Robinson+Cole

KENNETH C. BALDWIN

280 Trumbull Street
Hartford, CT 06103-3597
Main (860) 275-8200
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Direct (860) 275-8345

Also admitted in Massachusetts
and New York

March 31, 2022

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**
37 Peach Orchard Road, Prospect (a/k/a Clark Hill Road, Naugatuck), Connecticut

Dear Attorney Bachman:

Cellco Partnership d/b/a Verizon Wireless ("Cellco") currently maintains a wireless telecommunications facility at the above-referenced property address (the "Property"). The facility consists of antennas and remote radio heads attached to a tower and associated equipment on the ground near the base of the tower. The tower was approved by the Borough of Naugatuck ("Town") in July of 1991. Cellco's shared use of the tower was approved by the Siting Council ("Council") in November of 2013 (TS-VER-115-131009). A copy of the Town's tower approval and the Council's TS-VER-115-131009 approval are included in Attachment 1.

Cellco now intends to modify its facility by removing nine (9) existing antennas and installing three (3) new Samsung MT6407-77A antennas and six (6) new MX06FRO660-03 antennas on its existing antenna mounting structure. Cellco also intends to remove six (6) remote radio heads ("RRHs") and install six (6) new RRHs behind its antennas. A set of project plans showing Cellco's proposed facility modifications and the specifications for Cellco's new antennas and RRHs 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 Prospect's Chief Elected Official and Land Use Officer and Naugatuck's Chief Elected Official and Land Use Officer.

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

1. The proposed modifications will not result in an increase in the height of the existing tower. Cellco's new antennas will be installed on its existing antenna mounting structure.

2. The proposed modifications will not involve any change to ground-mounted equipment and, therefore, will not require the extension of the site boundary.

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

4. The installation of Cellco's new antennas will not increase radio frequency (RF) emissions at the facility to a level at or above the Federal Communications Commission (FCC) safety standard. A cumulative General Power Density table for Cellco's modified facility is included in Attachment 3. The modified facility will be capable of providing Cellco's 5G wireless service.

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

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

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

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

Sincerely,

Kenneth C. Baldwin

Enclosures
Copy to:

Robert Chatfield, Prospect Mayor
Mary Barton, Prospect Land Use Inspector
N. Warren “Pete” Hess III, Naugatuck Mayor
Lori Rotella, Naugatuck Town Planner
Counterpoint Communications, Inc., Property Owners (Prospect)
Tegna Broadcast Holdings LLC, Property Owners (Naugatuck)
Alex Tyurin, Verizon Wireless

ATTACHMENT 1

BOROUGH OF NAUGATUCK

INLAND WETLANDS COMMISSION
PLANNING COMMISSION
ZONING BOARD OF APPEALS
ZONING COMMISSION

LAND USE OFFICE
213 CHURCH STREET
NAUGATUCK, CT 06770
203/729-4571

I HEREBY CERTIFY THAT Channel 20, Inc. owner of record (owners address) 414 Meadow Street, Waterbury CT 06702, filed an application pursuant to Section 32 of the Zoning Regulations of the Borough of Naugatuck for a SPECIAL PERMIT for property at described in the attached Schedule A, which was APPROVED AT THE MEETING OF THE ZONING COMMISSION HELD ON:

Wednesday, July 17, 1991.
DAY DATE

FOR THE PURPOSE OF: Erecting and operating a transmission and communication tower with an overall height of 281 feet, with supporting anchors and guy wires.

SIGNED: Robert Wagner, (c/m) Michael Monnile
Zoning Commission Chairman Zoning Enforcement Officer

This action shall be filed with the Town Clerk on the Land Records of the Town as required by Section 8-3c(b) of the State Statutes.

SCHEDULE A

All that certain piece or parcel of land situated on the southerly side of East Side Boulevard in the City of Waterbury and in the Borough of Naugatuck, County of New Haven and State of Connecticut, bounded and described as follows:

Beginning at a point in the southerly line of East Side Boulevard in the City of Waterbury, Connecticut at the northeasterly corner of a parcel designated as a 50' R.O.W. on a map entitled "Subdivision of Peach Orchard Estates, Section Four, Waterbury, Conn., August, 1972, Scale: 1"=50'", recorded in Map Drawer IV, Page 386 of Waterbury Land Records, said 50' R.O.W. being located easterly of Lot #107 as shown on said Map, thence running easterly in the southerly line of East Side Boulevard and in a line curving to the left having a radius of 110.26 feet, a distance of 50.00 feet to land now or formerly of L & M Builders, Incorporated, thence running in line of land now or formerly of L & M Builder, Incorporated S 2°43'42W and crossing the Waterbury-Naugatuck Town Line from Waterbury 15.17feet into Naugatuck S 1° 19' 46" E, 125.00 feet, thence continuing in line of land now or formerly of L & M Builders, Incorporated S 87° 32' 18" E, 100.22 feet to The Naugatuck-Prospect Town Line and land now or formerly of George and Jennie Nardozza, thence running in line of land now or formerly of George and Jennie Nardozza, land now or formerly of Mary F. Raynor, land now or formerly of Grace M. Perun, land now or formerly of Thomas Bros., Inc., and land now or formerly of Philip J. Langdo S 1° 19' 46" E, 821.13 feet to land now or formerly of Estate of Stanley J. Lucas, the last described line being the Naugatuck-Prospect Town Line, thence running in line of land now or formerly of Estate of Stanley J. Lucas N 73° 32' 16" W, 181.07 feet, N 70° 15' 58" W, 117.30 feet, and N 69° 28' 34" W, 130.68 feet, N 57° 19' 46" W, 94.73 feet, N 71° 30' 34" W, 73.64 feet, and N 80° 52' 16" W, 45.91 feet to a point, thence running in line of remaining land of Francis M. McWeeney, Jr., N 1° 19' 46" W, 200.00 feet, N 88° 40' 14" E, 266.87 feet, N 1° 19' 46" W, 516.79 feet to Lot #107 as shown on a map entitled "Subdivision of Peach Orchard Estates Section Four", thence running in line of said lot #107 and a 50' wide Right of Way S 87° 32' 18" E, 165.00 feet, the last described line being the Naugatuck-Waterbury Town Line, thence running in the easterly line of a 50' wide Right of Way N 30° 36' 32" E, 31.53 feet to East Side Boulevard and the point of beginning. Bounded:

Northerly - by Lot #107 "Peach Orchard Estates Section Four", a 50' wide Right of Way, East Side Boulevard, and land now or formerly of L & M Builders, Incorporated;
Easterly - by land now or formerly of George & Jennie Nardozza, land now or formerly of Mary F. Raynor, land now or formerly of Grace M. Perun, land now or formerly of Thomas Bros. Inc., and land now or formerly of Philip J. Langdo;
Southerly - by land now or formerly of Estate of Stanley J. Lucas;
Westerly - by land now or formerly of Francis M. McWeeney, Jr.

Being a portion of the premises conveyed to Francis M. McWeeney, Jr., by L & M Builders, Incorporated a/k/a L & M Builders, Inc. by Quit-Claim Deed dated and recorded December 11, 1973 in Volume 1122, Page 152 of the Waterbury Land Records and in Volume 180, Page 27 of the Naugatuck Land

SCHEDULE A
(continued)

Together with a right of way over area designated at 50' R.O.W. on map of "Subdivision of Peach Orchard Estates Section Four, Waterbury, Conn., August, 1972, Scale: 1"=50'", recorded in Drawer IV, Page 386, Waterbury Land Records, said right of way being located easterly of Lot #107 as shown on said Map and running southerly from East Side Boulevard to the Waterbury-Naugatuck Town Line as described in Volume 1121, Pages 011 and 012 of Waterbury Land Records.

Together with an easement and right of way through, over, under and across (a) the remaining land owned by Francis M. McWeeney, Jr. located northerly of the Waterbury town line and lying between said town line and the southerly line of East Side Boulevard, as shown on a map entitled "Map of Land of Thomas Bros., Inc. Prospect, Conn. The A. J. Patton Co., Surveyor, Waterbury, Conn. June 15, 1979 Scale: 1" = 40' Additions Oct. 21, 1980" (the "Map"), and (b) the remaining land of Francis M. McWeeney, Jr. located in the Town of Naugatuck, bounded northerly by the Waterbury town line, westerly and southerly by the Premises and easterly by land N/F of Grace M. Franco, as shown on said Map, to use said lands for all purposes customarily made of a public highway, including, without limiting the generality of the foregoing, the right to pass and repass on foot or in vehicles, to enter upon, travel and transport materials over and upon said lands and, if necessary or convenient, in connection therewith, the right to grade, excavate, fill or otherwise improve said lands, said easement and right of way to terminate upon the completion of the construction of a television tower and station upon the Premises.

Together with a permanent easement and right of way sufficient in width to satisfy town road specifications for the zone district in which the remaining land of Francis M. McWeeney, Jr. (as defined herein and hereinafter referred to as the "Remaining Property") is located, said easement to begin at a point in the westerly boundary of the Premises and running therefrom generally westerly through, over, under and across the Remaining Property to any future public highway constructed on or which adjoins or benefits the Remaining Property, to use said land for all purposes customarily made of a public highway, including without limiting the generality of the foregoing, the right to lay, install and maintain sewer, water and storm water lines therein, the right to pass and repass on foot or in vehicles, and, if necessary or convenient, in connection therewith, the right to grade, excavate, fill or otherwise improve said right of way. Said easement and right of way shall be located in such area as Francis M. McWeeney, Jr. or his successor shall determine; provided, however, that said easement and right shall be subject to the approval of the Naugatuck Economic Development Commission.

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

November 5, 2013

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

RE: **TS-VER-115-131009** – Cellco Partnership d/b/a Verizon Wireless request for an order to approve the shared used of an existing telecommunications facility located at 37 Peach Orchard Road, Prospect, Connecticut.

Dear Attorney Baldwin:

At a public meeting held October 31, 2013, the Connecticut Siting Council (Council) ruled that the shared use of this existing tower site is technically, legally, environmentally, and economically feasible and meets public safety concerns, and therefore, in compliance with General Statutes § 16-50aa, the Council has ordered the shared use of this facility to avoid the unnecessary proliferation of tower structures with the following conditions:

- Any deviation from the proposed installation as specified in the original tower share request and supporting materials with the Council shall render this decision invalid;
- Any material changes to the proposed installation as specified in the original tower share request and supporting materials filed with the Council shall require an explicit request for modification to the Council pursuant to Connecticut General Statutes § 16-50aa, including all relevant information regarding the proposed change with cumulative worst-case modeling of radio frequency exposure at the closest point of uncontrolled access to the tower base, consistent with Federal Communications Commission, Office of Engineering and Technology, Bulletin 65;
- Not less than 45 days after completion of the proposed installation, the Council shall be notified in writing that the installation has been completed;
- The validity of this action shall expire one year from the date of this letter; and
- The applicant may file a request for an extension of time beyond the one year deadline provided that such request is submitted to the Council not less than 60 days prior to the expiration.

This decision is under the exclusive jurisdiction of the Council. This facility has been carefully modeled to ensure that radio frequency emissions are conservatively below State and federal standards applicable to the frequencies now used on this tower. Any deviation from this format may result in the Council implementing enforcement proceedings pursuant to General Statutes § 16-50u including, without limitation, imposition of expenses resulting from such failure and of civil penalties in an amount not less than one thousand dollars per day for each day of construction or operation in material violation.

This decision applies only to this request for tower sharing and is not applicable to any other request or construction. Please be advised that the validity of this action shall expire one year from the date of this letter.

The proposed shared use is to be implemented as specified in your letter dated October 8, 2013, including the placement of all necessary equipment and shelters within the tower compound.

Thank you for your attention and cooperation.

Very truly yours,

Robert Stein VAB

Robert Stein
Chairman

RS/CDM/jb

c: The Honorable Robert J. Chatfield, Mayor, Town of Prospect
William J. Donovan, Zoning Enforcement Officer, Town of Prospect
Counterpoint Communications

CSC
CONNECTICUT SITING COUNCIL

ATTACHMENT 2

PROJECT NOTES

1. SITE INFORMATION OBTAINED FROM THE FOLLOWING:
   A. LIMITED FIELD OBSERVATION BY MASER CONSULTING ON 08/30/21.
   B. POST-MOD ANTENNA MOUNT ANALYSIS REPORT PREPARED BY PAUL J. FORD & COMPANY OF COLUMBUS, OH DATED 08/12/21.
2. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE CODES, ORDINANCES, LAWS AND REGULATIONS OF ALL MUNICIPALITIES, UTILITY COMPANIES OR OTHER PUBLIC/GOVERNING AUTHORITIES.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS AND INSPECTIONS THAT MAY BE REQUIRED BY ANY FEDERAL, STATE, COUNTY OR MUNICIPAL AUTHORITIES.
4. THE CONTRACTOR SHALL NOTIFY THE CONSTRUCTION MANAGER, IN WRITING, OF ANY CONFLICTS, ERRORS OR OMISSIONS PRIOR TO THE SUBMISSION OF BIDS OR PERFORMANCE OF WORK.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL EXISTING SITE IMPROVEMENTS PRIOR TO COMMENCING CONSTRUCTION. THE CONTRACTOR SHALL REPAIR ANY DAMAGE AS A RESULT OF CONSTRUCTION OF THIS FACILITY AT THE CONTRACTOR'S EXPENSE TO THE SATISFACTION OF THE OWNER.
6. THE SCOPE OF WORK FOR THIS PROJECT SHALL INCLUDE PROVIDING ALL MATERIALS, EQUIPMENT AND LABOR REQUIRED TO COMPLETE THIS PROJECT. ALL EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
7. THE CONTRACTOR SHALL VISIT THE PROJECT SITE PRIOR TO SUBMITTING THE BID TO VERIFY THAT THE PROJECT CAN BE CONSTRUCTED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND CONSTRUCTION DRAWINGS.
8. THE CONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS PRIOR TO COMMENCING ANY WORK. ALL DIMENSIONS OF EXISTING CONSTRUCTION SHOWN ON THESE DRAWINGS MUST BE VERIFIED. THE CONTRACTOR SHALL NOTIFY THE CONSTRUCTION MANAGER OF ANY DISCREPANCIES PRIOR TO ORDERING MATERIAL OR PROCEEDING WITH CONSTRUCTION.
9. SINCE THE CELL SITE MAY BE ACTIVE, ALL SAFETY PRECAUTIONS MUST BE TAKEN WHEN WORKING AROUND HIGH LEVELS OF ELECTROMAGNETIC RADIATION. EQUIPMENT SHOULD BE SHUTDOWN PRIOR TO PERFORMING ANY WORK THAT COULD EXPOSE THE WORKERS TO DANGER. PERSONAL RF EXPOSURE MONITORS ARE REQUIRED TO BE WORN TO ALERT OF ANY POTENTIALLY DANGEROUS EXPOSURE LEVELS.
10. THE PROPOSED FACILITY WILL CAUSE AN INSIGNIFICANT OR "DE-MINIMUS" INCREASE IN STORM WATER RUNOFF, THEREFORE, NO DRAINAGE STRUCTURES ARE PROPOSED.
11. NO NOISE, SMOKE, DUST OR ODOR WILL RESULT FROM THIS FACILITY AS TO CAUSE A NUISANCE.
12. THE FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION (NO HANDICAP ACCESS IS REQUIRED).
13. THE FACILITY DOES NOT REQUIRE POTABLE WATER OR SANITARY SERVICE.
14. CONTRACTOR SHALL VERIFY ANTENNA ELEVATION AND AZIMUTHS WITH RF ENGINEERING PRIOR TO INSTALLATION.
15. THE TOWER, MOUNTS AND ANTENNAS SHALL BE DESIGNED TO MEET EIA/TIA-222-H AS PER IBC REQUIREMENTS.
16. ALL STRUCTURAL ELEMENTS SHALL BE HOT DIPPED GALVANIZED STEEL.
17. CONTRACTOR MUST FIELD LOCATE ALL EXISTING UNDERGROUND UTILITIES PRIOR TO ANY EXCAVATION.
18. CONSTRUCTION SHALL NOT COMMENCE UNTIL COMPLETION OF A PASSING STRUCTURAL ANALYSIS CERTIFIED BY A LICENSED PROFESSIONAL ENGINEER. THE STRUCTURAL ANALYSIS IS TO BE PERFORMED BY OTHERS.
19. CONTRACTOR SHALL CONTACT STATE SPECIFIC ONE CALL SYSTEM THREE WORKING DAYS PRIOR TO ANY EARTH MOVING ACTIVITIES.

SITE NAME: NAUGATUCK CT RELO
PLSC NUMBER: 468186
FUZE I.D. NUMBER: 16486414

37 PEACH ORCHARD RD
PROSPECT, CT 06712
NEW HAVEN COUNTY

VICINITY MAP

CODE COMPLIANCE

ALL WORK AND MATERIALS SHALL BE PERFORMED AND INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNING AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THE LATEST EDITIONS OF THE FOLLOWING CODES.

1. 2018 CONNECTICUT STATE BUILDING CODE, INCORPORATING THE 2015 IBC
2. 2017 NATIONAL ELECTRICAL CODE - NFPA 70
3. 2015 NFPA 101
4. AMERICAN INSTITUTE OF STEEL CONSTRUCTION 360-10
5. AMERICAN CONCRETE INSTITUTE
6. TIA-222-G
7. TIA 607 FOR GROUNDING
8. INSTITUTE FOR ELECTRICAL AND ELECTRONICS ENGINEERS 81 IEEE C2 LATEST EDITION
9. TELCORDIA GR-1275
10. ANSI T1.311
11. PROPOSED USE: UNMANNED TELECOM FACILITY
12. HANDICAP REQUIREMENTS: FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION. HANDICAPPED ACCESS NOT REQUIRED.
13. CONSTRUCTION TYPE: IIB
14. USE GROUP: U

PROJECT INFORMATION

SITE INFORMATION

LATITUDE:	41.518611"
LONGITUDE:	-73.016667"
GROUND ELEVATION:	786.46'± AMSL
JURISDICTION:	CITY OF PROSPECT

APPLICANT

COMPANY:	VERIZON WIRELESS
ADDRESS:	118 FLANDERS ROAD, THIRD FLOOR
CITY, STATE, ZIP:	WESTBOROUGH, MA 01581

PROPERTY OWNER

COMPANY:	COUNTERPOINT COMMUNICATION
ADDRESS:	37 PEACH ORCHARD ROAD
CITY, STATE, ZIP:	PROSPECT, CT 06712

SITE ACQUISITION

COMPANY:	SAI COMMUNICATIONS LLC
ADDRESS:	68 AVALON ROAD
CITY, STATE, ZIP:	MILTON, MA 02186

ENGINEERING COMPANY

COMPANY:	MASER CONSULTING CONNECTICUT
CONTACT:	PETE ALBANO
PHONE:	(856) 797-0412
E-MAIL:	PETER.ALBANO@COLLIERSENGINEERING.COM

CONTRACTOR PMI REQUIREMENT

PMI LOCATION:	HTTPS://PMI.VZWSMART.COM
SMART TOOL VENDOR PROJECT #:	10094053
VZW LOCATION CODE (PSLC):	468186
ANALYSIS DATE:	9/8/2021

*** PMI AND REQUIREMENTS ARE EMBEDDED IN MOUNT ANALYSIS REPORT

MOUNT MODIFICATIONS REQUIRED : YES

REFER TO MOUNT MODIFICATION DRAWINGS PAGE FOR VZW SMART KIT APPROVED VENDORS

PROJECT DESCRIPTION/ SCOPE OF WORK

THE PROPOSED PROJECT SCOPE INCLUDES MODIFYING TOWER MOUNTED EQUIPMENT AS INDICATED PER BELOW.

- REMOVE (9) EXISTING ANTENNAS
- INSTALL (9) PROPOSED ANTENNAS
- REMOVE (6) EXISTING REMOTE RADIO HEADS
- INSTALL (6) PROPOSED REMOTE RADIO HEADS
- INSTALL MOUNT MODIFICATIONS AS REQUIRED

SHEET INDEX

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SCALE: AS SHOWN | JOB NUMBER: 21781066A

REV	DATE	DESCRIPTION	DRAWN BY	CHECKED BY
0	03/29/22	ISSUED FOR CONSTRUCTION	DRP	PMA
A	09/20/21	ISSUED FOR REVIEW	MJB	PMA

STATE OF CONNECTICUT — PETER MICHAEL ALBANO — PROFESSIONAL ENGINEER
Peter M. Albano
CONNECTICUT LICENSED PROFESSIONAL ENGINEER

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

SITE NAME:
NAUGATUCK CT RELO

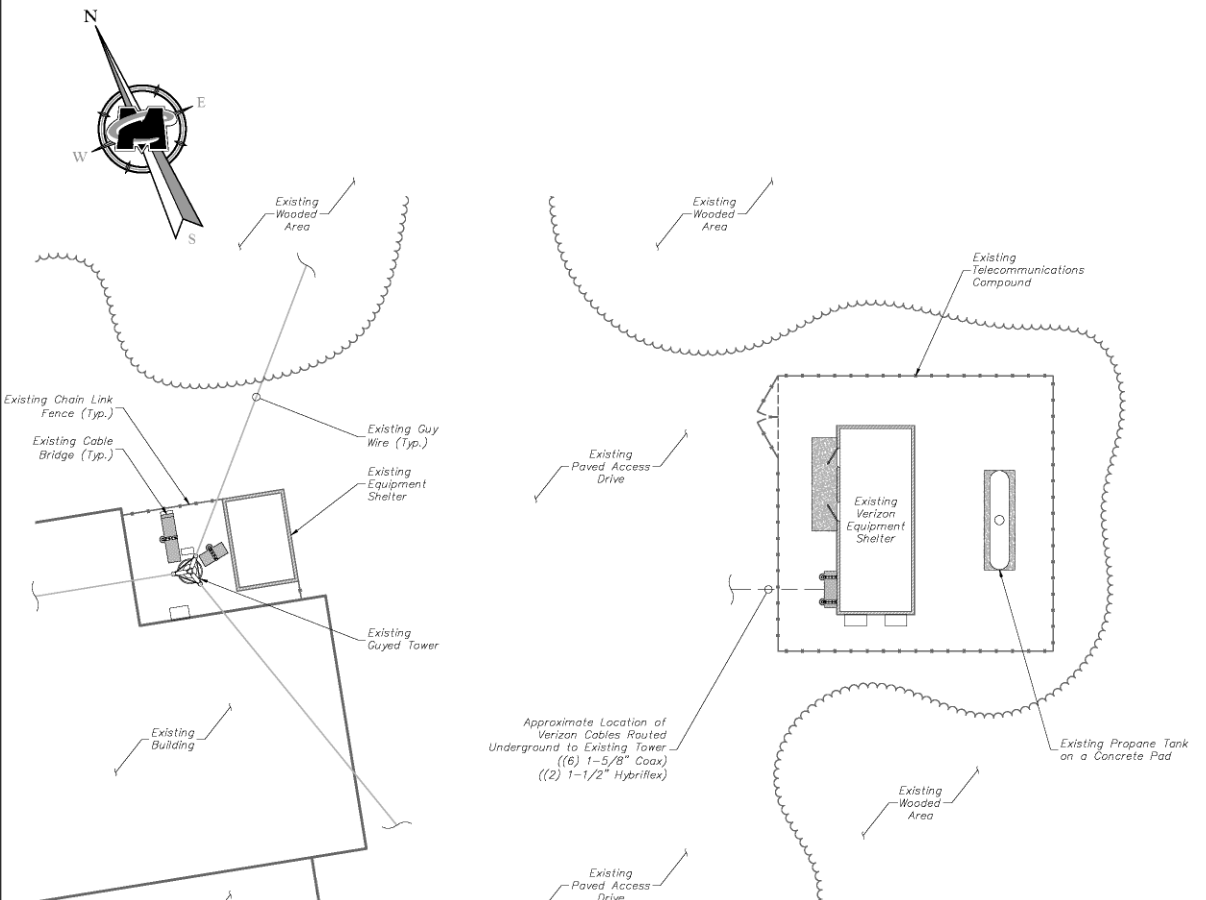
37 PEACH ORCHARD RD
PROSPECT, CT 06712
NEW HAVEN COUNTY

STAMFORD
1055 Washington Blvd
Stamford, CT 06901
Phone: 203.324.0800

SHEET TITLE: TITLE SHEET

SHEET NUMBER: T-1

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.



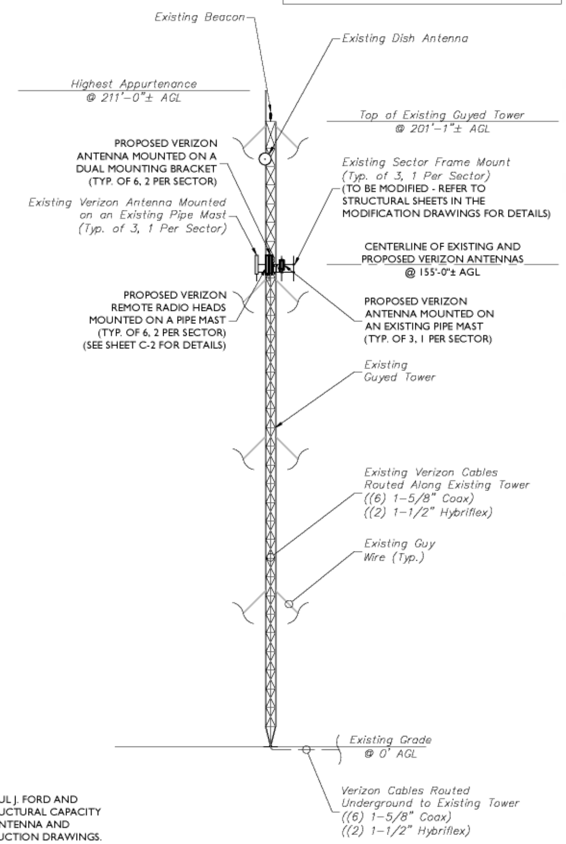
PARTIAL SITE PLAN

SCALE : 1" = 10' FOR 22"X34"
(SCALE : 1" = 20' FOR 11"X17")

NOTES:

1. POST MODIFICATION INSPECTION (PMI) REQUIRED ON ALL SITES. REFER TO MOUNT ANALYSIS REFERENCED IN STRUCTURAL NOTE 1 BELOW FOR ADDITIONAL DETAILS.

1. MOUNT MODIFICATIONS ARE REQUIRED BEFORE ANY INSTALLATION CAN OCCUR. PLEASE REFER TO MOUNT MODIFICATION DRAWINGS REFERENCED IN STRUCTURAL NOTE 1 BELOW FOR ADDITIONAL DETAILS.



ELEVATION VIEW

SCALE : 1" = 20' FOR 22"X34"
(SCALE : 1" = 40' FOR 11"X17")

STRUCTURAL NOTES:

1. A POST-MOD ANTENNA MOUNT ANALYSIS REPORT PREPARED BY PAUL J. FORD AND COMPANY, DATED 09/08/21 HAS BEEN PREPARED TO CHECK THE STRUCTURAL CAPACITY OF THE EXISTING ANTENNA MOUNT TO SUPPORT THE PROPOSED ANTENNA AND EQUIPMENT CONFIGURATION AS DEPICTED WITHIN THESE CONSTRUCTION DRAWINGS. BASED ON THE CONCLUSIONS OF THIS REPORT, THE ANTENNA MOUNT HAS BEEN DETERMINED TO HAVE SUFFICIENT CAPACITY PENDING INSTALLATION OF THE MODIFICATIONS OUTLINED IN THE APPROVED MODIFICATION DRAWINGS DATED 08/12/21.

2. A STRUCTURAL ANALYSIS REPORT PREPARED BY ALL POINTS TECHNOLOGY CORPORATION, DATED 02/17/22 HAS BEEN PREPARED TO CHECK THE STRUCTURAL CAPACITY OF THE EXISTING GUYED TOWER TO SUPPORT THE PROPOSED ANTENNA AND EQUIPMENT CONFIGURATION AS DEPICTED WITHIN THESE CONSTRUCTION DRAWINGS. BASED ON THE CONCLUSIONS OF THIS REPORT, THE EXISTING GUYED TOWER HAS BEEN DETERMINED TO HAVE SUFFICIENT CAPACITY.

3. THE CONTRACTOR IS RESPONSIBLE TO CONFIRM THAT ANY IMPROVEMENTS AND REINFORCEMENTS REQUIRED BY THE STRUCTURAL ANALYSIS CERTIFICATION ARE PROPERLY INSTALLED PRIOR TO THE ADDITION OF ANTENNAS, CABLES, SUPPORTS AND APPURTENANCES PROPOSED ON THESE DRAWINGS OR OTHERWISE NOTED IN THE STRUCTURAL ANALYSIS.

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SCALE	JOB NUMBER
AS SHOWN	21781066A

REV	DATE	DESCRIPTION	DRAWN BY	CHECKED BY
0	03/29/22	ISSUED FOR CONSTRUCTION	DNF	PMA
A	09/28/21	ISSUED FOR REVIEW	MB	PMA

Peter M. Albano
CONNECTICUT LICENSED PROFESSIONAL ENGINEER
STATE OF CONNECTICUT · PETER MICHAEL ALBANO · PROFESSIONAL ENGINEER

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SITE NAME:
NAUGATUCK CT RELO

37 PEACH ORCHARD RD
PROSPECT, CT 06712
NEW HAVEN COUNTY

STAMFORD
1055 Washington Blvd
Stamford, CT 06901

SHEET TITLE
PARTIAL SITE PLAN AND ELEVATION VIEW

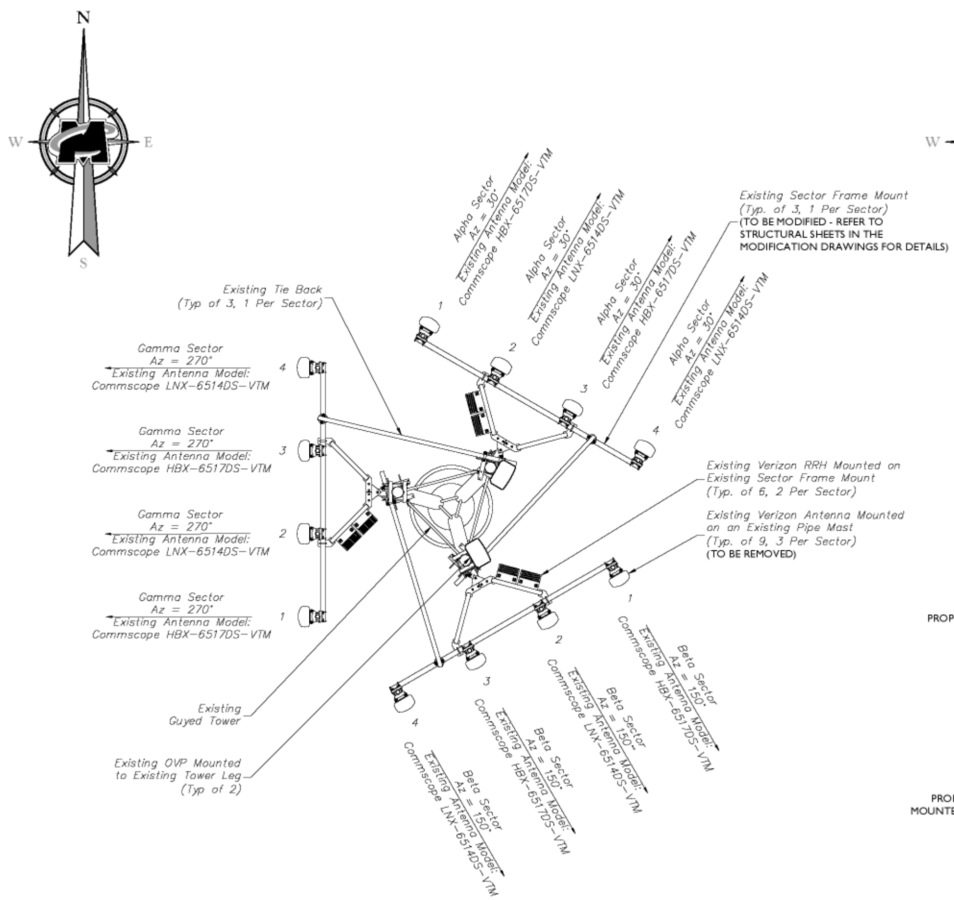
SHEET NUMBER
C-1

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

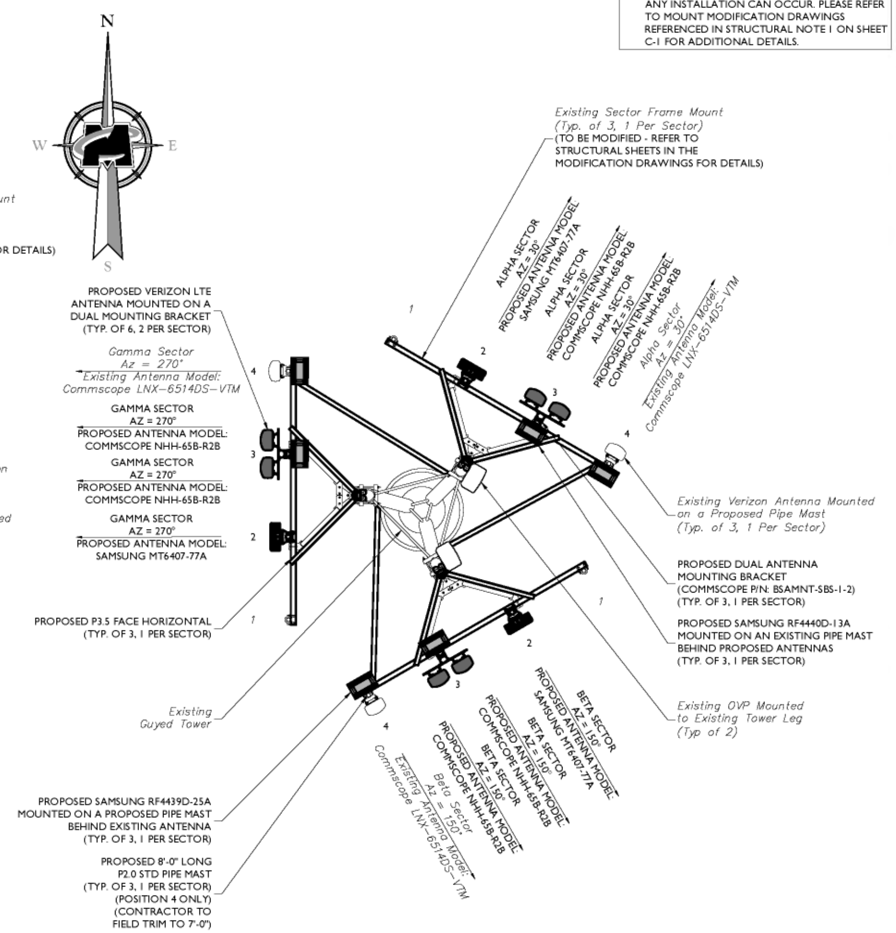
NOTES:

1. POST MODIFICATION INSPECTION (PMI) REQUIRED ON ALL SITES. REFER TO MOUNT ANALYSIS REFERENCED IN STRUCTURAL NOTE 1 ON SHEET C-1 FOR ADDITIONAL DETAILS.

1. MOUNT MODIFICATIONS ARE REQUIRED BEFORE ANY INSTALLATION CAN OCCUR. PLEASE REFER TO MOUNT MODIFICATION DRAWINGS REFERENCED IN STRUCTURAL NOTE 1 ON SHEET C-1 FOR ADDITIONAL DETAILS.



EXISTING ANTENNA LAYOUT
NOT TO SCALE



PROPOSED ANTENNA LAYOUT
NOT TO SCALE

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REV	DATE	DESCRIPTION	DRAWN BY	CHECKED BY
0	03/29/22	ISSUED FOR CONSTRUCTION	DRF	FMA
A	09/28/21	ISSUED FOR REVIEW	MB	FMA

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Peter M. Albano
CONNECTICUT LICENSED PROFESSIONAL ENGINEER

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PROSPECT, CT 06712
NEW HAVEN COUNTY

STAMFORD
1055 Washington Blvd
Stamford, CT 06901
Phone: 203.324.0800

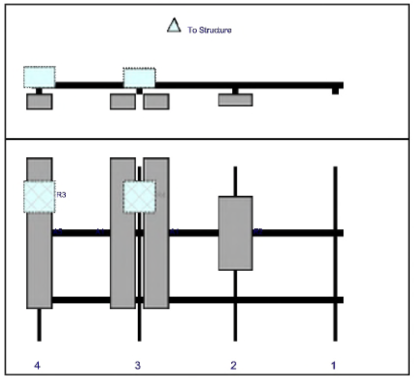
SHEET TITLE
ANTENNA LAYOUTS

SHEET NUMBER
C-2

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

Plan View

Front View
Looking at Structure

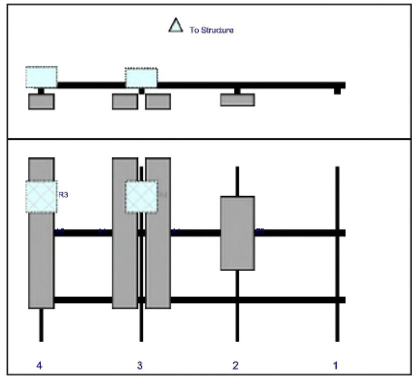


Ref#	Model	Height (in)	Width (in)	H Dist Frm L.	Pipe #	Pipe Pos V	Ant Pos	C. Ant Frm T.	Ant H Off	Status	Validation
R2	MT6407-77A	35.1	16.1	98	2	a	Front	32.04	0	Added	
A1	NHH-65B-R2B	72	11.9	52	3	a	Front	32.04	-6	Added	
A1	NHH-65B-R2B	72	11.9	52	3	b	Front	32.04	8	Added	
R4	RF4440d-13A	15	15	52	3	a	Behind	14.52	0	Added	
A5	LNX-6514DS-VTM	72	11.9	4	4	a	Front	32.04	0	Retained	08/03/2021
R3	RF4439d-25A	15	15	4	4	a	Behind	14.52	0	Added	

ALPHA SECTOR

Plan View

Front View
Looking at Structure

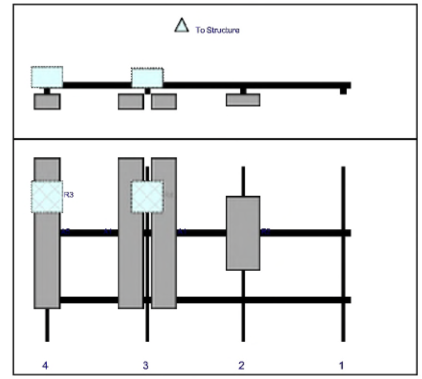


Ref#	Model	Height (in)	Width (in)	H Dist Frm L.	Pipe #	Pipe Pos V	Ant Pos	C. Ant Frm T.	Ant H Off	Status	Validation
R2	MT6407-77A	35.1	16.1	98	2	a	Front	32.04	0	Added	
A1	NHH-65B-R2B	72	11.9	52	3	a	Front	32.04	-6	Added	
A1	NHH-65B-R2B	72	11.9	52	3	b	Front	32.04	8	Added	
R4	RF4440d-13A	15	15	52	3	a	Behind	14.52	0	Added	
A5	LNX-6514DS-VTM	72	11.9	4	4	a	Front	32.04	0	Retained	08/03/2021
R3	RF4439d-25A	15	15	4	4	a	Behind	14.52	0	Added	

BETA SECTOR

Plan View

Front View
Looking at Structure



Ref#	Model	Height (in)	Width (in)	H Dist Frm L.	Pipe #	Pipe Pos V	Ant Pos	C. Ant Frm T.	Ant H Off	Status	Validation
R2	MT6407-77A	35.1	16.1	98	2	a	Front	32.04	0	Added	
A1	NHH-65B-R2B	72	11.9	52	3	a	Front	32.04	-6	Added	
A1	NHH-65B-R2B	72	11.9	52	3	b	Front	32.04	8	Added	
R4	RF4440d-13A	15	15	52	3	a	Behind	14.52	0	Added	
A5	LNX-6514DS-VTM	72	11.9	4	4	a	Front	32.04	0	Retained	08/03/2021
R3	RF4439d-25A	15	15	4	4	a	Behind	14.52	0	Added	

GAMMA SECTOR

EQUIPMENT PLACEMENT DIAGRAMS

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PROFESSIONAL ENGINEER
Peter M. Albano
CONNECTICUT LICENSED PROFESSIONAL ENGINEER
03/29/22

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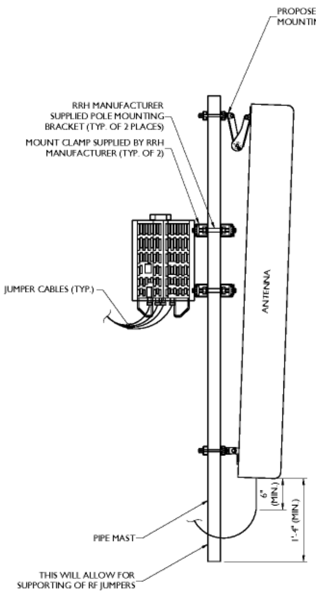
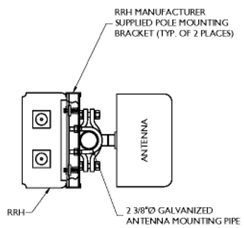
SHEET TITLE
EQUIPMENT PLACEMENT DIAGRAMS

SHEET NUMBER
C-3

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

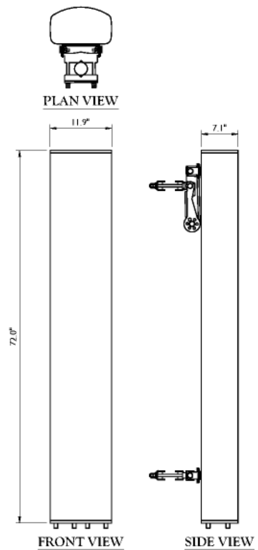


ELEVATION VIEW



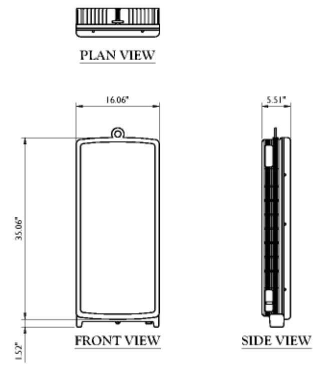
PLAN VIEW

ANTENNA MOUNTING DETAIL
NOT TO SCALE



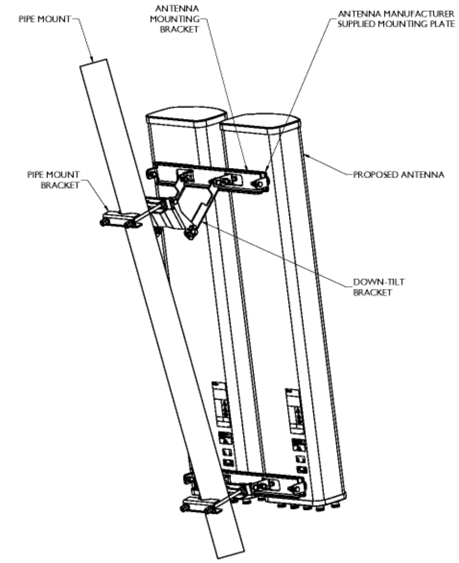
WEIGHT = 43.7 LBS
WITH WITH BRACKETS = 57.0 LBS

COMMSCOPE NHH-65B-R2B
NOT TO SCALE

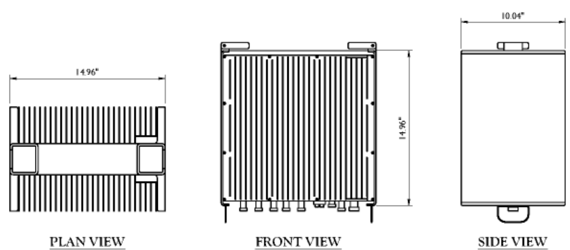


WEIGHT = 81.57 LBS

SAMSUNG MT6407-77A
NOT TO SCALE

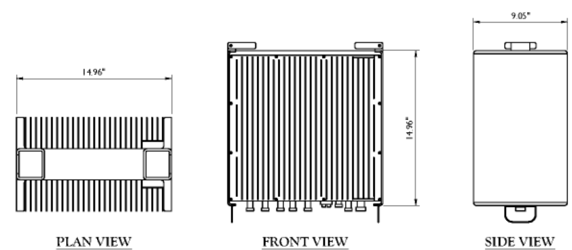


COMMSCOPE BSAMNT-SBS-1-2
NOT TO SCALE



WEIGHT = 74.70 LBS
VOLUME = 1.30 FT³

SAMSUNG RF4439D-25A (B2/B66) REMOTE RADIO HEAD
NOT TO SCALE



WEIGHT = 70.33 LBS
VOLUME = 1.17 FT³

SAMSUNG RF4440D-13A (B5/B13) REMOTE RADIO HEAD
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Peter M. Albano
CONNECTICUT LICENSED PROFESSIONAL ENGINEER
03/29/22

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SHEET TITLE
CONSTRUCTION DETAILS

SHEET NUMBER
A-1

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Antenna Summary

Added

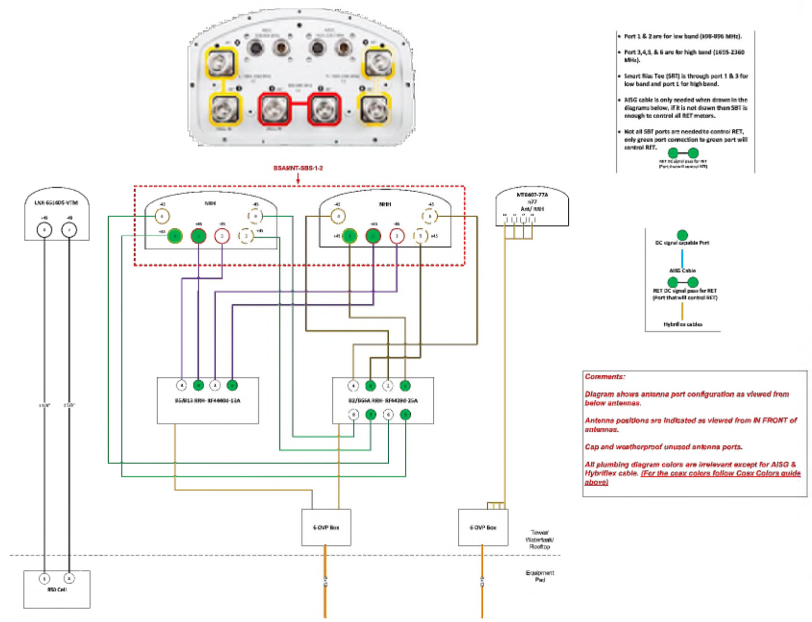
700	850	1900	AWS	L-Sub6	Make	Model	Centerline	Tip Height	Azimuth	RET	4xRx	Inst. Type	Quantity
LTE	LTE 5G	LTE	LTE		COMMSCOPE	NHH-65B-R2B	155	158	30(01) 150(02) 270(03)	true	true	PHYSICAL	6
				5G	Samsung	MT6407-77A	155	156.5	30(0088) 150(0089) 270(0090)	false	false	PHYSICAL	3

Equipment Summary

Added

Equipment Type	Location	700	850	1900	AWS	L-Sub6	Make	Model	Cable Length	Cable Size	Install Type	Quantity
Mount	Tower						Commscope	BSAMNT-SBS-1-2			PHYSICAL	3
RRU	Tower					5G	Samsung	MT6407-77A			PHYSICAL	3
RRU	Tower			LTE	LTE		Samsung	RF4439d-25A			PHYSICAL	3
RRU	Tower	LTE	LTE 5G				Samsung	RF4440d-13A			PHYSICAL	3

ANTENNA SCHEDULE



RF PLUMBING DIAGRAMS

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Peter M. Albano, Connecticut Licensed Professional Engineer

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SHEET TITLE: CONSTRUCTION DETAILS

SHEET NUMBER: A-2

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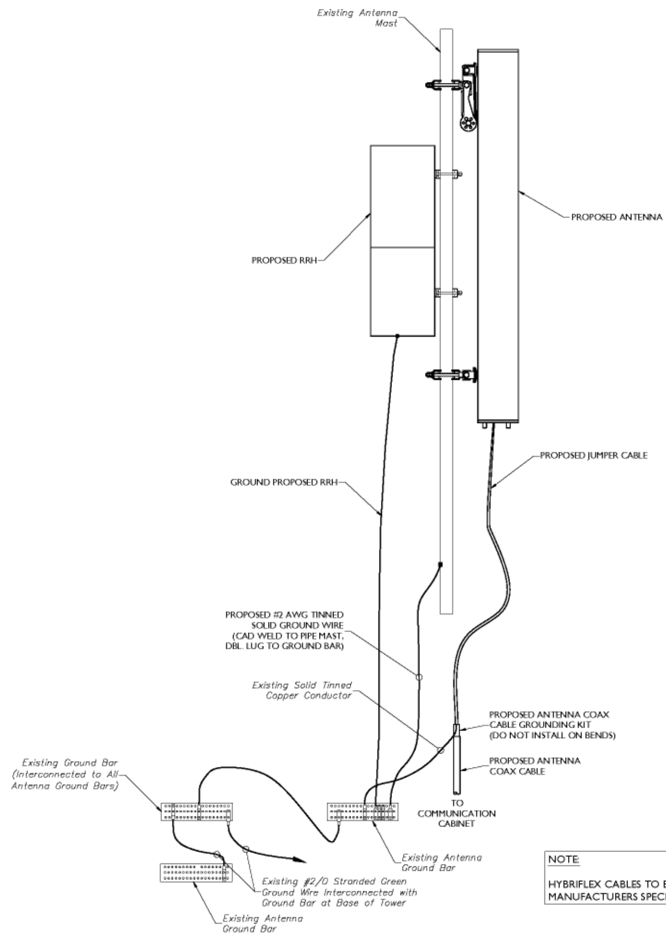

NOTE:

HYBRIFLEX CABLES TO BE GROUNDED PER MANUFACTURERS SPECIFICATIONS.

