LESSEE Site Name: Herrick Lake Sam

LESSEE Location #: 165883

#### SECOND AMENDMENT TO TOWER CONSTRUCTION AND LEASE AGREEMENT

THIS SECOND AMENDMENT TO TOWER CONSTRUCTION AND LEASE AGREEMENT (the "Second Amendment") is made and shall be effective, as of the last date of the signatures below ("Effective Date"), between Board of Education for Community Unit School District 200 f/k/a County Board of School Trustees of DuPage County, Illinois, a Body Politic and Corporate for the Use and Benefit of School District Number 95, ("LESSOR") and Chicago SMSA Limited Partnership d/b/a Verizon Wireless ("LESSEE"). LESSOR and LESSEE (or their predecessors in interest) entered into that certain Tower Construction and Lease Agreement dated June 23, 2015, as may have been previously amended and/or assigned (the "Lease"), pursuant to which LESSEE is leasing from LESSOR a portion of that certain property located at 1993 Tiger Trail, in the City of Wheaton, County of DuPage, State of Illinois, as more particularly described in the Lease. LESSOR and LESSEE may be referenced in this Second Amendment individually as a "Party" or collectively as the "Parties."

In consideration of the mutual covenants and promises contained in this Second Amendment, and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged by the Parties, the Parties agree to amend the Lease as follows:

- 1. LESSEE shall be allowed to make the equipment additions or removals necessary to configure LESSEE's equipment as shown on Attachment A, attached hereto. For all purposes under the Lease as amended hereby, the descriptions and specifications of LESSEE's equipment set forth in the Lease, including, without limitation, any equipment descriptions and specifications with respect to LESSEE's equipment set forth in any schedules, exhibits or attachments to the Lease, are hereby deleted and replaced with the specifications of LESSEE's equipment described in Attachment A, attached hereto.
- 2. Effective upon the first day of the month following the date LESSEE commences installation of the equipment modifications contemplated under this Second Amendment, annual rent for the current lease year shall be increased by \$1,200.00 and shall continue to be paid in accordance with the terms and conditions of the Lease.
- 3. Unless otherwise provided herein, all defined terms shall have the same meaning as ascribed to such terms in the Lease.
- 4. In the event of any conflict or inconsistency between the terms of this Second Amendment and the Lease, the terms of this Second Amendment shall govern and control.
- 5. Except as otherwise provided for in this Second Amendment, the Lease shall remain in full force and effect in accordance with the original terms of the Lease.

[SIGNATURE PAGE TO FOLLOW]

LESSEE Site Name: Herrick\_Lake Sam LESSEE Location #: 165883

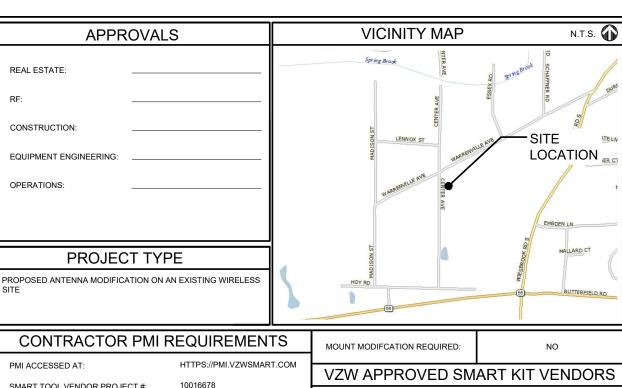
IN WITNESS WHEREOF, this Second Amendment is effective and entered into as of the date last written below:

LESSOR:
Board of Education for Community Unit School District 200 f/k/a County Board of School Trustees of DuPage County, Illinois, a Body Politic and Corporate for the Use and Benefit of School District Number 95,
By:
Name:
Title:
Date:
LESSEE:
Chicago SMSA Limited Partnership d/b/a Verizon Wireless By Cellco Partnership, Its General Partner
Ву:
Name:
Title:
Date:

LESSEE Site Name: Herrick\_Lake Sam LESSEE Location #: 165883

# ATTACHMENT A

### **SPECIFICATIONS**



**REGIONAL MAP** LOCATION Oak Park

> GENERAL CONTRACTOR TO FOLLOW ALL APPLICABLE BUILDING CODES

OBSERVED BY LOCAL JURISDICTION

**CONSULTANT TEAM** PROJECT CONSULTANT:

TERRA CONSULTING GROUP, LTD. 600 BUSSE HIGHWAY

PARK RIDGE, IL 60068 (847) 698-6400

STRUCTURAL CONSULTANT: PAUL J FORD AND COMPANY 250 E. BROAD STREET SUITE 1500

COLUMBUS, OH 43215 (614) 221-6679 (614) 448-4105 (FAX)

STRUCTURAL CONSULTANT: BY OTHERS

MOUNT ANALYSIS STATUS: COMPLETE MOUNT ANALYSIS RESULTS: PASS

MOUNT ANALYSIS DATE: 09/29/2020 STRUCTURAL ANALYSIS DATE:



**LOX** 

SMART TOOL VENDOR PROJECT #:

VZW LOCATION CODE (PSLC): 165883

> \*\*\*PMI AND REQUIREMENTS ALSO EMBEDDED IN MOUNT ANALYSIS REPORT

REFER TO MOUNT MODIFICATION DRAWINGS PAGE FOR

VZW SMART KIT APPROVED VENDORS

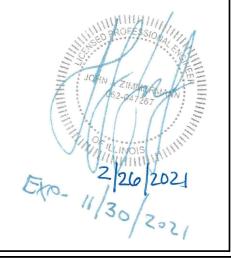


1701 GOLF ROAD, TOWER 2, SUITE 400 **ROLLING MEADOWS, ILLINOIS 60008** PHONE: (847) 619-5397 FAX: (847) 706-7415

**LOCATION NUMBER: 165883** 

SITE NAME: HERRICK LAKE

**1993 TIGER TRAIL WHEATON, IL 60189** 



#### PROJECT INFORMATION

OCCUPANCY: UNINHABITED

1993 TIGER TRAIL SITE ADDRESS WHEATON, IL 60189

41° 50' 07.10" N (APPROXIMATE) 88° 09' 03.88" W (APPROXIMATE) LONGITUDE:

COMMUNITY UNIT SCHOOL DISTRICT #200 STRUCTURE OWNER

130 WEST PARK AVE.

APPLICANT: VERIZON WIRELESS

1515 WOODFIELD ROAD SCHAUMBURG, IL 60173

REAL ESTATE MANAGER: MICHAEL COSENTINO (847) 706-2540

SHEET	DRAWING INDEX	REVISION
T-1	TITLE SHEET	_
C-1	SITE LAYOUT	-
ANT-1	SITE ELEVATION	-
ANT-2	ANTENNA LAYOUT	-
ANT-2A	PROPOSED ANTENNA LAYOUT	-
ANT-3	ANTENNA INFORMATION	-
ANT-3A	COMBINER CABLE DATA & CABLE DIAGRAM	-
ANT-4	DETAILS	-

