Robinson+Cole

KENNETH C. BALDWIN

280 Trumbull Street
Hartford, CT 06103-3597
Main (860) 275-8200
Fax (860) 275-8299
kbaldwin@rc.com
Direct (860) 275-8345

Also admitted in Massachusetts
and New York

July 12, 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**
35 South Bartlett Road, Waterford, 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 Town of Waterford ("Town") in August 2006. Cellco's shared use of the tower was approved by the Council in September 2015 (PE1133-VER-20150805). A copy of the Town's approval and Cellco's PE1133-VER-20150805 approval are included in Attachment 1.

Cellco now intends to modify its facility by replacing three (3) existing antennas with three (3) new Samsung MT6407-77A antennas and replacing nine (9) remote radio heads ("RRHs") with six (6) new RRHs all on Cellco's existing antenna mounting structure. 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 Waterford's Chief Elected Official and Land Use Officer. Please note, the Town of Waterford is the owner of the Property.

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 will not increase radio frequency (RF) emissions at the facility to a level at or above the Federal Communications Commission (FCC) safety standard. Far Field Approximation Tables for Cellco's modified facility are 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") the existing tower and tower foundation can support Cellco's proposed modifications. According to Mount Analysis ("MA") Cellco's antenna mounting system, 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 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:
Robert Brule, First Selectman for the Town of Waterford
Abby Piersall, AICP, Waterford Planning Director
Aleksey Tyurin

ATTACHMENT 1

VOL 899 PAGE 309

FIFTEEN ROPE FERRY ROAD

WATERFORD, CT 06385-2886

TOWN OF WATERFORD
PLANNING & ZONING COMMISSION

NOTICE OF GRANT OF A SPECIAL PERMIT

This is to certify that on August 14, 2006, the Waterford Planning & Zoning Commission granted Special Permit #PZ2006-024.

Owner of Record: Town of Waterford

Address: 35 South Bartlett Road

Description of Premises:

As recorded in Volumes 777, Page 090 of the Waterford Land Records

Nature of Special Permit: Special Permit and site plan approval granted for installation of a communications tower.

Applicable Zoning Regulations: Sections 13.2.1 , 19, 22 and 23.

Permit findings, stipulations and conditions are filed in the office of the Town Clerk as stated in the minutes of the Planning & Zoning Commission meeting of August 14, 2006.

PLANNING & ZONING COMMISSION

By: Dawn Choisy
Dawn Choisy
Recording Secretary
Planning & Zoning Commission

This notice is to be recorded on the land records of the Town of Waterford, indexed in the Grantor's Index under the name of the record owner.

ATTEST: TOWN CLERK

RECEIVED FOR RECORD
WATERFORD, CT
06 SEP 13 AM 11:07

There being no further comments or questions, the public hearing was closed at 7:34.

#PZ2006-024 – Request of the Town of Waterford, Director of Emergency Management, applicant; Town of Waterford, owner, for special permit and site plan approval to locate a communications tower at 35 South Bartlett Road, IP-1 zone, in accordance with Sections 13.2.1, 19, 22 and 23 of the Zoning Regulations and as shown on plans entitled "Preliminary Antenna Site Plan Prepared for Town of Waterford Emergency Communications Committee, Waterford, Connecticut" dated June 15, 2006, with modifications requested from sections 13.4.2 and 13.4.3 of the Zoning Regulations.

Chairman Maguire opened the public hearing and read the exhibits into the record:

EXHIBIT A -	Application and support materials.
EXHIBIT B -	Notice of Public Hearing advertised in the Day newspaper on July 31, 2006 and August 7, 2006.
EXHIBIT C -	Notification letter to applicant, along with certificates of mailing.
EXHIBIT D -	Staff and agency condensed comment sheet.
EXHIBIT E -	Plans titled "Preliminary Antenna Site Plan, Prepared for Town of Waterford Emergency Communications Committee, Waterford, Connecticut, dated June 15, 2006.

Murray Pendleton, Director of Emergency Management, and Thomas Dembeck presented this application to the Commission.

Chief Pendleton stated that this proposal involves erecting a 180-foot communications tower on the site of the newly constructed water tank, which is property owned by the Town. The goal is that the system provide first responders have 95% portable radio coverage. He stated that replacing the current radio system and antennas is very important.

Chairman Maguire asked if this proposal needed to go through the siting council. T. Wagner stated that the application is being processed as a municipal tower, and may need to be reviewed by the siting council. Any future co-location by cell phone carriers will usually require approval from the siting council.

Chief Pendleton stated that they want to complete the project in the most economical way possible, and that would involve co-locating of venders on the tower.

T. Wagner stated that two sites were originally identified as possible sites for the tower, and asked why the site at the water tank was preferred. T. Dembeck showed maps of coverage from both the proposed water tank site and the site at the Sportsman's Club, the other proposed location. These were entered into the record as Exhibits G and H.

Chief Pendleton stated that there is a tremendous financial responsibility and involvement in the licensing process that exists right now. This antenna will help to enable all emergency

personnel in town to communicate with each other. Mr. Dembeck explained how the new communications system will work. A flyer showing the tower design was entered into the record as Exhibit F.

J. Auwood stated concerns with the effect on the neighboring properties, noting that the antenna is quite a bit higher than the water tank. T. Dembeck stated that J. Bartelli of the Utility Commission has been in contact with the neighbors who voiced concerns during the public hearing held for the water tank. The proposed tower will be at the back side of the tank, and won't be lit. An 11' x 14' modular concrete building will be constructed to support the radio equipment.

M. Pendelton stated that when the water tank was constructed, the idea was to have the communication tower attached to it, and special brackets were attached to the tank for that purpose. The study that was done showed that an antenna on the water tank would not work.

T. Wagner stated that this public hearing is being held because this proposal is a vast deviation from what was approved for the construction of the water tank.

T. Ward also stated concerns regarding the neighbors. Chief Pendelton stated that this particular antenna was not planned at the time of the approval of the water tank.

Chairman Maguire asked if there was anyone present who wished to speak regarding this application.

Wayne Wainwright of Great Neck Road asked if any of the other towers around would be sufficient for this use. He stated that it seems more like a cell phone tower. He also requested the town consider placing their system on his tower in Montville

M. Wujtewicz stated that the neighbors were sent notices regarding the public hearing, and had opportunity to review the file.

There being no further comments or questions, the public hearing was closed at 7:56.

ITEM #6 APPLICATION REVIEWS
#PZ2006-008 – Request of New London Country Club, owner; and applicant; Gerwick-Mereen, LLC, agent; for a 2-lot resubdivision for property located at 28 Lamphere Road, OS zone, as shown on plans entitled "Jordan View Resubdivision" dated December 5, 2006 with revisions to July 10, 2006, sheets 1 through 4. A coastal site plan review is required in accordance with the Coastal Management Act.

It was the consensus of the Commission to have draft prepare a decision for review at the next meeting.

#PZ2006-013 - Request of Waterford & Miner, LLC, owner and applicant; Glenn M. Gordon, Esq., agent, to change the zone for property located at 22 Miner Lane from C-G (General Commercial) to C-MF (Commercial Multi-Family).

The Commission will review the material submitted during the public hearing and will discuss this application at the next meeting.

#PZ2006-016 – Request of the Town of Waterford Board of Education, applicant; Town of Waterford, owner; Jacunski Humes Architects, LLC, agent for site plan approval to build a new elementary school at 116 Old Norwich Road, VR-10 zone, in accordance with Sections 6a and 22 of the Zoning Regulations and as shown on plans entitled "Planning and Zoning Commission Submittal, Quaker Hill Elementary School" dated 6/26/06.

The Commission reviewed the draft approval prepared by Staff at the direction of the Commission, outlining the stipulations and conditions of approval.

M. Wujtewicz stated that the approval of this application includes an extension of the public water line pursuant to CGS 8-24.

MOTION: Motion made by T. Ward, seconded by H. Daniels, to approve Application #PZ2006-016 with the stipulations and conditions stated in Attachment A.

VOTE: 5-0

#PZ2006-023– Request of Crystal Mall, agent and applicant; Simon Property Group, owner, for site plan approval to locate an auto show at 850 Hartford Turnpike on August 20, 2006, in accordance with Section 3.19 of the Zoning Regulations.

Holly Carpenter of the Crystal Mall and Brian Rheaume of WWRX/WBMW were present to discuss this application with the Commission.

Mr. Rheaume stated that the proposed is the third annual car show held at the Mall, sponsored by Cohanzie Fire Department. Concerns regarding traffic control have been addressed.

T. Wagner stated that he had met with the Mall manager regarding outstanding issues with the stormwater system, and modifications that the Mall hopes to make.

Ms. Carpenter stated that in addition to two police officers at the site, the Mall is providing two uniformed security officers for the event.

MOTION: Motion made by T. Ward, seconded by D. Offen, to approve Application #PZ2006-023.

VOTE: 5-0

#PZ2006-024 – Request of the Town of Waterford, Director of Emergency Management, applicant; Town of Waterford, owner, for special permit and site plan approval to locate a communications tower at 35 South Bartlett Road, IP-1 zone, in accordance with Sections

13.2.1, 19, 22 and 23 of the Zoning Regulations and as shown on plans entitled "Preliminary Antenna Site Plan Prepared for Town of Waterford Emergency Communications Committee, Waterford, Connecticut" dated June 15, 2006, with modifications requested from sections 13.4.2 and 13.4.3 of the Zoning Regulations.

MOTION: Motion made by J. Anwood, seconded by H. Daniels, to approve Application #PZ2006-024.

VOTE: 5-0

ITEM #7 ADMINISTRATIVE REVIEW

Thames Landing – Request for Building and Foundation Permits.

Richard Schneck, representing Thames Landing, addressed the Commission. Mr. Schneck stated that a consolidated site plan and a construction schedule had been submitted to Staff.

E. Maguire stated that the Commission is looking to see that some of the public improvements are completed. Mr. Schneck stated that they are moving forward on the fishing pier, tennis courts and swimming pool. Proposals have been received for the pedestrian bridge. There have been delays in some of the construction.

R. Schneck stated that they want to be able to apply for building and foundation permits. The original agreement was that 70 units be completed and the public recreation area be completed concurrently. They hope to have the public recreation area done by December or January, however it will be quite a while before 70 units are completed.

T. Wagner noted that the construction sequence submitted shows that foundation excavation to occur on October 19 for buildings 7 through 12. Mr. Schneck stated that the schedule shows the worst case scenario, and they would like to have it done sooner.

T. Wagner stated that permits have been issued based on two phases. Phase one being everything on the south side, as defined by the drainage basin and conservation easement. There is one building that is part of phase one that has yet to be started. Staff would like to see more progress completed on the public improvements. He suggested that progress on the pool and the tennis court be presented to the Commission at their next meeting.

Mr. Schneck stated that the developer is looking to refinance the project, and the bank wants the developer to have permits in place prior to re-financing.

Chairman Maguire stated that the Commission can give Staff the authority to determine if progress is being made on the public improvements. T. Wagner stated that Staff will provide to the bank verification that the project is still valid.

The Commission stated that the amenities that were supposed to be part of the development should be in place for the current owners of the units. Mr. Schneck stated that the tennis court and swimming pool have been scheduled.

M. Wujtewicz stated that the swimming pool and tennis courts are not part of the public improvements, they are for the use of the condominium owners. The beach, shoreline, etc.,

RICHARD BLUMENTHAL
ATTORNEY GENERAL

55 Elm Street
P.O. Box 120
Hartford, CT 06141-0120

Office of The Attorney General
State of Connecticut

September 5, 2007

Daniel F. Caruso, Chairman
State of Connecticut Siting Council
Ten Franklin Square
New Britain, Connecticut 06051

Dear Chairman Caruso:

Your agency has asked for an opinion on whether the Connecticut Siting Council ("Council") has jurisdiction over the siting of municipal towers pursuant to Conn. Gen. Stat. § 16-50i (a)(6). By the term "municipal tower", the Council means a tower used, at least in part, for wireless telephone (commonly called "cell phone") service when that tower is owned by a municipality on municipal property. Specifically, the Council seeks an opinion as to whether the Council has jurisdiction over proposed towers that are to be owned by a municipality, built on municipal property, and will have one or more antennas to provide commercial cell phone service. According to the information you have provided, for many years the Council has interpreted its statutory authority to prohibit jurisdiction over such municipal towers. For the reasons stated below, I conclude that the Council should seek legislative clarification on this issue.[1]

The Public Utility Environmental Standards Act ("PUESA"), codified at Conn. Gen. Stat. § § 16-50g, *et seq.*, grants exclusive jurisdiction over the siting of certain facilities to the Council. Such facilities are defined in Conn. Gen. Stat. § 16-50i (a). Conn. Gen. Stat. § 16-50i (a)(6) defines the term "facility" to include "such telecommunications towers, including associated telecommunications equipment, owned or operated by the state, a public service company or a certified telecommunications provider or used in a cellular system, as defined in the Code of Federal regulations Title 47, Part 22, as amended, which

[1] It should be noted that this opinion request does not include towers built by a municipality for municipal communications that have sufficient space for cell phone antennas, but are initially built without such antennas. You have informed this office that the Council maintains that it has no jurisdiction over such towers. For example, if a municipality wishes to build a tower for police and fire department communications on town land and there is no cell antenna on the tower, the Council continues to hold that it has no jurisdiction over the siting and building of such a tower, even if such a tower could, at a later date, accommodate a cell antenna.

may have a substantial adverse environmental effect, as said council shall, by regulation, prescribe." The Council's relevant regulations include Reg. Conn. State Agencies § 16-50j-2a (g), which states, in part, that "facility" includes "telecommunications towers owned or operated by the state, a public service company as defined in section 16-1 of the General Statutes, or used for public cellular radio communications service as defined in section 16-50i of the General Statutes, which may have a substantial adverse environmental effect."

In recent years, the courts have interpreted Conn. Gen. Stat. § 16-50i (a)(6). In *Sprint Spectrum L.P v. Connecticut Siting Council*, 274 F.3d 674 (2d Cir. 2001), the United States Court of Appeals for the Second Circuit held that the Council's jurisdiction covered both cellular systems regulated by 47 C.F.R. Part 22 and Personal Communications Services (PCS) regulated by 47 C.F.R. Part 24. In *Town of Westport v. Connecticut Siting Council*, 47 Conn. Supp. 382, 797 A.2d 6555 (2001), *affirmed*, 260 Conn. 266, 796 A.2d 510 (2002), it was held that the Council had exclusive jurisdiction over mixed use towers (towers used in part, but not exclusively, for cellular service). Neither case concerned municipal ownership of towers.

Conn. Gen. Stat. § 1-2z states: "The meaning of a statute shall, in the first instance, be ascertained from the text of the statute itself and its relationship to other statutes. If, after examining such text and considering such relationship, the meaning of such text is plain and unambiguous and does not yield absurd or unworkable results, extratextual evidence of the meaning of the statute shall not be considered." The literal text of Conn. Gen. Stat. § 16-50i (a)(6) gives the Council jurisdiction over all "telecommunications towers. . . used in a cellular system" and does not exempt municipal towers from the Council's jurisdiction. Without a specific exemption for municipalities in the statute, a municipal tower "used in a cellular system. . . which may have a substantial adverse environmental effect" appears to fall within the Council's regulatory authority. Conn. Gen. Stat. § 16-50i(a)(6).

However, while a reasonable interpretation of Conn. Gen. Stat. § 16-50i(a)(6) places municipals towers within the Council's jurisdiction, other factors make the Council's jurisdiction less clear. First, although the text of the statute does not specifically exempt municipal towers, neither does the statute include municipal towers within the Council's jurisdiction. Conn. Gen. Stat. § 16-50i(a)(6) specifically gives the Council jurisdiction over towers "owned or operated by the state," but does not give the Council similar specific authority over towers owned by municipalities. Had the legislature intended to give the Council jurisdiction over all facilities owned by governmental entities "that were

used for public cellular radio communications services," the legislature may not have specifically included state owned facilities within the Council's jurisdiction. The legislature's failure to include towers owned or operated by municipalities within its definition of regulated facilities, while including those owned or operated by the state, may be construed as a legislative decision not to give the Council jurisdiction over municipal towers. *See Gay & Lesbian Law Students Ass'n v. Board of Trustees*, 236 Conn. 453, 476 (1996) (citing rule of statutory construction, expressio unius est exclusio alterius, or "the expression of one thing is the exclusion of another"); *Hyatt v. Burlington Coat Factory*, 263 Conn. 279, 295 (2003).

Second, Conn. Gen. Stat. § 16-50*l* (e) requires prior consultation with the chief elected official of a municipality by an applicant before filing an application with the Council, and permits the municipality to conduct public hearings. If the legislature had intended that municipal towers fall within the Council's jurisdiction, the process set forth in Section 16-50*l* (e) would require the town to consult with itself prior to filing an application with the council: "[w]e presume that the legislature intends sensible results from the statutes it enacts . . . Therefore, we read each statute in a manner that will not thwart its intended purpose or lead to absurd results." *Collins v. Colonial Penn. Ins. Co.*, 257 Conn. 718, 728-29 (2001) (citations omitted; internal quotation marks omitted.) Finally, the Council itself has never interpreted this statute to give it jurisdiction over municipal towers and continues to recognize that it has no jurisdiction over towers constructed by a town on town property that do not contain cell phone antennas, even if the town installs such antennas after the tower is constructed. Courts accord "considerable deference to the construction given a statute by the administrative agency charged with its enforcement, particularly when the agency has consistently followed its construction over a long period of time." *Sutton v. Lopes*, 201Conn. 115, 120 (1986).

The legislative history does not clarify whether municipal towers are facilities under Conn. Gen. Stat. § 16-50i (a)(6) as it contains no reference to municipal towers. As the Superior Court in *Town of Westport v. Connecticut Siting Council, supra*, noted:

> Public Acts 1984, No. 84-249 added subsection 6 to the definitions of § 16-50i(a). The act as initially passed in the Senate gave the council exclusive jurisdiction to regulate telecommunications towers used for public cellular radio communication services. 27 S.Proc., Pt. 3, 1984 Sess., p. 842,

> remarks of Senator John B. Larson. In the House proceedings, Representative David Lavine first generally pointed out that the purpose of the legislation was to end ad hoc town-by-town regulation in favor of regulation by the council. He also introduced an amendment that changed the Senate language to the current 'used in a cellular system' terminology with a reference to the federal definition of a cellular system. 27 H.R.Proc., Pt. 9, 1984 Sess., pp. 3206-11, especially pp. 3209-10. The Senate later joined in the bill as amended in the House. Public Act 84-249 as enacted thus contains broader language than as initially proposed.

Town of Westport v. Connecticut Siting Council, supra, 47 Conn. Supp. at 398-399.[2]

While the legislative history supports granting the Council exclusive jurisdiction over the siting of cellular towers, in contrast to town-by-town regulation, it does not clarify the Council's jurisdiction over towers owned by municipalities themselves. Both the language of Conn. Gen. Stat. § 16-50i (a)(6), and its legislative history are ambiguous as to the Council's jurisdiction over municipal towers and legislative clarification of this matter is, therefore, appropriate.

Please advise me if any further clarification is required.

Very truly yours,

RICHARD BLUMENTHAL
ATTORNEY GENERAL

[2] Note that the Connecticut Supreme Court essentially adopted the Superior Court's decision. *Town of Westport v. Connecticut Siting Council*, 260 Conn. 266, 796 A.2d 510 (2002).

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@ct.gov
www.ct.gov/csc

September 28, 2015

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

RE: **PE1133-VER-20150805** – Cellco Partnership d/b/a Verizon Wireless sub-petition for a declaratory ruling for approval of an eligible facility request for modifications to an existing telecommunications facility located at 35 South Bartlett Road, Waterford, Connecticut.

Dear Attorney Baldwin:

The Connecticut Siting Council (Council) hereby approves your Eligible Facilities Request (EFR) to install antennas and associated equipment at the above-referenced facility pursuant to the Federal Communications Commission Wireless Infrastructure Report and Order, with the following conditions:

- Install feed lines and remote radio heads in accordance with the structural analysis report prepared by FDH Velocitel dated April 21, 2015 and stamped by Dennis Abel;
- Within 45 days following completion of the equipment installation, Cellco shall provide documentation that its installation complied with the recommendations of the structural analysis;
- Within 45 days after completion of construction, the Council shall be notified in writing that construction has been completed;
- Any nonfunctioning antenna and associated antenna mounting equipment on this facility owned and operated by the Petitioner shall be removed within 60 days of the date the antenna ceased to function;
- The validity of this action shall expire one year from the date of this letter; and
- The petitioner may file a request for an extension of time beyond the one year deadline provided that such request is submitted to the Council not less than 60 days prior to the expiration.

This decision is under the exclusive jurisdiction of the Council and is not applicable to any other modification or construction. All work is to be implemented as specified in the EFR received August 5, 2015.

Thank you for your attention and cooperation.

Very truly yours,

Melanie Bachman
Acting Executive Director

MB/MP

c: Honorable Daniel M. Steward, First Selectman, Town of Waterford
Mark A. Wujtewicz, Planner, Town of Waterford

S:\PETITIONS\1101-\1133\3_Subpetitions_ByTown\Waterford\PE1133-VER-20150805-Waterford-35 South Bartlett Road-decision.docx

ATTACHMENT 2

verizon

WIRELESS COMMUNICATIONS FACILITY UPGRADE

QUAKER HILL CT-A
35 SOUTH BARTLETT RD,
QUAKER HILL, CT 06375

GENERAL NOTES

1. ALL WORK SHALL BE IN ACCORDANCE WITH THE 2015 INTERNATIONAL BUILDING CODE AS MODIFIED BY THE 2018 CONNECTICUT SUPPLEMENT, INCLUDING THE TIA/EIA-222 REVISION "G" STRUCTURAL STANDARDS FOR STEEL ANTENNA TOWERS AND SUPPORTING STRUCTURES, 2017 CONNECTICUT FIRE SAFETY CODE, NATIONAL ELECTRICAL CODE, AND LOCAL CODES.
2. SHOULD ANY FIELD CONDITIONS PRECLUDE COMPLIANCE WITH THE DRAWINGS, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER AND SHALL NOT PROCEED WITH ANY AFFECTED WORK.
3. CONTRACTOR SHALL REVIEW ALL DRAWINGS AND SPECIFICATIONS IN THE CONTRACT DOCUMENT SET. CONTRACTOR SHALL COORDINATE ALL WORK SHOWN IN THE SET OF DRAWINGS. THE CONTRACTOR SHALL PROVIDE A COMPLETE SET OF DRAWINGS TO ALL SUBCONTRACTORS AND ALL RELATED PARTIES. THE SUBCONTRACTORS SHALL EXAMINE ALL THE DRAWINGS AND SPECIFICATIONS FOR THE INFORMATION THAT AFFECTS THEIR WORK.
4. CONTRACTOR SHALL PROVIDE A COMPLETE BUILD-OUT WITH ALL FINISHES, STRUCTURAL, MECHANICAL, AND ELECTRICAL COMPONENTS AND PROVIDE ALL ITEMS AS SHOWN OR INDICATED ON THE DRAWINGS OR IN THE WRITTEN SPECIFICATIONS.
5. CONTRACTOR SHALL FURNISH ALL MATERIAL, LABOR AND EQUIPMENT TO COMPLETE THE WORK AND FURNISH A COMPLETED JOB ALL IN ACCORDANCE WITH LOCAL AND STATE GOVERNING AUTHORITIES AND OTHER AUTHORITIES HAVING LAWFUL JURISDICTION OVER THE WORK.
6. CONTRACTOR SHALL SECURE AND PAY FOR ALL PERMITS AND ALL INSPECTIONS REQUIRED AND SHALL ALSO PAY FEES REQUIRED FOR THE GENERAL CONSTRUCTION, AND ALL TRADES AS APPLICABLE PERMITS SHALL BE PAID FOR BY THE RESPECTIVE SUBCONTRACTORS.
7. CONTRACTOR SHALL MAINTAIN A CURRENT SET OF DRAWINGS AND SPECIFICATIONS ON SITE AT ALL TIMES AND INSURE DISTRIBUTION OF NEW DRAWINGS TO SUBCONTRACTORS AND OTHER RELEVANT PARTIES AS SOON AS THEY ARE MADE AVAILABLE. ALL OLD DRAWINGS SHALL BE MARKED VOID AND REMOVED FROM THE CONTRACT AREA. THE CONTRACTOR SHALL FURNISH AN "AS-BUILT" SET OF DRAWINGS TO OWNER UPON COMPLETION OF PROJECT.
8. LOCATION OF EQUIPMENT, AND WORK SUPPLIED BY OTHERS THAT IS DIAGRAMMATICALLY INDICATED ON THE DRAWINGS SHALL BE DETERMINED BY THE CONTRACTOR. THE CONTRACTOR SHALL DETERMINE LOCATIONS AND DIMENSIONS SUBJECT TO STRUCTURAL CONDITIONS AND WORK OF THE SUBCONTRACTORS.
9. THE CONTRACTOR IS SOLELY RESPONSIBLE TO DETERMINE CONSTRUCTION PROCEDURE AND SEQUENCE, AND TO ENSURE THE SAFETY OF THE EXISTING STRUCTURES AND ITS COMPONENT PARTS DURING CONSTRUCTION. THIS INCLUDES THE ADDITION OF WHATEVER SHORING, BRACING, UNDERPINNING, ETC. THAT MAY BE NECESSARY. MAINTAIN EXISTING BUILDING'S/PROPERTY'S OPERATIONS, COORDINATE WORK WITH BUILDING/PROPERTY OWNER.
10. DRAWINGS INDICATE THE MINIMUM STANDARDS, BUT IF ANY WORK SHOULD BE INDICATED TO BE SUBSTANDARD TO ANY ORDINANCES, LAWS, CODES, RULES, OR REGULATIONS BEARING ON THE WORK, THE CONTRACTOR SHALL INCLUDE IN HIS WORK AND SHALL EXECUTE THE WORK CORRECTLY IN ACCORDANCE WITH SUCH ORDINANCES, LAWS, CODES, RULES OR REGULATIONS WITH NO INCREASE IN COSTS.
11. ALL UTILITY WORK SHALL BE IN ACCORDANCE WITH LOCAL UTILITY COMPANY REQUIREMENTS AND SPECIFICATIONS.
12. ALL EQUIPMENT AND PRODUCTS PURCHASED ARE TO BE REVIEWED BY CONTRACTOR AND ALL APPLICABLE SUBCONTRACTORS FOR ANY CONDITION PER MFR.'S RECOMMENDATIONS. CONTRACTOR TO SUPPLY THESE ITEMS AT NO COST TO OWNER OR CONSTRUCTION MANAGER.
13. ANY AND ALL ERRORS, DISCREPANCIES, AND "MISSED" ITEMS ARE TO BE BROUGHT TO THE ATTENTION OF THE VERIZON WIRELESS CONSTRUCTION MANAGER DURING THE BIDDING PROCESS BY THE CONTRACTOR. ALL THESE ITEMS ARE TO BE INCLUDED IN THE BID. NO "EXTRA" WILL BE ALLOWED FOR MISSED ITEMS.
14. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL ON-SITE SAFETY FROM THE TIME THE JOB IS AWARDED UNTIL ALL WORK IS COMPLETE AND ACCEPTED BY THE OWNER.
15. CONTRACTOR TO REVIEW ALL SHOP DRAWINGS AND SUBMIT COPY TO ENGINEER FOR APPROVAL. DRAWINGS MUST BEAR THE CHECKER'S INITIALS BEFORE SUBMITTING TO THE CONSTRUCTION MANAGER FOR REVIEW.
16. THE CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS, ELEVATIONS, ANGLES, AND EXISTING CONDITIONS AT THE SITE, PRIOR TO FABRICATION AND/OR INSTALLATION OF ANY WORK IN THE CONTRACT AREA.
17. COORDINATION, LAYOUT, FURNISHING AND INSTALLATION OF CONDUIT AND ALL APPURTENANCES REQUIRED FOR PROPER INSTALLATION OF ELECTRICAL AND TELECOMMUNICATION SERVICE SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
18. ALL EQUIPMENT AND PRODUCTS PURCHASED ARE TO BE REVIEWED BY CONTRACTOR AND ALL APPLICABLE SUB- CONTRACTORS FOR ANY CONDITION PER THE MANUFACTURER'S RECOMMENDATIONS. CONTRACTOR TO SUPPLY THESE ITEMS AT NO COST TO OWNER OR CONSTRUCTION MANAGER.
19. ALL DAMAGE CAUSED TO ANY EXISTING STRUCTURE SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR WILL BE HELD LIABLE FOR ALL REPAIRS REQUIRED FOR EXISTING STRUCTURES IF DAMAGED DURING CONSTRUCTION ACTIVITIES.
20. THE CONTRACTOR SHALL CONTACT "CALL BEFORE YOU DIG" AT LEAST 48 HOURS PRIOR TO ANY EXCAVATIONS AT 1-800-922-4455. ALL UTILITIES SHALL BE IDENTIFIED AND CLEARLY MARKED PRIOR TO ANY EXCAVATION WORK. CONTRACTOR SHALL MAINTAIN AND PROTECT MARKED UTILITIES THROUGHOUT PROJECT COMPLETION.

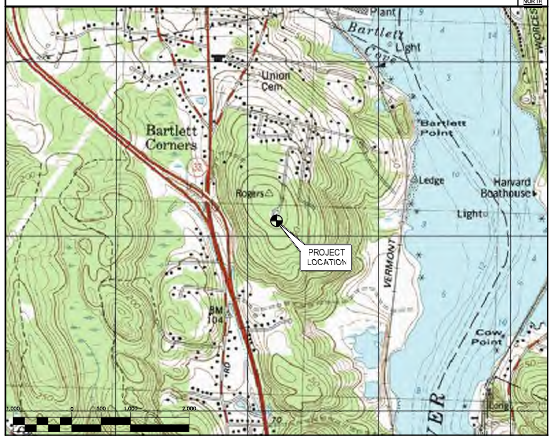
SITE DIRECTIONS

FROM: 20 ALEXANDER DRIVE WALLINGFORD, CONNECTICUT **TO:** 35 SOUTH BARTLETT RD, QUAKER HILL, CT 06375

1.	START OUT GOING NORTH ON ALEXANDER DR TOWARD BARNES INDUSTRIAL RD.	0.18 MI
2.	TURN RIGHT ONTO BARNES INDUSTRIAL RD.	0.11 MI
3.	TAKE THE 1ST RIGHT ONTO CT-68.	2.75 MI
4.	TURN SLIGHT LEFT ONTO DURHAM RD/CT-68. CONTINUE TO FOLLOW CT-68.	4.25 MI
5.	TURN RIGHT ONTO MAIN ST/CT-17.	0.85 MI
6.	STAY STRAIGHT TO GO ONTO MADISON RD/CT-79. CONTINUE TO FOLLOW CT-79.	2.55 MI
7.	TURN LEFT ONTO ROUTE 148 RD/CT-148. CONTINUE TO FOLLOW CT-148.	11.86 MI
8.	MERGE ONTO CT-9 S TOWARD OLD SAYBROOK.	8.38 MI
9.	MERGE ONTO I-95 N VIA THE EXIT ON THE LEFT TOWARD NEW LONDON/PROVIDENCE.	10.66 MI
10.	MERGE ONTO I-395 N VIA EXIT 76 ON THE LEFT TOWARD NORWICH/PLAINFIELD.	6.38 MI
11.	TAKE THE CT-163 EXIT, EXIT 6, TOWARD MONTVILLE/UNCASVILLE.	0.26 MI
12.	TURN LEFT ONTO ROUTE 163/CT-163.	0.48 MI
13.	TURN RIGHT ONTO NORWICH NEW LONDON TURNPIKE/CT-32. CONTINUE TO FOLLOW CT-32.	1.01 MI
14.	TURN LEFT ONTO LATHROP RD.	0.10 MI
15.	TAKE THE 1ST RIGHT ONTO UPPER BARTLETT RD.	0.29 MI
16.	TURN RIGHT ONTO S BARTLETT RD.	0.21 MI
17.	35 S BARTLETT RD, QUAKER HILL, CT 06375-1104, 35 S BARTLETT RD IS ON THE RIGHT. FOLLOW ROAD ALL THE WAY TO THE END TO REACH THE TOWER.	

VICINITY MAP

SCALE: 1" = 1000'



PROJECT SUMMARY

1. THE PROPOSED UPGRADE SCOPE OF WORK AT THE EXISTING UNMANNED TELECOMMUNICATIONS FACILITY GENERALLY INCLUDES THE FOLLOWING:

A. AT THE EXISTING TOWER MOUNTED ANTENNA SECTORS:

- INSTALL ANTENNA MOUNT BRACING PER MOUNT MODIFICATION DRAWINGS PREPARED BY OTHERS AS REFERENCED HEREIN.
- RELOCATE (6) EXISTING SBNHH ANTENNAS IN POSITION 2 & 3 ON (3) NEW BSAMNT-SBS-1-2 MOUNTS AT POSITION 2 AT EACH SECTOR.
- INSTALL (3) ALL-IN-ONE ANTENNA/RRHS AT POSITION 4.
- REMOVE (9) EXISTING NOKIA RRHS.
- INSTALL (3) NEW SAMSUNG B5/B13 RRH-BR04C (RFV01U-D2A) AND (3) NEW SAMSUNG B2/B66A RRH-BR049 (RFV01U-D1A).
- PLUMB 700/ 850/ PCS/ AWS/ L-SUB6 ACCORDING TO THE PLUMBING DIAGRAM.
- DAISY CHAIN AISG CABLES BETWEEN RET CAPABLE ANTENNAS AND CONNECT VIA RRH.
- CAP AND WEATHERPROOF UNUSED PORTS/CONNECTORS.

PROJECT INFORMATION

SITE NAME:	QUAKER HILL CT-A
SITE ADDRESS:	35 SOUTH BARTLETT RD, QUAKER HILL, CT 06375
LESSEE/TENANT:	CELLCO PARTNERSHIP d.b.a. VERIZON WIRELESS 20 ALEXANDER DRIVE WALLINGFORD, CT 06492
CONTACT PERSON:	WALTER CHARCZNSKI (CONSTRUCTION MANAGER) VERIZON WIRELESS (860) 306-1806
ENGINEER:	CENTEK ENGINEERING, INC. 63-2 NORTH BRANFORD RD. BRANFORD, CT. 06405 (203) 488-0580
PROJECT COORDINATES:	LATITUDE: 41°-25'-3.55"N LONGITUDE: 72°-6'-24.22"W GROUND ELEVATION: 262'± AMSL COORDINATES REFERENCED FROM VERIZON WIRELESS RFDS COVER SHEET. GROUND ELEVATION REFERENCED FROM FAA 2C SURVEY CERTIFICATION PREPARED FOR SBA TOWERS 2, LLC BY DEWBERRY-GOODKIND, INC., DATED 01/17/2008.

SHEET INDEX

SHT. NO.	DESCRIPTION	REV.
T-1	TITLE SHEET	1
N-1	NOTES AND SPECIFICATIONS	1
B-1	RF BILL OF MATERIALS	1
C-1	PLAN AND ELEVATION	1
C-2	ANTENNA SECTOR CONFIGURATION DETAILS	1
C-3	RF DETAILS	1
E-1	ELECTRICAL DETAILS AND SPECIFICATIONS	1

REV.	DATE	DRAWN BY	CHK'D BY	DESCRIPTION
1	06/18/21	DMD	TJL	CONSTRUCTION DRAWINGS - REVISED TO INCLUDE FAA ELEVATION INFO.
A	05/06/21	DMD	TJL	CONSTRUCTION DRAWINGS - ISSUED FOR CONSTRUCTION
	04/29/21	DMD	TJL	PRELIMINARY CONSTRUCTION DRAWINGS - ISSUED FOR CLIENT REVIEW

PROFESSIONAL ENGINEER SEAL

verizon

CENTEK engineering
Centered on Solutions
(203) 488-0580
(203) 488-8587 Fax
63-2 North Branford Road
Branford, CT 06405
www.CentekEng.com

Cellco Partnership d/b/a Verizon Wireless

QUAKER HILL CT-A

35 SOUTH BARTLETT RD,
QUAKER HILL, CT 06375

DATE: 04/29/21
SCALE: AS NOTED
JOB NO. 21007.21

TITLE SHEET

T-1

Sheet No. 1 of 7

NOTES AND SPECIFICATIONS

DESIGN BASIS:

GOVERNING CODE: 2015 INTERNATIONAL BUILDING (IBC) AS MODIFIED BY THE 2018 CT STATE BUILDING CODE AND AMENDMENTS.

1. DESIGN CRITERIA:

- RISK CATEGORY: II (BASED ON TABLE 1604.5 OF THE 2015 IBC)
- NOMINAL DESIGN SPEED (BUILDING): 105 MPH (Vasd) (EXPOSURE B/IMPORTANCE FACTOR 1.0 BASED ON ASCE 7-10) PER 2015 INTERNATIONAL BUILDING CODE (IBC) AS MODIFIED BY THE 2018 CONNECTICUT STATE BUILDING CODE.
- SEISMIC LOAD (DOES NOT CONTROL): PER ASCE 7-10 MINIMUM DESIGN LOADS FOR BUILDING AND OTHER STRUCTURES.

GENERAL NOTES:

1. ALL CONSTRUCTION SHALL BE IN COMPLIANCE WITH THE GOVERNING BUILDING CODE.
2. DRAWINGS INDICATE THE MINIMUM STANDARDS, BUT IF ANY WORK SHOULD BE INDICATED TO BE SUBSTANDARD TO ANY ORDINANCES, LAWS, CODES, RULES, OR REGULATIONS BEARING ON THE WORK, THE CONTRACTOR SHALL INCLUDE IN HIS WORK AND SHALL EXECUTE THE WORK CORRECTLY IN ACCORDANCE WITH SUCH ORDINANCES, LAWS, CODES, RULES OR REGULATIONS WITH NO INCREASE IN COSTS.
3. BEFORE BEGINNING THE WORK, THE CONTRACTOR IS RESPONSIBLE FOR MAKING SUCH INVESTIGATIONS CONCERNING PHYSICAL CONDITIONS (SURFACE AND SUBSURFACE) AT OR CONTIGUOUS TO THE SITE WHICH MAY AFFECT PERFORMANCE AND COST OF THE WORK.
4. DIMENSIONS AND DETAILS SHALL BE CHECKED AGAINST EXISTING FIELD CONDITIONS.
5. THE CONTRACTOR SHALL VERIFY AND COORDINATE THE SIZE AND LOCATION OF ALL OPENINGS, SLEEVES AND ANCHOR BOLTS AS REQUIRED BY ALL TRADES.
6. ALL DIMENSIONS, ELEVATIONS, AND OTHER REFERENCES TO EXISTING STRUCTURES, SURFACE, AND SUBSURFACE CONDITIONS ARE APPROXIMATE. NO GUARANTEE IS MADE FOR THE ACCURACY OR COMPLETENESS OF THE INFORMATION SHOWN. THE CONTRACTOR SHALL VERIFY AND COORDINATE ALL DIMENSIONS, ELEVATIONS, ANGLES WITH EXISTING CONDITIONS AND WITH ARCHITECTURAL AND SITE DRAWINGS BEFORE PROCEEDING WITH ANY WORK.
7. AS THE WORK PROGRESSES, THE CONTRACTOR SHALL NOTIFY THE OWNER OF ANY CONDITIONS WHICH ARE IN CONFLICT OR OTHERWISE NOT CONSISTENT WITH THE CONSTRUCTION DOCUMENTS AND SHALL NOT PROCEED WITH SUCH WORK UNTIL THE CONFLICT IS SATISFACTORILY RESOLVED.
8. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE SAFETY CODES AND REGULATIONS DURING ALL PHASES OF CONSTRUCTION. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR PROVIDING AND MAINTAINING ADEQUATE SHORING, BRACING, AND BARRICADES AS MAY BE REQUIRED FOR THE PROTECTION OF EXISTING PROPERTY, CONSTRUCTION WORKERS, AND FOR PUBLIC SAFETY.
9. THE CONTRACTOR IS SOLELY RESPONSIBLE TO DETERMINE CONSTRUCTION PROCEDURE AND SEQUENCE, AND TO ENSURE THE SAFETY OF THE EXISTING STRUCTURES AND ITS COMPONENT PARTS DURING CONSTRUCTION. THIS INCLUDES THE ADDITION OF WHATEVER SHORING, BRACING, UNDERPINNING, ETC. THAT MAY BE NECESSARY. MAINTAIN EXISTING SITE OPERATIONS, COORDINATE WORK WITH NORTHEAST UTILITIES
10. ALL DAMAGE CAUSED TO ANY EXISTING STRUCTURE SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR WILL BE HELD LIABLE FOR ALL REPAIRS REQUIRED FOR EXISTING STRUCTURES IF DAMAGED DURING CONSTRUCTION ACTIVITIES.
11. REFER TO DRAWING T1 FOR ADDITIONAL NOTES AND REQUIREMENTS.

REV.	DATE	DRAWN BY	CHK'D BY	DESCRIPTION
-	04/29/21	DMD	TJL	PRELIMINARY CONSTRUCTION DRAWINGS – ISSUED FOR CLIENT REVIEW
A	05/06/21	DMD	TJL	CONSTRUCTION DRAWINGS – ISSUED FOR CONSTRUCTION
1	06/08/21	DMD	TJL	CONSTRUCTION DRAWINGS – REVISED TO INCLUDE FAA ELEVATION INFO.

PROFESSIONAL ENGINEER SEAL

verizon

CENTEK engineering
Centered on Solutions
(203) 488-0580
(203) 488-8587 Fax
63-2 North Branford Road
Branford, CT 06405
www.CentekEng.com

Cellco Partnership d/b/a Verizon Wireless

QUAKER HILL CT-A

35 SOUTH BARTLETT RD.
QUAKER HILL, CT 06375

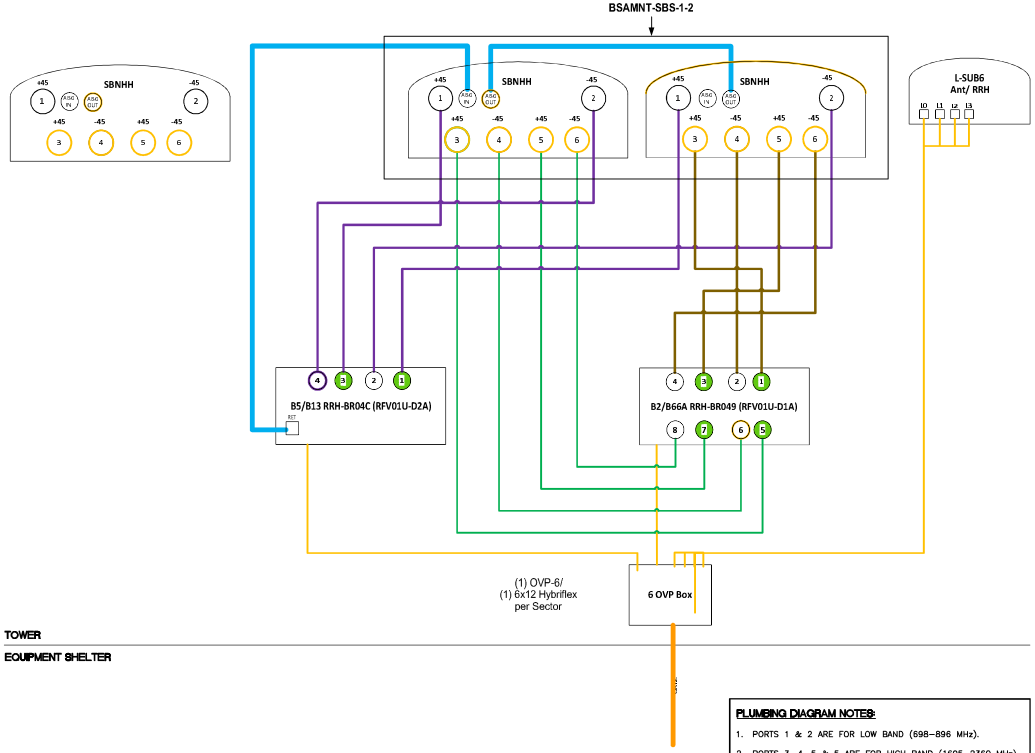
DATE: 04/29/21
SCALE: AS NOTED
JOB NO. 21007.21

NOTES AND SPECIFICATIONS

N-1

Sheet No. 2 of 7

BSAMNT-SBS-1-2



PLUMBING DIAGRAM NOTES:

1. PORTS 1 & 2 ARE FOR LOW BAND (698–896 MHz).
2. PORTS 3, 4, 5 & 6 ARE FOR HIGH BAND (1695–2360 MHz).
3. SMART BIAS TEE (SBT) IS THROUGH ANTENNA PORTS 1 & 3 (1 FOR LOW BAND AND 3 FOR HIGH BAND).
4. AISG CABLE IS ONLY NEEDED WHEN DRAWN IN THE DIAGRAMS ABOVE. IF IT IS NOT DRAWN THEN SBT IS ENOUGH TO CONTROL ALL RET MOTORS.
5. NOT ALL SBT PORTS ARE NEEDED TO CONTROL RET. ONLY GREEN PORT CONNECTION TO GREEN PORT WILL CONTROL RET.

RET DC SIGNAL PASS FOR RET
(PORT THAT WILL CONTROL RET)

DC SIGNAL CAPABLE PORT

AISG CABLE

RET DC SIGNAL PASS FOR RET (PORT THAT WILL CONTROL RET)

PLUMBING DIAGRAM COMMENTS:

A. DIAGRAMS SHOW ANTENNA PORT CONFIGURATIONS AS VIEWED FROM BELOW ANTENNAS.

B. ANTENNA POSITIONS ARE INDICATED AS VIEWED FROM IN FRONT OF ANTENNAS.

C. CAP AND WEATHERPROOF UNUSED ANTENNA PORTS.

D. ALL PLUMBING DIAGRAM COLORS ARE IRRELEVANT EXCEPT FOR AISG AND HYBRIFLEX CABLE. (FOR THE COAX COLORS, FOLLOW COAX COLORS GUIDE ABOVE)

NOTES:

1. INFORMATION SHOWN HEREIN IS FOR USE BY VERIZON WIRELESS EQUIPMENT OPERATIONS.
2. THIS B.O.M. DRAWING IS BASED ON FACILITY UPGRADE DESIGN DRAWINGS PREPARED BY CENTEK ENGINEERING (REV.0 DATED: 05.06.21), & VERIZON WIRELESS RF ANTENNA EQUIPMENT RECOMMENDATION (DATED 05.05.21).

BILL OF MATERIALS

TECHNOLOGY	QUANTITY	ANTENNA
LTE 700	–	–
LTE 850		
LTE PCS 1900		
LTE AWS 2100		
5G	3	SAMSUNG ANTENNA MODEL: MT6407-77A

CABLES	QUANTITY	LENGTH	COMMENTS
–	–	–	–

RADIOS	QUANTITY	COMMENTS
LTE 700	3	SAMSUNG MODEL: B5/B13 RRH-BR04C
LTE 850		
LTE PCS 1900	3	SAMSUNG MODEL: B2/B66A RRH-BR049
LTE AWS 2100		
5G	3	INTEGRATED INTO MT6407-77A ANTENNA

DIPLEXERS	QUANTITY	COMMENTS
–	0	–

OVP BOXES	QUANTITY	COMMENTS
OVP	0	–

ANTENNA MOUNT	QUANTITY	COMMENTS
SIDE-BY-SIDE MOUNTING KIT	3	COMMSCOPE MODEL BSAMNT-SBS-1-2

REFER TO FINAL VERIZON WIRELESS MOUNT MODIFICATION DESIGN PREPARED BY MASER CONSULTING CONNECTICUT DATED 04/20/2021 FOR ANTENNA MOUNT MODIFICATIONS AND ASSOCIATED REQUIRED MATERIALS.

REV.	DATE	DRAWN BY	CHK'D BY	DESCRIPTION
4	04/29/21	DMD	TJL	PRELIMINARY CONSTRUCTION DRAWINGS – ISSUED FOR CLIENT REVIEW
3	05/06/21	DMD	TJL	CONSTRUCTION DRAWINGS – ISSUED FOR CONSTRUCTION
2	06/08/21	DMD	TJL	CONSTRUCTION DRAWINGS – REVISED TO INCLUDE FAA ELEVATION INFO.

PROFESSIONAL ENGINEER SEAL

verizon

CENTEK engineering
Centered on Solutions
(203) 488-0580
(203) 488-8587 Fax
63-2 North Branford Road
Branford, CT 06405
www.CentekEng.com

Cellco Partnership d/b/a Verizon Wireless

QUAKER HILL CT-A

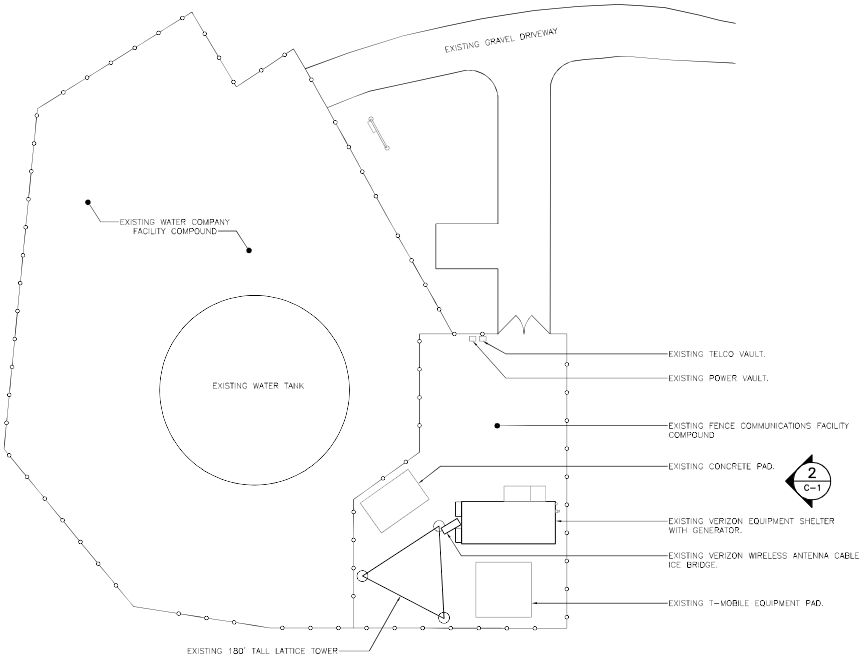
35 SOUTH BARTLETT RD.
QUAKER HILL, CT 06375

DATE: 04/29/21
SCALE: AS NOTED
JOB NO. 21007.21

RF BILL OF MATERIALS

B-1

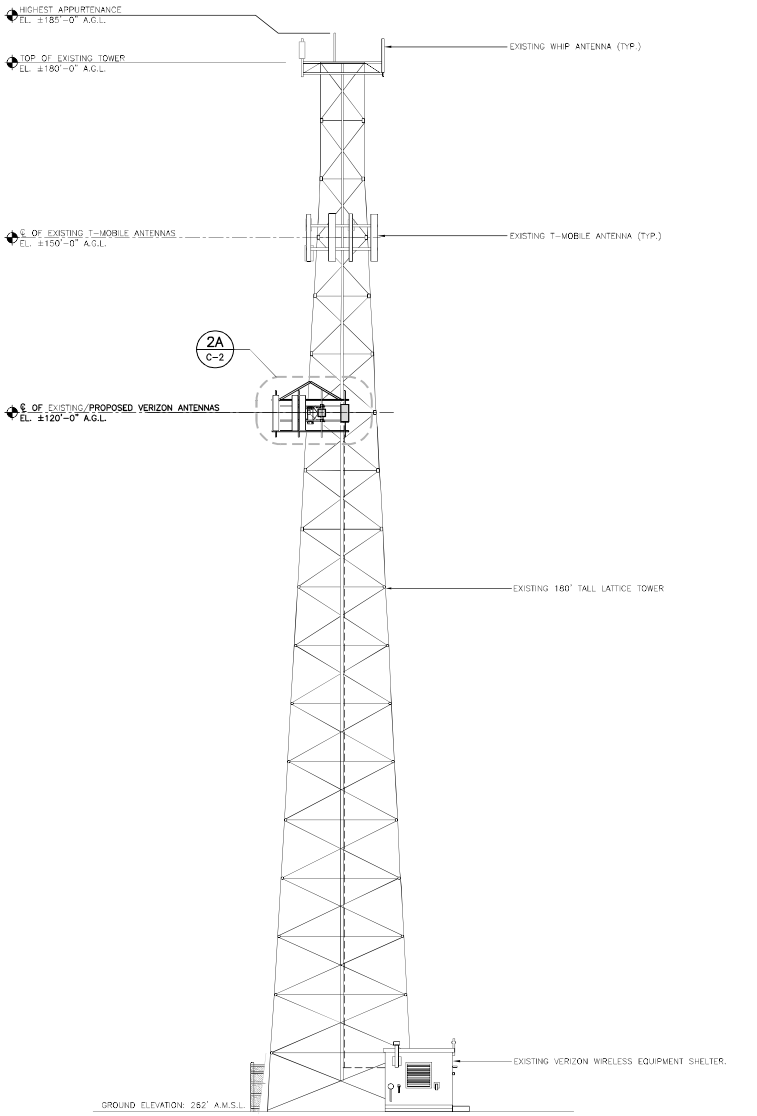
Sheet No. 3 of 7



1 C-1 **COMPOUND/ PARTIAL SITE PLAN**
SCALE: 1/8" = 1'- 0"

TRUE NORTH

GRAPHIC SCALE
(IN FEET)
1 inch = 8 ft.



2 C-1 **WEST ELEVATION - PROPOSED CONDITIONS**
SCALE: 1" = 10'-0"

GRAPHIC SCALE
(IN FEET)
1 inch = 10 ft.

REV.	DATE	DRAWN BY	CHK'D BY	DESCRIPTION
1	05/18/21	DMD	TJL	CONSTRUCTION DRAWINGS – REVISED TO INCLUDE FAA ELEVATION INFO.
0	05/06/21	DMD	TJL	CONSTRUCTION DRAWINGS – ISSUED FOR CONSTRUCTION
A	04/29/21	DMD	TJL	PRELIMINARY CONSTRUCTION DRAWINGS – ISSUED FOR CLIENT REVIEW

PROFESSIONAL ENGINEER SEAL

verizon

CENTEK engineering
Centered on Solutions
(203) 488-0580
(203) 488-8587 Fax
63-2 North Branford Road
Branford, CT 06405
www.CentekEng.com

Cellco Partnership d/b/a Verizon Wireless

QUAKER HILL CT-A

35 SOUTH BARTLETT RD.
QUAKER HILL, CT 06375

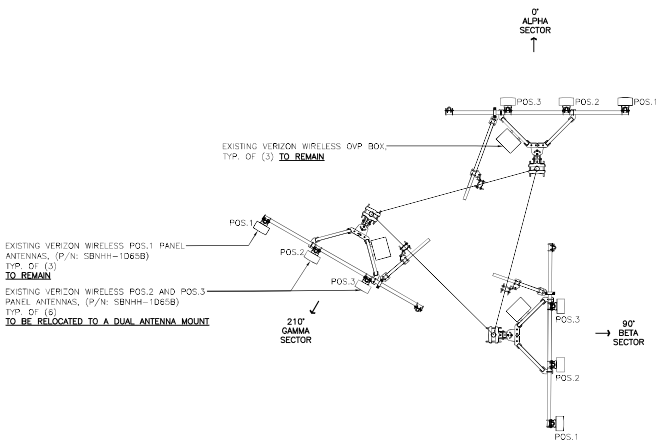
DATE: 04/29/21
SCALE: AS NOTED
JOB NO. 21007.21

PLAN AND ELEVATION

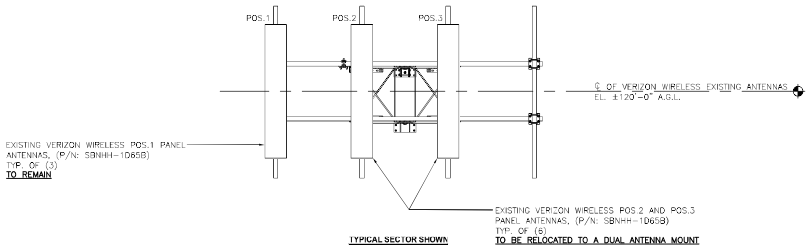
C-1

Sheet No. 4 of 7

EXISTING ANTENNA CONFIGURATIONS



1 / C-2 **EXISTING SECTOR CONFIGURATION PLAN**
SCALE: 1/4" = 1'-0"

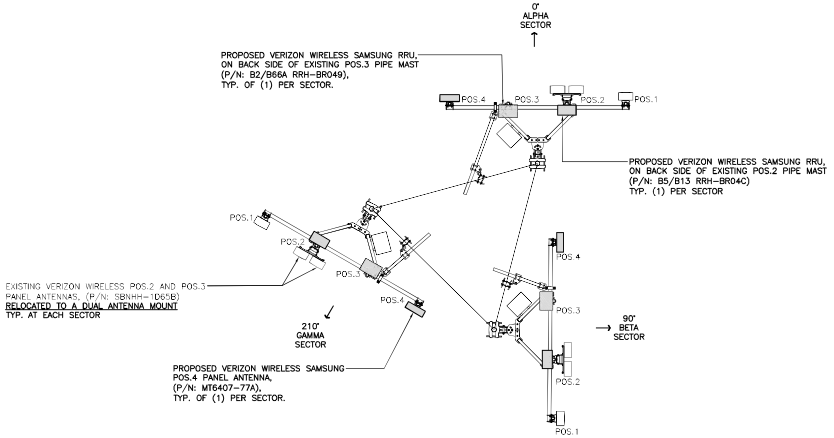


1A / C-2 **EXISTING SECTOR CONFIGURATION ELEVATION**
SCALE: 3/8" = 1'-0"

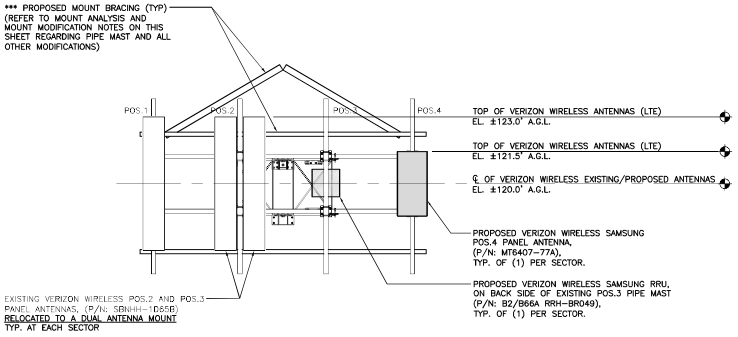
PROPOSED ANTENNA CONFIGURATIONS

ANTENNA MOUNT ANALYSIS AND MOD NOTES:

1. REFER TO PASSING VERIZON WIRELESS MOUNT ANALYSIS REPORT PREPARED BY MASER CONSULTING CONNECTICUT DATED 04/20/2021 FOR ADDITIONAL INFORMATION.
2. REFER TO FINAL VERIZON WIRELESS MOUNT MODIFICATION DESIGN PREPARED BY MASER CONSULTING CONNECTICUT DATED 04/20/2021 FOR ANTENNA MOUNT MODIFICATIONS.



2 / C-2 **PROPOSED SECTOR CONFIGURATION PLAN**
SCALE: 1/4" = 1'-0"



2A / C-2 **PROPOSED SECTOR CONFIGURATION ELEVATION**
SCALE: 3/8" = 1'-0"

REV.	DATE	DRAWN BY	CHK'D BY	DESCRIPTION
1	06/08/21	DMD	TJL	CONSTRUCTION DRAWINGS – REVISED TO INCLUDE FAA ELEVATION INFO.
0	05/06/21	DMD	TJL	CONSTRUCTION DRAWINGS – ISSUED FOR CONSTRUCTION
A	04/29/21	DMD	TJL	PRELIMINARY CONSTRUCTION DRAWINGS – ISSUED FOR CLIENT REVIEW

PROFESSIONAL ENGINEER SEAL

verizon

CENTEK engineering
Centered on Solutions
(203) 488-0580
(203) 488-8587 Fax
63-2 North Branford Road
Branford, CT 06405
www.CentekEng.com

Cellco Partnership d/b/a Verizon Wireless

QUAKER HILL CT-A

35 SOUTH BARTLETT RD,
QUAKER HILL, CT 06375

DATE: 04/29/21
SCALE: AS NOTED
JOB NO. 21007.21

ANTENNA SECTOR CONFIGURATION DETAILS

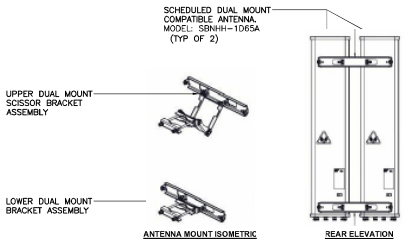
C-2

Sheet No. 5 of 7

ANTENNA FRONT

SECTOR ANTENNA		
EQUIPMENT	DIMENSIONS	WEIGHT
MAKE: SAMSUNG MODEL: MT6407-77A	35.1"h x 16.1"W x 5.5"D (NOT TO EXCEED)	87 LBS. (NOT TO EXCEED)
CLEARANCES AND SERVICE AREA		
TOP: 31.5"	HORIZONTAL DISTANCE: 31.5" (ANT. TO ANT.)	
FRONT, SIDES & BOTTOM: 15.7"	VERTICAL DISTANCE: 63.0" (ANT. TO ANT.)	
NOTES: 1. THIS ANTENNA HAS ITS OWN BUILT-IN RRH.		