ANTENNA GROUNDING SCHEMATIC

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STATE OF CONNECTICUT — PETER MICHAEL ALBANO — PROFESSIONAL ENGINEER

Peter M. Albano

CONNECTICUT LICENSED PROFESSIONAL ENGINEER

03/29/22

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SHEET TITLE

GROUNDING DETAILS

SHEET NUMBER

G-1

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

POST-MODIFICATION INSPECTION (PMI) REQUIREMENTS

1. PMI REQUIRED FOR ALL SITES, REFER TO VERIZON NSTD-446 SECTION 1.5 AND 2.3 FOR MORE INFORMATION.
2. CONTRACTOR SHALL REFER TO THE MOUNT ANALYSIS BY COLLIERS ENGINEERING & DESIGN, INC DATED 09/08/21 FOR ADDITIONAL DETAILS.
3. GENERAL CONTRACTOR SHALL PROVIDE THE BELOW DOCUMENTATION TO THE STRUCTURAL ENGINEER OF RECORD VIA EMAIL, DROPBOX, OR OTHER FILE SHARE METHOD. PROVIDE HIGH RESOLUTION PHOTO'S (DO NOT COMPRESS).
4. STRUCTURAL ENGINEER OF RECORD WILL CONDUCT A REVIEW OF THE PROVIDED DOCUMENTS TO PREPARE A PMI REPORT. STRUCTURAL ENGINEER OF RECORD WILL NOTIFY GENERAL CONTRACTOR IF ANY ADDITIONAL DOCUMENTATION IS REQUIRED TO COMPLETE THE PMI.
5. PMI DOCUMENTATION SHALL BE SUFFICIENT TO CONFIRM THE UPGRADE WAS BUILT AS DESIGNED, INCLUDING EQUIPMENT CHANGES AND STRUCTURAL MODIFICATIONS, AND IS IN ADDITION TO ANY OTHER REQUIRED CLOSEOUT PACKAGE DOCUMENTATION.
6. REQUIRED DOCUMENTATION FOR PMI INCLUDES THE FOLLOWING AT A MINIMUM. REFER TO THE MOUNT ANALYSIS FOR POSSIBLE ADDITIONAL INFORMATION. IF STRUCTURAL MODIFICATIONS ARE REQUIRED, REFER TO THE MODIFICATION DRAWINGS FOR POSSIBLE ADDITIONAL REQUIREMENTS.
   a. PROVIDE PRE-AND-POST CONSTRUCTION PHOTOS OF EACH SECTOR FROM THE MOUNT ELEVATION AND THE GROUND. CONTRACTOR IS RESPONSIBLE FOR ENSURING THE PHOTO'S PROVIDED PROVIDE POSITIVE CONFIRMATION THAT THE MODIFICATION/UPGRADE WAS COMPLETED IN ACCORDANCE WITH THESE CONSTRUCTION DRAWINGS AND ANY STRUCTURAL/MOUNT MODIFICATION DRAWINGS. CONTRACTOR SHALL RELAY ANY DATA THAT CAN IMPACT THE PERFORMANCE OF THE MOUNT OR MOUNT MODIFICATION, INCLUDING SAFETY ISSUES, PHOTOS SHALL HAVE A DATE/TIME STAMP IN THE PHOTO. REFER TO THE MOUNT ANALYSIS FOR SCHEDULE OF REQUIRED PHOTOS. PROVIDE PHOTOS OF THE GATE SIGNS AND CARRIER SHELTER TO IDENTIFY THE TOWER OWNER, SITE NAME, SITE NUMBER, ETC.
   b. VERIFICATION OF THE MEMBER CONNECTIONS, BRACING, AND RELEVANT DIMENSIONS.
   c. VERIFICATION OF THE ANTENNA AND OTHER EQUIPMENT CONFIGURATION (PHOTOS OF MODEL NUMBERS/TAGS FOR ALL EQUIPMENT, AS WELL AS THE FEEDLINE CONFIGURATION). TAKE PHOTOS OF THE BACK SIDE OF EACH SECTOR AS WELL AS CLOSE-UPS OF ALL EQUIPMENT. PHOTOS SHOULD CONFIRM THE HORIZONTAL AND VERTICAL POSITIONING OF THE ANTENNAS AND EQUIPMENT AND SHALL HAVE TAPE MEASURES IN THE PHOTOS TO CONFIRM.
   d. FOR TIEBACKS, STRUTS, MOUNT PIPES, PHOTOS TO CONFIRM THE ANGLES AND LOCATIONS OF ATTACHMENT POINT AT BOTH ENDS OF MEMBER, AS WELL AS DIMENSIONS, THICKNESS, AND LENGTHS OF THE MEMBERS. REFER TO THE CHECKLIST IN THE MOUNT ANALYSIS OR MOUNT MOD DRAWINGS FOR ADDITIONAL INFORMATION.
   e. MATERIALS USED (TYPE, STRENGTH, DIMENSIONS, ETC.). PROVIDE BILL OF MATERIAL AND MATERIAL SPEC TO CONFIRM MATERIAL GRADES AND SIZES. PROVIDE DOCUMENTATION FOR GALVANIZATION OF MEMBERS WHETHER HOT-DIPPED OR COLD-GALVANIZED. IF MATERIALS DIFFER FROM THOSE SPECIFIED ON THESE DRAWINGS, PROVIDE DOCUMENTATION THAT THE "EQUIVALENT" MATERIAL HAS THE SAME SPECIFICATIONS.
   f. MOUNT ORIENTATION/AZIMUTH AND ELEVATION. PROVIDE TAPE DROP OF ANTENNA CENTERLINE(S) AND MOUNT ATTACHMENT POINTS TO THE SUPPORTING STRUCTURE. IF THERE ARE MULTIPLE RAD CENTERS, PROVIDE PHOTOS OF ALL ELEVATIONS.
   g. VERIFICATION THAT THE INSTALL HAS NOT CAUSED DAMAGE TO OR UNPLANNED OBSTRUCTION OF THE FOLLOWING:
      - CLIMBING FACILITIES
      - SAFETY CLIMB IF PRESENT, INCLUDING PHOTOS ABOVE AND BELOW THE MOUNT
      - LIGHTING SYSTEMS
      - OTHER INSTALLED SYSTEMS ON THE STRUCTURE
      - CONTRACTOR SHALL ENSURE THE SAFETY CLIMB IS SUPPORTED AND NOT ADVERSELY AFFECTED BY THE INSTALLATION OF NEW COMPONENTS. THIS MAY INVOLVE THE INSTALLATION OF WIRE ROPE GUIDES OR OTHER ITEMS TO PROTECT THE WIRE ROPE .
   h. OTHER ITEMS DETERMINED BY THE STRUCTURAL ENGINEER TO ENSURE THE MOUNT WILL PERFORM AS DESIGNED. PHOTOS OF RELEVANT MEASUREMENTS, WITH SUFFICIENT DETAILS TO CONFIRM CONNECTION DETAILS, PLACEMENT OF EQUIPMENT, WALL ANCHOR DETAILS, BALLAST QUANTITIES, STRUCTURAL MODIFICATION ETC. DIAMETERS AND THICKNESS OF BOLTS/THREADED RODS/ANGLES/TUBES ETC. SHALL HAVE PHOTOS CONFIRMING CALIPER MEASUREMENTS.
      - CONFIRMATION THAT ALL HARDWARE WAS PROPERLY INSTALLED, AND EXISTING HARDWARE WAS INSPECTED FOR ANY ISSUES
      - FOR BALLAST SLEDS, DOCUMENTATION OF THE WEIGHT OF BALLAST IN EACH SECTOR
      - FOR WALL ANCHORS, PHOTOS, AND MEASUREMENTS OF OUTSIDE AND INSIDE OF CONNECTIONS, DOCUMENTATIONS OF ADHESIVE USED, SIZE AND LENGTH OF ANCHORS, EFFECTIVE EMBEDMENT DEPTH OF THE ANCHORS, GROUTING OF HOLLOW WALLS, SPACING AND EDGE DISTANCE MEASUREMENTS, AND ANY THROUGH-BOLTS OR BACKING PLATES.
      - FOR STUD WELD CONNECTION, DOCUMENTATION TO CONFIRM SURFACE PREPARATION, STUD WELD SIZE, GRADE, LENGTH, AND SPACING.
      - FOR FABRICATED PARTS, SHOP DRAWINGS TO BE APPROVED BY THE ENGINEER OF RECORD PRIOR TO CONSTRUCTION
      - FOR WELD PARTS, CERTIFIED WELD INSPECTION
      - FOR BOLTED PARTS, BOLT INSTALLATION AND TORQUE
7. CONTRACTOR SHALL PROVIDE, IN ADDITION TO THE ABOVE, AS-BUILT CDS WITH REDLINES IDENTIFYING ANY CHANGES. THE AS-BUILTS SHALL HAVE THE CONTRACTOR'S NAME, PREPARER'S SIGNATURE, AND DATE.
8. IF THE MODIFICATION INSTALLATION WOULD FAIL THE PMI ("FAILED PMI"), THE CONTRACTOR SHALL WORK WITH THE ENGINEER OF RECORD TO COORDINATE A REMEDIATION PLAN IN ONE OF TWO WAYS:
   a. CORRECT FAILING ISSUES TO COMPLY WITH THE SPECIFICATIONS CONTAINED IN THE ORIGINAL CONTRACT DOCUMENTS AND COORDINATE A SUPPLEMENTAL PMI.
   b. OR, WITH EOR'S APPROVAL, THE GC MAY WORK WITH THE EOR TO RE-ANALYZE THE MODIFICATION/REINFORCEMENT/UPGRADE USING THE AS-BUILT CONDITION
9. NOTE: IF LOADING IS DIFFERENT THAN THAT SHOWN IN THESE CONSTRUCTION DRAWINGS OR STRUCTURAL/ MOUNT MODIFICATION DRAWINGS, CONTRACTOR SHALL NOTIFY THE ENGINEER OF RECORD IMMEDIATELY FOR RESOLUTION.
10. THE ENGINEERING FIRM PERFORMING AN ANALYSIS SHALL PROVIDE A CONTRACTOR'S PHOTO LOG AND CHECKLIST TO BE COMPLETED BY THE INSTALLING CONTRACTOR. THE CONTRACTOR SHALL THEN PROVIDE POST-INSTALLATION INFORMATION TO THE STRUCTURAL ENGINEER. THE STRUCTURAL ENGINEER SHALL REVIEW THE DOCUMENTS FOR ANY DEFICIENCIES THAT CAN BE DETERMINED FROM THE DESKTOP REVIEW OF THE DATA. THE ENGINEERING FIRM SHALL THEN PROVIDE DOCUMENTATION TO VZW THAT THE SITE IS COMPLETED, AND THE PMI REPORT IS APPROVED.

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Peter M. Albano
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01/20/22

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Phone: 203.324.0800

SHEET TITLE
PMI REQUIREMENTS

SHEET NUMBER
GN-1

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

MOUNT MODIFICATION DRAWINGS
PROPOSED CARRIER: VERIZON

468186-VZW / NAUGATUCK CT RELO

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NEW HAVEN COUNTY
LAT: 41° 31' 07.00"; LONG: -73° 01' 00.00"

TOWER OWNER: COUNTERPOINT COMMUNICATIONS, INC.

FUZE ID # 16486414

CONTRACTOR PMI REQUIREMENTS	
PMI ACCESSED AT	HTTPS://PMI.VZWSMART.COM
SMART TOOL VENDOR PROJECT #	10094053
VZW LOCATION CODE (PSLC)	468186
*** PMI AND REQUIREMENTS ALSO EMBEDDED WITHIN MOUNT ANALYSIS REPORT	

VZW APPROVED SMART KIT VENDORS
REFER TO MOUNT MODIFICATION DRAWINGS PAGE FOR VZW SMART KIT APPROVED VENDORS

SHEET INDEX		
SHEET	DESCRIPTION	REV
ST-1	TITLE SHEET	0
SBOM	BILL OF MATERIALS	0
SGN-1	GENERAL NOTES	0
SCF-1	CLIMBING FACILITY DETAILS	0
SS-1	MODIFICATION DETAILS	0
SS-2	MOUNT PHOTOS	0
	SPECIFICATION SHEETS	

REV	DATE	DESCRIPTION
1	9/15/21	NO CHANGE

STATE OF CONNECTICUT
JUSTIN T. KLINE
No. 30301
LICENSED
PROFESSIONAL ENGINEER

2021.09.15
16:50:55-04'00'

PAUL J. FORD & COMPANY
250 E Broad St. Ste 600- Columbus, OH 43215
Phone 614.221.6679
www.paulford.com

VERIZON WIRELESS

468186-VZW / NAUGATUCK CT RELO
PROSPECT, CONNECTICUT
MOUNT MODIFICATION DRAWINGS

PROJECT No:	22721-0344.002 8191
DRAWN BY:	RJM
DESIGNED BY:	JRM
CHECKED BY:	STP
DATE	8/12/2021

TITLE SHEET

ST-1

V2.0 22721-0344.002.DWG

BILL OF MATERIALS

VZWSMART KITS

QUANTITY	MANUFACTURER	PART NUMBER	DESCRIPTION	PIECE WEIGHT (LBS)	TOTAL WEIGHT (LBS)	MATERIAL	NOTES
3		VZWSMART-P40-312X156	HORIZONTAL BRACING PIPE	94.75	284.25	ASTM A53 (Gr. B-35)	1
3		VZWSMART P40-278X096	8'-0" LONG, P2.5 STD (2.875"Ø X 0.203") PIPE	46.40	139.20	ASTM A53 (Gr. B-35)	FIELD TRIM TO 7' - 0"
6		VZWSMART-MSK1	MOUNT PIPE CROSSOVER PLATES	14.00	84.00		
6		VZWSMART-SFK3-SL	V-BRACING KIT	117.00	702.00	-	
12		VZWSMART-MSK2	BRACING PIPE CROSSOVER PLATES	15.00	180.00	-	
3	VZWSMART	VZWSMART-SFK1	TIE BACK ASSEMBLY	84.00	252.00	-	

OTHER REQUIRED PARTS

QUANTITY	MANUFACTURER	PART NUMBER	DESCRIPTION	PIECE WEIGHT (LBS)	TOTAL WEIGHT (LBS)	MATERIAL	NOTES
				TOTAL WEIGHT =	1641.45		

NOTE: ALL MATERIALS REQUIRED FOR THE DESIGN MODIFICATIONS BUT NOT LISTED IN THIS SHEET ARE ASSUMMED TO BE PROVIDED BY THE CONTRACTOR.

VZWSMART KITS - APPROVED VENDORS

VENDOR	CONTACT	EMAIL	PHONE NUMBER
PERFECT VISION	WIRELESS SALES	WIRELESSSALES@PERFECT-VISION.COM	(844) 884-6723
SITEPRO	PAULA BOSWELL	PAULA.BOSWELL@VALMONT.COM	(972) 236-9843
SABRE INDUSTRIES INC.	ANGIE WELCH	AKWELCH@SABREINDUSTRIES.COM	(866) 428-6937
METROSITE FABRICATORS, LLC	KENT RAMEY	KENT@METROSITELLC.COM	(706) 335-7045
COMMSCOPE	SALVADOR ANGUIANO	SALVADOR.ANGUIANO@COMMSCOPE.COM	(817) 304-7492

THE MANUFACTURER'S LISTED ARE THE APPROVED VENDORS FOR THE VZW MOUNT KITS. EACH MANUFACTURER WILL BE AWARE OF WHICH KITS HAVE BEEN THROUGH THE VZW APPROVAL PROCESS AND THE ARE IN TURN APPROVED TO SELL. PLEASE NOTE THAT THE MATERIAL UTILIZED ON THE MOUNT MODIFICATIONS WILL BE REVIEWED AS A PART OF THE DESKTOP PMI COMPLETED BY THE SMART TOOL VENDOR. IT WILL BE REQUIRED THAT THE VZW KITS SPECIFIED ARE UTILIZED IN THE MODIFICATION.

ALL PARTS ARE GALVANIZED UNLESS NOTED OTHERWISE

REV	DATE	DESCRIPTION
1	9/15/21	PIPE SIZE CHANGE

STATE OF CONNECTICUT
JUSTIN T. KUNZ
No. 30301
LICENSED
PROFESSIONAL ENGINEER
9-15-21

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VERIZON WIRELESS

468186-VZW / NAUGATUCK CT RELO
PROSPECT, CONNECTICUT
MOUNT MODIFICATION DRAWINGS

PROJECT No:	22721-0344.002 8191
DRAWN BY:	RJM
DESIGNED BY:	JRM
CHECKED BY:	STP
DATE:	8/12/2021

BILL OF MATERIALS

SBOM

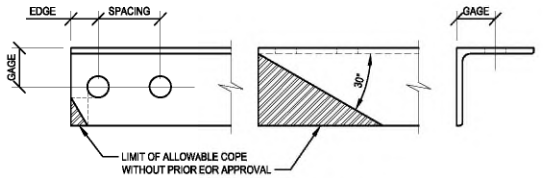
V2.0 22721-0344.002.DWG

GENERAL NOTES:

1. PAUL J. FORD AND COMPANY WAS NOT PROVIDED WITH THE EXACT LOCATION OF EVERY EXISTING ANTENNA MOUNT CONNECTION, CABLE CLIP, ETC THAT COULD POTENTIALLY INTERFERE WITH THE MODIFICATIONS AS INDICATED ON THESE DRAWINGS. THE CONTRACTOR SHALL FIELD VERIFY THAT THE MATERIAL CAN BE INSTALLED AS SHOWN ON THESE DRAWINGS BEFORE FABRICATING ANY MATERIAL. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE PROPER FIT AND CLEARANCE OF THE REINFORCING MATERIAL IN THE FIELD. IF THE CONTRACTOR DISCOVERS ANY EXISTING CONDITIONS THAT ARE NOT AS REPRESENTED ON THESE DRAWINGS, PAUL J. FORD AND COMPANY SHALL BE CONTACTED IMMEDIATELY TO EVALUATE THE STRUCTURAL SIGNIFICANCE OF THE DEVIATION.
2. WORK SHALL BE IN ACCORDANCE WITH LOCAL CODES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING THE LOCAL BUILDING OFFICIALS FOR ANY INSPECTIONS THAT MAY BE REQUIRED.
3. THE CONTRACTOR MUST BE EXPERIENCED IN THE PERFORMANCE OF WORK SIMILAR TO THAT DESCRIBED ON THESE DRAWINGS. BY ACCEPTANCE OF THIS PROJECT, THE CONTRACTOR IS ATTESTING THAT HE DOES HAVE SUFFICIENT EXPERIENCE AND ABILITY, THAT HE IS KNOWLEDGEABLE OF THE WORK TO BE PERFORMED AND THAT HE IS PROPERLY LICENSED TO DO THIS WORK IN THE JURISDICTION IN WHICH THE WORK IS TO BE PERFORMED.
4. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK AND SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION. ALL STRUCTURES ARE DESIGNED TO BE STABLE AND SELF-SUPPORTING AT THE COMPLETION OF CONSTRUCTION. THIS DRAWING DOES NOT INDICATE THE METHOD OF CONSTRUCTION. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO DETERMINE THE ERECTION PROCEDURES, METHODS, MEANS, TECHNIQUES, AND SEQUENCES TO ENSURE THE STABILITY AND SAFETY OF THE STRUCTURE AND ITS COMPONENT PARTS, AND THE ADEQUACY OF TEMPORARY OR INCOMPLETE CONNECTIONS DURING CONSTRUCTION. THIS INCLUDES, BUT IS NOT LIMITED TO, THE ADDITION OF WHATEVER TEMPORARY BRACING THAT MAY BE NECESSARY AND ENGINEERING ASSESSMENT OF CONSTRUCTION STRESSES WITH INSTALLATION MAXIMUM WIND SPEED AND/OR TEMPORARY BRACING AND SHORING. SUCH MATERIAL IS NOT INDICATED ON THE DRAWINGS AND, IF PROVIDED, SHALL BE REMOVED, AS CONDITIONS PERMIT AND REMAIN THE PROPERTY OF THE CONTRACTOR.
5. ANY EXISTING ATTACHMENTS AND/OR PROJECTIONS ON THE STRUCTURE THAT MAY INTERFERE WITH THE INSTALLATION OF THE MODIFICATION SYSTEM WILL HAVE TO BE REMOVED AND RELOCATED, REPLACED, OR RE-INSTALLED AS REQUIRED AFTER THE MODIFICATION IS SUCCESSFULLY COMPLETED. THE CONTRACTOR SHALL IDENTIFY AND COORDINATE THESE ITEMS PRIOR TO CONSTRUCTION WITH OWNER, TESTING AGENCY, AND EOR.
6. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR INITIATING, MAINTAINING, AND SUPERVISING ALL SAFETY PROGRAMS AND PRECAUTIONS IN CONNECTION WITH THE WORK.
7. CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO PREVENT DAMAGE TO EXISTING STRUCTURES, EQUIPMENT AND UTILITIES. ANY DAMAGE TO EXISTING STRUCTURES, EQUIPMENT, AND UTILITIES AS A RESULT OF THE CONTRACTOR'S WORK OR FROM DAMAGE DUE TO OTHER CAUSES SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE TO THE SATISFACTION OF THE OWNER.
8. WORK SHALL BE PERFORMED DURING CALM DRY DAYS (WINDS LESS THAN 30-MPH) IN ACCORDANCE WITH OPERATIONAL WIND CONDITIONS PER TIA-322.
9. THE MOUNTING SYSTEM SHALL NOT BE USED AS A TIE OFF POINT.
10. THE STRUCTURAL ANALYSIS ASSUMES THAT ALL STRUCTURAL COMPONENTS ARE IN BRAND-NEW CONDITION, FREE FROM FAULTS AND DEFECTS AND IN CONFORMANCE WITH THE CONTRACT DOCUMENTS. NO ALLOWANCE WAS MADE FOR ANY DAMAGED, MISSING, OR RUSTED MEMBERS. IF ANY OF THESE CONDITIONS ARE DISCOVERED, THE CONTRACTOR SHALL BRING THEM TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE. ANY AND ALL SUBSTITUTIONS MUST BE PROPERLY APPROVED AND AUTHORIZED IN WRITING BY OWNER AND EOR PRIOR TO INSTALLATION. THE CONTRACTOR SHALL FURNISH SATISFACTORY EVIDENCE AS TO THE KIND AND QUALITY OF MATERIALS AND EQUIPMENT BEING SUBSTITUTED.
11. IF MATERIALS, QUANTITIES, STRENGTHS, OR SIZES INDICATED BY THE DRAWINGS OR SPECIFICATIONS ARE NOT IN AGREEMENT WITH THESE NOTES, THE BETTER QUALITY AND/OR GREATER QUANTITY, STRENGTH, OR SIZE INDICATED, SPECIFIED, OR NOTED SHALL BE PROVIDED.
12. OBSERVATION VISITS TO THE SITE BY OWNER AND/OR THE EOR SHALL NOT INCLUDE INSPECTIONS OF THE PROTECTIVE MEASURES OR THE CONSTRUCTION PROCEDURES.
13. ANY SUPPORT SERVICES PERFORMED BY THE EOR DURING CONSTRUCTION ARE SOLELY FOR THE PURPOSE OF ASSISTING IN QUALITY CONTROL AND IN ACHIEVING GENERAL PERFORMANCE WITH CONTRACT DOCUMENTS. THEY DO NOT GUARANTEE CONTRACTORS PERFORMANCE AND SHALL NOT BE CONSTRUED AS SUPERVISION OF CONSTRUCTION.
14. THE CLIMBING FACILITIES, SAFETY CLIMB, AND ALL PARTS THEREOF SHALL NOT BE IMPEDED, MODIFIED, OR ALTERED WITHOUT THE APPROVAL OF THE EOR.
15. AFTER THE CONTRACTOR HAS SUCCESSFULLY COMPLETED THE INSTALLATION OF THE MODIFICATION SYSTEM AND THE WORK HAS BEEN ACCEPTED BY THE OWNER, THE OWNER WILL BE RESPONSIBLE FOR THE LONG TERM/PERPETUAL INSPECTION AND MAINTENANCE OF THE STRUCTURE AND MODIFICATION SYSTEM.
16. DO NOT SCALE DRAWINGS.
17. THE MOUNTING SYSTEM SHALL NOT BE USED FOR RIGGING PURPOSES. IF RIGGING TO THE MOUNT IS REQUIRED, ALL RIGGING PLANS SHALL ADHERE TO ANSI/ASSE A10.48 (LATEST EDITION), INCLUDING THE REQUIRED INVOLVEMENT OF A QUALIFIED ENGINEER FOR CLASS IV CONSTRUCTION TO CERTIFY THE SUPPORTING STRUCTURE(S) IN ACCORDANCE WITH THE ANSI/TIA-322 (LATEST EDITION).
18. ALL MANUFACTURER'S HARDWARE ASSEMBLY INSTRUCTIONS SHALL BE FOLLOWED, UNO. CONFLICTING NOTES SHALL BE BROUGHT TO THE ATTENTION OF THE EOR.
19. IF REMOVAL OF EXISTING MODIFICATIONS IS REQUIRED PER THE MODIFICATION SCOPE, THE GC SHALL CLEAN AND COLD GALVANIZE ANY EXISTING EMPTY BOLT HOLES, UNO. IF ADDITIONAL UNEXPECTED, OVERSIZED, OR SLOTTED HOLES ARE FOUND, THE GC SHALL CONTACT THE EOR FOR GUIDANCE PRIOR TO PROCEEDING WITH THE MODIFICATION.

STRUCTURAL STEEL:

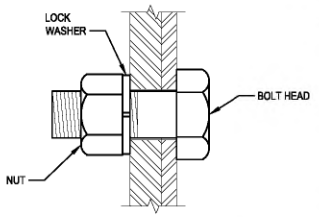
1. STRUCTURAL STEEL MATERIALS, FABRICATION, DETAILING, AND WORKMANSHIP SHALL CONFORM TO THE LATEST ADDITION OF THE FOLLOWING REFERENCE STANDARDS:
   A. BY THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC):
      "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS"
      "SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM HIGH STRENGTH BOLTS" AS APPROVED BY THE RESEARCH COUNCIL ON STRUCTURAL CONNECTIONS
      "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES"
   B. BY THE AMERICAN WELDING SOCIETY (AWS):
      "STRUCTURAL WELDING CODE- STEEL D1.1"
      "STANDARD SYMBOLS FOR WELDING, BRAZING, AND NON-DESTRUCTIVE EXAMINATION"
2. NEW STEEL (UNLESS NOTED OTHERWISE) SHALL CONFORM TO THE REQUIREMENTS OF THE ASTM STANDARD SPECIFICATION FOR STRUCTURAL STEEL NOTED BELOW:
   W - ASTM A992 (50 KSI YIELD POINT MATERIAL)
   HSS RECTANGULAR - ASTM A500 GR. B (46 KSI YIELD POINT MATERIAL)
   HSS ROUND - ASTM A500 GR. B (42 KSI YIELD POINT MATERIAL)
   PIPE - ASTM A53 GR. B (35 KSI YIELD POINT MATERIAL)
   C, MC, L, PLATES, BARS & ALL OTHER STEEL - ASTM A36 (36KSI YIELD POINT MATERIAL)
   BOLTS - ASTM A325
   U-BOLTS - ASTM A307 GRADE A, OR SAE J429 GRADE 2
   THREADED RODS - ASTM A36
   NUTS - ASTM A563 GRADE DH
   WASHERS - ASTM F436 TYPE 1
3. ALL NEW STEEL SHALL BE HOT-DIP GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH ASTM A123, ASTM 153/A153M, OR ASTM A653 G90.
4. ALL BOLTS, U-BOLTS, AND THREADED RODS SHALL BE PROVIDED WITH LOCK-WASHERS, OR LOCK-NUTS, OR PAL-NUTS TORQUED TO THE SNUG-TIGHT CONDITION AS DEFINED BY AISC.
5. ALL HOLES, EITHER PUNCHED OR DRILLED, IN THE EXISTING STEEL MEMBERS SHALL BE 1/16 INCH LARGER THAN THE BOLT DIAMETER, UNLESS NOTED OTHERWISE. BURNING OF MEMBERS SHALL NOT BE PERMITTED. SLOTTED HOLES ARE NOT PERMITTED. THE MINIMUM BOLT SPACING SHALL BE 3 TIMES THE BOLT DIAMETER AND THE MINIMUM EDGE DISTANCE SHALL BE 1.5 TIMES THE BOLT DIAMETER UNLESS NOTED OTHERWISE. ALL BOLT HOLES SHALL BE PLACED AT AISC STANDARD GAGE DIMENSIONS, UNLESS NOTED OTHERWISE.
6. IF ANY EXISTING ASTM A325 BOLTS ARE REMOVED, THEY MUST BE REPLACED WITH NEW A325 BOLTS OR GREATER.
7. ALL EXISTING PAINTED OR GALVANIZED SURFACES DAMAGED DURING CONSTRUCTION SHALL BE WIRE BRUSHED CLEAN, REPAIRED BY COLD GALVANIZING BRUSH APPLIED PAINT (ZINGA OR EQUAL), AND REPAINTED TO MATCH THE EXISTING FINISH CONFORMING TO ASTM A780.
8. ALL PARTS ARE TO MARKED WITH ITEM NUMBERS USING 3/4" HIGH STEEL STENCILS.
9. SHOP SHALL ASSEMBLE AND VERIFY FIT AND GAPS BEFORE BREAKDOWN FOR GALVANIZING.
10. NO FIELD WELDING SHALL BE DONE TO THE EXISTING STRUCTURE WITHOUT THE PRIOR APPROVAL OF THE OWNER AND SUPERVISION BY THE INSPECTION/TESTING AGENCY.
11. ALL REQUIRED CUTS SHALL BE CUT WITHIN THE DIMENSIONS SHOWN ON THE DRAWINGS. NO CUTS SHALL EXTEND BEYOND THE OUTLINE OF THE DIMENSIONS SHOWN ON THE DRAWINGS. ALL CUT EDGES SHALL BE GROUND SMOOTH AND DE-BURRED. CONTRACTOR TO AVOID 90 DEGREE CORNERS. IT MAY BE NECESSARY TO DRILL STARTER HOLES AS REQUIRED TO MAKE THE CUT.
12. ALL JOINTS ARE BEARING TYPE CONNECTIONS, UNO. IF NO BOLT LENGTH IS GIVEN IN THE BILL OF MATERIALS, THE CONNECTION MAY INCLUDE THREADS IN THE SHEAR PLANE, AND THE GC IS RESPONSIBLE FOR SIZING THE LENGTH OF THE BOLT. IT IS NOT PERMITTED FOR THE BOLT END TO BE BELOW THE FACE OF THE NUT AFTER TIGHTENING IS COMPLETED.



ALLOWABLE COPING

BOLT SCHEDULE (IN)				
BOLT DIAMETER	STANDARD HOLE	SHORT SLOT	MIN EDGE DISTANCE	SPACING
1/2	9/16	9/16 x 11/16	7/8	1 1/2
5/8	11/16	11/16 x 7/8	1 1/8	1 7/8
3/4	13/16	13/16 x 1	1 1/4	2 1/4
7/8	15/16	15/16 x 1 1/8	1 1/2	2 5/8
1	1 1/16	1 1/16 x 1 5/16	1 3/4	3

WORKABLE GAGES (IN)	
LEG	GAGE
4	2 1/2
3 1/2	2
3	1 3/4
2 1/2	1 3/8
2	1 1/8



TYP BOLT ASSEMBLY

NOTE:

1. ALL DIMENSIONS REPRESENTED IN THE ABOVE TABLES ARE AISC MINIMUM REQUIREMENTS. CONTRACTOR SHALL VERIFY EXISTING CONDITIONS IN FIELD AND NOTIFY ENGINEER IF DISTANCES ARE LESS THAN THOSE PROVIDED.
2. THE DIMENSIONS PROVIDED ARE MINIMUM REQUIREMENTS. ACTUAL DIMENSIONS OF PROPOSED MEMBERS WITHIN THESE DRAWINGS MAY VARY FROM THE AISC MINIMUM REQUIREMENTS.
3. SHORT SLOT HOLES SHALL ONLY BE USED WHEN DEPICTED IN THE DRAWING.
4. MATCH EXISTING GAGES WHEN APPLICABLE, UNLESS MINIMUM EDGE DISTANCES ARE COMPROMISED.

REV	DATE	DESCRIPTION
1	9/15/21	NO CHANGE

STATE OF CONNECTICUT
JUSTIN T. KLINE
No. 30901
LICENSED
PROFESSIONAL ENGINEER
9-15-21

PAUL J. FORD & COMPANY
250 E Broad St, Ste 600- Columbus, OH 43215
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www.paulford.com

VERIZON WIRELESS

468186-VZW / NAUGATUCK CT RELO
PROSPECT, CONNECTICUT
MOUNT MODIFICATION DRAWINGS

PROJECT No:	22721-0344.002 8191
DRAWN BY:	RJM
DESIGNED BY:	JRM
CHECKED BY:	STP
DATE:	8/12/2021

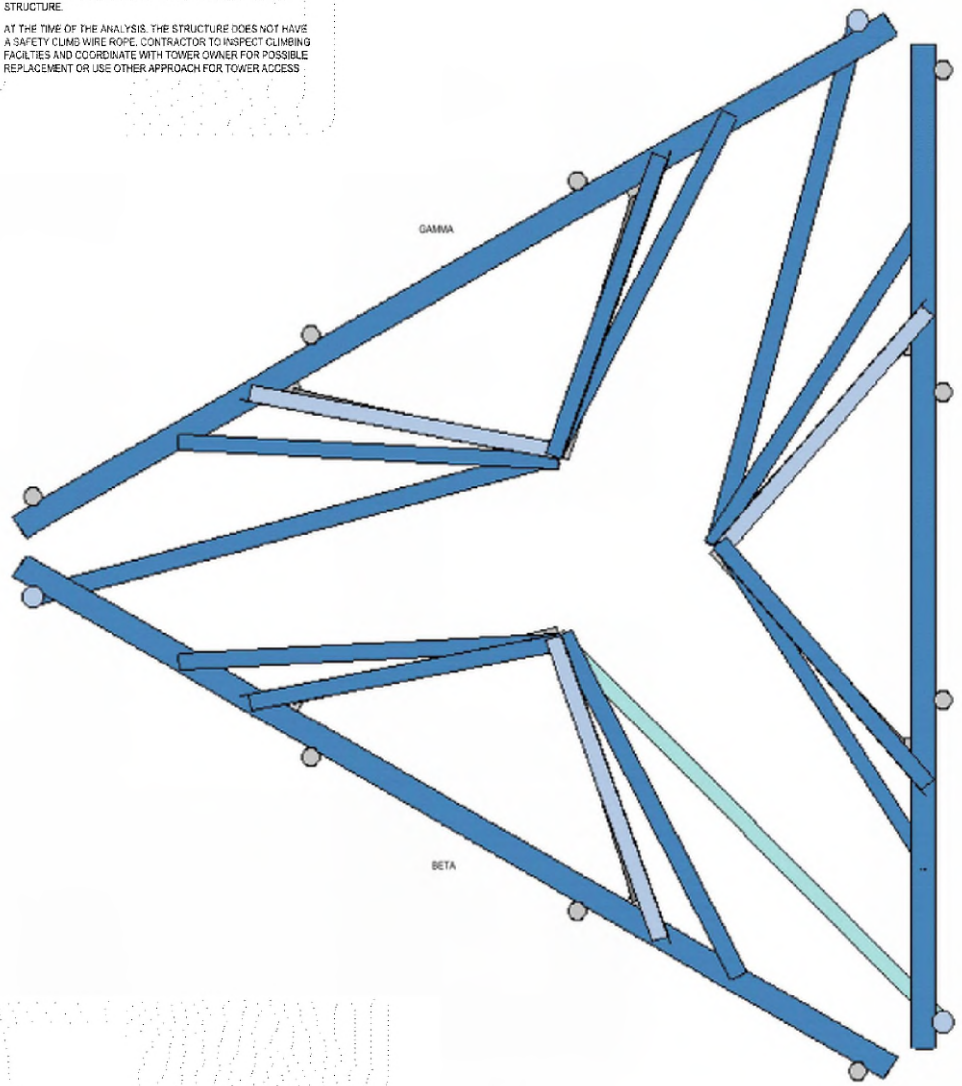
GENERAL NOTES

SGN-1

V2.0 22721-0344.002.DWG

NOTES:

1. INSTALL SHALL NOT CAUSE HARM TO THE STRUCTURE, CLIMBING FACILITY, SAFETY CLIMB OR ANY SYSTEM INSTALLED ON THE STRUCTURE.
2. AT THE TIME OF THE ANALYSIS, THE STRUCTURE DOES NOT HAVE A SAFETY CLIMB WIRE ROPE. CONTRACTOR TO INSPECT CLIMBING FACILITIES AND COORDINATE WITH TOWER OWNER FOR POSSIBLE REPLACEMENT OR USE OTHER APPROACH FOR TOWER ACCESS



LOCATION OF CLIMBING FACILITY

PICTURE OF CLIMBING FACILITY

REV	DATE	DESCRIPTION
1	9/15/21	NO CHANGE

STATE OF CONNECTICUT
JUSTIN T. KLINE
No. 30301
LICENSED
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VERIZON WIRELESS

468186-VZW / NAUGATUCK CT RELO
PROSPECT, CONNECTICUT
MOUNT MODIFICATION DRAWINGS

PROJECT No:	22721-0344.002.8191
DRAWN BY:	RJM
DESIGNED BY:	JRM
CHECKED BY:	STP
DATE:	8/12/2021

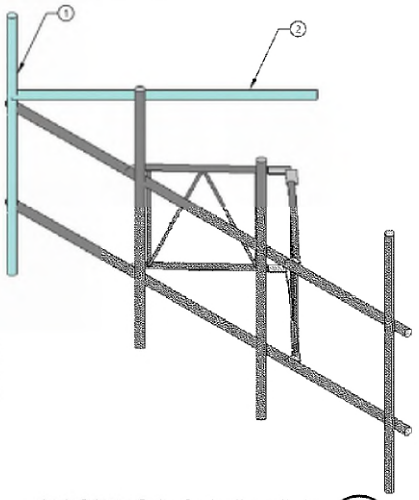
CLIMBING FACILITY DETAILS

SCF-1

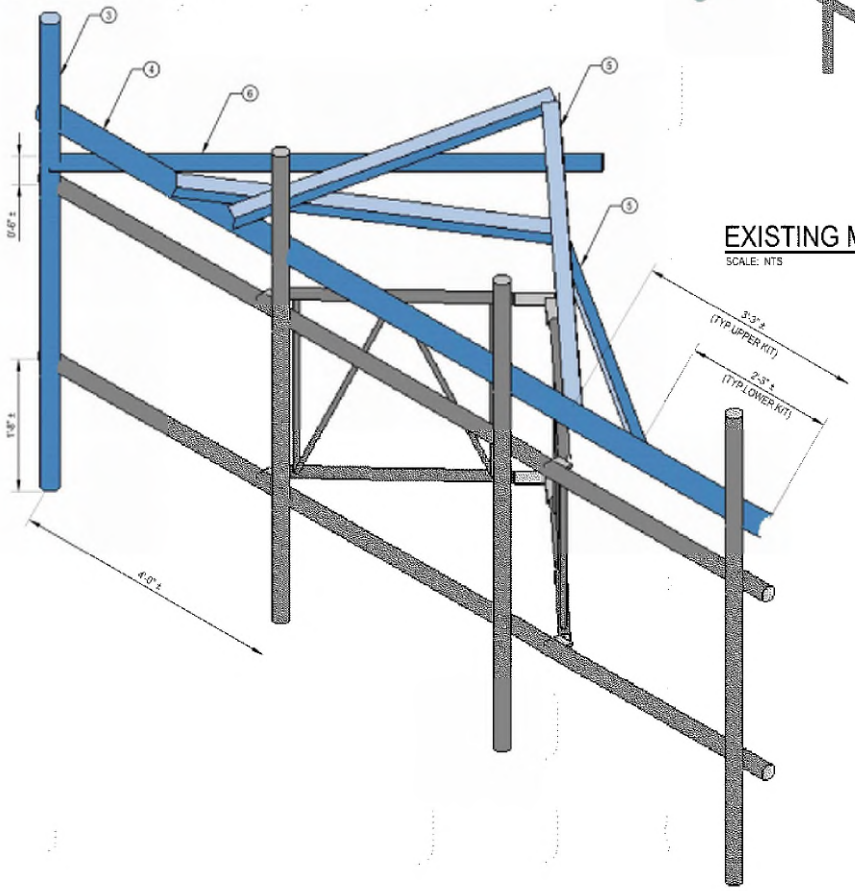
V2 0 22721.0344.002.DWG

NOTES:

1. PRIOR TO FABRICATION AND INSTALLATION, CONTRACTOR SHALL FIELD VERIFY ALL LENGTHS AND QUANTITIES GIVEN. LENGTH AND QUANTITIES PROVIDED ARE FOR QUOTING PURPOSE ONLY AND SHALL NOT BE USED FOR FABRICATION.
2. ALL MODIFICATIONS SHOWN ARE TYPICAL ALL SECTORS UNLESS NOTED OTHERWISE.
3. SOME MEMBERS NOT SHOWN FOR CLARITY.
4. RADIO AND/OR TME POSITIONS SHALL BE ADJUSTED VERTICALLY AS NEEDED IN ORDER TO ACHIEVE INSTALLATION OF MODIFICATION KITS AS SHOWN. EOR SHALL BE NOTIFIED IF EQUIPMENT NEEDS TO BE RELOCATED TO ANOTHER MOUNT PIPE.
5. MEMBERS IN BLUE COLOR ARE NEW REINFORCEMENTS AND MEMBERS IN AQUA COLOR (IF SHOWN) ARE REMOVED MEMBERS.
6. TIEBACK SHALL BE CONNECTED TO ADJACENT TOWER LEG.
7. NEW MOUNT PIPE TO BE FIELD TRIMMED TO 7'-0".



