

May 29, 2020

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
99 Hamilton Avenue, Stamford, Connecticut**

Dear Attorney Bachman:

Cellco Partnership d/b/a Verizon Wireless (“Cellco”) currently maintains four (4) wireless telecommunications antennas at a height of approximately 30’ above ground level (“AGL”) on the faux chimney stack on the roof of the building at 99 Hamilton Avenue in Stamford, Connecticut (the “Property”).¹ The building and the Property are owned by Cubesmart LP. Cellco’s use of this faux chimney structure was approved by the Council in 2016 (Petition No. 1253). A copy of the Council’s approval and staff report are included in Attachment 1.

Cellco now intends to modify its facility by adding one (1) antenna/remote radio head integrated unit adjacent to its existing alpha sector antennas. A set of project plans showing the proposed facility modifications and the specifications for Cellco’s new antenna/RRH unit 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 Stamford’s Mayor, David Martin;

¹ The existing facility consists of a 17-foot tall faux chimney on top of a self-storage building at the Property.

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Ralph Blessing, Stamford's Land Use Bureau Chief; and Cubesmart LP, the owner of the Property.

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

1. The proposed modifications will not result in an increase in the height of the existing faux chimney. Cellco's new antenna will be installed at the same level as the existing alpha sector antennas.

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 antenna will not increase radio frequency (RF) emissions at the facility to a level at or above the Federal Communications Commission (FCC) safety standard. A worst-case General Power Density table for Cellco's modified facility is included in Attachment 3.

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

6. The chimney structure and antenna mounts can support Cellco's proposed modifications. (See Structural Analysis Report and Mount Structural Analysis Report 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 owner of the Property 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).

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Sincerely,

A handwritten signature in black ink, appearing to read 'Kenneth C. Baldwin', with a stylized, flowing script.

Kenneth C. Baldwin

Enclosures

Copy to:

David Martin, Stamford Mayor
Ralph Blessing, Stamford Land Use Bureau Chief
Cubesmart LP
Tim Parks

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

CERTIFIED MAIL RETURN RECEIPT REQUESTED

October 31, 2016

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

RE: **PETITION NO. 1253** - Cellco Partnership d/b/a Verizon Wireless petition for a declaratory ruling that no Certificate of Environmental Compatibility and Public Need is required for the proposed installation of a wireless telecommunications facility on the roof of an existing commercial building located at 99 Hamilton Avenue, Stamford, Connecticut.

Dear Attorney Baldwin:

At a public meeting held on October 27, 2016, the Connecticut Siting Council (Council) considered and ruled that the above-referenced proposal would not have a substantial adverse environmental effect, and pursuant to Connecticut General Statutes § 16-50k, would not require a Certificate of Environmental Compatibility and Public Need with the following conditions:

1. Use of off-road construction equipment that meets the latest EPA or California Air Resources Board standards, or in the alternative, equipment with the best available controls on diesel emissions, including, but not limited to, retrofitting with diesel oxidation catalysts, particulate filters and use of ultra-low sulfur fuel;
2. Compliance with the provisions of Section 22a-174-18(b)(3)(C) of the Regulations of Connecticut State Agencies that limit the idling of mobile sources to 3 minutes;
3. Approval of any minor project changes be delegated to Council staff;
4. Unless otherwise approved by the Council, if the facility authorized herein is not fully constructed within three years from the date of the mailing of the Council's decision, this decision shall be void, and the facility owner/operator shall dismantle the facility 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 decision shall not be counted in calculating this deadline. Authority to monitor and modify this schedule, as necessary, is delegated to the Executive Director. The facility owner/operator shall provide written notice to the Executive Director of any schedule changes as soon as is practicable;
5. Any request for extension of the time period to fully construct the facility shall be filed with the Council not later than 60 days prior to the expiration date of this decision and shall be served on all parties and intervenors, if applicable, and the Town of Stamford;
6. Within 45 days after completion of construction, the Council shall be notified in writing that construction has been completed;

7. 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;
8. If the facility ceases to provide wireless services for a period of one year the Petitioner shall dismantle the tower and remove all associated equipment or reapply for any continued or new use to the Council within 90 days from the one year period of cessation of service. The Petitioner may submit a written request to the Council for an extension of the 90 day period not later than 60 days prior to the expiration of the 90 day period; and
9. This Declaratory Ruling may be transferred or partially transferred, provided both the facility owner/operator/transferor and the transferee are current with payments to the Council for their respective annual assessments and invoices under Conn. Gen. Stat. §16-50v. The Council shall be notified of such sale and/or transfer and of any change in contact information for the individual or representative responsible for management and operations of the facility within 30 days of the sale and/or transfer. Both the facility owner/operator/transferor and the transferee shall provide the Council with a written agreement as to the entity responsible for any quarterly assessment charges under Conn. Gen. Stat. §16-50v(b)(2) that may be associated with this facility.

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 petition dated September 20, 2016.

Enclosed for your information is a copy of the staff report on this project.

Very truly yours,



Robert Stein
Chairman

RS/RDM/cm

Enclosure: Staff Report dated October 27, 2016

c: The Honorable David Martin, Mayor, City of Stamford
Norman Cole, AICP, Land Use Bureau Chief, City of Stamford



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

Petition No. 1253

Cellco – Rooftop Telecommunications Facility

99 Hamilton Avenue, Stamford

Staff Report

October 27, 2016

On September 21, 2016, the Connecticut Siting Council (Council) received a petition from Cellco Partnership d/b/a Verizon Wireless (Cellco) for a declaratory ruling that no Certificate of Environmental Compatibility and Public Need is required for the proposed installation of a rooftop telecommunications facility at 99 Hamilton Avenue, Stamford, Connecticut. The site would provide LTE service to the southeast section of Stamford in the 1900 MHz and 2100 MHz frequency bands.

Cellco would replace an existing 17-foot chimney on the roof of a one-story commercial building with a faux brick chimney of the same height. The existing chimney is abandoned and is not structurally capable of supporting antennas. Cellco would install four panel antennas, four remote radio heads and one control box on the exterior, upper sides of the faux chimney. No antennas or other equipment would extend above the height of the faux chimney. The total height of the proposed facility is approximately 31 feet above ground level.

Cellco would install radio equipment in a 200 square foot lease area in a basement storage room. Electrical service would be obtained from existing building service.

The subject property, a self-storage facility owned by CubeSmart LP, is located in Stamford's M-L Light Industrial Zone. The property is surrounded by other developed commercial and industrial properties. The faux chimney would be designed to match existing building materials. The antennas and other exterior equipment would be painted to match the faux chimney and existing building finish. The visibility of the proposed installation would not change from existing conditions.

The calculated power density would be 13.3 percent of the applicable limit. Notice is not required to the Federal Aviation Administration.

Notice was provided to the City of Stamford, the property owner, and abutting property owners on or about September 20, 2016. The Council has not received any comments to date. Cellco contends that this proposed project would not have a substantial adverse environmental impact.

Staff recommends the following conditions:

1. Use of off-road construction equipment that meets the latest EPA or California Air Resources Board standards, or in the alternative, equipment with the best available controls on diesel emissions, including, but not limited to, retrofitting with diesel oxidation catalysts, particulate filters and use of ultra-low sulfur fuel;
2. Compliance with the provisions of Section 22a-174-18(b)(3)(C) of the Regulations of Connecticut State Agencies that limit the idling of mobile sources to 3 minutes; and
3. Approval of any minor project changes be delegated to Council staff.



Photo-simulation of faux chimney installation



PROPOSED

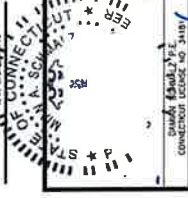
PHOTO	LOCATION	ORIENTATION	DISTANCE TO SITE
2	HAMILTON AVENUE	SOUTHEAST	+/- 102 FEET

ATTACHMENT 2

CONSTRUCTION DRAWINGS	
0	02/19/20 FOR SUBMITTAL
A	02/11/20 FOR REVIEW



Dewberry Engineers Inc.
800 ASPENWAY ROAD
SUITE 200
EAST HARTFORD, CT 06108
PHONE: 860-270-8400
FAX: 860-270-8400
WWW.DEBERRY.COM



DRAWN BY:	BAW
REVIEWED BY:	AM
CHECKED BY:	BSH
PROJECT NUMBER:	50174287
JOB NUMBER:	50174293
SITE NUMBER:	

5017684

SITE ADDRESS

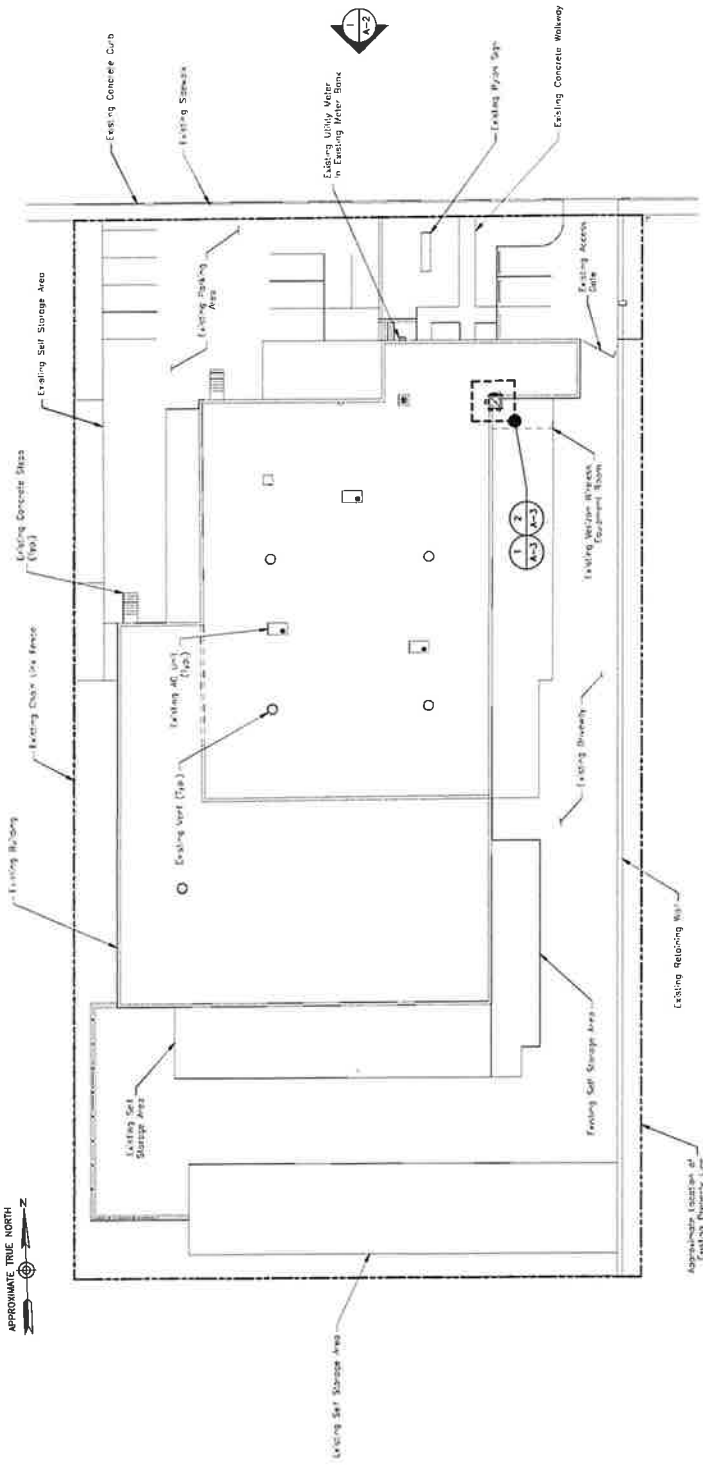
99 HAMILTON AVENUE
STAMFORD, CT 06902

SHEET TITLE

ROOF PLAN

SHEET NUMBER

A-1



ROOF PLAN
SCALE: 1"=40' FOR 11'x17'
1"=20' FOR 22'x34'

SCOPE OF WORK

1. INSTALL (1) NEW NR HBU ANTENNA IN POSITION 1 AT ALPHA SECTOR ONLY.
2. INSTALL NEW JUMPEES FROM THE EXISTING JUNCTION BOX TO THE NR HBU ANTENNA.

NOTES:

1. SCOPE OF WORK BASED ON ANTENNA REC DATED 01/03/2020 PROVIDED BY VERIZON WIRELESS FOR STAMFORD S 2 CT. VERIFY SCOPE OF WORK WITH PRINCIPAL PRIOR TO CONSTRUCTION.

NOTES:

1. NORTH SHOWN AS APPROXIMATE.
2. SOME EXISTING INFORMATION NOT SHOWN FOR CLARITY.
3. ROOF PLAN & ELEVATIONS BASED ON EXISTING PLANS BY DEWBERRY ENGINEERS INC. DATED 01/03/2020 & SITE SURVEY BY DEWBERRY ENGINEERS INC. ON 01/24/20.
4. LOCATION & ELEVATION OF ANTENNA SHALL BE INSTALLED IN ACCORDANCE WITH STRUCTURAL ANALYSIS BY DEWBERRY ENGINEERS INC. DATED 02/04/20.



CONSTRUCTION DRAWINGS

					O	02/19/20	FOR SUBMITTAL
					A	02/11/20	FOR REVIEW



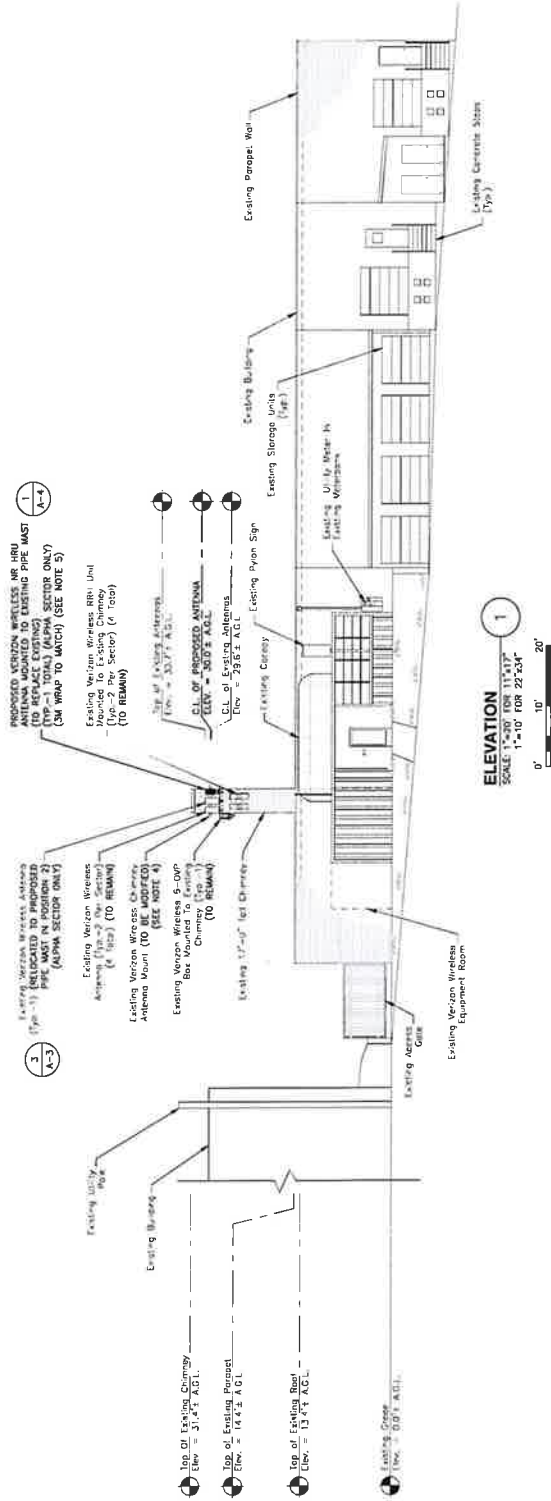
ORDER BY:	BUR
REVIEWED BY:	AY
CHECKED BY:	B54
PROJECT NUMBER:	50124287
JOB NUMBER:	50124793
SITE NUMBER:	

SITE ADDRESS

QUESTIONS

1000

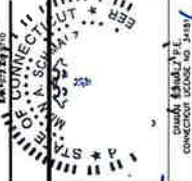
A-2



1. QUANTITY SHOWN AS #PERMANENT.
2. SOME EXISTING INFORMATION NOT SHOWN FOR CLARITY.
3. ROAD PLAN & ELEVATION BASED ON EXISTING PANS BY DORRERY ENGINEERS INC.
4. LOCATION & ORIENTATION OF ALL ANTENNAS, CABLE & EQUIPMENT MARKED BY 17-17-72.
5. MODIFICATIONS SHALL BE INSTALLED IN ACCORDANCE WITH STRUCTURAL ANALYSIS BY DORRERY ENGINEERS INC. DATED 02/04/70.
6. CONTRACTOR TO UTILIZE AN WMP FOR ALL ANTENNAS TO MATCH SURROUNDING ENVIRONMENT AND TO MEET ALL ANTENNA PER MANUFACTURER'S SPECIFICATION & RECOMMENDATIONS.