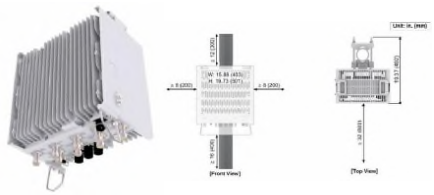
1 / C-3 **SECTOR ANTENNA DETAIL**
NOT TO SCALE



ANTENNA MOUNT ISOMETRIC REAR ELEVATION

DUAL ANTENNA MOUNTING KIT	
EQUIPMENT	DESCRIPTION
MOUNT MAKE: COMMSCOPE MODEL: BASMNT-SBS-1-2	• SIDE-BY-SIDE MOUNTING KIT, ACCOMMODATES (2) COMPATABLE ANTENNAS • ACCOMMODATES MAST DIAMETERS FROM 2.375" TO 4.5" (O.D.)

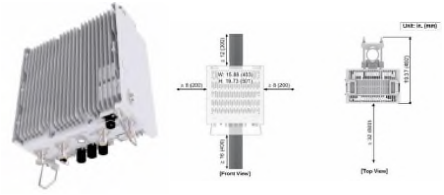
2 / C-3 **DUAL ANTENNA MOUNT DETAIL**
NOT TO SCALE



RRH ISOMETRIC RRH CLEARANCES

DUAL BAND RRU (REMOTE RADIO UNIT)			
EQUIPMENT	BANDS	DIMENSIONS	WEIGHT
MAKE: SAMSUNG MODEL: B2/B66A RRH-BR049 (RFV01U-D1A)	B2: PCS (1900 MHz) B66: AWS (2100 MHz)	15.0"H x 15.0"W x 10.0"D	84.4 LBS.
NOTES: 1. CONTRACTOR TO COORDINATE FINAL EQUIPMENT MODEL SELECTION WITH VERIZON WIRELESS CONSTRUCTION MANAGER PRIOR TO ORDERING.			

3 / C-3 **DUAL-BAND AWS/PCS RADIO UNIT DETAIL**
NOT TO SCALE



RRH ISOMETRIC RRH CLEARANCES

DUAL BAND RRU (REMOTE RADIO UNIT)			
EQUIPMENT	BANDS	DIMENSIONS	WEIGHT
MAKE: SAMSUNG MODEL: B5/B13 RRH-BR04C (RFV01U-D2A)	B5: 850 MHz B13: 700 MHz	15.0"H x 15.0"W x 8.1"D	70.3 LBS.
NOTES: 1. CONTRACTOR TO COORDINATE FINAL EQUIPMENT MODEL SELECTION WITH VERIZON WIRELESS CONSTRUCTION MANAGER PRIOR TO ORDERING.			

4 / C-3 **DUAL-BAND 700/850 MHZ RADIO UNIT DETAIL**
NOT TO SCALE

REV.	DATE	DRAWN BY	CHK'D BY	DESCRIPTION
1	06/08/21	DMD	TJL	CONSTRUCTION DRAWINGS – REVISED TO INCLUDE FAA ELEVATION INFO.
A	05/06/21	DMD	TJL	CONSTRUCTION DRAWINGS – ISSUED FOR CONSTRUCTION
	04/29/21	DMD	TJL	PRELIMINARY CONSTRUCTION DRAWINGS – ISSUED FOR CLIENT REVIEW

PROFESSIONAL ENGINEER SEAL

verizon

CENTEK engineering
Centered on Solutions
(203) 488-0580
(203) 488-8587 Fax
63-2 North Branford Road
Branford, CT 06405
www.CentekEng.com

Cellco Partnership d/b/a Verizon Wireless

QUAKER HILL CT-A

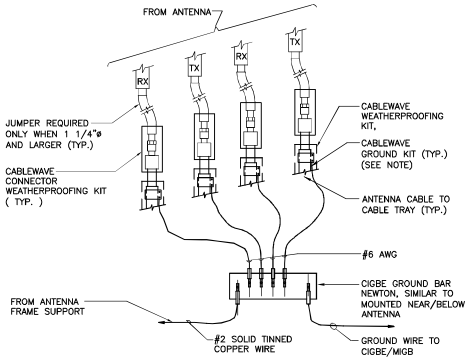
35 SOUTH BARTLETT RD.
QUAKER HILL, CT 06375

DATE: 04/29/21
SCALE: AS NOTED
JOB NO. 21007.21

RF DETAILS

C-3

Sheet No. 6 of 7



NOTES:

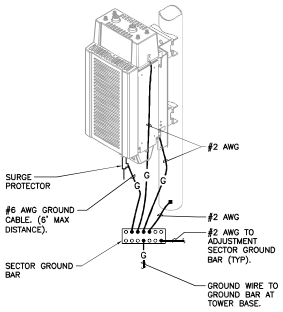
1. DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO CIGBE

1 E-1 CONNECTION OF GROUND WIRES TO GROUND BAR

NOT TO SCALE

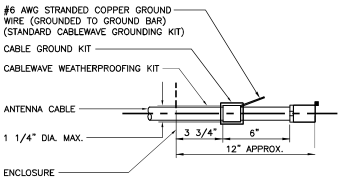
EACH RRH CABINET SHALL BE GROUNDED IN THE FOLLOWING MANNER:

1. AT TOP OF THE CABINET
2. AT RIGHT SIDE OF THE CABINET.



2 E-1 RRH POLE MOUNT GROUNDING

NOT TO SCALE

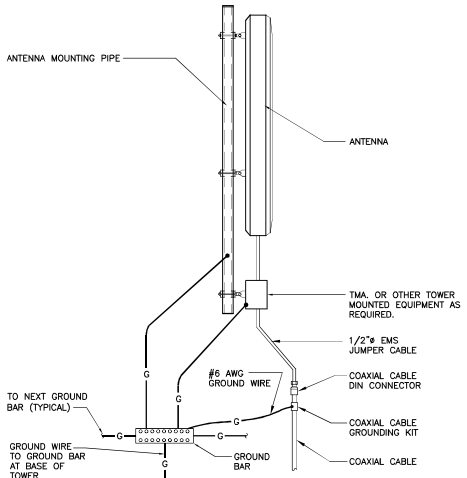


NOTES:

1. DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO GROUND BAR.

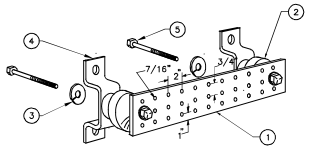
3 E-1 ANTENNA CABLE GROUNDING DETAIL

NOT TO SCALE



4 E-1 TYPICAL ANTENNA GROUNDING DETAIL

NOT TO SCALE



NOTES

1. TINNED COPPER GROUND BAR, 1/4" x 4" x 20", NEWTON INSTRUMENT CO. HOLE CENTERS TO MATCH NEMA DOUBLE LUG CONFIGURATION.
2. INSULATORS, NEWTON INSTRUMENT CAT. NO. 3061-4.
3. 5/8" LOCK WASHERS, NEWTON INSTRUMENT CO. CAT. NO. 3015-8.
4. WALL MOUNTING BRACKET, NEWTON INSTRUMENT CO. CAT NO. A-6056.
5. 5/8-11 x 1" STAINLESS STEEL TRUSS SPANNER MACHINE SCREWS.

5 E-1 GROUND BAR DETAIL

NOT TO SCALE

ELECTRICAL SPECIFICATIONS

SECTION 16010

1.01. SCOPE OF WORK

A. WORK SHALL INCLUDE ALL LABOR, EQUIPMENT AND SERVICES REQUIRED TO COMPLETE (MAKE READY FOR OPERATION) ALL THE ELECTRICAL WORK INCLUDING, BUT NOT LIMITED TO, THE FOLLOWING:

1. CELLULAR GROUNDING SYSTEMS CONSISTING OF ANTENNA GROUNDING, GROUND BARS, ETC.

1.02. GENERAL REQUIREMENTS

A. THE ENTIRE ELECTRICAL INSTALLATION SHALL BE MADE IN STRICT ACCORDANCE WITH ALL LOCAL, STATE AND NATIONAL CODES AND REGULATIONS WHICH MAY APPLY AND NOTHING IN THE DRAWINGS OR SPECIFICATIONS SHALL BE INTERPRETED AS AN INFRINGEMENT OF SUCH CODES OR REGULATIONS.

B. THE ELECTRICAL CONTRACTOR IS TO BE RESPONSIBLE FOR THE COMPLETE INSTALLATION AND COORDINATION OF THE ENTIRE ELECTRICAL SERVICE. ALL ACTIVITIES TO BE COORDINATED THROUGH OWNERS REPRESENTATIVE, DESIGN ENGINEER AND OTHER AUTHORITIES HAVING JURISDICTION OF TRADES.

C. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS AND PAY ALL FEES THAT MAY BE REQUIRED FOR THE ELECTRICAL WORK AND FOR SCHEDULING OF ALL INSPECTIONS THAT MAY BE REQUIRED BY THE LOCAL AUTHORITY.

D. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION WITH THE BUILDING OWNER FOR NEW AND/OR DEMOLITION WORK INVOLVED.

E. NO MATERIAL OTHER THAN THAT CONTAINED IN THE "LATEST LIST OF ELECTRICAL FITTINGS" APPROVED BY THE UNDERWRITERS' LABORATORIES, SHALL BE USED IN ANY PART OF THE WORK. ALL MATERIAL FOR WHICH LABEL SERVICE HAS BEEN ESTABLISHED SHALL BEAR THE U.L. LABEL.

F. THE CONTRACTOR SHALL GUARANTEE ALL NEW WORK FOR A PERIOD OF ONE YEAR FROM THE ACCEPTANCE DATE BY THE OWNER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING WARRANTIES FROM ALL EQUIPMENT MANUFACTURERS FOR SUBMISSION TO THE OWNER.

G. DRAWINGS INDICATE GENERAL ARRANGEMENT OF WORK INCLUDED IN CONTRACT. CONTRACTOR SHALL, WITHOUT EXTRA CHARGE, MAKE MODIFICATIONS TO THE LAYOUT OF THE WORK TO PREVENT CONFLICT WITH WORK OF OTHER TRADES AND FOR THE PROPER INSTALLATION OF WORK. CHECK ALL DRAWINGS AND VISIT JOB SITE TO VERIFY SPACE AND TYPE OF EXISTING CONDITIONS IN WHICH WORK WILL BE DONE, PRIOR TO SUBMITTAL OF BID.

H. THE ELECTRICAL CONTRACTOR SHALL SUPPLY THREE (3) COMPLETE SETS OF APPROVED DRAWINGS, ENGINEERING DATA SHEETS, MAINTENANCE AND OPERATING INSTRUCTION MANUALS FOR ALL SYSTEMS AND THEIR RESPECTIVE EQUIPMENT. THESE MANUALS SHALL BE INSERTED IN VINYL COVERED 3-RING BINDERS AND TURNED OVER TO OWNER'S REPRESENTATIVE ONE (1) WEEK PRIOR TO FINAL PUNCH LIST.

I. ALL WORK SHALL BE INSTALLED IN A NEAT AND WORKMAN LIKE MANNER AND WILL BE SUBJECT TO THE APPROVAL OF THE OWNER'S REPRESENTATIVE.

J. ALL EQUIPMENT AND MATERIALS TO BE INSTALLED SHALL BE NEW, UNLESS OTHERWISE NOTED.

K. BEFORE FINAL PAYMENT, THE CONTRACTOR SHALL PROVIDE A COMPLETE SET OF PRINTS (AS-BUILTS), LEGIBLY MARKED IN RED PENCIL TO SHOW ALL CHANGES FROM THE ORIGINAL PLANS.

L. ENTIRE ELECTRICAL INSTALLATION SHALL BE IN ACCORDANCE WITH OWNER'S SPECIFICATIONS, AND REQUIREMENTS OF ALL LOCAL AUTHORITIES HAVING JURISDICTION. IT IS THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE WITH APPROPRIATE INDIVIDUALS TO OBTAIN ALL SUCH SPECIFICATIONS AND REQUIREMENTS. NOTHING CONTAINED IN, OR OMITTED FROM, THESE DOCUMENTS SHALL RELIEVE CONTRACTOR FROM THIS OBLIGATION.

SECTION 16450

1.01. GROUNDING

A. ALL NON-CURRENT CARRYING PARTS OF THE ELECTRICAL AND TELEPHONE CONDUIT SYSTEMS SHALL BE MECHANICALLY AND ELECTRICALLY CONNECTED TO PROVIDE AN INDEPENDENT RETURN PATH TO THE EQUIPMENT GROUNDING SOURCES.

B. GROUNDING SYSTEM WILL BE IN ACCORDANCE WITH THE LATEST ACCEPTABLE EDITION OF THE NATIONAL ELECTRICAL CODE AND REQUIREMENTS PER LOCAL INSPECTOR HAVING JURISDICTION.

C. EQUIPMENT GROUNDING CONDUCTOR:

1. EACH EQUIPMENT GROUND CONDUCTOR SHALL BE SIZED IN ACCORDANCE WITH THE N.E.C. ARTICLE 250-122.

2. THE MINIMUM SIZE OF EQUIPMENT GROUND CONDUCTOR SHALL BE #12 AWG COPPER.

D. CELLULAR GROUNDING SYSTEM:

PROVIDE THE CELLULAR GROUNDING SYSTEM AS SPECIFIED ON DRAWINGS, INCLUDING, BUT NOT LIMITED TO:

1. GROUND BARS
2. ANTENNA GROUND CONNECTIONS AND PLATES.

E. ALL EQUIPMENT SHALL BE BONDED TO GROUND AS REQUIRED BY N.E.C., MFG. SPECIFICATIONS, AND OWNER'S SPECIFICATIONS.

REV.	DATE	DRAWN BY	CHK'D BY	DESCRIPTION
1	05/18/21	DMD	TJL	CONSTRUCTION DRAWINGS – REVISED TO INCLUDE FAA ELEVATION INFO.
0	05/06/21	DMD	TJL	CONSTRUCTION DRAWINGS – ISSUED FOR CONSTRUCTION
A	04/29/21	DMD	TJL	PRELIMINARY CONSTRUCTION DRAWINGS – ISSUED FOR CLIENT REVIEW

PROFESSIONAL ENGINEER SEAL

verizon

CENTEK engineering
Centered on Solutions
(203) 488-0580
(203) 488-8587 Fax
63-2 North Branford Road
Branford, CT 06405
www.CentekEng.com

Cellco Partnership d/b/a Verizon Wireless

QUAKER HILL CT-A

35 SOUTH BARTLETT RD.
QUAKER HILL, CT 06375

DATE: 04/29/21
SCALE: AS NOTED
JOB NO. 21007.21

ELECTRICAL DETAILS AND SPECIFICATIONS

E-1

Sheet No. 7 of 7

SAMSUNG

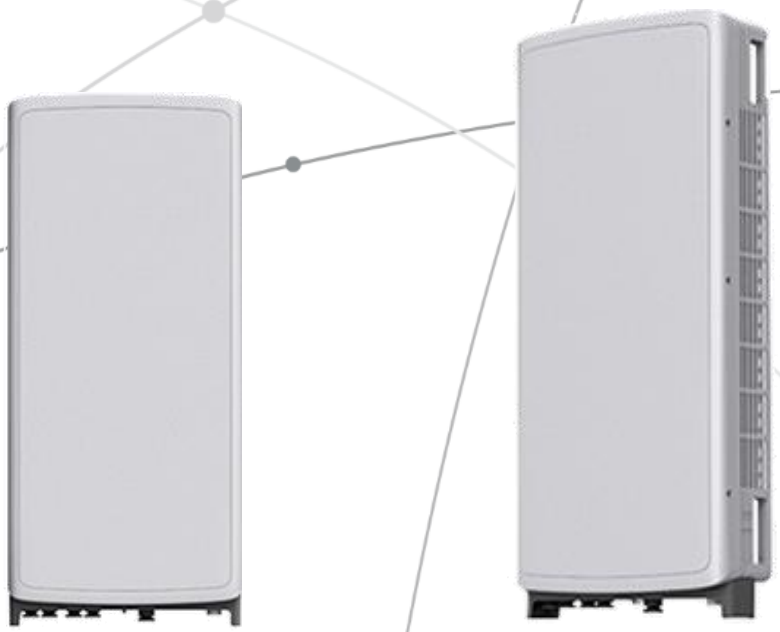
SAMSUNG

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

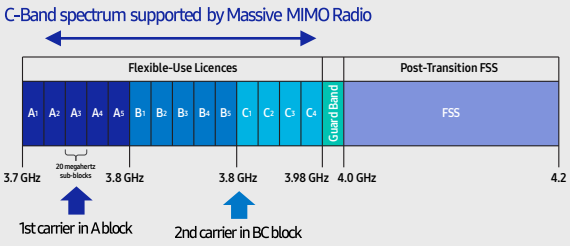


Points of Differentiation

Wide Bandwidth

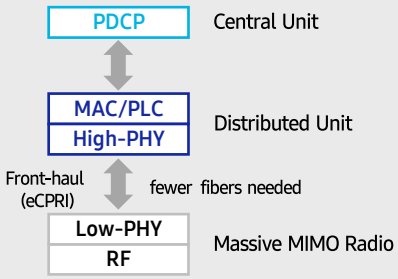
With capability to support up to 2 CC carrier configuration, Samsung C-Band massive MIMO Radio supports 200 MHz bandwidth in the C-Band spectrum.

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.

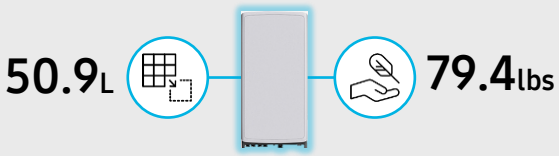
This helps operators reduce their CAPEX as they now need less products to cover the same area than before.

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

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

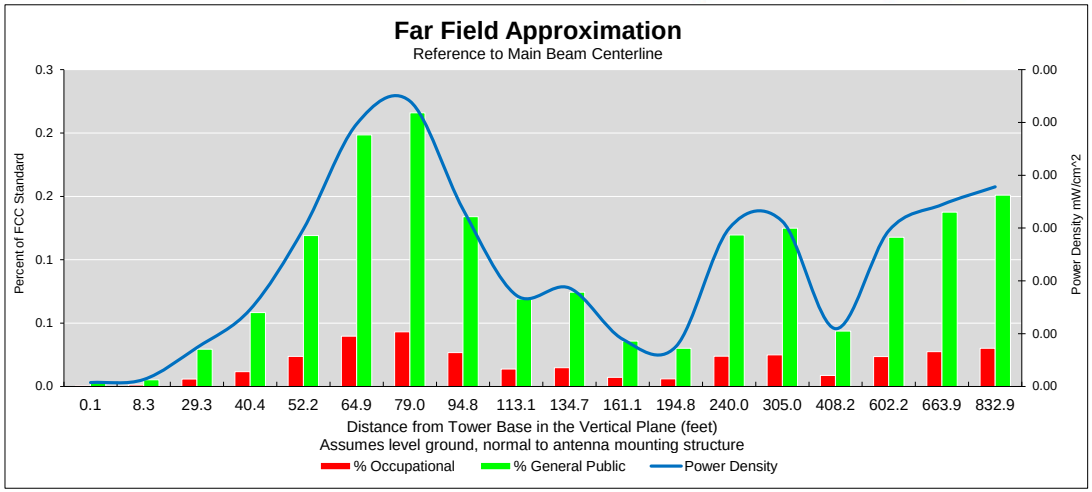
ATTACHMENT 3

Far Field Approximation
with downtilt variation

Estimated Radiated Emission
Single Emitter Far Field Model
Dipole/Wire/Yagi Antenna Types

Location:	**Quaker Hill CT**
Site #:	2-0583
Date:	06/25/21
Name:	Wesley Stevens
File Name:	Quaker Hill CT - FF Power

Antenna Type:	**SBNHH-1D65B**
Operating Freq. (MHz):	**751**
Antenna Height (ft):	**120.0**
Antenna Gain (dBi):	**14.5**
Downtilt (degrees):	**6.0**
Feedline Loss (dB):	**0.0**
Tx Power (W):	**40.0**
No. of Channels:	**4**



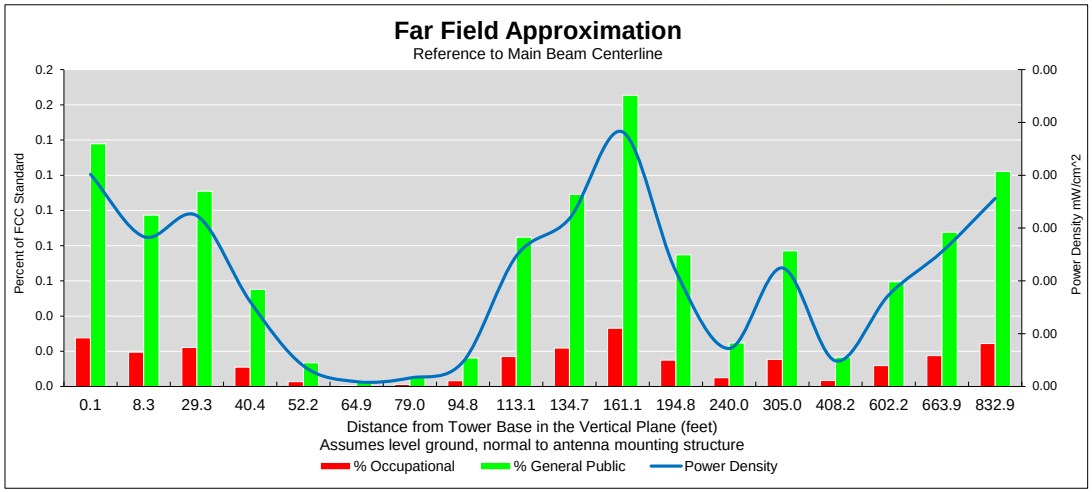
Calc Angle	90.0	86.0	76.0	71.0	66.0	61.0	56.0	51.0	46.0	41.0	36.0	31.0	26.0	21.0	16.0	11.0	10.0	8.0
Solve for r, dx to antenna	117.0	117.3	120.6	123.8	128.1	133.8	141.2	150.6	162.7	178.4	199.1	227.3	267.0	326.6	424.7	613.5	674.1	841.1
Distance from Antenna Structure Base in Horizontal plane	0.1	8.3	29.3	40.4	52.2	64.9	79.0	94.8	113.1	134.7	161.1	194.8	240.0	305.0	408.2	602.2	663.9	832.9
Angle from Main Beam (reference to horizontal plane)	90.0	80.0	70.0	65.0	60.0	55.0	50.0	45.0	40.0	35.0	30.0	25.0	20.0	15.0	10.0	5.0	4.0	2.0
dB down from centerline (referenced to centerline)	36.87	34.36	26.66	23.47	20.07	17.47	16.64	18.15	20.36	19.23	21.46	21.05	13.67	11.73	14.01	6.51	5.02	2.69
Reflection Coefficient (1 to 4, 2.56 typical)	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56
Power Density (mW/cm^2)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Percent of Occupational Standard	0.00	0.00	0.01	0.01	0.02	0.04	0.04	0.03	0.01	0.01	0.01	0.01	0.02	0.02	0.01	0.02	0.03	0.03
Percent of General Population Standard	0.00	0.01	0.03	0.06	0.12	0.20	0.22	0.13	0.07	0.07	0.04	0.03	0.12	0.12	0.04	0.12	0.14	0.15

Far Field Approximation
with downtilt variation

Estimated Radiated Emission
Single Emitter Far Field Model
Dipole/Wire/Yagi Antenna Types

Location:	**Quaker Hill CT**
Site #:	2-0583
Date:	06/25/21
Name:	Wesley Stevens
File Name:	Quaker Hill CT - FF Power

Antenna Type:	**SBNHH-1D65B**
Operating Freq. (MHz):	**874**
Antenna Height (ft):	**120.0**
Antenna Gain (dBi):	**14.5**
Downtilt (degrees):	**6.0**
Feedline Loss (dB):	**0.0**
Tx Power (W):	**40.0**
No. of Channels:	**4**



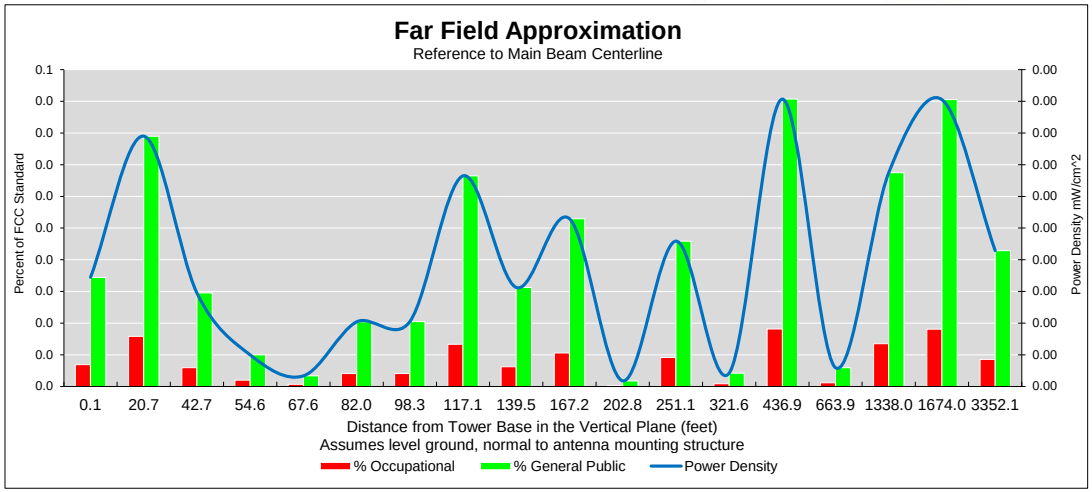
Calc Angle	90.0	86.0	76.0	71.0	66.0	61.0	56.0	51.0	46.0	41.0	36.0	31.0	26.0	21.0	16.0	11.0	10.0	8.0
Solve for r, dx to antenna	117.0	117.3	120.6	123.8	128.1	133.8	141.2	150.6	162.7	178.4	199.1	227.3	267.0	326.6	424.7	613.5	674.1	841.1
Distance from Antenna Structure Base in Horizontal plane	0.1	8.3	29.3	40.4	52.2	64.9	79.0	94.8	113.1	134.7	161.1	194.8	240.0	305.0	408.2	602.2	663.9	832.9
Angle from Main Beam (reference to horizontal plane)	90.0	80.0	70.0	65.0	60.0	55.0	50.0	45.0	40.0	35.0	30.0	25.0	20.0	15.0	10.0	5.0	4.0	2.0
dB down from centerline (referenced to centerline)	19.58	21.07	20.26	23.07	28.91	34.83	31.92	26.71	18.83	16.93	14.17	16.47	19.88	13.19	17.57	8.84	6.34	2.97
Reflection Coefficient (1 to 4, 2.56 typical)	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56
Power Density (mW/cm^2)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Percent of Occupational Standard	0.03	0.02	0.02	0.01	0.00	0.00	0.00	0.00	0.02	0.02	0.03	0.01	0.00	0.02	0.00	0.01	0.02	0.02
Percent of General Population Standard	0.14	0.10	0.11	0.06	0.01	0.00	0.01	0.02	0.08	0.11	0.17	0.07	0.02	0.08	0.02	0.06	0.09	0.12

Far Field Approximation
with downtilt variation

Estimated Radiated Emission
Single Emitter Far Field Model
Dipole/Wire/Yagi Antenna Types

Location:	**Quaker Hill CT**
Site #:	2-0583
Date:	06/25/21
Name:	Wesley Stevens
File Name:	Quaker Hill CT - FF Power

Antenna Type:	**SBNHH-1D65B**
Operating Freq. (MHz):	**1978**
Antenna Height (ft):	**120.0**
Antenna Gain (dBi):	**18.4**
Downtilt (degrees):	**0.0**
Feedline Loss (dB):	**0.0**
Tx Power (W):	**40.0**
No. of Channels:	**4**



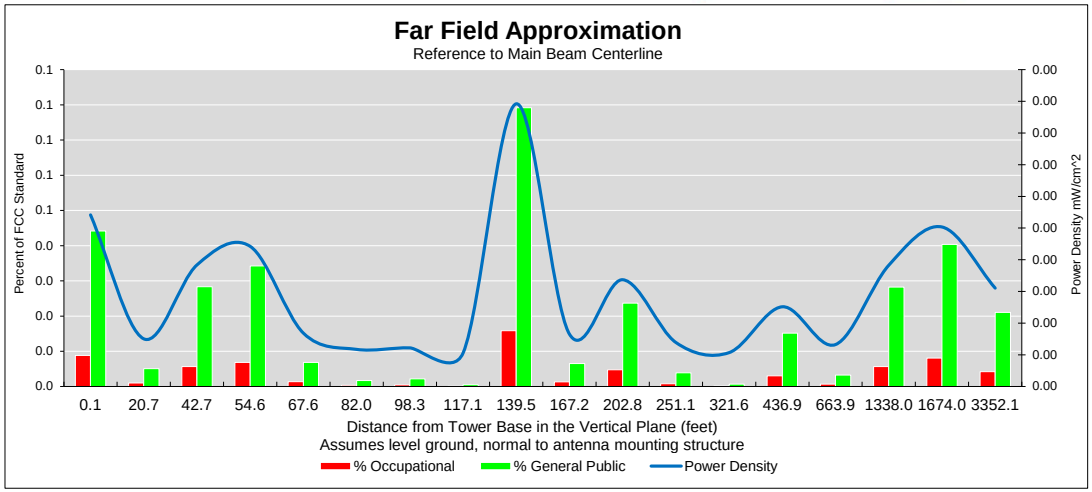
Calc Angle	90.0	80.0	70.0	65.0	60.0	55.0	50.0	45.0	40.0	35.0	30.0	25.0	20.0	15.0	10.0	5.0	4.0	2.0
Solve for r, dx to antenna	117.0	118.8	124.5	129.1	135.1	142.9	152.8	165.5	182.1	204.1	234.1	277.0	342.3	452.3	674.1	1343.1	1678.1	3354.2
Distance from Antenna Structure Base in Horizontal plane	0.1	20.7	42.7	54.6	67.6	82.0	98.3	117.1	139.5	167.2	202.8	251.1	321.6	436.9	663.9	1338.0	1674.0	3352.1
Angle from Main Beam (reference to horizontal plane)	90.0	80.0	70.0	65.0	60.0	55.0	50.0	45.0	40.0	35.0	30.0	25.0	20.0	15.0	10.0	5.0	4.0	2.0
dB down from centerline (referenced to centerline)	30.1	26.36	30.23	34.63	38.97	30.64	30.04	24.23	26.68	23.4	36.94	21.37	29.92	14.15	22.54	5.98	2.77	0
Reflection Coefficient (1 to 4, 2.56 typical)	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56
Power Density (mW/cm^2)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Percent of Occupational Standard	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01	0.00	0.00	0.00	0.01	0.00	0.01	0.01	0.00
Percent of General Population Standard	0.02	0.04	0.01	0.00	0.00	0.01	0.01	0.03	0.02	0.03	0.00	0.02	0.00	0.05	0.00	0.03	0.05	0.02

Far Field Approximation
with downtilt variation

Estimated Radiated Emission
Single Emitter Far Field Model
Dipole/Wire/Yagi Antenna Types

Location:	**Quaker Hill CT**
Site #:	2-0583
Date:	06/25/21
Name:	Wesley Stevens
File Name:	Quaker Hill CT - FF Power

Antenna Type:	**SBNHH-1D65B**
Operating Freq. (MHz):	**2120**
Antenna Height (ft):	**120.0**
Antenna Gain (dBi):	**18.3**
Downtilt (degrees):	**0.0**
Feedline Loss (dB):	**0.0**
Tx Power (W):	**40.0**
No. of Channels:	**4**



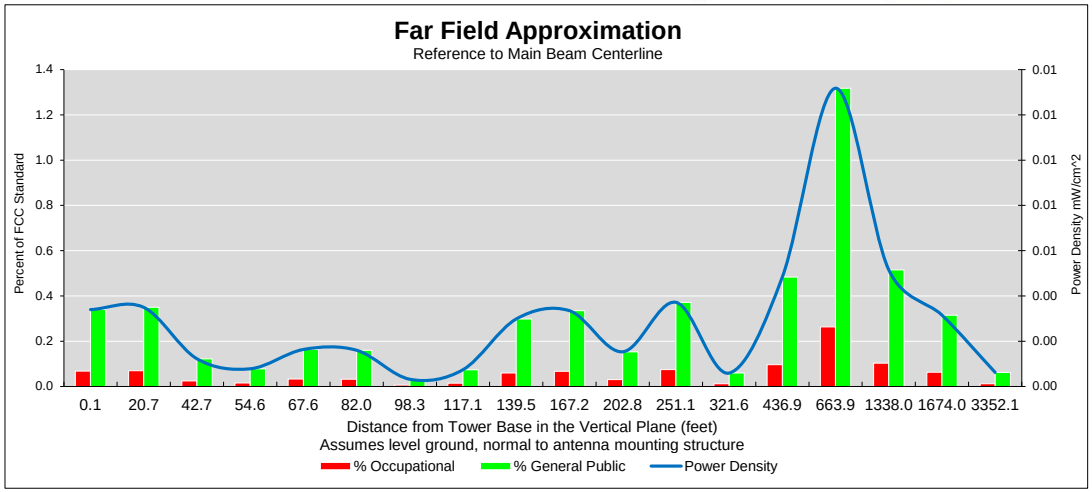
Calc Angle	90.0	80.0	70.0	65.0	60.0	55.0	50.0	45.0	40.0	35.0	30.0	25.0	20.0	15.0	10.0	5.0	4.0	2.0
Solve for r, dx to antenna	117.0	118.8	124.5	129.1	135.1	142.9	152.8	165.5	182.1	204.1	234.1	277.0	342.3	452.3	674.1	1343.1	1678.1	3354.2
Distance from Antenna Structure Base in Horizontal plane	0.1	20.7	42.7	54.6	67.6	82.0	98.3	117.1	139.5	167.2	202.8	251.1	321.6	436.9	663.9	1338.0	1674.0	3352.1
Angle from Main Beam (reference to horizontal plane)	90.0	80.0	70.0	65.0	60.0	55.0	50.0	45.0	40.0	35.0	30.0	25.0	20.0	15.0	10.0	5.0	4.0	2.0
dB down from centerline (referenced to centerline)	25.93	35.22	27.31	26.18	32.78	38.32	36.67	42.09	19.55	29.41	22.61	29	34.69	18.83	22.07	6.67	3.19	0
Reflection Coefficient (1 to 4, 2.56 typical)	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56
Power Density (mW/cm^2)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Percent of Occupational Standard	0.01	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00
Percent of General Population Standard	0.04	0.01	0.03	0.03	0.01	0.00	0.00	0.00	0.08	0.01	0.02	0.00	0.00	0.02	0.00	0.03	0.04	0.02

Far Field Approximation
with downtilt variation

Estimated Radiated Emission
Single Emitter Far Field Model
Dipole/Wire/Yagi Antenna Types

Location:	**Quaker Hill CT**
Site #:	2-0583
Date:	06/25/21
Name:	Wesley Stevens
File Name:	Quaker Hill CT - FF Power

Antenna Type:	**VZ-MT6407-77A**
Operating Freq. (MHz):	**3730**
Antenna Height (ft):	**120.0**
Antenna Gain (dBi):	**25.5**
Downtilt (degrees):	**0.0**
Feedline Loss (dB):	**0.0**
Tx Power (W):	**30.2**
No. of Channels:	**4**



Calc Angle	90.0	80.0	70.0	65.0	60.0	55.0	50.0	45.0	40.0	35.0	30.0	25.0	20.0	15.0	10.0	5.0	4.0	2.0
Solve for r, dx to antenna	117.0	118.8	124.5	129.1	135.1	142.9	152.8	165.5	182.1	204.1	234.1	277.0	342.3	452.3	674.1	1343.1	1678.1	3354.2
Distance from Antenna Structure Base in Horizontal plane	0.1	20.7	42.7	54.6	67.6	82.0	98.3	117.1	139.5	167.2	202.8	251.1	321.6	436.9	663.9	1338.0	1674.0	3352.1
Angle from Main Beam (reference to horizontal plane)	90.0	80.0	70.0	65.0	60.0	55.0	50.0	45.0	40.0	35.0	30.0	25.0	20.0	15.0	10.0	5.0	4.0	2.0
dB down from centerline (referenced to centerline)	23.06	22.8	26.95	28.58	24.98	24.59	31	26.65	19.78	18.29	20.49	15.18	21.32	9.78	1.96	0.05	0.25	1.29
Reflection Coefficient (1 to 4, 2.56 typical)	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56	2.56
Power Density (mW/cm^2)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.00	0.00
Percent of Occupational Standard	0.07	0.07	0.02	0.02	0.03	0.03	0.01	0.01	0.06	0.07	0.03	0.07	0.01	0.10	0.26	0.10	0.06	0.01
Percent of General Population Standard	0.34	0.35	0.12	0.08	0.16	0.16	0.03	0.07	0.30	0.33	0.15	0.37	0.06	0.48	1.32	0.52	0.32	0.06

ATTACHMENT 4

SBA Communications Corporation
8051 Congress Avenue
Boca Raton, FL 33487-1307

T + 561.995.7670
F + 561.995.7626

sbasite.com

Structural Analysis Report

Client: Verizon

Client Site ID / Name: 467959 / QUAKER_HILL_CT
Application #: 157355, v1

SBA Site ID / Name: CT09680-S / Rogers Hill

180' Self Supporting Tower

35 South Bartlett Road
Quaker Hill, CT 06375
Lat: 41.417653, Long: -72.106728

Project number: CT09680-VZW-061721

Analysis Results

Tower	97.1%	Pass
Foundation	70.0%	Pass

Change in tower stress due to mount modification / replacement	3.5%

Prepared by:

Daniel Yohannes
Structural Engineer II
214-570-8110 ext 2626
dyohannes@sbasite.com

Reviewed by:

Anantha (Shan) Shanubhogue, P.E.
Senior Manager, Structural Engineering
561-981-7390
SShanubhogue@sbasite.com

June 21, 2021

STATE OF CONNECTICUT
ANANTHA B SHANUBHOGUE
33123
LICENSED
PROFESSIONAL ENGINEER

06/21/21

Table of Contents

Introduction

The purpose of this report is to summarize the analysis results on the 180' Self Supporting Tower to support the proposed antennas and transmissions lines in addition to those currently installed.

Table 1 List of Documents Used

Item	Document
Tower Design	World Tower Company, Inc , Job #: Q071062 , Dated: 12/5/2007
Foundation Design	World Tower Company, Inc , Job #: Q071062F , Dated: 1/8/2008
Geotechnical report	Clarence Welti Associates, Inc. , Dated: 12/17/2007
Modification drawings	N/A
Latest SA Report	TES, Project # 94589, dated 7/14/2020

Analysis Criteria

Table 2 Code Related Data

Jurisdiction (State/County/City)	Connecticut / New London / Quaker Hill
Governing Codes	ANSI/TIA-222-G , 2015 IBC, 2018 Connecticut State Building Code
Basic wind speed (3-Sec gust)	105 mph (Ultimate Wind Speed: 135 mph)
Wind Speed with Ice (3-Sec gust)	50 mph
Service Wind Speed (3-Sec gust)	60 mph
Ice Thickness	0.75 in
Structural class *	II
Exposure Category	C
Topographic Category	1
Crest Height	0 ft.
Ground Elevation	260.75 ft.
Seismic Parameter S_s **	0.161
Seismic Parameter S_1	0.058

*This structural analysis is based upon the tower being classified as a Structural class II; however, if a different classification is required subsequent to the date hereof, the tower classification will be changed to meet such requirement and a new structural analysis will be run.

**Earthquake effects were ignored as per section 2.7.3 of the TIA-222-G code provisions for Ss < 1.0.

Appurtenance Loading

Existing Loading:

Table 3 Existing Appurtenances

Mount Elev. (ft)	CL Elev. (ft)	Type	Qty	Manufacturer	Model	Feed Line Size	Mount Type Qty.	Carrier
180	187.5	Omni	2	Sinclair	SC488-HF2LNF	(3) 1-5/8"	(3) Standoff w/ tieback	Town of Waterford
	182.5	Omni	1	Telewave	ANT150F2			
	180	TMA	1	dbSpectra	ATSSTMA10			
150	150	Panel	3	Ericsson	Air 21 B2A/B4P	(4) 1-5/8" (9) 1-5/8" Fiber	(3) 12.5' T-Frame (6) V-Bracing Kit [Metrosite MS-C1B-2875P]	T-Mobile
		Panel	3	Ericsson	AIR6449 B41			
		Panel	3	RFS	APXVAARR24_43-U-NA20			
		Panel	3	Ericsson	AIR32 KRD901146-1_B66A_B2A (Octo)			
		TMA	3	Ericsson	KRY 112 144/1			
		RRU	3	Ericsson	Radio 4449 B71+B85			
		RRU	3	Ericsson	4415 B25			
120	120	Panel	12	Commscope	SBNHH-1D65B	(3) 1-5/8" Hybrid (9) 1-5/8"	(3) Sector Frame [Commscope SF-QV12-B]	Verizon
		RRU	3	Alcatel Lucent	RRH2X60-1900			
		RRU	3	Alcatel Lucent	RRH2x60-AWS			
		RRU	3	Alcatel Lucent	RRH2x60-700			
		OVP	3	RFS	DB-T1-6Z-8AB-0Z			

Proposed Loading:

Information pertaining to proposed antennas and transmission lines were based upon the Application #: 157355, v1 from Verizon and is listed in Table 4.

Table 4 Proposed Appurtenances

Mount Elev. (ft)	CL Elev. (ft)	Type	Qty	Manufacturer	Model	Feed Line Size	Mount Type Qty.	Carrier
120	120	Panel	9	Commscope	SBNHH-1D65B	(3) 1-5/8" Hybrid (9) 1-5/8"	(3) Sector Frame [Commscope SF-QV12-B] (6) V-Bracing Kit [VZWSMART-SFK3] (6) Support Rail (3) Side-By-Side Mounting Kit [Commscope BSAMNT-SBS-1-2]	Verizon
		Panel	3	Samsung	MT6407-77A			
		RRU	6	Samsung	B5/B13			
		RRU	3	Samsung	B2/B66A			
		OVP	3	Raycap	RRFDC-3315-PF-48			

Analysis Results

Tower

The results of the structural analysis are shown below in table 5. Additional information for the tower analysis is provided within the Appendix.

Table 5 Tower Analysis Summary

Structural Component	% capacity	Analysis Result
Leg	81.5	Pass
Diagonal	96.6	Pass
Horizontal	21.0	Pass
Secondary Horizontal	97.1	Pass
Top girt	31.7	Pass
Bottom girt	25.9	Pass
Bolt	97.1	Pass
Anchor Bolt	63.6	Pass

Foundation

The results of the foundation analysis are shown below in table 6. Additional information for the foundation analysis is provided within the Appendix.

Table 6 Foundation Analysis Summary

Structural Component	Max Usage (%)	Analysis Result
Foundation	70.0	Pass

Conclusions

Based on the analysis results, the existing tower and foundation were found to be sufficient to safely support the equipment listed in this analysis. No modification to the tower and foundation is needed at this time.

Installation Requirements

This analysis was performed under the assumption that the carrier will place the proposed equipment and feed lines at the installation height listed in Table 4 and in accordance with the coax layout shown. TMAs and RRUs are to be installed on existing mounts behind tenant's antennas unless otherwise noted. No equipment is to be installed directly in the climbing path. All equipment is to be installed per mount manufacturer specifications. In case site conditions do not allow for the required installation parameters to be met the carrier must notify SBA Communications Corporation engineers for approval of an alternative placement.

Assumptions and Limitations

Assumptions

This analysis was completed based on the following assumptions:

- Tower and foundation were built in accordance to manufacturer specifications.
- Tower and foundation has been properly maintained in accordance with the manufacturer's specifications
- All existing structural members were assumed to be in good condition with no physical damage or deterioration associated with corrosion
- Welds and bolts are assumed able to carry their intended original design loads.
- The configuration of antennas, transmission cables, mounts and other appurtenances are as specified in Table 3 and 4.
- This analysis may be affected if any assumptions are not valid or have been made in error. SBA should be notified to determine the effect on the structural integrity of the tower.

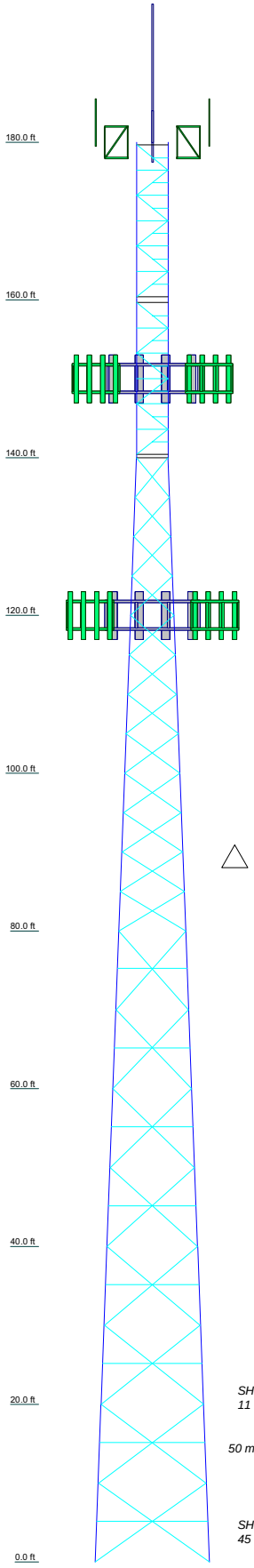
Limitations

The computer generated analysis performed by the tower software is limited to theoretical capacities of the towers structural members and does not account for any missing or damaged members or connections. The tower and foundation are assumed to have been properly designed, fabricated, installed and maintained, barring any conflicting findings from the most recent inspection.

SBA Communications Corporation has used its due diligence to verify the information provided to perform this analysis. It is unreasonable to perform a more detailed inspection of a tower and its components. This report is not a condition assessment of the tower or foundation.

Appendix

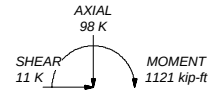
Section	T1	T2	T3	T4	T5	T6	T7	T8	T9
Legs	SR 1 1/2	SR 2	SR 2 3/4	SR 3	SR 3 1/2		SR 3 3/4	SR 4	
Leg Grade					A572-50				
Diagonals	SR 1	SR 1 1/4	L2x2x3/16	L2x2x1/4			L3x3x3/16		L3x3x1/4
Diagonal Grade					A36				
Top Girts		SR 1	L2x2x1/8		N.A.				
Bottom Girts		SR 1				N.A.			
Horizontals		SR 1				N.A.			
Sec. Horizontals		SR 1		N.A.		L2x2x1/8	L2x2x3/16		L2 1/2x2 1/2x3/16
Face Width (ft)	4			5.5	7	8.5	10	11.5	13
# Panels @ (ft)	12 @ 3.208333			12 @ 5				8 @ 10	
Weight (K)	0.9	1.3	1.7	2.2	2.8	2.8	3.2	3.7	4.0



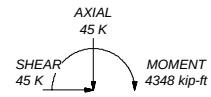
ALL REACTIONS ARE FACTORED

MAX. CORNER REACTIONS AT BASE:
DOWN: 359 K
SHEAR: 27 K

UPLIFT: -320 K
SHEAR: 25 K



TORQUE 4 kip-ft
50 mph WIND - 0.7500 in ICE



TORQUE 16 kip-ft
REACTIONS - 105 mph WIND

DESIGNED APPURTENANCE LOADING

TYPE	ELEVATION	TYPE	ELEVATION
Lightning Rod	180	4415 B25 (16.5" x 13.4" x 5.9")	150
(2) SC488-HF2LNF (183" x 2.9" x 2.9")	180	4415 B25 (16.5" x 13.4" x 5.9")	150
ANT150F2 (60" x 2.75" x 2.75")	180	12.5' T-Frame	150
ANT150F2 (60" x 2.75" x 2.75")	180	12.5' T-Frame	150
ATSSTMA10 (21.25" x 13.25" x 9")	180	12.5' T-Frame	150
Standoff w/ tieback	180	(2) V-Bracing Kit [Metrosite MS-C1B-2875P]	150
Standoff w/ tieback	180	(2) V-Bracing Kit [Metrosite MS-C1B-2875P]	150
Standoff w/ tieback	180	(2) V-Bracing Kit [Metrosite MS-C1B-2875P]	150
Air 21 B2A/B4P (55.9" x 12" x 7.8") w/ mount pipe	150	(3) SBNHH-1D65B (72" x 11.85" x 7.1") w/ mount pipe	120
Air 21 B2A/B4P (55.9" x 12" x 7.8") w/ mount pipe	150	(3) SBNHH-1D65B (72" x 11.85" x 7.1") w/ mount pipe	120
Air 21 B2A/B4P (55.9" x 12" x 7.8") w/ mount pipe	150	(3) SBNHH-1D65B (72" x 11.85" x 7.1") w/ mount pipe	120
AIR6449 B41 (33.1" x 20.5" x 8.3") w/ mount pipe	150	MT6407-77A (35.12" x 16.06" x 5.51") w/ mount pipe	120
AIR6449 B41 (33.1" x 20.5" x 8.3") w/ mount pipe	150	MT6407-77A (35.12" x 16.06" x 5.51") w/ mount pipe	120
AIR6449 B41 (33.1" x 20.5" x 8.3") w/ mount pipe	150	MT6407-77A (35.12" x 16.06" x 5.51") w/ mount pipe	120
APXVAARR24_43-U-NA20 (95.9" x 24" x 8.7") w/ mount pipe	150	(2) B5/B13 (15" x 15" x 8.1")	120
		(2) B5/B13 (15" x 15" x 8.1")	120
APXVAARR24_43-U-NA20 (95.9" x 24" x 8.7") w/ mount pipe	150	(2) B5/B13 (15" x 15" x 8.1")	120
		B2/B66A (15" x 15" x 10")	120
APXVAARR24_43-U-NA20 (95.9" x 24" x 8.7") w/ mount pipe	150	B2/B66A (15" x 15" x 10")	120
		B2/B66A (15" x 15" x 10")	120
AIR32 KRD901146-1_B66A_B2A (Octo) (56.6" x 12.9" x 8.7") w/ mount pipe	150	RRFDC-3315-PF-48 (22.98" x 15.79" x 10.25")	120
AIR32 KRD901146-1_B66A_B2A (Octo) (56.6" x 12.9" x 8.7") w/ mount pipe	150	RRFDC-3315-PF-48 (22.98" x 15.79" x 10.25")	120
		RRFDC-3315-PF-48 (22.98" x 15.79" x 10.25")	120
AIR32 KRD901146-1_B66A_B2A (Octo) (56.6" x 12.9" x 8.7") w/ mount pipe	150	Sector Frames [Commscope SF-QV12-B]	120
		Sector Frames [Commscope SF-QV12-B]	120
KRY 112 144/1 (6.9" x 6.1" x 2.7")	150	Sector Frames [Commscope SF-QV12-B]	120
KRY 112 144/1 (6.9" x 6.1" x 2.7")	150	(2) V-Bracing Kit [VZWSMART-SFK3] + Support Rail	120
KRY 112 144/1 (6.9" x 6.1" x 2.7")	150	(2) V-Bracing Kit [VZWSMART-SFK3] + Support Rail	120
Radio 4449 B71+B85 (13.1" x 14.9" x 9.2")	150	(2) V-Bracing Kit [VZWSMART-SFK3] + Support Rail	120
Radio 4449 B71+B85 (13.1" x 14.9" x 9.2")	150	Side-By-Side Mounting Kit [BSAMNT-SBS-1-2]	120
Radio 4449 B71+B85 (13.1" x 14.9" x 9.2")	150	Side-By-Side Mounting Kit [BSAMNT-SBS-1-2]	120
4415 B25 (16.5" x 13.4" x 5.9")	150	Side-By-Side Mounting Kit [BSAMNT-SBS-1-2]	120

MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
A572-50	50 ksi	65 ksi	A36	36 ksi	58 ksi

TOWER DESIGN NOTES

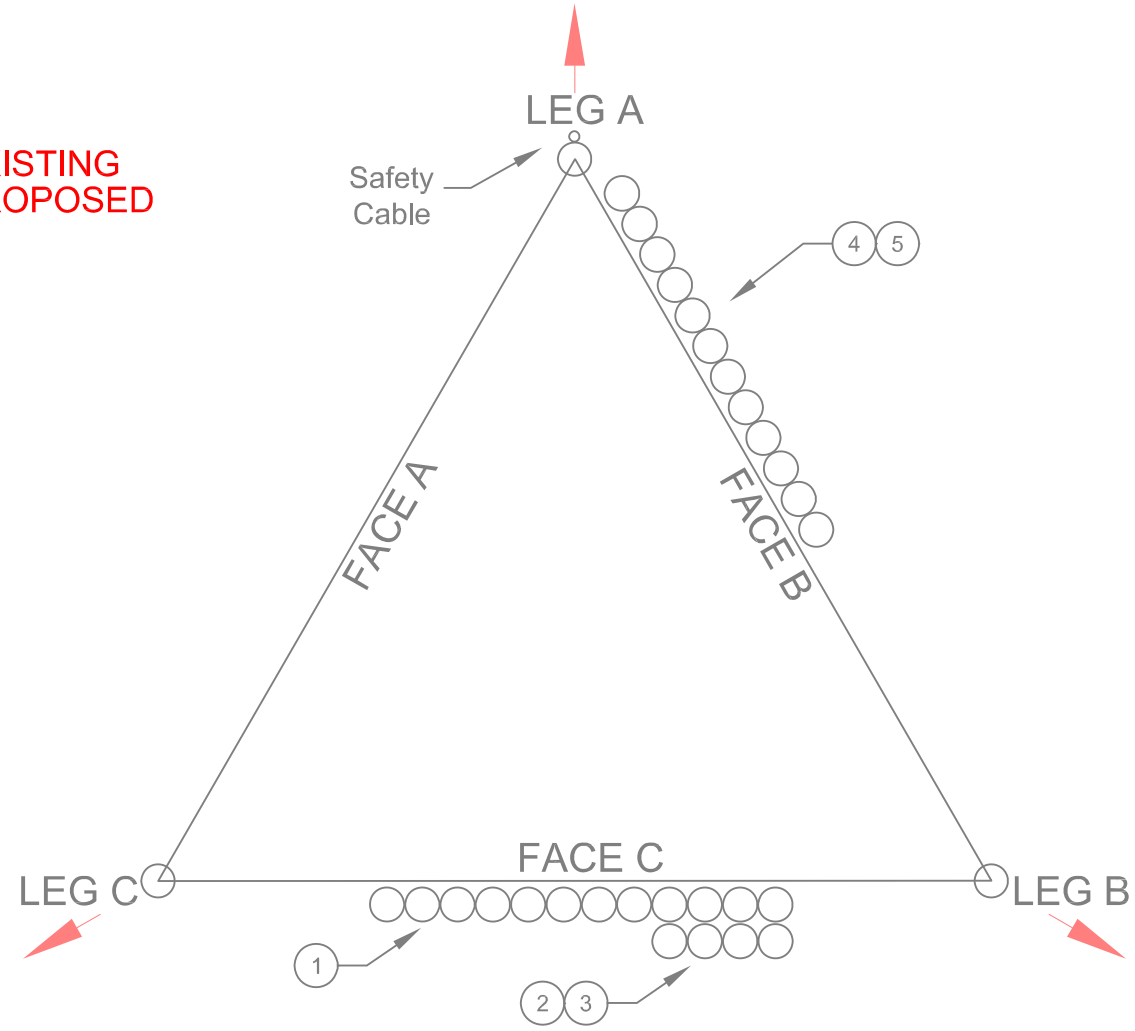
1. Tower is located in New London County, Connecticut.
2. Tower designed for Exposure C to the TIA-222-G Standard.
3. Tower designed for a 105 mph basic wind in accordance with the TIA-222-G Standard.
4. Tower is also designed for a 50 mph basic wind with 0.75 in ice. Ice is considered to increase in thickness with height.
5. Deflections are based upon a 60 mph wind.
6. Tower Structure Class II.
7. Topographic Category 1 with Crest Height of 0.00 ft
8. TOWER RATING: 97.1%

SBA Communications
8051 Congress Avenue
Boca Raton, FL 33487-1307
Phone: 5619957670
FAX: 5619957626

Job:			
Project:	***CT09680-VZW-061721***		
Client:		Drawn by: Daniel Yohannes	App'd:
Code: TIA-222-G		Date: 06/21/21	Scale: NTS
Path: C:\Users\dyohannes\Desktop\temp\CT09680-B157355_v1\Tower Calcs\CT09680-VZW-061721.eri			Dwg No. E-1

COAX LAYOUT

○ EXISTING
● PROPOSED



CT09680-S					
#	CARRIER	SIZE	QTY.	ELEVATION	NOTES
1	Town of Waterford	1-5/8"	3	180'	
2	T-Mobile	1-5/8"	4	150'	
3		1-5/8"	9		Fiber
4	Verizon	1-5/8"	3	120'	Hybrid
5		1-5/8"	9		

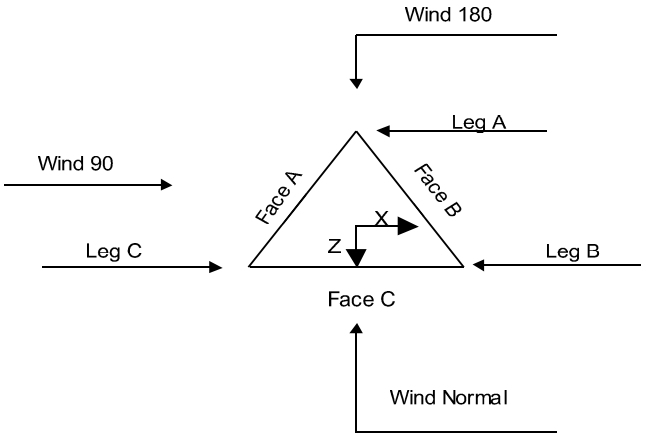
Tower Input Data

The main tower is a 3x free standing tower with an overall height of 180.00 ft above the ground line.
The base of the tower is set at an elevation of 0.00 ft above the ground line.
The face width of the tower is 4.00 ft at the top and 14.50 ft at the base.
This tower is designed using the TIA-222-G standard.
The following design criteria apply:

1. Tower is located in New London County, Connecticut.
2. ASCE 7-10 Wind Data is used (wind speeds converted to nominal values).
3. Basic wind speed of 105 mph.
4. Structure Class II.
5. Exposure Category C.
6. Topographic Category 1.
7. Crest Height 0.00 ft.
8. Nominal ice thickness of 0.7500 in.
9. Ice thickness is considered to increase with height.
10. Ice density of 56 pcf.
11. A wind speed of 50 mph is used in combination with ice.
12. Temperature drop of 50 °F.
13. Deflections calculated using a wind speed of 60 mph.
14. A non-linear (P-delta) analysis was used.
15. Pressures are calculated at each section.
16. Stress ratio used in tower member design is 1.
17. Local bending stresses due to climbing loads, feed line supports, and appurtenance mounts are not considered.

