

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

February 23, 2024

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

**RE: Notice of Exempt Modification // Site: NAUGATUCK II (ATC: 302526)
585 South Main Street, Naugatuck, CT 06770
N 41.478469 // W -73.048442**

Dear Ms. Bachman,

Cellco Partnership d/b/a Verizon Wireless currently maintains twelve (12) antenna at the 40-ft level on the existing 94 ft Tower, located at 585 South Main Street, Naugatuck, CT. The tower is owned by American Tower. Verizon Wireless proposed modification involves swapping out the existing antenna's and RRH's and installing new antenna and RRH along with (1) new Hybrid cable and (2) LCC4 within the ground cabinet on Verizon Wireless existing antenna platform and mounting assembly as described on the project documents.

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 Naugatuck'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 January 8, 2024, by A.T Engineering Services, LLC, a structural analysis dated December 1, 2023, by American Tower Corp., and a structural mount analysis by Colliers Engineering and Design dated January 25, 2024, and Non-Ionizing Electromagnetic Radiation (NIER) Study dated August 29, 202 by Tower Engineering Professionals.

1. The proposed modifications will not result in an increase in the height of the existing structure.
2. The proposed modifications will not require the extension of the site boundary.

3. The proposed modifications will not increase noise levels at the facility by six decibels or more, or to levels that exceed state and local criteria.
4. The operation of the new antennas will not increase radio frequency emissions at the facility to a level at or above the Federal Communications Commission safety standard.
5. The proposed modifications will not cause a change or alteration in the physical or environmental characteristics of the site.
6. The existing structure and its foundation can support the proposed loading, as shown in the attached structural analysis and a structural mount analysis, pursuant to certain conditions defined therein. Design and engineering are fully illustrated within final construction drawings.

For the foregoing reasons, Verizon Wireless respectfully submits that the proposed modifications to the above referenced telecommunications facility constitute an exempt modification under R.C.S.A. § 16-50j-72(b)(2).

Sincerely,

Derek Maheux

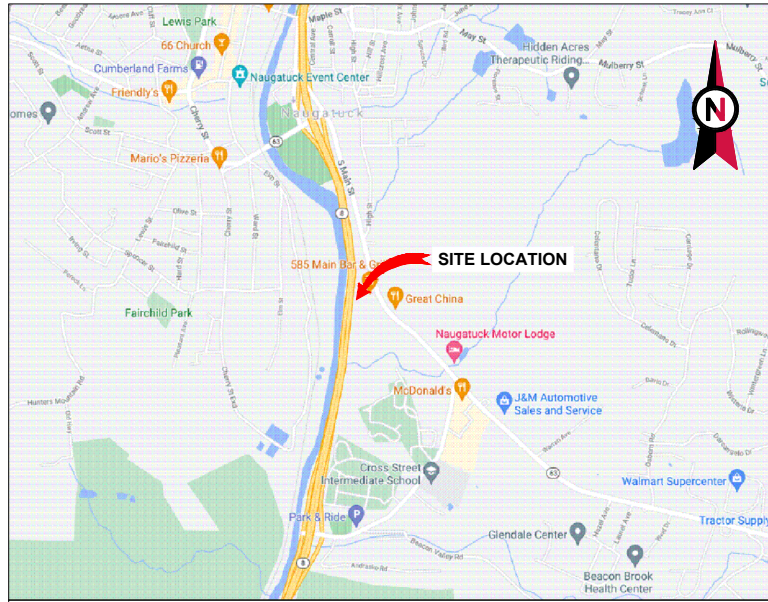
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Attachments: Exhibit 1 – Construction Drawings
Exhibit 2 – Property Card and GIS
Exhibit 3 – Structural Analysis
Exhibit 4 – Mount Analysis
Exhibit 5 – RF Emissions Analysis Report Evaluation
Exhibit 6 – Available Original Tower Approval Records
Exhibit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

cc: N. Warren Hess III – Mayor – Chief Elected Official
Lori Rotella – Town Planner - as P&Z official
The Office LLC – as ground owner
American Tower Corporation - as tower owner

EXHIBIT 1





VICINITY MAP



AMERICAN TOWER®

ATC SITE NAME: NAUGATUCK (TELEPHONE POLE)
 ATC SITE NUMBER: 302526
 VERIZON PACE NUMBERS: N/A
 VERIZON SITE ID: 324436
 VERIZON FA CODE: N/A
 VERIZON SITE NAME: NAUGATUCK II
 SITE ADDRESS: 585 SOUTH MAIN STREET
 NAUGATUCK, CT 06770



LOCATION MAP

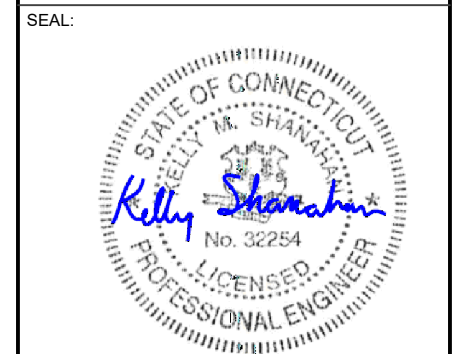
AMERICAN TOWER®
ATC TOWER SERVICES
 3500 REGENCY PARKWAY
 SUITE 100
 CARY, NC 27518
 PHONE: (919) 468-0112
 COA: C01229-00



ASCEND CONSULTING GROUP
 1284 GAP NEWPORT PIKE, SUITE 100
 AVONDALE, PA 19311

REV.	DESCRIPTION	BY	DATE
A	PRELIM	BJC	06/10/21
0	FINAL	TMM	09/24/21
1	REVISED PER NEW MA	SMH	07/11/23
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4	CODE UPDATE	SMH	02/23/24

ATC SITE NUMBER:
 302526
 ATC SITE NAME:
 NAUGATUCK (TELEPHONE POLE)
 VERIZON WIRELESS SITE NAME:
 NAUGATUCK II
 SITE ADDRESS:
 585 SOUTH MAIN STREET
 NAUGATUCK, CT 06770



DATE DRAWN:	06/10/21
ATC JOB NO:	13683578
CUSTOMER ID:	467142
CUSTOMER #:	N/A

TITLE SHEET

SHEET NUMBER:
G-001
 REVISION:
4

VERIZON WIRELESS
 ANTENNA AMENDMENT PLAN

COMPLIANCE CODE	PROJECT SUMMARY	PROJECT DESCRIPTION	SHEET INDEX				
ALL WORK SHALL BE PERFORMED AND MATERIALS INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNMENT AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THESE CODES. 1. 2022 CONNECTICUT BUILDING CODE 2. 2021 INTERNATIONAL BUILDING CODE (IBC) 3. ANSI/TIA-222-H 4. 2022 CONNECTICUT STATE FIRE SAFETY CODE 5. 2020 NATIONAL ELECTRICAL CODE 6. BASIC WIND SPEED: 118 MPH (VULT; RISK CATEGORY II; EXPOSURE CATEGORY B) 7. CITY/COUNTY ORDINANCES	<u>SITE ADDRESS:</u> 585 SOUTH MAIN STREET NAUGATUCK, CT 06770 COUNTY: NEW HAVEN <u>GEOGRAPHIC COORDINATES:</u> LATITUDE: 41.478469° LONGITUDE: -73.048442° GROUND ELEVATION: 262' AMSL	THE PROPOSED PROJECT INCLUDES MODIFYING GROUND BASED AND TOWER MOUNTED EQUIPMENT AS INDICATED PER BELOW: <u>TOWER WORK:</u> REMOVE (12) ANTENNA(S), (6) RRU(S), (1) OVP, (1) HYBRID CABLE, (2) COAX CABLE(S) INSTALL (12) ANTENNA(S), (6) RRU(S), (1) OVP, (2) HYBRID CABLE(S) EXISTING TO REMAIN (12) COAX CABLE(S) <u>GROUND WORK:</u> INSTALL (2) LCC4	SHEET NO:	DESCRIPTION:	REV:	DATE:	BY:
	<u>PROJECT TEAM</u> <u>TOWER OWNER:</u> AMERICAN TOWER 10 PRESIDENTIAL WAY WOBURN, MA 01801 <u>ENGINEER:</u> ASCEND CONSULTING GROUP 1284 GAP NEWPORT PIKE, SUITE 100 AVONDALE, PA 19311 <u>PROPERTY OWNER:</u> A MELTEL LLC 381 LOVEJOY TRAIL CULLODEN, WV 25510	<u>PROJECT NOTES</u> 1. THE FACILITY IS UNMANNED. 2. A TECHNICIAN WILL VISIT THE SITE APPROXIMATELY ONCE A MONTH FOR ROUTINE INSPECTION AND MAINTENANCE. 3. THE PROJECT WILL NOT RESULT IN ANY SIGNIFICANT LAND DISTURBANCE OR EFFECT OF STORM WATER DRAINAGE. 4. NO SANITARY SEWER, POTABLE WATER OR TRASH DISPOSAL IS REQUIRED. 5. HANDICAP ACCESS IS NOT REQUIRED.					
<u>UTILITY COMPANIES</u> POWER COMPANY: UTILITY COMPANY DIRECT PHONE: TBD TELEPHONE COMPANY: TBD PHONE: TBD		<u>PROJECT LOCATION DIRECTIONS</u> FROM HARTFORD TAKE I-84 WEST TO RT 8 SOUTH. TAKE EXIT FOR SOUTH MAIN STREET (RT 63). TURN LEFT OFF EXIT THEN RIGHT ONTO RT 63. FOLLOW UP HILL AND TURN RIGHT INTO CLUB PARKING LOT JUST BEFORE CURVE. TOWER IS BEHIND RESTAURANT.					



Know what's below.
 Call before you dig.

GENERAL CONSTRUCTION NOTES:

1. OWNER FURNISHED MATERIALS, VERIZON WIRELESS "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 WIRELESS 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 WIRELESS REP PRIOR TO REMEDIAL OR CORRECTIVE ACTION. ANY SUCH REMEDIAL ACTION SHALL REQUIRE WRITTEN APPROVAL BY THE VERIZON WIRELESS REP PRIOR TO PROCEEDING.
13. EACH CONTRACTOR SHALL COOPERATE WITH THE VERIZON WIRELESS 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 WIRELESS 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 WIRELESS 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 WIRELESS 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 WIRELESS REP TO DETERMINE WHAT, IF ANY, ITEMS WILL BE PROVIDED. ALL ITEMS NOT PROVIDED SHALL BE PROVIDED AND INSTALLED BY THE CONTRACTOR. CONTRACTOR

WILL INSTALL ALL ITEMS PROVIDED.

22. PRIOR TO SUBMISSION OF BID, CONTRACTOR SHALL COORDINATE WITH VERIZON WIRELESS REP TO DETERMINE IF ANY PERMITS WILL BE OBTAINED BY CONTRACTOR. ALL REQUIRED PERMITS NOT OBTAINED BY VERIZON WIRELESS MUST BE OBTAINED, AND PAID FOR, BY THE CONTRACTOR.
23. CONTRACTOR SHALL INSTALL ALL SITE SIGNAGE IN ACCORDANCE WITH VERIZON WIRELESS SPECIFICATIONS AND REQUIREMENTS.
24. CONTRACTOR SHALL SUBMIT ALL SHOP DRAWINGS TO VERIZON WIRELESS FOR REVIEW AND APPROVAL PRIOR TO FABRICATION.
25. ALL EQUIPMENT SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S SPECIFICATIONS AND LOCATED ACCORDING TO VERIZON WIRELESS 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 WIRELESS REP A MINIMUM OF 48 HOURS IN ADVANCE OF POURING CONCRETE OR BACKFILLING ANY UNDERGROUND UTILITIES, FOUNDATIONS OR SEALING ANY WALL, FLOOR OR ROOF PENETRATIONS FOR ENGINEERING REVIEW AND APPROVAL.
28. CONTRACTOR SHALL BE RESPONSIBLE FOR SITE SAFETY INCLUDING COMPLIANCE WITH ALL APPLICABLE OSHA STANDARDS AND RECOMMENDATIONS AND SHALL PROVIDE ALL NECESSARY SAFETY DEVICES INCLUDING PPE AND PPM AND CONSTRUCTION DEVICES SUCH AS WELDING AND FIRE PREVENTION, TEMPORARY SHORING, SCAFFOLDING, TRENCH BOXES/SLOPING, BARRIERS, ETC.
29. THE CONTRACTOR SHALL PROTECT AT HIS OWN EXPENSE, ALL EXISTING FACILITIES AND SUCH OF HIS NEW WORK LIABLE TO INJURY DURING THE CONSTRUCTION PERIOD. ANY DAMAGE CAUSED BY NEGLIGENCE ON THE PART OF THIS CONTRACTOR OR HIS REPRESENTATIVES, OR BY THE ELEMENTS DUE TO NEGLIGENCE ON THE PART OF THIS CONTRACTOR OR HIS REPRESENTATIVES, EITHER TO THE EXISTING WORK, OR TO HIS WORK OR THE WORK OF ANY OTHER CONTRACTOR, SHALL BE REPAIRED AT HIS EXPENSE TO THE OWNER'S SATISFACTION.
30. ALL WORK SHALL BE INSTALLED IN A FIRST CLASS, NEAT AND WORKMANLIKE MANNER BY MECHANICS SKILLED IN THE TRADE INVOLVED. THE QUALITY OF WORKMANSHIP SHALL BE SUBJECT TO THE APPROVAL OF THE VERIZON WIRELESS REP. ANY WORK FOUND BY THE VERIZON WIRELESS REP TO BE OF INFERIOR QUALITY AND/OR WORKMANSHIP SHALL BE REPLACED AND/OR REWORKED AT CONTRACTOR EXPENSE UNTIL APPROVAL IS OBTAINED.
31. IN ORDER TO ESTABLISH STANDARDS OF QUALITY AND PERFORMANCE, ALL TYPES OF MATERIALS LISTED HEREINAFTER BY MANUFACTURER'S NAMES AND/OR MANUFACTURER'S CATALOG NUMBER SHALL BE PROVIDED BY THESE MANUFACTURERS AS SPECIFIED.
32. VERIZON WIRELESS FURNISHED EQUIPMENT SHALL BE PICKED-UP AT THE VERIZON WIRELESS WAREHOUSE, NO LATER THAN 48HR AFTER BEING NOTIFIED INSURED, STORED, UNCRATE, PROTECTED AND INSTALLED BY THE CONTRACTOR WITH ALL APPURTENANCES REQUIRED TO PLACE THE EQUIPMENT IN OPERATION, READY FOR USE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE EQUIPMENT AFTER PICKING IT UP.
33. VERIZON WIRELESS 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 WIRELESS OR THEIR ARCHITECT/ENGINEER.

SPECIAL CONSTRUCTION

ANTENNA INSTALLATION NOTES:

1. WORK INCLUDED:
 - A. ANTENNA AND COAXIAL CABLES ARE FURNISHED BY VERIZON WIRELESS 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 AND
 - B. INSTALL ANTENNA AS INDICATE ON DRAWINGS AND VERIZON WIRELESS SPECIFICATIONS.
 - C. INSTALL GALVANIZED STEEL ANTENNA MOUNTS AS INDICATED ON DRAWINGS
 - D. INSTALL FURNISHED GALVANIZED STEEL OR ALUMINUM WAVEGUIDE.
 - E. CONTRACTOR SHALL PROVIDE FOUR (4) SETS OF SWEEP TESTS USING ANRITZU-PACKARD 8713B RF SCALAR NETWORK ANALYZER. SUBMIT FREQUENCY DOMAIN REFLECTOMETER(FDR) TESTS RESULTS TO THE PROJECT MANAGER. SWEEP TESTS SHALL BE AS PER ATTACHED RFS "MINIMUM FIELD TESTING RECOMMENDED FOR ANTENNA AND HELIAX COAXIAL CABLE SYSTEMS" DATED 10/5/93. TESTING SHALL BE PERFORMED BY AN INDEPENDENT TESTING SERVICE AND BE BOUND AND SUBMITTED WITHIN ONE WEEK OF WORK COMPLETION.
 - F. INSTALL COAXIAL CABLES AND TERMINATING BETWEEN ANTENNAS AND EQUIPMENT PER MANUFACTURER'S RECOMMENDATIONS. WEATHERPROOF ALL CONNECTIONS BETWEEN THE ANTENNA AND EQUIPMENT PER MANUFACTURER'S REQUIREMENTS. TERMINATE ALL COAXIAL CABLE THREE (3) FEET IN EXCESS OF ENTRY PORT LOCATION UNLESS OTHERWISE STATED.
 - G. ANTENNA AND COAXIAL CABLE GROUNDING:
2. ALL EXTERIOR #6 GREEDED GROUND WIRE "DAISY CHAIN" CONNECTIONS ARE TO BE WEATHER SEALED WITH RFS CONNECTORS/SPLICE WEATHERPROOFING KIT #221213 OR

EQUAL.

3. ALL COAXIAL CABLE GROUNDING KITS ARE TO BE INSTALLED ON STRAIGHT RUNS OF COAXIAL CABLE (NOT WITHIN BENDS)

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



ASCEND CONSULTING GROUP
1284 GAP NEWPORT PIKE, SUITE 100
AVONDALE, PA 19311

REV.	DESCRIPTION	BY	DATE
A	PRELIM	BJC	06/10/21
0	FINAL	TMM	09/24/21
1	REVISED PER NEW MA	SMH	07/11/23
2	PER TOWER COMMENTS	SMH	08/23/23
3	PER RFDS	SMH	01/08/24
4	CODE UPDATE	SMH	02/23/24

ATC SITE NUMBER:
302526

ATC SITE NAME:
NAUGATUCK (TELEPHONE POLE)

VERIZON WIRELESS SITE NAME:
NAUGATUCK II

SITE ADDRESS:
585 SOUTH MAIN STREET
NAUGATUCK, CT 06770



DATE DRAWN:	06/10/21
ATC JOB NO:	13683578
CUSTOMER ID:	467142
CUSTOMER #:	N/A

GENERAL NOTES

SHEET NUMBER: G-002	REVISION: 4
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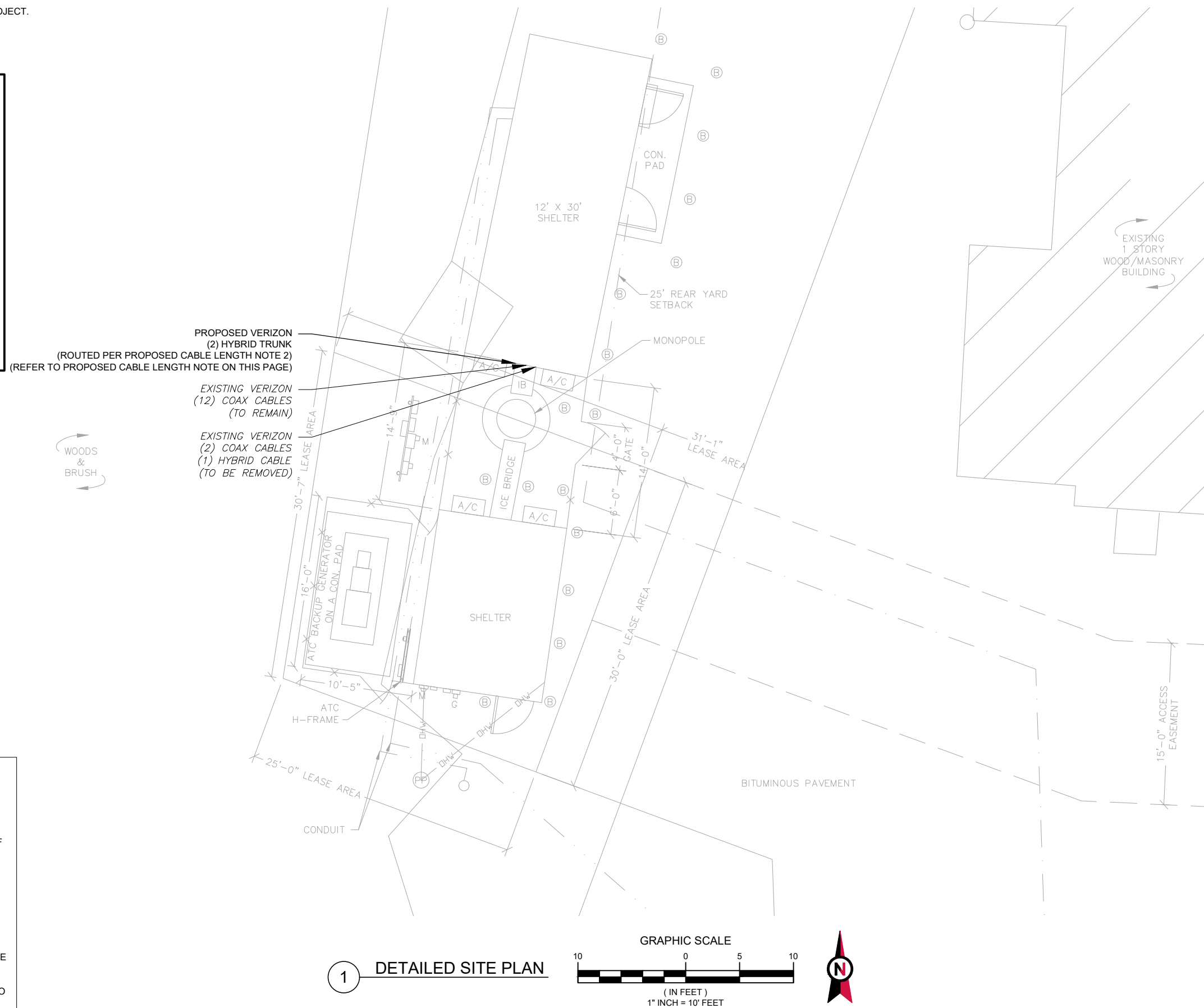
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SITE PLAN NOTES:

- 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.
- 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.
- NO ELECTRICAL SCOPE IS INCLUDED IN THIS PROJECT.

LEGEND

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



PROPOSED VERIZON
(2) HYBRID TRUNK
(ROUTED PER PROPOSED CABLE LENGTH NOTE 2)
(REFER TO PROPOSED CABLE LENGTH NOTE ON THIS PAGE)

EXISTING VERIZON
(12) COAX CABLES
(TO REMAIN)

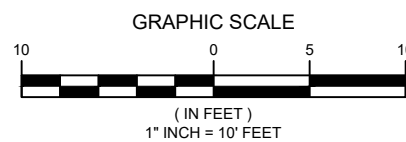
EXISTING VERIZON
(2) COAX CABLES
(1) HYBRID CABLE
(TO BE REMOVED)

WOODS
&
BRUSH

PROPOSED CABLE LENGTH:

- ESTIMATED LENGTH OF PROPOSED CABLE IS **60'**. ESTIMATED LENGTH OF CABLE WAS PROVIDED BY CUSTOMER OR CALCULATED BY ADDING THE RAD CENTER AND THE DISTANCE FROM THE SHELTER ENTRY PLATE TO THE TOWER (ALONG THE ICE BRIDGE) AND A SAFETY FACTOR MEASUREMENT OF 15% (OF THE TWO PREVIOUS VALUES). CDS DEFER TO GREATEST CABLE LENGTH.
- ROUTE PROPOSED CABLES ALONG SAME PATH AS EXISTING CABLES AND IN ACCORDANCE WITH STRUCTURAL ANALYSIS. WHERE POSSIBLE UTILIZE EXISTING CABLE SUPPORT STRUCTURES AS PROVIDED FOR CARRIER TO ADEQUATELY SECURE CABLES, USING EITHER APPROPRIATELY SIZED STAINLESS STEEL SNAP-INS OR MOUNTING HARDWARE AND BRACKETS AS SPECIFIED BY CABLE MANUFACTURER. OTHERWISE, ATTACH CABLES TO HORIZONTAL OR DIAGONAL TOWER MEMBERS USING PROPOSED STAINLESS STEEL ADAPTERS (DO NOT ATTACH TO TOWER LEG).

1 DETAILED SITE PLAN



ASCEND CONSULTING GROUP
1284 GAP NEWPORT PIKE, SUITE 100
AVONDALE, PA 19311

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SITE ADDRESS:
585 SOUTH MAIN STREET
NAUGATUCK, CT 06770

SEAL:



DATE DRAWN:	06/10/21
ATC JOB NO:	13683578
CUSTOMER ID:	467142
CUSTOMER #:	N/A

DETAILED SITE PLAN

SHEET NUMBER:	REVISION:
C-101	4



ASCEND CONSULTING GROUP
 1284 GAP NEWPORT PIKE, SUITE 100
 AVONDALE, PA 19311

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 NAUGATUCK, CT 06770

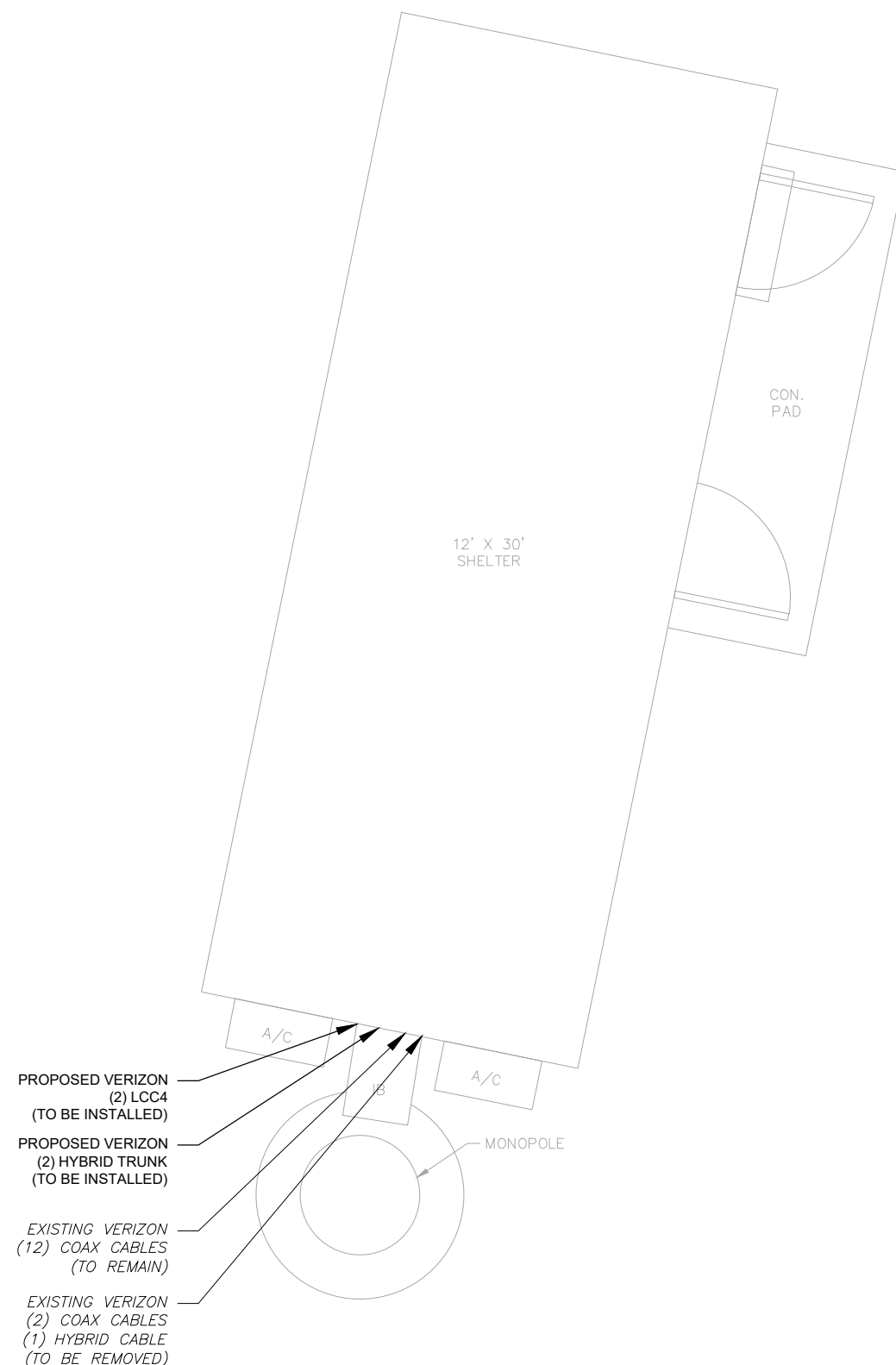
SEAL:



DATE DRAWN:	06/10/21
ATC JOB NO:	13683578
CUSTOMER ID:	467142
CUSTOMER #:	N/A

DETAILED EQUIPMENT LAYOUT

SHEET NUMBER:	REVISION:
C-102	4

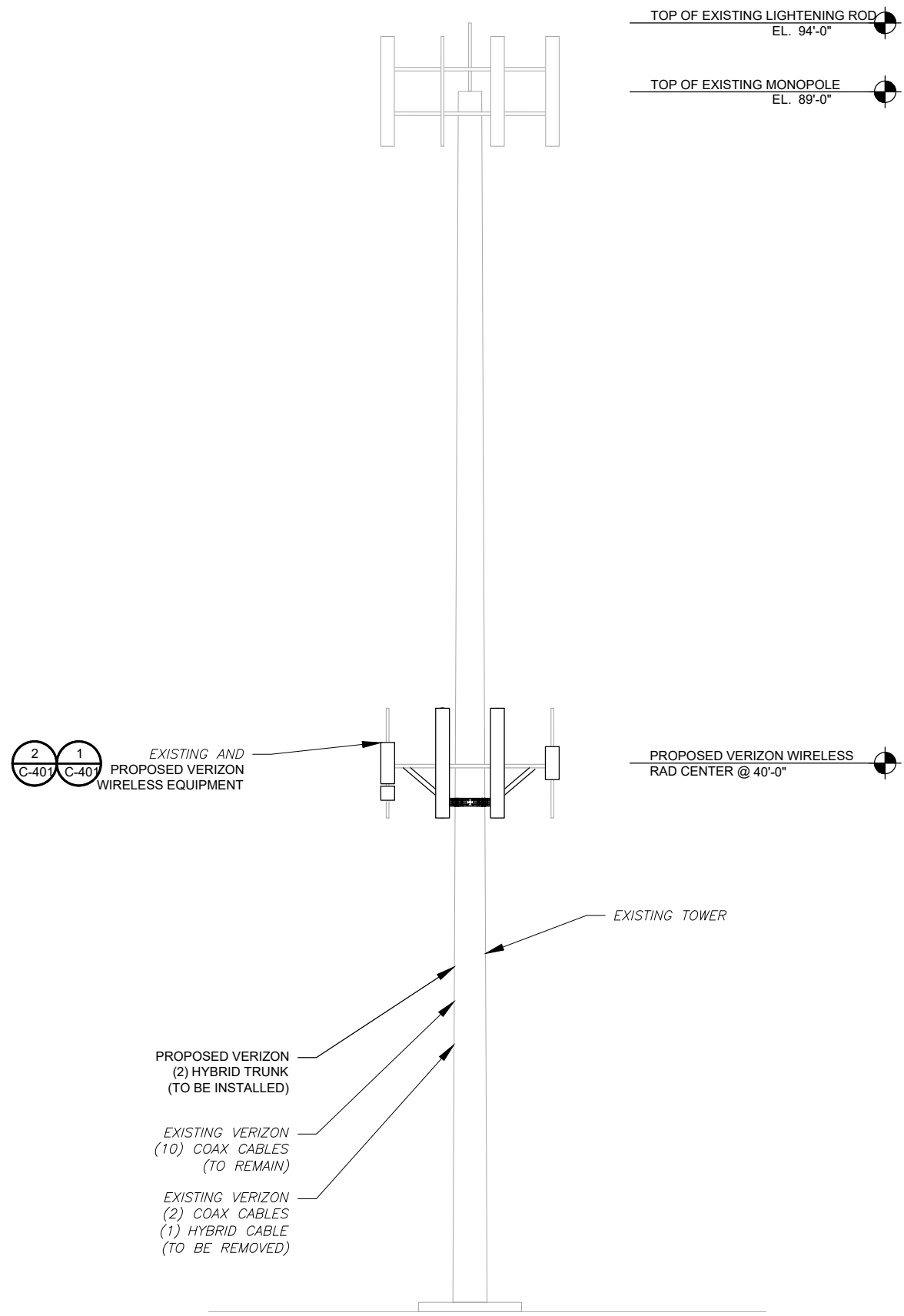


1 DETAILED EQUIPMENT PLAN

0 5' 10'

SCALE: 1"=5' (11X17)
 1"=2.5' (22X34)





PER MOUNT ANALYSIS COMPLETED BY COLLIERS ENGINEERING & DESIGN DATED 01/30/24, THE EXISTING MOUNT MUST BE MODIFIED TO ADEQUATELY SUPPORT THE PROPOSED LOADING. THE MOUNT MODIFICATION PROPOSED IN THE MOUNT ANALYSIS, INCLUDED AT THE END OF THIS PLAN SET, MUST BE INSTALLED PRIOR TO THE INSTALLATION OF THE PROPOSED ANTENNAS AND OTHER EQUIPMENT

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

1 TOWER ELEVATION
SCALE: N.T.S.



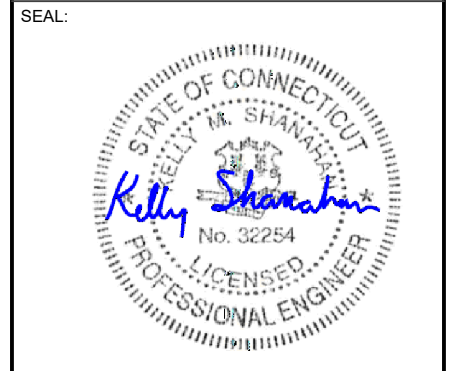
AMERICAN TOWER®
ATC TOWER SERVICES
 3500 REGENCY PARKWAY
 SUITE 100
 CARY, NC 27518
 PHONE: (919) 468-0112
 COA: C01229-00



ASCEND CONSULTING GROUP
 1284 GAP NEWPORT PIKE, SUITE 100
 AVONDALE, PA 19311

REV.	DESCRIPTION	BY	DATE
A	PRELIM	BJC	06/10/21
0	FINAL	TMM	09/24/21
1	REVISED PER NEW MA	SMH	07/11/23
2	PER TOWER COMMENTS	SMH	08/23/23
3	PER RFDS	SMH	01/08/24
4	CODE UPDATE	SMH	02/23/24

ATC SITE NUMBER:
302526
 ATC SITE NAME:
NAUGATUCK (TELEPHONE POLE)
 VERIZON WIRELESS SITE NAME:
NAUGATUCK II
 SITE ADDRESS:
 585 SOUTH MAIN STREET
 NAUGATUCK, CT 06770



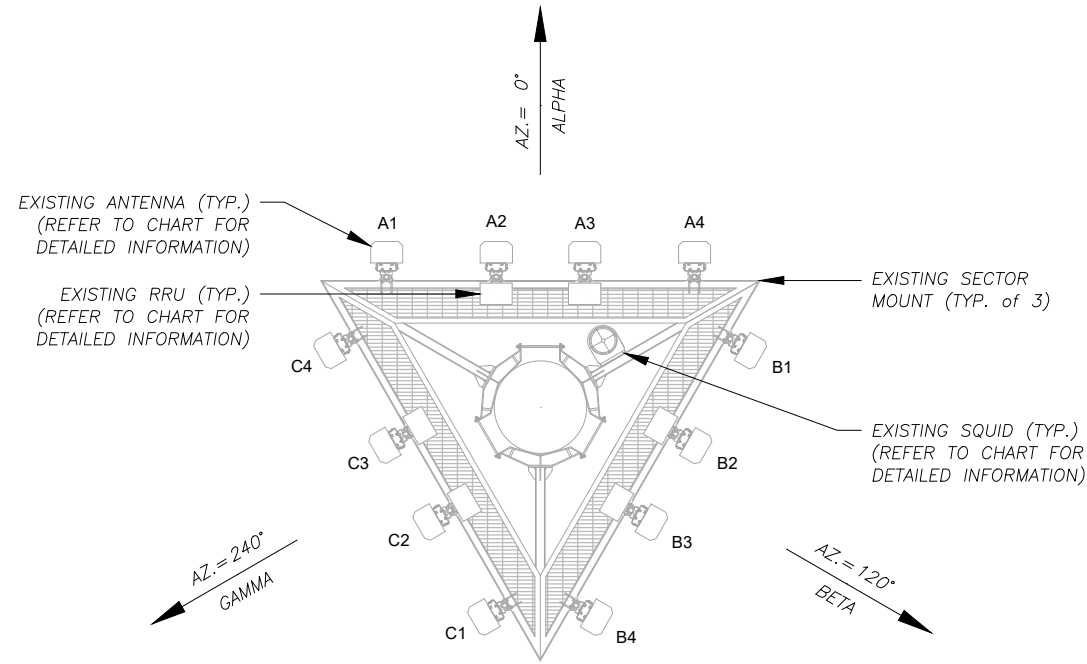
DATE DRAWN:	06/10/21
ATC JOB NO:	13683578
CUSTOMER ID:	467142
CUSTOMER #:	N/A

TOWER ELEVATION

SHEET NUMBER:	REVISION:
C-201	4

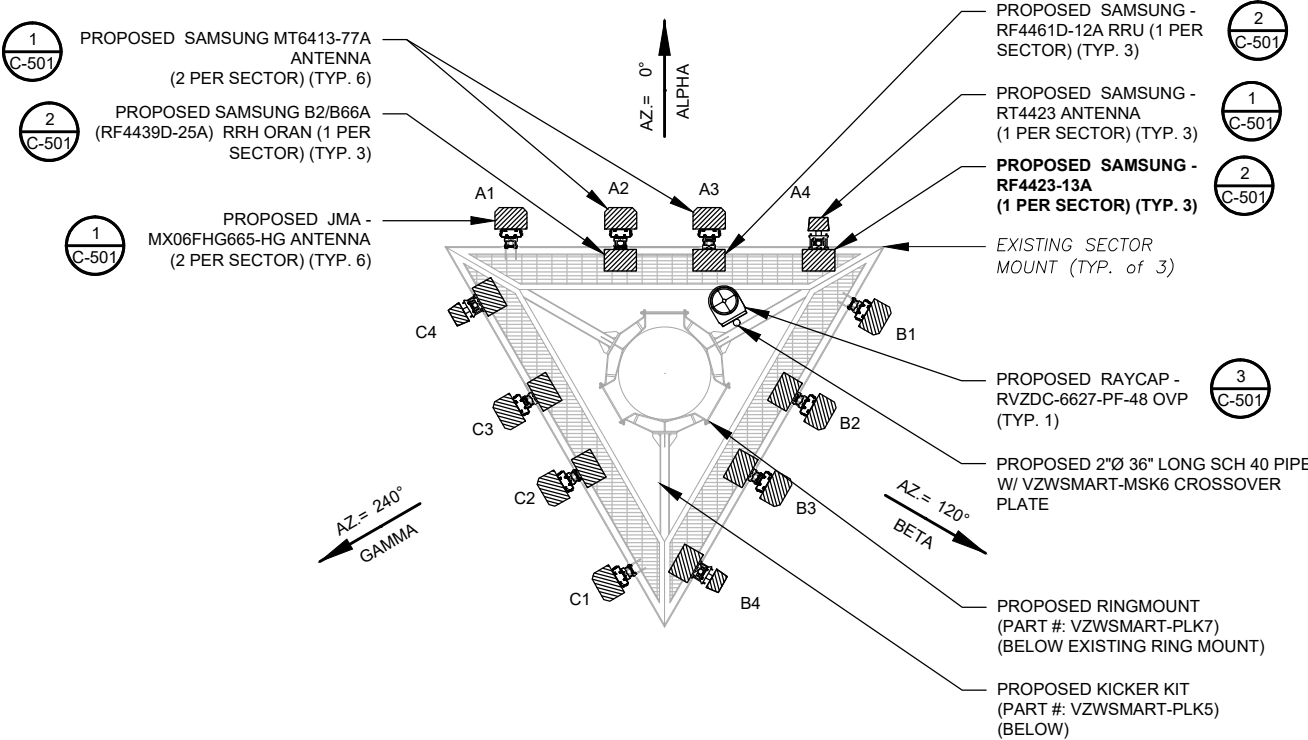
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EXISTING CONFIGURATIONS ARE BASED ON RFDS.
CONTRACTOR TO VERIFY EXISTING CONDITIONS.



1 CURRENT ANTENNA PLAN
SCALE: N.T.S.

PER MOUNT ANALYSIS COMPLETED BY COLLIERS ENGINEERING & DESIGN DATED 01/30/24, THE EXISTING MOUNT MUST BE MODIFIED TO ADEQUATELY SUPPORT THE PROPOSED LOADING. THE MOUNT MODIFICATION PROPOSED IN THE MOUNT ANALYSIS, INCLUDED AT THE END OF THIS PLAN SET, MUST BE INSTALLED PRIOR TO THE INSTALLATION OF THE PROPOSED ANTENNAS AND OTHER EQUIPMENT



2 FINAL ANTENNA PLAN
SCALE: N.T.S.

AMERICAN TOWER®
ATC TOWER SERVICES
3500 REGENCY PARKWAY
SUITE 100
CARY, NC 27518
PHONE: (919) 468-0112
COA: C01229-00

ASCEND CONSULTING GROUP
1284 GAP NEWPORT PIKE, SUITE 100
AVONDALE, PA 19311

REV.	DESCRIPTION	BY	DATE
A	PRELIM	BJC	06/10/21
0	FINAL	TMM	09/24/21
1	REVISED PER NEW MA	SMH	07/11/23
2	PER TOWER COMMENTS	SMH	08/23/23
3	PER RFDS	SMH	01/08/24
4	CODE UPDATE	SMH	02/23/24

ATC SITE NUMBER:
302526
ATC SITE NAME:
NAUGATUCK (TELEPHONE POLE)
VERIZON WIRELESS SITE NAME:
NAUGATUCK II
SITE ADDRESS:
585 SOUTH MAIN STREET
NAUGATUCK, CT 06770

SEAL:

verizon

DATE DRAWN: 06/10/21
ATC JOB NO: 13683578
CUSTOMER ID: 467142
CUSTOMER #: N/A

RF SCHEDULE AND ANTENNA INSTALLATION

SHEET NUMBER: **C-401** REVISION: **4**

EXISTING ANTENNA SCHEDULE								
LOCATION			ANTENNA SUMMARY				NON ANTENNA SUMMARY	
SECTOR	RAD	AZ	POS	ANTENNA	BAND	STATUS	ADDITIONAL TOWER MOUNTED EQUIPMENT	STATUS
ALPHA	40'	0°	A1	DECIBEL - DB844H65E-XYA	CDMA 850	RMV	-	-
			A2	COMMSCOPE - SBNHH-1D65B	CDMA 850	RMV	(1) UHBA B13 RRH 4X30	RMV
			A3	COMMSCOPE - SBNHH-1D65B	CDMA 850	RMV	(1) UHIC B4 RRH 2X60-4R	RMV
			A4	DECIBEL - DB844H65E-XYA	CDMA 850	RMV	-	-
BETA	40'	120°	B1	DECIBEL - DB844H65E-XYA	CDMA 850	RMV	-	-
			B2	COMMSCOPE - SBNHH-1D65B	CDMA 850	RMV	(1) UHBA B13 RRH 4X30	RMV
			B3	COMMSCOPE - SBNHH-1D65B	CDMA 850	RMV	(1) UHIC B4 RRH 2X60-4R	RMV
			B4	DECIBEL - DB844H65E-XYA	CDMA 850	RMV	-	-
GAMMA	40'	240°	C1	DECIBEL - DB844H65E-XYA	CDMA 850	RMV	-	-
			C2	COMMSCOPE - SBNHH-1D65B	CDMA 850	RMV	(1) UHBA B13 RRH 4X30	RMV
			C3	COMMSCOPE - SBNHH-1D65B	CDMA 850	RMV	(1) UHIC B4 RRH 2X60-4R	RMV
			C4	DECIBEL - DB844H65E-XYA	CDMA 850	RMV	-	-

NOTES

- CONFIRM WITH VERIZON WIRELESS REP FOR APPLICABLE UPDATES/REVISIONS AND MOST RECENT RFDS FOR NSN CONFIGURATION (CONFIG). GC TO CAP ALL UNUSED PORTS.
- CONFIRM SPACING OF PROPOSED EQUIP DOES NOT CAUSE TOWER CONFLICTS NOR IMPEDE TOWER CLIMBING PEGS.
- THE ANTENNA ORIENTATION PLAN IS A SCHEMATIC. ATC DID NOT CONFIRM EXISTING SITE CONDITIONS INCLUDING, BUT NOT LIMITED TO, ANTENNA AZIMUTHS, MOUNT CONFIGURATIONS AND TOWER ORIENTATION. SCALES SHOWN ARE FOR REFERENCE ONLY AND EXISTING DIMENSIONS ARE APPROXIMATE. THE CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS PRIOR TO INSTALLATION AND NOTIFY ATC OF ANY DISCREPANCIES.
- CONTRACTOR TO ENSURE PROPER SEPARATION IN ACCORDANCE WITH VERIZON'S FIRSTNET REQUIREMENTS (SEE SHEET R-602)

PROPOSED ANTENNA SCHEDULE									
LOCATION			ANTENNA SUMMARY				NON ANTENNA SUMMARY		
SECTOR	RAD	AZ	POS	ANTENNA	BAND	STATUS	ADDITIONAL TOWER MOUNTED EQUIPMENT	STATUS	
ALPHA	40'	0°	A1	SAMSUNG - MT6413-77A	CBAND NR	ADD	-	-	
			A2	JMA - MX06FHG665-HG	LTE 700, LTE 850, LTE 1900, LTE AWS	ADD	(1) B2/B66A RH ORAN (RF4439D-25A)	ADD	
			A3	JMA - MX06FHG665-HG	LTE 700, LTE 850, LTE 1900, LTE AWS	ADD	(1) RF4461D-13A	ADD	
			A4	SAMSUNG -RT4423	LTE CBRS 5G	ADD	(1) RF4423-48B	ADD	
BETA	40'	120°	B1	SAMSUNG - MT6413-77A	CBAND NR	ADD	-	-	
			B2	JMA - MX06FHG665-HG	LTE 700, LTE 850, LTE 1900, LTE AWS	ADD	(1) B2/B66A RH ORAN (RF4439D-25A)	ADD	
			B3	JMA - MX06FHG665-HG	LTE 700, LTE 850, LTE 1900, LTE AWS	ADD	(1) RF4461D-13A	ADD	
			B4	SAMSUNG -RT4423	LTE CBRS 5G	ADD	(1) RF4423-48B	ADD	
GAMMA	40'	240°	C1	SAMSUNG - MT6413-77A	CBAND NR	ADD	-	-	
			C2	JMA - MX06FHG665-HG	LTE 700, LTE 850, LTE 1900, LTE AWS	ADD	(1) B2/B66A RH ORAN (RF4439D-25A)	ADD	
			C3	JMA - MX06FHG665-HG	LTE 700, LTE 850, LTE 1900, LTE AWS	ADD	(1) RF4461D-13A	ADD	
			C4	SAMSUNG -RT4423	LTE CBRS 5G	ADD	(1) RF4423-48B	ADD	

EXISTING FIBER DISTRIBUTION/SQUID		EXISTING CABLING SUMMARY			
MODEL NUMBER	STATUS	COAX	DC	FIBER	STATUS
(1) OVP	RMV	(2) 1 5/8"	-	(1) HYBRID	RMV
-	-	(12) 1 5/8"	-	-	RMN
-	-	-	-	-	-

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'

3 EQUIPMENT SCHEDULES

PROPOSED FIBER DISTRIBUTION/SQUID		PROPOSED CABLING SUMMARY			
MODEL NUMBER	STATUS	COAX	DC	FIBER	STATUS
(1) RVZDC-6627-PF-48	ADD	-	-	(2) 6X12 HYBERIFLEX LI	ADD
-	-	(12) 1 5/8"	-	-	RMN
-	-	-	-	-	-



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3	PER RFDS	SMH	01/08/24
4	CODE UPDATE	SMH	02/23/24

ATC SITE NUMBER:
302526
 ATC SITE NAME:
NAUGATUCK (TELEPHONE POLE)
 VERIZON WIRELESS SITE NAME:
NAUGATUCK II
 SITE ADDRESS:
 585 SOUTH MAIN STREET
 NAUGATUCK, CT 06770

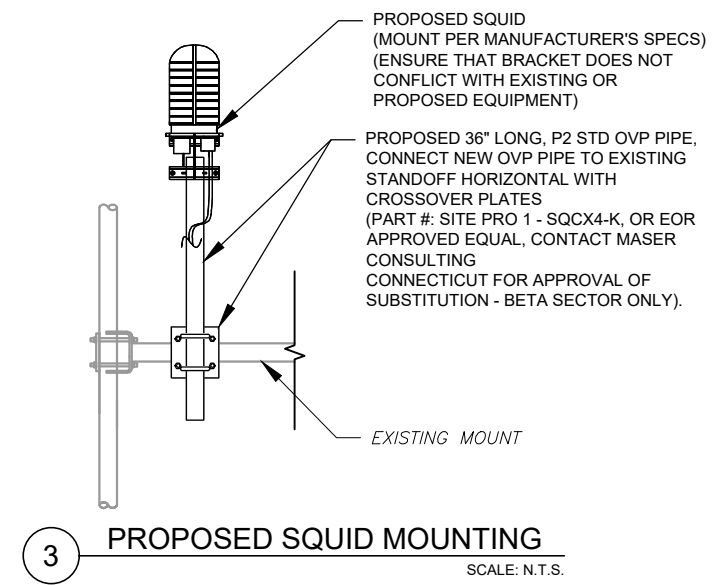
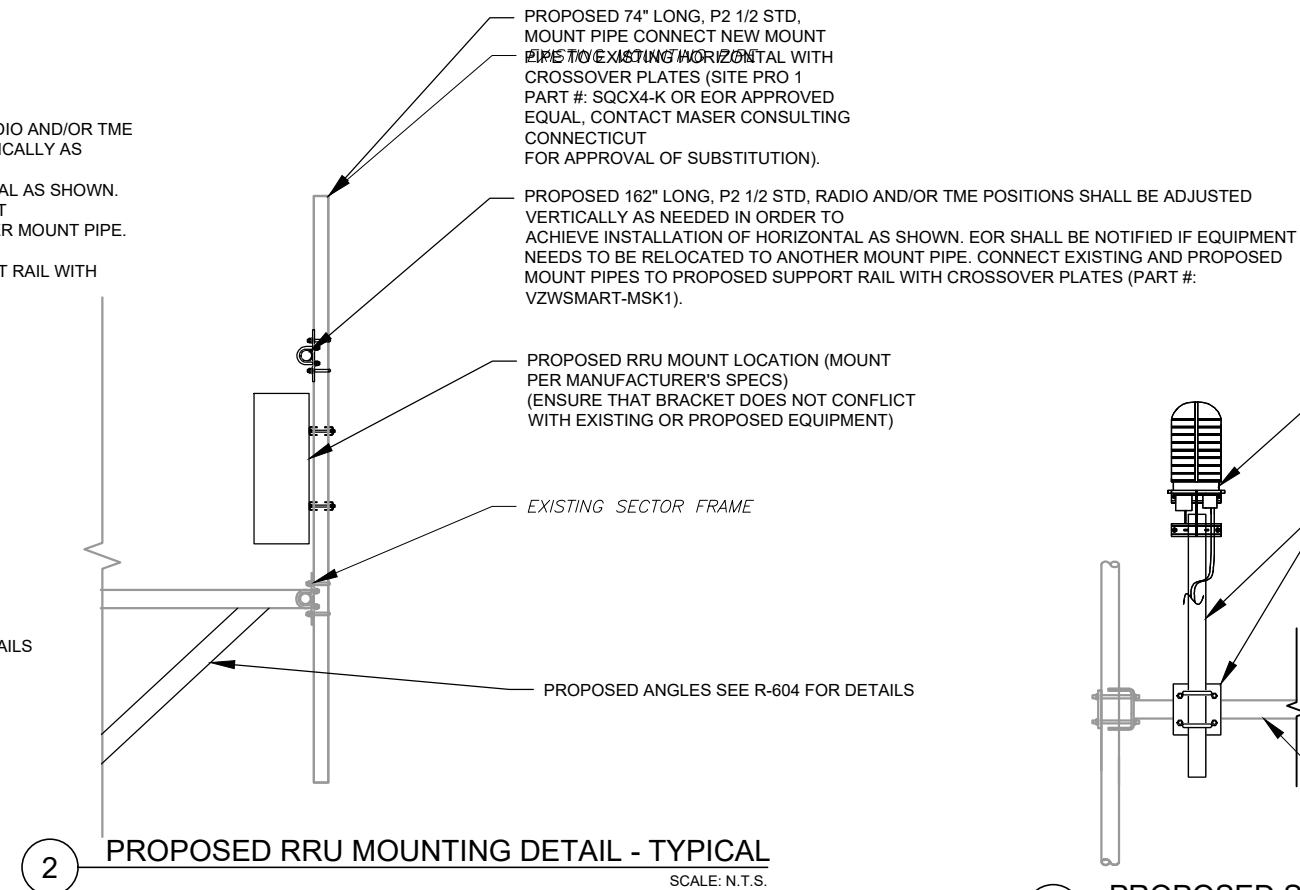
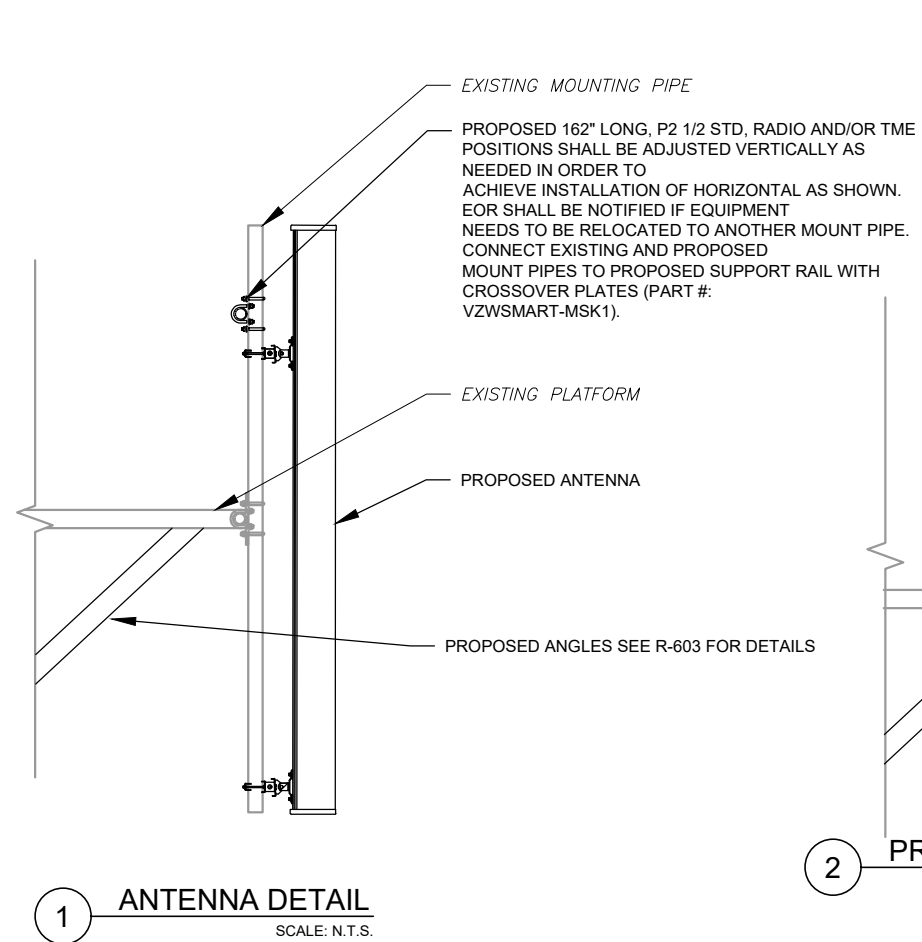
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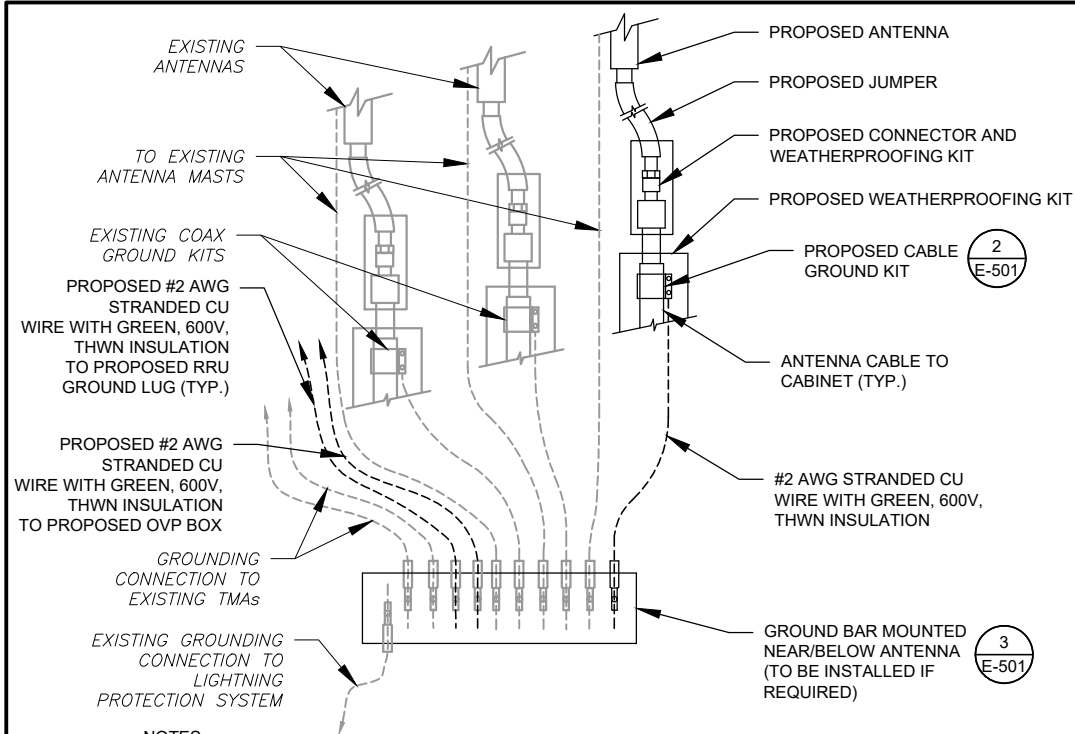
DATE DRAWN:	06/10/21
ATC JOB NO:	13683578
CUSTOMER ID:	467142
CUSTOMER #:	N/A

**CONSTRUCTION
 DETAILS**

SHEET NUMBER:	REVISION:
C-501	4



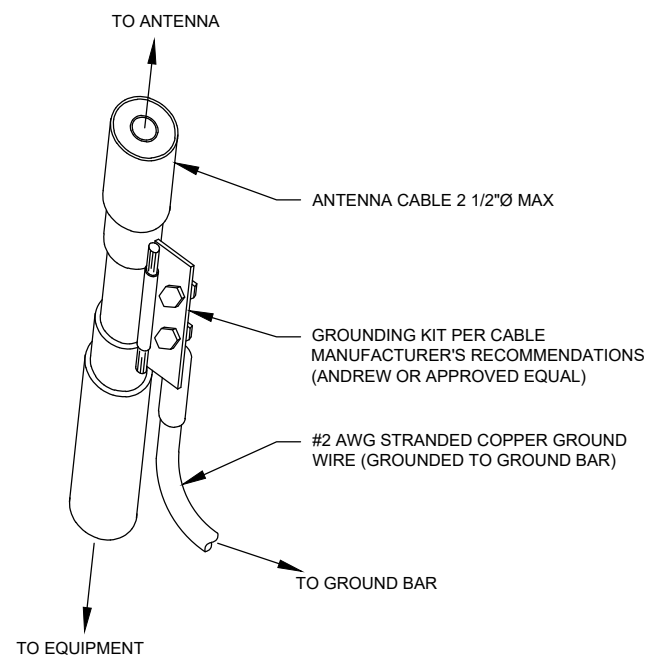
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NOTES:

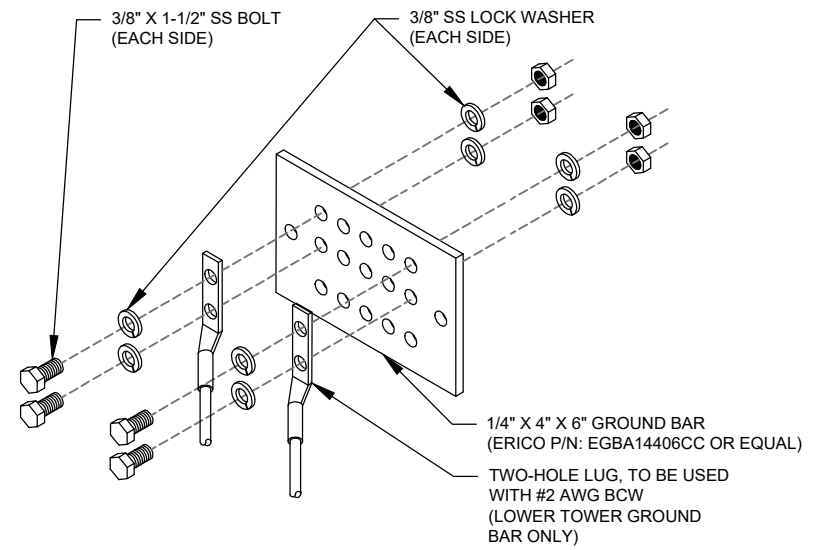
1. THIS DETAIL IS INTENDED TO SHOW THE GENERAL GROUNDING REQUIREMENTS. SLIGHT ADJUSTMENTS MAY BE REQUIRED BASED ON EXISTING SITE CONDITIONS. THE CONTRACTOR SHALL MAKE FIELD ADJUSTMENTS AS NEEDED AND INFORM THE CONSTRUCTION MANAGER OF ANY CONFLICTS.
2. SITE GROUNDING SHALL COMPLY WITH VERIZON WIRELESS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

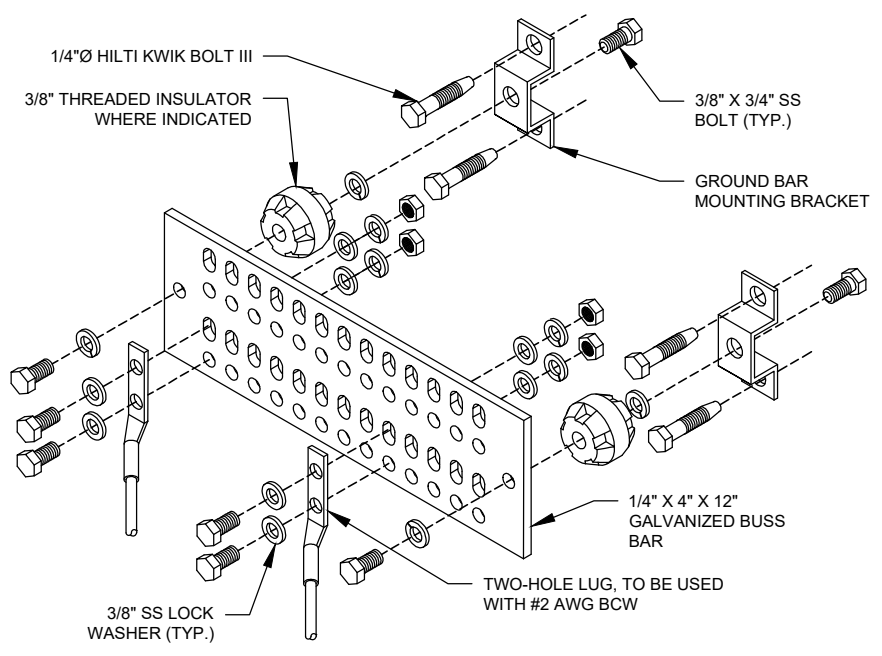
2 CABLE GROUND KIT CONNECTION DETAIL
SCALE: N.T.S.



