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Also admitted in Massachusetts
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May 18, 2023

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**
330 Bishop Street, Waterbury, 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"). Cellco's facility consists of antennas and remote radio heads pipe mounted on the roof of the building, inside concealment tubes. Equipment associated with the antennas is also located on the roof of the building. The existing facility was approved by the Siting Council ("Council") in October of 2015 (PE1133-VER-20150818). A copy of the Council's approval is included in Attachment 1.

Cellco now intends to install interference mitigation filters behind two (2) of its existing antennas. The filter specification sheet is 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 Waterbury'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 antennas. The filters will be installed on two of Cellco's antenna mounts within the existing concealment tubes.

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 interference mitigation filters will not result in a change to radio frequency (RF) emissions from the facility. Therefore, no new RF emissions information is included in this filing.

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 Mount and Structural Analysis Report ("MSA"), the existing mounting assemblies and the host structure can support Cellco's proposed modifications. A copy of the MSA is included in Attachment 3.

A copy of the parcel map and Property owner information is included in Attachment 4. A Certificate of Mailing verifying that this filing was sent to municipal officials and the property owner is included in Attachment 5.

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:
Neil M. O'Leary, Waterbury Mayor
Robert Nerney, City Planner
Waterbury Omega LLC, Property Owner
Kamoya Bautista, Verizon Wireless

ATTACHMENT 1

STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

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

October 2, 2015

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

RE: **PE1133-VER-20150818** – Cellco Partnership d/b/a Verizon Wireless sub-petition for a declaratory ruling for approval of an eligible facility request for modifications to an existing telecommunications facility located at 330 Bishop Street, Waterbury, Connecticut.

Dear Attorney Baldwin:

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

- Post-construction measurements of the cumulative percent maximum permissible exposure for power density shall be taken to demonstrate compliance at the site with applicable FCC maximum permissible exposure standards, and such measurements shall include, but not be limited to, measurements taken at ground level;
- Such report shall be submitted within 45 days of completion of construction;
- Within 45 days after completion of construction, the Council shall be notified in writing that construction has been completed;
- Any nonfunctioning antenna and associated antenna mounting equipment on this facility owned and operated by the Petitioner shall be removed within 60 days of the date the antenna ceased to function;
- The validity of this action shall expire one year from the date of this letter; and
- The petitioner may file a request for an extension of time beyond the one year deadline provided that such request is submitted to the Council not less than 60 days prior to the expiration.

This decision is under the exclusive jurisdiction of the Council and is not applicable to any other modification or construction. All work is to be implemented as specified in the EFR received August 18, 2015.

Thank you for your attention and cooperation.

Very truly yours,

Melanie Bachman
Acting Executive Director

MB/MP

c: Honorable Neil M. O'Leary, Mayor, City of Waterbury
James A. Sequin, AICP, City Planner, City of Waterbury

ATTACHMENT 2

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

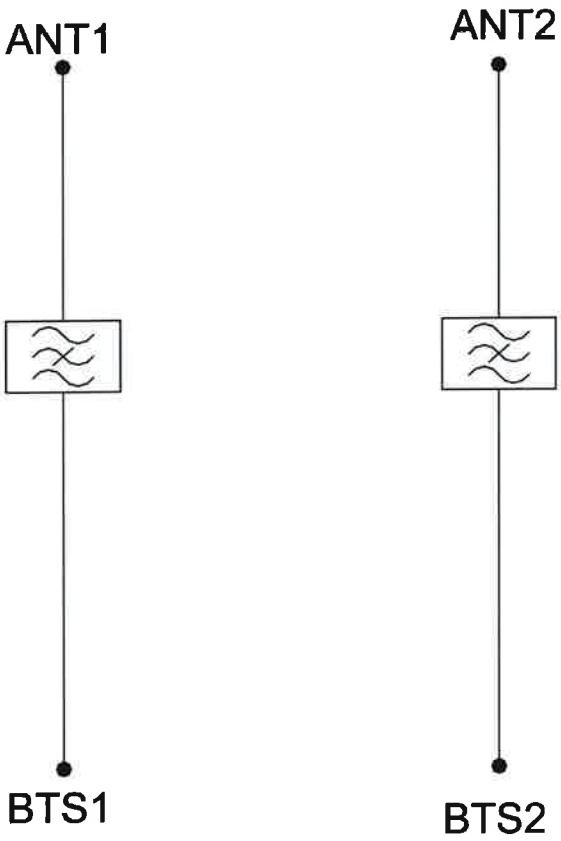
BAND NAME	700 PATH / 850 UPLINK PATH	850 DOWNLINK PATH
Passband	698 - 849MHz	869 - 891.5MHz
Insertion loss	0.1dB typical / 0.3dB maximum	0.5dB typical, 1.45dB maximum
Return loss	24dB typical, 18dB minimum	
Maximum input power (Per Port)	100W average	200W average and 66W per 5MHz
Rejection	53dB minimum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

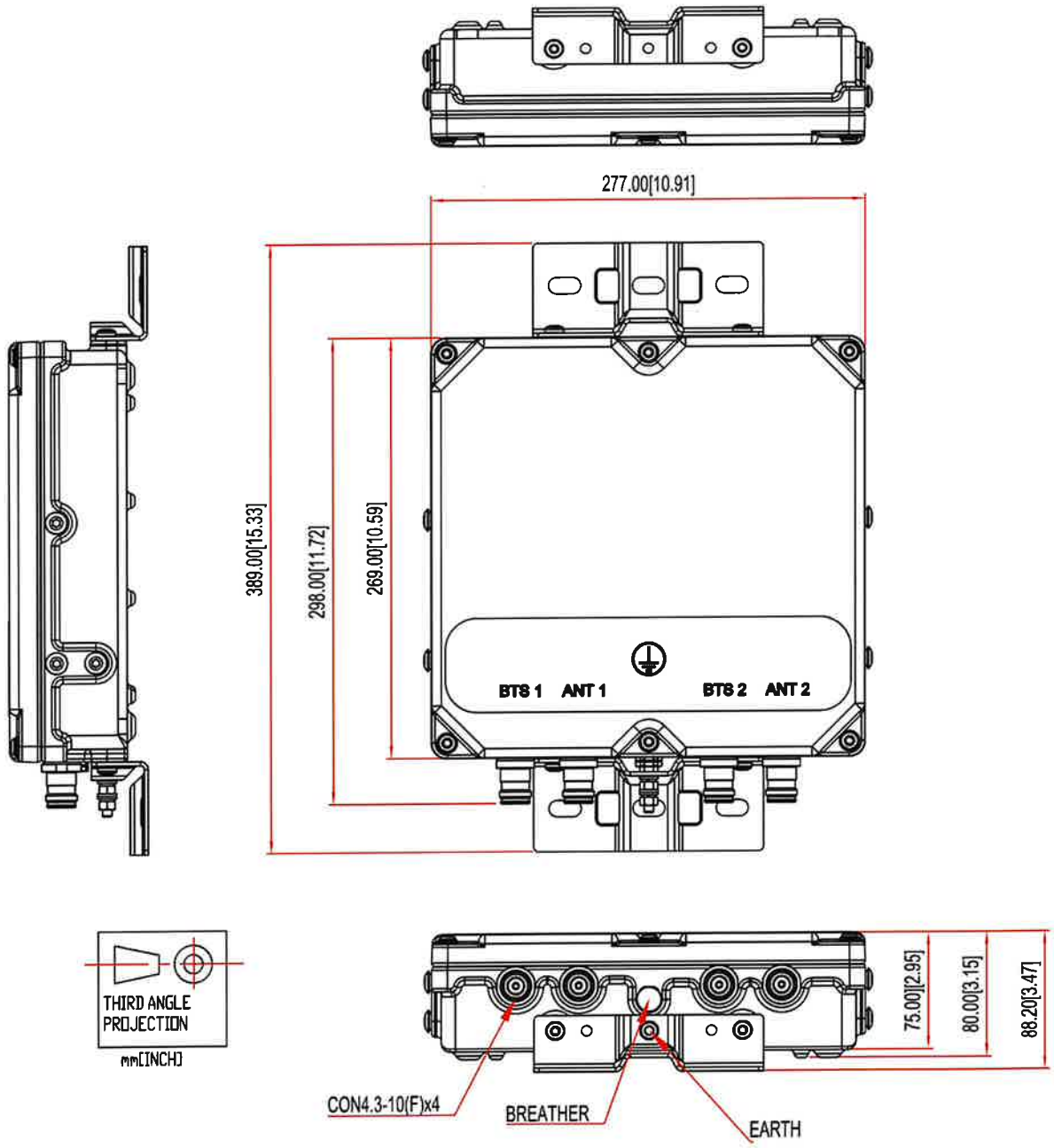
Contact Us: +1 303 768 8080 | +61 (0) 7 3907 1200 | www.kaelus.com