Options

	Consider Moments - Legs		Distribute Leg Loads As Uniform		Use ASCE 10 X-Brace Ly Rules
	Consider Moments - Horizontals		Assume Legs Pinned	√	Calculate Redundant Bracing Forces
	Consider Moments - Diagonals	√	Assume Rigid Index Plate		Ignore Redundant Members in FEA
	Use Moment Magnification	√	Use Clear Spans For Wind Area		SR Leg Bolts Resist Compression
√	Use Code Stress Ratios	√	Use Clear Spans For KL/r		All Leg Panels Have Same Allowable
√	Use Code Safety Factors - Guys		Retension Guys To Initial Tension		Offset Girt At Foundation
	Escalate Ice	√	Bypass Mast Stability Checks	√	Consider Feed Line Torque
	Always Use Max Kz	√	Use Azimuth Dish Coefficients	√	Include Angle Block Shear Check
	Use Special Wind Profile	√	Project Wind Area of Appurt.		Use TIA-222-G Bracing Resist. Exemption
√	Include Bolts In Member Capacity		Autocalc Torque Arm Areas		Use TIA-222-G Tension Splice Exemption
	Leg Bolts Are At Top Of Section		Add IBC .6D+W Combination		Poles
√	Secondary Horizontal Braces Leg	√	Sort Capacity Reports By Component	√	Include Shear-Torsion Interaction
	Use Diamond Inner Bracing (4 Sided)		Triangulate Diamond Inner Bracing		Always Use Sub-Critical Flow
√	SR Members Have Cut Ends		Treat Feed Line Bundles As Cylinder		Use Top Mounted Sockets
	SR Members Are Concentric		Ignore KL/ry For 60 Deg. Angle Legs		Pole Without Linear Attachments
					Pole With Shroud Or No Appurtenances
					Outside and Inside Corner Radii Are Known



Triangular Tower

Tower Section Geometry

Tower Section	Tower Elevation	Assembly Database	Description	Section Width	Number of Sections	Section Length
	ft			ft		ft
T1	180.00-160.00			4.00	1	20.00
T2	160.00-140.00			4.00	1	20.00
T3	140.00-120.00			4.00	1	20.00
T4	120.00-100.00			5.50	1	20.00
T5	100.00-80.00			7.00	1	20.00
T6	80.00-60.00			8.50	1	20.00
T7	60.00-40.00			10.00	1	20.00
T8	40.00-20.00			11.50	1	20.00
T9	20.00-0.00			13.00	1	20.00

Tower Section Geometry *(cont'd)*

Tower Section	Tower Elevation	Diagonal Spacing	Bracing Type	Has K Brace End Panels	Has Horizontals	Top Girt Offset	Bottom Girt Offset
	ft	ft				in	in
T1	180.00-160.00	3.21	K Brace Left	No	Yes+Steps	4.5000	4.5000
T2	160.00-140.00	3.21	K Brace Left	No	Yes+Steps	4.5000	4.5000

Tower Section	Tower Elevation ft	Diagonal Spacing ft	Bracing Type	Has K Brace End Panels	Has Horizontals	Top Girt Offset in	Bottom Girt Offset in
T3	140.00-120.00	5.00	X Brace	No	No	0.0000	0.0000
T4	120.00-100.00	5.00	X Brace	No	No	0.0000	0.0000
T5	100.00-80.00	5.00	X Brace	No	No	0.0000	0.0000
T6	80.00-60.00	10.00	X Brace	No	Yes	0.0000	0.0000
T7	60.00-40.00	10.00	X Brace	No	Yes	0.0000	0.0000
T8	40.00-20.00	10.00	X Brace	No	Yes	0.0000	0.0000
T9	20.00-0.00	10.00	X Brace	No	Yes	0.0000	0.0000

Tower Section Geometry *(cont'd)*

Tower Elevation ft	Leg Type	Leg Size	Leg Grade	Diagonal Type	Diagonal Size	Diagonal Grade
T1 180.00-160.00	Solid Round	1 1/2	A572-50 (50 ksi)	Solid Round	1	A36 (36 ksi)
T2 160.00-140.00	Solid Round	2	A572-50 (50 ksi)	Solid Round	1 1/4	A36 (36 ksi)
T3 140.00-120.00	Solid Round	2 3/4	A572-50 (50 ksi)	Single Angle	L2x2x3/16	A36 (36 ksi)
T4 120.00-100.00	Solid Round	3	A572-50 (50 ksi)	Single Angle	L2x2x1/4	A36 (36 ksi)
T5 100.00-80.00	Solid Round	3 1/2	A572-50 (50 ksi)	Single Angle	L2x2x1/4	A36 (36 ksi)
T6 80.00-60.00	Solid Round	3 1/2	A572-50 (50 ksi)	Single Angle	L3x3x3/16	A36 (36 ksi)
T7 60.00-40.00	Solid Round	3 3/4	A572-50 (50 ksi)	Single Angle	L3x3x3/16	A36 (36 ksi)
T8 40.00-20.00	Solid Round	4	A572-50 (50 ksi)	Single Angle	L3x3x3/16	A36 (36 ksi)
T9 20.00-0.00	Solid Round	4	A572-50 (50 ksi)	Single Angle	L3x3x1/4	A36 (36 ksi)

Tower Section Geometry *(cont'd)*

Tower Elevation ft	Top Girt Type	Top Girt Size	Top Girt Grade	Bottom Girt Type	Bottom Girt Size	Bottom Girt Grade
T1 180.00-160.00	Solid Round	1	A36 (36 ksi)	Solid Round	1	A36 (36 ksi)
T2 160.00-140.00	Solid Round	1	A36 (36 ksi)	Solid Round	1	A36 (36 ksi)
T3 140.00-120.00	Single Angle	L2x2x1/8	A36 (36 ksi)	Solid Round		A36 (36 ksi)

Tower Section Geometry *(cont'd)*

Tower Elevation ft	No. of Mid Girts	Mid Girt Type	Mid Girt Size	Mid Girt Grade	Horizontal Type	Horizontal Size	Horizontal Grade
T1 180.00-160.00	None	Flat Bar		A36 (36 ksi)	Solid Round	1	A36 (36 ksi)
T2 160.00-140.00	None	Flat Bar		A36 (36 ksi)	Solid Round	1	A36 (36 ksi)

Tower Section Geometry *(cont'd)*

Tower Elevation ft	Secondary Horizontal Type	Secondary Horizontal Size	Secondary Horizontal Grade	Inner Bracing Type	Inner Bracing Size	Inner Bracing Grade
T1 180.00-160.00	Solid Round	1	A36 (36 ksi)	Solid Round		A572-50 (50 ksi)
T2 160.00-140.00	Solid Round	1	A36 (36 ksi)	Solid Round		A572-50 (50 ksi)
T6 80.00-60.00	Equal Angle	L2x2x1/8	A36 (36 ksi)	Solid Round		A572-50 (50 ksi)
T7 60.00-40.00	Equal Angle	L2x2x3/16	A36 (36 ksi)	Solid Round		A572-50 (50 ksi)
T8 40.00-20.00	Equal Angle	L2 1/2x2 1/2x3/16	A36 (36 ksi)	Solid Round		A572-50 (50 ksi)
T9 20.00-0.00	Equal Angle	L2 1/2x2 1/2x3/16	A36 (36 ksi)	Solid Round		A572-50 (50 ksi)

Tower Section Geometry *(cont'd)*

Tower Elevation ft	Gusset Area (per face) ft^2	Gusset Thickness in	Gusset Grade	Adjust. Factor A_f	Adjust. Factor A_r	Weight Mult.	Double Angle Stitch Bolt Spacing Diagonals in	Double Angle Stitch Bolt Spacing Horizontals in	Double Angle Stitch Bolt Spacing Redundants in
T1 180.00-160.00	0.00	0.0000	A36 (36 ksi)	1	1	1.05	36.0000	36.0000	36.0000
T2 160.00-140.00	0.00	0.0000	A36 (36 ksi)	1	1	1.05	36.0000	36.0000	36.0000
T3 140.00-120.00	0.00	0.0000	A36 (36 ksi)	1	1	1.05	36.0000	36.0000	36.0000
T4 120.00-100.00	0.00	0.0000	A36 (36 ksi)	1	1	1.05	36.0000	36.0000	36.0000
T5 100.00-80.00	0.00	0.0000	A36 (36 ksi)	1	1	1.05	36.0000	36.0000	36.0000
T6 80.00-60.00	0.00	0.0000	A36 (36 ksi)	1	1	1.05	36.0000	36.0000	36.0000
T7 60.00-40.00	0.00	0.0000	A36	1	1	1.05	36.0000	36.0000	36.0000

Tower Elevation ft	Gusset Area (per face) ft²	Gusset Thickness in	Gusset Grade	Adjust. Factor A_f	Adjust. Factor A_r	Weight Mult.	Double Angle Stitch Bolt Spacing Diagonals in	Double Angle Stitch Bolt Spacing Horizontals in	Double Angle Stitch Bolt Spacing Redundants in
T8 40.00-20.00	0.00	0.0000	(36 ksi) A36 (36 ksi)	1	1	1.05	36.0000	36.0000	36.0000
T9 20.00-0.00	0.00	0.0000	(36 ksi) A36 (36 ksi)	1	1	1.05	36.0000	36.0000	36.0000

Tower Section Geometry *(cont'd)*

Tower Elevation ft	Calc K Single Angles	Calc K Solid Rounds	K Factors[1] Legs	X Brace Diags X Y	K Brace Diags X Y	Single Diags X Y	Girts X Y	Horiz. X Y	Sec. Horiz. X Y	Inner Brace X Y
T1 180.00-160.00	Yes	Yes	1	1 1	1 1	1 1	1 1	1 1	1 1	1 1
T2 160.00-140.00	Yes	Yes	1	1 1	1 1	1 1	1 1	1 1	1 1	1 1
T3 140.00-120.00	Yes	Yes	1	1 1	1 1	1 1	1 1	1 1	1 1	1 1
T4 120.00-100.00	Yes	Yes	1	1 1	1 1	1 1	1 1	1 1	1 1	1 1
T5 100.00-80.00	Yes	Yes	1	1 1	1 1	1 1	1 1	1 1	1 1	1 1
T6 80.00-60.00	Yes	Yes	1	1 1	1 1	1 1	1 1	1 1	1 0.5	1 1
T7 60.00-40.00	Yes	Yes	1	1 1	1 1	1 1	1 1	1 1	1 0.5	1 1
T8 40.00-20.00	Yes	Yes	1	1 1	1 1	1 1	1 1	1 1	1 0.5	1 1
T9 20.00-0.00	Yes	Yes	1	1 1	1 1	1 1	1 1	1 1	1 0.5	1 1

[1]*Note: K factors are applied to member segment lengths. K-braces without inner supporting members will have the K factor in the out-of-plane direction applied to the overall length.*

Tower Section Geometry *(cont'd)*

Tower Elevation ft	Leg Net Width Deduct in	Leg U	Diagonal Net Width Deduct in	Diagonal U	Top Girt Net Width Deduct in	Top Girt U	Bottom Girt Net Width Deduct in	Bottom Girt U	Mid Girt Net Width Deduct in	Mid Girt U	Long Horizontal Net Width Deduct in	Long Horizontal U	Short Horizontal Net Width Deduct in	Short Horizontal U
T1 180.00-160.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T2 160.00-140.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75

Tower Elevation ft	Leg		Diagonal		Top Girt		Bottom Girt		Mid Girt		Long Horizontal		Short Horizontal	
	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U
T3 140.00-120.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T4 120.00-100.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T5 100.00-80.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T6 80.00-60.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T7 60.00-40.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T8 40.00-20.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T9 20.00-0.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75

Tower Elevation ft	Redundant Horizontal		Redundant Diagonal		Redundant Sub-Diagonal		Redundant Sub-Horizontal		Redundant Vertical		Redundant Hip		Redundant Hip Diagonal	
	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U	Net Width Deduct in	U
T1 180.00-160.00	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T2 160.00-140.00	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T3 140.00-120.00	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T4 120.00-100.00	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T5 100.00-80.00	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T6 80.00-60.00	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T7 60.00-40.00	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T8 40.00-20.00	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T9 20.00-0.00	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75

Tower Section Geometry *(cont'd)*

Tower Elevation ft	Leg Connection Type	Leg		Diagonal		Top Girt		Bottom Girt		Mid Girt		Long Horizontal		Short Horizontal	
		Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.
T1 180.00-160.00	Flange	0.7500 A325N	4	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0
T2 160.00-140.00	Flange	0.7500 A325N	4	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0
T3 140.00-120.00	Flange	1.0000 A325N	4	0.6250 A325N	1	0.6250 A325N	1	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0

Tower Elevation ft	Leg Connection Type	Leg		Diagonal		Top Girt		Bottom Girt		Mid Girt		Long Horizontal		Short Horizontal	
		Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.	Bolt Size in	No.
T4 120.00-100.00	Flange	1.0000 A325N	6	0.6250 A325N	1	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0
T5 100.00-80.00	Flange	1.0000 A325N	6	0.6250 A325N	1	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0
T6 80.00-60.00	Flange	1.2500 A325N >1"	6	0.7500 A325N	1	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	1
T7 60.00-40.00	Flange	1.2500 A325N >1"	6	0.7500 A325N	1	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	1
T8 40.00-20.00	Flange	1.2500 A325N >1"	6	0.7500 A325N	1	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	1
T9 20.00-0.00	Flange	1.2500 A354-BC	0	0.7500 A325N	1	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	1

Feed Line/Linear Appurtenances - Entered As Round Or Flat

Description	Face or Leg	Allow Shield	Exclude From Torque Calculation	Component Type	Placement ft	Face Offset in	Lateral Offset (Frac FW)	#	# Per Row	Clear Spacing in	Width or Diameter in	Perimeter in	Weight plf
Safety Cable ***	A	No	No	Ar (CaAa)	180.00 - 5.00	0.0000	0.5	1	1	0.5000	0.3750		0.22
1-5/8"	C	No	No	Ar (CaAa)	180.00 - 5.00	0.0000	0.15	3	3	0.5000	1.9800		1.04
Feedline Ladder (Af) ***	C	No	No	Af (CaAa)	180.00 - 5.00	0.0000	0	1	1	0.5000	3.0000		8.40
1-5/8"	C	No	No	Ar (CaAa)	150.00 - 5.00	0.0000	0.05	4	4	0.5000	1.9800		1.04
1-5/8" Fiber ***	C	No	No	Ar (CaAa)	150.00 - 5.00	0.0000	-0.05	9	5	0.5000	1.6250		1.10
1-5/8" Hybrid	B	No	No	Ar (CaAa)	120.00 - 5.00	0.0000	-0.35	3	3	0.5000	2.0000		1.10
1-5/8"	B	No	No	Ar (CaAa)	120.00 - 5.00	0.0000	-0.2	9	9	0.5000	1.9800		1.04
Feedline Ladder (Af) ***	B	No	No	Af (CaAa)	120.00 - 5.00	0.0000	-0.25	1	1	0.5000	3.0000		8.40

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 ft^2/ft	Weight plf
***								

Feed Line/Linear Appurtenances Section Areas

Tower Section	Tower Elevation ft	Face	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight K
T1	180.00-160.00	A	0.000	0.000	0.750	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	21.880	0.000	0.23
T2	160.00-140.00	A	0.000	0.000	0.750	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	44.425	0.000	0.37
T3	140.00-120.00	A	0.000	0.000	0.750	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	66.970	0.000	0.51
T4	120.00-100.00	A	0.000	0.000	0.750	0.000	0.00
		B	0.000	0.000	57.640	0.000	0.42
		C	0.000	0.000	66.970	0.000	0.51
T5	100.00-80.00	A	0.000	0.000	0.750	0.000	0.00
		B	0.000	0.000	57.640	0.000	0.42
		C	0.000	0.000	66.970	0.000	0.51
T6	80.00-60.00	A	0.000	0.000	0.750	0.000	0.00
		B	0.000	0.000	57.640	0.000	0.42
		C	0.000	0.000	66.970	0.000	0.51
T7	60.00-40.00	A	0.000	0.000	0.750	0.000	0.00
		B	0.000	0.000	57.640	0.000	0.42
		C	0.000	0.000	66.970	0.000	0.51
T8	40.00-20.00	A	0.000	0.000	0.750	0.000	0.00
		B	0.000	0.000	57.640	0.000	0.42
		C	0.000	0.000	66.970	0.000	0.51
T9	20.00-0.00	A	0.000	0.000	0.563	0.000	0.00
		B	0.000	0.000	43.230	0.000	0.32
		C	0.000	0.000	50.227	0.000	0.38

Feed Line/Linear Appurtenances Section Areas - With Ice

Tower Section	Tower Elevation ft	Face or Leg	Ice Thickness in	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight K
T1	180.00-160.00	A	1.767	0.000	0.000	7.819	0.000	0.10
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	46.662	0.000	0.78
T2	160.00-140.00	A	1.745	0.000	0.000	7.731	0.000	0.09
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	83.229	0.000	1.38
T3	140.00-120.00	A	1.720	0.000	0.000	7.632	0.000	0.09

Tower Section	Tower Elevation ft	Face or Leg	Ice Thickness in	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight K
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	119.435	0.000	1.96
T4	120.00-100.00	A	1.692	0.000	0.000	7.518	0.000	0.09
		B		0.000	0.000	110.430	0.000	1.73
		C		0.000	0.000	118.750	0.000	1.94
T5	100.00-80.00	A	1.658	0.000	0.000	7.383	0.000	0.09
		B		0.000	0.000	109.870	0.000	1.70
		C		0.000	0.000	117.942	0.000	1.91
T6	80.00-60.00	A	1.617	0.000	0.000	7.219	0.000	0.08
		B		0.000	0.000	109.184	0.000	1.67
		C		0.000	0.000	116.954	0.000	1.87
T7	60.00-40.00	A	1.564	0.000	0.000	7.005	0.000	0.08
		B		0.000	0.000	108.294	0.000	1.63
		C		0.000	0.000	115.670	0.000	1.82
T8	40.00-20.00	A	1.486	0.000	0.000	6.693	0.000	0.07
		B		0.000	0.000	107.001	0.000	1.56
		C		0.000	0.000	113.804	0.000	1.76
T9	20.00-0.00	A	1.331	0.000	0.000	4.556	0.000	0.04
		B		0.000	0.000	78.332	0.000	1.08
		C		0.000	0.000	82.583	0.000	1.22

Feed Line Center of Pressure

Section	Elevation ft	CP_X in	CP_Z in	CP_X Ice in	CP_Z Ice in
T1	180.00-160.00	-1.7520	2.9843	-1.2804	1.3590
T2	160.00-140.00	-0.9984	4.4468	-0.9957	2.7345
T3	140.00-120.00	-0.5941	4.7708	-0.9301	4.3131
T4	120.00-100.00	1.3099	-6.5727	0.9275	-5.3146
T5	100.00-80.00	1.4784	-7.5843	1.0446	-6.2500
T6	80.00-60.00	1.5571	-8.1476	1.1411	-7.1000
T7	60.00-40.00	1.6987	-8.9938	1.2366	-7.9407
T8	40.00-20.00	1.7908	-9.5729	1.3039	-8.6681
T9	20.00-0.00	1.5631	-8.3942	1.1328	-7.9097

Shielding Factor Ka

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
T1	1	Safety Cable	160.00 - 180.00	0.6000	0.5668
T1	3	1-5/8"	160.00 - 180.00	0.6000	0.5668
T1	4	Feedline Ladder (Af)	160.00 - 180.00	0.6000	0.5668

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
T2	1	Safety Cable	140.00 - 160.00	0.6000	0.5514
T2	3	1-5/8"	140.00 - 160.00	0.6000	0.5514
T2	4	Feedline Ladder (Af)	140.00 - 160.00	0.6000	0.5514
T2	6	1-5/8"	140.00 - 150.00	0.6000	0.5514
T2	7	1-5/8" Fiber	140.00 - 150.00	0.6000	0.5514
T3	1	Safety Cable	120.00 - 140.00	0.6000	0.5614
T3	3	1-5/8"	120.00 - 140.00	0.6000	0.5614
T3	4	Feedline Ladder (Af)	120.00 - 140.00	0.6000	0.5614
T3	6	1-5/8"	120.00 - 140.00	0.6000	0.5614
T3	7	1-5/8" Fiber	120.00 - 140.00	0.6000	0.5614
T4	1	Safety Cable	100.00 - 120.00	0.6000	0.6000
T4	3	1-5/8"	100.00 - 120.00	0.6000	0.6000
T4	4	Feedline Ladder (Af)	100.00 - 120.00	0.6000	0.6000
T4	6	1-5/8"	100.00 - 120.00	0.6000	0.6000
T4	7	1-5/8" Fiber	100.00 - 120.00	0.6000	0.6000
T4	9	1-5/8" Hybrid	100.00 - 120.00	0.6000	0.6000
T4	10	1-5/8"	100.00 - 120.00	0.6000	0.6000
T4	11	Feedline Ladder (Af)	100.00 - 120.00	0.6000	0.6000
T5	1	Safety Cable	80.00 - 100.00	0.6000	0.6000
T5	3	1-5/8"	80.00 - 100.00	0.6000	0.6000
T5	4	Feedline Ladder (Af)	80.00 - 100.00	0.6000	0.6000
T5	6	1-5/8"	80.00 - 100.00	0.6000	0.6000
T5	7	1-5/8" Fiber	80.00 - 100.00	0.6000	0.6000
T5	9	1-5/8" Hybrid	80.00 - 100.00	0.6000	0.6000
T5	10	1-5/8"	80.00 - 100.00	0.6000	0.6000
T5	11	Feedline Ladder (Af)	80.00 - 100.00	0.6000	0.6000
T6	1	Safety Cable	60.00 - 80.00	0.6000	0.6000
T6	3	1-5/8"	60.00 - 80.00	0.6000	0.6000
T6	4	Feedline Ladder (Af)	60.00 - 80.00	0.6000	0.6000
T6	6	1-5/8"	60.00 - 80.00	0.6000	0.6000
T6	7	1-5/8" Fiber	60.00 - 80.00	0.6000	0.6000
T6	9	1-5/8" Hybrid	60.00 - 80.00	0.6000	0.6000
T6	10	1-5/8"	60.00 - 80.00	0.6000	0.6000
T6	11	Feedline Ladder (Af)	60.00 - 80.00	0.6000	0.6000
T7	1	Safety Cable	40.00 - 60.00	0.6000	0.6000
T7	3	1-5/8"	40.00 - 60.00	0.6000	0.6000
T7	4	Feedline Ladder (Af)	40.00 - 60.00	0.6000	0.6000
T7	6	1-5/8"	40.00 - 60.00	0.6000	0.6000
T7	7	1-5/8" Fiber	40.00 - 60.00	0.6000	0.6000
T7	9	1-5/8" Hybrid	40.00 - 60.00	0.6000	0.6000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
T7	10	1-5/8"	40.00 - 60.00	0.6000	0.6000
T7	11	Feedline Ladder (Af)	40.00 - 60.00	0.6000	0.6000
T8	1	Safety Cable	20.00 - 40.00	0.6000	0.6000
T8	3	1-5/8"	20.00 - 40.00	0.6000	0.6000
T8	4	Feedline Ladder (Af)	20.00 - 40.00	0.6000	0.6000
T8	6	1-5/8"	20.00 - 40.00	0.6000	0.6000
T8	7	1-5/8" Fiber	20.00 - 40.00	0.6000	0.6000
T8	9	1-5/8" Hybrid	20.00 - 40.00	0.6000	0.6000
T8	10	1-5/8"	20.00 - 40.00	0.6000	0.6000
T8	11	Feedline Ladder (Af)	20.00 - 40.00	0.6000	0.6000
T9	1	Safety Cable	5.00 - 20.00	0.6000	0.6000
T9	3	1-5/8"	5.00 - 20.00	0.6000	0.6000
T9	4	Feedline Ladder (Af)	5.00 - 20.00	0.6000	0.6000
T9	6	1-5/8"	5.00 - 20.00	0.6000	0.6000
T9	7	1-5/8" Fiber	5.00 - 20.00	0.6000	0.6000
T9	9	1-5/8" Hybrid	5.00 - 20.00	0.6000	0.6000
T9	10	1-5/8"	5.00 - 20.00	0.6000	0.6000
T9	11	Feedline Ladder (Af)	5.00 - 20.00	0.6000	0.6000

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 K
Lightning Rod	A	From Leg	0.00	0.0000	180.00	No Ice	0.25	0.25	0.04
			0.00			1/2" Ice	0.66	0.66	0.07
			2.00			1" Ice	1.07	1.07	0.10
*****									
(2) SC488-HF2LNF (183" x 2.9" x 2.9")	A	From Leg	6.00	0.0000	180.00	No Ice	4.42	4.42	0.03
			0.00			1/2" Ice	5.98	5.98	0.06
			7.50			1" Ice	7.54	7.54	0.09
ANT150F2 (60" x 2.75" x 2.75")	B	From Leg	6.00	0.0000	180.00	No Ice	1.31	1.31	0.01
			0.00			1/2" Ice	1.74	1.74	0.02
			2.50			1" Ice	2.16	2.16	0.03
ANT150F2 (60" x 2.75" x 2.75")	C	From Leg	6.00	0.0000	180.00	No Ice	1.31	1.31	0.01
			0.00			1/2" Ice	1.74	1.74	0.02
			2.50			1" Ice	2.16	2.16	0.03
ATSSTMA10 (21.25" x 13.25" x 9")	B	From Leg	6.00	0.0000	180.00	No Ice	2.35	1.59	0.03
			0.00			1/2" Ice	2.52	1.75	0.04
			0.00			1" Ice	2.69	1.90	0.06
Standoff w/ tieback	A	From Leg	3.00	0.0000	180.00	No Ice	1.84	4.96	0.15
			0.00			1/2" Ice	2.24	7.00	0.18
			0.00			1" Ice	2.64	9.04	0.21
Standoff w/ tieback	B	From Leg	3.00	0.0000	180.00	No Ice	1.84	4.96	0.15
			0.00			1/2" Ice	2.24	7.00	0.18
			0.00			1" Ice	2.64	9.04	0.21
Standoff w/ tieback	C	From Leg	3.00	0.0000	180.00	No Ice	1.84	4.96	0.15

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 K
			0.00			1/2" Ice	2.24	7.00	0.18
			0.00			1" Ice	2.64	9.04	0.21
*****									
Air 21 B2A/B4P (55.9" x 12" x 7.8") w/ mount pipe	A	From Leg	3.00	0.0000	150.00	No Ice	6.83	6.16	0.12
			0.00			1/2" Ice	7.54	7.31	0.18
			0.00			1" Ice	8.25	8.47	0.23
Air 21 B2A/B4P (55.9" x 12" x 7.8") w/ mount pipe	B	From Leg	3.00	0.0000	150.00	No Ice	6.83	6.16	0.12
			0.00			1/2" Ice	7.54	7.31	0.18
			0.00			1" Ice	8.25	8.47	0.23
Air 21 B2A/B4P (55.9" x 12" x 7.8") w/ mount pipe	C	From Leg	3.00	0.0000	150.00	No Ice	6.83	6.16	0.12
			0.00			1/2" Ice	7.54	7.31	0.18
			0.00			1" Ice	8.25	8.47	0.23
AIR6449 B41 (33.1" x 20.5" x 8.3") w/ mount pipe	A	From Leg	3.00	0.0000	150.00	No Ice	6.90	4.32	0.13
			0.00			1/2" Ice	7.69	5.35	0.18
			0.00			1" Ice	8.48	6.38	0.24
AIR6449 B41 (33.1" x 20.5" x 8.3") w/ mount pipe	B	From Leg	3.00	0.0000	150.00	No Ice	6.90	4.32	0.13
			0.00			1/2" Ice	7.69	5.35	0.18
			0.00			1" Ice	8.48	6.38	0.24
AIR6449 B41 (33.1" x 20.5" x 8.3") w/ mount pipe	C	From Leg	3.00	0.0000	150.00	No Ice	6.90	4.32	0.13
			0.00			1/2" Ice	7.69	5.35	0.18
			0.00			1" Ice	8.48	6.38	0.24
APXVAARR24_43-U-NA20 (95.9" x 24" x 8.7") w/ mount pipe	A	From Leg	3.00	0.0000	150.00	No Ice	20.24	10.79	0.16
			0.00			1/2" Ice	20.90	12.19	0.30
			0.00			1" Ice	21.56	13.58	0.44
APXVAARR24_43-U-NA20 (95.9" x 24" x 8.7") w/ mount pipe	B	From Leg	3.00	0.0000	150.00	No Ice	20.24	10.79	0.16
			0.00			1/2" Ice	20.90	12.19	0.30
			0.00			1" Ice	21.56	13.58	0.44
APXVAARR24_43-U-NA20 (95.9" x 24" x 8.7") w/ mount pipe	C	From Leg	3.00	0.0000	150.00	No Ice	20.24	10.79	0.16
			0.00			1/2" Ice	20.90	12.19	0.30
			0.00			1" Ice	21.56	13.58	0.44
AIR32 KRD901146-1_B66A_B2A (Octo) (56.6" x 12.9" x 8.7") w/ mount pipe	A	From Leg	3.00	0.0000	150.00	No Ice	7.29	6.61	0.16
			0.00			1/2" Ice	8.00	7.77	0.22
			0.00			1" Ice	8.71	8.93	0.28
AIR32 KRD901146-1_B66A_B2A (Octo) (56.6" x 12.9" x 8.7") w/ mount pipe	B	From Leg	3.00	0.0000	150.00	No Ice	7.29	6.61	0.16
			0.00			1/2" Ice	8.00	7.77	0.22
			0.00			1" Ice	8.71	8.93	0.28
AIR32 KRD901146-1_B66A_B2A (Octo) (56.6" x 12.9" x 8.7") w/ mount pipe	C	From Leg	3.00	0.0000	150.00	No Ice	7.29	6.61	0.16
			0.00			1/2" Ice	8.00	7.77	0.22
			0.00			1" Ice	8.71	8.93	0.28
KRY 112 144/1 (6.9" x 6.1" x 2.7")	A	From Leg	3.00	0.0000	150.00	No Ice	0.35	0.16	0.01
			0.00			1/2" Ice	0.42	0.21	0.01
			0.00			1" Ice	0.49	0.26	0.02
KRY 112 144/1 (6.9" x 6.1" x 2.7")	B	From Leg	3.00	0.0000	150.00	No Ice	0.35	0.16	0.01
			0.00			1/2" Ice	0.42	0.21	0.01
			0.00			1" Ice	0.49	0.26	0.02
KRY 112 144/1 (6.9" x 6.1" x 2.7")	C	From Leg	3.00	0.0000	150.00	No Ice	0.35	0.16	0.01
			0.00			1/2" Ice	0.42	0.21	0.01
			0.00			1" Ice	0.49	0.26	0.02
Radio 4449 B71+B85 (13.1" x 14.9" x 9.2")	A	From Leg	3.00	0.0000	150.00	No Ice	1.63	1.00	0.07
			0.00			1/2" Ice	1.77	1.12	0.09
			0.00			1" Ice	1.91	1.23	0.10
Radio 4449 B71+B85 (13.1" x 14.9" x 9.2")	B	From Leg	3.00	0.0000	150.00	No Ice	1.63	1.00	0.07
			0.00			1/2" Ice	1.77	1.12	0.09

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 K
			0.00			1" Ice	1.91	1.23	0.10
Radio 4449 B71+B85 (13.1" x 14.9" x 9.2")	C	From Leg	3.00	0.0000	150.00	No Ice	1.63	1.00	0.07
			0.00			1/2" Ice	1.77	1.12	0.09
			0.00			1" Ice	1.91	1.23	0.10
4415 B25 (16.5" x 13.4" x 5.9")	A	From Leg	3.00	0.0000	150.00	No Ice	1.84	0.82	0.05
			0.00			1/2" Ice	1.99	0.95	0.06
			0.00			1" Ice	2.14	1.07	0.07
4415 B25 (16.5" x 13.4" x 5.9")	B	From Leg	3.00	0.0000	150.00	No Ice	1.84	0.82	0.05
			0.00			1/2" Ice	1.99	0.95	0.06
			0.00			1" Ice	2.14	1.07	0.07
4415 B25 (16.5" x 13.4" x 5.9")	C	From Leg	3.00	0.0000	150.00	No Ice	1.84	0.82	0.05
			0.00			1/2" Ice	1.99	0.95	0.06
			0.00			1" Ice	2.14	1.07	0.07
12.5' T-Frame	A	From Leg	1.50	0.0000	150.00	No Ice	9.72	7.05	0.28
			0.00			1/2" Ice	13.66	9.87	0.40
			0.00			1" Ice	17.60	12.69	0.52
12.5' T-Frame	B	From Leg	1.50	0.0000	150.00	No Ice	9.72	7.05	0.28
			0.00			1/2" Ice	13.66	9.87	0.40
			0.00			1" Ice	17.60	12.69	0.52
12.5' T-Frame	C	From Leg	1.50	0.0000	150.00	No Ice	9.72	7.05	0.28
			0.00			1/2" Ice	13.66	9.87	0.40
			0.00			1" Ice	17.60	12.69	0.52
(2) V-Bracing Kit [Metrosite MS-C1B-2875P]	A	From Leg	1.50	0.0000	150.00	No Ice	3.77	2.91	0.11
			0.00			1/2" Ice	4.71	3.64	0.14
			0.00			1" Ice	5.66	4.37	0.17
(2) V-Bracing Kit [Metrosite MS-C1B-2875P]	B	From Leg	1.50	0.0000	150.00	No Ice	3.77	2.91	0.11
			0.00			1/2" Ice	4.71	3.64	0.14
			0.00			1" Ice	5.66	4.37	0.17
(2) V-Bracing Kit [Metrosite MS-C1B-2875P]	C	From Leg	1.50	0.0000	150.00	No Ice	3.77	2.91	0.11
			0.00			1/2" Ice	4.71	3.64	0.14
			0.00			1" Ice	5.66	4.37	0.17
*****									
(3) SBNHH-1D65B (72" x 11.85" x 7.1") w/ mount pipe	A	From Leg	3.00	0.0000	120.00	No Ice	8.53	7.24	0.08
			0.00			1/2" Ice	9.19	8.49	0.15
			0.00			1" Ice	9.85	9.75	0.21
(3) SBNHH-1D65B (72" x 11.85" x 7.1") w/ mount pipe	B	From Leg	3.00	0.0000	120.00	No Ice	8.53	7.24	0.08
			0.00			1/2" Ice	9.19	8.49	0.15
			0.00			1" Ice	9.85	9.75	0.21
(3) SBNHH-1D65B (72" x 11.85" x 7.1") w/ mount pipe	C	From Leg	3.00	0.0000	120.00	No Ice	8.53	7.24	0.08
			0.00			1/2" Ice	9.19	8.49	0.15
			0.00			1" Ice	9.85	9.75	0.21
MT6407-77A (35.12" x 16.06" x 5.51") w/ mount pipe	A	From Leg	3.00	0.0000	120.00	No Ice	5.91	3.74	0.12
			0.00			1/2" Ice	6.67	4.77	0.16
			0.00			1" Ice	7.43	5.80	0.21
MT6407-77A (35.12" x 16.06" x 5.51") w/ mount pipe	B	From Leg	3.00	0.0000	120.00	No Ice	5.91	3.74	0.12
			0.00			1/2" Ice	6.67	4.77	0.16
			0.00			1" Ice	7.43	5.80	0.21
MT6407-77A (35.12" x 16.06" x 5.51") w/ mount pipe	C	From Leg	3.00	0.0000	120.00	No Ice	5.91	3.74	0.12
			0.00			1/2" Ice	6.67	4.77	0.16
			0.00			1" Ice	7.43	5.80	0.21
(2) B5/B13 (15" x 15" x 8.1")	A	From Leg	3.00	0.0000	120.00	No Ice	1.88	1.01	0.07
			0.00			1/2" Ice	2.03	1.13	0.08
			0.00			1" Ice	2.18	1.25	0.10

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 K
(2) B5/B13 (15" x 15" x 8.1")	B	From Leg	3.00	0.0000	120.00	No Ice	1.88	1.01	0.07
			0.00			1/2" Ice	2.03	1.13	0.08
			0.00			1" Ice	2.18	1.25	0.10
(2) B5/B13 (15" x 15" x 8.1")	C	From Leg	3.00	0.0000	120.00	No Ice	1.88	1.01	0.07
			0.00			1/2" Ice	2.03	1.13	0.08
			0.00			1" Ice	2.18	1.25	0.10
B2/B66A (15" x 15" x 10")	A	From Leg	3.00	0.0000	120.00	No Ice	1.88	1.25	0.08
			0.00			1/2" Ice	2.03	1.38	0.10
			0.00			1" Ice	2.18	1.50	0.11
B2/B66A (15" x 15" x 10")	B	From Leg	3.00	0.0000	120.00	No Ice	1.88	1.25	0.08
			0.00			1/2" Ice	2.03	1.38	0.10
			0.00			1" Ice	2.18	1.50	0.11
B2/B66A (15" x 15" x 10")	C	From Leg	3.00	0.0000	120.00	No Ice	1.88	1.25	0.08
			0.00			1/2" Ice	2.03	1.38	0.10
			0.00			1" Ice	2.18	1.50	0.11
RRFDC-3315-PF-48 (22.98" x 15.79" x 10.25")	A	From Leg	3.00	0.0000	120.00	No Ice	3.02	1.96	0.03
			0.00			1/2" Ice	3.22	2.13	0.05
			0.00			1" Ice	3.41	2.30	0.08
RRFDC-3315-PF-48 (22.98" x 15.79" x 10.25")	B	From Leg	3.00	0.0000	120.00	No Ice	3.02	1.96	0.03
			0.00			1/2" Ice	3.22	2.13	0.05
			0.00			1" Ice	3.41	2.30	0.08
RRFDC-3315-PF-48 (22.98" x 15.79" x 10.25")	C	From Leg	3.00	0.0000	120.00	No Ice	3.02	1.96	0.03
			0.00			1/2" Ice	3.22	2.13	0.05
			0.00			1" Ice	3.41	2.30	0.08
Sector Frames [Commscope SF-QV12-B]	A	From Leg	1.50	0.0000	120.00	No Ice	19.94	8.22	0.42
			0.00			1/2" Ice	24.47	11.99	0.65
			0.00			1" Ice	29.00	15.76	0.88
Sector Frames [Commscope SF-QV12-B]	B	From Leg	1.50	0.0000	120.00	No Ice	19.94	8.22	0.42
			0.00			1/2" Ice	24.47	11.99	0.65
			0.00			1" Ice	29.00	15.76	0.88
Sector Frames [Commscope SF-QV12-B]	C	From Leg	1.50	0.0000	120.00	No Ice	19.94	8.22	0.42
			0.00			1/2" Ice	24.47	11.99	0.65
			0.00			1" Ice	29.00	15.76	0.88
(2) V-Bracing Kit [VZWSMART-SFK3] + Support Rail	A	From Leg	1.50	0.0000	120.00	No Ice	6.74	5.88	0.12
			0.00			1/2" Ice	8.43	7.35	0.15
			0.00			1" Ice	10.11	8.82	0.18
(2) V-Bracing Kit [VZWSMART-SFK3] + Support Rail	B	From Leg	1.50	0.0000	120.00	No Ice	6.74	5.88	0.12
			0.00			1/2" Ice	8.43	7.35	0.15
			0.00			1" Ice	10.11	8.82	0.18
(2) V-Bracing Kit [VZWSMART-SFK3] + Support Rail	C	From Leg	1.50	0.0000	120.00	No Ice	6.74	5.88	0.12
			0.00			1/2" Ice	8.43	7.35	0.15
			0.00			1" Ice	10.11	8.82	0.18
Side-By-Side Mounting Kit [BSAMNT-SBS-1-2]	A	From Leg	3.00	0.0000	120.00	No Ice	0.22	0.30	0.07
			0.00			1/2" Ice	0.26	0.35	0.09
			0.00			1" Ice	0.30	0.40	0.10
Side-By-Side Mounting Kit [BSAMNT-SBS-1-2]	B	From Leg	3.00	0.0000	120.00	No Ice	0.22	0.30	0.07
			0.00			1/2" Ice	0.26	0.35	0.09
			0.00			1" Ice	0.30	0.40	0.10
Side-By-Side Mounting Kit [BSAMNT-SBS-1-2]	C	From Leg	3.00	0.0000	120.00	No Ice	0.22	0.30	0.07
			0.00			1/2" Ice	0.26	0.35	0.09
			0.00			1" Ice	0.30	0.40	0.10

Load Combinations

Comb. No.	Description
1	Dead Only
2	1.2 Dead+1.6 Wind 0 deg - No Ice
3	0.9 Dead+1.6 Wind 0 deg - No Ice
4	1.2 Dead+1.6 Wind 30 deg - No Ice
5	0.9 Dead+1.6 Wind 30 deg - No Ice
6	1.2 Dead+1.6 Wind 60 deg - No Ice
7	0.9 Dead+1.6 Wind 60 deg - No Ice
8	1.2 Dead+1.6 Wind 90 deg - No Ice
9	0.9 Dead+1.6 Wind 90 deg - No Ice
10	1.2 Dead+1.6 Wind 120 deg - No Ice
11	0.9 Dead+1.6 Wind 120 deg - No Ice
12	1.2 Dead+1.6 Wind 150 deg - No Ice
13	0.9 Dead+1.6 Wind 150 deg - No Ice
14	1.2 Dead+1.6 Wind 180 deg - No Ice
15	0.9 Dead+1.6 Wind 180 deg - No Ice
16	1.2 Dead+1.6 Wind 210 deg - No Ice
17	0.9 Dead+1.6 Wind 210 deg - No Ice
18	1.2 Dead+1.6 Wind 240 deg - No Ice
19	0.9 Dead+1.6 Wind 240 deg - No Ice
20	1.2 Dead+1.6 Wind 270 deg - No Ice
21	0.9 Dead+1.6 Wind 270 deg - No Ice
22	1.2 Dead+1.6 Wind 300 deg - No Ice
23	0.9 Dead+1.6 Wind 300 deg - No Ice
24	1.2 Dead+1.6 Wind 330 deg - No Ice
25	0.9 Dead+1.6 Wind 330 deg - No Ice
26	1.2 Dead+1.0 Ice+1.0 Temp
27	1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp
28	1.2 Dead+1.0 Wind 30 deg+1.0 Ice+1.0 Temp
29	1.2 Dead+1.0 Wind 60 deg+1.0 Ice+1.0 Temp
30	1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp
31	1.2 Dead+1.0 Wind 120 deg+1.0 Ice+1.0 Temp
32	1.2 Dead+1.0 Wind 150 deg+1.0 Ice+1.0 Temp
33	1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp
34	1.2 Dead+1.0 Wind 210 deg+1.0 Ice+1.0 Temp
35	1.2 Dead+1.0 Wind 240 deg+1.0 Ice+1.0 Temp
36	1.2 Dead+1.0 Wind 270 deg+1.0 Ice+1.0 Temp
37	1.2 Dead+1.0 Wind 300 deg+1.0 Ice+1.0 Temp
38	1.2 Dead+1.0 Wind 330 deg+1.0 Ice+1.0 Temp
39	Dead+Wind 0 deg - Service
40	Dead+Wind 30 deg - Service
41	Dead+Wind 60 deg - Service
42	Dead+Wind 90 deg - Service
43	Dead+Wind 120 deg - Service
44	Dead+Wind 150 deg - Service
45	Dead+Wind 180 deg - Service
46	Dead+Wind 210 deg - Service
47	Dead+Wind 240 deg - Service
48	Dead+Wind 270 deg - Service
49	Dead+Wind 300 deg - Service
50	Dead+Wind 330 deg - Service

Maximum Tower Deflections - Service Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
T1	180 - 160	4.990	39	0.2431	0.0687
T2	160 - 140	3.976	39	0.2315	0.0390
T3	140 - 120	3.029	40	0.2044	0.0226
T4	120 - 100	2.221	40	0.1734	0.0178
T5	100 - 80	1.540	40	0.1396	0.0155
T6	80 - 60	0.990	40	0.1107	0.0124
T7	60 - 40	0.565	40	0.0795	0.0089
T8	40 - 20	0.265	40	0.0513	0.0056
T9	20 - 0	0.076	40	0.0259	0.0023

Critical Deflections and Radius of Curvature - Service Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
180.00	Lightning Rod	39	4.990	0.2431	0.0687	334124
150.00	Air 21 B2A/B4P (55.9" x 12" x 7.8") w/ mount pipe	39	3.488	0.2193	0.0290	43512
120.00	(3) SBNHH-1D65B (72" x 11.85" x 7.1") w/ mount pipe	40	2.221	0.1734	0.0178	39505

Maximum Tower Deflections - Design Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
T1	180 - 160	24.555	2	1.1960	0.3270
T2	160 - 140	19.560	2	1.1416	0.1827
T3	140 - 120	14.882	2	1.0076	0.1107
T4	120 - 100	10.899	4	0.8536	0.0870
T5	100 - 80	7.555	4	0.6865	0.0760
T6	80 - 60	4.855	4	0.5431	0.0607
T7	60 - 40	2.772	4	0.3900	0.0439
T8	40 - 20	1.298	4	0.2513	0.0274
T9	20 - 0	0.370	4	0.1270	0.0115

Critical Deflections and Radius of Curvature - Design Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
180.00	Lightning Rod	2	24.555	1.1960	0.3270	70325
150.00	Air 21 B2A/B4P (55.9" x 12" x 7.8") w/ mount pipe	2	17.153	1.0816	0.1377	8853
120.00	(3) SBNHH-1D65B (72" x 11.85" x 7.1") w/ mount pipe	4	10.899	0.8536	0.0870	8041

Bolt Design Data

Section No.	Elevation ft	Component Type	Bolt Grade	Bolt Size in	Number Of Bolts	Maximum Load per Bolt K	Allowable Load per Bolt K	Ratio Load / Allowable	Allowable Ratio	Criteria
T1	180	Leg	A325N	0.7500	4	2.64	29.82	0.089 ✔	1	Bolt Tension
T2	160	Leg	A325N	0.7500	4	11.12	29.82	0.373 ✔	1	Bolt Tension
T3	140	Leg	A325N	1.0000	4	19.01	53.01	0.359 ✔	1	Bolt Tension
		Diagonal	A325N	0.6250	1	3.99	6.83	0.584 ✔	1	Member Block Shear
		Top Girt	A325N	0.6250	1	1.44	4.55	0.317 ✔	1	Member Block Shear
T4	120	Leg	A325N	1.0000	6	20.86	53.01	0.394 ✔	1	Bolt Tension
		Diagonal	A325N	0.6250	1	6.11	9.11	0.671 ✔	1	Member Block Shear
T5	100	Leg	A325N	1.0000	6	28.32	53.01	0.534 ✔	1	Bolt Tension
		Diagonal	A325N	0.6250	1	6.26	9.11	0.687 ✔	1	Member Block Shear
T6	80	Leg	A325N >1"	1.2500	6	34.09	72.48	0.470 ✔	1	Bolt Tension
		Diagonal	A325N	0.7500	1	8.49	9.46	0.897 ✔	1	Member Bearing
		Secondary Horizontal	A325N	0.6250	1	4.42	4.55	0.971 ✔	1	Member Block Shear
T7	60	Leg	A325N >1"	1.2500	6	40.38	72.48	0.557 ✔	1	Bolt Tension
		Diagonal	A325N	0.7500	1	8.70	9.46	0.919 ✔	1	Member Bearing
		Secondary Horizontal	A325N	0.6250	1	4.99	6.83	0.730 ✔	1	Member Block Shear
T8	40	Leg	A325N >1"	1.2500	6	46.33	72.48	0.639 ✔	1	Bolt Tension
		Diagonal	A325N	0.7500	1	8.95	9.46	0.946 ✔	1	Member Bearing
		Secondary Horizontal	A325N	0.6250	1	5.49	7.83	0.701 ✔	1	Member Bearing
T9	20	Diagonal	A325N	0.7500	1	9.02	12.62	0.715 ✔	1	Member Bearing
		Secondary Horizontal	A325N	0.6250	1	6.17	7.83	0.788 ✔	1	Member Bearing

Compression Checks

Leg Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
T1	180 - 160	1 1/2	20.00	3.21	102.7 K=1.00	1.7672	-10.87	36.79	0.295 [1] ✔
T2	160 - 140	2	20.00	3.21	77.0 K=1.00	3.1416	-45.05	91.64	0.492 [1] ✔
T3	140 - 120	2 3/4	20.02	5.00	87.4 K=1.00	5.9396	-83.30	152.99	0.544 [1] ✔
T4	120 - 100	3	20.02	5.00	80.1 K=1.00	7.0686	-138.63	199.04	0.696 [1] ✔
T5	100 - 80	3 1/2	20.02	5.00	68.6 K=1.00	9.6211	-187.58	306.80	0.611 [1] ✔
T6	80 - 60	3 1/2	20.02	5.20	71.3 K=1.00	9.6211	-226.18	298.51	0.758 [1] ✔
T7	60 - 40	3 3/4	20.02	5.17	66.2 K=1.00	11.0447	-268.78	360.68	0.745 [1] ✔
T8	40 - 20	4	20.02	5.15	61.8 K=1.00	12.5664	-309.83	427.55	0.725 [1] ✔
T9	20 - 0	4	20.02	5.14	61.7 K=1.00	12.5664	-349.13	428.28	0.815 [1] ✔

[1] P_u / ϕP_n controls

Diagonal Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
T1	180 - 160	1	5.13	4.97	166.9 K=0.70	0.7854	-2.69	6.37	0.423 [1] ✔
T2	160 - 140	1 1/4	5.13	4.91	132.1 K=0.70	1.2272	-9.04	15.87	0.570 [1] ✔
T3	140 - 120	L2x2x3/16	6.52	3.13	101.5 K=1.06	0.7150	-4.17	13.47	0.309 [1] ✔
T4	120 - 100	L2x2x1/4	8.45	4.07	124.8 K=1.00	0.9380	-6.14	13.38	0.459 [1] ✔
T5	100 - 80	L2x2x1/4	9.70	4.67	143.3 K=1.00	0.9380	-6.26	10.32	0.606 [1] ✔
T6	80 - 60	L3x3x3/16	13.88	6.87	138.2 K=1.00	1.0900	-8.68	12.89	0.674 [1] ✔
T7	60 - 40	L3x3x3/16	14.96	7.39	148.7 K=1.00	1.0900	-8.98	11.13	0.807 [1] ✔

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
T8	40 - 20	L3x3x3/16	16.11	7.94	160.0 K=1.00	1.0900	-9.30	9.62	0.966 [1] ✔
T9	20 - 0	L3x3x1/4	17.31	8.54	173.2 K=1.00	1.4400	-9.47	10.85	0.873 [1] ✔

[1] P_u / ϕP_n controls

Horizontal Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
T1	180 - 160	1	4.00	3.88	130.2 K=0.70	0.7854	-0.31	10.42	0.029 [1] ✔
T2	160 - 140	1	4.00	3.83	128.8 K=0.70	0.7854	-2.23	10.63	0.210 [1] ✔

[1] P_u / ϕP_n controls

Secondary Horizontal Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
T1	180 - 160	1	2.00	1.94	83.9 K=0.90	0.7854	-0.00	17.56	0.000 [1] ✔
T2	160 - 140	1	2.00	1.92	83.7 K=0.91	0.7854	-0.00	17.59	0.000 [1] ✔
T6	80 - 60	L2x2x1/8	9.61	4.54	137.0 K=1.00	0.4844	-4.42	5.83	0.759 [1] ✔
T7	60 - 40	L2x2x3/16	11.11	5.28	160.8 K=1.00	0.7150	-4.99	6.25	0.799 [1] ✔
T8	40 - 20	L2 1/2x2 1/2x3/16	12.61	6.02	146.0 K=1.00	0.9020	-5.49	9.57	0.574 [1] ✔
T9	20 - 0	L2 1/2x2 1/2x3/16	14.12	6.77	164.1 K=1.00	0.9020	-6.17	7.56	0.816 [1] ✔

[1] P_u / ϕP_n controls

Top Girt Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
T1	180 - 160	1	4.00	3.88	130.2 K=0.70	0.7854	-0.95	10.42	0.091 [1] ✔
T2	160 - 140	1	4.00	3.83	128.8 K=0.70	0.7854	-1.41	10.63	0.133 [1] ✔
T3	140 - 120	L2x2x1/8	4.00	3.53	113.3 K=1.06	0.4844	-1.44	7.89	0.183 [1] ✔

[1] P_u / ϕP_n controls

Bottom Girt Design Data (Compression)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
T1	180 - 160	1	4.00	3.88	130.2 K=0.70	0.7854	-1.11	10.42	0.107 [1] ✔
T2	160 - 140	1	4.00	3.83	128.8 K=0.70	0.7854	-2.76	10.63	0.259 [1] ✔

[1] P_u / ϕP_n controls

Tension Checks

Leg Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
T1	180 - 160	1 1/2	20.00	0.38	12.0	1.7672	10.57	79.52	0.133 [1] ✔
T2	160 - 140	2	20.00	0.38	9.0	3.1416	44.49	141.37	0.315 [1] ✔
T3	140 - 120	2 3/4	20.02	5.00	87.4	5.9396	76.04	267.28	0.285 [1] ✔
T4	120 - 100	3	20.02	5.00	80.1	7.0686	125.18	318.09	0.394 [1] ✔
T5	100 - 80	3 1/2	20.02	5.00	68.6	9.6211	169.90	432.95	0.392 [1] ✔
T6	80 - 60	3 1/2	20.02	4.81	66.0	9.6211	204.72	432.95	0.473 [1] ✔

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
T7	60 - 40	3 3/4	20.02	4.84	61.9	11.0447	242.50	497.01	0.488 [1] ✔
T8	40 - 20	4	20.02	4.86	58.3	12.5664	278.22	565.49	0.492 [1] ✔
T9	20 - 0	4	20.02	4.87	58.5	12.5664	311.92	565.49	0.552 [1] ✔

[1] P_u / ϕP_n controls

Diagonal Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
T1	180 - 160	1	5.13	4.97	238.4	0.7854	2.69	25.45	0.106 [1] ✔
T2	160 - 140	1 1/4	5.13	4.91	188.7	1.2272	9.06	39.76	0.228 [1] ✔
T3	140 - 120	L2x2x3/16	6.52	3.13	63.2	0.4308	3.99	18.74	0.213 [1] ✔
T4	120 - 100	L2x2x1/4	7.86	3.78	76.8	0.5629	6.11	24.49	0.250 [1] ✔
T5	100 - 80	L2x2x1/4	9.70	4.67	94.4	0.5629	6.26	24.49	0.256 [1] ✔
T6	80 - 60	L3x3x3/16	13.88	6.87	89.5	0.6945	8.49	30.21	0.281 [1] ✔
T7	60 - 40	L3x3x3/16	14.96	7.39	96.1	0.6945	8.70	30.21	0.288 [1] ✔
T8	40 - 20	L3x3x3/16	16.11	7.94	103.3	0.6945	8.95	30.21	0.296 [1] ✔
T9	20 - 0	L3x3x1/4	16.70	8.25	108.1	0.9159	9.02	39.84	0.226 [1] ✔

[1] P_u / ϕP_n controls

Horizontal Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
T1	180 - 160	1	4.00	3.88	186.0	0.7854	0.31	25.45	0.012 [1] ✔

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
T2	160 - 140	1	4.00	3.83	184.0	0.7854	2.25	25.45	0.089 [1] ✔

[1] P_u / ϕP_n controls

Secondary Horizontal Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
T1	180 - 160	1	2.00	1.94	93.0	0.7854	0.00	25.45	0.000 [1] ✔
T2	160 - 140	1	2.00	1.92	92.0	0.7854	0.00	25.45	0.000 [1] ✔
T6	80 - 60	L2x2x1/8	8.86	4.16	164.2	0.2930	4.42	12.74	0.347 [1] ✔
T7	60 - 40	L2x2x3/16	10.36	4.90	195.4	0.4308	4.99	18.74	0.266 [1] ✔
T8	40 - 20	L2 1/2x2 1/2x3/16	11.86	5.65	177.8	0.5710	5.49	24.84	0.221 [1] ✔
T9	20 - 0	L2 1/2x2 1/2x3/16	14.12	6.77	212.6	0.5710	6.17	24.84	0.248 [1] ✔

[1] P_u / ϕP_n controls

Top Girt Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
T1	180 - 160	1	4.00	3.88	186.0	0.7854	0.98	25.45	0.038 [1] ✔
T2	160 - 140	1	4.00	3.83	184.0	0.7854	1.33	25.45	0.052 [1] ✔
T3	140 - 120	L2x2x1/8	4.00	3.53	72.3	0.2930	1.44	12.74	0.113 [1] ✔

[1] P_u / ϕP_n controls

Bottom Girt Design Data (Tension)

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
T1	180 - 160	1	4.00	3.88	186.0	0.7854	1.19	25.45	0.047 [1] ✔
T2	160 - 140	1	4.00	3.83	184.0	0.7854	2.88	25.45	0.113 [1] ✔

[1] P_u / ϕP_n controls

Section Capacity Table

Section No.	Elevation ft	Component Type	Size	Critical Element	P K	ϕP_{allow} K	% Capacity	Pass Fail
T1	180 - 160	Leg	1 1/2	3	-10.87	36.79	29.5	Pass
T2	160 - 140	Leg	2	51	-45.05	91.64	49.2	Pass
T3	140 - 120	Leg	2 3/4	99	-83.30	152.99	54.4	Pass
T4	120 - 100	Leg	3	129	-138.63	199.04	69.6	Pass
T5	100 - 80	Leg	3 1/2	156	-187.58	306.80	61.1	Pass
T6	80 - 60	Leg	3 1/2	183	-226.18	298.51	75.8	Pass
T7	60 - 40	Leg	3 3/4	204	-268.78	360.68	74.5	Pass
T8	40 - 20	Leg	4	225	-309.83	427.55	72.5	Pass
T9	20 - 0	Leg	4	246	-349.13	428.28	81.5	Pass
T1	180 - 160	Diagonal	1	11	-2.69	6.37	42.3	Pass
T2	160 - 140	Diagonal	1 1/4	60	-9.04	15.87	57.0	Pass
T3	140 - 120	Diagonal	L2x2x3/16	124	-4.17	13.47	30.9 58.4 (b)	Pass
T4	120 - 100	Diagonal	L2x2x1/4	134	-6.14	13.38	45.9 67.1 (b)	Pass
T5	100 - 80	Diagonal	L2x2x1/4	161	-6.26	10.32	60.6 68.7 (b)	Pass
T6	80 - 60	Diagonal	L3x3x3/16	188	-8.68	12.89	67.4 89.7 (b)	Pass
T7	60 - 40	Diagonal	L3x3x3/16	209	-8.98	11.13	80.7 91.9 (b)	Pass
T8	40 - 20	Diagonal	L3x3x3/16	230	-9.30	9.62	96.6	Pass
T9	20 - 0	Diagonal	L3x3x1/4	251	-9.47	10.85	87.3	Pass
T1	180 - 160	Horizontal	1	29	-0.31	10.42	2.9	Pass
T2	160 - 140	Horizontal	1	77	-2.23	10.63	21.0	Pass
T1	180 - 160	Secondary Horizontal	1	20	-0.00	17.56	0.1	Pass
T2	160 - 140	Secondary Horizontal	1	68	-0.00	17.59	0.1	Pass
T6	80 - 60	Secondary Horizontal	L2x2x1/8	191	-4.42	5.83	75.9 97.1 (b)	Pass
T7	60 - 40	Secondary Horizontal	L2x2x3/16	212	-4.99	6.25	79.9	Pass
T8	40 - 20	Secondary Horizontal	L2 1/2x2 1/2x3/16	233	-5.49	9.57	57.4 70.1 (b)	Pass
T9	20 - 0	Secondary Horizontal	L2 1/2x2 1/2x3/16	254	-6.17	7.56	81.6	Pass
T1	180 - 160	Top Girt	1	5	-0.95	10.42	9.1	Pass
T2	160 - 140	Top Girt	1	53	-1.41	10.63	13.3	Pass
T3	140 - 120	Top Girt	L2x2x1/8	101	-1.44	7.89	18.3 31.7 (b)	Pass
T1	180 - 160	Bottom Girt	1	8	-1.11	10.42	10.7	Pass
T2	160 - 140	Bottom Girt	1	56	-2.76	10.63	25.9	Pass

Section No.	Elevation ft	Component Type	Size	Critical Element	P K	ϕP_{allow} K	% Capacity	Pass Fail
						Summary		
						Leg (T9)	81.5	Pass
						Diagonal (T8)	96.6	Pass
						Horizontal (T2)	21.0	Pass
						Secondary Horizontal (T6)	97.1	Pass
						Top Girt (T3)	31.7	Pass
						Bottom Girt (T2)	25.9	Pass
						Bolt Checks	97.1	Pass
						RATING =	**97.1**	**Pass**

Self Support Anchor Bolt Check

Project Information	
SBA Project # :	CT09680-VZW-061721
Code :	G

Leg Reaction			
Uplift(kips):	320	Shear (kips) :	25
Comp(kips):	359	Shear (kips) :	27

Bolt Detail Type	
Anchor bolt detail type:	C
Anchor bolt detail factor:	0.5

Strength Reduction Factors	
Tension :	0.8
Compression :	0.80
Shear :	0.75
Flexure :	0.9

Bolt Capacity : 63.6% ***Pass***

Bolt Information	
Quantity :	6
Diameter (in) :	1.25
Assumed ungrouted gap (in) :	0
Bolt Fy (ksi) :	109
Bolt Fu (AISC Table 2-6) (ksi):	125
# of threads (AISC Table 7-17) :	7

Mat Foundation Design for Self Supporting Tower

Customer Name:		**EIA/TIA Standard:**	EIA-222-G
Site Name:		**Structure Height (Ft.):**	180
Site Nmber:	CT09680-VZW-061721	**Engineer Name:**	D. Yohannes
Engr. Number:		**Engineer Login ID:**	

Date

Foundation Info Obtained from: Drawings/Calculations

Analysis or Design? Analysis

Number of Tower Legs: 3 Legs

Base Reactions (Factored):

(1). Individual Leg:

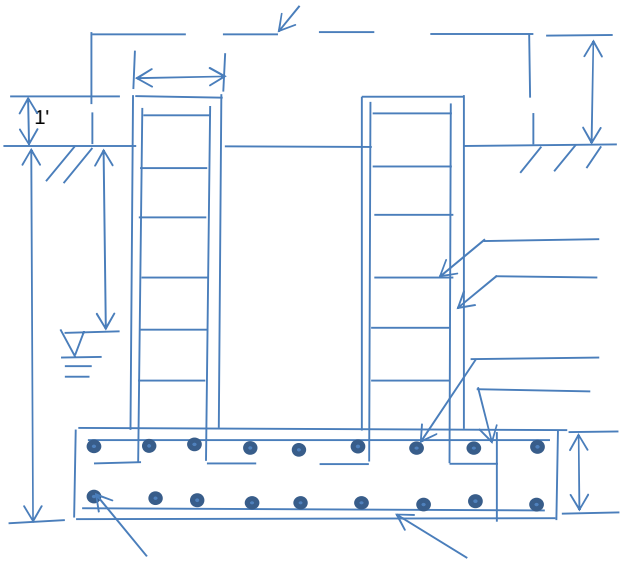
Axial Load (Kips):	359.0	Uplift Force (Kips):	
Shear Force (Kips):			

(2). Tower Base:

Total Vertical Load (Kips):	45.0	Total Shear Force (Kips):	
Moment (Kips-ft):			

Foundation Geometries:

Leg distance (Center-to-Center ft.):		14.5	Mods required -Yes/No ?:	
Diameter of Pier (ft.):	Round	3.0	Pier Height A. G. (ft.):	
Tower center to mat center (ft):			Depth of Base BG (ft.):	
Length of Pad (ft.):		28	Width of Pad (ft.):	
Thickness of Pad (ft):				



Material Properties and Reabr Info:

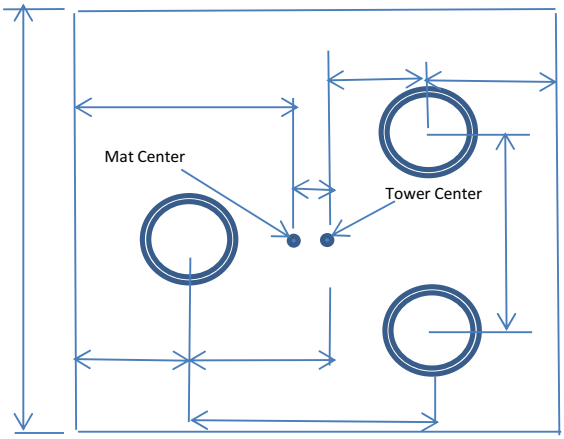
Concrete Strength (psi):	4000	Steel Elastic Modulus:	29000	ksi
Vertical bar yield (ksi)	60	Tie steel yield (ksi):		
Vertical Rebar Size #:		Tie / Stirrup Size #:		
Qty. of Vertical Rebars:	12	Tie Spacing (in):		
Pad Rebar Yield (Ksi):	60	Pad Steel Rebar Size (#):		
Concrete Cover (in.):		Unit Weight of Concrete:	150.0	pcf

Rebar at the bottom of the concrete pad:

Qty. of Rebar in Pad (L):	38	Qty. of Rebar in Pad (W):	

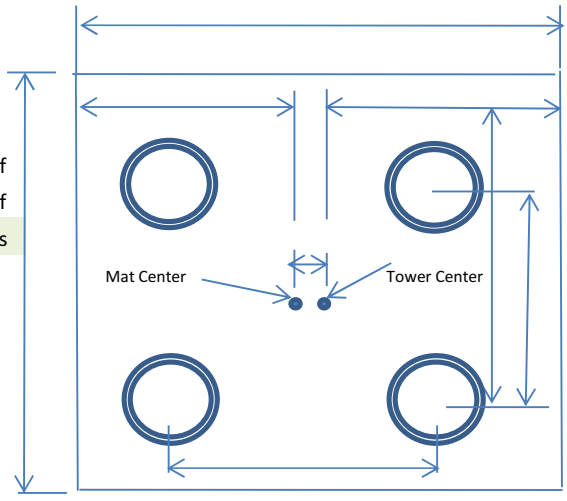
Rebar at the top of the concrete pad:

Qty. of Rebar in Pad (L):	38	Qty. of Rebar in Pad (W):	



Soil Design Parameters:

Soil Unit Weight (pcf):	110.0	Soil Buoyant Weight:		Pcf
Water Table B.G.S. (ft):	99.0	Unit Weight of Water:		pcf
Ultimate Bearing Pressure (psf):		Consider ties in concrete shear strength:		Yes
Consider Soil Lateral Resistance ?				