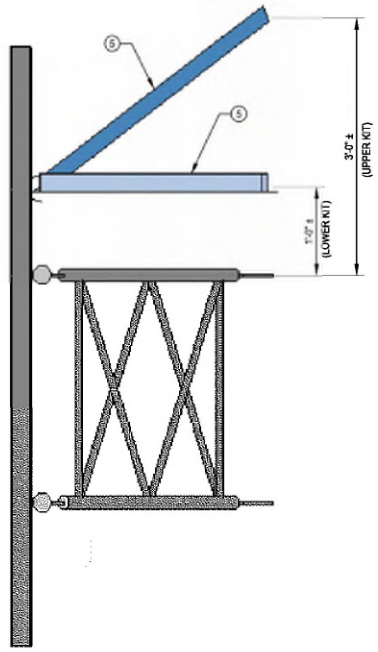
EXISTING MOUNT VIEW (1 / SS-1)
SCALE: NTS



ISOMETRIC MODIFIED MOUNT VIEW (2 / SS-1)
SCALE: NTS

MOUNT MODIFICATION SCHEDULE

	ELEVATION	MOUNT MODIFICATION DESCRIPTION	REFERENCE SHEETS
1	153'-9" ±	REMOVE EXISTING MOUNT PIPE & ASSOCIATED CONNECTION HARDWARE	SS-1
2	153'-9" ±	REMOVE EXISTING TIE BACK	SS-1
3	153'-9" ±	INSTALL NEW MOUNT PIPE USING NEW CROSSOVER PLATES	SS-1
4	153'-9" ±	INSTALL HORIZONTAL BRACING PIPES USING CROSSOVER PLATES AT EACH MOUNT PIPE LOCATION	SS-1
5	153'-9" ±	INSTALL V-BRACING KITS ON NEW HORIZONTAL BRACING PIPE	SS-1
6	153'-9" ±	INSTALL NEW TIE BACK KIT	SS-1



SIDE VIEW (3 / SS-1)
SCALE: NTS

REV	DATE	DESCRIPTION
1	9/15/21	NO CHANGE

STATE OF CONNECTICUT
AUSTIN T. KLINE
No. 30301
LICENSED
PROFESSIONAL ENGINEER
9-15-21

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MODIFICATION DETAILS

SS-1

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MOUNT MODIFICATION DRAWINGS

PROJECT No:	22721-0344.002.8191
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DESIGNED BY:	JRM
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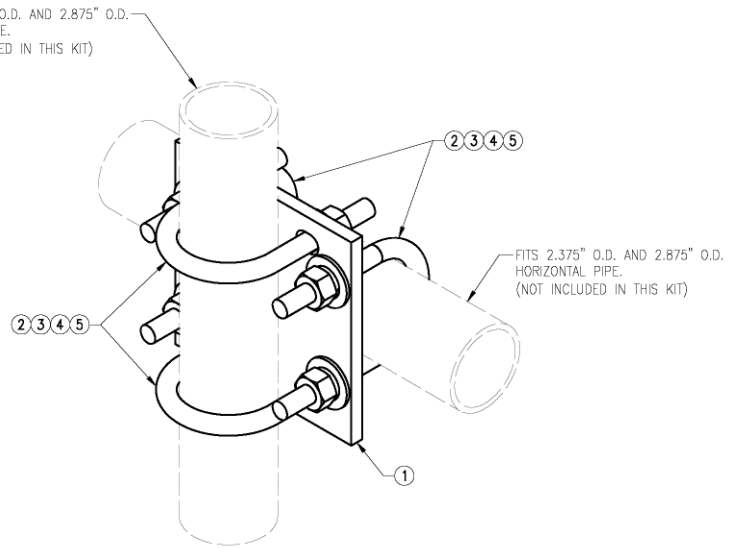
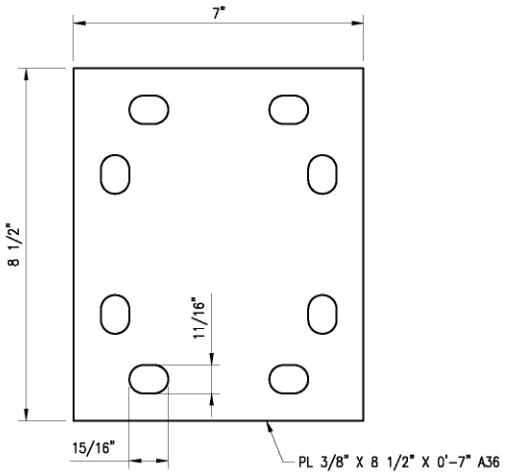
MOUNT PHOTOS

SS-2

V2.0 22721-0344.002.DWG





PL375-857

VZWSMART-MSK1 (CROSSOVER PLATE)					
ITEM NO.	QTY.	PART NO.	DESCRIPTION	SHEET #	WT
1	1	PL375-857	PL 3/8" X 8 1/2" X 0'-7" A36	MSK1-F1	6
2	4	MS02-625-300-500	RU-BOLT 5/8" X 3" I.W. X 5" I.L. A36 (OR EQUIV.)	RBC-1	5
3	8	FW-625	5/8" HDG USS FLAT WASHER	---	1
4	8	LW-625	5/8" HDG LOCK WASHER	---	0
5	8	NUT-625	5/8" HDG HEX NUT	---	1
				GALVANIZED WT	14

NOTES:
1. HOT-DIPPED GALVANIZED PER ASTM A123.

VzW SMART Tool© Vendor

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For Reference Only

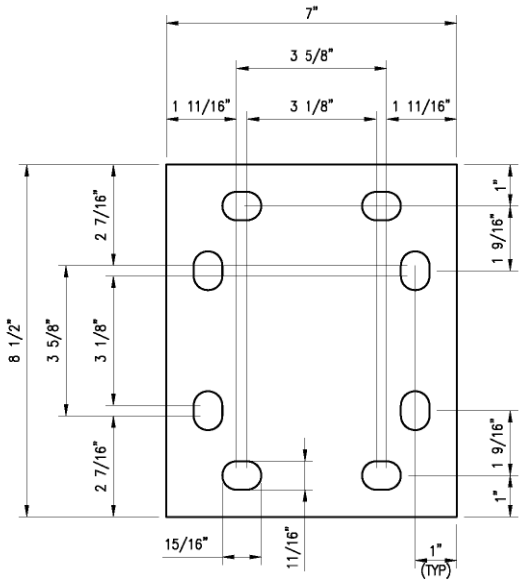
DRAWN BY: H.R | CHECKED BY: HMA

REV.	DESCRIPTION	BY	DATE
1	FIRST ISSUE	H.R	05/08/20

SHEET TITLE:
VZWSMART-MSK1
CROSSOVER PLATE

SHEET NUMBER: VZWSMART-MSK1

REV #: 0



PL375-857
PL 3/8" X 8 1/2" X 0'-7" A36
(6.42 LBS)

NOTES:
1. HOT-DIPPED GALVANIZED PER ASTM A123.

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DRAWN BY: H.R | CHECKED BY: HMA

REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	H.R	05/08/20

SHEET TITLE:

FABRICATION DETAILS

SHEET NUMBER: MSK1-F1

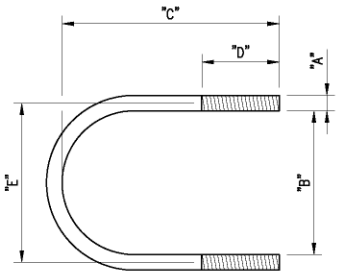
REV #: 0

STANDARD RU-BOLT CHART							
DESCRIPTION	(EQUIVALENT PART NO.)	"A"	"B"	"C"	"D"	"E"	"WGT"
3/8" RU-BOLT	MS02-375-8125-1625	3/8"	13/16"	1 5/8"	7/8"	1 3/16"	0.26
3/8" RU-BOLT	MS02-375-100-225	3/8"	1"	2 1/4"	1 1/4"	1 3/8"	0.30
3/8" RU-BOLT	MS02-375-125-225	3/8"	1 1/4"	2 1/4"	1 1/4"	1 5/8"	0.30
3/8" RU-BOLT	MS02-375-1125-18125	3/8"	1 1/8"	1 13/16"	1 1/4"	1 1/2"	0.27
3/8" RU-BOLT	MS02-375-150-250	3/8"	1 1/2"	2 1/2"	1 1/4"	1 7/8"	0.32
3/8" RU-BOLT	MS02-375-150-275	3/8"	1 1/2"	2 3/4"	1 5/8"	1 7/8"	0.34
3/8" RU-BOLT	MS02-375-150-300	3/8"	1 1/2"	3"	1 3/4"	1 7/8"	0.35
3/8" RU-BOLT	MS02-375-175-275	3/8"	1 3/4"	2 3/4"	1 1/8"	2 1/8"	0.34
3/8" RU-BOLT	MS02-375-200-2625	3/8"	2"	2 5/8"	1 1/4"	2 3/8"	0.34
3/8" RU-BOLT	MS02-375-200-125	3/8"	2"	3"	1-1/4"	2-3/8"	0.40
3/8" RU-BOLT	MS02-375-2125-300	3/8"	2 1/8"	3"	1 1/4"	2 1/2"	0.36
3/8" RU-BOLT	MS02-375-250-30625	3/8"	2 1/2"	3 1/16"	1 1/4"	2 7/8"	0.38
3/8" RU-BOLT	MS02-375-250-3125	3/8"	2 1/2"	3 1/8"	1 1/4"	2 7/8"	0.37
3/8" RU-BOLT	MS02-375-250-3625	3/8"	2 1/2"	3-5/8"	1 3/4"	2 7/8"	0.45
3/8" RU-BOLT	MS02-375-300-3625	3/8"	3"	3 5/8"	1 1/4"	3 3/8"	0.42
3/8" RU-BOLT	MS02-375-300-425	3/8"	3"	4 1/4"	2"	3 3/8"	0.50
3/8" RU-BOLT	MS02-375-300-6625	3/8"	3	6 5/8"	3	3 3/8"	0.53
3/8" RU-BOLT	MS02-375-350-4125	3/8"	3 1/2"	4 1/8"	1 1/4"	3 7/8"	0.46
3/8" RU-BOLT	MS02-375-350-475	3/8"	3 1/2"	4 3/4"	2"	3 7/8"	0.50
3/8" RU-BOLT	MS02-375-400-575	3/8"	4"	5 3/4"	2 1/2"	4 3/8"	0.60
1/2" RU-BOLT	MS02-500-75-350	1/2"	3/4"	3 1/2"	2 1/2"	1 1/4"	0.60
1/2" RU-BOLT	MS02-500-1563-350	1/2"	1 9/16"	3 1/2"	2"	2 1/16"	0.62
1/2" RU-BOLT	MS02-500-200-300	1/2"	2"	3"	1 1/4"	2 1/2"	0.55
1/2" RU-BOLT	MS02-500-200-375	1/2"	2"	3 3/4"	1 3/4"	2 1/2"	0.67
1/2" RU-BOLT	MS02-500-20625-500	1/2"	2 1/16"	5	3"	2 9/16"	0.80
1/2" RU-BOLT	MS02-500-225-450	1/2"	2 1/4"	4 1/2"	2 1/2"	2 3/4"	0.76
1/2" RU-BOLT	MS02-500-2438-3625	1/2"	2 7/16"	3 5/8"	1 3/4"	2 15/16"	0.67
1/2" RU-BOLT	MS02-500-2438-5375	1/2"	2 7/16"	5 3/8"	3"	2 15/16"	0.86
1/2" RU-BOLT	MS02-500-250-400	1/2"	2 1/2"	4"	2 1/2"	3"	0.70
1/2" RU-BOLT	MS02-500-250-450	1/2"	2 1/2"	4 1/2"	2 1/2"	3"	0.76
1/2" RU-BOLT	MS02-500-29375-575	1/2"	2 15/16"	5 3/4"	3"	3 7/16"	0.92
1/2" RU-BOLT	MS02-500-300-4125	1/2"	3"	4 1/8"	2"	3 1/2"	0.74
1/2" RU-BOLT	MS02-500-300-450	1/2"	3"	4 1/2"	1 5/8"	3 1/2"	0.73
1/2" RU-BOLT	MS02-500-300-500	1/2"	3"	5"	2 1/2"	3 1/2"	0.84
1/2" RU-BOLT	MS02-500-350-500	1/2"	3 1/2"	5"	1 1/2"	4"	0.78
1/2" RU-BOLT	MS02-500-350-850	1/2"	3 1/2"	8 1/2"	3"	4"	1.09
1/2" RU-BOLT	MS02-500-3625-550	1/2"	3 5/8"	5 1/2"	3"	4 1/8"	1.10
1/2" RU-BOLT	MS02-500-3625-600	1/2"	3 5/8"	6"	2 1/2"	4 1/8"	0.97
1/2" RU-BOLT	MS02-500-3563-450	1/2"	3 9/16"	4 1/2"	2"	4 1/16"	0.80
1/2" RU-BOLT	MS02-500-3563-650	1/2"	3 9/16"	6 1/2"	3"	4 1/16"	1.02
1/2" RU-BOLT	MS02-500-400-550-B	1/2"	4"	5 1/2"	1 1/2"	4 1/2"	0.84
1/2" RU-BOLT	MS02-500-400-550	1/2"	4"	5 1/2"	2"	4 1/2"	0.92
1/2" RU-BOLT	MS02-500-4063-700	1/2"	4 1/16"	7"	3"	4 9/16"	1.09
1/2" RU-BOLT	MS02-500-4125-600	1/2"	4 1/8"	6"	2 1/2"	4 5/8"	0.98
1/2" RU-BOLT	MS02-500-450-600	1/2"	4 1/2"	6"	1 1/2"	5"	0.89
1/2" RU-BOLT	MS02-500-4625-700	1/2"	4 5/8"	7"	2 1/2"	5 1/8"	1.11
1/2" RU-BOLT	MS02-500-4563-750	1/2"	4 9/16"	7 1/2"	3"	5 1/16"	1.16
1/2" RU-BOLT	MS02-500-5625-725	1/2"	5 5/8"	7 1/4"	2"	6 1/8"	1.04
1/2" RU-BOLT	MS02-500-4563-575	1/2"	4 9/16"	5 3/4"	2"	5 1/16"	0.97
1/2" RU-BOLT	MS02-500-5563-700	1/2"	5 9/16"	7"	2"	6 1/16"	1.14
1/2" RU-BOLT	MS02-500-575-750	1/2"	5 3/4"	7 1/2"	2 1/2"	6 1/4"	1.22
1/2" RU-BOLT	MS02-500-6625-800	1/2"	6 5/8"	8"	3"	7 1/8"	1.28
1/2" RU-BOLT	MS02-500-675-850	1/2"	6 3/4"	8 1/2"	2 1/2"	7 1/4"	1.17
1/2" RU-BOLT	MS02-500-675-8375	1/2"	6 3/4"	8 3/8"	2"	7 1/4"	1.24
1/2" RU-BOLT	MS02-500-8750-1025	1/2"	8 3/4"	10 1/4"	3"	9 1/4"	1.60
1/2" RU-BOLT	MS02-500-875-10375	1/2"	8 3/4"	10 3/8"	2"	9 1/4"	1.34
1/2" RU-BOLT	MS02-500-10875-1300	1/2"	10 7/8"	1'-1"	3"	11 3/8"	1.98

NOTES:

IF EQUIVALENT U-BOLTS ARE USED, THE FOLLOWING SPECIFICATIONS ARE REQUIRED:

1. THE MATERIAL SHALL BE HOT ROLLED STEEL WITH A MINIMUM YIELD STRENGTH OF 36 KSI.
2. ALL U-BOLTS SHALL BE HOT DIP GALVANIZED PER ASTM A153-78.
3. TOLERANCE: FOR "C" AND "D" +/- 1/16", "B" AND "E" + 1/16", "A" +/- 1/32".



STANDARD RU-BOLT CHART							
DESCRIPTION	(EQUIVALENT PART NO.)	"A"	"B"	"C"	"D"	"E"	"WGT"
5/8" RU-BOLT	MS02-625-200-375	5/8"	2"	3 3/4"	2"	2 5/8"	1.15
5/8" RU-BOLT	MS02-625-2063-500	5/8"	2 1/16"	5"	3"	2 11/16"	1.32
5/8" RU-BOLT	MS02-625-2438-5375	5/8"	2 7/16"	5 3/8"	3"	3 1/16"	1.40
5/8" RU-BOLT	MS02-625-250-400	5/8"	2 1/2"	4"	2 1/2"	3 1/8"	1.17
5/8" RU-BOLT	MS02-625-2625-450	5/8"	2 5/8"	4 1/2"	2"	3 1/4"	1.20
5/8" RU-BOLT	MS02-625-2563-550	5/8"	2 9/16"	5 1/2"	3"	3 3/16"	1.43
5/8" RU-BOLT	MS02-625-2938-5875	5/8"	2 15/16"	5 7/8"	3"	3 9/16"	1.52
5/8" RU-BOLT	MS02-625-300-400	5/8"	3"	4"	2"	3 5/8"	1.20
5/8" RU-BOLT	MS02-625-300-500	5/8"	3"	5"	3"	3 5/8"	1.37
5/8" RU-BOLT	MS02-625-3063-600	5/8"	3 1/16"	6"	3"	3 11/16"	1.54
5/8" RU-BOLT	MS02-625-3625-600	5/8"	3 5/8"	6"	3"	4 1/4"	1.45
5/8" RU-BOLT	MS02-625-3563-650	5/8"	3 9/16"	6 1/2"	3"	4 3/16"	1.65
5/8" RU-BOLT	MS02-625-4063-700	5/8"	4 1/16"	7"	3"	4 11/16"	1.77
5/8" RU-BOLT	MS02-625-4125-600	5/8"	4 1/8"	6"	3"	4 3/4"	1.60
5/8" RU-BOLT	MS02-625-4625-700	5/8"	4 5/8"	7"	3"	5 1/4"	1.60
5/8" RU-BOLT	MS02-625-4563-750	5/8"	4 9/16"	7 1/2"	3"	5 3/16"	1.87
5/8" RU-BOLT	MS02-625-4813-775	5/8"	4 13/16"	7 3/4"	3"	5 7/16"	1.93
5/8" RU-BOLT	MS02-625-500-700	5/8"	5"	7"	3"	5 5/8"	1.96
5/8" RU-BOLT	MS02-625-5063-800	5/8"	5 1/16"	8"	3"	5 11/16"	1.99
5/8" RU-BOLT	MS02-625-5625-85625	5/8"	5 5/8"	8 9/16"	3"	6 1/4"	2.11
5/8" RU-BOLT	MS02-625-575-800	5/8"	5 3/4"	8"	3"	6 3/8"	2.02
5/8" RU-BOLT	MS02-625-6688-9625	5/8"	6 11/16"	9 5/8"	3"	7 5/16"	2.35
5/8" RU-BOLT	MS02-625-6750-900	5/8"	6 3/4"	9"	3"	7 3/8"	2.24
5/8" RU-BOLT	MS02-625-8688-11625	5/8"	8 11/16"	11 5/8"	3"	9 3/16"	2.80
5/8" RU-BOLT	MS02-625-875-1100	5/8"	8 3/4"	11"	3"	9 3/8"	2.70
5/8" RU-BOLT	MS02-625-10688-1375	5/8"	10 13/16	13 3/4"	3"	11 7/16"	3.27
5/8" RU-BOLT	MS02-625-12875-1575	5/8"	12 7/8"	15 3/4"	3"	13 1/2"	3.72
5/8" RU-BOLT	MS02-625-14125-1700	5/8"	14 1/8"	17"	3"	14 3/4"	4.01

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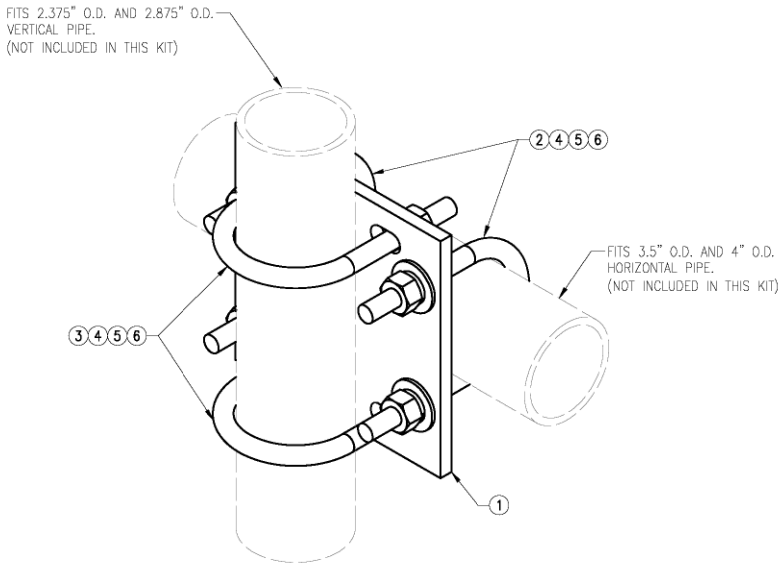
REV.	DESCRIPTION	BY	DATE
1	FIRST ISSUE	H.R	05/08/20

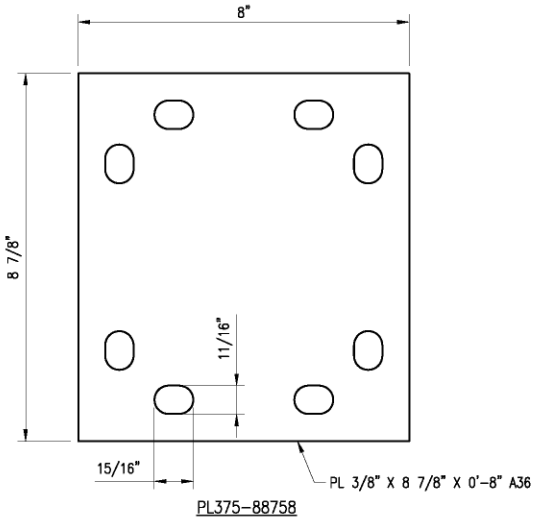
SHEET TITLE:

RU-BOLT CHART

SHEET NUMBER: RBC-1

REV #: 0





PL375-88758

VZWSMART-MSK2 (CROSSOVER PLATE)					
ITEM NO.	QTY.	PART NO.	DESCRIPTION	SHEET #	WT
1	1	PL375-88758	PL 3/8" X 8 3/4" X 0'-8" A36	MSK2-F1	8
2	2	MS02-625-4125-600	RU-BOLT 5/8" X 4 1/8" I.W. X 6" I.L. A36 (OR EQUIV.)	RBC-1	3
3	2	MS02-625-300-500	RU-BOLT 5/8" X 3" I.W. X 5" I.L. A36 (OR EQUIV.)	RBC-1	3
4	8	FW-625	5/8" HDG USS FLAT WASHER	---	1
5	8	LW-625	5/8" HDG LOCK WASHER	---	0
6	8	NUT-625	5/8" HDG HEX NUT	---	1
				GALVANIZED WT	15

NOTES:
1. HOT-DIPPED GALVANIZED PER ASTM A123.

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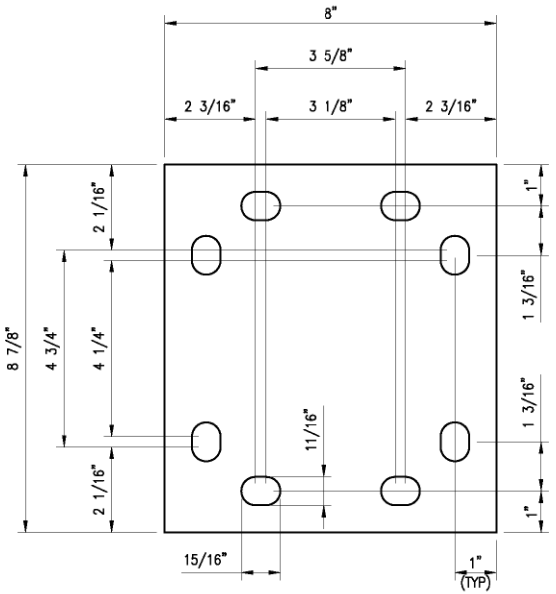
REV.	DESCRIPTION	BY	DATE
1	FIRST ISSUE	H.R	05/08/20

SHEET TITLE:
VZWSMART-MSK2
CROSSOVER PLATE

SHEET NUMBER: VZWSMART-MSK2

REV #: 0



PL375-88758
PL 3/8" X 8 7/8" X 0'-8" A36
(7.65 LBS)

NOTES:
1. HOT-DIPPED GALVANIZED PER ASTM A123.

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DRAWN BY: H.R	CHECKED BY: HMA

REV.	DESCRIPTION	BY	DATE
1	FIRST ISSUE	H.R	05/08/20

SHEET TITLE:

FABRICATION DETAILS

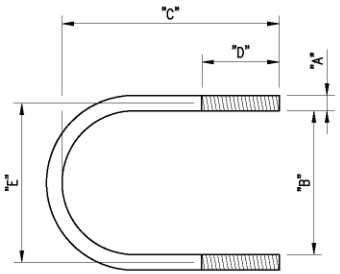
SHEET NUMBER:	REV #:
MSK2-F1	0

STANDARD RU-BOLT CHART							
DESCRIPTION	(EQUIVALENT PART NO.)	"A"	"B"	"C"	"D"	"E"	"WGT"
3/8" RU-BOLT	MS02-375-8125-1625	3/8"	13/16"	1 5/8"	7/8"	1 3/16"	0.26
3/8" RU-BOLT	MS02-375-100-225	3/8"	1"	2 1/4"	1 1/4"	1 3/8"	0.30
3/8" RU-BOLT	MS02-375-125-225	3/8"	1 1/4"	2 1/4"	1 1/4"	1 5/8"	0.30
3/8" RU-BOLT	MS02-375-1125-18125	3/8"	1 1/8"	1 13/16"	1 1/4"	1 1/2"	0.27
3/8" RU-BOLT	MS02-375-150-250	3/8"	1 1/2"	2 1/2"	1 1/4"	1 7/8"	0.32
3/8" RU-BOLT	MS02-375-150-275	3/8"	1 1/2"	2 3/4"	1 5/8"	1 7/8"	0.34
3/8" RU-BOLT	MS02-375-150-300	3/8"	1 1/2"	3"	1 3/4"	1 7/8"	0.35
3/8" RU-BOLT	MS02-375-175-275	3/8"	1 3/4"	2 3/4"	1 1/8"	2 1/8"	0.34
3/8" RU-BOLT	MS02-375-200-2625	3/8"	2"	2 5/8"	1 1/4"	2 3/8"	0.34
3/8" RU-BOLT	MS02-375-200-125	3/8"	2"	3"	1-1/4"	2-3/8"	0.40
3/8" RU-BOLT	MS02-375-2125-300	3/8"	2 1/8"	3"	1 1/4"	2 1/2"	0.36
3/8" RU-BOLT	MS02-375-250-30625	3/8"	2 1/2"	3 1/16"	1 1/4"	2 7/8"	0.38
3/8" RU-BOLT	MS02-375-250-3125	3/8"	2 1/2"	3 1/8"	1 1/4"	2 7/8"	0.37
3/8" RU-BOLT	MS02-375-250-3625	3/8"	2 1/2"	3-5/8"	1 3/4"	2 7/8"	0.45
3/8" RU-BOLT	MS02-375-300-3625	3/8"	3"	3 5/8"	1 1/4"	3 3/8"	0.42
3/8" RU-BOLT	MS02-375-300-425	3/8"	3"	4 1/4"	2"	3 3/8"	0.50
3/8" RU-BOLT	MS02-375-300-6625	3/8"	3	6 5/8"	3	3 3/8"	0.53
3/8" RU-BOLT	MS02-375-350-4125	3/8"	3 1/2"	4 1/8"	1 1/4"	3 7/8"	0.46
3/8" RU-BOLT	MS02-375-350-475	3/8"	3 1/2"	4 3/4"	2"	3 7/8"	0.50
3/8" RU-BOLT	MS02-375-400-575	3/8"	4"	5 3/4"	2 1/2"	4 3/8"	0.60
1/2" RU-BOLT	MS02-500-75-350	1/2"	3/4"	3 1/2"	2 1/2"	1 1/4"	0.60
1/2" RU-BOLT	MS02-500-1563-350	1/2"	1 9/16"	3 1/2"	2"	2 1/16"	0.62
1/2" RU-BOLT	MS02-500-200-300	1/2"	2"	3"	1 1/4"	2 1/2"	0.55
1/2" RU-BOLT	MS02-500-200-375	1/2"	2"	3 3/4"	1 3/4"	2 1/2"	0.67
1/2" RU-BOLT	MS02-500-20625-500	1/2"	2 1/16"	5	3"	2 9/16"	0.80
1/2" RU-BOLT	MS02-500-225-450	1/2"	2 1/4"	4 1/2"	2 1/2"	2 3/4"	0.76
1/2" RU-BOLT	MS02-500-2438-3625	1/2"	2 7/16"	3 5/8"	1 3/4"	2 15/16"	0.67
1/2" RU-BOLT	MS02-500-2438-5375	1/2"	2 7/16"	5 3/8"	3"	2 15/16"	0.86
1/2" RU-BOLT	MS02-500-250-400	1/2"	2 1/2"	4"	2 1/2"	3"	0.70
1/2" RU-BOLT	MS02-500-250-450	1/2"	2 1/2"	4 1/2"	2 1/2"	3"	0.76
1/2" RU-BOLT	MS02-500-29375-575	1/2"	2 15/16"	5 3/4"	3"	3 7/16"	0.92
1/2" RU-BOLT	MS02-500-300-4125	1/2"	3"	4 1/8"	2"	3 1/2"	0.74
1/2" RU-BOLT	MS02-500-300-450	1/2"	3"	4 1/2"	1 5/8"	3 1/2"	0.73
1/2" RU-BOLT	MS02-500-300-500	1/2"	3"	5"	2 1/2"	3 1/2"	0.84
1/2" RU-BOLT	MS02-500-350-500	1/2"	3 1/2"	5"	1 1/2"	4"	0.78
1/2" RU-BOLT	MS02-500-350-850	1/2"	3 1/2"	8 1/2"	3"	4"	1.09
1/2" RU-BOLT	MS02-500-3625-550	1/2"	3 5/8"	5 1/2"	3"	4 1/8"	1.10
1/2" RU-BOLT	MS02-500-3625-600	1/2"	3 5/8"	6"	2 1/2"	4 1/8"	0.97
1/2" RU-BOLT	MS02-500-3563-450	1/2"	3 9/16"	4 1/2"	2"	4 1/16"	0.80
1/2" RU-BOLT	MS02-500-3563-650	1/2"	3 9/16"	6 1/2"	3"	4 1/16"	1.02
1/2" RU-BOLT	MS02-500-400-550-B	1/2"	4"	5 1/2"	1 1/2"	4 1/2"	0.84
1/2" RU-BOLT	MS02-500-400-550	1/2"	4"	5 1/2"	2"	4 1/2"	0.92
1/2" RU-BOLT	MS02-500-4063-700	1/2"	4 1/16"	7"	3"	4 9/16"	1.09
1/2" RU-BOLT	MS02-500-4125-600	1/2"	4 1/8"	6"	2 1/2"	4 5/8"	0.98
1/2" RU-BOLT	MS02-500-450-600	1/2"	4 1/2"	6"	1 1/2"	5"	0.89
1/2" RU-BOLT	MS02-500-4625-700	1/2"	4 5/8"	7"	2 1/2"	5 1/8"	1.11
1/2" RU-BOLT	MS02-500-4563-750	1/2"	4 9/16"	7 1/2"	3"	5 1/16"	1.16
1/2" RU-BOLT	MS02-500-5625-725	1/2"	5 5/8"	7 1/4"	2"	6 1/8"	1.04
1/2" RU-BOLT	MS02-500-4563-575	1/2"	4 9/16"	5 3/4"	2"	5 1/16"	0.97
1/2" RU-BOLT	MS02-500-5563-700	1/2"	5 9/16"	7"	2"	6 1/16"	1.14
1/2" RU-BOLT	MS02-500-575-750	1/2"	5 3/4"	7 1/2"	2 1/2"	6 1/4"	1.22
1/2" RU-BOLT	MS02-500-6625-800	1/2"	6 5/8"	8"	3"	7 1/8"	1.28
1/2" RU-BOLT	MS02-500-675-850	1/2"	6 3/4"	8 1/2"	2 1/2"	7 1/4"	1.17
1/2" RU-BOLT	MS02-500-675-8375	1/2"	6 3/4"	8 3/8"	2"	7 1/4"	1.24
1/2" RU-BOLT	MS02-500-8750-1025	1/2"	8 3/4"	10 1/4"	3"	9 1/4"	1.60
1/2" RU-BOLT	MS02-500-875-10375	1/2"	8 3/4"	10 3/8"	2"	9 1/4"	1.34
1/2" RU-BOLT	MS02-500-10875-1300	1/2"	10 7/8"	1'-1"	3"	11 3/8"	1.98

NOTES:

IF EQUIVALENT U-BOLTS ARE USED, THE FOLLOWING SPECIFICATIONS ARE REQUIRED:

1. THE MATERIAL SHALL BE HOT ROLLED STEEL WITH A MINIMUM YIELD STRENGTH OF 36 KSI.
2. ALL U-BOLTS SHALL BE HOT DIP GALVANIZED PER ASTM A153-78.
3. TOLERANCE: FOR "C" AND "D" +/- 1/16", "B" AND "E" + 1/16", "A" +/- 1/32".



STANDARD RU-BOLT CHART							
DESCRIPTION	(EQUIVALENT PART NO.)	"A"	"B"	"C"	"D"	"E"	"WGT"
5/8" RU-BOLT	MS02-625-200-375	5/8"	2"	3 3/4"	2"	2 5/8"	1.15
5/8" RU-BOLT	MS02-625-2063-500	5/8"	2 1/16"	5"	3"	2 11/16"	1.32
5/8" RU-BOLT	MS02-625-2438-5375	5/8"	2 7/16"	5 3/8"	3"	3 1/16"	1.40
5/8" RU-BOLT	MS02-625-250-400	5/8"	2 1/2"	4"	2 1/2"	3 1/8"	1.17
5/8" RU-BOLT	MS02-625-2625-450	5/8"	2 5/8"	4 1/2"	2"	3 1/4"	1.20
5/8" RU-BOLT	MS02-625-2563-550	5/8"	2 9/16"	5 1/2"	3"	3 3/16"	1.43
5/8" RU-BOLT	MS02-625-2938-5875	5/8"	2 15/16"	5 7/8"	3"	3 9/16"	1.52
5/8" RU-BOLT	MS02-625-300-400	5/8"	3"	4"	2"	3 5/8"	1.20
5/8" RU-BOLT	MS02-625-300-500	5/8"	3"	5"	3"	3 5/8"	1.37
5/8" RU-BOLT	MS02-625-3063-600	5/8"	3 1/16"	6"	3"	3 11/16"	1.54
5/8" RU-BOLT	MS02-625-3625-600	5/8"	3 5/8"	6"	3"	4 1/4"	1.45
5/8" RU-BOLT	MS02-625-3563-650	5/8"	3 9/16"	6 1/2"	3"	4 3/16"	1.65
5/8" RU-BOLT	MS02-625-4063-700	5/8"	4 1/16"	7"	3"	4 11/16"	1.77
5/8" RU-BOLT	MS02-625-4125-600	5/8"	4 1/8"	6"	3"	4 3/4"	1.60
5/8" RU-BOLT	MS02-625-4625-700	5/8"	4 5/8"	7"	3"	5 1/4"	1.60
5/8" RU-BOLT	MS02-625-4563-750	5/8"	4 9/16"	7 1/2"	3"	5 3/16"	1.87
5/8" RU-BOLT	MS02-625-4813-775	5/8"	4 13/16"	7 3/4"	3"	5 7/16"	1.93
5/8" RU-BOLT	MS02-625-500-700	5/8"	5"	7"	3"	5 5/8"	1.96
5/8" RU-BOLT	MS02-625-5063-800	5/8"	5 1/16"	8"	3"	5 11/16"	1.99
5/8" RU-BOLT	MS02-625-5625-85625	5/8"	5 5/8"	8 9/16"	3"	6 1/4"	2.11
5/8" RU-BOLT	MS02-625-575-800	5/8"	5 3/4"	8"	3"	6 3/8"	2.02
5/8" RU-BOLT	MS02-625-6688-9625	5/8"	6 11/16"	9 5/8"	3"	7 5/16"	2.35
5/8" RU-BOLT	MS02-625-6750-900	5/8"	6 3/4"	9"	3"	7 3/8"	2.24
5/8" RU-BOLT	MS02-625-8688-11625	5/8"	8 11/16"	11 5/8"	3"	9 3/16"	2.80
5/8" RU-BOLT	MS02-625-875-1100	5/8"	8 3/4"	11"	3"	9 3/8"	2.70
5/8" RU-BOLT	MS02-625-10688-1375	5/8"	10 13/16	13 3/4"	3"	11 7/16"	3.27
5/8" RU-BOLT	MS02-625-12875-1575	5/8"	12 7/8"	15 3/4"	3"	13 1/2"	3.72
5/8" RU-BOLT	MS02-625-14125-1700	5/8"	14 1/8"	17"	3"	14 3/4"	4.01

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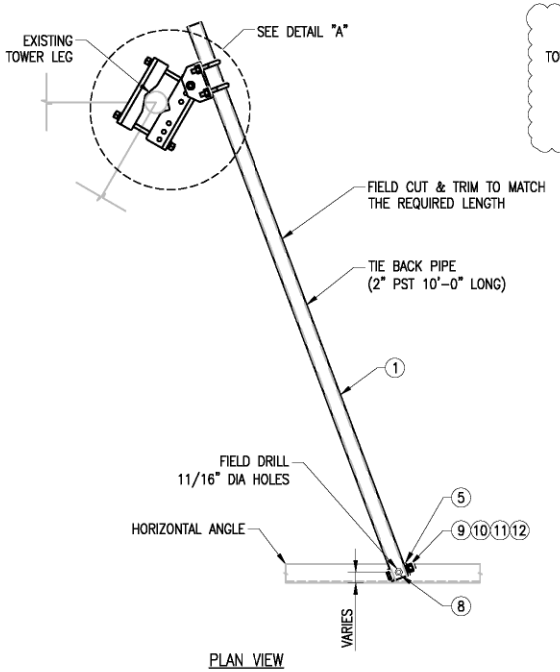
REV.	DESCRIPTION	BY	DATE
1	FIRST ISSUE	H.R	05/08/20

SHEET TITLE:

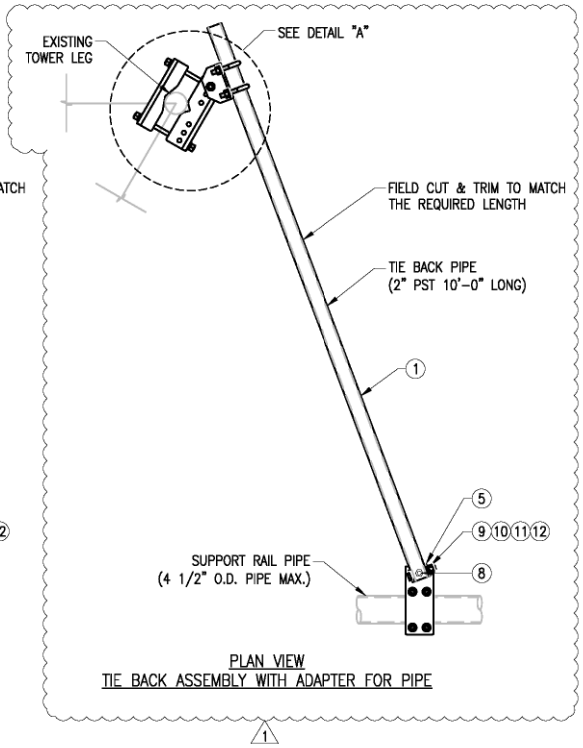
RU-BOLT CHART

SHEET NUMBER: RBC-1

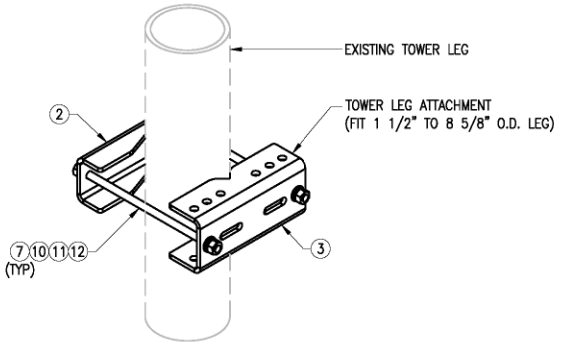
REV #: 0



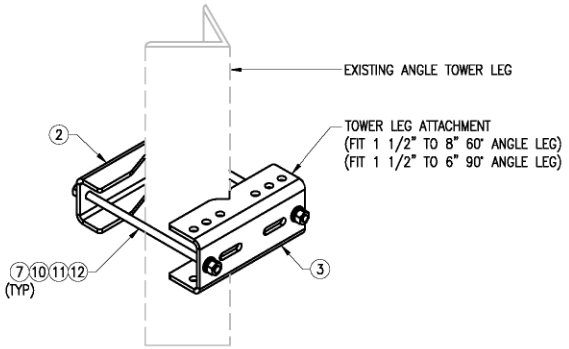
PLAN VIEW
TIE BACK ASSEMBLY



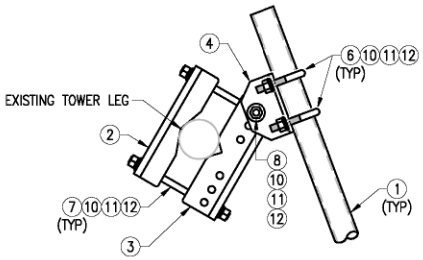
PLAN VIEW
TIE BACK ASSEMBLY WITH ADAPTER FOR PIPE



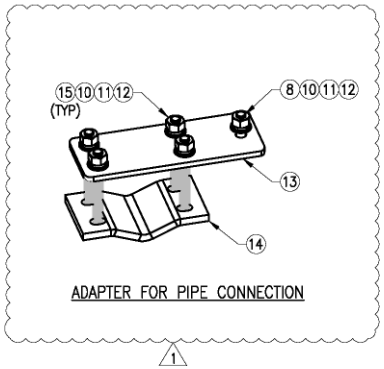
ROUND TOWER LEG ATTACHMENT DETAIL



ANGLE TOWER LEG ATTACHMENT DETAIL



DETAIL "A"



ADAPTER FOR PIPE CONNECTION

VZWSMART-SFK1 (TIE BACK ASSEMBLY)

ITEM NO.	QTY.	PART NO.	DESCRIPTION	SHEET #	WT
1	1	PST2375-10	2" PST (2.375" O.D. X 0.154" THK) X 10'-0" A53 GR-B 35KSI	SFK1-F1	38
2	1	BP825-12	PL 3/8" X 8 1/4" X 1'-0" A36 BENT PLATE	SFK1-F2	11
3	1	BP11125-12	PL 3/8" X 11 1/8" X 1'-0" A36 BENT PLATE	SFK1-F3	14
4	1	BP6-9375	PL 3/8" X 6" X 9 3/8" A36 BENT PLATE	SFK1-F4	6
5	1	BP2-875	PL 1/4" X 2" X 8 3/4" A36 BENT PLATE	SFK1-F4	1
6	2	MS02-625-300-500	RU-BOLT 5/8" X 3" I.W. X 5" I.L. A36 (OR EQUIV.)	RBC-1	2
7	2	---	THREADED ROD 5/8" DIA. X 1'-6" F1554-36 HDG	---	0
8	2	---	BOLT 5/8" X 2" A325	---	0
9	1	---	BOLT 5/8" X 4 1/4" A325	---	0
10	15	FW-625	5/8" HDG USS FLAT WASHER	---	1
11	15	LW-625	5/8" HDG LOCK WASHER	---	0
12	15	NUT-625	5/8" HDG HEX NUT	---	2
13	1	PL375-4511	PL 3/8" X 4 1/2" X 11" A36	SFK1-F1	4
14	1	V-CLAMP	PL 1/2" X 4 1/4" X 8 5/8" A36 BEND PLATE	SFK1-F5	5
15	4	---	BOLT 5/8" X 6" FULL THREAD SAE GR 5	---	0
			GALVANIZED WT		84

NOTES:
1. HOT-DIPPED GALVANIZED PER ASTM A123.

