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

May 3, 2024

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

RE: Notice of Exempt Modification // Site: SUFFIELD SW CT (ATC: 416862)
174 South Grand Street, Suffield, CT 06093
N 41.987037 // W -72.702088

Dear Ms. Bachman,

Cellco Partnership d/b/a Verizon Wireless currently maintains twelve (12) antenna at the 120-ft level on the existing 140 ft Tower, located at 174 South Grand Street, Suffield, CT. The tower is owned by American Tower. Verizon Wireless proposed modification involves the installation of a new mount modification, swap out (9) antennas and (6) RRH with new antennas and RRH, and one (1) OVP 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 West Suffield'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 April 15, 2024, by NB&C LLC, a structural analysis dated March 28, 2024, by American Tower Corp., and a structural mount analysis by Colliers Engineering and Design dated February 16, 2024, and Non-Ionizing Electromagnetic Radiation (NIER) Study dated April 30, 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
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West Bridgewater, MA 02379
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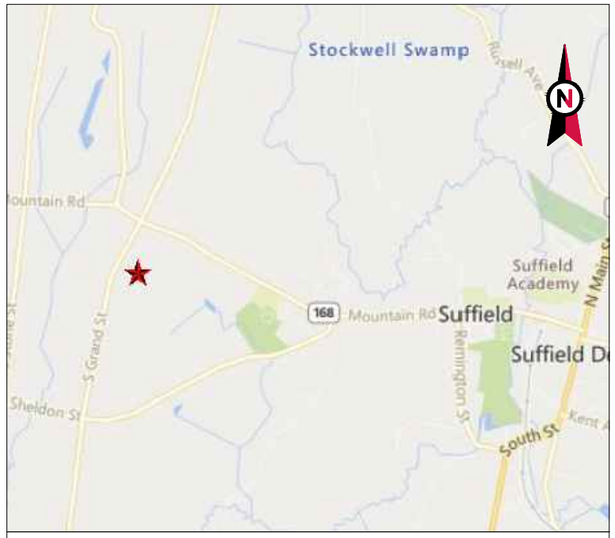
Attachments: Exhibit 1 – Construction Drawings
Exhibit 2 – Property Card and GIS
Exhibit 3 – Structural Analysis
Exhibit 4 – Mount Analysis
Exhibit 5 – RF Emissions Analysis Report Evaluation
Exhibit 6 – Available Original Tower Approval Records
Exhibit 7 – Notice Deliver Confirmations

cc: Colin Moll – First Selectman – Chief Elected Official
Bill Hawkins – Director of Planning - as P&Z official
American Tower Corporation - as tower owner
Darian P. Paganelli – as ground owner

EXHIBIT 1



VICINITY MAP

AMERICAN TOWER®

ATC SITE NAME: SUFFIELD SW CT CT
ATC SITE NUMBER: 416862
VERIZON SITE NAME: SUFFIELD SW CT
VERIZON SITE NUMBER: 5000386683
VERIZON FUZE PID: 16272252
SITE ADDRESS: 106 SOUTH GRAND ST.
WEST SUFFIELD,CT 06093

LOCATION MAP

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:	115 MPH (3-SECOND GUST)
BASIC WIND SPEED W/ ICE:	50 MPH (3-SECOND GUST) W/ 1.50" RADIAL ICE CONCURRENT
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=0.17, S_1=0.05
SITE CLASS:	D - STIFF SOIL - DEFAULT

INFORMATION TAKEN FROM STRUCTURAL ANALYSIS COMPLETED BY ATC, DATED 03/28/24.

UTILITY COMPANIES

POWER COMPANY: EVERSOURCE/NORTHEAST UTILITIES
PHONE: (888) 783-6617

TELEPHONE COMPANY: UNKNOWN
PHONE: N/A

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

PROJECT SUMMARY

SITE ADDRESS:

106 SOUTH GRAND ST.
WEST SUFFIELD,CT 06093
COUNTY: HARTFORD

GEOGRAPHIC COORDINATES:

LATITUDE: 41° 59' 13.351" N

LONGITUDE: 72° 42' 7.479" W

GROUND ELEVATION: 190' 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:

ROBERT G PAGANELLI
106 SOUTH GRAND ST.
WEST SUFFIELD,CT 06093

PROJECT DESCRIPTION

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

REMOVE (9) ANTENNA(s), (6) RRH(s) AND (2) OVP(s)

INSTALL MOUNT MODIFICATIONS, (9) ANTENNA(s), (6) RRH(s) AND (1) OVP(s)

EXISTING (3) ANTENNA(s) AND (2) 1-5/8" HYBRIFLEX 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 I-91 N AND CT-190 W TO THRALL AVE IN SUFFIELD, HEAD NORTH ON I-91 N, TAKE EXIT 47W TO MERGE ONTO CT-190 W TOWARD SUFFIELD, USE THE LEFT 2 LANES TO TURN LEFT ONTO CT-159 S, TURN RIGHT ONTO THRALL AVE, TAKE CT-168 W/MOUNTAIN RD TO CT-187 S, TURN RIGHT ONTO BRIDGE ST, TURN RIGHT ONTO N MAIN ST,TURN LEFT ONTO CT-168 W/MOUNTAIN RD, TURN LEFT ONTO CT-187 S, DESTINATION WILL BE ON THE LEFT

SHEET INDEX

SHEET NO:	DESCRIPTION:	REV:	DATE:	BY:
G-001	TITLE SHEET	0	04/15/24	LLR
G-002	GENERAL NOTES	0	04/15/24	LLR
C-101	DETAILED SITE PLAN	0	04/15/24	LLR
C-201	TOWER ELEVATION	0	04/15/24	LLR
C-401	ANTENNA INFORMATION & SCHEDULE	0	04/15/24	LLR
C-501	CONSTRUCTION DETAILS	0	04/15/24	LLR
E-501	GROUNDING DETAILS	0	04/15/24	LLR
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:	10222810
VZW LOCATION CODE (PSLC):	5000386683

***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

REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	LLR	04/15/24

ATC SITE NUMBER:
416862
ATC SITE NAME:
SUFFIELD SW CT CT
VERIZON SITE NAME:
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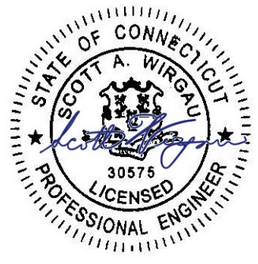
SEAL:



verizon

ATC JOB NO:	14843266_G0
CUSTOMER ID:	SUFFIELD SW CT
CUSTOMER #:	5000386683

TITLE SHEET

SHEET NUMBER:	REVISION:
G-001	0

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)

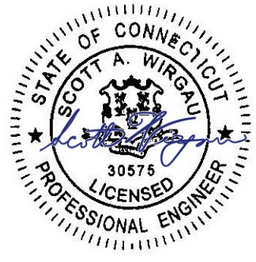
ALL DISCREPANCIES FROM WHAT IS SHOWN ON THESE CONSTRUCTION DRAWINGS SHALL BE COMMUNICATED TO ATC ENGINEERING IMMEDIATELY FOR CORRECTION OR RE-DESIGN. FAILURE TO COMMUNICATE DIRECTLY WITH ATC ENGINEERING OR ANY CHANGES FROM THE DESIGN CONDUCTED WITHOUT PRIOR APPROVAL FROM ATC ENGINEERING SHALL BE THE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

REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	LLR	04/15/24

ATC SITE NUMBER:
416862
ATC SITE NAME:
SUFFIELD SW CT CT
VERIZON SITE NAME:
SUFFIELD SW CT
SITE ADDRESS:
106 SOUTH GRAND ST.
WEST SUFFIELD,CT 06093

SEAL:



Digitally Signed: 2024-04-15

verizon

ATC JOB NO:	14843266_G0
CUSTOMER ID:	SUFFIELD SW CT
CUSTOMER #:	5000386683

GENERAL NOTES

SHEET NUMBER:	REVISION:
G-002	0

SITE PLAN NOTES:

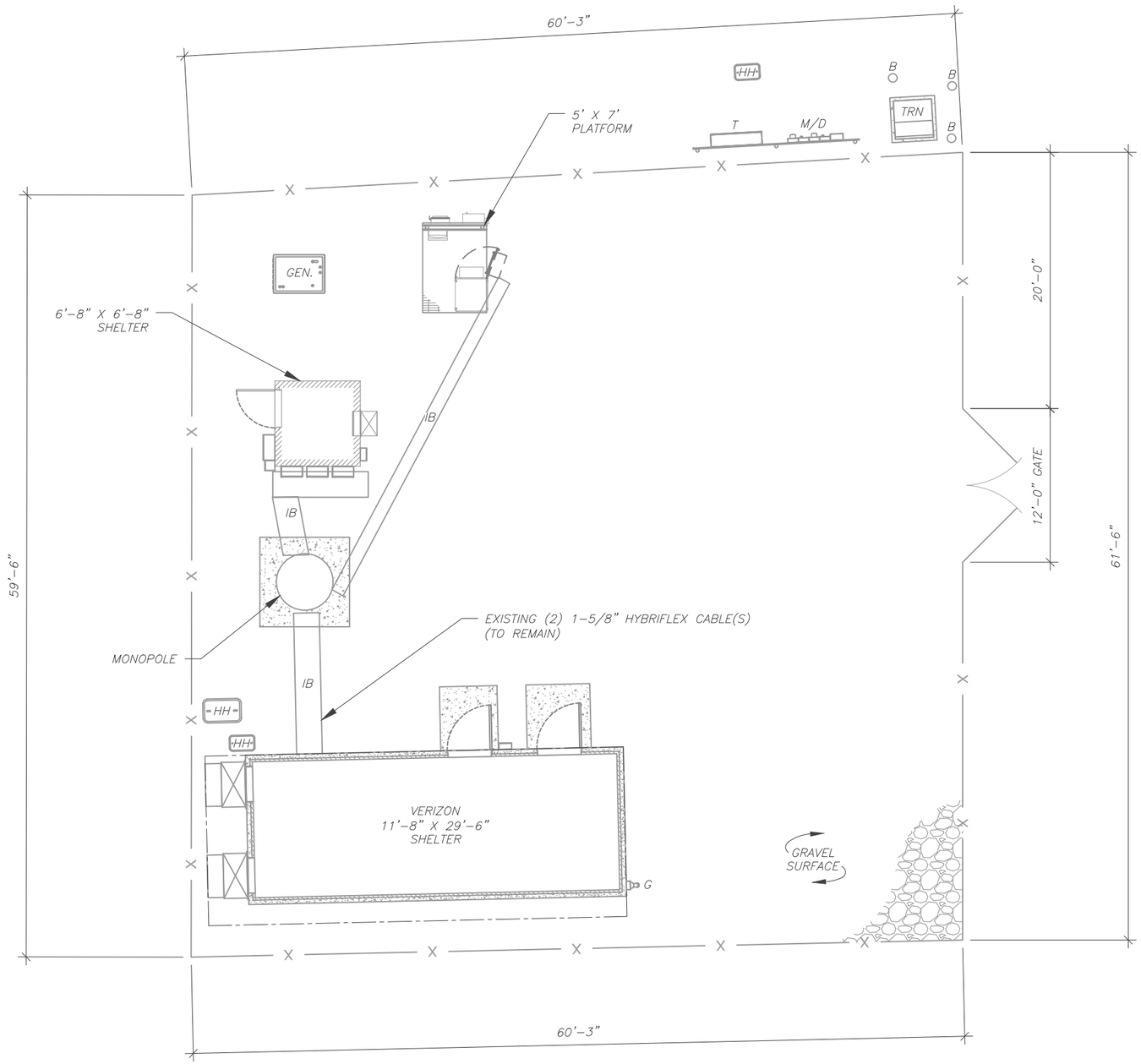
1. THIS SITE PLAN REPRESENTS THE BEST PRESENT KNOWLEDGE AVAILABLE TO THE ENGINEER AT THE TIME OF THIS DESIGN. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO CONSTRUCTION AND VERIFY ALL EXISTING CONDITIONS RELATED TO THE SCOPE OF WORK FOR THIS PROJECT.

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

3. NO ELECTRICAL SCOPE IS INCLUDED IN THIS PROJECT.

LEGEND

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



1 DETAILED SITE PLAN

GRAPHIC SCALE

10 0 5 10

(IN FEET)
1 UNIT = 10 FEET

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

REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	LLR	04/15/24

ATC SITE NUMBER:
416862

ATC SITE NAME:
SUFFIELD SW CT CT

VERIZON SITE NAME:
SUFFIELD SW CT

SITE ADDRESS:
106 SOUTH GRAND ST.
WEST SUFFIELD,CT 06093

SEAL:

STATE OF CONNECTICUT
SCOTT A. WIRGAU
30575
LICENSED
PROFESSIONAL ENGINEER

Digitally Signed: 2024-04-15

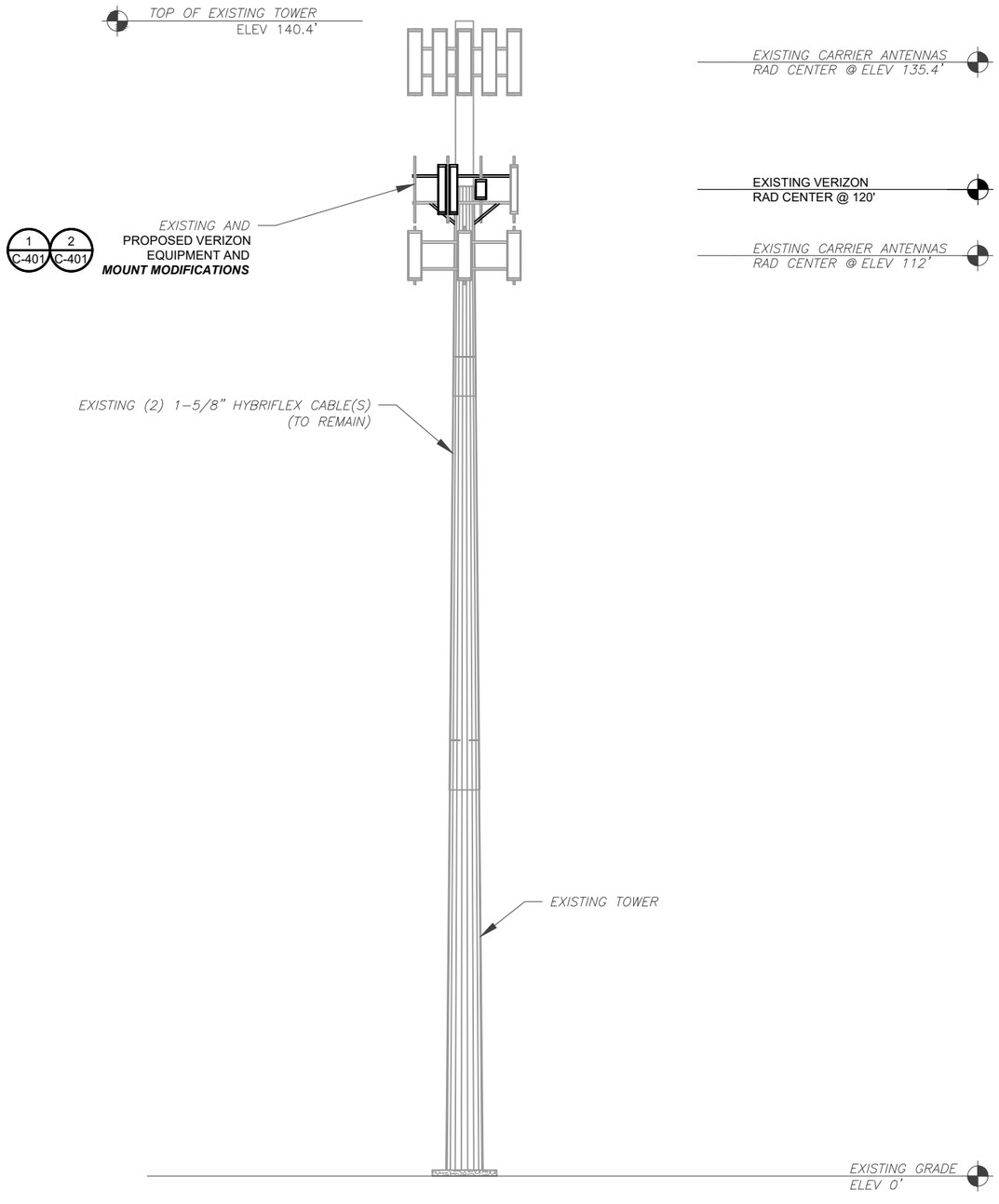
verizon

ATC JOB NO:	14843266_G0
CUSTOMER ID:	SUFFIELD SW CT
CUSTOMER #:	5000386683

DETAILED SITE PLAN

SHEET NUMBER:	REVISION:
C-101	0

PER MOUNT ANALYSIS COMPLETED BY COLLIERS ENGINEERING & DESIGN, DATED 02/19/24, 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.)

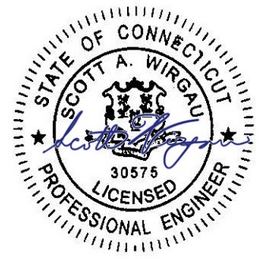
TOWER NOTE:
1. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONFIRM WITH THE PROJECT MANAGER THAT THEY HAVE THE MOST RECENT VERSION OF THE STRUCTURAL ANALYSIS BEFORE COMMENCING WORK. EXISTING AND PROPOSED TOWER APPURTENANCES, MOUNTS, AND ANTENNAS ARE SHOWN BASED ON THE STRUCTURAL ANALYSIS.
2. WHERE APPLICABLE, 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. TOWER ELEVATION DEPICTION MAY NOT REFLECT ALL EQUIPMENT INCLUDED IN STRUCTURAL ANALYSIS. REFER TO STRUCTURAL ANALYSIS FOR FULL TOWER LOADING.

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

REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	LLR	04/15/24

ATC SITE NUMBER:
416862
ATC SITE NAME:
SUFFIELD SW CT CT
VERIZON SITE NAME:
SUFFIELD SW CT
SITE ADDRESS:
106 SOUTH GRAND ST.
WEST SUFFIELD,CT 06093

SEAL:



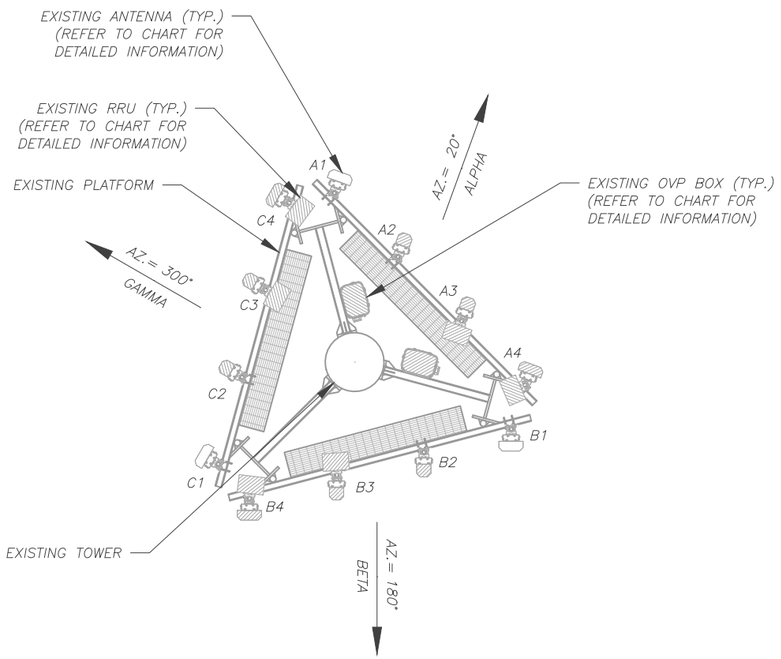
Digitally Signed: 2024-04-15

verizon

ATC JOB NO:	14843266_G0
CUSTOMER ID:	SUFFIELD SW CT
CUSTOMER #:	5000386683

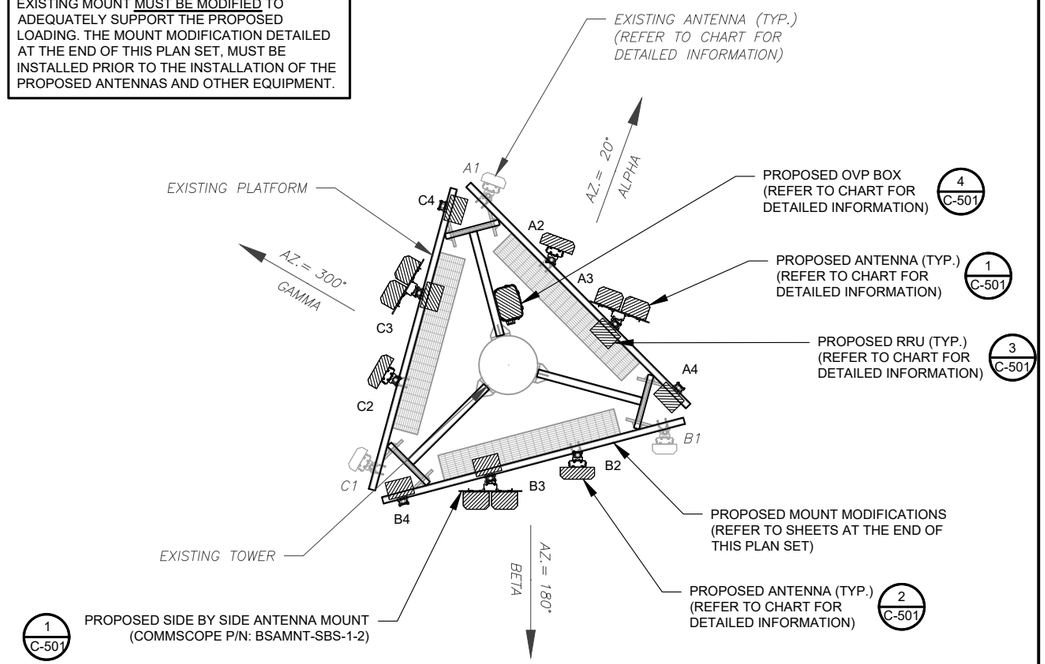
TOWER ELEVATION

SHEET NUMBER:	REVISION:
C-201	0



1 EXISTING ANTENNA PLAN

SCALE: N.T.S.



2 FINAL ANTENNA PLAN

SCALE: N.T.S.

PER MOUNT ANALYSIS COMPLETED BY COLLIERS ENGINEERING & DESIGN, DATED 02/19/24, 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.

EXISTING ANTENNA SCHEDULE

LOCATION			ANTENNA SUMMARY				NON ANTENNA SUMMARY	
SECTOR	RAD	AZ	POS	ANTENNA	BAND	STATUS	ADDITIONAL TOWER MOUNTED EQUIPMENT	STATUS
ALPHA	120'	20°	A1	BXA-70063/6CF_	-	RMN	-	-
			A2	LPA-185063/12CF	-	RMV	-	-
			A3	LPA-185063/12CF	-	RMV	RRH2x40-07-U	RMV
			A4	BXA-70063/6CF_	AWS LTE	RMV	RRH2x40-AWS	RMV
BETA	120'	180°	B1	BXA-70063/6CF_	-	RMN	-	-
			B2	LPA-185063/12CF	-	RMV	-	-
			B3	LPA-185063/12CF	-	RMV	RRH2x40-07-U	RMV
			B4	BXA-70063/6CF_	AWS LTE	RMV	RRH2x40-AWS	RMV
GAMMA	120'	300°	C1	BXA-70063/6CF_	-	RMN	-	-
			C2	LPA-185063/12CF	-	RMV	-	-
			C3	LPA-185063/12CF	-	RMV	RRH2x40-07-U	RMV
			C4	BXA-70063/6CF_	AWS LTE	RMV	RRH2x40-AWS	RMV

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	120'	20°	A1	BXA-70063/6CF_	-	RMN	-	-
			A2	MT6413-77A	L-SUB6 5G	ADD	-	-
			A3	(2) NHH-65B-R2B	700/850/1900/AWS LTE & 850 5G	ADD	RF4439D-25A	ADD
			A4	-	-	-	RF4461D-13A	ADD
BETA	120'	180°	B1	BXA-70063/6CF_	-	RMN	-	-
			B2	MT6413-77A	L-SUB6 5G	ADD	-	-
			B3	(2) NHH-65B-R2B	700/850/1900/AWS LTE & 850 5G	ADD	RF4439D-25A	ADD
			B4	-	-	-	RF4461D-13A	ADD
GAMMA	120'	300°	C1	BXA-70063/6CF_	-	RMN	-	-
			C2	MT6413-77A	L-SUB6 5G	ADD	-	-
			C3	(2) NHH-65B-R2B	700/850/1900/AWS LTE & 850 5G	ADD	RF4439D-25A	ADD
			C4	-	-	-	RF4461D-13A	ADD

EXISTING FIBER DISTRIBUTION / OVP BOX		EXISTING CABLING SUMMARY	
MODEL NUMBER	STATUS	CABLE QTY, SIZE, TYPE	STATUS
-	RMN	(2) 1-5/8" HYBRIFLEX CABLE(S)	RMN
(2) RRFDC-3315-PF-48	RMV	----	RMV

FINAL FIBER DISTRIBUTION / OVP BOX		FINAL CABLING SUMMARY	
MODEL NUMBER	STATUS	CABLE QTY, SIZE, TYPE	STATUS
-	RMN	(2) 1-5/8" HYBRIFLEX CABLE(S)	RMN
RCMDC-6627-PF-48	ADD	----	ADD

3 EQUIPMENT SCHEDULES

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

REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	LLR	04/15/24

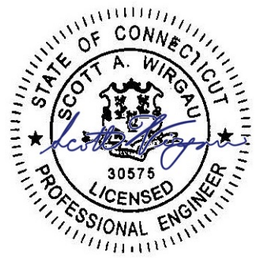
ATC SITE NUMBER:
416862

ATC SITE NAME:
SUFFIELD SW CT CT

VERIZON SITE NAME:
SUFFIELD SW CT

SITE ADDRESS:
106 SOUTH GRAND ST.
WEST SUFFIELD,CT 06093

SEAL:



Digitally Signed: 2024-04-15

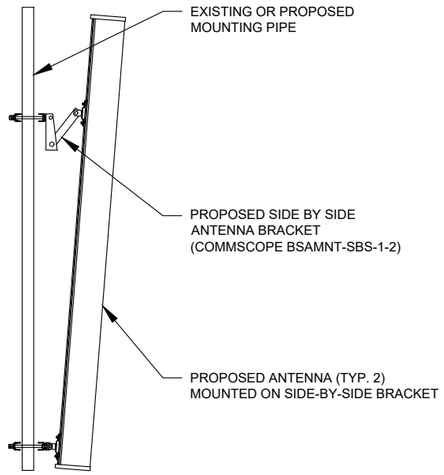
verizon

ATC JOB NO:	14843266_G0
CUSTOMER ID:	SUFFIELD SW CT
CUSTOMER #:	5000386683

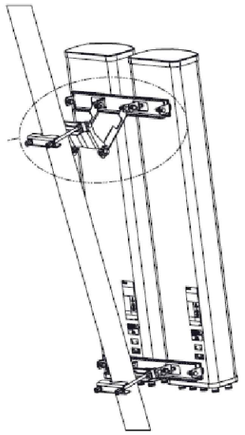
ANTENNA INFORMATION & SCHEDULE

SHEET NUMBER:	REVISION:
C-401	0

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.



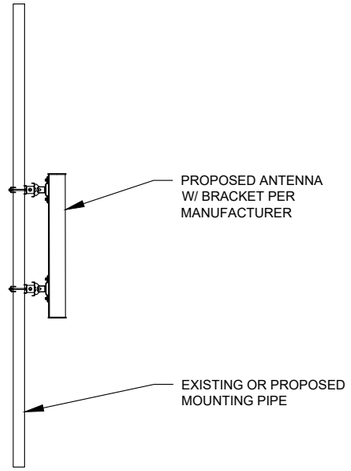
PROFILE VIEW



ISOMETRIC VIEW (BY MANUFACTURER)

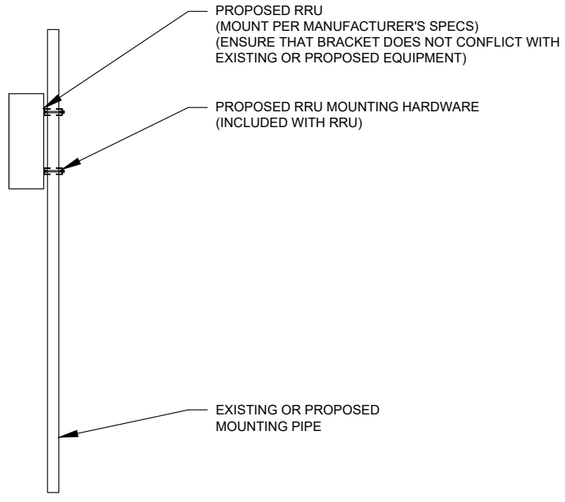
1 PROPOSED ANTENNA MOUNTING DETAIL - TYPICAL

SCALE: N.T.S.



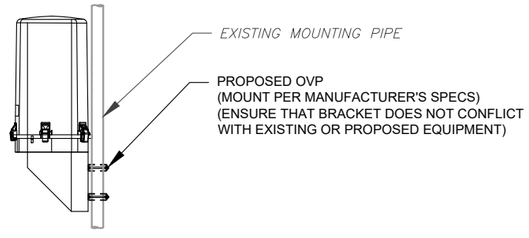
2 PROPOSED 5G ANTENNA MOUNTING DETAIL - TYPICAL

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

REV.	DESCRIPTION	BY	DATE
0	FOR CONSTRUCTION	LLR	04/15/24

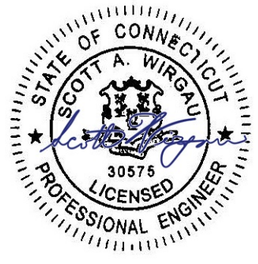
ATC SITE NUMBER:
416862

ATC SITE NAME:
SUFFIELD SW CT CT

VERIZON SITE NAME:
SUFFIELD SW CT

SITE ADDRESS:
106 SOUTH GRAND ST.
WEST SUFFIELD,CT 06093

SEAL:



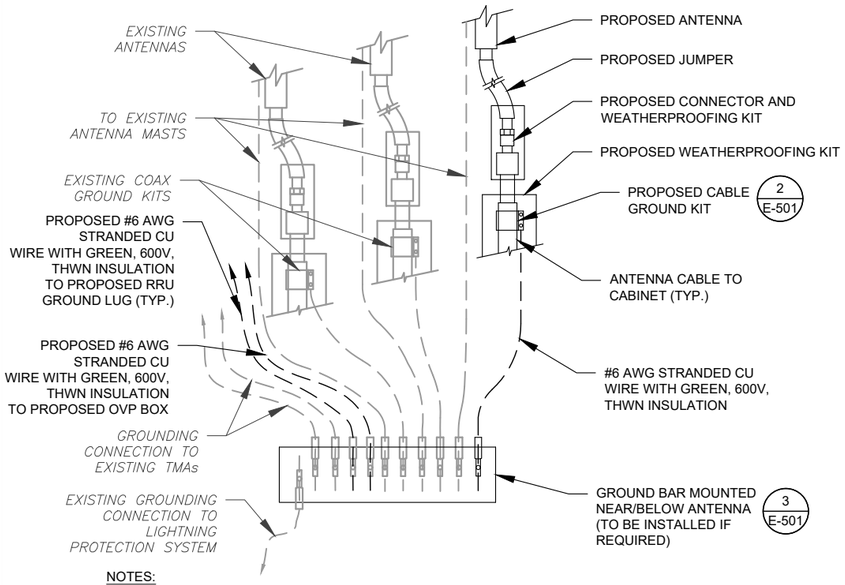
Digitally Signed: 2024-04-15

verizon

ATC JOB NO:	14843266_G0
CUSTOMER ID:	SUFFIELD SW CT
CUSTOMER #:	5000386683

CONSTRUCTION DETAILS

SHEET NUMBER:	REVISION:
C-501	0

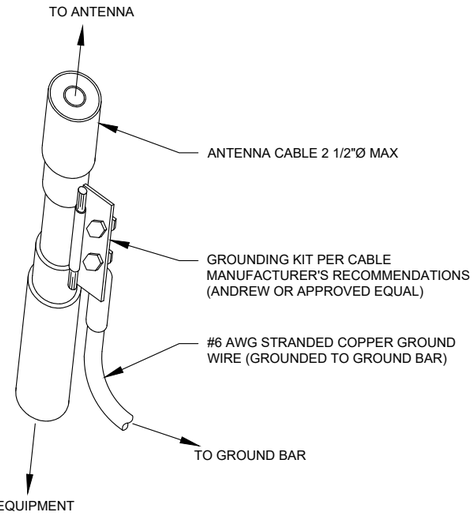


NOTES:

1. THIS DETAIL IS INTENDED TO SHOW THE GENERAL GROUNDING REQUIREMENTS. SLIGHT ADJUSTMENTS MAY BE REQUIRED BASED ON EXISTING SITE CONDITIONS. THE CONTRACTOR SHALL MAKE FIELD ADJUSTMENTS AS NEEDED AND INFORM THE CONSTRUCTION MANAGER OF ANY CONFLICTS.
2. SITE GROUNDING SHALL COMPLY WITH 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.

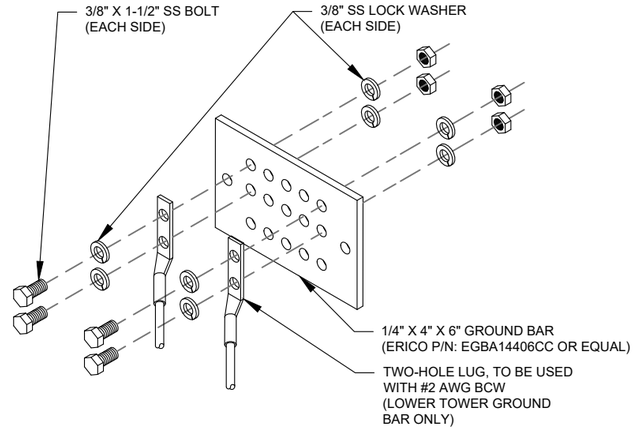


GROUND KIT NOTES:

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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0	FOR CONSTRUCTION	LLR	04/15/24

ATC SITE NUMBER:
416862

ATC SITE NAME:
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VERIZON SITE NAME:
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SITE ADDRESS:
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WEST SUFFIELD,CT 06093

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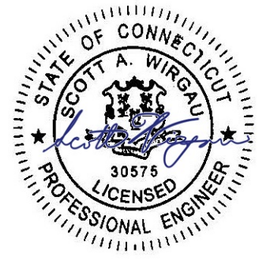


Digitally Signed: 2024-04-15

verizon

ATC JOB NO:	14843266_G0
CUSTOMER ID:	SUFFIELD SW CT
CUSTOMER #:	5000386683

GROUNDING DETAILS

SHEET NUMBER:	REVISION:
E-501	0

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 #: 10222810
Colliers Engineering & Design Project #: 21777462 (Rev.2)

February 16, 2024

Site Information

Site ID:	*5000386683-VZW / SUFFIELD SW CT*
Site Name:	*SUFFIELD SW CT*
Carrier Name:	*Verizon Wireless*
Address:	*174 S Grand St* *West Suffield, Connecticut 06093* *Hartford County*
Latitude:	*41.98704°*
Longitude:	*-72.70209°*

Structure Information

Tower Type:	*119-Ft Monopole*
Mount Type:	*13.75-Ft Platform*

FUZE ID # 16272252

Analysis Results

Platform: **76.0% 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: Prasanna Dhakal

STATE OF CONNECTICUT · DEJIAN XU · No. 33733 · LICENSED PROFESSIONAL ENGINEER
02/19/2024

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: R-601

REVISION: 0

verizon

MOUNT MODIFICATION DRAWINGS
EXISTING 13.75' PLATFORM

TOWER OWNER: AMERICAN TOWER CORPORATION
TOWER OWNER SITE NUMBER: 416862

CARRIER SITE NAME: SUFFIELD SW CT
CARRIER SITE NUMBER: 468149
FUZE ID: 16272252

174 S GRAND ST
WEST SUFFIELD, CT 06093
HARTFORD COUNTY

LATITUDE: 41.987037° N
LONGITUDE: 72.702088° W

DESIGN CRITERIA

WIND LOADS
BASIC WIND SPEED (3 SECOND GUST), V = 120 MPH
EXPOSURE CATEGORY C
TOPOGRAPHIC CATEGORY 1
MEAN BASE ELEVATION (AMSL) = 190.05'

ICE LOADS
ICE WIND SPEED (3 SECOND GUST), V = 50 MPH
ICE THICKNESS = 1.50 IN

SEISMIC LOADS
SEISMIC DESIGN CATEGORY B
SHORT TERM MCER GROUND MOTION, S_S = .170
LONG TERM MCER GROUND MOTION, S_1 = .054

PROJECT INFORMATION

APPLICANT/LESSEE
COMPANY: VERIZON WIRELESS

CLIENT REPRESENTATIVE
COMPANY: VERIZON WIRELESS

PROJECT MANAGER
COMPANY: MASER CONSULTING CONNECTICUT
CONTACT: PETER ALBANO
PHONE: 856-797-0412
E-MAIL: PETER.ALBANO@COLLIERSENGINEERING.COM

CONTRACTOR PMI REQUIREMENTS

PMI LOCATION: HTTPS://PMI.VZWSMART.COM
SMART TOOL PROJECT #: 10101706
VZW LOCATION CODE (PSLC): 468149
ANALYSIS DATE: 9/17/2021

PMI REQUIREMENTS 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

SITE NAME: SUFFIELD SW CT 468149
174 S GRAND ST
WEST SUFFIELD, CT 06093
HARTFORD COUNTY

TITLE SHEET — ST-1

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

BILL OF MATERIALS

SECTION 1 - VZWSMART KITS

QUANTITY	MANUFACTURER	PART NUMBER	DESCRIPTION	NOTES	UNIT WEIGHT (LBS.)	WEIGHT (LBS.)
12	VZWSMART	VZWSMART-MSK1	CROSSOVER PLATE		14	168
3	VZWSMART	VZWSMART-PLK3	SUPPORT RAIL CORNER BRACKET		29	87
1	VZWSMART	VZWSMART-PLK5	KICKER KIT	CONTRACTOR TO VERIFY THE LENGTH REQUIRED AND TRIM AS NECESSARY IN ACCORDANCE WITH THE 'STRUCTURAL STEEL' NOTES ON SHEET SGN-1.	291	291
1	VZWSMART	VZWSMART-PLK7	MONOPOLE COLLAR MOUNT ASSEMBLY		150	150

SECTION 2 - OTHER REQUIRED PARTS

QUANTITY	MANUFACTURER	PART NUMBER	DESCRIPTION	NOTES	UNIT WEIGHT (LBS.)	WEIGHT (LBS.)
3	-	-	36" LONG, L3x3x1/4	GALVANIZED. CONTRACTOR TO VERIFY THE LENGTH REQUIRED AND TRIM AS NECESSARY IN ACCORDANCE WITH THE 'STRUCTURAL STEEL' NOTES ON SHEET SGN-1.	15	44
3	-	-	156" LONG, P2 1/2 STD	GALVANIZED	71	214
					TOTAL:	954

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

BILL OF MATERIALS — SBOM-1

PROJECT NOTES

1. SEE MODIFICATION NOTES
2. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE CODES, ORDINANCES, LAWS AND REGULATIONS OF ALL MUNICIPALITIES, UTILITY COMPANIES OR OTHER PUBLIC/GOVERNING AUTHORITIES.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS AND INSPECTIONS THAT MAY BE REQUIRED BY ANY FEDERAL, STATE, COUNTY OR MUNICIPAL AUTHORITIES.
4. THE CONTRACTOR SHALL NOTIFY THE CONSTRUCTION MANAGER, IN WRITING, OF ANY CONFLICTS, ERRORS OR OMISSIONS PRIOR TO THE SUBMISSION OF BIDS OR PERFORMANCE OF WORK.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL EXISTING SITE IMPROVEMENTS PRIOR TO COMMENCING CONSTRUCTION. THE CONTRACTOR SHALL REPAIR ANY DAMAGE AS A RESULT OF CONSTRUCTION OF THIS FACILITY AT THE CONTRACTOR'S EXPENSE TO THE SATISFACTION OF THE OWNER.
6. THE SCOPE OF WORK FOR THIS PROJECT SHALL INCLUDE PROVIDING ALL MATERIALS, EQUIPMENT AND LABOR REQUIRED TO COMPLETE THIS PROJECT. ALL EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
7. THE CONTRACTOR SHALL VISIT THE PROJECT SITE PRIOR TO SUBMITTING THE BID TO VERIFY THAT THE PROJECT CAN BE CONSTRUCTED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND CONSTRUCTION DRAWINGS.
8. THE CONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS PRIOR TO COMMENCING ANY WORK. ALL DIMENSIONS OF EXISTING CONSTRUCTION SHOWN ON THESE DRAWINGS MUST BE VERIFIED. THE CONTRACTOR SHALL NOTIFY THE CONSTRUCTION MANAGER OF ANY DISCREPANCIES PRIOR TO ORDERING MATERIAL OR PROCEEDING WITH CONSTRUCTION.
9. SINCE THE CELL SITE MAY BE ACTIVE, ALL SAFETY PRECAUTIONS MUST BE TAKEN WHEN WORKING AROUND HIGH LEVELS OF ELECTROMAGNETIC RADIATION. EQUIPMENT SHOULD BE SHUTDOWN PRIOR TO PERFORMING ANY WORK THAT COULD EXPOSE THE WORKERS TO DANGER. PERSONAL RF EXPOSURE MONITORS ARE REQUIRED TO BE WORN TO ALERT OF ANY POTENTIALLY DANGEROUS EXPOSURE LEVELS.
10. NO NOISE, SMOKE, DUST OR ODOR WILL RESULT FROM THIS FACILITY AS TO CAUSE A NUISANCE.
11. THE FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION (NO HANDICAP ACCESS IS REQUIRED).

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@COLLIERSENGINEERING.COM
   b. PROVIDE MASER CONSULTING PROJECT # AND MASER CONSULTING 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. CONTRACTOR SHALL PROTECT CUT ENDS OF ALL FIELD-CUT STEEL WITH TWO (2) COATS OF COLD GALVANIZATION (ZINGA OR ZINC COTE).
9. 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.
10. 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.
11. FOR MEMBERS BEING REPLACED, PROVIDE NEW BOLTS AND MATCH EXISTING SIZE AND GRADE. MAINTAIN AISC REQUIREMENTS FOR MINIMUM BOLT DISTANCE AND SPACING.
12. 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.
13. GALVANIZED ASTM A325 BOLTS SHALL NOT BE REUSED.
14. ALL EXISTING PAINTED/GALVANIZED SURFACES DAMAGED DURING REHAB INCLUDING AREAS UNDER STIFFENER PLATES SHALL BE WIRE BRUSHED CLEAN, REPAIRED BY COLD GALVANIZING (ZINGA OR ZINC COTE), 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.

WELDING NOTES

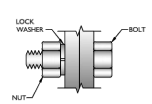
1. ALL WELDING SHALL BE DONE IN ACCORDANCE WITH AWS D1.0 (LATEST EDITION). THIS SHALL INCLUDE A CERTIFIED WELD INSPECTION (CWI) FOR ACCEPTANCE OR REJECTION OF ALL WELDING OPERATIONS, PRE, DURING, AND POST INSTALLATION, USING THE ACCEPTANCE CRITERIA OF AWS D1.1.
2. CONTRACTOR IS RESPONSIBLE FOR COMMISSIONING A THIRD PARTY CERTIFIED WELD INSPECTOR (CWI) THROUGHOUT THE ENTIRETY OF THE PROJECT. A PASSING CWI REPORT SHALL BE PROVIDED TO THE ENGINEER UPON COMPLETION OF THE PROJECT.
3. THE CERTIFIED WELD INSPECTOR SHALL INDICATE, IN A WRITTEN CWI REPORT, THAT ALL WELDING OPERATIONS PRE, DURING, AND POST INSTALLATION WERE CONDUCTED IN ACCORDANCE WITH AWS D1.1 WITH PHOTOGRAPHS AND DOCUMENTATION SUPPORTING THE ACCEPTANCE OR REJECTION OF ALL WELDING. ALL CWI WELD INSPECTION DOCUMENTATION AND PHOTOS SHALL BE SUBMITTED DURING THE PMI.
4. IN CASES WHERE A WELD IS SPECIFIED BETWEEN TWO MEMBERS IN WHICH THERE IS A GAP IN BETWEEN, THE WELD IS TO BE BUILT-UP SUCH THAT THE SIZE OF WELD ON THE MEMBER IS EQUAL TO THAT SHOWN IN THE DRAWINGS.
5. OXY FUEL GAS WELDING OR BRAZING IS STRICTLY PROHIBITED. SPECIFICALLY, NO TORCH CUTTING IS PERMITTED ON SITE. ALL HOLES SHALL BE CUT WITH A GRINDER.
6. CONTRACTOR SHALL EXERCISE CAUTION WHEN WELDING A GALVANIZED SURFACE.
7. CONTRACTOR SHALL HAVE A FIRE PROTECTION PLAN IN PLACE THAT CONFORMS WITH ALL OSHA, ANSI/ASSP A10.48, ANSI Z49.1, AND LOCAL JURISDICTIONAL REQUIREMENTS.

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

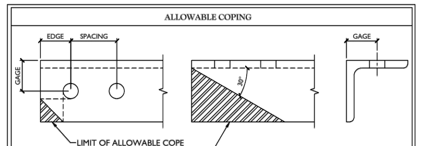


TYP. BOLT ASSEMBLY

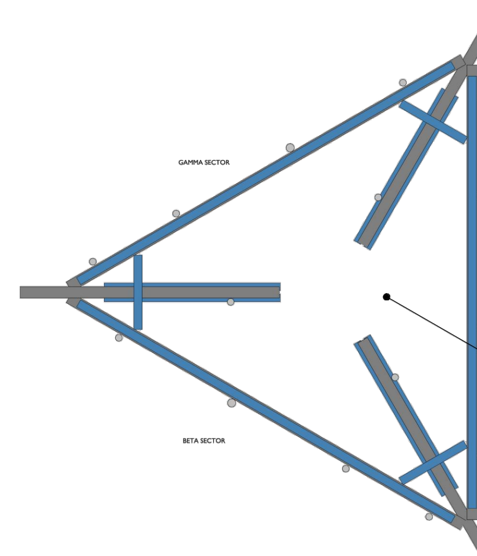
NOTES:

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.

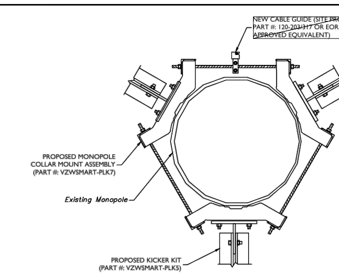
ALLOWABLE COPING



MODIFICATION NOTES — SGN-1



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



2 CABLE GUIDE COLLAR ATTACHMENT - PLAN VIEW
SCALE : N.T.S.

CLIMBING FACILITY PHOTO

STRUCTURAL NOTES:

1. PER THE MOUNT MAPPING COMPLETED BY RKS DESIGN & ENGINEERING LLC ON 3/25/2021, THE SAFETY CLIMB AND CLIMBING FACILITIES UP TO THE VERIZON MOUNT ELEVATION (118'-9") ARE IN GOOD CONDITION. MASER 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.

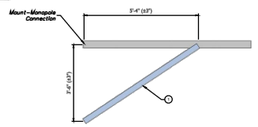
CLIMBING FACILITY DETAIL — SCF-1

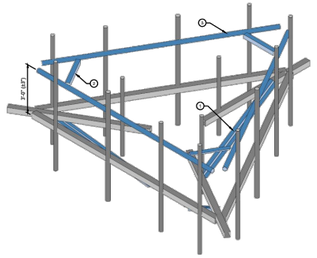
1 MOUNT ANALYSIS

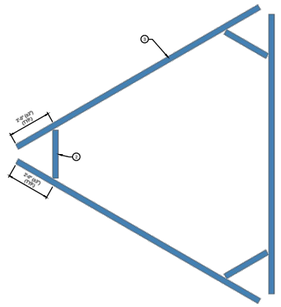
NOTE: THIS SHEET WAS CREATED BY OTHERS AND PROVIDED AT THE REQUEST OF THE CUSTOMER WITHOUT EDIT. PLEASE REFERENCE THE MOUNT ANALYSIS REPORT FOR COMPLETE MOUNT ANALYSIS CALCULATIONS AND DETAILS. SUPPLEMENTAL PAGES INCLUDED IN THE CONSTRUCTION DRAWINGS ARE FOR REFERENCE ONLY. GENERAL CONTRACTOR IS TO VERYIFY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

SUPPLEMENTAL

SHEET NUMBER: R-602
REVISION: 0







LEGEND:

- ▨ PROPOSED
- ▨ RELOCATED
- ▨ EXISTING

① PROPOSED SIDE ELEVATION VIEW (TYP. ALL SECTORS)
SCALE : N.T.S.

MOUNT MODIFICATION SCHEDULE				
NO.	ELEVATION	QUANTITY	DESCRIPTION	NOTES
1	118'-9"	1	PROPOSED KICKER KIT (PART #: VZWSMART-PLK5)	CONTRACTOR TO VERIFY THE LENGTH REQUIRED AND TRIM AS NECESSARY IN ACCORDANCE WITH THE 'STRUCTURAL STEEL' NOTES ON SHEET SGN-1. CONNECT OTHER END OF KICKER KIT TO MONOPOLE COLLAR MOUNT ASSEMBLY (PART #: VZWSMART-PLK7).
2		3	36" LONG, L3x3x1/4	GALVANIZED CONTRACTOR TO VERIFY THE LENGTH REQUIRED AND TRIM AS NECESSARY IN ACCORDANCE WITH THE 'STRUCTURAL STEEL' NOTES ON SHEET SGN-1. CONTRACTOR SHALL CONNECT PROPOSED L3X3X1/4 ANGLES TO CORNER BRACKETS (PART #: VZWSMART-PLK3) USING THE PROVIDED (8) 5/8" DIA. BOLTS, (4) BOLTS PER CONNECTION.
3		3	156" LONG, P2 1/2 STD	GALVANIZED RADIO AND/OR TME POSITIONS SHALL BE ADJUSTED VERTICALLY AS NEEDED IN ORDER TO ACHIEVE INSTALLATION OF HORIZONTAL AS SHOWN. EOR SHALL BE NOTIFIED IF EQUIPMENT NEEDS TO BE RELOCATED TO ANOTHER MOUNT PIPE. CONNECT NEW SUPPORT RAIL TO ALL EXISTING VERTICAL MOUNT PIPES WITH CROSSOVER PLATES (PART #: VZWSMART-MSK1).

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

② PROPOSED ISOMETRIC VIEW
SCALE : N.T.S.

③ PROPOSED PLAN VIEW
SCALE : N.T.S.

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SCALE: AS SHOWN
JOB NUMBER: 21777462A

REV	DATE	DESCRIPTION	DRAWN BY	CHECKED BY
0	9/17/2021	ISSUED FOR CONSTRUCTION	DEH	DX

DEJIAN XU
No. 33733
09/17/2021

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:
SUFFIELD SW CT
468149
174 S GRAND ST
WEST SUFFIELD, CT 06093
HARTFORD COUNTY

MT. LAUREL OFFICE
2000 Midlantic Drive
Suite 100
Mount Laurel, NJ 08054
Phone: 856.797.0412
Fax: 856.722.1120

SHEET TITLE: MODIFICATION DETAILS
SHEET NUMBER: SS-1

MOUNT PHOTO 1

MOUNT PHOTO 2

MOUNT PHOTO 3

MOUNT PHOTO 4

MASER CONSULTING
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SCALE: AS SHOWN
JOB NUMBER: 21777462A

REV	DATE	DESCRIPTION	DRAWN BY	CHECKED BY
0	9/17/2021	ISSUED FOR CONSTRUCTION	DEH	DX

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Suite 100
Mount Laurel, NJ 08054
Phone: 856.797.0412
Fax: 856.722.1120

SHEET TITLE: MOUNT PHOTOS
SHEET NUMBER: SS-2

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.

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REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	BT	08/04/21

SHEET TITLE:
VZWSMART
STANDARD PIPE

SHEET NUMBER: VZWSMART–PIPE
REV #: 0

HOLE STYLE "A"

HOLE STYLE "B"

HOLE STYLE "C"

HOLE STYLE "D"

VZWSMART Standard Angle					
VZWSMART Number	Size	Length	Hole Style	Hole Gage	Also Used In:
A-PLK2-01	L 3" X 3" X 1/4"	96"	A	1-3/4"	VZWSMART-PLK2
A-PLK5-01	L 3"X 3" X 3/16"	96"	B	1-3/4"	VZWSMART-PLK5
A-SFK3-01	L 2-1/2" X 2-1/2" X 1/4"	96"	C	1-3/8"	VZWSMART-SFK3,-SFK3-SL, -PLK6, & -PLK8
A-L25X25X4X120	L 2-1/2" X 2-1/2" X 1/4"	120"	D	1-5/16"	
A-L25X25X4X240	L 2-1/2" X 2-1/2" X 1/4"	240"	D	1-5/16"	
A-L30X30X4X120	L 3" X 3" X 1/4"	120"	D	1-1/2"	
A-L30X30X4X240	L 3" X 3" X 1/4"	240"	D	1-1/2"	
A-L40X40X4X120	L 4" X 4" X 1/4"	120"	D	2"	
A-L40X40X4X240	L 4" X 4" X 1/4"	240"	D	2"	
A-L50X30X6X120	L 5" X 3" X 3/8"	120"	D	2-1/2"	
A-L50X50X6X120	L 5" X 5" X 3/8"	120"	D	2-1/2"	

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

NOTES:
1. ALL ANGLE GRADE A36 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.

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CHECKED BY: HMA/KW

REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	BT	08/04/21

SHEET TITLE:
VZWSMART
STANDARD ANGLE

SHEET NUMBER: VZWSMART–ANGLE
REV #: 0

① MOUNT ANALYSIS

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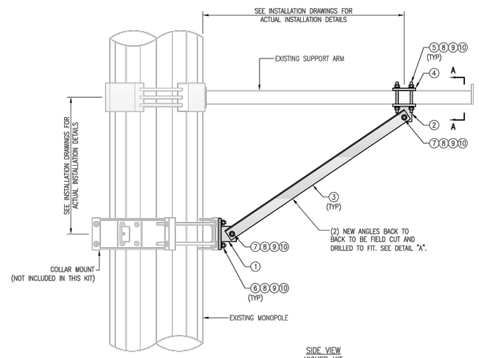
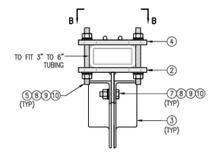
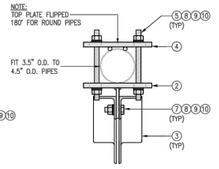
SUPPLEMENTAL

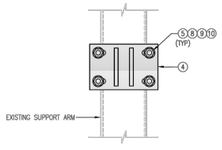
SHEET NUMBER: R-603
REVISION: 0

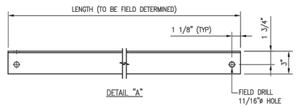
NOTE:
THE LOCATION OF KICKER AND EXISTING ANTENNA MOUNT SHOWN ON THE DRAWING IS FOR REPRESENTATION PURPOSE ONLY. SEE INSTALLATION DRAWINGS FOR ACTUAL INSTALLATION OF DETAILS.











NOTES:
1. ALL HOLES ARE 11/16" DIA. U.N.O
2. HOT-DIPPED GALVANIZED PER ASTM A123.
3. FIT UP TO 6" SQ. TUBING OR 4 1/2" O.D. PIPE

VZWSMART-PLK5 (KICKER KIT)

ITEM NO.	QTY.	PART NO.	DESCRIPTION	SHEET #	WT
1	3	BRKW-XXX	BRACKET WELDMENT A36	PLK5-F3	43.8
2	3	BRKW-XXXX	BRACKET WELDMENT A36	PLK5-F2	35.7
3	6	L331875-8	L 3" X 3" X 3/16" X 8'-0" A36	PLK5-F4	182.9
4	3	PL-KI	PL 5/8" X 6" X 9" A36	PLK5-F1	29.0
5	12	----	THREADED ROD 5/8" DIA. X 1'-0" F1554-36 HDG		---
6	6	----	BOLT 5/8" X 2" A325	---	---
7	12	----	BOLT 5/8" X 2 1/2" A325	---	---
8	42	FW-625	5/8" HDG USS FLAT WASHER	---	3
9	42	LW-625	5/8" HDG LOCK WASHER	---	1
10	42	NUT-625	5/8" HDG HEX NUT	---	5
				GALVANIZED WT	291

VzW SMART Tool© Vendor

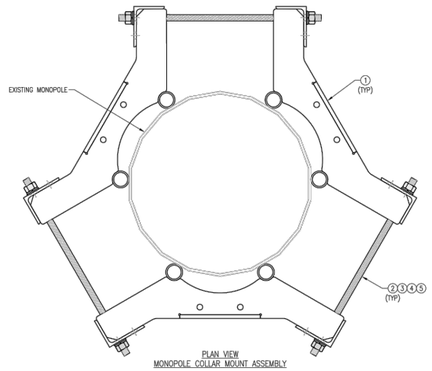
verizon

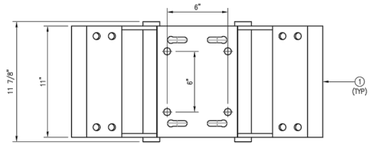
DRAWN BY: MN | CHECKED BY: HMA/KW

REV.	DESCRIPTION	BY	DATE
1	FIRST ISSUE	MN	05/08/20

SHEET TITLE: VZWSMART-PLK5 KICKER KIT

SHEET NUMBER: VZWSMART-PLK5 | REV #: 0





NOTES:
1. FIT 12" TO 45" DIA MONOPOLE.
2. HOT-DIPPED GALVANIZED PER ASTM A123.

VZWSMART-PLK7 (MONOPOLE COLLAR MOUNT ASSEMBLY)

ITEM NO.	QTY.	PART NO.	DESCRIPTION	SHEET #	WT
1	3	CM-1245	COLLAR MOUNT ASSEMBLY	PLK7-F1	147
2	6	----	THREADED ROD 5/8" X 4'-0" A193-B7	----	
3	12	FW-625	5/8" HDG USS FLAT WASHER	----	1
4	12	LW-625	5/8" HDG LOCK WASHER	----	0
5	12	NUT-625	5/8" HDG HEX NUT	----	1
				GALVANIZED WT	150

VzW SMART Tool© Vendor

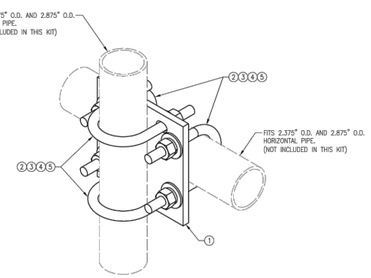
verizon

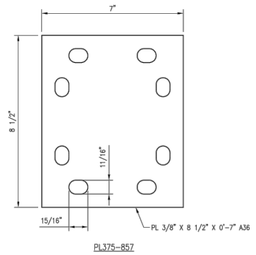
DRAWN BY: BT | CHECKED BY: HMA/KW

REV.	DESCRIPTION	BY	DATE
1	FIRST ISSUE	BT	05/11/20

SHEET TITLE: VZWSMART-PLK7 MONOPOLE COLLAR MOUNT ASSEMBLY

SHEET NUMBER: VZWSMART-PLK7 | REV #: 0





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

VZWSMART-MSK1 (CROSSOVER PLATE)

ITEM NO.	QTY.	PART NO.	DESCRIPTION	SHEET #	WT
1	1	PL375-857	PL 3/8" X 8 1/2" X 0'-7" A36	MSK1-F1	6
2	4	MS02-625-300-500	RU-BOLT 5/8" X 3" I.W. X 5" I.L. A36 (OR EQUIV.)	RBC-1	5
3	8	FW-625	5/8" HDG USS FLAT WASHER	----	1
4	8	LW-625	5/8" HDG LOCK WASHER	----	0
5	8	NUT-625	5/8" HDG HEX NUT	----	1
				GALVANIZED WT	14

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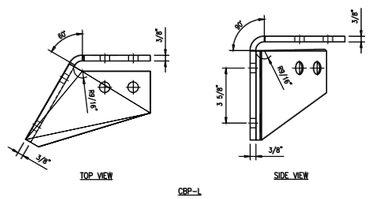
verizon

DRAWN BY: HLR | CHECKED BY: HMA

REV.	DESCRIPTION	BY	DATE
1	FIRST ISSUE	HLR	05/08/20

SHEET TITLE: VZWSMART-MSK1 CROSSOVER PLATE

SHEET NUMBER: VZWSMART-MSK1 | REV #: 0



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

VZWSMART-PLK3 (SUPPORT RAIL CORNER BRACKET)

ITEM NO.	QTY.	PART NO.	DESCRIPTION	SHEET #	WT
1	1	CBP-L	CORNER BENT PLATE BRACKET	PLK3-F1	9
2	1	CBP-R	CORNER BENT PLATE BRACKET	PLK3-F1	9
3	4	MS02-625-300-500	RU-BOLT 5/8" X 3" I.W. X 5" I.L. A36 (OR EQUIV.)	RBC-1	5
4	8	----	BOLT 5/8" X 2" A325	----	3
5	16	FW-625	5/8" HDG USS FLAT WASHER	----	1
6	16	LW-625	5/8" HDG LOCK WASHER	----	0
7	16	NUT-625	5/8" HDG HEX NUT	----	2
				GALVANIZED WT	30

VzW SMART Tool© Vendor

verizon

DRAWN BY: HLR | CHECKED BY: HMA

REV.	DESCRIPTION	BY	DATE
1	FIRST ISSUE	HLR	05/08/20

SHEET TITLE: VZWSMART-PLK3 SUPPORT RAIL CORNER BRACKET

SHEET NUMBER: VZWSMART-PLK3 | REV #: 0

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: R-604 | REVISION: 0

EXHIBIT 2

Suffield

Unique ID: R1624510 **Card No:** 1 Of 1

Location:	174 S GRAND ST	Map Id:	16 H 24 51 A CEL	Zone:	R45	Date Printed:	5/1/2024
		Neighborhood:	I6			Last Update:	5/1/2024

Owner Of Record	Volume/Page	Date	Sales Type	Valid	Sale Price
PAGANELLI DARIAN P	0547/0985	6/29/2020		No	0
C/O VERIZON WIRELESS, PO BOX 2549, ADDISON, TX 75001			Exempt		

Prior Owner History

PAGANELLI DARIAN P	0547/0985	6/29/2020		No	0

Permit Number	Date	Permit Description
E-22-43	2/10/2022	3 panel antennas and 6 RRHs are to be installed at the existing monopole location. A new hybrid cabl
C-21-12	5/4/2021	Extension of existing monopole and installation of AT&T antennas and base station equipment.

