Robinson+Cole

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Also admitted in Massachusetts
and New York

September 30, 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**
12 Burr Road, Bloomfield, 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 and Cellco's use of the tower were approved by the Siting Council ("Council") in October of 2009 (Docket No. 379). A copy of the Council's Docket No. 379 Decision and Order is included in Attachment 1.

Cellco now intends to modify its facility by removing three (3) existing antennas and installing three (3) Samsung MT6407-77A antennas and three (3) CBRS antennas on its existing t-arm antenna mounts. Cellco also intends to replace six (6) existing remote radio heads ("RRHs") with nine (9) new RRHs behind its antennas. A set of project plans showing Cellco's proposed facility modifications and new antennas and RRH 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 Bloomfield's Chief Elected Official and Land Use Officer.

The planned modifications to the facility fall squarely within those activities explicitly provided for in R.C.S.A. § 16-50j-72(b)(2).

1. The proposed modifications will not result in an increase in the height of the existing tower.

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. A cumulative General Power Density table for Cellco's modified facility is included in Attachment 3. The modified facility will be capable of providing Cellco's 5G wireless service.

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

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

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

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

Sincerely,

Kenneth C. Baldwin

Enclosures
Copy to:

Suzette DeBeatham, Mayor for the Town of Bloomfield
Jose Giner, Bloomfield Director of Land Use
Maple Hill Farms, Inc., Property Owner
Alex Tyurin

ATTACHMENT 1

DOCKET NO. 379 – SBA Towers II, LLC application for a Certificate of Environmental Compatibility and Public Need for the construction, maintenance and operation of a telecommunications facility at 12 Burr Road, Bloomfield, Connecticut.	}	Connecticut
	}	Siting
	}	Council

October 8, 2009

Decision and Order

Pursuant to the foregoing Findings of Fact and Opinion, the Connecticut Siting Council (Council) finds that the effects associated with the construction, operation, and maintenance of a telecommunications facility, including effects on the natural environment; ecological integrity and balance; public health and safety; scenic, historic, and recreational values; forests and parks; air and water purity; and fish and wildlife are not disproportionate, either alone or cumulatively with other effects, when compared to need, are not in conflict with the policies of the State concerning such effects, and are not sufficient reason to deny the application, and therefore directs that a Certificate of Environmental Compatibility and Public Need, as provided by General Statutes § 16-50k, be issued to SBA Towers II, LLC, hereinafter referred to as the Certificate Holder, for a telecommunications facility located at 12 Burr Road, Bloomfield, Connecticut.

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

1. The tower shall be constructed as a monopole, no taller than necessary to provide the proposed telecommunications services, sufficient to accommodate the antennas of T-Mobile, Verizon, and other entities, both public and private, but such tower shall not exceed a height of 130 feet above ground level. Antennas installed on the tower shall utilize flush mounts or T-arm mounts. No platforms shall be permitted on the tower.

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

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

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

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

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

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

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

7. Unless otherwise approved by the Council, if the facility authorized herein is not fully constructed and providing wireless services within eighteen months from the date of the mailing of the Council's Findings of Fact, Opinion, and Decision and Order (collectively called "Final Decision"), this Decision and Order shall be void, and the Certificate Holder shall dismantle the tower and remove all associated equipment or reapply for any continued or new use to the Council before any such use is made. The time between the filing and resolution of any appeals of the Council's Final Decision shall not be counted in calculating this deadline.

8. At least one wireless telecommunications carrier shall install their equipment and shall become operational not later than 120 days after the tower is erected. Authority to monitor and modify this schedule, as necessary, is delegated to the Executive Director. The Certificate Holder shall provide written notice to the Executive Director of any schedule changes as soon as is practicable.

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

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

11. The Certificate Holder shall remove any nonfunctioning antenna, and associated antenna mounting equipment, within 60 days of the date the antenna ceased to function.

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

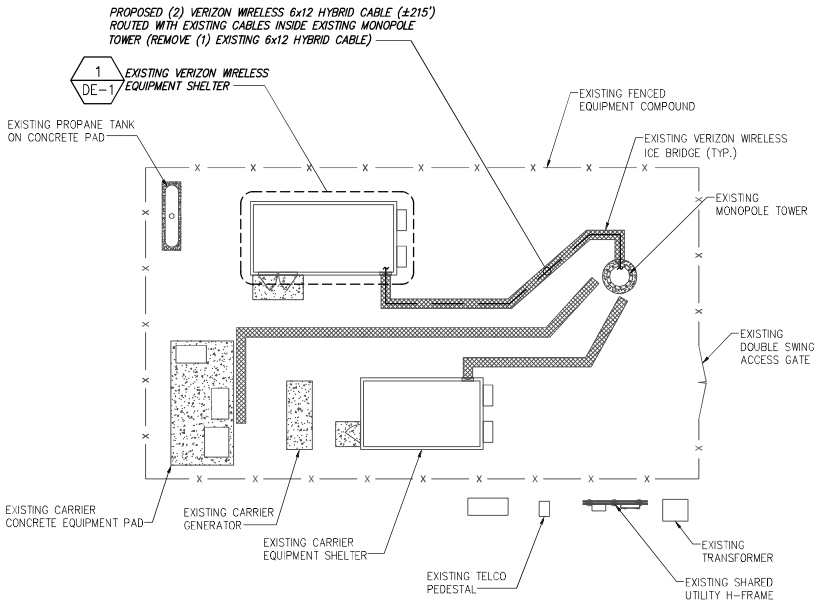
Pursuant to General Statutes § 16-50p, the Council hereby directs that a copy of the Findings of Fact, Opinion, and Decision and Order be served on each person listed below, and notice of issuance shall be published in the Hartford Courant.

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

The parties and intervenors to this proceeding are:

Applicant	**Its Representative**
SBA Towers II, LLC One Research Drive, Suite 200C Westborough, MA 01581	Carrie L. Larson, Esq. Pullman and Comley, LLC 90 State House Square Hartford, CT 06103
Intervenor	**Its Representative**
Cellco Partnership d/b/a Verizon Wireless 99 East River Drive East Hartford, CT 06108	Joey Lee Miranda, Esq. Robinson & Cole LLP 280 Trumbull Street Hartford, Connecticut 06103-3597
Thomas Midney 13 Burr Street Bloomfield, CT 06002	
Elizabeth Schiro Auerbach 25 Brookside Boulevard West Hartford, CT 06107	

ATTACHMENT 2



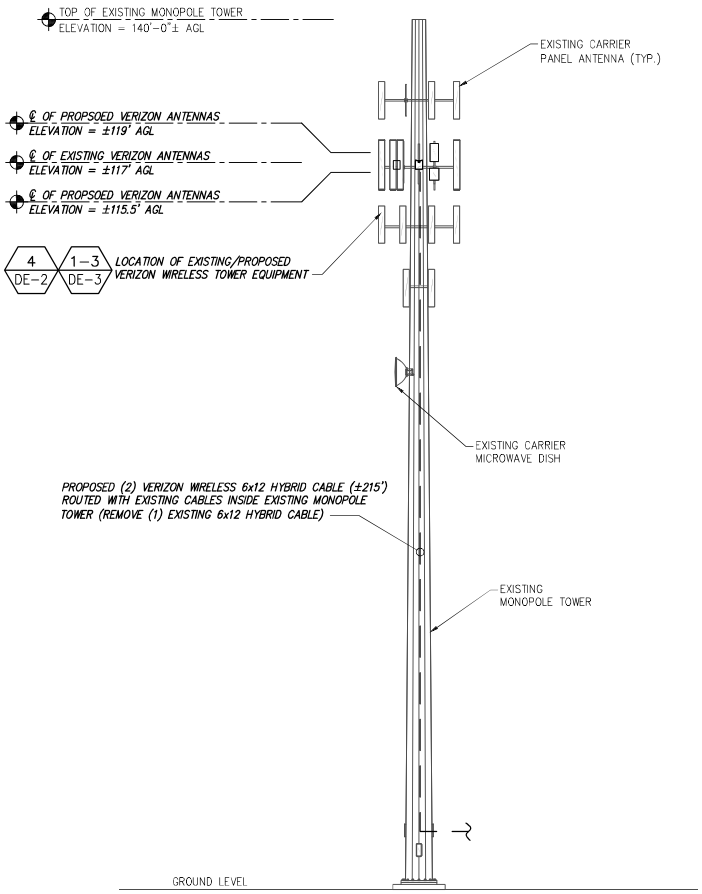
NOTE:
THIS PLAN IS DIAGRAMMATIC IN NATURE AND IS INTENDED FOR VISUAL REPRESENTATION OF THE PROPOSED ANTENNA UPGRADE.

BASEMAPPING PREPARED FROM A SITE WALK PERFORMED BY INFINIGY ENGINEERING ON 01/21/20, AND PROVIDED INFORMATION AND DOES NOT REPRESENT AN ACTUAL FIELD SURVEY.

GRAPHIC SCALE:
20' 10' 0 10' 20'
SCALE (11x17): 1" = 20'-0"
SCALE (22x34): 1" = 10'-0"

SITE PLAN (PROPOSED) | SCALE: AS NOTED | 1

STRUCTURAL NOTES:
- FOR ADDITIONAL STRUCTURAL INFORMATION PERTAINING TO THE ANTENNA MOUNT SEE 'ANTENNA MOUNT ANALYSIS REPORT WITH HARDWARE UPGRADES' COMPLETED BY MASER CONSULTING, DATED 7/2/21. REFER TO MOUNT ANALYSIS FOR SPECIFIC ANTENNA AND RRU MOUNT POSITIONS.
- FOR ADDITIONAL STRUCTURAL INFORMATION PERTAINING TO THE TOWER STRUCTURE, SEE 'STRUCTURAL ANALYSIS REPORT' COMPLETED BY TES, DATED 8/24/21.



ELEVATION VIEW | NOT SCALE | 2

PLANS PREPARED FOR:
verizon

PLANS PREPARED BY:
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1033 Watervliet Shaker Rd | Albany, NY 12205
Phone: 518-690-0790 | Fax: 518-690-0793
www.infinigy.com

ENGINEERING LICENSE:
STATE OF CONNECTICUT
SUHEI SAKANOUE
34916
LICENSED PROFESSIONAL ENGINEER
09-22-2021

DRAWING NOTICE:

REVISIONS:

DESCRIPTION	DATE	BY	REV.
REVISED FOR FINALS	09/22/21	SKB	1
ISSUED FOR FINALS	09/15/21	SKB	0

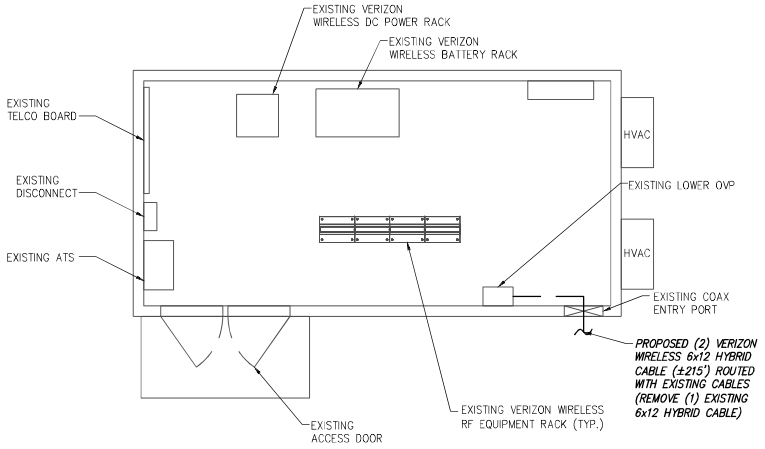
SITE NAME:
BLOOMFIELD 2 CT

SITE ADDRESS:
12 BURR ROAD
BLOOMFIELD, CT 06002

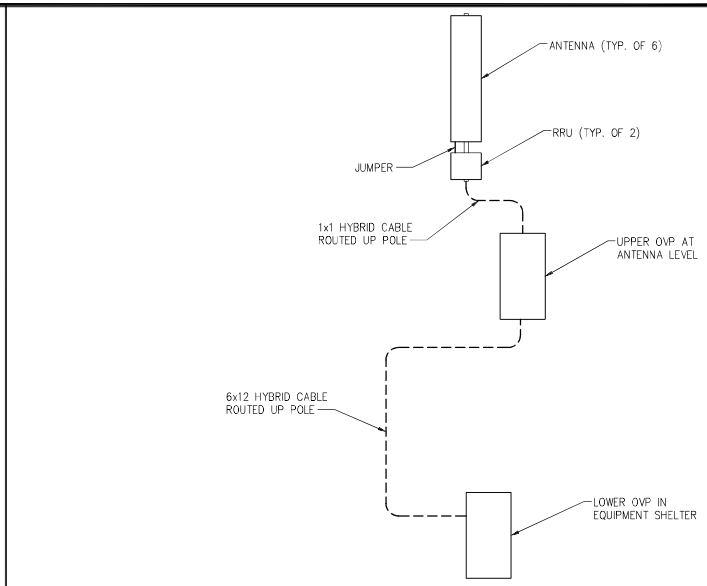
SHEET DESCRIPTION:
COMPOUND PLAN & ELEVATION VIEW

SHEET NUMBER:
DE-1

BASEMAPPING PREPARED FROM A SITE WALK PERFORMED BY INFINIGY ENGINEERING ON 01/21/20, AND PROVIDED INFORMATION, AND DOES NOT REPRESENT AN ACTUAL FIELD SURVEY.



SHELTER PLAN – GRADE | SCALE: AS NOTED | 1



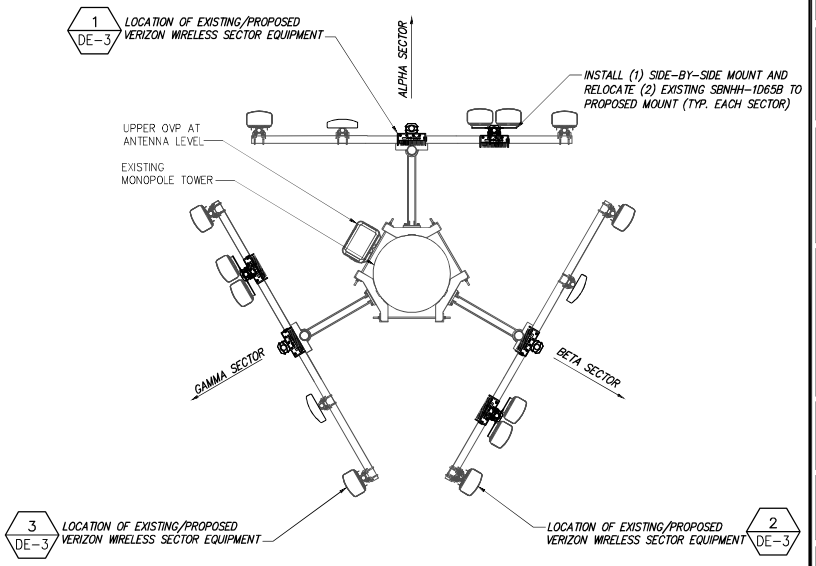
RF PLUMBING DIAGRAM | SCALE: AS NOTED | 2

BILL OF MATERIALS

SITE NAME: BLOOMFIELD 2 CT

DESCRIPTION	QTY.	EXISTING/PROPOSED	LENGTH	COMMENT
LOWER OVP	1	EXISTING	–	–
UPPER OVP	1	EXISTING	–	(1) (E) TO REMAIN
OVP ANTENNA SECTORS	0	–	–	–
6x12 HIBRID CABLE	2	PROPOSED	±215'	–
2X4 HYBRID CABLE (ALPHA)	0	–	–	–
2X4 HYBRID CABLE (BETA)	0	–	–	–
2X4 HYBRID CABLE (GAMMA)	0	–	–	–
1X1 HYBRID CABLE	9	PROPOSED	±14'	(3) PER SECTOR FOR RRU CONNECTIONS
AWS/1900 RRU	3	PROPOSED	–	(1) PER SECTOR
700/850 RRU	3	PROPOSED	–	(1) PER SECTOR
RRU WALL MOUNT BRACKET	0	–	–	–
RRU PIPE MOUNT BRACKET	9	PROPOSED	–	(3) PER SECTOR
850 ANTENNA	6	EXISTING	–	–
1900 ANTENNA	3	EXISTING	–	–
AWS ANTENNA	3	EXISTING	–	–
CBRS ANTENNA	3	PROPOSED	–	(1) PER SECTOR
L SUB 6 ANTENNA	3	PROPOSED	–	(1) PER SECTOR
SIDE-BY-SIDE ANTENNA MOUNT	3	PROPOSED	–	(1) PER SECTOR

BILL OF MATERIALS | | 3



ANTENNA ORIENTATION PLAN | SCALE: AS NOTED | 4

PLANS PREPARED FOR:

verizon

PLANS PREPARED BY:

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09-22-2021

DRAWING NOTICE:

REVISIONS:

DESCRIPTION	DATE	BY	REV.
REVISED FOR FINALS	09/22/21	SKB	1
ISSUED FOR FINALS	09/15/21	SKB	0

SITE NAME:

BLOOMFIELD 2 CT

SITE ADDRESS:

12 BURR ROAD
BLOOMFIELD, CT 06002

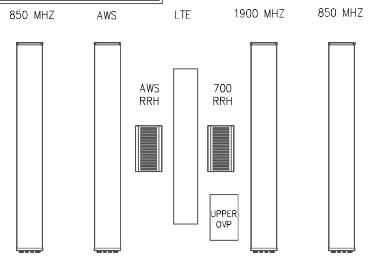
SHEET DESCRIPTION:

SHELTER PLAN, B.O.M., & ORIENTATION

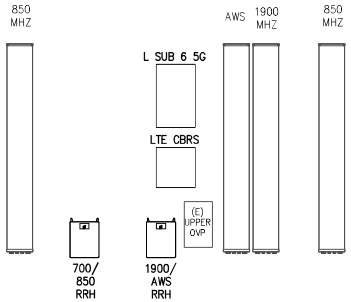
SHEET NUMBER:

DE-2

NOTE:
THIS PLAN IS DIAGRAMMATIC IN NATURE AND IS INTENDED FOR VISUAL REPRESENTATION OF THE PROPOSED ANTENNA UPGRADE.



EXISTING (BEHIND ANTENNAS)

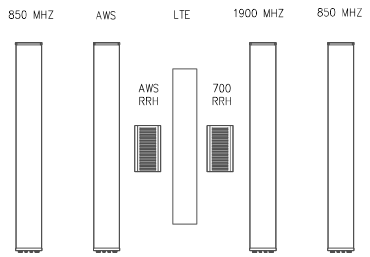


PROPOSED (BEHIND ANTENNAS)

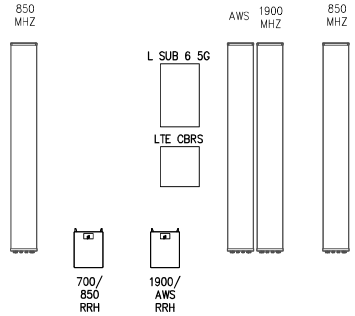
SECTOR: ALPHA

POSITION	EXISTING ANTENNA	PROPOSED		
		ANTENNA	RRU	OVP
1	850 MHZ	(E) TO REMAIN	–	(1) EXISTING
2	LTE CBRS	XXDWMM-12.5-65-8T	BUILT IN	
3	5G L SUB 6	MT6407-77A	BUILT IN	
4	AWS	(E) TO REMAIN	B2/B66A BR049	
5	1900 MHZ	(E) TO REMAIN	–	
6	850 MHZ	(E) TO REMAIN	B5/B13 BR04C	

ANTENNA MOUNTING CONFIGURATION (ALPHA) | NO SCALE | 1



EXISTING (BEHIND ANTENNAS)

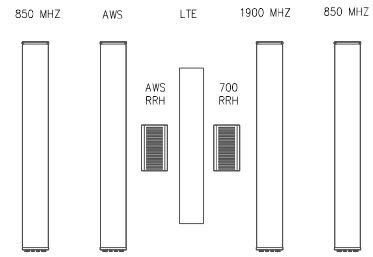


PROPOSED (BEHIND ANTENNAS)

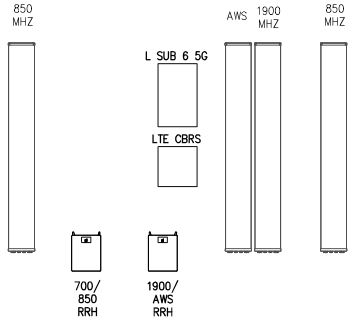
SECTOR: BETA

POSITION	EXISTING ANTENNA	PROPOSED		
		ANTENNA	RRU	OVP
1	850 MHZ	(E) TO REMAIN	–	SHARED
2	LTE CBRS	XXDWMM-12.5-65-8T	BUILT IN	
3	5G L SUB 6	MT6407-77A	BUILT IN	
4	AWS	(E) TO REMAIN	B2/B66A BR049	
5	1900 MHZ	(E) TO REMAIN	–	
6	850 MHZ	(E) TO REMAIN	B5/B13 BR04C	

ANTENNA MOUNTING CONFIGURATION (BETA) | NO SCALE | 2



EXISTING (BEHIND ANTENNAS)



PROPOSED (BEHIND ANTENNAS)

SECTOR: GAMMA

POSITION	EXISTING ANTENNA	PROPOSED		
		ANTENNA	RRU	OVP
1	850 MHZ	(E) TO REMAIN	–	SHARED
2	LTE CBRS	XXDWMM-12.5-65-8T	BUILT IN	
3	5G L SUB 6	MT6407-77A	BUILT IN	
4	AWS	(E) TO REMAIN	B2/B66A BR049	
5	1900 MHZ	(E) TO REMAIN	–	
6	850 MHZ	(E) TO REMAIN	B5/B13 BR04C	

ANTENNA MOUNTING CONFIGURATION (GAMMA) | NO SCALE | 3

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SUHEI SAKANOUE
34916
LICENSED PROFESSIONAL ENGINEER

09-22-2021

DRAWING NOTICE:

REVISIONS:

DESCRIPTION	DATE	BY	REV.
REVISED FOR FINALS	09/22/21	SKB	1
ISSUED FOR FINALS	09/15/21	SKB	0

SITE NAME:

BLOOMFIELD 2 CT

SITE ADDRESS:

12 BURR ROAD
BLOOMFIELD, CT 06002

SHEET DESCRIPTION:

ANTENNA CONFIGURATION

SHEET NUMBER:

DE-3

[CBRS] Clip-on Antenna Specifications

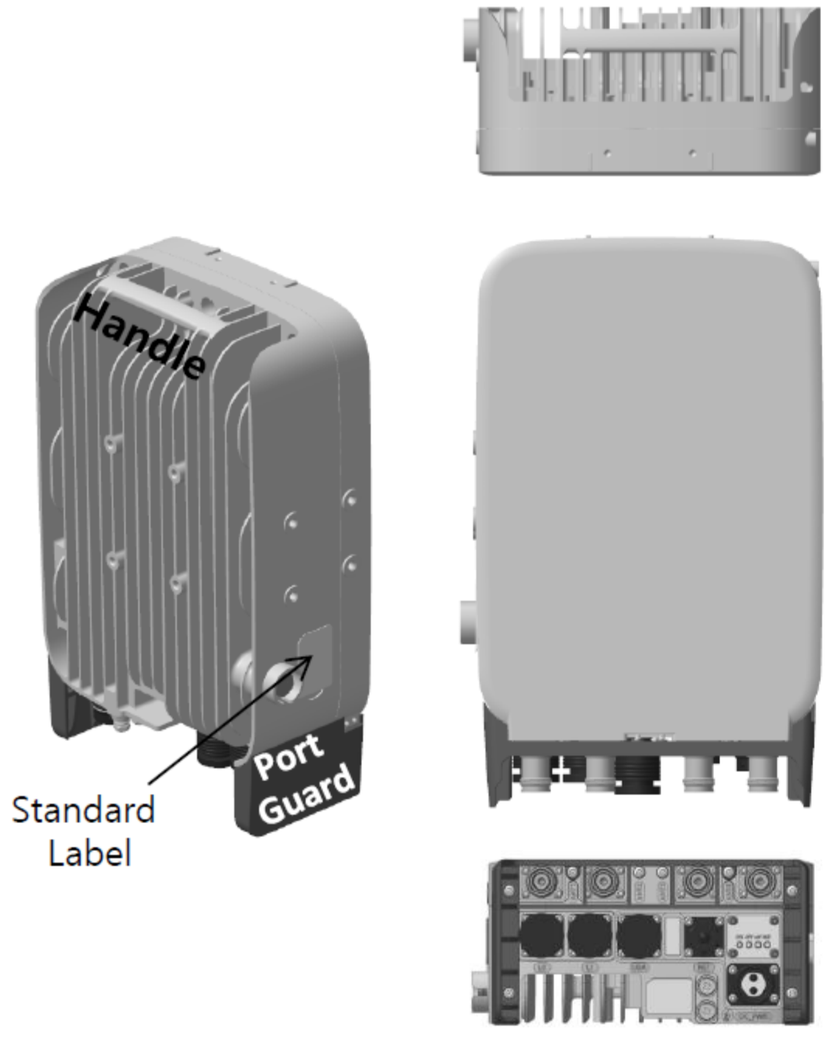
VzW accepted IP45 in FLD, but IP55 is Samsung Spec.

Items	Clip-on Antenna, BASTA**
Antenna Gain	12.5 ± 0.5 dBi (Max 13 dBi)
Horizontal BW (-3dB)	65° ± 5°
Vertical BW (-3dB)	17° ±3°
Electrical Tilt	8° (fixed) ±2°
Front-to-Back Ratio	> 25 dB
Port-to-Port Tracking	< 3 dB
VSWR	< 1.5
Isolation	> 25 dB
Ingress Protection	**IP55**
Size	220(W)×313(H)×34.3(D) mm (*) (8.7 x 12.3 x 1.4 inch.)
Weight	< **2.0** kg [Typ. 1.3 kg]
It is required that the radio should be weatherproofed properly with JMA WPS Boot with external antenna or with Weatherproof Boot for clip-on antennas.	

Antenna includes integrated cable with connector
* Design is subject to minor change

** Ant. spec. follows NGMN recommendations on Base Station Antenna Standards (BASTA). For example, 'mean ± tolerance of 86.6%' is applied to double-sided specification of statistical RF parameters.

[CBRS RRH] Spec.



Current Size: 216 x 307 x 105.5 mm (6.99L)
(8.5 x 12.1 x 4.1 inch., excluding Port Guard)
Design is subject to minor change

Item	Specification
Band	Band 48 (3.5 GHz)
Frequency	3550~3700 MHz
IBW	150 MHz
OBW	80 MHz
# of Carriers	5/10/15/20 MHz x 4 carriers
RF Chain	4TX / 4RX
RF Output Power & EIRP	4 path x 5 W (Total: 20 W = 43 dBm) (EIRP: 47 dBm / 10 MHz)
RX Sensitivity	Typical : -101.5 dBm @ 1 Rx (3GPP 36.104, Wide Area)
Modulation	256-QAM support (1024-QAM with 1~2dB power back-off)
Input Power	-48 VDC (-38 to -57 VDC, 1 SKU), with clip-on AC-DC converter (Option)
Power Consumption	About 160 Watt @ 100% RF load, typical conditions
Volume	**Under 7L** (w/o Antenna), Under 9.6L (with antenna)
Weight	**Under 8.0 kg** (**18.64** lb) (w/o Antenna), Under 10.5 Kg (with ant.)
Operating Temperature	-40°C (-40°F) ~ 55°C (131°F) (W/o solar load)
Cooling	Natural convection
Unwanted Emission	3GPP 36.104 Category A
	[B48] : FCC 47 CFR 96.41 e)
Optic Interface	20km, 2 ports (9.8Gbps x 2), SFP, single mode, duplex or Bi-Di
CPRI Cascade	Not supported
# of Antenna Port	4
External Alarm (UDA)	4
RET	AISG 2.2
TMA & built-in Bias-T I//F and PIM cancellation	Not supported
Mounting Options	Pole, wall, tower, back to back, side by side (for external ant), 3 RRH with Clip-on Antenna on the pole
Antenna Type	Integrated (Clip-on) antenna (Option), External antenna (Option)
NB-IoT	Not Supported (HW Resource reserved for 1 Guard Band NB-IoT per LTE carrier)
Spectrum Analyzer	TX/RX Support
External Alarm (UDA)	4
5G NR	Support with S/W upgrade
XRAN	Support with S/W upgrade

SAMSUNG

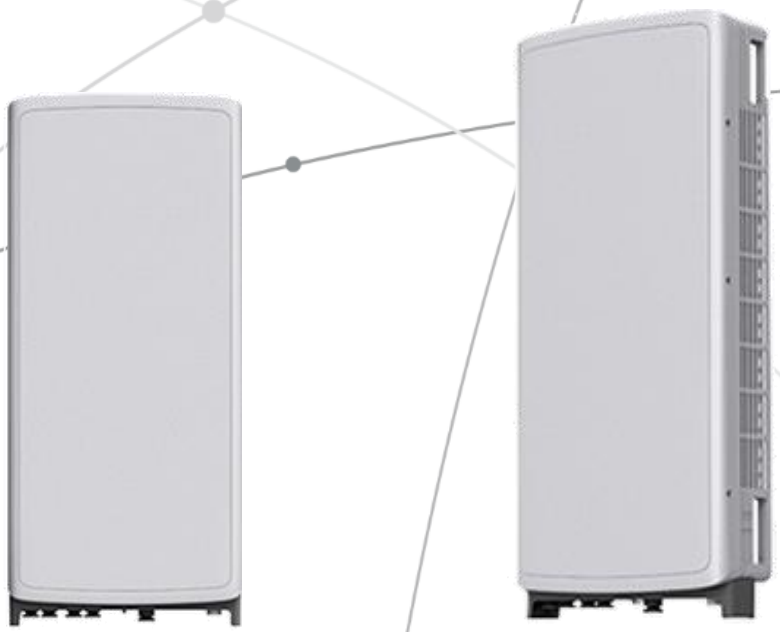
SAMSUNG

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

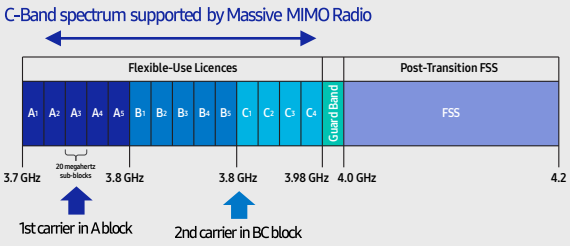


Points of Differentiation

Wide Bandwidth

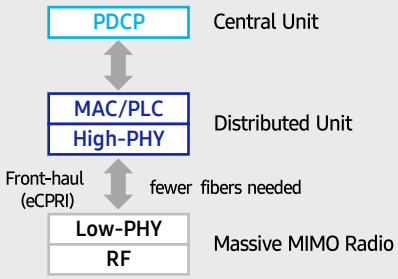
With capability to support up to 2 CC carrier configuration, Samsung C-Band massive MIMO Radio supports 200 MHz bandwidth in the C-Band spectrum.

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.

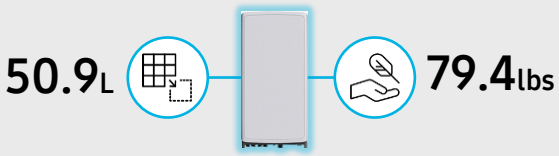
This helps operators reduce their CAPEX as they now need less products to cover the same area than before.

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

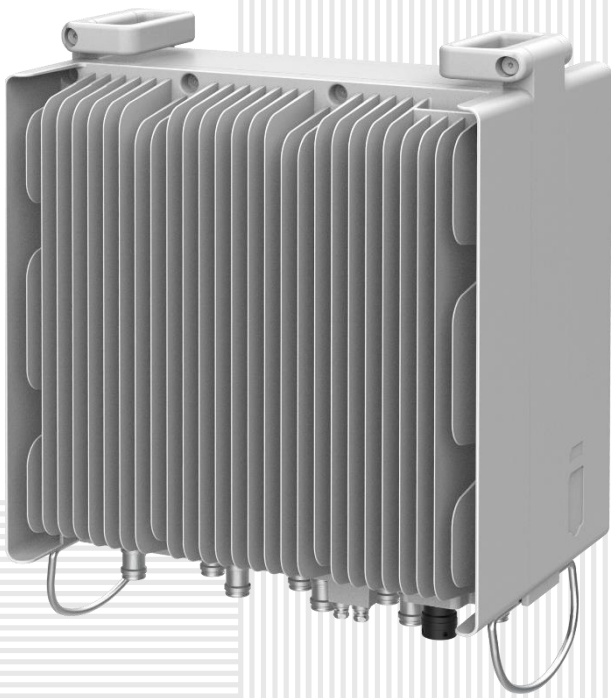
AWS/PCS MACRO RADIO

DUAL-BAND AND HIGH POWER FOR MACRO COVERAGE

Samsung's future proof dual-band radio is designed to help effectively increase the coverage areas in wireless networks. This AWS/PCS 4T4R dual-band radio has 4Tx/4Rx to 2Tx/2Rx RF chains options and a total output power of 320W, making it ideal for macro sites.

57196

Model Code	RF4439d-25A



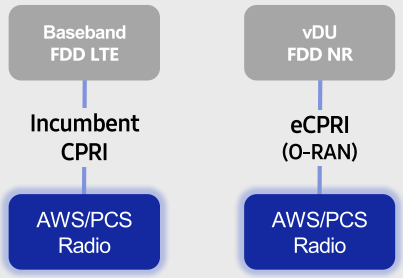
Homepage
samsungnetworks.com

Youtube
www.youtube.com/samsung5g

Points of Differentiation

Continuous Migration

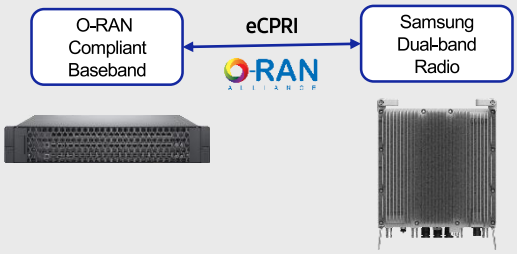
Samsung's AWS/PCS macro radio can support each incumbent CPRI interface as well as advanced eCPRI interfaces. This feature provides installable options for both legacy LTE networks and added NR networks.



O-RAN Compliant

A standardized O-RAN radio can help in implementing cost-effective networks, which are capable of sending more data without compromising additional investments.

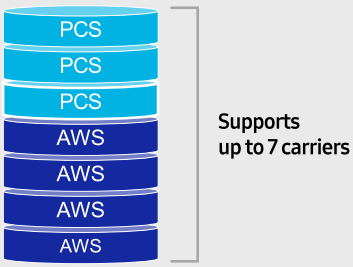
Samsung's state-of-the-art O-RAN technology will help accelerate the effort toward constructing a solid O-RAN ecosystem.



Optimum Spectrum Utilization

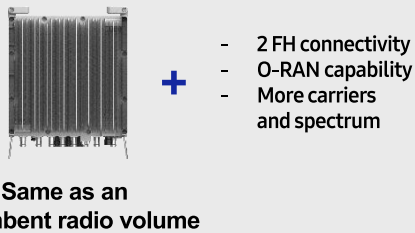
The number of required carriers varies according to site (region). Supporting many carriers is essential for using all frequencies that the operator has available.

The new AWS/PCS dual-band radio can support up to 3 carriers in the PCS (1.9GHz) band and 4 carriers in the AWS (2.1GHz) band, respectively.



Brand New Features in a Compact Size

Samsung's AWS/PCS macro radio offers several features, such as dual connectivity for baseband for both CDU and vDU, O-RAN capability, more carriers and an enlarged PCS spectrum, combined into an incumbent radio volume of 36.8L.



Technical Specifications

Item	Specification
Tech	LTE / NR
Brand	B25(PCS), B66(AWS)
Frequency Band	DL: 1930 – 1995MHz, UL: 1850 – 1915MHz DL: 2110 – 2200MHz, UL: 1710 – 1780MHz
RF Power	(B25) 4 × 40W or 2 × 60W (B66) 4 × 60W or 2 × 80W
IBW/OBW	(B25) 65MHz / 30MHz (B66) DL 90MHz, UL 70MHz / 60MHz
Installation	Pole, Wall
Size/ Weight	14.96 x 14.96 x 10.04inch (36.8L) / 74.7lb

SAMSUNG

700/850MHZ MACRO RADIO

DUAL-BAND AND HIGH POWER FOR MACRO COVERAGE

Samsung's future proof dual-band radio is designed to help effectively increase the coverage areas in wireless networks. This 700/850MHz 4T4R dual-band radio has 4Tx/4Rx to 2Tx/2Rx RF chains options and a total output power of 320W, making it ideal for macro sites.

Model Code	RF4440d-13A

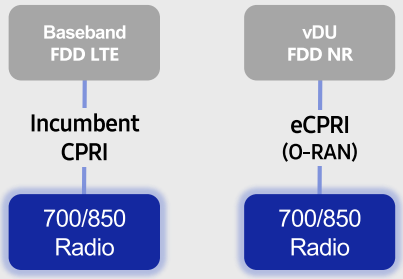
Homepage
samsungnetworks.com

Youtube
www.youtube.com/samsung5g

Points of Differentiation

Continuous Migration

Samsung's 700/850MHz macro radio can support each incumbent CPRI interface as well as an advanced eCPRI interface. This feature provides installable options for both legacy LTE networks and added NR networks.



O-RAN Compliant

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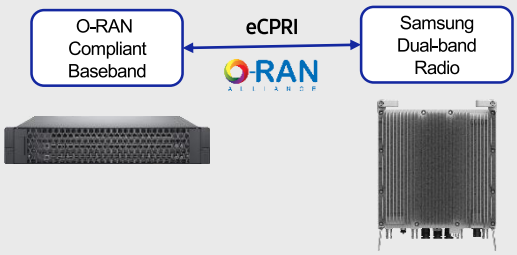
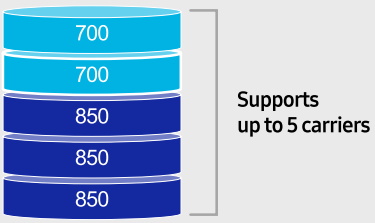
Samsung's state-of-the-art O-RAN technology will help accelerate the effort toward constructing a solid O-RAN ecosystem.



Optimum Spectrum Utilization

The number of required carriers varies according to site (region). The ability to support many carriers is essential for using all frequencies that the operator has available.

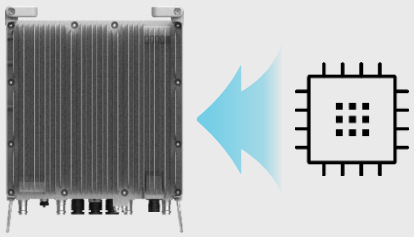
The new 700/850MHz dual-band radio can support up to 2 carriers in the B13 (700MHz) band and 3 carriers in the B5 (850MHz) band, respectively.



Secured Integrity

Access to sensitive data is allowed only to authorized software.

The Samsung radio's CPU can protect root of trust, which is credential information to verify SW integrity, and secure storage provides access control to sensitive data by using dedicated hardware (TPM).



Technical Specifications

Item	Specification
Tech	LTE / NR
Brand	B13(700MHz), B5(850MHz)
Frequency Band	DL: 746 – 756MHz, UL: 777 – 787MHz DL: 869 – 894MHz, UL: 824 – 849MHz
RF Power	(B13) 4 × 40W or 2 × 60W (B5) 4 × 40W or 2 × 60W
IBW/OBW	(B13) 10MHz / 10MHz (B5) 25MHz / 25MHz
Installation	Pole, Wall
Size/ Weight	14.96 x 14.96 x 9.05inch (33.2L) / 70.33 lb

ATTACHMENT 3

	General	Power	Density					
Site Name: Bloomfield 2								
Tower Height: Verizon @ 117ft								
CARRIER	**# OF CHAN.**	**WATTS ERP**	**HEIGHT**	**FREQ.**	**CALC. POWER DENS**	**MAX. PERMISS. EXP.**	**FRACTION MPE**	**Total**
*Clearwire	2	153	97	2496	0.0133	1.0000	0.13%	
*Clearwire	1	211	97	11 GHz	0.0092	1.0000	0.09%	
*T-Mobile	2	1556	130	1900	0.0728	1.0000	0.73%	
*T-Mobile	2	2334	130	2100	0.1092	1.0000	1.09%	
*T-Mobile	1	584	130	1900	0.0137	1.0000	0.14%	
*T-Mobile	1	1556	130	2100	0.0364	1.0000	0.36%	
*T-Mobile	2	789	130	600	0.0369	0.4000	0.92%	
*T-Mobile	2	433	130	700	0.0203	0.4667	0.43%	
*AT&T	2	565	107	880	0.0398	0.5867	0.68%	
*AT&T	2	875	107	1900	0.0617	1.0000	0.62%	
*AT&T	1	283	107	880	0.0100	0.5867	0.17%	
*AT&T	4	525	107	1900	0.0740	1.0000	0.74%	
*AT&T	1	1615	107	734	0.0569	0.4893	1.16%	
*MetroPCS	3	727	137	2140	0.0457	1.0000	0.46%	
VZW 700	**4**	**698**	**117**	**751**	**0.0073**	**0.5007**	**1.47%**	
VZW CDMA	**2**	**398**	**117**	**869**	**0.0021**	**0.5793**	**0.36%**	
VZW Cellular	**4**	**826**	**117**	**869**	**0.0087**	**0.5793**	**1.50%**	
VZW PCS	**4**	**1593**	**117**	**1980**	**0.0167**	**1.0000**	**1.67%**	
VZW AWS	**4**	**1563**	**117**	**2125**	**0.0164**	**1.0000**	**1.64%**	
VZW CBAND	**4**	**6531**	**119**	**3730**	**0.0663**	**1.0000**	**6.63%**	
VZW CBRS	**4**	**12**	**115.5**	**3625**	**0.0001**	**1.0000**	**0.01%**	
								21.02%
* Source: Siting Council								

ATTACHMENT 4

Tower Engineering Solutions
Phone (972) 483-0607, Fax (972) 975-9615
1320 Greenway Drive, Suite 600, Irving, Texas 75038

Structural Analysis Report

Existing 140 ft Rohn Monopole

Customer Name: SBA Communications Corp

Customer Site Number: CT13548-S

Customer Site Name: Bloomfield 4

Carrier Name: Verizon (App#: 151776, v3)

Carrier Site ID / Name: 468216 / BLOOMFIELD_2_CT

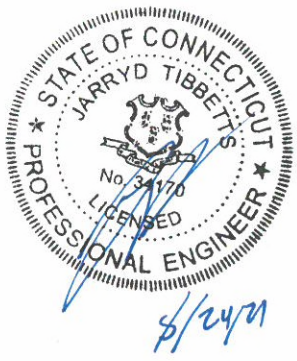
Site Location: 12 Burr Road

Bloomfield, Connecticut

Hartford County

Latitude: 41.817858

Longitude: -72.764511



Analysis Result:

Max Structural Usage: 74.8% [Pass]

Max Foundation Usage: 63.2% [Pass]

Additional Usage Caused by Mount Modification: N/A

Report Prepared By: Walter Velez

Tower Engineering Solutions
Phone (972) 483-0607, Fax (972) 975-9615
1320 Greenway Drive, Suite 600, Irving, Texas 75038

Structural Analysis Report

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Analysis Result:

Max Structural Usage: 74.8% [Pass]

Max Foundation Usage: 63.2% [Pass]

Additional Usage Caused by Mount Modification:

Report Prepared By: Walter Velez

Introduction

The purpose of this report is to summarize the analysis results on the 140 ft ROHN Monopole to support the proposed antennas and transmission lines in addition to those currently installed. Any modification listed under Sources of Information was assumed completed and was included in this analysis.

Sources of Information

Tower Drawings	Original structural design report & shaft section data prepared by ROHN. Dated 02-04-2010. Drawing No 606820-01-D1 Rev2. File No 0606820. Previous structural report prepared by Tower Engineering Solutions. Dated 06-28-2021. TES Project No 110784.
Foundation Drawing	Original foundation calculations & Drawings prepared by ROHN. Dated 12-02-2009. Drawing No 606820-01-F1 Rev2 & 606820-01-F2 Rev 2. File No 0606820.
Geotechnical Report	Geotechnical report prepared by Tower Engineering Professionals, Inc. Dated 03-01-2010. Project No 093184.01 Rev 1.
Modification Drawings	Previous modifications by FDH Engineering, Inc. Dated 06-26-2012. Project No 12-02719E S1. / Modification inspection report prepared by FDH Engineering, Inc. Dated 08-30-2012. Project No 1206095TC1.
Mount Analysis	Verizon (App#: 151776, v3)

Analysis Criteria

The rigorous analysis was performed in accordance with the requirements and stipulations of the TIA-

In accordance with this standard, the structure was analyzed using **TESPoles,** a proprietary analysis software. The program considers the structure as an elastic 3-D model with second-order effects and temperature effects incorporated in the analysis. The analysis was performed using multiple wind directions.

Wind Speed Used in the Analysis:	Ultimate Design Wind Speed V_{ult} = 125.0 mph (3-Sec. Gust)
(Based on IBC 2015)	Nominal Design Wind Speed V_{asd} = 97.0 mph (3-Sec. Gust)
Wind Speed with Ice:	50 mph (3-Sec. Gust) with 1" radial ice concurrent
Operational Wind Speed:	60 mph + 0" Radial ice
Standard/Codes:	TIA-222-G-2, 2015 IBC & 2018 Connecticut State Building Code
Exposure Category:	
Structure Class:	
Topographic Category:	
Crest Height:	0 ft.
Seismic Parameters:	

This structural analysis is based upon the tower being classified as a Structure 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.

Existing Antennas, Mounts and Transmission Lines

The table below summarizes the antennas, mounts and transmission lines that were considered in the analysis as existing on the tower.

Items	Elevation (ft.)	Qty.	Antenna Descriptions	Mount Type & Qty.	Transmission Lines	Owner
			Ericsson AIR 21 B2A/B4P - Panel	(3) T-Arms	(2) 1 1/4" Fiber	T-Mobile
			RFS APXVAARR24_43-U-NA20 (Octa) - Panel			
			Ericsson AIR32 KRD901146-1_B66A (Octa) - Panel			
			Ericsson KRY 112 144/2 TMA's			
			Ericsson Radio 4449 B71 + B12			
			Andrew SBNHH-1D65B w/ 126 Mount Pipe - Panel	(3) T-Arms w/ (3) Commscope 12'-6" long 2.0" STD Pipe & SitePro1 PRK-1245 kit	(6) 1 5/8" Coax; Hybrid	Verizon
			Samsung XXDWMM-12.5-65-8TCBRS_Port1_3550_8D T integrated antenna with RRH RT4401- Panel			
			Antel LPA-80063/6CF_5 - Panel			
			Samsung CBRS RRH - RT4401-48A RRU's			
			Samsung B5/B13 RRHBR04C (RFV01UD2A) RRU's			
			Samsung B2/B66A RRHBR049 (RFV01UD1A) RRU's			
			RFS DB-T1-6Z-8AB-0Z DC Surge			
			Andrew SBNH-1D6565C - Panel	Platform w/ Hand Rails	[(1) Fiber + (2) DC Cables inside (1) 3" Conduit]*	
			KMW AM-X-CD-16-65-00T-RET - Panel			
			Powerwave 7020.00			
			Powerwave P65-16-XLH-RR - Panel			
			Powerwave P65-17-XLH-RR - Panel			
			Powerwave TT08-19DB111-001			
			Andrew RRUS11 RRUs	(1) Valmont LWRM Ring Mount		
			Raycap DC6-48-60-18-8F			

* Existing (1) Fiber + (2) DC Power lines installed inside (1) 3" Conduit running outside of the pole shaft and exposed to wind.