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.

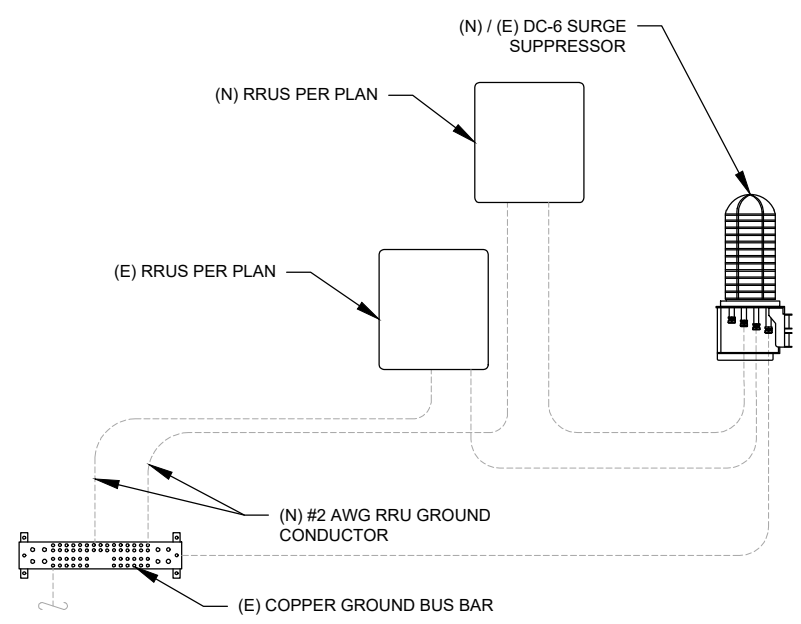
3 TOWER GROUND BAR DETAIL
SCALE: N.T.S.



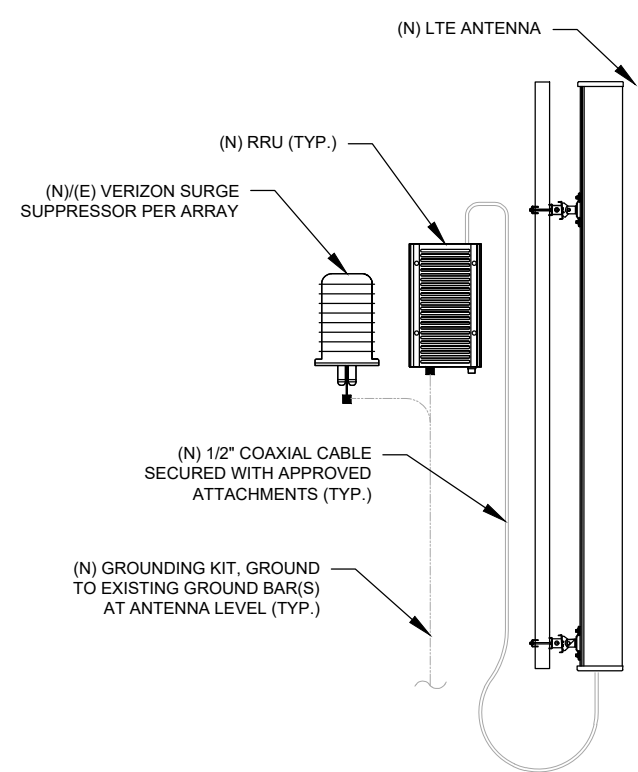
GROUND BAR NOTES

1. GROUND KITS COME WITH ALL HARDWARE, NUTS, BOLTS, WASHERS, ETC. EXCEPT THE STRUCTURAL MOUNTING MEMBER(S).
2. GROUND BAR SHALL BE BOLTED TO STRUCTURAL MEMBER OR ANCHORED TO CONCRETE SLAB W/ HILTI KWIK BOLT III.

4 MAIN GROUND BAR DETAIL
SCALE: N.T.S.



5 RRU GROUNDING
SCALE: N.T.S.



6 ANTENNA/RRU GROUNDING
SCALE: N.T.S.

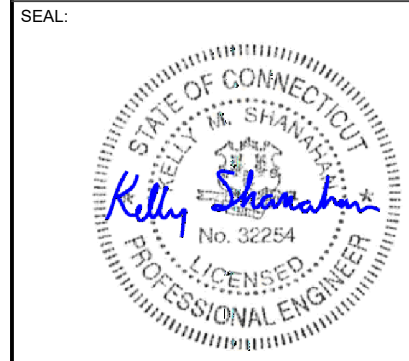
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 3500 REGENCY PARKWAY
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 CARY, NC 27518
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ASCEND CONSULTING GROUP
 1284 GAP NEWPORT PIKE, SUITE 100
 AVONDALE, PA 19311

REV.	DESCRIPTION	BY	DATE
A	PRELIM	BJC	06/10/21
0	FINAL	TMM	09/24/21
1	REVISED PER NEW MA	SMH	07/11/23
2	PER TOWER COMMENTS	SMH	08/23/23
3	PER RFDS	SMH	01/08/24
4	CODE UPDATE	SMH	02/23/24

ATC SITE NUMBER:
302526
 ATC SITE NAME:
NAUGATUCK (TELEPHONE POLE)
 VERIZON WIRELESS SITE NAME:
NAUGATUCK II
 SITE ADDRESS:
 585 SOUTH MAIN STREET
 NAUGATUCK, CT 06770



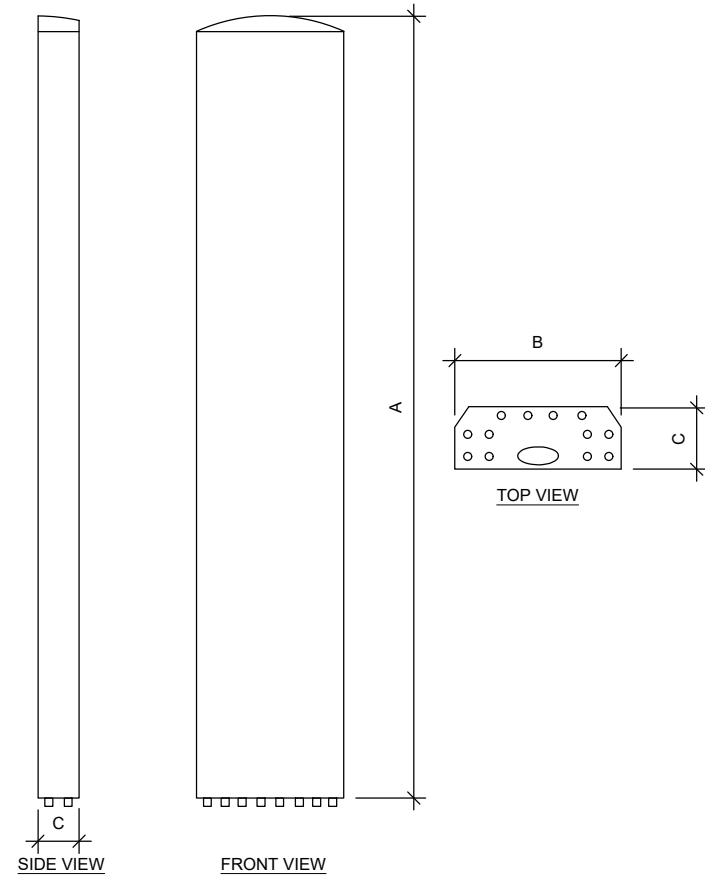
verizon

DATE DRAWN:	06/10/21
ATC JOB NO:	13683578
CUSTOMER ID:	467142
CUSTOMER #:	N/A

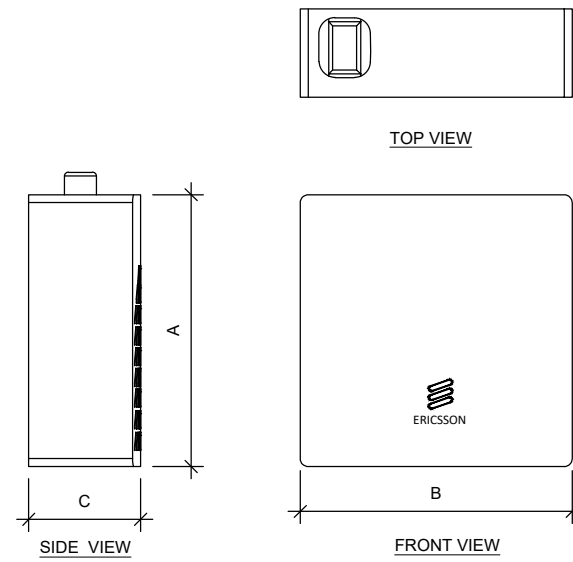
GROUNDING DETAILS

SHEET NUMBER:
E-501
 REVISION:
4

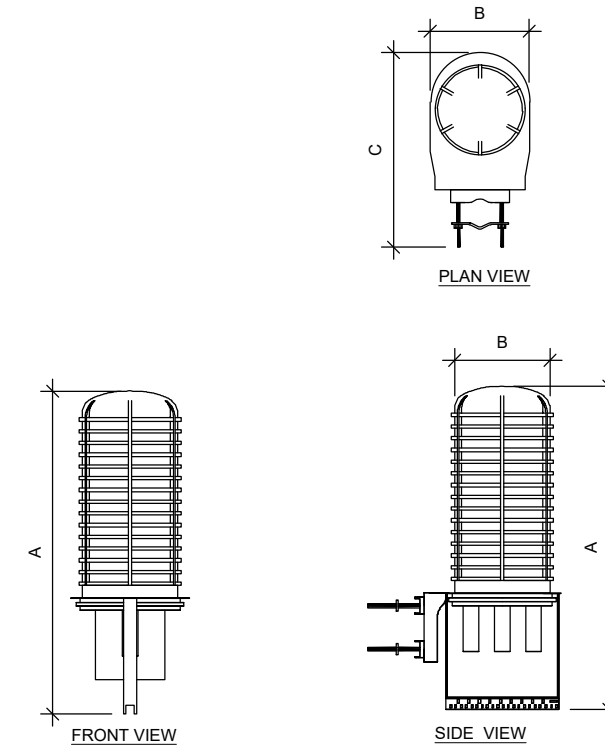
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ANTENNA SPECIFICATIONS				
ANTENNA MODEL	A	B	C	WEIGHT (LBS)
SAMSUNG MT6413-77A	29.5"	15.8"	5.1"	55.1
JMA MX06FHG665-HG	95.9	12.2	7.5	46.2
SAMSUNG RT4423	12"	8.7"	1.5"	3.3



RRU SPECIFICATIONS				
RRU MODEL	A	B	C	WEIGHT (LBS)
SAMSUNG B2/B66A RRH ORAN (RF4439D-25A)	15"	15"	10"	84.4
JMA MX06FHG665-HG	15"	15"	10.7"	60.0
SAMSUNG RT4423	13.9"	8.6"	4.2"	18.6






RAYCAP SPECIFICATIONS				
RAYCAP MODEL	A	B	C	WEIGHT (LBS)
RVZDC-6627-PF-48	29.5"	16.5"	12.6"	32.0

1 EQUIPMENT SPECIFICATIONS
SCALE: N.T.S.

SUPPLEMENTAL

SHEET NUMBER: R-601
REVISION: 4

LEGEND:

-  PROPOSED
-  RELOCATED
-  EXISTING

MOUNT MODIFICATION SCHEDULE				
NO.	ELEVATION	QUANTITY	DESCRIPTION	NOTES
1	40'-0"	1	PROPOSED KICKER KIT (PART #: VZWSMART-PLK5)2	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). SEE GENERAL NOTE B.
2		1	PROPOSED 36" LONG, PIPE 2 SCH40 OVP PIPE	CONNECT NEW OVP PIPE TO EXISTING STANDOFF HORIZONTAL WITH BACK TO BACK CROSSOVER PLATE (VZWSMART-MSK6). BETA SECTOR ONLY.

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



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SCALE:	AS SHOWN	PROJECT NO.:	21777895
REV	DATE	DESCRIPTION	DRAWN BY / CHECKED BY
1	11/15/2023	ISSUED FOR CONSTRUCTION	CL / DK
0	07/28/2023	ISSUED FOR CONSTRUCTION	MIG / DK

COLLIERS ENGINEERING & DESIGN CT, P.C.
 C.T. JPC0000131

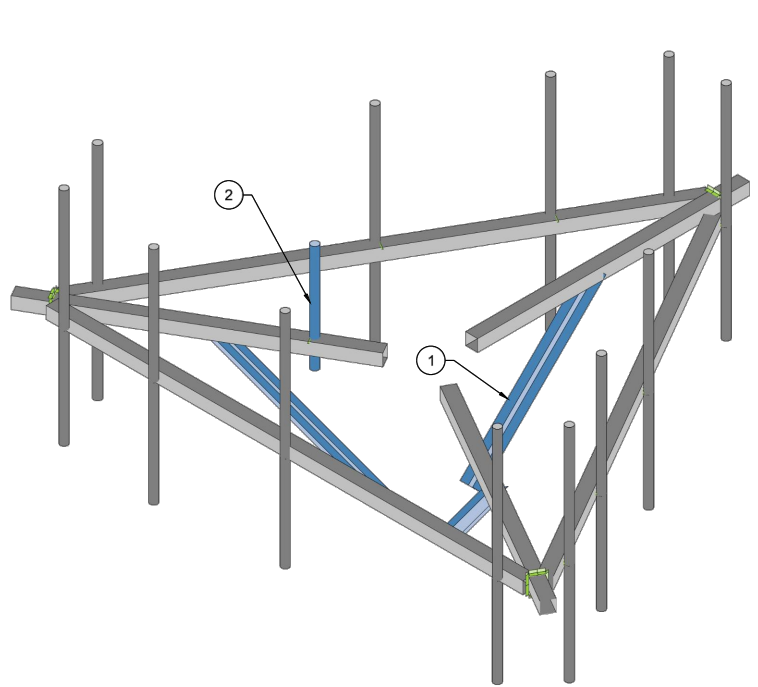
IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF THE RESPONSIBLE LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.

SITE NAME:
 NAUGATUCK 2 CT
 5000383776
 585 SOUTH MAIN STREET
 NAUGATUCK, CT 06770
 NEW HAVEN COUNTY

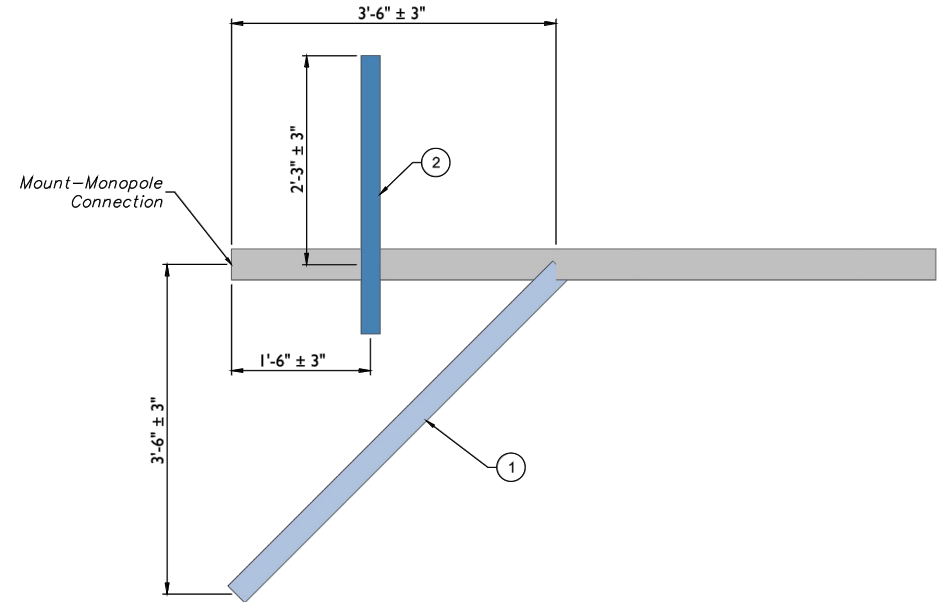
STAMFORD
 1055 Washington Boulevard
 Stamford, CT 06901
 Phone: 203.324.0800
 COLLIER ENGINEERING & DESIGN CT, P.C.
 DOING BUSINESS AS M&E CONSULTING

SHEET TITLE:
 MODIFICATION DETAILS
SHEET NUMBER:
 SS-1

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.



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



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

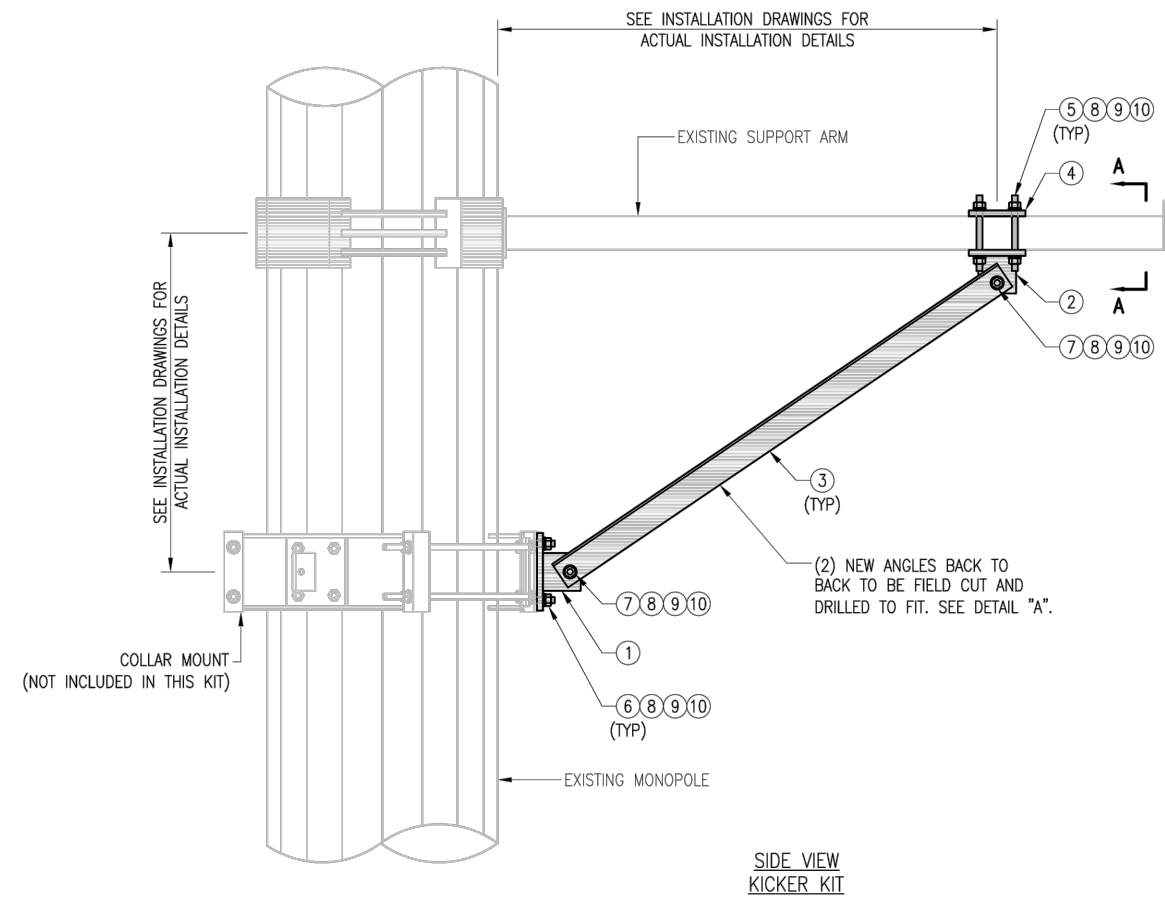
NOTE: THIS SHEET WAS CREATED BY OTHERS AND PROVIDED AT THE REQUEST OF THE CUSTOMER WITHOUT EDIT.

SUPPLEMENTAL

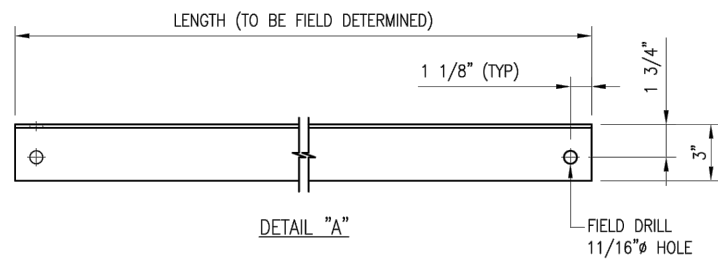
SHEET NUMBER:
R-602

REVISION:
4

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.



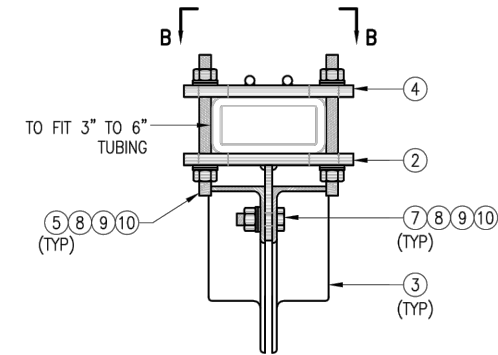
SIDE VIEW
KICKER KIT



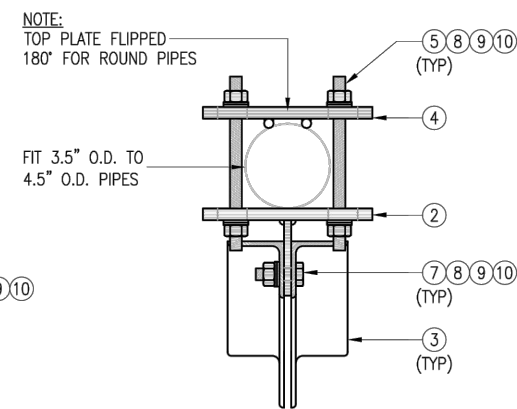
DETAIL "A"

FIELD DRILL
11/16" Ø HOLE

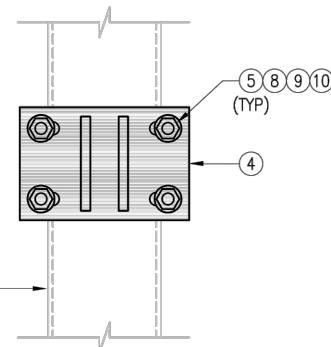
- NOTES:
1. ALL HOLES ARE 11/16" DIA. U.N.O
 2. HOT-DIPPED GALVANIZED PER ASTM A123.
 3. FIT UP TO 6" SQ. TUBING OR 4 1/2" O.D. PIPE



SECTION "A-A"
RECT. HSS MOUNTING



SECTION "A-A"
ROUND PIPE MOUNTING



SECTION "B-B"

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

FOR REFERENCE
ONLY

DRAWN BY: MN CHECKED BY: HMA/KW

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

SHEET TITLE:

VZWSMART-PLK5
KICKER KIT

SHEET NUMBER: REV #:

VZWSMART-PLK5 0

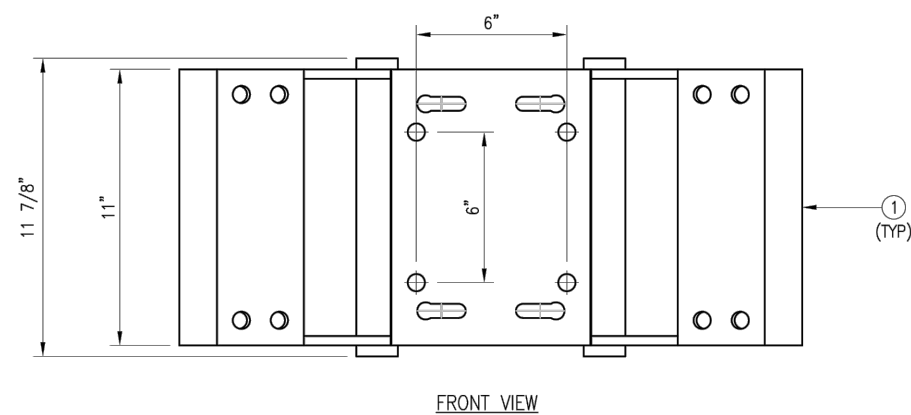
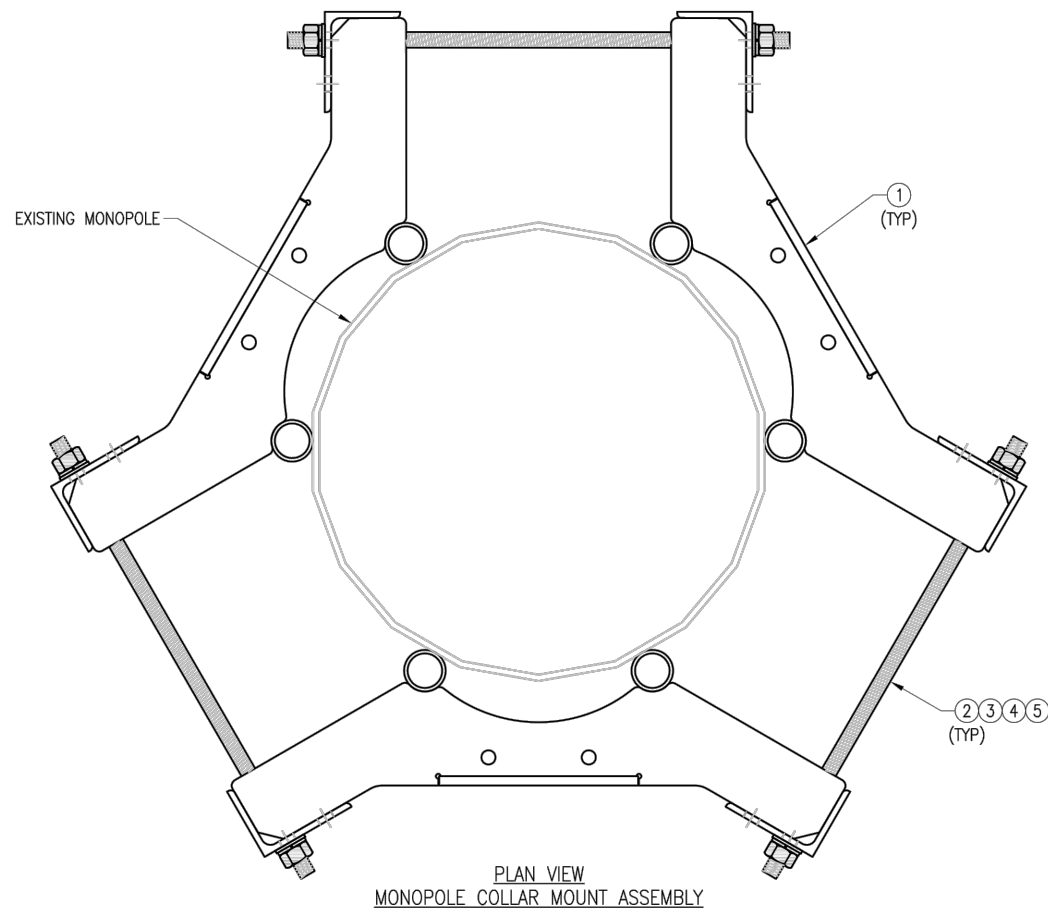
NOTE: THIS SHEET WAS CREATED BY OTHERS AND PROVIDED AT THE REQUEST OF THE CUSTOMER WITHOUT EDIT.

SUPPLEMENTAL

SHEET NUMBER: REVISION:

R-603

4



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

VZSMART-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



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DRAWN BY: BT	CHECKED BY: HMA/KW		
REV.	DESCRIPTION	BY	DATE
△	FIRST ISSUE	BT	05/11/20
△			
△			
△			

SHEET TITLE:	
VZSMART-PLK7 MONOPOLE COLLAR MOUNT ASSEMBLY	
SHEET NUMBER:	REV #:
VZSMART-PLK7	0

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

SUPPLEMENTAL

SHEET NUMBER: R-604	REVISION: 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 #: 10213282
Colliers Engineering & Design Project #: 21777895 (Rev. 2)

January 25, 2024

Site Information

Site ID: 5000383776-VZW / NAUGATUCK 2 CT
Site Name: NAUGATUCK 2 CT
Carrier Name: Verizon Wireless
Address: 585 South Main Street
Naugatuck, Connecticut 06770
New Haven County
Latitude: 41.478469°
Longitude: -73.048442°

Structure Information

Tower Type: 80-Ft Monopole
Mount Type: 13.50-Ft Platform

FUZE ID # 16053183

Analysis Results

Platform: 41.7% **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: Frank Centone

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:
 - o Channel, Solid Round, Angle, Plate ASTM A36 (Gr. 36)
 - o HSS (Rectangular) ASTM 500 (Gr. B-46)
 - o Pipe ASTM A53 (Gr. B-35)
 - o Threaded Rod F1554 (Gr. 36)
 - o Bolts ASTM A325
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	19.7%	Pass
Face Horizontal	13.6%	Pass
Mount Pipe	12.6%	Pass
Mod Kicker	7.9%	Pass
Mount connection	41.7%	Pass
Structure Rating – (Controlling Utilization of all Components)		41.7%

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	40.0	N3	440	2149	0.445	1.000	804	2042	0.810	0.226
Sector B Standoff	40.0	N31	414	2223	0.411	1.071	688	2064	0.699	0.245
Sector A Standoff	40.0	N43A	439	2133	0.436	0.965	795	2017	0.800	0.217

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

EXHIBIT 2



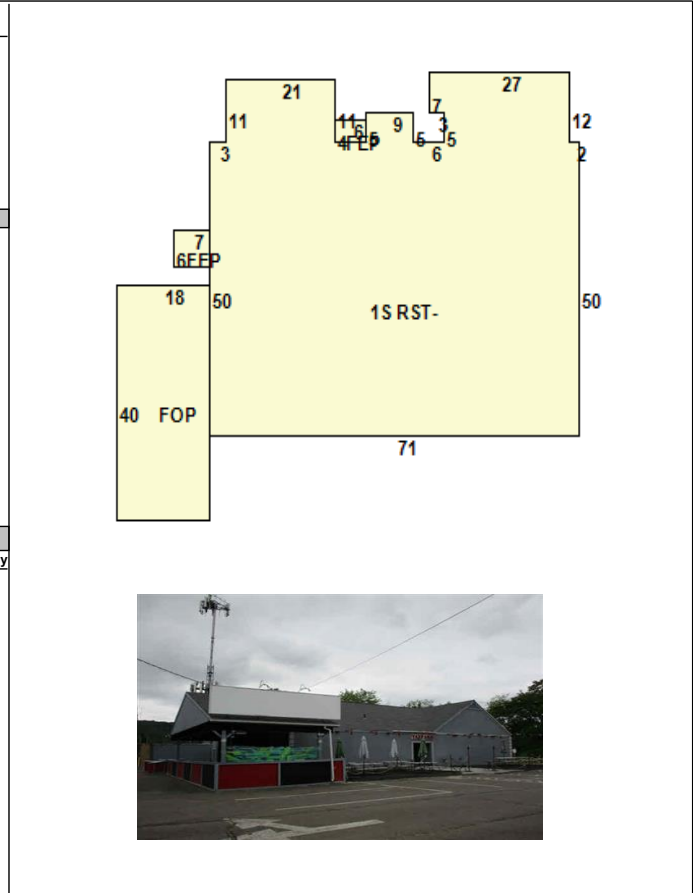
Location:	585 SOUTH MAIN ST			Map Id:	49-112	Zone:	R15	Date Printed:	2/23/2024		
				Neighborhood:	09			Last Update:	2/23/2024		
Owner Of Record				Volume/Page	Date	Sales Type		Valid	Sale Price		
THE OFFICE LLC				0875/0080	9/20/2010	Quit Claim		No	0		
1920 S PROVIDENCE RD, NORTH CHESTERFIELD, VA 23236						Exempt					
Prior Owner History											
TARZAK BUILDERS LLC				0871/0365	7/7/2010	Quit Claim		No	0		
CHRISTOFORO COLUMBO SOCIETY				0747/0363	2/27/2006			No	0		
CHRISTOFORO COLUMBO SOCIETY				0747/0357	2/27/2006			No	0		
CHRISTOFORO COLUMBO SOCIETY				0747/0345	2/27/2006	Warrantv Deed		No	198,000		
CHRISTOFORO COLUMBO SOCIETY				0110/0174	6/3/1953			No	0		
Permit Number	Date	Permit Description									
MH-23-177	11/7/2023	SUPPLY AND INSTALL HVAC EQUIPMENT AND RELATED DUCTWORK AS PER PLANS AND SPEC									
RSW-23-312	9/28/2023	ROOF REPLACEMENT ONLY									
P-23-148	8/28/2023	ROUGH IN AND INSTALL (2) BATHROOMS.(1) MOP SINK .(1) KITCHEN BREAKROOM SINK .(1) WATER HEATER									
B-23-137	6/30/2023	INTERIOR TENANT FIT OUT									
B-23-79	3/29/2023	AT&T MODIFICATIONS INCLUDE REPLACING (2) ANTENNAS. ADDING (2) RRSUS. AND INSTALL NEW MOUNTS ON THE EX									
E-003989	5/6/2020	CCTV- LOW VOLTAGE & LOW VOLTAGE BURGLAR ALARM.									
Supplemental Data							Appraised Value				
Census/Tract	345201	VisionPID	1771			Total Land Value		149,900			
Dev Map ID		Alt Parcel ID	26-35E23			Total Building Value		290,100			
GIS ID		Old MBL	AQ14 35E23			Total Outbldg Value		28,500			
Route						Total Market Value		468,500			
District											
Utilities											
Acres				State Item Codes							
Land Type	Acres	490	Total Value	Code		Quantity	Value				
Primary Site	1.00	0.00	105,000	22-Commercial Building		1.00	203,070				
Commercial Excess	0.66	0.00	6,600	21-Commercial Land		1.76	104,930				
Primarv Site	0.10	0.00	38,300	25-Commercial Outbuilding		1.00	19,950				
Total	1.7600	0.00	149,900								
Assessment History (Prior Years as of Oct 1)					490 Appraised Totals						
	2024	2023	2022	2021	2020	Type	Acres	Value	Type	Acres	Value
Land	104,930	104,930	104,930	132,930	132,930						
Building	203,070	203,070	156,450	109,350	109,350						
Outbuilding	19,950	19,950	250,740	74,430	74,430						
Total	327,950	327,950	512,120	316,710	316,710				Totals	0.00	0
						Application Date:	Expiration Date:				
Comments											
8/1/2022	3000/month x 95% vac x 95% exp / .10 cap rate = 324,900										

Unique ID: 011-8400

Nauquatuck

Location:	585 SOUTH MAIN ST	Unit	
------------------	-------------------	-------------	--

Commercial Building Description		Description	Area/Qty
Building Use	Retail	Base Value	4135
Class	Wood Frame	Central Air	4135
Overall Condition	Good/Very Good		
Construction Quality	C+		
Stories	1.00		
Year Built	1960		
Remodel			
Percent Complete	75		
GLA	4135		
Basement			
Basement Area	0		
HVAC			
Heating Type	Forced Hot Air		
Fuel Type	Oil		
Cooling Type	Central		
Interior			
Floors	Vinyl Tile/Carpet		
Walls	Drvwall/Plywood Panel		
Wall Height			
Exterior			
Exterior Walls	Concr/Cinder/Stucco		
Roof Type	Arch Shingles		
Roof Cover	Gable		
Special Features			

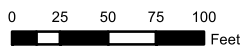
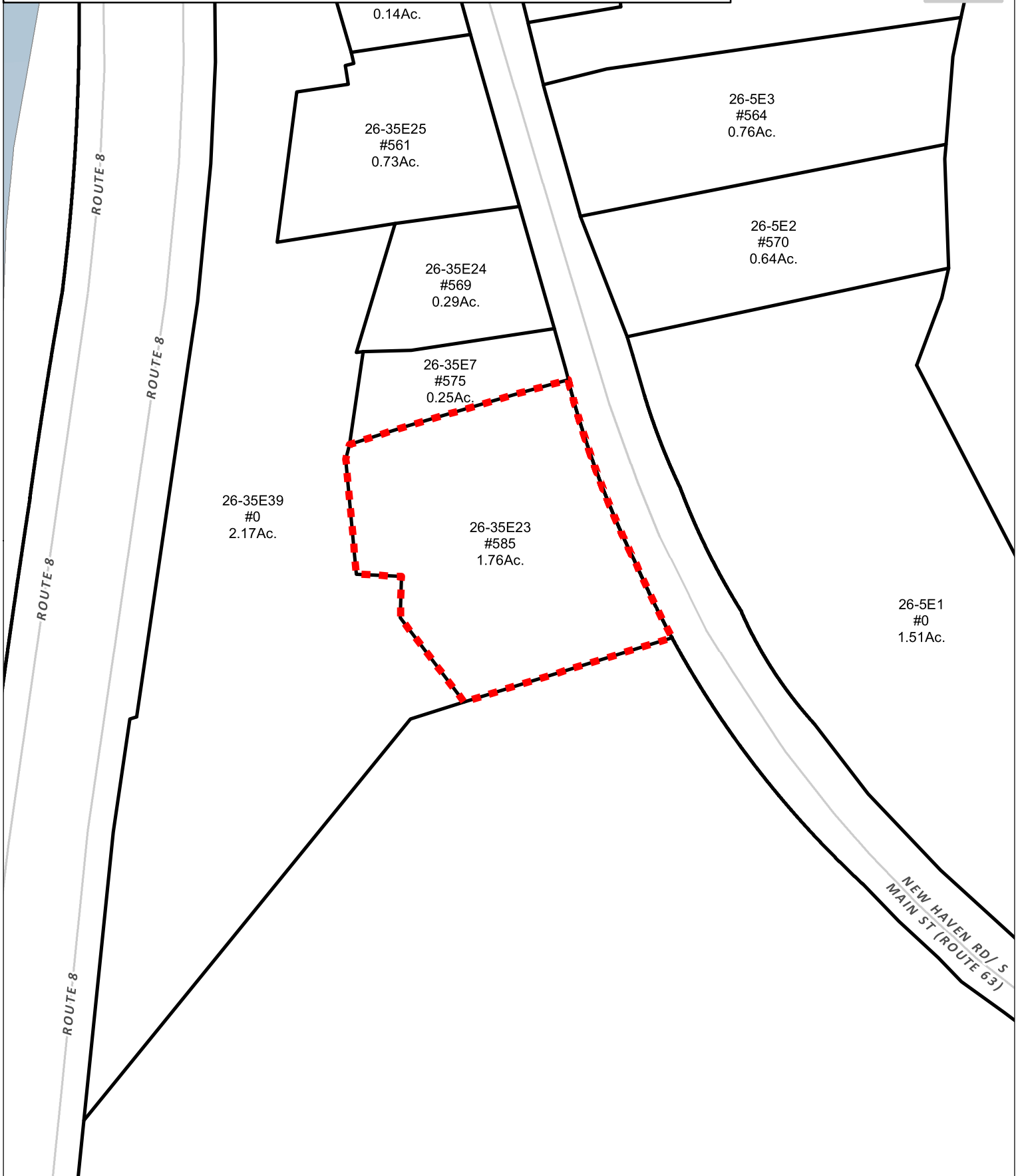


Detached Component Computations							
Type	Year	Condition	Area/Qty	Type	Year	Condition	Area/Qty
Paving	2000	Fair	19000				

Borough of Naugatuck, Connecticut - Assessment Parcel Map

Parcel Account Number: 011-8400

Address: 585 SOUTH MAIN ST



Disclaimer: This map is for informational purposes only.
All information is subject to verification by any user.
The Borough of Naugatuck and its mapping contractors
assume no legal responsibility for the information contained herein.

Map Produced March 2019

EXHIBIT 3





AMERICAN TOWER®
CORPORATION

Structural Analysis Report

Structure : 89 ft Monopole
ATC Asset Name : Naugatuck (telephone Pole)
ATC Asset Number : 302526
Engineering Number : 14564830_C3_01
Proposed Carrier : VERIZON WIRELESS
Carrier Site Name : NAUGATUCK 2 CT
Carrier Site Number : 5000383776
Site Location : 585 South Main St. (soc. Club)
Naugatuck, CT 06770-4725
41.4784° N, 73.0485° W
County : New Haven
Date : December 1, 2023
Max Usage : 75%
Analysis Result : Pass

Created By:

Thomas Ambrosio
Structural Engineer I



COA: PEC.0001553



Table of Contents

Introduction	3
Supporting Documents.....	3
Analysis	3
Conclusion	3
Structure Usages	4
Maximum Reactions	4
Tower Loading	5
Standard Conditions	Attached
Calculations.....	Attached

Introduction

The purpose of this report is to summarize results of a structural analysis performed on the 89 ft Monopole tower to reflect the change in loading by VERIZON WIRELESS.

Supporting Documents

Tower:	EI Job #11696, dated January 22, 2001
Foundation:	EI Job #11696, dated June 5, 2003
Geotechnical:	CET Project #07729-76, dated March 28, 2003
Modification:	ATC Project #OAA698250_C6_03, dated June 8, 2017

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:	118 mph (3-second gust)
Basic Wind Speed w/ Ice:	50 mph (3-second gust) w/ 1.00" radial ice concurrent
Code(s):	ANSI/TIA-222-H / 2021 IBC / 2022 Connecticut State Building Code
Exposure Category:	B
Risk Category:	II
Topographic Factor Procedure:	Method 1
Topographic Category:	1
Spectral Response:	$S_s = 0.20, S_i = 0.05$
Site Class:	D - Stiff Soil - Default

**Wind load and Ice thickness have been reduced by applicable existing structure load modification factors in accordance with TIA-222-H, ANNEX-S*

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	75.4%	1.2D + 1.0W	Pass
Reinforcement	43.8%	0 ft to 50.21 ft	Pass
Upper Termination	63.7%	0 ft to 50.21 ft	Pass
Intermediate Connector	40.2%	0 ft to 50.21 ft	Pass
Serviceability Usage	20.8%	1.0D + 1.0W	Pass
Upper Flange Plate @ 69.0 ft	31.6%	Bolts	Pass
Upper Flange Plate @ 49.0 ft	17.9%	Dywidag	Pass
Base Plate @ 0.0 ft	41.4%	Dywidag	Pass
Mat & Pier	71.1%	Moment [Soil]	Pass

Maximum Reactions

Foundation	Moment (k-ft)	Axial (k)	Shear (k)
Monopole Base	468.3	21.2	7.7

**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
40.0	1	Triangular Low Profile Platform	(10) 1 5/8" Coax (2) 1 5/8" Hybriflex
	1	Raycap RCMD-6627-PF-48	
	3	Mount Reinforcements	
	3	RFS FD9R6004/1C-3L	
	3	Samsung B2/B66A RRH ORAN (RF 4439d-25A)	
	3	Samsung MT6413-77A	
	3	Samsung RF4461d-13A	
	3	Samsung RT4423-48A/B	
	3	Samsung RT4423-48a with R0440CC clip-on	
	6	JMA Wireless MX06FHG665-HG	

Other Existing/Reserved Loading

Elev (ft)	Qty	Equipment	Lines	Carrier
92.0	2	Ericsson AIR 6419 B77G	-	AT&T MOBILITY
	2	Ericsson Radio 4890HP 48B2/B25 48B66 M01		
90.0	1	Triangular Platform with Handrails	(2) 0.40" (10.3mm) Fiber (6) 0.82" (20.8mm) 8 AWG 6 (3) 2" conduit	
	2	Ericsson 4478 Band 14 (15" Height)		
	2	Ericsson RRUS 32 B30		
	2	Ericsson RRUS 4449 B5, B12		
	2	Ericsson Radio 2012 B29		
	2	Kathrein Scala 80010965		
	2	Quintel QD6616-7		
3	Raycap DC6-48-60-18-8C-EV			
89.0	3	Mount Reinforcements	-	
88.0	2	Ericsson AIR 6449 B77D/ C-Band	(4) 1 5/8" Coax	

(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.

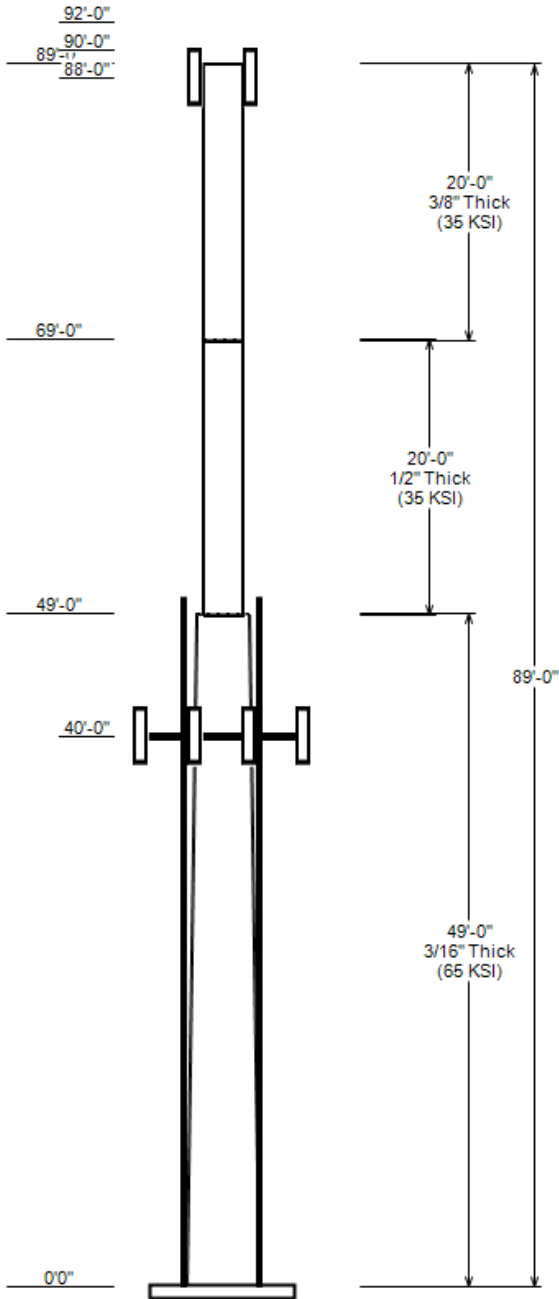
All services are performed, results obtained, and recommendations made in accordance with generally accepted engineering principles and practices. A.T. Engineering Services LLC is not responsible for the conclusions, opinions and recommendations made by others based on the information supplied herein.