Supplemental Data

Census/Tract	VisionPID	185424
Dev Map ID	Listing	
GIS ID	I+E	
Route		
District		
Utilities		

Appraised Value

Total Land Value	0
Total Building Value	0
Total Outbldg Value	695,600
Total Market Value	695,600

Acres

Land Type	Acres	490	Total Value
Total	0.0000	0.00	0

State Item Codes

Code	Quantity	Value
25-Commercial Outbuilding	2.00	486.920

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	486,920	486,920	273,000	273,000	273,000
Total	486,920	486,920	273,000	273,000	273,000

490 Appraised Totals

Type	Acres	Value	Type	Acres	Value
			Totals	0.00	0

Application Date: Expiration Date:

Comments

8/7/2023 CELL VAL - $5000 MON X 5% VAC X 5 EXP 8 CAP

Revaluation Date: 10/1/2023

Suffield

Unique ID: R1624510

Location:	174 S GRAND ST	**Unit**	

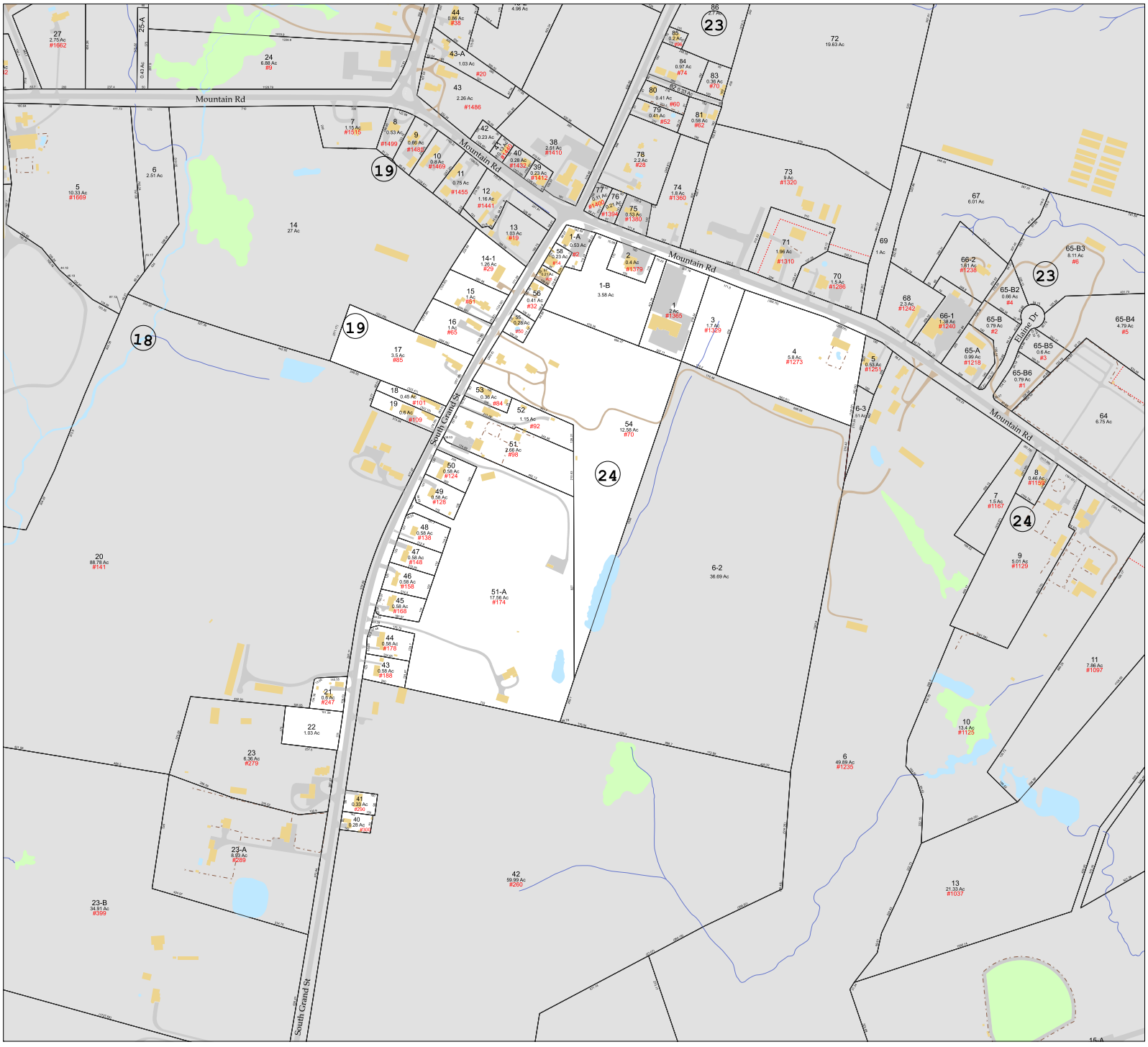
Commercial Building Description	Description	Area/Qty
Building Use		
Class		
Overall Condition		
Construction Quality		
Stories		
Year Built		
Remodel		
Percent Complete		
GLA		
Basement		
Basement Area		
HVAC		
Heating Type		
Fuel Type		
Cooling Type		
Interior		
Floors		
Walls		
Wall Height		
Exterior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



Map: 16H

1:1,800

100 50 0 100 200 300 Feet

Disclaimer:
All information is subject to verification by any user. The Town of Suffield and its mapping contractors assume no legal responsibility for the information contained herein.

NEGEO New England GeoSystems

Town of Suffield, Connecticut
Assessor Parcel Map

Map Produced March 2023
Grand List October 2022

Map Coordinates based on NAD 83 Connecticut State Plane Feet.
Planimetric features updated using aerial photography dated 2016.

--- Historic Property Line
--- Property Line

44 Address
77 Lot Number Block: 8
2.35 Ac Assessor Acreage
1.37 AcC G.I.S. Calculated Acreage
123.45 Assessor Parcel Dimension
(123.45) G.I.S. Calculated Dimension

Fence
Stonewall
Retaining Wall
Railroad
Trails
Hydro Features
Swamps

Buildings and Structures
Bridge
Unpaved Road and Driveway
Paved Sidewalk, Road and Driveway

Map: 16H

EXHIBIT 3

AMERICAN TOWER®
CORPORATION

Structural Analysis Report

Structure	:	139 ft Monopole
ATC Asset Name	:	SUFFIELD SW CT CT
ATC Asset Number	:	416862
Engineering Number	:	14843266_C3_02
Proposed Carrier	:	VERIZON WIRELESS
Carrier Site Name	:	SUFFIELD SW CT
Carrier Site Number	:	5000386683
Site Location	:	106 South Grand St. West Suffield, CT 06093-3412 41.987° N, 72.7021° W
County	:	Hartford
Date	:	March 28, 2024
Max Usage	:	49%
Analysis Result	:	Pass

Created By:

Garrett Williams
Structural Engineer

Garrett Williams

COA: PEC.0001553

Table of Contents

Introduction

The purpose of this report is to summarize results of a structural analysis performed on the 139 ft Monopole tower to reflect the change in loading by VERIZON WIRELESS.

Supporting Documents

Tower:	EEI Job #16937, dated August 31, 2012
Foundation:	EEI Job #16937, dated March 18, 2013
Geotechnical:	DET Job #2011.01, dated July 21, 2012
Modification:	ATC Job #OAA760209_C6_04, dated November 19, 2020

Analysis

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

Basic Wind Speed:	115 mph (3-second gust)
Basic Wind Speed w/ Ice:	50 mph (3-second gust) w/ 1.50" 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 = 0.17, S_1 = 0.05
Site Class:	D - Stiff Soil - Default

Conclusion

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

If you have any questions or require additional information, please 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	48.9%	1.2D + 1.0W	Pass
Serviceability Usage	24.6%	1.0D + 1.0W	Pass
Upper Flange Plate @ 119.0 ft	13.8%	Bolts	Pass
Base Plate @ 0.0 ft	35.7%	Rods	Pass
Mat & Pier	41.1%	Flexure [Steel (Pier)]	Pass

Maximum Reactions

Foundation	Moment (k-ft)	Axial (k)	Shear (k)
Monopole Base	2,196.1	44.6	21.6

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
121.0	1	Raycap RCMDC-6627-PF-48	(2) 1 5/8" Hybriflex
	3	Samsung B2/B66A RRH ORAN (RF 4439d-25A)	
	3	Samsung RF4461d-13A	
120.0	1	Unused Reserve (19266.99 sqin)	-
	3	Antel BXA-70063/6CF_	
	3	Samsung MT6413-77A	
	6	Commscope NHH-65B-R2B	
119.0	1	Platform with Handrails	-
	3	Mount Reinforcement	

Install proposed lines inside the pole shaft.

Other Existing/Reserved Loading

Elev (ft)	Qty	Equipment	Lines	Carrier
135.0	1	Raycap DC6-48-60-0-8F	(1) 0.40" (10.3mm) Fiber (2) 0.82" (20.8mm) 8 AWG 6 (2) 0.92" (23.4mm) Cable (2) 2" conduit	AT&T MOBILITY
	1	Raycap DC9-48-60-24-8C-EV		
	3	CCI DMP65R-BU8D		
	3	CCI TPA65R-BU8D		
	3	Ericsson RRUS 4415 B30		
	3	Ericsson RRUS 4449 B5, B12		
	3	Ericsson RRUS 4478 B14		
	3	Ericsson RRUS 8843 B2, B66A		
	3	Sector Frame		
112.0	1	Commscope RDIDC-9181-PF-48	(1) 1.60" (40.6mm) Hybrid	DISH WIRELESS L.L.C.
	3	Fujitsu TA08025-B604		
	3	Fujitsu TA08025-B605		
	3	JMA Wireless MX08FRO665-21		
110.0	1	Platform with Handrails	-	DISH WIRELESS L.L.C.

(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.

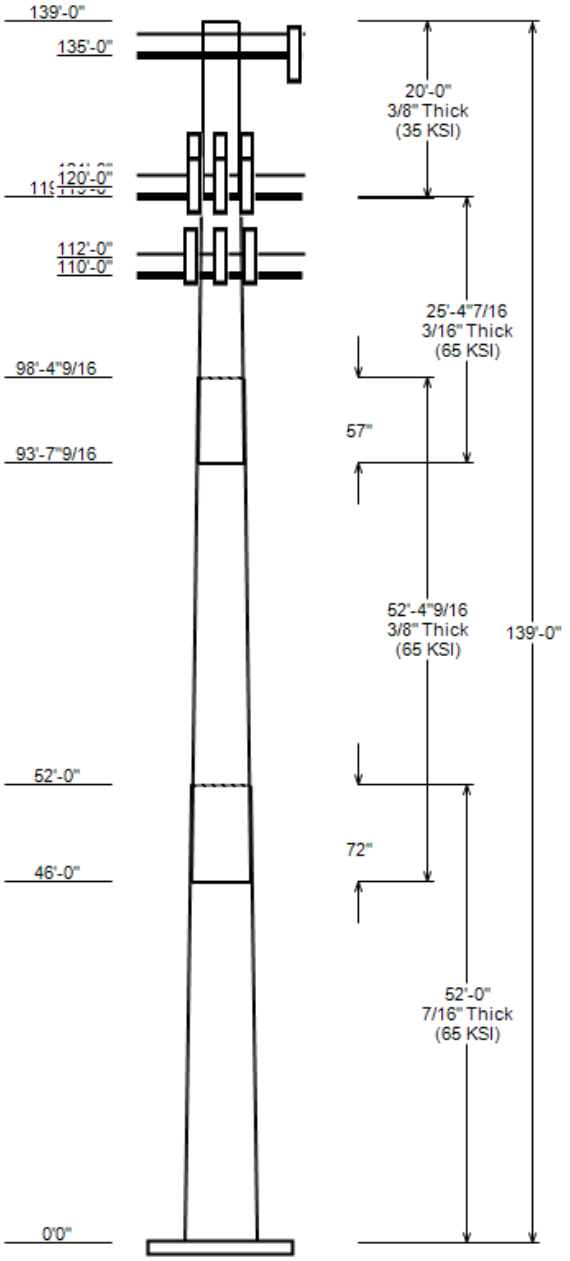
All services are performed, results obtained, and recommendations made in accordance with generally accepted engineering principles and practices. A.T. Engineering Services LLC is not responsible for the conclusions, opinions and recommendations made by others based on the information supplied herein.

ANALYSIS PARAMETERS

Nominal Wind:	115 mph	**Ice Wind:**	50 mph w/ 1.5" ice	**Service Wind:**	60 mph
Risk Category:	II	**Exposure:**	B	**S_s:** 0.171	**S_1:** 0.054
Topo Category:	1	**Topo Factor:**	Method 1	**Topo Feature:**	
Structure Height:	139 ft	**Base Elevation:**	0.00 ft	**Structure Type:**	Custom
Base Diameter:	53 in	**Base Rotation:**	0°	**Taper:**	0.2210 (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	52.000	41.50	53.00	0.438		0.000	18 Sides	65
2	52.380	31.99	43.57	0.375	Slip Joint	72.000	18 Sides	65
3	25.370	27.80	33.41	0.188	Slip Joint	57.000	18 Sides	65
4	20.000	26.00	26.00	0.375	Butt Joint	0.000	Round	35



DISCRETE APPURTENANCE

Elev (ft)	Description
135.0	(1) Raycap DC6-48-60-0-8F
135.0	(3) Ericsson RRUS 8843 B2, B66A
135.0	(3) Ericsson RRUS 4415 B30
135.0	(3) Ericsson RRUS 4449 B5, B12
135.0	(3) Ericsson RRUS 4478 B14
135.0	(1) Raycap DC9-48-60-24-8C-EV
135.0	(3) Generic Round Sector Frame
135.0	(3) CCI DMP65R-BU8D
135.0	(3) CCI TPA65R-BU8D
121.0	(3) Samsung B2/B66A RRH ORAN (RF 4
121.0	(3) Samsung RF4461d-13A
121.0	(1) Raycap RCMDC-6627-PF-48
120.0	(3) Samsung MT6413-77A
120.0	(3) Antel BXA-70063/6CF_
120.0	(6) Commscope NHH-65B-R2B
120.0	(1) Unused Reserve (19266.99 sqin)
119.0	(3) Generic Mount Reinforcement
119.0	(1) Generic Flat Platform with Han
112.0	(1) Commscope RDIDC-9181-PF-48
112.0	(3) Fujitsu TA08025-B605
112.0	(3) Fujitsu TA08025-B604
112.0	(3) JMA Wireless MX08FRO665-21
110.0	(1) Generic Round Platform with Ha

LINEAR APPURTENANCE

Elev To (ft)	Description
135.0	(2) 2" conduit
135.0	(2) 0.92" (23.4mm) Cable
135.0	(2) 0.82" (20.8mm) 8 AWG 6
135.0	(1) 0.40" (10.3mm) Fiber
121.0	(2) 1 5/8" Hybriflex
112.0	(1) 1.60" (40.6mm) Hybrid

GLOBAL BASE REACTIONS

Load Case	Moment (kip-ft)	Axial (kip)	Shear (kip)
1.2D + 1.0W	2196.10	44.61	21.58
0.9D + 1.0W	2175.34	33.45	21.57
1.2D + 1.0Di + 1.0Wi	702.66	67.27	6.82
1.2D + 1.0Ev + 1.0Eh	127.43	44.38	1.12
0.9D - 1.0Ev + 1.0Eh	125.97	30.99	1.12
1.0D + 1.0W	531.68	37.20	5.25

ANALYSIS PARAMETERS

Location:	Hartford County,CT	**Height:**	139 ft
Type and Shape:	Custom, Round	**Base Diameter:**	53.00 in
Manufacturer:	EEI	**Top Diameter:**	26.00 in
K_d (non-service):	0.95	**Taper:**	0.2210 in/ft
K_e:	0.99	**Rotation:**	0.000º

ICE & WIND PARAMETERS

Risk Category:	II	**Design Wind Speed:**	115 mph
Exposure Category:	B	**Design Wind Speed w/ Ice:**	50 mph
Topo Factor Procedure:	Method 1	**Design Ice Thickness:**	1.50 in
Topographic Category:	1	**Service Wind Speed:**	60 mph
Crest Height:	0 ft	**HMSL:**	190.00 ft

SEISMIC PARAMETERS

Analysis Method:	Equivalent Lateral Force Method				
Site Class:	D - Stiff Soil		**Period Based on Rayleigh Method (sec):**		2.07
T_L (sec):	6	**P:**	1	**$C_{s:}$**	0.030
$S_{s:}$	0.171	**$S_{1:}$**	0.054	**C_s Max:**	0.030
$F_{a:}$	1.600	**$F_{v:}$**	2.400	**C_s Min:**	0.030
$S_{ds:}$	0.182	**$S_{d1:}$**	0.086		

LOAD CASES

1.2D + 1.0W	115 mph Wind with No Ice
0.9D + 1.0W	115 mph Wind with No Ice (Reduced DL)
1.2D + 1.0Di + 1.0Wi	50 mph Wind with 1.5" Radial Ice
1.2D + 1.0Ev + 1.0Eh	Seismic
0.9D - 1.0Ev + 1.0Eh	Seismic (Reduced DL)
1.0D + 1.0W	60 mph Wind with No Ice

SHAFT SECTION PROPERTIES

Section	Length (ft)	Thick (in)	Fy (ksi)	Joint Type	Joint Len (in)	Weight (lb)	Bottom 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	52.00	0.4375	65		0.00	11,501	53.00	0.000	72.99	25,477.1	19.95	121.14	41.50	52.00	57.02	12,144.	15.31	94.85	0.2212
2-18	52.38	0.3750	65	Slip	72.00	7,935	43.57	46.000	51.42	12,123.3	19.08	116.20	31.99	98.38	37.63	4,751.0	13.63	85.30	0.2212
3-18	25.37	0.1875	65	Slip	57.00	1,563	33.41	93.630	19.77	2,758.0	30.01	178.20	27.80	119.00	16.43	1,583.3	24.73	148.27	0.2212
4-R	20.00	0.3750	35	Butt	0.00	2,055	26.00	119.000	30.19	2,479.8	0.00	69.33	26.00	139.00	30.19	2,479.8	0.00	69.33	0.0000
			Total Shaft Weight			**23,054**													

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
135.00	CCI DMP65R-BU8D	3	0.80	0.000	95.70	17.871	0.63	432.08	21.518	0.63
135.00	Generic Round Sector Frame	3	0.75	0.000	700.00	14.400	0.75	1665.27	30.782	0.75
135.00	Raycap DC9-48-60-24-8C-EV	1	0.80	0.000	16.00	4.788	0.67	143.77	6.244	0.67
135.00	Ericsson RRUS 4478 B14	3	0.80	0.000	59.40	2.021	0.67	120.14	2.955	0.67
135.00	CCI TPA65R-BU8D	3	0.80	0.000	82.50	18.089	0.63	423.74	21.743	0.63
135.00	Ericsson RRUS 4415 B30	3	0.80	0.000	46.00	1.842	0.50	94.53	2.730	0.50
135.00	Ericsson RRUS 8843 B2, B66A	3	0.80	0.000	72.00	1.639	0.50	132.66	2.475	0.50
135.00	Raycap DC6-48-60-0-8F	1	0.80	0.000	32.80	1.360	0.50	90.33	2.016	0.50
135.00	Ericsson RRUS 4449 B5, B12	3	0.80	0.000	71.00	1.969	0.50	134.79	2.892	0.50
121.00	Samsung B2/B66A RRH ORAN (RF 4	3	0.75	0.000	74.70	1.875	0.50	137.35	2.757	0.50
121.00	Raycap RCMDC-6627-PF-48	1	0.75	0.000	32.00	4.056	1.00	156.59	5.394	1.00
121.00	Samsung RF4461d-13A	3	0.75	0.000	79.10	1.875	0.50	142.31	2.760	0.50
120.00	Antel BXA-70063/6CF_	3	0.75	2.000	17.00	7.569	0.65	155.52	10.270	0.65
120.00	Samsung MT6413-77A	3	0.75	0.000	57.30	3.805	0.61	140.47	5.106	0.61
120.00	Unused Reserve (19266.99 sqin)	1	0.75	0.000	1521.50	133.799	0.90	2559.77	225.103	0.90
120.00	Commscope NHH-65B-R2B	6	0.75	0.000	43.70	8.079	0.69	214.48	10.808	0.69
119.00	Generic Flat Platform with Han	1	1.00	0.000	2500.00	42.400	1.00	4236.44	62.899	1.00
119.00	Generic Mount Reinforcement	3	0.75	0.000	200.00	4.980	0.67	389.17	9.840	0.67
112.00	Fujitsu TA08025-B605	3	0.75	0.000	75.00	1.962	0.50	135.91	2.856	0.50
112.00	Fujitsu TA08025-B604	3	0.75	0.000	63.90	1.962	0.50	120.60	2.856	0.50
112.00	Commscope RDIDC-9181-PF-48	1	0.75	0.000	21.90	1.867	1.00	77.23	2.742	1.00
112.00	JMA Wireless MX08FRO665-21	3	0.75	0.000	64.50	12.489	0.64	314.41	15.222	0.64
110.00	Generic Round Platform with Ha	1	1.00	0.000	2500.00	27.200	1.00	4069.87	50.892	1.00
Totals	**Row Count: 23**	**58**			**12,160.70**			**26,237.73**		

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	135.00	2	0.92" (23.4mm) Cable	0.92	0.89	N	0	0	0	0	0	N	AT&T MOBILITY
0.00	135.00	2	0.82" (20.8mm) 8 AWG	0.82	0.62	N	0	0	0	0	0	N	AT&T MOBILITY
0.00	135.00	2	2" conduit	2.38	3.65	N	0	0	0	0	0	N	AT&T MOBILITY
0.00	135.00	1	0.40" (10.3mm) Fiber	0.4	0.09	N	0	0	0	0	0	N	AT&T MOBILITY
0.00	121.00	2	1 5/8" Hybriflex	1.98	1.3	N	2	1.49	1.49	90	1.49	N	VERIZON WIRELESS
0.00	112.00	1	1.60" (40.6mm) Hybrid	1.6	2.34	N	0	0	0	0	0	N	DISH WIRELESS L.L.C.

SEGMENT PROPERTIES

Seg Top Elev (ft)	Description *(Max Length: 5 ft)*	Thick (in)	Flat Dia (in)	Area (in²)	Ix (in⁴)	W/t Ratio	D/t Ratio	F'y (ksi)	S (in³)	Z (in³)	Weight (lb)
0.00		0.4375	53.000	72.987	25,477.10	19.95	121.14	77.9	946.8	0.0	0.0
5.00		0.4375	51.894	71.451	23,902.50	19.50	118.61	78.5	907.2	0.0	1,228.7
10.00		0.4375	50.788	69.915	22,394.10	19.06	116.09	79	868.5	0.0	1,202.6
15.00		0.4375	49.682	68.380	20,950.60	18.61	113.56	79.5	830.6	0.0	1,176.5
20.00		0.4375	48.576	66.844	19,570.40	18.17	111.03	80	793.5	0.0	1,150.3
25.00		0.4375	47.470	65.308	18,252.30	17.72	108.50	80.6	757.3	0.0	1,124.2
30.00		0.4375	46.364	63.772	16,994.70	17.28	105.97	81.1	722.0	0.0	1,098.1

SEGMENT PROPERTIES

Seg Top Elev (ft)	Description	(Max Length: 5 ft)	Thick (in)	Flat Dia (in)	Area (in^2)	Ix (in^4)	W/t Ratio	D/t Ratio	F'y (ksi)	S (in^3)	Z (in^3)	Weight (lb)
35.00			0.4375	45.258	62.237	15,796.20	16.83	103.45	81.6	687.4	0.0	1,072.0
40.00			0.4375	44.152	60.701	14,655.40	16.38	100.92	82.1	653.8	0.0	1,045.8
45.00			0.4375	43.046	59.165	13,571.00	15.94	98.39	82.6	621.0	0.0	1,019.7
46.00	Bot - Section 2		0.4375	42.825	58.858	13,360.70	15.85	97.89	82.6	614.5	0.0	200.8
50.00			0.4375	41.940	57.629	12,541.40	15.49	95.86	82.6	589.0	0.0	1,485.4
52.00	Top - Section 1		0.3750	42.248	49.837	11,039.90	18.45	112.66	79.7	514.7	0.0	731.1
55.00			0.3750	41.584	49.047	10,523.30	18.14	110.89	80.1	498.4	0.0	504.7
60.00			0.3750	40.478	47.731	9,698.50	17.62	107.94	80.7	471.9	0.0	823.3
65.00			0.3750	39.372	46.415	8,918.00	17.10	104.99	81.3	446.1	0.0	800.9
70.00			0.3750	38.266	45.098	8,180.60	16.58	102.04	81.9	421.1	0.0	778.5
75.00			0.3750	37.160	43.782	7,484.90	16.06	99.09	82.5	396.7	0.0	756.1
80.00			0.3750	36.054	42.465	6,829.90	15.54	96.14	82.6	373.1	0.0	733.7
85.00			0.3750	34.948	41.149	6,214.20	15.02	93.19	82.6	350.2	0.0	711.3
90.00			0.3750	33.842	39.833	5,636.70	14.50	90.25	82.6	328.1	0.0	688.9
93.63	Bot - Section 3		0.3750	33.039	38.877	5,240.70	14.12	88.10	82.6	312.4	0.0	486.1
95.00			0.3750	32.736	38.516	5,096.10	13.98	87.30	82.6	306.6	0.0	272.2
98.38	Top - Section 2		0.1875	32.363	19.148	2,504.60	29.02	172.60	67.3	152.4	0.0	660.7
100.00			0.1875	32.005	18.935	2,421.80	28.69	170.69	67.7	149.0	0.0	105.0
105.00			0.1875	30.899	18.277	2,178.00	27.65	164.79	68.9	138.8	0.0	316.6
110.00			0.1875	29.793	17.618	1,951.00	26.61	158.90	70.1	129.0	0.0	305.4
112.00			0.1875	29.351	17.355	1,864.90	26.19	156.54	70.6	125.1	0.0	119.0
115.00			0.1875	28.687	16.960	1,740.40	25.57	153.00	71.3	119.5	0.0	175.2
119.00	Top - Section 3		0.1875	27.802	16.434	1,583.30	24.73	148.28	72.3	112.2	0.0	227.3
119.00	Bot - Section 4		0.3750	26.000	30.189	2,479.80	0.00	69.33	35	190.8	246.3	
120.00			0.3750	26.000	30.189	2,479.80	0.00	69.33	35	190.8	246.3	102.7
121.00			0.3750	26.000	30.189	2,479.80	0.00	69.33	35	190.8	246.3	102.7
125.00			0.3750	26.000	30.189	2,479.80	0.00	69.33	35	190.8	246.3	410.9
130.00			0.3750	26.000	30.189	2,479.80	0.00	69.33	35	190.8	246.3	513.6
135.00			0.3750	26.000	30.189	2,479.80	0.00	69.33	35	190.8	246.3	513.6
139.00			0.3750	26.000	30.189	2,479.80	0.00	69.33	35	190.8	246.3	410.9
											Total:	**23,054.5**

CALCULATED FORCES

Load Case: 1.2D + 1.0W — 115 mph Wind with No Ice — 22 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	-44.61	-21.58	0.00	-2,196.1	0.00	2,196.10	5,119.46	1,280.92	6,081.36	5,534.19	0	0	0.406
5.00	-43.00	-21.28	0.00	-2,088.2	0.00	2,088.20	5,045.45	1,253.97	5,828.17	5,338.47	0.06	-0.12	0.400
10.00	-41.42	-20.97	0.00	-1,981.8	0.00	1,981.82	4,970.00	1,227.02	5,580.35	5,144.65	0.25	-0.24	0.394
15.00	-39.88	-20.67	0.00	-1,877.0	0.00	1,876.95	4,893.09	1,200.06	5,337.92	4,952.82	0.57	-0.36	0.387
20.00	-38.36	-20.38	0.00	-1,773.6	0.00	1,773.58	4,814.73	1,173.11	5,100.87	4,763.09	1.02	-0.49	0.381
25.00	-36.88	-20.08	0.00	-1,671.7	0.00	1,671.70	4,734.93	1,146.16	4,869.21	4,575.55	1.6	-0.61	0.373
30.00	-35.43	-19.79	0.00	-1,571.3	0.00	1,571.28	4,653.68	1,119.21	4,642.92	4,390.31	2.31	-0.74	0.366
35.00	-34.02	-19.49	0.00	-1,472.3	0.00	1,472.33	4,570.97	1,092.25	4,422.03	4,207.46	3.15	-0.87	0.358
40.00	-32.63	-19.17	0.00	-1,374.9	0.00	1,374.90	4,486.82	1,065.30	4,206.51	4,027.10	4.13	-0.99	0.349
45.00	-31.30	-18.97	0.00	-1,279.0	0.00	1,279.03	4,395.67	1,038.35	3,996.38	3,844.48	5.24	-1.12	0.340
46.00	-31.02	-18.82	0.00	-1,260.0	0.00	1,260.05	4,372.85	1,032.96	3,955.00	3,804.47	5.47	-1.15	0.339
50.00	-29.14	-18.59	0.00	-1,184.8	0.00	1,184.79	4,281.57	1,011.39	3,791.64	3,646.50	6.48	-1.25	0.332
52.00	-28.21	-18.42	0.00	-1,147.6	0.00	1,147.61	3,574.58	874.64	3,308.04	3,076.36	7.02	-1.31	0.381
55.00	-27.52	-18.15	0.00	-1,092.4	0.00	1,092.36	3,534.13	860.78	3,204.03	2,992.91	7.87	-1.39	0.373
60.00	-26.41	-17.82	0.00	-1,001.6	0.00	1,001.60	3,465.56	837.68	3,034.38	2,855.36	9.39	-1.53	0.359
65.00	-25.32	-17.47	0.00	-912.5	0.00	912.52	3,395.53	814.57	2,869.34	2,719.79	11.07	-1.67	0.343
70.00	-24.27	-17.13	0.00	-825.2	0.00	825.15	3,324.05	791.47	2,708.91	2,586.31	12.89	-1.81	0.327
75.00	-23.24	-16.79	0.00	-739.5	0.00	739.49	3,251.13	768.37	2,553.10	2,455.01	14.86	-1.94	0.309
80.00	-22.25	-16.44	0.00	-655.6	0.00	655.56	3,154.97	745.27	2,401.91	2,310.04	16.96	-2.07	0.291
85.00	-21.28	-16.09	0.00	-573.4	0.00	573.36	3,057.17	722.17	2,255.33	2,168.32	19.2	-2.2	0.272
90.00	-20.34	-15.79	0.00	-492.9	0.00	492.89	2,959.37	699.06	2,113.36	2,031.09	21.58	-2.32	0.250
93.63	-19.69	-15.61	0.00	-435.6	0.00	435.57	2,888.37	682.29	2,013.19	1,934.27	23.38	-2.41	0.233

CALCULATED FORCES

95.00	-19.33	-15.45	0.00	-414.2	0.00	414.19	2,861.57	675.96	1,976.01	1,898.35	24.07	-2.44	0.225
98.38	-18.47	-15.25	0.00	-362.0	0.00	361.98	1,159.16	336.05	976.56	768.96	25.83	-2.51	0.489
100.00	-18.29	-15.06	0.00	-337.3	0.00	337.27	1,153.00	332.30	954.93	756.31	26.69	-2.55	0.464
105.00	-17.79	-14.75	0.00	-262.0	0.00	262.00	1,133.05	320.75	889.70	717.23	29.45	-2.72	0.383
110.00	-14.38	-13.40	0.00	-188.2	0.00	188.25	1,111.64	309.20	826.78	678.18	32.39	-2.87	0.292
112.00	-13.48	-12.35	0.00	-161.4	0.00	161.45	1,102.67	304.58	802.26	662.60	33.61	-2.92	0.258
115.00	-13.22	-12.13	0.00	-124.4	0.00	124.39	1,088.78	297.65	766.17	639.27	35.46	-2.99	0.208
119.00	-9.27	-9.96	0.00	-75.8	0.00	75.85	950.95	285.28	642.72	624.60	38	-3.05	0.132
119.00	-9.27	-9.96	0.00	-75.8	0.00	75.85	1,069.46	288.41	719.34	608.30	38	-3.05	0.135
120.00	-6.98	-4.96	0.00	-65.1	0.00	65.08	950.95	285.28	642.72	624.60	38.64	-3.07	0.112
121.00	-6.27	-4.54	0.00	-60.1	0.00	60.12	950.95	285.28	642.72	624.60	39.28	-3.07	0.103
125.00	-5.74	-4.30	0.00	-42.0	0.00	41.96	950.95	285.28	642.72	624.60	41.87	-3.1	0.073
130.00	-5.08	-4.02	0.00	-20.5	0.00	20.49	950.95	285.28	642.72	624.60	45.12	-3.11	0.038
135.00	-0.49	-0.10	0.00	-0.4	0.00	0.40	950.95	285.28	642.72	624.60	48.38	-3.12	0.001
139.00	0.00	-0.07	0.00	0.0	0.00	0.00	950.95	285.28	642.72	624.60	51	-3.12	0.000

CALCULATED FORCES

Load Case: 0.9D + 1.0W — 115 mph Wind with No Ice (Reduced DL) — 22 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	-33.45	-21.57	0.00	-2,175.3	0.00	2,175.34	5,119.46	1,280.92	6,081.36	5,534.19	0	0	0.400
5.00	-32.24	-21.24	0.00	-2,067.5	0.00	2,067.49	5,045.45	1,253.97	5,828.17	5,338.47	0.06	-0.12	0.394
10.00	-31.04	-20.92	0.00	-1,961.3	0.00	1,961.29	4,970.00	1,227.02	5,580.35	5,144.65	0.25	-0.24	0.388
15.00	-29.87	-20.60	0.00	-1,856.7	0.00	1,856.71	4,893.09	1,200.06	5,337.92	4,952.82	0.57	-0.36	0.381
20.00	-28.73	-20.28	0.00	-1,753.7	0.00	1,753.72	4,814.73	1,173.11	5,100.87	4,763.09	1.01	-0.48	0.374
25.00	-27.61	-19.97	0.00	-1,652.3	0.00	1,652.31	4,734.93	1,146.16	4,869.21	4,575.55	1.58	-0.61	0.367
30.00	-26.51	-19.66	0.00	-1,552.5	0.00	1,552.46	4,653.68	1,119.21	4,642.92	4,390.31	2.28	-0.73	0.360
35.00	-25.44	-19.34	0.00	-1,454.2	0.00	1,454.16	4,570.97	1,092.25	4,422.03	4,207.46	3.12	-0.86	0.351
40.00	-24.39	-19.02	0.00	-1,357.4	0.00	1,357.45	4,486.82	1,065.30	4,206.51	4,027.10	4.08	-0.98	0.343
45.00	-23.38	-18.81	0.00	-1,262.4	0.00	1,262.36	4,395.67	1,038.35	3,996.38	3,844.48	5.18	-1.11	0.334
46.00	-23.17	-18.65	0.00	-1,243.6	0.00	1,243.55	4,372.85	1,032.96	3,955.00	3,804.47	5.42	-1.14	0.332
50.00	-21.76	-18.42	0.00	-1,169.0	0.00	1,168.97	4,281.57	1,011.39	3,791.64	3,646.50	6.41	-1.24	0.326
52.00	-21.06	-18.24	0.00	-1,132.1	0.00	1,132.13	3,574.58	874.64	3,308.04	3,076.36	6.94	-1.29	0.374
55.00	-20.54	-17.97	0.00	-1,077.4	0.00	1,077.41	3,534.13	860.78	3,204.03	2,992.91	7.78	-1.37	0.366
60.00	-19.69	-17.62	0.00	-987.6	0.00	987.57	3,465.56	837.68	3,034.38	2,855.36	9.29	-1.51	0.352
65.00	-18.87	-17.27	0.00	-899.5	0.00	899.46	3,395.53	814.57	2,869.34	2,719.79	10.94	-1.65	0.337
70.00	-18.07	-16.92	0.00	-813.1	0.00	813.10	3,324.05	791.47	2,708.91	2,586.31	12.74	-1.78	0.320
75.00	-17.30	-16.57	0.00	-728.5	0.00	728.50	3,251.13	768.37	2,553.10	2,455.01	14.68	-1.92	0.303
80.00	-16.55	-16.22	0.00	-645.6	0.00	645.65	3,154.97	745.27	2,401.91	2,310.04	16.76	-2.05	0.285
85.00	-15.82	-15.87	0.00	-564.6	0.00	564.55	3,057.17	722.17	2,255.33	2,168.32	18.98	-2.17	0.266
90.00	-15.11	-15.57	0.00	-485.2	0.00	485.20	2,959.37	699.06	2,113.36	2,031.09	21.32	-2.29	0.244
93.63	-14.62	-15.39	0.00	-428.7	0.00	428.70	2,888.37	682.29	2,013.19	1,934.27	23.1	-2.38	0.227
95.00	-14.35	-15.22	0.00	-407.6	0.00	407.62	2,861.57	675.96	1,976.01	1,898.35	23.78	-2.41	0.220
98.38	-13.70	-15.03	0.00	-356.2	0.00	356.17	1,159.16	336.05	976.56	768.96	25.52	-2.48	0.477
100.00	-13.56	-14.83	0.00	-331.8	0.00	331.82	1,153.00	332.30	954.93	756.31	26.36	-2.51	0.452
105.00	-13.19	-14.51	0.00	-257.7	0.00	257.68	1,133.05	320.75	889.70	717.23	29.09	-2.69	0.373
110.00	-10.63	-13.21	0.00	-185.1	0.00	185.11	1,111.64	309.20	826.78	678.18	31.99	-2.83	0.284
112.00	-9.97	-12.17	0.00	-158.7	0.00	158.70	1,102.67	304.58	802.26	662.60	33.19	-2.88	0.250
115.00	-9.77	-11.94	0.00	-122.2	0.00	122.20	1,088.78	297.65	766.17	639.27	35.02	-2.95	0.202
119.00	-6.83	-9.82	0.00	-74.4	0.00	74.43	950.95	285.28	642.72	624.60	37.52	-3.01	0.128
119.00	-6.83	-9.82	0.00	-74.4	0.00	74.43	1,069.46	288.41	719.34	608.30	37.52	-3.01	0.130
120.00	-5.18	-4.86	0.00	-63.8	0.00	63.80	950.95	285.28	642.72	624.60	38.15	-3.02	0.108
121.00	-4.65	-4.45	0.00	-58.9	0.00	58.93	950.95	285.28	642.72	624.60	38.79	-3.03	0.099
125.00	-4.25	-4.21	0.00	-41.1	0.00	41.14	950.95	285.28	642.72	624.60	41.34	-3.05	0.071
130.00	-3.76	-3.94	0.00	-20.1	0.00	20.09	950.95	285.28	642.72	624.60	44.54	-3.07	0.036
135.00	-0.37	-0.09	0.00	-0.4	0.00	0.38	950.95	285.28	642.72	624.60	47.76	-3.08	0.001
139.00	0.00	-0.07	0.00	0.0	0.00	0.00	950.95	285.28	642.72	624.60	50.34	-3.08	0.000

CALCULATED FORCES

Load Case: 1.2D + 1.0Di + 1.0Wi — 50 mph Wind with 1.5" Radial Ice — 21 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	-67.27	-6.82	0.00	-702.7	0.00	702.66	5,119.46	1,280.92	6,081.36	5,534.19	0	0	0.140
5.00	-65.31	-6.73	0.00	-668.6	0.00	668.57	5,045.45	1,253.97	5,828.17	5,338.47	0.02	-0.04	0.138
10.00	-63.35	-6.65	0.00	-634.9	0.00	634.90	4,970.00	1,227.02	5,580.35	5,144.65	0.08	-0.08	0.136
15.00	-61.41	-6.56	0.00	-601.7	0.00	601.66	4,893.09	1,200.06	5,337.92	4,952.82	0.18	-0.12	0.134
20.00	-59.49	-6.48	0.00	-568.8	0.00	568.84	4,814.73	1,173.11	5,100.87	4,763.09	0.33	-0.16	0.132
25.00	-57.60	-6.40	0.00	-536.4	0.00	536.44	4,734.93	1,146.16	4,869.21	4,575.55	0.51	-0.2	0.129
30.00	-55.75	-6.31	0.00	-504.5	0.00	504.46	4,653.68	1,119.21	4,642.92	4,390.31	0.74	-0.24	0.127
35.00	-53.93	-6.22	0.00	-472.9	0.00	472.91	4,570.97	1,092.25	4,422.03	4,207.46	1.01	-0.28	0.124
40.00	-52.14	-6.13	0.00	-441.8	0.00	441.80	4,486.82	1,065.30	4,206.51	4,027.10	1.32	-0.32	0.121
45.00	-50.39	-6.07	0.00	-411.2	0.00	411.15	4,395.67	1,038.35	3,996.38	3,844.48	1.68	-0.36	0.118
46.00	-50.05	-6.02	0.00	-405.1	0.00	405.09	4,372.85	1,032.96	3,955.00	3,804.47	1.75	-0.37	0.118
50.00	-47.84	-5.95	0.00	-381.0	0.00	381.00	4,281.57	1,011.39	3,791.64	3,646.50	2.08	-0.4	0.116
52.00	-46.75	-5.90	0.00	-369.1	0.00	369.09	3,574.58	874.64	3,308.04	3,076.36	2.25	-0.42	0.133
55.00	-45.84	-5.82	0.00	-351.4	0.00	351.39	3,534.13	860.78	3,204.03	2,992.91	2.52	-0.44	0.130
60.00	-44.33	-5.72	0.00	-322.3	0.00	322.29	3,465.56	837.68	3,034.38	2,855.36	3.01	-0.49	0.126
65.00	-42.87	-5.61	0.00	-293.7	0.00	293.70	3,395.53	814.57	2,869.34	2,719.79	3.55	-0.54	0.121
70.00	-41.44	-5.51	0.00	-265.6	0.00	265.63	3,324.05	791.47	2,708.91	2,586.31	4.14	-0.58	0.115
75.00	-40.04	-5.40	0.00	-238.1	0.00	238.09	3,251.13	768.37	2,553.10	2,455.01	4.77	-0.62	0.109
80.00	-38.68	-5.29	0.00	-211.1	0.00	211.10	3,154.97	745.27	2,401.91	2,310.04	5.44	-0.67	0.104
85.00	-37.35	-5.18	0.00	-184.7	0.00	184.66	3,057.17	722.17	2,255.33	2,168.32	6.16	-0.71	0.097
90.00	-36.07	-5.08	0.00	-158.8	0.00	158.77	2,959.37	699.06	2,113.36	2,031.09	6.93	-0.75	0.090
93.63	-35.15	-5.02	0.00	-140.3	0.00	140.33	2,888.37	682.29	2,013.19	1,934.27	7.51	-0.77	0.085
95.00	-34.70	-4.97	0.00	-133.5	0.00	133.46	2,861.57	675.96	1,976.01	1,898.35	7.73	-0.78	0.082
98.38	-33.61	-4.90	0.00	-116.7	0.00	116.67	1,159.16	336.05	976.56	768.96	8.29	-0.81	0.181
100.00	-33.33	-4.84	0.00	-108.7	0.00	108.73	1,153.00	332.30	954.93	756.31	8.57	-0.82	0.173
105.00	-32.52	-4.74	0.00	-84.5	0.00	84.53	1,133.05	320.75	889.70	717.23	9.46	-0.88	0.147
110.00	-27.39	-4.25	0.00	-60.8	0.00	60.82	1,111.64	309.20	826.78	678.18	10.4	-0.92	0.115
112.00	-25.34	-3.97	0.00	-52.3	0.00	52.31	1,102.67	304.58	802.26	662.60	10.79	-0.94	0.102
115.00	-24.89	-3.89	0.00	-40.4	0.00	40.41	1,088.78	297.65	766.17	639.27	11.39	-0.96	0.086
119.00	-18.63	-3.20	0.00	-24.8	0.00	24.85	1,069.46	288.41	719.34	608.30	12.21	-0.98	0.058
119.00	-18.63	-3.20	0.00	-24.8	0.00	24.85	950.95	285.28	642.72	624.60	12.21	-0.98	0.059
120.00	-13.72	-1.66	0.00	-21.4	0.00	21.44	950.95	285.28	642.72	624.60	12.41	-0.99	0.049
121.00	-12.50	-1.52	0.00	-19.8	0.00	19.78	950.95	285.28	642.72	624.60	12.62	-0.99	0.045
125.00	-11.73	-1.41	0.00	-13.7	0.00	13.72	950.95	285.28	642.72	624.60	13.45	-1	0.034
130.00	-10.76	-1.29	0.00	-6.7	0.00	6.66	950.95	285.28	642.72	624.60	14.5	-1	0.022
135.00	-0.73	-0.05	0.00	-0.2	0.00	0.21	950.95	285.28	642.72	624.60	15.55	-1	0.001
139.00	0.00	-0.04	0.00	0.0	0.00	0.00	950.95	285.28	642.72	624.60	16.39	-1	0.000

CALCULATED FORCES

Load Case: 1.0D + 1.0W — 60 mph Wind with No Ice — 21 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	-37.20	-5.25	0.00	-531.7	0.00	531.68	5,119.46	1,280.92	6,081.36	5,534.19	0	0	0.103
5.00	-35.89	-5.18	0.00	-505.4	0.00	505.41	5,045.45	1,253.97	5,828.17	5,338.47	0.02	-0.03	0.102
10.00	-34.61	-5.10	0.00	-479.5	0.00	479.53	4,970.00	1,227.02	5,580.35	5,144.65	0.06	-0.06	0.100
15.00	-33.35	-5.02	0.00	-454.0	0.00	454.04	4,893.09	1,200.06	5,337.92	4,952.82	0.14	-0.09	0.099
20.00	-32.12	-4.95	0.00	-428.9	0.00	428.93	4,814.73	1,173.11	5,100.87	4,763.09	0.25	-0.12	0.097
25.00	-30.92	-4.87	0.00	-404.2	0.00	404.19	4,734.93	1,146.16	4,869.21	4,575.55	0.39	-0.15	0.095
30.00	-29.74	-4.80	0.00	-379.8	0.00	379.82	4,653.68	1,119.21	4,642.92	4,390.31	0.56	-0.18	0.093
35.00	-28.59	-4.72	0.00	-355.8	0.00	355.83	4,570.97	1,092.25	4,422.03	4,207.46	0.76	-0.21	0.091
40.00	-27.46	-4.64	0.00	-332.2	0.00	332.21	4,486.82	1,065.30	4,206.51	4,027.10	1	-0.24	0.089
45.00	-26.37	-4.59	0.00	-309.0	0.00	308.99	4,395.67	1,038.35	3,996.38	3,844.48	1.27	-0.27	0.086
46.00	-26.15	-4.56	0.00	-304.4	0.00	304.40	4,372.85	1,032.96	3,955.00	3,804.47	1.32	-0.28	0.086
50.00	-24.60	-4.50	0.00	-286.2	0.00	286.17	4,281.57	1,011.39	3,791.64	3,646.50	1.57	-0.3	0.084
52.00	-23.84	-4.46	0.00	-277.2	0.00	277.17	3,574.58	874.64	3,308.04	3,076.36	1.7	-0.32	0.097
55.00	-23.29	-4.39	0.00	-263.8	0.00	263.80	3,534.13	860.78	3,204.03	2,992.91	1.9	-0.33	0.095
60.00	-22.38	-4.31	0.00	-241.8	0.00	241.84	3,465.56	837.68	3,034.38	2,855.36	2.27	-0.37	0.091
65.00	-21.50	-4.22	0.00	-220.3	0.00	220.29	3,395.53	814.57	2,869.34	2,719.79	2.68	-0.4	0.087
70.00	-20.65	-4.14	0.00	-199.2	0.00	199.17	3,324.05	791.47	2,708.91	2,586.31	3.12	-0.44	0.083
75.00	-19.81	-4.06	0.00	-178.5	0.00	178.47	3,251.13	768.37	2,553.10	2,455.01	3.59	-0.47	0.079
80.00	-19.00	-3.97	0.00	-158.2	0.00	158.19	3,154.97	745.27	2,401.91	2,310.04	4.1	-0.5	0.075
85.00	-18.21	-3.89	0.00	-138.3	0.00	138.34	3,057.17	722.17	2,255.33	2,168.32	4.64	-0.53	0.070
90.00	-17.45	-3.81	0.00	-118.9	0.00	118.91	2,959.37	699.06	2,113.36	2,031.09	5.22	-0.56	0.064
93.63	-16.90	-3.77	0.00	-105.1	0.00	105.08	2,888.37	682.29	2,013.19	1,934.27	5.65	-0.58	0.060
95.00	-16.61	-3.73	0.00	-99.9	0.00	99.91	2,861.57	675.96	1,976.01	1,898.35	5.82	-0.59	0.058
98.38	-15.90	-3.68	0.00	-87.3	0.00	87.31	1,159.16	336.05	976.56	768.96	6.24	-0.61	0.127
100.00	-15.77	-3.63	0.00	-81.4	0.00	81.35	1,153.00	332.30	954.93	756.31	6.45	-0.62	0.121
105.00	-15.37	-3.56	0.00	-63.2	0.00	63.18	1,133.05	320.75	889.70	717.23	7.12	-0.66	0.102
110.00	-12.49	-3.24	0.00	-45.4	0.00	45.39	1,111.64	309.20	826.78	678.18	7.83	-0.69	0.078
112.00	-11.71	-2.98	0.00	-38.9	0.00	38.92	1,102.67	304.58	802.26	662.60	8.12	-0.71	0.069
115.00	-11.50	-2.93	0.00	-30.0	0.00	29.98	1,088.78	297.65	766.17	639.27	8.57	-0.72	0.058
119.00	-8.12	-2.41	0.00	-18.3	0.00	18.27	1,069.46	288.41	719.34	608.30	9.18	-0.74	0.038
119.00	-8.12	-2.41	0.00	-18.3	0.00	18.27	950.95	285.28	642.72	624.60	9.18	-0.74	0.038
120.00	-6.02	-1.19	0.00	-15.7	0.00	15.66	950.95	285.28	642.72	624.60	9.34	-0.74	0.031
121.00	-5.41	-1.09	0.00	-14.5	0.00	14.47	950.95	285.28	642.72	624.60	9.49	-0.74	0.029
125.00	-4.96	-1.03	0.00	-10.1	0.00	10.10	950.95	285.28	642.72	624.60	10.12	-0.75	0.021
130.00	-4.39	-0.97	0.00	-4.9	0.00	4.93	950.95	285.28	642.72	624.60	10.9	-0.75	0.013
135.00	-0.41	-0.02	0.00	-0.1	0.00	0.09	950.95	285.28	642.72	624.60	11.69	-0.75	0.001
139.00	0.00	-0.02	0.00	0.0	0.00	0.00	950.95	285.28	642.72	624.60	12.32	-0.75	0.000

EQUIVALENT LATERAL FORCES METHOD ANALYSIS

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

Spectral Response Acceleration for Short Period (S_S):	0.171
Spectral Response Acceleration at 1.0 Second Period (S_1):	0.054
Long-Period Transition Period (T_L – Seconds):	6
Importance Factor (I_e):	1.000
Site Coefficient F_a:	1.600
Site Coefficient F_v:	2.400
Response Modification Coefficient (R):	1.500
Design Spectral Response Acceleration at Short Period (S_{ds}):	0.182
Design Spectral Response Acceleration at 1.0 Second Period (S_{d1}):	0.086
Seismic Response Coefficient (C_s):	0.030
Upper Limit C_S:	0.030
Lower Limit C_S:	0.030
Period based on Rayleigh Method (sec):	2.070
Redundancy Factor (p):	1.000
Seismic Force Distribution Exponent (k):	1.790
Total Unfactored Dead Load:	37.200 k
Seismic Base Shear (E):	1.120 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)
35	137	411	2,704	0.025	28	508
34	132.5	566	3,507	0.032	36	699
33	127.5	566	3,274	0.030	34	699
32	123	453	2,456	0.023	25	560
31	120.5	116	606	0.006	6	143
30	119.5	116	597	0.006	6	143
29	117	279	1,386	0.013	14	345
28	113.5	214	1,007	0.009	10	265
27	111	150	676	0.006	7	185
26	107.5	382	1,630	0.015	17	472
25	102.5	393	1,541	0.014	16	486
24	99.19	130	480	0.004	5	161
23	96.69	713	2,516	0.023	26	881
22	94.315	293	990	0.009	10	363
21	91.815	542	1,744	0.016	18	670
20	87.5	766	2,261	0.021	23	947
19	82.5	788	2,095	0.019	21	974
18	77.5	810	1,927	0.018	20	1,002
17	72.5	833	1,758	0.016	18	1,030
16	67.5	855	1,589	0.015	16	1,057
15	62.5	878	1,421	0.013	15	1,085
14	57.5	900	1,255	0.012	13	1,113
13	53.5	551	675	0.006	7	681
12	51	762	857	0.008	9	942
11	48	1,547	1,562	0.014	16	1,913
10	45.5	216	198	0.002	2	267
9	42.5	1,096	891	0.008	9	1,356
8	37.5	1,123	729	0.007	7	1,388
7	32.5	1,149	578	0.005	6	1,420
6	27.5	1,175	439	0.004	4	1,453
5	22.5	1,201	313	0.003	3	1,485
4	17.5	1,227	204	0.002	2	1,517
3	12.5	1,253	114	0.001	1	1,550
2	7.5	1,279	47	0.000	0	1,582
1	2.5	1,305	7	0.000	0	1,614
Raycap DC6-48-60-0-8F	135	33	210	0.002	2	41
Ericsson RRUS 8843 B2, B66A	135	216	1,385	0.013	14	267
Ericsson RRUS 4415 B30	135	138	885	0.008	9	171

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)
Ericsson RRUS 4449 B5, B12	135	213	1,365	0.012	14	263
Ericsson RRUS 4478 B14	135	178	1,142	0.010	12	220
Raycap DC9-48-60-24-8C-EV	135	16	103	0.001	1	20
Generic Round Sector Frame	135	2,100	13,461	0.124	138	2,597
CCI DMP65R-BU8D	135	287	1,840	0.017	19	355
CCI TPA65R-BU8D	135	248	1,586	0.015	16	306
Samsung B2/B66A RRH ORAN (RF 4439d-25A)	121	224	1,181	0.011	12	277
Samsung RF4461d-13A	121	237	1,251	0.012	13	293
Raycap RCMDC-6627-PF-48	121	32	169	0.002	2	40
Samsung MT6413-77A	120	172	893	0.008	9	213
Antel BXA-70063/6CF_	120	51	265	0.002	3	63
Commscope NHH-65B-R2B	120	262	1,362	0.012	14	324
Unused Reserve (19266.99 sqin)	120	1,522	7,902	0.073	81	1,881
Generic Mount Reinforcement	119	600	3,070	0.028	31	742
Generic Flat Platform with Handrails	119	2,500	12,791	0.117	131	3,091
Commscope RDIDC-9181-PF-48	112	22	101	0.001	1	27
Fujitsu TA08025-B605	112	225	1,033	0.010	11	278
Fujitsu TA08025-B604	112	192	880	0.008	9	237
JMA Wireless MX08FRO665-21	112	194	888	0.008	9	239
Generic Round Platform with Handrails	110	2,500	11,114	0.102	114	3,091
	Totals:	**37,197**	**108,910**	**1.000**	**1,116**	**45,993**

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)
35	137	411	2,704	0.025	28	355
34	132.5	566	3,507	0.032	36	488
33	127.5	566	3,274	0.030	34	488
32	123	453	2,456	0.023	25	391
31	120.5	116	606	0.006	6	100
30	119.5	116	597	0.006	6	100
29	117	279	1,386	0.013	14	241
28	113.5	214	1,007	0.009	10	185
27	111	150	676	0.006	7	129
26	107.5	382	1,630	0.015	17	330
25	102.5	393	1,541	0.014	16	340
24	99.19	130	480	0.004	5	112
23	96.69	713	2,516	0.023	26	615
22	94.315	293	990	0.009	10	253
21	91.815	542	1,744	0.016	18	468
20	87.5	766	2,261	0.021	23	661
19	82.5	788	2,095	0.019	21	680
18	77.5	810	1,927	0.018	20	700
17	72.5	833	1,758	0.016	18	719
16	67.5	855	1,589	0.015	16	739
15	62.5	878	1,421	0.013	15	758
14	57.5	900	1,255	0.012	13	777
13	53.5	551	675	0.006	7	476
12	51	762	857	0.008	9	658
11	48	1,547	1,562	0.014	16	1,336
10	45.5	216	198	0.002	2	187
9	42.5	1,096	891	0.008	9	947
8	37.5	1,123	729	0.007	7	969
7	32.5	1,149	578	0.005	6	992
6	27.5	1,175	439	0.004	4	1,014
5	22.5	1,201	313	0.003	3	1,037
4	17.5	1,227	204	0.002	2	1,060
3	12.5	1,253	114	0.001	1	1,082
2	7.5	1,279	47	0.000	0	1,105
1	2.5	1,305	7	0.000	0	1,127

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)
Raycap DC6-48-60-0-8F	135	33	210	0.002	2	28
Ericsson RRUS 8843 B2, B66A	135	216	1,385	0.013	14	187
Ericsson RRUS 4415 B30	135	138	885	0.008	9	119
Ericsson RRUS 4449 B5, B12	135	213	1,365	0.012	14	184
Ericsson RRUS 4478 B14	135	178	1,142	0.010	12	154
Raycap DC9-48-60-24-8C-EV	135	16	103	0.001	1	14
Generic Round Sector Frame	135	2,100	13,461	0.124	138	1,813
CCI DMP65R-BU8D	135	287	1,840	0.017	19	248
CCI TPA65R-BU8D	135	248	1,586	0.015	16	214
Samsung B2/B66A RRH ORAN (RF 4439d-25A)	121	224	1,181	0.011	12	194
Samsung RF4461d-13A	121	237	1,251	0.012	13	205
Raycap RCMDC-6627-PF-48	121	32	169	0.002	2	28
Samsung MT6413-77A	120	172	893	0.008	9	148
Antel BXA-70063/6CF_	120	51	265	0.002	3	44
Commscope NHH-65B-R2B	120	262	1,362	0.012	14	226
Unused Reserve (19266.99 sqin)	120	1,522	7,902	0.073	81	1,314
Generic Mount Reinforcement	119	600	3,070	0.028	31	518
Generic Flat Platform with Handrails	119	2,500	12,791	0.117	131	2,159
Commscope RDIDC-9181-PF-48	112	22	101	0.001	1	19
Fujitsu TA08025-B605	112	225	1,033	0.010	11	194
Fujitsu TA08025-B604	112	192	880	0.008	9	166
JMA Wireless MX08FRO665-21	112	194	888	0.008	9	167
Generic Round Platform with Handrails	110	2,500	11,114	0.102	114	2,159
	Totals:	**37,197**	**108,910**	**1.000**	**1,116**	**32,120**

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	-44.38	-1.12	0.00	-127.43	0.00	127.43	5,119.46	1,280.92	6,081	5,534.19	0.00	0.00	0.03
5.00	-42.80	-1.12	0.00	-121.85	0.00	121.85	5,045.45	1,253.97	5,828	5,338.47	0.00	-0.01	0.03
10.00	-41.25	-1.13	0.00	-116.24	0.00	116.24	4,970.00	1,227.02	5,580	5,144.65	0.01	-0.01	0.03
15.00	-39.73	-1.13	0.00	-110.61	0.00	110.61	4,893.09	1,200.06	5,338	4,952.82	0.03	-0.02	0.03
20.00	-38.24	-1.13	0.00	-104.97	0.00	104.97	4,814.73	1,173.11	5,101	4,763.09	0.06	-0.03	0.03
25.00	-36.79	-1.13	0.00	-99.32	0.00	99.32	4,734.93	1,146.16	4,869	4,575.55	0.09	-0.04	0.03
30.00	-35.37	-1.13	0.00	-93.68	0.00	93.68	4,653.68	1,119.21	4,643	4,390.31	0.14	-0.04	0.03
35.00	-33.98	-1.12	0.00	-88.05	0.00	88.05	4,570.97	1,092.25	4,422	4,207.46	0.18	-0.05	0.03
40.00	-32.63	-1.12	0.00	-82.44	0.00	82.44	4,486.82	1,065.30	4,207	4,027.10	0.24	-0.06	0.03
45.00	-32.36	-1.12	0.00	-76.86	0.00	76.86	4,395.67	1,038.35	3,996	3,844.48	0.31	-0.07	0.03
46.00	-30.45	-1.10	0.00	-75.74	0.00	75.74	4,372.85	1,032.96	3,955	3,804.47	0.32	-0.07	0.03
50.00	-29.51	-1.09	0.00	-71.34	0.00	71.34	4,281.57	1,011.39	3,792	3,646.50	0.38	-0.07	0.03
52.00	-28.82	-1.09	0.00	-69.15	0.00	69.15	3,574.58	874.64	3,308	3,076.36	0.41	-0.08	0.03
55.00	-27.71	-1.08	0.00	-65.89	0.00	65.89	3,534.13	860.78	3,204	2,992.91	0.46	-0.08	0.03
60.00	-26.63	-1.06	0.00	-60.51	0.00	60.51	3,465.56	837.68	3,034	2,855.36	0.56	-0.09	0.03
65.00	-25.57	-1.05	0.00	-55.19	0.00	55.19	3,395.53	814.57	2,869	2,719.79	0.65	-0.10	0.03
70.00	-24.54	-1.03	0.00	-49.95	0.00	49.95	3,324.05	791.47	2,709	2,586.31	0.76	-0.11	0.03
75.00	-23.54	-1.01	0.00	-44.78	0.00	44.78	3,251.13	768.37	2,553	2,455.01	0.88	-0.12	0.03
80.00	-22.56	-0.99	0.00	-39.71	0.00	39.71	3,154.97	745.27	2,402	2,310.04	1.01	-0.12	0.02
85.00	-21.62	-0.97	0.00	-34.73	0.00	34.73	3,057.17	722.17	2,255	2,168.32	1.14	-0.13	0.02
90.00	-20.95	-0.96	0.00	-29.87	0.00	29.87	2,959.37	699.06	2,113	2,031.09	1.28	-0.14	0.02
93.63	-20.58	-0.95	0.00	-26.41	0.00	26.41	2,888.37	682.29	2,013	1,934.27	1.39	-0.14	0.02
95.00	-19.70	-0.92	0.00	-25.11	0.00	25.11	2,861.57	675.96	1,976	1,898.35	1.43	-0.15	0.02
98.38	-19.54	-0.91	0.00	-22.01	0.00	22.01	1,159.16	336.05	977	768.96	1.54	-0.15	0.05
100.00	-19.05	-0.90	0.00	-20.53	0.00	20.53	1,153.00	332.30	955	756.31	1.59	-0.15	0.04
105.00	-18.58	-0.88	0.00	-16.03	0.00	16.03	1,133.05	320.75	890	717.23	1.76	-0.16	0.04
110.00	-15.31	-0.76	0.00	-11.61	0.00	11.61	1,111.64	309.20	827	678.18	1.93	-0.17	0.03
112.00	-14.26	-0.71	0.00	-10.10	0.00	10.10	1,102.67	304.58	802	662.60	2.00	-0.18	0.03
115.00	-13.91	-0.70	0.00	-7.95	0.00	7.95	1,088.78	297.65	766	639.27	2.12	-0.18	0.03
119.00	-9.94	-0.52	0.00	-5.16	0.00	5.16	1,069.46	288.41	719	608.30	2.27	-0.18	0.02