Proposed Carrier's Final Configuration of Antennas, Mounts and Transmission Lines

Information pertaining to the proposed carrier's final configuration of antennas and transmission lines was provided by SBA Communications Corp. The proposed antennas and lines are listed below.

Items	Elevation (ft.)	Qty.	Antenna Descriptions	Mount Type & Qty.	Transmission Lines	Owner
			Antel LPA-80063/6CF_5 - Panel	(3) T-Arms w/ (3) Commscope 12'-6" long 2.0" STD Pipe & SitePro1 PRK-1245 kit	Coax; Hybrid	Verizon
			Samsung XXDWMM-12.5-65-8TCBRS_Port1_3550_8D T integrated antenna with RRH RT4401 - Panel			
			Andrew SBNHH-1D65B w/ 126 Mount Pipe - Panel			
			Samsung MT6407-77A - Panel			
			Samsung B2/B66A RRHBR049 (RFV01UD1A) RRU's			
			Samsung B5/B13 RRHBR04C (RFV01UD2A) RRU's			
			Samsung CBRS RRH - RT4401-48A RRU's			
			Commscope FE-16148-OVP-B12 OVP			

All transmission lines are considered running inside of the pole shafts. Please see the attached coax layout for the line placement considered in the analysis.

Analysis Results

The results of the structural analysis, performed for the wind and ice loading and antenna equipment as defined above, are summarized as the following:

	Pole shafts	Anchor Bolts	Base Plate
Max. Usage:			
Pass/Fail	**Pass**	**Pass**	**Pass**

Foundations

	Moment (Kip-Ft)	Shear (Kips)	Axial (Kips)
Original Design Reactions			
Analysis Reactions			
Factored Reactions*			

* Per section 15.5.1 of the TIA-222-G standard, factored reactions were obtained by multiplying a 1.35 factor to the original design reactions.

The foundation has been investigated using the supplied documents and soils report and was found adequate. Therefore, no modification to the foundation will be required.

Operational Condition (Rigidity):

Operational characteristics of the tower are found to be within the limits prescribed by TIA-222 for the installed antennas. The maximum twist/sway at the elevation of the proposed equipment is 1.1887 degrees under the operational wind speed as specified in the Analysis Criteria.

Conclusions

Based on the analysis results, the existing structure and its foundation were found to be adequate to safely support the existing and proposed equipment and meet the minimum requirements per the ANSI/TIA-222-G standards, the 2015 IBC and the 2018 Connecticut State Building Code under the design basic wind speed specified in the Analysis Criteria.

Standard Conditions

This analysis was performed based on the information supplied to **Tower Engineering Solutions,** Verification of the information provided was not included in the Scope of Work for . The accuracy of the analysis is dependent on the accuracy of the information provided.

The structural analysis was performance based upon the evidence available at the time of this report. All information provided by the client is considered to be accurate.

The analyses will be performed based on the codes as specified by the client or based on the best knowledge of the engineering staff of . In the absence of information to the contrary, all work will be performed in accordance with the latest relevant revision of ANSI/TIA-222. If wind speed and/or ice loads are different from the minimum values recommended by the ANSI/TIA-222 standard or other codes, should be notified in writing and the applicable minimum values provided by the client.

The configuration of the existing mounts, antennas, coax and other appurtenances were supplied by the customer for the current structural analysis. has not visited the tower site to verify the adequacy of the information provided. If there is any discrepancy found in the report regarding the existing conditions, should be notified immediately to evaluate the effect of the discrepancy on the analysis results.

The client will assume responsibility for rework associated with the differences in initially provided information, including tower and foundation information, existing and/or proposed equipment and transmission lines.

If a feasibility analysis was performed, final acceptance of changed conditions shall be based upon a rigorous structural analysis.

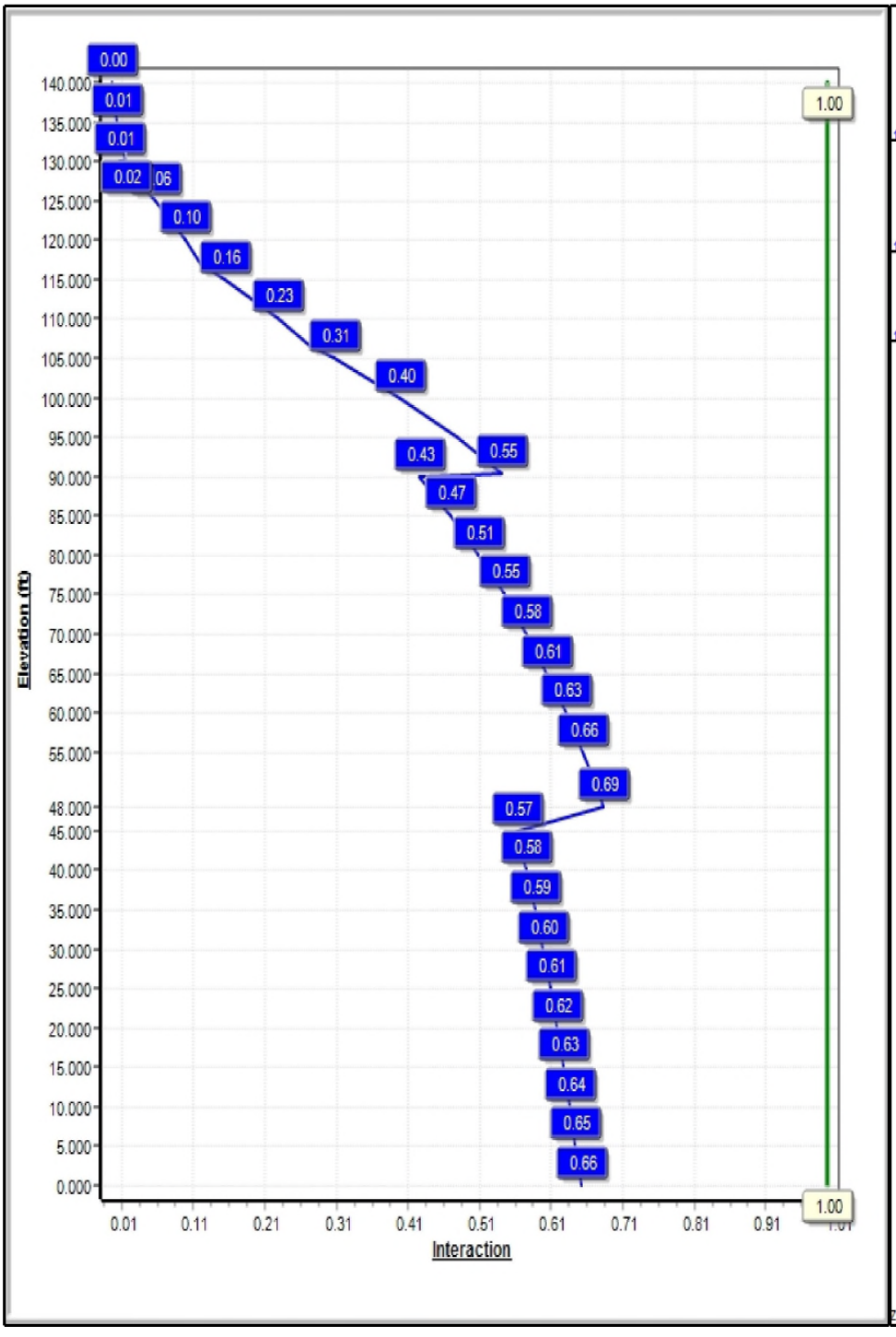
Usage Diagram - Max Ratio 68.80% at 48.0ft

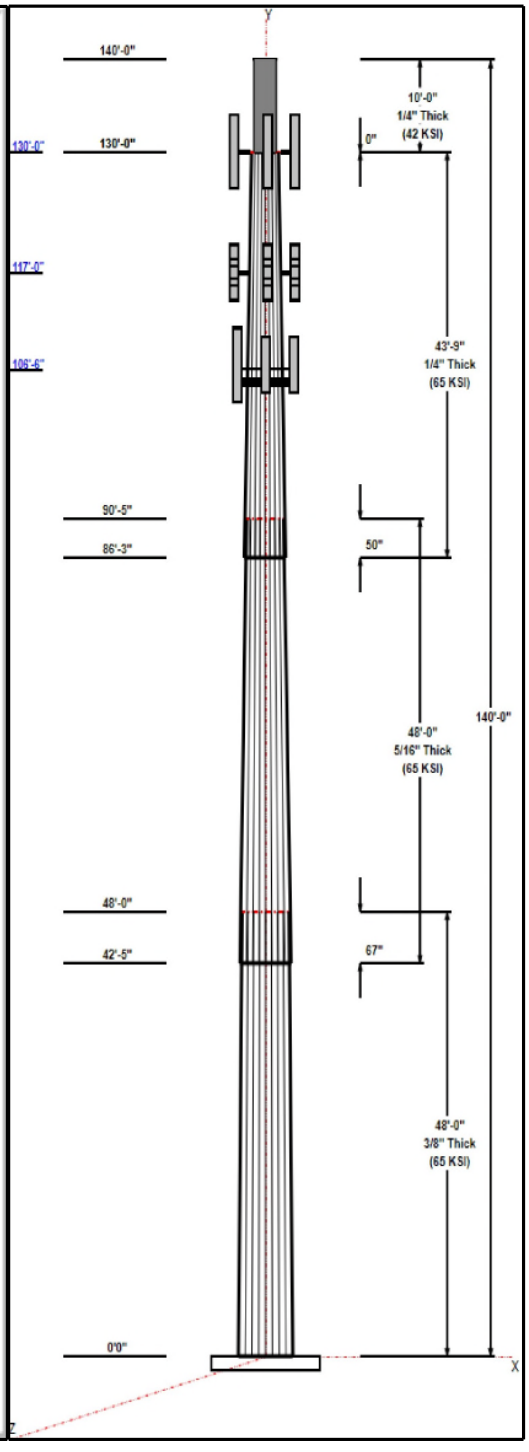
Structure:	CT13548-S-SBA	**Code:**	EIA/TIA-222-G	8/24/2021
Site Name:	Bloomfield 4	**Exposure:**	C	
Height:	140.00 (ft)	**Gh:**	1.1	
Base Elev:	0.000 (ft)			Page: 1

Tower Engineering Solutions

Dead Load Factor:	1.20	**Iterations:**	23
Wind Load Factor:	1.60		

Load Case : 1.2D + 1.6W 97 mph Wind





Structure: CT13548-S-SBA

Type: Custom
Site Name: Bloomfield 4
Height: 140.00 (ft)
Base Elev: 0.00 (ft)

Base Shape: 18 Sided
Taper: 0.25788

8/24/2021

Tower Engineering Solutions

Shaft Properties

Seq	Length (ft)	Top (in)	Bottom (in)	Thick (in)	Joint Type	Taper	Grade (ksi)
1	48.00	40.62	53.00	0.375		0.25788	65
2	48.00	30.31	42.69	0.313	Slip	0.25788	65
3	43.75	20.60	31.88	0.250	Slip	0.25788	65
4	10.00	20.00	20.00	0.250	Butt	0.00000	42

Discrete Appurtenances

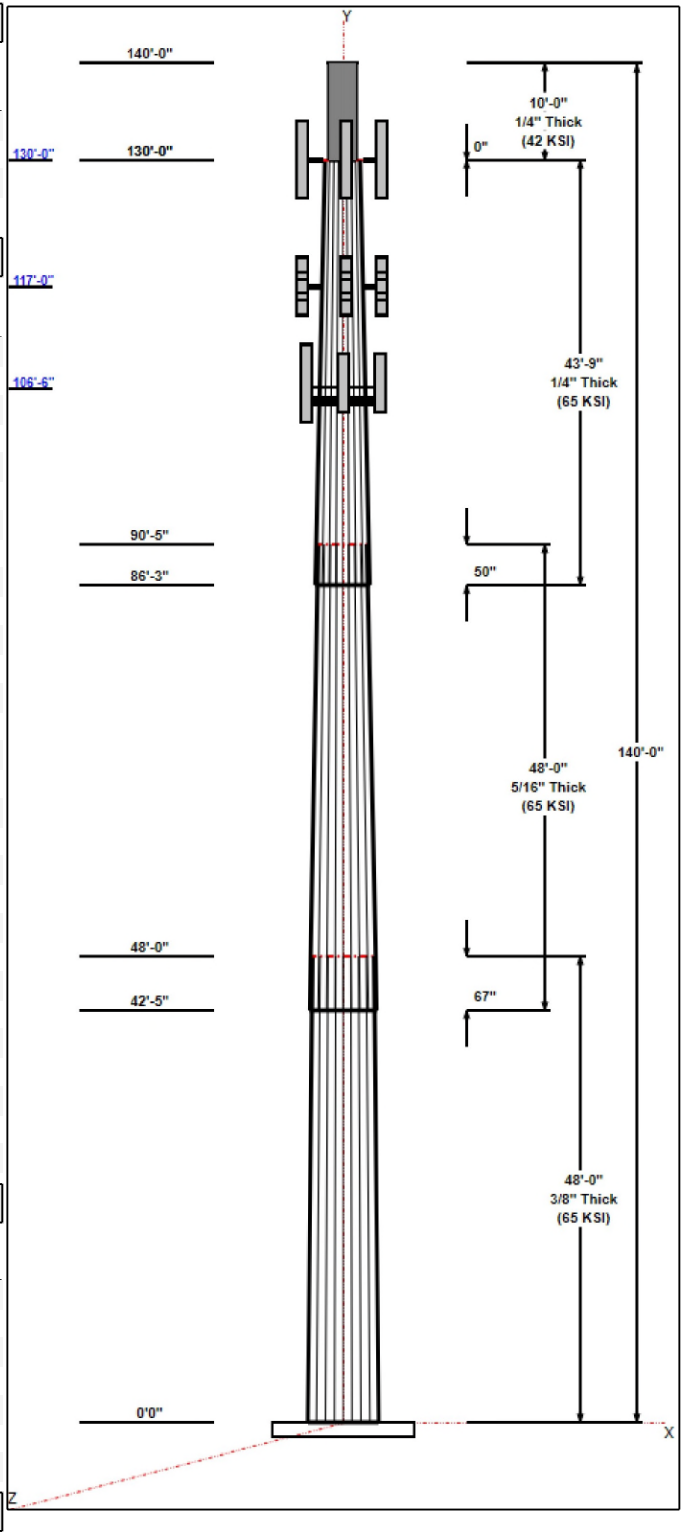
Attach Elev (ft)	Force Elev (ft)	Qty	Description	Carrier
140.00	143.50	1	Lightning Rod	---
130.00	130.00	3	RFS	T-Mobile
130.00	130.00	3	Ericsson AIR32	T-Mobile
130.00	130.00	3	Ericsson Radio 4449 B71	T-Mobile
130.00	130.00	3	T-Arms	T-Mobile
130.00	130.00	3	Ericsson AIR 21 B2A/B4P	T-Mobile
130.00	130.00	3	Ericsson KRY 112 144/2	T-Mobile
117.00	117.00	6	Antel LPA-80063/6CF_5	Verizon
117.00	117.00	3	Samsung	Verizon
117.00	117.00	6	Andrew SBNHH-1D65B w/	Verizon
117.00	117.00	3	Samsung MT6407-77A	Verizon
117.00	117.00	3	Commscope	Verizon
117.00	117.00	3	Samsung B2/B66A	Verizon
117.00	117.00	3	Samsung B5/B13	Verizon
117.00	117.00	3	Samsung CBRS RRH -	Verizon
117.00	117.00	1	Commscope	Verizon
117.00	117.00	3	T-Arms	Verizon
117.00	113.67	1	12'-6" long 2.0" STD Pipe	Verizon
117.00	119.00	1	SitePro1 PRK-1245 kit	Verizon
106.50	107.00	12	Powerwave	AT&T
106.50	107.00	12	Powerwave 7020.00	AT&T
106.50	106.50	1	Platform w/ Hand Rails	AT&T
106.50	107.00	9	Powerwave	AT&T
106.50	107.00	1	Powerwave	AT&T
106.50	107.00	1	Andrew SBNH-1D6565C	AT&T
106.50	107.00	1	KMW	AT&T
105.00	106.00	6	Andrew RRUS11 RRUs	AT&T
105.00	106.00	1	Raycap DC6-48-60-18-8F	AT&T
105.00	105.00	1	Valmont LWRM Ring	AT&T

Linear Appurtenances

Elev From (ft)	Elev To (ft)	Placement	Description	Carrier
3.00	130.00	Inside	1 1/4" Fiber	T-Mobile
3.00	130.00	Inside	1 5/8" Coax	T-Mobile
3.00	117.00	Inside	1 5/8" Coax	Verizon
3.00	117.00	Inside	1 5/8" Hybrid	Verizon
3.00	106.50	Inside	1 5/8" Coax	AT&T
3.00	106.50	Inside	1/2" Coax	AT&T
3.00	106.50	Outside	3" Conduit	AT&T

Anchor Bolts

Qty	Specifications	Grade (ksi)	Arrangement
24	1.5" F1554 105	105.0	Radial



Base Plate

Thickness (in)	Specifications (in)	Grade (ksi)	Geometry
2.0000	62.0	50.0	Round

Reactions

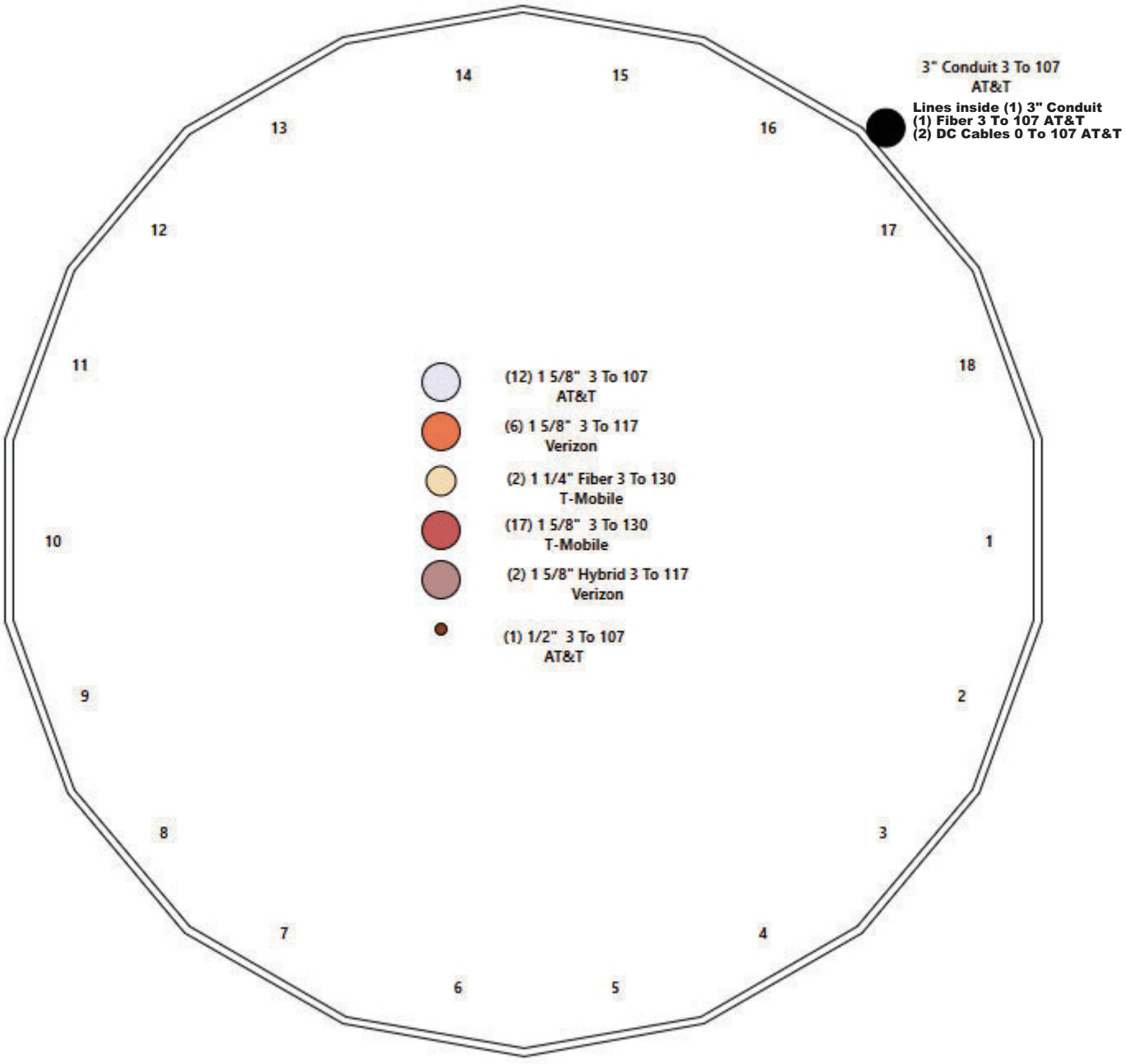
Load Case	Moment (FT-Kips)	Shear (Kips)	Axial (Kips)
1.2D + 1.6W 97 mph Wind	2912.1	29.4	39.2
0.9D + 1.6W 97 mph Wind	2885.4	29.4	29.4
1.2D + 1.0Di + 1.0Wi 50 mph Wind	848.2	8.5	68.6
1.2D + 1.0E	103.6	1.1	39.2
0.9D + 1.0E	102.6	1.1	29.4
1.0D + 1.0W 60 mph Wind	692.9	7.0	32.7

Structure: CT13548-S-SBA - Coax Line Placement

Type: Monopole
Site Name: Bloomfield 4
Height: 140.00 (ft)

8/24/2021

Tower Engineering Solutions



Shaft Properties

Structure:	CT13548-S-SBA		**Code:**	EIA/TIA-222-G	8/24/2021
Site Name:	Bloomfield 4		**Exposure:**	C	
Height:	140.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 5

Sec. No.	Shape	Length (ft)	Thick (in)	Fy (ksi)	Joint Type	Overlap (in)	Weight (lb)
1	18	48.000	0.3750	65		0.00	9,027
2	18	48.000	0.3125	65	Slip	67.00	5,862
3	18	43.750	0.2500	65	Slip	50.00	3,070
4	R	10.000	0.2500	42	Flange	0.00	528
					Total Shaft Weight:		**18,487**

	Bottom						Top						
Sec. No.	**Dia (in)**	**Elev (ft)**	**Area (sqin)**	**Ix (in^4)**	**W/t Ratio**	**D/t Ratio**	**Dia (in)**	**Elev (ft)**	**Area (sqin)**	**Ix (in^4)**	**W/t Ratio**	**D/t Ratio**	**Taper**
1	53.00	0.00	62.63	21915.53	23.51	141.33	40.62	48.00	47.90	9803.05	17.69	108.3	0.257885
2	42.69	42.42	42.03	9534.32	22.68	136.60	30.31	90.42	29.75	3381.89	15.69	96.99	0.257885
3	31.88	86.25	25.10	3173.09	21.08	127.53	20.60	130.00	16.15	844.85	13.12	82.40	0.257885
4	20.00	130.0	15.51	756.89	0.00	80.00	20.00	140.00	15.51	756.89	0.00	80.00	0.000000

Load Summary

Structure:	CT13548-S-SBA	**Code:**	EIA/TIA-222-G	8/24/2021	
Site Name:	Bloomfield 4	**Exposure:**	C		
Height:	140.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 6	

Tower Engineering Solutions

Discrete Appurtenances

				No Ice			Ice				
No.	Elev (ft)	Description	Qty	Weight (lb)	CaAa (sf)	CaAa Factor	Weight (lb)	CaAa (sf)	CaAa Factor	Hor. Ecc. (ft)	Vert Ecc (ft)
1	140.00	Lightning Rod	1	35.00	1.05	1.00	76.60	4.193	1.00	0.00	3.50
2	130.00	RFS APXVAARR24_43-U-NA20	3	128.00	20.24	0.72	716.14	22.767	0.72	0.00	0.00
3	130.00	Ericsson AIR32 KRD901146-1_B66A	3	132.20	6.51	0.86	388.68	8.075	0.86	0.00	0.00
4	130.00	Ericsson Radio 4449 B71 + B12	3	74.00	1.63	0.67	141.90	2.303	0.67	0.00	0.00
5	130.00	T-Arms	3	350.00	8.00	0.75	671.14	17.176	0.75	0.00	0.00
6	130.00	Ericsson AIR 21 B2A/B4P	3	83.00	6.05	0.86	318.76	7.517	0.86	0.00	0.00
7	130.00	Ericsson KRY 112 144/2 TMA's	3	11.02	0.35	0.60	25.22	0.883	0.60	0.00	0.00
8	117.00	Antel LPA-80063/6CF_5	6	27.00	9.59	0.95	362.72	13.151	0.95	0.00	0.00
9	117.00	Samsung XXDWMM-12.5-65	3	23.10	1.54	0.75	63.49	1.951	0.75	0.00	0.00
10	117.00	Andrew SBNHH-1D65B w/ 126	6	40.00	8.16	0.83	319.58	9.886	0.83	0.00	0.00
11	117.00	Samsung MT6407-77A	3	87.10	4.71	0.70	252.57	5.939	0.70	0.00	0.00
12	117.00	Commscope BSAMNT-SBS-1-2	3	67.40	0.09	0.60	128.60	0.172	0.60	0.00	0.00
13	117.00	Samsung B2/B66A RRHBR049	3	84.00	1.88	0.67	150.35	2.597	0.67	0.00	0.00
14	117.00	Samsung B5/B13 RRHBR04C	3	73.30	1.88	0.67	139.25	2.597	0.67	0.00	0.00
15	117.00	Samsung CBRS RRH - RT4401-48A	3	23.14	1.53	0.67	45.35	2.236	0.67	0.00	0.00
16	117.00	Commscope FE-16148-OVP-B12	1	15.10	1.87	0.67	66.91	3.143	0.67	0.00	0.00
17	117.00	T-Arms	3	350.00	8.00	0.75	667.78	17.079	0.75	0.00	0.00
18	117.00	12'-6" long 2.0" STD Pipe	1	261.72	6.75	1.00	665.68	15.330	1.00	0.00	-3.33
19	117.00	SitePro1 PRK-1245 kit	1	464.91	9.50	1.00	887.02	22.438	1.00	0.00	2.00
20	106.50	Powerwave TT08-19DB111-001	12	22.00	0.92	0.60	56.29	1.872	0.60	0.00	0.50
21	106.50	Powerwave 7020.00	12	2.20	0.40	0.60	15.38	1.024	0.60	0.00	0.50
22	106.50	Platform w/ Hand Rails	1	2000.00	40.00	1.00	4698.33	66.983	1.00	0.00	0.00
23	106.50	Powerwave P65-16-XLH-RR	9	53.00	8.16	0.80	265.66	11.771	0.80	0.00	0.50
24	106.50	Powerwave P65-17-XLH-RR	1	59.00	11.44	0.80	338.08	15.607	0.80	0.00	0.50
25	106.50	Andrew SBNH-1D6565C	1	66.10	11.47	0.80	362.30	15.659	0.80	0.00	0.50
26	106.50	KMW AM-X-CD-16-65-00T-RET	1	48.50	8.02	0.78	257.58	11.620	0.78	0.00	0.50
27	105.00	Andrew RRUS11 RRUs	6	50.70	2.52	0.67	173.03	3.379	0.67	0.00	1.00
28	105.00	Raycap DC6-48-60-18-8F	1	32.80	1.47	0.67	112.34	2.370	0.67	0.00	1.00
29	105.00	Valmont LWRM Ring Mount	1	350.00	5.00	0.80	727.23	9.491	0.80	0.00	0.00
		Totals:	**100**	**9,265.51**			**27,702.71**				

Linear Appurtenances

Bottom Elev. (ft)	Top Elev. (ft)	Description	Exposed Width	Exposed
3.00	130.00	(2) 1 1/4" Fiber	0.00	Inside
3.00	130.00	(17) 1 5/8" Coax	0.00	Inside
3.00	117.00	(6) 1 5/8" Coax	0.00	Inside
3.00	117.00	(2) 1 5/8" Hybrid	0.00	Inside
3.00	106.50	(12) 1 5/8" Coax	0.00	Inside
3.00	106.50	(1) 1/2" Coax	0.00	Inside
3.00	106.50	(1) 3" Conduit	0.00	Outside

Shaft Section Properties

Structure:	CT13548-S-SBA	**Code:**	EIA/TIA-222-G	8/24/2021	
Site Name:	Bloomfield 4	**Exposure:**	C		
Height:	140.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 7	

Increment Length: **5 (ft)**

Elev (ft)	Description	Thick (in)	Dia (in)	Area (in^2)	Ix (in^4)	W/t Ratio	D/t Ratio	Fpy (ksi)	S (in^3)	Weight (lb)
0.00		0.3750	53.000	62.635	21915.5	23.51	141.33	73.7	814.4	0.0
5.00		0.3750	51.711	61.100	20343.7	22.90	137.89	74.5	774.9	1052.6
10.00		0.3750	50.421	59.565	18849.0	22.30	134.46	75.2	736.3	1026.5
15.00		0.3750	49.132	58.031	17429.3	21.69	131.02	75.9	698.7	1000.4
20.00		0.3750	47.842	56.496	16082.7	21.09	127.58	76.6	662.1	974.3
25.00		0.3750	46.553	54.961	14807.4	20.48	124.14	77.3	626.5	948.2
30.00		0.3750	45.263	53.427	13601.3	19.87	120.70	78.0	591.9	922.0
35.00		0.3750	43.974	51.892	12462.5	19.27	117.26	78.7	558.2	895.9
40.00		0.3750	42.685	50.357	11389.2	18.66	113.83	79.5	525.5	869.8
42.42	Bot - Section 2	0.3750	42.061	49.615	10893.3	18.37	112.16	79.8	510.1	411.1
45.00		0.3750	41.395	48.823	10379.3	18.05	110.39	80.2	493.9	799.2
48.00	Top - Section 1	0.3125	41.247	40.600	8595.0	21.86	131.99	0.0	0.0	912.1
50.00		0.3125	40.731	40.088	8274.2	21.57	130.34	76.0	400.1	274.6
55.00		0.3125	39.441	38.810	7507.3	20.84	126.21	76.9	374.9	671.2
60.00		0.3125	38.152	37.531	6789.3	20.12	122.09	77.7	350.5	649.4
65.00		0.3125	36.862	36.252	6118.7	19.39	117.96	78.6	326.9	627.7
70.00		0.3125	35.573	34.973	5493.7	18.66	113.83	79.5	304.2	605.9
75.00		0.3125	34.284	33.694	4912.8	17.93	109.71	80.3	282.2	584.1
80.00		0.3125	32.994	32.415	4374.3	17.21	105.58	81.2	261.1	562.4
85.00		0.3125	31.705	31.136	3876.7	16.48	101.46	82.0	240.8	540.6
86.25	Bot - Section 3	0.3125	31.382	30.816	3758.5	16.30	100.42	82.2	235.9	131.8
90.00		0.3125	30.415	29.857	3418.4	15.75	97.33	82.5	221.4	702.5
90.42	Top - Section 2	0.2500	30.808	24.247	2860.6	20.32	123.23	0.0	0.0	76.7
95.00		0.2500	29.626	23.309	2541.3	19.48	118.50	78.5	169.0	370.8
100.00		0.2500	28.337	22.286	2221.2	18.58	113.35	79.6	154.4	387.9
105.00		0.2500	27.047	21.263	1929.1	17.67	108.19	80.6	140.5	370.5
106.50		0.2500	26.660	20.956	1846.7	17.39	106.64	80.9	136.4	107.7
110.00		0.2500	25.758	20.240	1663.8	16.76	103.03	81.7	127.2	245.3
115.00		0.2500	24.468	19.217	1424.0	15.85	97.87	82.5	114.6	335.7
117.00		0.2500	23.952	18.807	1335.0	15.48	95.81	82.5	109.8	129.4
120.00		0.2500	23.179	18.193	1208.5	14.94	92.72	82.5	102.7	188.9
125.00		0.2500	21.889	17.170	1015.8	14.03	87.56	82.5	91.4	300.8
130.00	Top - Section 3	0.2500	20.600	16.147	844.8	13.12	82.40	82.5	80.8	283.4
130.00	Bot - Section 4	0.2500	20.000	15.512	756.9	13.12	82.40	41.7	75.7	
135.00		0.2500	20.000	15.512	756.9	0.00	80.00	41.7	75.7	263.9
140.00		0.2500	20.000	15.512	756.9	0.00	80.00	41.7	75.7	263.9
										18487.1

Wind Loading - Shaft

Structure:	CT13548-S-SBA	**Code:**	EIA/TIA-222-G	8/24/2021	
Site Name:	Bloomfield 4	**Exposure:**	C		
Height:	140.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 8	

Tower Engineering Solutions

Load Case: 1.2D + 1.6W 97 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.60

Iterations 23

Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.85	19.450	21.40	401.07	0.650	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.85	19.450	21.40	391.32	0.650	0.000	5.00	22.151	14.40	492.9	0.0	1263.1
10.00		1.00	0.85	19.450	21.40	381.56	0.650	0.000	5.00	21.606	14.04	480.8	0.0	1231.8
15.00		1.00	0.85	19.450	21.40	371.80	0.650	0.000	5.00	21.060	13.69	468.6	0.0	1200.5
20.00		1.00	0.90	20.638	22.70	372.93	0.650	0.000	5.00	20.515	13.33	484.3	0.0	1169.1
25.00		1.00	0.95	21.630	23.79	371.50	0.650	0.000	5.00	19.969	12.98	494.1	0.0	1137.8
30.00		1.00	0.98	22.477	24.72	368.21	0.650	0.000	5.00	19.423	12.63	499.4	0.0	1106.5
35.00		1.00	1.01	23.218	25.54	363.57	0.650	0.000	5.00	18.878	12.27	501.4	0.0	1075.1
40.00		1.00	1.04	23.880	26.27	357.91	0.650	0.000	5.00	18.332	11.92	500.8	0.0	1043.8
42.42	Bot - Section 2	1.00	1.06	24.177	26.59	354.87	0.650	0.000	2.42	8.665	5.63	239.7	0.0	493.3
45.00		1.00	1.07	24.479	26.93	351.43	0.650	0.000	2.58	9.258	6.02	259.3	0.0	959.0
48.00	Top - Section 1	1.00	1.08	24.814	27.30	347.21	0.650	0.000	3.00	10.569	6.87	300.0	0.0	1094.5
50.00		1.00	1.09	25.029	27.53	349.64	0.650	0.000	2.00	6.937	4.51	198.6	0.0	329.5
55.00		1.00	1.12	25.536	28.09	341.99	0.650	0.000	5.00	16.960	11.02	495.5	0.0	805.4
60.00		1.00	1.14	26.008	28.61	333.85	0.650	0.000	5.00	16.415	10.67	488.4	0.0	779.3
65.00		1.00	1.16	26.450	29.09	325.30	0.650	0.000	5.00	15.869	10.31	480.2	0.0	753.2
70.00		1.00	1.17	26.866	29.55	316.38	0.650	0.000	5.00	15.324	9.96	471.0	0.0	727.1
75.00		1.00	1.19	27.259	29.98	307.13	0.650	0.000	5.00	14.778	9.61	460.8	0.0	701.0
80.00		1.00	1.21	27.632	30.39	297.60	0.650	0.000	5.00	14.232	9.25	449.9	0.0	674.9
85.00		1.00	1.22	27.987	30.79	287.80	0.650	0.000	5.00	13.687	8.90	438.2	0.0	648.8
86.25	Bot - Section 3	1.00	1.23	28.073	30.88	285.31	0.650	0.000	1.25	3.336	2.17	107.2	0.0	158.1
90.00		1.00	1.24	28.325	31.16	277.76	0.650	0.000	3.75	9.964	6.48	322.9	0.0	843.0
90.42	Top - Section 2	1.00	1.24	28.353	31.19	276.91	0.650	0.000	0.42	1.088	0.71	35.3	0.0	92.0
95.00		1.00	1.25	28.650	31.51	272.09	0.650	0.000	4.58	11.719	7.62	384.1	0.0	445.0
100.00		1.00	1.27	28.961	31.86	261.66	0.650	0.000	5.00	12.262	7.97	406.2	0.0	465.4
105.00	Appurtenance(s)	1.00	1.28	29.260	32.19	251.04	0.650	0.000	5.00	11.716	7.62	392.2	0.0	444.6
106.50	Appurtenance(s)	1.00	1.28	29.347	32.28	247.82	0.650	0.000	1.50	3.408	2.22	114.4	0.0	129.3
110.00		1.00	1.29	29.548	32.50	240.25	0.650	0.000	3.50	7.762	5.05	262.4	0.0	294.4
115.00		1.00	1.30	29.826	32.81	229.29	0.650	0.000	5.00	10.625	6.91	362.5	0.0	402.8
117.00	Appurtenance(s)	1.00	1.31	29.934	32.93	224.86	0.650	0.000	2.00	4.097	2.66	140.3	0.0	155.3
120.00		1.00	1.32	30.094	33.10	218.18	0.650	0.000	3.00	5.982	3.89	206.0	0.0	226.6
125.00		1.00	1.33	30.354	33.39	206.93	0.650	0.000	5.00	9.534	6.20	331.1	0.0	361.0
130.00	Top - Section 3	1.00	1.34	30.605	33.67	195.55	0.650	0.000	5.00	8.989	5.84	314.7	0.0	340.1
135.00		1.00	1.35	30.850	33.93	187.71	0.600	0.000	5.00	8.333	5.00	271.5	0.0	316.7
140.00	Appurtenance(s)	1.00	1.36	31.087	34.20	188.43	0.600	0.000	5.00	8.333	5.00	273.6	0.0	316.7
								Totals:	**140.00**			**12,128.2**		**22,184.5**

Discrete Appurtenance Forces

Structure:	CT13548-S-SBA	**Code:**	EIA/TIA-222-G	8/24/2021	
Site Name:	Bloomfield 4	**Exposure:**	C		
Height:	140.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 9	

Load Case: 1.2D + 1.6W 97 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.60

Iterations 23

No.	Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	Orient Factor x Ka	Ka	Total CaAa (sf)	Dead Load (lb)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)
1	140.00	Lightning Rod	1	31.249	34.374	1.00	1.00	1.05	42.00	0.000	3.500	57.75	0.00	202.12
2	130.00	Ericsson Radio 4449 B71	3	30.605	33.666	0.54	0.80	2.62	266.40	0.000	0.000	141.18	0.00	0.00
3	130.00	Ericsson AIR32	3	30.605	33.666	0.69	0.80	13.44	475.92	0.000	0.000	723.77	0.00	0.00
4	130.00	RFS	3	30.605	33.666	0.58	0.80	34.97	460.80	0.000	0.000	1883.93	0.00	0.00
5	130.00	T-Arms	3	30.605	33.666	0.75	1.00	18.00	1260.00	0.000	0.000	969.58	0.00	0.00
6	130.00	Ericsson AIR 21 B2A/B4P	3	30.605	33.666	0.69	0.80	12.49	298.80	0.000	0.000	672.63	0.00	0.00
7	130.00	Ericsson KRY 112 144/2	3	30.605	33.666	0.48	0.80	0.50	39.67	0.000	0.000	27.15	0.00	0.00
8	117.00	SitePro1 PRK-1245 kit	1	30.041	33.045	0.75	0.75	7.13	557.89	0.000	2.000	376.71	0.00	753.43
9	117.00	12'-6" long 2.0" STD Pipe	1	29.753	32.728	0.75	0.75	5.06	314.06	0.000	-3.330	265.10	0.00	-882.77
10	117.00	T-Arms	3	29.934	32.927	0.56	0.75	13.50	1260.00	0.000	0.000	711.23	0.00	0.00
11	117.00	Commscope	1	29.934	32.927	0.54	0.80	1.00	18.12	0.000	0.000	52.81	0.00	0.00
12	117.00	Samsung CBRS RRH -	3	29.934	32.927	0.54	0.80	2.46	83.30	0.000	0.000	129.61	0.00	0.00
13	117.00	Samsung B5/B13	3	29.934	32.927	0.54	0.80	3.02	263.88	0.000	0.000	159.27	0.00	0.00
14	117.00	Samsung B2/B66A	3	29.934	32.927	0.54	0.80	3.02	302.40	0.000	0.000	159.27	0.00	0.00
15	117.00	Commscope	3	29.934	32.927	0.48	0.80	0.13	242.64	0.000	0.000	6.83	0.00	0.00
16	117.00	Andrew SBNHH-1D65B w/	6	29.934	32.927	0.66	0.80	32.51	288.00	0.000	0.000	1712.72	0.00	0.00
17	117.00	Samsung	3	29.934	32.927	0.60	0.80	2.77	83.16	0.000	0.000	146.04	0.00	0.00
18	117.00	Antel LPA-80063/6CF_5	6	29.934	32.927	0.76	0.80	43.73	194.40	0.000	0.000	2303.89	0.00	0.00
19	117.00	Samsung MT6407-77A	3	29.934	32.927	0.56	0.80	7.91	313.56	0.000	0.000	416.88	0.00	0.00
20	106.50	Platform w/ Hand Rails	1	29.347	32.282	1.00	1.00	40.00	2400.00	0.000	0.000	2066.05	0.00	0.00
21	106.50	Powerwave	12	29.376	32.314	0.45	0.75	4.97	316.80	0.000	0.500	256.86	0.00	128.43
22	106.50	Powerwave 7020.00	12	29.376	32.314	0.45	0.75	2.16	31.68	0.000	0.500	111.68	0.00	55.84
23	106.50	Powerwave	1	29.376	32.314	0.60	0.75	6.86	70.80	0.000	0.500	354.88	0.00	177.44
24	106.50	Powerwave	9	29.376	32.314	0.60	0.75	44.06	572.40	0.000	0.500	2278.20	0.00	1139.10
25	106.50	Andrew SBNH-1D6565C	1	29.376	32.314	0.60	0.75	6.88	79.32	0.000	0.500	355.81	0.00	177.91
26	106.50	KMW	1	29.376	32.314	0.58	0.75	4.69	58.20	0.000	0.500	242.57	0.00	121.29
27	105.00	Valmont LWRM Ring	1	29.260	32.186	0.64	0.80	3.20	420.00	0.000	0.000	164.79	0.00	0.00
28	105.00	Raycap DC6-48-60-18-8F	1	29.318	32.250	0.54	0.80	0.79	39.36	0.000	1.000	40.66	0.00	40.66
29	105.00	Andrew RRUS11 RRUs	6	29.318	32.250	0.54	0.80	8.10	365.04	0.000	1.000	418.18	0.00	418.18
							Totals:		**11,118.61**			**17,206.02**		

Total Applied Force Summary

Structure:	CT13548-S-SBA		**Code:**	EIA/TIA-222-G	8/24/2021
Site Name:	Bloomfield 4		**Exposure:**	C	
Height:	140.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 10

Tower Engineering Solutions

Load Case: 1.2D + 1.6W 97 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.60

Iterations 23

Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
5.00		492.89	1365.00	0.00	0.00
10.00		480.75	1486.49	0.00	0.00
15.00		468.61	1455.16	0.00	0.00
20.00		484.34	1423.83	0.00	0.00
25.00		494.13	1392.49	0.00	0.00
30.00		499.44	1361.16	0.00	0.00
35.00		501.42	1329.83	0.00	0.00
40.00		500.82	1298.49	0.00	0.00
42.42		239.66	616.37	0.00	0.00
45.00		259.28	1090.64	0.00	0.00
48.00		300.03	1247.31	0.00	0.00
50.00		198.62	431.36	0.00	0.00
55.00		495.46	1060.12	0.00	0.00
60.00		488.38	1034.01	0.00	0.00
65.00		480.18	1007.89	0.00	0.00
70.00		470.96	981.78	0.00	0.00
75.00		460.84	955.67	0.00	0.00
80.00		449.90	929.56	0.00	0.00
85.00		438.21	903.45	0.00	0.00
86.25		107.15	221.78	0.00	0.00
90.00		322.86	1034.02	0.00	0.00
90.42		35.29	113.26	0.00	0.00
95.00		384.10	678.49	0.00	0.00
100.00		406.25	720.15	0.00	0.00
105.00	(8) attachments	1015.81	1523.66	0.00	458.84
106.50	(37) attachments	5780.49	3734.90	0.00	1800.00
110.00		262.38	412.82	0.00	0.00
115.00		362.54	571.98	0.00	0.00
117.00	(36) attachments	6580.66	4144.36	0.00	-129.34
120.00		205.96	297.76	0.00	0.00
125.00		331.07	479.56	0.00	0.00
130.00	(18) attachments	4732.95	3260.27	0.00	0.00
135.00		271.48	316.70	0.00	0.00
140.00	(1) attachments	331.31	358.70	0.00	202.12
	Totals:	**29,334.20**	**39,239.01**	**0.00**	**2,331.62**

Linear Appurtenance Segment Forces (Factored)

Structure:	CT13548-S-SBA	**Code:**	EIA/TIA-222-G	8/24/2021	
Site Name:	Bloomfield 4	**Exposure:**	C		
Height:	140.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 11	

Load Case: 1.2D + 1.6W 97 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.60

Iterations 23

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
5.00	3" Conduit	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	19.450	0.00	3.86
10.00	3" Conduit	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	19.450	0.00	9.66
15.00	3" Conduit	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	19.450	0.00	9.66
20.00	3" Conduit	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	20.638	0.00	9.66
25.00	3" Conduit	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	21.630	0.00	9.66
30.00	3" Conduit	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	22.477	0.00	9.66
35.00	3" Conduit	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	23.218	0.00	9.66
40.00	3" Conduit	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	23.880	0.00	9.66
42.42	3" Conduit	Yes	2.42	0.000	0.00	0.00	0.00	0.000	0.000	24.177	0.00	4.67
45.00	3" Conduit	Yes	2.58	0.000	0.00	0.00	0.00	0.000	0.000	24.479	0.00	4.99
48.00	3" Conduit	Yes	3.00	0.000	0.00	0.00	0.00	0.000	0.000	24.814	0.00	5.80
50.00	3" Conduit	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	25.029	0.00	3.86
55.00	3" Conduit	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	25.536	0.00	9.66
60.00	3" Conduit	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	26.008	0.00	9.66
65.00	3" Conduit	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	26.450	0.00	9.66
70.00	3" Conduit	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	26.866	0.00	9.66
75.00	3" Conduit	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	27.259	0.00	9.66
80.00	3" Conduit	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	27.632	0.00	9.66
85.00	3" Conduit	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	27.987	0.00	9.66
86.25	3" Conduit	Yes	1.25	0.000	0.00	0.00	0.00	0.000	0.000	28.073	0.00	2.42
90.00	3" Conduit	Yes	3.75	0.000	0.00	0.00	0.00	0.000	0.000	28.325	0.00	7.25
90.42	3" Conduit	Yes	0.42	0.000	0.00	0.00	0.00	0.000	0.000	28.353	0.00	0.81
95.00	3" Conduit	Yes	4.58	0.000	0.00	0.00	0.00	0.000	0.000	28.650	0.00	8.85
100.00	3" Conduit	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	28.961	0.00	9.66
105.00	3" Conduit	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	29.260	0.00	9.66
106.50	3" Conduit	Yes	1.50	0.000	0.00	0.00	0.00	0.000	0.000	29.347	0.00	2.90
										Totals:	**0.0**	**200.0**