Foundation Analysis and Design: Uplift Strength Reduction Factor: Compression Strength Reduction Factor:

Total Dry Soil Volume (cu. Ft.):	1525.59	Total Dry Soil Weight (Kips):	
Total Buoyant Soil Volume (cu. Ft.):		Total Buoyant Soil Weight (Kips):	
Total Effective Soil Weight (Kips):	167.81	Weight from the Concrete Block at Top (K):	
Total Dry Concrete Volume (cu. Ft.):	2023.62	Total Dry Concrete Weight (Kips):	
Total Buoyant Concrete Volume (cu. Ft.):		Total Buoyant Concrete Weight (Kips):	
Total Effective Concrete Weight (Kips):	303.54	Total Vertical Load on Base (Kips):	

Check Soil Capacities:

				Load/ Capacity Ratio
Calculated Maxium Net Soil Pressure under the base (psf):	<	Allowable Factored Soil Bearing (psf):	9000	
Allowable Foundation Overturning Resistance (kips-ft.):		Design Factored Momont (kips-ft):		
Factor of Safety Against Overturning (O. R. Moment/Design Moment):				

Check the capacities of Reinforceing Concrete:

Strength reduction factor (Flexure and axial tension):		Strength reduction factor (Shear):	
Strength reduction factor (Axial compresion):		Wind Load Factor on Concrete Design:	

(1) Concrete Pier:

				Load/ Capacity Ratio
Vertical Steel Rebar Area (sq. in./each):		Tie / Stirrup Area (sq. in./each):		
Calculated Moment Capacity (Mn,Kips-Ft):		Design Factored Moment (Mu, Kips-Ft)		
Calculated Shear Capacity (Kips):	>	Design Factored Shear (Kips):		
Calculated Tension Capacity (Tn, Kips):	>	Design Factored Tension (Tu Kips):		
Calculated Compression Capacity (Pn, Kips):	>	Design Factored Axial Load (Pu Kips):		
Moment & Tension Strength Combination:	OK!	Check Tie Spacing (Design/Req'd):		
Pier Reinforcement Ratio:	Reinforcement Ratio is satisfied per ACI			

(2).Concrete Pad:

One-Way Design Shear Capacity (L or W Direction, Kips):	One-Way Factored Shear (L/W-Dir Kips	
One-Way Design Shear Capacity (Diagonal Dir., Kips):	One-Way Factored Shear (Dia. Dir, Kips	
Lower Steel Pad Reinforcement Ratio (L or W-Direct.):	Lower Steel Reinf. Ratio (Dia. Dir.):	
Lower Steel Pad Moment Capacity (L or W-Dir. Kips-ft):	Moment at Bottom (L-Direct. K-Ft):	
Lower Steel Pad Moment Capacity (Dia. Direction,K-ft):	Moment at Bottom (Dia. Dir. K-Ft):	
Upper Steel Pad Reinforcement Ratio (L or W -Direction):	Upper Steel Reinf. Ratio (Dia. Dir.):	
Upper Steel Pad Moment Capacity (L or W-Dir., Kips-ft):	Moment at the top (L-Dir Kips-Ft):	
Upper Steel Pad Moment Capacity (Dia. Direction, K-ft):	Moment at the top (Dia. Dir., K-Ft):	
Punching Failure Capacity (Kips):	Punch. Failure Factored Shear (K):	

Maser Consulting Connecticut
2000 Midlantic Drive, Suite 100
Mt. Laurel, NJ 08054
856.797.0412
greg.dulnik@colliersengineering.com

Post-Mod Antenna Mount Analysis Report and PMI Requirements

Mount Fix

SMART Tool Project #: 10056764
Maser Consulting Connecticut Project #: 20777648A

April 20, 2021

Site Information	*Site ID:*	*467959-VZW / Quacker Hill CT-A*
	Site Name:	*Quacker Hill CT-A*
	Carrier Name:	*Verizon Wireless*
	Address:	*35 South Bartlett Rd.* *Quaker Hill, Connecticut 06375* *New London County*
	Latitude:	*41.41765277°*
	Longitude:	*-72.10672777°*
Structure Information	*Tower Type:*	*160.00-Ft Self Support*
	Mount Type:	*12.50-Ft Sector Mount*

FUZE ID # 16244630

Analysis Results

Sector Mount: **67.9% 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: Selene Chen

Digitally signed by Alec Norris
Date: 2021.04.21 13:40:55-04'00'

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: 5001350, dated February 10, 2021*
Mount Mapping Report	*Hudson Design Group LLC, Site ID: 467959, dated February 9, 2021*
Mount Analysis Report	*Maser Consulting Connecticut, Project #: 20777648A, dated March 22, 2021*
Mount Modification Drawings	*Maser Consulting Connecticut, Project #: 20777648A, dated April 20, 2021*

Analysis Criteria:

Codes and Standards:	ANSI/TIA-222-H	
Wind Parameters:	Basic Wind Speed (Ultimate 3-sec. Gust),	126 mph
	Ice Wind Speed (3-sec. Gust):	50 mph
	Design Ice Thickness:	1.00 in
	Risk Category:	II
	Exposure Category:	C
	Topographic Category:	1
	Topographic Feature Considered:	N/A
	Topographic Method:	N/A
	Ground Elevation Factor, K_e:	0.991
Seismic Parameters:	S_S:	0.194
	S_1:	0.053
Maintenance Parameters:	Wind Speed (3-sec. Gust):	30 mph
	Maintenance Live Load, Lv:	250 lbs.
	Maintenance Live Load, Lm:	500 lbs.
Analysis Software:	RISA-3D (V17)	

Final Loading Configuration:

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

Mount Elevation (ft)	Equipment Elevation (ft)	Quantity	Manufacturer	Model	Status
			Samsung		Added
			Samsung		
			Samsung		
			Andrew		Retained
			Raycap		

Standard Conditions:

1. All engineering services are performed on the basis that the information provided to Maser Consulting Connecticut and used in this analysis is current and correct. The existing equipment loading has been applied at locations determined from the supplied documentation. Any deviation from the loading locations specified in this report shall be communicated to Maser Consulting Connecticut 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 Maser Consulting Connecticut, 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. Maser Consulting Connecticut is not responsible for the conclusion, opinions, and recommendations made by others based on the information supplied.

7. Structural Steel Grades have been assumed as follows, if applicable, unless otherwise noted in this analysis:
   - Channel, Solid Round, Angle, Plate — ASTM A36 (Gr. 36)
   - HSS (Rectangular) — ASTM 500 (Gr. B-46)
   - Pipe — ASTM A53 (Gr. B-35)
   - Threaded Rod — F1554 (Gr. 36)
   - Bolts — ASTM A325

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

Discrepancies between in-field conditions and the assumptions listed above may render this analysis invalid unless explicitly approved by Maser Consulting Connecticut.

Analysis Results:

Component	Utilization %	Pass/Fail
Tie Back	*4.8%*	*Pass*
Face Horizontal	*66.2%*	*Pass*
Antenna Pipe	*67.9%*	*Pass*
Standoff Diagonal	*13.2%*	*Pass*
Standoff Vertical	*20.0%*	*Pass*
Standoff Horizontal	*28.7%*	*Pass*
Back Plate	*30.7%*	*Pass*
Kicker	*12.4%*	*Pass*
Connection Check	*16.0%*	*Pass*

Structure Rating – *(Controlling Utilization of all Components)*	**67.9%**

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:

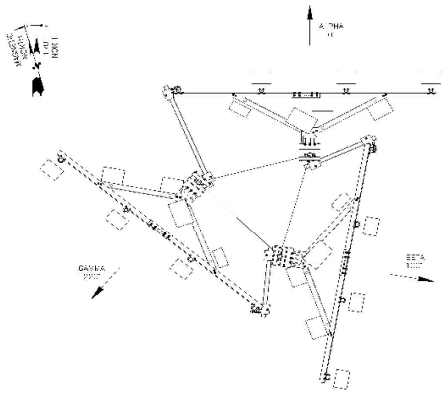
Mount Photos
Mount Mapping Report (for reference only)
Analysis Calculations
Contractor Required PMI Report Deliverables
Antenna Placement Diagrams
TIA Adoption and Wind Speed Usage Letter

V3.0 Updated on 8-31-2020

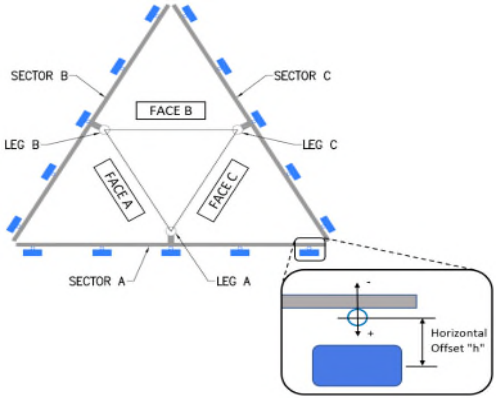
Antenna Mount Mapping Form (PATENT PENDING)

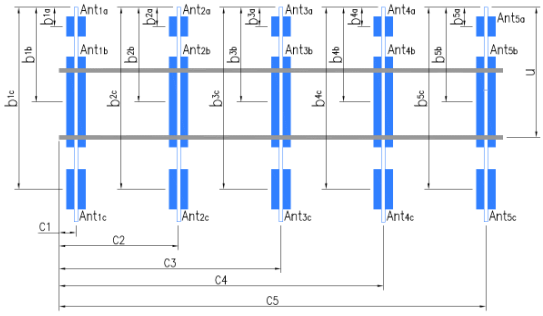
FCC # 1262077

Tower Owner:	SBA	**Mapping Date:**	2/9/2021
Site Name:	Quacker Hill CT	**Tower Type:**	Self Support
Site Number or ID:	467959	**Tower Height (Ft.):**	160
Mapping Contractor:	Hudson Design Group LLC	**Mount Elevation (Ft.):**	120



ANTENNA PLAN





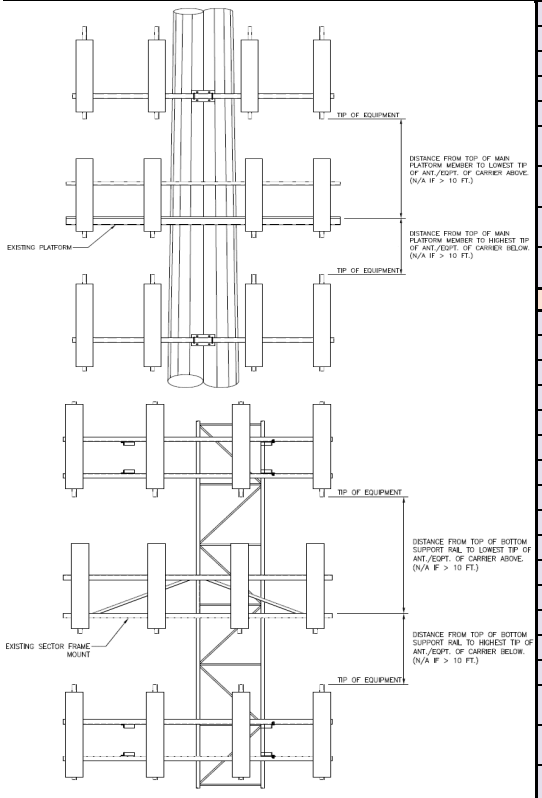
Antenna Layout (Looking Out From Tower)

Mount Pipe Configuration and Geometries [Unit = Inches]							
Sector / Position	Mount Pipe Size & Length	Vertical Offset Dimension "u"	Horizontal Offset "C1, C2, C3, etc."	Sector / Position	Mount Pipe Size & Length	Vertical Offset Dimension "u"	Horizontal Offset "C1, C2, C3, etc."
A1	PIPE 2"Ø STD. X 100" LONG	69.00	3.00	C1	PIPE 2"Ø STD. X 100" LONG	69.00	3.00
A2	PIPE 2"Ø STD. X 100" LONG	69.00	51.00	C2	PIPE 2"Ø STD. X 100" LONG	69.00	51.00
A3	PIPE 2"Ø STD. X 100" LONG	69.00	98.00	C3	PIPE 2"Ø STD. X 100" LONG	69.00	98.00
A4	PIPE 2"Ø STD. X 100" LONG	69.00	146.00	C4	PIPE 2"Ø STD. X 100" LONG	69.00	146.00
A5				C5			
A6				C6			
B1	PIPE 2"Ø STD. X 100" LONG	69.00	3.00	D1			
B2	PIPE 2"Ø STD. X 100" LONG	69.00	51.00	D2			
B3	PIPE 2"Ø STD. X 100" LONG	69.00	98.00	D3			
B4	PIPE 2"Ø STD. X 100" LONG	69.00	146.00	D4			
B5				D5			
B6				D6			
Distance between bottom rail and mount CL elevation (dim d). Unit is inches. See 'Mount Elev Ref' tab for details. :							
Distance from top of bottom support rail to lowest tip of ant./eqpt. of Carrier above. (N/A if > 10 ft.) :							20
Distance from top of bottom support rail to highest tip of ant./eqpt. of Carrier below. (N/A if > 10 ft.) :							
Please enter additional infomation or comments below.							
ALL RRH AND OVP UNITS MOUNTED TO STANDOFF							
Tower Face Width at Mount Elev. (ft.):		5.5	Tower Leg Size or Pole Shaft Diameter at Mount Elev. (in.):				2.75

	Enter antenna model. If not labeled, enter "Unknown".						Mounting Locations [Units are inches and degrees]			Photos of antennas
Ants. Items	Antenna Models if Known	Width (in.)	Depth (in.)	Height (in.)	Coax Size and Qty	Antenna Center-line (Ft.)	Vertical Distances"b_{1a}, b_{2a}, b_{3a}, b_{1b}...." (Inches)	Horiz. Offset "h" (Use "-" if Ant. is behind)	Antenna Azimuth (Degrees)	Photo Numbers
Sector A										
Ant_{1a}										
Ant_{1b}										
Ant_{1c}										
Ant_{2a}										
Ant_{2b}	SBNHH-1D65B	12.00	7.50	73.00		121.167	55.00	8.00	0.00	134
Ant_{2c}										
Ant_{3a}										
Ant_{3b}	SBNHH-1D65B	12.00	7.50	73.00		121.167	55.00	8.00	0.00	138
Ant_{3c}										
Ant_{4a}										
Ant_{4b}	SBNHH-1D65B	12.00	7.50	73.00		121.167	55.00	8.00	0.00	139
Ant_{4c}										
Ant_{5a}										
Ant_{5b}										
Ant_{5c}										
Ant on Standoff	B4 RRH2X60-4R	11.00	5.50	36.00			20.00	-6.00		117
Ant on Standoff	B13 RRH4X30	12.00	9.00	21.50			20.00	-6.00		131
Ant on Tower	B25 RRH4X30	12.00	9.00	21.50			20.00	6.00		128
Ant on Tower	RRFDC-3315-PF-48	15.00	10.00	28.00			34.00	5.00		121

Mount Azimuth (Degree) for Each Sector				Tower Leg Azimuth (Degree) for Each Sector	
Sector A:	0.00	Deg	Leg A:	45.00	Deg
Sector B:	100.00	Deg	Leg B:	165.00	Deg
Sector C:	220.00	Deg	Leg C:	285.00	Deg
Sector D:		Deg	Leg D:		Deg

Climbing Facility Information			
Location:	45.00	Deg	On Leg A
Climbing Facility	Corrosion Type:		Good condition.
	Access:		Climbing path was unobstructed.
	Condition:		Good condition.



Sector B										
Ant_{1a}										
Ant_{1b}										
Ant_{1c}										
Ant_{2a}										
Ant_{2b}	SBNHH-1D65B	12.00	7.50	73.00		121.167	55.00	8.00	100.00	134
Ant_{2c}										
Ant_{3a}										
Ant_{3b}	SBNHH-1D65B	12.00	7.50	73.00		121.167	55.00	8.00	100.00	138
Ant_{3c}										
Ant_{4a}										
Ant_{4b}	SBNHH-1D65B	12.00	7.50	73.00		121.167	55.00	8.00	100.00	139
Ant_{4c}										
Ant_{5a}										
Ant_{5b}										
Ant_{5c}										
Ant on Standoff	B4 RRH2X60-4R	11.00	5.50	36.00			20.00	-6.00		117
Ant on Standoff	B13 RRH4X30	12.00	9.00	21.50			20.00	-6.00		131
Ant on Tower	B25 RRH4X30	12.00	9.00	21.50			20.00	-6.00		128
Ant on Tower	RRFDC-3315-PF-48	15.00	10.00	28.00			34.00	5.00		121
Sector C										
Ant_{1a}										
Ant_{1b}										
Ant_{1c}										
Ant_{2a}										
Ant_{2b}	SBNHH-1D65B	12.00	7.50	73.00		121.167	55.00	8.00	220.00	134
Ant_{2c}										
Ant_{3a}										
Ant_{3b}	SBNHH-1D65B	12.00	7.50	73.00		121.167	55.00	8.00	220.00	138
Ant_{3c}										
Ant_{4a}										
Ant_{4b}	SBNHH-1D65B	12.00	7.50	73.00		121.167	55.00	8.00	220.00	139
Ant_{4c}										
Ant_{5a}										
Ant_{5b}										
Ant_{5c}										
Ant on Standoff	B4 RRH2X60-4R	11.00	5.50	36.00			20.00	-6.00		117
Ant on Standoff	B13 RRH4X30	12.00	9.00	21.50			20.00	-6.00		131
Ant on Tower	B25 RRH4X30	12.00	9.00	21.50			20.00	-6.00		128
Ant on Tower	RRFDC-3315-PF-48	15.00	10.00	28.00			34.00	5.00		121
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) 1-1/4"Ø HYBRID	32
3		
4		
5		
6		
7		
8		

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

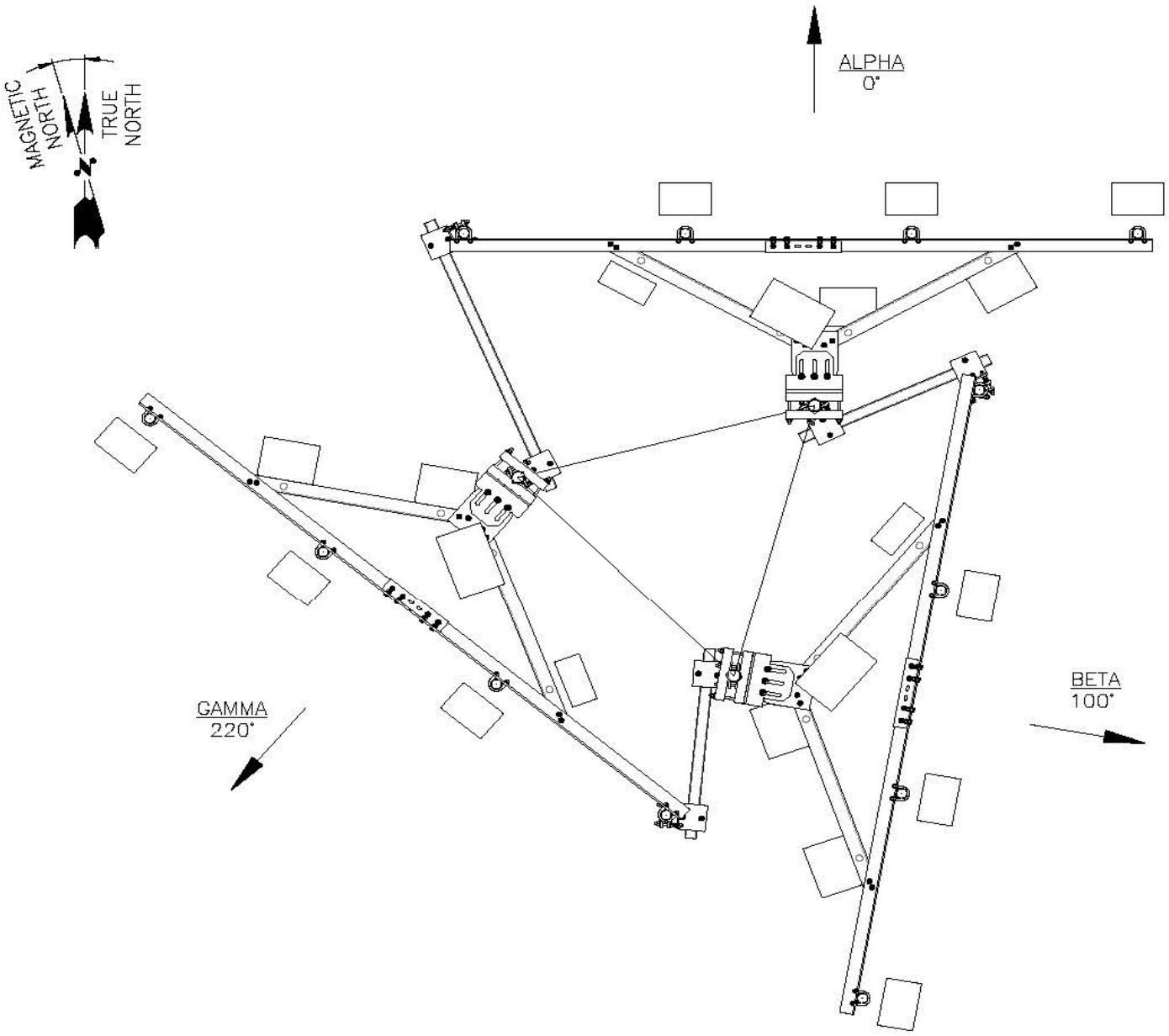
Standard Conditions
1. Obvious safety and structural issues/deficiencies noticed at the time of the mount mapping are to be reported in this mapping. However, this mount mapping is not a condition assessment of the mount.

Antenna Mount Mapping Form (PATENT PENDING)

FCC #
1262077

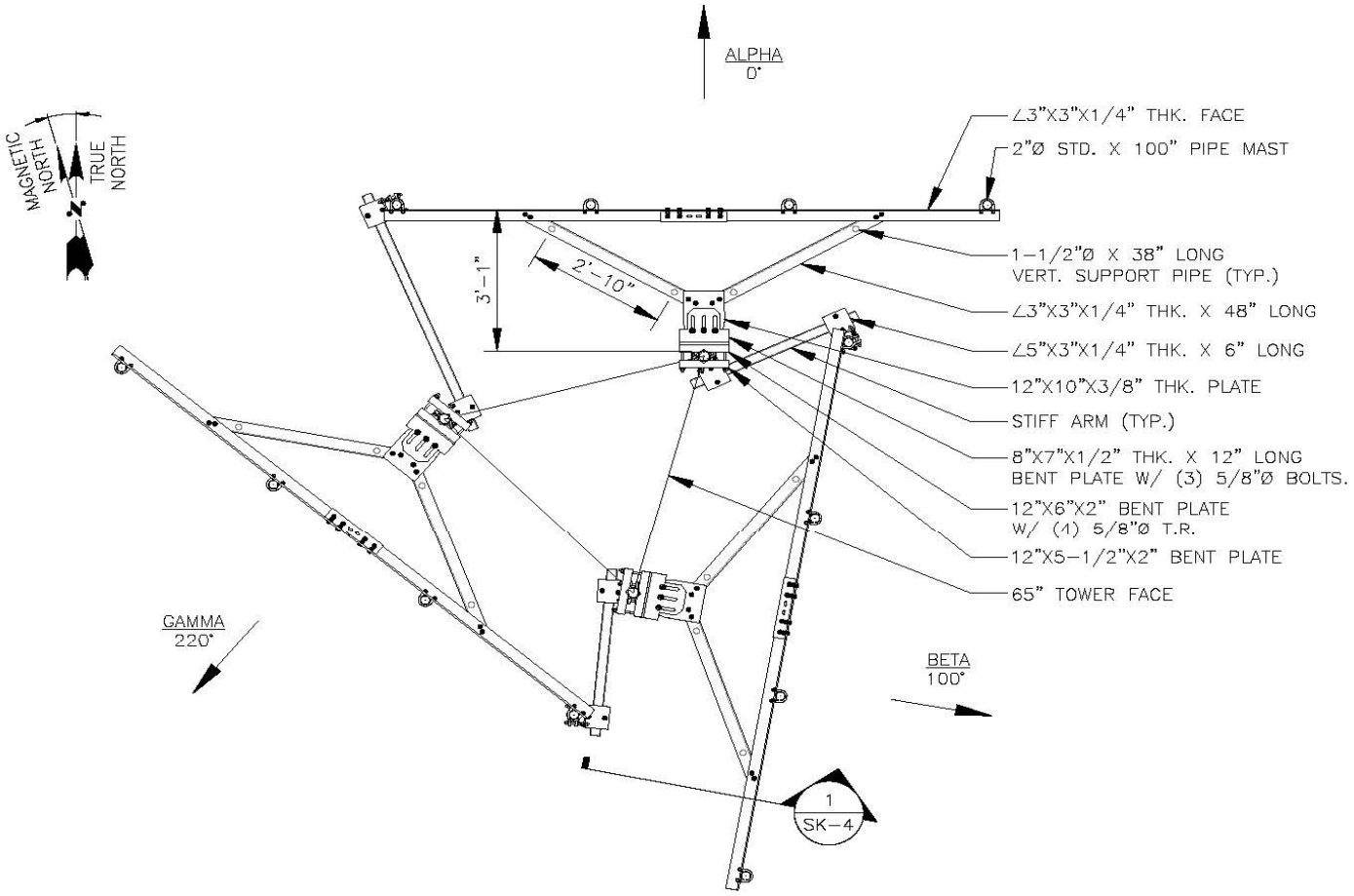
Tower Owner:	SBA	**Mapping Date:**	2/9/2021
Site Name:	Quacker Hill CT	**Tower Type:**	Self Support
Site Number or ID:	467959	**Tower Height (Ft.):**	160
Mapping Contractor:	Hudson Design Group LLC	**Mount Elevation (Ft.):**	120

Please Insert Sketches of the Antenna Mount



ANTENNA PLAN 1
SCALE: N.T.S SK–1

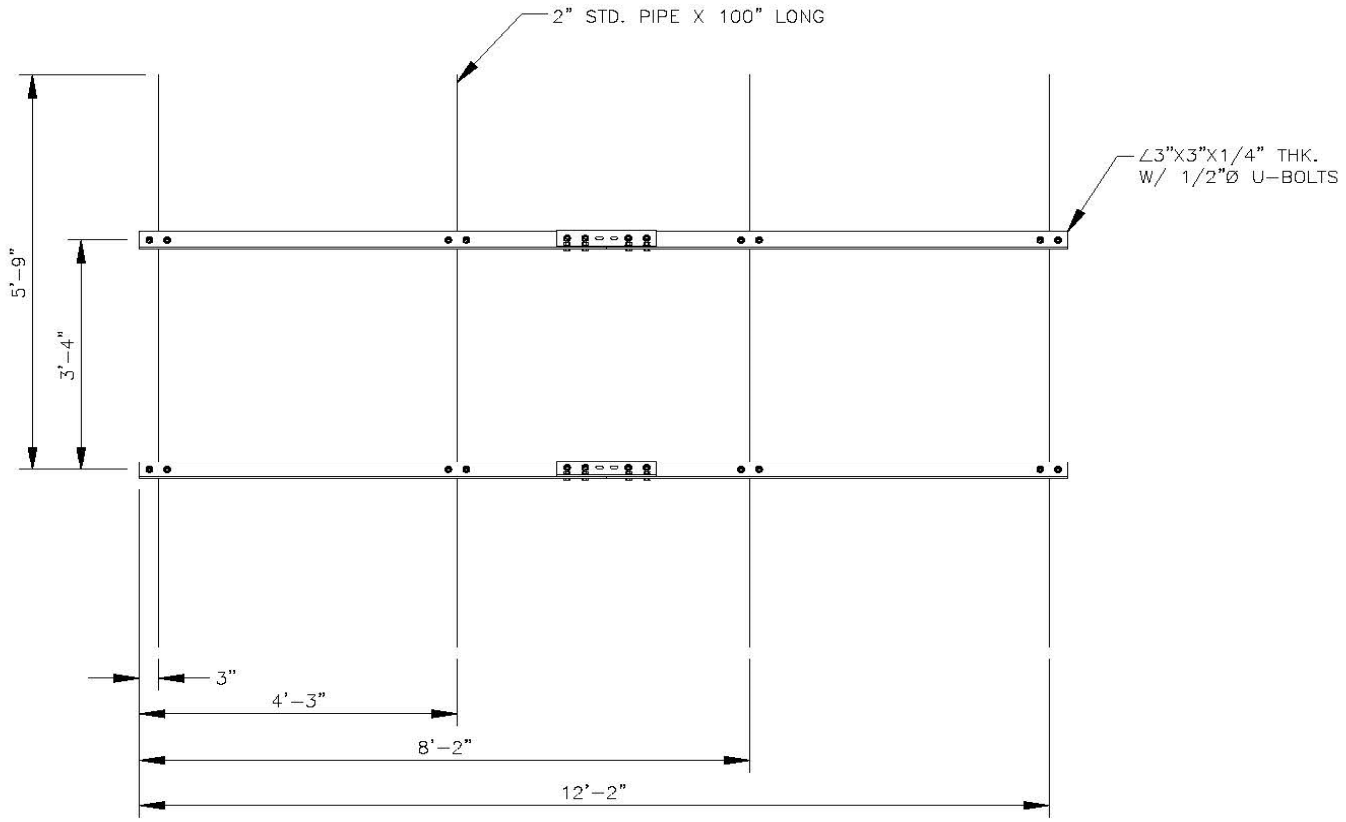
Please Insert Sketches of the Antenna Mount, cont'd



MOUNT PLAN (1 / SK-2)
SCALE: N.T.S

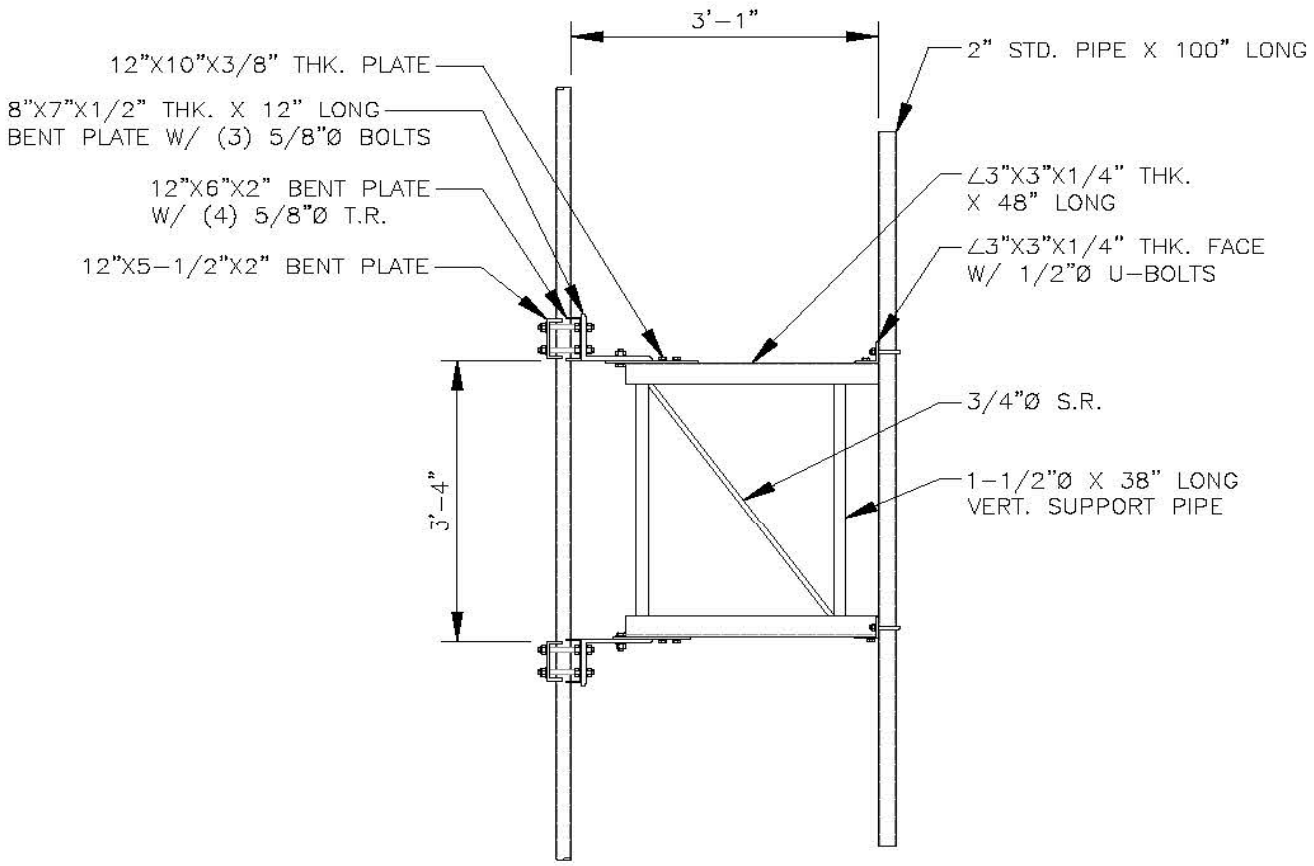
NOTE: ANTENNAS NOT SHOWN FOR CLARITY

Please Insert Sketches of the Antenna Mount, cont'd



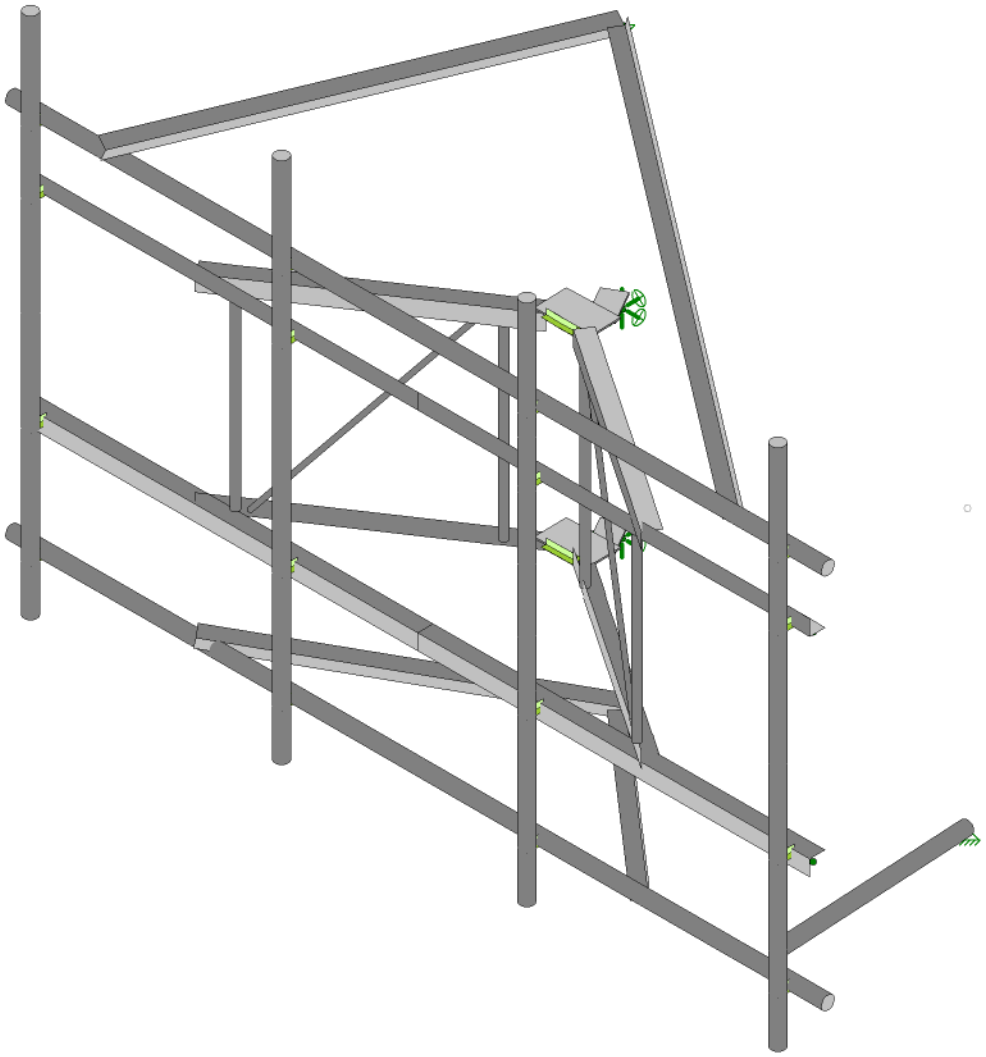
MOUNT ELEVATION 1
SCALE: N.T.S SK-3

Please Insert Sketches of the Antenna Mount, cont'd



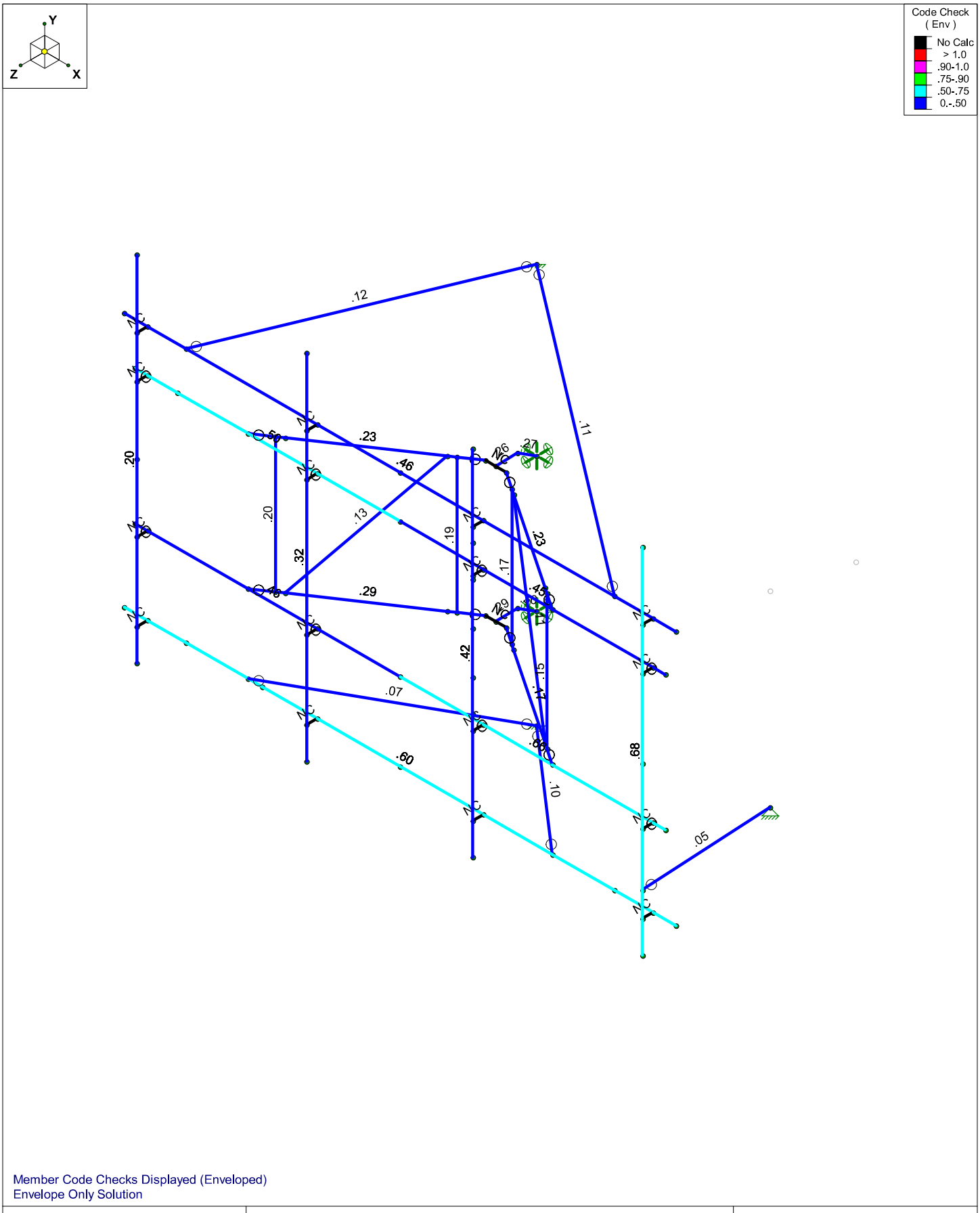
MOUNT ELEVATION (1 / SK-4)

SCALE: N.T.S



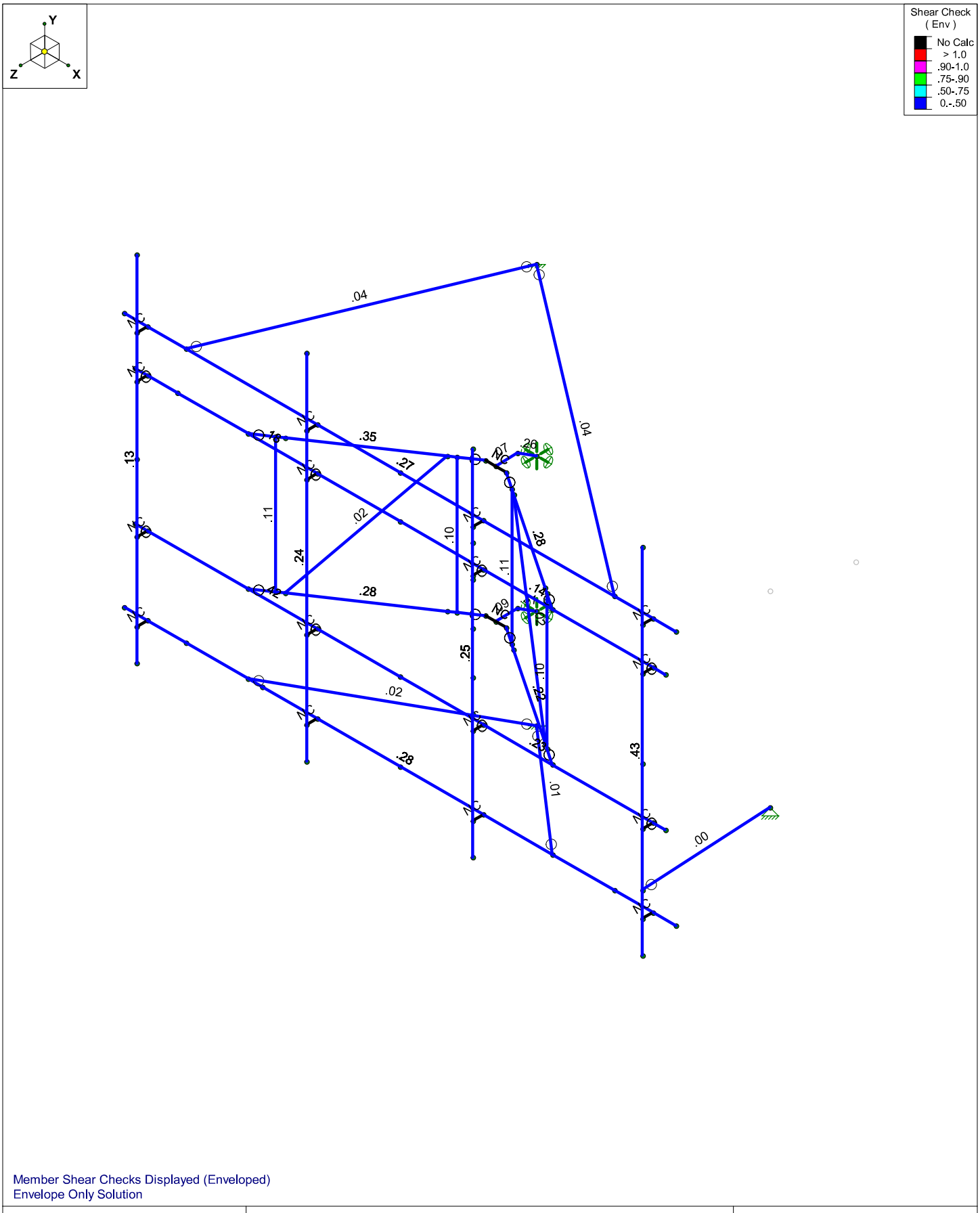
Envelope Only Solution

Maser Consulting	467959-VZW_MT_LOT_SectorA_H	SK - 1
AE		Apr 19, 2021 at 4:45 PM
Project No. 10032614		467959-VZW_MT_LOT_A_H_Load...



Member Code Checks Displayed (Enveloped)
Envelope Only Solution

Maser Consulting	467959-VZW_MT_LOT_SectorA_H	SK - 2
AE		Apr 19, 2021 at 4:46 PM
Project No. 10032614		467959-VZW_MT_LOT_A_H_Load...



Member Shear Checks Displayed (Enveloped)
Envelope Only Solution

Maser Consulting	467959-VZW_MT_LOT_SectorA_H	SK - 3
AE		Apr 19, 2021 at 4:46 PM
Project No. 10032614		467959-VZW_MT_LOT_A_H_Load...

Basic Load Cases

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distributed	Area(Me...	Surface(P...
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 De...	None					33			
32	Antenna Wm (150 De...	None					33			
33	Antenna Wm (180 De...	None					33			
34	Antenna Wm (210 De...	None					33			
35	Antenna Wm (240 De...	None					33			
36	Antenna Wm (270 De...	None					33			
37	Antenna Wm (300 De...	None					33			
38	Antenna Wm (330 De...	None					33			
39	Structure D	None		-1						
40	Structure Di	None						29		
41	Structure Wo (0 Deg)	None						58		
42	Structure Wo (30 Deg)	None						58		
43	Structure Wo (60 Deg)	None						58		
44	Structure Wo (90 Deg)	None						58		
45	Structure Wo (120 D...	None						58		
46	Structure Wo (150 D...	None						58		
47	Structure Wo (180 D...	None						58		
48	Structure Wo (210 D...	None						58		
49	Structure Wo (240 D...	None						58		
50	Structure Wo (270 D...	None						58		
51	Structure Wo (300 D...	None						58		

Basic Load Cases (Continued)

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distributed	Area(Me...	Surface(P...
52	Structure Wo (330 D...	None						58		
53	Structure Wi (0 Deg)	None						58		
54	Structure Wi (30 Deg)	None						58		
55	Structure Wi (60 Deg)	None						58		
56	Structure Wi (90 Deg)	None						58		
57	Structure Wi (120 De...	None						58		
58	Structure Wi (150 De...	None						58		
59	Structure Wi (180 De...	None						58		
60	Structure Wi (210 De...	None						58		
61	Structure Wi (240 De...	None						58		
62	Structure Wi (270 De...	None						58		
63	Structure Wi (300 De...	None						58		
64	Structure Wi (330 De...	None						58		
65	Structure Wm (0 Deg)	None						58		
66	Structure Wm (30 D...	None						58		
67	Structure Wm (60 D...	None						58		
68	Structure Wm (90 D...	None						58		
69	Structure Wm (120 ...	None						58		
70	Structure Wm (150 ...	None						58		
71	Structure Wm (180 ...	None						58		
72	Structure Wm (210 ...	None						58		
73	Structure Wm (240 ...	None						58		
74	Structure Wm (270 ...	None						58		
75	Structure Wm (300 ...	None						58		
76	Structure Wm (330 ...	None						58		
77	Lm1	None					1			
78	Lm2	None					1			
79	Lv1	None					1			
80	Lv2	None					1			

Load Combinations

	Description	Solve	PDelta	S...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...
1	1.2D+1.0Wo (0...	Yes	Y		1	1.2	39	1.2	3	1	41	1												
2	1.2D+1.0Wo (3...	Yes	Y		1	1.2	39	1.2	4	1	42	1												
3	1.2D+1.0Wo (6...	Yes	Y		1	1.2	39	1.2	5	1	43	1												
4	1.2D+1.0Wo (9...	Yes	Y		1	1.2	39	1.2	6	1	44	1												
5	1.2D+1.0Wo (1...	Yes	Y		1	1.2	39	1.2	7	1	45	1												
6	1.2D+1.0Wo (1...	Yes	Y		1	1.2	39	1.2	8	1	46	1												
7	1.2D+1.0Wo (1...	Yes	Y		1	1.2	39	1.2	9	1	47	1												
8	1.2D+1.0Wo (2...	Yes	Y		1	1.2	39	1.2	10	1	48	1												
9	1.2D+1.0Wo (2...	Yes	Y		1	1.2	39	1.2	11	1	49	1												
10	1.2D+1.0Wo (2...	Yes	Y		1	1.2	39	1.2	12	1	50	1												
11	1.2D+1.0Wo (3...	Yes	Y		1	1.2	39	1.2	13	1	51	1												
12	1.2D+1.0Wo (3...	Yes	Y		1	1.2	39	1.2	14	1	52	1												
13	1.2D + 1.0Di + ...	Yes	Y		1	1.2	39	1.2	2	1	40	1	15	1	53	1								
14	1.2D + 1.0Di + ...	Yes	Y		1	1.2	39	1.2	2	1	40	1	16	1	54	1								
15	1.2D + 1.0Di + ...	Yes	Y		1	1.2	39	1.2	2	1	40	1	17	1	55	1								
16	1.2D + 1.0Di + ...	Yes	Y		1	1.2	39	1.2	2	1	40	1	18	1	56	1								
17	1.2D + 1.0Di + ...	Yes	Y		1	1.2	39	1.2	2	1	40	1	19	1	57	1								
18	1.2D + 1.0Di + ...	Yes	Y		1	1.2	39	1.2	2	1	40	1	20	1	58	1								

Load Combinations (Continued)

	Description	Solve	PDelta	S...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...	BLC	Fac...
19	1.2D + 1.0Di + ...	Yes	Y		1	1.2	39	1.2	2	1	40	1	21	1	59	1								
20	1.2D + 1.0Di + ...	Yes	Y		1	1.2	39	1.2	2	1	40	1	22	1	60	1								
21	1.2D + 1.0Di + ...	Yes	Y		1	1.2	39	1.2	2	1	40	1	23	1	61	1								
22	1.2D + 1.0Di + ...	Yes	Y		1	1.2	39	1.2	2	1	40	1	24	1	62	1								
23	1.2D + 1.0Di + ...	Yes	Y		1	1.2	39	1.2	2	1	40	1	25	1	63	1								
24	1.2D + 1.0Di + ...	Yes	Y		1	1.2	39	1.2	2	1	40	1	26	1	64	1								
25	1.2D + 1.5Lm1 ...	Yes	Y		1	1.2	39	1.2	77	1.5	27	1	65	1										
26	1.2D + 1.5Lm1 ...	Yes	Y		1	1.2	39	1.2	77	1.5	28	1	66	1										
27	1.2D + 1.5Lm1 ...	Yes	Y		1	1.2	39	1.2	77	1.5	29	1	67	1										
28	1.2D + 1.5Lm1 ...	Yes	Y		1	1.2	39	1.2	77	1.5	30	1	68	1										
29	1.2D + 1.5Lm1 ...	Yes	Y		1	1.2	39	1.2	77	1.5	31	1	69	1										
30	1.2D + 1.5Lm1 ...	Yes	Y		1	1.2	39	1.2	77	1.5	32	1	70	1										
31	1.2D + 1.5Lm1 ...	Yes	Y		1	1.2	39	1.2	77	1.5	33	1	71	1										
32	1.2D + 1.5Lm1 ...	Yes	Y		1	1.2	39	1.2	77	1.5	34	1	72	1										
33	1.2D + 1.5Lm1 ...	Yes	Y		1	1.2	39	1.2	77	1.5	35	1	73	1										
34	1.2D + 1.5Lm1 ...	Yes	Y		1	1.2	39	1.2	77	1.5	36	1	74	1										
35	1.2D + 1.5Lm1 ...	Yes	Y		1	1.2	39	1.2	77	1.5	37	1	75	1										
36	1.2D + 1.5Lm1 ...	Yes	Y		1	1.2	39	1.2	77	1.5	38	1	76	1										
37	1.2D + 1.5Lm2 ...	Yes	Y		1	1.2	39	1.2	78	1.5	27	1	65	1										
38	1.2D + 1.5Lm2 ...	Yes	Y		1	1.2	39	1.2	78	1.5	28	1	66	1										
39	1.2D + 1.5Lm2 ...	Yes	Y		1	1.2	39	1.2	78	1.5	29	1	67	1										
40	1.2D + 1.5Lm2 ...	Yes	Y		1	1.2	39	1.2	78	1.5	30	1	68	1										
41	1.2D + 1.5Lm2 ...	Yes	Y		1	1.2	39	1.2	78	1.5	31	1	69	1										
42	1.2D + 1.5Lm2 ...	Yes	Y		1	1.2	39	1.2	78	1.5	32	1	70	1										
43	1.2D + 1.5Lm2 ...	Yes	Y		1	1.2	39	1.2	78	1.5	33	1	71	1										
44	1.2D + 1.5Lm2 ...	Yes	Y		1	1.2	39	1.2	78	1.5	34	1	72	1										
45	1.2D + 1.5Lm2 ...	Yes	Y		1	1.2	39	1.2	78	1.5	35	1	73	1										
46	1.2D + 1.5Lm2 ...	Yes	Y		1	1.2	39	1.2	78	1.5	36	1	74	1										
47	1.2D + 1.5Lm2 ...	Yes	Y		1	1.2	39	1.2	78	1.5	37	1	75	1										
48	1.2D + 1.5Lm2 ...	Yes	Y		1	1.2	39	1.2	78	1.5	38	1	76	1										
49	1.2D + 1.5Lv1	Yes	Y		1	1.2	39	1.2	79	1.5														
50	1.2D + 1.5Lv2	Yes	Y		1	1.2	39	1.2	80	1.5														
51	1.4D	Yes	Y		1	1.4	39	1.4																
52	Seismic Mass		Y		1	1	39	1																
53	1.2D + 1.0Ev + ...		Y		1	1.2	39	1.2	SX		SY	1	SZ	-1										
54	1.2D + 1.0Ev + ...		Y		1	1.2	39	1.2	SX	.5	SY	1	SZ	-.866										
55	1.2D + 1.0Ev + ...		Y		1	1.2	39	1.2	SX	.866	SY	1	SZ	-.5										
56	1.2D + 1.0Ev + ...		Y		1	1.2	39	1.2	SX	1	SY	1	SZ											
57	1.2D + 1.0Ev + ...		Y		1	1.2	39	1.2	SX	.866	SY	1	SZ	.5										
58	1.2D + 1.0Ev + ...		Y		1	1.2	39	1.2	SX	.5	SY	1	SZ	.866										
59	1.2D + 1.0Ev + ...		Y		1	1.2	39	1.2	SX		SY	1	SZ	1										
60	1.2D + 1.0Ev + ...		Y		1	1.2	39	1.2	SX	-.5	SY	1	SZ	.866										
61	1.2D + 1.0Ev + ...		Y		1	1.2	39	1.2	SX	-.866	SY	1	SZ	.5										
62	1.2D + 1.0Ev + ...		Y		1	1.2	39	1.2	SX	-1	SY	1	SZ											
63	1.2D + 1.0Ev + ...		Y		1	1.2	39	1.2	SX	-.866	SY	1	SZ	-.5										
64	1.2D + 1.0Ev + ...		Y		1	1.2	39	1.2	SX	-.5	SY	1	SZ	-.866										