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
119.00	-9.94	-0.52	0.00	-5.16	0.00	5.16	950.95	285.28	643	624.60	2.27	-0.18	0.02
120.00	-7.31	-0.40	0.00	-4.64	0.00	4.64	950.95	285.28	643	624.60	2.31	-0.18	0.02
121.00	-6.15	-0.34	0.00	-4.24	0.00	4.24	950.95	285.28	643	624.60	2.35	-0.19	0.01
125.00	-5.45	-0.31	0.00	-2.87	0.00	2.87	950.95	285.28	643	624.60	2.50	-0.19	0.01
130.00	-4.75	-0.27	0.00	-1.34	0.00	1.34	950.95	285.28	643	624.60	2.70	-0.19	0.01
135.00	0.00	0.00	0.00	0.00	0.00	0.00	950.95	285.28	643	624.60	2.90	-0.19	0.00
139.00	0.00	0.00	0.00	0.00	0.00	0.00	950.95	285.28	643	624.60	3.05	-0.19	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	-30.99	-1.12	0.00	-125.97	0.00	125.97	5,119.46	1,280.92	6,081	5,534.19	0.00	0.00	0.03
5.00	-29.89	-1.12	0.00	-120.39	0.00	120.39	5,045.45	1,253.97	5,828	5,338.47	0.00	-0.01	0.03
10.00	-28.81	-1.12	0.00	-114.79	0.00	114.79	4,970.00	1,227.02	5,580	5,144.65	0.01	-0.01	0.03
15.00	-27.75	-1.12	0.00	-109.18	0.00	109.18	4,893.09	1,200.06	5,338	4,952.82	0.03	-0.02	0.03
20.00	-26.71	-1.12	0.00	-103.57	0.00	103.57	4,814.73	1,173.11	5,101	4,763.09	0.06	-0.03	0.03
25.00	-25.69	-1.12	0.00	-97.95	0.00	97.95	4,734.93	1,146.16	4,869	4,575.55	0.09	-0.04	0.03
30.00	-24.70	-1.12	0.00	-92.35	0.00	92.35	4,653.68	1,119.21	4,643	4,390.31	0.13	-0.04	0.03
35.00	-23.73	-1.11	0.00	-86.76	0.00	86.76	4,570.97	1,092.25	4,422	4,207.46	0.18	-0.05	0.03
40.00	-22.79	-1.11	0.00	-81.20	0.00	81.20	4,486.82	1,065.30	4,207	4,027.10	0.24	-0.06	0.03
45.00	-22.60	-1.10	0.00	-75.68	0.00	75.68	4,395.67	1,038.35	3,996	3,844.48	0.30	-0.07	0.03
46.00	-21.26	-1.09	0.00	-74.57	0.00	74.57	4,372.85	1,032.96	3,955	3,804.47	0.32	-0.07	0.02
50.00	-20.61	-1.08	0.00	-70.22	0.00	70.22	4,281.57	1,011.39	3,792	3,646.50	0.38	-0.07	0.02
52.00	-20.13	-1.07	0.00	-68.05	0.00	68.05	3,574.58	874.64	3,308	3,076.36	0.41	-0.08	0.03
55.00	-19.35	-1.06	0.00	-64.83	0.00	64.83	3,534.13	860.78	3,204	2,992.91	0.46	-0.08	0.03
60.00	-18.59	-1.05	0.00	-59.52	0.00	59.52	3,465.56	837.68	3,034	2,855.36	0.55	-0.09	0.03
65.00	-17.86	-1.04	0.00	-54.27	0.00	54.27	3,395.53	814.57	2,869	2,719.79	0.65	-0.10	0.03
70.00	-17.14	-1.02	0.00	-49.09	0.00	49.09	3,324.05	791.47	2,709	2,586.31	0.75	-0.11	0.02
75.00	-16.44	-1.00	0.00	-44.00	0.00	44.00	3,251.13	768.37	2,553	2,455.01	0.87	-0.11	0.02
80.00	-15.76	-0.98	0.00	-39.00	0.00	39.00	3,154.97	745.27	2,402	2,310.04	0.99	-0.12	0.02
85.00	-15.09	-0.96	0.00	-34.11	0.00	34.11	3,057.17	722.17	2,255	2,168.32	1.12	-0.13	0.02
90.00	-14.63	-0.94	0.00	-29.33	0.00	29.33	2,959.37	699.06	2,113	2,031.09	1.26	-0.14	0.02
93.63	-14.37	-0.93	0.00	-25.92	0.00	25.92	2,888.37	682.29	2,013	1,934.27	1.37	-0.14	0.02
95.00	-13.76	-0.90	0.00	-24.64	0.00	24.64	2,861.57	675.96	1,976	1,898.35	1.41	-0.14	0.02
98.38	-13.65	-0.90	0.00	-21.59	0.00	21.59	1,159.16	336.05	977	768.96	1.52	-0.15	0.04
100.00	-13.31	-0.88	0.00	-20.14	0.00	20.14	1,153.00	332.30	955	756.31	1.57	-0.15	0.04
105.00	-12.98	-0.87	0.00	-15.73	0.00	15.73	1,133.05	320.75	890	717.23	1.73	-0.16	0.03
110.00	-10.69	-0.74	0.00	-11.39	0.00	11.39	1,111.64	309.20	827	678.18	1.90	-0.17	0.03
112.00	-9.96	-0.70	0.00	-9.90	0.00	9.90	1,102.67	304.58	802	662.60	1.97	-0.17	0.02
115.00	-9.72	-0.69	0.00	-7.81	0.00	7.81	1,088.78	297.65	766	639.27	2.08	-0.18	0.02
119.00	-6.94	-0.51	0.00	-5.06	0.00	5.06	1,069.46	288.41	719	608.30	2.24	-0.18	0.02
119.00	-6.94	-0.51	0.00	-5.06	0.00	5.06	950.95	285.28	643	624.60	2.24	-0.18	0.02
120.00	-5.11	-0.39	0.00	-4.55	0.00	4.55	950.95	285.28	643	624.60	2.27	-0.18	0.01
121.00	-4.29	-0.34	0.00	-4.16	0.00	4.16	950.95	285.28	643	624.60	2.31	-0.18	0.01
125.00	-3.80	-0.30	0.00	-2.82	0.00	2.82	950.95	285.28	643	624.60	2.46	-0.18	0.01
130.00	-3.31	-0.26	0.00	-1.32	0.00	1.32	950.95	285.28	643	624.60	2.66	-0.19	0.01
135.00	0.00	0.00	0.00	0.00	0.00	0.00	950.95	285.28	643	624.60	2.85	-0.19	0.00
139.00	0.00	0.00	0.00	0.00	0.00	0.00	950.95	285.28	643	624.60	3.01	-0.19	0.00

ANALYSIS SUMMARY

	Base Reactions						Max Usage	
Load Case	Shear FX (kips)	Shear FZ (kips)	Axial FY (kips)	Moment MX (ft-kips)	Moment MY (ft-kips)	Moment MZ (ft-kips)	Elev (ft)	Interaction Ratio
1.2D + 1.0W	21.58	0.00	44.61	0.00	0.00	2196.10	98.38	0.49
0.9D + 1.0W	21.57	0.00	33.45	0.00	0.00	2175.34	98.38	0.48
1.2D + 1.0Di + 1.0Wi	6.82	0.00	67.27	0.00	0.00	702.66	98.38	0.18
1.2D + 1.0Ev + 1.0Eh	1.13	0.00	44.38	0.00	0.00	127.43	98.38	0.05
0.9D - 1.0Ev + 1.0Eh	1.12	0.00	30.99	0.00	0.00	125.97	98.38	0.04
1.0D + 1.0W	5.25	0.00	37.20	0.00	0.00	531.68	98.38	0.13

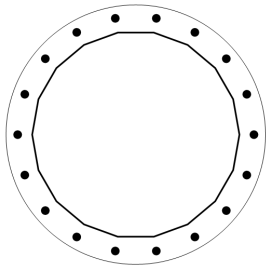
BASE PLATE ANALYSIS @ 0 FT

APPLIED REACTIONS

Moment (k-ft)	Axial (k)	Shear (k)
2196.1	44.61	21.58

PLATE PARAMETERS (ID# 28668)

Width:	67	in
Shape:	Round	
Thickness:	2.5	in
Grade:	A572-50	
Yield Strength:	50	ksi
Tensile Strength:	65	ksi
Rod Detail Type:	d	
Clear Distance	3	in
Base Weld Size:	0.125	in
Orientation Offset:	-	°
Analysis Type:	Plastic	
Neutral Axis:	230	°



ANCHOR ROD PARAMETERS

Class	Arrangement	Quantity	Diameter (in)	Circle (in)	Grade	F_y (ksi)	F_u (ksi)	Spacing (in)	Offset (°)
Original [ID#29423]	Radial	18	2.25	61	A615-75	75	100	-	-

COMPONENT PROPERTIES

Component	ID	Gross Area (in^2)	Net Area (in^2)	Individual Inertia (in^4)	Moment of Inertia (in^4)	Threads/in
Pole	53"ø x 0.4375" (18 Sides)	71.8781	-	-	24827.87	-
Bolt Group	Original (18) 2.25"ø	3.9761	3.2477	0.8393	24915.76	4.5

REACTION DISTRIBUTION

Component	ID	Moment M_u (k-ft)	Axial Load P_u (k)	Shear V_u (k)	Moment Factor
Pole	53"ø x 0.4375" (18 Sides)	2196.1	44.61	21.58	1.000
Bolt Group	Original (18) 2.25"ø	2196.1	-	21.58	1.000

BASE PLATE BEND LINE ANALYSIS @ 0 FT

POLE PROPERTIES

Flat-to-Flat Diameter:	53.12	in	Flat Width:	9.367	in	Neutral Axis:	230	°
Point-to-Point Diameter:	53.94	in	Flat Radians:	0.349	rad	Bend Line Limits:	5.039 to 6.131	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	36.384	0.00	56.850	436.9	2558.3	17.1%
Corners	35.158	0.00	54.934	315.6	2472.0	12.8%
Circumferential	45.414	0.00	70.960	656.0	3193.2	20.5%

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	18	2.25	83.3	1.8	243.6	35.7%

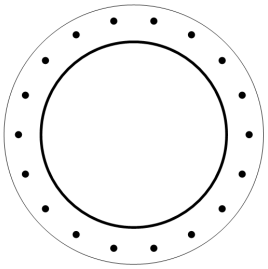
UPPER FLANGE PLATE ANALYSIS @ 119 FT

APPLIED REACTIONS

Moment (k-ft)	Axial (k)	Shear (k)
75.85	9.27	9.96

PLATE PARAMETERS (ID# 28667)

Width:	36	in
Shape:	Round	
Thickness:	1.5	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:	220	°



FLANGE BOLT PARAMETERS

Class	Arrangement	Quantity	Diameter (in)	Circle (in)	Grade	F_y (ksi)	F_u (ksi)	Spacing (in)	Offset (°)
Original [ID#29424]	Radial	18	1	32	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	26"ø x 0.375" (Round)	30.1884	-	-	2479.29	-
Bolt Group	Original (18) 1"ø	0.7854	0.6057	0.0292	1289.26	8.0

REACTION DISTRIBUTION

Component	ID	Moment M_u (k-ft)	Axial Load P_u (k)	Shear V_u (k)	Moment Factor
Pole	26"ø x 0.375" (Round)	75.8	9.27	9.96	1.000
Bolt Group	Original (18) 1"ø	75.8	-	9.96	1.000

UPPER FLANGE PLATE BEND LINE ANALYSIS @ 119 FT

POLE PROPERTIES

Flat-to-Flat Diameter:	26.12	in	Flat Width:	0.228	in	Neutral Axis:	220	°
Point-to-Point Diameter:	26.12	in	Flat Radians:	0.017	rad	Bend Line Limits:	4.773 to 6.048	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	21.089	0.00	11.863	32.2	533.8	6.0%
Corners	21.089	0.00	11.863	32.2	533.8	6.0%
Circumferential	27.373	0.00	15.397	61.0	692.9	8.8%

PLASTIC FLANGE BOLT ANALYSIS

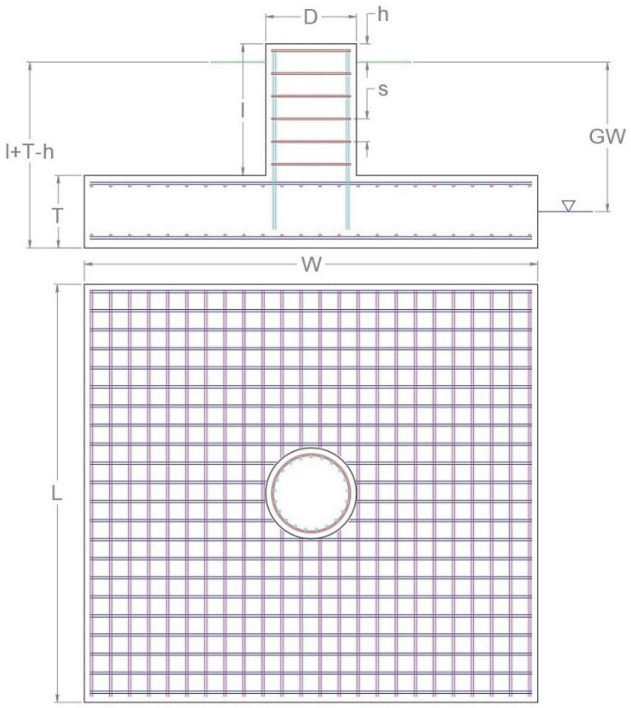
Class	Group Quantity	Bolt Diameter (in)	Applied Axial Load P_u (k)	Applied Shear Load V_u (k)	Compressive Capacity ΦP_n (k)	Interaction Result
Original	18	1	6.3	0.9	54.5	13.8%

APPLIED GLOBAL REACTIONS

Moment (k-ft)	Axial (k)	Shear (k)
2,196.10	44.61	21.58

FOUNDATION PARAMETERS

Mat Length:	L	26	ft
Mat Width:	W	26	ft
Mat Thickness:	T	3	ft
Base Depth:	L+T-h	5	ft
Pier Shape:		Round	
Pier Diameter:	D	7	ft
Pier Height above Grade:	h	1	ft
Concrete Compressive Strength:		4,000	psi
Mat Top Rebar:		(18) #9 bars [60 ksi]	
Mat Bottom Rebar:		(36) #9 bars [60 ksi]	
Pier Vertical Rebar:		(35) #9 bars [60 ksi]	
Pier Rebar Ties:	s	#4 bars @ 6.0" c/c [60 ksi]	
Rebar Clear Cover:		3.0	in
Tower Eccentricity:	ecc	0	ft
Tower Leg Count		1	



SOIL PARAMETERS

Water Table Depth [BGL]:	GW	10	ft
Soil Unit Weight:		127	pcf
Ultimate Skin Friction:		0	psf
Ultimate Bearing Pressure:		6,376	psf
Bearing Pressure Type:		Gross	
Coefficient of Shear Friction:		0.45	

SOIL STRENGTH ANALYSIS

Soil Strength Reduction Factor, Φ_s	Uplift Strength Reduction Factor, Φ_s	Asset Dead Load Factor	Dead Load Factor
0.75	0.75	0.9	1.2

SOIL OVERTURNING ANALYSIS

Design Moment, $M_{u,Design}$ (k-ft)	Nominal Overturning Capacity, $\Phi_m M_n$ (k-ft)	Soil Overturning Usage, $M_{u,Design} / \Phi_m M_n$	
2,325.58	6,349.65	**36.6%**	✓

SOIL BEARING ANALYSIS

Net Bearing Pressure, $P_{u,Net}$ (psf)	Nominal Bearing Capacity, $\Phi_b P_n$ (k-ft)	Bearing Pressure Controlling Load Direction	Soil Bearing Usage, $P_{u,net} / \Phi_b P_n$	
1,119.00	4,782.00	Diagonal to Pad Edge	**23.4%**	✓

SOIL SLIDING SHEAR ANALYSIS

Applied Shear Force, V_u (k)	Friction Resistance (k)	Passive Pressure (psf)	Passive Pressure Resistance (k)	Nominal Shear Capacity, $\Phi_s V_n$ (k)	Soil Sliding Shear Usage, $V_u / \Phi_s V_n$	
21.58	0.00	444.5	34.67	201.71	**11.0%**	✓

MAT REINFORCING STEEL STRENGTH ANALYSIS

Steel Elastic Modulus, E (ksi)	Strength Bending/Tension Reduction Factor, Φ_b	Strength Shear Reduction Factor, Φ_v	Strength Compression Reduction Factor, Φ_c
29,000	0.9	0.75	0.65

MAT REINFORCING ONE WAY SHEAR ANALYSIS

One Way Design Shear, V_u (k)	Nominal One Way Shear Capacity, $\Phi_c V_n$ (k)	One Way Shear Controlling Load Direction	Mat One Way Shear Usage, $V_u / \Phi_c V_n$	
72.43	887.48	Diagonal to Pad Edge	**8.2%**	✓

MAT REINFORCING PUNCHING SHEAR ANALYSIS

Punching Shear Design Stress, v_u (psi)	Nominal Punching Shear Capacity, $\Phi_c v_n$ (psi)	Mat Punching Shear Usage, $v_u / \Phi_c v_n$	
27.3	189.7	**14.4%**	✓

MAT REINFORCING MOMENT TRANSFER ANALYSIS

Moment Transfer Effective Flexural Width, w_f (in)	Neutral Axis Depth (in)	Pier Moment at Joint, M_{ut} (k-in)	Nominal Moment Transfer Capacity, $\Phi M_{sc,f}$ (k-in)	Mat Moment Transfer Usage, $0.6\ M_{ut} / \Phi M_{sc,f}$	
16.00	2.11	0.00	38,474.9	**0.0%**	✓

MAT REINFORCING FLEXURE ANALYSIS – UPPER STEEL

Factored Moment, M_u (k-ft)	Nominal Flexural Capacity, ΦM_n (k-ft)	Flexural Steel Controlling Load Direction	Mat Upper Rebar Flexure Usage, $M_u / \Phi M_n$	
822.31	2,546.83	Parallel to Pad Edge	**32.3%**	✓

MAT REINFORCING FLEXURE ANALYSIS – LOWER STEEL

Factored Moment, M_u (k-ft)	Nominal Flexural Capacity, ΦM_n (k-ft)	Flexural Steel Controlling Load Direction	Mat Lower Rebar Flexure Usage, $M_u / \Phi M_n$	
797.50	5,023.56	Parallel to Pad Edge	**15.9%**	✓

PIER REINFORCING STEEL STRENGTH ANALYSIS

Rebar Cage Diameter (in)	Steel Elastic Modulus, E (ksi)	Strength Bending/Tension Reduction Factor, Φ_b	Strength Shear Reduction Factor, Φ_v	Strength Compression Reduction Factor, Φ_c
75.88	29,000	0.9	0.75	0.65

PIER REINFORCING MOMENT ANALYSIS

Design Moment, M_u (k-ft)	Nominal Moment Capacity, $\Phi_b M_n$ (k-ft)	Bending Reinforcement Ratio	Pier Rebar Flexure Usage, $M_u/\Phi_b M_n$	
2,260.84	5,507.04	0.006	**41.1%**	✓

PIER REINFORCING COMPRESSION ANALYSIS

Design Compression, P_u (k)	Nominal Compressive Capacity, $\Phi_p P_n$ (k)	Pier Rebar Compressive Usage, $P_u / \Phi_p P_n$	
44.61	9,767.17	**0.5%**	✓

PIER REINFORCING SHEAR ANALYSIS

Design Shear, V_u (k)	Nominal Shear Capacity, $\Phi_v V_n$ (k)	Pier Rebar Shear Usage, $V_u / \Phi_v V_n$	
21.58	729.45	**3.0%**	✓

EXHIBIT 4

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 #: 10222810
Colliers Engineering & Design Project #: 21777462 (Rev.2)

February 16, 2024

Site Information	*Site ID:*	*5000386683-VZW / SUFFIELD SW CT*
	Site Name:	*SUFFIELD SW CT*
	Carrier Name:	*Verizon Wireless*
	Address:	*174 S Grand St* *West Suffield, Connecticut 06093* *Hartford County*
	Latitude:	*41.98704°*
	Longitude:	*-72.70209°*
Structure Information	*Tower Type:*	*119-Ft Monopole*
	Mount Type:	*13.75-Ft Platform*

FUZE ID # 16272252

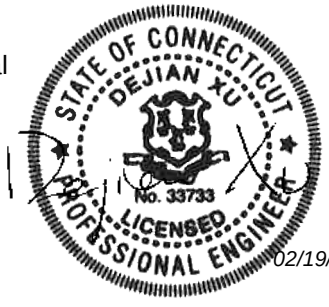
Analysis Results

Platform: **76.0%** **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: Prasanna Dhakal



02/19/2024

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: 753300, dated September 20, 2023*
Mount Mapping Report	*RKS Design & Engineering, LLC, Site ID: ATC: 416862, dated March 25, 2021*
Previous Mount Analysis	*Colliers Engineering & Design, Project #: 21777462 (Rev.2), dated February 1, 2024*
Mount Modification Drawings	*Maser Consulting Connecticut, Project #: 21777462A, dated September 17, 2021*

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}:	120 mph
	Ice Wind Speed (3-sec. Gust):	50 mph
	Design Ice Thickness:	1.50 in
	Risk Category:	II
	Exposure Category:	C
	Topographic Category:	1
	Topographic Feature Considered:	N/A
	Topographic Method:	N/A
	Ground Elevation Factor, K_e:	0.993
Seismic Parameters:	S_S:	0.170 g
	S_1:	0.054 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
118.75	120.00	3	Samsung	MT6413-77A	Added
		6	Commscope	NHH-65B-R2B	
		3	Samsung	RF4461d-13A	
		3	Samsung	RF4439d-25A	
		1	Raycap	RVZDC-6627-PF-48	
		3	Amphenol Antel	BXA-70063-6CF	Retained
		1	-	Lightning Rod	

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

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

Standard Conditions:

1. All engineering services are performed on the basis that the information provided to Colliers Engineering & Design 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
Standoff Horizontal	*23.9%*	*Pass*
Face Horizontal	*14.2%*	*Pass*
Mount Pipe	*31.6%*	*Pass*
Mod Support Rail	*15.2%*	*Pass*
Mod Support Rail Corner	*20.5%*	*Pass*
Mod Kicker	*10.9%*	*Pass*
Mount Connection	*76.0%*	*Pass*

Structure Rating – *(Controlling Utilization of all Components)*	**76.0%**

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 C Standoff	118.8	N3	200	3902	0.346	1.818	429	2961	0.564	0.531
Sector B Standoff	118.8	N83A	149	3538	0.334	1.903	284	2872	0.454	0.546
Sector A Standoff	118.8	N89	139	3989	0.226	1.442	256	2978	0.418	0.460
Sector C Reinforcement	115.3	N102 A	1458	2129	0.000	0.000	2813	4119	0.000	0.000
Sector B Reinforcement	115.3	N131	1405	2048	0.000	0.000	2786	4079	0.000	0.000
Sector A Reinforcement	115.3	N133	1467	2141	0.000	0.000	2822	4133	0.000	0.000

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	31.4	31.4	46.4	46.4
0.5	40.4	40.4	61.7	61.7
1	48.5	48.5	76.1	76.1

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

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MDG #: 5000386683 SMART Project #: 10222810 Fuze Project ID: 16272252

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:

1. Contractor shall install proposed OVP on existing 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:	

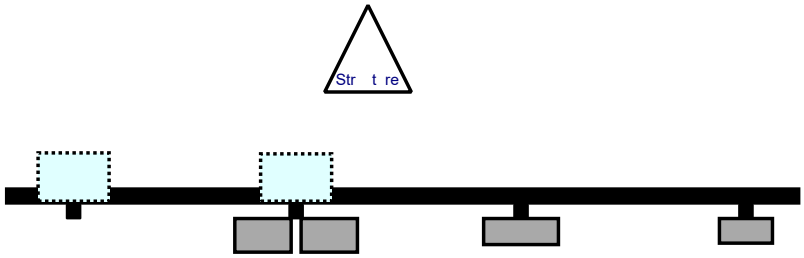
Structure: 5000 66 -VZW - SUFFIELD SW CT

Se tor: **A** 2/13/2024

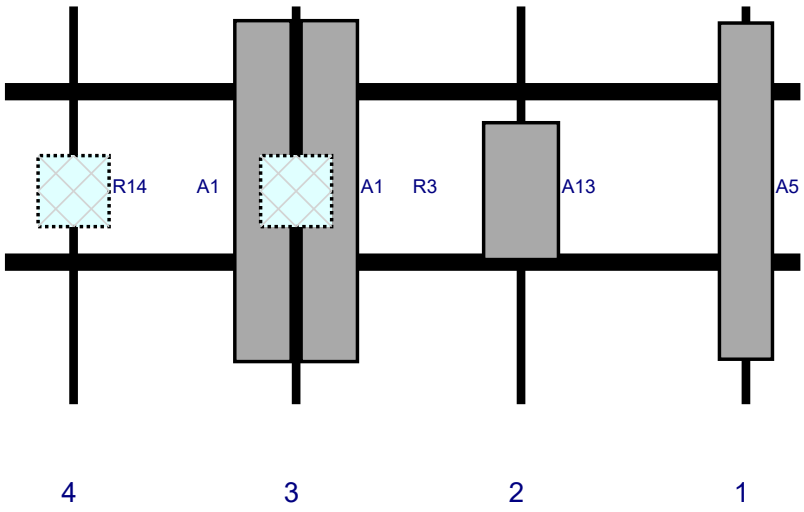
Str t re Type: Mo opole 10222810

Mo t Elev: 118.75 P ge: 1

Plan View

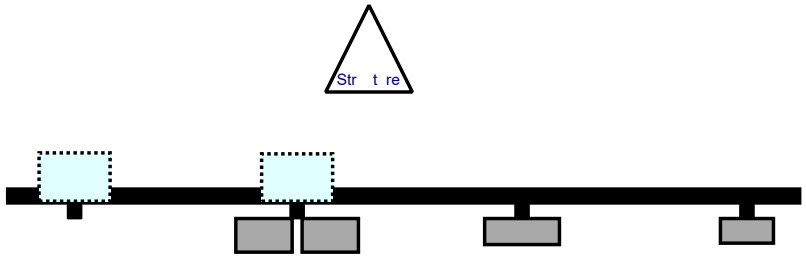


Front View - Loo i g t Str t re

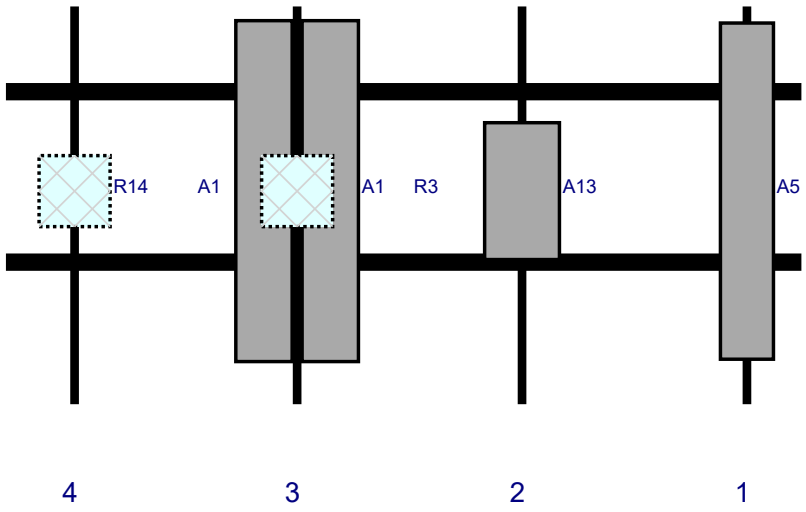


Re #	Model	Height (i)	Width (i)	H Dist Fr L.	Pipe #	Pipe Pos V	A t Pos	C. A t Fr T.	A t H O	St t s	V lid tio
A5	BXA-70063-6CF	71	11.2	156.5	1		Fro t	39	0	Ret i ed	03/25/2021
A13	MT6413-77A	28.9	15.8	109	2		Fro t	39	0	Added	
A1	NHH-65B-R2B	72	11.9	61.5	3		Fro t	39	7	Added	
A1	NHH-65B-R2B	72	11.9	61.5	3		Fro t	39	-7	Added	
R3	RF4439d-25A	15	15	61.5	3		Behi d	39	0	Added	
R14	RF4461d-13A	15	15	14.5	4		Behi d	39	0	Added	
OVP1	RVZDC-6627-PF-48	29.5	16.5		Me er					Added	
LR	Light i g Rod	72	1		Me er					Ret i ed	03/25/2021

Plan View

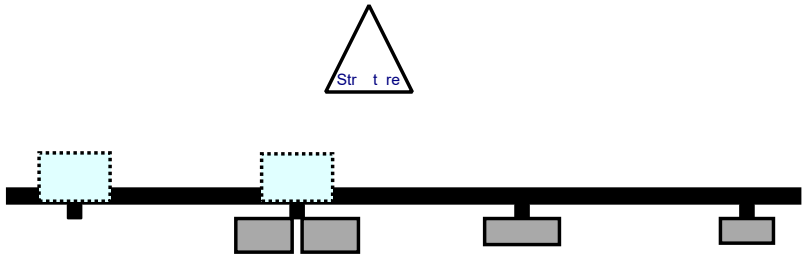


Front View - Loo i g t Str t re



Re #	Model	Height (i)	Width (i)	H Dist Fr L.	Pipe #	Pipe Pos V	A t Pos	C. A t Fr T.	A t H O	St t s	V lid tio
A5	BXA-70063-6CF	71	11.2	156.5	1		Fro t	39	0	Ret i ed	03/25/2021
A13	MT6413-77A	28.9	15.8	109	2		Fro t	39	0	Added	
A1	NHH-65B-R2B	72	11.9	61.5	3		Fro t	39	7	Added	
A1	NHH-65B-R2B	72	11.9	61.5	3		Fro t	39	-7	Added	
R3	RF4439d-25A	15	15	61.5	3		Behi d	39	0	Added	
R14	RF4461d-13A	15	15	14.5	4		Behi d	39	0	Added	

Plan View



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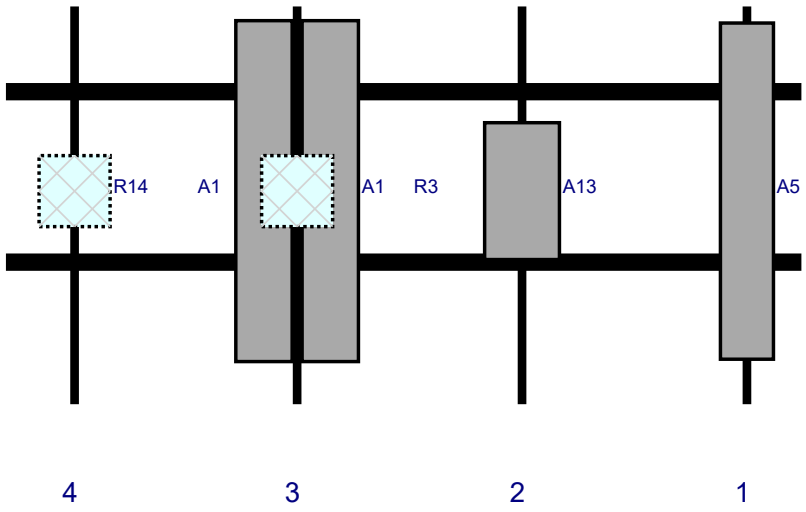

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R3	RF4439d-25A	15	15	61.5	3		Behi d	39	0	Added	
R14	RF4461d-13A	15	15	14.5	4		Behi d	39	0	Added	

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MOUNT MODIFICATION DRAWINGS
EXISTING 13.75' PLATFORM

TOWER OWNER: AMERICAN TOWER CORPORATION
TOWER OWNER SITE NUMBER: 416862

CARRIER SITE NAME: SUFFIELD SW CT
CARRIER SITE NUMBER: 468149
FUZE ID: 16272252

174 S GRAND ST
WEST SUFFIELD, CT 06093
HARTFORD COUNTY

LATITUDE: 41.987037° N
LONGITUDE: 72.702088° W

DESIGN CRITERIA

WIND LOADS

BASIC WIND SPEED (3 SECOND GUST), V = 120 MPH
EXPOSURE CATEGORY C
TOPOGRAPHIC CATEGORY 1
MEAN BASE ELEVATION (AMSL) = 190.05'

ICE LOADS

ICE WIND SPEED (3 SECOND GUST), V = 50 MPH
ICE THICKNESS = 1.50 IN

SEISMIC LOADS

SEISMIC DESIGN CATEGORY B
SHORT TERM MCER GROUND MOTION, S_S = .170
LONG TERM MCER GROUND MOTION, S_1 = .054

PROJECT INFORMATION

APPLICANT/LESSEE

COMPANY: VERIZON WIRELESS

CLIENT REPRESENTATIVE

COMPANY: VERIZON WIRELESS

PROJECT MANAGER

COMPANY: MASER CONSULTING CONNECTICUT
CONTACT: PETER ALBANO
PHONE: 856-797-0412
E-MAIL: PETER.ALBANO@COLLIERSENGINEERING.COM

CONTRACTOR PMI REQUIREMENTS

PMI LOCATION:	HTTPS://PMI.VZWSMART.COM
SMART TOOL PROJECT #:	10101706
VZW LOCATION CODE (PSLC):	468149
ANALYSIS DATE:	9/17/2021

PMI REQUIREMENTS 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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SCALE :	JOB NUMBER :
AS SHOWN	21777462A

REV	DATE	DESCRIPTION	DRAWN BY	CHECKED BY
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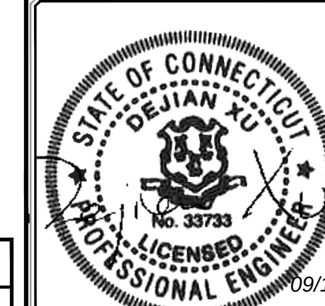
0	9/17/2021	ISSUED FOR CONSTRUCTION	DEH	DX



09/17/2021

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:

SUFFIELD SW CT
468149

174 S GRAND ST
WEST SUFFIELD, CT 06093
HARTFORD COUNTY

MT. LAUREL OFFICE
2000 Midlantic Drive
Suite 100
Mount Laurel, NJ 08054

Phone: 856.797.0412
Fax: 856.722.1120

SHEET TITLE : TITLE SHEET

SHEET NUMBER : ST-1

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

BILL OF MATERIALS

SECTION 1 - VZWSMART KITS

QUANTITY	MANUFACTURER	PART NUMBER	DESCRIPTION	NOTES	UNIT WEIGHT (LBS.)	WEIGHT (LBS.)
12	VZWSMART	VZWSMART-MSK1	CROSSOVER PLATE		14	168
3		VZWSMART-PLK3	SUPPORT RAIL CORNER BRACKET		29	87
1		VZWSMART-PLK5	KICKER KIT	CONTRACTOR TO VERIFY THE LENGTH REQUIRED AND TRIM AS NECESSARY IN ACCORDANCE WITH THE 'STRUCTURAL STEEL' NOTES ON SHEET SGN-1.	291	291
1		VZWSMART-PLK7	MONOPOLE COLLAR MOUNT ASSEMBLY		150	150

SECTION 2 - OTHER REQUIRED PARTS

QUANTITY	MANUFACTURER	PART NUMBER	DESCRIPTION	NOTES	UNIT WEIGHT (LBS.)	WEIGHT (LBS.)
3	-	-	36" LONG, L3x3x1/4	GALVANIZED. CONTRACTOR TO VERIFY THE LENGTH REQUIRED AND TRIM AS NECESSARY IN ACCORDANCE WITH THE 'STRUCTURAL STEEL' NOTES ON SHEET SGN-1.	15	44
3	-	-	156" LONG, P2 1/2 STD	GALVANIZED	71	214
					TOTAL:	954

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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SCALE : AS SHOWN
JOB NUMBER : 21777462A

REV	DATE	DESCRIPTION	DRAWN BY	CHECKED BY
0	9/17/2021	ISSUED FOR CONSTRUCTION	DEH	DX

STATE OF CONNECTICUT
DEJIAN XU
No. 33733
LICENSED PROFESSIONAL ENGINEER
09/17/2021

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SITE NAME:

SUFFIELD SW CT
468149

174 S GRAND ST
WEST SUFFIELD, CT 06093
HARTFORD COUNTY

MT. LAUREL OFFICE
2000 Midlantic Drive
Suite 100
Mount Laurel, NJ 08054

Phone: 856.797.0412
Fax: 856.722.1120

SHEET TITLE : BILL OF MATERIALS

SHEET NUMBER : SBOM-1

PROJECT NOTES

1. SEE MODIFICATION NOTES
2. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE CODES, ORDINANCES, LAWS AND REGULATIONS OF ALL MUNICIPALITIES, UTILITY COMPANIES OR OTHER PUBLIC/GOVERNING AUTHORITIES.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS AND INSPECTIONS THAT MAY BE REQUIRED BY ANY FEDERAL, STATE, COUNTY OR MUNICIPAL AUTHORITIES.
4. THE CONTRACTOR SHALL NOTIFY THE CONSTRUCTION MANAGER, IN WRITING, OF ANY CONFLICTS, ERRORS OR OMISSIONS PRIOR TO THE SUBMISSION OF BIDS OR PERFORMANCE OF WORK.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL EXISTING SITE IMPROVEMENTS PRIOR TO COMMENCING CONSTRUCTION. THE CONTRACTOR SHALL REPAIR ANY DAMAGE AS A RESULT OF CONSTRUCTION OF THIS FACILITY AT THE CONTRACTOR'S EXPENSE TO THE SATISFACTION OF THE OWNER.
6. THE SCOPE OF WORK FOR THIS PROJECT SHALL INCLUDE PROVIDING ALL MATERIALS, EQUIPMENT AND LABOR REQUIRED TO COMPLETE THIS PROJECT. ALL EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
7. THE CONTRACTOR SHALL VISIT THE PROJECT SITE PRIOR TO SUBMITTING THE BID TO VERIFY THAT THE PROJECT CAN BE CONSTRUCTED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND CONSTRUCTION DRAWINGS.
8. THE CONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS PRIOR TO COMMENCING ANY WORK. ALL DIMENSIONS OF EXISTING CONSTRUCTION SHOWN ON THESE DRAWINGS MUST BE VERIFIED. THE CONTRACTOR SHALL NOTIFY THE CONSTRUCTION MANAGER OF ANY DISCREPANCIES PRIOR TO ORDERING MATERIAL OR PROCEEDING WITH CONSTRUCTION.
9. SINCE THE CELL SITE MAY BE ACTIVE, ALL SAFETY PRECAUTIONS MUST BE TAKEN WHEN WORKING AROUND HIGH LEVELS OF ELECTROMAGNETIC RADIATION. EQUIPMENT SHOULD BE SHUTDOWN PRIOR TO PERFORMING ANY WORK THAT COULD EXPOSE THE WORKERS TO DANGER. PERSONAL RF EXPOSURE MONITORS ARE REQUIRED TO BE WORN TO ALERT OF ANY POTENTIALLY DANGEROUS EXPOSURE LEVELS.
10. NO NOISE, SMOKE, DUST OR ODOR WILL RESULT FROM THIS FACILITY AS TO CAUSE A NUISANCE.
11. THE FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION (NO HANDICAP ACCESS IS REQUIRED).

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@COLLIERSENGINEERING.COM

   b. PROVIDE MASER CONSULTING PROJECT # AND MASER CONSULTING 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. CONTRACTOR SHALL PROTECT CUT ENDS OF ALL FIELD-CUT STEEL WITH TWO (2) COATS OF COLD GALVANIZATION (ZINGA OR ZINC COTE).
9. 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.
10. 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.
11. FOR MEMBERS BEING REPLACED, PROVIDE NEW BOLTS AND MATCH EXISTING SIZE AND GRADE. MAINTAIN AISC REQUIREMENTS FOR MINIMUM BOLT DISTANCE AND SPACING.
12. 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.
13. GALVANIZED ASTM A325 BOLTS SHALL NOT BE REUSED.
14. ALL EXISTING PAINTED/GALVANIZED SURFACES DAMAGED DURING REHAB INCLUDING AREAS UNDER STIFFENER PLATES SHALL BE WIRE BRUSHED CLEAN, REPAIRED BY COLD GALVANIZING (ZINGA OR ZINC COTE), 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.

WELDING NOTES

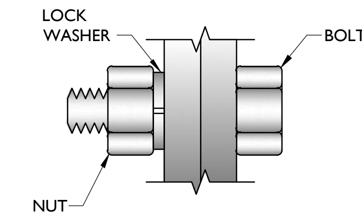
1. ALL WELDING SHALL BE DONE IN ACCORDANCE WITH AWS D1.0 (LATEST EDITION). THIS SHALL INCLUDE A CERTIFIED WELD INSPECTION (CWI) FOR ACCEPTANCE OR REJECTION OF ALL WELDING OPERATIONS, PRE, DURING, AND POST INSTALLATION, USING THE ACCEPTANCE CRITERIA OF AWS D1.1.
2. CONTRACTOR IS RESPONSIBLE FOR COMMISSIONING A THIRD PARTY CERTIFIED WELD INSPECTOR (CWI) THROUGHOUT THE ENTIRETY OF THE PROJECT. A PASSING CWI REPORT SHALL BE PROVIDED TO THE ENGINEER UPON COMPLETION OF THE PROJECT.
3. THE CERTIFIED WELD INSPECTOR SHALL INDICATE, IN A WRITTEN CWI REPORT, THAT ALL WELDING OPERATIONS PRE, DURING, AND POST INSTALLATION WERE CONDUCTED IN ACCORDANCE WITH AWS D1.1 WITH PHOTOGRAPHS AND DOCUMENTATION SUPPORTING THE ACCEPTANCE OR REJECTION OF ALL WELDING. ALL CWI WELD INSPECTION DOCUMENTATION AND PHOTOS SHALL BE SUBMITTED DURING THE PMI.
4. IN CASES WHERE A WELD IS SPECIFIED BETWEEN TWO MEMBERS IN WHICH THERE IS A GAP IN BETWEEN, THE WELD IS TO BE BUILT-UP SUCH THAT THE SIZE OF WELD ON THE MEMBER IS EQUAL TO THAT SHOWN IN THE DRAWINGS.
5. OXY FUEL GAS WELDING OR BRAZING IS STRICTLY PROHIBITED. SPECIFICALLY, NO TORCH CUTTING IS PERMITTED ON SITE. ALL HOLES SHALL BE CUT WITH A GRINDER.
6. CONTRACTOR SHALL EXERCISE CAUTION WHEN WELDING A GALVANIZED SURFACE.
7. CONTRACTOR SHALL HAVE A FIRE PROTECTION PLAN IN PLACE THAT CONFORMS WITH ALL OSHA, ANSI/ASSP A10.48, ANSI Z49.1, AND LOCAL JURISDICTIONAL REQUIREMENTS.

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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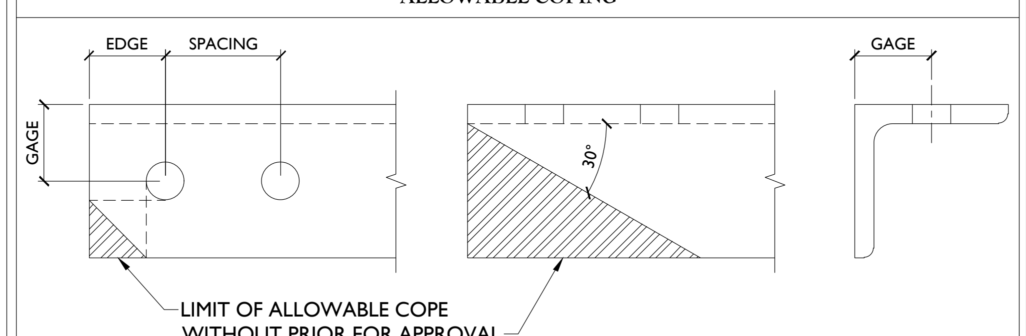

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ALL STATES REQUIRE NOTIFICATION OF EXCAVATORS, DESIGNERS, OR ANY PERSON PREPARING TO DISTURB THE EARTH'S SURFACE ANYWHERE IN ANY STATE

FOR STATE SPECIFIC DIRECT PHONE NUMBERS VISIT: WWW.CALL811.COM

SCALE : AS SHOWN
JOB NUMBER : 21777462A

REV	DATE	DESCRIPTION	DRAWN BY	CHECKED BY
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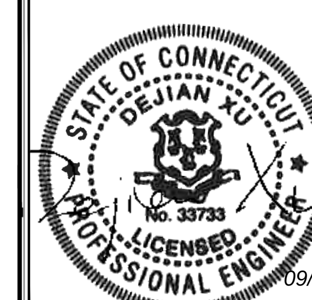
.	.	.	.	.
0	9/17/2021	ISSUED FOR CONSTRUCTION	DEH	DX



09/17/2021

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:

SUFFIELD SW CT
468149

174 S GRAND ST
WEST SUFFIELD, CT 06093
HARTFORD COUNTY

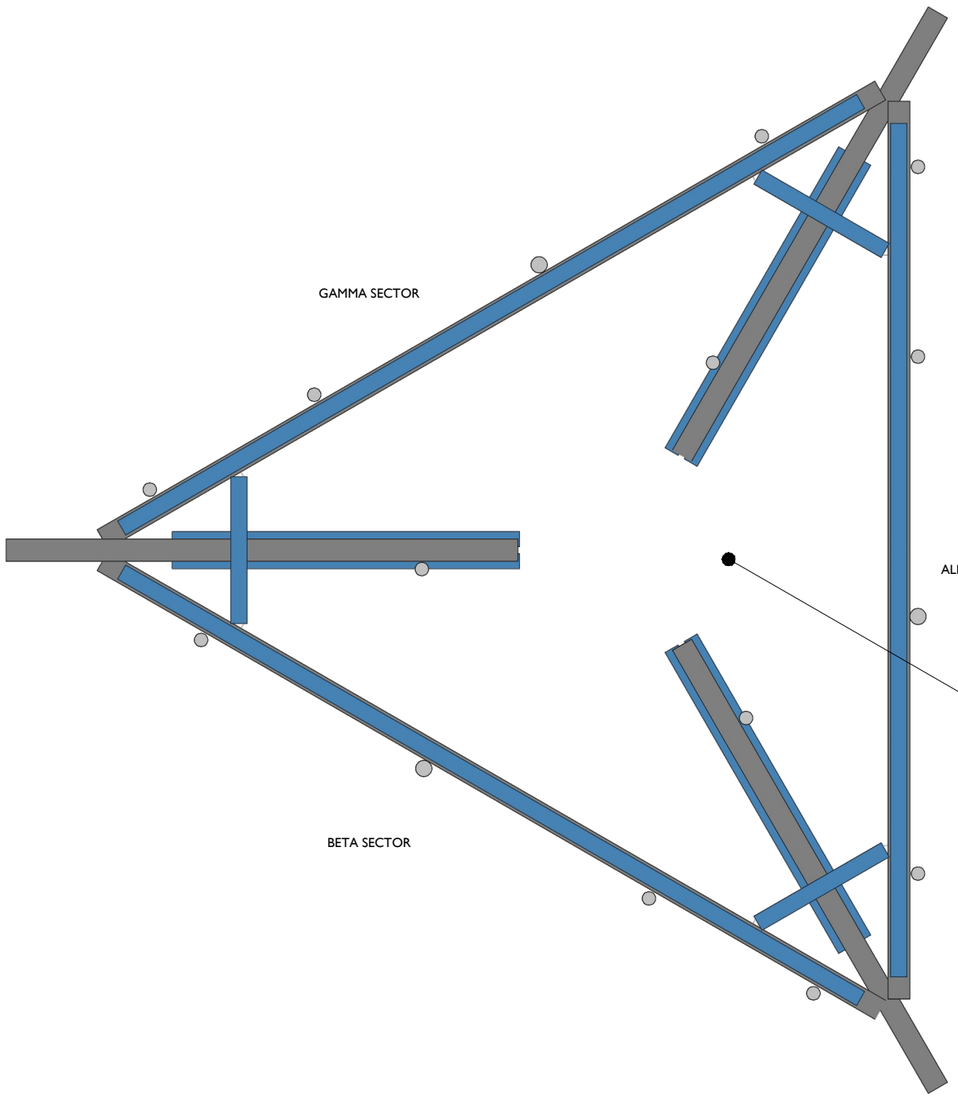
MT. LAUREL OFFICE
2000 Midlantic Drive
Suite 100
Mount Laurel, NJ 08054

Phone: 856.797.0412
Fax: 856.722.1120

SHEET TITLE : MODIFICATION NOTES

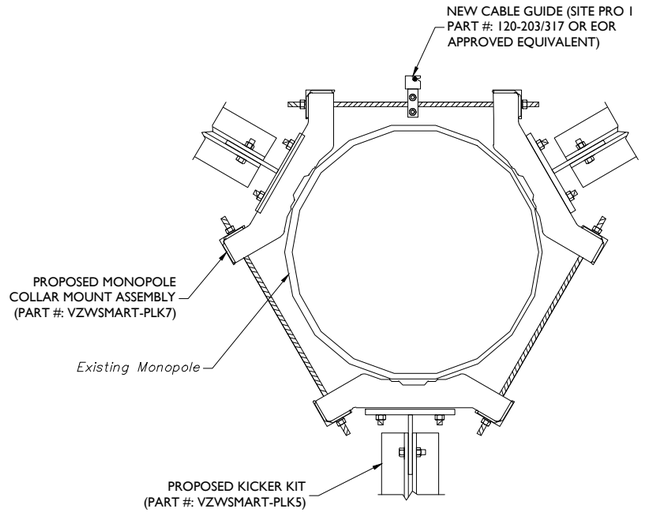
SHEET NUMBER : SGN-1

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.



1 CLIMBING FACILITY LOCATION

SCALE : N.T.S.



2 CABLE GUIDE COLLAR ATTACHMENT - PLAN VIEW

SCALE : N.T.S.

STRUCTURAL NOTES:

1. PER THE MOUNT MAPPING COMPLETED BY RKS DESIGN & ENGINEERING LLC ON 3/25/2021, THE SAFETY CLIMB AND CLIMBING FACILITIES UP TO THE VERIZON MOUNT ELEVATION (118'-9") ARE IN GOOD CONDITION. MASER 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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STATE OF CONNECTICUT
DEJIAN XU
No. 33733
LICENSED PROFESSIONAL ENGINEER
09/17/2021

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468149

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2000 Midlantic Drive
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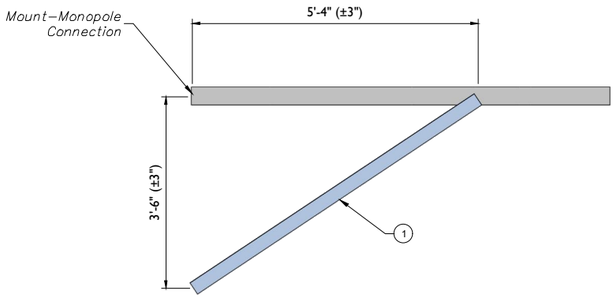
SHEET TITLE :
CLIMBING FACILITY DETAIL

SHEET NUMBER :
SCF-1

LEGEND:

- PROPOSED
- RELOCATED
- EXISTING



1 PROPOSED SIDE ELEVATION VIEW (TYP. ALL SECTORS)

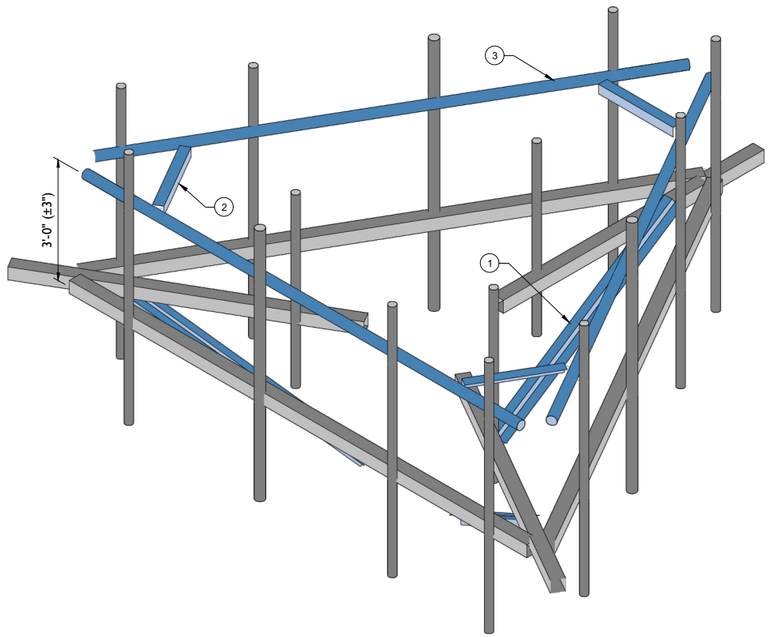
SCALE : N.T.S.

MOUNT MODIFICATION SCHEDULE

NO.	ELEVATION	QUANTITY	DESCRIPTION	NOTES
1	118'-9"	1	PROPOSED KICKER KIT (PART #: VZWSMART-PLK5)	CONTRACTOR TO VERIFY THE LENGTH REQUIRED AND TRIM AS NECESSARY IN ACCORDANCE WITH THE 'STRUCTURAL STEEL' NOTES ON SHEET SGN-1. CONNECT OTHER END OF KICKER KIT TO MONOPOLE COLLAR MOUNT ASSEMBLY (PART #: VZWSMART-PLK7).
2		3	36" LONG, L3x3x1/4	GALVANIZED CONTRACTOR TO VERIFY THE LENGTH REQUIRED AND TRIM AS NECESSARY IN ACCORDANCE WITH THE 'STRUCTURAL STEEL' NOTES ON SHEET SGN-1. CONTRACTOR SHALL CONNECT PROPOSED L3X3X1/4 ANGLES TO CORNER BRACKETS (PART #: VZWSMART-PLK3) USING THE PROVIDED (8) 5/8" DIA. BOLTS, (4) BOLTS PER CONNECTION.
3		3	156" LONG, P2 1/2 STD	GALVANIZED RADIO AND/OR TME POSITIONS SHALL BE ADJUSTED VERTICALLY AS NEEDED IN ORDER TO ACHIEVE INSTALLATION OF HORIZONTAL AS SHOWN. EOR SHALL BE NOTIFIED IF EQUIPMENT NEEDS TO BE RELOCATED TO ANOTHER MOUNT PIPE. CONNECT NEW SUPPORT RAIL TO ALL EXISTING VERTICAL MOUNT PIPES WITH CROSSOVER PLATES (PART #: VZWSMART-MSK1).

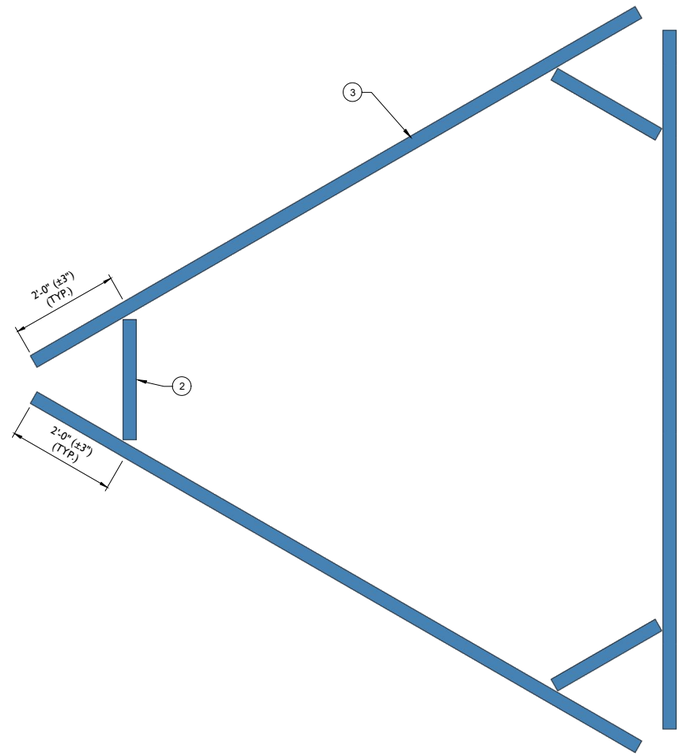
NOTES.

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



2 PROPOSED ISOMETRIC VIEW

SCALE : N.T.S.



3 PROPOSED PLAN VIEW

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Phone: 856.797.0412
Fax: 856.722.1120

SHEET TITLE :

MODIFICATION DETAILS

SHEET NUMBER :

SS-1

MOUNT PHOTO 1

MOUNT PHOTO 2

MOUNT PHOTO 3

MOUNT PHOTO 4

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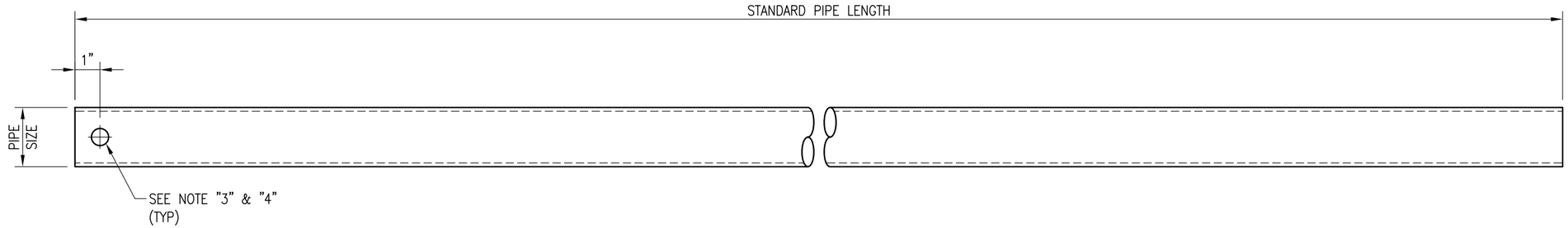
Fax: 856.722.1120

SHEET TITLE : MOUNT PHOTOS

SHEET NUMBER : SS-2



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.

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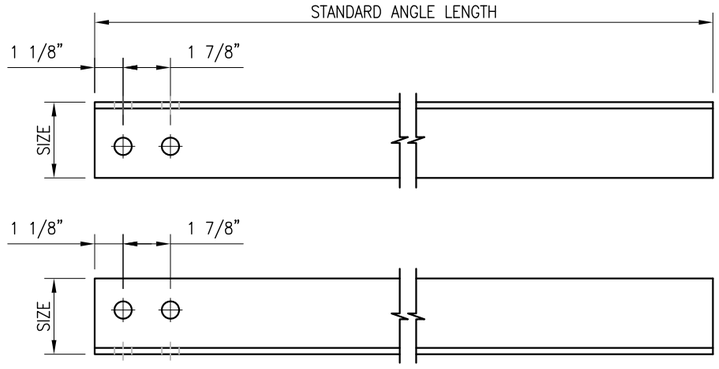
DRAWN BY: BT | CHECKED BY: HMA/KW

REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	BT	08/04/21

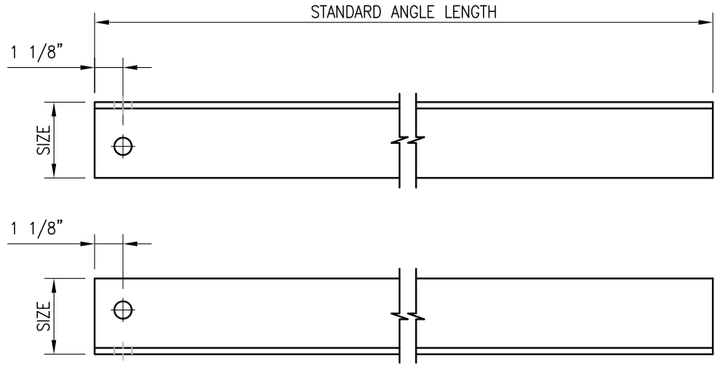
SHEET TITLE:
VZWSMART STANDARD PIPE

SHEET NUMBER: VZWSMART-PIPE

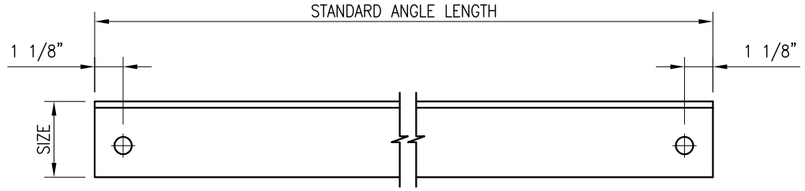
REV #: 0

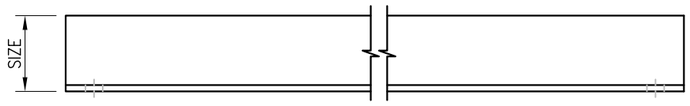


HOLE STYLE "A"

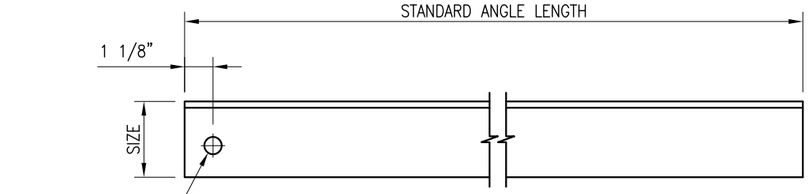


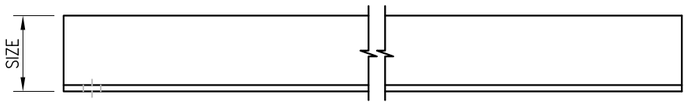
HOLE STYLE "B"





HOLE STYLE "C"





HOLE STYLE "D"

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

NOTES:
1. ALL ANGLE GRADE A36 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.

VZWSMART Standard Angle					
VZWSMART Number	Size	Length	Hole Style	Hole Gage	Also Used In:
A-PLK2-01	L 3" X 3" X 1/4"	96"	A	1-3/4"	VZWSMART-PLK2
A-PLK5-01	L 3"X 3" X 3/16"	96"	B	1-3/4"	VZWSMART-PLK5
A-SFK3-01	L 2-1/2" X 2-1/2" X 1/4"	96"	C	1-3/8"	VZWSMART-SFK3,-SFK3-SL, -PLK6, & -PLK8
A-L25X25X4X120	L 2-1/2" X 2-1/2" X 1/4"	120"	D	1-5/16"	
A-L25X25X4X240	L 2-1/2" X 2-1/2" X 1/4"	240"	D	1-5/16"	
A-L30X30X4X120	L 3" X 3" X 1/4"	120"	D	1-1/2"	
A-L30X30X4X240	L 3" X 3" X 1/4"	240"	D	1-1/2"	
A-L40X40X4X120	L 4" X 4" X 1/4"	120"	D	2"	
A-L40X40X4X240	L 4" X 4" X 1/4"	240"	D	2"	
A-L50X30X6X120	L 5" X 3" X 3/8"	120"	D	2-1/2"	
A-L50X50X6X120	L 5" X 5" X 3/8"	120"	D	2-1/2"	

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REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	BT	08/04/21

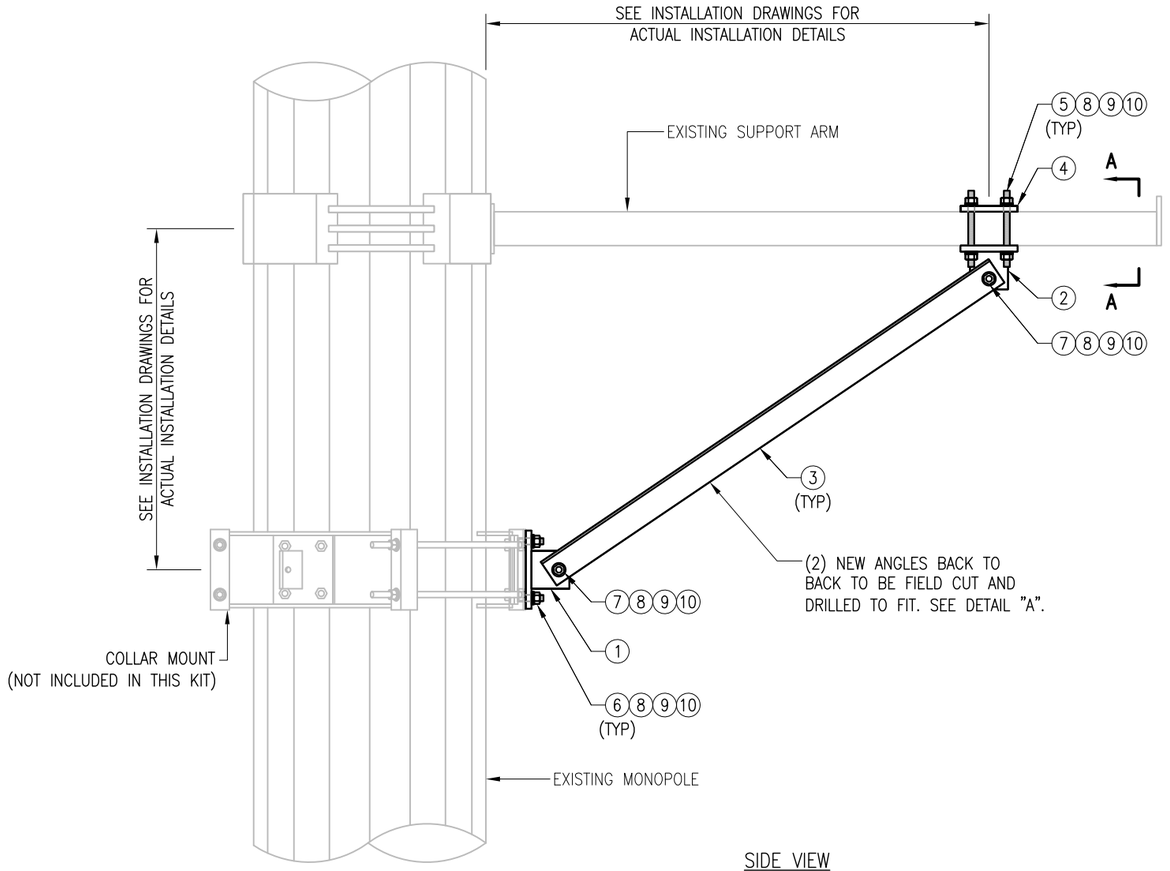
SHEET TITLE:

VZWSMART STANDARD ANGLE

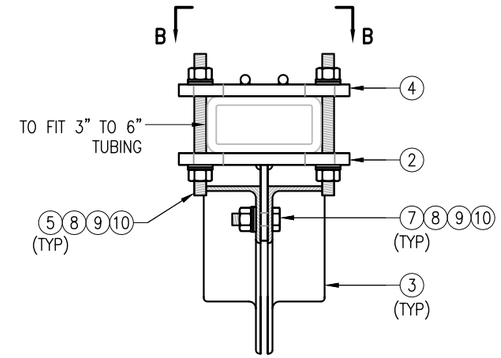
SHEET NUMBER: VZWSMART-ANGLE

REV #: 0

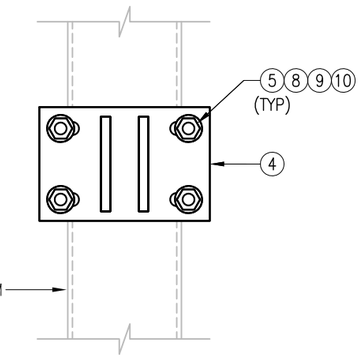
NOTE:
THE LOCATION OF KICKER AND EXISTING ANTENNA MOUNT SHOWN ON THE DRAWING IS FOR REPRESENTATION PURPOSE ONLY. SEE INSTALLATION DRAWINGS FOR ACTUAL INSTALLATION OF DETAILS.



