Robinson+Cole

KENNETH C. BALDWIN

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Also admitted in Massachusetts
and New York

August 11, 2021

Via Electronic Mail

Melanie A. Bachman, Esq.
Executive Director/Staff Attorney
Connecticut Siting Council
10 Franklin Square
New Britain, CT 06051

Re: **Notice of Exempt Modification – Facility Modification**
33 (a/k/a 86) Boardman Road, New Milford, Connecticut

Dear Attorney Bachman:

Cellco Partnership d/b/a Verizon Wireless ("Cellco") currently maintains an existing wireless telecommunications facility at the above-referenced property address (the "Property"). The facility consists of antennas and remote radio heads attached to a tower and related equipment on the ground, near the base of the tower. The tower was approved by the Siting Council in July of 2004 (Docket No. 285). Cellco's use of the tower was approved by the Siting Council in January of 2006 (EM-VER-017-020-096-068-060104). A copy of Siting Council's Docket No. 285 Decision and Order and 2006 approval of the Cellco installation are included in Attachment 1.

Cellco now intends to modify its facility by removing nine (9) existing antennas and installing three (3) new Samsung MT6407-77A antennas; and six (6) MX06FRO660-03 antennas. Cellco will also remove nine (9) existing remote radio heads ("RRHs") and install six (6) new RRHs all on Cellco's existing antenna mounting system. A set of project plans showing Cellco's proposed facility modifications and new antennas and RRHs specifications are included in Attachment 2.

Please accept this letter as notification pursuant to R.C.S.A. § 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 New Milford'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).

1. The proposed modifications will not result in an increase in the height of the existing tower. Cellco's replacement antennas will be installed on Cellco's existing antenna mounts.

2. The proposed modifications will not involve any change to ground-mounted equipment and, therefore, 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 installation of Cellco's new antennas and RRHs will not increase radio frequency (RF) emissions at the facility to a level at or above the Federal Communications Commission (FCC) safety standard. A cumulative general power density table for Cellco's modified facility is included in Attachment 3. The modified facility will be capable of providing Cellco's 5G wireless service.

5. The proposed modifications will not cause a change or alteration in the physical or environmental characteristics of the site.

6. According to the attached Structural Analysis ("SA") and Mount Analysis ("MA"), the existing tower, tower foundation and antenna mounts with certain modifications can support Cellco's proposed modifications. Copies of the SA and MA are included in Attachment 4.

A copy of the parcel map and Property owner information is included in Attachment 5. A Certificate of Mailing verifying that this filing was sent to municipal officials and the property owner is included in Attachment 6.

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

Sincerely,

Kenneth C. Baldwin

Enclosures
Copy to:
Pete Bass, New Milford Mayor
Lauran Regan, New Milford Town Planner/Zoning Enforcement Officer/Land Use Supervisor
Quarry Stone and Gravel LLC, Property Owner
Karla Hanna

ATTACHMENT 1

DOCKET NO. 285 - Sprint Spectrum, L.P. application for a Certificate of Environmental Compatibility and Public Need for the construction, maintenance and operation of a wireless telecommunications facility at 33 Boardman Road, New Milford, Connecticut.	} } }	Connecticut Siting Council July 13, 2004

Decision and Order

Pursuant to the foregoing Findings of Fact and Opinion, the Connecticut Siting Council (Council) finds that the effects associated with the construction, operation, and maintenance of a telecommunications facility including effects on the natural environment; ecological integrity and balance; public health and safety; scenic, historic, and recreational values; forests and parks; air and water purity; and fish and wildlife are not disproportionate either alone or cumulatively with other effects when compared to need, are not in conflict with the policies of the State concerning such effects, and are not sufficient reason to deny the application and therefore directs that a Certificate of Environmental Compatibility and Public Need, as provided by General Statutes **§** 16-50k, be issued to Sprint Spectrum, L.P. for the construction, maintenance and operation of a wireless telecommunications facility at 33 Boardman Road, New Milford, Connecticut.

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

1. The tower shall be constructed as a monopole, no taller than necessary to provide the proposed telecommunications services, sufficient to accommodate the antennas of Sprint Spectrum L.P., Nextel Communications, Inc., and other entities, both public and private, but such tower shall not exceed a height of 150 feet above ground level. The height at the top of the antennas shall not exceed a height of 153 feet above ground level.

2. The Certificate Holder shall prepare a Development and Management (D&M) Plan for this site in compliance with Sections 16-50j-75 through 16-50j-77 of the Regulations of Connecticut State Agencies. The D&M Plan shall be served on the Town of New Milford, and all parties and intervenors as listed in the service list, and submitted to and approved by the Council prior to the commencement of facility construction. The D&M shall include:

a. a final site plan(s) of site development to include specifications for the tower, tower foundation, antennas, equipment building, access road, utility line, and landscaping; and

b. construction plans for site clearing, water drainage, and erosion and sedimentation control consistent with the 2002 Connecticut Guidelines for Soil Erosion and Sediment Control, as amended.

3. Prior to submission of the D&M plan to the Council, the Certificate Holder shall discuss the appropriateness and feasibility of stealth tower designs for this site with the Town. The Town and Certificate Holder shall agree upon the final tower design.

4. The Certificate Holder shall, prior to the commencement of operation, provide the Council worst-case

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

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

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

7. The Certificate Holder shall provide reasonable space on the tower for no compensation for any municipal antennas, provided such antennas are compatible with the structural integrity of the tower.

8. If the facility does not initially provide wireless services within one year of completion of construction or ceases to provide wireless services for a period of one year, this Decision and Order shall be void, and the Certificate Holder shall dismantle the tower and remove all associated equipment or reapply for any continued or new use to the Council before any such use is made.

9. Any antenna that becomes obsolete and ceases to function shall be removed within 60 days after such antennas become obsolete and cease to function.

10. Unless otherwise approved by the Council, this Decision and Order shall be void if the facility authorized herein is not operational within one year of the effective date of this Decision and Order or within one year after all appeals to this Decision and Order have been resolved. Any request for extension of this

period shall be filed with the Council no later than sixty days prior to expiration date of this Certificate and shall be served on all parties and intervenors, as listed in the service list. Any proposed modifications to this Decision and Order shall likewise be so served.

Pursuant to General Statutes **§** 16-50p, we hereby direct that a copy of the Findings of Fact, Opinion, and Decision and Order be served on each person listed below, and notice of issuance shall be published in the Hartford Courant, the New Milford Spectrum, and the New Milford Times.

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

The parties and intervenors to this proceeding are:

Applicant	**Its Representative**
Sprint Spectrum, L.P.	Thomas J. Regan, Esquire Brown Rudnick Berlack Isreals LLP CityPlace I, 38th Floor 185 Asylum Street Hartford, CT 06103-3402
Intervenor	**Its Representative**
Nextel Communications, Inc.	Julie Donaldson Kohler Hurwitz & Sagarin P.O. Box 112 Milford, CT 06460

STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

Ten Franklin Square, New Britain, CT 06051
Phone: (860) 827-2935 Fax: (860) 827-2950
E-Mail: siting.council@po.state.ct.us
www.ct.gov/csc

January 26, 2006

Kenneth C. Baldwin, Esq.
Robinson & Cole LLP
280 Trumbull Avenue
Hartford, CT 06103-3597

RE: **EM-VER-017-020-096-068-060104** - Cellco Partnership d/b/a Verizon Wireless notice of intent to modify existing telecommunications facilities located at 371 Terryville Avenue, Bristol; 12 Nepaug Road, Burlington; 399 Chestnut Land Road, New Milford; 33 Boardman Road, New Milford; and 136 Bulls Bridge Road, Kent, Connecticut.

Dear Attorney Baldwin:

At a public meeting held on January 25, 2006, the Connecticut Siting Council (Council) acknowledged your notice to modify these existing telecommunications facilities, pursuant to Section 16-50j-73 of the Regulations of Connecticut State Agencies.

The proposed modifications are to be implemented as specified here and in your notice dated January 4, 2006, including the placement of all necessary equipment and shelters within the tower compounds. The modifications are in compliance with the exception criteria in Section 16-50j-72 (b) of the Regulations of Connecticut State Agencies as changes to existing facility sites that would not increase tower heights, extend the boundaries of the tower sites, increase noise levels at the tower site boundaries by six decibels, and increase the total radio frequencies electromagnetic radiation power densities measured at the tower site boundaries to or above the standard adopted by the State Department of Environmental Protection pursuant to General Statutes § 22a-162. These facilities have also been carefully modeled to ensure that radio frequency emissions are conservatively below State and federal standards applicable to the frequencies now used on these towers.

This decision is under the exclusive jurisdiction of the Council. Please be advised that the validity of this action shall expire one year from the date of this letter. Any additional change to any of these facilities will require explicit notice to this agency pursuant to Regulations of Connecticut State Agencies Section 16-50j-73. Such notice shall include all relevant information regarding the proposed change with cumulative worst-case modeling of radio frequency exposure at the closest point of uncontrolled access to the tower base, consistent with Federal Communications Commission, Office of Engineering and Technology, Bulletin 65. Any deviation from this format may result in the Council implementing enforcement proceedings pursuant to General Statutes § 16-50u including, without limitation, imposition of expenses resulting from such failure and of civil penalties in an amount not less than one thousand dollars per day for each day of construction or operation in material violation.

Thank you for your attention and cooperation.

Very truly yours,

Pamela B. Katz, P.E.
Chairman

PBK/laf

c: See attached List

List Attachment:

c: The Honorable William T. Stortz, Mayor, City of Bristol
Alan Weiner, Planner/Dev. Coordinator, City of Bristol
The Honorable Theodore C. Scheidel, Jr., First Selectman, Town of Burlington
Robert J. Coates, Planning and Zoning Chairman, Town of Burlington
The Honorable Ruth S. Epstein, First Selectman, Town of Kent
Judith Wick, Zoning Enforcement Officer, Town of Kent
The Honorable Patricia A. Murphy, Mayor, Town of New Milford
Christopher B. Fisher, Esq., Cuddy & Feder LLP
Michele G. Briggs, New Cingular Wireless PCS, LLC
Thomas F. Flynn III, Sprint Nextel Corporation
Thomas J. Regan, Esq., Brown Rudnick Berlack Israels LLP

ATTACHMENT 2

verizon

WIRELESS COMMUNICATIONS FACILITY

NEW MILFORD W CT
33 AKA 86 BOARDMAN ROAD
NEW MILFORD, CT 06776

DRAWING INDEX

T-1 **TITLE SHEET**

C-1 **COMPOUND PLAN, TOWER ELEVATION, EQUIPMENT CONFIGURATION PLANS & ELEVATIONS.**

B-1 **RF BILL OF MATERIALS, MECHANICAL SPECIFICATIONS & EQUIPMENT DETAILS.**

N-1 **NOTES & SPECIFICATIONS**

SITE DIRECTIONS

START: **20 ALEXANDER DRIVE**
WALLINGFORD, CONNECTICUT 06492

END: **33 AKA 86 BOARDMAN ROAD**
NEW MILFORD, CT 06776

1.	HEAD SOUTH TOWARDS ALEXANDER DRIVE	279 FT
2.	SLIGHT RIGHT TOWARDS ALEXANDER DRIVE	269 FT
3.	TURN RIGHT TOWARDS ALEXANDER DRIVE	167 FT
4.	TURN RIGHT ONTO ALEXANDER DRIVE	0.3 MI
5.	TURN RIGHT ONTO BARNES INDUSTRIAL RD S.	0.1 MI
6.	TURN RIGHT ONTO CT-68 W	0.4 MI
7.	TURN RIGHT ONTO N. COLONY RD	0.3 MI
8.	TURN RIGHT ONTO CT-15 N	0.5 MI
9.	CONTINUE ONTO CT-15 N	3.1 MI
10.	TAKE EXIT 68 W TO 1-691 W	7.9 MI
11.	TAKE EXIT 1 TO I-84 W	1.0 MI
12.	CONTINUE ON I-84 W TO EXIT 15	17.8 MI
13.	TAKE EXIT 15 TOWARD SOUTHBURY	0.3 MI
14.	TURN RIGHT ONTO US-6 E	1.4 MI
15.	TURN LEFT ONTO CT-67 W	6.7 MI
16.	TURN LEFT TO STAY ON CT-67 W	367 FT
17.	CONTINUE STRAIGHT ONTO CHURCH ST	381 FT
18.	CONTINUE ONTO WELLERS BRIDGE RD	1.3 MI
19.	TURN LEFT ONTO CT-67 W	5.3 MI
20.	TURN SLIGHTLY LEFT ONTO US-202 W/BRIDGE ST	0.5 MI
21.	TURN RIGHT ONTO US-7 N	2.3 MI
22.	TURN RIGHT ONTO BOARDMAN RD (DESTINATION WILL BE ON THE LEFT)	0.2 MI

LOCATION MAP
SCALE : 1" = 2000'-0"

SITE INFORMATION

VZ SITE NAME: NEW MILFORD W CT
VZ PROJ FUZE I.D.: 16244606
VZ LOCATION CODE: 467734
VZ PROJECT CODE: 20202198988
LOCATION: 33 AKA 86 BOARDMAN ROAD
NEW MILFORD, CT 06776

PROJECT SCOPE: REFER TO NOTES ON C-1 FOR SCOPE OF WORK.

MAP/BLOCK/LOT: 47/73

ZONING DISTRICT: I (INDUSTRIAL ZONE) / R-40 (RESIDENTIAL ZONE)

LATITUDE: 41° 35' 57.8796" N (41.599411° N)
LONGITUDE: 73° 26' 14.9208" W (73.437478° W)
SITE COORDINATES AND GROUND ELEVATION OBTAINED FROM GOOGLE EARTH.

GROUND ELEVATION: 579'± AMSL

PROPERTY OWNER: QUARRY STONE AND GRAVEL LLC
O&G INDUSTRIES
112 WALL STREET
TORRINGTON, CT 06790

APPLICANT: CELLCO PARTNERSHIP
d/b/a VERIZON WIRELESS
20 ALEXANDER DRIVE
WALLINGFORD, CT 06492

LEGAL/REGULATORY COUNSEL: ROBINSON & COLE, LLP
KENNETH C. BALDWIN, ESQ.
280 TRUMBULL STREET
HARTFORD, CT 06103

ENGINEER CONTACT: ALL-POINTS TECHNOLOGY CORPORATION, P.C.
567 VAUXHALL STREET EXTENSION - SUITE 311
WATERFORD, CT 06385
(860) 663-1697

VERIZON SMART TOOL PROJECT #: 10082846; 10019472

Cellco Partnership d/b/a
verizon
20 ALEXANDER DRIVE
WALLINGFORD, CT 06492

ALL-POINTS TECHNOLOGY CORPORATION
567 VAUXHALL STREET EXTENSION - SUITE 311
WATERFORD, CT 06385 PHONE: (860)-663-1697
WWW.ALLPOINTSTECH.COM FAX: (860)-663-0935

CONSTRUCTION DOCUMENTS

NO	DATE	REVISION
0	12/16/20	FOR REVIEW: JRM
1	08/04/21	FOR REVIEW: JRM
2	08/05/21	FOR FILING: JRM
3		
4		
5		
6		

STATE OF CONNECTICUT
MICHAEL TRODDEN
33315
LICENSED
PROFESSIONAL ENGINEER

DESIGN PROFESSIONALS OF RECORD

PROF: MICHAEL S. TRODDEN P.E.
COMP: ALL-POINTS TECHNOLOGY CORPORATION, P.C.
ADD: 567 VAUXHALL STREET EXT. SUITE 311 WATERFORD, CT 06385

OWNER: QUARRY STONE AND GRAVEL LLC, O&G INDUSTRIES
ADDRESS: 112 WALL STREET TORRINGTON, CT 06790

NEW MILFORD W CT

SITE ADDRESS: 33 AKA 86 BOARDMAN ROAD NEW MILFORD, CT 06776

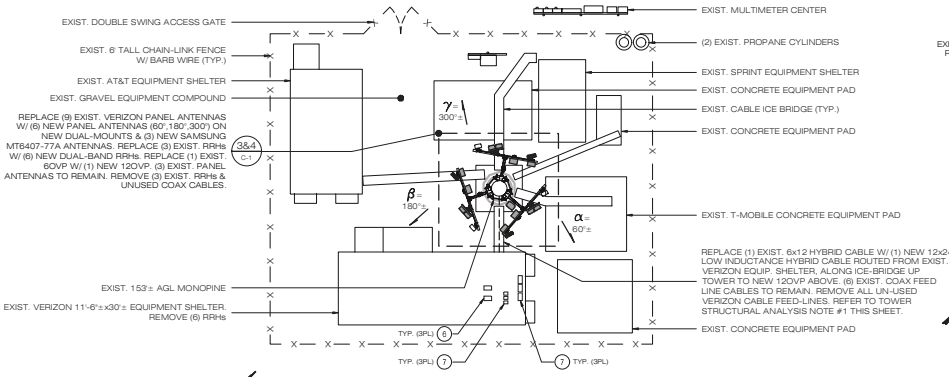
APT FILING NUMBER: CT141_11730

DRAWN BY: CSH
DATE: 12/16/20 **CHECKED BY:** JRM

VZ PROJECT CODE: 20202198988
VZ LOCATION CODE: 467734
VZ FUZE ID: 16244606

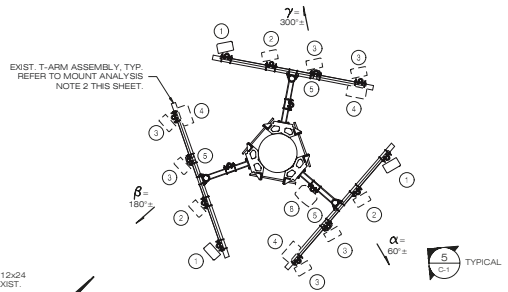
SHEET TITLE:
TITLE SHEET

SHEET NUMBER:
T-1



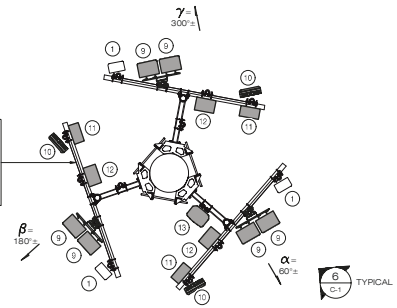
1 COMPOUND PLAN
C-1 SCALE : 1" = 10'-0"

10' SCALE: 1 INCH= 10'-0"

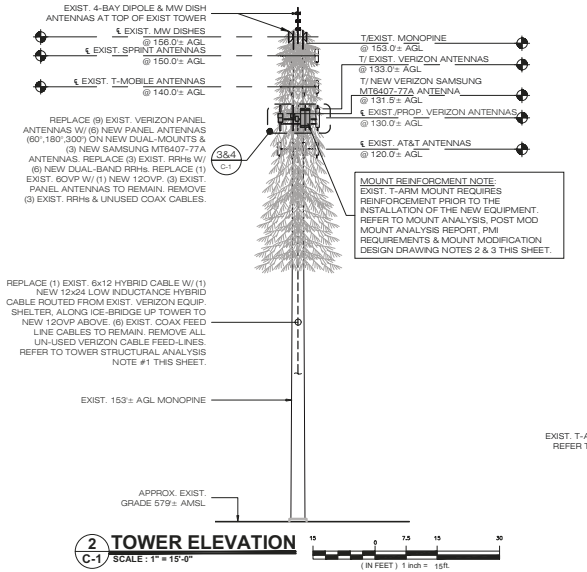


3 EQUIP. CONFIGURATION PLAN (EXIST.)
C-1 SCALE : ¼" = 1'-0"

MOUNT REINFORCMENT NOTE:
EXIST. T-ARM MOUNTS REQUIRE REINFORCEMENT PRIOR TO THE INSTALLATION OF THE NEW EQUIPMENT. REFER TO MOUNT ANALYSIS, POST MOD MOUNT ANALYSIS REPORT, PMI REQUIREMENTS & MOUNT MODIFICATION DESIGN DRAWING NOTES 2 & 3 THIS SHEET.

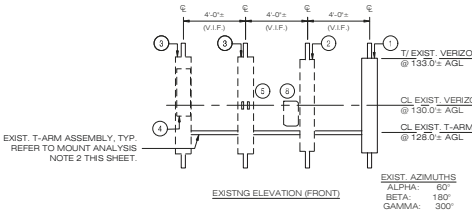


4 EQUIP. CONFIGURATION PLAN (NEW)
C-1 SCALE : ¼" = 1'-0"

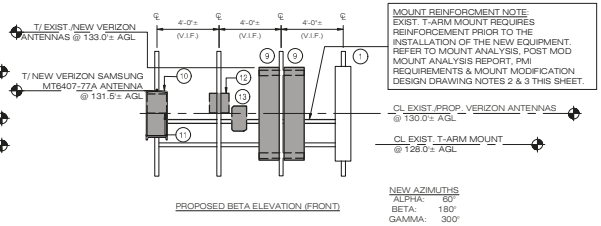


2 TOWER ELEVATION
C-1 SCALE : 1" = 15'-0"

(IN FEET) 1 inch = 15ft.



5 EQUIP. MOUNTING CONFIG. (EXIST.)
SCALE : ¼" = 1'-0"



MOUNT REINFORCMENT NOTE:
EXIST. T-ARM MOUNT REQUIRES REINFORCEMENT PRIOR TO THE INSTALLATION OF THE NEW EQUIPMENT. REFER TO MOUNT ANALYSIS, POST MOD MOUNT ANALYSIS REPORT, PMI REQUIREMENTS & MOUNT MODIFICATION DESIGN DRAWING NOTES 2 & 3 THIS SHEET.

6 EQUIP. MOUNTING CONFIG. (NEW)
C-1 SCALE : ¼" = 1'-0"

GENERAL ABBREVIATION LIST:

□	ABP	ABOVE BASE PLATE
□	AGL	ABOVE GROUND LEVEL
□	AMSL	ABOVE MEAN SEA LEVEL
□	AWS	ADVANCED WIRELESS SERVICE
□	HDG	HOT DIP GALVANIZED
□	OVP	OVER VOLTAGE PROTECTION
□	RRH	REMOTE RADIO HEAD
□	V.I.F.	VERIFY IN FIELD
□	W.P.	WORK POINT
□	A.F.R.	ABOVE FINISH ROOF

SCOPE OF WORK (ALL) SECTORS

1. EXIST. ANTENNA (TO REMAIN) MODEL: ANDREW LNX-8513DS-A1M
2. EXIST. ANTENNA (TO BE REPLACED) MODEL: ANTEL BXA-70063-6CF
3. EXIST. ANTENNA (TO BE REPLACED) MODEL: ANDREW HBXX-6517DS-A2M
4. EXIST. RRH (TO BE REPLACED) MODEL: NOKIA B4 2x60W AWS RRH
5. EXIST. DIPLEXER (TO BE REMOVED) MODEL: RFS FD9R6004/1C-3L
6. EXIST. RRH (TO BE REPLACED) MODEL: NOKIA B13 RRH 4x30-700
7. (3) EXIST. RRHs & (3) EXIST. TWIN TRIPLEXERS (TO BE REMOVED FROM WITHIN EXIST. EQUIP. SHELTER) RRH MODEL: NOKIA B25 RRH 4X30-1900
8. EXIST. 6 OVP (TO BE REPLACED) MODEL: RAYCAP RRFDC3315-PF-48 (V.I.F.)
9. NEW ANTENNA MODEL: JMA MX06FRO660-03 MOUNTED ON NEW JMA DUAL MOUNT (P/N 91900314-2) & (1) P2.5 STD PIPE (2.875' O.D. x 8'-0" LG)
10. NEW ANTENNA MODEL: SAMSUNG MT6407-77A
11. NEW DUAL BAND RRH MODEL: SAMSUNG B13/B5 RRH-BR04C (RFV01U-D2A)
12. NEW DUAL BAND RRH MODEL: SAMSUNG B66/B2A RRH-BR049 (RFV01U-D1A)
13. NEW 12OVP (ALPHA ONLY) MODEL: RAYCAP RVZDC-6627-PF-48

NOTES:

1. REFER TO TOWER STRUCTURAL ANALYSIS REPORT PREPARED BY ALL POINTS TECHNOLOGY CORPORATION, P.C. DATED 08/05/21 AVAILABLE UNDER SEPARATE COVER.
2. REFER TO MOUNT ANALYSIS REPORT PREPARED BY MASER CONSULTING, P.A., PROJECT #20777375 MARKED REV0, DATED 06/25/21 AVAILABLE UNDER SEPARATE COVER.
3. REFER TO POST MOD MOUNT ANALYSIS REPORT, PMI REQUIREMENTS & MOUNT MODIFICATION DESIGN DRAWINGS PREPARED BY MASER CONSULTING, P.A., PROJECT #21777046, DATED 06/30/21 AVAILABLE UNDER SEPARATE COVER.
4. BASE MAPPING FROM FIELD MEASUREMENTS TAKEN BY ALL-POINTS TECH. CORP., P.C. ON 11/20/20.
5. PROJECT SCOPE INCLUDES THE FOLLOWING:
   - □ REPLACEMENT OF (9) EXIST. PANEL ANTENNAS w/ (6) NEW PANEL ANTENNAS ON DUAL MOUNTS (JMA P/N 91900314) & (3) NEW SAMSUNG MT6407-77A ANTENNAS.
   - □ REPLACEMENT OF (6) EXIST. RRHs w/ (6) NEW DUAL BAND RRHs.
   - □ REPLACEMENT OF (1) EXIST. 6OVP w/ (1) NEW 12OVP. (ALPHA ONLY)
   - □ REPLACEMENT OF (1) EXIST. 6x12 HYBRID FEED LINE CABLE w/ (1) NEW 12x24 LOW INDUCTANCE HYBRID FEED LINE CABLE.
   - □ REMOVAL OF (6) EXIST. DIPLEXERS (TOWER).
   - □ REMOVAL OF (3) EXIST. RRHs & (3) EXIST. TRIPLEXERS LOCATED WITHIN EXIST. VERIZON EQUIP. SHELTER.
   - □ REMOVAL OF ALL UNUSED VERIZON COAX CABLE FEED-LINES.
6. ALL EXPOSED STEEL AND HARDWARE TO BE HOT DIP GALV. (HDG). PAINT TO MATCH EXIST. (WHERE APPLICABLE)
7. CAP & WEATHERPROOF ALL UN-USED CABLE ENTRY PORTS (WHERE APPLICABLE).
8. MOUNT & GROUND ALL NEW EQUIPMENT IN ACCORDANCE WITH NEC (NFPA-70), NESC AND MANUFACTURERS SPECIFICATION.
9. SECURE ALL NEW ANTENNA CABLES PER MANUFACTURER RECOMMENDATIONS.
10. BOND NEW ANTENNA MOUNTING PIPES TO ANTENNA SECTOR GROUND BAR w/ # 2 AWG, BCW, (WHERE APPLICABLE).
11. CONTRACTOR SHALL INSTALL NEW SIDE-BY-SIDE & DUAL-MOUNT BRACKETS PER ANTENNA MOUNT MANUFACTURER RECOMMENDATIONS, INCLUDING VERIFICATION OF MINIMUM PIPE MAST DIAMETER REQUIRED TO INSTALL NEW MOUNT BRACKETS. CONTRACTOR SHALL NOTIFY ENGINEER OF RECORD SHOULD EXIST. PIPE MASTS REQUIRE REPLACEMENT TO SUPPORT THE NEW MOUNT BRACKETS.
12. ANTENNA CONFIGURATIONS SHOWN HEREIN ARE FRONT ELEVATIONS.
13. ANTENNA SPACING DIMENSIONS ARE TO THE CENTER OF THE EXIST. ANTENNA AND PROP. ANTENNA FACE.
14. REFER TO THE FINAL RFDS PROVIDED BY VERIZON FOR THE LATEST INFORMATION REGARDING EQUIPMENT MODELS, REQUIRED CABLING & DOWN-TILT INFORMATION.
15. COORDINATE ALL LSUB6 COLOR MATCHING (WHERE APPLICABLE) W/ LSUB6 MANUFACTURER INSTALLATION REQUIREMENTS, VERIZON CONSTRUCTION MANAGER & OWNER.
16. PAINT ALL NEW NON SAMSUNG MT6407-77A ANTENNAS & APPURTENANCES TO MATCH EXIST. STRUCTURE (WHERE APPLICABLE) COORDINATE W/ VERIZON CONSTRUCTION MANAGER & BUILDING OWNER.

Cellco Partnership d/b/a
verizon
20 ALEXANDER DRIVE
WALLINGFORD, CT 06492

ALL-POINTS TECHNOLOGY CORPORATION
567 VAUXHALL STREET EXTENSION - SUITE 311
WATERFORD, CT 06385 PHONE: (860)-663-1697
WWW.ALLPOINTSTECH.COM FAX: (860)-663-0935

CONSTRUCTION DOCUMENTS

NO	DATE	REVISION
0	12/16/20	FOR REVIEW: JRM
1	08/04/21	FOR REVIEW: JRM
2	08/05/21	FOR FILING: JRM
3		
4		
5		
6		

STATE OF CONNECTICUT MICHAEL TRODDEN 33315 LICENSED PROFESSIONAL ENGINEER

DESIGN PROFESSIONALS OF RECORD

PROF: MICHAEL S. TRODDEN P.E.
COMP: ALL-POINTS TECHNOLOGY CORPORATION, P.C.
ADD: 567 VAUXHALL STREET EXT. SUITE 311 WATERFORD, CT 06385

OWNER: QUARRY STONE AND GRAVEL LLC, O&G INDUSTRIES
ADDRESS: 112 WALL STREET TORRINGTON, CT 06790

NEW MILFORD W CT

SITE ADDRESS: 33 AKA 86 BOARDMAN ROAD NEW MILFORD, CT 06776

APT FILING NUMBER: CT141_11730

DRAWN BY: CSH
DATE: 12/16/20
CHECKED BY: JRM

VZ PROJECT CODE: 20202198988
VZ LOCATION CODE: 467734
VZ FUZE ID: 16244606

SHEET TITLE:
COMPOUND PLAN, TOWER ELEVATION, EQUIP. CONFIGURATION PLANS & ELEVATIONS

SHEET NUMBER:
C-1

EQUIPMENT DATA

EQUIPMENT SPECIFICATIONS

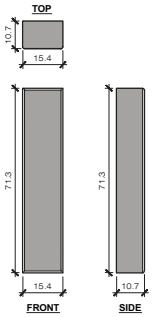
SECTOR	ANTENNA MAKE/MODEL	QTY	AZIMUTH	EQUIPMENT STATUS	HEIGHT (IN)	WIDTH (IN)	DEPTH (IN)	WEIGHT (LBS)
ALPHA	CDMA: ANDREW LNX-8513DS-A1M	1	60°	ETR	72.7	11.9	7.1	39.2(5)
	700/850/1900/2100: JMA MX06FRO660-03	1	60°	NEW	71.3	15.4	10.7	60.0(5)
	700/850/1900/2100: JMA MX06FRO660-03	1	60°	NEW	71.3	15.4	10.7	60.0(5)
	SAMSUNG MT6407-77A	1	60°	NEW	35.1(5)	16.1(5)	5.51(5)	87.1(5)(6)
BETA	CDMA: ANDREW LNX-8513DS-A1M	1	180°	ETR	72.7	11.9	7.1	39.2(5)
	700/850/1900/2100: JMA MX06FRO660-03	1	180°	NEW	71.3	15.4	10.7	60.0(5)
	700/850/1900/2100: JMA MX06FRO660-03	1	180°	NEW	71.3	15.4	10.7	60.0(5)
	SAMSUNG MT6407-77A	1	180°	NEW	35.1(5)	16.1(5)	5.51(5)	87.1(5)(6)
GAMMA	CDMA: ANDREW LNX-8513DS-A1M	1	300°	ETR	72.7	11.9	7.1	39.2(5)
	700/850/1900/2100: JMA MX06FRO660-03	1	300°	NEW	71.3	15.4	10.7	60.0(5)
	700/850/1900/2100: JMA MX06FRO660-03	1	300°	NEW	71.3	15.4	10.7	60.0(5)
	SAMSUNG MT6407-77A	1	300°	NEW	35.1(5)	16.1(5)	5.51(5)	87.1(5)(6)
	APPURTENANCE MAKE/MODEL							
	SAMSUNG B2/B66A RRH-BR049 (RFV01U-D1A)	3	-	NEW	14.9	14.9	10.04	97.5
	SAMSUNG B5/B13 RRH-BR04C (RFV01U-D2A)	3	-	NEW	14.9	14.9	8.14	82.0
	RAYCAP RVZDC-6627-PF-48	3	-	NEW	29.5	16.5	12.6	32.0

(1) 'ETR' DENOTES EXIST. TO REMAIN
(2) WEIGHT WITHOUT MOUNTING BRACKET.
(3) ANTENNA DATA BASED ON RFDS DATED 10/27/20
(4) EQUIPMENT CONFIGURATION INDICATED ABOVE VIEWED FROM BEHIND.
(5) NOT TO EXCEED

BILL OF MATERIALS

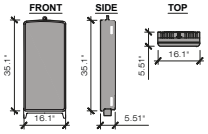
		QUANTITY	LENGTH	COMMENTS
1	700/850/1900/2100/CBRS	6		(JMA MX06FRO660-03) MOUNTED W/ NEW JMA DUAL MOUNT (P/N 91900314-2) & (1) P2.5 STD PIPE (2.875" O.D.)
2	SAMSUNG MT6407-77A	3		
3	1/2" JUMPER CABLE	36	15 FT	ROUTE FROM RRH TO ANTENNAS
4	ANTENNA LINK CABLES	9	15 FT	ROUTE FROM UPPER OVP TO ANTENNAS
5	ANTENNA POWER CABLES	3	15 FT	PROPRIETARY POWER CABLE FROM UPPER OVP TO ANTENNAS
6	AWS/PCS RRH	3		SAMSUNG B2/B66 RRH-BR049 (RFV01U-D1A) MOUNTED TO EXIST. PIPE MAST
7	700/850 RRH	3		SAMSUNG B5/B13 RRH-BR04C (RFV01U-D2A) MOUNTED TO EXIST. PIPE MAST
8	RRH CABLES	6	15M	PROPRIETARY POWER & FIBER CABLES
9	UPPER 12OVP	1		(RVZDC-6627-PF-48)
10	HYBRID CABLE	1	180± FT	12x24 LOW INDUCTANCE HYBRID CABLE (1⅝"Ø)

NOTES:
1. INFORMATION SHOWN HEREON IS FOR USE BY VERIZON EQUIPMENT OPERATIONS.
2. INFORMATION IS BASED ON RFDS DATED 10/27/20.
3. * DENOTES EQUIPMENT DESIGNATED "FOR LEASING ONLY" (WHERE APPLICABLE)
4. INSTALL ALARM BOARDS AT ALL OVPs WHERE REQUIRED. COORDINATE w/ VERIZON EQUIPMENT ENGINEERING.
5. INSTALL UP-CONVERTER(S) LOCATED AT BASE OVPs WHERE REQUIRED. COORDINATE w/ VERIZON EQUIPMENT ENGINEERING AS NECESSARY.
6. COORDINATE ANTENNA CABLING REQUIREMENTS WITH VERIZON ENGINEERING.



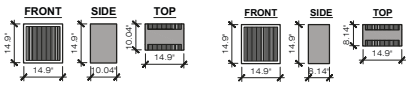
JMA MX06FRO660-03
HxWxD=71.3"x15.4"x10.7 60.0 Lbs)

2 B-1 NEW ANTENNA DETAIL
SCALE : ½" = 1'-0"



SAMSUNG MT6407-77A ANTENNA
HxWxD=35.1"x16.1"x5.51"
WT=87.1 Lbs
(NOT TO EXCEED)

3 B-1 NEW ANTENNA DETAIL
SCALE : ½" = 1'-0"

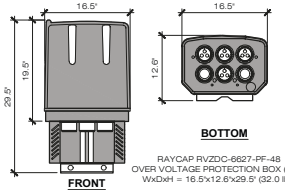


SAMSUNG DUAL HIGH BAND B2/B66A
RRH-BR049 (RFV01U-D1A)
RRH PCS/AWS
REMOTE RADIO HEAD (RRH)
WxDxH=14.9"x14.9"x10.04" (97.5 Lbs)

SAMSUNG DUAL LOW BAND B5/B13
RRH-BR04C (RFV01 U-D2A)
RRH 850/700
REMOTE RADIO HEAD (RRH)
WxDxH=14.9"x14.9"x8.14" (82.0 Lbs)

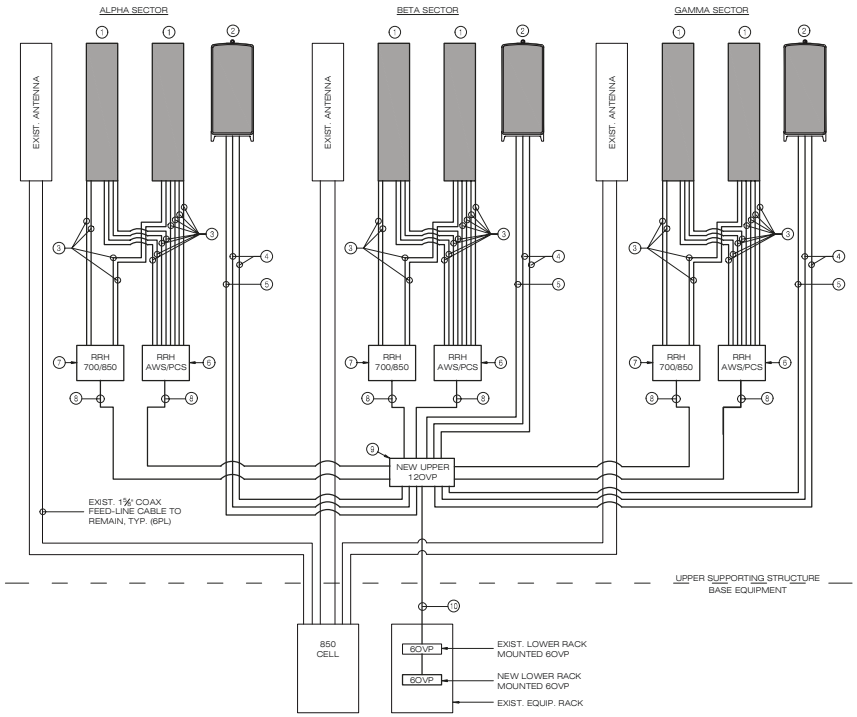
NOTE: WEIGHTS INCLUDE SOLAR SHEILD & MOUNTING BRACKET

4 B-1 RRH EQUIPMENT DETAILS
SCALE : ½" = 1'-0"



RAYCAP RVZDC-6627-PF-48
OVER VOLTAGE PROTECTION BOX (OVP)
WxDxH = 16.5'x12.6'x29.5' (32.0 lbs)

5 B-1 OVER VOLTAGE PROTECTION BOX (OVP)
SCALE : 1" = 1'-0"



1 B-1 PLUMBING DIAGRAM
SCALE : ½" = 1'-0"

Cellco Partnership d/b/a
verizon
20 ALEXANDER DRIVE
WALLINGFORD, CT 06492

ALL-POINTS TECHNOLOGY CORPORATION
567 VAUXHALL STREET EXTENSION - SUITE 311
WATERFORD, CT 06385 PHONE: (860)-663-1697
WWW.ALLPOINTSTECH.COM FAX: (860)-663-0935

CONSTRUCTION DOCUMENTS

NO	DATE	REVISION
0	12/16/20	FOR REVIEW: JRM
1	08/04/21	FOR REVIEW: JRM
2	08/05/21	FOR FILING: JRM
3		
4		
5		
6		

STATE OF CONNECTICUT
MICHAEL TRODDEN
33315
LICENSED
PROFESSIONAL ENGINEER

DESIGN PROFESSIONALS OF RECORD

PROF: MICHAEL S. TRODDEN P.E.
COMP: ALL-POINTS TECHNOLOGY CORPORATION, P.C.
ADD: 567 VAUXHALL STREET EXT. SUITE 311 WATERFORD, CT 06385

OWNER: QUARRY STONE AND GRAVEL LLC, O&G INDUSTRIES
ADDRESS: 112 WALL STREET TORRINGTON, CT 06790

NEW MILFORD W CT

SITE ADDRESS: 33 AKA 86 BOARDMAN ROAD NEW MILFORD, CT 06776

APT FILING NUMBER: CT141_11730

DRAWN BY: CSH
DATE: 12/16/20 CHECKED BY: JRM

VZ PROJECT CODE: 20202198988
VZ LOCATION CODE: 467734
VZ FUZE ID: 16244606

SHEET TITLE:
RF BILL OF MATERIALS, MECHANICAL SPECIFICATIONS & EQUIPMENT DETAILS

SHEET NUMBER:
B-1

DESIGN BASIS:

GOVERNING CODES/DESIGN STANDARDS:

2015 INTERNATIONAL BUILDING CODE (IBC) AS AMENDED BY THE 2018 CONNECTICUT STATE BUILDING CODE
ASCE 7-10
TIA-222-G (TOWER)

01 GENERAL:

ABBREVIATIONS USED IN THESE SPECIFICATIONS INCLUDE THE FOLLOWING:

ACI	AMERICAN CONCRETE INSTITUTE
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE
AWS	AMERICAN WELDING SOCIETY
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION
ASCE	AMERICAN SOCIETY OF CIVIL ENGINEERS
ASTM	AMERICAN STANDARDS AND TESTING METHODS
CRSI	CONCRETE REINFORCING STEEL INSTITUTE
ICC-ES	INTERNATIONAL CODE COUNCIL EVALUATION SERVICE
TIA	TELECOMMUNICATIONS INDUSTRY ASSOCIATION
UL	UNDERWIRTERS LABORATORIES
NEC	NATIONAL ELECTRICAL CODE
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
OSHA	OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION

EVERY INDIVIDUAL TRADE, DISCIPLINE, AND CONTRACTOR SHALL INCLUDE THESE GENERAL SPECIFICATIONS.

THE ENGINEER IS NOT RESPONSIBLE FOR NOR A GUARANTOR OF THE INSTALLING CONTRACTORS WORK, ADEQUACY OF ANY SITE COMPONENT, SUPERVISION OF ANY WORK, AND SAFETY IN, ON, OR ABOUT THE WORK SITE.

ANY REFERENCE HEREIN TO AN OR EQUAL ITEM, THAT EQUAL ITEM SHALL BE PRE-APPROVED BY THE CONSTRUCTION MANAGER BEFORE INSTALLATION

ALL TRADES SHALL COORDINATE THEIR WORK WITH ALL OTHER TRADES AND OTHER WORK AND CONDITIONS AS APNEWRIATE OR REQUIRED TO AVOID CONFLICTS. RESOLVE AND COORDINATE ALL CONFLICTS WITH ALL AFFECTED WORK AND SITE OPERATIONS. COORDINATION WITH THE SITE SHALL BE WITH THE OWNER, OR OWNER'S SPECIFIED REPRESENTATIVE, FOR EVERYTHING RELATED TO THE INSTALLATION OF THIS PROJECT.

ALL WORK SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE EDITIONS OF ALL APPLICABLE CODES AND SHALL BE ACCEPTABLE TO ALL AUTHORITIES HAVING JURISDICTION (AHJ). WHERE A CONFLICT EXISTS BETWEEN CODES, PLANS, SPECIFICATIONS, AND/OR AHJ, THE MORE STRINGENT AUTHORITY SHALL APPLY. WHERE CONFLICT EXISTS BETWEEN PLANS AND SPECIFICATIONS, PLAN SHALL APPLY. WHERE CONFLICT EXISTS BETWEEN PLAN SHEETS, CONSTRUCTION MANAGER SHALL BE CONSULTED PRIOR TO COMMENCING ANY WORK.

CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIALS, INSURANCE, EQUIPMENT, INSTALLATION, CONSTRUCTION TOOLS, TRANSPORTATION, ETC., FOR A COMPLETE AND NEWERLY OPERATIVE AND USABLE SYSTEM THROUGHOUT AND AS INDICATED ON THE DRAWINGS AND AS SPECIFIED HEREIN AND/OR OTHERWISE REQUIRED.

CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS, INSTALLATIONS, AND EQUIPMENT IN THE FIELD PRIOR TO BID, FABRICATION, AND INSTALLATION OF ANY WORK.

CONTRACTORS SHALL VERIFY ALL DIMENSIONS AND CONDITIONS IN THE FIELD PRIOR TO FABRICATION AND ERECTION OF ANY MATERIAL. THE ENGINEER SHALL BE NOTIFIED FOR INSPECTIONS PRIOR TO CLOSING PENETRATIONS AND OF ANY CONDITIONS WHICH PRECLUDE COMPLETION OF THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.

CONTRACTOR SHALL VISIT THE SITE TO MANAGE AND GAIN APPROVAL FOR ALL TENANT DISRUPTIONS, POWER OUTAGES, WORK SCHEDULES, DEFINITION OF WORK AREA AND WORK STORAGE, NEWER BUILDING/SITE ACCESS, NOISE AND CLEANLINESS REQUIREMENTS WITH THE BUILDING/SITE MANAGEMENT PRIOR TO ALL WORK. ANY DISRUPTIONS SHALL BE KEPT TO A MINIMUM AND SHALL BE IMPLEMENTED ONLY UPON WRITTEN APPROVAL OF THE OWNER.

THE CONTRACTOR SHALL SAFEGUARD AGAINST CREATING ANY HAZARD AFFECTING TENANT EGRESS OR COMPROMISING SITE SECURITY MEASURES.

PRIOR TO ALL BELOW-GRADE WORK AND ANY SURFACE WORK IN A NEW AREA FOR STRUCTURES OR VEHICLES, CONTRACTOR SHALL ENGAGE A MARKOUT SERVICE TO IDENTIFY ANY UNDERGROUND STRUCTURES, CONDUITS, AND PIPELINES IN THE AREA. ALL EXISTING SEWER, WATER, GAS, ELECTRIC, FIBER OPTIC, AND OTHER UNDERGROUND UTILITIES IDENTIFIED OR ENCOUNTERED, SHALL BE PROTECTED AT ALL TIMES. EXTREME CAUTION SHOULD BE USED BY THE CONTRACTOR WHEN DIGGING OR EXCAVATING IN ANY MANNER AROUND OR NEAR SUCH UTILITIES. CONTRACTOR IS RESPONSIBLE FOR REPAIRS, REPLACEMENT, AND ALL DAMAGES DUE TO DAMAGE OF UTILITIES BY HIS OPERATIONS.

ALL EXISTING AND NEW EQUIPMENT AND MATERIAL LOCATIONS, ROUTING, ORIENTATION, MOUNTING, SPECIFICATIONS AND GENERAL INSTALLED CHARACTERISTICS SHALL BE CONSIDERED DIAGRAMMATIC ON THE PLANS. EXACT CONDITIONS SHALL BE DETERMINED IN THE FIELD PRIOR TO ANY INSTALLATION. ANY DIFFERENCES THAT MAY CAUSE SCHEDULE, COST, OR QUALITY SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER OR ENGINEER PRIOR TO ANY WORK.

ALL REFERENCES HEREIN TO VERIFICATION OF ANY CONDITION OF SITE, FIELD, PLANS, OR SPECIFICATIONS PRIOR TO ANY WORK SHALL BE THE FULL RESPONSIBILITY OF THE CONTRACTOR. ANY AND ALL ADDITIONS, MODIFICATIONS, CHANGES, REPAIR, OR DEMOLITION AS A RESULT OF FAILURE TO BRING ANY EXISTING CONDITION NEWERLY TO THE ATTENTION OF THE OWNER OR ENGINEER SHALL BE THE FULL RESPONSIBILITY OF THE CONTRACTOR WITHOUT DELAY, COST, OR CHANGES IN QUALITY.

ALL NOTES THIS SHEET SHALL APPLY UNLESS SPECIFICALLY NOTED OTHERWISE ON THE INCLUDED DRAWINGS OR IN SEPARATE PROJECT SPECIFICATIONS AS APPLICABLE. ALL SPECIFICATIONS SHALL BE CONSIDERED REQUIRED UNLESS APPROVED EQUAL BY THE OWNER, CONSTRUCTION MANAGER, OR ENGINEER AS APPLICABLE.

THE WORDS "PROVIDE" OR "INSTALL" SHALL MEAN FURNISH AND INSTALL.

CONTRACTOR SHALL PROVIDE ALL CUTTING AND PATCHING AS REQUIRED FOR THE INSTALLATION OF HIS WORK. ANY PATCHING SHALL MATCH EXISTING SURROUNDING AREA IN ALL RESPECTS. ALL REMOVED MATERIAL SHALL BE REMOVED FROM THE PREMISES DAILY IN AN APPROVED SAFE MANNER.

ALL SURPLUS MATERIAL SHALL BE REMOVED FROM THE SITE PROMPTLY WHEN DEEMED TO BE SURPLUS.

EVERY CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF HIS WORK AND NEWLY INSTALLED OR EXISTING WORK, INCLUDING PROTECTION OF THE SITE, ALL STRUCTURES, AND ALL OCCUPANTS. FURNISH, INSTALL, MAINTAIN, AND REMOVE AS APNEWRIATE, ALL APNEWRIATE BARRIERS, SAFETY GUARDS, SIGNAGE, AND SECURITY AS REQUIRED.

EVERY CONTRACTOR SHALL BE RESPONSIBLE FOR THEIR RESPECTIVE FEES, PERMITS, INSPECTIONS, TESTING, CERTIFICATES, AND ALL MANAGEMENT OF SAME REQUIRED FOR COMPLETION OF AND LEGAL OCCUPANCY OF THE FINISHED PROJECT.