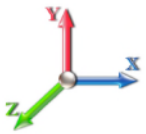
Calculated Forces

Structure:	CT13548-S-SBA	**Code:**	EIA/TIA-222-G	8/24/2021	
Site Name:	Bloomfield 4	**Exposure:**	C		
Height:	140.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 12	

Load Case: 1.2D + 1.6W 97 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.60



Iterations 23

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-39.19	-29.40	0.00	-2912.1	0.00	2912.12	4157.29	2078.64	8996.15	4504.76	0.00	0.000	0.000	0.656
5.00	-37.73	-29.03	0.00	-2765.1	0.00	2765.13	4094.64	2047.32	8641.94	4327.39	0.10	-0.184	0.000	0.648
10.00	-36.15	-28.66	0.00	-2620.0	0.00	2620.01	4030.02	2015.01	8290.37	4151.35	0.39	-0.373	0.000	0.640
15.00	-34.61	-28.30	0.00	-2476.7	0.00	2476.72	3963.43	1981.72	7941.76	3976.78	0.89	-0.565	0.000	0.632
20.00	-33.09	-27.91	0.00	-2335.2	0.00	2335.24	3894.87	1947.44	7596.41	3803.85	1.58	-0.761	0.000	0.623
25.00	-31.61	-27.51	0.00	-2195.7	0.00	2195.70	3824.34	1912.17	7254.65	3632.72	2.49	-0.962	0.000	0.613
30.00	-30.16	-27.09	0.00	-2058.1	0.00	2058.17	3751.84	1875.92	6916.79	3463.54	3.61	-1.166	0.000	0.602
35.00	-28.74	-26.67	0.00	-1922.7	0.00	1922.72	3677.38	1838.69	6583.15	3296.47	4.94	-1.374	0.000	0.591
40.00	-27.39	-26.21	0.00	-1789.3	0.00	1789.39	3600.94	1800.47	6254.04	3131.67	6.49	-1.586	0.000	0.579
42.42	-26.73	-26.00	0.00	-1726.0	0.00	1726.06	3563.29	1781.64	6096.69	3052.87	7.32	-1.692	0.000	0.573
45.00	-25.59	-25.76	0.00	-1658.8	0.00	1658.89	3522.53	1761.26	5929.77	2969.29	8.27	-1.806	0.000	0.566
48.00	-24.30	-25.47	0.00	-1581.6	0.00	1581.61	2765.58	1382.79	4652.71	2329.81	9.45	-1.939	0.000	0.688
50.00	-23.80	-25.33	0.00	-1530.6	0.00	1530.67	2743.08	1371.54	4556.27	2281.52	10.28	-2.030	0.000	0.680
55.00	-22.65	-24.89	0.00	-1404.0	0.00	1404.02	2685.46	1342.73	4317.17	2161.80	12.54	-2.282	0.000	0.658
60.00	-21.53	-24.46	0.00	-1279.5	0.00	1279.55	2625.87	1312.94	4081.16	2043.62	15.07	-2.536	0.000	0.635
65.00	-20.44	-24.02	0.00	-1157.2	0.00	1157.26	2564.31	1282.15	3848.56	1927.14	17.86	-2.792	0.000	0.609
70.00	-19.38	-23.59	0.00	-1037.1	0.00	1037.14	2500.78	1250.39	3619.69	1812.53	20.92	-3.047	0.000	0.580
75.00	-18.35	-23.16	0.00	-919.20	0.00	919.20	2435.28	1217.64	3394.85	1699.95	24.25	-3.300	0.000	0.549
80.00	-17.35	-22.73	0.00	-803.41	0.00	803.41	2367.81	1183.90	3174.36	1589.54	27.84	-3.549	0.000	0.513
85.00	-16.42	-22.28	0.00	-689.78	0.00	689.78	2298.37	1149.18	2958.55	1481.47	31.69	-3.792	0.000	0.473
86.25	-16.16	-22.19	0.00	-661.93	0.00	661.93	2280.70	1140.35	2905.36	1454.84	32.69	-3.854	0.000	0.462
90.00	-15.11	-21.82	0.00	-578.73	0.00	578.73	2218.24	1109.12	2736.97	1370.52	35.79	-4.030	0.000	0.429
90.42	-14.96	-21.81	0.00	-569.64	0.00	569.64	1691.27	845.64	2122.94	1063.05	36.14	-4.050	0.000	0.545
95.00	-14.23	-21.43	0.00	-469.70	0.00	469.70	1646.42	823.21	1986.06	994.50	40.13	-4.251	0.000	0.482
100.00	-13.46	-21.02	0.00	-362.56	0.00	362.56	1595.61	797.80	1839.56	921.15	44.70	-4.483	0.000	0.403
105.00	-11.98	-19.91	0.00	-257.00	0.00	257.00	1542.83	771.41	1696.33	849.43	49.51	-4.682	0.000	0.311
106.50	-8.71	-13.85	0.00	-225.34	0.00	225.34	1526.61	763.30	1654.04	828.25	50.99	-4.736	0.000	0.278
110.00	-8.30	-13.58	0.00	-176.85	0.00	176.85	1488.07	744.04	1556.67	779.49	54.50	-4.844	0.000	0.233
115.00	-7.74	-13.18	0.00	-108.97	0.00	108.97	1427.69	713.85	1417.28	709.69	59.63	-4.966	0.000	0.159
117.00	-4.18	-6.26	0.00	-82.61	0.00	82.61	1397.29	698.64	1357.25	679.64	61.72	-5.004	0.000	0.125
120.00	-3.90	-6.04	0.00	-63.82	0.00	63.82	1351.68	675.84	1269.65	635.77	64.88	-5.051	0.000	0.103
125.00	-3.44	-5.67	0.00	-33.65	0.00	33.65	1275.66	637.83	1130.14	565.91	70.20	-5.109	0.000	0.062
130.00	-0.62	-0.66	0.00	-5.32	0.00	5.32	1199.65	599.83	998.75	500.12	75.56	-5.136	0.000	0.011
130.00	-0.62	-0.66	0.00	-5.32	0.00	5.32	582.69	291.35	473.23	281.02	75.56	-5.136	0.000	0.020
135.00	-0.33	-0.36	0.00	-2.01	0.00	2.01	582.69	291.35	473.23	281.02	80.93	-5.142	0.000	0.008
140.00	0.00	-0.33	0.00	-0.20	0.00	0.20	582.69	291.35	473.23	281.02	86.31	-5.144	0.000	0.001

Wind Loading - Shaft

Structure:	CT13548-S-SBA	**Code:**	EIA/TIA-222-G	8/24/2021	
Site Name:	Bloomfield 4	**Exposure:**	C		
Height:	140.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 13	

Load Case: 0.9D + 1.6W 97 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60

Iterations 23

Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.85	19.450	21.40	401.07	0.650	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.85	19.450	21.40	391.32	0.650	0.000	5.00	22.151	14.40	492.9	0.0	947.3
10.00		1.00	0.85	19.450	21.40	381.56	0.650	0.000	5.00	21.606	14.04	480.8	0.0	923.8
15.00		1.00	0.85	19.450	21.40	371.80	0.650	0.000	5.00	21.060	13.69	468.6	0.0	900.3
20.00		1.00	0.90	20.638	22.70	372.93	0.650	0.000	5.00	20.515	13.33	484.3	0.0	876.8
25.00		1.00	0.95	21.630	23.79	371.50	0.650	0.000	5.00	19.969	12.98	494.1	0.0	853.3
30.00		1.00	0.98	22.477	24.72	368.21	0.650	0.000	5.00	19.423	12.63	499.4	0.0	829.8
35.00		1.00	1.01	23.218	25.54	363.57	0.650	0.000	5.00	18.878	12.27	501.4	0.0	806.3
40.00		1.00	1.04	23.880	26.27	357.91	0.650	0.000	5.00	18.332	11.92	500.8	0.0	782.8
42.42	Bot - Section 2	1.00	1.06	24.177	26.59	354.87	0.650	0.000	2.42	8.665	5.63	239.7	0.0	370.0
45.00		1.00	1.07	24.479	26.93	351.43	0.650	0.000	2.58	9.258	6.02	259.3	0.0	719.3
48.00	Top - Section 1	1.00	1.08	24.814	27.30	347.21	0.650	0.000	3.00	10.569	6.87	300.0	0.0	820.9
50.00		1.00	1.09	25.029	27.53	349.64	0.650	0.000	2.00	6.937	4.51	198.6	0.0	247.1
55.00		1.00	1.12	25.536	28.09	341.99	0.650	0.000	5.00	16.960	11.02	495.5	0.0	604.1
60.00		1.00	1.14	26.008	28.61	333.85	0.650	0.000	5.00	16.415	10.67	488.4	0.0	584.5
65.00		1.00	1.16	26.450	29.09	325.30	0.650	0.000	5.00	15.869	10.31	480.2	0.0	564.9
70.00		1.00	1.17	26.866	29.55	316.38	0.650	0.000	5.00	15.324	9.96	471.0	0.0	545.3
75.00		1.00	1.19	27.259	29.98	307.13	0.650	0.000	5.00	14.778	9.61	460.8	0.0	525.7
80.00		1.00	1.21	27.632	30.39	297.60	0.650	0.000	5.00	14.232	9.25	449.9	0.0	506.1
85.00		1.00	1.22	27.987	30.79	287.80	0.650	0.000	5.00	13.687	8.90	438.2	0.0	486.6
86.25	Bot - Section 3	1.00	1.23	28.073	30.88	285.31	0.650	0.000	1.25	3.336	2.17	107.2	0.0	118.6
90.00		1.00	1.24	28.325	31.16	277.76	0.650	0.000	3.75	9.964	6.48	322.9	0.0	632.2
90.42	Top - Section 2	1.00	1.24	28.353	31.19	276.91	0.650	0.000	0.42	1.088	0.71	35.3	0.0	69.0
95.00		1.00	1.25	28.650	31.51	272.09	0.650	0.000	4.58	11.719	7.62	384.1	0.0	333.8
100.00		1.00	1.27	28.961	31.86	261.66	0.650	0.000	5.00	12.262	7.97	406.2	0.0	349.1
105.00	Appurtenance(s)	1.00	1.28	29.260	32.19	251.04	0.650	0.000	5.00	11.716	7.62	392.2	0.0	333.4
106.50	Appurtenance(s)	1.00	1.28	29.347	32.28	247.82	0.650	0.000	1.50	3.408	2.22	114.4	0.0	97.0
110.00		1.00	1.29	29.548	32.50	240.25	0.650	0.000	3.50	7.762	5.05	262.4	0.0	220.8
115.00		1.00	1.30	29.826	32.81	229.29	0.650	0.000	5.00	10.625	6.91	362.5	0.0	302.1
117.00	Appurtenance(s)	1.00	1.31	29.934	32.93	224.86	0.650	0.000	2.00	4.097	2.66	140.3	0.0	116.4
120.00		1.00	1.32	30.094	33.10	218.18	0.650	0.000	3.00	5.982	3.89	206.0	0.0	170.0
125.00		1.00	1.33	30.354	33.39	206.93	0.650	0.000	5.00	9.534	6.20	331.1	0.0	270.8
130.00	Top - Section 3	1.00	1.34	30.605	33.67	195.55	0.650	0.000	5.00	8.989	5.84	314.7	0.0	255.1
135.00		1.00	1.35	30.850	33.93	187.71	0.600	0.000	5.00	8.333	5.00	271.5	0.0	237.5
140.00	Appurtenance(s)	1.00	1.36	31.087	34.20	188.43	0.600	0.000	5.00	8.333	5.00	273.6	0.0	237.5
								Totals:	**140.00**			**12,128.2**		**16,638.4**

Discrete Appurtenance Forces

Structure:	CT13548-S-SBA	**Code:**	EIA/TIA-222-G	8/24/2021	
Site Name:	Bloomfield 4	**Exposure:**	C		
Height:	140.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 14	

Tower Engineering Solutions

Load Case: 0.9D + 1.6W 97 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60

Iterations 23

No.	Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	Orient Factor x Ka	Ka	Total CaAa (sf)	Dead Load (lb)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)
1	140.00	Lightning Rod	1	31.249	34.374	1.00	1.00	1.05	31.50	0.000	3.500	57.75	0.00	202.12
2	130.00	Ericsson Radio 4449 B71	3	30.605	33.666	0.54	0.80	2.62	199.80	0.000	0.000	141.18	0.00	0.00
3	130.00	Ericsson AIR32	3	30.605	33.666	0.69	0.80	13.44	356.94	0.000	0.000	723.77	0.00	0.00
4	130.00	RFS	3	30.605	33.666	0.58	0.80	34.97	345.60	0.000	0.000	1883.93	0.00	0.00
5	130.00	T-Arms	3	30.605	33.666	0.75	1.00	18.00	945.00	0.000	0.000	969.58	0.00	0.00
6	130.00	Ericsson AIR 21 B2A/B4P	3	30.605	33.666	0.69	0.80	12.49	224.10	0.000	0.000	672.63	0.00	0.00
7	130.00	Ericsson KRY 112 144/2	3	30.605	33.666	0.48	0.80	0.50	29.75	0.000	0.000	27.15	0.00	0.00
8	117.00	SitePro1 PRK-1245 kit	1	30.041	33.045	0.75	0.75	7.13	418.42	0.000	2.000	376.71	0.00	753.43
9	117.00	12'-6" long 2.0" STD Pipe	1	29.753	32.728	0.75	0.75	5.06	235.55	0.000	-3.330	265.10	0.00	-882.77
10	117.00	T-Arms	3	29.934	32.927	0.56	0.75	13.50	945.00	0.000	0.000	711.23	0.00	0.00
11	117.00	Commscope	1	29.934	32.927	0.54	0.80	1.00	13.59	0.000	0.000	52.81	0.00	0.00
12	117.00	Samsung CBRS RRH -	3	29.934	32.927	0.54	0.80	2.46	62.48	0.000	0.000	129.61	0.00	0.00
13	117.00	Samsung B5/B13	3	29.934	32.927	0.54	0.80	3.02	197.91	0.000	0.000	159.27	0.00	0.00
14	117.00	Samsung B2/B66A	3	29.934	32.927	0.54	0.80	3.02	226.80	0.000	0.000	159.27	0.00	0.00
15	117.00	Commscope	3	29.934	32.927	0.48	0.80	0.13	181.98	0.000	0.000	6.83	0.00	0.00
16	117.00	Andrew SBNHH-1D65B w/	6	29.934	32.927	0.66	0.80	32.51	216.00	0.000	0.000	1712.72	0.00	0.00
17	117.00	Samsung	3	29.934	32.927	0.60	0.80	2.77	62.37	0.000	0.000	146.04	0.00	0.00
18	117.00	Antel LPA-80063/6CF_5	6	29.934	32.927	0.76	0.80	43.73	145.80	0.000	0.000	2303.89	0.00	0.00
19	117.00	Samsung MT6407-77A	3	29.934	32.927	0.56	0.80	7.91	235.17	0.000	0.000	416.88	0.00	0.00
20	106.50	Platform w/ Hand Rails	1	29.347	32.282	1.00	1.00	40.00	1800.00	0.000	0.000	2066.05	0.00	0.00
21	106.50	Powerwave	12	29.376	32.314	0.45	0.75	4.97	237.60	0.000	0.500	256.86	0.00	128.43
22	106.50	Powerwave 7020.00	12	29.376	32.314	0.45	0.75	2.16	23.76	0.000	0.500	111.68	0.00	55.84
23	106.50	Powerwave	1	29.376	32.314	0.60	0.75	6.86	53.10	0.000	0.500	354.88	0.00	177.44
24	106.50	Powerwave	9	29.376	32.314	0.60	0.75	44.06	429.30	0.000	0.500	2278.20	0.00	1139.10
25	106.50	Andrew SBNH-1D6565C	1	29.376	32.314	0.60	0.75	6.88	59.49	0.000	0.500	355.81	0.00	177.91
26	106.50	KMW	1	29.376	32.314	0.58	0.75	4.69	43.65	0.000	0.500	242.57	0.00	121.29
27	105.00	Valmont LWRM Ring	1	29.260	32.186	0.64	0.80	3.20	315.00	0.000	0.000	164.79	0.00	0.00
28	105.00	Raycap DC6-48-60-18-8F	1	29.318	32.250	0.54	0.80	0.79	29.52	0.000	1.000	40.66	0.00	40.66
29	105.00	Andrew RRUS11 RRUs	6	29.318	32.250	0.54	0.80	8.10	273.78	0.000	1.000	418.18	0.00	418.18
							Totals:		**8,338.96**			**17,206.02**		

Total Applied Force Summary

Structure:	CT13548-S-SBA		**Code:**	EIA/TIA-222-G	8/24/2021
Site Name:	Bloomfield 4		**Exposure:**	C	
Height:	140.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 15

Tower Engineering Solutions

Load Case: 0.9D + 1.6W 97 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60

Iterations 23

Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
5.00		492.89	1023.75	0.00	0.00
10.00		480.75	1114.87	0.00	0.00
15.00		468.61	1091.37	0.00	0.00
20.00		484.34	1067.87	0.00	0.00
25.00		494.13	1044.37	0.00	0.00
30.00		499.44	1020.87	0.00	0.00
35.00		501.42	997.37	0.00	0.00
40.00		500.82	973.87	0.00	0.00
42.42		239.66	462.28	0.00	0.00
45.00		259.28	817.98	0.00	0.00
48.00		300.03	935.48	0.00	0.00
50.00		198.62	323.52	0.00	0.00
55.00		495.46	795.09	0.00	0.00
60.00		488.38	775.50	0.00	0.00
65.00		480.18	755.92	0.00	0.00
70.00		470.96	736.34	0.00	0.00
75.00		460.84	716.75	0.00	0.00
80.00		449.90	697.17	0.00	0.00
85.00		438.21	677.59	0.00	0.00
86.25		107.15	166.34	0.00	0.00
90.00		322.86	775.51	0.00	0.00
90.42		35.29	84.94	0.00	0.00
95.00		384.10	508.86	0.00	0.00
100.00		406.25	540.11	0.00	0.00
105.00	(8) attachments	1015.81	1142.74	0.00	458.84
106.50	(37) attachments	5780.49	2801.18	0.00	1800.00
110.00		262.38	309.61	0.00	0.00
115.00		362.54	428.99	0.00	0.00
117.00	(36) attachments	6580.66	3108.27	0.00	-129.34
120.00		205.96	223.32	0.00	0.00
125.00		331.07	359.67	0.00	0.00
130.00	(18) attachments	4732.95	2445.20	0.00	0.00
135.00		271.48	237.52	0.00	0.00
140.00	(1) attachments	331.31	269.02	0.00	202.12
	Totals:	**29,334.20**	**29,429.26**	**0.00**	**2,331.62**

Linear Appurtenance Segment Forces (Factored)

Structure:	CT13548-S-SBA	**Code:**	EIA/TIA-222-G	8/24/2021	
Site Name:	Bloomfield 4	**Exposure:**	C		
Height:	140.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 16	

Load Case: 0.9D + 1.6W 97 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60

Iterations 23

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
5.00	3" Conduit	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	19.450	0.00	2.90
10.00	3" Conduit	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	19.450	0.00	7.25
15.00	3" Conduit	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	19.450	0.00	7.25
20.00	3" Conduit	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	20.638	0.00	7.25
25.00	3" Conduit	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	21.630	0.00	7.25
30.00	3" Conduit	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	22.477	0.00	7.25
35.00	3" Conduit	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	23.218	0.00	7.25
40.00	3" Conduit	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	23.880	0.00	7.25
42.42	3" Conduit	Yes	2.42	0.000	0.00	0.00	0.00	0.000	0.000	24.177	0.00	3.50
45.00	3" Conduit	Yes	2.58	0.000	0.00	0.00	0.00	0.000	0.000	24.479	0.00	3.74
48.00	3" Conduit	Yes	3.00	0.000	0.00	0.00	0.00	0.000	0.000	24.814	0.00	4.35
50.00	3" Conduit	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	25.029	0.00	2.90
55.00	3" Conduit	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	25.536	0.00	7.25
60.00	3" Conduit	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	26.008	0.00	7.25
65.00	3" Conduit	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	26.450	0.00	7.25
70.00	3" Conduit	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	26.866	0.00	7.25
75.00	3" Conduit	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	27.259	0.00	7.25
80.00	3" Conduit	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	27.632	0.00	7.25
85.00	3" Conduit	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	27.987	0.00	7.25
86.25	3" Conduit	Yes	1.25	0.000	0.00	0.00	0.00	0.000	0.000	28.073	0.00	1.81
90.00	3" Conduit	Yes	3.75	0.000	0.00	0.00	0.00	0.000	0.000	28.325	0.00	5.43
90.42	3" Conduit	Yes	0.42	0.000	0.00	0.00	0.00	0.000	0.000	28.353	0.00	0.60
95.00	3" Conduit	Yes	4.58	0.000	0.00	0.00	0.00	0.000	0.000	28.650	0.00	6.64
100.00	3" Conduit	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	28.961	0.00	7.25
105.00	3" Conduit	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	29.260	0.00	7.25
106.50	3" Conduit	Yes	1.50	0.000	0.00	0.00	0.00	0.000	0.000	29.347	0.00	2.17
										Totals:	**0.0**	**150.0**

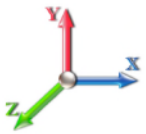
Calculated Forces

Structure:	CT13548-S-SBA	**Code:**	EIA/TIA-222-G	8/24/2021	
Site Name:	Bloomfield 4	**Exposure:**	C		
Height:	140.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 17	

Load Case: 0.9D + 1.6W 97 mph Wind

Dead Load Factor 0.90

Wind Load Factor 1.60



Iterations 23

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-29.38	-29.38	0.00	-2885.3	0.00	2885.36	4157.29	2078.64	8996.15	4504.76	0.00	0.000	0.000	0.648
5.00	-28.26	-28.98	0.00	-2738.4	0.00	2738.46	4094.64	2047.32	8641.94	4327.39	0.10	-0.183	0.000	0.640
10.00	-27.06	-28.58	0.00	-2593.5	0.00	2593.57	4030.02	2015.01	8290.37	4151.35	0.39	-0.369	0.000	0.632
15.00	-25.88	-28.19	0.00	-2450.6	0.00	2450.66	3963.43	1981.72	7941.76	3976.78	0.88	-0.559	0.000	0.623
20.00	-24.72	-27.78	0.00	-2309.7	0.00	2309.71	3894.87	1947.44	7596.41	3803.85	1.57	-0.754	0.000	0.614
25.00	-23.59	-27.35	0.00	-2170.8	0.00	2170.81	3824.34	1912.17	7254.65	3632.72	2.47	-0.952	0.000	0.604
30.00	-22.48	-26.91	0.00	-2034.0	0.00	2034.05	3751.84	1875.92	6916.79	3463.54	3.57	-1.154	0.000	0.593
35.00	-21.40	-26.47	0.00	-1899.4	0.00	1899.48	3677.38	1838.69	6583.15	3296.47	4.89	-1.359	0.000	0.582
40.00	-20.37	-26.00	0.00	-1767.1	0.00	1767.14	3600.94	1800.47	6254.04	3131.67	6.43	-1.569	0.000	0.570
42.42	-19.86	-25.78	0.00	-1704.3	0.00	1704.31	3563.29	1781.64	6096.69	3052.87	7.25	-1.673	0.000	0.564
45.00	-19.00	-25.54	0.00	-1637.7	0.00	1637.70	3522.53	1761.26	5929.77	2969.29	8.18	-1.786	0.000	0.557
48.00	-18.02	-25.25	0.00	-1561.0	0.00	1561.08	2765.58	1382.79	4652.71	2329.81	9.35	-1.918	0.000	0.677
50.00	-17.63	-25.09	0.00	-1510.5	0.00	1510.59	2743.08	1371.54	4556.27	2281.52	10.17	-2.007	0.000	0.669
55.00	-16.75	-24.64	0.00	-1385.1	0.00	1385.15	2685.46	1342.73	4317.17	2161.80	12.41	-2.256	0.000	0.647
60.00	-15.89	-24.19	0.00	-1261.9	0.00	1261.97	2625.87	1312.94	4081.16	2043.62	14.91	-2.507	0.000	0.624
65.00	-15.05	-23.74	0.00	-1141.0	0.00	1141.04	2564.31	1282.15	3848.56	1927.14	17.67	-2.758	0.000	0.598
70.00	-14.24	-23.29	0.00	-1022.3	0.00	1022.35	2500.78	1250.39	3619.69	1812.53	20.69	-3.010	0.000	0.570
75.00	-13.45	-22.85	0.00	-905.88	0.00	905.88	2435.28	1217.64	3394.85	1699.95	23.98	-3.259	0.000	0.539
80.00	-12.68	-22.42	0.00	-791.62	0.00	791.62	2367.81	1183.90	3174.36	1589.54	27.52	-3.505	0.000	0.504
85.00	-11.98	-21.97	0.00	-679.54	0.00	679.54	2298.37	1149.18	2958.55	1481.47	31.32	-3.744	0.000	0.464
86.25	-11.78	-21.87	0.00	-652.08	0.00	652.08	2280.70	1140.35	2905.36	1454.84	32.31	-3.805	0.000	0.454
90.00	-10.99	-21.52	0.00	-570.05	0.00	570.05	2218.24	1109.12	2736.97	1370.52	35.37	-3.979	0.000	0.421
90.42	-10.86	-21.50	0.00	-561.09	0.00	561.09	1691.27	845.64	2122.94	1063.05	35.72	-3.999	0.000	0.535
95.00	-10.30	-21.12	0.00	-462.56	0.00	462.56	1646.42	823.21	1986.06	994.50	39.65	-4.196	0.000	0.472
100.00	-9.72	-20.71	0.00	-356.98	0.00	356.98	1595.61	797.80	1839.56	921.15	44.17	-4.425	0.000	0.394
105.00	-8.62	-19.62	0.00	-252.99	0.00	252.99	1542.83	771.41	1696.33	849.43	48.91	-4.621	0.000	0.304
106.50	-6.28	-13.64	0.00	-221.75	0.00	221.75	1526.61	763.30	1654.04	828.25	50.37	-4.673	0.000	0.272
110.00	-5.96	-13.37	0.00	-174.01	0.00	174.01	1488.07	744.04	1556.67	779.49	53.83	-4.780	0.000	0.228
115.00	-5.55	-12.98	0.00	-107.17	0.00	107.17	1427.69	713.85	1417.28	709.69	58.90	-4.900	0.000	0.155
117.00	-3.01	-6.16	0.00	-81.21	0.00	81.21	1397.29	698.64	1357.25	679.64	60.96	-4.938	0.000	0.122
120.00	-2.80	-5.93	0.00	-62.74	0.00	62.74	1351.68	675.84	1269.65	635.77	64.08	-4.984	0.000	0.101
125.00	-2.47	-5.58	0.00	-33.07	0.00	33.07	1275.66	637.83	1130.14	565.91	69.33	-5.040	0.000	0.060
130.00	-0.45	-0.65	0.00	-5.20	0.00	5.20	1199.65	599.83	998.75	500.12	74.62	-5.067	0.000	0.011
130.00	-0.45	-0.65	0.00	-5.20	0.00	5.20	582.69	291.35	473.23	281.02	74.62	-5.067	0.000	0.019
135.00	-0.24	-0.35	0.00	-1.97	0.00	1.97	582.69	291.35	473.23	281.02	79.92	-5.073	0.000	0.007
140.00	0.00	-0.33	0.00	-0.20	0.00	0.20	582.69	291.35	473.23	281.02	85.23	-5.075	0.000	0.001

Wind Loading - Shaft

Structure:	CT13548-S-SBA	**Code:**	EIA/TIA-222-G	8/24/2021	
Site Name:	Bloomfield 4	**Exposure:**	C		
Height:	140.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 18	

Load Case: 1.2D + 1.0Di + 1.0Wi 50 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.00

Iterations 22

Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.85	5.168	5.68	0.00	1.200	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.85	5.168	5.68	0.00	1.200	1.656	5.00	23.531	28.24	160.5	547.9	1811.1
10.00		1.00	0.85	5.168	5.68	0.00	1.200	1.775	5.00	23.085	27.70	157.5	574.4	1806.2
15.00		1.00	0.85	5.168	5.68	0.00	1.200	1.848	5.00	22.600	27.12	154.2	584.2	1784.6
20.00		1.00	0.90	5.483	6.03	0.00	1.200	1.902	5.00	22.100	26.52	160.0	586.6	1755.8
25.00		1.00	0.95	5.747	6.32	0.00	1.200	1.945	5.00	21.590	25.91	163.8	584.8	1722.6
30.00		1.00	0.98	5.972	6.57	0.00	1.200	1.981	5.00	21.074	25.29	166.1	580.2	1686.6
35.00		1.00	1.01	6.169	6.79	0.00	1.200	2.012	5.00	20.554	24.67	167.4	573.5	1648.6
40.00		1.00	1.04	6.345	6.98	0.00	1.200	2.039	5.00	20.031	24.04	167.8	565.2	1609.0
42.42	Bot - Section 2	1.00	1.06	6.424	7.07	0.00	1.200	2.051	2.42	9.491	11.39	80.5	271.0	764.3
45.00		1.00	1.07	6.504	7.15	0.00	1.200	2.063	2.58	10.147	12.18	87.1	291.3	1250.3
48.00	Top - Section 1	1.00	1.08	6.593	7.25	0.00	1.200	2.076	3.00	11.607	13.93	101.0	334.5	1429.0
50.00		1.00	1.09	6.650	7.32	0.00	1.200	2.085	2.00	7.632	9.16	67.0	221.3	550.8
55.00		1.00	1.12	6.785	7.46	0.00	1.200	2.105	5.00	18.714	22.46	167.6	542.0	1347.4
60.00		1.00	1.14	6.910	7.60	0.00	1.200	2.123	5.00	18.184	21.82	165.9	530.0	1309.3
65.00		1.00	1.16	7.028	7.73	0.00	1.200	2.140	5.00	17.653	21.18	163.8	517.4	1270.6
70.00		1.00	1.17	7.138	7.85	0.00	1.200	2.156	5.00	17.120	20.54	161.3	504.2	1231.3
75.00		1.00	1.19	7.243	7.97	0.00	1.200	2.171	5.00	16.587	19.90	158.6	490.5	1191.5
80.00		1.00	1.21	7.342	8.08	0.00	1.200	2.185	5.00	16.053	19.26	155.6	476.4	1151.2
85.00		1.00	1.22	7.436	8.18	0.00	1.200	2.198	5.00	15.519	18.62	152.3	461.9	1110.6
86.25	Bot - Section 3	1.00	1.23	7.459	8.20	0.00	1.200	2.202	1.25	3.795	4.55	37.4	114.5	272.7
90.00		1.00	1.24	7.526	8.28	0.00	1.200	2.211	3.75	11.345	13.61	112.7	340.4	1183.4
90.42	Top - Section 2	1.00	1.24	7.533	8.29	0.00	1.200	2.212	0.42	1.242	1.49	12.3	37.7	129.8
95.00		1.00	1.25	7.612	8.37	0.00	1.200	2.223	4.58	13.417	16.10	134.8	402.2	847.2
100.00		1.00	1.27	7.695	8.46	0.00	1.200	2.234	5.00	14.124	16.95	143.5	423.3	888.7
105.00	Appurtenance(s)	1.00	1.28	7.774	8.55	0.00	1.200	2.245	5.00	13.587	16.30	139.4	407.5	852.1
106.50	Appurtenance(s)	1.00	1.28	7.798	8.58	0.00	1.200	2.249	1.50	3.971	4.76	40.9	120.8	250.1
110.00		1.00	1.29	7.851	8.64	0.00	1.200	2.256	3.50	9.078	10.89	94.1	274.1	568.4
115.00		1.00	1.30	7.925	8.72	0.00	1.200	2.266	5.00	12.513	15.02	130.9	375.3	778.1
117.00	Appurtenance(s)	1.00	1.31	7.954	8.75	0.00	1.200	2.270	2.00	4.854	5.82	51.0	147.5	302.7
120.00		1.00	1.32	7.996	8.80	0.00	1.200	2.276	3.00	7.120	8.54	75.2	215.3	441.9
125.00		1.00	1.33	8.065	8.87	0.00	1.200	2.285	5.00	11.438	13.73	121.8	342.1	703.1
130.00	Top - Section 3	1.00	1.34	8.132	8.95	0.00	1.200	2.294	5.00	10.900	13.08	117.0	325.3	665.4
135.00		1.00	1.35	8.197	9.02	0.00	1.200	2.303	5.00	10.252	12.30	110.9	313.7	630.4
140.00	Appurtenance(s)	1.00	1.36	8.260	9.09	0.00	1.200	2.311	5.00	10.259	12.31	111.9	315.0	631.7
								Totals:	**140.00**			**4,191.5**		**35,576.4**

Discrete Appurtenance Forces

Structure:	CT13548-S-SBA	**Code:**	EIA/TIA-222-G	8/24/2021	
Site Name:	Bloomfield 4	**Exposure:**	C		
Height:	140.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 19	

Load Case: 1.2D + 1.0Di + 1.0Wi 50 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.00

Iterations 22

No.	Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	Orient Factor x Ka	Ka	Total CaAa (sf)	Dead Load (lb)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)
1	140.00	Lightning Rod	1	8.303	9.133	1.00	1.00	4.19	74.60	0.000	3.500	38.29	0.00	134.03
2	130.00	Ericsson Radio 4449 B71	3	8.132	8.945	0.54	0.80	3.70	485.70	0.000	0.000	33.13	0.00	0.00
3	130.00	Ericsson AIR32	3	8.132	8.945	0.69	0.80	16.67	1245.36	0.000	0.000	149.08	0.00	0.00
4	130.00	RFS	3	8.132	8.945	0.58	0.80	39.34	2225.21	0.000	0.000	351.91	0.00	0.00
5	130.00	T-Arms	3	8.132	8.945	0.75	1.00	38.65	2013.43	0.000	0.000	345.69	0.00	0.00
6	130.00	Ericsson AIR 21 B2A/B4P	3	8.132	8.945	0.69	0.80	15.52	1006.09	0.000	0.000	138.79	0.00	0.00
7	130.00	Ericsson KRY 112 144/2	3	8.132	8.945	0.48	0.80	1.27	73.02	0.000	0.000	11.38	0.00	0.00
8	117.00	SitePro1 PRK-1245 kit	1	7.982	8.780	0.75	0.75	16.83	884.91	0.000	2.000	147.76	0.00	295.52
9	117.00	12'-6" long 2.0" STD Pipe	1	7.905	8.696	0.75	0.75	11.50	314.06	0.000	-3.330	99.98	0.00	-332.94
10	117.00	T-Arms	3	7.954	8.749	0.56	0.75	28.82	2003.34	0.000	0.000	252.16	0.00	0.00
11	117.00	Commscope	1	7.954	8.749	0.54	0.80	1.68	49.93	0.000	0.000	14.74	0.00	0.00
12	117.00	Samsung CBRS RRH -	3	7.954	8.749	0.54	0.80	3.59	48.05	0.000	0.000	31.45	0.00	0.00
13	117.00	Samsung B5/B13	3	7.954	8.749	0.54	0.80	4.18	435.94	0.000	0.000	36.53	0.00	0.00
14	117.00	Samsung B2/B66A	3	7.954	8.749	0.54	0.80	4.18	394.66	0.000	0.000	36.53	0.00	0.00
15	117.00	Commscope	3	7.954	8.749	0.48	0.80	0.25	373.43	0.000	0.000	2.16	0.00	0.00
16	117.00	Andrew SBNHH-1D65B w/	6	7.954	8.749	0.66	0.80	39.38	1965.46	0.000	0.000	344.57	0.00	0.00
17	117.00	Samsung	3	7.954	8.749	0.60	0.80	3.51	-51.86	0.000	0.000	30.73	0.00	0.00
18	117.00	Antel LPA-80063/6CF_5	6	7.954	8.749	0.76	0.80	59.97	1765.35	0.000	0.000	524.67	0.00	0.00
19	117.00	Samsung MT6407-77A	3	7.954	8.749	0.56	0.80	9.98	809.97	0.000	0.000	87.30	0.00	0.00
20	106.50	Platform w/ Hand Rails	1	7.798	8.577	1.00	1.00	66.98	4498.33	0.000	0.000	574.54	0.00	0.00
21	106.50	Powerwave	12	7.805	8.586	0.45	0.75	10.11	637.11	0.000	0.500	86.81	0.00	43.41
22	106.50	Powerwave 7020.00	12	7.805	8.586	0.45	0.75	5.53	155.02	0.000	0.500	47.47	0.00	23.73
23	106.50	Powerwave	1	7.805	8.586	0.60	0.75	9.36	287.88	0.000	0.500	80.40	0.00	40.20
24	106.50	Powerwave	9	7.805	8.586	0.60	0.75	63.56	2061.52	0.000	0.500	545.75	0.00	272.87
25	106.50	Andrew SBNH-1D6565C	1	7.805	8.586	0.60	0.75	9.40	309.62	0.000	0.500	80.67	0.00	40.33
26	106.50	KMW	1	7.805	8.586	0.58	0.75	6.80	220.78	0.000	0.500	58.36	0.00	29.18
27	105.00	Valmont LWRM Ring	1	7.774	8.552	0.64	0.80	6.07	697.23	0.000	0.000	51.95	0.00	0.00
28	105.00	Raycap DC6-48-60-18-8F	1	7.790	8.569	0.54	0.80	1.27	101.20	0.000	1.000	10.89	0.00	10.89
29	105.00	Andrew RRUS11 RRUs	6	7.790	8.569	0.54	0.80	10.87	1099.00	0.000	1.000	93.13	0.00	93.13
							Totals:		**26,184.33**			**4,306.81**		

Total Applied Force Summary

Structure:	CT13548-S-SBA		**Code:**	EIA/TIA-222-G	8/24/2021
Site Name:	Bloomfield 4		**Exposure:**	C	
Height:	140.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 20

Tower Engineering Solutions

Load Case: 1.2D + 1.0Di + 1.0Wi 50 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.00

Iterations 22

Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
5.00		160.52	1925.47	0.00	0.00
10.00		157.48	2095.57	0.00	0.00
15.00		154.17	2076.25	0.00	0.00
20.00		159.96	2049.03	0.00	0.00
25.00		163.79	2017.23	0.00	0.00
30.00		166.13	1982.38	0.00	0.00
35.00		167.38	1945.34	0.00	0.00
40.00		167.77	1906.63	0.00	0.00
42.42		80.48	908.34	0.00	0.00
45.00		87.12	1404.48	0.00	0.00
48.00		101.02	1608.34	0.00	0.00
50.00		66.99	670.45	0.00	0.00
55.00		167.61	1647.23	0.00	0.00
60.00		165.87	1609.73	0.00	0.00
65.00		163.76	1571.56	0.00	0.00
70.00		161.32	1532.80	0.00	0.00
75.00		158.58	1493.52	0.00	0.00
80.00		155.58	1453.78	0.00	0.00
85.00		152.33	1413.62	0.00	0.00
86.25		37.37	348.43	0.00	0.00
90.00		112.71	1410.97	0.00	0.00
90.42		12.35	155.04	0.00	0.00
95.00		134.82	1125.69	0.00	0.00
100.00		143.46	1192.95	0.00	0.00
105.00	(8) attachments	295.40	3054.14	0.00	104.02
106.50	(37) attachments	1514.87	8511.80	0.00	449.73
110.00		94.08	686.88	0.00	0.00
115.00		130.90	947.26	0.00	0.00
117.00	(36) attachments	1659.55	9363.66	0.00	-37.42
120.00		75.15	513.05	0.00	0.00
125.00		121.77	821.70	0.00	0.00
130.00	(18) attachments	1146.97	7832.74	0.00	0.00
135.00		110.93	630.39	0.00	0.00
140.00	(1) attachments	150.15	706.25	0.00	134.03
	Totals:	**8,498.32**	**68,612.71**	**0.00**	**650.36**

Linear Appurtenance Segment Forces (Factored)

Structure:	CT13548-S-SBA	**Code:**	EIA/TIA-222-G	8/24/2021	
Site Name:	Bloomfield 4	**Exposure:**	C		
Height:	140.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 21	

Load Case: 1.2D + 1.0Di + 1.0Wi 50 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.00

Iterations 22

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
5.00	3" Conduit	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	5.168	0.00	16.39
10.00	3" Conduit	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	5.168	0.00	44.38
15.00	3" Conduit	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	5.168	0.00	46.58
20.00	3" Conduit	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	5.483	0.00	48.23
25.00	3" Conduit	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	5.747	0.00	49.57
30.00	3" Conduit	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	5.972	0.00	50.71
35.00	3" Conduit	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	6.169	0.00	51.70
40.00	3" Conduit	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	6.345	0.00	52.58
42.42	3" Conduit	Yes	2.42	0.000	0.00	0.00	0.00	0.000	0.000	6.424	0.00	25.60
45.00	3" Conduit	Yes	2.58	0.000	0.00	0.00	0.00	0.000	0.000	6.504	0.00	27.58
48.00	3" Conduit	Yes	3.00	0.000	0.00	0.00	0.00	0.000	0.000	6.593	0.00	32.29
50.00	3" Conduit	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	6.650	0.00	21.64
55.00	3" Conduit	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	6.785	0.00	54.76
60.00	3" Conduit	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	6.910	0.00	55.38
65.00	3" Conduit	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	7.028	0.00	55.96
70.00	3" Conduit	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	7.138	0.00	56.50
75.00	3" Conduit	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	7.243	0.00	57.01
80.00	3" Conduit	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	7.342	0.00	57.49
85.00	3" Conduit	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	7.436	0.00	57.95
86.25	3" Conduit	Yes	1.25	0.000	0.00	0.00	0.00	0.000	0.000	7.459	0.00	14.52
90.00	3" Conduit	Yes	3.75	0.000	0.00	0.00	0.00	0.000	0.000	7.526	0.00	43.79
90.42	3" Conduit	Yes	0.42	0.000	0.00	0.00	0.00	0.000	0.000	7.533	0.00	4.87
95.00	3" Conduit	Yes	4.58	0.000	0.00	0.00	0.00	0.000	0.000	7.612	0.00	53.91
100.00	3" Conduit	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	7.695	0.00	59.21
105.00	3" Conduit	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	7.774	0.00	59.59
106.50	3" Conduit	Yes	1.50	0.000	0.00	0.00	0.00	0.000	0.000	7.798	0.00	17.91
										Totals:	**0.0**	**1,116.1**

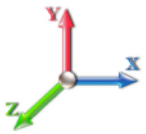
Calculated Forces

Structure:	CT13548-S-SBA	**Code:**	EIA/TIA-222-G	8/24/2021	
Site Name:	Bloomfield 4	**Exposure:**	C		
Height:	140.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 22	

Load Case: 1.2D + 1.0Di + 1.0Wi 50 mph Wind

Dead Load Factor 1.20

Wind Load Factor 1.00



Iterations 22

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-68.61	-8.53	0.00	-848.22	0.00	848.22	4157.29	2078.64	8996.15	4504.76	0.00	0.000	0.000	0.205
5.00	-66.68	-8.43	0.00	-805.57	0.00	805.57	4094.64	2047.32	8641.94	4327.39	0.03	-0.054	0.000	0.202
10.00	-64.57	-8.33	0.00	-763.41	0.00	763.41	4030.02	2015.01	8290.37	4151.35	0.11	-0.109	0.000	0.200
15.00	-62.49	-8.24	0.00	-721.74	0.00	721.74	3963.43	1981.72	7941.76	3976.78	0.26	-0.165	0.000	0.197
20.00	-60.43	-8.13	0.00	-680.55	0.00	680.55	3894.87	1947.44	7596.41	3803.85	0.46	-0.222	0.000	0.194
25.00	-58.41	-8.02	0.00	-639.90	0.00	639.90	3824.34	1912.17	7254.65	3632.72	0.73	-0.280	0.000	0.191
30.00	-56.42	-7.90	0.00	-599.81	0.00	599.81	3751.84	1875.92	6916.79	3463.54	1.05	-0.340	0.000	0.188
35.00	-54.46	-7.78	0.00	-560.30	0.00	560.30	3677.38	1838.69	6583.15	3296.47	1.44	-0.400	0.000	0.185
40.00	-52.55	-7.64	0.00	-521.41	0.00	521.41	3600.94	1800.47	6254.04	3131.67	1.89	-0.462	0.000	0.181
42.42	-51.64	-7.58	0.00	-502.95	0.00	502.95	3563.29	1781.64	6096.69	3052.87	2.13	-0.493	0.000	0.179
45.00	-50.23	-7.51	0.00	-483.36	0.00	483.36	3522.53	1761.26	5929.77	2969.29	2.41	-0.526	0.000	0.177
48.00	-48.62	-7.42	0.00	-460.83	0.00	460.83	2765.58	1382.79	4652.71	2329.81	2.75	-0.565	0.000	0.215
50.00	-47.94	-7.39	0.00	-445.98	0.00	445.98	2743.08	1371.54	4556.27	2281.52	3.00	-0.591	0.000	0.213
55.00	-46.29	-7.27	0.00	-409.02	0.00	409.02	2685.46	1342.73	4317.17	2161.80	3.66	-0.665	0.000	0.206
60.00	-44.67	-7.14	0.00	-372.69	0.00	372.69	2625.87	1312.94	4081.16	2043.62	4.39	-0.739	0.000	0.199
65.00	-43.10	-7.01	0.00	-337.00	0.00	337.00	2564.31	1282.15	3848.56	1927.14	5.21	-0.813	0.000	0.192
70.00	-41.56	-6.88	0.00	-301.96	0.00	301.96	2500.78	1250.39	3619.69	1812.53	6.10	-0.888	0.000	0.183
75.00	-40.06	-6.75	0.00	-267.57	0.00	267.57	2435.28	1217.64	3394.85	1699.95	7.07	-0.961	0.000	0.174
80.00	-38.60	-6.61	0.00	-233.83	0.00	233.83	2367.81	1183.90	3174.36	1589.54	8.11	-1.034	0.000	0.163
85.00	-37.18	-6.46	0.00	-200.76	0.00	200.76	2298.37	1149.18	2958.55	1481.47	9.24	-1.105	0.000	0.152
86.25	-36.83	-6.44	0.00	-192.68	0.00	192.68	2280.70	1140.35	2905.36	1454.84	9.53	-1.123	0.000	0.149
90.00	-35.42	-6.32	0.00	-168.52	0.00	168.52	2218.24	1109.12	2736.97	1370.52	10.43	-1.174	0.000	0.139
90.42	-35.26	-6.32	0.00	-165.88	0.00	165.88	1691.27	845.64	2122.94	1063.05	10.53	-1.180	0.000	0.177
95.00	-34.13	-6.20	0.00	-136.90	0.00	136.90	1646.42	823.21	1986.06	994.50	11.70	-1.238	0.000	0.158
100.00	-32.94	-6.07	0.00	-105.88	0.00	105.88	1595.61	797.80	1839.56	921.15	13.03	-1.306	0.000	0.136
105.00	-29.89	-5.72	0.00	-75.43	0.00	75.43	1542.83	771.41	1696.33	849.43	14.43	-1.364	0.000	0.108
106.50	-21.41	-4.01	0.00	-66.40	0.00	66.40	1526.61	763.30	1654.04	828.25	14.86	-1.380	0.000	0.094
110.00	-20.72	-3.91	0.00	-52.36	0.00	52.36	1488.07	744.04	1556.67	779.49	15.89	-1.412	0.000	0.081
115.00	-19.78	-3.77	0.00	-32.79	0.00	32.79	1427.69	713.85	1417.28	709.69	17.39	-1.448	0.000	0.060
117.00	-10.46	-1.87	0.00	-25.25	0.00	25.25	1397.29	698.64	1357.25	679.64	17.99	-1.460	0.000	0.045
120.00	-9.95	-1.79	0.00	-19.63	0.00	19.63	1351.68	675.84	1269.65	635.77	18.92	-1.474	0.000	0.038
125.00	-9.13	-1.65	0.00	-10.69	0.00	10.69	1275.66	637.83	1130.14	565.91	20.47	-1.492	0.000	0.026
130.00	-1.33	-0.30	0.00	-2.46	0.00	2.46	1199.65	599.83	998.75	500.12	22.04	-1.501	0.000	0.006
130.00	-1.33	-0.30	0.00	-2.46	0.00	2.46	582.69	291.35	473.23	281.02	22.04	-1.501	0.000	0.011
135.00	-0.70	-0.17	0.00	-0.98	0.00	0.98	582.69	291.35	473.23	281.02	23.61	-1.504	0.000	0.005
140.00	0.00	-0.15	0.00	-0.13	0.00	0.13	582.69	291.35	473.23	281.02	25.19	-1.505	0.000	0.000