SIDE VIEW
KICKER KIT

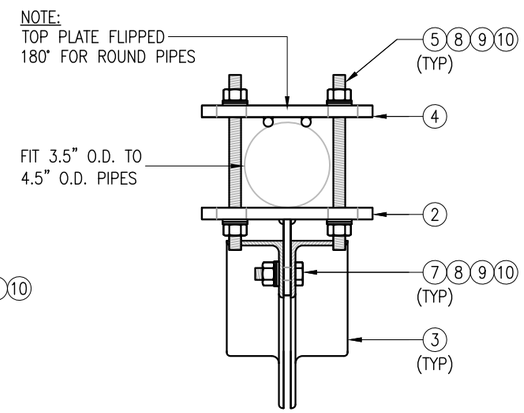


SECTION "A–A"
RECT. HSS MOUNTING

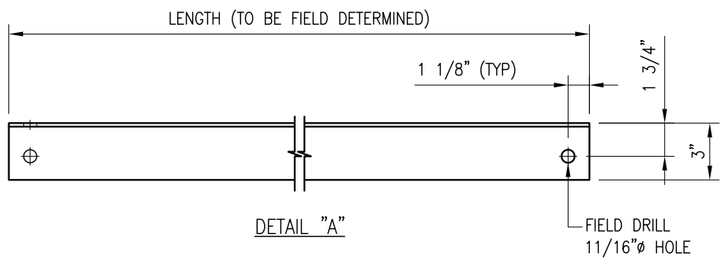


SECTION "B–B"

NOTE:
TOP PLATE FLIPPED 180° FOR ROUND PIPES



SECTION "A–A"
ROUND PIPE MOUNTING



DETAIL "A"

NOTES:
1. ALL HOLES ARE 11/16" DIA. U.N.O
2. HOT–DIPPED GALVANIZED PER ASTM A123.
3. FIT UP TO 6" SQ. TUBING OR 4 1/2" O.D. PIPE

VZWSMART–PLK5 (KICKER KIT)

ITEM NO.	QTY.	PART NO.	DESCRIPTION	SHEET #	WT
1	3	BRKW–XXX	BRACKET WELDMENT A36	PLK5–F3	43.8
2	3	BRKW–XXXX	BRACKET WELDMENT A36	PLK5–F2	35.7
3	6	L331875–8	L 3" X 3" X 3/16" X 8'–0" A36	PLK5–F4	182.9
4	3	PL–KI	PL 5/8" X 6" X 9" A36	PLK5–F1	29.0
5	12	---	THREADED ROD 5/8" DIA. X 1'–0" F1554–36 HDG	---	--
6	6	---	BOLT 5/8" X 2" A325	---	--
7	12	---	BOLT 5/8" X 2 1/2" A325	---	--
8	42	FW–625	5/8" HDG USS FLAT WASHER	---	3
9	42	LW–625	5/8" HDG LOCK WASHER	---	1
10	42	NUT–625	5/8" HDG HEX NUT	---	5
				GALVANIZED WT	291

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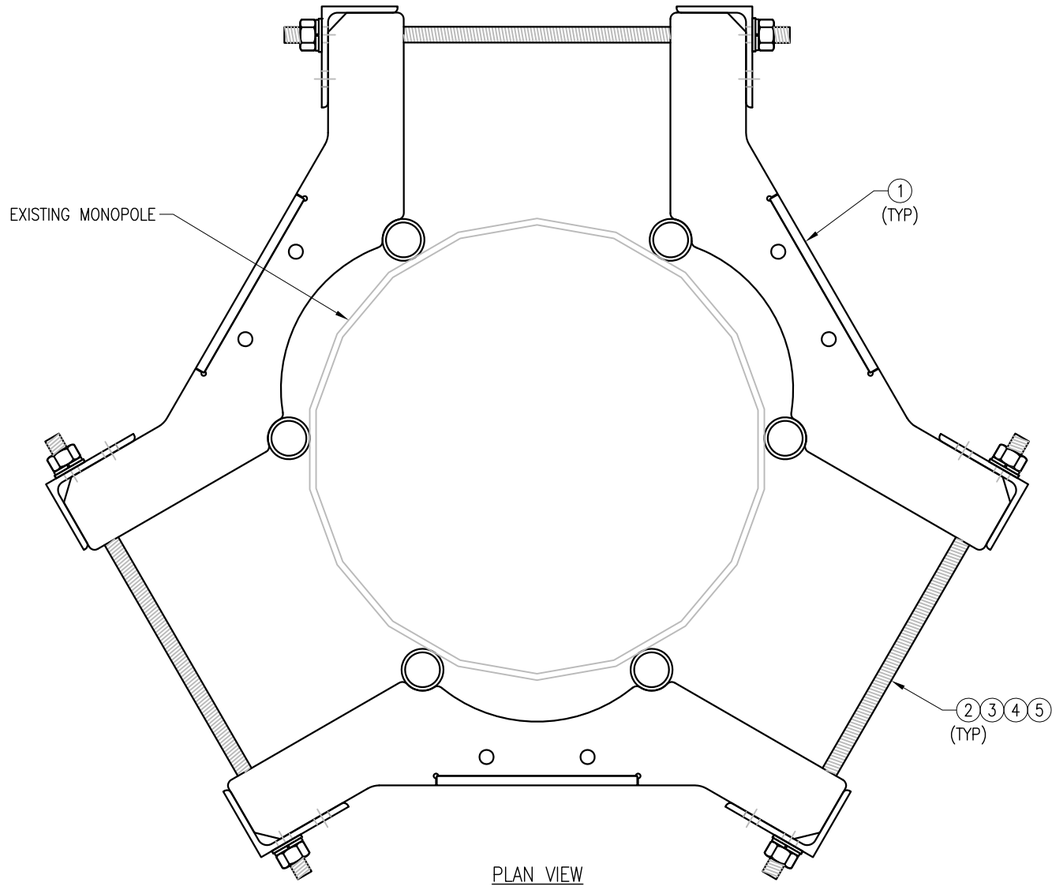
DRAWN BY: MN | CHECKED BY: HMA/KW

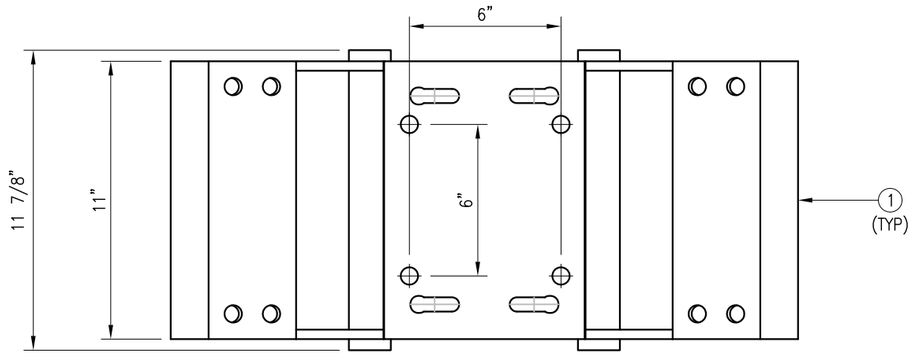
REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	MN	05/08/20

SHEET TITLE:
VZWSMART–PLK5
KICKER KIT

SHEET NUMBER: VZWSMART–PLK5
REV #: 0



PLAN VIEW
MONOPOLE COLLAR MOUNT ASSEMBLY



FRONT VIEW

NOTES:
1. FIT 12" TO 45" DIA MONOPOLE.
2. HOT-DIPPED GALVANIZED PER ASTM A123.

VZWSMART-PLK7 (MONOPOLE COLLAR MOUNT ASSEMBLY)

ITEM NO.	QTY.	PART NO.	DESCRIPTION	SHEET #	WT
1	3	CM-1245	COLLAR MOUNT ASSEMBLY	PLK7-F1	147
2	6	---	THREADED ROD 5/8" X 4'-0" A193-B7	---	
3	12	FW-625	5/8" HDG USS FLAT WASHER	---	1
4	12	LW-625	5/8" HDG LOCK WASHER	---	0
5	12	NUT-625	5/8" HDG HEX NUT	---	1
				GALVANIZED WT	150

VzW SMART Tool© Vendor

verizon

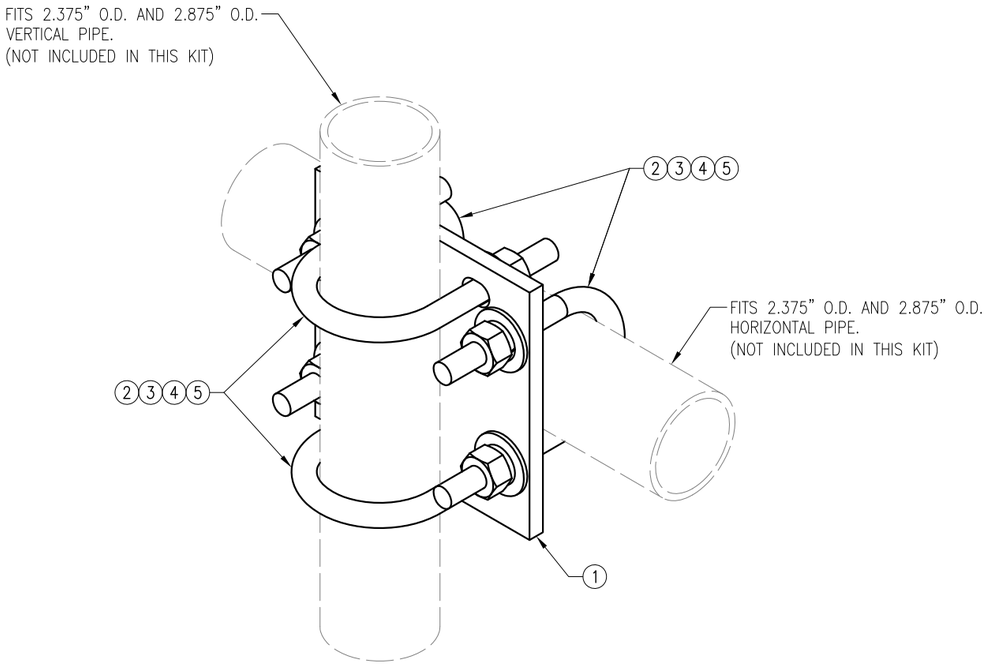
DRAWN BY: BT | CHECKED BY: HMA/KW

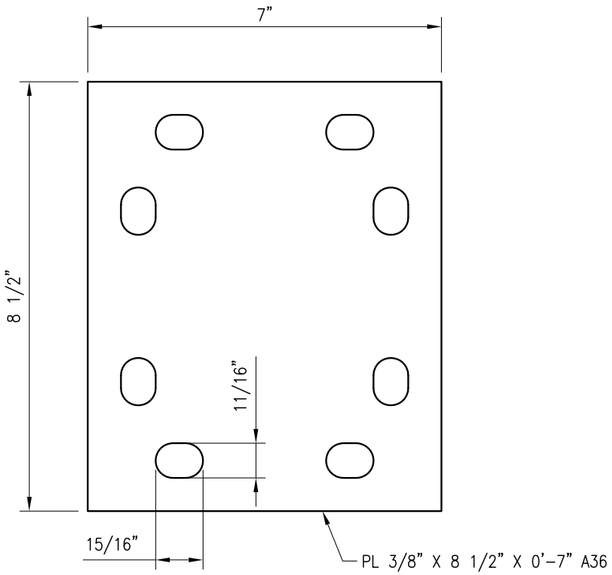
REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	BT	05/11/20

SHEET TITLE:
VZWSMART-PLK7
MONOPOLE COLLAR
MOUNT ASSEMBLY

SHEET NUMBER: VZWSMART-PLK7

REV #: 0





PL375-857

VZWSMART-MSK1 (CROSSOVER PLATE)					
ITEM NO.	QTY.	PART NO.	DESCRIPTION	SHEET #	WT
1	1	PL375-857	PL 3/8" X 8 1/2" X 0'-7" A36	MSK1-F1	6
2	4	MS02-625-300-500	RU-BOLT 5/8" X 3" I.W. X 5" I.L. A36 (OR EQUIV.)	RBC-1	5
3	8	FW-625	5/8" HDG USS FLAT WASHER	---	1
4	8	LW-625	5/8" HDG LOCK WASHER	---	0
5	8	NUT-625	5/8" HDG HEX NUT	---	1
				GALVANIZED WT	14

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

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verizon

DRAWN BY: H.R | CHECKED BY: HMA

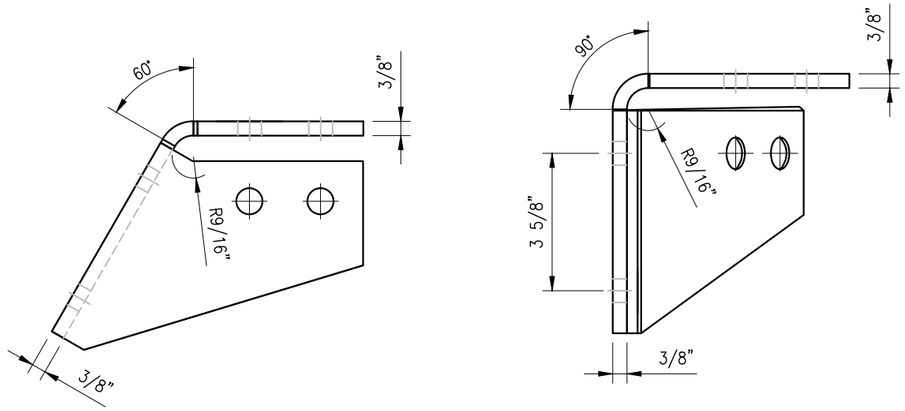
REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	H.R	05/08/20

SHEET TITLE:

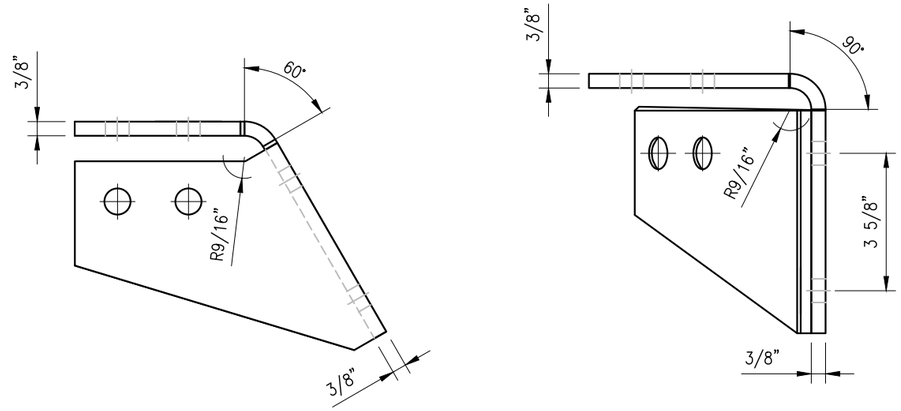
VZWSMART-MSK1
CROSSOVER PLATE

SHEET NUMBER: VZWSMART-MSK1

REV #: 0



CBP-L



CBP-R

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

VZWSMART-PLK3 (SUPPORT RAIL CORNER BRACKET)

ITEM NO.	QTY.	PART NO.	DESCRIPTION	SHEET #	WT
1	1	CBP-L	CORNER BENT PLATE BRACKET	PLK3-F1	9
2	1	CBP-R	CORNER BENT PLATE BRACKET	PLK3-F1	9
3	4	MS02-625-300-500	RU-BOLT 5/8" X 3" I.W. X 5" I.L. A36 (OR EQUIV.)	RBC-1	5
4	8	---	BOLT 5/8" X 2" A325	---	3
5	16	FW-625	5/8" HDG USS FLAT WASHER	---	1
6	16	LW-625	5/8" HDG LOCK WASHER	---	0
7	16	NUT-625	5/8" HDG HEX NUT	---	2
				GALVANIZED WT	30

VzW SMART Tool© Vendor

verizon

DRAWN BY: H.R | CHECKED BY: HMA

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

SHEET TITLE:
VZWSMART-PLK3 SUPPORT RAIL CORNER BRACKET

SHEET NUMBER: VZWSMART-PLK3

REV #: 0


03/25/2021


03/25/2021

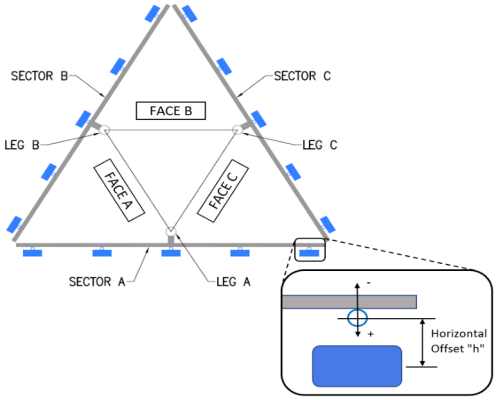
V3.0 Updated on 8-31-2020

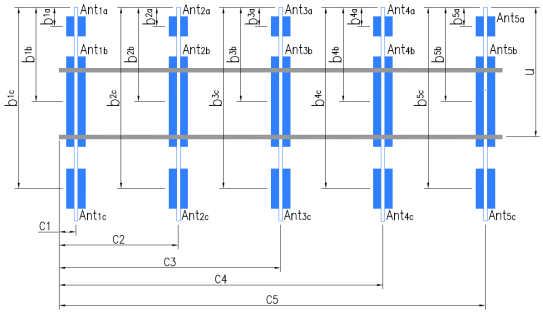
Antenna Mount Mapping Form (PATENT PENDING)

FCC # 1288447

Tower Owner:	ATC	**Mapping Date:**	3/25/2021
Site Name:	ATC:SUFFIELD SW CT CT,VZW:SUFFIELD SW CT	**Tower Type:**	Monopole
Site Number or ID:	ATC:416862	**Tower Height (Ft.):**	119
Mapping Contractor:	RKS Design & Engineering LLC	**Mount Elevation (Ft.):**	118.33

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





Antenna Layout (Looking Out From Tower)

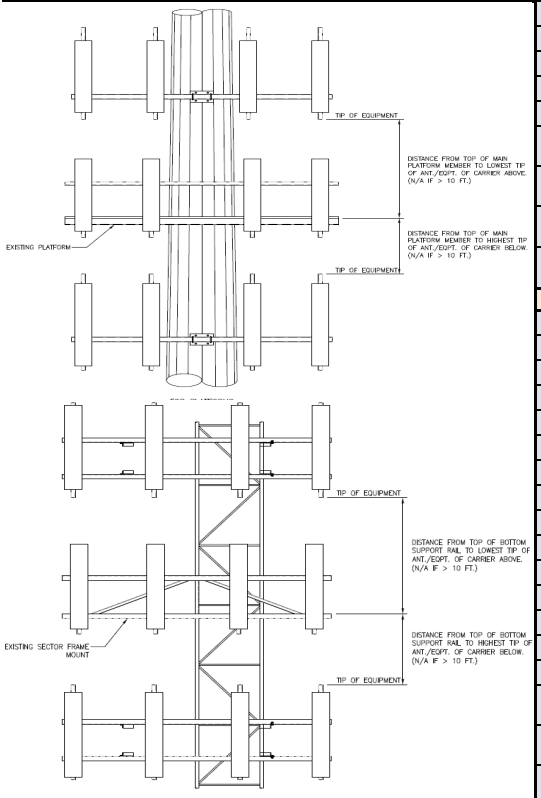
Mount Pipe Configuration and Geometries [Unit = Inches]

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 2.375"Ø X 0.17" X 84" Long	57.00	11.50	C1	Pipe 2.375"Ø X 0.17" X 84" Long	57.00	11.50
A2	Pipe 2.375"Ø X 0.17" X 84" Long	56.75	59.00	C2	Pipe 2.375"Ø X 0.17" X 84" Long	56.75	59.00
A3	Pipe 2.375"Ø X 0.17" X 84" Long	55.00	106.50	C3	Pipe 2.375"Ø X 0.17" X 84" Long	55.00	106.50
A4	Pipe 2.375"Ø X 0.17" X 84" Long	55.75	153.50	C4	Pipe 2.375"Ø X 0.17" X 84" Long	55.75	153.50
A5				C5			
A6				C6			
B1	Pipe 2.375"Ø X 0.17" X 84" Long	57.00	11.50	D1			
B2	Pipe 2.375"Ø X 0.17" X 84" Long	56.75	59.00	D2			
B3	Pipe 2.375"Ø X 0.17" X 84" Long	55.00	106.50	D3			
B4	Pipe 2.375"Ø X 0.17" X 84" Long	55.75	153.50	D4			
B5				D5			
B6				D6			
Distance between bottom rail and mount CL elevation (dim d). Unit is inches. See 'Mount Elev Ref' tab for details. :							
Distance from top of bottom support rail to lowest tip of ant./eqpt. of Carrier above. (N/A if > 10 ft.) :							
Distance from top of bottom support rail to highest tip of ant./eqpt. of Carrier below. (N/A if > 10 ft.) :							
Please enter additional infomation or comments below.							
Tower Face Width at Mount Elev. (ft.):			Tower Leg Size or Pole Shaft Diameter at Mount Elev. (in.):			29.94	

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}	BXA-70063-6CF-EDIN-	11.20	5.20	71.00		119.372	44.50	9.00	15.00	11,184
Ant_{1c}										
Ant_{2a}										
Ant_{2b}	BXA-171063-12CF-ED	6.10	4.10	72.40		119.476	43.00	8.50	15.00	11,184
Ant_{2c}										
Ant_{3a}	9442 RRH2x40-AWS	10.60	6.70	24.40		121.101	21.75	-7.50		11,185
Ant_{3b}	BXA-171063-12CF-ED	6.10	4.10	72.40		119.518	40.75	8.50	15.00	11,185
Ant_{3c}										
Ant_{4a}	KS24822L1	15.00	10.00	16.50		120.58	28.75	-9.00		11,186
Ant_{4b}	BXA-70063-6CF-EDIN-	11.20	5.20	71.00		119.351	43.50	9.00	15.00	11,186
Ant_{4c}										
Ant_{5a}										
Ant_{5b}										
Ant_{5c}										
Ant on Standoff	RRFDC-3315-PF-48	15.70	10.20	25.60			26.00			334
Ant on Standoff										
Ant on Tower										
Ant on Tower										

Mount Azimuth (Degree) for Each Sector				Tower Leg Azimuth (Degree) for Each Sector	
Sector A:	45.00	Deg	Leg A:		Deg
Sector B:	165.00	Deg	Leg B:		Deg
Sector C:	285.00	Deg	Leg C:		Deg
Sector D:		Deg	Leg D:		Deg

Climbing Facility Information		
Location:	165.00 Deg	N/A
Climbing Facility	Corrosion Type:	N/A
	Access:	Climbing path was unobstructed.
	Condition:	Good condition.



Sector B										
Ant_{1a}										
Ant_{1b}	BXA-70063-6CF-EDIN-	11.20	5.20	71.00		119.372	44.50	9.00	195.00	18,188
Ant_{1c}										
Ant_{2a}										
Ant_{2b}	BXA-171063-12CF-ED	6.10	4.10	72.40		119.476	43.00	8.50	195.00	18,189
Ant_{2c}										
Ant_{3a}	9442 RRH2x40-AWS	10.60	6.70	24.40		121.101	21.75	-7.50		18,189
Ant_{3b}	BXA-171063-12CF-ED	6.10	4.10	72.40		119.518	40.75	8.50	195.00	18,189
Ant_{3c}										
Ant_{4a}	KS24822L1	15.00	10.00	16.50		120.58	28.75	-9.00		18,189
Ant_{4b}	BXA-70063-6CF-EDIN-	11.20	5.20	71.00		119.351	43.50	9.00	195.00	18,189
Ant_{4c}										
Ant_{5a}										
Ant_{5b}										
Ant_{5c}										
Ant on Standoff	RRFDC-3315-PF-48	15.70	10.20	25.60			26.00			320
Ant on Standoff										
Ant on Tower										
Ant on Tower										
Sector C										
Ant_{1a}										
Ant_{1b}	BXA-70063-6CF-EDIN-	11.20	5.20	71.00		119.372	44.50	9.00	300.00	26,192
Ant_{1c}										
Ant_{2a}										
Ant_{2b}	BXA-171063-12CF-ED	6.10	4.10	72.40		119.476	43.00	8.50	300.00	26,192
Ant_{2c}										
Ant_{3a}	9442 RRH2x40-AWS	10.60	6.70	24.40		121.101	21.75	-7.50		26,194
Ant_{3b}	BXA-171063-12CF-ED	6.10	4.10	72.40		119.518	40.75	8.50	300.00	26,194
Ant_{3c}										
Ant_{4a}	KS24822L1	15.00	10.00	16.50		120.58	28.75	-9.00		26,194
Ant_{4b}	BXA-70063-6CF-EDIN-	11.20	5.20	71.00		119.351	43.50	9.00	300.00	26,194
Ant_{4c}										
Ant_{5a}										
Ant_{5b}										
Ant_{5c}										
Ant on Standoff	LIGHTNINGROD	0.50	0.50	60.00						179
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 (2): (2) 1.5"Ø HYBRID	
2		
3		
4		
5		
6		
7		
8		

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

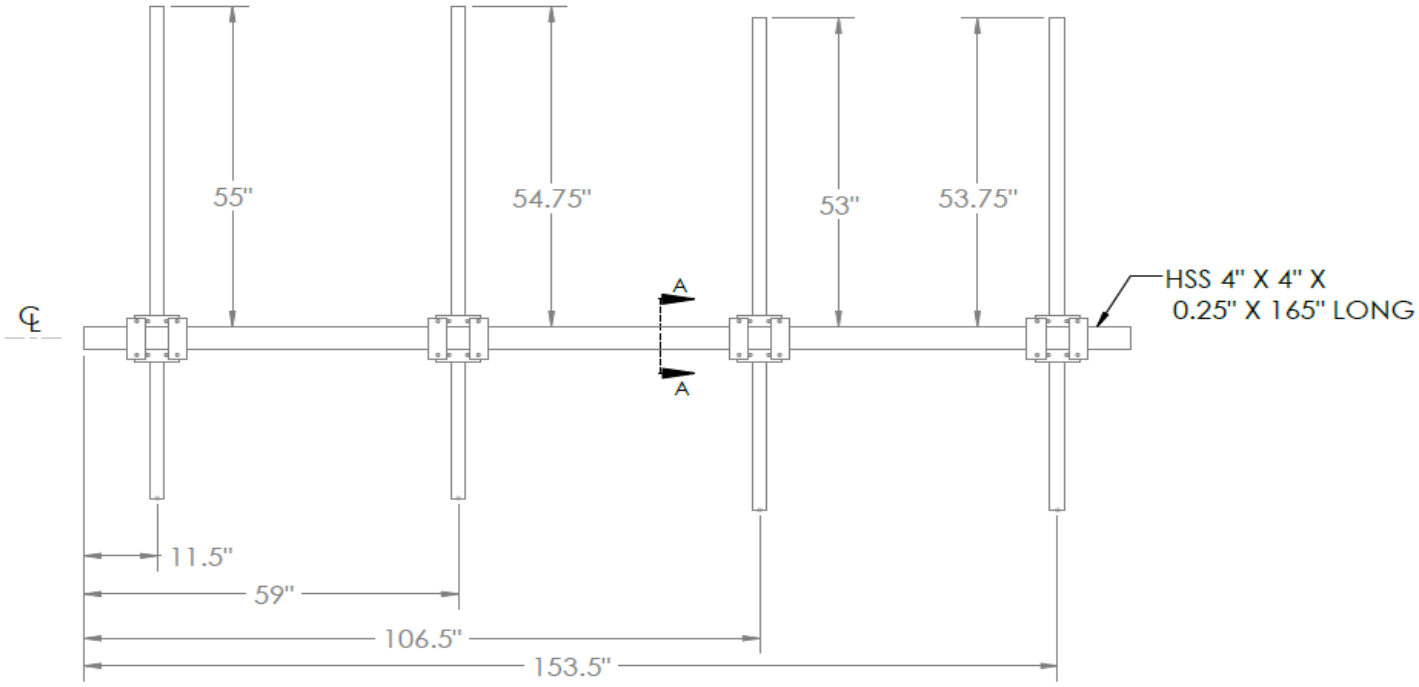
Standard Conditions
1. Obvious safety and structural issues/deficiencies noticed at the time of the mount mapping are to be reported in this mapping. However, this mount mapping is not a condition assessment of the mount.

Antenna Mount Mapping Form (PATENT PENDING)

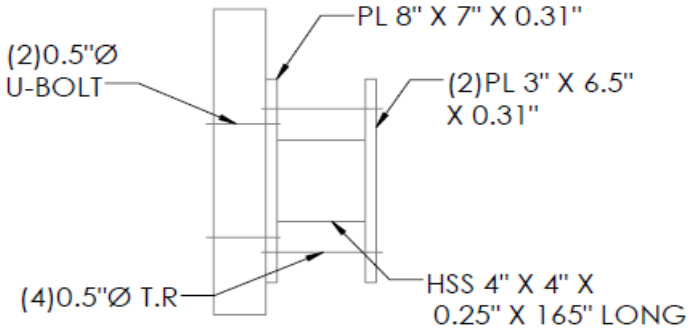
FCC #
1288447

Tower Owner:	ATC	**Mapping Date:**	3/25/2021
Site Name:	ATC:SUFFIELD SW CT CT,VZW:SUFFIELD SW CT	**Tower Type:**	Monopole
Site Number or ID:	ATC:416862	**Tower Height (Ft.):**	119
Mapping Contractor:	RKS Design & Engineering LLC	**Mount Elevation (Ft.):**	118.33

Please Insert Sketches of the Antenna Mount

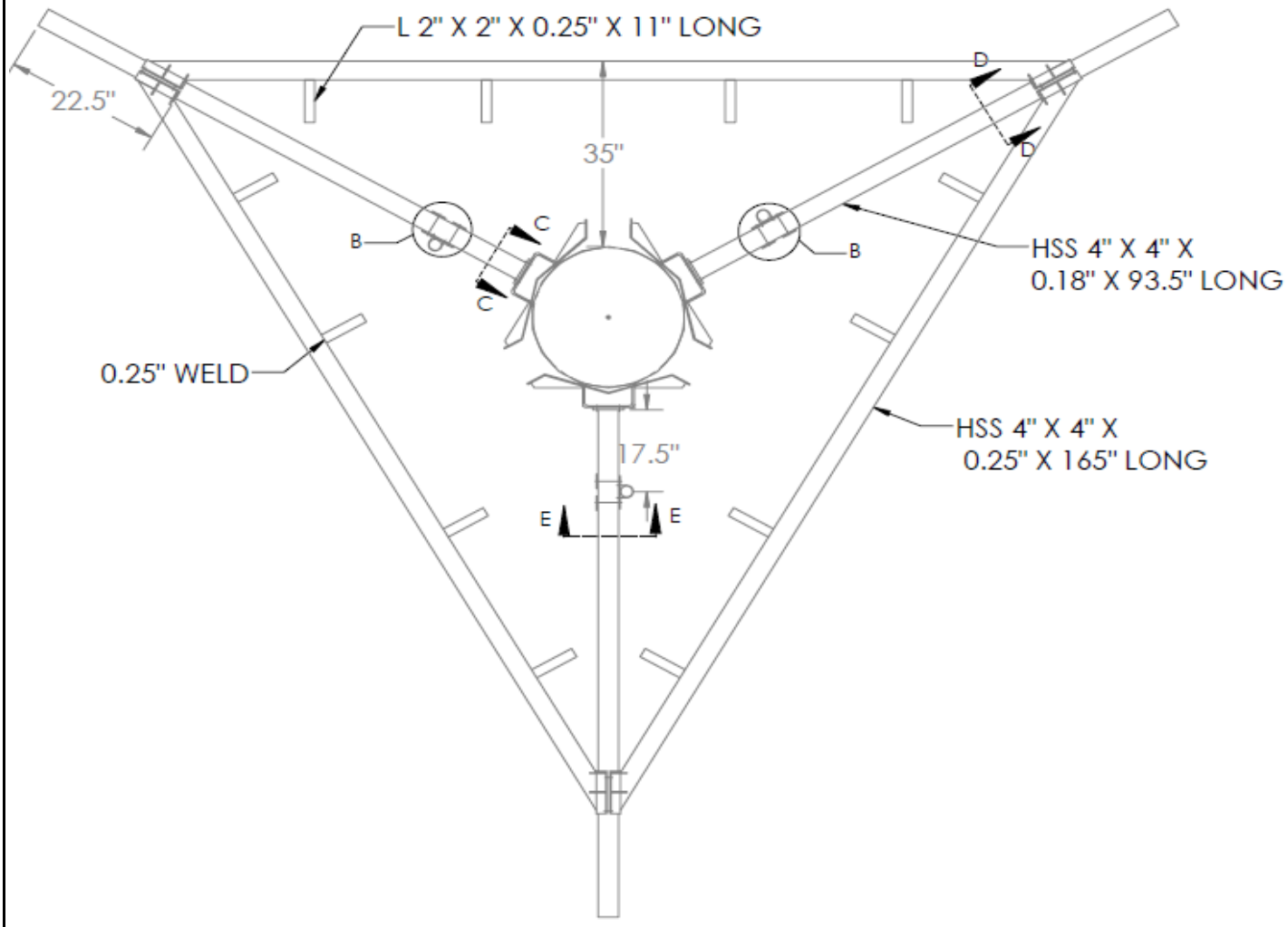


SECTOR A,B & C

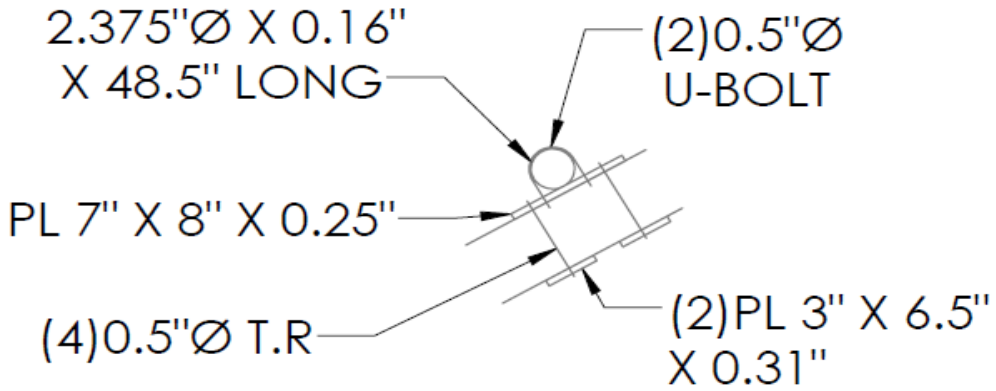


SECTION A-A

Please Insert Sketches of the Antenna Mount, cont'd

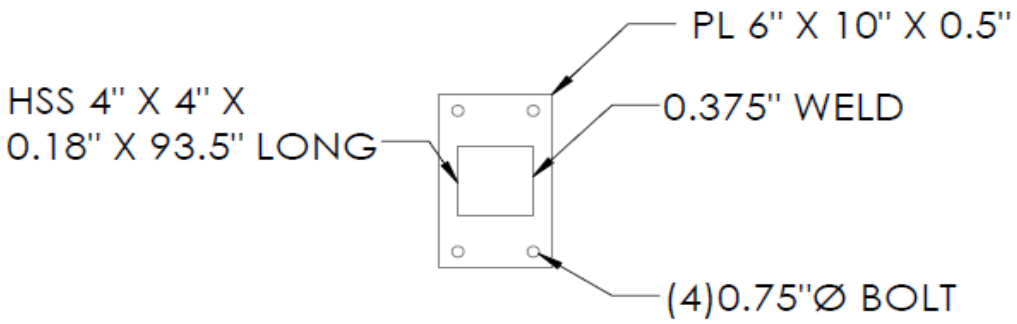


MOUNT VIEW

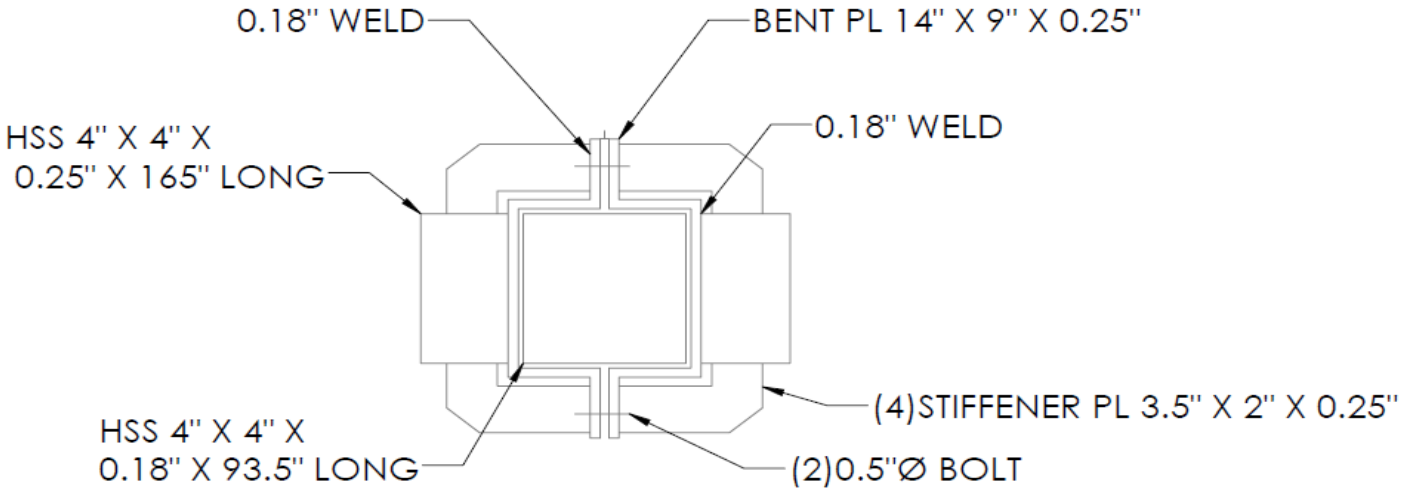


DETAIL B

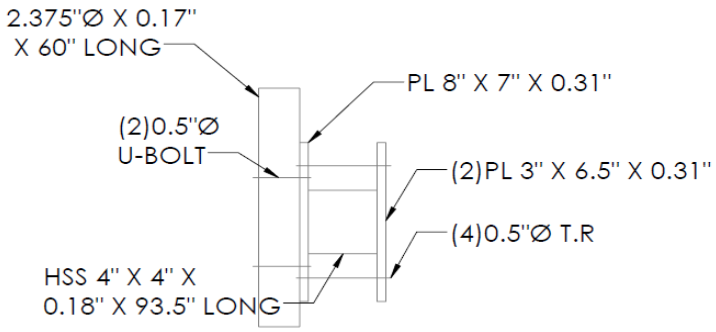
Please Insert Sketches of the Antenna Mount, cont'd



SECTION C-C



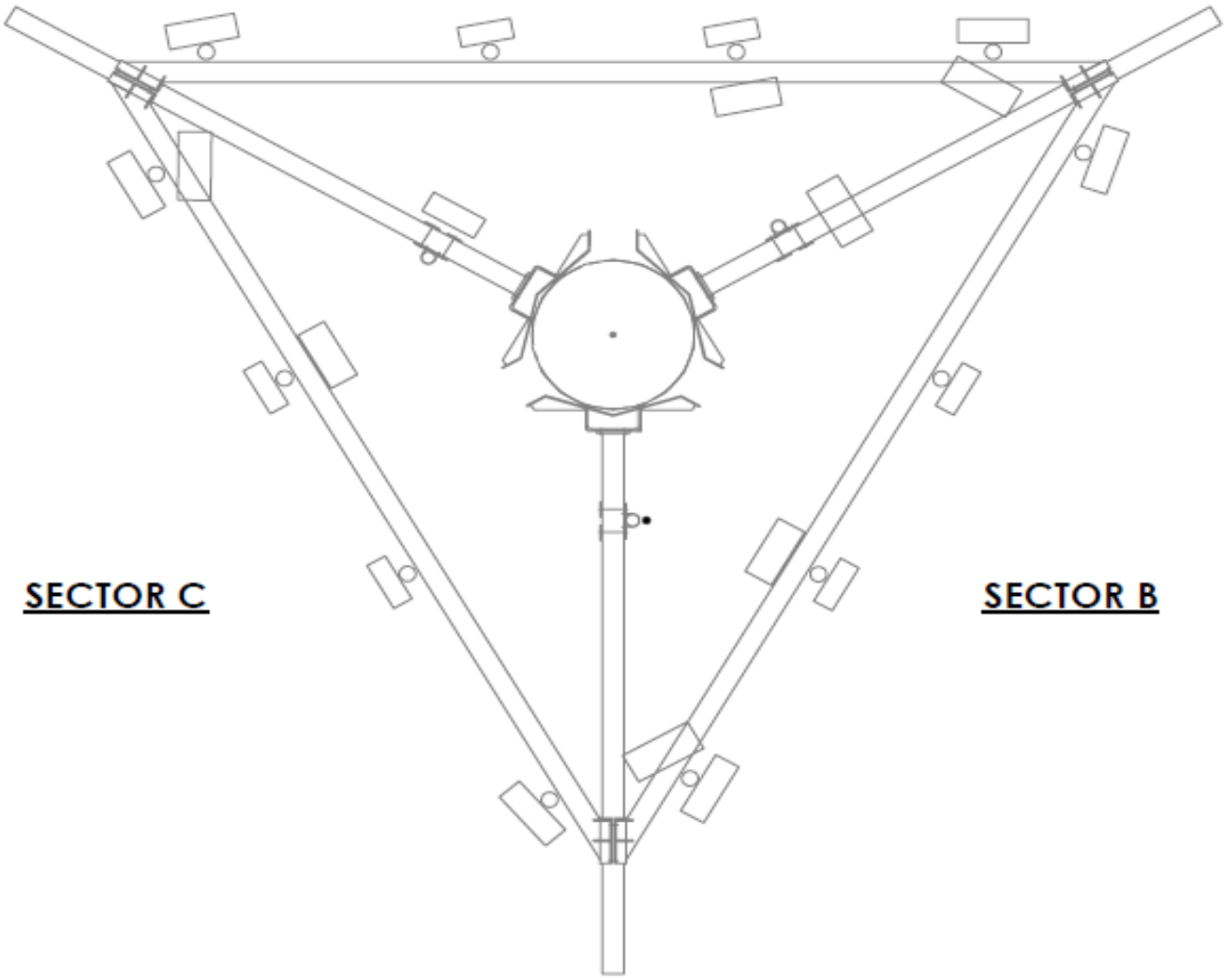
SECTION D-D



SECTION E-E

Please Insert Sketches of the Antenna Mount, cont'd

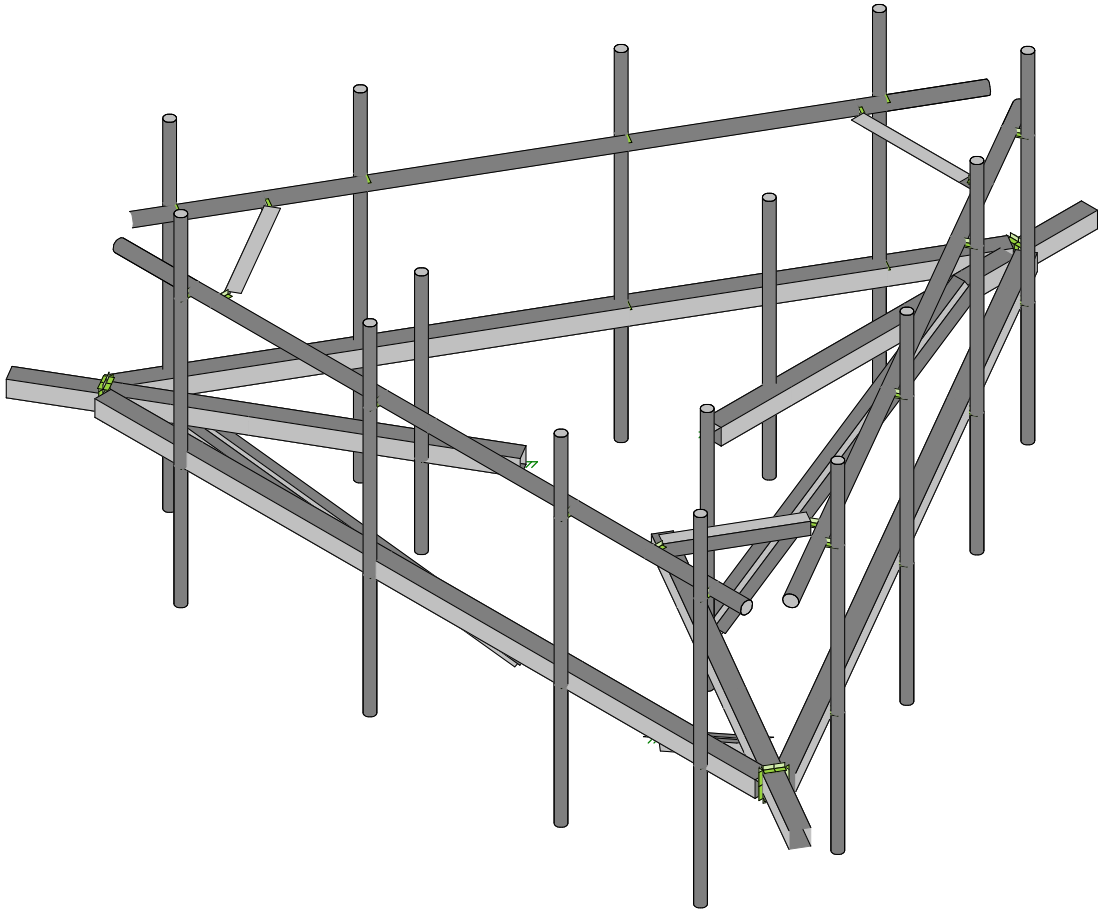
SECTOR A



SECTOR C

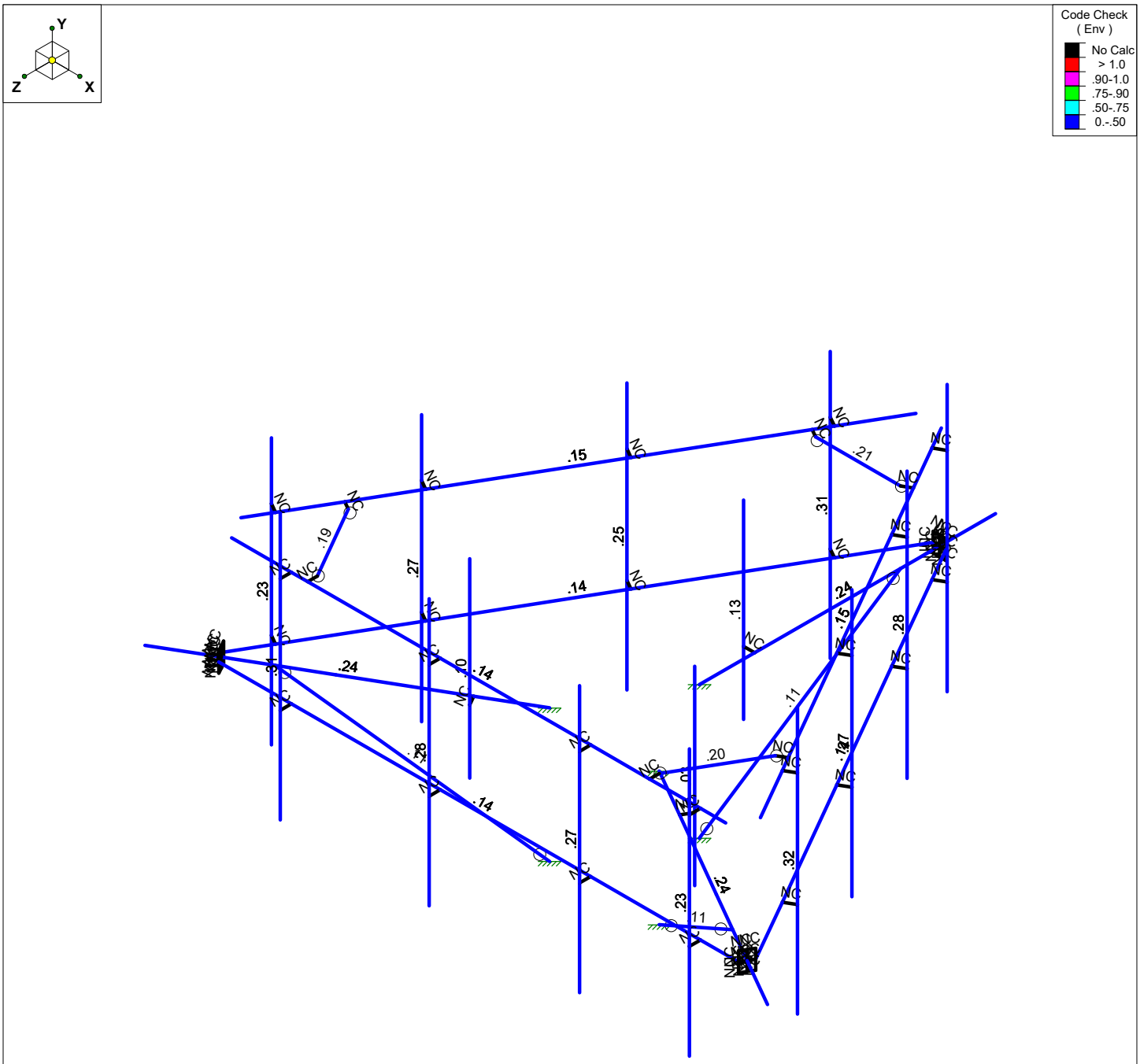
SECTOR B

ANTENNA PLAN VIEW



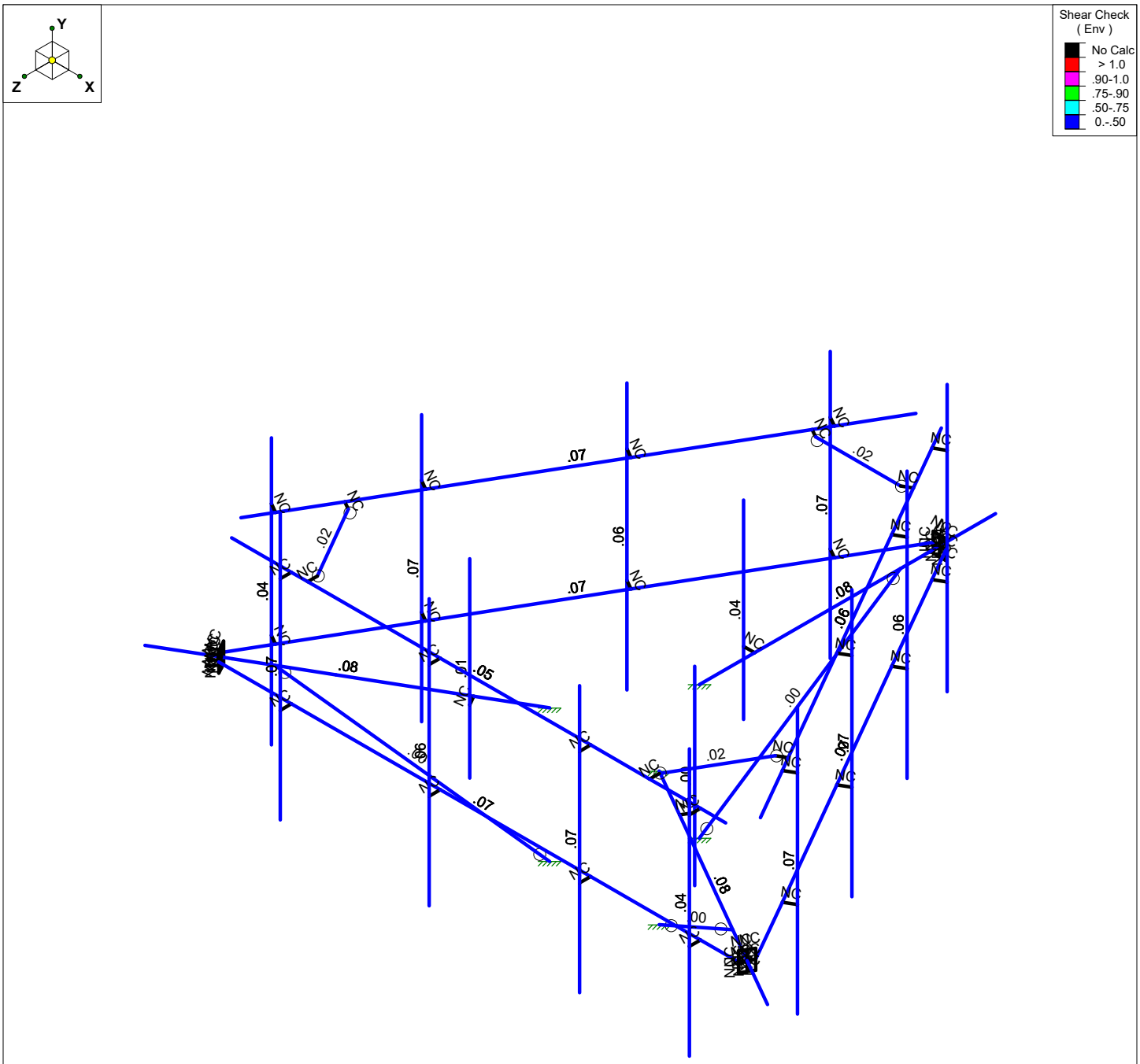
Envelope Only Solution

Colliers Engineering & De...	Antenna Mount Analysis	SK - 1
		Feb 13, 2024 at 1:22 PM
Project # 21777462		5000386683-VZW_MT_LO_H.r3d



Member Code Checks Displayed (Enveloped)
Envelope Only Solution

Colliers Engineering & De...	Antenna Mount Analysis	SK - 2
		Feb 13, 2024 at 1:26 PM
Project # 21777462		5000386683-VZW_MT_LO_H.r3d



Member Shear Checks Displayed (Enveloped)
Envelope Only Solution

Colliers Engineering & De...	Antenna Mount Analysis	SK - 3
		Feb 13, 2024 at 1:27 PM
Project # 21777462		5000386683-VZW_MT_LO_H.r3d

Basic Load Cases

	BLC Description	Category	X Gr...	Y Gr...	Z Gr...	Joint	Point	Distributed	Area(Member)	Surfa...
1	Antenna D	None					96			
2	Antenna Di	None					96			
3	Antenna Wo (0 Deg)	None					96			
4	Antenna Wo (30 Deg)	None					96			
5	Antenna Wo (60 Deg)	None					96			
6	Antenna Wo (90 Deg)	None					96			
7	Antenna Wo (120 Deg)	None					96			
8	Antenna Wo (150 Deg)	None					96			
9	Antenna Wo (180 Deg)	None					96			
10	Antenna Wo (210 Deg)	None					96			
11	Antenna Wo (240 Deg)	None					96			
12	Antenna Wo (270 Deg)	None					96			
13	Antenna Wo (300 Deg)	None					96			
14	Antenna Wo (330 Deg)	None					96			
15	Antenna Wi (0 Deg)	None					96			
16	Antenna Wi (30 Deg)	None					96			
17	Antenna Wi (60 Deg)	None					96			
18	Antenna Wi (90 Deg)	None					96			
19	Antenna Wi (120 Deg)	None					96			
20	Antenna Wi (150 Deg)	None					96			
21	Antenna Wi (180 Deg)	None					96			
22	Antenna Wi (210 Deg)	None					96			
23	Antenna Wi (240 Deg)	None					96			
24	Antenna Wi (270 Deg)	None					96			
25	Antenna Wi (300 Deg)	None					96			
26	Antenna Wi (330 Deg)	None					96			
27	Antenna Wm (0 Deg)	None					96			
28	Antenna Wm (30 Deg)	None					96			
29	Antenna Wm (60 Deg)	None					96			
30	Antenna Wm (90 Deg)	None					96			
31	Antenna Wm (120 Deg)	None					96			
32	Antenna Wm (150 Deg)	None					96			
33	Antenna Wm (180 Deg)	None					96			
34	Antenna Wm (210 Deg)	None					96			
35	Antenna Wm (240 Deg)	None					96			
36	Antenna Wm (270 Deg)	None					96			
37	Antenna Wm (300 Deg)	None					96			
38	Antenna Wm (330 Deg)	None					96			
39	Structure D	None		-1					3	
40	Structure Di	None						30	3	
41	Structure Wo (0 Deg)	None						60		
42	Structure Wo (30 Deg)	None						60		
43	Structure Wo (60 Deg)	None						60		
44	Structure Wo (90 Deg)	None						60		
45	Structure Wo (120 Deg)	None						60		
46	Structure Wo (150 Deg)	None						60		
47	Structure Wo (180 Deg)	None						60		
48	Structure Wo (210 Deg)	None						60		
49	Structure Wo (240 Deg)	None						60		
50	Structure Wo (270 Deg)	None						60		
51	Structure Wo (300 Deg)	None						60		
52	Structure Wo (330 Deg)	None						60		
53	Structure Wi (0 Deg)	None						60		
54	Structure Wi (30 Deg)	None						60		
55	Structure Wi (60 Deg)	None						60		
56	Structure Wi (90 Deg)	None						60		

Basic Load Cases (Continued)

	BLC Description	Category	X Gr...	Y Gr...	Z Gr...	Joint	Point	Distributed	Area(Member)	Surfa...
57	Structure Wi (120 Deg)	None						60		
58	Structure Wi (150 Deg)	None						60		
59	Structure Wi (180 Deg)	None						60		
60	Structure Wi (210 Deg)	None						60		
61	Structure Wi (240 Deg)	None						60		
62	Structure Wi (270 Deg)	None						60		
63	Structure Wi (300 Deg)	None						60		
64	Structure Wi (330 Deg)	None						60		
65	Structure Wm (0 Deg)	None						60		
66	Structure Wm (30 Deg)	None						60		
67	Structure Wm (60 Deg)	None						60		
68	Structure Wm (90 Deg)	None						60		
69	Structure Wm (120 Deg)	None						60		
70	Structure Wm (150 Deg)	None						60		
71	Structure Wm (180 Deg)	None						60		
72	Structure Wm (210 Deg)	None						60		
73	Structure Wm (240 Deg)	None						60		
74	Structure Wm (270 Deg)	None						60		
75	Structure Wm (300 Deg)	None						60		
76	Structure Wm (330 Deg)	None						60		
77	Lm1	None					1			
78	Lm2	None					1			
79	Lv1	None					1			
80	Lv2	None					1			
81	Antenna Ev	None					96			
82	Antenna Eh (0 Deg)	None					64			
83	Antenna Eh (90 Deg)	None					64			
84	Structure Ev	ELY		-.0363					3	
85	Structure Eh (0 Deg)	ELZ			-.0907				3	
86	Structure Eh (90 Deg)	ELX	.0907						3	
87	BLC 39 Transient Area Loads	None						15		
88	BLC 40 Transient Area Loads	None						15		
89	BLC 84 Transient Area Loads	None						30		
90	BLC 85 Transient Area Loads	None						30		
91	BLC 86 Transient Area Loads	None						30		

Load Combinations

	Description	S...	PDel...	SR...	BLC	Fa...	BLC	Fa...	BLC	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	BLC	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 De...	Yes	Y		1	1.2	39	1.2	7	1	45	1												
6	1.2D+1.0Wo (150 De...	Yes	Y		1	1.2	39	1.2	8	1	46	1												
7	1.2D+1.0Wo (180 De...	Yes	Y		1	1.2	39	1.2	9	1	47	1												
8	1.2D+1.0Wo (210 De...	Yes	Y		1	1.2	39	1.2	10	1	48	1												
9	1.2D+1.0Wo (240 De...	Yes	Y		1	1.2	39	1.2	11	1	49	1												
10	1.2D+1.0Wo (270 De...	Yes	Y		1	1.2	39	1.2	12	1	50	1												
11	1.2D+1.0Wo (300 De...	Yes	Y		1	1.2	39	1.2	13	1	51	1												
12	1.2D+1.0Wo (330 De...	Yes	Y		1	1.2	39	1.2	14	1	52	1												
13	1.2D + 1.0Di + 1.0Wi...	Yes	Y		1	1.2	39	1.2	2	1	40	1	15	1	53	1								
14	1.2D + 1.0Di + 1.0Wi...	Yes	Y		1	1.2	39	1.2	2	1	40	1	16	1	54	1								
15	1.2D + 1.0Di + 1.0Wi...	Yes	Y		1	1.2	39	1.2	2	1	40	1	17	1	55	1								
16	1.2D + 1.0Di + 1.0Wi...	Yes	Y		1	1.2	39	1.2	2	1	40	1	18	1	56	1								
17	1.2D + 1.0Di + 1.0Wi...	Yes	Y		1	1.2	39	1.2	2	1	40	1	19	1	57	1								

Load Combinations (Continued)

	Description	S...	PDel...	SR...	BLC	Fa...	BLC	Fa...	BLC	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	BLC	Fa...	B...	Fa...	B...	Fa...	B...	Fa...
18	1.2D + 1.0Di + 1.0Wi...	Yes	Y		1	1.2	39	1.2	2	1	40	1	20	1	58	1								
19	1.2D + 1.0Di + 1.0Wi...	Yes	Y		1	1.2	39	1.2	2	1	40	1	21	1	59	1								
20	1.2D + 1.0Di + 1.0Wi...	Yes	Y		1	1.2	39	1.2	2	1	40	1	22	1	60	1								
21	1.2D + 1.0Di + 1.0Wi...	Yes	Y		1	1.2	39	1.2	2	1	40	1	23	1	61	1								
22	1.2D + 1.0Di + 1.0Wi...	Yes	Y		1	1.2	39	1.2	2	1	40	1	24	1	62	1								
23	1.2D + 1.0Di + 1.0Wi...	Yes	Y		1	1.2	39	1.2	2	1	40	1	25	1	63	1								
24	1.2D + 1.0Di + 1.0Wi...	Yes	Y		1	1.2	39	1.2	2	1	40	1	26	1	64	1								
25	1.2D + 1.5Lm1 + 1.0...	Yes	Y		1	1.2	39	1.2	77	1.5	27	1	65	1										
26	1.2D + 1.5Lm1 + 1.0...	Yes	Y		1	1.2	39	1.2	77	1.5	28	1	66	1										
27	1.2D + 1.5Lm1 + 1.0...	Yes	Y		1	1.2	39	1.2	77	1.5	29	1	67	1										
28	1.2D + 1.5Lm1 + 1.0...	Yes	Y		1	1.2	39	1.2	77	1.5	30	1	68	1										
29	1.2D + 1.5Lm1 + 1.0...	Yes	Y		1	1.2	39	1.2	77	1.5	31	1	69	1										
30	1.2D + 1.5Lm1 + 1.0...	Yes	Y		1	1.2	39	1.2	77	1.5	32	1	70	1										
31	1.2D + 1.5Lm1 + 1.0...	Yes	Y		1	1.2	39	1.2	77	1.5	33	1	71	1										
32	1.2D + 1.5Lm1 + 1.0...	Yes	Y		1	1.2	39	1.2	77	1.5	34	1	72	1										
33	1.2D + 1.5Lm1 + 1.0...	Yes	Y		1	1.2	39	1.2	77	1.5	35	1	73	1										
34	1.2D + 1.5Lm1 + 1.0...	Yes	Y		1	1.2	39	1.2	77	1.5	36	1	74	1										
35	1.2D + 1.5Lm1 + 1.0...	Yes	Y		1	1.2	39	1.2	77	1.5	37	1	75	1										
36	1.2D + 1.5Lm1 + 1.0...	Yes	Y		1	1.2	39	1.2	77	1.5	38	1	76	1										
37	1.2D + 1.5Lm2 + 1.0...	Yes	Y		1	1.2	39	1.2	78	1.5	27	1	65	1										
38	1.2D + 1.5Lm2 + 1.0...	Yes	Y		1	1.2	39	1.2	78	1.5	28	1	66	1										
39	1.2D + 1.5Lm2 + 1.0...	Yes	Y		1	1.2	39	1.2	78	1.5	29	1	67	1										
40	1.2D + 1.5Lm2 + 1.0...	Yes	Y		1	1.2	39	1.2	78	1.5	30	1	68	1										
41	1.2D + 1.5Lm2 + 1.0...	Yes	Y		1	1.2	39	1.2	78	1.5	31	1	69	1										
42	1.2D + 1.5Lm2 + 1.0...	Yes	Y		1	1.2	39	1.2	78	1.5	32	1	70	1										
43	1.2D + 1.5Lm2 + 1.0...	Yes	Y		1	1.2	39	1.2	78	1.5	33	1	71	1										
44	1.2D + 1.5Lm2 + 1.0...	Yes	Y		1	1.2	39	1.2	78	1.5	34	1	72	1										
45	1.2D + 1.5Lm2 + 1.0...	Yes	Y		1	1.2	39	1.2	78	1.5	35	1	73	1										
46	1.2D + 1.5Lm2 + 1.0...	Yes	Y		1	1.2	39	1.2	78	1.5	36	1	74	1										
47	1.2D + 1.5Lm2 + 1.0...	Yes	Y		1	1.2	39	1.2	78	1.5	37	1	75	1										
48	1.2D + 1.5Lm2 + 1.0...	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 + 1.0E...	Yes	Y		1	1.2	39	1.2	81	1	E...	1	82	1	83		ELZ	1	E...					
53	1.2D + 1.0Ev + 1.0E...	Yes	Y		1	1.2	39	1.2	81	1	E...	1	82	.866	83	.5	ELZ	.866	E...	.5				
54	1.2D + 1.0Ev + 1.0E...	Yes	Y		1	1.2	39	1.2	81	1	E...	1	82	.5	83	.866	ELZ	.5	E...	.866				
55	1.2D + 1.0Ev + 1.0E...	Yes	Y		1	1.2	39	1.2	81	1	E...	1	82		83	1	ELZ		E...	1				
56	1.2D + 1.0Ev + 1.0E...	Yes	Y		1	1.2	39	1.2	81	1	E...	1	82	-.5	83	.866	ELZ	-.5	E...	.866				
57	1.2D + 1.0Ev + 1.0E...	Yes	Y		1	1.2	39	1.2	81	1	E...	1	82	-.8...	83	.5	ELZ	-.8...	E...	.5				
58	1.2D + 1.0Ev + 1.0E...	Yes	Y		1	1.2	39	1.2	81	1	E...	1	82	-1	83		ELZ	-1	E...					
59	1.2D + 1.0Ev + 1.0E...	Yes	Y		1	1.2	39	1.2	81	1	E...	1	82	-.8...	83	-.5	ELZ	-.8...	E...	-.5				
60	1.2D + 1.0Ev + 1.0E...	Yes	Y		1	1.2	39	1.2	81	1	E...	1	82	-.5	83	-.8...	ELZ	-.5	E...	-.8...				
61	1.2D + 1.0Ev + 1.0E...	Yes	Y		1	1.2	39	1.2	81	1	E...	1	82		83	-1	ELZ		E...	-1				
62	1.2D + 1.0Ev + 1.0E...	Yes	Y		1	1.2	39	1.2	81	1	E...	1	82	.5	83	-.8...	ELZ	.5	E...	-.8...				
63	1.2D + 1.0Ev + 1.0E...	Yes	Y		1	1.2	39	1.2	81	1	E...	1	82	.866	83	-.5	ELZ	.866	E...	-.5				
64	0.9D - 1.0Ev + 1.0Eh...	Yes	Y		1	.9	39	.9	81	-1	E...	-1	82	1	83		ELZ	1	E...					
65	0.9D - 1.0Ev + 1.0Eh...	Yes	Y		1	.9	39	.9	81	-1	E...	-1	82	.866	83	.5	ELZ	.866	E...	.5				
66	0.9D - 1.0Ev + 1.0Eh...	Yes	Y		1	.9	39	.9	81	-1	E...	-1	82	.5	83	.866	ELZ	.5	E...	.866				
67	0.9D - 1.0Ev + 1.0Eh...	Yes	Y		1	.9	39	.9	81	-1	E...	-1	82		83	1	ELZ		E...	1				
68	0.9D - 1.0Ev + 1.0Eh...	Yes	Y		1	.9	39	.9	81	-1	E...	-1	82	-.5	83	.866	ELZ	-.5	E...	.866				
69	0.9D - 1.0Ev + 1.0Eh...	Yes	Y		1	.9	39	.9	81	-1	E...	-1	82	-.8...	83	.5	ELZ	-.8...	E...	.5				
70	0.9D - 1.0Ev + 1.0Eh...	Yes	Y		1	.9	39	.9	81	-1	E...	-1	82	-1	83		ELZ	-1	E...					
71	0.9D - 1.0Ev + 1.0Eh...	Yes	Y		1	.9	39	.9	81	-1	E...	-1	82	-.8...	83	-.5	ELZ	-.8...	E...	-.5				
72	0.9D - 1.0Ev + 1.0Eh...	Yes	Y		1	.9	39	.9	81	-1	E...	-1	82	-.5	83	-.8...	ELZ	-.5	E...	-.8...				
73	0.9D - 1.0Ev + 1.0Eh...	Yes	Y		1	.9	39	.9	81	-1	E...	-1	82		83	-1	ELZ		E...	-1				
74	0.9D - 1.0Ev + 1.0Eh...	Yes	Y		1	.9	39	.9	81	-1	E...	-1	82	.5	83	-.8...	ELZ	.5	E...	-.8...				