ALL CONTRACTORS SHALL PROVIDE ALL NECESSARY TOOLS, FIXTURES, SERVICES, MATERIALS, JOB AIDS, AND PERSONNEL REQUIRED FOR THE EXECUTION OF THEIR WORK.

EACH CONTRACTOR SHALL GUARANTEE ALL MATERIALS AND WORKMANSHIP BY THEM TO BE FREE OF DEFECTS AND MAINTAINED FOR A PERIOD OF ONE YEAR AFTER ACCEPTANCE OF THE INSTALLATION BY THE OWNER AND ENGINEER.

ALL WORK SHALL BE PERFORMED BY LICENSED CONTRACTORS IN THE TRADE HAVING JURISDICTION.

ANY DEVIATION, MODIFICATION, ADDITION, OR CHANGE IN DESIGN SHALL NOT BE MADE WITHOUT WRITTEN APPROVAL OF THE OWNER OR ENGINEER.

ALL CONTRACTORS SHALL SUBMIT SHOP DRAWINGS OF ALL EQUIPMENT AND MATERIALS TO THE ENGINEER FOR APPROVAL PRIOR TO FABRICATION AND INSTALLATION, AND SHALL NOT PROCEED UNTIL ENGINEER APPROVAL IN WRITING IS RETURNED. EACH CONTRACTOR SHALL MAINTAIN ON JOB SITE A COMPLETE SET OF SHOP DRAWINGS WITH ANY DEVIATIONS FROM THE ORIGINAL DESIGN SHALL BE NOTED.

ALL MATERIALS AND EQUIPMENT SHALL BE NEW, WITHOUT BLEMISH OR DEFECT, AND SUITABLE AND LISTED FOR THE INSTALLATION AND SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS OR SPECIFICATIONS. ALL ITEMS OF EQUIPMENT OR MATERIAL THAT ARE OF ONE GENERIC TYPE SHALL BE ONE MANUFACTURER THROUGHOUT.

ALL MATERIALS, EQUIPMENT, TOOLS, AND ITEMS UNDER THE CONTRACTOR'S RESPONSIBILITY ON THE JOBSITE SHALL BE ADEQUATELY SECURED, MAINTAINED, AND PROTECTED, SO AS NOT TO BECOME DAMAGED OR CREATE ANY HAZARD TO PERSONNEL OR NEWERTY.

THE CONTRACTORS HOURS OF WORK SHALL BE IN ACCORDANCE WITH LOCAL CODES AND ORDINANCES AND BE APPROVED BY THE OWNER.

CONTRACTOR SHALL PROVIDE SAFETY TRAINING FOR ALL OF HIS CREW AND INSURE THAT EVERY CREW MEMBER FOLLOWS SAVE WORK PRACTICES. SAFETY TRAINING SHALL INCLUDE, BUT NOT BE LIMITED TO, FALL PROTECTION, CONFINED SPACE ENTRY, ELECTRICAL SAFETY, AND TRENCHING/EXCAVATION SAFETY WHERE SUCH WORK IS EXECUTED OR ENCOUNTERED.

ALL TEMPORARY WORK REQUIRED OR SPECIFIED AS A PART OF THIS WORK, SHALL MEET ALL OF THE SAME REQUIREMENTS AS PERMANENT INSTALLATIONS, SHALL MEET ALL APPLICABLE CODE REQUIREMENTS, AND SHALL BE COMPLETELY REMOVED AFTER ITS PURPOSES HAVE BEEN SERVED.

ANY EXISTING UTILITY, SERVICE, STRUCTURE, EQUIPMENT, OR FIXTURE OBSTRUCTING THE WORK SHALL BE REMOVED AND/OR RELOCATED AS DIRECTED BY THE CONSTRUCTION MANAGER.

IF ASBESTOS IS ENCOUNTERED DURING WORK EXECUTION, CONTRACTOR SHALL IMMEDIATELY NOTIFY THE CONSTRUCTION MANAGER AND CEASE ALL ACTIVITIES IN AFFECTED AREAS UNTIL NOTIFIED BY THE CONSTRUCTION TO RESUME OPERATIONS.

EXIST. ELECTRICAL AND MECHANICAL FIXTURES, PIPING, WIRING AND EQUIPMENT OBSTRUCTING THE WORK SHALL BE REMOVED AND/OR RELOCATED AS DIRECTED BY THE CONSTRUCTION MANAGER. TEMPORARY SERVICE INTERRUPTIONS MUST BE COORDINATED WITH OWNER.

05 STEEL:

THESE SPECIFICATIONS SHALL INCLUDE THE GENERAL SPECIFICATIONS HEREIN.

MATERIALS:

WIDE FLANGE	ASTM A992, GR 50
TUBING	ASTM A500, GR B
PIPE	ASTM A53, GR B
BOLTS	ASTM A325
GRATING	TYPE GW-2 (1-1/4"x3/16" BARS)
EXISTING METALS	ASTM A36

PROVIDE CERTIFICATION THAT WELDERS TO BE USED IN WORK ARE LICENSED AND HAVE SATISFACTORILY PASSED AWS QUALIFICATION TEST UNDER THE PROVISIONS OF APPENDIX D, PARTS II AND III OF THE AWS CODE FOR WELDING IN BUILDING CONSTRUCTION.

ALL BUILDING CONNECTION POINTS TO BE CENTERED ON EXISTING STRUCTURAL BEARING POINTS AND THE LOCATIONS ARE TO BE VERIFIED IN FIELD PRIOR TO THE FABRICATION OF STEEL.

DESIGN AND CONSTRUCTION OF STRUCTURAL STEEL SHALL CONFORM TO THE LATEST EDITION OF AISC SPECIFICATION FOR *"THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS"*.

NON-STRUCTURAL CONNECTIONS FOR STEEL GRATING MAY USE 5/8" DIAMETER GALVANIZED ASTM A 307 BOLTS UNLESS OTHERWISE NOTED.

ALL STEEL MATERIAL SHALL BE GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH ASTM A123 "ZINC (HOT-DIPPED GALVANIZED) COATINGS" ON IRON AND STEEL PRODUCTS WITH A COATING WEIGHT OF 2 OZ/SF.

ALL BOLTS, ANCHORS AND MISCELLANEOUS HARDWARE EXPOSED TO WEATHER SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153 "ZINC COATING (HOT-DIP) ON IRON AND STEEL HARDWARE."

DAMAGED GALVANIZED SURFACES SHALL BE REPAIRED BY TOUCHING UP ALL DAMAGED GALVANIZED STEEL WITH COLD ZINC, "GALVANOX", "DRY GALV", OR "ZINC IT", IN ACCORDANCE WITH MANUFACTURERS GUIDELINES. TOUCH UP DAMAGED NON-GALVANIZED STEEL WITH SAME PAINT APPLIED IN SHOP OR FIELD.

THE ENGINEER SHALL BE NOTIFIED OF ANY INCORRECTLY FABRICATED, DAMAGED OR OTHERWISE MISFITTING OR NONCONFORMING MATERIALS OR CONDITIONS TO REMEDIAL OR CORRECTIVE ACTION. ANY SUCH ACTION SHALL REQUIRE ENGINEER REVIEW. FIELD CUTTING OF STRUCTURAL STEEL IS NOT PERMITTED EXCEPT WITH THE PRIOR APPROVAL OF THE ENGINEER.

CONTRACTOR TO REMOVE AND RE-INSTALL ALL FIRE PROOFING AS REQUIRED DURING CONSTRUCTION.

THE STEEL STRUCTURE SHALL BE DESIGNED TO BE SELF-SUPPORTING AND STABLE AFTER COMPLETION. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO DETERMINE ERECTION PROCEDURE AND SEQUENCE AND TO INSURE THE SAFETY OF THE BUILDING AND ITS COMPONENT PARTS DURING ERECTION.

ALL STEEL ELEMENTS SHALL BE INSTALLED PLUMB AND LEVEL.

TOWER MANUFACTURER'S DESIGNS SHALL PREVAIL FOR TOWER.

CONNECTIONS SHALL BE DESIGNED BY THE FABRICATOR AND CONSTRUCTED IN ACCORDANCE WITH THE LATEST EDITION OF THE AISC *"MANUAL OF STEEL CONSTRUCTION"*. CONNECTIONS SHALL BE PROVIDED TO CONFORM TO THE REQUIREMENTS OF TYPE 2 CONSTRUCTION.

STRUCTURAL CONNECTION BOLTS SHALL CONFORM TO ASTM A325. ALL BOLTS SHALL BE MINIMUM 3/4" DIAMETER AND EACH CONNECTION SHALL HAVE MINIMUM TWO BOLTS. LOCK WASHERS ARE NOT PERMITTED FOR A325 STEEL ASSEMBLIES. IF TENSION CONTROL BOLTS ARE USED, CONNECTIONS SHALL BE DESIGNED FOR SLIP CRITICAL BOLT ALLOWABLE LOAD VALUES.

DESIGN CONNECTIONS AT BEAM ENDS FOR 10 KIPS (MIN).

ALL U-BOLTED CONNECTIONS SHALL BE COMPLETED WITH DOUBLE NUTS OR A LOCK WASHER.

CONTRACTOR SHALL COMPLY WITH AWS CODE FOR PROCEDURES, APPEARANCE AND QUALITY OF WELDS, AND WELDING PROCESSES SHALL BE QUALIFIED IN ACCORDANCE WITH AWS *"STANDARD QUALIFICATION PROCEDURES"*. ALL WELDING SHALL BE PERFORMED USING E70XX ELECTRODES AND SHALL CONFORM TO AISC AND D1.1. WHERE FILLET WELD SIZES ARE NOT SHOWN, PROVIDE THE LARGER OF 1/4" FILLET OR MINIMUM SIZE PER TABLE J2.4 IN THE AISC *"MANUAL OF STEEL CONSTRUCTION"*. AT THE COMPLETION OF WELDING, ALL DAMAGE TO GALVANIZED COATING SHALL BE REPAIRED. SEE NOTE REGARDING DAMAGED GALVANIZED SURFACES.

ALL ARC AND GAS WELDING SHALL BE DONE BY A LICENSED AND CERTIFIED WELDER IN ACCORDANCE WITH AWS.

SEAL ALL PENETRATIONS AND SEAMS BETWEEN MASONRY AND STEEL WITH DOW CORNING 790 SILICONE BUILDING SEALANT OR EQUAL.

26 ELECTRICAL:

THESE SPECIFICATIONS SHALL INCLUDE THE GENERAL SPECIFICATIONS HEREIN.

ALL ELECTRICAL CONDUCTORS:

- INSULATION SHALL BE MINIMUM 600V TYPE THHN, THWN-2, OR XHHW.
- BRANCH CIRCUIT CONDUCTORS SHALL BE SOFT DRAWN 98% MINIMUM CONDUCTIVITY NEWERLY REFINED COPPER.
- FEEDER CIRCUIT CONDUCTORS SHALL BE EITHER COPPER OR ALUMINUM OF THE APNEWRIATE SIZE FOR THE APPLICATION, OR AS SPECIFICALLY NOTED.
- PERMANENTLY LABEL OR TAG ALL CONDUCTORS WITH THEIR CIRCUIT DESIGNATION AT ALL TERMINATION ENDS, SPLICES, AND VISIBLE AS PASS-THROUGH IN ALL ENCLOSURES.

ALL CONDUIT, RACEWAY, WIREWAYS, DUCTS, ETC. SHALL BE LISTED AND SUITABLE FOR THE APPLICATION. ONLY THE FOLLOWING CONDUITS AS APPROVED AND LISTED FOR THE APPLICATION SHALL BE ACCEPTABLE:

- ELECTRICAL METALLIC TUBING (EMT).
- COMPRESSION COUPLINGS AND CONNECTORS ONLY MADE UP WRENCH TIGHT.
- FLEXIBLE METAL CONDUIT (FMC) AND LIQUIDTIGHT FLEXIBLE METAL CONDUIT (LFMC).
- FINAL CONNECTIONS TO VIBRATING OR ADJUSTABLE EQUIPMENT INCLUDING, BUT NOT LIMITED TO, LIGHT FIXTURES, HVAC UNITS, TRANSFORMERS, MOTORS, ETC. OR WHERE EQUIPMENT IS PLACED UPON SLAB ON-GRADE.
- RIGID GALVANIZED STEEL (RGS).
- ALL FITTINGS, CONNECTORS, AND COUPLINGS SHALL BE THREADED MADE UP WRENCH TIGHT.
- RIGID POLYVINYL CHLORIDE (PVC) SCHEDULE 40 OR SCHEDULE 80.
- MAY BE USED FOR SERVICES, EXTERIOR, BELOW GRADE, AND WET LOCATIONS.
- SHALL NOT BE USED IN CONCRETE SLABS NOR EXPOSED WITHIN A BUILDING OR STRUCTURE.
- METAL-CLAD CABLE (MC)
- CONCEALED INSTALLATIONS ONLY.
- WITHIN A DUCT WITH SMOOTH OR CORRUGATED METAL JACKET AND NO OUTER COVERING OVER THE METAL JACKET.

IN FINISHED SPACES, ALL CONDUITS SHALL BE CONCEALED EXCEPT TO MAKE A FINAL CONNECTION TO EQUIPMENT NOT MOUNTED IN OR AGAINST FINISH MATERIAL.

ALL FEEDER AND BRANCH CIRCUITS SHALL HAVE A SEPARATE NEWERLY SIZED AND MARKED GROUNDING CONDUCTOR, PER APPLICABLE CODES, THAT BONDS ALL ENCLOSURES, BOXES, ETC. CONDUIT SHALL NOT BE USED AS A GROUNDING OR BONDING CONDUCTOR.

IF EXISTING ELECTRIC SERVICE IS TO REMAIN, CONTRACTOR SHALL BE VERIFY THAT IT MEETS PROJECT REQUIREMENTS WITHOUT MODIFICATION. IF IT IS TO BE ADDED OR REPLACED AS A PART OF THIS WORK, CONTRACTOR SHALL ORDER FROM, COORDINATE WITH, AND GAIN APPROVAL FROM THE ELECTRICAL UTILITY. ALL ELECTRICAL EQUIPMENT SHALL BE AS SPECIFIED AND AS APPROVED BY THE LOCAL UTILITY WHERE APPLICABLE.

ALL EQUIPMENT, ENCLOSURES, ETC. SHALL BE SUITABLE FOR THE INSTALLED ENVIRONMENT, MINIMUM NEMA 3R FOR ALL EXTERIOR INSTALLATIONS.

WIRING DEVICES SHALL BE SPECIFICATION GRADE AND WIRING DEVICE COVER PLATES SHALL BE PLASTIC WITH ENGRAVING AS SPECIFIED. COLOR SHALL BE IVORY. ALL DEVICES AND COVER PLATES SHALL BE OF THE SAME MANUFACTURER.

ALL FIRE-RATED PENETRATIONS SHALL BE SEALED USING A SUITABLE AND LISTED FIRE SEALING DEVICE OR GROUT THAT WILL MAINTAIN THE FIRE RATING OF THE STRUCTURE PENETRATED.

PROVIDE PERMANENTLY AFFIXED ENGRAVED NAMEPLATES FOR ALL CODE REQUIRED LABELING AND ON ALL PANELS, METERING, DISCONNECTS, AND ELECTRICAL EQUIPMENT THAT IDENTIFIES EQUIPMENT SERVED, ELECTRICAL SOURCE WITH CIRCUIT IDENTIFICATION, AND VOLTAGES WITHIN.

ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR ALL FINAL TERMINATIONS TO ALL EQUIPMENT.

ALL ELECTRICAL APPURTENANCES THAT ARE DISCONNECTED SHALL BE COMPLETELY REMOVED WITH EXISTING STRUCTURES TO REMAIN, REPAIRED, FINISHED, FILLED, PAINTED, ETC. ALL PANEL SCHEDULES, EQUIPMENT LABELING, AND CODE-REQUIRED LABELING, SHALL BE VERIFIED AND NEWERLY COMPLETED TO MATCH THE INSTALLATION.

26 GROUNDING:

THESE SPECIFICATIONS SHALL INCLUDE THE GENERAL SPECIFICATIONS HEREIN.

GROUND ALL SYSTEMS AND EQUIPMENT IN ACCORDANCE WITH BEST INDUSTRY PRACTICE, THE REQUIREMENTS OF THE NFPA 70 NATIONAL ELECTRICAL CODE (NEC), AND ALL OTHER APPLICABLE CODES AND REGULATIONS.

ALL GROUNDING ELECTRODES PRESENT AT EACH SERVICE LOCATION SHALL BE BONDED TOGETHER TO FORM THE GROUNDING ELECTRODE SYSTEM.

ALL EQUIPMENT ENCLOSURES, DEVICES, AND CONDUITS SHALL BE GROUNDED BY THE INSTALLATION OF A SEPARATE GROUNDING CONDUCTOR FOR ALL FEEDER AND BRANCH CIRCUITS THAT IS SIZED PER CODE OR IS OF THE SIZE INDICATED ON THE DRAWINGS, SHALL BE CONTINUOUS IN LENGTH, AND SHALL BE BONDED TO EACH ENCLOSURE PASSED THROUGH. CONDUIT SHALL NOT BE USED AS A GROUNDING OR BONDING WIRE OR CIRCUIT.

BOND ALL METALLIC CONDUITS TOGETHER THAT ARE CONNECTED TO NON-METALLIC ENCLOSURES, IN-GROUND BOXES, AND TO AN ENCLOSURE WHERE A GROUND BUS IS SPECIFIED OR SUPPLIED. ACCOMPLISH THIS BOND WITH GROUNDING CONDUCTORS MINIMUM SIZED TO THE LARGEST GROUNDING CONDUCTOR PRESENT IN THE ENCLOSURE CONNECTED TO A GROUNDING TYPE BUSHING EQUALLY SIZED OR MAXIMUM GROUND WIRE ACCOMMODATION AVAILABLE IN STANDARD MANUFACTURE FOR THE CONDUIT SIZE, WHICHEVER IS LESS.

EQUIPMENT GROUNDING AND LOAD SIDE BONDING CONDUCTORS SHALL BE SIZED PER THE CIRCUIT'S OVER-CURRENT PROTECTIVE DEVICE (OCPD) SIZE. WHERE THE UNGROUNDED CONDUCTORS ARE INCREASED IN SIZE ABOVE THE STANDARD FOR THE CIRCUIT'S OCPD, INCREASE THE GROUNDING CONDUCTOR NEWORTIONATELY TO THE CROSS-SECTIONAL AREA OF THE UNGROUNDED CONDUCTORS.

SERVICE MAIN BONDING JUMPERS AND GROUNDING ELECTRODE CONDUCTORS SHALL BE SIZED AND INSTALLED PER THE MINIMUM OF ALL APPLICABLE CODES AND REGULATIONS.

26 LIGHTNING PROTECTION:

THESE SPECIFICATIONS SHALL INCLUDE THE GENERAL SPECIFICATIONS AND THE GROUNDING SPECIFICATIONS HEREIN.

THE LIGHTNING PROTECTION GROUNDING SYSTEM (LPGS) SHALL CONSIST OF BONDING ALL EQUIPMENT AND CONDUCTIVE STRUCTURES TO LOCALIZED SINGLE-POINT GROUNDING CONNECTIONS (TYPICALLY GROUND BARS) WHICH ARE BONDED TOGETHER AND TO AN IN-GROUND SYSTEM. IF THE LPGS IS ON A BUILDING, IT SHALL BE EFFECTIVELY BONDED TO THE ELECTRICAL SERVICE MAIN BONDING JUMPER AND TO ADDITIONAL IN-GROUND ELECTRODES AS MAY BE REQUIRED OR INDICATED. IF THE LPGS IS ON A DEDICATED COMMUNICATION SITE, ALL EQUIPMENT AREAS AND TOWERS SHALL EACH HAVE THEIR OWN IN-GROUND RING WITH EVERY RING BONDED TOGETHER, AND ALL CONDUCTIVE STRUCTURES IN CLOSE PROXIMITY (FENCES, ICE BRIDGES, ISOLATED EQUIPMENT, ETC.) ALSO BONDED TO PROVIDE A COMMON ELECTRICAL EQUIPOTENTIAL SYSTEM FOR ALL CONDUCTIVE ELEMENTS AND STRUCTURES.

CONDUCTORS:

- MIN #2 AWG SOLID BARE TINNED COPPER (SBTC) FOR ALL IN-GROUND CONDUCTORS.
- MIN #2 AWG COPPER GREEN STRANDED FOR BONDING STRUCTURES, AND FOR INTER-SYSTEM BONDING OF INDIVIDUAL ELEMENTS SUCH AS GROUND BAR TO GROUND BAR.
- MIN #6 AWG COPPER GREEN STRANDED OR ALL EQUIPMENT BONDING.
- INSTALL ALL IN-GROUND CONDUCTORS IN THE SAME HORIZONTAL PLANE OR IN A DOWNWARD DIRECTION AWAY FROM THE TOWER AND EQUIPMENT AREAS.
- AVOID LONG RUNS. MAKE DIRECT RUNS AS MUCH AS POSSIBLE.
- PLACE THROUGH NON-METALLIC SLEEVES WHEN PASSING THROUGH FLOORS, WALLS, CEILINGS, AND SIMILAR STRUCTURES.
- MAKE ALL CONNECTIONS IN CONTACT WITH EARTH WITH EXOTHERMIC WELDING. MAKE ALL OTHER CONNECTIONS WITH EXOTHERMIC WELDING, IRREVERSIBLE COMPRESSION CONNECTORS, OR LISTED COMPRESSION TWO-HOLE LUGS.
- INSTALL ALL CONDUCTORS WITH A MINIMUM 18 INCH BEND RADIUS AND NO BEND LONGER THAN A 90 DEGREE ARC. ALL BENDS SHALL BE HORIZONTAL, OR DOWNWARD TOWARDS EARTH.
- ALL CONDUCTORS PASSING FROM ABOVE-GROUND TO IN-GROUND CONNECTIONS, WHERE EXPOSED, SHALL BE COVERED AND PROTECTED WITH A NON-METALLIC CONDUIT SEALED AT BOTH ENDS.
- IF 2 OR MORE IN-GROUND CONDUCTOS ARE IN THE SAME PATH (2 RINGS OVERLAPPING, BONDING FOLLOWING ANOTHER RING OR RADIAL, OR SIMILAR), COMBINE WITH A SHARED SINGLE CONDUCTOR.

EQUIPMENT AND TOWER GROUND RINGS SHALL BE:

- BONDED TO ANY CONDUCTIVE OBJECT OR STRUCTURE WITHIN 5 FEET OF EQUIPMENT GROUND RINGS AND WITHIN 20 FEET OF TOWER GROUND RINGS.
- INSTALLED MINIMUM 18 INCHES FROM FOUNDATIONS, FOOTINGS, AND SIMILAR.

INSTALL ALL IN-GROUND RINGS, RADIALS, BONDS CONNECTING THEM, AND ALL SIMILAR GROUNDING:

- MIN 30 INCHES BELOW GRADE, OR 6 INCHES BELOW THE FROST LINE, WHICHEVER IS GREATER DEPTH.
- MIN 2 FEET FROM FOUNDATIONS, FOOTINGS, OTHER GROUNDING SYSTEMS, AND SIMILAR STRUCTURES, EXCEPT WHEN MAKING A BOND TO ANY OF THESE STRUCTURES. DO NOT BOND TO FOUNDATION INTERNAL REINFORCEMENT.

ALL EQUIPMENT GROUPED IN A COMMON AREA, COMPOUND, STRUCTURE, OR SIMILAR SHALL BE BONDED TO A SINGLE-POINT GROUND, PREFERABLY AN ISOLATED GROUND BAR. BOND THE GROUND BAR TO THE SYSTEM WITH MINIMUM SINGLE BONDING CONDUCTOR. IF BONDING TO AN IN-GROUND RING, INSTALL 2 BONDING CONDUCTORS MINIMUM WITH EACH CONDUCTOR INSTALLED DIRECTIONALLY AWAY FROM EACH OTHER AND PARALLEL TO THE IN-GROUND CONDUCTOR, WITH NO TEE CONNECTIONS.

TOWER GROUNDING:

- EACH TOWER LEG SHALL BE BONDED TO ITS RING. SINGLE-LEGGED TOWERS, OR MONOPOLES, SHALL HAVE 2 BONDS ON OPPOSITE SIDES.
- BOND TO TOWER BASE, NOT TO VERTICAL TOWER STRUCTURE, AWAY FROM TOWER MOUNTING HARDWARE.
- EACH BOND SHALL HAVE A CORRESPONDING GROUND ROD ON THE RING.
- EACH BOND SHALL CONSIST OF 2 CONDUCTORS FROM THE TOWER TO ITS RING WITH EACH CONDUCTOR DIRECTED IN OPPOSITE DIRECTIONS WITH A PARALLEL CONNECTION ON THE RING ON OPPOSITE SIDES OF THE GROUND ROD.

EQUIPMENT AREA GROUNDING:

- COMMUNICATION AREAS ON EARTH SHALL HAVE A GROUND RING.
- BOND ALL EQUIPMENT TO A SINGLE-POINT GROUND (GROUND BAR).
- BOND THE EQIPMENT SINGLE-POINT GROUND TO THE EQUIPMENT GROUND RING WITH MINIMUM 2 CONDUCTORS DIRECTED IN OPPOSITE DIRECTIONS WITH PARALLEL CONNECTIONS ON THE RING.
- IF EQUIPMENT IS ENCLOSED IN A SHELTER:
- IF THE SHELTER IS CONSIDERED TO BE EXPOSED TO A DIRECT LIGHTNING STRIKE, INSTALL A BUILDING LIGHTNING PROTECTION SYSTEM PER APPLICABLE VERSION OF NFPA 780.
- BOND ALL FIXED CONDUCTIVE BUILDING COMPONENTS TOGETHER AND TO THE BUILDING RING GROUND AT THE CORNERS. THIS IS TYPICALLY CALLED THE HALO GROUND. DO NOT BOND EQUIPMENT TO THE HALO GROUND.
- BOND ALL EQUIPMENT TOGETHER TO A SINGLE-POINT OR INTERIOR EQUIPMENT RING GROUND (IEGR). BOND THE SINGLE-POINT OR IEGR TO THE EXTERNAL EQUIPMENT RING GROUND.
- PLACE GROUND RODS AT THE EQUIPMENT GROUND RING CORNERS.

GROUND RODS:

- SEPARATION SPACE BETWEEN ANY 2 GROUND RODS SHALL BE NO CLOSER THAN THEIR DEPTH. THIS APPLIES TO ALL RODS IN THE COMPLETE SYSTEM.
- DRIVE VERTICALLY IN UNDISTURBED SOIL WITH THE TOP AT SAME DEPTH AS THE IN-GROUND CONDUCTOR. IF NOT POSSIBLE TO INSTALL VERTICALLY, PLACE AS CLOSE TO VERTICAL AS POSSIBLE AND IN A DIRECTION AWAY FROM THE NEAREST ABOVE-GROUND CONDUCTIVE ELEMENT (TOWER, EQUIPMENT, ETC.).

RADIALS (TYP. NEW DEDICATED COMMUNICATION SITES):

- WHERE FEASIBLE WITH ENOUGH SPACE AVAILABLE, INSTALL A MINIMUM OF 4, MAXIMUM 10 RING RADIALS.
- EACH RADIAL'S LENGTH SHALL BE MIN 20 FT, MAX 80 FT.
- EXTEND RADIALS PERPENDICULAR FROM RINGS IN AS STRAIGHT LINE AS POSSIBLE, AWAY FROM OTHER RING GROUNDS, RADIALS, BONDS, AND SIMILAR.
- A COMMON PRACTICE IS TO PLACE 4 RADIALS FROM THE TOWER RING TO THE 4 CORNERS OF THE AVAILABLE AREA.

AT A MINIMUM, BOND ALL COMPOUND CONDUCTIVE FENCE CORNER POSTS AND GATE POSTS TO THE LPGS. PREFERABLY, INSTALL A GROUND RING THAT FOLLOWS THE FENCE LINE, BONDING ALL POSTS TO THE RING.

27 ANTENNAS & CABLES:

THESE SPECIFICATIONS SHALL INCLUDE THE GENERAL SPECIFICATIONS HEREIN.

THE CONTRACTOR SHALL FURNISH AND INSTALL ALL TRANSMISSION CABLES, JUMPERS, CONNECTORS, GROUNDING STRAPS, ANTENNAS, MOUNT AND HARDWARE. ALL MATERIALS SHALL BE INSPECTED BY THE CONTRACTOR FOR DAMAGE UPON DELIVERY. JUMPERS SHALL BE SUPPLIED AT ANTENNAS AND EQUIPMENT INSIDE SHELTER. COORDINATE LENGTH OF JUMPER CABLES WITH OWNER. COORDINATE AND VERIFY ALL OF THE MATERIALS TO BE PROVIDED WITH OWNER PRIOR TO SUBMITTING BID AND ORDERING MATERIALS.

AFTER INSTALLATION, THE TRANSMISSION LINE SYSTEM SHALL BE PIM / SWEEP TESTED FOR NEWER INSTALLATION AND DAMAGE WITH ANTENNAS CONNECTED. CONTRACTOR SHALL OBTAIN AND USE LATEST TESTING PROCEDURES FROM OWNER OR MANUFACTURER PRIOR TO BIDDING.

ANTENNA CABLES SHALL BE UNIQUELY COLOR-CODED AT THE ANTENNAS, BOTH SIDES OF EQUIPMENT SHELTER WALL, AND JUMPER CABLES AT THE EQUIPMENT.

THE CONTRACTOR SHALL FURNISH AND INSTALL ALL CONNECTORS, ASSOCIATED CABLE MOUNTING AND GROUNDING HARDWARE, WALL MOUNTS, STANDOFFS, AND ALL ASSOCIATED HARDWARE TO INSTALL ALL CABLES AND ANTENNAS TO THE MANUFACTURER'S AND OWNER'S SPECIFICATIONS.

ANTENNA CABLES SHALL BE FOAM DIELECTRIC COAXIAL CABLES AS FOLLOWS:

- BASE STATION ANTENNAS:
  - 7/8" DIAMETER FOR CABLE LENGTHS UP TO 100 FT.
  - 1-5/8" DIAMETER FOR CABLE LENGTHS GREATER THAN 100 FT.
  - GPS ANTENNAS:
  - 7/8" DIAMETER FOR CABLE LENGTHS UP TO 200 FT.
  - 1-5/8" DIAMETER FOR CABLE LENGTHS GREATER THAN 200 FT.

MINIMUM BENDING RADIUS FOR COAXIAL CABLES SHALL BE:

- 15 FT FOR 7/8" COAXIAL CABLES.
- 25 FT FOR 1-5/8" COAXIAL CABLES.

CABLE SHALL BE INSTALLED WITH A MINIMUM NUMBER OF BENDS WHERE POSSIBLE. CABLE SHALL NOT BE LEFT UNTERMINATED AND SHALL BE SEALED IMMEDIATELY AFTER BEING INSTALLED.

ALL EXTERIOR CABLE CONNECTIONS SHALL BE COVERED WITH A WATERPROOF SPLICING KIT.

CONTRACTOR SHALL VERIFY EXACT LENGTH AND DIRECTION OF TRAVEL IN FIELD PRIOR TO CONSTRUCTION.

CABLE SHALL BE FURNISHED AND INSTALLED WITHOUT SPLICES AND WITH CONNECTORS AT EACH END.

27 CABLE TRAY:

THESE SPECIFICATIONS SHALL INCLUDE THE GENERAL SPECIFICATIONS HEREIN.

CABLE TRAY SHALL BE MADE OF EITHER CORROSION RESISTANT METAL OR WITH A CORROSION RESISTANT FINISH.

CABLE TRAY SHALL BE OF LADDER TRAY TYPE WITH FLAT COVER CLAMPED TO SIDE RAILS.

CABLE LADDER SHALL BE SIZED TO FIT ALL CABLES IN ACCORDANCE WITH NEC AND NEMA 11-15-84.

CABLE LADDER TRAYS SHALL BE NEMA CLASS 12A BY PW INDUSTRIES, INC. OR EQUAL.

CABLE LADDER TRAY SHALL BE SUPPORTED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.

ALL WORKMANSHIP SHALL CONFORM TO THESE REQUIREMENTS AND ALL LOCAL CODES AND STANDARDS TO ENSURE SAFE AND ADEQUATE GROUNDING SYSTEM.

Cellco Partnership d/b/a

verizon

20 ALEXANDER DRIVE
WALLINGFORD, CT 06492

ALL-POINTS TECHNOLOGY CORPORATION

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WATERFORD, CT 06385 PHONE: (860)-663-1697
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CONSTRUCTION DOCUMENTS

NO	DATE	REVISION
0	12/16/20	FOR REVIEW: JRM
1	08/04/21	FOR REVIEW: JRM
2	08/05/21	FOR FILING: JRM
3		
4		
5		
6		

DESIGN PROFESSIONALS OF RECORD

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COMP: ALL-POINTS TECHNOLOGY CORPORATION, P.C.
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OWNER: QUARRY STONE AND GRAVEL LLC, O&G INDUSTRIES
ADDRESS: 112 WALL STREET TORRINGTON, CT 06790

NEW MILFORD W CT

SITE ADDRESS: 33 AKA 86 BOARDMAN ROAD NEW MILFORD, CT 06776

APT FILING NUMBER: CT141_11730

DRAWN BY: CSH

DATE: 12/16/20 CHECKED BY: JRM

VZ PROJECT CODE: 20202198988

VZ LOCATION CODE: 467734

VZ FUZE ID: 16244606

SHEET TITLE:

NOTES& SPECIFICATIONS

SHEET NUMBER:

N-1

SAMSUNG

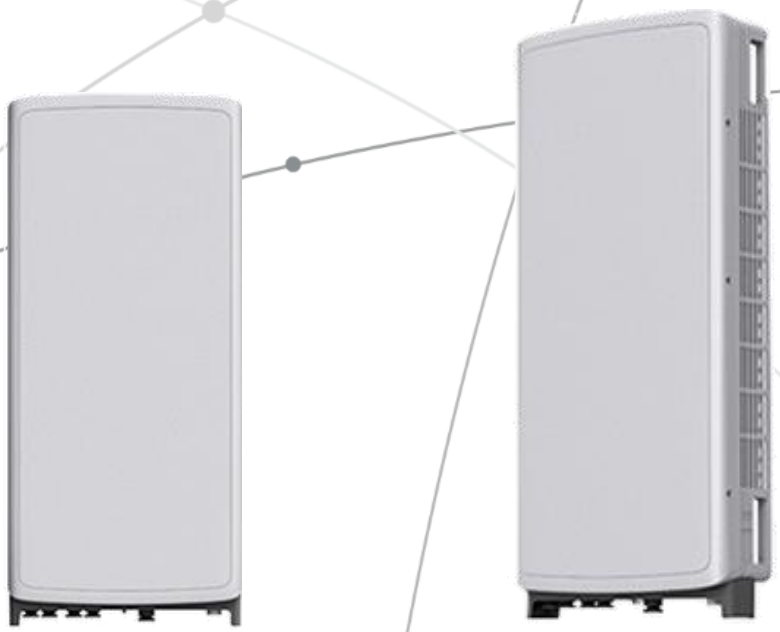
SAMSUNG

C-Band 64T64R Massive MIMO Radio

for High Capacity and Wide Coverage

Samsung C-Band 64T64R Massive MIMO Radio enables mobile operators to increase coverage range, boost data speeds and ultimately offer enriched 5G experiences to users in the U.S..

Model Code : MT6407-77A

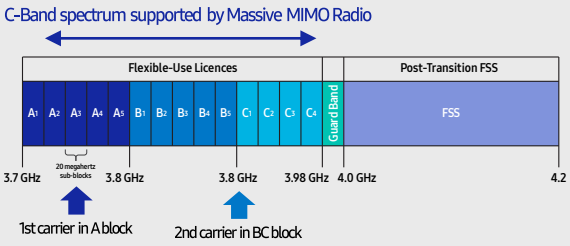


Points of Differentiation

Wide Bandwidth

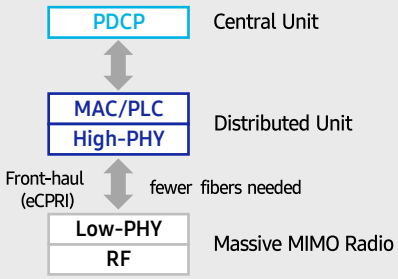
With capability to support up to 2 CC carrier configuration, Samsung C-Band massive MIMO Radio supports 200 MHz bandwidth in the C-Band spectrum.

Samsung C-Band massive MIMO Radio covers the entire C-Band 280 MHz spectrum, so it can meet the operator's needs in current A block and future B/C blocks



Future Proof Product

Samsung C-Band 64T64R Massive MIMO radio supports not only CPRI but also eCPRI as front-haul interface.
It enables operators can cut down on OPEX/CAPEX by reducing front-haul bandwidth through low layer split and using ethernet based higher efficient line.



Enhanced Performance

C-Band massive MIMO Radio creates sharp beams and extends networks' coverage on the critical mid-band spectrum using a large number of antenna elements and high output power to boost data speeds.

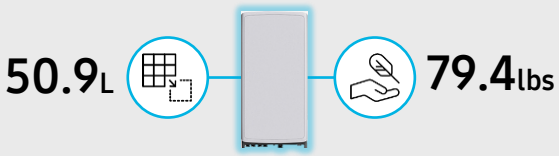
This helps operators reduce their CAPEX as they now need less products to cover the same area than before.

Furthermore, as C-Band massive MIMO Radio supports MU-MIMO(Multi-user MIMO) , it enables to increase user throughput by minimizing interference.

Well Matched Design

Samsung C-Band Massive MIMO radio utilizes 64 antennas, supports up to 280MHz bandwidth, and delivers a 200W output power. despite the above advanced performance, the Radio has a compact size of 50.9L and 79.4lbs. This makes it easy to install the Radio.

It is designed to look solid and compact, with a low profile appearance so that, when installed, harmonizes well with the surrounding environment..



Technical Specifications

Item	Specification
Tech	NR
Band	n77
Frequency Band	3700 - 3980 MHz
EIRP	78.5dBm (53.0 dBm+25.5 dBi)
IBW/OBW	280 MHz / 200 MHz
Installation	Pole/Wall
Size/ Weight	16.06 x 35.06 x 5.51 inch (50.86L)/ 79.4 lbs

SAMSUNG

About Samsung Electronics Co., Ltd.

Samsung inspires the world and shapes the future with transformative ideas and technologies. The company is redefining the worlds of TVs, smartphones, wearable devices, tablets, digital appliances, network systems, and memory, system LSI, foundry and LED solutions.

129 Samsung-ro, Yeongtong-gu, Suwon-si Gyeonggi-do, Korea

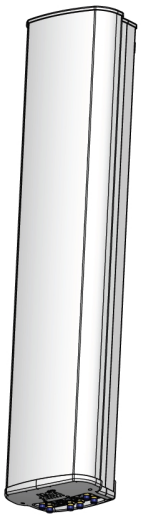
MX06FRO660-03

NWAV™ X-Pol Hex-Port Antenna

X-Pol Hex-Port 6 ft 60° Fast Roll Off antenna with independent tilt on 700 & 850 MHz:

2 ports 698-798, 824-894 MHz and 4 ports 1695-2180 MHz

- Fast Roll Off (FRO™) azimuth beam pattern improves Intra- and Inter-cell SINR
- Compatible with dual band 700/850 MHz radios with independent low band EDT without external diplexers
- Fully integrated (iRETs) with independent RET control for low and high bands for ease of network optimization
- SON-Ready array spacing supports beamforming capabilities
- Suitable for LTE/CDMA/PCS/UMTS/GSM air interface technologies
- Integrated Smart Bias-Ts reduce leasing costs

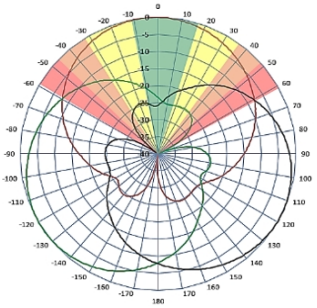


nwav

Fast Roll-Off antennas increase data throughput without compromising coverage

The horizontal beam produced by Fast Roll-Off (FRO) technology increases the Signal to Interference & Noise Ratio (SINR) by eliminating overlap between sectors .

Non-FRO antenna



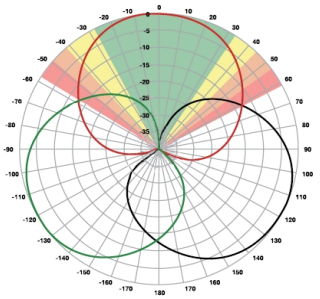
Large traditional antenna pattern overlap creates harmful interference.

JMA's FRO antenna pattern minimizes overlap, thereby minimizing interference.

LTE throughput	SINR	Speed (bps/Hz)	Speed increase	CQI
Excellent	>18	>4.5	333+%	8-10
Good	15-18	3.3-4.5	277%	6-7
Fair	10-15	2-3.3	160%	4-6
Poor	<10	<2	0%	1-3

The LTE radio automatically selects the best throughput based on measured SINR.

JMA FRO antenna



Electrical specification (minimum/maximum)	Ports 1, 2		Ports 3, 4, 5, 6		
Frequency bands, MHz	698-798	824-894	1695-1880	1850-1990	1920-2180
Polarization	± 45°		± 45°		
Average gain over all tilts, dBi	14.4	14.0	17.6	18.0	18.2
Horizontal beamwidth (HBW), degrees	60.5	53.0	55.0	55.0	55.5
Front-to-back ratio, co-polar power @180°± 30°, dB	>24	>24.0	>25.0	>25.0	>25.0
X-Pol discrimination (CPR) at boresight, dB	>15.0	>14.2	>18	>18	>15
Sector power ratio, percent	<3.5	<3.0	<3.7	<3.8	<3.6
Vertical beamwidth (VBW), degrees[1]	13.1	11.8	6.0	5.5	5.5
Electrical downtilt (EDT) range, degrees	2-14	2-14	0-9		
First upper side lobe (USLS) suppression, dB[1]	≤-15.0	≤-16.5	≤-16.0	≤-16.0	≤-16.0
Cross-polar isolation, port-to-port, dB[1]	25	25	25	25	25
Max VSWR / return loss, dB	1.5:1 / -14.0		1.5:1 / -14.0		
Max passive intermodulation (PIM), 2x20W carrier, dBc	-153		-153		
Max input power per any port, watts	300		250		
Total composite power all ports, watts	1500				

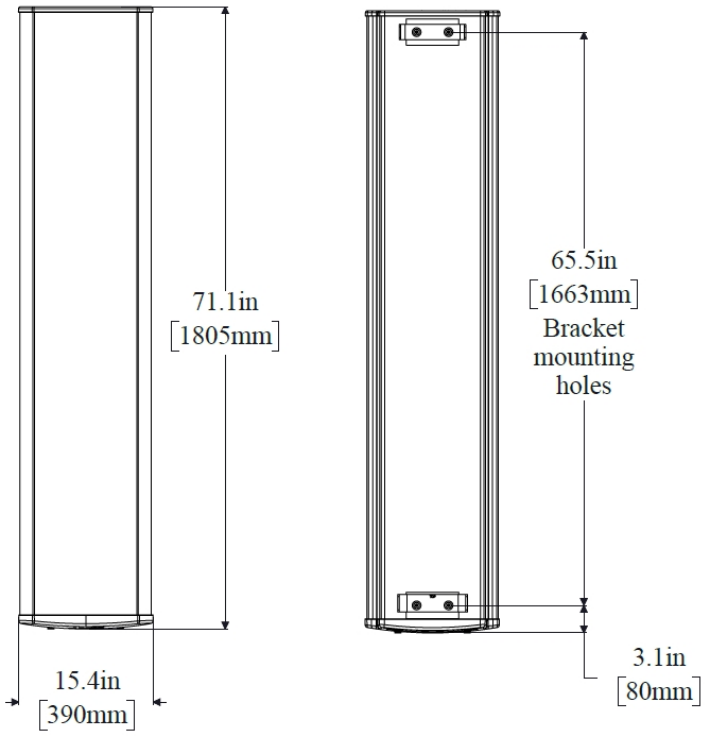
[1] Typical value over frequency and tilt

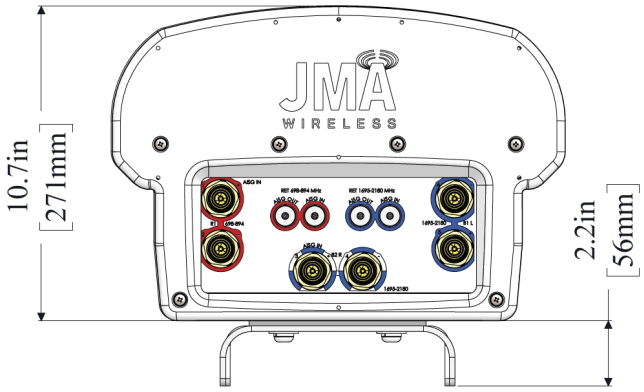
MX06FRO660-03

NWAV™ X-Pol Hex-Port Antenna

Mechanical specifications	
Dimensions height/width/depth, inches (mm)	71.3/ 15.4/ 10.7 (1811/ 392/ 273)
Shipping dimensions length/width/height, inches (mm)	82/ 20/ 15 (2083/ 508/ 381)
No. of RF input ports, connector type, and location	6 x 4.3-10 female, bottom
RF connector torque	96 lbf·in (10.85 N·m or 8 lbf·ft)
Net antenna weight, lb (kg)	60 (27.0)
Shipping weight, lb (kg)	90 (41.0)
Antenna mounting and downtilt kit included with antenna	91900318
Net weight of the mounting and downtilt kit, lb (kg)	18 (8.18)
Range of mechanical up/down tilt	-2° to 14°
Rated wind survival speed, mph (km/h)	150 (241)
Frontal, lateral, and rear wind loading @ 150 km/h, lbf (N)	154 (685), 73 (325), 158 (703)
Equivalent flat plate @ 100 mph and Cd=2, sq ft	2.6

Front view | **Back view** | **Bottom view**





Ordering information	
Antenna model	**Description**
MX06FRO660-03	6F X-Pol HEX FRO 60° independent tilt 700/850 RET, 4.3-10 & SBT
Optional accessories	
AISG cables	M/F cables for AISG connections
PCU-1000 RET controller	Stand-alone controller for RET control and configurations

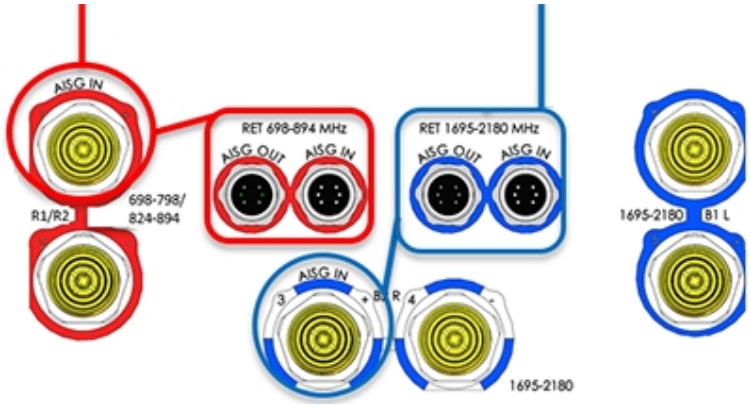
Remote electrical tilt (RET 1000) information	
RET location	Integrated into antenna
RET interface connector type	8-pin AISG connector per IEC 60130-9
RET connector torque	Min 0.5 N·m to max 1.0 N·m (hand pressure & finger tight)
RET interface connector quantity	2 pairs of AISG male/female connectors
RET interface connector location	Bottom of the antenna
Total no. of internal RETs (low bands)	2
Total no. of internal RETs (high bands)	1
RET input operating voltage, vdc	10-30
RET max power consumption, idle state, W	≤ 2.0
RET max power consumption, normal operating conditions, W	≤ 13.0
RET communication protocol	AISG 2.0 / 3GPP

RET and RF connector topology

Each RET device can be controlled either via the designated external AISG connector or RF port as shown below:

RET device	Band	RF port
R1	698-798	1-2
R2	824-894	1-2

RET device	Band	RF port
B1/B2	1695-2180	3-6

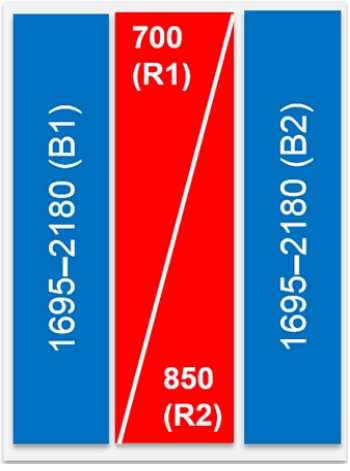


Array topology

3 sets of radiating arrays

R1/R2: 698-894 MHz
B1: 1695-2180 MHz
B2: 1695-2180 MHz

Band	RF port
1695-2180	3-4
698-894	1-2
1695-2180	5-6



SAMSUNG

Dual-Band Radio Unit
AWS/PCS (B66/B2)
RFV01U-D1A

Samsung's RFV01U-D1A is a compact remote Radio Unit (RU) designed for deployments that require flexibility in installation and rapid onlining, without compromising on coverage, capacity or operational expenses.

The RFV01U-D1A RU targets dual-band support across Band 66 (AWS) and Band 2 (PCS), making it an ideal product for broad coverage footprints across multiple common mid-range frequencies.