CONSTRUCTION DRAWINGS	
0	02/19/20 FOR SUBMITTAL
A	02/11/20 FOR REVIEW

Dewberry Engineers Inc.
800 PASHANAW ROAD
SUITE 200
EAST HARTFORD, CT 06108
TEL: 860-233-8800
FAX: 860-233-8800



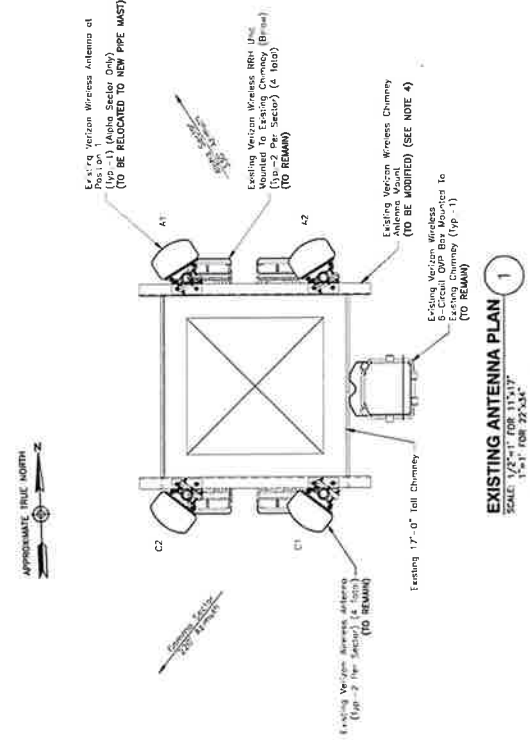
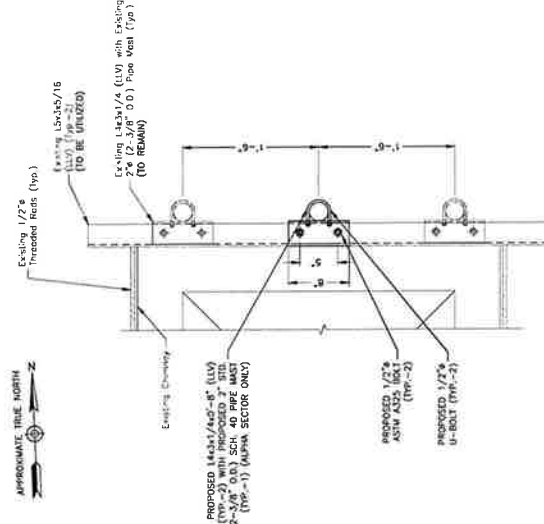
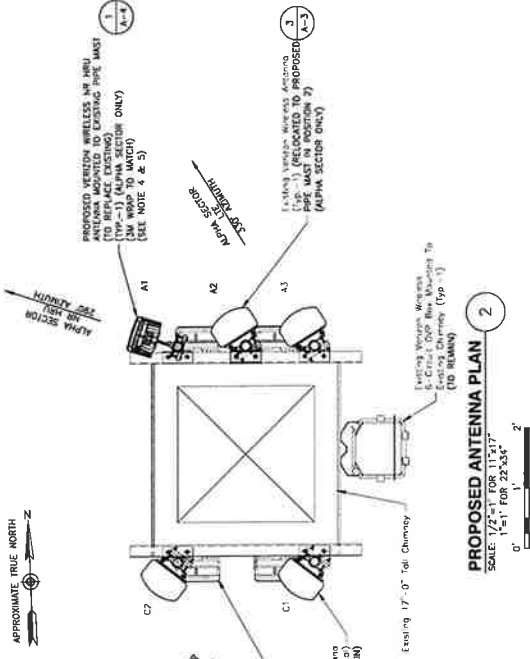
DRAWN BY:	BAW
REVIEWED BY:	AMT
CHECKED BY:	BDH
PROJECT NUMBER:	50174287
JOB NUMBER:	50174293
SITE NUMBER:	

5017684

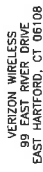
SITE ADDRESS:
99 HAMILTON AVENUE
STAMFORD, CT 06902

SHEET TITLE:	EXISTING & PROPOSED ANTENNA PLANS & MOUNT DETAIL
SHEET NUMBER:	

A-3

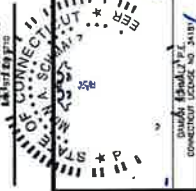
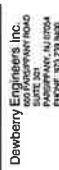


- NOTES:
1. NORTH SHOWN AS APPROXIMATE.
 2. SOME EXISTING INFORMATION NOT SHOWN FOR CLARITY.
 3. ROOF PLAN & ELEVATION BASED ON EXISTING PLANS BY DEWBERRY ENGINEERS INC. DATED 01/06/17 & A SITE VISIT BY DEWBERRY ENGINEERS INC. ON 01/24/20.
 4. LOCATION & ORIENTATION OF ALL ANTENNAS, COAX & EQUIPMENT MOUNT SHALL BE DETERMINED BY THE CLIENT AND COORDINATE WITH STRUCTURAL ANALYSIS BY DEWBERRY ENGINEERS INC. DATED 02/04/20.



CONSTRUCTION DRAWINGS

02/19/20	FOR SUBMITT
02/11/20	FOR REVIEW



DESIGN BY:	BUS
REVIEWED BY:	ANY
CHECKED BY:	BSI
PROJECT NUMBER:	5012429
JOB NUMBER:	5012429
SITE NUMBER:	

DATE: 10/10/2013

99 HAMILTON AVENUE
STAMFORD, CT 06902

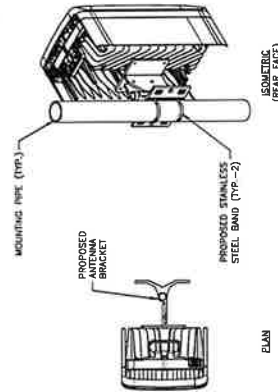
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CONSTRUCTION DETAILS

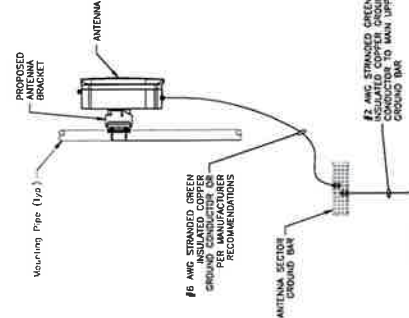
1150

A-4

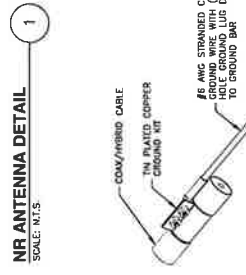
1. ALL DIMENSIONS TO, OF, AND ON EXISTING BUILDINGS, DRAMMAGE STRUCTURES, AND ALL APPURTENANCES SHALL BE VERIFIED IN FIELD BY CONTRACTOR PRIOR TO ALL FABRICATION WITH ALL DISCREPANCIES REPORTED IMMEDIATELY TO THE ENGINEER.
2. DO NOT CHANGE SIZE NOR SPACING OF STRUCTURAL ELEMENTS.
3. DETAILS SHOWN ARE TYPICAL, SIMILAR DETAILS APPLY TO SIMILAR CONDITIONS UNLESS OTHERWISE NOTED.
4. THESE DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY WHICH IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
5. BRACE STRUCTURES UNTIL ALL STRUCTURAL ELEMENTS NEEDED FOR STABILITY ARE IN PLACE. THESE ELEMENTS ARE AS FOLLOWS: LATERAL BRACING, ANCHOR BOLTS, ETC.
6. DETERMINE EXACT LOCATION OF EXISTING UTILITY, GROUNDING DOWNS, DRAIN PIPES, ETC. DO NOT FORCE CONDUITS OR WIRING.
7. DO NOT REMOVE OR ALTER ANY EXISTING WIRING, OR DRAMMAGE/FORMING MATERIALS OR CONDITIONS, SUCH AS BEING REPORTED TO THE OWNER PRIOR TO REMEDIAL OR CORRECTIVE ACTION. ANY SUCH REMEDIAL ACTION SHALL REQUIRE WRITTEN APPROVAL BY THE OWNER'S REPRESENTATIVE PRIOR TO PROCEEDING.
8. EACH CONTRACTOR SHALL COOPERATE WITH THE OWNER'S REPRESENTATIVE AND COORDINATE THEIR WORK WITH THE WORK OF OTHERS.
9. REPAIR ANY DAMAGE DURING CONSTRUCTION TO MATCH EXISTING PRE-CONSTRUCTION CONDITIONS TO THE SATISFACTION OF THE CONSTRUCTION MANAGER.
10. ALL CABLE/CONDUIT ENTRY/EXIT PORTS SHALL BE WEATHERPROOFED DURING CONSTRUCTION USING A SECURE SOLAR.
11. CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE PROTECTION REGARDING THE STRUCTURES. CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES AND FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT.
12. SEAL PENETRATIONS THROUGH FIRE RATED AREAS WITH UL LISTED 5 FIRE CODE APPROVED MATERIALS.
13. TURN OVER ALL SALVAGEABLE BUILDING MATERIAL TO BUILDING MANAGER.
14. ALL DISRUPTIVE WORK AND WORK WITHIN TENANT SPACES TO BE COORDINATED WITH BUILDING REPRESENTATIVE.
15. ALL ROOF PENETRATIONS SHALL BE RESTORED TO MAINTAIN ALL ROOF WARRANTIES AND ENSURE A CONTRACTOR WITHOUT A LEAK.
16. CONTRACTOR SHALL NOT THE ENGINEER A MINIMUM OF 48 HOURS IN ADVANCE OF ANY WORK THAT MAY BE REQUIRED TO REMOVE EXISTING WALLS, PARTIAL WALLS, OR WALL OR ROOF PENETRATIONS, DRAIN UTILITY CONNECTIONS, POURING CONCRETE, FOR ENGINEERING REVIEW AND INSPECTION.



JUMPER MOUNT 2



**TYPICAL ANTENNA
GROUNDING DETAIL**



**COAX/HYBRID GROUNDING
DETAIL**
SCALE: N.T.S.

NOTES:

1. DO NOT INSTALL CABLE GROUND KIT AT A BEND. ALWAYS DIRECT GROUND WIRE DOWN TO GROUND BAR.
2. GROUNDING KIT SHALL BE TIN PLATED COPPER WITH TWO-HOLE LUG, SIZE PER COAX DIAMETER.
3. WEATHER SEAL GROUND KIT PER CARRIER REQUIREMENTS.
4. COAX CABLE GROUND KIT LOCATION & QUANTITY SHALL BE PER CARRIER SPECIFICATIONS & STANDARDS.

**COAX/H
DETAIL**
SCALE: N.T.S.

Specifications

The table below outlines the main specifications of the AU:

Table 1. Specifications

Item		AT1K01
Technology		5G NR
Operating Frequency		27.5 to 28.35 GHz
RF Chain		1024 TR/unit
Antenna Array	Configuration	1024 AE (4T4R)
	Element	256 AE (16H16V)/path, 1024 AE/unit
	Gain	28 dBi/path
IBW/OBW		850/800 MHz
Channel Bandwidth/Capacity		100 MHz Max 8CC (50/200/400 MHz will be supported in ES2, SVR19A: 100 MHz)
RF Output Power		26 dBm/path, 32 dBm/unit
Input Voltage		-48 V DC (-36 to -58 V DC) or 100 to 240 V AC
Input Current		10.9 A @ -48 V DC 4.3 A @ 100 to 240 V AC
LED		Total: 1 EA Powered, Operational, Fail (3 Status w/different colors)
Operational Temperature		-40~55°C (with solar load)
Humidity		TBD
IP rating		IP65
EMC		FCC Title 47 CFR Part 15 Subpart B
Safety		UL 60950 or 62368
Installation		Pole/Wall/Tower mounting
Dimension (W × D × H)		9.57 in. (243 mm) × 6.89 in. (175 mm) × 16.81 in. (427 mm) • (@without cover) 9.57 in. (243 mm) × 6.89 in. (175 mm) × 19.4 in. (493 mm) (@with cover & GPS Port)
Volume		< 18.16 L
Weight		< 33.07 lb (15.8 kg)



EAST > North East > New England > New England West > STAMFORD S2 CT - A

Gadasu, Shiva - shiva.gadasu@verizonwireless.com - 1/3/2020 15:3:12

Project Details

Carrier Aggregation: false
MPT Id:
eCIP-0: false
Project Name: 39GHz ADD
FUZE Project ID: 16066674
Designed Sector Carrier 4G: 4
Designed Sector Carrier 5G: 1
Additional Sector Carrier 4G: N/A
Additional Sector Carrier 5G: N/A

SiteTraker Project Id:

RFDS Project Scope: 5G on Alpha sector only.
Do not change any of the existing configuration
Move the antennas to make room for 5G antenna
to be mounted on the right end of Alpha sector
(when looking from below)

Rev0_20200103 : Initial Design

Suffix: Rev0_20200103

Location Information

Site ID: 5017684
E-NodeB ID: 065568,0065568
PSLC: 468343
Switch Name:
Tower Owner:
Tower Type: Rooftop
Site Type: Macro
Street Address: 99 Hamilton Ave
City: Stamford
State: CT
Zip Code: 06902
County: Fairfield
Latitude: 41.06342083 / 41° 3' 48.315" N
Longitude: -73.53590833 / 73° 32' 9.27" W

Added

Removed

No data available

Retained

Equipment Summary

Added

Equipment Type	Location	700	850	1900	AWS	AWS3	28 GHz	31 GHz	39 GHz	CBRS	LAA	Make	Model	Cable Length	Cable Size	Install Type	Quantity
RRU	Tower						9G					Samsung	AT1401 AC			PHYSICAL	1

Removed

Equipment Type	Location	700	850	1900	AWS	AWS3	28 GHz	31 GHz	39 GHz	CBRS	LAA	Make	Model	Cable Length	Cable Size	Install Type	Quantity
----------------	----------	-----	-----	------	-----	------	--------	--------	--------	------	-----	------	-------	--------------	------------	--------------	----------

Retained

Equipment Type	Location	700	850	1900	AWS	AWS3	28 GHz	31 GHz	39 GHz	CBRS	LAA	Make	Model	Cable Length	Cable Size	Install Type	Quantity
Hybrid Cable	Tower								No data available							PHYSICAL	1
OVP Box	Tower															PHYSICAL	1
RRU	Tower			LTE								Nokia	UHFA B25 RRH 4x30			PHYSICAL	2
RRU	Tower				LTE							Nokia	UHIE B56A RRH 4x45			PHYSICAL	2

Service Info

1900 MHz LTE

Sector	D1	D3
Cell / ENode B ID	330	220
Antenna Model	065568	065568
Antenna Make	HBXX-6513DS-VTM_00DT_1920 (351992)	HBXX-6513DS-VTM_00DT_1920 (351992)
Antenna Centrifline(Ft)	ANDREW	ANDREW
Mechanical Down-Tilt(Deg.)	29.6	29.6
Electrical Down-Tilt	0	0
Tip Height	0	0
Regulatory Power	30.7	30.7
TMA Make	46.32	46.32
TMA Model		
RRU Make	Nokia	Nokia
RRU Model	UHFA B25 RRH 4x30	UHFA B25 RRH 4x30
Number of Tx, Rx Lines	4,4	4,4
Position		
Source	ATOLL_API	ATOLL_API

2100 MHz LTE

Sector	D1	D3
Cell / ENode B ID	330	220
Antenna Model	065568	065568
Antenna Make	HBXX-6513DS-VTM_01DT_2110 (351995)	HBXX-6513DS-VTM_04DT_2110 (352001)
Antenna Centrifline(Ft)	ANDREW	ANDREW
Mechanical Down-Tilt(Deg.)	29.6	29.6
Electrical Down-Tilt	0	0
Tip Height	1	4
Regulatory Power	30.7	30.7
TMA Make	73.41	73.41
TMA Model		
RRU Make	Nokia	Nokia
RRU Model	UHIE B66A RRH 4x45	UHIE B66A RRH 4x45
Number of Tx, Rx Lines	4,4	4,4
Position		
Source	ATOLL_API	ATOLL_API

28 GHz

Sector	D1	D3
Cell / ENode B ID	330	220
Antenna Model	065568	065568
Antenna Make	HBXX-6513DS-VTM_01DT_2110 (351995)	HBXX-6513DS-VTM_04DT_2110 (352001)
Antenna Centrifline(Ft)	ANDREW	ANDREW
Mechanical Down-Tilt(Deg.)	29.6	29.6
Electrical Down-Tilt	0	0
Tip Height	1	4
Regulatory Power	30.7	30.7
TMA Make	73.41	73.41
TMA Model		
RRU Make	Nokia	Nokia
RRU Model	UHIE B66A RRH 4x45	UHIE B66A RRH 4x45
Number of Tx, Rx Lines	4,4	4,4
Position		
Source	ATOLL_API	ATOLL_API

Service Comments

5G NR

Sector	D1	D3
Cell / ENode B ID	330	220
Antenna Model	065568	065568
Antenna Make	HBXX-6513DS-VTM_00DT_1920 (351992)	HBXX-6513DS-VTM_00DT_1920 (351992)
Antenna Centrifline(Ft)	ANDREW	ANDREW
Mechanical Down-Tilt(Deg.)	29.6	29.6
Electrical Down-Tilt	0	0
Tip Height	0	0
Regulatory Power	30.7	30.7
TMA Make	46.32	46.32
TMA Model		
RRU Make	Nokia	Nokia
RRU Model	UHFA B25 RRH 4x30	UHFA B25 RRH 4x30
Number of Tx, Rx Lines	4,4	4,4
Position		
Source	ATOLL_API	ATOLL_API

5G NR

Sector	D1	D3
Cell / ENode B ID	330	220
Antenna Model	065568	065568
Antenna Make	HBXX-6513DS-VTM_01DT_2110 (351995)	HBXX-6513DS-VTM_04DT_2110 (352001)
Antenna Centrifline(Ft)	ANDREW	ANDREW
Mechanical Down-Tilt(Deg.)	29.6	29.6
Electrical Down-Tilt	0	0
Tip Height	1	4
Regulatory Power	30.7	30.7
TMA Make	73.41	73.41
TMA Model		
RRU Make	Nokia	Nokia
RRU Model	UHIE B66A RRH 4x45	UHIE B66A RRH 4x45
Number of Tx, Rx Lines	4,4	4,4
Position		
Source	ATOLL_API	ATOLL_API

5G NR

Sector	D1	D3
Cell / ENode B ID	330	220
Antenna Model	065568	065568
Antenna Make	HBXX-6513DS-VTM_01DT_2110 (351995)	HBXX-6513DS-VTM_04DT_2110 (352001)
Antenna Centrifline(Ft)	ANDREW	ANDREW
Mechanical Down-Tilt(Deg.)	29.6	29.6
Electrical Down-Tilt	0	0
Tip Height	1	4
Regulatory Power	30.7	30.7
TMA Make	73.41	73.41
TMA Model		
RRU Make	Nokia	Nokia
RRU Model	UHIE B66A RRH 4x45	UHIE B66A RRH 4x45
Number of Tx, Rx Lines	4,4	4,4
Position		
Source	ATOLL_API	ATOLL_API