ANALYSIS PARAMETERS

Nominal Wind: 115 mph	Ice Wind: 49 mph w/ 0.85" ice	Service Wind: 60 mph
Risk Category: II	Exposure: B	S _s : 0.197 S _i : 0.054
Topo Category: 1	Topo Factor: Method 1	Topo Feature:
Structure Height: 89 ft	Base Elevation: 0.00 ft	Structure Type: Custom
Base Diameter: 23 in	Base Rotation: 0°	Taper: 0.1840 (in/ft)

POLE SECTION PROPERTIES

Section	Length (ft)	Flat Diameter (in)		Thick (in)	Joint Type	Joint Length (in)	Pole Shape	Yield Strength (ksi)
		Top	Bottom					
1	49.000	14.00	23.00	0.188		0.000	18 Sides	65
2	20.000	12.75	12.75	0.500	Butt Joint	0.000	Round	35
3	20.000	12.75	12.75	0.375	Butt Joint	0.000	Round	35



DISCRETE APPURTENANCE

Elev (ft)	Description
92.0	(2) Ericsson Radio 4890HP 48B2/B25
92.0	(2) Ericsson AIR 6419 B77G
90.0	(2) Ericsson 4478 Band 14 (15" Hei
90.0	(2) Ericsson Radio 2012 B29
90.0	(2) Ericsson RRUS 4449 B5, B12
90.0	(2) Ericsson RRUS 32 B30
90.0	(3) Raycap DC6-48-60-18-8C-EV
90.0	(2) Quintel QD6616-7
90.0	(2) Kathrein Scala 80010965
90.0	(1) Generic Round Platform with Ha
89.0	(3) Mount Reinforcements
88.0	(2) Ericsson AIR 6449 B77D/ C-Band
40.0	(3) RFS FD9R6004/1C-3L
40.0	(3) Samsung RT4423-48A/B
40.0	(3) Samsung RT4423-48a with R0440C
40.0	(3) Samsung RF4461d-13A
40.0	(3) Samsung B2/B66A RRH ORAN (RF 4
40.0	(3) Samsung MT6413-77A
40.0	(1) Raycap RCMDC-6627-PF-48
40.0	(3) Mount Reinforcements
40.0	(6) JMA Wireless MX06FHG665-HG
40.0	(1) Generic Flat Low Profile Platf

LINEAR APPURTENANCE

Elev To (ft)	Description
90.0	(3) 2" conduit
90.0	(6) 0.82" (20.8mm) 8 AWG 6
90.0	(2) 0.40" (10.3mm) Fiber
88.0	(4) 1 5/8" Coax
53.5	(1) W8 Brackets for #20
53.5	(1) W8 Brackets for #20
53.5	(1) W8 Brackets for #20
53.5	(1) #20 w/ W Brackets
53.5	(1) #20 w/ W Brackets
53.5	(1) #20 w/ W Brackets
40.0	(2) 1 5/8" Hybriflex
40.0	(10) 1 5/8" Coax

GLOBAL BASE REACTIONS

Load Case	Moment (kip-ft)	Axial (kip)	Shear (kip)
1.2D + 1.0W	468.29	21.21	7.65
0.9D + 1.0W	462.97	15.91	7.65
1.2D + 1.0Di + 1.0Wi	137.90	26.76	2.47
1.2D + 1.0Ev + 1.0Eh	40.73	21.08	0.53
0.9D - 1.0Ev + 1.0Eh	40.09	14.56	0.53
1.0D + 1.0W	117.82	17.69	1.93

ANALYSIS PARAMETERS

Location:	New Haven County,CT	Height:	89 ft
Type and Shape:	Custom, Round	Base Diameter:	23.00 in
Manufacturer:	EEL	Top Diameter:	12.75 in
K_d (non-service):	0.95	Taper:	0.1840 in/ft
K_e:	0.99	Rotation:	0.000°

ICE & WIND PARAMETERS

Risk Category:	II	Design Wind Speed:	115 mph
Exposure Category:	B	Design Wind Speed w/ Ice:	49 mph
Topo Factor Procedure:	Method 1	Design Ice Thickness:	0.85 in
Topographic Category:	1	Service Wind Speed:	60 mph
Crest Height:	0 ft	HMSL:	262.00 ft

SEISMIC PARAMETERS

Analysis Method:	Equivalent Lateral Force Method		
Site Class:	D - Stiff Soil	Period Based on Rayleigh Method (sec):	1.91
T_L (sec):	6	P:	1
S_s:	0.197	S₁:	0.054
F_a:	1.600	F_v:	2.400
S_{ds}:	0.210	S_{d1}:	0.086
		C_s:	0.030
		C_s Max:	0.030
		C_s Min:	0.030

LOAD CASES

1.2D + 1.0W	115.01 mph Wind with No Ice
0.9D + 1.0W	115.01 mph Wind with No Ice (Reduced DL)
1.2D + 1.0Di + 1.0Wi	48.73 mph Wind with 0.85" Radial Ice
1.2D + 1.0Ev + 1.0Eh	Seismic
0.9D - 1.0Ev + 1.0Eh	Seismic (Reduced DL)
1.0D + 1.0W	60 mph Wind with No Ice

SHAFT SECTION PROPERTIES

Section	Length (ft)	Thick (in)	Fy (ksi)	Joint Type	Joint Len (in)	Bottom						Top								
						Weight (lb)	Dia (in)	Elev (ft)	Area (in ²)	Ix (in ⁴)	W/t Ratio	D/t Ratio	Dia (in)	Elev (ft)	Area (in ²)	Ix (in ⁴)	W/t Ratio	D/t Ratio	Taper (in/ft)	
1-18	49.00	0.1875	65		0.00	1,817	23.00	0.000	13.58	892.6	20.22	122.67	14.00	49.00	8.22	198.1	11.75	74.66	0.1837	
2-R	20.00	0.5000	35	Butt	0.00	1,310	12.75	49.000	19.24	361.2	0.00	25.50	12.75	69.00	19.24	361.2	0.00	25.50	0.0000	
3-R	20.00	0.3750	35	Butt	0.00	992	12.75	69.000	14.58	279.3	0.00	34.00	12.75	89.00	14.58	279.3	0.00	34.00	0.0000	
Total Shaft Weight						4,119														

DISCRETE APPURTENANCE PROPERTIES

Attach Elev (ft)	Description	Qty	Ka	Vert Ecc (ft)	No Ice			Ice			
					Weight (lb)	EPAA (sf)	Orientation Factor	Weight (lb)	EPAA (sf)	Orientation Factor	
92.00	Ericsson Radio 4890HP 48B2/B25	2	0.75	0.000	67.20	2.202	0.67	99.30	2.728	0.67	
92.00	Ericsson AIR 6419 B77G	2	0.75	0.000	66.10	3.797	0.74	118.36	4.507	0.74	
90.00	Quintel QD6616-7	2	0.75	0.000	130.00	13.578	0.73	287.57	15.107	0.73	
90.00	Raycap DC6-48-60-18-8C-EV	3	0.75	0.000	16.00	4.788	0.67	85.56	5.580	0.67	
90.00	Ericsson RRUS 4449 B5, B12	2	0.75	0.000	71.00	1.969	0.50	105.72	2.471	0.50	
90.00	Ericsson Radio 2012 B29	2	0.75	0.000	43.20	1.856	0.50	69.75	2.341	0.50	
90.00	Ericsson 4478 Band 14 (15" Hei	2	0.75	0.000	59.90	1.842	0.50	89.68	2.325	0.50	
90.00	Kathrein Scala 80010965	2	0.75	0.000	97.60	13.814	0.72	241.20	15.457	0.72	
90.00	Generic Round Platform with Ha	1	1.00	0.000	2500.00	27.200	1.00	3372.46	40.367	1.00	
90.00	Ericsson RRUS 32 B30	2	0.75	0.000	60.00	2.743	0.50	99.63	3.373	0.50	
89.00	Mount Reinforcements	3	0.75	0.000	200.00	4.980	0.67	275.05	6.849	0.67	
88.00	Ericsson AIR 6449 B77D/ C-Band	2	0.75	0.000	81.60	4.028	0.77	144.20	4.765	0.77	
40.00	JMA Wireless MX06FHG665-HG	6	0.80	0.000	41.00	8.242	0.70	130.43	9.619	0.70	
40.00	Mount Reinforcements	3	0.75	0.000	200.00	4.980	0.67	268.87	6.695	0.67	
40.00	Raycap RCMD-6627-PF-48	1	0.80	0.000	32.00	4.056	0.67	94.82	4.731	0.67	
40.00	Samsung MT6413-77A	3	0.80	0.000	57.30	3.805	0.61	99.27	4.461	0.61	
40.00	Generic Flat Low Profile Platf	1	1.00	0.000	1875.00	26.100	1.00	2275.34	35.538	1.00	
40.00	Samsung RF4461d-13A	3	0.80	0.000	79.10	1.875	0.50	110.97	2.321	0.50	
40.00	Samsung RT4423-48a with R0440C	3	0.80	0.000	18.70	0.870	0.50	31.79	1.181	0.50	
40.00	Samsung RT4423-48A/B	3	0.80	0.000	15.40	0.855	0.50	26.65	1.163	0.50	
40.00	RFS FD9R6004/1C-3L	3	0.80	0.000	3.10	0.314	0.50	7.06	0.505	0.50	
40.00	Samsung B2/B66A RRH ORAN (RF 4	3	0.80	0.000	74.70	1.875	0.50	106.29	2.320	0.50	
Totals	Row Count: 22	54				7,999.10			12,070.55		

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	90.00	6	0.82" (20.8mm) 8 AWG	0.82	0.62	N	0	0	0	0	0	N	AT&T MOBILITY
0.00	90.00	3	2" conduit	2.38	3.65	N	0	0	0	0	0	N	AT&T MOBILITY
0.00	90.00	2	0.40" (10.3mm) Fiber	0.4	0.09	N	0	0	0	0	0	N	AT&T MOBILITY
0.00	88.00	4	1 5/8" Coax	1.98	0.82	N	0	0	0	0	0	N	AT&T MOBILITY
0.00	53.50	1	W8 Brackets for #20	2.48	6.3	Y	1	0	0	60	2.9	Y	
0.00	53.50	1	#20 w/ W Brackets	2.5	0	N	1	0	0	280	8.28	Y	
0.00	53.50	1	#20 w/ W Brackets	2.5	0	N	1	0	0	180	8.28	Y	
0.00	53.50	1	W8 Brackets for #20	2.48	6.3	Y	1	0	0	280	2.9	Y	
0.00	53.50	1	#20 w/ W Brackets	2.5	0	N	1	0	0	60	8.28	Y	
0.00	53.50	1	W8 Brackets for #20	2.48	6.3	Y	1	0	0	180	2.9	Y	
0.00	40.00	10	1 5/8" Coax	1.98	0.82	N	0	0	0	0	0	N	VERIZON WIRELESS
0.00	40.00	2	1 5/8" Hybriflex	1.98	1.3	N	0	0	0	0	0	N	VERIZON WIRELESS

ADDITIONAL STEEL

Intermediate Connectors

Elev From (ft)	Elev To (ft)	Qty	Description	Fy (ksi)	Offset (in)	Bracket Type	Spacing (in)	Length (in)	Connectors	Continuation?
0.00	50.21	3	SOL #20 All Thread Bar	80	8.28	6" T Bracket	32.00	3.31	5/8" A36 U-Bolt	N

SEGMENT PROPERTIES

Seg Top Elev (ft)	Description	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)	Additional Reinforcing		
												Area (in ²)	Ix (in ⁴)	Weight (lb)
0.00		0.1875	23.000	13.576	892.60	20.22	122.67	77.6	76.4	0.0	0.0	14.730	3,263.00	0.0
5.00		0.1875	22.082	13.029	789.10	19.36	117.77	78.6	70.4	0.0	226.3	14.730	3,122.30	250.5
10.00		0.1875	21.163	12.483	693.90	18.49	112.87	79.7	64.6	0.0	217.0	14.730	2,984.70	250.5
15.00		0.1875	20.245	11.936	606.70	17.63	107.97	80.7	59.0	0.0	207.7	14.730	2,850.20	250.5
20.00		0.1875	19.326	11.389	527.10	16.76	103.07	81.7	53.7	0.0	198.4	14.730	2,718.80	250.5
25.00		0.1875	18.408	10.843	454.80	15.90	98.17	82.6	48.7	0.0	189.1	14.730	2,590.50	250.5
30.00		0.1875	17.489	10.296	389.40	15.04	93.27	82.6	43.9	0.0	179.8	14.730	2,465.30	250.5
35.00		0.1875	16.571	9.750	330.60	14.17	88.38	82.6	39.3	0.0	170.5	14.730	2,343.30	250.5
40.00		0.1875	15.652	9.203	278.10	13.31	83.48	82.6	35.0	0.0	161.2	14.730	2,224.30	250.5
45.00		0.1875	14.734	8.656	231.40	12.44	78.58	82.6	30.9	0.0	151.9	14.730	2,108.50	250.5
49.00	Top - Section 1	0.1875	13.999	8.219	198.10	11.75	74.66	82.6	27.9	0.0	114.8	14.730	2,018.00	200.4
49.00	Bot - Section 2	0.5000	12.750	19.242	361.20	0.00	25.50	35	56.7	75.1		14.730	2,018.00	
50.00		0.5000	12.750	19.242	361.20	0.00	25.50	35	56.7	75.1	65.5	14.730	1,868.90	50.1
50.21	Reinf. Top	0.5000	12.750	19.242	361.20	0.00	25.50	35	56.7	75.1	13.8	14.730	1,868.90	10.5
55.00		0.5000	12.750	19.242	361.20	0.00	25.50	35	56.7	75.1	313.6			
60.00		0.5000	12.750	19.242	361.20	0.00	25.50	35	56.7	75.1	327.4			
65.00		0.5000	12.750	19.242	361.20	0.00	25.50	35	56.7	75.1	327.4			
69.00	Top - Section 2	0.5000	12.750	19.242	361.20	0.00	25.50	35	56.7	75.1	261.9			
69.00	Bot - Section 3	0.3750	12.750	14.579	279.30	0.00	34.00	35	43.8	57.4				
70.00		0.3750	12.750	14.579	279.30	0.00	34.00	35	43.8	57.4	49.6			
75.00		0.3750	12.750	14.579	279.30	0.00	34.00	35	43.8	57.4	248.0			
80.00		0.3750	12.750	14.579	279.30	0.00	34.00	35	43.8	57.4	248.0			
85.00		0.3750	12.750	14.579	279.30	0.00	34.00	35	43.8	57.4	248.0			
88.00		0.3750	12.750	14.579	279.30	0.00	34.00	35	43.8	57.4	148.8			
89.00		0.3750	12.750	14.579	279.30	0.00	34.00	35	43.8	57.4	49.6			
Totals:											4,118.3	2,515.5		

CALCULATED FORCES

Load Case: 1.2D + 1.0W 115.01 mph Wind with No Ice 21 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	-21.21	-7.65	0.00	-468.3	0.00	468.29	948.37	238.26	490.93	444.99	0	0	0.238
5.00	-20.33	-7.44	0.00	-430.0	0.00	430.02	922.10	228.66	452.19	415.10	0.08	-0.15	0.220
10.00	-19.47	-7.25	0.00	-392.8	0.00	392.81	894.83	219.07	415.05	385.78	0.33	-0.3	0.203
15.00	-18.62	-7.06	0.00	-356.6	0.00	356.58	866.56	209.48	379.51	357.09	0.72	-0.45	0.186
20.00	-17.78	-6.89	0.00	-321.3	0.00	321.27	837.29	199.88	345.55	329.08	1.27	-0.59	0.169
25.00	-16.95	-6.74	0.00	-286.8	0.00	286.80	805.56	190.29	313.18	301.27	1.96	-0.72	0.152
30.00	-16.13	-6.60	0.00	-253.1	0.00	253.11	764.96	180.70	282.41	271.51	2.78	-0.85	0.137
35.00	-15.33	-6.46	0.00	-220.1	0.00	220.13	724.35	171.11	253.22	243.30	3.74	-0.96	0.122
40.00	-10.38	-4.22	0.00	-187.8	0.00	187.82	683.74	161.51	225.63	216.64	4.81	-1.07	0.103
45.00	-9.68	-4.08	0.00	-166.7	0.00	166.74	643.13	151.92	199.63	191.53	5.99	-1.17	0.092
49.00	-9.12	-4.00	0.00	-150.4	0.00	150.41	610.64	144.25	179.97	172.55	7.01	-1.25	0.084
49.00	-9.12	-4.00	0.00	-150.4	0.00	150.41	606.13	181.84	195.84	197.07	7.01	-1.25	0.125
50.00	-8.94	-3.98	0.00	-146.4	0.00	146.41	606.13	181.84	195.84	197.07	7.27	-1.27	0.129
50.21	-8.89	-3.94	0.00	-145.6	0.00	145.58	606.13	181.84	195.84	197.07	7.33	-1.27	0.128
50.21	-8.89	-3.94	0.00	-145.6	0.00	145.58	606.13	181.84	195.84	197.07	7.33	-1.27	0.754
55.00	-8.32	-3.86	0.00	-126.7	0.00	126.70	606.13	181.84	195.84	197.07	8.65	-1.36	0.657
60.00	-7.80	-3.81	0.00	-107.4	0.00	107.39	606.13	181.84	195.84	197.07	10.32	-1.82	0.558
65.00	-7.28	-3.75	0.00	-88.3	0.00	88.34	606.13	181.84	195.84	197.07	12.43	-2.2	0.461
69.00	-6.87	-3.70	0.00	-73.4	0.00	73.35	606.13	181.84	195.84	197.07	14.39	-2.46	0.384
69.00	-6.87	-3.70	0.00	-73.4	0.00	73.35	459.24	137.77	149.89	150.79	14.39	-2.46	0.502
70.00	-6.78	-3.66	0.00	-69.6	0.00	69.65	459.24	137.77	149.89	150.79	14.91	-2.51	0.477
75.00	-6.36	-3.57	0.00	-51.4	0.00	51.37	459.24	137.77	149.89	150.79	17.71	-2.82	0.355
80.00	-5.95	-3.46	0.00	-33.5	0.00	33.54	459.24	137.77	149.89	150.79	20.79	-3.04	0.236
85.00	-5.54	-3.36	0.00	-16.2	0.00	16.24	459.24	137.77	149.89	150.79	24.05	-3.17	0.120
88.00	-5.12	-3.14	0.00	-6.2	0.00	6.16	459.24	137.77	149.89	150.79	26.05	-3.2	0.053
89.00	0.00	-2.85	0.00	-3.0	0.00	3.02	459.24	137.77	149.89	150.79	26.72	-3.21	0.020

CALCULATED FORCES

CALCULATED FORCES

Load Case: 0.9D + 1.0W 115.01 mph Wind with No Ice (Reduced DL) 21 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	-15.91	-7.65	0.00	-463.0	0.00	462.97	948.37	238.26	490.93	444.99	0	0	0.233
5.00	-15.24	-7.42	0.00	-424.8	0.00	424.75	922.10	228.66	452.19	415.10	0.08	-0.15	0.215
10.00	-14.59	-7.21	0.00	-387.6	0.00	387.64	894.83	219.07	415.05	385.78	0.32	-0.3	0.198
15.00	-13.95	-7.02	0.00	-351.6	0.00	351.57	866.56	209.48	379.51	357.09	0.72	-0.44	0.181
20.00	-13.31	-6.84	0.00	-316.5	0.00	316.48	837.29	199.88	345.55	329.08	1.25	-0.58	0.164
25.00	-12.69	-6.68	0.00	-282.3	0.00	282.28	805.56	190.29	313.18	301.27	1.93	-0.71	0.148
30.00	-12.08	-6.53	0.00	-248.9	0.00	248.90	764.96	180.70	282.41	271.51	2.75	-0.84	0.133
35.00	-11.47	-6.39	0.00	-216.2	0.00	216.25	724.35	171.11	253.22	243.30	3.69	-0.95	0.118
40.00	-7.77	-4.16	0.00	-184.3	0.00	184.30	683.74	161.51	225.63	216.64	4.74	-1.06	0.100
45.00	-7.24	-4.03	0.00	-163.5	0.00	163.49	643.13	151.92	199.63	191.53	5.91	-1.16	0.089
49.00	-6.82	-3.95	0.00	-147.4	0.00	147.38	610.64	144.25	179.97	172.55	6.91	-1.23	0.081
49.00	-6.82	-3.95	0.00	-147.4	0.00	147.38	606.13	181.84	195.84	197.07	6.91	-1.23	0.120
50.00	-6.68	-3.93	0.00	-143.4	0.00	143.43	606.13	181.84	195.84	197.07	7.17	-1.25	0.125
50.21	-6.65	-3.89	0.00	-142.6	0.00	142.61	606.13	181.84	195.84	197.07	7.22	-1.25	0.124
50.21	-6.65	-3.89	0.00	-142.6	0.00	142.61	606.13	181.84	195.84	197.07	7.22	-1.25	0.735
55.00	-6.22	-3.80	0.00	-124.0	0.00	123.99	606.13	181.84	195.84	197.07	8.52	-1.34	0.640
60.00	-5.82	-3.74	0.00	-105.0	0.00	104.98	606.13	181.84	195.84	197.07	10.17	-1.79	0.543
65.00	-5.43	-3.67	0.00	-86.3	0.00	86.30	606.13	181.84	195.84	197.07	12.24	-2.16	0.447
69.00	-5.12	-3.62	0.00	-71.6	0.00	71.63	606.13	181.84	195.84	197.07	14.16	-2.41	0.372
69.00	-5.12	-3.62	0.00	-71.6	0.00	71.63	459.24	137.77	149.89	150.79	14.16	-2.41	0.487
70.00	-5.05	-3.57	0.00	-68.0	0.00	68.01	459.24	137.77	149.89	150.79	14.67	-2.47	0.463
75.00	-4.73	-3.48	0.00	-50.2	0.00	50.16	459.24	137.77	149.89	150.79	17.42	-2.77	0.344
80.00	-4.42	-3.37	0.00	-32.8	0.00	32.77	459.24	137.77	149.89	150.79	20.44	-2.98	0.228
85.00	-4.12	-3.28	0.00	-15.9	0.00	15.91	459.24	137.77	149.89	150.79	23.63	-3.1	0.115
88.00	-3.80	-3.06	0.00	-6.1	0.00	6.08	459.24	137.77	149.89	150.79	25.59	-3.14	0.049
89.00	0.00	-2.85	0.00	-3.0	0.00	3.02	459.24	137.77	149.89	150.79	26.25	-3.14	0.020

CALCULATED FORCES

Load Case: 1.2D + 1.0Di + 1.0Wi													48.73 mph Wind with 0.85" Radial Ice		21 Iterations	
Gust Response Factor:		1.10		Ice Dead Load Factor			1.00			Ice Importance Factor			1.00			
Dead load Factor:		1.20														
Wind Load Factor:		1.00														
Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	Phi Pn (kips)	Phi Vn (kips)	Phi Tn (ft-kips)	Phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio			
0.00	-26.76	-2.47	0.00	-137.9	0.00	137.90	948.37	238.26	490.93	444.99	0	0	0.080			
5.00	-25.73	-2.40	0.00	-125.5	0.00	125.54	922.10	228.66	452.19	415.10	0.02	-0.05	0.074			
10.00	-24.69	-2.32	0.00	-113.6	0.00	113.56	894.83	219.07	415.05	385.78	0.1	-0.09	0.068			
15.00	-23.66	-2.23	0.00	-102.0	0.00	101.98	866.56	209.48	379.51	357.09	0.21	-0.13	0.062			
20.00	-22.64	-2.15	0.00	-90.8	0.00	90.81	837.29	199.88	345.55	329.08	0.37	-0.17	0.057			
25.00	-21.62	-2.07	0.00	-80.0	0.00	80.05	805.56	190.29	313.18	301.27	0.57	-0.21	0.051			
30.00	-20.62	-1.98	0.00	-69.7	0.00	69.72	764.96	180.70	282.41	271.51	0.81	-0.24	0.046			
35.00	-19.63	-1.89	0.00	-59.8	0.00	59.82	724.35	171.11	253.22	243.30	1.08	-0.27	0.041			
40.00	-13.32	-1.31	0.00	-50.4	0.00	50.37	683.74	161.51	225.63	216.64	1.38	-0.3	0.033			
45.00	-12.42	-1.21	0.00	-43.8	0.00	43.84	643.13	151.92	199.63	191.53	1.71	-0.33	0.030			
49.00	-11.71	-1.14	0.00	-39.0	0.00	39.01	610.64	144.25	179.97	172.55	2	-0.35	0.027			
49.00	-11.71	-1.14	0.00	-39.0	0.00	39.01	606.13	181.84	195.84	197.07	2	-0.35	0.041			
50.00	-11.49	-1.12	0.00	-37.9	0.00	37.87	606.13	181.84	195.84	197.07	2.07	-0.36	0.042			
50.21	-11.45	-1.10	0.00	-37.6	0.00	37.64	606.13	181.84	195.84	197.07	2.09	-0.36	0.042			
50.21	-11.45	-1.10	0.00	-37.6	0.00	37.64	606.13	181.84	195.84	197.07	2.09	-0.36	0.210			
55.00	-10.75	-1.03	0.00	-32.4	0.00	32.37	606.13	181.84	195.84	197.07	2.46	-0.38	0.182			
60.00	-10.17	-1.00	0.00	-27.2	0.00	27.23	606.13	181.84	195.84	197.07	2.92	-0.5	0.155			
65.00	-9.59	-0.98	0.00	-22.2	0.00	22.22	606.13	181.84	195.84	197.07	3.49	-0.59	0.129			
69.00	-9.13	-0.96	0.00	-18.3	0.00	18.31	606.13	181.84	195.84	197.07	4.02	-0.66	0.108			
69.00	-9.13	-0.96	0.00	-18.3	0.00	18.31	459.24	137.77	149.89	150.79	4.02	-0.66	0.141			
70.00	-9.03	-0.94	0.00	-17.4	0.00	17.36	459.24	137.77	149.89	150.79	4.15	-0.67	0.135			
75.00	-8.55	-0.90	0.00	-12.7	0.00	12.67	459.24	137.77	149.89	150.79	4.9	-0.75	0.103			
80.00	-8.07	-0.86	0.00	-8.2	0.00	8.17	459.24	137.77	149.89	150.79	5.71	-0.8	0.072			
85.00	-7.58	-0.82	0.00	-3.9	0.00	3.89	459.24	137.77	149.89	150.79	6.57	-0.83	0.042			
88.00	-7.00	-0.76	0.00	-1.4	0.00	1.44	459.24	137.77	149.89	150.79	7.09	-0.84	0.025			
89.00	0.00	-0.66	0.00	-0.7	0.00	0.68	459.24	137.77	149.89	150.79	7.27	-0.84	0.005			

EQUIVALENT LATERAL FORCES METHOD ANALYSIS

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

Spectral Response Acceleration for Short Period (S_S):	0.197
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}):	0.210
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):	1.910
Redundancy Factor (ρ):	1.000
Seismic Force Distribution Exponent (k):	1.710
Total Unfactored Dead Load:	17.690 k
Seismic Base Shear (E):	0.530 k

SEISMIC FORCES

Segment	Seismic	Height Above Base (ft)	Weight (lb)	W_z (lb-ft)	C_{vx}	Horizontal Force (lb)	Vertical Force (lb)
22		88.5	64	135	0.008	4	80
21		86.5	203	411	0.024	13	252
20		82.5	339	631	0.036	19	421
19		77.5	339	567	0.033	17	421
18		72.5	339	506	0.029	15	421
17		69.5	68	94	0.005	3	84
16		67	334	437	0.025	13	415
15		62.5	418	485	0.028	15	519
14		57.5	418	421	0.024	13	519
13		52.605	463	400	0.023	12	575
12		50.105	32	26	0.002	1	40
11		49.5	153	119	0.007	4	190
10		47	463	331	0.019	10	576
9		42.5	588	353	0.020	11	730
8		37.5	651	316	0.018	10	808
7		32.5	660	251	0.014	8	820
6		27.5	669	191	0.011	6	832
5		22.5	679	138	0.008	4	843
4		17.5	688	91	0.005	3	855
3		12.5	697	52	0.003	2	866
2		7.5	707	22	0.001	1	878
1		2.5	716	3	0.000	0	889
Ericsson Radio 4890HP 48B2/B25 48B66 M01		89	134	285	0.016	9	167
Ericsson AIR 6419 B77G		89	132	280	0.016	9	164
Ericsson 4478 Band 14 (15" Height)		89	120	254	0.015	8	149
Ericsson Radio 2012 B29		89	86	183	0.010	6	107
Ericsson RRUS 4449 B5, B12		89	142	301	0.017	9	176
Ericsson RRUS 32 B30		89	120	255	0.015	8	149
Raycap DC6-48-60-18-8C-EV		89	48	102	0.006	3	60
Quintel QD6616-7		89	260	552	0.032	17	323
Kathrein Scala 80010965		89	195	414	0.024	13	242
Generic Round Platform with Handrails		89	2,500	5,303	0.304	162	3,105
Mount Reinforcements		89	600	1,273	0.073	39	745
Mount Reinforcements		40	600	325	0.019	10	745
Ericsson AIR 6449 B77D/ C-Band		88	163	340	0.020	10	203
RFS FD9R6004/1C-3L		40	9	5	0.000	0	12
Samsung RT4423-48A/B		40	46	25	0.001	1	57
Samsung RT4423-48a with R0440CC clip-on		40	56	30	0.002	1	70

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)
Samsung RF4461d-13A	40	237	129	0.007	4	295
Samsung B2/B66A RRH ORAN (RF 4439d-25A)	40	224	121	0.007	4	278
Samsung MT6413-77A	40	172	93	0.005	3	214
Raycap RCMDC-6627-PF-48	40	32	17	0.001	1	40
JMA Wireless MX06FHG665-HG	40	246	133	0.008	4	306
Generic Flat Low Profile Platform	40	1,875	1,016	0.058	31	2,329
Totals:		17,687	17,418	1.000	533	21,967

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)
22	88.5	64	135	0.008	4	55
21	86.5	203	411	0.024	13	174
20	82.5	339	631	0.036	19	291
19	77.5	339	567	0.033	17	291
18	72.5	339	506	0.029	15	291
17	69.5	68	94	0.005	3	58
16	67	334	437	0.025	13	287
15	62.5	418	485	0.028	15	359
14	57.5	418	421	0.024	13	359
13	52.605	463	400	0.023	12	397
12	50.105	32	26	0.002	1	27
11	49.5	153	119	0.007	4	131
10	47	463	331	0.019	10	398
9	42.5	588	353	0.020	11	504
8	37.5	651	316	0.018	10	558
7	32.5	660	251	0.014	8	566
6	27.5	669	191	0.011	6	574
5	22.5	679	138	0.008	4	582
4	17.5	688	91	0.005	3	590
3	12.5	697	52	0.003	2	598
2	7.5	707	22	0.001	1	606
1	2.5	716	3	0.000	0	614
Ericsson Radio 4890HP 48B2/B25 48B66 M01	89	134	285	0.016	9	115
Ericsson AIR 6419 B77G	89	132	280	0.016	9	113
Ericsson 4478 Band 14 (15" Height)	89	120	254	0.015	8	103
Ericsson Radio 2012 B29	89	86	183	0.010	6	74
Ericsson RRUS 4449 B5, B12	89	142	301	0.017	9	122
Ericsson RRUS 32 B30	89	120	255	0.015	8	103
Raycap DC6-48-60-18-8C-EV	89	48	102	0.006	3	41
Quintel QD6616-7	89	260	552	0.032	17	223
Kathrein Scala 80010965	89	195	414	0.024	13	167
Generic Round Platform with Handrails	89	2,500	5,303	0.304	162	2,145
Mount Reinforcements	89	600	1,273	0.073	39	515
Mount Reinforcements	40	600	325	0.019	10	515
Ericsson AIR 6449 B77D/ C-Band	88	163	340	0.020	10	140
RFS FD9R6004/1C-3L	40	9	5	0.000	0	8
Samsung RT4423-48A/B	40	46	25	0.001	1	40
Samsung RT4423-48a with R0440CC clip-on	40	56	30	0.002	1	48
Samsung RF4461d-13A	40	237	129	0.007	4	204
Samsung B2/B66A RRH ORAN (RF 4439d-25A)	40	224	121	0.007	4	192
Samsung MT6413-77A	40	172	93	0.005	3	147
Raycap RCMDC-6627-PF-48	40	32	17	0.001	1	27
JMA Wireless MX06FHG665-HG	40	246	133	0.008	4	211
Generic Flat Low Profile Platform	40	1,875	1,016	0.058	31	1,609
Totals:		17,687	17,418	1.000	533	15,175

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	-21.08	-0.53	0.00	-40.73	0.00	40.73	948.37	238.26	491	444.99	0.00	0.00	0.03
5.00	-20.20	-0.54	0.00	-38.05	0.00	38.05	922.10	228.66	452	415.10	0.01	-0.01	0.03
10.00	-19.33	-0.54	0.00	-35.36	0.00	35.36	894.83	219.07	415	385.78	0.03	-0.03	0.03
15.00	-18.48	-0.54	0.00	-32.65	0.00	32.65	866.56	209.48	380	357.09	0.06	-0.04	0.03
20.00	-17.64	-0.54	0.00	-29.94	0.00	29.94	837.29	199.88	346	329.08	0.11	-0.05	0.02
25.00	-16.80	-0.54	0.00	-27.24	0.00	27.24	805.56	190.29	313	301.27	0.18	-0.07	0.02
30.00	-15.98	-0.53	0.00	-24.55	0.00	24.55	764.96	180.70	282	271.51	0.25	-0.08	0.02
35.00	-15.18	-0.52	0.00	-21.88	0.00	21.88	724.35	171.11	253	243.30	0.34	-0.09	0.02
40.00	-10.10	-0.45	0.00	-19.26	0.00	19.26	683.74	161.51	226	216.64	0.44	-0.10	0.02
45.00	-9.53	-0.44	0.00	-17.01	0.00	17.01	643.13	151.92	200	191.53	0.55	-0.11	0.01
49.00	-9.34	-0.44	0.00	-15.25	0.00	15.25	606.13	181.84	196	197.07	0.64	-0.12	0.02
49.00	-9.34	-0.44	0.00	-15.25	0.00	15.25	610.64	144.25	180	172.55	0.64	-0.12	0.01
50.00	-9.30	-0.44	0.00	-14.81	0.00	14.81	606.13	181.84	196	197.07	0.67	-0.12	0.02
50.21	-8.72	-0.42	0.00	-14.72	0.00	14.72	606.13	181.84	196	197.07	0.67	-0.12	0.09
50.21	-8.72	-0.42	0.00	-14.72	0.00	14.72	606.13	181.84	196	197.07	0.67	-0.12	0.02
55.00	-8.20	-0.41	0.00	-12.69	0.00	12.69	606.13	181.84	196	197.07	0.80	-0.13	0.08
60.00	-7.68	-0.40	0.00	-10.63	0.00	10.63	606.13	181.84	196	197.07	0.96	-0.17	0.07
65.00	-7.27	-0.39	0.00	-8.61	0.00	8.61	606.13	181.84	196	197.07	1.16	-0.21	0.06
69.00	-7.18	-0.39	0.00	-7.05	0.00	7.05	459.24	137.77	150	150.79	1.35	-0.24	0.06
69.00	-7.18	-0.39	0.00	-7.05	0.00	7.05	606.13	181.84	196	197.07	1.35	-0.24	0.05
70.00	-6.76	-0.38	0.00	-6.66	0.00	6.66	459.24	137.77	150	150.79	1.40	-0.24	0.06
75.00	-6.34	-0.36	0.00	-4.78	0.00	4.78	459.24	137.77	150	150.79	1.67	-0.27	0.05
80.00	-5.92	-0.34	0.00	-2.98	0.00	2.98	459.24	137.77	150	150.79	1.97	-0.29	0.03
85.00	-5.67	-0.33	0.00	-1.29	0.00	1.29	459.24	137.77	150	150.79	2.28	-0.30	0.02
88.00	-5.39	-0.31	0.00	-0.31	0.00	0.31	459.24	137.77	150	150.79	2.47	-0.30	0.01
89.00	0.00	-0.28	0.00	0.00	0.00	0.00	459.24	137.77	150	150.79	2.53	-0.31	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	-14.56	-0.53	0.00	-40.09	0.00	40.09	948.37	238.26	491	444.99	0.00	0.00	0.03
5.00	-13.95	-0.54	0.00	-37.42	0.00	37.42	922.10	228.66	452	415.10	0.01	-0.01	0.03
10.00	-13.36	-0.54	0.00	-34.74	0.00	34.74	894.83	219.07	415	385.78	0.03	-0.03	0.02
15.00	-12.77	-0.54	0.00	-32.06	0.00	32.06	866.56	209.48	380	357.09	0.06	-0.04	0.02
20.00	-12.18	-0.53	0.00	-29.37	0.00	29.37	837.29	199.88	346	329.08	0.11	-0.05	0.02
25.00	-11.61	-0.53	0.00	-26.70	0.00	26.70	805.56	190.29	313	301.27	0.17	-0.06	0.02
30.00	-11.04	-0.52	0.00	-24.04	0.00	24.04	764.96	180.70	282	271.51	0.25	-0.08	0.02
35.00	-10.48	-0.52	0.00	-21.42	0.00	21.42	724.35	171.11	253	243.30	0.33	-0.09	0.02
40.00	-6.98	-0.44	0.00	-18.84	0.00	18.84	683.74	161.51	226	216.64	0.43	-0.10	0.01
45.00	-6.58	-0.43	0.00	-16.62	0.00	16.62	643.13	151.92	200	191.53	0.54	-0.11	0.01
49.00	-6.45	-0.43	0.00	-14.89	0.00	14.89	606.13	181.84	196	197.07	0.63	-0.12	0.02
49.00	-6.45	-0.43	0.00	-14.89	0.00	14.89	610.64	144.25	180	172.55	0.63	-0.12	0.01
50.00	-6.42	-0.43	0.00	-14.46	0.00	14.46	606.13	181.84	196	197.07	0.66	-0.12	0.02
50.21	-6.02	-0.42	0.00	-14.37	0.00	14.37	606.13	181.84	196	197.07	0.66	-0.12	0.08
50.21	-6.02	-0.42	0.00	-14.37	0.00	14.37	606.13	181.84	196	197.07	0.66	-0.12	0.02
55.00	-5.67	-0.41	0.00	-12.37	0.00	12.37	606.13	181.84	196	197.07	0.78	-0.13	0.07
60.00	-5.31	-0.39	0.00	-10.34	0.00	10.34	606.13	181.84	196	197.07	0.94	-0.17	0.06
65.00	-5.02	-0.38	0.00	-8.37	0.00	8.37	606.13	181.84	196	197.07	1.14	-0.21	0.05
69.00	-4.96	-0.38	0.00	-6.84	0.00	6.84	459.24	137.77	150	150.79	1.32	-0.23	0.06
69.00	-4.96	-0.38	0.00	-6.84	0.00	6.84	606.13	181.84	196	197.07	1.32	-0.23	0.04
70.00	-4.67	-0.37	0.00	-6.46	0.00	6.46	459.24	137.77	150	150.79	1.37	-0.24	0.05
75.00	-4.38	-0.35	0.00	-4.64	0.00	4.64	459.24	137.77	150	150.79	1.64	-0.27	0.04
80.00	-4.09	-0.33	0.00	-2.89	0.00	2.89	459.24	137.77	150	150.79	1.93	-0.28	0.03
85.00	-3.92	-0.32	0.00	-1.25	0.00	1.25	459.24	137.77	150	150.79	2.23	-0.30	0.02
88.00	-3.72	-0.30	0.00	-0.30	0.00	0.30	459.24	137.77	150	150.79	2.42	-0.30	0.01
89.00	0.00	-0.28	0.00	0.00	0.00	0.00	459.24	137.77	150	150.79	2.48	-0.30	0.00

ANALYSIS SUMMARY

Load Case	Base Reactions						Max Usage	
	Shear FX (kips)	Shear FZ (kips)	Axial FY (kips)	Moment MX (ft-kips)	Moment MY (ft-kips)	Moment MZ (ft-kips)	Elev (ft)	Interaction Ratio
1.2D + 1.0W	7.65	0.00	21.21	0.00	0.00	468.29	50.21	0.75
0.9D + 1.0W	7.65	0.00	15.91	0.00	0.00	462.97	50.21	0.74
1.2D + 1.0Di + 1.0Wi	2.47	0.00	26.76	0.00	0.00	137.90	50.21	0.21
1.2D + 1.0Ev + 1.0Eh	0.54	0.00	21.08	0.00	0.00	40.73	50.21	0.09
0.9D - 1.0Ev + 1.0Eh	0.54	0.00	14.56	0.00	0.00	40.09	50.21	0.08
1.0D + 1.0W	1.93	0.00	17.69	0.00	0.00	117.82	50.21	0.2

ADDITIONAL STEEL SUMMARY

Elev From (ft)	Elev To (ft)	Member	Intermediate Connectors				Max Member		
			VQ/I (k/in)	Shear Applied (kips)	phiVn (kips)	Ratio	Pu (kip)	phiPn (kip)	Ratio
0.00	50.21	SOL #20 All Thread Bar	211.4	6.8	16.8	0.4024	143.3	327.4	

Elev From (ft)	Elev To (ft)	Member	Upper Termination Connectors				Lower Termination Connectors					
			MQ/I (kips)	phiVn (kips)	Number Required	Number Actual	Ratio	MQ/I (kips)	phiVn (kip)	Number Required	Number Actual	Ratio
0.00	50.21	SOL #20 All Thread Bar	61.1742	12	6	8	0.6372	0	12	0	0	0.0000

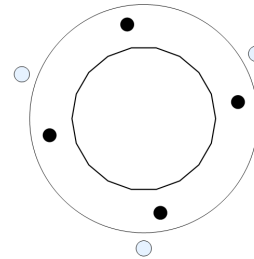
BASE PLATE ANALYSIS @ 0 FT

APPLIED REACTIONS

Moment (k-ft)	Axial (k)	Shear (k)
468.29	21.21	7.65

PLATE PARAMETERS (ID# 15402)

Width:	37	in
Shape:	Round	
Thickness:	1.5	in
Grade:	A572-60	
Yield Strength:	60	ksi
Tensile Strength:	75	ksi
Rod Detail Type:	d	
Clear Distance	3	in
Base Weld Size:	0.125	in
Orientation Offset:	-	°
Analysis Type:	Elastic	
Neutral Axis:	198	°



ANCHOR ROD PARAMETERS

Class	Arrangement	Quantity	Diameter (in)	Circle (in)	Grade	F _y (ksi)	F _u (ksi)	Spacing (in)	Offset (°)
Original [ID#15765]	Radial	4	2.25	31	A615-75	75	100	-	10

DYWIDAG BAR PARAMETERS

Quantity	Bar Size	Bar Diameter (in)	F _y (ksi)	F _u (ksi)	Bracket Type	Bracket Offset (in)	Circle (in)	Offset (°)
3 [ID# 919]	#20	2.5	80	100	W8x21	8.28	42.06	30

COMPONENT PROPERTIES

Component	ID	Gross Area (in ²)	Net Area (in ²)	Individual Inertia (in ⁴)	Moment of Inertia (in ⁴)	Threads/in
Pole	23"ø x 0.1875" (18 Sides)	13.3696	-	-	869.86	-
Bolt Group	Original (4) 2.25"ø	3.9761	3.2477	0.8393	1310.78	4.5
Dywidag Group	(3) #20	4.9087	4.9087	1.9175	2886.11	-

REACTION DISTRIBUTION

Component	ID	Moment M _u (k-ft)	Axial Load P _u (k)	Shear V _u (k)	Moment Factor
Pole	23"ø x 0.1875" (18 Sides)	108.4	21.21	7.65	0.232
Bolt Group	Original (4) 2.25"ø	108.4	-	7.65	0.232
Dywidag Group	(3) #20	359.8	-	-	0.768

ASSET: 302526, Naugatuck (telephone Pole)
 CUSTOMER: VERIZON WIRELESS

CODE: ANSI/TIA-222-H
 PROJECT: 14564830

BASE PLATE BEND LINE ANALYSIS @ 0 FT

POLE PROPERTIES

Flat-to-Flat Diameter: 23.12 in
 Point-to-Point Diameter: 23.48 in
 Orientation Offset: - °

Flat Width: 4.078 in
 Flat Radians: 0.349 rad

PLATE PROPERTIES

Neutral Axis: 198 °
 Bend Line Limits: 3.679 to -0.188 rad

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 /ΦM _n	
Flats	25.454	0.00	14.318	115.7	773.2	15.0%	✓
Corners	25.125	0.00	14.133	107.4	763.2	14.1%	✓
Circumferential	44.336	0.00	24.939	113.8	1346.7	8.5%	✓

ELASTIC 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)	Compressive Result	Interaction Result	
Original	4	2.25	46.5	0.5	243.6	0.191	19.5%	✓

DYWIDAG BAR ANALYSIS

Group Quantity	Bar Size	Bar Circle (in)	Applied Axial Load P _u (k)	Compressive Capacity ΦP _n (k)	Compressive Result P _u / ΦP _n	
3	#20	42.06	152.3	368.2	41.4%	✓

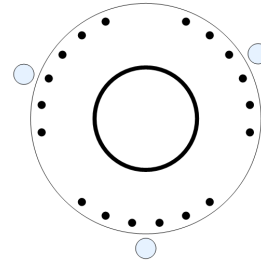
UPPER FLANGE PLATE ANALYSIS @ 49 FT

APPLIED REACTIONS

Moment (k-ft)	Axial (k)	Shear (k)
150.41	9.12	4

PLATE PARAMETERS (ID# 15404)

Width:	28.25	in
Shape:	Round	
Thickness:	2	in
Grade:	A572-50	
Yield Strength:	50	ksi
Tensile Strength:	65	ksi
Base Weld Size:	0.313	in
Orientation Offset:	-	°
Analysis Type:	Elastic	
Neutral Axis:	205	°



FLANGE BOLT PARAMETERS

Class	Arrangement	Quantity	Diameter (in)	Circle (in)	Grade	F _y (ksi)	F _u (ksi)	Spacing (in)	Offset (°)
Original [ID#15766]	Radial	18	1	25.75	A325	92	120	-	-

DYWIDAG BAR PARAMETERS

Quantity	Bar Size	Bar Diameter (in)	F _y (ksi)	F _u (ksi)	Bracket Type	Bracket Offset (in)	Circle (in)	Offset (°)
3 [ID# 921]	#20	2.5	80	100	W8x21	8.28	31.81	30

COMPONENT PROPERTIES

Component	ID	Gross Area (in ²)	Net Area (in ²)	Individual Inertia (in ⁴)	Moment of Inertia (in ⁴)	Threads/in
Pole	12.75"Ø x 0.5" (Round)	19.2420	-	-	362.57	-
Bolt Group	Original (18) 1"Ø	0.7854	0.6057	0.0292	818.62	8.0
Dywidag Group	(3) #20	4.9087	4.9087	1.9175	1656.04	-

REACTION DISTRIBUTION

Component	ID	Moment M _u (k-ft)	Axial Load P _u (k)	Shear V _u (k)	Moment Factor
Pole	12.75"Ø x 0.5" (Round)	27.0	9.12	4.00	0.180
Bolt Group	Original (18) 1"Ø	27.0	-	4.00	0.180
Dywidag Group	(3) #20	123.4	-	-	0.820

ASSET: 302526, Naugatuck (telephone Pole)
 CUSTOMER: VERIZON WIRELESS

CODE: ANSI/TIA-222-H
 PROJECT: 14564830

UPPER FLANGE PLATE BEND LINE ANALYSIS @ 49 FT

POLE PROPERTIES

Flat-to-Flat Diameter: 13.06 in
 Point-to-Point Diameter: 13.06 in
 Orientation Offset: - °

Flat Width: 0.114 in
 Flat Radians: 0.017 rad

PLATE PROPERTIES

Neutral Axis: 205 °
 Bend Line Limits: 5.685 to -1.496 rad

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 /ΦM _n	
Flats	24.000	0.00	24.000	61.7	1080.0	5.7%	✓
Corners	24.000	0.00	24.000	61.7	1080.0	5.7%	✓
Circumferential	14.752	0.00	14.752	86.9	663.9	13.1%	✓

ELASTIC 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)	Compressive Result	Interaction Result	
Original	18	1	3.0	0.0	54.5	0.056	5.6%	✓

DYWIDAG BAR ANALYSIS

Group Quantity	Bar Size	Bar Circle (in)	Applied Axial Load P _u (k)	Compressive Capacity ΦP _n (k)	Compressive Result P _u / ΦP _n	
3	#20	31.81	65.8	368.2	17.9%	✓

ASSET: 302526, Naugatuck (telephone Pole)
 CUSTOMER: VERIZON WIRELESS

CODE: ANSI/TIA-222-H
 PROJECT: 14564830

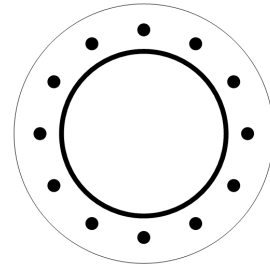
UPPER FLANGE PLATE ANALYSIS @ 69 FT

APPLIED REACTIONS

Moment (k-ft)	Axial (k)	Shear (k)
73.35	6.87	3.7

PLATE PARAMETERS (ID# 15403)

Width:	20	in
Shape:	Round	
Thickness:	1.5	in
Grade:	A572-50	
Yield Strength:	50	ksi
Tensile Strength:	65	ksi
Base Weld Size:	0.313	in
Orientation Offset:	-	°
Analysis Type:	Plastic	
Neutral Axis:	45	°



FLANGE BOLT PARAMETERS

Class	Arrangement	Quantity	Diameter (in)	Circle (in)	Grade	F _y (ksi)	F _u (ksi)	Spacing (in)	Offset (°)
Original [ID#15767]	Radial	12	1	16	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	12.75"ø x 0.375" (Round)	14.5788	-	-	279.77	-
Bolt Group	Original (12) 1"ø	0.7854	0.6057	0.0292	198.03	8.0

REACTION DISTRIBUTION

Component	ID	Moment M _u (k-ft)	Axial Load P _u (k)	Shear V _u (k)	Moment Factor
Pole	12.75"ø x 0.375" (Round)	73.4	6.87	3.70	1.000
Bolt Group	Original (12) 1"ø	73.4	-	3.70	1.000

UPPER FLANGE PLATE BEND LINE ANALYSIS @ 69 FT

POLE PROPERTIES

Flat-to-Flat Diameter:	13.06	in
Point-to-Point Diameter:	13.06	in
Orientation Offset:	-	°

Flat Width:	0.114	in
Flat Radians:	0.017	rad

PLATE PROPERTIES

Neutral Axis:	45	°
Bend Line Limits:	1.831 to 2.881	rad

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 /ΦM _n
Flats	11.757	0.00	6.614	23.4	297.6	7.9% ✔
Corners	11.757	0.00	6.614	23.4	297.6	7.9% ✔
Circumferential	13.679	0.00	7.695	33.3	346.3	9.6% ✔

PLASTIC FLANGE BOLT ANALYSIS

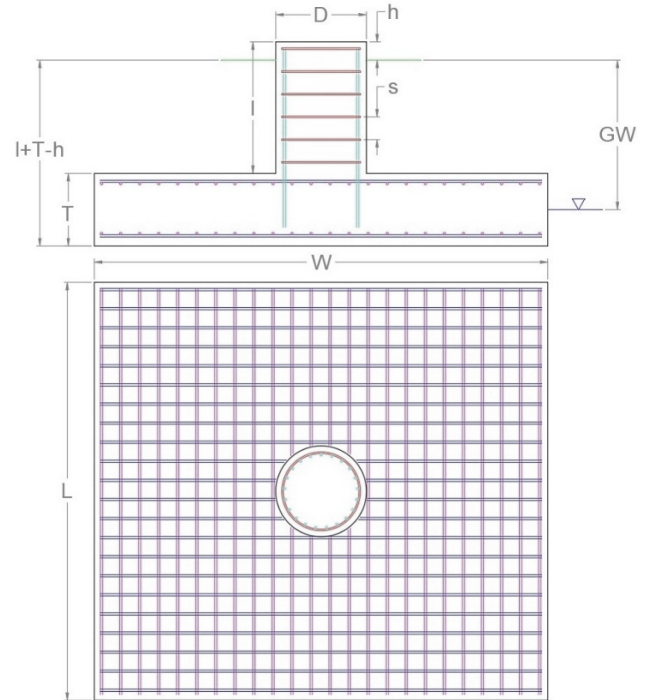
Class	Group Quantity	Bolt Diameter (in)	Applied Axial Load P _u (k)	Applied Shear Load V _u (k)	Compressive Capacity ΦP _n (k)	Interaction Result
Original	12	1	16.6	0.5	54.5	31.6% ✔

APPLIED GLOBAL REACTIONS

Moment (k-ft)	Axial (k)	Shear (k)
468.29	21.21	7.65

FOUNDATION PARAMETERS

Mat Length:	L	12	ft
Mat Width:	W	12	ft
Mat Thickness:	T	3	ft
Base Depth:	L+T-h	5.25	ft
Pier Shape:		Square	
Pier Width:	D	4.5	ft
Pier Height above Grade:	h	1	ft
Concrete Compressive Strength:		4,000	psi
Mat Top Rebar:		(20) #6 bars [60 ksi]	
Mat Bottom Rebar:		(20) #6 bars [60 ksi]	
Pier Vertical Rebar:		(24) #6 bars [60 ksi]	
Pier Rebar Ties:	s	#4 bars @ 7.0" 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	25	ft
Soil Unit Weight:		110	pcf
Ultimate Skin Friction:		0	psf
Ultimate Bearing Pressure:		12,000	psf
Bearing Pressure Type:		Net	
Coefficient of Shear Friction:		0.3	

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, $M_{u,Design} / \Phi_m M_n$
516.10	726.35	71.1% ✔

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, $P_{u,net} / \Phi_b P_n$
2,787.00	9,434.00	Diagonal to Pad Edge	29.5% ✔

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, $V_u / \Phi_s V_n$
7.65	0.00	412.5	14.85	38.81	20.0% ✔

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, $V_u / \Phi_c V_n$
27.82	260.51	Diagonal to Pad Edge	10.7%

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, $v_u / \Phi_c v_n$
10.2	189.7	5.4%

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, $0.6 M_{ut} / \Phi M_{sc,f}$
13.50	1.12	0.00	17,639.5	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, $M_u / \Phi M_n$
58.85	1,258.95	Parallel to Pad Edge	4.7%

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, $M_u / \Phi M_n$
192.50	1,307.76	Diagonal to Pad Edge	14.7%

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
46.25	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, $M_u / \Phi_b M_n$
493.15	1,076.18	0.004	45.8%

PIER REINFORCING COMPRESSION ANALYSIS

Design Compression, P_u (k)	Nominal Compressive Capacity, $\Phi_p P_n$ (k)	Pier Rebar Compressive Usage, $P_u / \Phi_p P_n$
21.21	5,150.55	0.4%

PIER REINFORCING SHEAR ANALYSIS

Design Shear, V_u (k)	Nominal Shear Capacity, $\Phi_v V_n$ (k)	Pier Rebar Shear Usage, $V_u / \Phi_v V_n$
7.65	388.73	2.0%

EXHIBIT 4



Colliers Engineering & Design,
Architecture, Landscape Architecture,
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Post-Modification Antenna Mount Analysis Report and PMI Requirements

Mount Fix

SMART Tool Project #: 10213282
Colliers Engineering & Design Project #: 21777895 (Rev. 2)

January 25, 2024

Site Information

Site ID: 5000383776-VZW / NAUGATUCK 2 CT
Site Name: NAUGATUCK 2 CT
Carrier Name: Verizon Wireless
Address: 585 South Main Street
Naugatuck, Connecticut 06770
New Haven County
Latitude: 41.478469°
Longitude: -73.048442°

Structure Information

Tower Type: 80-Ft Monopole
Mount Type: 13.50-Ft Platform

FUZE ID # 16053183

Analysis Results

Platform: 41.7% **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: Frank Centone



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
<i>Radio Frequency Data Sheet (RFDS)</i>	<i>Verizon RFDS, Site ID: 324436, dated October 4, 2023</i>
<i>Mount Mapping Report</i>	<i>Elite ICT Service, Site ID: 302526, dated April 17, 2021</i>
<i>Previous Mount Analysis</i>	<i>Colliers Engineering & Design Project #: 21777895A (Rev 1), dated October 26, 2023</i>
<i>Mount Modification Drawing</i>	<i>Colliers Engineering & Design Project #: 21777895A (Rev 1), dated November 15, 2023</i>

Analysis Criteria:

Codes and Standards:	ANSI/TIA-222-H 2022 Connecticut State Building Code (CSBC), Effective October 1, 2022
Wind Parameters:	Basic Wind Speed (Ultimate 3-sec. Gust), V_{ULT} : 120 mph Ice Wind Speed (3-sec. Gust): 50 mph Design Ice Thickness: 1.00 in Risk Category: II Exposure Category: B Topographic Category: 1 Topographic Feature Considered: N/A Topographic Method: N/A Ground Elevation Factor, K_e : 0.991
Seismic Parameters:	S_s : 0.197 g S_1 : 0.054 g
Maintenance Parameters:	Wind Speed (3-sec. Gust): 30 mph Maintenance Load, L_v : 250 lbs. Maintenance Load, L_m : 500 lbs.
Analysis Software:	RISA-3D (V17)

Final Loading Configuration:

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

Mount Elevation (ft)	Equipment Elevation (ft)	Quantity	Manufacturer	Model	Status
40.00	40.00	6	JMA Wireless	MX06FHG665-HG	Added
		3	Samsung	RT4423-48B(AC) w/ Clip-On Ant	
		3	Samsung	MT6413-77A	
		3	Samsung	RF4439d-25A	
		3	Samsung	RF4461d-13A	
		1	Raycap	RVZDC-6627-PF-48	

Any proposed antennas not currently installed should be mounted such that the centerline of the antennas does not exceed 6 inches vertically from the center of the antenna mount.

The recent mount mapping reported existing OVP units. 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:
 - o Channel, Solid Round, Angle, Plate ASTM A36 (Gr. 36)
 - o HSS (Rectangular) ASTM 500 (Gr. B-46)
 - o Pipe ASTM A53 (Gr. B-35)
 - o Threaded Rod F1554 (Gr. 36)
 - o Bolts ASTM A325
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	19.7%	Pass
Face Horizontal	13.6%	Pass
Mount Pipe	12.6%	Pass
Mod Kicker	7.9%	Pass
Mount connection	41.7%	Pass

Structure Rating – (Controlling Utilization of all Components)	41.7%
---	--------------

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	40.0	N3	440	2149	0.445	1.000	804	2042	0.810	0.226
Sector B Standoff	40.0	N31	414	2223	0.411	1.071	688	2064	0.699	0.245
Sector A Standoff	40.0	N43A	439	2133	0.436	0.965	795	2017	0.800	0.217

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	19.9	19.9	34.0	34.0
0.5	25.2	25.2	45.2	45.2
1	29.7	29.7	55.6	55.6

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

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

Attachments:

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

Mount Desktop – Post Modification Inspection (PMI) Report Requirements

Documents & Photos Required from Contractor – Mount Modification

Electronic pdf version of this can be downloaded at <https://pmi.vzwsmart.com>
For additional questions and support, please reach out to pmisupport@colliersengineering.com

MDG #: 5000383776

SMART Project #: 10213282

Fuze Project ID: 16053183

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:

Install proposed OVP on proposed OVP pipe.

Contractor shall inspect climbing facilities and safety climb and ensure they are in good condition. Contractor shall install safety climb wire rope guides in locations where wire rope is contacting the mount or mount-to-tower connection steel. Wire brush clean any observed corrosion and protect with two (2) coats of cold galvanization (Zinga or Zinc Kote). Contractor shall provide photos of wire rope guide installation as part of PMI documents. Contact EOR if additional guidance is required.

