Crown Castle
3 Corporate Park Drive, Suite 101
Clifton Park, NY 12065

March 18, 2024

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

RE: **Notice of Exempt Modification for Verizon Wireless: 5000242940**
Crown Site ID# 876352
94 East High Street, East Hampton CT 0606424
Latitude: 41° 35′ 14.2″ / Longitude: -72° 29′ 19.6″

Dear Ms. Bachman:

Verizon Wireless currently maintains twelve (12) antennas at the 104-foot mount on the existing 118-foot monopole tower located at 94 East High Street, East Hampton CT. The property is owned by Paul & Sandy Too Inc and tower is owned by Crown Castle. Verizon now intends to add four (4) interference mitigation filters at the 104ft level. This modification/proposal includes hardware that is both 4G (LTE) and 5G capable through remote software configuration and either or both services may be turned on or off at various times.

Panned Modification:

Tower:

Install New:
(4) Kaelus BSF0020F3V1- Interference Mitigation Filters

The facility was approved by the Town of East Hampton Planning & Zoning Commission on May 7, 1997 via Special Permit.

Please accept this letter as notification pursuant to Regulations of Connecticut State Agencies §16-50j-73, for construction that constitutes an exempt modification pursuant to R.C.S.A. § 16-50j-72(b)(2). In accordance with R.C.S.A. § 16-50j-73, a copy of this letter is being sent to David Cox, Town Manager, Town of East Hampton, John Guszkowski, Interim Planner, Town of East Hampton. Paul & Sandy Too Inc are the landowners and Crown Castle is the tower owner.

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

2. The proposed modifications will not require the extension of the site boundary.

3. The proposed modification will not increase noise levels at the facility by six decibels or more, or to levels that exceed state and local criteria.

4. The operation of the replacement antennas will not increase radio frequency emissions at the facility to a level at or above the Federal Communication Commission safety standard.
5. The proposed modifications will not cause a change or alteration in the physical or environmental characteristics of the site.

6. The existing structure and its foundation can support the proposed loading.

For the foregoing reasons, Verizon Wireless respectfully submits that the proposed modifications to the above-reference telecommunications facility constitutes an exempt modification under R.C.S.A. § 16-50j-72(b)(2). Please send approval/rejection letter to Attn: Jeffrey Barbadora.

Sincerely,

Jeffrey Barbadora
Permitting Specialist
1800 W. Park Drive
Westborough, MA 01581
(781) 970-0053
Jeff.Barbadora@crowncastle.com

Attachments
cc:

David Cox, Town Manager
Town of East Hampton
1 Community Drive
East Hampton, CT 06424
860-267-4468

John Guszkowski, Interim Planner
Town of East Hampton
1 Community Drive
East Hampton, CT 06424
860-267-7450

Paul & Sandy Too Inc
93 East High Street
East Hampton, CT 06424

Crown Castle, Tower Owner

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SPECIAL PERMIT

Applicant:	Sprint Spectrum, L.P.
Owner:	Richard Wall, et al
Location:	94 East High Street (Map 26,Block 65, Lot 16)
Date Granted:	May 7, 1997
Nature of Permit:	Section 7.6.1.E - Public Utility Structure Section 7.9.1.G - Retail/Commercial Use Section 7.12 - Lake Pocotopaug Protection Area
Action:	Subject to the provisions of the relevant regulations and written, oral and graphic testimony, the permit is approved with the following:
Conditions:	1. IWWEA Approval A. All E&S controls shall be in place prior to start of any work B. E&S controls will be monitored by Town Hall C. Bonding will be determined by Town Engineer D. The surface of the lower portion of the access drive shall be restored consistent with new construction as well as noted on the plans. 2. The tower shall be disassembled and removed upon cessation of use.

UNOFFICIAL

Carol Micek, Clerk
East Hampton Planning & Zoning
Commission

May 13, 1997
Date

RECEIVED FOR RECORD AT E. HAMPTON, CT
ON 5/28/97 AT 1:30 P.M.
Attest: PAULINE L. MARCHAM, Town Clerk
Marjorie Wall, Asst.

94 EAST HIGH ST #CELL

Location	94 EAST HIGH ST #CELL	**Mblu**	26/ 85/ 16/ /
Acct#	R07038	**Owner**	PAULS + SANDYS TOO INC
Assessment	$301,530	**Appraisal**	$430,760
PID	5476	**Building Count**	1

Current Value

Appraisal			
Valuation Year	**Improvements**	**Land**	**Total**
2021	$230,760	$200,000	$430,760
Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2021	$161,530	$140,000	$301,530

Owner of Record

Owner PAULS + SANDYS TOO INC
Co-Owner
Address 93 EAST HIGH ST
EAST HAMPTON, CT 06424

Sale Price $0
Certificate
Book & Page 0344/0096
Sale Date 01/28/2002
Instrument 29

Ownership History

Ownership History					
Owner	**Sale Price**	**Certificate**	**Book & Page**	**Instrument**	**Sale Date**
PAULS + SANDYS TOO INC	$0		0344/0096	29	01/28/2002

Building Information

Building 1 : Section 1

Year Built:
Living Area: 0
Replacement Cost: $0
Building Percent Good:
Replacement Cost Less Depreciation: $0

No Data for Extra Features

Land

Land Use

Use Code	202
Description	Commercial Land & OB
Zone	C
Neighborhood	COM
Alt Land Appr	No
Category	

Land Line Valuation

Size (Acres)	1
Frontage	
Depth	
Assessed Value	$140,000
Appraised Value	$200,000

Outbuildings

Outbuildings						Legend
Code	**Description**	**Sub Code**	**Sub Description**	**Size**	**Value**	**Bldg #**
BLD	Building			360.00 SF	$48,600	1
SHD1	Shed	FR	Frame	120.00 S.F.	$2,160	1
CEL	Cell Tower			1.00 UNITS	$90,000	1
CEL	Cell Tower			1.00 UNITS	$90,000	1

Valuation History

Appraisal			
Valuation Year	**Improvements**	**Land**	**Total**
2021	$140,760	$200,000	$340,760
2019	$156,400	$200,000	$356,400
2018	$156,400	$200,000	$356,400
2016	$156,400	$200,000	$356,400

Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2021	$98,530	$140,000	$238,530
2019	$109,480	$140,000	$249,480
2018	$109,480	$140,000	$249,480
2016	$109,480	$140,000	$249,480

)4 east high st

Search Results

Parcel Details

)4 EAST HIGH ST

PAULS + SANDYS TOO INC

93 EAST HIGH ST
EAST HAMPTON, CT 06424

Parcel ID: 26-85-16
Lot Size: 62.44 Ac
Sale Price: $325000

)ks	Abutters
Parcel Details	Bing Bird's Eye
Photo	Property Map
Google Map	Sketch
Abutter Distance:	Add Parcel
Adjacent	Remove Parcel
Adjacent	Print Labels
50 ft	Export List
100 ft	
200 ft	
300 ft	
400 ft	
500 ft	
Find Abutters	
Clear Abutters	