Joint Coordinates and Temperatures

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
1	N1	0	-.625	0	0	
2	N2	-12.5	-.625	0	0	
3	N6	-0.291667	-.625	0	0	
4	N10	-0.291667	-.625	.25	0	
5	N11	0	2.541667	0	0	
6	N12	-12.5	2.541667	0	0	
7	N16	-0.291667	2.541667	0	0	
8	N20	-0.291667	2.541667	.25	0	
9	N24	-0.291667	5.125	.25	0	
10	N26	-0.291667	-3.208333	.25	0	
11	N32	-9.836552	-.625	0	0	
12	N33	-9.836552	2.541667	0	0	
13	N34	-6.25	-.625	0	0	
14	N35	-6.25	2.541667	0	0	
15	N36	-6.491537	-.625	-2.25	0	
16	N37	-6.491537	2.541667	-2.25	0	
17	N38	-9.451569	2.541667	-0.258956	0	
18	N41	-9.451569	-.625	-0.258956	0	
19	N42	-9.313277	2.541667	-0.351977	0	
20	N45	-9.313277	-.625	-0.351977	0	
21	N46	-7.031452	2.541667	-1.886831	0	
22	N49	-7.031452	-.625	-1.886831	0	
23	N50	-6.893159	2.541667	-1.979852	0	
24	N53	-6.893159	-.625	-1.979852	0	
25	N59	-6.265624	-.625	-2.774525	0	
26	N60	-6.265624	2.541667	-2.774525	0	
27	N61A	-5.976949	-.625	-2.941192	0	
28	N62	-5.976949	2.541667	-2.941192	0	
29	N61B	-6	2.541667	-2.25	0	
30	N63	-6.25	-.625	-2.25	0	
31	N64	-6.25	2.541667	-2.25	0	
32	N63A	-6	-0.625	-2.25	0	
33	N55	-2.663448	-.625	0	0	
34	N56	-2.663448	2.541667	0	0	
35	N59A	-3.047457	2.541667	-0.258956	0	
36	N60A	-3.047457	-.625	-0.258956	0	
37	N61	-3.186723	2.541667	-0.351977	0	
38	N62A	-3.185399	-.625	-0.351977	0	
39	N63B	-5.461452	2.541667	-1.886831	0	
40	N64A	-5.468548	-.625	-1.886831	0	
41	N65	-5.599394	2.541667	-1.979852	0	
42	N66	-5.599394	-.625	-1.979852	0	
43	N47	-4.291667	-.625	0	0	
44	N48	-4.291667	-.625	.25	0	
45	N49A	-4.291667	2.541667	0	0	
46	N50A	-4.291667	2.541667	.25	0	
47	N51	-4.291667	5.125	.25	0	
48	N52	-4.291667	-3.208333	.25	0	
49	N53A	-8.208333	-.625	0	0	
50	N54	-8.208333	-.625	.25	0	
51	N55A	-8.208333	2.541667	0	0	
52	N56A	-8.208333	2.541667	.25	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
53	N57	-8.208333	5.125	.25	0	
54	N58	-8.208333	-3.208333	.25	0	
55	N59B	-12.208333	-.625	0	0	
56	N60B	-12.208333	-.625	.25	0	
57	N61C	-12.208333	2.541667	0	0	
58	N62B	-12.208333	2.541667	.25	0	
59	N63C	-12.208333	5.125	.25	0	
60	N64B	-12.208333	-3.208333	.25	0	
61	N63D	-4.291667	3.208333	.25	0	
62	N64C	-4.291667	-0.291667	.25	0	
63	N65A	-4.291667	1.458333	.25	0	
64	N66A	-12.208333	0.958333	.25	0	
65	N67	-4.291667	2.458333	.25	0	
66	N68	-4.291667	0.458333	.25	0	
67	N69	-3.226949	-.625	-7.704332	0	
68	N71	-0.476949	-1.875	-2.941192	0	
69	N72	-0.476949	2.541667	-2.941192	0	
70	N71A	-0.291667	-1.875	.25	0	
71	N74	-0.291667	0.708333	.25	0	
72	N74A	-5.976949	6.458333	-2.941192	0	
73	N75	.25	3.541667	0	0	
74	N76	-12.75	3.541667	0	0	
75	N77	-0.291667	3.541667	0	0	
76	N78	-0.291667	3.541667	.25	0	
77	N80	-6.25	3.541667	0	0	
78	N82	-4.291667	3.541667	0	0	
79	N83	-4.291667	3.541667	.25	0	
80	N84	-8.208333	3.541667	0	0	
81	N85	-8.208333	3.541667	.25	0	
82	N86	-12.208333	3.541667	0	0	
83	N87	-12.208333	3.541667	.25	0	
84	N89	-11.3	3.541667	0	0	
85	N90	-1.2	3.541667	0	0	
86	N92	.25	-2.458333	0	0	
87	N93	-12.75	-2.458333	0	0	
88	N94	-0.291667	-2.458333	0	0	
89	N95	-0.291667	-2.458333	.25	0	
90	N96	-9.836552	-2.458333	0	0	
91	N97	-6.25	-2.458333	0	0	
92	N98	-2.663448	-2.458333	0	0	
93	N99	-4.291667	-2.458333	0	0	
94	N100	-4.291667	-2.458333	.25	0	
95	N101	-8.208333	-2.458333	0	0	
96	N102	-8.208333	-2.458333	.25	0	
97	N103	-12.208333	-2.458333	0	0	
98	N104	-12.208333	-2.458333	.25	0	
99	N105	-9.5	-2.458333	0	0	
100	N106	-11.3	-2.458333	0	0	
101	N107	-1.2	-2.458333	0	0	
102	N108	-5.976949	-2.958333	-2.941192	0	
103	N104A	-11.5	2.541667	0	0	

Hot Rolled Steel Section Sets

	Label	Shape	Type	Design List	Material	Design Rules	A [in2]	Iyy [in4]	Izz [in4]	J [in4]
1	Antenna Pipe	PIPE_2.0	Beam	Pipe	A53 Gr. B	Typical	1.02	.627	.627	1.25
2	Mod Tieback	PIPE_2.5	Beam	Pipe	A53 Gr. B	Typical	1.61	1.45	1.45	2.89
3	Mod Face horizontal	PIPE_2.0X	Beam	Pipe	A53 Gr. B	Typical	1.4	.827	.827	1.65
4	Face Horizontal	L3X3X4	Beam	Single Angle	A36 Gr.36	Typical	1.44	1.23	1.23	.031
5	Standoff Horizontal	L3X3X4	Beam	Single Angle	A36 Gr.36	Typical	1.44	1.23	1.23	.031
6	Mod V kit	L2.5x2.5x4	Beam	Single Angle	A36 Gr.36	Typical	1.19	.692	.692	.026
7	Standoff Vertical	PIPE_1.0	Beam	Pipe	A53 Gr. B	Typical	.469	.083	.083	.166
8	Standoff Diagonal	SR_0.75	Beam	RECT	A36 Gr.36	Typical	.442	.016	.016	.031
9	Back Plate 1	PL3/8x10	Beam	RECT	A36 Gr.36	Typical	3.75	.044	31.25	.172
10	Back Plate 2	PL1/2X7_H...	Beam	RECT	A36 Gr.36	Typical	3.5	.073	14.292	.279
11	Tie Back	PIPE_2.0	Beam	Pipe	A53 Gr. B	Typical	1.02	.627	.627	1.25

Hot Rolled Steel Properties

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

Member Primary Data

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
1	M1	N2	N34		180	Face Horizontal	Beam	Single Angle	A36 Gr.36	Typical
2	M5	N10	N6			RIGID	None	None	RIGID	Typical
3	M6	N12	N35		270	Face Horizontal	Beam	Single Angle	A36 Gr.36	Typical
4	M10	N20	N16			RIGID	None	None	RIGID	Typical
5	MP1A	N24	N26			Antenna Pipe	Beam	Pipe	A53 Gr. B	Typical
6	M15	N33	N37		180	Standoff Horiz...	Beam	Single Angle	A36 Gr.36	Typical
7	M18	N32	N36		270	Standoff Horiz...	Beam	Single Angle	A36 Gr.36	Typical
8	M19	N38	N41		45	Standoff Vertical	Beam	Pipe	A53 Gr. B	Typical
9	M20	N50	N53		45	Standoff Vertical	Beam	Pipe	A53 Gr. B	Typical
10	M23	N46	N45			Standoff Diago...	Beam	RECT	A36 Gr.36	Typical
11	M31	N60	N62		90	Back Plate 2	Beam	RECT	A36 Gr.36	Typical
12	M32	N59	N61A		90	Back Plate 2	Beam	RECT	A36 Gr.36	Typical
13	M31A	N64	N60		90	Back Plate 1	Beam	RECT	A36 Gr.36	Typical
14	M32A	N63	N59		90	Back Plate 1	Beam	RECT	A36 Gr.36	Typical
15	M33	N61B	N37			RIGID	None	None	RIGID	Typical
16	M31B	N63A	N36			RIGID	None	None	RIGID	Typical
17	M27	N56	N61B		90	Standoff Horiz...	Beam	Single Angle	A36 Gr.36	Typical
18	M28	N55	N63A			Standoff Horiz...	Beam	Single Angle	A36 Gr.36	Typical
19	M29	N59A	N60A		45	Standoff Vertical	Beam	Pipe	A53 Gr. B	Typical
20	M30	N65	N66		45	Standoff Vertical	Beam	Pipe	A53 Gr. B	Typical
21	M31C	N63B	N62A			Standoff Diago...	Beam	RECT	A36 Gr.36	Typical
22	M23A	N48	N47			RIGID	None	None	RIGID	Typical
23	M24	N50A	N49A			RIGID	None	None	RIGID	Typical
24	MP2A	N51	N52			Antenna Pipe	Beam	Pipe	A53 Gr. B	Typical
25	M26	N54	N53A			RIGID	None	None	RIGID	Typical

Member Primary Data (Continued)

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
26	M27A	N56A	N55A			RIGID	None	None	RIGID	Typical
27	MP3A	N57	N58			Antenna Pipe	Beam	Pipe	A53 Gr. B	Typical
28	M29A	N60B	N59B			RIGID	None	None	RIGID	Typical
29	M30A	N62B	N61C			RIGID	None	None	RIGID	Typical
30	MP4A	N63C	N64B			Antenna Pipe	Beam	Pipe	A53 Gr. B	Typical
31	M32B	N34	N1		180	Face Horizontal	Beam	Single Angle	A36 Gr.36	Typical
32	M33A	N35	N11		270	Face Horizontal	Beam	Single Angle	A36 Gr.36	Typical
33	M33B	N71A	N71			Tie Back	Beam	Pipe	A53 Gr. B	Typical
34	M36	N78	N77			RIGID	None	None	RIGID	Typical
35	M37	N83	N82			RIGID	None	None	RIGID	Typical
36	M38	N85	N84			RIGID	None	None	RIGID	Typical
37	M39	N87	N86			RIGID	None	None	RIGID	Typical
38	M40	N76	N75		270	Mod Face hori...	Beam	Pipe	A53 Gr. B	Typical
39	M40A	N74A	N89		270	Mod V kit	Beam	Single Angle	A36 Gr.36	Typical
40	M41	N74A	N90			Mod V kit	Beam	Single Angle	A36 Gr.36	Typical
41	M44	N95	N94			RIGID	None	None	RIGID	Typical
42	M45	N100	N99			RIGID	None	None	RIGID	Typical
43	M46	N102	N101			RIGID	None	None	RIGID	Typical
44	M47	N104	N103			RIGID	None	None	RIGID	Typical
45	M48	N93	N92		270	Mod Face hori...	Beam	Pipe	A53 Gr. B	Typical
46	M49	N108	N96		270	Mod V kit	Beam	Single Angle	A36 Gr.36	Typical
47	M50	N108	N98			Mod V kit	Beam	Single Angle	A36 Gr.36	Typical

Member Advanced Data

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Defl Rat...	Analysis ...	Inactive	Seismic...
1	M1						Yes				None
2	M5	OOOXOX					Yes	** NA **			None
3	M6						Yes				None
4	M10	OOOXOX					Yes	** NA **			None
5	MP1A						Yes				None
6	M15	BenPIN	OOOOXX				Yes	Default			None
7	M18	BenPIN	OOOOXX				Yes	Default			None
8	M19						Yes				None
9	M20						Yes				None
10	M23						Yes	Default			None
11	M31						Yes				None
12	M32						Yes				None
13	M31A						Yes				None
14	M32A						Yes				None
15	M33						Yes	** NA **			None
16	M31B						Yes	** NA **			None
17	M27	BenPIN	OOOOXX				Yes	Default			None
18	M28	BenPIN	OOOOXX				Yes	Default			None
19	M29						Yes				None
20	M30						Yes				None
21	M31C						Yes	Default			None
22	M23A	OOOXOX					Yes	** NA **			None
23	M24	OOOXOX					Yes	** NA **			None
24	MP2A						Yes				None
25	M26	OOOXOX					Yes	** NA **			None

Member Advanced Data (Continued)

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Defl Rat...	Analysis ...	Inactive	Seismic...
26	M27A	OOOXOX					Yes	** NA **			None
27	MP3A						Yes				None
28	M29A	OOOXOX					Yes	** NA **			None
29	M30A	OOOXOX					Yes	** NA **			None
30	MP4A						Yes				None
31	M32B						Yes				None
32	M33A						Yes				None
33	M33B	BenPIN					Yes	Default			None
34	M36						Yes	** NA **			None
35	M37						Yes	** NA **			None
36	M38						Yes	** NA **			None
37	M39						Yes	** NA **			None
38	M40						Yes	Default			None
39	M40A	BenPIN	BenPIN				Yes				None
40	M41	BenPIN	BenPIN				Yes				None
41	M44						Yes	** NA **			None
42	M45						Yes	** NA **			None
43	M46						Yes	** NA **			None
44	M47						Yes	** NA **			None
45	M48						Yes	Default			None
46	M49	BenPIN	BenPIN				Yes				None
47	M50	BenPIN	BenPIN				Yes				None

Member Point Loads (BLC 1 : Antenna D)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	Y	-43.55	2.67
2	MP1A	My	-.022	2.67
3	MP1A	Mz	0	2.67
4	MP1A	Y	-43.55	4.67
5	MP1A	My	-.022	4.67
6	MP1A	Mz	0	4.67
7	MP3A	Y	-20	1.92
8	MP3A	My	-.013	1.92
9	MP3A	Mz	.013	1.92
10	MP3A	Y	-20	5.42
11	MP3A	My	-.013	5.42
12	MP3A	Mz	.013	5.42
13	MP3A	Y	-20	1.92
14	MP3A	My	-.013	1.92
15	MP3A	Mz	-.013	1.92
16	MP3A	Y	-20	5.42
17	MP3A	My	-.013	5.42
18	MP3A	Mz	-.013	5.42
19	MP4A	Y	-20	1.92
20	MP4A	My	-.013	1.92
21	MP4A	Mz	0	1.92
22	MP4A	Y	-20	5.42
23	MP4A	My	-.013	5.42
24	MP4A	Mz	0	5.42
25	MP2A	Y	-84.4	3.67

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
26	MP2A	My	.042	3.67
27	MP2A	Mz	0	3.67
28	MP3A	Y	-70.3	3.67
29	MP3A	My	.035	3.67
30	MP3A	Mz	0	3.67
31	M30	Y	-26.9	1.5
32	M30	My	0	1.5
33	M30	Mz	0	1.5

Member Point Loads (BLC 2 : Antenna Di)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	Y	-35.041	2.67
2	MP1A	My	-.018	2.67
3	MP1A	Mz	0	2.67
4	MP1A	Y	-35.041	4.67
5	MP1A	My	-.018	4.67
6	MP1A	Mz	0	4.67
7	MP3A	Y	-60.087	1.92
8	MP3A	My	-.04	1.92
9	MP3A	Mz	.04	1.92
10	MP3A	Y	-60.087	5.42
11	MP3A	My	-.04	5.42
12	MP3A	Mz	.04	5.42
13	MP3A	Y	-60.087	1.92
14	MP3A	My	-.04	1.92
15	MP3A	Mz	-.04	1.92
16	MP3A	Y	-60.087	5.42
17	MP3A	My	-.04	5.42
18	MP3A	Mz	-.04	5.42
19	MP4A	Y	-60.087	1.92
20	MP4A	My	-.04	1.92
21	MP4A	Mz	0	1.92
22	MP4A	Y	-60.087	5.42
23	MP4A	My	-.04	5.42
24	MP4A	Mz	0	5.42
25	MP2A	Y	-44.168	3.67
26	MP2A	My	.022	3.67
27	MP2A	Mz	0	3.67
28	MP3A	Y	-39.716	3.67
29	MP3A	My	.02	3.67
30	MP3A	Mz	0	3.67
31	M30	Y	-54.397	1.5
32	M30	My	0	1.5
33	M30	Mz	0	1.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	0	2.67
2	MP1A	Z	-106.294	2.67
3	MP1A	Mx	0	2.67
4	MP1A	X	0	4.67

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
5	MP1A	Z	-106.294	4.67
6	MP1A	Mx	0	4.67
7	MP3A	X	0	1.92
8	MP3A	Z	-184.544	1.92
9	MP3A	Mx	-.123	1.92
10	MP3A	X	0	5.42
11	MP3A	Z	-184.544	5.42
12	MP3A	Mx	-.123	5.42
13	MP3A	X	0	1.92
14	MP3A	Z	-184.544	1.92
15	MP3A	Mx	.123	1.92
16	MP3A	X	0	5.42
17	MP3A	Z	-184.544	5.42
18	MP3A	Mx	.123	5.42
19	MP4A	X	0	1.92
20	MP4A	Z	-184.544	1.92
21	MP4A	Mx	0	1.92
22	MP4A	X	0	5.42
23	MP4A	Z	-184.544	5.42
24	MP4A	Mx	0	5.42
25	MP2A	X	0	3.67
26	MP2A	Z	-84.583	3.67
27	MP2A	Mx	0	3.67
28	MP3A	X	0	3.67
29	MP3A	Z	-84.583	3.67
30	MP3A	Mx	0	3.67
31	M30	X	0	1.5
32	M30	Z	-113.078	1.5
33	M30	Mx	0	1.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	45.062	2.67
2	MP1A	Z	-78.049	2.67
3	MP1A	Mx	-.023	2.67
4	MP1A	X	45.062	4.67
5	MP1A	Z	-78.049	4.67
6	MP1A	Mx	-.023	4.67
7	MP3A	X	84.459	1.92
8	MP3A	Z	-146.287	1.92
9	MP3A	Mx	-.154	1.92
10	MP3A	X	84.459	5.42
11	MP3A	Z	-146.287	5.42
12	MP3A	Mx	-.154	5.42
13	MP3A	X	84.459	1.92
14	MP3A	Z	-146.287	1.92
15	MP3A	Mx	.041	1.92
16	MP3A	X	84.459	5.42
17	MP3A	Z	-146.287	5.42
18	MP3A	Mx	.041	5.42
19	MP4A	X	84.459	1.92

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
20	MP4A	Z	-146.287	1.92
21	MP4A	Mx	-.056	1.92
22	MP4A	X	84.459	5.42
23	MP4A	Z	-146.287	5.42
24	MP4A	Mx	-.056	5.42
25	MP2A	X	38.786	3.67
26	MP2A	Z	-67.179	3.67
27	MP2A	Mx	.019	3.67
28	MP3A	X	37.443	3.67
29	MP3A	Z	-64.853	3.67
30	MP3A	Mx	.019	3.67
31	M30	X	51.583	1.5
32	M30	Z	-89.345	1.5
33	M30	Mx	0	1.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	50.042	2.67
2	MP1A	Z	-28.892	2.67
3	MP1A	Mx	-.025	2.67
4	MP1A	X	50.042	4.67
5	MP1A	Z	-28.892	4.67
6	MP1A	Mx	-.025	4.67
7	MP3A	X	119.222	1.92
8	MP3A	Z	-68.833	1.92
9	MP3A	Mx	-.125	1.92
10	MP3A	X	119.222	5.42
11	MP3A	Z	-68.833	5.42
12	MP3A	Mx	-.125	5.42
13	MP3A	X	119.222	1.92
14	MP3A	Z	-68.833	1.92
15	MP3A	Mx	-.034	1.92
16	MP3A	X	119.222	5.42
17	MP3A	Z	-68.833	5.42
18	MP3A	Mx	-.034	5.42
19	MP4A	X	119.222	1.92
20	MP4A	Z	-68.833	1.92
21	MP4A	Mx	-.079	1.92
22	MP4A	X	119.222	5.42
23	MP4A	Z	-68.833	5.42
24	MP4A	Mx	-.079	5.42
25	MP2A	X	55.036	3.67
26	MP2A	Z	-31.775	3.67
27	MP2A	Mx	.028	3.67
28	MP3A	X	48.058	3.67
29	MP3A	Z	-27.747	3.67
30	MP3A	Mx	.024	3.67
31	M30	X	72.178	1.5
32	M30	Z	-41.672	1.5
33	M30	Mx	0	1.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	41.614	2.67
2	MP1A	Z	0	2.67
3	MP1A	Mx	-.021	2.67
4	MP1A	X	41.614	4.67
5	MP1A	Z	0	4.67
6	MP1A	Mx	-.021	4.67
7	MP3A	X	122.04	1.92
8	MP3A	Z	0	1.92
9	MP3A	Mx	-.081	1.92
10	MP3A	X	122.04	5.42
11	MP3A	Z	0	5.42
12	MP3A	Mx	-.081	5.42
13	MP3A	X	122.04	1.92
14	MP3A	Z	0	1.92
15	MP3A	Mx	-.081	1.92
16	MP3A	X	122.04	5.42
17	MP3A	Z	0	5.42
18	MP3A	Mx	-.081	5.42
19	MP4A	X	122.04	1.92
20	MP4A	Z	0	1.92
21	MP4A	Mx	-.081	1.92
22	MP4A	X	122.04	5.42
23	MP4A	Z	0	5.42
24	MP4A	Mx	-.081	5.42
25	MP2A	X	56.539	3.67
26	MP2A	Z	0	3.67
27	MP2A	Mx	.028	3.67
28	MP3A	X	45.797	3.67
29	MP3A	Z	0	3.67
30	MP3A	Mx	.023	3.67
31	M30	X	73.433	1.5
32	M30	Z	0	1.5
33	M30	Mx	0	1.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	50.042	2.67
2	MP1A	Z	28.892	2.67
3	MP1A	Mx	-.025	2.67
4	MP1A	X	50.042	4.67
5	MP1A	Z	28.892	4.67
6	MP1A	Mx	-.025	4.67
7	MP3A	X	119.222	1.92
8	MP3A	Z	68.833	1.92
9	MP3A	Mx	-.034	1.92
10	MP3A	X	119.222	5.42
11	MP3A	Z	68.833	5.42
12	MP3A	Mx	-.034	5.42
13	MP3A	X	119.222	1.92
14	MP3A	Z	68.833	1.92
15	MP3A	Mx	-.125	1.92

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
16	MP3A	X	119.222	5.42
17	MP3A	Z	68.833	5.42
18	MP3A	Mx	-.125	5.42
19	MP4A	X	119.222	1.92
20	MP4A	Z	68.833	1.92
21	MP4A	Mx	-.079	1.92
22	MP4A	X	119.222	5.42
23	MP4A	Z	68.833	5.42
24	MP4A	Mx	-.079	5.42
25	MP2A	X	55.036	3.67
26	MP2A	Z	31.775	3.67
27	MP2A	Mx	.028	3.67
28	MP3A	X	48.058	3.67
29	MP3A	Z	27.747	3.67
30	MP3A	Mx	.024	3.67
31	M30	X	72.178	1.5
32	M30	Z	41.672	1.5
33	M30	Mx	0	1.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	45.062	2.67
2	MP1A	Z	78.049	2.67
3	MP1A	Mx	-.023	2.67
4	MP1A	X	45.062	4.67
5	MP1A	Z	78.049	4.67
6	MP1A	Mx	-.023	4.67
7	MP3A	X	84.459	1.92
8	MP3A	Z	146.287	1.92
9	MP3A	Mx	.041	1.92
10	MP3A	X	84.459	5.42
11	MP3A	Z	146.287	5.42
12	MP3A	Mx	.041	5.42
13	MP3A	X	84.459	1.92
14	MP3A	Z	146.287	1.92
15	MP3A	Mx	-.154	1.92
16	MP3A	X	84.459	5.42
17	MP3A	Z	146.287	5.42
18	MP3A	Mx	-.154	5.42
19	MP4A	X	84.459	1.92
20	MP4A	Z	146.287	1.92
21	MP4A	Mx	-.056	1.92
22	MP4A	X	84.459	5.42
23	MP4A	Z	146.287	5.42
24	MP4A	Mx	-.056	5.42
25	MP2A	X	38.786	3.67
26	MP2A	Z	67.179	3.67
27	MP2A	Mx	.019	3.67
28	MP3A	X	37.443	3.67
29	MP3A	Z	64.853	3.67
30	MP3A	Mx	.019	3.67

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
31	M30	X	51.583	1.5
32	M30	Z	89.345	1.5
33	M30	Mx	0	1.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	0	2.67
2	MP1A	Z	106.294	2.67
3	MP1A	Mx	0	2.67
4	MP1A	X	0	4.67
5	MP1A	Z	106.294	4.67
6	MP1A	Mx	0	4.67
7	MP3A	X	0	1.92
8	MP3A	Z	184.544	1.92
9	MP3A	Mx	.123	1.92
10	MP3A	X	0	5.42
11	MP3A	Z	184.544	5.42
12	MP3A	Mx	.123	5.42
13	MP3A	X	0	1.92
14	MP3A	Z	184.544	1.92
15	MP3A	Mx	-.123	1.92
16	MP3A	X	0	5.42
17	MP3A	Z	184.544	5.42
18	MP3A	Mx	-.123	5.42
19	MP4A	X	0	1.92
20	MP4A	Z	184.544	1.92
21	MP4A	Mx	0	1.92
22	MP4A	X	0	5.42
23	MP4A	Z	184.544	5.42
24	MP4A	Mx	0	5.42
25	MP2A	X	0	3.67
26	MP2A	Z	84.583	3.67
27	MP2A	Mx	0	3.67
28	MP3A	X	0	3.67
29	MP3A	Z	84.583	3.67
30	MP3A	Mx	0	3.67
31	M30	X	0	1.5
32	M30	Z	113.078	1.5
33	M30	Mx	0	1.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	-45.062	2.67
2	MP1A	Z	78.049	2.67
3	MP1A	Mx	.023	2.67
4	MP1A	X	-45.062	4.67
5	MP1A	Z	78.049	4.67
6	MP1A	Mx	.023	4.67
7	MP3A	X	-84.459	1.92
8	MP3A	Z	146.287	1.92
9	MP3A	Mx	.154	1.92

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
10	MP3A	X	-84.459	5.42
11	MP3A	Z	146.287	5.42
12	MP3A	Mx	.154	5.42
13	MP3A	X	-84.459	1.92
14	MP3A	Z	146.287	1.92
15	MP3A	Mx	-.041	1.92
16	MP3A	X	-84.459	5.42
17	MP3A	Z	146.287	5.42
18	MP3A	Mx	-.041	5.42
19	MP4A	X	-84.459	1.92
20	MP4A	Z	146.287	1.92
21	MP4A	Mx	.056	1.92
22	MP4A	X	-84.459	5.42
23	MP4A	Z	146.287	5.42
24	MP4A	Mx	.056	5.42
25	MP2A	X	-38.786	3.67
26	MP2A	Z	67.179	3.67
27	MP2A	Mx	-.019	3.67
28	MP3A	X	-37.443	3.67
29	MP3A	Z	64.853	3.67
30	MP3A	Mx	-.019	3.67
31	M30	X	-51.583	1.5
32	M30	Z	89.345	1.5
33	M30	Mx	0	1.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	-50.042	2.67
2	MP1A	Z	28.892	2.67
3	MP1A	Mx	.025	2.67
4	MP1A	X	-50.042	4.67
5	MP1A	Z	28.892	4.67
6	MP1A	Mx	.025	4.67
7	MP3A	X	-119.222	1.92
8	MP3A	Z	68.833	1.92
9	MP3A	Mx	.125	1.92
10	MP3A	X	-119.222	5.42
11	MP3A	Z	68.833	5.42
12	MP3A	Mx	.125	5.42
13	MP3A	X	-119.222	1.92
14	MP3A	Z	68.833	1.92
15	MP3A	Mx	.034	1.92
16	MP3A	X	-119.222	5.42
17	MP3A	Z	68.833	5.42
18	MP3A	Mx	.034	5.42
19	MP4A	X	-119.222	1.92
20	MP4A	Z	68.833	1.92
21	MP4A	Mx	.079	1.92
22	MP4A	X	-119.222	5.42
23	MP4A	Z	68.833	5.42
24	MP4A	Mx	.079	5.42

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
25	MP2A	X	-55.036	3.67
26	MP2A	Z	31.775	3.67
27	MP2A	Mx	-.028	3.67
28	MP3A	X	-48.058	3.67
29	MP3A	Z	27.747	3.67
30	MP3A	Mx	-.024	3.67
31	M30	X	-72.178	1.5
32	M30	Z	41.672	1.5
33	M30	Mx	0	1.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	-41.614	2.67
2	MP1A	Z	0	2.67
3	MP1A	Mx	.021	2.67
4	MP1A	X	-41.614	4.67
5	MP1A	Z	0	4.67
6	MP1A	Mx	.021	4.67
7	MP3A	X	-122.04	1.92
8	MP3A	Z	0	1.92
9	MP3A	Mx	.081	1.92
10	MP3A	X	-122.04	5.42
11	MP3A	Z	0	5.42
12	MP3A	Mx	.081	5.42
13	MP3A	X	-122.04	1.92
14	MP3A	Z	0	1.92
15	MP3A	Mx	.081	1.92
16	MP3A	X	-122.04	5.42
17	MP3A	Z	0	5.42
18	MP3A	Mx	.081	5.42
19	MP4A	X	-122.04	1.92
20	MP4A	Z	0	1.92
21	MP4A	Mx	.081	1.92
22	MP4A	X	-122.04	5.42
23	MP4A	Z	0	5.42
24	MP4A	Mx	.081	5.42
25	MP2A	X	-56.539	3.67
26	MP2A	Z	0	3.67
27	MP2A	Mx	-.028	3.67
28	MP3A	X	-45.797	3.67
29	MP3A	Z	0	3.67
30	MP3A	Mx	-.023	3.67
31	M30	X	-73.433	1.5
32	M30	Z	0	1.5
33	M30	Mx	0	1.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	-50.042	2.67
2	MP1A	Z	-28.892	2.67
3	MP1A	Mx	.025	2.67

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
4	MP1A	X	-50.042	4.67
5	MP1A	Z	-28.892	4.67
6	MP1A	Mx	.025	4.67
7	MP3A	X	-119.222	1.92
8	MP3A	Z	-68.833	1.92
9	MP3A	Mx	.034	1.92
10	MP3A	X	-119.222	5.42
11	MP3A	Z	-68.833	5.42
12	MP3A	Mx	.034	5.42
13	MP3A	X	-119.222	1.92
14	MP3A	Z	-68.833	1.92
15	MP3A	Mx	.125	1.92
16	MP3A	X	-119.222	5.42
17	MP3A	Z	-68.833	5.42
18	MP3A	Mx	.125	5.42
19	MP4A	X	-119.222	1.92
20	MP4A	Z	-68.833	1.92
21	MP4A	Mx	.079	1.92
22	MP4A	X	-119.222	5.42
23	MP4A	Z	-68.833	5.42
24	MP4A	Mx	.079	5.42
25	MP2A	X	-55.036	3.67
26	MP2A	Z	-31.775	3.67
27	MP2A	Mx	-.028	3.67
28	MP3A	X	-48.058	3.67
29	MP3A	Z	-27.747	3.67
30	MP3A	Mx	-.024	3.67
31	M30	X	-72.178	1.5
32	M30	Z	-41.672	1.5
33	M30	Mx	0	1.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	-45.062	2.67
2	MP1A	Z	-78.049	2.67
3	MP1A	Mx	.023	2.67
4	MP1A	X	-45.062	4.67
5	MP1A	Z	-78.049	4.67
6	MP1A	Mx	.023	4.67
7	MP3A	X	-84.459	1.92
8	MP3A	Z	-146.287	1.92
9	MP3A	Mx	-.041	1.92
10	MP3A	X	-84.459	5.42
11	MP3A	Z	-146.287	5.42
12	MP3A	Mx	-.041	5.42
13	MP3A	X	-84.459	1.92
14	MP3A	Z	-146.287	1.92
15	MP3A	Mx	.154	1.92
16	MP3A	X	-84.459	5.42
17	MP3A	Z	-146.287	5.42
18	MP3A	Mx	.154	5.42

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
19	MP4A	X	-84.459	1.92
20	MP4A	Z	-146.287	1.92
21	MP4A	Mx	.056	1.92
22	MP4A	X	-84.459	5.42
23	MP4A	Z	-146.287	5.42
24	MP4A	Mx	.056	5.42
25	MP2A	X	-38.786	3.67
26	MP2A	Z	-67.179	3.67
27	MP2A	Mx	-.019	3.67
28	MP3A	X	-37.443	3.67
29	MP3A	Z	-64.853	3.67
30	MP3A	Mx	-.019	3.67
31	M30	X	-51.583	1.5
32	M30	Z	-89.345	1.5
33	M30	Mx	0	1.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	0	2.67
2	MP1A	Z	-18.877	2.67
3	MP1A	Mx	0	2.67
4	MP1A	X	0	4.67
5	MP1A	Z	-18.877	4.67
6	MP1A	Mx	0	4.67
7	MP3A	X	0	1.92
8	MP3A	Z	-32.001	1.92
9	MP3A	Mx	-.021	1.92
10	MP3A	X	0	5.42
11	MP3A	Z	-32.001	5.42
12	MP3A	Mx	-.021	5.42
13	MP3A	X	0	1.92
14	MP3A	Z	-32.001	1.92
15	MP3A	Mx	.021	1.92
16	MP3A	X	0	5.42
17	MP3A	Z	-32.001	5.42
18	MP3A	Mx	.021	5.42
19	MP4A	X	0	1.92
20	MP4A	Z	-32.001	1.92
21	MP4A	Mx	0	1.92
22	MP4A	X	0	5.42
23	MP4A	Z	-32.001	5.42
24	MP4A	Mx	0	5.42
25	MP2A	X	0	3.67
26	MP2A	Z	-15.897	3.67
27	MP2A	Mx	0	3.67
28	MP3A	X	0	3.67
29	MP3A	Z	-15.897	3.67
30	MP3A	Mx	0	3.67
31	M30	X	0	1.5
32	M30	Z	-20.719	1.5
33	M30	Mx	0	1.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	8.083	2.67
2	MP1A	Z	-14	2.67
3	MP1A	Mx	-.004	2.67
4	MP1A	X	8.083	4.67
5	MP1A	Z	-14	4.67
6	MP1A	Mx	-.004	4.67
7	MP3A	X	14.757	1.92
8	MP3A	Z	-25.56	1.92
9	MP3A	Mx	-.027	1.92
10	MP3A	X	14.757	5.42
11	MP3A	Z	-25.56	5.42
12	MP3A	Mx	-.027	5.42
13	MP3A	X	14.757	1.92
14	MP3A	Z	-25.56	1.92
15	MP3A	Mx	.007	1.92
16	MP3A	X	14.757	5.42
17	MP3A	Z	-25.56	5.42
18	MP3A	Mx	.007	5.42
19	MP4A	X	14.757	1.92
20	MP4A	Z	-25.56	1.92
21	MP4A	Mx	-.01	1.92
22	MP4A	X	14.757	5.42
23	MP4A	Z	-25.56	5.42
24	MP4A	Mx	-.01	5.42
25	MP2A	X	7.343	3.67
26	MP2A	Z	-12.718	3.67
27	MP2A	Mx	.004	3.67
28	MP3A	X	7.113	3.67
29	MP3A	Z	-12.319	3.67
30	MP3A	Mx	.004	3.67
31	M30	X	9.526	1.5
32	M30	Z	-16.499	1.5
33	M30	Mx	0	1.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	9.303	2.67
2	MP1A	Z	-5.371	2.67
3	MP1A	Mx	-.005	2.67
4	MP1A	X	9.303	4.67
5	MP1A	Z	-5.371	4.67
6	MP1A	Mx	-.005	4.67
7	MP3A	X	21.255	1.92
8	MP3A	Z	-12.271	1.92
9	MP3A	Mx	-.022	1.92
10	MP3A	X	21.255	5.42
11	MP3A	Z	-12.271	5.42
12	MP3A	Mx	-.022	5.42
13	MP3A	X	21.255	1.92
14	MP3A	Z	-12.271	1.92
15	MP3A	Mx	-.006	1.92

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
16	MP3A	X	21.255	5.42
17	MP3A	Z	-12.271	5.42
18	MP3A	Mx	-.006	5.42
19	MP4A	X	21.255	1.92
20	MP4A	Z	-12.271	1.92
21	MP4A	Mx	-.014	1.92
22	MP4A	X	21.255	5.42
23	MP4A	Z	-12.271	5.42
24	MP4A	Mx	-.014	5.42
25	MP2A	X	10.62	3.67
26	MP2A	Z	-6.131	3.67
27	MP2A	Mx	.005	3.67
28	MP3A	X	9.424	3.67
29	MP3A	Z	-5.441	3.67
30	MP3A	Mx	.005	3.67
31	M30	X	13.612	1.5
32	M30	Z	-7.859	1.5
33	M30	Mx	0	1.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	8.031	2.67
2	MP1A	Z	0	2.67
3	MP1A	Mx	-.004	2.67
4	MP1A	X	8.031	4.67
5	MP1A	Z	0	4.67
6	MP1A	Mx	-.004	4.67
7	MP3A	X	22.057	1.92
8	MP3A	Z	0	1.92
9	MP3A	Mx	-.015	1.92
10	MP3A	X	22.057	5.42
11	MP3A	Z	0	5.42
12	MP3A	Mx	-.015	5.42
13	MP3A	X	22.057	1.92
14	MP3A	Z	0	1.92
15	MP3A	Mx	-.015	1.92
16	MP3A	X	22.057	5.42
17	MP3A	Z	0	5.42
18	MP3A	Mx	-.015	5.42
19	MP4A	X	22.057	1.92
20	MP4A	Z	0	1.92
21	MP4A	Mx	-.015	1.92
22	MP4A	X	22.057	5.42
23	MP4A	Z	0	5.42
24	MP4A	Mx	-.015	5.42
25	MP2A	X	11.051	3.67
26	MP2A	Z	0	3.67
27	MP2A	Mx	.006	3.67
28	MP3A	X	9.21	3.67
29	MP3A	Z	0	3.67
30	MP3A	Mx	.005	3.67

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
31	M30	X	14.05	1.5
32	M30	Z	0	1.5
33	M30	Mx	0	1.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	9.303	2.67
2	MP1A	Z	5.371	2.67
3	MP1A	Mx	-.005	2.67
4	MP1A	X	9.303	4.67
5	MP1A	Z	5.371	4.67
6	MP1A	Mx	-.005	4.67
7	MP3A	X	21.255	1.92
8	MP3A	Z	12.271	1.92
9	MP3A	Mx	-.006	1.92
10	MP3A	X	21.255	5.42
11	MP3A	Z	12.271	5.42
12	MP3A	Mx	-.006	5.42
13	MP3A	X	21.255	1.92
14	MP3A	Z	12.271	1.92
15	MP3A	Mx	-.022	1.92
16	MP3A	X	21.255	5.42
17	MP3A	Z	12.271	5.42
18	MP3A	Mx	-.022	5.42
19	MP4A	X	21.255	1.92
20	MP4A	Z	12.271	1.92
21	MP4A	Mx	-.014	1.92
22	MP4A	X	21.255	5.42
23	MP4A	Z	12.271	5.42
24	MP4A	Mx	-.014	5.42
25	MP2A	X	10.62	3.67
26	MP2A	Z	6.131	3.67
27	MP2A	Mx	.005	3.67
28	MP3A	X	9.424	3.67
29	MP3A	Z	5.441	3.67
30	MP3A	Mx	.005	3.67
31	M30	X	13.612	1.5
32	M30	Z	7.859	1.5
33	M30	Mx	0	1.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	8.083	2.67
2	MP1A	Z	14	2.67
3	MP1A	Mx	-.004	2.67
4	MP1A	X	8.083	4.67
5	MP1A	Z	14	4.67
6	MP1A	Mx	-.004	4.67
7	MP3A	X	14.757	1.92
8	MP3A	Z	25.56	1.92
9	MP3A	Mx	.007	1.92

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
10	MP3A	X	14.757	5.42
11	MP3A	Z	25.56	5.42
12	MP3A	Mx	.007	5.42
13	MP3A	X	14.757	1.92
14	MP3A	Z	25.56	1.92
15	MP3A	Mx	-.027	1.92
16	MP3A	X	14.757	5.42
17	MP3A	Z	25.56	5.42
18	MP3A	Mx	-.027	5.42
19	MP4A	X	14.757	1.92
20	MP4A	Z	25.56	1.92
21	MP4A	Mx	-.01	1.92
22	MP4A	X	14.757	5.42
23	MP4A	Z	25.56	5.42
24	MP4A	Mx	-.01	5.42
25	MP2A	X	7.343	3.67
26	MP2A	Z	12.718	3.67
27	MP2A	Mx	.004	3.67
28	MP3A	X	7.113	3.67
29	MP3A	Z	12.319	3.67
30	MP3A	Mx	.004	3.67
31	M30	X	9.526	1.5
32	M30	Z	16.499	1.5
33	M30	Mx	0	1.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	0	2.67
2	MP1A	Z	18.877	2.67
3	MP1A	Mx	0	2.67
4	MP1A	X	0	4.67
5	MP1A	Z	18.877	4.67
6	MP1A	Mx	0	4.67
7	MP3A	X	0	1.92
8	MP3A	Z	32.001	1.92
9	MP3A	Mx	.021	1.92
10	MP3A	X	0	5.42
11	MP3A	Z	32.001	5.42
12	MP3A	Mx	.021	5.42
13	MP3A	X	0	1.92
14	MP3A	Z	32.001	1.92
15	MP3A	Mx	-.021	1.92
16	MP3A	X	0	5.42
17	MP3A	Z	32.001	5.42
18	MP3A	Mx	-.021	5.42
19	MP4A	X	0	1.92
20	MP4A	Z	32.001	1.92
21	MP4A	Mx	0	1.92
22	MP4A	X	0	5.42
23	MP4A	Z	32.001	5.42
24	MP4A	Mx	0	5.42

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
25	MP2A	X	0	3.67
26	MP2A	Z	15.897	3.67
27	MP2A	Mx	0	3.67
28	MP3A	X	0	3.67
29	MP3A	Z	15.897	3.67
30	MP3A	Mx	0	3.67
31	M30	X	0	1.5
32	M30	Z	20.719	1.5
33	M30	Mx	0	1.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	-8.083	2.67
2	MP1A	Z	14	2.67
3	MP1A	Mx	.004	2.67
4	MP1A	X	-8.083	4.67
5	MP1A	Z	14	4.67
6	MP1A	Mx	.004	4.67
7	MP3A	X	-14.757	1.92
8	MP3A	Z	25.56	1.92
9	MP3A	Mx	.027	1.92
10	MP3A	X	-14.757	5.42
11	MP3A	Z	25.56	5.42
12	MP3A	Mx	.027	5.42
13	MP3A	X	-14.757	1.92
14	MP3A	Z	25.56	1.92
15	MP3A	Mx	-.007	1.92
16	MP3A	X	-14.757	5.42
17	MP3A	Z	25.56	5.42
18	MP3A	Mx	-.007	5.42
19	MP4A	X	-14.757	1.92
20	MP4A	Z	25.56	1.92
21	MP4A	Mx	.01	1.92
22	MP4A	X	-14.757	5.42
23	MP4A	Z	25.56	5.42
24	MP4A	Mx	.01	5.42
25	MP2A	X	-7.343	3.67
26	MP2A	Z	12.718	3.67
27	MP2A	Mx	-.004	3.67
28	MP3A	X	-7.113	3.67
29	MP3A	Z	12.319	3.67
30	MP3A	Mx	-.004	3.67
31	M30	X	-9.526	1.5
32	M30	Z	16.499	1.5
33	M30	Mx	0	1.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	-9.303	2.67
2	MP1A	Z	5.371	2.67
3	MP1A	Mx	.005	2.67

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
4	MP1A	X	-9.303	4.67
5	MP1A	Z	5.371	4.67
6	MP1A	Mx	.005	4.67
7	MP3A	X	-21.255	1.92
8	MP3A	Z	12.271	1.92
9	MP3A	Mx	.022	1.92
10	MP3A	X	-21.255	5.42
11	MP3A	Z	12.271	5.42
12	MP3A	Mx	.022	5.42
13	MP3A	X	-21.255	1.92
14	MP3A	Z	12.271	1.92
15	MP3A	Mx	.006	1.92
16	MP3A	X	-21.255	5.42
17	MP3A	Z	12.271	5.42
18	MP3A	Mx	.006	5.42
19	MP4A	X	-21.255	1.92
20	MP4A	Z	12.271	1.92
21	MP4A	Mx	.014	1.92
22	MP4A	X	-21.255	5.42
23	MP4A	Z	12.271	5.42
24	MP4A	Mx	.014	5.42
25	MP2A	X	-10.62	3.67
26	MP2A	Z	6.131	3.67
27	MP2A	Mx	-.005	3.67
28	MP3A	X	-9.424	3.67
29	MP3A	Z	5.441	3.67
30	MP3A	Mx	-.005	3.67
31	M30	X	-13.612	1.5
32	M30	Z	7.859	1.5
33	M30	Mx	0	1.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	-8.031	2.67
2	MP1A	Z	0	2.67
3	MP1A	Mx	.004	2.67
4	MP1A	X	-8.031	4.67
5	MP1A	Z	0	4.67
6	MP1A	Mx	.004	4.67
7	MP3A	X	-22.057	1.92
8	MP3A	Z	0	1.92
9	MP3A	Mx	.015	1.92
10	MP3A	X	-22.057	5.42
11	MP3A	Z	0	5.42
12	MP3A	Mx	.015	5.42
13	MP3A	X	-22.057	1.92
14	MP3A	Z	0	1.92
15	MP3A	Mx	.015	1.92
16	MP3A	X	-22.057	5.42
17	MP3A	Z	0	5.42
18	MP3A	Mx	.015	5.42

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
19	MP4A	X	-22.057	1.92
20	MP4A	Z	0	1.92
21	MP4A	Mx	.015	1.92
22	MP4A	X	-22.057	5.42
23	MP4A	Z	0	5.42
24	MP4A	Mx	.015	5.42
25	MP2A	X	-11.051	3.67
26	MP2A	Z	0	3.67
27	MP2A	Mx	-.006	3.67
28	MP3A	X	-9.21	3.67
29	MP3A	Z	0	3.67
30	MP3A	Mx	-.005	3.67
31	M30	X	-14.05	1.5
32	M30	Z	0	1.5
33	M30	Mx	0	1.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	-9.303	2.67
2	MP1A	Z	-5.371	2.67
3	MP1A	Mx	.005	2.67
4	MP1A	X	-9.303	4.67
5	MP1A	Z	-5.371	4.67
6	MP1A	Mx	.005	4.67
7	MP3A	X	-21.255	1.92
8	MP3A	Z	-12.271	1.92
9	MP3A	Mx	.006	1.92
10	MP3A	X	-21.255	5.42
11	MP3A	Z	-12.271	5.42
12	MP3A	Mx	.006	5.42
13	MP3A	X	-21.255	1.92
14	MP3A	Z	-12.271	1.92
15	MP3A	Mx	.022	1.92
16	MP3A	X	-21.255	5.42
17	MP3A	Z	-12.271	5.42
18	MP3A	Mx	.022	5.42
19	MP4A	X	-21.255	1.92
20	MP4A	Z	-12.271	1.92
21	MP4A	Mx	.014	1.92
22	MP4A	X	-21.255	5.42
23	MP4A	Z	-12.271	5.42
24	MP4A	Mx	.014	5.42
25	MP2A	X	-10.62	3.67
26	MP2A	Z	-6.131	3.67
27	MP2A	Mx	-.005	3.67
28	MP3A	X	-9.424	3.67
29	MP3A	Z	-5.441	3.67
30	MP3A	Mx	-.005	3.67
31	M30	X	-13.612	1.5
32	M30	Z	-7.859	1.5
33	M30	Mx	0	1.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	-8.083	2.67
2	MP1A	Z	-14	2.67
3	MP1A	Mx	.004	2.67
4	MP1A	X	-8.083	4.67
5	MP1A	Z	-14	4.67
6	MP1A	Mx	.004	4.67
7	MP3A	X	-14.757	1.92
8	MP3A	Z	-25.56	1.92
9	MP3A	Mx	-.007	1.92
10	MP3A	X	-14.757	5.42
11	MP3A	Z	-25.56	5.42
12	MP3A	Mx	-.007	5.42
13	MP3A	X	-14.757	1.92
14	MP3A	Z	-25.56	1.92
15	MP3A	Mx	.027	1.92
16	MP3A	X	-14.757	5.42
17	MP3A	Z	-25.56	5.42
18	MP3A	Mx	.027	5.42
19	MP4A	X	-14.757	1.92
20	MP4A	Z	-25.56	1.92
21	MP4A	Mx	.01	1.92
22	MP4A	X	-14.757	5.42
23	MP4A	Z	-25.56	5.42
24	MP4A	Mx	.01	5.42
25	MP2A	X	-7.343	3.67
26	MP2A	Z	-12.718	3.67
27	MP2A	Mx	-.004	3.67
28	MP3A	X	-7.113	3.67
29	MP3A	Z	-12.319	3.67
30	MP3A	Mx	-.004	3.67
31	M30	X	-9.526	1.5
32	M30	Z	-16.499	1.5
33	M30	Mx	0	1.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	0	2.67
2	MP1A	Z	-6.026	2.67
3	MP1A	Mx	0	2.67
4	MP1A	X	0	4.67
5	MP1A	Z	-6.026	4.67
6	MP1A	Mx	0	4.67
7	MP3A	X	0	1.92
8	MP3A	Z	-10.462	1.92
9	MP3A	Mx	-.007	1.92
10	MP3A	X	0	5.42
11	MP3A	Z	-10.462	5.42
12	MP3A	Mx	-.007	5.42
13	MP3A	X	0	1.92
14	MP3A	Z	-10.462	1.92
15	MP3A	Mx	.007	1.92

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
16	MP3A	X	0	5.42
17	MP3A	Z	-10.462	5.42
18	MP3A	Mx	.007	5.42
19	MP4A	X	0	1.92
20	MP4A	Z	-10.462	1.92
21	MP4A	Mx	0	1.92
22	MP4A	X	0	5.42
23	MP4A	Z	-10.462	5.42
24	MP4A	Mx	0	5.42
25	MP2A	X	0	3.67
26	MP2A	Z	-4.795	3.67
27	MP2A	Mx	0	3.67
28	MP3A	X	0	3.67
29	MP3A	Z	-4.795	3.67
30	MP3A	Mx	0	3.67
31	M30	X	0	1.5
32	M30	Z	-6.41	1.5
33	M30	Mx	0	1.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	2.555	2.67
2	MP1A	Z	-4.425	2.67
3	MP1A	Mx	-.001	2.67
4	MP1A	X	2.555	4.67
5	MP1A	Z	-4.425	4.67
6	MP1A	Mx	-.001	4.67
7	MP3A	X	4.788	1.92
8	MP3A	Z	-8.293	1.92
9	MP3A	Mx	-.009	1.92
10	MP3A	X	4.788	5.42
11	MP3A	Z	-8.293	5.42
12	MP3A	Mx	-.009	5.42
13	MP3A	X	4.788	1.92
14	MP3A	Z	-8.293	1.92
15	MP3A	Mx	.002	1.92
16	MP3A	X	4.788	5.42
17	MP3A	Z	-8.293	5.42
18	MP3A	Mx	.002	5.42
19	MP4A	X	4.788	1.92
20	MP4A	Z	-8.293	1.92
21	MP4A	Mx	-.003	1.92
22	MP4A	X	4.788	5.42
23	MP4A	Z	-8.293	5.42
24	MP4A	Mx	-.003	5.42
25	MP2A	X	2.199	3.67
26	MP2A	Z	-3.808	3.67
27	MP2A	Mx	.001	3.67
28	MP3A	X	2.123	3.67
29	MP3A	Z	-3.676	3.67
30	MP3A	Mx	.001	3.67

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
31	M30	X	2.924	1.5
32	M30	Z	-5.065	1.5
33	M30	Mx	0	1.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	2.837	2.67
2	MP1A	Z	-1.638	2.67
3	MP1A	Mx	-.001	2.67
4	MP1A	X	2.837	4.67
5	MP1A	Z	-1.638	4.67
6	MP1A	Mx	-.001	4.67
7	MP3A	X	6.759	1.92
8	MP3A	Z	-3.902	1.92
9	MP3A	Mx	-.007	1.92
10	MP3A	X	6.759	5.42
11	MP3A	Z	-3.902	5.42
12	MP3A	Mx	-.007	5.42
13	MP3A	X	6.759	1.92
14	MP3A	Z	-3.902	1.92
15	MP3A	Mx	-.002	1.92
16	MP3A	X	6.759	5.42
17	MP3A	Z	-3.902	5.42
18	MP3A	Mx	-.002	5.42
19	MP4A	X	6.759	1.92
20	MP4A	Z	-3.902	1.92
21	MP4A	Mx	-.005	1.92
22	MP4A	X	6.759	5.42
23	MP4A	Z	-3.902	5.42
24	MP4A	Mx	-.005	5.42
25	MP2A	X	3.12	3.67
26	MP2A	Z	-1.801	3.67
27	MP2A	Mx	.002	3.67
28	MP3A	X	2.724	3.67
29	MP3A	Z	-1.573	3.67
30	MP3A	Mx	.001	3.67
31	M30	X	4.092	1.5
32	M30	Z	-2.362	1.5
33	M30	Mx	0	1.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	2.359	2.67
2	MP1A	Z	0	2.67
3	MP1A	Mx	-.001	2.67
4	MP1A	X	2.359	4.67
5	MP1A	Z	0	4.67
6	MP1A	Mx	-.001	4.67
7	MP3A	X	6.918	1.92
8	MP3A	Z	0	1.92
9	MP3A	Mx	-.005	1.92

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
10	MP3A	X	6.918	5.42
11	MP3A	Z	0	5.42
12	MP3A	Mx	-.005	5.42
13	MP3A	X	6.918	1.92
14	MP3A	Z	0	1.92
15	MP3A	Mx	-.005	1.92
16	MP3A	X	6.918	5.42
17	MP3A	Z	0	5.42
18	MP3A	Mx	-.005	5.42
19	MP4A	X	6.918	1.92
20	MP4A	Z	0	1.92
21	MP4A	Mx	-.005	1.92
22	MP4A	X	6.918	5.42
23	MP4A	Z	0	5.42
24	MP4A	Mx	-.005	5.42
25	MP2A	X	3.205	3.67
26	MP2A	Z	0	3.67
27	MP2A	Mx	.002	3.67
28	MP3A	X	2.596	3.67
29	MP3A	Z	0	3.67
30	MP3A	Mx	.001	3.67
31	M30	X	4.163	1.5
32	M30	Z	0	1.5
33	M30	Mx	0	1.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	2.837	2.67
2	MP1A	Z	1.638	2.67
3	MP1A	Mx	-.001	2.67
4	MP1A	X	2.837	4.67
5	MP1A	Z	1.638	4.67
6	MP1A	Mx	-.001	4.67
7	MP3A	X	6.759	1.92
8	MP3A	Z	3.902	1.92
9	MP3A	Mx	-.002	1.92
10	MP3A	X	6.759	5.42
11	MP3A	Z	3.902	5.42
12	MP3A	Mx	-.002	5.42
13	MP3A	X	6.759	1.92
14	MP3A	Z	3.902	1.92
15	MP3A	Mx	-.007	1.92
16	MP3A	X	6.759	5.42
17	MP3A	Z	3.902	5.42
18	MP3A	Mx	-.007	5.42
19	MP4A	X	6.759	1.92
20	MP4A	Z	3.902	1.92
21	MP4A	Mx	-.005	1.92
22	MP4A	X	6.759	5.42
23	MP4A	Z	3.902	5.42
24	MP4A	Mx	-.005	5.42

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
25	MP2A	X	3.12	3.67
26	MP2A	Z	1.801	3.67
27	MP2A	Mx	.002	3.67
28	MP3A	X	2.724	3.67
29	MP3A	Z	1.573	3.67
30	MP3A	Mx	.001	3.67
31	M30	X	4.092	1.5
32	M30	Z	2.362	1.5
33	M30	Mx	0	1.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	2.555	2.67
2	MP1A	Z	4.425	2.67
3	MP1A	Mx	-.001	2.67
4	MP1A	X	2.555	4.67
5	MP1A	Z	4.425	4.67
6	MP1A	Mx	-.001	4.67
7	MP3A	X	4.788	1.92
8	MP3A	Z	8.293	1.92
9	MP3A	Mx	.002	1.92
10	MP3A	X	4.788	5.42
11	MP3A	Z	8.293	5.42
12	MP3A	Mx	.002	5.42
13	MP3A	X	4.788	1.92
14	MP3A	Z	8.293	1.92
15	MP3A	Mx	-.009	1.92
16	MP3A	X	4.788	5.42
17	MP3A	Z	8.293	5.42
18	MP3A	Mx	-.009	5.42
19	MP4A	X	4.788	1.92
20	MP4A	Z	8.293	1.92
21	MP4A	Mx	-.003	1.92
22	MP4A	X	4.788	5.42
23	MP4A	Z	8.293	5.42
24	MP4A	Mx	-.003	5.42
25	MP2A	X	2.199	3.67
26	MP2A	Z	3.808	3.67
27	MP2A	Mx	.001	3.67
28	MP3A	X	2.123	3.67
29	MP3A	Z	3.676	3.67
30	MP3A	Mx	.001	3.67
31	M30	X	2.924	1.5
32	M30	Z	5.065	1.5
33	M30	Mx	0	1.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	0	2.67
2	MP1A	Z	6.026	2.67
3	MP1A	Mx	0	2.67

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
4	MP1A	X	0	4.67
5	MP1A	Z	6.026	4.67
6	MP1A	Mx	0	4.67
7	MP3A	X	0	1.92
8	MP3A	Z	10.462	1.92
9	MP3A	Mx	.007	1.92
10	MP3A	X	0	5.42
11	MP3A	Z	10.462	5.42
12	MP3A	Mx	.007	5.42
13	MP3A	X	0	1.92
14	MP3A	Z	10.462	1.92
15	MP3A	Mx	-.007	1.92
16	MP3A	X	0	5.42
17	MP3A	Z	10.462	5.42
18	MP3A	Mx	-.007	5.42
19	MP4A	X	0	1.92
20	MP4A	Z	10.462	1.92
21	MP4A	Mx	0	1.92
22	MP4A	X	0	5.42
23	MP4A	Z	10.462	5.42
24	MP4A	Mx	0	5.42
25	MP2A	X	0	3.67
26	MP2A	Z	4.795	3.67
27	MP2A	Mx	0	3.67
28	MP3A	X	0	3.67
29	MP3A	Z	4.795	3.67
30	MP3A	Mx	0	3.67
31	M30	X	0	1.5
32	M30	Z	6.41	1.5
33	M30	Mx	0	1.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	-2.555	2.67
2	MP1A	Z	4.425	2.67
3	MP1A	Mx	.001	2.67
4	MP1A	X	-2.555	4.67
5	MP1A	Z	4.425	4.67
6	MP1A	Mx	.001	4.67
7	MP3A	X	-4.788	1.92
8	MP3A	Z	8.293	1.92
9	MP3A	Mx	.009	1.92
10	MP3A	X	-4.788	5.42
11	MP3A	Z	8.293	5.42
12	MP3A	Mx	.009	5.42
13	MP3A	X	-4.788	1.92
14	MP3A	Z	8.293	1.92
15	MP3A	Mx	-.002	1.92
16	MP3A	X	-4.788	5.42
17	MP3A	Z	8.293	5.42
18	MP3A	Mx	-.002	5.42