22" x 34" IS FULL SCALE | 11" x 17" IS HALF SCALE

	REVISIONS		
ON	DESCRIPTION	DATE	BY
	ISSUED FOR REVIEW	12/11/2020	Ŧ
1.	ISSUED FOR FINAL	02/26/2021	Æ

LOC. # 165883

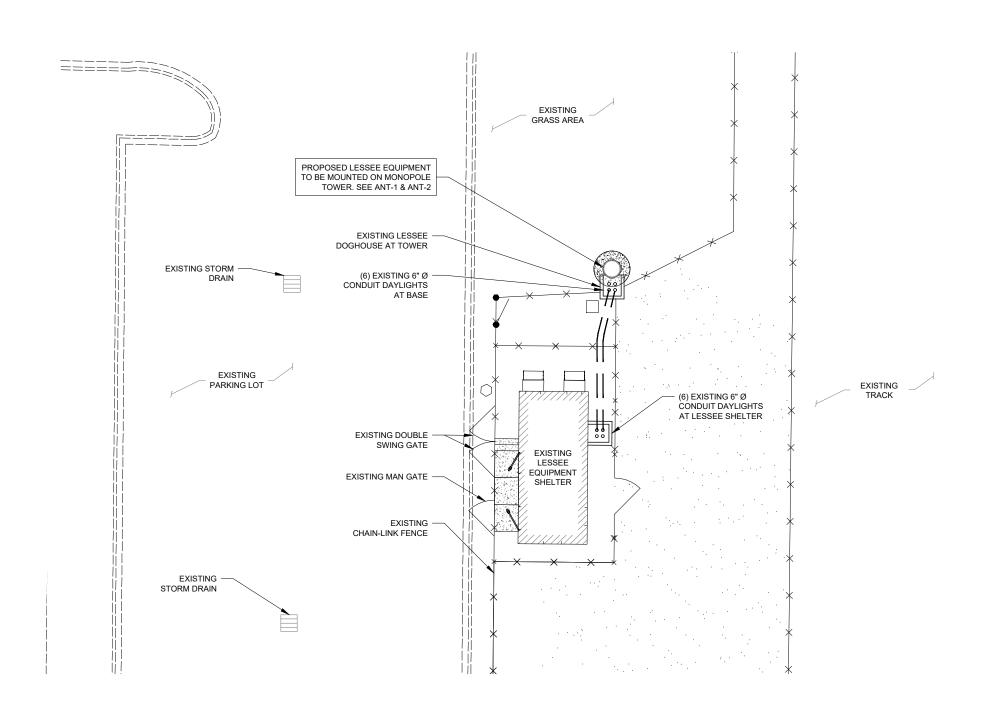
HERRICK LAKE

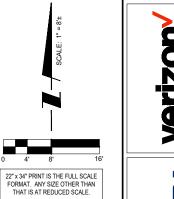
1993 RIGER TRAIL WHEATON, IL 60189

CHECKED BY AU 10/13/20 DATE: PROJECT #: 124-975

> SHEET TITLE TITLE SHEET









	DATE BY	12/11/2020 TH	02/26/2021 RA			
REVISIONS						
α	DESCRIPTION	ISSUED FOR REVIEW	ISSUED FOR FINAL			
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LOC. # 165883

HERRICK LAKE

1993 RIGER TRAIL WHEATON, IL 60189

DRAWN BY:	TH
CHECKED BY:	AU
DATE:	10/13/20
PROJECT #:	124-975

SHEET TITLE

SITE LAYOUT

SHEET NUMBER

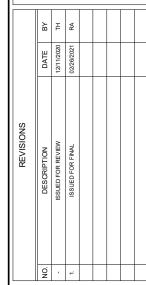
**C-1** 

THESE PLANS ASSUME SITE WAS BUILT PER CONSTRUCTION DRAWINGS BY TERRA CONSULTING GROUP DATED 06/25/2018. A SITE VISIT WAS NOT PERFORMED FOR THIS UPGRADE.



4 CELTZON 1701 GOLF ROAD, TOWER 2, SUITE 400 ROLLING MEADOWS, IL 60008 PHONE: (847) 619-5397 FAX: (847) 7706-7415





LOC. # 165883

HERRICK LAKE

1993 RIGER TRAIL WHEATON, IL 60189

DRAWN BY: TH

CHECKED BY: AU

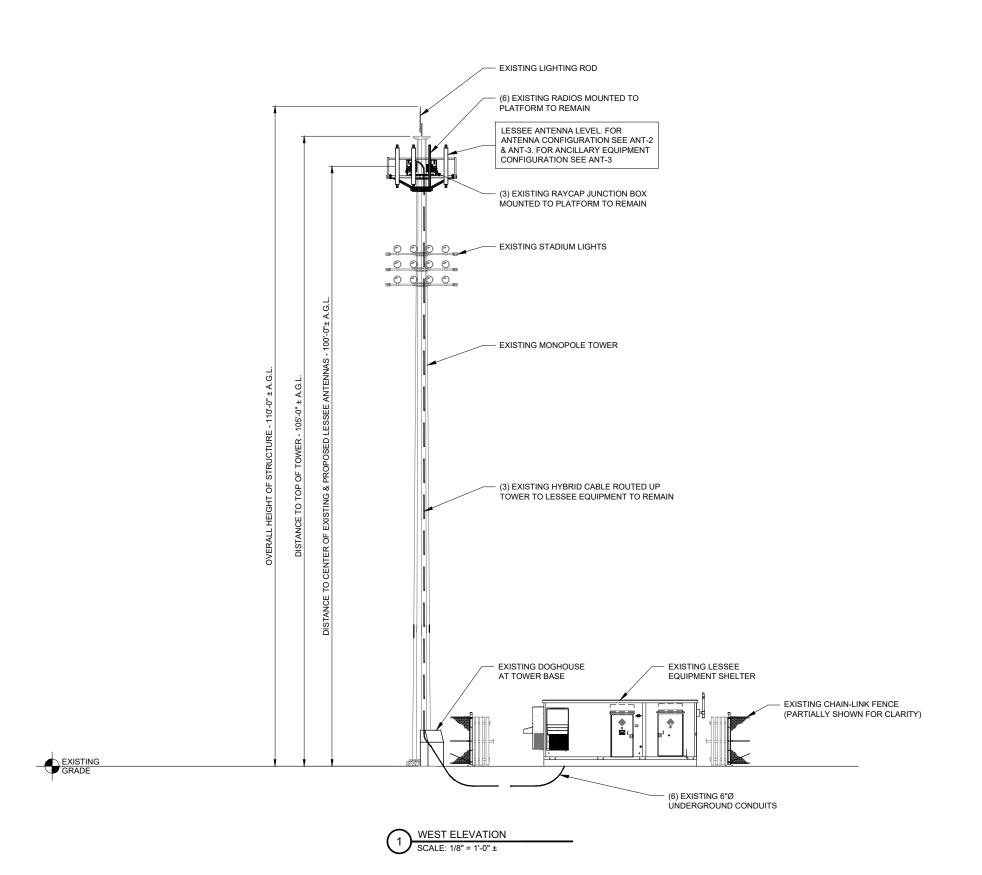
DATE: 10/13/20

PROJECT #: 124-975

SHEET TITLE
SITE
ELEVATION

SHEET NUMBER

ANT-1



THESE PLANS ASSUME SITE WAS BUILT PER CONSTRUCTION DRAWINGS BY TERRA CONSULTING GROUP DATED 06/25/2018. A SITE VISIT WAS NOT PERFORMED FOR THIS UPGRADE.

THIS DRAWING IS FOR EXHIBIT AND LAYOUT PURPOSES ONLY.