ELECTRICAL BLOCK DIAGRAM



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

MECHANICAL BLOCK DIAGRAM



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

ATTACHMENT 3

ALL-POINTS
TECHNOLOGY CORPORATION

MOUNT AND STRUCTURAL ANALYSIS REPORT
WATERBURY, CONNECTICUT

Prepared for
Verizon Wireless

verizon

Verizon Site Ref:

467741; Waterbury Fulton CT

Site Address: 330 Bishop Street, Waterbury, CT 06704
FUZE ID: 17041979
Location Code: 467741
Project Code: -

APT Filing No. CT141_13920

~~Rev 0: April 3, 2023~~
Rev 1: May 1, 2023

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

Mount and Structural Analysis Report
Waterbury, Connecticut
prepared for
Verizon Wireless

EXECUTIVE SUMMARY:

All-Points Technology Corporation, P.C. (APT) performed a structural analysis of the existing appurtenance mount assemblies to support a proposed Verizon Wireless (Verizon) equipment modification. Additionally, APT performed a local host structure check to determine the structural adequacy of the existing roof with the existing and proposed equipment loading.

Details of the existing and proposed equipment configuration are included within the table on the following page. Reference can be made to the Construction Drawings, prepared by APT, marked Rev 1, dated 05/01/2023.

The results of this analysis indicate that the existing appurtenance mount assemblies meet the requirements of the 2021 International Building Code (IBC), as amended by the 2022 Connecticut State Building Code, and the ANSI/TIA-222-H standard with Verizon's proposed equipment modification. Furthermore, it is our professional opinion that proposed equipment modification will not adversely affect the structural integrity of the existing host structure.

The existing and proposed mount assemblies' component usages are summarized in the table below:

Appurtenance Ballasted Mount Assembly	Usage (%)
Manufacturing Loading Rating	29%
Sliding	50%
Overturning	53%

INTRODUCTION:

A structural analysis of the existing appurtenance mount assemblies was performed by APT for the purpose of supporting the proposed Verizon equipment modification. The subject host structure is located at 330 Bishop Street in Waterbury, Connecticut.

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

- Rooftop mapping obtained from field measurements and site observations conducted by APT during October 2020.
- Manufacturer's Specifications, Drawings, etc. (Refer to Appendix C)
- Construction Drawings prepared by CENTEK, marked Rev 1, dated 08/03/2016.

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

Carrier	Antenna and Appurtenance Make/Model	Elevation	Status	Mount Type
Verizon	(4) Andrew HBXX-6517DS-A2M panel antennas (4) Andrew LNX-6514-A1M panel antennas	66.8'±	ETR	Eight (8) existing single pipe mounts with FRP concealment canisters.
	(2) Kaelus BSF0020F3V1-1 Filters	**64.7'**±	**P**	Two (2) existing SitePro1 RT-RRU5HD rooftop ballasted mounting frames. **Add four (4) SitePRO1 MAT18 rubber mats per mounting frame.**
	(2) Nokia B13 4x30W 700 RRH Remote Radio Heads (RRHs) (2) Nokia B4 2x60-4R AWS RRH Remote Radio Heads (RRHs) (2) Raycap RHSDC-3315-PF-48 6 OVP		ETR	

Notes:

1. ETR = Existing to Remain; ERL = Existing to be Relocated; **P** = Proposed; F = Future; *R*= Reserved.

STRUCTURAL ANALYSIS:

Analysis Criteria:

The structural analysis has been prepared in accordance with the ANSI/TIA-222-H standard entitled "Structural Standard for Antenna Supporting Structures, Antennas and Small Wind Turbine Support Structures"; American Institute of Steel Construction (AISC) Manual of Steel Construction, and the 2021 International Building Code (IBC), as amended by the 2022 Connecticut State Building Code utilizing the following criteria:

- Load Case 1: 120 mph (3-second gust) design wind speed.
- Risk Category: II
- Exposure Category: B
- Ground Snow Load, Pg = 35 psf
- Roof Live Load, LLr = 20 psf

ANALYSIS RESULTS:

The analysis of the appurtenance mount assemblies was conducted in accordance with the criteria outlined herein with the aforementioned proposed equipment loading. The following table summarizes the results of the analysis:

Appurtenance Ballasted Mount Assembly	Usage (%)
Manufacturing Loading Rating	29%
Sliding	50%
Overturning	53%

CONCLUSIONS AND RECOMMENDATIONS:

In conclusion, we find that the existing appurtenance mount assemblies located at 330 Bishop Street in Waterbury, Connecticut meets the requirements of the 2021 International Building Code (IBC), as amended by the 2022 Connecticut State Building Code, and the ANSI/TIA-222-H standard under the proposed equipment loading. Furthermore, it is our professional opinion that proposed equipment modification will not adversely affect the structural integrity of the existing host structure.

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

Michael S. Trodden, P.E.
Senior Structural Engineer

LIMITATIONS:

This report is based on the following:

1. Tower/structure is properly installed and maintained.
2. With the exception of the anchor bolts, all members are in a non-deteriorated condition.
3. All required members are in place.
4. All bolts are in place and are properly tightened.
5. Tower/structure is in plumb condition.
6. All tower members were properly designed, detailed, fabricated, and installed and have been properly maintained since erection.