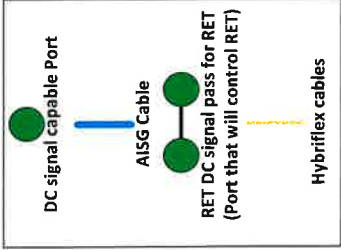
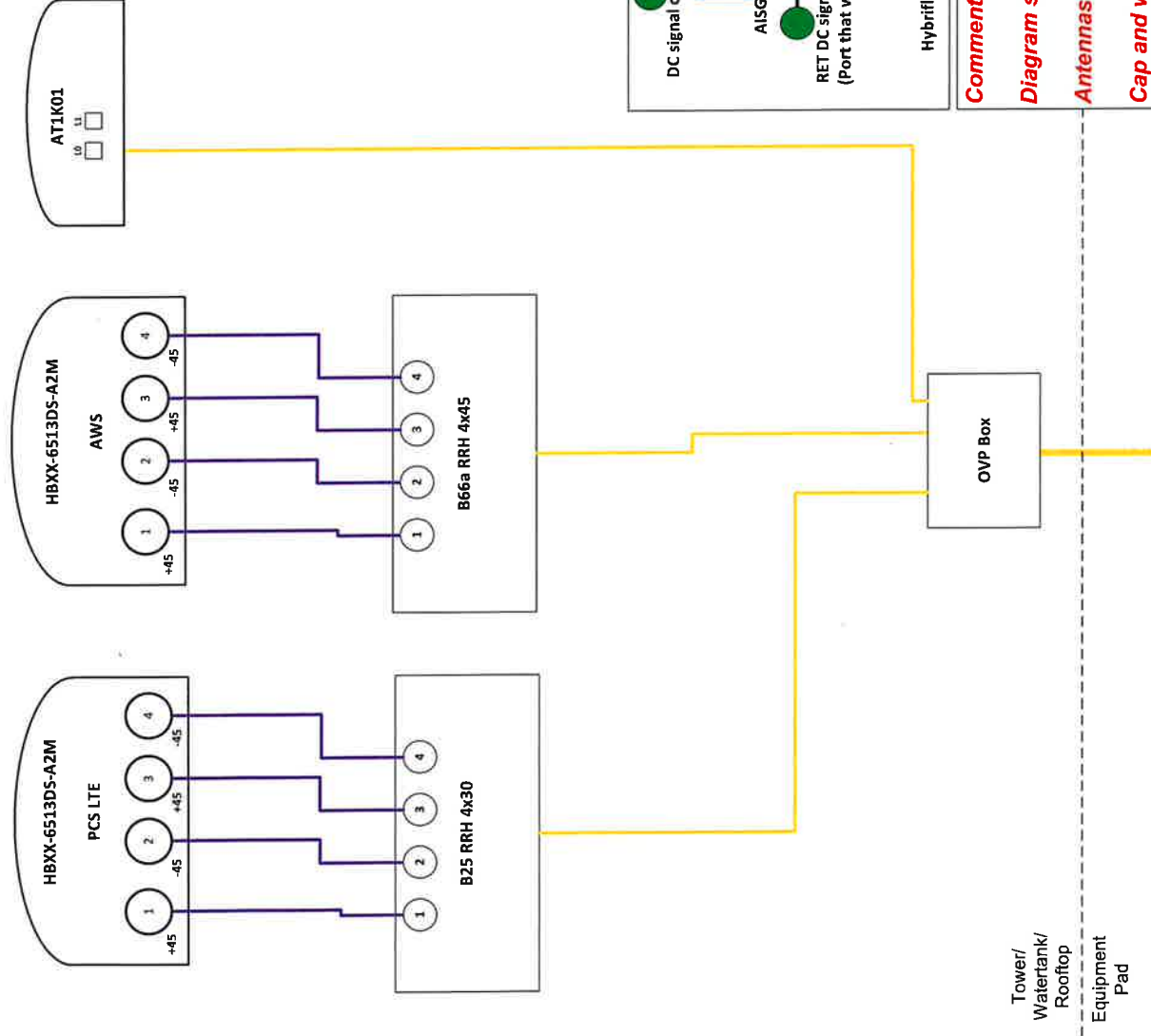
Callsigns Per Antenna

Sector	Antenna Make	Antenna Model	Ant CL Height AGL	Tip Height	Azimuth (TM)	Electrical Tilt	Mechanical Tilt	Gain	Beamwidth	Regulatory Power	Callsigns	700	850	1900	2100	28 GHz	31 GHz	39 GHz
E001	SAMSUNG	VZ-ATIK01	30	30.6	290	0	0	25.8dBi	52							VJBA702 VJBA703		
D1	ANDREW	(351992)	29.6	30.7	330	0	0	12.46	63.75					KNLF644 KNLH264 WQBT539				
D3	ANDREW	(351092)	29.6	30.7	220	0	0	12.46	63.75					KNLF644 KNLH264 WQBT539				
D1	ANDREW	(351995)	29.6	30.7	330	1	0	12.76	61.5						WOGA906 WQGB279			
D3	ANDREW	(352001)	29.6	30.7	220	4	0	12.76	60.5						WOGA906 WQGB279			

CallSigns

CallSign	Market	Radio Code	Market Number	Block	State	County	Licensee Name	Wholly Owned	Total MHz	Freq Range 1	Freq Range 2	Freq Range 3	Freq Range 4	Regulatory Power	Threshold (W)	POP/Sq MI	Status	Action	Approved for Insvc
KNKA363	Bridgeport-Stamford-Norwalk-Danbury, CT	CL	CTA002	A	CT	Fairfield	Celco Partnership	Yes	25.000	821.000-835.000	869.000-879.000	845.000-846.500	890.000-891.500		400	1467.18	Active		Yes
KVLF644	New York, NY	CW	BTA321	C	CT	Fairfield	AltTouch Cellular	Yes	20.000	1900.000-1910.000	1980.000-1990.000	1900.000-1905.000	1990.000-1995.000	46.32	1640	1467.18	Active	retained	Yes
KTLH264	New York, NY	CW	BTA322	F	CT	Fairfield	Celco Partnership	Yes	10.000	1850.000-1855.000	1970.000-1975.000	1850.000-1855.000	1970.000-1975.000	46.32	1640	1467.18	Active	retained	Yes
WPLN397	New York, NY	LD	BTA321	B	CT	Fairfield	Celco Partnership	Yes	150.000	31000.000-31075.000	31225.000-31300.000	31000.000-31075.000	31225.000-31300.000			1467.18	Active		No
WPOH942	New York, NY	LD	BTA321	A	CT	Fairfield	Celco Partnership	Yes	300.000	29100.000-29250.000	31075.000-31225.000	29100.000-29250.000	31075.000-31225.000			1467.18	Active		No
WORT539	New York, NY	CW	BTA321	C	CT	Fairfield	Celco Partnership	Yes	10.000	1895.000-1900.000	1975.000-1980.000	1895.000-1900.000	1975.000-1980.000	46.32	1640	1467.18	Active	retained	Yes
WQGA906	New York, NY	AW	BFA010	B	CT	Fairfield	Celco Partnership	Yes	20.000	1720.000-1726.000	2120.000-2126.000	1720.000-1726.000	2120.000-2126.000	71.41	1640	1467.18	Active	retained	Yes
WQGB279	Bridgeport-Stamford-Norwalk-Danbury, CT	AW	CTA002	A	CT	Fairfield	Celco Partnership	Yes	20.000	1720.000-1726.000	2120.000-2126.000	1720.000-1726.000	2120.000-2126.000	71.41	1640	1467.18	Active	retained	Yes
WQJO689	Norwalk, CT	VU	REA001	C	CT	Fairfield	Celco Partnership	Yes	22.000	746.000-757.000	776.000-787.000	746.000-757.000	776.000-787.000		1000	1467.18	Active		Yes
WRBA702	New York, NY	UU	BTA321	L1	CT	Fairfield	Celco Partnership	Yes	325.000	27600.000-27925.000	28000.000-28325.000	27600.000-27925.000	28000.000-28325.000	251.07		1467.18	Active	added	Yes
WRBA703	New York, NY	UU	BTA321	L2	CT	Fairfield	Celco Partnership	Yes	233.000	27925.000-27950.000	28325.000-28350.000	27925.000-27950.000	28325.000-28350.000	251.07		1467.18	Active	added	Yes
WRBD571	New York, NY	UU	PEA001	2-A	CT	Fairfield	Straight Path Spectrum, LLC	Yes	000	000.000-000.000	000.000-000.000	000.000-000.000	000.000-000.000			1467.18	Active		Yes
WRBD572	New York, NY	UU	PEA001	2-B	CT	Fairfield	Straight Path Spectrum, LLC	Yes	000	000.000-000.000	000.000-000.000	000.000-000.000	000.000-000.000			1467.18	Active		Yes
WRBE444	New York, NY	UU	PEA001	5-A	CT	Fairfield	Straight path Spectrum, LLC	Yes	50.000	36300.000-36350.000	000.000-000.000	000.000-000.000	000.000-000.000			1467.18	Active		Yes
WPB5445	New York, NY	UU	PEA001	5-B	CT	Fairfield	Straight Path Spectrum, LLC	Yes	50.000	39500.000-39550.000	000.000-000.000	000.000-000.000	000.000-000.000			1467.18	Active		Yes
WRBE704	New York, NY	UU	PEA001	6-A	CT	Fairfield	Straight Path Spectrum, LLC	Yes	000	000.000-000.000	000.000-000.000	000.000-000.000	000.000-000.000			1467.18	Active		Yes
WPBE705	New York, NY	UU	PEA001	6-B	CT	Fairfield	Straight Path Spectrum, LLC	Yes	000	000.000-000.000	000.000-000.000	000.000-000.000	000.000-000.000			1467.18	Active		Yes

WRE5864	New York, NY	UU	PEA001	7-A	CT	Fairfield	Straight Path Spectrum, LLC	Yes	50,000	38900,000-38950,000	000,000-000,000	000,000-000,000	000,000-000,000	1467.18	Active	Yes
WRE1065	New York, NY	UU	PEA001	7-B	CT	Fairfield	Straight Path Spectrum, LLC	Yes	50,000	38900,000-38950,000	000,000-000,000	000,000-000,000	000,000-000,000	1467.18	Active	Yes
WRF500	New York, NY	UU	PEA001	9-A	CT	Fairfield	Straight Path Spectrum, LLC	Yes	50,000	39000,000-39050,000	000,000-000,000	000,000-000,000	000,000-000,000	1467.18	Active	Yes
WRF501	New York, NY	UU	PEA001	9-B	CT	Fairfield	Straight Path Spectrum, LLC	Yes	50,000	39000,000-39050,000	000,000-000,000	000,000-000,000	000,000-000,000	1467.18	Active	Yes
WRF792	New York, NY	UU	PEA001	10-A	CT	Fairfield	Straight Path Spectrum, LLC	Yes	50,000	39050,000-39100,000	000,000-000,000	000,000-000,000	000,000-000,000	1467.18	Active	Yes
WRF793	New York, NY	UU	PEA001	10-B	CT	Fairfield	Straight Path Spectrum, LLC	Yes	50,000	39050,000-39100,000	000,000-000,000	000,000-000,000	000,000-000,000	1467.18	Active	Yes
WRF968	New York, NY	UU	PEA001	11-A	CT	Fairfield	Straight Path Spectrum, LLC	Yes	000	000,000-000,000	000,000-000,000	000,000-000,000	000,000-000,000	1467.18	Active	Yes
WRF969	New York, NY	UU	PEA001	11-B	CT	Fairfield	Straight Path Spectrum, LLC	Yes	000	000,000-000,000	000,000-000,000	000,000-000,000	000,000-000,000	1467.18	Active	Yes
WRD500	New York, NY	UU	PEA001	52	CT	Fairfield	Cellco Partnership	Yes	400,000	37600,000-38200,000	000,000-000,000	000,000-000,000	000,000-000,000	1467.18	Active	Yes



Comments:

Diagram shows configuration as viewed from below antennas.

Antennas will be installed in that order from left to right.

Cap and weatherproof unused antenna ports.

All plumbing diagram colors are irrelevant except for AISG & Hybriflex cable.

065568 STAMFORD S 2 CT - Alpha

ATTACHMENT 3

General Power Density

Site Name: STAMFORD S 2 CT
Cumulative Power Density

Operator	Operating Frequency (MHz)	Number of Trans.	ERP Per Trans. (watts)	Total ERP (watts)	Distance to Target (feet)	Calculated Power Density (mW/cm ²)	Maximum Permissible Exposure* (mW/cm ²)	Fraction of MPE (%)
5G 28GHz	28000	1	610	610	29.6	0.2504	1.0	25.04%
VZW CBRS	3600	0	50	0	29.6	0.0000	1.0	0.00%
VZW PCS	1970	1	508	508.15	29.6	0.2086	1.0	20.86%
VZW Cellular LTE	869	0	499	0	29.6	0.0000	0.5793333333	0.00%
VZW Cellular	869	0	499	0	29.6	0.0000	0.5793333333	0.00%
VZW AWS	2145	1	805.37	805.37	29.6	0.3306	1.0	33.06%
VZW 700	746	0	1165	0	29.6	0.0000	0.4973333333	0.00%

Total Percentage of Maximum Permissible Exposure

78.95%

*Guidelines adopted by the FCC on August 1, 1996, 47 CFR Section 1.13101 based on NCRP Report 86, 1986 and generally on ANSI/IEEE C95.1-1992

MHz = Megahertz

mW/cm² = milliwatts per square centimeter

ERP = Effective Radiated Power

Absolute worst case maximum values used, including the following assumptions:

1. closest accessible point is distance from antenna to base of pole;
2. continuous transmission from all available channels at full power for indefinite time period; and,
3. all RF energy is assumed to be directed solely to the base of the pole.

ATTACHMENT 4



Dewberry Engineers Inc.
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Mount Analysis Report and Design Calculations For a Wireless Telecommunications Upgrade

Site Name: Stamford S 2CT
Site #: 5017684
Site No.: 221
Site Address: 99 Hamilton Ave
Stamford, CT 06902

Prepared for:
Verizon Wireless
99 East River Drive
East Hartford, CT 06108

Rev. 0
February 4, 2020

Prepared by:
Dewberry Engineers Inc.
600 Parsippany Road
Parsippany, NJ 07054
Dewberry Project Number: 50124293

Analysis Conditions	Utilization Ratio	Pass/Fail
Existing Mounts (Alpha & Gamma)	55.0%	Pass

Prepared by:

Gerardo Barba
Graduate Engineer

Reviewed by:

Shannon Brewster
Structural Project Engineer

Approved by:

Benjamin Revette, P.E.
Connecticut Professional Engineer
License No.: 28971

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2.0 EXISTING & PROPOSED ANTENNAS & EQUIPMENT	1
3.0 CODES, STANDARDS, AND REFERENCES	2
4.0 LOADING AND PERFORMANCE CRITERIA	2
5.0 CALCULATIONS	2
6.0 CONCLUSIONS, COMMENTARY, AND RECOMMENDATIONS	3
APPENDIX A MOUNT ANALYSIS (ALPHA & GAMMA SECTOR)	
APPENDIX B REFERENCE MATERIAL	
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1.0 INTRODUCTION AND PROJECT SUMMARY

The objective of this report is to assess the proposed installation of a new mounted to the existing antenna frame installed on the chimney at the above referenced site in Alpha & Gamma sectors. This report is limited to the analysis of the existing antenna frame and with the most unfavorable loading scenario only.

The existing structure is an approximately 31'-5" tall chimney located in Stamford, CT. There are currently existing antennas and support equipment mounted to steel frames in sectors Alpha & Gamma. The existing frames are installed at the chimney with threaded rods and have an approximate antenna centerline elevation of 30'-0".

2.0 EXISTING & PROPOSED ANTENNAS & EQUIPMENT

- Currently, each sector has the following equipment:
 - Two (2) HBXX-6513DS-VTM panel antenna measuring 27.4"H x 12.0"W x 6.5"D (27.4 lbs.) (To remain)
 - One (1) B25 4x30 RRH unit measuring 21.2"H x 12.0"W x 7.2"D (53.0 lbs.) (To remain)
 - One (1) B66a 4x45 RRH unit measuring 25.8"H x 12.0"W x 7.3"D (77.0 lbs.) (To remain)
 - Miscellaneous equipment and cables negligible in weight and profile.
- The following equipment is proposed for Alpha sector:
 - One (1) VZ-AT1K01 antenna measuring 16.8"H x 9.6"W x 6.9"D (43.0 lbs.)
 - Miscellaneous equipment and cables negligible in weight and profile.

For the final configuration, refer to the table below:

Table 1: APPURTENANCES on Alpha & Gamma Sectors			
Elev.	Status	Carrier	Appurtenance Description
30'	Final	VZW	(1) – VZ-AT1K01
29.6'	Final	VZW	(4) – HBXX-6513DS-VTM
29.6'	Final	VZW	(2) – UHFA B25 RRH4x30
29.6'	Final	VZW	(2) – UHIE B66A RRH4x45
VZW			

3.0 CODES, STANDARDS, AND REFERENCES

The structure was analyzed and the proposed installation designed per the provisions of the following Codes and standards:

- *2018 Connecticut State Building Code – Amendments to IBC 2015.*
- *International Building Code (IBC) 2015*, International Code Council.
- *TIA-222-G, Structural Standard for Antenna Supporting Structures and Antennas.*
- *Steel Construction Manual 15th Ed*, American Institute of Steel Construction.
- *ASCE 7-10 Minimum Design Loads for Buildings and Other Structures*, American Society of Civil Engineers.
- Radio Frequency Data Sheet (RFDS) provided by VZW dated 01/03/20.
- Construction Drawings by Dewberry Engineers Inc. Rev. A dated 02/05/20.
- Site Visit by Dewberry Engineers Inc. on 01/24/20.

4.0 LOADING AND PERFORMANCE CRITERIA

The following code-specified strength limit state (LRFD) load combinations were considered in the analysis of the antenna mount (*TIA-222-G*):

- | | |
|---|--|
| <ol style="list-style-type: none"> 1. $1.2D + 1.6W$ 2. $1.2D + 1.0D_i + 1.0W_i$ | <p>Where:</p> <p>D = dead load of mount & equipment
 D_i = dead load of ice
 W = design wind load
 W_i = design ice wind load.</p> |
|---|--|

The following code-specified serviceability load combinations were considered in the analysis of the antenna mount (*TIA-222-G*):

- | | |
|---|---|
| <ol style="list-style-type: none"> 1. $1.0D + 1.0W_s$ | <p>Where:</p> <p>W_s = service wind load</p> |
|---|---|

The following site-specific design parameters were considered in this analysis per the provisions of *TIA-222-G*:

Risk Category:	III	
Exposure Category:	C	
Design Basic Wind Speed:	119 mph	<i>ASCE 7-10, ATC Windspeed</i>
Design Ice Wind Speed:	50 mph	<i>Annex B, TIA</i>
Design Ice Thickness:	0.75 in.	<i>Annex B, TIA</i>
Gust Effect Factor	0.85	<i>Sect. 2.6.9, TIA</i>
Wind Direction Probability Factor	0.95	<i>TIA Table 2-2</i>
Serviceability Wind Speed:	60 mph	<i>Sect. 2.8.3, TIA</i>

5.0 CALCULATIONS

Calculations for this analysis and the design of the installation are included in Appendices of this report.

6.0 CONCLUSIONS, COMMENTARY, AND RECOMMENDATIONS

After evaluation and analysis, it is determined that the existing antenna frames and chimney are adequate and have sufficient structural capacity to support the proposed installation upgrade, in regard to stresses and deflections with the most unfavorable conditions. Under the proposed conditions, the maximum utilization of a single structural member is 55.0%.

Due to limited information on the existing mount, some member sizes and dimensions were estimated and are approximate. If the actual field conditions vary from what was assumed in this analysis, the results and conclusions expressed in this report are invalid and further evaluation is recommended for any proposed installation to continue.

Dewberry Engineers Inc. reserves the right to add to or modify this report if more information becomes available. The conclusions reached by Dewberry Engineers Inc. in this report are only applicable to the previously mentioned existing structural elements supporting the proposed wireless telecommunications installation. The results of this report are based on the assumption that existing structural elements have been installed per the original design documents, have been well maintained, and are uncompromised. This report does not imply that a thorough inspection of the existing structure has been performed. Any deviation of the support condition, loading, location, placement, equipment configuration, etc., will require Dewberry Engineers Inc. to generate an additional structural analysis. Further, no structural qualification is made or implied by this report of any existing structural elements.