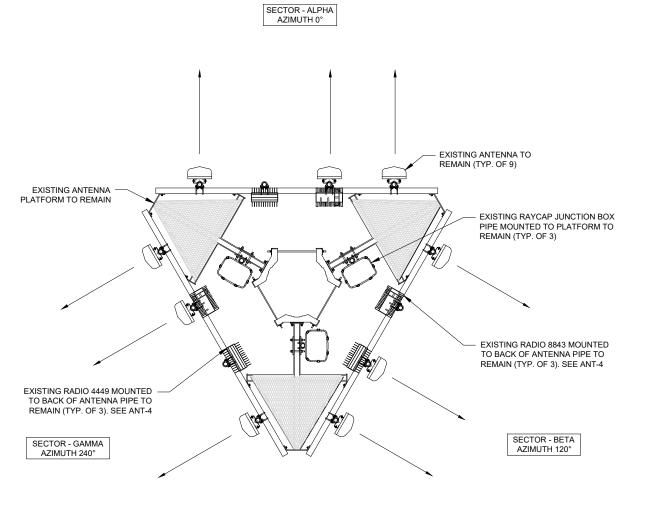
PLEASE REFER TO MOUNT ANALYSIS PROVIDED BY OTHERS AND TOWER ANALYSIS PROVIDED BY PAUL J FORD & COMPANY FOR ANALYSIS AND STRUCTURAL REQUIREMENTS.

THE ANALYSIS OF THE ANTENNA MOUNT WAS PERFORMED BY OTHERS. TERRA CONSULTING GROUP IS NOT RESPONSIBLE FOR THE ANTENNA MOUNT. THE OWNER DIRECTLY CONTRACTED THE MOUNT ANALYSIS WITH OTHERS.

#### NOTES:

- 1. THIS DRAWING IS FOR EXHIBIT AND LAYOUT PURPOSES ONLY.
- 2. NO ANTENNA OR LINE WORK TO BEGIN PRIOR TO CONFIRMATION OF ADEQUATE TOWER AND MOUNT CAPACITY.
- G.C. TO VERIFY ANTENNA TECHNOLOGIES PRIOR TO REMOVAL OF ANY ANTENNAS
- 4. REFER TO ANT-3 & ANT-3A FOR DETAIL ON EXISTING & PROPOSED RF CONFIGURATION.





1701 GOLF ROAD, TOWER 2, SUITE 400 PHONE; (847) 619-5397 FAX: (847) 706-7415



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	DATE	12/11/2020	02/26/2021			
REVISIONS	DESCRIPTION	ISSUED FOR REVIEW	ISSUED FOR FINAL			
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LOC. # 165883

HERRICK LAKE

1993 RIGER TRAIL WHEATON, IL 60189

DRAWN BY:	TH
CHECKED BY:	AU
DATE:	10/13/20
PROJECT #:	124-975

SHEET TITLE

ANTENNA LAYOUT

SHEET NUMBER

ANT-2

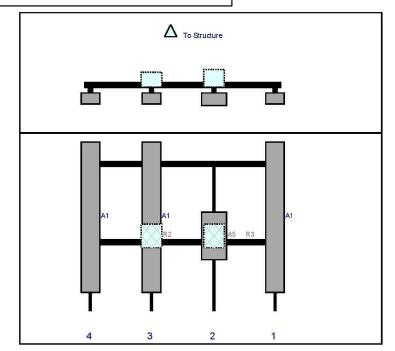
THESE PLANS ASSUME SITE WAS BUILT PER CONSTRUCTION DRAWINGS BY TERRA CONSULTING GROUP DATED 06/25/2018. A SITE VISIT WAS NOT PERFORMED FOR THIS UPGRADE.



NOTE:
THE GENERAL CONTRACTOR IS TO REFER TO THE STRUCTURAL MOUNT ANALYSIS PERFORMED BY OTHERS. THIS IS A REPRESENTATION TAKEN DIRECTLY FROM THAT ANALYSIS. IF THERE IS CONFLICT BETWEEN THE ANALYSIS AND DRAWINGS, THE ANALYSIS TAKES PRECEDENT. VERIZON WIRELESS CONTRACTED DIRECTLY WITH THE MOUNT ANALYSIS ENGINEER; TERRA IS NOT RESPONSIBLE FOR THE MOUNT ANALYSIS.

Plan View

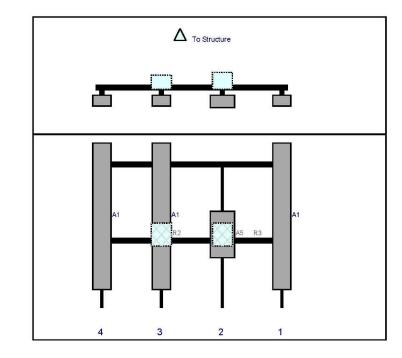
Front View Looking at Structure



ALPHA SECTOR

Plan View

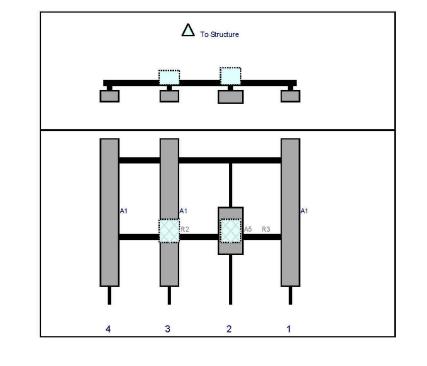
Front View Looking at Structure



BETA SECTOR

Plan View

Front View Looking at Structure



ALPHA SECTOR

		AL	FINAS	ECIO	<u>`</u>						
		Height	Width	H Dist	Pipe	Pipe	Ant	C. Ant	Ant		
Ref#	Model	(in)	(in)	Frm L.	#	Pos V	Pos	Frm T.	H Off	Status	Validation
A1	NHH-65C-R2B	96	11.9	122	1	a	Front	36	0	Retained	
A5	VZE01	30.4	15.9	83	2	a	Front	48	0	Added	
R3	8843	15	13.2	83	2	a	Behind	48	0	Retained	
A1	NHH-65C-R2B	96	11.9	43	3	а	Front	36	0	Retained	
R2	4449	15	13.2	43	3	а	Behind	48	0	Retained	
A1	NHH-65C-R2B	96	11.9	4	4	а	Front	36	0	Retained	

\*The Raycap equipment is located on the standoff members and is

#### BETA SECTOR

		Height	VVidth	H Dist	Pipe	Pipe	Ant	C. Ant	Ant		
Ref#	Model	(in)	(in)	Frm L.	#	Pos V	Pos	Frm T.	H Off	Status	Validation
A1	NHH-65C-R2B	96	11.9	122	1	а	Front	36	0	Retained	
A5	VZE01	30.4	15.9	83	2	а	Front	48	0	Added	
R3	8843	15	13.2	83	2	а	Behind	48	0	Retained	
A1	NHH-65C-R2B	96	11.9	43	3	а	Front	36	0	Retained	
R2	4449	15	13.2	43	3	а	Behind	48	0	Retained	
A1	NHH-65C-R2B	96	11.9	4	4	а	Front	36	0	Retained	

## GAMMA SECTOR

		Height	vviatn	H DIST	Pipe	Pipe	Ant	C. Ant	Ant		
Ref#	Model	(in)	(in)	Frm L.	#	Pos V	Pos	Frm T.	H Off	Status	Validation
A1	NHH-65C-R2B	96	11.9	122	1	а	Front	36	0	Retained	
A5	VZE01	30.4	15.9	83	2	a	Front	48	0	Added	
R3	8843	15	13.2	83	2	a	Behind	48	0	Retained	
A1	NHH-65C-R2B	96	11.9	43	3	a	Front	36	0	Retained	
R2	4449	15	13.2	43	3	а	Behind	48	0	Retained	
A1	NHH-65C-R2B	96	11.9	4	4	a	Front	36	0	Retained	