Seismic Segment Forces (Factored)

Structure:	CT13548-S-SBA		**Code:**	EIA/TIA-222-G	8/24/2021
Site Name:	Bloomfield 4		**Exposure:**	C	
Height:	140.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 23

Load Case:	1.2D + 1.0E							**Iterations**	20
Gust Response Factor	1.10				**Sds**	0.19		**Ss**	0.18
Dead Load Factor	1.20	**Seismic Load Factor**	1.00		**Sd1**	0.10		**S1**	0.06
Wind Load Factor	0.00	**Structure Frequency (f1)**	0.39		**SA**	0.04	**Seismic Importance Factor**		1.00

Top Elev (ft)	Description	Wz (lb)	a	b	c	Lateral Fs (lb)	R: 1.50
0.00		0.00	0.00	0.00	0.00	0.00	
5.00		1052.6	0.00	0.03	0.02	18.76	
10.00		1026.4	0.01	0.05	0.03	26.51	
15.00		1000.3	0.02	0.06	0.04	29.70	
20.00		974.27	0.04	0.07	0.04	30.84	
25.00		948.16	0.06	0.07	0.04	31.12	
30.00		922.05	0.09	0.07	0.04	31.13	
35.00		895.94	0.12	0.07	0.03	31.04	
40.00		869.83	0.15	0.07	0.03	30.79	
42.42	Bot - Section 2	411.06	0.17	0.07	0.03	14.64	
45.00		799.20	0.20	0.06	0.02	28.50	
48.00	Top - Section 1	912.07	0.22	0.06	0.02	32.27	
50.00		274.56	0.24	0.06	0.02	9.58	
55.00		671.18	0.29	0.05	0.01	21.74	
60.00		649.42	0.35	0.03	0.01	17.74	
65.00		627.66	0.41	0.02	0.01	12.01	
70.00		605.90	0.47	-0.01	0.01	4.83	
75.00		584.14	0.54	-0.03	0.01	-2.91	
80.00		562.39	0.62	-0.06	0.02	-9.82	
85.00		540.63	0.70	-0.09	0.03	-14.62	
86.25	Bot - Section 3	131.76	0.72	-0.09	0.03	-3.79	
90.00		702.49	0.78	-0.11	0.05	-22.43	
90.42	Top - Section 2	76.69	0.79	-0.11	0.05	-2.46	
95.00		370.84	0.87	-0.12	0.08	-11.59	
100.00		387.87	0.96	-0.12	0.11	-9.57	
105.00	Appurtenance(s)	1057.4	1.06	-0.09	0.17	-12.92	
106.50	Appurtenance(s)	3048.7	1.09	-0.07	0.18	-22.37	
110.00		245.31	1.17	-0.02	0.23	1.50	
115.00		335.65	1.28	0.09	0.31	10.18	
117.00	Appurtenance(s)	3397.2	1.32	0.15	0.35	141.55	
120.00		188.86	1.39	0.26	0.42	11.42	
125.00		300.84	1.51	0.52	0.55	29.07	
130.00	Top - Section 3	2618.0	1.63	0.87	0.71	363.72	
135.00		263.91	1.76	1.35	0.91	49.48	
140.00	Appurtenance(s)	298.91	1.89	1.98	1.14	72.48	
	Totals:	**27,752.6**				**938.1**	**Total Wind:** **29,334.2**

Seismic Base Shear is Less Than 50% of Wind Force - An Analysis is NOT Required

Calculated Forces

Structure:	CT13548-S-SBA	**Code:**	EIA/TIA-222-G	8/24/2021	
Site Name:	Bloomfield 4	**Exposure:**	C		
Height:	140.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 24	

Tower Engineering Solutions

Load Case:	1.2D + 1.0E							**Iterations**	20
Gust Response Factor	1.10			**Sds**	0.19			**Ss**	0.18
Dead Load Factor	1.20	**Seismic Load Factor**	1.00	**Sd1**	0.10			**S1**	0.06
Wind Load Factor	0.00	**Structure Frequency (f1)**	0.39	**SA**	0.04	**Seismic Importance Factor**			1.00

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-39.24	-1.05	0.00	-103.60	0.00	103.60	4157.29	2078.64	8996.15	4504.76		0.00	0.00	0.032
5.00	-37.87	-1.04	0.00	-98.34	0.00	98.34	4094.64	2047.32	8641.94	4327.39		0.00	-0.01	0.032
10.00	-36.39	-1.02	0.00	-93.16	0.00	93.16	4030.02	2015.01	8290.37	4151.35		0.01	-0.01	0.031
15.00	-34.93	-0.99	0.00	-88.08	0.00	88.08	3963.43	1981.72	7941.76	3976.78		0.03	-0.02	0.031
20.00	-33.51	-0.96	0.00	-83.13	0.00	83.13	3894.87	1947.44	7596.41	3803.85		0.06	-0.03	0.030
25.00	-32.12	-0.93	0.00	-78.32	0.00	78.32	3824.34	1912.17	7254.65	3632.72		0.09	-0.03	0.030
30.00	-30.75	-0.91	0.00	-73.65	0.00	73.65	3751.84	1875.92	6916.79	3463.54		0.13	-0.04	0.029
35.00	-29.42	-0.88	0.00	-69.12	0.00	69.12	3677.38	1838.69	6583.15	3296.47		0.18	-0.05	0.029
40.00	-28.13	-0.85	0.00	-64.73	0.00	64.73	3600.94	1800.47	6254.04	3131.67		0.23	-0.06	0.028
42.42	-27.51	-0.84	0.00	-62.68	0.00	62.68	3563.29	1781.64	6096.69	3052.87		0.26	-0.06	0.028
45.00	-26.42	-0.81	0.00	-60.52	0.00	60.52	3522.53	1761.26	5929.77	2969.29		0.29	-0.06	0.028
48.00	-25.17	-0.78	0.00	-58.10	0.00	58.10	2765.58	1382.79	4652.71	2329.81		0.34	-0.07	0.034
50.00	-24.74	-0.77	0.00	-56.55	0.00	56.55	2743.08	1371.54	4556.27	2281.52		0.37	-0.07	0.034
55.00	-23.68	-0.75	0.00	-52.71	0.00	52.71	2685.46	1342.73	4317.17	2161.80		0.45	-0.08	0.033
60.00	-22.65	-0.73	0.00	-48.96	0.00	48.96	2625.87	1312.94	4081.16	2043.62		0.54	-0.09	0.033
65.00	-21.64	-0.72	0.00	-45.29	0.00	45.29	2564.31	1282.15	3848.56	1927.14		0.64	-0.10	0.032
70.00	-20.66	-0.72	0.00	-41.67	0.00	41.67	2500.78	1250.39	3619.69	1812.53		0.75	-0.11	0.031
75.00	-19.70	-0.72	0.00	-38.07	0.00	38.07	2435.28	1217.64	3394.85	1699.95		0.88	-0.12	0.030
80.00	-18.77	-0.72	0.00	-34.45	0.00	34.45	2367.81	1183.90	3174.36	1589.54		1.01	-0.13	0.030
85.00	-17.87	-0.72	0.00	-30.83	0.00	30.83	2298.37	1149.18	2958.55	1481.47		1.15	-0.14	0.029
86.25	-17.64	-0.73	0.00	-29.93	0.00	29.93	2280.70	1140.35	2905.36	1454.84		1.19	-0.15	0.028
90.00	-16.61	-0.72	0.00	-27.21	0.00	27.21	2218.24	1109.12	2736.97	1370.52		1.31	-0.15	0.027
90.42	-16.50	-0.72	0.00	-26.91	0.00	26.91	1691.27	845.64	2122.94	1063.05		1.32	-0.16	0.035
95.00	-15.82	-0.73	0.00	-23.59	0.00	23.59	1646.42	823.21	1986.06	994.50		1.48	-0.16	0.033
100.00	-15.10	-0.73	0.00	-19.96	0.00	19.96	1595.61	797.80	1839.56	921.15		1.66	-0.18	0.031
105.00	-13.57	-0.72	0.00	-16.32	0.00	16.32	1542.83	771.41	1696.33	849.43		1.85	-0.19	0.028
106.50	-9.84	-0.71	0.00	-15.23	0.00	15.23	1526.61	763.30	1654.04	828.25		1.91	-0.19	0.025
110.00	-9.43	-0.71	0.00	-12.74	0.00	12.74	1488.07	744.04	1556.67	779.49		2.05	-0.20	0.023
115.00	-8.85	-0.70	0.00	-9.18	0.00	9.18	1427.69	713.85	1417.28	709.69		2.27	-0.21	0.019
117.00	-4.71	-0.54	0.00	-7.78	0.00	7.78	1397.29	698.64	1357.25	679.64		2.35	-0.21	0.015
120.00	-4.41	-0.53	0.00	-6.15	0.00	6.15	1351.68	675.84	1269.65	635.77		2.49	-0.22	0.013
125.00	-3.93	-0.50	0.00	-3.50	0.00	3.50	1275.66	637.83	1130.14	565.91		2.72	-0.22	0.009
130.00	-0.67	-0.12	0.00	-0.99	0.00	0.99	1199.65	599.83	998.75	500.12		2.96	-0.23	0.003
130.00	-0.67	-0.12	0.00	-0.99	0.00	0.99	582.69	291.35	473.23	281.02		2.96	-0.23	0.005
135.00	-0.36	-0.07	0.00	-0.37	0.00	0.37	582.69	291.35	473.23	281.02		3.19	-0.23	0.002
140.00	0.00	-0.07	0.00	0.00	0.00	0.00	582.69	291.35	473.23	281.02		3.43	-0.23	0.000

Seismic Segment Forces (Factored)

Structure:	CT13548-S-SBA		**Code:**	EIA/TIA-222-G	8/24/2021
Site Name:	Bloomfield 4		**Exposure:**	C	
Height:	140.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 25

Load Case:	0.9D + 1.0E							**Iterations**	20
Gust Response Factor	1.10				**Sds**	0.19		**Ss**	0.18
Dead Load Factor	0.90	**Seismic Load Factor**	1.00		**Sd1**	0.10		**S1**	0.06
Wind Load Factor	0.00	**Structure Frequency (f1)**	0.39		**SA**	0.04	**Seismic Importance Factor**		1.00

Top Elev (ft)	Description	Wz (lb)	a	b	c	Lateral Fs (lb)	R: 1.50
0.00		0.00	0.00	0.00	0.00	0.00	
5.00		1052.6	0.00	0.03	0.02	18.76	
10.00		1026.4	0.01	0.05	0.03	26.51	
15.00		1000.3	0.02	0.06	0.04	29.70	
20.00		974.27	0.04	0.07	0.04	30.84	
25.00		948.16	0.06	0.07	0.04	31.12	
30.00		922.05	0.09	0.07	0.04	31.13	
35.00		895.94	0.12	0.07	0.03	31.04	
40.00		869.83	0.15	0.07	0.03	30.79	
42.42	Bot - Section 2	411.06	0.17	0.07	0.03	14.64	
45.00		799.20	0.20	0.06	0.02	28.50	
48.00	Top - Section 1	912.07	0.22	0.06	0.02	32.27	
50.00		274.56	0.24	0.06	0.02	9.58	
55.00		671.18	0.29	0.05	0.01	21.74	
60.00		649.42	0.35	0.03	0.01	17.74	
65.00		627.66	0.41	0.02	0.01	12.01	
70.00		605.90	0.47	-0.01	0.01	4.83	
75.00		584.14	0.54	-0.03	0.01	-2.91	
80.00		562.39	0.62	-0.06	0.02	-9.82	
85.00		540.63	0.70	-0.09	0.03	-14.62	
86.25	Bot - Section 3	131.76	0.72	-0.09	0.03	-3.79	
90.00		702.49	0.78	-0.11	0.05	-22.43	
90.42	Top - Section 2	76.69	0.79	-0.11	0.05	-2.46	
95.00		370.84	0.87	-0.12	0.08	-11.59	
100.00		387.87	0.96	-0.12	0.11	-9.57	
105.00	Appurtenance(s)	1057.4	1.06	-0.09	0.17	-12.92	
106.50	Appurtenance(s)	3048.7	1.09	-0.07	0.18	-22.37	
110.00		245.31	1.17	-0.02	0.23	1.50	
115.00		335.65	1.28	0.09	0.31	10.18	
117.00	Appurtenance(s)	3397.2	1.32	0.15	0.35	141.55	
120.00		188.86	1.39	0.26	0.42	11.42	
125.00		300.84	1.51	0.52	0.55	29.07	
130.00	Top - Section 3	2618.0	1.63	0.87	0.71	363.72	
135.00		263.91	1.76	1.35	0.91	49.48	
140.00	Appurtenance(s)	298.91	1.89	1.98	1.14	72.48	
	Totals:	**27,752.6**				**938.1**	**Total Wind:** **29,334.2**

Seismic Base Shear is Less Than 50% of Wind Force - An Analysis is NOT Required

Calculated Forces

Structure:	CT13548-S-SBA	**Code:**	EIA/TIA-222-G	8/24/2021	
Site Name:	Bloomfield 4	**Exposure:**	C		
Height:	140.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 26	

Tower Engineering Solutions

Load Case:	0.9D + 1.0E							**Iterations**	20
Gust Response Factor	1.10			**Sds**	0.19			**Ss**	0.18
Dead Load Factor	0.90	**Seismic Load Factor**	1.00	**Sd1**	0.10			**S1**	0.06
Wind Load Factor	0.00	**Structure Frequency (f1)**	0.39	**SA**	0.04	**Seismic Importance Factor**			1.00

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-29.43	-1.05	0.00	-102.59	0.00	102.59	4157.29	2078.64	8996.15	4504.76		0.00	0.00	0.030
5.00	-28.41	-1.04	0.00	-97.34	0.00	97.34	4094.64	2047.32	8641.94	4327.39		0.00	-0.01	0.029
10.00	-27.29	-1.01	0.00	-92.16	0.00	92.16	4030.02	2015.01	8290.37	4151.35		0.01	-0.01	0.029
15.00	-26.20	-0.99	0.00	-87.09	0.00	87.09	3963.43	1981.72	7941.76	3976.78		0.03	-0.02	0.029
20.00	-25.13	-0.96	0.00	-82.17	0.00	82.17	3894.87	1947.44	7596.41	3803.85		0.06	-0.03	0.028
25.00	-24.09	-0.93	0.00	-77.38	0.00	77.38	3824.34	1912.17	7254.65	3632.72		0.09	-0.03	0.028
30.00	-23.07	-0.90	0.00	-72.74	0.00	72.74	3751.84	1875.92	6916.79	3463.54		0.13	-0.04	0.027
35.00	-22.07	-0.87	0.00	-68.24	0.00	68.24	3677.38	1838.69	6583.15	3296.47		0.17	-0.05	0.027
40.00	-21.09	-0.84	0.00	-63.88	0.00	63.88	3600.94	1800.47	6254.04	3131.67		0.23	-0.06	0.026
42.42	-20.63	-0.83	0.00	-61.85	0.00	61.85	3563.29	1781.64	6096.69	3052.87		0.26	-0.06	0.026
45.00	-19.81	-0.80	0.00	-59.71	0.00	59.71	3522.53	1761.26	5929.77	2969.29		0.29	-0.06	0.026
48.00	-18.88	-0.77	0.00	-57.31	0.00	57.31	2765.58	1382.79	4652.71	2329.81		0.33	-0.07	0.031
50.00	-18.55	-0.76	0.00	-55.78	0.00	55.78	2743.08	1371.54	4556.27	2281.52		0.36	-0.07	0.031
55.00	-17.76	-0.74	0.00	-51.98	0.00	51.98	2685.46	1342.73	4317.17	2161.80		0.44	-0.08	0.031
60.00	-16.98	-0.72	0.00	-48.28	0.00	48.28	2625.87	1312.94	4081.16	2043.62		0.53	-0.09	0.030
65.00	-16.23	-0.71	0.00	-44.66	0.00	44.66	2564.31	1282.15	3848.56	1927.14		0.63	-0.10	0.030
70.00	-15.49	-0.71	0.00	-41.09	0.00	41.09	2500.78	1250.39	3619.69	1812.53		0.74	-0.11	0.029
75.00	-14.77	-0.71	0.00	-37.54	0.00	37.54	2435.28	1217.64	3394.85	1699.95		0.87	-0.12	0.028
80.00	-14.08	-0.71	0.00	-33.98	0.00	33.98	2367.81	1183.90	3174.36	1589.54		1.00	-0.13	0.027
85.00	-13.40	-0.71	0.00	-30.42	0.00	30.42	2298.37	1149.18	2958.55	1481.47		1.14	-0.14	0.026
86.25	-13.23	-0.71	0.00	-29.53	0.00	29.53	2280.70	1140.35	2905.36	1454.84		1.18	-0.14	0.026
90.00	-12.46	-0.71	0.00	-26.86	0.00	26.86	2218.24	1109.12	2736.97	1370.52		1.29	-0.15	0.025
90.42	-12.37	-0.71	0.00	-26.56	0.00	26.56	1691.27	845.64	2122.94	1063.05		1.31	-0.15	0.032
95.00	-11.86	-0.71	0.00	-23.29	0.00	23.29	1646.42	823.21	1986.06	994.50		1.46	-0.16	0.031
100.00	-11.32	-0.71	0.00	-19.72	0.00	19.72	1595.61	797.80	1839.56	921.15		1.64	-0.17	0.029
105.00	-10.18	-0.71	0.00	-16.15	0.00	16.15	1542.83	771.41	1696.33	849.43		1.83	-0.19	0.026
106.50	-7.38	-0.70	0.00	-15.08	0.00	15.08	1526.61	763.30	1654.04	828.25		1.88	-0.19	0.023
110.00	-7.07	-0.70	0.00	-12.62	0.00	12.62	1488.07	744.04	1556.67	779.49		2.03	-0.20	0.021
115.00	-6.64	-0.69	0.00	-9.11	0.00	9.11	1427.69	713.85	1417.28	709.69		2.24	-0.21	0.017
117.00	-3.53	-0.54	0.00	-7.72	0.00	7.72	1397.29	698.64	1357.25	679.64		2.33	-0.21	0.014
120.00	-3.31	-0.53	0.00	-6.11	0.00	6.11	1351.68	675.84	1269.65	635.77		2.46	-0.21	0.012
125.00	-2.95	-0.50	0.00	-3.47	0.00	3.47	1275.66	637.83	1130.14	565.91		2.69	-0.22	0.008
130.00	-0.51	-0.12	0.00	-0.99	0.00	0.99	1199.65	599.83	998.75	500.12		2.92	-0.22	0.002
130.00	-0.51	-0.12	0.00	-0.99	0.00	0.99	582.69	291.35	473.23	281.02		2.92	-0.22	0.004
135.00	-0.27	-0.07	0.00	-0.37	0.00	0.37	582.69	291.35	473.23	281.02		3.15	-0.22	0.002
140.00	0.00	-0.07	0.00	0.00	0.00	0.00	582.69	291.35	473.23	281.02		3.39	-0.22	0.000

Wind Loading - Shaft

Structure:	CT13548-S-SBA	**Code:**	EIA/TIA-222-G	8/24/2021	
Site Name:	Bloomfield 4	**Exposure:**	C		
Height:	140.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 27	

Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00

Wind Load Factor 1.00

Iterations 22

Elev (ft)	Description	Kzt	Kz	qz (psf)	qzGh (psf)	C (mph-ft)	Cf	Ice Thick (in)	Tributary (ft)	Aa (sf)	CfAa (sf)	Wind Force X (lb)	Dead Load Ice (lb)	Tot Dead Load (lb)
0.00		1.00	0.85	7.442	8.19	248.09	0.650	0.000	0.00	0.000	0.00	0.0	0.0	0.0
5.00		1.00	0.85	7.442	8.19	242.05	0.650	0.000	5.00	22.151	14.40	117.9	0.0	1052.6
10.00		1.00	0.85	7.442	8.19	236.02	0.650	0.000	5.00	21.606	14.04	115.0	0.0	1026.5
15.00		1.00	0.85	7.442	8.19	229.98	0.650	0.000	5.00	21.060	13.69	112.1	0.0	1000.4
20.00		1.00	0.90	7.896	8.69	230.68	0.650	0.000	5.00	20.515	13.33	115.8	0.0	974.3
25.00		1.00	0.95	8.276	9.10	229.80	0.650	0.000	5.00	19.969	12.98	118.2	0.0	948.2
30.00		1.00	0.98	8.600	9.46	227.76	0.650	0.000	5.00	19.423	12.63	119.4	0.0	922.0
35.00		1.00	1.01	8.883	9.77	224.89	0.650	0.000	5.00	18.878	12.27	119.9	0.0	895.9
40.00		1.00	1.04	9.137	10.05	221.39	0.650	0.000	5.00	18.332	11.92	119.8	0.0	869.8
42.42	Bot - Section 2	1.00	1.06	9.250	10.18	219.51	0.650	0.000	2.42	8.665	5.63	57.3	0.0	411.1
45.00		1.00	1.07	9.366	10.30	217.38	0.650	0.000	2.58	9.258	6.02	62.0	0.0	799.2
48.00	Top - Section 1	1.00	1.08	9.494	10.44	214.77	0.650	0.000	3.00	10.569	6.87	71.7	0.0	912.1
50.00		1.00	1.09	9.576	10.53	216.27	0.650	0.000	2.00	6.937	4.51	47.5	0.0	274.6
55.00		1.00	1.12	9.770	10.75	211.54	0.650	0.000	5.00	16.960	11.02	118.5	0.0	671.2
60.00		1.00	1.14	9.951	10.95	206.51	0.650	0.000	5.00	16.415	10.67	116.8	0.0	649.4
65.00		1.00	1.16	10.120	11.13	201.22	0.650	0.000	5.00	15.869	10.31	114.8	0.0	627.7
70.00		1.00	1.17	10.279	11.31	195.70	0.650	0.000	5.00	15.324	9.96	112.6	0.0	605.9
75.00		1.00	1.19	10.430	11.47	189.98	0.650	0.000	5.00	14.778	9.61	110.2	0.0	584.1
80.00		1.00	1.21	10.572	11.63	184.08	0.650	0.000	5.00	14.232	9.25	107.6	0.0	562.4
85.00		1.00	1.22	10.708	11.78	178.02	0.650	0.000	5.00	13.687	8.90	104.8	0.0	540.6
86.25	Bot - Section 3	1.00	1.23	10.741	11.82	176.48	0.650	0.000	1.25	3.336	2.17	25.6	0.0	131.8
90.00		1.00	1.24	10.838	11.92	171.81	0.650	0.000	3.75	9.964	6.48	77.2	0.0	702.5
90.42	Top - Section 2	1.00	1.24	10.848	11.93	171.29	0.650	0.000	0.42	1.088	0.71	8.4	0.0	76.7
95.00		1.00	1.25	10.962	12.06	168.31	0.650	0.000	4.58	11.719	7.62	91.9	0.0	370.8
100.00		1.00	1.27	11.081	12.19	161.85	0.650	0.000	5.00	12.262	7.97	97.1	0.0	387.9
105.00	Appurtenance(s)	1.00	1.28	11.195	12.31	155.28	0.650	0.000	5.00	11.716	7.62	93.8	0.0	370.5
106.50	Appurtenance(s)	1.00	1.28	11.229	12.35	153.29	0.650	0.000	1.50	3.408	2.22	27.4	0.0	107.7
110.00		1.00	1.29	11.305	12.44	148.61	0.650	0.000	3.50	7.762	5.05	62.7	0.0	245.3
115.00		1.00	1.30	11.412	12.55	141.83	0.650	0.000	5.00	10.625	6.91	86.7	0.0	335.7
117.00	Appurtenance(s)	1.00	1.31	11.453	12.60	139.09	0.650	0.000	2.00	4.097	2.66	33.6	0.0	129.4
120.00		1.00	1.32	11.514	12.67	134.96	0.650	0.000	3.00	5.982	3.89	49.3	0.0	188.9
125.00		1.00	1.33	11.614	12.78	128.00	0.650	0.000	5.00	9.534	6.20	79.2	0.0	300.8
130.00	Top - Section 3	1.00	1.34	11.710	12.88	120.96	0.650	0.000	5.00	8.989	5.84	75.3	0.0	283.4
135.00		1.00	1.35	11.803	12.98	116.11	0.600	0.000	5.00	8.333	5.00	64.9	0.0	263.9
140.00	Appurtenance(s)	1.00	1.36	11.894	13.08	116.56	0.600	0.000	5.00	8.333	5.00	65.4	0.0	263.9
								Totals:	**140.00**			**2,900.2**		**18,487.1**

Discrete Appurtenance Forces

Structure:	CT13548-S-SBA	**Code:**	EIA/TIA-222-G	8/24/2021	
Site Name:	Bloomfield 4	**Exposure:**	C		
Height:	140.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 28	

Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00

Wind Load Factor 1.00

Iterations 22

No.	Elev (ft)	Description	Qty	qz (psf)	qzGh (psf)	Orient Factor x Ka	Ka	Total CaAa (sf)	Dead Load (lb)	Horiz Ecc (ft)	Vert Ecc (ft)	Wind FX (lb)	Mom Y (lb-ft)	Mom Z (lb-ft)
1	140.00	Lightning Rod	1	11.956	13.152	1.00	1.00	1.05	35.00	0.000	3.500	13.81	0.00	48.33
2	130.00	Ericsson Radio 4449 B71	3	11.710	12.881	0.54	0.80	2.62	222.00	0.000	0.000	33.76	0.00	0.00
3	130.00	Ericsson AIR32	3	11.710	12.881	0.69	0.80	13.44	396.60	0.000	0.000	173.08	0.00	0.00
4	130.00	RFS	3	11.710	12.881	0.58	0.80	34.97	384.00	0.000	0.000	450.51	0.00	0.00
5	130.00	T-Arms	3	11.710	12.881	0.75	1.00	18.00	1050.00	0.000	0.000	231.86	0.00	0.00
6	130.00	Ericsson AIR 21 B2A/B4P	3	11.710	12.881	0.69	0.80	12.49	249.00	0.000	0.000	160.85	0.00	0.00
7	130.00	Ericsson KRY 112 144/2	3	11.710	12.881	0.48	0.80	0.50	33.06	0.000	0.000	6.49	0.00	0.00
8	117.00	SitePro1 PRK-1245 kit	1	11.494	12.643	0.75	0.75	7.13	464.91	0.000	2.000	90.08	0.00	180.17
9	117.00	12'-6" long 2.0" STD Pipe	1	11.384	12.522	0.75	0.75	5.06	261.72	0.000	-3.330	63.39	0.00	-211.10
10	117.00	T-Arms	3	11.453	12.598	0.56	0.75	13.50	1050.00	0.000	0.000	170.08	0.00	0.00
11	117.00	Commscope	1	11.453	12.598	0.54	0.80	1.00	15.10	0.000	0.000	12.63	0.00	0.00
12	117.00	Samsung CBRS RRH -	3	11.453	12.598	0.54	0.80	2.46	69.42	0.000	0.000	31.00	0.00	0.00
13	117.00	Samsung B5/B13	3	11.453	12.598	0.54	0.80	3.02	219.90	0.000	0.000	38.09	0.00	0.00
14	117.00	Samsung B2/B66A	3	11.453	12.598	0.54	0.80	3.02	252.00	0.000	0.000	38.09	0.00	0.00
15	117.00	Commscope	3	11.453	12.598	0.48	0.80	0.13	202.20	0.000	0.000	1.63	0.00	0.00
16	117.00	Andrew SBNHH-1D65B w/	6	11.453	12.598	0.66	0.80	32.51	240.00	0.000	0.000	409.57	0.00	0.00
17	117.00	Samsung	3	11.453	12.598	0.60	0.80	2.77	69.30	0.000	0.000	34.92	0.00	0.00
18	117.00	Antel LPA-80063/6CF_5	6	11.453	12.598	0.76	0.80	43.73	162.00	0.000	0.000	550.93	0.00	0.00
19	117.00	Samsung MT6407-77A	3	11.453	12.598	0.56	0.80	7.91	261.30	0.000	0.000	99.69	0.00	0.00
20	106.50	Platform w/ Hand Rails	1	11.229	12.351	1.00	1.00	40.00	2000.00	0.000	0.000	494.06	0.00	0.00
21	106.50	Powerwave	12	11.240	12.364	0.45	0.75	4.97	264.00	0.000	0.500	61.42	0.00	30.71
22	106.50	Powerwave 7020.00	12	11.240	12.364	0.45	0.75	2.16	26.40	0.000	0.500	26.71	0.00	13.35
23	106.50	Powerwave	1	11.240	12.364	0.60	0.75	6.86	59.00	0.000	0.500	84.86	0.00	42.43
24	106.50	Powerwave	9	11.240	12.364	0.60	0.75	44.06	477.00	0.000	0.500	544.79	0.00	272.40
25	106.50	Andrew SBNH-1D6565C	1	11.240	12.364	0.60	0.75	6.88	66.10	0.000	0.500	85.09	0.00	42.54
26	106.50	KMW	1	11.240	12.364	0.58	0.75	4.69	48.50	0.000	0.500	58.01	0.00	29.00
27	105.00	Valmont LWRM Ring	1	11.195	12.315	0.64	0.80	3.20	350.00	0.000	0.000	39.41	0.00	0.00
28	105.00	Raycap DC6-48-60-18-8F	1	11.218	12.339	0.54	0.80	0.79	32.80	0.000	1.000	9.72	0.00	9.72
29	105.00	Andrew RRUS11 RRUs	6	11.218	12.339	0.54	0.80	8.10	304.20	0.000	1.000	100.00	0.00	100.00
							Totals:		**9,265.51**			**4,114.52**		

Total Applied Force Summary

Structure:	CT13548-S-SBA		**Code:**	EIA/TIA-222-G	8/24/2021
Site Name:	Bloomfield 4		**Exposure:**	C	
Height:	140.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 29

Tower Engineering Solutions

Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00

Wind Load Factor 1.00

Iterations 22

Elev (ft)	Description	Lateral FX (-) (lb)	Axial FY (-) (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)
0.00		0.00	0.00	0.00	0.00
5.00		117.87	1137.50	0.00	0.00
10.00		114.96	1238.74	0.00	0.00
15.00		112.06	1212.63	0.00	0.00
20.00		115.82	1186.52	0.00	0.00
25.00		118.16	1160.41	0.00	0.00
30.00		119.43	1134.30	0.00	0.00
35.00		119.91	1108.19	0.00	0.00
40.00		119.76	1082.08	0.00	0.00
42.42		57.31	513.64	0.00	0.00
45.00		62.00	908.87	0.00	0.00
48.00		71.75	1039.42	0.00	0.00
50.00		47.50	359.46	0.00	0.00
55.00		118.48	883.43	0.00	0.00
60.00		116.79	861.67	0.00	0.00
65.00		114.83	839.91	0.00	0.00
70.00		112.62	818.15	0.00	0.00
75.00		110.20	796.39	0.00	0.00
80.00		107.59	774.64	0.00	0.00
85.00		104.79	752.88	0.00	0.00
86.25		25.62	184.82	0.00	0.00
90.00		77.21	861.68	0.00	0.00
90.42		8.44	94.38	0.00	0.00
95.00		91.85	565.40	0.00	0.00
100.00		97.15	600.12	0.00	0.00
105.00	(8) attachments	242.91	1269.72	0.00	109.72
106.50	(37) attachments	1382.30	3112.42	0.00	430.44
110.00		62.74	344.01	0.00	0.00
115.00		86.69	476.65	0.00	0.00
117.00	(36) attachments	1573.65	3453.64	0.00	-30.93
120.00		49.25	248.14	0.00	0.00
125.00		79.17	399.64	0.00	0.00
130.00	(18) attachments	1131.80	2716.89	0.00	0.00
135.00		64.92	263.91	0.00	0.00
140.00	(1) attachments	79.23	298.91	0.00	48.33
	Totals:	**7,014.77**	**32,699.18**	**0.00**	**557.57**

Linear Appurtenance Segment Forces (Factored)

Structure:	CT13548-S-SBA	**Code:**	EIA/TIA-222-G	8/24/2021	
Site Name:	Bloomfield 4	**Exposure:**	C		
Height:	140.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 30	

Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00

Wind Load Factor 1.00

Iterations 22

Top Elev (ft)	Description	Wind Exposed	Length (ft)	Ca	Exposed Width (in)	Area (sqft)	CaAa (sqft)	Ra	Cf Adjust Factor	qz (psf)	F X (lb)	Dead Load (lb)
5.00	3" Conduit	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	7.442	0.00	3.22
10.00	3" Conduit	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	7.442	0.00	8.05
15.00	3" Conduit	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	7.442	0.00	8.05
20.00	3" Conduit	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	7.896	0.00	8.05
25.00	3" Conduit	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	8.276	0.00	8.05
30.00	3" Conduit	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	8.600	0.00	8.05
35.00	3" Conduit	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	8.883	0.00	8.05
40.00	3" Conduit	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	9.137	0.00	8.05
42.42	3" Conduit	Yes	2.42	0.000	0.00	0.00	0.00	0.000	0.000	9.250	0.00	3.89
45.00	3" Conduit	Yes	2.58	0.000	0.00	0.00	0.00	0.000	0.000	9.366	0.00	4.16
48.00	3" Conduit	Yes	3.00	0.000	0.00	0.00	0.00	0.000	0.000	9.494	0.00	4.83
50.00	3" Conduit	Yes	2.00	0.000	0.00	0.00	0.00	0.000	0.000	9.576	0.00	3.22
55.00	3" Conduit	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	9.770	0.00	8.05
60.00	3" Conduit	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	9.951	0.00	8.05
65.00	3" Conduit	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	10.120	0.00	8.05
70.00	3" Conduit	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	10.279	0.00	8.05
75.00	3" Conduit	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	10.430	0.00	8.05
80.00	3" Conduit	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	10.572	0.00	8.05
85.00	3" Conduit	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	10.708	0.00	8.05
86.25	3" Conduit	Yes	1.25	0.000	0.00	0.00	0.00	0.000	0.000	10.741	0.00	2.01
90.00	3" Conduit	Yes	3.75	0.000	0.00	0.00	0.00	0.000	0.000	10.838	0.00	6.04
90.42	3" Conduit	Yes	0.42	0.000	0.00	0.00	0.00	0.000	0.000	10.848	0.00	0.67
95.00	3" Conduit	Yes	4.58	0.000	0.00	0.00	0.00	0.000	0.000	10.962	0.00	7.38
100.00	3" Conduit	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	11.081	0.00	8.05
105.00	3" Conduit	Yes	5.00	0.000	0.00	0.00	0.00	0.000	0.000	11.195	0.00	8.05
106.50	3" Conduit	Yes	1.50	0.000	0.00	0.00	0.00	0.000	0.000	11.229	0.00	2.42
										Totals:	**0.0**	**166.6**

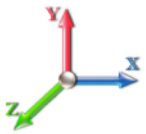
Calculated Forces

Structure:	CT13548-S-SBA	**Code:**	EIA/TIA-222-G	8/24/2021	
Site Name:	Bloomfield 4	**Exposure:**	C		
Height:	140.00 (ft)	**Crest Height:**	0.00		
Base Elev:	0.000 (ft)	**Site Class:**	D - Stiff Soil		
Gh:	1.1 **Topography:** 1	**Struct Class:**	II	Page: 31	

Load Case: 1.0D + 1.0W 60 mph Wind

Dead Load Factor 1.00

Wind Load Factor 1.00



Iterations 22

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation Sway (deg)	Rotation Twist (deg)	Stress Ratio
0.00	-32.70	-7.03	0.00	-692.86	0.00	692.86	4157.29	2078.64	8996.15	4504.76	0.00	0.000	0.000	0.162
5.00	-31.55	-6.93	0.00	-657.72	0.00	657.72	4094.64	2047.32	8641.94	4327.39	0.02	-0.044	0.000	0.160
10.00	-30.31	-6.84	0.00	-623.05	0.00	623.05	4030.02	2015.01	8290.37	4151.35	0.09	-0.089	0.000	0.158
15.00	-29.09	-6.75	0.00	-588.85	0.00	588.85	3963.43	1981.72	7941.76	3976.78	0.21	-0.134	0.000	0.155
20.00	-27.90	-6.65	0.00	-555.10	0.00	555.10	3894.87	1947.44	7596.41	3803.85	0.38	-0.181	0.000	0.153
25.00	-26.73	-6.55	0.00	-521.83	0.00	521.83	3824.34	1912.17	7254.65	3632.72	0.59	-0.229	0.000	0.151
30.00	-25.60	-6.45	0.00	-489.06	0.00	489.06	3751.84	1875.92	6916.79	3463.54	0.86	-0.277	0.000	0.148
35.00	-24.48	-6.35	0.00	-456.81	0.00	456.81	3677.38	1838.69	6583.15	3296.47	1.17	-0.327	0.000	0.145
40.00	-23.40	-6.24	0.00	-425.07	0.00	425.07	3600.94	1800.47	6254.04	3131.67	1.54	-0.377	0.000	0.142
42.42	-22.88	-6.19	0.00	-410.00	0.00	410.00	3563.29	1781.64	6096.69	3052.87	1.74	-0.402	0.000	0.141
45.00	-21.97	-6.13	0.00	-394.02	0.00	394.02	3522.53	1761.26	5929.77	2969.29	1.97	-0.429	0.000	0.139
48.00	-20.93	-6.06	0.00	-375.64	0.00	375.64	2765.58	1382.79	4652.71	2329.81	2.25	-0.461	0.000	0.169
50.00	-20.56	-6.02	0.00	-363.52	0.00	363.52	2743.08	1371.54	4556.27	2281.52	2.44	-0.482	0.000	0.167
55.00	-19.68	-5.92	0.00	-333.41	0.00	333.41	2685.46	1342.73	4317.17	2161.80	2.98	-0.542	0.000	0.162
60.00	-18.81	-5.81	0.00	-303.83	0.00	303.83	2625.87	1312.94	4081.16	2043.62	3.58	-0.603	0.000	0.156
65.00	-17.96	-5.71	0.00	-274.78	0.00	274.78	2564.31	1282.15	3848.56	1927.14	4.25	-0.663	0.000	0.150
70.00	-17.14	-5.60	0.00	-246.25	0.00	246.25	2500.78	1250.39	3619.69	1812.53	4.97	-0.724	0.000	0.143
75.00	-16.34	-5.50	0.00	-218.24	0.00	218.24	2435.28	1217.64	3394.85	1699.95	5.77	-0.784	0.000	0.135
80.00	-15.56	-5.40	0.00	-190.75	0.00	190.75	2367.81	1183.90	3174.36	1589.54	6.62	-0.843	0.000	0.127
85.00	-14.81	-5.29	0.00	-163.77	0.00	163.77	2298.37	1149.18	2958.55	1481.47	7.53	-0.901	0.000	0.117
86.25	-14.62	-5.27	0.00	-157.16	0.00	157.16	2280.70	1140.35	2905.36	1454.84	7.77	-0.916	0.000	0.114
90.00	-13.76	-5.18	0.00	-137.41	0.00	137.41	2218.24	1109.12	2736.97	1370.52	8.51	-0.957	0.000	0.106
90.42	-13.66	-5.18	0.00	-135.25	0.00	135.25	1691.27	845.64	2122.94	1063.05	8.59	-0.962	0.000	0.135
95.00	-13.09	-5.09	0.00	-111.52	0.00	111.52	1646.42	823.21	1986.06	994.50	9.54	-1.010	0.000	0.120
100.00	-12.49	-4.99	0.00	-86.08	0.00	86.08	1595.61	797.80	1839.56	921.15	10.63	-1.065	0.000	0.101
105.00	-11.22	-4.73	0.00	-61.02	0.00	61.02	1542.83	771.41	1696.33	849.43	11.77	-1.112	0.000	0.079
106.50	-8.14	-3.29	0.00	-53.49	0.00	53.49	1526.61	763.30	1654.04	828.25	12.12	-1.125	0.000	0.070
110.00	-7.79	-3.22	0.00	-41.98	0.00	41.98	1488.07	744.04	1556.67	779.49	12.96	-1.151	0.000	0.059
115.00	-7.32	-3.13	0.00	-25.86	0.00	25.86	1427.69	713.85	1417.28	709.69	14.18	-1.180	0.000	0.042
117.00	-3.90	-1.49	0.00	-19.60	0.00	19.60	1397.29	698.64	1357.25	679.64	14.67	-1.189	0.000	0.032
120.00	-3.65	-1.43	0.00	-15.14	0.00	15.14	1351.68	675.84	1269.65	635.77	15.43	-1.200	0.000	0.027
125.00	-3.25	-1.35	0.00	-7.98	0.00	7.98	1275.66	637.83	1130.14	565.91	16.69	-1.213	0.000	0.017
130.00	-0.56	-0.16	0.00	-1.26	0.00	1.26	1199.65	599.83	998.75	500.12	17.96	-1.220	0.000	0.003
130.00	-0.56	-0.16	0.00	-1.26	0.00	1.26	582.69	291.35	473.23	281.02	17.96	-1.220	0.000	0.005
135.00	-0.30	-0.09	0.00	-0.48	0.00	0.48	582.69	291.35	473.23	281.02	19.24	-1.221	0.000	0.002
140.00	0.00	-0.08	0.00	-0.05	0.00	0.05	582.69	291.35	473.23	281.02	20.52	-1.222	0.000	0.000

Final Analysis Summary

Structure:	CT13548-S-SBA		**Code:**	EIA/TIA-222-G	8/24/2021
Site Name:	Bloomfield 4		**Exposure:**	C	
Height:	140.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 32

Tower Engineering Solutions

Reactions

Load Case	Shear FX (kips)	Shear FZ (kips)	Axial FY (kips)	Moment MX (ft-kips)	Moment MY (ft-kips)	Moment MZ (ft-kips)
1.2D + 1.6W 97 mph Wind	29.4	0.00	39.19	0.00	0.00	2912.12
0.9D + 1.6W 97 mph Wind	29.4	0.00	29.38	0.00	0.00	2885.36
1.2D + 1.0Di + 1.0Wi 50 mph Wind	8.5	0.00	68.61	0.00	0.00	848.22
1.2D + 1.0E	1.1	0.00	39.24	0.00	0.00	103.60
0.9D + 1.0E	1.1	0.00	29.43	0.00	0.00	102.59
1.0D + 1.0W 60 mph Wind	7.0	0.00	32.70	0.00	0.00	692.86

Max Stresses

Load Case	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (-) (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Elev (ft)	Stress Ratio
1.2D + 1.6W 97 mph Wind	-24.30	-25.47	0.00	-1581.6	0.00	-1581.6	2765.58	1382.7	4652.71	2329.81	48.00	0.688
0.9D + 1.6W 97 mph Wind	-18.02	-25.25	0.00	-1561.0	0.00	-1561.0	2765.58	1382.7	4652.71	2329.81	48.00	0.677
1.2D + 1.0Di + 1.0Wi 50 mph Wind	-48.62	-7.42	0.00	-460.83	0.00	-460.83	2765.58	1382.7	4652.71	2329.81	48.00	0.215
1.2D + 1.0E	-16.50	-0.72	0.00	-26.91	0.00	-26.91	1691.27	845.64	2122.94	1063.05	90.42	0.035
0.9D + 1.0E	-12.37	-0.71	0.00	-26.56	0.00	-26.56	1691.27	845.64	2122.94	1063.05	90.42	0.032
1.0D + 1.0W 60 mph Wind	-20.93	-6.06	0.00	-375.64	0.00	-375.64	2765.58	1382.7	4652.71	2329.81	48.00	0.169

Base Plate Summary

Structure:	CT13548-S-SB		**Code:**	EIA/TIA-222-G	8/24/2021
Site Name:	Bloomfield 4		**Exposure:**	C	
Height:	140.00 (ft)		**Crest Height:**	0.00	
Base Elev:	0.000 (ft)		**Site Class:**	D - Stiff Soil	
Gh:	1.1	**Topography:** 1	**Struct Class:**	II	Page: 33

Tower Engineering Solutions

Reactions	
Original Design	
Moment (kip-ft):	2825.90
Axial (kip):	51.34
Shear (kip):	27.29
Analysis (1.2D + 1.6W)	
Moment (kip-ft):	2912.12
Axial (kip):	39.19
Shear (kip):	29.40

Base Plate	
Yield (ksi):	50.00
Width (in):	62.00
Style:	Round
Polygon Sides:	0.00
Clip Length (in):	0.00
Effective Len (in):	9.02
Moment (kip-in):	264.33
Allow Stress (ksi):	67.50
Applied Stress (ksi):	43.88
Stress Ratio:	0.65

Anchor Bolts	
Bolt Circle:	58.13
Number Bolts:	24.00
Bolt Type:	1.5" F1554 105
Bolt Diameter (in):	1.50
Yield (ksi):	105.00
Ultimate (ksi):	125.00
Arrangement:	Radial
Cluster Dist (in):	0.00
Start Angle (deg):	0.00
Compression	
Force (kip):	103.05
Allowable (kip):	141.00
Ratio:	0.75
Tension	
Force (kip):	97.33
Allowable (kip):	141.00
Ratio:	0.71

Monopole Mat Foundation Design

			Date: 8/24/2021
Customer Name:	Verizon	**EIA/TIA Standard:**	EIA-222-G
Site Name:	Bloomfield 4	**Structure Height (Ft.):**	140
Site Number:	CT13548-S-SBA	**Engineer Name:**	W. Velez
Engr. Number:	113623	**Engineer Login ID:**	

Foundation Info Obtained from: Drawings/Calculations

Structure Type: Monopole

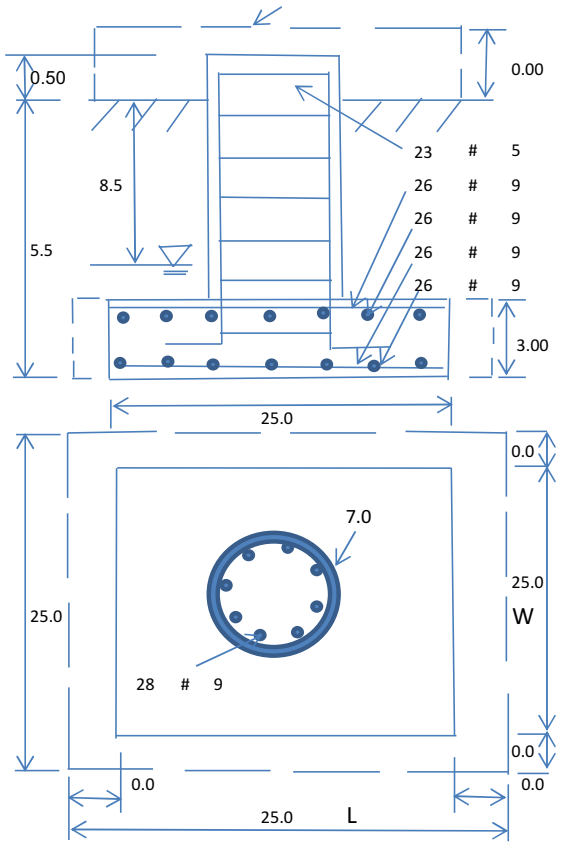
Analysis or Design? Analysis

Base Reactions (Factored):

Axial Load (Kips):	39.2	Shear Force (Kips):	29.4
Uplift Force (Kips):	0.0	Moment (Kips-ft):	2912.1
Allowable overstress %:	5.0%		

Foundation Geometries:

		Mods required- Yes/No ?:	No
Diameter of Pier (ft.):	7.0	Depth of Base BG (ft.):	5.5
Pier Height A. G. (ft.):	0.50	Thickness of Pad (ft):	3.00
Length of Pad (ft.):	25	Width of Pad (ft.):	25
Final Length of pad (ft)	25.0	Final width of pad (ft):	25.0



Material Properties and Reabr Info:

Concrete Strength (psi):	4000	Steel Elastic Modulus:	29000	ksi
Vertical bar yield (ksi)	60	Tie steel yield (ksi):	60	
Vertical Rebar Size #:	9	Tie / Stirrup Size #:	5	
Qty. of Vertical Rebars:	28	Tie Spacing (in):	3.0	
Pad Rebar Yield (Ksi):	60	Pad Steel Rebar Size (#):	9	
Concrete Cover (in.):	6	Unit Weight of Concrete:	150.0	pcf
Rebar at the bottom of the concrete pad:				
Qty. of Rebar in Pad (L):	26	Qty. of Rebar in Pad (W):	26	
Rebar at the top of the concrete pad:				
Qty. of Rebar in Pad (L):	26	Qty. of Rebar in Pad (W):	26	
Apply 1.35 factor for e/w Per G:	1.35			

Soil Design Parameters:

Soil Unit Weight (pcf):	115.0	Soil Buoyant Weight:	52.6	Pcf		
Water Table B.G.S. (ft):	8.5	Unit Weight of Water:	62.4	pcf	Angle from Top of Pad:	30
Ultimate Bearing Pressure (psf):	6000	Ultimate Skin Friction:	0	Psf	Angle from Bottm of Pad:	25
Consider Friction for O.T.M. (Y/N):	No	Consider Friction for bearing (Y/N):	Yes		Angle from Bottm of Pad:	25
Consider soil hor. resist. for OTM.:	Yes	Reduction factor on the maximum soil bearing pressure:	1.00			

Foundation Analysis and Design: Uplift Strength Reduction Factor: 0.75 — Compression Strength Reduction Factor: 0.75

Total Dry Soil Volume (cu. Ft.):	1466.29	Total Dry Soil Weight (Kips):	168.62
Total Buoyant Soil Volume (cu. Ft.):	0.00	Total Buoyant Soil Weight (Kips):	0.00
Total Effective Soil Weight (Kips):	168.62	Weight from the Concrete Block at Top (K):	0.00
Total Dry Concrete Volume (cu. Ft.):	1990.45	Total Dry Concrete Weight (Kips):	298.57
Total Buoyant Concrete Volume (cu. Ft.):	0.00	Total Buoyant Concrete Weight (Kips):	0.00
Total Effective Concrete Weight (Kips):	298.57	Total Vertical Load on Base (Kips):	506.38

Check Soil Capacities:

					Load/ Capacity Ratio	
Calculated Maxium Net Soil Pressure under the base (psf):	2080	<	Allowable Factored Soil Bearing (psf):	4500	0.46	OK!
Allowable Foundation Overturning Resistance (kips-ft.):	5745.8	>	Design Factored Momont (kips-ft):	2970	0.52	OK!
Factor of Safety Against Overturning (O. R. Moment/Design Moment):	1.93	OK!				