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

1. Replacing or reinforcing bracing members.
2. Reinforcing members in any manner.
3. Installing antenna mounts.
4. Extending tower/structure.

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

Appendix A

Design Criteria

Municipality	Basic Design Wind Speeds, V (mph)				Allowable Stress Design Wind Speeds, V_{asd} (mph)				Ground Snow Load p_g (psf)	MCE Ground Accelerations		Wind-Borne Debris Region[1]		Hurricane-Prone Region
	Risk Cat. I	Risk Cat. II	Risk Cat. III	Risk Cat. IV	Risk Cat. I	Risk Cat. II	Risk Cat. III	Risk Cat. IV		S_S (g)	S_1 (g)	Risk Cat. III Occup. I-2	Risk Cat. IV	
Sherman	110	115	125	130	85	89	97	101	35	0.203	0.055			
Simsbury	110	120	125	130	85	93	97	101	35	0.177	0.054			Yes
Somers	110	120	130	135	85	93	101	105	35	0.174	0.055			Yes
South Windsor	110	120	130	135	85	93	101	105	30	0.183	0.055			Yes
Southbury	110	120	130	130	85	93	101	101	35	0.199	0.054			Yes
Southington	110	120	130	135	85	93	101	105	30	0.196	0.055			Yes
Sprague	115	125	135	140	89	97	105	108	30	0.191	0.054			Yes
Stafford	110	120	130	135	85	93	101	105	35	0.176	0.055			Yes
Stamford	110	120	130	135	85	93	101	105	30	0.261	0.058		Type B	Yes
Sterling	115	125	135	140	89	97	105	108	35	0.187	0.054			Yes
Stonington	120	130	140	145	93	101	108	112	30	0.182	0.051	Type B	Type A	Yes
Stratford	110	120	130	135	85	93	101	105	30	0.206	0.054		Type B	Yes
Suffield	110	120	125	130	85	93	97	101	35	0.170	0.054			Yes
Thomaston	110	120	125	130	85	93	97	101	35	0.184	0.054			Yes
Thompson	110	120	130	135	85	93	101	105	40	0.185	0.056			Yes
Tolland	110	120	130	135	85	93	101	105	35	0.182	0.055			Yes
Torrington	110	115	125	130	85	89	97	101	40	0.175	0.054			
Trumbull	110	120	130	135	85	93	101	105	30	0.210	0.054			Yes
Union	110	120	130	135	85	93	101	105	40	0.178	0.055			Yes
Vernon	110	120	130	135	85	93	101	105	30	0.186	0.055			Yes
Voluntown	120	130	135	140	93	101	105	108	30	0.188	0.053			Yes
Wallingford	110	120	130	135	85	93	101	105	30	0.205	0.055			Yes
Warren	110	115	125	130	85	89	97	101	40	0.179	0.054			
~~Washington~~	~~110~~	~~115~~	~~125~~	~~130~~	~~85~~	~~89~~	~~97~~	~~101~~	~~35~~	~~0.189~~	~~0.054~~			
Waterbury	110	120	130	135	85	93	101	105	35	0.193	0.054			Yes
~~Waterford~~	~~120~~	~~130~~	~~140~~	~~140~~	~~93~~	~~101~~	~~108~~	~~108~~	~~30~~	~~0.194~~	~~0.053~~	~~Type B~~	~~Type B~~	~~Yes~~
Watertown	110	120	130	130	85	93	101	101	35	0.189	0.054			Yes
West Hartford	110	120	130	135	85	93	101	105	30	0.187	0.055			Yes
West Haven	110	125	130	135	85	97	101	105	30	0.200	0.053	Type B	Type B	Yes
Westbrook	115	125	135	140	89	97	105	108	30	0.204	0.054	Type B	Type B	Yes
Weston	110	120	130	135	85	93	101	105	30	0.233	0.056			Yes
Westport	110	120	130	135	85	93	101	105	30	0.232	0.056		Type B	Yes

Appendix B

Antenna Mount Analysis

ALL-POINTS TECHNOLOGY CORPORATION

Project ID:	CT141_13920
Site Name:	Waterbury Fulton CT
Date:	5/1/2023

(Based on ANSI/TIA-222-H)

Site Name:	Waterbury Fulton CT
Site Address:	330 Bishop Street Waterbury, CT 06704
Site County:	New Haven

Design Criteria:

Risk Category =	II		*Table 1.5-1*
Exposure Category =	B		*Section 26.7.3*
Ultimate Design Wind Speed, V =	120	mph	*2022 CTSBC, Appendix P*

Wind Pressure Analysis:

$q_z = 0.00256K_zK_{zt}K_sK_eK_dV^2$ *Section 2.6.11.6*

K_z : **See Next Sheet**

	z_g =	1200	*Table 26.9-1*
	α =	7	*Table 26.9-1*
	K_{zmin} =	0.7	*Table 26.9-1*
K_{zt} :	K_{zt} =	**1.00**	*Section 2.6.6*
K_s :	K_s =	**1.00**	*Section 2.6.7*
K_e :	K_e =	**1.00**	*Section 2.6.8*
K_d :	K_d =	**0.95**	*Section 16.6*
	q_z' =	**35.02**	**psf**

$F = q_zG_h(EPA)_A = q_zG_hK_a[(EPA)_N\cos^2(\Theta)+(EPA)_T\sin^2(\Theta)]$ *Section 2.6.11.2*

G_h =	1.00	*Section 16.6*
K_a =	0.90	*Section 16.6*

Project ID:	CT141_13920
Site Name:	Waterbury Fulton CT
Date:	5/1/2023

(Based on ANSI/TIA-222-H)

Rooftop Wind Speed-Up Factor *(Section 2.6.7)*

Building Information:

Building Height, H =	60.7	ft., +/-	*(Roof Height)*
Parapet Height, H_{ppt} =	1.00	ft., +/-	
Largest Windward Face of Structure, W_s =	136.0	ft., +/-	
H_s =	61.7	ft	
W_s/H_s =	0.45		

Rooftop Wind Speed-Up Factor Criteria:

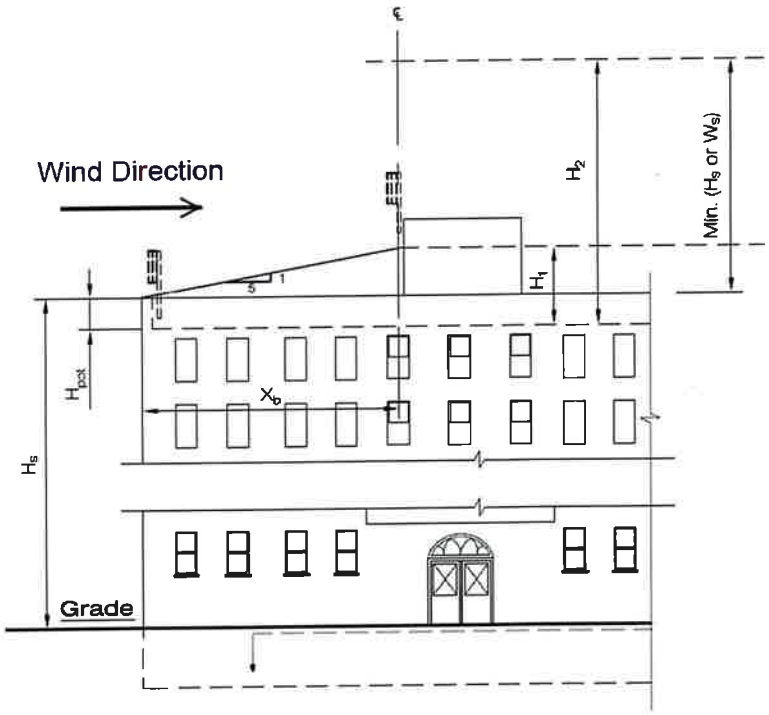
Does the site meet the following conditions?:

Condition 1: The building is greater than 50ft [15m] in height and is isolated and unobstructed for a continuous 90 degree quadrant by other buildings of comparable height for a distance from the windward wall equal to 2,600ft [792m] or twenty times the building height, whichever is less. **NO**

Condition 2: The building protrudes 50ft [15m] above the average height of immediately adjacent buildings in a continuous 90 degree quadrant. **NO**

Rooftop Wind Speed-Up Factor Determination:

Antenna Centerline =	66.8	ft, +/-
Height above roof, z_r =	6.1	ft
x_b =	3	ft
H_1 =	1.6	ft
H_2 =	61.7	ft
Ks =	**1.00**	



ALL-POINTS TECHNOLOGY CORPORATION

(Based on ANSI/TIA-222-H)

Project ID: CT141_13920
Site Name: Waterbury Fulton CT
Date: 5/1/2023

Design Criteria: *(From Previous Sheet)*

q_z = 35.02 psf G_h = 1.00 *Section 16.6* K_a = 0.90 *Section 16.6*

Description	Elev. z, ft	K_z	q_z, psf	Dimensions Height, in	Width, in	Depth, in	Wght., lbs	Flat Panel Front Coefficient Area, ft^2	Aspect Ratio	Ca	C_aA_a	Flat Panel Side Coefficient Area, ft^2	Aspect Ratio	Ca	C_aA_a	Front Wind Force, lbs	Side Wind Force, lbs	Weight, lbs
Nokia B13 RRH4x30	64.7	0.873	30.56	20.9	11.8	7.5	55.6	1.71	1.771	1.20	2.06	1.089	2.787	1.21	1.320	57.0	37.0	55.6
Nokia B4 RRH 2x60 - 4R	64.7	0.873	30.56	36.7	10.6	5.8	55.0	2.70	3.462	1.24	3.36	1.478	6.328	1.37	2.025	93.0	56.0	55.0
BSF0020F3V1-1	64.7	0.873	30.56	10.6	10.9	3.2	17.6	0.80	0.972	1.20	0.96	0.232	3.365	1.24	0.287	27.0	8.0	17.6
6OVP	64.7	0.873	30.56	19.8	15.7	10.3	32.0	2.16	1.259	1.20	2.60	1.409	1.932	1.20	1.691	72.0	47.0	32.0

ALL-POINTS TECHNOLOGY CORPORATION

Project ID:	CT141_13920
Site Name:	Waterbury Fulton CT
Date:	5/1/2023

Antenna/Appurtenance Loading:

Quant.	Description	ASD Factor	Ultimate Wind Load, lbs EA.	Wind Load, lbs (Tot.)	Centerline Height,ft.	$M_{overturn}$, lbs-ft	Weight, lbs EA.	Weight, lbs (Tot.)
1	B13 RRH	0.6	57.0	34.2	4.0	136.8	55.6	55.6
1	B4 RRH	0.6	93.0	55.8	4.0	223.2	55.0	55.0
1	OVP	0.6	72.0	43.2	4.0	172.8	32.0	32.0
1	**BSF0020F3V1-1**	0.6	27.0	16.2	4.0	64.8	17.6	17.6
				149.4		**597.6**		**160.2**

Mount Capacity Check:

Per SitePRO1 Mount Capacity Letter (dated March 18, 2015) for the RT-RRU5HD:

Total Mount Load (Normal) =	149.4	lbs	/	1120.0	lbs (@ 4'H)	**13.3%**	**OK**
Total Mount Load (Tangential) =	129.0	lbs	/	800.0	lbs (@ 4'H)	**16.1%**	**OK**
Total Mount Load (Dead) =	160.2	lbs	/	560.0	lbs (@ 4'H)	**28.6%**	**OK**

Ballast Weights:

Solid 4"x8"x16" Block 33 lbs/block

	Quant.	Weight, lbs	Moment Arm, ft	M_{resist}, lbs-ft
Front Tray:	5	165.0	0.75	123.8
Back Tray:	5	165.0	4.50	742.5
		330.0		**866.3**

	DL Reduction Factor	Weight, lbs	Moment Arm, ft	M_{resist}, lbs-ft
Equip:	0.6	96.1	2.625	252.3
		96		**252.3**

ALL-POINTS TECHNOLOGY CORPORATION

Project ID:	CT141_13920
Site Name:	Waterbury Fulton CT
Date:	5/1/2023

Sliding Resistance:

Weight =	426.1 lbs		
$F_{resist.}$ =	**298.3 lbs**	μ =	0.7
F_{wind} =	**149.4 lbs**		
Usage =	0.50 < 1.0	**OK**	

Overturning Resistance:

$M_{resist.}$ =	**1118.6 lbs-ft**	
$M_{overturn.}$ =	**597.6 lbs-ft**	
Usage =	0.53 < 1.0	**OK**

Roof Pressure Check:

>> Add four (4) SitePRO1 MAT18 Rubber Mats (48"x18"x1/2")

Weight of Mounting Frame =	282.1 lbs	
Equipment Weight =	330.0 lbs	
Ballast Weight =	160.2 lbs	
Total Weight =	**772.3 lbs**	
Mat Area =	24.0 ft^2	
Mat Weight =	2.125 psf	
Roof Pressure =	**34.30 psf**	

>> Compare against roof pressure applied per CENTEK CDs:

Weight of Mounting Frame =	161.8 lbs	*(Andrew RR-TFS spec sheet)*		
Est. Equipment Weight =	182.0 lbs	*(3) - 50 lbs RRH, (1) - 32 lbs OVP*		
Ballast Weight =	200.0 lbs	*(Per CDs)*		
Base Area =	12.8 ft^2	*(Total Area of mat, Per CDs)*		
Mat Weight =	2.125 psf			
Roof Pressure =	**44.68 psf**	>	**34.30**	**psf, OK**

Appendix C

References

SITE PRO 1

A valmont COMPANY

March 18, 2015

RE: ANSI/TIA-222-G Mount Capacity
Valmont / Site Pro 1 Mount: 5' Rooftop RRU Frame

Part No. RT-RRU5HD

The 5' Rooftop RRU Frame referenced above has been analyzed in accordance with ANSI/TIA-222-G-2005 standard using the following design criteria.