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LOC. # 165883

HERRICK LAKE

1993 RIGER TRAIL WHEATON, IL 60189

DRAWN BY:	TH
CHECKED BY:	AU
DATE:	10/13/20
PROJECT #:	124-975

SHEET TITLE

PROPOSED ANTENNA LAYOUT

#### Antenna Summary

ddec	1																		
0	850	1900	AWS	AWS3	28 GHz	31 GHz	39 GHz	CBRS	LAA	L-Sub6	Make	Model	Centerline	Tip Height	Azimuth	RET	4xRx	Inst. Type	Quantity
										5G	ТВО	L-Sub6 Antenna	100	101.3	0(0001) 120(0002) 240(0003)	false	false	PHYSICAL	3
emo	ved																		
00	850	1900	AWS	AWS3	28 GHz	31 GHz	39 GHz	CBRS	LAA	L-Sub6	Make	Model	Centerline	Tip Height	Azimuth	RET	4xRx	Inst. Type	Quantity
												No data availab	le.						
letair	red																		
00	850	1900	AWS	AWS3	28 GHz	31 GHz	39 GHz	CBRS	LAA	L-Sub6	Make	Model	Centerline	Tip Height	Azimuth	RET	4xRx	Inst. Type	Quantity
LTE	LTE 5G	LTE	LTE								COMMSCOPE	NHH-65C-R2B	100	104	0(D1) 120(D2) 240(D3)	false	false	PHYSICAL	9

ANTENNA SUMMARY
N.T.S.

#### **Equipment Summary**

Added																		
Equipment Type	Location	700	850	1900	AWS	AWS3	28 GHz	31 GHz	39 GHz	CBRS	LAA	L-Sub6	Make	Model	Cable Length	Cable Size	Install Type	Quantity
RRU	Tower											5G	Ericsson	VZE01			PHYSICAL	3
Removed																		
Equipment Type	Location	700	850	1900	AWS	AWS3	28 GHz	31 GHz	39 GHz	CBRS	LAA	L-Sub6	Make	Model	Cable Length	Cable Size	Install Type	Quantity
											No	data availab	ole.					
Retained																		
Equipment Type	Location	700	850	1900	AWS	AWS3	28 GHz	31 GHz	39 GHz	CBRS	LAA	L-Sub6	Make	Model	Cable Length	Cable Size	Install Type	Quantity
RRU	Tower	LTE	LTE 5G										Ericsson	4449			PHYSICAL	3
RRU	Tower			LTE	LTE								Ericsson	8843			PHYSICAL	3
Hybrid Cable	Tower														6x12		PHYSICAL	3
OVP Box	Tower														3315		PHYSICAL	3
OVP Box	Shelter														3315		PHYSICAL	1
OVP Box	Shelter														6627		PHYSICAL	1

THESE PLANS ASSUME SITE WAS BUILT PER CONSTRUCTION DRAWINGS BY TERRA CONSULTING GROUP DATED 06/25/2018. A SITE VISIT WAS NOT PERFORMED FOR THIS UPGRADE.







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	ВУ	Ŧ	\$			
	DATE	12/11/2020	02/26/2021			
REVISIONS	NO. DESCRIPTION	ISSUED FOR REVIEW	1. ISSUED FOR FINAL			
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LOC. # 165883

HERRICK LAKE

1993 RIGER TRAIL WHEATON, IL 60189

DRAWN BY:	TH
CHECKED BY:	AU
DATE:	10/13/20
PROJECT #:	124-975

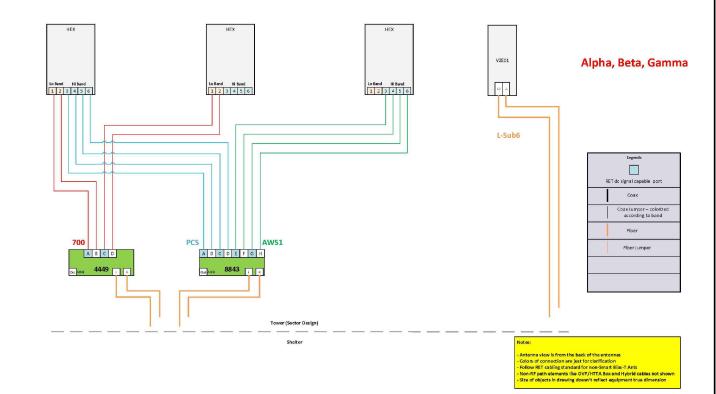
ANTENNA INFORMATION

OUEST NUMBER

ANT-3

RF EMISSIONS RI	EPORT REQUIRED	
XES	NO	
DATE OF REPORT:	XX/XX/XX	_

EXIST	ING EQUIPMENT TO BE R	EUSED
LOCATION	COMPONENT	COUNT
ТОР	MAIN RAYCAP	3
воттом	MAIN RAYCAP	2
EXIS	TING CABLING TO BE RE	USED
TYPE	SIZE	COUNT
HYBRID	MAIN TRUNK	3
COAX	N/A	0



CABLE DIAGRAM

N.T.S.





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	ВУ	Ŧ	Æ			
	DATE	12/11/2020	02/26/2021			
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LOC. # 165883

HERRICK LAKE

1993 RIGER TRAIL WHEATON, IL 60189

DRAWN BY:	TH
CHECKED BY:	AU
DATE:	10/13/20
PROJECT #:	124-975

SHEET TITLE

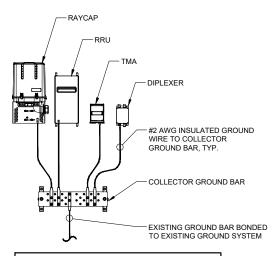
COMBINER CABLE DATA & CABLE DIAGRAM

SHEET NUMBER

ANT-3A

THESE PLANS ASSUME SITE WAS BUILT PER CONSTRUCTION DRAWINGS BY TERRA CONSULTING GROUP DATED 06/25/2018. A SITE VISIT WAS NOT PERFORMED FOR THIS UPGRADE.





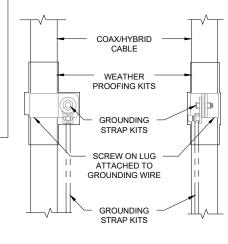
- DETAIL IS CONCEPTUAL ONLY. PLEASE SEE ECR AND LAYOUT SHEETS FOR ACTUAL EQUIPMENT CONFIGURATION.
- GROUND CONNECTIONS MUST BE DOUBLE HOLE CONNECTION. SPECIAL EXCEPTION ONLY TO EQUIPMENT THAT WILL NOT ALLOW FOR A DOUBLE HOLE CONNECTION.



- NOTES:

  1. DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO GROUND BAR.
- 2. THIS DETAIL IS TYPICAL FOR EACH COAX CABLE WHERE IT IS SPECIFIED TO BE GROUNDED
- 3. CABLE TO BE GROUNDED AT ANTENNA LEVEL AND PRIOR TO ENTERING SHELTER ENTRY PANEL.
- 4. CABLE ALSO TO BE GROUNDED TO GROUND BAR AT TOWER BASE IF APPLICABLE.
- 5. USE ONLY TIN PLATED GROUNDING KITS.





COAX / HYBRID CABLE GROUND KIT DETAIL

SPECIFICATIONS DC SURGE PROTECTION FOR RRU/INTEGRATED ANTENNA RADIO HEAD APPLICATION: TOWER / BASE / ROOFTOP / ROOFTOP DISTRIBUTION MODELS

INCHES

LOC. # 165883

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verizon

**HERRICK LAKE** 

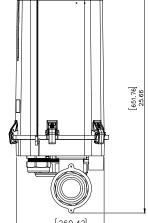
1993 RIGER TRAIL WHEATON, IL 60189

DRAWN BY:	TH
CHECKED BY:	AU
DATE:	10/13/20
PROJECT #:	124-975

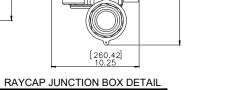
SHEET TITLE **DETAILS** 

SHEET NUMBER

SCALE: N.T.S.