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

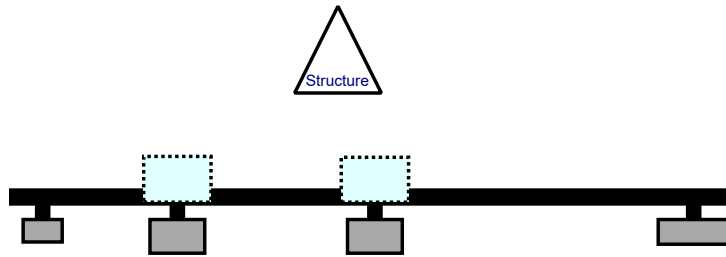
Comments:

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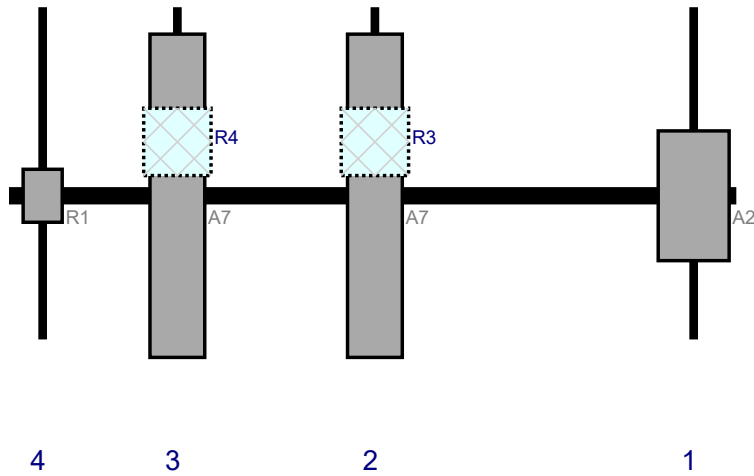
Certifying Individual:

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

Plan View

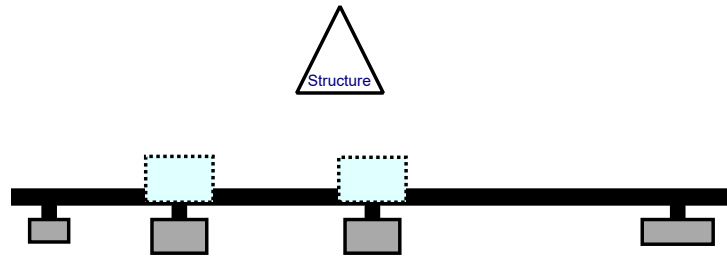


Front View - Looking at Structure

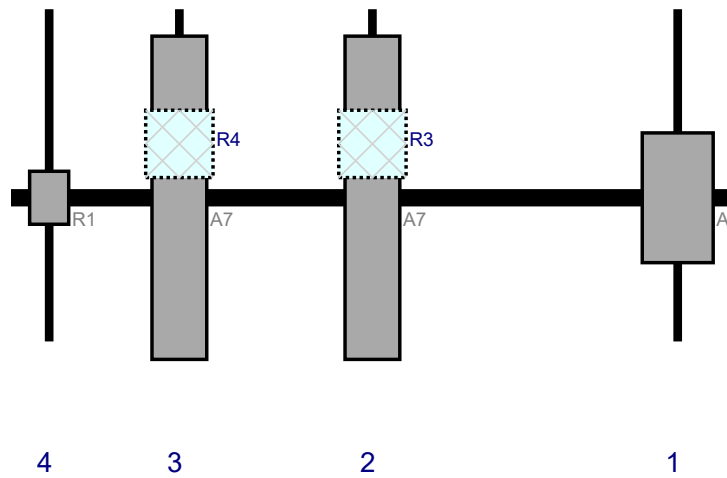


Ref#	Model	Height (in)	Width (in)	H Dist Frm L.	Pipe #	Pipe Pos V	Ant Pos	C. Ant Frm T.	Ant H Off	Status	Validation
A2	MT6413-77A	28.9	15.8	152.5	1	a	Front	42	0	Added	
A7	MX06FHG665-HG	72	12.2	81.5	2	a	Front	42	0	Added	
R3	RF4439d-25A	15	15	81.5	2	a	Behind	30	0	Added	
A7	MX06FHG665-HG	72	12.2	37.5	3	a	Front	42	0	Added	
R4	RF4461d-13A	15	15	37.5	3	a	Behind	30	0	Added	
R1	RT4423-48B(AC) w/ Clip-On Ant	11.8	8.7	7.5	4	a	Front	42	0	Added	
OVP	RVZDC-6627-PF-48	29.5	16.5		Member					Added	

Plan View

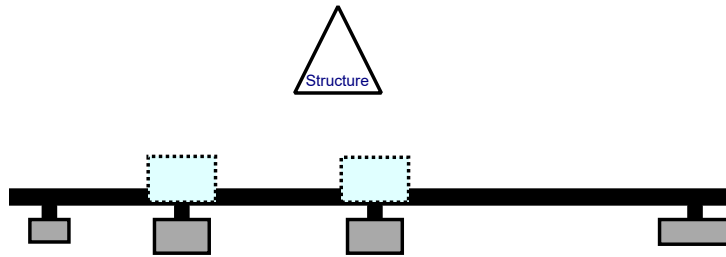


Front View - Looking at Structure

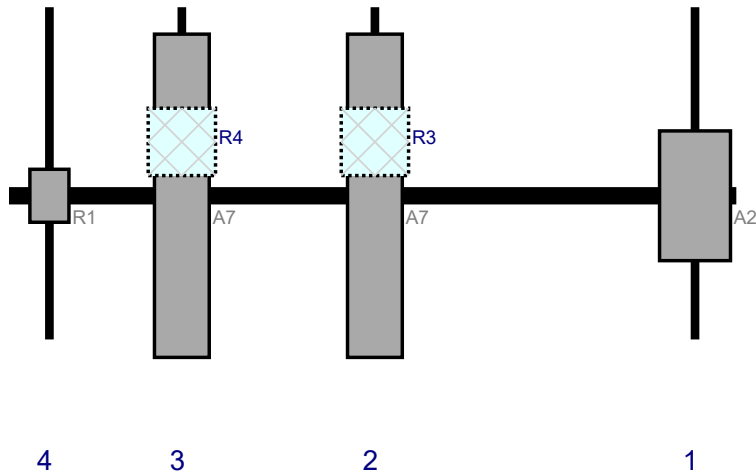


Ref#	Model	Height (in)	Width (in)	H Dist Frm L.	Pipe #	Pipe Pos V	Ant Pos	C. Ant Frm T.	Ant H Off	Status	Validation
A2	MT6413-77A	28.9	15.8	148.5	1	a	Front	42	0	Added	
A7	MX06FHG665-HG	72	12.2	80.5	2	a	Front	42	0	Added	
R3	RF4439d-25A	15	15	80.5	2	a	Behind	30	0	Added	
A7	MX06FHG665-HG	72	12.2	37.5	3	a	Front	42	0	Added	
R4	RF4461d-13A	15	15	37.5	3	a	Behind	30	0	Added	
R1	RT4423-48B(AC) w/ Clip-On Ant	11.8	8.7	8.5	4	a	Front	42	0	Added	

Plan View



Front View - Looking at Structure



Ref#	Model	Height (in)	Width (in)	H Dist Frm L.	Pipe #	Pipe Pos V	Ant Pos	C. Ant Frm T.	Ant H Off	Status	Validation
A2	MT6413-77A	28.9	15.8	152.8	1	a	Front	42	0	Added	
A7	MX06FHG665-HG	72	12.2	81.5	2	a	Front	42	0	Added	
R3	RF4439d-25A	15	15	81.5	2	a	Behind	30	0	Added	
A7	MX06FHG665-HG	72	12.2	38.5	3	a	Front	42	0	Added	
R4	RF4461d-13A	15	15	38.5	3	a	Behind	30	0	Added	
R1	RT4423-48B(AC) w/ Clip-On Ant	11.8	8.7	9	4	a	Front	42	0	Added	



MOUNT MODIFICATION DRAWINGS
EXISTING 13.50' PLATFORM

TOWER OWNER: AMERICAN TOWER CORPORATION
TOWER OWNER SITE NUMBER: 302526

CARRIER SITE NAME: NAUGATUCK 2 CT
CARRIER SITE NUMBER: 5000383776
FUZE ID: 16053183

585 SOUTH MAIN STREET
NAUGATUCK, CT 06770
NEW HAVEN COUNTY

LATITUDE: 41.47846900° N
LONGITUDE: 73.04844200° W



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SCALE: AS SHOWN JOB NUMBER: 21777895

REV	DATE	DESCRIPTION	DRAWN BY	CHECKED BY
1	11/15/2023	ISSUED FOR CONSTRUCTION	CL	DX
0	07/23/2021	ISSUED FOR CONSTRUCTION	MSG	DX

STATE OF CONNECTICUT
DEJIAN XU
No. 33733
LICENSED PROFESSIONAL ENGINEER
11/15/2023
COLLIERS ENGINEERING & DESIGN CT, P.C.
C.T. JPC-0000131

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:
NAUGATUCK 2 CT
5000383776
585 SOUTH MAIN STREET
NAUGATUCK, CT 06770
NEW HAVEN COUNTY

TITLE SHEET

ST-1

DESIGN CRITERIA
WIND LOADS BASIC WIND SPEED (3 SECOND GUST), V = 120 MPH EXPOSURE CATEGORY B TOPOGRAPHIC CATEGORY: 1 TOPOGRAPHIC CONSIDERED: N/A TOPOGRAPHIC METHOD: N/A MEAN BASE ELEVATION (AMSL) = 261.56'
ICE LOADS ICE WIND SPEED (3 SECOND GUST), V = 50 MPH ICE THICKNESS = 1.00 IN
SEISMIC LOADS SEISMIC DESIGN CATEGORY B SHORT TERM MCER GROUND MOTION, S _s = .197 LONG TERM MCER GROUND MOTION, S _l = .054

PROJECT INFORMATION
APPLICANT/LESSEE COMPANY: VERIZON WIRELESS CLIENT REPRESENTATIVE COMPANY: VERIZON WIRELESS PROJECT MANAGER COMPANY: COLLIERS ENGINEERING & DESIGN CONTACT: PETER ALBANO PHONE: 856.797.0412 E-MAIL: PETER.ALBANO@COLLIERSENG.COM
CONTRACTOR PMI REQUIREMENTS PMI LOCATION: HTTPS://PMI.VZWSMART.COM SMART TOOL PROJECT #: 10213282 VZW MDG #: 5000383776 ANALYSIS DATE: 11/15/2023 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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BILL OF MATERIALS

SECTION 1 - VZWSMART KITS

QUANTITY	MANUFACTURER	PART NUMBER	DESCRIPTION	NOTES	UNIT WEIGHT (LBS.)	WEIGHT (LBS.)
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-PLK7	MONOPOLE COLLAR MOUNT ASSEMBLY		150	150
1		VZWSMART-MSK6	BACK TO BACK CROSSOVER PLATE			34

SECTION 2 - OTHER REQUIRED PARTS

QUANTITY	MANUFACTURER	PART NUMBER	DESCRIPTION	NOTES	UNIT WEIGHT (LBS.)	WEIGHT (LBS.)
1	-	-	PROPOSED 36" LONG, PIPE 2 SCH40	GALVANIZED	11	11

SECTION 3 - REQUIRED SAFETY CLIMB PARTS

QUANTITY	MANUFACTURER	PART NUMBER	DESCRIPTION	NOTES	UNIT WEIGHT (LBS.)	WEIGHT (LBS.)
1	PERFECT VISION	PV-CLAMP-LW-0106	CLAMP BRACKET	OR EOR APPROVED EQUIVALENT	-	-
1	PERFECT VISION	PV-CMX-CG-SM	WIRE ROPE GUIDE	OR EOR APPROVED EQUIVALENT	-	-
TOTAL:						486

NOTES:

- 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.
- 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



www.colliersengineering.com

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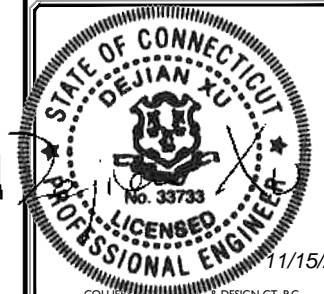
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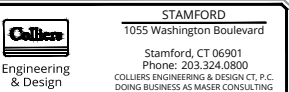
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1	11/15/2023	ISSUED FOR CONSTRUCTION	CL	DX
0	07/23/2021	ISSUED FOR CONSTRUCTION	MSG	DX



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SITE NAME:

NAUGATUCK 2 CT
5000383776
585 SOUTH MAIN STREET
NAUGATUCK, CT 06770
NEW HAVEN COUNTY



BILL OF MATERIALS

SHEET NUMBER: SBOM-1

GENERAL NOTES

- 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.
- 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.
- 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.
- IT IS ASSUMED THAT ANY STRUCTURAL MODIFICATION WORK SPECIFIED ON THESE PLANS WILL BE ACCOMPLISHED BY KNOWLEDGEABLE WORKMEN WITH TOWER CONSTRUCTION EXPERIENCE.
- THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK AND SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION METHODS, MEANS, TECHNIQUES, SEQUENCES, AND PROCEDURES.
- 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.
- THE CONTRACTOR IS SOLELY RESPONSIBLE FOR INITIATING, MAINTAINING, AND SUPERVISING ALL SAFETY PROGRAMS IN ACCORDANCE WITH APPLICABLE SAFETY CODES.
- 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.
- 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.
- 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.
- 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.
- DO NOT SCALE DRAWINGS.
- DO NOT USE THESE DRAWINGS FOR ANY OTHER SITE.
- 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.
- THE MOUNT UNDER NO CIRCUMSTANCES SHOULD BE USED AS A TIE OFF POINT.

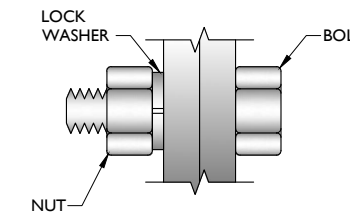
STRUCTURAL STEEL

- DESIGN, DETAILING, FABRICATION AND ERECTION OF STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING PUBLICATIONS EXCEPT AS SPECIFICALLY INDICATED IN THE CONTRACT DOCUMENTS.
 - AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) MANUAL OF STEEL CONSTRUCTION (15TH EDITION)
 - SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS
 - AISC CODE OF STANDARD PRACTICE
- 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
- 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.
- PROVIDE STRUCTURAL STEEL SHOP DRAWINGS TO ENGINEER FOR APPROVAL PRIOR TO FABRICATION.
 - SUBMIT SHOP DRAWINGS TO
PETER.ALBANO@COLLIERSENG.COM
 - PROVIDE COLLIERS ENGINEERING & DESIGN PROJECT # AND COLLIERS ENGINEERING & DESIGN PROJECT ENGINEER CONTACT IN THE BODY OF THE EMAIL.
- 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.
- GALVANIZED ASTM A325 BOLTS SHALL NOT BE REUSED.
- 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.
- 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.
- 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.
- FOR MEMBERS BEING REPLACED, PROVIDE NEW BOLTS AND MATCH EXISTING SIZE AND GRADE. MAINTAIN AISC REQUIREMENTS FOR MINIMUM BOLT DISTANCE AND SPACING.
- 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.
- GALVANIZED ASTM A325 BOLTS SHALL NOT BE REUSED.
- ALL NEW STEEL SHALL BE HOT BE DIPPED GALVANIZED FOR FULL WEATHER PROTECTION. CONTRACTOR SHALL OBTAIN WRITTEN PERMISSION TO PROTECT STEEL BY ANY OTHER MEANS.
- ALL EXISTING PAINTED/GALVANIZED SURFACES DAMAGED DURING REHAB INCLUDING AREAS UNDER STIFFENER PLATES SHALL BE WIRE BRUSHED CLEAN, REPAIRED BY COLD GALVANIZING (ZINC COTE, OR EOR APPROVED EQUAL), AND REPAINTED TO MATCH THE EXISTING FINISH (IF APPLICABLE).
- ALL HOLES IN STEEL MEMBERS SHALL BE SIZED 1/16" LARGER THAN THE BOLT DIAMETER. STANDARD HOLES SHALL BE USED UNLESS NOTED OTHERWISE.

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

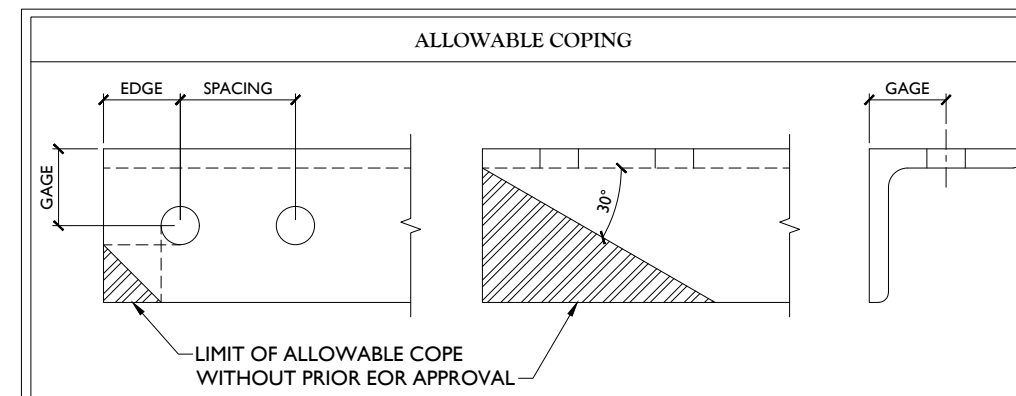
WORKABLE GAGES (IN.)	
LEG	GAGE
4	2 1/2
3 1/2	2
3	1 3/4
2 1/2	1 3/8
2	1 1/8



TYP. BOLT ASSEMBLY

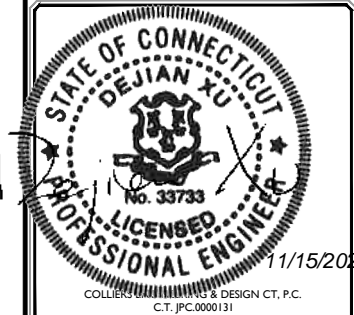
NOTES:

- 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.
- THE DIMENSIONS PROVIDED ARE MINIMUM REQUIREMENTS. ACTUAL DIMENSIONS OF PROPOSED MEMBERS WITHIN THESE DRAWINGS MAY VARY FROM THE AISC MINIMUM REQUIREMENTS.
- SHORT SLOT HOLES SHALL ONLY BE USED WHEN DEPICTED IN THE DRAWINGS
- MATCH EXISTING GAGES WHEN APPLICABLE, UNLESS MINIMUM EDGE DISTANCES ARE COMPROMISED.



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FOR STATE SPECIFIC DIRECT PHONE NUMBERS VISIT: WWW.CALL11.COM

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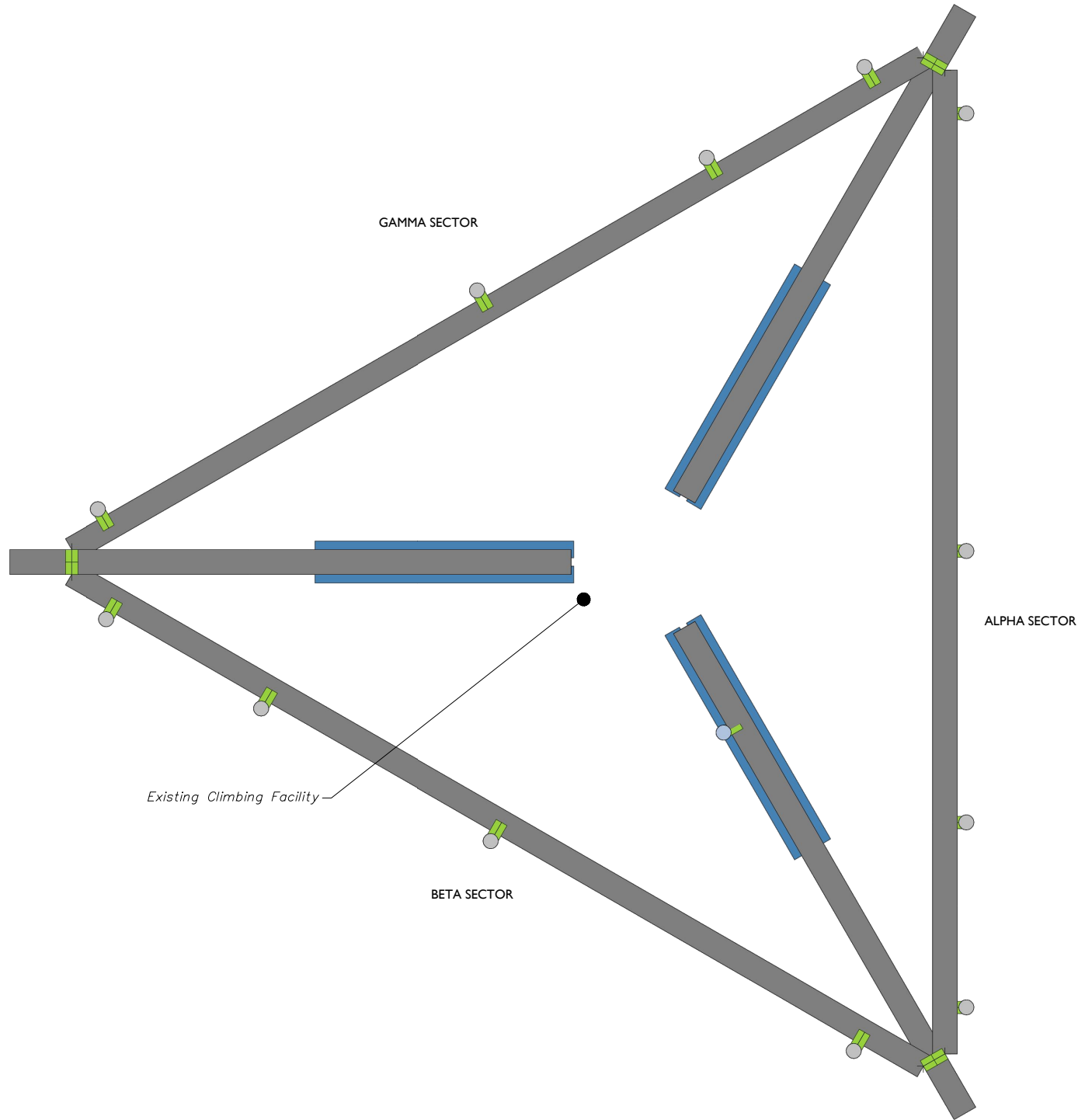
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SITE NAME:
NAUGATUCK 2 CT
5000383776
585 SOUTH MAIN STREET
NAUGATUCK, CT 06770
NEW HAVEN COUNTY

STAMFORD
1055 Washington Boulevard
Stamford, CT 06901
Phone: 203.324.0800
COLLIERS ENGINEERING & DESIGN CT, P.C.
DOING BUSINESS AS MASER CONSULTING

SHEET TITLE:
GENERAL NOTES

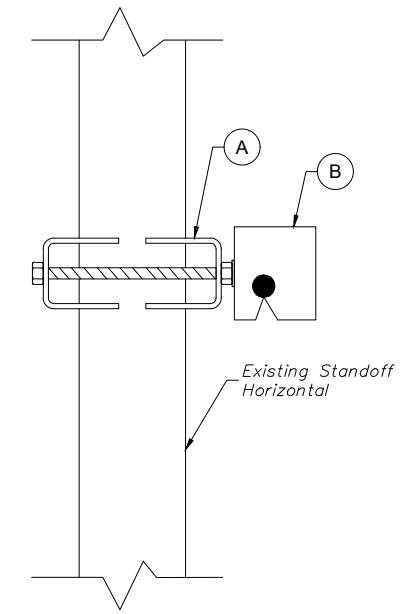
SHEET NUMBER:
SGN-I



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

STRUCTURAL NOTES:

- PER THE MOUNT MAPPING COMPLETED BY ELITE ICT SERVICE ON 4/17/2021, THE SAFETY CLIMB AND CLIMBING FACILITIES UP TO THE VERIZON MOUNT ELEVATION (40'-0") ARE IN GOOD CONDITION. COLLIERS ENGINEERING & DESIGN DOES NOT WARRANT THIS INFORMATION.
- INSTALL SHALL NOT CAUSE HARM TO THE STRUCTURE, CLIMBING FACILITY, SAFETY CLIMB, OR ANY SYSTEM INSTALLED ON THE STRUCTURE. TIMELY NOTICE AND DOCUMENTATION SHALL BE PROVIDED BY CONTRACTORS TO THE EOR (OF STRUCTURAL DESIGN) IF AN OBSTRUCTION WAS REQUIRED TO MEET THE RF SYSTEM DESIGN REQUIREMENTS AND PERFORMANCES.



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

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

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



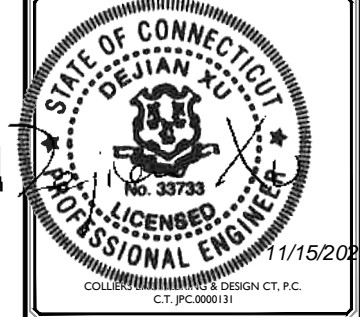
Existing Safety Climb
Existing Climbing Facility

CLIMBING FACILITY PHOTO



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

SCALE:	AS SHOWN	JOB NUMBER:	21777895
REV	DATE	DESCRIPTION	MSG DRAWN BY CHECKED BY
1	11/15/2023	ISSUED FOR CONSTRUCTION	CL DX
0	07/23/2021	ISSUED FOR CONSTRUCTION	MSG DX



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SITE NAME:
NAUGATUCK 2 CT
5000383776
585 SOUTH MAIN STREET
NAUGATUCK, CT 06770
NEW HAVEN COUNTY

STAMFORD
1055 Washington Boulevard
Stamford, CT 06901
Phone: 203.324.0800
COLLIERS ENGINEERING & DESIGN CT, P.C.
DOING BUSINESS AS MASER CONSULTING

SHEET TITLE:
CLIMBING FACILITY DETAIL

SHEET NUMBER:
SCF-1

LEGEND:

- PROPOSED
- RELOCATED
- EXISTING

MOUNT MODIFICATION SCHEDULE

NO.	ELEVATION	QUANTITY	DESCRIPTION	NOTES
1	40'-0"	1	PROPOSED KICKER KIT (PART #: VZWSMART-PLK5)2	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). SEE GENERAL NOTE B.
2		1	PROPOSED 36" LONG, PIPE 2 SCH40 OVP PIPE	

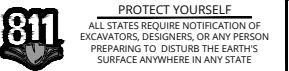
GENERAL NOTES:

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



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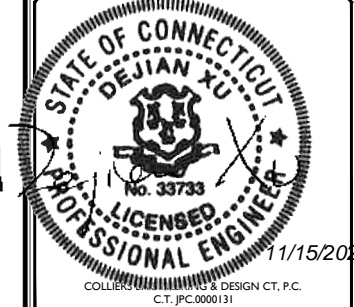


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FOR STATE SPECIFIC DIRECT PHONE NUMBERS VISIT: WWW.CALL811.COM

SCALE: AS SHOWN JOB NUMBER: 21777895

REV	DATE	DESCRIPTION	MSG BY	CHK BY
1	11/15/2023	ISSUED FOR CONSTRUCTION	CL	DX
0	07/23/2021	ISSUED FOR CONSTRUCTION	MSG	DK



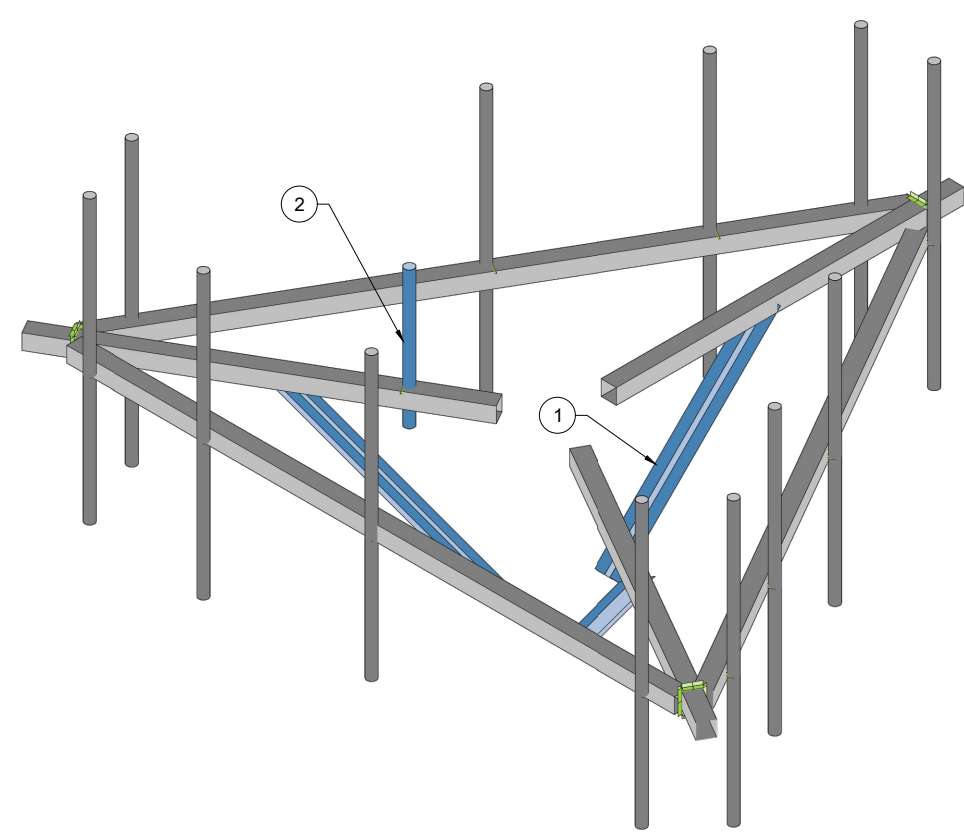
IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF THE RESPONSIBLE LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.

SITE NAME:
NAUGATUCK 2 CT
5000383776
585 SOUTH MAIN STREET
NAUGATUCK, CT 06770
NEW HAVEN COUNTY

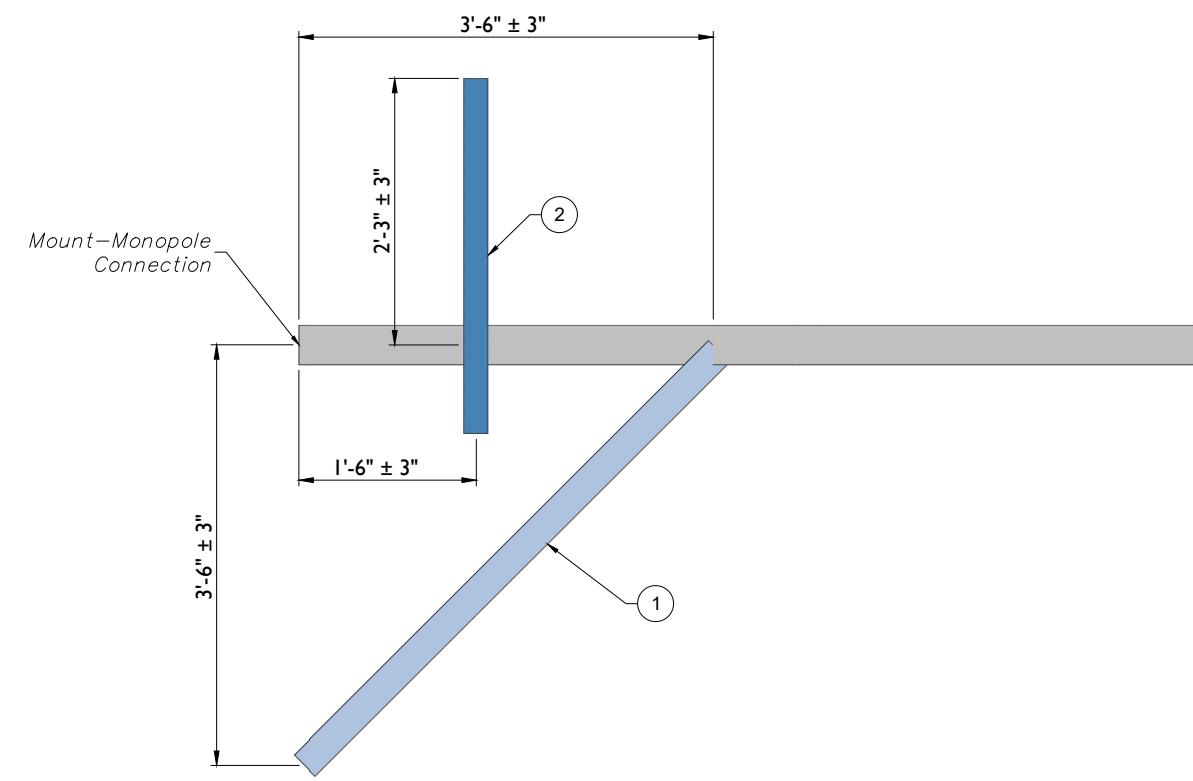
STAMFORD
1055 Washington Boulevard
Stamford, CT 06901
Phone: 203.324.0800
COLLIERS ENGINEERING & DESIGN, P.C.
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MODIFICATION DETAILS

SHEET NUMBER: **SS-1**



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



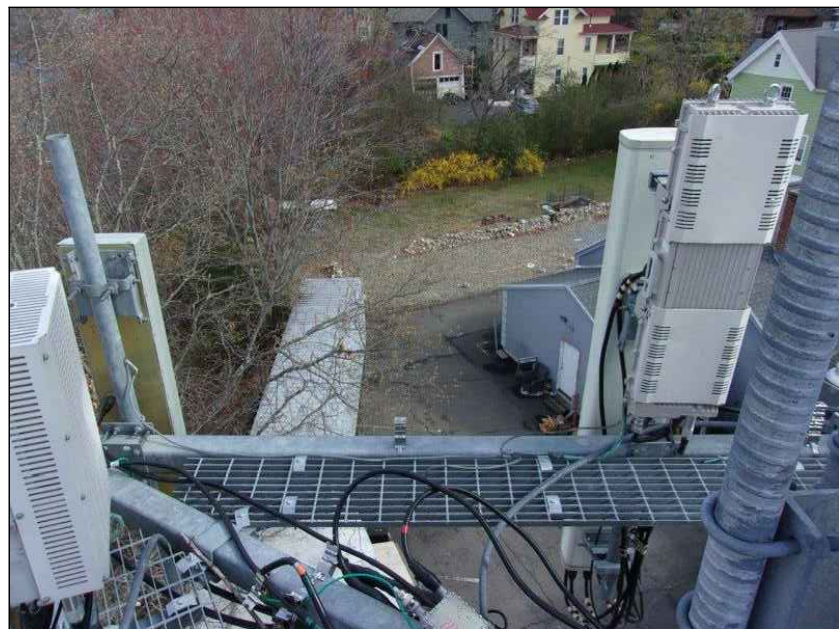
2 PROPOSED SIDE ELEVATION VIEW (TYP. ALL SECTORS)
SCALE : N.T.S.



MOUNT PHOTO 1



MOUNT PHOTO 2



MOUNT PHOTO 3



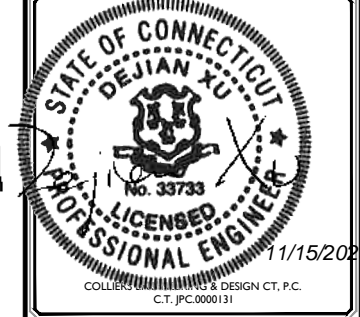
MOUNT PHOTO 4



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SCALE: AS SHOWN JOB NUMBER: 21777895

REV	DATE	DESCRIPTION	DRAWN BY	CHECKED BY
1	11/15/2023	ISSUED FOR CONSTRUCTION	CL	DX
0	07/23/2021	ISSUED FOR CONSTRUCTION	MSG	DX



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SITE NAME:
 NAUGATUCK 2 CT
 5000383776
 585 SOUTH MAIN STREET
 NAUGATUCK, CT 06770
 NEW HAVEN COUNTY

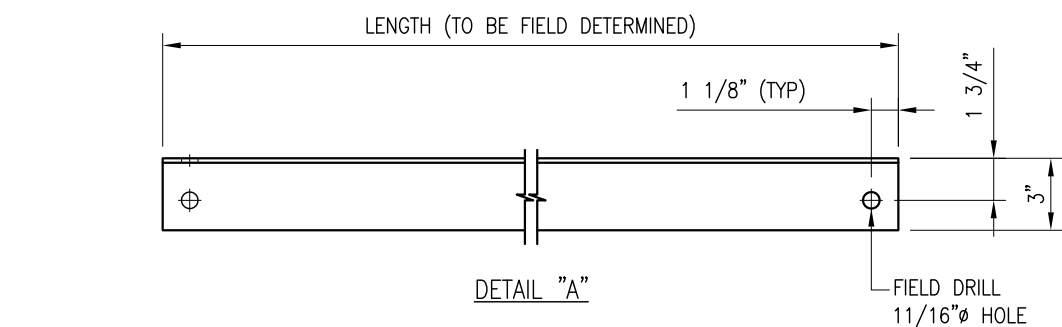
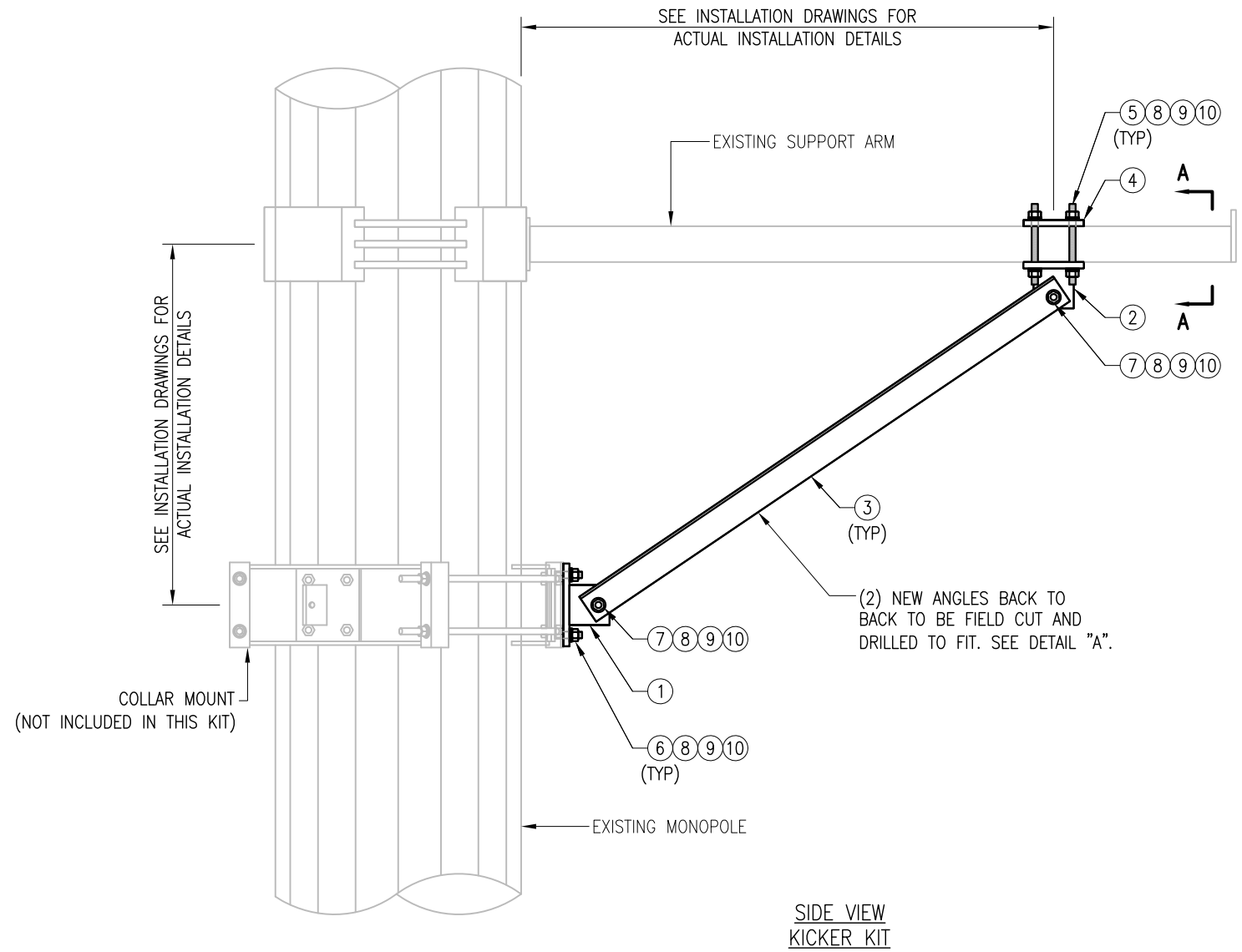
Colliers Engineering & Design
 STAMFORD
 1055 Washington Boulevard
 Stamford, CT 06901
 Phone: 203.324.0800
 COLLIERS ENGINEERING & DESIGN, P.C.
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SHEET TITLE:
MOUNT PHOTOS

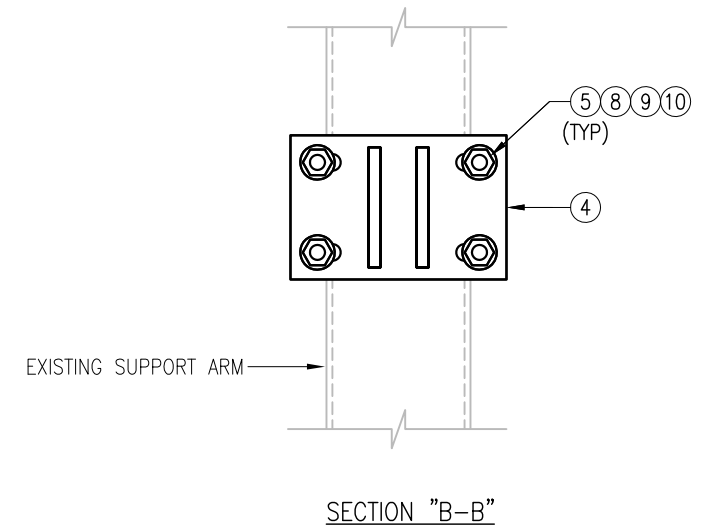
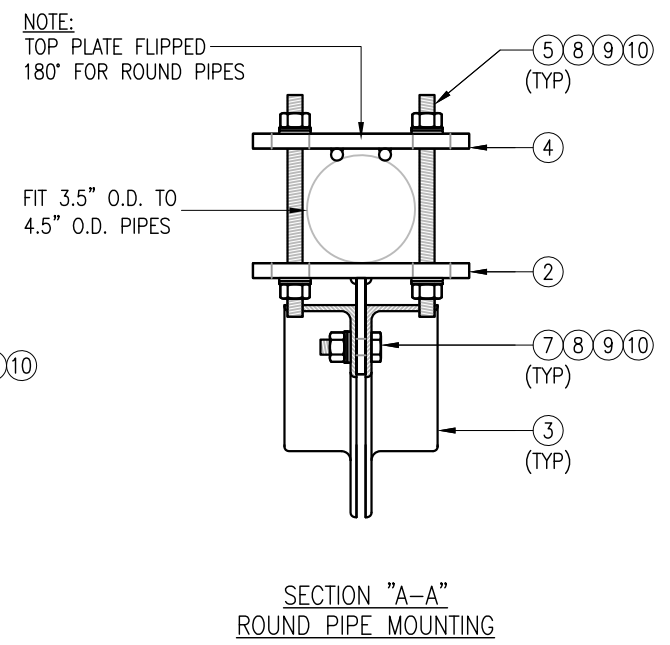
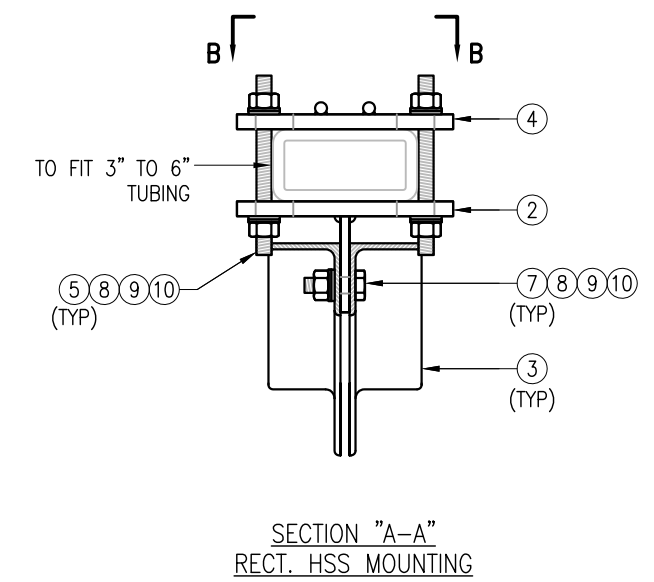
SHEET NUMBER:
SS-2

M:\Projects\18272600\83776_065118_MOUNTING.dwg(5/2) By: CLINDNS

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



VZSMART-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



FOR REFERENCE ONLY

DRAWN BY: MN CHECKED BY: HMA/KW

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

SHEET TITLE:
**VZSMART-PLK5
KICKER KIT**

SHEET NUMBER: VZSMART-PLK5 REV #: 0



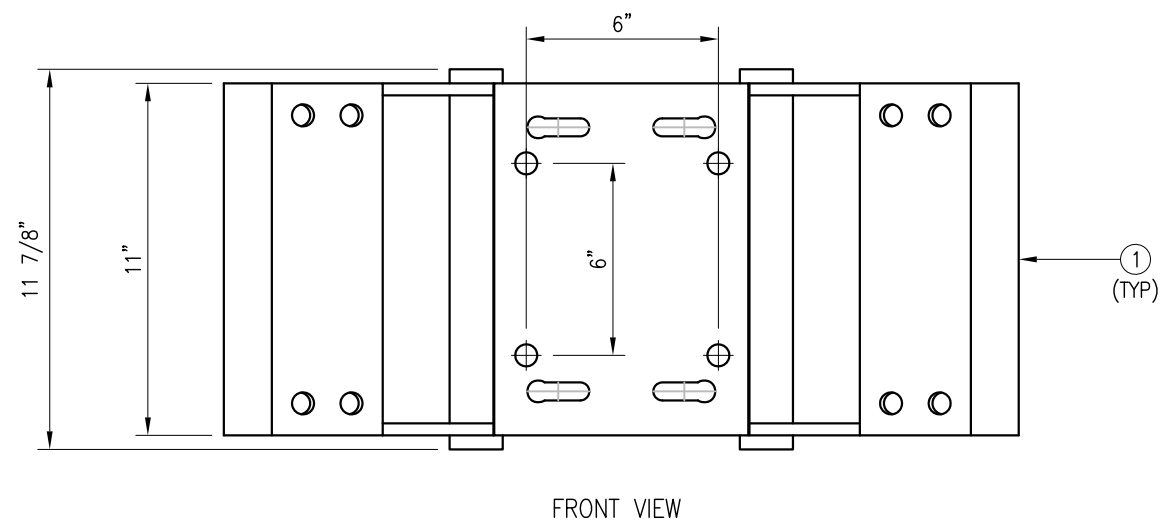
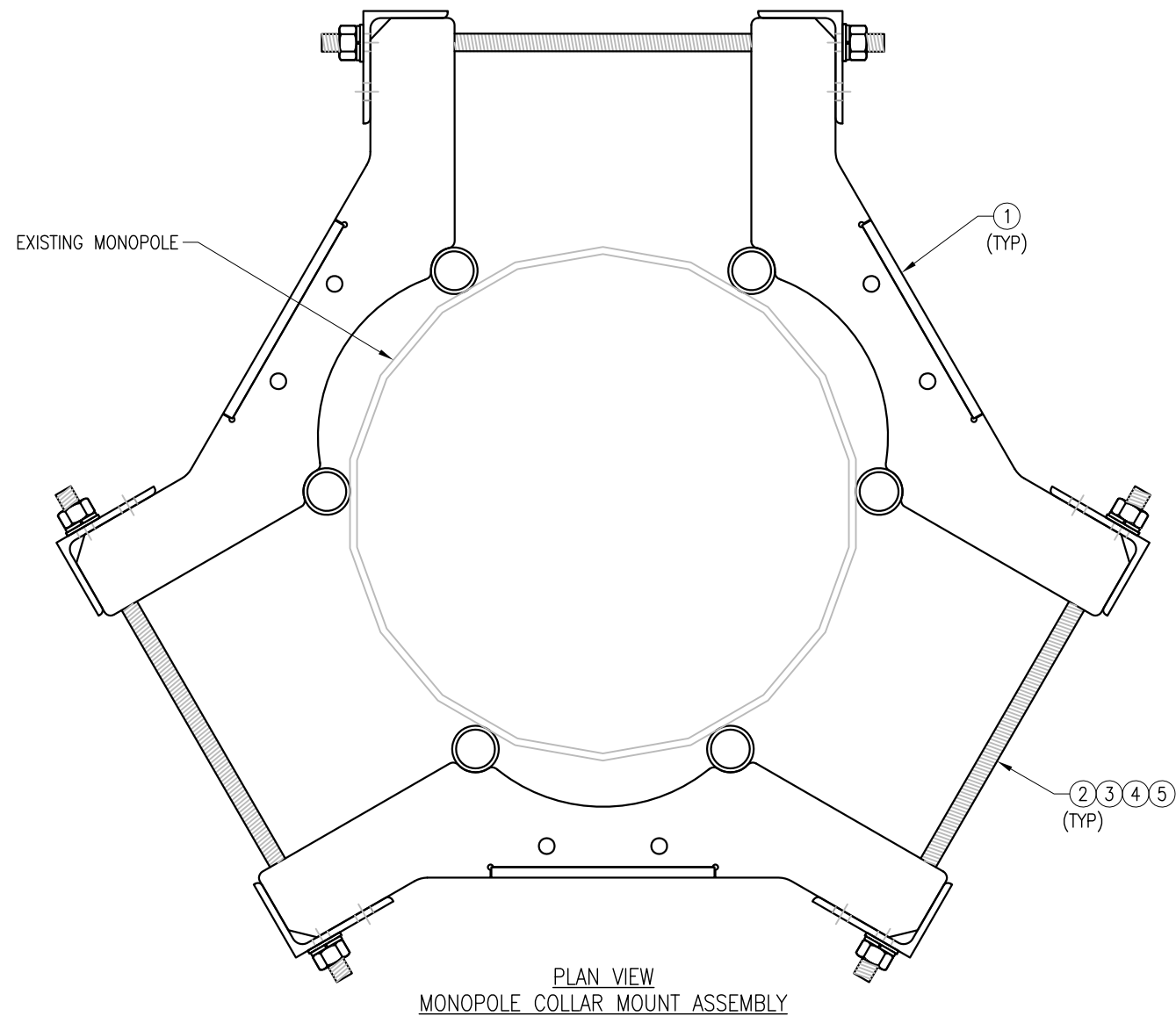
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DRAWN BY: BT CHECKED BY: HMA/KW

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

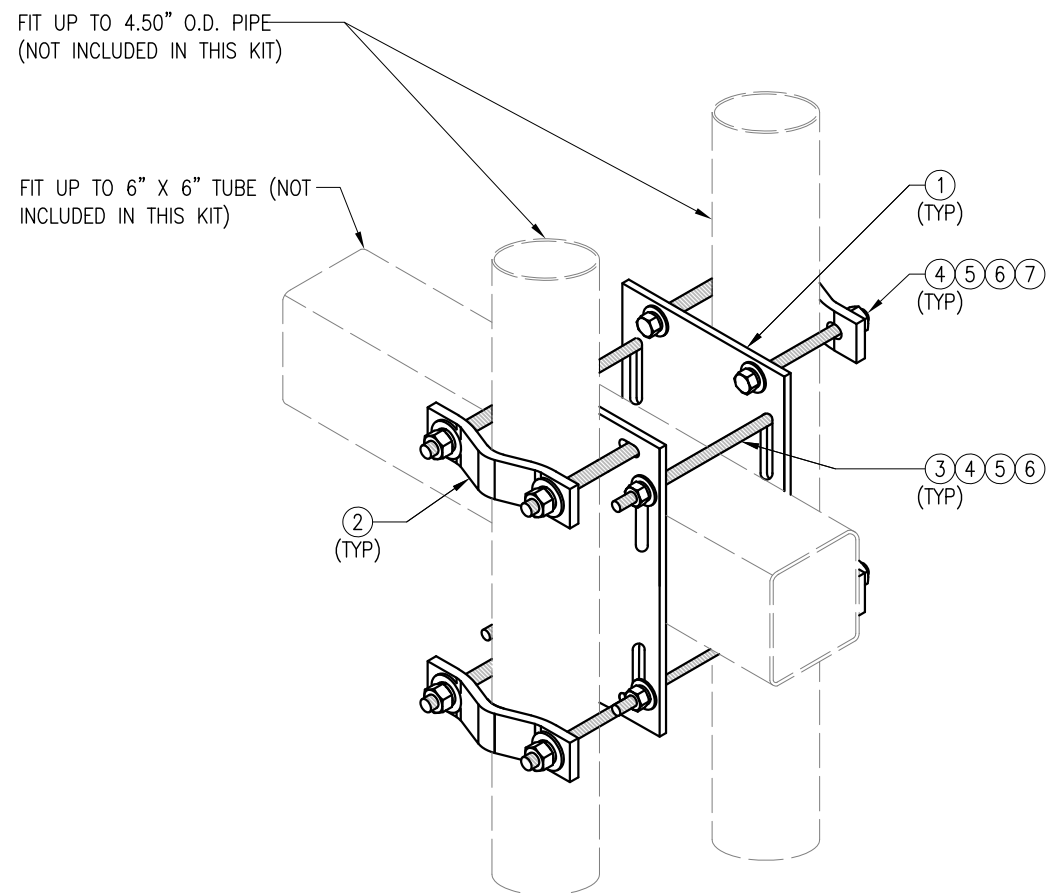
SHEET TITLE:
 VZSMART-PLK7
 MONOPOLE COLLAR
 MOUNT ASSEMBLY

SHEET NUMBER: VZSMART-PLK7 REV #: 0



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

VZSMART-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



ISOMETRIC VIEW
 BACK TO BACK CROSSOVER

FOR REFERENCE
 ONLY

DRAWN BY: SK CHECKED BY: BT/KW

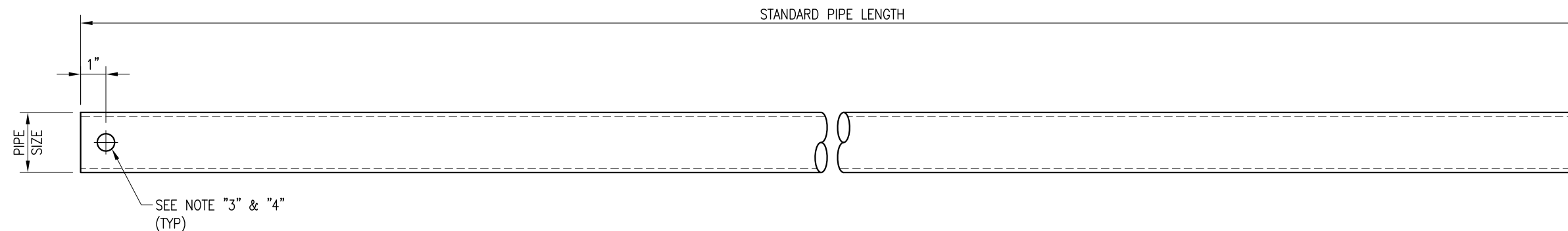
REV.	DESCRIPTION	BY	DATE
1	FIRST ISSUE	SK	05/08/20

SHEET TITLE:
 VZSMART-MSK6
 BACK TO BACK
 CROSSOVER

SHEET NUMBER: VZSMART-MSK6
 REV #: 0

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

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



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.

FOR REFERENCE
 ONLY

DRAWN BY: BT CHECKED BY: HMA/KW

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

SHEET TITLE:
 VZWSMART
 STANDARD PIPE

SHEET NUMBER: VZWSMART-PIPE REV #: 0



Observed Safety and Structural Issues During the Mount Mapping

Issue #	Description of Issue	Photo #
1		
2		
3		
4		
5		
6		
7		
8		

Observed Obstructions to Tower Lighting System

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

Mapping Notes

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

Standard Conditions

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



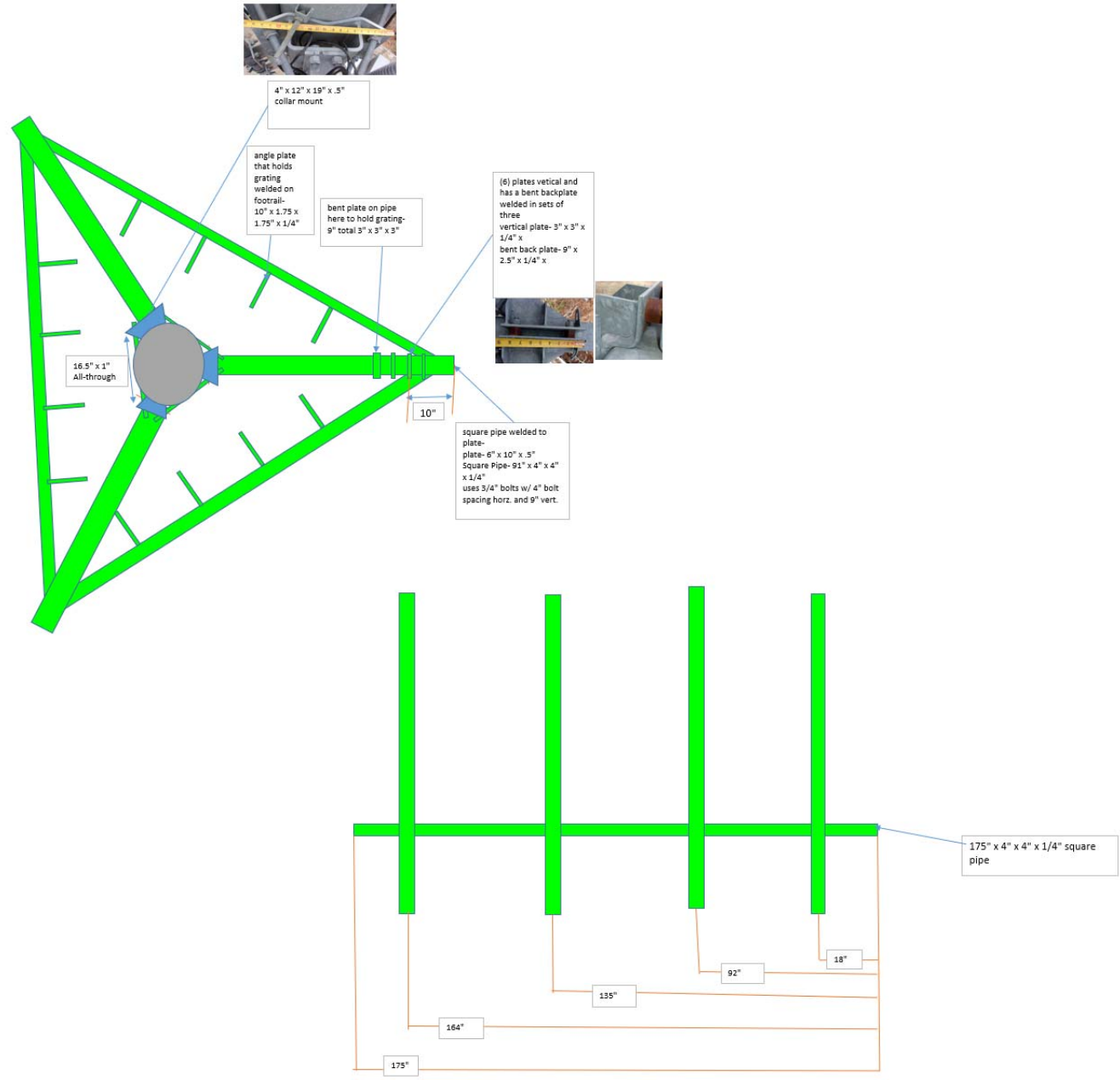
Antenna Mount Mapping Form (PATENT PENDING)

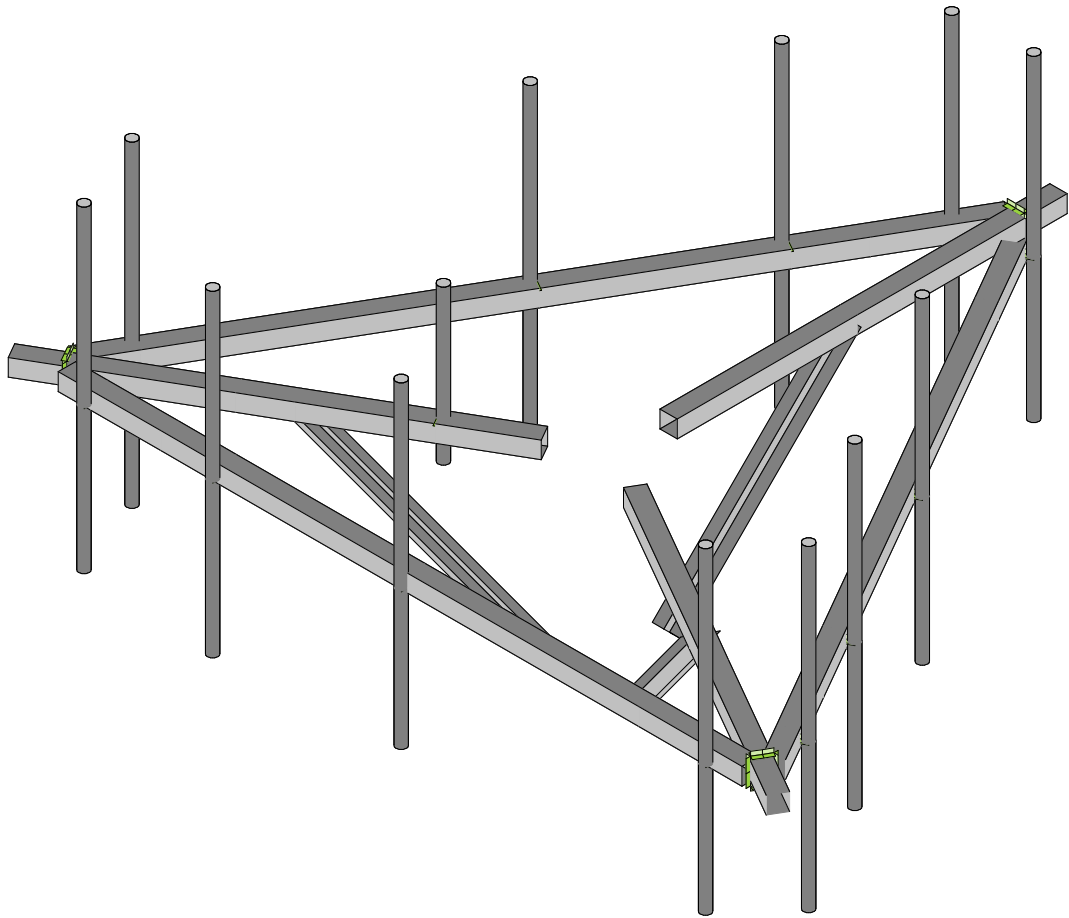
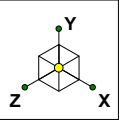
FCC #	NA
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Tower Owner:	ATC	Mapping Date:	4/17/2021
Site Name:	Naugatuck	Tower Type:	Monopole
Site Number or ID:	302526	Tower Height (Ft.):	80
Mapping Contractor:	Elite ICT Service	Mount Elevation (Ft.):	42

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Please Insert Sketches of the Antenna Mount





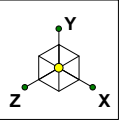
Colliers Engineering & De...