APPENDIX A



Job Number 50124293
 Made by: GJB
 Date: 02/04/2020
 Checked by: SB
 Date: 02/04/2020

(Stamford S 2 CT) - Design Wind Load

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Wind Load Design Criteria

Site Name: Stamford S 2 CT

General Information & Design Input from TIA-222-G

Item	Value	Description	Reference
$V_{max} =$	119.00	Design Wind Speed (mph)	ASCE 7-05, ATC Windspeed
Location =	CT	Stamford	Annex B, TIA
$V_i =$	50.00	Design Ice Wind Speed (mph)	
$K_d =$	0.95	Wind Direction Probability Factor	Table 2-2, TIA
Class	III	Structure Classification	Table 2-1, TIA
$I =$	1.00	Importance Factor (Without Ice)	Table 2-3, TIA
$I_{ice\ thick} =$	1.00	Importance Factor (Ice Thickness)	Table 2-3, TIA
$z = h =$	30.00	ft. (A.G.L.)	Max. Center of Appurtenance
Exp. Cat. =	C	Exposure Category	Sect. 2.6.5.1, TIA
$Z_g =$	900.00	Exposure Category Coeff.	Table 2-4, TIA
$\alpha =$	9.50	Exposure Category Coeff.	Table 2-4, TIA
$K_{z\ (min)} =$	0.85	Exposure Category Coeff.	Table 2-4, TIA
$K_e =$	1.00	Exposure Category Coeff.	Table 2-4, TIA
$K_t =$	N/A	Topographic Category Coeff.	Table 2-5, TIA ("N/A" if Topo. Cat. = 1)
$K_z =$	0.98	$= 2.01(z/Z_g)^{(2/\alpha)}$	Sect. 2.6.5.2, TIA
Topo. Cat. =	1	Topographic Category (1-5)	Sect. 2.6.6.2, TIA
$e =$	2.72	Natural Logarithmic base	
$f =$	N/A	Height Attenuation Factor	Table 2-5, TIA ("N/A" if Topo. Cat. = 1)
$H =$	N/A	ft. Height of crest above surrounding terrain	
$K_h =$	N/A	$e^{((fz)/H)}$	Sect. 2.6.6.4, TIA
$K_{zt} =$	1.00	$= [1 + ((K_e * K_t)/K_h)]^2$	Sect. 2.6.6.4, TIA
$K_{iz} =$	0.99	$= (z/33)^{0.10} \leq 1.4$ (Height Escalation Factor)	Sect. 2.6.8, TIA
$G_h =$	0.85	Gust Effect Factor	Sect. 2.6.7, TIA/ Sect. 2.6.9, TIA
$t_i =$	0.75	Design Ice Thickness	Annex B, TIA
$t_{iz} =$	1.48	$= 2t_i(I_{ice\ thick})K_{iz}(K_{zt})^{0.35}$	Sect. 2.6.8, TIA
$q_{z\ design} =$	33.9 psf	$= 0.00256(K_z)(K_{zt})(K_g)(V_{max}^2)(I)$	Sect. 2.6.9.6, TIA
$q_{z\ ice} =$	6.0 psf	$= 0.00256(K_z)(K_{zt})(K_g)(V_i^2)$	Sect. 2.6.9.6, TIA

Design Wind Forces:

Section 2.6.9.2

$$F_A = q_{z\ design} G_h (EPA)_A$$

(where $(EPA)_A$ = effective projected area of the appurtenance = $C_a A_a$)

$$F_{Ai} = q_{z\ ice} G_h (EPA)_{Ai}$$

(see calculation tables on following pages)

Design Ice Weight:

Section 2.6.10

$$F_i = [\pi(t_{iz})(D_c + t_{iz})] * 56\ lb/ft^3$$

(where D_c = largest out to out dimension of member)

(see calculation tables on following pages)



Job Number 50124293
Made by: GJB
Date: 02/04/2020
Checked by: SB
Date: 02/04/2020

(Stamford S 2 CT) - Design Wind Load

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Element Definition

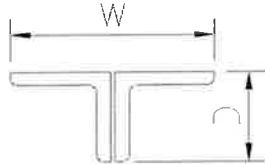
Description	Dimensions (in.)			Weight (lb)	Length / # Supports
	W	D	H		
HBXX-6513DS-VTM	12.00	6.50	27.40	17.40	2.00
VZ-AT1K01	8.60	6.90	16.80	43.00	1.00
STRUCTURAL MEMBERS					
2-3/8" OD Pipe	2.38	2.38	12.00	STAAD	Pipe
2-3/8" OD Pipe	2.38	2.38	12.00	STAAD	Pipe
L5x3x5/16"	5.00	5.00	12.00	STAAD	Angle

(Mounting Pipe)

(See Note 2)

Note:

1) For Double Angles assume the following:



2) For mounting pipes that **do not** support equipment or portions which are not shielded by equipment, create an additional entry below.



Job Number 50124293
 Made by: GJB
 Date: 02/04/2020
 Checked by: SB
 Date: 02/04/2020

(Stamford S 2 CT) - Design Wind Load

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Design Wind Load

Members	Dimensions (ft.)			Area (A_a) _n (normal) (sf)	Area (A_a) _t (tangent) (sf)	Aspect Ratio (normal)	Aspect Ratio (tangent)	C_{an} (normal) Table 2-8	C_{at} (tangent) Table 2-8
	Width (Normal)	Depth (Tangent)	Height (or span)						
HBXX-6513DS-VTM	1.00	0.54	2.28	2.28	1.23	2.28	4.22	1.20	1.28
VZ-AT1K01	0.72	0.58	1.40	1.01	0.81	1.94	2.41	1.20	1.20
STRUCTURAL MEMBERS									
2-3/8" OD Pipe	0.20	0.20	1.00	0.20	0.20	5.00	5.00	0.76	0.76
2-3/8" OD Pipe	0.20	0.20	1.00	0.20	0.20	5.00	5.00	0.76	0.76
L5x3x5/16"	0.42	0.42	1.00	0.42	0.42	2.38	2.38	1.20	1.20

Design Effective Projected Area & Wind Loads

Members	EPA _a @ 0.0° (sf)	EPA _a @ 30.0° (sf)	EPA _a @ 60.0° (sf)	EPA _a @ 90.0° (sf)	F _a @ 0.0° (lb)	F _a @ 30.0° (lb)	F _a @ 60.0° (lb)	F _a @ 90.0° (lb)	Gravity Load @ Support (lb)
HBXX-6513DS-VTM	2.74	2.45	1.86	1.57	39.4	35.2	26.9	22.7	8.7
VZ-AT1K01	1.21	1.15	1.03	0.97	34.9	33.2	29.7	28.0	43.0
STRUCTURAL MEMBERS									
2-3/8" OD Pipe	0.15	-	-	-	4.4	-	-	-	-
2-3/8" OD Pipe	0.15	-	-	-	4.4	-	-	-	-
L5x3x5/16"	0.50	-	-	-	14.5	-	-	-	-



Job Number 50124293
 Made by: GJB
 Date: 02/04/2020
 Checked by: SB
 Date: 02/04/2020

(Stamford S 2 CT) - Design Wind Load

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Design Ice Wind Load

- Design ice thickness included in tabulated dimensions below.

Members	Dimensions (ft.)			Area (A_a) _{ni} (normal) (sf)	Area (A_a) _{ti} (tangent) (sf)	Aspect Ratio (normal)	Aspect Ratio (tangent)	C_{ani} (normal) Table 2-8	C_{ati} (tangent) Table 2-8
	Width (Normal)	Depth (Tangent)	Height (or span)						
HBXX-6513DS-VTM	1.25	0.79	2.53	3.16	2.00	2.02	3.20	1.20	1.23
VZ-AT1K01	0.96	0.82	1.65	1.58	1.35	1.72	2.01	1.20	1.20
STRUCTURAL MEMBERS									
2-3/8" OD Pipe	0.45	0.45	1.00	0.45	0.45	2.22	2.22	0.70	0.70
2-3/8" OD Pipe	0.45	0.45	1.00	0.45	0.45	2.22	2.22	0.70	0.70
L5x3x5/16"	0.66	0.66	1.00	0.66	0.66	1.52	1.52	1.20	1.20

Design Effective Projected Area & Wind Loads with Ice

Members	EPA_{ai} @ 0.0° (sf)	EPA_{ai} @ 30.0° (sf)	EPA_{ai} @ 60.0° (sf)	EPA_{ai} @ 90.0° (sf)	F_{ai} @ 0.0° (lb)	F_{ai} @ 30.0° (lb)	F_{ai} @ 60.0° (lb)	F_{ai} @ 90.0° (lb)	Ice Load F_i @ Support (lb)
HBXX-6513DS-VTM	3.79	3.46	2.79	2.46	9.7	8.8	7.1	6.3	31.2
VZ-AT1K01	1.90	1.83	1.69	1.62	9.7	9.3	8.6	8.3	31.7
STRUCTURAL MEMBERS									
2-3/8" OD Pipe	0.32	-	-	-	1.6	-	-	-	7.0
2-3/8" OD Pipe	0.32	-	-	-	1.6	-	-	-	7.0
L5x3x5/16"	0.79	-	-	-	4.0	-	-	-	15.5



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 Date: 02/04/2020

(Stamford S 2 CT) - Serviceability Wind Load

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Serviceability Wind Load Design Criteria

General Information & Design Input from TIA-222-G

Item	Value	Description	Reference
$V_{service} =$	60.00	Service Wind Speed (mph)	Sect. 2.8.3, TIA
$K_{d\ service} =$	0.85	Wind Direction Probability Factor	Sect. 2.8.3, TIA
Class =	III	Structure Classification	Table 2-1, TIA
I =	1.15	Importance Factor	Table 2-3, TIA
$z = h =$	30.00	ft. (A.G.L.)	Max. Center of Appurtenance
Exp. Cat. =	C	Exposure Category	Sect. 2.6.5.1, TIA
$z_g =$	900.00	Exposure Category Coeff.	Table 2-4, TIA
$\alpha =$	9.50	Exposure Category Coeff.	Table 2-4, TIA
$K_{z\ (min)} =$	0.85	Exposure Category Coeff.	Table 2-4, TIA
$K_e =$	1.00	Exposure Category Coeff.	Table 2-4, TIA
$K_t =$	N/A	Topographic Category Coeff.	Table 2-5, TIA ("N/A" if Topo. Cat. = 1)
$K_z =$	0.98	$= 2.01(z/z_g)^{(2/\alpha)}$	Sect. 2.6.5.2, TIA
Topo. Cat. =	1	Topographic Category (1-5)	Sect. 2.6.6.2, TIA
e =	2.72	Natural Logarithmic base	
f =	N/A	Height Attenuation Factor	Table 2-5, TIA ("N/A" if Topo. Cat. = 1)
H =	N/A	ft. Height of crest above surrounding terrain	
$K_h =$	N/A	$e^{((f \cdot z)/H)}$	Sect. 2.6.6.4, TIA
$K_{zt} =$	1.00	$= [1 + ((K_e \cdot K_t)/K_h)]^2$	Sect. 2.6.6.4, TIA
$G_h =$	0.85	Gust Effect Factor	Sect. 2.6.7, TIA/ Sect. 2.6.9, TIA
$q_{z\ service} =$	7.7 psf	$= 0.00256(K_z)(K_{zt})(K_d)(V_{service}^2)$	Sect. 2.6.9.6, TIA

Design Serviceability Wind Forces:

Section 2.6.9.2

$$F_{As} = q_{z\ service} G_h (EPA)_A$$

(where $(EPA)_A$ = effective projected area of the appurtenance = $C_a A_a$)

(see calculation tables on following pages)



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(Stamford S 2 CT) - Serviceability Wind Load

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Element Definition:

(Mounting Pipe)

Description	Dimensions (in.)			Weight (lb)	Length / # Supports
	W	D	H		
HBXX-6513DS-VTM	12.00	6.50	27.40	17.40	2.00
VZ-AT1K01	8.60	6.90	16.80	43.00	1.00
STRUCTURAL MEMBERS					
2-3/8" OD Pipe	2.38	2.38	12.00	STAAD	Pipe
2-3/8" OD Pipe	2.38	2.38	12.00	STAAD	Pipe
L5x3x5/16"	5.00	5.00	12.00	STAAD	Angle

Service Wind Load

Members	Dimensions (ft.)			Area (A_a) _n (normal) (sf)	Area (A_a) _t (tangent) (sf)	Aspect Ratio (normal)	Aspect Ratio (tangent)	C_{an} (normal) Table 2-8	C_{at} (tangent) Table 2-8
	Width (Normal)	Depth (Tangent)	Height (or span)						
HBXX-6513DS-VTM	1.00	0.54	2.28	2.28	1.23	2.28	4.22	1.20	1.28
VZ-AT1K01	0.72	0.58	1.40	1.01	0.81	1.94	2.41	1.20	1.20
STRUCTURAL MEMBERS									
2-3/8" OD Pipe	0.20	0.20	1.00	0.20	0.20	5.00	5.00	0.76	0.76
2-3/8" OD Pipe	0.20	0.20	1.00	0.20	0.20	5.00	5.00	0.76	0.76
L5x3x5/16"	0.42	0.42	1.00	0.42	0.42	2.38	2.38	1.20	1.20



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(Stamford S 2 CT) - Serviceability Wind Load

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Service Effective Projected Area & Wind Loads

Members	EPA _{as} @ 0.0° (sf)	EPA _{as} @ 30.0° (sf)	EPA _{as} @ 60.0° (sf)	EPA _{as} @ 90.0° (sf)	F _{as} @ 0.0° (lb)	F _{as} @ 30.0° (lb)	F _{as} @ 60.0° (lb)	F _{as} @ 90.0° (lb)
HBXX-6513DS-VTM	2.74	2.45	1.86	1.57	9.0	8.0	6.1	5.2
VZ-AT1K01	1.21	1.15	1.03	0.97	7.9	7.5	6.8	6.4
STRUCTURAL MEMBERS								
2-3/8" OD Pipe	0.15	-	-	-	1.0	-	-	-
2-3/8" OD Pipe	0.15	-	-	-	1.0	-	-	-
L5x3x5/16"	0.50	-	-	-	3.3	-	-	-



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Part **Antenna Frame**

Job Title **Stamford S 2 CT**

Ref

By **GJB**

Date **2/3/2020**

Chd **SB**

Client **VZW**

File **50124293 - Antenna Fram** Date/Time **07-Feb-2020 13:34**

Job Information

	Engineer	Checked	Approved
Name:	GJB	SB	
Date:	2/3/2020	2/3/2020	

Project ID	
Project Name	

Structure Type	SPACE FRAME
----------------	-------------

Number of Nodes	31	Highest Node	31
Number of Elements	26	Highest Beam	26

Number of Basic Load Cases	20
Number of Combination Load Cases	24

Included in this printout are data for:

All	The Whole Structure
-----	---------------------

Included in this printout are results for load cases:

Type	L/C	Name
Primary	1	DEAD
Primary	2	WL#1
Primary	3	WL#2
Primary	4	WL#3
Primary	5	WL#4
Primary	6	WL#5
Primary	7	WL#6
Primary	8	DI
Primary	9	WLI#1
Primary	10	WLI#2
Primary	11	WLI#3
Primary	12	WLI#4
Primary	13	WLI#5
Primary	14	WLI#6
Primary	15	WLS#1
Primary	16	WLS#2
Primary	17	WLS#3
Primary	18	WLS#4
Primary	19	WLS#5
Primary	20	WLS#6
Combination	21	1.2D+1.6WL#1
Combination	22	1.2D+1.6WL#2
Combination	23	1.2D+1.6WL#3
Combination	24	1.2D+1.6WL#4
Combination	25	1.2D+1.6WL#5



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Job Information Cont...

Type	L/C	Name
Combination	29	1.2D+1.0DI+1.0WI#3
Combination	30	1.2D+1.0DI+1.0WI#4
Combination	31	1.2D+1.0DI+1.0WI#5
Combination	32	1.2D+1.0DI+1.0WI#6
Combination	33	1.0D+1.0WLS#1
Combination	34	1.0D+1.0WLS#2
Combination	35	1.0D+1.0WLS#3
Combination	36	1.0D+1.0WLS#4
Combination	37	1.0D+1.0WLS#5
Combination	38	1.0D+1.0WLS#6
Combination	39	1.0DL+1.0WL#1
Combination	40	1.0DL+1.0WL#2
Combination	41	1.0DL+1.0WL#3
Combination	42	1.0DL+1.0WL#4
Combination	43	1.0DL+1.0WL#5
Combination	44	1.0DL+1.0WL#6



3D Rendered View



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Part Antenna Frame

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Nodes

Node	X (ft)	Y (ft)	Z (ft)
1	0	0	0
2	4.000	0	0
3	0	1.750	0
4	4.000	1.750	0
5	-0.500	0	0
6	-0.500	1.750	0
7	4.500	0	0
8	4.500	1.750	0
9	3.500	0	0
10	3.500	1.750	0
11	0.500	0	0
12	0.500	1.750	0
13	3.500	0	0.300
14	3.500	1.750	0.300
15	0.500	0	0.300
16	0.500	1.750	0.300
17	3.500	2.750	0.300
18	0.500	2.750	0.300
19	3.500	-1.000	0.300
20	0.500	-1.000	0.300
21	2.000	1.750	0
22	2.000	0	0
23	2.000	1.750	0.300
24	2.000	0	0.300
25	2.000	2.750	0.300
26	2.000	-1.000	0.300
27	3.500	2.250	0.300
28	3.500	0.875	0.300
29	2.000	1.250	0.300
30	0.500	2.250	0.300
31	0.500	0.875	0.300