The RU handles all Radio Frequency (RF) processing in a single, compact unit, and is designed to interface via CPRI with Samsung's CDU baseband offerings, in both distributed- and central-RAN configurations.

In addition to its minimal footprint and ease of installation, the RU is also designed to reduce cost of ownership through its integrated spectrum analyzer, which allows for remote RF monitoring, greatly reducing the need for on-site maintenance visits.

Features and Benefits

- Dual-band support for broad frequency coverage
- Minimal footprint reduces site costs
- Rapid, easy installation
- Flexibly deployable in any location
- Remote RF monitoring capability
- Convection cooled, silent operation
- Built-in Broadcast Auxiliary Services (BAS) filter ensures compliant AWS operation without impacting footprint

Key Technical Specifications

Duplex Type: FDD
Operating Frequencies:
    B66: DL(2,110-2,180MHz)/UL(1,710-1,780MHz)
    B2: DL(1,930-1,990MHz)/UL(1,850-1,910MHz)
Instantaneous Bandwidth:
    70MHz(B66) + 60MHz(B2)
RF Chain: 4T4R/2T4R/2T2R
Output Power: Total 320W
DU-RU Interface: CPRI (10Gbps)
Dimensions: 380 x 380 x 255mm (36.8L)
Weight: 38.3kg
Input Power: -48V DC
Operating Temp.: -40 - 55°(w/o solar load)
Cooling: Natural convection

SAMSUNG

Dual-Band Radio Unit
700/850MHz (B13/B5)
RFV01U-D2A

Samsung's RFV01U-D2A is a compact remote Radio Unit (RU) designed for deployments that require flexibility in installation and rapid onlining, without compromising on coverage, capacity or operational expenses.

The RFV01U-D2A RU targets dual-band support across Band 13 (700MHz) and Band 5 (850MHz), making it an ideal product for broad coverage footprints across multiple common low-end, long-range frequencies.

The RU handles all Radio Frequency (RF) processing in a single, compact unit, and is designed to interface via CPRI with Samsung's CDU baseband offerings, in both distributed- and central-RAN configurations.

In addition to its minimal footprint and ease of installation, the RU is also designed to reduce cost of ownership through its integrated spectrum analyzer, which allows for remote RF monitoring, greatly reducing the need for on-site maintenance visits.

Features and Benefits

- Dual-band support for broad frequency coverage
- Minimal footprint reduces site costs
- Rapid, easy installation
- Flexibly deployable in any location
- Remote RF monitoring capability
- Convection cooled, silent operation

Key Technical Specifications

Duplex Type: FDD
Operating Frequencies:
B13: DL(746-756MHz)/UL(777-787MHz)
B5: DL(869-894MHz)/UL(824-849MHz)
Instantaneous Bandwidth: 10MHz(B13) + 25MHz(B5)
RF Chain: 4T4R/2T4R/2T2R
Output Power: Total 320W
DU-RU Interface: CPRI (10Gbps)
Dimensions: 380 x 380 x 207mm (29.9L)
Weight: 31.9kg
Input Power: -48V DC
Operating Temp.: -40 - 55°(w/o solar load)
Cooling: Natural convection

ATTACHMENT 3

	General	Power	Density					
Site Name: New Miflrod W								
Tower Height: Verizon @ 130ft								
CARRIER	**# OF CHAN.**	**WATTS ERP**	**HEIGHT**	**CALC. POWER DENS**	**FREQ.**	**MAX. PERMISS. EXP.**	**FRACTION MPE**	**Total**
*Sprint	1	438	150	850	0.0076	0.5667	0.13%	
*Sprint	2	438	150	850	0.0152	0.5667	0.27%	
*Sprint	5	623	150	1900	0.0540	1.0000	0.54%	
*Sprint	2	1556	150	1900	0.0540	1.0000	0.54%	
*Sprint	8	640	150	2510	0.0888	1.0000	0.89%	
*AT&T-UMTS	2	414	120	850	0.0229	0.5667	0.40%	
*AT&T-LTE	4	1005	120	2300	0.1112	1.0000	1.11%	
*AT&T-PCS-LTE	4	736	120	700	0.0815	0.4667	1.75%	
*AT&T-LTE	2	885	120	850	0.0490	0.5667	0.86%	
*AT&T-WCS-LTE	4	1181	120	2100	0.1307	1.0000	1.31%	
*AT&T-PCS-LTE	2	664	120	850	0.0367	0.5667	0.65%	
*AT&T-LTE	2	1167	120	700	0.0646	0.4667	1.38%	
*AT&T-AWS-LTE	4	1309	120	1900	0.1449	1.0000	1.45%	
*T-Mobile	2	2334	140	2100	0.0935	1.0000	0.93%	
*T-Mobile	2	6413	140	2500	0.2569	1.0000	2.57%	
*T-Mobile	2	6413	140	2500	0.2569	1.0000	2.57%	
*T-Mobile	2	592	140	600	0.0237	0.4000	0.59%	
*T-Mobile	1	1578	140	600	0.0316	0.4000	0.79%	
*T-Mobile	2	649	140	700	0.0260	0.4667	0.56%	
*T-Mobile	4	1102	140	1900	0.0883	1.0000	0.88%	
*T-Mobile	2	2204	140	1900	0.0883	1.0000	0.88%	
VZW 700	**4**	**581**	**130**	**0.0049**	**751**	**0.5007**	**0.99%**	
VZW CDMA	**2**	**438**	**130**	**0.0019**	**877.26**	**0.5848**	**0.32%**	
VZW Cellular	**4**	**581**	**130**	**0.0049**	**874**	**0.5827**	**0.85%**	
VZW PCS	**4**	**905**	**130**	**0.0077**	**1975**	**1.0000**	**0.77%**	
VZW AWS	**4**	**2991**	**130**	**0.0255**	**2120**	**1.0000**	**2.55%**	
VZW CBAND	**4**	**6531**	**130**	**0.0556**	**3730.08**	**1.0000**	**5.56%**	
								32.10%
* Source: Siting Council								

ATTACHMENT 4

STRUCTURAL ANALYSIS REPORT
153-ft MONOPOLE TOWER
NEW MILFORD, CONNECTICUT

Prepared for
Verizon Wireless

Verizon Site Ref.
467734; New Milford W CT

Site Address: 86 Boardman Road, New Milford, Connecticut 06776

APT Filing No. CT141_11730

August 5, 2021

ALL-POINTS TECHNOLOGY CORPORATION, P.C.
567 VAUXHALL STREET EXTENSION · SUITE 311 · WATERFORD, CT 06385 · PHONE 860-663-1697

STRUCTURAL ANALYSIS REPORT
153-ft MONOPOLE TOWER
NEW MILFORD, CONNECTICUT
prepared for
Verizon Wireless

EXECUTIVE SUMMARY:

All-Points Technology Corporation, P.C. (APT) performed a structural analysis of an existing 153-foot tapered steel monopole tower structure to support a proposed Verizon equipment modification.

The proposed Verizon antenna and appurtenance modification consists of the replacement of nine (9) existing panel antennas with six (6) new panel antennas and three (3) Samsung MT6407-77A antennas, the replacement of nine (9) existing remote radio heads (RRHs) with six (6) new RRHs and one (1) existing 6OVP with one (1) new 12OVP. Equipment will be fed by six (6) existing 1-5/8" lines and one (1) new 12x24 low-inductance (LI) hybrid line.

The existing 10' T-arms at 128' require reinforcements prior to the installation of the new equipment, as referenced below.

Our analysis indicates the subject tower and base foundation meet the requirements of the 2015 International Building Code (IBC), as amended by the 2018 Connecticut State Building Code, and ANSI/TIA-222-G with the proposed equipment changes.

INTRODUCTION:

A structural analysis of this communications tower was performed by APT for Verizon Wireless. The tower is located at 86 Boardman Road in New Milford, Connecticut.

The following information was utilized in the preparation of this analysis:

- Structural Analysis Report prepared by Centek Engineering, Centek Project No. 14001.060, dated 12/1/2014.
- Structural Analysis Report prepared by Centek Engineering, Centek Project No. 20074.50, dated 07/08/20.
- RFDS sheet provided by Verizon Wireless, dated 10/27/2020.
- Antenna Mount Analysis Report prepared by GPD Engineering, Project #2021740.467734.01, dated 6/25/2021.
- Post-Mod Antenna Mount Analysis Report, PMI Requirements and Mount Modification drawings, prepared by GPD Engineering, Project #2021740.467734.02, dated 6/30/2021.
- Construction Drawings prepared by All-Points Technology Corporation, P.C. (APT), APT Filing No. CT141_11730, marked Rev 2, dated 08/05/21.

The tower is a 153-foot, 18-sided tapered steel monopole tower manufactured by Engineered Endeavors, Inc. (EEI). The pole features pine branches above the 80' elevation.

The analysis was conducted using the following antenna inventory (proposed equipment shown in **bold** text):

Carrier	Antenna and Appurtenance Make/Model	Elevation (AGL) [2]	Status	Mount Type	Coax/Feed-Line [3]
Motorola	2' HP dish, 3' HP dish	156'	E	(2) 5' x 4-1/2" pipe mount	(2) 7/8"
Town	Motorola BA40-41-DIN	154'	E	Valmont Uni-Tri bracket, (1) 5' x 4-1/2" pipe mounts	7/8"
Sprint	(3) Commscope DT465B-2XR & (3) RFS APXVSPP18-C-A20 panels, (3) TD-RRH8x20-25 RRHs, (6) FD-RRH-2x50-800 RRHs, (3) ALU RRH4x40-1900 RRHs	150'	E	(3) 10' T-arm sector mounts	(9) 1-5/8", (4) 1-1/4" hybrid
T-Mobile	(3) RFS APXVAARR24_43-U-NA20, (3) RFS APX16DWV-16DWVS & (3) Ericsson Air6449 B41 panels, (3) Radio 4424 RRHs, (3) Radio 4415 RRHs, (3) Radio 4449 RRHs, (3) TMA 8" x 10"	140'	E	(3) 10' T-arm sector mounts (Reinforced)	(2) 6x12 hybrid
Verizon Wireless	(3) Andrew LNX-8513DS-A1M, **(6) JMA Wireless MX06FRO660-03 &** **(3) Samsung MT6407-77A panels,** **(3) Samsung B66a/B2a RRH-BRO49 (RFV01U-D1A) RRHs,** **(3) Samsung B13/B5 RRH-BR04C (RFV01UD2A) RRHs,** **(1) Raycap DB-C1-12C-24AB-0Z OVP**	130'	E **P** **P** **P** **P** **P** **P** **P**	(3) 10' T-arm sector mounts **(To be Reinforced)**	(6) 1-5/8", **(1) 12x24 LI hybrid**
AT&T	(3) Powerwave 7770.00, (2) Kathrein 800-10965, (1) Kathrein 800-10966 & (6) cci HPA-65R-BUU-H6 panels, (3) Powerwave LGP21401 TMAs, (3) Ericsson RRUS-11 RRHs, (6) Ericsson RRUS-32 RRHs, (3) Radio 4426 RRHs, (3) Radio 4478 RRHs, (3) Raycap DC6-48-60-18-8F "squid" D-boxes	120'	E	(3) 10' T-arm sector mounts	(12) 1-5/8", (1) Fiber, (2) DC power

Notes:

1. E = Existing to Remain; ERL = Existing to be Relocated; P = Proposed.
2. Elevations refer to AGL.
3. All feed lines run inside the pole.

STRUCTURAL ANALYSIS:

Methodology:

This structural analysis has been prepared in accordance with the ANSI TIA-222-G standard entitled "Structural Standards for Steel Antenna Towers and Antenna Supporting Structures," American Institute of Steel Construction (AISC) Manual of Steel Construction, and the 2015 International Building Code (IBC), as amended by the 2018 Connecticut State Building Code.

Antenna, appurtenance and mount assembly loads were evaluated utilizing the ANSI TIA-222-G standard.

- Load Case 1: 115 mph (3-second gust), 0" ice
- Load Case 2: 50mph (3-second gust) w/ 0.75" ice thickness required

- Load Case 3: 60mph (3-second gust) (Service Load)
- Structure Class: II
- Exposure Category: C
- Topographic Category: 1

Splice and Anchor Bolts:

Connection bolts were evaluated under the reduced design criteria. All splice and anchor bolts were found to be adequately sized to support the proposed equipment.

Analysis Results:

The following table summarizes the capacity of the monopole based on combined axial and bending stresses:

Elevation	Capacity
134.83'-154'	17%
89.16'-134.83'	72%
44.54'-89.16'	65%
1'-44.54'	67%
Base Plate	72%

Base Foundation:

Evaluation of the existing base foundation was evaluated utilizing documents provided to APT and was found to be adequately sized for the proposed and future loads.

Factored base reactions imposed with the proposed equipment were calculated as follows:

Load Effect	Calculated Reactions
Compression	77.2 k
Total Shear	55.2 k
Overturning Moment	6468 ft-k

CONCLUSIONS AND SUGGESTIONS:

In conclusion, our analysis indicates the 153-ft monopole tower structure and foundation located at 86 Boardman Road in New Milford, Connecticut meets the requirements of the 2015 International Building Code (IBC), as amended by the 2018 Connecticut State Building Code, and the ANSI/TIA-222-G with Verizon's proposed equipment changes and mount modifications.

Sincerely,
All-Points Technology Corp. P.C.

Robert E. Adair, P.E.
Principal

Prepared by:
All-Points Technology Corp. P.C.

Ali M. Adair
Project Scientist

LIMITATIONS:

This report is based on the following:

1. Tower/structure is properly installed and maintained.
2. All members and components are in a non-deteriorated condition.
3. All required members are in place.
4. All bolts are in place and are properly tightened.
5. Tower/structure is in plumb condition.
6. All tower members were properly designed, detailed, fabricated, and installed and have been properly maintained since erection.
7. Material yield stress values as follows:
   Monopole: 65 ksi
   Base plate: 60 ksi
   Anchor bolts: 75 ksi

All-Points Technology Corporation, P.C. (APT) is not responsible for any modifications completed prior to or hereafter which APT is not or was not directly involved. Modifications include but are not limited to:

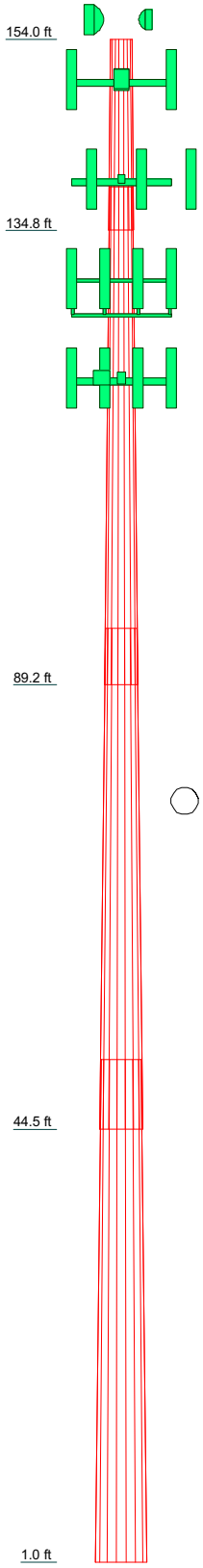
1. Replacing or reinforcing bracing members.
2. Reinforcing members in any manner.
3. Adding or relocating antennas.
4. Installing antenna mounts or waveguide cables.
5. Extending tower.

APT hereby states that this document represents the entire report and that it assumes no liability for any factual changes that may occur after the date of this report. All representations, recommendations, and conclusions are based upon the information contained and set forth herein. If you are aware of any information which conflicts with that which is contained herein, or you are aware of any defects arising from original design, material, fabrication, or erection deficiencies, you should disregard this report and immediately contact APT. APT disclaims all liability for any representation, recommendation, or conclusion not expressly stated herein.

Appendix A

Tower Schematic

Section	1	2	3	4		
Length (ft)	19.17	50.00	50.29	50.46		
Number of Sides	18	18	18	18		
Thickness (in)	0.1875	0.3130	0.5000	0.5630		
Socket Length (ft)	4.33	5.67	6.92			
Top Dia (in)	25.2500	28.5753	38.8852	48.5745		
Bot Dia (in)	30.0300	40.9100	51.2800	61.0000		
Grade					A572-65	
Weight (lb)	1065.7	5819.6	12107.6	16637.6		35630.5



DESIGNED APPURTENANCE LOADING

TYPE	ELEVATION	TYPE	ELEVATION
5'x4 1/2" Pipe Mount (Motorola)	156	B2/B66A RRHBRO49 (RFV01U-D1A) (Verizon Wireless)	130
5'x4 1/2" Pipe Mount (Motorola)	156	B2/B66A RRHBRO49 (RFV01U-D1A) (Verizon Wireless)	130
2' HP dish	156	B5/B13 RRHBR04C (RFV01UD2A) (Verizon Wireless)	130
3' HP dish	156	B5/B13 RRHBR04C (RFV01UD2A) (Verizon Wireless)	130
Valmont Uni-Tri bracket (Town)	154	B5/B13 RRHBR04C (RFV01UD2A) (Verizon Wireless)	130
BA40-41-DIN (Town)	154	DB-C1-12X-24AB-0Z D-box (Verizon Wireless)	130
5'x4 1/2" Pipe Mount (Town)	154	LNX-8513DS-A1M (Verizon Wireless)	130
DT465B-2XR (Sprint)	150	LNX-8513DS-A1M (Verizon Wireless)	130
APXVSPP18-C-A20 (Sprint)	150	Pine branches large (EEI)	130
APXVSPP18-C-A20 (Sprint)	150	LNX-8513DS-A1M (Verizon Wireless)	130
APXVSPP18-C-A20 (Sprint)	150	(2) JMA MX06FRO660-03 (Verizon Wireless)	130
TD-RRH8x20-25 (Sprint)	150	EEI 10' T-Arm w/ Reinforcements (Verizon Wireless)	128
TD-RRH8x20-25 (Sprint)	150	EEI 10' T-Arm w/ Reinforcements (Verizon Wireless)	128
TD-RRH8x20-25 (Sprint)	150	EEI 10' T-Arm w/ Reinforcements (Verizon Wireless)	128
ALU RRH4x40-1900 (Sprint)	150	(2) HPA-65R-BUU-H6 (ATI)	120
ALU RRH4x40-1900 (Sprint)	150	800-10965 (ATI)	120
ALU RRH4x40-1900 (Sprint)	150	800-10965 (ATI)	120
(2) FD-RRH-2x50-800 (Sprint)	150	800-10966 (ATI)	120
(2) FD-RRH-2x50-800 (Sprint)	150	LGP2140X TMA (ATI)	120
(2) FD-RRH-2x50-800 (Sprint)	150	LGP2140X TMA (ATI)	120
EEI 10' T-Arm (Sprint)	150	LGP2140X TMA (ATI)	120
EEI 10' T-Arm (Sprint)	150	Ericsson RRUS-11 (ATI)	120
EEI 10' T-Arm (Sprint)	150	Ericsson RRUS-11 (ATI)	120
Pine branches large (EEI)	150	Ericsson RRUS-11 (ATI)	120
DT465B-2XR (Sprint)	150	(2) Ericsson RRUS-32 (ATI)	120
DT465B-2XR (Sprint)	150	(2) Ericsson RRUS-32 (ATI)	120
APXVAARR 24_43 (T-Mobile)	140	(2) Ericsson RRUS-32 (ATI)	120
APXVAARR 24_43 (T-Mobile)	140	Radio 4426 (ATI)	120
APXVAARR 24_43 (T-Mobile)	140	Radio 4426 (ATI)	120
AIR 6449 B41 (T-Mobile)	140	Radio 4426 (ATI)	120
AIR 6449 B41 (T-Mobile)	140	(2) Radio 4478 (ATI)	120
AIR 6449 B41 (T-Mobile)	140	(2) Radio 4478 (ATI)	120
Radio 4424 B25 (T-Mobile)	140	(2) Radio 4478 (ATI)	120
Radio 4424 B25 (T-Mobile)	140	Raycap DC6-48-60-18-8F squid (ATI)	120
Radio 4424 B25 (T-Mobile)	140	Raycap DC6-48-60-18-8F squid (ATI)	120
Radio 4415 (T-Mobile)	140	Raycap DC6-48-60-18-8F squid (ATI)	120
Radio 4415 (T-Mobile)	140	EEI 10' T-Arm (ATI)	120
Radio 4415 (T-Mobile)	140	EEI 10' T-Arm (ATI)	120
Radio 4449 (T-Mobile)	140	EEI 10' T-Arm (ATI)	120
Radio 4449 (T-Mobile)	140	7770.00 (ATI)	120
Radio 4449 (T-Mobile)	140	(2) HPA-65R-BUU-H6 (ATI)	120
TMA 8" x 10" (T-Mobile)	140	(2) HPA-65R-BUU-H6 (ATI)	120
TMA 8" x 10" (T-Mobile)	140	Pine branches large (EEI)	120
TMA 8" x 10" (T-Mobile)	140	7770.00 (ATI)	120
EEI 10' T-Arm (T-Mobile)	140	7770.00 (ATI)	120
EEI 10' T-Arm (T-Mobile)	140	Pine branches large (EEI)	110
EEI 10' T-Arm (T-Mobile)	140	Pine branches large (EEI)	100
Monopole Sector Stabilizer (T-Mobile)	140	Pine branches large (EEI)	90
APX16DWV-16DWVS (T-Mobile)	140	Pine branches large (EEI)	80
Pine branches large (EEI)	140		
APX16DWV-16DWVS (T-Mobile)	140		
APX16DWV-16DWVS (T-Mobile)	140		
(2) JMA MX06FRO660-03 (Verizon Wireless)	130		
(2) JMA MX06FRO660-03 (Verizon Wireless)	130		
MT6407-77A (Verizon Wireless)	130		
MT6407-77A (Verizon Wireless)	130		
MT6407-77A (Verizon Wireless)	130		
B2/B66A RRHBRO49 (RFV01U-D1A) (Verizon Wireless)	130		

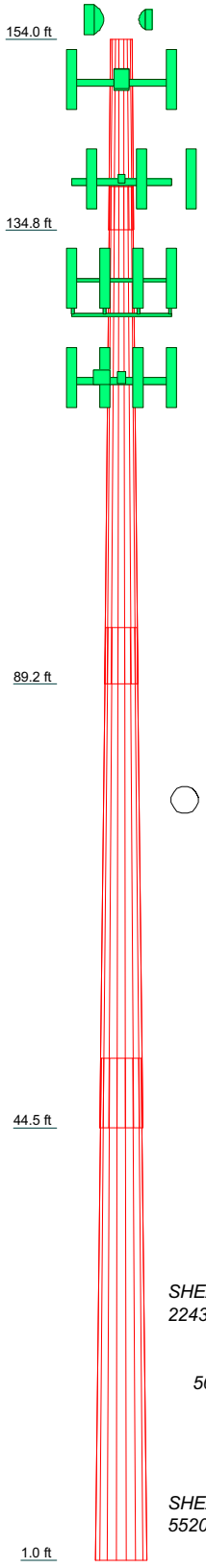
MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
A572-65	65 ksi	80 ksi			

All-Points Technology Corp.
567 Vauxhall St. Ext. Suite 311
Waterford, CT 06385
Phone: (860) 663-1697
FAX: (860) 663-0935

Job: ***153' Monopole Tower***			
Project: ***CT141_11730 New Milford***			
Client: VzW Site #467734; New Milford West	Drawn by: M. Larson	App'd:	
Code: TIA-222-G	Date: 08/05/21	Scale: NTS	
Path: C:\Users\APT User\Desktop\Work\Jobs\Verizon\CT141_11730 New Milford West\CT141_11730 New Milford West.eri		Dwg No. E-1	

Section	Length (ft)	Number of Sides	Thickness (in)	Socket Length (ft)	Top Dia (in)	Bot Dia (in)	Grade	Weight (lb)
1	19.17	18	0.1875	4.33	25.2500	30.0300		1065.7
2	50.00	18	0.3130	5.67	28.5753	40.9100		5819.6
3	50.29	18	0.5000	6.92	38.8852	51.2800	A572-65	12107.6
4	50.46	18	0.5630		48.5745	61.0000		16637.6
								35630.5



MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
A572-65	65 ksi	80 ksi			

ALL REACTIONS ARE FACTORED

AXIAL
121743 lb

SHEAR
22437 lb

MOMENT
2682578 lb-ft

TORQUE 163 lb-ft
50 mph WIND - 0.7500 in ICE

AXIAL
77231 lb

SHEAR
55201 lb

MOMENT
6468058 lb-ft

TORQUE 789 lb-ft
REACTIONS - 89 mph WIND

All-Points Technology Corp.
567 Vauxhall St. Ext. Suite 311
Waterford, CT 06385
Phone: (860) 663-1697
FAX: (860) 663-0935

Job: ***153' Monopole Tower***
Project: ***CT141_11730 New Milford***
Client: VzW Site #467734; New Milford West | Drawn by: M. Larson | App'd:
Code: TIA-222-G | Date: 08/05/21 | Scale: NTS
Path: C:\Users\APT User\Desktop\Work\Jobs\Verizon\CT141_11730 New Milford West\CT141_11730 New Milford West.eri | Dwg No. E-1

Appendix B

Calculations

Tower Input Data

The tower is a monopole.
This tower is designed using the TIA-222-G standard.
The following design criteria apply:

ASCE 7-10 Wind Data is used (wind speeds converted to nominal values).
Basic wind speed of 89 mph.
Ultimate wind speed of 115 mph.
Structure Class II.
Exposure Category C.
Topographic Category 1.
Crest Height 0.00 ft.
Nominal ice thickness of 0.7500 in.
Ice thickness is considered to increase with height.
Ice density of 56 pcf.
A wind speed of 50 mph is used in combination with ice.
Temperature drop of 50 °F.
Deflections calculated using a wind speed of 60 mph.
A non-linear (P-delta) analysis was used.
Pressures are calculated at each section.
Stress ratio used in pole design is 1.

Monopole Base Plate Data

Base Plate Data	
Base plate is square	
Base plate is grouted	
Anchor bolt grade	A615-75
Anchor bolt size	2.2500 in
Number of bolts	28
Embedment length	84.0000 in
f'_c	4 ksi
Grout space	2.0000 in
Base plate grade	A572-60
Base plate thickness	3.0000 in
Bolt circle diameter	68.0000 in
Outer diameter	74.0000 in
Inner diameter	61.0000 in
Base plate type	Plain Plate

Feed Line/Linear Appurtenances - Entered As Area

Description	*Face or Leg*	*Allow Shield*	*Exclude From Torque Calculation*	*Component Type*	*Placement* *ft*	*Total Number*		C_AA_A *ft²/ft*	*Weight* *plf*
7/8 (Town)	B	No	Yes	Inside Pole	154.00 - 5.00	3	No Ice	0.00	0.54
							1/2" Ice	0.00	0.54
							1" Ice	0.00	0.54
1-1/4" Hybrid fiber-power cable (Sprint)	B	No	Yes	Inside Pole	150.00 - 5.00	4	No Ice	0.00	1.30
							1/2" Ice	0.00	1.30
							1" Ice	0.00	1.30
1 5/8 (Sprint)	B	No	Yes	Inside Pole	150.00 - 5.00	9	No Ice	0.00	1.04
							1/2" Ice	0.00	1.04
							1" Ice	0.00	1.04

Description	Face or Leg	Allow Shield	Exclude From Torque Calculation	Component Type	Placement ft	Total Number		C_AA_A ft^2/ft	Weight plf
6x12 hybrid (T-Mobile)	B	No	Yes	Inside Pole	140.00 - 5.00	2	No Ice	0.00	1.88
							1/2" Ice	0.00	1.88
							1" Ice	0.00	1.88
1 5/8 (Verizon Wireless)	B	No	Yes	Inside Pole	130.00 - 5.00	6	No Ice	0.00	1.04
							1/2" Ice	0.00	1.04
							1" Ice	0.00	1.04
12x24 LI (Verizon Wireless)	B	No	Yes	Inside Pole	130.00 - 5.00	1	No Ice	0.00	3.04
							1/2" Ice	0.00	3.04
							1" Ice	0.00	3.04
1 5/8 (AT&T)	B	No	Yes	Inside Pole	120.00 - 5.00	12	No Ice	0.00	1.04
							1/2" Ice	0.00	1.04
							1" Ice	0.00	1.04
5/16" Fiberoptic cable (AT&T)	C	No	Yes	Inside Pole	120.00 - 5.00	1	No Ice	0.00	0.25
							1/2" Ice	0.00	0.25
							1" Ice	0.00	0.25
3/4" power (AT&T)	C	No	Yes	Inside Pole	120.00 - 5.00	2	No Ice	0.00	0.58
							1/2" Ice	0.00	0.58
							1" Ice	0.00	0.58
3/8" safety cable	A	No	Yes	CaAa (Out Of Face)	154.00 - 5.00	1	No Ice	0.04	0.22
							1/2" Ice	0.14	0.83
							1" Ice	0.24	1.98

Discrete Tower Loads

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight lb
5'x4 1/2" Pipe Mount (Motorola)	B	From Face	0.00 / 0.00	0.0000	156.00	No Ice	1.54	1.54	53.90
						1/2" Ice	2.08	2.08	69.94
			2.00			1" Ice	2.40	2.40	89.65
5'x4 1/2" Pipe Mount (Motorola)	C	From Face	0.00 / 0.00	0.0000	156.00	No Ice	1.54	1.54	53.90
						1/2" Ice	2.08	2.08	69.94
			2.00			1" Ice	2.40	2.40	89.65
BA40-41-DIN (Town)	A	From Leg	1.00 / 0.00	0.0000	154.00	No Ice	0.15	0.15	36.00
						1/2" Ice	0.22	0.22	38.07
			5.00			1" Ice	0.30	0.30	41.13
5'x4 1/2" Pipe Mount (Town)	A	From Leg	1.00 / 0.00	0.0000	154.00	No Ice	1.54	1.54	53.90
						1/2" Ice	2.08	2.08	69.94
			2.00			1" Ice	2.40	2.40	89.65
Valmont Uni-Tri bracket (Town)	A	None		0.0000	154.00	No Ice	1.75	1.75	29.00
						1/2" Ice	1.94	1.94	30.60
						1" Ice	2.13	2.13	32.30
DT465B-2XR (Sprint)	A	From Face	4.00 / 0.00	0.0000	150.00	No Ice	9.11	5.98	60.00
						1/2" Ice	9.58	6.44	118.08
			0.00			1" Ice	10.05	6.91	182.45
DT465B-2XR (Sprint)	B	From Face	4.00 / 0.00	0.0000	150.00	No Ice	9.11	5.98	60.00
						1/2" Ice	9.58	6.44	118.08
			0.00			1" Ice	10.05	6.91	182.45
DT465B-2XR (Sprint)	C	From Face	4.00 / 0.00	0.0000	150.00	No Ice	9.11	5.98	60.00
						1/2" Ice	9.58	6.44	118.08
			0.00			1" Ice	10.05	6.91	182.45
APXVSPP18-C-A20 (Sprint)	A	From Face	4.00 / 0.00	0.0000	150.00	No Ice	8.02	5.28	107.00
						1/2" Ice	8.48	5.74	156.52
			0.00			1" Ice	8.94	6.20	212.12

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight lb
APXVSPP18-C-A20	B	From Face	4.00	0.0000	150.00	No Ice	8.02	5.28	107.00
(Sprint)			0.00			1/2" Ice	8.48	5.74	156.52
			0.00			1" Ice	8.94	6.20	212.12
APXVSPP18-C-A20	C	From Face	4.00	0.0000	150.00	No Ice	8.02	5.28	107.00
(Sprint)			0.00			1/2" Ice	8.48	5.74	156.52
			0.00			1" Ice	8.94	6.20	212.12
TD-RRH8x20-25	A	From Face	3.50	0.0000	150.00	No Ice	4.05	1.53	75.00
(Sprint)			0.00			1/2" Ice	4.30	1.71	102.14
			0.00			1" Ice	4.56	1.90	132.80
TD-RRH8x20-25	B	From Face	3.50	0.0000	150.00	No Ice	4.05	1.53	75.00
(Sprint)			0.00			1/2" Ice	4.30	1.71	102.14
			0.00			1" Ice	4.56	1.90	132.80
TD-RRH8x20-25	C	From Face	3.50	0.0000	150.00	No Ice	4.05	1.53	75.00
(Sprint)			0.00			1/2" Ice	4.30	1.71	102.14
			0.00			1" Ice	4.56	1.90	132.80
ALU RRH4x40-1900	A	From Face	3.50	0.0000	150.00	No Ice	3.26	2.49	90.00
(Sprint)			0.00			1/2" Ice	3.48	2.70	121.27
			0.00			1" Ice	3.72	2.91	156.18
ALU RRH4x40-1900	B	From Face	3.50	0.0000	150.00	No Ice	3.26	2.49	90.00
(Sprint)			0.00			1/2" Ice	3.48	2.70	121.27
			0.00			1" Ice	3.72	2.91	156.18
ALU RRH4x40-1900	C	From Face	3.50	0.0000	150.00	No Ice	3.26	2.49	90.00
(Sprint)			0.00			1/2" Ice	3.48	2.70	121.27
			0.00			1" Ice	3.72	2.91	156.18
(2) FD-RRH-2x50-800	A	From Face	3.50	0.0000	150.00	No Ice	2.13	1.79	53.00
(Sprint)			0.00			1/2" Ice	2.32	1.96	74.30
			0.00			1" Ice	2.51	2.14	98.61
(2) FD-RRH-2x50-800	B	From Face	3.50	0.0000	150.00	No Ice	2.13	1.79	53.00
(Sprint)			0.00			1/2" Ice	2.32	1.96	74.30
			0.00			1" Ice	2.51	2.14	98.61
(2) FD-RRH-2x50-800	C	From Face	3.50	0.0000	150.00	No Ice	2.13	1.79	53.00
(Sprint)			0.00			1/2" Ice	2.32	1.96	74.30
			0.00			1" Ice	2.51	2.14	98.61
EEI 10' T-Arm	A	None		0.0000	150.00	No Ice	10.54	10.54	336.00
(Sprint)						1/2" Ice	14.45	14.45	412.00
						1" Ice	18.36	18.36	488.00
EEI 10' T-Arm	B	None		0.0000	150.00	No Ice	10.54	10.54	336.00
(Sprint)						1/2" Ice	14.45	14.45	412.00
						1" Ice	18.36	18.36	488.00
EEI 10' T-Arm	C	None		0.0000	150.00	No Ice	10.54	10.54	336.00
(Sprint)						1/2" Ice	14.45	14.45	412.00
						1" Ice	18.36	18.36	488.00
APX16DWV-16DWVS	A	From Face	3.00	0.0000	140.00	No Ice	6.08	2.00	25.00
(T-Mobile)			6.00			1/2" Ice	6.44	2.33	56.34
			0.00			1" Ice	6.80	2.66	92.36
APX16DWV-16DWVS	B	From Face	3.00	0.0000	140.00	No Ice	6.08	2.00	25.00
(T-Mobile)			6.00			1/2" Ice	6.44	2.33	56.34
			0.00			1" Ice	6.80	2.66	92.36
APX16DWV-16DWVS	C	From Face	3.00	0.0000	140.00	No Ice	6.08	2.00	25.00
(T-Mobile)			6.00			1/2" Ice	6.44	2.33	56.34
			0.00			1" Ice	6.80	2.66	92.36
APXVAARR 24_43	A	From Face	3.00	0.0000	140.00	No Ice	20.24	8.89	75.00
(T-Mobile)			-6.00			1/2" Ice	20.89	9.49	187.59
			0.00			1" Ice	21.54	10.09	308.72
APXVAARR 24_43	B	From Face	3.00	0.0000	140.00	No Ice	20.24	8.89	75.00
(T-Mobile)			-6.00			1/2" Ice	20.89	9.49	187.59
			0.00			1" Ice	21.54	10.09	308.72

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight lb
APXVAARR 24_43 (T-Mobile)	C	From Face	3.00 -6.00 0.00	0.0000	140.00	No Ice 1/2" Ice 1" Ice	20.24 20.89 21.54	8.89 9.49 10.09	75.00 187.59 308.72
AIR 6449 B41 (T-Mobile)	A	From Face	3.00 -2.00 0.00	0.0000	140.00	No Ice 1/2" Ice 1" Ice	5.68 5.98 6.29	2.49 2.72 2.95	128.00 167.12 210.46
AIR 6449 B41 (T-Mobile)	B	From Face	3.00 -2.00 0.00	0.0000	140.00	No Ice 1/2" Ice 1" Ice	5.68 5.98 6.29	2.49 2.72 2.95	128.00 167.12 210.46
AIR 6449 B41 (T-Mobile)	C	From Face	3.00 -2.00 0.00	0.0000	140.00	No Ice 1/2" Ice 1" Ice	5.68 5.98 6.29	2.49 2.72 2.95	128.00 167.12 210.46
Radio 4424 B25 (T-Mobile)	A	From Face	3.00 -6.00 0.00	0.0000	140.00	No Ice 1/2" Ice 1" Ice	1.86 2.03 2.20	1.32 1.47 1.62	93.00 110.87 131.50
Radio 4424 B25 (T-Mobile)	B	From Face	3.00 -6.00 0.00	0.0000	140.00	No Ice 1/2" Ice 1" Ice	1.86 2.03 2.20	1.32 1.47 1.62	93.00 110.87 131.50
Radio 4424 B25 (T-Mobile)	C	From Face	3.00 -6.00 0.00	0.0000	140.00	No Ice 1/2" Ice 1" Ice	1.86 2.03 2.20	1.32 1.47 1.62	93.00 110.87 131.50
Radio 4415 (T-Mobile)	A	From Face	3.00 6.00 0.00	0.0000	140.00	No Ice 1/2" Ice 1" Ice	1.64 1.80 1.97	0.68 0.79 0.91	50.00 62.41 77.18
Radio 4415 (T-Mobile)	B	From Face	3.00 6.00 0.00	0.0000	140.00	No Ice 1/2" Ice 1" Ice	1.64 1.80 1.97	0.68 0.79 0.91	50.00 62.41 77.18
Radio 4415 (T-Mobile)	C	From Face	3.00 6.00 0.00	0.0000	140.00	No Ice 1/2" Ice 1" Ice	1.64 1.80 1.97	0.68 0.79 0.91	50.00 62.41 77.18
Radio 4449 (T-Mobile)	A	From Face	3.00 -6.00 0.00	0.0000	140.00	No Ice 1/2" Ice 1" Ice	1.65 1.81 1.98	1.16 1.30 1.45	80.00 96.16 114.95
Radio 4449 (T-Mobile)	B	From Face	3.00 -6.00 0.00	0.0000	140.00	No Ice 1/2" Ice 1" Ice	1.65 1.81 1.98	1.16 1.30 1.45	80.00 96.16 114.95
Radio 4449 (T-Mobile)	C	From Face	3.00 -6.00 0.00	0.0000	140.00	No Ice 1/2" Ice 1" Ice	1.65 1.81 1.98	1.16 1.30 1.45	80.00 96.16 114.95
TMA 8" x 10" (T-Mobile)	A	From Face	3.00 0.00 0.00	0.0000	140.00	No Ice 1/2" Ice 1" Ice	0.67 0.77 0.88	0.26 0.33 0.41	12.00 17.06 23.67
TMA 8" x 10" (T-Mobile)	B	From Face	3.00 0.00 0.00	0.0000	140.00	No Ice 1/2" Ice 1" Ice	0.67 0.77 0.88	0.26 0.33 0.41	12.00 17.06 23.67
TMA 8" x 10" (T-Mobile)	C	From Face	3.00 0.00 0.00	0.0000	140.00	No Ice 1/2" Ice 1" Ice	0.67 0.77 0.88	0.26 0.33 0.41	12.00 17.06 23.67
EEI 10' T-Arm (T-Mobile)	A	None		0.0000	140.00	No Ice 1/2" Ice 1" Ice	10.54 14.45 18.36	10.54 14.45 18.36	336.00 412.00 488.00
EEI 10' T-Arm (T-Mobile)	B	None		0.0000	140.00	No Ice 1/2" Ice 1" Ice	10.54 14.45 18.36	10.54 14.45 18.36	336.00 412.00 488.00
EEI 10' T-Arm (T-Mobile)	C	None		0.0000	140.00	No Ice 1/2" Ice 1" Ice	10.54 14.45 18.36	10.54 14.45 18.36	336.00 412.00 488.00

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight lb
Monopole Sector Stabilizer (T-Mobile)	A	None		0.0000	140.00	No Ice	9.00	9.00	35.00
						1/2" Ice	11.50	11.50	42.50
						1" Ice	14.00	14.00	50.00
LNX-8513DS-A1M (Verizon Wireless)	A	From Face	4.00 0.00 0.00	0.0000	130.00	No Ice 1/2" Ice 1" Ice	14.30 14.88 15.47	11.70 12.26 12.82	75.00 177.00 287.01
LNX-8513DS-A1M (Verizon Wireless)	B	From Face	4.00 0.00 0.00	0.0000	130.00	No Ice 1/2" Ice 1" Ice	14.30 14.88 15.47	11.70 12.26 12.82	75.00 177.00 287.01
LNX-8513DS-A1M (Verizon Wireless)	C	From Face	4.00 0.00 0.00	0.0000	130.00	No Ice 1/2" Ice 1" Ice	14.30 14.88 15.47	11.70 12.26 12.82	75.00 177.00 287.01
(2) JMA MX06FRO660-03 (Verizon Wireless)	A	From Face	4.00 0.00 0.00	0.0000	130.00	No Ice 1/2" Ice 1" Ice	9.87 10.34 10.82	7.34 7.78 8.24	65.00 133.84 209.18
(2) JMA MX06FRO660-03 (Verizon Wireless)	B	From Face	4.00 0.00 0.00	0.0000	130.00	No Ice 1/2" Ice 1" Ice	9.87 10.34 10.82	7.34 7.78 8.24	65.00 133.84 209.18
(2) JMA MX06FRO660-03 (Verizon Wireless)	C	From Face	4.00 0.00 0.00	0.0000	130.00	No Ice 1/2" Ice 1" Ice	9.87 10.34 10.82	7.34 7.78 8.24	65.00 133.84 209.18
MT6407-77A (Verizon Wireless)	A	From Face	4.00 0.00 0.00	0.0000	130.00	No Ice 1/2" Ice 1" Ice	4.69 4.98 5.28	1.84 2.06 2.29	90.00 119.24 152.35
MT6407-77A (Verizon Wireless)	B	From Face	4.00 0.00 0.00	0.0000	130.00	No Ice 1/2" Ice 1" Ice	4.69 4.98 5.28	1.84 2.06 2.29	90.00 119.24 152.35
MT6407-77A (Verizon Wireless)	C	From Face	4.00 0.00 0.00	0.0000	130.00	No Ice 1/2" Ice 1" Ice	4.69 4.98 5.28	1.84 2.06 2.29	90.00 119.24 152.35
B2/B66A RRHBRO49 (RFV01U-D1A) (Verizon Wireless)	A	From Face	3.50 0.00 0.00	0.0000	130.00	No Ice 1/2" Ice 1" Ice	1.88 2.05 2.22	1.25 1.39 1.54	85.00 103.34 124.47
B2/B66A RRHBRO49 (RFV01U-D1A) (Verizon Wireless)	B	From Face	3.50 0.00 0.00	0.0000	130.00	No Ice 1/2" Ice 1" Ice	1.88 2.05 2.22	1.25 1.39 1.54	85.00 103.34 124.47
B2/B66A RRHBRO49 (RFV01U-D1A) (Verizon Wireless)	C	From Face	3.50 0.00 0.00	0.0000	130.00	No Ice 1/2" Ice 1" Ice	1.88 2.05 2.22	1.25 1.39 1.54	85.00 103.34 124.47
B5/B13 RRHBR04C (RFV01UD2A) (Verizon Wireless)	A	From Face	3.50 0.00 0.00	0.0000	130.00	No Ice 1/2" Ice 1" Ice	1.88 2.05 2.22	1.01 1.14 1.28	100.00 116.43 135.53
B5/B13 RRHBR04C (RFV01UD2A) (Verizon Wireless)	B	From Face	3.50 0.00 0.00	0.0000	130.00	No Ice 1/2" Ice 1" Ice	1.88 2.05 2.22	1.01 1.14 1.28	100.00 116.43 135.53
B5/B13 RRHBR04C (RFV01UD2A) (Verizon Wireless)	C	From Face	3.50 0.00 0.00	0.0000	130.00	No Ice 1/2" Ice 1" Ice	1.88 2.05 2.22	1.01 1.14 1.28	100.00 116.43 135.53
DB-C1-12X-24AB-0Z D-box (Verizon Wireless)	A	None		0.0000	130.00	No Ice 1/2" Ice 1" Ice	4.06 4.32 4.58	3.10 3.34 3.58	38.00 74.49 114.97
EEI 10' T-Arm w/ Reinforcements (Verizon Wireless)	A	None		0.0000	128.00	No Ice 1/2" Ice 1" Ice	13.50 17.00 20.50	13.50 17.00 20.50	500.00 650.00 800.00
EEI 10' T-Arm w/ Reinforcements (Verizon Wireless)	C	None		0.0000	128.00	No Ice 1/2" Ice 1" Ice	13.50 17.00 20.50	13.50 17.00 20.50	500.00 650.00 800.00

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight lb
EEI 10' T-Arm w/ Reinforcements (Verizon Wireless)	C	None		0.0000	128.00	No Ice	13.50	13.50	500.00
						1/2" Ice	17.00	17.00	650.00
						1" Ice	20.50	20.50	800.00
7770.00 (AT&T)	A	From Face	3.00	0.0000	120.00	No Ice	5.51	2.93	35.00
			-2.00			1/2" Ice	5.87	3.27	67.63
			0.00			1" Ice	6.23	3.63	105.06
7770.00 (AT&T)	B	From Face	3.00	0.0000	120.00	No Ice	5.51	2.93	35.00
			-2.00			1/2" Ice	5.87	3.27	67.63
			0.00			1" Ice	6.23	3.63	105.06
7770.00 (AT&T)	C	From Face	3.00	0.0000	120.00	No Ice	5.51	2.93	35.00
			-2.00			1/2" Ice	5.87	3.27	67.63
			0.00			1" Ice	6.23	3.63	105.06
(2) HPA-65R-BUU-H6 (AT&T)	A	From Face	3.00	0.0000	120.00	No Ice	9.66	6.45	55.00
			0.00			1/2" Ice	10.13	6.91	117.99
			0.00			1" Ice	10.61	7.38	187.38
(2) HPA-65R-BUU-H6 (AT&T)	B	From Face	3.00	0.0000	120.00	No Ice	9.66	6.45	55.00
			0.00			1/2" Ice	10.13	6.91	117.99
			0.00			1" Ice	10.61	7.38	187.38
(2) HPA-65R-BUU-H6 (AT&T)	C	From Face	3.00	0.0000	120.00	No Ice	9.66	6.45	55.00
			0.00			1/2" Ice	10.13	6.91	117.99
			0.00			1" Ice	10.61	7.38	187.38
800-10965 (AT&T)	A	From Face	3.00	0.0000	120.00	No Ice	13.81	5.83	45.00
			2.00			1/2" Ice	14.35	6.32	121.53
			0.00			1" Ice	14.89	6.82	205.11
800-10965 (AT&T)	B	From Face	3.00	0.0000	120.00	No Ice	13.81	5.83	45.00
			2.00			1/2" Ice	14.35	6.32	121.53
			0.00			1" Ice	14.89	6.82	205.11
800-10966 (AT&T)	C	From Face	3.00	0.0000	120.00	No Ice	17.36	7.50	125.00
			2.00			1/2" Ice	17.99	8.09	217.18
			0.00			1" Ice	18.63	8.69	317.51
LGP2140X TMA (AT&T)	A	From Face	3.00	0.0000	120.00	No Ice	1.08	0.36	20.00
			0.00			1/2" Ice	1.21	0.45	27.13
			0.00			1" Ice	1.35	0.56	36.14
LGP2140X TMA (AT&T)	B	From Face	3.00	0.0000	120.00	No Ice	1.08	0.36	20.00
			0.00			1/2" Ice	1.21	0.45	27.13
			0.00			1" Ice	1.35	0.56	36.14
LGP2140X TMA (AT&T)	C	From Face	3.00	0.0000	120.00	No Ice	1.08	0.36	20.00
			0.00			1/2" Ice	1.21	0.45	27.13
			0.00			1" Ice	1.35	0.56	36.14
Ericsson RRUS-11 (AT&T)	A	From Face	1.00	0.0000	120.00	No Ice	2.79	1.02	55.00
			2.00			1/2" Ice	3.00	1.16	75.86
			0.00			1" Ice	3.21	1.30	99.77
Ericsson RRUS-11 (AT&T)	B	From Face	1.00	0.0000	120.00	No Ice	2.79	1.02	55.00
			2.00			1/2" Ice	3.00	1.16	75.86
			0.00			1" Ice	3.21	1.30	99.77
Ericsson RRUS-11 (AT&T)	C	From Face	1.00	0.0000	120.00	No Ice	2.79	1.02	55.00
			2.00			1/2" Ice	3.00	1.16	75.86
			0.00			1" Ice	3.21	1.30	99.77
(2) Ericsson RRUS-32 (AT&T)	A	From Face	1.00	0.0000	120.00	No Ice	3.31	2.42	80.00
			2.00			1/2" Ice	3.56	2.64	107.93
			0.00			1" Ice	3.81	2.86	139.47
(2) Ericsson RRUS-32 (AT&T)	B	From Face	1.00	0.0000	120.00	No Ice	3.31	2.42	80.00
			2.00			1/2" Ice	3.56	2.64	107.93
			0.00			1" Ice	3.81	2.86	139.47
(2) Ericsson RRUS-32 (AT&T)	C	From Face	1.00	0.0000	120.00	No Ice	3.31	2.42	80.00
			2.00			1/2" Ice	3.56	2.64	107.93
			0.00			1" Ice	3.81	2.86	139.47