Mount Analysis

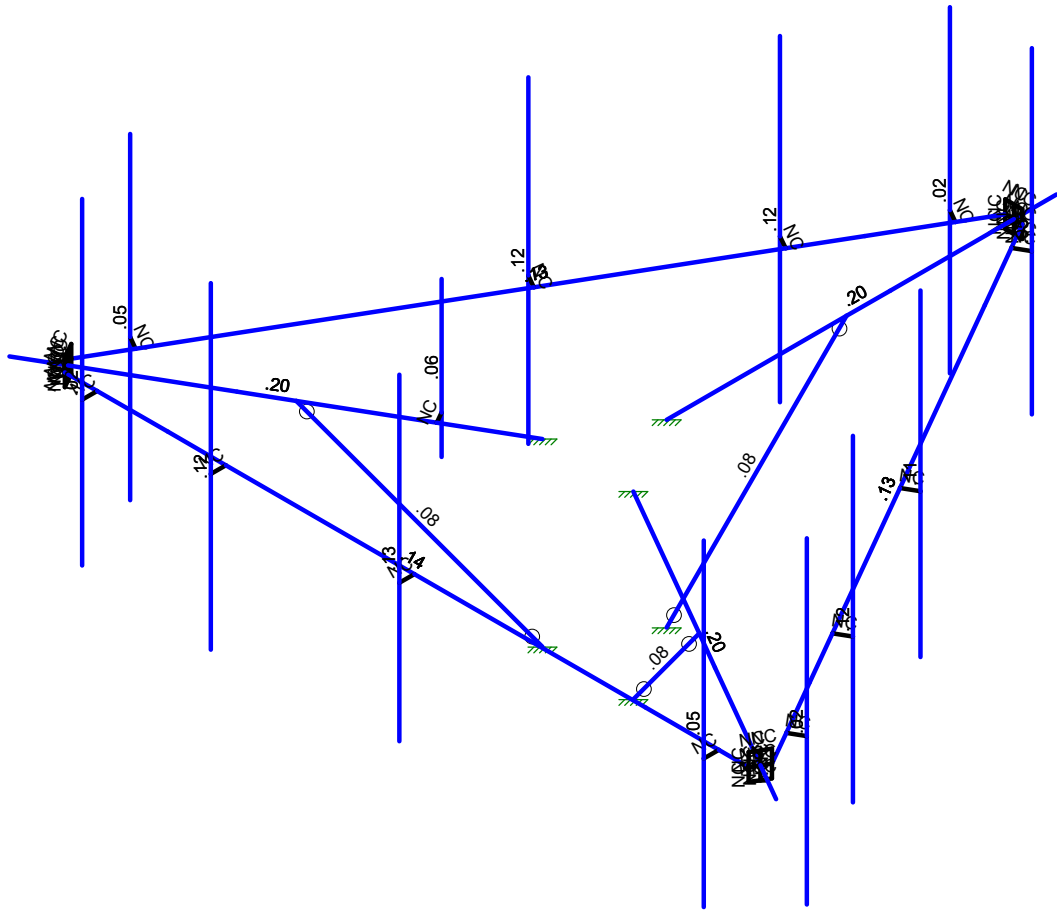
SK - 1

Jan 10, 2024 at 3:00 PM

5000383776-VZW_MT_LO_H.r3d

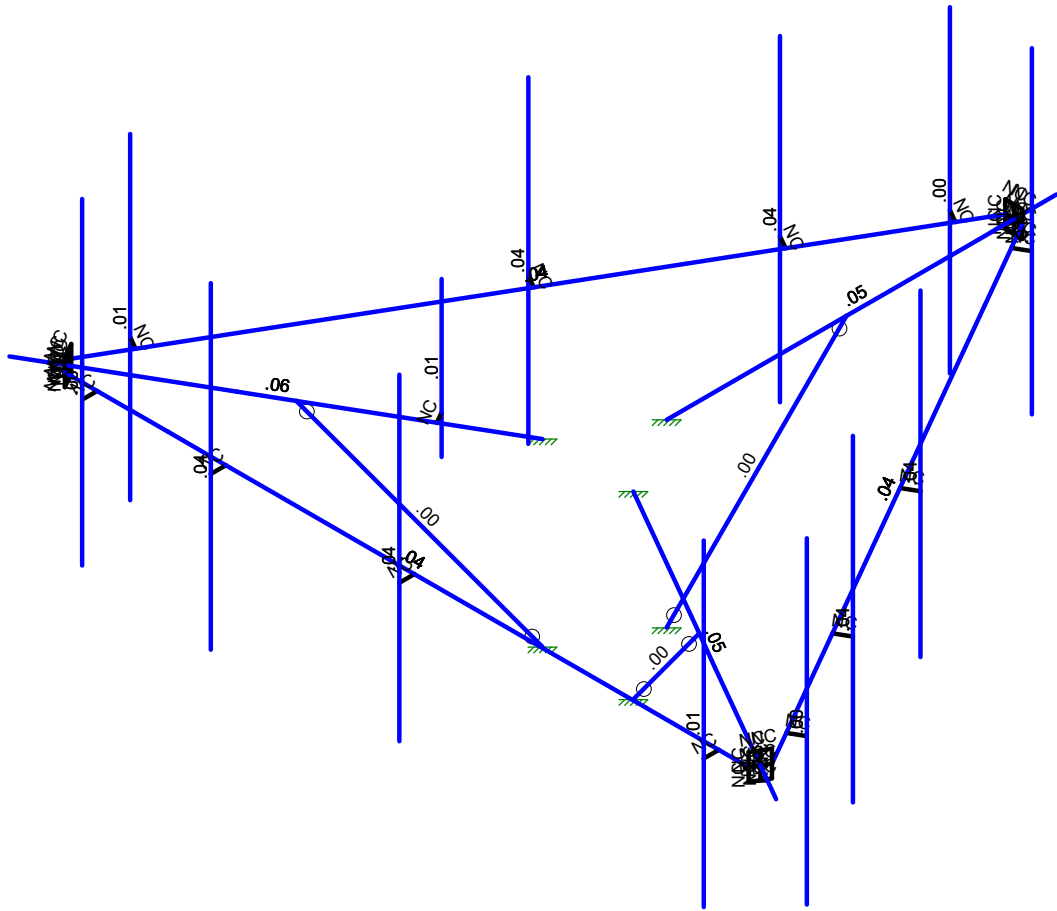
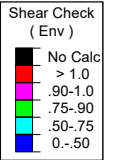
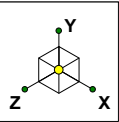


Code Check (Env)	
Black	No Calc
Red	> 1.0
Magenta	.90-1.0
Green	.75-.90
Cyan	.50-.75
Blue	0-.50



Member Code Checks Displayed (Enveloped)
Results for LC 1, 1.2D+1.0Wo (0 Deg)

Colliers Engineering & De...	Mount Analysis	SK - 2
		Jan 10, 2024 at 3:01 PM
		5000383776-VZW_MT_LO_H.r3d



Member Shear Checks Displayed (Enveloped)
 Results for LC 1, 1.2D+1.0Wo (0 Deg)

Colliers Engineering & De...	Mount Analysis	SK - 3
		Jan 10, 2024 at 3:01 PM
		5000383776-VZW_MT_LO_H.r3d

Basic Load Cases

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distribut...	Area(Me...	Surface(...
1	Antenna D	None					84			
2	Antenna Di	None					84			
3	Antenna Wo (0 Deg)	None					84			
4	Antenna Wo (30 Deg)	None					84			
5	Antenna Wo (60 Deg)	None					84			
6	Antenna Wo (90 Deg)	None					84			
7	Antenna Wo (120 Deg)	None					84			
8	Antenna Wo (150 Deg)	None					84			
9	Antenna Wo (180 Deg)	None					84			
10	Antenna Wo (210 Deg)	None					84			
11	Antenna Wo (240 Deg)	None					84			
12	Antenna Wo (270 Deg)	None					84			
13	Antenna Wo (300 Deg)	None					84			
14	Antenna Wo (330 Deg)	None					84			
15	Antenna Wi (0 Deg)	None					84			
16	Antenna Wi (30 Deg)	None					84			
17	Antenna Wi (60 Deg)	None					84			
18	Antenna Wi (90 Deg)	None					84			
19	Antenna Wi (120 Deg)	None					84			
20	Antenna Wi (150 Deg)	None					84			
21	Antenna Wi (180 Deg)	None					84			
22	Antenna Wi (210 Deg)	None					84			
23	Antenna Wi (240 Deg)	None					84			
24	Antenna Wi (270 Deg)	None					84			
25	Antenna Wi (300 Deg)	None					84			
26	Antenna Wi (330 Deg)	None					84			
27	Antenna Wm (0 Deg)	None					84			
28	Antenna Wm (30 Deg)	None					84			
29	Antenna Wm (60 Deg)	None					84			
30	Antenna Wm (90 Deg)	None					84			
31	Antenna Wm (120 Deg)	None					84			
32	Antenna Wm (150 Deg)	None					84			
33	Antenna Wm (180 Deg)	None					84			
34	Antenna Wm (210 Deg)	None					84			
35	Antenna Wm (240 Deg)	None					84			
36	Antenna Wm (270 Deg)	None					84			
37	Antenna Wm (300 Deg)	None					84			
38	Antenna Wm (330 Deg)	None					84			
39	Structure D	None		-1					3	
40	Structure Di	None						22	3	
41	Structure Wo (0 Deg)	None						44		
42	Structure Wo (30 Deg)	None						44		
43	Structure Wo (60 Deg)	None						44		
44	Structure Wo (90 Deg)	None						44		
45	Structure Wo (120 Deg)	None						44		
46	Structure Wo (150 Deg)	None						44		
47	Structure Wo (180 Deg)	None						44		
48	Structure Wo (210 Deg)	None						44		
49	Structure Wo (240 Deg)	None						44		
50	Structure Wo (270 Deg)	None						44		
51	Structure Wo (300 Deg)	None						44		
52	Structure Wo (330 Deg)	None						44		
53	Structure Wi (0 Deg)	None						44		
54	Structure Wi (30 Deg)	None						44		
55	Structure Wi (60 Deg)	None						44		
56	Structure Wi (90 Deg)	None						44		
57	Structure Wi (120 Deg)	None						44		
58	Structure Wi (150 Deg)	None						44		

Basic Load Cases (Continued)

BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distribut...	Area(Me...	Surface(...
59 Structure Wi (180 Deg)	None						44		
60 Structure Wi (210 Deg)	None						44		
61 Structure Wi (240 Deg)	None						44		
62 Structure Wi (270 Deg)	None						44		
63 Structure Wi (300 Deg)	None						44		
64 Structure Wi (330 Deg)	None						44		
65 Structure Wm (0 Deg)	None						44		
66 Structure Wm (30 Deg)	None						44		
67 Structure Wm (60 Deg)	None						44		
68 Structure Wm (90 Deg)	None						44		
69 Structure Wm (120 Deg)	None						44		
70 Structure Wm (150 Deg)	None						44		
71 Structure Wm (180 Deg)	None						44		
72 Structure Wm (210 Deg)	None						44		
73 Structure Wm (240 Deg)	None						44		
74 Structure Wm (270 Deg)	None						44		
75 Structure Wm (300 Deg)	None						44		
76 Structure Wm (330 Deg)	None						44		
77 Lm1	None					1			
78 Lm2	None					1			
79 Lv1	None					1			
80 Lv2	None					1			
81 Antenna Ev	None					84			
82 Antenna Eh (0 Deg)	None					56			
83 Antenna Eh (90 Deg)	None					56			
84 Structure Ev	ELY		-.042					3	
85 Structure Eh (0 Deg)	ELZ			-.105				3	
86 Structure Eh (90 Deg)	ELX	.105						3	
87 BLC 39 Transient Area Loads	None						45		
88 BLC 40 Transient Area Loads	None						45		
89 BLC 84 Transient Area Loads	None						45		
90 BLC 85 Transient Area Loads	None						45		
91 BLC 86 Transient Area Loads	None						45		

Load Combinations

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

Load Combinations (Continued)

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

Hot Rolled Steel Section Sets

	Label	Shape	Type	Design L...	Material	Design ...	A [in2]	Iyy [in4]	Izz [in4]	J [in4]
1	Face Horizontal	HSS4X4X4	Beam	SquareT...	A500 Gr.B Rect	Typical	3.37	7.8	7.8	12.8
2	Standoff Horizontal	HSS4X4X4	Beam	SquareT...	A500 Gr.B Rect	Typical	3.37	7.8	7.8	12.8
3	Mount Pipe	PIPE 2.0	Column	Pipe	A53 Gr.B	Typical	1.02	.627	.627	1.25
4	Mod Dual Antenna Mou...	PIPE 2.5	Column	Pipe	A53 Gr.B	Typical	1.61	1.45	1.45	2.89
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 A...	A36 Gr.36	Typical	1.44	1.23	1.23	.031
7	Mod Kicker	LL3x3x3x6	Column	Double ...	A36 Gr.36	Typical	2.18	4.97	1.9	.027

Member Primary Data

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
1	M4	N3	N27			Standoff Horiz...	Beam	SquareTube	A500 Gr.B...	Typical
2	M42	N62A	N72A			Face Horizontal	Beam	SquareTube	A500 Gr.B...	Typical
3	M46	N41	N44			RIGID	None	None	RIGID	Typical
4	MP1A	N48	N52			Mount Pipe	Column	Pipe	A53 Gr.B	Typical
5	M23	N31	N32			Standoff Horiz...	Beam	SquareTube	A500 Gr.B...	Typical
6	M36	N43A	N44A			Standoff Horiz...	Beam	SquareTube	A500 Gr.B...	Typical
7	M71A	N95	N98			RIGID	None	None	RIGID	Typical
8	OVP	N100	N102			Mount Pipe	Column	Pipe	A53 Gr.B	Typical
9	M75	N82	N51A			RIGID	None	None	RIGID	Typical
10	M76	N81	N51A			RIGID	None	None	RIGID	Typical
11	M77	N85	N83			RIGID	None	None	RIGID	Typical
12	M78	N84	N83			RIGID	None	None	RIGID	Typical
13	M79	N88	N86			RIGID	None	None	RIGID	Typical
14	M80	N87A	N86			RIGID	None	None	RIGID	Typical
15	M81	N83	N51A			RIGID	None	None	RIGID	Typical
16	M82	N86	N51A			RIGID	None	None	RIGID	Typical
17	M83	N82	N85			RIGID	None	None	RIGID	Typical
18	M84	N81	N84			RIGID	None	None	RIGID	Typical
19	M85	N82	N88			RIGID	None	None	RIGID	Typical
20	M86	N81	N87A			RIGID	None	None	RIGID	Typical
21	M51A	N63A	N61A			RIGID	None	None	RIGID	Typical
22	M52A	N62A	N61A			RIGID	None	None	RIGID	Typical
23	M53A	N66A	N64A			RIGID	None	None	RIGID	Typical
24	M54A	N65A	N64A			RIGID	None	None	RIGID	Typical
25	M55A	N69A	N67A			RIGID	None	None	RIGID	Typical
26	M56A	N68A	N67A			RIGID	None	None	RIGID	Typical
27	M57A	N64A	N61A			RIGID	None	None	RIGID	Typical
28	M58A	N67A	N61A			RIGID	None	None	RIGID	Typical
29	M59A	N63A	N66A			RIGID	None	None	RIGID	Typical
30	M60A	N62A	N65A			RIGID	None	None	RIGID	Typical
31	M61A	N63A	N69A			RIGID	None	None	RIGID	Typical
32	M62A	N62A	N68A			RIGID	None	None	RIGID	Typical
33	M63A	N72A	N70A			RIGID	None	None	RIGID	Typical
34	M64A	N71A	N70A			RIGID	None	None	RIGID	Typical
35	M65A	N75	N73			RIGID	None	None	RIGID	Typical
36	M66A	N74	N73			RIGID	None	None	RIGID	Typical
37	M67A	N78	N76			RIGID	None	None	RIGID	Typical
38	M68A	N77	N76			RIGID	None	None	RIGID	Typical
39	M69A	N73	N70A			RIGID	None	None	RIGID	Typical
40	M70A	N76	N70A			RIGID	None	None	RIGID	Typical
41	M71B	N72A	N75			RIGID	None	None	RIGID	Typical
42	M72A	N71A	N74			RIGID	None	None	RIGID	Typical
43	M73	N72A	N78			RIGID	None	None	RIGID	Typical
44	M74	N71A	N77			RIGID	None	None	RIGID	Typical
45	M75A	N71A	N82			Face Horizontal	Beam	SquareTube	A500 Gr.B...	Typical
46	M76A	N81	N63A			Face Horizontal	Beam	SquareTube	A500 Gr.B...	Typical

Member Primary Data (Continued)

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
47	M47	N43	N44B			RIGID	None	None	RIGID	Typical
48	MP2A	N45	N46			Mount Pipe	Column	Pipe	A53 Gr.B	Typical
49	M49	N47	N48A			RIGID	None	None	RIGID	Typical
50	MP3A	N49	N50			Mount Pipe	Column	Pipe	A53 Gr.B	Typical
51	M51	N51	N52A			RIGID	None	None	RIGID	Typical
52	MP4A	N53	N54			Mount Pipe	Column	Pipe	A53 Gr.B	Typical
53	M53	N55	N56			RIGID	None	None	RIGID	Typical
54	MP1C	N57	N58			Mount Pipe	Column	Pipe	A53 Gr.B	Typical
55	M55	N59	N60			RIGID	None	None	RIGID	Typical
56	MP1B	N61	N62			Mount Pipe	Column	Pipe	A53 Gr.B	Typical
57	M57	N63	N64			RIGID	None	None	RIGID	Typical
58	MP2B	N65	N66			Mount Pipe	Column	Pipe	A53 Gr.B	Typical
59	M59	N67	N68			RIGID	None	None	RIGID	Typical
60	MP3B	N69	N70			Mount Pipe	Column	Pipe	A53 Gr.B	Typical
61	M61	N71	N72			RIGID	None	None	RIGID	Typical
62	MP4B	N73A	N74A			Mount Pipe	Column	Pipe	A53 Gr.B	Typical
63	M63	N75A	N76A			RIGID	None	None	RIGID	Typical
64	MP2C	N77A	N78A			Mount Pipe	Column	Pipe	A53 Gr.B	Typical
65	M65	N79	N80			RIGID	None	None	RIGID	Typical
66	MP3C	N81A	N82A			Mount Pipe	Column	Pipe	A53 Gr.B	Typical
67	M67	N83A	N84A			RIGID	None	None	RIGID	Typical
68	MP4C	N85A	N86A			Mount Pipe	Column	Pipe	A53 Gr.B	Typical
69	M93	N138	N139			Mod Kicker	Column	Double Angle (...)	A36 Gr.36	Typical
70	M94	N140	N141			Mod Kicker	Column	Double Angle (...)	A36 Gr.36	Typical
71	M95	N142	N143			Mod Kicker	Column	Double Angle (...)	A36 Gr.36	Typical

Member Advanced Data

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Defl Rat...	Analysis ...	Inactive	Seismic...
1	M4						Yes				None
2	M42						Yes				None
3	M46						Yes	** NA **			None
4	MP1A						Yes	** NA **			None
5	M23						Yes				None
6	M36						Yes				None
7	M71A						Yes	** NA **			None
8	OVP						Yes	** NA **			None
9	M75						Yes	** NA **			None
10	M76						Yes	** NA **			None
11	M77						Yes	** NA **			None
12	M78						Yes	** NA **			None
13	M79						Yes	** NA **			None
14	M80						Yes	** NA **			None
15	M81						Yes	** NA **			None
16	M82						Yes	** NA **			None
17	M83						Yes	** NA **			None
18	M84						Yes	** NA **			None
19	M85						Yes	** NA **			None
20	M86						Yes	** NA **			None
21	M51A						Yes	** NA **			None
22	M52A						Yes	** NA **			None
23	M53A						Yes	** NA **			None
24	M54A						Yes	** NA **			None
25	M55A						Yes	** NA **			None
26	M56A						Yes	** NA **			None
27	M57A						Yes	** NA **			None
28	M58A						Yes	** NA **			None
29	M59A						Yes	** NA **			None

Member Advanced Data (Continued)

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Defl Rat...	Analysis ...	Inactive	Seismic...
30	M60A						Yes	** NA **			None
31	M61A						Yes	** NA **			None
32	M62A						Yes	** NA **			None
33	M63A						Yes	** NA **			None
34	M64A						Yes	** NA **			None
35	M65A						Yes	** NA **			None
36	M66A						Yes	** NA **			None
37	M67A						Yes	** NA **			None
38	M68A						Yes	** NA **			None
39	M69A						Yes	** NA **			None
40	M70A						Yes	** NA **			None
41	M71B						Yes	** NA **			None
42	M72A						Yes	** NA **			None
43	M73						Yes	** NA **			None
44	M74						Yes	** NA **			None
45	M75A						Yes				None
46	M76A						Yes				None
47	M47						Yes	** NA **			None
48	MP2A						Yes	** NA **			None
49	M49						Yes	** NA **			None
50	MP3A						Yes	** NA **			None
51	M51						Yes	** NA **			None
52	MP4A						Yes	** NA **			None
53	M53						Yes	** NA **			None
54	MP1C						Yes	** NA **			None
55	M55						Yes	** NA **			None
56	MP1B						Yes	** NA **			None
57	M57						Yes	** NA **			None
58	MP2B						Yes	** NA **			None
59	M59						Yes	** NA **			None
60	MP3B						Yes	** NA **			None
61	M61						Yes	** NA **			None
62	MP4B						Yes	** NA **			None
63	M63						Yes	** NA **			None
64	MP2C						Yes	** NA **			None
65	M65						Yes	** NA **			None
66	MP3C						Yes	** NA **			None
67	M67						Yes	** NA **			None
68	MP4C						Yes	** NA **			None
69	M93	BenPIN	BenPIN				Yes	** NA **			None
70	M94	BenPIN	BenPIN				Yes	** NA **			None
71	M95	BenPIN	BenPIN				Yes	** NA **			None

Member Point Loads (BLC 1 : Antenna D)

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP4A	Y	-24.3	3.5
2	MP4A	My	-.006	3.5
3	MP4A	Mz	0	3.5
4	MP4B	Y	-24.3	3.5
5	MP4B	My	.003	3.5
6	MP4B	Mz	-.005	3.5
7	MP4C	Y	-24.3	3.5
8	MP4C	My	.003	3.5
9	MP4C	Mz	.005	3.5
10	MP1A	Y	-28.65	2.5
11	MP1A	My	-.014	2.5
12	MP1A	Mz	0	2.5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
13	MP1A	Y	-28.65	4.5
14	MP1A	My	-0.14	4.5
15	MP1A	Mz	0	4.5
16	MP1B	Y	-28.65	2.5
17	MP1B	My	.007	2.5
18	MP1B	Mz	-.012	2.5
19	MP1B	Y	-28.65	4.5
20	MP1B	My	.007	4.5
21	MP1B	Mz	-.012	4.5
22	MP1C	Y	-28.65	2.5
23	MP1C	My	.007	2.5
24	MP1C	Mz	.012	2.5
25	MP1C	Y	-28.65	4.5
26	MP1C	My	.007	4.5
27	MP1C	Mz	.012	4.5
28	MP2A	Y	-74.7	2.5
29	MP2A	My	.037	2.5
30	MP2A	Mz	0	2.5
31	MP2B	Y	-74.7	2.5
32	MP2B	My	-.019	2.5
33	MP2B	Mz	.032	2.5
34	MP2C	Y	-74.7	2.5
35	MP2C	My	-.019	2.5
36	MP2C	Mz	-.032	2.5
37	MP3A	Y	-79.1	2.5
38	MP3A	My	.04	2.5
39	MP3A	Mz	0	2.5
40	MP3B	Y	-79.1	2.5
41	MP3B	My	-.02	2.5
42	MP3B	Mz	.034	2.5
43	MP3C	Y	-79.1	2.5
44	MP3C	My	-.02	2.5
45	MP3C	Mz	-.034	2.5
46	OVP	Y	-32	1
47	OVP	My	0	1
48	OVP	Mz	0	1
49	MP2A	Y	-33.5	2
50	MP2A	My	-.025	2
51	MP2A	Mz	0	2
52	MP2A	Y	-33.5	5
53	MP2A	My	-.025	5
54	MP2A	Mz	0	5
55	MP2B	Y	-33.5	2
56	MP2B	My	.013	2
57	MP2B	Mz	-.022	2
58	MP2B	Y	-33.5	5
59	MP2B	My	.013	5
60	MP2B	Mz	-.022	5
61	MP2C	Y	-33.5	2
62	MP2C	My	.013	2
63	MP2C	Mz	.022	2
64	MP2C	Y	-33.5	5
65	MP2C	My	.013	5
66	MP2C	Mz	.022	5
67	MP3A	Y	-33.5	2
68	MP3A	My	-.025	2
69	MP3A	Mz	0	2
70	MP3A	Y	-33.5	5
71	MP3A	My	-.025	5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
72	MP3A	Mz	0	5
73	MP3B	Y	-33.5	2
74	MP3B	My	.013	2
75	MP3B	Mz	-.022	2
76	MP3B	Y	-33.5	5
77	MP3B	My	.013	5
78	MP3B	Mz	-.022	5
79	MP3C	Y	-33.5	2
80	MP3C	My	.013	2
81	MP3C	Mz	.022	2
82	MP3C	Y	-33.5	5
83	MP3C	My	.013	5
84	MP3C	Mz	.022	5

Member Point Loads (BLC 2 : Antenna Di)

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
1	MP4A	Y	-16.398	3.5
2	MP4A	My	-.004	3.5
3	MP4A	Mz	0	3.5
4	MP4B	Y	-16.398	3.5
5	MP4B	My	.002	3.5
6	MP4B	Mz	-.004	3.5
7	MP4C	Y	-16.398	3.5
8	MP4C	My	.002	3.5
9	MP4C	Mz	.004	3.5
10	MP1A	Y	-25.935	2.5
11	MP1A	My	-.013	2.5
12	MP1A	Mz	0	2.5
13	MP1A	Y	-25.935	4.5
14	MP1A	My	-.013	4.5
15	MP1A	Mz	0	4.5
16	MP1B	Y	-25.935	2.5
17	MP1B	My	.006	2.5
18	MP1B	Mz	-.011	2.5
19	MP1B	Y	-25.935	4.5
20	MP1B	My	.006	4.5
21	MP1B	Mz	-.011	4.5
22	MP1C	Y	-25.935	2.5
23	MP1C	My	.006	2.5
24	MP1C	Mz	.011	2.5
25	MP1C	Y	-25.935	4.5
26	MP1C	My	.006	4.5
27	MP1C	Mz	.011	4.5
28	MP2A	Y	-39.065	2.5
29	MP2A	My	.02	2.5
30	MP2A	Mz	0	2.5
31	MP2B	Y	-39.065	2.5
32	MP2B	My	-.01	2.5
33	MP2B	Mz	.017	2.5
34	MP2C	Y	-39.065	2.5
35	MP2C	My	-.01	2.5
36	MP2C	Mz	-.017	2.5
37	MP3A	Y	-39.482	2.5
38	MP3A	My	.02	2.5
39	MP3A	Mz	0	2.5
40	MP3B	Y	-39.482	2.5
41	MP3B	My	-.01	2.5
42	MP3B	Mz	.017	2.5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
43	MP3C	Y	-39.482	2.5
44	MP3C	My	-.01	2.5
45	MP3C	Mz	-.017	2.5
46	OVP	Y	-76.802	1
47	OVP	My	0	1
48	OVP	Mz	0	1
49	MP2A	Y	-54.805	2
50	MP2A	My	-.041	2
51	MP2A	Mz	0	2
52	MP2A	Y	-54.805	5
53	MP2A	My	-.041	5
54	MP2A	Mz	0	5
55	MP2B	Y	-54.805	2
56	MP2B	My	.021	2
57	MP2B	Mz	-.036	2
58	MP2B	Y	-54.805	5
59	MP2B	My	.021	5
60	MP2B	Mz	-.036	5
61	MP2C	Y	-54.805	2
62	MP2C	My	.021	2
63	MP2C	Mz	.036	2
64	MP2C	Y	-54.805	5
65	MP2C	My	.021	5
66	MP2C	Mz	.036	5
67	MP3A	Y	-54.805	2
68	MP3A	My	-.041	2
69	MP3A	Mz	0	2
70	MP3A	Y	-54.805	5
71	MP3A	My	-.041	5
72	MP3A	Mz	0	5
73	MP3B	Y	-54.805	2
74	MP3B	My	.021	2
75	MP3B	Mz	-.036	2
76	MP3B	Y	-54.805	5
77	MP3B	My	.021	5
78	MP3B	Mz	-.036	5
79	MP3C	Y	-54.805	2
80	MP3C	My	.021	2
81	MP3C	Mz	.036	2
82	MP3C	Y	-54.805	5
83	MP3C	My	.021	5
84	MP3C	Mz	.036	5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP4A	X	0	3.5
2	MP4A	Z	-18.048	3.5
3	MP4A	Mx	0	3.5
4	MP4B	X	0	3.5
5	MP4B	Z	-12.349	3.5
6	MP4B	Mx	.003	3.5
7	MP4C	X	0	3.5
8	MP4C	Z	-12.349	3.5
9	MP4C	Mx	-.003	3.5
10	MP1A	X	0	2.5
11	MP1A	Z	-37.521	2.5
12	MP1A	Mx	0	2.5
13	MP1A	X	0	4.5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
14	MP1A	Z	-37.521	4.5
15	MP1A	Mx	0	4.5
16	MP1B	X	0	2.5
17	MP1B	Z	-19.265	2.5
18	MP1B	Mx	.008	2.5
19	MP1B	X	0	4.5
20	MP1B	Z	-19.265	4.5
21	MP1B	Mx	.008	4.5
22	MP1C	X	0	2.5
23	MP1C	Z	-19.265	2.5
24	MP1C	Mx	-.008	2.5
25	MP1C	X	0	4.5
26	MP1C	Z	-19.265	4.5
27	MP1C	Mx	-.008	4.5
28	MP2A	X	0	2.5
29	MP2A	Z	-36.809	2.5
30	MP2A	Mx	0	2.5
31	MP2B	X	0	2.5
32	MP2B	Z	-27.725	2.5
33	MP2B	Mx	-.012	2.5
34	MP2C	X	0	2.5
35	MP2C	Z	-27.725	2.5
36	MP2C	Mx	.012	2.5
37	MP3A	X	0	2.5
38	MP3A	Z	-44.408	2.5
39	MP3A	Mx	0	2.5
40	MP3B	X	0	2.5
41	MP3B	Z	-33.811	2.5
42	MP3B	Mx	-.015	2.5
43	MP3C	X	0	2.5
44	MP3C	Z	-33.811	2.5
45	MP3C	Mx	.015	2.5
46	OVP	X	0	1
47	OVP	Z	-75.28	1
48	OVP	Mx	0	1
49	MP2A	X	0	2
50	MP2A	Z	-97.84	2
51	MP2A	Mx	0	2
52	MP2A	X	0	5
53	MP2A	Z	-97.84	5
54	MP2A	Mx	0	5
55	MP2B	X	0	2
56	MP2B	Z	-74.107	2
57	MP2B	Mx	.048	2
58	MP2B	X	0	5
59	MP2B	Z	-74.107	5
60	MP2B	Mx	.048	5
61	MP2C	X	0	2
62	MP2C	Z	-74.107	2
63	MP2C	Mx	-.048	2
64	MP2C	X	0	5
65	MP2C	Z	-74.107	5
66	MP2C	Mx	-.048	5
67	MP3A	X	0	2
68	MP3A	Z	-97.84	2
69	MP3A	Mx	0	2
70	MP3A	X	0	5
71	MP3A	Z	-97.84	5
72	MP3A	Mx	0	5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
73	MP3B	X	0	2
74	MP3B	Z	-74.107	2
75	MP3B	Mx	.048	2
76	MP3B	X	0	5
77	MP3B	Z	-74.107	5
78	MP3B	Mx	.048	5
79	MP3C	X	0	2
80	MP3C	Z	-74.107	2
81	MP3C	Mx	-.048	2
82	MP3C	X	0	5
83	MP3C	Z	-74.107	5
84	MP3C	Mx	-.048	5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
1	MP4A	X	8.074	3.5
2	MP4A	Z	-13.985	3.5
3	MP4A	Mx	-.002	3.5
4	MP4B	X	5.224	3.5
5	MP4B	Z	-9.049	3.5
6	MP4B	Mx	.003	3.5
7	MP4C	X	8.074	3.5
8	MP4C	Z	-13.985	3.5
9	MP4C	Mx	-.002	3.5
10	MP1A	X	15.718	2.5
11	MP1A	Z	-27.224	2.5
12	MP1A	Mx	-.008	2.5
13	MP1A	X	15.718	4.5
14	MP1A	Z	-27.224	4.5
15	MP1A	Mx	-.008	4.5
16	MP1B	X	6.59	2.5
17	MP1B	Z	-11.414	2.5
18	MP1B	Mx	.007	2.5
19	MP1B	X	6.59	4.5
20	MP1B	Z	-11.414	4.5
21	MP1B	Mx	.007	4.5
22	MP1C	X	15.718	2.5
23	MP1C	Z	-27.224	2.5
24	MP1C	Mx	-.008	2.5
25	MP1C	X	15.718	4.5
26	MP1C	Z	-27.224	4.5
27	MP1C	Mx	-.008	4.5
28	MP2A	X	16.89	2.5
29	MP2A	Z	-29.255	2.5
30	MP2A	Mx	.008	2.5
31	MP2B	X	12.349	2.5
32	MP2B	Z	-21.389	2.5
33	MP2B	Mx	-.012	2.5
34	MP2C	X	16.89	2.5
35	MP2C	Z	-29.255	2.5
36	MP2C	Mx	.008	2.5
37	MP3A	X	20.438	2.5
38	MP3A	Z	-35.399	2.5
39	MP3A	Mx	.01	2.5
40	MP3B	X	15.139	2.5
41	MP3B	Z	-26.222	2.5
42	MP3B	Mx	-.015	2.5
43	MP3C	X	20.438	2.5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
44	MP3C	Z	-35.399	2.5
45	MP3C	Mx	.01	2.5
46	OVP	X	35.384	1
47	OVP	Z	-61.286	1
48	OVP	Mx	0	1
49	MP2A	X	44.964	2
50	MP2A	Z	-77.881	2
51	MP2A	Mx	-.034	2
52	MP2A	X	44.964	5
53	MP2A	Z	-77.881	5
54	MP2A	Mx	-.034	5
55	MP2B	X	33.098	2
56	MP2B	Z	-57.328	2
57	MP2B	Mx	.05	2
58	MP2B	X	33.098	5
59	MP2B	Z	-57.328	5
60	MP2B	Mx	.05	5
61	MP2C	X	44.964	2
62	MP2C	Z	-77.881	2
63	MP2C	Mx	-.034	2
64	MP2C	X	44.964	5
65	MP2C	Z	-77.881	5
66	MP2C	Mx	-.034	5
67	MP3A	X	44.964	2
68	MP3A	Z	-77.881	2
69	MP3A	Mx	-.034	2
70	MP3A	X	44.964	5
71	MP3A	Z	-77.881	5
72	MP3A	Mx	-.034	5
73	MP3B	X	33.098	2
74	MP3B	Z	-57.328	2
75	MP3B	Mx	.05	2
76	MP3B	X	33.098	5
77	MP3B	Z	-57.328	5
78	MP3B	Mx	.05	5
79	MP3C	X	44.964	2
80	MP3C	Z	-77.881	2
81	MP3C	Mx	-.034	2
82	MP3C	X	44.964	5
83	MP3C	Z	-77.881	5
84	MP3C	Mx	-.034	5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP4A	X	10.694	3.5
2	MP4A	Z	-6.174	3.5
3	MP4A	Mx	-.003	3.5
4	MP4B	X	10.694	3.5
5	MP4B	Z	-6.174	3.5
6	MP4B	Mx	.003	3.5
7	MP4C	X	15.63	3.5
8	MP4C	Z	-9.024	3.5
9	MP4C	Mx	0	3.5
10	MP1A	X	16.684	2.5
11	MP1A	Z	-9.633	2.5
12	MP1A	Mx	-.008	2.5
13	MP1A	X	16.684	4.5
14	MP1A	Z	-9.633	4.5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
15	MP1A	Mx	-.008	4.5
16	MP1B	X	16.684	2.5
17	MP1B	Z	-9.633	2.5
18	MP1B	Mx	.008	2.5
19	MP1B	X	16.684	4.5
20	MP1B	Z	-9.633	4.5
21	MP1B	Mx	.008	4.5
22	MP1C	X	32.494	2.5
23	MP1C	Z	-18.761	2.5
24	MP1C	Mx	0	2.5
25	MP1C	X	32.494	4.5
26	MP1C	Z	-18.761	4.5
27	MP1C	Mx	0	4.5
28	MP2A	X	24.011	2.5
29	MP2A	Z	-13.863	2.5
30	MP2A	Mx	.012	2.5
31	MP2B	X	24.011	2.5
32	MP2B	Z	-13.863	2.5
33	MP2B	Mx	-.012	2.5
34	MP2C	X	31.877	2.5
35	MP2C	Z	-18.404	2.5
36	MP2C	Mx	0	2.5
37	MP3A	X	29.281	2.5
38	MP3A	Z	-16.905	2.5
39	MP3A	Mx	.015	2.5
40	MP3B	X	29.281	2.5
41	MP3B	Z	-16.905	2.5
42	MP3B	Mx	-.015	2.5
43	MP3C	X	38.458	2.5
44	MP3C	Z	-22.204	2.5
45	MP3C	Mx	0	2.5
46	OVP	X	53.471	1
47	OVP	Z	-30.872	1
48	OVP	Mx	0	1
49	MP2A	X	64.179	2
50	MP2A	Z	-37.054	2
51	MP2A	Mx	-.048	2
52	MP2A	X	64.179	5
53	MP2A	Z	-37.054	5
54	MP2A	Mx	-.048	5
55	MP2B	X	64.179	2
56	MP2B	Z	-37.054	2
57	MP2B	Mx	.048	2
58	MP2B	X	64.179	5
59	MP2B	Z	-37.054	5
60	MP2B	Mx	.048	5
61	MP2C	X	84.732	2
62	MP2C	Z	-48.92	2
63	MP2C	Mx	0	2
64	MP2C	X	84.732	5
65	MP2C	Z	-48.92	5
66	MP2C	Mx	0	5
67	MP3A	X	64.179	2
68	MP3A	Z	-37.054	2
69	MP3A	Mx	-.048	2
70	MP3A	X	64.179	5
71	MP3A	Z	-37.054	5
72	MP3A	Mx	-.048	5
73	MP3B	X	64.179	2

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
74	MP3B	Z	-37.054	2
75	MP3B	Mx	.048	2
76	MP3B	X	64.179	5
77	MP3B	Z	-37.054	5
78	MP3B	Mx	.048	5
79	MP3C	X	84.732	2
80	MP3C	Z	-48.92	2
81	MP3C	Mx	0	2
82	MP3C	X	84.732	5
83	MP3C	Z	-48.92	5
84	MP3C	Mx	0	5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
1	MP4A	X	10.449	3.5
2	MP4A	Z	0	3.5
3	MP4A	Mx	-.003	3.5
4	MP4B	X	16.148	3.5
5	MP4B	Z	0	3.5
6	MP4B	Mx	.002	3.5
7	MP4C	X	16.148	3.5
8	MP4C	Z	0	3.5
9	MP4C	Mx	.002	3.5
10	MP1A	X	13.18	2.5
11	MP1A	Z	0	2.5
12	MP1A	Mx	-.007	2.5
13	MP1A	X	13.18	4.5
14	MP1A	Z	0	4.5
15	MP1A	Mx	-.007	4.5
16	MP1B	X	31.436	2.5
17	MP1B	Z	0	2.5
18	MP1B	Mx	.008	2.5
19	MP1B	X	31.436	4.5
20	MP1B	Z	0	4.5
21	MP1B	Mx	.008	4.5
22	MP1C	X	31.436	2.5
23	MP1C	Z	0	2.5
24	MP1C	Mx	.008	2.5
25	MP1C	X	31.436	4.5
26	MP1C	Z	0	4.5
27	MP1C	Mx	.008	4.5
28	MP2A	X	24.697	2.5
29	MP2A	Z	0	2.5
30	MP2A	Mx	.012	2.5
31	MP2B	X	33.781	2.5
32	MP2B	Z	0	2.5
33	MP2B	Mx	-.008	2.5
34	MP2C	X	33.781	2.5
35	MP2C	Z	0	2.5
36	MP2C	Mx	-.008	2.5
37	MP3A	X	30.278	2.5
38	MP3A	Z	0	2.5
39	MP3A	Mx	.015	2.5
40	MP3B	X	40.875	2.5
41	MP3B	Z	0	2.5
42	MP3B	Mx	-.01	2.5
43	MP3C	X	40.875	2.5
44	MP3C	Z	0	2.5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
45	MP3C	Mx	-.01	2.5
46	OVP	X	57.231	1
47	OVP	Z	0	1
48	OVP	Mx	0	1
49	MP2A	X	66.196	2
50	MP2A	Z	0	2
51	MP2A	Mx	-.05	2
52	MP2A	X	66.196	5
53	MP2A	Z	0	5
54	MP2A	Mx	-.05	5
55	MP2B	X	89.929	2
56	MP2B	Z	0	2
57	MP2B	Mx	.034	2
58	MP2B	X	89.929	5
59	MP2B	Z	0	5
60	MP2B	Mx	.034	5
61	MP2C	X	89.929	2
62	MP2C	Z	0	2
63	MP2C	Mx	.034	2
64	MP2C	X	89.929	5
65	MP2C	Z	0	5
66	MP2C	Mx	.034	5
67	MP3A	X	66.196	2
68	MP3A	Z	0	2
69	MP3A	Mx	-.05	2
70	MP3A	X	66.196	5
71	MP3A	Z	0	5
72	MP3A	Mx	-.05	5
73	MP3B	X	89.929	2
74	MP3B	Z	0	2
75	MP3B	Mx	.034	2
76	MP3B	X	89.929	5
77	MP3B	Z	0	5
78	MP3B	Mx	.034	5
79	MP3C	X	89.929	2
80	MP3C	Z	0	2
81	MP3C	Mx	.034	2
82	MP3C	X	89.929	5
83	MP3C	Z	0	5
84	MP3C	Mx	.034	5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP4A	X	10.694	3.5
2	MP4A	Z	6.174	3.5
3	MP4A	Mx	-.003	3.5
4	MP4B	X	15.63	3.5
5	MP4B	Z	9.024	3.5
6	MP4B	Mx	0	3.5
7	MP4C	X	10.694	3.5
8	MP4C	Z	6.174	3.5
9	MP4C	Mx	.003	3.5
10	MP1A	X	16.684	2.5
11	MP1A	Z	9.633	2.5
12	MP1A	Mx	-.008	2.5
13	MP1A	X	16.684	4.5
14	MP1A	Z	9.633	4.5
15	MP1A	Mx	-.008	4.5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
16	MP1B	X	32.494	2.5
17	MP1B	Z	18.761	2.5
18	MP1B	Mx	0	2.5
19	MP1B	X	32.494	4.5
20	MP1B	Z	18.761	4.5
21	MP1B	Mx	0	4.5
22	MP1C	X	16.684	2.5
23	MP1C	Z	9.633	2.5
24	MP1C	Mx	.008	2.5
25	MP1C	X	16.684	4.5
26	MP1C	Z	9.633	4.5
27	MP1C	Mx	.008	4.5
28	MP2A	X	24.011	2.5
29	MP2A	Z	13.863	2.5
30	MP2A	Mx	.012	2.5
31	MP2B	X	31.877	2.5
32	MP2B	Z	18.404	2.5
33	MP2B	Mx	0	2.5
34	MP2C	X	24.011	2.5
35	MP2C	Z	13.863	2.5
36	MP2C	Mx	-.012	2.5
37	MP3A	X	29.281	2.5
38	MP3A	Z	16.905	2.5
39	MP3A	Mx	.015	2.5
40	MP3B	X	38.458	2.5
41	MP3B	Z	22.204	2.5
42	MP3B	Mx	0	2.5
43	MP3C	X	29.281	2.5
44	MP3C	Z	16.905	2.5
45	MP3C	Mx	-.015	2.5
46	OVP	X	53.471	1
47	OVP	Z	30.872	1
48	OVP	Mx	0	1
49	MP2A	X	64.179	2
50	MP2A	Z	37.054	2
51	MP2A	Mx	-.048	2
52	MP2A	X	64.179	5
53	MP2A	Z	37.054	5
54	MP2A	Mx	-.048	5
55	MP2B	X	84.732	2
56	MP2B	Z	48.92	2
57	MP2B	Mx	0	2
58	MP2B	X	84.732	5
59	MP2B	Z	48.92	5
60	MP2B	Mx	0	5
61	MP2C	X	64.179	2
62	MP2C	Z	37.054	2
63	MP2C	Mx	.048	2
64	MP2C	X	64.179	5
65	MP2C	Z	37.054	5
66	MP2C	Mx	.048	5
67	MP3A	X	64.179	2
68	MP3A	Z	37.054	2
69	MP3A	Mx	-.048	2
70	MP3A	X	64.179	5
71	MP3A	Z	37.054	5
72	MP3A	Mx	-.048	5
73	MP3B	X	84.732	2
74	MP3B	Z	48.92	2

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
75	MP3B	Mx	0	2
76	MP3B	X	84.732	5
77	MP3B	Z	48.92	5
78	MP3B	Mx	0	5
79	MP3C	X	64.179	2
80	MP3C	Z	37.054	2
81	MP3C	Mx	.048	2
82	MP3C	X	64.179	5
83	MP3C	Z	37.054	5
84	MP3C	Mx	.048	5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP4A	X	8.074	3.5
2	MP4A	Z	13.985	3.5
3	MP4A	Mx	-.002	3.5
4	MP4B	X	8.074	3.5
5	MP4B	Z	13.985	3.5
6	MP4B	Mx	-.002	3.5
7	MP4C	X	5.224	3.5
8	MP4C	Z	9.049	3.5
9	MP4C	Mx	.003	3.5
10	MP1A	X	15.718	2.5
11	MP1A	Z	27.224	2.5
12	MP1A	Mx	-.008	2.5
13	MP1A	X	15.718	4.5
14	MP1A	Z	27.224	4.5
15	MP1A	Mx	-.008	4.5
16	MP1B	X	15.718	2.5
17	MP1B	Z	27.224	2.5
18	MP1B	Mx	-.008	2.5
19	MP1B	X	15.718	4.5
20	MP1B	Z	27.224	4.5
21	MP1B	Mx	-.008	4.5
22	MP1C	X	6.59	2.5
23	MP1C	Z	11.414	2.5
24	MP1C	Mx	.007	2.5
25	MP1C	X	6.59	4.5
26	MP1C	Z	11.414	4.5
27	MP1C	Mx	.007	4.5
28	MP2A	X	16.89	2.5
29	MP2A	Z	29.255	2.5
30	MP2A	Mx	.008	2.5
31	MP2B	X	16.89	2.5
32	MP2B	Z	29.255	2.5
33	MP2B	Mx	.008	2.5
34	MP2C	X	12.349	2.5
35	MP2C	Z	21.389	2.5
36	MP2C	Mx	-.012	2.5
37	MP3A	X	20.438	2.5
38	MP3A	Z	35.399	2.5
39	MP3A	Mx	.01	2.5
40	MP3B	X	20.438	2.5
41	MP3B	Z	35.399	2.5
42	MP3B	Mx	.01	2.5
43	MP3C	X	15.139	2.5
44	MP3C	Z	26.222	2.5
45	MP3C	Mx	-.015	2.5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
46	OVP	X	35.384	1
47	OVP	Z	61.286	1
48	OVP	Mx	0	1
49	MP2A	X	44.964	2
50	MP2A	Z	77.881	2
51	MP2A	Mx	-.034	2
52	MP2A	X	44.964	5
53	MP2A	Z	77.881	5
54	MP2A	Mx	-.034	5
55	MP2B	X	44.964	2
56	MP2B	Z	77.881	2
57	MP2B	Mx	-.034	2
58	MP2B	X	44.964	5
59	MP2B	Z	77.881	5
60	MP2B	Mx	-.034	5
61	MP2C	X	33.098	2
62	MP2C	Z	57.328	2
63	MP2C	Mx	.05	2
64	MP2C	X	33.098	5
65	MP2C	Z	57.328	5
66	MP2C	Mx	.05	5
67	MP3A	X	44.964	2
68	MP3A	Z	77.881	2
69	MP3A	Mx	-.034	2
70	MP3A	X	44.964	5
71	MP3A	Z	77.881	5
72	MP3A	Mx	-.034	5
73	MP3B	X	44.964	2
74	MP3B	Z	77.881	2
75	MP3B	Mx	-.034	2
76	MP3B	X	44.964	5
77	MP3B	Z	77.881	5
78	MP3B	Mx	-.034	5
79	MP3C	X	33.098	2
80	MP3C	Z	57.328	2
81	MP3C	Mx	.05	2
82	MP3C	X	33.098	5
83	MP3C	Z	57.328	5
84	MP3C	Mx	.05	5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
1	MP4A	X	0	3.5
2	MP4A	Z	18.048	3.5
3	MP4A	Mx	0	3.5
4	MP4B	X	0	3.5
5	MP4B	Z	12.349	3.5
6	MP4B	Mx	-.003	3.5
7	MP4C	X	0	3.5
8	MP4C	Z	12.349	3.5
9	MP4C	Mx	.003	3.5
10	MP1A	X	0	2.5
11	MP1A	Z	37.521	2.5
12	MP1A	Mx	0	2.5
13	MP1A	X	0	4.5
14	MP1A	Z	37.521	4.5
15	MP1A	Mx	0	4.5
16	MP1B	X	0	2.5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
17	MP1B	Z	19.265	2.5
18	MP1B	Mx	-.008	2.5
19	MP1B	X	0	4.5
20	MP1B	Z	19.265	4.5
21	MP1B	Mx	-.008	4.5
22	MP1C	X	0	2.5
23	MP1C	Z	19.265	2.5
24	MP1C	Mx	.008	2.5
25	MP1C	X	0	4.5
26	MP1C	Z	19.265	4.5
27	MP1C	Mx	.008	4.5
28	MP2A	X	0	2.5
29	MP2A	Z	36.809	2.5
30	MP2A	Mx	0	2.5
31	MP2B	X	0	2.5
32	MP2B	Z	27.725	2.5
33	MP2B	Mx	.012	2.5
34	MP2C	X	0	2.5
35	MP2C	Z	27.725	2.5
36	MP2C	Mx	-.012	2.5
37	MP3A	X	0	2.5
38	MP3A	Z	44.408	2.5
39	MP3A	Mx	0	2.5
40	MP3B	X	0	2.5
41	MP3B	Z	33.811	2.5
42	MP3B	Mx	.015	2.5
43	MP3C	X	0	2.5
44	MP3C	Z	33.811	2.5
45	MP3C	Mx	-.015	2.5
46	OVP	X	0	1
47	OVP	Z	75.28	1
48	OVP	Mx	0	1
49	MP2A	X	0	2
50	MP2A	Z	97.84	2
51	MP2A	Mx	0	2
52	MP2A	X	0	5
53	MP2A	Z	97.84	5
54	MP2A	Mx	0	5
55	MP2B	X	0	2
56	MP2B	Z	74.107	2
57	MP2B	Mx	-.048	2
58	MP2B	X	0	5
59	MP2B	Z	74.107	5
60	MP2B	Mx	-.048	5
61	MP2C	X	0	2
62	MP2C	Z	74.107	2
63	MP2C	Mx	.048	2
64	MP2C	X	0	5
65	MP2C	Z	74.107	5
66	MP2C	Mx	.048	5
67	MP3A	X	0	2
68	MP3A	Z	97.84	2
69	MP3A	Mx	0	2
70	MP3A	X	0	5
71	MP3A	Z	97.84	5
72	MP3A	Mx	0	5
73	MP3B	X	0	2
74	MP3B	Z	74.107	2
75	MP3B	Mx	-.048	2

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
76	MP3B	X	0	5
77	MP3B	Z	74.107	5
78	MP3B	Mx	-.048	5
79	MP3C	X	0	2
80	MP3C	Z	74.107	2
81	MP3C	Mx	.048	2
82	MP3C	X	0	5
83	MP3C	Z	74.107	5
84	MP3C	Mx	.048	5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP4A	X	-8.074	3.5
2	MP4A	Z	13.985	3.5
3	MP4A	Mx	.002	3.5
4	MP4B	X	-5.224	3.5
5	MP4B	Z	9.049	3.5
6	MP4B	Mx	-.003	3.5
7	MP4C	X	-8.074	3.5
8	MP4C	Z	13.985	3.5
9	MP4C	Mx	.002	3.5
10	MP1A	X	-15.718	2.5
11	MP1A	Z	27.224	2.5
12	MP1A	Mx	.008	2.5
13	MP1A	X	-15.718	4.5
14	MP1A	Z	27.224	4.5
15	MP1A	Mx	.008	4.5
16	MP1B	X	-6.59	2.5
17	MP1B	Z	11.414	2.5
18	MP1B	Mx	-.007	2.5
19	MP1B	X	-6.59	4.5
20	MP1B	Z	11.414	4.5
21	MP1B	Mx	-.007	4.5
22	MP1C	X	-15.718	2.5
23	MP1C	Z	27.224	2.5
24	MP1C	Mx	.008	2.5
25	MP1C	X	-15.718	4.5
26	MP1C	Z	27.224	4.5
27	MP1C	Mx	.008	4.5
28	MP2A	X	-16.89	2.5
29	MP2A	Z	29.255	2.5
30	MP2A	Mx	-.008	2.5
31	MP2B	X	-12.349	2.5
32	MP2B	Z	21.389	2.5
33	MP2B	Mx	.012	2.5
34	MP2C	X	-16.89	2.5
35	MP2C	Z	29.255	2.5
36	MP2C	Mx	-.008	2.5
37	MP3A	X	-20.438	2.5
38	MP3A	Z	35.399	2.5
39	MP3A	Mx	-.01	2.5
40	MP3B	X	-15.139	2.5
41	MP3B	Z	26.222	2.5
42	MP3B	Mx	.015	2.5
43	MP3C	X	-20.438	2.5
44	MP3C	Z	35.399	2.5
45	MP3C	Mx	-.01	2.5
46	OVP	X	-35.384	1