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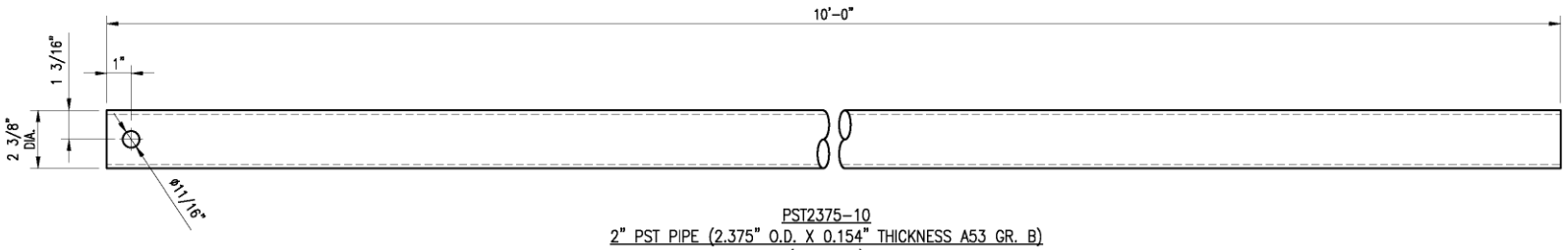
REV.	DESCRIPTION	BY	DATE
1	FIRST ISSUE	BT	05/08/20
1	REVISED	BT	04/10/21

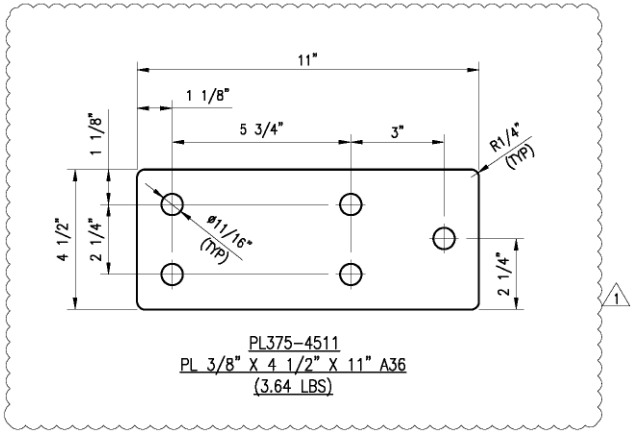
SHEET TITLE:
VZWSMART-SFK1
TIE BACK ASSEMBLY

SHEET NUMBER: VZWSMART-SFK1

REV #: 1



PST2375-10
2" PST PIPE (2.375" O.D. X 0.154" THICKNESS A53 GR. B)
(37.7 LBS)



PL375-4511
PL 3/8" X 4 1/2" X 11" A36
(3.64 LBS)

NOTES:
1. HOT-DIPPED GALVANIZED PER ASTM A123.

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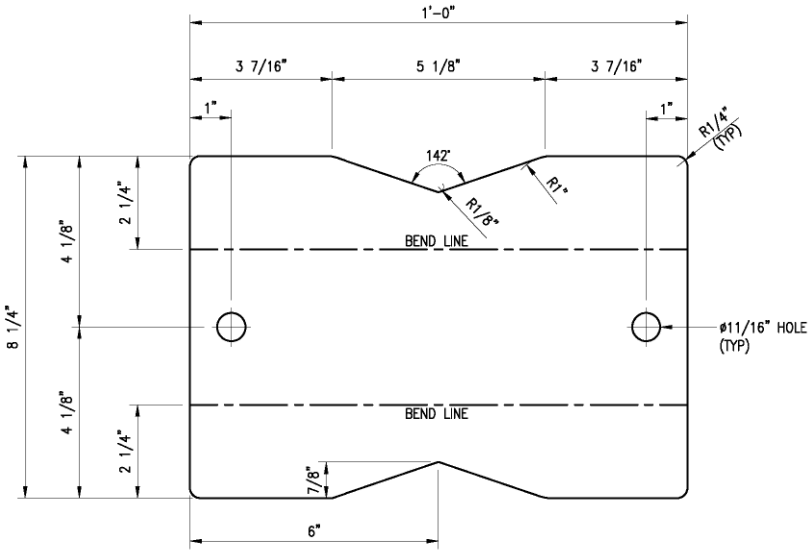
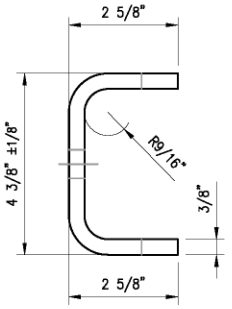
REV.	DESCRIPTION	BY	DATE
1	FIRST ISSUE	BT	05/08/20
1	REVISED	BT	04/10/21

SHEET TITLE:
FABRICATION DETAILS

SHEET NUMBER: SFK1-F1
REV #: 1



BEFORE BENDING



AFTER BENDING

BP825-12
PL 3/8" X 8 1/4" X 1'-0" A36 BENT PLATE
(10.67 LBS)

NOTES:
1. HOT-DIPPED GALVANIZED PER ASTM A123.

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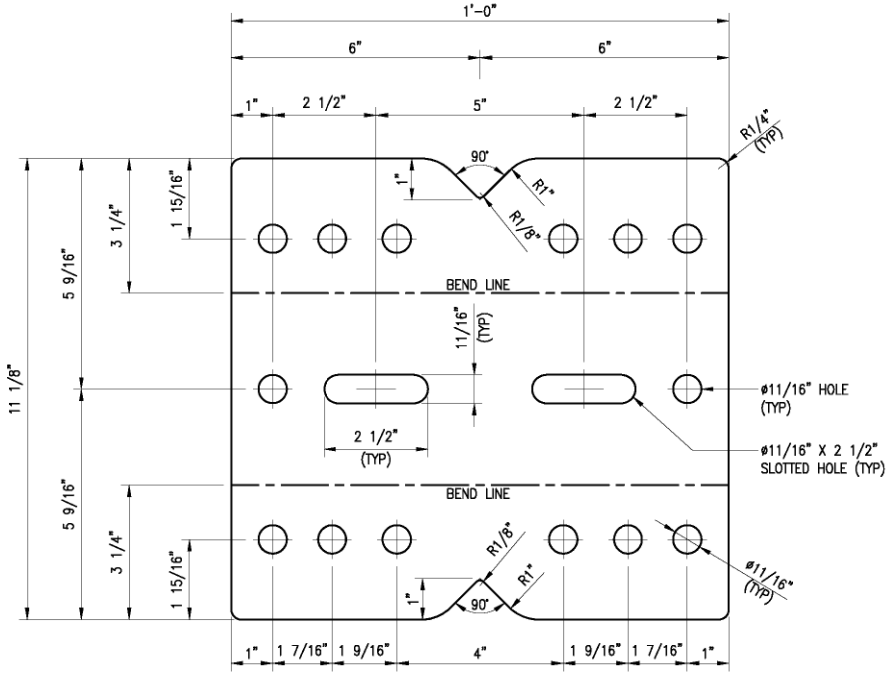
REV.	DESCRIPTION	BY	DATE
1	FIRST ISSUE	BT	05/08/20

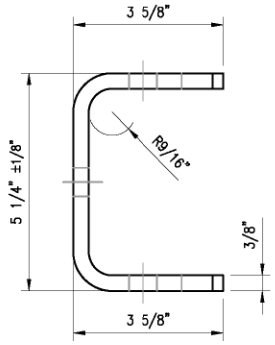
SHEET TITLE:

FABRICATION DETAILS

SHEET NUMBER:	REV #:
SFK1-F2	0



BEFORE BENDING



AFTER BENDING

BP11125-12
PL 3/8" X 11 1/8" X 1'-0" A36 BENT PLATE
(14.39 LBS)

NOTES:
1. HOT-DIPPED GALVANIZED PER ASTM A123.

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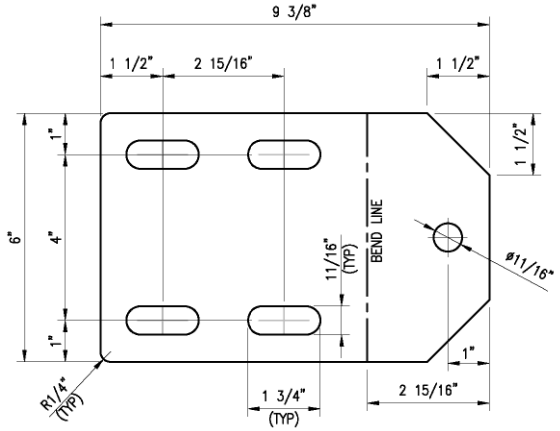
REV.	DESCRIPTION	BY	DATE
1	FIRST ISSUE	BT	05/08/20

SHEET TITLE:

FABRICATION DETAILS

SHEET NUMBER: SFK1-F3

REV #: 0



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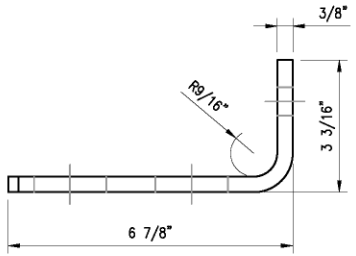
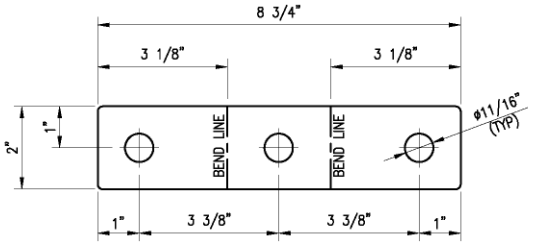


AFTER BENDING

BP6-9375
PL 3/8" X 6" X 9 3/8" A36 BENT PLATE
(6.07 LBS)



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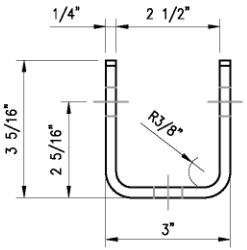

AFTER BENDING

BP2-875
PL 1/4" X 2" X 8 3/4" A36 BENT PLATE
(1.27 LBS)

NOTES:
1. HOT-DIPPED GALVANIZED PER ASTM A123.

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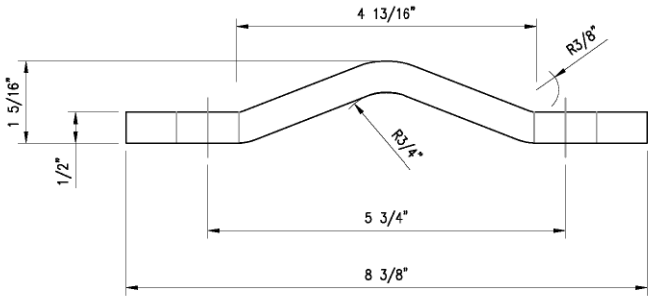
REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	BT	05/08/20

SHEET TITLE:

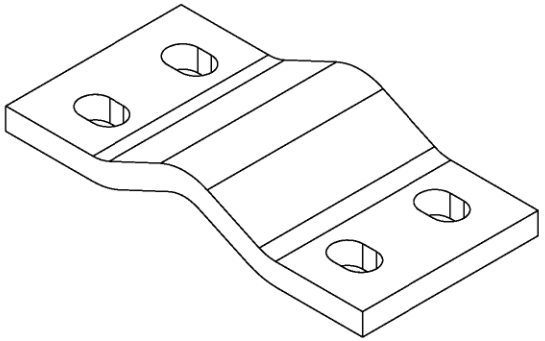
FABRICATION DETAILS

SHEET NUMBER: SFK1-F4

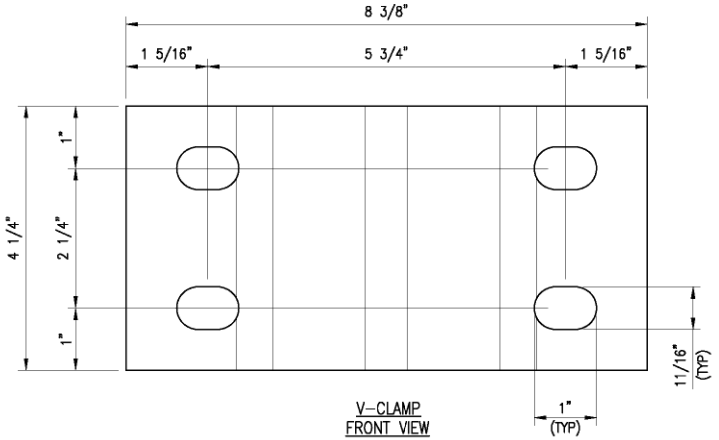
REV #: 0



V-CLAMP
TOP VIEW



V-CLAMP
ISOMETRIC VIEW



V-CLAMP
FRONT VIEW

V-CLAMP
PL 1/2" X 4 1/4" X 8 5/8" A36 BENT PLATE

NOTES:
1. HOT-DIPPED GALVANIZED PER ASTM A123.

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REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	BT	05/08/20
1	REVISED	BT	04/10/21

SHEET TITLE:
FABRICATION DETAILS

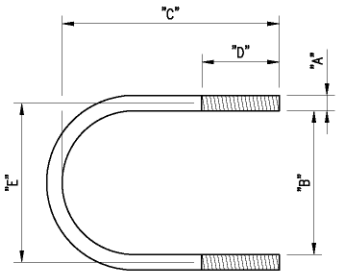
SHEET NUMBER:	REV #:
SFK1-F5	1

STANDARD RU-BOLT CHART							
DESCRIPTION	(EQUIVALENT PART NO.)	"A"	"B"	"C"	"D"	"E"	"WGT"
3/8" RU-BOLT	MS02-375-8125-1625	3/8"	13/16"	1 5/8"	7/8"	1 3/16"	0.26
3/8" RU-BOLT	MS02-375-100-225	3/8"	1"	2 1/4"	1 1/4"	1 3/8"	0.30
3/8" RU-BOLT	MS02-375-125-225	3/8"	1 1/4"	2 1/4"	1 1/4"	1 5/8"	0.30
3/8" RU-BOLT	MS02-375-1125-18125	3/8"	1 1/8"	1 13/16"	1 1/4"	1 1/2"	0.27
3/8" RU-BOLT	MS02-375-150-250	3/8"	1 1/2"	2 1/2"	1 1/4"	1 7/8"	0.32
3/8" RU-BOLT	MS02-375-150-275	3/8"	1 1/2"	2 3/4"	1 5/8"	1 7/8"	0.34
3/8" RU-BOLT	MS02-375-150-300	3/8"	1 1/2"	3"	1 3/4"	1 7/8"	0.35
3/8" RU-BOLT	MS02-375-175-275	3/8"	1 3/4"	2 3/4"	1 1/8"	2 1/8"	0.34
3/8" RU-BOLT	MS02-375-200-2625	3/8"	2"	2 5/8"	1 1/4"	2 3/8"	0.34
3/8" RU-BOLT	MS02-375-200-125	3/8"	2"	3"	1-1/4"	2-3/8"	0.40
3/8" RU-BOLT	MS02-375-2125-300	3/8"	2 1/8"	3"	1 1/4"	2 1/2"	0.36
3/8" RU-BOLT	MS02-375-250-30625	3/8"	2 1/2"	3 1/16"	1 1/4"	2 7/8"	0.38
3/8" RU-BOLT	MS02-375-250-3125	3/8"	2 1/2"	3 1/8"	1 1/4"	2 7/8"	0.37
3/8" RU-BOLT	MS02-375-250-3625	3/8"	2 1/2"	3-5/8"	1 3/4"	2 7/8"	0.45
3/8" RU-BOLT	MS02-375-300-3625	3/8"	3"	3 5/8"	1 1/4"	3 3/8"	0.42
3/8" RU-BOLT	MS02-375-300-425	3/8"	3"	4 1/4"	2"	3 3/8"	0.50
3/8" RU-BOLT	MS02-375-300-6625	3/8"	3	6 5/8"	3	3 3/8"	0.53
3/8" RU-BOLT	MS02-375-350-4125	3/8"	3 1/2"	4 1/8"	1 1/4"	3 7/8"	0.46
3/8" RU-BOLT	MS02-375-350-475	3/8"	3 1/2"	4 3/4"	2"	3 7/8"	0.50
3/8" RU-BOLT	MS02-375-400-575	3/8"	4"	5 3/4"	2 1/2"	4 3/8"	0.60
1/2" RU-BOLT	MS02-500-75-350	1/2"	3/4"	3 1/2"	2 1/2"	1 1/4"	0.60
1/2" RU-BOLT	MS02-500-1563-350	1/2"	1 9/16"	3 1/2"	2"	2 1/16"	0.62
1/2" RU-BOLT	MS02-500-200-300	1/2"	2"	3"	1 1/4"	2 1/2"	0.55
1/2" RU-BOLT	MS02-500-200-375	1/2"	2"	3 3/4"	1 3/4"	2 1/2"	0.67
1/2" RU-BOLT	MS02-500-20625-500	1/2"	2 1/16"	5	3"	2 9/16"	0.80
1/2" RU-BOLT	MS02-500-225-450	1/2"	2 1/4"	4 1/2"	2 1/2"	2 3/4"	0.76
1/2" RU-BOLT	MS02-500-2438-3625	1/2"	2 7/16"	3 5/8"	1 3/4"	2 15/16"	0.67
1/2" RU-BOLT	MS02-500-2438-5375	1/2"	2 7/16"	5 3/8"	3"	2 15/16"	0.86
1/2" RU-BOLT	MS02-500-250-400	1/2"	2 1/2"	4"	2 1/2"	3"	0.70
1/2" RU-BOLT	MS02-500-250-450	1/2"	2 1/2"	4 1/2"	2 1/2"	3"	0.76
1/2" RU-BOLT	MS02-500-29375-575	1/2"	2 15/16"	5 3/4"	3"	3 7/16"	0.92
1/2" RU-BOLT	MS02-500-300-4125	1/2"	3"	4 1/8"	2"	3 1/2"	0.74
1/2" RU-BOLT	MS02-500-300-450	1/2"	3"	4 1/2"	1 5/8"	3 1/2"	0.73
1/2" RU-BOLT	MS02-500-300-500	1/2"	3"	5"	2 1/2"	3 1/2"	0.84
1/2" RU-BOLT	MS02-500-350-500	1/2"	3 1/2"	5"	1 1/2"	4"	0.78
1/2" RU-BOLT	MS02-500-350-850	1/2"	3 1/2"	8 1/2"	3"	4"	1.09
1/2" RU-BOLT	MS02-500-3625-550	1/2"	3 5/8"	5 1/2"	3"	4 1/8"	1.10
1/2" RU-BOLT	MS02-500-3625-600	1/2"	3 5/8"	6"	2 1/2"	4 1/8"	0.97
1/2" RU-BOLT	MS02-500-3563-450	1/2"	3 9/16"	4 1/2"	2"	4 1/16"	0.80
1/2" RU-BOLT	MS02-500-3563-650	1/2"	3 9/16"	6 1/2"	3"	4 1/16"	1.02
1/2" RU-BOLT	MS02-500-400-550-B	1/2"	4"	5 1/2"	1 1/2"	4 1/2"	0.84
1/2" RU-BOLT	MS02-500-400-550	1/2"	4"	5 1/2"	2"	4 1/2"	0.92
1/2" RU-BOLT	MS02-500-4063-700	1/2"	4 1/16"	7"	3"	4 9/16"	1.09
1/2" RU-BOLT	MS02-500-4125-600	1/2"	4 1/8"	6"	2 1/2"	4 5/8"	0.98
1/2" RU-BOLT	MS02-500-450-600	1/2"	4 1/2"	6"	1 1/2"	5"	0.89
1/2" RU-BOLT	MS02-500-4625-700	1/2"	4 5/8"	7"	2 1/2"	5 1/8"	1.11
1/2" RU-BOLT	MS02-500-4563-750	1/2"	4 9/16"	7 1/2"	3"	5 1/16"	1.16
1/2" RU-BOLT	MS02-500-5625-725	1/2"	5 5/8"	7 1/4"	2"	6 1/8"	1.04
1/2" RU-BOLT	MS02-500-4563-575	1/2"	4 9/16"	5 3/4"	2"	5 1/16"	0.97
1/2" RU-BOLT	MS02-500-5563-700	1/2"	5 9/16"	7"	2"	6 1/16"	1.14
1/2" RU-BOLT	MS02-500-575-750	1/2"	5 3/4"	7 1/2"	2 1/2"	6 1/4"	1.22
1/2" RU-BOLT	MS02-500-6625-800	1/2"	6 5/8"	8"	3"	7 1/8"	1.28
1/2" RU-BOLT	MS02-500-675-850	1/2"	6 3/4"	8 1/2"	2 1/2"	7 1/4"	1.17
1/2" RU-BOLT	MS02-500-675-8375	1/2"	6 3/4"	8 3/8"	2"	7 1/4"	1.24
1/2" RU-BOLT	MS02-500-8750-1025	1/2"	8 3/4"	10 1/4"	3"	9 1/4"	1.60
1/2" RU-BOLT	MS02-500-875-10375	1/2"	8 3/4"	10 3/8"	2"	9 1/4"	1.34
1/2" RU-BOLT	MS02-500-10875-1300	1/2"	10 7/8"	1'-1"	3"	11 3/8"	1.98

NOTES:

IF EQUIVALENT U-BOLTS ARE USED, THE FOLLOWING SPECIFICATIONS ARE REQUIRED:

1. THE MATERIAL SHALL BE HOT ROLLED STEEL WITH A MINIMUM YIELD STRENGTH OF 36 KSI.
2. ALL U-BOLTS SHALL BE HOT DIP GALVANIZED PER ASTM A153-78.
3. TOLERANCE: FOR "C" AND "D" +/- 1/16", "B" AND "E" + 1/16", "A" +/- 1/32".



STANDARD RU-BOLT CHART							
DESCRIPTION	(EQUIVALENT PART NO.)	"A"	"B"	"C"	"D"	"E"	"WGT"
5/8" RU-BOLT	MS02-625-200-375	5/8"	2"	3 3/4"	2"	2 5/8"	1.15
5/8" RU-BOLT	MS02-625-2063-500	5/8"	2 1/16"	5"	3"	2 11/16"	1.32
5/8" RU-BOLT	MS02-625-2438-5375	5/8"	2 7/16"	5 3/8"	3"	3 1/16"	1.40
5/8" RU-BOLT	MS02-625-250-400	5/8"	2 1/2"	4"	2 1/2"	3 1/8"	1.17
5/8" RU-BOLT	MS02-625-2625-450	5/8"	2 5/8"	4 1/2"	2"	3 1/4"	1.20
5/8" RU-BOLT	MS02-625-2563-550	5/8"	2 9/16"	5 1/2"	3"	3 3/16"	1.43
5/8" RU-BOLT	MS02-625-2938-5875	5/8"	2 15/16"	5 7/8"	3"	3 9/16"	1.52
5/8" RU-BOLT	MS02-625-300-400	5/8"	3"	4"	2"	3 5/8"	1.20
5/8" RU-BOLT	MS02-625-300-500	5/8"	3"	5"	3"	3 5/8"	1.37
5/8" RU-BOLT	MS02-625-3063-600	5/8"	3 1/16"	6"	3"	3 11/16"	1.54
5/8" RU-BOLT	MS02-625-3625-600	5/8"	3 5/8"	6"	3"	4 1/4"	1.45
5/8" RU-BOLT	MS02-625-3563-650	5/8"	3 9/16"	6 1/2"	3"	4 3/16"	1.65
5/8" RU-BOLT	MS02-625-4063-700	5/8"	4 1/16"	7"	3"	4 11/16"	1.77
5/8" RU-BOLT	MS02-625-4125-600	5/8"	4 1/8"	6"	3"	4 3/4"	1.60
5/8" RU-BOLT	MS02-625-4625-700	5/8"	4 5/8"	7"	3"	5 1/4"	1.60
5/8" RU-BOLT	MS02-625-4563-750	5/8"	4 9/16"	7 1/2"	3"	5 3/16"	1.87
5/8" RU-BOLT	MS02-625-4813-775	5/8"	4 13/16"	7 3/4"	3"	5 7/16"	1.93
5/8" RU-BOLT	MS02-625-500-700	5/8"	5"	7"	3"	5 5/8"	1.96
5/8" RU-BOLT	MS02-625-5063-800	5/8"	5 1/16"	8"	3"	5 11/16"	1.99
5/8" RU-BOLT	MS02-625-5625-85625	5/8"	5 5/8"	8 9/16"	3"	6 1/4"	2.11
5/8" RU-BOLT	MS02-625-575-800	5/8"	5 3/4"	8"	3"	6 3/8"	2.02
5/8" RU-BOLT	MS02-625-6688-9625	5/8"	6 11/16"	9 5/8"	3"	7 5/16"	2.35
5/8" RU-BOLT	MS02-625-6750-900	5/8"	6 3/4"	9"	3"	7 3/8"	2.24
5/8" RU-BOLT	MS02-625-8688-11625	5/8"	8 11/16"	11 5/8"	3"	9 3/16"	2.80
5/8" RU-BOLT	MS02-625-875-1100	5/8"	8 3/4"	11"	3"	9 3/8"	2.70
5/8" RU-BOLT	MS02-625-10688-1375	5/8"	10 13/16	13 3/4"	3"	11 7/16"	3.27
5/8" RU-BOLT	MS02-625-12875-1575	5/8"	12 7/8"	15 3/4"	3"	13 1/2"	3.72
5/8" RU-BOLT	MS02-625-14125-1700	5/8"	14 1/8"	17"	3"	14 3/4"	4.01

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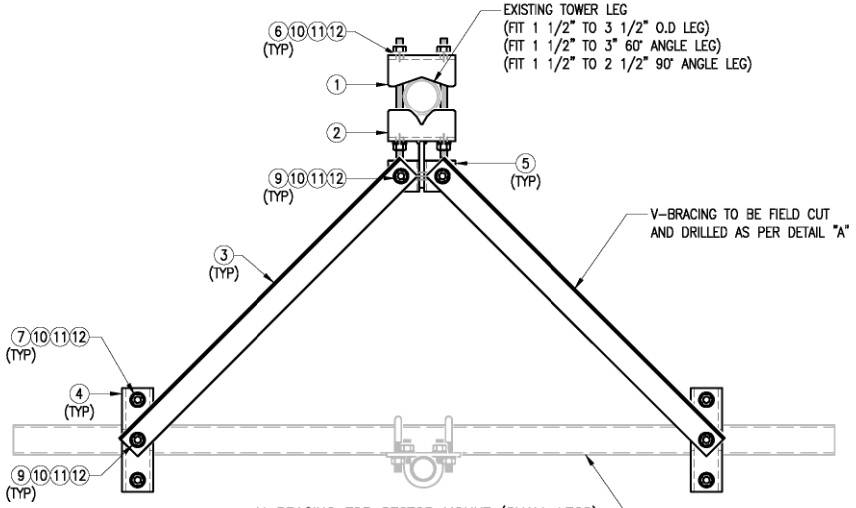
REV.	DESCRIPTION	BY	DATE
1	FIRST ISSUE	BT	05/08/20

SHEET TITLE:

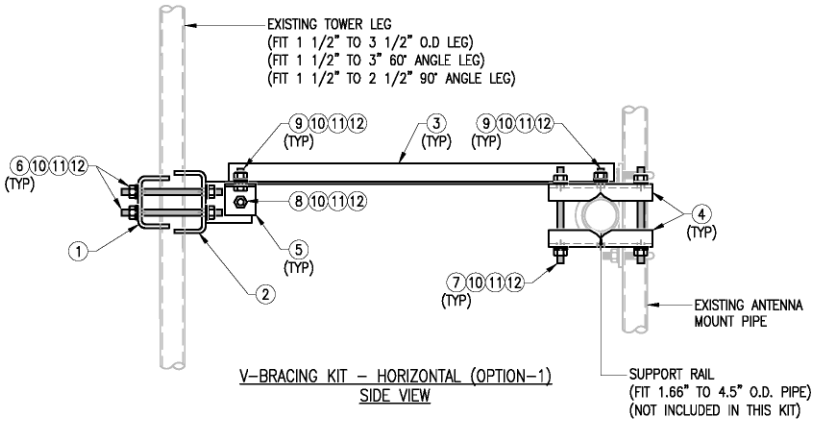
RU-BOLT CHART

SHEET NUMBER: RBC-1

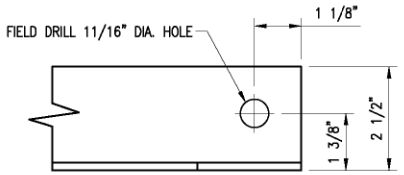
REV #: 0



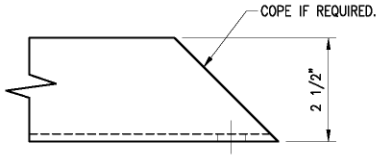
V-BRACING FOR SECTOR MOUNT (SMALL LEGS)
PLAN VIEW



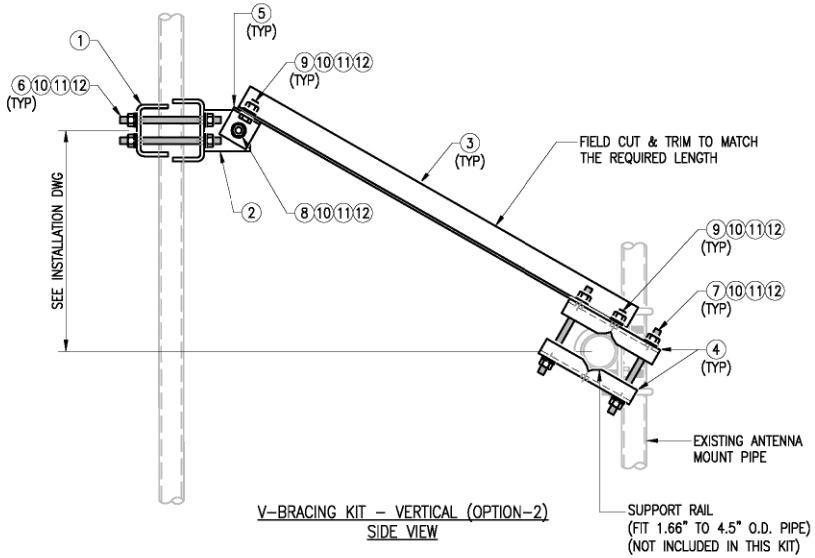
V-BRACING KIT - HORIZONTAL (OPTION-1)
SIDE VIEW



PLAN VIEW



FRONT VIEW
DETAIL "A"



V-BRACING KIT - VERTICAL (OPTION-2)
SIDE VIEW

NOTES:
1. HOT-DIPPED GALVANIZED PER ASTM A123.

VZWSMART-SFK3-SL (V-BRACING KIT FOR SMALL LEGS)

ITEM NO.	QTY.	PART NO.	DESCRIPTION	SHEET #	WT
1	1	BP9625-65	PL 3/8" X 9 5/8" X 6 1/2" A36 BENT PLATE	VBSM-SL-F1	12
2	1	BRKW-VBSM-SL	WELDMENT BRACKET	VBSM-SL-F3	11
3	2	L252525-8	L 2 1/2" X 2 1/2" X 1/4" X 8'-0" A36	VBSM-F5	67
4	4	BP6875-10	PL 3/8" X 6 7/8" X 10" A36 BENT PLATE	VBSM-F2	20
5	2	AL-333	L 3" X 3" X 1/4" X 3" A36	VBSM-F2	3
6	4	---	THREADED ROD 5/8" DIA. X 1'-0" F1554-36 HDG	---	--
7	4	---	THREADED ROD 5/8" DIA. X 10" F1554-36 HDG	---	--
8	1	---	BOLT 5/8" X 2 1/4" A325	---	--
9	4	---	BOLT 5/8" X 1 3/4" A325	---	--
10	21	FW-625	5/8" HDG USS FLAT WASHER	---	2
11	21	LW-625	5/8" HDG LOCK WASHER	---	0
12	21	NUT-625	5/8" HDG HEX NUT	---	2
				GALVANIZED WT	117

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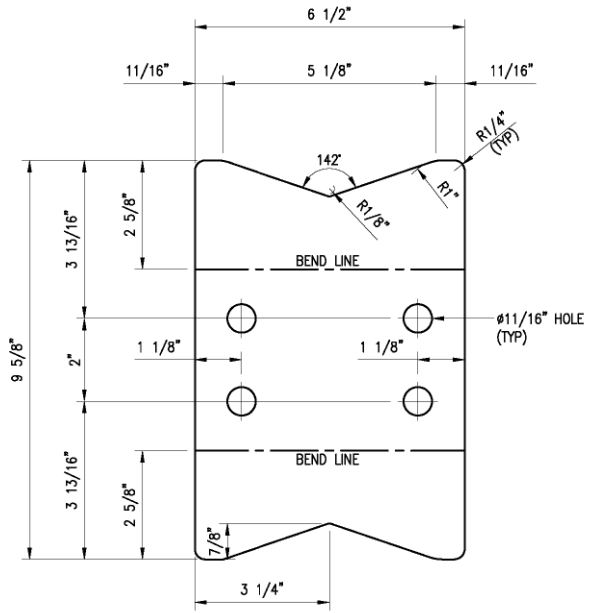
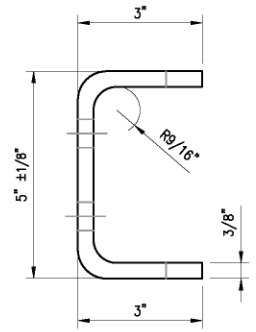
REV.	DESCRIPTION	BY	DATE
1	FIRST ISSUE	BT	04/10/21

SHEET TITLE:
VZWSMART-SFK3-SL
V-BRACING KIT
FOR SMALL LEGS

SHEET NUMBER: VZWSMART-SFK3-SL
REV #: 0



BEFORE BENDING



AFTER BENDING

BP9625-65
PL 3/8" X 9 5/8" X 6 1/2" A36 BENT PLATE
(6.75 LBS)

NOTES:
1. HOT-DIPPED GALVANIZED PER ASTM A123.

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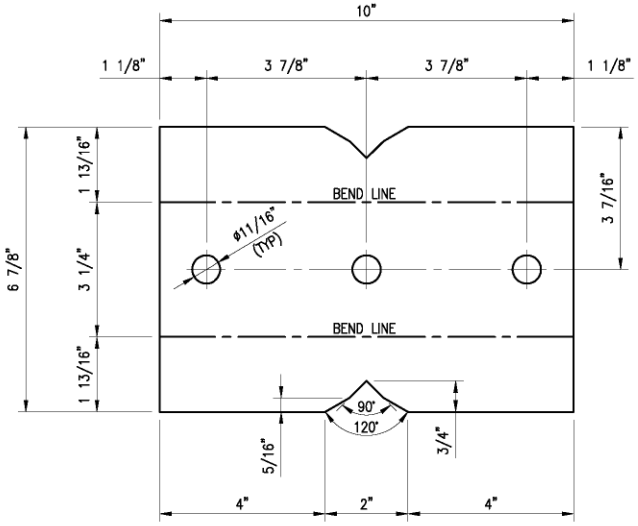
REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	BT	04/10/21

SHEET TITLE:

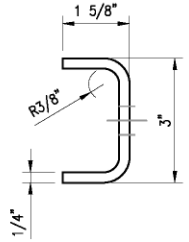
FABRICATION DETAILS

SHEET NUMBER:	REV #:
VBSM-SL-F1	0

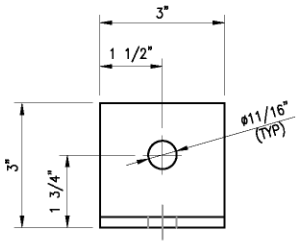


BEFORE BENDING

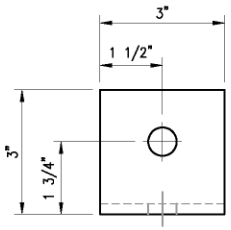
BP6875-10
PL 1/4" X 6 7/8" X 10" A36 BENT PLATE
(4.97 LBS)



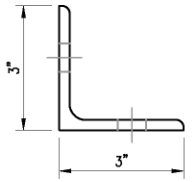
AFTER BENDING



PLAN VIEW



FRONT VIEW



SIDE VIEW

AL-333
L 3" X 3" X 1/4" X 3" A36
(1.25 LBS)

NOTES:
1. HOT-DIPPED GALVANIZED PER ASTM A123.

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DRAWN BY: BT	CHECKED BY: HMA

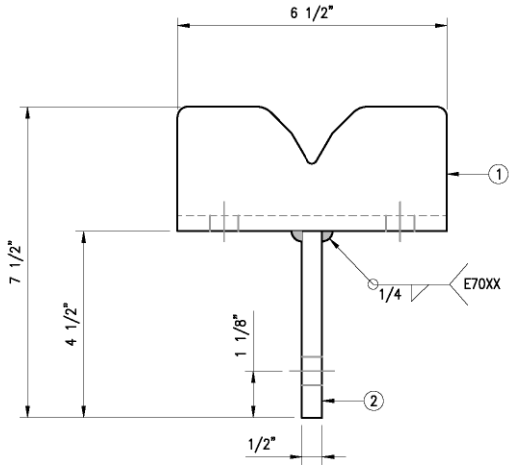
REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	BT	04/10/21

SHEET TITLE:

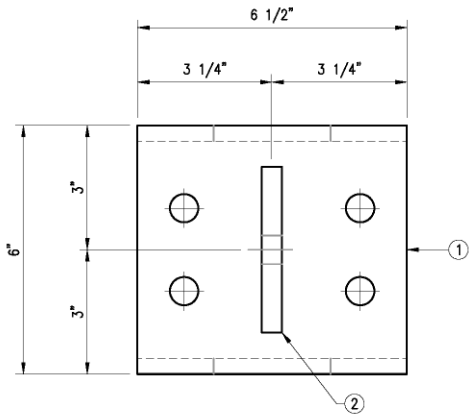
FABRICATION DETAILS

SHEET NUMBER:	REV #:
VBSM-F2	0

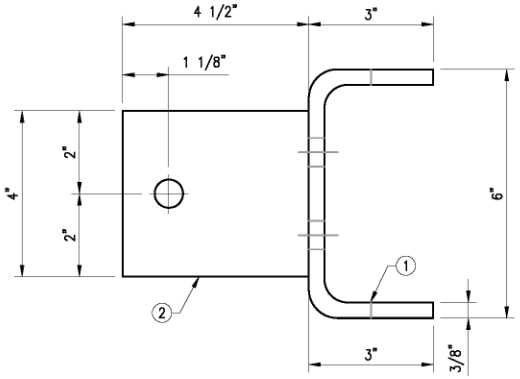
BRKW-VBSM-SL WELDMENT						
ITEM NO.	QTY.	PART NO.	DESCRIPTION	GRADE	SHEET #	WT
1	1	BP10625-65	PL 3/8" X 10 5/8" X 6 1/2"	A36	VBSM-SL-F4	7.5
2	1	PL500-4425	PL 1/2" X 4" X 0'-4 1/2"	A572	VBSM-SL-F4	2.58
					BLACK WT	10.0
					GALVANIZED WT	11



PLAN VIEW



FRONT VIEW



SIDE VIEW

BRKW-VBSM-SL
WELDMENT BRACKET
(11 LBS)

NOTES:
1. HOT-DIPPED GALVANIZED PER ASTM A123.

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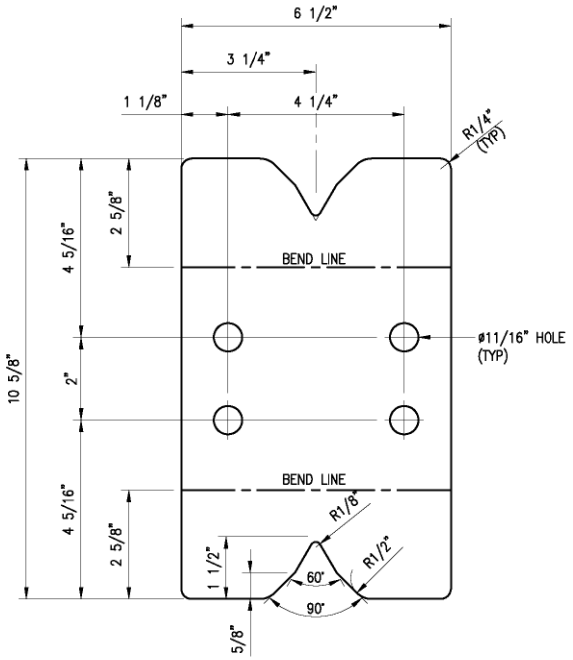
REV.	DESCRIPTION	BY	DATE
1	FIRST ISSUE	BT	04/10/21

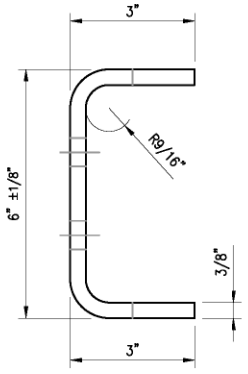
SHEET TITLE:
FABRICATION DETAILS

SHEET NUMBER: VBSM-SL-F3

REV #: 0

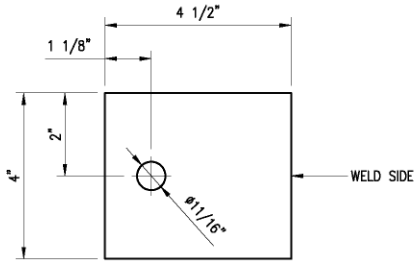


BEFORE BENDING



AFTER BENDING

BP10625-65
PL 3/8" X 10 5/8" X 6 1/2" A36 BENT PLATE
(7.45 LBS)



PL500-4425
PL 1/2" X 4" X 4 1/2" A36
(2.58 LBS)

NOTES:
1. HOT-DIPPED GALVANIZED PER ASTM A123.