Parcel ID 26-85-16
AV PID 4364
-I ST

About
Layers
Identify

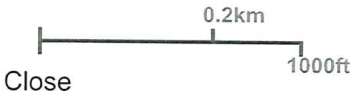
Summary

94 EAST HIGH S
PAULS + SANDYS TO
Parcel ID: 26-85-16 Vie

Bevan Brothers Pond
Flanders Pond

nail Map Link

opy and paste the following string into an email to link to the current map view:



Close

int Map

Size:

Scale: 1" = ft. Title:

Close Print

Date: **January 16, 2024**

Crown Castle
2000 Corporate Drive
Canonsburg, PA 15317
(724) 416-2000

Subject:	**Structural Analysis Report**	
Carrier Designation:	***Verizon Wireless* Co-Locate**	
	Site Number:	5000242940
	Site Name:	EAST HAMPTON CT
Crown Castle Designation:	**BU Number:**	876352
	Site Name:	RICHARD WALL
	JDE Job Number:	751365
	Work Order Number:	2278558
	Order Number:	654587 Rev. 0
Engineering Firm Designation:	**Crown Castle Project Number**	2278558
Site Data:	**94 East Hight Street, East Hampton, Middlesex County, CT**	
	Latitude: *41° 35' 14.2"* Longitude: *-72° 29' 19.6"*	
	117.5 ft - Monopole Tower	

Crown Castle is pleased to submit this **"Structural Analysis Report"** to determine the structural integrity of the above-mentioned tower.

The purpose of the analysis is to determine acceptability of the tower stress level. Based on our analysis we have determined the tower stress level for the structure and foundation, under the following load case, to be:

LC7: Proposed Equipment Configuration **Sufficient Capacity**

This analysis utilizes an ultimate 3-second gust wind speed of 120 mph as required by the 2022 Connecticut State Building Code. Applicable Standard references and design criteria are listed in Section 2 - Analysis Criteria.

Structural analysis prepared by: Matthew Schmitt

Respectfully submitted by:

Sudarshan Kasera

Digitally signed by Sudarshan C Kasera
Date: 2024.01.18 17:22:07 -05'00'

Sudarshan C Kasera
Senior Project Engineer

1) INTRODUCTION

This tower is a 117.5 ft Monopole Tower designed by Engineered Endeavors, Inc.. The tower has been modified in the past to accommodate additional loading.

2) ANALYSIS CRITERIA

TIA-222 Revision:	TIA-222-H
Risk Category:	II
Wind Speed:	120 mph
Exposure Category:	C
Topographic Factor:	1
Ice Thickness:	1.00 in
Wind Speed with Ice:	50 mph
Service Wind Speed:	60 mph

Table 1 - Proposed Equipment Configuration

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)
102	106	3	commscope	CBC78T-DS-43-2X	2 12	1-5/8 1-1/4
	104	3	andrew	LNX-6514DS-A1M w/ Mount Pipe		
		6	commscope	JAHH-65B-R3B w/ Mount Pipe		
		4	kaelus	KA-6030		
		2	rfs celwave	DB-B1-6C-12AB-0Z		
		3	samsung telecommunications	MT6407-77A_CCIV2 w/ Mount Pipe		
	102	3	samsung telecommunications	RFV01U-D1A		
		3	samsung telecommunications	RFV01U-D2A		
		1	tower mounts	Platform Mount [LP 1201-1_HR-1]		

Table 2 - Other Considered Equipment

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)
118	130	1	decibel	DB224-A	3 2 1 5 2	1-5/8 7/8 1/2 3/8 Elliptical
	129	1	decibel	DB264-A		
	126	1	decibel	DB809K-YP w/ Mount Pipe		
	124	1	decibel	DB408-A		
	122	1	andrew	VHLP3-11W		
		2	ceragon	FIBEAIR IP-20A_RFU-D		
	119	1	andrew	VHLP3-11W		
		2	ceragon	FIBEAIR IP-20A_RFU-D		
		3	ericsson	AIR6449 B41_T-MOBILE w/ Mount Pipe		
		3	ericsson	RADIO 4460 B2/B25 B66_TMO		
		3	ericsson	Radio 4480_TMOV2		

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)
		3	rfs celwave	APXVAALL24_43-U-NA20_TMO w/ Mount Pipe		
	118	1	radiowaves	HP2-11_CCIV2		
		1	tower mounts	Platform Mount [LP 602-1]		
94	96	3	ericsson	RADIO 4449 B5/B12	6 2 4 1 2	1-5/8 3/8 3/4 7/8 Conduit
		3	ericsson	RRUS 8843 B2/B66A		
	94	1		Site Pro 1 RMQLP-4120-H10		
		3	cci antennas	DMP65R-BU6D w/ Mount Pipe		
		3	cci antennas	HPA65R-BU6A w/ Mount Pipe		
		3	cci antennas	OPA65R-BU6BA-K w/ Mount Pipe		
		3	powerwave technologies	7770.00 w/ Mount Pipe		
	93	3	ericsson	RADIO 4415 B30		
		3	ericsson	RRUS 4478 B14		
		6	powerwave technologies	LGP 17201		
		2	raycap	DC6-48-60-18-8F		
	72	1	commscope	DB224-A		
73	74	1	lucent	KS24019-L112A	1	1/2
	73	1	tower mounts	Side Arm Mount [SO 701-1]		

3) ANALYSIS PROCEDURE

Table 3 - Documents Provided

Document	Reference	Source
4-GEOTECHNICAL REPORTS	1532964	CCISITES
4-POST-MODIFICATION INSPECTION	1956331	CCISITES
4-POST-MODIFICATION INSPECTION	3404046	CCISITES
4-POST-MODIFICATION INSPECTION	8406841	CCISITES
4-TOWER FOUNDATION DRAWINGS/DESIGN/SPECS	2122776	CCISITES
4-TOWER MANUFACTURER DRAWINGS	2122777	CCISITES
4-TOWER REINFORCEMENT DESIGN/DRAWINGS/DATA	2055770	CCISITES
4-TOWER REINFORCEMENT DESIGN/DRAWINGS/DATA	3250765	CCISITES
4-TOWER REINFORCEMENT DESIGN/DRAWINGS/DATA	8034413	CCISITES

3.1) Analysis Method

tnxTower (version 8.2.2.0), a commercially available analysis software package, was used to create a three-dimensional model of the tower and calculate member stresses for various loading cases. Selected output from the analysis is included in Appendix A. When applicable, Crown Castle has calculated and provided the effective area for panel antennas using approved methods following the intent of the TIA-222 standard.

tnxTower was used to determine the loads on the modified structure. Additional calculations were performed to determine the stresses in the reinforcing elements. These calculations are included in Appendix C.

3.2) Assumptions

1) Tower and structures were maintained in accordance with the TIA-222 Standard.
2) The configuration of antennas, transmission cables, mounts and other appurtenances are as specified in Tables 1 and 2 and the referenced drawings.

This analysis may be affected if any assumptions are not valid or have been made in error. Crown Castle should be notified to determine the effect on the structural integrity of the tower.