Load Combinations (Continued)

	Description	S...	PDel...	SR...	BLC	Fa...	BLC	Fa...	BLC	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	BLC	Fa...	B...	Fa...	B...	Fa...	B...	Fa...
75	0.9D - 1.0Ev + 1.0Eh...	Yes	Y		1	.9	39	.9	81	-1	E...	-1	82	.866	83	-.5	ELZ	.866	E...	-.5				

Hot Rolled Steel Section Sets

	Label	Shape	Type	Design List	Material	Desig...	A [in2]	Iyy [i...	Izz [i...	J [in4]
1	Face Horizontal	HSS4X4X4	Beam	SquareTube	A500 Gr.B Rect	Typical	3.37	7.8	7.8	12.8
2	Standoff Horizontal	HSS4X4X3	Beam	SquareTube	A500 Gr.B Rect	Typical	2.58	6.21	6.21	10
3	Mount Pipe	PIPE_2.0	Column	Pipe	A53 Gr.B	Typical	1.02	.627	.627	1.25
4	Mod Kicker	LL3x3x3x6	Column	Double Angle ...	A36 Gr.36	Typical	2.18	4.97	1.9	.0272
5	Mod Support Rail	PIPE_2.5	Beam	Pipe	A53 Gr.B	Typical	1.61	1.45	1.45	2.89
6	Mod Support Rail Corner	L3X3X4	Beam	Single Angle	A36 Gr.36	Typical	1.44	1.23	1.23	.0313

Hot Rolled Steel Properties

	Label	E [ksi]	G [ksi]	Nu	Therm (/...	Density[k/ft^3]	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(d...	Section/Shape	Type	Design List	Material	Design Ru...
1	M4	N3	N27			Standoff Horizontal	Beam	SquareTube	A500 Gr...	Typical
2	M2	N7	N5			RIGID	None	None	RIGID	Typical
3	M3	N6	N5			RIGID	None	None	RIGID	Typical
4	M4A	N10	N8			RIGID	None	None	RIGID	Typical
5	M5	N9	N8			RIGID	None	None	RIGID	Typical
6	M6	N13	N11			RIGID	None	None	RIGID	Typical
7	M7	N12	N11			RIGID	None	None	RIGID	Typical
8	M8	N8	N5			RIGID	None	None	RIGID	Typical
9	M9	N11	N5			RIGID	None	None	RIGID	Typical
10	M10	N7	N10			RIGID	None	None	RIGID	Typical
11	M11	N6	N9			RIGID	None	None	RIGID	Typical
12	M12	N7	N13			RIGID	None	None	RIGID	Typical
13	M13	N6	N12			RIGID	None	None	RIGID	Typical
14	M40	N96	N7			Face Horizontal	Beam	SquareTube	A500 Gr...	Typical
15	M41	N6	N106			Face Horizontal	Beam	SquareTube	A500 Gr...	Typical
16	M42	N97	N105			Face Horizontal	Beam	SquareTube	A500 Gr...	Typical
17	M43	N38	N42			RIGID	None	None	RIGID	Typical
18	M44	N39	N43			RIGID	None	None	RIGID	Typical
19	M45	N41A	N45			RIGID	None	None	RIGID	Typical
20	M46	N41	N44			RIGID	None	None	RIGID	Typical
21	MP4A	N46	N50			Mount Pipe	Column	Pipe	A53 Gr.B	Typical
22	MP3A	N47	N51			Mount Pipe	Column	Pipe	A53 Gr.B	Typical
23	MP2A	N49	N53			Mount Pipe	Column	Pipe	A53 Gr.B	Typical
24	MP1A	N48	N52			Mount Pipe	Column	Pipe	A53 Gr.B	Typical
25	OVP1	N92	N93			Mount Pipe	Column	Pipe	A53 Gr.B	Typical
26	M68	N91	N90			RIGID	None	None	RIGID	Typical
27	M67	N83A	N84A			Standoff Horizontal	Beam	SquareTube	A500 Gr...	Typical
28	LR	N87	N88			Mount Pipe	Column	Pipe	A53 Gr.B	Typical

Member Primary Data (Continued)

	Label	I Joint	J Joint	K Joint	Rotate(d...	Section/Shape	Type	Design List	Material	Design Ru...
29	M69	N86	N85A			RIGID	None	None	RIGID	Typical
30	M70	N89	N90A			Standoff Horizontal	Beam	SquareTube	A500 Gr...	Typical
31	OVP2	N93A	N94			Mount Pipe	Column	Pipe	A53 Gr.B	Typical
32	M72	N92A	N91A			RIGID	None	None	RIGID	Typical
33	M73	N97	N95			RIGID	None	None	RIGID	Typical
34	M74	N96	N95			RIGID	None	None	RIGID	Typical
35	M75	N100	N98			RIGID	None	None	RIGID	Typical
36	M76	N99	N98			RIGID	None	None	RIGID	Typical
37	M77	N103	N101			RIGID	None	None	RIGID	Typical
38	M78	N102	N101			RIGID	None	None	RIGID	Typical
39	M79	N98	N95			RIGID	None	None	RIGID	Typical
40	M80	N101	N95			RIGID	None	None	RIGID	Typical
41	M81	N97	N100			RIGID	None	None	RIGID	Typical
42	M82	N96	N99			RIGID	None	None	RIGID	Typical
43	M83	N97	N103			RIGID	None	None	RIGID	Typical
44	M84	N96	N102			RIGID	None	None	RIGID	Typical
45	M85	N106	N104			RIGID	None	None	RIGID	Typical
46	M86	N105	N104			RIGID	None	None	RIGID	Typical
47	M87	N109	N107			RIGID	None	None	RIGID	Typical
48	M88	N108	N107			RIGID	None	None	RIGID	Typical
49	M89	N112	N110			RIGID	None	None	RIGID	Typical
50	M90	N111	N110			RIGID	None	None	RIGID	Typical
51	M91	N107	N104			RIGID	None	None	RIGID	Typical
52	M92	N110	N104			RIGID	None	None	RIGID	Typical
53	M93	N106	N109			RIGID	None	None	RIGID	Typical
54	M94	N105	N108			RIGID	None	None	RIGID	Typical
55	M95	N106	N112			RIGID	None	None	RIGID	Typical
56	M96	N105	N111			RIGID	None	None	RIGID	Typical
57	M57	N63	N67			RIGID	None	None	RIGID	Typical
58	M58	N64	N68			RIGID	None	None	RIGID	Typical
59	M59	N66	N70			RIGID	None	None	RIGID	Typical
60	M60	N65	N69			RIGID	None	None	RIGID	Typical
61	MP4C	N71	N75			Mount Pipe	Column	Pipe	A53 Gr.B	Typical
62	MP3C	N72	N76			Mount Pipe	Column	Pipe	A53 Gr.B	Typical
63	MP2C	N74	N78			Mount Pipe	Column	Pipe	A53 Gr.B	Typical
64	MP1C	N73	N77			Mount Pipe	Column	Pipe	A53 Gr.B	Typical
65	M65	N79	N83			RIGID	None	None	RIGID	Typical
66	M66	N80	N84			RIGID	None	None	RIGID	Typical
67	M67A	N82	N86A			RIGID	None	None	RIGID	Typical
68	M68B	N81	N85			RIGID	None	None	RIGID	Typical
69	MP4B	N87A	N91B			Mount Pipe	Column	Pipe	A53 Gr.B	Typical
70	MP3B	N88A	N92B			Mount Pipe	Column	Pipe	A53 Gr.B	Typical
71	MP2B	N90B	N94A			Mount Pipe	Column	Pipe	A53 Gr.B	Typical
72	MP1B	N89A	N93B			Mount Pipe	Column	Pipe	A53 Gr.B	Typical
73	M73A	N115	N114			Mod Support Rail	Beam	Pipe	A53 Gr.B	Typical
74	M74A	N103A	N107A			RIGID	None	None	RIGID	Typical
75	M75A	N104A	N108A			RIGID	None	None	RIGID	Typical
76	M76A	N106A	N110A			RIGID	None	None	RIGID	Typical
77	M77A	N105A	N109A			RIGID	None	None	RIGID	Typical
78	M78A	N115A	N117			RIGID	None	None	RIGID	Typical
79	M79A	N114A	N116			RIGID	None	None	RIGID	Typical
80	M80A	N119	N118			Mod Support Rail	Beam	Pipe	A53 Gr.B	Typical
81	M81A	N121	N123			RIGID	None	None	RIGID	Typical
82	M82A	N120	N122			RIGID	None	None	RIGID	Typical
83	M83A	N125	N124			Mod Support Rail	Beam	Pipe	A53 Gr.B	Typical
84	M84A	N127	N129			RIGID	None	None	RIGID	Typical
85	M85A	N126	N128			RIGID	None	None	RIGID	Typical

Member Primary Data (Continued)

	Label	I Joint	J Joint	K Joint	Rotate(d...	Section/Shape	Type	Design List	Material	Design Ru...
86	M86A	N129	N122		90	Mod Support Rail ...	Beam	Single Angle	A36 Gr.36	Typical
87	M87A	N123	N116		90	Mod Support Rail ...	Beam	Single Angle	A36 Gr.36	Typical
88	M88A	N117	N128		90	Mod Support Rail ...	Beam	Single Angle	A36 Gr.36	Typical
89	M89A	N101A	N102A			Mod Kicker	Column	Double Angl...	A36 Gr.36	Typical
90	M90A	N130	N131			Mod Kicker	Column	Double Angl...	A36 Gr.36	Typical
91	M91A	N132	N133			Mod Kicker	Column	Double Angl...	A36 Gr.36	Typical
92	M92A	N134	N138			RIGID	None	None	RIGID	Typical
93	M93A	N135	N139			RIGID	None	None	RIGID	Typical
94	M94A	N137	N141			RIGID	None	None	RIGID	Typical
95	M95A	N136	N140			RIGID	None	None	RIGID	Typical
96	M96A	N142	N146			RIGID	None	None	RIGID	Typical
97	M97	N143	N147			RIGID	None	None	RIGID	Typical
98	M98	N145	N149			RIGID	None	None	RIGID	Typical
99	M99	N144	N148			RIGID	None	None	RIGID	Typical

Member Advanced Data

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Defl Ratio Opti...	Analysis ...	Inactive	Seismi...
1	M4						Yes	Default			None
2	M2						Yes	** NA **			None
3	M3						Yes	** NA **			None
4	M4A						Yes	** NA **			None
5	M5						Yes	** NA **			None
6	M6						Yes	** NA **			None
7	M7						Yes	** NA **			None
8	M8						Yes	** NA **			None
9	M9						Yes	** NA **			None
10	M10						Yes	** NA **			None
11	M11						Yes	** NA **			None
12	M12						Yes	** NA **			None
13	M13						Yes	** NA **			None
14	M40						Yes				None
15	M41						Yes				None
16	M42						Yes	Default			None
17	M43						Yes	** NA **			None
18	M44						Yes	** NA **			None
19	M45						Yes	** NA **			None
20	M46						Yes	** NA **			None
21	MP4A						Yes	** NA **			None
22	MP3A						Yes	** NA **			None
23	MP2A						Yes	** NA **			None
24	MP1A						Yes	** NA **			None
25	OVP1						Yes	** NA **			None
26	M68						Yes	** NA **			None
27	M67						Yes				None
28	LR						Yes	** NA **			None
29	M69						Yes	** NA **			None
30	M70						Yes				None
31	OVP2						Yes	** NA **			None
32	M72						Yes	** NA **			None
33	M73						Yes	** NA **			None
34	M74						Yes	** NA **			None
35	M75						Yes	** NA **			None
36	M76						Yes	** NA **			None
37	M77						Yes	** NA **			None
38	M78						Yes	** NA **			None

Member Advanced Data (Continued)

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Defl Ratio Opti...	Analysis ...	Inactive	Seismi...
39	M79						Yes	** NA **			None
40	M80						Yes	** NA **			None
41	M81						Yes	** NA **			None
42	M82						Yes	** NA **			None
43	M83						Yes	** NA **			None
44	M84						Yes	** NA **			None
45	M85						Yes	** NA **			None
46	M86						Yes	** NA **			None
47	M87						Yes	** NA **			None
48	M88						Yes	** NA **			None
49	M89						Yes	** NA **			None
50	M90						Yes	** NA **			None
51	M91						Yes	** NA **			None
52	M92						Yes	** NA **			None
53	M93						Yes	** NA **			None
54	M94						Yes	** NA **			None
55	M95						Yes	** NA **			None
56	M96						Yes	** NA **			None
57	M57						Yes	** NA **			None
58	M58						Yes	** NA **			None
59	M59						Yes	** NA **			None
60	M60						Yes	** NA **			None
61	MP4C						Yes	** NA **			None
62	MP3C						Yes	** NA **			None
63	MP2C						Yes	** NA **			None
64	MP1C						Yes	** NA **			None
65	M65						Yes	** NA **			None
66	M66						Yes	** NA **			None
67	M67A						Yes	** NA **			None
68	M68B						Yes	** NA **			None
69	MP4B						Yes	** NA **			None
70	MP3B						Yes	** NA **			None
71	MP2B						Yes	** NA **			None
72	MP1B						Yes	** NA **			None
73	M73A						Yes	Default			None
74	M74A						Yes	** NA **			None
75	M75A						Yes	** NA **			None
76	M76A						Yes	** NA **			None
77	M77A						Yes	** NA **			None
78	M78A	OOOOOX					Yes	** NA **			None
79	M79A	OOOOOX					Yes	** NA **			None
80	M80A						Yes	Default			None
81	M81A	OOOOOX					Yes	** NA **			None
82	M82A	OOOOOX					Yes	** NA **			None
83	M83A						Yes	Default			None
84	M84A	OOOOOX					Yes	** NA **			None
85	M85A	OOOOOX					Yes	** NA **			None
86	M86A						Yes				None
87	M87A						Yes				None
88	M88A						Yes				None
89	M89A	BenPIN	BenPIN				Yes	** NA **			None
90	M90A	BenPIN	BenPIN				Yes	** NA **			None
91	M91A	BenPIN	BenPIN				Yes	** NA **			None
92	M92A						Yes	** NA **			None
93	M93A						Yes	** NA **			None
94	M94A						Yes	** NA **			None
95	M95A						Yes	** NA **			None

Member Advanced Data (Continued)

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Defl Ratio Opti...	Analysis ...	Inactive	Seismi...
96	M96A						Yes	** NA **			None
97	M97						Yes	** NA **			None
98	M98						Yes	** NA **			None
99	M99						Yes	** NA **			None

Member Point Loads (BLC 1 : Antenna D)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	Y	-21.85	.75
2	MP3A	My	-.0059	.75
3	MP3A	Mz	.0157	.75
4	MP3A	Y	-21.85	5.75
5	MP3A	My	-.0059	5.75
6	MP3A	Mz	.0157	5.75
7	MP3B	Y	-21.85	.75
8	MP3B	My	.000176	.75
9	MP3B	Mz	-.0168	.75
10	MP3B	Y	-21.85	5.75
11	MP3B	My	.000176	5.75
12	MP3B	Mz	-.0168	5.75
13	MP3C	Y	-21.85	.75
14	MP3C	My	.0144	.75
15	MP3C	Mz	.0085	.75
16	MP3C	Y	-21.85	5.75
17	MP3C	My	.0144	5.75
18	MP3C	Mz	.0085	5.75
19	MP3A	Y	-21.85	.75
20	MP3A	My	-.0146	.75
21	MP3A	Mz	-.0082	.75
22	MP3A	Y	-21.85	5.75
23	MP3A	My	-.0146	5.75
24	MP3A	Mz	-.0082	5.75
25	MP3B	Y	-21.85	.75
26	MP3B	My	.0166	.75
27	MP3B	Mz	.0027	.75
28	MP3B	Y	-21.85	5.75
29	MP3B	My	.0166	5.75
30	MP3B	Mz	.0027	5.75
31	MP3C	Y	-21.85	.75
32	MP3C	My	-.0107	.75
33	MP3C	Mz	.013	.75
34	MP3C	Y	-21.85	5.75
35	MP3C	My	-.0107	5.75
36	MP3C	Mz	.013	5.75
37	MP3A	Y	-74.7	3.25
38	MP3A	My	.0351	3.25
39	MP3A	Mz	-.0128	3.25
40	MP3B	Y	-74.7	3.25
41	MP3B	My	-.0286	3.25
42	MP3B	Mz	.024	3.25
43	MP3C	Y	-74.7	3.25
44	MP3C	My	-.0065	3.25
45	MP3C	Mz	-.0368	3.25
46	MP1A	Y	-8.5	1.25
47	MP1A	My	-.004	1.25
48	MP1A	Mz	.0015	1.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
49	MP1A	Y	-8.5	5.25
50	MP1A	My	-.004	5.25
51	MP1A	Mz	.0015	5.25
52	MP1B	Y	-8.5	1.25
53	MP1B	My	.0033	1.25
54	MP1B	Mz	-.0027	1.25
55	MP1B	Y	-8.5	5.25
56	MP1B	My	.0033	5.25
57	MP1B	Mz	-.0027	5.25
58	MP1C	Y	-8.5	1.25
59	MP1C	My	.000738	1.25
60	MP1C	Mz	.0042	1.25
61	MP1C	Y	-8.5	5.25
62	MP1C	My	.000738	5.25
63	MP1C	Mz	.0042	5.25
64	OVP1	Y	-32	2
65	OVP1	My	-.016	2
66	OVP1	Mz	0	2
67	LR	Y	-5	.25
68	LR	My	0	.25
69	LR	Mz	0	.25
70	MP2A	Y	-28.65	2.75
71	MP2A	My	-.0224	2.75
72	MP2A	Mz	.0082	2.75
73	MP2A	Y	-28.65	3.75
74	MP2A	My	-.0224	3.75
75	MP2A	Mz	.0082	3.75
76	MP2B	Y	-28.65	2.75
77	MP2B	My	.0183	2.75
78	MP2B	Mz	-.0153	2.75
79	MP2B	Y	-28.65	3.75
80	MP2B	My	.0183	3.75
81	MP2B	Mz	-.0153	3.75
82	MP2C	Y	-28.65	2.75
83	MP2C	My	.0041	2.75
84	MP2C	Mz	.0235	2.75
85	MP2C	Y	-28.65	3.75
86	MP2C	My	.0041	3.75
87	MP2C	Mz	.0235	3.75
88	MP4A	Y	-79.1	3.25
89	MP4A	My	.0372	3.25
90	MP4A	Mz	-.0135	3.25
91	MP4B	Y	-79.1	3.25
92	MP4B	My	-.0303	3.25
93	MP4B	Mz	.0254	3.25
94	MP4C	Y	-79.1	3.25
95	MP4C	My	-.0069	3.25
96	MP4C	Mz	-.0389	3.25