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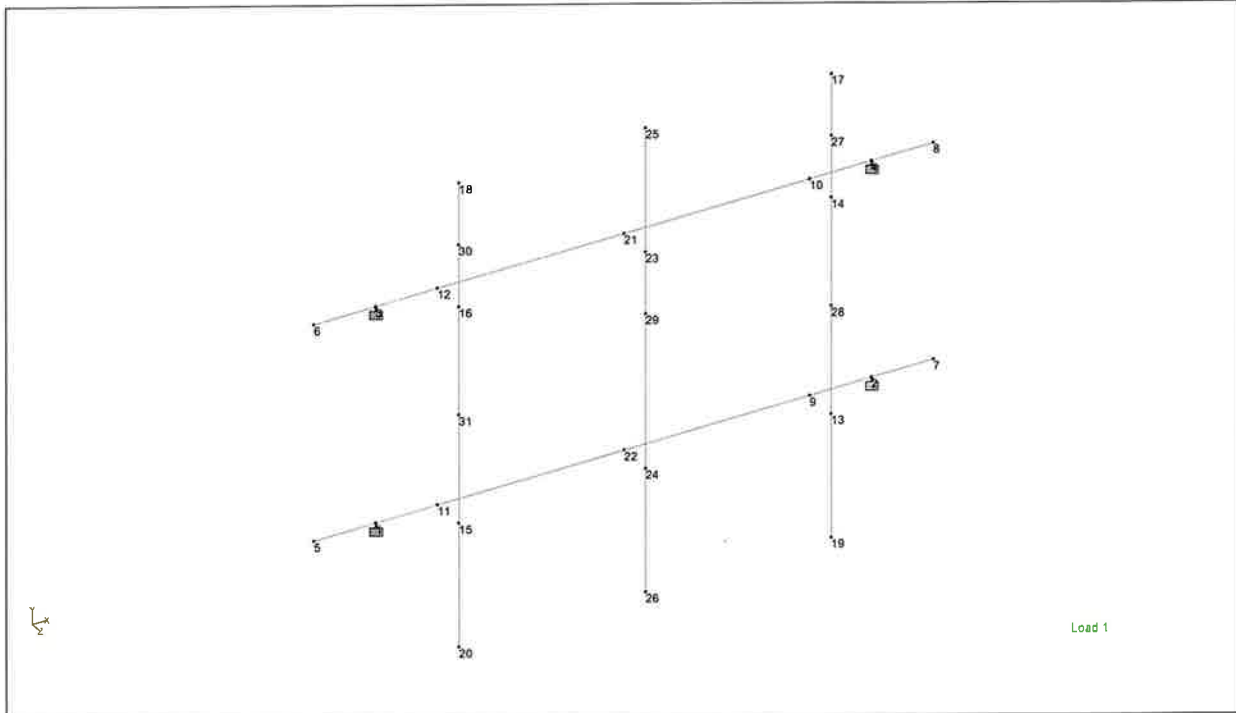
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Node Layout

Beams

Beam	Node A	Node B	Length (ft)	Property	β (degrees)
1	8	4	0.500	2	70
2	4	10	0.500	2	70
3	10	21	1.500	2	70
4	12	3	0.500	2	70
5	3	6	0.500	2	70
6	7	2	0.500	2	70
7	2	9	0.500	2	70
8	9	22	1.500	2	70
9	11	1	0.500	2	70
10	1	5	0.500	2	70
11	17	27	0.500	1	0
12	14	28	0.875	1	0
13	13	19	1.000	1	0
14	18	30	0.500	1	0
15	16	31	0.875	1	0
16	15	20	1.000	1	0
17	21	12	1.500	2	70
18	22	11	1.500	2	70
19	25	23	1.000	1	0



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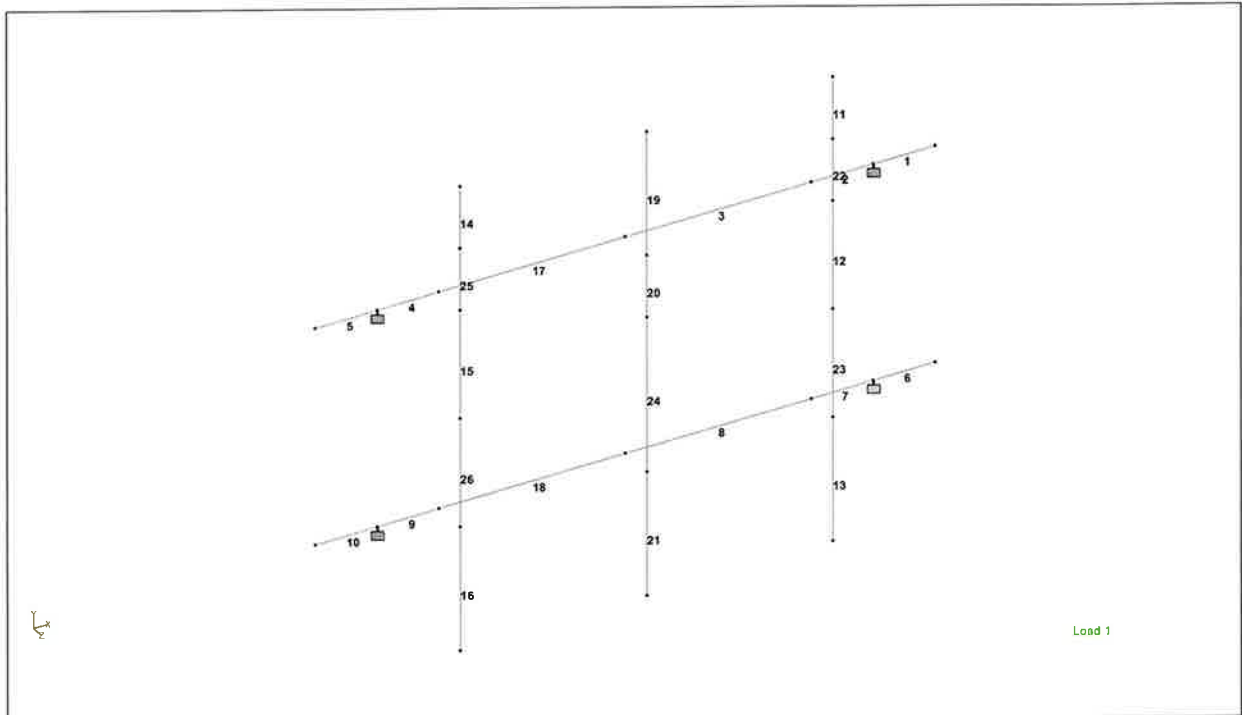
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Beams Cont...

Beam	Node A	Node B	Length (ft)	Property	β (degrees)
20	23	29	0.500	1	0
21	24	26	1.000	1	0
22	27	14	0.500	1	0
23	28	13	0.875	1	0
24	29	24	1.250	1	0
25	30	16	0.500	1	0
26	31	15	0.875	1	0



Beam Layout

Section Properties

Prop	Section	Area (in ²)	I_{yy} (in ⁴)	I_{zz} (in ⁴)	J (in ⁴)	Material
1	PIPS20	1.020	0.627	0.627	1.254	STEEL
2	L50305	2.410	6.976	1.045	0.080	STEEL



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Materials

Mat	Name	E (kip/in ²)	v	Density (kip/in ³)	α (/°F)
1	CONCRETE	3.15 E+3	0.170	8.68e-05	5.5 E -6
2	ALUMINUM	10 E+3	0.330	9.8e-05	12.8 E -6
3	STEEL_50_KSI	29 E+3	0.300	0.000283	6.5 E -6
4	STAINLESSSTEEL	28 E+3	0.300	0.000283	9.9 E -6
5	STEEL_36_KSI	29 E+3	0.300	0.000283	6.5 E -6
6	STEEL_275_NMM2	29.7 E+3	0.300	0.000	6.67 E -6
7	STEEL	29 E+3	0.300	0.000283	6.5 E -6
8	STEEL_355_NMM2	29.7 E+3	0.300	0.000	6.67 E -6

Supports

Node	X (kip/in)	Y (kip/in)	Z (kip/in)	rX (kip·ft/deg)	rY (kip·ft/deg)	rZ (kip·ft/deg)
1	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed
2	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed
3	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed
4	Fixed	Fixed	Fixed	Fixed	Fixed	Fixed

Releases

There is no data of this type.

Primary Load Cases

Number	Name	Type
1	DEAD	Dead
2	WL#1	Wind
3	WL#2	Wind
4	WL#3	Wind
5	WL#4	Wind
6	WL#5	Wind
7	WL#6	Wind
8	DI	Ice
9	WLI#1	Wind on Ice
10	WLI#2	Wind on Ice
11	WLI#3	Wind on Ice
12	WLI#4	Wind on Ice
13	WLI#5	Wind on Ice
14	WLI#6	Wind on Ice
15	WLS#1	Wind
16	WLS#2	Wind
17	WLS#3	Wind
18	WLS#4	Wind



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Primary Load Cases Cont...

Number	Name	Type
19	WLS#5	Wind
20	WLS#6	Wind

Combination Load Cases

Comb.	Combination L/C Name	Primary	Primary L/C Name	Factor
21	1.2D+1.6WL#1	1	DEAD	1.20
		2	WL#1	1.60
22	1.2D+1.6WL#2	1	DEAD	1.20
		3	WL#2	1.60
23	1.2D+1.6WL#3	1	DEAD	1.20
		4	WL#3	1.60
24	1.2D+1.6WL#4	1	DEAD	1.20
		5	WL#4	1.60
25	1.2D+1.6WL#5	1	DEAD	1.20
		6	WL#5	1.60
26	1.2D+1.6WL#6	1	DEAD	1.20
		7	WL#6	1.60
27	1.2D+1.0DI+1.0WI#1	1	DEAD	1.20
		9	WLI#1	1.00
		8	DI	1.00
28	1.2D+1.0DI+1.0WI#2	1	DEAD	1.20
		10	WLI#2	1.00
		8	DI	1.00
29	1.2D+1.0DI+1.0WI#3	1	DEAD	1.20
		11	WLI#3	1.00
		8	DI	1.00
30	1.2D+1.0DI+1.0WI#4	1	DEAD	1.20
		12	WLI#4	1.00
		8	DI	1.00
31	1.2D+1.0DI+1.0WI#5	1	DEAD	1.20
		13	WLI#5	1.00
		8	DI	1.00
32	1.2D+1.0DI+1.0WI#6	1	DEAD	1.20
		14	WLI#6	1.00
		8	DI	1.00
33	1.0D+1.0WLS#1	1	DEAD	1.00
		15	WLS#1	1.00
34	1.0D+1.0WLS#2	1	DEAD	1.00
		16	WLS#2	1.00
35	1.0D+1.0WLS#3	1	DEAD	1.00
		17	WLS#3	1.00
36	1.0D+1.0WLS#4	1	DEAD	1.00



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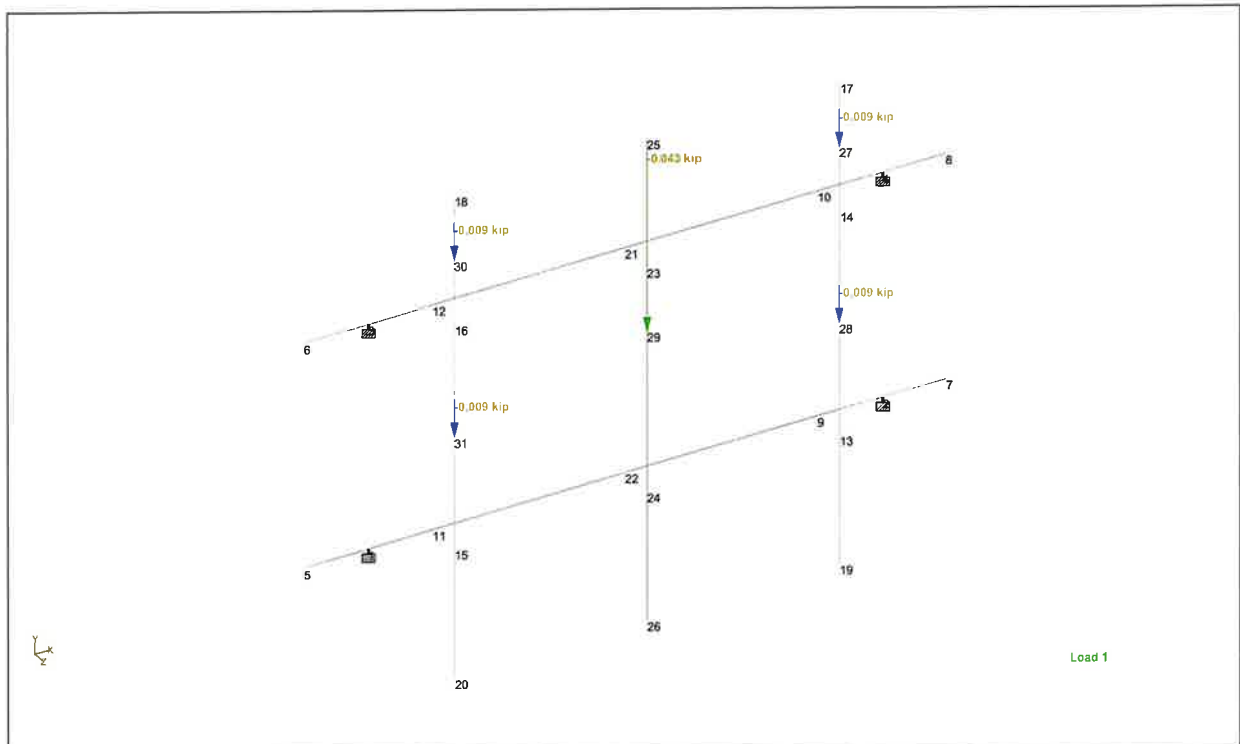
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Combination Load Cases Cont...

Comb.	Combination L/C Name	Primary	Primary L/C Name	Factor
		18	WLS#4	1.00
37	1.0D+1.0WLS#5	1	DEAD	1.00
		19	WLS#5	1.00
38	1.0D+1.0WLS#6	1	DEAD	1.00
		20	WLS#6	1.00
39	1.0DL+1.0WL#1	1	DEAD	1.00
		2	WL#1	1.00
40	1.0DL+1.0WL#2	1	DEAD	1.00
		3	WL#2	1.00
41	1.0DL+1.0WL#3	1	DEAD	1.00
		4	WL#3	1.00
42	1.0DL+1.0WL#4	1	DEAD	1.00
		5	WL#4	1.00
43	1.0DL+1.0WL#5	1	DEAD	1.00
		6	WL#5	1.00
44	1.0DL+1.0WL#6	1	DEAD	1.00
		7	WL#6	1.00



Dead Load



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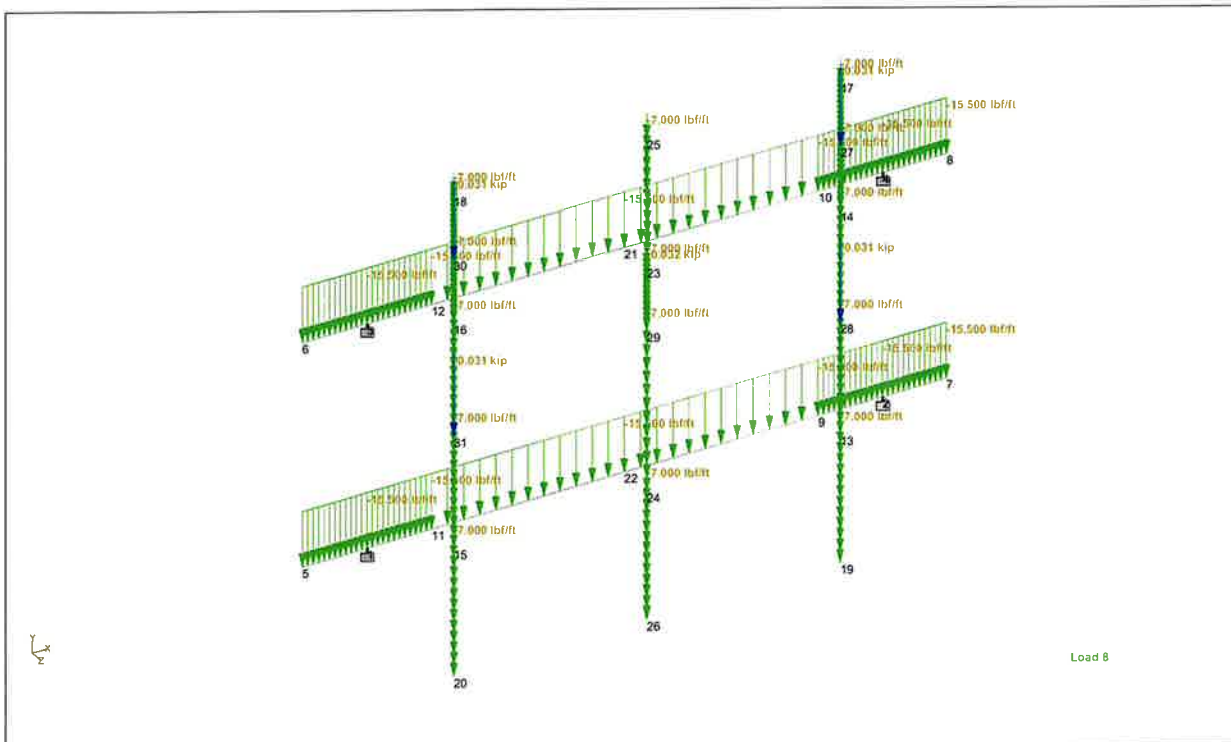
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Dead Ice Load



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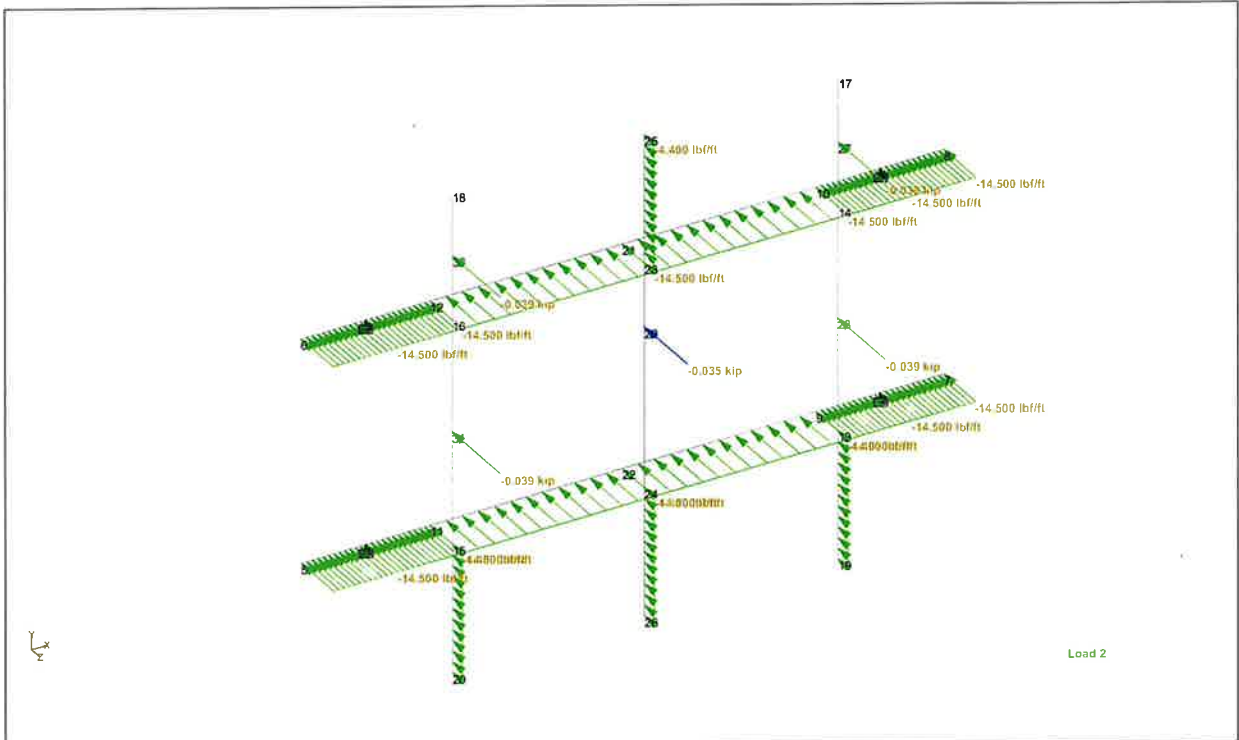
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Chd **SB**