4) ANALYSIS RESULTS

Table 4 - Section Capacity (Summary)

Elevation (ft)	Component Type	Size	Critical Element	% Capacity	Pass / Fail
117.5 - 112.5	Pole	TP16.266x15x0.1875	Pole	22.2	Pass
112.5 - 107.5	Pole	TP17.531x16.266x0.1875	Pole	33.1	Pass
107.5 - 102.5	Pole	TP18.797x17.531x0.1875	Pole	41.8	Pass
102.5 - 97.5	Pole	TP20.062x18.797x0.1875	Pole	56.5	Pass
97.5 - 92.5	Pole	TP21.328x20.062x0.1875	Pole	69.5	Pass
92.5 - 89.71	Pole	TP22.9x21.328x0.1875	Pole	78.4	Pass
89.71 - 84.71	Pole	TP22.913x21.659x0.3125	Pole	53.9	Pass
84.71 - 79.71	Pole	TP24.166x22.913x0.3125	Pole	59.6	Pass
79.71 - 74.71	Pole	TP25.419x24.166x0.3125	Pole	64.0	Pass
74.71 - 69.71	Pole	TP26.672x25.419x0.3125	Pole	67.4	Pass
69.71 - 64.71	Pole	TP27.926x26.672x0.3125	Pole	70.1	Pass
64.71 - 62.83	Pole	TP28.397x27.926x0.3125	Pole	70.9	Pass
62.83 - 62.58	Pole + Reinf.	TP28.459x28.397x0.7375	Reinf. 2 Tension Rupture	48.4	Pass
62.58 - 57.58	Pole + Reinf.	TP29.713x28.459x0.7125	Reinf. 2 Tension Rupture	50.9	Pass
57.58 - 52.58	Pole + Reinf.	TP30.966x29.713x0.7	Reinf. 2 Tension Rupture	53.2	Pass
52.58 - 47.58	Pole + Reinf.	TP32.219x30.966x0.675	Reinf. 2 Tension Rupture	55.2	Pass
47.58 - 47.38	Pole + Reinf.	TP33.46x32.219x0.675	Reinf. 2 Tension Rupture	55.3	Pass
47.38 - 42.38	Pole + Reinf.	TP32.896x31.644x0.675	Reinf. 2 Tension Rupture	58.8	Pass
42.38 - 37.38	Pole + Reinf.	TP34.147x32.896x0.65	Reinf. 2 Tension Rupture	60.4	Pass
37.38 - 32.38	Pole + Reinf.	TP35.398x34.147x0.6375	Reinf. 2 Tension Rupture	61.8	Pass
32.38 - 31.75	Pole + Reinf.	TP35.555x35.398x0.6375	Reinf. 2 Tension Rupture	62.0	Pass
31.75 - 31.5	Pole + Reinf.	TP35.618x35.555x0.7375	Reinf. 1 Bolt Shear	52.9	Pass
31.5 - 26.5	Pole + Reinf.	TP36.869x35.618x0.725	Reinf. 1 Compression	52.0	Pass
26.5 - 21.5	Pole + Reinf.	TP38.12x36.869x0.7125	Reinf. 1 Compression	53.1	Pass
21.5 - 16.5	Pole + Reinf.	TP39.371x38.12x0.6875	Reinf. 1 Compression	54.1	Pass
16.5 - 11.5	Pole + Reinf.	TP40.622x39.371x0.675	Reinf. 1 Compression	54.9	Pass
11.5 - 6.5	Pole + Reinf.	TP41.874x40.622x0.6625	Reinf. 1 Compression	55.7	Pass
6.5 - 1.5	Pole + Reinf.	TP43.125x41.874x0.65	Reinf. 1 Compression	56.4	Pass

Elevation (ft)	Component Type	Size	Critical Element	% Capacity	Pass / Fail
1.5 - 0	Pole + Reinf.	TP43.5x43.125x0.65	Reinf. 1 Compression	56.6	Pass
				Summary	
			Pole	78.4	Pass
			Reinforcement	62.0	Pass
			Overall	78.4	Pass

Table 5 - Tower Component Stresses vs. Capacity - LC7

Notes	Component	Elevation (ft)	% Capacity	Pass / Fail
1	Anchor Rods	0	56.7	Pass
1	Base Plate	0	53.6	Pass
1	Base Foundation (Structural)	0	58.8	Pass
1	Base Foundation (Soil)	0	49.5	Pass

Structure Rating (max from all components) =	78.4%

Notes:
1) See additional documentation in "Appendix C – Additional Calculations" for calculations supporting the % capacity consumed

4.1) Recommendations

The tower and its foundation have sufficient capacity to carry the considered equipment configuration. No modifications are required at this time.

Colliers Engineering & Design CT, P.C.
1055 Washington Boulevard
Stamford, CT 06901
203.324.0800
peter.albano@collierseng.com

Antenna Mount Analysis Report and PMI Requirements

Mount ReAnalysis

SMART Tool Project #: 10206802
Colliers Engineering & Design CT, P.C. Project #: 23777104

July 21, 2023

Site Information	*Site ID:*	*5000242940-VZW / EAST HAMPTON CT*
	Site Name:	*EAST HAMPTON CT*
	Carrier Name:	*Verizon Wireless*
	Address:	*94 East High Street* *East Hampton, Connecticut 06424* *Middlesex County*
	Latitude:	*41.587278°*
	Longitude:	*-72.488778°*
Structure Information	*Tower Type:*	*Monopole*
	Mount Type:	*14.08-Ft Platform*

FUZE ID # 17123754

Analysis Results

Platform: **47.1% Pass***

***Antennas and equipment to be installed in compliance with PMI Requirements of this mount analysis.**

******Contractor PMI Requirements:***
Included at the end of this MA report
Available & Submitted via portal at https://pmi.vzwsmart.com

For additional questions and support, please reach out to:
pmisupport@colliersengineering.com

Report Prepared By: Prasanna Dhakal

Digitally signed by Derek Hartzell
Date: 2023.07.21 14:42:17-07'00'

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: 674884, dated February 16, 2021*
Mount Mapping Report	*Roaming Networks Inc., Site ID: PSLC:469377, dated April 4, 2021*
Previous Post-Mod Antenna Mount Analysis Report	*Maser Consulting Connecticut, Project #: 21777315, dated June 24, 2021*
Previous Mount Modification Drawing	*Maser Consulting Connecticut, Project #: 21777315, dated June 24, 2021*
Confirmation of fitment of Mod Kit	*Email Correspondence with Gregory Drake dated July 7, 2023*
Final Loading Configuration	*Filter Add Scope Provided by Verizon Wireless*

Analysis Criteria:

Codes and Standards:	ANSI/TIA-222-H 2022 Connecticut State Building Code (CSBC), Effective October 1, 2022	
Wind Parameters:	Basic Wind Speed (Ultimate 3-sec. Gust), V_{ULT}:	125 mph
	Ice Wind Speed (3-sec. Gust):	50 mph
	Design Ice Thickness:	1.00 in
	Risk Category:	II
	Exposure Category:	C
	Topographic Category:	1
	Topographic Feature Considered:	N/A
	Topographic Method:	N/A
	Ground Elevation Factor, K_e:	0.976
Seismic Parameters:	S_S:	0.210 g
	S_1:	0.056 g
Maintenance Parameters:	Wind Speed (3-sec. Gust):	30 mph
	Maintenance Load, Lv:	250 lbs.
	Maintenance Load, Lm:	500 lbs.
Analysis Software:	RISA-3D (V17)	

Final Loading Configuration:

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

Mount Elevation (ft)	Equipment Elevation (ft)	Quantity	Manufacturer	Model	Status
106.0	108.0	6	Andrew	JAHH-65B-R3B	Added
		3	Samsung	MT6407-77A	
		3	Commscope	CBC78T-DS-43-2X	
		3	Samsung	B2/B66A RRH-BR049	
		3	Samsung	B5/B13 RRH-BR04C	
		4	KAelus	KA-6030	
		3	Andrew	LNX-6514DS-A1M	Retained
		2	Raycap	RHSDC-3315-PF-48	

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

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

Standard Conditions:

1. All engineering services are performed on the basis that the information provided to Colliers Engineering & Design CT, P.C. and used in this analysis is current and correct. The existing equipment loading has been applied at locations determined from the supplied documentation. Any deviation from the loading locations specified in this report shall be communicated to Colliers Engineering & Design CT, P.C. to verify deviation will not adversely impact the analysis.