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
19	MP4A	X	-4.788	1.92
20	MP4A	Z	8.293	1.92
21	MP4A	Mx	.003	1.92
22	MP4A	X	-4.788	5.42
23	MP4A	Z	8.293	5.42
24	MP4A	Mx	.003	5.42
25	MP2A	X	-2.199	3.67
26	MP2A	Z	3.808	3.67
27	MP2A	Mx	-.001	3.67
28	MP3A	X	-2.123	3.67
29	MP3A	Z	3.676	3.67
30	MP3A	Mx	-.001	3.67
31	M30	X	-2.924	1.5
32	M30	Z	5.065	1.5
33	M30	Mx	0	1.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	-2.837	2.67
2	MP1A	Z	1.638	2.67
3	MP1A	Mx	.001	2.67
4	MP1A	X	-2.837	4.67
5	MP1A	Z	1.638	4.67
6	MP1A	Mx	.001	4.67
7	MP3A	X	-6.759	1.92
8	MP3A	Z	3.902	1.92
9	MP3A	Mx	.007	1.92
10	MP3A	X	-6.759	5.42
11	MP3A	Z	3.902	5.42
12	MP3A	Mx	.007	5.42
13	MP3A	X	-6.759	1.92
14	MP3A	Z	3.902	1.92
15	MP3A	Mx	.002	1.92
16	MP3A	X	-6.759	5.42
17	MP3A	Z	3.902	5.42
18	MP3A	Mx	.002	5.42
19	MP4A	X	-6.759	1.92
20	MP4A	Z	3.902	1.92
21	MP4A	Mx	.005	1.92
22	MP4A	X	-6.759	5.42
23	MP4A	Z	3.902	5.42
24	MP4A	Mx	.005	5.42
25	MP2A	X	-3.12	3.67
26	MP2A	Z	1.801	3.67
27	MP2A	Mx	-.002	3.67
28	MP3A	X	-2.724	3.67
29	MP3A	Z	1.573	3.67
30	MP3A	Mx	-.001	3.67
31	M30	X	-4.092	1.5
32	M30	Z	2.362	1.5
33	M30	Mx	0	1.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	-2.359	2.67
2	MP1A	Z	0	2.67
3	MP1A	Mx	.001	2.67
4	MP1A	X	-2.359	4.67
5	MP1A	Z	0	4.67
6	MP1A	Mx	.001	4.67
7	MP3A	X	-6.918	1.92
8	MP3A	Z	0	1.92
9	MP3A	Mx	.005	1.92
10	MP3A	X	-6.918	5.42
11	MP3A	Z	0	5.42
12	MP3A	Mx	.005	5.42
13	MP3A	X	-6.918	1.92
14	MP3A	Z	0	1.92
15	MP3A	Mx	.005	1.92
16	MP3A	X	-6.918	5.42
17	MP3A	Z	0	5.42
18	MP3A	Mx	.005	5.42
19	MP4A	X	-6.918	1.92
20	MP4A	Z	0	1.92
21	MP4A	Mx	.005	1.92
22	MP4A	X	-6.918	5.42
23	MP4A	Z	0	5.42
24	MP4A	Mx	.005	5.42
25	MP2A	X	-3.205	3.67
26	MP2A	Z	0	3.67
27	MP2A	Mx	-.002	3.67
28	MP3A	X	-2.596	3.67
29	MP3A	Z	0	3.67
30	MP3A	Mx	-.001	3.67
31	M30	X	-4.163	1.5
32	M30	Z	0	1.5
33	M30	Mx	0	1.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	-2.837	2.67
2	MP1A	Z	-1.638	2.67
3	MP1A	Mx	.001	2.67
4	MP1A	X	-2.837	4.67
5	MP1A	Z	-1.638	4.67
6	MP1A	Mx	.001	4.67
7	MP3A	X	-6.759	1.92
8	MP3A	Z	-3.902	1.92
9	MP3A	Mx	.002	1.92
10	MP3A	X	-6.759	5.42
11	MP3A	Z	-3.902	5.42
12	MP3A	Mx	.002	5.42
13	MP3A	X	-6.759	1.92
14	MP3A	Z	-3.902	1.92
15	MP3A	Mx	.007	1.92

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
16	MP3A	X	-6.759	5.42
17	MP3A	Z	-3.902	5.42
18	MP3A	Mx	.007	5.42
19	MP4A	X	-6.759	1.92
20	MP4A	Z	-3.902	1.92
21	MP4A	Mx	.005	1.92
22	MP4A	X	-6.759	5.42
23	MP4A	Z	-3.902	5.42
24	MP4A	Mx	.005	5.42
25	MP2A	X	-3.12	3.67
26	MP2A	Z	-1.801	3.67
27	MP2A	Mx	-.002	3.67
28	MP3A	X	-2.724	3.67
29	MP3A	Z	-1.573	3.67
30	MP3A	Mx	-.001	3.67
31	M30	X	-4.092	1.5
32	M30	Z	-2.362	1.5
33	M30	Mx	0	1.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP1A	X	-2.555	2.67
2	MP1A	Z	-4.425	2.67
3	MP1A	Mx	.001	2.67
4	MP1A	X	-2.555	4.67
5	MP1A	Z	-4.425	4.67
6	MP1A	Mx	.001	4.67
7	MP3A	X	-4.788	1.92
8	MP3A	Z	-8.293	1.92
9	MP3A	Mx	-.002	1.92
10	MP3A	X	-4.788	5.42
11	MP3A	Z	-8.293	5.42
12	MP3A	Mx	-.002	5.42
13	MP3A	X	-4.788	1.92
14	MP3A	Z	-8.293	1.92
15	MP3A	Mx	.009	1.92
16	MP3A	X	-4.788	5.42
17	MP3A	Z	-8.293	5.42
18	MP3A	Mx	.009	5.42
19	MP4A	X	-4.788	1.92
20	MP4A	Z	-8.293	1.92
21	MP4A	Mx	.003	1.92
22	MP4A	X	-4.788	5.42
23	MP4A	Z	-8.293	5.42
24	MP4A	Mx	.003	5.42
25	MP2A	X	-2.199	3.67
26	MP2A	Z	-3.808	3.67
27	MP2A	Mx	-.001	3.67
28	MP3A	X	-2.123	3.67
29	MP3A	Z	-3.676	3.67
30	MP3A	Mx	-.001	3.67

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
31	M30	X	-2.924	1.5
32	M30	Z	-5.065	1.5
33	M30	Mx	0	1.5

Member Point Loads (BLC 77 : Lm1)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	M1	Y	-500	%69

Member Point Loads (BLC 78 : Lm2)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	M1	Y	-500	%5

Member Point Loads (BLC 79 : Lv1)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	M1	Y	-250	%100

Member Point Loads (BLC 80 : Lv2)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	M32B	Y	-250	%100

Member Distributed Loads (BLC 40 : Structure Di)

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	Y	-7.476	-7.476	0	%100
2	M6	Y	-7.476	-7.476	0	%100
3	MP1A	Y	-4.88	-4.88	0	%100
4	M15	Y	-7.476	-7.476	0	%100
5	M18	Y	-7.476	-7.476	0	%100
6	M19	Y	-3.408	-3.408	0	%100
7	M20	Y	-3.408	-3.408	0	%100
8	M23	Y	-2.622	-2.622	0	%100
9	M31	Y	-11.332	-11.332	0	%100
10	M32	Y	-11.332	-11.332	0	%100
11	M31A	Y	-15.485	-15.485	0	%100
12	M32A	Y	-15.485	-15.485	0	%100
13	M27	Y	-7.476	-7.476	0	%100
14	M28	Y	-7.476	-7.476	0	%100
15	M29	Y	-3.408	-3.408	0	%100
16	M30	Y	-3.408	-3.408	0	%100
17	M31C	Y	-2.622	-2.622	0	%100
18	MP2A	Y	-4.88	-4.88	0	%100
19	MP3A	Y	-4.88	-4.88	0	%100
20	MP4A	Y	-4.88	-4.88	0	%100
21	M32B	Y	-7.476	-7.476	0	%100
22	M33A	Y	-7.476	-7.476	0	%100
23	M33B	Y	-4.88	-4.88	0	%100
24	M40	Y	-4.88	-4.88	0	%100
25	M40A	Y	-6.493	-6.493	0	%100
26	M41	Y	-6.493	-6.493	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
27	M48	Y	-4.88	-4.88	0	%100
28	M49	Y	-6.493	-6.493	0	%100
29	M50	Y	-6.493	-6.493	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	0	0	0	%100
2	M1	Z	-22.616	-22.616	0	%100
3	M6	X	0	0	0	%100
4	M6	Z	-22.616	-22.616	0	%100
5	MP1A	X	0	0	0	%100
6	MP1A	Z	-10.742	-10.742	0	%100
7	M15	X	0	0	0	%100
8	M15	Z	-13.268	-13.268	0	%100
9	M18	X	0	0	0	%100
10	M18	Z	-13.268	-13.268	0	%100
11	M19	X	0	0	0	%100
12	M19	Z	-5.948	-5.948	0	%100
13	M20	X	0	0	0	%100
14	M20	Z	-5.948	-5.948	0	%100
15	M23	X	0	0	0	%100
16	M23	Z	-2.938	-2.938	0	%100
17	M31	X	0	0	0	%100
18	M31	Z	-1.696	-1.696	0	%100
19	M32	X	0	0	0	%100
20	M32	Z	-1.696	-1.696	0	%100
21	M31A	X	0	0	0	%100
22	M31A	Z	-.002	-.002	0	%100
23	M32A	X	0	0	0	%100
24	M32A	Z	-.002	-.002	0	%100
25	M27	X	0	0	0	%100
26	M27	Z	-13.239	-13.239	0	%100
27	M28	X	0	0	0	%100
28	M28	Z	-13.239	-13.239	0	%100
29	M29	X	0	0	0	%100
30	M29	Z	-5.948	-5.948	0	%100
31	M30	X	0	0	0	%100
32	M30	Z	-5.948	-5.948	0	%100
33	M31C	X	0	0	0	%100
34	M31C	Z	-2.937	-2.937	0	%100
35	MP2A	X	0	0	0	%100
36	MP2A	Z	-10.742	-10.742	0	%100
37	MP3A	X	0	0	0	%100
38	MP3A	Z	-10.742	-10.742	0	%100
39	MP4A	X	0	0	0	%100
40	MP4A	Z	-10.742	-10.742	0	%100
41	M32B	X	0	0	0	%100
42	M32B	Z	-22.616	-22.616	0	%100
43	M33A	X	0	0	0	%100
44	M33A	Z	-22.616	-22.616	0	%100
45	M33B	X	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
46	M33B	Z	-.03	-.03	0	%100
47	M40	X	0	0	0	%100
48	M40	Z	-10.742	-10.742	0	%100
49	M40A	X	0	0	0	%100
50	M40A	Z	-15.263	-15.263	0	%100
51	M41	X	0	0	0	%100
52	M41	Z	-14.768	-14.768	0	%100
53	M48	X	0	0	0	%100
54	M48	Z	-10.742	-10.742	0	%100
55	M49	X	0	0	0	%100
56	M49	Z	-13	-13	0	%100
57	M50	X	0	0	0	%100
58	M50	Z	-11.744	-11.744	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	8.481	8.481	0	%100
2	M1	Z	-14.689	-14.689	0	%100
3	M6	X	8.481	8.481	0	%100
4	M6	Z	-14.689	-14.689	0	%100
5	MP1A	X	5.371	5.371	0	%100
6	MP1A	Z	-9.303	-9.303	0	%100
7	M15	X	1.861	1.861	0	%100
8	M15	Z	-3.224	-3.224	0	%100
9	M18	X	1.861	1.861	0	%100
10	M18	Z	-3.224	-3.224	0	%100
11	M19	X	2.974	2.974	0	%100
12	M19	Z	-5.151	-5.151	0	%100
13	M20	X	2.974	2.974	0	%100
14	M20	Z	-5.151	-5.151	0	%100
15	M23	X	1.108	1.108	0	%100
16	M23	Z	-1.919	-1.919	0	%100
17	M31	X	.283	.283	0	%100
18	M31	Z	-.49	-.49	0	%100
19	M32	X	.283	.283	0	%100
20	M32	Z	-.49	-.49	0	%100
21	M31A	X	.234	.234	0	%100
22	M31A	Z	-.406	-.406	0	%100
23	M32A	X	.234	.234	0	%100
24	M32A	Z	-.406	-.406	0	%100
25	M27	X	9.583	9.583	0	%100
26	M27	Z	-16.599	-16.599	0	%100
27	M28	X	9.583	9.583	0	%100
28	M28	Z	-16.599	-16.599	0	%100
29	M29	X	2.974	2.974	0	%100
30	M29	Z	-5.151	-5.151	0	%100
31	M30	X	2.974	2.974	0	%100
32	M30	Z	-5.151	-5.151	0	%100
33	M31C	X	1.693	1.693	0	%100
34	M31C	Z	-2.932	-2.932	0	%100
35	MP2A	X	5.371	5.371	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
36	MP2A	Z	-9.303	-9.303	0	%100
37	MP3A	X	5.371	5.371	0	%100
38	MP3A	Z	-9.303	-9.303	0	%100
39	MP4A	X	5.371	5.371	0	%100
40	MP4A	Z	-9.303	-9.303	0	%100
41	M32B	X	8.481	8.481	0	%100
42	M32B	Z	-14.689	-14.689	0	%100
43	M33A	X	8.481	8.481	0	%100
44	M33A	Z	-14.689	-14.689	0	%100
45	M33B	X	1.355	1.355	0	%100
46	M33B	Z	-2.348	-2.348	0	%100
47	M40	X	4.028	4.028	0	%100
48	M40	Z	-6.977	-6.977	0	%100
49	M40A	X	3.803	3.803	0	%100
50	M40A	Z	-6.588	-6.588	0	%100
51	M41	X	9.417	9.417	0	%100
52	M41	Z	-16.311	-16.311	0	%100
53	M48	X	4.028	4.028	0	%100
54	M48	Z	-6.977	-6.977	0	%100
55	M49	X	2.651	2.651	0	%100
56	M49	Z	-4.591	-4.591	0	%100
57	M50	X	8.884	8.884	0	%100
58	M50	Z	-15.387	-15.387	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	4.896	4.896	0	%100
2	M1	Z	-2.827	-2.827	0	%100
3	M6	X	4.896	4.896	0	%100
4	M6	Z	-2.827	-2.827	0	%100
5	MP1A	X	9.303	9.303	0	%100
6	MP1A	Z	-5.371	-5.371	0	%100
7	M15	X	.078	.078	0	%100
8	M15	Z	-.045	-.045	0	%100
9	M18	X	.078	.078	0	%100
10	M18	Z	-.045	-.045	0	%100
11	M19	X	5.151	5.151	0	%100
12	M19	Z	-2.974	-2.974	0	%100
13	M20	X	5.151	5.151	0	%100
14	M20	Z	-2.974	-2.974	0	%100
15	M23	X	1.681	1.681	0	%100
16	M23	Z	-.97	-.97	0	%100
17	M31	X	0	0	0	%100
18	M31	Z	0	0	0	%100
19	M32	X	0	0	0	%100
20	M32	Z	0	0	0	%100
21	M31A	X	1.139	1.139	0	%100
22	M31A	Z	-.658	-.658	0	%100
23	M32A	X	1.139	1.139	0	%100
24	M32A	Z	-.658	-.658	0	%100
25	M27	X	13.473	13.473	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
26	M27	Z	-7.779	-7.779	0	%100
27	M28	X	13.473	13.473	0	%100
28	M28	Z	-7.779	-7.779	0	%100
29	M29	X	5.151	5.151	0	%100
30	M29	Z	-2.974	-2.974	0	%100
31	M30	X	5.151	5.151	0	%100
32	M30	Z	-2.974	-2.974	0	%100
33	M31C	X	2.696	2.696	0	%100
34	M31C	Z	-1.556	-1.556	0	%100
35	MP2A	X	9.303	9.303	0	%100
36	MP2A	Z	-5.371	-5.371	0	%100
37	MP3A	X	9.303	9.303	0	%100
38	MP3A	Z	-5.371	-5.371	0	%100
39	MP4A	X	9.303	9.303	0	%100
40	MP4A	Z	-5.371	-5.371	0	%100
41	M32B	X	4.896	4.896	0	%100
42	M32B	Z	-2.827	-2.827	0	%100
43	M33A	X	4.896	4.896	0	%100
44	M33A	Z	-2.827	-2.827	0	%100
45	M33B	X	6.211	6.211	0	%100
46	M33B	Z	-3.586	-3.586	0	%100
47	M40	X	2.326	2.326	0	%100
48	M40	Z	-1.343	-1.343	0	%100
49	M40A	X	3.057	3.057	0	%100
50	M40A	Z	-1.765	-1.765	0	%100
51	M41	X	13.419	13.419	0	%100
52	M41	Z	-7.747	-7.747	0	%100
53	M48	X	2.326	2.326	0	%100
54	M48	Z	-1.343	-1.343	0	%100
55	M49	X	2.763	2.763	0	%100
56	M49	Z	-1.595	-1.595	0	%100
57	M50	X	14.614	14.614	0	%100
58	M50	Z	-8.438	-8.438	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	0	0	0	%100
2	M1	Z	0	0	0	%100
3	M6	X	0	0	0	%100
4	M6	Z	0	0	0	%100
5	MP1A	X	10.742	10.742	0	%100
6	MP1A	Z	0	0	0	%100
7	M15	X	6.003	6.003	0	%100
8	M15	Z	0	0	0	%100
9	M18	X	6.003	6.003	0	%100
10	M18	Z	0	0	0	%100
11	M19	X	5.948	5.948	0	%100
12	M19	Z	0	0	0	%100
13	M20	X	5.948	5.948	0	%100
14	M20	Z	0	0	0	%100
15	M23	X	2.388	2.388	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
16	M23	Z	0	0	0	%100
17	M31	X	.565	.565	0	%100
18	M31	Z	0	0	0	%100
19	M32	X	.565	.565	0	%100
20	M32	Z	0	0	0	%100
21	M31A	X	1.695	1.695	0	%100
22	M31A	Z	0	0	0	%100
23	M32A	X	1.695	1.695	0	%100
24	M32A	Z	0	0	0	%100
25	M27	X	6.021	6.021	0	%100
26	M27	Z	0	0	0	%100
27	M28	X	6.021	6.021	0	%100
28	M28	Z	0	0	0	%100
29	M29	X	5.948	5.948	0	%100
30	M29	Z	0	0	0	%100
31	M30	X	5.948	5.948	0	%100
32	M30	Z	0	0	0	%100
33	M31C	X	2.392	2.392	0	%100
34	M31C	Z	0	0	0	%100
35	MP2A	X	10.742	10.742	0	%100
36	MP2A	Z	0	0	0	%100
37	MP3A	X	10.742	10.742	0	%100
38	MP3A	Z	0	0	0	%100
39	MP4A	X	10.742	10.742	0	%100
40	MP4A	Z	0	0	0	%100
41	M32B	X	0	0	0	%100
42	M32B	Z	0	0	0	%100
43	M33A	X	0	0	0	%100
44	M33A	Z	0	0	0	%100
45	M33B	X	8.952	8.952	0	%100
46	M33B	Z	0	0	0	%100
47	M40	X	0	0	0	%100
48	M40	Z	0	0	0	%100
49	M40A	X	7.108	7.108	0	%100
50	M40A	Z	0	0	0	%100
51	M41	X	8.089	8.089	0	%100
52	M41	Z	0	0	0	%100
53	M48	X	0	0	0	%100
54	M48	Z	0	0	0	%100
55	M49	X	8.779	8.779	0	%100
56	M49	Z	0	0	0	%100
57	M50	X	9.959	9.959	0	%100
58	M50	Z	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	4.896	4.896	0	%100
2	M1	Z	2.827	2.827	0	%100
3	M6	X	4.896	4.896	0	%100
4	M6	Z	2.827	2.827	0	%100
5	MP1A	X	9.303	9.303	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
6	MP1A	Z	5.371	5.371	0	%100
7	M15	X	13.465	13.465	0	%100
8	M15	Z	7.774	7.774	0	%100
9	M18	X	13.465	13.465	0	%100
10	M18	Z	7.774	7.774	0	%100
11	M19	X	5.151	5.151	0	%100
12	M19	Z	2.974	2.974	0	%100
13	M20	X	5.151	5.151	0	%100
14	M20	Z	2.974	2.974	0	%100
15	M23	X	2.694	2.694	0	%100
16	M23	Z	1.555	1.555	0	%100
17	M31	X	1.469	1.469	0	%100
18	M31	Z	.848	.848	0	%100
19	M32	X	1.469	1.469	0	%100
20	M32	Z	.848	.848	0	%100
21	M31A	X	1.063	1.063	0	%100
22	M31A	Z	.614	.614	0	%100
23	M32A	X	1.063	1.063	0	%100
24	M32A	Z	.614	.614	0	%100
25	M27	X	.081	.081	0	%100
26	M27	Z	.047	.047	0	%100
27	M28	X	.081	.081	0	%100
28	M28	Z	.047	.047	0	%100
29	M29	X	5.151	5.151	0	%100
30	M29	Z	2.974	2.974	0	%100
31	M30	X	5.151	5.151	0	%100
32	M30	Z	2.974	2.974	0	%100
33	M31C	X	1.683	1.683	0	%100
34	M31C	Z	.972	.972	0	%100
35	MP2A	X	9.303	9.303	0	%100
36	MP2A	Z	5.371	5.371	0	%100
37	MP3A	X	9.303	9.303	0	%100
38	MP3A	Z	5.371	5.371	0	%100
39	MP4A	X	9.303	9.303	0	%100
40	MP4A	Z	5.371	5.371	0	%100
41	M32B	X	4.896	4.896	0	%100
42	M32B	Z	2.827	2.827	0	%100
43	M33A	X	4.896	4.896	0	%100
44	M33A	Z	2.827	2.827	0	%100
45	M33B	X	5.431	5.431	0	%100
46	M33B	Z	3.136	3.136	0	%100
47	M40	X	2.326	2.326	0	%100
48	M40	Z	1.343	1.343	0	%100
49	M40A	X	12.786	12.786	0	%100
50	M40A	Z	7.382	7.382	0	%100
51	M41	X	3.483	3.483	0	%100
52	M41	Z	2.011	2.011	0	%100
53	M48	X	2.326	2.326	0	%100
54	M48	Z	1.343	1.343	0	%100
55	M49	X	14.271	14.271	0	%100
56	M49	Z	8.239	8.239	0	%100
57	M50	X	3.408	3.408	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
58	M50	Z	1.967	1.967	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	8.481	8.481	0	%100
2	M1	Z	14.689	14.689	0	%100
3	M6	X	8.481	8.481	0	%100
4	M6	Z	14.689	14.689	0	%100
5	MP1A	X	5.371	5.371	0	%100
6	MP1A	Z	9.303	9.303	0	%100
7	M15	X	9.59	9.59	0	%100
8	M15	Z	16.611	16.611	0	%100
9	M18	X	9.59	9.59	0	%100
10	M18	Z	16.611	16.611	0	%100
11	M19	X	2.974	2.974	0	%100
12	M19	Z	5.151	5.151	0	%100
13	M20	X	2.974	2.974	0	%100
14	M20	Z	5.151	5.151	0	%100
15	M23	X	1.693	1.693	0	%100
16	M23	Z	2.932	2.932	0	%100
17	M31	X	1.131	1.131	0	%100
18	M31	Z	1.959	1.959	0	%100
19	M32	X	1.131	1.131	0	%100
20	M32	Z	1.959	1.959	0	%100
21	M31A	X	.191	.191	0	%100
22	M31A	Z	.33	.33	0	%100
23	M32A	X	.191	.191	0	%100
24	M32A	Z	.33	.33	0	%100
25	M27	X	1.851	1.851	0	%100
26	M27	Z	3.207	3.207	0	%100
27	M28	X	1.851	1.851	0	%100
28	M28	Z	3.207	3.207	0	%100
29	M29	X	2.974	2.974	0	%100
30	M29	Z	5.151	5.151	0	%100
31	M30	X	2.974	2.974	0	%100
32	M30	Z	5.151	5.151	0	%100
33	M31C	X	1.108	1.108	0	%100
34	M31C	Z	1.92	1.92	0	%100
35	MP2A	X	5.371	5.371	0	%100
36	MP2A	Z	9.303	9.303	0	%100
37	MP3A	X	5.371	5.371	0	%100
38	MP3A	Z	9.303	9.303	0	%100
39	MP4A	X	5.371	5.371	0	%100
40	MP4A	Z	9.303	9.303	0	%100
41	M32B	X	8.481	8.481	0	%100
42	M32B	Z	14.689	14.689	0	%100
43	M33A	X	8.481	8.481	0	%100
44	M33A	Z	14.689	14.689	0	%100
45	M33B	X	.905	.905	0	%100
46	M33B	Z	1.568	1.568	0	%100
47	M40	X	4.028	4.028	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
48	M40	Z	6.977	6.977	0	%100
49	M40A	X	9.42	9.42	0	%100
50	M40A	Z	16.317	16.317	0	%100
51	M41	X	3.681	3.681	0	%100
52	M41	Z	6.376	6.376	0	%100
53	M48	X	4.028	4.028	0	%100
54	M48	Z	6.977	6.977	0	%100
55	M49	X	9.294	9.294	0	%100
56	M49	Z	16.098	16.098	0	%100
57	M50	X	2.414	2.414	0	%100
58	M50	Z	4.181	4.181	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	0	0	0	%100
2	M1	Z	22.616	22.616	0	%100
3	M6	X	0	0	0	%100
4	M6	Z	22.616	22.616	0	%100
5	MP1A	X	0	0	0	%100
6	MP1A	Z	10.742	10.742	0	%100
7	M15	X	0	0	0	%100
8	M15	Z	13.268	13.268	0	%100
9	M18	X	0	0	0	%100
10	M18	Z	13.268	13.268	0	%100
11	M19	X	0	0	0	%100
12	M19	Z	5.948	5.948	0	%100
13	M20	X	0	0	0	%100
14	M20	Z	5.948	5.948	0	%100
15	M23	X	0	0	0	%100
16	M23	Z	2.938	2.938	0	%100
17	M31	X	0	0	0	%100
18	M31	Z	1.696	1.696	0	%100
19	M32	X	0	0	0	%100
20	M32	Z	1.696	1.696	0	%100
21	M31A	X	0	0	0	%100
22	M31A	Z	.002	.002	0	%100
23	M32A	X	0	0	0	%100
24	M32A	Z	.002	.002	0	%100
25	M27	X	0	0	0	%100
26	M27	Z	13.239	13.239	0	%100
27	M28	X	0	0	0	%100
28	M28	Z	13.239	13.239	0	%100
29	M29	X	0	0	0	%100
30	M29	Z	5.948	5.948	0	%100
31	M30	X	0	0	0	%100
32	M30	Z	5.948	5.948	0	%100
33	M31C	X	0	0	0	%100
34	M31C	Z	2.937	2.937	0	%100
35	MP2A	X	0	0	0	%100
36	MP2A	Z	10.742	10.742	0	%100
37	MP3A	X	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
38	MP3A	Z	10.742	10.742	0	%100
39	MP4A	X	0	0	0	%100
40	MP4A	Z	10.742	10.742	0	%100
41	M32B	X	0	0	0	%100
42	M32B	Z	22.616	22.616	0	%100
43	M33A	X	0	0	0	%100
44	M33A	Z	22.616	22.616	0	%100
45	M33B	X	0	0	0	%100
46	M33B	Z	.03	.03	0	%100
47	M40	X	0	0	0	%100
48	M40	Z	10.742	10.742	0	%100
49	M40A	X	0	0	0	%100
50	M40A	Z	15.263	15.263	0	%100
51	M41	X	0	0	0	%100
52	M41	Z	14.768	14.768	0	%100
53	M48	X	0	0	0	%100
54	M48	Z	10.742	10.742	0	%100
55	M49	X	0	0	0	%100
56	M49	Z	13	13	0	%100
57	M50	X	0	0	0	%100
58	M50	Z	11.744	11.744	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-8.481	-8.481	0	%100
2	M1	Z	14.689	14.689	0	%100
3	M6	X	-8.481	-8.481	0	%100
4	M6	Z	14.689	14.689	0	%100
5	MP1A	X	-5.371	-5.371	0	%100
6	MP1A	Z	9.303	9.303	0	%100
7	M15	X	-1.861	-1.861	0	%100
8	M15	Z	3.224	3.224	0	%100
9	M18	X	-1.861	-1.861	0	%100
10	M18	Z	3.224	3.224	0	%100
11	M19	X	-2.974	-2.974	0	%100
12	M19	Z	5.151	5.151	0	%100
13	M20	X	-2.974	-2.974	0	%100
14	M20	Z	5.151	5.151	0	%100
15	M23	X	-1.108	-1.108	0	%100
16	M23	Z	1.919	1.919	0	%100
17	M31	X	-.283	-.283	0	%100
18	M31	Z	.49	.49	0	%100
19	M32	X	-.283	-.283	0	%100
20	M32	Z	.49	.49	0	%100
21	M31A	X	-.234	-.234	0	%100
22	M31A	Z	.406	.406	0	%100
23	M32A	X	-.234	-.234	0	%100
24	M32A	Z	.406	.406	0	%100
25	M27	X	-9.583	-9.583	0	%100
26	M27	Z	16.599	16.599	0	%100
27	M28	X	-9.583	-9.583	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
28	M28	Z	16.599	16.599	0	%100
29	M29	X	-2.974	-2.974	0	%100
30	M29	Z	5.151	5.151	0	%100
31	M30	X	-2.974	-2.974	0	%100
32	M30	Z	5.151	5.151	0	%100
33	M31C	X	-1.693	-1.693	0	%100
34	M31C	Z	2.932	2.932	0	%100
35	MP2A	X	-5.371	-5.371	0	%100
36	MP2A	Z	9.303	9.303	0	%100
37	MP3A	X	-5.371	-5.371	0	%100
38	MP3A	Z	9.303	9.303	0	%100
39	MP4A	X	-5.371	-5.371	0	%100
40	MP4A	Z	9.303	9.303	0	%100
41	M32B	X	-8.481	-8.481	0	%100
42	M32B	Z	14.689	14.689	0	%100
43	M33A	X	-8.481	-8.481	0	%100
44	M33A	Z	14.689	14.689	0	%100
45	M33B	X	-1.355	-1.355	0	%100
46	M33B	Z	2.348	2.348	0	%100
47	M40	X	-4.028	-4.028	0	%100
48	M40	Z	6.977	6.977	0	%100
49	M40A	X	-3.803	-3.803	0	%100
50	M40A	Z	6.588	6.588	0	%100
51	M41	X	-9.417	-9.417	0	%100
52	M41	Z	16.311	16.311	0	%100
53	M48	X	-4.028	-4.028	0	%100
54	M48	Z	6.977	6.977	0	%100
55	M49	X	-2.651	-2.651	0	%100
56	M49	Z	4.591	4.591	0	%100
57	M50	X	-8.884	-8.884	0	%100
58	M50	Z	15.387	15.387	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-4.896	-4.896	0	%100
2	M1	Z	2.827	2.827	0	%100
3	M6	X	-4.896	-4.896	0	%100
4	M6	Z	2.827	2.827	0	%100
5	MP1A	X	-9.303	-9.303	0	%100
6	MP1A	Z	5.371	5.371	0	%100
7	M15	X	-.078	-.078	0	%100
8	M15	Z	.045	.045	0	%100
9	M18	X	-.078	-.078	0	%100
10	M18	Z	.045	.045	0	%100
11	M19	X	-5.151	-5.151	0	%100
12	M19	Z	2.974	2.974	0	%100
13	M20	X	-5.151	-5.151	0	%100
14	M20	Z	2.974	2.974	0	%100
15	M23	X	-1.681	-1.681	0	%100
16	M23	Z	.97	.97	0	%100
17	M31	X	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
18	M31	Z	0	0	0	%100
19	M32	X	0	0	0	%100
20	M32	Z	0	0	0	%100
21	M31A	X	-1.139	-1.139	0	%100
22	M31A	Z	.658	.658	0	%100
23	M32A	X	-1.139	-1.139	0	%100
24	M32A	Z	.658	.658	0	%100
25	M27	X	-13.473	-13.473	0	%100
26	M27	Z	7.779	7.779	0	%100
27	M28	X	-13.473	-13.473	0	%100
28	M28	Z	7.779	7.779	0	%100
29	M29	X	-5.151	-5.151	0	%100
30	M29	Z	2.974	2.974	0	%100
31	M30	X	-5.151	-5.151	0	%100
32	M30	Z	2.974	2.974	0	%100
33	M31C	X	-2.696	-2.696	0	%100
34	M31C	Z	1.556	1.556	0	%100
35	MP2A	X	-9.303	-9.303	0	%100
36	MP2A	Z	5.371	5.371	0	%100
37	MP3A	X	-9.303	-9.303	0	%100
38	MP3A	Z	5.371	5.371	0	%100
39	MP4A	X	-9.303	-9.303	0	%100
40	MP4A	Z	5.371	5.371	0	%100
41	M32B	X	-4.896	-4.896	0	%100
42	M32B	Z	2.827	2.827	0	%100
43	M33A	X	-4.896	-4.896	0	%100
44	M33A	Z	2.827	2.827	0	%100
45	M33B	X	-6.211	-6.211	0	%100
46	M33B	Z	3.586	3.586	0	%100
47	M40	X	-2.326	-2.326	0	%100
48	M40	Z	1.343	1.343	0	%100
49	M40A	X	-3.057	-3.057	0	%100
50	M40A	Z	1.765	1.765	0	%100
51	M41	X	-13.419	-13.419	0	%100
52	M41	Z	7.747	7.747	0	%100
53	M48	X	-2.326	-2.326	0	%100
54	M48	Z	1.343	1.343	0	%100
55	M49	X	-2.763	-2.763	0	%100
56	M49	Z	1.595	1.595	0	%100
57	M50	X	-14.614	-14.614	0	%100
58	M50	Z	8.438	8.438	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	0	0	0	%100
2	M1	Z	0	0	0	%100
3	M6	X	0	0	0	%100
4	M6	Z	0	0	0	%100
5	MP1A	X	-10.742	-10.742	0	%100
6	MP1A	Z	0	0	0	%100
7	M15	X	-6.003	-6.003	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
8	M15	Z	0	0	0	%100
9	M18	X	-6.003	-6.003	0	%100
10	M18	Z	0	0	0	%100
11	M19	X	-5.948	-5.948	0	%100
12	M19	Z	0	0	0	%100
13	M20	X	-5.948	-5.948	0	%100
14	M20	Z	0	0	0	%100
15	M23	X	-2.388	-2.388	0	%100
16	M23	Z	0	0	0	%100
17	M31	X	-.565	-.565	0	%100
18	M31	Z	0	0	0	%100
19	M32	X	-.565	-.565	0	%100
20	M32	Z	0	0	0	%100
21	M31A	X	-1.695	-1.695	0	%100
22	M31A	Z	0	0	0	%100
23	M32A	X	-1.695	-1.695	0	%100
24	M32A	Z	0	0	0	%100
25	M27	X	-6.021	-6.021	0	%100
26	M27	Z	0	0	0	%100
27	M28	X	-6.021	-6.021	0	%100
28	M28	Z	0	0	0	%100
29	M29	X	-5.948	-5.948	0	%100
30	M29	Z	0	0	0	%100
31	M30	X	-5.948	-5.948	0	%100
32	M30	Z	0	0	0	%100
33	M31C	X	-2.392	-2.392	0	%100
34	M31C	Z	0	0	0	%100
35	MP2A	X	-10.742	-10.742	0	%100
36	MP2A	Z	0	0	0	%100
37	MP3A	X	-10.742	-10.742	0	%100
38	MP3A	Z	0	0	0	%100
39	MP4A	X	-10.742	-10.742	0	%100
40	MP4A	Z	0	0	0	%100
41	M32B	X	0	0	0	%100
42	M32B	Z	0	0	0	%100
43	M33A	X	0	0	0	%100
44	M33A	Z	0	0	0	%100
45	M33B	X	-8.952	-8.952	0	%100
46	M33B	Z	0	0	0	%100
47	M40	X	0	0	0	%100
48	M40	Z	0	0	0	%100
49	M40A	X	-7.108	-7.108	0	%100
50	M40A	Z	0	0	0	%100
51	M41	X	-8.089	-8.089	0	%100
52	M41	Z	0	0	0	%100
53	M48	X	0	0	0	%100
54	M48	Z	0	0	0	%100
55	M49	X	-8.779	-8.779	0	%100
56	M49	Z	0	0	0	%100
57	M50	X	-9.959	-9.959	0	%100
58	M50	Z	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-4.896	-4.896	0	%100
2	M1	Z	-2.827	-2.827	0	%100
3	M6	X	-4.896	-4.896	0	%100
4	M6	Z	-2.827	-2.827	0	%100
5	MP1A	X	-9.303	-9.303	0	%100
6	MP1A	Z	-5.371	-5.371	0	%100
7	M15	X	-13.465	-13.465	0	%100
8	M15	Z	-7.774	-7.774	0	%100
9	M18	X	-13.465	-13.465	0	%100
10	M18	Z	-7.774	-7.774	0	%100
11	M19	X	-5.151	-5.151	0	%100
12	M19	Z	-2.974	-2.974	0	%100
13	M20	X	-5.151	-5.151	0	%100
14	M20	Z	-2.974	-2.974	0	%100
15	M23	X	-2.694	-2.694	0	%100
16	M23	Z	-1.555	-1.555	0	%100
17	M31	X	-1.469	-1.469	0	%100
18	M31	Z	-.848	-.848	0	%100
19	M32	X	-1.469	-1.469	0	%100
20	M32	Z	-.848	-.848	0	%100
21	M31A	X	-1.063	-1.063	0	%100
22	M31A	Z	-.614	-.614	0	%100
23	M32A	X	-1.063	-1.063	0	%100
24	M32A	Z	-.614	-.614	0	%100
25	M27	X	-.081	-.081	0	%100
26	M27	Z	-.047	-.047	0	%100
27	M28	X	-.081	-.081	0	%100
28	M28	Z	-.047	-.047	0	%100
29	M29	X	-5.151	-5.151	0	%100
30	M29	Z	-2.974	-2.974	0	%100
31	M30	X	-5.151	-5.151	0	%100
32	M30	Z	-2.974	-2.974	0	%100
33	M31C	X	-1.683	-1.683	0	%100
34	M31C	Z	-.972	-.972	0	%100
35	MP2A	X	-9.303	-9.303	0	%100
36	MP2A	Z	-5.371	-5.371	0	%100
37	MP3A	X	-9.303	-9.303	0	%100
38	MP3A	Z	-5.371	-5.371	0	%100
39	MP4A	X	-9.303	-9.303	0	%100
40	MP4A	Z	-5.371	-5.371	0	%100
41	M32B	X	-4.896	-4.896	0	%100
42	M32B	Z	-2.827	-2.827	0	%100
43	M33A	X	-4.896	-4.896	0	%100
44	M33A	Z	-2.827	-2.827	0	%100
45	M33B	X	-5.431	-5.431	0	%100
46	M33B	Z	-3.136	-3.136	0	%100
47	M40	X	-2.326	-2.326	0	%100
48	M40	Z	-1.343	-1.343	0	%100
49	M40A	X	-12.786	-12.786	0	%100
50	M40A	Z	-7.382	-7.382	0	%100
51	M41	X	-3.483	-3.483	0	%100
52	M41	Z	-2.011	-2.011	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
53	M48	X	-2.326	-2.326	0	%100
54	M48	Z	-1.343	-1.343	0	%100
55	M49	X	-14.271	-14.271	0	%100
56	M49	Z	-8.239	-8.239	0	%100
57	M50	X	-3.408	-3.408	0	%100
58	M50	Z	-1.967	-1.967	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-8.481	-8.481	0	%100
2	M1	Z	-14.689	-14.689	0	%100
3	M6	X	-8.481	-8.481	0	%100
4	M6	Z	-14.689	-14.689	0	%100
5	MP1A	X	-5.371	-5.371	0	%100
6	MP1A	Z	-9.303	-9.303	0	%100
7	M15	X	-9.59	-9.59	0	%100
8	M15	Z	-16.611	-16.611	0	%100
9	M18	X	-9.59	-9.59	0	%100
10	M18	Z	-16.611	-16.611	0	%100
11	M19	X	-2.974	-2.974	0	%100
12	M19	Z	-5.151	-5.151	0	%100
13	M20	X	-2.974	-2.974	0	%100
14	M20	Z	-5.151	-5.151	0	%100
15	M23	X	-1.693	-1.693	0	%100
16	M23	Z	-2.932	-2.932	0	%100
17	M31	X	-1.131	-1.131	0	%100
18	M31	Z	-1.959	-1.959	0	%100
19	M32	X	-1.131	-1.131	0	%100
20	M32	Z	-1.959	-1.959	0	%100
21	M31A	X	-.191	-.191	0	%100
22	M31A	Z	-.33	-.33	0	%100
23	M32A	X	-.191	-.191	0	%100
24	M32A	Z	-.33	-.33	0	%100
25	M27	X	-1.851	-1.851	0	%100
26	M27	Z	-3.207	-3.207	0	%100
27	M28	X	-1.851	-1.851	0	%100
28	M28	Z	-3.207	-3.207	0	%100
29	M29	X	-2.974	-2.974	0	%100
30	M29	Z	-5.151	-5.151	0	%100
31	M30	X	-2.974	-2.974	0	%100
32	M30	Z	-5.151	-5.151	0	%100
33	M31C	X	-1.108	-1.108	0	%100
34	M31C	Z	-1.92	-1.92	0	%100
35	MP2A	X	-5.371	-5.371	0	%100
36	MP2A	Z	-9.303	-9.303	0	%100
37	MP3A	X	-5.371	-5.371	0	%100
38	MP3A	Z	-9.303	-9.303	0	%100
39	MP4A	X	-5.371	-5.371	0	%100
40	MP4A	Z	-9.303	-9.303	0	%100
41	M32B	X	-8.481	-8.481	0	%100
42	M32B	Z	-14.689	-14.689	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
43	M33A	X	-8.481	-8.481	0	%100
44	M33A	Z	-14.689	-14.689	0	%100
45	M33B	X	-.905	-.905	0	%100
46	M33B	Z	-1.568	-1.568	0	%100
47	M40	X	-4.028	-4.028	0	%100
48	M40	Z	-6.977	-6.977	0	%100
49	M40A	X	-9.42	-9.42	0	%100
50	M40A	Z	-16.317	-16.317	0	%100
51	M41	X	-3.681	-3.681	0	%100
52	M41	Z	-6.376	-6.376	0	%100
53	M48	X	-4.028	-4.028	0	%100
54	M48	Z	-6.977	-6.977	0	%100
55	M49	X	-9.294	-9.294	0	%100
56	M49	Z	-16.098	-16.098	0	%100
57	M50	X	-2.414	-2.414	0	%100
58	M50	Z	-4.181	-4.181	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	0	0	0	%100
2	M1	Z	-5.181	-5.181	0	%100
3	M6	X	0	0	0	%100
4	M6	Z	-5.181	-5.181	0	%100
5	MP1A	X	0	0	0	%100
6	MP1A	Z	-3.312	-3.312	0	%100
7	M15	X	0	0	0	%100
8	M15	Z	-3.128	-3.128	0	%100
9	M18	X	0	0	0	%100
10	M18	Z	-3.128	-3.128	0	%100
11	M19	X	0	0	0	%100
12	M19	Z	-2.308	-2.308	0	%100
13	M20	X	0	0	0	%100
14	M20	Z	-2.308	-2.308	0	%100
15	M23	X	0	0	0	%100
16	M23	Z	-1.791	-1.791	0	%100
17	M31	X	0	0	0	%100
18	M31	Z	-.976	-.976	0	%100
19	M32	X	0	0	0	%100
20	M32	Z	-.976	-.976	0	%100
21	M31A	X	0	0	0	%100
22	M31A	Z	-.001	-.001	0	%100
23	M32A	X	0	0	0	%100
24	M32A	Z	-.001	-.001	0	%100
25	M27	X	0	0	0	%100
26	M27	Z	-3.121	-3.121	0	%100
27	M28	X	0	0	0	%100
28	M28	Z	-3.121	-3.121	0	%100
29	M29	X	0	0	0	%100
30	M29	Z	-2.308	-2.308	0	%100
31	M30	X	0	0	0	%100
32	M30	Z	-2.308	-2.308	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
33	M31C	X	0	0	0	%100
34	M31C	Z	-1.79	-1.79	0	%100
35	MP2A	X	0	0	0	%100
36	MP2A	Z	-3.312	-3.312	0	%100
37	MP3A	X	0	0	0	%100
38	MP3A	Z	-3.312	-3.312	0	%100
39	MP4A	X	0	0	0	%100
40	MP4A	Z	-3.312	-3.312	0	%100
41	M32B	X	0	0	0	%100
42	M32B	Z	-5.181	-5.181	0	%100
43	M33A	X	0	0	0	%100
44	M33A	Z	-5.181	-5.181	0	%100
45	M33B	X	0	0	0	%100
46	M33B	Z	-.009	-.009	0	%100
47	M40	X	0	0	0	%100
48	M40	Z	-3.312	-3.312	0	%100
49	M40A	X	0	0	0	%100
50	M40A	Z	-3.715	-3.715	0	%100
51	M41	X	0	0	0	%100
52	M41	Z	-3.595	-3.595	0	%100
53	M48	X	0	0	0	%100
54	M48	Z	-3.312	-3.312	0	%100
55	M49	X	0	0	0	%100
56	M49	Z	-3.165	-3.165	0	%100
57	M50	X	0	0	0	%100
58	M50	Z	-2.885	-2.885	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	1.943	1.943	0	%100
2	M1	Z	-3.365	-3.365	0	%100
3	M6	X	1.943	1.943	0	%100
4	M6	Z	-3.365	-3.365	0	%100
5	MP1A	X	1.656	1.656	0	%100
6	MP1A	Z	-2.868	-2.868	0	%100
7	M15	X	.439	.439	0	%100
8	M15	Z	-.76	-.76	0	%100
9	M18	X	.439	.439	0	%100
10	M18	Z	-.76	-.76	0	%100
11	M19	X	1.154	1.154	0	%100
12	M19	Z	-1.999	-1.999	0	%100
13	M20	X	1.154	1.154	0	%100
14	M20	Z	-1.999	-1.999	0	%100
15	M23	X	.675	.675	0	%100
16	M23	Z	-1.17	-1.17	0	%100
17	M31	X	.163	.163	0	%100
18	M31	Z	-.282	-.282	0	%100
19	M32	X	.163	.163	0	%100
20	M32	Z	-.282	-.282	0	%100
21	M31A	X	.169	.169	0	%100
22	M31A	Z	-.292	-.292	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
23	M32A	X	.169	.169	0	%100
24	M32A	Z	-.292	-.292	0	%100
25	M27	X	2.259	2.259	0	%100
26	M27	Z	-3.913	-3.913	0	%100
27	M28	X	2.259	2.259	0	%100
28	M28	Z	-3.913	-3.913	0	%100
29	M29	X	1.154	1.154	0	%100
30	M29	Z	-1.999	-1.999	0	%100
31	M30	X	1.154	1.154	0	%100
32	M30	Z	-1.999	-1.999	0	%100
33	M31C	X	1.032	1.032	0	%100
34	M31C	Z	-1.787	-1.787	0	%100
35	MP2A	X	1.656	1.656	0	%100
36	MP2A	Z	-2.868	-2.868	0	%100
37	MP3A	X	1.656	1.656	0	%100
38	MP3A	Z	-2.868	-2.868	0	%100
39	MP4A	X	1.656	1.656	0	%100
40	MP4A	Z	-2.868	-2.868	0	%100
41	M32B	X	1.943	1.943	0	%100
42	M32B	Z	-3.365	-3.365	0	%100
43	M33A	X	1.943	1.943	0	%100
44	M33A	Z	-3.365	-3.365	0	%100
45	M33B	X	.421	.421	0	%100
46	M33B	Z	-.729	-.729	0	%100
47	M40	X	1.242	1.242	0	%100
48	M40	Z	-2.151	-2.151	0	%100
49	M40A	X	.926	.926	0	%100
50	M40A	Z	-1.604	-1.604	0	%100
51	M41	X	2.292	2.292	0	%100
52	M41	Z	-3.971	-3.971	0	%100
53	M48	X	1.242	1.242	0	%100
54	M48	Z	-2.151	-2.151	0	%100
55	M49	X	.645	.645	0	%100
56	M49	Z	-1.118	-1.118	0	%100
57	M50	X	2.182	2.182	0	%100
58	M50	Z	-3.78	-3.78	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	1.122	1.122	0	%100
2	M1	Z	-.648	-.648	0	%100
3	M6	X	1.122	1.122	0	%100
4	M6	Z	-.648	-.648	0	%100
5	MP1A	X	2.868	2.868	0	%100
6	MP1A	Z	-1.656	-1.656	0	%100
7	M15	X	.018	.018	0	%100
8	M15	Z	-.011	-.011	0	%100
9	M18	X	.018	.018	0	%100
10	M18	Z	-.011	-.011	0	%100
11	M19	X	1.999	1.999	0	%100
12	M19	Z	-1.154	-1.154	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
13	M20	X	1.999	1.999	0	%100
14	M20	Z	-1.154	-1.154	0	%100
15	M23	X	1.025	1.025	0	%100
16	M23	Z	-.592	-.592	0	%100
17	M31	X	0	0	0	%100
18	M31	Z	0	0	0	%100
19	M32	X	0	0	0	%100
20	M32	Z	0	0	0	%100
21	M31A	X	.819	.819	0	%100
22	M31A	Z	-.473	-.473	0	%100
23	M32A	X	.819	.819	0	%100
24	M32A	Z	-.473	-.473	0	%100
25	M27	X	3.176	3.176	0	%100
26	M27	Z	-1.834	-1.834	0	%100
27	M28	X	3.176	3.176	0	%100
28	M28	Z	-1.834	-1.834	0	%100
29	M29	X	1.999	1.999	0	%100
30	M29	Z	-1.154	-1.154	0	%100
31	M30	X	1.999	1.999	0	%100
32	M30	Z	-1.154	-1.154	0	%100
33	M31C	X	1.643	1.643	0	%100
34	M31C	Z	-.949	-.949	0	%100
35	MP2A	X	2.868	2.868	0	%100
36	MP2A	Z	-1.656	-1.656	0	%100
37	MP3A	X	2.868	2.868	0	%100
38	MP3A	Z	-1.656	-1.656	0	%100
39	MP4A	X	2.868	2.868	0	%100
40	MP4A	Z	-1.656	-1.656	0	%100
41	M32B	X	1.122	1.122	0	%100
42	M32B	Z	-.648	-.648	0	%100
43	M33A	X	1.122	1.122	0	%100
44	M33A	Z	-.648	-.648	0	%100
45	M33B	X	1.929	1.929	0	%100
46	M33B	Z	-1.114	-1.114	0	%100
47	M40	X	.717	.717	0	%100
48	M40	Z	-.414	-.414	0	%100
49	M40A	X	.744	.744	0	%100
50	M40A	Z	-.43	-.43	0	%100
51	M41	X	3.267	3.267	0	%100
52	M41	Z	-1.886	-1.886	0	%100
53	M48	X	.717	.717	0	%100
54	M48	Z	-.414	-.414	0	%100
55	M49	X	.673	.673	0	%100
56	M49	Z	-.388	-.388	0	%100
57	M50	X	3.59	3.59	0	%100
58	M50	Z	-2.073	-2.073	0	%100