Mount Design Criteria

Structure Height	300'	
Basic Wind Speed	140 mph	
Ice Wind Speed	60 mph	
Structure Class	II	
Exposure Category	B	
Topographic Category	I	
Factored Ice Thickness	2.49"	
Wind Direction Factor	0.95	Tubular Pole Structures, Lattice Structures with other than triangular, square or rectangular cross-sections, strength design of appurtenances
Gust Effect Factor	1.0	Appurtenances

Modeling & Applied Appurtenance Loading

The mount was analyzed for four (4) mounting locations on each side of the vertical face (8 locations total) evenly spaced across each face of the mount. Based on a 4' mounting height "H", and the Design Criteria above, the maximum allowable force per mounting location is described in the table below:

(Individual location load)		
Normal Wind Load	= factored 224 lbs	= non-factored 140 lbs (560 ft-lbs)
Tangential Wind Load	= factored 160 lbs	= non-factored 100 lbs (400 ft-lbs)
Dead Load	= factored 84 lbs	= non-factored 70 lbs
Normal Wind Load w/ Ice	= N/A	= non-factored 76 lbs
Tangential Wind Load w/ Ice	= N/A	= non-factored 76 lbs
Ice Load	= N/A	= non-factored 240 lbs

(Total mount load)		
Normal Wind Load	= factored 1792 lbs	= non-factored 1120 lbs (4480 ft-lbs)
Tangential Wind Load	= factored 1280 lbs	= non-factored 800 lbs (3200 ft-lbs)
Dead Load	= factored 672 lbs	= non-factored 560 lbs
Normal Wind Load w/ Ice	= N/A	= non-factored 608 lbs
Tangential Wind Load w/ Ice	= N/A	= non-factored 608 lbs
Ice Load	= N/A	= non-factored 1920 lbs

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Non-Penetrating Ballast Requirement

Non-penetrating ballasted Roof Mount enables installation of wireless equipment. This mount, with various mast sizes, is secured to the roof using concrete-block ballast (not included).
A nominal 4 x 8 x 16 solid concrete block weighs approximately 20-30 lbs. Verify weight with local supplier. The ballast should be evenly distributed on each ballast trays. The required ballast can be calculated using one of two equations shown below.

Ballast Equation Information

A_L	= Total Antenna / Equipment wind load (non-factored) (lbs)
A_w	= Total Antenna / Equipment weight (non-factored) (lbs)
H	= Height from rooftop (ft)
W_T	= Total ballast weight (lbs)
W	= Ballast weight per tray (lbs)

Ballast equation with 1.5 safety factor:

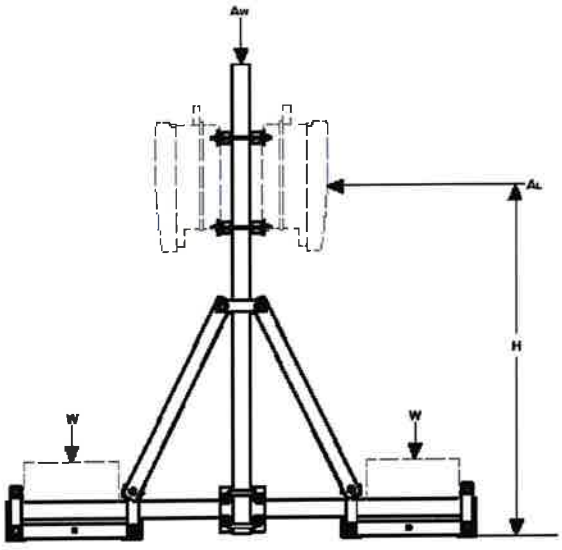
$$W = \frac{(A_L * H * 1.5) - (A_w * 2.625)}{4.5}$$

$$W_T = W * 2$$

Ballast equation with Rev G loading:

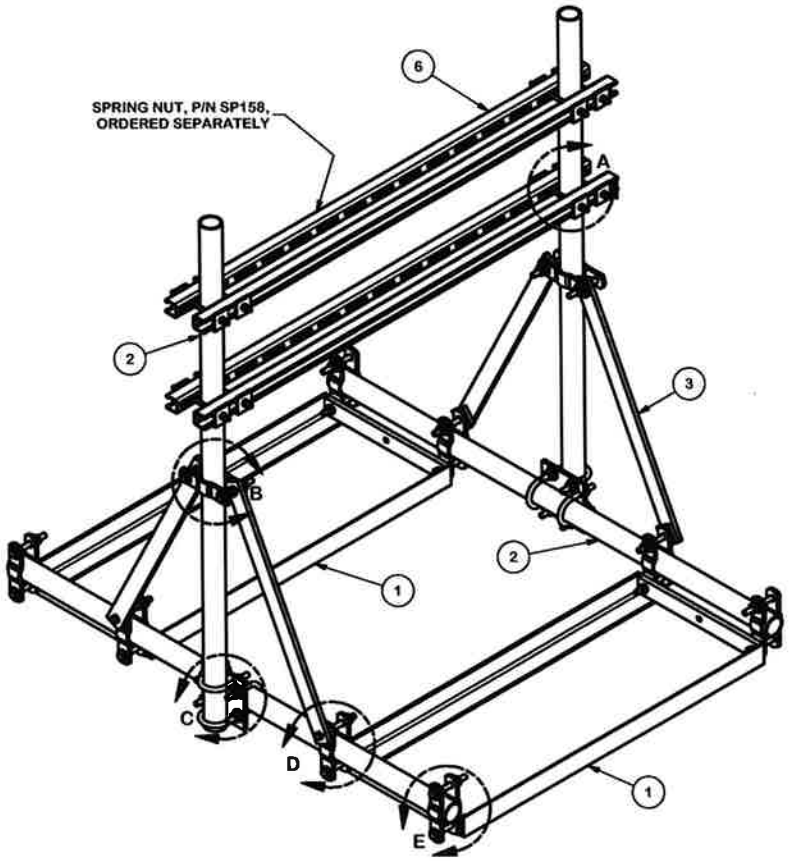
$$W = \frac{(A_L * H * 1.6) - (A_w * 2.625)}{4.5(0.9)}$$

$$W_T = W * 2$$

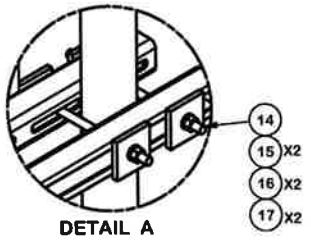


PiROD
MICROFLECT

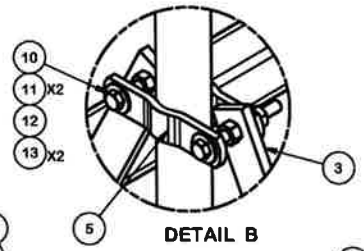
Valmont Site Pro 1
2400 Walter Glaub Drive Plymouth, Indiana 46563-4005 USA
574-936-4221 Fax 574-936-8925 www.sitepro1.com