Member Point Loads (BLC 2 : Antenna Di)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	Y	-94.0544	.75
2	MP3A	My	-.0254	.75
3	MP3A	Mz	.0676	.75
4	MP3A	Y	-94.0544	5.75
5	MP3A	My	-.0254	5.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
6	MP3A	Mz	.0676	5.75
7	MP3B	Y	-94.0544	.75
8	MP3B	My	.000758	.75
9	MP3B	Mz	-.0723	.75
10	MP3B	Y	-94.0544	5.75
11	MP3B	My	.000758	5.75
12	MP3B	Mz	-.0723	5.75
13	MP3C	Y	-94.0544	.75
14	MP3C	My	.0622	.75
15	MP3C	Mz	.0368	.75
16	MP3C	Y	-94.0544	5.75
17	MP3C	My	.0622	5.75
18	MP3C	Mz	.0368	5.75
19	MP3A	Y	-94.0544	.75
20	MP3A	My	-.063	.75
21	MP3A	Mz	-.0355	.75
22	MP3A	Y	-94.0544	5.75
23	MP3A	My	-.063	5.75
24	MP3A	Mz	-.0355	5.75
25	MP3B	Y	-94.0544	.75
26	MP3B	My	.0713	.75
27	MP3B	Mz	.0118	.75
28	MP3B	Y	-94.0544	5.75
29	MP3B	My	.0713	5.75
30	MP3B	Mz	.0118	5.75
31	MP3C	Y	-94.0544	.75
32	MP3C	My	-.0459	.75
33	MP3C	Mz	.0558	.75
34	MP3C	Y	-94.0544	5.75
35	MP3C	My	-.0459	5.75
36	MP3C	Mz	.0558	5.75
37	MP3A	Y	-70.5248	3.25
38	MP3A	My	.0331	3.25
39	MP3A	Mz	-.0121	3.25
40	MP3B	Y	-70.5248	3.25
41	MP3B	My	-.027	3.25
42	MP3B	Mz	.0227	3.25
43	MP3C	Y	-70.5248	3.25
44	MP3C	My	-.0061	3.25
45	MP3C	Mz	-.0347	3.25
46	MP1A	Y	-80.8221	1.25
47	MP1A	My	-.038	1.25
48	MP1A	Mz	.0138	1.25
49	MP1A	Y	-80.8221	5.25
50	MP1A	My	-.038	5.25
51	MP1A	Mz	.0138	5.25
52	MP1B	Y	-80.8221	1.25
53	MP1B	My	.031	1.25
54	MP1B	Mz	-.026	1.25
55	MP1B	Y	-80.8221	5.25
56	MP1B	My	.031	5.25
57	MP1B	Mz	-.026	5.25
58	MP1C	Y	-80.8221	1.25
59	MP1C	My	.007	1.25
60	MP1C	Mz	.0398	1.25
61	MP1C	Y	-80.8221	5.25
62	MP1C	My	.007	5.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
63	MP1C	Mz	.0398	5.25
64	OVP1	Y	-135.8505	2
65	OVP1	My	-.0679	2
66	OVP1	Mz	0	2
67	LR	Y	-14.459	.25
68	LR	My	0	.25
69	LR	Mz	0	.25
70	MP2A	Y	-46.5772	2.75
71	MP2A	My	-.0365	2.75
72	MP2A	Mz	.0133	2.75
73	MP2A	Y	-46.5772	3.75
74	MP2A	My	-.0365	3.75
75	MP2A	Mz	.0133	3.75
76	MP2B	Y	-46.5772	2.75
77	MP2B	My	.0297	2.75
78	MP2B	Mz	-.0249	2.75
79	MP2B	Y	-46.5772	3.75
80	MP2B	My	.0297	3.75
81	MP2B	Mz	-.0249	3.75
82	MP2C	Y	-46.5772	2.75
83	MP2C	My	.0067	2.75
84	MP2C	Mz	.0382	2.75
85	MP2C	Y	-46.5772	3.75
86	MP2C	My	.0067	3.75
87	MP2C	Mz	.0382	3.75
88	MP4A	Y	-71.247	3.25
89	MP4A	My	.0335	3.25
90	MP4A	Mz	-.0122	3.25
91	MP4B	Y	-71.247	3.25
92	MP4B	My	-.0273	3.25
93	MP4B	Mz	.0229	3.25
94	MP4C	Y	-71.247	3.25
95	MP4C	My	-.0062	3.25
96	MP4C	Mz	-.0351	3.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	0	.75
2	MP3A	Z	-104.075	.75
3	MP3A	Mx	-.0748	.75
4	MP3A	X	0	5.75
5	MP3A	Z	-104.075	5.75
6	MP3A	Mx	-.0748	5.75
7	MP3B	X	0	.75
8	MP3B	Z	-85.217	.75
9	MP3B	Mx	.0655	.75
10	MP3B	X	0	5.75
11	MP3B	Z	-85.217	5.75
12	MP3B	Mx	.0655	5.75
13	MP3C	X	0	.75
14	MP3C	Z	-49.774	.75
15	MP3C	Mx	-.0195	.75
16	MP3C	X	0	5.75
17	MP3C	Z	-49.774	5.75
18	MP3C	Mx	-.0195	5.75
19	MP3A	X	0	.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
20	MP3A	Z	-104.075	.75
21	MP3A	Mx	.0393	.75
22	MP3A	X	0	5.75
23	MP3A	Z	-104.075	5.75
24	MP3A	Mx	.0393	5.75
25	MP3B	X	0	.75
26	MP3B	Z	-85.217	.75
27	MP3B	Mx	-.0107	.75
28	MP3B	X	0	5.75
29	MP3B	Z	-85.217	5.75
30	MP3B	Mx	-.0107	5.75
31	MP3C	X	0	.75
32	MP3C	Z	-49.774	.75
33	MP3C	Mx	-.0296	.75
34	MP3C	X	0	5.75
35	MP3C	Z	-49.774	5.75
36	MP3C	Mx	-.0296	5.75
37	MP3A	X	0	3.25
38	MP3A	Z	-61.218	3.25
39	MP3A	Mx	.0105	3.25
40	MP3B	X	0	3.25
41	MP3B	Z	-55.013	3.25
42	MP3B	Mx	-.0177	3.25
43	MP3C	X	0	3.25
44	MP3C	Z	-43.352	3.25
45	MP3C	Mx	.0213	3.25
46	MP1A	X	0	1.25
47	MP1A	Z	-147.278	1.25
48	MP1A	Mx	-.0252	1.25
49	MP1A	X	0	5.25
50	MP1A	Z	-147.278	5.25
51	MP1A	Mx	-.0252	5.25
52	MP1B	X	0	1.25
53	MP1B	Z	-126.522	1.25
54	MP1B	Mx	.0407	1.25
55	MP1B	X	0	5.25
56	MP1B	Z	-126.522	5.25
57	MP1B	Mx	.0407	5.25
58	MP1C	X	0	1.25
59	MP1C	Z	-87.514	1.25
60	MP1C	Mx	-.0431	1.25
61	MP1C	X	0	5.25
62	MP1C	Z	-87.514	5.25
63	MP1C	Mx	-.0431	5.25
64	OVP1	X	0	2
65	OVP1	Z	-130.213	2
66	OVP1	Mx	0	2
67	LR	X	0	.25
68	LR	Z	-35.942	.25
69	LR	Mx	0	.25
70	MP2A	X	0	2.75
71	MP2A	Z	-59.976	2.75
72	MP2A	Mx	-.0171	2.75
73	MP2A	X	0	3.75
74	MP2A	Z	-59.976	3.75
75	MP2A	Mx	-.0171	3.75
76	MP2B	X	0	2.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
77	MP2B	Z	-47.505	2.75
78	MP2B	Mx	.0254	2.75
79	MP2B	X	0	3.75
80	MP2B	Z	-47.505	3.75
81	MP2B	Mx	.0254	3.75
82	MP2C	X	0	2.75
83	MP2C	Z	-24.067	2.75
84	MP2C	Mx	-.0198	2.75
85	MP2C	X	0	3.75
86	MP2C	Z	-24.067	3.75
87	MP2C	Mx	-.0198	3.75
88	MP4A	X	0	3.25
89	MP4A	Z	-73.954	3.25
90	MP4A	Mx	.0126	3.25
91	MP4B	X	0	3.25
92	MP4B	Z	-66.715	3.25
93	MP4B	Mx	-.0214	3.25
94	MP4C	X	0	3.25
95	MP4C	Z	-53.11	3.25
96	MP4C	Mx	.0262	3.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	37.08	.75
2	MP3A	Z	-64.225	.75
3	MP3A	Mx	-.0562	.75
4	MP3A	X	37.08	5.75
5	MP3A	Z	-64.225	5.75
6	MP3A	Mx	-.0562	5.75
7	MP3B	X	27.651	.75
8	MP3B	Z	-47.893	.75
9	MP3B	Mx	.037	.75
10	MP3B	X	27.651	5.75
11	MP3B	Z	-47.893	5.75
12	MP3B	Mx	.037	5.75
13	MP3C	X	37.08	.75
14	MP3C	Z	-64.225	.75
15	MP3C	Mx	-.000598	.75
16	MP3C	X	37.08	5.75
17	MP3C	Z	-64.225	5.75
18	MP3C	Mx	-.000598	5.75
19	MP3A	X	37.08	.75
20	MP3A	Z	-64.225	.75
21	MP3A	Mx	-.000598	.75
22	MP3A	X	37.08	5.75
23	MP3A	Z	-64.225	5.75
24	MP3A	Mx	-.000598	5.75
25	MP3B	X	27.651	.75
26	MP3B	Z	-47.893	.75
27	MP3B	Mx	.0149	.75
28	MP3B	X	27.651	5.75
29	MP3B	Z	-47.893	5.75
30	MP3B	Mx	.0149	5.75
31	MP3C	X	37.08	.75
32	MP3C	Z	-64.225	.75
33	MP3C	Mx	-.0562	.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
34	MP3C	X	37.08	5.75
35	MP3C	Z	-64.225	5.75
36	MP3C	Mx	-.0562	5.75
37	MP3A	X	25.688	3.25
38	MP3A	Z	-44.492	3.25
39	MP3A	Mx	.0197	3.25
40	MP3B	X	22.585	3.25
41	MP3B	Z	-39.119	3.25
42	MP3B	Mx	-.0212	3.25
43	MP3C	X	25.688	3.25
44	MP3C	Z	-44.492	3.25
45	MP3C	Mx	.0197	3.25
46	MP1A	X	57.177	1.25
47	MP1A	Z	-99.033	1.25
48	MP1A	Mx	-.0438	1.25
49	MP1A	X	57.177	5.25
50	MP1A	Z	-99.033	5.25
51	MP1A	Mx	-.0438	5.25
52	MP1B	X	46.799	1.25
53	MP1B	Z	-81.058	1.25
54	MP1B	Mx	.044	1.25
55	MP1B	X	46.799	5.25
56	MP1B	Z	-81.058	5.25
57	MP1B	Mx	.044	5.25
58	MP1C	X	57.177	1.25
59	MP1C	Z	-99.033	1.25
60	MP1C	Mx	-.0438	1.25
61	MP1C	X	57.177	5.25
62	MP1C	Z	-99.033	5.25
63	MP1C	Mx	-.0438	5.25
64	OVP1	X	61.204	2
65	OVP1	Z	-106.009	2
66	OVP1	Mx	-.0306	2
67	LR	X	12.836	.25
68	LR	Z	-22.233	.25
69	LR	Mx	0	.25
70	MP2A	X	20.097	2.75
71	MP2A	Z	-34.809	2.75
72	MP2A	Mx	-.0257	2.75
73	MP2A	X	20.097	3.75
74	MP2A	Z	-34.809	3.75
75	MP2A	Mx	-.0257	3.75
76	MP2B	X	13.861	2.75
77	MP2B	Z	-24.009	2.75
78	MP2B	Mx	.0217	2.75
79	MP2B	X	13.861	3.75
80	MP2B	Z	-24.009	3.75
81	MP2B	Mx	.0217	3.75
82	MP2C	X	20.097	2.75
83	MP2C	Z	-34.809	2.75
84	MP2C	Mx	-.0257	2.75
85	MP2C	X	20.097	3.75
86	MP2C	Z	-34.809	3.75
87	MP2C	Mx	-.0257	3.75
88	MP4A	X	31.236	3.25
89	MP4A	Z	-54.102	3.25
90	MP4A	Mx	.0239	3.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
91	MP4B	X	27.616	3.25
92	MP4B	Z	-47.832	3.25
93	MP4B	Mx	-.026	3.25
94	MP4C	X	31.236	3.25
95	MP4C	Z	-54.102	3.25
96	MP4C	Mx	.0239	3.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	43.106	.75
2	MP3A	Z	-24.887	.75
3	MP3A	Mx	-.0296	.75
4	MP3A	X	43.106	5.75
5	MP3A	Z	-24.887	5.75
6	MP3A	Mx	-.0296	5.75
7	MP3B	X	43.106	.75
8	MP3B	Z	-24.887	.75
9	MP3B	Mx	.0195	.75
10	MP3B	X	43.106	5.75
11	MP3B	Z	-24.887	5.75
12	MP3B	Mx	.0195	5.75
13	MP3C	X	90.132	.75
14	MP3C	Z	-52.038	.75
15	MP3C	Mx	.0393	.75
16	MP3C	X	90.132	5.75
17	MP3C	Z	-52.038	5.75
18	MP3C	Mx	.0393	5.75
19	MP3A	X	43.106	.75
20	MP3A	Z	-24.887	.75
21	MP3A	Mx	-.0195	.75
22	MP3A	X	43.106	5.75
23	MP3A	Z	-24.887	5.75
24	MP3A	Mx	-.0195	5.75
25	MP3B	X	43.106	.75
26	MP3B	Z	-24.887	.75
27	MP3B	Mx	.0296	.75
28	MP3B	X	43.106	5.75
29	MP3B	Z	-24.887	5.75
30	MP3B	Mx	.0296	5.75
31	MP3C	X	90.132	.75
32	MP3C	Z	-52.038	.75
33	MP3C	Mx	-.0748	.75
34	MP3C	X	90.132	5.75
35	MP3C	Z	-52.038	5.75
36	MP3C	Mx	-.0748	5.75
37	MP3A	X	37.544	3.25
38	MP3A	Z	-21.676	3.25
39	MP3A	Mx	.0213	3.25
40	MP3B	X	37.544	3.25
41	MP3B	Z	-21.676	3.25
42	MP3B	Mx	-.0213	3.25
43	MP3C	X	53.017	3.25
44	MP3C	Z	-30.609	3.25
45	MP3C	Mx	.0105	3.25
46	MP1A	X	75.789	1.25
47	MP1A	Z	-43.757	1.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
48	MP1A	Mx	-.0431	1.25
49	MP1A	X	75.789	5.25
50	MP1A	Z	-43.757	5.25
51	MP1A	Mx	-.0431	5.25
52	MP1B	X	75.789	1.25
53	MP1B	Z	-43.757	1.25
54	MP1B	Mx	.0431	1.25
55	MP1B	X	75.789	5.25
56	MP1B	Z	-43.757	5.25
57	MP1B	Mx	.0431	5.25
58	MP1C	X	127.547	1.25
59	MP1C	Z	-73.639	1.25
60	MP1C	Mx	-.0252	1.25
61	MP1C	X	127.547	5.25
62	MP1C	Z	-73.639	5.25
63	MP1C	Mx	-.0252	5.25
64	OVP1	X	92.491	2
65	OVP1	Z	-53.4	2
66	OVP1	Mx	-.0462	2
67	LR	X	17.787	.25
68	LR	Z	-10.269	.25
69	LR	Mx	0	.25
70	MP2A	X	20.843	2.75
71	MP2A	Z	-12.034	2.75
72	MP2A	Mx	-.0198	2.75
73	MP2A	X	20.843	3.75
74	MP2A	Z	-12.034	3.75
75	MP2A	Mx	-.0198	3.75
76	MP2B	X	20.843	2.75
77	MP2B	Z	-12.034	2.75
78	MP2B	Mx	.0198	2.75
79	MP2B	X	20.843	3.75
80	MP2B	Z	-12.034	3.75
81	MP2B	Mx	.0198	3.75
82	MP2C	X	51.941	2.75
83	MP2C	Z	-29.988	2.75
84	MP2C	Mx	-.0171	2.75
85	MP2C	X	51.941	3.75
86	MP2C	Z	-29.988	3.75
87	MP2C	Mx	-.0171	3.75
88	MP4A	X	45.994	3.25
89	MP4A	Z	-26.555	3.25
90	MP4A	Mx	.0262	3.25
91	MP4B	X	45.994	3.25
92	MP4B	Z	-26.555	3.25
93	MP4B	Mx	-.0262	3.25
94	MP4C	X	64.046	3.25
95	MP4C	Z	-36.977	3.25
96	MP4C	Mx	.0126	3.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	55.302	.75
2	MP3A	Z	0	.75
3	MP3A	Mx	-.0149	.75
4	MP3A	X	55.302	5.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
5	MP3A	Z	0	5.75
6	MP3A	Mx	-.0149	5.75
7	MP3B	X	74.161	.75
8	MP3B	Z	0	.75
9	MP3B	Mx	.000598	.75
10	MP3B	X	74.161	5.75
11	MP3B	Z	0	5.75
12	MP3B	Mx	.000598	5.75
13	MP3C	X	109.603	.75
14	MP3C	Z	0	.75
15	MP3C	Mx	.0725	.75
16	MP3C	X	109.603	5.75
17	MP3C	Z	0	5.75
18	MP3C	Mx	.0725	5.75
19	MP3A	X	55.302	.75
20	MP3A	Z	0	.75
21	MP3A	Mx	-.037	.75
22	MP3A	X	55.302	5.75
23	MP3A	Z	0	5.75
24	MP3A	Mx	-.037	5.75
25	MP3B	X	74.161	.75
26	MP3B	Z	0	.75
27	MP3B	Mx	.0562	.75
28	MP3B	X	74.161	5.75
29	MP3B	Z	0	5.75
30	MP3B	Mx	.0562	5.75
31	MP3C	X	109.603	.75
32	MP3C	Z	0	.75
33	MP3C	Mx	-.0534	.75
34	MP3C	X	109.603	5.75
35	MP3C	Z	0	5.75
36	MP3C	Mx	-.0534	5.75
37	MP3A	X	45.17	3.25
38	MP3A	Z	0	3.25
39	MP3A	Mx	.0212	3.25
40	MP3B	X	51.375	3.25
41	MP3B	Z	0	3.25
42	MP3B	Mx	-.0197	3.25
43	MP3C	X	63.037	3.25
44	MP3C	Z	0	3.25
45	MP3C	Mx	-.0055	3.25
46	MP1A	X	93.598	1.25
47	MP1A	Z	0	1.25
48	MP1A	Mx	-.044	1.25
49	MP1A	X	93.598	5.25
50	MP1A	Z	0	5.25
51	MP1A	Mx	-.044	5.25
52	MP1B	X	114.354	1.25
53	MP1B	Z	0	1.25
54	MP1B	Mx	.0438	1.25
55	MP1B	X	114.354	5.25
56	MP1B	Z	0	5.25
57	MP1B	Mx	.0438	5.25
58	MP1C	X	153.362	1.25
59	MP1C	Z	0	1.25
60	MP1C	Mx	.0133	1.25
61	MP1C	X	153.362	5.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
62	MP1C	Z	0	5.25
63	MP1C	Mx	.0133	5.25
64	OVP1	X	98.995	2
65	OVP1	Z	0	2
66	OVP1	Mx	-.0495	2
67	LR	X	25.673	.25
68	LR	Z	0	.25
69	LR	Mx	0	.25
70	MP2A	X	27.723	2.75
71	MP2A	Z	0	2.75
72	MP2A	Mx	-.0217	2.75
73	MP2A	X	27.723	3.75
74	MP2A	Z	0	3.75
75	MP2A	Mx	-.0217	3.75
76	MP2B	X	40.194	2.75
77	MP2B	Z	0	2.75
78	MP2B	Mx	.0257	2.75
79	MP2B	X	40.194	3.75
80	MP2B	Z	0	3.75
81	MP2B	Mx	.0257	3.75
82	MP2C	X	63.632	2.75
83	MP2C	Z	0	2.75
84	MP2C	Mx	.0092	2.75
85	MP2C	X	63.632	3.75
86	MP2C	Z	0	3.75
87	MP2C	Mx	.0092	3.75
88	MP4A	X	55.232	3.25
89	MP4A	Z	0	3.25
90	MP4A	Mx	.026	3.25
91	MP4B	X	62.471	3.25
92	MP4B	Z	0	3.25
93	MP4B	Mx	-.0239	3.25
94	MP4C	X	76.077	3.25
95	MP4C	Z	0	3.25
96	MP4C	Mx	-.0066	3.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	73.8	.75
2	MP3A	Z	42.608	.75
3	MP3A	Mx	.0107	.75
4	MP3A	X	73.8	5.75
5	MP3A	Z	42.608	5.75
6	MP3A	Mx	.0107	5.75
7	MP3B	X	90.132	.75
8	MP3B	Z	52.038	.75
9	MP3B	Mx	-.0393	.75
10	MP3B	X	90.132	5.75
11	MP3B	Z	52.038	5.75
12	MP3B	Mx	-.0393	5.75
13	MP3C	X	73.8	.75
14	MP3C	Z	42.608	.75
15	MP3C	Mx	.0655	.75
16	MP3C	X	73.8	5.75
17	MP3C	Z	42.608	5.75
18	MP3C	Mx	.0655	5.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
19	MP3A	X	73.8	.75
20	MP3A	Z	42.608	.75
21	MP3A	Mx	-.0655	.75
22	MP3A	X	73.8	5.75
23	MP3A	Z	42.608	5.75
24	MP3A	Mx	-.0655	5.75
25	MP3B	X	90.132	.75
26	MP3B	Z	52.038	.75
27	MP3B	Mx	.0748	.75
28	MP3B	X	90.132	5.75
29	MP3B	Z	52.038	5.75
30	MP3B	Mx	.0748	5.75
31	MP3C	X	73.8	.75
32	MP3C	Z	42.608	.75
33	MP3C	Mx	-.0107	.75
34	MP3C	X	73.8	5.75
35	MP3C	Z	42.608	5.75
36	MP3C	Mx	-.0107	5.75
37	MP3A	X	47.643	3.25
38	MP3A	Z	27.507	3.25
39	MP3A	Mx	.0177	3.25
40	MP3B	X	53.017	3.25
41	MP3B	Z	30.609	3.25
42	MP3B	Mx	-.0105	3.25
43	MP3C	X	47.643	3.25
44	MP3C	Z	27.507	3.25
45	MP3C	Mx	-.0177	3.25
46	MP1A	X	109.571	1.25
47	MP1A	Z	63.261	1.25
48	MP1A	Mx	-.0407	1.25
49	MP1A	X	109.571	5.25
50	MP1A	Z	63.261	5.25
51	MP1A	Mx	-.0407	5.25
52	MP1B	X	127.547	1.25
53	MP1B	Z	73.639	1.25
54	MP1B	Mx	.0252	1.25
55	MP1B	X	127.547	5.25
56	MP1B	Z	73.639	5.25
57	MP1B	Mx	.0252	5.25
58	MP1C	X	109.571	1.25
59	MP1C	Z	63.261	1.25
60	MP1C	Mx	.0407	1.25
61	MP1C	X	109.571	5.25
62	MP1C	Z	63.261	5.25
63	MP1C	Mx	.0407	5.25
64	OVP1	X	92.491	2
65	OVP1	Z	53.4	2
66	OVP1	Mx	-.0462	2
67	LR	X	31.127	.25
68	LR	Z	17.971	.25
69	LR	Mx	0	.25
70	MP2A	X	41.141	2.75
71	MP2A	Z	23.753	2.75
72	MP2A	Mx	-.0254	2.75
73	MP2A	X	41.141	3.75
74	MP2A	Z	23.753	3.75
75	MP2A	Mx	-.0254	3.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
76	MP2B	X	51.941	2.75
77	MP2B	Z	29.988	2.75
78	MP2B	Mx	.0171	2.75
79	MP2B	X	51.941	3.75
80	MP2B	Z	29.988	3.75
81	MP2B	Mx	.0171	3.75
82	MP2C	X	41.141	2.75
83	MP2C	Z	23.753	2.75
84	MP2C	Mx	.0254	2.75
85	MP2C	X	41.141	3.75
86	MP2C	Z	23.753	3.75
87	MP2C	Mx	.0254	3.75
88	MP4A	X	57.777	3.25
89	MP4A	Z	33.358	3.25
90	MP4A	Mx	.0214	3.25
91	MP4B	X	64.046	3.25
92	MP4B	Z	36.977	3.25
93	MP4B	Mx	-.0126	3.25
94	MP4C	X	57.777	3.25
95	MP4C	Z	33.358	3.25
96	MP4C	Mx	-.0214	3.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	54.802	.75
2	MP3A	Z	94.919	.75
3	MP3A	Mx	.0534	.75
4	MP3A	X	54.802	5.75
5	MP3A	Z	94.919	5.75
6	MP3A	Mx	.0534	5.75
7	MP3B	X	54.802	.75
8	MP3B	Z	94.919	.75
9	MP3B	Mx	-.0725	.75
10	MP3B	X	54.802	5.75
11	MP3B	Z	94.919	5.75
12	MP3B	Mx	-.0725	5.75
13	MP3C	X	27.651	.75
14	MP3C	Z	47.893	.75
15	MP3C	Mx	.037	.75
16	MP3C	X	27.651	5.75
17	MP3C	Z	47.893	5.75
18	MP3C	Mx	.037	5.75
19	MP3A	X	54.802	.75
20	MP3A	Z	94.919	.75
21	MP3A	Mx	-.0725	.75
22	MP3A	X	54.802	5.75
23	MP3A	Z	94.919	5.75
24	MP3A	Mx	-.0725	5.75
25	MP3B	X	54.802	.75
26	MP3B	Z	94.919	.75
27	MP3B	Mx	.0534	.75
28	MP3B	X	54.802	5.75
29	MP3B	Z	94.919	5.75
30	MP3B	Mx	.0534	5.75
31	MP3C	X	27.651	.75
32	MP3C	Z	47.893	.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
33	MP3C	Mx	.0149	.75
34	MP3C	X	27.651	5.75
35	MP3C	Z	47.893	5.75
36	MP3C	Mx	.0149	5.75
37	MP3A	X	31.519	3.25
38	MP3A	Z	54.592	3.25
39	MP3A	Mx	.0055	3.25
40	MP3B	X	31.519	3.25
41	MP3B	Z	54.592	3.25
42	MP3B	Mx	.0055	3.25
43	MP3C	X	22.585	3.25
44	MP3C	Z	39.119	3.25
45	MP3C	Mx	-.0212	3.25
46	MP1A	X	76.681	1.25
47	MP1A	Z	132.816	1.25
48	MP1A	Mx	-.0133	1.25
49	MP1A	X	76.681	5.25
50	MP1A	Z	132.816	5.25
51	MP1A	Mx	-.0133	5.25
52	MP1B	X	76.681	1.25
53	MP1B	Z	132.816	1.25
54	MP1B	Mx	-.0133	1.25
55	MP1B	X	76.681	5.25
56	MP1B	Z	132.816	5.25
57	MP1B	Mx	-.0133	5.25
58	MP1C	X	46.799	1.25
59	MP1C	Z	81.058	1.25
60	MP1C	Mx	.044	1.25
61	MP1C	X	46.799	5.25
62	MP1C	Z	81.058	5.25
63	MP1C	Mx	.044	5.25
64	OVP1	X	61.204	2
65	OVP1	Z	106.009	2
66	OVP1	Mx	-.0306	2
67	LR	X	20.538	.25
68	LR	Z	35.573	.25
69	LR	Mx	0	.25
70	MP2A	X	31.816	2.75
71	MP2A	Z	55.107	2.75
72	MP2A	Mx	-.0092	2.75
73	MP2A	X	31.816	3.75
74	MP2A	Z	55.107	3.75
75	MP2A	Mx	-.0092	3.75
76	MP2B	X	31.816	2.75
77	MP2B	Z	55.107	2.75
78	MP2B	Mx	-.0092	2.75
79	MP2B	X	31.816	3.75
80	MP2B	Z	55.107	3.75
81	MP2B	Mx	-.0092	3.75
82	MP2C	X	13.861	2.75
83	MP2C	Z	24.009	2.75
84	MP2C	Mx	.0217	2.75
85	MP2C	X	13.861	3.75
86	MP2C	Z	24.009	3.75
87	MP2C	Mx	.0217	3.75
88	MP4A	X	38.038	3.25
89	MP4A	Z	65.884	3.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
90	MP4A	Mx	.0066	3.25
91	MP4B	X	38.038	3.25
92	MP4B	Z	65.884	3.25
93	MP4B	Mx	.0066	3.25
94	MP4C	X	27.616	3.25
95	MP4C	Z	47.832	3.25
96	MP4C	Mx	-.026	3.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	0	.75
2	MP3A	Z	104.075	.75
3	MP3A	Mx	.0748	.75
4	MP3A	X	0	5.75
5	MP3A	Z	104.075	5.75
6	MP3A	Mx	.0748	5.75
7	MP3B	X	0	.75
8	MP3B	Z	85.217	.75
9	MP3B	Mx	-.0655	.75
10	MP3B	X	0	5.75
11	MP3B	Z	85.217	5.75
12	MP3B	Mx	-.0655	5.75
13	MP3C	X	0	.75
14	MP3C	Z	49.774	.75
15	MP3C	Mx	.0195	.75
16	MP3C	X	0	5.75
17	MP3C	Z	49.774	5.75
18	MP3C	Mx	.0195	5.75
19	MP3A	X	0	.75
20	MP3A	Z	104.075	.75
21	MP3A	Mx	-.0393	.75
22	MP3A	X	0	5.75
23	MP3A	Z	104.075	5.75
24	MP3A	Mx	-.0393	5.75
25	MP3B	X	0	.75
26	MP3B	Z	85.217	.75
27	MP3B	Mx	.0107	.75
28	MP3B	X	0	5.75
29	MP3B	Z	85.217	5.75
30	MP3B	Mx	.0107	5.75
31	MP3C	X	0	.75
32	MP3C	Z	49.774	.75
33	MP3C	Mx	.0296	.75
34	MP3C	X	0	5.75
35	MP3C	Z	49.774	5.75
36	MP3C	Mx	.0296	5.75
37	MP3A	X	0	3.25
38	MP3A	Z	61.218	3.25
39	MP3A	Mx	-.0105	3.25
40	MP3B	X	0	3.25
41	MP3B	Z	55.013	3.25
42	MP3B	Mx	.0177	3.25
43	MP3C	X	0	3.25
44	MP3C	Z	43.352	3.25
45	MP3C	Mx	-.0213	3.25
46	MP1A	X	0	1.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
47	MP1A	Z	147.278	1.25
48	MP1A	Mx	.0252	1.25
49	MP1A	X	0	5.25
50	MP1A	Z	147.278	5.25
51	MP1A	Mx	.0252	5.25
52	MP1B	X	0	1.25
53	MP1B	Z	126.522	1.25
54	MP1B	Mx	-.0407	1.25
55	MP1B	X	0	5.25
56	MP1B	Z	126.522	5.25
57	MP1B	Mx	-.0407	5.25
58	MP1C	X	0	1.25
59	MP1C	Z	87.514	1.25
60	MP1C	Mx	.0431	1.25
61	MP1C	X	0	5.25
62	MP1C	Z	87.514	5.25
63	MP1C	Mx	.0431	5.25
64	OVP1	X	0	2
65	OVP1	Z	130.213	2
66	OVP1	Mx	0	2
67	LR	X	0	.25
68	LR	Z	35.942	.25
69	LR	Mx	0	.25
70	MP2A	X	0	2.75
71	MP2A	Z	59.976	2.75
72	MP2A	Mx	.0171	2.75
73	MP2A	X	0	3.75
74	MP2A	Z	59.976	3.75
75	MP2A	Mx	.0171	3.75
76	MP2B	X	0	2.75
77	MP2B	Z	47.505	2.75
78	MP2B	Mx	-.0254	2.75
79	MP2B	X	0	3.75
80	MP2B	Z	47.505	3.75
81	MP2B	Mx	-.0254	3.75
82	MP2C	X	0	2.75
83	MP2C	Z	24.067	2.75
84	MP2C	Mx	.0198	2.75
85	MP2C	X	0	3.75
86	MP2C	Z	24.067	3.75
87	MP2C	Mx	.0198	3.75
88	MP4A	X	0	3.25
89	MP4A	Z	73.954	3.25
90	MP4A	Mx	-.0126	3.25
91	MP4B	X	0	3.25
92	MP4B	Z	66.715	3.25
93	MP4B	Mx	.0214	3.25
94	MP4C	X	0	3.25
95	MP4C	Z	53.11	3.25
96	MP4C	Mx	-.0262	3.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	-37.08	.75
2	MP3A	Z	64.225	.75
3	MP3A	Mx	.0562	.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
4	MP3A	X	-37.08	5.75
5	MP3A	Z	64.225	5.75
6	MP3A	Mx	.0562	5.75
7	MP3B	X	-27.651	.75
8	MP3B	Z	47.893	.75
9	MP3B	Mx	-.037	.75
10	MP3B	X	-27.651	5.75
11	MP3B	Z	47.893	5.75
12	MP3B	Mx	-.037	5.75
13	MP3C	X	-37.08	.75
14	MP3C	Z	64.225	.75
15	MP3C	Mx	.000598	.75
16	MP3C	X	-37.08	5.75
17	MP3C	Z	64.225	5.75
18	MP3C	Mx	.000598	5.75
19	MP3A	X	-37.08	.75
20	MP3A	Z	64.225	.75
21	MP3A	Mx	.000598	.75
22	MP3A	X	-37.08	5.75
23	MP3A	Z	64.225	5.75
24	MP3A	Mx	.000598	5.75
25	MP3B	X	-27.651	.75
26	MP3B	Z	47.893	.75
27	MP3B	Mx	-.0149	.75
28	MP3B	X	-27.651	5.75
29	MP3B	Z	47.893	5.75
30	MP3B	Mx	-.0149	5.75
31	MP3C	X	-37.08	.75
32	MP3C	Z	64.225	.75
33	MP3C	Mx	.0562	.75
34	MP3C	X	-37.08	5.75
35	MP3C	Z	64.225	5.75
36	MP3C	Mx	.0562	5.75
37	MP3A	X	-25.688	3.25
38	MP3A	Z	44.492	3.25
39	MP3A	Mx	-.0197	3.25
40	MP3B	X	-22.585	3.25
41	MP3B	Z	39.119	3.25
42	MP3B	Mx	.0212	3.25
43	MP3C	X	-25.688	3.25
44	MP3C	Z	44.492	3.25
45	MP3C	Mx	-.0197	3.25
46	MP1A	X	-57.177	1.25
47	MP1A	Z	99.033	1.25
48	MP1A	Mx	.0438	1.25
49	MP1A	X	-57.177	5.25
50	MP1A	Z	99.033	5.25
51	MP1A	Mx	.0438	5.25
52	MP1B	X	-46.799	1.25
53	MP1B	Z	81.058	1.25
54	MP1B	Mx	-.044	1.25
55	MP1B	X	-46.799	5.25
56	MP1B	Z	81.058	5.25
57	MP1B	Mx	-.044	5.25
58	MP1C	X	-57.177	1.25
59	MP1C	Z	99.033	1.25
60	MP1C	Mx	.0438	1.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
61	MP1C	X	-57.177	5.25
62	MP1C	Z	99.033	5.25
63	MP1C	Mx	.0438	5.25
64	OVP1	X	-61.204	2
65	OVP1	Z	106.009	2
66	OVP1	Mx	.0306	2
67	LR	X	-12.836	.25
68	LR	Z	22.233	.25
69	LR	Mx	0	.25
70	MP2A	X	-20.097	2.75
71	MP2A	Z	34.809	2.75
72	MP2A	Mx	.0257	2.75
73	MP2A	X	-20.097	3.75
74	MP2A	Z	34.809	3.75
75	MP2A	Mx	.0257	3.75
76	MP2B	X	-13.861	2.75
77	MP2B	Z	24.009	2.75
78	MP2B	Mx	-.0217	2.75
79	MP2B	X	-13.861	3.75
80	MP2B	Z	24.009	3.75
81	MP2B	Mx	-.0217	3.75
82	MP2C	X	-20.097	2.75
83	MP2C	Z	34.809	2.75
84	MP2C	Mx	.0257	2.75
85	MP2C	X	-20.097	3.75
86	MP2C	Z	34.809	3.75
87	MP2C	Mx	.0257	3.75
88	MP4A	X	-31.236	3.25
89	MP4A	Z	54.102	3.25
90	MP4A	Mx	-.0239	3.25
91	MP4B	X	-27.616	3.25
92	MP4B	Z	47.832	3.25
93	MP4B	Mx	.026	3.25
94	MP4C	X	-31.236	3.25
95	MP4C	Z	54.102	3.25
96	MP4C	Mx	-.0239	3.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	-43.106	.75
2	MP3A	Z	24.887	.75
3	MP3A	Mx	.0296	.75
4	MP3A	X	-43.106	5.75
5	MP3A	Z	24.887	5.75
6	MP3A	Mx	.0296	5.75
7	MP3B	X	-43.106	.75
8	MP3B	Z	24.887	.75
9	MP3B	Mx	-.0195	.75
10	MP3B	X	-43.106	5.75
11	MP3B	Z	24.887	5.75
12	MP3B	Mx	-.0195	5.75
13	MP3C	X	-90.132	.75
14	MP3C	Z	52.038	.75
15	MP3C	Mx	-.0393	.75
16	MP3C	X	-90.132	5.75
17	MP3C	Z	52.038	5.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
18	MP3C	Mx	-.0393	5.75
19	MP3A	X	-43.106	.75
20	MP3A	Z	24.887	.75
21	MP3A	Mx	.0195	.75
22	MP3A	X	-43.106	5.75
23	MP3A	Z	24.887	5.75
24	MP3A	Mx	.0195	5.75
25	MP3B	X	-43.106	.75
26	MP3B	Z	24.887	.75
27	MP3B	Mx	-.0296	.75
28	MP3B	X	-43.106	5.75
29	MP3B	Z	24.887	5.75
30	MP3B	Mx	-.0296	5.75
31	MP3C	X	-90.132	.75
32	MP3C	Z	52.038	.75
33	MP3C	Mx	.0748	.75
34	MP3C	X	-90.132	5.75
35	MP3C	Z	52.038	5.75
36	MP3C	Mx	.0748	5.75
37	MP3A	X	-37.544	3.25
38	MP3A	Z	21.676	3.25
39	MP3A	Mx	-.0213	3.25
40	MP3B	X	-37.544	3.25
41	MP3B	Z	21.676	3.25
42	MP3B	Mx	.0213	3.25
43	MP3C	X	-53.017	3.25
44	MP3C	Z	30.609	3.25
45	MP3C	Mx	-.0105	3.25
46	MP1A	X	-75.789	1.25
47	MP1A	Z	43.757	1.25
48	MP1A	Mx	.0431	1.25
49	MP1A	X	-75.789	5.25
50	MP1A	Z	43.757	5.25
51	MP1A	Mx	.0431	5.25
52	MP1B	X	-75.789	1.25
53	MP1B	Z	43.757	1.25
54	MP1B	Mx	-.0431	1.25
55	MP1B	X	-75.789	5.25
56	MP1B	Z	43.757	5.25
57	MP1B	Mx	-.0431	5.25
58	MP1C	X	-127.547	1.25
59	MP1C	Z	73.639	1.25
60	MP1C	Mx	.0252	1.25
61	MP1C	X	-127.547	5.25
62	MP1C	Z	73.639	5.25
63	MP1C	Mx	.0252	5.25
64	OVP1	X	-92.491	2
65	OVP1	Z	53.4	2
66	OVP1	Mx	.0462	2
67	LR	X	-17.787	.25
68	LR	Z	10.269	.25
69	LR	Mx	0	.25
70	MP2A	X	-20.843	2.75
71	MP2A	Z	12.034	2.75
72	MP2A	Mx	.0198	2.75
73	MP2A	X	-20.843	3.75
74	MP2A	Z	12.034	3.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
75	MP2A	Mx	.0198	3.75
76	MP2B	X	-20.843	2.75
77	MP2B	Z	12.034	2.75
78	MP2B	Mx	-.0198	2.75
79	MP2B	X	-20.843	3.75
80	MP2B	Z	12.034	3.75
81	MP2B	Mx	-.0198	3.75
82	MP2C	X	-51.941	2.75
83	MP2C	Z	29.988	2.75
84	MP2C	Mx	.0171	2.75
85	MP2C	X	-51.941	3.75
86	MP2C	Z	29.988	3.75
87	MP2C	Mx	.0171	3.75
88	MP4A	X	-45.994	3.25
89	MP4A	Z	26.555	3.25
90	MP4A	Mx	-.0262	3.25
91	MP4B	X	-45.994	3.25
92	MP4B	Z	26.555	3.25
93	MP4B	Mx	.0262	3.25
94	MP4C	X	-64.046	3.25
95	MP4C	Z	36.977	3.25
96	MP4C	Mx	-.0126	3.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	-55.302	.75
2	MP3A	Z	0	.75
3	MP3A	Mx	.0149	.75
4	MP3A	X	-55.302	5.75
5	MP3A	Z	0	5.75
6	MP3A	Mx	.0149	5.75
7	MP3B	X	-74.161	.75
8	MP3B	Z	0	.75
9	MP3B	Mx	-.000598	.75
10	MP3B	X	-74.161	5.75
11	MP3B	Z	0	5.75
12	MP3B	Mx	-.000598	5.75
13	MP3C	X	-109.603	.75
14	MP3C	Z	0	.75
15	MP3C	Mx	-.0725	.75
16	MP3C	X	-109.603	5.75
17	MP3C	Z	0	5.75
18	MP3C	Mx	-.0725	5.75
19	MP3A	X	-55.302	.75
20	MP3A	Z	0	.75
21	MP3A	Mx	.037	.75
22	MP3A	X	-55.302	5.75
23	MP3A	Z	0	5.75
24	MP3A	Mx	.037	5.75
25	MP3B	X	-74.161	.75
26	MP3B	Z	0	.75
27	MP3B	Mx	-.0562	.75
28	MP3B	X	-74.161	5.75
29	MP3B	Z	0	5.75
30	MP3B	Mx	-.0562	5.75
31	MP3C	X	-109.603	.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
32	MP3C	Z	0	.75
33	MP3C	Mx	.0534	.75
34	MP3C	X	-109.603	5.75
35	MP3C	Z	0	5.75
36	MP3C	Mx	.0534	5.75
37	MP3A	X	-45.17	3.25
38	MP3A	Z	0	3.25
39	MP3A	Mx	-.0212	3.25
40	MP3B	X	-51.375	3.25
41	MP3B	Z	0	3.25
42	MP3B	Mx	.0197	3.25
43	MP3C	X	-63.037	3.25
44	MP3C	Z	0	3.25
45	MP3C	Mx	.0055	3.25
46	MP1A	X	-93.598	1.25
47	MP1A	Z	0	1.25
48	MP1A	Mx	.044	1.25
49	MP1A	X	-93.598	5.25
50	MP1A	Z	0	5.25
51	MP1A	Mx	.044	5.25
52	MP1B	X	-114.354	1.25
53	MP1B	Z	0	1.25
54	MP1B	Mx	-.0438	1.25
55	MP1B	X	-114.354	5.25
56	MP1B	Z	0	5.25
57	MP1B	Mx	-.0438	5.25
58	MP1C	X	-153.362	1.25
59	MP1C	Z	0	1.25
60	MP1C	Mx	-.0133	1.25
61	MP1C	X	-153.362	5.25
62	MP1C	Z	0	5.25
63	MP1C	Mx	-.0133	5.25
64	OVP1	X	-98.995	2
65	OVP1	Z	0	2
66	OVP1	Mx	.0495	2
67	LR	X	-25.673	.25
68	LR	Z	0	.25
69	LR	Mx	0	.25
70	MP2A	X	-27.723	2.75
71	MP2A	Z	0	2.75
72	MP2A	Mx	.0217	2.75
73	MP2A	X	-27.723	3.75
74	MP2A	Z	0	3.75
75	MP2A	Mx	.0217	3.75
76	MP2B	X	-40.194	2.75
77	MP2B	Z	0	2.75
78	MP2B	Mx	-.0257	2.75
79	MP2B	X	-40.194	3.75
80	MP2B	Z	0	3.75
81	MP2B	Mx	-.0257	3.75
82	MP2C	X	-63.632	2.75
83	MP2C	Z	0	2.75
84	MP2C	Mx	-.0092	2.75
85	MP2C	X	-63.632	3.75
86	MP2C	Z	0	3.75
87	MP2C	Mx	-.0092	3.75
88	MP4A	X	-55.232	3.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
89	MP4A	Z	0	3.25
90	MP4A	Mx	-.026	3.25
91	MP4B	X	-62.471	3.25
92	MP4B	Z	0	3.25
93	MP4B	Mx	.0239	3.25
94	MP4C	X	-76.077	3.25
95	MP4C	Z	0	3.25
96	MP4C	Mx	.0066	3.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	-73.8	.75
2	MP3A	Z	-42.608	.75
3	MP3A	Mx	-.0107	.75
4	MP3A	X	-73.8	5.75
5	MP3A	Z	-42.608	5.75
6	MP3A	Mx	-.0107	5.75
7	MP3B	X	-90.132	.75
8	MP3B	Z	-52.038	.75
9	MP3B	Mx	.0393	.75
10	MP3B	X	-90.132	5.75
11	MP3B	Z	-52.038	5.75
12	MP3B	Mx	.0393	5.75
13	MP3C	X	-73.8	.75
14	MP3C	Z	-42.608	.75
15	MP3C	Mx	-.0655	.75
16	MP3C	X	-73.8	5.75
17	MP3C	Z	-42.608	5.75
18	MP3C	Mx	-.0655	5.75
19	MP3A	X	-73.8	.75
20	MP3A	Z	-42.608	.75
21	MP3A	Mx	.0655	.75
22	MP3A	X	-73.8	5.75
23	MP3A	Z	-42.608	5.75
24	MP3A	Mx	.0655	5.75
25	MP3B	X	-90.132	.75
26	MP3B	Z	-52.038	.75
27	MP3B	Mx	-.0748	.75
28	MP3B	X	-90.132	5.75
29	MP3B	Z	-52.038	5.75
30	MP3B	Mx	-.0748	5.75
31	MP3C	X	-73.8	.75
32	MP3C	Z	-42.608	.75
33	MP3C	Mx	.0107	.75
34	MP3C	X	-73.8	5.75
35	MP3C	Z	-42.608	5.75
36	MP3C	Mx	.0107	5.75
37	MP3A	X	-47.643	3.25
38	MP3A	Z	-27.507	3.25
39	MP3A	Mx	-.0177	3.25
40	MP3B	X	-53.017	3.25
41	MP3B	Z	-30.609	3.25
42	MP3B	Mx	.0105	3.25
43	MP3C	X	-47.643	3.25
44	MP3C	Z	-27.507	3.25
45	MP3C	Mx	.0177	3.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
46	MP1A	X	-109.571	1.25
47	MP1A	Z	-63.261	1.25
48	MP1A	Mx	.0407	1.25
49	MP1A	X	-109.571	5.25
50	MP1A	Z	-63.261	5.25
51	MP1A	Mx	.0407	5.25
52	MP1B	X	-127.547	1.25
53	MP1B	Z	-73.639	1.25
54	MP1B	Mx	-.0252	1.25
55	MP1B	X	-127.547	5.25
56	MP1B	Z	-73.639	5.25
57	MP1B	Mx	-.0252	5.25
58	MP1C	X	-109.571	1.25
59	MP1C	Z	-63.261	1.25
60	MP1C	Mx	-.0407	1.25
61	MP1C	X	-109.571	5.25
62	MP1C	Z	-63.261	5.25
63	MP1C	Mx	-.0407	5.25
64	OVP1	X	-92.491	2
65	OVP1	Z	-53.4	2
66	OVP1	Mx	.0462	2
67	LR	X	-31.127	.25
68	LR	Z	-17.971	.25
69	LR	Mx	0	.25
70	MP2A	X	-41.141	2.75
71	MP2A	Z	-23.753	2.75
72	MP2A	Mx	.0254	2.75
73	MP2A	X	-41.141	3.75
74	MP2A	Z	-23.753	3.75
75	MP2A	Mx	.0254	3.75
76	MP2B	X	-51.941	2.75
77	MP2B	Z	-29.988	2.75
78	MP2B	Mx	-.0171	2.75
79	MP2B	X	-51.941	3.75
80	MP2B	Z	-29.988	3.75
81	MP2B	Mx	-.0171	3.75
82	MP2C	X	-41.141	2.75
83	MP2C	Z	-23.753	2.75
84	MP2C	Mx	-.0254	2.75
85	MP2C	X	-41.141	3.75
86	MP2C	Z	-23.753	3.75
87	MP2C	Mx	-.0254	3.75
88	MP4A	X	-57.777	3.25
89	MP4A	Z	-33.358	3.25
90	MP4A	Mx	-.0214	3.25
91	MP4B	X	-64.046	3.25
92	MP4B	Z	-36.977	3.25
93	MP4B	Mx	.0126	3.25
94	MP4C	X	-57.777	3.25
95	MP4C	Z	-33.358	3.25
96	MP4C	Mx	.0214	3.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	-54.802	.75
2	MP3A	Z	-94.919	.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
3	MP3A	Mx	-.0534	.75
4	MP3A	X	-54.802	5.75
5	MP3A	Z	-94.919	5.75
6	MP3A	Mx	-.0534	5.75
7	MP3B	X	-54.802	.75
8	MP3B	Z	-94.919	.75
9	MP3B	Mx	.0725	.75
10	MP3B	X	-54.802	5.75
11	MP3B	Z	-94.919	5.75
12	MP3B	Mx	.0725	5.75
13	MP3C	X	-27.651	.75
14	MP3C	Z	-47.893	.75
15	MP3C	Mx	-.037	.75
16	MP3C	X	-27.651	5.75
17	MP3C	Z	-47.893	5.75
18	MP3C	Mx	-.037	5.75
19	MP3A	X	-54.802	.75
20	MP3A	Z	-94.919	.75
21	MP3A	Mx	.0725	.75
22	MP3A	X	-54.802	5.75
23	MP3A	Z	-94.919	5.75
24	MP3A	Mx	.0725	5.75
25	MP3B	X	-54.802	.75
26	MP3B	Z	-94.919	.75
27	MP3B	Mx	-.0534	.75
28	MP3B	X	-54.802	5.75
29	MP3B	Z	-94.919	5.75
30	MP3B	Mx	-.0534	5.75
31	MP3C	X	-27.651	.75
32	MP3C	Z	-47.893	.75
33	MP3C	Mx	-.0149	.75
34	MP3C	X	-27.651	5.75
35	MP3C	Z	-47.893	5.75
36	MP3C	Mx	-.0149	5.75
37	MP3A	X	-31.519	3.25
38	MP3A	Z	-54.592	3.25
39	MP3A	Mx	-.0055	3.25
40	MP3B	X	-31.519	3.25
41	MP3B	Z	-54.592	3.25
42	MP3B	Mx	-.0055	3.25
43	MP3C	X	-22.585	3.25
44	MP3C	Z	-39.119	3.25
45	MP3C	Mx	.0212	3.25
46	MP1A	X	-76.681	1.25
47	MP1A	Z	-132.816	1.25
48	MP1A	Mx	.0133	1.25
49	MP1A	X	-76.681	5.25
50	MP1A	Z	-132.816	5.25
51	MP1A	Mx	.0133	5.25
52	MP1B	X	-76.681	1.25
53	MP1B	Z	-132.816	1.25
54	MP1B	Mx	.0133	1.25
55	MP1B	X	-76.681	5.25
56	MP1B	Z	-132.816	5.25
57	MP1B	Mx	.0133	5.25
58	MP1C	X	-46.799	1.25
59	MP1C	Z	-81.058	1.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
60	MP1C	Mx	-.044	1.25
61	MP1C	X	-46.799	5.25
62	MP1C	Z	-81.058	5.25
63	MP1C	Mx	-.044	5.25
64	OVP1	X	-61.204	2
65	OVP1	Z	-106.009	2
66	OVP1	Mx	.0306	2
67	LR	X	-20.538	.25
68	LR	Z	-35.573	.25
69	LR	Mx	0	.25
70	MP2A	X	-31.816	2.75
71	MP2A	Z	-55.107	2.75
72	MP2A	Mx	.0092	2.75
73	MP2A	X	-31.816	3.75
74	MP2A	Z	-55.107	3.75
75	MP2A	Mx	.0092	3.75
76	MP2B	X	-31.816	2.75
77	MP2B	Z	-55.107	2.75
78	MP2B	Mx	.0092	2.75
79	MP2B	X	-31.816	3.75
80	MP2B	Z	-55.107	3.75
81	MP2B	Mx	.0092	3.75
82	MP2C	X	-13.861	2.75
83	MP2C	Z	-24.009	2.75
84	MP2C	Mx	-.0217	2.75
85	MP2C	X	-13.861	3.75
86	MP2C	Z	-24.009	3.75
87	MP2C	Mx	-.0217	3.75
88	MP4A	X	-38.038	3.25
89	MP4A	Z	-65.884	3.25
90	MP4A	Mx	-.0066	3.25
91	MP4B	X	-38.038	3.25
92	MP4B	Z	-65.884	3.25
93	MP4B	Mx	-.0066	3.25
94	MP4C	X	-27.616	3.25
95	MP4C	Z	-47.832	3.25
96	MP4C	Mx	.026	3.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	0	.75
2	MP3A	Z	-32.145	.75
3	MP3A	Mx	-.0231	.75
4	MP3A	X	0	5.75
5	MP3A	Z	-32.145	5.75
6	MP3A	Mx	-.0231	5.75
7	MP3B	X	0	.75
8	MP3B	Z	-29.21	.75
9	MP3B	Mx	.0224	.75
10	MP3B	X	0	5.75
11	MP3B	Z	-29.21	5.75
12	MP3B	Mx	.0224	5.75
13	MP3C	X	0	.75
14	MP3C	Z	-23.695	.75
15	MP3C	Mx	-.0093	.75
16	MP3C	X	0	5.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
17	MP3C	Z	-23.695	5.75
18	MP3C	Mx	-.0093	5.75
19	MP3A	X	0	.75
20	MP3A	Z	-32.145	.75
21	MP3A	Mx	.0121	.75
22	MP3A	X	0	5.75
23	MP3A	Z	-32.145	5.75
24	MP3A	Mx	.0121	5.75
25	MP3B	X	0	.75
26	MP3B	Z	-29.21	.75
27	MP3B	Mx	-.0037	.75
28	MP3B	X	0	5.75
29	MP3B	Z	-29.21	5.75
30	MP3B	Mx	-.0037	5.75
31	MP3C	X	0	.75
32	MP3C	Z	-23.695	.75
33	MP3C	Mx	-.0141	.75
34	MP3C	X	0	5.75
35	MP3C	Z	-23.695	5.75
36	MP3C	Mx	-.0141	5.75
37	MP3A	X	0	3.25
38	MP3A	Z	-16.73	3.25
39	MP3A	Mx	.0029	3.25
40	MP3B	X	0	3.25
41	MP3B	Z	-15.235	3.25
42	MP3B	Mx	-.0049	3.25
43	MP3C	X	0	3.25
44	MP3C	Z	-12.425	3.25
45	MP3C	Mx	.0061	3.25
46	MP1A	X	0	1.25
47	MP1A	Z	-29.918	1.25
48	MP1A	Mx	-.0051	1.25
49	MP1A	X	0	5.25
50	MP1A	Z	-29.918	5.25
51	MP1A	Mx	-.0051	5.25
52	MP1B	X	0	1.25
53	MP1B	Z	-26.229	1.25
54	MP1B	Mx	.0084	1.25
55	MP1B	X	0	5.25
56	MP1B	Z	-26.229	5.25
57	MP1B	Mx	.0084	5.25
58	MP1C	X	0	1.25
59	MP1C	Z	-19.298	1.25
60	MP1C	Mx	-.0095	1.25
61	MP1C	X	0	5.25
62	MP1C	Z	-19.298	5.25
63	MP1C	Mx	-.0095	5.25
64	OVP1	X	0	2
65	OVP1	Z	-34.767	2
66	OVP1	Mx	0	2
67	LR	X	0	.25
68	LR	Z	-19.411	.25
69	LR	Mx	0	.25
70	MP2A	X	0	2.75
71	MP2A	Z	-15.338	2.75
72	MP2A	Mx	-.0044	2.75
73	MP2A	X	0	3.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
74	MP2A	Z	-15.338	3.75
75	MP2A	Mx	-.0044	3.75
76	MP2B	X	0	2.75
77	MP2B	Z	-12.62	2.75
78	MP2B	Mx	.0068	2.75
79	MP2B	X	0	3.75
80	MP2B	Z	-12.62	3.75
81	MP2B	Mx	.0068	3.75
82	MP2C	X	0	2.75
83	MP2C	Z	-7.511	2.75
84	MP2C	Mx	-.0062	2.75
85	MP2C	X	0	3.75
86	MP2C	Z	-7.511	3.75
87	MP2C	Mx	-.0062	3.75
88	MP4A	X	0	3.25
89	MP4A	Z	-16.754	3.25
90	MP4A	Mx	.0029	3.25
91	MP4B	X	0	3.25
92	MP4B	Z	-15.318	3.25
93	MP4B	Mx	-.0049	3.25
94	MP4C	X	0	3.25
95	MP4C	Z	-12.621	3.25
96	MP4C	Mx	.0062	3.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	13.745	.75
2	MP3A	Z	-23.807	.75
3	MP3A	Mx	-.0208	.75
4	MP3A	X	13.745	5.75
5	MP3A	Z	-23.807	5.75
6	MP3A	Mx	-.0208	5.75
7	MP3B	X	12.277	.75
8	MP3B	Z	-21.265	.75
9	MP3B	Mx	.0164	.75
10	MP3B	X	12.277	5.75
11	MP3B	Z	-21.265	5.75
12	MP3B	Mx	.0164	5.75
13	MP3C	X	13.745	.75
14	MP3C	Z	-23.807	.75
15	MP3C	Mx	-.000222	.75
16	MP3C	X	13.745	5.75
17	MP3C	Z	-23.807	5.75
18	MP3C	Mx	-.000222	5.75
19	MP3A	X	13.745	.75
20	MP3A	Z	-23.807	.75
21	MP3A	Mx	-.000222	.75
22	MP3A	X	13.745	5.75
23	MP3A	Z	-23.807	5.75
24	MP3A	Mx	-.000222	5.75
25	MP3B	X	12.277	.75
26	MP3B	Z	-21.265	.75
27	MP3B	Mx	.0066	.75
28	MP3B	X	12.277	5.75
29	MP3B	Z	-21.265	5.75
30	MP3B	Mx	.0066	5.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
31	MP3C	X	13.745	.75
32	MP3C	Z	-23.807	.75
33	MP3C	Mx	-.0208	.75
34	MP3C	X	13.745	5.75
35	MP3C	Z	-23.807	5.75
36	MP3C	Mx	-.0208	5.75
37	MP3A	X	7.179	3.25
38	MP3A	Z	-12.435	3.25
39	MP3A	Mx	.0055	3.25
40	MP3B	X	6.431	3.25
41	MP3B	Z	-11.14	3.25
42	MP3B	Mx	-.006	3.25
43	MP3C	X	7.179	3.25
44	MP3C	Z	-12.435	3.25
45	MP3C	Mx	.0055	3.25
46	MP1A	X	12.034	1.25
47	MP1A	Z	-20.843	1.25
48	MP1A	Mx	-.0092	1.25
49	MP1A	X	12.034	5.25
50	MP1A	Z	-20.843	5.25
51	MP1A	Mx	-.0092	5.25
52	MP1B	X	10.189	1.25
53	MP1B	Z	-17.648	1.25
54	MP1B	Mx	.0096	1.25
55	MP1B	X	10.189	5.25
56	MP1B	Z	-17.648	5.25
57	MP1B	Mx	.0096	5.25
58	MP1C	X	12.034	1.25
59	MP1C	Z	-20.843	1.25
60	MP1C	Mx	-.0092	1.25
61	MP1C	X	12.034	5.25
62	MP1C	Z	-20.843	5.25
63	MP1C	Mx	-.0092	5.25
64	OVP1	X	16.471	2
65	OVP1	Z	-28.529	2
66	OVP1	Mx	-.0082	2
67	LR	X	9.706	.25
68	LR	Z	-16.81	.25
69	LR	Mx	0	.25
70	MP2A	X	5.513	2.75
71	MP2A	Z	-9.549	2.75
72	MP2A	Mx	-.007	2.75
73	MP2A	X	5.513	3.75
74	MP2A	Z	-9.549	3.75
75	MP2A	Mx	-.007	3.75
76	MP2B	X	4.154	2.75
77	MP2B	Z	-7.195	2.75
78	MP2B	Mx	.0065	2.75
79	MP2B	X	4.154	3.75
80	MP2B	Z	-7.195	3.75
81	MP2B	Mx	.0065	3.75
82	MP2C	X	5.513	2.75
83	MP2C	Z	-9.549	2.75
84	MP2C	Mx	-.007	2.75
85	MP2C	X	5.513	3.75
86	MP2C	Z	-9.549	3.75
87	MP2C	Mx	-.007	3.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
88	MP4A	X	7.238	3.25
89	MP4A	Z	-12.537	3.25
90	MP4A	Mx	.0055	3.25
91	MP4B	X	6.521	3.25
92	MP4B	Z	-11.294	3.25
93	MP4B	Mx	-.0061	3.25
94	MP4C	X	7.238	3.25
95	MP4C	Z	-12.537	3.25
96	MP4C	Mx	.0055	3.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	20.52	.75
2	MP3A	Z	-11.847	.75
3	MP3A	Mx	-.0141	.75
4	MP3A	X	20.52	5.75
5	MP3A	Z	-11.847	5.75
6	MP3A	Mx	-.0141	5.75
7	MP3B	X	20.52	.75
8	MP3B	Z	-11.847	.75
9	MP3B	Mx	.0093	.75
10	MP3B	X	20.52	5.75
11	MP3B	Z	-11.847	5.75
12	MP3B	Mx	.0093	5.75
13	MP3C	X	27.838	.75
14	MP3C	Z	-16.072	.75
15	MP3C	Mx	.0121	.75
16	MP3C	X	27.838	5.75
17	MP3C	Z	-16.072	5.75
18	MP3C	Mx	.0121	5.75
19	MP3A	X	20.52	.75
20	MP3A	Z	-11.847	.75
21	MP3A	Mx	-.0093	.75
22	MP3A	X	20.52	5.75
23	MP3A	Z	-11.847	5.75
24	MP3A	Mx	-.0093	5.75
25	MP3B	X	20.52	.75
26	MP3B	Z	-11.847	.75
27	MP3B	Mx	.0141	.75
28	MP3B	X	20.52	5.75
29	MP3B	Z	-11.847	5.75
30	MP3B	Mx	.0141	5.75
31	MP3C	X	27.838	.75
32	MP3C	Z	-16.072	.75
33	MP3C	Mx	-.0231	.75
34	MP3C	X	27.838	5.75
35	MP3C	Z	-16.072	5.75
36	MP3C	Mx	-.0231	5.75
37	MP3A	X	10.76	3.25
38	MP3A	Z	-6.212	3.25
39	MP3A	Mx	.0061	3.25
40	MP3B	X	10.76	3.25
41	MP3B	Z	-6.212	3.25
42	MP3B	Mx	-.0061	3.25
43	MP3C	X	14.489	3.25
44	MP3C	Z	-8.365	3.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
45	MP3C	Mx	.0029	3.25
46	MP1A	X	16.712	1.25
47	MP1A	Z	-9.649	1.25
48	MP1A	Mx	-.0095	1.25
49	MP1A	X	16.712	5.25
50	MP1A	Z	-9.649	5.25
51	MP1A	Mx	-.0095	5.25
52	MP1B	X	16.712	1.25
53	MP1B	Z	-9.649	1.25
54	MP1B	Mx	.0095	1.25
55	MP1B	X	16.712	5.25
56	MP1B	Z	-9.649	5.25
57	MP1B	Mx	.0095	5.25
58	MP1C	X	25.909	1.25
59	MP1C	Z	-14.959	1.25
60	MP1C	Mx	-.0051	1.25
61	MP1C	X	25.909	5.25
62	MP1C	Z	-14.959	5.25
63	MP1C	Mx	-.0051	5.25
64	OVP1	X	25.369	2
65	OVP1	Z	-14.647	2
66	OVP1	Mx	-.0127	2
67	LR	X	16.81	.25
68	LR	Z	-9.706	.25
69	LR	Mx	0	.25
70	MP2A	X	6.505	2.75
71	MP2A	Z	-3.756	2.75
72	MP2A	Mx	-.0062	2.75
73	MP2A	X	6.505	3.75
74	MP2A	Z	-3.756	3.75
75	MP2A	Mx	-.0062	3.75
76	MP2B	X	6.505	2.75
77	MP2B	Z	-3.756	2.75
78	MP2B	Mx	.0062	2.75
79	MP2B	X	6.505	3.75
80	MP2B	Z	-3.756	3.75
81	MP2B	Mx	.0062	3.75
82	MP2C	X	13.283	2.75
83	MP2C	Z	-7.669	2.75
84	MP2C	Mx	-.0044	2.75
85	MP2C	X	13.283	3.75
86	MP2C	Z	-7.669	3.75
87	MP2C	Mx	-.0044	3.75
88	MP4A	X	10.93	3.25
89	MP4A	Z	-6.31	3.25
90	MP4A	Mx	.0062	3.25
91	MP4B	X	10.93	3.25
92	MP4B	Z	-6.31	3.25
93	MP4B	Mx	-.0062	3.25
94	MP4C	X	14.509	3.25
95	MP4C	Z	-8.377	3.25
96	MP4C	Mx	.0029	3.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	24.555	.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
2	MP3A	Z	0	.75
3	MP3A	Mx	-.0066	.75
4	MP3A	X	24.555	5.75
5	MP3A	Z	0	5.75
6	MP3A	Mx	-.0066	5.75
7	MP3B	X	27.49	.75
8	MP3B	Z	0	.75
9	MP3B	Mx	.000222	.75
10	MP3B	X	27.49	5.75
11	MP3B	Z	0	5.75
12	MP3B	Mx	.000222	5.75
13	MP3C	X	33.005	.75
14	MP3C	Z	0	.75
15	MP3C	Mx	.0218	.75
16	MP3C	X	33.005	5.75
17	MP3C	Z	0	5.75
18	MP3C	Mx	.0218	5.75
19	MP3A	X	24.555	.75
20	MP3A	Z	0	.75
21	MP3A	Mx	-.0164	.75
22	MP3A	X	24.555	5.75
23	MP3A	Z	0	5.75
24	MP3A	Mx	-.0164	5.75
25	MP3B	X	27.49	.75
26	MP3B	Z	0	.75
27	MP3B	Mx	.0208	.75
28	MP3B	X	27.49	5.75
29	MP3B	Z	0	5.75
30	MP3B	Mx	.0208	5.75
31	MP3C	X	33.005	.75
32	MP3C	Z	0	.75
33	MP3C	Mx	-.0161	.75
34	MP3C	X	33.005	5.75
35	MP3C	Z	0	5.75
36	MP3C	Mx	-.0161	5.75
37	MP3A	X	12.863	3.25
38	MP3A	Z	0	3.25
39	MP3A	Mx	.006	3.25
40	MP3B	X	14.358	3.25
41	MP3B	Z	0	3.25
42	MP3B	Mx	-.0055	3.25
43	MP3C	X	17.168	3.25
44	MP3C	Z	0	3.25
45	MP3C	Mx	-.0015	3.25
46	MP1A	X	20.379	1.25
47	MP1A	Z	0	1.25
48	MP1A	Mx	-.0096	1.25
49	MP1A	X	20.379	5.25
50	MP1A	Z	0	5.25
51	MP1A	Mx	-.0096	5.25
52	MP1B	X	24.067	1.25
53	MP1B	Z	0	1.25
54	MP1B	Mx	.0092	1.25
55	MP1B	X	24.067	5.25
56	MP1B	Z	0	5.25
57	MP1B	Mx	.0092	5.25
58	MP1C	X	30.999	1.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
59	MP1C	Z	0	1.25
60	MP1C	Mx	.0027	1.25
61	MP1C	X	30.999	5.25
62	MP1C	Z	0	5.25
63	MP1C	Mx	.0027	5.25
64	OVP1	X	27.469	2
65	OVP1	Z	0	2
66	OVP1	Mx	-.0137	2
67	LR	X	19.411	.25
68	LR	Z	0	.25
69	LR	Mx	0	.25
70	MP2A	X	8.308	2.75
71	MP2A	Z	0	2.75
72	MP2A	Mx	-.0065	2.75
73	MP2A	X	8.308	3.75
74	MP2A	Z	0	3.75
75	MP2A	Mx	-.0065	3.75
76	MP2B	X	11.026	2.75
77	MP2B	Z	0	2.75
78	MP2B	Mx	.007	2.75
79	MP2B	X	11.026	3.75
80	MP2B	Z	0	3.75
81	MP2B	Mx	.007	3.75
82	MP2C	X	16.135	2.75
83	MP2C	Z	0	2.75
84	MP2C	Mx	.0023	2.75
85	MP2C	X	16.135	3.75
86	MP2C	Z	0	3.75
87	MP2C	Mx	.0023	3.75
88	MP4A	X	13.041	3.25
89	MP4A	Z	0	3.25
90	MP4A	Mx	.0061	3.25
91	MP4B	X	14.477	3.25
92	MP4B	Z	0	3.25
93	MP4B	Mx	-.0055	3.25
94	MP4C	X	17.174	3.25
95	MP4C	Z	0	3.25
96	MP4C	Mx	-.0015	3.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	25.297	.75
2	MP3A	Z	14.605	.75
3	MP3A	Mx	.0037	.75
4	MP3A	X	25.297	5.75
5	MP3A	Z	14.605	5.75
6	MP3A	Mx	.0037	5.75
7	MP3B	X	27.838	.75
8	MP3B	Z	16.072	.75
9	MP3B	Mx	-.0121	.75
10	MP3B	X	27.838	5.75
11	MP3B	Z	16.072	5.75
12	MP3B	Mx	-.0121	5.75
13	MP3C	X	25.297	.75
14	MP3C	Z	14.605	.75
15	MP3C	Mx	.0224	.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
16	MP3C	X	25.297	5.75
17	MP3C	Z	14.605	5.75
18	MP3C	Mx	.0224	5.75
19	MP3A	X	25.297	.75
20	MP3A	Z	14.605	.75
21	MP3A	Mx	-.0224	.75
22	MP3A	X	25.297	5.75
23	MP3A	Z	14.605	5.75
24	MP3A	Mx	-.0224	5.75
25	MP3B	X	27.838	.75
26	MP3B	Z	16.072	.75
27	MP3B	Mx	.0231	.75
28	MP3B	X	27.838	5.75
29	MP3B	Z	16.072	5.75
30	MP3B	Mx	.0231	5.75
31	MP3C	X	25.297	.75
32	MP3C	Z	14.605	.75
33	MP3C	Mx	-.0037	.75
34	MP3C	X	25.297	5.75
35	MP3C	Z	14.605	5.75
36	MP3C	Mx	-.0037	5.75
37	MP3A	X	13.194	3.25
38	MP3A	Z	7.617	3.25
39	MP3A	Mx	.0049	3.25
40	MP3B	X	14.489	3.25
41	MP3B	Z	8.365	3.25
42	MP3B	Mx	-.0029	3.25
43	MP3C	X	13.194	3.25
44	MP3C	Z	7.617	3.25
45	MP3C	Mx	-.0049	3.25
46	MP1A	X	22.715	1.25
47	MP1A	Z	13.115	1.25
48	MP1A	Mx	-.0084	1.25
49	MP1A	X	22.715	5.25
50	MP1A	Z	13.115	5.25
51	MP1A	Mx	-.0084	5.25
52	MP1B	X	25.909	1.25
53	MP1B	Z	14.959	1.25
54	MP1B	Mx	.0051	1.25
55	MP1B	X	25.909	5.25
56	MP1B	Z	14.959	5.25
57	MP1B	Mx	.0051	5.25
58	MP1C	X	22.715	1.25
59	MP1C	Z	13.115	1.25
60	MP1C	Mx	.0084	1.25
61	MP1C	X	22.715	5.25
62	MP1C	Z	13.115	5.25
63	MP1C	Mx	.0084	5.25
64	OVP1	X	25.369	2
65	OVP1	Z	14.647	2
66	OVP1	Mx	-.0127	2
67	LR	X	16.81	.25
68	LR	Z	9.706	.25
69	LR	Mx	0	.25
70	MP2A	X	10.929	2.75
71	MP2A	Z	6.31	2.75
72	MP2A	Mx	-.0068	2.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
73	MP2A	X	10.929	3.75
74	MP2A	Z	6.31	3.75
75	MP2A	Mx	-.0068	3.75
76	MP2B	X	13.283	2.75
77	MP2B	Z	7.669	2.75
78	MP2B	Mx	.0044	2.75
79	MP2B	X	13.283	3.75
80	MP2B	Z	7.669	3.75
81	MP2B	Mx	.0044	3.75
82	MP2C	X	10.929	2.75
83	MP2C	Z	6.31	2.75
84	MP2C	Mx	.0068	2.75
85	MP2C	X	10.929	3.75
86	MP2C	Z	6.31	3.75
87	MP2C	Mx	.0068	3.75
88	MP4A	X	13.266	3.25
89	MP4A	Z	7.659	3.25
90	MP4A	Mx	.0049	3.25
91	MP4B	X	14.509	3.25
92	MP4B	Z	8.377	3.25
93	MP4B	Mx	-.0029	3.25
94	MP4C	X	13.266	3.25
95	MP4C	Z	7.659	3.25
96	MP4C	Mx	-.0049	3.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	16.503	.75
2	MP3A	Z	28.583	.75
3	MP3A	Mx	.0161	.75
4	MP3A	X	16.503	5.75
5	MP3A	Z	28.583	5.75
6	MP3A	Mx	.0161	5.75
7	MP3B	X	16.503	.75
8	MP3B	Z	28.583	.75
9	MP3B	Mx	-.0218	.75
10	MP3B	X	16.503	5.75
11	MP3B	Z	28.583	5.75
12	MP3B	Mx	-.0218	5.75
13	MP3C	X	12.277	.75
14	MP3C	Z	21.265	.75
15	MP3C	Mx	.0164	.75
16	MP3C	X	12.277	5.75
17	MP3C	Z	21.265	5.75
18	MP3C	Mx	.0164	5.75
19	MP3A	X	16.503	.75
20	MP3A	Z	28.583	.75
21	MP3A	Mx	-.0218	.75
22	MP3A	X	16.503	5.75
23	MP3A	Z	28.583	5.75
24	MP3A	Mx	-.0218	5.75
25	MP3B	X	16.503	.75
26	MP3B	Z	28.583	.75
27	MP3B	Mx	.0161	.75
28	MP3B	X	16.503	5.75
29	MP3B	Z	28.583	5.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
30	MP3B	Mx	.0161	5.75
31	MP3C	X	12.277	.75
32	MP3C	Z	21.265	.75
33	MP3C	Mx	.0066	.75
34	MP3C	X	12.277	5.75
35	MP3C	Z	21.265	5.75
36	MP3C	Mx	.0066	5.75
37	MP3A	X	8.584	3.25
38	MP3A	Z	14.868	3.25
39	MP3A	Mx	.0015	3.25
40	MP3B	X	8.584	3.25
41	MP3B	Z	14.868	3.25
42	MP3B	Mx	.0015	3.25
43	MP3C	X	6.431	3.25
44	MP3C	Z	11.14	3.25
45	MP3C	Mx	-.006	3.25
46	MP1A	X	15.499	1.25
47	MP1A	Z	26.846	1.25
48	MP1A	Mx	-.0027	1.25
49	MP1A	X	15.499	5.25
50	MP1A	Z	26.846	5.25
51	MP1A	Mx	-.0027	5.25
52	MP1B	X	15.499	1.25
53	MP1B	Z	26.846	1.25
54	MP1B	Mx	-.0027	1.25
55	MP1B	X	15.499	5.25
56	MP1B	Z	26.846	5.25
57	MP1B	Mx	-.0027	5.25
58	MP1C	X	10.189	1.25
59	MP1C	Z	17.648	1.25
60	MP1C	Mx	.0096	1.25
61	MP1C	X	10.189	5.25
62	MP1C	Z	17.648	5.25
63	MP1C	Mx	.0096	5.25
64	OVP1	X	16.471	2
65	OVP1	Z	28.529	2
66	OVP1	Mx	-.0082	2
67	LR	X	9.706	.25
68	LR	Z	16.81	.25
69	LR	Mx	0	.25
70	MP2A	X	8.067	2.75
71	MP2A	Z	13.973	2.75
72	MP2A	Mx	-.0023	2.75
73	MP2A	X	8.067	3.75
74	MP2A	Z	13.973	3.75
75	MP2A	Mx	-.0023	3.75
76	MP2B	X	8.067	2.75
77	MP2B	Z	13.973	2.75
78	MP2B	Mx	-.0023	2.75
79	MP2B	X	8.067	3.75
80	MP2B	Z	13.973	3.75
81	MP2B	Mx	-.0023	3.75
82	MP2C	X	4.154	2.75
83	MP2C	Z	7.195	2.75
84	MP2C	Mx	.0065	2.75
85	MP2C	X	4.154	3.75
86	MP2C	Z	7.195	3.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
87	MP2C	Mx	.0065	3.75
88	MP4A	X	8.587	3.25
89	MP4A	Z	14.874	3.25
90	MP4A	Mx	.0015	3.25
91	MP4B	X	8.587	3.25
92	MP4B	Z	14.874	3.25
93	MP4B	Mx	.0015	3.25
94	MP4C	X	6.521	3.25
95	MP4C	Z	11.294	3.25
96	MP4C	Mx	-.0061	3.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	0	.75
2	MP3A	Z	32.145	.75
3	MP3A	Mx	.0231	.75
4	MP3A	X	0	5.75
5	MP3A	Z	32.145	5.75
6	MP3A	Mx	.0231	5.75
7	MP3B	X	0	.75
8	MP3B	Z	29.21	.75
9	MP3B	Mx	-.0224	.75
10	MP3B	X	0	5.75
11	MP3B	Z	29.21	5.75
12	MP3B	Mx	-.0224	5.75
13	MP3C	X	0	.75
14	MP3C	Z	23.695	.75
15	MP3C	Mx	.0093	.75
16	MP3C	X	0	5.75
17	MP3C	Z	23.695	5.75
18	MP3C	Mx	.0093	5.75
19	MP3A	X	0	.75
20	MP3A	Z	32.145	.75
21	MP3A	Mx	-.0121	.75
22	MP3A	X	0	5.75
23	MP3A	Z	32.145	5.75
24	MP3A	Mx	-.0121	5.75
25	MP3B	X	0	.75
26	MP3B	Z	29.21	.75
27	MP3B	Mx	.0037	.75
28	MP3B	X	0	5.75
29	MP3B	Z	29.21	5.75
30	MP3B	Mx	.0037	5.75
31	MP3C	X	0	.75
32	MP3C	Z	23.695	.75
33	MP3C	Mx	.0141	.75
34	MP3C	X	0	5.75
35	MP3C	Z	23.695	5.75
36	MP3C	Mx	.0141	5.75
37	MP3A	X	0	3.25
38	MP3A	Z	16.73	3.25
39	MP3A	Mx	-.0029	3.25
40	MP3B	X	0	3.25
41	MP3B	Z	15.235	3.25
42	MP3B	Mx	.0049	3.25
43	MP3C	X	0	3.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
44	MP3C	Z	12.425	3.25
45	MP3C	Mx	-.0061	3.25
46	MP1A	X	0	1.25
47	MP1A	Z	29.918	1.25
48	MP1A	Mx	.0051	1.25
49	MP1A	X	0	5.25
50	MP1A	Z	29.918	5.25
51	MP1A	Mx	.0051	5.25
52	MP1B	X	0	1.25
53	MP1B	Z	26.229	1.25
54	MP1B	Mx	-.0084	1.25
55	MP1B	X	0	5.25
56	MP1B	Z	26.229	5.25
57	MP1B	Mx	-.0084	5.25
58	MP1C	X	0	1.25
59	MP1C	Z	19.298	1.25
60	MP1C	Mx	.0095	1.25
61	MP1C	X	0	5.25
62	MP1C	Z	19.298	5.25
63	MP1C	Mx	.0095	5.25
64	OVP1	X	0	2
65	OVP1	Z	34.767	2
66	OVP1	Mx	0	2
67	LR	X	0	.25
68	LR	Z	19.411	.25
69	LR	Mx	0	.25
70	MP2A	X	0	2.75
71	MP2A	Z	15.338	2.75
72	MP2A	Mx	.0044	2.75
73	MP2A	X	0	3.75
74	MP2A	Z	15.338	3.75
75	MP2A	Mx	.0044	3.75
76	MP2B	X	0	2.75
77	MP2B	Z	12.62	2.75
78	MP2B	Mx	-.0068	2.75
79	MP2B	X	0	3.75
80	MP2B	Z	12.62	3.75
81	MP2B	Mx	-.0068	3.75
82	MP2C	X	0	2.75
83	MP2C	Z	7.511	2.75
84	MP2C	Mx	.0062	2.75
85	MP2C	X	0	3.75
86	MP2C	Z	7.511	3.75
87	MP2C	Mx	.0062	3.75
88	MP4A	X	0	3.25
89	MP4A	Z	16.754	3.25
90	MP4A	Mx	-.0029	3.25
91	MP4B	X	0	3.25
92	MP4B	Z	15.318	3.25
93	MP4B	Mx	.0049	3.25
94	MP4C	X	0	3.25
95	MP4C	Z	12.621	3.25
96	MP4C	Mx	-.0062	3.25

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

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

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	-13.745	.75
2	MP3A	Z	23.807	.75
3	MP3A	Mx	.0208	.75
4	MP3A	X	-13.745	5.75
5	MP3A	Z	23.807	5.75
6	MP3A	Mx	.0208	5.75
7	MP3B	X	-12.277	.75
8	MP3B	Z	21.265	.75
9	MP3B	Mx	-.0164	.75
10	MP3B	X	-12.277	5.75
11	MP3B	Z	21.265	5.75
12	MP3B	Mx	-.0164	5.75
13	MP3C	X	-13.745	.75
14	MP3C	Z	23.807	.75
15	MP3C	Mx	.000222	.75
16	MP3C	X	-13.745	5.75
17	MP3C	Z	23.807	5.75
18	MP3C	Mx	.000222	5.75
19	MP3A	X	-13.745	.75
20	MP3A	Z	23.807	.75
21	MP3A	Mx	.000222	.75
22	MP3A	X	-13.745	5.75
23	MP3A	Z	23.807	5.75
24	MP3A	Mx	.000222	5.75
25	MP3B	X	-12.277	.75
26	MP3B	Z	21.265	.75
27	MP3B	Mx	-.0066	.75
28	MP3B	X	-12.277	5.75
29	MP3B	Z	21.265	5.75
30	MP3B	Mx	-.0066	5.75
31	MP3C	X	-13.745	.75
32	MP3C	Z	23.807	.75
33	MP3C	Mx	.0208	.75
34	MP3C	X	-13.745	5.75
35	MP3C	Z	23.807	5.75
36	MP3C	Mx	.0208	5.75
37	MP3A	X	-7.179	3.25
38	MP3A	Z	12.435	3.25
39	MP3A	Mx	-.0055	3.25
40	MP3B	X	-6.431	3.25
41	MP3B	Z	11.14	3.25
42	MP3B	Mx	.006	3.25
43	MP3C	X	-7.179	3.25
44	MP3C	Z	12.435	3.25
45	MP3C	Mx	-.0055	3.25
46	MP1A	X	-12.034	1.25
47	MP1A	Z	20.843	1.25
48	MP1A	Mx	.0092	1.25
49	MP1A	X	-12.034	5.25
50	MP1A	Z	20.843	5.25
51	MP1A	Mx	.0092	5.25
52	MP1B	X	-10.189	1.25
53	MP1B	Z	17.648	1.25
54	MP1B	Mx	-.0096	1.25
55	MP1B	X	-10.189	5.25
56	MP1B	Z	17.648	5.25
57	MP1B	Mx	-.0096	5.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
58	MP1C	X	-12.034	1.25
59	MP1C	Z	20.843	1.25
60	MP1C	Mx	.0092	1.25
61	MP1C	X	-12.034	5.25
62	MP1C	Z	20.843	5.25
63	MP1C	Mx	.0092	5.25
64	OVP1	X	-16.471	2
65	OVP1	Z	28.529	2
66	OVP1	Mx	.0082	2
67	LR	X	-9.706	.25
68	LR	Z	16.81	.25
69	LR	Mx	0	.25
70	MP2A	X	-5.513	2.75
71	MP2A	Z	9.549	2.75
72	MP2A	Mx	.007	2.75
73	MP2A	X	-5.513	3.75
74	MP2A	Z	9.549	3.75
75	MP2A	Mx	.007	3.75
76	MP2B	X	-4.154	2.75
77	MP2B	Z	7.195	2.75
78	MP2B	Mx	-.0065	2.75
79	MP2B	X	-4.154	3.75
80	MP2B	Z	7.195	3.75
81	MP2B	Mx	-.0065	3.75
82	MP2C	X	-5.513	2.75
83	MP2C	Z	9.549	2.75
84	MP2C	Mx	.007	2.75
85	MP2C	X	-5.513	3.75
86	MP2C	Z	9.549	3.75
87	MP2C	Mx	.007	3.75
88	MP4A	X	-7.238	3.25
89	MP4A	Z	12.537	3.25
90	MP4A	Mx	-.0055	3.25
91	MP4B	X	-6.521	3.25
92	MP4B	Z	11.294	3.25
93	MP4B	Mx	.0061	3.25
94	MP4C	X	-7.238	3.25
95	MP4C	Z	12.537	3.25
96	MP4C	Mx	-.0055	3.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	-20.52	.75
2	MP3A	Z	11.847	.75
3	MP3A	Mx	.0141	.75
4	MP3A	X	-20.52	5.75
5	MP3A	Z	11.847	5.75
6	MP3A	Mx	.0141	5.75
7	MP3B	X	-20.52	.75
8	MP3B	Z	11.847	.75
9	MP3B	Mx	-.0093	.75
10	MP3B	X	-20.52	5.75
11	MP3B	Z	11.847	5.75
12	MP3B	Mx	-.0093	5.75
13	MP3C	X	-27.838	.75
14	MP3C	Z	16.072	.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
15	MP3C	Mx	-.0121	.75
16	MP3C	X	-27.838	5.75
17	MP3C	Z	16.072	5.75
18	MP3C	Mx	-.0121	5.75
19	MP3A	X	-20.52	.75
20	MP3A	Z	11.847	.75
21	MP3A	Mx	.0093	.75
22	MP3A	X	-20.52	5.75
23	MP3A	Z	11.847	5.75
24	MP3A	Mx	.0093	5.75
25	MP3B	X	-20.52	.75
26	MP3B	Z	11.847	.75
27	MP3B	Mx	-.0141	.75
28	MP3B	X	-20.52	5.75
29	MP3B	Z	11.847	5.75
30	MP3B	Mx	-.0141	5.75
31	MP3C	X	-27.838	.75
32	MP3C	Z	16.072	.75
33	MP3C	Mx	.0231	.75
34	MP3C	X	-27.838	5.75
35	MP3C	Z	16.072	5.75
36	MP3C	Mx	.0231	5.75
37	MP3A	X	-10.76	3.25
38	MP3A	Z	6.212	3.25
39	MP3A	Mx	-.0061	3.25
40	MP3B	X	-10.76	3.25
41	MP3B	Z	6.212	3.25
42	MP3B	Mx	.0061	3.25
43	MP3C	X	-14.489	3.25
44	MP3C	Z	8.365	3.25
45	MP3C	Mx	-.0029	3.25
46	MP1A	X	-16.712	1.25
47	MP1A	Z	9.649	1.25
48	MP1A	Mx	.0095	1.25
49	MP1A	X	-16.712	5.25
50	MP1A	Z	9.649	5.25
51	MP1A	Mx	.0095	5.25
52	MP1B	X	-16.712	1.25
53	MP1B	Z	9.649	1.25
54	MP1B	Mx	-.0095	1.25
55	MP1B	X	-16.712	5.25
56	MP1B	Z	9.649	5.25
57	MP1B	Mx	-.0095	5.25
58	MP1C	X	-25.909	1.25
59	MP1C	Z	14.959	1.25
60	MP1C	Mx	.0051	1.25
61	MP1C	X	-25.909	5.25
62	MP1C	Z	14.959	5.25
63	MP1C	Mx	.0051	5.25
64	OVP1	X	-25.369	2
65	OVP1	Z	14.647	2
66	OVP1	Mx	.0127	2
67	LR	X	-16.81	.25
68	LR	Z	9.706	.25
69	LR	Mx	0	.25
70	MP2A	X	-6.505	2.75
71	MP2A	Z	3.756	2.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
72	MP2A	Mx	.0062	2.75
73	MP2A	X	-6.505	3.75
74	MP2A	Z	3.756	3.75
75	MP2A	Mx	.0062	3.75
76	MP2B	X	-6.505	2.75
77	MP2B	Z	3.756	2.75
78	MP2B	Mx	-.0062	2.75
79	MP2B	X	-6.505	3.75
80	MP2B	Z	3.756	3.75
81	MP2B	Mx	-.0062	3.75
82	MP2C	X	-13.283	2.75
83	MP2C	Z	7.669	2.75
84	MP2C	Mx	.0044	2.75
85	MP2C	X	-13.283	3.75
86	MP2C	Z	7.669	3.75
87	MP2C	Mx	.0044	3.75
88	MP4A	X	-10.93	3.25
89	MP4A	Z	6.31	3.25
90	MP4A	Mx	-.0062	3.25
91	MP4B	X	-10.93	3.25
92	MP4B	Z	6.31	3.25
93	MP4B	Mx	.0062	3.25
94	MP4C	X	-14.509	3.25
95	MP4C	Z	8.377	3.25
96	MP4C	Mx	-.0029	3.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	-24.555	.75
2	MP3A	Z	0	.75
3	MP3A	Mx	.0066	.75
4	MP3A	X	-24.555	5.75
5	MP3A	Z	0	5.75
6	MP3A	Mx	.0066	5.75
7	MP3B	X	-27.49	.75
8	MP3B	Z	0	.75
9	MP3B	Mx	-.000222	.75
10	MP3B	X	-27.49	5.75
11	MP3B	Z	0	5.75
12	MP3B	Mx	-.000222	5.75
13	MP3C	X	-33.005	.75
14	MP3C	Z	0	.75
15	MP3C	Mx	-.0218	.75
16	MP3C	X	-33.005	5.75
17	MP3C	Z	0	5.75
18	MP3C	Mx	-.0218	5.75
19	MP3A	X	-24.555	.75
20	MP3A	Z	0	.75
21	MP3A	Mx	.0164	.75
22	MP3A	X	-24.555	5.75
23	MP3A	Z	0	5.75
24	MP3A	Mx	.0164	5.75
25	MP3B	X	-27.49	.75
26	MP3B	Z	0	.75
27	MP3B	Mx	-.0208	.75
28	MP3B	X	-27.49	5.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
29	MP3B	Z	0	5.75
30	MP3B	Mx	-.0208	5.75
31	MP3C	X	-33.005	.75
32	MP3C	Z	0	.75
33	MP3C	Mx	.0161	.75
34	MP3C	X	-33.005	5.75
35	MP3C	Z	0	5.75
36	MP3C	Mx	.0161	5.75
37	MP3A	X	-12.863	3.25
38	MP3A	Z	0	3.25
39	MP3A	Mx	-.006	3.25
40	MP3B	X	-14.358	3.25
41	MP3B	Z	0	3.25
42	MP3B	Mx	.0055	3.25
43	MP3C	X	-17.168	3.25
44	MP3C	Z	0	3.25
45	MP3C	Mx	.0015	3.25
46	MP1A	X	-20.379	1.25
47	MP1A	Z	0	1.25
48	MP1A	Mx	.0096	1.25
49	MP1A	X	-20.379	5.25
50	MP1A	Z	0	5.25
51	MP1A	Mx	.0096	5.25
52	MP1B	X	-24.067	1.25
53	MP1B	Z	0	1.25
54	MP1B	Mx	-.0092	1.25
55	MP1B	X	-24.067	5.25
56	MP1B	Z	0	5.25
57	MP1B	Mx	-.0092	5.25
58	MP1C	X	-30.999	1.25
59	MP1C	Z	0	1.25
60	MP1C	Mx	-.0027	1.25
61	MP1C	X	-30.999	5.25
62	MP1C	Z	0	5.25
63	MP1C	Mx	-.0027	5.25
64	OVP1	X	-27.469	2
65	OVP1	Z	0	2
66	OVP1	Mx	.0137	2
67	LR	X	-19.411	.25
68	LR	Z	0	.25
69	LR	Mx	0	.25
70	MP2A	X	-8.308	2.75
71	MP2A	Z	0	2.75
72	MP2A	Mx	.0065	2.75
73	MP2A	X	-8.308	3.75
74	MP2A	Z	0	3.75
75	MP2A	Mx	.0065	3.75
76	MP2B	X	-11.026	2.75
77	MP2B	Z	0	2.75
78	MP2B	Mx	-.007	2.75
79	MP2B	X	-11.026	3.75
80	MP2B	Z	0	3.75
81	MP2B	Mx	-.007	3.75
82	MP2C	X	-16.135	2.75
83	MP2C	Z	0	2.75
84	MP2C	Mx	-.0023	2.75
85	MP2C	X	-16.135	3.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
86	MP2C	Z	0	3.75
87	MP2C	Mx	-.0023	3.75
88	MP4A	X	-13.041	3.25
89	MP4A	Z	0	3.25
90	MP4A	Mx	-.0061	3.25
91	MP4B	X	-14.477	3.25
92	MP4B	Z	0	3.25
93	MP4B	Mx	.0055	3.25
94	MP4C	X	-17.174	3.25
95	MP4C	Z	0	3.25
96	MP4C	Mx	.0015	3.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	-25.297	.75
2	MP3A	Z	-14.605	.75
3	MP3A	Mx	-.0037	.75
4	MP3A	X	-25.297	5.75
5	MP3A	Z	-14.605	5.75
6	MP3A	Mx	-.0037	5.75
7	MP3B	X	-27.838	.75
8	MP3B	Z	-16.072	.75
9	MP3B	Mx	.0121	.75
10	MP3B	X	-27.838	5.75
11	MP3B	Z	-16.072	5.75
12	MP3B	Mx	.0121	5.75
13	MP3C	X	-25.297	.75
14	MP3C	Z	-14.605	.75
15	MP3C	Mx	-.0224	.75
16	MP3C	X	-25.297	5.75
17	MP3C	Z	-14.605	5.75
18	MP3C	Mx	-.0224	5.75
19	MP3A	X	-25.297	.75
20	MP3A	Z	-14.605	.75
21	MP3A	Mx	.0224	.75
22	MP3A	X	-25.297	5.75
23	MP3A	Z	-14.605	5.75
24	MP3A	Mx	.0224	5.75
25	MP3B	X	-27.838	.75
26	MP3B	Z	-16.072	.75
27	MP3B	Mx	-.0231	.75
28	MP3B	X	-27.838	5.75
29	MP3B	Z	-16.072	5.75
30	MP3B	Mx	-.0231	5.75
31	MP3C	X	-25.297	.75
32	MP3C	Z	-14.605	.75
33	MP3C	Mx	.0037	.75
34	MP3C	X	-25.297	5.75
35	MP3C	Z	-14.605	5.75
36	MP3C	Mx	.0037	5.75
37	MP3A	X	-13.194	3.25
38	MP3A	Z	-7.617	3.25
39	MP3A	Mx	-.0049	3.25
40	MP3B	X	-14.489	3.25
41	MP3B	Z	-8.365	3.25
42	MP3B	Mx	.0029	3.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
43	MP3C	X	-13.194	3.25
44	MP3C	Z	-7.617	3.25
45	MP3C	Mx	.0049	3.25
46	MP1A	X	-22.715	1.25
47	MP1A	Z	-13.115	1.25
48	MP1A	Mx	.0084	1.25
49	MP1A	X	-22.715	5.25
50	MP1A	Z	-13.115	5.25
51	MP1A	Mx	.0084	5.25
52	MP1B	X	-25.909	1.25
53	MP1B	Z	-14.959	1.25
54	MP1B	Mx	-.0051	1.25
55	MP1B	X	-25.909	5.25
56	MP1B	Z	-14.959	5.25
57	MP1B	Mx	-.0051	5.25
58	MP1C	X	-22.715	1.25
59	MP1C	Z	-13.115	1.25
60	MP1C	Mx	-.0084	1.25
61	MP1C	X	-22.715	5.25
62	MP1C	Z	-13.115	5.25
63	MP1C	Mx	-.0084	5.25
64	OVP1	X	-25.369	2
65	OVP1	Z	-14.647	2
66	OVP1	Mx	.0127	2
67	LR	X	-16.81	.25
68	LR	Z	-9.706	.25
69	LR	Mx	0	.25
70	MP2A	X	-10.929	2.75
71	MP2A	Z	-6.31	2.75
72	MP2A	Mx	.0068	2.75
73	MP2A	X	-10.929	3.75
74	MP2A	Z	-6.31	3.75
75	MP2A	Mx	.0068	3.75
76	MP2B	X	-13.283	2.75
77	MP2B	Z	-7.669	2.75
78	MP2B	Mx	-.0044	2.75
79	MP2B	X	-13.283	3.75
80	MP2B	Z	-7.669	3.75
81	MP2B	Mx	-.0044	3.75
82	MP2C	X	-10.929	2.75
83	MP2C	Z	-6.31	2.75
84	MP2C	Mx	-.0068	2.75
85	MP2C	X	-10.929	3.75
86	MP2C	Z	-6.31	3.75
87	MP2C	Mx	-.0068	3.75
88	MP4A	X	-13.266	3.25
89	MP4A	Z	-7.659	3.25
90	MP4A	Mx	-.0049	3.25
91	MP4B	X	-14.509	3.25
92	MP4B	Z	-8.377	3.25
93	MP4B	Mx	.0029	3.25
94	MP4C	X	-13.266	3.25
95	MP4C	Z	-7.659	3.25
96	MP4C	Mx	.0049	3.25