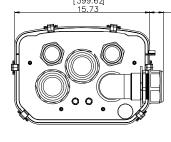
SIDE VIEW



THESE PLANS ASSUME SITE WAS BUILT PER CONSTRUCTION DRAWINGS BY TERRA CONSULTING GROUP DATED 06/25/2018. A SITE VISIT WAS NOT PERFORMED FOR THIS UPGRADE.



FRONT VIEW



PROPOSED RAYCAP JUNCTION BOX MODEL# RCMDC-3315-PF-48

**BOTTOM VIEW** 



#### GLS > Upper Midwest > Illinois/Wisconsin > Northern IL > HERRICK LAKE

Vim Brian brian kim@vorizonwirologg.com 0/14/2020 0:52:

Kim, Brian - brian.kimi	@verizonwireless.com - 9/14/2020 9:52:9
Project Details	Location Information
Carrier Aggregation: false	Site ID: 2391229
MPT Id:	E-NodeB ID: 203311,2039153,0203311
eCIP-0: false	PSLC: 165883
Project Name: 5G L-Sub6 - Carrier Add	Switch Name: Elgin 1,Elgin 1,Elgin 1
FUZE Project ID: 16229474	Tower Owner:
Designed Sector Carrier 4G: 14	Tower Type: Monopole
Designed Sector Carrier 5G: 3	Site Type: MACRO
Additional Sector Carrier 4G: N/A	Street Address: 1993 Tiger Trail
Additional Sector Carrier 5G: N/A	City: Wheaton
SiteTraker Project Id: a4K0H000000RoJoUAK	State: IL
FP Solution Type & Tech Type: MODIFICATION;5G_L-Sub6-Prep	Zip Code: 60189
RFDS Project Scope:	County: DuPage
Suffix:	Latitude: 41.835306 / 41° 50' 7.1016" N
	Longitude: -88.151078 / 88° 9' 3.8808" W

## Actionary

| Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Actionary | Ac

Page 1 of 8 Peptidates and Confidential Mas for discissions and side of Verbison.

Added																		
Equipment Type	Location	700	850	1900	AWS	AWS3	28 GHz	31 GHz	39 GHz	CBRS	LAA	L-Sub6	Make	Model	Cable Length	Cable Size	Install Type	Quantity
RRU	Tower											5G	Ericsson	VZE01			PHYSICAL	3
Removed																		
Equipment Type	Location	700	850	1900	AWS	AWS3	28 GHz	31 GHz	39 GHz	CBRS	LAA	L-Sub6	Make	Model	Cable Length	Cable Size	Install Type	Quantity
											No	data availal	ble.					
Retained																		
Equipment Type	Location	700	850	1900	AWS	AWS3	28 GHz	31 GHz	39 GHz	CBRS	LAA	L-Sub6	Make	Model	Cable Length	Cable Size	Install Type	Quantity
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RRU	Tower			LTE	LTE								Ericsson	8843			PHYSICAL	3
Hybrid Cable	Tower														6x12		PHYSICAL	3
OVP Box	Tower														3315		PHYSICAL	3
OVP Box	Shelter														3315		PHYSICAL	1

Equipment Summary

			Service Info			
00 MHZ LTE		0000			SGLS	
Sector	D1	D2	D3	D1	D2	D3
Azimuth	0	120	240	0	120	240
Cell / ENode B ID	203311	203311	203311	203311	203311	203311
Antenna Model	NHH-6SC-R2B	NHH-65C-R2B	NHH-65C-R2B	NHH-65C-R2B	NHH-65C-R2B	NHH-65C-R2B
Antenna Make	COMMSCOPE	COMMSCOPE	COMMSCOPE	COMMSCOPE	COMMSCOPE	COMMSCOPE
Antenna Centerline(Ft)	100	100	100	100	100	100
Mechanical Down-Tilt(Deg.)	0	0	0	0	0	0
Electrical Down-Tilt	2	2	3	2	2	3
Tip Height	104	104	104	104	104	104
Regulatory Power	477.36	477.36	558.92	477.36	477.36	558.92
TMA Make						
TMA Model						
RRU Make	Ericsson	Ericsson	Ericsson	Ericsson	Ericsson	Ericsson
RRU Model	8843	8843	8843	8843	8843	8843
Number of Tx, Rx Lines	4.4	4.4	4,4	4,4	4,4	4,4
Position						
Transmitter Id	747887	747888	747889	7444479	7444480	7444481
Source	ATOLL API	ATOLL API	ATOLL API	ATOLL API	ATOLL API	ATOLL API
LOD MHZ LTE	-		-	-		
		0000			5GLS	
Sector	D1	D2	D3	D1	D2	D3
Azimuth	0	120	240	0	120	240
Cell / ENode B ID	203311	203311	203311	203311	203311	203311
Antenna Model	NHH-65C-R2B	NHH-65C-R2B	NHH-65C-R2B	NHH-65C-R2B	NHH-65C-R2B	NHH-65C-R2B
Antenna Make	COMMSCOPE	COMMSCOPE	COMMSCOPE	COMMSCOPE	COMMSCOPE	COMMSCOPE
Antenna Centerline(Ft)	100	100	100	100	100	100
Mechanical Down-Tilt(Deg.)	0	0	0	0	0	0
Electrical Down-Tilt	2	2	1	2	2	1
Tip Height	104	104	104	104	104	104
	120.72	120.72	11879	120.72	120.72	118.79
Regulatory Power	120.72	120.72	110.79	120.72	120.72	110.79
TMA Make						
TMA Model						
RRU Make	Ericsson	Ericsson	Ericsson	Ericsson	Ericsson	Ericsson
RRU Model	8843	8843	8843	8843	8843	8843
Number of Tx, Rx Lines	4,4	4,4	4.4	4,4	4,4	4,4
Position						
Transmitter Id	724879	724880	724881	7444476	7444477	7444478
Source	ATOLL API	ATOLL API	ATOLL API	ATOLL API	ATOLL API	ATOLL API
50 MHZ LTE						
	D1	0000 D2	D3	D1	SGLS D2	D3
Sector						
Azimuth	0	120	240	0	120	240
Cell / ENode B ID	203311	203311	203311	203311	203311	203311
Antenna Model	NHH-65C-R2B	NHH-65C-R2B	NHH-65C-R2B	NHH-65C-R2B	NHH-65C-R2B	NHH-65C-R2B
Antenna Make	COMMSCOPE	COMMSCOPE	COMMSCOPE	COMMSCOPE	COMMSCOPE	COMMSCOPE
Antenna Centerline(Ft)	100	100	100	100	100	100
Mechanical Down-Tilt(Deg.)	0	0	0	0	0	0
Electrical Down-Tilt	4	5	5	4	5	5
		104	5 104	104	104	104
Tip Height	104					
Regulatory Power	247.9	255.38	255.38	123.95	127.69	127.69
TMA Make						
TMA Model						
RRU Make	Ericsson	Ericsson	Ericsson	Ericsson	Ericsson	Ericsson
RRU Model	4449	4449	4449	4449	4449	4449
Number of Tx, Rx Lines	4,4	4,4	4,4	4,4	4,4	4,4
Position						
Transmitter Id	747893	747894	747895	7444485	7444486	7444487
Source	ATOLL_API	ATOLL_API	ATOLL_API	ATOLL_API	ATOLL_API	ATOLL_API

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Project 3 of 8

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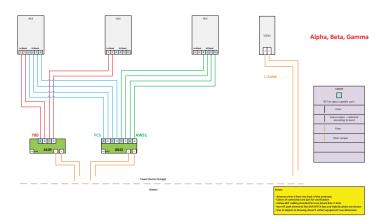
Project and A to for disclosure activities of Windows.