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
47	OVP	Z	61.286	1
48	OVP	Mx	0	1
49	MP2A	X	-44.964	2
50	MP2A	Z	77.881	2
51	MP2A	Mx	.034	2
52	MP2A	X	-44.964	5
53	MP2A	Z	77.881	5
54	MP2A	Mx	.034	5
55	MP2B	X	-33.098	2
56	MP2B	Z	57.328	2
57	MP2B	Mx	-.05	2
58	MP2B	X	-33.098	5
59	MP2B	Z	57.328	5
60	MP2B	Mx	-.05	5
61	MP2C	X	-44.964	2
62	MP2C	Z	77.881	2
63	MP2C	Mx	.034	2
64	MP2C	X	-44.964	5
65	MP2C	Z	77.881	5
66	MP2C	Mx	.034	5
67	MP3A	X	-44.964	2
68	MP3A	Z	77.881	2
69	MP3A	Mx	.034	2
70	MP3A	X	-44.964	5
71	MP3A	Z	77.881	5
72	MP3A	Mx	.034	5
73	MP3B	X	-33.098	2
74	MP3B	Z	57.328	2
75	MP3B	Mx	-.05	2
76	MP3B	X	-33.098	5
77	MP3B	Z	57.328	5
78	MP3B	Mx	-.05	5
79	MP3C	X	-44.964	2
80	MP3C	Z	77.881	2
81	MP3C	Mx	.034	2
82	MP3C	X	-44.964	5
83	MP3C	Z	77.881	5
84	MP3C	Mx	.034	5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
1	MP4A	X	-10.694	3.5
2	MP4A	Z	6.174	3.5
3	MP4A	Mx	.003	3.5
4	MP4B	X	-10.694	3.5
5	MP4B	Z	6.174	3.5
6	MP4B	Mx	-.003	3.5
7	MP4C	X	-15.63	3.5
8	MP4C	Z	9.024	3.5
9	MP4C	Mx	0	3.5
10	MP1A	X	-16.684	2.5
11	MP1A	Z	9.633	2.5
12	MP1A	Mx	.008	2.5
13	MP1A	X	-16.684	4.5
14	MP1A	Z	9.633	4.5
15	MP1A	Mx	.008	4.5
16	MP1B	X	-16.684	2.5
17	MP1B	Z	9.633	2.5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
18	MP1B	Mx	-.008	2.5
19	MP1B	X	-16.684	4.5
20	MP1B	Z	9.633	4.5
21	MP1B	Mx	-.008	4.5
22	MP1C	X	-32.494	2.5
23	MP1C	Z	18.761	2.5
24	MP1C	Mx	0	2.5
25	MP1C	X	-32.494	4.5
26	MP1C	Z	18.761	4.5
27	MP1C	Mx	0	4.5
28	MP2A	X	-24.011	2.5
29	MP2A	Z	13.863	2.5
30	MP2A	Mx	-.012	2.5
31	MP2B	X	-24.011	2.5
32	MP2B	Z	13.863	2.5
33	MP2B	Mx	.012	2.5
34	MP2C	X	-31.877	2.5
35	MP2C	Z	18.404	2.5
36	MP2C	Mx	0	2.5
37	MP3A	X	-29.281	2.5
38	MP3A	Z	16.905	2.5
39	MP3A	Mx	-.015	2.5
40	MP3B	X	-29.281	2.5
41	MP3B	Z	16.905	2.5
42	MP3B	Mx	.015	2.5
43	MP3C	X	-38.458	2.5
44	MP3C	Z	22.204	2.5
45	MP3C	Mx	0	2.5
46	OVP	X	-53.471	1
47	OVP	Z	30.872	1
48	OVP	Mx	0	1
49	MP2A	X	-64.179	2
50	MP2A	Z	37.054	2
51	MP2A	Mx	.048	2
52	MP2A	X	-64.179	5
53	MP2A	Z	37.054	5
54	MP2A	Mx	.048	5
55	MP2B	X	-64.179	2
56	MP2B	Z	37.054	2
57	MP2B	Mx	-.048	2
58	MP2B	X	-64.179	5
59	MP2B	Z	37.054	5
60	MP2B	Mx	-.048	5
61	MP2C	X	-84.732	2
62	MP2C	Z	48.92	2
63	MP2C	Mx	0	2
64	MP2C	X	-84.732	5
65	MP2C	Z	48.92	5
66	MP2C	Mx	0	5
67	MP3A	X	-64.179	2
68	MP3A	Z	37.054	2
69	MP3A	Mx	.048	2
70	MP3A	X	-64.179	5
71	MP3A	Z	37.054	5
72	MP3A	Mx	.048	5
73	MP3B	X	-64.179	2
74	MP3B	Z	37.054	2
75	MP3B	Mx	-.048	2
76	MP3B	X	-64.179	5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
77	MP3B	Z	37.054	5
78	MP3B	Mx	-.048	5
79	MP3C	X	-84.732	2
80	MP3C	Z	48.92	2
81	MP3C	Mx	0	2
82	MP3C	X	-84.732	5
83	MP3C	Z	48.92	5
84	MP3C	Mx	0	5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
1	MP4A	X	-10.449	3.5
2	MP4A	Z	0	3.5
3	MP4A	Mx	.003	3.5
4	MP4B	X	-16.148	3.5
5	MP4B	Z	0	3.5
6	MP4B	Mx	-.002	3.5
7	MP4C	X	-16.148	3.5
8	MP4C	Z	0	3.5
9	MP4C	Mx	-.002	3.5
10	MP1A	X	-13.18	2.5
11	MP1A	Z	0	2.5
12	MP1A	Mx	.007	2.5
13	MP1A	X	-13.18	4.5
14	MP1A	Z	0	4.5
15	MP1A	Mx	.007	4.5
16	MP1B	X	-31.436	2.5
17	MP1B	Z	0	2.5
18	MP1B	Mx	-.008	2.5
19	MP1B	X	-31.436	4.5
20	MP1B	Z	0	4.5
21	MP1B	Mx	-.008	4.5
22	MP1C	X	-31.436	2.5
23	MP1C	Z	0	2.5
24	MP1C	Mx	-.008	2.5
25	MP1C	X	-31.436	4.5
26	MP1C	Z	0	4.5
27	MP1C	Mx	-.008	4.5
28	MP2A	X	-24.697	2.5
29	MP2A	Z	0	2.5
30	MP2A	Mx	-.012	2.5
31	MP2B	X	-33.781	2.5
32	MP2B	Z	0	2.5
33	MP2B	Mx	.008	2.5
34	MP2C	X	-33.781	2.5
35	MP2C	Z	0	2.5
36	MP2C	Mx	.008	2.5
37	MP3A	X	-30.278	2.5
38	MP3A	Z	0	2.5
39	MP3A	Mx	-.015	2.5
40	MP3B	X	-40.875	2.5
41	MP3B	Z	0	2.5
42	MP3B	Mx	.01	2.5
43	MP3C	X	-40.875	2.5
44	MP3C	Z	0	2.5
45	MP3C	Mx	.01	2.5
46	OVP	X	-57.231	1
47	OVP	Z	0	1

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
48	OVP	Mx	0	1
49	MP2A	X	-66.196	2
50	MP2A	Z	0	2
51	MP2A	Mx	.05	2
52	MP2A	X	-66.196	5
53	MP2A	Z	0	5
54	MP2A	Mx	.05	5
55	MP2B	X	-89.929	2
56	MP2B	Z	0	2
57	MP2B	Mx	-.034	2
58	MP2B	X	-89.929	5
59	MP2B	Z	0	5
60	MP2B	Mx	-.034	5
61	MP2C	X	-89.929	2
62	MP2C	Z	0	2
63	MP2C	Mx	-.034	2
64	MP2C	X	-89.929	5
65	MP2C	Z	0	5
66	MP2C	Mx	-.034	5
67	MP3A	X	-66.196	2
68	MP3A	Z	0	2
69	MP3A	Mx	.05	2
70	MP3A	X	-66.196	5
71	MP3A	Z	0	5
72	MP3A	Mx	.05	5
73	MP3B	X	-89.929	2
74	MP3B	Z	0	2
75	MP3B	Mx	-.034	2
76	MP3B	X	-89.929	5
77	MP3B	Z	0	5
78	MP3B	Mx	-.034	5
79	MP3C	X	-89.929	2
80	MP3C	Z	0	2
81	MP3C	Mx	-.034	2
82	MP3C	X	-89.929	5
83	MP3C	Z	0	5
84	MP3C	Mx	-.034	5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
1	MP4A	X	-10.694	3.5
2	MP4A	Z	-6.174	3.5
3	MP4A	Mx	.003	3.5
4	MP4B	X	-15.63	3.5
5	MP4B	Z	-9.024	3.5
6	MP4B	Mx	0	3.5
7	MP4C	X	-10.694	3.5
8	MP4C	Z	-6.174	3.5
9	MP4C	Mx	-.003	3.5
10	MP1A	X	-16.684	2.5
11	MP1A	Z	-9.633	2.5
12	MP1A	Mx	.008	2.5
13	MP1A	X	-16.684	4.5
14	MP1A	Z	-9.633	4.5
15	MP1A	Mx	.008	4.5
16	MP1B	X	-32.494	2.5
17	MP1B	Z	-18.761	2.5
18	MP1B	Mx	0	2.5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
19	MP1B	X	-32.494	4.5
20	MP1B	Z	-18.761	4.5
21	MP1B	Mx	0	4.5
22	MP1C	X	-16.684	2.5
23	MP1C	Z	-9.633	2.5
24	MP1C	Mx	-.008	2.5
25	MP1C	X	-16.684	4.5
26	MP1C	Z	-9.633	4.5
27	MP1C	Mx	-.008	4.5
28	MP2A	X	-24.011	2.5
29	MP2A	Z	-13.863	2.5
30	MP2A	Mx	-.012	2.5
31	MP2B	X	-31.877	2.5
32	MP2B	Z	-18.404	2.5
33	MP2B	Mx	0	2.5
34	MP2C	X	-24.011	2.5
35	MP2C	Z	-13.863	2.5
36	MP2C	Mx	.012	2.5
37	MP3A	X	-29.281	2.5
38	MP3A	Z	-16.905	2.5
39	MP3A	Mx	-.015	2.5
40	MP3B	X	-38.458	2.5
41	MP3B	Z	-22.204	2.5
42	MP3B	Mx	0	2.5
43	MP3C	X	-29.281	2.5
44	MP3C	Z	-16.905	2.5
45	MP3C	Mx	.015	2.5
46	OVP	X	-53.471	1
47	OVP	Z	-30.872	1
48	OVP	Mx	0	1
49	MP2A	X	-64.179	2
50	MP2A	Z	-37.054	2
51	MP2A	Mx	.048	2
52	MP2A	X	-64.179	5
53	MP2A	Z	-37.054	5
54	MP2A	Mx	.048	5
55	MP2B	X	-84.732	2
56	MP2B	Z	-48.92	2
57	MP2B	Mx	0	2
58	MP2B	X	-84.732	5
59	MP2B	Z	-48.92	5
60	MP2B	Mx	0	5
61	MP2C	X	-64.179	2
62	MP2C	Z	-37.054	2
63	MP2C	Mx	-.048	2
64	MP2C	X	-64.179	5
65	MP2C	Z	-37.054	5
66	MP2C	Mx	-.048	5
67	MP3A	X	-64.179	2
68	MP3A	Z	-37.054	2
69	MP3A	Mx	.048	2
70	MP3A	X	-64.179	5
71	MP3A	Z	-37.054	5
72	MP3A	Mx	.048	5
73	MP3B	X	-84.732	2
74	MP3B	Z	-48.92	2
75	MP3B	Mx	0	2
76	MP3B	X	-84.732	5
77	MP3B	Z	-48.92	5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
78	MP3B	Mx	0	5
79	MP3C	X	-64.179	2
80	MP3C	Z	-37.054	2
81	MP3C	Mx	-.048	2
82	MP3C	X	-64.179	5
83	MP3C	Z	-37.054	5
84	MP3C	Mx	-.048	5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
1	MP4A	X	-8.074	3.5
2	MP4A	Z	-13.985	3.5
3	MP4A	Mx	.002	3.5
4	MP4B	X	-8.074	3.5
5	MP4B	Z	-13.985	3.5
6	MP4B	Mx	.002	3.5
7	MP4C	X	-5.224	3.5
8	MP4C	Z	-9.049	3.5
9	MP4C	Mx	-.003	3.5
10	MP1A	X	-15.718	2.5
11	MP1A	Z	-27.224	2.5
12	MP1A	Mx	.008	2.5
13	MP1A	X	-15.718	4.5
14	MP1A	Z	-27.224	4.5
15	MP1A	Mx	.008	4.5
16	MP1B	X	-15.718	2.5
17	MP1B	Z	-27.224	2.5
18	MP1B	Mx	.008	2.5
19	MP1B	X	-15.718	4.5
20	MP1B	Z	-27.224	4.5
21	MP1B	Mx	.008	4.5
22	MP1C	X	-6.59	2.5
23	MP1C	Z	-11.414	2.5
24	MP1C	Mx	-.007	2.5
25	MP1C	X	-6.59	4.5
26	MP1C	Z	-11.414	4.5
27	MP1C	Mx	-.007	4.5
28	MP2A	X	-16.89	2.5
29	MP2A	Z	-29.255	2.5
30	MP2A	Mx	-.008	2.5
31	MP2B	X	-16.89	2.5
32	MP2B	Z	-29.255	2.5
33	MP2B	Mx	-.008	2.5
34	MP2C	X	-12.349	2.5
35	MP2C	Z	-21.389	2.5
36	MP2C	Mx	.012	2.5
37	MP3A	X	-20.438	2.5
38	MP3A	Z	-35.399	2.5
39	MP3A	Mx	-.01	2.5
40	MP3B	X	-20.438	2.5
41	MP3B	Z	-35.399	2.5
42	MP3B	Mx	-.01	2.5
43	MP3C	X	-15.139	2.5
44	MP3C	Z	-26.222	2.5
45	MP3C	Mx	.015	2.5
46	OVP	X	-35.384	1
47	OVP	Z	-61.286	1
48	OVP	Mx	0	1

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
49	MP2A	X	-44.964	2
50	MP2A	Z	-77.881	2
51	MP2A	Mx	.034	2
52	MP2A	X	-44.964	5
53	MP2A	Z	-77.881	5
54	MP2A	Mx	.034	5
55	MP2B	X	-44.964	2
56	MP2B	Z	-77.881	2
57	MP2B	Mx	.034	2
58	MP2B	X	-44.964	5
59	MP2B	Z	-77.881	5
60	MP2B	Mx	.034	5
61	MP2C	X	-33.098	2
62	MP2C	Z	-57.328	2
63	MP2C	Mx	-.05	2
64	MP2C	X	-33.098	5
65	MP2C	Z	-57.328	5
66	MP2C	Mx	-.05	5
67	MP3A	X	-44.964	2
68	MP3A	Z	-77.881	2
69	MP3A	Mx	.034	2
70	MP3A	X	-44.964	5
71	MP3A	Z	-77.881	5
72	MP3A	Mx	.034	5
73	MP3B	X	-44.964	2
74	MP3B	Z	-77.881	2
75	MP3B	Mx	.034	2
76	MP3B	X	-44.964	5
77	MP3B	Z	-77.881	5
78	MP3B	Mx	.034	5
79	MP3C	X	-33.098	2
80	MP3C	Z	-57.328	2
81	MP3C	Mx	-.05	2
82	MP3C	X	-33.098	5
83	MP3C	Z	-57.328	5
84	MP3C	Mx	-.05	5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
1	MP4A	X	0	3.5
2	MP4A	Z	-4.448	3.5
3	MP4A	Mx	0	3.5
4	MP4B	X	0	3.5
5	MP4B	Z	-3.21	3.5
6	MP4B	Mx	.000695	3.5
7	MP4C	X	0	3.5
8	MP4C	Z	-3.21	3.5
9	MP4C	Mx	-.000695	3.5
10	MP1A	X	0	2.5
11	MP1A	Z	-8.799	2.5
12	MP1A	Mx	0	2.5
13	MP1A	X	0	4.5
14	MP1A	Z	-8.799	4.5
15	MP1A	Mx	0	4.5
16	MP1B	X	0	2.5
17	MP1B	Z	-4.956	2.5
18	MP1B	Mx	.002	2.5
19	MP1B	X	0	4.5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
20	MP1B	Z	-4.956	4.5
21	MP1B	Mx	.002	4.5
22	MP1C	X	0	2.5
23	MP1C	Z	-4.956	2.5
24	MP1C	Mx	-.002	2.5
25	MP1C	X	0	4.5
26	MP1C	Z	-4.956	4.5
27	MP1C	Mx	-.002	4.5
28	MP2A	X	0	2.5
29	MP2A	Z	-9.039	2.5
30	MP2A	Mx	0	2.5
31	MP2B	X	0	2.5
32	MP2B	Z	-6.954	2.5
33	MP2B	Mx	-.003	2.5
34	MP2C	X	0	2.5
35	MP2C	Z	-6.954	2.5
36	MP2C	Mx	.003	2.5
37	MP3A	X	0	2.5
38	MP3A	Z	-9.039	2.5
39	MP3A	Mx	0	2.5
40	MP3B	X	0	2.5
41	MP3B	Z	-7.037	2.5
42	MP3B	Mx	-.003	2.5
43	MP3C	X	0	2.5
44	MP3C	Z	-7.037	2.5
45	MP3C	Mx	.003	2.5
46	OVP	X	0	1
47	OVP	Z	-18.686	1
48	OVP	Mx	0	1
49	MP2A	X	0	2
50	MP2A	Z	-18.511	2
51	MP2A	Mx	0	2
52	MP2A	X	0	5
53	MP2A	Z	-18.511	5
54	MP2A	Mx	0	5
55	MP2B	X	0	2
56	MP2B	Z	-14.35	2
57	MP2B	Mx	.009	2
58	MP2B	X	0	5
59	MP2B	Z	-14.35	5
60	MP2B	Mx	.009	5
61	MP2C	X	0	2
62	MP2C	Z	-14.35	2
63	MP2C	Mx	-.009	2
64	MP2C	X	0	5
65	MP2C	Z	-14.35	5
66	MP2C	Mx	-.009	5
67	MP3A	X	0	2
68	MP3A	Z	-18.511	2
69	MP3A	Mx	0	2
70	MP3A	X	0	5
71	MP3A	Z	-18.511	5
72	MP3A	Mx	0	5
73	MP3B	X	0	2
74	MP3B	Z	-14.35	2
75	MP3B	Mx	.009	2
76	MP3B	X	0	5
77	MP3B	Z	-14.35	5
78	MP3B	Mx	.009	5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
79	MP3C	X	0	2
80	MP3C	Z	-14.35	2
81	MP3C	Mx	-.009	2
82	MP3C	X	0	5
83	MP3C	Z	-14.35	5
84	MP3C	Mx	-.009	5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
1	MP4A	X	2.018	3.5
2	MP4A	Z	-3.495	3.5
3	MP4A	Mx	-.000504	3.5
4	MP4B	X	1.398	3.5
5	MP4B	Z	-2.422	3.5
6	MP4B	Mx	.000699	3.5
7	MP4C	X	2.018	3.5
8	MP4C	Z	-3.495	3.5
9	MP4C	Mx	-.000504	3.5
10	MP1A	X	3.759	2.5
11	MP1A	Z	-6.511	2.5
12	MP1A	Mx	-.002	2.5
13	MP1A	X	3.759	4.5
14	MP1A	Z	-6.511	4.5
15	MP1A	Mx	-.002	4.5
16	MP1B	X	1.838	2.5
17	MP1B	Z	-3.183	2.5
18	MP1B	Mx	.002	2.5
19	MP1B	X	1.838	4.5
20	MP1B	Z	-3.183	4.5
21	MP1B	Mx	.002	4.5
22	MP1C	X	3.759	2.5
23	MP1C	Z	-6.511	2.5
24	MP1C	Mx	-.002	2.5
25	MP1C	X	3.759	4.5
26	MP1C	Z	-6.511	4.5
27	MP1C	Mx	-.002	4.5
28	MP2A	X	4.172	2.5
29	MP2A	Z	-7.226	2.5
30	MP2A	Mx	.002	2.5
31	MP2B	X	3.129	2.5
32	MP2B	Z	-5.42	2.5
33	MP2B	Mx	-.003	2.5
34	MP2C	X	4.172	2.5
35	MP2C	Z	-7.226	2.5
36	MP2C	Mx	.002	2.5
37	MP3A	X	4.186	2.5
38	MP3A	Z	-7.25	2.5
39	MP3A	Mx	.002	2.5
40	MP3B	X	3.185	2.5
41	MP3B	Z	-5.516	2.5
42	MP3B	Mx	-.003	2.5
43	MP3C	X	4.186	2.5
44	MP3C	Z	-7.25	2.5
45	MP3C	Mx	.002	2.5
46	OVP	X	8.829	1
47	OVP	Z	-15.292	1
48	OVP	Mx	0	1
49	MP2A	X	8.562	2

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
50	MP2A	Z	-14.83	2
51	MP2A	Mx	-.006	2
52	MP2A	X	8.562	5
53	MP2A	Z	-14.83	5
54	MP2A	Mx	-.006	5
55	MP2B	X	6.481	2
56	MP2B	Z	-11.226	2
57	MP2B	Mx	.01	2
58	MP2B	X	6.481	5
59	MP2B	Z	-11.226	5
60	MP2B	Mx	.01	5
61	MP2C	X	8.562	2
62	MP2C	Z	-14.83	2
63	MP2C	Mx	-.006	2
64	MP2C	X	8.562	5
65	MP2C	Z	-14.83	5
66	MP2C	Mx	-.006	5
67	MP3A	X	8.562	2
68	MP3A	Z	-14.83	2
69	MP3A	Mx	-.006	2
70	MP3A	X	8.562	5
71	MP3A	Z	-14.83	5
72	MP3A	Mx	-.006	5
73	MP3B	X	6.481	2
74	MP3B	Z	-11.226	2
75	MP3B	Mx	.01	2
76	MP3B	X	6.481	5
77	MP3B	Z	-11.226	5
78	MP3B	Mx	.01	5
79	MP3C	X	8.562	2
80	MP3C	Z	-14.83	2
81	MP3C	Mx	-.006	2
82	MP3C	X	8.562	5
83	MP3C	Z	-14.83	5
84	MP3C	Mx	-.006	5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
1	MP4A	X	2.78	3.5
2	MP4A	Z	-1.605	3.5
3	MP4A	Mx	-.000695	3.5
4	MP4B	X	2.78	3.5
5	MP4B	Z	-1.605	3.5
6	MP4B	Mx	.000695	3.5
7	MP4C	X	3.852	3.5
8	MP4C	Z	-2.224	3.5
9	MP4C	Mx	0	3.5
10	MP1A	X	4.292	2.5
11	MP1A	Z	-2.478	2.5
12	MP1A	Mx	-.002	2.5
13	MP1A	X	4.292	4.5
14	MP1A	Z	-2.478	4.5
15	MP1A	Mx	-.002	4.5
16	MP1B	X	4.292	2.5
17	MP1B	Z	-2.478	2.5
18	MP1B	Mx	.002	2.5
19	MP1B	X	4.292	4.5
20	MP1B	Z	-2.478	4.5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
21	MP1B	Mx	.002	4.5
22	MP1C	X	7.62	2.5
23	MP1C	Z	-4.399	2.5
24	MP1C	Mx	0	2.5
25	MP1C	X	7.62	4.5
26	MP1C	Z	-4.399	4.5
27	MP1C	Mx	0	4.5
28	MP2A	X	6.022	2.5
29	MP2A	Z	-3.477	2.5
30	MP2A	Mx	.003	2.5
31	MP2B	X	6.022	2.5
32	MP2B	Z	-3.477	2.5
33	MP2B	Mx	-.003	2.5
34	MP2C	X	7.828	2.5
35	MP2C	Z	-4.52	2.5
36	MP2C	Mx	0	2.5
37	MP3A	X	6.094	2.5
38	MP3A	Z	-3.519	2.5
39	MP3A	Mx	.003	2.5
40	MP3B	X	6.094	2.5
41	MP3B	Z	-3.519	2.5
42	MP3B	Mx	-.003	2.5
43	MP3C	X	7.828	2.5
44	MP3C	Z	-4.52	2.5
45	MP3C	Mx	0	2.5
46	OVP	X	13.512	1
47	OVP	Z	-7.801	1
48	OVP	Mx	0	1
49	MP2A	X	12.427	2
50	MP2A	Z	-7.175	2
51	MP2A	Mx	-.009	2
52	MP2A	X	12.427	5
53	MP2A	Z	-7.175	5
54	MP2A	Mx	-.009	5
55	MP2B	X	12.427	2
56	MP2B	Z	-7.175	2
57	MP2B	Mx	.009	2
58	MP2B	X	12.427	5
59	MP2B	Z	-7.175	5
60	MP2B	Mx	.009	5
61	MP2C	X	16.031	2
62	MP2C	Z	-9.256	2
63	MP2C	Mx	0	2
64	MP2C	X	16.031	5
65	MP2C	Z	-9.256	5
66	MP2C	Mx	0	5
67	MP3A	X	12.427	2
68	MP3A	Z	-7.175	2
69	MP3A	Mx	-.009	2
70	MP3A	X	12.427	5
71	MP3A	Z	-7.175	5
72	MP3A	Mx	-.009	5
73	MP3B	X	12.427	2
74	MP3B	Z	-7.175	2
75	MP3B	Mx	.009	2
76	MP3B	X	12.427	5
77	MP3B	Z	-7.175	5
78	MP3B	Mx	.009	5
79	MP3C	X	16.031	2

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
80	MP3C	Z	-9.256	2
81	MP3C	Mx	0	2
82	MP3C	X	16.031	5
83	MP3C	Z	-9.256	5
84	MP3C	Mx	0	5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
1	MP4A	X	2.797	3.5
2	MP4A	Z	0	3.5
3	MP4A	Mx	-.000699	3.5
4	MP4B	X	4.035	3.5
5	MP4B	Z	0	3.5
6	MP4B	Mx	.000504	3.5
7	MP4C	X	4.035	3.5
8	MP4C	Z	0	3.5
9	MP4C	Mx	.000504	3.5
10	MP1A	X	3.675	2.5
11	MP1A	Z	0	2.5
12	MP1A	Mx	-.002	2.5
13	MP1A	X	3.675	4.5
14	MP1A	Z	0	4.5
15	MP1A	Mx	-.002	4.5
16	MP1B	X	7.518	2.5
17	MP1B	Z	0	2.5
18	MP1B	Mx	.002	2.5
19	MP1B	X	7.518	4.5
20	MP1B	Z	0	4.5
21	MP1B	Mx	.002	4.5
22	MP1C	X	7.518	2.5
23	MP1C	Z	0	2.5
24	MP1C	Mx	.002	2.5
25	MP1C	X	7.518	4.5
26	MP1C	Z	0	4.5
27	MP1C	Mx	.002	4.5
28	MP2A	X	6.258	2.5
29	MP2A	Z	0	2.5
30	MP2A	Mx	.003	2.5
31	MP2B	X	8.344	2.5
32	MP2B	Z	0	2.5
33	MP2B	Mx	-.002	2.5
34	MP2C	X	8.344	2.5
35	MP2C	Z	0	2.5
36	MP2C	Mx	-.002	2.5
37	MP3A	X	6.37	2.5
38	MP3A	Z	0	2.5
39	MP3A	Mx	.003	2.5
40	MP3B	X	8.372	2.5
41	MP3B	Z	0	2.5
42	MP3B	Mx	-.002	2.5
43	MP3C	X	8.372	2.5
44	MP3C	Z	0	2.5
45	MP3C	Mx	-.002	2.5
46	OVP	X	14.574	1
47	OVP	Z	0	1
48	OVP	Mx	0	1
49	MP2A	X	12.963	2
50	MP2A	Z	0	2

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
51	MP2A	Mx	-.01	2
52	MP2A	X	12.963	5
53	MP2A	Z	0	5
54	MP2A	Mx	-.01	5
55	MP2B	X	17.124	2
56	MP2B	Z	0	2
57	MP2B	Mx	.006	2
58	MP2B	X	17.124	5
59	MP2B	Z	0	5
60	MP2B	Mx	.006	5
61	MP2C	X	17.124	2
62	MP2C	Z	0	2
63	MP2C	Mx	.006	2
64	MP2C	X	17.124	5
65	MP2C	Z	0	5
66	MP2C	Mx	.006	5
67	MP3A	X	12.963	2
68	MP3A	Z	0	2
69	MP3A	Mx	-.01	2
70	MP3A	X	12.963	5
71	MP3A	Z	0	5
72	MP3A	Mx	-.01	5
73	MP3B	X	17.124	2
74	MP3B	Z	0	2
75	MP3B	Mx	.006	2
76	MP3B	X	17.124	5
77	MP3B	Z	0	5
78	MP3B	Mx	.006	5
79	MP3C	X	17.124	2
80	MP3C	Z	0	2
81	MP3C	Mx	.006	2
82	MP3C	X	17.124	5
83	MP3C	Z	0	5
84	MP3C	Mx	.006	5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP4A	X	2.78	3.5
2	MP4A	Z	1.605	3.5
3	MP4A	Mx	-.000695	3.5
4	MP4B	X	3.852	3.5
5	MP4B	Z	2.224	3.5
6	MP4B	Mx	0	3.5
7	MP4C	X	2.78	3.5
8	MP4C	Z	1.605	3.5
9	MP4C	Mx	.000695	3.5
10	MP1A	X	4.292	2.5
11	MP1A	Z	2.478	2.5
12	MP1A	Mx	-.002	2.5
13	MP1A	X	4.292	4.5
14	MP1A	Z	2.478	4.5
15	MP1A	Mx	-.002	4.5
16	MP1B	X	7.62	2.5
17	MP1B	Z	4.399	2.5
18	MP1B	Mx	0	2.5
19	MP1B	X	7.62	4.5
20	MP1B	Z	4.399	4.5
21	MP1B	Mx	0	4.5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
22	MP1C	X	4.292	2.5
23	MP1C	Z	2.478	2.5
24	MP1C	Mx	.002	2.5
25	MP1C	X	4.292	4.5
26	MP1C	Z	2.478	4.5
27	MP1C	Mx	.002	4.5
28	MP2A	X	6.022	2.5
29	MP2A	Z	3.477	2.5
30	MP2A	Mx	.003	2.5
31	MP2B	X	7.828	2.5
32	MP2B	Z	4.52	2.5
33	MP2B	Mx	0	2.5
34	MP2C	X	6.022	2.5
35	MP2C	Z	3.477	2.5
36	MP2C	Mx	-.003	2.5
37	MP3A	X	6.094	2.5
38	MP3A	Z	3.519	2.5
39	MP3A	Mx	.003	2.5
40	MP3B	X	7.828	2.5
41	MP3B	Z	4.52	2.5
42	MP3B	Mx	0	2.5
43	MP3C	X	6.094	2.5
44	MP3C	Z	3.519	2.5
45	MP3C	Mx	-.003	2.5
46	OVP	X	13.512	1
47	OVP	Z	7.801	1
48	OVP	Mx	0	1
49	MP2A	X	12.427	2
50	MP2A	Z	7.175	2
51	MP2A	Mx	-.009	2
52	MP2A	X	12.427	5
53	MP2A	Z	7.175	5
54	MP2A	Mx	-.009	5
55	MP2B	X	16.031	2
56	MP2B	Z	9.256	2
57	MP2B	Mx	0	2
58	MP2B	X	16.031	5
59	MP2B	Z	9.256	5
60	MP2B	Mx	0	5
61	MP2C	X	12.427	2
62	MP2C	Z	7.175	2
63	MP2C	Mx	.009	2
64	MP2C	X	12.427	5
65	MP2C	Z	7.175	5
66	MP2C	Mx	.009	5
67	MP3A	X	12.427	2
68	MP3A	Z	7.175	2
69	MP3A	Mx	-.009	2
70	MP3A	X	12.427	5
71	MP3A	Z	7.175	5
72	MP3A	Mx	-.009	5
73	MP3B	X	16.031	2
74	MP3B	Z	9.256	2
75	MP3B	Mx	0	2
76	MP3B	X	16.031	5
77	MP3B	Z	9.256	5
78	MP3B	Mx	0	5
79	MP3C	X	12.427	2
80	MP3C	Z	7.175	2

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
81	MP3C	Mx	.009	2
82	MP3C	X	12.427	5
83	MP3C	Z	7.175	5
84	MP3C	Mx	.009	5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
1	MP4A	X	2.018	3.5
2	MP4A	Z	3.495	3.5
3	MP4A	Mx	-.000504	3.5
4	MP4B	X	2.018	3.5
5	MP4B	Z	3.495	3.5
6	MP4B	Mx	-.000504	3.5
7	MP4C	X	1.398	3.5
8	MP4C	Z	2.422	3.5
9	MP4C	Mx	.000699	3.5
10	MP1A	X	3.759	2.5
11	MP1A	Z	6.511	2.5
12	MP1A	Mx	-.002	2.5
13	MP1A	X	3.759	4.5
14	MP1A	Z	6.511	4.5
15	MP1A	Mx	-.002	4.5
16	MP1B	X	3.759	2.5
17	MP1B	Z	6.511	2.5
18	MP1B	Mx	-.002	2.5
19	MP1B	X	3.759	4.5
20	MP1B	Z	6.511	4.5
21	MP1B	Mx	-.002	4.5
22	MP1C	X	1.838	2.5
23	MP1C	Z	3.183	2.5
24	MP1C	Mx	.002	2.5
25	MP1C	X	1.838	4.5
26	MP1C	Z	3.183	4.5
27	MP1C	Mx	.002	4.5
28	MP2A	X	4.172	2.5
29	MP2A	Z	7.226	2.5
30	MP2A	Mx	.002	2.5
31	MP2B	X	4.172	2.5
32	MP2B	Z	7.226	2.5
33	MP2B	Mx	.002	2.5
34	MP2C	X	3.129	2.5
35	MP2C	Z	5.42	2.5
36	MP2C	Mx	-.003	2.5
37	MP3A	X	4.186	2.5
38	MP3A	Z	7.25	2.5
39	MP3A	Mx	.002	2.5
40	MP3B	X	4.186	2.5
41	MP3B	Z	7.25	2.5
42	MP3B	Mx	.002	2.5
43	MP3C	X	3.185	2.5
44	MP3C	Z	5.516	2.5
45	MP3C	Mx	-.003	2.5
46	OVP	X	8.829	1
47	OVP	Z	15.292	1
48	OVP	Mx	0	1
49	MP2A	X	8.562	2
50	MP2A	Z	14.83	2
51	MP2A	Mx	-.006	2

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
52	MP2A	X	8.562	5
53	MP2A	Z	14.83	5
54	MP2A	Mx	-.006	5
55	MP2B	X	8.562	2
56	MP2B	Z	14.83	2
57	MP2B	Mx	-.006	2
58	MP2B	X	8.562	5
59	MP2B	Z	14.83	5
60	MP2B	Mx	-.006	5
61	MP2C	X	6.481	2
62	MP2C	Z	11.226	2
63	MP2C	Mx	.01	2
64	MP2C	X	6.481	5
65	MP2C	Z	11.226	5
66	MP2C	Mx	.01	5
67	MP3A	X	8.562	2
68	MP3A	Z	14.83	2
69	MP3A	Mx	-.006	2
70	MP3A	X	8.562	5
71	MP3A	Z	14.83	5
72	MP3A	Mx	-.006	5
73	MP3B	X	8.562	2
74	MP3B	Z	14.83	2
75	MP3B	Mx	-.006	2
76	MP3B	X	8.562	5
77	MP3B	Z	14.83	5
78	MP3B	Mx	-.006	5
79	MP3C	X	6.481	2
80	MP3C	Z	11.226	2
81	MP3C	Mx	.01	2
82	MP3C	X	6.481	5
83	MP3C	Z	11.226	5
84	MP3C	Mx	.01	5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP4A	X	0	3.5
2	MP4A	Z	4.448	3.5
3	MP4A	Mx	0	3.5
4	MP4B	X	0	3.5
5	MP4B	Z	3.21	3.5
6	MP4B	Mx	-.000695	3.5
7	MP4C	X	0	3.5
8	MP4C	Z	3.21	3.5
9	MP4C	Mx	.000695	3.5
10	MP1A	X	0	2.5
11	MP1A	Z	8.799	2.5
12	MP1A	Mx	0	2.5
13	MP1A	X	0	4.5
14	MP1A	Z	8.799	4.5
15	MP1A	Mx	0	4.5
16	MP1B	X	0	2.5
17	MP1B	Z	4.956	2.5
18	MP1B	Mx	-.002	2.5
19	MP1B	X	0	4.5
20	MP1B	Z	4.956	4.5
21	MP1B	Mx	-.002	4.5
22	MP1C	X	0	2.5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
23	MP1C	Z	4.956	2.5
24	MP1C	Mx	.002	2.5
25	MP1C	X	0	4.5
26	MP1C	Z	4.956	4.5
27	MP1C	Mx	.002	4.5
28	MP2A	X	0	2.5
29	MP2A	Z	9.039	2.5
30	MP2A	Mx	0	2.5
31	MP2B	X	0	2.5
32	MP2B	Z	6.954	2.5
33	MP2B	Mx	.003	2.5
34	MP2C	X	0	2.5
35	MP2C	Z	6.954	2.5
36	MP2C	Mx	-.003	2.5
37	MP3A	X	0	2.5
38	MP3A	Z	9.039	2.5
39	MP3A	Mx	0	2.5
40	MP3B	X	0	2.5
41	MP3B	Z	7.037	2.5
42	MP3B	Mx	.003	2.5
43	MP3C	X	0	2.5
44	MP3C	Z	7.037	2.5
45	MP3C	Mx	-.003	2.5
46	OVP	X	0	1
47	OVP	Z	18.686	1
48	OVP	Mx	0	1
49	MP2A	X	0	2
50	MP2A	Z	18.511	2
51	MP2A	Mx	0	2
52	MP2A	X	0	5
53	MP2A	Z	18.511	5
54	MP2A	Mx	0	5
55	MP2B	X	0	2
56	MP2B	Z	14.35	2
57	MP2B	Mx	-.009	2
58	MP2B	X	0	5
59	MP2B	Z	14.35	5
60	MP2B	Mx	-.009	5
61	MP2C	X	0	2
62	MP2C	Z	14.35	2
63	MP2C	Mx	.009	2
64	MP2C	X	0	5
65	MP2C	Z	14.35	5
66	MP2C	Mx	.009	5
67	MP3A	X	0	2
68	MP3A	Z	18.511	2
69	MP3A	Mx	0	2
70	MP3A	X	0	5
71	MP3A	Z	18.511	5
72	MP3A	Mx	0	5
73	MP3B	X	0	2
74	MP3B	Z	14.35	2
75	MP3B	Mx	-.009	2
76	MP3B	X	0	5
77	MP3B	Z	14.35	5
78	MP3B	Mx	-.009	5
79	MP3C	X	0	2
80	MP3C	Z	14.35	2
81	MP3C	Mx	.009	2

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
82	MP3C	X	0	5
83	MP3C	Z	14.35	5
84	MP3C	Mx	.009	5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP4A	X	-2.018	3.5
2	MP4A	Z	3.495	3.5
3	MP4A	Mx	.000504	3.5
4	MP4B	X	-1.398	3.5
5	MP4B	Z	2.422	3.5
6	MP4B	Mx	-.000699	3.5
7	MP4C	X	-2.018	3.5
8	MP4C	Z	3.495	3.5
9	MP4C	Mx	.000504	3.5
10	MP1A	X	-3.759	2.5
11	MP1A	Z	6.511	2.5
12	MP1A	Mx	.002	2.5
13	MP1A	X	-3.759	4.5
14	MP1A	Z	6.511	4.5
15	MP1A	Mx	.002	4.5
16	MP1B	X	-1.838	2.5
17	MP1B	Z	3.183	2.5
18	MP1B	Mx	-.002	2.5
19	MP1B	X	-1.838	4.5
20	MP1B	Z	3.183	4.5
21	MP1B	Mx	-.002	4.5
22	MP1C	X	-3.759	2.5
23	MP1C	Z	6.511	2.5
24	MP1C	Mx	.002	2.5
25	MP1C	X	-3.759	4.5
26	MP1C	Z	6.511	4.5
27	MP1C	Mx	.002	4.5
28	MP2A	X	-4.172	2.5
29	MP2A	Z	7.226	2.5
30	MP2A	Mx	-.002	2.5
31	MP2B	X	-3.129	2.5
32	MP2B	Z	5.42	2.5
33	MP2B	Mx	.003	2.5
34	MP2C	X	-4.172	2.5
35	MP2C	Z	7.226	2.5
36	MP2C	Mx	-.002	2.5
37	MP3A	X	-4.186	2.5
38	MP3A	Z	7.25	2.5
39	MP3A	Mx	-.002	2.5
40	MP3B	X	-3.185	2.5
41	MP3B	Z	5.516	2.5
42	MP3B	Mx	.003	2.5
43	MP3C	X	-4.186	2.5
44	MP3C	Z	7.25	2.5
45	MP3C	Mx	-.002	2.5
46	OVP	X	-8.829	1
47	OVP	Z	15.292	1
48	OVP	Mx	0	1
49	MP2A	X	-8.562	2
50	MP2A	Z	14.83	2
51	MP2A	Mx	.006	2
52	MP2A	X	-8.562	5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
53	MP2A	Z	14.83	5
54	MP2A	Mx	.006	5
55	MP2B	X	-6.481	2
56	MP2B	Z	11.226	2
57	MP2B	Mx	-.01	2
58	MP2B	X	-6.481	5
59	MP2B	Z	11.226	5
60	MP2B	Mx	-.01	5
61	MP2C	X	-8.562	2
62	MP2C	Z	14.83	2
63	MP2C	Mx	.006	2
64	MP2C	X	-8.562	5
65	MP2C	Z	14.83	5
66	MP2C	Mx	.006	5
67	MP3A	X	-8.562	2
68	MP3A	Z	14.83	2
69	MP3A	Mx	.006	2
70	MP3A	X	-8.562	5
71	MP3A	Z	14.83	5
72	MP3A	Mx	.006	5
73	MP3B	X	-6.481	2
74	MP3B	Z	11.226	2
75	MP3B	Mx	-.01	2
76	MP3B	X	-6.481	5
77	MP3B	Z	11.226	5
78	MP3B	Mx	-.01	5
79	MP3C	X	-8.562	2
80	MP3C	Z	14.83	2
81	MP3C	Mx	.006	2
82	MP3C	X	-8.562	5
83	MP3C	Z	14.83	5
84	MP3C	Mx	.006	5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
1	MP4A	X	-2.78	3.5
2	MP4A	Z	1.605	3.5
3	MP4A	Mx	.000695	3.5
4	MP4B	X	-2.78	3.5
5	MP4B	Z	1.605	3.5
6	MP4B	Mx	-.000695	3.5
7	MP4C	X	-3.852	3.5
8	MP4C	Z	2.224	3.5
9	MP4C	Mx	0	3.5
10	MP1A	X	-4.292	2.5
11	MP1A	Z	2.478	2.5
12	MP1A	Mx	.002	2.5
13	MP1A	X	-4.292	4.5
14	MP1A	Z	2.478	4.5
15	MP1A	Mx	.002	4.5
16	MP1B	X	-4.292	2.5
17	MP1B	Z	2.478	2.5
18	MP1B	Mx	-.002	2.5
19	MP1B	X	-4.292	4.5
20	MP1B	Z	2.478	4.5
21	MP1B	Mx	-.002	4.5
22	MP1C	X	-7.62	2.5
23	MP1C	Z	4.399	2.5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
24	MP1C	Mx	0	2.5
25	MP1C	X	-7.62	4.5
26	MP1C	Z	4.399	4.5
27	MP1C	Mx	0	4.5
28	MP2A	X	-6.022	2.5
29	MP2A	Z	3.477	2.5
30	MP2A	Mx	-.003	2.5
31	MP2B	X	-6.022	2.5
32	MP2B	Z	3.477	2.5
33	MP2B	Mx	.003	2.5
34	MP2C	X	-7.828	2.5
35	MP2C	Z	4.52	2.5
36	MP2C	Mx	0	2.5
37	MP3A	X	-6.094	2.5
38	MP3A	Z	3.519	2.5
39	MP3A	Mx	-.003	2.5
40	MP3B	X	-6.094	2.5
41	MP3B	Z	3.519	2.5
42	MP3B	Mx	.003	2.5
43	MP3C	X	-7.828	2.5
44	MP3C	Z	4.52	2.5
45	MP3C	Mx	0	2.5
46	OVP	X	-13.512	1
47	OVP	Z	7.801	1
48	OVP	Mx	0	1
49	MP2A	X	-12.427	2
50	MP2A	Z	7.175	2
51	MP2A	Mx	.009	2
52	MP2A	X	-12.427	5
53	MP2A	Z	7.175	5
54	MP2A	Mx	.009	5
55	MP2B	X	-12.427	2
56	MP2B	Z	7.175	2
57	MP2B	Mx	-.009	2
58	MP2B	X	-12.427	5
59	MP2B	Z	7.175	5
60	MP2B	Mx	-.009	5
61	MP2C	X	-16.031	2
62	MP2C	Z	9.256	2
63	MP2C	Mx	0	2
64	MP2C	X	-16.031	5
65	MP2C	Z	9.256	5
66	MP2C	Mx	0	5
67	MP3A	X	-12.427	2
68	MP3A	Z	7.175	2
69	MP3A	Mx	.009	2
70	MP3A	X	-12.427	5
71	MP3A	Z	7.175	5
72	MP3A	Mx	.009	5
73	MP3B	X	-12.427	2
74	MP3B	Z	7.175	2
75	MP3B	Mx	-.009	2
76	MP3B	X	-12.427	5
77	MP3B	Z	7.175	5
78	MP3B	Mx	-.009	5
79	MP3C	X	-16.031	2
80	MP3C	Z	9.256	2
81	MP3C	Mx	0	2
82	MP3C	X	-16.031	5



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
83	MP3C	Z	9.256	5
84	MP3C	Mx	0	5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP4A	X	-2.797	3.5
2	MP4A	Z	0	3.5
3	MP4A	Mx	.000699	3.5
4	MP4B	X	-4.035	3.5
5	MP4B	Z	0	3.5
6	MP4B	Mx	-.000504	3.5
7	MP4C	X	-4.035	3.5
8	MP4C	Z	0	3.5
9	MP4C	Mx	-.000504	3.5
10	MP1A	X	-3.675	2.5
11	MP1A	Z	0	2.5
12	MP1A	Mx	.002	2.5
13	MP1A	X	-3.675	4.5
14	MP1A	Z	0	4.5
15	MP1A	Mx	.002	4.5
16	MP1B	X	-7.518	2.5
17	MP1B	Z	0	2.5
18	MP1B	Mx	-.002	2.5
19	MP1B	X	-7.518	4.5
20	MP1B	Z	0	4.5
21	MP1B	Mx	-.002	4.5
22	MP1C	X	-7.518	2.5
23	MP1C	Z	0	2.5
24	MP1C	Mx	-.002	2.5
25	MP1C	X	-7.518	4.5
26	MP1C	Z	0	4.5
27	MP1C	Mx	-.002	4.5
28	MP2A	X	-6.258	2.5
29	MP2A	Z	0	2.5
30	MP2A	Mx	-.003	2.5
31	MP2B	X	-8.344	2.5
32	MP2B	Z	0	2.5
33	MP2B	Mx	.002	2.5
34	MP2C	X	-8.344	2.5
35	MP2C	Z	0	2.5
36	MP2C	Mx	.002	2.5
37	MP3A	X	-6.37	2.5
38	MP3A	Z	0	2.5
39	MP3A	Mx	-.003	2.5
40	MP3B	X	-8.372	2.5
41	MP3B	Z	0	2.5
42	MP3B	Mx	.002	2.5
43	MP3C	X	-8.372	2.5
44	MP3C	Z	0	2.5
45	MP3C	Mx	.002	2.5
46	OVP	X	-14.574	1
47	OVP	Z	0	1
48	OVP	Mx	0	1
49	MP2A	X	-12.963	2
50	MP2A	Z	0	2
51	MP2A	Mx	.01	2
52	MP2A	X	-12.963	5
53	MP2A	Z	0	5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
54	MP2A	Mx	.01	5
55	MP2B	X	-17.124	2
56	MP2B	Z	0	2
57	MP2B	Mx	-.006	2
58	MP2B	X	-17.124	5
59	MP2B	Z	0	5
60	MP2B	Mx	-.006	5
61	MP2C	X	-17.124	2
62	MP2C	Z	0	2
63	MP2C	Mx	-.006	2
64	MP2C	X	-17.124	5
65	MP2C	Z	0	5
66	MP2C	Mx	-.006	5
67	MP3A	X	-12.963	2
68	MP3A	Z	0	2
69	MP3A	Mx	.01	2
70	MP3A	X	-12.963	5
71	MP3A	Z	0	5
72	MP3A	Mx	.01	5
73	MP3B	X	-17.124	2
74	MP3B	Z	0	2
75	MP3B	Mx	-.006	2
76	MP3B	X	-17.124	5
77	MP3B	Z	0	5
78	MP3B	Mx	-.006	5
79	MP3C	X	-17.124	2
80	MP3C	Z	0	2
81	MP3C	Mx	-.006	2
82	MP3C	X	-17.124	5
83	MP3C	Z	0	5
84	MP3C	Mx	-.006	5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
1	MP4A	X	-2.78	3.5
2	MP4A	Z	-1.605	3.5
3	MP4A	Mx	.000695	3.5
4	MP4B	X	-3.852	3.5
5	MP4B	Z	-2.224	3.5
6	MP4B	Mx	0	3.5
7	MP4C	X	-2.78	3.5
8	MP4C	Z	-1.605	3.5
9	MP4C	Mx	-.000695	3.5
10	MP1A	X	-4.292	2.5
11	MP1A	Z	-2.478	2.5
12	MP1A	Mx	.002	2.5
13	MP1A	X	-4.292	4.5
14	MP1A	Z	-2.478	4.5
15	MP1A	Mx	.002	4.5
16	MP1B	X	-7.62	2.5
17	MP1B	Z	-4.399	2.5
18	MP1B	Mx	0	2.5
19	MP1B	X	-7.62	4.5
20	MP1B	Z	-4.399	4.5
21	MP1B	Mx	0	4.5
22	MP1C	X	-4.292	2.5
23	MP1C	Z	-2.478	2.5
24	MP1C	Mx	-.002	2.5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
25	MP1C	X	-4.292	4.5
26	MP1C	Z	-2.478	4.5
27	MP1C	Mx	-.002	4.5
28	MP2A	X	-6.022	2.5
29	MP2A	Z	-3.477	2.5
30	MP2A	Mx	-.003	2.5
31	MP2B	X	-7.828	2.5
32	MP2B	Z	-4.52	2.5
33	MP2B	Mx	0	2.5
34	MP2C	X	-6.022	2.5
35	MP2C	Z	-3.477	2.5
36	MP2C	Mx	.003	2.5
37	MP3A	X	-6.094	2.5
38	MP3A	Z	-3.519	2.5
39	MP3A	Mx	-.003	2.5
40	MP3B	X	-7.828	2.5
41	MP3B	Z	-4.52	2.5
42	MP3B	Mx	0	2.5
43	MP3C	X	-6.094	2.5
44	MP3C	Z	-3.519	2.5
45	MP3C	Mx	.003	2.5
46	OVP	X	-13.512	1
47	OVP	Z	-7.801	1
48	OVP	Mx	0	1
49	MP2A	X	-12.427	2
50	MP2A	Z	-7.175	2
51	MP2A	Mx	.009	2
52	MP2A	X	-12.427	5
53	MP2A	Z	-7.175	5
54	MP2A	Mx	.009	5
55	MP2B	X	-16.031	2
56	MP2B	Z	-9.256	2
57	MP2B	Mx	0	2
58	MP2B	X	-16.031	5
59	MP2B	Z	-9.256	5
60	MP2B	Mx	0	5
61	MP2C	X	-12.427	2
62	MP2C	Z	-7.175	2
63	MP2C	Mx	-.009	2
64	MP2C	X	-12.427	5
65	MP2C	Z	-7.175	5
66	MP2C	Mx	-.009	5
67	MP3A	X	-12.427	2
68	MP3A	Z	-7.175	2
69	MP3A	Mx	.009	2
70	MP3A	X	-12.427	5
71	MP3A	Z	-7.175	5
72	MP3A	Mx	.009	5
73	MP3B	X	-16.031	2
74	MP3B	Z	-9.256	2
75	MP3B	Mx	0	2
76	MP3B	X	-16.031	5
77	MP3B	Z	-9.256	5
78	MP3B	Mx	0	5
79	MP3C	X	-12.427	2
80	MP3C	Z	-7.175	2
81	MP3C	Mx	-.009	2
82	MP3C	X	-12.427	5
83	MP3C	Z	-7.175	5