2. Mounts are assumed to have been properly fabricated, installed and maintained in good condition, twist free and plumb in accordance with its original design and manufacturer's specifications.

   Obvious safety and structural issues/deficiencies noticed at the time of the mount mapping and reported in the Mount Mapping Report are assumed to be corrected and documented as part of the PMI process and are not considered in the mount analysis.

   The mount analysis and the mount mapping are not a condition assessment of the mount. Proper maintenance and condition assessments are still required post analysis.

3. For mount analyses completed from other data sources (including new replacement mounts) and not specifically mapped in accordance with the NSTD-446 Standard, the mounts are assumed to have been properly fabricated, installed and maintained in good condition, twist free and plumb in accordance with its original design and manufacturer's specifications.

4. All member connections are assumed to have been designed to meet or exceed the load carrying capacity of the connected member unless otherwise specified in this report.

5. The mount was checked up to, and including, the bolts that fasten it to the mount collar/attachment and threaded rod connections in collar members if applicable. Local deformation and interaction between the mount collar/attachment and the supporting tower structure are outside the scope of this analysis.

6. All services are performed, results obtained, and recommendations made in accordance with generally accepted engineering principles and practices. Colliers Engineering & Design CT, P.C. is not responsible for the conclusion, opinions, and recommendations made by others based on the information supplied.

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

8. It is assumed that the mount modifications listed under Sources of Information have been installed per the design specifications.

Discrepancies between in-field conditions and the assumptions listed above may render this analysis invalid unless explicitly approved by Colliers Engineering & Design CT, P.C.

Analysis Results:

Component	Utilization %	Pass/Fail
Inner Standoff	*29.6%*	*Pass*
Outer Standoff	*13.4%*	*Pass*
Grating Angle	*5.3%*	*Pass*
Cross Member	*26.3%*	*Pass*
Face Horizontal	*47.1%*	*Pass*
Mount Pipe	*46.4%*	*Pass*
Support Rail	*29.7%*	*Pass*
Support Rail Corner Angle	*37.2%*	*Pass*
V-Bracing Kit	*10.5%*	*Pass*
Mount Connection	*17.2%*	*Pass*

Structure Rating – *(Controlling Utilization of all Components)*	**47.1%**

Mount Steel (EPA)a per ANSI/TIA-222-H Section 2.6.11.2:

Ice Thickness (In)	Mount Pipes Excluded		Mount Pipes Included	
	Front (EPA)a (Sq. Ft.)	Side (EPA)a (Sq. Ft.)	Front (EPA)a (Sq. Ft.)	Side (EPA)a (Sq. Ft.)
0	34.3	34.3	47.1	47.1
0.5	42.9	42.9	61.1	61.1
1	51.1	51.1	74.7	74.7

Notes:
- (EPA)a values listed above may be used in the absence of more precise information
- (EPA)a values in the table above include 3 sectors.
- Ka factors included in (EPA)a calculations

Requirements:

The existing mounts are **SUFFICIENT** for the final loading configuration shown in attachment 2 and do not require modifications. Additional requirements are noted below.

1. Contractor shall verify modifications detailed in Mount Modification Drawings by Maser Consulting Connecticut, Project #: 21777315A, dated June 24, 2021, have been installed prior to installation of equipment. **Escalate any discrepancies to EOR immediately as it may render the results of this analysis invalid and require additional modifications**.

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

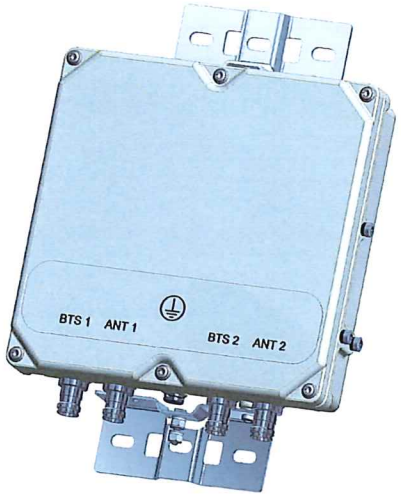
Attachments:

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

BSF0020F3V1-1

TWIN BANDSTOP 900MHZ INTERFERENCE MITIGATION FILTER

The BSF0020 is ideal for co-located 700, 850 and 900 networks. Utilising a 2.6MHz guardband the BSF0020 provides rejection of the 900 UL band while passing 700/850 UL and DL bands. Capable of being used in an outdoor environment the BSF0020 contains two identical bandstop filters, suitable for 2x2 MIMO configuration, offering excellent insertion loss, group delay and rejection.



FEATURES

- Passes full 700 and 850 bands
- Low insertion loss
- Rejection of 900MHz uplink
- DC/AISG pass
- Twin unit
- Dual twin mounting available

TECHNICAL SPECIFICATIONS

BAND NAME	700 PATH / 850 UPLINK PATH	850 DOWNLINK PATH
Passband	698 - 849MHz	869 - 891.5MHz
Insertion loss	0.1dB typical / 0.3dB maximum	0.5dB typical, 1.45dB maximum
Return loss	24dB typical, 18dB minimum	
Maximum input power (Per Port)	100W average	200W average and 66W per 5MHz
Rejection	53dB minimum @ 894.1 - 896.5MHz	

ELECTRICAL	
Impedance	50Ohms
Intermodulation products	-160dBc maximum in UL Band (assuming 20MHz Signal), with 2 x 43dBm carriers -153dBc maximum with 2 x 43dBm

DC / AISG	
Passband	0 - 13MHz
Insertion loss	0.3dB maximum
Return loss	15dB minimum
Input voltage range	± 33V
DC current rating	2A continuous, 4A peak
Compliance	3GPP TS 25.461

ENVIRONMENTAL	
For further details of environmental compliance, please contact Kaelus.	
Temperature range	-20°C to +60°C | -4°F to +140°F
Ingress protection	IP67
Altitude	2600m | 8530ft
Lightning protection	RF port: ±5kA maximum (8/20us), IEC 61000-4-5 – Unit must be terminated with some lightning protection circuits.
MTBF	>1,000,000 hours
Compliance	ETSI EN 300 019 class 4.1H, RoHS, NEBS GR-487-CORE