PARTS LIST						
ITEM	QTY	PART NO.	PART DESCRIPTION	LENGTH	UNIT WT.	NET WT.
1	2	X-251012	BALLAST TRAY WELDMENT - SITE PRO 1		36.46	72.92
2	4	P263	2-3/8" X 63"SCH 40 GALVANIZED PIPE	63 in	20.18	80.74
3	4	X-232698	TRPD-HD SUPPORT PLATE - SITE PRO 1		8.72	34.89
4	2	SCX1	CROSSOVER PLATE 2-3/8" X 2-3/8"		3.71	7.42
5	20	X-115765	5" V-CLAMP		1.03	20.51
6	4	UNT5	UNISTRUT		10.19	40.76
7	4	X-124312	1/2" X 2" X 2" ANGLE SPACER; WITH 9/16" HOLE		0.53	2.13
8	8	X-UB1212	1/2" X 2-1/2" X 4-1/2" X 2" U-BOLT (HDG.)		0.73	5.85
9	4	G1205	1/2" x 5" HDG HEX BOLT GR5 FULL THREAD	5 in	0.33	1.30
10	16	G12045	1/2" x 4.5" HDG HEX BOLT GR5 FULL THREAD	4 1/2 in	0.30	4.77
11	44	G12FW	1/2" HDG USS FLATWASHER		0.03	1.50
12	36	G12LW	1/2" HDG LOCKWASHER		0.01	0.50
13	40	G12NUT	1/2" HDG HEAVY 2H HEX NUT		0.07	2.87
14	8	SS38R-8	3/8" X 8" THREADED ROD (STAINLESS STEEL)		0.25	2.01
15	16	SQW38	3/8" SQUARE WASHER (GALV.)	2 in	0.27	4.37
16	16	SS38LW	3/8" SS LOCKWASHER		0.01	0.11
17	16	SS38NUT	3/8" SS HEX NUT		0.02	0.29
					TOTAL WT. #	282.07



DETAIL A



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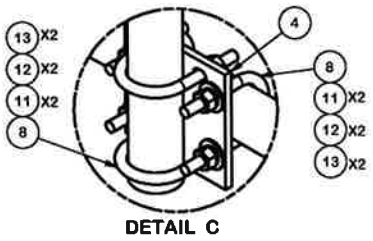
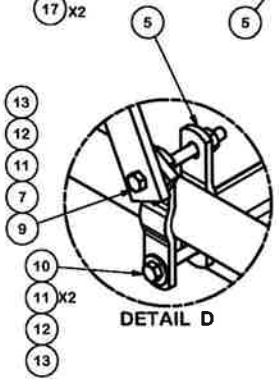
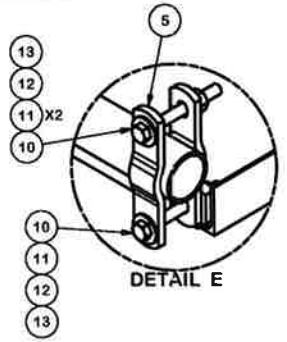


DETAIL C



DETAIL D



DETAIL E

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
5' HEAVY DUTY ROOFTOP
FOR REMOTE RADIO UNITS

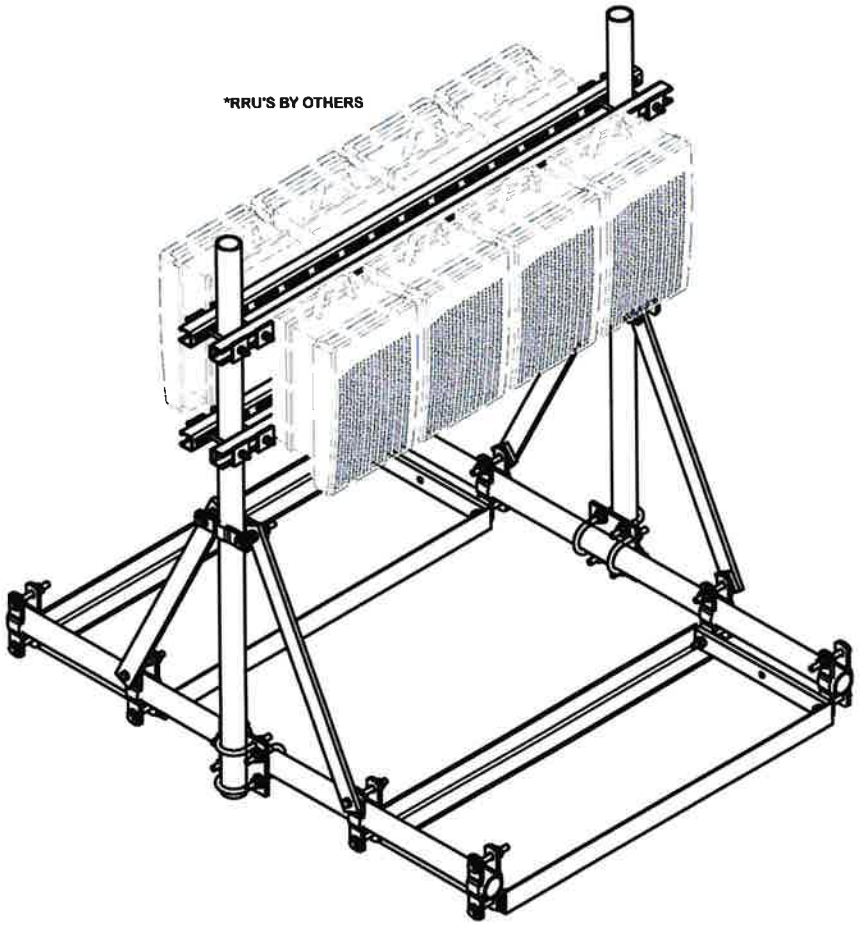
SITE PRO 1 — A valmont company

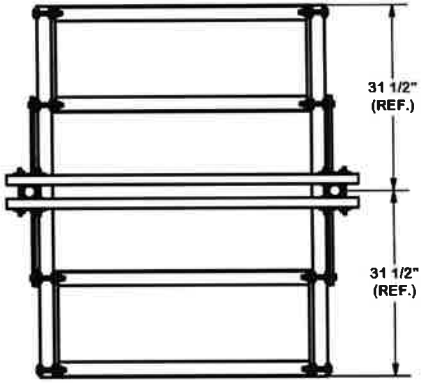
Engineering Support Team: 1-888-753-7446

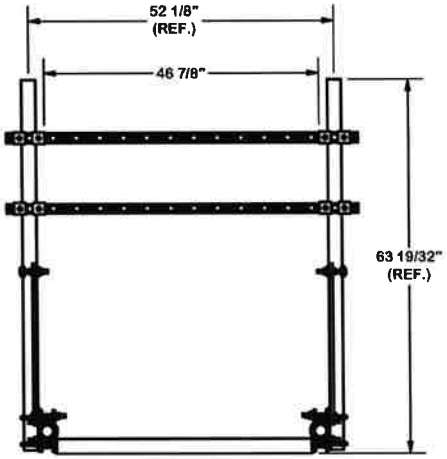
Locations:
New York, NY
Atlanta, GA
Los Angeles, CA
Plymouth, IN
Salem, OR
Dallas, TX