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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
84	MP3C	Mx	-0.009	5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP4A	X	-2.018	3.5
2	MP4A	Z	-3.495	3.5
3	MP4A	Mx	.000504	3.5
4	MP4B	X	-2.018	3.5
5	MP4B	Z	-3.495	3.5
6	MP4B	Mx	.000504	3.5
7	MP4C	X	-1.398	3.5
8	MP4C	Z	-2.422	3.5
9	MP4C	Mx	-.000699	3.5
10	MP1A	X	-3.759	2.5
11	MP1A	Z	-6.511	2.5
12	MP1A	Mx	.002	2.5
13	MP1A	X	-3.759	4.5
14	MP1A	Z	-6.511	4.5
15	MP1A	Mx	.002	4.5
16	MP1B	X	-3.759	2.5
17	MP1B	Z	-6.511	2.5
18	MP1B	Mx	.002	2.5
19	MP1B	X	-3.759	4.5
20	MP1B	Z	-6.511	4.5
21	MP1B	Mx	.002	4.5
22	MP1C	X	-1.838	2.5
23	MP1C	Z	-3.183	2.5
24	MP1C	Mx	-.002	2.5
25	MP1C	X	-1.838	4.5
26	MP1C	Z	-3.183	4.5
27	MP1C	Mx	-.002	4.5
28	MP2A	X	-4.172	2.5
29	MP2A	Z	-7.226	2.5
30	MP2A	Mx	-.002	2.5
31	MP2B	X	-4.172	2.5
32	MP2B	Z	-7.226	2.5
33	MP2B	Mx	-.002	2.5
34	MP2C	X	-3.129	2.5
35	MP2C	Z	-5.42	2.5
36	MP2C	Mx	.003	2.5
37	MP3A	X	-4.186	2.5
38	MP3A	Z	-7.25	2.5
39	MP3A	Mx	-.002	2.5
40	MP3B	X	-4.186	2.5
41	MP3B	Z	-7.25	2.5
42	MP3B	Mx	-.002	2.5
43	MP3C	X	-3.185	2.5
44	MP3C	Z	-5.516	2.5
45	MP3C	Mx	.003	2.5
46	OVP	X	-8.829	1
47	OVP	Z	-15.292	1
48	OVP	Mx	0	1
49	MP2A	X	-8.562	2
50	MP2A	Z	-14.83	2
51	MP2A	Mx	.006	2
52	MP2A	X	-8.562	5
53	MP2A	Z	-14.83	5
54	MP2A	Mx	.006	5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
55	MP2B	X	-8.562	2
56	MP2B	Z	-14.83	2
57	MP2B	Mx	.006	2
58	MP2B	X	-8.562	5
59	MP2B	Z	-14.83	5
60	MP2B	Mx	.006	5
61	MP2C	X	-6.481	2
62	MP2C	Z	-11.226	2
63	MP2C	Mx	-.01	2
64	MP2C	X	-6.481	5
65	MP2C	Z	-11.226	5
66	MP2C	Mx	-.01	5
67	MP3A	X	-8.562	2
68	MP3A	Z	-14.83	2
69	MP3A	Mx	.006	2
70	MP3A	X	-8.562	5
71	MP3A	Z	-14.83	5
72	MP3A	Mx	.006	5
73	MP3B	X	-8.562	2
74	MP3B	Z	-14.83	2
75	MP3B	Mx	.006	2
76	MP3B	X	-8.562	5
77	MP3B	Z	-14.83	5
78	MP3B	Mx	.006	5
79	MP3C	X	-6.481	2
80	MP3C	Z	-11.226	2
81	MP3C	Mx	-.01	2
82	MP3C	X	-6.481	5
83	MP3C	Z	-11.226	5
84	MP3C	Mx	-.01	5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
1	MP4A	X	0	3.5
2	MP4A	Z	-1.128	3.5
3	MP4A	Mx	0	3.5
4	MP4B	X	0	3.5
5	MP4B	Z	-.772	3.5
6	MP4B	Mx	.000167	3.5
7	MP4C	X	0	3.5
8	MP4C	Z	-.772	3.5
9	MP4C	Mx	-.000167	3.5
10	MP1A	X	0	2.5
11	MP1A	Z	-2.345	2.5
12	MP1A	Mx	0	2.5
13	MP1A	X	0	4.5
14	MP1A	Z	-2.345	4.5
15	MP1A	Mx	0	4.5
16	MP1B	X	0	2.5
17	MP1B	Z	-1.204	2.5
18	MP1B	Mx	.000521	2.5
19	MP1B	X	0	4.5
20	MP1B	Z	-1.204	4.5
21	MP1B	Mx	.000521	4.5
22	MP1C	X	0	2.5
23	MP1C	Z	-1.204	2.5
24	MP1C	Mx	-.000521	2.5
25	MP1C	X	0	4.5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
26	MP1C	Z	-1.204	4.5
27	MP1C	Mx	-0.000521	4.5
28	MP2A	X	0	2.5
29	MP2A	Z	-2.301	2.5
30	MP2A	Mx	0	2.5
31	MP2B	X	0	2.5
32	MP2B	Z	-1.733	2.5
33	MP2B	Mx	-0.00075	2.5
34	MP2C	X	0	2.5
35	MP2C	Z	-1.733	2.5
36	MP2C	Mx	.00075	2.5
37	MP3A	X	0	2.5
38	MP3A	Z	-2.775	2.5
39	MP3A	Mx	0	2.5
40	MP3B	X	0	2.5
41	MP3B	Z	-2.113	2.5
42	MP3B	Mx	-0.000915	2.5
43	MP3C	X	0	2.5
44	MP3C	Z	-2.113	2.5
45	MP3C	Mx	.000915	2.5
46	OVP	X	0	1
47	OVP	Z	-4.705	1
48	OVP	Mx	0	1
49	MP2A	X	0	2
50	MP2A	Z	-6.115	2
51	MP2A	Mx	0	2
52	MP2A	X	0	5
53	MP2A	Z	-6.115	5
54	MP2A	Mx	0	5
55	MP2B	X	0	2
56	MP2B	Z	-4.632	2
57	MP2B	Mx	.003	2
58	MP2B	X	0	5
59	MP2B	Z	-4.632	5
60	MP2B	Mx	.003	5
61	MP2C	X	0	2
62	MP2C	Z	-4.632	2
63	MP2C	Mx	-.003	2
64	MP2C	X	0	5
65	MP2C	Z	-4.632	5
66	MP2C	Mx	-.003	5
67	MP3A	X	0	2
68	MP3A	Z	-6.115	2
69	MP3A	Mx	0	2
70	MP3A	X	0	5
71	MP3A	Z	-6.115	5
72	MP3A	Mx	0	5
73	MP3B	X	0	2
74	MP3B	Z	-4.632	2
75	MP3B	Mx	.003	2
76	MP3B	X	0	5
77	MP3B	Z	-4.632	5
78	MP3B	Mx	.003	5
79	MP3C	X	0	2
80	MP3C	Z	-4.632	2
81	MP3C	Mx	-.003	2
82	MP3C	X	0	5
83	MP3C	Z	-4.632	5
84	MP3C	Mx	-.003	5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
1	MP4A	X	.505	3.5
2	MP4A	Z	-.874	3.5
3	MP4A	Mx	-.000126	3.5
4	MP4B	X	.327	3.5
5	MP4B	Z	-.566	3.5
6	MP4B	Mx	.000163	3.5
7	MP4C	X	.505	3.5
8	MP4C	Z	-.874	3.5
9	MP4C	Mx	-.000126	3.5
10	MP1A	X	.982	2.5
11	MP1A	Z	-1.702	2.5
12	MP1A	Mx	-.000491	2.5
13	MP1A	X	.982	4.5
14	MP1A	Z	-1.702	4.5
15	MP1A	Mx	-.000491	4.5
16	MP1B	X	.412	2.5
17	MP1B	Z	-.713	2.5
18	MP1B	Mx	.000412	2.5
19	MP1B	X	.412	4.5
20	MP1B	Z	-.713	4.5
21	MP1B	Mx	.000412	4.5
22	MP1C	X	.982	2.5
23	MP1C	Z	-1.702	2.5
24	MP1C	Mx	-.000491	2.5
25	MP1C	X	.982	4.5
26	MP1C	Z	-1.702	4.5
27	MP1C	Mx	-.000491	4.5
28	MP2A	X	1.056	2.5
29	MP2A	Z	-1.828	2.5
30	MP2A	Mx	.000528	2.5
31	MP2B	X	.772	2.5
32	MP2B	Z	-1.337	2.5
33	MP2B	Mx	-.000772	2.5
34	MP2C	X	1.056	2.5
35	MP2C	Z	-1.828	2.5
36	MP2C	Mx	.000528	2.5
37	MP3A	X	1.277	2.5
38	MP3A	Z	-2.212	2.5
39	MP3A	Mx	.000638	2.5
40	MP3B	X	.946	2.5
41	MP3B	Z	-1.639	2.5
42	MP3B	Mx	-.000946	2.5
43	MP3C	X	1.277	2.5
44	MP3C	Z	-2.212	2.5
45	MP3C	Mx	.000639	2.5
46	OVP	X	2.211	1
47	OVP	Z	-3.83	1
48	OVP	Mx	0	1
49	MP2A	X	2.81	2
50	MP2A	Z	-4.868	2
51	MP2A	Mx	-.002	2
52	MP2A	X	2.81	5
53	MP2A	Z	-4.868	5
54	MP2A	Mx	-.002	5
55	MP2B	X	2.069	2
56	MP2B	Z	-3.583	2
57	MP2B	Mx	.003	2
58	MP2B	X	2.069	5
59	MP2B	Z	-3.583	5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
60	MP2B	Mx	.003	5
61	MP2C	X	2.81	2
62	MP2C	Z	-4.868	2
63	MP2C	Mx	-.002	2
64	MP2C	X	2.81	5
65	MP2C	Z	-4.868	5
66	MP2C	Mx	-.002	5
67	MP3A	X	2.81	2
68	MP3A	Z	-4.868	2
69	MP3A	Mx	-.002	2
70	MP3A	X	2.81	5
71	MP3A	Z	-4.868	5
72	MP3A	Mx	-.002	5
73	MP3B	X	2.069	2
74	MP3B	Z	-3.583	2
75	MP3B	Mx	.003	2
76	MP3B	X	2.069	5
77	MP3B	Z	-3.583	5
78	MP3B	Mx	.003	5
79	MP3C	X	2.81	2
80	MP3C	Z	-4.868	2
81	MP3C	Mx	-.002	2
82	MP3C	X	2.81	5
83	MP3C	Z	-4.868	5
84	MP3C	Mx	-.002	5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
1	MP4A	X	.668	3.5
2	MP4A	Z	-.386	3.5
3	MP4A	Mx	-.000167	3.5
4	MP4B	X	.668	3.5
5	MP4B	Z	-.386	3.5
6	MP4B	Mx	.000167	3.5
7	MP4C	X	.977	3.5
8	MP4C	Z	-.564	3.5
9	MP4C	Mx	0	3.5
10	MP1A	X	1.043	2.5
11	MP1A	Z	-.602	2.5
12	MP1A	Mx	-.000521	2.5
13	MP1A	X	1.043	4.5
14	MP1A	Z	-.602	4.5
15	MP1A	Mx	-.000521	4.5
16	MP1B	X	1.043	2.5
17	MP1B	Z	-.602	2.5
18	MP1B	Mx	.000521	2.5
19	MP1B	X	1.043	4.5
20	MP1B	Z	-.602	4.5
21	MP1B	Mx	.000521	4.5
22	MP1C	X	2.031	2.5
23	MP1C	Z	-1.173	2.5
24	MP1C	Mx	0	2.5
25	MP1C	X	2.031	4.5
26	MP1C	Z	-1.173	4.5
27	MP1C	Mx	0	4.5
28	MP2A	X	1.501	2.5
29	MP2A	Z	-.866	2.5
30	MP2A	Mx	.00075	2.5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
31	MP2B	X	1.501	2.5
32	MP2B	Z	-0.866	2.5
33	MP2B	Mx	-0.00075	2.5
34	MP2C	X	1.992	2.5
35	MP2C	Z	-1.15	2.5
36	MP2C	Mx	0	2.5
37	MP3A	X	1.83	2.5
38	MP3A	Z	-1.057	2.5
39	MP3A	Mx	.000915	2.5
40	MP3B	X	1.83	2.5
41	MP3B	Z	-1.057	2.5
42	MP3B	Mx	-0.000915	2.5
43	MP3C	X	2.404	2.5
44	MP3C	Z	-1.388	2.5
45	MP3C	Mx	0	2.5
46	OVP	X	3.342	1
47	OVP	Z	-1.929	1
48	OVP	Mx	0	1
49	MP2A	X	4.011	2
50	MP2A	Z	-2.316	2
51	MP2A	Mx	-.003	2
52	MP2A	X	4.011	5
53	MP2A	Z	-2.316	5
54	MP2A	Mx	-.003	5
55	MP2B	X	4.011	2
56	MP2B	Z	-2.316	2
57	MP2B	Mx	.003	2
58	MP2B	X	4.011	5
59	MP2B	Z	-2.316	5
60	MP2B	Mx	.003	5
61	MP2C	X	5.296	2
62	MP2C	Z	-3.057	2
63	MP2C	Mx	0	2
64	MP2C	X	5.296	5
65	MP2C	Z	-3.057	5
66	MP2C	Mx	0	5
67	MP3A	X	4.011	2
68	MP3A	Z	-2.316	2
69	MP3A	Mx	-.003	2
70	MP3A	X	4.011	5
71	MP3A	Z	-2.316	5
72	MP3A	Mx	-.003	5
73	MP3B	X	4.011	2
74	MP3B	Z	-2.316	2
75	MP3B	Mx	.003	2
76	MP3B	X	4.011	5
77	MP3B	Z	-2.316	5
78	MP3B	Mx	.003	5
79	MP3C	X	5.296	2
80	MP3C	Z	-3.057	2
81	MP3C	Mx	0	2
82	MP3C	X	5.296	5
83	MP3C	Z	-3.057	5
84	MP3C	Mx	0	5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
1	MP4A	X	.653	3.5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
2	MP4A	Z	0	3.5
3	MP4A	Mx	-0.000163	3.5
4	MP4B	X	1.009	3.5
5	MP4B	Z	0	3.5
6	MP4B	Mx	.000126	3.5
7	MP4C	X	1.009	3.5
8	MP4C	Z	0	3.5
9	MP4C	Mx	.000126	3.5
10	MP1A	X	.824	2.5
11	MP1A	Z	0	2.5
12	MP1A	Mx	-0.000412	2.5
13	MP1A	X	.824	4.5
14	MP1A	Z	0	4.5
15	MP1A	Mx	-0.000412	4.5
16	MP1B	X	1.965	2.5
17	MP1B	Z	0	2.5
18	MP1B	Mx	.000491	2.5
19	MP1B	X	1.965	4.5
20	MP1B	Z	0	4.5
21	MP1B	Mx	.000491	4.5
22	MP1C	X	1.965	2.5
23	MP1C	Z	0	2.5
24	MP1C	Mx	.000491	2.5
25	MP1C	X	1.965	4.5
26	MP1C	Z	0	4.5
27	MP1C	Mx	.000491	4.5
28	MP2A	X	1.544	2.5
29	MP2A	Z	0	2.5
30	MP2A	Mx	.000772	2.5
31	MP2B	X	2.111	2.5
32	MP2B	Z	0	2.5
33	MP2B	Mx	-0.000528	2.5
34	MP2C	X	2.111	2.5
35	MP2C	Z	0	2.5
36	MP2C	Mx	-0.000528	2.5
37	MP3A	X	1.892	2.5
38	MP3A	Z	0	2.5
39	MP3A	Mx	.000946	2.5
40	MP3B	X	2.555	2.5
41	MP3B	Z	0	2.5
42	MP3B	Mx	-0.000639	2.5
43	MP3C	X	2.555	2.5
44	MP3C	Z	0	2.5
45	MP3C	Mx	-0.000639	2.5
46	OVP	X	3.577	1
47	OVP	Z	0	1
48	OVP	Mx	0	1
49	MP2A	X	4.137	2
50	MP2A	Z	0	2
51	MP2A	Mx	-.003	2
52	MP2A	X	4.137	5
53	MP2A	Z	0	5
54	MP2A	Mx	-.003	5
55	MP2B	X	5.621	2
56	MP2B	Z	0	2
57	MP2B	Mx	.002	2
58	MP2B	X	5.621	5
59	MP2B	Z	0	5
60	MP2B	Mx	.002	5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
61	MP2C	X	5.621	2
62	MP2C	Z	0	2
63	MP2C	Mx	.002	2
64	MP2C	X	5.621	5
65	MP2C	Z	0	5
66	MP2C	Mx	.002	5
67	MP3A	X	4.137	2
68	MP3A	Z	0	2
69	MP3A	Mx	-.003	2
70	MP3A	X	4.137	5
71	MP3A	Z	0	5
72	MP3A	Mx	-.003	5
73	MP3B	X	5.621	2
74	MP3B	Z	0	2
75	MP3B	Mx	.002	2
76	MP3B	X	5.621	5
77	MP3B	Z	0	5
78	MP3B	Mx	.002	5
79	MP3C	X	5.621	2
80	MP3C	Z	0	2
81	MP3C	Mx	.002	2
82	MP3C	X	5.621	5
83	MP3C	Z	0	5
84	MP3C	Mx	.002	5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP4A	X	.668	3.5
2	MP4A	Z	.386	3.5
3	MP4A	Mx	-.000167	3.5
4	MP4B	X	.977	3.5
5	MP4B	Z	.564	3.5
6	MP4B	Mx	0	3.5
7	MP4C	X	.668	3.5
8	MP4C	Z	.386	3.5
9	MP4C	Mx	.000167	3.5
10	MP1A	X	1.043	2.5
11	MP1A	Z	.602	2.5
12	MP1A	Mx	-.000521	2.5
13	MP1A	X	1.043	4.5
14	MP1A	Z	.602	4.5
15	MP1A	Mx	-.000521	4.5
16	MP1B	X	2.031	2.5
17	MP1B	Z	1.173	2.5
18	MP1B	Mx	0	2.5
19	MP1B	X	2.031	4.5
20	MP1B	Z	1.173	4.5
21	MP1B	Mx	0	4.5
22	MP1C	X	1.043	2.5
23	MP1C	Z	.602	2.5
24	MP1C	Mx	.000521	2.5
25	MP1C	X	1.043	4.5
26	MP1C	Z	.602	4.5
27	MP1C	Mx	.000521	4.5
28	MP2A	X	1.501	2.5
29	MP2A	Z	.866	2.5
30	MP2A	Mx	.00075	2.5
31	MP2B	X	1.992	2.5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
32	MP2B	Z	1.15	2.5
33	MP2B	Mx	0	2.5
34	MP2C	X	1.501	2.5
35	MP2C	Z	.866	2.5
36	MP2C	Mx	-.00075	2.5
37	MP3A	X	1.83	2.5
38	MP3A	Z	1.057	2.5
39	MP3A	Mx	.000915	2.5
40	MP3B	X	2.404	2.5
41	MP3B	Z	1.388	2.5
42	MP3B	Mx	0	2.5
43	MP3C	X	1.83	2.5
44	MP3C	Z	1.057	2.5
45	MP3C	Mx	-.000915	2.5
46	OVP	X	3.342	1
47	OVP	Z	1.929	1
48	OVP	Mx	0	1
49	MP2A	X	4.011	2
50	MP2A	Z	2.316	2
51	MP2A	Mx	-.003	2
52	MP2A	X	4.011	5
53	MP2A	Z	2.316	5
54	MP2A	Mx	-.003	5
55	MP2B	X	5.296	2
56	MP2B	Z	3.057	2
57	MP2B	Mx	0	2
58	MP2B	X	5.296	5
59	MP2B	Z	3.057	5
60	MP2B	Mx	0	5
61	MP2C	X	4.011	2
62	MP2C	Z	2.316	2
63	MP2C	Mx	.003	2
64	MP2C	X	4.011	5
65	MP2C	Z	2.316	5
66	MP2C	Mx	.003	5
67	MP3A	X	4.011	2
68	MP3A	Z	2.316	2
69	MP3A	Mx	-.003	2
70	MP3A	X	4.011	5
71	MP3A	Z	2.316	5
72	MP3A	Mx	-.003	5
73	MP3B	X	5.296	2
74	MP3B	Z	3.057	2
75	MP3B	Mx	0	2
76	MP3B	X	5.296	5
77	MP3B	Z	3.057	5
78	MP3B	Mx	0	5
79	MP3C	X	4.011	2
80	MP3C	Z	2.316	2
81	MP3C	Mx	.003	2
82	MP3C	X	4.011	5
83	MP3C	Z	2.316	5
84	MP3C	Mx	.003	5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
1	MP4A	X	.505	3.5
2	MP4A	Z	.874	3.5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
3	MP4A	Mx	-.000126	3.5
4	MP4B	X	.505	3.5
5	MP4B	Z	.874	3.5
6	MP4B	Mx	-.000126	3.5
7	MP4C	X	.327	3.5
8	MP4C	Z	.566	3.5
9	MP4C	Mx	.000163	3.5
10	MP1A	X	.982	2.5
11	MP1A	Z	1.702	2.5
12	MP1A	Mx	-.000491	2.5
13	MP1A	X	.982	4.5
14	MP1A	Z	1.702	4.5
15	MP1A	Mx	-.000491	4.5
16	MP1B	X	.982	2.5
17	MP1B	Z	1.702	2.5
18	MP1B	Mx	-.000491	2.5
19	MP1B	X	.982	4.5
20	MP1B	Z	1.702	4.5
21	MP1B	Mx	-.000491	4.5
22	MP1C	X	.412	2.5
23	MP1C	Z	.713	2.5
24	MP1C	Mx	.000412	2.5
25	MP1C	X	.412	4.5
26	MP1C	Z	.713	4.5
27	MP1C	Mx	.000412	4.5
28	MP2A	X	1.056	2.5
29	MP2A	Z	1.828	2.5
30	MP2A	Mx	.000528	2.5
31	MP2B	X	1.056	2.5
32	MP2B	Z	1.828	2.5
33	MP2B	Mx	.000528	2.5
34	MP2C	X	.772	2.5
35	MP2C	Z	1.337	2.5
36	MP2C	Mx	-.000772	2.5
37	MP3A	X	1.277	2.5
38	MP3A	Z	2.212	2.5
39	MP3A	Mx	.000638	2.5
40	MP3B	X	1.277	2.5
41	MP3B	Z	2.212	2.5
42	MP3B	Mx	.000639	2.5
43	MP3C	X	.946	2.5
44	MP3C	Z	1.639	2.5
45	MP3C	Mx	-.000946	2.5
46	OVP	X	2.211	1
47	OVP	Z	3.83	1
48	OVP	Mx	0	1
49	MP2A	X	2.81	2
50	MP2A	Z	4.868	2
51	MP2A	Mx	-.002	2
52	MP2A	X	2.81	5
53	MP2A	Z	4.868	5
54	MP2A	Mx	-.002	5
55	MP2B	X	2.81	2
56	MP2B	Z	4.868	2
57	MP2B	Mx	-.002	2
58	MP2B	X	2.81	5
59	MP2B	Z	4.868	5
60	MP2B	Mx	-.002	5
61	MP2C	X	2.069	2

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
62	MP2C	Z	3.583	2
63	MP2C	Mx	.003	2
64	MP2C	X	2.069	5
65	MP2C	Z	3.583	5
66	MP2C	Mx	.003	5
67	MP3A	X	2.81	2
68	MP3A	Z	4.868	2
69	MP3A	Mx	-.002	2
70	MP3A	X	2.81	5
71	MP3A	Z	4.868	5
72	MP3A	Mx	-.002	5
73	MP3B	X	2.81	2
74	MP3B	Z	4.868	2
75	MP3B	Mx	-.002	2
76	MP3B	X	2.81	5
77	MP3B	Z	4.868	5
78	MP3B	Mx	-.002	5
79	MP3C	X	2.069	2
80	MP3C	Z	3.583	2
81	MP3C	Mx	.003	2
82	MP3C	X	2.069	5
83	MP3C	Z	3.583	5
84	MP3C	Mx	.003	5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
1	MP4A	X	0	3.5
2	MP4A	Z	1.128	3.5
3	MP4A	Mx	0	3.5
4	MP4B	X	0	3.5
5	MP4B	Z	.772	3.5
6	MP4B	Mx	-.000167	3.5
7	MP4C	X	0	3.5
8	MP4C	Z	.772	3.5
9	MP4C	Mx	.000167	3.5
10	MP1A	X	0	2.5
11	MP1A	Z	2.345	2.5
12	MP1A	Mx	0	2.5
13	MP1A	X	0	4.5
14	MP1A	Z	2.345	4.5
15	MP1A	Mx	0	4.5
16	MP1B	X	0	2.5
17	MP1B	Z	1.204	2.5
18	MP1B	Mx	-.000521	2.5
19	MP1B	X	0	4.5
20	MP1B	Z	1.204	4.5
21	MP1B	Mx	-.000521	4.5
22	MP1C	X	0	2.5
23	MP1C	Z	1.204	2.5
24	MP1C	Mx	.000521	2.5
25	MP1C	X	0	4.5
26	MP1C	Z	1.204	4.5
27	MP1C	Mx	.000521	4.5
28	MP2A	X	0	2.5
29	MP2A	Z	2.301	2.5
30	MP2A	Mx	0	2.5
31	MP2B	X	0	2.5
32	MP2B	Z	1.733	2.5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
33	MP2B	Mx	.00075	2.5
34	MP2C	X	0	2.5
35	MP2C	Z	1.733	2.5
36	MP2C	Mx	-.00075	2.5
37	MP3A	X	0	2.5
38	MP3A	Z	2.775	2.5
39	MP3A	Mx	0	2.5
40	MP3B	X	0	2.5
41	MP3B	Z	2.113	2.5
42	MP3B	Mx	.000915	2.5
43	MP3C	X	0	2.5
44	MP3C	Z	2.113	2.5
45	MP3C	Mx	-.000915	2.5
46	OVP	X	0	1
47	OVP	Z	4.705	1
48	OVP	Mx	0	1
49	MP2A	X	0	2
50	MP2A	Z	6.115	2
51	MP2A	Mx	0	2
52	MP2A	X	0	5
53	MP2A	Z	6.115	5
54	MP2A	Mx	0	5
55	MP2B	X	0	2
56	MP2B	Z	4.632	2
57	MP2B	Mx	-.003	2
58	MP2B	X	0	5
59	MP2B	Z	4.632	5
60	MP2B	Mx	-.003	5
61	MP2C	X	0	2
62	MP2C	Z	4.632	2
63	MP2C	Mx	.003	2
64	MP2C	X	0	5
65	MP2C	Z	4.632	5
66	MP2C	Mx	.003	5
67	MP3A	X	0	2
68	MP3A	Z	6.115	2
69	MP3A	Mx	0	2
70	MP3A	X	0	5
71	MP3A	Z	6.115	5
72	MP3A	Mx	0	5
73	MP3B	X	0	2
74	MP3B	Z	4.632	2
75	MP3B	Mx	-.003	2
76	MP3B	X	0	5
77	MP3B	Z	4.632	5
78	MP3B	Mx	-.003	5
79	MP3C	X	0	2
80	MP3C	Z	4.632	2
81	MP3C	Mx	.003	2
82	MP3C	X	0	5
83	MP3C	Z	4.632	5
84	MP3C	Mx	.003	5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
1	MP4A	X	-.505	3.5
2	MP4A	Z	.874	3.5
3	MP4A	Mx	.000126	3.5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
4	MP4B	X	-.327	3.5
5	MP4B	Z	.566	3.5
6	MP4B	Mx	-.000163	3.5
7	MP4C	X	-.505	3.5
8	MP4C	Z	.874	3.5
9	MP4C	Mx	.000126	3.5
10	MP1A	X	-.982	2.5
11	MP1A	Z	1.702	2.5
12	MP1A	Mx	.000491	2.5
13	MP1A	X	-.982	4.5
14	MP1A	Z	1.702	4.5
15	MP1A	Mx	.000491	4.5
16	MP1B	X	-.412	2.5
17	MP1B	Z	.713	2.5
18	MP1B	Mx	-.000412	2.5
19	MP1B	X	-.412	4.5
20	MP1B	Z	.713	4.5
21	MP1B	Mx	-.000412	4.5
22	MP1C	X	-.982	2.5
23	MP1C	Z	1.702	2.5
24	MP1C	Mx	.000491	2.5
25	MP1C	X	-.982	4.5
26	MP1C	Z	1.702	4.5
27	MP1C	Mx	.000491	4.5
28	MP2A	X	-1.056	2.5
29	MP2A	Z	1.828	2.5
30	MP2A	Mx	-.000528	2.5
31	MP2B	X	-.772	2.5
32	MP2B	Z	1.337	2.5
33	MP2B	Mx	.000772	2.5
34	MP2C	X	-1.056	2.5
35	MP2C	Z	1.828	2.5
36	MP2C	Mx	-.000528	2.5
37	MP3A	X	-1.277	2.5
38	MP3A	Z	2.212	2.5
39	MP3A	Mx	-.000638	2.5
40	MP3B	X	-.946	2.5
41	MP3B	Z	1.639	2.5
42	MP3B	Mx	.000946	2.5
43	MP3C	X	-1.277	2.5
44	MP3C	Z	2.212	2.5
45	MP3C	Mx	-.000639	2.5
46	OVP	X	-2.211	1
47	OVP	Z	3.83	1
48	OVP	Mx	0	1
49	MP2A	X	-2.81	2
50	MP2A	Z	4.868	2
51	MP2A	Mx	.002	2
52	MP2A	X	-2.81	5
53	MP2A	Z	4.868	5
54	MP2A	Mx	.002	5
55	MP2B	X	-2.069	2
56	MP2B	Z	3.583	2
57	MP2B	Mx	-.003	2
58	MP2B	X	-2.069	5
59	MP2B	Z	3.583	5
60	MP2B	Mx	-.003	5
61	MP2C	X	-2.81	2
62	MP2C	Z	4.868	2

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
63	MP2C	Mx	.002	2
64	MP2C	X	-2.81	5
65	MP2C	Z	4.868	5
66	MP2C	Mx	.002	5
67	MP3A	X	-2.81	2
68	MP3A	Z	4.868	2
69	MP3A	Mx	.002	2
70	MP3A	X	-2.81	5
71	MP3A	Z	4.868	5
72	MP3A	Mx	.002	5
73	MP3B	X	-2.069	2
74	MP3B	Z	3.583	2
75	MP3B	Mx	-.003	2
76	MP3B	X	-2.069	5
77	MP3B	Z	3.583	5
78	MP3B	Mx	-.003	5
79	MP3C	X	-2.81	2
80	MP3C	Z	4.868	2
81	MP3C	Mx	.002	2
82	MP3C	X	-2.81	5
83	MP3C	Z	4.868	5
84	MP3C	Mx	.002	5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
1	MP4A	X	-.668	3.5
2	MP4A	Z	.386	3.5
3	MP4A	Mx	.000167	3.5
4	MP4B	X	-.668	3.5
5	MP4B	Z	.386	3.5
6	MP4B	Mx	-.000167	3.5
7	MP4C	X	-.977	3.5
8	MP4C	Z	.564	3.5
9	MP4C	Mx	0	3.5
10	MP1A	X	-1.043	2.5
11	MP1A	Z	.602	2.5
12	MP1A	Mx	.000521	2.5
13	MP1A	X	-1.043	4.5
14	MP1A	Z	.602	4.5
15	MP1A	Mx	.000521	4.5
16	MP1B	X	-1.043	2.5
17	MP1B	Z	.602	2.5
18	MP1B	Mx	-.000521	2.5
19	MP1B	X	-1.043	4.5
20	MP1B	Z	.602	4.5
21	MP1B	Mx	-.000521	4.5
22	MP1C	X	-2.031	2.5
23	MP1C	Z	1.173	2.5
24	MP1C	Mx	0	2.5
25	MP1C	X	-2.031	4.5
26	MP1C	Z	1.173	4.5
27	MP1C	Mx	0	4.5
28	MP2A	X	-1.501	2.5
29	MP2A	Z	.866	2.5
30	MP2A	Mx	-.00075	2.5
31	MP2B	X	-1.501	2.5
32	MP2B	Z	.866	2.5
33	MP2B	Mx	.00075	2.5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
34	MP2C	X	-1.992	2.5
35	MP2C	Z	1.15	2.5
36	MP2C	Mx	0	2.5
37	MP3A	X	-1.83	2.5
38	MP3A	Z	1.057	2.5
39	MP3A	Mx	-.000915	2.5
40	MP3B	X	-1.83	2.5
41	MP3B	Z	1.057	2.5
42	MP3B	Mx	.000915	2.5
43	MP3C	X	-2.404	2.5
44	MP3C	Z	1.388	2.5
45	MP3C	Mx	0	2.5
46	OVP	X	-3.342	1
47	OVP	Z	1.929	1
48	OVP	Mx	0	1
49	MP2A	X	-4.011	2
50	MP2A	Z	2.316	2
51	MP2A	Mx	.003	2
52	MP2A	X	-4.011	5
53	MP2A	Z	2.316	5
54	MP2A	Mx	.003	5
55	MP2B	X	-4.011	2
56	MP2B	Z	2.316	2
57	MP2B	Mx	-.003	2
58	MP2B	X	-4.011	5
59	MP2B	Z	2.316	5
60	MP2B	Mx	-.003	5
61	MP2C	X	-5.296	2
62	MP2C	Z	3.057	2
63	MP2C	Mx	0	2
64	MP2C	X	-5.296	5
65	MP2C	Z	3.057	5
66	MP2C	Mx	0	5
67	MP3A	X	-4.011	2
68	MP3A	Z	2.316	2
69	MP3A	Mx	.003	2
70	MP3A	X	-4.011	5
71	MP3A	Z	2.316	5
72	MP3A	Mx	.003	5
73	MP3B	X	-4.011	2
74	MP3B	Z	2.316	2
75	MP3B	Mx	-.003	2
76	MP3B	X	-4.011	5
77	MP3B	Z	2.316	5
78	MP3B	Mx	-.003	5
79	MP3C	X	-5.296	2
80	MP3C	Z	3.057	2
81	MP3C	Mx	0	2
82	MP3C	X	-5.296	5
83	MP3C	Z	3.057	5
84	MP3C	Mx	0	5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
1	MP4A	X	-.653	3.5
2	MP4A	Z	0	3.5
3	MP4A	Mx	.000163	3.5
4	MP4B	X	-1.009	3.5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
5	MP4B	Z	0	3.5
6	MP4B	Mx	-.000126	3.5
7	MP4C	X	-1.009	3.5
8	MP4C	Z	0	3.5
9	MP4C	Mx	-.000126	3.5
10	MP1A	X	-.824	2.5
11	MP1A	Z	0	2.5
12	MP1A	Mx	.000412	2.5
13	MP1A	X	-.824	4.5
14	MP1A	Z	0	4.5
15	MP1A	Mx	.000412	4.5
16	MP1B	X	-1.965	2.5
17	MP1B	Z	0	2.5
18	MP1B	Mx	-.000491	2.5
19	MP1B	X	-1.965	4.5
20	MP1B	Z	0	4.5
21	MP1B	Mx	-.000491	4.5
22	MP1C	X	-1.965	2.5
23	MP1C	Z	0	2.5
24	MP1C	Mx	-.000491	2.5
25	MP1C	X	-1.965	4.5
26	MP1C	Z	0	4.5
27	MP1C	Mx	-.000491	4.5
28	MP2A	X	-1.544	2.5
29	MP2A	Z	0	2.5
30	MP2A	Mx	-.000772	2.5
31	MP2B	X	-2.111	2.5
32	MP2B	Z	0	2.5
33	MP2B	Mx	.000528	2.5
34	MP2C	X	-2.111	2.5
35	MP2C	Z	0	2.5
36	MP2C	Mx	.000528	2.5
37	MP3A	X	-1.892	2.5
38	MP3A	Z	0	2.5
39	MP3A	Mx	-.000946	2.5
40	MP3B	X	-2.555	2.5
41	MP3B	Z	0	2.5
42	MP3B	Mx	.000639	2.5
43	MP3C	X	-2.555	2.5
44	MP3C	Z	0	2.5
45	MP3C	Mx	.000639	2.5
46	OVP	X	-3.577	1
47	OVP	Z	0	1
48	OVP	Mx	0	1
49	MP2A	X	-4.137	2
50	MP2A	Z	0	2
51	MP2A	Mx	.003	2
52	MP2A	X	-4.137	5
53	MP2A	Z	0	5
54	MP2A	Mx	.003	5
55	MP2B	X	-5.621	2
56	MP2B	Z	0	2
57	MP2B	Mx	-.002	2
58	MP2B	X	-5.621	5
59	MP2B	Z	0	5
60	MP2B	Mx	-.002	5
61	MP2C	X	-5.621	2
62	MP2C	Z	0	2
63	MP2C	Mx	-.002	2

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
64	MP2C	X	-5.621	5
65	MP2C	Z	0	5
66	MP2C	Mx	-.002	5
67	MP3A	X	-4.137	2
68	MP3A	Z	0	2
69	MP3A	Mx	.003	2
70	MP3A	X	-4.137	5
71	MP3A	Z	0	5
72	MP3A	Mx	.003	5
73	MP3B	X	-5.621	2
74	MP3B	Z	0	2
75	MP3B	Mx	-.002	2
76	MP3B	X	-5.621	5
77	MP3B	Z	0	5
78	MP3B	Mx	-.002	5
79	MP3C	X	-5.621	2
80	MP3C	Z	0	2
81	MP3C	Mx	-.002	2
82	MP3C	X	-5.621	5
83	MP3C	Z	0	5
84	MP3C	Mx	-.002	5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
1	MP4A	X	-.668	3.5
2	MP4A	Z	-.386	3.5
3	MP4A	Mx	.000167	3.5
4	MP4B	X	-.977	3.5
5	MP4B	Z	-.564	3.5
6	MP4B	Mx	0	3.5
7	MP4C	X	-.668	3.5
8	MP4C	Z	-.386	3.5
9	MP4C	Mx	-.000167	3.5
10	MP1A	X	-1.043	2.5
11	MP1A	Z	-.602	2.5
12	MP1A	Mx	.000521	2.5
13	MP1A	X	-1.043	4.5
14	MP1A	Z	-.602	4.5
15	MP1A	Mx	.000521	4.5
16	MP1B	X	-2.031	2.5
17	MP1B	Z	-1.173	2.5
18	MP1B	Mx	0	2.5
19	MP1B	X	-2.031	4.5
20	MP1B	Z	-1.173	4.5
21	MP1B	Mx	0	4.5
22	MP1C	X	-1.043	2.5
23	MP1C	Z	-.602	2.5
24	MP1C	Mx	-.000521	2.5
25	MP1C	X	-1.043	4.5
26	MP1C	Z	-.602	4.5
27	MP1C	Mx	-.000521	4.5
28	MP2A	X	-1.501	2.5
29	MP2A	Z	-.866	2.5
30	MP2A	Mx	-.00075	2.5
31	MP2B	X	-1.992	2.5
32	MP2B	Z	-1.15	2.5
33	MP2B	Mx	0	2.5
34	MP2C	X	-1.501	2.5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
35	MP2C	Z	- .866	2.5
36	MP2C	Mx	.00075	2.5
37	MP3A	X	-1.83	2.5
38	MP3A	Z	-1.057	2.5
39	MP3A	Mx	-.000915	2.5
40	MP3B	X	-2.404	2.5
41	MP3B	Z	-1.388	2.5
42	MP3B	Mx	0	2.5
43	MP3C	X	-1.83	2.5
44	MP3C	Z	-1.057	2.5
45	MP3C	Mx	.000915	2.5
46	OVP	X	-3.342	1
47	OVP	Z	-1.929	1
48	OVP	Mx	0	1
49	MP2A	X	-4.011	2
50	MP2A	Z	-2.316	2
51	MP2A	Mx	.003	2
52	MP2A	X	-4.011	5
53	MP2A	Z	-2.316	5
54	MP2A	Mx	.003	5
55	MP2B	X	-5.296	2
56	MP2B	Z	-3.057	2
57	MP2B	Mx	0	2
58	MP2B	X	-5.296	5
59	MP2B	Z	-3.057	5
60	MP2B	Mx	0	5
61	MP2C	X	-4.011	2
62	MP2C	Z	-2.316	2
63	MP2C	Mx	-.003	2
64	MP2C	X	-4.011	5
65	MP2C	Z	-2.316	5
66	MP2C	Mx	-.003	5
67	MP3A	X	-4.011	2
68	MP3A	Z	-2.316	2
69	MP3A	Mx	.003	2
70	MP3A	X	-4.011	5
71	MP3A	Z	-2.316	5
72	MP3A	Mx	.003	5
73	MP3B	X	-5.296	2
74	MP3B	Z	-3.057	2
75	MP3B	Mx	0	2
76	MP3B	X	-5.296	5
77	MP3B	Z	-3.057	5
78	MP3B	Mx	0	5
79	MP3C	X	-4.011	2
80	MP3C	Z	-2.316	2
81	MP3C	Mx	-.003	2
82	MP3C	X	-4.011	5
83	MP3C	Z	-2.316	5
84	MP3C	Mx	-.003	5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP4A	X	- .505	3.5
2	MP4A	Z	- .874	3.5
3	MP4A	Mx	.000126	3.5
4	MP4B	X	- .505	3.5
5	MP4B	Z	- .874	3.5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
6	MP4B	Mx	.000126	3.5
7	MP4C	X	-.327	3.5
8	MP4C	Z	-.566	3.5
9	MP4C	Mx	-.000163	3.5
10	MP1A	X	-.982	2.5
11	MP1A	Z	-1.702	2.5
12	MP1A	Mx	.000491	2.5
13	MP1A	X	-.982	4.5
14	MP1A	Z	-1.702	4.5
15	MP1A	Mx	.000491	4.5
16	MP1B	X	-.982	2.5
17	MP1B	Z	-1.702	2.5
18	MP1B	Mx	.000491	2.5
19	MP1B	X	-.982	4.5
20	MP1B	Z	-1.702	4.5
21	MP1B	Mx	.000491	4.5
22	MP1C	X	-.412	2.5
23	MP1C	Z	-.713	2.5
24	MP1C	Mx	-.000412	2.5
25	MP1C	X	-.412	4.5
26	MP1C	Z	-.713	4.5
27	MP1C	Mx	-.000412	4.5
28	MP2A	X	-1.056	2.5
29	MP2A	Z	-1.828	2.5
30	MP2A	Mx	-.000528	2.5
31	MP2B	X	-1.056	2.5
32	MP2B	Z	-1.828	2.5
33	MP2B	Mx	-.000528	2.5
34	MP2C	X	-.772	2.5
35	MP2C	Z	-1.337	2.5
36	MP2C	Mx	.000772	2.5
37	MP3A	X	-1.277	2.5
38	MP3A	Z	-2.212	2.5
39	MP3A	Mx	-.000638	2.5
40	MP3B	X	-1.277	2.5
41	MP3B	Z	-2.212	2.5
42	MP3B	Mx	-.000639	2.5
43	MP3C	X	-.946	2.5
44	MP3C	Z	-1.639	2.5
45	MP3C	Mx	.000946	2.5
46	OVP	X	-2.211	1
47	OVP	Z	-3.83	1
48	OVP	Mx	0	1
49	MP2A	X	-2.81	2
50	MP2A	Z	-4.868	2
51	MP2A	Mx	.002	2
52	MP2A	X	-2.81	5
53	MP2A	Z	-4.868	5
54	MP2A	Mx	.002	5
55	MP2B	X	-2.81	2
56	MP2B	Z	-4.868	2
57	MP2B	Mx	.002	2
58	MP2B	X	-2.81	5
59	MP2B	Z	-4.868	5
60	MP2B	Mx	.002	5
61	MP2C	X	-2.069	2
62	MP2C	Z	-3.583	2
63	MP2C	Mx	-.003	2
64	MP2C	X	-2.069	5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
65	MP2C	Z	-3.583	5
66	MP2C	Mx	-.003	5
67	MP3A	X	-2.81	2
68	MP3A	Z	-4.868	2
69	MP3A	Mx	.002	2
70	MP3A	X	-2.81	5
71	MP3A	Z	-4.868	5
72	MP3A	Mx	.002	5
73	MP3B	X	-2.81	2
74	MP3B	Z	-4.868	2
75	MP3B	Mx	.002	2
76	MP3B	X	-2.81	5
77	MP3B	Z	-4.868	5
78	MP3B	Mx	.002	5
79	MP3C	X	-2.069	2
80	MP3C	Z	-3.583	2
81	MP3C	Mx	-.003	2
82	MP3C	X	-2.069	5
83	MP3C	Z	-3.583	5
84	MP3C	Mx	-.003	5

Member Point Loads (BLC 77 : Lm1)

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	M47	Y	-500	0

Member Point Loads (BLC 78 : Lm2)

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	M49	Y	-500	0

Member Point Loads (BLC 79 : Lv1)

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

Member Point Loads (BLC 80 : Lv2)

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	M42	Y	-250	%100

Member Point Loads (BLC 81 : Antenna Ev)

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP4A	Y	-1.021	3.5
2	MP4A	My	-.000255	3.5
3	MP4A	Mz	0	3.5
4	MP4B	Y	-1.021	3.5
5	MP4B	My	.000128	3.5
6	MP4B	Mz	-.000221	3.5
7	MP4C	Y	-1.021	3.5
8	MP4C	My	.000128	3.5
9	MP4C	Mz	.000221	3.5
10	MP1A	Y	-1.204	2.5
11	MP1A	My	-.000602	2.5
12	MP1A	Mz	0	2.5
13	MP1A	Y	-1.204	4.5
14	MP1A	My	-.000602	4.5
15	MP1A	Mz	0	4.5
16	MP1B	Y	-1.204	2.5
17	MP1B	My	.000301	2.5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
18	MP1B	Mz	-.000521	2.5
19	MP1B	Y	-1.204	4.5
20	MP1B	My	.000301	4.5
21	MP1B	Mz	-.000521	4.5
22	MP1C	Y	-1.204	2.5
23	MP1C	My	.000301	2.5
24	MP1C	Mz	.000521	2.5
25	MP1C	Y	-1.204	4.5
26	MP1C	My	.000301	4.5
27	MP1C	Mz	.000521	4.5
28	MP2A	Y	-3.139	2.5
29	MP2A	My	.002	2.5
30	MP2A	Mz	0	2.5
31	MP2B	Y	-3.139	2.5
32	MP2B	My	-.000785	2.5
33	MP2B	Mz	.001	2.5
34	MP2C	Y	-3.139	2.5
35	MP2C	My	-.000785	2.5
36	MP2C	Mz	-.001	2.5
37	MP3A	Y	-3.324	2.5
38	MP3A	My	.002	2.5
39	MP3A	Mz	0	2.5
40	MP3B	Y	-3.324	2.5
41	MP3B	My	-.000831	2.5
42	MP3B	Mz	.001	2.5
43	MP3C	Y	-3.324	2.5
44	MP3C	My	-.000831	2.5
45	MP3C	Mz	-.001	2.5
46	OVP	Y	-1.345	1
47	OVP	My	0	1
48	OVP	Mz	0	1
49	MP2A	Y	-1.408	2
50	MP2A	My	-.001	2
51	MP2A	Mz	0	2
52	MP2A	Y	-1.408	5
53	MP2A	My	-.001	5
54	MP2A	Mz	0	5
55	MP2B	Y	-1.408	2
56	MP2B	My	.000528	2
57	MP2B	Mz	-.000914	2
58	MP2B	Y	-1.408	5
59	MP2B	My	.000528	5
60	MP2B	Mz	-.000914	5
61	MP2C	Y	-1.408	2
62	MP2C	My	.000528	2
63	MP2C	Mz	.000914	2
64	MP2C	Y	-1.408	5
65	MP2C	My	.000528	5
66	MP2C	Mz	.000914	5
67	MP3A	Y	-1.408	2
68	MP3A	My	-.001	2
69	MP3A	Mz	0	2
70	MP3A	Y	-1.408	5
71	MP3A	My	-.001	5
72	MP3A	Mz	0	5
73	MP3B	Y	-1.408	2
74	MP3B	My	.000528	2
75	MP3B	Mz	-.000914	2
76	MP3B	Y	-1.408	5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
77	MP3B	My	.000528	5
78	MP3B	Mz	-.000914	5
79	MP3C	Y	-1.408	2
80	MP3C	My	.000528	2
81	MP3C	Mz	.000914	2
82	MP3C	Y	-1.408	5
83	MP3C	My	.000528	5
84	MP3C	Mz	.000914	5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft,%]
1	MP4A	Z	-2.553	3.5
2	MP4A	Mx	0	3.5
3	MP4B	Z	-2.553	3.5
4	MP4B	Mx	.000553	3.5
5	MP4C	Z	-2.553	3.5
6	MP4C	Mx	-.000553	3.5
7	MP1A	Z	-3.01	2.5
8	MP1A	Mx	0	2.5
9	MP1A	Z	-3.01	4.5
10	MP1A	Mx	0	4.5
11	MP1B	Z	-3.01	2.5
12	MP1B	Mx	.001	2.5
13	MP1B	Z	-3.01	4.5
14	MP1B	Mx	.001	4.5
15	MP1C	Z	-3.01	2.5
16	MP1C	Mx	-.001	2.5
17	MP1C	Z	-3.01	4.5
18	MP1C	Mx	-.001	4.5
19	MP2A	Z	-7.848	2.5
20	MP2A	Mx	0	2.5
21	MP2B	Z	-7.848	2.5
22	MP2B	Mx	-.003	2.5
23	MP2C	Z	-7.848	2.5
24	MP2C	Mx	.003	2.5
25	MP3A	Z	-8.311	2.5
26	MP3A	Mx	0	2.5
27	MP3B	Z	-8.311	2.5
28	MP3B	Mx	-.004	2.5
29	MP3C	Z	-8.311	2.5
30	MP3C	Mx	.004	2.5
31	OVP	Z	-3.362	1
32	OVP	Mx	0	1
33	MP2A	Z	-3.52	2
34	MP2A	Mx	0	2
35	MP2A	Z	-3.52	5
36	MP2A	Mx	0	5
37	MP2B	Z	-3.52	2
38	MP2B	Mx	.002	2
39	MP2B	Z	-3.52	5
40	MP2B	Mx	.002	5
41	MP2C	Z	-3.52	2
42	MP2C	Mx	-.002	2
43	MP2C	Z	-3.52	5
44	MP2C	Mx	-.002	5
45	MP3A	Z	-3.52	2
46	MP3A	Mx	0	2
47	MP3A	Z	-3.52	5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
48	MP3A	Mx	0	5
49	MP3B	Z	-3.52	2
50	MP3B	Mx	.002	2
51	MP3B	Z	-3.52	5
52	MP3B	Mx	.002	5
53	MP3C	Z	-3.52	2
54	MP3C	Mx	-.002	2
55	MP3C	Z	-3.52	5
56	MP3C	Mx	-.002	5

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
1	MP4A	X	2.553	3.5
2	MP4A	Mx	-.000638	3.5
3	MP4B	X	2.553	3.5
4	MP4B	Mx	.000319	3.5
5	MP4C	X	2.553	3.5
6	MP4C	Mx	.000319	3.5
7	MP1A	X	3.01	2.5
8	MP1A	Mx	-.002	2.5
9	MP1A	X	3.01	4.5
10	MP1A	Mx	-.002	4.5
11	MP1B	X	3.01	2.5
12	MP1B	Mx	.000753	2.5
13	MP1B	X	3.01	4.5
14	MP1B	Mx	.000753	4.5
15	MP1C	X	3.01	2.5
16	MP1C	Mx	.000753	2.5
17	MP1C	X	3.01	4.5
18	MP1C	Mx	.000753	4.5
19	MP2A	X	7.848	2.5
20	MP2A	Mx	.004	2.5
21	MP2B	X	7.848	2.5
22	MP2B	Mx	-.002	2.5
23	MP2C	X	7.848	2.5
24	MP2C	Mx	-.002	2.5
25	MP3A	X	8.311	2.5
26	MP3A	Mx	.004	2.5
27	MP3B	X	8.311	2.5
28	MP3B	Mx	-.002	2.5
29	MP3C	X	8.311	2.5
30	MP3C	Mx	-.002	2.5
31	OVP	X	3.362	1
32	OVP	Mx	0	1
33	MP2A	X	3.52	2
34	MP2A	Mx	-.003	2
35	MP2A	X	3.52	5
36	MP2A	Mx	-.003	5
37	MP2B	X	3.52	2
38	MP2B	Mx	.001	2
39	MP2B	X	3.52	5
40	MP2B	Mx	.001	5
41	MP2C	X	3.52	2
42	MP2C	Mx	.001	2
43	MP2C	X	3.52	5
44	MP2C	Mx	.001	5
45	MP3A	X	3.52	2
46	MP3A	Mx	-.003	2

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

	Member Label	Direction	Magnitude[lb.k-ft]	Location[ft.%]
47	MP3A	X	3.52	5
48	MP3A	Mx	-.003	5
49	MP3B	X	3.52	2
50	MP3B	Mx	.001	2
51	MP3B	X	3.52	5
52	MP3B	Mx	.001	5
53	MP3C	X	3.52	2
54	MP3C	Mx	.001	2
55	MP3C	X	3.52	5
56	MP3C	Mx	.001	5

Member Area Loads (BLC 39 : Structure D)

	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[ksf]
1	N88A	N87	N94	N94A	Y	Two Way	-.005
2	N90	N89	N95A	N94	Y	Two Way	-.005
3	N92	N91	N94A	N95A	Y	Two Way	-.005

Member Area Loads (BLC 40 : Structure Di)

	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[ksf]
1	N88A	N87	N94	N94A	Y	Two Way	-.009
2	N90	N89	N95A	N94	Y	Two Way	-.009
3	N92	N91	N94A	N95A	Y	Two Way	-.009

Member Area Loads (BLC 84 : Structure Ev)

	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[ksf]
1	N88A	N87	N94	N94A	Y	Two Way	-.000219
2	N90	N89	N95A	N94	Y	Two Way	-.000219
3	N92	N91	N94A	N95A	Y	Two Way	-.000219

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

	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[ksf]
1	N88A	N87	N94	N94A	Z	Two Way	-.000546
2	N90	N89	N95A	N94	Z	Two Way	-.000546
3	N92	N91	N94A	N95A	Z	Two Way	-.000546

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

	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[ksf]
1	N88A	N87	N94	N94A	X	Two Way	.000546
2	N90	N89	N95A	N94	X	Two Way	.000546
3	N92	N91	N94A	N95A	X	Two Way	.000546

Envelope Joint Reactions

	Joint	X [lb]	LC	Y [lb]	LC	Z [lb]	LC	MX [k-ft]	LC	MY [k-ft]	LC	MZ [k-ft]	LC	
1	N3	max	359.451	10	-307.884	70	2148.937	1	-.312	70	1	4	-.009	40
2		min	-359.445	4	-803.845	13	-228.197	7	-.807	20	-1	10	-.066	22
3	N31	max	1912.032	9	-273.407	66	190.715	2	.354	24	1.071	12	.813	42
4		min	-257.582	3	-750.76	45	-1145.144	8	-.02	30	-1.071	6	.245	75
5	N43A	max	217.73	11	-303.842	74	99.221	11	.458	14	.964	8	-.254	64
6		min	-1859.018	5	-795.175	17	-1046.729	5	.039	32	-.965	2	-.692	50
7	N138	max	25.663	10	2606.234	13	-993.031	70	0	75	0	4	0	10
8		min	-25.663	4	1006.784	70	-2555.526	13	0	1	0	10	0	4
9	N140	max	-855.902	66	2612.565	21	1283.472	23	0	6	0	36	0	36
10		min	-2219.644	20	1002.063	66	493.687	67	0	36	0	6	0	6
11	N142	max	2194.438	19	2582.879	17	1270.094	14	0	8	0	8	0	8

Envelope Joint Reactions (Continued)

Joint	X [lb]	LC	Y [lb]	LC	Z [lb]	LC	MX [k-ft]	LC	MY [k-ft]	LC	MZ [k-ft]	LC
12	min 851.68	74	997.191	74	491.22	73	0	26	0	26	0	26
13	Totals: max 2330.561	10	5501.131	15	2348.661	1						
14	min -2330.562	4	2132.29	72	-2348.662	7						

Joint Reactions (By Combination)

LC	Joint Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
1	N3	22.759	-439.861	2148.937	-0.433	-0.046	-0.027
2	N31	371.986	-371.274	152.267	.268	.641	.309
3	N43A	-395.201	-422.716	19.737	.264	-0.47	-0.346
4	N138	-.041	1437.252	-1391.278	0	0	0
5	N140	-1184.343	1389.147	709.282	0	0	0
6	N142	1184.842	1389.795	709.717	0	0	0
7	Totals:	.003	2982.343	2348.661			
8	COG (ft):	X: -.036	Y: .108	Z: -.002			
9	N3	-27.525	-438.797	2002.472	-0.433	-0.124	-0.018
10	N31	-111.388	-361.027	190.715	.237	.028	.332
11	N43A	-1020.331	-428.343	-183.162	.267	-0.965	-0.345
12	N138	-12.708	1433.687	-1390.354	0	0	0
13	N140	-1183.224	1373.979	697.658	0	0	0
14	N142	1183.08	1402.845	712.757	0	0	0
15	Totals:	-1172.097	2982.344	2030.085			
16	COG (ft):	X: -.036	Y: .108	Z: -.002			
17	N3	-222.149	-436.765	1577.239	-0.435	.502	-0.012
18	N31	-257.582	-360.359	178.702	.195	.082	.357
19	N43A	-1514.634	-433.386	-593.686	.262	-0.531	-0.347
20	N138	-22.152	1425.861	-1390.916	0	0	0
21	N140	-1189.981	1371.827	686.936	0	0	0
22	N142	1184.233	1415.166	709.289	0	0	0
23	Totals:	-2022.265	2982.344	1167.564			
24	COG (ft):	X: -.036	Y: .108	Z: -.002			
25	N3	-359.445	-434.313	937.966	-0.439	1	-0.01
26	N31	-157.844	-365.837	26.271	.157	.126	.378
27	N43A	-1776.262	-436.655	-949.217	.253	.052	-0.352
28	N138	-25.663	1416.344	-1394.456	0	0	0
29	N140	-1200.389	1379.182	678.338	0	0	0
30	N142	1189.041	1423.624	701.101	0	0	0
31	Totals:	-2330.562	2982.344	.002			
32	COG (ft):	X: -.036	Y: .108	Z: -.002			
33	N3	-249.387	-431.411	303.7	-0.441	.56	-0.013
34	N31	120.723	-374.512	-390.129	.125	-0.538	.392
35	N43A	-1859.018	-438.525	-1046.729	.242	-0.049	-0.36
36	N138	-22.108	1406.657	-1397.826	0	0	0
37	N140	-1209.219	1392.31	672.526	0	0	0
38	N142	1196.738	1427.824	690.884	0	0	0
39	Totals:	-2022.27	2982.344	-1167.573			
40	COG (ft):	X: -.036	Y: .108	Z: -.002			
41	N3	-70.29	-428.822	-105.223	-0.443	-0.037	-0.021
42	N31	632.535	-387.653	-865.743	.102	-1.071	.398
43	N43A	-1709.438	-438.356	-1013.923	.229	-0.144	-0.368
44	N138	-12.626	1398.921	-1398.479	0	0	0
45	N140	-1216.5	1411.765	672.716	0	0	0
46	N142	1204.215	1426.488	680.546	0	0	0
47	Totals:	-1172.103	2982.343	-2030.106			
48	COG (ft):	X: -.036	Y: .108	Z: -.002			
49	N3	-22.704	-427.936	-228.197	-0.443	.046	-0.031
50	N31	1281.538	-403.213	-1107.54	.105	-0.642	.389
51	N43A	-1245.11	-434.953	-967.313	.22	.47	-0.374

Joint Reactions (By Combination) (Continued)

LC	Joint Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
52	7	N138	.039	1396.235	-1398.435	0	0
53	7	N140	-1222.731	1434.09	680.465	0	0
54	7	N142	1208.963	1418.119	672.358	0	0
55	7	Totals:	-.004	2982.342	-2348.662		
56	7	COG (ft):	X: -.036	Y: .108	Z: -.002		
57	8	N3	28.056	-429.021	-82.565	-.443	.124
58	8	N31	1765.4	-413.422	-1145.144	.137	-.028
59	8	N43A	-620.967	-429.354	-764.386	.217	.964
60	8	N138	12.701	1399.809	-1399.367	0	0
61	8	N140	-1223.845	1449.235	692.054	0	0
62	8	N142	1210.751	1405.094	669.323	0	0
63	8	Totals:	1172.096	2982.341	-2030.085		
64	8	COG (ft):	X: -.036	Y: .108	Z: -.002		
65	9	N3	221.646	-431.104	342.782	-.441	-.502
66	9	N31	1912.032	-414.083	-1134.063	.179	-.082
67	9	N43A	-126.064	-424.28	-353.001	.222	.53
68	9	N138	22.159	1407.672	-1398.842	0	0
69	9	N140	-1217.086	1451.392	702.791	0	0
70	9	N142	1209.579	1392.744	672.768	0	0
71	9	Totals:	2022.265	2982.341	-1167.564		
72	9	COG (ft):	X: -.036	Y: .108	Z: -.002		
73	10	N3	359.451	-433.583	982.904	-.437	-1
74	10	N31	1811.334	-408.632	-981.607	.216	-.126
75	10	N43A	136.062	-420.968	1.663	.232	-.052
76	10	N138	25.663	1417.211	-1395.325	0	0
77	10	N140	-1206.687	1444.054	711.406	0	0
78	10	N142	1204.739	1384.258	680.956	0	0
79	10	Totals:	2330.561	2982.341	-.003		
80	10	COG (ft):	X: -.036	Y: .108	Z: -.002		
81	11	N3	249.919	-436.46	1616.194	-.435	-.56
82	11	N31	1533.366	-399.994	-564.275	.248	.539
83	11	N43A	217.73	-419.081	99.221	.243	.049
84	11	N138	22.099	1426.876	-1391.932	0	0
85	11	N140	-1197.888	1430.945	717.201	0	0
86	11	N142	1197.044	1380.055	691.164	0	0
87	11	Totals:	2022.27	2982.341	1167.573		
88	11	COG (ft):	X: -.036	Y: .108	Z: -.002		
89	12	N3	69.837	-439	2025.099	-.433	.037
90	12	N31	1022.028	-386.862	-89.523	.271	1.071
91	12	N43A	68.634	-419.268	67.254	.255	.144
92	12	N138	12.631	1434.58	-1391.249	0	0
93	12	N140	-1190.604	1411.495	717.026	0	0
94	12	N142	1189.576	1381.397	701.498	0	0
95	12	Totals:	1172.103	2982.342	2030.105		
96	12	COG (ft):	X: -.036	Y: .108	Z: -.002		
97	13	N3	4.867	-803.845	2041.54	-.806	-.01
98	13	N31	1412.367	-675.685	-729.578	.353	.146
99	13	N43A	-1397.115	-790.115	-749.08	.457	-.109
100	13	N138	-.018	2606.234	-2555.526	0	0
101	13	N140	-2207.052	2593.858	1280.329	0	0
102	13	N142	2186.951	2570.683	1268.779	0	0
103	13	Totals:	0	5501.131	556.464		
104	13	COG (ft):	X: -.056	Y: .069	Z: .007		
105	14	N3	-7.126	-803.499	2007.247	-.806	-.025
106	14	N31	1296.36	-672.759	-718.619	.344	.009
107	14	N43A	-1545.568	-791.867	-799.736	.458	-.217
108	14	N138	-2.921	2605.121	-2554.784	0	0
109	14	N140	-2205.768	2589.323	1276.818	0	0
110	14	N142	2187.299	2574.812	1270.094	0	0

Joint Reactions (By Combination) (Continued)