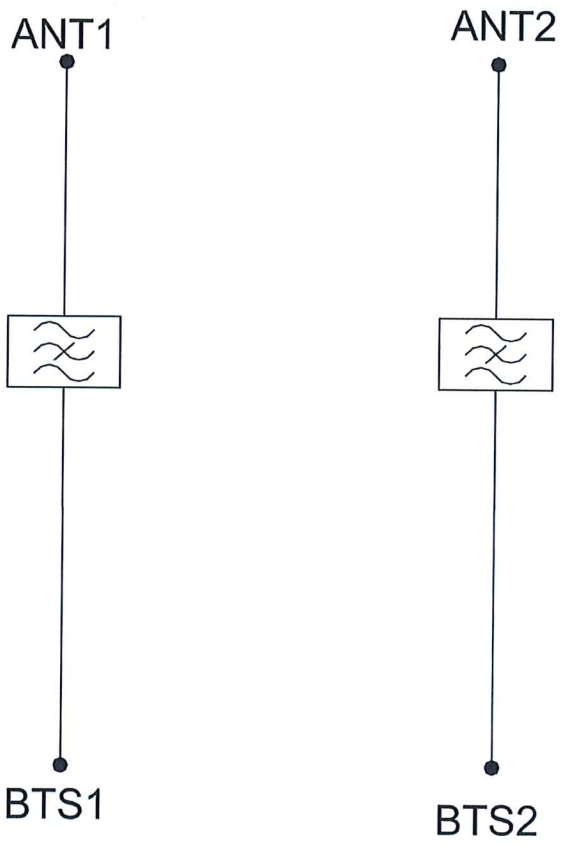
MECHANICAL	
Dimensions H x D x W	269 x 277 x 80mm | 10.60 x 10.90 x 3.15in (Excluding brackets and connectors)
Weight	8.0 kg | 17.6 lbs (no bracket)
Finish	Powder coated, light grey (RAL7035)
Connectors	RF: 4.3-10 (F) x 4
Mounting	Optional pole/wall bracket supplied with two metal clamps 45-178mm diameter poles or custom bracket. See ordering information.

ORDERING INFORMATION

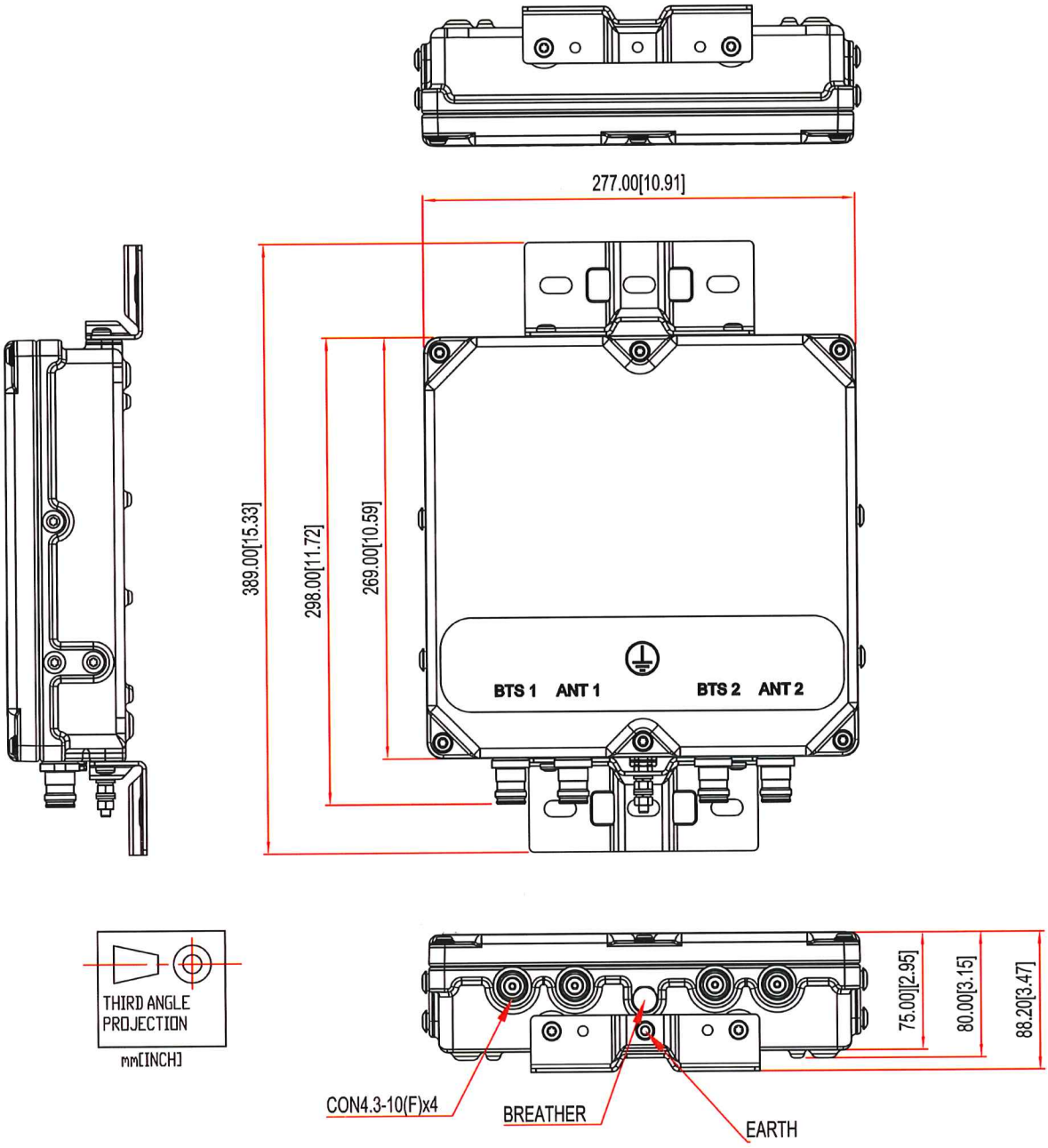
PART NUMBER	CONFIGURATION	OPTIONAL FEATURES	CONNECTORS
BSF0020F3V1	TWIN, 2 in / 2 out	DC/AISG PASS NO BRACKET	4.3-10 (F)
BSF0020F3V1-1	TWIN, 2 in / 2 out	DC/AISG PASS	4.3-10 (F)
BSF0020F3V1-2	QUAD, 4 in / 4 out	DC/AISG PASS	4.3-10 (F)