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft / ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight lb
Radio 4426	A	From Face	1.00	0.0000	120.00	No Ice	1.63	0.72	50.00
(AT&T)			2.00			1/2" Ice	1.79	0.84	62.72
			0.00			1" Ice	1.95	0.96	77.82
Radio 4426	B	From Face	1.00	0.0000	120.00	No Ice	1.63	0.72	50.00
(AT&T)			2.00			1/2" Ice	1.79	0.84	62.72
			0.00			1" Ice	1.95	0.96	77.82
Radio 4426	C	From Face	1.00	0.0000	120.00	No Ice	1.63	0.72	50.00
(AT&T)			2.00			1/2" Ice	1.79	0.84	62.72
			0.00			1" Ice	1.95	0.96	77.82
(2) Radio 4478	A	From Face	1.00	0.0000	120.00	No Ice	1.86	1.06	65.00
(AT&T)			2.00			1/2" Ice	2.03	1.20	80.96
			0.00			1" Ice	2.20	1.34	99.56
(2) Radio 4478	B	From Face	1.00	0.0000	120.00	No Ice	1.86	1.06	65.00
(AT&T)			2.00			1/2" Ice	2.03	1.20	80.96
			0.00			1" Ice	2.20	1.34	99.56
(2) Radio 4478	C	From Face	1.00	0.0000	120.00	No Ice	1.86	1.06	65.00
(AT&T)			2.00			1/2" Ice	2.03	1.20	80.96
			0.00			1" Ice	2.20	1.34	99.56
Raycap DC6-48-60-18-8F	A	From Face	0.50	0.0000	120.00	No Ice	0.74	0.74	30.00
squid			0.00			1/2" Ice	1.20	1.20	44.34
(AT&T)			0.00			1" Ice	1.37	1.37	60.93
Raycap DC6-48-60-18-8F	B	From Face	0.50	0.0000	120.00	No Ice	0.74	0.74	30.00
squid			0.00			1/2" Ice	1.20	1.20	44.34
(AT&T)			0.00			1" Ice	1.37	1.37	60.93
Raycap DC6-48-60-18-8F	C	From Face	0.50	0.0000	120.00	No Ice	0.74	0.74	30.00
squid			0.00			1/2" Ice	1.20	1.20	44.34
(AT&T)			0.00			1" Ice	1.37	1.37	60.93
EEI 10' T-Arm	A	None		0.0000	120.00	No Ice	10.54	10.54	336.00
(AT&T)						1/2" Ice	14.45	14.45	412.00
						1" Ice	18.36	18.36	488.00
EEI 10' T-Arm	B	None		0.0000	120.00	No Ice	10.54	10.54	336.00
(AT&T)						1/2" Ice	14.45	14.45	412.00
						1" Ice	18.36	18.36	488.00
EEI 10' T-Arm	C	None		0.0000	120.00	No Ice	10.54	10.54	336.00
(AT&T)						1/2" Ice	14.45	14.45	412.00
						1" Ice	18.36	18.36	488.00
Pine branches large (EEI)	C	None		0.0000	150.00	No Ice	90.00	90.00	1500.00
						1/2" Ice	130.00	130.00	1900.00
						1" Ice	170.00	170.00	2300.00
Pine branches large (EEI)	C	None		0.0000	140.00	No Ice	90.00	90.00	1500.00
						1/2" Ice	130.00	130.00	1900.00
						1" Ice	170.00	170.00	2300.00
Pine branches large (EEI)	C	None		0.0000	130.00	No Ice	90.00	90.00	1500.00
						1/2" Ice	130.00	130.00	1900.00
						1" Ice	170.00	170.00	2300.00
Pine branches large (EEI)	C	None		0.0000	120.00	No Ice	90.00	90.00	1500.00
						1/2" Ice	130.00	130.00	1900.00
						1" Ice	170.00	170.00	2300.00
Pine branches large (EEI)	C	None		0.0000	110.00	No Ice	90.00	90.00	1500.00
						1/2" Ice	130.00	130.00	1900.00
						1" Ice	170.00	170.00	2300.00
Pine branches large (EEI)	C	None		0.0000	100.00	No Ice	90.00	90.00	1500.00
						1/2" Ice	130.00	130.00	1900.00
						1" Ice	170.00	170.00	2300.00
Pine branches large (EEI)	C	None		0.0000	90.00	No Ice	90.00	90.00	1500.00
						1/2" Ice	130.00	130.00	1900.00
						1" Ice	170.00	170.00	2300.00

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight lb
Pine branches large (EEI)	C	None		0.0000	80.00	No Ice	90.00	90.00	1500.00
						1/2" Ice	130.00	130.00	1900.00
						1" Ice	170.00	170.00	2300.00

Dishes

Description	Face or Leg	Dish Type	Offset Type	Offsets: Horz Lateral ft / Vert ft	Azimuth Adjustment °	3 dB Beam Width °	Elevation ft	Outside Diameter ft		Aperture Area ft^2	Weight lb
2' HP dish	B	Paraboloid w/Shroud (HP)	From Leg	1.00 0.00 0.00	Worst		156.00	2.00	No Ice 1/2" Ice 1" Ice	3.14 3.41 3.68	50.00 67.50 85.00
3' HP dish	C	Paraboloid w/Shroud (HP)	From Leg	1.00 0.00 0.00	Worst		156.00	3.00	No Ice 1/2" Ice 1" Ice	7.07 7.47 7.86	75.00 113.33 153.33

Solution Summary

Maximum Tower Deflections - Service Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L1	154 - 134.83	24.209	45	1.3554	0.0012
L2	139.16 - 89.16	20.020	45	1.3296	0.0008
L3	94.83 - 44.54	9.105	45	0.9246	0.0003
L4	51.46 - 1	2.610	45	0.4747	0.0001

Critical Deflections and Radius of Curvature - Service Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
156.00	2' HP dish	45	24.209	1.3554	0.0012	38712
154.00	BA40-41-DIN	45	24.209	1.3554	0.0012	38712
150.00	DT465B-2XR	45	23.072	1.3520	0.0011	38712
140.00	APX16DWV-16DWVS	45	20.254	1.3326	0.0008	14043
130.00	LNX-8513DS-A1M	45	17.519	1.2805	0.0006	9747
128.00	EEI 10' T-Arm w/ Reinforcements	45	16.985	1.2662	0.0006	9236
120.00	7770.00	45	14.907	1.1983	0.0005	7635
110.00	Pine branches large (EEI)	45	12.452	1.0958	0.0004	6274
100.00	Pine branches large (EEI)	45	10.189	0.9834	0.0003	5325
90.00	Pine branches large (EEI)	45	8.151	0.8708	0.0003	4907
80.00	Pine branches large (EEI)	45	6.357	0.7628	0.0002	4842

Maximum Tower Deflections - Design Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L1	154 - 134.83	95.659	14	5.3593	0.0050
L2	139.16 - 89.16	79.115	14	5.2579	0.0032
L3	94.83 - 44.54	35.996	14	3.6571	0.0011
L4	51.46 - 1	10.318	14	1.8770	0.0004

Critical Deflections and Radius of Curvature - Design Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
156.00	2' HP dish	14	95.659	5.3593	0.0050	9974
154.00	BA40-41-DIN	14	95.659	5.3593	0.0050	9974
150.00	DT465B-2XR	14	91.166	5.3463	0.0045	9974
140.00	APX16DWV-16DWVS	14	80.037	5.2696	0.0033	3616
130.00	LNX-8513DS-A1M	14	69.235	5.0640	0.0024	2503
128.00	EEI 10' T-Arm w/ Reinforcements	14	67.129	5.0073	0.0023	2371
120.00	7770.00	14	58.918	4.7389	0.0018	1956
110.00	Pine branches large (EEI)	14	49.221	4.3341	0.0015	1605
100.00	Pine branches large (EEI)	14	40.279	3.8895	0.0012	1359
90.00	Pine branches large (EEI)	14	32.223	3.4441	0.0010	1250
80.00	Pine branches large (EEI)	14	25.131	3.0170	0.0008	1231

Section Capacity Table

Section No.	Elevation ft	Component Type	Size	Critical Element	P lb	ϕP_{allow} lb	% Capacity	Pass Fail
L1	**154 - 134.83**	**Pole**	**TP30.03x25.25x0.1875**	**1**	**-9434.55**	**1101640.00**	**17.2**	**Pass**
L2	**134.83 - 89.16**	**Pole**	**TP40.91x28.5753x0.313**	**2**	**-30767.60**	**2710570.00**	**71.5**	**Pass**
L3	**89.16 - 44.54**	**Pole**	**TP51.28x38.8852x0.5**	**3**	**-50855.70**	**5786180.00**	**64.9**	**Pass**
L4	**44.54 - 1**	**Pole**	**TP61x48.5745x0.563**	**4**	**-77189.70**	**7877160.00**	**67.2**	**Pass**
							Summary	
						Pole (L2)	71.5	Pass
						Base Plate	71.7	Pass
						RATING =	**71.7**	**Pass**

All-Points Technology Corp., P.C.
567 Vauxhall St. Ext., Suite 311
Waterford, CT 06385
(860) 663-1697

Client:	**Verizon Wireless**	Site No.:	**New Milford W CT**
Job:	**New Milford West**	Job No.:	**CT141_11730**
Calculated By:	**A. Adair**	Date:	**8/5/2021**

Program assumes:

Mat is square in plan view.
Water table is below bottom of mat.

Unit weight of concrete =	150	pcf
Unit weight of soil =	100	pcf

Information to be provided:

Pier is round or square in plan dimension ("R" or "S")	Shape =	R	
OTM = Overturning Moment to be resisted	OTM =	6468	ft-kips
P = Download reaction	P =	74.2	kips
H = Height from ground surface to top of mat (if buried)	H =	2.5	ft.
P_M = Projection of pier above mat	P_M =	3.5	ft.
y = Thickness of mat	y =	4.00	ft.
x = Width of mat	x =	32.00	ft.
d = Diameter of round pier	d =	7.5	ft.
Mass of tower and appurtenances (below)			

Results:

Component	Mass		Moment Arm		Moment Resist.	
Pier	20.9	kips	16	ft.	334.0	ft-kips
Overburden	242.2	kips	16	ft.	3874.7	ft-kips
Mat	553.0	kips	16	ft.	8847.4	ft-kips
Tower Dead Load		kips	16	ft.	0.0	ft-kips
Antenna Dead Load		kips	16	ft.	0.0	ft-kips

Overturning Moment Resistance =	13056.04	ft-kips	
Factor of Safety =	2.02		SATISFACTORY
Concrete Quantity =	161.5	c.y.	

GPD Engineering And Architecture Professional Corporation
520 South Main Street, Suite 2531
Akron, OH 44311

Maser Consulting Contact:
Peter.albano@colliersengineering.com
(856)371-9457

Post-Mod Antenna Mount Analysis Report and PMI Requirements

Mount Fix

SMART Tool Project #: 10082846
GPD Project #: 2021740.467734.02
Maser Project #: 20777375

June 30, 2021

Site Information	*Site ID:*	*467734-VZW / New Milford West*
	Site Name:	*New Milford W CT*
	Carrier Name:	*Verizon Wireless*
	Address:	*86 BOARDMAN ROAD* *NEW MILFORD, CONNECTICUT 6776, LITCHFIELD COUNTY*
	Latitude:	*41.599411°*
	Longitude:	*-73.437478°*
Structure Information	*Tower Type:*	*150-Ft Monopole*
	Mount Type:	*10.00-Ft T-Arm*

FUZE ID # 16244606

Analysis Results

T-Arm: **51.7% Pass**

******Contractor PMI Requirements*:**
Included at the end of this MA report
Available & Submitted via portal at https://pmi.vzwsmart.com
Contractor - Please Review Specific Site PMI Requirements Upon Award
Requirements also Noted on Mount Modification Drawings
Requirements may also be Noted on A & E drawings

Report Prepared by: Eric Nieto

Respectfully Submitted by:

Christopher J. Scheks, P.E.
Connecticut #: 0030026

6/30/2021

Executive Summary:

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

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

Sources of Information:

Document Type	Remarks
Radio Frequency Data Sheet (RFDS)	*Verizon RFDS Site ID: 324472, dated 10/27/2020*
Mount Mapping Report	*Structural Components Site #: 20777375, dated 5/20/2021*
Previous Mount Analysis Report	*GPD Project #: 2021740.467734.01, dated 6/25/2021*
Proposed Mount Modification Design	*GPD Project #: 2021740.467734.02 Rev. 0, dated 6/30/2021*

Analysis Criteria:

Codes and Standards:	ANSI/TIA-222-H	
Wind Parameters:	Basic Wind Speed (Ultimate 3-sec. Gust), V_{ULT}:	114 mph
	Ice Wind Speed (3-sec. Gust):	40 mph
Desi	gn Ice Thickness:	1.00 in
	Risk Category:	II
	Exposure Category:	C
Topo	graphic Category:	1
Topo	graphic Feature Considered:	N/A
Topo	graphic Method:	N/A
	Ground Elevation Factor, K_e:	0.979
Seismic Parameters:	S_S:	0.197
S	$_1$:	0.055
Maintenance Parameters:	Wind Speed (3-sec. Gust):	30 mph
	Maintenance Live Load, Lv:	250 lbs.
	Maintenance Live Load, Lm:	250 lbs.*
	*Reduced as allowed per ANSI/TIA-222-H 16.9	
Analysis Software:	RISA-3D (V17.0.2)	

Final Loading Configuration:

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

Mount Elevation (ft)	Equipment Elevation (ft)	Quantity	Manufacturer	Model	Status
128.00	130.00	6	JMA Wireless	MX06FRO660-03	Added
		3	Samsung	MT6407-77A	
		1	RFS	DB-C1-12C-24AB-0Z	
		3	Samsung	B2/B66A RRH-BR049	
		3	Samsung	B5/B13 RRH-BR04C	
		3	Andrew	LNX-8513DS-AIM	Retained

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 GPD and used in this analysis is current and correct. The existing equipment loading has been applied at locations determined from the supplied documentation and field observations. Any deviation from the loading locations specified in this report shall be communicated to GPD 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 by GPD, 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. GPD is not responsible for the conclusion, opinions, and recommendations made by others based on the information supplied.

7. Structural Steel Grades have been assumed as follows, if applicable, unless otherwise noted in this analysis:
   - Channel, Solid Round, Angle, Plate — ASTM A36 (Gr. 36)
   - HSS (Rectangular) — ASTM 500 (Gr. B-46)
   - Pipe — ASTM A53 (Gr. B-35)
   - Threaded Rod — ASTM A307
   - 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 GPD.

Analysis Results:

Component	Utilization %	Pass/Fail
Standoff Horizontal	22.3 %	Pass
Face Horizontal	14.7 %	Pass
Mount Pipe (P2STD)	26.2 %	Pass
Mount Pipe (P2.5STD)	40.6 %	Pass
Reinforcement Standoff	36.5 %	Pass
Reinforcement Face	32.2 %	Pass
Mount Connection	51.7 %	Pass

Structure Rating – ***(Controlling Utilization of all Components)***	**51.7%***

***The mount has been found structurally adequate for all steel and external connection capacities. Serviceability in accordance with TIA-222-H Section 4.9.11.3 has not been considered.**

Recommendation:

The existing mounts will be **SUFFICIENT** for the final loading after the proposed modifications 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. Mount Photos
2. Mount Mapping Report (for reference only)
3. Analysis Calculations
4. **Contractor Required PMI Report Deliverables**
5. Antenna Placement Diagrams
6. TIA Adoption Wind Speed Letter


05/20/2021

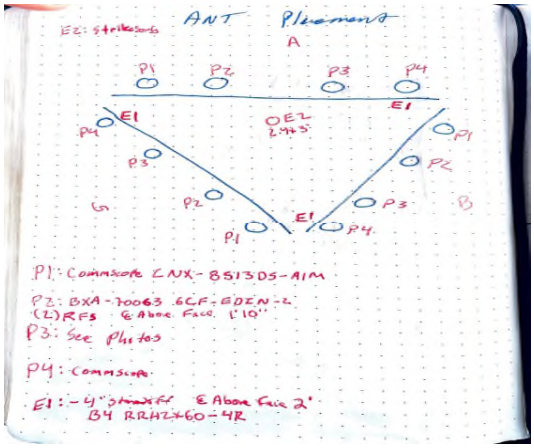

05/20/2021

V3.0 Updated on 8-31-2020

Antenna Mount Mapping Form (PATENT PENDING)

FCC #
N/A

Tower Owner:	Unknown	**Mapping Date:**	5/20/2021
Site Name:	New Milford West	**Tower Type:**	Other
Site Number or ID:	20777375	**Tower Height (Ft.):**	150
Mapping Contractor:	TEP	**Mount Elevation (Ft.):**	130



Mount Pipe Configuration and Geometries [Unit = Inches]

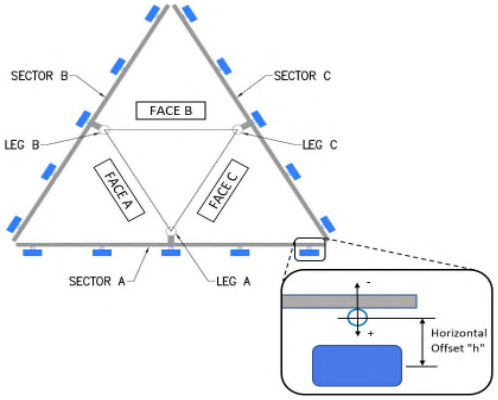
Sector / Position	Mount Pipe Size & Length	Vertical Offset Dimension "u"	Horizontal Offset "C1, C2, C3, etc."	Sector / Position	Mount Pipe Size & Length	Vertical Offset Dimension "u"	Horizontal Offset "C1, C2, C3, etc."
A1	2.4"Øx0.154"x5'-0"	44.00	3.50	C1	2.4"Øx0.154"x5'-0"	44.00	3.50
A2	2.4"Øx0.154"x5'-0"	44.00	27.50	C2	2.4"Øx0.154"x5'-0"	44.00	27.50
A3	2.4"Øx0.154"x6'-0"	46.00	74.50	C3	2.4"Øx0.154"x6'-0"	46.00	74.50
A4	2.4"Øx0.154"x5'-0"	44.50	116.50	C4	2.4"Øx0.154"x5'-0"	44.50	116.50
A5				C5			
A6				C6			
B1	2.4"Øx0.154"x5'-0"	44.00	3.50	D1			
B2	2.4"Øx0.154"x5'-0"	44.00	27.50	D2			
B3	2.4"Øx0.154"x6'-0"	46.00	74.50	D3			
B4	2.4"Øx0.154"x5'-0"	44.50	116.50	D4			
B5				D5			
B6				D6			

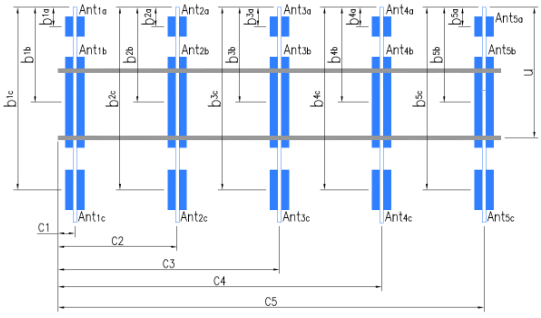
Distance between bottom rail and mount CL elevation (dim d). Unit is inches. See 'Mount Elev Ref' tab for details. :	0.00
Distance from top of bottom support rail to lowest tip of ant./eqpt. of Carrier above. (N/A if > 10 ft.) :	60
Distance from top of bottom support rail to highest tip of ant./eqpt. of Carrier below. (N/A if > 10 ft.) :	126

Please enter additional infomation or comments below.

Coax: (12) 1 5/8" FH, (1) 1 1/2"Ø Hybrid

Tower Face Width at Mount Elev. (ft.):		Tower Leg Size or Pole Shaft Diameter at Mount Elev. (in.):	23.5



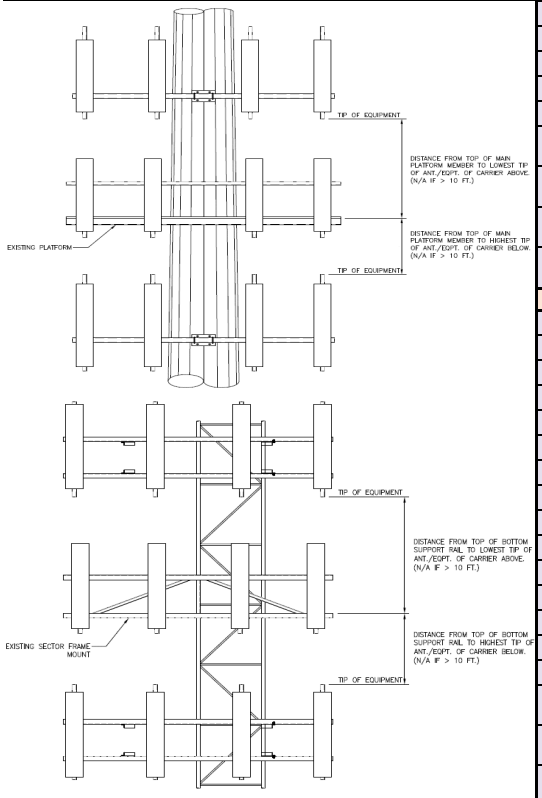


Antenna Layout (Looking Out From Tower)

Ants. Items	Enter antenna model. If not labeled, enter "Unknown". Antenna Models if Known	Width (in.)	Depth (in.)	Height (in.)	Coax Size and Qty	Antenna Center-line (Ft.)	Mounting Locations [Units are inches and degrees] Vertical Distances"b_{1a}, b_{2a}, b_{3a}, b_{1b}...." (Inches)	Horiz. Offset "h" (Use "-" if Ant. is behind)	Antenna Azimuth (Degrees)	Photos of antennas Photo Numbers
Sector A										
Ant_{1a}										
Ant_{1b}	LNX-8513DS-AIM	11.90	7.10	72.70	1) 1 5/8" F	132	20.00	4.00	10.00	26-28
Ant_{1c}										
Ant_{2a}	RFS Diplexor	6.25	1.00	4.75		131.667	24.00	2.00		38
Ant_{2b}	BXA-70063 6CF-EDIN-	11.30	6.00	71.00	1) 1 5/8" F	130.917	33.00	6.50	20.00	29-31
Ant_{2c}	RFS Diplexor					131.667	24.00	-2.00		39
Ant_{3a}										
Ant_{3b}	HBXX-6517DS-A2M	12.00	6.50	75.00	1) 1 5/8" F	131.333	30.00	5.50	20.00	32-34
Ant_{3c}										
Ant_{4a}										
Ant_{4b}	HBXX-6517DS-A2M	12.00	6.50	75.00	1) 1 5/8" F	132.042	20.00	5.50	10.00	35-36
Ant_{4c}	B4 RRH2x60-4R	10.60	5.70	36.60		132.042	20.00			40-42
Ant_{5a}										
Ant_{5b}										
Ant_{5c}										
Ant on Standoff	RRFDC-3315-PF-48	15.70	10.30	28.90	1) 1 1/2"Ø					88-90
Ant on Standoff										
Ant on Tower										
Ant on Tower										

Mount Azimuth (Degree) for Each Sector			Tower Leg Azimuth (Degree) for Each Sector		
Sector A:	60.00	Deg	Leg A:		Deg
Sector B:	180.00	Deg	Leg B:		Deg
Sector C:	300.00	Deg	Leg C:		Deg
Sector D:		Deg	Leg D:		Deg

Climbing Facility Information			
Location:	N/A	Deg	N/A
Climbing Facility	Corrosion Type:		N/A
	Access:		N/A
	Condition:		N/A



Sector B										
Ant_{1a}										
Ant_{1b}	LNX-8513DS-AIM	11.90	7.10	72.70	(-) 1 5/8" F	132	20.00	4.00	10.00	66-67
Ant_{1c}										
Ant_{2a}	RFS Diplexor	6.25	1.00	4.75		131.667	24.00	2.00		68-70
Ant_{2b}	BXA-70063 6CF-EDIN-	11.30	6.00	71.00	(-) 1 5/8" F	130.917	33.00	6.50	20.00	46-47
Ant_{2c}	RFS Diplexor					131.667	24.00	-2.00		68-70
Ant_{3a}										
Ant_{3b}	HBXX-6517DS-A2M	12.00	6.50	75.00	(-) 1 5/8" F	131.333	30.00	5.50	20.00	46-47
Ant_{3c}										
Ant_{4a}										
Ant_{4b}	HBXX-6517DS-A2M	12.00	6.50	75.00	(-) 1 5/8" F	132.042	20.00	5.50	10.00	46-47
Ant_{4c}	B4 RRH2x60-4R	10.60	5.70	36.60		132.042	20.00			46-47
Ant_{5a}										
Ant_{5b}										
Ant_{5c}										
Ant on Standoff										
Ant on Standoff										
Ant on Tower										
Ant on Tower										
Sector C										
Ant_{1a}										
Ant_{1b}	LNX-8513DS-AIM	11.90	7.10	72.70	(-) 1 5/8" F	132	20.00	4.00	10.00	86
Ant_{1c}										
Ant_{2a}	RFS Diplexor	6.25	1.00	4.75		131.667	24.00	2.00		48-50
Ant_{2b}	BXA-70063 6CF-EDIN-	11.30	6.00	71.00	(-) 1 5/8" F	130.917	33.00	6.50	20.00	48-50
Ant_{2c}	RFS Diplexor					131.667	24.00	-2.00		48-50
Ant_{3a}										
Ant_{3b}	HBXX-6517DS-A2M	12.00	6.50	75.00	(-) 1 5/8" F	131.333	30.00	5.50	20.00	48-50
Ant_{3c}										
Ant_{4a}										
Ant_{4b}	HBXX-6517DS-A2M	12.00	6.50	75.00	(-) 1 5/8" F	132.042	20.00	5.50	10.00	48-50
Ant_{4c}	B4 RRH2x60-4R	10.60	5.70	36.60		132.042	20.00			85
Ant_{5a}										
Ant_{5b}										
Ant_{5c}										
Ant on Standoff										
Ant on Standoff										
Ant on Tower										
Ant on Tower										
Sector D										
Ant_{1a}										
Ant_{1b}										
Ant_{1c}										
Ant_{2a}										
Ant_{2b}										
Ant_{2c}										
Ant_{3a}										
Ant_{3b}										
Ant_{3c}										
Ant_{4a}										
Ant_{4b}										
Ant_{4c}										
Ant_{5a}										
Ant_{5b}										
Ant_{5c}										
Ant on Standoff										
Ant on Standoff										
Ant on Tower										
Ant on Tower										

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

1		
2		
3		
4		
5		
6		
7		
8		

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

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

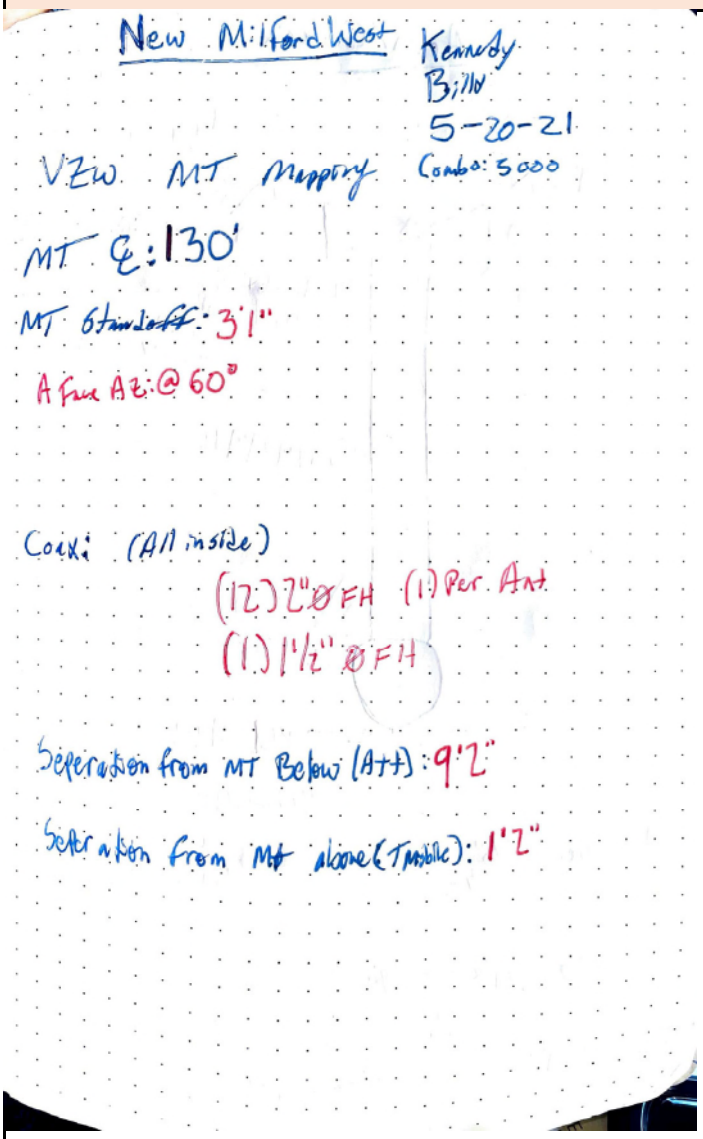
V3.0 Updated on 8-31-2020

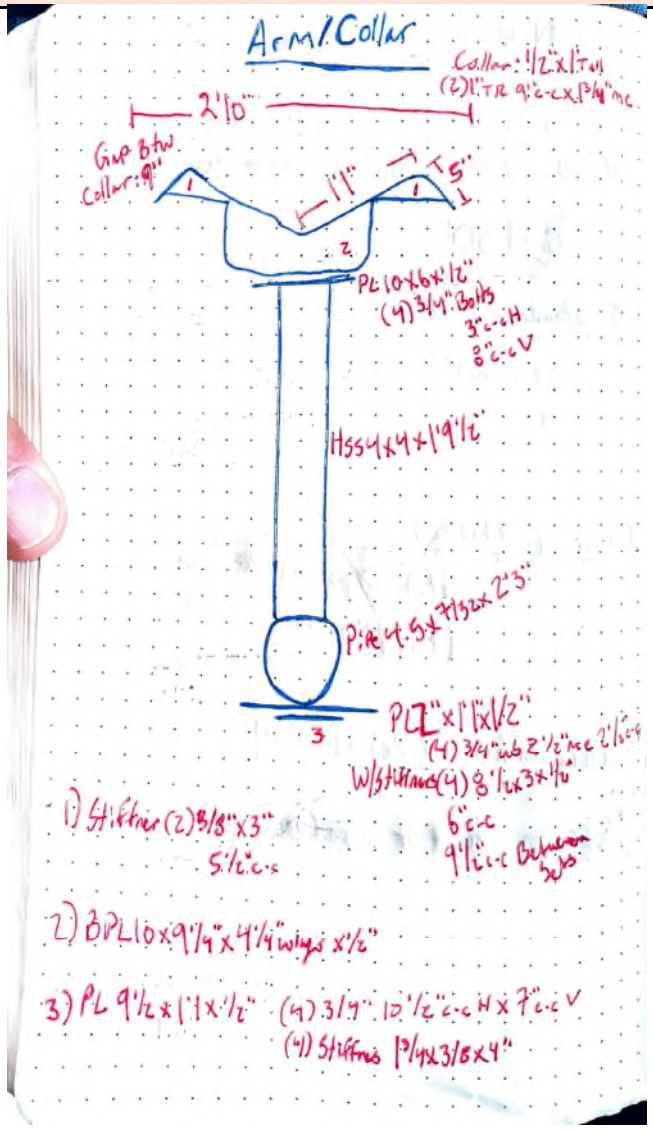
Antenna Mount Mapping Form (PATENT PENDING)

FCC # N/A

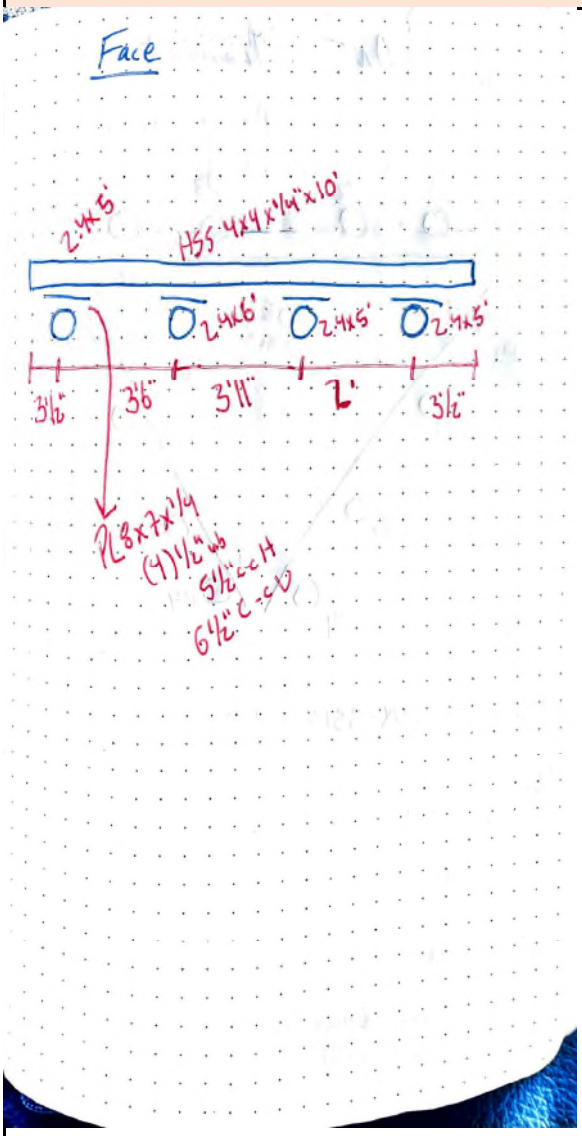
Tower Owner:	Unknown	**Mapping Date:**	5/20/2021
Site Name:	New Milford West	**Tower Type:**	Other
Site Number or ID:	20777375	**Tower Height (Ft.):**	150
Mapping Contractor:	TEP	**Mount Elevation (Ft.):**	130

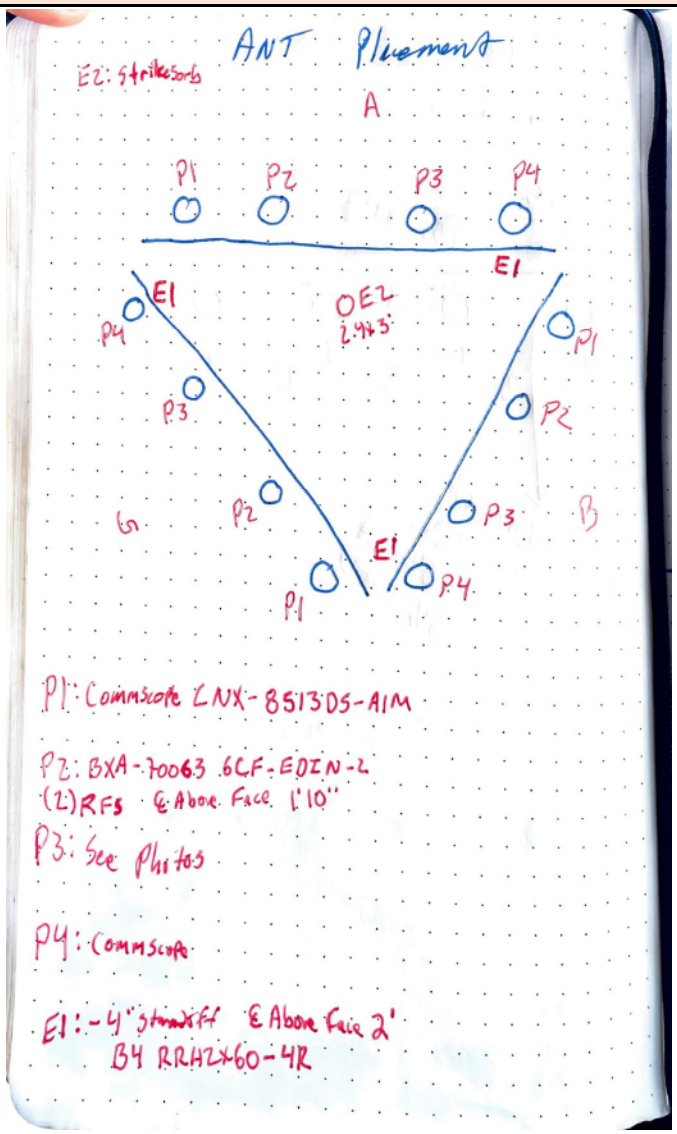
Please Insert Sketches of the Antenna Mount



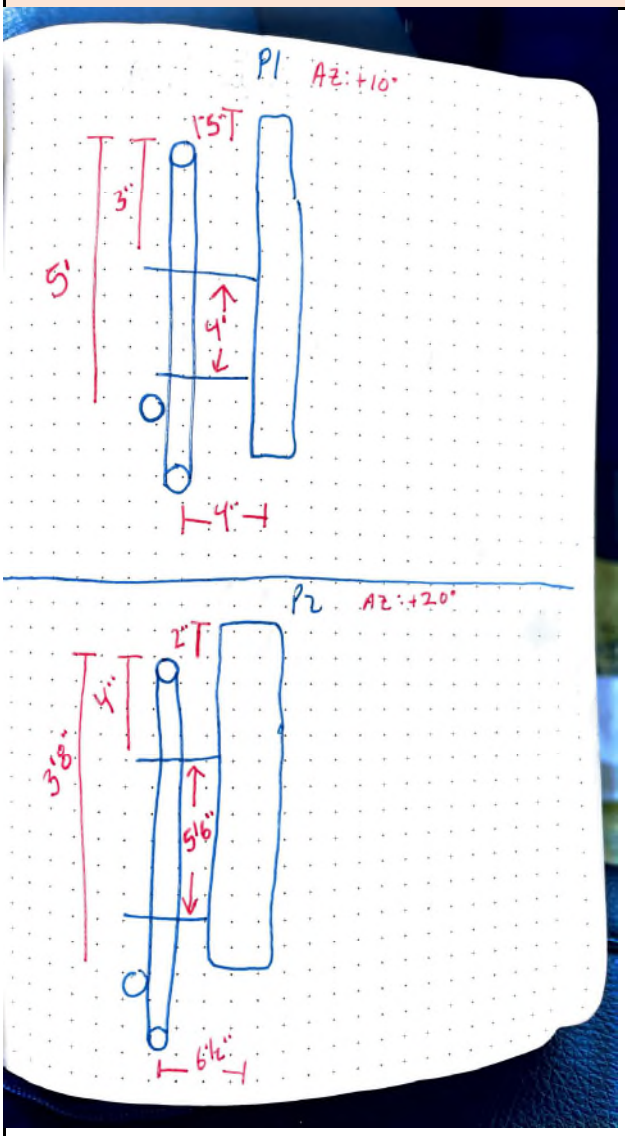


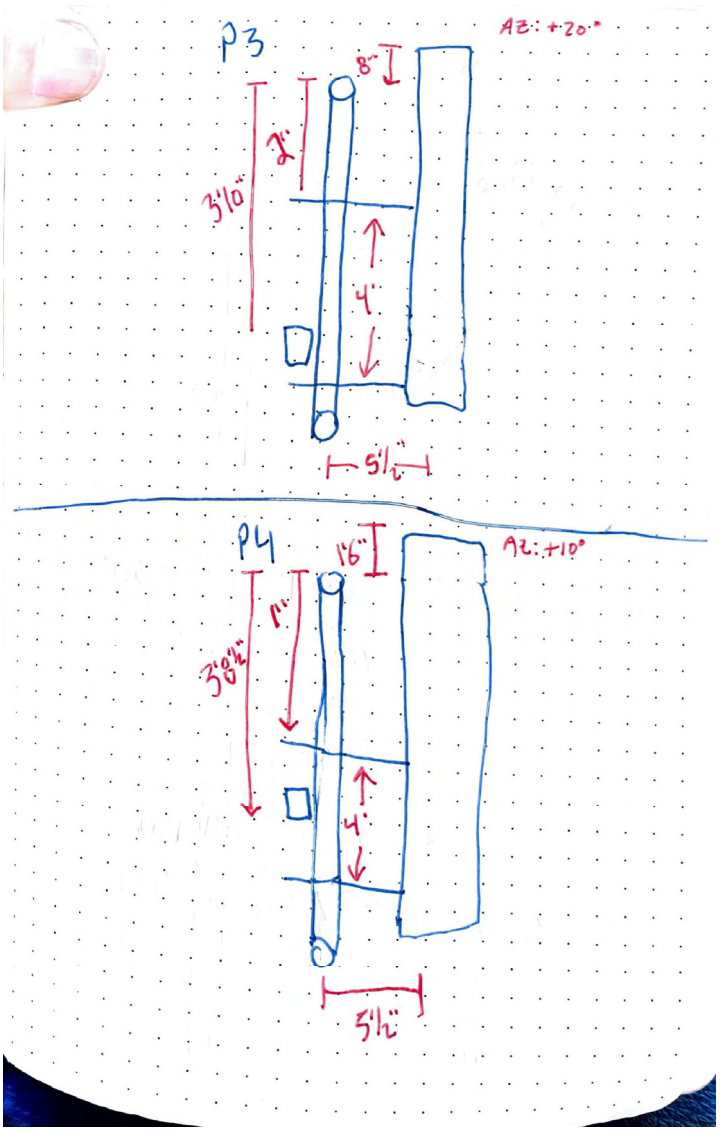
Please Insert Sketches of the Antenna Mount, cont'd

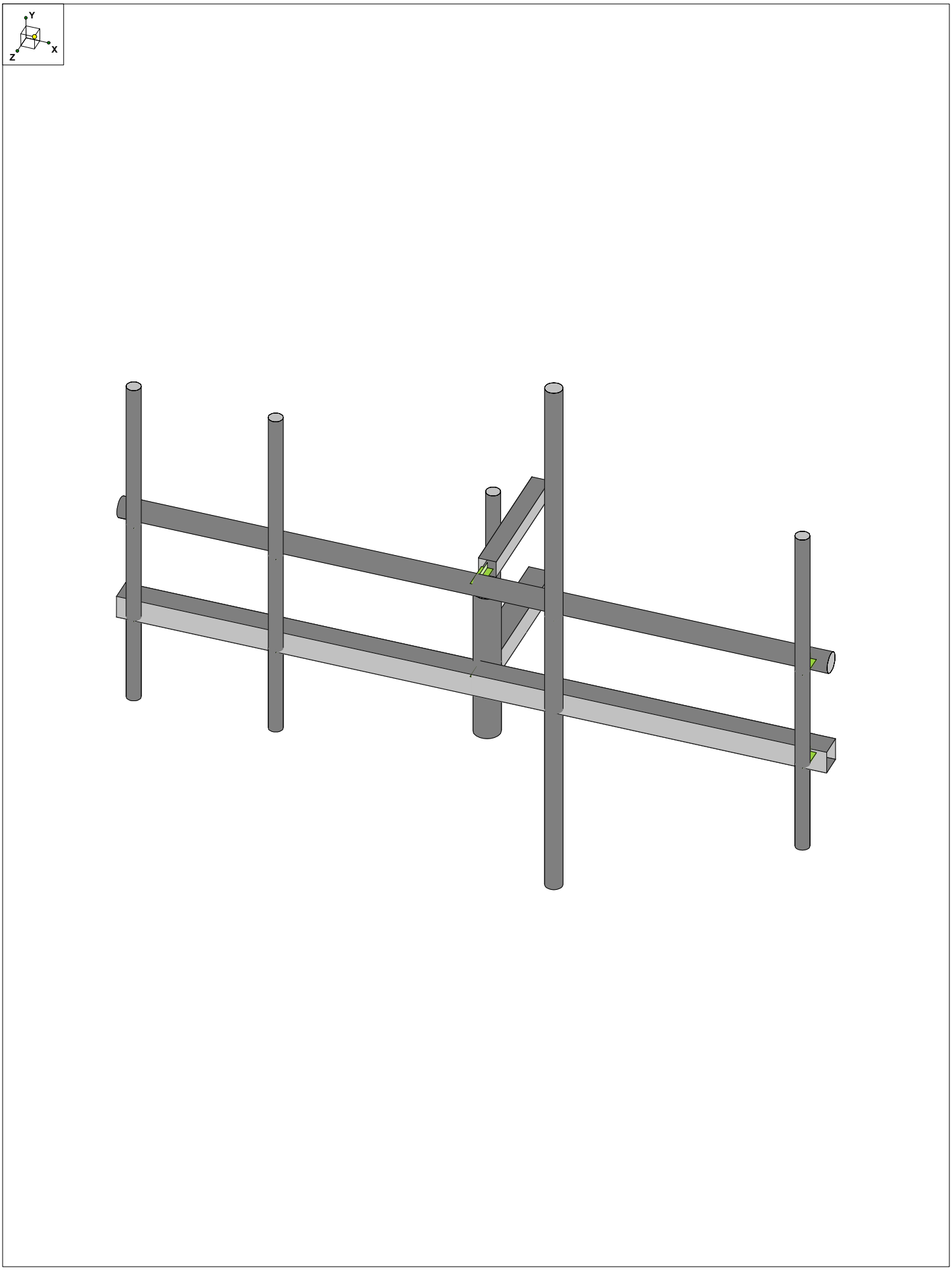


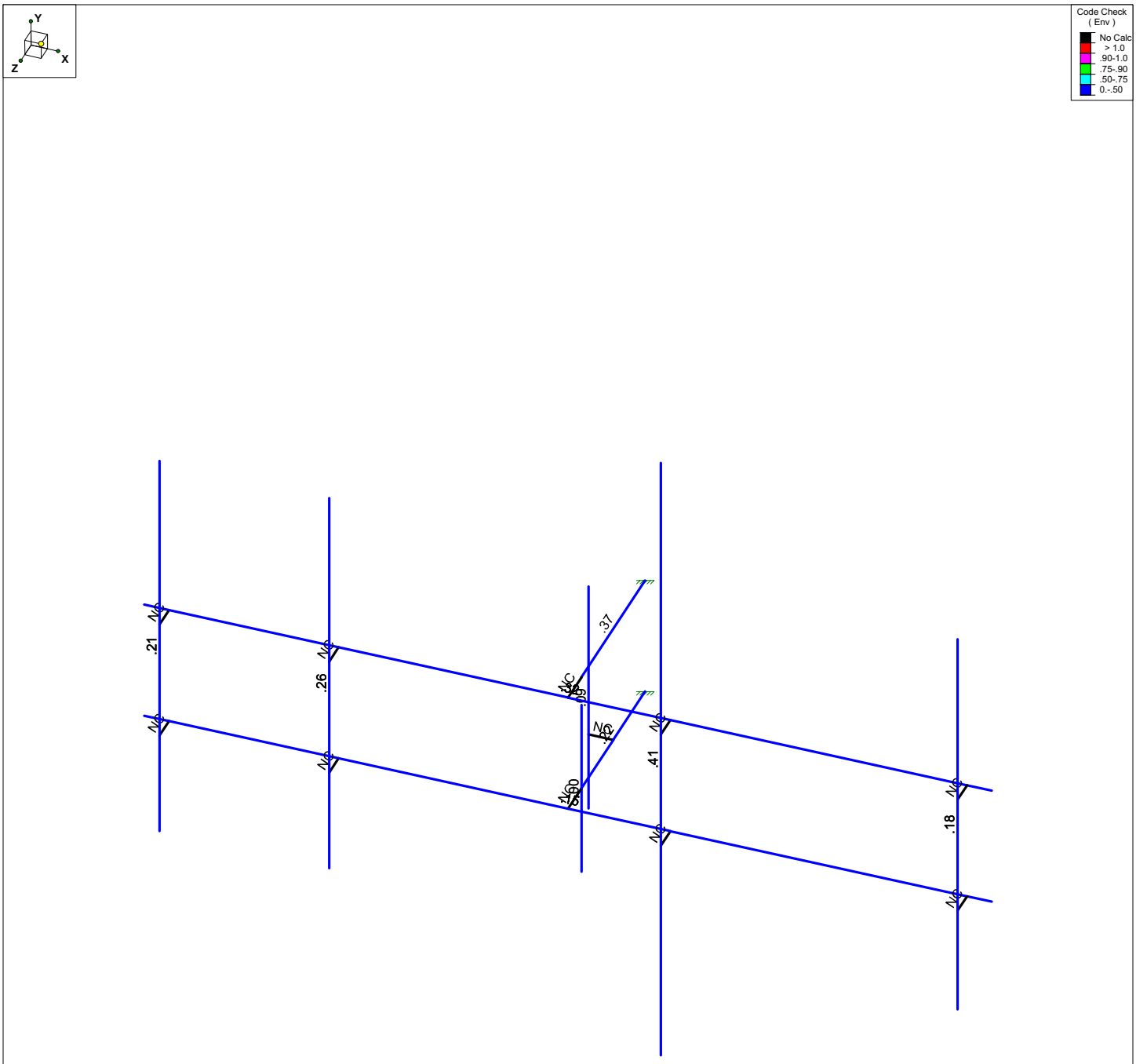


Please Insert Sketches of the Antenna Mount, cont'd

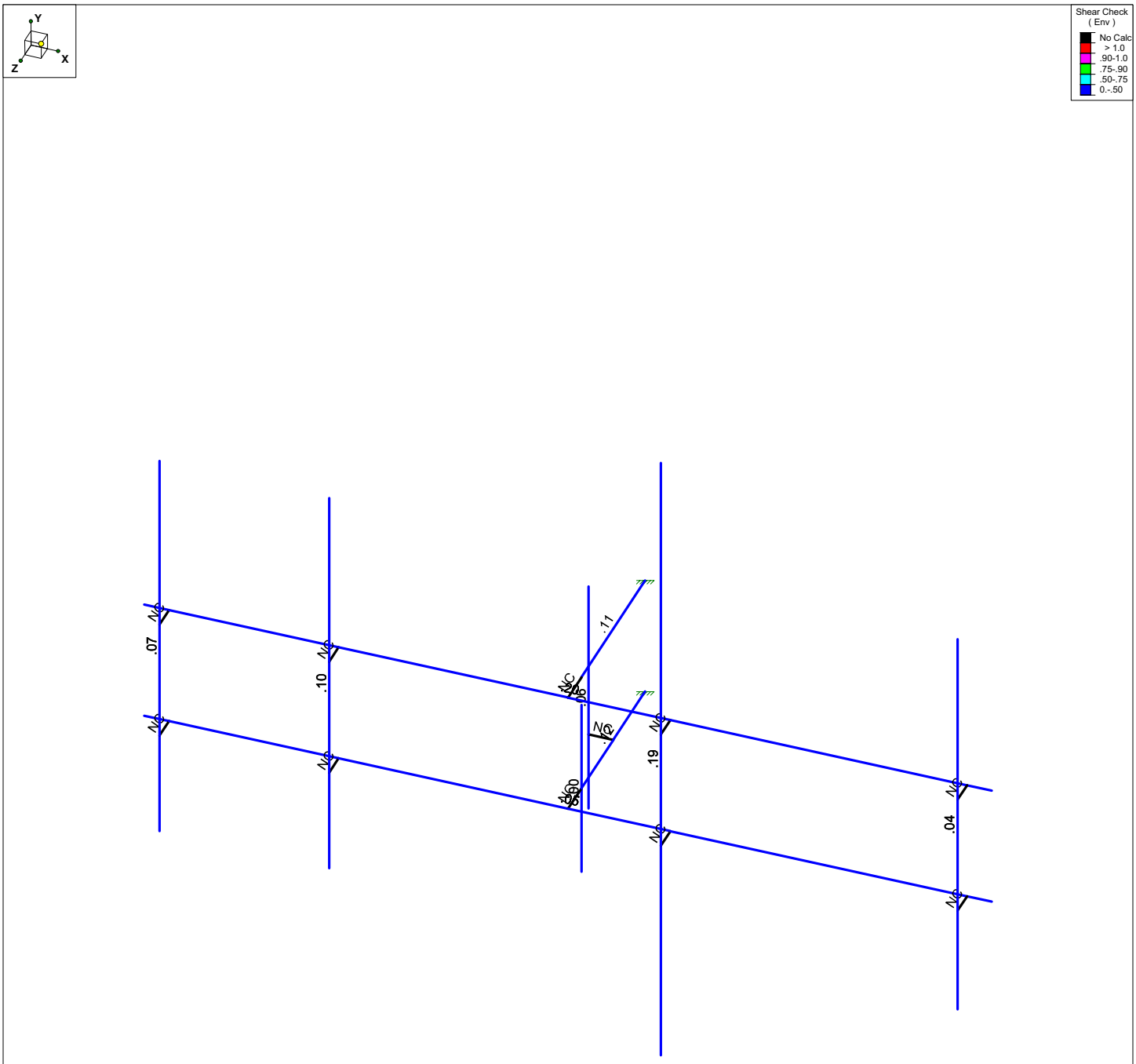





Y
X
Z



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



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

Basic Load Cases

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

Basic Load Cases (Continued)