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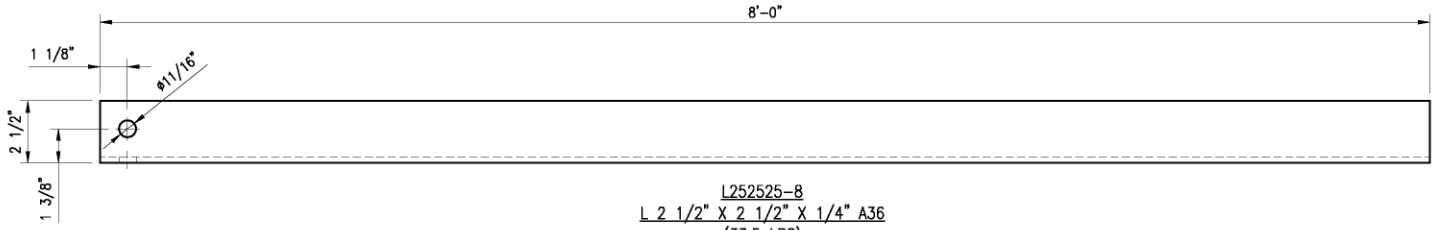
REV.	DESCRIPTION	BY	DATE
1	FIRST ISSUE	BT	04/10/21

SHEET TITLE:

FABRICATION DETAILS

SHEET NUMBER: VBSM-SL-F4

REV #: 0



L252525-8
L 2 1/2" X 2 1/2" X 1/4" A36
(33.5 LBS)

NOTES:
1. HOT-DIPPED GALVANIZED PER ASTM A123.

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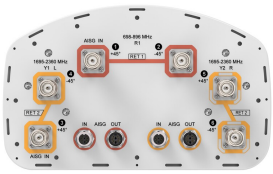
REV.	DESCRIPTION	BY	DATE
1	FIRST ISSUE	BT	04/10/21

SHEET TITLE:
FABRICATION DETAILS

SHEET NUMBER: VBSM-F5
REV #: 0

NHH-65B-R2B



6-port sector antenna, 2x 698–896 and 4x 1695–2360 MHz, 65° HPBW, 2x RET. Both high bands share the same electrical tilt.

- Interleaved dipole technology providing for attractive, low wind load mechanical package
- Internal SBT on low and high band allow remote RET control from the radio over the RF jumper cable
- Separate RS-485 RET input/output for low and high band
- One RET for low band and one RET for both high bands to ensure same tilt level for 4x Rx or 4x MIMO

General Specifications

Antenna Type	Sector
Band	Multiband
Color	Light gray
Grounding Type	RF connector body grounded to reflector and mounting bracket
Performance Note	Outdoor usage | Wind loading figures are validated by wind tunnel measurements described in white paper WP-112534-EN
Radome Material	Fiberglass, UV resistant
Radiator Material	Low loss circuit board
Reflector Material	Aluminum
RF Connector Interface	4.3-10 Female
RF Connector Location	Bottom
RF Connector Quantity, high band	4
RF Connector Quantity, low band	2
RF Connector Quantity, total	6

Remote Electrical Tilt (RET) Information

RET Interface	8-pin DIN Female | 8-pin DIN Male
RET Interface, quantity	2 female | 2 male
Input Voltage	10–30 Vdc
Internal Bias Tee	Port 1 | Port 3
Internal RET	High band (1) | Low band (1)
Power Consumption, idle state, maximum	2 W
Power Consumption, normal conditions, maximum	13 W

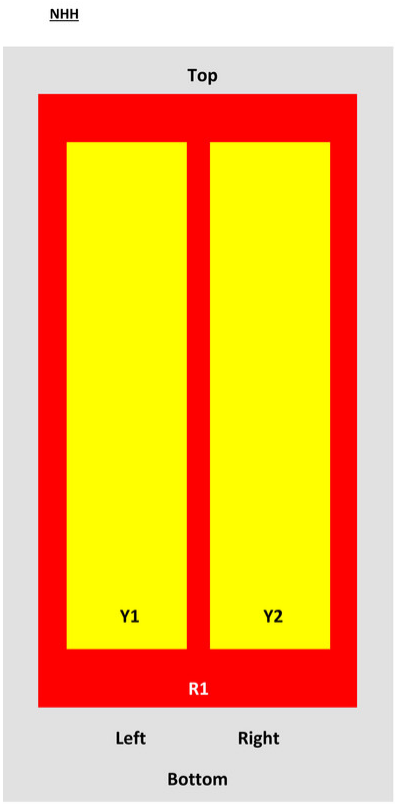
NHH-65B-R2B

Protocol	3GPP/AISG 2.0 (Single RET)

Dimensions

Width	301 mm | 11.85 in
Depth	180 mm | 7.087 in
Length	1828 mm | 71.969 in
Net Weight, without mounting kit	19.8 kg | 43.651 lb

Array Layout



Array	Freq (MHz)	Conns	RET (SRET)	AISG RET UID
R1	698-896	1-2	1	ANxxxxxxxxxxxxxxx1
Y1	1695-2360	3-4	2	ANxxxxxxxxxxxxxxx2
Y2	1695-2360	5-6		

View from the front of the antenna

(Sizes of colored boxes are not true depictions of array sizes)

Electrical Specifications

Impedance	50 ohm
Operating Frequency Band	1695 – 2360 MHz | 698 – 896 MHz

NHH-65B-R2B

Polarization	±45°
Total Input Power, maximum	900 W @ 50 °C

Electrical Specifications

Frequency Band, MHz	**698–806**	**806–896**	**1695–1880**	**1850–1990**	**1920–2200**	**2300–2360**
Gain, dBi	14.9	15	17.7	17.9	18.4	18.7
Beamwidth, Horizontal, degrees	65	60	71	69	64	57
Beamwidth, Vertical, degrees	12.4	11.2	5.7	5.2	4.9	4.6
Beam Tilt, degrees	0–14	0–14	0–7	0–7	0–7	0–7
USLS (First Lobe), dB	13	14	18	18	19	18
Front-to-Back Ratio at 180°, dB	30	29	31	30	29	31
Isolation, Cross Polarization, dB	25	25	25	25	25	25
Isolation, Inter-band, dB	30	30	30	30	30	30
VSWR | Return loss, dB	1.5 | 14.0	1.5 | 14.0	1.5 | 14.0	1.5 | 14.0	1.5 | 14.0	1.5 | 14.0
PIM, 3rd Order, 2 x 20 W, dBc	-153	-153	-153	-153	-153	-153
Input Power per Port at 50°C, maximum, watts	300	300	300	300	300	300

Electrical Specifications, BASTA

Frequency Band, MHz	**698–806**	**806–896**	**1695–1880**	**1850–1990**	**1920–2200**	**2300–2360**
Gain by all Beam Tilts, average, dBi	14.5	14.5	17.3	17.7	18.1	18.5
Gain by all Beam Tilts Tolerance, dB	±0.6	±1.1	±0.4	±0.4	±0.5	±0.3
Gain by Beam Tilt, average, dBi	0 ° | 14.4 7 ° | 14.6 14 ° | 14.3	0 ° | 14.7 7 ° | 14.7 14 ° | 14.1	0 ° | 17.2 4 ° | 17.3 7 ° | 17.3	0 ° | 17.6 4 ° | 17.7 7 ° | 17.7	0 ° | 18.0 4 ° | 18.2 7 ° | 18.1	0 ° | 18.3 4 ° | 18.5 7 ° | 18.6
Beamwidth, Horizontal Tolerance, degrees	±2	±2.1	±3	±4.1	±6.5	±2.9
Beamwidth, Vertical Tolerance, degrees	±0.7	±0.7	±0.3	±0.2	±0.3	±0.2
USLS, beampeak to 20° above beampeak, dB	13	14	16	16	17	15
Front-to-Back Total Power at 180° ± 30°, dB	23	22	27	27	25	25
CPR at Boresight, dB	22	21	23	23	22	19

CPR at Sector, dB	10	7	16	13	11	4

Mechanical Specifications

Effective Projective Area (EPA), frontal	0.26 m² | 2.799 ft²
Effective Projective Area (EPA), lateral	0.22 m² | 2.368 ft²
Wind Loading @ Velocity, frontal	278.0 N @ 150 km/h (62.5 lbf @ 150 km/h)
Wind Loading @ Velocity, lateral	230.0 N @ 150 km/h (51.7 lbf @ 150 km/h)
Wind Loading @ Velocity, maximum	537.0 N @ 150 km/h (120.7 lbf @ 150 km/h)
Wind Loading @ Velocity, rear	282.0 N @ 150 km/h (63.4 lbf @ 150 km/h)
Wind Speed, maximum	241 km/h | 149.75 mph

Packaging and Weights

Width, packed	409 mm | 16.102 in
Depth, packed	299 mm | 11.772 in
Length, packed	1952 mm | 76.85 in
Weight, gross	32.3 kg | 71.209 lb

Regulatory Compliance/Certifications

Agency	**Classification**
CHINA-ROHS	Below maximum concentration value
ISO 9001:2015	Designed, manufactured and/or distributed under this quality management system
ROHS	Compliant

Included Products

BSAMNT-3	–	Wide Profile Antenna 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

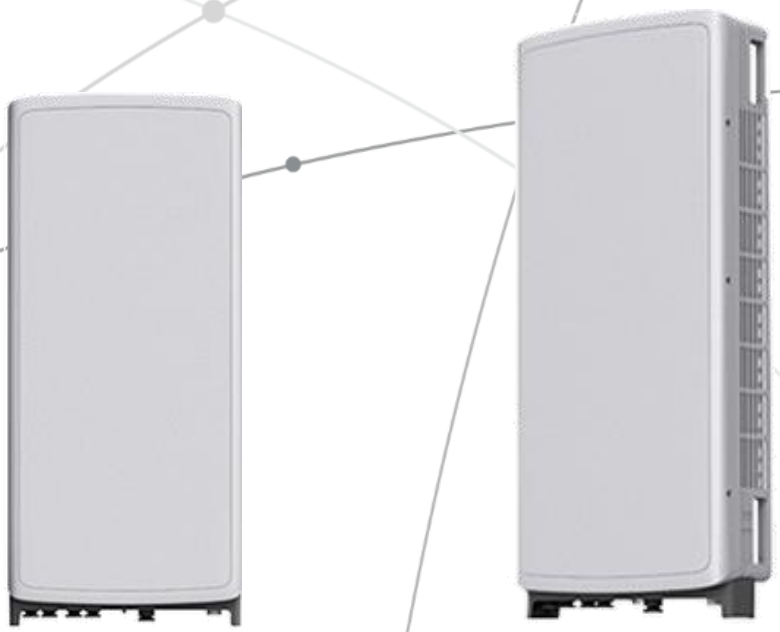
SAMSUNG

SAMSUNG C-Band 64T64R Massive MIMO Radio

for High Capacity and Wide Coverage

Samsung C-Band 64T64R Massive MIMO Radio enables mobile operators to increase coverage range, boost data speeds and ultimately offer enriched 5G experiences to users in the U.S..

Model Code : MT6407-77A

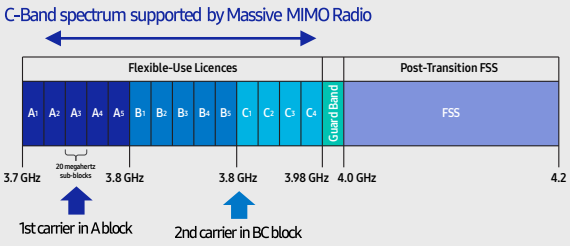


Points of Differentiation

Wide Bandwidth

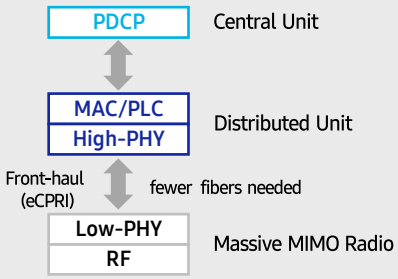
With capability to support up to 2 CC carrier configuration, Samsung C-Band massive MIMO Radio supports 200 MHz bandwidth in the C-Band spectrum.

Samsung C-Band massive MIMO Radio covers the entire C-Band 280 MHz spectrum, so it can meet the operator's needs in current A block and future B/C blocks



Future Proof Product

Samsung C-Band 64T64R Massive MIMO radio supports not only CPRI but also eCPRI as front-haul interface.
It enables operators can cut down on OPEX/CAPEX by reducing front-haul bandwidth through low layer split and using ethernet based higher efficient line.



Enhanced Performance

C-Band massive MIMO Radio creates sharp beams and extends networks' coverage on the critical mid-band spectrum using a large number of antenna elements and high output power to boost data speeds.

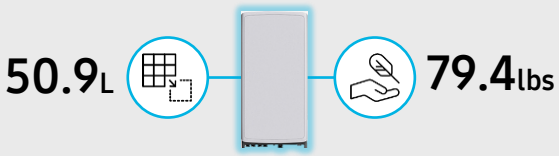
This helps operators reduce their CAPEX as they now need less products to cover the same area than before.

Furthermore, as C-Band massive MIMO Radio supports MU-MIMO(Multi-user MIMO) , it enables to increase user throughput by minimizing interference.

Well Matched Design

Samsung C-Band Massive MIMO radio utilizes 64 antennas, supports up to 280MHz bandwidth, and delivers a 200W output power. despite the above advanced performance, the Radio has a compact size of 50.9L and 79.4lbs. This makes it easy to install the Radio.

It is designed to look solid and compact, with a low profile appearance so that, when installed, harmonizes well with the surrounding environment..



Technical Specifications

Item	Specification
Tech	NR
Band	n77
Frequency Band	3700 - 3980 MHz
EIRP	78.5dBm (53.0 dBm+25.5 dBi)
IBW/OBW	280 MHz / 200 MHz
Installation	Pole/Wall
Size/ Weight	16.06 x 35.06 x 5.51 inch (50.86L)/ 79.4 lbs

SAMSUNG

About Samsung Electronics Co., Ltd.

Samsung inspires the world and shapes the future with transformative ideas and technologies. The company is redefining the worlds of TVs, smartphones, wearable devices, tablets, digital appliances, network systems, and memory, system LSI, foundry and LED solutions.

129 Samsung-ro, Yeongtong-gu, Suwon-si Gyeonggi-do, Korea

SAMSUNG

700/850MHZ MACRO RADIO

DUAL-BAND AND HIGH POWER FOR MACRO COVERAGE

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

Model Code	RF4440d-13A

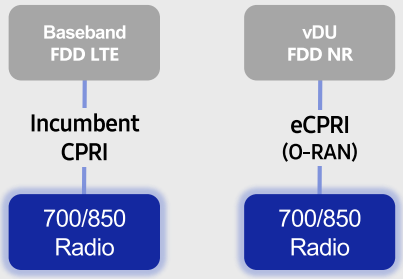
Homepage
samsungnetworks.com

Youtube
www.youtube.com/samsung5g

Points of Differentiation

Continuous Migration

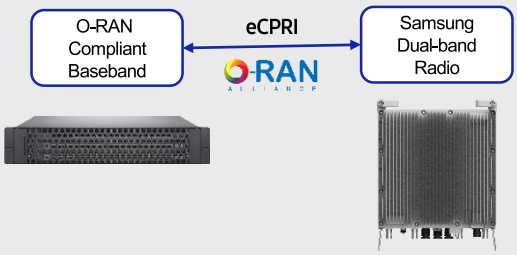
Samsung's 700/850MHz macro radio can support each incumbent CPRI interface as well as an advanced eCPRI interface. This feature provides installable options for both legacy LTE networks and added NR networks.



O-RAN Compliant

A standardized O-RAN radio can help when implementing cost-effective networks because it is capable of sending more data without compromising additional investments.

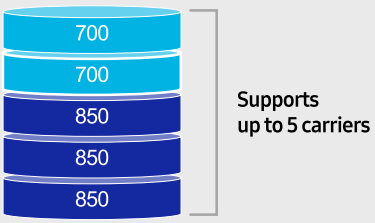
Samsung's state-of-the-art O-RAN technology will help accelerate the effort toward constructing a solid O-RAN ecosystem.



Optimum Spectrum Utilization

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

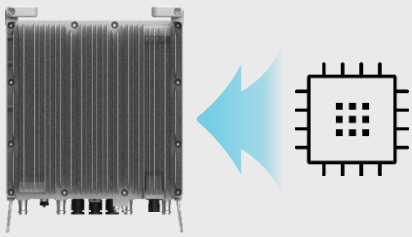
The new 700/850MHz dual-band radio can support up to 2 carriers in the B13 (700MHz) band and 3 carriers in the B5 (850MHz) band, respectively.



Secured Integrity

Access to sensitive data is allowed only to authorized software.

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



Technical Specifications

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

SAMSUNG

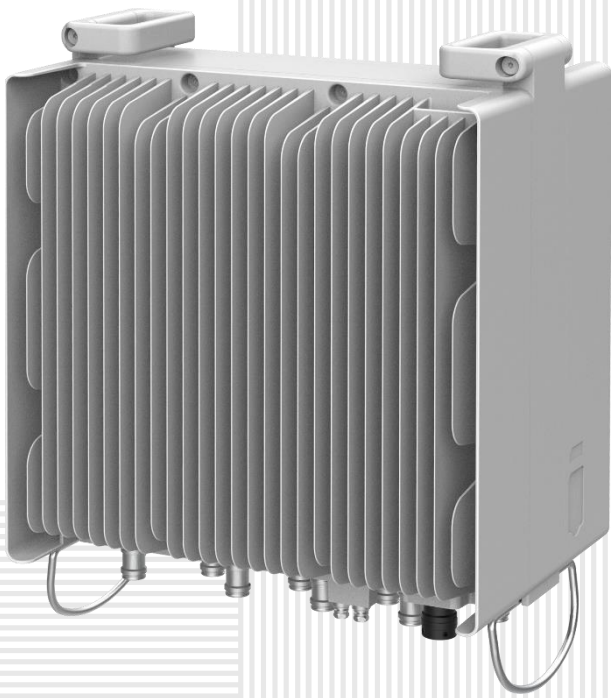
AWS/PCS MACRO RADIO

DUAL-BAND AND HIGH POWER FOR MACRO COVERAGE

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

57196

Model Code	RF4439d-25A



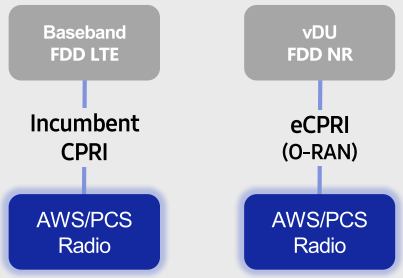
Homepage
samsungnetworks.com

Youtube
www.youtube.com/samsung5g

Points of Differentiation

Continuous Migration

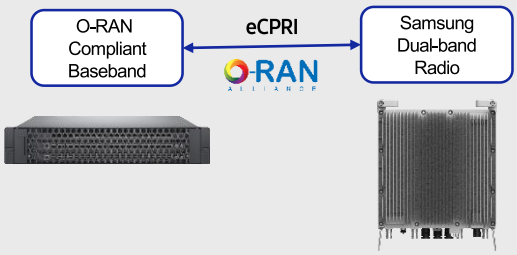
Samsung's AWS/PCS macro radio can support each incumbent CPRI interface as well as advanced eCPRI interfaces. This feature provides installable options for both legacy LTE networks and added NR networks.



O-RAN Compliant

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

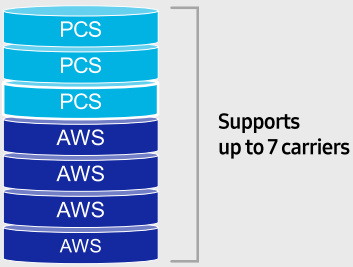
Samsung's state-of-the-art O-RAN technology will help accelerate the effort toward constructing a solid O-RAN ecosystem.



Optimum Spectrum Utilization

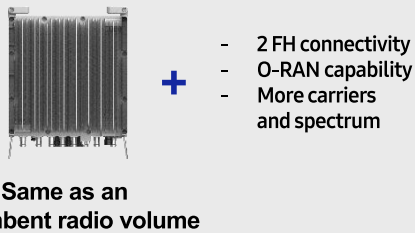
The number of required carriers varies according to site (region). Supporting many carriers is essential for using all frequencies that the operator has available.

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



Brand New Features in a Compact Size

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



Technical Specifications

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

ATTACHMENT 3

Site Name: ***NAUGATUCK CT RELO***

Cumulative Power Density

Operator	Operating Frequency	Number of Trans.	ERP Per Trans.	Total ERP	Distance to Target	Calculated Power Density	Maximum Permissible Exposure*	Fraction of MPE
	(MHz)		(watts)	(watts)	(feet)	(mW/cm^2)	(mW/cm^2)	(%)
VZW 700	751	4	689	2755	155	0.0041	0.5007	0.82%
VZW CDMA	877.26	2	438	875	155	0.0013	0.5848	0.22%
VZW Cellular	874	4	700	2799	155	0.0042	0.5827	0.72%
VZW PCS	1975	4	1433	5732	155	0.0086	1.0000	0.86%
VZW AWS	2120	4	1600	6398	155	0.0096	1.0000	0.96%
VZW CBAND	3730.08	2	13335	26670	155	0.0399	1.0000	3.99%
Total Percentage of Maximum Permissible Exposure								7.57%

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

**Calculation includes a -10 dB Off Beam Antenna Pattern Adjustment pursuant to Attachments B and C of the Siting Council's November 10, 2015 Memorandum for Exempt Modification filings

MHz = Megahertz

mW/cm^2 = milliwatts per square centimeter

ERP = Effective Radiated Power

Absolute worst case maximum values used.

ATTACHMENT 4

CONDITION ASSESSMENT & STRUCTURAL ANALYSIS REPORT
200-ft GUYED TOWER
PROSPECT, CONNECTICUT

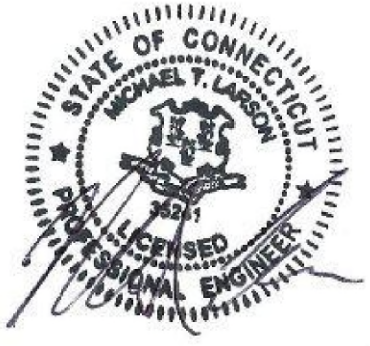
Prepared for
Verizon Wireless

Verizon Site Ref.
468186; Naugatuck CT Relo

Site Address: 37 Peach Orchard Road, Prospect, CT 06712

APT Filing No. CT141_13230

February 17, 2022



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

CONDITION ASSESSMENT & STRUCTURAL ANALYSIS REPORT
200-ft GUYED TOWER
PROSPECT, CONNECTICUT
prepared for
Verizon Wireless

EXECUTIVE SUMMARY:

All-Points Technology Corporation, P.C. (APT) performed a condition assessment and structural analysis of the 200-foot guyed tower structure to support a proposed Verizon equipment modification.

The proposed Verizon antenna and appurtenance modification consists of the proposed replacement of nine (9) existing panel antennas and six (6) existing Remote Radio Heads (RRHs) with six (6) new panel antennas & three (3) new LSub6 antennas with integrated RRHs and six (6) new Samsung dual-band RRHs. Additionally, Verizon proposes to replace their two (2) existing 6OVPs with one (1) new 12OVP. Equipment shall be fed by six (6) existing 1-5/8" coaxial cables and two (2) new 6x12 Low-Inductance (LI) hybrid feed-line cables as referenced in the table below.

Equipment shall be installed on the three (3) existing 12.5' sector mounts at 153.75'. As referenced in the Mount Modification Drawings listed below, prior to the proposed equipment installation, the following modifications are required:

- Three (3) VZWSMART P40-312X150 horizontal bracing pipes
- Three (3) VZWSMART P40-238X096, 8' long, P2 STD (2.375" x 0.154") pipe
- Six (6) VZWSMART-MSK1 mount pipe crossover plates
- Six (6) VZWSMART-SFK3-SL V-bracing kits
- Twelve (12) VZWSMART-MSK2 bracing pipe crossover plates
- Three (3) VZWSMART-SFK1 tie back assembly

Our analysis indicates that the subject tower structure meets the requirements of the 2015 International Building Code (IBC 2015), as amended by the 2018 Connecticut State Building Code, and the ANSI/TIA-222-H standard with the proposed and existing equipment configuration. **APT observed thirteen (13) inactive feed lines to the 170' elevation taped to the tower legs. We recommend these be removed to reduce wind load. APT also observed no safety climbing cable is installed. We recommend installing one.**

Evaluation of the existing base foundation and guy anchors could not be performed, as information on their design or construction was not available to APT. However, since the tower has additional available capacity the foundation and anchors are likely to be adequate.

INTRODUCTION:

A condition assessment and structural analysis was performed on the above-mentioned communications tower by APT for Verizon Wireless. The tower is located at 37 Peach Orchard Road in Prospect, Connecticut.

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

- Field notes and photos from APT's site visits, most recent being 02/09/22. APT climbed the structure in its entirety to record information regarding physical and dimensional properties of the structure and its appurtenances.
- Structural Analysis Report prepared by APT (Project No. CT1414262) dated 03/20/18.
- Mount Modification Drawings prepared by Paul J. Ford & Company (Project No. 22721-0344.002.8191) dated 08/12/21.
- Post-Mod Antenna Mount Analysis Report and PMI Requirements prepared by Paul J. Ford & Company (Project No. 22721-0344.002.8191) dated 08/12/21.
- RFDS detailing Verizon's proposed equipment changes, latest version.

The structure is a 200-foot guyed tower of unknown manufacturer. The tower features pipe leg and bracing members, and is guyed at four elevations, all of which contain torque arms with double guy wires.

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

Carrier	Antenna and Appurtenance Make/Model	Elevation	Status	Mount Type	Coax/Feed-Line
	6' TV antenna, 6' omnidirectional whip	205'		8' x 2-3/8" pipe mount	7/8"
	Beacon, Lightning rod	200'		Top plates	1" conduit
	Scala paraflector grid (PR-900 or equal)	193'		Leg	1-1/4"
	Inactive feed lines from removed array	170'		N.A.	(12) 1-5/8", 3/8" [2]
Verizon Wireless	**(6) Commscope NHH-65B-R2B &** **(3)** Andrew LNX-6514 DS panel antennas, **(3) Samsung MT6407-77A antennas,** **(3) Samsung RF4439d-25A RRHs,** **(3) Samsung RF4440d-13A RRHs,** **(1) 12OVP**	155'		**(3) 12.5' sector mounts w/ modifications [3]**	(6) 1-5/8", **(2) 6x12 LI hybrid**
	(2) obstruction lights	108'		Conduit across legs	1" conduit from 200'
	2' x 3' grid	78'		Leg	1/4"

Notes:

1. ETR = Existing to Remain; ERL= Existing to be Relocated; P = Proposed.
2. APT observed the thirteen (13) inactive feed lines to 170' taped to the tower leg.
3. Mount elevation is 153.75' according to the mount analysis prepared by Paul J. Ford & Company.

CONDITION ASSESSMENT:

- **General Condition:** The tower, a painted steel structure, appeared to be in generally sound condition. No signs of movement or overstress were observed.

- **Climbing Facilities:** Climbing step-horizontals are in place on the northeastern face of the tower. **No safety climb cable is installed. We recommend installing one.**

- **Leg Members:** Leg members were comprised of steel pipe and appeared to be in sound condition.

- **Lattice Bracing:** Braces consist of pipe K-braces and appeared to be in generally sound condition. Bracing connections were visually observed to the maximum extent practicable and appeared to be in good condition, with no deficient welds noted.

- **Splice Connections:** Connections were checked by hand for tightness at each splice location. No loose or missing splice bolts were observed.

- **Appurtenance Connections:** Antenna mounting hardware appeared to be in good condition, with corrosion resistant hardware and galvanized members prevalent. **APT observed thirteen (13) inactive feed lines to the 170' elevation taped to the tower legs – see photo pages. We recommend these be removed to reduce wind load.**

- **Base Foundation:** Exposed concrete appeared to be in sound condition.

- **Guy Cables and Hardware:** Guy cables appeared to be in sound condition. Guy attachment hardware appeared to be in good condition.

STRUCTURAL ANALYSIS:

Methodology:

This structural analysis has been prepared in accordance with the ANSI/TIA-222-H standard entitled "Structural Standard for Antenna Supporting Structures, Antennas and Small Wind Turbine Support Structures; American Institute of Steel Construction (AISC) Manual of Steel Construction", and the 2015 International Building Code (IBC), as amended by the 2018 Connecticut State Building Code.

Antenna, appurtenance and mount assembly loads were evaluated utilizing the ANSI/TIA-222-H standard.

- Load Case 1: 118 mph (3-second gust), 0" ice
- Load Case 2: 50mph (3-second gust) w/ 1.0" ice thickness required
- Load Case 3: 60mph (3-second gust) (Service Load)
- Structure Class: II
- Exposure Category: B
- Topographic Category: 2
- Crest Height: 400'

Analysis Results:

Analysis of the tower was conducted in accordance with the criteria outlined herein with antenna changes as previously described. The following table summarizes the results of the analysis based on stresses of individual leg and bracing members:

Elevation	Legs [1]	Bracing [2]
180'-200'	49%	25%
160'-180'	60%	18%
140'-160'	63%	69%
120'-140'	63%	31%
100'-120'	80%	44%
80'-100'	80%	50%
60'-80'	64%	16%
40'-60'	74%	52%
20'-40'	63%	22%
0'-20'	65%	42%

Notes:
1. Based on ASTM A572 Gr. 50 2.5" standard pipe.
2. Based on ASTM A36 pipe K-braces.

Splice Bolts:

Connection bolts were evaluated under the proposed loading. All bolts were found to be adequately sized to support the proposed loads.

Guy Cables:

Our analysis indicates all guys are adequately sized to support the proposed equipment.

Guy Elevation	Capacity
200'	55%
150'	83%
100.25'	61%
50'	38%

Base Foundation:

Evaluation of the existing base foundation and guy anchors could not be performed, as information on their design or construction was not available to APT. Since the tower has additional capacity available the foundation and anchors are likely to be adequate.

Factored base reactions imposed with the additional antennas were calculated as follows:

Location	Vertical	Horizontal
Base	117.0 kips	1.2 kips
Guy Anchor	-37.4 kips	42.8 kips

CONCLUSIONS AND RECOMMENDATIONS:

In conclusion, our structural analysis indicates that the 200-foot guyed tower structure located at 37 Peach Orchard Road in Prospect, Connecticut meets the requirements of the 2015 International Building Code (IBC), as amended by the 2018 Connecticut State Building Code, and the ANSI/TIA-222-H standard with Verizon Wireless's proposed equipment. **APT observed thirteen (13) inactive feed lines on the tower to the 170' elevation. We recommend these be removed to reduce wind load. APT also observed no safety climbing cable is installed. We recommend installing one.**

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

Michael T. Larson, P.E.
Project Engineer

Prepared by:
All-Points Technology Corp. P.C.

Ali M. Adair
Project Scientist

LIMITATIONS:

This report is based on the following:

1. Tower is properly installed and maintained.
2. All members are in an undeteriorated condition.
3. All required members are in place.
4. All bolts are in place and are properly tightened.
5. Tower is in plumb condition.
6. All tower members were properly designed, detailed, fabricated, and installed and have been properly maintained since erection.

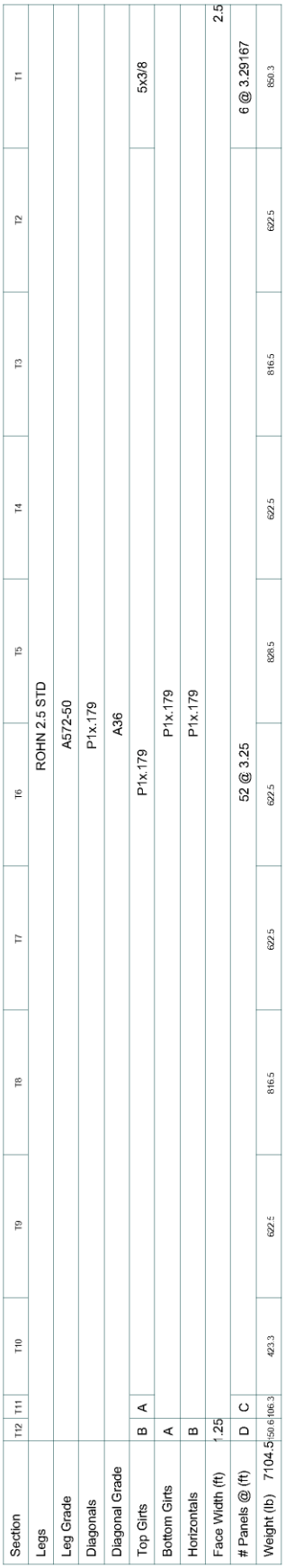
All-Points Technology Corporation, P.C. (APT) is not responsible for modifications completed prior to or hereafter which APT is not or was not directly involved. Modifications include but are not limited to:

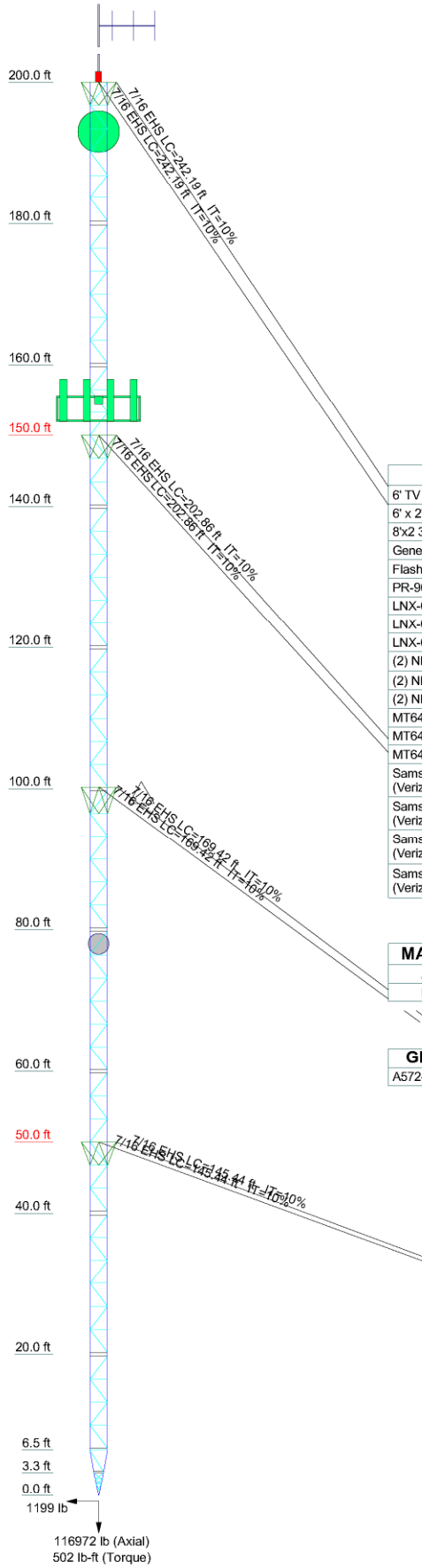
1. Replacing or strengthening bracing members.
2. Reinforcing vertical members in any manner.
3. Adding or relocating torque arms or guys.
4. Installing antenna mounting gates or side arms.

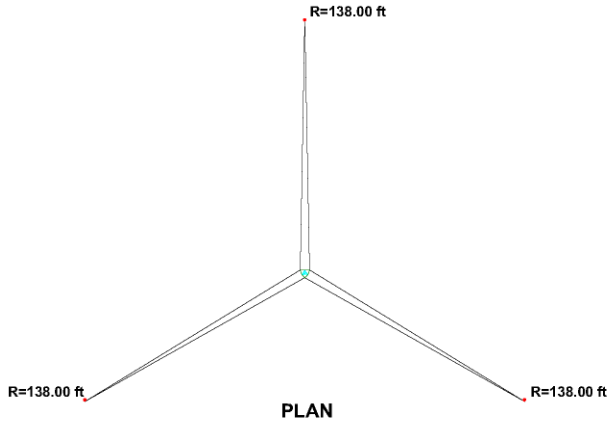
APT hereby states that this document represents the entire report and that it assumes no liability for any factual changes that may occur after the date of this report. All representations, recommendations, and conclusions are based upon the information contained and set forth herein. If you are aware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

Appendix A

Tower Schematic







DESIGNED APPURTENANCE LOADING

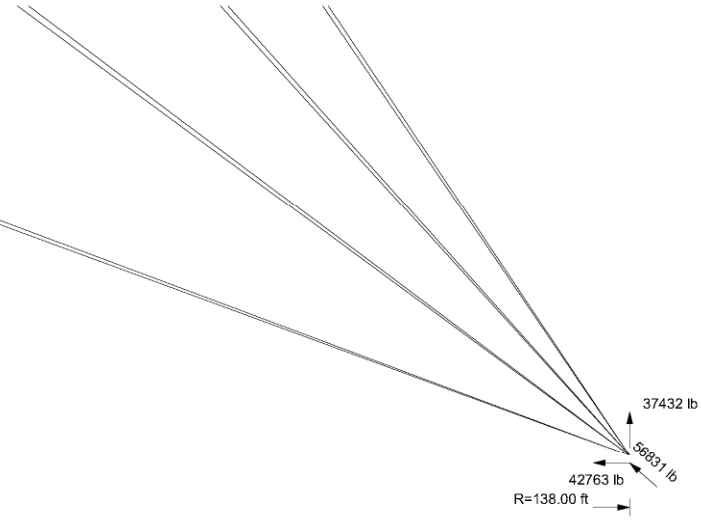
TYPE	ELEVATION	TYPE	ELEVATION
6' TV antenna	200	Samsung RF4440d-13A RRHs (Verizon)	155
6' x 2" omni whip	200	Samsung RF4440d-13A RRHs (Verizon)	155
8'x2 3/8" Pipe Mount	200	12OVP (Verizon)	155
Generic Lightning Rod 4' copper	200	12.5' Sector Mounts (Verizon)	153.75
Flash Beacon Lighting	200	12.5' Sector Mounts (Verizon)	153.75
PR-900	193	12.5' Sector Mounts (Verizon)	153.75
LNX-6514DS-VTM (Verizon)	155	12'-6" x 3-1/2" pipe mount (Verizon)	153.75
LNX-6514DS-VTM (Verizon)	155	12'-6" x 3-1/2" pipe mount (Verizon)	153.75
LNX-6514DS-VTM (Verizon)	155	12'-6" x 3-1/2" pipe mount (Verizon)	153.75
(2) NHH-65B-R2B (Verizon)	155	(2) SitePro1 SFK3-SL reinf. kit (Verizon)	153.75
(2) NHH-65B-R2B (Verizon)	155	(2) SitePro1 SFK3-SL reinf. kit (Verizon)	153.75
(2) NHH-65B-R2B (Verizon)	155	(2) SitePro1 SFK3-SL reinf. kit (Verizon)	153.75
MT6407-77A (Verizon)	155	Obstruction light	108
MT6407-77A (Verizon)	155	Obstruction light	108
MT6407-77A (Verizon)	155	3' grid dish	78
Samsung RF4439d-25A RRHs (Verizon)	155		
Samsung RF4439d-25A RRHs (Verizon)	155		
Samsung RF4439d-25A RRHs (Verizon)	155		
Samsung RF4440d-13A RRHs (Verizon)	155		

SYMBOL LIST

MARK	SIZE	MARK	SIZE
A	N.A.	C	1 @ 3
B	4x3/8	D	4 @ 0.8125

MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
A572-50	50 ksi	65 ksi	A36	36 ksi	58 ksi



ALL REACTIONS ARE FACTORED

All Points Technology
567 Vauxhall St. Ext., Suite 311
Waterford, CT 06385
Phone: (860) 663-1697
FAX: (860) 663-0935

Job: *200' Guyed Tower*			
Project: *CT141_13230 Naugatuck CT Relo*			
Client: Verizon Wireless	Drawn by: AMA		App'd:
Code: TIA-222-H	Date: 02/17/22		Scale: NTS
Path: C:\Users\User\Documents\APTR\Verizon Wireless\CT\CT141_13230 Naugatuck CT Relo\CT141_13230 Naugatuck CT Relo.eri			Dwg No. E-1

Appendix B

Photographs

VERIZON WIRELESS
200' GUYED TOWER
PROSPECT, CONNECTICUT
VERIZON SITE #468186; NAUGATUCK CT RELO

Overview photo of the existing 200' guyed tower located in Prospect, Connecticut.

Photos taken by All-Points Technology Corporation, P.C. on February 9, 2022.

VERIZON WIRELESS
200' GUYED TOWER
PROSPECT, CONNECTICUT
VERIZON SITE #468186; NAUGATUCK CT RELO


Overview photos of typical existing equipment, mounts and guy pull-offs.


Photos taken by All-Points Technology Corporation, P.C. on February 9, 2022.

VERIZON WIRELESS
200' GUYED TOWER
PROSPECT, CONNECTICUT
VERIZON SITE #468186; NAUGATUCK CT RELO

Photos of Verizon's existing cable entry ports and ground bar at shelter.

Photos taken by All-Points Technology Corporation, P.C. on February 9, 2022.

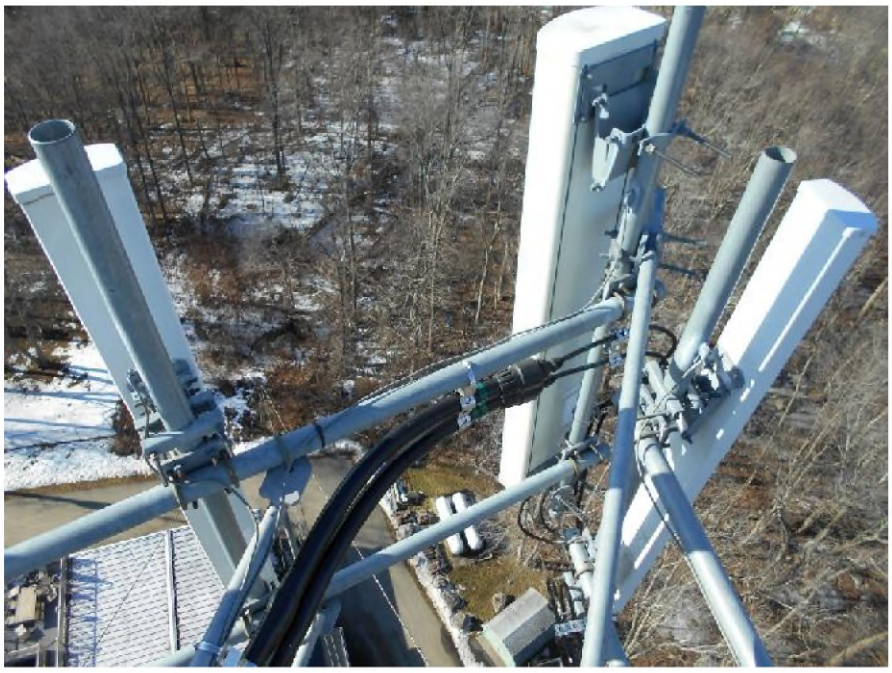
VERIZON WIRELESS
200' GUYED TOWER
PROSPECT, CONNECTICUT
VERIZON SITE #468186; NAUGATUCK CT RELO

Photo of Verizon's existing ice bridge.

Photos of Verizon's typical existing equipment and mounts at 155'.

Photos taken by All-Points Technology Corporation, P.C. on February 9, 2022.

VERIZON WIRELESS
200' GUYED TOWER
PROSPECT, CONNECTICUT
VERIZON SITE #468186; NAUGATUCK CT RELO



Additional photos of Verizon's typical existing equipment and mounts at 155'.

Photos taken by All-Points Technology Corporation, P.C. on February 9, 2022.

VERIZON WIRELESS
200' GUYED TOWER
PROSPECT, CONNECTICUT
VERIZON SITE #468186; NAUGATUCK CT RELO

Additional photos of Verizon's typical existing equipment and mounts at 155'.

Photos taken by All-Points Technology Corporation, P.C. on February 9, 2022.