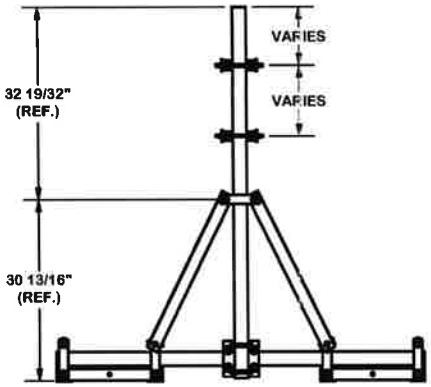
CPD NO.	DRAWN BY	ENG. APPROVAL	PART NO.
	CEK 3/16/2015		RT-RRU5HD

CLASS	SUB	DRAWING USAGE	CHECKED BY	DWG. NO.
81	02	CUSTOMER	BMC 3/16/2015	RT-RRU5HD









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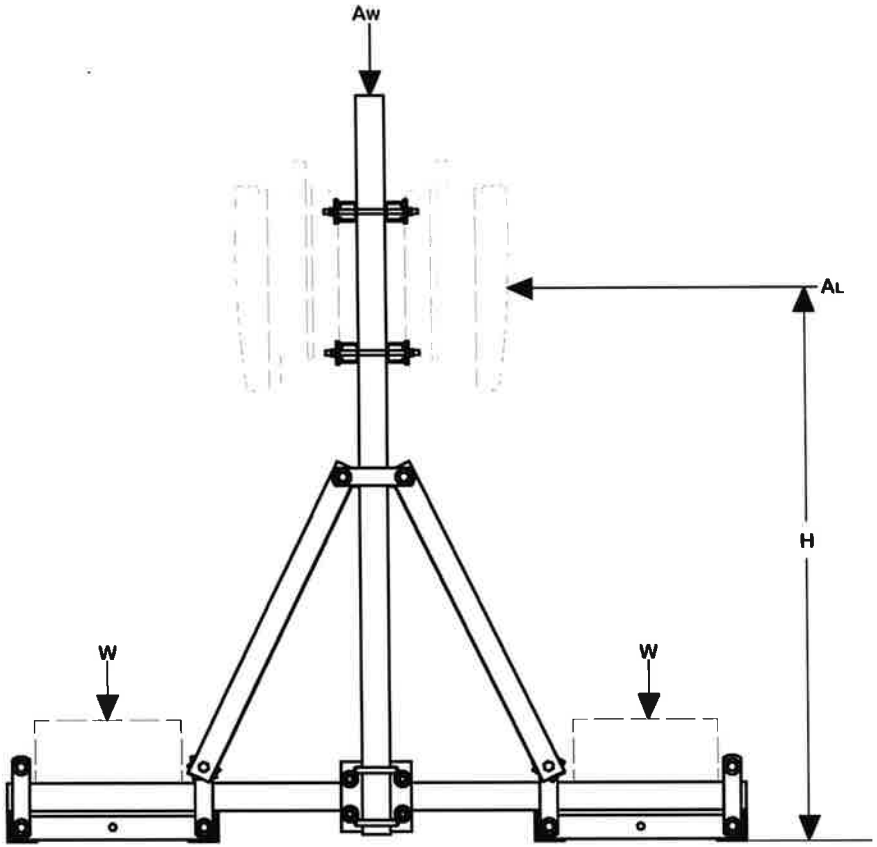
DESCRIPTION			
5' HEAVY DUTY ROOFTOP FOR REMOTE RADIO UNITS			
CPD NO.	DRAWN BY: CEK 3/16/2015	ENG. APPROVAL	PART NO.: RT-RRU5HD
CLASS: 81 / SUB: 02	DRAWING USAGE: CUSTOMER	CHECKED BY: BMC 3/16/2015	DWG. NO.: RT-RRU5HD

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



BALLAST EQUATION WITH 1.5 SAFETY FACTOR:

$$W = \frac{(A_L * H * 1.5) - (A_W * 2.625)}{4.5}$$

$$W_T = W * 2$$

BALLAST EQUATION WITH REV. G LOADING:

$$W = \frac{(A_L * H * 1.6) - (A_W * 2.625)}{4.5\ (0.9)}$$

$$W_T = W * 2$$

A_L	= TOTAL ANTENNA / EQUIPMENT WIND LOAD (NON-FACTORED)	lbs
A_W	= TOTAL ANTENNA / EQUIPMENT WEIGHT (NON-FACTORED)	lbs
H	= HEIGHT FROM ROOFTOP	ft
W_T	= TOTAL BALLAST WEIGHT	lbs
W	= BALLAST WEIGHT PER TRAY	lbs

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DESCRIPTION: 5' HEAVY DUTY ROOFTOP FOR REMOTE RADIO UNITS

SITE PRO — 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.
	CEK 3/16/2015		RT-RRU5HD

CLASS	SUB	DRAWING USAGE	CHECKED BY	DWG. NO.
81	02	CUSTOMER	BMC 3/16/2015	RT-RRU5HD

SITE PRO 1
A valmont COMPANY

MAT18: Rubber Mats

Features:

- Manufactured from UV-resistant 1/2" thick rubber
- Six mats required for use with Non-Penetrating Tripods
- Four mats required for use with Non-Penetrating Roof-Top Frames

Part #	Size
MAT18	1/2" x 18" x 48"

SITE PRO 1
A valmont COMPANY

MAT18: Rubber Mats

Product Class: Rubber

Property	Test Method	Result		Unit
Density	ASTM D297	.64 min		g/cm³
Tensile Strength	ASTM D412, Die C	71 min		PSI
Elongation	ASTM D412, Die C	30 min		Percent
Compression	ASTM F36		Recovery	
100 psi		25 - 35	85 min	Percent
200 psi		40 - 50	85 min	Percent
300 psi		50 - 60	85 min	Percent
400 psi		60 - 70	85 min	Percent
Shore A Hardness	ASTM D2240	20 - 60		Points
Tear Strength	ASTM D624, Die C	20 min		PPI
Flexibility	ASTM F147	1 max		Factor
Compression Set B 25% deflection, 22 hrs. 158°F	ASTM D395	20 - 30		Percent
Compression Set (Foam) 50% deflection, 22 hrs 158°F	ASTM D3676	20 - 30		Percent

This material has a shelf life of 5 years from date of manufacture when protected from environmental extremes.