Check the capacities of Reinforceing Concrete:

Strength reduction factor (Flexure and axial tension):	0.90	Strength reduction factor (Shear):	0.75			
Strength reduction factor (Axial compresion):	0.65	Wind Load Factor on Concrete Design:	1.00			
					Load/ Capacity Ratio	
(1) Concrete Pier:						
Vertical Steel Rebar Area (sq. in./each):	1.00		Tie / Stirrup Area (sq. in./each):	0.31		
Calculated Moment Capacity (Mn,Kips-Ft):	4809.3	>	Design Factored Moment (Mu, Kips-F	3000.3	0.62	OK!
Calculated Shear Capacity (Kips):	1359.0	>	Design Factored Shear (Kips):	29.4	0.02	OK!
Calculated Tension Capacity (Tn, Kips):	1512.0	>	Design Factored Tension (Tu Kips):	0.0	0.00	OK!
Calculated Compression Capacity (Pn, Kips):	9748.3	>	Design Factored Axial Load (Pu Kips):	39.2	0.00	OK!
Moment & Axial Strength Combination:	0.62	OK!	Check Tie Spacing (Design/Required):		0.25	OK!
Pier Reinforcement Ratio:	0.005		Reinforcement Ratio is satisfied per ACI			
(2).Concrete Pad:						
One-Way Design Shear Capacity (L-Direction, Kips):	837.8	>	One-Way Factored Shear (L-D. Kips):	193.4	0.23	OK!
One-Way Design Shear Capacity (W-Direction, Kips):	837.8	>	One-Way Factored Shear (W-D., Kips)	193.4	0.23	OK!
One-Way Design Shear Capacity (Corner-Corner. Kips):	785.8	>	One-Way Factored Shear (C-C, Kips):	186.9	0.24	OK!
Lower Steel Pad Reinforcement Ratio (L-Direct.):	0.0029	OK!	Lower Steel Pad Reinf. Ratio (W-Direc	0.0029		
Lower Steel Pad Moment Capacity (L-Direction. Kips-ft):	3354.7	>	Moment at Bottom (L-Dir. K-Ft):	1047.1	0.31	OK!
Lower Steel Pad Moment Capacity (W-Direction. Kips-ft):	3354.7	>	Moment at Bottom (W-Dir. K-Ft):	1047.1	0.31	OK!
Lower Steel Pad Moment Capacity (Corner-Corner,K-ft):	4713.0	>	Moment at Bottom (C-C Dir. K-Ft):	1480.9	0.31	OK!
Upper Steel Pad Reinforcement Ratio (L-Direct.):	0.0029	OK!	Upper Steel Reinf. Ratio (W-Dir.):	0.0029		
Upper Steel Pad Moment Capacity (L-Direc. Kips-ft):	3354.7	>	Moment at the top (L-Dir K-Ft):	463.2	0.14	OK!
Upper Steel Pad Moment Capacity (W-Direc. Kips-ft):	3354.7	>	Moment at the top (W-Dir K-Ft):	463.2	0.14	OK!
Upper Steel Pad Moment Capacity (Corner-Corner. K-ft):	4713.0	>	Moment at the top (C-C Dir. K-Ft):	434.6	0.09	OK!
(3).Check Punching Shear Capacity due to Moment in the Pier:						
Moment transferred by punching shear:	1164.8	k-ft.	Max. factored shear stress v_{u_CD}:		3.1	Psi
Max. factored shear stress v_{u_AB}:	9.1	Psi	Factored shear Strengthϕv_n:		189.7	Psi
Max. factored shear stress v_u:	9.1	Psi	Check Usage of Punching Shear Capacity:		0.05	OK!

Pier Foundation Design For Monopole

				Date
				8/24/2021
	Customer Name:	**Verizon**	**EIA/TIA Standard:**	EIA-222-G
	Site Name:	Bloomfield 4	**Structure Height (Ft.):**	140
	Site Number:	CT13548-S-SBA	**Engineer Name:**	W. Velez
	Engr. Number:	113623	**Engineer Login ID:**	

Foundation Info Obtained from: Drawings/Calculations

Structure Type: Monopole

Analysis or Design? Analysis

Base Reactions (Factored):

Axial Load (Kips):	39.2	Shear Force (Kips):	29.4
Uplift Force (Kips):	0.0	Moment (Kips-ft):	2912.1

Foundation Geometries:

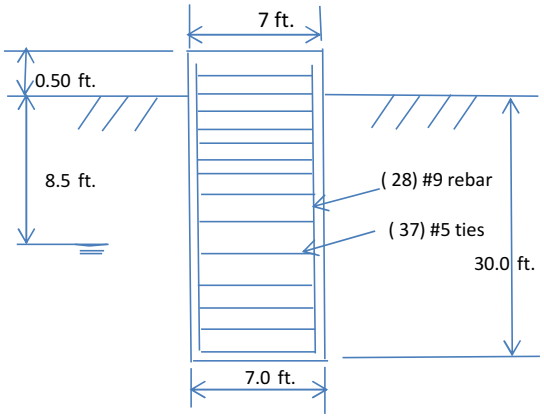
Diameter of Pier (ft.):	7.0	Depth of Base B. G. S. :	30.0	ft.
Pier Height A. G. (ft.):	0.50			

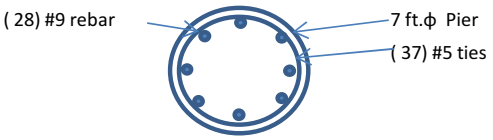
Material Properties and Reabr Info:

Concrete Strength (psi):	4000	Steel Elastic Modulus:	29000	ksi
Vertical bar yield (ksi)	60	Tie steel yield strength:	60	ksi
Vertical Rebar Size #:	9	Tie / Stirrup Size #:	5	
Qty. of Vertical Rebars:	28	Tie Spacing:	12.0	in.
Concrete Cover (in.):	5	Concrete unit weight:	150.0	pcf

Soil Design Parameters:

Water Table B.G.S. (ft):	8.5	Unit weight of water:	62.4	psf
Ratio of Uplift/Axial Skin Friction:	1.0	Pullout failure Angle:	30	(°)
Skin Frictions are to be obtained from:		Soil Report		





Monopole Pier Foundation

Depth of Layers (ft) Top	Depth of Layers (ft) Bottom	soil (pcf)	(°)	Cohesion (psf)	Ultimate Skin Friction (psf)	Ultimate Bearing (psf)	Soil Types
0.0	4.0	110	25	0	0	0	Silt
4.0	8.0	115	33	0	400	0	Sand
8.0	15.0	115	33	0	550	0	Sand
15.0	26.0	115	33	0	800	0	Sand
26.0	31.0	115	33	0	1100	6000	Sand

Soil weight Increase Factor for bouyant soils (1.0 to 1.15): 1.1

Foundation Analysis and Design:

Uplift Strength Reduction Factor:	0.75	Soil Bearing Strength Reduction Factor:	0.75	
Total Dry Soil Volume from Conical Failure (cu. Ft.):	8715	Dry Soil Weight from Conical Failure:	982	Kips
Total Buoyant Soil Volume from Conical Failure (cu. Ft.):	6404	Buoyant Soil Weight from Conical Failure (K	447	Kips
Total Dry Concrete Volume (cu. Ft.):	346	Total Dry Concrete Weight:	52.0	Kips
Total Buoyant Concrete Volume (cu. Ft.):	827.4	Total Buoyant Concrete Weight:	72.48	Kips
Total Effective Concrete Weight (Kips):	124.4	Total Effective Soil Weight:	1429.1	Kips
Total Effective Vertical Load on Base (Kips):	69.0			

Check Soil Capacities:

					Usage	
Allowable Foundation Overturning Resistance (kips-ft.):	10435.4	>	Design Factored Moment (kips-ft):	3496	0.34	OK!
Factor of Safety of Passive Soil Resistance against Moment:	2.99	OK!				

Check the capacities of Reinforceing Concrete:

Strength reduction factor (Flexure and axial tension):	0.90	Strength reduction factor (Shear):	0.75	
Strength reduction factor (Axial compresion):	0.65	Wind Load Factor on Concrete Design:	1.00	

Reinforcing Concrete Pier:

					Usage	
Vertical Steel Rebar Area (sq. in./each):	1.00		Tie / Stirrup Area (sq. in./each):	0.31		
Calculated Moment Capacity (Mn,Kips-Ft):	4778.1	>	Design Factored Moment (Mu, K-Ft):	3021.3	0.63	OK!
Calculated Shear Capacity (Kips):	967.3	>	Design Factored Shear (Kips):	227.8	0.24	OK!
Calculated Tension Capacity (Tn, Kips):	1512.0	>	Design Factored Tension (Tu Kips):	0.0	0.00	OK!
Calculated Compression Capacity (Pn, Kips):	9748	>	Design Factored Axial Load (Pu Kips):	39.2	0.00	OK!
Moment & Axial Strength Combination:	0.63	OK!	Max. Allowable Tie/Stirrup Spacing:	12.00	in.	
Pier Reinforcement Ratio:	0.005		Reinforcement Ratio is too small			

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

Antenna Mount Analysis Report with Hardware Upgrades

Mount Analysis

SMART Tool Project #: 10054713
Maser Consulting Connecticut Project #: 21777712A

July 2, 2021

Site Information	*Site ID:*	*468216-VZW / BLOOMFIELD 2 CT*
	Site Name:	*BLOOMFIELD 2 CT*
	Carrier Name:	*Verizon Wireless*
	Address:	*12 Burr Rd* *Bloomfield, Connecticut 06002* *Hartford County*
	Latitude:	*41.817861°*
	Longitude:	*-72.764500°*
Structure Information	*Tower Type:*	*140-Ft Monopole*
	Mount Type:	*12.50-Ft T-Arm*

FUZE ID # 15625719

Analysis Results

T-Arm: **87.8% Pass***

*Results valid after hardware upgrades noted in the PMI Requirements are installed.

******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: Chuanjiao Hu

Executive Summary:

The objective of this report is to determine the capacity of the antenna support mount at the subject facility for the final wireless telecommunications configuration, per the applicable codes and standards. Any modification listed under Sources of Information was assumed completed and was included in this analysis.

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: 702480, dated June 8, 2021*
Mount Mapping Report	*FDH-IS, Site ID: 468216, dated April 4, 2021*
Construction Drawing	*Infinigy, Site Name: Bloomfield 2CT, dated June 14, 2021*

Analysis Criteria:

Codes and Standards:	ANSI/TIA-222-H	
Wind Parameters:	Basic Wind Speed (Ultimate 3-sec. Gust),	116 mph
	Ice Wind Speed (3-sec. Gust):	50 mph
	Design Ice Thickness:	1.50 in
	Risk Category:	II
	Exposure Category:	C
	Topographic Category:	1
	Topographic Feature Considered:	N/A
	Topographic Method:	N/A
	Ground Elevation Factor, K_e:	0.993
Seismic Parameters:	S_S:	0.181
	S_1:	0.055
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
			Antel		
			Raycap		
			Samsung		Added

* Equipment to be flush mounted directly to the Monopole. They are not mounted on T-Arm mounts and are not included in this mount analysis.

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

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

Standard Conditions:

1. All engineering services are performed on the basis that the information provided to 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:
   - o Channel, Solid Round, Angle, Plate — ASTM A36 (Gr. 36)
   - o HSS (Rectangular) — ASTM 500 (Gr. B-46)
   - o Pipe — ASTM A53 (Gr. B-35)
   - o Threaded Rod — F1554 (Gr. 36)
   - o Bolts — ASTM A325

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
Face Horizontal		Pass
Mount Pipe		Pass
Standoff		Pass
P2.5 Mount Pipe		Pass
Mount Connection		Pass

Structure Rating – *(Controlling Utilization of all Components)*	**87.8%**

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

Recommendation:

The existing mounts are **SUFFICIENT** for the final loading configuration upon the completion of the recommendations listed in the Special instructions section of the below referenced PMI document.

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 Post Installation Inspection (PMI) Report Deliverables
Antenna Placement Diagrams
TIA Adoption and Wind Speed Usage Letter


4.4.2021


4.4.2021

V3.0 Updated on 8-31-2020

PAUL J. FORD & COMPANY

Antenna Mount Mapping Form (PATENT PENDING)

FCC #

Tower Owner:	SBA	**Mapping Date:**	4/4/2021
Site Name:	Bloomfield 2 CT	**Tower Type:**	Monopole
Site Number or ID:	468216	**Tower Height (Ft.):**	
Mapping Contractor:	FDH-IS	**Mount Elevation (Ft.):**	119.5

Mount Pipe Configuration and Geometries [Unit = Inches]

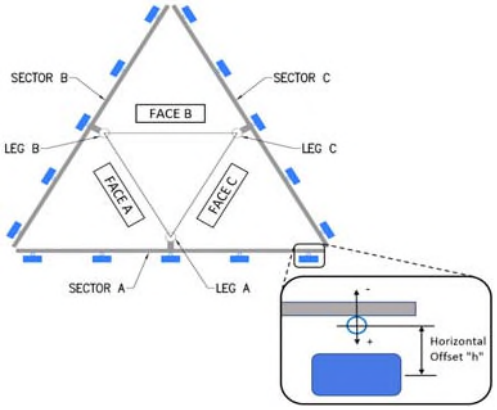
Sector / Position	Mount Pipe Size & Length	Vertical Offset Dimension "u"	Horizontal Offset "C1, C2, C3, etc."	Sector / Position	Mount Pipe Size & Length	Vertical Offset Dimension "u"	Horizontal Offset "C1, C2, C3, etc."
A1	2.4"Ø x 0.154" x 7.0'	41.00	7.00	C1	2.4"Ø x 0.154" x 7.0'	41.00	7.00
A2	2.4"Ø x 0.154" x 7.0'	41.00	32.00	C2	2.4"Ø x 0.154" x 7.0'	41.00	32.00
A3	2.4"Ø x 0.154" x 8.0'	48.00	63.50	C3	2.4"Ø x 0.154" x 8.0'	48.00	63.50
A4	2.4"Ø x 0.154" x 7.0'	41.00	95.00	C4	2.4"Ø x 0.154" x 7.0'	41.00	95.00
A5	2.4"Ø x 0.154" x 7.0'	41.00	120.00	C5	2.4"Ø x 0.154" x 7.0'	41.00	120.00
A6				C6			
B1	2.4"Ø x 0.154" x 7.0'	41.00	7.00	D1			
B2	2.4"Ø x 0.154" x 7.0'	41.00	32.00	D2			
B3	2.4"Ø x 0.154" x 8.0'	48.00	63.50	D3			
B4	2.4"Ø x 0.154" x 7.0'	41.00	95.00	D4			
B5	2.4"Ø x 0.154" x 7.0'	41.00	120.00	D5			
B6				D6			

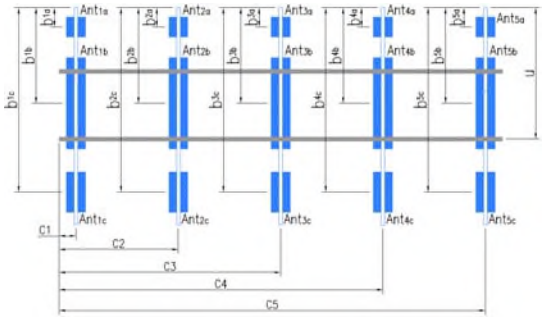
Distance between bottom rail and mount CL elevation (dim d). Unit is inches. See 'Mount Elev Ref' tab for details. :	
Distance from top of bottom support rail to lowest tip of ant./eqpt. of Carrier above. (N/A if > 10 ft.) :	
Distance from top of bottom support rail to highest tip of ant./eqpt. of Carrier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

Please enter additional infomation or comments below.

(18) 1 5/8" Coax; (1) 1 1/2"Ø Coax; (1) 3/8"Ø Cable

Tower Face Width at Mount Elev. (ft.):		Tower Leg Size or Pole Shaft Diameter at Mount Elev. (in.):	23



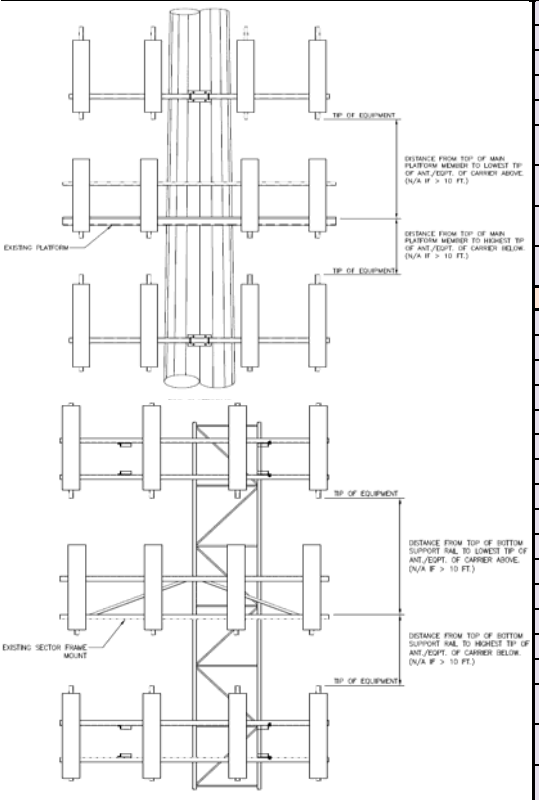


Antenna Layout (Looking Out From Tower)

Ants. Items	Enter antenna model. If not labeled, enter "Unknown". Antenna Models if Known	Width (in.)	Depth (in.)	Height (in.)	Coax Size and Qty	Antenna Center-line (Ft.)	Mounting Locations [Units are inches and degrees] Vertical Distances"b_{1a}, b_{2a}, b_{3a}, b_{1b}...." (Inches)	Horiz. Offset "h" (Use "-" if Ant. is behind)	Antenna Azimuth (Degrees)	Photos of antennas Photo Numbers
Sector A										
Ant_{1a}	LPA-80063/6CFE-Din5	15.00	13.00	71.00		119.583	40.00	11.00	60.00	
Ant_{1b}										
Ant_{1c}										
Ant_{2a}	SBNHH-1D65B	12.00	7.00	73.00		120.083	34.00	8.00	60.00	
Ant_{2b}										
Ant_{2c}										
Ant_{3a}	BXA-70063/6CF	11.00	6.00	71.00		120.083	41.00	10.00	60.00	
Ant_{3b}	B13 RRH4x30	12.00	21.00	7.50		123	6.00	4.00		
Ant_{3c}										
Ant_{4a}	SBNHH-1D65B	12.00	7.00	73.00		120.083	34.00	8.00	60.00	
Ant_{4b}										
Ant_{4c}										
Ant_{5a}	LPA-80063/6CF	15.00	13.00	71.00		119.583	40.00	11.00	60.00	
Ant_{5b}										
Ant_{5c}										
Ant on Standoff										
Ant on Standoff										
Ant on Tower										
Ant on Tower										

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

Climbing Facility Information		
Location:	Flat 1	Deg
Climbing Facility	Corrosion Type:	Good condition.
	Access:	Climbing path was unobstructed.
	Condition:	Good condition.



Sector B										
Ant_{1a}	LPA-80063/6CFE-Din5	15.00	13.00	71.00		119.583	40.00	11.00	180.00	
Ant_{1b}										
Ant_{1c}										
Ant_{2a}	SBNHH-1D65B	12.00	7.00	73.00		120.083	34.00	8.00	180.00	
Ant_{2b}										
Ant_{2c}										
Ant_{3a}	BXA-70063/6CF	11.00	6.00	71.00		120.083	41.00	10.00	180.00	
Ant_{3b}	B13 RRH4x30	12.00	21.00	7.50		123	6.00	4.00		
Ant_{3c}										
Ant_{4a}	SBNHH-1D65B	12.00	7.00	73.00		120.083	34.00	8.00	180.00	
Ant_{4b}										
Ant_{4c}										
Ant_{5a}	LPA-80063/6CF	15.00	13.00	71.00		119.583	40.00	11.00	180.00	
Ant_{5b}										
Ant_{5c}										
Ant on Standoff										
Ant on Standoff										
Ant on Tower										
Ant on Tower										
Sector C										
Ant_{1a}	LPA-80063/6CFE-Din5	15.00	13.00	71.00		119.583	40.00	11.00	300.00	
Ant_{1b}										
Ant_{1c}										
Ant_{2a}	SBNHH-1D65B	12.00	7.00	73.00		120.083	34.00	8.00	300.00	
Ant_{2b}										
Ant_{2c}										
Ant_{3a}	BXA-70063/6CF	11.00	6.00	71.00		120.083	41.00	10.00	300.00	
Ant_{3b}	B13 RRH4x30	12.00	21.00	7.50		123	6.00	4.00		
Ant_{3c}										
Ant_{4a}	SBNHH-1D65B	12.00	7.00	73.00		120.083	34.00	8.00	300.00	
Ant_{4b}										
Ant_{4c}										
Ant_{5a}	LPA-80063/6CF	15.00	13.00	71.00		119.583	40.00	11.00	300.00	
Ant_{5b}										
Ant_{5c}										
Ant on Standoff										
Ant on Standoff										
Ant on Tower										
Ant on Tower										
Sector D										
Ant_{1a}										
Ant_{1b}										
Ant_{1c}										
Ant_{2a}										
Ant_{2b}										
Ant_{2c}										
Ant_{3a}										
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Ant_{4a}										
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Ant_{5a}										
Ant_{5b}										
Ant_{5c}										
Ant on Standoff										
Ant on Standoff										
Ant on Tower										
Ant on Tower										

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

1		
2		
3		
4		
5		
6		
7		
8		

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

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

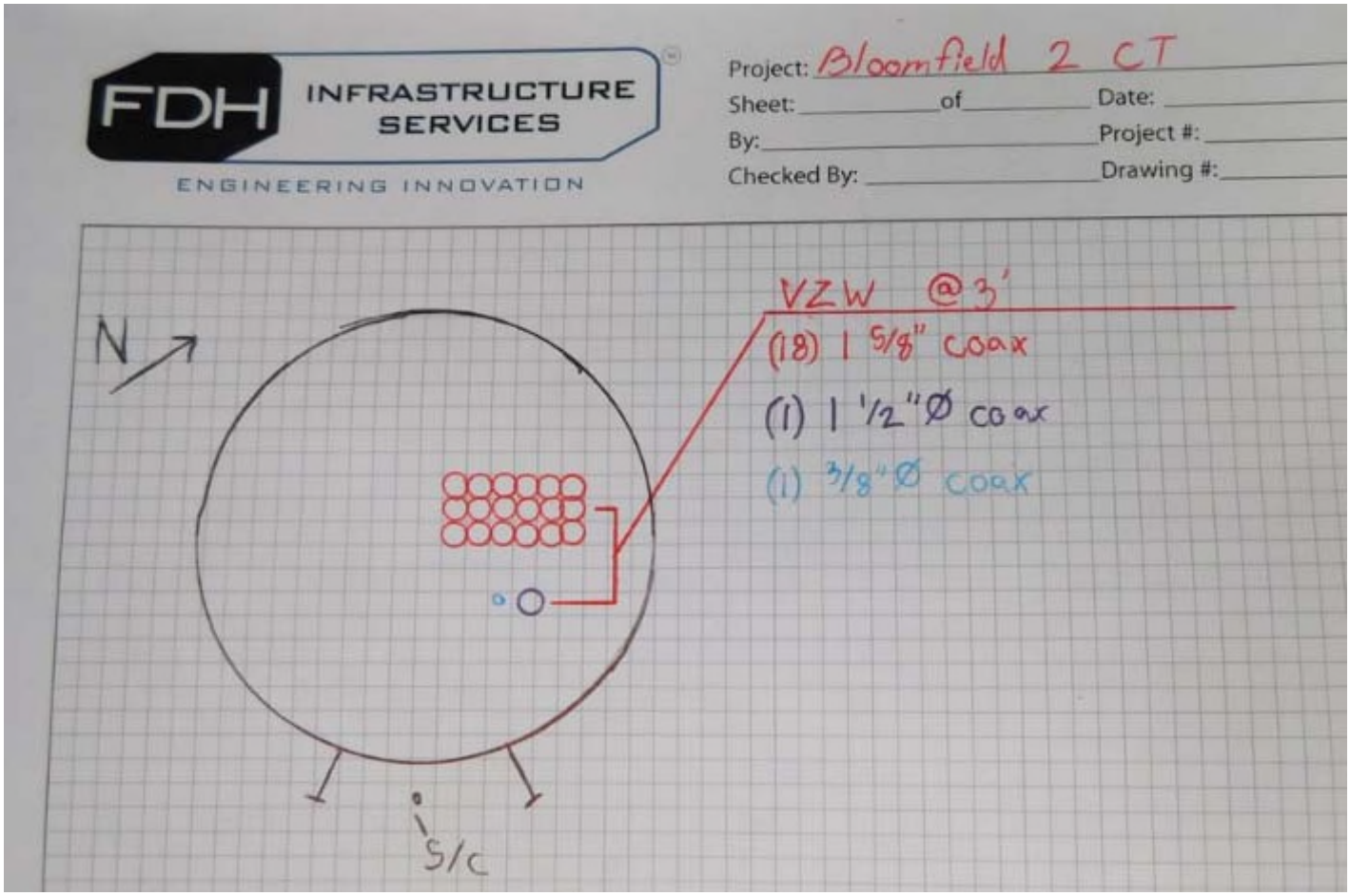
PAUL J. FORD & COMPANY

Antenna Mount Mapping Form (PATENT PENDING)

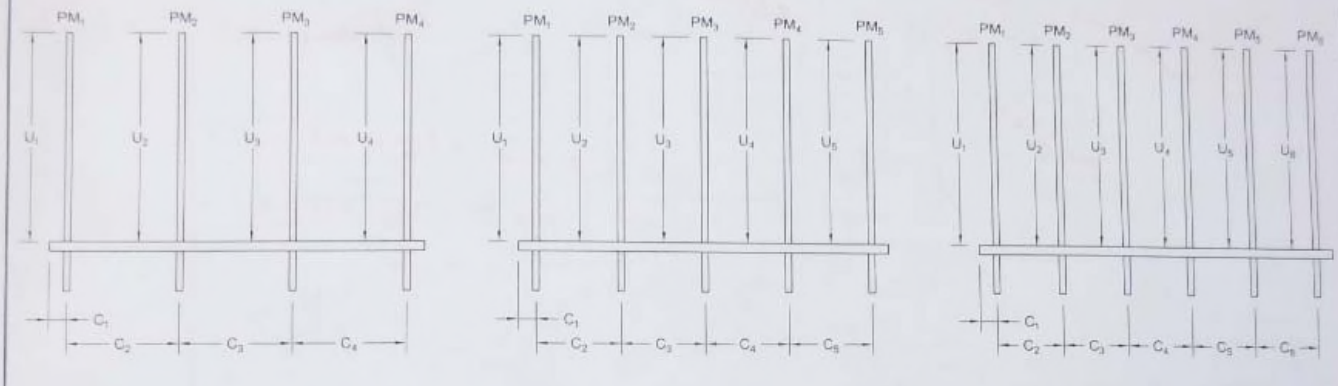
FCC #

Tower Owner:	SBA	**Mapping Date:**	4/4/2021
Site Name:	Bloomfield 2 CT	**Tower Type:**	Monopole
Site Number or ID:	468216	**Tower Height (Ft.):**	
Mapping Contractor:	FDH-IS	**Mount Elevation (Ft.):**	119.5

Please Insert Sketches of the Antenna Mount



Please Insert Sketches of the Antenna Mount, cont'd

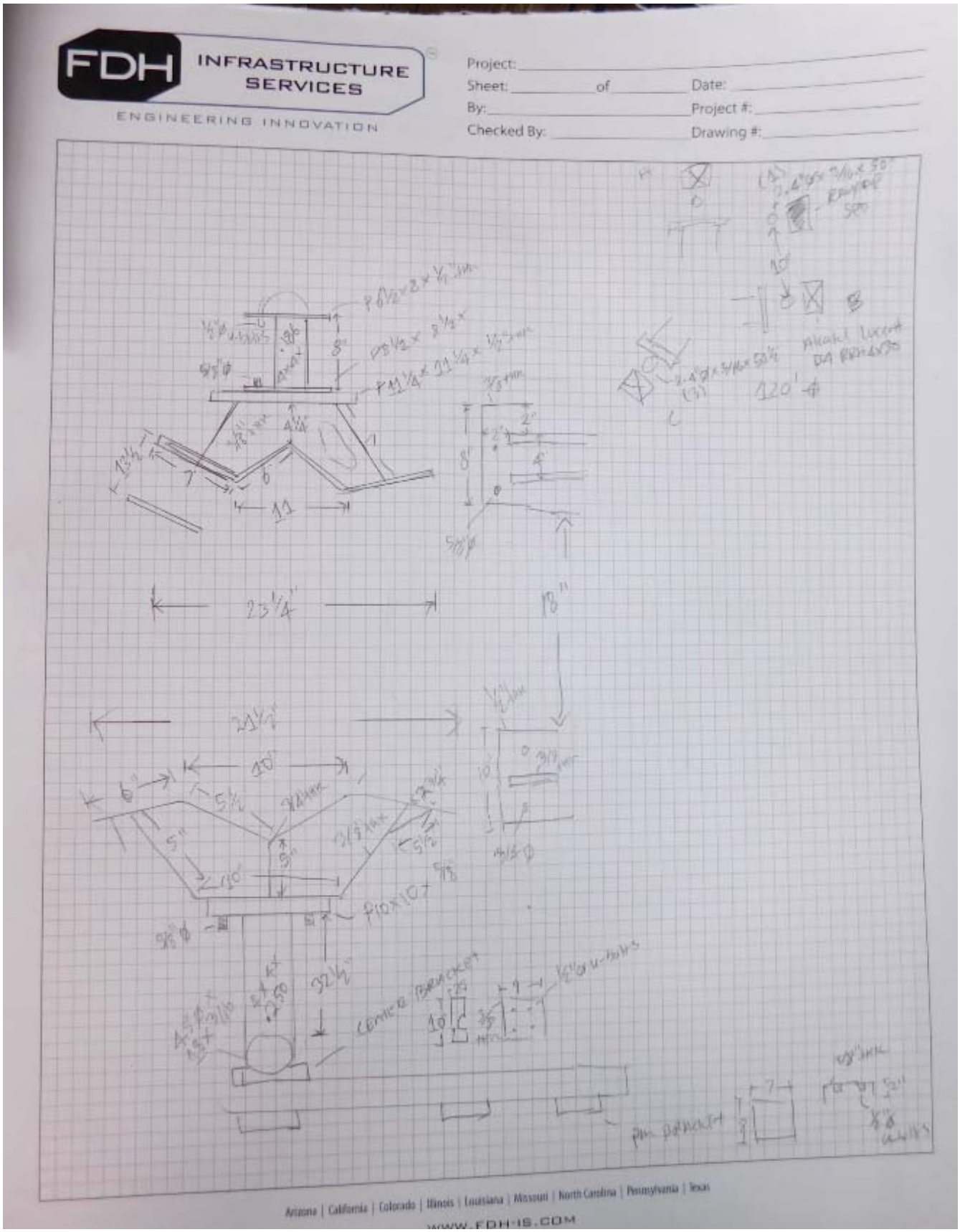


All dimensions shall be represented in Inches.

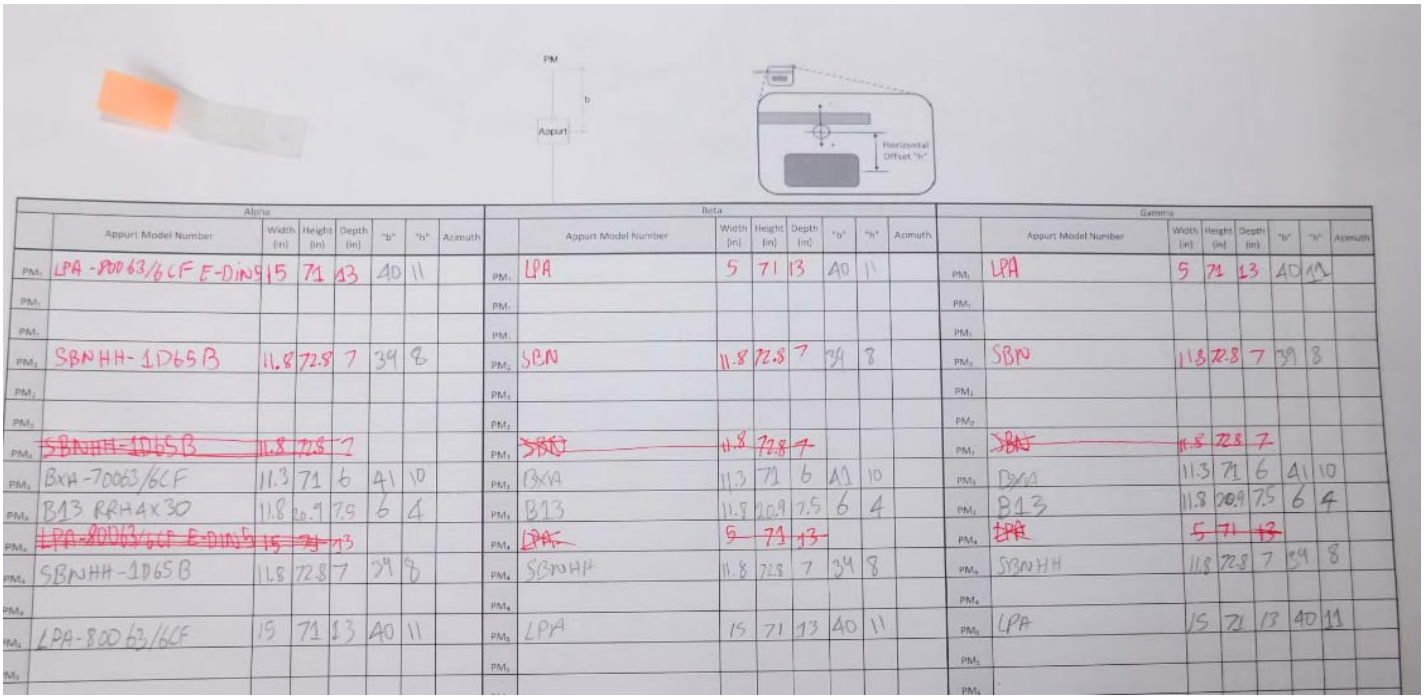
Date:	4/6/2021	A-Leg Azimuth:	/	Coax:	
Site Name:	Bloomfield 2	B-Leg Azimuth:	/		
Carrier:	VZW	C-Leg Azimuth:	/		
Tower Owner:	SBA	Leg Size/Monopole Ø:	23"Ø		
Mount Elevation:	~~120~~ 119.5	Top Rail Dim:	3.5"Ø x .185 x 12.5'		
Tower Facewidth:	/	Bottom Rail Dim:	N/A		
S.C. Location:	FIAT 1	Top To Bottom Rail Dim "S"	N/A		

Alpha	Mount Azimuth:	340		Beta	Mount Azimuth:	80		Gamma	Mount Azimuth:	180	
	P Ø x tk. x Length	"U"	"C"		P Ø x tk. x Length	"U"	"C"		P Ø x tk. x Length	"U"	"C"
PM_1	2.4"Ø x 3/16 x 7'	41	7	PM_1	2.4"Ø x 3/16 x 7'	41	7	PM_1	2.4"Ø x 3/16 x 7'	41	7
PM_2	2.4"Ø x 3/16 x 7'	41	25	PM_2	↓	↓	25	PM_2	↓	↓	25
PM_3	2.4"Ø x 3/16 x 8'	48	31.5	PM_3	2.4"Ø x 3/16 x 8'	48	31.5	PM_3	2.4"Ø x 3/16 x 8'	48	31.5
PM_4	2.4"Ø x 3/16 x 7'	41	31.5	PM_4	2.4"Ø x 3/16 x 7'	41	31.5	PM_4	2.4"Ø x 3/16 x 7'	41	31.5
PM_5	2.4"Ø x 3/16 x 7'	41	25	PM_5	↓	↓	25	PM_5	↓	↓	25
PM_6				PM_6				PM_6			

Please Insert Sketches of the Antenna Mount, cont'd



Please Insert Sketches of the Antenna Mount, cont'd



Alpha

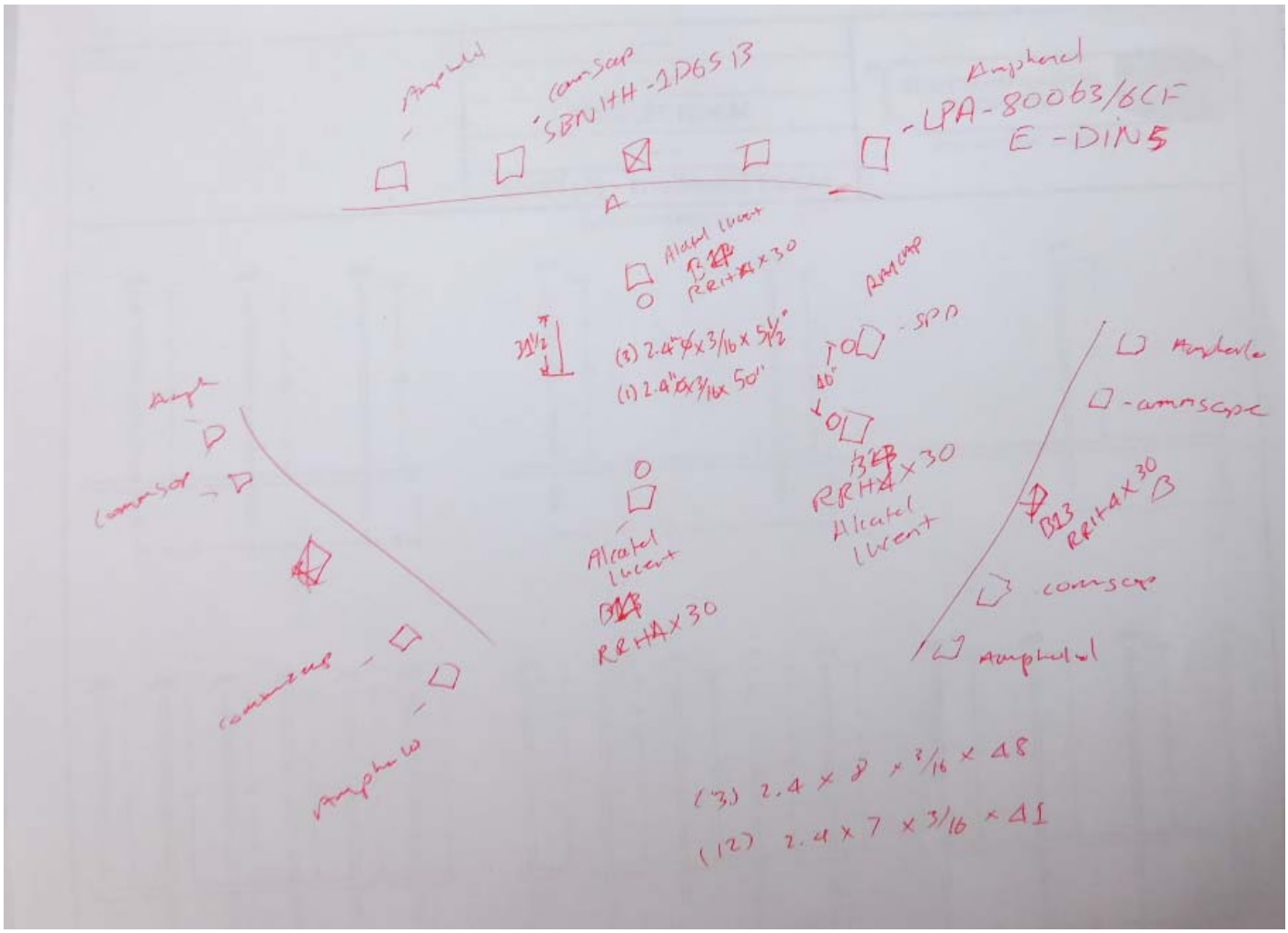
	Appurt Model Number	Width (in)	Height (in)	Depth (in)	"b"	"h"	Azimuth
PM1	LPA-80063/6CF E-DIN5	15	71	13	40	11	
PM2							
PM3							
PM4	SBNHH-1D65B	11.8	72.8	7	39	8	
PM5							
PM6							
PM7	~~SBNHH-1D65B~~	~~11.8~~	~~72.8~~	~~7~~			
PM8	BXA-70063/6CF	11.3	71	6	41	10	
PM9	B13 RRH4x30	11.8	20.9	7.5	6	4	
PM10	~~LPA-80063/6CF E-DIN5~~	~~15~~	~~71~~	~~13~~			
PM11	SBNHH-1D65B	11.8	72.8	7	39	8	
PM12							
PM13	LPA-80063/6CF	15	71	13	40	11	
PM14							

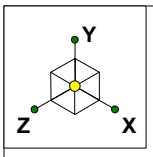
Beta

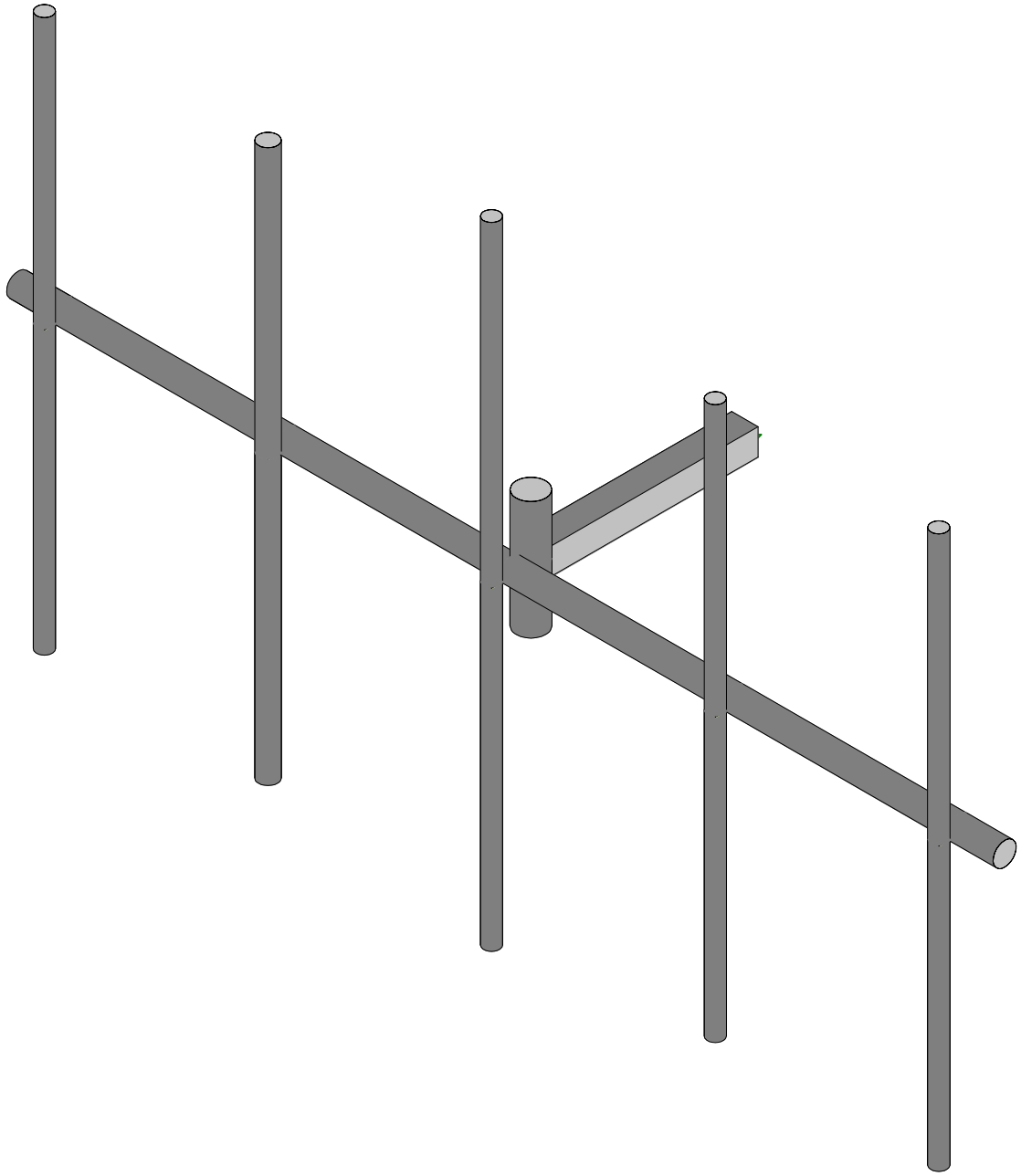
	Appurt Model Number	Width (in)	Height (in)	Depth (in)	"b"	"h"	Azimuth
PM1	LPA	5	71	13	40	11	
PM2							
PM3							
PM4	SBN	11.8	72.8	7	39	8	
PM5							
PM6							
PM7	~~SBN~~	~~11.8~~	~~72.8~~	~~7~~			
PM8	BXA	11.3	71	6	41	10	
PM9	B13	11.8	20.9	7.5	6	4	
PM10	~~LPA~~	~~5~~	~~71~~	~~13~~			
PM11	SBNHH	11.8	72.8	7	39	8	
PM12							
PM13	LPA	15	71	13	40	11	
PM14							