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

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

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
3	M6	X	0	0	0	%100
4	M6	Z	0	0	0	%100
5	MP1A	X	3.312	3.312	0	%100
6	MP1A	Z	0	0	0	%100
7	M15	X	1.415	1.415	0	%100
8	M15	Z	0	0	0	%100
9	M18	X	1.415	1.415	0	%100
10	M18	Z	0	0	0	%100
11	M19	X	2.308	2.308	0	%100
12	M19	Z	0	0	0	%100
13	M20	X	2.308	2.308	0	%100
14	M20	Z	0	0	0	%100
15	M23	X	1.456	1.456	0	%100
16	M23	Z	0	0	0	%100
17	M31	X	.325	.325	0	%100
18	M31	Z	0	0	0	%100
19	M32	X	.325	.325	0	%100
20	M32	Z	0	0	0	%100
21	M31A	X	1.219	1.219	0	%100
22	M31A	Z	0	0	0	%100
23	M32A	X	1.219	1.219	0	%100
24	M32A	Z	0	0	0	%100
25	M27	X	1.419	1.419	0	%100
26	M27	Z	0	0	0	%100
27	M28	X	1.419	1.419	0	%100
28	M28	Z	0	0	0	%100
29	M29	X	2.308	2.308	0	%100
30	M29	Z	0	0	0	%100
31	M30	X	2.308	2.308	0	%100
32	M30	Z	0	0	0	%100
33	M31C	X	1.458	1.458	0	%100
34	M31C	Z	0	0	0	%100
35	MP2A	X	3.312	3.312	0	%100
36	MP2A	Z	0	0	0	%100
37	MP3A	X	3.312	3.312	0	%100
38	MP3A	Z	0	0	0	%100
39	MP4A	X	3.312	3.312	0	%100
40	MP4A	Z	0	0	0	%100
41	M32B	X	0	0	0	%100
42	M32B	Z	0	0	0	%100
43	M33A	X	0	0	0	%100
44	M33A	Z	0	0	0	%100
45	M33B	X	2.781	2.781	0	%100
46	M33B	Z	0	0	0	%100
47	M40	X	0	0	0	%100
48	M40	Z	0	0	0	%100
49	M40A	X	1.73	1.73	0	%100
50	M40A	Z	0	0	0	%100
51	M41	X	1.969	1.969	0	%100
52	M41	Z	0	0	0	%100
53	M48	X	0	0	0	%100
54	M48	Z	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
55	M49	X	2.137	2.137	0	%100
56	M49	Z	0	0	0	%100
57	M50	X	2.446	2.446	0	%100
58	M50	Z	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	1.122	1.122	0	%100
2	M1	Z	.648	.648	0	%100
3	M6	X	1.122	1.122	0	%100
4	M6	Z	.648	.648	0	%100
5	MP1A	X	2.868	2.868	0	%100
6	MP1A	Z	1.656	1.656	0	%100
7	M15	X	3.174	3.174	0	%100
8	M15	Z	1.833	1.833	0	%100
9	M18	X	3.174	3.174	0	%100
10	M18	Z	1.833	1.833	0	%100
11	M19	X	1.999	1.999	0	%100
12	M19	Z	1.154	1.154	0	%100
13	M20	X	1.999	1.999	0	%100
14	M20	Z	1.154	1.154	0	%100
15	M23	X	1.642	1.642	0	%100
16	M23	Z	.948	.948	0	%100
17	M31	X	.845	.845	0	%100
18	M31	Z	.488	.488	0	%100
19	M32	X	.845	.845	0	%100
20	M32	Z	.488	.488	0	%100
21	M31A	X	.765	.765	0	%100
22	M31A	Z	.442	.442	0	%100
23	M32A	X	.765	.765	0	%100
24	M32A	Z	.442	.442	0	%100
25	M27	X	.019	.019	0	%100
26	M27	Z	.011	.011	0	%100
27	M28	X	.019	.019	0	%100
28	M28	Z	.011	.011	0	%100
29	M29	X	1.999	1.999	0	%100
30	M29	Z	1.154	1.154	0	%100
31	M30	X	1.999	1.999	0	%100
32	M30	Z	1.154	1.154	0	%100
33	M31C	X	1.026	1.026	0	%100
34	M31C	Z	.592	.592	0	%100
35	MP2A	X	2.868	2.868	0	%100
36	MP2A	Z	1.656	1.656	0	%100
37	MP3A	X	2.868	2.868	0	%100
38	MP3A	Z	1.656	1.656	0	%100
39	MP4A	X	2.868	2.868	0	%100
40	MP4A	Z	1.656	1.656	0	%100
41	M32B	X	1.122	1.122	0	%100
42	M32B	Z	.648	.648	0	%100
43	M33A	X	1.122	1.122	0	%100
44	M33A	Z	.648	.648	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
45	M33B	X	1.687	1.687	0	%100
46	M33B	Z	.974	.974	0	%100
47	M40	X	.717	.717	0	%100
48	M40	Z	.414	.414	0	%100
49	M40A	X	3.112	3.112	0	%100
50	M40A	Z	1.797	1.797	0	%100
51	M41	X	.848	.848	0	%100
52	M41	Z	.49	.49	0	%100
53	M48	X	.717	.717	0	%100
54	M48	Z	.414	.414	0	%100
55	M49	X	3.474	3.474	0	%100
56	M49	Z	2.006	2.006	0	%100
57	M50	X	.837	.837	0	%100
58	M50	Z	.483	.483	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	1.943	1.943	0	%100
2	M1	Z	3.365	3.365	0	%100
3	M6	X	1.943	1.943	0	%100
4	M6	Z	3.365	3.365	0	%100
5	MP1A	X	1.656	1.656	0	%100
6	MP1A	Z	2.868	2.868	0	%100
7	M15	X	2.261	2.261	0	%100
8	M15	Z	3.916	3.916	0	%100
9	M18	X	2.261	2.261	0	%100
10	M18	Z	3.916	3.916	0	%100
11	M19	X	1.154	1.154	0	%100
12	M19	Z	1.999	1.999	0	%100
13	M20	X	1.154	1.154	0	%100
14	M20	Z	1.999	1.999	0	%100
15	M23	X	1.032	1.032	0	%100
16	M23	Z	1.787	1.787	0	%100
17	M31	X	.651	.651	0	%100
18	M31	Z	1.127	1.127	0	%100
19	M32	X	.651	.651	0	%100
20	M32	Z	1.127	1.127	0	%100
21	M31A	X	.137	.137	0	%100
22	M31A	Z	.237	.237	0	%100
23	M32A	X	.137	.137	0	%100
24	M32A	Z	.237	.237	0	%100
25	M27	X	.436	.436	0	%100
26	M27	Z	.756	.756	0	%100
27	M28	X	.436	.436	0	%100
28	M28	Z	.756	.756	0	%100
29	M29	X	1.154	1.154	0	%100
30	M29	Z	1.999	1.999	0	%100
31	M30	X	1.154	1.154	0	%100
32	M30	Z	1.999	1.999	0	%100
33	M31C	X	.676	.676	0	%100
34	M31C	Z	1.17	1.17	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
35	MP2A	X	1.656	1.656	0	%100
36	MP2A	Z	2.868	2.868	0	%100
37	MP3A	X	1.656	1.656	0	%100
38	MP3A	Z	2.868	2.868	0	%100
39	MP4A	X	1.656	1.656	0	%100
40	MP4A	Z	2.868	2.868	0	%100
41	M32B	X	1.943	1.943	0	%100
42	M32B	Z	3.365	3.365	0	%100
43	M33A	X	1.943	1.943	0	%100
44	M33A	Z	3.365	3.365	0	%100
45	M33B	X	.281	.281	0	%100
46	M33B	Z	.487	.487	0	%100
47	M40	X	1.242	1.242	0	%100
48	M40	Z	2.151	2.151	0	%100
49	M40A	X	2.293	2.293	0	%100
50	M40A	Z	3.972	3.972	0	%100
51	M41	X	.896	.896	0	%100
52	M41	Z	1.552	1.552	0	%100
53	M48	X	1.242	1.242	0	%100
54	M48	Z	2.151	2.151	0	%100
55	M49	X	2.263	2.263	0	%100
56	M49	Z	3.919	3.919	0	%100
57	M50	X	.593	.593	0	%100
58	M50	Z	1.027	1.027	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	0	0	0	%100
2	M1	Z	5.181	5.181	0	%100
3	M6	X	0	0	0	%100
4	M6	Z	5.181	5.181	0	%100
5	MP1A	X	0	0	0	%100
6	MP1A	Z	3.312	3.312	0	%100
7	M15	X	0	0	0	%100
8	M15	Z	3.128	3.128	0	%100
9	M18	X	0	0	0	%100
10	M18	Z	3.128	3.128	0	%100
11	M19	X	0	0	0	%100
12	M19	Z	2.308	2.308	0	%100
13	M20	X	0	0	0	%100
14	M20	Z	2.308	2.308	0	%100
15	M23	X	0	0	0	%100
16	M23	Z	1.791	1.791	0	%100
17	M31	X	0	0	0	%100
18	M31	Z	.976	.976	0	%100
19	M32	X	0	0	0	%100
20	M32	Z	.976	.976	0	%100
21	M31A	X	0	0	0	%100
22	M31A	Z	.001	.001	0	%100
23	M32A	X	0	0	0	%100
24	M32A	Z	.001	.001	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
25	M27	X	0	0	0	%100
26	M27	Z	3.121	3.121	0	%100
27	M28	X	0	0	0	%100
28	M28	Z	3.121	3.121	0	%100
29	M29	X	0	0	0	%100
30	M29	Z	2.308	2.308	0	%100
31	M30	X	0	0	0	%100
32	M30	Z	2.308	2.308	0	%100
33	M31C	X	0	0	0	%100
34	M31C	Z	1.79	1.79	0	%100
35	MP2A	X	0	0	0	%100
36	MP2A	Z	3.312	3.312	0	%100
37	MP3A	X	0	0	0	%100
38	MP3A	Z	3.312	3.312	0	%100
39	MP4A	X	0	0	0	%100
40	MP4A	Z	3.312	3.312	0	%100
41	M32B	X	0	0	0	%100
42	M32B	Z	5.181	5.181	0	%100
43	M33A	X	0	0	0	%100
44	M33A	Z	5.181	5.181	0	%100
45	M33B	X	0	0	0	%100
46	M33B	Z	.009	.009	0	%100
47	M40	X	0	0	0	%100
48	M40	Z	3.312	3.312	0	%100
49	M40A	X	0	0	0	%100
50	M40A	Z	3.715	3.715	0	%100
51	M41	X	0	0	0	%100
52	M41	Z	3.595	3.595	0	%100
53	M48	X	0	0	0	%100
54	M48	Z	3.312	3.312	0	%100
55	M49	X	0	0	0	%100
56	M49	Z	3.165	3.165	0	%100
57	M50	X	0	0	0	%100
58	M50	Z	2.885	2.885	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-1.943	-1.943	0	%100
2	M1	Z	3.365	3.365	0	%100
3	M6	X	-1.943	-1.943	0	%100
4	M6	Z	3.365	3.365	0	%100
5	MP1A	X	-1.656	-1.656	0	%100
6	MP1A	Z	2.868	2.868	0	%100
7	M15	X	-.439	-.439	0	%100
8	M15	Z	.76	.76	0	%100
9	M18	X	-.439	-.439	0	%100
10	M18	Z	.76	.76	0	%100
11	M19	X	-1.154	-1.154	0	%100
12	M19	Z	1.999	1.999	0	%100
13	M20	X	-1.154	-1.154	0	%100
14	M20	Z	1.999	1.999	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
15	M23	X	-.675	-.675	0	%100
16	M23	Z	1.17	1.17	0	%100
17	M31	X	-.163	-.163	0	%100
18	M31	Z	.282	.282	0	%100
19	M32	X	-.163	-.163	0	%100
20	M32	Z	.282	.282	0	%100
21	M31A	X	-.169	-.169	0	%100
22	M31A	Z	.292	.292	0	%100
23	M32A	X	-.169	-.169	0	%100
24	M32A	Z	.292	.292	0	%100
25	M27	X	-2.259	-2.259	0	%100
26	M27	Z	3.913	3.913	0	%100
27	M28	X	-2.259	-2.259	0	%100
28	M28	Z	3.913	3.913	0	%100
29	M29	X	-1.154	-1.154	0	%100
30	M29	Z	1.999	1.999	0	%100
31	M30	X	-1.154	-1.154	0	%100
32	M30	Z	1.999	1.999	0	%100
33	M31C	X	-1.032	-1.032	0	%100
34	M31C	Z	1.787	1.787	0	%100
35	MP2A	X	-1.656	-1.656	0	%100
36	MP2A	Z	2.868	2.868	0	%100
37	MP3A	X	-1.656	-1.656	0	%100
38	MP3A	Z	2.868	2.868	0	%100
39	MP4A	X	-1.656	-1.656	0	%100
40	MP4A	Z	2.868	2.868	0	%100
41	M32B	X	-1.943	-1.943	0	%100
42	M32B	Z	3.365	3.365	0	%100
43	M33A	X	-1.943	-1.943	0	%100
44	M33A	Z	3.365	3.365	0	%100
45	M33B	X	-.421	-.421	0	%100
46	M33B	Z	.729	.729	0	%100
47	M40	X	-1.242	-1.242	0	%100
48	M40	Z	2.151	2.151	0	%100
49	M40A	X	-.926	-.926	0	%100
50	M40A	Z	1.604	1.604	0	%100
51	M41	X	-2.292	-2.292	0	%100
52	M41	Z	3.971	3.971	0	%100
53	M48	X	-1.242	-1.242	0	%100
54	M48	Z	2.151	2.151	0	%100
55	M49	X	-.645	-.645	0	%100
56	M49	Z	1.118	1.118	0	%100
57	M50	X	-2.182	-2.182	0	%100
58	M50	Z	3.78	3.78	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-1.122	-1.122	0	%100
2	M1	Z	.648	.648	0	%100
3	M6	X	-1.122	-1.122	0	%100
4	M6	Z	.648	.648	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
5	MP1A	X	-2.868	-2.868	0	%100
6	MP1A	Z	1.656	1.656	0	%100
7	M15	X	-.018	-.018	0	%100
8	M15	Z	.011	.011	0	%100
9	M18	X	-.018	-.018	0	%100
10	M18	Z	.011	.011	0	%100
11	M19	X	-1.999	-1.999	0	%100
12	M19	Z	1.154	1.154	0	%100
13	M20	X	-1.999	-1.999	0	%100
14	M20	Z	1.154	1.154	0	%100
15	M23	X	-1.025	-1.025	0	%100
16	M23	Z	.592	.592	0	%100
17	M31	X	0	0	0	%100
18	M31	Z	0	0	0	%100
19	M32	X	0	0	0	%100
20	M32	Z	0	0	0	%100
21	M31A	X	-.819	-.819	0	%100
22	M31A	Z	.473	.473	0	%100
23	M32A	X	-.819	-.819	0	%100
24	M32A	Z	.473	.473	0	%100
25	M27	X	-3.176	-3.176	0	%100
26	M27	Z	1.834	1.834	0	%100
27	M28	X	-3.176	-3.176	0	%100
28	M28	Z	1.834	1.834	0	%100
29	M29	X	-1.999	-1.999	0	%100
30	M29	Z	1.154	1.154	0	%100
31	M30	X	-1.999	-1.999	0	%100
32	M30	Z	1.154	1.154	0	%100
33	M31C	X	-1.643	-1.643	0	%100
34	M31C	Z	.949	.949	0	%100
35	MP2A	X	-2.868	-2.868	0	%100
36	MP2A	Z	1.656	1.656	0	%100
37	MP3A	X	-2.868	-2.868	0	%100
38	MP3A	Z	1.656	1.656	0	%100
39	MP4A	X	-2.868	-2.868	0	%100
40	MP4A	Z	1.656	1.656	0	%100
41	M32B	X	-1.122	-1.122	0	%100
42	M32B	Z	.648	.648	0	%100
43	M33A	X	-1.122	-1.122	0	%100
44	M33A	Z	.648	.648	0	%100
45	M33B	X	-1.929	-1.929	0	%100
46	M33B	Z	1.114	1.114	0	%100
47	M40	X	-.717	-.717	0	%100
48	M40	Z	.414	.414	0	%100
49	M40A	X	-.744	-.744	0	%100
50	M40A	Z	.43	.43	0	%100
51	M41	X	-3.267	-3.267	0	%100
52	M41	Z	1.886	1.886	0	%100
53	M48	X	-.717	-.717	0	%100
54	M48	Z	.414	.414	0	%100
55	M49	X	-.673	-.673	0	%100
56	M49	Z	.388	.388	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
57	M50	X	-3.59	-3.59	0	%100
58	M50	Z	2.073	2.073	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	0	0	0	%100
2	M1	Z	0	0	0	%100
3	M6	X	0	0	0	%100
4	M6	Z	0	0	0	%100
5	MP1A	X	-3.312	-3.312	0	%100
6	MP1A	Z	0	0	0	%100
7	M15	X	-1.415	-1.415	0	%100
8	M15	Z	0	0	0	%100
9	M18	X	-1.415	-1.415	0	%100
10	M18	Z	0	0	0	%100
11	M19	X	-2.308	-2.308	0	%100
12	M19	Z	0	0	0	%100
13	M20	X	-2.308	-2.308	0	%100
14	M20	Z	0	0	0	%100
15	M23	X	-1.456	-1.456	0	%100
16	M23	Z	0	0	0	%100
17	M31	X	-.325	-.325	0	%100
18	M31	Z	0	0	0	%100
19	M32	X	-.325	-.325	0	%100
20	M32	Z	0	0	0	%100
21	M31A	X	-1.219	-1.219	0	%100
22	M31A	Z	0	0	0	%100
23	M32A	X	-1.219	-1.219	0	%100
24	M32A	Z	0	0	0	%100
25	M27	X	-1.419	-1.419	0	%100
26	M27	Z	0	0	0	%100
27	M28	X	-1.419	-1.419	0	%100
28	M28	Z	0	0	0	%100
29	M29	X	-2.308	-2.308	0	%100
30	M29	Z	0	0	0	%100
31	M30	X	-2.308	-2.308	0	%100
32	M30	Z	0	0	0	%100
33	M31C	X	-1.458	-1.458	0	%100
34	M31C	Z	0	0	0	%100
35	MP2A	X	-3.312	-3.312	0	%100
36	MP2A	Z	0	0	0	%100
37	MP3A	X	-3.312	-3.312	0	%100
38	MP3A	Z	0	0	0	%100
39	MP4A	X	-3.312	-3.312	0	%100
40	MP4A	Z	0	0	0	%100
41	M32B	X	0	0	0	%100
42	M32B	Z	0	0	0	%100
43	M33A	X	0	0	0	%100
44	M33A	Z	0	0	0	%100
45	M33B	X	-2.781	-2.781	0	%100
46	M33B	Z	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
47	M40	X	0	0	0	%100
48	M40	Z	0	0	0	%100
49	M40A	X	-1.73	-1.73	0	%100
50	M40A	Z	0	0	0	%100
51	M41	X	-1.969	-1.969	0	%100
52	M41	Z	0	0	0	%100
53	M48	X	0	0	0	%100
54	M48	Z	0	0	0	%100
55	M49	X	-2.137	-2.137	0	%100
56	M49	Z	0	0	0	%100
57	M50	X	-2.446	-2.446	0	%100
58	M50	Z	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-1.122	-1.122	0	%100
2	M1	Z	-.648	-.648	0	%100
3	M6	X	-1.122	-1.122	0	%100
4	M6	Z	-.648	-.648	0	%100
5	MP1A	X	-2.868	-2.868	0	%100
6	MP1A	Z	-1.656	-1.656	0	%100
7	M15	X	-3.174	-3.174	0	%100
8	M15	Z	-1.833	-1.833	0	%100
9	M18	X	-3.174	-3.174	0	%100
10	M18	Z	-1.833	-1.833	0	%100
11	M19	X	-1.999	-1.999	0	%100
12	M19	Z	-1.154	-1.154	0	%100
13	M20	X	-1.999	-1.999	0	%100
14	M20	Z	-1.154	-1.154	0	%100
15	M23	X	-1.642	-1.642	0	%100
16	M23	Z	-.948	-.948	0	%100
17	M31	X	-.845	-.845	0	%100
18	M31	Z	-.488	-.488	0	%100
19	M32	X	-.845	-.845	0	%100
20	M32	Z	-.488	-.488	0	%100
21	M31A	X	-.765	-.765	0	%100
22	M31A	Z	-.442	-.442	0	%100
23	M32A	X	-.765	-.765	0	%100
24	M32A	Z	-.442	-.442	0	%100
25	M27	X	-.019	-.019	0	%100
26	M27	Z	-.011	-.011	0	%100
27	M28	X	-.019	-.019	0	%100
28	M28	Z	-.011	-.011	0	%100
29	M29	X	-1.999	-1.999	0	%100
30	M29	Z	-1.154	-1.154	0	%100
31	M30	X	-1.999	-1.999	0	%100
32	M30	Z	-1.154	-1.154	0	%100
33	M31C	X	-1.026	-1.026	0	%100
34	M31C	Z	-.592	-.592	0	%100
35	MP2A	X	-2.868	-2.868	0	%100
36	MP2A	Z	-1.656	-1.656	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
37	MP3A	X	-2.868	-2.868	0	%100
38	MP3A	Z	-1.656	-1.656	0	%100
39	MP4A	X	-2.868	-2.868	0	%100
40	MP4A	Z	-1.656	-1.656	0	%100
41	M32B	X	-1.122	-1.122	0	%100
42	M32B	Z	-.648	-.648	0	%100
43	M33A	X	-1.122	-1.122	0	%100
44	M33A	Z	-.648	-.648	0	%100
45	M33B	X	-1.687	-1.687	0	%100
46	M33B	Z	-.974	-.974	0	%100
47	M40	X	-.717	-.717	0	%100
48	M40	Z	-.414	-.414	0	%100
49	M40A	X	-3.112	-3.112	0	%100
50	M40A	Z	-1.797	-1.797	0	%100
51	M41	X	-.848	-.848	0	%100
52	M41	Z	-.49	-.49	0	%100
53	M48	X	-.717	-.717	0	%100
54	M48	Z	-.414	-.414	0	%100
55	M49	X	-3.474	-3.474	0	%100
56	M49	Z	-2.006	-2.006	0	%100
57	M50	X	-.837	-.837	0	%100
58	M50	Z	-.483	-.483	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-1.943	-1.943	0	%100
2	M1	Z	-3.365	-3.365	0	%100
3	M6	X	-1.943	-1.943	0	%100
4	M6	Z	-3.365	-3.365	0	%100
5	MP1A	X	-1.656	-1.656	0	%100
6	MP1A	Z	-2.868	-2.868	0	%100
7	M15	X	-2.261	-2.261	0	%100
8	M15	Z	-3.916	-3.916	0	%100
9	M18	X	-2.261	-2.261	0	%100
10	M18	Z	-3.916	-3.916	0	%100
11	M19	X	-1.154	-1.154	0	%100
12	M19	Z	-1.999	-1.999	0	%100
13	M20	X	-1.154	-1.154	0	%100
14	M20	Z	-1.999	-1.999	0	%100
15	M23	X	-1.032	-1.032	0	%100
16	M23	Z	-1.787	-1.787	0	%100
17	M31	X	-.651	-.651	0	%100
18	M31	Z	-1.127	-1.127	0	%100
19	M32	X	-.651	-.651	0	%100
20	M32	Z	-1.127	-1.127	0	%100
21	M31A	X	-.137	-.137	0	%100
22	M31A	Z	-.237	-.237	0	%100
23	M32A	X	-.137	-.137	0	%100
24	M32A	Z	-.237	-.237	0	%100
25	M27	X	-.436	-.436	0	%100
26	M27	Z	-.756	-.756	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
27	M28	X	-.436	-.436	0	%100
28	M28	Z	-.756	-.756	0	%100
29	M29	X	-1.154	-1.154	0	%100
30	M29	Z	-1.999	-1.999	0	%100
31	M30	X	-1.154	-1.154	0	%100
32	M30	Z	-1.999	-1.999	0	%100
33	M31C	X	-.676	-.676	0	%100
34	M31C	Z	-1.17	-1.17	0	%100
35	MP2A	X	-1.656	-1.656	0	%100
36	MP2A	Z	-2.868	-2.868	0	%100
37	MP3A	X	-1.656	-1.656	0	%100
38	MP3A	Z	-2.868	-2.868	0	%100
39	MP4A	X	-1.656	-1.656	0	%100
40	MP4A	Z	-2.868	-2.868	0	%100
41	M32B	X	-1.943	-1.943	0	%100
42	M32B	Z	-3.365	-3.365	0	%100
43	M33A	X	-1.943	-1.943	0	%100
44	M33A	Z	-3.365	-3.365	0	%100
45	M33B	X	-.281	-.281	0	%100
46	M33B	Z	-.487	-.487	0	%100
47	M40	X	-1.242	-1.242	0	%100
48	M40	Z	-2.151	-2.151	0	%100
49	M40A	X	-2.293	-2.293	0	%100
50	M40A	Z	-3.972	-3.972	0	%100
51	M41	X	-.896	-.896	0	%100
52	M41	Z	-1.552	-1.552	0	%100
53	M48	X	-1.242	-1.242	0	%100
54	M48	Z	-2.151	-2.151	0	%100
55	M49	X	-2.263	-2.263	0	%100
56	M49	Z	-3.919	-3.919	0	%100
57	M50	X	-.593	-.593	0	%100
58	M50	Z	-1.027	-1.027	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	0	0	0	%100
2	M1	Z	-1.282	-1.282	0	%100
3	M6	X	0	0	0	%100
4	M6	Z	-1.282	-1.282	0	%100
5	MP1A	X	0	0	0	%100
6	MP1A	Z	-.609	-.609	0	%100
7	M15	X	0	0	0	%100
8	M15	Z	-.752	-.752	0	%100
9	M18	X	0	0	0	%100
10	M18	Z	-.752	-.752	0	%100
11	M19	X	0	0	0	%100
12	M19	Z	-.337	-.337	0	%100
13	M20	X	0	0	0	%100
14	M20	Z	-.337	-.337	0	%100
15	M23	X	0	0	0	%100
16	M23	Z	-.167	-.167	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
17	M31	X	0	0	0	%100
18	M31	Z	-.096	-.096	0	%100
19	M32	X	0	0	0	%100
20	M32	Z	-.096	-.096	0	%100
21	M31A	X	0	0	0	%100
22	M31A	Z	-8.5e-5	-8.5e-5	0	%100
23	M32A	X	0	0	0	%100
24	M32A	Z	-8.5e-5	-8.5e-5	0	%100
25	M27	X	0	0	0	%100
26	M27	Z	-.751	-.751	0	%100
27	M28	X	0	0	0	%100
28	M28	Z	-.751	-.751	0	%100
29	M29	X	0	0	0	%100
30	M29	Z	-.337	-.337	0	%100
31	M30	X	0	0	0	%100
32	M30	Z	-.337	-.337	0	%100
33	M31C	X	0	0	0	%100
34	M31C	Z	-.167	-.167	0	%100
35	MP2A	X	0	0	0	%100
36	MP2A	Z	-.609	-.609	0	%100
37	MP3A	X	0	0	0	%100
38	MP3A	Z	-.609	-.609	0	%100
39	MP4A	X	0	0	0	%100
40	MP4A	Z	-.609	-.609	0	%100
41	M32B	X	0	0	0	%100
42	M32B	Z	-1.282	-1.282	0	%100
43	M33A	X	0	0	0	%100
44	M33A	Z	-1.282	-1.282	0	%100
45	M33B	X	0	0	0	%100
46	M33B	Z	-.002	-.002	0	%100
47	M40	X	0	0	0	%100
48	M40	Z	-.609	-.609	0	%100
49	M40A	X	0	0	0	%100
50	M40A	Z	-.865	-.865	0	%100
51	M41	X	0	0	0	%100
52	M41	Z	-.837	-.837	0	%100
53	M48	X	0	0	0	%100
54	M48	Z	-.609	-.609	0	%100
55	M49	X	0	0	0	%100
56	M49	Z	-.737	-.737	0	%100
57	M50	X	0	0	0	%100
58	M50	Z	-.666	-.666	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	.481	.481	0	%100
2	M1	Z	-.833	-.833	0	%100
3	M6	X	.481	.481	0	%100
4	M6	Z	-.833	-.833	0	%100
5	MP1A	X	.304	.304	0	%100
6	MP1A	Z	-.527	-.527	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
7	M15	X	.106	.106	0	%100
8	M15	Z	-.183	-.183	0	%100
9	M18	X	.106	.106	0	%100
10	M18	Z	-.183	-.183	0	%100
11	M19	X	.169	.169	0	%100
12	M19	Z	-.292	-.292	0	%100
13	M20	X	.169	.169	0	%100
14	M20	Z	-.292	-.292	0	%100
15	M23	X	.063	.063	0	%100
16	M23	Z	-.109	-.109	0	%100
17	M31	X	.016	.016	0	%100
18	M31	Z	-.028	-.028	0	%100
19	M32	X	.016	.016	0	%100
20	M32	Z	-.028	-.028	0	%100
21	M31A	X	.013	.013	0	%100
22	M31A	Z	-.023	-.023	0	%100
23	M32A	X	.013	.013	0	%100
24	M32A	Z	-.023	-.023	0	%100
25	M27	X	.543	.543	0	%100
26	M27	Z	-.941	-.941	0	%100
27	M28	X	.543	.543	0	%100
28	M28	Z	-.941	-.941	0	%100
29	M29	X	.169	.169	0	%100
30	M29	Z	-.292	-.292	0	%100
31	M30	X	.169	.169	0	%100
32	M30	Z	-.292	-.292	0	%100
33	M31C	X	.096	.096	0	%100
34	M31C	Z	-.166	-.166	0	%100
35	MP2A	X	.304	.304	0	%100
36	MP2A	Z	-.527	-.527	0	%100
37	MP3A	X	.304	.304	0	%100
38	MP3A	Z	-.527	-.527	0	%100
39	MP4A	X	.304	.304	0	%100
40	MP4A	Z	-.527	-.527	0	%100
41	M32B	X	.481	.481	0	%100
42	M32B	Z	-.833	-.833	0	%100
43	M33A	X	.481	.481	0	%100
44	M33A	Z	-.833	-.833	0	%100
45	M33B	X	.077	.077	0	%100
46	M33B	Z	-.133	-.133	0	%100
47	M40	X	.228	.228	0	%100
48	M40	Z	-.396	-.396	0	%100
49	M40A	X	.216	.216	0	%100
50	M40A	Z	-.373	-.373	0	%100
51	M41	X	.534	.534	0	%100
52	M41	Z	-.925	-.925	0	%100
53	M48	X	.228	.228	0	%100
54	M48	Z	-.396	-.396	0	%100
55	M49	X	.15	.15	0	%100
56	M49	Z	-.26	-.26	0	%100
57	M50	X	.504	.504	0	%100
58	M50	Z	-.872	-.872	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	.278	.278	0	%100
2	M1	Z	-.16	-.16	0	%100
3	M6	X	.278	.278	0	%100
4	M6	Z	-.16	-.16	0	%100
5	MP1A	X	.527	.527	0	%100
6	MP1A	Z	-.304	-.304	0	%100
7	M15	X	.004	.004	0	%100
8	M15	Z	-.003	-.003	0	%100
9	M18	X	.004	.004	0	%100
10	M18	Z	-.003	-.003	0	%100
11	M19	X	.292	.292	0	%100
12	M19	Z	-.169	-.169	0	%100
13	M20	X	.292	.292	0	%100
14	M20	Z	-.169	-.169	0	%100
15	M23	X	.095	.095	0	%100
16	M23	Z	-.055	-.055	0	%100
17	M31	X	0	0	0	%100
18	M31	Z	0	0	0	%100
19	M32	X	0	0	0	%100
20	M32	Z	0	0	0	%100
21	M31A	X	.065	.065	0	%100
22	M31A	Z	-.037	-.037	0	%100
23	M32A	X	.065	.065	0	%100
24	M32A	Z	-.037	-.037	0	%100
25	M27	X	.764	.764	0	%100
26	M27	Z	-.441	-.441	0	%100
27	M28	X	.764	.764	0	%100
28	M28	Z	-.441	-.441	0	%100
29	M29	X	.292	.292	0	%100
30	M29	Z	-.169	-.169	0	%100
31	M30	X	.292	.292	0	%100
32	M30	Z	-.169	-.169	0	%100
33	M31C	X	.153	.153	0	%100
34	M31C	Z	-.088	-.088	0	%100
35	MP2A	X	.527	.527	0	%100
36	MP2A	Z	-.304	-.304	0	%100
37	MP3A	X	.527	.527	0	%100
38	MP3A	Z	-.304	-.304	0	%100
39	MP4A	X	.527	.527	0	%100
40	MP4A	Z	-.304	-.304	0	%100
41	M32B	X	.278	.278	0	%100
42	M32B	Z	-.16	-.16	0	%100
43	M33A	X	.278	.278	0	%100
44	M33A	Z	-.16	-.16	0	%100
45	M33B	X	.352	.352	0	%100
46	M33B	Z	-.203	-.203	0	%100
47	M40	X	.132	.132	0	%100
48	M40	Z	-.076	-.076	0	%100
49	M40A	X	.173	.173	0	%100
50	M40A	Z	-.1	-.1	0	%100
51	M41	X	.761	.761	0	%100
52	M41	Z	-.439	-.439	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
53	M48	X	.132	.132	0	%100
54	M48	Z	-.076	-.076	0	%100
55	M49	X	.157	.157	0	%100
56	M49	Z	-.09	-.09	0	%100
57	M50	X	.828	.828	0	%100
58	M50	Z	-.478	-.478	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	0	0	0	%100
2	M1	Z	0	0	0	%100
3	M6	X	0	0	0	%100
4	M6	Z	0	0	0	%100
5	MP1A	X	.609	.609	0	%100
6	MP1A	Z	0	0	0	%100
7	M15	X	.34	.34	0	%100
8	M15	Z	0	0	0	%100
9	M18	X	.34	.34	0	%100
10	M18	Z	0	0	0	%100
11	M19	X	.337	.337	0	%100
12	M19	Z	0	0	0	%100
13	M20	X	.337	.337	0	%100
14	M20	Z	0	0	0	%100
15	M23	X	.135	.135	0	%100
16	M23	Z	0	0	0	%100
17	M31	X	.032	.032	0	%100
18	M31	Z	0	0	0	%100
19	M32	X	.032	.032	0	%100
20	M32	Z	0	0	0	%100
21	M31A	X	.096	.096	0	%100
22	M31A	Z	0	0	0	%100
23	M32A	X	.096	.096	0	%100
24	M32A	Z	0	0	0	%100
25	M27	X	.341	.341	0	%100
26	M27	Z	0	0	0	%100
27	M28	X	.341	.341	0	%100
28	M28	Z	0	0	0	%100
29	M29	X	.337	.337	0	%100
30	M29	Z	0	0	0	%100
31	M30	X	.337	.337	0	%100
32	M30	Z	0	0	0	%100
33	M31C	X	.136	.136	0	%100
34	M31C	Z	0	0	0	%100
35	MP2A	X	.609	.609	0	%100
36	MP2A	Z	0	0	0	%100
37	MP3A	X	.609	.609	0	%100
38	MP3A	Z	0	0	0	%100
39	MP4A	X	.609	.609	0	%100
40	MP4A	Z	0	0	0	%100
41	M32B	X	0	0	0	%100
42	M32B	Z	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
43	M33A	X	0	0	0	%100
44	M33A	Z	0	0	0	%100
45	M33B	X	.507	.507	0	%100
46	M33B	Z	0	0	0	%100
47	M40	X	0	0	0	%100
48	M40	Z	0	0	0	%100
49	M40A	X	.403	.403	0	%100
50	M40A	Z	0	0	0	%100
51	M41	X	.459	.459	0	%100
52	M41	Z	0	0	0	%100
53	M48	X	0	0	0	%100
54	M48	Z	0	0	0	%100
55	M49	X	.498	.498	0	%100
56	M49	Z	0	0	0	%100
57	M50	X	.565	.565	0	%100
58	M50	Z	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	.278	.278	0	%100
2	M1	Z	.16	.16	0	%100
3	M6	X	.278	.278	0	%100
4	M6	Z	.16	.16	0	%100
5	MP1A	X	.527	.527	0	%100
6	MP1A	Z	.304	.304	0	%100
7	M15	X	.763	.763	0	%100
8	M15	Z	.441	.441	0	%100
9	M18	X	.763	.763	0	%100
10	M18	Z	.441	.441	0	%100
11	M19	X	.292	.292	0	%100
12	M19	Z	.169	.169	0	%100
13	M20	X	.292	.292	0	%100
14	M20	Z	.169	.169	0	%100
15	M23	X	.153	.153	0	%100
16	M23	Z	.088	.088	0	%100
17	M31	X	.083	.083	0	%100
18	M31	Z	.048	.048	0	%100
19	M32	X	.083	.083	0	%100
20	M32	Z	.048	.048	0	%100
21	M31A	X	.06	.06	0	%100
22	M31A	Z	.035	.035	0	%100
23	M32A	X	.06	.06	0	%100
24	M32A	Z	.035	.035	0	%100
25	M27	X	.005	.005	0	%100
26	M27	Z	.003	.003	0	%100
27	M28	X	.005	.005	0	%100
28	M28	Z	.003	.003	0	%100
29	M29	X	.292	.292	0	%100
30	M29	Z	.169	.169	0	%100
31	M30	X	.292	.292	0	%100
32	M30	Z	.169	.169	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
33	M31C	X	.095	.095	0	%100
34	M31C	Z	.055	.055	0	%100
35	MP2A	X	.527	.527	0	%100
36	MP2A	Z	.304	.304	0	%100
37	MP3A	X	.527	.527	0	%100
38	MP3A	Z	.304	.304	0	%100
39	MP4A	X	.527	.527	0	%100
40	MP4A	Z	.304	.304	0	%100
41	M32B	X	.278	.278	0	%100
42	M32B	Z	.16	.16	0	%100
43	M33A	X	.278	.278	0	%100
44	M33A	Z	.16	.16	0	%100
45	M33B	X	.308	.308	0	%100
46	M33B	Z	.178	.178	0	%100
47	M40	X	.132	.132	0	%100
48	M40	Z	.076	.076	0	%100
49	M40A	X	.725	.725	0	%100
50	M40A	Z	.418	.418	0	%100
51	M41	X	.197	.197	0	%100
52	M41	Z	.114	.114	0	%100
53	M48	X	.132	.132	0	%100
54	M48	Z	.076	.076	0	%100
55	M49	X	.809	.809	0	%100
56	M49	Z	.467	.467	0	%100
57	M50	X	.193	.193	0	%100
58	M50	Z	.112	.112	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	.481	.481	0	%100
2	M1	Z	.833	.833	0	%100
3	M6	X	.481	.481	0	%100
4	M6	Z	.833	.833	0	%100
5	MP1A	X	.304	.304	0	%100
6	MP1A	Z	.527	.527	0	%100
7	M15	X	.544	.544	0	%100
8	M15	Z	.942	.942	0	%100
9	M18	X	.544	.544	0	%100
10	M18	Z	.942	.942	0	%100
11	M19	X	.169	.169	0	%100
12	M19	Z	.292	.292	0	%100
13	M20	X	.169	.169	0	%100
14	M20	Z	.292	.292	0	%100
15	M23	X	.096	.096	0	%100
16	M23	Z	.166	.166	0	%100
17	M31	X	.064	.064	0	%100
18	M31	Z	.111	.111	0	%100
19	M32	X	.064	.064	0	%100
20	M32	Z	.111	.111	0	%100
21	M31A	X	.011	.011	0	%100
22	M31A	Z	.019	.019	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
23	M32A	X	.011	.011	0	%100
24	M32A	Z	.019	.019	0	%100
25	M27	X	.105	.105	0	%100
26	M27	Z	.182	.182	0	%100
27	M28	X	.105	.105	0	%100
28	M28	Z	.182	.182	0	%100
29	M29	X	.169	.169	0	%100
30	M29	Z	.292	.292	0	%100
31	M30	X	.169	.169	0	%100
32	M30	Z	.292	.292	0	%100
33	M31C	X	.063	.063	0	%100
34	M31C	Z	.109	.109	0	%100
35	MP2A	X	.304	.304	0	%100
36	MP2A	Z	.527	.527	0	%100
37	MP3A	X	.304	.304	0	%100
38	MP3A	Z	.527	.527	0	%100
39	MP4A	X	.304	.304	0	%100
40	MP4A	Z	.527	.527	0	%100
41	M32B	X	.481	.481	0	%100
42	M32B	Z	.833	.833	0	%100
43	M33A	X	.481	.481	0	%100
44	M33A	Z	.833	.833	0	%100
45	M33B	X	.051	.051	0	%100
46	M33B	Z	.089	.089	0	%100
47	M40	X	.228	.228	0	%100
48	M40	Z	.396	.396	0	%100
49	M40A	X	.534	.534	0	%100
50	M40A	Z	.925	.925	0	%100
51	M41	X	.209	.209	0	%100
52	M41	Z	.361	.361	0	%100
53	M48	X	.228	.228	0	%100
54	M48	Z	.396	.396	0	%100
55	M49	X	.527	.527	0	%100
56	M49	Z	.913	.913	0	%100
57	M50	X	.137	.137	0	%100
58	M50	Z	.237	.237	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	0	0	0	%100
2	M1	Z	1.282	1.282	0	%100
3	M6	X	0	0	0	%100
4	M6	Z	1.282	1.282	0	%100
5	MP1A	X	0	0	0	%100
6	MP1A	Z	.609	.609	0	%100
7	M15	X	0	0	0	%100
8	M15	Z	.752	.752	0	%100
9	M18	X	0	0	0	%100
10	M18	Z	.752	.752	0	%100
11	M19	X	0	0	0	%100
12	M19	Z	.337	.337	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
13	M20	X	0	0	0	%100
14	M20	Z	.337	.337	0	%100
15	M23	X	0	0	0	%100
16	M23	Z	.167	.167	0	%100
17	M31	X	0	0	0	%100
18	M31	Z	.096	.096	0	%100
19	M32	X	0	0	0	%100
20	M32	Z	.096	.096	0	%100
21	M31A	X	0	0	0	%100
22	M31A	Z	8.5e-5	8.5e-5	0	%100
23	M32A	X	0	0	0	%100
24	M32A	Z	8.5e-5	8.5e-5	0	%100
25	M27	X	0	0	0	%100
26	M27	Z	.751	.751	0	%100
27	M28	X	0	0	0	%100
28	M28	Z	.751	.751	0	%100
29	M29	X	0	0	0	%100
30	M29	Z	.337	.337	0	%100
31	M30	X	0	0	0	%100
32	M30	Z	.337	.337	0	%100
33	M31C	X	0	0	0	%100
34	M31C	Z	.167	.167	0	%100
35	MP2A	X	0	0	0	%100
36	MP2A	Z	.609	.609	0	%100
37	MP3A	X	0	0	0	%100
38	MP3A	Z	.609	.609	0	%100
39	MP4A	X	0	0	0	%100
40	MP4A	Z	.609	.609	0	%100
41	M32B	X	0	0	0	%100
42	M32B	Z	1.282	1.282	0	%100
43	M33A	X	0	0	0	%100
44	M33A	Z	1.282	1.282	0	%100
45	M33B	X	0	0	0	%100
46	M33B	Z	.002	.002	0	%100
47	M40	X	0	0	0	%100
48	M40	Z	.609	.609	0	%100
49	M40A	X	0	0	0	%100
50	M40A	Z	.865	.865	0	%100
51	M41	X	0	0	0	%100
52	M41	Z	.837	.837	0	%100
53	M48	X	0	0	0	%100
54	M48	Z	.609	.609	0	%100
55	M49	X	0	0	0	%100
56	M49	Z	.737	.737	0	%100
57	M50	X	0	0	0	%100
58	M50	Z	.666	.666	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-.481	-.481	0	%100
2	M1	Z	.833	.833	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
3	M6	X	-.481	-.481	0	%100
4	M6	Z	.833	.833	0	%100
5	MP1A	X	-.304	-.304	0	%100
6	MP1A	Z	.527	.527	0	%100
7	M15	X	-.106	-.106	0	%100
8	M15	Z	.183	.183	0	%100
9	M18	X	-.106	-.106	0	%100
10	M18	Z	.183	.183	0	%100
11	M19	X	-.169	-.169	0	%100
12	M19	Z	.292	.292	0	%100
13	M20	X	-.169	-.169	0	%100
14	M20	Z	.292	.292	0	%100
15	M23	X	-.063	-.063	0	%100
16	M23	Z	.109	.109	0	%100
17	M31	X	-.016	-.016	0	%100
18	M31	Z	.028	.028	0	%100
19	M32	X	-.016	-.016	0	%100
20	M32	Z	.028	.028	0	%100
21	M31A	X	-.013	-.013	0	%100
22	M31A	Z	.023	.023	0	%100
23	M32A	X	-.013	-.013	0	%100
24	M32A	Z	.023	.023	0	%100
25	M27	X	-.543	-.543	0	%100
26	M27	Z	.941	.941	0	%100
27	M28	X	-.543	-.543	0	%100
28	M28	Z	.941	.941	0	%100
29	M29	X	-.169	-.169	0	%100
30	M29	Z	.292	.292	0	%100
31	M30	X	-.169	-.169	0	%100
32	M30	Z	.292	.292	0	%100
33	M31C	X	-.096	-.096	0	%100
34	M31C	Z	.166	.166	0	%100
35	MP2A	X	-.304	-.304	0	%100
36	MP2A	Z	.527	.527	0	%100
37	MP3A	X	-.304	-.304	0	%100
38	MP3A	Z	.527	.527	0	%100
39	MP4A	X	-.304	-.304	0	%100
40	MP4A	Z	.527	.527	0	%100
41	M32B	X	-.481	-.481	0	%100
42	M32B	Z	.833	.833	0	%100
43	M33A	X	-.481	-.481	0	%100
44	M33A	Z	.833	.833	0	%100
45	M33B	X	-.077	-.077	0	%100
46	M33B	Z	.133	.133	0	%100
47	M40	X	-.228	-.228	0	%100
48	M40	Z	.396	.396	0	%100
49	M40A	X	-.216	-.216	0	%100
50	M40A	Z	.373	.373	0	%100
51	M41	X	-.534	-.534	0	%100
52	M41	Z	.925	.925	0	%100
53	M48	X	-.228	-.228	0	%100
54	M48	Z	.396	.396	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
55	M49	X	-.15	-.15	0	%100
56	M49	Z	.26	.26	0	%100
57	M50	X	-.504	-.504	0	%100
58	M50	Z	.872	.872	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-.278	-.278	0	%100
2	M1	Z	.16	.16	0	%100
3	M6	X	-.278	-.278	0	%100
4	M6	Z	.16	.16	0	%100
5	MP1A	X	-.527	-.527	0	%100
6	MP1A	Z	.304	.304	0	%100
7	M15	X	-.004	-.004	0	%100
8	M15	Z	.003	.003	0	%100
9	M18	X	-.004	-.004	0	%100
10	M18	Z	.003	.003	0	%100
11	M19	X	-.292	-.292	0	%100
12	M19	Z	.169	.169	0	%100
13	M20	X	-.292	-.292	0	%100
14	M20	Z	.169	.169	0	%100
15	M23	X	-.095	-.095	0	%100
16	M23	Z	.055	.055	0	%100
17	M31	X	0	0	0	%100
18	M31	Z	0	0	0	%100
19	M32	X	0	0	0	%100
20	M32	Z	0	0	0	%100
21	M31A	X	-.065	-.065	0	%100
22	M31A	Z	.037	.037	0	%100
23	M32A	X	-.065	-.065	0	%100
24	M32A	Z	.037	.037	0	%100
25	M27	X	-.764	-.764	0	%100
26	M27	Z	.441	.441	0	%100
27	M28	X	-.764	-.764	0	%100
28	M28	Z	.441	.441	0	%100
29	M29	X	-.292	-.292	0	%100
30	M29	Z	.169	.169	0	%100
31	M30	X	-.292	-.292	0	%100
32	M30	Z	.169	.169	0	%100
33	M31C	X	-.153	-.153	0	%100
34	M31C	Z	.088	.088	0	%100
35	MP2A	X	-.527	-.527	0	%100
36	MP2A	Z	.304	.304	0	%100
37	MP3A	X	-.527	-.527	0	%100
38	MP3A	Z	.304	.304	0	%100
39	MP4A	X	-.527	-.527	0	%100
40	MP4A	Z	.304	.304	0	%100
41	M32B	X	-.278	-.278	0	%100
42	M32B	Z	.16	.16	0	%100
43	M33A	X	-.278	-.278	0	%100
44	M33A	Z	.16	.16	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
45	M33B	X	-.352	-.352	0	%100
46	M33B	Z	.203	.203	0	%100
47	M40	X	-.132	-.132	0	%100
48	M40	Z	.076	.076	0	%100
49	M40A	X	-.173	-.173	0	%100
50	M40A	Z	.1	.1	0	%100
51	M41	X	-.761	-.761	0	%100
52	M41	Z	.439	.439	0	%100
53	M48	X	-.132	-.132	0	%100
54	M48	Z	.076	.076	0	%100
55	M49	X	-.157	-.157	0	%100
56	M49	Z	.09	.09	0	%100
57	M50	X	-.828	-.828	0	%100
58	M50	Z	.478	.478	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	0	0	0	%100
2	M1	Z	0	0	0	%100
3	M6	X	0	0	0	%100
4	M6	Z	0	0	0	%100
5	MP1A	X	-.609	-.609	0	%100
6	MP1A	Z	0	0	0	%100
7	M15	X	-.34	-.34	0	%100
8	M15	Z	0	0	0	%100
9	M18	X	-.34	-.34	0	%100
10	M18	Z	0	0	0	%100
11	M19	X	-.337	-.337	0	%100
12	M19	Z	0	0	0	%100
13	M20	X	-.337	-.337	0	%100
14	M20	Z	0	0	0	%100
15	M23	X	-.135	-.135	0	%100
16	M23	Z	0	0	0	%100
17	M31	X	-.032	-.032	0	%100
18	M31	Z	0	0	0	%100
19	M32	X	-.032	-.032	0	%100
20	M32	Z	0	0	0	%100
21	M31A	X	-.096	-.096	0	%100
22	M31A	Z	0	0	0	%100
23	M32A	X	-.096	-.096	0	%100
24	M32A	Z	0	0	0	%100
25	M27	X	-.341	-.341	0	%100
26	M27	Z	0	0	0	%100
27	M28	X	-.341	-.341	0	%100
28	M28	Z	0	0	0	%100
29	M29	X	-.337	-.337	0	%100
30	M29	Z	0	0	0	%100
31	M30	X	-.337	-.337	0	%100
32	M30	Z	0	0	0	%100
33	M31C	X	-.136	-.136	0	%100
34	M31C	Z	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
35	MP2A	X	-.609	-.609	0	%100
36	MP2A	Z	0	0	0	%100
37	MP3A	X	-.609	-.609	0	%100
38	MP3A	Z	0	0	0	%100
39	MP4A	X	-.609	-.609	0	%100
40	MP4A	Z	0	0	0	%100
41	M32B	X	0	0	0	%100
42	M32B	Z	0	0	0	%100
43	M33A	X	0	0	0	%100
44	M33A	Z	0	0	0	%100
45	M33B	X	-.507	-.507	0	%100
46	M33B	Z	0	0	0	%100
47	M40	X	0	0	0	%100
48	M40	Z	0	0	0	%100
49	M40A	X	-.403	-.403	0	%100
50	M40A	Z	0	0	0	%100
51	M41	X	-.459	-.459	0	%100
52	M41	Z	0	0	0	%100
53	M48	X	0	0	0	%100
54	M48	Z	0	0	0	%100
55	M49	X	-.498	-.498	0	%100
56	M49	Z	0	0	0	%100
57	M50	X	-.565	-.565	0	%100
58	M50	Z	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-.278	-.278	0	%100
2	M1	Z	-.16	-.16	0	%100
3	M6	X	-.278	-.278	0	%100
4	M6	Z	-.16	-.16	0	%100
5	MP1A	X	-.527	-.527	0	%100
6	MP1A	Z	-.304	-.304	0	%100
7	M15	X	-.763	-.763	0	%100
8	M15	Z	-.441	-.441	0	%100
9	M18	X	-.763	-.763	0	%100
10	M18	Z	-.441	-.441	0	%100
11	M19	X	-.292	-.292	0	%100
12	M19	Z	-.169	-.169	0	%100
13	M20	X	-.292	-.292	0	%100
14	M20	Z	-.169	-.169	0	%100
15	M23	X	-.153	-.153	0	%100
16	M23	Z	-.088	-.088	0	%100
17	M31	X	-.083	-.083	0	%100
18	M31	Z	-.048	-.048	0	%100
19	M32	X	-.083	-.083	0	%100
20	M32	Z	-.048	-.048	0	%100
21	M31A	X	-.06	-.06	0	%100
22	M31A	Z	-.035	-.035	0	%100
23	M32A	X	-.06	-.06	0	%100
24	M32A	Z	-.035	-.035	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
25	M27	X	-.005	-.005	0	%100
26	M27	Z	-.003	-.003	0	%100
27	M28	X	-.005	-.005	0	%100
28	M28	Z	-.003	-.003	0	%100
29	M29	X	-.292	-.292	0	%100
30	M29	Z	-.169	-.169	0	%100
31	M30	X	-.292	-.292	0	%100
32	M30	Z	-.169	-.169	0	%100
33	M31C	X	-.095	-.095	0	%100
34	M31C	Z	-.055	-.055	0	%100
35	MP2A	X	-.527	-.527	0	%100
36	MP2A	Z	-.304	-.304	0	%100
37	MP3A	X	-.527	-.527	0	%100
38	MP3A	Z	-.304	-.304	0	%100
39	MP4A	X	-.527	-.527	0	%100
40	MP4A	Z	-.304	-.304	0	%100
41	M32B	X	-.278	-.278	0	%100
42	M32B	Z	-.16	-.16	0	%100
43	M33A	X	-.278	-.278	0	%100
44	M33A	Z	-.16	-.16	0	%100
45	M33B	X	-.308	-.308	0	%100
46	M33B	Z	-.178	-.178	0	%100
47	M40	X	-.132	-.132	0	%100
48	M40	Z	-.076	-.076	0	%100
49	M40A	X	-.725	-.725	0	%100
50	M40A	Z	-.418	-.418	0	%100
51	M41	X	-.197	-.197	0	%100
52	M41	Z	-.114	-.114	0	%100
53	M48	X	-.132	-.132	0	%100
54	M48	Z	-.076	-.076	0	%100
55	M49	X	-.809	-.809	0	%100
56	M49	Z	-.467	-.467	0	%100
57	M50	X	-.193	-.193	0	%100
58	M50	Z	-.112	-.112	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
1	M1	X	-.481	-.481	0	%100
2	M1	Z	-.833	-.833	0	%100
3	M6	X	-.481	-.481	0	%100
4	M6	Z	-.833	-.833	0	%100
5	MP1A	X	-.304	-.304	0	%100
6	MP1A	Z	-.527	-.527	0	%100
7	M15	X	-.544	-.544	0	%100
8	M15	Z	-.942	-.942	0	%100
9	M18	X	-.544	-.544	0	%100
10	M18	Z	-.942	-.942	0	%100
11	M19	X	-.169	-.169	0	%100
12	M19	Z	-.292	-.292	0	%100
13	M20	X	-.169	-.169	0	%100
14	M20	Z	-.292	-.292	0	%100

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

	Member Label	Direction	Start Magnitude[lb/ft,...	End Magnitude[lb/ft,F...	Start Location[ft,%]	End Location[ft,%]
15	M23	X	-.096	-.096	0	%100
16	M23	Z	-.166	-.166	0	%100
17	M31	X	-.064	-.064	0	%100
18	M31	Z	-.111	-.111	0	%100
19	M32	X	-.064	-.064	0	%100
20	M32	Z	-.111	-.111	0	%100
21	M31A	X	-.011	-.011	0	%100
22	M31A	Z	-.019	-.019	0	%100
23	M32A	X	-.011	-.011	0	%100
24	M32A	Z	-.019	-.019	0	%100
25	M27	X	-.105	-.105	0	%100
26	M27	Z	-.182	-.182	0	%100
27	M28	X	-.105	-.105	0	%100
28	M28	Z	-.182	-.182	0	%100
29	M29	X	-.169	-.169	0	%100
30	M29	Z	-.292	-.292	0	%100
31	M30	X	-.169	-.169	0	%100
32	M30	Z	-.292	-.292	0	%100
33	M31C	X	-.063	-.063	0	%100
34	M31C	Z	-.109	-.109	0	%100
35	MP2A	X	-.304	-.304	0	%100
36	MP2A	Z	-.527	-.527	0	%100
37	MP3A	X	-.304	-.304	0	%100
38	MP3A	Z	-.527	-.527	0	%100
39	MP4A	X	-.304	-.304	0	%100
40	MP4A	Z	-.527	-.527	0	%100
41	M32B	X	-.481	-.481	0	%100
42	M32B	Z	-.833	-.833	0	%100
43	M33A	X	-.481	-.481	0	%100
44	M33A	Z	-.833	-.833	0	%100
45	M33B	X	-.051	-.051	0	%100
46	M33B	Z	-.089	-.089	0	%100
47	M40	X	-.228	-.228	0	%100
48	M40	Z	-.396	-.396	0	%100
49	M40A	X	-.534	-.534	0	%100
50	M40A	Z	-.925	-.925	0	%100
51	M41	X	-.209	-.209	0	%100
52	M41	Z	-.361	-.361	0	%100
53	M48	X	-.228	-.228	0	%100
54	M48	Z	-.396	-.396	0	%100
55	M49	X	-.527	-.527	0	%100
56	M49	Z	-.913	-.913	0	%100
57	M50	X	-.137	-.137	0	%100
58	M50	Z	-.237	-.237	0	%100

Member Area Loads

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

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

	Member	Shape	Code C...	Loc[ft]	LC	Shear ...	Loc[ft]	Dir	LC	phi*Pnc [lb]	phi*Pnt [lb]	phi*Mn y-...	phi*Mn z-...	Cb	Eqn
1	MP1A	PIPE_2.0	.679	7.031	6	.426	5.729		6	13973.503	32130	1.872	1.872	2....	H3-6
2	M32B	L3X3X4	.662	3.581	12	.234	3.646	y	50	19638.824	46656	1.688	3.213	1....	H2-1
3	M48	PIPE_2.0X	.599	10.021	12	.281	10.156		6	7677.082	44100	2.531	2.531	1....	H1-1b
4	M6	L3X3X4	.501	2.669	1	.181	2.669	y	1	19638.824	46656	1.688	3.522	1....	H2-1
5	M40	PIPE_2.0X	.465	11.51	6	.273	11.646		6	7677.082	44100	2.531	2.531	3....	H3-6
6	M1	L3X3X4	.457	2.669	37	.417	2.604	y	47	19638.824	46656	1.688	3.419	1....	H2-1
7	M33A	L3X3X4	.446	3.581	1	.143	3.581	y	14	19638.824	46656	1.688	3.39	1....	H2-1
8	MP2A	PIPE_2.0	.425	7.552	6	.254	2.517		5	13973.503	32130	1.872	1.872	2....	H1-1b
9	MP3A	PIPE_2.0	.320	7.552	12	.241	2.517		12	13973.503	32130	1.872	1.872	2....	H1-1b
10	M32	PL1/2X7_HRA	.301	.333	24	.307	.333	y	13	108906.6...	113400	1.181	16.538	1....	H1-1b
11	M32A	PL3/8x10	.292	.525	14	.088	.525	y	13	101674.5...	121500	.949	23.708	1....	H1-1b
12	M18	L3X3X4	.287	.63	48	.277	.462	z	24	32550.853	46656	1.688	3.756	1....	H2-1
13	M31	PL1/2X7_HRA	.265	.333	13	.262	0	y	15	108906.6...	113400	1.181	16.538	1....	H1-1b
14	M31A	PL3/8x10	.260	.525	14	.065	0	y	6	101674.5...	121500	.949	23.5	1....	H1-1b
15	M27	L3X3X4	.230	3.354	13	.279	.461	z	13	32591.649	46656	1.688	3.746	1....	H2-1
16	M15	L3X3X4	.227	3.359	37	.349	.462	y	12	32550.853	46656	1.688	3.722	1....	H2-1
17	MP4A	PIPE_2.0	.203	7.552	12	.130	5.729		11	13973.503	32130	1.872	1.872	1....	H1-1b
18	M19	PIPE_1.0	.200	0	12	.115	3.167		12	12039.608	14773.5	.465	.465	2....	H1-1b
19	M20	PIPE_1.0	.189	0	48	.099	3.167		12	12039.608	14773.5	.465	.465	2....	H1-1b
20	M30	PIPE_1.0	.170	1.517	1	.106	0		6	12039.608	14773.5	.465	.465	1....	H1-1b
21	M28	L3X3X4	.170	.629	50	.218	.461	y	14	32591.649	46656	1.688	3.756	1....	H2-1
22	M29	PIPE_1.0	.154	0	13	.104	0		6	12039.608	14773.5	.465	.465	2....	H1-1b
23	M23	SR_0.75	.132	4.194	48	.015	4.194		12	2827.066	14313.866	.179	.179	2....	H1-1b
24	M40A	L2.5x2.5x4	.124	3.372	12	.042	0	y	12	9534.091	38556	1.114	2.088	1....	H2-1
25	M41	L2.5x2.5x4	.113	3.161	2	.038	6.323	z	6	10849.516	38556	1.114	2.125	1....	H2-1
26	M31C	SR_0.75	.105	4.191	13	.022	0		6	2831.301	14313.866	.179	.179	2....	H1-1b
27	M50	L2.5x2.5x4	.099	2.183	12	.015	0	y	11	20154.445	38556	1.114	2.305	1....	H2-1
28	M49	L2.5x2.5x4	.070	2.439	12	.016	0	y	12	17736.133	38556	1.114	2.262	1....	H2-1
29	M33B	PIPE_2.0	.048	0	6	.002	3.197		10	28425.244	32130	1.872	1.872	1....	H1-1b*

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	N61A	max	357.156	8	862.642	24	1692.271	12	-.128	6	0	51	.001	6
2		min	-282.954	1	115.047	6	-1152.563	6	-.401	13	0	1	-.177	24
3	N62	max	569.851	8	693.761	13	1451.62	1	-.141	8	0	51	-.037	6
4		min	-464.752	1	265.913	7	-1259.85	7	-.353	15	0	1	-.161	48
5	N71	max	90.051	6	15.697	24	1358.166	6	0	51	0	51	0	51
6		min	-65.74	12	3.548	5	-1392.507	12	0	1	0	1	0	1
7	N74A	max	850.769	12	1119.481	18	144.041	12	.003	14	.006	12	.006	6
8		min	-940.205	6	-14.322	12	-1061.461	18	0	8	-.006	6	-.006	12
9	N108	max	1138.417	12	242.819	12	1377.968	12	0	2	0	6	.003	6
10		min	-1221.637	6	-172.983	6	-1209.431	6	0	8	0	12	-.003	12
11	Totals:	max	1888.952	11	2598.633	24	3431.702	1						
12		min	-1888.952	5	1182.804	6	-3431.667	7						

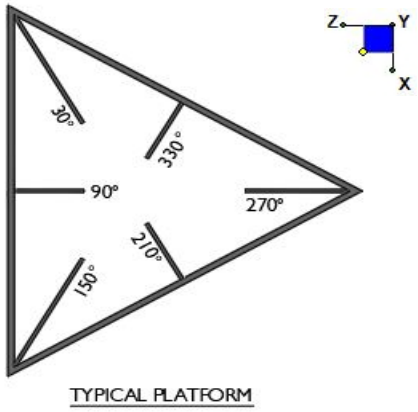
Client:	Verizon Wireless	Date:	4/19/2021
Site Name:	Quacker Hill CT		
Project No.	20777648A		
Title:	Antenna Mount Analysis	Page:	1

Version 3.1

I. Mount-to-Tower Connection Check

RISA Model Data

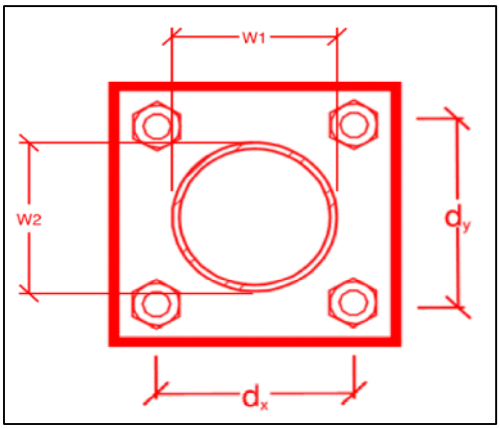
Nodes *(labeled per RISA)*	Orientation *(per graphic of typical platform)*
n62	30
n61a	30



TYPICAL PLATFORM

Tower Connection Bolt Checks

Any moment resistance?:	yes
Bolt Quantity per Reaction:	4
d_x (in) *(Delta X of typ. bolt config. sketch)* :	10
d_y (in) *(Delta Y of typ. bolt config. sketch)* :	2
Bolt Type:	A307
Bolt Diameter (in):	0.625
Required Tensile Strength (kips):	6.4
Required Shear Strength (kips):	2.3
Tensile Strength / bolt (kips):	10.0
Shear Strength / bolt (kips):	6.0
Tensile Capacity Overall:	**16.0%***
Shear Capacity Overall:	**9.6%**



**Note: Tension reduction not required if tension or shear capacity < 30%*

Mount Desktop – Post Modification Inspection (PMI) Report Requirements

Documents & Photos Required from Contractor – Mount Modification

Purpose – to provide Maser Consulting Connecticut 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 Maser Consulting Connecticut 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 Maser Consulting Connecticut.
    - 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 Maser Consulting Connecticut 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 Maser Consulting Connecticut 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 Maser Consulting Connecticut 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:

Contractor shall install new safety climb wire rope guides to the existing tower leg to prevent interference with mount connection.