The values shown represent current production and may vary under different conditions.

ecore™

6510

Product Class: Rubber

Property	Test Method	Typical Result
Density	ASTM D297	51 lbs./ft^3 (0.82 g/cm^3)
Tensile Strength	ASTM D412, Die C	100 lbs./in^2 (690 kPa)
Elongation	ASTM D412, Die C	80%
Tear Strength	ASTM D624, Die C	38 lbs./in. (6.7 N/mm)
Shore A Hardness	ASTM D2240	48
Flexibility	ASTM F147	1
Compression @ 100 psi	ASTM F36	25%
Recovery		92%
Compression Set B	ASTM D395	40% max.
25% deflection, 22 hrs. 158°F		

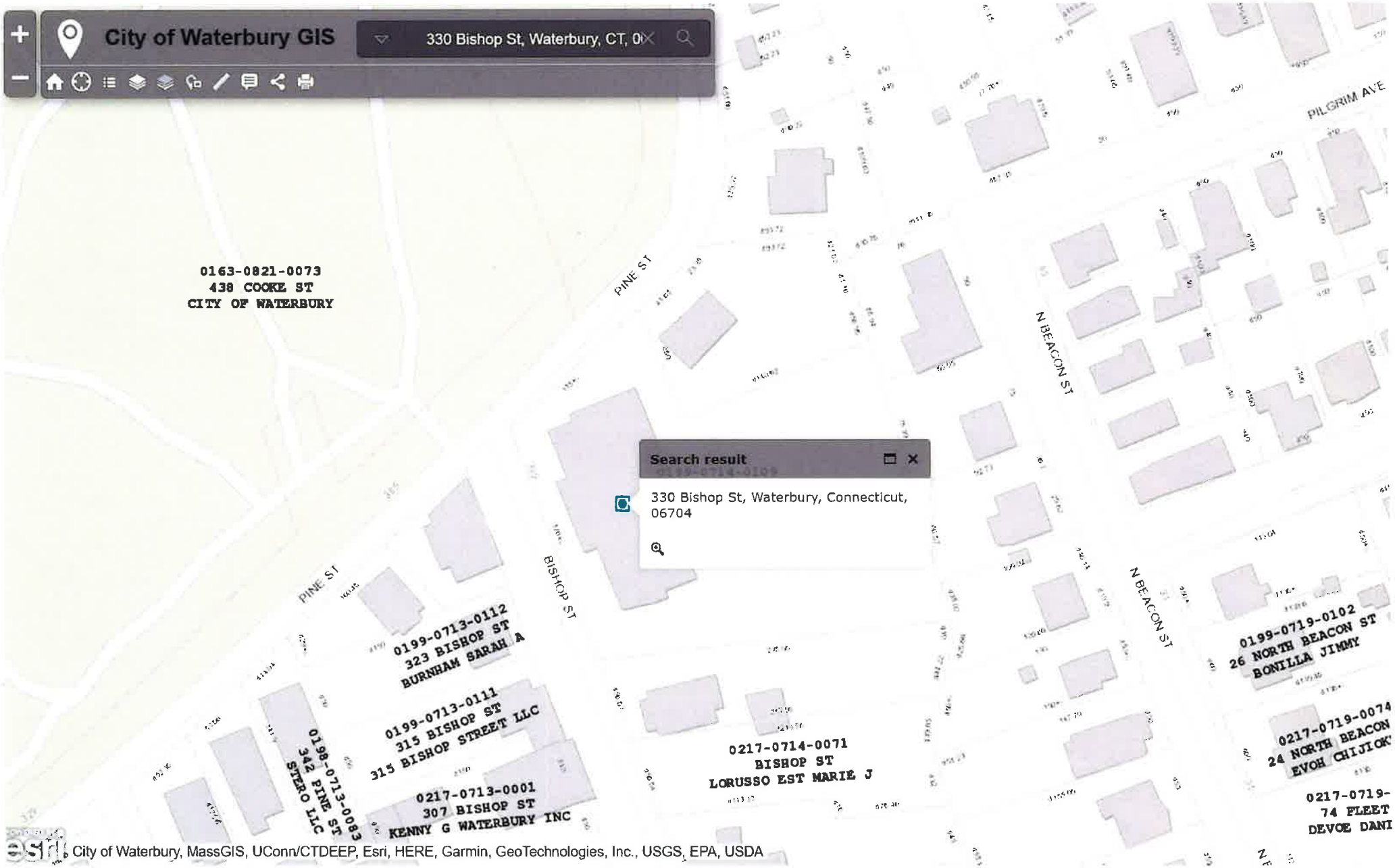
This material has a shelf life of 5 years from date of manufacture when protected from environmental extremes.

The values shown represent current production and may vary under different conditions.

PS-150 6510 (8012 & 8014)
REV 101015
WMW

715 Fountain Avenue, Lancaster, PA 17601 phone: 717.295.3400

ATTACHMENT 4


City of Waterbury GIS
330 Bishop St, Waterbury, CT, 0
0163-0821-0073
438 COOKE ST
CITY OF WATERBURY
PINE ST
N BEACON ST
PILGRIM AVE
Search result
330 Bishop St, Waterbury, Connecticut, 06704
BISHOP ST
0199-0713-0112
323 BISHOP ST
BURNHAM SARAH A
0199-0713-0111
315 BISHOP ST
315 BISHOP STREET LLC
0198-0713-0082
342 PINE ST
STERO LLC
0217-0713-0001
307 BISHOP ST
KENNY G WATERBURY INC
0217-0714-0071
BISHOP ST
LORUSSO EST MARIE J
0199-0719-0102
26 NORTH BEACON ST
BONILLA JIMMY
0217-0719-0074
24 NORTH BEACON
EVOH CHIJIOK
0217-0719-
74 FLEET
DEVOE DANI
City of Waterbury, MassGIS, UConn/CTDEEP, Esri, HERE, Garmin, GeoTechnologies, Inc., USGS, EPA, USDA

The Assessor's office is responsible for the maintenance of records on the ownership of properties. Assessments are computed at 70% of the estimated market value of real property at the time of the last revaluation which was 2017.

CITY OF WATERBURY

Information on the Property Records for the Municipality of Waterbury was last updated on 5/4/2022.

Property Summary Information

Parcel Data And Values | Building | Outbuildings | Sales | Permits

Parcel Information

Location:	330 BISHOP ST	Property Use:	Multifamily	Primary Use:	Apt - High Rise
Unique ID:	019907140109	Map Block Lot:	0199-0714-0109	Acres:	1.09
490 Acres:	0.00	Zone:	RM	Volume / Page:	4254/ 142
Developers Map / Lot:		Census:			

Value Information

	Appraised Value	Assessed Value
Land	170,313	119,220
Buildings	1,916,731	1,341,710
Detached Outbuildings	23,096	16,170
Total	2,110,140	1,477,100

Owner's Information

Owner's Data

WATERBURY OMEGA LLC
330 BISHOP ST #100
WATERBURY, CT 06704

ATTACHMENT 5

Waterbury Fulton

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	3	OLD STATE HOUSE STATION 06103 MAY 18 2023 neopost 05/18/2023 US POSTAGE $003.10⁰⁰ ZIP 06103 041L12203937
	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.	Neil M. O'Leary, Mayor City of Waterbury 236 Grand Street Waterbury, CT 06702				
2.	Robert Nerney, City Planner City of Waterbury 185 South Main Street Waterbury, CT 06706				
3.	Waterbury Omega LLC Attn: Moishe Schwatrz PO Box 4870 Waterbury, CT 06704				
4.					
5.					
6.					

See Reverse for Instructions