Gamma

	Appurt Model Number	Width (in)	Height (in)	Depth (in)	"b"	"h"	Azimuth
PM1	LPA	5	71	13	40	11	
PM2							
PM3							
PM4	SBN	11.8	72.8	7	39	8	
PM5							
PM6							
PM7	~~SBN~~	~~11.8~~	~~72.8~~	~~7~~			
PM8	BXA	11.3	71	6	41	10	
PM9	B13	11.8	20.9	7.5	6	4	
PM10	~~LPA~~	~~5~~	~~71~~	~~13~~			
PM11	SBNHH	11.8	72.8	7	39	8	
PM12							
PM13	LPA	15	71	13	40	11	
PM14							

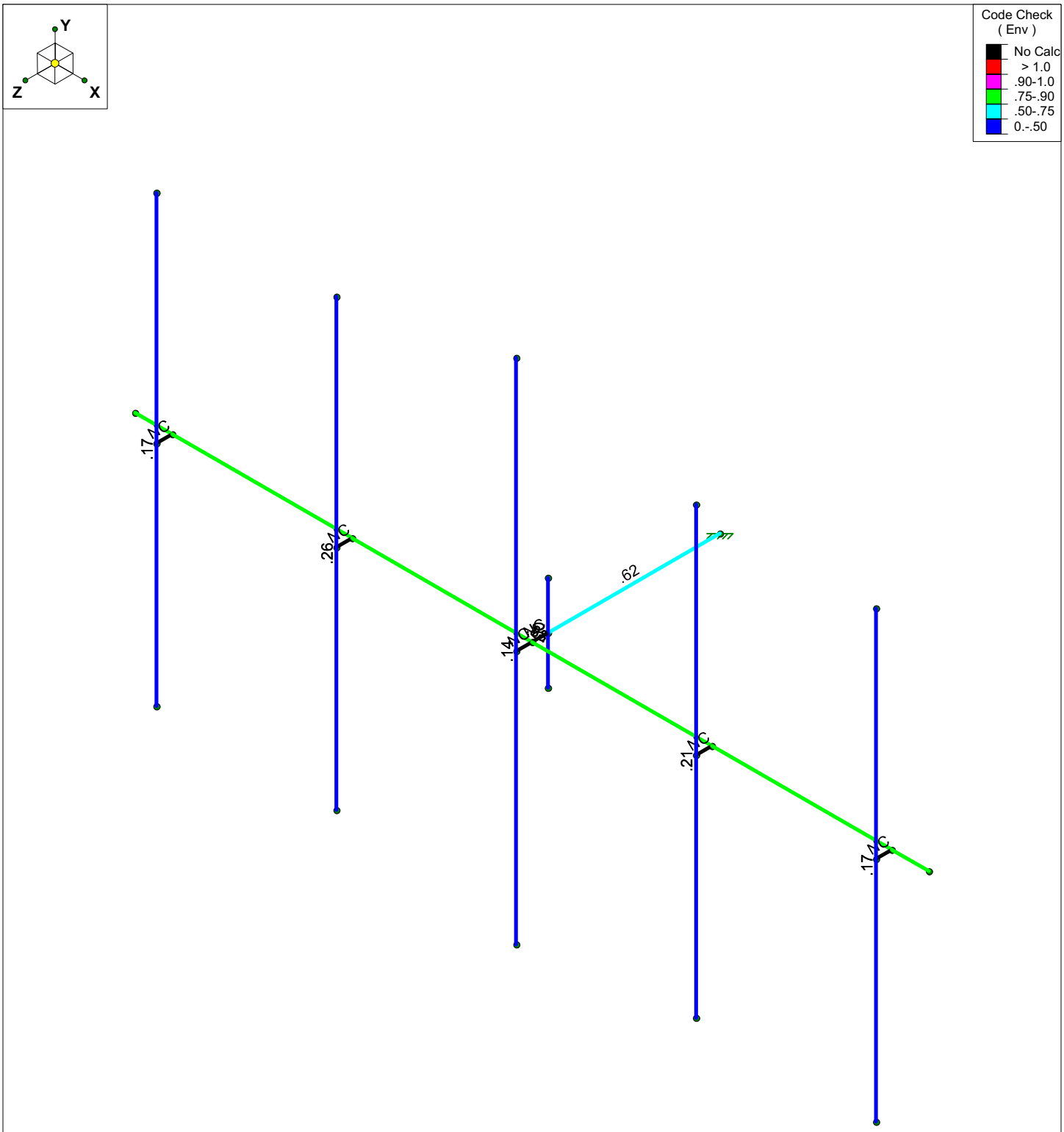






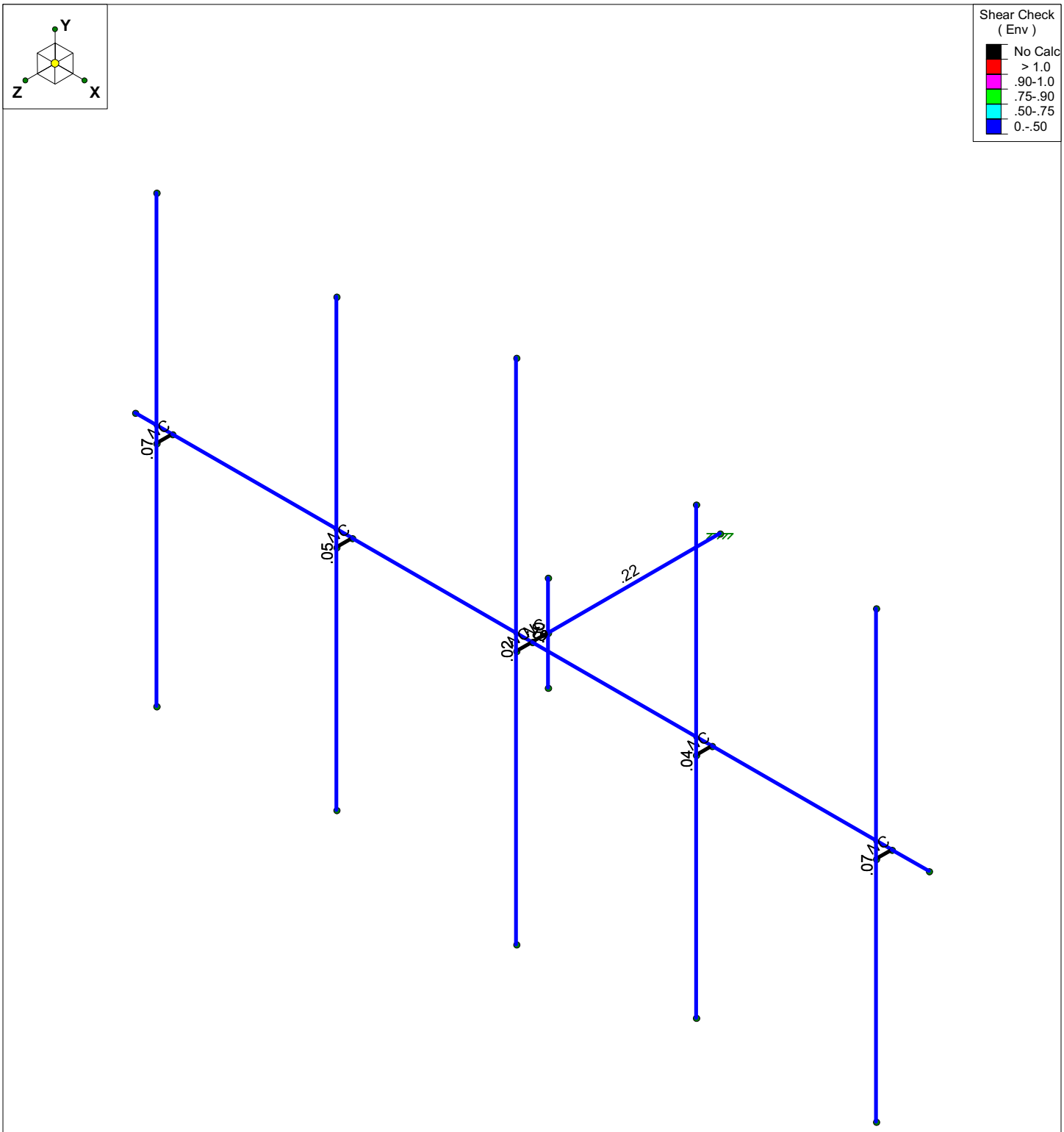
Envelope Only Solution

Maser Consulting		SK - 1
CH		June 30, 2021 at 3:44 PM
		468216-VZW_MT_LOT_A_H.r3d



Member Code Checks Displayed (Enveloped)
Envelope Only Solution

Maser Consulting		SK - 1
CH		July 2, 2021 at 11:08 AM
		468216-VZW_MT_LOT_A_H.r3d



Member Shear Checks Displayed (Enveloped)
Envelope Only Solution

Maser Consulting		SK - 2
CH		July 2, 2021 at 11:08 AM
		468216-VZW_MT_LOT_A_H.r3d

Basic Load Cases

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

Basic Load Cases (Continued)

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distributed	Area(Me...	Surface(P...
57	Structure Wi (120 De...	None						16		
58	Structure Wi (150 De...	None						16		
59	Structure Wi (180 De...	None						16		
60	Structure Wi (210 De...	None						16		
61	Structure Wi (240 De...	None						16		
62	Structure Wi (270 De...	None						16		
63	Structure Wi (300 De...	None						16		
64	Structure Wi (330 De...	None						16		
65	Structure Wm (0 Deg)	None						16		
66	Structure Wm (30 De...	None						16		
67	Structure Wm (60 De...	None						16		
68	Structure Wm (90 De...	None						16		
69	Structure Wm (120 D...	None						16		
70	Structure Wm (150 D...	None						16		
71	Structure Wm (180 D...	None						16		
72	Structure Wm (210 D...	None						16		
73	Structure Wm (240 D...	None						16		
74	Structure Wm (270 D...	None						16		
75	Structure Wm (300 D...	None						16		
76	Structure Wm (330 D...	None						16		
77	Lm1	None					1			
78	Lm2	None					1			
79	Lv1	None					1			
80	Lv2	None					1			

Load Combinations

	Description	So...	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 (30...	Yes	Y		1	1.2	39	1.2	4	1	42	1												
3	1.2D+1.0Wo (60...	Yes	Y		1	1.2	39	1.2	5	1	43	1												
4	1.2D+1.0Wo (90...	Yes	Y		1	1.2	39	1.2	6	1	44	1												
5	1.2D+1.0Wo (12...	Yes	Y		1	1.2	39	1.2	7	1	45	1												
6	1.2D+1.0Wo (15...	Yes	Y		1	1.2	39	1.2	8	1	46	1												
7	1.2D+1.0Wo (18...	Yes	Y		1	1.2	39	1.2	9	1	47	1												
8	1.2D+1.0Wo (21...	Yes	Y		1	1.2	39	1.2	10	1	48	1												
9	1.2D+1.0Wo (24...	Yes	Y		1	1.2	39	1.2	11	1	49	1												
10	1.2D+1.0Wo (27...	Yes	Y		1	1.2	39	1.2	12	1	50	1												
11	1.2D+1.0Wo (30...	Yes	Y		1	1.2	39	1.2	13	1	51	1												
12	1.2D+1.0Wo (33...	Yes	Y		1	1.2	39	1.2	14	1	52	1												
13	1.2D + 1.0Di + 1...	Yes	Y		1	1.2	39	1.2	2	1	40	1	15	1	53	1								
14	1.2D + 1.0Di + 1...	Yes	Y		1	1.2	39	1.2	2	1	40	1	16	1	54	1								
15	1.2D + 1.0Di + 1...	Yes	Y		1	1.2	39	1.2	2	1	40	1	17	1	55	1								
16	1.2D + 1.0Di + 1...	Yes	Y		1	1.2	39	1.2	2	1	40	1	18	1	56	1								
17	1.2D + 1.0Di + 1...	Yes	Y		1	1.2	39	1.2	2	1	40	1	19	1	57	1								
18	1.2D + 1.0Di + 1...	Yes	Y		1	1.2	39	1.2	2	1	40	1	20	1	58	1								
19	1.2D + 1.0Di + 1...	Yes	Y		1	1.2	39	1.2	2	1	40	1	21	1	59	1								
20	1.2D + 1.0Di + 1...	Yes	Y		1	1.2	39	1.2	2	1	40	1	22	1	60	1								
21	1.2D + 1.0Di + 1...	Yes	Y		1	1.2	39	1.2	2	1	40	1	23	1	61	1								
22	1.2D + 1.0Di + 1...	Yes	Y		1	1.2	39	1.2	2	1	40	1	24	1	62	1								
23	1.2D + 1.0Di + 1...	Yes	Y		1	1.2	39	1.2	2	1	40	1	25	1	63	1								
24	1.2D + 1.0Di + 1...	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										

Load Combinations (Continued)

	Description	So...	PDelta	S...	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac..	BLC	Fac...
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	N3	-4.154335	3.25	-3.097664	0	
2	N4	8.345665	3.25	-3.097664	0	
3	N6	2.095665	3.25	-3.097664	0	
4	N32	2.095665	3.25	-3.347664	0	
5	N34	2.095665	2.5	-3.347664	0	
6	N46	2.095665	4	-3.347664	0	
7	N52	7.762332	3.25	-3.097664	0	
8	N55A	7.762332	3.25	-2.847664	0	
9	N56A	7.762332	6.666667	-2.847664	0	
10	N57A	7.762332	-0.333333	-2.847664	0	
11	N23	2.095665	3.25	-6.055997	0	
12	N12	4.928998	3.25	-3.097664	0	
13	N13	4.928998	3.25	-2.847664	0	
14	N14	4.928998	6.666667	-2.847664	0	
15	N15	4.928998	-0.333333	-2.847664	0	
16	N16	-0.737668	3.25	-3.097664	0	

Joint Coordinates and Temperatures (Continued)

	Label	X [ft]	Y [ft]	Z [ft]	Temp [F]	Detach From Diap...
17	N17	-0.737668	3.25	-2.847664	0	
18	N18	-0.737668	6.666667	-2.847664	0	
19	N19	-0.737668	-0.333333	-2.847664	0	
20	N20	-3.571002	3.25	-3.097664	0	
21	N21	-3.571002	3.25	-2.847664	0	
22	N22	-3.571002	6.666667	-2.847664	0	
23	N23A	-3.571002	-0.333333	-2.847664	0	
24	N25	2.095665	3.25	-2.847664	0	
25	N26	2.095665	7.25	-2.847664	0	
26	N27	2.095665	-0.75	-2.847664	0	

Hot Rolled Steel Section Sets

	Label	Shape	Type	Design List	Material	Design ...	A [in2]	Iyy [in4]	Izz [in4]	J [in4]
1	Mount Pipe	PIPE_2.0	Column	Pipe	A53 Gr.B	Typical	1.02	.627	.627	1.25
2	Face Horizontal	PIPE_3.0	Beam	Pipe	A53 Gr.B	Typical	2.07	2.85	2.85	5.69
3	Mast Pipe	PIPE_4.0	Column	Pipe	A53 Gr.B	Typical	2.96	6.82	6.82	13.6
4	Standoff	HSS4X4X4	Beam	Tube	A500 Gr.B R...	Typical	3.37	7.8	7.8	12.8
5	P2.5 Mount Pipe	PIPE_2.5	Column	Pipe	A53 Gr.B	Typical	1.61	1.45	1.45	2.89

Hot Rolled Steel Properties

	Label	E [ksi]	G [ksi]	Nu	Therm (/1E...	Density[k/ft...	Yield[ksi]	Ry	Fu[ksi]	Rt
1	A992	29000	11154	.3	.65	.49	50	1.1	65	1.1
2	A36 Gr.36	29000	11154	.3	.65	.49	36	1.5	58	1.2
3	A572 Gr.50	29000	11154	.3	.65	.49	50	1.1	65	1.1
4	A500 Gr.B RND	29000	11154	.3	.65	.527	42	1.4	58	1.3
5	A500 Gr.B Rect	29000	11154	.3	.65	.527	46	1.4	58	1.3
6	A53 Gr.B	29000	11154	.3	.65	.49	35	1.6	60	1.2
7	A1085	29000	11154	.3	.65	.49	50	1.4	65	1.3

Member Primary Data

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
1	M2	N3	N4			Face Horizontal	Beam	Pipe	A53 Gr.B	Typical
2	M15	N6	N32			RIGID	None	None	RIGID	Typical
3	M17	N46	N34			Mast Pipe	Column	Pipe	A53 Gr.B	Typical
4	M30A	N52	N55A			RIGID	None	None	RIGID	Typical
5	MP1A	N56A	N57A			Mount Pipe	Column	Pipe	A53 Gr.B	Typical
6	M12	N32	N23			Standoff	Beam	Tube	A500 Gr.B...	Typical
7	M7	N12	N13			RIGID	None	None	RIGID	Typical
8	MP2A	N14	N15			Mount Pipe	Column	Pipe	A53 Gr.B	Typical
9	M9	N16	N17			RIGID	None	None	RIGID	Typical
10	MP4A	N18	N19			P2.5 Mount Pi...	Column	Pipe	A53 Gr.B	Typical
11	M11	N20	N21			RIGID	None	None	RIGID	Typical
12	MP5A	N22	N23A			Mount Pipe	Column	Pipe	A53 Gr.B	Typical
13	M13	N6	N25			RIGID	None	None	RIGID	Typical
14	MP3A	N26	N27			Mount Pipe	Column	Pipe	A53 Gr.B	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	M2						Yes				None
2	M15						Yes	** NA **			None
3	M17						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...
4	M30A						Yes	** NA **			None
5	MP1A						Yes	** NA **			None
6	M12						Yes				None
7	M7						Yes	** NA **			None
8	MP2A						Yes	** NA **			None
9	M9						Yes	** NA **			None
10	MP4A						Yes	** NA **			None
11	M11						Yes	** NA **			None
12	MP5A						Yes	** NA **			None
13	M13						Yes	** NA **			None
14	MP3A						Yes	** NA **			None

Member Point Loads (BLC 1 : Antenna D)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	Y	-43.55	.75
2	MP2A	My	-.022	.75
3	MP2A	Mz	0	.75
4	MP2A	Y	-43.55	2.75
5	MP2A	My	-.022	2.75
6	MP2A	Mz	0	2.75
7	MP2A	Y	-23.2	5.25
8	MP2A	My	-.012	5.25
9	MP2A	Mz	0	5.25
10	MP4A	Y	-84.4	1.75
11	MP4A	My	.042	1.75
12	MP4A	Mz	0	1.75
13	MP3A	Y	-70.3	2
14	MP3A	My	.035	2
15	MP3A	Mz	0	2
16	MP4A	Y	-20	1
17	MP4A	My	-.01	1
18	MP4A	Mz	.012	1
19	MP4A	Y	-20	5.5
20	MP4A	My	-.01	5.5
21	MP4A	Mz	.012	5.5
22	MP4A	Y	-20	1
23	MP4A	My	-.01	1
24	MP4A	Mz	-.012	1
25	MP4A	Y	-20	5.5
26	MP4A	My	-.01	5.5
27	MP4A	Mz	-.012	5.5
28	MP1A	Y	-13.5	2
29	MP1A	My	-.007	2
30	MP1A	Mz	0	2
31	MP1A	Y	-13.5	4.5
32	MP1A	My	-.007	4.5
33	MP1A	Mz	0	4.5
34	MP5A	Y	-13.5	2
35	MP5A	My	-.007	2
36	MP5A	Mz	0	2
37	MP5A	Y	-13.5	4.5
38	MP5A	My	-.007	4.5
39	MP5A	Mz	0	4.5

Member Point Loads (BLC 2 : Antenna Di)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	Y	-55.413	.75
2	MP2A	My	-.028	.75
3	MP2A	Mz	0	.75
4	MP2A	Y	-55.413	2.75
5	MP2A	My	-.028	2.75
6	MP2A	Mz	0	2.75
7	MP2A	Y	-47.563	5.25
8	MP2A	My	-.024	5.25
9	MP2A	Mz	0	5.25
10	MP4A	Y	-70.401	1.75
11	MP4A	My	.035	1.75
12	MP4A	Mz	0	1.75
13	MP3A	Y	-63.551	2
14	MP3A	My	.032	2
15	MP3A	Mz	0	2
16	MP4A	Y	-94.611	1
17	MP4A	My	-.047	1
18	MP4A	Mz	.055	1
19	MP4A	Y	-94.611	5.5
20	MP4A	My	-.047	5.5
21	MP4A	Mz	.055	5.5
22	MP4A	Y	-94.611	1
23	MP4A	My	-.047	1
24	MP4A	Mz	-.055	1
25	MP4A	Y	-94.611	5.5
26	MP4A	My	-.047	5.5
27	MP4A	Mz	-.055	5.5
28	MP1A	Y	-135.696	2
29	MP1A	My	-.068	2
30	MP1A	Mz	0	2
31	MP1A	Y	-135.696	4.5
32	MP1A	My	-.068	4.5
33	MP1A	Mz	0	4.5
34	MP5A	Y	-135.696	2
35	MP5A	My	-.068	2
36	MP5A	Mz	0	2
37	MP5A	Y	-135.696	4.5
38	MP5A	My	-.068	4.5
39	MP5A	Mz	0	4.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	0	.75
2	MP2A	Z	-89.891	.75
3	MP2A	Mx	0	.75
4	MP2A	X	0	2.75
5	MP2A	Z	-89.891	2.75
6	MP2A	Mx	0	2.75
7	MP2A	X	0	5.25
8	MP2A	Z	-58.525	5.25
9	MP2A	Mx	0	5.25
10	MP4A	X	0	1.75
11	MP4A	Z	-71.53	1.75
12	MP4A	Mx	0	1.75
13	MP3A	X	0	2
14	MP3A	Z	-71.53	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
15	MP3A	Mx	0	2
16	MP4A	X	0	1
17	MP4A	Z	-156.066	1
18	MP4A	Mx	-.091	1
19	MP4A	X	0	5.5
20	MP4A	Z	-156.066	5.5
21	MP4A	Mx	-.091	5.5
22	MP4A	X	0	1
23	MP4A	Z	-156.066	1
24	MP4A	Mx	.091	1
25	MP4A	X	0	5.5
26	MP4A	Z	-156.066	5.5
27	MP4A	Mx	.091	5.5
28	MP1A	X	0	2
29	MP1A	Z	-183.607	2
30	MP1A	Mx	0	2
31	MP1A	X	0	4.5
32	MP1A	Z	-183.607	4.5
33	MP1A	Mx	0	4.5
34	MP5A	X	0	2
35	MP5A	Z	-183.607	2
36	MP5A	Mx	0	2
37	MP5A	X	0	4.5
38	MP5A	Z	-183.607	4.5
39	MP5A	Mx	0	4.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	38.108	.75
2	MP2A	Z	-66.005	.75
3	MP2A	Mx	-.019	.75
4	MP2A	X	38.108	2.75
5	MP2A	Z	-66.005	2.75
6	MP2A	Mx	-.019	2.75
7	MP2A	X	25.556	5.25
8	MP2A	Z	-44.263	5.25
9	MP2A	Mx	-.013	5.25
10	MP4A	X	32.801	1.75
11	MP4A	Z	-56.812	1.75
12	MP4A	Mx	.016	1.75
13	MP3A	X	31.665	2
14	MP3A	Z	-54.845	2
15	MP3A	Mx	.016	2
16	MP4A	X	71.426	1
17	MP4A	Z	-123.713	1
18	MP4A	Mx	-.108	1
19	MP4A	X	71.426	5.5
20	MP4A	Z	-123.713	5.5
21	MP4A	Mx	-.108	5.5
22	MP4A	X	71.426	1
23	MP4A	Z	-123.713	1
24	MP4A	Mx	.036	1
25	MP4A	X	71.426	5.5
26	MP4A	Z	-123.713	5.5
27	MP4A	Mx	.036	5.5
28	MP1A	X	89.352	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
29	MP1A	Z	-154.763	2
30	MP1A	Mx	-.045	2
31	MP1A	X	89.352	4.5
32	MP1A	Z	-154.763	4.5
33	MP1A	Mx	-.045	4.5
34	MP5A	X	89.352	2
35	MP5A	Z	-154.763	2
36	MP5A	Mx	-.045	2
37	MP5A	X	89.352	4.5
38	MP5A	Z	-154.763	4.5
39	MP5A	Mx	-.045	4.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	42.32	.75
2	MP2A	Z	-24.433	.75
3	MP2A	Mx	-.021	.75
4	MP2A	X	42.32	2.75
5	MP2A	Z	-24.433	2.75
6	MP2A	Mx	-.021	2.75
7	MP2A	X	31.423	5.25
8	MP2A	Z	-18.142	5.25
9	MP2A	Mx	-.016	5.25
10	MP4A	X	46.543	1.75
11	MP4A	Z	-26.872	1.75
12	MP4A	Mx	.023	1.75
13	MP3A	X	40.642	2
14	MP3A	Z	-23.465	2
15	MP3A	Mx	.02	2
16	MP4A	X	100.824	1
17	MP4A	Z	-58.211	1
18	MP4A	Mx	-.084	1
19	MP4A	X	100.824	5.5
20	MP4A	Z	-58.211	5.5
21	MP4A	Mx	-.084	5.5
22	MP4A	X	100.824	1
23	MP4A	Z	-58.211	1
24	MP4A	Mx	-.016	1
25	MP4A	X	100.824	5.5
26	MP4A	Z	-58.211	5.5
27	MP4A	Mx	-.016	5.5
28	MP1A	X	146.272	2
29	MP1A	Z	-84.45	2
30	MP1A	Mx	-.073	2
31	MP1A	X	146.272	4.5
32	MP1A	Z	-84.45	4.5
33	MP1A	Mx	-.073	4.5
34	MP5A	X	146.272	2
35	MP5A	Z	-84.45	2
36	MP5A	Mx	-.073	2
37	MP5A	X	146.272	4.5
38	MP5A	Z	-84.45	4.5
39	MP5A	Mx	-.073	4.5

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

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

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	35.192	.75
2	MP2A	Z	0	.75
3	MP2A	Mx	-.018	.75
4	MP2A	X	35.192	2.75
5	MP2A	Z	0	2.75
6	MP2A	Mx	-.018	2.75
7	MP2A	X	28.87	5.25
8	MP2A	Z	0	5.25
9	MP2A	Mx	-.014	5.25
10	MP4A	X	47.814	1.75
11	MP4A	Z	0	1.75
12	MP4A	Mx	.024	1.75
13	MP3A	X	38.73	2
14	MP3A	Z	0	2
15	MP3A	Mx	.019	2
16	MP4A	X	103.207	1
17	MP4A	Z	0	1
18	MP4A	Mx	-.052	1
19	MP4A	X	103.207	5.5
20	MP4A	Z	0	5.5
21	MP4A	Mx	-.052	5.5
22	MP4A	X	103.207	1
23	MP4A	Z	0	1
24	MP4A	Mx	-.052	1
25	MP4A	X	103.207	5.5
26	MP4A	Z	0	5.5
27	MP4A	Mx	-.052	5.5
28	MP1A	X	163.998	2
29	MP1A	Z	0	2
30	MP1A	Mx	-.082	2
31	MP1A	X	163.998	4.5
32	MP1A	Z	0	4.5
33	MP1A	Mx	-.082	4.5
34	MP5A	X	163.998	2
35	MP5A	Z	0	2
36	MP5A	Mx	-.082	2
37	MP5A	X	163.998	4.5
38	MP5A	Z	0	4.5
39	MP5A	Mx	-.082	4.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	42.32	.75
2	MP2A	Z	24.433	.75
3	MP2A	Mx	-.021	.75
4	MP2A	X	42.32	2.75
5	MP2A	Z	24.433	2.75
6	MP2A	Mx	-.021	2.75
7	MP2A	X	31.423	5.25
8	MP2A	Z	18.142	5.25
9	MP2A	Mx	-.016	5.25
10	MP4A	X	46.543	1.75
11	MP4A	Z	26.872	1.75
12	MP4A	Mx	.023	1.75
13	MP3A	X	40.642	2
14	MP3A	Z	23.465	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
15	MP3A	Mx	.02	2
16	MP4A	X	100.824	1
17	MP4A	Z	58.211	1
18	MP4A	Mx	-.016	1
19	MP4A	X	100.824	5.5
20	MP4A	Z	58.211	5.5
21	MP4A	Mx	-.016	5.5
22	MP4A	X	100.824	1
23	MP4A	Z	58.211	1
24	MP4A	Mx	-.084	1
25	MP4A	X	100.824	5.5
26	MP4A	Z	58.211	5.5
27	MP4A	Mx	-.084	5.5
28	MP1A	X	146.272	2
29	MP1A	Z	84.45	2
30	MP1A	Mx	-.073	2
31	MP1A	X	146.272	4.5
32	MP1A	Z	84.45	4.5
33	MP1A	Mx	-.073	4.5
34	MP5A	X	146.272	2
35	MP5A	Z	84.45	2
36	MP5A	Mx	-.073	2
37	MP5A	X	146.272	4.5
38	MP5A	Z	84.45	4.5
39	MP5A	Mx	-.073	4.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	38.108	.75
2	MP2A	Z	66.005	.75
3	MP2A	Mx	-.019	.75
4	MP2A	X	38.108	2.75
5	MP2A	Z	66.005	2.75
6	MP2A	Mx	-.019	2.75
7	MP2A	X	25.556	5.25
8	MP2A	Z	44.263	5.25
9	MP2A	Mx	-.013	5.25
10	MP4A	X	32.801	1.75
11	MP4A	Z	56.812	1.75
12	MP4A	Mx	.016	1.75
13	MP3A	X	31.665	2
14	MP3A	Z	54.845	2
15	MP3A	Mx	.016	2
16	MP4A	X	71.426	1
17	MP4A	Z	123.713	1
18	MP4A	Mx	.036	1
19	MP4A	X	71.426	5.5
20	MP4A	Z	123.713	5.5
21	MP4A	Mx	.036	5.5
22	MP4A	X	71.426	1
23	MP4A	Z	123.713	1
24	MP4A	Mx	-.108	1
25	MP4A	X	71.426	5.5
26	MP4A	Z	123.713	5.5
27	MP4A	Mx	-.108	5.5
28	MP1A	X	89.352	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
29	MP1A	Z	154.763	2
30	MP1A	Mx	-.045	2
31	MP1A	X	89.352	4.5
32	MP1A	Z	154.763	4.5
33	MP1A	Mx	-.045	4.5
34	MP5A	X	89.352	2
35	MP5A	Z	154.763	2
36	MP5A	Mx	-.045	2
37	MP5A	X	89.352	4.5
38	MP5A	Z	154.763	4.5
39	MP5A	Mx	-.045	4.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	0	.75
2	MP2A	Z	89.891	.75
3	MP2A	Mx	0	.75
4	MP2A	X	0	2.75
5	MP2A	Z	89.891	2.75
6	MP2A	Mx	0	2.75
7	MP2A	X	0	5.25
8	MP2A	Z	58.525	5.25
9	MP2A	Mx	0	5.25
10	MP4A	X	0	1.75
11	MP4A	Z	71.53	1.75
12	MP4A	Mx	0	1.75
13	MP3A	X	0	2
14	MP3A	Z	71.53	2
15	MP3A	Mx	0	2
16	MP4A	X	0	1
17	MP4A	Z	156.066	1
18	MP4A	Mx	.091	1
19	MP4A	X	0	5.5
20	MP4A	Z	156.066	5.5
21	MP4A	Mx	.091	5.5
22	MP4A	X	0	1
23	MP4A	Z	156.066	1
24	MP4A	Mx	-.091	1
25	MP4A	X	0	5.5
26	MP4A	Z	156.066	5.5
27	MP4A	Mx	-.091	5.5
28	MP1A	X	0	2
29	MP1A	Z	183.607	2
30	MP1A	Mx	0	2
31	MP1A	X	0	4.5
32	MP1A	Z	183.607	4.5
33	MP1A	Mx	0	4.5
34	MP5A	X	0	2
35	MP5A	Z	183.607	2
36	MP5A	Mx	0	2
37	MP5A	X	0	4.5
38	MP5A	Z	183.607	4.5
39	MP5A	Mx	0	4.5

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

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

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-38.108	.75
2	MP2A	Z	66.005	.75
3	MP2A	Mx	.019	.75
4	MP2A	X	-38.108	2.75
5	MP2A	Z	66.005	2.75
6	MP2A	Mx	.019	2.75
7	MP2A	X	-25.556	5.25
8	MP2A	Z	44.263	5.25
9	MP2A	Mx	.013	5.25
10	MP4A	X	-32.801	1.75
11	MP4A	Z	56.812	1.75
12	MP4A	Mx	-.016	1.75
13	MP3A	X	-31.665	2
14	MP3A	Z	54.845	2
15	MP3A	Mx	-.016	2
16	MP4A	X	-71.426	1
17	MP4A	Z	123.713	1
18	MP4A	Mx	.108	1
19	MP4A	X	-71.426	5.5
20	MP4A	Z	123.713	5.5
21	MP4A	Mx	.108	5.5
22	MP4A	X	-71.426	1
23	MP4A	Z	123.713	1
24	MP4A	Mx	-.036	1
25	MP4A	X	-71.426	5.5
26	MP4A	Z	123.713	5.5
27	MP4A	Mx	-.036	5.5
28	MP1A	X	-89.352	2
29	MP1A	Z	154.763	2
30	MP1A	Mx	.045	2
31	MP1A	X	-89.352	4.5
32	MP1A	Z	154.763	4.5
33	MP1A	Mx	.045	4.5
34	MP5A	X	-89.352	2
35	MP5A	Z	154.763	2
36	MP5A	Mx	.045	2
37	MP5A	X	-89.352	4.5
38	MP5A	Z	154.763	4.5
39	MP5A	Mx	.045	4.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-42.32	.75
2	MP2A	Z	24.433	.75
3	MP2A	Mx	.021	.75
4	MP2A	X	-42.32	2.75
5	MP2A	Z	24.433	2.75
6	MP2A	Mx	.021	2.75
7	MP2A	X	-31.423	5.25
8	MP2A	Z	18.142	5.25
9	MP2A	Mx	.016	5.25
10	MP4A	X	-46.543	1.75
11	MP4A	Z	26.872	1.75
12	MP4A	Mx	-.023	1.75
13	MP3A	X	-40.642	2
14	MP3A	Z	23.465	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
15	MP3A	Mx	-.02	2
16	MP4A	X	-100.824	1
17	MP4A	Z	58.211	1
18	MP4A	Mx	.084	1
19	MP4A	X	-100.824	5.5
20	MP4A	Z	58.211	5.5
21	MP4A	Mx	.084	5.5
22	MP4A	X	-100.824	1
23	MP4A	Z	58.211	1
24	MP4A	Mx	.016	1
25	MP4A	X	-100.824	5.5
26	MP4A	Z	58.211	5.5
27	MP4A	Mx	.016	5.5
28	MP1A	X	-146.272	2
29	MP1A	Z	84.45	2
30	MP1A	Mx	.073	2
31	MP1A	X	-146.272	4.5
32	MP1A	Z	84.45	4.5
33	MP1A	Mx	.073	4.5
34	MP5A	X	-146.272	2
35	MP5A	Z	84.45	2
36	MP5A	Mx	.073	2
37	MP5A	X	-146.272	4.5
38	MP5A	Z	84.45	4.5
39	MP5A	Mx	.073	4.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-35.192	.75
2	MP2A	Z	0	.75
3	MP2A	Mx	.018	.75
4	MP2A	X	-35.192	2.75
5	MP2A	Z	0	2.75
6	MP2A	Mx	.018	2.75
7	MP2A	X	-28.87	5.25
8	MP2A	Z	0	5.25
9	MP2A	Mx	.014	5.25
10	MP4A	X	-47.814	1.75
11	MP4A	Z	0	1.75
12	MP4A	Mx	-.024	1.75
13	MP3A	X	-38.73	2
14	MP3A	Z	0	2
15	MP3A	Mx	-.019	2
16	MP4A	X	-103.207	1
17	MP4A	Z	0	1
18	MP4A	Mx	.052	1
19	MP4A	X	-103.207	5.5
20	MP4A	Z	0	5.5
21	MP4A	Mx	.052	5.5
22	MP4A	X	-103.207	1
23	MP4A	Z	0	1
24	MP4A	Mx	.052	1
25	MP4A	X	-103.207	5.5
26	MP4A	Z	0	5.5
27	MP4A	Mx	.052	5.5
28	MP1A	X	-163.998	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
29	MP1A	Z	0	2
30	MP1A	Mx	.082	2
31	MP1A	X	-163.998	4.5
32	MP1A	Z	0	4.5
33	MP1A	Mx	.082	4.5
34	MP5A	X	-163.998	2
35	MP5A	Z	0	2
36	MP5A	Mx	.082	2
37	MP5A	X	-163.998	4.5
38	MP5A	Z	0	4.5
39	MP5A	Mx	.082	4.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-42.32	.75
2	MP2A	Z	-24.433	.75
3	MP2A	Mx	.021	.75
4	MP2A	X	-42.32	2.75
5	MP2A	Z	-24.433	2.75
6	MP2A	Mx	.021	2.75
7	MP2A	X	-31.423	5.25
8	MP2A	Z	-18.142	5.25
9	MP2A	Mx	.016	5.25
10	MP4A	X	-46.543	1.75
11	MP4A	Z	-26.872	1.75
12	MP4A	Mx	-.023	1.75
13	MP3A	X	-40.642	2
14	MP3A	Z	-23.465	2
15	MP3A	Mx	-.02	2
16	MP4A	X	-100.824	1
17	MP4A	Z	-58.211	1
18	MP4A	Mx	.016	1
19	MP4A	X	-100.824	5.5
20	MP4A	Z	-58.211	5.5
21	MP4A	Mx	.016	5.5
22	MP4A	X	-100.824	1
23	MP4A	Z	-58.211	1
24	MP4A	Mx	.084	1
25	MP4A	X	-100.824	5.5
26	MP4A	Z	-58.211	5.5
27	MP4A	Mx	.084	5.5
28	MP1A	X	-146.272	2
29	MP1A	Z	-84.45	2
30	MP1A	Mx	.073	2
31	MP1A	X	-146.272	4.5
32	MP1A	Z	-84.45	4.5
33	MP1A	Mx	.073	4.5
34	MP5A	X	-146.272	2
35	MP5A	Z	-84.45	2
36	MP5A	Mx	.073	2
37	MP5A	X	-146.272	4.5
38	MP5A	Z	-84.45	4.5
39	MP5A	Mx	.073	4.5

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

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

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-38.108	.75
2	MP2A	Z	-66.005	.75
3	MP2A	Mx	.019	.75
4	MP2A	X	-38.108	2.75
5	MP2A	Z	-66.005	2.75
6	MP2A	Mx	.019	2.75
7	MP2A	X	-25.556	5.25
8	MP2A	Z	-44.263	5.25
9	MP2A	Mx	.013	5.25
10	MP4A	X	-32.801	1.75
11	MP4A	Z	-56.812	1.75
12	MP4A	Mx	-.016	1.75
13	MP3A	X	-31.665	2
14	MP3A	Z	-54.845	2
15	MP3A	Mx	-.016	2
16	MP4A	X	-71.426	1
17	MP4A	Z	-123.713	1
18	MP4A	Mx	-.036	1
19	MP4A	X	-71.426	5.5
20	MP4A	Z	-123.713	5.5
21	MP4A	Mx	-.036	5.5
22	MP4A	X	-71.426	1
23	MP4A	Z	-123.713	1
24	MP4A	Mx	.108	1
25	MP4A	X	-71.426	5.5
26	MP4A	Z	-123.713	5.5
27	MP4A	Mx	.108	5.5
28	MP1A	X	-89.352	2
29	MP1A	Z	-154.763	2
30	MP1A	Mx	.045	2
31	MP1A	X	-89.352	4.5
32	MP1A	Z	-154.763	4.5
33	MP1A	Mx	.045	4.5
34	MP5A	X	-89.352	2
35	MP5A	Z	-154.763	2
36	MP5A	Mx	.045	2
37	MP5A	X	-89.352	4.5
38	MP5A	Z	-154.763	4.5
39	MP5A	Mx	.045	4.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	0	.75
2	MP2A	Z	-19.945	.75
3	MP2A	Mx	0	.75
4	MP2A	X	0	2.75
5	MP2A	Z	-19.945	2.75
6	MP2A	Mx	0	2.75
7	MP2A	X	0	5.25
8	MP2A	Z	-14.584	5.25
9	MP2A	Mx	0	5.25
10	MP4A	X	0	1.75
11	MP4A	Z	-17.254	1.75
12	MP4A	Mx	0	1.75
13	MP3A	X	0	2
14	MP3A	Z	-17.254	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
15	MP3A	Mx	0	2
16	MP4A	X	0	1
17	MP4A	Z	-33.494	1
18	MP4A	Mx	-.02	1
19	MP4A	X	0	5.5
20	MP4A	Z	-33.494	5.5
21	MP4A	Mx	-.02	5.5
22	MP4A	X	0	1
23	MP4A	Z	-33.494	1
24	MP4A	Mx	.02	1
25	MP4A	X	0	5.5
26	MP4A	Z	-33.494	5.5
27	MP4A	Mx	.02	5.5
28	MP1A	X	0	2
29	MP1A	Z	-38.793	2
30	MP1A	Mx	0	2
31	MP1A	X	0	4.5
32	MP1A	Z	-38.793	4.5
33	MP1A	Mx	0	4.5
34	MP5A	X	0	2
35	MP5A	Z	-38.793	2
36	MP5A	Mx	0	2
37	MP5A	X	0	4.5
38	MP5A	Z	-38.793	4.5
39	MP5A	Mx	0	4.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	8.585	.75
2	MP2A	Z	-14.869	.75
3	MP2A	Mx	-.004	.75
4	MP2A	X	8.585	2.75
5	MP2A	Z	-14.869	2.75
6	MP2A	Mx	-.004	2.75
7	MP2A	X	6.498	5.25
8	MP2A	Z	-11.254	5.25
9	MP2A	Mx	-.003	5.25
10	MP4A	X	7.998	1.75
11	MP4A	Z	-13.854	1.75
12	MP4A	Mx	.004	1.75
13	MP3A	X	7.76	2
14	MP3A	Z	-13.44	2
15	MP3A	Mx	.004	2
16	MP4A	X	15.501	1
17	MP4A	Z	-26.849	1
18	MP4A	Mx	-.023	1
19	MP4A	X	15.501	5.5
20	MP4A	Z	-26.849	5.5
21	MP4A	Mx	-.023	5.5
22	MP4A	X	15.501	1
23	MP4A	Z	-26.849	1
24	MP4A	Mx	.008	1
25	MP4A	X	15.501	5.5
26	MP4A	Z	-26.849	5.5
27	MP4A	Mx	.008	5.5
28	MP1A	X	18.924	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
29	MP1A	Z	-32.777	2
30	MP1A	Mx	-.009	2
31	MP1A	X	18.924	4.5
32	MP1A	Z	-32.777	4.5
33	MP1A	Mx	-.009	4.5
34	MP5A	X	18.924	2
35	MP5A	Z	-32.777	2
36	MP5A	Mx	-.009	2
37	MP5A	X	18.924	4.5
38	MP5A	Z	-32.777	4.5
39	MP5A	Mx	-.009	4.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	10.06	.75
2	MP2A	Z	-5.808	.75
3	MP2A	Mx	-.005	.75
4	MP2A	X	10.06	2.75
5	MP2A	Z	-5.808	2.75
6	MP2A	Mx	-.005	2.75
7	MP2A	X	8.503	5.25
8	MP2A	Z	-4.909	5.25
9	MP2A	Mx	-.004	5.25
10	MP4A	X	11.676	1.75
11	MP4A	Z	-6.741	1.75
12	MP4A	Mx	.006	1.75
13	MP3A	X	10.434	2
14	MP3A	Z	-6.024	2
15	MP3A	Mx	.005	2
16	MP4A	X	22.534	1
17	MP4A	Z	-13.01	1
18	MP4A	Mx	-.019	1
19	MP4A	X	22.534	5.5
20	MP4A	Z	-13.01	5.5
21	MP4A	Mx	-.019	5.5
22	MP4A	X	22.534	1
23	MP4A	Z	-13.01	1
24	MP4A	Mx	-.004	1
25	MP4A	X	22.534	5.5
26	MP4A	Z	-13.01	5.5
27	MP4A	Mx	-.004	5.5
28	MP1A	X	31.138	2
29	MP1A	Z	-17.978	2
30	MP1A	Mx	-.016	2
31	MP1A	X	31.138	4.5
32	MP1A	Z	-17.978	4.5
33	MP1A	Mx	-.016	4.5
34	MP5A	X	31.138	2
35	MP5A	Z	-17.978	2
36	MP5A	Mx	-.016	2
37	MP5A	X	31.138	4.5
38	MP5A	Z	-17.978	4.5
39	MP5A	Mx	-.016	4.5