	BLC Description	Category	X Gra...	Y Gra...	Z Grav...	Joint	Point	Distrib...	Area(Member)	Surface(Plate/W...
57	Structure Wi (120 Deg)	None						20		
58	Structure Wi (150 Deg)	None						20		
59	Structure Wi (180 Deg)	None						20		
60	Structure Wi (210 Deg)	None						20		
61	Structure Wi (240 Deg)	None						20		
62	Structure Wi (270 Deg)	None						20		
63	Structure Wi (300 Deg)	None						20		
64	Structure Wi (330 Deg)	None						20		
65	Structure Wm (0 Deg)	None						20		
66	Structure Wm (30 Deg)	None						20		
67	Structure Wm (60 Deg)	None						20		
68	Structure Wm (90 Deg)	None						20		
69	Structure Wm (120 Deg)	None						20		
70	Structure Wm (150 Deg)	None						20		
71	Structure Wm (180 Deg)	None						20		
72	Structure Wm (210 Deg)	None						20		
73	Structure Wm (240 Deg)	None						20		
74	Structure Wm (270 Deg)	None						20		
75	Structure Wm (300 Deg)	None						20		
76	Structure Wm (330 Deg)	None						20		
77	Lm1	None					1			
78	Lm2	None					1			
79	Lv1	None					1			
80	Lv2	None					1			

Load Combinations

	Description	S...	PDel...	SRSS	B...	Fa...	B...	Fa...	BLC	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...
1	1.2D+1.0Wo (0 Deg)	Y...	Y		1	1.2	39	1.2	3	1	41	1												
2	1.2D+1.0Wo (30 Deg)	Y...	Y		1	1.2	39	1.2	4	1	42	1												
3	1.2D+1.0Wo (60 Deg)	Y...	Y		1	1.2	39	1.2	5	1	43	1												
4	1.2D+1.0Wo (90 Deg)	Y...	Y		1	1.2	39	1.2	6	1	44	1												
5	1.2D+1.0Wo (120 Deg)	Y...	Y		1	1.2	39	1.2	7	1	45	1												
6	1.2D+1.0Wo (150 Deg)	Y...	Y		1	1.2	39	1.2	8	1	46	1												
7	1.2D+1.0Wo (180 Deg)	Y...	Y		1	1.2	39	1.2	9	1	47	1												
8	1.2D+1.0Wo (210 Deg)	Y...	Y		1	1.2	39	1.2	10	1	48	1												
9	1.2D+1.0Wo (240 Deg)	Y...	Y		1	1.2	39	1.2	11	1	49	1												
10	1.2D+1.0Wo (270 Deg)	Y...	Y		1	1.2	39	1.2	12	1	50	1												
11	1.2D+1.0Wo (300 Deg)	Y...	Y		1	1.2	39	1.2	13	1	51	1												
12	1.2D+1.0Wo (330 Deg)	Y...	Y		1	1.2	39	1.2	14	1	52	1												
13	1.2D + 1.0Di + 1.0Wi (0 Deg)	Y...	Y		1	1.2	39	1.2	2	1	40	1	15	1	53	1								
14	1.2D + 1.0Di + 1.0Wi (30 Deg)	Y...	Y		1	1.2	39	1.2	2	1	40	1	16	1	54	1								
15	1.2D + 1.0Di + 1.0Wi (60 Deg)	Y...	Y		1	1.2	39	1.2	2	1	40	1	17	1	55	1								
16	1.2D + 1.0Di + 1.0Wi (90 Deg)	Y...	Y		1	1.2	39	1.2	2	1	40	1	18	1	56	1								
17	1.2D + 1.0Di + 1.0Wi (120 Deg)	Y...	Y		1	1.2	39	1.2	2	1	40	1	19	1	57	1								
18	1.2D + 1.0Di + 1.0Wi (150 Deg)	Y...	Y		1	1.2	39	1.2	2	1	40	1	20	1	58	1								
19	1.2D + 1.0Di + 1.0Wi (180 Deg)	Y...	Y		1	1.2	39	1.2	2	1	40	1	21	1	59	1								
20	1.2D + 1.0Di + 1.0Wi (210 Deg)	Y...	Y		1	1.2	39	1.2	2	1	40	1	22	1	60	1								
21	1.2D + 1.0Di + 1.0Wi (240 Deg)	Y...	Y		1	1.2	39	1.2	2	1	40	1	23	1	61	1								
22	1.2D + 1.0Di + 1.0Wi (270 Deg)	Y...	Y		1	1.2	39	1.2	2	1	40	1	24	1	62	1								
23	1.2D + 1.0Di + 1.0Wi (300 Deg)	Y...	Y		1	1.2	39	1.2	2	1	40	1	25	1	63	1								
24	1.2D + 1.0Di + 1.0Wi (330 Deg)	Y...	Y		1	1.2	39	1.2	2	1	40	1	26	1	64	1								
25	1.2D + 1.5Lm1 + 1.0Wm (0 Deg)	Y...	Y		1	1.2	39	1.2	77	1.5	27	1	65	1										
26	1.2D + 1.5Lm1 + 1.0Wm (30 Deg)	Y...	Y		1	1.2	39	1.2	77	1.5	28	1	66	1										
27	1.2D + 1.5Lm1 + 1.0Wm (60 Deg)	Y...	Y		1	1.2	39	1.2	77	1.5	29	1	67	1										
28	1.2D + 1.5Lm1 + 1.0Wm (90 Deg)	Y...	Y		1	1.2	39	1.2	77	1.5	30	1	68	1										

Load Combinations (Continued)

	Description	S...	PDel...	SRSS	B...	Fa...	B...	Fa...	BLC	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...
29	1.2D + 1.5Lm1 + 1.0Wm (120 Deg)	Y...	Y		1	1.2	39	1.2	77	1.5	31	1	69	1										
30	1.2D + 1.5Lm1 + 1.0Wm (150 Deg)	Y...	Y		1	1.2	39	1.2	77	1.5	32	1	70	1										
31	1.2D + 1.5Lm1 + 1.0Wm (180 Deg)	Y...	Y		1	1.2	39	1.2	77	1.5	33	1	71	1										
32	1.2D + 1.5Lm1 + 1.0Wm (210 Deg)	Y...	Y		1	1.2	39	1.2	77	1.5	34	1	72	1										
33	1.2D + 1.5Lm1 + 1.0Wm (240 Deg)	Y...	Y		1	1.2	39	1.2	77	1.5	35	1	73	1										
34	1.2D + 1.5Lm1 + 1.0Wm (270 Deg)	Y...	Y		1	1.2	39	1.2	77	1.5	36	1	74	1										
35	1.2D + 1.5Lm1 + 1.0Wm (300 Deg)	Y...	Y		1	1.2	39	1.2	77	1.5	37	1	75	1										
36	1.2D + 1.5Lm1 + 1.0Wm (330 Deg)	Y...	Y		1	1.2	39	1.2	77	1.5	38	1	76	1										
37	1.2D + 1.5Lm2 + 1.0Wm (0 Deg)	Y...	Y		1	1.2	39	1.2	78	1.5	27	1	65	1										
38	1.2D + 1.5Lm2 + 1.0Wm (30 Deg)	Y...	Y		1	1.2	39	1.2	78	1.5	28	1	66	1										
39	1.2D + 1.5Lm2 + 1.0Wm (60 Deg)	Y...	Y		1	1.2	39	1.2	78	1.5	29	1	67	1										
40	1.2D + 1.5Lm2 + 1.0Wm (90 Deg)	Y...	Y		1	1.2	39	1.2	78	1.5	30	1	68	1										
41	1.2D + 1.5Lm2 + 1.0Wm (120 Deg)	Y...	Y		1	1.2	39	1.2	78	1.5	31	1	69	1										
42	1.2D + 1.5Lm2 + 1.0Wm (150 Deg)	Y...	Y		1	1.2	39	1.2	78	1.5	32	1	70	1										
43	1.2D + 1.5Lm2 + 1.0Wm (180 Deg)	Y...	Y		1	1.2	39	1.2	78	1.5	33	1	71	1										
44	1.2D + 1.5Lm2 + 1.0Wm (210 Deg)	Y...	Y		1	1.2	39	1.2	78	1.5	34	1	72	1										
45	1.2D + 1.5Lm2 + 1.0Wm (240 Deg)	Y...	Y		1	1.2	39	1.2	78	1.5	35	1	73	1										
46	1.2D + 1.5Lm2 + 1.0Wm (270 Deg)	Y...	Y		1	1.2	39	1.2	78	1.5	36	1	74	1										
47	1.2D + 1.5Lm2 + 1.0Wm (300 Deg)	Y...	Y		1	1.2	39	1.2	78	1.5	37	1	75	1										
48	1.2D + 1.5Lm2 + 1.0Wm (330 Deg)	Y...	Y		1	1.2	39	1.2	78	1.5	38	1	76	1										
49	1.2D + 1.5Lv1	Y...	Y		1	1.2	39	1.2	79	1.5														
50	1.2D + 1.5Lv2	Y...	Y		1	1.2	39	1.2	80	1.5														
51	1.4D	Y...	Y		1	1.4	39	1.4																
52	Seismic Mass		Y		1	1	39	1																
53	1.2D + 1.0Ev + 1.0Eh (0 Deg)		Y		1	1.2	39	1.2	SX		SY	1	SZ	-1										
54	1.2D + 1.0Ev + 1.0Eh (30 Deg)		Y		1	1.2	39	1.2	SX	.5	SY	1	SZ	-.8...										
55	1.2D + 1.0Ev + 1.0Eh (60 Deg)		Y		1	1.2	39	1.2	SX	.866	SY	1	SZ	-.5										
56	1.2D + 1.0Ev + 1.0Eh (90 Deg)		Y		1	1.2	39	1.2	SX	1	SY	1	SZ											
57	1.2D + 1.0Ev + 1.0Eh (120 Deg)		Y		1	1.2	39	1.2	SX	.866	SY	1	SZ	.5										
58	1.2D + 1.0Ev + 1.0Eh (150 Deg)		Y		1	1.2	39	1.2	SX	.5	SY	1	SZ	.866										
59	1.2D + 1.0Ev + 1.0Eh (180 Deg)		Y		1	1.2	39	1.2	SX		SY	1	SZ	1										
60	1.2D + 1.0Ev + 1.0Eh (210 Deg)		Y		1	1.2	39	1.2	SX	-.5	SY	1	SZ	.866										
61	1.2D + 1.0Ev + 1.0Eh (240 Deg)		Y		1	1.2	39	1.2	SX	-.8...	SY	1	SZ	.5										
62	1.2D + 1.0Ev + 1.0Eh (270 Deg)		Y		1	1.2	39	1.2	SX	-1	SY	1	SZ											
63	1.2D + 1.0Ev + 1.0Eh (300 Deg)		Y		1	1.2	39	1.2	SX	-.8...	SY	1	SZ	-.5										
64	1.2D + 1.0Ev + 1.0Eh (330 Deg)		Y		1	1.2	39	1.2	SX	-.5	SY	1	SZ	-.8...										

Joint Coordinates and Temperatures

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
1	A1	0	0	1.541667	0	
2	A2	0	0	3.520833	0	
3	A3	5	0	3.9375	0	
4	A4	-5	0	3.9375	0	
5	A5	0	0	2.53125	0	
6	A6	-0.291667	0	2.53125	0	
7	A7	4.708333	0	3.9375	0	
8	A8	4.708333	0	4.229167	0	
9	A13	-4.708333	0	3.9375	0	
10	A14	-4.708333	0	4.229167	0	
11	A15	0	0	3.9375	0	
12	A16	0	1.125	3.520833	0	
13	A17	0	-1.125	3.520833	0	
14	A18	4.708333	3.666667	4.229167	0	
15	A20	4.708333	-1.333333	4.229167	0	
16	A24	-4.708333	3.708333	4.229167	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
17	A25	-4.708333	-1.291667	4.229167	0	
18	N26	-0.291667	2	2.53125	0	
19	N27	-0.291667	-1	2.53125	0	
20	N28	-2.708333	0	3.9375	0	
21	N29	-2.708333	0	4.229167	0	
22	N30	-2.708333	3.708333	4.229167	0	
23	N31	-2.708333	-1.291667	4.229167	0	
24	N32	1.208333	0	3.9375	0	
25	N33	1.208333	0	4.229167	0	
26	N34	1.208333	5.166667	4.229167	0	
27	N35	1.208333	-2.833333	4.229167	0	
28	N28A	0	1.5	1.541667	0	
29	N29A	0	1.5	3.520833	0	
30	N30A	5	1.5	3.9375	0	
31	N31A	-5	1.5	3.9375	0	
32	N32A	4.708333	1.5	3.9375	0	
33	N33A	4.708333	1.5	4.229167	0	
34	N34A	-4.708333	1.5	3.9375	0	
35	N35A	-4.708333	1.5	4.229167	0	
36	N36	0	1.5	3.9375	0	
37	N37	-2.708333	1.5	3.9375	0	
38	N38	-2.708333	1.5	4.229167	0	
39	N39	1.208333	1.5	3.9375	0	
40	N40	1.208333	1.5	4.229167	0	

Hot Rolled Steel Section Sets

	Label	Shape	Type	Design List	Material	Desig..	A [in2]	Iyy [i...	Izz [i...	J [in4]
1	Standoff Horizontal	HSS4X4X4	None	None	A500 Gr.B RECT	Typical	3.37	7.8	7.8	12.8
2	Standoff Vertical	PIPE_4.0	None	None	A53 Gr.B	Typical	2.96	6.82	6.82	13.6
3	Face Horizontal	HSS4X4X4	None	None	A500 Gr.B RECT	Typical	3.37	7.8	7.8	12.8
4	Mount Pipe (P2STD)	PIPE_2.0	None	None	A53 Gr.B	Typical	1.02	.627	.627	1.25
5	Mount Pipe (P2.5STD)	PIPE_2.5	None	None	A53 Gr.B	Typical	1.61	1.45	1.45	2.89
6	Reinforcement Standoff	HSS3X3X4	None	None	A500 Gr.B RECT	Typical	2.44	3.02	3.02	5.08
7	Reinforcement Face	PIPE_3.0	None	None	A53 Gr.B	Typical	2.07	2.85	2.85	5.69

Hot Rolled Steel Properties

	Label	E [ksi]	G [ksi]	Nu	Therm (\1E5 F)	Density[k/ft^3]	Yield[ksi]	Ry	Fu[ksi]	Rt
1	A992	29000	11154	.3	.65	.49	50	1.1	65	1.1
2	A36 Gr.36	29000	11154	.3	.65	.49	36	1.5	58	1.2
3	A572 Gr.50	29000	11154	.3	.65	.49	50	1.1	65	1.1
4	A500 Gr.B RND	29000	11154	.3	.65	.527	42	1.4	58	1.3
5	A500 Gr.B RECT	29000	11154	.3	.65	.527	46	1.4	58	1.3
6	A500 Gr.C RND	29000	11154	.3	.65	.527	46	1.4	62	1.3
7	A500 Gr.C RECT	29000	11154	.3	.65	.527	50	1.4	62	1.3
8	A53 Gr.B	29000	11154	.3	.65	.49	35	1.6	60	1.2
9	A1085	29000	11154	.3	.65	.49	50	1.4	65	1.3
10	A913 Gr.65	29000	11154	.3	.65	.49	65	1.1	80	1.1

Member Primary Data

	Label	I Joint	J Joint	K Joint	Rotate(d...	Section/Shape	Type	Design List	Material	Design Rul...
1	A1	A1	A2			Standoff Horizontal	None	None	A500 Gr...	Typical
2	A2	A3	A4			Face Horizontal	None	None	A500 Gr...	Typical

Member Primary Data (Continued)

	Label	I Joint	J Joint	K Joint	Rotate(d...	Section/Shape	Type	Design List	Material	Design Rul...
3	A3	A5	A6			RIGID	None	None	RIGID	Typical
4	A4	A7	A8			RIGID	None	None	RIGID	Typical
5	A7	A13	A14			RIGID	None	None	RIGID	Typical
6	A8	A2	A15			RIGID	None	None	RIGID	Typical
7	A9	A16	A17			Standoff Vertical	None	None	A53 Gr.B	Typical
8	MP1A	A18	A20			Mount Pipe (P2STD)	None	None	A53 Gr.B	Typical
9	MP4A	A24	A25			Mount Pipe (P2STD)	None	None	A53 Gr.B	Typical
10	S1	N26	N27			Mount Pipe (P2STD)	None	None	A53 Gr.B	Typical
11	M15	N28	N29			RIGID	None	None	RIGID	Typical
12	MP3A	N30	N31			Mount Pipe (P2STD)	None	None	A53 Gr.B	Typical
13	M17	N32	N33			RIGID	None	None	RIGID	Typical
14	MP2A	N34	N35			Mount Pipe (P2.5STD)	None	None	A53 Gr.B	Typical
15	M15A	N28A	N29A			Reinforcement Standoff	None	None	A500 Gr...	Typical
16	M16	N30A	N31A			Reinforcement Face	None	None	A53 Gr.B	Typical
17	M17A	N32A	N33A			RIGID	None	None	RIGID	Typical
18	M18	N34A	N35A			RIGID	None	None	RIGID	Typical
19	M19	N29A	N36			RIGID	None	None	RIGID	Typical
20	M20	N37	N38			RIGID	None	None	RIGID	Typical
21	M21	N39	N40			RIGID	None	None	RIGID	Typical

Member Advanced Data

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Defl Ratio Opti...	Analysis Offs...	Inactive	Seismi...
1	A1						Yes	** NA **			None
2	A2						Yes	** NA **			None
3	A3						Yes	** NA **			None
4	A4						Yes	** NA **			None
5	A7						Yes	** NA **			None
6	A8						Yes	** NA **			None
7	A9						Yes	** NA **			None
8	MP1A						Yes	** NA **			None
9	MP4A						Yes	** NA **			None
10	S1						Yes	** NA **			None
11	M15						Yes	** NA **			None
12	MP3A						Yes	** NA **			None
13	M17						Yes	** NA **			None
14	MP2A						Yes	** NA **			None
15	M15A						Yes	** NA **			None
16	M16						Yes	** NA **			None
17	M17A						Yes	** NA **			None
18	M18						Yes	** NA **			None
19	M19						Yes	** NA **			None
20	M20						Yes	** NA **			None
21	M21						Yes	** NA **			None

Member Point Loads (BLC 1 : Antenna D)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	Y	-30	.08
2	MP2A	My	-.023	.08
3	MP2A	Mz	.017	.08
4	MP2A	Y	-30	4.08
5	MP2A	My	-.023	4.08
6	MP2A	Mz	.017	4.08
7	MP2A	Y	-30	.08
8	MP2A	My	-.016	.08

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
9	MP2A	Mz	-.024	.08
10	MP2A	Y	-30	4.08
11	MP2A	My	-.016	4.08
12	MP2A	Mz	-.024	4.08
13	MP4A	Y	-49.75	.42
14	MP4A	My	-.033	.42
15	MP4A	Mz	-.006	.42
16	MP4A	Y	-49.75	2.92
17	MP4A	My	-.033	2.92
18	MP4A	Mz	-.006	2.92
19	S1	Y	-32	1
20	S1	My	.016	1
21	S1	Mz	0	1
22	MP3A	Y	-84.4	1.1
23	MP3A	My	.042	1.1
24	MP3A	Mz	0	1.1
25	MP4A	Y	-70.3	1.1
26	MP4A	My	.035	1.1
27	MP4A	Mz	0	1.1
28	MP1A	Y	-13.15	.25
29	MP1A	My	-.004	.25
30	MP1A	Mz	-.000761	.25
31	MP1A	Y	-13.15	4.28
32	MP1A	My	-.004	4.28
33	MP1A	Mz	-.000761	4.28

Member Point Loads (BLC 2 : Antenna Di)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	Y	-81.92	.08
2	MP2A	My	-.064	.08
3	MP2A	Mz	.048	.08
4	MP2A	Y	-81.92	4.08
5	MP2A	My	-.064	4.08
6	MP2A	Mz	.048	4.08
7	MP2A	Y	-81.92	.08
8	MP2A	My	-.044	.08
9	MP2A	Mz	-.067	.08
10	MP2A	Y	-81.92	4.08
11	MP2A	My	-.044	4.08
12	MP2A	Mz	-.067	4.08
13	MP4A	Y	-37.647	.42
14	MP4A	My	-.025	.42
15	MP4A	Mz	-.004	.42
16	MP4A	Y	-37.647	2.92
17	MP4A	My	-.025	2.92
18	MP4A	Mz	-.004	2.92
19	S1	Y	-87.325	1
20	S1	My	.044	1
21	S1	Mz	0	1
22	MP3A	Y	-44.59	1.1
23	MP3A	My	.022	1.1
24	MP3A	Mz	0	1.1
25	MP4A	Y	-40.098	1.1
26	MP4A	My	.02	1.1
27	MP4A	Mz	0	1.1
28	MP1A	Y	-60.726	.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
29	MP1A	My	-.02	.25
30	MP1A	Mz	-.004	.25
31	MP1A	Y	-60.726	4.28
32	MP1A	My	-.02	4.28
33	MP1A	Mz	-.004	4.28

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	0	.08
2	MP2A	Z	-182.483	.08
3	MP2A	Mx	-.106	.08
4	MP2A	X	0	4.08
5	MP2A	Z	-182.483	4.08
6	MP2A	Mx	-.106	4.08
7	MP2A	X	0	.08
8	MP2A	Z	-182.483	.08
9	MP2A	Mx	.148	.08
10	MP2A	X	0	4.08
11	MP2A	Z	-182.483	4.08
12	MP2A	Mx	.148	4.08
13	MP4A	X	0	.42
14	MP4A	Z	-76.331	.42
15	MP4A	Mx	.009	.42
16	MP4A	X	0	2.92
17	MP4A	Z	-76.331	2.92
18	MP4A	Mx	.009	2.92
19	S1	X	0	1
20	S1	Z	-115.43	1
21	S1	Mx	0	1
22	MP3A	X	0	1.1
23	MP3A	Z	-69.687	1.1
24	MP3A	Mx	0	1.1
25	MP4A	X	0	1.1
26	MP4A	Z	-69.687	1.1
27	MP4A	Mx	0	1.1
28	MP1A	X	0	.25
29	MP1A	Z	-150.677	.25
30	MP1A	Mx	.009	.25
31	MP1A	X	0	4.28
32	MP1A	Z	-150.677	4.28
33	MP1A	Mx	.009	4.28

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	89.194	.08
2	MP2A	Z	-154.488	.08
3	MP2A	Mx	-.159	.08
4	MP2A	X	89.194	4.08
5	MP2A	Z	-154.488	4.08
6	MP2A	Mx	-.159	4.08
7	MP2A	X	89.194	.08
8	MP2A	Z	-154.488	.08
9	MP2A	Mx	.078	.08
10	MP2A	X	89.194	4.08
11	MP2A	Z	-154.488	4.08
12	MP2A	Mx	.078	4.08

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
13	MP4A	X	36.733	.42
14	MP4A	Z	-63.623	.42
15	MP4A	Mx	-.017	.42
16	MP4A	X	36.733	2.92
17	MP4A	Z	-63.623	2.92
18	MP4A	Mx	-.017	2.92
19	S1	X	62.199	1
20	S1	Z	-107.731	1
21	S1	Mx	.031	1
22	MP3A	X	31.955	1.1
23	MP3A	Z	-55.348	1.1
24	MP3A	Mx	.016	1.1
25	MP4A	X	30.849	1.1
26	MP4A	Z	-53.432	1.1
27	MP4A	Mx	.015	1.1
28	MP1A	X	73.102	.25
29	MP1A	Z	-126.617	.25
30	MP1A	Mx	-.017	.25
31	MP1A	X	73.102	4.28
32	MP1A	Z	-126.617	4.28
33	MP1A	Mx	-.017	4.28

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	135.291	.08
2	MP2A	Z	-78.11	.08
3	MP2A	Mx	-.151	.08
4	MP2A	X	135.291	4.08
5	MP2A	Z	-78.11	4.08
6	MP2A	Mx	-.151	4.08
7	MP2A	X	135.291	.08
8	MP2A	Z	-78.11	.08
9	MP2A	Mx	-.009	.08
10	MP2A	X	135.291	4.08
11	MP2A	Z	-78.11	4.08
12	MP2A	Mx	-.009	4.08
13	MP4A	X	50.192	.42
14	MP4A	Z	-28.978	.42
15	MP4A	Mx	-.03	.42
16	MP4A	X	50.192	2.92
17	MP4A	Z	-28.978	2.92
18	MP4A	Mx	-.03	2.92
19	S1	X	123.263	1
20	S1	Z	-71.166	1
21	S1	Mx	.062	1
22	MP3A	X	45.344	1.1
23	MP3A	Z	-26.179	1.1
24	MP3A	Mx	.023	1.1
25	MP4A	X	39.595	1.1
26	MP4A	Z	-22.86	1.1
27	MP4A	Mx	.02	1.1
28	MP1A	X	105.656	.25
29	MP1A	Z	-61.001	.25
30	MP1A	Mx	-.031	.25
31	MP1A	X	105.656	4.28
32	MP1A	Z	-61.001	4.28

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
33	MP1A	Mx	-.031	4.28

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	138.15	.08
2	MP2A	Z	0	.08
3	MP2A	Mx	-.108	.08
4	MP2A	X	138.15	4.08
5	MP2A	Z	0	4.08
6	MP2A	Mx	-.108	4.08
7	MP2A	X	138.15	.08
8	MP2A	Z	0	.08
9	MP2A	Mx	-.074	.08
10	MP2A	X	138.15	4.08
11	MP2A	Z	0	4.08
12	MP2A	Mx	-.074	4.08
13	MP4A	X	45.314	.42
14	MP4A	Z	0	.42
15	MP4A	Mx	-.03	.42
16	MP4A	X	45.314	2.92
17	MP4A	Z	0	2.92
18	MP4A	Mx	-.03	2.92
19	S1	X	151.299	1
20	S1	Z	0	1
21	S1	Mx	.076	1
22	MP3A	X	46.582	1.1
23	MP3A	Z	0	1.1
24	MP3A	Mx	.023	1.1
25	MP4A	X	37.731	1.1
26	MP4A	Z	0	1.1
27	MP4A	Mx	.019	1.1
28	MP1A	X	102.271	.25
29	MP1A	Z	0	.25
30	MP1A	Mx	-.034	.25
31	MP1A	X	102.271	4.28
32	MP1A	Z	0	4.28
33	MP1A	Mx	-.034	4.28

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	123.189	.08
2	MP2A	Z	71.123	.08
3	MP2A	Mx	-.055	.08
4	MP2A	X	123.189	4.08
5	MP2A	Z	71.123	4.08
6	MP2A	Mx	-.055	4.08
7	MP2A	X	123.189	.08
8	MP2A	Z	71.123	.08
9	MP2A	Mx	-.124	.08
10	MP2A	X	123.189	4.08
11	MP2A	Z	71.123	4.08
12	MP2A	Mx	-.124	4.08
13	MP4A	X	41.725	.42
14	MP4A	Z	24.09	.42
15	MP4A	Mx	-.03	.42
16	MP4A	X	41.725	2.92

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
17	MP4A	Z	24.09	2.92
18	MP4A	Mx	-.03	2.92
19	S1	X	123.263	1
20	S1	Z	71.166	1
21	S1	Mx	.062	1
22	MP3A	X	45.344	1.1
23	MP3A	Z	26.179	1.1
24	MP3A	Mx	.023	1.1
25	MP4A	X	39.595	1.1
26	MP4A	Z	22.86	1.1
27	MP4A	Mx	.02	1.1
28	MP1A	X	92.442	.25
29	MP1A	Z	53.372	.25
30	MP1A	Mx	-.033	.25
31	MP1A	X	92.442	4.28
32	MP1A	Z	53.372	4.28
33	MP1A	Mx	-.033	4.28

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	82.206	.08
2	MP2A	Z	142.386	.08
3	MP2A	Mx	.019	.08
4	MP2A	X	82.206	4.08
5	MP2A	Z	142.386	4.08
6	MP2A	Mx	.019	4.08
7	MP2A	X	82.206	.08
8	MP2A	Z	142.386	.08
9	MP2A	Mx	-.16	.08
10	MP2A	X	82.206	4.08
11	MP2A	Z	142.386	4.08
12	MP2A	Mx	-.16	4.08
13	MP4A	X	31.844	.42
14	MP4A	Z	55.156	.42
15	MP4A	Mx	-.027	.42
16	MP4A	X	31.844	2.92
17	MP4A	Z	55.156	2.92
18	MP4A	Mx	-.027	2.92
19	S1	X	62.199	1
20	S1	Z	107.731	1
21	S1	Mx	.031	1
22	MP3A	X	31.955	1.1
23	MP3A	Z	55.348	1.1
24	MP3A	Mx	.016	1.1
25	MP4A	X	30.849	1.1
26	MP4A	Z	53.432	1.1
27	MP4A	Mx	.015	1.1
28	MP1A	X	65.473	.25
29	MP1A	Z	113.403	.25
30	MP1A	Mx	-.028	.25
31	MP1A	X	65.473	4.28
32	MP1A	Z	113.403	4.28
33	MP1A	Mx	-.028	4.28

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

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

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	0	.08
2	MP2A	Z	182.483	.08
3	MP2A	Mx	.106	.08
4	MP2A	X	0	4.08
5	MP2A	Z	182.483	4.08
6	MP2A	Mx	.106	4.08
7	MP2A	X	0	.08
8	MP2A	Z	182.483	.08
9	MP2A	Mx	-.148	.08
10	MP2A	X	0	4.08
11	MP2A	Z	182.483	4.08
12	MP2A	Mx	-.148	4.08
13	MP4A	X	0	.42
14	MP4A	Z	76.331	.42
15	MP4A	Mx	-.009	.42
16	MP4A	X	0	2.92
17	MP4A	Z	76.331	2.92
18	MP4A	Mx	-.009	2.92
19	S1	X	0	1
20	S1	Z	115.43	1
21	S1	Mx	0	1
22	MP3A	X	0	1.1
23	MP3A	Z	69.687	1.1
24	MP3A	Mx	0	1.1
25	MP4A	X	0	1.1
26	MP4A	Z	69.687	1.1
27	MP4A	Mx	0	1.1
28	MP1A	X	0	.25
29	MP1A	Z	150.677	.25
30	MP1A	Mx	-.009	.25
31	MP1A	X	0	4.28
32	MP1A	Z	150.677	4.28
33	MP1A	Mx	-.009	4.28

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-89.194	.08
2	MP2A	Z	154.488	.08
3	MP2A	Mx	.159	.08
4	MP2A	X	-89.194	4.08
5	MP2A	Z	154.488	4.08
6	MP2A	Mx	.159	4.08
7	MP2A	X	-89.194	.08
8	MP2A	Z	154.488	.08
9	MP2A	Mx	-.078	.08
10	MP2A	X	-89.194	4.08
11	MP2A	Z	154.488	4.08
12	MP2A	Mx	-.078	4.08
13	MP4A	X	-36.733	.42
14	MP4A	Z	63.623	.42
15	MP4A	Mx	.017	.42
16	MP4A	X	-36.733	2.92
17	MP4A	Z	63.623	2.92
18	MP4A	Mx	.017	2.92
19	S1	X	-62.199	1
20	S1	Z	107.731	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
21	S1	Mx	-.031	1
22	MP3A	X	-31.955	1.1
23	MP3A	Z	55.348	1.1
24	MP3A	Mx	-.016	1.1
25	MP4A	X	-30.849	1.1
26	MP4A	Z	53.432	1.1
27	MP4A	Mx	-.015	1.1
28	MP1A	X	-73.102	.25
29	MP1A	Z	126.617	.25
30	MP1A	Mx	.017	.25
31	MP1A	X	-73.102	4.28
32	MP1A	Z	126.617	4.28
33	MP1A	Mx	.017	4.28

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-135.291	.08
2	MP2A	Z	78.11	.08
3	MP2A	Mx	.151	.08
4	MP2A	X	-135.291	4.08
5	MP2A	Z	78.11	4.08
6	MP2A	Mx	.151	4.08
7	MP2A	X	-135.291	.08
8	MP2A	Z	78.11	.08
9	MP2A	Mx	.009	.08
10	MP2A	X	-135.291	4.08
11	MP2A	Z	78.11	4.08
12	MP2A	Mx	.009	4.08
13	MP4A	X	-50.192	.42
14	MP4A	Z	28.978	.42
15	MP4A	Mx	.03	.42
16	MP4A	X	-50.192	2.92
17	MP4A	Z	28.978	2.92
18	MP4A	Mx	.03	2.92
19	S1	X	-123.263	1
20	S1	Z	71.166	1
21	S1	Mx	-.062	1
22	MP3A	X	-45.344	1.1
23	MP3A	Z	26.179	1.1
24	MP3A	Mx	-.023	1.1
25	MP4A	X	-39.595	1.1
26	MP4A	Z	22.86	1.1
27	MP4A	Mx	-.02	1.1
28	MP1A	X	-105.656	.25
29	MP1A	Z	61.001	.25
30	MP1A	Mx	.031	.25
31	MP1A	X	-105.656	4.28
32	MP1A	Z	61.001	4.28
33	MP1A	Mx	.031	4.28

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-138.15	.08
2	MP2A	Z	0	.08
3	MP2A	Mx	.108	.08
4	MP2A	X	-138.15	4.08

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
5	MP2A	Z	0	4.08
6	MP2A	Mx	.108	4.08
7	MP2A	X	-138.15	.08
8	MP2A	Z	0	.08
9	MP2A	Mx	.074	.08
10	MP2A	X	-138.15	4.08
11	MP2A	Z	0	4.08
12	MP2A	Mx	.074	4.08
13	MP4A	X	-45.314	.42
14	MP4A	Z	0	.42
15	MP4A	Mx	.03	.42
16	MP4A	X	-45.314	2.92
17	MP4A	Z	0	2.92
18	MP4A	Mx	.03	2.92
19	S1	X	-151.299	1
20	S1	Z	0	1
21	S1	Mx	-.076	1
22	MP3A	X	-46.582	1.1
23	MP3A	Z	0	1.1
24	MP3A	Mx	-.023	1.1
25	MP4A	X	-37.731	1.1
26	MP4A	Z	0	1.1
27	MP4A	Mx	-.019	1.1
28	MP1A	X	-102.271	.25
29	MP1A	Z	0	.25
30	MP1A	Mx	.034	.25
31	MP1A	X	-102.271	4.28
32	MP1A	Z	0	4.28
33	MP1A	Mx	.034	4.28

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-123.189	.08
2	MP2A	Z	-71.123	.08
3	MP2A	Mx	.055	.08
4	MP2A	X	-123.189	4.08
5	MP2A	Z	-71.123	4.08
6	MP2A	Mx	.055	4.08
7	MP2A	X	-123.189	.08
8	MP2A	Z	-71.123	.08
9	MP2A	Mx	.124	.08
10	MP2A	X	-123.189	4.08
11	MP2A	Z	-71.123	4.08
12	MP2A	Mx	.124	4.08
13	MP4A	X	-41.725	.42
14	MP4A	Z	-24.09	.42
15	MP4A	Mx	.03	.42
16	MP4A	X	-41.725	2.92
17	MP4A	Z	-24.09	2.92
18	MP4A	Mx	.03	2.92
19	S1	X	-123.263	1
20	S1	Z	-71.166	1
21	S1	Mx	-.062	1
22	MP3A	X	-45.344	1.1
23	MP3A	Z	-26.179	1.1
24	MP3A	Mx	-.023	1.1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
25	MP4A	X	-39.595	1.1
26	MP4A	Z	-22.86	1.1
27	MP4A	Mx	-.02	1.1
28	MP1A	X	-92.442	.25
29	MP1A	Z	-53.372	.25
30	MP1A	Mx	.033	.25
31	MP1A	X	-92.442	4.28
32	MP1A	Z	-53.372	4.28
33	MP1A	Mx	.033	4.28

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-82.206	.08
2	MP2A	Z	-142.386	.08
3	MP2A	Mx	-.019	.08
4	MP2A	X	-82.206	4.08
5	MP2A	Z	-142.386	4.08
6	MP2A	Mx	-.019	4.08
7	MP2A	X	-82.206	.08
8	MP2A	Z	-142.386	.08
9	MP2A	Mx	.16	.08
10	MP2A	X	-82.206	4.08
11	MP2A	Z	-142.386	4.08
12	MP2A	Mx	.16	4.08
13	MP4A	X	-31.844	.42
14	MP4A	Z	-55.156	.42
15	MP4A	Mx	.027	.42
16	MP4A	X	-31.844	2.92
17	MP4A	Z	-55.156	2.92
18	MP4A	Mx	.027	2.92
19	S1	X	-62.199	1
20	S1	Z	-107.731	1
21	S1	Mx	-.031	1
22	MP3A	X	-31.955	1.1
23	MP3A	Z	-55.348	1.1
24	MP3A	Mx	-.016	1.1
25	MP4A	X	-30.849	1.1
26	MP4A	Z	-53.432	1.1
27	MP4A	Mx	-.015	1.1
28	MP1A	X	-65.473	.25
29	MP1A	Z	-113.403	.25
30	MP1A	Mx	.028	.25
31	MP1A	X	-65.473	4.28
32	MP1A	Z	-113.403	4.28
33	MP1A	Mx	.028	4.28

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	0	.08
2	MP2A	Z	-24.495	.08
3	MP2A	Mx	-.014	.08
4	MP2A	X	0	4.08
5	MP2A	Z	-24.495	4.08
6	MP2A	Mx	-.014	4.08
7	MP2A	X	0	.08
8	MP2A	Z	-24.495	.08

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
9	MP2A	Mx	.02	.08
10	MP2A	X	0	4.08
11	MP2A	Z	-24.495	4.08
12	MP2A	Mx	.02	4.08
13	MP4A	X	0	.42
14	MP4A	Z	-10.652	.42
15	MP4A	Mx	.001	.42
16	MP4A	X	0	2.92
17	MP4A	Z	-10.652	2.92
18	MP4A	Mx	.001	2.92
19	S1	X	0	1
20	S1	Z	-16.482	1
21	S1	Mx	0	1
22	MP3A	X	0	1.1
23	MP3A	Z	-10.255	1.1
24	MP3A	Mx	0	1.1
25	MP4A	X	0	1.1
26	MP4A	Z	-10.255	1.1
27	MP4A	Mx	0	1.1
28	MP1A	X	0	.25
29	MP1A	Z	-20.469	.25
30	MP1A	Mx	.001	.25
31	MP1A	X	0	4.28
32	MP1A	Z	-20.469	4.28
33	MP1A	Mx	.001	4.28

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	11.987	.08
2	MP2A	Z	-20.762	.08
3	MP2A	Mx	-.021	.08
4	MP2A	X	11.987	4.08
5	MP2A	Z	-20.762	4.08
6	MP2A	Mx	-.021	4.08
7	MP2A	X	11.987	.08
8	MP2A	Z	-20.762	.08
9	MP2A	Mx	.01	.08
10	MP2A	X	11.987	4.08
11	MP2A	Z	-20.762	4.08
12	MP2A	Mx	.01	4.08
13	MP4A	X	5.138	.42
14	MP4A	Z	-8.9	.42
15	MP4A	Mx	-.002	.42
16	MP4A	X	5.138	2.92
17	MP4A	Z	-8.9	2.92
18	MP4A	Mx	-.002	2.92
19	S1	X	8.816	1
20	S1	Z	-15.27	1
21	S1	Mx	.004	1
22	MP3A	X	4.737	1.1
23	MP3A	Z	-8.205	1.1
24	MP3A	Mx	.002	1.1
25	MP4A	X	4.589	1.1
26	MP4A	Z	-7.948	1.1
27	MP4A	Mx	.002	1.1
28	MP1A	X	9.956	.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
29	MP1A	Z	-17.244	.25
30	MP1A	Mx	-.002	.25
31	MP1A	X	9.956	4.28
32	MP1A	Z	-17.244	4.28
33	MP1A	Mx	-.002	4.28

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	18.316	.08
2	MP2A	Z	-10.575	.08
3	MP2A	Mx	-.02	.08
4	MP2A	X	18.316	4.08
5	MP2A	Z	-10.575	4.08
6	MP2A	Mx	-.02	4.08
7	MP2A	X	18.316	.08
8	MP2A	Z	-10.575	.08
9	MP2A	Mx	-.001	.08
10	MP2A	X	18.316	4.08
11	MP2A	Z	-10.575	4.08
12	MP2A	Mx	-.001	4.08
13	MP4A	X	7.14	.42
14	MP4A	Z	-4.122	.42
15	MP4A	Mx	-.004	.42
16	MP4A	X	7.14	2.92
17	MP4A	Z	-4.122	2.92
18	MP4A	Mx	-.004	2.92
19	S1	X	17.261	1
20	S1	Z	-9.966	1
21	S1	Mx	.009	1
22	MP3A	X	6.852	1.1
23	MP3A	Z	-3.956	1.1
24	MP3A	Mx	.003	1.1
25	MP4A	X	6.081	1.1
26	MP4A	Z	-3.511	1.1
27	MP4A	Mx	.003	1.1
28	MP1A	X	14.634	.25
29	MP1A	Z	-8.449	.25
30	MP1A	Mx	-.004	.25
31	MP1A	X	14.634	4.28
32	MP1A	Z	-8.449	4.28
33	MP1A	Mx	-.004	4.28

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	18.847	.08
2	MP2A	Z	0	.08
3	MP2A	Mx	-.015	.08
4	MP2A	X	18.847	4.08
5	MP2A	Z	0	4.08
6	MP2A	Mx	-.015	4.08
7	MP2A	X	18.847	.08
8	MP2A	Z	0	.08
9	MP2A	Mx	-.01	.08
10	MP2A	X	18.847	4.08
11	MP2A	Z	0	4.08
12	MP2A	Mx	-.01	4.08

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
13	MP4A	X	6.587	.42
14	MP4A	Z	0	.42
15	MP4A	Mx	-.004	.42
16	MP4A	X	6.587	2.92
17	MP4A	Z	0	2.92
18	MP4A	Mx	-.004	2.92
19	S1	X	21.081	1
20	S1	Z	0	1
21	S1	Mx	.011	1
22	MP3A	X	7.131	1.1
23	MP3A	Z	0	1.1
24	MP3A	Mx	.004	1.1
25	MP4A	X	5.944	1.1
26	MP4A	Z	0	1.1
27	MP4A	Mx	.003	1.1
28	MP1A	X	14.44	.25
29	MP1A	Z	0	.25
30	MP1A	Mx	-.005	.25
31	MP1A	X	14.44	4.28
32	MP1A	Z	0	4.28
33	MP1A	Mx	-.005	4.28

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	16.774	.08
2	MP2A	Z	9.684	.08
3	MP2A	Mx	-.007	.08
4	MP2A	X	16.774	4.08
5	MP2A	Z	9.684	4.08
6	MP2A	Mx	-.007	4.08
7	MP2A	X	16.774	.08
8	MP2A	Z	9.684	.08
9	MP2A	Mx	-.017	.08
10	MP2A	X	16.774	4.08
11	MP2A	Z	9.684	4.08
12	MP2A	Mx	-.017	4.08
13	MP4A	X	6.03	.42
14	MP4A	Z	3.482	.42
15	MP4A	Mx	-.004	.42
16	MP4A	X	6.03	2.92
17	MP4A	Z	3.482	2.92
18	MP4A	Mx	-.004	2.92
19	S1	X	17.261	1
20	S1	Z	9.966	1
21	S1	Mx	.009	1
22	MP3A	X	6.852	1.1
23	MP3A	Z	3.956	1.1
24	MP3A	Mx	.003	1.1
25	MP4A	X	6.081	1.1
26	MP4A	Z	3.511	1.1
27	MP4A	Mx	.003	1.1
28	MP1A	X	12.988	.25
29	MP1A	Z	7.499	.25
30	MP1A	Mx	-.005	.25
31	MP1A	X	12.988	4.28
32	MP1A	Z	7.499	4.28

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
33	MP1A	Mx	-.005	4.28

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	11.097	.08
2	MP2A	Z	19.22	.08
3	MP2A	Mx	.003	.08
4	MP2A	X	11.097	4.08
5	MP2A	Z	19.22	4.08
6	MP2A	Mx	.003	4.08
7	MP2A	X	11.097	.08
8	MP2A	Z	19.22	.08
9	MP2A	Mx	-.022	.08
10	MP2A	X	11.097	4.08
11	MP2A	Z	19.22	4.08
12	MP2A	Mx	-.022	4.08
13	MP4A	X	4.498	.42
14	MP4A	Z	7.79	.42
15	MP4A	Mx	-.004	.42
16	MP4A	X	4.498	2.92
17	MP4A	Z	7.79	2.92
18	MP4A	Mx	-.004	2.92
19	S1	X	8.816	1
20	S1	Z	15.27	1
21	S1	Mx	.004	1
22	MP3A	X	4.737	1.1
23	MP3A	Z	8.205	1.1
24	MP3A	Mx	.002	1.1
25	MP4A	X	4.589	1.1
26	MP4A	Z	7.948	1.1
27	MP4A	Mx	.002	1.1
28	MP1A	X	9.006	.25
29	MP1A	Z	15.599	.25
30	MP1A	Mx	-.004	.25
31	MP1A	X	9.006	4.28
32	MP1A	Z	15.599	4.28
33	MP1A	Mx	-.004	4.28