Client **VZW**

File **50124293 - Antenna Fran**

Date/Time **07-Feb-2020 13:34**



Wind Load Case #1 (-Z)



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Job No
50124293

Sheet No
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Rev
0

Part Antenna Frame

Job Title **Stamford S 2 CT**

Ref

By **GJB**

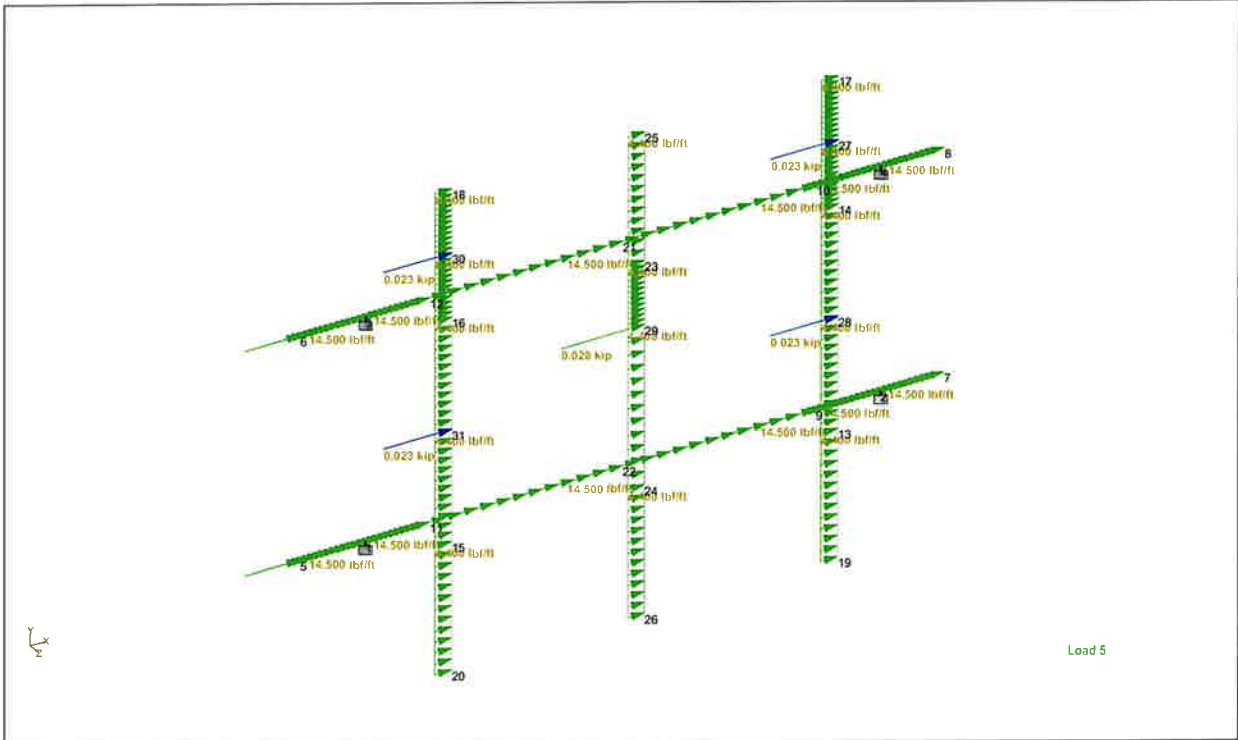
Date **2/3/2020**

Chd **SB**

Client **VZW**

File **50124293 - Antenna Fran**

Date/Time **07-Feb-2020 13:34**



Wind Load Case #4 (X)

Utilization Ratio

Beam	Analysis Property	Design Property	Actual Ratio	Allowable Ratio	Ratio (Act./Allow.)	Clause	L/C	Ax (in ²)	Iz (in ⁴)	Iy (in ⁴)	Ix (in ⁴)
1	L50305	L50305	0.001	1.000	0.001	Eq. H2-1	26	2.410	1.015	7.006	0.079
2	L50305	L50305	0.038	1.000	0.038	Eq. H2-1	26	2.410	1.015	7.006	0.079
3	L50305	L50305	0.018	1.000	0.018	Eq. H2-1	26	2.410	1.015	7.006	0.079
4	L50305	L50305	0.037	1.000	0.037	Eq. H2-1	21	2.410	1.015	7.006	0.079
5	L50305	L50305	0.001	1.000	0.001	Eq. H2-1	26	2.410	1.015	7.006	0.079
6	L50305	L50305	0.001	1.000	0.001	Eq. H2-1	26	2.410	1.015	7.006	0.079
7	L50305	L50305	0.025	1.000	0.025	Eq. H2-1	21	2.410	1.015	7.006	0.079
8	L50305	L50305	0.013	1.000	0.013	Eq. H2-1	21	2.410	1.015	7.006	0.079
9	L50305	L50305	0.025	1.000	0.025	Eq. H2-1	21	2.410	1.015	7.006	0.079
10	L50305	L50305	0.001	1.000	0.001	Eq. H2-1	26	2.410	1.015	7.006	0.079
11	PIPS20	PIPS20	0.001	1.000	0.001	Eq. H1-1b	23	1.020	0.627	0.627	1.254
12	PIPS20	PIPS20	0.020	1.000	0.020	Eq. H1-1b	26	1.020	0.627	0.627	1.254
13	PIPS20	PIPS20	0.002	1.000	0.002	Eq. H1-1b	21	1.020	0.627	0.627	1.254
14	PIPS20	PIPS20	0.001	1.000	0.001	Eq. H1-1b	23	1.020	0.627	0.627	1.254
15	PIPS20	PIPS20	0.026	1.000	0.026	Eq. H1-1b	26	1.020	0.627	0.627	1.254
16	PIPS20	PIPS20	0.002	1.000	0.002	Eq. H1-1b	21	1.020	0.627	0.627	1.254
17	L50305	L50305	0.021	1.000	0.021	Eq. H2-1	26	2.410	1.015	7.006	0.079
18	L50305	L50305	0.013	1.000	0.013	Eq. H2-1	21	2.410	1.015	7.006	0.079



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50124293

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Job Title **Stamford S 2 CT**

Part **Antenna Frame**

Ref

By **GJB**

Date **2/3/2020**

Chd **SB**

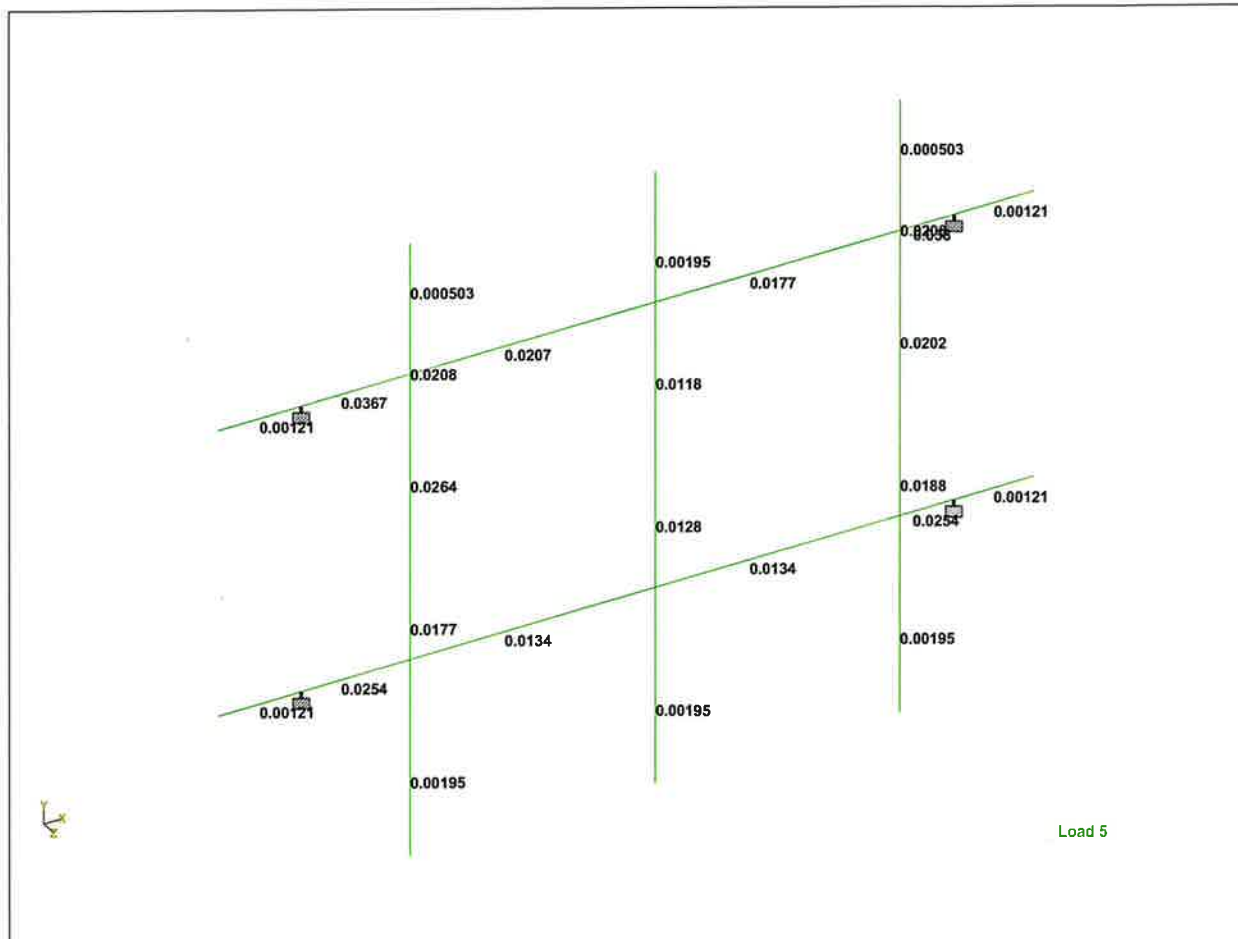
Client **VZW**

File **50124293 - Antenna Fran**

Date/Time **07-Feb-2020 13:34**

Utilization Ratio Cont...

Beam	Analysis Property	Design Property	Actual Ratio	Allowable Ratio	Ratio (Act./Allow.)	Clause	L/C	Ax (in ²)	Iz (in ⁴)	Iy (in ⁴)	Ix (in ⁴)
19	PIPS20	PIPS20	0.002	1.000	0.002	Eq. H1-1b	21	1.020	0.627	0.627	1.254
20	PIPS20	PIPS20	0.012	1.000	0.012	Eq. H1-1b	25	1.020	0.627	0.627	1.254
21	PIPS20	PIPS20	0.002	1.000	0.002	Eq. H1-1b	21	1.020	0.627	0.627	1.254
22	PIPS20	PIPS20	0.021	1.000	0.021	Eq. H1-1b	22	1.020	0.627	0.627	1.254
23	PIPS20	PIPS20	0.019	1.000	0.019	Eq. H1-1b	32	1.020	0.627	0.627	1.254
24	PIPS20	PIPS20	0.0281	1.000	0.0281	Eq. H1-1b	29	1.020	0.627	0.627	1.254
25	PIPS20	PIPS20	0.021	1.000	0.021	Eq. H1-1b	22	1.020	0.627	0.627	1.254
26	PIPS20	PIPS20	0.018	1.000	0.018	Eq. H1-1b	32	1.020	0.627	0.627	1.254



Utility Ratio



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50124293

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Job Title **Stamford S 2 CT**

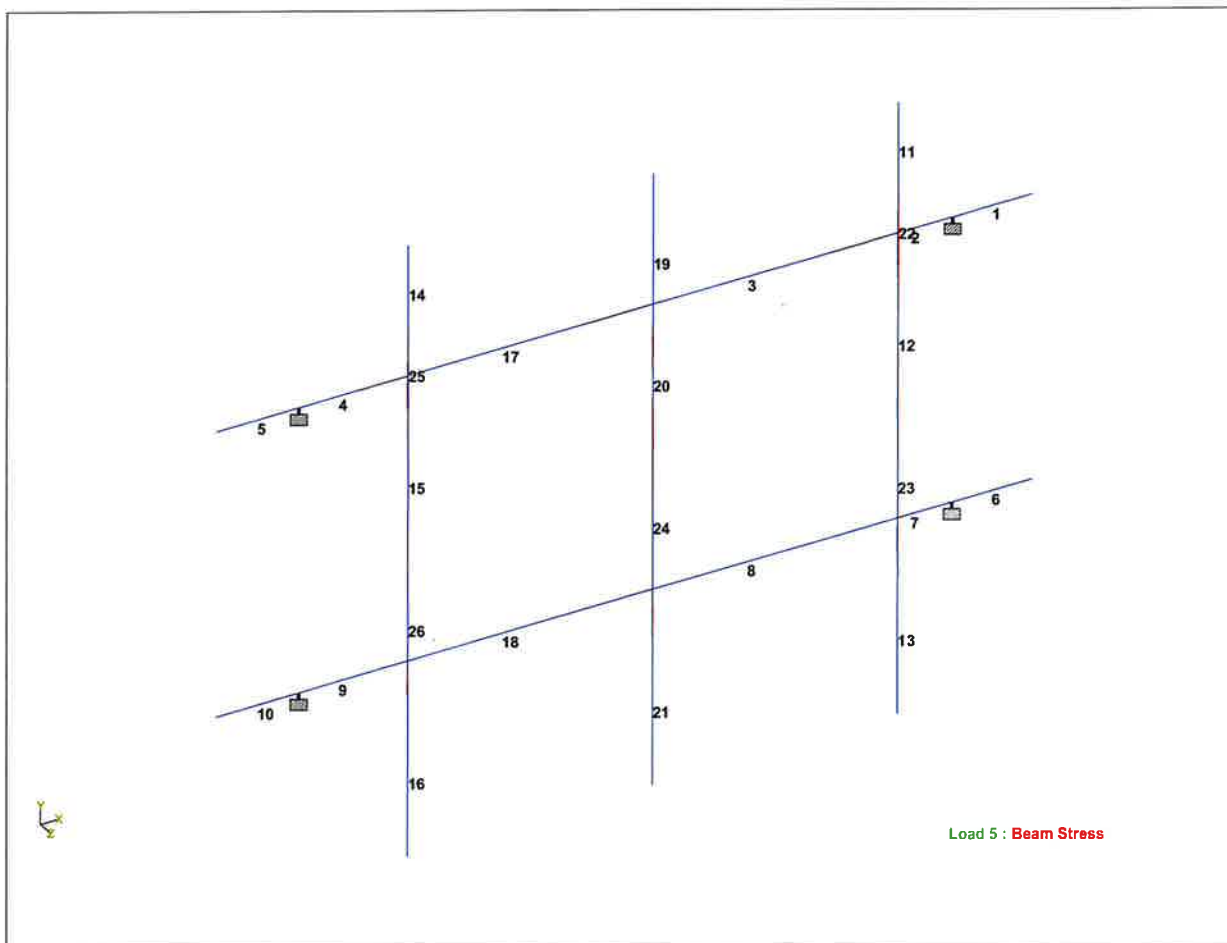
Part **Antenna Frame**

Ref

By **GJB** Date **2/3/2020** Chd **SB**

Client **VZW**

File **50124293 - Antenna Fran** Date/Time **07-Feb-2020 13:34**



Stresses

Failed Members

There is no data of this type.



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50124293

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1

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Job Title **Stamford S 2 CT**

Part **Antenna Frame**

Ref

By **GJB**

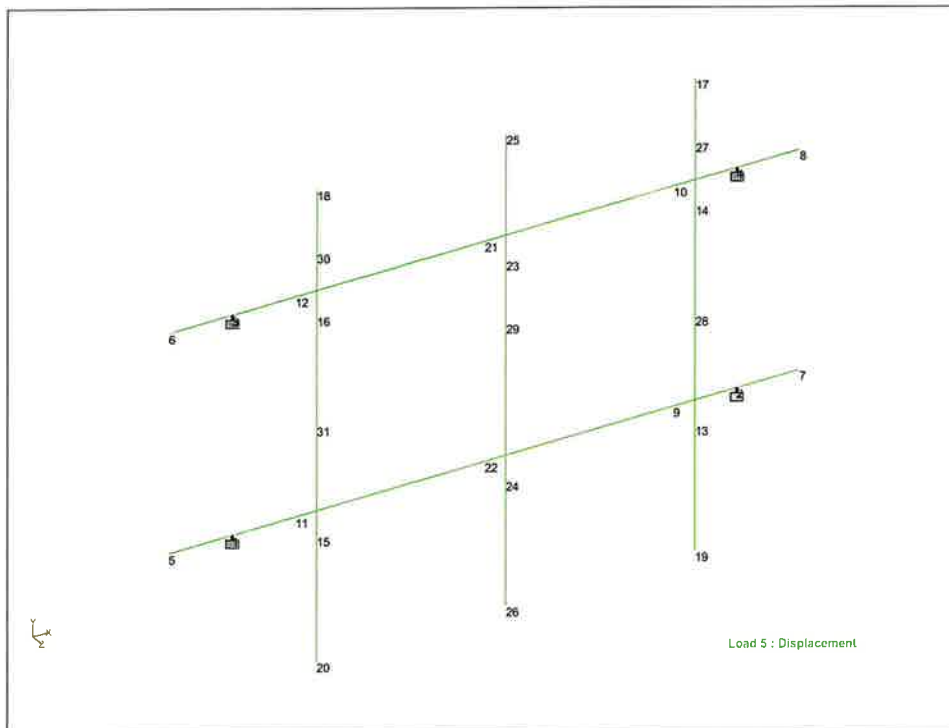
Date **2/3/2020**

Chd **SB**

Client **VZW**

File **50124293 - Antenna Fran**

Date/Time **07-Feb-2020 13:34**



Displacement

Node Displacement Summary

	Node	L/C	X (in)	Y (in)	Z (in)	Resultant (in)	rX (rad)	rY (rad)	rZ (rad)
Max X	19	38:1.0D+1.0WI	0.000	-0.000	-0.000	0.000	0.000	0.000	0.000
Min X	20	38:1.0D+1.0WI	-0.000	-0.000	-0.000	0.000	0.000	-0.000	-0.000
Max Y	1	33:1.0D+1.0WI	0	0	0	0	0	0	0
Min Y	29	38:1.0D+1.0WI	0.000	-0.000	0.001	0.001	0.000	0.000	0.000
Max Z	25	38:1.0D+1.0WI	-0.000	-0.000	0.001	0.001	0.000	0.000	0.000
Min Z	26	34:1.0D+1.0WI	-0.000	-0.000	-0.001	0.001	0.000	-0.000	-0.000
Max rX	22	38:1.0D+1.0WI	0.000	-0.000	0.000	0.000	0.000	-0.000	-0.000
Min rX	31	38:1.0D+1.0WI	-0.000	-0.000	0.000	0.000	-0.000	-0.000	0.000
Max rY	10	38:1.0D+1.0WI	0.000	-0.000	0.000	0.000	0.000	0.000	0.000
Min rY	12	38:1.0D+1.0WI	0.000	-0.000	0.000	0.000	0.000	-0.000	-0.000
Max rZ	10	38:1.0D+1.0WI	0.000	-0.000	0.000	0.000	0.000	0.000	0.000
Min rZ	18	38:1.0D+1.0WI	0.000	-0.000	0.000	0.000	0.000	-0.000	-0.000
Max Rst	25	38:1.0D+1.0WI	-0.000	-0.000	0.001	0.001	0.000	0.000	0.000