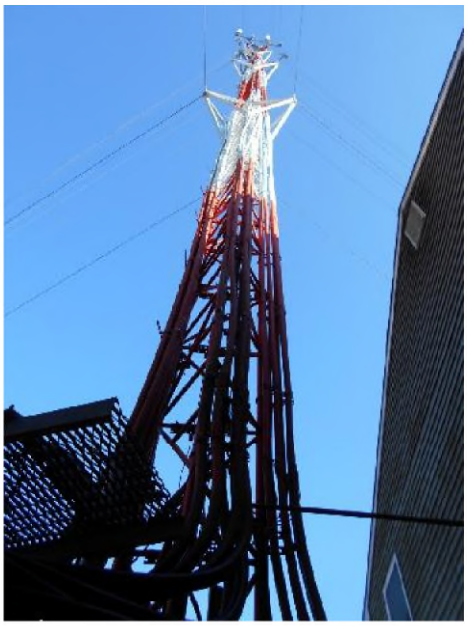
VERIZON WIRELESS
200' GUYED TOWER
PROSPECT, CONNECTICUT
VERIZON SITE #468186; NAUGATUCK CT RELO

Additional photos of Verizon's typical existing equipment and mounts at 155'.

Photos taken by All-Points Technology Corporation, P.C. on February 9, 2022.

VERIZON WIRELESS
200' GUYED TOWER
PROSPECT, CONNECTICUT
VERIZON SITE #468186; NAUGATUCK CT RELO

Photo of existing cable entry ports.



Photos of existing feed lines at tower.

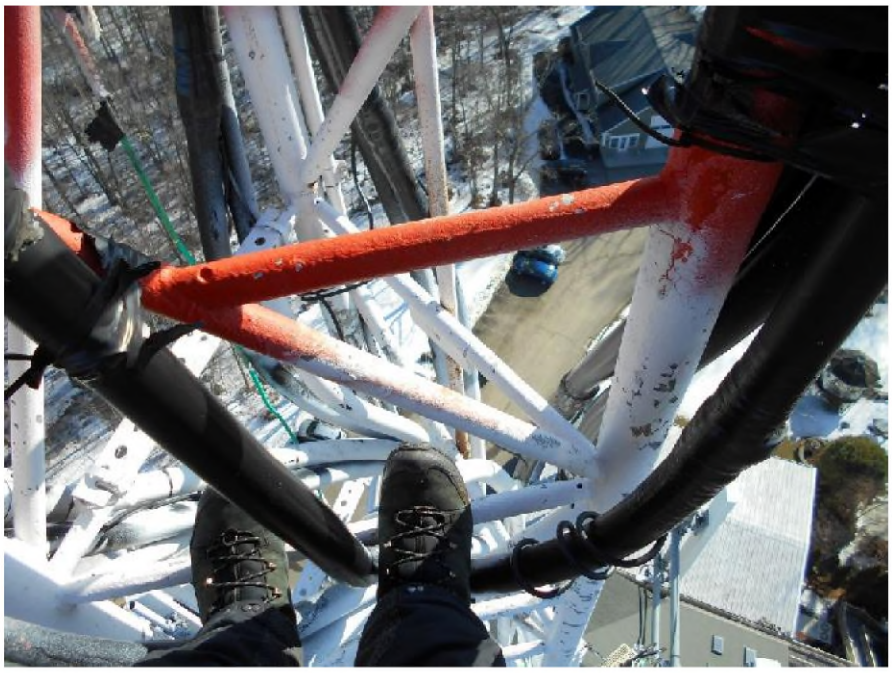
Photos taken by All-Points Technology Corporation, P.C. on February 9, 2022.

VERIZON WIRELESS
200' GUYED TOWER
PROSPECT, CONNECTICUT
VERIZON SITE #468186; NAUGATUCK CT RELO

Photos of typical existing equipment and mounts.

Photos taken by All-Points Technology Corporation, P.C. on February 9, 2022.

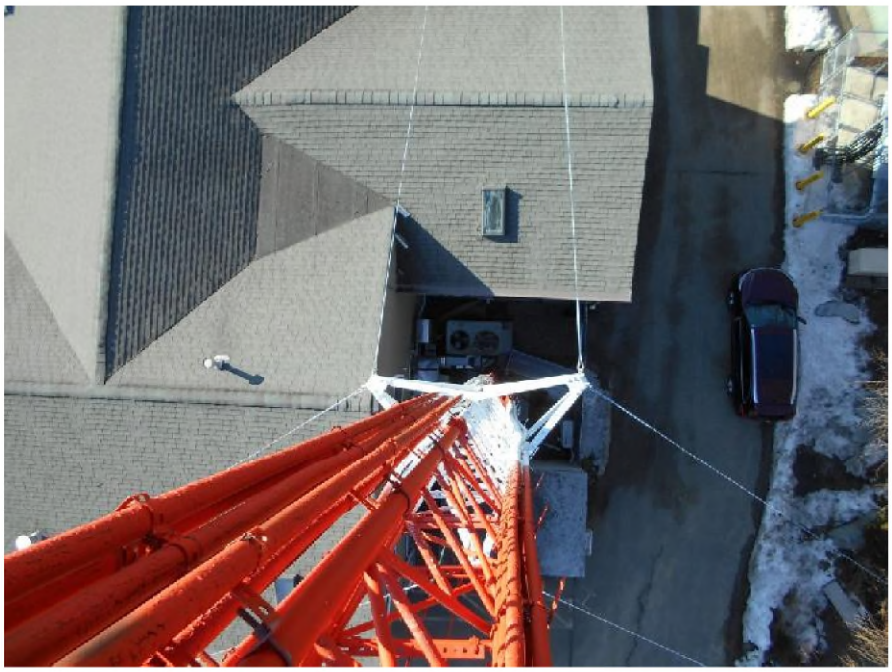
VERIZON WIRELESS
200' GUYED TOWER
PROSPECT, CONNECTICUT
VERIZON SITE #468186; NAUGATUCK CT RELO



Photos of inactive feed lines taped to tower leg.

Photos taken by All-Points Technology Corporation, P.C. on February 9, 2022.

VERIZON WIRELESS
200' GUYED TOWER
PROSPECT, CONNECTICUT
VERIZON SITE #468186; NAUGATUCK CT RELO



Photos of typical existing guy pull-offs.

Photos taken by All-Points Technology Corporation, P.C. on February 9, 2022.

VERIZON WIRELESS
200' GUYED TOWER
PROSPECT, CONNECTICUT
VERIZON SITE #468186; NAUGATUCK CT RELO

Photo of typical existing base foundation.

Photos taken by All-Points Technology Corporation, P.C. on February 9, 2022.

Appendix C

Calculations

Tower Input Data

The main tower is a 3x guyed tower with an overall height of 200.00 ft above the ground line.
The base of the tower is set at an elevation of 0.00 ft above the ground line.
The face width of the tower is 2.50 ft at the top and tapered at the base.
This tower is designed using the TIA-222-H standard.
The following design criteria apply:

Tower base elevation above sea level: 780.00 ft.
Basic wind speed of 118 mph.
Risk Category II.
Exposure Category B.
Simplified Topographic Factor Procedure for wind speed-up calculations is used.
Topographic Category: 2.
Crest Height: 400.00 ft.
Nominal ice thickness of 1.0000 in.
Ice thickness is considered to increase with height.
Ice density of 56 pcf.
A wind speed of 50 mph is used in combination with ice.
Temperature drop of 50 °F.
Deflections calculated using a wind speed of 60 mph.
Pressures are calculated at each section.
Stress ratio used in tower member design is 1.
Safety factor used in guy design is 1.
Local bending stresses due to climbing loads, feed line supports, and appurtenance mounts are not considered.

Guy Data

Guy Elevation	*Guy Grade*		*Guy Size*	*Initial Tension*	*%*	*Guy Modulus*	*Guy Weight*	*L_u*	*Anchor Radius*	*Anchor Azimuth Adj.*	*Anchor Elevation*	*End Fitting Efficiency*
ft				*lb*		*ksi*	*plf*	*ft*	*ft*	*°*	*ft*	*%*
200	EHS	A	7/16	2080.00	10%	21000	0.399	241.98	138.00	0.0000	0.00	100%
		B	7/16	2080.00	10%	21000	0.399	241.98	138.00	0.0000	0.00	100%
		C	7/16	2080.00	10%	21000	0.399	241.98	138.00	0.0000	0.00	100%
150	EHS	A	7/16	2080.00	10%	21000	0.399	202.69	138.00	0.0000	0.00	100%
		B	7/16	2080.00	10%	21000	0.399	202.69	138.00	0.0000	0.00	100%
		C	7/16	2080.00	10%	21000	0.399	202.69	138.00	0.0000	0.00	100%
100.25	EHS	A	7/16	2080.00	10%	21000	0.399	169.28	138.00	0.0000	0.00	100%
		B	7/16	2080.00	10%	21000	0.399	169.28	138.00	0.0000	0.00	100%
		C	7/16	2080.00	10%	21000	0.399	169.28	138.00	0.0000	0.00	100%
50	EHS	A	7/16	2080.00	10%	21000	0.399	145.32	138.00	0.0000	0.00	100%
		B	7/16	2080.00	10%	21000	0.399	145.32	138.00	0.0000	0.00	100%
		C	7/16	2080.00	10%	21000	0.399	145.32	138.00	0.0000	0.00	100%

Guy Data *(cont'd)*

Guy Elevation ft	Mount Type	Torque-Arm Spread ft	Torque-Arm Leg Angle °	Torque-Arm Style	Torque-Arm Grade	Torque-Arm Type	Torque-Arm Size
200	Torque Arm	5.00	45.0000	Bat Ear	A36 (36 ksi)	Equal Angle	L3x3x1/4
150	Torque Arm	5.00	45.0000	Bat Ear	A36 (36 ksi)	Equal Angle	L3x3x1/4
100.25	Torque Arm	5.00	45.0000	Bat Ear	A36 (36 ksi)	Equal Angle	L3x3x1/4
50	Torque Arm	5.00	45.0000	Bat Ear	A36 (36 ksi)	Equal Angle	L3x3x1/4

Guy Elevation ft	Diagonal Grade	Diagonal Type	Upper Diagonal Size	Lower Diagonal Size	Is Strap.	Pull-Off Grade	Pull-Off Type	Pull-Off Size
200.00	A572-50 (50 ksi)	Solid Round				A572-50 (50 ksi)	Solid Round	
150.00	A572-50 (50 ksi)	Solid Round				A572-50 (50 ksi)	Flat Bar	
100.25	A572-50 (50 ksi)	Solid Round				A572-50 (50 ksi)	Flat Bar	
50.00	A572-50 (50 ksi)	Solid Round				A572-50 (50 ksi)	Flat Bar	

Feed Line/Linear Appurtenances

Description	Face or Leg	Allow Shield	Exclude From Torque Calculation	Component Type	Placement ft	Face Offset in	Lateral Offset (Frac FW)	#	# Per Row	Clear Spacing in	Width or Diameter in	Perimeter in	Weight plf
1" conduit	C	No	No	Ar (CaAa)	200.00 - 8.00	0.0000	0	1	1	1.0000	1.0000		0.50
1 1/4	B	No	No	Ar (CaAa)	193.00 - 8.00	0.0000	-0.47	1	1	0.0000	1.5500		0.66
7/8	B	No	No	Ar (CaAa)	200.00 - 8.00	0.0000	0.47	1	1	1.1100	1.1100		0.54
1/4	B	No	No	Ar (CaAa)	78.00 - 8.00	0.0000	0	1	1	0.2500	0.2500		0.05
1 5/8 (From removed array)	C	No	No	Ar (CaAa)	170.00 - 8.00	0.0000	0.5	6	3	0.5000	1.9800		1.04
1 5/8 (From removed array)	C	No	No	Ar (CaAa)	170.00 - 8.00	0.0000	-0.5	6	3	0.5000	1.9800		1.04
3/8 (From removed array)	C	No	No	Ar (CaAa)	170.00 - 8.00	0.0000	-0.4	1	1	0.4400	0.4400		0.08
1 5/8 (Verizon)	A	No	No	Ar (CaAa)	155.00 - 8.00	0.0000	0.45	6	2	0.5000	1.9800		1.04
6x12 LI hybrid (Verizon)	A	No	No	Ar (CaAa)	155.00 - 8.00	0.0000	0.3	2	2	0.5000	1.5500		1.88

Discrete Tower Loads

Description	Face or Leg	Offset Type	Offsets: Horz Lateral / Vert (ft / ft / ft)	Azimuth Adjustment (°)	Placement (ft)		C_AA_A Front (ft^2)	C_AA_A Side (ft^2)	Weight (lb)
6' TV antenna	A	From Leg	0.50 0.00 8.00	0.0000	200.00	No Ice 1/2" Ice 1" Ice	4.00 5.63 7.28	4.00 5.63 7.28	60.00 89.63 129.45
6' x 2" omni whip	A	From Leg	0.50 0.00 8.00	0.0000	200.00	No Ice 1/2" Ice 1" Ice	1.20 1.80 2.17	1.20 1.80 2.17	25.00 34.39 47.81
8'x2 3/8" Pipe Mount	A	None		0.0000	200.00	No Ice 1/2" Ice 1" Ice	1.90 2.73 3.40	1.90 2.73 3.40	29.20 43.54 63.16
Generic Lightning Rod 4' copper	A	From Leg	0.00 0.00 2.00	0.0000	200.00	No Ice 1/2" Ice 1" Ice	0.50 1.00 1.50	0.50 1.00 1.50	0.00 0.00 0.00
Flash Beacon Lighting	C	None		0.0000	200.00	No Ice 1/2" Ice 1" Ice	2.70 3.10 3.50	2.70 3.10 3.50	50.00 70.00 90.00
PR-900	A	None		0.0000	193.00	No Ice 1/2" Ice 1" Ice	6.35 11.43 16.51	6.35 11.43 16.51	38.00 49.40 60.80
LNX-6514DS-VTM (Verizon)	A	From Face	4.00 0.00 0.00	0.0000	155.00	No Ice 1/2" Ice 1" Ice	8.17 8.63 9.10	4.17 4.61 5.07	30.00 74.68 125.36
LNX-6514DS-VTM (Verizon)	B	From Face	4.00 0.00 0.00	0.0000	155.00	No Ice 1/2" Ice 1" Ice	8.17 8.63 9.10	4.17 4.61 5.07	30.00 74.68 125.36
LNX-6514DS-VTM (Verizon)	C	From Face	4.00 0.00 0.00	0.0000	155.00	No Ice 1/2" Ice 1" Ice	8.17 8.63 9.10	4.17 4.61 5.07	30.00 74.68 125.36
(2) NHH-65B-R2B (Verizon)	A	From Face	4.00 0.00 0.00	0.0000	155.00	No Ice 1/2" Ice 1" Ice	8.08 8.53 9.00	5.34 5.79 6.26	48.00 98.05 154.20
(2) NHH-65B-R2B (Verizon)	B	From Face	4.00 0.00 0.00	0.0000	155.00	No Ice 1/2" Ice 1" Ice	8.08 8.53 9.00	5.34 5.79 6.26	48.00 98.05 154.20
(2) NHH-65B-R2B (Verizon)	C	From Face	4.00 0.00 0.00	0.0000	155.00	No Ice 1/2" Ice 1" Ice	8.08 8.53 9.00	5.34 5.79 6.26	48.00 98.05 154.20
MT6407-77A (Verizon)	A	From Face	4.00 0.00 0.00	0.0000	155.00	No Ice 1/2" Ice 1" Ice	4.69 4.98 5.28	1.84 2.06 2.29	90.00 119.24 152.35
MT6407-77A (Verizon)	B	From Face	4.00 0.00 0.00	0.0000	155.00	No Ice 1/2" Ice 1" Ice	4.69 4.98 5.28	1.84 2.06 2.29	90.00 119.24 152.35
MT6407-77A (Verizon)	C	From Face	4.00 0.00 0.00	0.0000	155.00	No Ice 1/2" Ice 1" Ice	4.69 4.98 5.28	1.84 2.06 2.29	90.00 119.24 152.35
Samsung RF4439d-25A RRHs (Verizon)	A	From Face	3.50 0.00 0.00	0.0000	155.00	No Ice 1/2" Ice 1" Ice	1.87 2.03 2.21	1.25 1.39 1.54	100.00 118.32 139.42
Samsung RF4439d-25A RRHs (Verizon)	B	From Face	3.50 0.00 0.00	0.0000	155.00	No Ice 1/2" Ice 1" Ice	1.87 2.03 2.21	1.25 1.39 1.54	100.00 118.32 139.42
Samsung RF4439d-25A RRHs (Verizon)	C	From Face	3.50 0.00 0.00	0.0000	155.00	No Ice 1/2" Ice 1" Ice	1.87 2.03 2.21	1.25 1.39 1.54	100.00 118.32 139.42

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft / Vert ft / ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight lb
Samsung RF4440d-13A	A	From Face	3.50	0.0000	155.00	No Ice	1.87	1.13	85.00
RRHs			0.00			1/2" Ice	2.03	1.27	102.32
(Verizon)			0.00			1" Ice	2.21	1.41	122.37
Samsung RF4440d-13A	B	From Face	3.50	0.0000	155.00	No Ice	1.87	1.13	85.00
RRHs			0.00			1/2" Ice	2.03	1.27	102.32
(Verizon)			0.00			1" Ice	2.21	1.41	122.37
Samsung RF4440d-13A	C	From Face	3.50	0.0000	155.00	No Ice	1.87	1.13	85.00
RRHs			0.00			1/2" Ice	2.03	1.27	102.32
(Verizon)			0.00			1" Ice	2.21	1.41	122.37
12OVP	C	None		0.0000	155.00	No Ice	4.06	3.10	38.00
(Verizon)						1/2" Ice	4.32	3.34	74.49
						1" Ice	4.58	3.58	114.97
12.5' Sector Mounts	A	None		0.0000	153.75	No Ice	13.20	9.20	658.00
(Verizon)						1/2" Ice	19.50	14.60	804.00
						1" Ice	25.80	19.50	1015.00
12.5' Sector Mounts	B	None		0.0000	153.75	No Ice	13.20	9.20	658.00
(Verizon)						1/2" Ice	19.50	14.60	804.00
						1" Ice	25.80	19.50	1015.00
12.5' Sector Mounts	C	None		0.0000	153.75	No Ice	13.20	9.20	658.00
(Verizon)						1/2" Ice	19.50	14.60	804.00
						1" Ice	25.80	19.50	1015.00
12'-6" x 3-1/2" pipe mount	A	None		0.0000	153.75	No Ice	3.84	3.84	128.00
(Verizon)						1/2" Ice	5.66	5.66	159.06
						1" Ice	6.97	6.97	198.26
12'-6" x 3-1/2" pipe mount	B	None		0.0000	153.75	No Ice	3.84	3.84	128.00
(Verizon)						1/2" Ice	5.66	5.66	159.06
						1" Ice	6.97	6.97	198.26
12'-6" x 3-1/2" pipe mount	C	None		0.0000	153.75	No Ice	3.84	3.84	128.00
(Verizon)						1/2" Ice	5.66	5.66	159.06
						1" Ice	6.97	6.97	198.26
(2) SitePro1 SFK3-SL reinf.	A	None		0.0000	153.75	No Ice	13.20	9.20	658.00
kit						1/2" Ice	19.50	14.60	804.00
(Verizon)						1" Ice	25.80	19.50	1015.00
(2) SitePro1 SFK3-SL reinf.	B	None		0.0000	153.75	No Ice	13.20	9.20	658.00
kit						1/2" Ice	19.50	14.60	804.00
(Verizon)						1" Ice	25.80	19.50	1015.00
(2) SitePro1 SFK3-SL reinf.	C	None		0.0000	153.75	No Ice	5.39	2.70	132.00
kit						1/2" Ice	7.89	3.95	250.00
(Verizon)						1" Ice	10.39	5.20	375.00
Obstruction light	B	None		0.0000	108.00	No Ice	0.14	0.14	8.00
						1/2" Ice	0.22	0.22	10.47
						1" Ice	0.29	0.29	13.91
Obstruction light	C	None		0.0000	108.00	No Ice	0.14	0.14	8.00
						1/2" Ice	0.22	0.22	10.47
						1" Ice	0.29	0.29	13.91

Dishes

Description	Face or Leg	Dish Type	Offset Type	Offsets: Horz Lateral Vert ft ° °	Azimuth Adjustment	3 dB Beam Width	Elevation ft	Outside Diameter ft		Aperture Area ft²	Weight lb
3' grid dish	A	Grid	From Leg	0.50 0.00 0.00	0.0000		78.00	3.00	No Ice 1/2" Ice 1" Ice	7.07 7.47 7.86	20.00 38.33 56.66

Solution Summary

Maximum Tower Deflections - Service Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
T1	200 - 180	1.700	33	0.1786	0.0478
T2	180 - 160	2.340	33	0.1232	0.0614
T3	160 - 140	2.578	33	0.0112	0.0546
T4	140 - 120	2.335	33	0.0978	0.0306
T5	120 - 100	1.769	33	0.1594	0.0330
T6	100 - 80	1.106	33	0.1171	0.0261
T7	80 - 60	0.785	33	0.0624	0.0935
T8	60 - 40	0.544	33	0.0520	0.0831
T9	40 - 20	0.396	33	0.0229	0.0405
T10	20 - 6.5	0.269	33	0.0474	0.0754
T11	6.5 - 3.25	0.100	33	0.0676	0.0753
T12	3.25 - 0	0.053	33	0.0725	0.1120

Critical Deflections and Radius of Curvature - Service Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
200.00	Guy	33	1.700	0.1786	0.0478	40664
193.00	PR-900	33	1.948	0.1677	0.0534	29046
155.00	LNX-6514DS-VTM	33	2.557	0.0188	0.0469	10185
153.75	12.5' Sector Mounts	33	2.548	0.0231	0.0447	10511
150.00	Guy	33	2.508	0.0401	0.0379	11623
108.00	Obstruction light	33	1.346	0.1421	0.0220	18264
100.25	Guy	33	1.113	0.1179	0.0256	9198
78.00	3' grid dish	33	0.761	0.0601	0.0984	87055
50.00	Guy	33	0.458	0.0356	0.0344	48611

Maximum Tower Deflections - Design Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
T1	200 - 180	15.600	2	0.8571	0.1851
T2	180 - 160	18.849	2	0.5625	0.1842
T3	160 - 140	19.962	2	0.1630	0.1616
T4	140 - 120	18.112	2	0.7529	0.1278
T5	120 - 100	13.972	2	1.1547	0.1426

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
T6	100 - 80	9.018	2	1.0109	0.1179
T7	80 - 60	5.601	2	0.7038	0.2420
T8	60 - 40	3.036	2	0.5035	0.2069
T9	40 - 20	1.788	8	0.2108	0.1333
T10	20 - 6.5	1.157	8	0.2127	0.1855
T11	6.5 - 3.25	0.424	8	0.2887	0.1767
T12	3.25 - 0	0.224	8	0.3075	0.2456

Critical Deflections and Radius of Curvature - Design Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
200.00	Guy	2	15.600	0.8571	0.1851	8046
193.00	PR-900	2	16.859	0.7929	0.1854	5747
155.00	LNX-6514DS-VTM	2	19.768	0.2342	0.1421	1585
153.75	12.5' Sector Mounts	2	19.690	0.2668	0.1382	1618
150.00	Guy	2	19.385	0.3849	0.1278	1724
108.00	Obstruction light	2	10.908	1.1157	0.1335	4346
100.25	Guy	2	9.072	1.0147	0.1170	2100
78.00	3' grid dish	2	5.313	0.6814	0.2501	8251
50.00	Guy	2	2.172	0.3450	0.1021	4196

Bolt Design Data

Section No.	Elevation ft	Component Type	Bolt Grade	Bolt Size in	Number Of Bolts	Maximum Load per Bolt lb	Allowable Load per Bolt lb	Ratio Load / Allowable	Allowable Ratio	Criteria
T1	200	Leg	A325N	0.7500	4	6269.41	30101.40	0.208 ✓	1	Bolt Tension
T2	180	Leg	A325N	0.7500	4	9734.38	30101.40	0.323 ✓	1	Bolt Tension
T3	160	Leg	A325N	0.7500	4	4332.54	30101.40	0.144 ✓	1	Bolt Tension
T4	140	Leg	A325N	0.7500	4	2203.21	30101.40	0.073 ✓	1	Bolt Tension
T5	120	Leg	A325N	0.7500	4	4452.67	30101.40	0.148 ✓	1	Bolt Tension
T6	100	Leg	A325N	0.7500	4	3240.93	30101.40	0.108 ✓	1	Bolt Tension
T7	80	Leg	A325N	0.7500	4	3546.75	30101.40	0.118 ✓	1	Bolt Tension
T8	60	Leg	A325N	0.7500	4	3228.12	30101.40	0.107 ✓	1	Bolt Tension
T9	40	Leg	A325N	0.7500	4	3393.22	30101.40	0.113 ✓	1	Bolt Tension
T10	20	Leg	A325N	0.7500	4	3350.30	30101.40	0.111 ✓	1	Bolt Tension
T11	6.5	Leg	A325N	0.7500	4	3450.01	30101.40	0.115 ✓	1	Bolt Tension

Section Capacity Table

Section No.	Elevation ft	Component Type	Size	Critical Element	P lb	ϕP_{allow} lb	% Capacity	Pass Fail
T1	**200 - 180**	**Leg**	**ROHN 2.5 STD**	**3**	**-32470.00**	**66951.50**	**48.5**	**Pass**
		Diagonal	P1x.179	34	-3815.26	15122.60	25.2	Pass
		Horizontal	P1x.179	37	683.01	20697.90	3.3	Pass
		Top Girt	5x3/8	4	-1969.76	13768.50	14.3	Pass
		Bottom Girt	P1x.179	7	-664.83	18453.00	3.6	Pass
		Guy A@200	7/16	466	6831.71	12480.00	54.7	Pass
		Guy B@200	7/16	461	6828.52	12480.00	54.7	Pass
		Guy C@200	7/16	454	6831.51	12480.00	54.7	Pass
		Torque Arm Top@200	L3x3x1/4	457	5176.52	46656.00	11.1	Pass
		Torque Arm Bottom@200	L3x3x1/4	459	-7896.39	41467.20	19.0	Pass
T2	**180 - 160**	**Leg**	**ROHN 2.5 STD**	**45**	**-40437.60**	**67228.10**	**60.1**	**Pass**
		Diagonal	P1x.179	82	-2687.74	15198.50	17.7	Pass
		Horizontal	P1x.179	56	-700.40	18453.00	3.8	Pass
		Top Girt	P1x.179	47	-700.40	18453.00	3.8	Pass
		Bottom Girt	P1x.179	50	-700.40	18453.00	3.8	Pass
T3	**160 - 140**	**Leg**	**ROHN 2.5 STD**	**87**	**-41740.70**	**66607.40**	**62.7**	**Pass**
		Diagonal	P1x.179	113	-10470.90	15198.50	68.9	Pass
		Horizontal	P1x.179	109	6396.08	20697.90	30.9	Pass
		Top Girt	P1x.179	89	-722.97	18453.00	3.9	Pass
		Bottom Girt	P1x.179	92	-722.97	18453.00	3.9	Pass
		Guy A@150	7/16	484	10347.30	12480.00	82.9	Pass
		Guy B@150	7/16	479	10112.90	12480.00	81.0	Pass
		Guy C@150	7/16	472	10179.50	12480.00	81.6	Pass
		Torque Arm Top@150	L3x3x1/4	486	9062.17	46656.00	19.4	Pass
		Torque Arm Bottom@150	L3x3x1/4	477	-11374.50	41632.70	27.3	Pass
T4	**140 - 120**	**Leg**	**ROHN 2.5 STD**	**129**	**-41742.60**	**66607.20**	**62.7**	**Pass**
		Diagonal	P1x.179	137	-4696.11	15198.50	30.9	Pass
		Horizontal	P1x.179	157	813.05	20697.90	3.9	Pass
		Top Girt	P1x.179	131	-723.00	18453.00	3.9	Pass
		Bottom Girt	P1x.179	134	1250.10	20697.90	6.0	Pass
T5	**120 - 100**	**Leg**	**ROHN 2.5 STD**	**171**	**-53432.00**	**66785.10**	**80.0**	**Pass**
		Diagonal	P1x.179	186	-6677.58	15198.50	43.9	Pass
		Horizontal	P1x.179	194	-925.47	18453.00	5.0	Pass
		Top Girt	P1x.179	173	1173.73	20697.90	5.7	Pass
		Bottom Girt	P1x.179	175	-4271.98	18453.00	23.2	Pass
		Guy A@100.25	7/16	502	7552.46	12480.00	60.5	Pass
		Guy B@100.25	7/16	496	7485.98	12480.00	60.0	Pass
		Guy C@100.25	7/16	491	7550.34	12480.00	60.5	Pass
		Torque Arm Top@100.25	L3x3x1/4	492	7545.90	46656.00	16.2	Pass
		Torque Arm Bottom@100.25	L3x3x1/4	500	-5635.54	38235.20	14.7	Pass
T6	**100 - 80**	**Leg**	**ROHN 2.5 STD**	**213**	**-53434.00**	**66723.10**	**80.1**	**Pass**
		Diagonal	P1x.179	251	-7550.56	15198.50	49.7	Pass
		Horizontal	P1x.179	247	2175.23	20697.90	10.5	Pass
		Top Girt	P1x.179	215	2922.17	20697.90	14.1	Pass
		Bottom Girt	P1x.179	218	-925.50	18453.00	5.0	Pass
T7	**80 - 60**	**Leg**	**ROHN 2.5 STD**	**255**	**-42561.00**	**66076.80**	**64.4**	**Pass**
		Diagonal	P1x.179	264	-2472.73	15198.50	16.3	Pass
		Horizontal	P1x.179	291	847.02	20697.90	4.1	Pass
		Top Girt	P1x.179	257	-737.18	18453.00	4.0	Pass
		Bottom Girt	P1x.179	260	-737.18	18453.00	4.0	Pass
T8	**60 - 40**	**Leg**	**ROHN 2.5 STD**	**297**	**-48859.30**	**66351.90**	**73.6**	**Pass**
		Diagonal	P1x.179	318	-7920.69	15198.50	52.1	Pass

Section No.	Elevation ft	Component Type	Size	Critical Element	P lb	ϕP_{allow} lb	% Capacity	Pass Fail
		Horizontal	P1x.179	319	4594.58	20697.90	22.2	Pass
		Top Girt	P1x.179	299	-846.27	18453.00	4.6	Pass
		Bottom Girt	P1x.179	302	-846.27	18453.00	4.6	Pass
		Guy A@50	7/16	520	4731.48	12480.00	37.9	Pass
		Guy B@50	7/16	514	4497.27	12480.00	36.0	Pass
		Guy C@50	7/16	508	4542.42	12480.00	36.4	Pass
		Torque Arm Top@50	L3x3x1/4	511	4861.29	46656.00	10.4	Pass
		Torque Arm Bottom@50	L3x3x1/4	524	-3568.07	41632.70	8.6	Pass
T9	**40 - 20**	**Leg**	**ROHN 2.5 STD**	**339**	**-40718.60**	**64232.30**	**63.4**	**Pass**
		Diagonal	P1x.179	372	-3291.48	15198.50	21.7	Pass
		Horizontal	P1x.179	356	975.61	20697.90	4.7	Pass
		Top Girt	P1x.179	341	858.65	20697.90	4.1	Pass
		Bottom Girt	P1x.179	344	-705.27	18453.00	3.8	Pass
T10	**20 - 6.5**	**Leg**	**ROHN 2.5 STD**	**381**	**-40722.10**	**64232.20**	**63.4**	**Pass**
		Diagonal	P1x.179	401	-2015.98	15198.50	13.3	Pass
		Horizontal	P1x.179	398	923.18	20697.90	4.5	Pass
		Top Girt	P1x.179	383	-705.33	18453.00	3.8	Pass
		Bottom Girt	P1x.179	386	1685.23	20697.90	8.1	Pass
T11	**6.5 - 3.25**	**Leg**	**ROHN 2.5 STD**	**411**	**-41400.10**	**64187.50**	**64.5**	**Pass**
		Diagonal	P1x.179	418	-1357.37	16585.70	8.2	Pass
		Horizontal	P1x.179	413	3895.58	20697.90	18.8	Pass
		Bottom Girt	P1x.179	415	909.30	20697.90	4.4	Pass
T12	**3.25 - 0**	**Leg**	**ROHN 2.5 STD**	**423**	**-40831.20**	**64560.60**	**63.2**	**Pass**
		Diagonal	P1x.179	433	-8553.05	20626.60	41.5	Pass
		Horizontal	4x3/8	437	6889.15	48600.00	14.2	Pass
		Top Girt	4x3/8	425	2352.30	48600.00	4.8	Pass
							Summary	
							Leg (T6) 80.1	Pass
							Diagonal (T3) 68.9	Pass
							Horizontal (T3) 30.9	Pass
							Top Girt (T1) 14.3	Pass
							Bottom Girt (T5) 23.2	Pass
							Guy A (T3) 82.9	Pass
							Guy B (T3) 81.0	Pass
							Guy C (T3) 81.6	Pass
							Torque Arm Top (T3) 19.4	Pass
							Torque Arm Bottom (T3) 27.3	Pass
							Bolt Checks 32.3	Pass
							RATING = 82.9	**Pass**

Paul J. Ford and Company
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Post-Mod Antenna Mount Analysis Report and PMI Requirements

Mount Fix

SMART Tool Project #: 10094053

Paul J. Ford Project #: 22721-0344.002.8191

Maser Consulting Project #: 21781066

September 8, 2021

Site Information	*Site ID:*	*468186-VZW / NAUGATUCK CT RELO*
	Site Name:	*NAUGATUCK CT RELO*
	Carrier Name:	*Verizon Wireless*
	Address:	*37 Peach Orchard Rd Prospect, Connecticut 06712, New Haven County*
	Latitude:	*41.518611°*
	Longitude:	*-73.016667°*
Structure Information	*Tower Type:*	*200-Ft Guyed*
	Mount Type:	*12.50-Ft Sector Frame*

FUZE ID # 16486414

Analysis Results

12.50-Ft Sector Frame: **68.3% 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

Report Prepared By: Jacob Mengelkamp

STATE OF CONNECTICUT
JUSTIN T. KLINE
No. 30301
LICENSED PROFESSIONAL ENGINEER

2021.09.13
11:08:30-04'00'

Executive Summary:

The objective of this report is to summarize the analysis results of the antenna support mount including the proposed modifications at the subject facility for the final wireless telecommunications configuration, per the applicable codes and standards.

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

Sources of Information:

Document Type	Remarks
Radio Frequency Data Sheet (RFDS)	*Verizon RFDS, 16486414, dated August 4, 2021*
Previous Mount Analysis Report	*Paul J. Ford, Project # 22721-0344.001.8190, dated August 4, 2021*
Proposed Mount Modification	*Paul J. Ford, Project # 22721-0344.002.8191, dated August 12, 2021*
Mount Mapping Report	*Hudson Design Group, LLC., Project # 468186, dated July 20, 2021*

Analysis Criteria:

Codes and Standards:	ANSI/TIA-222-H	
Wind Parameters:	Basic Wind Speed (Ultimate 3-sec. Gust), V_{ULT}:	118 mph
	Ice Wind Speed (3-sec. Gust):	50 mph
	Design Ice Thickness:	1.00 in
	Risk Category:	II
	Exposure Category:	C
	Topographic Category:	4
	Topographic Feature Considered:	Flat Topped Ridge
	Topographic Method:	Method 2
	Ground Elevation Factor, K_e:	0.972
Seismic Parameters:	S_S:	0.196
	S_1:	0.054
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 mounts:

Mount Elevation (ft)	Equipment Elevation (ft)	Quantity	Manufacturer	Model	Status
153.75 ±	155.00	6	Commscope	NHH-65B-R2B	Added
		3	Commscope	BSAMNT-SBS-1-2	
		3	Samsung	MT6407-77A	
		3	Samsung	RF4439d-25A	
		3	Samsung	RF4440d-13A	
		1	Raycap	OVP-12*	
		3	Andrew	LNX-6514DS-VTM	Retained

*Equipment is to be flush mounted directly to Guyed tower. It is not mounted on the Sector Frame mounts and is not included in this mount analysis.

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

Model Number	Ports	AKA
RHSDC-1064-PF-48	2	OVP-2
RC3DC-3315-PF-48	6	OVP-6
RC3DC-3300-PF-48	6	OVP-6
RC3DC-4750-PF-48	6	OVP-6
RHSDC-6627-PF-48	12	OVP-12
RHSDC-6600-PF-48	12	OVP-12

Standard Conditions:

1. 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.

3. 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 — ASTM A36 (Gr. 36)
   - HSS (Rectangular) — ASTM 500 (Gr. B-46)
   - Pipe — ASTM A53 (Gr. B-35)
   - Threaded Rod — F1554 (Gr. 36)
   - Bolts — ASTM A325

8. Any mount modifications listed under Sources of Information are assumed to have been installed per the design specifications.

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

Analysis Results:

Component	Utilization %	Pass/Fail
Face Horizontals	*68.3%*	*Pass*
Standoff Members	*41.1%*	*Pass*
Tie Backs	*31.3%*	*Pass*
Bracing Members	*29.7%*	*Pass*
Mount Pipes	*55.3%*	*Pass*
Mount to Tower Connection	*42.1%*	*Pass*

Structure Rating – *(Controlling Utilization of all Components)*	**66.7%**

Recommendation:

The existing mounts will be **SUFFICIENT** for the final loading after the proposed modifications are successfully completed.

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 Mapping Report (for reference only)
3. Analysis Calculations
4. **Contractor Required PMI Report Deliverables**
5. Antenna Placement Diagrams

V4.0 Updated on 3-31-2021

Antenna Mount Mapping Form (PATENT PENDING)

FCC # 1063268

Tower Owner:	OTHER	**Mapping Date:**	7/20/2021
Site Name:	NAUGATUCK CT RELO	**Tower Type:**	Guyed Tower
Site Number or ID:	468186	**Tower Height (Ft.):**	200
Mapping Contractor:	HUDSON DESIGN GROUP, LLC.	**Mount Elevation (Ft.):**	153.75

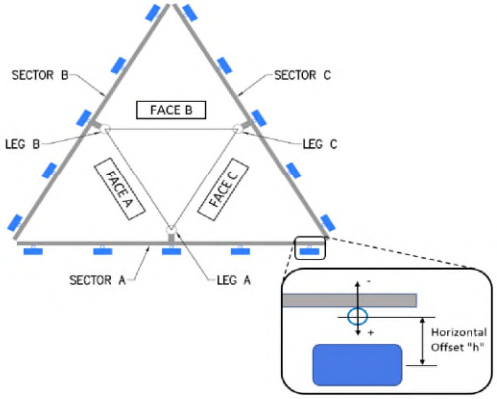
Please insert the sketches of the antenna mount from the "Sketches" tab with dimensions and members here.

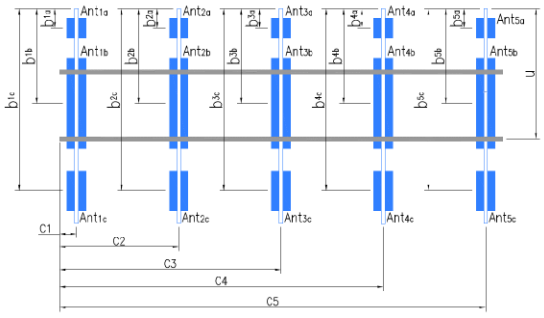
Mount Pipe Configuration and Geometries [Unit = Inches]

Sector / Position	Mount Pipe Size & Length	Vertical Offset Dimension "u"	Horizontal Offset "C1, C2, C3, etc."	Sector / Position	Mount Pipe Size & Length	Vertical Offset Dimension "u"	Horizontal Offset "C1, C2, C3, etc."
A1	2" STD. PIPE X 84" LONG	64.00	4.00	C1	2" STD. PIPE X 84" LONG	64.00	4.00
A2	2" STD. PIPE X 84" LONG	64.00	52.00	C2	2" STD. PIPE X 84" LONG	64.00	52.00
A3	2" STD. PIPE X 84" LONG	64.00	98.00	C3	2" STD. PIPE X 84" LONG	64.00	98.00
A4	2" STD. PIPE X 84" LONG	64.00	146.00	C4	2" STD. PIPE X 84" LONG	64.00	146.00
A5				C5			
A6				C6			
B1	2" STD. PIPE X 84" LONG	64.00	4.00	D1			
B2	2" STD. PIPE X 84" LONG	64.00	52.00	D2			
B3	2" STD. PIPE X 84" LONG	64.00	98.00	D3			
B4	2" STD. PIPE X 84" LONG	64.00	146.00	D4			
B5				D5			
B6				D6			

Distance between bottom rail and mount CL elevation (dim d). Unit is inches. See 'Mount Elev Ref' tab for details. :	16.00
Distance from top of bottom support rail to lowest tip of ant./eqpt. of Carrier above. (N/A if > 10 ft.) :	
Distance from top of bottom support rail to highest tip of ant./eqpt. of Carrier below. (N/A if > 10 ft.) :	2.1
Please enter additional infomation or comments below.	

Tower Face Width at Mount Elev. (ft.):	2.25	Tower Leg Size or Pole Shaft Diameter at Mount Elev. (in.):	3
For T-Arms/Platforms on monopoles, report the weld size from the main standoff to the plate bolting into the collar mount.			





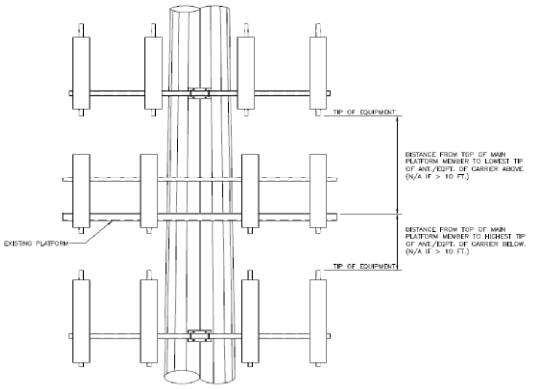
Antenna Layout (Looking Out From Tower)

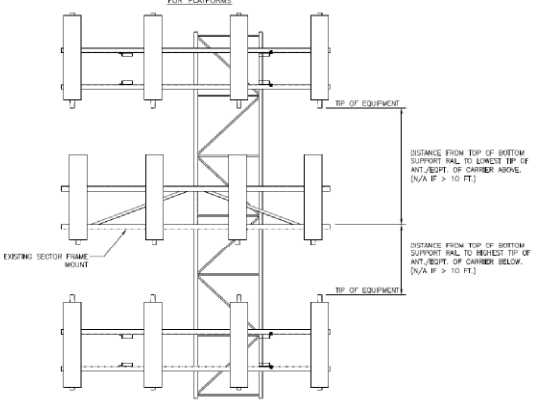
Ants. Items	Enter antenna model. If not labeled, enter "Unknown". Antenna Models if Known	Width (in.)	Depth (in.)	Height (in.)	Coax Size and Qty	Antenna Center-line (Ft.)	Mounting Locations [Units are inches and degrees] Vertical Distances"b_{1a}, b_{2a}, b_{3a}, b_{1b}...." (Inches)	Horiz. Offset "h" (Use "-" if Ant. is behind)	Antenna Azimuth (Degrees)	Photos of antennas Photo Numbers
Sector A										
Ant_{1a}										
Ant_{1b}	HBX-6517DS-VTM	7.00	4.00	75.00		154.167	43.00	5.50	30.00	14,114
Ant_{1c}										
Ant_{2a}										
Ant_{2b}	UNKNOWN	12.00	8.00	73.00		154.333	41.00	13.00	30.00	15,116
Ant_{2c}										
Ant_{3a}										
Ant_{3b}	HBX-6517DS-VTM	7.00	4.00	75.00		154.167	43.00	5.50	30.00	16,114
Ant_{3c}										
Ant_{4a}										
Ant_{4b}	UNKNOWN	12.00	8.00	73.00		154.333	41.00	10.00	30.00	17,116
Ant_{4c}										
Ant_{5a}										
Ant_{5b}										
Ant_{5c}										
Ant on Standoff										
Ant on Standoff										
Ant on Tower										
Ant on Tower										

Mount Azimuth (Degree) for Each Sector				Tower Leg Azimuth (Degree) for Each Sector	
Sector A:	30.00	Deg	Leg A:	65.00	Deg
Sector B:	150.00	Deg	Leg B:	185.00	Deg
Sector C:	280.00	Deg	Leg C:	305.00	Deg
Sector D:		Deg	Leg D:		Deg

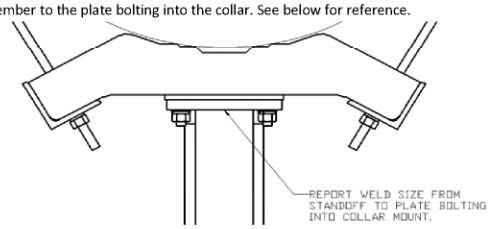
Climbing Facility Information		
Location:	305.00 Deg	N/A
Climbing Facility	Corrosion Type:	Good condition.
	Access:	N/A
	Condition:	Missing safety cable.