Contact Us: +1 303 768 8080 | +61 (0) 7 3907 1200 | www.kaelus.com

ELECTRICAL BLOCK DIAGRAM



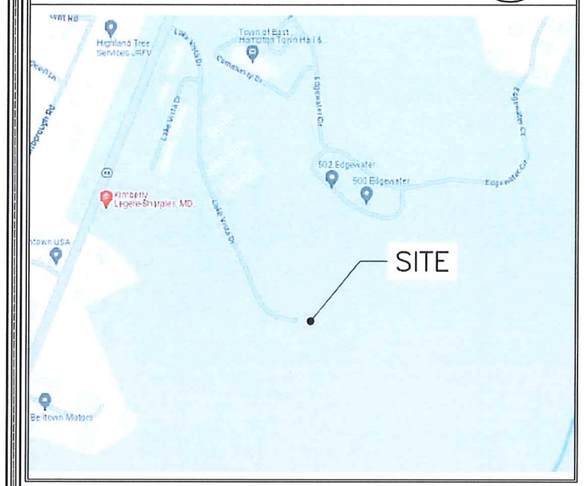
MECHANICAL BLOCK DIAGRAM



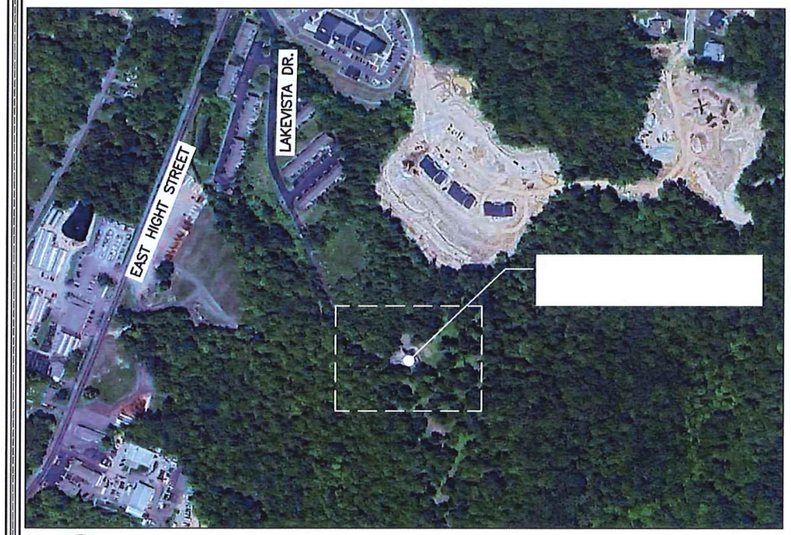
NOTE:
AN ANALYSIS OF THE CAPACITY OF THE STRUCTURE TO SUPPORT THE PROPOSED LOADING HAS BEEN COMPLETED BY CROWN CASTLE DATED JANUARY 18, 2024.

LEASE EXHIBIT:
THIS LEASE EXHIBIT IS DIAGRAMMATIC IN NATURE AND IS INTENDED TO PROVIDE GENERAL INFORMATION REGARDING THE LOCATION AND SIZE OF THE PROPOSED WIRELESS COMMUNICATION FACILITY. THE SITE LAYOUT WILL BE FINALIZED UPON COMPLETION OF THE SITE SURVEY AND FACILITY DESIGN.

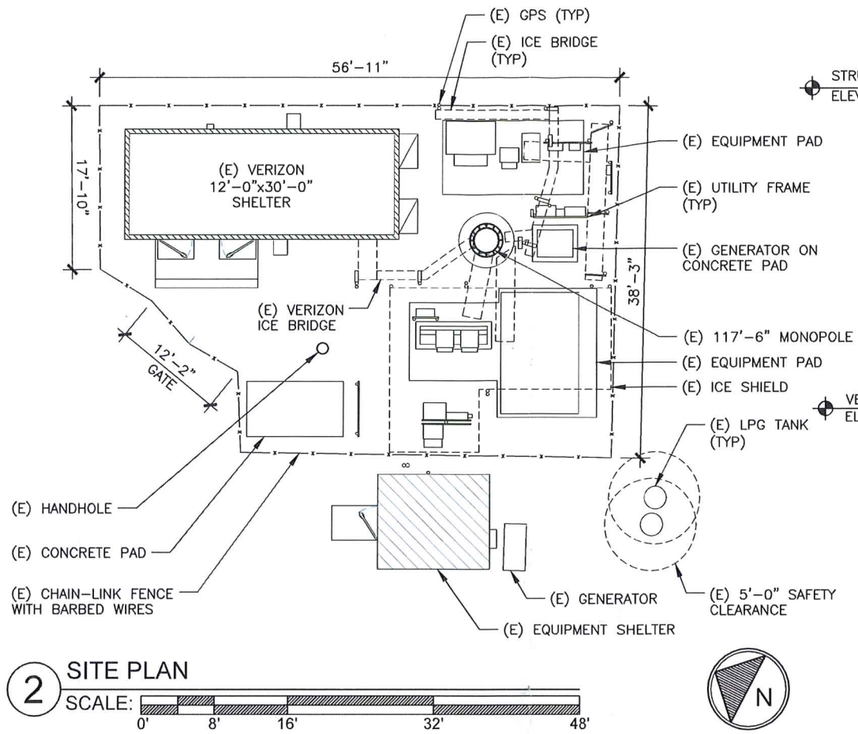
LOCATION MAP
N.T.S



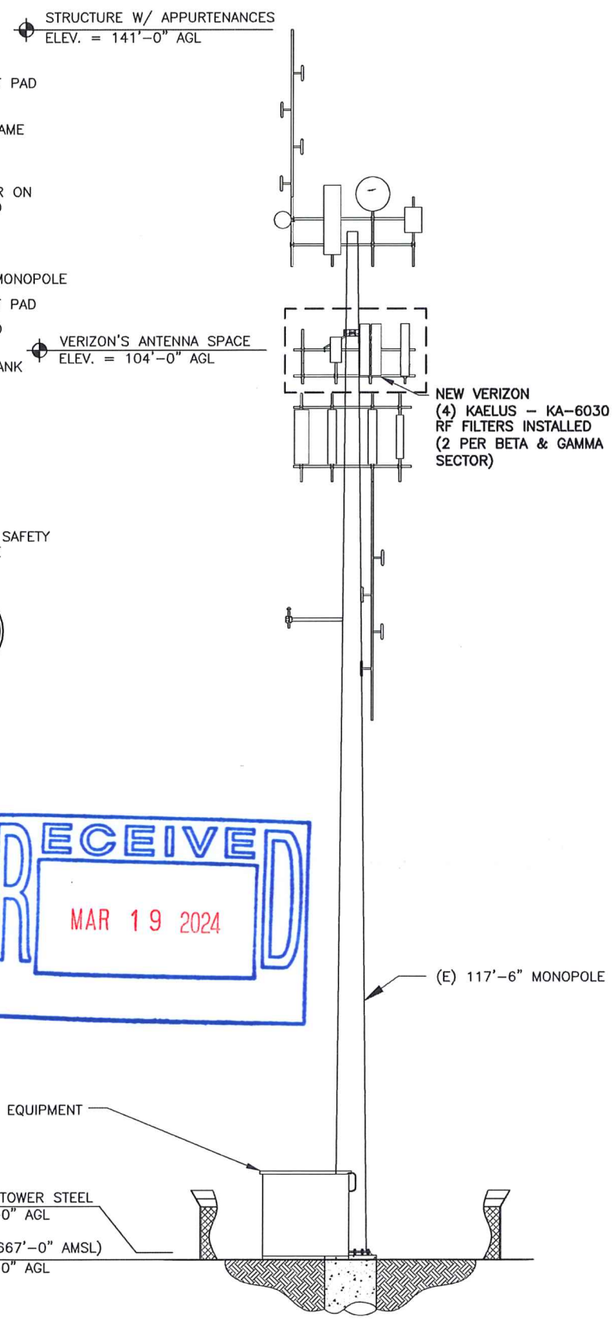
APPROXIMATE COORDINATES:	LATITUDE:	41° 35' 14.20" N	41.587278° N
	LONGITUDE:	72° 29' 19.60" W	72.488778° W