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: 467959-VZW - Quacker Hill CT

Sector: **A**

Structure Type: Self Support

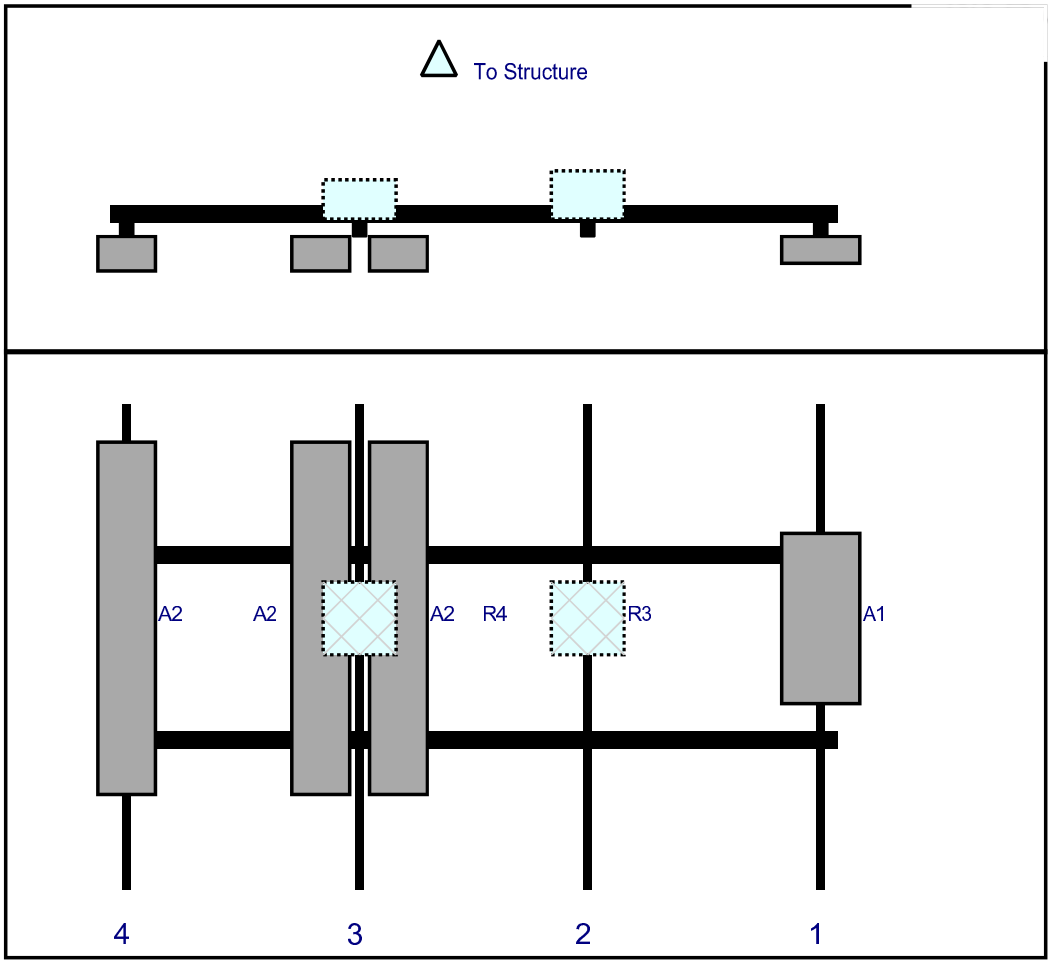
Mount Elev: 119.50

4/19/2021

MASER CONSULTING — CONNECTICUT —

Plan View

Front View
Looking at Structure

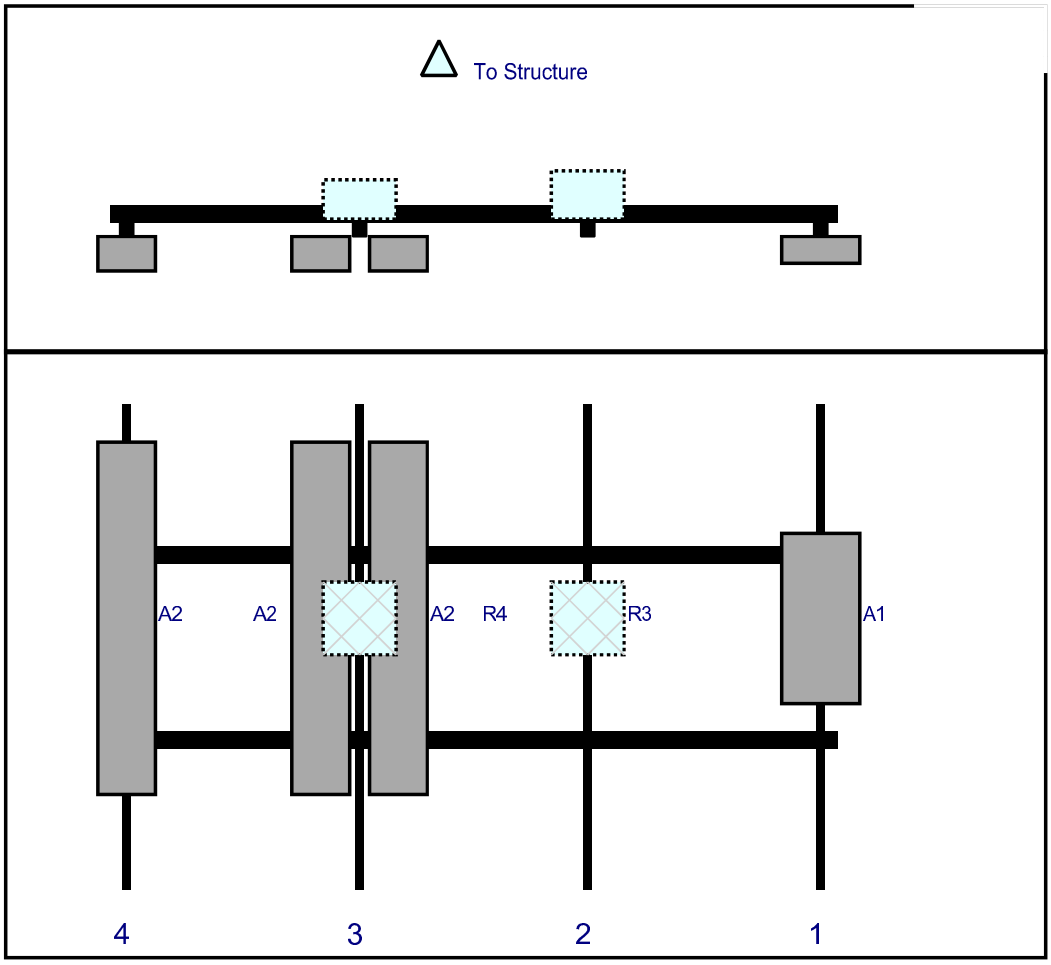


Ref#	Model	Height (in)	Width (in)	H Dist Frm L.	Pipe #	Pipe Pos V	Ant Pos	C. Ant Frm T.	Ant H Off	Status	Validation
A1	MT6407-77A	35.1	16.1	146.5	1	a	Front	44.04	0	Added	
R3	B2/B66A RRH-BR049	15	15	98.5	2	a	Behind	44.04	0	Added	
A2	SBNHH-1D65B	72.6	11.9	51.5	3	a	Front	44.04	8	Retained	02/09/2021
A2	SBNHH-1D65B	72.6	11.9	51.5	3	b	Front	44.04	-8	Retained	02/09/2021
R4	B5/B13 RRH-BR04C	15	15	51.5	3	a	Behind	44.04	0	Added	
A2	SBNHH-1D65B	72.6	11.9	3.5	4	a	Front	44.04	0	Retained	02/09/2021

MASER CONSULTING CONNECTICUT

Plan View

Front View
Looking at Structure

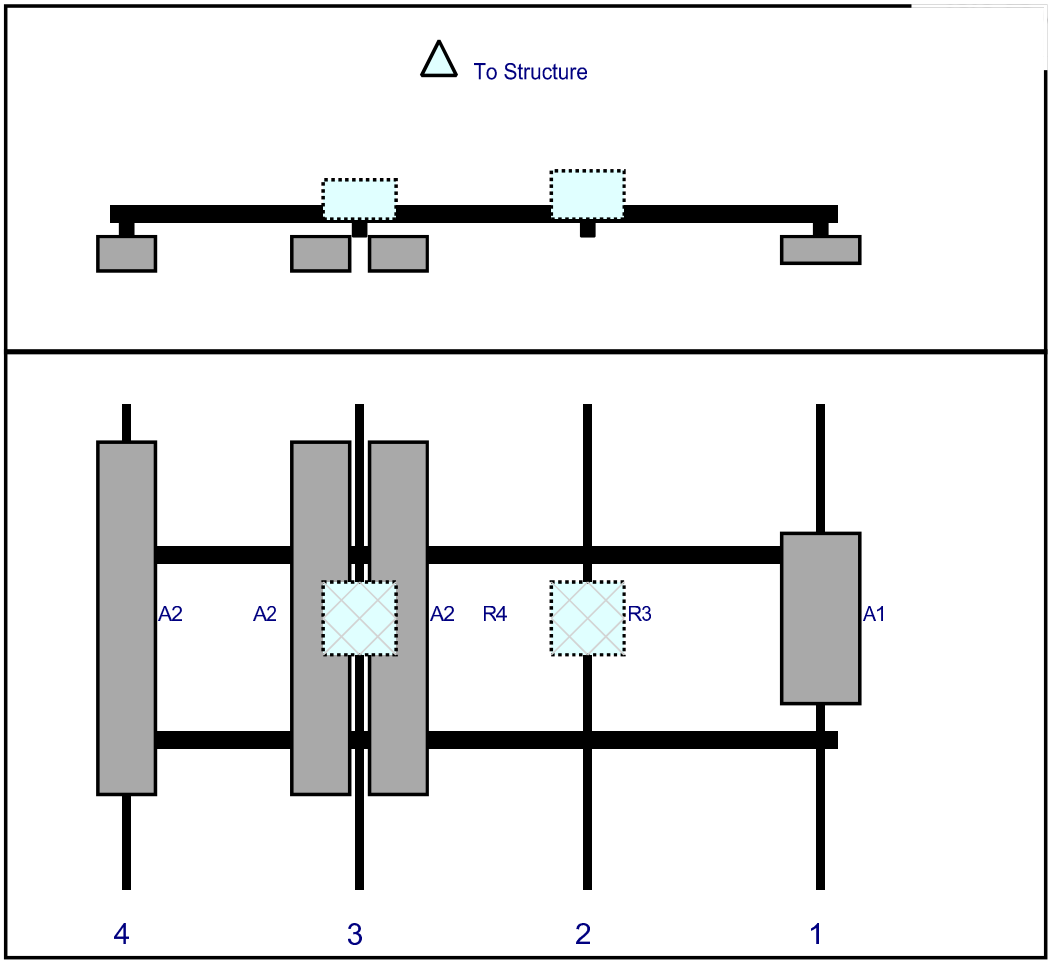


Ref#	Model	Height (in)	Width (in)	H Dist Frm L.	Pipe #	Pipe Pos V	Ant Pos	C. Ant Frm T.	Ant H Off	Status	Validation
A1	MT6407-77A	35.1	16.1	146.5	1	a	Front	44.04	0	Added	
R3	B2/B66A RRH-BR049	15	15	98.5	2	a	Behind	44.04	0	Added	
A2	SBNHH-1D65B	72.6	11.9	51.5	3	a	Front	44.04	8	Retained	02/09/2021
A2	SBNHH-1D65B	72.6	11.9	51.5	3	b	Front	44.04	-8	Retained	02/09/2021
R4	B5/B13 RRH-BR04C	15	15	51.5	3	a	Behind	44.04	0	Added	
A2	SBNHH-1D65B	72.6	11.9	3.5	4	a	Front	44.04	0	Retained	02/09/2021

MASER CONSULTING CONNECTICUT

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
A1	MT6407-77A	35.1	16.1	146.5	1	a	Front	44.04	0	Added	
R3	B2/B66A RRH-BR049	15	15	98.5	2	a	Behind	44.04	0	Added	
A2	SBNHH-1D65B	72.6	11.9	51.5	3	a	Front	44.04	8	Retained	02/09/2021
A2	SBNHH-1D65B	72.6	11.9	51.5	3	b	Front	44.04	-8	Retained	02/09/2021
R4	B5/B13 RRH-BR04C	15	15	51.5	3	a	Behind	44.04	0	Added	
A2	SBNHH-1D65B	72.6	11.9	3.5	4	a	Front	44.04	0	Retained	02/09/2021

Maser Consulting Connecticut

MASER CONSULTING — CONNECTICUT —

Subject		TIA-222-H Usage
Site Information	Site ID:	467959-VZW / Quacker Hill CT
	Site Name:	Quacker Hill CT
	Carrier Name:	Verizon Wireless
	Address:	35 South Bartlett Rd. Quaker Hill, Connecticut 06375 New London County
	Latitude:	41.41765277°
	Longitude:	-72.10672777°
Structure Information	Tower Type:	160.00-Ft Self Support
	Mount Type:	12.50-Ft Sector Mount

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. The 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 map 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 method, seismic analysis, 30-degree increment wind direction 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,

Alec S. Norris, PE

Digitally signed by Alec Norris
Date: 2021.04.21 13:41:03-04'00'

PROJECT NOTES

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

verizon

MOUNT MODIFICATION DRAWINGS
EXISTING 12.50' SECTOR FRAME

SITE NAME: QUACKER HILL CT-A
SITE NUMBER: 467959

35 SOUTH BARTLETT RD
QUAKER HILL, CT 06375
NEW LONDON COUNTY

PROJECT INFORMATION

SITE INFORMATION

LATITUDE: 41.41765277° N
LONGITUDE: 72.10672777° W
JURISDICTION: NEW LONDON COUNTY

APPLICANT/LESSEE

COMPANY: VERIZON WIRELESS

CLIENT REPRESENTATIVE

COMPANY: VERIZON WIRELESS
ADDRESS: 118 FLANDERS ROAD, THIRD FLOOR
CITY, STATE, ZIP: WESTBOROUGH, MA 01581
CONTACT: ANDREW CANDIELLO
EMAIL: ANDREW.CANDIELLO@VERIZONWIRELESS.COM

PROJECT MANAGER

COMPANY: MASER CONSULTING CONNECTICUT
CONTACT: GREG DULNIK
PHONE: (615) 686-2575
E-MAIL: GREG.DULNIK@COLLIERSENGINEERING.COM

SHEET INDEX

CONTRACTOR PMI REQUIREMENTS

PMI LOCATION: HTTPS://PMI.VZWSMART.COM
SMART TOOL PROJECT #: 10056764
VZW LOCATION CODE (PSLC): 467959
FUZE ID: 16244630

PMI REQUIREMENTS EMBEDDED WITHIN MOUNT MODIFICATION REPORT

REFERENCED DOCUMENTS

FAILING MOUNT ANALYSIS REPORT
SMART TOOL PROJECT #: 10032614
MASER CONSULTING PROJECT #: 20777648A
ANALYSIS DATE: 3/22/2021

MASER CONSULTING CONNECTICUT
WILL BE KNOWN AS COLLIERS ENGINEERING & DESIGN IN 2021
Customer Loyalty *through* Client Satisfaction
www.maserconsulting.com
Office Locations:
- NEW JERSEY
- NEW YORK
- PENNSYLVANIA
- VIRGINIA
- FLORIDA
- NORTH CAROLINA
- SOUTH CAROLINA
- NEW MEXICO
- MARYLAND
- GEORGIA
- TEXAS
- TENNESSEE
- COLORADO

verizon

SCALE: AS SHOWN
JOB NUMBER: 20777648A

REV	DATE	DESCRIPTION	DRAWN BY	CHECKED BY
.	.	.	.	.
.	.	.	.	.
.	.	.	.	.
0	4/20/2021	ISSUED FOR CONSTRUCTION	FAC	ASN

Alec S. Norris
CONNECTICUT PROFESSIONAL ENGINEER
LICENSE NUMBER: 32588
MASER CONSULTING
C.T. C.O.A #: JPC.0000131
Digitally signed by Alec Norris
Date: 2021.04.21 13:41:5_ -04'00'

SITE NAME:
QUACKER HILL CT-A
467959

35 SOUTH BARTLETT RD.
QUAKER HILL, CT 06375
NEW LONDON COUNTY

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

SHEET TITLE: TITLE SHEET

SHEET NUMBER: T-1

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

BILL OF MATERIALS

VZWSMART KITS

QUANTITY	MANUFACTURER	PART NUMBER	DESCRIPTION	NOTES
24	VZWSMART	VZWSMART-MSK1	CROSSOVER PLATE	
6		VZWSMART-SFK3	V-BRACING KIT	CONTRACTOR TO VERIFY THE LENGTH REQUIRED AND TRIM AS NECESSARY IN ACCORDANCE WITH THE 'STRUCTURAL STEEL' NOTES ON SHEET S-2

OTHER REQUIRED PARTS

QUANTITY	MANUFACTURER	PART NUMBER	DESCRIPTION	NOTES
6	-	-	156" LONG P2.0X-STR PIPE	GALVANIZED

NOTE: ALL MATERIALS REQUIRED FOR THE DESIGNED MODIFICATIONS BUT NOT LISTED IN THIS SHEET ARE ASSUMED TO BE PROVIDED BY THE CONTRACTOR

VZWSMART KITS - APPROVED VENDORS

COMMSCOPE	
CONTACT	SALVADOR ANGUIANO
PHONE	(817) 304-7492
EMAIL	SALVADOR.ANGUIANO@COMMSCOPE.COM
WEBSITE	WWW.COMMSCOPE.COM
METROSITE FABRICATORS, LLC	
CONTACT	KENT RAMEY
PHONE	(706) 335-7045 (O), (706) 982-9788 (M)
EMAIL	KENT@METROSITELLC.COM
WEBSITE	METROSITEFABRICATORS.COM
PERFECTVISION	
CONTACT	WIRELESS SALES
PHONE	(844) 887-6723
EMAIL	WWW.PERFECT-VISION.COM
WEBSITE	WIRELESSSALES@PERFECT-VISION.COM
SABRE INDUSTRIES, INC.	
CONTACT	ANGIE WELCH
PHONE	(866) 428-6937
EMAIL	AKWELCH@SABREINDUSTRIES.COM
WEBSITE	WWW.SABRESITESOLUTIONS.COM
SITE PRO 1	
CONTACT	PAULA BOSWELL
PHONE	(972) 236-9843
EMAIL	PAULA.BOSWELL@VALMONT.COM
WEBSITE	WWW.SITEPRO1.COM

NOTE: WHEN SPECIFIED, VZWSMART KITS SHALL BE REQUIRED AND WILL BE VERIFIED DURING THE DESKTOP PMI

MASER CONSULTING CONNECTICUT
(WILL BE KNOWN AS MASER CONSULTING CT AFTER 7/1/2021)
Customer Loyalty through Client Satisfaction
www.maserconsulting.com
Office Locations:
NEW JERSEY, NEW YORK, PENNSYLVANIA, VIRGINIA, FLORIDA, NORTH CAROLINA, SOUTH CAROLINA
NEW MEXICO, MARYLAND, GEORGIA, TEXAS, TENNESSEE, COLORADO

verizon

811 PROTECT YOURSELF
ALL STATES REQUIRE NOTIFICATION OF EXCAVATORS, DESIGNERS, OR ANY PERSON PREPARING TO DISTURB THE EARTH'S SURFACE ANYWHERE IN ANY STATE
Know what's below. Call before you dig.
FOR STATE SPECIFIC DIRECT PHONE NUMBERS VISIT: WWW.CALL811.COM

SCALE:	JOB NUMBER:
AS SHOWN	20777648A

REV	DATE	DESCRIPTION	DRAWN BY	CHECKED BY
1	9/21/21	ISSUED FOR CONSTRUCTION	FAC	ASN

Alec S. Norris
CONNECTICUT LICENSE NO. PEC.0029181
MASER CONSULTING, P.A.
C.T. C.O.A. # PEC.0000013

Digitally signed by Alec Norris
Date: 2021.09.21 13:42:10 -04'00'

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

SITE NAME:
QUACKER HILL CT-A
467959

35 SOUTH BARTLETT RD.
QUAKER HILL, CT 06375
NEW LONDON COUNTY

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

SHEET TITLE:
BILL OF MATERIALS

SHEET NUMBER:
S-1

GENERAL NOTES

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

DESIGN LOADS

WIND LOADS

a. BASIC WIND SPEED (3 SECOND GUST), V = 126 MPH

b. EXPOSURE CATEGORY C

c. TOPOGRAPHIC CATEGORY 1

d. MEAN BASE ELEVATION (AMSL) = 260.75'

ICE LOADS

a. ICE WIND SPEED (3 SECOND GUST), V = 50 MPH

b. ICE THICKNESS = 1.00 IN

SEISMIC LOADS

a. SEISMIC DESIGN CATEGORY B

b. SHORT TERM MCER GROUND MOTION, S_S = .194

c. LONG TERM MCER GROUND MOTION, S_1 = .053

STRUCTURAL STEEL

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

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

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

MASER CONSULTING CONNECTICUT
WILL BE KNOWN AS COLLIERS ENGINEERING & DESIGN IN 2021
Customer Loyalty *through* Client Satisfaction
www.maserconsulting.com
Office Locations:
- NEW JERSEY
- NEW YORK
- PENNSYLVANIA
- VIRGINIA
- FLORIDA
- NORTH CAROLINA
- SOUTH CAROLINA
- NEW MEXICO
- MARYLAND
- GEORGIA
- TEXAS
- TENNESSEE
- COLORADO

verizon

PROTECT YOURSELF

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

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

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

SCALE :	JOB NUMBER :
AS SHOWN	20777648A

REV	DATE	DESCRIPTION	DRAWN BY	CHECKED BY
.	.	.	.	.
.	.	.	.	.
.	.	.	.	.
0	4/20/2021	ISSUED FOR CONSTRUCTION	FAC	ASN

Alec S. Norris
CONNECTICUT PROFESSIONAL ENGINEER
LICENSE NUMBER: 32588
MASER CONSULTING
C.T. C.O.A #: JPC.0000131
Digitally signed by Alec Norris
Date: 2021.04.21 13:42:0[illegible]-04'00'

SITE NAME:

QUACKER HILL CT-A
467959

35 SOUTH BARTLETT RD.
QUAKER HILL, CT 06375
NEW LONDON COUNTY

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

SHEET TITLE :
MODIFICATION NOTES

SHEET NUMBER :
S-2

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

MODIFICATION INSPECTION NOTES

MI CHECKLIST	
CONSTRUCTION/ INSTALLATION INSPECTIONS AND TESTING REQUIRED (COMPLETED BY EOR)	REPORT ITEM
PRE-CONSTRUCTION	
X	MI CHECKLIST DRAWING
X	EOR APPROVED SHOP DRAWINGS
NA	FABRICATION INSPECTION
NA	FABRICATOR CERTIFIED WELD INSPECTION
X	MATERIAL TEST REPORT (MTR)
NA	FABRICATOR NDE INSPECTION
X	PACKING SLIPS
ADDITIONAL TESTING AND INSPECTIONS:	
CONSTRUCTION	
X	CONSTRUCTION INSPECTIONS
NA	CONTRACTOR'S CERTIFIED WELD INSPECTION AND NDE REPORTS
X	ON SITE COLD GALVANIZING VERIFICATION
X	GC AS-BUILT DOCUMENTS
ADDITIONAL TESTING AND INSPECTIONS:	
POST-CONSTRUCTION	
X	MI INSPECTOR REDLINE OR RECORD DRAWING(S)
X	VZW PMI DOCUMENTS
X	PHOTOGRAPHS
ADDITIONAL TESTING AND INSPECTIONS:	

NOTE: X DENOTES A DOCUMENT REQUIRED FOR THE MI REPORT
NA DENOTES A DOCUMENT THAT IS NOT REQUIRED FOR THE MI REPORT

THE MODIFICATION INSPECTION (MI) IS A VISUAL INSPECTION OF MODIFICATIONS AND A REVIEW OF CONSTRUCTION INSPECTIONS AND OTHER REPORTS TO ENSURE THE INSTALLATION WAS CONSTRUCTED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS, NAMELY THE MODIFICATION DRAWINGS, AS DESIGNED BY THE ENGINEER OF RECORD (EOR).

THE MI IS TO CONFIRM INSTALLATION CONFIGURATION AND WORKMANSHIP ONLY AND IS NOT A REVIEW OF THE MODIFICATION DESIGN ITSELF, NOR DOES THE MI INSPECTOR TAKE OWNERSHIP OF THE MODIFICATION DESIGN. OWNERSHIP OF THE STRUCTURAL MODIFICATION DESIGN EFFECTIVENESS AND INTEGRITY RESIDES WITH THE EOR AT ALL TIMES.

TO ENSURE THAT THE REQUIREMENTS OF THE MI ARE MET, IT IS VITAL THAT THE GENERAL CONTRACTOR (GC) AND THE MI INSPECTOR BEGIN COMMUNICATING AND COORDINATING AS SOON AS A PURCHASE ORDER (PO) IS RECEIVED. IT IS EXPECTED THAT EACH PARTY WILL BE PROACTIVE IN REACHING OUT TO THE OTHER PARTY.

MI INSPECTOR

THE MI INSPECTOR IS REQUIRED TO CONTACT THE GC AS SOON AS RECEIVING A PO FOR THE MI TO, AT A MINIMUM:

- REVIEW THE REQUIREMENTS OF THE MI CHECKLIST
- WORK WITH THE GC TO DEVELOP A SCHEDULE TO CONDUCT ON-SITE INSPECTIONS

THE MI INSPECTOR IS RESPONSIBLE FOR COLLECTING ALL GC INSPECTION AND TEST REPORTS, REVIEWING THE DOCUMENTS FOR ADHERENCE TO THE CONTRACT DOCUMENTS, CONDUCTING THE IN-FIELD INSPECTIONS, AND SUBMITTING THE MI REPORT TO EOR.

GENERAL CONTRACTOR

THE GC IS REQUIRED TO CONTACT THE MI INSPECTOR AS SOON AS RECEIVING A PO FOR THE MODIFICATION INSTALLATION OR TURNKEY PROJECT TO, AT A MINIMUM:

- REVIEW THE REQUIREMENTS OF THE MI CHECKLIST
- WORK WITH THE MI INSPECTOR TO DEVELOP A SCHEDULE TO CONDUCT ON-SITE MI INSPECTIONS, INCLUDING FOUNDATION INSPECTIONS
- BETTER UNDERSTAND ALL INSPECTION AND TESTING REQUIREMENTS

THE GC SHALL PERFORM AND RECORD THE TEST AND INSPECTION RESULTS IN ACCORDANCE WITH THE REQUIREMENTS OF THE MI CHECKLIST.

RECOMMENDATIONS

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

- IT IS SUGGESTED THAT THE GC PROVIDE A MINIMUM OF 5 BUSINESS DAYS NOTICE, PREFERABLY 10, TO THE MI INSPECTOR AS TO WHEN THE SITE WILL BE READY FOR 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 SIMULTANEOUSLY FOR ANY GUY WIRE TENSIONING OR RE-TENSIONING OPERATIONS.
- IT MAY BE BENEFICIAL TO INSTALL ALL MODIFICATIONS PRIOR TO CONDUCTING THE FOUNDATION INSPECTIONS TO ALLOW THE FOUNDATION AND MI INSPECTION(S) TO COMMENCE WITH ONE SITE VISIT.
- WHEN POSSIBLE, IT IS PREFERRED TO HAVE THE GC AND MI INSPECTOR ON-SITE DURING THE MI TO HAVE ANY 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.

CORRECTION OF FAILING MI'S

IF THE MODIFICATION INSTALLATION WOULD FAIL THE MI ("FAILED MI"), THE GC SHALL WORK WITH THE OWNER TO COORDINATE A REMEDIATION PLAN:

- CORRECT FAILING ISSUES TO COMPLY WITH THE SPECIFICATIONS CONTAINED IN THE ORIGINAL CONTRACT DOCUMENTS AND COORDINATE A SUPPLEMENT MI.

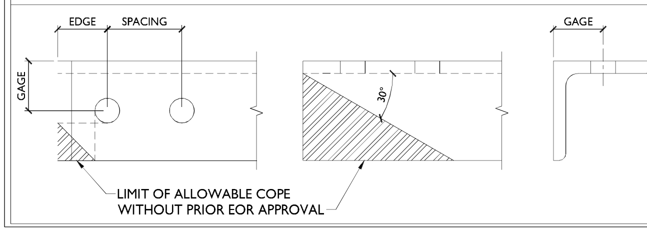
REQUIRED PHOTOS

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 REINFORCEMENT MODIFICATION CONSTRUCTION/ERECTION AND INSPECTION
  - RAW MATERIALS
  - PHOTOS OF ALL CRITICAL DETAILS
  - FOUNDATION MODIFICATIONS
  - WELD PREPARATION
  - BOLT INSTALLATION
  - FINAL INSTALLED CONDITION
  - SURFACE COATING REPAIR
- POST CONSTRUCTION PHOTOGRAPHS
  - FINAL INFIELD CONDITION

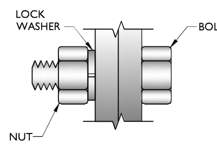
PHOTOS OF ELEVATED MODIFICATIONS TAKEN ONLY FROM THE GROUND SHALL BE CONSIDERED INADEQUATE.

ALLOWABLE COPING



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

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



TYP. BOLT ASSEMBLY

NOTES:

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

MASER CONSULTING CONNECTICUT
WILL BE KNOWN AS COLLIERS ENGINEERING & DESIGN IN 2021
Customer Loyalty *through* Client Satisfaction
www.maserconsulting.com
Office Locations:

- NEW JERSEY
- NEW YORK
- PENNSYLVANIA
- VIRGINIA
- FLORIDA
- NORTH CAROLINA
- SOUTH CAROLINA
- NEW MEXICO
- MARYLAND
- GEORGIA
- TEXAS
- TENNESSEE
- COLORADO

verizon

PROTECT YOURSELF
ALL STATES REQUIRE NOTIFICATION OF EXCAVATORS, DESIGNERS, OR ANY PERSON PREPARING TO DISTURB THE EARTH'S SURFACE ANYWHERE IN ANY STATE
811 Know what's below. Call before you dig.
FOR STATE SPECIFIC DIRECT PHONE NUMBERS VISIT: WWW.CALL811.COM

SCALE :	JOB NUMBER :
AS SHOWN	20777648A

REV	DATE	DESCRIPTION	DRAWN BY	CHECKED BY
.	.	.	.	.
.	.	.	.	.
.	.	.	.	.
0	4/20/2021	ISSUED FOR CONSTRUCTION	FAC	ASN

Alec S. Norris
CONNECTICUT PROFESSIONAL ENGINEER
LICENSE NUMBER: 32588
MASER CONSULTING
C.T. C.O.A #: JPC.0000131
Digitally signed by Alec Norris
Date: 2021.04.21 13:42:0_ -04'00'

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

SITE NAME:
QUACKER HILL CT-A
467959

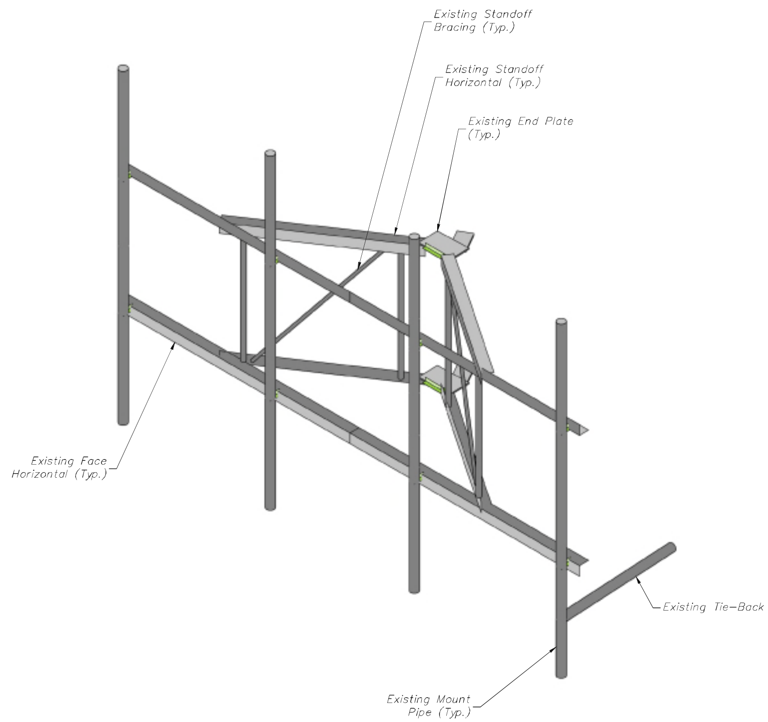
35 SOUTH BARTLETT RD.
QUAKER HILL, CT 06375
NEW LONDON COUNTY

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

SHEET TITLE :
MODIFICATION NOTES

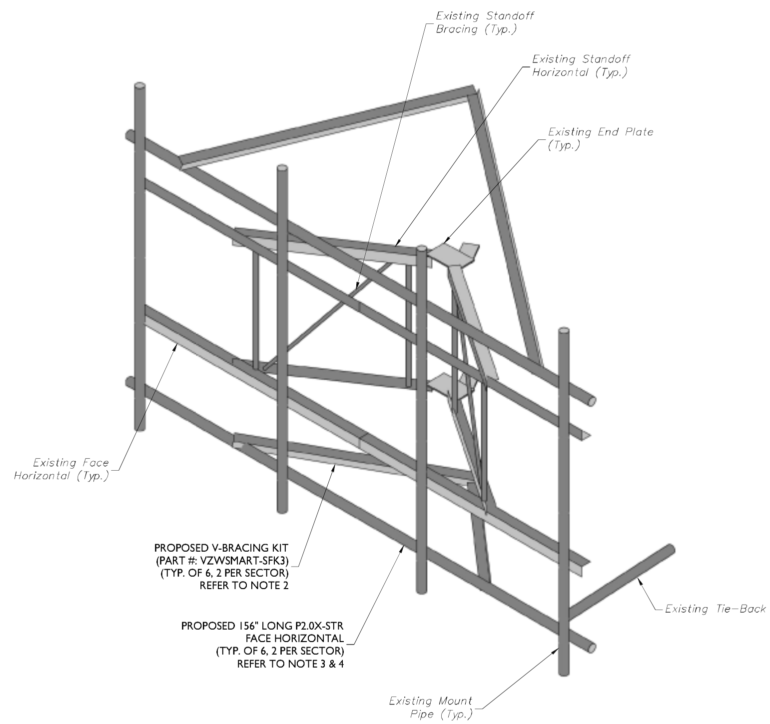
SHEET NUMBER :
S-3

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.



1 EXISTING SECTOR FRAME ISOMETRIC VIEW (TYP. ALL SECTORS)

SCALE : N.T.S.



2 PROPOSED SECTOR FRAME ISOMETRIC VIEW (TYP. ALL SECTORS)

SCALE : N.T.S.

STRUCTURAL NOTES:

1. PER THE MOUNT MAPPING COMPLETED BY HUDSON DESIGN GROUP, LLC ON 2/9/2021, THE SAFETY CLIMB AND CLIMBING FACILITIES UP TO THE VERIZON MOUNT ELEVATION (119'-6") ARE IN GOOD CONDITION. MASER DOES NOT WARRANT THIS INFORMATION.
2. INSTALL SHALL NOT CAUSE HARM TO THE STRUCTURE, CLIMBING FACILITY, SAFETY CLIMB, OR ANY SYSTEM INSTALLED ON THE STRUCTURE. TIMELY NOTICE AND DOCUMENTATION SHALL BE PROVIDED BY CONTRACTORS TO THE EOR (OF STRUCTURAL DESIGN) IF AN OBSTRUCTION WAS REQUIRED TO MEET THE RF SYSTEM DESIGN REQUIREMENTS AND PERFORMANCES.

MODIFICATION NOTES:

1. MOUNT MEMBERS NOT SHOWN FOR CLARITY U.N.O.
2. CONTRACTOR TO VERIFY THE LENGTH REQUIRED AND TRIM AS NECESSARY IN ACCORDANCE WITH THE 'STRUCTURAL STEEL' NOTES ON SHEET S-2.
3. RADIO AND/OR TME POSITIONS SHALL BE ADJUSTED VERTICALLY AS NEEDED IN ORDER TO ACHIEVE INSTALLATION OF HORIZONTAL AS SHOWN. EOR SHALL BE NOTIFIED IF EQUIPMENT NEEDS TO BE RELOCATED TO ANOTHER MOUNT PIPE.
4. CONNECT NEW HORIZONTAL TO ALL EXISTING VERTICAL MOUNT PIPES WITH CROSSOVER PLATES (PART #: VZWSMART-MSK1).

MASER CONSULTING CONNECTICUT
WILL BE KNOWN AS COLLIERS ENGINEERING & DESIGN IN 2021
Customer Loyalty *through* Client Satisfaction
www.maserconsulting.com
Office Locations:
- NEW JERSEY
- NEW YORK
- PENNSYLVANIA
- VIRGINIA
- FLORIDA
- NORTH CAROLINA
- SOUTH CAROLINA
- NEW MEXICO
- MARYLAND
- GEORGIA
- TEXAS
- TENNESSEE
- COLORADO

verizon

PROTECT YOURSELF

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

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

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

SCALE :	JOB NUMBER :
AS SHOWN	20777648A

REV	DATE	DESCRIPTION	DRAWN BY	CHECKED BY
.	.	.	.	.
.	.	.	.	.
.	.	.	.	.
0	4/20/2021	ISSUED FOR CONSTRUCTION	FAC	ASN

Alec S. Norris
CONNECTICUT PROFESSIONAL ENGINEER
LICENSE NUMBER: 32588
MASER CONSULTING
C.T. C.O.A #: JPC.0000131
Digitally signed by Alec Norris
Date: 2021.04.21 13:42:15-04'00'

SITE NAME:

QUACKER HILL CT-A
467959

35 SOUTH BARTLETT RD.
QUAKER HILL, CT 06375
NEW LONDON COUNTY

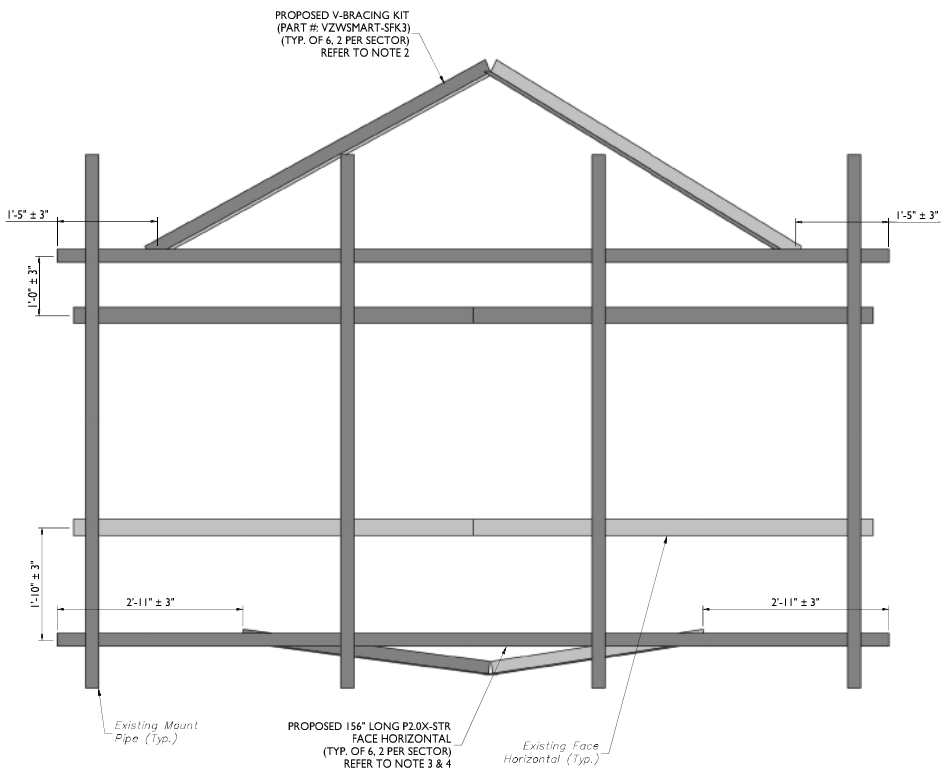
MT. LAUREL OFFICE
2000 Midlantic Drive
Suite 100
Mount Laurel, NJ 08054
Phone: 856.797.0412
Fax: 856.722.1120

SHEET TITLE :

MODIFICATION DETAILS

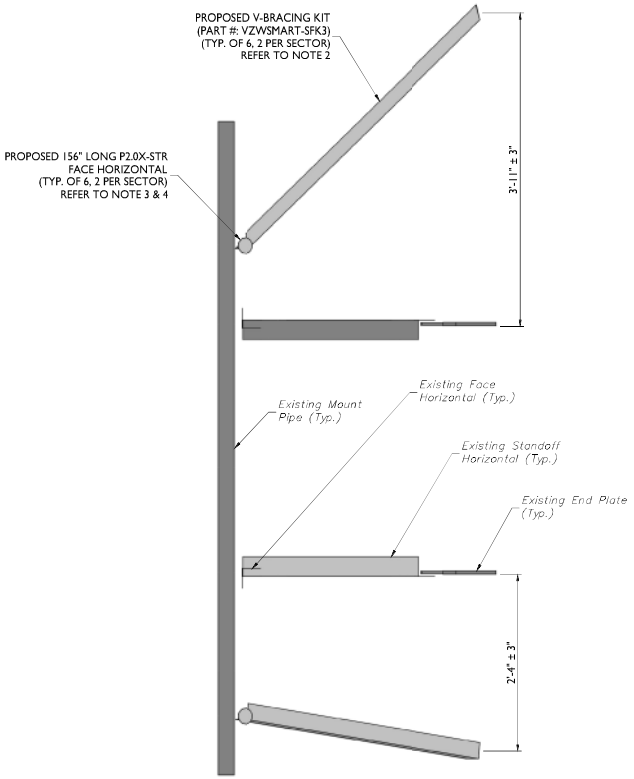
SHEET NUMBER :

S-4



1 PROPOSED FRONT ELEVATION (TYP. ALL SECTORS)

SCALE : N.T.S.

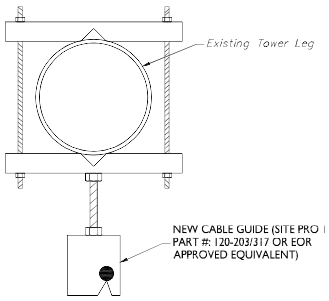


2 PROPOSED SIDE ELEVATION (TYP. ALL SECTORS)

SCALE : N.T.S.

MODIFICATION NOTES:

1. MOUNT MEMBERS NOT SHOWN FOR CLARITY U.N.O.
2. CONTRACTOR TO VERIFY THE LENGTH REQUIRED AND TRIM AS NECESSARY IN ACCORDANCE WITH THE 'STRUCTURAL STEEL' NOTES ON SHEET S-2.
3. RADIO AND/OR TME POSITIONS SHALL BE ADJUSTED VERTICALLY AS NEEDED IN ORDER TO ACHIEVE INSTALLATION OF HORIZONTAL AS SHOWN. EOR SHALL BE NOTIFIED IF EQUIPMENT NEEDS TO BE RELOCATED TO ANOTHER MOUNT PIPE.
4. CONNECT NEW HORIZONTAL TO ALL EXISTING VERTICAL MOUNT PIPES WITH CROSSOVER PLATES (PART #: VZWSMART-MSK1).



3 PROPOSED CABLE GUIDE TOWER LEG ATTACHMENT - PLAN VIEW

SCALE : N.T.S.

MASER CONSULTING CONNECTICUT
Customer Loyalty through Client Satisfaction
www.maserconsulting.com
Office Locations:
NEW JERSEY, NEW YORK, PENNSYLVANIA, VIRGINIA, FLORIDA, NORTH CAROLINA, SOUTH CAROLINA, NEW MEXICO, MARYLAND, GEORGIA, TEXAS, TENNESSEE, COLORADO

verizon

811 PROTECT YOURSELF
ALL STATES REQUIRE NOTIFICATION OF EXCAVATORS, DESIGNERS, OR ANY PERSON PREPARING TO DISTURB THE EARTH'S SURFACE ANYWHERE IN ANY STATE
Know what's below. Call before you dig.
FOR STATE SPECIFIC DIRECT PHONE NUMBERS VISIT: WWW.CALL811.COM

SCALE:	JOB NUMBER:
AS SHOWN	20777648A

REV	DATE	DESCRIPTION	DRAWN BY	CHECKED BY
1	9/21/21	ISSUED FOR CONSTRUCTION	FAC	ASN

Alec S. Norris
CONNECTICUT LICENSED PROFESSIONAL ENGINEER
LICENSE NUMBER: 30437
MASER CONSULTING, P.A.
CT. C.O.A. # PEC.0000013

Digitally signed by Alec Norris
Date: 2021.09.21 13:42:30 -04'00'

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

SITE NAME:
QUACKER HILL CT-A
467959

35 SOUTH BARTLETT RD.
QUAKER HILL, CT 06375
NEW LONDON COUNTY

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

SHEET TITLE:
MODIFICATION DETAILS

SHEET NUMBER:
S-5

MOUNT PHOTO 1

MOUNT PHOTO 2

MOUNT PHOTO 3

MOUNT PHOTO 4

MASER CONSULTING CONNECTICUT
(WILL BE KNOWN AS MASER CONSULTING CONNECTICUT)
Customer Loyalty through Client Satisfaction
www.maserconsulting.com
Office Locations:
NEW JERSEY, NEW YORK, PENNSYLVANIA, VIRGINIA, FLORIDA, NORTH CAROLINA, SOUTH CAROLINA, NEW MEXICO, MARYLAND, GEORGIA, TEXAS, TENNESSEE, COLORADO

verizon

811 PROTECT YOURSELF
ALL STATES REQUIRE NOTIFICATION OF EXCAVATORS, DESIGNERS, OR ANY PERSON PREPARING TO DISTURB THE EARTH'S SURFACE ANYWHERE IN ANY STATE
Know what's below. Call before you dig.
FOR STATE SPECIFIC DIRECT PHONE NUMBERS VISIT: WWW.CALL811.COM

SCALE:	JOB NUMBER:
AS SHOWN	20777648A

REV	DATE	DESCRIPTION	DRAWN BY	CHECKED BY
1	5/21/21	ADDITION OF CONSTELLATION	FAC	ASN

Alec S. Norris
CONNECTICUT LICENSED PROFESSIONAL ENGINEER
LICENSE NUMBER: PEC.0030111
MASER CONSULTING
C.T. C.O.A. # PC.0000111

Digitally signed by Alec Norris
Date: 2021.04.21 13:42:20 -04'00'

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

SITE NAME:

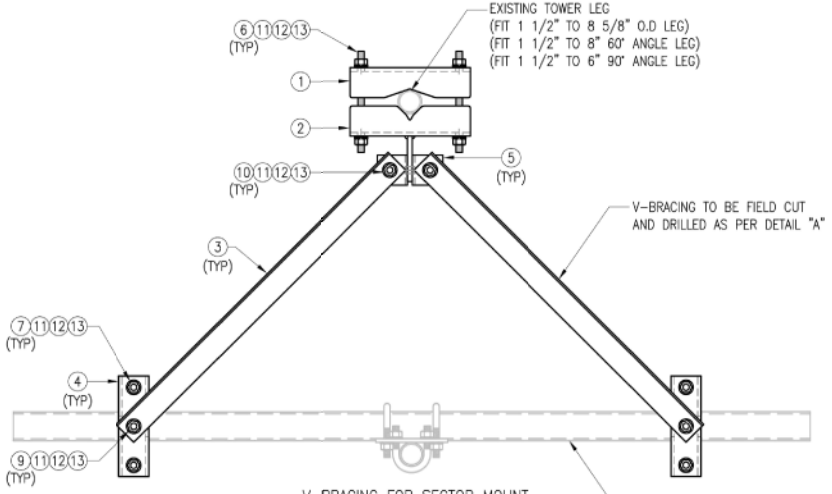
QUACKER HILL CT-A
467959

35 SOUTH BARTLETT RD.
QUAKER HILL, CT 06375
NEW LONDON COUNTY

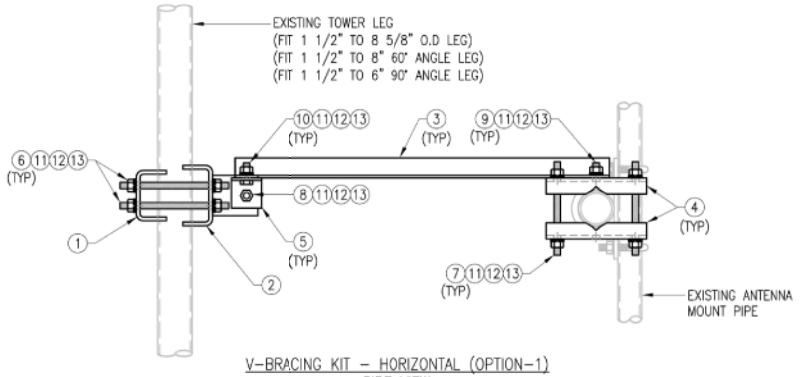
*N. LAUREL OFFICE
2000 Midlantic Drive
Suite 100
*Mount Laurel, NJ 08054
Phone: 856.797.0412
Fax: 856.722.1120

SHEET TITLE:
MOUNT PHOTOS

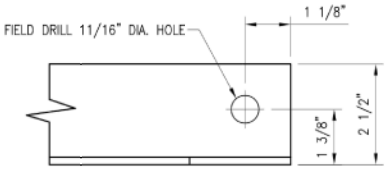
SHEET NUMBER:
S-6



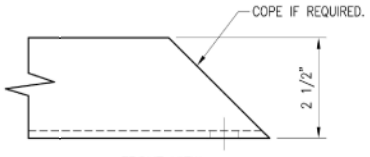
V-BRACING FOR SECTOR MOUNT
PLAN VIEW



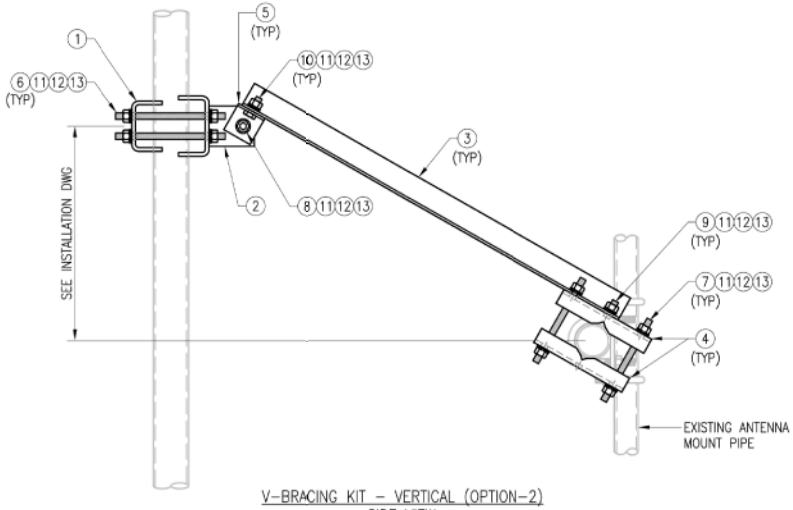
V-BRACING KIT - HORIZONTAL (OPTION-1)
SIDE VIEW



PLAN VIEW



FRONT VIEW
DETAIL "A"



V-BRACING KIT - VERTICAL (OPTION-2)
SIDE VIEW

VZWSMART-SFK3 (V-BRACING KIT)

ITEM NO.	QTY.	PART NO.	DESCRIPTION	SHEET #	WT
1	1	BP9625-12	PL 3/8" X 9 5/8" X 1'-0" A36 BENT PLATE	VBSM-F1	12
2	1	BRKW-VBSM	WELDMENT BRACKET	VBSM-F3	16
3	2	L252525-8	L 2 1/2" X 2 1/2" X 1/4" X 8'-0" A36	VBSM-F5	67
4	4	BP6875-10	PL 3/8" X 6 7/8" X 10" A36 BENT PLATE	VBSM-F2	20
5	2	AL-333	L 3" X 3" X 1/4" X 3" A36	VBSM-F2	3
6	4	---	THREADED ROD 5/8" DIA. X 1'-6" F1554-36 HDG	---	--
7	4	---	THREADED ROD 5/8" DIA. X 10" F1554-36 HDG	---	--
8	1	---	BOLT 5/8" X 2 1/4" A325	---	--
9	2	---	BOLT 5/8" X 2" A325	---	--
10	2	---	BOLT 5/8" X 1 3/4" A325	---	--
11	21	FW-625	5/8" HDG USS FLAT WASHER	---	2
12	21	LW-625	5/8" HDG LOCK WASHER	---	0
13	21	NUT-625	5/8" HDG HEX NUT	---	2
				GALVANIZED WT	122

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

VzW SMART Tool© Vendor

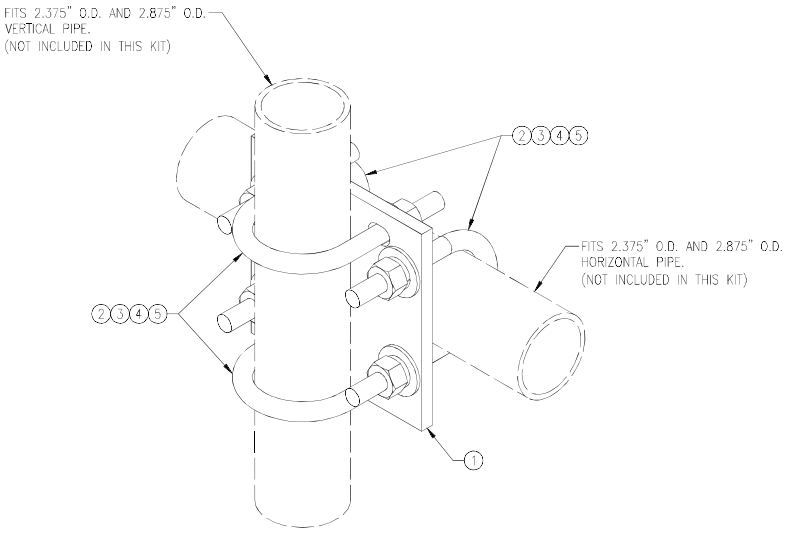
verizon

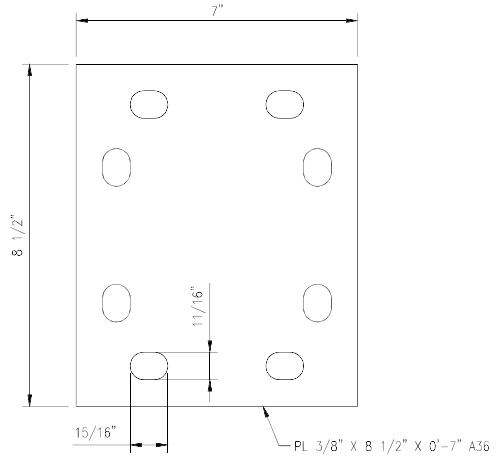
DRAWN BY: H.R. | CHECKED BY: HMA

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

SHEET TITLE:
VZWSMART-SFK3
V-BRACING KIT

SHEET NUMBER: VZWSMART-SFK3
REV #: 0





PL375-857

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

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

VzW SMART Tool© Vendor

verizon

DRAWN BY: H.R | CHECKED BY: HMA

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

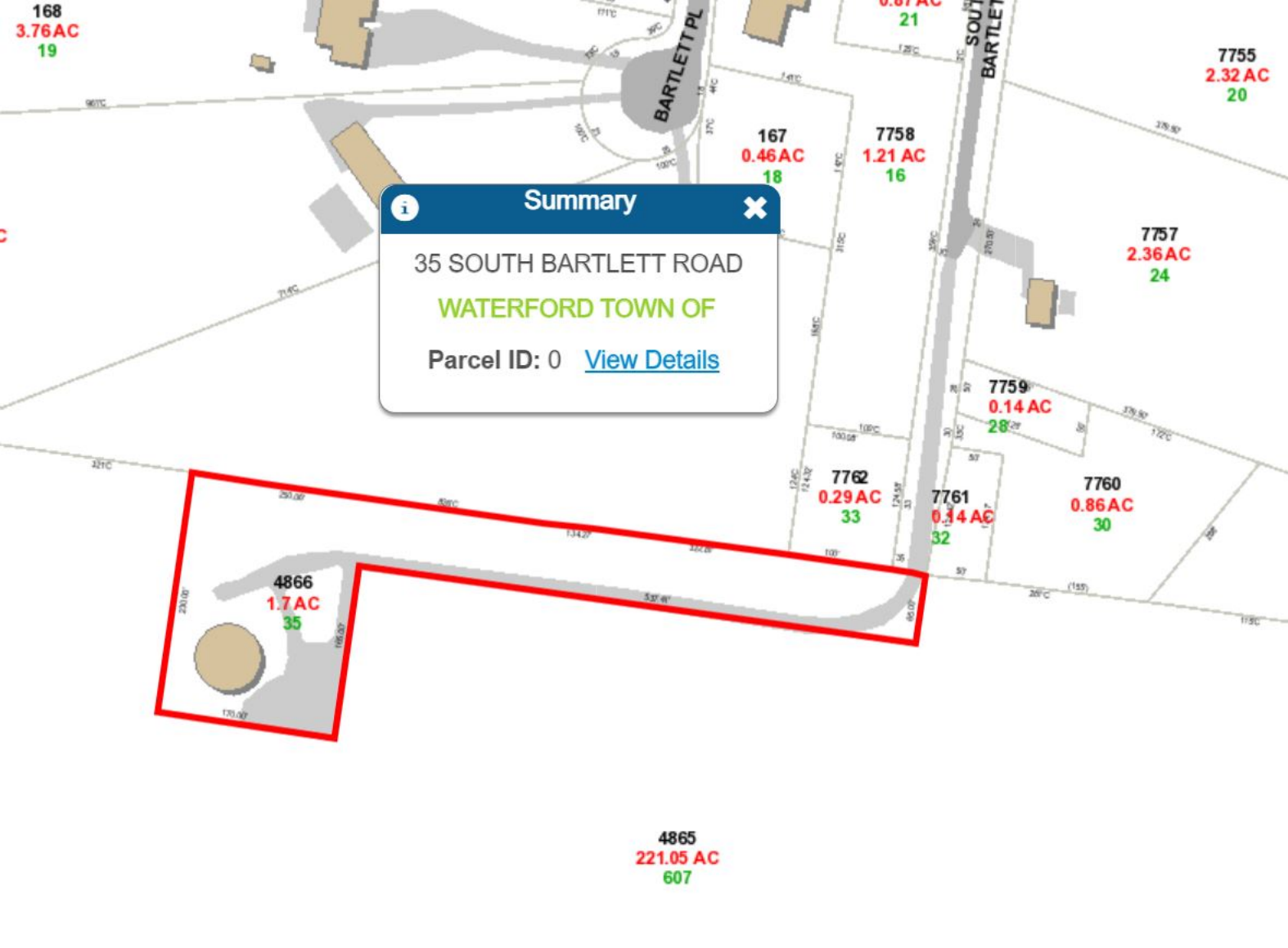
SHEET TITLE:

VZWSMART-MSK1
CROSSOVER PLATE

SHEET NUMBER: VZWSMART-MSK1

REV #: 0

ATTACHMENT 5


168
3.76 AC
19
BARTLETT PL
167
0.46 AC
18
7758
1.21 AC
16
21
7755
2.32 AC
20
Summary
35 SOUTH BARTLETT ROAD
WATERFORD TOWN OF
Parcel ID: 0 View Details
7757
2.36 AC
24
7759
0.14 AC
28
7762
0.29 AC
33
7761
0.14 AC
32
7760
0.86 AC
30
4866
1.7 AC
35
4865
221.05 AC
607

WATERFORD,CT

35 SOUTH BARTLETT ROAD

Location
35 SOUTH BARTLETT ROAD
Mblu
11/ / 4866/ /
Acct#
00443701
Owner
WATERFORD TOWN OF
Assessment
$643,430
Appraisal
$919,180
PID
4866
Building Count
1

Current Value

Appraisal

Valuation Year	Improvements	Land	Total
2017	$697,500	$221,680	$919,180

Assessment

Valuation Year	Improvements	Land	Total
2017	$488,250	$155,180	$643,430

Parcel Addreses

Additional Addresses

No Additional Addresses available for this parcel

Owner of Record

Owner WATERFORD TOWN OF
Co-Owner
Sale Price $53,000
Certificate
Book & Page 0777/0090
Sale Date 04/22/2005
Instrument 00

Ownership History

Ownership History

Owner	Sale Price	Certificate	Book & Page	Instrument	Sale Date
WATERFORD TOWN OF	$53,000		0777/0090	00	04/22/2005
MASHANTUCKET PEQUOT TRIBE THE	$0		0743/0219	00	12/07/2004

Building Information
Building 1 : Section 1
Year Built:
Living Area: 0
Replacement Cost: $0
Building Percent Good:

Building Attributes

Field	Description
Style	Outbuildings

Model	
Grade:	
Stories	
Occupancy	
Exterior Wall 1	
Exterior Wall 2	
Roof Structure	
Roof Cover	
Interior Wall 1	
Interior Wall 2	
Interior Flr 1	
Interior Flr 2	
Heat Fuel	
Heat Type:	
AC Percent	
Total Bedrooms:	
Full Bthrms:	
Half Baths:	
Extra Fixtures	
Total Rooms:	
Bath Style:	
Kitchen Style:	
Num Kitchens	
Fireplace(s)	
Extra Opening(s)	
Gas Fireplace(s)	
% Attic Fin	

LF Dormer	
Foundation	
Bsmt Gar(s)	
Bsmt %	
SF FBM	
SF Rec Rm	
Fin Bsmt Qual	
Bsmt Access	
Usrfld 300	
Usrfld 301	

Building Photo

Building Layout 

Building Sub-Areas (sq ft) Legend

No Data for Building Sub-Areas

Extra Features

Extra Features Legend

No Data for Extra Features

Land

Land Use

Use Code	909
Description	Exempt Vac w/ OB
Zone	IP-1
Neighborhood	IND1
Alt Land Appr	No
Category	

Land Line Valuation

Size (Acres)	1.7
Frontage	0
Depth	0
Assessed Value	$155,180
Appraised Value	$221,680

Outbuildings

Outbuildings Legend

Code	Description	Sub Code	Sub Description	Size	Value	Bldg #
LSUM	Lump Sum			775000.00 UNITS	$697,500	1

Valuation History

Appraisal

Valuation Year	Improvements	Land	Total
2020	$697,500	$221,680	$919,180
4000	$697,500	$221,680	$919,180

Assessment

Valuation Year	Improvements	Land	Total
2020	$488,250	$155,180	$643,430
4000	$488,250	$155,180	$643,430

closecloseclose

ATTACHMENT 6

UNITED STATES POSTAL SERVICE®

QUAKER HILL

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	2	2	neopost 07/12/2021 US POSTAGE $002.89⁰ ZIP 06103 041L12203937
	Postmaster, per *(name of receiving employee)* EILEEN D.		

USPS® Tracking Number Firm-specific Identifier	Address (Name, Street, City, State, and ZIP Code™)	Postage	Fee	Special Handling	Parcel Airlift
1.	Robert Brule, First Selectman Town of Waterford 15 Rope Ferry Road Waterford, CT 06385				
2.	Abby Piersall, Planning Director Town of Waterford 15 Rope Ferry Road Waterford, CT 06385				
3.					
4.					
5.					
6.					

OLD STATE HOUSE STATION 06103
JUL 12 2021
USPS