Project and A to for disclosure activities of Windows.

Project and A to for disclosure activities of Windows.

IZ LTE		0000			5GLS	
Sector	D1	D2	D3	D1	D2	D3
Azimuth	0	120	240	0	120	240
Cell / ENode B ID	203311	203311	203311	203311	203311	203311
Antenna Model	NHH-65C-R2B	NHH-65C-R2B	NHH-65C-R2B	NHH-65C-R2B	NHH-65C-R2B	NHH-65C-R2B
Antenna Model	NITH-03C-RZD	NITH-GSC-RZB	NHH-63C-RZB	NRR-GSU-RZB	NRR-03U-RZB	NRR-03C-RZB
Antenna Make	COMMSCOPE	COMMSCOPE	COMMSCOPE	COMMSCOPE	COMMSCOPE	COMMSCOPE
Antenna Centerline(Ft)	100	100	100	100	100	100
		0		0	0	
Mechanical Down-Tilt(Deg.)	0		0			0
Electrical Down-Tilt	4	5	5	4	5	5
Tip Height	104	104	104	104	104	104
Regulatory Power	98.29	97.01	97.01	98.29	97.01	97.01
TMA Make						
TMA Model						
RRU Make	Ericsson	Ericsson	Ericsson	Ericsson	Ericsson	Ericsson
RRU Model	4449	4449	4449	4449	4449	4449
Number of Tx, Rx Lines	4,4	4,4	4,4	4.4	4,4	4,4
Position		7,7	7,1			
Transmitter Id	747890	747891	747892	7444482	7444483	7444484
Source	ATOLL_API	ATOLL_API	ATOLL_API	ATOLL_API	ATOLL_API	ATOLL_API
IZ SGNR					SGLS	
Sector				9901	0002	0003
Sector				0001	120	240
Cell / ENode B ID				0203311	0203311	0203311
Antenna Model				NHH-65C-R2B	NHH-65C-R2B	NHH-65C-R2B
Antenna Make				COMMSCOPE	COMMSCOPE	COMMSCOPE
Antenna Centerline(Ft)				100	100	100
Mechanical Down-Tilt(Dep.)				0	0	0
Electrical Down-Tilt				4	5	5
Tip Height				104	104	104
				123.95	127.69	127.69
Regulatory Power				123.95	127.69	127.69
TMA Make						
TMA Model						
RRU Make				Ericsson	Ericsson	Ericsson
RRU Model				4449	4449	4449
Number of Tx, Rx Lines				4,4	4,4	4,4
Position						
Transmitter Id				7747074	7747075	7747076
Source				ATOLL API	ATOLL API	ATOLL API
6					5GLS	
Sector				0001	6002	0003
Azimuth				0	120	240
Cell / ENode B ID				0203311	0203311	0203311
Antenna Model				L-Sub6 Antenna	L-Sub6 Antenna	L-Sub6 Antenna
America 70000				Date Maine	COOK MINING	County Attention
Antenna Make				TBD	TBD	TBD
Antenna Make Antenna Centerline(Ft)				100	100	100
Mechanical Down-Tilt(Deg.)				0	0	. 0
Electrical Down-Tilt				3		3
Tip Height				101.3	101.3	101.3
Regulatory Power				120.72	120.72	118.79
TMA Make						
TMA Model						
				Ericsson	Ericsson	Ericsson
				VZE01	VZE01	VZE01
RRU Make						4,4
RRU Model						
RRU Model Number of Tx, Rx Lines				4,4	4,4	4.4
RRU Model Number of Tx, Rx Lines Position						
RRU Model Number of Tx, Rx Lines				4,4 7444509 ATOLL API	744510 ATOLL API	7444511 ATOLL API

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Paul J. Ford and Company 250 East Broad Street Suite 600 Columbus, OH 43215 (614) 221-6679 rkozak@pauljford.com

#### **Antenna Mount Analysis Report and PMI Requirements**

Mount Analysis

SMART Tool #: 10016678

Paul J. Ford Project #: 24320-0304.001.7190

September 28, 2020

Site Information Site ID: 165883-VZW / HERRICK LAKE -- 2391229

Site Name: HERRICK LAKE -- 2391229

Carrier Name: Verizon Wireless Address: 1993 Tiger Trail

Wheaton, Illinois 60189, DuPage County

Latitude: 41.835300° Longitude: -88.151080°

<u>Structure Information</u> Tower Type: 104-Ft Monopole

Mount Type: 10.50-Ft Platform w/ Support Rail

**FUZE ID # 16229474** 

**Analysis Results** 

10.50-Ft Platform w/ Support Rail 40.9% Pass

\*\*\*Contractor PMI Requirements:

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

Contractor - Please Review Specific Site PMI Requirements Upon Award

Requirements also Noted on Mount Modification Drawings

Requirements may also be Noted on A & E drawings

09/29/2020

STATE OF ILLIN

CHAD BRIAN

HINES 081-008031 EXPIRATION DATE: 11/30/2020

BMD

Report Prepared By: Robert Kozak, P.E.

#### **Executive Summary:**

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

This analysis is inclusive of the mount structure only, and does not address the structural capacity of the supporting structure. This mounting frame was not analyzed as an anchor attachment point for fall protection. All climbing activities are required to have a fall protection plan completed by a competent person.

#### **Sources of Information:**

Document Type	Remarks
Radio Frequency Data Sheet (RFDS)	16229474, dated September 14, 2020
Previous Mount Analysis Report	Semaan, dated April 27, 2018
Mount Specification	Sabre, P/N # C10851001
Construction Drawings (Previous Project)	Terra, Project # 124-054, dated October 16, 2017

#### **Analysis Criteria:**

Codes and Standards:	ANSI/TIA-222-H

Wind Parameters:	Basic Wind Speed (Ultimate 3-sec. Gust), VillT:	107 mph

Ice Wind Speed (3-sec. Gust): 40 mph Design Ice Thickness: 1.50 in Risk Category: Ш Exposure Category: С Topographic Category: 1 Topographic Feature Considered: N/A Topographic Method: N/A Ground Elevation Factor, Ke: 0.973

Seismic Parameters: Ss: 0.133

S<sub>1</sub>: 0.065

Maintenance Parameters: Wind Speed (3-sec. Gust): 30 mph

Maintenance Live Load, Lv: 250 lbs. Maintenance Live Load, Lm: 500 lbs.

Analysis Software: RISA-3D (V17.0.3)

#### **Final Loading Configuration:**

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

Mount Elevation (ft)	Equipment Elevation (ft)	Quantity	Manufacturer	Model	Status
	100.00	9	Commscope	NHH-65C-R2B	
		3	Ericsson	4449	Retained
97.00		3	Ericsson	8843	Retailleu
		3	Raycap	RC3DC-3315-PF-48	
		3	Ericsson	VZE01	Added

#### **Standard Conditions:**

- All engineering services are performed on the basis that the information provided to Paul J. Ford and
  used in this analysis is current and correct. The existing equipment loading has been applied at
  locations determined from the supplied documentation. Any deviation from the loading locations
  specified in this report shall be communicated to Paul J. Ford to verify deviation will not adversely
  impact the analysis.
- 2. Mounts are assumed to have been properly fabricated, installed and maintained in good condition, twist free and plumb in accordance with its original design and manufacturer's specifications.