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	0	.08
2	MP2A	Z	24.495	.08
3	MP2A	Mx	.014	.08
4	MP2A	X	0	4.08
5	MP2A	Z	24.495	4.08
6	MP2A	Mx	.014	4.08
7	MP2A	X	0	.08
8	MP2A	Z	24.495	.08
9	MP2A	Mx	-.02	.08
10	MP2A	X	0	4.08
11	MP2A	Z	24.495	4.08
12	MP2A	Mx	-.02	4.08
13	MP4A	X	0	.42
14	MP4A	Z	10.652	.42
15	MP4A	Mx	-.001	.42
16	MP4A	X	0	2.92

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
17	MP4A	Z	10.652	2.92
18	MP4A	Mx	-.001	2.92
19	S1	X	0	1
20	S1	Z	16.482	1
21	S1	Mx	0	1
22	MP3A	X	0	1.1
23	MP3A	Z	10.255	1.1
24	MP3A	Mx	0	1.1
25	MP4A	X	0	1.1
26	MP4A	Z	10.255	1.1
27	MP4A	Mx	0	1.1
28	MP1A	X	0	.25
29	MP1A	Z	20.469	.25
30	MP1A	Mx	-.001	.25
31	MP1A	X	0	4.28
32	MP1A	Z	20.469	4.28
33	MP1A	Mx	-.001	4.28

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-11.987	.08
2	MP2A	Z	20.762	.08
3	MP2A	Mx	.021	.08
4	MP2A	X	-11.987	4.08
5	MP2A	Z	20.762	4.08
6	MP2A	Mx	.021	4.08
7	MP2A	X	-11.987	.08
8	MP2A	Z	20.762	.08
9	MP2A	Mx	-.01	.08
10	MP2A	X	-11.987	4.08
11	MP2A	Z	20.762	4.08
12	MP2A	Mx	-.01	4.08
13	MP4A	X	-5.138	.42
14	MP4A	Z	8.9	.42
15	MP4A	Mx	.002	.42
16	MP4A	X	-5.138	2.92
17	MP4A	Z	8.9	2.92
18	MP4A	Mx	.002	2.92
19	S1	X	-8.816	1
20	S1	Z	15.27	1
21	S1	Mx	-.004	1
22	MP3A	X	-4.737	1.1
23	MP3A	Z	8.205	1.1
24	MP3A	Mx	-.002	1.1
25	MP4A	X	-4.589	1.1
26	MP4A	Z	7.948	1.1
27	MP4A	Mx	-.002	1.1
28	MP1A	X	-9.956	.25
29	MP1A	Z	17.244	.25
30	MP1A	Mx	.002	.25
31	MP1A	X	-9.956	4.28
32	MP1A	Z	17.244	4.28
33	MP1A	Mx	.002	4.28

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

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

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-18.316	.08
2	MP2A	Z	10.575	.08
3	MP2A	Mx	.02	.08
4	MP2A	X	-18.316	4.08
5	MP2A	Z	10.575	4.08
6	MP2A	Mx	.02	4.08
7	MP2A	X	-18.316	.08
8	MP2A	Z	10.575	.08
9	MP2A	Mx	.001	.08
10	MP2A	X	-18.316	4.08
11	MP2A	Z	10.575	4.08
12	MP2A	Mx	.001	4.08
13	MP4A	X	-7.14	.42
14	MP4A	Z	4.122	.42
15	MP4A	Mx	.004	.42
16	MP4A	X	-7.14	2.92
17	MP4A	Z	4.122	2.92
18	MP4A	Mx	.004	2.92
19	S1	X	-17.261	1
20	S1	Z	9.966	1
21	S1	Mx	-.009	1
22	MP3A	X	-6.852	1.1
23	MP3A	Z	3.956	1.1
24	MP3A	Mx	-.003	1.1
25	MP4A	X	-6.081	1.1
26	MP4A	Z	3.511	1.1
27	MP4A	Mx	-.003	1.1
28	MP1A	X	-14.634	.25
29	MP1A	Z	8.449	.25
30	MP1A	Mx	.004	.25
31	MP1A	X	-14.634	4.28
32	MP1A	Z	8.449	4.28
33	MP1A	Mx	.004	4.28

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-18.847	.08
2	MP2A	Z	0	.08
3	MP2A	Mx	.015	.08
4	MP2A	X	-18.847	4.08
5	MP2A	Z	0	4.08
6	MP2A	Mx	.015	4.08
7	MP2A	X	-18.847	.08
8	MP2A	Z	0	.08
9	MP2A	Mx	.01	.08
10	MP2A	X	-18.847	4.08
11	MP2A	Z	0	4.08
12	MP2A	Mx	.01	4.08
13	MP4A	X	-6.587	.42
14	MP4A	Z	0	.42
15	MP4A	Mx	.004	.42
16	MP4A	X	-6.587	2.92
17	MP4A	Z	0	2.92
18	MP4A	Mx	.004	2.92
19	S1	X	-21.081	1
20	S1	Z	0	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
21	S1	Mx	-.011	1
22	MP3A	X	-7.131	1.1
23	MP3A	Z	0	1.1
24	MP3A	Mx	-.004	1.1
25	MP4A	X	-5.944	1.1
26	MP4A	Z	0	1.1
27	MP4A	Mx	-.003	1.1
28	MP1A	X	-14.44	.25
29	MP1A	Z	0	.25
30	MP1A	Mx	.005	.25
31	MP1A	X	-14.44	4.28
32	MP1A	Z	0	4.28
33	MP1A	Mx	.005	4.28

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-16.774	.08
2	MP2A	Z	-9.684	.08
3	MP2A	Mx	.007	.08
4	MP2A	X	-16.774	4.08
5	MP2A	Z	-9.684	4.08
6	MP2A	Mx	.007	4.08
7	MP2A	X	-16.774	.08
8	MP2A	Z	-9.684	.08
9	MP2A	Mx	.017	.08
10	MP2A	X	-16.774	4.08
11	MP2A	Z	-9.684	4.08
12	MP2A	Mx	.017	4.08
13	MP4A	X	-6.03	.42
14	MP4A	Z	-3.482	.42
15	MP4A	Mx	.004	.42
16	MP4A	X	-6.03	2.92
17	MP4A	Z	-3.482	2.92
18	MP4A	Mx	.004	2.92
19	S1	X	-17.261	1
20	S1	Z	-9.966	1
21	S1	Mx	-.009	1
22	MP3A	X	-6.852	1.1
23	MP3A	Z	-3.956	1.1
24	MP3A	Mx	-.003	1.1
25	MP4A	X	-6.081	1.1
26	MP4A	Z	-3.511	1.1
27	MP4A	Mx	-.003	1.1
28	MP1A	X	-12.988	.25
29	MP1A	Z	-7.499	.25
30	MP1A	Mx	.005	.25
31	MP1A	X	-12.988	4.28
32	MP1A	Z	-7.499	4.28
33	MP1A	Mx	.005	4.28

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-11.097	.08
2	MP2A	Z	-19.22	.08
3	MP2A	Mx	-.003	.08
4	MP2A	X	-11.097	4.08

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
5	MP2A	Z	-19.22	4.08
6	MP2A	Mx	-.003	4.08
7	MP2A	X	-11.097	.08
8	MP2A	Z	-19.22	.08
9	MP2A	Mx	.022	.08
10	MP2A	X	-11.097	4.08
11	MP2A	Z	-19.22	4.08
12	MP2A	Mx	.022	4.08
13	MP4A	X	-4.498	.42
14	MP4A	Z	-7.79	.42
15	MP4A	Mx	.004	.42
16	MP4A	X	-4.498	2.92
17	MP4A	Z	-7.79	2.92
18	MP4A	Mx	.004	2.92
19	S1	X	-8.816	1
20	S1	Z	-15.27	1
21	S1	Mx	-.004	1
22	MP3A	X	-4.737	1.1
23	MP3A	Z	-8.205	1.1
24	MP3A	Mx	-.002	1.1
25	MP4A	X	-4.589	1.1
26	MP4A	Z	-7.948	1.1
27	MP4A	Mx	-.002	1.1
28	MP1A	X	-9.006	.25
29	MP1A	Z	-15.599	.25
30	MP1A	Mx	.004	.25
31	MP1A	X	-9.006	4.28
32	MP1A	Z	-15.599	4.28
33	MP1A	Mx	.004	4.28

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	0	.08
2	MP2A	Z	-12.637	.08
3	MP2A	Mx	-.007	.08
4	MP2A	X	0	4.08
5	MP2A	Z	-12.637	4.08
6	MP2A	Mx	-.007	4.08
7	MP2A	X	0	.08
8	MP2A	Z	-12.637	.08
9	MP2A	Mx	.01	.08
10	MP2A	X	0	4.08
11	MP2A	Z	-12.637	4.08
12	MP2A	Mx	.01	4.08
13	MP4A	X	0	.42
14	MP4A	Z	-5.286	.42
15	MP4A	Mx	.000612	.42
16	MP4A	X	0	2.92
17	MP4A	Z	-5.286	2.92
18	MP4A	Mx	.000612	2.92
19	S1	X	0	1
20	S1	Z	-7.994	1
21	S1	Mx	0	1
22	MP3A	X	0	1.1
23	MP3A	Z	-4.826	1.1
24	MP3A	Mx	0	1.1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
25	MP4A	X	0	1.1
26	MP4A	Z	-4.826	1.1
27	MP4A	Mx	0	1.1
28	MP1A	X	0	.25
29	MP1A	Z	-10.435	.25
30	MP1A	Mx	.000604	.25
31	MP1A	X	0	4.28
32	MP1A	Z	-10.435	4.28
33	MP1A	Mx	.000604	4.28

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	6.177	.08
2	MP2A	Z	-10.699	.08
3	MP2A	Mx	-.011	.08
4	MP2A	X	6.177	4.08
5	MP2A	Z	-10.699	4.08
6	MP2A	Mx	-.011	4.08
7	MP2A	X	6.177	.08
8	MP2A	Z	-10.699	.08
9	MP2A	Mx	.005	.08
10	MP2A	X	6.177	4.08
11	MP2A	Z	-10.699	4.08
12	MP2A	Mx	.005	4.08
13	MP4A	X	2.544	.42
14	MP4A	Z	-4.406	.42
15	MP4A	Mx	-.001	.42
16	MP4A	X	2.544	2.92
17	MP4A	Z	-4.406	2.92
18	MP4A	Mx	-.001	2.92
19	S1	X	4.307	1
20	S1	Z	-7.461	1
21	S1	Mx	.002	1
22	MP3A	X	2.213	1.1
23	MP3A	Z	-3.833	1.1
24	MP3A	Mx	.001	1.1
25	MP4A	X	2.136	1.1
26	MP4A	Z	-3.7	1.1
27	MP4A	Mx	.001	1.1
28	MP1A	X	5.062	.25
29	MP1A	Z	-8.768	.25
30	MP1A	Mx	-.001	.25
31	MP1A	X	5.062	4.28
32	MP1A	Z	-8.768	4.28
33	MP1A	Mx	-.001	4.28

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	9.369	.08
2	MP2A	Z	-5.409	.08
3	MP2A	Mx	-.01	.08
4	MP2A	X	9.369	4.08
5	MP2A	Z	-5.409	4.08
6	MP2A	Mx	-.01	4.08
7	MP2A	X	9.369	.08
8	MP2A	Z	-5.409	.08

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
9	MP2A	Mx	-.000599	.08
10	MP2A	X	9.369	4.08
11	MP2A	Z	-5.409	4.08
12	MP2A	Mx	-.000599	4.08
13	MP4A	X	3.476	.42
14	MP4A	Z	-2.007	.42
15	MP4A	Mx	-.002	.42
16	MP4A	X	3.476	2.92
17	MP4A	Z	-2.007	2.92
18	MP4A	Mx	-.002	2.92
19	S1	X	8.536	1
20	S1	Z	-4.928	1
21	S1	Mx	.004	1
22	MP3A	X	3.14	1.1
23	MP3A	Z	-1.813	1.1
24	MP3A	Mx	.002	1.1
25	MP4A	X	2.742	1.1
26	MP4A	Z	-1.583	1.1
27	MP4A	Mx	.001	1.1
28	MP1A	X	7.317	.25
29	MP1A	Z	-4.224	.25
30	MP1A	Mx	-.002	.25
31	MP1A	X	7.317	4.28
32	MP1A	Z	-4.224	4.28
33	MP1A	Mx	-.002	4.28

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	9.567	.08
2	MP2A	Z	0	.08
3	MP2A	Mx	-.007	.08
4	MP2A	X	9.567	4.08
5	MP2A	Z	0	4.08
6	MP2A	Mx	-.007	4.08
7	MP2A	X	9.567	.08
8	MP2A	Z	0	.08
9	MP2A	Mx	-.005	.08
10	MP2A	X	9.567	4.08
11	MP2A	Z	0	4.08
12	MP2A	Mx	-.005	4.08
13	MP4A	X	3.138	.42
14	MP4A	Z	0	.42
15	MP4A	Mx	-.002	.42
16	MP4A	X	3.138	2.92
17	MP4A	Z	0	2.92
18	MP4A	Mx	-.002	2.92
19	S1	X	10.478	1
20	S1	Z	0	1
21	S1	Mx	.005	1
22	MP3A	X	3.226	1.1
23	MP3A	Z	0	1.1
24	MP3A	Mx	.002	1.1
25	MP4A	X	2.613	1.1
26	MP4A	Z	0	1.1
27	MP4A	Mx	.001	1.1
28	MP1A	X	7.082	.25

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
29	MP1A	Z	0	.25
30	MP1A	Mx	-.002	.25
31	MP1A	X	7.082	4.28
32	MP1A	Z	0	4.28
33	MP1A	Mx	-.002	4.28

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	8.531	.08
2	MP2A	Z	4.925	.08
3	MP2A	Mx	-.004	.08
4	MP2A	X	8.531	4.08
5	MP2A	Z	4.925	4.08
6	MP2A	Mx	-.004	4.08
7	MP2A	X	8.531	.08
8	MP2A	Z	4.925	.08
9	MP2A	Mx	-.009	.08
10	MP2A	X	8.531	4.08
11	MP2A	Z	4.925	4.08
12	MP2A	Mx	-.009	4.08
13	MP4A	X	2.89	.42
14	MP4A	Z	1.668	.42
15	MP4A	Mx	-.002	.42
16	MP4A	X	2.89	2.92
17	MP4A	Z	1.668	2.92
18	MP4A	Mx	-.002	2.92
19	S1	X	8.536	1
20	S1	Z	4.928	1
21	S1	Mx	.004	1
22	MP3A	X	3.14	1.1
23	MP3A	Z	1.813	1.1
24	MP3A	Mx	.002	1.1
25	MP4A	X	2.742	1.1
26	MP4A	Z	1.583	1.1
27	MP4A	Mx	.001	1.1
28	MP1A	X	6.402	.25
29	MP1A	Z	3.696	.25
30	MP1A	Mx	-.002	.25
31	MP1A	X	6.402	4.28
32	MP1A	Z	3.696	4.28
33	MP1A	Mx	-.002	4.28

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	5.693	.08
2	MP2A	Z	9.861	.08
3	MP2A	Mx	.001	.08
4	MP2A	X	5.693	4.08
5	MP2A	Z	9.861	4.08
6	MP2A	Mx	.001	4.08
7	MP2A	X	5.693	.08
8	MP2A	Z	9.861	.08
9	MP2A	Mx	-.011	.08
10	MP2A	X	5.693	4.08
11	MP2A	Z	9.861	4.08
12	MP2A	Mx	-.011	4.08

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
13	MP4A	X	2.205	.42
14	MP4A	Z	3.82	.42
15	MP4A	Mx	-.002	.42
16	MP4A	X	2.205	2.92
17	MP4A	Z	3.82	2.92
18	MP4A	Mx	-.002	2.92
19	S1	X	4.307	1
20	S1	Z	7.461	1
21	S1	Mx	.002	1
22	MP3A	X	2.213	1.1
23	MP3A	Z	3.833	1.1
24	MP3A	Mx	.001	1.1
25	MP4A	X	2.136	1.1
26	MP4A	Z	3.7	1.1
27	MP4A	Mx	.001	1.1
28	MP1A	X	4.534	.25
29	MP1A	Z	7.853	.25
30	MP1A	Mx	-.002	.25
31	MP1A	X	4.534	4.28
32	MP1A	Z	7.853	4.28
33	MP1A	Mx	-.002	4.28

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	0	.08
2	MP2A	Z	12.637	.08
3	MP2A	Mx	.007	.08
4	MP2A	X	0	4.08
5	MP2A	Z	12.637	4.08
6	MP2A	Mx	.007	4.08
7	MP2A	X	0	.08
8	MP2A	Z	12.637	.08
9	MP2A	Mx	-.01	.08
10	MP2A	X	0	4.08
11	MP2A	Z	12.637	4.08
12	MP2A	Mx	-.01	4.08
13	MP4A	X	0	.42
14	MP4A	Z	5.286	.42
15	MP4A	Mx	-.000612	.42
16	MP4A	X	0	2.92
17	MP4A	Z	5.286	2.92
18	MP4A	Mx	-.000612	2.92
19	S1	X	0	1
20	S1	Z	7.994	1
21	S1	Mx	0	1
22	MP3A	X	0	1.1
23	MP3A	Z	4.826	1.1
24	MP3A	Mx	0	1.1
25	MP4A	X	0	1.1
26	MP4A	Z	4.826	1.1
27	MP4A	Mx	0	1.1
28	MP1A	X	0	.25
29	MP1A	Z	10.435	.25
30	MP1A	Mx	-.000604	.25
31	MP1A	X	0	4.28
32	MP1A	Z	10.435	4.28

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
33	MP1A	Mx	-.000604	4.28

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-6.177	.08
2	MP2A	Z	10.699	.08
3	MP2A	Mx	.011	.08
4	MP2A	X	-6.177	4.08
5	MP2A	Z	10.699	4.08
6	MP2A	Mx	.011	4.08
7	MP2A	X	-6.177	.08
8	MP2A	Z	10.699	.08
9	MP2A	Mx	-.005	.08
10	MP2A	X	-6.177	4.08
11	MP2A	Z	10.699	4.08
12	MP2A	Mx	-.005	4.08
13	MP4A	X	-2.544	.42
14	MP4A	Z	4.406	.42
15	MP4A	Mx	.001	.42
16	MP4A	X	-2.544	2.92
17	MP4A	Z	4.406	2.92
18	MP4A	Mx	.001	2.92
19	S1	X	-4.307	1
20	S1	Z	7.461	1
21	S1	Mx	-.002	1
22	MP3A	X	-2.213	1.1
23	MP3A	Z	3.833	1.1
24	MP3A	Mx	-.001	1.1
25	MP4A	X	-2.136	1.1
26	MP4A	Z	3.7	1.1
27	MP4A	Mx	-.001	1.1
28	MP1A	X	-5.062	.25
29	MP1A	Z	8.768	.25
30	MP1A	Mx	.001	.25
31	MP1A	X	-5.062	4.28
32	MP1A	Z	8.768	4.28
33	MP1A	Mx	.001	4.28

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-9.369	.08
2	MP2A	Z	5.409	.08
3	MP2A	Mx	.01	.08
4	MP2A	X	-9.369	4.08
5	MP2A	Z	5.409	4.08
6	MP2A	Mx	.01	4.08
7	MP2A	X	-9.369	.08
8	MP2A	Z	5.409	.08
9	MP2A	Mx	.000599	.08
10	MP2A	X	-9.369	4.08
11	MP2A	Z	5.409	4.08
12	MP2A	Mx	.000599	4.08
13	MP4A	X	-3.476	.42
14	MP4A	Z	2.007	.42
15	MP4A	Mx	.002	.42
16	MP4A	X	-3.476	2.92

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
17	MP4A	Z	2.007	2.92
18	MP4A	Mx	.002	2.92
19	S1	X	-8.536	1
20	S1	Z	4.928	1
21	S1	Mx	-.004	1
22	MP3A	X	-3.14	1.1
23	MP3A	Z	1.813	1.1
24	MP3A	Mx	-.002	1.1
25	MP4A	X	-2.742	1.1
26	MP4A	Z	1.583	1.1
27	MP4A	Mx	-.001	1.1
28	MP1A	X	-7.317	.25
29	MP1A	Z	4.224	.25
30	MP1A	Mx	.002	.25
31	MP1A	X	-7.317	4.28
32	MP1A	Z	4.224	4.28
33	MP1A	Mx	.002	4.28

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-9.567	.08
2	MP2A	Z	0	.08
3	MP2A	Mx	.007	.08
4	MP2A	X	-9.567	4.08
5	MP2A	Z	0	4.08
6	MP2A	Mx	.007	4.08
7	MP2A	X	-9.567	.08
8	MP2A	Z	0	.08
9	MP2A	Mx	.005	.08
10	MP2A	X	-9.567	4.08
11	MP2A	Z	0	4.08
12	MP2A	Mx	.005	4.08
13	MP4A	X	-3.138	.42
14	MP4A	Z	0	.42
15	MP4A	Mx	.002	.42
16	MP4A	X	-3.138	2.92
17	MP4A	Z	0	2.92
18	MP4A	Mx	.002	2.92
19	S1	X	-10.478	1
20	S1	Z	0	1
21	S1	Mx	-.005	1
22	MP3A	X	-3.226	1.1
23	MP3A	Z	0	1.1
24	MP3A	Mx	-.002	1.1
25	MP4A	X	-2.613	1.1
26	MP4A	Z	0	1.1
27	MP4A	Mx	-.001	1.1
28	MP1A	X	-7.082	.25
29	MP1A	Z	0	.25
30	MP1A	Mx	.002	.25
31	MP1A	X	-7.082	4.28
32	MP1A	Z	0	4.28
33	MP1A	Mx	.002	4.28

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

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

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-8.531	.08
2	MP2A	Z	-4.925	.08
3	MP2A	Mx	.004	.08
4	MP2A	X	-8.531	4.08
5	MP2A	Z	-4.925	4.08
6	MP2A	Mx	.004	4.08
7	MP2A	X	-8.531	.08
8	MP2A	Z	-4.925	.08
9	MP2A	Mx	.009	.08
10	MP2A	X	-8.531	4.08
11	MP2A	Z	-4.925	4.08
12	MP2A	Mx	.009	4.08
13	MP4A	X	-2.89	.42
14	MP4A	Z	-1.668	.42
15	MP4A	Mx	.002	.42
16	MP4A	X	-2.89	2.92
17	MP4A	Z	-1.668	2.92
18	MP4A	Mx	.002	2.92
19	S1	X	-8.536	1
20	S1	Z	-4.928	1
21	S1	Mx	-.004	1
22	MP3A	X	-3.14	1.1
23	MP3A	Z	-1.813	1.1
24	MP3A	Mx	-.002	1.1
25	MP4A	X	-2.742	1.1
26	MP4A	Z	-1.583	1.1
27	MP4A	Mx	-.001	1.1
28	MP1A	X	-6.402	.25
29	MP1A	Z	-3.696	.25
30	MP1A	Mx	.002	.25
31	MP1A	X	-6.402	4.28
32	MP1A	Z	-3.696	4.28
33	MP1A	Mx	.002	4.28

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-5.693	.08
2	MP2A	Z	-9.861	.08
3	MP2A	Mx	-.001	.08
4	MP2A	X	-5.693	4.08
5	MP2A	Z	-9.861	4.08
6	MP2A	Mx	-.001	4.08
7	MP2A	X	-5.693	.08
8	MP2A	Z	-9.861	.08
9	MP2A	Mx	.011	.08
10	MP2A	X	-5.693	4.08
11	MP2A	Z	-9.861	4.08
12	MP2A	Mx	.011	4.08
13	MP4A	X	-2.205	.42
14	MP4A	Z	-3.82	.42
15	MP4A	Mx	.002	.42
16	MP4A	X	-2.205	2.92
17	MP4A	Z	-3.82	2.92
18	MP4A	Mx	.002	2.92
19	S1	X	-4.307	1
20	S1	Z	-7.461	1

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
21	S1	Mx	-.002	1
22	MP3A	X	-2.213	1.1
23	MP3A	Z	-3.833	1.1
24	MP3A	Mx	-.001	1.1
25	MP4A	X	-2.136	1.1
26	MP4A	Z	-3.7	1.1
27	MP4A	Mx	-.001	1.1
28	MP1A	X	-4.534	.25
29	MP1A	Z	-7.853	.25
30	MP1A	Mx	.002	.25
31	MP1A	X	-4.534	4.28
32	MP1A	Z	-7.853	4.28
33	MP1A	Mx	.002	4.28

Member Point Loads (BLC 77 : Lm1)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	A2	Y	-250	%38

Member Point Loads (BLC 78 : Lm2)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	A2	Y	-250	%97

Member Point Loads (BLC 79 : Lv1)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	A2	Y	-250	%100

Member Point Loads (BLC 80 : Lv2)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	A2	Y	-250	%50

Member Distributed Loads (BLC 40 : Structure Di)

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
1	A1	Y	-9.517	-9.517	0	%100
2	A2	Y	-9.517	-9.517	0	%100
3	A9	Y	-7.898	-7.898	0	%100
4	MP1A	Y	-4.925	-4.925	0	%100
5	MP4A	Y	-4.925	-4.925	0	%100
6	S1	Y	-4.925	-4.925	0	%100
7	MP3A	Y	-4.925	-4.925	0	%100
8	MP2A	Y	-5.625	-5.625	0	%100
9	M15A	Y	-7.538	-7.538	0	%100
10	M16	Y	-6.499	-6.499	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
1	A1	X	0	0	0	%100
2	A1	Z	0	0	0	%100
3	A2	X	0	0	0	%100
4	A2	Z	-15.477	-15.477	0	%100
5	A9	X	0	0	0	%100
6	A9	Z	-9.839	-9.839	0	%100
7	MP1A	X	0	0	0	%100
8	MP1A	Z	-8.822	-8.822	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
9	MP4A	X	0	0	0	%100
10	MP4A	Z	-8.822	-8.822	0	%100
11	S1	X	0	0	0	%100
12	S1	Z	-7.214	-7.214	0	%100
13	MP3A	X	0	0	0	%100
14	MP3A	Z	-8.822	-8.822	0	%100
15	MP2A	X	0	0	0	%100
16	MP2A	Z	-10.679	-10.679	0	%100
17	M15A	X	0	0	0	%100
18	M15A	Z	0	0	0	%100
19	M16	X	0	0	0	%100
20	M16	Z	-13	-13	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
1	A1	X	1.375	1.375	0	%100
2	A1	Z	-2.381	-2.381	0	%100
3	A2	X	5.804	5.804	0	%100
4	A2	Z	-10.052	-10.052	0	%100
5	A9	X	4.92	4.92	0	%100
6	A9	Z	-8.521	-8.521	0	%100
7	MP1A	X	4.411	4.411	0	%100
8	MP1A	Z	-7.64	-7.64	0	%100
9	MP4A	X	4.411	4.411	0	%100
10	MP4A	Z	-7.64	-7.64	0	%100
11	S1	X	3.607	3.607	0	%100
12	S1	Z	-6.247	-6.247	0	%100
13	MP3A	X	4.411	4.411	0	%100
14	MP3A	Z	-7.64	-7.64	0	%100
15	MP2A	X	5.339	5.339	0	%100
16	MP2A	Z	-9.248	-9.248	0	%100
17	M15A	X	1.065	1.065	0	%100
18	M15A	Z	-1.845	-1.845	0	%100
19	M16	X	4.875	4.875	0	%100
20	M16	Z	-8.444	-8.444	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
1	A1	X	7.143	7.143	0	%100
2	A1	Z	-4.124	-4.124	0	%100
3	A2	X	3.351	3.351	0	%100
4	A2	Z	-1.935	-1.935	0	%100
5	A9	X	8.521	8.521	0	%100
6	A9	Z	-4.92	-4.92	0	%100
7	MP1A	X	7.64	7.64	0	%100
8	MP1A	Z	-4.411	-4.411	0	%100
9	MP4A	X	7.64	7.64	0	%100
10	MP4A	Z	-4.411	-4.411	0	%100
11	S1	X	6.247	6.247	0	%100
12	S1	Z	-3.607	-3.607	0	%100
13	MP3A	X	7.64	7.64	0	%100
14	MP3A	Z	-4.411	-4.411	0	%100
15	MP2A	X	9.248	9.248	0	%100
16	MP2A	Z	-5.339	-5.339	0	%100
17	M15A	X	5.536	5.536	0	%100
18	M15A	Z	-3.196	-3.196	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
19	M16	X	2.815	2.815	0	%100
20	M16	Z	-1.625	-1.625	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
1	A1	X	10.997	10.997	0	%100
2	A1	Z	0	0	0	%100
3	A2	X	0	0	0	%100
4	A2	Z	0	0	0	%100
5	A9	X	9.839	9.839	0	%100
6	A9	Z	0	0	0	%100
7	MP1A	X	8.822	8.822	0	%100
8	MP1A	Z	0	0	0	%100
9	MP4A	X	8.822	8.822	0	%100
10	MP4A	Z	0	0	0	%100
11	S1	X	7.214	7.214	0	%100
12	S1	Z	0	0	0	%100
13	MP3A	X	8.822	8.822	0	%100
14	MP3A	Z	0	0	0	%100
15	MP2A	X	10.679	10.679	0	%100
16	MP2A	Z	0	0	0	%100
17	M15A	X	8.523	8.523	0	%100
18	M15A	Z	0	0	0	%100
19	M16	X	0	0	0	%100
20	M16	Z	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
1	A1	X	7.143	7.143	0	%100
2	A1	Z	4.124	4.124	0	%100
3	A2	X	3.351	3.351	0	%100
4	A2	Z	1.935	1.935	0	%100
5	A9	X	8.521	8.521	0	%100
6	A9	Z	4.92	4.92	0	%100
7	MP1A	X	7.64	7.64	0	%100
8	MP1A	Z	4.411	4.411	0	%100
9	MP4A	X	7.64	7.64	0	%100
10	MP4A	Z	4.411	4.411	0	%100
11	S1	X	6.247	6.247	0	%100
12	S1	Z	3.607	3.607	0	%100
13	MP3A	X	7.64	7.64	0	%100
14	MP3A	Z	4.411	4.411	0	%100
15	MP2A	X	9.248	9.248	0	%100
16	MP2A	Z	5.339	5.339	0	%100
17	M15A	X	5.536	5.536	0	%100
18	M15A	Z	3.196	3.196	0	%100
19	M16	X	2.815	2.815	0	%100
20	M16	Z	1.625	1.625	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
1	A1	X	1.375	1.375	0	%100
2	A1	Z	2.381	2.381	0	%100
3	A2	X	5.804	5.804	0	%100
4	A2	Z	10.052	10.052	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
5	A9	X	4.92	4.92	0	%100
6	A9	Z	8.521	8.521	0	%100
7	MP1A	X	4.411	4.411	0	%100
8	MP1A	Z	7.64	7.64	0	%100
9	MP4A	X	4.411	4.411	0	%100
10	MP4A	Z	7.64	7.64	0	%100
11	S1	X	3.607	3.607	0	%100
12	S1	Z	6.247	6.247	0	%100
13	MP3A	X	4.411	4.411	0	%100
14	MP3A	Z	7.64	7.64	0	%100
15	MP2A	X	5.339	5.339	0	%100
16	MP2A	Z	9.248	9.248	0	%100
17	M15A	X	1.065	1.065	0	%100
18	M15A	Z	1.845	1.845	0	%100
19	M16	X	4.875	4.875	0	%100
20	M16	Z	8.444	8.444	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
1	A1	X	0	0	0	%100
2	A1	Z	0	0	0	%100
3	A2	X	0	0	0	%100
4	A2	Z	15.477	15.477	0	%100
5	A9	X	0	0	0	%100
6	A9	Z	9.839	9.839	0	%100
7	MP1A	X	0	0	0	%100
8	MP1A	Z	8.822	8.822	0	%100
9	MP4A	X	0	0	0	%100
10	MP4A	Z	8.822	8.822	0	%100
11	S1	X	0	0	0	%100
12	S1	Z	7.214	7.214	0	%100
13	MP3A	X	0	0	0	%100
14	MP3A	Z	8.822	8.822	0	%100
15	MP2A	X	0	0	0	%100
16	MP2A	Z	10.679	10.679	0	%100
17	M15A	X	0	0	0	%100
18	M15A	Z	0	0	0	%100
19	M16	X	0	0	0	%100
20	M16	Z	13	13	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
1	A1	X	-1.375	-1.375	0	%100
2	A1	Z	2.381	2.381	0	%100
3	A2	X	-5.804	-5.804	0	%100
4	A2	Z	10.052	10.052	0	%100
5	A9	X	-4.92	-4.92	0	%100
6	A9	Z	8.521	8.521	0	%100
7	MP1A	X	-4.411	-4.411	0	%100
8	MP1A	Z	7.64	7.64	0	%100
9	MP4A	X	-4.411	-4.411	0	%100
10	MP4A	Z	7.64	7.64	0	%100
11	S1	X	-3.607	-3.607	0	%100
12	S1	Z	6.247	6.247	0	%100
13	MP3A	X	-4.411	-4.411	0	%100
14	MP3A	Z	7.64	7.64	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
15	MP2A	X	-5.339	-5.339	0	%100
16	MP2A	Z	9.248	9.248	0	%100
17	M15A	X	-1.065	-1.065	0	%100
18	M15A	Z	1.845	1.845	0	%100
19	M16	X	-4.875	-4.875	0	%100
20	M16	Z	8.444	8.444	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
1	A1	X	-7.143	-7.143	0	%100
2	A1	Z	4.124	4.124	0	%100
3	A2	X	-3.351	-3.351	0	%100
4	A2	Z	1.935	1.935	0	%100
5	A9	X	-8.521	-8.521	0	%100
6	A9	Z	4.92	4.92	0	%100
7	MP1A	X	-7.64	-7.64	0	%100
8	MP1A	Z	4.411	4.411	0	%100
9	MP4A	X	-7.64	-7.64	0	%100
10	MP4A	Z	4.411	4.411	0	%100
11	S1	X	-6.247	-6.247	0	%100
12	S1	Z	3.607	3.607	0	%100
13	MP3A	X	-7.64	-7.64	0	%100
14	MP3A	Z	4.411	4.411	0	%100
15	MP2A	X	-9.248	-9.248	0	%100
16	MP2A	Z	5.339	5.339	0	%100
17	M15A	X	-5.536	-5.536	0	%100
18	M15A	Z	3.196	3.196	0	%100
19	M16	X	-2.815	-2.815	0	%100
20	M16	Z	1.625	1.625	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
1	A1	X	-10.997	-10.997	0	%100
2	A1	Z	0	0	0	%100
3	A2	X	0	0	0	%100
4	A2	Z	0	0	0	%100
5	A9	X	-9.839	-9.839	0	%100
6	A9	Z	0	0	0	%100
7	MP1A	X	-8.822	-8.822	0	%100
8	MP1A	Z	0	0	0	%100
9	MP4A	X	-8.822	-8.822	0	%100
10	MP4A	Z	0	0	0	%100
11	S1	X	-7.214	-7.214	0	%100
12	S1	Z	0	0	0	%100
13	MP3A	X	-8.822	-8.822	0	%100
14	MP3A	Z	0	0	0	%100
15	MP2A	X	-10.679	-10.679	0	%100
16	MP2A	Z	0	0	0	%100
17	M15A	X	-8.523	-8.523	0	%100
18	M15A	Z	0	0	0	%100
19	M16	X	0	0	0	%100
20	M16	Z	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]

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

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
1	A1	X	-7.143	-7.143	0	%100
2	A1	Z	-4.124	-4.124	0	%100
3	A2	X	-3.351	-3.351	0	%100
4	A2	Z	-1.935	-1.935	0	%100
5	A9	X	-8.521	-8.521	0	%100
6	A9	Z	-4.92	-4.92	0	%100
7	MP1A	X	-7.64	-7.64	0	%100
8	MP1A	Z	-4.411	-4.411	0	%100
9	MP4A	X	-7.64	-7.64	0	%100
10	MP4A	Z	-4.411	-4.411	0	%100
11	S1	X	-6.247	-6.247	0	%100
12	S1	Z	-3.607	-3.607	0	%100
13	MP3A	X	-7.64	-7.64	0	%100
14	MP3A	Z	-4.411	-4.411	0	%100
15	MP2A	X	-9.248	-9.248	0	%100
16	MP2A	Z	-5.339	-5.339	0	%100
17	M15A	X	-5.536	-5.536	0	%100
18	M15A	Z	-3.196	-3.196	0	%100
19	M16	X	-2.815	-2.815	0	%100
20	M16	Z	-1.625	-1.625	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
1	A1	X	-1.375	-1.375	0	%100
2	A1	Z	-2.381	-2.381	0	%100
3	A2	X	-5.804	-5.804	0	%100
4	A2	Z	-10.052	-10.052	0	%100
5	A9	X	-4.92	-4.92	0	%100
6	A9	Z	-8.521	-8.521	0	%100
7	MP1A	X	-4.411	-4.411	0	%100
8	MP1A	Z	-7.64	-7.64	0	%100
9	MP4A	X	-4.411	-4.411	0	%100
10	MP4A	Z	-7.64	-7.64	0	%100
11	S1	X	-3.607	-3.607	0	%100
12	S1	Z	-6.247	-6.247	0	%100
13	MP3A	X	-4.411	-4.411	0	%100
14	MP3A	Z	-7.64	-7.64	0	%100
15	MP2A	X	-5.339	-5.339	0	%100
16	MP2A	Z	-9.248	-9.248	0	%100
17	M15A	X	-1.065	-1.065	0	%100
18	M15A	Z	-1.845	-1.845	0	%100
19	M16	X	-4.875	-4.875	0	%100
20	M16	Z	-8.444	-8.444	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
1	A1	X	0	0	0	%100
2	A1	Z	0	0	0	%100
3	A2	X	0	0	0	%100
4	A2	Z	-2.962	-2.962	0	%100
5	A9	X	0	0	0	%100
6	A9	Z	-2.132	-2.132	0	%100
7	MP1A	X	0	0	0	%100
8	MP1A	Z	-2.14	-2.14	0	%100
9	MP4A	X	0	0	0	%100
10	MP4A	Z	-2.14	-2.14	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
11	S1	X	0	0	0	%100
12	S1	Z	-1.761	-1.761	0	%100
13	MP3A	X	0	0	0	%100
14	MP3A	Z	-2.14	-2.14	0	%100
15	MP2A	X	0	0	0	%100
16	MP2A	Z	-2.37	-2.37	0	%100
17	M15A	X	0	0	0	%100
18	M15A	Z	0	0	0	%100
19	M16	X	0	0	0	%100
20	M16	Z	-2.657	-2.657	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
1	A1	X	.266	.266	0	%100
2	A1	Z	-.46	-.46	0	%100
3	A2	X	1.111	1.111	0	%100
4	A2	Z	-1.924	-1.924	0	%100
5	A9	X	1.066	1.066	0	%100
6	A9	Z	-1.846	-1.846	0	%100
7	MP1A	X	1.07	1.07	0	%100
8	MP1A	Z	-1.854	-1.854	0	%100
9	MP4A	X	1.07	1.07	0	%100
10	MP4A	Z	-1.854	-1.854	0	%100
11	S1	X	.881	.881	0	%100
12	S1	Z	-1.525	-1.525	0	%100
13	MP3A	X	1.07	1.07	0	%100
14	MP3A	Z	-1.854	-1.854	0	%100
15	MP2A	X	1.185	1.185	0	%100
16	MP2A	Z	-2.052	-2.052	0	%100
17	M15A	X	.227	.227	0	%100
18	M15A	Z	-.394	-.394	0	%100
19	M16	X	.996	.996	0	%100
20	M16	Z	-1.726	-1.726	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
1	A1	X	1.38	1.38	0	%100
2	A1	Z	-.797	-.797	0	%100
3	A2	X	.641	.641	0	%100
4	A2	Z	-.37	-.37	0	%100
5	A9	X	1.846	1.846	0	%100
6	A9	Z	-1.066	-1.066	0	%100
7	MP1A	X	1.854	1.854	0	%100
8	MP1A	Z	-1.07	-1.07	0	%100
9	MP4A	X	1.854	1.854	0	%100
10	MP4A	Z	-1.07	-1.07	0	%100
11	S1	X	1.525	1.525	0	%100
12	S1	Z	-.881	-.881	0	%100
13	MP3A	X	1.854	1.854	0	%100
14	MP3A	Z	-1.07	-1.07	0	%100
15	MP2A	X	2.052	2.052	0	%100
16	MP2A	Z	-1.185	-1.185	0	%100
17	M15A	X	1.181	1.181	0	%100
18	M15A	Z	-.682	-.682	0	%100
19	M16	X	.575	.575	0	%100
20	M16	Z	-.332	-.332	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
1	A1	X	2.124	2.124	0	%100
2	A1	Z	0	0	0	%100
3	A2	X	0	0	0	%100
4	A2	Z	0	0	0	%100
5	A9	X	2.132	2.132	0	%100
6	A9	Z	0	0	0	%100
7	MP1A	X	2.14	2.14	0	%100
8	MP1A	Z	0	0	0	%100
9	MP4A	X	2.14	2.14	0	%100
10	MP4A	Z	0	0	0	%100
11	S1	X	1.761	1.761	0	%100
12	S1	Z	0	0	0	%100
13	MP3A	X	2.14	2.14	0	%100
14	MP3A	Z	0	0	0	%100
15	MP2A	X	2.37	2.37	0	%100
16	MP2A	Z	0	0	0	%100
17	M15A	X	1.819	1.819	0	%100
18	M15A	Z	0	0	0	%100
19	M16	X	0	0	0	%100
20	M16	Z	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
1	A1	X	1.38	1.38	0	%100
2	A1	Z	.797	.797	0	%100
3	A2	X	.641	.641	0	%100
4	A2	Z	.37	.37	0	%100
5	A9	X	1.846	1.846	0	%100
6	A9	Z	1.066	1.066	0	%100
7	MP1A	X	1.854	1.854	0	%100
8	MP1A	Z	1.07	1.07	0	%100
9	MP4A	X	1.854	1.854	0	%100
10	MP4A	Z	1.07	1.07	0	%100
11	S1	X	1.525	1.525	0	%100
12	S1	Z	.881	.881	0	%100
13	MP3A	X	1.854	1.854	0	%100
14	MP3A	Z	1.07	1.07	0	%100
15	MP2A	X	2.052	2.052	0	%100
16	MP2A	Z	1.185	1.185	0	%100
17	M15A	X	1.181	1.181	0	%100
18	M15A	Z	.682	.682	0	%100
19	M16	X	.575	.575	0	%100
20	M16	Z	.332	.332	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
1	A1	X	.266	.266	0	%100
2	A1	Z	.46	.46	0	%100
3	A2	X	1.111	1.111	0	%100
4	A2	Z	1.924	1.924	0	%100
5	A9	X	1.066	1.066	0	%100
6	A9	Z	1.846	1.846	0	%100
7	MP1A	X	1.07	1.07	0	%100
8	MP1A	Z	1.854	1.854	0	%100
9	MP4A	X	1.07	1.07	0	%100
10	MP4A	Z	1.854	1.854	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
11	S1	X	.881	.881	0	%100
12	S1	Z	1.525	1.525	0	%100
13	MP3A	X	1.07	1.07	0	%100
14	MP3A	Z	1.854	1.854	0	%100
15	MP2A	X	1.185	1.185	0	%100
16	MP2A	Z	2.052	2.052	0	%100
17	M15A	X	.227	.227	0	%100
18	M15A	Z	.394	.394	0	%100
19	M16	X	.996	.996	0	%100
20	M16	Z	1.726	1.726	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
1	A1	X	0	0	0	%100
2	A1	Z	0	0	0	%100
3	A2	X	0	0	0	%100
4	A2	Z	2.962	2.962	0	%100
5	A9	X	0	0	0	%100
6	A9	Z	2.132	2.132	0	%100
7	MP1A	X	0	0	0	%100
8	MP1A	Z	2.14	2.14	0	%100
9	MP4A	X	0	0	0	%100
10	MP4A	Z	2.14	2.14	0	%100
11	S1	X	0	0	0	%100
12	S1	Z	1.761	1.761	0	%100
13	MP3A	X	0	0	0	%100
14	MP3A	Z	2.14	2.14	0	%100
15	MP2A	X	0	0	0	%100
16	MP2A	Z	2.37	2.37	0	%100
17	M15A	X	0	0	0	%100
18	M15A	Z	0	0	0	%100
19	M16	X	0	0	0	%100
20	M16	Z	2.657	2.657	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
1	A1	X	-.266	-.266	0	%100
2	A1	Z	.46	.46	0	%100
3	A2	X	-1.111	-1.111	0	%100
4	A2	Z	1.924	1.924	0	%100
5	A9	X	-1.066	-1.066	0	%100
6	A9	Z	1.846	1.846	0	%100
7	MP1A	X	-1.07	-1.07	0	%100
8	MP1A	Z	1.854	1.854	0	%100
9	MP4A	X	-1.07	-1.07	0	%100
10	MP4A	Z	1.854	1.854	0	%100
11	S1	X	-.881	-.881	0	%100
12	S1	Z	1.525	1.525	0	%100
13	MP3A	X	-1.07	-1.07	0	%100
14	MP3A	Z	1.854	1.854	0	%100
15	MP2A	X	-1.185	-1.185	0	%100
16	MP2A	Z	2.052	2.052	0	%100
17	M15A	X	-.227	-.227	0	%100
18	M15A	Z	.394	.394	0	%100
19	M16	X	-.996	-.996	0	%100
20	M16	Z	1.726	1.726	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
1	A1	X	-1.38	-1.38	0	%100
2	A1	Z	.797	.797	0	%100
3	A2	X	-.641	-.641	0	%100
4	A2	Z	.37	.37	0	%100
5	A9	X	-1.846	-1.846	0	%100
6	A9	Z	1.066	1.066	0	%100
7	MP1A	X	-1.854	-1.854	0	%100
8	MP1A	Z	1.07	1.07	0	%100
9	MP4A	X	-1.854	-1.854	0	%100
10	MP4A	Z	1.07	1.07	0	%100
11	S1	X	-1.525	-1.525	0	%100
12	S1	Z	.881	.881	0	%100
13	MP3A	X	-1.854	-1.854	0	%100
14	MP3A	Z	1.07	1.07	0	%100
15	MP2A	X	-2.052	-2.052	0	%100
16	MP2A	Z	1.185	1.185	0	%100
17	M15A	X	-1.181	-1.181	0	%100
18	M15A	Z	.682	.682	0	%100
19	M16	X	-.575	-.575	0	%100
20	M16	Z	.332	.332	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
1	A1	X	-2.124	-2.124	0	%100
2	A1	Z	0	0	0	%100
3	A2	X	0	0	0	%100
4	A2	Z	0	0	0	%100
5	A9	X	-2.132	-2.132	0	%100
6	A9	Z	0	0	0	%100
7	MP1A	X	-2.14	-2.14	0	%100
8	MP1A	Z	0	0	0	%100
9	MP4A	X	-2.14	-2.14	0	%100
10	MP4A	Z	0	0	0	%100
11	S1	X	-1.761	-1.761	0	%100
12	S1	Z	0	0	0	%100
13	MP3A	X	-2.14	-2.14	0	%100
14	MP3A	Z	0	0	0	%100
15	MP2A	X	-2.37	-2.37	0	%100
16	MP2A	Z	0	0	0	%100
17	M15A	X	-1.819	-1.819	0	%100
18	M15A	Z	0	0	0	%100
19	M16	X	0	0	0	%100
20	M16	Z	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
1	A1	X	-1.38	-1.38	0	%100
2	A1	Z	-.797	-.797	0	%100
3	A2	X	-.641	-.641	0	%100
4	A2	Z	-.37	-.37	0	%100
5	A9	X	-1.846	-1.846	0	%100
6	A9	Z	-1.066	-1.066	0	%100
7	MP1A	X	-1.854	-1.854	0	%100
8	MP1A	Z	-1.07	-1.07	0	%100
9	MP4A	X	-1.854	-1.854	0	%100
10	MP4A	Z	-1.07	-1.07	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
11	S1	X	-1.525	-1.525	0	%100
12	S1	Z	-.881	-.881	0	%100
13	MP3A	X	-1.854	-1.854	0	%100
14	MP3A	Z	-1.07	-1.07	0	%100
15	MP2A	X	-2.052	-2.052	0	%100
16	MP2A	Z	-1.185	-1.185	0	%100
17	M15A	X	-1.181	-1.181	0	%100
18	M15A	Z	-.682	-.682	0	%100
19	M16	X	-.575	-.575	0	%100
20	M16	Z	-.332	-.332	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
1	A1	X	-.266	-.266	0	%100
2	A1	Z	-.46	-.46	0	%100
3	A2	X	-1.111	-1.111	0	%100
4	A2	Z	-1.924	-1.924	0	%100
5	A9	X	-1.066	-1.066	0	%100
6	A9	Z	-1.846	-1.846	0	%100
7	MP1A	X	-1.07	-1.07	0	%100
8	MP1A	Z	-1.854	-1.854	0	%100
9	MP4A	X	-1.07	-1.07	0	%100
10	MP4A	Z	-1.854	-1.854	0	%100
11	S1	X	-.881	-.881	0	%100
12	S1	Z	-1.525	-1.525	0	%100
13	MP3A	X	-1.07	-1.07	0	%100
14	MP3A	Z	-1.854	-1.854	0	%100
15	MP2A	X	-1.185	-1.185	0	%100
16	MP2A	Z	-2.052	-2.052	0	%100
17	M15A	X	-.227	-.227	0	%100
18	M15A	Z	-.394	-.394	0	%100
19	M16	X	-.996	-.996	0	%100
20	M16	Z	-1.726	-1.726	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
1	A1	X	0	0	0	%100
2	A1	Z	0	0	0	%100
3	A2	X	0	0	0	%100
4	A2	Z	-1.075	-1.075	0	%100
5	A9	X	0	0	0	%100
6	A9	Z	-.684	-.684	0	%100
7	MP1A	X	0	0	0	%100
8	MP1A	Z	-.613	-.613	0	%100
9	MP4A	X	0	0	0	%100
10	MP4A	Z	-.613	-.613	0	%100
11	S1	X	0	0	0	%100
12	S1	Z	-.501	-.501	0	%100
13	MP3A	X	0	0	0	%100
14	MP3A	Z	-.613	-.613	0	%100
15	MP2A	X	0	0	0	%100
16	MP2A	Z	-.742	-.742	0	%100
17	M15A	X	0	0	0	%100
18	M15A	Z	0	0	0	%100
19	M16	X	0	0	0	%100
20	M16	Z	-.903	-.903	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
1	A1	X	.096	.096	0	%100
2	A1	Z	-.165	-.165	0	%100
3	A2	X	.403	.403	0	%100
4	A2	Z	-.698	-.698	0	%100
5	A9	X	.342	.342	0	%100
6	A9	Z	-.592	-.592	0	%100
7	MP1A	X	.306	.306	0	%100
8	MP1A	Z	-.531	-.531	0	%100
9	MP4A	X	.306	.306	0	%100
10	MP4A	Z	-.531	-.531	0	%100
11	S1	X	.251	.251	0	%100
12	S1	Z	-.434	-.434	0	%100
13	MP3A	X	.306	.306	0	%100
14	MP3A	Z	-.531	-.531	0	%100
15	MP2A	X	.371	.371	0	%100
16	MP2A	Z	-.643	-.643	0	%100
17	M15A	X	.074	.074	0	%100
18	M15A	Z	-.128	-.128	0	%100
19	M16	X	.339	.339	0	%100
20	M16	Z	-.587	-.587	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
1	A1	X	.496	.496	0	%100
2	A1	Z	-.287	-.287	0	%100
3	A2	X	.233	.233	0	%100
4	A2	Z	-.134	-.134	0	%100
5	A9	X	.592	.592	0	%100
6	A9	Z	-.342	-.342	0	%100
7	MP1A	X	.531	.531	0	%100
8	MP1A	Z	-.306	-.306	0	%100
9	MP4A	X	.531	.531	0	%100
10	MP4A	Z	-.306	-.306	0	%100
11	S1	X	.434	.434	0	%100
12	S1	Z	-.251	-.251	0	%100
13	MP3A	X	.531	.531	0	%100
14	MP3A	Z	-.306	-.306	0	%100
15	MP2A	X	.643	.643	0	%100
16	MP2A	Z	-.371	-.371	0	%100
17	M15A	X	.385	.385	0	%100
18	M15A	Z	-.222	-.222	0	%100
19	M16	X	.196	.196	0	%100
20	M16	Z	-.113	-.113	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
1	A1	X	.764	.764	0	%100
2	A1	Z	0	0	0	%100
3	A2	X	0	0	0	%100
4	A2	Z	0	0	0	%100
5	A9	X	.684	.684	0	%100
6	A9	Z	0	0	0	%100
7	MP1A	X	.613	.613	0	%100
8	MP1A	Z	0	0	0	%100
9	MP4A	X	.613	.613	0	%100
10	MP4A	Z	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
11	S1	X	.501	.501	0	%100
12	S1	Z	0	0	0	%100
13	MP3A	X	.613	.613	0	%100
14	MP3A	Z	0	0	0	%100
15	MP2A	X	.742	.742	0	%100
16	MP2A	Z	0	0	0	%100
17	M15A	X	.592	.592	0	%100
18	M15A	Z	0	0	0	%100
19	M16	X	0	0	0	%100
20	M16	Z	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
1	A1	X	.496	.496	0	%100
2	A1	Z	.287	.287	0	%100
3	A2	X	.233	.233	0	%100
4	A2	Z	.134	.134	0	%100
5	A9	X	.592	.592	0	%100
6	A9	Z	.342	.342	0	%100
7	MP1A	X	.531	.531	0	%100
8	MP1A	Z	.306	.306	0	%100
9	MP4A	X	.531	.531	0	%100
10	MP4A	Z	.306	.306	0	%100
11	S1	X	.434	.434	0	%100
12	S1	Z	.251	.251	0	%100
13	MP3A	X	.531	.531	0	%100
14	MP3A	Z	.306	.306	0	%100
15	MP2A	X	.643	.643	0	%100
16	MP2A	Z	.371	.371	0	%100
17	M15A	X	.385	.385	0	%100
18	M15A	Z	.222	.222	0	%100
19	M16	X	.196	.196	0	%100
20	M16	Z	.113	.113	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
1	A1	X	.096	.096	0	%100
2	A1	Z	.165	.165	0	%100
3	A2	X	.403	.403	0	%100
4	A2	Z	.698	.698	0	%100
5	A9	X	.342	.342	0	%100
6	A9	Z	.592	.592	0	%100
7	MP1A	X	.306	.306	0	%100
8	MP1A	Z	.531	.531	0	%100
9	MP4A	X	.306	.306	0	%100
10	MP4A	Z	.531	.531	0	%100
11	S1	X	.251	.251	0	%100
12	S1	Z	.434	.434	0	%100
13	MP3A	X	.306	.306	0	%100
14	MP3A	Z	.531	.531	0	%100
15	MP2A	X	.371	.371	0	%100
16	MP2A	Z	.643	.643	0	%100
17	M15A	X	.074	.074	0	%100
18	M15A	Z	.128	.128	0	%100
19	M16	X	.339	.339	0	%100
20	M16	Z	.587	.587	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
1	A1	X	0	0	0	%100
2	A1	Z	0	0	0	%100
3	A2	X	0	0	0	%100
4	A2	Z	1.075	1.075	0	%100
5	A9	X	0	0	0	%100
6	A9	Z	.684	.684	0	%100
7	MP1A	X	0	0	0	%100
8	MP1A	Z	.613	.613	0	%100
9	MP4A	X	0	0	0	%100
10	MP4A	Z	.613	.613	0	%100
11	S1	X	0	0	0	%100
12	S1	Z	.501	.501	0	%100
13	MP3A	X	0	0	0	%100
14	MP3A	Z	.613	.613	0	%100
15	MP2A	X	0	0	0	%100
16	MP2A	Z	.742	.742	0	%100
17	M15A	X	0	0	0	%100
18	M15A	Z	0	0	0	%100
19	M16	X	0	0	0	%100
20	M16	Z	.903	.903	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
1	A1	X	-.096	-.096	0	%100
2	A1	Z	.165	.165	0	%100
3	A2	X	-.403	-.403	0	%100
4	A2	Z	.698	.698	0	%100
5	A9	X	-.342	-.342	0	%100
6	A9	Z	.592	.592	0	%100
7	MP1A	X	-.306	-.306	0	%100
8	MP1A	Z	.531	.531	0	%100
9	MP4A	X	-.306	-.306	0	%100
10	MP4A	Z	.531	.531	0	%100
11	S1	X	-.251	-.251	0	%100
12	S1	Z	.434	.434	0	%100
13	MP3A	X	-.306	-.306	0	%100
14	MP3A	Z	.531	.531	0	%100
15	MP2A	X	-.371	-.371	0	%100
16	MP2A	Z	.643	.643	0	%100
17	M15A	X	-.074	-.074	0	%100
18	M15A	Z	.128	.128	0	%100
19	M16	X	-.339	-.339	0	%100
20	M16	Z	.587	.587	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
1	A1	X	-.496	-.496	0	%100
2	A1	Z	.287	.287	0	%100
3	A2	X	-.233	-.233	0	%100
4	A2	Z	.134	.134	0	%100
5	A9	X	-.592	-.592	0	%100
6	A9	Z	.342	.342	0	%100
7	MP1A	X	-.531	-.531	0	%100
8	MP1A	Z	.306	.306	0	%100
9	MP4A	X	-.531	-.531	0	%100
10	MP4A	Z	.306	.306	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
11	S1	X	-.434	-.434	0	%100
12	S1	Z	.251	.251	0	%100
13	MP3A	X	-.531	-.531	0	%100
14	MP3A	Z	.306	.306	0	%100
15	MP2A	X	-.643	-.643	0	%100
16	MP2A	Z	.371	.371	0	%100
17	M15A	X	-.385	-.385	0	%100
18	M15A	Z	.222	.222	0	%100
19	M16	X	-.196	-.196	0	%100
20	M16	Z	.113	.113	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
1	A1	X	-.764	-.764	0	%100
2	A1	Z	0	0	0	%100
3	A2	X	0	0	0	%100
4	A2	Z	0	0	0	%100
5	A9	X	-.684	-.684	0	%100
6	A9	Z	0	0	0	%100
7	MP1A	X	-.613	-.613	0	%100
8	MP1A	Z	0	0	0	%100
9	MP4A	X	-.613	-.613	0	%100
10	MP4A	Z	0	0	0	%100
11	S1	X	-.501	-.501	0	%100
12	S1	Z	0	0	0	%100
13	MP3A	X	-.613	-.613	0	%100
14	MP3A	Z	0	0	0	%100
15	MP2A	X	-.742	-.742	0	%100
16	MP2A	Z	0	0	0	%100
17	M15A	X	-.592	-.592	0	%100
18	M15A	Z	0	0	0	%100
19	M16	X	0	0	0	%100
20	M16	Z	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
1	A1	X	-.496	-.496	0	%100
2	A1	Z	-.287	-.287	0	%100
3	A2	X	-.233	-.233	0	%100
4	A2	Z	-.134	-.134	0	%100
5	A9	X	-.592	-.592	0	%100
6	A9	Z	-.342	-.342	0	%100
7	MP1A	X	-.531	-.531	0	%100
8	MP1A	Z	-.306	-.306	0	%100
9	MP4A	X	-.531	-.531	0	%100
10	MP4A	Z	-.306	-.306	0	%100
11	S1	X	-.434	-.434	0	%100
12	S1	Z	-.251	-.251	0	%100
13	MP3A	X	-.531	-.531	0	%100
14	MP3A	Z	-.306	-.306	0	%100
15	MP2A	X	-.643	-.643	0	%100
16	MP2A	Z	-.371	-.371	0	%100
17	M15A	X	-.385	-.385	0	%100
18	M15A	Z	-.222	-.222	0	%100
19	M16	X	-.196	-.196	0	%100
20	M16	Z	-.113	-.113	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,F,ksf]	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
1	A1	X	-.096	-.096	0	%100
2	A1	Z	-.165	-.165	0	%100
3	A2	X	-.403	-.403	0	%100
4	A2	Z	-.698	-.698	0	%100
5	A9	X	-.342	-.342	0	%100
6	A9	Z	-.592	-.592	0	%100
7	MP1A	X	-.306	-.306	0	%100
8	MP1A	Z	-.531	-.531	0	%100
9	MP4A	X	-.306	-.306	0	%100
10	MP4A	Z	-.531	-.531	0	%100
11	S1	X	-.251	-.251	0	%100
12	S1	Z	-.434	-.434	0	%100
13	MP3A	X	-.306	-.306	0	%100
14	MP3A	Z	-.531	-.531	0	%100
15	MP2A	X	-.371	-.371	0	%100
16	MP2A	Z	-.643	-.643	0	%100
17	M15A	X	-.074	-.074	0	%100
18	M15A	Z	-.128	-.128	0	%100
19	M16	X	-.339	-.339	0	%100
20	M16	Z	-.587	-.587	0	%100