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

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

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	-16.503	.75
2	MP3A	Z	-28.583	.75
3	MP3A	Mx	-.0161	.75
4	MP3A	X	-16.503	5.75
5	MP3A	Z	-28.583	5.75
6	MP3A	Mx	-.0161	5.75
7	MP3B	X	-16.503	.75
8	MP3B	Z	-28.583	.75
9	MP3B	Mx	.0218	.75
10	MP3B	X	-16.503	5.75
11	MP3B	Z	-28.583	5.75
12	MP3B	Mx	.0218	5.75
13	MP3C	X	-12.277	.75
14	MP3C	Z	-21.265	.75
15	MP3C	Mx	-.0164	.75
16	MP3C	X	-12.277	5.75
17	MP3C	Z	-21.265	5.75
18	MP3C	Mx	-.0164	5.75
19	MP3A	X	-16.503	.75
20	MP3A	Z	-28.583	.75
21	MP3A	Mx	.0218	.75
22	MP3A	X	-16.503	5.75
23	MP3A	Z	-28.583	5.75
24	MP3A	Mx	.0218	5.75
25	MP3B	X	-16.503	.75
26	MP3B	Z	-28.583	.75
27	MP3B	Mx	-.0161	.75
28	MP3B	X	-16.503	5.75
29	MP3B	Z	-28.583	5.75
30	MP3B	Mx	-.0161	5.75
31	MP3C	X	-12.277	.75
32	MP3C	Z	-21.265	.75
33	MP3C	Mx	-.0066	.75
34	MP3C	X	-12.277	5.75
35	MP3C	Z	-21.265	5.75
36	MP3C	Mx	-.0066	5.75
37	MP3A	X	-8.584	3.25
38	MP3A	Z	-14.868	3.25
39	MP3A	Mx	-.0015	3.25
40	MP3B	X	-8.584	3.25
41	MP3B	Z	-14.868	3.25
42	MP3B	Mx	-.0015	3.25
43	MP3C	X	-6.431	3.25
44	MP3C	Z	-11.14	3.25
45	MP3C	Mx	.006	3.25
46	MP1A	X	-15.499	1.25
47	MP1A	Z	-26.846	1.25
48	MP1A	Mx	.0027	1.25
49	MP1A	X	-15.499	5.25
50	MP1A	Z	-26.846	5.25
51	MP1A	Mx	.0027	5.25
52	MP1B	X	-15.499	1.25
53	MP1B	Z	-26.846	1.25
54	MP1B	Mx	.0027	1.25
55	MP1B	X	-15.499	5.25
56	MP1B	Z	-26.846	5.25
57	MP1B	Mx	.0027	5.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
58	MP1C	X	-10.189	1.25
59	MP1C	Z	-17.648	1.25
60	MP1C	Mx	-.0096	1.25
61	MP1C	X	-10.189	5.25
62	MP1C	Z	-17.648	5.25
63	MP1C	Mx	-.0096	5.25
64	OVP1	X	-16.471	2
65	OVP1	Z	-28.529	2
66	OVP1	Mx	.0082	2
67	LR	X	-9.706	.25
68	LR	Z	-16.81	.25
69	LR	Mx	0	.25
70	MP2A	X	-8.067	2.75
71	MP2A	Z	-13.973	2.75
72	MP2A	Mx	.0023	2.75
73	MP2A	X	-8.067	3.75
74	MP2A	Z	-13.973	3.75
75	MP2A	Mx	.0023	3.75
76	MP2B	X	-8.067	2.75
77	MP2B	Z	-13.973	2.75
78	MP2B	Mx	.0023	2.75
79	MP2B	X	-8.067	3.75
80	MP2B	Z	-13.973	3.75
81	MP2B	Mx	.0023	3.75
82	MP2C	X	-4.154	2.75
83	MP2C	Z	-7.195	2.75
84	MP2C	Mx	-.0065	2.75
85	MP2C	X	-4.154	3.75
86	MP2C	Z	-7.195	3.75
87	MP2C	Mx	-.0065	3.75
88	MP4A	X	-8.587	3.25
89	MP4A	Z	-14.874	3.25
90	MP4A	Mx	-.0015	3.25
91	MP4B	X	-8.587	3.25
92	MP4B	Z	-14.874	3.25
93	MP4B	Mx	-.0015	3.25
94	MP4C	X	-6.521	3.25
95	MP4C	Z	-11.294	3.25
96	MP4C	Mx	.0061	3.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	0	.75
2	MP3A	Z	-6.505	.75
3	MP3A	Mx	-.0047	.75
4	MP3A	X	0	5.75
5	MP3A	Z	-6.505	5.75
6	MP3A	Mx	-.0047	5.75
7	MP3B	X	0	.75
8	MP3B	Z	-5.326	.75
9	MP3B	Mx	.0041	.75
10	MP3B	X	0	5.75
11	MP3B	Z	-5.326	5.75
12	MP3B	Mx	.0041	5.75
13	MP3C	X	0	.75
14	MP3C	Z	-3.111	.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
15	MP3C	Mx	-.0012	.75
16	MP3C	X	0	5.75
17	MP3C	Z	-3.111	5.75
18	MP3C	Mx	-.0012	5.75
19	MP3A	X	0	.75
20	MP3A	Z	-6.505	.75
21	MP3A	Mx	.0025	.75
22	MP3A	X	0	5.75
23	MP3A	Z	-6.505	5.75
24	MP3A	Mx	.0025	5.75
25	MP3B	X	0	.75
26	MP3B	Z	-5.326	.75
27	MP3B	Mx	-.000668	.75
28	MP3B	X	0	5.75
29	MP3B	Z	-5.326	5.75
30	MP3B	Mx	-.000668	5.75
31	MP3C	X	0	.75
32	MP3C	Z	-3.111	.75
33	MP3C	Mx	-.0018	.75
34	MP3C	X	0	5.75
35	MP3C	Z	-3.111	5.75
36	MP3C	Mx	-.0018	5.75
37	MP3A	X	0	3.25
38	MP3A	Z	-3.826	3.25
39	MP3A	Mx	.000654	3.25
40	MP3B	X	0	3.25
41	MP3B	Z	-3.438	3.25
42	MP3B	Mx	-.0011	3.25
43	MP3C	X	0	3.25
44	MP3C	Z	-2.709	3.25
45	MP3C	Mx	.0013	3.25
46	MP1A	X	0	1.25
47	MP1A	Z	-9.205	1.25
48	MP1A	Mx	-.0016	1.25
49	MP1A	X	0	5.25
50	MP1A	Z	-9.205	5.25
51	MP1A	Mx	-.0016	5.25
52	MP1B	X	0	1.25
53	MP1B	Z	-7.908	1.25
54	MP1B	Mx	.0025	1.25
55	MP1B	X	0	5.25
56	MP1B	Z	-7.908	5.25
57	MP1B	Mx	.0025	5.25
58	MP1C	X	0	1.25
59	MP1C	Z	-5.47	1.25
60	MP1C	Mx	-.0027	1.25
61	MP1C	X	0	5.25
62	MP1C	Z	-5.47	5.25
63	MP1C	Mx	-.0027	5.25
64	OVP1	X	0	2
65	OVP1	Z	-8.138	2
66	OVP1	Mx	0	2
67	LR	X	0	.25
68	LR	Z	-2.246	.25
69	LR	Mx	0	.25
70	MP2A	X	0	2.75
71	MP2A	Z	-3.749	2.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
72	MP2A	Mx	-.0011	2.75
73	MP2A	X	0	3.75
74	MP2A	Z	-3.749	3.75
75	MP2A	Mx	-.0011	3.75
76	MP2B	X	0	2.75
77	MP2B	Z	-2.969	2.75
78	MP2B	Mx	.0016	2.75
79	MP2B	X	0	3.75
80	MP2B	Z	-2.969	3.75
81	MP2B	Mx	.0016	3.75
82	MP2C	X	0	2.75
83	MP2C	Z	-1.504	2.75
84	MP2C	Mx	-.0012	2.75
85	MP2C	X	0	3.75
86	MP2C	Z	-1.504	3.75
87	MP2C	Mx	-.0012	3.75
88	MP4A	X	0	3.25
89	MP4A	Z	-4.622	3.25
90	MP4A	Mx	.00079	3.25
91	MP4B	X	0	3.25
92	MP4B	Z	-4.17	3.25
93	MP4B	Mx	-.0013	3.25
94	MP4C	X	0	3.25
95	MP4C	Z	-3.319	3.25
96	MP4C	Mx	.0016	3.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	2.318	.75
2	MP3A	Z	-4.014	.75
3	MP3A	Mx	-.0035	.75
4	MP3A	X	2.318	5.75
5	MP3A	Z	-4.014	5.75
6	MP3A	Mx	-.0035	5.75
7	MP3B	X	1.728	.75
8	MP3B	Z	-2.993	.75
9	MP3B	Mx	.0023	.75
10	MP3B	X	1.728	5.75
11	MP3B	Z	-2.993	5.75
12	MP3B	Mx	.0023	5.75
13	MP3C	X	2.318	.75
14	MP3C	Z	-4.014	.75
15	MP3C	Mx	-3.7e-5	.75
16	MP3C	X	2.318	5.75
17	MP3C	Z	-4.014	5.75
18	MP3C	Mx	-3.7e-5	5.75
19	MP3A	X	2.318	.75
20	MP3A	Z	-4.014	.75
21	MP3A	Mx	-3.8e-5	.75
22	MP3A	X	2.318	5.75
23	MP3A	Z	-4.014	5.75
24	MP3A	Mx	-3.8e-5	5.75
25	MP3B	X	1.728	.75
26	MP3B	Z	-2.993	.75
27	MP3B	Mx	.000934	.75
28	MP3B	X	1.728	5.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
29	MP3B	Z	-2.993	5.75
30	MP3B	Mx	.000934	5.75
31	MP3C	X	2.318	.75
32	MP3C	Z	-4.014	.75
33	MP3C	Mx	-.0035	.75
34	MP3C	X	2.318	5.75
35	MP3C	Z	-4.014	5.75
36	MP3C	Mx	-.0035	5.75
37	MP3A	X	1.605	3.25
38	MP3A	Z	-2.781	3.25
39	MP3A	Mx	.0012	3.25
40	MP3B	X	1.412	3.25
41	MP3B	Z	-2.445	3.25
42	MP3B	Mx	-.0013	3.25
43	MP3C	X	1.605	3.25
44	MP3C	Z	-2.781	3.25
45	MP3C	Mx	.0012	3.25
46	MP1A	X	3.574	1.25
47	MP1A	Z	-6.19	1.25
48	MP1A	Mx	-.0027	1.25
49	MP1A	X	3.574	5.25
50	MP1A	Z	-6.19	5.25
51	MP1A	Mx	-.0027	5.25
52	MP1B	X	2.925	1.25
53	MP1B	Z	-5.066	1.25
54	MP1B	Mx	.0027	1.25
55	MP1B	X	2.925	5.25
56	MP1B	Z	-5.066	5.25
57	MP1B	Mx	.0027	5.25
58	MP1C	X	3.574	1.25
59	MP1C	Z	-6.19	1.25
60	MP1C	Mx	-.0027	1.25
61	MP1C	X	3.574	5.25
62	MP1C	Z	-6.19	5.25
63	MP1C	Mx	-.0027	5.25
64	OVP1	X	3.825	2
65	OVP1	Z	-6.626	2
66	OVP1	Mx	-.0019	2
67	LR	X	.802	.25
68	LR	Z	-1.39	.25
69	LR	Mx	0	.25
70	MP2A	X	1.256	2.75
71	MP2A	Z	-2.176	2.75
72	MP2A	Mx	-.0016	2.75
73	MP2A	X	1.256	3.75
74	MP2A	Z	-2.176	3.75
75	MP2A	Mx	-.0016	3.75
76	MP2B	X	.866	2.75
77	MP2B	Z	-1.501	2.75
78	MP2B	Mx	.0014	2.75
79	MP2B	X	.866	3.75
80	MP2B	Z	-1.501	3.75
81	MP2B	Mx	.0014	3.75
82	MP2C	X	1.256	2.75
83	MP2C	Z	-2.176	2.75
84	MP2C	Mx	-.0016	2.75
85	MP2C	X	1.256	3.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
86	MP2C	Z	-2.176	3.75
87	MP2C	Mx	-.0016	3.75
88	MP4A	X	1.952	3.25
89	MP4A	Z	-3.381	3.25
90	MP4A	Mx	.0015	3.25
91	MP4B	X	1.726	3.25
92	MP4B	Z	-2.99	3.25
93	MP4B	Mx	-.0016	3.25
94	MP4C	X	1.952	3.25
95	MP4C	Z	-3.381	3.25
96	MP4C	Mx	.0015	3.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	2.694	.75
2	MP3A	Z	-1.555	.75
3	MP3A	Mx	-.0018	.75
4	MP3A	X	2.694	5.75
5	MP3A	Z	-1.555	5.75
6	MP3A	Mx	-.0018	5.75
7	MP3B	X	2.694	.75
8	MP3B	Z	-1.555	.75
9	MP3B	Mx	.0012	.75
10	MP3B	X	2.694	5.75
11	MP3B	Z	-1.555	5.75
12	MP3B	Mx	.0012	5.75
13	MP3C	X	5.633	.75
14	MP3C	Z	-3.252	.75
15	MP3C	Mx	.0025	.75
16	MP3C	X	5.633	5.75
17	MP3C	Z	-3.252	5.75
18	MP3C	Mx	.0025	5.75
19	MP3A	X	2.694	.75
20	MP3A	Z	-1.555	.75
21	MP3A	Mx	-.0012	.75
22	MP3A	X	2.694	5.75
23	MP3A	Z	-1.555	5.75
24	MP3A	Mx	-.0012	5.75
25	MP3B	X	2.694	.75
26	MP3B	Z	-1.555	.75
27	MP3B	Mx	.0018	.75
28	MP3B	X	2.694	5.75
29	MP3B	Z	-1.555	5.75
30	MP3B	Mx	.0018	5.75
31	MP3C	X	5.633	.75
32	MP3C	Z	-3.252	.75
33	MP3C	Mx	-.0047	.75
34	MP3C	X	5.633	5.75
35	MP3C	Z	-3.252	5.75
36	MP3C	Mx	-.0047	5.75
37	MP3A	X	2.346	3.25
38	MP3A	Z	-1.355	3.25
39	MP3A	Mx	.0013	3.25
40	MP3B	X	2.346	3.25
41	MP3B	Z	-1.355	3.25
42	MP3B	Mx	-.0013	3.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
43	MP3C	X	3.314	3.25
44	MP3C	Z	-1.913	3.25
45	MP3C	Mx	.000654	3.25
46	MP1A	X	4.737	1.25
47	MP1A	Z	-2.735	1.25
48	MP1A	Mx	-.0027	1.25
49	MP1A	X	4.737	5.25
50	MP1A	Z	-2.735	5.25
51	MP1A	Mx	-.0027	5.25
52	MP1B	X	4.737	1.25
53	MP1B	Z	-2.735	1.25
54	MP1B	Mx	.0027	1.25
55	MP1B	X	4.737	5.25
56	MP1B	Z	-2.735	5.25
57	MP1B	Mx	.0027	5.25
58	MP1C	X	7.972	1.25
59	MP1C	Z	-4.602	1.25
60	MP1C	Mx	-.0016	1.25
61	MP1C	X	7.972	5.25
62	MP1C	Z	-4.602	5.25
63	MP1C	Mx	-.0016	5.25
64	OVP1	X	5.781	2
65	OVP1	Z	-3.337	2
66	OVP1	Mx	-.0029	2
67	LR	X	1.112	.25
68	LR	Z	-.642	.25
69	LR	Mx	0	.25
70	MP2A	X	1.303	2.75
71	MP2A	Z	-.752	2.75
72	MP2A	Mx	-.0012	2.75
73	MP2A	X	1.303	3.75
74	MP2A	Z	-.752	3.75
75	MP2A	Mx	-.0012	3.75
76	MP2B	X	1.303	2.75
77	MP2B	Z	-.752	2.75
78	MP2B	Mx	.0012	2.75
79	MP2B	X	1.303	3.75
80	MP2B	Z	-.752	3.75
81	MP2B	Mx	.0012	3.75
82	MP2C	X	3.246	2.75
83	MP2C	Z	-1.874	2.75
84	MP2C	Mx	-.0011	2.75
85	MP2C	X	3.246	3.75
86	MP2C	Z	-1.874	3.75
87	MP2C	Mx	-.0011	3.75
88	MP4A	X	2.875	3.25
89	MP4A	Z	-1.66	3.25
90	MP4A	Mx	.0016	3.25
91	MP4B	X	2.875	3.25
92	MP4B	Z	-1.66	3.25
93	MP4B	Mx	-.0016	3.25
94	MP4C	X	4.003	3.25
95	MP4C	Z	-2.311	3.25
96	MP4C	Mx	.00079	3.25

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

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

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	3.456	.75
2	MP3A	Z	0	.75
3	MP3A	Mx	-.000934	.75
4	MP3A	X	3.456	5.75
5	MP3A	Z	0	5.75
6	MP3A	Mx	-.000934	5.75
7	MP3B	X	4.635	.75
8	MP3B	Z	0	.75
9	MP3B	Mx	3.7e-5	.75
10	MP3B	X	4.635	5.75
11	MP3B	Z	0	5.75
12	MP3B	Mx	3.7e-5	5.75
13	MP3C	X	6.85	.75
14	MP3C	Z	0	.75
15	MP3C	Mx	.0045	.75
16	MP3C	X	6.85	5.75
17	MP3C	Z	0	5.75
18	MP3C	Mx	.0045	5.75
19	MP3A	X	3.456	.75
20	MP3A	Z	0	.75
21	MP3A	Mx	-.0023	.75
22	MP3A	X	3.456	5.75
23	MP3A	Z	0	5.75
24	MP3A	Mx	-.0023	5.75
25	MP3B	X	4.635	.75
26	MP3B	Z	0	.75
27	MP3B	Mx	.0035	.75
28	MP3B	X	4.635	5.75
29	MP3B	Z	0	5.75
30	MP3B	Mx	.0035	5.75
31	MP3C	X	6.85	.75
32	MP3C	Z	0	.75
33	MP3C	Mx	-.0033	.75
34	MP3C	X	6.85	5.75
35	MP3C	Z	0	5.75
36	MP3C	Mx	-.0033	5.75
37	MP3A	X	2.823	3.25
38	MP3A	Z	0	3.25
39	MP3A	Mx	.0013	3.25
40	MP3B	X	3.211	3.25
41	MP3B	Z	0	3.25
42	MP3B	Mx	-.0012	3.25
43	MP3C	X	3.94	3.25
44	MP3C	Z	0	3.25
45	MP3C	Mx	-.000342	3.25
46	MP1A	X	5.85	1.25
47	MP1A	Z	0	1.25
48	MP1A	Mx	-.0027	1.25
49	MP1A	X	5.85	5.25
50	MP1A	Z	0	5.25
51	MP1A	Mx	-.0027	5.25
52	MP1B	X	7.147	1.25
53	MP1B	Z	0	1.25
54	MP1B	Mx	.0027	1.25
55	MP1B	X	7.147	5.25
56	MP1B	Z	0	5.25
57	MP1B	Mx	.0027	5.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
58	MP1C	X	9.585	1.25
59	MP1C	Z	0	1.25
60	MP1C	Mx	.000832	1.25
61	MP1C	X	9.585	5.25
62	MP1C	Z	0	5.25
63	MP1C	Mx	.000832	5.25
64	OVP1	X	6.187	2
65	OVP1	Z	0	2
66	OVP1	Mx	-.0031	2
67	LR	X	1.605	.25
68	LR	Z	0	.25
69	LR	Mx	0	.25
70	MP2A	X	1.733	2.75
71	MP2A	Z	0	2.75
72	MP2A	Mx	-.0014	2.75
73	MP2A	X	1.733	3.75
74	MP2A	Z	0	3.75
75	MP2A	Mx	-.0014	3.75
76	MP2B	X	2.512	2.75
77	MP2B	Z	0	2.75
78	MP2B	Mx	.0016	2.75
79	MP2B	X	2.512	3.75
80	MP2B	Z	0	3.75
81	MP2B	Mx	.0016	3.75
82	MP2C	X	3.977	2.75
83	MP2C	Z	0	2.75
84	MP2C	Mx	.000575	2.75
85	MP2C	X	3.977	3.75
86	MP2C	Z	0	3.75
87	MP2C	Mx	.000575	3.75
88	MP4A	X	3.452	3.25
89	MP4A	Z	0	3.25
90	MP4A	Mx	.0016	3.25
91	MP4B	X	3.904	3.25
92	MP4B	Z	0	3.25
93	MP4B	Mx	-.0015	3.25
94	MP4C	X	4.755	3.25
95	MP4C	Z	0	3.25
96	MP4C	Mx	-.000413	3.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	4.612	.75
2	MP3A	Z	2.663	.75
3	MP3A	Mx	.000668	.75
4	MP3A	X	4.612	5.75
5	MP3A	Z	2.663	5.75
6	MP3A	Mx	.000668	5.75
7	MP3B	X	5.633	.75
8	MP3B	Z	3.252	.75
9	MP3B	Mx	-.0025	.75
10	MP3B	X	5.633	5.75
11	MP3B	Z	3.252	5.75
12	MP3B	Mx	-.0025	5.75
13	MP3C	X	4.612	.75
14	MP3C	Z	2.663	.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
15	MP3C	Mx	.0041	.75
16	MP3C	X	4.612	5.75
17	MP3C	Z	2.663	5.75
18	MP3C	Mx	.0041	5.75
19	MP3A	X	4.612	.75
20	MP3A	Z	2.663	.75
21	MP3A	Mx	-.0041	.75
22	MP3A	X	4.612	5.75
23	MP3A	Z	2.663	5.75
24	MP3A	Mx	-.0041	5.75
25	MP3B	X	5.633	.75
26	MP3B	Z	3.252	.75
27	MP3B	Mx	.0047	.75
28	MP3B	X	5.633	5.75
29	MP3B	Z	3.252	5.75
30	MP3B	Mx	.0047	5.75
31	MP3C	X	4.612	.75
32	MP3C	Z	2.663	.75
33	MP3C	Mx	-.000668	.75
34	MP3C	X	4.612	5.75
35	MP3C	Z	2.663	5.75
36	MP3C	Mx	-.000668	5.75
37	MP3A	X	2.978	3.25
38	MP3A	Z	1.719	3.25
39	MP3A	Mx	.0011	3.25
40	MP3B	X	3.314	3.25
41	MP3B	Z	1.913	3.25
42	MP3B	Mx	-.000655	3.25
43	MP3C	X	2.978	3.25
44	MP3C	Z	1.719	3.25
45	MP3C	Mx	-.0011	3.25
46	MP1A	X	6.848	1.25
47	MP1A	Z	3.954	1.25
48	MP1A	Mx	-.0025	1.25
49	MP1A	X	6.848	5.25
50	MP1A	Z	3.954	5.25
51	MP1A	Mx	-.0025	5.25
52	MP1B	X	7.972	1.25
53	MP1B	Z	4.602	1.25
54	MP1B	Mx	.0016	1.25
55	MP1B	X	7.972	5.25
56	MP1B	Z	4.602	5.25
57	MP1B	Mx	.0016	5.25
58	MP1C	X	6.848	1.25
59	MP1C	Z	3.954	1.25
60	MP1C	Mx	.0025	1.25
61	MP1C	X	6.848	5.25
62	MP1C	Z	3.954	5.25
63	MP1C	Mx	.0025	5.25
64	OVP1	X	5.781	2
65	OVP1	Z	3.337	2
66	OVP1	Mx	-.0029	2
67	LR	X	1.945	.25
68	LR	Z	1.123	.25
69	LR	Mx	0	.25
70	MP2A	X	2.571	2.75
71	MP2A	Z	1.485	2.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
72	MP2A	Mx	-.0016	2.75
73	MP2A	X	2.571	3.75
74	MP2A	Z	1.485	3.75
75	MP2A	Mx	-.0016	3.75
76	MP2B	X	3.246	2.75
77	MP2B	Z	1.874	2.75
78	MP2B	Mx	.0011	2.75
79	MP2B	X	3.246	3.75
80	MP2B	Z	1.874	3.75
81	MP2B	Mx	.0011	3.75
82	MP2C	X	2.571	2.75
83	MP2C	Z	1.485	2.75
84	MP2C	Mx	.0016	2.75
85	MP2C	X	2.571	3.75
86	MP2C	Z	1.485	3.75
87	MP2C	Mx	.0016	3.75
88	MP4A	X	3.611	3.25
89	MP4A	Z	2.085	3.25
90	MP4A	Mx	.0013	3.25
91	MP4B	X	4.003	3.25
92	MP4B	Z	2.311	3.25
93	MP4B	Mx	-.00079	3.25
94	MP4C	X	3.611	3.25
95	MP4C	Z	2.085	3.25
96	MP4C	Mx	-.0013	3.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	3.425	.75
2	MP3A	Z	5.932	.75
3	MP3A	Mx	.0033	.75
4	MP3A	X	3.425	5.75
5	MP3A	Z	5.932	5.75
6	MP3A	Mx	.0033	5.75
7	MP3B	X	3.425	.75
8	MP3B	Z	5.932	.75
9	MP3B	Mx	-.0045	.75
10	MP3B	X	3.425	5.75
11	MP3B	Z	5.932	5.75
12	MP3B	Mx	-.0045	5.75
13	MP3C	X	1.728	.75
14	MP3C	Z	2.993	.75
15	MP3C	Mx	.0023	.75
16	MP3C	X	1.728	5.75
17	MP3C	Z	2.993	5.75
18	MP3C	Mx	.0023	5.75
19	MP3A	X	3.425	.75
20	MP3A	Z	5.932	.75
21	MP3A	Mx	-.0045	.75
22	MP3A	X	3.425	5.75
23	MP3A	Z	5.932	5.75
24	MP3A	Mx	-.0045	5.75
25	MP3B	X	3.425	.75
26	MP3B	Z	5.932	.75
27	MP3B	Mx	.0033	.75
28	MP3B	X	3.425	5.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
29	MP3B	Z	5.932	5.75
30	MP3B	Mx	.0033	5.75
31	MP3C	X	1.728	.75
32	MP3C	Z	2.993	.75
33	MP3C	Mx	.000934	.75
34	MP3C	X	1.728	5.75
35	MP3C	Z	2.993	5.75
36	MP3C	Mx	.000934	5.75
37	MP3A	X	1.97	3.25
38	MP3A	Z	3.412	3.25
39	MP3A	Mx	.000342	3.25
40	MP3B	X	1.97	3.25
41	MP3B	Z	3.412	3.25
42	MP3B	Mx	.000342	3.25
43	MP3C	X	1.412	3.25
44	MP3C	Z	2.445	3.25
45	MP3C	Mx	-.0013	3.25
46	MP1A	X	4.793	1.25
47	MP1A	Z	8.301	1.25
48	MP1A	Mx	-.000832	1.25
49	MP1A	X	4.793	5.25
50	MP1A	Z	8.301	5.25
51	MP1A	Mx	-.000832	5.25
52	MP1B	X	4.793	1.25
53	MP1B	Z	8.301	1.25
54	MP1B	Mx	-.000832	1.25
55	MP1B	X	4.793	5.25
56	MP1B	Z	8.301	5.25
57	MP1B	Mx	-.000832	5.25
58	MP1C	X	2.925	1.25
59	MP1C	Z	5.066	1.25
60	MP1C	Mx	.0027	1.25
61	MP1C	X	2.925	5.25
62	MP1C	Z	5.066	5.25
63	MP1C	Mx	.0027	5.25
64	OVP1	X	3.825	2
65	OVP1	Z	6.626	2
66	OVP1	Mx	-.0019	2
67	LR	X	1.284	.25
68	LR	Z	2.223	.25
69	LR	Mx	0	.25
70	MP2A	X	1.988	2.75
71	MP2A	Z	3.444	2.75
72	MP2A	Mx	-.000575	2.75
73	MP2A	X	1.988	3.75
74	MP2A	Z	3.444	3.75
75	MP2A	Mx	-.000575	3.75
76	MP2B	X	1.988	2.75
77	MP2B	Z	3.444	2.75
78	MP2B	Mx	-.000576	2.75
79	MP2B	X	1.988	3.75
80	MP2B	Z	3.444	3.75
81	MP2B	Mx	-.000576	3.75
82	MP2C	X	.866	2.75
83	MP2C	Z	1.501	2.75
84	MP2C	Mx	.0014	2.75
85	MP2C	X	.866	3.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
86	MP2C	Z	1.501	3.75
87	MP2C	Mx	.0014	3.75
88	MP4A	X	2.377	3.25
89	MP4A	Z	4.118	3.25
90	MP4A	Mx	.000413	3.25
91	MP4B	X	2.377	3.25
92	MP4B	Z	4.118	3.25
93	MP4B	Mx	.000413	3.25
94	MP4C	X	1.726	3.25
95	MP4C	Z	2.99	3.25
96	MP4C	Mx	-.0016	3.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	0	.75
2	MP3A	Z	6.505	.75
3	MP3A	Mx	.0047	.75
4	MP3A	X	0	5.75
5	MP3A	Z	6.505	5.75
6	MP3A	Mx	.0047	5.75
7	MP3B	X	0	.75
8	MP3B	Z	5.326	.75
9	MP3B	Mx	-.0041	.75
10	MP3B	X	0	5.75
11	MP3B	Z	5.326	5.75
12	MP3B	Mx	-.0041	5.75
13	MP3C	X	0	.75
14	MP3C	Z	3.111	.75
15	MP3C	Mx	.0012	.75
16	MP3C	X	0	5.75
17	MP3C	Z	3.111	5.75
18	MP3C	Mx	.0012	5.75
19	MP3A	X	0	.75
20	MP3A	Z	6.505	.75
21	MP3A	Mx	-.0025	.75
22	MP3A	X	0	5.75
23	MP3A	Z	6.505	5.75
24	MP3A	Mx	-.0025	5.75
25	MP3B	X	0	.75
26	MP3B	Z	5.326	.75
27	MP3B	Mx	.000668	.75
28	MP3B	X	0	5.75
29	MP3B	Z	5.326	5.75
30	MP3B	Mx	.000668	5.75
31	MP3C	X	0	.75
32	MP3C	Z	3.111	.75
33	MP3C	Mx	.0018	.75
34	MP3C	X	0	5.75
35	MP3C	Z	3.111	5.75
36	MP3C	Mx	.0018	5.75
37	MP3A	X	0	3.25
38	MP3A	Z	3.826	3.25
39	MP3A	Mx	-.000654	3.25
40	MP3B	X	0	3.25
41	MP3B	Z	3.438	3.25
42	MP3B	Mx	.0011	3.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
43	MP3C	X	0	3.25
44	MP3C	Z	2.709	3.25
45	MP3C	Mx	-.0013	3.25
46	MP1A	X	0	1.25
47	MP1A	Z	9.205	1.25
48	MP1A	Mx	.0016	1.25
49	MP1A	X	0	5.25
50	MP1A	Z	9.205	5.25
51	MP1A	Mx	.0016	5.25
52	MP1B	X	0	1.25
53	MP1B	Z	7.908	1.25
54	MP1B	Mx	-.0025	1.25
55	MP1B	X	0	5.25
56	MP1B	Z	7.908	5.25
57	MP1B	Mx	-.0025	5.25
58	MP1C	X	0	1.25
59	MP1C	Z	5.47	1.25
60	MP1C	Mx	.0027	1.25
61	MP1C	X	0	5.25
62	MP1C	Z	5.47	5.25
63	MP1C	Mx	.0027	5.25
64	OVP1	X	0	2
65	OVP1	Z	8.138	2
66	OVP1	Mx	0	2
67	LR	X	0	.25
68	LR	Z	2.246	.25
69	LR	Mx	0	.25
70	MP2A	X	0	2.75
71	MP2A	Z	3.749	2.75
72	MP2A	Mx	.0011	2.75
73	MP2A	X	0	3.75
74	MP2A	Z	3.749	3.75
75	MP2A	Mx	.0011	3.75
76	MP2B	X	0	2.75
77	MP2B	Z	2.969	2.75
78	MP2B	Mx	-.0016	2.75
79	MP2B	X	0	3.75
80	MP2B	Z	2.969	3.75
81	MP2B	Mx	-.0016	3.75
82	MP2C	X	0	2.75
83	MP2C	Z	1.504	2.75
84	MP2C	Mx	.0012	2.75
85	MP2C	X	0	3.75
86	MP2C	Z	1.504	3.75
87	MP2C	Mx	.0012	3.75
88	MP4A	X	0	3.25
89	MP4A	Z	4.622	3.25
90	MP4A	Mx	-.00079	3.25
91	MP4B	X	0	3.25
92	MP4B	Z	4.17	3.25
93	MP4B	Mx	.0013	3.25
94	MP4C	X	0	3.25
95	MP4C	Z	3.319	3.25
96	MP4C	Mx	-.0016	3.25

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

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

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	-2.318	.75
2	MP3A	Z	4.014	.75
3	MP3A	Mx	.0035	.75
4	MP3A	X	-2.318	5.75
5	MP3A	Z	4.014	5.75
6	MP3A	Mx	.0035	5.75
7	MP3B	X	-1.728	.75
8	MP3B	Z	2.993	.75
9	MP3B	Mx	-.0023	.75
10	MP3B	X	-1.728	5.75
11	MP3B	Z	2.993	5.75
12	MP3B	Mx	-.0023	5.75
13	MP3C	X	-2.318	.75
14	MP3C	Z	4.014	.75
15	MP3C	Mx	3.7e-5	.75
16	MP3C	X	-2.318	5.75
17	MP3C	Z	4.014	5.75
18	MP3C	Mx	3.7e-5	5.75
19	MP3A	X	-2.318	.75
20	MP3A	Z	4.014	.75
21	MP3A	Mx	3.8e-5	.75
22	MP3A	X	-2.318	5.75
23	MP3A	Z	4.014	5.75
24	MP3A	Mx	3.8e-5	5.75
25	MP3B	X	-1.728	.75
26	MP3B	Z	2.993	.75
27	MP3B	Mx	-.000934	.75
28	MP3B	X	-1.728	5.75
29	MP3B	Z	2.993	5.75
30	MP3B	Mx	-.000934	5.75
31	MP3C	X	-2.318	.75
32	MP3C	Z	4.014	.75
33	MP3C	Mx	.0035	.75
34	MP3C	X	-2.318	5.75
35	MP3C	Z	4.014	5.75
36	MP3C	Mx	.0035	5.75
37	MP3A	X	-1.605	3.25
38	MP3A	Z	2.781	3.25
39	MP3A	Mx	-.0012	3.25
40	MP3B	X	-1.412	3.25
41	MP3B	Z	2.445	3.25
42	MP3B	Mx	.0013	3.25
43	MP3C	X	-1.605	3.25
44	MP3C	Z	2.781	3.25
45	MP3C	Mx	-.0012	3.25
46	MP1A	X	-3.574	1.25
47	MP1A	Z	6.19	1.25
48	MP1A	Mx	.0027	1.25
49	MP1A	X	-3.574	5.25
50	MP1A	Z	6.19	5.25
51	MP1A	Mx	.0027	5.25
52	MP1B	X	-2.925	1.25
53	MP1B	Z	5.066	1.25
54	MP1B	Mx	-.0027	1.25
55	MP1B	X	-2.925	5.25
56	MP1B	Z	5.066	5.25
57	MP1B	Mx	-.0027	5.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
58	MP1C	X	-3.574	1.25
59	MP1C	Z	6.19	1.25
60	MP1C	Mx	.0027	1.25
61	MP1C	X	-3.574	5.25
62	MP1C	Z	6.19	5.25
63	MP1C	Mx	.0027	5.25
64	OVP1	X	-3.825	2
65	OVP1	Z	6.626	2
66	OVP1	Mx	.0019	2
67	LR	X	-.802	.25
68	LR	Z	1.39	.25
69	LR	Mx	0	.25
70	MP2A	X	-1.256	2.75
71	MP2A	Z	2.176	2.75
72	MP2A	Mx	.0016	2.75
73	MP2A	X	-1.256	3.75
74	MP2A	Z	2.176	3.75
75	MP2A	Mx	.0016	3.75
76	MP2B	X	-.866	2.75
77	MP2B	Z	1.501	2.75
78	MP2B	Mx	-.0014	2.75
79	MP2B	X	-.866	3.75
80	MP2B	Z	1.501	3.75
81	MP2B	Mx	-.0014	3.75
82	MP2C	X	-1.256	2.75
83	MP2C	Z	2.176	2.75
84	MP2C	Mx	.0016	2.75
85	MP2C	X	-1.256	3.75
86	MP2C	Z	2.176	3.75
87	MP2C	Mx	.0016	3.75
88	MP4A	X	-1.952	3.25
89	MP4A	Z	3.381	3.25
90	MP4A	Mx	-.0015	3.25
91	MP4B	X	-1.726	3.25
92	MP4B	Z	2.99	3.25
93	MP4B	Mx	.0016	3.25
94	MP4C	X	-1.952	3.25
95	MP4C	Z	3.381	3.25
96	MP4C	Mx	-.0015	3.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	-2.694	.75
2	MP3A	Z	1.555	.75
3	MP3A	Mx	.0018	.75
4	MP3A	X	-2.694	5.75
5	MP3A	Z	1.555	5.75
6	MP3A	Mx	.0018	5.75
7	MP3B	X	-2.694	.75
8	MP3B	Z	1.555	.75
9	MP3B	Mx	-.0012	.75
10	MP3B	X	-2.694	5.75
11	MP3B	Z	1.555	5.75
12	MP3B	Mx	-.0012	5.75
13	MP3C	X	-5.633	.75
14	MP3C	Z	3.252	.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
15	MP3C	Mx	-.0025	.75
16	MP3C	X	-5.633	5.75
17	MP3C	Z	3.252	5.75
18	MP3C	Mx	-.0025	5.75
19	MP3A	X	-2.694	.75
20	MP3A	Z	1.555	.75
21	MP3A	Mx	.0012	.75
22	MP3A	X	-2.694	5.75
23	MP3A	Z	1.555	5.75
24	MP3A	Mx	.0012	5.75
25	MP3B	X	-2.694	.75
26	MP3B	Z	1.555	.75
27	MP3B	Mx	-.0018	.75
28	MP3B	X	-2.694	5.75
29	MP3B	Z	1.555	5.75
30	MP3B	Mx	-.0018	5.75
31	MP3C	X	-5.633	.75
32	MP3C	Z	3.252	.75
33	MP3C	Mx	.0047	.75
34	MP3C	X	-5.633	5.75
35	MP3C	Z	3.252	5.75
36	MP3C	Mx	.0047	5.75
37	MP3A	X	-2.346	3.25
38	MP3A	Z	1.355	3.25
39	MP3A	Mx	-.0013	3.25
40	MP3B	X	-2.346	3.25
41	MP3B	Z	1.355	3.25
42	MP3B	Mx	.0013	3.25
43	MP3C	X	-3.314	3.25
44	MP3C	Z	1.913	3.25
45	MP3C	Mx	-.000654	3.25
46	MP1A	X	-4.737	1.25
47	MP1A	Z	2.735	1.25
48	MP1A	Mx	.0027	1.25
49	MP1A	X	-4.737	5.25
50	MP1A	Z	2.735	5.25
51	MP1A	Mx	.0027	5.25
52	MP1B	X	-4.737	1.25
53	MP1B	Z	2.735	1.25
54	MP1B	Mx	-.0027	1.25
55	MP1B	X	-4.737	5.25
56	MP1B	Z	2.735	5.25
57	MP1B	Mx	-.0027	5.25
58	MP1C	X	-7.972	1.25
59	MP1C	Z	4.602	1.25
60	MP1C	Mx	.0016	1.25
61	MP1C	X	-7.972	5.25
62	MP1C	Z	4.602	5.25
63	MP1C	Mx	.0016	5.25
64	OVP1	X	-5.781	2
65	OVP1	Z	3.337	2
66	OVP1	Mx	.0029	2
67	LR	X	-1.112	.25
68	LR	Z	.642	.25
69	LR	Mx	0	.25
70	MP2A	X	-1.303	2.75
71	MP2A	Z	.752	2.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
72	MP2A	Mx	.0012	2.75
73	MP2A	X	-1.303	3.75
74	MP2A	Z	.752	3.75
75	MP2A	Mx	.0012	3.75
76	MP2B	X	-1.303	2.75
77	MP2B	Z	.752	2.75
78	MP2B	Mx	-.0012	2.75
79	MP2B	X	-1.303	3.75
80	MP2B	Z	.752	3.75
81	MP2B	Mx	-.0012	3.75
82	MP2C	X	-3.246	2.75
83	MP2C	Z	1.874	2.75
84	MP2C	Mx	.0011	2.75
85	MP2C	X	-3.246	3.75
86	MP2C	Z	1.874	3.75
87	MP2C	Mx	.0011	3.75
88	MP4A	X	-2.875	3.25
89	MP4A	Z	1.66	3.25
90	MP4A	Mx	-.0016	3.25
91	MP4B	X	-2.875	3.25
92	MP4B	Z	1.66	3.25
93	MP4B	Mx	.0016	3.25
94	MP4C	X	-4.003	3.25
95	MP4C	Z	2.311	3.25
96	MP4C	Mx	-.00079	3.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	-3.456	.75
2	MP3A	Z	0	.75
3	MP3A	Mx	.000934	.75
4	MP3A	X	-3.456	5.75
5	MP3A	Z	0	5.75
6	MP3A	Mx	.000934	5.75
7	MP3B	X	-4.635	.75
8	MP3B	Z	0	.75
9	MP3B	Mx	-3.7e-5	.75
10	MP3B	X	-4.635	5.75
11	MP3B	Z	0	5.75
12	MP3B	Mx	-3.7e-5	5.75
13	MP3C	X	-6.85	.75
14	MP3C	Z	0	.75
15	MP3C	Mx	-.0045	.75
16	MP3C	X	-6.85	5.75
17	MP3C	Z	0	5.75
18	MP3C	Mx	-.0045	5.75
19	MP3A	X	-3.456	.75
20	MP3A	Z	0	.75
21	MP3A	Mx	.0023	.75
22	MP3A	X	-3.456	5.75
23	MP3A	Z	0	5.75
24	MP3A	Mx	.0023	5.75
25	MP3B	X	-4.635	.75
26	MP3B	Z	0	.75
27	MP3B	Mx	-.0035	.75
28	MP3B	X	-4.635	5.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
29	MP3B	Z	0	5.75
30	MP3B	Mx	-.0035	5.75
31	MP3C	X	-6.85	.75
32	MP3C	Z	0	.75
33	MP3C	Mx	.0033	.75
34	MP3C	X	-6.85	5.75
35	MP3C	Z	0	5.75
36	MP3C	Mx	.0033	5.75
37	MP3A	X	-2.823	3.25
38	MP3A	Z	0	3.25
39	MP3A	Mx	-.0013	3.25
40	MP3B	X	-3.211	3.25
41	MP3B	Z	0	3.25
42	MP3B	Mx	.0012	3.25
43	MP3C	X	-3.94	3.25
44	MP3C	Z	0	3.25
45	MP3C	Mx	.000342	3.25
46	MP1A	X	-5.85	1.25
47	MP1A	Z	0	1.25
48	MP1A	Mx	.0027	1.25
49	MP1A	X	-5.85	5.25
50	MP1A	Z	0	5.25
51	MP1A	Mx	.0027	5.25
52	MP1B	X	-7.147	1.25
53	MP1B	Z	0	1.25
54	MP1B	Mx	-.0027	1.25
55	MP1B	X	-7.147	5.25
56	MP1B	Z	0	5.25
57	MP1B	Mx	-.0027	5.25
58	MP1C	X	-9.585	1.25
59	MP1C	Z	0	1.25
60	MP1C	Mx	-.000832	1.25
61	MP1C	X	-9.585	5.25
62	MP1C	Z	0	5.25
63	MP1C	Mx	-.000832	5.25
64	OVP1	X	-6.187	2
65	OVP1	Z	0	2
66	OVP1	Mx	.0031	2
67	LR	X	-1.605	.25
68	LR	Z	0	.25
69	LR	Mx	0	.25
70	MP2A	X	-1.733	2.75
71	MP2A	Z	0	2.75
72	MP2A	Mx	.0014	2.75
73	MP2A	X	-1.733	3.75
74	MP2A	Z	0	3.75
75	MP2A	Mx	.0014	3.75
76	MP2B	X	-2.512	2.75
77	MP2B	Z	0	2.75
78	MP2B	Mx	-.0016	2.75
79	MP2B	X	-2.512	3.75
80	MP2B	Z	0	3.75
81	MP2B	Mx	-.0016	3.75
82	MP2C	X	-3.977	2.75
83	MP2C	Z	0	2.75
84	MP2C	Mx	-.000575	2.75
85	MP2C	X	-3.977	3.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
86	MP2C	Z	0	3.75
87	MP2C	Mx	-.000575	3.75
88	MP4A	X	-3.452	3.25
89	MP4A	Z	0	3.25
90	MP4A	Mx	-.0016	3.25
91	MP4B	X	-3.904	3.25
92	MP4B	Z	0	3.25
93	MP4B	Mx	.0015	3.25
94	MP4C	X	-4.755	3.25
95	MP4C	Z	0	3.25
96	MP4C	Mx	.000413	3.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	-4.612	.75
2	MP3A	Z	-2.663	.75
3	MP3A	Mx	-.000668	.75
4	MP3A	X	-4.612	5.75
5	MP3A	Z	-2.663	5.75
6	MP3A	Mx	-.000668	5.75
7	MP3B	X	-5.633	.75
8	MP3B	Z	-3.252	.75
9	MP3B	Mx	.0025	.75
10	MP3B	X	-5.633	5.75
11	MP3B	Z	-3.252	5.75
12	MP3B	Mx	.0025	5.75
13	MP3C	X	-4.612	.75
14	MP3C	Z	-2.663	.75
15	MP3C	Mx	-.0041	.75
16	MP3C	X	-4.612	5.75
17	MP3C	Z	-2.663	5.75
18	MP3C	Mx	-.0041	5.75
19	MP3A	X	-4.612	.75
20	MP3A	Z	-2.663	.75
21	MP3A	Mx	.0041	.75
22	MP3A	X	-4.612	5.75
23	MP3A	Z	-2.663	5.75
24	MP3A	Mx	.0041	5.75
25	MP3B	X	-5.633	.75
26	MP3B	Z	-3.252	.75
27	MP3B	Mx	-.0047	.75
28	MP3B	X	-5.633	5.75
29	MP3B	Z	-3.252	5.75
30	MP3B	Mx	-.0047	5.75
31	MP3C	X	-4.612	.75
32	MP3C	Z	-2.663	.75
33	MP3C	Mx	.000668	.75
34	MP3C	X	-4.612	5.75
35	MP3C	Z	-2.663	5.75
36	MP3C	Mx	.000668	5.75
37	MP3A	X	-2.978	3.25
38	MP3A	Z	-1.719	3.25
39	MP3A	Mx	-.0011	3.25
40	MP3B	X	-3.314	3.25
41	MP3B	Z	-1.913	3.25
42	MP3B	Mx	.000655	3.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
43	MP3C	X	-2.978	3.25
44	MP3C	Z	-1.719	3.25
45	MP3C	Mx	.0011	3.25
46	MP1A	X	-6.848	1.25
47	MP1A	Z	-3.954	1.25
48	MP1A	Mx	.0025	1.25
49	MP1A	X	-6.848	5.25
50	MP1A	Z	-3.954	5.25
51	MP1A	Mx	.0025	5.25
52	MP1B	X	-7.972	1.25
53	MP1B	Z	-4.602	1.25
54	MP1B	Mx	-.0016	1.25
55	MP1B	X	-7.972	5.25
56	MP1B	Z	-4.602	5.25
57	MP1B	Mx	-.0016	5.25
58	MP1C	X	-6.848	1.25
59	MP1C	Z	-3.954	1.25
60	MP1C	Mx	-.0025	1.25
61	MP1C	X	-6.848	5.25
62	MP1C	Z	-3.954	5.25
63	MP1C	Mx	-.0025	5.25
64	OVP1	X	-5.781	2
65	OVP1	Z	-3.337	2
66	OVP1	Mx	.0029	2
67	LR	X	-1.945	.25
68	LR	Z	-1.123	.25
69	LR	Mx	0	.25
70	MP2A	X	-2.571	2.75
71	MP2A	Z	-1.485	2.75
72	MP2A	Mx	.0016	2.75
73	MP2A	X	-2.571	3.75
74	MP2A	Z	-1.485	3.75
75	MP2A	Mx	.0016	3.75
76	MP2B	X	-3.246	2.75
77	MP2B	Z	-1.874	2.75
78	MP2B	Mx	-.0011	2.75
79	MP2B	X	-3.246	3.75
80	MP2B	Z	-1.874	3.75
81	MP2B	Mx	-.0011	3.75
82	MP2C	X	-2.571	2.75
83	MP2C	Z	-1.485	2.75
84	MP2C	Mx	-.0016	2.75
85	MP2C	X	-2.571	3.75
86	MP2C	Z	-1.485	3.75
87	MP2C	Mx	-.0016	3.75
88	MP4A	X	-3.611	3.25
89	MP4A	Z	-2.085	3.25
90	MP4A	Mx	-.0013	3.25
91	MP4B	X	-4.003	3.25
92	MP4B	Z	-2.311	3.25
93	MP4B	Mx	.00079	3.25
94	MP4C	X	-3.611	3.25
95	MP4C	Z	-2.085	3.25
96	MP4C	Mx	.0013	3.25

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

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

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	-3.425	.75
2	MP3A	Z	-5.932	.75
3	MP3A	Mx	-.0033	.75
4	MP3A	X	-3.425	5.75
5	MP3A	Z	-5.932	5.75
6	MP3A	Mx	-.0033	5.75
7	MP3B	X	-3.425	.75
8	MP3B	Z	-5.932	.75
9	MP3B	Mx	.0045	.75
10	MP3B	X	-3.425	5.75
11	MP3B	Z	-5.932	5.75
12	MP3B	Mx	.0045	5.75
13	MP3C	X	-1.728	.75
14	MP3C	Z	-2.993	.75
15	MP3C	Mx	-.0023	.75
16	MP3C	X	-1.728	5.75
17	MP3C	Z	-2.993	5.75
18	MP3C	Mx	-.0023	5.75
19	MP3A	X	-3.425	.75
20	MP3A	Z	-5.932	.75
21	MP3A	Mx	.0045	.75
22	MP3A	X	-3.425	5.75
23	MP3A	Z	-5.932	5.75
24	MP3A	Mx	.0045	5.75
25	MP3B	X	-3.425	.75
26	MP3B	Z	-5.932	.75
27	MP3B	Mx	-.0033	.75
28	MP3B	X	-3.425	5.75
29	MP3B	Z	-5.932	5.75
30	MP3B	Mx	-.0033	5.75
31	MP3C	X	-1.728	.75
32	MP3C	Z	-2.993	.75
33	MP3C	Mx	-.000934	.75
34	MP3C	X	-1.728	5.75
35	MP3C	Z	-2.993	5.75
36	MP3C	Mx	-.000934	5.75
37	MP3A	X	-1.97	3.25
38	MP3A	Z	-3.412	3.25
39	MP3A	Mx	-.000342	3.25
40	MP3B	X	-1.97	3.25
41	MP3B	Z	-3.412	3.25
42	MP3B	Mx	-.000342	3.25
43	MP3C	X	-1.412	3.25
44	MP3C	Z	-2.445	3.25
45	MP3C	Mx	.0013	3.25
46	MP1A	X	-4.793	1.25
47	MP1A	Z	-8.301	1.25
48	MP1A	Mx	.000832	1.25
49	MP1A	X	-4.793	5.25
50	MP1A	Z	-8.301	5.25
51	MP1A	Mx	.000832	5.25
52	MP1B	X	-4.793	1.25
53	MP1B	Z	-8.301	1.25
54	MP1B	Mx	.000832	1.25
55	MP1B	X	-4.793	5.25
56	MP1B	Z	-8.301	5.25
57	MP1B	Mx	.000832	5.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
58	MP1C	X	-2.925	1.25
59	MP1C	Z	-5.066	1.25
60	MP1C	Mx	-.0027	1.25
61	MP1C	X	-2.925	5.25
62	MP1C	Z	-5.066	5.25
63	MP1C	Mx	-.0027	5.25
64	OVP1	X	-3.825	2
65	OVP1	Z	-6.626	2
66	OVP1	Mx	.0019	2
67	LR	X	-1.284	.25
68	LR	Z	-2.223	.25
69	LR	Mx	0	.25
70	MP2A	X	-1.988	2.75
71	MP2A	Z	-3.444	2.75
72	MP2A	Mx	.000575	2.75
73	MP2A	X	-1.988	3.75
74	MP2A	Z	-3.444	3.75
75	MP2A	Mx	.000575	3.75
76	MP2B	X	-1.988	2.75
77	MP2B	Z	-3.444	2.75
78	MP2B	Mx	.000576	2.75
79	MP2B	X	-1.988	3.75
80	MP2B	Z	-3.444	3.75
81	MP2B	Mx	.000576	3.75
82	MP2C	X	-.866	2.75
83	MP2C	Z	-1.501	2.75
84	MP2C	Mx	-.0014	2.75
85	MP2C	X	-.866	3.75
86	MP2C	Z	-1.501	3.75
87	MP2C	Mx	-.0014	3.75
88	MP4A	X	-2.377	3.25
89	MP4A	Z	-4.118	3.25
90	MP4A	Mx	-.000413	3.25
91	MP4B	X	-2.377	3.25
92	MP4B	Z	-4.118	3.25
93	MP4B	Mx	-.000413	3.25
94	MP4C	X	-1.726	3.25
95	MP4C	Z	-2.99	3.25
96	MP4C	Mx	.0016	3.25

Member Point Loads (BLC 77 : Lm1)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	M44	Y	-500	0

Member Point Loads (BLC 78 : Lm2)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	M45	Y	-500	0

Member Point Loads (BLC 79 : Lv1)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	M42	Y	-250	0

Member Point Loads (BLC 80 : Lv2)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	M42	Y	-250	%50

Member Point Loads (BLC 81 : Antenna Ev)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	Y	-.7924	.75
2	MP3A	My	-.000214	.75
3	MP3A	Mz	.00057	.75
4	MP3A	Y	-.7924	5.75
5	MP3A	My	-.000214	5.75
6	MP3A	Mz	.00057	5.75
7	MP3B	Y	-.7924	.75
8	MP3B	My	6e-6	.75
9	MP3B	Mz	-.000609	.75
10	MP3B	Y	-.7924	5.75
11	MP3B	My	6e-6	5.75
12	MP3B	Mz	-.000609	5.75
13	MP3C	Y	-.7924	.75
14	MP3C	My	.000524	.75
15	MP3C	Mz	.00031	.75
16	MP3C	Y	-.7924	5.75
17	MP3C	My	.000524	5.75
18	MP3C	Mz	.00031	5.75
19	MP3A	Y	-.7924	.75
20	MP3A	My	-.00053	.75
21	MP3A	Mz	-.000299	.75
22	MP3A	Y	-.7924	5.75
23	MP3A	My	-.00053	5.75
24	MP3A	Mz	-.000299	5.75
25	MP3B	Y	-.7924	.75
26	MP3B	My	.000601	.75
27	MP3B	Mz	9.9e-5	.75
28	MP3B	Y	-.7924	5.75
29	MP3B	My	.000601	5.75
30	MP3B	Mz	9.9e-5	5.75
31	MP3C	Y	-.7924	.75
32	MP3C	My	-.000386	.75
33	MP3C	Mz	.00047	.75
34	MP3C	Y	-.7924	5.75
35	MP3C	My	-.000386	5.75
36	MP3C	Mz	.00047	5.75
37	MP3A	Y	-2.7091	3.25
38	MP3A	My	.0013	3.25
39	MP3A	Mz	-.000463	3.25
40	MP3B	Y	-2.7091	3.25
41	MP3B	My	-.001	3.25
42	MP3B	Mz	.000871	3.25
43	MP3C	Y	-2.7091	3.25
44	MP3C	My	-.000235	3.25
45	MP3C	Mz	-.0013	3.25
46	MP1A	Y	-.3083	1.25
47	MP1A	My	-.000145	1.25
48	MP1A	Mz	5.3e-5	1.25
49	MP1A	Y	-.3083	5.25
50	MP1A	My	-.000145	5.25
51	MP1A	Mz	5.3e-5	5.25
52	MP1B	Y	-.3083	1.25
53	MP1B	My	.000118	1.25
54	MP1B	Mz	-9.9e-5	1.25
55	MP1B	Y	-.3083	5.25
56	MP1B	My	.000118	5.25
57	MP1B	Mz	-9.9e-5	5.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
58	MP1C	Y	-.3083	1.25
59	MP1C	My	2.7e-5	1.25
60	MP1C	Mz	.000152	1.25
61	MP1C	Y	-.3083	5.25
62	MP1C	My	2.7e-5	5.25
63	MP1C	Mz	.000152	5.25
64	OVP1	Y	-1.1605	2
65	OVP1	My	-.00058	2
66	OVP1	Mz	0	2
67	LR	Y	-.1813	.25
68	LR	My	0	.25
69	LR	Mz	0	.25
70	MP2A	Y	-1.039	2.75
71	MP2A	My	-.000814	2.75
72	MP2A	Mz	.000296	2.75
73	MP2A	Y	-1.039	3.75
74	MP2A	My	-.000814	3.75
75	MP2A	Mz	.000296	3.75
76	MP2B	Y	-1.039	2.75
77	MP2B	My	.000663	2.75
78	MP2B	Mz	-.000557	2.75
79	MP2B	Y	-1.039	3.75
80	MP2B	My	.000663	3.75
81	MP2B	Mz	-.000557	3.75
82	MP2C	Y	-1.039	2.75
83	MP2C	My	.00015	2.75
84	MP2C	Mz	.000853	2.75
85	MP2C	Y	-1.039	3.75
86	MP2C	My	.00015	3.75
87	MP2C	Mz	.000853	3.75
88	MP4A	Y	-2.8687	3.25
89	MP4A	My	.0013	3.25
90	MP4A	Mz	-.000491	3.25
91	MP4B	Y	-2.8687	3.25
92	MP4B	My	-.0011	3.25
93	MP4B	Mz	.000922	3.25
94	MP4C	Y	-2.8687	3.25
95	MP4C	My	-.000249	3.25
96	MP4C	Mz	-.0014	3.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	Z	-1.9811	.75
2	MP3A	Mx	-.0014	.75
3	MP3A	Z	-1.9811	5.75
4	MP3A	Mx	-.0014	5.75
5	MP3B	Z	-1.9811	.75
6	MP3B	Mx	.0015	.75
7	MP3B	Z	-1.9811	5.75
8	MP3B	Mx	.0015	5.75
9	MP3C	Z	-1.9811	.75
10	MP3C	Mx	-.000775	.75
11	MP3C	Z	-1.9811	5.75
12	MP3C	Mx	-.000775	5.75
13	MP3A	Z	-1.9811	.75
14	MP3A	Mx	.000747	.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
15	MP3A	Z	-1.9811	5.75
16	MP3A	Mx	.000747	5.75
17	MP3B	Z	-1.9811	.75
18	MP3B	Mx	-.000249	.75
19	MP3B	Z	-1.9811	5.75
20	MP3B	Mx	-.000249	5.75
21	MP3C	Z	-1.9811	.75
22	MP3C	Mx	-.0012	.75
23	MP3C	Z	-1.9811	5.75
24	MP3C	Mx	-.0012	5.75
25	MP3A	Z	-6.7728	3.25
26	MP3A	Mx	.0012	3.25
27	MP3B	Z	-6.7728	3.25
28	MP3B	Mx	-.0022	3.25
29	MP3C	Z	-6.7728	3.25
30	MP3C	Mx	.0033	3.25
31	MP1A	Z	-.7707	1.25
32	MP1A	Mx	-.000132	1.25
33	MP1A	Z	-.7707	5.25
34	MP1A	Mx	-.000132	5.25
35	MP1B	Z	-.7707	1.25
36	MP1B	Mx	.000248	1.25
37	MP1B	Z	-.7707	5.25
38	MP1B	Mx	.000248	5.25
39	MP1C	Z	-.7707	1.25
40	MP1C	Mx	-.000379	1.25
41	MP1C	Z	-.7707	5.25
42	MP1C	Mx	-.000379	5.25
43	OVP1	Z	-2.9013	2
44	OVP1	Mx	0	2
45	LR	Z	-.4533	.25
46	LR	Mx	0	.25
47	MP2A	Z	-2.5976	2.75
48	MP2A	Mx	-.00074	2.75
49	MP2A	Z	-2.5976	3.75
50	MP2A	Mx	-.00074	3.75
51	MP2B	Z	-2.5976	2.75
52	MP2B	Mx	.0014	2.75
53	MP2B	Z	-2.5976	3.75
54	MP2B	Mx	.0014	3.75
55	MP2C	Z	-2.5976	2.75
56	MP2C	Mx	-.0021	2.75
57	MP2C	Z	-2.5976	3.75
58	MP2C	Mx	-.0021	3.75
59	MP4A	Z	-7.1717	3.25
60	MP4A	Mx	.0012	3.25
61	MP4B	Z	-7.1717	3.25
62	MP4B	Mx	-.0023	3.25
63	MP4C	Z	-7.1717	3.25
64	MP4C	Mx	.0035	3.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP3A	X	1.9811	.75
2	MP3A	Mx	-.000536	.75
3	MP3A	X	1.9811	5.75

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
4	MP3A	Mx	-.000536	5.75
5	MP3B	X	1.9811	.75
6	MP3B	Mx	1.6e-5	.75
7	MP3B	X	1.9811	5.75
8	MP3B	Mx	1.6e-5	5.75
9	MP3C	X	1.9811	.75
10	MP3C	Mx	.0013	.75
11	MP3C	X	1.9811	5.75
12	MP3C	Mx	.0013	5.75
13	MP3A	X	1.9811	.75
14	MP3A	Mx	-.0013	.75
15	MP3A	X	1.9811	5.75
16	MP3A	Mx	-.0013	5.75
17	MP3B	X	1.9811	.75
18	MP3B	Mx	.0015	.75
19	MP3B	X	1.9811	5.75
20	MP3B	Mx	.0015	5.75
21	MP3C	X	1.9811	.75
22	MP3C	Mx	-.000966	.75
23	MP3C	X	1.9811	5.75
24	MP3C	Mx	-.000966	5.75
25	MP3A	X	6.7728	3.25
26	MP3A	Mx	.0032	3.25
27	MP3B	X	6.7728	3.25
28	MP3B	Mx	-.0026	3.25
29	MP3C	X	6.7728	3.25
30	MP3C	Mx	-.000588	3.25
31	MP1A	X	.7707	1.25
32	MP1A	Mx	-.000362	1.25
33	MP1A	X	.7707	5.25
34	MP1A	Mx	-.000362	5.25
35	MP1B	X	.7707	1.25
36	MP1B	Mx	.000295	1.25
37	MP1B	X	.7707	5.25
38	MP1B	Mx	.000295	5.25
39	MP1C	X	.7707	1.25
40	MP1C	Mx	6.7e-5	1.25
41	MP1C	X	.7707	5.25
42	MP1C	Mx	6.7e-5	5.25
43	OVP1	X	2.9013	2
44	OVP1	Mx	-.0015	2
45	LR	X	.4533	.25
46	LR	Mx	0	.25
47	MP2A	X	2.5976	2.75
48	MP2A	Mx	-.002	2.75
49	MP2A	X	2.5976	3.75
50	MP2A	Mx	-.002	3.75
51	MP2B	X	2.5976	2.75
52	MP2B	Mx	.0017	2.75
53	MP2B	X	2.5976	3.75
54	MP2B	Mx	.0017	3.75
55	MP2C	X	2.5976	2.75
56	MP2C	Mx	.000376	2.75
57	MP2C	X	2.5976	3.75
58	MP2C	Mx	.000376	3.75
59	MP4A	X	7.1717	3.25
60	MP4A	Mx	.0034	3.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
61	MP4B	X	7.1717	3.25
62	MP4B	Mx	-.0027	3.25
63	MP4C	X	7.1717	3.25
64	MP4C	Mx	-.000623	3.25

Member Area Loads (BLC 39 : Structure D)

	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[ksf]
1	N96A	N95A	N97A	N98A	Y	A-B	-.009
2	N95A	N99A	N100A	N97A	Y	A-B	-.009
3	N99A	N96A	N98A	N100A	Y	A-B	-.009

Member Area Loads (BLC 40 : Structure Di)

	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[ksf]
1	N96A	N95A	N97A	N98A	Y	A-B	-.014
2	N95A	N99A	N100A	N97A	Y	A-B	-.014
3	N99A	N96A	N98A	N100A	Y	A-B	-.014

Member Area Loads (BLC 84 : Structure Ev)

	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[ksf]
1	N96A	N95A	N97A	N98A	Y	Two Way	-.000189
2	N95A	N99A	N100A	N97A	Y	Two Way	-.000189
3	N99A	N96A	N98A	N100A	Y	Two Way	-.000189

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

	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[ksf]
1	N96A	N95A	N97A	N98A	Z	Two Way	-.000471
2	N95A	N99A	N100A	N97A	Z	Two Way	-.000471
3	N99A	N96A	N98A	N100A	Z	Two Way	-.000471

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

	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[ksf]
1	N96A	N95A	N97A	N98A	X	Two Way	.000471
2	N95A	N99A	N100A	N97A	X	Two Way	.000471
3	N99A	N96A	N98A	N100A	X	Two Way	.000471

Envelope Joint Reactions

	Joint		X [lb]	LC	Y [lb]	LC	Z [lb]	LC	MX [k-ft]	LC	MY [k-ft]	...	MZ [k-ft]	LC
1	N3	...	751.109	10	428.899	19	3902.06	1	.551	13	1.818	4	.244	4
2		...	-750.628	4	62.543	1	-2435.224	7	.135	71	-1.816	10	-.294	10
3	N83A	...	3059.392	9	283.78	15	1045.932	3	.139	12	1.903	12	.01	6
4		...	-1796.862	3	50.216	49	-1776.198	9	-.334	6	-1.901	6	-.416	24
5	N89	...	2177.087	11	255.541	23	1276.613	11	.065	2	1.442	8	.392	14
6		...	-3446.449	5	52.372	5	-2008.719	5	-.252	44	-1.441	2	.077	9
7	N102A	...	62.506	10	2812.635	13	-796.626	7	0	75	0	12	0	6
8		...	-62.544	4	532.414	7	-4119.061	13	0	1	0	6	0	12
9	N131	...	-752.644	3	2786.081	21	2039.508	21	0	10	0	4	0	4
10		...	-3532.356	21	580.278	3	434.392	3	0	4	0	10	0	10
11	N133	...	3578.907	17	2821.559	17	2066.3	17	0	4	0	4	0	4
12		...	676.927	11	522.514	11	390.829	11	0	10	0	10	0	10
13	Totals:	...	4529.487	10	8890.892	17	4570.881	1						
14		...	-4529.488	4	2387.347	74	-4570.878	7						