1 PARTIAL SITE / KEY PLAN
SCALE: N.T.S.



2 SITE PLAN
SCALE: 0' 8' 16' 32' 48'



3 TOWER ELEVATION
SCALE: N.T.S

RECEIVED
MAR 19 2024

verizon
20 ALEXANDER DRIVE
WALLINGFORD, CT 06492

B+T GRP
MTS ENGINEERING, P.L.L.C.
1717 S. BOULDER
SUITE 300
TULSA, OK 74119
PH: (918) 587-4630
btwo@btgrp.com

EAST HAMPTON CT

94 EAST HIGHT STREET
EAST HAMPTON, CT 06424

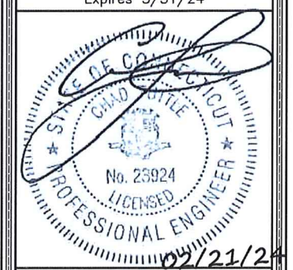
EXISTING MONOPOLE

PROJECT NO:	92595.007.01
CHECKED BY:	LR

ISSUED FOR:

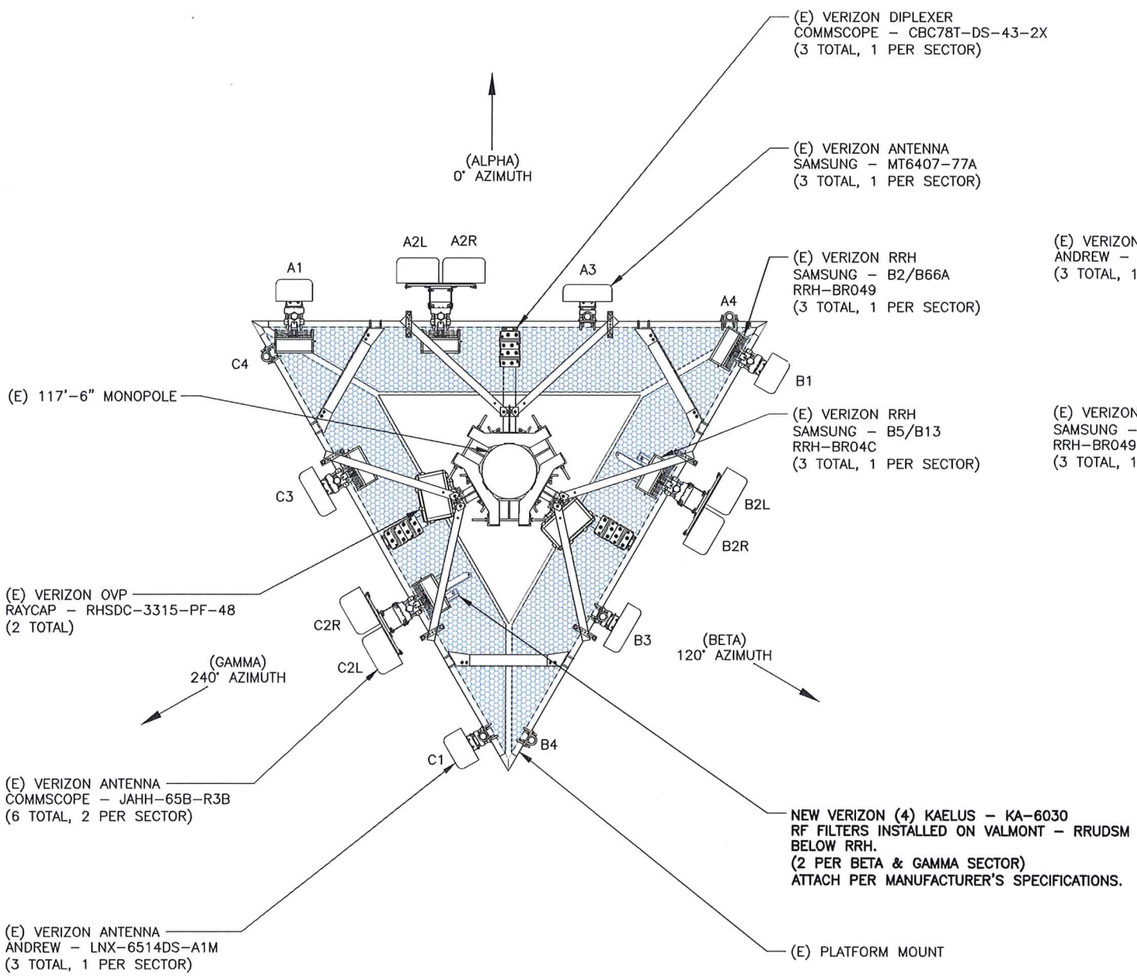
REV	DATE	DRWN	DESCRIPTION
0	02/21/24	YX	CONSTRUCTION

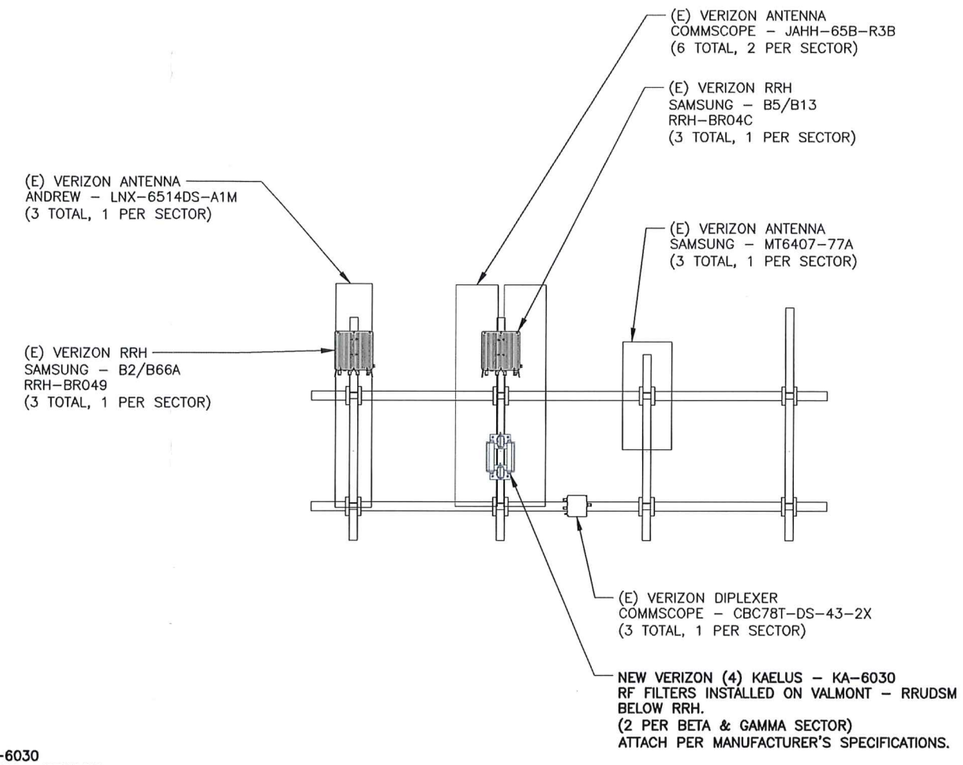
MTS ENGINEERING P.L.L.C.
BER:2386985
Expires 3/31/24