Max. Displacement = 0.001"

✓ Allow. Displacement = 1.5% of Cantilever = 0.180"

0.180" > 0.001" ∴ OK



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Job No
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Part Antenna Frame

Job Title Stamford S 2 CT

Ref

By GJB

Date 2/3/2020

Chd SB

Client VZW

File 50124293 - Antenna Fran

Date/Time 07-Feb-2020 13:34

Reaction Summary

	Node	L/C	Horizontal	Vertical	Horizontal	Moment		
			FX (kip)	FY (kip)	FZ (kip)	MX (kip'in)	MY (kip'in)	MZ (kip'in)
Max FX	2	39:1.0DL+1.0V	0.003	0.045	0.068	0.002	0.470	-0.391
Min FX	3	43:1.0DL+1.0V	-0.099	0.047	-0.046	-0.003	0.208	0.349
Max FY	2	44:1.0DL+1.0V	-0.021	0.058	-0.044	-0.005	-0.328	-0.283
Min FY	3	44:1.0DL+1.0V	-0.043	0.043	-0.115	-0.005	0.650	0.260
Max FZ	3	39:1.0DL+1.0V	0.003	0.054	0.110	0.002	-0.649	0.396
Min FZ	3	44:1.0DL+1.0V	-0.043	0.043	-0.115	-0.005	0.650	0.260
Max MX	1	39:1.0DL+1.0V	-0.003	0.045	0.068	0.002	-0.470	0.391
Min MX	2	44:1.0DL+1.0V	-0.021	0.058	-0.044	-0.005	-0.328	-0.283
Max MY	3	44:1.0DL+1.0V	-0.043	0.043	-0.115	-0.005	0.650	0.260
Min MY	4	44:1.0DL+1.0V	-0.023	0.043	-0.108	-0.005	-0.697	-0.187
Max MZ	3	40:1.0DL+1.0V	-0.031	0.053	0.088	0.001	-0.571	0.423
Min MZ	4	39:1.0DL+1.0V	-0.003	0.054	0.110	0.002	0.649	-0.396

Max. reactions used in the following anchorage check.



Job Number 50124293
Made by: GJB
Date: 2/4/2020
Checked by: SB
Date: 2/4/2020

(Stamford S 2 CT)- Anchorage Design

Q:\50124287\50124293\Engineering\Structural\MA\Rev 0\Calculations\50124293 - Anchorage Check.xlsx

Design Mount Anchorage to Exist. Brick Wall

- Reactions taken from STAAD output
- Threaded rods ASTM A36 (36 ksi) 1/2" diameter threaded rod

Max. Loading from STAAD

$$\begin{aligned} F_x &= 0.099 \text{ k} \\ F_y &= 0.058 \text{ k} \\ F_z &= 0.115 \text{ k} \end{aligned} \rightarrow (F_x^2 + F_y^2)^{0.5} = F_r = 115 \text{ lb (Resultant Shear)}$$
$$F_z = 115 \text{ lb (Outward Force)}$$

$$\begin{aligned} M_x &= 0.005 \text{ k-in} \rightarrow 5 \text{ lbs-in} \\ M_y &= 0.697 \text{ k-in} \rightarrow 697 \text{ lbs-in} \\ M_z &= 0.423 \text{ k-in} \rightarrow 423 \text{ lbs-in} \end{aligned}$$
$$\begin{aligned} S_v &= 2.00 \text{ in (Bolt Spacing or Edge Distance)} \\ S_h &= 1.00 \text{ in (Bolt Spacing or Edge Distance)} \\ S_c &= 2.20 \text{ in (Center of Bolt Group)} \end{aligned}$$

Max. Shear per Anchor

- Divide shear equally among anchors

$$\begin{aligned} V_{\max} &= F_r / n + M_z / S_c n \\ &= 115 \text{ lb} / 2 \text{ bolts} + (423 \text{ lb-in} / 2.2 \text{ in}) / 1 \text{ bolts} \\ V_{\max} &= 250 \text{ lb/bolt} \end{aligned}$$

Max. Tension per Anchor

- Assume tension (F_z) divided by all anchors

$$\begin{aligned} T_{\max} &= F_z / n + M_y / S_h n + M_x / S_v n \\ &= 115 \text{ lb} / 2 \text{ bolts} + (697 \text{ lb-in} / 1 \text{ in}) / 1 \text{ bolts} + (5 \text{ lb-in} / 2 \text{ in}) / 1 \text{ bolts} \\ T_{\max} &= 757 \text{ lb/bolt} \end{aligned}$$

Determine allowable loads for a 1/2" diameter threaded rod

$$\begin{aligned} \Omega &= 2 \\ \text{Through Bolt Diameter} &= 0.50 \text{ in} \\ \text{Through Bolt Cross Sectional Area, } A_b &= 0.20 \text{ in}^2 \\ F_{nv} &= 26 \text{ ksi (Table J3.2 in AISC 14th ed.)} \\ F_{nt} &= 44 \text{ ksi (Table J3.2 in AISC 14th ed.)} \\ n &= 2 \text{ bolts (number of bolts)} \\ n' &= 1 \text{ bolts (number of bolts resisting eccentric loading)} \end{aligned}$$

Determine Capacity

$$\begin{aligned} T_{\text{allow steel}} &= 4271 \text{ lb (} F_{nt} \times A_b / \Omega \text{)} \\ V_{\text{allow steel}} &= 2562 \text{ lb (} F_{nv} \times A_b / \Omega \text{)} \end{aligned}$$

Check anchors for Tension/Shear

$$\begin{aligned} \text{Allowable Tension} &= 4271 \text{ lb} & \text{Max. Tension} &= 1514 \text{ lb (Doubled to take other side into account)} \\ \text{Allowable Shear} &= 2562 \text{ lb} & \text{Max. Shear} &= 500 \text{ lb (Doubled to take other side into account)} \end{aligned}$$

$$\frac{T_{\max}}{T_{\text{allow}}} + \frac{V_{\max}}{V_{\text{allow}}} \leq 1$$
$$\frac{1514 \text{ lb}}{4271 \text{ lb}} + \frac{500 \text{ lb}}{2562 \text{ lb}} = 0.55 < 1.0, \text{ OK}$$

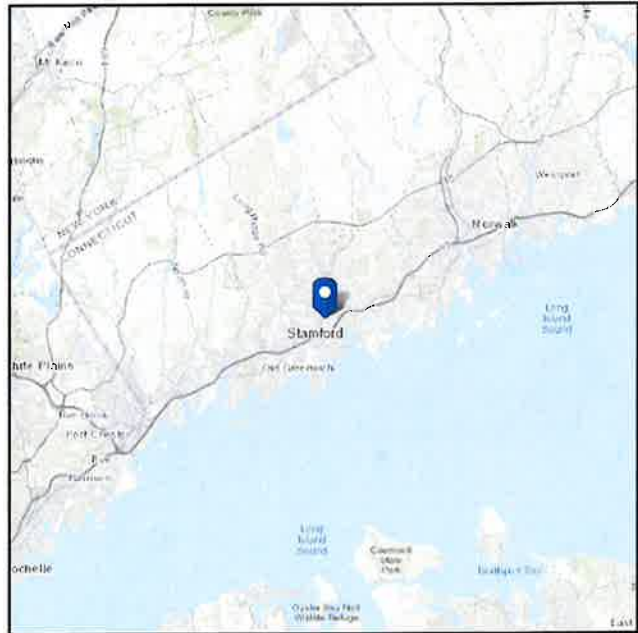
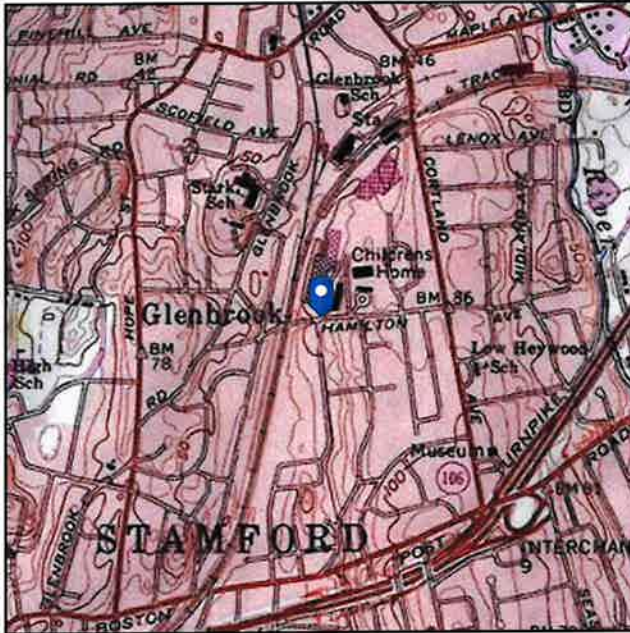
APPENDIX B

ASCE 7 Hazards Report

Address:
99 Hamilton Ave
Stamford, Connecticut
06902

Standard: ASCE/SEI 7-10
Risk Category: II
Soil Class:

Elevation: 58.85 ft (NAVD 88)
Latitude: 41.063614
Longitude: -73.519344



Wind

Results:

Wind Speed:	119 Vmph
10-year MRI	76 Vmph
25-year MRI	86 Vmph
50-year MRI	91 Vmph
100-year MRI	97 Vmph

Data Source: ASCE/SEI 7-10, Fig. 26.5-1A and Figs. CC-1–CC-4, incorporating errata of March 12, 2014

Date Accessed: Mon Feb 03 2020

Value provided is 3-second gust wind speeds at 33 ft above ground for Exposure C Category, based on linear interpolation between contours. Wind speeds are interpolated in accordance with the 7-10 Standard. Wind speeds correspond to approximately a 7% probability of exceedance in 50 years (annual exceedance probability = 0.00143, MRI = 700 years).

Site is in a hurricane-prone region as defined in ASCE/SEI 7-10 Section 26.2. Glazed openings need not be protected against wind-borne debris.

Mountainous terrain, gorges, ocean promontories, and special wind regions should be examined for unusual wind conditions.

Results:

Ice Thickness: 0.75 in.
Concurrent Temperature: 15 F
Gust Speed: 50 mph

Data Source: Standard ASCE/SEI 7-10, Figs. 10-2 through 10-8

Date Accessed: Mon Feb 03 2020

Ice thicknesses on structures in exposed locations at elevations higher than the surrounding terrain and in valleys and gorges may exceed the mapped values.

Values provided are equivalent radial ice thicknesses due to freezing rain with concurrent 3-second gust speeds, for a 50-year mean recurrence interval, and temperatures concurrent with ice thicknesses due to freezing rain. Thicknesses for ice accretions caused by other sources shall be obtained from local meteorological studies. Ice thicknesses in exposed locations at elevations higher than the surrounding terrain and in valleys and gorges may exceed the mapped values.

The ASCE 7 Hazard Tool is provided for your convenience, for informational purposes only, and is provided "as is" and without warranties of any kind. The location data included herein has been obtained from information developed, produced, and maintained by third party providers; or has been extrapolated from maps incorporated in the ASCE 7 standard. While ASCE has made every effort to use data obtained from reliable sources or methodologies, ASCE does not make any representations or warranties as to the accuracy, completeness, reliability, currency, or quality of any data provided herein. Any third-party links provided by this Tool should not be construed as an endorsement, affiliation, relationship, or sponsorship of such third-party content by or from ASCE.

ASCE does not intend, nor should anyone interpret, the results provided by this Tool to replace the sound judgment of a competent professional, having knowledge and experience in the appropriate field(s) of practice, nor to substitute for the standard of care required of such professionals in interpreting and applying the contents of this Tool or the ASCE 7 standard.

In using this Tool, you expressly assume all risks associated with your use. Under no circumstances shall ASCE or its officers, directors, employees, members, affiliates, or agents be liable to you or any other person for any direct, indirect, special, incidental, or consequential damages arising from or related to your use of, or reliance on, the Tool or any information obtained therein. To the fullest extent permitted by law, you agree to release and hold harmless ASCE from any and all liability of any nature arising out of or resulting from any use of data provided by the ASCE 7 Hazard Tool.

Product Specifications

COMMScope®

POWERED BY



HBXX-6513DS-VTM

Andrew® Quad Port Antenna, 1710–2170 MHz, 65° horizontal beamwidth, RET compatible

- Two DualPol® antennas under one radome
- Each antenna is independently capable of field adjustable electrical tilt
- Continuous wideband operation

Electrical Specifications

Frequency Band, MHz	1710–1880	1850–1990	1920–2170
Gain, dBi	14.5	14.6	14.9
Beamwidth, Horizontal, degrees	67	66	64
Beamwidth, Vertical, degrees	14.8	14.0	13.4
Beam Tilt, degrees	0–12	0–12	0–12
USLS, dB	15	15	15
Front-to-Back Ratio at 180°, dB	30	30	30
Front-to-Back Total Power at 180° ± 30°, dB	26	27	27
CPR at Boresight, dB	22	22	22
CPR at Sector, dB	7	8	8
Isolation, dB	30	30	30
VSWR Return Loss, dB	1.4 15.6	1.4 15.6	1.4 15.6
PIM, 3rd Order, 2 x 20 W, dBc	-150	-150	-150
Input Power per Port, maximum, watts	350	350	350
Polarization	±45°	±45°	±45°
Impedance	50 ohm	50 ohm	50 ohm

Electrical Specifications, BASTA*

Frequency Band, MHz	1710–1880	1850–1990	1920–2170
Gain by all Beam Tilts, average, dBi	14.2	14.3	14.6
Gain by all Beam Tilts Tolerance, dB	±0.8	±0.7	±0.7
	0 ° 14.6	0 ° 14.7	0 ° 15.0
Gain by Beam Tilt, average, dBi	6 ° 14.4	6 ° 14.5	6 ° 14.7
	12 ° 13.5	12 ° 13.7	12 ° 13.8
Beamwidth, Horizontal Tolerance, degrees	±3.7	±3.3	±3.5
Beamwidth, Vertical Tolerance, degrees	±1.4	±0.9	±1.1
USLS, dB	15	15	16
CPR at Boresight, dB	22	22	22
CPR at Sector, dB	7	8	8

* CommScope® supports NGMN recommendations on Base Station Antenna Standards (BASTA). To learn more about the benefits of BASTA, [download the whitepaper Time to Raise the Bar on BSAs.](#)

General Specifications

Antenna Brand	Andrew®
Antenna Type	DualPol® quad
Band	Single band
Brand	DualPol® Teletilt®
Operating Frequency Band	1710 – 2170 MHz

Product Specifications

COMMScope®

HBXX-6513DS-VTM

POWERED BY



Performance Note

Outdoor usage

Mechanical Specifications

Color	Light gray
Lightning Protection	dc Ground
Radiator Material	Low loss circuit board
Radome Material	PVC, UV resistant
Reflector Material	Aluminum
RF Connector Interface	7-16 DIN Female
RF Connector Location	Bottom
RF Connector Quantity, total	4
Wind Loading, maximum	223.0 N @ 150 km/h 50.1 lbf @ 150 km/h
Wind Speed, maximum	241.0 km/h 149.8 mph

Dimensions

Depth	166.0 mm 6.5 in
Length	695.0 mm 27.4 in
Width	305.0 mm 12.0 in
Net Weight	7.9 kg 17.4 lb

Remote Electrical Tilt (RET) Information

Model with Factory Installed AISG 2.0 Actuator	HBXX-6513DS-A2M
RET System	Teletilt®

Regulatory Compliance/Certifications

Agency	Classification
RoHS 2011/65/EU	Compliant by Exemption
China RoHS SJ/T 11364-2006	Above Maximum Concentration Value (MCV)
ISO 9001:2008	Designed, manufactured and/or distributed under this quality management system



Included Products

600899A-2 — Downtilt Mounting Kit for 2.4 - 4.5 in (60 - 115 mm) OD round members. Kit contains one scissor top bracket set and one bottom bracket set.