Member Area Loads

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

Envelope Joint Reactions

	Joint		X [lb]	LC	Y [lb]	LC	Z [lb]	LC	MX [k-ft]	LC	MY [k-ft]	LC	MZ [k-ft]	LC
1	A1	m...	171.792	9	1431.914	19	1029.848	14	-.263	1	1.781	9	.524	3
2		min	-749.136	49	381.267	1	302.098	9	-2.677	19	-2.443	3	-1.398	9
3	N28A	m...	1270.75	10	644.457	13	1513.465	1	-.377	3	2.4	9	.214	3
4		min	-815.842	4	30.959	7	-2358.675	7	-1.1	21	-1.738	3	-.564	9
5	Totals:	m...	1383.549	10	1998.544	15	1985.045	1						
6		min	-1383.55	4	956.775	9	-1985.043	7						

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

	Member	Shape	Code Che...	Loc[ft]	LC	Shear Che...	Loc[ft]	Dir	LC	phi*...	phi*...	phi*...	phi*...	...	Eqn
1	MP2A	PIPE_2.5	.406	3.667	7	.190	3.667		7	3003..	50715	3.596	3.596	...	H1-...
2	M15A	HSS3X3X4	.365	0	9	.115	0	z	9	9796..	1010..	8.556	8.556	...	H1-...
3	M16	PIPE_3.0	.322	5	7	.200	5		1	3817..	65205	5.749	5.749	...	H1-...
4	MP3A	PIPE_2.0	.262	3.698	49	.103	2.24		7	2380..	32130	1.872	1.872	...	H1-...
5	A1	HSS4X4X4	.223	0	8	.121	0	y	9	1372..	1395..	16.1...	16.1...	...	H1-...
6	MP4A	PIPE_2.0	.214	3.698	49	.070	3.698		7	2380..	32130	1.872	1.872	...	H1-...
7	MP1A	PIPE_2.0	.176	3.646	8	.035	3.646		2	2380..	32130	1.872	1.872	...	H1-...
8	A2	HSS4X4X4	.147	5	8	.047	3.854	z	16	9180..	1395..	16.1...	16.1...	...	H1-...
9	S1	PIPE_2.0	.090	2	11	.063	2		10	2884..	32130	1.872	1.872	...	H1-...
10	A9	PIPE_4.0	.001	1.125	9	.000	1.125		9	9174..	93240	10.6...	10.6...	...	H1-...

TIA-222-H CONNECTION CHECK
Mount to Tower Connection - Typ. All Sectors
2021740.467734.02

Bolt Information		
Bolt Diameter (d)	0.75	in
Net Tensile Area (An)	0.334	in^2
# of Bolts Total (n)	4	
Bolt Distance Up-Down	8	in
Bolt Distance Left-Right	3	in
Bolt Grade	A325N	
Bolt Tensile Strength (F_{ub})	120	ksi

Flange Information		
Height (h)	10	in
Width (w)	5	in
Thickness (t)	0.75	in
Steel Grade	A36	
Plate Yield Strength (Fy)	36	ksi
Support Arm Height	4	in
Support Arm Width	4	in

RISA 3D Reactions		
Moment (M)	2.68	k-ft
Axial (T)	-0.97	kips
Shear (V)	1.43	kips

Bolt Capacity		
Nominal Tensile Strength (R_{nt})	40.135	kips
Nominal Shear Strength (R_{nv})	26.51	kips
Bolt Tensile Force (T_{ub})	1.77	kips
Bolt Shear Force (V_{ub})	0.359	kips
$T_{ub}/\phi R_{nt}$	0.05865	
$V_{ub}/\phi R_{nv}$	0.01804	
$(V_{ub}/\phi R_{nv})^2+(T_{ub}/\phi R_{nt})^2$	0.00377	
Bolt Capacity =	5.9%	OK

Plate Capacity		
Bolt Circle (D_{BC})	8.544	in
Effective Width (B_{eff})	5.00	in
Flexural Moment (M_u)	7.06	k-in
Flexural Strength ($ØM_n$)	22.78	k-in
Plate Capacity=	31.0%	OK

Weld Capacity		
Fillet (leg) =	0.250	in
Throat (eff) =	0.18	in
Fexx =	70.00	ksi
ø =	0.75	
øRn =	5.57	kips/in
Weld Capacity=	38.6%	OK

TIA-222-H CONNECTION CHECK
Mod T-Arm to Tower Connection - Typ. All Sectors
2021740.467734.02

Bolt Information		
Bolt Diameter (d)	0.625	in
Net Tensile Area (An)	0.226	in^2
# of Bolts Total (n)	4	
Bolt Distance Up-Down	6	in
Bolt Distance Left-Right	6	in
Bolt Grade	A325N	
Bolt Tensile Strength (F_{ub})	120	ksi

Flange Information		
Height (h)	8.25	in
Width (w)	8.25	in
Thickness (t)	0.75	in
Steel Grade	A572-50	
Plate Yield Strength (Fy)	50	ksi
Support Arm Height	3	in
Support Arm Width	3	in

RISA 3D Reactions		
Moment (M)	1.09	k-ft
Axial (T)	1.28	kips
Shear (V)	0.57	kips

Bolt Capacity		
Nominal Tensile Strength (R_{nt})	27.120	kips
Nominal Shear Strength (R_{nv})	18.41	kips
Bolt Tensile Force (T_{ub})	3.25	kips
Bolt Shear Force (V_{ub})	0.144	kips
$T_{ub}/\phi R_{nt}$	0.15995	
$V_{ub}/\phi R_{nv}$	0.01040	
$(V_{ub}/\phi R_{nv})^2+(T_{ub}/\phi R_{nt})^2$	0.02569	
Bolt Capacity =	16.0%	OK

Plate Capacity		
Bolt Circle (D_{BC})	8.485	in
Effective Width (B_{eff})	7.31	in
Flexural Moment (M_u)	6.90	k-in
Flexural Strength ($ØM_n$)	46.27	k-in
Plate Capacity=	14.9%	OK

Weld Capacity		
Fillet (leg) =	0.313	in
Throat (eff) =	0.22	in
Fexx =	70.00	ksi
ø =	0.75	
øRn =	6.96	kips/in
Weld Capacity=	51.7%	OK

Mount Desktop – Post Modification Inspection (PMI) Report Requirements

Documents & Photos Required from Contractor – Mount Modification

Purpose – to provide TES the proper documentation in order to complete the required Mount Desktop review of the Post Modification Inspection Report.

Contractor is responsible for making certain the photos provided as noted below provide confirmation that the 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:

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) must be shown.

Notation that all hardware was properly installed, and the existing hardware was inspected for any issues.

Verification that loading is as communicated in the modification drawings. NOTE If loading is different than what is conveyed in the modification drawing contact TES immediately.

Each photo should be time and date stamped

Photos should be high resolution and submitted in a Zip File and should be organized in the file structure as depicted in Schedule A attached.

Contractor shall ensure that the safety climb wire rope is supported and not adversely impacted by the install of the modification components. This may involve the install of wire rope guides, or other items to protect the wire rope.

The photos in the file structure should be uploaded **to** https://pmi.vzwsmart.com as depicted on the drawings

Photo Requirements:

Base and "During Installation Photos"

- Base pictures include
  - Photo of Gate Signs showing the tower owner, site name, and number
  - Photo of carrier shelter showing the carrier site name and number if available
  - Photos of the galvanizing compound and/or paint used (if applicable), clearly showing the label and name
- "During Installation Photos if provided - must be placed only in this folder

Photos taken at ground level

- Overall tower structure before and after installation of the modifications
- Photos of the appropriate mount before and 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 each individual sector before and also after installation of modifications. Each entire sector must be in one photo to show in the inter-connection of members.
  - These photos should also certify that the placement and geometry of the equipment on the mount is as depicted on the sketch and table in the mount analysis
- Close-up photos of each installed modification per the modification drawings; pictures should also include connection hardware (U-bolts, bolts, nuts, all-threaded rods, etc.)
- Photos showing the measurements of the installed modification member sizes (i.e. lengths, widths, depths, diameters, thicknesses)
- Photos showing the elevation or distances of the installed modifications from the appropriate reference locations shown in the modification drawings
- Photos showing the installed modifications onto the tower with tape drop measurements (if applicable) (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, a tape drop measurement shall be provided before the elevation change
- 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.

Material Certification:

Materials utilized must be as per specification on the drawings or the equivalent as validated by TES.

- If the drawings are as specified on the drawings
  - The contractor should provide the packing list or the materials utilized to perform the mount modification
- If an equivalent is utilized
  - It is required that the TES certification of such is included in the contractor submission package. There may be an additional charge for this certification if the equivalent submission doesn't meet specifications as prescribed in the drawings.

The contractor must certify that the materials meet these specifications by one of these methods.

☐ The Material utilized was as specified on the TES Mount Modification Drawings and included in the Material certification folder is a packing list or invoice for these materials

☐ The material utilized was an "equivalent" and included as part of the contractor submission is the TES certification, invoices, or specifications validating accepted status

Certifying Individual: Company _____

Name _____

Signature _____

Antenna & equipment placement and Geometry Confirmation:

The contractor must certify that the antenna & equipment placement and geometry is in accordance with the antenna placement diagrams as included in this mount analysis.

- ☐ The contractor certifies that the photos support and the equipment on the mount is as depicted on the antenna placement diagrams as included in this mount analysis.

- ☐ The contractor notes that the equipment on the mount is not in accordance with the antenna placement diagrams and has accordingly marked up the diagrams or provided a diagram outlining the differences.

Certifying Individual: Company _____

Name _____

Signature _____

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

Issue:

Response:

Schedule A – Photo & Document File Structure

- VzW Site Number / Name
  - Base & “During Installation” Photos
  - Pre-Installation Photos
    - Alpha
    - Beta
    - Gamma
    - Ground Level
    - Tape Drop
  - Post-Installation Photos
    - Alpha
    - Beta
    - Gamma
    - Ground Level
    - Tape Drop
    - Photos of climbing facility and safety climb – If Present
  - Certifications – Submission of this document including certifications
  - Specific Required Additional Photos

Structure: 467734-VZW - New Milford West

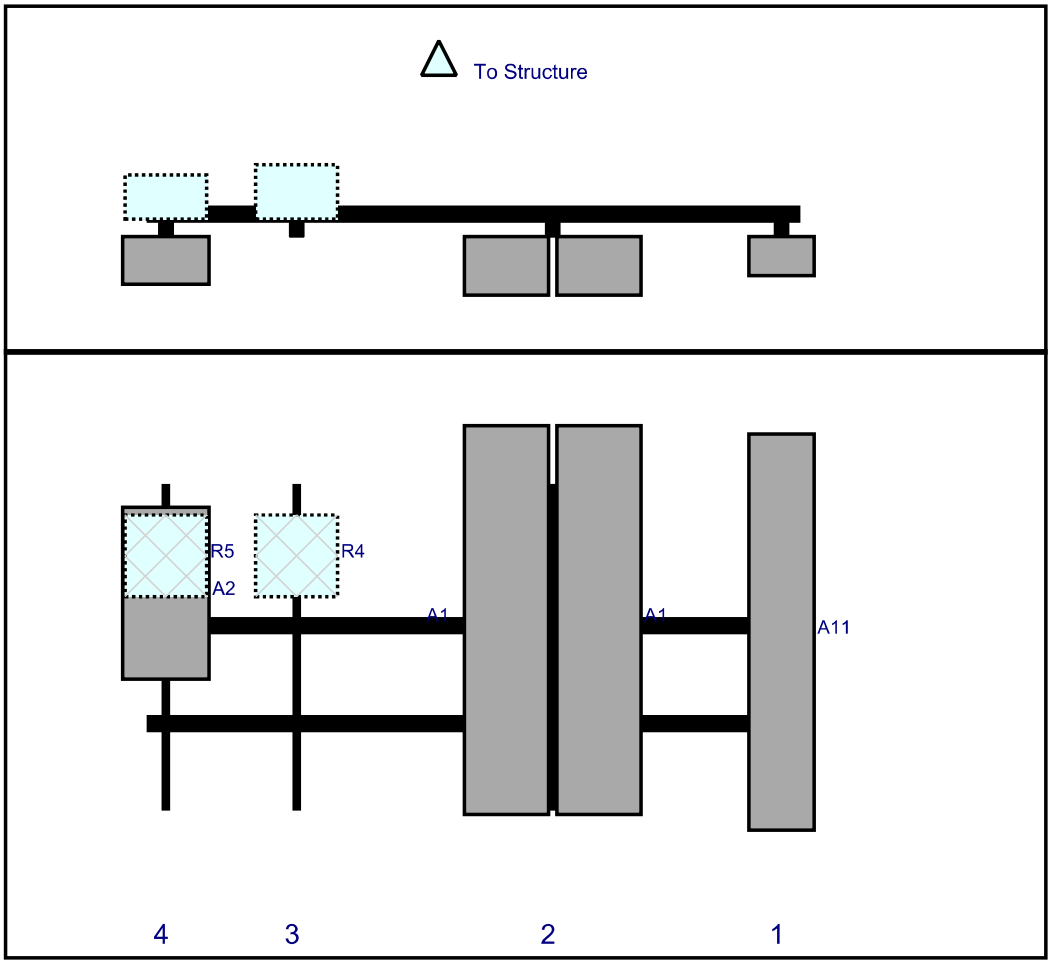
Sector: **A** 6/29/2021

Structure Type: Monopole 10082846

Mount Elev: 128.00

Plan View

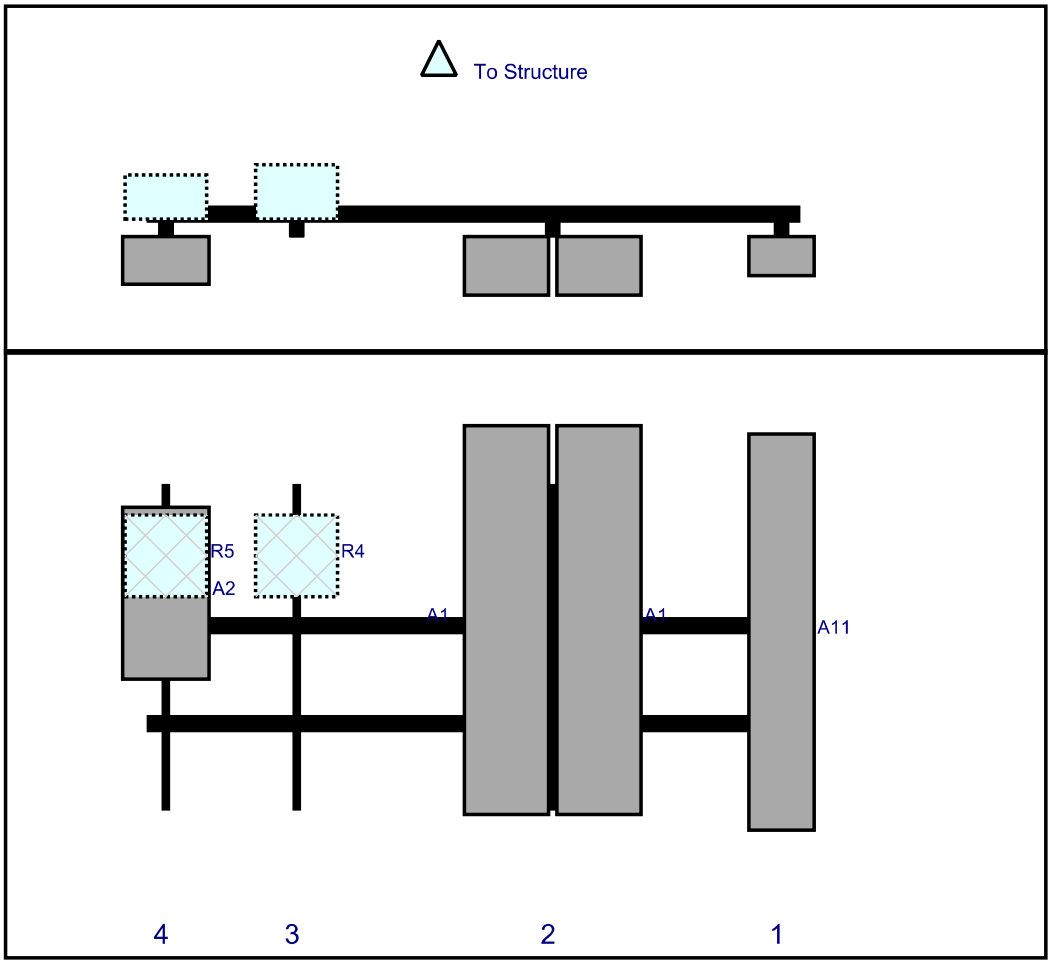
Front View
Looking at Structure



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
A11	LNX-8513DS-AIM	72.7	11.9	116.5	1	a	Front	27.18	0	Retained	05/20/2021
A1	MX06FRO660-03	71.3	15.4	74.5	2	a	Front	24.96	8.5	Added	
A1	MX06FRO660-03	71.3	15.4	74.5	2	b	Front	24.96	-8.5	Added	
R4	B2/B66A RRH-BR049 (RFV01U-D1A)	15	15	27.5	3	a	Behind	13.2	0	Added	
A2	MT6407-77A	31.5	15.8	3.5	4	a	Front	20.04	0	Added	
R5	B5/B13 RRH-BR04C (RFV01U-D2A)	15	15	3.5	4	a	Behind	13.2	0	Added	

Plan View

Front View
Looking at Structure



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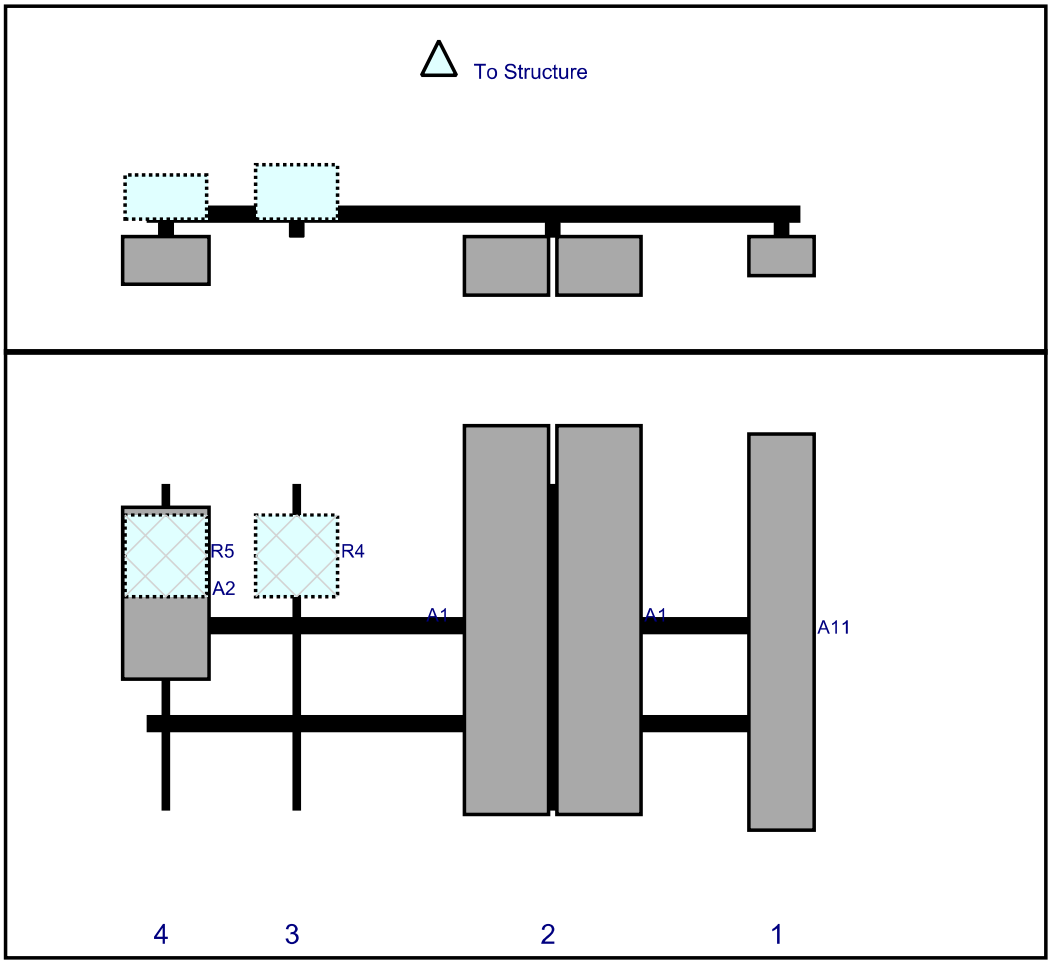
Front View
Looking at Structure



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GPD Engineering and Architecture
Professional Corporation

June 30, 2021
2021740.467734.02

Subject	TIA-222-H Usage
Site Information	Site ID: 467734-VZW / New Milford West Site Name: New Milford W CT Carrier Name: Verizon Wireless Address: 86 Boardman Road New Milford, Connecticut 06776 Litchfield County Latitude: 41.599411° Longitude: -73.437478°
Structure Information	Tower Type: 150-Ft Monopole Mount Type: 10.00-Ft T-Arm

To Whom It May Concern,

We respectfully submit the above referenced Antenna Mount Structural Analysis report in conformance with ANSI/TIA-222-H, Structural Standard for Antenna Supporting Structures and Antennas and Small Wind Turbine Support Structures.

The 2015 International Building Code states that, in Section 3108, telecommunication towers shall be designed and constructed in accordance with the provisions of TIA-222. TIA-222-H is the latest revision of the TIA-222 Standard, effective as of January 01, 2018.

As with all ANSI standards and engineering best practice is to apply the most current revision of the standard. This ensures the engineer is applying all updates. As an example, the TIA-222-H Standard includes updates to bring it in line with the latest AISC and ACI standards and it also incorporates the latest wind speed maps by ASCE 7 based on updated studies of the wind data.

The TIA-222-H standard clarifies these specific requirements for the antenna mount analysis such as modeling methods, seismic analysis, 30-degree increment wind directions and maintenance loading. Therefore, it is our opinion that TIA-222-H is the most appropriate standard for antenna mount structural analysis and is acceptable for use at this site to ensure the engineer is taking into account the most current engineering standard available.

Sincerely,

GPD Group

Christopher J. Scheks, P.E.
Connecticut #: 0030026

NEW MILFORD W CT

SITE #: 467734

SMART TOOL PROJECT #: 10082846

verizon

MOUNT INFORMATION:

MOUNT TYPE:	10'-0" T-ARM
SITE LOCATION:	
LAT.:	41.599411°
LONG.:	-73.437478°
STREET ADDRESS:	86 BOARDMAN ROAD
CITY, STATE ZIP:	NEW MILFORD, CT 06776
COUNTY:	LITCHFIELD

CODE COMPLIANCE:

GOVERNING CODES:	TIA-222-H
WIND SPEEDS:	114 MPH 3-SECOND GUST 40 MPH 3-SECOND GUST (W/ ICE)
ICE THICKNESS:	1"
RISK CATEGORY:	II
EXPOSURE CATEGORY:	C
TOPO CATEGORY:	1

SEISMIC CRITERIA:

SITE CLASS:	D
RESPONSE COEFFICIENT (R):	2
1-SECOND SPECTRAL RESPONSE ACCELERATION (S_1) :	0.055
SHORT PERIOD SPECTRAL RESPONSE ACCELERATION (S_S):	0.197

PROJECT CONTACTS:

MASER CONSULTING CONTACT:

PETER ALBANO
PETER.ALBANO@COLLIERSENGINEERING.COM
(856) 371-9457
PROJECT #: 20777375

ENGINEER CONTACT:

GPD ENGINEERING AND ARCHITECTURE PROFESSIONAL CORPORATION
520 SOUTH MAIN STREET, SUITE 2531
AKRON, OH 44311
(330)572-2100
FOR QUESTIONS PLEASE EMAIL:
GPDMODS@GPDGROUP.COM

SHEET INDEX:

T-01: TITLE SHEET
N-01: PROJECT NOTES & INSPECTION CHECKLIST
S-01: BILL OF MATERIALS
S-02: MODIFICATION SCHEDULE & DETAILS
S-03 - S-07: DETAILS/PARTS
S-08: MOUNT PHOTOS

CONTRACTOR PMI REQUIREMENTS:

PMI LOCATION:	HTTPS://PMI.VZWSMART.COM
SMART TOOL PROJECT #:	10082846
VZW LOCATION CODE (PSLC):	467734
FUZE ID:	16244606

REFERENCED DOCUMENTS:

FAILING MOUNT ANALYSIS REPORT

SMART TOOL PROJECT #:	10019472
GPD PROJECT #:	2021740.467734.01
ANALYSIS DATE:	6/25/2021

STATE OF CONNECTICUT
CHRISTOPHER J. SCHENKEL
No. 30139
LICENSED PROFESSIONAL ENGINEER
6/30/21

GPD Engineering and Architecture Professional Corporation
520 South Main Street
Akron, OH 44311
330.572.2100 Fax: 330.572.2102

DESIGN DRAWINGS PREPARED FOR:
verizon
NEW MILFORD W CT
SITE #: 467734

DESIGN DRAWINGS PREPARED FOR:
verizon
SMART TOOL PROJECT #: 10082846

REV	DATE	DESCRIPTION
0	6/30/21	INITIAL RELEASE

NEW MILFORD W CT
86 BOARDMAN ROAD
NEW MILFORD, CT 06776

TITLE SHEET

ISSUED FOR:	
PERMIT	6/30/2021
BID	-
CONSTRUCTION	-
RECORD	-

ENGINEER	DESIGNER
EAN	EAN
PROJECT MANAGER	APPROVED BY
DP	CJS

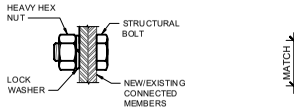
JOB NO.
2021740.467734.02

T-01

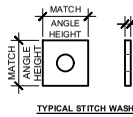
MODIFICATION INSPECTION CHECKLIST

REQUIRED	REPORT ITEM	BRIEF DESCRIPTION
	PRE-CONSTRUCTION	
X	PACKING SLIPS	ANY RECEIPT OF PURCHASE FOR THE MODIFICATION MATERIAL IS ACCEPTABLE.
X	CERTIFICATE OF CONFORMANCE	ALL PRE-ENGINEERED KITS, PARTS, AND/OR ASSEMBLIES PURCHASED FROM REPUTABLE SUPPLIERS SHALL HAVE A SITE SPECIFIC CERTIFICATE OF CONFORMANCE PROVIDED TO CONFIRM ACCEPTABILITY.
X	MATERIAL TEST REPORT (CUSTOM ORDERED OR FABRICATED HARDWARE ONLY)	ALL HARDWARE NOT SPECIFICALLY PROVIDED AS A PRE-ENGINEERED KIT, PART, AND/OR ASSEMBLY SHALL REQUIRE MTR'S TO VERIFY ACCEPTABILITY.
X	EXISTING MOUNT(S)	PHOTOS OF ALL SECTORS (WHERE APPLICABLE) PRIOR TO MODIFICATIONS.
X	HARDWARE PRIOR TO INSTALLATION	PHOTOS OF ALL HARDWARE BEFORE BEING INSTALLED ON THE MOUNT(S),
X	NDT - ALL FULL PENETRATION OR WELDS > 5/16"	AWS STAMPED REPORT REQUIRED. WELDING REQUIREMENTS NOT APPLICABLE FOR PRE-ENGINEERED KITS, PARTS OR ASSEMBLIES FROM REPUTABLE SUPPLIERS.
X	FABRICATOR CERTIFIED WELD INSPECTION	
X	WELDERS' CERTIFICATIONS	
	POST-CONSTRUCTION	
X	ON SITE COLD GALVANIZING VERIFICATION (IF APPLICABLE, SEE STRUCTURAL STEEL NOTE #2)	ANY DAMAGE TO THE TOWER SHALL BE REPAIRED IN ACCORDANCE WITH STRUCTURAL STEEL NOTE #2.
X	GC AS-BUILT DRAWINGS	ALL DEVIATIONS TO THE DRAWINGS THAT WERE FOUND MUST BE CLEARLY MARKED AND APPROVED BY THE EOR.
X	MEMBER SIZES	NEW MEMBERS SHALL BE VERIFIED WITH A TAPE MEASURE, CALIPERS, THICKNESS GAUGE, OR OTHER STANDARD INDUSTRY EQUIPMENT.
X	CONNECTION HARDWARE	BOLT SIZE (VIA CALIPERS), FIT-UP, LOCKING MECHANISMS, AND TIGHTNESS SHALL ALL BE VERIFIED AND DOCUMENTED.
X	CRITICAL DIMENSIONS	ALL DIMENSIONS SPECIFICALLY CALLED OUT IN THE DRAWING PACKAGE SHALL BE VERIFIED WITH A TAPE MEASURE. THIS INCLUDES MEMBER LENGTHS, HORIZONTAL AND/OR VERTICAL OFFSETS, SPACING REQUIREMENTS, ETC.
X	FINAL INSTALLED CONFIGURATION	THE COMPLETE MODIFIED CONDITION SHALL BE INSPECTED TO ENSURE FULL CONFORMANCE WITH THE DESIGN DRAWINGS.

BOLTING DETAILS



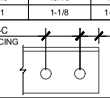
TYPICAL BOLT ASSEMBLY



TYPICAL STITCH WASHER

BOLT SCHEDULE

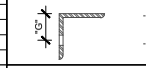
BOLT DIAMETER	STANDARD HOLE	SHORT SLOT	MIN. EDGE DISTANCE	C-C SPACING
1/2	9/16	9/16x11/16	7/8	1-1/2
5/8	11/16	11/16x7/8	1-1/8	1-7/8
3/4	13/16	13/16x1	1-1/4	2-1/4
7/8	15/16	15/16x1-1/8	1-1/2	2-5/8
1	1-1/8	1-1/8x1-5/16	1-3/4	3



-DIMENSIONS GIVEN IN INCHES
-SHORT SLOT HOLES SHALL ONLY BE USED WHEN DEPICTED ON THE PLANS

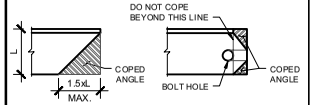
WORKABLE GAGES

LEG	4	3-1/2	3	2-1/2	2	1-3/4
G	2-1/2	2	1-3/4	1-3/8	1-1/8	1



-DIMENSIONS GIVEN IN INCHES
-MATCH EXISTING WHEN APPLICABLE

ALLOWABLE ANGLE COPE



NOTES:
1. ALL DIMENSIONS REPRESENTED IN THESE TABLES ARE AISC MINIMUM REQUIREMENTS. CONTRACTOR SHALL VERIFY EXISTING CONDITIONS IN FIELD AND NOTIFY ENGINEER IF DISTANCES ARE LESS THAN THOSE PROVIDED
2. THE DIMENSIONS PROVIDED ARE MINIMUM REQUIREMENTS. ACTUAL DIMENSIONS OF PROPOSED MEMBERS WITHIN THESE DRAWINGS MAY VARY FROM THE AISC MINIMUM REQUIREMENTS.
3. AS AN ALTERNATIVE TO USING A LOCK WASHER PAL-NUTS CAN BE INSTALLED ABOVE THE HEX NUT. ALL BOLTS MUST HAVE LOCKING DEVICES INSTALLED AS PART OF THE ASSEMBLY.
4. ADDITIONAL HARDENED FLAT WASHERS MAY BE REQUIRED IN CASES WHERE OVERSIZED OR SLOTTED HOLES ARE PRESENT. EXISTING CONDITIONS SHALL BE APPROVED BY THE EOR.

6/30/21

GENERAL NOTES

1. THIS DESIGN IS IN ACCORDANCE WITH THE GOVERNING PROVISIONS OF TIA/EIA-222, AWS, ANSI TIA-322, AND AISC. MATERIALS, FABRICATION, INSTALLATION, AND ALL OTHER SERVICES PROVIDED BY THE CONTRACTOR SHALL CONFORM TO THE ABOVE MENTIONED CODES AND THE CONTRACT SPECIFICATIONS.
2. THIS DESIGN ASSUMES THE TOWER AND MOUNTS HAVE BEEN WELL MAINTAINED, ARE IN GOOD CONDITION, AND ARE WITHOUT DEFECT. BENT MEMBERS, CORRODED MEMBERS, LOOSE BOLTS, CRACKED WELDS AND OTHER MEMBER DEFECTS HAVE NOT BEEN CONSIDERED. THE TOWER IS ASSUMED TO BE PLUMB AND THE SITE IS ASSUMED TO BE LEVEL. THIS DESIGN IS BEING PROVIDED WITHOUT THE BENEFIT OF A CONDITION ASSESSMENT BY GPD.
3. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO BIDDING; ANY PROBLEMS WITH ACCESS, INTERFERENCE, ETC. SHALL BE RESOLVED PRIOR TO MOBILIZATION. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS AND NOTE ANY EXISTING CONDITIONS THAT ARE NOT REPRESENTED ON THESE DRAWINGS OR THAT INTERFERE WITH THE CONTINUOUS INSTALLATION OF THE MODIFICATIONS. CONTRACTOR SHALL NOTE ALL ATTACHMENT POINTS, ANTENNAS, MOUNTS, COAX, LIGHTING, CLIMBING SUPPORTS, STEP BOLTS, PORT HOLES, AND ANY OTHER APPURTENANCES IN THE REGION OF THE MODIFICATIONS. GPD SHALL BE CONTACTED IMMEDIATELY TO EVALUATE THE SIGNIFICANCE OF ANY DEVIATION PRIOR TO ORDERING MATERIAL.
4. ALL MATERIAL SPECIFIED FOR THIS PROJECT MUST BE NEW AND FREE OF ANY DEFECTS. ANY MATERIAL SUBSTITUTIONS, INCLUDING BUT NOT LIMITED TO ALTERED SIZES AND/OR STRENGTHS, MUST BE APPROVED BY THE OWNER AND ENGINEER IN WRITING. CONTRACTOR SHALL PROVIDE DOCUMENTATION TO ENGINEER FOR DETERMINING IF SUBSTITUTE IS SUITABLE FOR USE AND MEETS THE 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.
5. CONTRACTOR IS RESPONSIBLE FOR ENGAGING A MODIFICATION INSPECTOR AT THE TIME OF AWARD TO COORDINATE AN INSPECTION SCHEDULE AND ENSURE PROPER DOCUMENTATION IS RETAINED THROUGHOUT THE PROJECT. REFER TO THE MODIFICATION INSPECTION TABLES ON THIS SHEET.
6. INSTALLATION OF THE PROPOSED LOADING IS BY OTHERS AND IS BEYOND THE SCOPE OF THESE DRAWINGS.
7. ALL CONTRACTORS AND LOWER TIER CONTRACTORS MUST ACKNOWLEDGE IN WRITING TO TOWER OWNER AND GPD THAT THEY HAVE OBTAINED, UNDERSTAND, AND WILL FOLLOW TOWER OWNER STANDARDS OF PRACTICE, CONSTRUCTION GUIDELINES, ALL SITE AND TOWER SAFETY PROCEDURES, ALL PRODUCT LIMITATIONS AND INSTALLATION PROCEDURES USED ON SITE, AND PROPOSED MODIFICATIONS DESCRIBED. RECEIPT OF ACKNOWLEDGMENT MUST OCCUR PRIOR TO BEGINNING CONSTRUCTION OR CLIMBING. IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO PROVIDE THIS DOCUMENTATION FOR TOWER OWNER AND GPD ON COMPANY LETTERHEAD AND THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO OBTAIN THIS DOCUMENTATION FROM LOWER TIER SUBCONTRACTORS (ON SUBCONTRACTOR LETTERHEAD) AND DELIVER IT TO TOWER OWNER AND GPD.
8. IT IS ASSUMED THAT ANY STRUCTURAL MODIFICATION WORK SPECIFIED ON THESE PLANS WILL BE ACCOMPLISHED BY KNOWLEDGEABLE WORKMEN WITH TOWER CONSTRUCTION EXPERIENCE. THIS INCLUDES PROVIDING THE NECESSARY CERTIFICATIONS TO THE TOWER OWNER AND ENGINEER.
9. THESE DRAWINGS DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK AND SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION METHODS, MEANS, TECHNIQUES, SEQUENCES, AND PROCEDURES.
10. THE CONTRACTOR AND ALL SUB-CONTRACTORS SHALL BE RESPONSIBLE FOR THE SAFETY OF THEIR WORK FORCE. THE WORK AREA, ADJACENT AREA, AND ANY PROPERTY OCCUPANTS WHO MAY BE AFFECTED BY THE WORK UNDER CONTRACT. THE CONTRACTOR SHALL REVIEW AND ABIDE BY ALL LANDOWNER, PRIME CONTRACTOR, CARRIER, OSHA, AND LOCAL SAFETY GUIDELINES. ALL TOWER WORKERS SHALL UTILIZE APPROPRIATE FALL PROTECTION AND SAFETY EQUIPMENT THAT IS UP-TO-DATE AND INSPECTED PER OSHA AND INDUSTRY GUIDELINES. ALL WORKERS SHALL BE TRAINED AND MONITORED TO ENSURE SAFE WORKING PRACTICES ARE MAINTAINED.
11. CONTRACTOR IS RESPONSIBLE FOR TEMPORARILY REMOVING ALL COAX, T-BRACKETS, ANTENNA MOUNTS, AND ANY OTHER APPURTENANCE THAT MAY INTERFERE WITH THE TOWER MODIFICATIONS. ALL TOWER APPURTENANCES MUST BE REPLACED AND/OR RESTORED TO ITS ORIGINAL LOCATION. SOME ATTACHMENTS MAY REQUIRE CUSTOM MODIFICATIONS TO PROPERLY FIT THE MODIFIED REGION OF THE STRUCTURE. THESE CUSTOMIZATIONS ARE DESIGNED BY OTHERS AND MUST BE APPROVED BY THE ENGINEER PRIOR TO REMOVING SUCH ATTACHMENTS. ANY CARRIER DOWNTIME MUST BE COORDINATED WITH THE TOWER OWNER IN WRITING.
12. CONTRACTOR SHALL ONLY WORK WITHIN THE LIMITS OF THE TOWER OWNER'S PROPERTY OR LEASE AREA AND APPROVED EASEMENTS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY WORK IS WITHIN THESE BOUNDARIES. CONTRACTOR SHALL EMPLOY A SURVEYOR AS REQUIRED. ANY WORK OUTSIDE THESE BOUNDARIES SHALL BE APPROVED IN WRITING BY THE LAND OWNER PRIOR TO MOBILIZATION. CONSTRUCTION STAKING AND BOUNDARY MARKING IS THE RESPONSIBILITY OF THE CONTRACTOR.
13. THE STRUCTURAL INTEGRITY OF THIS DESIGN EXTENDS TO THE COMPLETE CONDITION ONLY. THE CONTRACTOR MUST BE COGNIZANT THAT THE REMOVAL OF ANY STRUCTURAL COMPONENT HAS THE POTENTIAL TO CAUSE THE PARTIAL OR COMPLETE COLLAPSE OF THE STRUCTURE. ALL NECESSARY PRECAUTIONS MUST BE TAKEN TO ENSURE THE STRUCTURAL INTEGRITY, INCLUDING, BUT NOT LIMITED TO, ENGINEERING ASSESSMENT OF CONSTRUCTION STRESSES WITH INSTALLATION MAXIMUM WIND SPEED AND/OR TEMPORARY BRACING AND SHORING.
14. WORK SHALL ONLY BE PERFORMED DURING CALM DRY DAYS (WINDS LESS THAN 10-MPH). ALL TEMPORARY BRACING AND TEMPORARY SUPPORTS ARE THE RESPONSIBILITY OF THE CONTRACTOR.
15. VERIFY IF THIS STRUCTURE IS AN FM TOWER AND TAKE NECESSARY ACTIONS TO PROVIDE SAFE WORKING CONDITIONS INCLUDING, BUT NOT LIMITED TO, HAVING FM SIGNAL TURNED OFF. CONTRACTOR SHALL HAVE PROPER RADMAN FOR NOTIFICATION OF EXCESSIVE RF EXPOSURE FOR ALL INDIVIDUALS WORKING ON SITE IF FM ANTENNAS ARE PRESENT.
16. ALL MANUFACTURERS HARDWARE AND ASSEMBLY INSTRUCTIONS SHALL BE FOLLOWED EXACTLY. DEVIATION FROM THE INSTRUCTIONS IS UNACCEPTABLE AND REQUIRES WRITTEN APPROVAL FROM ENGINEER.
17. DO NOT SCALE DRAWINGS.
18. THE CLIMBING FACILITIES, SAFETY CLIMB AND ALL ASSOCIATED HARDWARE SHALL NOT BE IMPEDED OR MODIFIED WITHOUT THE WRITTEN CONSENT OF GPD.
19. INSTALL SHALL NOT CAUSE HARM TO THE STRUCTURE, CLIMBING FACILITY, SAFETY CLIMB OR ANY SYSTEM INSTALLED ON THE STRUCTURE.