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

SHEET NUMBER:	REVISION:
LE-1	0





NOTE:

ELEVATION VIEW FROM BEHIND ANTENNAS

1 NEW RF FILTER PLAN

SCALE: 0' 1' 2' 4' 10'

N

2 NEW RF FILTER ELEVATION

SCALE: 0' 1' 2' 4' 10'

verizon

20 ALEXANDER DRIVE
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btwo@btgrp.com

EAST HAMPTON CT

94 EAST HIGHT STREET
EAST HAMPTON, CT 06424

EXISTING MONOPOLE

PROJECT NO:	92595.007.01
CHECKED BY:	LR

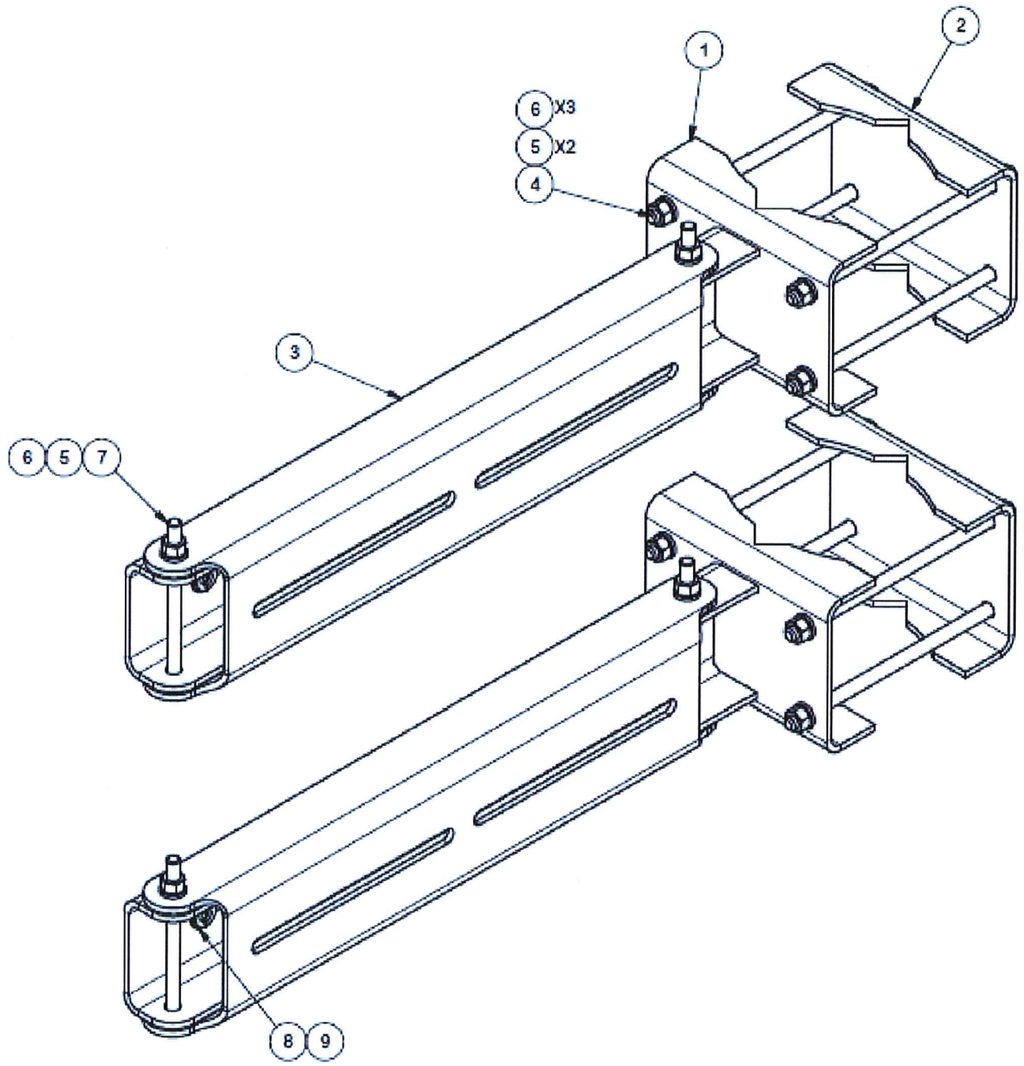
ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION
0	02/21/24	YX	CONSTRUCTION

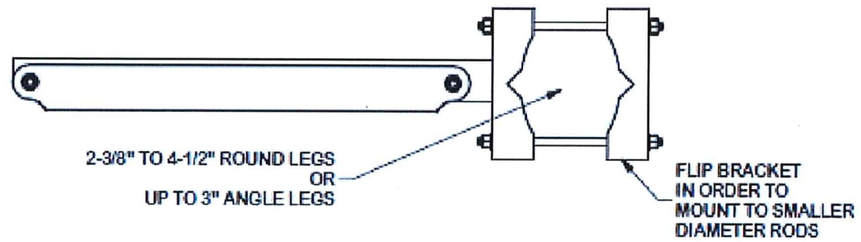
MTS ENGINEERING P.L.L.C.
BER:2386985
Expires 3/31/24

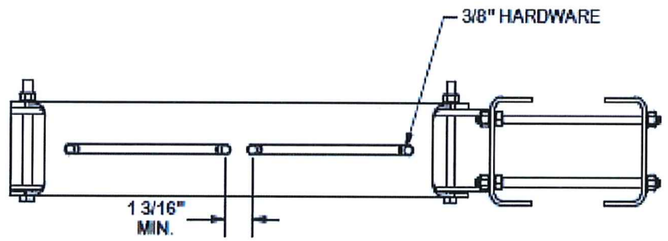
STATE OF CONNECTICUT
CHAD TITLE
No. 23924
LICENSED
PROFESSIONAL ENGINEER
02/21/24

SHEET NUMBER:	REVISION:
LE-2	0



PARTS LIST					
ITEM	QTY	PART DESCRIPTION	LENGTH	UNIT WT.	NET WT.
1	2	MOUNTING ARM		8.99	17.97
2	2	CLAMP PLATE		2.35	4.69
3	2	SWIVEL MOUNT		6.65	13.30
4	8	3/8"-16 UNC X 8" GALV. THREADED ROD		0.25	2.00
5	20	3/8" GALV LOCK WASHER		0.01	0.13
6	28	3/8"-16 UNC GALV HEX NUT		0.02	0.52
7	4	3/8" X 5" GALV BOLT		0.18	0.71
8	8	3/8" SS FLAT WASHER		0.01	0.06
9	8	3/8" SS LOCK WASHER		0.01	0.05
				TOTAL WT. #	39.43





TOLERANCE NOTES

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

DESCRIPTION
RRU
DUAL SWIVEL MOUNT

SITE PRO 1
A valmont COMPANY

Engineering Support Team:
1-888-753-7446

Locations:
New York, NY
Atlanta, GA
Los Angeles, CA
Plymouth, IN
Salem, OR
Dallas, TX

CPD NO.		DRAWN BY	ENG. APPROVAL	PART NO.	PAGE
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