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

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

- For mount analyses completed from other data sources (including new replacement mounts) and not specifically mapped by PJF, the mounts are assumed to have been properly fabricated, installed and maintained in good condition, twist free and plumb in accordance with its original design and manufacturer's specifications.
- 4. All member connections are assumed to have been designed to meet or exceed the load carrying capacity of the connected member unless otherwise specified in this report.
- 5. The mount was checked up to, and including, the bolts that fasten it to the mount collar/attachment and threaded rod connections in collar members if applicable. Local deformation and interaction between the mount collar/attachment and the supporting tower structure are outside the scope of this analysis.
- 6. All services are performed, results obtained, and recommendations made in accordance with generally accepted engineering principles and practices. Paul J. Ford is not responsible for the conclusion, opinions, and recommendations made by others based on the information supplied.

7. Structural Steel Grades have been assumed as follows, if applicable, unless otherwise noted in this analysis:

Channel, Solid Round, Angle, Plate
 HSS (Rectangular)
 Pipe
 Threaded Rod
 Bolts
 ASTM A36 (Gr. 36)
 ASTM A53 (Gr. B-46)
 ASTM A53 (Gr. B-35)
 F1554 (Gr. 36)
 ASTM A325

Discrepancies between in-field conditions and the assumptions listed above may render this analysis invalid unless explicitly approved by Paul J. Ford.

#### **Analysis Results:**

Component	Utilization %	Pass/Fail
Mount Pipe	40.9%	Pass
Support Rail	34.1%	Pass
Standoff	31.8%	Pass
Standoff Support	37.7%	Pass
Horizontal	29.0%	Pass
Corner Plate	8.3%	Pass
Mount to Tower Connection	28.9%	Pass

Structure Rating – (Controlling Utilization of all Components)	40.9%
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#### **Recommendation:**

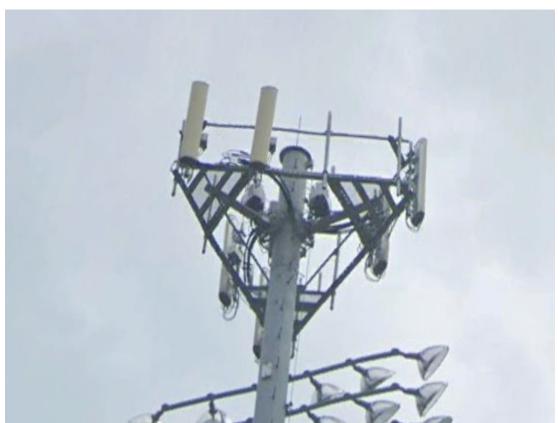
The existing mount is **SUFFICIENT** for the final loading configuration and do not require modifications.

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

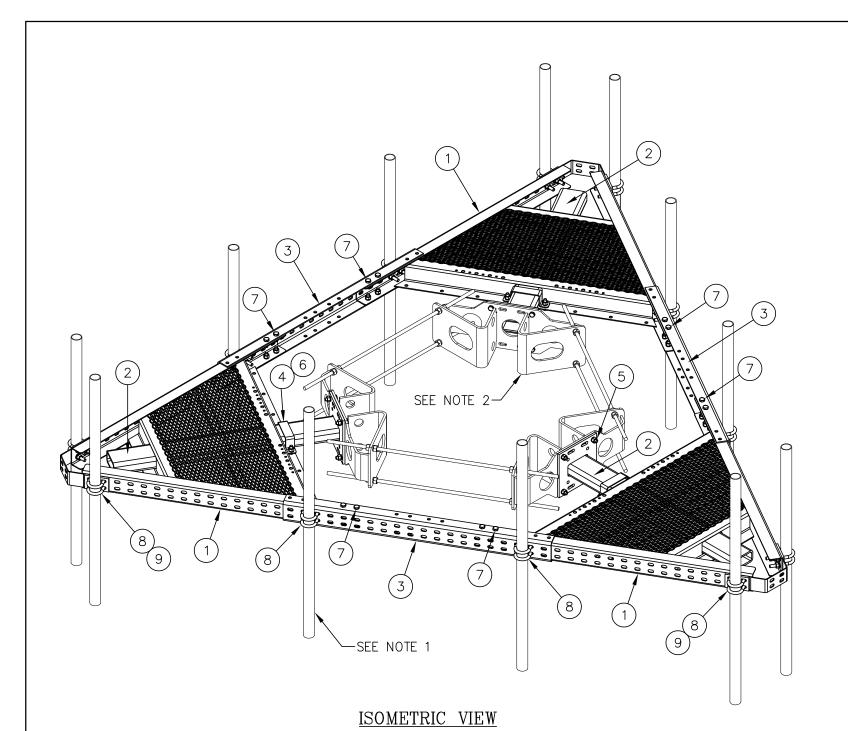
#### **Attachments:**

- 1. Mount Photos
- 2. Mount Manufacturing Drawings
- 3. Analysis Calculations
- 4. Contractor Required Post Installation Inspection (PMI) Report Deliverables
- 5. Antenna Placement Diagrams





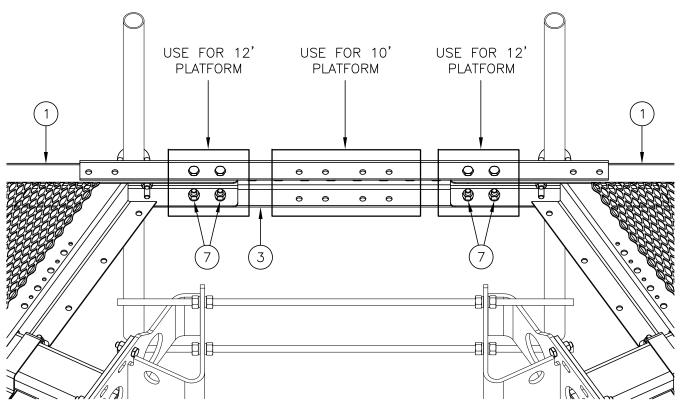




	C10851001 10'-12' PLATFORM W/MOUNTING PIPE HARDWARE								
ITEM	ITEM QTY. PART NO. DESCRIPTION								
1.	3	CW00885	WELDMENT, CORNER PLATFORM		413				
2.	3	CW00886	WELDMENT, PLATFORM ARM		309				
3.	3	CS02247	CHANNEL, PLATFORM SPLICE	CHANNEL, PLATFORM SPLICE					
4.	3	CS02248	SADDLE CLAMP, PLATFORM	5					
5.	12	C40026024	BOLT ASSEMBLY, 5/8 Ø X 2 1/4 A3	BOLT ASSEMBLY, 5/8 Ø X 2 1/4 A325					
6.	6	C40026023	BOLT ASSEMBLY, 5/8 Ø X 2 A325		3				
7.	24	C40026022	BOLT ASSEMBLY, 5/8 Ø X 1 3/4 A3	25	11				
8.	24	C40034023	0034023 U-BOLT ASSEMBLY, 5/8 Ø X 3 1/16 C-C						
9.	6	CS02317	PLATE, U-BOLT SPACER		14				
NOTE:	NOTE: TOTAL WEIGHT 928								

HARDWARE KIT CK00378 CONSISTS OF ITEMS 4 THRU 9 LISTED ABOVE

NOTE:



### PLATFORM ADJUSTMENT DETAIL

TO ADJUST THE PLATFORM FACE WIDTH, SLIDE THE CORNER WELDMENTS IN OR OUT TO THE CORRESPONDING HOLES ON THE PLATFORM CHANNEL SPLICE

#### NOTES:

- 1. 2 3/8" O.D. MOUNTING PIPES MUST BE PURCHASED SEPARATELY.
- 2. THE TRI-COLLAR BRACKET IS SHOWN TYPICAL AND MUST BE PURCHASED SEPARATELY.
  - -USE TRI-COLLAR BRACKET C10112300 (10"-40" POLE)
  - -USE TRI-COLLAR BRACKET C10112301 (12"-60" POLE)
- 3. IF HANDRAILS ARE REQUIRED, THE FOLLOWING KITS MUST BE ORDERED SEPARATELY:
  - -USE HANDRAIL KIT C10116812 FOR A 10' PLATFORM.
  - -USE HANDRAIL KIT C10116813 FOR A 12' PLATFORM.