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

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

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	8.841	.75
2	MP2A	Z	0	.75
3	MP2A	Mx	-.004	.75
4	MP2A	X	8.841	2.75
5	MP2A	Z	0	2.75
6	MP2A	Mx	-.004	2.75
7	MP2A	X	8.23	5.25
8	MP2A	Z	0	5.25
9	MP2A	Mx	-.004	5.25
10	MP4A	X	12.225	1.75
11	MP4A	Z	0	1.75
12	MP4A	Mx	.006	1.75
13	MP3A	X	10.313	2
14	MP3A	Z	0	2
15	MP3A	Mx	.005	2
16	MP4A	X	23.529	1
17	MP4A	Z	0	1
18	MP4A	Mx	-.012	1
19	MP4A	X	23.529	5.5
20	MP4A	Z	0	5.5
21	MP4A	Mx	-.012	5.5
22	MP4A	X	23.529	1
23	MP4A	Z	0	1
24	MP4A	Mx	-.012	1
25	MP4A	X	23.529	5.5
26	MP4A	Z	0	5.5
27	MP4A	Mx	-.012	5.5
28	MP1A	X	35.009	2
29	MP1A	Z	0	2
30	MP1A	Mx	-.018	2
31	MP1A	X	35.009	4.5
32	MP1A	Z	0	4.5
33	MP1A	Mx	-.018	4.5
34	MP5A	X	35.009	2
35	MP5A	Z	0	2
36	MP5A	Mx	-.018	2
37	MP5A	X	35.009	4.5
38	MP5A	Z	0	4.5
39	MP5A	Mx	-.018	4.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	10.06	.75
2	MP2A	Z	5.808	.75
3	MP2A	Mx	-.005	.75
4	MP2A	X	10.06	2.75
5	MP2A	Z	5.808	2.75
6	MP2A	Mx	-.005	2.75
7	MP2A	X	8.503	5.25
8	MP2A	Z	4.909	5.25
9	MP2A	Mx	-.004	5.25
10	MP4A	X	11.676	1.75
11	MP4A	Z	6.741	1.75
12	MP4A	Mx	.006	1.75
13	MP3A	X	10.434	2
14	MP3A	Z	6.024	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
15	MP3A	Mx	.005	2
16	MP4A	X	22.534	1
17	MP4A	Z	13.01	1
18	MP4A	Mx	-.004	1
19	MP4A	X	22.534	5.5
20	MP4A	Z	13.01	5.5
21	MP4A	Mx	-.004	5.5
22	MP4A	X	22.534	1
23	MP4A	Z	13.01	1
24	MP4A	Mx	-.019	1
25	MP4A	X	22.534	5.5
26	MP4A	Z	13.01	5.5
27	MP4A	Mx	-.019	5.5
28	MP1A	X	31.138	2
29	MP1A	Z	17.978	2
30	MP1A	Mx	-.016	2
31	MP1A	X	31.138	4.5
32	MP1A	Z	17.978	4.5
33	MP1A	Mx	-.016	4.5
34	MP5A	X	31.138	2
35	MP5A	Z	17.978	2
36	MP5A	Mx	-.016	2
37	MP5A	X	31.138	4.5
38	MP5A	Z	17.978	4.5
39	MP5A	Mx	-.016	4.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	8.585	.75
2	MP2A	Z	14.869	.75
3	MP2A	Mx	-.004	.75
4	MP2A	X	8.585	2.75
5	MP2A	Z	14.869	2.75
6	MP2A	Mx	-.004	2.75
7	MP2A	X	6.498	5.25
8	MP2A	Z	11.254	5.25
9	MP2A	Mx	-.003	5.25
10	MP4A	X	7.998	1.75
11	MP4A	Z	13.854	1.75
12	MP4A	Mx	.004	1.75
13	MP3A	X	7.76	2
14	MP3A	Z	13.44	2
15	MP3A	Mx	.004	2
16	MP4A	X	15.501	1
17	MP4A	Z	26.849	1
18	MP4A	Mx	.008	1
19	MP4A	X	15.501	5.5
20	MP4A	Z	26.849	5.5
21	MP4A	Mx	.008	5.5
22	MP4A	X	15.501	1
23	MP4A	Z	26.849	1
24	MP4A	Mx	-.023	1
25	MP4A	X	15.501	5.5
26	MP4A	Z	26.849	5.5
27	MP4A	Mx	-.023	5.5
28	MP1A	X	18.924	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
29	MP1A	Z	32.777	2
30	MP1A	Mx	-.009	2
31	MP1A	X	18.924	4.5
32	MP1A	Z	32.777	4.5
33	MP1A	Mx	-.009	4.5
34	MP5A	X	18.924	2
35	MP5A	Z	32.777	2
36	MP5A	Mx	-.009	2
37	MP5A	X	18.924	4.5
38	MP5A	Z	32.777	4.5
39	MP5A	Mx	-.009	4.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	0	.75
2	MP2A	Z	19.945	.75
3	MP2A	Mx	0	.75
4	MP2A	X	0	2.75
5	MP2A	Z	19.945	2.75
6	MP2A	Mx	0	2.75
7	MP2A	X	0	5.25
8	MP2A	Z	14.584	5.25
9	MP2A	Mx	0	5.25
10	MP4A	X	0	1.75
11	MP4A	Z	17.254	1.75
12	MP4A	Mx	0	1.75
13	MP3A	X	0	2
14	MP3A	Z	17.254	2
15	MP3A	Mx	0	2
16	MP4A	X	0	1
17	MP4A	Z	33.494	1
18	MP4A	Mx	.02	1
19	MP4A	X	0	5.5
20	MP4A	Z	33.494	5.5
21	MP4A	Mx	.02	5.5
22	MP4A	X	0	1
23	MP4A	Z	33.494	1
24	MP4A	Mx	-.02	1
25	MP4A	X	0	5.5
26	MP4A	Z	33.494	5.5
27	MP4A	Mx	-.02	5.5
28	MP1A	X	0	2
29	MP1A	Z	38.793	2
30	MP1A	Mx	0	2
31	MP1A	X	0	4.5
32	MP1A	Z	38.793	4.5
33	MP1A	Mx	0	4.5
34	MP5A	X	0	2
35	MP5A	Z	38.793	2
36	MP5A	Mx	0	2
37	MP5A	X	0	4.5
38	MP5A	Z	38.793	4.5
39	MP5A	Mx	0	4.5

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

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

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-8.585	.75
2	MP2A	Z	14.869	.75
3	MP2A	Mx	.004	.75
4	MP2A	X	-8.585	2.75
5	MP2A	Z	14.869	2.75
6	MP2A	Mx	.004	2.75
7	MP2A	X	-6.498	5.25
8	MP2A	Z	11.254	5.25
9	MP2A	Mx	.003	5.25
10	MP4A	X	-7.998	1.75
11	MP4A	Z	13.854	1.75
12	MP4A	Mx	-.004	1.75
13	MP3A	X	-7.76	2
14	MP3A	Z	13.44	2
15	MP3A	Mx	-.004	2
16	MP4A	X	-15.501	1
17	MP4A	Z	26.849	1
18	MP4A	Mx	.023	1
19	MP4A	X	-15.501	5.5
20	MP4A	Z	26.849	5.5
21	MP4A	Mx	.023	5.5
22	MP4A	X	-15.501	1
23	MP4A	Z	26.849	1
24	MP4A	Mx	-.008	1
25	MP4A	X	-15.501	5.5
26	MP4A	Z	26.849	5.5
27	MP4A	Mx	-.008	5.5
28	MP1A	X	-18.924	2
29	MP1A	Z	32.777	2
30	MP1A	Mx	.009	2
31	MP1A	X	-18.924	4.5
32	MP1A	Z	32.777	4.5
33	MP1A	Mx	.009	4.5
34	MP5A	X	-18.924	2
35	MP5A	Z	32.777	2
36	MP5A	Mx	.009	2
37	MP5A	X	-18.924	4.5
38	MP5A	Z	32.777	4.5
39	MP5A	Mx	.009	4.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-10.06	.75
2	MP2A	Z	5.808	.75
3	MP2A	Mx	.005	.75
4	MP2A	X	-10.06	2.75
5	MP2A	Z	5.808	2.75
6	MP2A	Mx	.005	2.75
7	MP2A	X	-8.503	5.25
8	MP2A	Z	4.909	5.25
9	MP2A	Mx	.004	5.25
10	MP4A	X	-11.676	1.75
11	MP4A	Z	6.741	1.75
12	MP4A	Mx	-.006	1.75
13	MP3A	X	-10.434	2
14	MP3A	Z	6.024	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
15	MP3A	Mx	-.005	2
16	MP4A	X	-22.534	1
17	MP4A	Z	13.01	1
18	MP4A	Mx	.019	1
19	MP4A	X	-22.534	5.5
20	MP4A	Z	13.01	5.5
21	MP4A	Mx	.019	5.5
22	MP4A	X	-22.534	1
23	MP4A	Z	13.01	1
24	MP4A	Mx	.004	1
25	MP4A	X	-22.534	5.5
26	MP4A	Z	13.01	5.5
27	MP4A	Mx	.004	5.5
28	MP1A	X	-31.138	2
29	MP1A	Z	17.978	2
30	MP1A	Mx	.016	2
31	MP1A	X	-31.138	4.5
32	MP1A	Z	17.978	4.5
33	MP1A	Mx	.016	4.5
34	MP5A	X	-31.138	2
35	MP5A	Z	17.978	2
36	MP5A	Mx	.016	2
37	MP5A	X	-31.138	4.5
38	MP5A	Z	17.978	4.5
39	MP5A	Mx	.016	4.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-8.841	.75
2	MP2A	Z	0	.75
3	MP2A	Mx	.004	.75
4	MP2A	X	-8.841	2.75
5	MP2A	Z	0	2.75
6	MP2A	Mx	.004	2.75
7	MP2A	X	-8.23	5.25
8	MP2A	Z	0	5.25
9	MP2A	Mx	.004	5.25
10	MP4A	X	-12.225	1.75
11	MP4A	Z	0	1.75
12	MP4A	Mx	-.006	1.75
13	MP3A	X	-10.313	2
14	MP3A	Z	0	2
15	MP3A	Mx	-.005	2
16	MP4A	X	-23.529	1
17	MP4A	Z	0	1
18	MP4A	Mx	.012	1
19	MP4A	X	-23.529	5.5
20	MP4A	Z	0	5.5
21	MP4A	Mx	.012	5.5
22	MP4A	X	-23.529	1
23	MP4A	Z	0	1
24	MP4A	Mx	.012	1
25	MP4A	X	-23.529	5.5
26	MP4A	Z	0	5.5
27	MP4A	Mx	.012	5.5
28	MP1A	X	-35.009	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
29	MP1A	Z	0	2
30	MP1A	Mx	.018	2
31	MP1A	X	-35.009	4.5
32	MP1A	Z	0	4.5
33	MP1A	Mx	.018	4.5
34	MP5A	X	-35.009	2
35	MP5A	Z	0	2
36	MP5A	Mx	.018	2
37	MP5A	X	-35.009	4.5
38	MP5A	Z	0	4.5
39	MP5A	Mx	.018	4.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-10.06	.75
2	MP2A	Z	-5.808	.75
3	MP2A	Mx	.005	.75
4	MP2A	X	-10.06	2.75
5	MP2A	Z	-5.808	2.75
6	MP2A	Mx	.005	2.75
7	MP2A	X	-8.503	5.25
8	MP2A	Z	-4.909	5.25
9	MP2A	Mx	.004	5.25
10	MP4A	X	-11.676	1.75
11	MP4A	Z	-6.741	1.75
12	MP4A	Mx	-.006	1.75
13	MP3A	X	-10.434	2
14	MP3A	Z	-6.024	2
15	MP3A	Mx	-.005	2
16	MP4A	X	-22.534	1
17	MP4A	Z	-13.01	1
18	MP4A	Mx	.004	1
19	MP4A	X	-22.534	5.5
20	MP4A	Z	-13.01	5.5
21	MP4A	Mx	.004	5.5
22	MP4A	X	-22.534	1
23	MP4A	Z	-13.01	1
24	MP4A	Mx	.019	1
25	MP4A	X	-22.534	5.5
26	MP4A	Z	-13.01	5.5
27	MP4A	Mx	.019	5.5
28	MP1A	X	-31.138	2
29	MP1A	Z	-17.978	2
30	MP1A	Mx	.016	2
31	MP1A	X	-31.138	4.5
32	MP1A	Z	-17.978	4.5
33	MP1A	Mx	.016	4.5
34	MP5A	X	-31.138	2
35	MP5A	Z	-17.978	2
36	MP5A	Mx	.016	2
37	MP5A	X	-31.138	4.5
38	MP5A	Z	-17.978	4.5
39	MP5A	Mx	.016	4.5

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

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

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-8.585	.75
2	MP2A	Z	-14.869	.75
3	MP2A	Mx	.004	.75
4	MP2A	X	-8.585	2.75
5	MP2A	Z	-14.869	2.75
6	MP2A	Mx	.004	2.75
7	MP2A	X	-6.498	5.25
8	MP2A	Z	-11.254	5.25
9	MP2A	Mx	.003	5.25
10	MP4A	X	-7.998	1.75
11	MP4A	Z	-13.854	1.75
12	MP4A	Mx	-.004	1.75
13	MP3A	X	-7.76	2
14	MP3A	Z	-13.44	2
15	MP3A	Mx	-.004	2
16	MP4A	X	-15.501	1
17	MP4A	Z	-26.849	1
18	MP4A	Mx	-.008	1
19	MP4A	X	-15.501	5.5
20	MP4A	Z	-26.849	5.5
21	MP4A	Mx	-.008	5.5
22	MP4A	X	-15.501	1
23	MP4A	Z	-26.849	1
24	MP4A	Mx	.023	1
25	MP4A	X	-15.501	5.5
26	MP4A	Z	-26.849	5.5
27	MP4A	Mx	.023	5.5
28	MP1A	X	-18.924	2
29	MP1A	Z	-32.777	2
30	MP1A	Mx	.009	2
31	MP1A	X	-18.924	4.5
32	MP1A	Z	-32.777	4.5
33	MP1A	Mx	.009	4.5
34	MP5A	X	-18.924	2
35	MP5A	Z	-32.777	2
36	MP5A	Mx	.009	2
37	MP5A	X	-18.924	4.5
38	MP5A	Z	-32.777	4.5
39	MP5A	Mx	.009	4.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	0	.75
2	MP2A	Z	-6.012	.75
3	MP2A	Mx	0	.75
4	MP2A	X	0	2.75
5	MP2A	Z	-6.012	2.75
6	MP2A	Mx	0	2.75
7	MP2A	X	0	5.25
8	MP2A	Z	-3.914	5.25
9	MP2A	Mx	0	5.25
10	MP4A	X	0	1.75
11	MP4A	Z	-4.784	1.75
12	MP4A	Mx	0	1.75
13	MP3A	X	0	2
14	MP3A	Z	-4.784	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
15	MP3A	Mx	0	2
16	MP4A	X	0	1
17	MP4A	Z	-10.438	1
18	MP4A	Mx	-.006	1
19	MP4A	X	0	5.5
20	MP4A	Z	-10.438	5.5
21	MP4A	Mx	-.006	5.5
22	MP4A	X	0	1
23	MP4A	Z	-10.438	1
24	MP4A	Mx	.006	1
25	MP4A	X	0	5.5
26	MP4A	Z	-10.438	5.5
27	MP4A	Mx	.006	5.5
28	MP1A	X	0	2
29	MP1A	Z	-12.28	2
30	MP1A	Mx	0	2
31	MP1A	X	0	4.5
32	MP1A	Z	-12.28	4.5
33	MP1A	Mx	0	4.5
34	MP5A	X	0	2
35	MP5A	Z	-12.28	2
36	MP5A	Mx	0	2
37	MP5A	X	0	4.5
38	MP5A	Z	-12.28	4.5
39	MP5A	Mx	0	4.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	2.549	.75
2	MP2A	Z	-4.415	.75
3	MP2A	Mx	-.001	.75
4	MP2A	X	2.549	2.75
5	MP2A	Z	-4.415	2.75
6	MP2A	Mx	-.001	2.75
7	MP2A	X	1.709	5.25
8	MP2A	Z	-2.961	5.25
9	MP2A	Mx	-.000855	5.25
10	MP4A	X	2.194	1.75
11	MP4A	Z	-3.8	1.75
12	MP4A	Mx	.001	1.75
13	MP3A	X	2.118	2
14	MP3A	Z	-3.668	2
15	MP3A	Mx	.001	2
16	MP4A	X	4.777	1
17	MP4A	Z	-8.274	1
18	MP4A	Mx	-.007	1
19	MP4A	X	4.777	5.5
20	MP4A	Z	-8.274	5.5
21	MP4A	Mx	-.007	5.5
22	MP4A	X	4.777	1
23	MP4A	Z	-8.274	1
24	MP4A	Mx	.002	1
25	MP4A	X	4.777	5.5
26	MP4A	Z	-8.274	5.5
27	MP4A	Mx	.002	5.5
28	MP1A	X	5.976	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
29	MP1A	Z	-10.351	2
30	MP1A	Mx	-.003	2
31	MP1A	X	5.976	4.5
32	MP1A	Z	-10.351	4.5
33	MP1A	Mx	-.003	4.5
34	MP5A	X	5.976	2
35	MP5A	Z	-10.351	2
36	MP5A	Mx	-.003	2
37	MP5A	X	5.976	4.5
38	MP5A	Z	-10.351	4.5
39	MP5A	Mx	-.003	4.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	2.831	.75
2	MP2A	Z	-1.634	.75
3	MP2A	Mx	-.001	.75
4	MP2A	X	2.831	2.75
5	MP2A	Z	-1.634	2.75
6	MP2A	Mx	-.001	2.75
7	MP2A	X	2.102	5.25
8	MP2A	Z	-1.213	5.25
9	MP2A	Mx	-.001	5.25
10	MP4A	X	3.113	1.75
11	MP4A	Z	-1.797	1.75
12	MP4A	Mx	.002	1.75
13	MP3A	X	2.718	2
14	MP3A	Z	-1.569	2
15	MP3A	Mx	.001	2
16	MP4A	X	6.744	1
17	MP4A	Z	-3.893	1
18	MP4A	Mx	-.006	1
19	MP4A	X	6.744	5.5
20	MP4A	Z	-3.893	5.5
21	MP4A	Mx	-.006	5.5
22	MP4A	X	6.744	1
23	MP4A	Z	-3.893	1
24	MP4A	Mx	-.001	1
25	MP4A	X	6.744	5.5
26	MP4A	Z	-3.893	5.5
27	MP4A	Mx	-.001	5.5
28	MP1A	X	9.783	2
29	MP1A	Z	-5.648	2
30	MP1A	Mx	-.005	2
31	MP1A	X	9.783	4.5
32	MP1A	Z	-5.648	4.5
33	MP1A	Mx	-.005	4.5
34	MP5A	X	9.783	2
35	MP5A	Z	-5.648	2
36	MP5A	Mx	-.005	2
37	MP5A	X	9.783	4.5
38	MP5A	Z	-5.648	4.5
39	MP5A	Mx	-.005	4.5

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

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

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	2.354	.75
2	MP2A	Z	0	.75
3	MP2A	Mx	-.001	.75
4	MP2A	X	2.354	2.75
5	MP2A	Z	0	2.75
6	MP2A	Mx	-.001	2.75
7	MP2A	X	1.931	5.25
8	MP2A	Z	0	5.25
9	MP2A	Mx	-.000966	5.25
10	MP4A	X	3.198	1.75
11	MP4A	Z	0	1.75
12	MP4A	Mx	.002	1.75
13	MP3A	X	2.59	2
14	MP3A	Z	0	2
15	MP3A	Mx	.001	2
16	MP4A	X	6.903	1
17	MP4A	Z	0	1
18	MP4A	Mx	-.003	1
19	MP4A	X	6.903	5.5
20	MP4A	Z	0	5.5
21	MP4A	Mx	-.003	5.5
22	MP4A	X	6.903	1
23	MP4A	Z	0	1
24	MP4A	Mx	-.003	1
25	MP4A	X	6.903	5.5
26	MP4A	Z	0	5.5
27	MP4A	Mx	-.003	5.5
28	MP1A	X	10.969	2
29	MP1A	Z	0	2
30	MP1A	Mx	-.005	2
31	MP1A	X	10.969	4.5
32	MP1A	Z	0	4.5
33	MP1A	Mx	-.005	4.5
34	MP5A	X	10.969	2
35	MP5A	Z	0	2
36	MP5A	Mx	-.005	2
37	MP5A	X	10.969	4.5
38	MP5A	Z	0	4.5
39	MP5A	Mx	-.005	4.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	2.831	.75
2	MP2A	Z	1.634	.75
3	MP2A	Mx	-.001	.75
4	MP2A	X	2.831	2.75
5	MP2A	Z	1.634	2.75
6	MP2A	Mx	-.001	2.75
7	MP2A	X	2.102	5.25
8	MP2A	Z	1.213	5.25
9	MP2A	Mx	-.001	5.25
10	MP4A	X	3.113	1.75
11	MP4A	Z	1.797	1.75
12	MP4A	Mx	.002	1.75
13	MP3A	X	2.718	2
14	MP3A	Z	1.569	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
15	MP3A	Mx	.001	2
16	MP4A	X	6.744	1
17	MP4A	Z	3.893	1
18	MP4A	Mx	-.001	1
19	MP4A	X	6.744	5.5
20	MP4A	Z	3.893	5.5
21	MP4A	Mx	-.001	5.5
22	MP4A	X	6.744	1
23	MP4A	Z	3.893	1
24	MP4A	Mx	-.006	1
25	MP4A	X	6.744	5.5
26	MP4A	Z	3.893	5.5
27	MP4A	Mx	-.006	5.5
28	MP1A	X	9.783	2
29	MP1A	Z	5.648	2
30	MP1A	Mx	-.005	2
31	MP1A	X	9.783	4.5
32	MP1A	Z	5.648	4.5
33	MP1A	Mx	-.005	4.5
34	MP5A	X	9.783	2
35	MP5A	Z	5.648	2
36	MP5A	Mx	-.005	2
37	MP5A	X	9.783	4.5
38	MP5A	Z	5.648	4.5
39	MP5A	Mx	-.005	4.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	2.549	.75
2	MP2A	Z	4.415	.75
3	MP2A	Mx	-.001	.75
4	MP2A	X	2.549	2.75
5	MP2A	Z	4.415	2.75
6	MP2A	Mx	-.001	2.75
7	MP2A	X	1.709	5.25
8	MP2A	Z	2.961	5.25
9	MP2A	Mx	-.000855	5.25
10	MP4A	X	2.194	1.75
11	MP4A	Z	3.8	1.75
12	MP4A	Mx	.001	1.75
13	MP3A	X	2.118	2
14	MP3A	Z	3.668	2
15	MP3A	Mx	.001	2
16	MP4A	X	4.777	1
17	MP4A	Z	8.274	1
18	MP4A	Mx	.002	1
19	MP4A	X	4.777	5.5
20	MP4A	Z	8.274	5.5
21	MP4A	Mx	.002	5.5
22	MP4A	X	4.777	1
23	MP4A	Z	8.274	1
24	MP4A	Mx	-.007	1
25	MP4A	X	4.777	5.5
26	MP4A	Z	8.274	5.5
27	MP4A	Mx	-.007	5.5
28	MP1A	X	5.976	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
29	MP1A	Z	10.351	2
30	MP1A	Mx	-.003	2
31	MP1A	X	5.976	4.5
32	MP1A	Z	10.351	4.5
33	MP1A	Mx	-.003	4.5
34	MP5A	X	5.976	2
35	MP5A	Z	10.351	2
36	MP5A	Mx	-.003	2
37	MP5A	X	5.976	4.5
38	MP5A	Z	10.351	4.5
39	MP5A	Mx	-.003	4.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	0	.75
2	MP2A	Z	6.012	.75
3	MP2A	Mx	0	.75
4	MP2A	X	0	2.75
5	MP2A	Z	6.012	2.75
6	MP2A	Mx	0	2.75
7	MP2A	X	0	5.25
8	MP2A	Z	3.914	5.25
9	MP2A	Mx	0	5.25
10	MP4A	X	0	1.75
11	MP4A	Z	4.784	1.75
12	MP4A	Mx	0	1.75
13	MP3A	X	0	2
14	MP3A	Z	4.784	2
15	MP3A	Mx	0	2
16	MP4A	X	0	1
17	MP4A	Z	10.438	1
18	MP4A	Mx	.006	1
19	MP4A	X	0	5.5
20	MP4A	Z	10.438	5.5
21	MP4A	Mx	.006	5.5
22	MP4A	X	0	1
23	MP4A	Z	10.438	1
24	MP4A	Mx	-.006	1
25	MP4A	X	0	5.5
26	MP4A	Z	10.438	5.5
27	MP4A	Mx	-.006	5.5
28	MP1A	X	0	2
29	MP1A	Z	12.28	2
30	MP1A	Mx	0	2
31	MP1A	X	0	4.5
32	MP1A	Z	12.28	4.5
33	MP1A	Mx	0	4.5
34	MP5A	X	0	2
35	MP5A	Z	12.28	2
36	MP5A	Mx	0	2
37	MP5A	X	0	4.5
38	MP5A	Z	12.28	4.5
39	MP5A	Mx	0	4.5

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

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

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-2.549	.75
2	MP2A	Z	4.415	.75
3	MP2A	Mx	.001	.75
4	MP2A	X	-2.549	2.75
5	MP2A	Z	4.415	2.75
6	MP2A	Mx	.001	2.75
7	MP2A	X	-1.709	5.25
8	MP2A	Z	2.961	5.25
9	MP2A	Mx	.000855	5.25
10	MP4A	X	-2.194	1.75
11	MP4A	Z	3.8	1.75
12	MP4A	Mx	-.001	1.75
13	MP3A	X	-2.118	2
14	MP3A	Z	3.668	2
15	MP3A	Mx	-.001	2
16	MP4A	X	-4.777	1
17	MP4A	Z	8.274	1
18	MP4A	Mx	.007	1
19	MP4A	X	-4.777	5.5
20	MP4A	Z	8.274	5.5
21	MP4A	Mx	.007	5.5
22	MP4A	X	-4.777	1
23	MP4A	Z	8.274	1
24	MP4A	Mx	-.002	1
25	MP4A	X	-4.777	5.5
26	MP4A	Z	8.274	5.5
27	MP4A	Mx	-.002	5.5
28	MP1A	X	-5.976	2
29	MP1A	Z	10.351	2
30	MP1A	Mx	.003	2
31	MP1A	X	-5.976	4.5
32	MP1A	Z	10.351	4.5
33	MP1A	Mx	.003	4.5
34	MP5A	X	-5.976	2
35	MP5A	Z	10.351	2
36	MP5A	Mx	.003	2
37	MP5A	X	-5.976	4.5
38	MP5A	Z	10.351	4.5
39	MP5A	Mx	.003	4.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-2.831	.75
2	MP2A	Z	1.634	.75
3	MP2A	Mx	.001	.75
4	MP2A	X	-2.831	2.75
5	MP2A	Z	1.634	2.75
6	MP2A	Mx	.001	2.75
7	MP2A	X	-2.102	5.25
8	MP2A	Z	1.213	5.25
9	MP2A	Mx	.001	5.25
10	MP4A	X	-3.113	1.75
11	MP4A	Z	1.797	1.75
12	MP4A	Mx	-.002	1.75
13	MP3A	X	-2.718	2
14	MP3A	Z	1.569	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
15	MP3A	Mx	-.001	2
16	MP4A	X	-6.744	1
17	MP4A	Z	3.893	1
18	MP4A	Mx	.006	1
19	MP4A	X	-6.744	5.5
20	MP4A	Z	3.893	5.5
21	MP4A	Mx	.006	5.5
22	MP4A	X	-6.744	1
23	MP4A	Z	3.893	1
24	MP4A	Mx	.001	1
25	MP4A	X	-6.744	5.5
26	MP4A	Z	3.893	5.5
27	MP4A	Mx	.001	5.5
28	MP1A	X	-9.783	2
29	MP1A	Z	5.648	2
30	MP1A	Mx	.005	2
31	MP1A	X	-9.783	4.5
32	MP1A	Z	5.648	4.5
33	MP1A	Mx	.005	4.5
34	MP5A	X	-9.783	2
35	MP5A	Z	5.648	2
36	MP5A	Mx	.005	2
37	MP5A	X	-9.783	4.5
38	MP5A	Z	5.648	4.5
39	MP5A	Mx	.005	4.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-2.354	.75
2	MP2A	Z	0	.75
3	MP2A	Mx	.001	.75
4	MP2A	X	-2.354	2.75
5	MP2A	Z	0	2.75
6	MP2A	Mx	.001	2.75
7	MP2A	X	-1.931	5.25
8	MP2A	Z	0	5.25
9	MP2A	Mx	.000966	5.25
10	MP4A	X	-3.198	1.75
11	MP4A	Z	0	1.75
12	MP4A	Mx	-.002	1.75
13	MP3A	X	-2.59	2
14	MP3A	Z	0	2
15	MP3A	Mx	-.001	2
16	MP4A	X	-6.903	1
17	MP4A	Z	0	1
18	MP4A	Mx	.003	1
19	MP4A	X	-6.903	5.5
20	MP4A	Z	0	5.5
21	MP4A	Mx	.003	5.5
22	MP4A	X	-6.903	1
23	MP4A	Z	0	1
24	MP4A	Mx	.003	1
25	MP4A	X	-6.903	5.5
26	MP4A	Z	0	5.5
27	MP4A	Mx	.003	5.5
28	MP1A	X	-10.969	2

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
29	MP1A	Z	0	2
30	MP1A	Mx	.005	2
31	MP1A	X	-10.969	4.5
32	MP1A	Z	0	4.5
33	MP1A	Mx	.005	4.5
34	MP5A	X	-10.969	2
35	MP5A	Z	0	2
36	MP5A	Mx	.005	2
37	MP5A	X	-10.969	4.5
38	MP5A	Z	0	4.5
39	MP5A	Mx	.005	4.5

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-2.831	.75
2	MP2A	Z	-1.634	.75
3	MP2A	Mx	.001	.75
4	MP2A	X	-2.831	2.75
5	MP2A	Z	-1.634	2.75
6	MP2A	Mx	.001	2.75
7	MP2A	X	-2.102	5.25
8	MP2A	Z	-1.213	5.25
9	MP2A	Mx	.001	5.25
10	MP4A	X	-3.113	1.75
11	MP4A	Z	-1.797	1.75
12	MP4A	Mx	-.002	1.75
13	MP3A	X	-2.718	2
14	MP3A	Z	-1.569	2
15	MP3A	Mx	-.001	2
16	MP4A	X	-6.744	1
17	MP4A	Z	-3.893	1
18	MP4A	Mx	.001	1
19	MP4A	X	-6.744	5.5
20	MP4A	Z	-3.893	5.5
21	MP4A	Mx	.001	5.5
22	MP4A	X	-6.744	1
23	MP4A	Z	-3.893	1
24	MP4A	Mx	.006	1
25	MP4A	X	-6.744	5.5
26	MP4A	Z	-3.893	5.5
27	MP4A	Mx	.006	5.5
28	MP1A	X	-9.783	2
29	MP1A	Z	-5.648	2
30	MP1A	Mx	.005	2
31	MP1A	X	-9.783	4.5
32	MP1A	Z	-5.648	4.5
33	MP1A	Mx	.005	4.5
34	MP5A	X	-9.783	2
35	MP5A	Z	-5.648	2
36	MP5A	Mx	.005	2
37	MP5A	X	-9.783	4.5
38	MP5A	Z	-5.648	4.5
39	MP5A	Mx	.005	4.5

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

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

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

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	MP2A	X	-2.549	.75
2	MP2A	Z	-4.415	.75
3	MP2A	Mx	.001	.75
4	MP2A	X	-2.549	2.75
5	MP2A	Z	-4.415	2.75
6	MP2A	Mx	.001	2.75
7	MP2A	X	-1.709	5.25
8	MP2A	Z	-2.961	5.25
9	MP2A	Mx	.000855	5.25
10	MP4A	X	-2.194	1.75
11	MP4A	Z	-3.8	1.75
12	MP4A	Mx	-.001	1.75
13	MP3A	X	-2.118	2
14	MP3A	Z	-3.668	2
15	MP3A	Mx	-.001	2
16	MP4A	X	-4.777	1
17	MP4A	Z	-8.274	1
18	MP4A	Mx	-.002	1
19	MP4A	X	-4.777	5.5
20	MP4A	Z	-8.274	5.5
21	MP4A	Mx	-.002	5.5
22	MP4A	X	-4.777	1
23	MP4A	Z	-8.274	1
24	MP4A	Mx	.007	1
25	MP4A	X	-4.777	5.5
26	MP4A	Z	-8.274	5.5
27	MP4A	Mx	.007	5.5
28	MP1A	X	-5.976	2
29	MP1A	Z	-10.351	2
30	MP1A	Mx	.003	2
31	MP1A	X	-5.976	4.5
32	MP1A	Z	-10.351	4.5
33	MP1A	Mx	.003	4.5
34	MP5A	X	-5.976	2
35	MP5A	Z	-10.351	2
36	MP5A	Mx	.003	2
37	MP5A	X	-5.976	4.5
38	MP5A	Z	-10.351	4.5
39	MP5A	Mx	.003	4.5

Member Point Loads (BLC 77 : Lm1)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	M9	Y	-500	0

Member Point Loads (BLC 78 : Lm2)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	M13	Y	-500	0

Member Point Loads (BLC 79 : Lv1)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	M2	Y	-250	0

Member Point Loads (BLC 80 : Lv2)

	Member Label	Direction	Magnitude[lb,k-ft]	Location[ft,%]
1	M2	Y	-250	%50

Member Distributed Loads (BLC 40 : Structure Di)

	Member Label	Direction	Start Magnitude[lb/f...	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
1	M2	Y	-10.82	-10.82	0	%100
2	M17	Y	-12.9	-12.9	0	%100
3	MP1A	Y	-8.48	-8.48	0	%100
4	M12	Y	-15.306	-15.306	0	%100
5	MP2A	Y	-8.48	-8.48	0	%100
6	MP4A	Y	-9.52	-9.52	0	%100
7	MP5A	Y	-8.48	-8.48	0	%100
8	MP3A	Y	-8.48	-8.48	0	%100

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

	Member Label	Direction	Start Magnitude[lb/f...	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
1	M2	X	0	0	0	%100
2	M2	Z	-13.388	-13.388	0	%100
3	M17	X	0	0	0	%100
4	M17	Z	-9.425	-9.425	0	%100
5	MP1A	X	0	0	0	%100
6	MP1A	Z	-9.085	-9.085	0	%100
7	M12	X	0	0	0	%100
8	M12	Z	0	0	0	%100
9	MP2A	X	0	0	0	%100
10	MP2A	Z	-9.085	-9.085	0	%100
11	MP4A	X	0	0	0	%100
12	MP4A	Z	-10.997	-10.997	0	%100
13	MP5A	X	0	0	0	%100
14	MP5A	Z	-9.085	-9.085	0	%100
15	MP3A	X	0	0	0	%100
16	MP3A	Z	-9.085	-9.085	0	%100

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

	Member Label	Direction	Start Magnitude[lb/f...	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
1	M2	X	5.02	5.02	0	%100
2	M2	Z	-8.696	-8.696	0	%100
3	M17	X	4.713	4.713	0	%100
4	M17	Z	-8.163	-8.163	0	%100
5	MP1A	X	4.542	4.542	0	%100
6	MP1A	Z	-7.868	-7.868	0	%100
7	M12	X	1.469	1.469	0	%100
8	M12	Z	-2.545	-2.545	0	%100
9	MP2A	X	4.542	4.542	0	%100
10	MP2A	Z	-7.868	-7.868	0	%100
11	MP4A	X	5.499	5.499	0	%100
12	MP4A	Z	-9.524	-9.524	0	%100
13	MP5A	X	4.542	4.542	0	%100
14	MP5A	Z	-7.868	-7.868	0	%100
15	MP3A	X	4.542	4.542	0	%100
16	MP3A	Z	-7.868	-7.868	0	%100

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

	Member Label	Direction	Start Magnitude[lb/f...	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
1	M2	X	2.899	2.899	0	%100
2	M2	Z	-1.673	-1.673	0	%100
3	M17	X	8.163	8.163	0	%100
4	M17	Z	-4.713	-4.713	0	%100
5	MP1A	X	7.868	7.868	0	%100

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

	Member Label	Direction	Start Magnitude[lb/f...	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
6	MP1A	Z	-4.542	-4.542	0	%100
7	M12	X	7.635	7.635	0	%100
8	M12	Z	-4.408	-4.408	0	%100
9	MP2A	X	7.868	7.868	0	%100
10	MP2A	Z	-4.542	-4.542	0	%100
11	MP4A	X	9.524	9.524	0	%100
12	MP4A	Z	-5.499	-5.499	0	%100
13	MP5A	X	7.868	7.868	0	%100
14	MP5A	Z	-4.542	-4.542	0	%100
15	MP3A	X	7.868	7.868	0	%100
16	MP3A	Z	-4.542	-4.542	0	%100

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

	Member Label	Direction	Start Magnitude[lb/f...	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
1	M2	X	0	0	0	%100
2	M2	Z	0	0	0	%100
3	M17	X	9.425	9.425	0	%100
4	M17	Z	0	0	0	%100
5	MP1A	X	9.085	9.085	0	%100
6	MP1A	Z	0	0	0	%100
7	M12	X	11.754	11.754	0	%100
8	M12	Z	0	0	0	%100
9	MP2A	X	9.085	9.085	0	%100
10	MP2A	Z	0	0	0	%100
11	MP4A	X	10.997	10.997	0	%100
12	MP4A	Z	0	0	0	%100
13	MP5A	X	9.085	9.085	0	%100
14	MP5A	Z	0	0	0	%100
15	MP3A	X	9.085	9.085	0	%100
16	MP3A	Z	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/f...	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
1	M2	X	2.899	2.899	0	%100
2	M2	Z	1.673	1.673	0	%100
3	M17	X	8.163	8.163	0	%100
4	M17	Z	4.713	4.713	0	%100
5	MP1A	X	7.868	7.868	0	%100
6	MP1A	Z	4.542	4.542	0	%100
7	M12	X	7.635	7.635	0	%100
8	M12	Z	4.408	4.408	0	%100
9	MP2A	X	7.868	7.868	0	%100
10	MP2A	Z	4.542	4.542	0	%100
11	MP4A	X	9.524	9.524	0	%100
12	MP4A	Z	5.499	5.499	0	%100
13	MP5A	X	7.868	7.868	0	%100
14	MP5A	Z	4.542	4.542	0	%100
15	MP3A	X	7.868	7.868	0	%100
16	MP3A	Z	4.542	4.542	0	%100

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

	Member Label	Direction	Start Magnitude[lb/f...	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
1	M2	X	5.02	5.02	0	%100
2	M2	Z	8.696	8.696	0	%100
3	M17	X	4.713	4.713	0	%100

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

	Member Label	Direction	Start Magnitude[lb/f...	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
4	M17	Z	8.163	8.163	0	%100
5	MP1A	X	4.542	4.542	0	%100
6	MP1A	Z	7.868	7.868	0	%100
7	M12	X	1.469	1.469	0	%100
8	M12	Z	2.545	2.545	0	%100
9	MP2A	X	4.542	4.542	0	%100
10	MP2A	Z	7.868	7.868	0	%100
11	MP4A	X	5.499	5.499	0	%100
12	MP4A	Z	9.524	9.524	0	%100
13	MP5A	X	4.542	4.542	0	%100
14	MP5A	Z	7.868	7.868	0	%100
15	MP3A	X	4.542	4.542	0	%100
16	MP3A	Z	7.868	7.868	0	%100

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

	Member Label	Direction	Start Magnitude[lb/f...	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
1	M2	X	0	0	0	%100
2	M2	Z	13.388	13.388	0	%100
3	M17	X	0	0	0	%100
4	M17	Z	9.425	9.425	0	%100
5	MP1A	X	0	0	0	%100
6	MP1A	Z	9.085	9.085	0	%100
7	M12	X	0	0	0	%100
8	M12	Z	0	0	0	%100
9	MP2A	X	0	0	0	%100
10	MP2A	Z	9.085	9.085	0	%100
11	MP4A	X	0	0	0	%100
12	MP4A	Z	10.997	10.997	0	%100
13	MP5A	X	0	0	0	%100
14	MP5A	Z	9.085	9.085	0	%100
15	MP3A	X	0	0	0	%100
16	MP3A	Z	9.085	9.085	0	%100

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

	Member Label	Direction	Start Magnitude[lb/f...	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
1	M2	X	-5.02	-5.02	0	%100
2	M2	Z	8.696	8.696	0	%100
3	M17	X	-4.713	-4.713	0	%100
4	M17	Z	8.163	8.163	0	%100
5	MP1A	X	-4.542	-4.542	0	%100
6	MP1A	Z	7.868	7.868	0	%100
7	M12	X	-1.469	-1.469	0	%100
8	M12	Z	2.545	2.545	0	%100
9	MP2A	X	-4.542	-4.542	0	%100
10	MP2A	Z	7.868	7.868	0	%100
11	MP4A	X	-5.499	-5.499	0	%100
12	MP4A	Z	9.524	9.524	0	%100
13	MP5A	X	-4.542	-4.542	0	%100
14	MP5A	Z	7.868	7.868	0	%100
15	MP3A	X	-4.542	-4.542	0	%100
16	MP3A	Z	7.868	7.868	0	%100

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

	Member Label	Direction	Start Magnitude[lb/f...	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
1	M2	X	-2.899	-2.899	0	%100

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

	Member Label	Direction	Start Magnitude[lb/f...	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
2	M2	Z	1.673	1.673	0	%100
3	M17	X	-8.163	-8.163	0	%100
4	M17	Z	4.713	4.713	0	%100
5	MP1A	X	-7.868	-7.868	0	%100
6	MP1A	Z	4.542	4.542	0	%100
7	M12	X	-7.635	-7.635	0	%100
8	M12	Z	4.408	4.408	0	%100
9	MP2A	X	-7.868	-7.868	0	%100
10	MP2A	Z	4.542	4.542	0	%100
11	MP4A	X	-9.524	-9.524	0	%100
12	MP4A	Z	5.499	5.499	0	%100
13	MP5A	X	-7.868	-7.868	0	%100
14	MP5A	Z	4.542	4.542	0	%100
15	MP3A	X	-7.868	-7.868	0	%100
16	MP3A	Z	4.542	4.542	0	%100

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

	Member Label	Direction	Start Magnitude[lb/f...	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
1	M2	X	0	0	0	%100
2	M2	Z	0	0	0	%100
3	M17	X	-9.425	-9.425	0	%100
4	M17	Z	0	0	0	%100
5	MP1A	X	-9.085	-9.085	0	%100
6	MP1A	Z	0	0	0	%100
7	M12	X	-11.754	-11.754	0	%100
8	M12	Z	0	0	0	%100
9	MP2A	X	-9.085	-9.085	0	%100
10	MP2A	Z	0	0	0	%100
11	MP4A	X	-10.997	-10.997	0	%100
12	MP4A	Z	0	0	0	%100
13	MP5A	X	-9.085	-9.085	0	%100
14	MP5A	Z	0	0	0	%100
15	MP3A	X	-9.085	-9.085	0	%100
16	MP3A	Z	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/f...	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
1	M2	X	-2.899	-2.899	0	%100
2	M2	Z	-1.673	-1.673	0	%100
3	M17	X	-8.163	-8.163	0	%100
4	M17	Z	-4.713	-4.713	0	%100
5	MP1A	X	-7.868	-7.868	0	%100
6	MP1A	Z	-4.542	-4.542	0	%100
7	M12	X	-7.635	-7.635	0	%100
8	M12	Z	-4.408	-4.408	0	%100
9	MP2A	X	-7.868	-7.868	0	%100
10	MP2A	Z	-4.542	-4.542	0	%100
11	MP4A	X	-9.524	-9.524	0	%100
12	MP4A	Z	-5.499	-5.499	0	%100
13	MP5A	X	-7.868	-7.868	0	%100
14	MP5A	Z	-4.542	-4.542	0	%100
15	MP3A	X	-7.868	-7.868	0	%100
16	MP3A	Z	-4.542	-4.542	0	%100

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

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

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

	Member Label	Direction	Start Magnitude[lb/f...	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
1	M2	X	-5.02	-5.02	0	%100
2	M2	Z	-8.696	-8.696	0	%100
3	M17	X	-4.713	-4.713	0	%100
4	M17	Z	-8.163	-8.163	0	%100
5	MP1A	X	-4.542	-4.542	0	%100
6	MP1A	Z	-7.868	-7.868	0	%100
7	M12	X	-1.469	-1.469	0	%100
8	M12	Z	-2.545	-2.545	0	%100
9	MP2A	X	-4.542	-4.542	0	%100
10	MP2A	Z	-7.868	-7.868	0	%100
11	MP4A	X	-5.499	-5.499	0	%100
12	MP4A	Z	-9.524	-9.524	0	%100
13	MP5A	X	-4.542	-4.542	0	%100
14	MP5A	Z	-7.868	-7.868	0	%100
15	MP3A	X	-4.542	-4.542	0	%100
16	MP3A	Z	-7.868	-7.868	0	%100

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

	Member Label	Direction	Start Magnitude[lb/f...	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
1	M2	X	0	0	0	%100
2	M2	Z	-4.907	-4.907	0	%100
3	M17	X	0	0	0	%100
4	M17	Z	-3.491	-3.491	0	%100
5	MP1A	X	0	0	0	%100
6	MP1A	Z	-4.093	-4.093	0	%100
7	M12	X	0	0	0	%100
8	M12	Z	0	0	0	%100
9	MP2A	X	0	0	0	%100
10	MP2A	Z	-4.093	-4.093	0	%100
11	MP4A	X	0	0	0	%100
12	MP4A	Z	-4.448	-4.448	0	%100
13	MP5A	X	0	0	0	%100
14	MP5A	Z	-4.093	-4.093	0	%100
15	MP3A	X	0	0	0	%100
16	MP3A	Z	-4.108	-4.108	0	%100

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

	Member Label	Direction	Start Magnitude[lb/f...	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
1	M2	X	1.84	1.84	0	%100
2	M2	Z	-3.187	-3.187	0	%100
3	M17	X	1.745	1.745	0	%100
4	M17	Z	-3.023	-3.023	0	%100
5	MP1A	X	2.046	2.046	0	%100
6	MP1A	Z	-3.544	-3.544	0	%100
7	M12	X	.489	.489	0	%100
8	M12	Z	-.847	-.847	0	%100
9	MP2A	X	2.046	2.046	0	%100
10	MP2A	Z	-3.544	-3.544	0	%100
11	MP4A	X	2.224	2.224	0	%100
12	MP4A	Z	-3.852	-3.852	0	%100
13	MP5A	X	2.046	2.046	0	%100
14	MP5A	Z	-3.544	-3.544	0	%100
15	MP3A	X	2.054	2.054	0	%100
16	MP3A	Z	-3.557	-3.557	0	%100

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

	Member Label	Direction	Start Magnitude[lb/f...	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
1	M2	X	1.062	1.062	0	%100
2	M2	Z	-.613	-.613	0	%100
3	M17	X	3.023	3.023	0	%100
4	M17	Z	-1.745	-1.745	0	%100
5	MP1A	X	3.544	3.544	0	%100
6	MP1A	Z	-2.046	-2.046	0	%100
7	M12	X	2.54	2.54	0	%100
8	M12	Z	-1.467	-1.467	0	%100
9	MP2A	X	3.544	3.544	0	%100
10	MP2A	Z	-2.046	-2.046	0	%100
11	MP4A	X	3.852	3.852	0	%100
12	MP4A	Z	-2.224	-2.224	0	%100
13	MP5A	X	3.544	3.544	0	%100
14	MP5A	Z	-2.046	-2.046	0	%100
15	MP3A	X	3.557	3.557	0	%100
16	MP3A	Z	-2.054	-2.054	0	%100