Joint Reactions

	LC	Joint Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
1	1	N3	-36.887	62.543	3902.06	.224	.194	-.047
2	1	N83A	-547.934	129.786	830.672	.104	.95	-.24
3	1	N89	560.178	107.704	722.346	.043	-.607	.2
4	1	N102A	.596	1458.384	-2128.645	0	0	0
5	1	N131	-967.097	766.528	614.945	0	0	0
6	1	N133	991.141	785.112	629.504	0	0	0
7	1	Totals:	-.002	3310.056	4570.881			
8	1	COG (ft):	X: -.008	Y: .75	Z: -.033			
9	2	N3	-116.736	79.306	3330.501	.225	-.123	.096
10	2	N83A	-1512.772	144.215	920.666	.01	-.262	-.184
11	2	N89	-906.329	91.14	131.798	.065	-1.441	.216
12	2	N102A	-22.503	1360.271	-1978.122	0	0	0
13	2	N131	-814.233	634.309	495.22	0	0	0
14	2	N133	1242.103	1000.822	789.976	0	0	0
15	2	Totals:	-2130.471	3310.062	3690.038			
16	2	COG (ft):	X: -.008	Y: .75	Z: -.033			
17	3	N3	-498.216	109.162	2262.391	.218	.961	.195
18	3	N83A	-1796.862	148.97	1045.932	-.077	.06	-.138
19	3	N89	-2056.463	77.662	-795.393	.054	-.61	.217
20	3	N102A	-48.715	1197.274	-1739.193	0	0	0
21	3	N131	-752.644	580.278	434.392	0	0	0
22	3	N133	1480.758	1196.719	911.951	0	0	0
23	3	Totals:	-3672.143	3310.065	2120.08			
24	3	COG (ft):	X: -.008	Y: .75	Z: -.033			
25	4	N3	-750.628	137.621	731.857	.2	1.818	.244
26	4	N83A	-1697.075	143.648	945.459	-.165	.372	-.079
27	4	N89	-2937.982	61.397	-1682.758	.017	.408	.191
28	4	N102A	-62.544	987.257	-1450.167	0	0	0
29	4	N131	-799.981	606.729	436.491	0	0	0
30	4	N133	1718.722	1373.415	1019.124	0	0	0
31	4	Totals:	-4529.488	3310.068	.006			
32	4	COG (ft):	X: -.008	Y: .75	Z: -.033			
33	5	N3	-473.302	165.289	-1000.494	.177	.822	.231
34	5	N83A	-1075.935	124.433	112.575	-.271	-.879	-.012
35	5	N89	-3446.449	52.372	-2008.719	-.045	.035	.149
36	5	N102A	-49.336	746.47	-1114.668	0	0	0
37	5	N131	-1000.671	754.657	520.88	0	0	0
38	5	N133	1854.574	1466.851	1070.735	0	0	0
39	5	Totals:	-4191.118	3310.072	-2419.691			
40	5	COG (ft):	X: -.008	Y: .75	Z: -.033			
41	6	N3	-66.034	191.252	-2212.553	.161	-.423	.142
42	6	N83A	266.392	95.702	-1003.628	-.334	-1.901	.01
43	6	N89	-3084.895	62.287	-1820.744	-.121	-.368	.115
44	6	N102A	-21.984	565.273	-848.36	0	0	0
45	6	N131	-1299.179	996.516	678.095	0	0	0
46	6	N133	1775.594	1399.042	998.194	0	0	0
47	6	Totals:	-2430.105	3310.072	-4208.996			
48	6	COG (ft):	X: -.008	Y: .75	Z: -.033			
49	7	N3	35.68	200.162	-2435.224	.154	-.192	-.003
50	7	N83A	1808.888	70.439	-1561.783	-.299	-.948	-.03
51	7	N89	-1826.07	82.795	-1454.01	-.18	.609	.094
52	7	N102A	-.205	532.414	-796.626	0	0	0
53	7	N131	-1559.308	1219.288	844.2	0	0	0
54	7	N133	1541.016	1204.969	832.564	0	0	0
55	7	Totals:	.001	3310.067	-4570.878			
56	7	COG (ft):	X: -.008	Y: .75	Z: -.033			

Joint Reactions (Continued)

	LC	Joint Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
57	8	N3	120.473	183.106	-1866.542	.152	.121	-.146
58	8	N83A	2774.885	56.233	-1645.975	-.205	.264	-.086
59	8	N89	-364.463	99.161	-864.841	-.202	1.442	.078
60	8	N102A	21.711	630.812	-947.468	0	0	0
61	8	N131	-1712.545	1351.221	962.641	0	0	0
62	8	N133	1290.409	989.528	672.15	0	0	0
63	8	Totals:	2130.47	3310.061	-3690.036			
64	8	COG (ft):	X: -.008	Y: .75	Z: -.033			
65	9	N3	496.83	152.964	-797.029	.159	-.96	-.246
66	9	N83A	3059.392	51.619	-1776.198	-.118	-.06	-.133
67	9	N89	788.707	112.801	65.531	-.191	.61	.077
68	9	N102A	49.083	794.077	-1186.667	0	0	0
69	9	N131	-1773.516	1405.132	1024.298	0	0	0
70	9	N133	1051.645	793.465	549.988	0	0	0
71	9	Totals:	3672.142	3310.058	-2120.078			
72	9	COG (ft):	X: -.008	Y: .75	Z: -.033			
73	10	N3	751.109	124.41	738.218	.177	-1.816	-.294
74	10	N83A	2954.574	56.884	-1677.368	-.03	-.373	-.191
75	10	N89	1674.508	129.497	948.244	-.155	-.405	.103
76	10	N102A	62.506	1004.275	-1475.904	0	0	0
77	10	N131	-1725.686	1378.723	1023.122	0	0	0
78	10	N133	812.476	616.265	443.685	0	0	0
79	10	Totals:	4529.487	3310.055	-.003			
80	10	COG (ft):	X: -.008	Y: .75	Z: -.033			
81	11	N3	475.958	96.972	2465.091	.2	-.822	-.282
82	11	N83A	2338.112	75.813	-839.157	.075	.881	-.258
83	11	N89	2177.087	138.849	1276.613	-.092	-.035	.145
84	11	N102A	49.044	1244.849	-1811.171	0	0	0
85	11	N131	-1526.01	1231.055	937.489	0	0	0
86	11	N133	676.927	522.514	390.829	0	0	0
87	11	Totals:	4191.117	3310.051	2419.694			
88	11	COG (ft):	X: -.008	Y: .75	Z: -.033			
89	12	N3	60.955	71.411	3675.262	.217	.427	-.192
90	12	N83A	999.989	104.384	272.191	.139	1.903	-.28
91	12	N89	1816.449	128.712	1095.394	-.016	.366	.179
92	12	N102A	23.49	1425.557	-2076.917	0	0	0
93	12	N131	-1227.571	989.446	780.74	0	0	0
94	12	N133	756.793	590.542	462.328	0	0	0
95	12	Totals:	2430.104	3310.051	4208.998			
96	12	COG (ft):	X: -.008	Y: .75	Z: -.033			
97	13	N3	-4.636	387.306	2960.955	.551	.034	-.074
98	13	N83A	1275.847	273.179	-567.699	-.154	.288	-.402
99	13	N89	-1321.678	246.597	-622.98	-.149	-.227	.387
100	13	N102A	.194	2812.635	-4119.061	0	0	0
101	13	N131	-3251.651	2566.344	1892.603	0	0	0
102	13	N133	3301.923	2604.826	1921.998	0	0	0
103	13	Totals:	-.002	8890.887	1465.816			
104	13	COG (ft):	X: -.012	Y: .81	Z: -.057			
105	14	N3	-41.191	391.681	2802.789	.551	-.017	-.029
106	14	N83A	939.136	280.85	-507.855	-.184	-.045	-.378
107	14	N89	-1792.029	240.462	-818.747	-.14	-.458	.392
108	14	N102A	-6.201	2785.71	-4077.126	0	0	0
109	14	N131	-3191.536	2516.919	1849.748	0	0	0
110	14	N133	3385.641	2675.267	1974.317	0	0	0
111	14	Totals:	-706.18	8890.889	1223.126			
112	14	COG (ft):	X: -.012	Y: .81	Z: -.057			
113	15	N3	-155.027	400.399	2450.029	.549	.295	.004

Joint Reactions (Continued)

	LC	Joint Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
114	15	N83A	827.939	283.78	-475.593	-.225	.009	-.352
115	15	N89	-2179.161	235.135	-1120.19	-.144	-.222	.392
116	15	N102A	-13.199	2731.863	-3996.924	0	0	0
117	15	N131	-3168.494	2497.721	1829.204	0	0	0
118	15	N133	3467.961	2741.992	2017.82	0	0	0
119	15	Totals:	-1219.98	8890.89	704.346			
120	15	COG (ft):	X: -.012	Y: .81	Z: -.057			
121	16	N3	-227.59	409.707	1945.345	.544	.531	.02
122	16	N83A	886.139	280.399	-543.125	-.27	.059	-.328
123	16	N89	-2450.197	230.267	-1392.184	-.158	.074	.383
124	16	N102A	-16.709	2661.31	-3898.09	0	0	0
125	16	N131	-3192.131	2512.6	1835.639	0	0	0
126	16	N133	3541.944	2796.608	2052.419	0	0	0
127	16	Totals:	-1458.545	8890.891	.004			
128	16	COG (ft):	X: -.012	Y: .81	Z: -.057			
129	17	N3	-151.185	418.643	1406.071	.538	.268	.014
130	17	N83A	1118.057	271.382	-814.467	-.309	-.281	-.309
131	17	N89	-2578.137	228.028	-1490.931	-.18	.008	.369
132	17	N102A	-13.372	2585.866	-3791.855	0	0	0
133	17	N131	-3263.713	2565.414	1868.893	0	0	0
134	17	N133	3578.907	2821.559	2066.3	0	0	0
135	17	Totals:	-1309.444	8890.892	-755.988			
136	17	COG (ft):	X: -.012	Y: .81	Z: -.057			
137	18	N3	-34.038	426.233	1029.042	.534	-.07	-.014
138	18	N83A	1546.876	259.943	-1153.427	-.33	-.543	-.305
139	18	N89	-2457.479	230.776	-1444.921	-.206	-.062	.357
140	18	N102A	-6.381	2529.956	-3708.542	0	0	0
141	18	N131	-3360.574	2643.293	1920.96	0	0	0
142	18	N133	3553.768	2800.693	2044.317	0	0	0
143	18	Totals:	-757.828	8890.892	-1312.571			
144	18	COG (ft):	X: -.012	Y: .81	Z: -.057			
145	19	N3	4.684	428.899	932.717	.531	-.03	-.058
146	19	N83A	2038.078	249.382	-1346.395	-.323	-.286	-.319
147	19	N89	-2075.554	236.905	-1337.418	-.227	.229	.348
148	19	N102A	-.134	2515.662	-3685.738	0	0	0
149	19	N131	-3449.238	2717.512	1976.164	0	0	0
150	19	N133	3482.163	2742.531	1994.86	0	0	0
151	19	Totals:	-.001	8890.891	-1465.811			
152	19	COG (ft):	X: -.012	Y: .81	Z: -.057			
153	20	N3	41.595	424.498	1090.61	.532	.021	-.103
154	20	N83A	2374.935	241.74	-1405.755	-.293	.047	-.342
155	20	N89	-1605.632	243.02	-1141.709	-.236	.46	.342
156	20	N102A	6.169	2542.611	-3727.701	0	0	0
157	20	N131	-3509.376	2766.9	2018.896	0	0	0
158	20	N133	3398.487	2672.119	1942.54	0	0	0
159	20	Totals:	706.177	8890.889	-1223.12			
160	20	COG (ft):	X: -.012	Y: .81	Z: -.057			
161	21	N3	154.962	415.747	1443.469	.534	-.291	-.136
162	21	N83A	2486.198	238.825	-1438.436	-.252	-.007	-.368
163	21	N89	-1218.26	248.366	-839.951	-.232	.224	.343
164	21	N102A	13.274	2596.494	-3807.941	0	0	0
165	21	N131	-3532.356	2786.081	2039.508	0	0	0
166	21	N133	3316.159	2605.376	1899.01	0	0	0
167	21	Totals:	1219.977	8890.888	-704.341			
168	21	COG (ft):	X: -.012	Y: .81	Z: -.057			
169	22	N3	227.715	406.427	1948.54	.538	-.527	-.152
170	22	N83A	2427.582	242.194	-1371.013	-.207	-.057	-.393

Joint Reactions (Continued)

	LC	Joint Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
171	22	N89	-946.884	253.275	-568.357	-.218	-.072	.352
172	22	N102A	16.746	2667.069	-3906.803	0	0	0
173	22	N131	-3508.684	2771.211	2033.153	0	0	0
174	22	N133	3242.066	2550.71	1864.481	0	0	0
175	22	Totals:	1458.542	8890.887	.001			
176	22	COG (ft):	X: -.012	Y: .81	Z: -.057			
177	23	N3	151.518	397.513	2487.39	.544	-.264	-.147
178	23	N83A	2196.026	251.179	-1099.232	-.168	.283	-.412
179	23	N89	-819.406	255.541	-469.449	-.196	-.006	.365
180	23	N102A	13.382	2742.493	-4013.017	0	0	0
181	23	N131	-3437.199	2718.431	1999.801	0	0	0
182	23	N133	3205.12	2525.729	1850.5	0	0	0
183	23	Totals:	1309.441	8890.886	755.994			
184	23	COG (ft):	X: -.012	Y: .81	Z: -.057			
185	24	N3	33.78	389.962	2864.303	.549	.074	-.119
186	24	N83A	1767.494	262.603	-760.677	-.147	.546	-.416
187	24	N89	-939.961	252.772	-514.968	-.17	.063	.378
188	24	N102A	6.53	2798.355	-4096.272	0	0	0
189	24	N131	-3340.347	2640.579	1947.782	0	0	0
190	24	N133	3230.328	2546.616	1872.409	0	0	0
191	24	Totals:	757.825	8890.886	1312.577			
192	24	COG (ft):	X: -.012	Y: .81	Z: -.057			
193	25	N3	.361	130.21	716.012	.194	.006	-.023
194	25	N83A	971.795	150.806	-521.305	-.27	.073	-.152
195	25	N89	-815.759	131.658	-441.838	-.202	-.045	.154
196	25	N102A	.018	985.007	-1444.612	0	0	0
197	25	N131	-1784.612	1390.876	1033.822	0	0	0
198	25	N133	1628.197	1271.501	943.605	0	0	0
199	25	Totals:	0	4060.058	285.683			
200	25	COG (ft):	X: -.194	Y: .611	Z: .738			
201	26	N3	-4.782	131.267	680.381	.194	-.014	-.014
202	26	N83A	911.451	151.699	-515.905	-.276	-.003	-.148
203	26	N89	-907.266	130.637	-478.669	-.2	-.097	.155
204	26	N102A	-1.387	978.868	-1435.198	0	0	0
205	26	N131	-1775.035	1382.635	1026.435	0	0	0
206	26	N133	1643.862	1284.952	953.587	0	0	0
207	26	Totals:	-133.157	4060.058	230.632			
208	26	COG (ft):	X: -.194	Y: .611	Z: .738			
209	27	N3	-28.455	133.144	613.581	.193	.054	-.008
210	27	N83A	893.7	151.997	-507.904	-.281	.018	-.145
211	27	N89	-979.225	129.798	-536.731	-.201	-.045	.155
212	27	N102A	-3.064	968.673	-1420.257	0	0	0
213	27	N131	-1771.217	1379.259	1022.575	0	0	0
214	27	N133	1658.751	1297.187	961.237	0	0	0
215	27	Totals:	-229.51	4060.058	132.5			
216	27	COG (ft):	X: -.194	Y: .611	Z: .738			
217	28	N3	-44.268	134.928	517.79	.192	.107	-.005
218	28	N83A	900.1	151.678	-514.106	-.287	.037	-.142
219	28	N89	-1034.429	128.78	-592.073	-.203	.018	.153
220	28	N102A	-3.921	955.538	-1402.183	0	0	0
221	28	N131	-1774.198	1380.903	1022.643	0	0	0
222	28	N133	1673.626	1308.231	967.93	0	0	0
223	28	Totals:	-283.091	4060.059	.001			
224	28	COG (ft):	X: -.194	Y: .611	Z: .738			
225	29	N3	-27.02	136.654	409.684	.191	.045	-.006
226	29	N83A	938.77	150.5	-566.363	-.293	-.041	-.138
227	29	N89	-1066.033	128.219	-612.488	-.207	-.005	.151

Joint Reactions (Continued)

	LC	Joint Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
228	29	N102A	-3.083	940.492	-1381.217	0	0	0
229	29	N131	-1786.674	1390.133	1028.001	0	0	0
230	29	N133	1682.101	1314.062	971.154	0	0	0
231	29	Totals:	-261.939	4060.059	-151.228			
232	29	COG (ft):	X: -.194	Y: .611	Z: .738			
233	30	N3	-1.361	138.267	333.994	.19	-.033	-.011
234	30	N83A	1022.509	148.723	-636.018	-.297	-.105	-.136
235	30	N89	-1043.478	128.85	-600.914	-.212	-.03	.148
236	30	N102A	-1.42	929.183	-1364.591	0	0	0
237	30	N131	-1805.278	1405.22	1037.849	0	0	0
238	30	N133	1677.15	1309.816	966.623	0	0	0
239	30	Totals:	-151.879	4060.059	-263.058			
240	30	COG (ft):	X: -.194	Y: .611	Z: .738			
241	31	N3	4.889	138.823	319.956	.189	-.018	-.021
242	31	N83A	1119.068	147.149	-670.86	-.295	-.046	-.139
243	31	N89	-964.889	130.143	-577.849	-.216	.031	.147
244	31	N102A	-.029	927.131	-1361.359	0	0	0
245	31	N131	-1821.54	1419.12	1048.162	0	0	0
246	31	N133	1662.502	1297.692	956.269	0	0	0
247	31	Totals:	0	4060.058	-285.681			
248	31	COG (ft):	X: -.194	Y: .611	Z: .738			
249	32	N3	10.051	137.765	355.576	.189	.001	-.029
250	32	N83A	1179.417	146.257	-676.237	-.289	.03	-.142
251	32	N89	-873.401	131.164	-541.025	-.217	.083	.146
252	32	N102A	1.371	933.27	-1370.774	0	0	0
253	32	N131	-1831.119	1427.36	1055.544	0	0	0
254	32	N133	1646.838	1284.242	946.287	0	0	0
255	32	Totals:	133.157	4060.058	-230.63			
256	32	COG (ft):	X: -.194	Y: .611	Z: .738			
257	33	N3	33.704	135.887	422.382	.19	-.066	-.036
258	33	N83A	1197.169	145.959	-684.258	-.284	.01	-.145
259	33	N89	-801.43	132.003	-482.95	-.216	.031	.146
260	33	N102A	3.053	943.467	-1385.716	0	0	0
261	33	N131	-1834.934	1430.736	1059.407	0	0	0
262	33	N133	1631.948	1272.006	938.637	0	0	0
263	33	Totals:	229.51	4060.058	-132.499			
264	33	COG (ft):	X: -.194	Y: .611	Z: .738			
265	34	N3	49.524	134.103	518.191	.191	-.12	-.039
266	34	N83A	1190.75	146.278	-678.062	-.278	-.01	-.149
267	34	N89	-746.209	133.023	-427.626	-.214	-.033	.148
268	34	N102A	3.908	956.602	-1403.792	0	0	0
269	34	N131	-1831.951	1429.092	1059.342	0	0	0
270	34	N133	1617.069	1260.96	931.947	0	0	0
271	34	Totals:	283.091	4060.058	0			
272	34	COG (ft):	X: -.194	Y: .611	Z: .738			
273	35	N3	32.285	132.378	626.276	.192	-.058	-.038
274	35	N83A	1152.098	147.455	-625.784	-.272	.069	-.153
275	35	N89	-714.628	133.586	-407.202	-.21	-.01	.15
276	35	N102A	3.069	971.647	-1424.757	0	0	0
277	35	N131	-1819.48	1419.863	1053.979	0	0	0
278	35	N133	1608.595	1255.128	928.718	0	0	0
279	35	Totals:	261.939	4060.058	151.23			
280	35	COG (ft):	X: -.194	Y: .611	Z: .738			
281	36	N3	6.595	130.767	701.958	.193	.02	-.032
282	36	N83A	1068.376	149.231	-556.148	-.268	.133	-.154
283	36	N89	-737.18	132.953	-418.749	-.205	.016	.152
284	36	N102A	1.413	982.955	-1441.38	0	0	0

Joint Reactions (Continued)

	LC	Joint Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
285	36	N131	-1800.875	1404.777	1044.133	0	0	0
286	36	N133	1613.55	1259.375	933.245	0	0	0
287	36	Totals:	151.879	4060.058	263.06			
288	36	COG (ft):	X: -.194	Y: .611	Z: .738			
289	37	N3	-3.016	129.659	705.216	.193	.016	-.036
290	37	N83A	655.346	126.915	-341.813	-.178	.067	-.145
291	37	N89	-1140.506	126.495	-627.677	-.237	-.048	.136
292	37	N102A	.035	987.332	-1448.127	0	0	0
293	37	N131	-1480.207	1158.503	858.099	0	0	0
294	37	N133	1968.348	1531.157	1139.984	0	0	0
295	37	Totals:	0	4060.062	285.683			
296	37	COG (ft):	X: .537	Y: .611	Z: .738			
297	38	N3	-8.159	130.715	669.58	.193	-.004	-.027
298	38	N83A	595.015	127.81	-336.377	-.184	-.009	-.142
299	38	N89	-1232.036	125.479	-664.482	-.235	-.1	.137
300	38	N102A	-1.371	981.193	-1438.713	0	0	0
301	38	N131	-1470.639	1150.256	850.681	0	0	0
302	38	N133	1984.033	1544.609	1149.942	0	0	0
303	38	Totals:	-133.156	4060.062	230.632			
304	38	COG (ft):	X: .537	Y: .611	Z: .738			
305	39	N3	-31.831	132.592	602.78	.192	.064	-.021
306	39	N83A	577.251	128.107	-328.394	-.19	.012	-.139
307	39	N89	-1303.979	124.645	-722.572	-.236	-.048	.137
308	39	N102A	-3.047	970.996	-1423.77	0	0	0
309	39	N131	-1466.811	1146.879	846.839	0	0	0
310	39	N133	1998.909	1556.843	1157.618	0	0	0
311	39	Totals:	-229.509	4060.062	132.501			
312	39	COG (ft):	X: .537	Y: .611	Z: .738			
313	40	N3	-47.642	134.376	506.989	.191	.118	-.018
314	40	N83A	583.638	127.782	-334.614	-.195	.031	-.135
315	40	N89	-1359.168	123.631	-777.943	-.238	.015	.135
316	40	N102A	-3.904	957.862	-1405.695	0	0	0
317	40	N131	-1469.784	1148.525	846.925	0	0	0
318	40	N133	2013.77	1567.887	1164.34	0	0	0
319	40	Totals:	-283.09	4060.062	.002			
320	40	COG (ft):	X: .537	Y: .611	Z: .738			
321	41	N3	-30.395	136.101	398.876	.19	.055	-.019
322	41	N83A	622.328	126.596	-386.838	-.202	-.047	-.131
323	41	N89	-1390.791	123.071	-798.335	-.242	-.008	.133
324	41	N102A	-3.066	942.816	-1384.73	0	0	0
325	41	N131	-1482.277	1157.757	852.254	0	0	0
326	41	N133	2022.263	1573.721	1167.545	0	0	0
327	41	Totals:	-261.938	4060.063	-151.228			
328	41	COG (ft):	X: .537	Y: .611	Z: .738			
329	42	N3	-4.736	137.714	323.181	.189	-.023	-.025
330	42	N83A	706.089	124.812	-456.465	-.206	-.111	-.129
331	42	N89	-1368.252	123.702	-786.736	-.247	-.033	.131
332	42	N102A	-1.404	931.507	-1368.105	0	0	0
333	42	N131	-1500.903	1172.851	862.078	0	0	0
334	42	N133	2017.328	1569.477	1162.991	0	0	0
335	42	Totals:	-151.878	4060.063	-263.057			
336	42	COG (ft):	X: .537	Y: .611	Z: .738			
337	43	N3	1.515	138.271	309.144	.188	-.008	-.034
338	43	N83A	802.64	123.232	-491.339	-.204	-.052	-.132
339	43	N89	-1289.64	124.99	-763.696	-.251	.028	.129
340	43	N102A	-.013	929.455	-1364.873	0	0	0
341	43	N131	-1517.161	1186.761	872.421	0	0	0

Joint Reactions (Continued)

	LC	Joint Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
342	43	N133	2002.662	1557.353	1152.663	0	0	0
343	43	Totals:	0	4060.062	-285.681			
344	43	COG (ft):	X: .537	Y: .611	Z: .738			
345	44	N3	6.677	137.213	344.769	.188	.012	-.043
346	44	N83A	862.975	122.338	-496.752	-.198	.024	-.136
347	44	N89	-1198.13	126.005	-726.896	-.252	.08	.128
348	44	N102A	1.388	935.595	-1374.289	0	0	0
349	44	N131	-1526.731	1195.008	879.834	0	0	0
350	44	N133	1986.979	1543.903	1142.705	0	0	0
351	44	Totals:	133.158	4060.062	-230.63			
352	44	COG (ft):	X: .537	Y: .611	Z: .738			
353	45	N3	30.329	135.336	411.575	.189	-.056	-.049
354	45	N83A	880.741	122.042	-504.755	-.192	.004	-.138
355	45	N89	-1126.174	126.84	-668.793	-.251	.028	.128
356	45	N102A	3.069	945.793	-1389.233	0	0	0
357	45	N131	-1530.557	1198.384	883.68	0	0	0
358	45	N133	1972.102	1531.668	1135.028	0	0	0
359	45	Totals:	229.51	4060.062	-132.498			
360	45	COG (ft):	X: .537	Y: .611	Z: .738			
361	46	N3	46.148	133.551	507.385	.19	-.11	-.052
362	46	N83A	874.335	122.366	-498.541	-.187	-.016	-.142
363	46	N89	-1070.969	127.856	-613.441	-.249	-.035	.13
364	46	N102A	3.924	958.928	-1407.308	0	0	0
365	46	N131	-1527.582	1196.738	883.597	0	0	0
366	46	N133	1957.236	1520.622	1128.309	0	0	0
367	46	Totals:	283.091	4060.062	.001			
368	46	COG (ft):	X: .537	Y: .611	Z: .738			
369	47	N3	28.909	131.827	615.476	.191	-.047	-.051
370	47	N83A	835.662	123.551	-446.296	-.18	.063	-.146
371	47	N89	-1039.369	128.416	-593.039	-.245	-.012	.132
372	47	N102A	3.085	973.973	-1428.272	0	0	0
373	47	N131	-1515.092	1187.508	878.263	0	0	0
374	47	N133	1948.744	1514.787	1125.1	0	0	0
375	47	Totals:	261.939	4060.061	151.231			
376	47	COG (ft):	X: .537	Y: .611	Z: .738			
377	48	N3	3.219	130.215	691.164	.192	.031	-.045
378	48	N83A	751.918	125.335	-376.688	-.176	.127	-.148
379	48	N89	-1061.904	127.785	-604.611	-.24	.013	.135
380	48	N102A	1.43	985.28	-1444.895	0	0	0
381	48	N131	-1496.467	1172.414	868.441	0	0	0
382	48	N133	1953.683	1519.032	1129.65	0	0	0
383	48	Totals:	151.88	4060.061	263.06			
384	48	COG (ft):	X: .537	Y: .611	Z: .738			
385	49	N3	1.463	130.194	594.878	.185	-.004	-.025
386	49	N83A	1106.63	50.216	-638.693	-.075	.001	-.07
387	49	N89	-524.973	94.555	-303.703	-.07	.004	.143
388	49	N102A	-.005	983.529	-1444.519	0	0	0
389	49	N131	-1843.504	1435.859	1064.34	0	0	0
390	49	N133	1260.389	990.709	727.699	0	0	0
391	49	Totals:	0	3685.063	.002			
392	49	COG (ft):	X: -.703	Y: .674	Z: .392			
393	50	N3	1.034	132.735	626.274	.19	-.002	-.025
394	50	N83A	798.036	122.884	-457.362	-.181	.007	-.14
395	50	N89	-803.798	114.673	-461.508	-.148	-.004	.148
396	50	N102A	0	975.949	-1433.057	0	0	0
397	50	N131	-1492.106	1167.604	861.459	0	0	0
398	50	N133	1496.833	1171.215	864.196	0	0	0

Joint Reactions (Continued)

	LC	Joint Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
399	50	Totals:	0	3685.06	.001			
400	50	COG (ft):	X: -.007	Y: .674	Z: .392			
401	51	N3	.359	152.673	855.076	.22	0	-.03
402	51	N83A	736.284	116.513	-425.251	-.114	0	-.157
403	51	N89	-739.938	110.863	-426.839	-.08	0	.171
404	51	N102A	.005	1161.879	-1707.149	0	0	0
405	51	N131	-1474.204	1158.648	851.127	0	0	0
406	51	N133	1477.494	1161.163	853.038	0	0	0
407	51	Totals:	0	3861.738	.001			
408	51	COG (ft):	X: -.008	Y: .75	Z: -.033			
409	52	N3	.546	132.583	916.412	.195	0	-.027
410	52	N83A	589.338	104.141	-317.799	-.094	.04	-.143
411	52	N89	-593.56	98.625	-320.2	-.066	-.038	.154
412	52	N102A	.004	1043.933	-1532.47	0	0	0
413	52	N131	-1286.641	1011.586	744.936	0	0	0
414	52	N133	1290.312	1014.392	747.064	0	0	0
415	52	Totals:	0	3405.26	237.942			
416	52	COG (ft):	X: -.008	Y: .751	Z: -.033			
417	53	N3	-12.078	133.011	894.383	.195	.024	-.022
418	53	N83A	534.893	104.756	-295.879	-.096	.023	-.142
419	53	N89	-663.984	97.744	-357.32	-.064	-.044	.154
420	53	N102A	-1.044	1041.149	-1528.544	0	0	0
421	53	N131	-1278.572	1004.619	739.391	0	0	0
422	53	N133	1301.813	1023.981	754.028	0	0	0
423	53	Totals:	-118.973	3405.26	206.058			
424	53	COG (ft):	X: -.008	Y: .751	Z: -.033			
425	54	N3	-21.378	133.945	834.762	.195	.041	-.018
426	54	N83A	511.104	104.892	-295.161	-.099	0	-.139
427	54	N89	-731.335	96.925	-399.554	-.064	-.038	.154
428	54	N102A	-1.812	1033.851	-1518.284	0	0	0
429	54	N131	-1276.124	1002.161	736.766	0	0	0
430	54	N133	1313.484	1033.486	760.442	0	0	0
431	54	Totals:	-206.06	3405.26	118.972			
432	54	COG (ft):	X: -.008	Y: .751	Z: -.033			
433	55	N3	-24.864	135.134	753.515	.194	.048	-.016
434	55	N83A	524.339	104.512	-315.837	-.103	-.022	-.137
435	55	N89	-777.576	96.389	-435.592	-.066	-.022	.153
436	55	N102A	-2.093	1023.994	-1504.436	0	0	0
437	55	N131	-1279.951	1004.87	737.764	0	0	0
438	55	N133	1322.199	1040.361	764.587	0	0	0
439	55	Totals:	-237.945	3405.26	.002			
440	55	COG (ft):	X: -.008	Y: .751	Z: -.033			
441	56	N3	-21.6	136.261	672.417	.194	.041	-.017
442	56	N83A	571.061	103.717	-352.373	-.106	-.038	-.135
443	56	N89	-790.303	96.279	-455.772	-.069	0	.151
444	56	N102A	-1.812	1014.218	-1490.713	0	0	0
445	56	N131	-1289.03	1012.023	742.119	0	0	0
446	56	N133	1325.623	1042.762	765.353	0	0	0
447	56	Totals:	-206.061	3405.26	-118.969			
448	56	COG (ft):	X: -.008	Y: .751	Z: -.033			
449	57	N3	-12.467	137.023	613.201	.194	.024	-.02
450	57	N83A	638.74	102.723	-394.975	-.107	-.044	-.135
451	57	N89	-766.116	96.624	-454.688	-.073	.023	.15
452	57	N102A	-1.045	1007.144	-1480.791	0	0	0
453	57	N131	-1300.924	1021.699	748.663	0	0	0
454	57	N133	1322.839	1040.049	762.536	0	0	0
455	57	Totals:	-118.973	3405.26	-206.055			

Joint Reactions (Continued)

	LC	Joint Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
456	57	COG (ft):	X: -.008	Y: .751	Z: -.033			
457	58	N3	.092	137.215	591.721	.193	0	-.025
458	58	N83A	709.255	101.794	-432.232	-.107	-.038	-.135
459	58	N89	-711.494	97.331	-432.63	-.075	.039	.148
460	58	N102A	.004	1004.667	-1477.328	0	0	0
461	58	N131	-1312.45	1031.308	755.642	0	0	0
462	58	N133	1314.593	1032.946	756.888	0	0	0
463	58	Totals:	0	3405.26	-237.94			
464	58	COG (ft):	X: -.008	Y: .751	Z: -.033			
465	59	N3	12.711	136.786	613.748	.193	-.024	-.03
466	59	N83A	763.703	101.18	-454.154	-.105	-.022	-.136
467	59	N89	-641.07	98.212	-395.504	-.077	.045	.148
468	59	N102A	1.052	1007.451	-1481.255	0	0	0
469	59	N131	-1320.518	1038.274	761.186	0	0	0
470	59	N133	1303.093	1023.357	749.924	0	0	0
471	59	Totals:	118.972	3405.26	-206.056			
472	59	COG (ft):	X: -.008	Y: .751	Z: -.033			
473	60	N3	22.011	135.852	673.365	.193	-.041	-.034
474	60	N83A	787.497	101.045	-454.87	-.101	0	-.138
475	60	N89	-573.724	99.031	-353.268	-.076	.039	.148
476	60	N102A	1.82	1014.75	-1491.517	0	0	0
477	60	N131	-1322.966	1040.731	763.81	0	0	0
478	60	N133	1291.422	1013.852	743.51	0	0	0
479	60	Totals:	206.059	3405.26	-118.97			
480	60	COG (ft):	X: -.008	Y: .751	Z: -.033			
481	61	N3	25.501	134.662	754.61	.194	-.047	-.036
482	61	N83A	774.263	101.425	-434.189	-.098	.023	-.141
483	61	N89	-527.486	99.568	-317.231	-.075	.023	.149
484	61	N102A	2.1	1024.608	-1505.365	0	0	0
485	61	N131	-1319.139	1038.022	762.812	0	0	0
486	61	N133	1282.705	1006.976	739.363	0	0	0
487	61	Totals:	237.944	3405.26	0			
488	61	COG (ft):	X: -.008	Y: .751	Z: -.033			
489	62	N3	22.242	133.535	835.71	.194	-.04	-.036
490	62	N83A	727.537	102.218	-397.65	-.095	.04	-.143
491	62	N89	-514.758	99.679	-297.056	-.072	0	.151
492	62	N102A	1.819	1034.383	-1519.088	0	0	0
493	62	N131	-1310.062	1030.871	758.457	0	0	0
494	62	N133	1279.281	1004.574	738.597	0	0	0
495	62	Totals:	206.059	3405.26	118.971			
496	62	COG (ft):	X: -.008	Y: .751	Z: -.033			
497	63	N3	13.109	132.775	894.93	.194	-.023	-.032
498	63	N83A	659.854	103.212	-355.052	-.094	.046	-.143
499	63	N89	-538.94	99.334	-298.143	-.068	-.022	.152
500	63	N102A	1.052	1041.456	-1529.008	0	0	0
501	63	N131	-1298.167	1021.195	751.915	0	0	0
502	63	N133	1282.065	1007.288	741.416	0	0	0
503	63	Totals:	118.972	3405.26	206.058			
504	63	COG (ft):	X: -.008	Y: .751	Z: -.033			
505	64	N3	.458	91.823	690.86	.136	0	-.019
506	64	N83A	395.137	73.016	-205.641	-.064	.039	-.101
507	64	N89	-398.395	69.003	-207.608	-.044	-.038	.108
508	64	N102A	.002	738.123	-1083.241	0	0	0
509	64	N131	-898.708	706.622	520.976	0	0	0
510	64	N133	901.507	708.76	522.596	0	0	0
511	64	Totals:	0	2387.347	237.942			
512	64	COG (ft):	X: -.008	Y: .748	Z: -.033			

Joint Reactions (Continued)

	LC	Joint Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
513	65	N3	-12.167	92.252	668.832	.136	.024	-.014
514	65	N83A	340.694	73.634	-183.723	-.066	.023	-.1
515	65	N89	-468.817	68.117	-244.726	-.043	-.044	.109
516	65	N102A	-1.052	735.338	-1079.314	0	0	0
517	65	N131	-890.639	699.652	515.426	0	0	0
518	65	N133	913.009	718.354	529.562	0	0	0
519	65	Totals:	-118.973	2387.348	206.058			
520	65	COG (ft):	X: -.008	Y: .748	Z: -.033			
521	66	N3	-21.468	93.189	609.215	.136	.041	-.01
522	66	N83A	316.904	73.771	-183.006	-.069	0	-.098
523	66	N89	-536.164	67.295	-286.958	-.043	-.038	.108
524	66	N102A	-1.823	728.038	-1069.052	0	0	0
525	66	N131	-888.193	697.193	512.796	0	0	0
526	66	N133	924.683	727.863	535.976	0	0	0
527	66	Totals:	-206.06	2387.348	118.972			
528	66	COG (ft):	X: -.008	Y: .748	Z: -.033			
529	67	N3	-24.954	94.383	527.972	.136	.048	-.008
530	67	N83A	330.137	73.389	-203.682	-.073	-.022	-.095
531	67	N89	-582.403	66.756	-322.996	-.045	-.022	.107
532	67	N102A	-2.106	718.176	-1055.202	0	0	0
533	67	N131	-892.023	699.903	513.79	0	0	0
534	67	N133	933.403	734.741	540.12	0	0	0
535	67	Totals:	-237.945	2387.348	.001			
536	67	COG (ft):	X: -.008	Y: .748	Z: -.033			
537	68	N3	-21.69	95.514	446.877	.135	.041	-.009
538	68	N83A	376.857	72.592	-240.218	-.076	-.038	-.094
539	68	N89	-595.129	66.644	-343.177	-.048	0	.106
540	68	N102A	-1.824	708.397	-1041.475	0	0	0
541	68	N131	-901.105	707.058	518.142	0	0	0
542	68	N133	936.831	737.144	540.882	0	0	0
543	68	Totals:	-206.06	2387.348	-118.969			
544	68	COG (ft):	X: -.008	Y: .748	Z: -.033			
545	69	N3	-12.556	96.279	387.663	.135	.024	-.012
546	69	N83A	444.532	71.593	-282.818	-.077	-.044	-.093
547	69	N89	-570.943	66.99	-342.095	-.051	.023	.104
548	69	N102A	-1.052	701.319	-1031.551	0	0	0
549	69	N131	-913.003	716.738	524.686	0	0	0
550	69	N133	934.049	734.429	538.059	0	0	0
551	69	Totals:	-118.973	2387.348	-206.056			
552	69	COG (ft):	X: -.008	Y: .748	Z: -.033			
553	70	N3	.004	96.472	366.183	.135	0	-.017
554	70	N83A	515.045	70.66	-320.073	-.077	-.038	-.093
555	70	N89	-516.322	67.701	-320.039	-.054	.039	.103
556	70	N102A	.002	698.84	-1028.087	0	0	0
557	70	N131	-924.531	726.351	531.668	0	0	0
558	70	N133	925.803	727.324	532.407	0	0	0
559	70	Totals:	0	2387.348	-237.94			
560	70	COG (ft):	X: -.008	Y: .748	Z: -.033			
561	71	N3	12.624	96.042	388.209	.135	-.024	-.022
562	71	N83A	569.491	70.043	-341.993	-.074	-.022	-.094
563	71	N89	-445.902	68.586	-282.915	-.055	.045	.102
564	71	N102A	1.056	701.626	-1032.014	0	0	0
565	71	N131	-932.599	733.32	537.217	0	0	0
566	71	N133	914.301	717.731	525.44	0	0	0
567	71	Totals:	118.972	2387.348	-206.056			
568	71	COG (ft):	X: -.008	Y: .748	Z: -.033			
569	72	N3	21.925	95.104	447.823	.135	-.041	-.026

Joint Reactions (Continued)

	LC	Joint Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
570	72	N83A	593.284	69.907	-342.708	-.071	0	-.097
571	72	N89	-378.558	69.409	-240.68	-.055	.039	.103
572	72	N102A	1.827	708.927	-1042.277	0	0	0
573	72	N131	-935.045	735.779	539.847	0	0	0
574	72	N133	902.627	708.222	519.026	0	0	0
575	72	Totals:	206.06	2387.347	-118.97			
576	72	COG (ft):	X: -.008	Y: .748	Z: -.033			
577	73	N3	25.415	93.91	529.064	.135	-.047	-.028
578	73	N83A	580.052	70.288	-322.026	-.068	.023	-.099
579	73	N89	-332.323	69.949	-204.644	-.053	.023	.104
580	73	N102A	2.109	718.789	-1056.128	0	0	0
581	73	N131	-931.216	733.069	538.853	0	0	0
582	73	N133	893.906	701.343	514.882	0	0	0
583	73	Totals:	237.944	2387.347	0			
584	73	COG (ft):	X: -.008	Y: .748	Z: -.033			
585	74	N3	22.156	92.779	610.161	.136	-.041	-.028
586	74	N83A	533.329	71.084	-285.488	-.065	.039	-.101
587	74	N89	-319.596	70.061	-184.468	-.05	0	.105
588	74	N102A	1.827	728.568	-1069.854	0	0	0
589	74	N131	-922.135	725.915	534.501	0	0	0
590	74	N133	890.478	698.939	514.12	0	0	0
591	74	Totals:	206.06	2387.347	118.971			
592	74	COG (ft):	X: -.008	Y: .748	Z: -.033			
593	75	N3	13.022	92.016	669.379	.136	-.023	-.024
594	75	N83A	465.65	72.083	-242.892	-.063	.045	-.101
595	75	N89	-343.778	69.715	-185.553	-.047	-.022	.107
596	75	N102A	1.055	735.644	-1079.777	0	0	0
597	75	N131	-910.237	716.236	527.958	0	0	0
598	75	N133	893.259	701.654	516.943	0	0	0
599	75	Totals:	118.972	2387.347	206.057			
600	75	COG (ft):	X: -.008	Y: .748	Z: -.033			

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

	Member	Shape	Code Check	Lo...	LC	Shear Check	Lo.....		LC	phi*Pnc...	phi*Pnt ...	phi*Mn y...	phi*Mn...	Cb	Eqn
1	M4	HSS4X4...	.238	6.25	16	.084	5....	y	24	83659....	106812	12.662	12.662	2.687	H1-...
2	M40	HSS4X4...	.141	13...	17	.066	0	y	23	63811....	139518	16.181	16.181	2.034	H1-...
3	M41	HSS4X4...	.142	13...	21	.066	0	y	15	63811....	139518	16.181	16.181	2.044	H1-...
4	M42	HSS4X4...	.141	0	13	.067	13...	y	18	63811....	139518	16.181	16.181	2.019	H1-...
5	MP4A	PIPE_2.0	.311	4....	22	.068	4....		11	17855....	32130	1.872	1.872	2.023	H1-...
6	MP3A	PIPE_2.0	.283	4....	11	.060	3....		10	17855....	32130	1.872	1.872	1.904	H1-...
7	MP2A	PIPE_2.0	.267	4....	5	.072	4....		5	17855....	32130	1.872	1.872	2.089	H1-...
8	MP1A	PIPE_2.0	.227	4....	17	.041	4....		8	17855....	32130	1.872	1.872	1.979	H1-...
9	OVP1	PIPE_2.0	.133	3....	7	.043	3....		10	23808.54	32130	1.872	1.872	1	H1-...
10	M67	HSS4X4...	.239	6.25	24	.083	5....	y	20	83659....	106812	12.662	12.662	2.674	H1-...
11	LR	PIPE_2.0	.097	3....	6	.008	3....		6	23808.54	32130	1.872	1.872	2.032	H1-...
12	M70	HSS4X4...	.236	6.25	20	.085	5....	y	16	83659....	106812	12.662	12.662	2.679	H1-...
13	OVP2	PIPE_2.0	.029	3....	3	.003	3....		3	23808.54	32130	1.872	1.872	2.234	H1-...
14	MP4C	PIPE_2.0	.316	4....	18	.066	4....		7	17855....	32130	1.872	1.872	2.135	H1-...
15	MP3C	PIPE_2.0	.270	4....	6	.066	3....		6	17855....	32130	1.872	1.872	2.184	H1-...
16	MP2C	PIPE_2.0	.278	4....	11	.064	4....		12	17855....	32130	1.872	1.872	2.225	H1-...
17	MP1C	PIPE_2.0	.226	4....	24	.041	4....		8	17855....	32130	1.872	1.872	1.992	H1-...
18	MP4B	PIPE_2.0	.314	4....	13	.065	4....		3	17855....	32130	1.872	1.872	1.961	H1-...
19	MP3B	PIPE_2.0	.246	4....	1	.060	3....		1	17855....	32130	1.872	1.872	2.091	H1-...
20	MP2B	PIPE_2.0	.267	4....	7	.067	4....		10	17855....	32130	1.872	1.872	2.158	H1-...
21	MP1B	PIPE_2.0	.225	4....	21	.041	4....		4	17855....	32130	1.872	1.872	2.088	H1-...

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

	Member	Shape	Code Check	Lo...	LC	Shear Check	Lo.....		LC	phi*Pnc...	phi*Pnt ...	phi*Mn y...	phi*Mn...	Cb	Eqn
22	M73A	PIPE_2.5	.140	1....	22	.051	1....		20	13460....	50715	3.596	3.596	2.32	H1-...
23	M80A	PIPE_2.5	.152	2....	6	.062	2....		4	13460....	50715	3.596	3.596	3.597	H1-...
24	M83A	PIPE_2.5	.150	5....	13	.065	2....		12	13460....	50715	3.596	3.596	2.464	H1-...
25	M86A	L3X3X4	.205	2....	11	.017	0	y	3	41763....	46656	1.688	3.756	1.942	H2-1
26	M87A	L3X3X4	.198	2....	3	.018	0	y	7	41763....	46656	1.688	3.756	1.885	H2-1
27	M88A	L3X3X4	.195	2....	7	.017	0	y	11	41763....	46656	1.688	3.756	1.999	H2-1
28	M89A	LL3x3x3x6	.108	6....	13	.004	6....	y	24	45994.25	70632	6.362	3.75	1	H1-...
29	M90A	LL3x3x3x6	.107	6....	21	.004	6....	y	20	45994.25	70632	6.362	3.75	1	H1-...
30	M91A	LL3x3x3x6	.109	6....	17	.004	0	y	16	45994.25	70632	6.362	3.75	1	H1-...

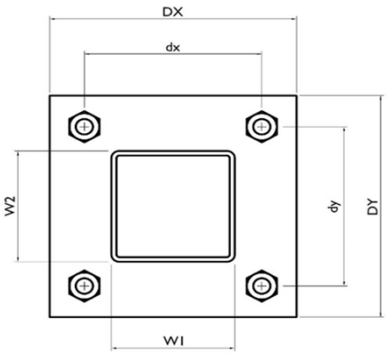
VzW SMART Tool© Vendor

Client:	Verizon Wireless	Date:	2/13/2024
Site Name:	SUFFIELD SW CT		
MDG #:	5000386683		
Fuze ID #:	16272252	Page:	1

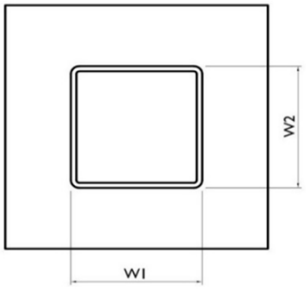
Version 2.00

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)* :	3
d_y (in) *(Delta Y of typ. bolt config. sketch)* :	8
Bolt Type:	A325N
Bolt Diameter (in):	0.75
Required Tensile Strength / bolt (kips):	4.1
Required Shear Strength / bolt (kips):	0.3
Tensile Capacity / bolt (kips):	29.8
Shear Capacity / bolt (kips):	17.9
Bolt Overall Utilization:	**13.8%**



Tower Connection Baseplate Checks	Yes
Connecting Standoff Member Shape:	Rect Tube
Weld Stiffener Configuration:	No Stiffeners
Plate Width, D_x (in):	6
Plate Height, D_y (in):	10
W1(in):	4
W2 (in):	4
Member Thickness (in):	0.18
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):	0.5
Length of Yield Line, L_y (in):	4.85
Bolt Eccentricity, e (in):	1.81
M_u (kip-in):	7.47
Phi*M_n (kip-in):	9.82
Plate Bending Utilization:	**76.0%**



VzW SMART Tool© Vendor

Client:	Verizon Wireless	Date:	2/13/2024
Site Name:	SUFFIELD SW CT		
PSLC #:	5000386683		
Fuze ID #:	16272252	Page:	2

Version 2.00

Tower Connection Weld Checks	Yes

Weld Shape:	Rectangle
Weld Stiffener Configuration:	None
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)	2.18
c_y (in)	2.18
Required combined strength (kip/in):	0.82
Weld Capacity (kip/in):	8.35
Weld Utilization:	**9.9%**

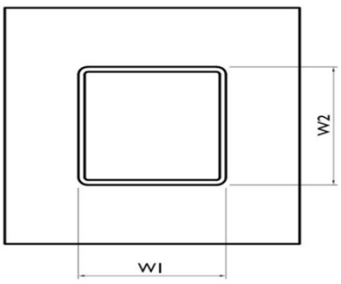


EXHIBIT 5

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Non-Ionizing Electromagnetic Radiation (NIER) Study

Site Number:
416862

Site Name:
Suffield SW CT CT

Location:
West Suffield, Connecticut

Tenants:
AT&T Mobility, Dish Wireless, & Verizon Wireless

Prepared For:

American Tower, Inc.
Woburn, Massachusetts

April 30th, 2024

181345 P-426881

Prepared By:

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

Approved By:

04/30/24

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Non-Ionizing Electromagnetic Radiation (NIER) Study

416862 Suffield SW CT CT
West Suffield, 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 416862 Suffield SW CT CT is located at 106 South Grand St., in West Suffield, Connecticut at coordinates 41.987042, -72.702078. The support structure is a 140' monopole. An aerial view of the tower can be found in Appendix 1, Site Photos. The tenants are AT&T Mobility (AT&T), Dish Wireless (Dish), & 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 200' from the base of the tower with a height of 6' above ground level was used, beyond 200' 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 416862 Suffield SW CT CT.RF NIER Study 4/15/24.
- 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 ***WILL BE*** 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

416862 Suffield SW CT CT							
Antenna Inventory							
Antenna #	Carrier	Antenna Manufacturer	Antenna Model	Frequency Band (MHz)	Azmiuth (°)	Effective Radiated Power (W)	Radiation Center (ft)
1	AT&T	CCI	DMP65R-BU8D	700/800/1900	090	56718	135.0
2	AT&T	CCI	DMP65R-BU8D	700/800/1900	210	56718	135.0
3	AT&T	CCI	DMP65R-BU8D	700/800/1900	340	56718	135.0
4	AT&T	CCI	TPA65R-BU8D	700/2100/2300	090	81639	135.0
5	AT&T	CCI	TPA65R-BU8D	700/2100/2300	210	81639	135.0
6	AT&T	CCI	TPA65R-BU8D	700/2100/2300	340	81639	135.0
7	VZW	Samsung	MT6407-77A	3700	020	18286	120.0
8	VZW	Samsung	MT6407-77A	3700	180	18286	120.0
9	VZW	Samsung	MT6407-77A	3700	300	18286	120.0
10	VZW	Commscope	NHH-65C-R2B	1	020	47361	120.0
11	VZW	Commscope	NHH-65C-R2B	1	180	47361	120.0
12	VZW	Commscope	NHH-65C-R2B	1	300	47361	120.0
13	VZW	Commscope	NHH-65C-R2B	1	020	47361	120.0
14	VZW	Commscope	NHH-65C-R2B	1	180	47361	120.0
15	VZW	Commscope	NHH-65C-R2B	1	300	47361	120.0
16	VZW	Antel	BXA-70063/6CF	1	030	38277	120.0
17	VZW	Antel	BXA-70063/6CF	1	160	38277	120.0
18	VZW	Antel	BXA-70063/6CF	1	265	38277	120.0
19	Dish	JMA	MX08FRO665-21	600/1900/2000/2100	000	48332	112.0
20	Dish	JMA	MX08FRO665-21	600/1900/2000/2100	120	48332	112.0
21	Dish	JMA	MX08FRO665-21	600/1900/2000/2100	240	48332	112.0
22	Dish	JMA	MX08FRO665-21	600/1900/2000/2100	055	48332	112.0
23	Dish	JMA	MX08FRO665-21	600/1900/2000/2100	179	48332	112.0
24	Dish	JMA	MX08FRO665-21	600/1900/2000/2100	305	48332	112.0
25	Dish	JMA	MX08FRO665-21	600/1900/2000/2100	000	48332	110.0
26	Dish	JMA	MX08FRO665-21	600/1900/2000/2100	120	48332	110.0
27	Dish	JMA	MX08FRO665-21	600/1900/2000/2100	240	48332	110.0

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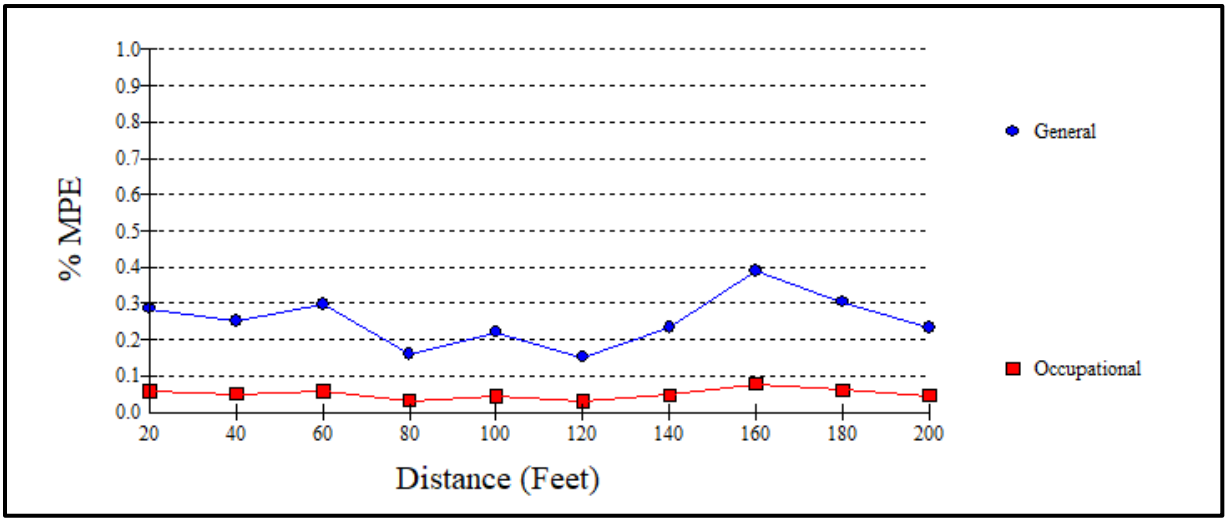
Appendix 3.1 MPE Limit Study



Maximum Power Density (@160'):	0.0024 mW/cm²
General Population MPE (@160'):	0.3839%
Occupational MPE (@160'):	0.0798%

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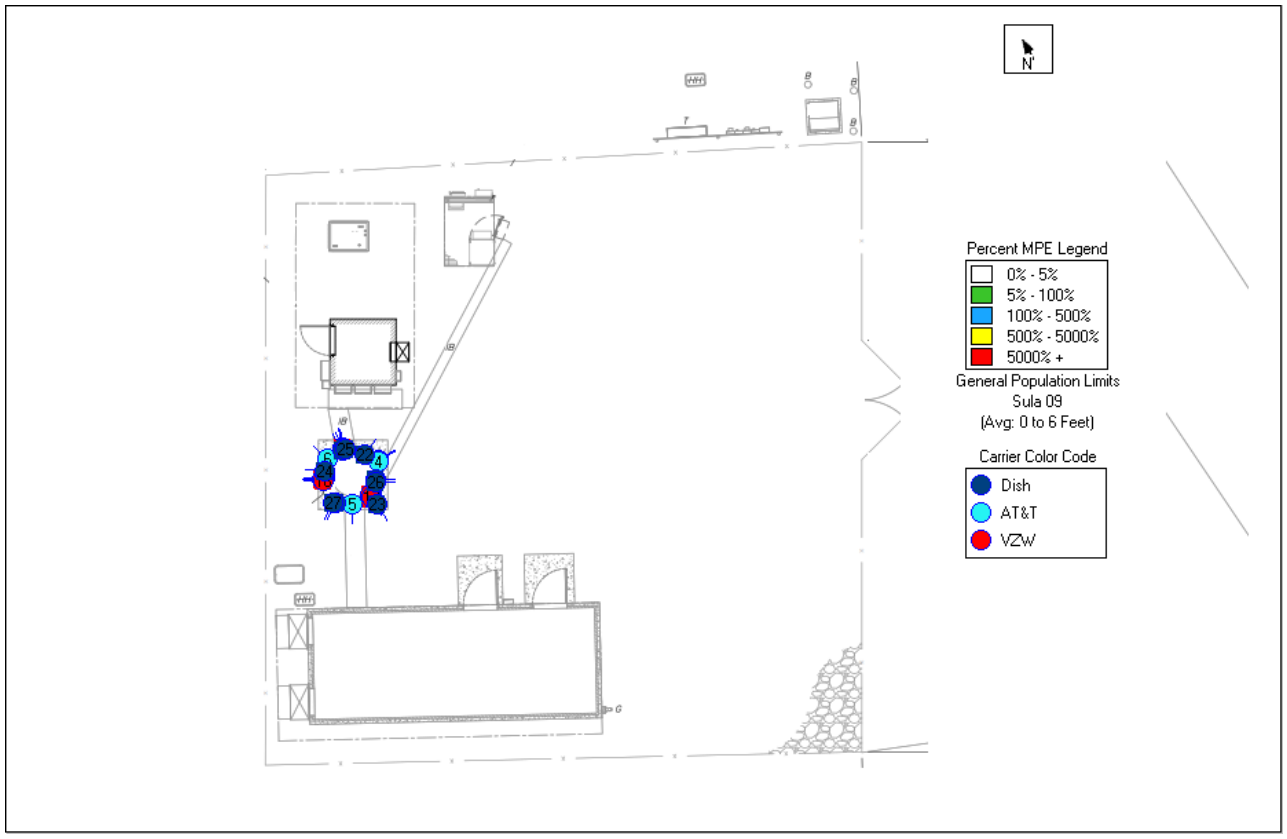
Appendix 3.2 MPE Limit Study



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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

DOCKET NO. 403 - Cellco Partnership d/b/a Verizon Wireless application for a Certificate of Environmental Compatibility and	}	Connecticut
Public Need for the construction, maintenance and operation of a telecommunications facility located at 174 South Grand Street,	}	Siting
Suffield, Connecticut.	}	Council

December 2, 2010

Decision and Order

Pursuant to the foregoing Findings of Fact and Opinion, the Connecticut Siting Council (Council) finds that the effects associated with the construction, maintenance, and operation of a telecommunications facility, including effects on the natural environment; ecological integrity and balance; public health and safety; scenic, historic, and recreational values; forests and parks; air and water purity; and fish and wildlife are not disproportionate, either alone or cumulatively with other effects, when compared to need, are not in conflict with the policies of the State concerning such effects, and are not sufficient reason to deny the application, and therefore directs that a Certificate of Environmental Compatibility and Public Need, as provided by General Statutes § 16-50k, be issued to Cellco Partnership d/b/a Verizon Wireless, hereinafter referred to as the Certificate Holder, for a telecommunications facility located at 174 South Grand Street, Suffield, Connecticut.

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

1. The tower shall be constructed as a monopole, no taller than necessary to provide the proposed telecommunications services, sufficient to accommodate the antennas of the Certificate Holder and other entities, both public and private, but such tower shall not exceed a height of 120 feet above ground level.

2. The Certificate Holder shall prepare a Development and Management (D&M) Plan for this site in compliance with Sections 16-50j-75 through 16-50j-77 of the Regulations of Connecticut State Agencies. The D&M Plan shall be served on the Town of Suffield for comment, and all parties and intervenors as listed in the service list, and submitted to and approved by the Council prior to the commencement of facility construction and shall include:
    a) a final site plan(s) of site development to include specifications for the tower, tower foundation, antennas, equipment compound, radio equipment, access road, utility line, and landscaping; and
    b) construction plans for site clearing, grading, landscaping, water drainage, and erosion and sedimentation controls consistent with the 2002 Connecticut Guidelines for Soil Erosion and Sediment Control, as amended.

3. Prior to the commencement of operation, the Certificate Holder shall provide the Council worst-case modeling of the electromagnetic radio frequency power density of all proposed entities' antennas at the closest point of uncontrolled access to the tower base, consistent with Federal Communications Commission, Office of Engineering and Technology, Bulletin No. 65, August 1997. The Certificate Holder shall ensure a recalculated report of the electromagnetic radio frequency power density be submitted to the Council if and when circumstances in operation cause a change in power density above the levels calculated and provided pursuant to this Decision and Order.

4. Upon the establishment of any new State or federal radio frequency standards applicable to frequencies of this facility, the facility granted herein shall be brought into compliance with such standards.

5. The Certificate Holder shall permit public or private entities to share space on the proposed tower for fair consideration, or shall provide any requesting entity with specific legal, technical, environmental, or economic reasons precluding such tower sharing.

6. The Certificate Holder shall provide reasonable space on the tower for no compensation for any Town of Suffield public safety services (police, fire and medical services), provided such use can be accommodated and is compatible with the structural integrity of the tower.

7. Unless otherwise approved by the Council, if the facility authorized herein is not fully constructed with at least one fully operational wireless telecommunications carrier providing wireless service within eighteen months from the date of the mailing of the Council's Findings of Fact, Opinion, and Decision and Order (collectively called "Final Decision"), this Decision and Order shall be void, and the Certificate Holder shall dismantle the tower and remove all associated equipment or reapply for any continued or new use to the Council before any such use is made. The time between the filing and resolution of any appeals of the Council's Final Decision shall not be counted in calculating this deadline. Authority to monitor and modify this schedule, as necessary, is delegated to the Executive Director. The Certificate Holder shall provide written notice to the Executive Director of any schedule changes as soon as is practicable.

8. Any request for extension of the time period referred to in Condition 7 shall be filed with the Council not later than 60 days prior to the expiration date of this Certificate and shall be served on all parties and intervenors, as listed in the service list, and the Town of Suffield. Any proposed modifications to this Decision and Order shall likewise be so served.

9. If the facility ceases to provide wireless services for a period of one year, this Decision and Order shall be void, and the Certificate Holder shall dismantle the tower and remove all associated equipment or reapply for any continued or new use to the Council before any such use is made.

10. Any nonfunctioning antenna, and associated antenna mounting equipment, on this facility shall be removed within 60 days of the date the antenna ceased to function.

11. In accordance with Section 16-50j-77 of the Regulations of Connecticut State Agencies, the Certificate Holder shall provide the Council with written notice two weeks prior to the commencement of site construction activities. In addition, the Certificate Holder shall provide the Council with written notice of the completion of site construction, and the commencement of site operation.

12. The Certificate Holder shall remit timely payments associated with annual assessments and invoices submitted by the Council for expenses attributable to the facility under Conn. Gen. Stat. §16-50v.

13. This Certificate may be transferred in accordance with Conn. Gen. Stat. §16-50k(b), provided both the Certificate Holder/transferor and the transferee are current with payments to the Council for their respective annual assessments and invoices under Conn. Gen. Stat. §16-50v. In addition, both the Certificate Holder/transferor and the transferee shall provide the Council a written agreement as to the entity responsible for any quarterly assessment charges under Conn. Gen. Stat. §16-50v(b)(2) that may be associated with this facility.

14. The Certificate Holder shall maintain the facility and associated equipment in a reasonable physical and operational condition, including but not limited to, the tower, tower foundation, antennas, equipment compound, radio equipment, access road, utility line and landscaping, that is consistent with this Decision and Order and a Development and Management Plan to be approved by the Council.

Pursuant to General Statutes **§** 16-50p, the Council hereby directs that a copy of the Findings of Fact, Opinion, and Decision and Order be served on each person listed below, and notice of issuance shall be published in The Journal Inquirer.

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

The parties and intervenors to this proceeding are:

Applicant	**Its Representative**
Cellco Partnership d/b/a Verizon Wireless	Kenneth C. Baldwin, Esq. Robinson & Cole LLP 280 Trumbull Street Hartford, CT 06103-3597

EXHIBIT 7

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Tracking Number:	**1Z9Y45030338545257**
Ship To:	BILL HAWKINS DIRECTOR OF PLANNING 83 MOUNTAIN ROAD SUFFIELD, CT 060782041 US
Number of Packages:	1
UPS Service:	UPS Ground
Package Weight:	1.0 LBS
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Ship To:	DARIAN PAGANELLI 174 SOUTH GRAND STREET WEST SUFFIELD, CT 060933413 US
Number of Packages:	1
UPS Service:	UPS Ground
Package Weight:	1.0 LBS
Reference Number:	14843266

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