STRUCTURAL STEEL NOTES

1. ALL NEW STEEL SHALL BE HOT-DIPPED GALVANIZED PER ASTM A123, ASTM A153/A153M, OR ASTM A653 G90, AS APPLICABLE FOR FULL WEATHER PROTECTION. FOR HIGH STRENGTH STEEL FASTENERS WHERE HOT-DIPPED GALVANIZING IS NOT PERMITTED MAGNI 565 COATING (OR ENGINEER APPROVED EQUIVALENT) SHALL BE USED. IN ADDITION ALL NEW STEEL SHALL BE PAINTED TO MATCH EXISTING TOWER STEEL. CONTRACTOR SHALL OBTAIN WRITTEN PERMISSION TO PROTECT STEEL BY ANY OTHER MEANS.
2. ALL EXPOSED STRUCTURAL STEEL AS THE RESULT OF THIS SCOPE OF WORK INCLUDING, BUT NOT LIMITED TO, DAMAGED MEMBERS, FIELD WELDS, FIELD CUT MEMBERS, FIELD DRILLED HOLES, AND SHAFT INTERIORS (WHERE APPLICABLE), SHALL BE SOLVENT CLEANED AND HAVE TWO (2) COATS OF BRUSHED ON ZRC ZINC RICH COLD GALVANIZING PAINT APPLIED AND SHALL BE PAINTED TO MATCH THE TOWER FINISH (WHERE APPLICABLE). PHOTO DOCUMENTATION IS REQUIRED TO BE SUBMITTED TO THE MODIFICATION INSPECTOR.
3. ALL STRUCTURAL STEEL SHALL CONFORM TO THE LISTED REQUIREMENTS U.N.O. IN THESE DRAWINGS:

STEEL ANGLE:	ASTM A36 (Fy=36 KSI)
PIPE (ROUND):	ASTM A53 GRADE B (Fy=35 KSI)
BOLTS:	ASTM A325 TYPE 1
THREADED RODS:	ASTM A307 GRADE A
U-BOLTS:	ASTM A307 GRADE A
NUTS:	ASTM A563 GRADE DH
WASHERS (AS REQUIRED):	ASTM F436 TYPE 1
LOCKING DEVICES:	PAL-NUT OR SPLIT WASHER

4. ALL BOLT ASSEMBLIES FOR STRUCTURAL MEMBERS REPRESENTED IN THIS DRAWING REQUIRE LOCKING DEVICES TO BE INSTALLED IN ACCORDANCE WITH THE GOVERNING PROVISIONS OF TIA/EIA-222 REQUIREMENTS.
5. ALL BOLTS, INCLUDING U-BOLTS, SHALL BE TIGHTENED IN ACCORDANCE WITH AISC "SNUG TIGHT" REQUIREMENTS, U.N.O.
6. ALL U-BOLTS SPECIFIED SHALL MEET THE REQUIREMENTS OF ASME B18.31.5-2011 BENT BOLTS.
7. STRUCTURAL STEEL SHOP DRAWINGS SHALL BE PROVIDED TO ENGINEER FOR APPROVAL PRIOR TO FABRICATION.
8. UNLESS NOTED OTHERWISE, ALL NEW MEMBERS SHALL MAINTAIN THE EXISTING MEMBER WORK LINES AND NOT INTRODUCE ECCENTRICITIES INTO THE STRUCTURE.
9. WELDING OF ANY KIND IS NOT PERMITTED ON SITE UNLESS SPECIFIED WITHIN THESE DRAWINGS. OXY FUEL GAS WELDING OR BRAZING IS STRICTLY PROHIBITED. SPECIFICALLY, NO TORCH CUTTING OR OPEN FLAME IS PERMITTED ON SITE. ALL HOLES SHALL BE CUT WITH A GRINDER.
10. FOR ALL SHOP WELDING, USE E70XX ELECTRODES FOR SMAW PROCESS AND E7XT-XX ELECTRODES FOR FCAW PROCESS, UNO.

MODIFICATION INSPECTION NOTES

GENERAL

1. THE MI IS AN ON-SITE AND HANDS-ON INSPECTION OF THE MODIFICATIONS INCLUDING A REVIEW OF CONSTRUCTION REPORTS AND ADDITIONAL PERTINENT DOCUMENTATION PROVIDED BY THE GENERAL CONTRACTOR (GC), AS WELL AS AND INSPECTION DOCUMENTS PROVIDED BY 3RD PARTY INSPECTORS. THE MI IS TO ENSURE THE INSTALLATION WAS CONSTRUCTED IN ACCORDANCE WITH THE MODIFICATION DRAWINGS; IN ACCORDANCE WITH ALL APPLICABLE INDUSTRY STANDARDS; AND AS DESIGNED BY THE ENGINEER OF RECORD (EOR).
2. NO DOCUMENT, CODE, OR POLICY CAN ANTICIPATE EVERY SITUATION THAT MAY ARISE. ACCORDINGLY, THE CHECKLIST IS INTENDED TO SERVE AS A SOURCE OF GUIDING PRINCIPLES IN ESTABLISHING GUIDELINES FOR THE MODIFICATION INSPECTION.
3. THE MI IS TO CONFIRM INSTALLATION CONFIGURATION AND WORKMANSHIP ONLY AND IS NOT A REVIEW OF THE MODIFICATION DESIGN ITSELF. AND THE MI INSPECTOR DOES NOT TAKE OWNERSHIP OF THE DESIGN. THE MI INSPECTOR SHALL INSPECT AN NOTE CONFORMANCE/NON-CONFORMANCE AND PROVIDE TO THE TOWER/STRUCTURE OWNER AND EOR FOR EVALUATION.
4. TO ENSURE THAT THE REQUIREMENTS OF THE MODIFICATION INSPECTION ARE MET, IT IS VITAL THAT THE GENERAL CONTRACTOR (GC) AND THE MI INSPECTOR BEGIN COMMUNICATING AND COORDINATING AS SOON AS A PO OR PAYMENT IS RECEIVED. IT IS EXPECTED THAT EACH PARTY WILL BE PROACTIVE IN REACHING OUT TO THE OTHER PARTY. CONTACT LISTED ON THE TITLE SHEET SHALL BE CONTACTED IF SPECIFIC INSPECTOR CONTACT INFORMATION IS NOT KNOWN.

FAILING INSPECTION REQUIREMENTS

1. IF THE MODIFICATION INSTALLATION WOULD FAIL THE MODIFICATION INSPECTION ("FAILED MODIFICATION INSPECTION"), THE GC SHALL WORK WITH THE MI INSPECTOR TO COORDINATE A REMEDIATION PLAN IN ONE OF TWO WAYS:

   CORRECT FAILING ISSUES TO COMPLY WITH THE SPECIFICATIONS CONTAINED IN THE ORIGINAL MODIFICATION DRAWINGS AND COORDINATE A SUPPLEMENT MODIFICATION INSPECTION.

   OR, WITH TOWER OWNER APPROVAL, THE GC MAY WORK WITH THE ENGINEER OF RECORD TO RE-ANALYZE THE MODIFICATION/REINFORCEMENT USING THE AS-BUILT CONDITION.

SERVICE LEVEL COMMITMENT

1. THE FOLLOWING RECOMMENDATIONS AND SUGGESTIONS ARE OFFERED TO ENHANCE THE EFFICIENCY AND EFFECTIVENESS OF DELIVERING AN MI REPORT:

   THE GC SHALL PROVIDE A MINIMUM OF 5 BUSINESS DAYS NOTICE, PREFERABLY 10, TO THE MI INSPECTOR AS TO WHEN THE SITE WILL E READY TO THE MI TO BE CONDUCTED.

   THE GC AND MI INSPECTOR COORDINATE CLOSELY THROUGHOUT THE ENTIRE PROJECT.

   WHEN POSSIBLE, IT IS PREFERRED TO HAVE THE GC AND MI INSPECTOR ON-SITE DURING THE MI TO HAVE ANY MINOR DEFICIENCIES CORRECTED DURING THE INITIAL MI. THEREFORE, THE GC MAY CHOOSE TO COORDINATE THE MI CAREFULLY TO ENSURE ALL CONSTRUCTION FACILITIES ARE AT THEIR DISPOSAL WHEN THE MI INSPECTOR IS ON SITE.

REQUIRED PHOTOS

1. BETWEEN THE GC AND THE MI INSPECTOR THE FOLLOWING PHOTOGRAPHS, AT A MINIMUM, ARE TO BE TAKEN AND INCLUDED IN THE MI REPORT:

   PRE-CONSTRUCTION GENERAL SITE CONDITION
   PHOTOGRAPHS DURING THE MODIFICATION CONSTRUCTION/ERECTION AND INSPECTION
   - RAW MATERIALS
   - PHOTOS OF ALL CRITICAL DETAILS
   - WELD PREPARATION
   - BOLT INSTALLATION
   - FINAL INSTALLED CONDITION
   - SURFACE COATING REPAIR

   ANY OTHER PHOTOS DEEMED RELEVANT TO SHOW COMPLETE DETAILS OF THE MODIFICATIONS.

2. PHOTOS OF ELEVATED MODIFICATION TAKEN ONLY FROM THE GROUND SHALL BE CONSIDERED INADEQUATE.

GPD Engineering and Architecture Professional Corporation
520 South Main Street
Akron, OH 44311
330.572.2100 Fax: 330.572.2102

DESIGN DRAWINGS PREPARED FOR:
verizon
NEW MILFORD W CT
SITE #: 467734

DESIGN DRAWINGS PREPARED FOR:
verizon
SMART TOOL PROJECT #: 10082846

REV.	DATE	DESCRIPTION
0	6/30/21	INITIAL RELEASE

NEW MILFORD W CT
86 BOARDMAN ROAD
NEW MILFORD, CT 06776

PROJECT NOTES & INSPECTION CHECKLIST

ISSUED FOR:	
PERMIT	6/30/2021
BID	-
CONSTRUCTION	-
RECORD	-

ENGINEER	DESIGNER
EAN	EAN
PROJECT MANAGER	APPROVED BY
DP	CJS

JOB NO.
2021740.467734.02

N-01

BILL OF MATERIALS

VZWSMART KITS

QUANTITY	MANUFACTURER	PART NUMBER	DESCRIPTION	NOTES
3	VZWSMART	VZWSMART-SFK4	T-ARM REINFORCEMENT KIT	
1		VZWSMART-PLK7	COLLAR MOUNT ASSEMBLY	
12		VZWSMART-MSK2	CROSSOVER PLATE ASSEMBLY	USED TO CONNECT NEW FACE HORIZONTALS TO MOUNT PIPES.
OTHER REQUIRED KITS				
3	MISC.	8'-0" P2.5 STD PIPE	MOUNT PIPE	SEE PAGE N-01 FOR STEEL GRADE REQUIREMENTS.
3		10'-0" (F.V.) P3 STD PIPE	FACE HORIZONTAL PIPE	FIELD VERIFY REQUIRED LENGTH. SEE PAGE N-01 FOR STEEL GRADE REQUIREMENTS.
3	SITE PRO 1	SQCX4-K	CROSSOVER PLATE ASSEMBLY	USED TO CONNECT NEW MOUNT PIPES TO EXISTING FACE HORIZONTAL..

NOTES:
1. 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	WIRELESSSALES@PERFECT-VISION.COM
WEBSITE	WWW.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

STATE OF CONNECTICUT
CHRISTOPHER J. SCHEKS
No. 30026
PROFESSIONAL ENGINEER
6/30/21

GPD Engineering and Architecture Professional Corporation
520 South Main Street
Akron, OH 44311
330.572.2100 Fax: 330.572.2102

DESIGN DRAWINGS PREPARED FOR:
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NEW MILFORD W CT
SITE #: 467734

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SMART TOOL PROJECT #: 10082846

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86 BOARDMAN ROAD
NEW MILFORD, CT 06776

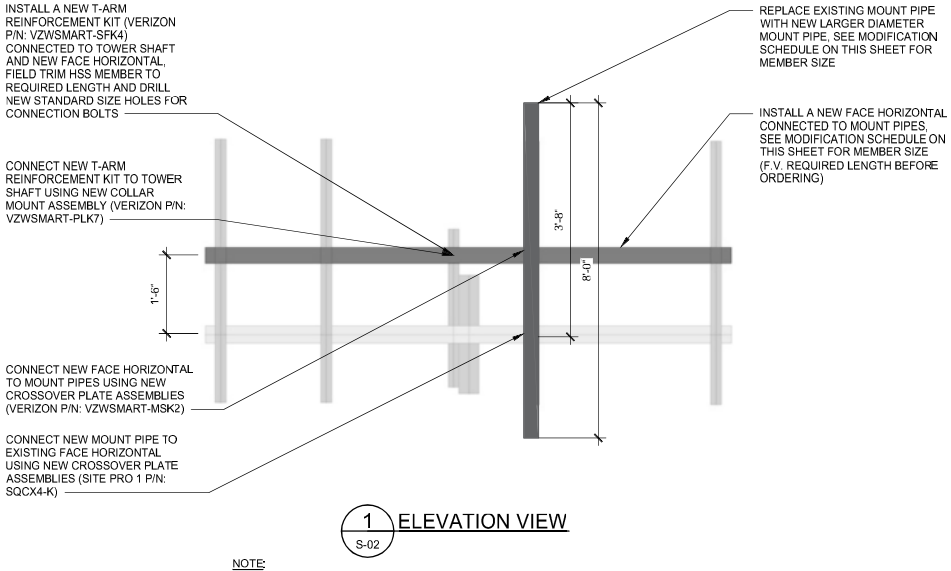
BILL OF MATERIALS

ISSUED FOR:	
PERMIT	6/30/2021
BID	-
CONSTRUCTION	-
RECORD	-

ENGINEER	DESIGNER
EAN	EAN
PROJECT MANAGER	APPROVED BY
DP	CJS

JOB NO.
2021740.467734.02

S-01



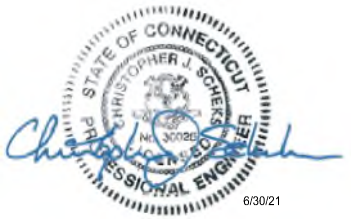
1 S-02 ELEVATION VIEW

NOTE:
1. DETAIL IS TYPICAL FOR ALL THREE SECTORS. ONLY ONE SECTOR SHOWN FOR DETAIL CLARITY.
2. ALL FIELD CUT MEMBERS AND DRILLED HOLES SHALL BE SOLVENT CLEANED AND TOUCHED UP WITH TWO COATS OF BRUSH APPLIED ZRC ZINC RICH COLD GALVANIZING PAINT

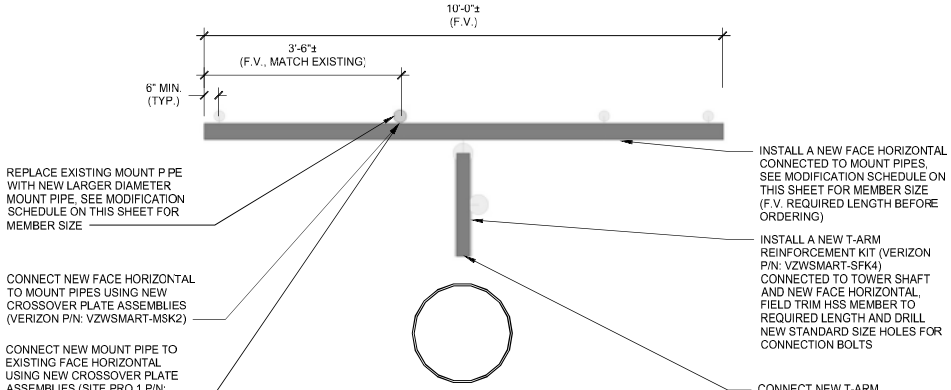
MODIFICATION SCHEDULE

MEMBER TYPE	ELEVATION	EXISTING MEMBER	NEW MEMBER	REFERENCE DETAIL/SHEET	NOTES
FACE HORIZONTAL	128'-0"±	10'-0" T-ARM	(1) P3 STD (PER SECTOR)	SHEETS S-02 & S-03	INSTALL A NEW FACE HORIZONTAL CONNECTED TO MOUNT PIPES.
T-ARM REINFORCEMENT KIT			(1) T-ARM REINFORCEMENT KIT (PER SECTOR)	SHEETS S-02 & S-03	INSTALL A NEW T-ARM REINFORCEMENT KIT CONNECTED TO TOWER SHAFT AND NEW FACE HORIZONTAL.
MOUNT PIPE			(1) P2.5 STD (PER SECTOR)	SHEETS S-02 & S-03	REPLACE EXISTING MOUNT PIPE WITH NEW LARGER DIAMETER MOUNT PIPE.

NOTES:
1. ANY SUBSTITUTION OF PARTS SPECIFIED IN THIS DESIGN PACKAGE SHALL REQUIRE ENGINEER APPROVAL PRIOR TO FABRICATION.
2. ALL MATERIAL REMOVED FROM MOUNT SHALL BE DISPOSED OF BY CONTRACTOR OFF SITE.
3. INSTALL SHALL NOT CAUSE HARM TO THE STRUCTURE, CLIMBING FACILITY, SAFETY CLIMB OR ANY SYSTEM INSTALLED ON THE STRUCTURE.

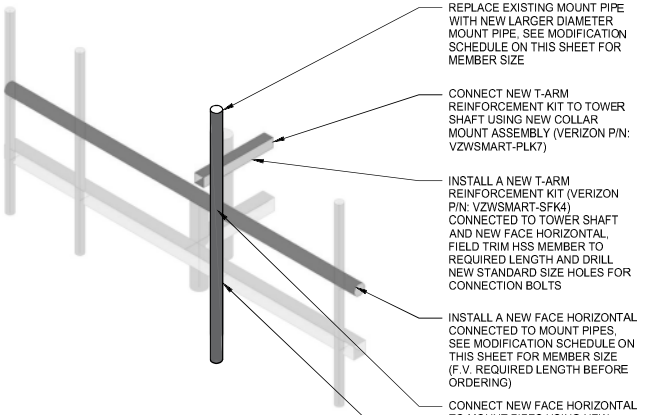


6/30/21



2 S-02 PLAN VIEW

NOTE:
1. DETAIL IS TYPICAL FOR ALL THREE SECTORS. ONLY ONE SECTOR SHOWN FOR DETAIL CLARITY.
2. ALL FIELD CUT MEMBERS AND DRILLED HOLES SHALL BE SOLVENT CLEANED AND TOUCHED UP WITH TWO COATS OF BRUSH APPLIED ZRC ZINC RICH COLD GALVANIZING PAINT



3 S-02 ISOMETRIC VIEW

NOTE:
1. DETAIL IS TYPICAL FOR ALL THREE SECTORS. ONLY ONE SECTOR SHOWN FOR DETAIL CLARITY.
2. ALL FIELD CUT MEMBERS AND DRILLED HOLES SHALL BE SOLVENT CLEANED AND TOUCHED UP WITH TWO COATS OF BRUSH APPLIED ZRC ZINC RICH COLD GALVANIZING PAINT

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DESIGN DRAWINGS PREPARED FOR
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NEW MILFORD W CT
SITE #:467734

DESIGN DRAWINGS PREPARED FOR
verizon
SMART TOOL PROJECT #: 10082646

REV	DATE	DESCRIPTION
0	6/30/21	INITIAL RELEASE

NEW MILFORD W CT
86 BOARDMAN ROAD
NEW MILFORD, CT 06776

MODIFICATION SCHEDULE & DETAILS

ISSUED FOR:	
PERMIT	6/30/2021
BID	-
CONSTRUCTION	-
RECORD	-

ENGINEER	DESIGNER
EAN	EAN
PROJECT MANAGER	APPROVED BY
DP	CJS

JOB NO.
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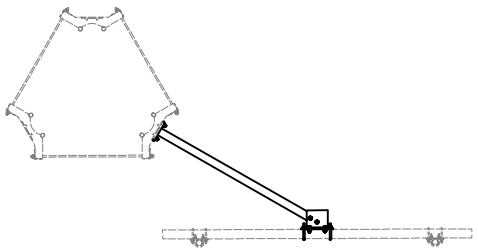
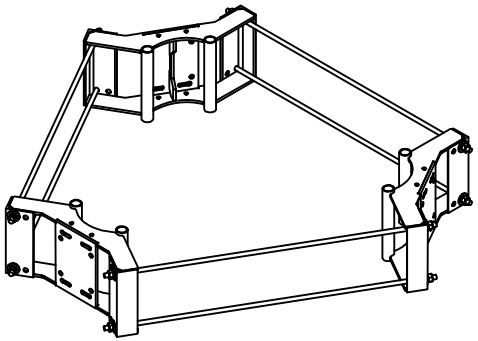
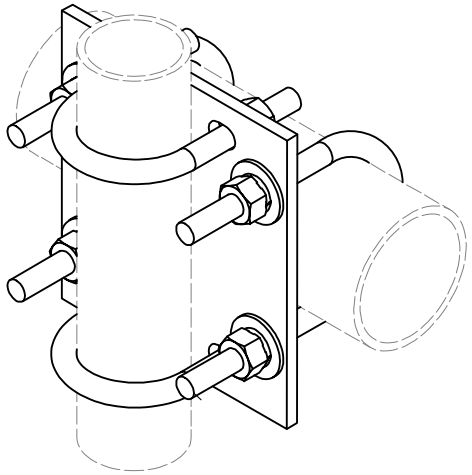
S-02



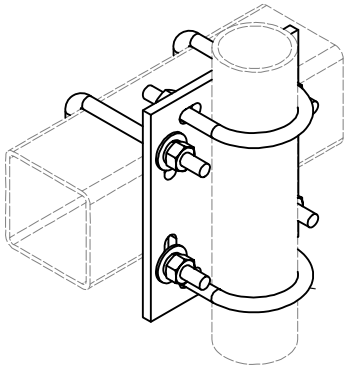
4 S-03 VZWSMART-SFK4 T-ARM REINFORCEMENT KIT



5 S-03 VZWSMART-PLK7 COLLAR MOUNT ASSEMBLY



6 S-03 VZWSMART-MSK2 CROSSOVER PLATE ASSEMBLIES



7 S-03 SQCX4-K CROSSOVER PLATE ASSEMBLIES

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SMART TOOL PROJECT #: 10082846

REV.	DATE	DESCRIPTION
0	6/30/21	INITIAL RELEASE

NEW MILFORD W CT
86 BOARDMAN ROAD
NEW MILFORD, CT 06776

DETAILS/PARTS

ISSUED FOR:	
PERMIT	6/30/2021
BID	-
CONSTRUCTION	-
RECORD	-

ENGINEER	DESIGNER
EAN	EAN
PROJECT MANAGER	APPROVED BY
DP	CJS

JOB NO.
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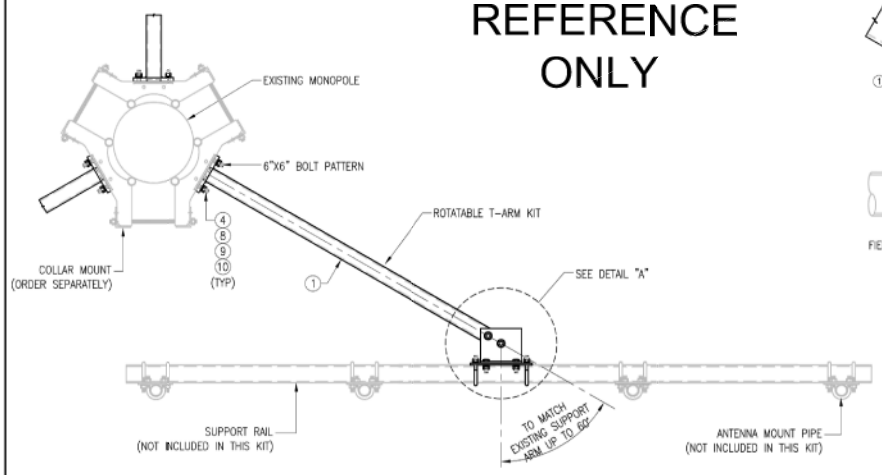
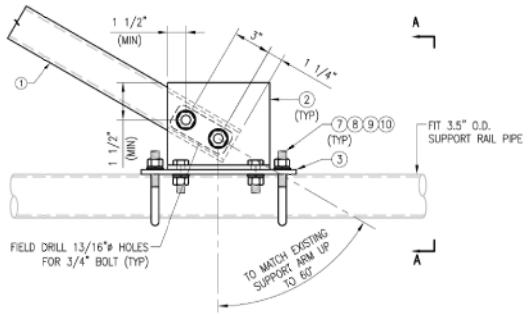
S-03

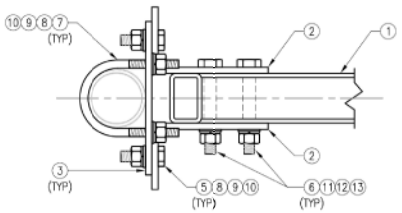
REFERENCE ONLY



PLAN VIEW
T-ARM KIT



DETAIL "A"



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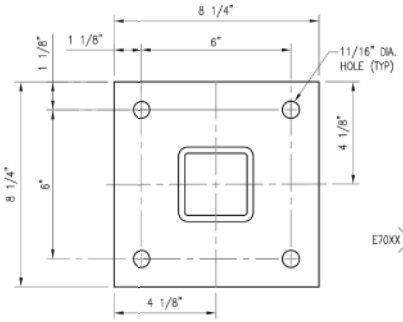
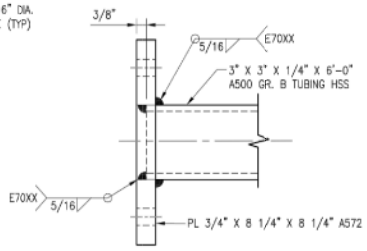


FRONT VIEW



SIDE VIEW

RO-TAW-6 WELDMENT

VZWSMART-SFK4 (T-ARM KIT)					
ITEM NO.	QTY.	PART NO.	DESCRIPTION	SHEET #	WT
1	1	RO-TAW-6	T-ARM WELDMENT	SFK4-F1	71
2	2	BP825-94375	PL 3/8" X 8 1/4" X 9 7/16" A36 BEND PLATE	SFK4-F2	17
3	1	PL375-92512025	PL 3/8" X 9 1/4" X 1'-0 1/2" A36	SFK4-F3	12
4	4	---	BOLT 5/8" X 2 1/4" A325	---	0
5	4	---	BOLT 5/8" X 2" A325	---	0
6	2	---	BOLT 3/4" X 5 1/4" A325	---	0
7	2	MS02-625-3625-600	RU-BOLT 5/8" X 3 5/8" I.W. X 6" I.L. A36 (OR EQUIV.)	RBC-1	3
8	12	FW-625	5/8" HDG USS FLAT WASHER	---	1
9	12	LW-625	5/8" HDG LOCK WASHER	---	0
10	12	NUT-625	5/8" HDG HEX NUT	---	1
11	2	FW-75	3/4" HDG USS FLAT WASHER	---	0
12	2	LW-75	3/4" HDG LOCK WASHER	---	0
13	2	NUT-75	3/4" HDG HEX NUT	---	0
				GALVANIZED WT	106

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

VzW SMART Tool© Vendor

verizon

DRAWN BY: BT | CHECKED BY: HMA/KW

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

SHEET TITLE:
VZWSMART-SFK4
T-ARM KIT

SHEET NUMBER: VZWSMART-SFK4 | REV #: 0

GPD Engineering and Architecture Professional Corporation
520 South Main Street
Akron, OH 44311
330.572.2100 Fax 330.572.2102

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verizon
NEW MILFORD W CT
SITE #:467734

DESIGN DRAWINGS PREPARED FOR
verizon
SMART TOOL PROJECT #: 10082646

REV	DATE	DESCRIPTION
0	6/30/21	INITIAL RELEASE

NEW MILFORD W CT
86 BOARDMAN ROAD
NEW MILFORD, CT 06776

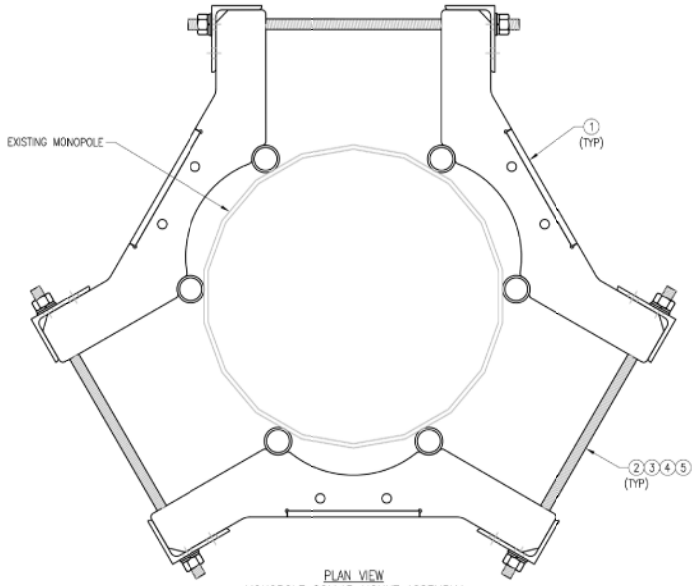
DETAILS/PARTS

ISSUED FOR:	
PERMIT	6/30/2021
BID	-
CONSTRUCTION	-
RECORD	-

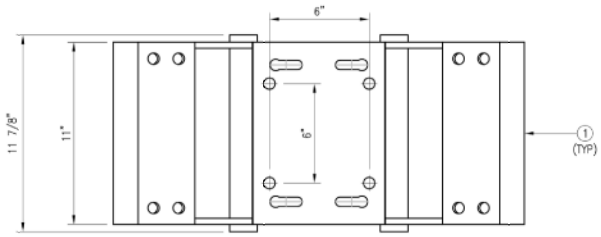
ENGINEER	DESIGNER
EAN	EAN
PROJECT MANAGER	APPROVED BY
DP	CJS

JOB NO.
2021740.467734.02

S-04



PLAN VIEW
MONOPOLE COLLAR MOUNT ASSEMBLY



FRONT VIEW

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

REFERENCE ONLY

VZWSMART-PLK7 (MONOPOLE COLLAR MOUNT ASSEMBLY)

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

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DRAWN BY: BT | CHECKED BY: HMA/KW

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

SHEET TITLE:
VZWSMART-PLK7
MONOPOLE COLLAR
MOUNT ASSEMBLY

SHEET NUMBER: VZWSMART-PLK7 | REV #: 0

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86 BOARDMAN ROAD
NEW MILFORD, CT 06776

DETAILS/PARTS

ISSUED FOR:	
PERMIT	6/30/2021
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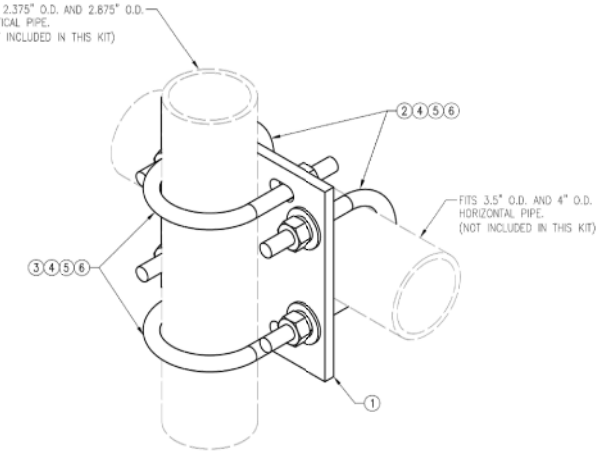
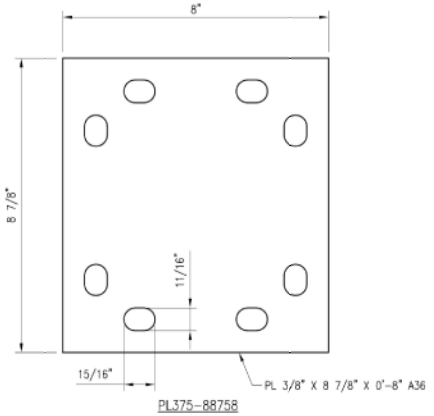
CONSTRUCTION	-
RECORD	-

ENGINEER	DESIGNER
EAN	EAN
PROJECT MANAGER	APPROVED BY
DP	CJS

JOB NO.
2021740.467734.02

S-05





PL375-88758

REFERENCE ONLY

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

VZWSMART-MSK2 (CROSSOVER PLATE)

ITEM NO.	QTY.	PART NO.	DESCRIPTION	SHEET #	WT
1	1	PL375-88758	PL 3/8" X 8 3/4" X 0'-8" A36	MSK2-F1	8
2	2	MS02-625-4125-600	RU-BOLT 5/8" X 4 1/8" I.W. X 6" LL. A36 (OR EQUIV.)	RBC-1	3
3	2	MS02-625-300-500	RU-BOLT 5/8" X 3" I.W. X 5" LL. A36 (OR EQUIV.)	RBC-1	3
4	8	FW-625	5/8" HDG USS FLAT WASHER	---	1
5	8	LW-625	5/8" HDG LOCK WASHER	---	0
6	8	NUT-625	5/8" HDG HEX NUT	---	1
				GALVANIZED WT	15

VzW SMART Tool© Vendor

verizon

DRAWN BY: H.R | CHECKED BY: HMA

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

SHEET TITLE:
VZWSMART-MSK2
CROSSOVER PLATE

SHEET NUMBER: VZWSMART-MSK2 | REV #: 0

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520 South Main Street
Akron, OH 44311
330.572.2100 Fax 330.572.2102

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SMART TOOL PROJECT #: 10082646

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NEW MILFORD W CT
86 BOARDMAN ROAD
NEW MILFORD, CT 06776

DETAILS/PARTS

ISSUED FOR:	
PERMIT	6/30/2021
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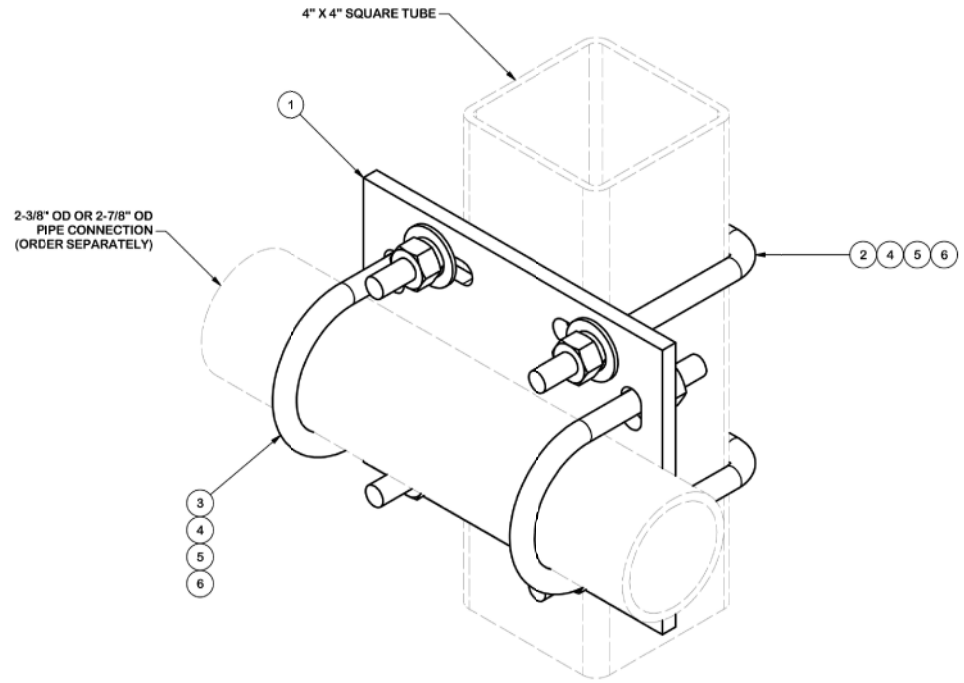
RECORD	-

ENGINEER	DESIGNER
EAN	EAN
PROJECT MANAGER	APPROVED BY
DP	CJS

JOB NO.
2021740.467734.02

S-06

PARTS LIST						
ITEM	QTY	PART NO.	PART DESCRIPTION	LENGTH	UNIT WT.	NET WT.
1	1	SCX4	CROSSOVER PLATE	8 1/2 in	6.02	6.02
2	2	X-SUB1418	SQUARE U-BOLT 0.5" DIA. X 4.125" IW X 6" IL X 3" TR		0.98	1.95
3	2	X-UB1212	1/2" X 2-1/2" X 4-1/2" X 2" U-BOLT (HDG.)		0.60	1.19
3	2	X-UB1300	1/2" X 3" X 5" X 2" U-BOLT (HDG.)		0.67	1.34
4	8	G12FW	1/2" HDG USS FLATWASHER	3/32 in	0.03	0.27
5	8	G12LW	1/2" HDG LOCKWASHER	1/8 in	0.01	0.11
6	8	G12NUT	1/2" HDG HEAVY 2H HEX NUT		0.07	0.57
					TOTAL WT. #	11.35



REFERENCE
ONLY

TOLERANCE NOTES

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

DESCRIPTION
CROSSOVER PLATE KIT
W/ SQUARE U-BOLTS AND STD. U-BOLTS

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

CPD NO.	DRAWN BY	ENG. APPROVAL	PART NO.
	CSL 9/18/2018	3RD PARTY	SQCX4-K

CLASS	SUB	DRAWING USAGE	CHECKED BY	DWG. NO.
87	02	CUSTOMER	BMC 11/12/2018	SQCX4-K

PAGE 1 OF 1

GPD Engineering and Architecture Professional Corporation
520 South Main Street
Akron, OH 44311
330.572.2100 Fax 330.572.2102

DESIGN DRAWINGS PREPARED FOR
verizon
NEW MILFORD W CT
SITE # 467734

DESIGN DRAWINGS PREPARED FOR
verizon
SMART TOOL PROJECT # 10082646

REV	DATE	DESCRIPTION
0	6/30/21	INITIAL RELEASE

NEW MILFORD W CT
86 BOARDMAN ROAD
NEW MILFORD, CT 06776

DETAILS/PARTS

ISSUED FOR:	
PERMIT	6/30/2021
BID	-
CONSTRUCTION	-
RECORD	-

ENGINEER	DESIGNER
EAN	EAN
PROJECT MANAGER	APPROVED BY
DP	CJS

JOB NO.
2021740.467734.02

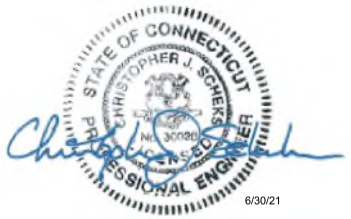
S-07

MOUNT PHOTO

MOUNT PHOTO

MOUNT PHOTO

MOUNT PHOTO



6/30/21

GPD Engineering and Architecture Professional Corporation

520 South Main Street
Akron, OH 44311
330.572.2100 Fax: 330.572.2102

DESIGN DRAWINGS PREPARED FOR:

verizon

NEW MILFORD W CT
SITE #: 467734

DESIGN DRAWINGS PREPARED FOR:

verizon

SMART TOOL PROJECT #: 10082846

REV.	DATE	DESCRIPTION
0	6/30/21	INITIAL RELEASE

NEW MILFORD W CT
86 BOARDMAN ROAD
NEW MILFORD, CT 06776

MOUNT PHOTOS

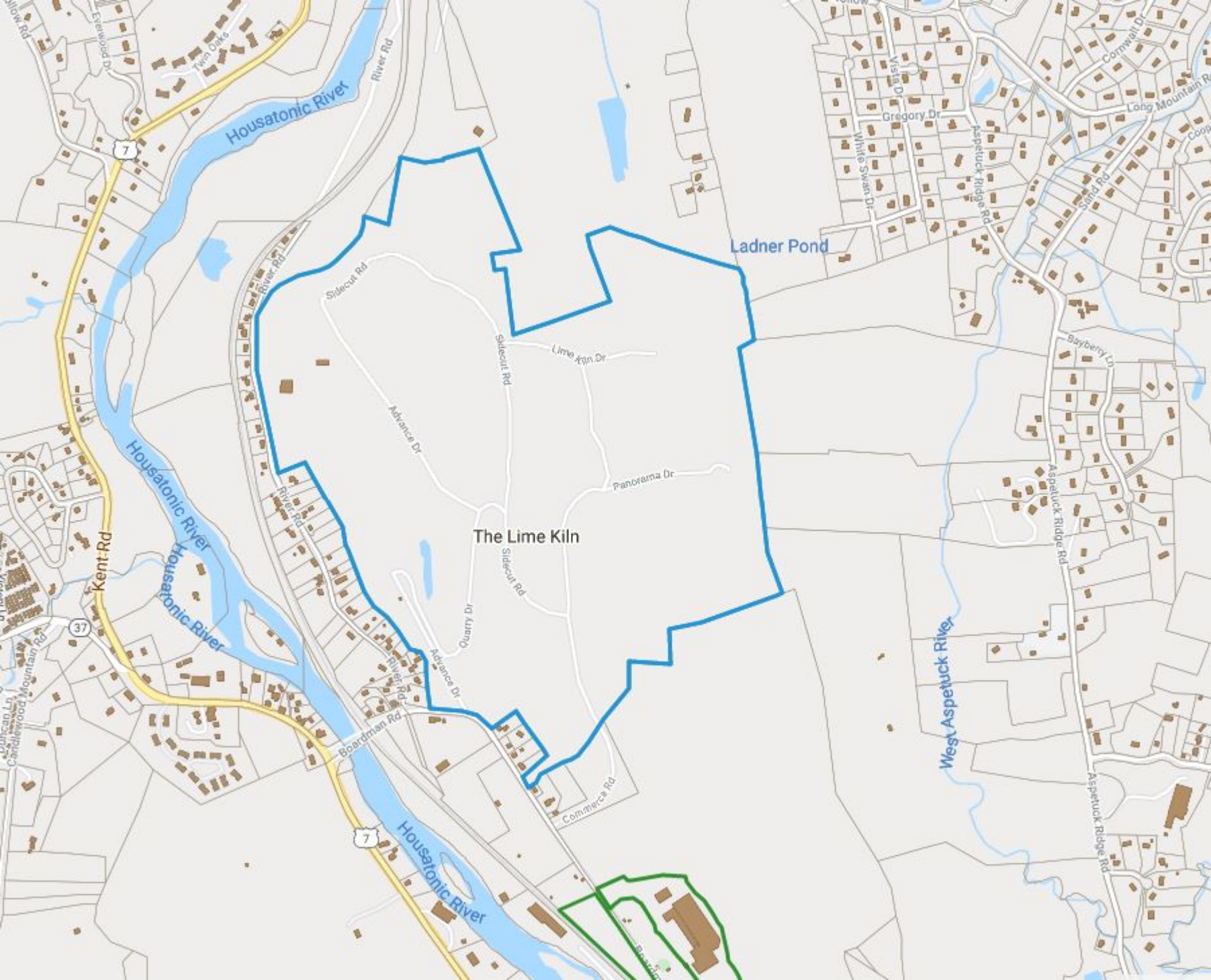
ISSUED FOR:	
PERMIT	6/30/2021
BID	-
CONSTRUCTION	-
RECORD	-

ENGINEER	DESIGNER
EAN	EAN
PROJECT MANAGER	APPROVED BY
DP	CJS

JOB NO.
2021740.467734.02

S-08

ATTACHMENT 5


The Lime Kiln
Ladner Pond
Housatonic River
Housatonic River
Housatonic River
West Aspetuck River
Kent Rd
Sidecut Rd
Sidecut Rd
Sidecut Rd
Lime Kiln Dr
Advance Dr
Advance Dr
Panorama Dr
Quarry Dr
River Rd
River Rd
River Rd
River Rd
Boardman Rd
Commerce Rd
Aspetuck Ridge Rd
Aspetuck Ridge Rd
Aspetuck Ridge Rd
Gregory Dr
White Swan Dr
Vista Dr
Cornwell Dr
Long Mountain Rd
Sand Rd
Bayberry Ln
Twin Oaks
Everwood Dr
Candlewood Mountain Rd
Duncan Ln
7
7
37

NEW MILFORD,CT

33 BOARDMAN RD

Location
33 BOARDMAN RD
Mblu
47/ / 73/ /
Acct#
005304
Owner
QUARRY STONE AND GRAVEL LLC
Assessment
$2,990,290
Appraisal
$5,201,730
PID
8323
Building Count
2

Current Value

Appraisal

Valuation Year	Improvements	Land	Total
2020	$1,268,700	$3,933,030	$5,201,730

Assessment

Valuation Year	Improvements	Land	Total
2020	$888,090	$2,102,200	$2,990,290

Parcel Addreses

Additional Addresses

No Additional Addresses available for this parcel

Owner of Record

Owner QUARRY STONE AND GRAVEL LLC
Co-Owner % O + G INDUSTRIES
Address 112 WALL ST
TORRINGTON, CT 06790
Sale Price $0
Certificate
Book & Page 0778/0681
Sale Date 09/11/2003
Instrument 03

Ownership History

Ownership History

Owner	Sale Price	Certificate	Book & Page	Instrument	Sale Date
QUARRY STONE AND GRAVEL LLC	$0		0778/0681	03	09/11/2003
QUARRY STONE AND GRAVEL LLC	$0		0765/0512	03	07/08/2003
KOVACS ROBERT G + KOVACS PAUL B + KOVACS	$0		0705/0499	29	05/23/2002
QUARRY STONE AND GRAVEL LLC	$0		0690/0804	03	01/09/2002
KOVACS ROGER P + PAUL B + ROBERT G	$0		0361/0142		12/24/1986

ATTACHMENT 6

UNITED STATES POSTAL SERVICE®

NEW MILFORD WEST

Certificate of Mailing — Firm

Name and Address of Sender	TOTAL NO. of Pieces Listed by Sender	TOTAL NO. of Pieces Received at Post Office™	Affix Stamp Here ***Postmark with Date of Receipt.***
Kenneth C. Baldwin, Esq. Robinson & Cole LLP 280 Trumbull Street Hartford, CT 06103	3	3	neopost 08/11/2021 US POSTAGE $002.89⁰ ZIP 06103 041L12203937
	Postmaster, per *(name of receiving employee)* ED		

USPS® Tracking Number / Firm-specific Identifier	Address (Name, Street, City, State, and ZIP Code™)	Postage	Fee	Special Handling	Parcel Airlift
1.	Pete Bass, Mayor Town of New Milford 10 Main Street New Milford, CT 06776		OLD STATE HOUSE STATION 06103 AUG 11 2021 USPS		
2.	Lauran Regan, New Milford Town Planner/Zoning Enforcement Officer/Land Use Supervisor ~~Town of New Milford~~ ~~10 Main Street~~ New Milford, CT 06776				
3.	Quarry Stone and Gravel LLC c/o O&G Industries 112 Wall Street Torrington, CT 06790				
4.					
5.					
6.					