LC	Joint Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]	
111	14	Totals:	-277.723	5501.131	481.02			
112	14	COG (ft):	X: -.056	Y: .069	Z: .007			
113	15	N3	-51.583	-802.738	1905.712	-.806	.117	-.054
114	15	N31	1260.28	-672.414	-721.151	.333	.019	.614
115	15	N43A	-1664.336	-793.51	-897.709	.457	-.118	-.656
116	15	N138	-5.295	2602.535	-2553.866	0	0	0
117	15	N140	-2206.797	2588.458	1274.048	0	0	0
118	15	N142	2188.496	2578.8	1269.657	0	0	0
119	15	Totals:	-479.234	5501.131	276.692			
120	15	COG (ft):	X: -.056	Y: .069	Z: .007			
121	16	N3	-82.119	-801.752	1752.49	-.807	.225	-.053
122	16	N31	1283.462	-673.878	-758.266	.322	.024	.62
123	16	N43A	-1728.391	-794.62	-980.997	.454	.012	-.658
124	16	N138	-6.257	2599.255	-2553.755	0	0	0
125	16	N140	-2209.715	2590.525	1272.387	0	0	0
126	16	N142	2190.679	2581.601	1268.142	0	0	0
127	16	Totals:	-552.341	5501.131	0			
128	16	COG (ft):	X: -.056	Y: .069	Z: .007			
129	17	N3	-56.307	-800.673	1600.562	-.807	.124	-.054
130	17	N31	1351.375	-676.441	-857.225	.314	-.127	.624
131	17	N43A	-1748.962	-795.175	-1004.021	.451	-.011	-.66
132	17	N138	-5.287	2595.943	-2553.614	0	0	0
133	17	N140	-2212.981	2594.597	1271.541	0	0	0
134	17	N142	2192.926	2582.879	1266.063	0	0	0
135	17	Totals:	-479.235	5501.131	-276.695			
136	17	COG (ft):	X: -.056	Y: .069	Z: .007			
137	18	N3	-15.493	-799.803	1502.349	-.807	-.009	-.057
138	18	N31	1476.073	-680.282	-969.735	.308	-.245	.626
139	18	N43A	-1713.72	-795.011	-996.431	.447	-.03	-.663
140	18	N138	-2.895	2593.404	-2552.743	0	0	0
141	18	N140	-2215.867	2600.552	1272.112	0	0	0
142	18	N142	2194.178	2582.271	1263.422	0	0	0
143	18	Totals:	-277.725	5501.131	-481.026			
144	18	COG (ft):	X: -.056	Y: .069	Z: .007			
145	19	N3	-4.827	-799.508	1472.176	-.807	.01	-.06
146	19	N31	1632.511	-684.686	-1028.387	.309	-.146	.624
147	19	N43A	-1603.779	-793.899	-983.516	.444	.109	-.664
148	19	N138	.017	2592.531	-2552.241	0	0	0
149	19	N140	-2218.36	2607.166	1274.685	0	0	0
150	19	N142	2194.438	2579.527	1260.818	0	0	0
151	19	Totals:	-.001	5501.131	-556.465			
152	19	COG (ft):	X: -.056	Y: .069	Z: .007			
153	20	N3	7.191	-799.856	1506.426	-.807	.025	-.063
154	20	N31	1748.544	-687.609	-1039.301	.318	-.009	.618
155	20	N43A	-1455.379	-792.149	-932.858	.443	.217	-.664
156	20	N138	2.92	2593.645	-2552.984	0	0	0
157	20	N140	-2219.644	2611.699	1278.194	0	0	0
158	20	N142	2194.092	2575.4	1259.503	0	0	0
159	20	Totals:	277.723	5501.13	-481.021			
160	20	COG (ft):	X: -.056	Y: .069	Z: .007			
161	21	N3	51.592	-800.619	1607.967	-.807	-.117	-.065
162	21	N31	1784.646	-687.954	-1036.82	.33	-.019	.611
163	21	N43A	-1336.578	-790.504	-834.839	.444	.117	-.663
164	21	N138	5.295	2596.233	-2553.905	0	0	0
165	21	N140	-2218.615	2612.565	1280.965	0	0	0
166	21	N142	2192.893	2571.409	1259.939	0	0	0
167	21	Totals:	479.233	5501.13	-276.693			
168	21	COG (ft):	X: -.056	Y: .069	Z: .007			
169	22	N3	82.156	-801.607	1761.234	-.806	-.226	-.066

Joint Reactions (By Combination) (Continued)

LC	Joint Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]	
170	22	N31	1761.414	-686.492	-999.703	.34	-.024	.606
171	22	N43A	-1272.496	-789.392	-751.597	.447	-.012	-.661
172	22	N138	6.256	2599.516	-2554.017	0	0	0
173	22	N140	-2215.698	2610.499	1282.627	0	0	0
174	22	N142	2190.708	2568.607	1261.454	0	0	0
175	22	Totals:	552.34	5501.13	-.001			
176	22	COG (ft):	X: -.056	Y: .069	Z: .007			
177	23	N3	56.371	-802.685	1913.109	-.806	-.125	-.065
178	23	N31	1693.534	-683.931	-900.694	.349	.127	.601
179	23	N43A	-1251.984	-788.835	-728.569	.45	.011	-.659
180	23	N138	5.286	2602.825	-2554.156	0	0	0
181	23	N140	-2212.434	2606.428	1283.472	0	0	0
182	23	N142	2188.461	2567.329	1263.532	0	0	0
183	23	Totals:	479.234	5501.13	276.694			
184	23	COG (ft):	X: -.056	Y: .069	Z: .007			
185	24	N3	15.505	-803.551	2011.321	-.806	.008	-.063
186	24	N31	1568.861	-680.091	-788.23	.354	.245	.599
187	24	N43A	-1287.199	-.789	-736.116	.454	.03	-.657
188	24	N138	2.895	2605.362	-2555.025	0	0	0
189	24	N140	-2209.547	2600.474	1282.902	0	0	0
190	24	N142	2187.21	2567.937	1266.173	0	0	0
191	24	Totals:	277.724	5501.131	481.025			
192	24	COG (ft):	X: -.056	Y: .069	Z: .007			
193	25	N3	1.403	-393.289	840.464	-.397	-.003	-.03
194	25	N31	1159.067	-515.886	-646.672	-.009	.038	.602
195	25	N43A	-1184.748	-570.897	-668.921	.042	-.028	-.63
196	25	N138	-.002	1326.093	-1302.677	0	0	0
197	25	N140	-1651.861	1929.14	955.284	0	0	0
198	25	N142	1676.141	1957.174	969.314	0	0	0
199	25	Totals:	0	3732.334	146.792			
200	25	COG (ft):	X: 0	Y: .086	Z: .808			
201	26	N3	-1.756	-393.221	831.335	-.397	-.008	-.03
202	26	N31	1128.858	-515.26	-644.32	-.011	0	.604
203	26	N43A	-1223.765	-571.224	-681.574	.042	-.059	-.63
204	26	N138	-.793	1325.868	-1302.618	0	0	0
205	26	N140	-1651.805	1928.22	954.587	0	0	0
206	26	N142	1676.006	1957.95	969.471	0	0	0
207	26	Totals:	-73.256	3732.334	126.882			
208	26	COG (ft):	X: 0	Y: .086	Z: .808			
209	27	N3	-13.882	-393.087	804.75	-.397	.031	-.029
210	27	N31	1119.708	-515.208	-645.036	-.014	.003	.605
211	27	N43A	-1254.652	-571.514	-707.258	.042	-.031	-.631
212	27	N138	-1.387	1325.373	-1302.647	0	0	0
213	27	N140	-1652.225	1928.079	953.908	0	0	0
214	27	N142	1676.045	1958.691	969.253	0	0	0
215	27	Totals:	-126.393	3732.334	72.97			
216	27	COG (ft):	X: 0	Y: .086	Z: .808			
217	28	N3	-22.473	-392.924	764.765	-.397	.063	-.029
218	28	N31	1125.955	-515.523	-654.548	-.016	.006	.607
219	28	N43A	-1270.997	-571.692	-729.457	.041	.005	-.631
220	28	N138	-1.609	1324.768	-1302.858	0	0	0
221	28	N140	-1652.855	1928.511	953.352	0	0	0
222	28	N142	1676.314	1959.194	968.744	0	0	0
223	28	Totals:	-145.664	3732.334	-.002			
224	28	COG (ft):	X: 0	Y: .086	Z: .808			
225	29	N3	-15.615	-392.735	725.148	-.397	.035	-.029
226	29	N31	1143.324	-516.035	-680.604	-.018	-.035	.608
227	29	N43A	-1276.123	-571.784	-735.538	.04	-.001	-.631
228	29	N138	-1.384	1324.154	-1303.06	0	0	0

Joint Reactions (By Combination) (Continued)

LC	Joint Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]	
229	29	N140	-1653.373	1929.303	952.992	0	0	0
230	29	N142	1676.777	1959.431	968.087	0	0	0
231	29	Totals:	-126.393	3732.334	-72.975			
232	29	COG (ft):	X: 0	Y: .086	Z: .808			
233	30	N3	-4.4	-392.569	699.588	-.398	-.002	-.03
234	30	N31	1175.273	-516.829	-710.305	-.02	-.069	.608
235	30	N43A	-1266.789	-571.762	-733.505	.04	-.007	-.632
236	30	N138	-.788	1323.667	-1303.097	0	0	0
237	30	N140	-1653.793	1930.487	953.002	0	0	0
238	30	N142	1677.242	1959.341	967.432	0	0	0
239	30	Totals:	-73.256	3732.334	-126.887			
240	30	COG (ft):	X: 0	Y: .086	Z: .808			
241	31	N3	-1.439	-392.513	691.876	-.398	.003	-.031
242	31	N31	1215.839	-517.776	-725.389	-.02	-.042	.607
243	31	N43A	-1237.797	-571.56	-730.591	.039	.031	-.632
244	31	N138	.002	1323.498	-1303.093	0	0	0
245	31	N140	-1654.156	1931.843	953.454	0	0	0
246	31	N142	1677.55	1958.842	966.948	0	0	0
247	31	Totals:	0	3732.334	-146.796			
248	31	COG (ft):	X: 0	Y: .086	Z: .808			
249	32	N3	1.722	-392.582	701.002	-.398	.008	-.031
250	32	N31	1246.05	-518.402	-727.738	-.018	-.004	.606
251	32	N43A	-1198.784	-571.234	-717.938	.039	.062	-.632
252	32	N138	.793	1323.722	-1303.153	0	0	0
253	32	N140	-1654.212	1932.764	954.151	0	0	0
254	32	N142	1677.685	1958.065	966.792	0	0	0
255	32	Totals:	73.254	3732.334	-126.885			
256	32	COG (ft):	X: 0	Y: .086	Z: .808			
257	33	N3	13.844	-392.716	727.587	-.397	-.031	-.032
258	33	N31	1255.201	-518.454	-727.026	-.015	-.007	.604
259	33	N43A	-1167.895	-570.944	-692.251	.039	.035	-.632
260	33	N138	1.387	1324.218	-1303.124	0	0	0
261	33	N140	-1653.792	1932.905	954.83	0	0	0
262	33	N142	1677.646	1957.325	967.009	0	0	0
263	33	Totals:	126.392	3732.334	-72.974			
264	33	COG (ft):	X: 0	Y: .086	Z: .808			
265	34	N3	22.437	-392.879	767.575	-.397	-.062	-.032
266	34	N31	1248.951	-518.139	-717.513	-.013	-.01	.603
267	34	N43A	-1151.548	-570.765	-670.055	.04	-.002	-.632
268	34	N138	1.609	1324.823	-1302.913	0	0	0
269	34	N140	-1653.162	1932.472	955.387	0	0	0
270	34	N142	1677.376	1956.822	967.518	0	0	0
271	34	Totals:	145.663	3732.334	-.002			
272	34	COG (ft):	X: 0	Y: .086	Z: .808			
273	35	N3	15.581	-393.068	807.188	-.397	-.035	-.032
274	35	N31	1231.584	-517.627	-691.454	-.011	.032	.602
275	35	N43A	-1146.426	-570.673	-663.974	.041	.005	-.631
276	35	N138	1.384	1325.437	-1302.711	0	0	0
277	35	N140	-1652.644	1931.68	955.746	0	0	0
278	35	N142	1676.914	1956.585	968.175	0	0	0
279	35	Totals:	126.392	3732.334	72.971			
280	35	COG (ft):	X: 0	Y: .086	Z: .808			
281	36	N3	4.362	-393.233	832.749	-.397	.002	-.031
282	36	N31	1199.637	-516.833	-661.756	-.009	.065	.602
283	36	N43A	-1155.758	-570.695	-666.003	.041	.011	-.631
284	36	N138	.788	1325.924	-1302.674	0	0	0
285	36	N140	-1652.224	1930.496	955.737	0	0	0
286	36	N142	1676.449	1956.675	968.831	0	0	0
287	36	Totals:	73.255	3732.334	126.883			

Joint Reactions (By Combination) (Continued)

LC	Joint Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]	
288	36	COG (ft):	X: 0	Y: .086	Z: .808			
289	37	N3	2.011	-398.791	833.526	-.403	-.005	-.01
290	37	N31	1580.642	-748.233	-889.759	.11	.039	.807
291	37	N43A	-845.176	-460.824	-473.28	.118	-.026	-.465
292	37	N138	-.006	1332.437	-1309.022	0	0	0
293	37	N140	-2085.335	2429.497	1205.533	0	0	0
294	37	N142	1347.863	1578.22	779.794	0	0	0
295	37	Totals:	0	3732.305	146.791			
296	37	COG (ft):	X: -.736	Y: .086	Z: .808			
297	38	N3	-1.149	-398.723	824.4	-.403	-.01	-.01
298	38	N31	1550.426	-747.619	-887.423	.108	.001	.809
299	38	N43A	-884.198	-461.164	-485.95	.118	-.057	-.465
300	38	N138	-.796	1332.217	-1308.968	0	0	0
301	38	N140	-2085.275	2428.581	1204.853	0	0	0
302	38	N142	1347.736	1579.013	779.968	0	0	0
303	38	Totals:	-73.255	3732.305	126.881			
304	38	COG (ft):	X: -.736	Y: .086	Z: .808			
305	39	N3	-13.274	-398.592	797.82	-.403	.029	-.009
306	39	N31	1541.282	-747.574	-888.135	.105	.004	.81
307	39	N43A	-915.097	-461.467	-511.628	.118	-.03	-.465
308	39	N138	-1.39	1331.73	-1309.004	0	0	0
309	39	N140	-2085.702	2428.445	1204.171	0	0	0
310	39	N142	1347.789	1579.763	779.746	0	0	0
311	39	Totals:	-126.393	3732.305	72.97			
312	39	COG (ft):	X: -.736	Y: .086	Z: .808			
313	40	N3	-21.864	-398.432	757.839	-.403	.06	-.009
314	40	N31	1547.536	-747.892	-897.645	.103	.007	.812
315	40	N43A	-931.451	-461.657	-533.817	.117	.006	-.465
316	40	N138	-1.612	1331.131	-1309.222	0	0	0
317	40	N140	-2086.341	2428.884	1203.614	0	0	0
318	40	N142	1348.068	1580.27	779.228	0	0	0
319	40	Totals:	-145.664	3732.305	-.002			
320	40	COG (ft):	X: -.736	Y: .086	Z: .808			
321	41	N3	-15.007	-398.245	718.225	-.403	.032	-.009
322	41	N31	1564.894	-748.397	-923.716	.101	-.034	.813
323	41	N43A	-936.577	-461.758	-539.905	.117	0	-.466
324	41	N138	-1.387	1330.519	-1309.426	0	0	0
325	41	N140	-2086.848	2429.674	1203.269	0	0	0
326	41	N142	1348.532	1580.512	778.577	0	0	0
327	41	Totals:	-126.393	3732.305	-72.975			
328	41	COG (ft):	X: -.736	Y: .086	Z: .808			
329	42	N3	-3.793	-398.081	692.665	-.404	-.005	-.01
330	42	N31	1596.826	-749.172	-953.426	.099	-.068	.813
331	42	N43A	-927.241	-461.739	-537.876	.116	-.006	-.466
332	42	N138	-.792	1330.031	-1309.462	0	0	0
333	42	N140	-2087.25	2430.846	1203.287	0	0	0
334	42	N142	1348.993	1580.42	777.926	0	0	0
335	42	Totals:	-73.256	3732.305	-126.887			
336	42	COG (ft):	X: -.736	Y: .086	Z: .808			
337	43	N3	-.831	-398.025	684.953	-.404	0	-.01
338	43	N31	1637.392	-750.101	-968.495	.099	-.041	.812
339	43	N43A	-898.248	-461.529	-534.945	.115	.032	-.467
340	43	N138	-.001	1329.86	-1309.456	0	0	0
341	43	N140	-2087.61	2432.191	1203.722	0	0	0
342	43	N142	1349.298	1579.909	777.425	0	0	0
343	43	Totals:	0	3732.305	-146.796			
344	43	COG (ft):	X: -.736	Y: .086	Z: .808			
345	44	N3	2.33	-398.093	694.076	-.404	.005	-.011
346	44	N31	1667.611	-750.714	-970.828	.101	-.002	.811

Joint Reactions (By Combination) (Continued)

	LC	Joint Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
347	44	N43A	-859.229	-461.19	-522.275	.115	.063	-.467
348	44	N138	.79	1330.08	-1309.511	0	0	0
349	44	N140	-2087.671	2433.106	1204.402	0	0	0
350	44	N142	1349.425	1579.116	777.25	0	0	0
351	44	Totals:	73.255	3732.305	-126.886			
352	44	COG (ft):	X: -.736	Y: .086	Z: .808			
353	45	N3	14.451	-398.224	720.656	-.403	-.034	-.011
354	45	N31	1676.756	-750.76	-970.119	.104	-.006	.809
355	45	N43A	-828.328	-460.887	-496.593	.115	.036	-.467
356	45	N138	1.383	1330.567	-1309.474	0	0	0
357	45	N140	-2087.243	2433.242	1205.084	0	0	0
358	45	N142	1349.372	1578.366	777.472	0	0	0
359	45	Totals:	126.392	3732.305	-72.975			
360	45	COG (ft):	X: -.736	Y: .086	Z: .808			
361	46	N3	23.043	-398.384	760.64	-.403	-.065	-.012
362	46	N31	1670.499	-750.442	-960.609	.106	-.009	.808
363	46	N43A	-811.972	-460.697	-474.408	.116	0	-.466
364	46	N138	1.605	1331.166	-1309.257	0	0	0
365	46	N140	-2086.605	2432.803	1205.642	0	0	0
366	46	N142	1349.093	1577.858	777.99	0	0	0
367	46	Totals:	145.663	3732.305	-.003			
368	46	COG (ft):	X: -.736	Y: .086	Z: .808			
369	47	N3	16.188	-398.571	800.251	-.403	-.037	-.011
370	47	N31	1653.143	-749.937	-934.535	.108	.033	.807
371	47	N43A	-806.851	-460.595	-468.32	.117	.006	-.466
372	47	N138	1.38	1331.778	-1309.053	0	0	0
373	47	N140	-2086.098	2432.013	1205.986	0	0	0
374	47	N142	1348.629	1577.617	778.641	0	0	0
375	47	Totals:	126.392	3732.305	72.97			
376	47	COG (ft):	X: -.736	Y: .086	Z: .808			
377	48	N3	4.97	-398.735	825.811	-.403	0	-.011
378	48	N31	1621.213	-749.161	-904.828	.11	.066	.807
379	48	N43A	-816.185	-460.614	-470.345	.117	.012	-.465
380	48	N138	.785	1332.266	-1309.016	0	0	0
381	48	N140	-2085.696	2430.841	1205.969	0	0	0
382	48	N142	1348.167	1577.708	779.292	0	0	0
383	48	Totals:	73.255	3732.305	126.882			
384	48	COG (ft):	X: -.736	Y: .086	Z: .808			
385	49	N3	.006	-413.433	863.161	-.418	0	-.029
386	49	N31	1014.787	-455.176	-586.103	.086	0	.481
387	49	N43A	-1008.212	-496.796	-582.309	.141	0	-.492
388	49	N138	0	1370.796	-1348.897	0	0	0
389	49	N140	-1435.822	1679.773	828.974	0	0	0
390	49	N142	1429.24	1672.174	825.174	0	0	0
391	49	Totals:	0	3357.338	-.001			
392	49	COG (ft):	X: -.032	Y: .096	Z: .449			
393	50	N3	-.538	-423.265	850.722	-.428	.002	-.021
394	50	N31	741.254	-379.915	-428.589	.168	-.002	.352
395	50	N43A	-1428.483	-790.807	-824.736	.408	0	-.692
396	50	N138	.003	1382.12	-1360.222	0	0	0
397	50	N140	-1182.767	1387.64	682.875	0	0	0
398	50	N142	1870.531	2181.582	1079.952	0	0	0
399	50	Totals:	0	3357.354	0			
400	50	COG (ft):	X: .71	Y: .096	Z: .449			
401	51	N3	.007	-506.414	1120.253	-.511	0	-.034
402	51	N31	964.967	-451.927	-557.115	.218	0	.407
403	51	N43A	-957.239	-500.471	-552.657	.283	0	-.42
404	51	N138	0	1653.057	-1627.549	0	0	0
405	51	N140	-1404.289	1647.042	810.767	0	0	0

Joint Reactions (By Combination) (Continued)

LC	Joint Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]	
406	51	N142	1396.554	1638.113	806.301	0	0	0
407	51	Totals:	0	3479.4	0			
408	51	COG (ft):	X: -.036	Y: .108	Z: -.002			
409	52	N3	1.316	-451.395	1140.319	-.454	-.003	-.03
410	52	N31	803.518	-399.176	-431.7	.199	.057	.357
411	52	N43A	-798.2	-442.596	-434.509	.254	-.048	-.37
412	52	N138	-.003	1472.449	-1447.877	0	0	0
413	52	N140	-1242.717	1457.589	719.35	0	0	0
414	52	N142	1236.087	1449.938	715.529	0	0	0
415	52	Totals:	0	3086.809	261.111			
416	52	COG (ft):	X: -.036	Y: .108	Z: -.002			
417	53	N3	-12.659	-451.117	1120.106	-.454	.027	-.028
418	53	N31	750.55	-397.975	-413.75	.197	.036	.359
419	53	N43A	-863.979	-443.897	-467.6	.255	-.057	-.37
420	53	N138	-.936	1471.637	-1447.323	0	0	0
421	53	N140	-1241.439	1455.013	717.819	0	0	0
422	53	N142	1237.909	1453.147	716.87	0	0	0
423	53	Totals:	-130.555	3086.809	226.122			
424	53	COG (ft):	X: -.036	Y: .108	Z: -.002			
425	54	N3	-23.238	-450.323	1066.05	-.454	.05	-.026
426	54	N31	725.848	-397.549	-417.359	.193	.005	.361
427	54	N43A	-925.786	-445.203	-506.761	.255	-.051	-.371
428	54	N138	-1.619	1469.437	-1445.827	0	0	0
429	54	N140	-1241.319	1454.077	716.67	0	0	0
430	54	N142	1239.994	1456.37	717.782	0	0	0
431	54	Totals:	-226.122	3086.809	130.555			
432	54	COG (ft):	X: -.036	Y: .108	Z: -.002			
433	55	N3	-27.588	-449.226	992.627	-.453	.06	-.026
434	55	N31	736.024	-398.011	-441.562	.19	-.027	.363
435	55	N43A	-967.07	-446.165	-541.507	.253	-.031	-.373
436	55	N138	-1.869	1466.438	-1443.789	0	0	0
437	55	N140	-1242.389	1455.03	716.209	0	0	0
438	55	N142	1241.782	1458.743	718.022	0	0	0
439	55	Totals:	-261.111	3086.809	0			
440	55	COG (ft):	X: -.036	Y: .108	Z: -.002			
441	56	N3	-24.543	-448.119	919.514	-.453	.053	-.027
442	56	N31	778.361	-399.237	-479.88	.187	-.052	.364
443	56	N43A	-976.756	-446.526	-562.521	.251	-.002	-.374
444	56	N138	-1.617	1463.443	-1441.756	0	0	0
445	56	N140	-1244.362	1457.618	716.56	0	0	0
446	56	N142	1242.796	1459.63	717.526	0	0	0
447	56	Totals:	-226.122	3086.809	-130.556			
448	56	COG (ft):	X: -.036	Y: .108	Z: -.002			
449	57	N3	-14.922	-447.299	866.306	-.453	.032	-.028
450	57	N31	841.503	-400.899	-522.039	.186	-.063	.365
451	57	N43A	-952.257	-446.189	-564.174	.249	.027	-.375
452	57	N138	-.932	1461.255	-1440.271	0	0	0
453	57	N140	-1246.709	1461.147	717.629	0	0	0
454	57	N142	1242.763	1458.794	716.426	0	0	0
455	57	Totals:	-130.556	3086.808	-226.123			
456	57	COG (ft):	X: -.036	Y: .108	Z: -.002			
457	58	N3	-1.303	-446.987	847.247	-.453	.003	-.03
458	58	N31	908.545	-402.551	-556.75	.187	-.057	.365
459	58	N43A	-900.135	-445.244	-546.021	.247	.048	-.376
460	58	N138	.002	1460.461	-1439.734	0	0	0
461	58	N140	-1248.802	1464.67	719.13	0	0	0
462	58	N142	1241.692	1456.459	715.017	0	0	0
463	58	Totals:	0	3086.808	-261.112			
464	58	COG (ft):	X: -.036	Y: .108	Z: -.002			

Joint Reactions (By Combination) (Continued)

LC	Joint Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]	
465	59	N3	12.667	-447.265	867.458	-.453	-.028	-.033
466	59	N31	961.517	-403.75	-574.703	.19	-.036	.364
467	59	N43A	-834.356	-443.943	-512.925	.246	.057	-.375
468	59	N138	.937	1461.273	-1440.289	0	0	0
469	59	N140	-1250.079	1467.245	720.66	0	0	0
470	59	N142	1239.87	1453.249	713.677	0	0	0
471	59	Totals:	130.555	3086.808	-226.123			
472	59	COG (ft):	X: -.036	Y: .108	Z: -.002			
473	60	N3	23.245	-448.06	921.509	-.453	-.05	-.034
474	60	N31	986.223	-404.176	-571.091	.193	-.005	.362
475	60	N43A	-772.554	-442.636	-473.761	.246	.051	-.374
476	60	N138	1.62	1463.474	-1441.786	0	0	0
477	60	N140	-1250.199	1468.181	721.809	0	0	0
478	60	N142	1237.786	1450.026	712.764	0	0	0
479	60	Totals:	226.121	3086.808	-130.556			
480	60	COG (ft):	X: -.036	Y: .108	Z: -.002			
481	61	N3	27.6	-449.158	994.93	-.453	-.06	-.035
482	61	N31	976.049	-403.715	-546.882	.197	.027	.359
483	61	N43A	-731.274	-441.673	-439.017	.248	.031	-.373
484	61	N138	1.869	1466.473	-1443.825	0	0	0
485	61	N140	-1249.13	1467.228	722.27	0	0	0
486	61	N142	1235.996	1447.653	712.523	0	0	0
487	61	Totals:	261.11	3086.808	0			
488	61	COG (ft):	X: -.036	Y: .108	Z: -.002			
489	62	N3	24.56	-450.264	1068.045	-.454	-.053	-.034
490	62	N31	933.708	-402.49	-508.561	.199	.052	.358
491	62	N43A	-721.589	-441.312	-418.008	.25	.002	-.372
492	62	N138	1.617	1469.468	-1445.858	0	0	0
493	62	N140	-1247.157	1464.641	721.919	0	0	0
494	62	N142	1234.982	1446.765	713.02	0	0	0
495	62	Totals:	226.121	3086.808	130.556			
496	62	COG (ft):	X: -.036	Y: .108	Z: -.002			
497	63	N3	14.94	-451.083	1121.258	-.454	-.032	-.032
498	63	N31	870.561	-400.828	-466.405	.2	.063	.357
499	63	N43A	-746.083	-441.65	-416.359	.252	-.027	-.37
500	63	N138	.932	1471.655	-1447.341	0	0	0
501	63	N140	-1244.81	1461.113	720.85	0	0	0
502	63	N142	1235.016	1447.602	714.12	0	0	0
503	63	Totals:	130.555	3086.808	226.123			
504	63	COG (ft):	X: -.036	Y: .108	Z: -.002			
505	64	N3	1.313	-312.425	832.967	-.314	-.003	-.021
506	64	N31	538.69	-275.068	-278.815	.14	.057	.245
507	64	N43A	-535.484	-305.159	-282.841	.177	-.048	-.254
508	64	N138	-.002	1018.926	-1001.324	0	0	0
509	64	N140	-857.326	1005.614	496.863	0	0	0
510	64	N142	852.809	1000.402	494.26	0	0	0
511	64	Totals:	0	2132.291	261.111			
512	64	COG (ft):	X: -.036	Y: .108	Z: -.002			
513	65	N3	-12.657	-312.138	812.745	-.314	.027	-.019
514	65	N31	485.702	-273.842	-260.85	.137	.036	.247
515	65	N43A	-601.291	-306.493	-315.949	.177	-.057	-.255
516	65	N138	-.945	1018.104	-1000.76	0	0	0
517	65	N140	-856.027	1003.01	495.314	0	0	0
518	65	N142	854.662	1003.649	495.622	0	0	0
519	65	Totals:	-130.555	2132.291	226.122			
520	65	COG (ft):	X: -.036	Y: .108	Z: -.002			
521	66	N3	-23.232	-311.319	758.665	-.314	.05	-.017
522	66	N31	460.995	-273.407	-264.45	.133	.005	.249
523	66	N43A	-663.127	-307.831	-355.125	.177	-.051	-.256

Joint Reactions (By Combination) (Continued)

LC	Joint Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]	
524	66	N138	-1.635	1015.877	-999.236	0	0	0
525	66	N140	-855.902	1002.063	494.151	0	0	0
526	66	N142	856.779	1006.91	496.551	0	0	0
527	66	Totals:	-226.122	2132.291	130.555			
528	66	COG (ft):	X: -.036	Y: .108	Z: -.002			
529	67	N3	-27.58	-310.189	685.207	-.313	.06	-.016
530	67	N31	471.182	-273.878	-288.653	.13	-.027	.251
531	67	N43A	-704.434	-308.817	-389.88	.176	-.031	-.257
532	67	N138	-1.887	1012.839	-997.161	0	0	0
533	67	N140	-856.985	1003.027	493.687	0	0	0
534	67	N142	858.594	1009.31	496.799	0	0	0
535	67	Totals:	-261.11	2132.291	0			
536	67	COG (ft):	X: -.036	Y: .108	Z: -.002			
537	68	N3	-24.535	-309.049	612.061	-.313	.053	-.017
538	68	N31	513.542	-275.13	-326.979	.127	-.052	.253
539	68	N43A	-714.129	-309.186	-410.895	.174	-.002	-.259
540	68	N138	-1.634	1009.805	-995.089	0	0	0
541	68	N140	-858.986	1005.644	494.046	0	0	0
542	68	N142	859.62	1010.207	496.3	0	0	0
543	68	Totals:	-226.122	2132.291	-130.556			
544	68	COG (ft):	X: -.036	Y: .108	Z: -.002			
545	69	N3	-14.919	-308.205	558.828	-.312	.032	-.019
546	69	N31	576.715	-276.825	-369.154	.126	-.063	.254
547	69	N43A	-689.624	-308.84	-412.539	.171	.027	-.26
548	69	N138	-.942	1007.589	-993.578	0	0	0
549	69	N140	-861.368	1009.211	495.131	0	0	0
550	69	N142	859.583	1009.361	495.188	0	0	0
551	69	Totals:	-130.556	2132.291	-226.123			
552	69	COG (ft):	X: -.036	Y: .108	Z: -.002			
553	70	N3	-1.305	-307.884	539.761	-.312	.003	-.021
554	70	N31	643.787	-278.511	-403.883	.127	-.057	.253
555	70	N43A	-637.483	-307.871	-394.371	.17	.048	-.26
556	70	N138	.002	1006.784	-993.031	0	0	0
557	70	N140	-863.493	1012.774	496.653	0	0	0
558	70	N142	858.492	1006.998	493.76	0	0	0
559	70	Totals:	0	2132.291	-261.112			
560	70	COG (ft):	X: -.036	Y: .108	Z: -.002			
561	71	N3	12.66	-308.172	559.981	-.312	-.028	-.023
562	71	N31	696.778	-279.735	-421.852	.13	-.036	.252
563	71	N43A	-571.676	-306.538	-361.257	.169	.057	-.26
564	71	N138	.945	1007.607	-993.595	0	0	0
565	71	N140	-864.792	1015.378	498.202	0	0	0
566	71	N142	856.64	1003.751	492.399	0	0	0
567	71	Totals:	130.555	2132.291	-226.123			
568	71	COG (ft):	X: -.036	Y: .108	Z: -.002			
569	72	N3	23.235	-308.991	614.057	-.313	-.05	-.025
570	72	N31	721.49	-280.17	-418.248	.133	-.005	.25
571	72	N43A	-509.844	-305.198	-322.077	.169	.051	-.259
572	72	N138	1.635	1009.836	-995.12	0	0	0
573	72	N140	-864.916	1016.324	499.364	0	0	0
574	72	N142	854.522	1000.49	491.469	0	0	0
575	72	Totals:	226.121	2132.29	-130.556			
576	72	COG (ft):	X: -.036	Y: .108	Z: -.002			
577	73	N3	27.588	-310.122	687.511	-.313	-.06	-.025
578	73	N31	711.304	-279.699	-394.039	.137	.027	.248
579	73	N43A	-468.542	-304.211	-287.324	.17	.031	-.258
580	73	N138	1.887	1012.874	-997.196	0	0	0
581	73	N140	-863.834	1015.361	499.828	0	0	0
582	73	N142	852.706	998.088	491.22	0	0	0

Joint Reactions (By Combination) (Continued)

LC	Joint Label	X [lb]	Y [lb]	Z [lb]	MX [k-ft]	MY [k-ft]	MZ [k-ft]
583	73	Totals:	261.11	2132.29	0		
584	73	COG (ft):	X: -.036	Y: .108	Z: -.002		
585	74	N3	24.549	-311.262	760.659	-.314	-.053
586	74	N31	668.94	-278.449	-355.71	.14	.052
587	74	N43A	-458.847	-303.842	-266.316	.172	.002
588	74	N138	1.633	1015.907	-999.266	0	0
589	74	N140	-861.833	1012.745	499.47	0	0
590	74	N142	851.68	997.191	491.719	0	0
591	74	Totals:	226.122	2132.291	130.556		
592	74	COG (ft):	X: -.036	Y: .108	Z: -.002		
593	75	N3	14.933	-312.104	813.897	-.314	-.032
594	75	N31	605.762	-276.754	-313.538	.141	.063
595	75	N43A	-483.347	-304.189	-264.675	.175	-.027
596	75	N138	.942	1018.122	-1000.777	0	0
597	75	N140	-859.452	1009.178	498.385	0	0
598	75	N142	851.717	998.038	492.832	0	0
599	75	Totals:	130.555	2132.291	226.123		
600	75	COG (ft):	X: -.036	Y: .108	Z: -.002		

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

Member	Shape	Code C...	Loc[ft]	LC Shear ...	Loc[ft]	Dir	LC phi*Pnc [lb]	phi*Pnt [lb]	phi*Mn y-...	phi*Mn z-...	Cb	Eqn			
1	M4	HSS4X4X4	.197	6.714	22	.047	3.555	y	22	109675.0...	139518	16.181	16.181	1...	H1-1b
2	M42	HSS4X4X4	.136	0	37	.040	13.293	y	19	66599.146	139518	16.181	16.181	2...	H1-1b
3	MP1A	PIPE 2.0	.054	3.661	7	.010	3.661		8	20365.524	32130	1.872	1.872	1	H1-1b
4	M23	HSS4X4X4	.196	6.714	24	.064	3.555	y	45	109675.0...	139518	16.181	16.181	1...	H1-1b
5	M36	HSS4X4X4	.196	6.714	20	.054	3.555	y	32	109675.0...	139518	16.181	16.181	1...	H1-1b
6	OVP	PIPE 2.0	.057	2.25	1	.009	2.25		1	28843.414	32130	1.872	1.872	1	H1-1b
7	M75A	HSS4X4X4	.134	0	21	.040	13.293	y	14	66599.146	139518	16.181	16.181	2...	H1-1b
8	M76A	HSS4X4X4	.135	0	17	.039	13.293	y	22	66599.146	139518	16.181	16.181	2...	H1-1b
9	MP2A	PIPE 2.0	.126	3.469	1	.038	3.533		10	20365.524	32130	1.872	1.872	1...	H1-1b
10	MP3A	PIPE 2.0	.123	3.212	1	.038	3.212		4	20365.524	32130	1.872	1.872	1...	H1-1b
11	MP4A	PIPE 2.0	.017	3.34	6	.005	3.405		6	20365.524	32130	1.872	1.872	1...	H1-1b
12	MP1C	PIPE 2.0	.046	3.405	3	.010	3.405		4	20365.524	32130	1.872	1.872	2...	H1-1b
13	MP1B	PIPE 2.0	.046	3.405	11	.010	3.405		12	20365.524	32130	1.872	1.872	2...	H1-1b
14	MP2B	PIPE 2.0	.116	3.34	5	.038	3.34		2	20365.524	32130	1.872	1.872	1...	H1-1b
15	MP3B	PIPE 2.0	.120	3.34	5	.038	3.405		8	20365.524	32130	1.872	1.872	1...	H1-1b
16	MP4B	PIPE 2.0	.018	3.405	10	.004	3.469		10	20365.524	32130	1.872	1.872	1...	H1-1b
17	MP2C	PIPE 2.0	.115	3.34	9	.038	3.405		6	20365.524	32130	1.872	1.872	1...	H1-1b
18	MP3C	PIPE 2.0	.120	3.34	9	.038	3.405		12	20365.524	32130	1.872	1.872	1...	H1-1b
19	MP4C	PIPE 2.0	.018	3.34	9	.005	3.34		2	20365.524	32130	1.872	1.872	1...	H1-1b
20	M93	LL3x3x3x6	.079	0	13	.002	0	z	4	46402.29	70632	6.362	3.751	1	H1-1b*
21	M94	LL3x3x3x6	.079	0	21	.002	0	z	12	46402.29	70632	6.362	3.751	1	H1-1b*
22	M95	LL3x3x3x6	.078	0	17	.002	4.95	z	8	46402.29	70632	6.362	3.751	1	H1-1b*

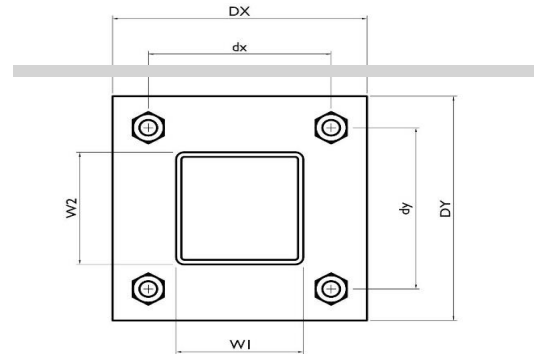
I. Mount-to-Tower Connection Check

Custom Orientation Required No

Tower Connection Bolt Checks Yes

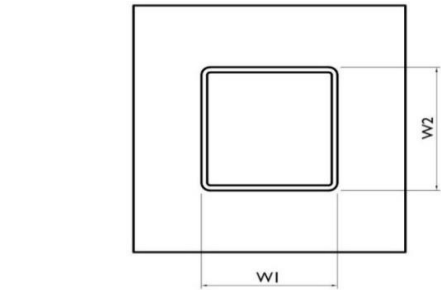
Bolt Orientation Parallel

Bolt Quantity per Reaction:	4
d_x (in) (Delta X of typ. bolt config. sketch):	4
d_y (in) (Delta Y of typ. bolt config. sketch):	8
Bolt Type:	A325N
Bolt Diameter (in):	0.625
Required Tensile Strength / bolt (kips):	2.1
Required Shear Strength / bolt (kips):	0.2
Tensile Capacity / bolt (kips):	20.7
Shear Capacity / bolt (kips):	12.4
Bolt Overall Utilization:	10.4%



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
W_1 (in):	4
W_2 (in):	4
Member Thickness (in):	0.25
Stiffener location a_1 (in):	
Stiffener location b_1 (in):	
Stiffener location a_2 (in):	
Stiffener location b_2 (in):	
F_y (ksi, plate):	36
Plate Thickness (in):	0.5
Length of Yield Line, L_y (in):	5.04
Bolt Eccentricity, e (in):	1.98
M_u (kip-in):	4.26
$\Phi * M_n$ (kip-in):	10.21
Plate Bending Utilization:	41.7%



Tower Connection Weld Checks

Weld Shape:
 Weld Stiffener Configuration:
 Stiffener Notch Length, n (in):
 Weld Size (1/16 in):
 W1 (in):
 W2 (in):
 Weld Total Length (in):
 Z_x (in³/in):
 Z_y (in³/in):
 J_p (in⁴/in):
 c_x (in)
 c_y (in)
 Required combined strength (kip/in):
 Weld Capacity (kip/in):
 Weld Utilization:

Yes
Rectangle
None
0
3
4
4
16.00
21.33
21.33
85.33
2.25
2.25
0.60
4.18
14.3%

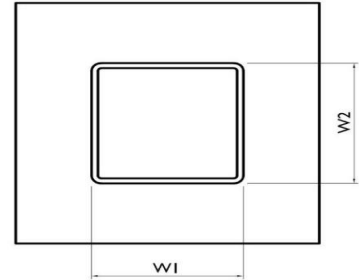
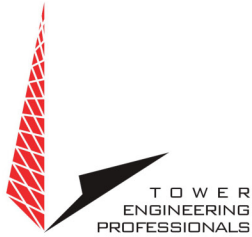


EXHIBIT 5





RF Design and Services
326 Tryon Road
Raleigh, North Carolina 27603
(612) 965-8225
WWW.TEPGROUP.NET

Non-Ionizing Electromagnetic Radiation (NIER) Study

Site Number:

320526

Site Name:

Naugatuck (Telephone Pole)

Location:

Naugatuck, Connecticut

Tenants:

AT&T & Verizon Wireless

Prepared For:

American Tower, Inc.
Woburn, Massachusetts

August 29th, 2023

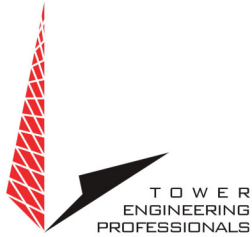
82817 P-405392

Prepared By:

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

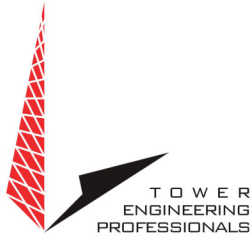
Approved By:

A circular professional engineer seal for the State of Connecticut, featuring the text "STATE OF CONNECTICUT", "SCOTT C. BRADY", "35536", and "LICENSED PROFESSIONAL ENGINEER". A blue ink signature is written over the seal, and the date "09/05/2023" is written in blue ink below it.



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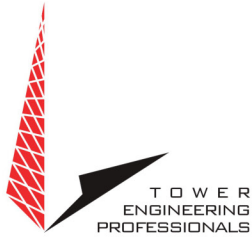
RF Design and Services
326 Tryon Road
Raleigh, North Carolina 27603
(612) 965-8225
WWW.TEPGROUP.NET

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Non-Ionizing Electromagnetic Radiation (NIER) Study

302526 Naugatuck (Telephone Pole)
Naugatuck, 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.

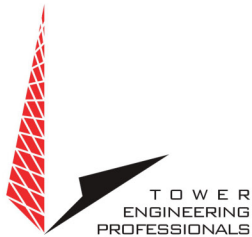
SITE AND FACILITY CONSIDERATIONS

Site 302526 Naugatuck (Telephone Pole) is located at 585 South Main St., in Naugatuck, Connecticut at coordinates 41.313856, -72.364116. The support structure is a 90' monopole. An aerial view of the tower can be found in Appendix 1, Site Photos. The tenants are AT&T Mobility (AT&T) & Verizon Wireless (VZW). A table listing all antennae and effective radiated power (ERP) levels that were used in this study may be found in Appendix 2, Antenna Inventory.

POWER DENSITY CALCULATIONS

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

For the purpose of this study, a radius of 100' from the base of the tower with a height of 6' above ground level was used, beyond 100' the MPE levels become *di minimus*. This study utilized FCC recognized and accepted software programs using the maximum ERP levels for the antenna models provided by ATC. Diagrams depicting the predicted spatial average power density level at any specific location may be found in Appendix 3, MPE Limit Study. A discussion regarding the FCC limits may be found in Appendix 4, Information Pertaining to MPE Studies. Study methodology describing Non-ionizing Radiation Prediction Models used in this study may be found in Appendix 5, MPE Standards Methodology.



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

- ATC furnished data and does not include other unidentified communication facilities.
- Load List at 302526 Naugatuck (Telephone Pole).RF NIER Study sent 8/14/23.
- FCC databases.
- Carrier standard configurations.
- Empirical data collected by TEP.

SITE MITIGATION & CONTROL

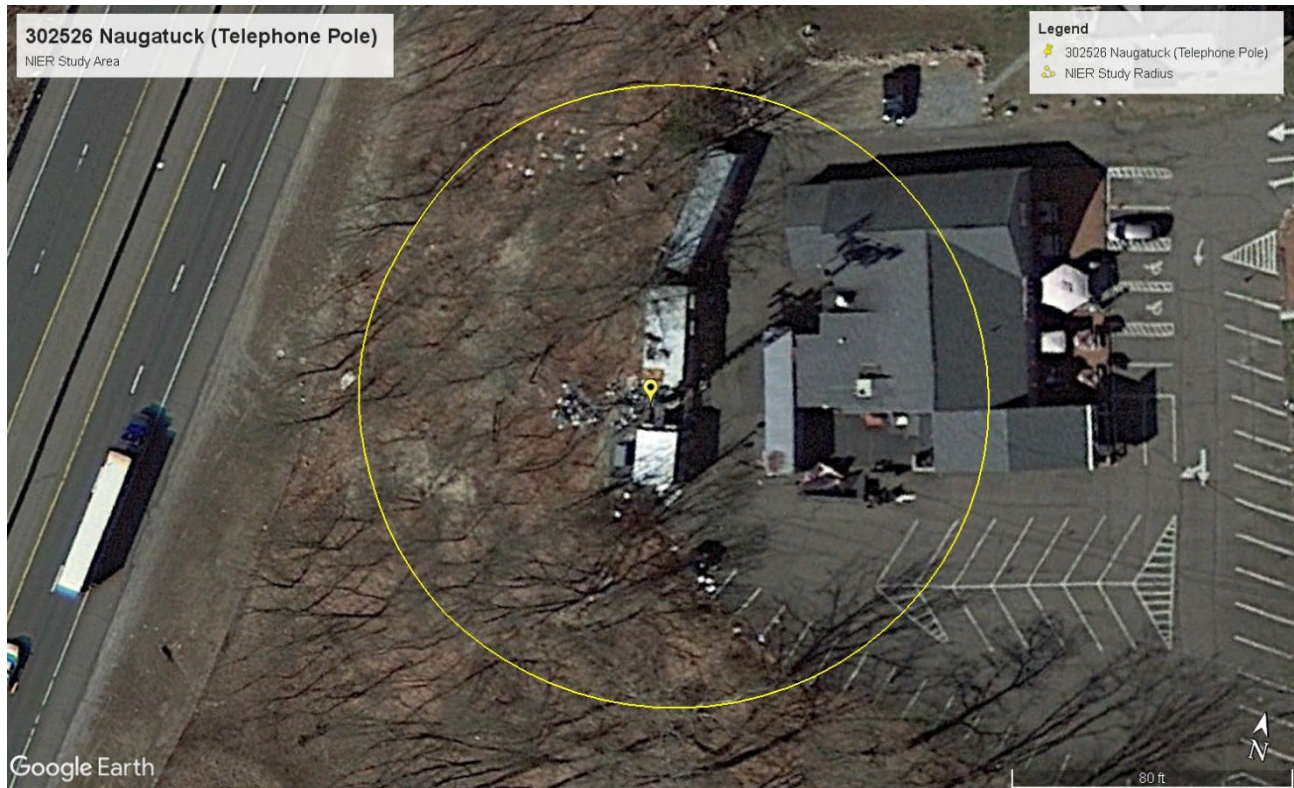
In order to comply with FCC, tenant, & ATC requirements, TEP recommends the placement of signage at the base of the tower and all compound access points to alert workers of potential exposure to RF fields while working on or near the antennae.

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

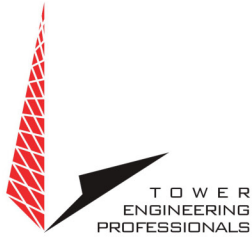
COMPLIANCE DETERMINATION

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

APPENDIX 1 Site Photos

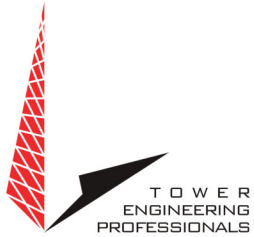


Aerial View of Site

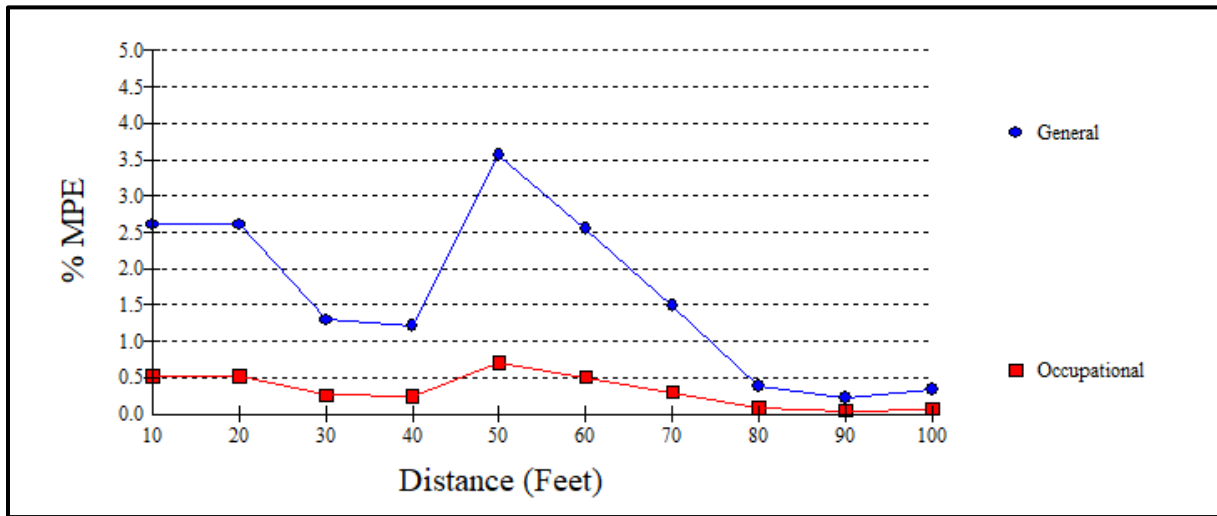


Appendix 2.1 Antenna Inventory

302526 Naugatuck (Telephone Pole)							
Antenna Inventory							
Antenna #	Carrier	Antenna Manufacturer	Antenna Model	Frequency Band (MHz)	Azimuth (°)	Effective Radiated Power (W)	Radiation Center (ft)
1	AT&T	Ericsson	Air 6419	3700/3800/3900	144	20240	92
2	AT&T	Ericsson	Air 6419	3700/3800/3900	286	20240	92
3	AT&T	Quintel	QD6616-7	1700/1800	144	38472	90
4	AT&T	Quintel	QD6616-7	1700/1800	286	38472	90
5	AT&T	Scala	80010965	700/800/1900	144	21833	90
6	AT&T	Scala	80010965	700/800/1900	286	21833	90
7	AT&T	Ericsson	Air 6449	3700/3800/3900	144	30476	88
8	AT&T	Ericsson	Air 6449	3700/3800/3900	286	30476	88
9	Verizon	Samsung	Outdoor CBRS	3500/3600/3700	000	485	40
10	Verizon	Samsung	Outdoor CBRS	3500/3600/3700	120	485	40
11	Verizon	Samsung	Outdoor CBRS	3500/3600/3700	240	485	40
12	Verizon	Commscope	SBNHH-1D65B	700/2100	000	39388	40
13	Verizon	Commscope	SBNHH-1D65B	700/2100	120	39388	40
14	Verizon	Commscope	SBNHH-1D65B	700/2100	240	39388	40
15	Verizon	JMA	MX06FRO660-03	700/800/1900/2100	000	49901	40
16	Verizon	JMA	MX06FRO660-03	700/800/1900/2100	120	49901	40
17	Verizon	JMA	MX06FRO660-03	700/800/1900/2100	240	49901	40
18	Verizon	JMA	MX06FRO660-03	700/800/1900/2100	000	49901	40
19	Verizon	JMA	MX06FRO660-03	700/800/1900/2100	120	49901	40
20	Verizon	JMA	MX06FRO660-03	700/800/1900/2100	240	49901	40
21	Verizon	Samsung	MT6407-77A	3700/3800/3900	000	18286	40
22	Verizon	Samsung	MT6407-77A	3700/3800/3900	120	18286	40
23	Verizon	Samsung	MT6407-77A	3700/3800/3900	240	18286	40

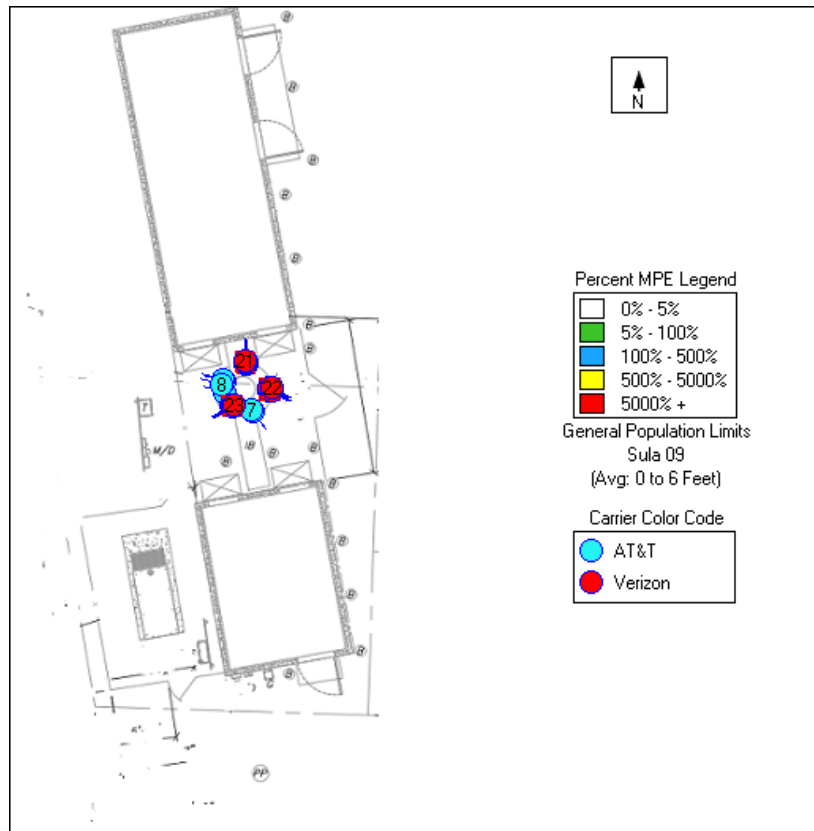


Appendix 3.1 MPE Limit Study



Maximum Power Density (@50'):	0.0216 mW/cm ²
General Population MPE (@50'):	3.526%
Occupational MPE (@50'):	0.7126

Appendix 3.2 MPE Limit Study





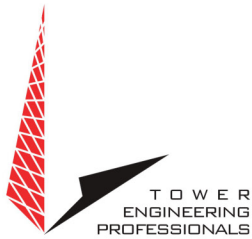
Appendix 4 Information Pertaining to MPE Studies

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

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

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

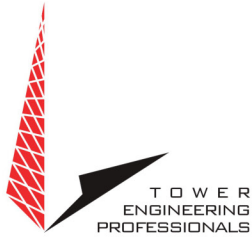
The FCC exposure limits are also based on data showing that the human body absorbs RF energy at some frequencies more efficiently than at others. The most restrictive limits occur in the frequency range of 30-300 MHz where whole-body absorption of RF energy by human beings is most efficient. At other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



MPE limits are defined in terms of power density (units of milliwatts per centimeter squared: 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.

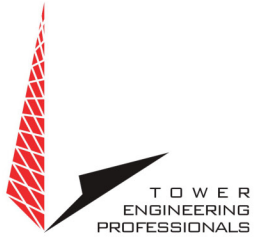
General population/uncontrolled exposure limits apply to situations in which the general public may be exposed or in which persons who are exposed as a consequence of their employment may not be made fully aware of the potential for exposure or cannot exercise control over their exposure. Therefore,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



Appendix 5 MPE Standards Methodology

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

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

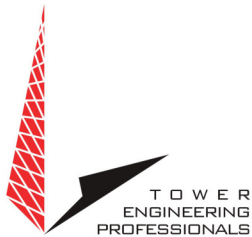


The FCC's limits for exposure at different frequencies are shown in the following Tables.

Limits for Occupational/Controlled Exposure				
Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm 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



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.



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

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

Cylindrical Model (Near Field Predictions)

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

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

Where:

S = Power Density

P = Total Power into antenna

R = Distance from the antenna

L = Antenna aperture length



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

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

Where:

S = Power Density

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.



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



Staff Report:
Petition 623
Verizon
585 New Haven Road (Route 63), Naugatuck
May 6, 2003

On Monday, May 05, 2003, Council member Gerry Heffernan and staff member David Martin met with Verizon representatives Ken Baldwin and Sandy Carter at 585 New Haven Road, Naugatuck. At this location, there is a 49-foot tall wooden pole on which Cingular currently has a set of wireless antennas. The pole is at the edge of the parking lot behind a café. From the parking lot, the land slopes very steeply down to Route 8. Verizon is seeking to replace the wooden pole with a steel monopole of the same height. Cingular's antennas would be placed on the top of the new pole; Verizon would install 12 antennas ten feet below at about 40 feet AGL. The new pole would be located approximately 15 feet northeast of the existing pole. Verizon would add a 12' x 30' equipment shelter just north of the replacement pole.

The area surrounding the petition property is primarily commercial. The low height of the existing tower and its location behind the café minimize its visual impact from Route 63. The tower does have some visibility from Route 8, but at 50 feet, it is not much higher than the surrounding trees and it's at a much higher elevation than the highway making it less likely to be noticed by passing drivers.

According to calculations submitted by Verizon, at the point where the power density generated by the replacement facility would be the highest, it would represent approximately 2.55 % of the regulatory limit.

Based on the evidence presented in the petition and the field review, it is unlikely that this proposed tower replacement would create any significant adverse environmental impacts.

EXHIBIT 7





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UPS Service:	UPS Ground
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Reference Number:	13683578

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Number of Packages:	1
UPS Service:	UPS Ground
Package Weight:	1.0 LBS
Reference Number:	13683578

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To: [Derek Maheux](#)
Subject: Re: Is this still showing as out for delivery?
Date: Friday, March 1, 2024 11:04:15 AM
Attachments: [image001.png](#)
[Outlook-Logo_icon.png](#)

I never got a notification of delivery, but it was delivered



Your shipment from ☆

CENTERLINE SITE ACQUISITION

✓ Delivered On
Tuesday, February 27 at 12:41 P.M. at Met Customer


Delivered To [Proof of Delivery](#)
1920 S PROVIDENCE RD
NORTH CHESTERFIELD, VA 23236 US

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You have the same information as our customer agents. If you need more support, use the [virtual assistant](#).

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Barbara Kassabian | Project Coordinator
750 W Center St, Suite 301 | West Bridgewater, MA 02379
Mobile: 603-303-8001
bkassabian@clinellc.com | www.centerlinecommunications.com

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Subject: Is this still showing as out for delivery?



Derek Maheux |
750 W Center St, Suite 301 | West Bridgewater, MA 02379
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