Please insert a photo of the mount centerline measurement here.





For T-Arms/Platforms on monopoles, record the weld size from the main standoff member to the plate bolting into the collar. See below for reference.



Sector B										
Ant_{1a}										
Ant_{1b}	HBX-6517DS-VTM	7.00	4.00	75.00		154.167	43.00	5.50	150.00	22,114
Ant_{1c}										
Ant_{2a}										
Ant_{2b}	UNKNOWN	12.00	8.00	73.00		154.333	41.00	13.00	150.00	24,114
Ant_{2c}										
Ant_{3a}										
Ant_{3b}	HBX-6517DS-VTM	7.00	4.00	75.00		154.167	43.00	5.50	150.00	26,114
Ant_{3c}										
Ant_{4a}										
Ant_{4b}	UNKNOWN	12.00	8.00	73.00		154.333	41.00	10.00	150.00	26,116
Ant_{4c}										
Ant_{5a}										
Ant_{5b}										
Ant_{5c}										
Ant on Standoff										
Ant on Standoff										
Ant on Tower										
Ant on Tower										
Sector C										
Ant_{1a}										
Ant_{1b}	HBX-6517DS-VTM	7.00	4.00	75.00		154.167	43.00	5.50	280.00	32,114
Ant_{1c}										
Ant_{2a}										
Ant_{2b}	UNKNOWN	12.00	8.00	73.00		154.333	41.00	13.00	280.00	34,116
Ant_{2c}										
Ant_{3a}										
Ant_{3b}	HBX-6517DS-VTM	7.00	4.00	75.00		154.167	43.00	5.50	280.00	35,114
Ant_{3c}										
Ant_{4a}										
Ant_{4b}	UNKNOWN	12.00	8.00	73.00		154.333	41.00	10.00	280.00	36,116
Ant_{4c}										
Ant_{5a}										
Ant_{5b}										
Ant_{5c}										
Ant on Standoff										
Ant on Standoff										
Ant on Tower										
Ant on Tower										
Sector D										
Ant_{1a}										
Ant_{1b}										
Ant_{1c}										
Ant_{2a}										
Ant_{2b}										
Ant_{2c}										
Ant_{3a}										
Ant_{3b}										
Ant_{3c}										
Ant_{4a}										
Ant_{4b}										
Ant_{4c}										
Ant_{5a}										
Ant_{5b}										
Ant_{5c}										
Ant on Standoff										
Ant on Standoff										
Ant on Tower										
Ant on Tower										

Observed Safety and Structural Issues During the Mount Mapping		
Issue #	Description of Issue	Photo #
1	NO SAFETY CLIMB CABLE VISABLE	18,25,34
2		
3		
4		
5		
6		
7		
8		

Observed Obstructions to Tower Lighting System					
If the tower lighting system is being obstructed by the carrier's equipment (for example: a light nested by the antennas), please provide photos and fill in the information below.					Photo #
Description of Obstruction:					
Type of Light:		Photo #		Additional Comments:	
Lighting Technology:		Photo #			
Elevation (AGL) at base of light (Ft.):		Photo #			
Is a service loop available?		Photo #			
Is beacon installed on an extension?		Photo #			

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

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

V4.0 Updated on 3-31-2021

Antenna Mount Mapping Form (PATENT PENDING)

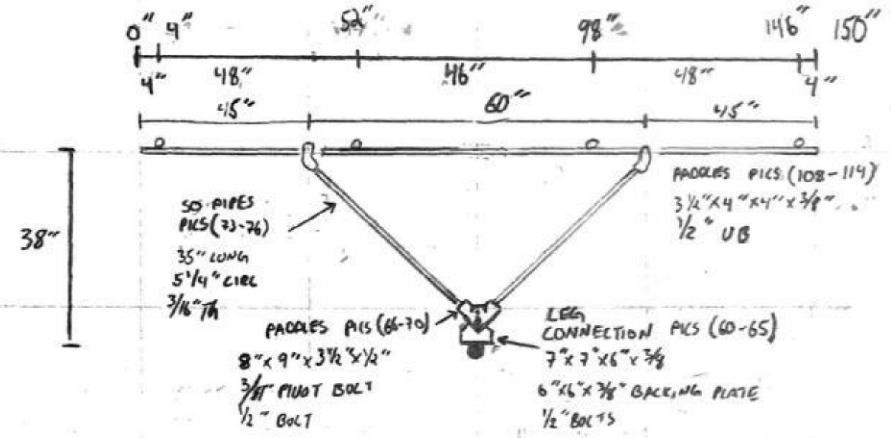
FCC # 1063268

Tower Owner:	OTHER	**Mapping Date:**	7/20/2021
Site Name:	NAUGATUCK CT RELO	**Tower Type:**	Guyed Tower
Site Number or ID:	468186	**Tower Height (Ft.):**	200
Mapping Contractor:	HUDSON DESIGN GROUP, LLC.	**Mount Elevation (Ft.):**	153.75

Please Insert Sketches of the Antenna Mount

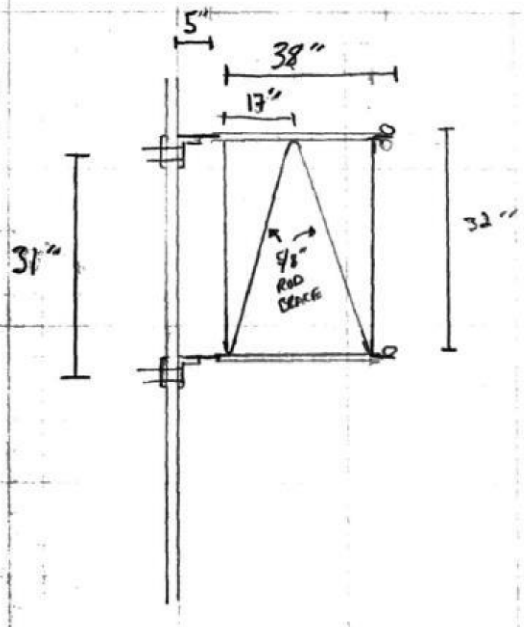
DATE: 07202021
Project Name: COLCIFERS
Project No.: NAUGATUCK CT RELO
Design By: [illegible] Chk'd By: _____ Page 2 of 2

HUDSON Design Group LLC
45 BEECHWOOD DRIVE, NORTH ANDOVER, MA 01845
TEL: (978) 557-5553 FAX: (978) 336-5586

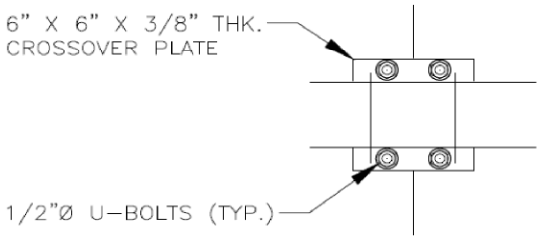


CROSSOVER PLATES
6" x 6" x 3/8"
1/2" UB

STIFF ARMS
5 1/2" CIRC
3/16" TH
MOUNTED POS. 4' HIGH TO CLOCK WISE LEG
* ALPHA STIFF ARM IS DISCONNECTED. IT LOOKS LIKE ALPHA MAY HAVE SWUNG INTO GAMMA PICS (13, 17, 126-129)



Please Insert Sketches of the Antenna Mount, cont'd



CROSSOVER PLATE DETAIL

V4.0 Updated on 3-31-2021

Antenna Mount Mapping Form (PATENT PENDING)

FCC #
1063268

Tower Owner:	OTHER	**Mapping Date:**	7/20/2021
Site Name:	NAUGATUCK CT RELO	**Tower Type:**	Guyed Tower
Site Number or ID:	468186	**Tower Height (Ft.):**	200
Mapping Contractor:	HUDSON DESIGN GROUP, LLC.	**Mount Elevation (Ft.):**	153.75

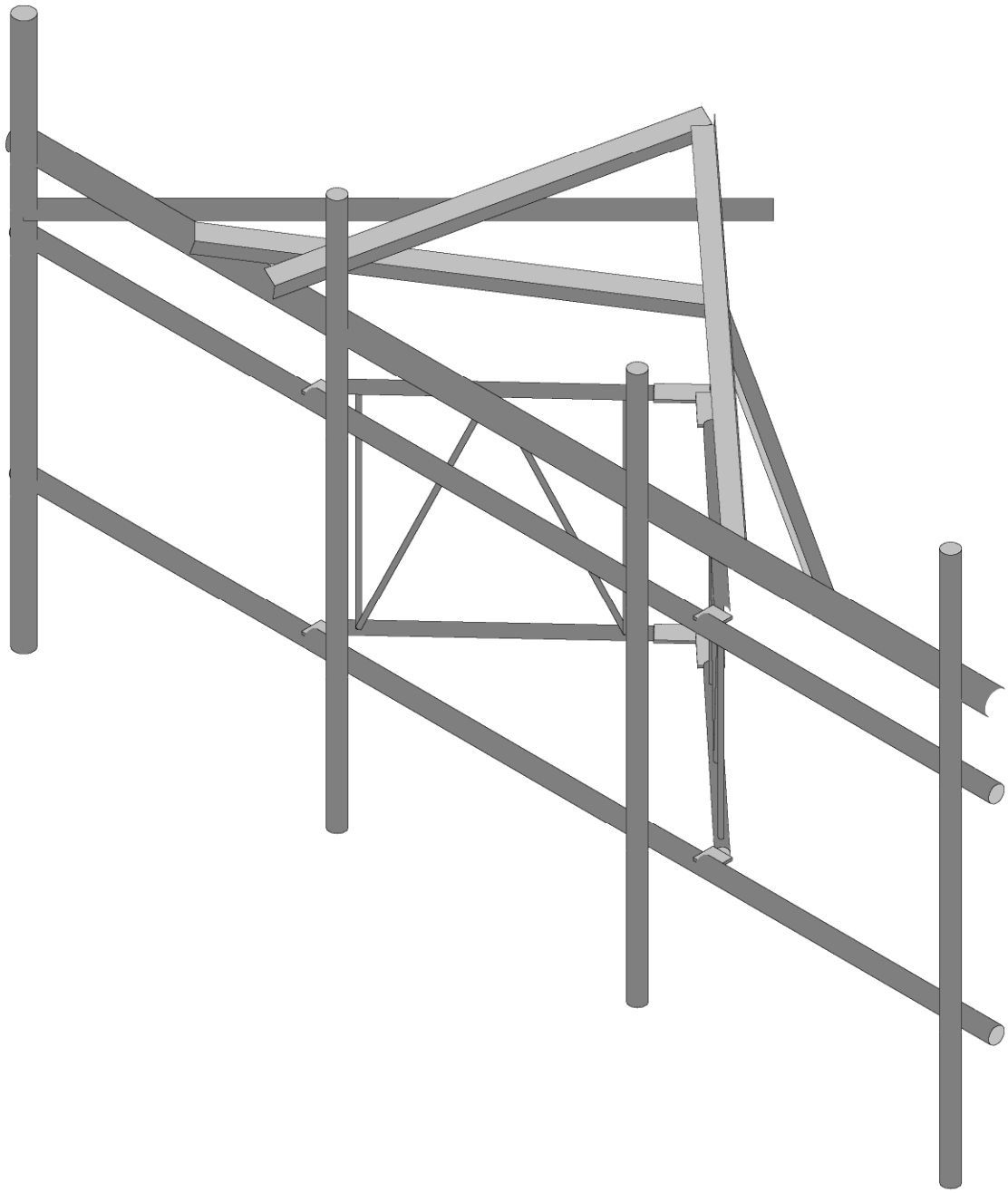
Please enter information about transmission lines.

Transmission Line Type (Pick from List)	Quantity	Diameter/Size (in.) Please add a description if using type "Other".	Located on Tower Face	Photo #	Additional Comments
All Sectors					
Coax	6	1-5/8"Ø	C-A	2,43,46	ATTACHED TO TOWER LEG A
Hybrid	2	1-1/2"Ø	C-A	2,43,46	ATTACHED TO TOWER LEG A

Please enter information about additional RF equipment.

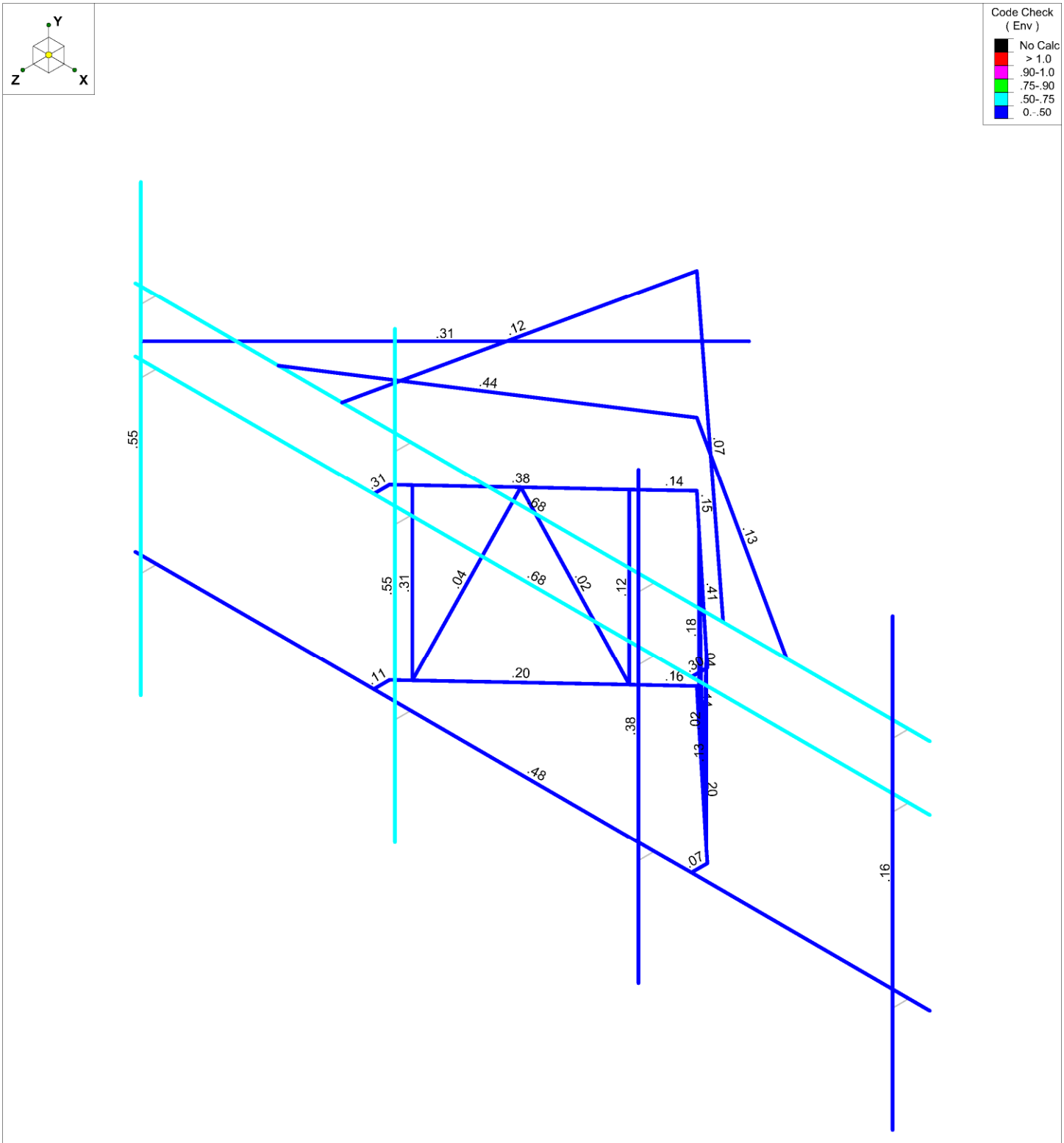
Equipment Type (Pick from List)	Quantity	Model Numbers if Known	Width (in.)	Depth (in.)	Height (in.)	Location	Photo #	Additional Comments
Sector A								
RRU	1	9442 RRH2X40-AWS	8.00	5.00	12.00	MOUNTED TO STANDOFF	118,130	
RRU	1	700 MRRH	16.00	10.00	16.00	MOUNTED TO STANDOFF	130,144	
OVP	1	RC3DC-3315-PF-48	15.00	10.00	28.00	MOUNTED TO TOWER LEG	133,134	2-1/8"Ø X 24" LONG PIPE, U=54"
Sector B								
RRU	1	9442 RRH2X40-AWS	8.00	5.00	12.00	MOUNTED TO STANDOFF	118,123	
RRU	1	700 MRRH	16.00	10.00	16.00	MOUNTED TO STANDOFF	123,144	
OVP	1	RC3DC-3315-PF-48	15.00	10.00	28.00	MOUNTED TO TOWER LEG	25,134	2-1/8"Ø X 24" LONG PIPE, U=54"
Sector C								
RRU	1	9442 RRH2X40-AWS	8.00	5.00	12.00	MOUNTED TO STANDOFF	118,127	
RRU	1	700 MRRH	16.00	10.00	16.00	MOUNTED TO STANDOFF	127,144	

Equipment Type (Pick from List)	Quantity	Model Numbers if Known	Width (in.)	Depth (in.)	Height (in.)	Location	Photo #	Additional Comments
Sector D								
Ground Equipment								



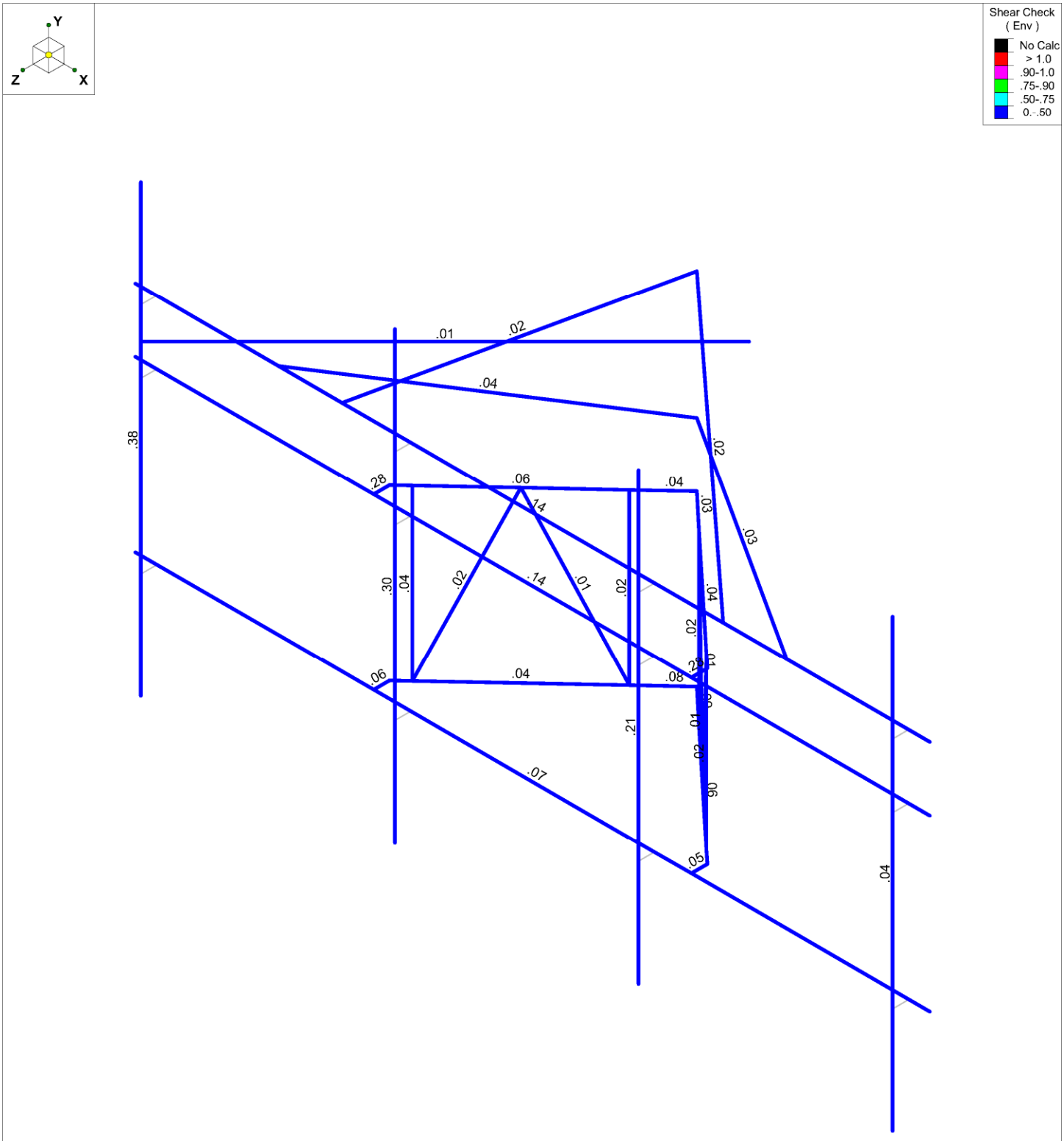
Envelope Only Solution

Paul J. Ford	468186-VZW_MT_LOT_SectorA_H	SK - 1
JRM		Sept 8, 2021 at 3:46 PM
Project No. 10094053		468186-VZW_MT_LOT_A_H.r3d



Member Code Checks Displayed (Enveloped)
Envelope Only Solution

Paul J. Ford	468186-VZW_MT_LOT_SectorA_H	SK - 2
JRM		Sept 8, 2021 at 3:46 PM
Project No. 10094053		468186-VZW_MT_LOT_A_H.r3d



Member Shear Checks Displayed (Enveloped)
Envelope Only Solution

Paul J. Ford	468186-VZW_MT_LOT_SectorA_H	SK - 3
JRM		Sept 8, 2021 at 3:46 PM
Project No. 10094053		468186-VZW_MT_LOT_A_H.r3d

(Global) Model Settings

Display Sections for Member Calcs	5
Max Internal Sections for Member Calcs	97
Include Shear Deformation?	Yes
Increase Nailing Capacity for Wind?	Yes
Include Warping?	Yes
Trans Load Btwn Intersecting Wood Wall?	Yes
Area Load Mesh (in^2)	144
Merge Tolerance (in)	.12
P-Delta Analysis Tolerance	0.50%
Include P-Delta for Walls?	Yes
Automatically Iterate Stiffness for Walls?	No
Max Iterations for Wall Stiffness	3
Gravity Acceleration (ft/sec^2)	386.4
Wall Mesh Size (in)	12
Eigensolution Convergence Tol. (1.E-)	4
Vertical Axis	Y
Global Member Orientation Plane	XZ
Static Solver	Sparse Accelerated
Dynamic Solver	Accelerated Solver

Hot Rolled Steel Code	AISC 15th(360-16): LRFD
Adjust Stiffness?	Yes(Iterative)
RISAConnection Code	None
Cold Formed Steel Code	None
Wood Code	None
Wood Temperature	< 100F
Concrete Code	None
Masonry Code	None
Aluminum Code	None - Building
Stainless Steel Code	None

Number of Shear Regions	4
Region Spacing Increment (in)	4
Biaxial Column Method	Exact Integration
Parme Beta Factor (PCA)	.65
Concrete Stress Block	Rectangular
Use Cracked Sections?	No
Use Cracked Sections Slab?	Yes
Bad Framing Warnings?	No
Unused Force Warnings?	No
Min 1 Bar Diam. Spacing?	No
Concrete Rebar Set	REBAR_SET_ASTMA615
Min % Steel for Column	1
Max % Steel for Column	0

(Global) Model Settings, Continued

Seismic Code	None
Seismic Base Elevation (ft)	Not Entered
Add Base Weight?	No
Ct X	0
Ct Z	0
T X (sec)	Not Entered
T Z (sec)	Not Entered
R X	1
R Z	1

Hot Rolled Steel Properties

	Label	E [ksi]	G [ksi]	Nu	Therm (/1...	Density[k/ft^3]	Yield[ksi]	Ry	Fu[ksi]	Rt
1	A53 Gr. B (35 ksi)	29000	11154	.3	.65	.49	35	1.5	60	1.2
2	A500 Gr. B (46ksi)	29000	11154	.3	.65	.49	46	1.5	58	1.2
3	A36 (36ksi)	29000	11154	.3	.65	.49	36	1.5	58	1.2

Member Primary Data

	Label	I Joint	J Joint	K Joint	Rotate...	Section/Shape	Type	Design List	Material	Design Rules
1	MP3A	A4	A1			PIPE_2.0	Colu...	Pipe	A53 Gr. B (...	Typical
2	MP2A	A12	A9			PIPE_2.0	Colu...	Pipe	A53 Gr. B (...	Typical
3	R1	D2	N47A		90	PL3/8x3	None	None	A36 (36ksi)	Typical
4	R2	D1	N48A		90	PL3/8x3	None	None	A36 (36ksi)	Typical
5	MP1A	A16	A13			PIPE_2.0	Colu...	Pipe	A53 Gr. B (...	Typical
6	P1	N45	C2		90	PL3/8x3	None	None	A36 (36ksi)	Typical
7	P2	N46	C1		90	PL3/8x3	None	None	A36 (36ksi)	Typical
8	M29	A3	N50			RIGID	None	None	RIGID	Typical
9	M30	A2	N49			RIGID	None	None	RIGID	Typical
10	M33	A11	N54			RIGID	None	None	RIGID	Typical
11	M34	A10	N53			RIGID	None	None	RIGID	Typical
12	M35	A15	N56			RIGID	None	None	RIGID	Typical
13	M36	A14	N55			RIGID	None	None	RIGID	Typical
14	MP4A	N82	N79A			PIPE_2.5	Colu...	Pipe	A53 Gr. B (...	Typical
15	M51A	N81	N84			RIGID	None	None	RIGID	Typical
16	M52	N80A	N83			RIGID	None	None	RIGID	Typical
17	M37	B3	B4			PIPE_2.0	None	None	A53 Gr. B (...	Typical
18	M38	B1	B2			PIPE_2.0	None	None	A53 Gr. B (...	Typical
19	M26	N47A	N45			PIPE_1.25	Beam	Pipe	A53 Gr. B (...	Typical
20	M27	N48A	N46			PIPE_1.25	Beam	Pipe	A53 Gr. B (...	Typical
21	M22	N43	N44			SR_0.625	None	None	A36 (36ksi)	Typical
22	M23	N44	N41			SR_0.625	None	None	A36 (36ksi)	Typical
23	M24	N41	N48B			SR_0.625	None	None	A36 (36ksi)	Typical
24	M25	N48B	N47B			SR_0.625	None	None	A36 (36ksi)	Typical
25	M26A	D2	N51		90	PL3/8x3	None	None	A36 (36ksi)	Typical
26	M27A	D1	N52		90	PL3/8x3	None	None	A36 (36ksi)	Typical
27	M28	N49A	N46A		90	PL3/8x3	None	None	A36 (36ksi)	Typical
28	M29A	N50A	N45A		90	PL3/8x3	None	None	A36 (36ksi)	Typical
29	M30A	N51	N49A			PIPE_1.25	Beam	Pipe	A53 Gr. B (...	Typical
30	M31	N52	N50A			PIPE_1.25	Beam	Pipe	A53 Gr. B (...	Typical
31	M32	N56A	N57			SR_0.625	None	None	A36 (36ksi)	Typical
32	M33A	N56A	N56B			SR_0.625	None	None	A36 (36ksi)	Typical
33	M34A	N56B	N53A			SR_0.625	None	None	A36 (36ksi)	Typical
34	M35A	N54A	N53A			SR_0.625	None	None	A36 (36ksi)	Typical
35	M35B	N55B	N58			PIPE_2.0	None	None	A53 Gr. B (...	Typical
36	M43	N72A	N77			RIGID	None	None	RIGID	Typical
37	M44	N73	N78			RIGID	None	None	RIGID	Typical

Member Primary Data (Continued)

	Label	I Joint	J Joint	K Joint	Rotate...	Section/Shape	Type	Design List	Material	Design Rules
38	M45	N74	N79			RIGID	None	None	RIGID	Typical
39	M46	N80	N81A			RIGID	None	None	RIGID	Typical
40	M47	N75	N76			PIPE_3.0	None	None	A53 Gr. B (...	Typical
41	M48	N82A	N83A			L2.5x2.5x4	None	None	A36 (36ksi)	Typical
42	M49	N84A	N83A		270	L2.5x2.5x4	None	None	A36 (36ksi)	Typical
43	M43A	N72	N73A			L2.5x2.5x4	None	None	A36 (36ksi)	Typical
44	M44A	N74A	N73A			L2.5x2.5x4	None	None	A36 (36ksi)	Typical

Member Advanced Data

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Defl R...	Analysi...	Inactive	Seismic Design Rules
1	MP3A						Yes	** NA **			None
2	MP2A						Yes	** NA **			None
3	R1						Yes	** NA **			None
4	R2						Yes	** NA **			None
5	MP1A						Yes	** NA **			None
6	P1		BenPIN				Yes	** NA **			None
7	P2		BenPIN				Yes	** NA **			None
8	M29						Yes	** NA **		Exclude	None
9	M30						Yes	** NA **		Exclude	None
10	M33						Yes	** NA **		Exclude	None
11	M34						Yes	** NA **		Exclude	None
12	M35						Yes	** NA **		Exclude	None
13	M36						Yes	** NA **		Exclude	None
14	MP4A						Yes	** NA **			None
15	M51A						Yes	** NA **		Exclude	None
16	M52						Yes	** NA **		Exclude	None
17	M37						Yes	** NA **			None
18	M38						Yes	** NA **			None
19	M26						Yes				None
20	M27						Yes				None
21	M22	BenPIN	BenPIN				Yes	** NA **			None
22	M23	BenPIN	BenPIN			Tension...	Yes	** NA **			None
23	M24	BenPIN	BenPIN			Tension...	Yes	** NA **			None
24	M25	BenPIN	BenPIN				Yes	** NA **			None
25	M26A						Yes	** NA **			None
26	M27A						Yes	** NA **			None
27	M28		BenPIN				Yes	** NA **			None
28	M29A		BenPIN				Yes	** NA **			None
29	M30A						Yes				None
30	M31						Yes				None
31	M32	BenPIN	BenPIN				Yes	** NA **			None
32	M33A	BenPIN	BenPIN			Tension...	Yes	** NA **			None
33	M34A	BenPIN	BenPIN			Tension...	Yes	** NA **			None
34	M35A	BenPIN	BenPIN				Yes	** NA **			None
35	M35B	BenPIN					Yes	** NA **			None
36	M43						Yes	** NA **		Exclude	None
37	M44						Yes	** NA **		Exclude	None
38	M45						Yes	** NA **		Exclude	None
39	M46						Yes	** NA **		Exclude	None
40	M47						Yes	** NA **			None
41	M48	BenPIN					Yes	** NA **			None
42	M49	BenPIN					Yes	** NA **			None
43	M43A	BenPIN					Yes	** NA **			None
44	M44A	BenPIN					Yes	** NA **			None

Hot Rolled Steel Design Parameters

	Label	Shape	Length[ft]	Lbyy[ft]	Lbzz[ft]	Lcomp top[ft]	Lcomp bot[ft]	L-torqu...	Kyy	Kzz	Cb	Function
1	MP3A	PIPE_2.0	7			Lbyy						Lateral
2	MP2A	PIPE_2.0	7			Lbyy						Lateral
3	R1	PL3/8x3	.5			Lbyy						Lateral
4	R2	PL3/8x3	.5			Lbyy						Lateral
5	MP1A	PIPE_2.0	7			Lbyy						Lateral
6	P1	PL3/8x3	.25			Lbyy						Lateral
7	P2	PL3/8x3	.25			Lbyy						Lateral
8	MP4A	PIPE_2.5	7			Lbyy						Lateral
9	M37	PIPE_2.0	12.5									Lateral
10	M38	PIPE_2.0	12.5									Lateral
11	M26	PIPE_1.25	2.92			Lbyy						Lateral
12	M27	PIPE_1.25	2.92			Lbyy						Lateral
13	M22	SR_0.625	2.667									Lateral
14	M23	SR_0.625	2.928									Lateral
15	M24	SR_0.625	2.928									Lateral
16	M25	SR_0.625	2.667									Lateral
17	M26A	PL3/8x3	.5			Lbyy						Lateral
18	M27A	PL3/8x3	.5			Lbyy						Lateral
19	M28	PL3/8x3	.25			Lbyy						Lateral
20	M29A	PL3/8x3	.25			Lbyy						Lateral
21	M30A	PIPE_1.25	2.92			Lbyy						Lateral
22	M31	PIPE_1.25	2.92			Lbyy						Lateral
23	M32	SR_0.625	2.667									Lateral
24	M33A	SR_0.625	2.928									Lateral
25	M34A	SR_0.625	2.928									Lateral
26	M35A	SR_0.625	2.667									Lateral
27	M35B	PIPE_2.0	6.77									Lateral
28	M47	PIPE_3.0	12.5									Lateral
29	M48	L2.5x2.5x4	4.435									Lateral
30	M49	L2.5x2.5x4	4.435									Lateral
31	M43A	L2.5x2.5x4	4.762									Lateral
32	M44A	L2.5x2.5x4	4.762									Lateral

Basic Load Cases

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distributed	Area(Me...	Surface(P...
1	Antenna D	None					36			
2	Antenna Di	None					36			
3	Antenna Wo (0 Deg)	None					36			
4	Antenna Wo (30 Deg)	None					36			
5	Antenna Wo (60 Deg)	None					36			
6	Antenna Wo (90 Deg)	None					36			
7	Antenna Wo (120 Deg)	None					36			
8	Antenna Wo (150 Deg)	None					36			
9	Antenna Wo (180 Deg)	None					36			
10	Antenna Wo (210 Deg)	None					36			
11	Antenna Wo (240 Deg)	None					36			
12	Antenna Wo (270 Deg)	None					36			
13	Antenna Wo (300 Deg)	None					36			
14	Antenna Wo (330 Deg)	None					36			
15	Antenna Wi (0 Deg)	None					36			
16	Antenna Wi (30 Deg)	None					36			
17	Antenna Wi (60 Deg)	None					36			
18	Antenna Wi (90 Deg)	None					36			
19	Antenna Wi (120 Deg)	None					36			

Basic Load Cases (Continued)

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distributed	Area(Me...	Surface(P...
20	Antenna Wi (150 Deg)	None					36			
21	Antenna Wi (180 Deg)	None					36			
22	Antenna Wi (210 Deg)	None					36			
23	Antenna Wi (240 Deg)	None					36			
24	Antenna Wi (270 Deg)	None					36			
25	Antenna Wi (300 Deg)	None					36			
26	Antenna Wi (330 Deg)	None					36			
27	Antenna Wm (0 Deg)	None					36			
28	Antenna Wm (30 Deg)	None					36			
29	Antenna Wm (60 Deg)	None					36			
30	Antenna Wm (90 Deg)	None					36			
31	Antenna Wm (120 Deg)	None					36			
32	Antenna Wm (150 Deg)	None					36			
33	Antenna Wm (180 Deg)	None					36			
34	Antenna Wm (210 Deg)	None					36			
35	Antenna Wm (240 Deg)	None					36			
36	Antenna Wm (270 Deg)	None					36			
37	Antenna Wm (300 Deg)	None					36			
38	Antenna Wm (330 Deg)	None					36			
39	Structure D	None		-1						
40	Structure Di	None						32		
41	Structure Wo (0 Deg)	None						64		
42	Structure Wo (30 Deg)	None						64		
43	Structure Wo (60 Deg)	None						64		
44	Structure Wo (90 Deg)	None						64		
45	Structure Wo (120 D...	None						64		
46	Structure Wo (150 D...	None						64		
47	Structure Wo (180 D...	None						64		
48	Structure Wo (210 D...	None						64		
49	Structure Wo (240 D...	None						64		
50	Structure Wo (270 D...	None						64		
51	Structure Wo (300 D...	None						64		
52	Structure Wo (330 D...	None						64		
53	Structure Wi (0 Deg)	None						64		
54	Structure Wi (30 Deg)	None						64		
55	Structure Wi (60 Deg)	None						64		
56	Structure Wi (90 Deg)	None						64		
57	Structure Wi (120 De...	None						64		
58	Structure Wi (150 De...	None						64		
59	Structure Wi (180 De...	None						64		
60	Structure Wi (210 De...	None						64		
61	Structure Wi (240 De...	None						64		
62	Structure Wi (270 De...	None						64		
63	Structure Wi (300 De...	None						64		
64	Structure Wi (330 De...	None						64		
65	Structure Wm (0 Deg)	None						64		
66	Structure Wm (30 De...	None						64		
67	Structure Wm (60 De...	None						64		
68	Structure Wm (90 De...	None						64		
69	Structure Wm (120 D...	None						64		
70	Structure Wm (150 D...	None						64		
71	Structure Wm (180 D...	None						64		
72	Structure Wm (210 D...	None						64		
73	Structure Wm (240 D...	None						64		
74	Structure Wm (270 D...	None						64		
75	Structure Wm (300 D...	None						64		
76	Structure Wm (330 D...	None						64		

Basic Load Cases (Continued)

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distributed	Area(Me...	Surface(P...
77	Lm1	None					1			
78	Lm2	None					1			
79	Lv1	None					1			
80	Lv2	None					1			

Load Combinations

	Description	So...	P...	S...	BLC	Fact..	BLC	Fact..	BLC	Fact..	BLC	Fact..	BLC	Fact..	BLC	Fact..	BLC	Fact..	BLC	Fact..	BLC	Fact..	BLC	Fact..	BLC	Fact...
1	1.2D+1.0Wo (0...	Yes	Y		1	1.2	39	1.2	3	1	41	1														
2	1.2D+1.0Wo (3...	Yes	Y		1	1.2	39	1.2	4	1	42	1														
3	1.2D+1.0Wo (6...	Yes	Y		1	1.2	39	1.2	5	1	43	1														
4	1.2D+1.0Wo (9...	Yes	Y		1	1.2	39	1.2	6	1	44	1														
5	1.2D+1.0Wo (1...	Yes	Y		1	1.2	39	1.2	7	1	45	1														
6	1.2D+1.0Wo (1...	Yes	Y		1	1.2	39	1.2	8	1	46	1														
7	1.2D+1.0Wo (1...	Yes	Y		1	1.2	39	1.2	9	1	47	1														
8	1.2D+1.0Wo (2...	Yes	Y		1	1.2	39	1.2	10	1	48	1														
9	1.2D+1.0Wo (2...	Yes	Y		1	1.2	39	1.2	11	1	49	1														
10	1.2D+1.0Wo (2...	Yes	Y		1	1.2	39	1.2	12	1	50	1														
11	1.2D+1.0Wo (3...	Yes	Y		1	1.2	39	1.2	13	1	51	1														
12	1.2D+1.0Wo (3...	Yes	Y		1	1.2	39	1.2	14	1	52	1														
13	1.2D + 1.0Di + ...	Yes	Y		1	1.2	39	1.2	2	1	40	1	15	1	53	1										
14	1.2D + 1.0Di + ...	Yes	Y		1	1.2	39	1.2	2	1	40	1	16	1	54	1										
15	1.2D + 1.0Di + ...	Yes	Y		1	1.2	39	1.2	2	1	40	1	17	1	55	1										
16	1.2D + 1.0Di + ...	Yes	Y		1	1.2	39	1.2	2	1	40	1	18	1	56	1										
17	1.2D + 1.0Di + ...	Yes	Y		1	1.2	39	1.2	2	1	40	1	19	1	57	1										
18	1.2D + 1.0Di + ...	Yes	Y		1	1.2	39	1.2	2	1	40	1	20	1	58	1										
19	1.2D + 1.0Di + ...	Yes	Y		1	1.2	39	1.2	2	1	40	1	21	1	59	1										
20	1.2D + 1.0Di + ...	Yes	Y		1	1.2	39	1.2	2	1	40	1	22	1	60	1										
21	1.2D + 1.0Di + ...	Yes	Y		1	1.2	39	1.2	2	1	40	1	23	1	61	1										
22	1.2D + 1.0Di + ...	Yes	Y		1	1.2	39	1.2	2	1	40	1	24	1	62	1										
23	1.2D + 1.0Di + ...	Yes	Y		1	1.2	39	1.2	2	1	40	1	25	1	63	1										
24	1.2D + 1.0Di + ...	Yes	Y		1	1.2	39	1.2	2	1	40	1	26	1	64	1										
25	1.2D + 1.5Lm1...	Yes	Y		1	1.2	39	1.2	77	1.5	27	1	65	1												
26	1.2D + 1.5Lm1...	Yes	Y		1	1.2	39	1.2	77	1.5	28	1	66	1												
27	1.2D + 1.5Lm1...	Yes	Y		1	1.2	39	1.2	77	1.5	29	1	67	1												
28	1.2D + 1.5Lm1...	Yes	Y		1	1.2	39	1.2	77	1.5	30	1	68	1												
29	1.2D + 1.5Lm1...	Yes	Y		1	1.2	39	1.2	77	1.5	31	1	69	1												
30	1.2D + 1.5Lm1...	Yes	Y		1	1.2	39	1.2	77	1.5	32	1	70	1												
31	1.2D + 1.5Lm1...	Yes	Y		1	1.2	39	1.2	77	1.5	33	1	71	1												
32	1.2D + 1.5Lm1...	Yes	Y		1	1.2	39	1.2	77	1.5	34	1	72	1												
33	1.2D + 1.5Lm1...	Yes	Y		1	1.2	39	1.2	77	1.5	35	1	73	1												
34	1.2D + 1.5Lm1...	Yes	Y		1	1.2	39	1.2	77	1.5	36	1	74	1												
35	1.2D + 1.5Lm1...	Yes	Y		1	1.2	39	1.2	77	1.5	37	1	75	1												
36	1.2D + 1.5Lm1...	Yes	Y		1	1.2	39	1.2	77	1.5	38	1	76	1												
37	1.2D + 1.5Lm2...	Yes	Y		1	1.2	39	1.2	78	1.5	27	1	65	1												
38	1.2D + 1.5Lm2...	Yes	Y		1	1.2	39	1.2	78	1.5	28	1	66	1												
39	1.2D + 1.5Lm2...	Yes	Y		1	1.2	39	1.2	78	1.5	29	1	67	1												
40	1.2D + 1.5Lm2...	Yes	Y		1	1.2	39	1.2	78	1.5	30	1	68	1												
41	1.2D + 1.5Lm2...	Yes	Y		1	1.2	39	1.2	78	1.5	31	1	69	1												
42	1.2D + 1.5Lm2...	Yes	Y		1	1.2	39	1.2	78	1.5	32	1	70	1												
43	1.2D + 1.5Lm2...	Yes	Y		1	1.2	39	1.2	78	1.5	33	1	71	1												
44	1.2D + 1.5Lm2...	Yes	Y		1	1.2	39	1.2	78	1.5	34	1	72	1												
45	1.2D + 1.5Lm2...	Yes	Y		1	1.2	39	1.2	78	1.5	35	1	73	1												
46	1.2D + 1.5Lm2...	Yes	Y		1	1.2	39	1.2	78	1.5	36	1	74	1												
47	1.2D + 1.5Lm2...	Yes	Y		1	1.2	39	1.2	78	1.5	37	1	75	1												
48	1.2D + 1.5Lm2...	Yes	Y		1	1.2	39	1.2	78	1.5	38	1	76	1												

Load Combinations (Continued)

	Description	So...	P...	S...	BLC	Fact..	BLC	Fact..	BLC	Fact..	BLC	Fact..	BLC	Fact..	BLC	Fact..	BLC	Fact..	BLC	Fact..	BLC	Fact..	BLC	Fact...
49	1.2D + 1.5Lv1	Yes	Y		1	1.2	39	1.2	79	1.5														
50	1.2D + 1.5Lv2	Yes	Y		1	1.2	39	1.2	80	1.5														
51	1.4D	Yes	Y		1	1.4	39	1.4																
52	Seismic Mass		Y		1	1	39	1																
53	1.2D + 1.0Ev +...		Y		1	1.2	39	1.2	SX		SY	1	SZ	-1										
54	1.2D + 1.0Ev +...		Y		1	1.2	39	1.2	SX	.5	SY	1	SZ	-.866										
55	1.2D + 1.0Ev +...		Y		1	1.2	39	1.2	SX	.866	SY	1	SZ	-.5										
56	1.2D + 1.0Ev +...		Y		1	1.2	39	1.2	SX	1	SY	1	SZ											
57	1.2D + 1.0Ev +...		Y		1	1.2	39	1.2	SX	.866	SY	1	SZ	.5										
58	1.2D + 1.0Ev +...		Y		1	1.2	39	1.2	SX	.5	SY	1	SZ	.866										
59	1.2D + 1.0Ev +...		Y		1	1.2	39	1.2	SX		SY	1	SZ	1										
60	1.2D + 1.0Ev +...		Y		1	1.2	39	1.2	SX	-.5	SY	1	SZ	.866										
61	1.2D + 1.0Ev +...		Y		1	1.2	39	1.2	SX	-.866	SY	1	SZ	.5										
62	1.2D + 1.0Ev +...		Y		1	1.2	39	1.2	SX	-1	SY	1	SZ											
63	1.2D + 1.0Ev +...		Y		1	1.2	39	1.2	SX	-.866	SY	1	SZ	-.5										
64	1.2D + 1.0Ev +...		Y		1	1.2	39	1.2	SX	-.5	SY	1	SZ	-.866										

Envelope Joint Reactions

	Joint		X [lb]	LC	Y [lb]	LC	Z [lb]	LC	MX [k-ft]	LC	MY [k-ft]	LC	MZ [k-ft]	LC
1	D1	max	502.474	9	241.53	12	823.556	2	0	51	0	51	0	51
2		min	-536.635	3	-4.054	6	-864.214	8	0	1	0	1	0	1
3	D2	max	101.779	12	65.549	20	2200.071	12	0	51	0	51	0	51
4		min	-485.179	42	-88.716	6	-1463.023	6	0	1	0	1	0	1
5	N56C	max	0	51	0	51	0	51	0	51	0	51	0	51
6		min	0	1	0	1	0	1	0	1	0	1	0	1
7	N57A	max	0	51	0	51	0	51	0	51	0	51	0	51
8		min	0	1	0	1	0	1	0	1	0	1	0	1
9	N58	max	3475.764	6	37.887	18	3562.376	12	0	51	0	51	0	51
10		min	-3559.706	12	4.415	12	-3598.193	6	0	1	0	1	0	1
11	N83A	max	2387.056	42	2147.849	18	-738.159	12	0	51	0	51	0	51
12		min	-682.437	12	643.492	12	-2714.68	18	0	1	0	1	0	1
13	N73A	max	5726.06	11	64.004	23	3905.177	5	0	51	0	51	0	51
14		min	-6446.626	5	18.967	41	-2466.765	11	0	1	0	1	0	1
15	Totals:	max	2421.597	11	2428.941	18	3998.971	1						
16		min	-2421.586	5	955.57	12	-3998.974	7						

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

	Member	Shape	Code Check	Lo...	LC	Shear Check	Lo...	...	LC	phi*P...	phi*P...	phi*M...	phi*M...	...	Eqn
1	M37	PIPE_2.0	.683	4.2...	6	.139	8.7...		12	6295...	32130	1.872	1.872	...	H1-1a
2	M47	PIPE_3.0	.677	2.2...	5	.138	.391		12	2825...	65205	5.749	5.749	...	H1-1b
3	MP3A	PIPE_2.0	.553	2.6...	12	.299	2.6...		12	1785...	32130	1.872	1.872	...	H1-1b
4	MP4A	PIPE_2.5	.553	2.1...	12	.380	2.1...		12	3396...	50715	3.596	3.596	...	H1-1b
5	M38	PIPE_2.0	.478	3.7...	11	.069	3.7...		8	6295...	32130	1.872	1.872	...	H1-1b
6	M43A	L2.5x2....	.442	2.1...	5	.043	4.7...	z	12	1839...	38556	1.114	2.28	...	H2-1
7	M30A	PIPE_1....	.411	2.92	12	.040	2.6...		12	1590...	1968...	.801	.801	...	H1-1b
8	M26	PIPE_1....	.384	2.92	12	.060	1.46		12	1590...	1968...	.801	.801	...	H1-1b
9	MP2A	PIPE_2.0	.382	2.6...	12	.207	1.6...		11	1785...	32130	1.872	1.872	...	H1-1b
10	M35B	PIPE_2.0	.313	3.3...	12	.005	0		12	1854...	32130	1.872	1.872	...	H1-1a
11	M22	SR_0.6...	.311	1.3...	12	.036	2.6...		11	1652...	9940....	.104	.104	...	H1-1a
12	P1	PL3/8x3	.306	0	12	.278	.25	y	12	3500...	36450	.285	2.278	...	H1-1b
13	M28	PL3/8x3	.295	0	12	.284	0	y	12	3500...	36450	.285	2.278	...	H1-1b
14	M27	PIPE_1....	.202	2.92	8	.044	0		12	1590...	1968...	.801	.801	...	H1-1b
15	M31	PIPE_1....	.198	1.46	12	.057	1.4...		12	1590...	1968...	.801	.801	...	H1-1b
16	M35A	SR_0.6...	.176	0	12	.015	2.6...		6	1652...	9940....	.104	.104	...	H1-...