### UNLESS OTHERWISE SPECIFIED MATERIAL: ALL DIMENSIONS INCLUDE FINISHES AND ARE IN INCHES TOLERANCES: FRACTIONS ± 1/16" ANGLES $\pm$ 1/2 DEG. TOLERANCES DO NOT APPLY DECIMALS ± .010" TO RAW MATERIAL 3 9/1/11 DLW DEL REVISED ALL BOLT QUANTITIES AND NOTE 2 12/9/10 JKW WJ REVISED PART NUMBERS ON HANDRAIL KIT 1 2/3/10 MLC MC REDRAWN IN AUTOCAD DATE

## Sabre Industries Towers and Poles

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10'-12' LOW PROFILE PLATFORM W/ANTENNA MOUNTING PIPE HARDWARE NO ANTENNA MOUNTING PIPES

		SIZE	DRA		REV	
DATE 10/22/09		В	C10	3		
DRAWN BY	JV			SCALE	P	AGE
CHECKED BY	WMN			None	OF 1	





Paul J. Ford & Company	
RCK	165883-VZW_MT_LO_H
Project No. 10016678	

Α Sector:

9/28/2020

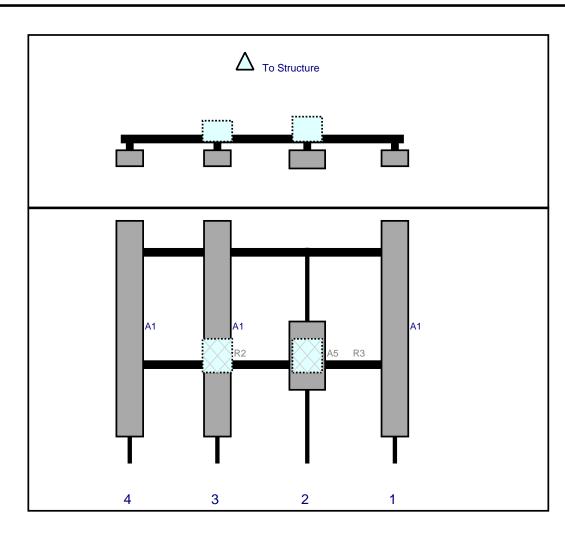
Structure Type: Monopole

Mount Elev: 97.00 Page: 1





Front View Looking at Structure



		Height	Width	H Dist	Pipe	Pipe	Ant	C. Ant	Ant		
Ref#	Model	(in)	(in)	Frm L.	#	Pos V	Pos	Frm T.	H Off	Status	Validation
A1	NHH-65C-R2B	96	11.9	122	1	a	Front	36	0	Retained	
A5	VZE01	30.4	15.9	83	2	а	Front	48	0	Added	
R3	8843	15	13.2	83	2	а	Behind	48	0	Retained	
A1	NHH-65C-R2B	96	11.9	43	3	a	Front	36	0	Retained	
R2	4449	15	13.2	43	3	a	Behind	48	0	Retained	
A1	NHH-65C-R2B	96	11.9	4	4	а	Front	36	0	Retained	

<sup>\*</sup>The Raycap equipment is located on the standoff members and is not shown in these diagrams.

В Sector:

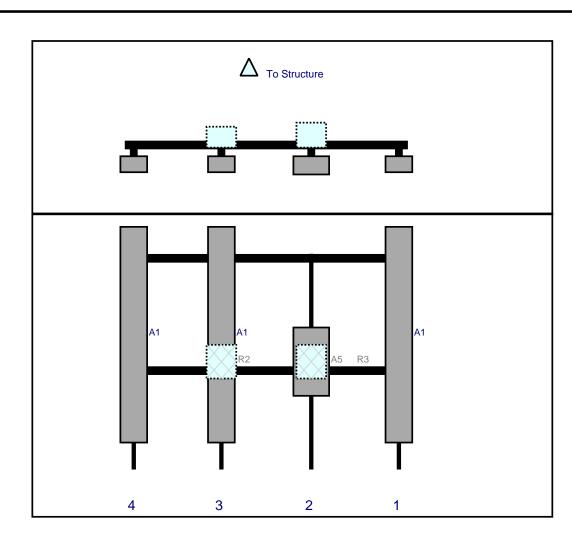
9/28/2020

Structure Type: Monopole

Mount Elev: 97.00 Page: 2



Front View Looking at Structure



		Height	Width	H Dist	Pipe	Pipe	Ant	C. Ant	Ant		
Ref#	Model	(in)	(in)	Frm L.	#	Pos V	Pos	Frm T.	H Off	Status	Validation
A1	NHH-65C-R2B	96	11.9	122	1	а	Front	36	0	Retained	
A5	VZE01	30.4	15.9	83	2	а	Front	48	0	Added	
R3	8843	15	13.2	83	2	а	Behind	48	0	Retained	
A1	NHH-65C-R2B	96	11.9	43	3	а	Front	36	0	Retained	
R2	4449	15	13.2	43	3	а	Behind	48	0	Retained	
A1	NHH-65C-R2B	96	11.9	4	4	а	Front	36	0	Retained	

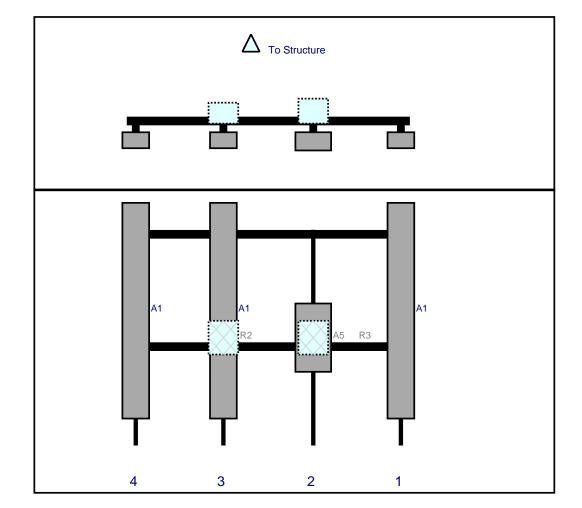
С Sector:

9/28/2020

Structure Type: Monopole

Mount Elev: 97.00 Page: 3





Front View Looking at Structure

		Height	Width	H Dist	Pipe	Pipe	Ant	C. Ant	Ant		
Ref#	Model	(in)	(in)	Frm L.	#	Pos V	Pos	Frm T.	H Off	Status	Validation
A1	NHH-65C-R2B	96	11.9	122	1	а	Front	36	0	Retained	
A5	VZE01	30.4	15.9	83	2	а	Front	48	0	Added	
R3	8843	15	13.2	83	2	а	Behind	48	0	Retained	
A1	NHH-65C-R2B	96	11.9	43	3	а	Front	36	0	Retained	
R2	4449	15	13.2	43	3	а	Behind	48	0	Retained	
A1	NHH-65C-R2B	96	11.9	4	4	а	Front	36	0	Retained	