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

	Member Label	Direction	Start Magnitude[lb/f...	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
1	M2	X	0	0	0	%100
2	M2	Z	0	0	0	%100
3	M17	X	3.491	3.491	0	%100
4	M17	Z	0	0	0	%100
5	MP1A	X	4.093	4.093	0	%100
6	MP1A	Z	0	0	0	%100
7	M12	X	3.911	3.911	0	%100
8	M12	Z	0	0	0	%100
9	MP2A	X	4.093	4.093	0	%100
10	MP2A	Z	0	0	0	%100
11	MP4A	X	4.448	4.448	0	%100
12	MP4A	Z	0	0	0	%100
13	MP5A	X	4.093	4.093	0	%100
14	MP5A	Z	0	0	0	%100
15	MP3A	X	4.108	4.108	0	%100
16	MP3A	Z	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/f...	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
1	M2	X	1.062	1.062	0	%100
2	M2	Z	.613	.613	0	%100
3	M17	X	3.023	3.023	0	%100
4	M17	Z	1.745	1.745	0	%100
5	MP1A	X	3.544	3.544	0	%100
6	MP1A	Z	2.046	2.046	0	%100
7	M12	X	2.54	2.54	0	%100
8	M12	Z	1.467	1.467	0	%100
9	MP2A	X	3.544	3.544	0	%100
10	MP2A	Z	2.046	2.046	0	%100
11	MP4A	X	3.852	3.852	0	%100
12	MP4A	Z	2.224	2.224	0	%100
13	MP5A	X	3.544	3.544	0	%100
14	MP5A	Z	2.046	2.046	0	%100
15	MP3A	X	3.557	3.557	0	%100
16	MP3A	Z	2.054	2.054	0	%100

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

	Member Label	Direction	Start Magnitude[lb/f...	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
1	M2	X	1.84	1.84	0	%100
2	M2	Z	3.187	3.187	0	%100
3	M17	X	1.745	1.745	0	%100
4	M17	Z	3.023	3.023	0	%100
5	MP1A	X	2.046	2.046	0	%100
6	MP1A	Z	3.544	3.544	0	%100
7	M12	X	.489	.489	0	%100
8	M12	Z	.847	.847	0	%100
9	MP2A	X	2.046	2.046	0	%100
10	MP2A	Z	3.544	3.544	0	%100
11	MP4A	X	2.224	2.224	0	%100
12	MP4A	Z	3.852	3.852	0	%100
13	MP5A	X	2.046	2.046	0	%100
14	MP5A	Z	3.544	3.544	0	%100
15	MP3A	X	2.054	2.054	0	%100
16	MP3A	Z	3.557	3.557	0	%100

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

	Member Label	Direction	Start Magnitude[lb/f...	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
1	M2	X	0	0	0	%100
2	M2	Z	4.907	4.907	0	%100
3	M17	X	0	0	0	%100
4	M17	Z	3.491	3.491	0	%100
5	MP1A	X	0	0	0	%100
6	MP1A	Z	4.093	4.093	0	%100
7	M12	X	0	0	0	%100
8	M12	Z	0	0	0	%100
9	MP2A	X	0	0	0	%100
10	MP2A	Z	4.093	4.093	0	%100
11	MP4A	X	0	0	0	%100
12	MP4A	Z	4.448	4.448	0	%100
13	MP5A	X	0	0	0	%100
14	MP5A	Z	4.093	4.093	0	%100
15	MP3A	X	0	0	0	%100
16	MP3A	Z	4.108	4.108	0	%100

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

	Member Label	Direction	Start Magnitude[lb/f...	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
1	M2	X	-1.84	-1.84	0	%100
2	M2	Z	3.187	3.187	0	%100
3	M17	X	-1.745	-1.745	0	%100
4	M17	Z	3.023	3.023	0	%100
5	MP1A	X	-2.046	-2.046	0	%100
6	MP1A	Z	3.544	3.544	0	%100
7	M12	X	-.489	-.489	0	%100
8	M12	Z	.847	.847	0	%100
9	MP2A	X	-2.046	-2.046	0	%100
10	MP2A	Z	3.544	3.544	0	%100
11	MP4A	X	-2.224	-2.224	0	%100
12	MP4A	Z	3.852	3.852	0	%100
13	MP5A	X	-2.046	-2.046	0	%100
14	MP5A	Z	3.544	3.544	0	%100
15	MP3A	X	-2.054	-2.054	0	%100
16	MP3A	Z	3.557	3.557	0	%100

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

	Member Label	Direction	Start Magnitude[lb/f...	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
1	M2	X	-1.062	-1.062	0	%100
2	M2	Z	.613	.613	0	%100
3	M17	X	-3.023	-3.023	0	%100
4	M17	Z	1.745	1.745	0	%100
5	MP1A	X	-3.544	-3.544	0	%100
6	MP1A	Z	2.046	2.046	0	%100
7	M12	X	-2.54	-2.54	0	%100
8	M12	Z	1.467	1.467	0	%100
9	MP2A	X	-3.544	-3.544	0	%100
10	MP2A	Z	2.046	2.046	0	%100
11	MP4A	X	-3.852	-3.852	0	%100
12	MP4A	Z	2.224	2.224	0	%100
13	MP5A	X	-3.544	-3.544	0	%100
14	MP5A	Z	2.046	2.046	0	%100
15	MP3A	X	-3.557	-3.557	0	%100
16	MP3A	Z	2.054	2.054	0	%100

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

	Member Label	Direction	Start Magnitude[lb/f...	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
1	M2	X	0	0	0	%100
2	M2	Z	0	0	0	%100
3	M17	X	-3.491	-3.491	0	%100
4	M17	Z	0	0	0	%100
5	MP1A	X	-4.093	-4.093	0	%100
6	MP1A	Z	0	0	0	%100
7	M12	X	-3.911	-3.911	0	%100
8	M12	Z	0	0	0	%100
9	MP2A	X	-4.093	-4.093	0	%100
10	MP2A	Z	0	0	0	%100
11	MP4A	X	-4.448	-4.448	0	%100
12	MP4A	Z	0	0	0	%100
13	MP5A	X	-4.093	-4.093	0	%100
14	MP5A	Z	0	0	0	%100
15	MP3A	X	-4.108	-4.108	0	%100
16	MP3A	Z	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/f...	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
1	M2	X	-1.062	-1.062	0	%100
2	M2	Z	-.613	-.613	0	%100
3	M17	X	-3.023	-3.023	0	%100
4	M17	Z	-1.745	-1.745	0	%100
5	MP1A	X	-3.544	-3.544	0	%100
6	MP1A	Z	-2.046	-2.046	0	%100
7	M12	X	-2.54	-2.54	0	%100
8	M12	Z	-1.467	-1.467	0	%100
9	MP2A	X	-3.544	-3.544	0	%100
10	MP2A	Z	-2.046	-2.046	0	%100
11	MP4A	X	-3.852	-3.852	0	%100
12	MP4A	Z	-2.224	-2.224	0	%100
13	MP5A	X	-3.544	-3.544	0	%100
14	MP5A	Z	-2.046	-2.046	0	%100
15	MP3A	X	-3.557	-3.557	0	%100
16	MP3A	Z	-2.054	-2.054	0	%100

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

	Member Label	Direction	Start Magnitude[lb/f...	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
1	M2	X	-1.84	-1.84	0	%100
2	M2	Z	-3.187	-3.187	0	%100
3	M17	X	-1.745	-1.745	0	%100
4	M17	Z	-3.023	-3.023	0	%100
5	MP1A	X	-2.046	-2.046	0	%100
6	MP1A	Z	-3.544	-3.544	0	%100
7	M12	X	-.489	-.489	0	%100
8	M12	Z	-.847	-.847	0	%100
9	MP2A	X	-2.046	-2.046	0	%100
10	MP2A	Z	-3.544	-3.544	0	%100
11	MP4A	X	-2.224	-2.224	0	%100
12	MP4A	Z	-3.852	-3.852	0	%100
13	MP5A	X	-2.046	-2.046	0	%100
14	MP5A	Z	-3.544	-3.544	0	%100
15	MP3A	X	-2.054	-2.054	0	%100
16	MP3A	Z	-3.557	-3.557	0	%100

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

	Member Label	Direction	Start Magnitude[lb/f...	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
1	M2	X	0	0	0	%100
2	M2	Z	-.895	-.895	0	%100
3	M17	X	0	0	0	%100
4	M17	Z	-.63	-.63	0	%100
5	MP1A	X	0	0	0	%100
6	MP1A	Z	-.608	-.608	0	%100
7	M12	X	0	0	0	%100
8	M12	Z	0	0	0	%100
9	MP2A	X	0	0	0	%100
10	MP2A	Z	-.608	-.608	0	%100
11	MP4A	X	0	0	0	%100
12	MP4A	Z	-.736	-.736	0	%100
13	MP5A	X	0	0	0	%100
14	MP5A	Z	-.608	-.608	0	%100
15	MP3A	X	0	0	0	%100
16	MP3A	Z	-.608	-.608	0	%100

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

	Member Label	Direction	Start Magnitude[lb/f...	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
1	M2	X	.336	.336	0	%100
2	M2	Z	-.582	-.582	0	%100
3	M17	X	.315	.315	0	%100
4	M17	Z	-.546	-.546	0	%100
5	MP1A	X	.304	.304	0	%100
6	MP1A	Z	-.526	-.526	0	%100
7	M12	X	.098	.098	0	%100
8	M12	Z	-.17	-.17	0	%100
9	MP2A	X	.304	.304	0	%100
10	MP2A	Z	-.526	-.526	0	%100
11	MP4A	X	.368	.368	0	%100
12	MP4A	Z	-.637	-.637	0	%100
13	MP5A	X	.304	.304	0	%100
14	MP5A	Z	-.526	-.526	0	%100
15	MP3A	X	.304	.304	0	%100
16	MP3A	Z	-.526	-.526	0	%100

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

	Member Label	Direction	Start Magnitude[lb/f...	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
1	M2	X	.194	.194	0	%100
2	M2	Z	-.112	-.112	0	%100
3	M17	X	.546	.546	0	%100
4	M17	Z	-.315	-.315	0	%100
5	MP1A	X	.526	.526	0	%100
6	MP1A	Z	-.304	-.304	0	%100
7	M12	X	.511	.511	0	%100
8	M12	Z	-.295	-.295	0	%100
9	MP2A	X	.526	.526	0	%100
10	MP2A	Z	-.304	-.304	0	%100
11	MP4A	X	.637	.637	0	%100
12	MP4A	Z	-.368	-.368	0	%100
13	MP5A	X	.526	.526	0	%100
14	MP5A	Z	-.304	-.304	0	%100
15	MP3A	X	.526	.526	0	%100
16	MP3A	Z	-.304	-.304	0	%100

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

	Member Label	Direction	Start Magnitude[lb/f...	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
1	M2	X	0	0	0	%100
2	M2	Z	0	0	0	%100
3	M17	X	.63	.63	0	%100
4	M17	Z	0	0	0	%100
5	MP1A	X	.608	.608	0	%100
6	MP1A	Z	0	0	0	%100
7	M12	X	.786	.786	0	%100
8	M12	Z	0	0	0	%100
9	MP2A	X	.608	.608	0	%100
10	MP2A	Z	0	0	0	%100
11	MP4A	X	.736	.736	0	%100
12	MP4A	Z	0	0	0	%100
13	MP5A	X	.608	.608	0	%100
14	MP5A	Z	0	0	0	%100
15	MP3A	X	.608	.608	0	%100
16	MP3A	Z	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/f...	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
1	M2	X	.194	.194	0	%100
2	M2	Z	.112	.112	0	%100
3	M17	X	.546	.546	0	%100
4	M17	Z	.315	.315	0	%100
5	MP1A	X	.526	.526	0	%100
6	MP1A	Z	.304	.304	0	%100
7	M12	X	.511	.511	0	%100
8	M12	Z	.295	.295	0	%100
9	MP2A	X	.526	.526	0	%100
10	MP2A	Z	.304	.304	0	%100
11	MP4A	X	.637	.637	0	%100
12	MP4A	Z	.368	.368	0	%100
13	MP5A	X	.526	.526	0	%100
14	MP5A	Z	.304	.304	0	%100
15	MP3A	X	.526	.526	0	%100
16	MP3A	Z	.304	.304	0	%100

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

	Member Label	Direction	Start Magnitude[lb/f...	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
1	M2	X	.336	.336	0	%100
2	M2	Z	.582	.582	0	%100
3	M17	X	.315	.315	0	%100
4	M17	Z	.546	.546	0	%100
5	MP1A	X	.304	.304	0	%100
6	MP1A	Z	.526	.526	0	%100
7	M12	X	.098	.098	0	%100
8	M12	Z	.17	.17	0	%100
9	MP2A	X	.304	.304	0	%100
10	MP2A	Z	.526	.526	0	%100
11	MP4A	X	.368	.368	0	%100
12	MP4A	Z	.637	.637	0	%100
13	MP5A	X	.304	.304	0	%100
14	MP5A	Z	.526	.526	0	%100
15	MP3A	X	.304	.304	0	%100
16	MP3A	Z	.526	.526	0	%100

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

	Member Label	Direction	Start Magnitude[lb/f...	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
1	M2	X	0	0	0	%100
2	M2	Z	.895	.895	0	%100
3	M17	X	0	0	0	%100
4	M17	Z	.63	.63	0	%100
5	MP1A	X	0	0	0	%100
6	MP1A	Z	.608	.608	0	%100
7	M12	X	0	0	0	%100
8	M12	Z	0	0	0	%100
9	MP2A	X	0	0	0	%100
10	MP2A	Z	.608	.608	0	%100
11	MP4A	X	0	0	0	%100
12	MP4A	Z	.736	.736	0	%100
13	MP5A	X	0	0	0	%100
14	MP5A	Z	.608	.608	0	%100
15	MP3A	X	0	0	0	%100
16	MP3A	Z	.608	.608	0	%100

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

	Member Label	Direction	Start Magnitude[lb/f...	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
1	M2	X	-.336	-.336	0	%100
2	M2	Z	.582	.582	0	%100
3	M17	X	-.315	-.315	0	%100
4	M17	Z	.546	.546	0	%100
5	MP1A	X	-.304	-.304	0	%100
6	MP1A	Z	.526	.526	0	%100
7	M12	X	-.098	-.098	0	%100
8	M12	Z	.17	.17	0	%100
9	MP2A	X	-.304	-.304	0	%100
10	MP2A	Z	.526	.526	0	%100
11	MP4A	X	-.368	-.368	0	%100
12	MP4A	Z	.637	.637	0	%100
13	MP5A	X	-.304	-.304	0	%100
14	MP5A	Z	.526	.526	0	%100
15	MP3A	X	-.304	-.304	0	%100
16	MP3A	Z	.526	.526	0	%100

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

	Member Label	Direction	Start Magnitude[lb/f...	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
1	M2	X	-.194	-.194	0	%100
2	M2	Z	.112	.112	0	%100
3	M17	X	-.546	-.546	0	%100
4	M17	Z	.315	.315	0	%100
5	MP1A	X	-.526	-.526	0	%100
6	MP1A	Z	.304	.304	0	%100
7	M12	X	-.511	-.511	0	%100
8	M12	Z	.295	.295	0	%100
9	MP2A	X	-.526	-.526	0	%100
10	MP2A	Z	.304	.304	0	%100
11	MP4A	X	-.637	-.637	0	%100
12	MP4A	Z	.368	.368	0	%100
13	MP5A	X	-.526	-.526	0	%100
14	MP5A	Z	.304	.304	0	%100
15	MP3A	X	-.526	-.526	0	%100
16	MP3A	Z	.304	.304	0	%100

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

	Member Label	Direction	Start Magnitude[lb/f...	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
1	M2	X	0	0	0	%100
2	M2	Z	0	0	0	%100
3	M17	X	-.63	-.63	0	%100
4	M17	Z	0	0	0	%100
5	MP1A	X	-.608	-.608	0	%100
6	MP1A	Z	0	0	0	%100
7	M12	X	-.786	-.786	0	%100
8	M12	Z	0	0	0	%100
9	MP2A	X	-.608	-.608	0	%100
10	MP2A	Z	0	0	0	%100
11	MP4A	X	-.736	-.736	0	%100
12	MP4A	Z	0	0	0	%100
13	MP5A	X	-.608	-.608	0	%100
14	MP5A	Z	0	0	0	%100
15	MP3A	X	-.608	-.608	0	%100
16	MP3A	Z	0	0	0	%100

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

	Member Label	Direction	Start Magnitude[lb/f...	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
1	M2	X	-.194	-.194	0	%100
2	M2	Z	-.112	-.112	0	%100
3	M17	X	-.546	-.546	0	%100
4	M17	Z	-.315	-.315	0	%100
5	MP1A	X	-.526	-.526	0	%100
6	MP1A	Z	-.304	-.304	0	%100
7	M12	X	-.511	-.511	0	%100
8	M12	Z	-.295	-.295	0	%100
9	MP2A	X	-.526	-.526	0	%100
10	MP2A	Z	-.304	-.304	0	%100
11	MP4A	X	-.637	-.637	0	%100
12	MP4A	Z	-.368	-.368	0	%100
13	MP5A	X	-.526	-.526	0	%100
14	MP5A	Z	-.304	-.304	0	%100
15	MP3A	X	-.526	-.526	0	%100
16	MP3A	Z	-.304	-.304	0	%100

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

	Member Label	Direction	Start Magnitude[lb/f...	End Magnitude[lb/ft,F,ksf]	Start Location[ft,%]	End Location[ft,%]
1	M2	X	-.336	-.336	0	%100
2	M2	Z	-.582	-.582	0	%100
3	M17	X	-.315	-.315	0	%100
4	M17	Z	-.546	-.546	0	%100
5	MP1A	X	-.304	-.304	0	%100
6	MP1A	Z	-.526	-.526	0	%100
7	M12	X	-.098	-.098	0	%100
8	M12	Z	-.17	-.17	0	%100
9	MP2A	X	-.304	-.304	0	%100
10	MP2A	Z	-.526	-.526	0	%100
11	MP4A	X	-.368	-.368	0	%100
12	MP4A	Z	-.637	-.637	0	%100
13	MP5A	X	-.304	-.304	0	%100
14	MP5A	Z	-.526	-.526	0	%100
15	MP3A	X	-.304	-.304	0	%100
16	MP3A	Z	-.526	-.526	0	%100

Member Area Loads

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

Envelope Joint Reactions

	Joint		X [lb]	LC	Y [lb]	LC	Z [lb]	LC	MX [k-ft]	LC	MY [k-ft]	LC	MZ [k-ft]	LC
1	N23	max	1641.033	10	2531.667	13	2262.218	1	-1.889	1	5.984	11	.141	5
2		min	-1641.033	4	809.472	7	-2262.218	7	-8.558	19	-6.042	5	-2.581	49
3	Totals:	max	1641.033	10	2531.667	13	2262.218	1						
4		min	-1641.033	4	809.472	7	-2262.218	7						

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

	Member	Shape	Code Check	Loc[ft]	LC	Shear ...	Loc[ft]	Dir	LC	phi*Pnc ...	phi*Pnt [...	phi*Mn ...	phi*Mn ...	Cb	Eqn
1	M2	PIPE_3.0	.878	6.25	1	.195	6.25		19	28250.5...	65205	5.749	5.749	1....	H1-1b
2	M12	HSS4X4X4	.621	2.708	17	.220	2.708	y	49	135300....	139518	16.181	16.181	1....	H1-1b
3	MP4A	PIPE_2.5	.264	3.354	1	.050	3.427		9	33961.6...	50715	3.596	3.596	1....	H1-1b
4	MP2A	PIPE_2.0	.214	3.354	7	.042	3.354		6	17855.0...	32130	1.872	1.872	2....	H1-1b
5	MP1A	PIPE_2.0	.166	3.354	7	.070	3.427		4	17855.0...	32130	1.872	1.872	1....	H1-1b
6	MP5A	PIPE_2.0	.166	3.354	7	.070	3.427		10	17855.0...	32130	1.872	1.872	1....	H1-1b
7	MP3A	PIPE_2.0	.141	4	1	.021	4		9	14916.0...	32130	1.872	1.872	1....	H1-1b
8	M17	PIPE_4.0	.000	.75	7	.000	.75		7	92571.3...	93240	10.631	10.631	1	H1-1b

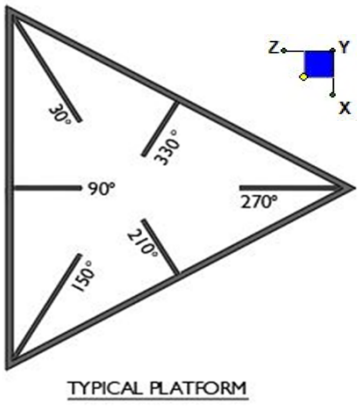
Client:	Verizon Wireless	Date:	7/2/2021
Site Name:	BLOOMFIELD 2 CT		
Project No.	21777712A		
Title:	Antenna Mount Analysis	Page:	1

Version 3.1

I. Mount-to-Tower Connection Check

RISA Model Data

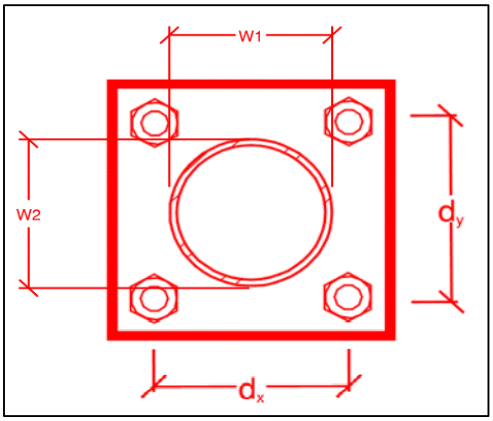
Nodes *(labeled per RISA)*	Orientation *(per graphic of typical platform)*
N23	90



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)* :	7
d_y (in) *(Delta Y of typ. bolt config. sketch)* :	7
Bolt Type:	A325N
Bolt Diameter (in):	0.625
Required Tensile Strength (kips):	30.0
Required Shear Strength (kips):	10.0
Tensile Strength / bolt (kips):	20.7
Shear Strength / bolt (kips):	12.4
Tensile Capacity Overall:	**36.2%***
Shear Capacity Overall:	**20.2%**



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

Tower Connection Plate and Weld Check

Connecting Standoff Member Shape:	Rect
Plate Width (in):	10
Plate Height (in):	10
W1 (in):	4
W2 (in):	4
Fy (ksi, plate):	36
t_{Plate} (in):	0.625
Weld Size (1/16 in):	5
Phi*Rn (kip/in):	6.96
Required Weld Strength (kip/in):	4.90
Plate Bending Capacity:	**82.2%**
Weld Capacity:	**70.5%**

Max Plate Bending Strengths

Mu_{xx} *(kip-in)* :	21.9
Phi*Mn_{xx} *(kip-in)* :	31.6
Mu_{yy} *(kip-in)* :	4.1
Phi*Mn_{yy} *(kip-in)* :	31.6

Mount Desktop – Post Modification Inspection (PMI) Report Requirements

Documents & Photos Required from Contractor – Passing Mount Analysis

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 installation was completed in accordance with this Passing Mount Analysis.
- Contractor shall relay any data that can impact the performance of the mount, this includes safety issues.

Base Requirements:

- Any special photos outside of the standard requirements will be indicated on the passing MA
- Verification that loading is as communicated in the Passing Mount Analysis. NOTE If loading is different than what is conveyed 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 equipment 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 equipment.

- 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
- 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.

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 any other information the contractor deems necessary to share that was identified:

Issue:

- Contractor shall replace existing position 4 mount pipe with new 84” long P2.5 Std pipe 34” from position 5 pipe. Attach new pipes to existing face horizontals using new crossover plates (VZWSMART-MSK2). - Contractor shall relocate position 2 mount pipe to be 34” away from position 1 pipe on all sectors.

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: 468216-VZW - BLOOMFIELD 2 CT

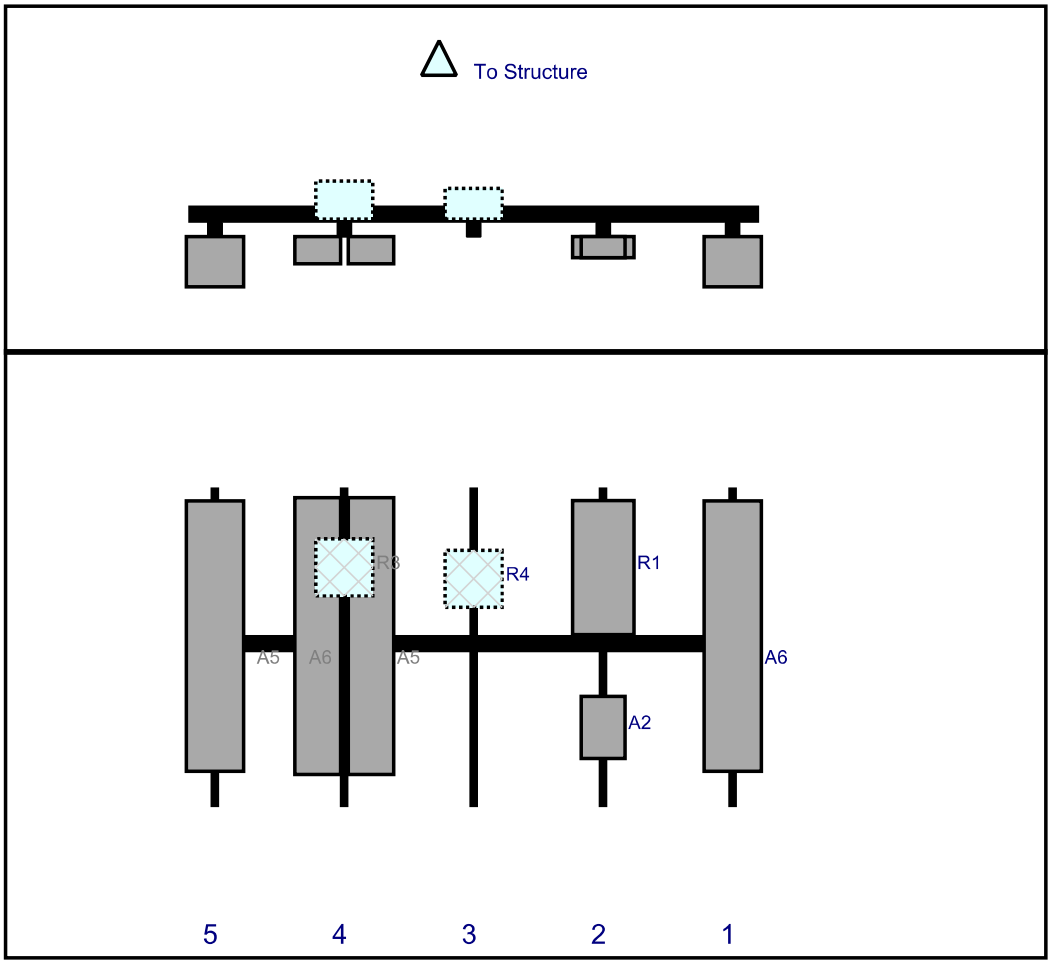
Sector: **A** 6/30/2021

Structure Type: Monopole 10054713

Mount Elev: 117.00 Page: 1

Plan View

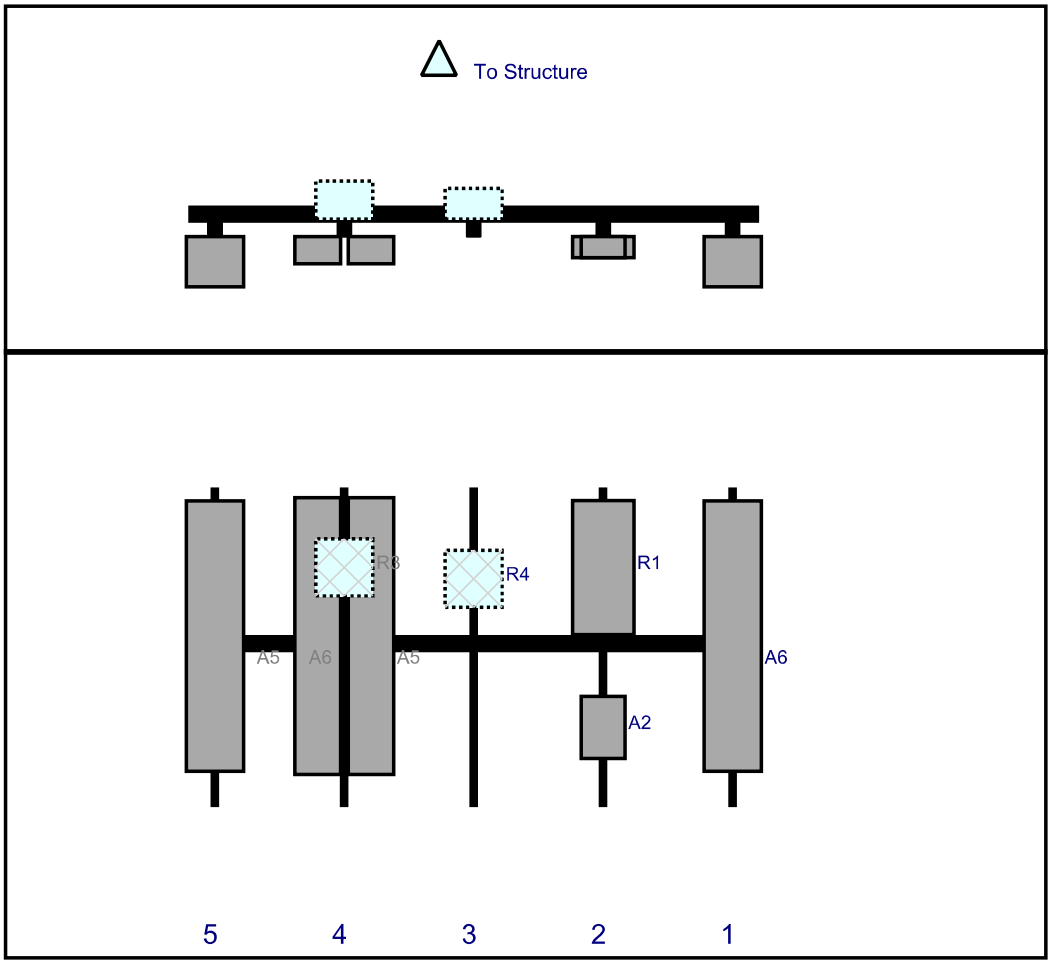
Front View
Looking at Structure



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
A6	LPA-80063/6CF 5	70.9	15	143	1	a	Front	39	0	Retained	04/04/2021
A2	XXDWMM-12.5-65-8T-CBRS	16.2	11.4	109	2	a	Front	63	0	Added	
R1	MT6407-77A	35.1	16.1	109	2	a	Front	21	0	Added	
R4	B5/B13 RRH-BR04C	15	15	75	3	a	Behind	24	0	Added	
A5	SBNHH-1D65B	72.6	11.9	41	4	a	Front	39	7	Retained	04/04/2021
A5	SBNHH-1D65B	72.6	11.9	41	4	b	Front	39	-7	Retained	04/04/2021
R3	B2/B66A RRH-BR049	15	15	41	4	a	Behind	21	0	Added	
A6	LPA-80063/6CF 5	70.9	15	7	5	a	Front	39	0	Retained	04/04/2021

Plan View

Front View
Looking at Structure



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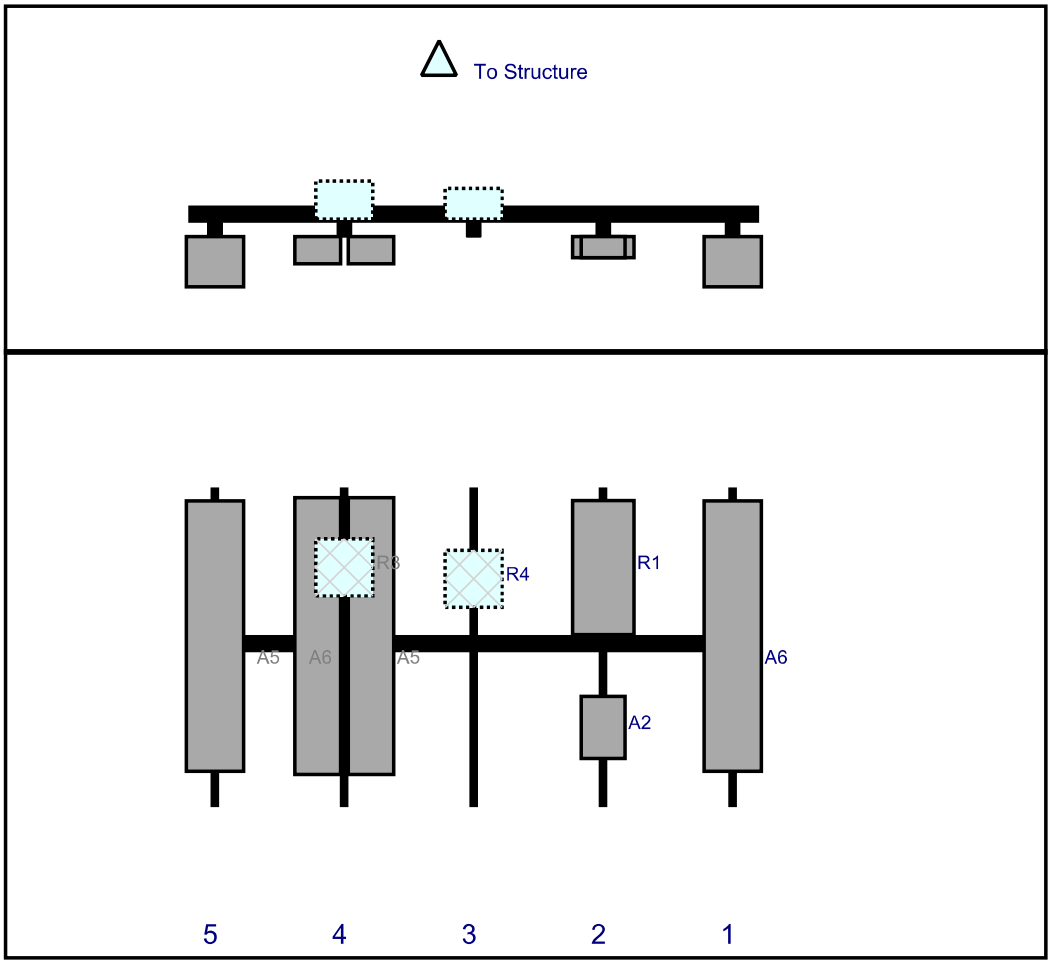
R4	B5/B13 RRH-BR04C	15	15	75	3	a	Behind	24	0	Added	
A5	SBNHH-1D65B	72.6	11.9	41	4	a	Front	39	7	Retained	04/04/2021
A5	SBNHH-1D65B	72.6	11.9	41	4	b	Front	39	-7	Retained	04/04/2021
R3	B2/B66A RRH-BR049	15	15	41	4	a	Behind	21	0	Added	
A6	LPA-80063/6CF 5	70.9	15	7	5	a	Front	39	0	Retained	04/04/2021

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
A6	LPA-80063/6CF 5	70.9	15	143	1	a	Front	39	0	Retained	04/04/2021
A2	XXDWMM-12.5-65-8T-CBRS	16.2	11.4	109	2	a	Front	63	0	Added	
R1	MT6407-77A	35.1	16.1	109	2	a	Front	21	0	Added	
R4	B5/B13 RRH-BR04C	15	15	75	3	a	Behind	24	0	Added	
A5	SBNHH-1D65B	72.6	11.9	41	4	a	Front	39	-7	Retained	04/04/2021
A5	SBNHH-1D65B	72.6	11.9	41	4	b	Front	39	7	Retained	04/04/2021
R3	B2/B66A RRH-BR049	15	15	41	4	a	Behind	21	0	Added	
A6	LPA-80063/6CF 5	70.9	15	7	5	a	Front	39	0	Retained	04/04/2021

Maser Consulting Connecticut

Subject	*TIA-222-H Usage*	
Site Information	*Site ID:*	*468216-VZW / BLOOMFIELD 2 CT*
	Site Name:	*BLOOMFIELD 2 CT*
	Carrier Name:	*Verizon Wireless*
	Address:	*12 Burr Rd* *Bloomfield, Connecticut 06002* *Hartford County*
	Latitude:	*41.817861°*
	Longitude:	*-72.764500°*
Structure Information	*Tower Type:*	*140-Ft Monopole*
	Mount Type:	*12.50-Ft T-Arm*

To Whom It May Concern,

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

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

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

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

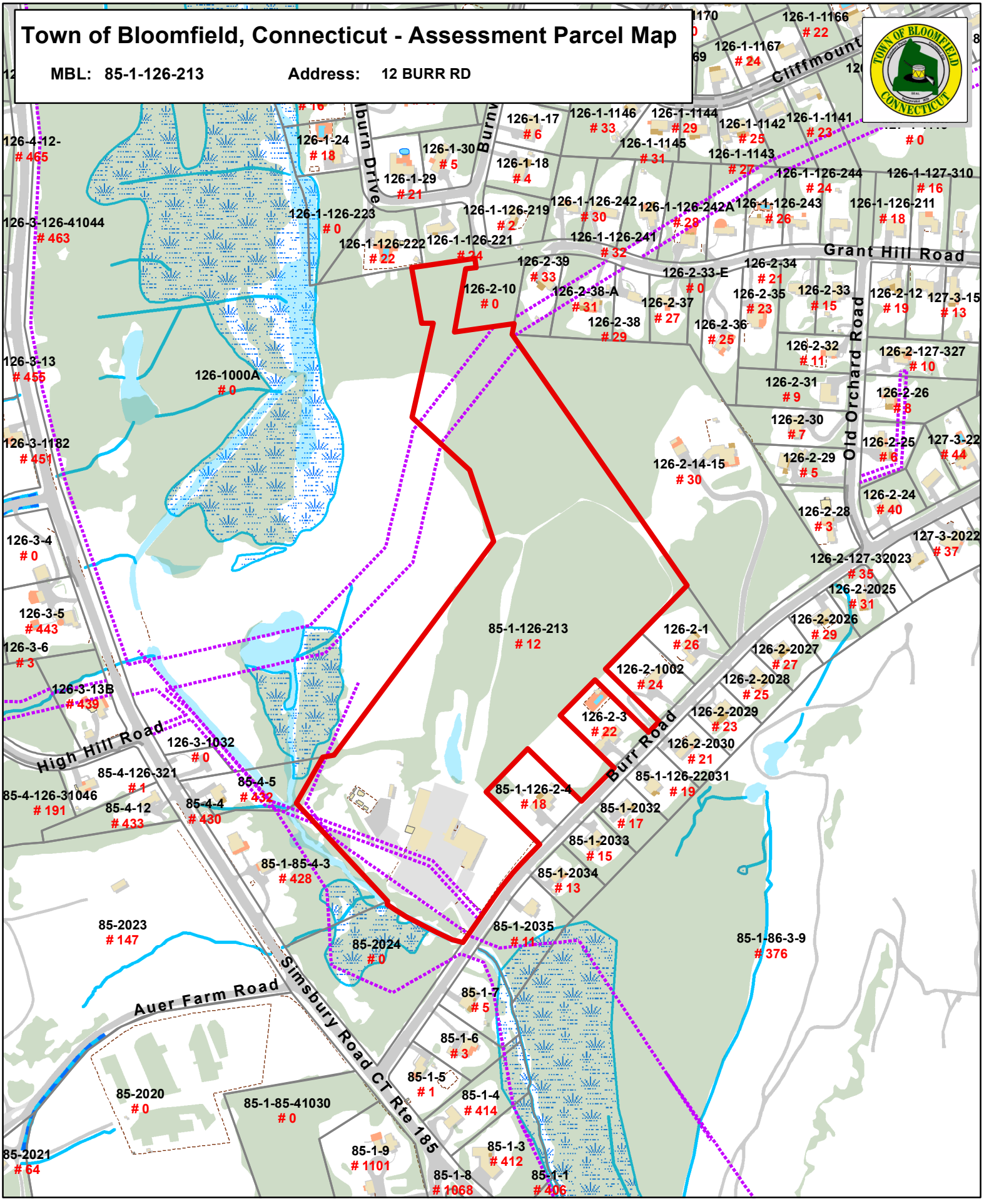
Sincerely,

Derek Hartzell, PE
Technical Specialist

ATTACHMENT 5

Town of Bloomfield, Connecticut - Assessment Parcel Map

MBL: 85-1-126-213 **Address:** 12 BURR RD



N W E S

Approximate Scale:

1 inch = 400 feet

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

Map Produced October 2019

Parcels labeled by Unique ID

Town of Bloomfield, CT

Property Listing Report

Map Block Lot	85-1-126-213	Building #	1	PID	4360	Account	R04478

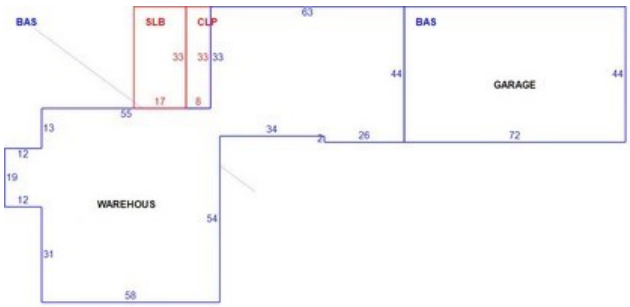
Property Information

Property Location	12 BURR RD
Owner	MAPLE HILL FARMS INC
Co-Owner	
Mailing Address	30 BURR RD BLOOMFIELD CT 06002
Land Use	300 Industrial
Land Class	I
Zoning Code	R-40
Census Tract	4714

Site Index	C
Acreage	9.6
Utilities	
Lot Setting/Desc	
Fire District	C
Book / Page	2048/46

Photo

Sketch



Primary Construction Details

Year Built	1961
Building Desc.	Industrial
Building Style	Warehouse - Storage
Building Grade	D
Stories	1
Occupancy	1.00
Exterior Walls	T111
Exterior Walls 2	NA
Roof Style	Gable
Roof Cover	Arch Shingles
Interior Walls	Average
Interior Walls 2	
Interior Floors 1	Concrete
Interior Floors 2	

Heating Fuel	Gas
Heating Type	Forced Air
AC Type	43
Bedrooms	0
Full Bathrooms	0
Half Bathrooms	0
Extra Fixtures	0
Total Rooms	0
Bath Style	NA
Kitchen Style	NA
Bsmt Fin Area	0
Rec Rm Area	0
Bsmt Gar	0
Fireplaces	0

(*Industrial / Commercial Details)

Building Use	Industrial
Building Condition	F
Sprinkler %	0
Heat / AC	None
Frame Type	Wood Frame
Baths / Plumbing	Average
Ceiling / Wall	Ceil & Wall
Rooms / Prtns	Average
Wall Height	11.00
First Floor Use	
Foundation	POURED CONC.

Report Created On 9/20/2021

Town of Bloomfield, CT

Property Listing Report

Map Block Lot	85-1-126-213	Building #	1	PID	4360	Account	R04478

Valuation Summary

(Assessed value = 70% of Appraised Value)

Item	Appraised	Assessed
Buildings	499800	349860
Extras	8400	5880
Improvements		
Outbuildings	89200	62440
Land	353500	247450
Total	950900	665630

Sub Areas

Subarea Type	Gross Area (sq ft)	Living Area (sq ft)
First Floor	9721	9721
Covered Loading Platform	264	0
Slab	561	0
Total Area	10546	9721

Outbuilding and Extra Features

Type	Description
Ovhd 8'	8 UNITS
Load Leveller	2 Units
Cell Shed	288 S.F.
Cell Shed	288 S.F.
Fence	280 L.F.

Sales History

Owner of Record	Book/ Page	Sale Date	Sale Price
MAPLE HILL FARMS INC	2048/46	2020-09-18	325000
MAPLE HILL FARMS INC	0079/0335	1957-05-09	0

Report Created On 9/20/2021

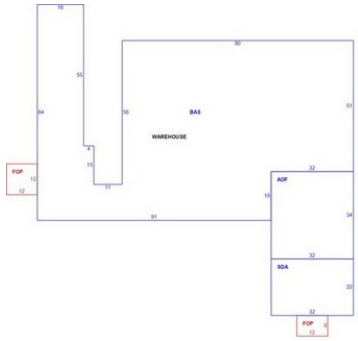
Town of Bloomfield, CT

Property Listing Report

Map Block Lot	85-1-126-213	Building #	2	PID	4360	Account	R04478

Photo

Sketch



Primary Construction Details

Year Built	2005
Building Desc.	Industrial
Building Style	Warehouse - Storage
Building Grade	C
Stories	1
Occupancy	1.00
Exterior Walls	Pre-finsh Metl
Exterior Walls 2	NA
Roof Style	Gable
Roof Cover	Metal/Tin
Interior Walls	Minimum
Interior Walls 2	Drywall
Interior Floors 1	Concrete
Interior Floors 2	Laminate Flr

Heating Fuel	Gas
Heating Type	Hot Air-No Duc
AC Type	20
Bedrooms	0
Full Bathrooms	0
Half Bathrooms	0
Extra Fixtures	0
Total Rooms	0
Bath Style	NA
Kitchen Style	NA
Bsmt Fin Area	0
Rec Room Area	0
Bsmt Gar	0
Fireplaces	0

(*Industrial / Commercial Details)

Building Use	Industrial
Building Condition	A
Sprinkler %	0
Heat / AC	None
Frame Type	Steel
Baths / Plumbing	Average
Ceiling / Wall	Ceil & Wall
Rooms / Prtns	Average
Wall Height	13.00
First Floor Use	
Foundation	POURED CONC.

Sub Areas

Subarea Type	Gross Area (sq ft)	Living Area (sq ft)
Office Area	1088	1088
First Floor	7474	7474
Covered Loading Platform	144	0
Finished Open Porch	96	0
Store Display Area	704	704

Subarea Type	Gross Area (sq ft)	Living Area (sq ft)
Total Area	9506	9266

Report Created On 9/20/2021

ATTACHMENT 6

BLOOMFIELD 2

UNITED STATES POSTAL SERVICE®

Certificate of Mailing — Firm

Name and Address of Sender	TOTAL NO. of Pieces Listed by Sender	TOTAL NO. of Pieces Received at Post Office™	Affix Stamp Here ***Postmark with Date of Receipt.***
Kenneth C. Baldwin, Esq. Robinson & Cole LLP 280 Trumbull Street Hartford, CT 06103		3	neopost 09/30/2021 US POSTAGE $002.99 ZIP 06103 041L12203937 OLD STATE HOUSE STATION 06103 SEP 30 2021
	Postmaster, per *(name of receiving employee)*		

USPS® Tracking Number / Firm-specific Identifier	Address (Name, Street, City, State, and ZIP Code™)	Postage	Fee	Special Handling	Parcel Airlift
1.	Suzette DeBeatham, Mayor Town of Bloomfield 800 Bloomfield Avenue Bloomfield, CT 06002				
2.	Jose Giner, Director of Land Use Town of Bloomfield 800 Bloomfield Avenue Bloomfield, CT 06002				
3.	Maple Hill Farms, Inc. 30 Burr Hill Road Bloomfield, CT 06002				
4.					
5.					
6.					

See Reverse for Instructions