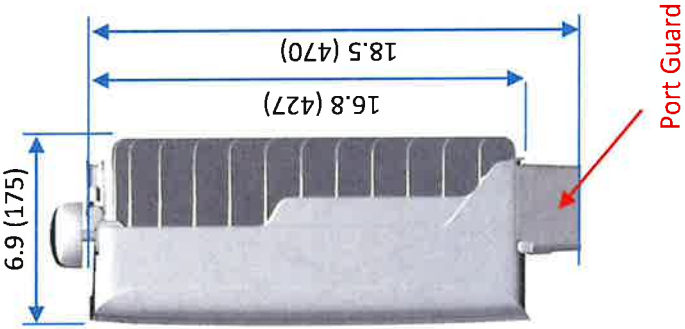
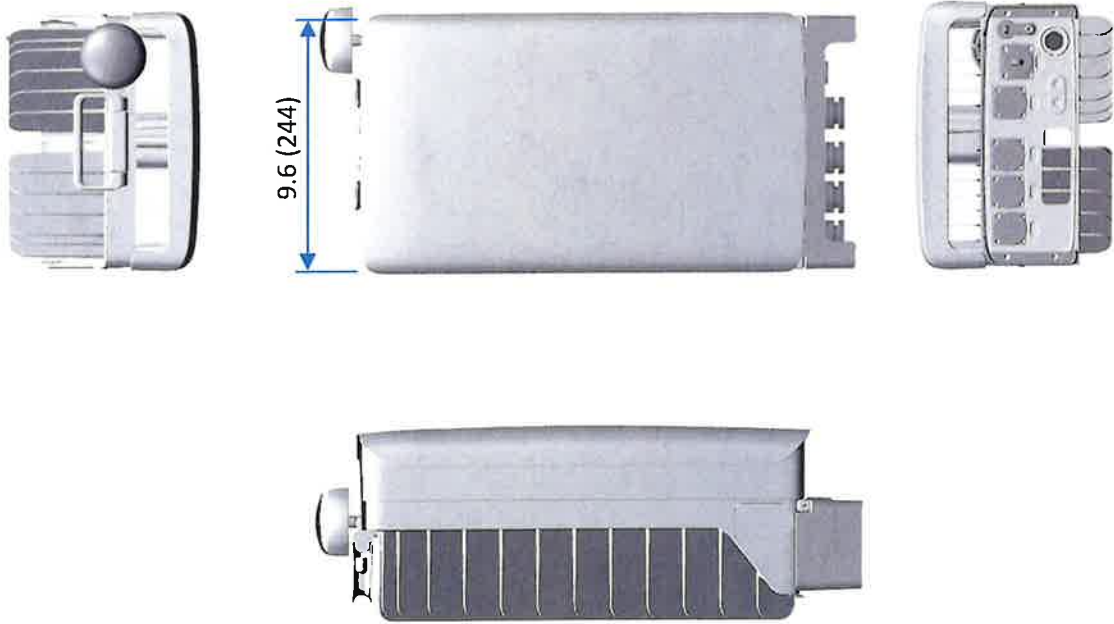
* Footnotes

Performance Note	Severe environmental conditions may degrade optimum performance
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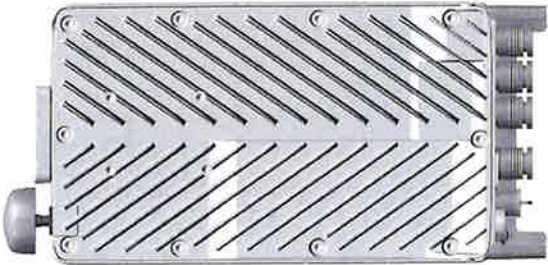
5G NR AU (AT1K01) Product Specifications

	28GHz	39GHz
Integrated AU		
Operating frequency	26.5 ~ 29.5GHz	37 ~ 40GHz
IBW/OBW	850MHz/800MHz	1.4GHz/800MHz
EIRP	60dBm	59dBm
Antenna Gain	25dBi	24dBi
Tx/Rx		4T4R
Antenna Elements		1,024
Beam Scan Range		120H / 40V
Size/Weight		9.6 x 16.8 x 6.9 in (18.1L) / 15.0Kg (33lbs)
Input Power		-48VDC / 100 ~ 240VAC
Power Consumption		362W
Midhaul (gNB-CU Interface)		10G Optic x 2 ports
Installation		Outdoor Pole/Wall Mount
Clock Synchronization		GPS and IEEE 1588v2
Operating Temperature		-40 deg C to +55 deg C with solar load
Cooling		Natural Convection

Appearance



[Unit : in. (mm)]



APPENDIX C

Site Name: Stamford S 2 CT

Site Address: 99 Hamilton Ave
Stamford, CT 06902

Stamford S 2 CT - Site Photos

Photo of Existing Alpha Sector



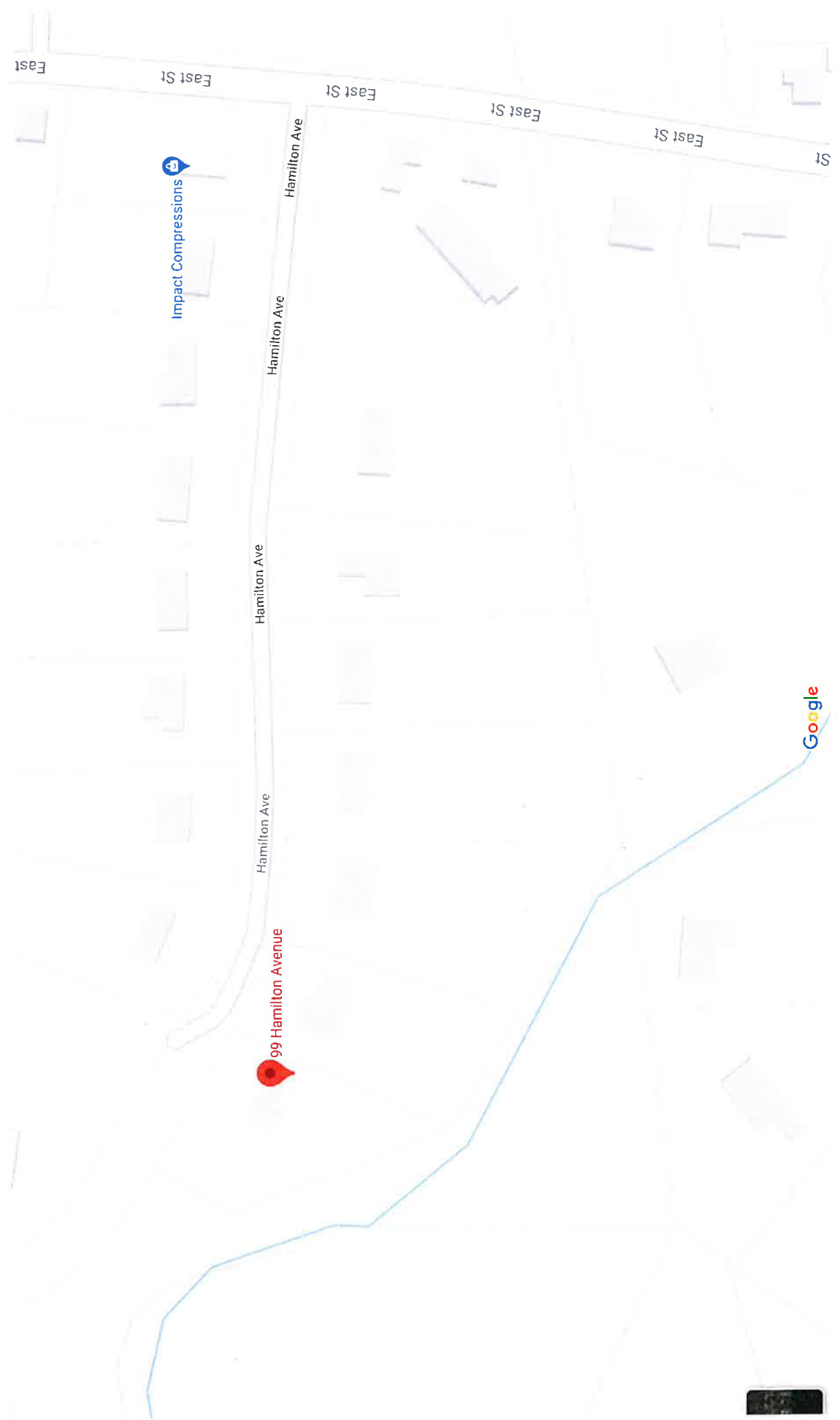
Site Name: Stamford S 2 CT

Site Address: 99 Hamilton Ave
Stamford, CT 06902

Photo of Existing Gamma Sector



ATTACHMENT 5





STAMFORD, CT

99 HAMILTON AVENUE

Sales Print Map It

Location

99 HAMILTON AVENUE

Mblu

001/ 6518/ / /

Acct#

001-6518

Owner

CUBESMART L P

Assessment

\$4,305,900

Appraisal

\$6,151,280

PID

5850

Building Count

8

Current Value

Appraisal

Valuation Year	Improvements	Land	Total
2019	\$3,841,330	\$2,309,950	\$6,151,280

Assessment

Valuation Year	Improvements	Land	Total
2019	\$2,688,930	\$1,616,970	\$4,305,900

Owner of Record

Owner CUBESMART L P

Co-Owner

Address PO BOX 320099
ALEXANDRIA, VA 22320

Sale Price \$0

Book & Page 10934/0290

Sale Date 01/17/2014

Instrument 03

Ownership History

Owner	Sale Price	Book & Page	Instrument	Sale Date
CUBESMART L P	\$0	10934/0290	03	01/17/2014
YSI VI LLC	\$0	8170/0283	25	07/22/2005
U-STORE-IT L P	\$5,275,000	7979/0242	00	03/15/2005
A-1 SELF STORAGE LLC	\$950,000	4752/0240	00	05/02/1997
G S L ENTERPRISES INC	\$0	2504/0099	25	01/22/1985

Building Information

Building 1 : Section 1

Year Built: 1955

Living Area: 23,826

Building Attributes

Field	Description
STYLE	Mini Warehouse
MODEL	Comm/Ind
Grade	B
Stories:	1
Occupancy	1.00
Exterior Wall 1	Brick/Masonry
Exterior Wall 2	Pre-finish Metl
Roof Structure	Flat
Roof Cover	Rolled Compos
Interior Wall 1	Drywall/Plaste
Interior Wall 2	Minimum
Interior Floor 1	Ceram Clay Til
Interior Floor 2	Concrete Slab
Heating Fuel	Gas/LP
Heating Type	Hot Wtr Bbd
AC Type	Central
Struct Class	
Bldg Use	Commercial MDL-94
Total Rooms	
Total Bedrms	00
Total Baths	0

Usrflld 218	
Usrflld 219	
1st Floor Use:	300
Heat/AC	Heat/AC Split
Frame Type	Masonry
Baths/Plumbing	Average
Ceiling/Wall	Sus-Ceil/Mn WL
Rooms/Prtns	Average
Wall Height	9.00
% Conn Wall	

Building Photo



Building Layout



Building Sub-Areas (sq ft) Legend

Code	Description	Gross Area	Living Area
BAS	First Floor	23,826	23,826
		23,826	23,826

Building 2 : Section 1

Year Built:

1997

Living Area:

4,413

Building Attributes : Bldg 2 of 8

Field	Description
STYLE	Mini Warehouse
MODEL	Comm/Ind
Grade	B
Stories:	1
Occupancy	1.00
Exterior Wall 1	Pre-finsh Metl
Exterior Wall 2	
Roof Structure	Flat
Roof Cover	Metal/Tin
Interior Wall 1	Minimum
Interior Wall 2	
Interior Floor 1	Concrete Slab
Interior Floor 2	
Heating Fuel	None
Heating Type	None
AC Type	None
Struct Class	

Bldg Use	Commercial MDL-94
Total Rooms	
Total Bedrms	00
Total Baths	0
Usrflld 218	
Usrflld 219	
1st Floor Use:	300
Heat/AC	None
Frame Type	Steel
Baths/Plumbing	None
Ceiling/Wall	Ceiling Only
Rooms/Prtns	Average
Wall Height	9.00
% Corn Wall	

Building Photo



Building Layout



Building Sub-Areas (sq ft) Legend

Code	Description	Gross Area	Living Area
BAS	First Floor	4,413	4,413
		4,413	4,413

Building 3 : Section 1

Year Built:

1997

Living Area:

2,625

Building Attributes : Bldg 3 of 8

Field	Description
STYLE	Mini Warehouse
MODEL	Comm/Ind
Grade	B
Stories:	1
Occupancy	1.00
Exterior Wall 1	Pre-finish Metl
Exterior Wall 2	
Roof Structure	Flat
Roof Cover	Metal/Tin
Interior Wall 1	Minimum
Interior Wall 2	
Interior Floor 1	Concrete Slab
Interior Floor 2	

Heating Fuel	None
Heating Type	None
AC Type	None
Struct Class	
Bldg Use	Commercial MDL-94
Total Rooms	
Total Bedrms	00
Total Baths	0
Usrflld 218	
Usrflld 219	
1st Floor Use:	300
Heat/AC	None
Frame Type	Steel
Baths/Plumbing	None
Ceiling/Wall	Ceiling Only
Rooms/Prtns	Average
Wall Height	9.00
% Comn Wall	

Building Photo



Building Layout



Building Sub-Areas (sq ft) Legend

Code	Description	Gross Area	Living Area
BAS	First Floor	2,625	2,625
		2,625	2,625

Building 4 : Section 1

Year Built:

1997

Living Area:

1,169

Building Attributes : Bldg 4 of 8

Field	Description
STYLE	Mini Warehouse
MODEL	Comm/Ind
Grade	B
Stories:	1
Occupancy	1.00
Exterior Wall 1	Pre-finsh Metl
Exterior Wall 2	
Roof Structure	Flat
Roof Cover	Metal/Tin

Interior Wall 1	Minimum
Interior Wall 2	
Interior Floor 1	Concrete Slab
Interior Floor 2	
Heating Fuel	None
Heating Type	None
AC Type	None
Struct Class	
Bldg Use	Commercial MDL-94
Total Rooms	
Total Bedrms	00
Total Baths	0
Usrflld 218	
Usrflld 219	
1st Floor Use:	300
Heat/AC	None
Frame Type	Steel
Baths/Plumbing	None
Ceiling/Wall	Ceiling Only
Rooms/Prtns	Average
Wall Height	9.00
% Comn Wall	

Building Photo



Building Layout



Building Sub-Areas (sq ft) Legend

Code	Description	Gross Area	Living Area
BAS	First Floor	1,169	1,169
		1,169	1,169

Building 5 : Section 1

Year Built:

1997

Living Area:

2,391

Building Attributes : Bldg 5 of 8

Field	Description
STYLE	Mini Warehouse
MODEL	Comm/Ind
Grade	B
Stories:	1
Occupancy	1.00

Exterior Wall 1	Pre-finish Metal
Exterior Wall 2	
Roof Structure	Flat
Roof Cover	Metal/Tin
Interior Wall 1	Minimum
Interior Wall 2	
Interior Floor 1	Concrete Slab
Interior Floor 2	
Heating Fuel	None
Heating Type	None
AC Type	None
Struct Class	
Bldg Use	Commercial MDL-94
Total Rooms	
Total Bedrms	00
Total Baths	0
Usrflld 218	
Usrflld 219	
1st Floor Use:	300
Heat/AC	None
Frame Type	Steel
Baths/Plumbing	None
Ceiling/Wall	Ceiling Only
Rooms/Prtns	Average
Wall Height	9.00
% Comn Wall	

Building Photo



Building Layout



Building Sub-Areas (sq ft) Legend

Code	Description	Gross Area	Living Area
BAS	First Floor	2,391	2,391
		2,391	2,391

Building 6 : Section 1

Year Built:

1997

Living Area:

809

Building Attributes : Bldg 6 of 8

Field	Description
STYLE	Mini Warehouse

MODEL	Comm/Ind
Grade	B
Stories:	1
Occupancy	1.00
Exterior Wall 1	Pre-finish Metl
Exterior Wall 2	
Roof Structure	Flat
Roof Cover	Metal/Tin
Interior Wall 1	Minimum
Interior Wall 2	
Interior Floor 1	Dirt/None
Interior Floor 2	
Heating Fuel	None
Heating Type	None
AC Type	None
Struct Class	
Bldg Use	Commercial MDL-94
Total Rooms	
Total Bedrms	00
Total Baths	0
Usrflld 218	
Usrflld 219	
1st Floor Use:	300
Heat/AC	None
Frame Type	Steel
Baths/Plumbing	None
Ceiling/Wall	Ceiling Only
Rooms/Prtns	Average
Wall Height	9.00
% Comn Wall	

Building Photo



Building Layout



Building Sub-Areas (sq ft) Legend

Code	Description	Gross Area	Living Area
BAS	First Floor	809	809
		809	809

Building 7 : Section 1

Year Built:

1997

Living Area:

758

Building Attributes : Bldg 7 of 8

Field	Description
STYLE	Mini Warehouse
MODEL	Comm/Ind
Grade	B
Stories:	1
Occupancy	1.00
Exterior Wall 1	Pre-finish Metl
Exterior Wall 2	
Roof Structure	Flat
Roof Cover	Metal/Tin
Interior Wall 1	Minimum
Interior Wall 2	
Interior Floor 1	Concrete Slab
Interior Floor 2	
Heating Fuel	None
Heating Type	None
AC Type	None
Struct Class	
Bldg Use	Commercial MDL-94
Total Rooms	
Total Bedrms	00
Total Baths	0
Usrfld 218	
Usrfld 219	
1st Floor Use:	300
Heat/AC	None
Frame Type	Steel
Baths/Plumbing	None
Ceiling/Wall	Ceiling Only
Rooms/Prtns	Average
Wall Height	9.00
% Conn Wall	

Building Photo



Building Layout



Building Sub-Areas (sq ft) Legend

Code	Description	Gross Area	Living Area
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BAS	First Floor	758	758
		758	758

Building 8 : Section 1

Year Built:

1997

Living Area:

600

Building Attributes : Bldg 8 of 8

Field	Description
STYLE	Mini Warehouse
MODEL	Comm/Ind
Grade	B
Stories:	1
Occupancy	1.00
Exterior Wall 1	Pre-finish Metl
Exterior Wall 2	
Roof Structure	Flat
Roof Cover	Metal/Tin
Interior Wall 1	Minimum
Interior Wall 2	
Interior Floor 1	Concrete Slab
Interior Floor 2	
Heating Fuel	None
Heating Type	None
AC Type	None
Struct Class	
Bldg Use	Commercial MDL-94
Total Rooms	
Total Bedrms	00
Total Baths	0
Usrflid 218	
Usrflid 219	
1st Floor Use:	300
Heat/AC	None
Frame Type	Steel
Baths/Plumbing	None
Ceiling/Wall	Ceiling Only
Rooms/Prtns	Average
Wall Height	9.00
% Conn Wall	

Building Photo



Building Layout



Building Sub-Areas (sq ft) Legend

Code	Description	Gross Area	Living Area
BAS	First Floor	600	600
		600	600

Extra Features

Extra Features Legend

Code	Description	Size	Value	Bldg #
OH1	Door Overhd Co	2.00 UNITS	\$6,220	1
SPR1	Sprinklers - Wet	23826.00 S.F.	\$32,020	1

Land

Land Use

Use Code 200

Description Commercial MDL-94

Zone ML

Neighborhood 0400

Alt Land Appr No

Category

Land Line Valuation

Size (Acres) 1.53

Depth

Assessed Value \$1,616,970

Appraised Value \$2,309,950

Outbuildings

Outbuildings Legend

Code	Description	Sub Code	Sub Description	Size	Value	Bldg #
AP1	Fence Chn Lk			527.00 L.F.	\$4,550	1
LP4	Pavng Asphlt			19600.00 S.F.	\$23,520	1

Valuation History

Appraisal

Valuation Year	Improvements	Land	Total
2019	\$3,841,330	\$2,309,950	\$6,151,280
2018	\$3,841,330	\$2,309,950	\$6,151,280
2017	\$3,841,330	\$2,309,950	\$6,151,280

Valuation Year	Improvements	Land	Total
2019	\$2,688,930	\$1,616,970	\$4,305,900
2018	\$2,688,930	\$1,616,970	\$4,305,900
2017	\$2,688,930	\$1,616,970	\$4,305,900

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ATTACHMENT 6



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		9 Postmaster, per (name of receiving employee)		neopostTM 05/29/2020 US POSTAGE \$002.84 ZIP 06103 041L12209937			
USPS® Tracking Number Firm-specific Identifier		Address (Name, Street, City, State, and ZIP Code™)		Postage	Fee	Special Handling	Parcel Airlift
1.		David Martin, Mayor City of Stamford 888 Washington Boulevard Stamford, CT 06901					
2.		Ralph Blessing, Land Use Bureau Chief City of Stamford 888 Washington Boulevard Stamford, CT 06901					
3.		Cubesmart LP 5 Old Lancaster Road Malverne, PA 19355					
4.							
5.							
6.							