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

	Member	Shape	Code Check	Lo...	LC	Shear Check	Lo...	...	LC	phi*P...	phi*P...	phi*M...	phi*M...	...	Eqn
17	R2	PL3/8x3	.164	.5	12	.084	0	y	24	3100...	36450	.285	2.278	...	H1-1b
18	MP1A	PIPE_2.0	.158	2.6...	12	.044	1.6...		6	1785...	32130	1.872	1.872	...	H1-1b
19	M26A	PL3/8x3	.151	0	12	.025	0	y	17	3100...	36450	.285	2.278	...	H1-1b
20	R1	PL3/8x3	.140	.5	6	.044	0	y	12	3100...	36450	.285	2.278	...	H1-1b
21	M27A	PL3/8x3	.138	.5	12	.085	0	y	12	3100...	36450	.285	2.278	...	H1-1b
22	M32	SR_0.6...	.135	2.6...	12	.016	2.6...		1	1652...	9940...	.104	.104	...	H1-...
23	M44A	L2.5x2....	.128	4.7...	1	.031	4.7...	z	12	1839...	38556	1.114	2.492	...	H2-1
24	M48	L2.5x2....	.117	2.2...	15	.023	4.4...	z	12	2029...	38556	1.114	2.301	...	H2-1
25	M25	SR_0.6...	.117	0	6	.019	0		44	1652...	9940...	.104	.104	...	H1-...
26	P2	PL3/8x3	.114	0	11	.057	0	y	8	3500...	36450	.285	2.278	...	H1-1b
27	M49	L2.5x2....	.071	2.2...	13	.023	0	z	12	2029...	38556	1.114	2.299	...	H2-1
28	M29A	PL3/8x3	.067	0	12	.049	0	y	6	3500...	36450	.285	2.278	...	H1-1b
29	M23	SR_0.6...	.044	2.9...	12	.016	0		2	1370...	9940...	.104	.104	...	H1-...
30	M34A	SR_0.6...	.038	0	12	.010	0		40	1370...	9940...	.104	.104	...	H1-...
31	M24	SR_0.6...	.023	0	6	.010	0		6	1370...	9940...	.104	.104	...	H1-...
32	M33A	SR_0.6...	.020	2.9...	6	.013	0		3	1370...	9940...	.104	.104	...	H1-...

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Job Number:	22721-0344.002.8191
Engineer:	JRM
Date:	9/8/2021
Site Name:	NAUGATUCK CT RELO
Site Number:	468186
Client Project 1:	10094053

Mount to Tower Connection Checks

(Version v5.3 - Effective Date 02/9/2021)

Risa File Path:

Settings

☐ Apply Capcity Normalization Per Section 15.5

Code:	TIA-222-H
Main Check(s) Performed:	Bolts
Consider Epoxy Capacity:	No

Risa-3D Member Reactions

☑ Input Forces Manually

Consider Tie-Backs:	No
Consider Kickers:	No
Consider Horizontal Members Only:	Yes
Analysis Load Case:	ENV
Analysis Member/Node:	N73A
Member Orientation:	
Member Local Rotation:	0

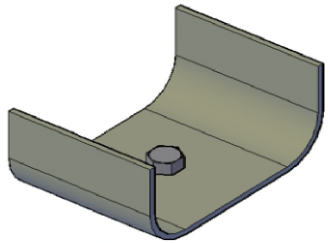
	Shear (kip)	Moment (kip-ft)
Horizontal Direction:	6.447	0.000
Vertical Direction:	3.905	0.000

	Axial (kip)	Torque (kip-ft)
Axial Direction:	0.064	0.000

Note: Axial direction is the bolt longitudinal axis

Bolt Information

Type:	A325-N	
Diameter:	0.75	in
Quantity:	1	
Vertical Spacing (S_{VERT}):		in
Horizontal Spacing (S_{HORZ}):		in



Orientation: Vertical

Analysis Results

42.1% **Pass**

Bolt Capacity 42.1%

Tension:	Applied Load: 0.06 kip Capacity: 29.82 kip	0.2%
Shear:	Applied Load: 7.54 kip Capacity: 17.89 kip	42.1%
Tension-Shear Interaction:	Applied Load: - Capacity: -	OK

Weld Capacity N/A

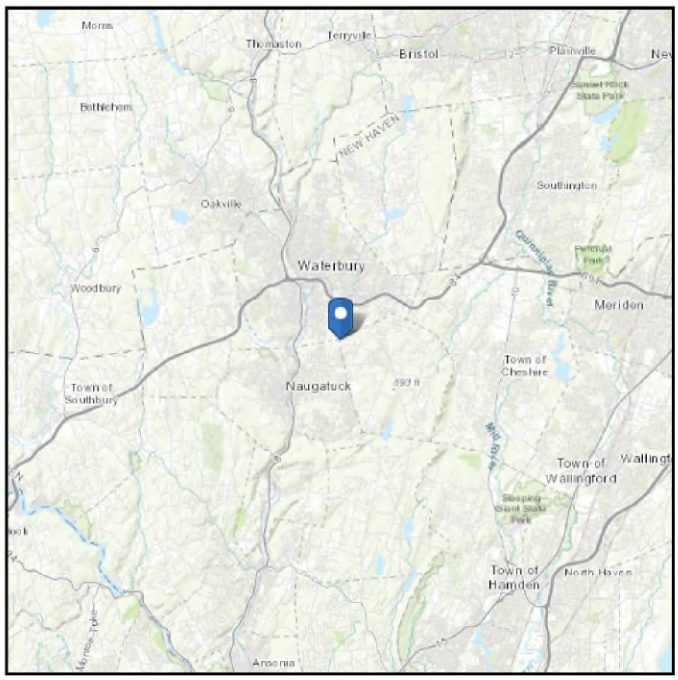
Notes:
1. Connectior is considered pinned, as such no applied moment was considered.
2. Allowable capacity limit is 105%.
3. Calculations are in accordance with TIA-222-H and AISC 15th Ed.
4. Bolt tension reduction not required as tension and/or shear capacity is below 30%.

ASCE 7 Hazards Report

Address:
No Address at This Location

Standard: ASCE/SEI 7-16
Risk Category: II
Soil Class: D - Default (see Section 11.4.3)

Elevation: 786.46 ft (NAVD 88)
Latitude: 41.518611
Longitude: -73.016667



Wind

Results:

Wind Speed:	118 Vmph
10-year MRI	75 Vmph
25-year MRI	84 Vmph
50-year MRI	90 Vmph
100-year MRI	97 Vmph

Data Source:	ASCE/SEI 7-16, Fig. 26.5-1B and Figs. CC.2-1–CC.2-4, and Section 26.5.2
Date Accessed:	Fri Jul 30 2021

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 7-16 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 7-16 Section 26.2. Glazed openings need not be protected against wind-borne debris.

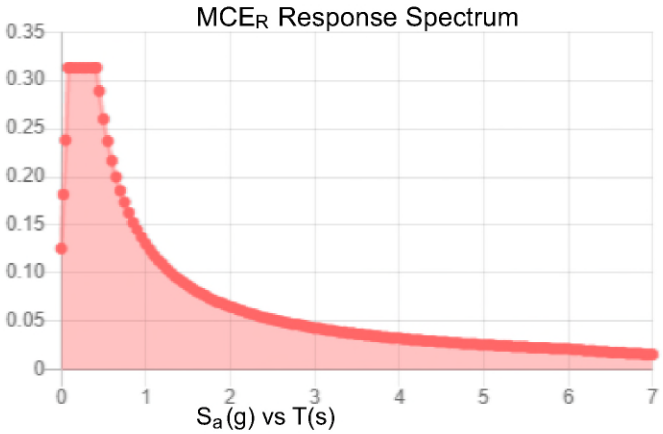
Seismic

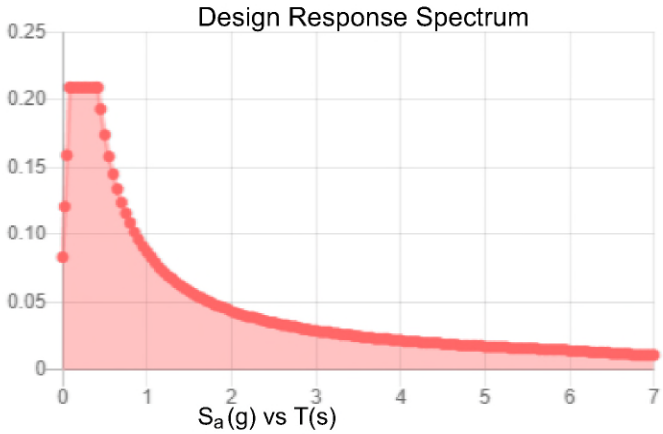
Site Soil Class: D - Default (see Section 11.4.3)

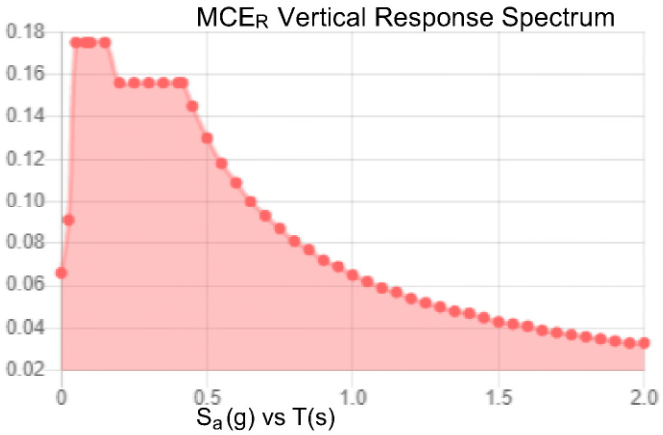
Results:

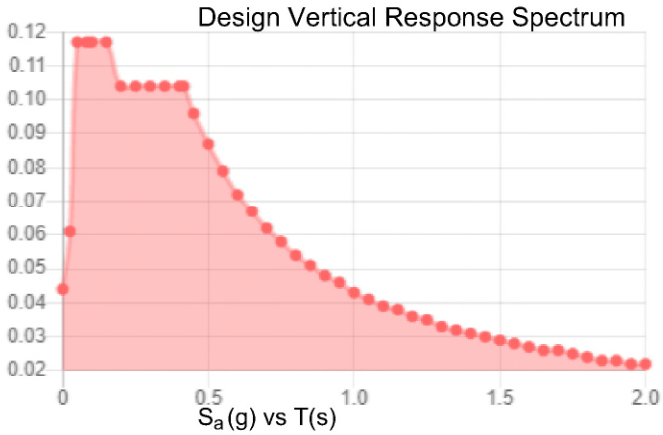
S_S :	0.196	S_{D1} :	0.087
S_1 :	0.054	T_L :	6
F_a :	1.6	PGA :	0.108
F_v :	2.4	PGA_M :	0.171
S_{MS} :	0.313	F_{PGA} :	1.584
S_{M1} :	0.13	I_e :	1
S_{DS} :	0.209	C_v :	0.7

Seismic Design Category B









Data Accessed: Fri Jul 30 2021

Date Source: USGS Seismic Design Maps based on ASCE/SEI 7-16 and ASCE/SEI 7-16 Table 1.5-2. Additional data for site-specific ground motion procedures in accordance with ASCE/SEI 7-16 Ch. 21 are available from USGS.

Ice

Results:

Ice Thickness:	1.00 in.
Concurrent Temperature:	15 F
Gust Speed:	50 mph
Data Source:	Standard ASCE/SEI 7-16, Figs. 10-2 through 10-8
Date Accessed:	Fri Jul 30 2021

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 500-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.

Mount Desktop – Post Modification Inspection (PMI) Report Requirements

Documents & Photos Required from Contractor – Mount Modification

Purpose – to provide PJF the proper documentation in order to complete the required Mount Desktop review of the Post Modification Inspection Report.

- Contractor is responsible for making certain the photos provided as noted below provide confirmation that the modification was completed in accordance with the modification drawings.
- Contractor shall relay any data that can impact the performance of the mount or the mount modification, this includes safety issues.

Base Requirements:

- Any special photos outside of the standard requirements will be indicated on the drawings
- Provide "as built drawings" showing contractor's name, preparer's signature, and date. Any deviations from the drawings (proposed modification) must be shown.
- Notation that all hardware was properly installed, and the existing hardware was inspected for any issues.
- Verification that loading is as communicated in the modification drawings. NOTE If loading is different than what is conveyed in the modification drawing contact PJF immediately.
- Each photo should be time and date stamped
- Photos should be high resolution and submitted in a Zip File and should be organized in the file structure as depicted in Schedule A attached.
- Contractor shall ensure that the safety climb wire rope is supported and not adversely impacted by the install of the modification components. This may involve the install of wire rope guides, or other items to protect the wire rope.
- The photos in the file structure should be uploaded **to** https://pmi.vzwsmart.com as depicted on the drawings

Photo Requirements:

- *Base and "During Installation Photos"*
  - Base pictures include
    - Photo of Gate Signs showing the tower owner, site name, and number
    - Photo of carrier shelter showing the carrier site name and number if available
    - Photos of the galvanizing compound and/or paint used (if applicable), clearly showing the label and name
  - "During Installation Photos if provided - must be placed only in this folder
- *Photos taken at ground level*
  - Overall tower structure before and after installation of the modifications
  - Photos of the appropriate mount before and after installation of the modifications; if the mounts are at different rad elevations, pictures must be provided for all elevations that the modifications were installed

- *Photos taken at Mount Elevation*
    - Photos showing each individual sector before and also after installation of modifications. Each entire sector must be in one photo to show in the inter-connection of members.
        - These photos should also certify that the placement and geometry of the equipment on the mount is as depicted on the sketch and table in the mount analysis
    - Close-up photos of each installed modification per the modification drawings; pictures should also include connection hardware (U-bolts, bolts, nuts, all-threaded rods, etc.)
    - Photos showing the measurements of the installed modification member sizes (i.e. lengths, widths, depths, diameters, thicknesses)
    - Photos showing the elevation or distances of the installed modifications from the appropriate reference locations shown in the modification drawings
    - Photos showing the installed modifications onto the tower with tape drop measurements (if applicable) (i.e. ring/collar mounts, tie-backs, V-bracing kits, etc.); if the existing mount elevation needs to be changed according to the modification drawings, a tape drop measurement shall be provided before the elevation change
    - Photos showing the safety climb wire rope above and below the mount prior to modification.
    - Photos showing the climbing facility and safety climb if present.

Material Certification:

- Materials utilized must be as per specification on the drawings or the equivalent as validated by PJF.
    - If the drawings are as specified on the drawings
        - The contractor should provide the packing list or the materials utilized to perform the mount modification
    - If an equivalent is utilized
        - It is required that the PJF certification of such is included in the contractor submission package. There may be an additional charge for this certification if the equivalent submission doesn't meet specifications as prescribed in the drawings.
- The contractor must certify that the materials meet these specifications by one of these methods.

☐ The Material utilized was as specified on the PJF Mount Modification Drawings and included in the Material certification folder is a packing list or invoice for these materials

☐ The material utilized was an "equivalent" and included as part of the contractor submission is the PJF certification, invoices, or specifications validating accepted status

Certifying Individual: Company _____

Name _____

Signature _____

Antenna & equipment placement and Geometry Confirmation:

- The contractor must certify that the antenna & equipment placement and geometry is in accordance with the antenna placement diagrams as included in this mount analysis.

☐ The contractor certifies that the photos support and the equipment on the mount is as depicted on the antenna placement diagrams as included in this mount analysis.

☐ The contractor notes that the equipment on the mount is not in accordance with the antenna placement diagrams and has accordingly marked up the diagrams or provided a diagram outlining the differences.

Certifying Individual: Company _____

Name _____

Signature _____

Special Instructions / Validation as required from the MA or Mod Drawings:

Issue:

Response:

Schedule A – Photo & Document File Structure

- VzW Site Number / Name
  - Base & "During Installation" Photos
  - Pre-Installation Photos
    - Alpha
    - Beta
    - Gamma
    - Ground Level
    - Tape Drop
  - Post-Installation Photos
    - Alpha
    - Beta
    - Gamma
    - Ground Level
    - Tape Drop
    - Photos of climbing facility and safety climb – If Present
  - Certifications – Submission of this document including certifications
  - Specific Required Additional Photos

Structure: 468186-VZW - NAUGATUCK CT RELO

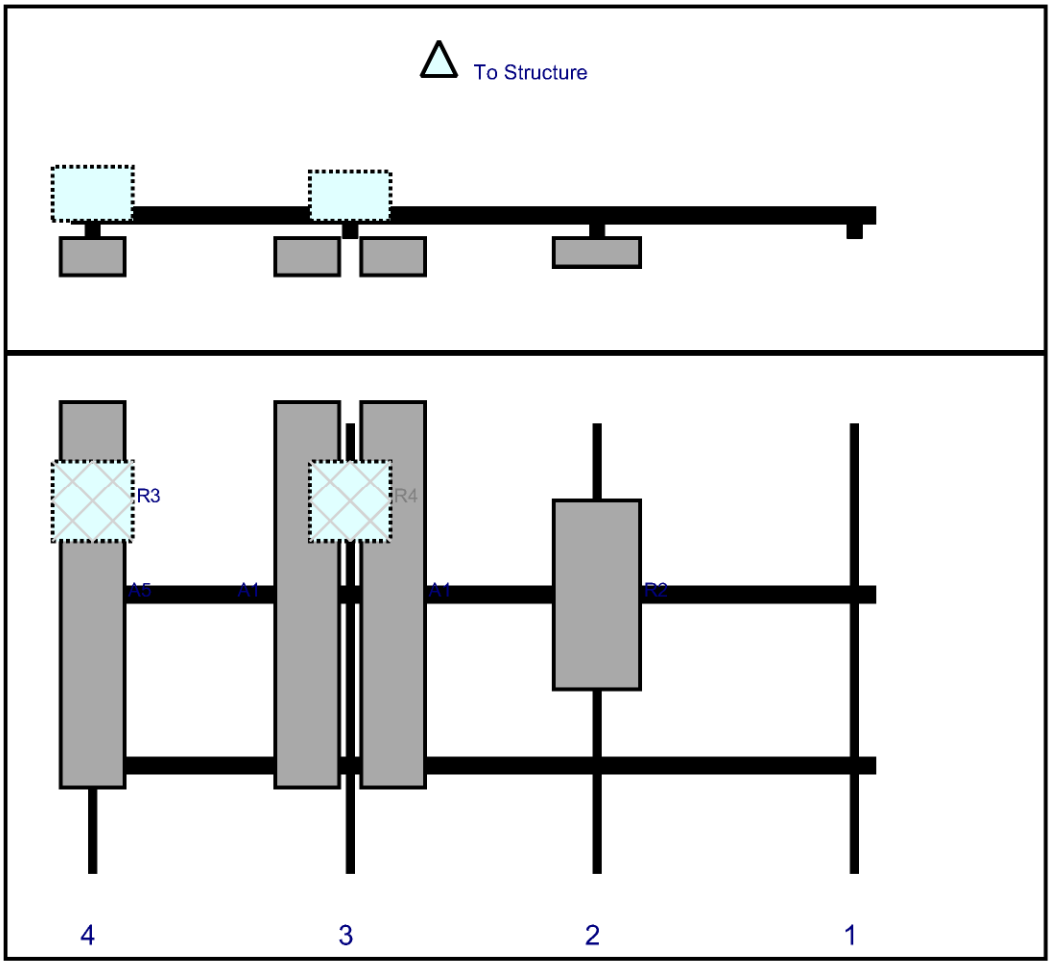
Sector: **A** 9/8/2021

Structure Type: Guyed 10094053

Mount Elev: 153.75 Page: 1

Plan View

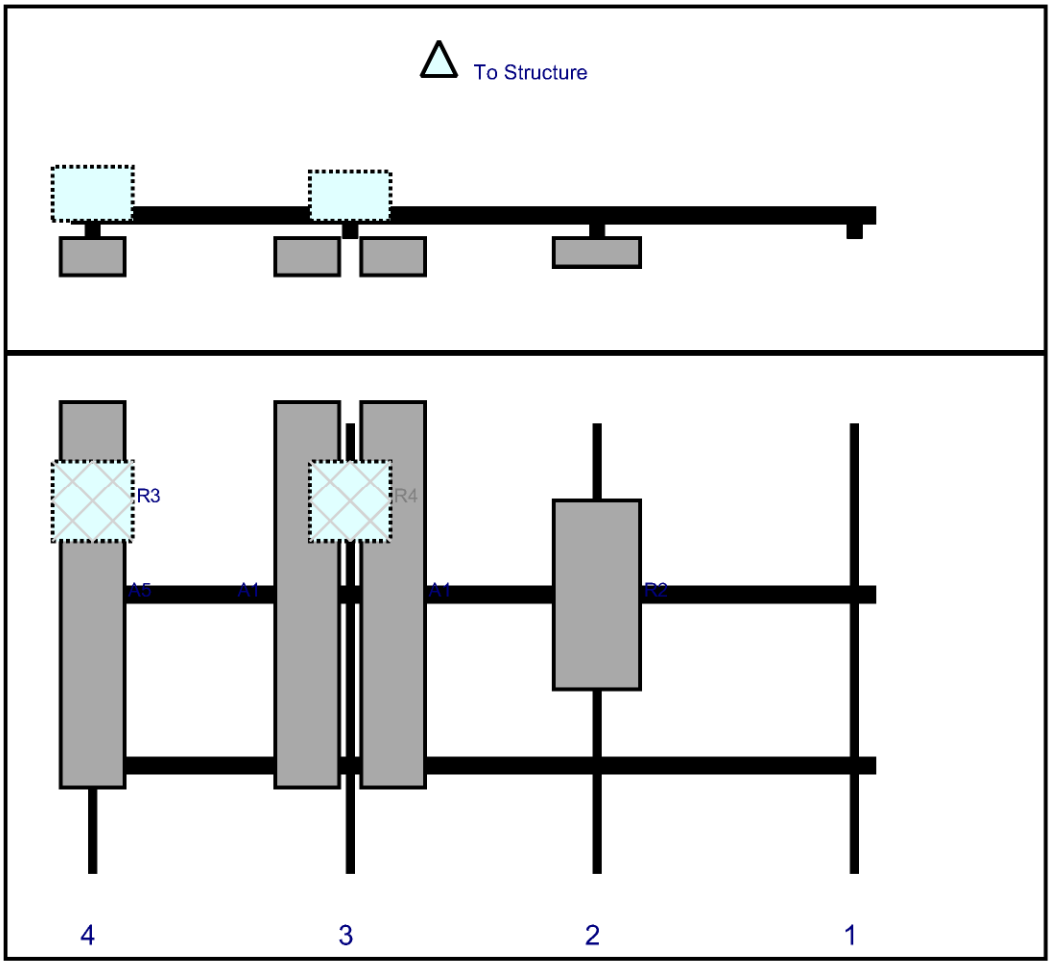
Front View
Looking at Structure



Ref#	Model	Height (in)	Width (in)	H Dist Frm L.	Pipe #	Pipe Pos V	Ant Pos	C. Ant Frm T.	Ant H Off	Status	Validation
R2	MT6407-77A	35.1	16.1	98	2	a	Front	32.04	0	Added	
A1	NHH-65B-R2B	72	11.9	52	3	a	Front	32.04	-8	Added	
A1	NHH-65B-R2B	72	11.9	52	3	b	Front	32.04	8	Added	
R4	RF4440d-13A	15	15	52	3	a	Behind	14.52	0	Added	
A5	LNX-6514DS-VTM	72	11.9	4	4	a	Front	32.04	0	Retained	08/03/2021
R3	RF4439d-25A	15	15	4	4	a	Behind	14.52	0	Added	

Plan View

Front View
Looking at Structure



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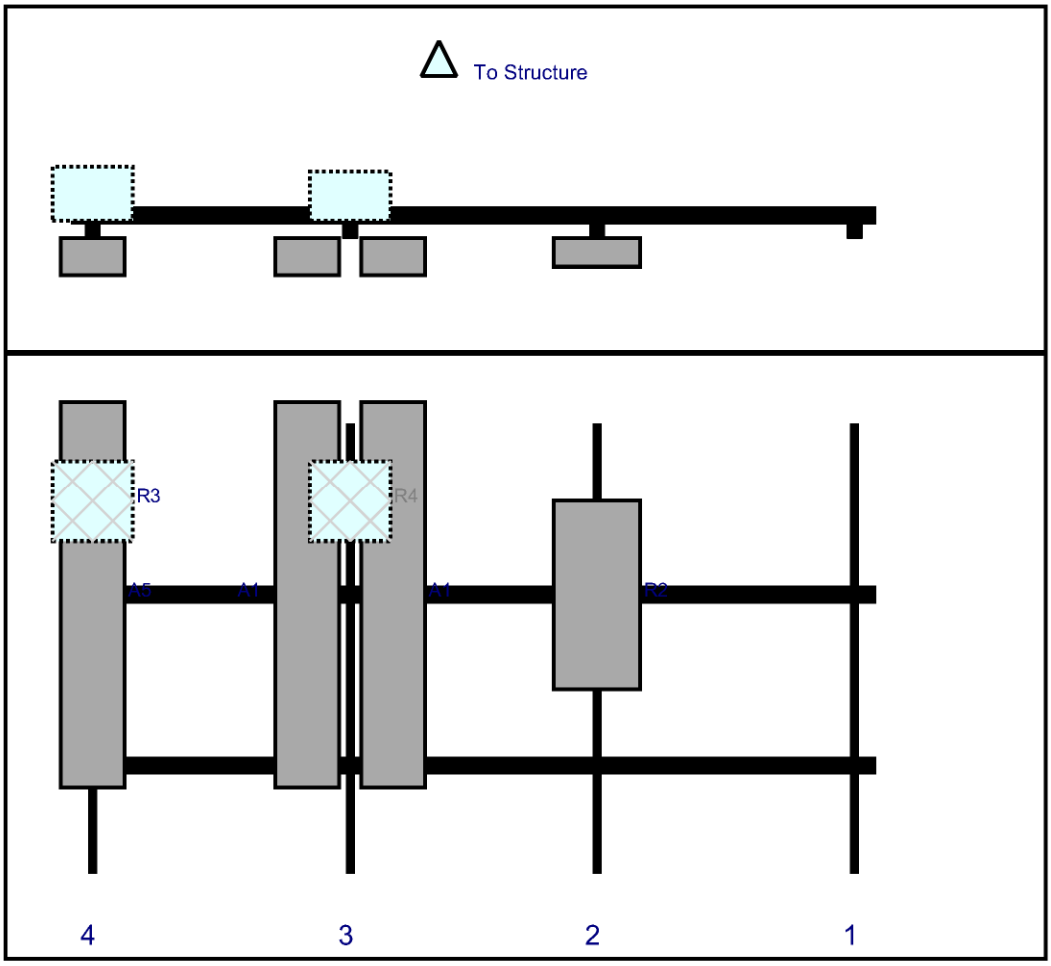
Plan View

Front View
Looking at Structure



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A1	NHH-65B-R2B	72	11.9	52	3	b	Front	32.04	8	Added	
R4	RF4440d-13A	15	15	52	3	a	Behind	14.52	0	Added	
A5	LNX-6514DS-VTM	72	11.9	4	4	a	Front	32.04	0	Retained	08/03/2021
R3	RF4439d-25A	15	15	4	4	a	Behind	14.52	0	Added	

PAUL J. FORD & COMPANY

Subject	TIA-222-H Usage
Site Information	Site ID: 468186-VZW/NAUGATUCK CT RELO Site Name: **NAUGATUCK CT RELO** Carrier Name: VERIZON WIRELESS Address: 37 PEACH ORCHARD RD PROSPECT, CONNETICUT 06712, NEW HAVEN COUNTY Latitude: 41.518611° Longitude: -73.016667°
Structure Information	Tower Type: Guyed Mount Type: Sector Frame

To Whom It May Concern,

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

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

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

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

Sincerely,

Justin Brown

Justin Brown

MOUNT MODIFICATION DRAWINGS
PROPOSED CARRIER: VERIZON

468186-VZW / NAUGATUCK CT RELO

37 PEACH ORCHARD RD
PROSPECT, CONNECTICUT 06712
NEW HAVEN COUNTY
LAT: 41° 31' 07.00"; LONG: -73° 01' 00.00"

TOWER OWNER: COUNTERPOINT COMMUNICATIONS, INC.

FUZE ID # 16486414

CONTRACTOR PMI REQUIREMENTS	
PMI ACCESSED AT	HTTPS://PMI.VZWSMART.COM
SMART TOOL VENDOR PROJECT #	10094053
VZW LOCATION CODE (PSLC)	468186
*** PMI AND REQUIREMENTS ALSO EMBEDDED WITHIN MOUNT ANALYSIS REPORT	

VZW APPROVED SMART KIT VENDORS
REFER TO MOUNT MODIFICATION DRAWINGS PAGE FOR VZW SMART KIT APPROVED VENDORS

SHEET INDEX		
SHEET	DESCRIPTION	REV
ST-1	TITLE SHEET	0
SBOM	BILL OF MATERIALS	0
SGN-1	GENERAL NOTES	0
SCF-1	CLIMBING FACILITY DETAILS	0
SS-1	MODIFICATION DETAILS	0
SS-2	MOUNT PHOTOS	0
	SPECIFICATION SHEETS	

REV	DATE	DESCRIPTION
1	9/15/21	NO CHANGE

STATE OF CONNECTICUT
JUSTIN T. KLINE
No. 30301
LICENSED PROFESSIONAL ENGINEER

2021.09.15 16:30:55-4'00'

PAUL J. FORD & COMPANY
250 E Broad St. Ste 600- Columbus, OH 43215
Phone 614.221.6679
www.paulford.com

VERIZON WIRELESS

468186-VZW / NAUGATUCK CT RELO
PROSPECT, CONNECTICUT
MOUNT MODIFICATION DRAWINGS

PROJECT No:	22721-0344.002.8191
DRAWN BY:	RJM
DESIGNED BY:	JRM
CHECKED BY:	STP
DATE:	8/12/2021

TITLE SHEET

ST-1

V2 0 22721-0344.002.DWG

BILL OF MATERIALS

VZWSMART KITS

QUANTITY	MANUFACTURER	PART NUMBER	DESCRIPTION	PIECE WEIGHT (LBS)	TOTAL WEIGHT (LBS)	MATERIAL	NOTES
3		VZWSMART-P40-312X156	HORIZONTAL BRACING PIPE	94.75	284.25	ASTM A53 (Gr. B-35)	1
3		VZWSMART P40-278X096	8'-0" LONG, P2.5 STD (2.875"Ø X 0.203") PIPE	46.40	139.20	ASTM A53 (Gr. B-35)	FIELD TRIM TO 7' - 0"
6		VZWSMART-MSK1	MOUNT PIPE CROSSOVER PLATES	14.00	84.00	-	
6		VZWSMART-SFK3-SL	V-BRACING KIT	117.00	702.00	-	
12		VZWSMART-MSK2	BRACING PIPE CROSSOVER PLATES	15.00	180.00	-	
3	VZWSMART	VZWSMART-SFK1	TIE BACK ASSEMBLY	84.00	252.00	-	

OTHER REQUIRED PARTS

QUANTITY	MANUFACTURER	PART NUMBER	DESCRIPTION	PIECE WEIGHT (LBS)	TOTAL WEIGHT (LBS)	MATERIAL	NOTES
				TOTAL WEIGHT =	1641.45		

NOTE: ALL MATERIALS REQUIRED FOR THE DESIGN MODIFICATIONS BUT NOT LISTED IN THIS SHEET ARE ASSUMMED TO BE PROVIDED BY THE CONTRACTOR.

VZWSMART KITS - APPROVED VENDORS

VENDOR	CONTACT	EMAIL	PHONE NUMBER
PERFECT VISION	WIRELESS SALES	WIRELESSSALES@PERFECT-VISION.COM	(844) 884-6723
SITEPRO	PAULA BOSWELL	PAULA.BOSWELL@VALMONT.COM	(972) 236-9843
SABRE INDUSTRIES INC.	ANGIE WELCH	AKWELCH@SABREINDUSTRIES.COM	(866) 428-6937
METROSITE FABRICATORS, LLC	KENT RAMEY	KENT@METROSITELLC.COM	(706) 335-7045
COMMSCOPE	SALVADOR ANGUIANO	SALVADOR.ANGUIANO@COMMSCOPE.COM	(817) 304-7492

THE MANUFACTURER'S LISTED ARE THE APPROVED VENDORS FOR THE VZW MOUNT KITS. EACH MANUFACTURER WILL BE AWARE OF WHICH KITS HAVE BEEN THROUGH THE VZW APPROVAL PROCESS AND THE ARE IN TURN APPROVED TO SELL. PLEASE NOTE THAT THE MATERIAL UTILIZED ON THE MOUNT MODIFICATIONS WILL BE REVIEWED AS A PART OF THE DESKTOP PMI COMPLETED BY THE SMART TOOL VENDOR. IT WILL BE REQUIRED THAT THE VZW KITS SPECIFIED ARE UTILIZED IN THE MODIFICATION.

ALL PARTS ARE GALVANIZED UNLESS NOTED OTHERWISE

REV	DATE	DESCRIPTION
1	9/15/21	PIPE SIZE CHANGE

STATE OF CONNECTICUT
JUSTIN T. KUNZE
No. 30301
LICENSED
PROFESSIONAL ENGINEER
9-15-21

PAUL J. FORD & COMPANY
250 E Broad St. Ste 600 - Columbus, OH 43215
Phone 614.221.6679
www.pauljford.com

VERIZON WIRELESS

468186-VZW / NAUGATUCK CT RELO
PROSPECT, CONNECTICUT
MOUNT MODIFICATION DRAWINGS

PROJECT No:	22721-0344.002.8191
DRAWN BY:	RJM
DESIGNED BY:	JRM
CHECKED BY:	STP
DATE:	8/12/2021

BILL OF MATERIALS

SBOM

V2 0 22721.0344.002.DWG

GENERAL NOTES:

1. PAUL J. FORD AND COMPANY WAS NOT PROVIDED WITH THE EXACT LOCATION OF EVERY EXISTING ANTENNA MOUNT CONNECTION, CABLE CLIP, ETC THAT COULD POTENTIALLY INTERFERE WITH THE MODIFICATIONS AS INDICATED ON THESE DRAWINGS. THE CONTRACTOR SHALL FIELD VERIFY THAT THE MATERIAL CAN BE INSTALLED AS SHOWN ON THESE DRAWINGS BEFORE FABRICATING ANY MATERIAL. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE PROPER FIT AND CLEARANCE OF THE REINFORCING MATERIAL IN THE FIELD. IF THE CONTRACTOR DISCOVERS ANY EXISTING CONDITIONS THAT ARE NOT AS REPRESENTED ON THESE DRAWINGS, PAUL J. FORD AND COMPANY SHALL BE CONTACTED IMMEDIATELY TO EVALUATE THE STRUCTURAL SIGNIFICANCE OF THE DEVIATION.

2. WORK SHALL BE IN ACCORDANCE WITH LOCAL CODES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING THE LOCAL BUILDING OFFICIALS FOR ANY INSPECTIONS THAT MAY BE REQUIRED.

3. THE CONTRACTOR MUST BE EXPERIENCED IN THE PERFORMANCE OF WORK SIMILAR TO THAT DESCRIBED ON THESE DRAWINGS. BY ACCEPTANCE OF THIS PROJECT, THE CONTRACTOR IS ATTESTING THAT HE DOES HAVE SUFFICIENT EXPERIENCE AND ABILITY, THAT HE IS KNOWLEDGEABLE OF THE WORK TO BE PERFORMED AND THAT HE IS PROPERLY LICENSED TO DO THIS WORK IN THE JURISDICTION IN WHICH THE WORK IS TO BE PERFORMED.

4. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK AND SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION. ALL STRUCTURES ARE DESIGNED TO BE STABLE AND SELF-SUPPORTING AT THE COMPLETION OF CONSTRUCTION. THIS DRAWING DOES NOT INDICATE THE METHOD OF CONSTRUCTION. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO DETERMINE THE ERECTION PROCEDURES, METHODS, MEANS, TECHNIQUES, AND SEQUENCES TO ENSURE THE STABILITY AND SAFETY OF THE STRUCTURE AND ITS COMPONENT PARTS, AND THE ADEQUACY OF TEMPORARY OR INCOMPLETE CONNECTIONS DURING CONSTRUCTION. THIS INCLUDES, BUT IS NOT LIMITED TO, THE ADDITION OF WHATEVER TEMPORARY BRACING THAT MAY BE NECESSARY AND ENGINEERING ASSESSMENT OF CONSTRUCTION STRESSES WITH INSTALLATION MAXIMUM WIND SPEED AND/OR TEMPORARY BRACING AND SHORING. SUCH MATERIAL IS NOT INDICATED ON THE DRAWINGS AND, IF PROVIDED, SHALL BE REMOVED, AS CONDITIONS PERMIT AND REMAIN THE PROPERTY OF THE CONTRACTOR.

5. ANY EXISTING ATTACHMENTS AND/OR PROJECTIONS ON THE STRUCTURE THAT MAY INTERFERE WITH THE INSTALLATION OF THE MODIFICATION SYSTEM WILL HAVE TO BE REMOVED AND RELOCATED, REPLACED, OR RE-INSTALLED AS REQUIRED AFTER THE MODIFICATION IS SUCCESSFULLY COMPLETED. THE CONTRACTOR SHALL IDENTIFY AND COORDINATE THESE ITEMS PRIOR TO CONSTRUCTION WITH OWNER, TESTING AGENCY, AND EOR.

6. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR INITIATING, MAINTAINING, AND SUPERVISING ALL SAFETY PROGRAMS AND PRECAUTIONS IN CONNECTION WITH THE WORK.

7. CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO PREVENT DAMAGE TO EXISTING STRUCTURES, EQUIPMENT AND UTILITIES. ANY DAMAGE TO EXISTING STRUCTURES, EQUIPMENT, AND UTILITIES AS A RESULT OF THE CONTRACTOR'S WORK OR FROM DAMAGE DUE TO OTHER CAUSES SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE TO THE SATISFACTION OF THE OWNER.

8. WORK SHALL BE PERFORMED DURING CALM DRY DAYS (WINDS LESS THAN 30-MPH) IN ACCORDANCE WITH OPERATIONAL WIND CONDITIONS PER TIA-322.

9. THE MOUNTING SYSTEM SHALL NOT BE USED AS A TIE OFF POINT.

10. THE STRUCTURAL ANALYSIS ASSUMES THAT ALL STRUCTURAL COMPONENTS ARE IN BRAND-NEW CONDITION, FREE FROM FAULTS AND DEFECTS AND IN CONFORMANCE WITH THE CONTRACT DOCUMENTS. NO ALLOWANCE WAS MADE FOR ANY DAMAGED, MISSING, OR RUSTED MEMBERS. IF ANY OF THESE CONDITIONS ARE DISCOVERED, THE CONTRACTOR SHALL BRING THEM TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE. ANY AND ALL SUBSTITUTIONS MUST BE PROPERLY APPROVED AND AUTHORIZED IN WRITING BY OWNER AND EOR PRIOR TO INSTALLATION. THE CONTRACTOR SHALL FURNISH SATISFACTORY EVIDENCE AS TO THE KIND AND QUALITY OF MATERIALS AND EQUIPMENT BEING SUBSTITUTED.

11. IF MATERIALS, QUANTITIES, STRENGTHS, OR SIZES INDICATED BY THE DRAWINGS OR SPECIFICATIONS ARE NOT IN AGREEMENT WITH THESE NOTES, THE BETTER QUALITY AND/OR GREATER QUANTITY, STRENGTH, OR SIZE INDICATED, SPECIFIED, OR NOTED SHALL BE PROVIDED.

12. OBSERVATION VISITS TO THE SITE BY OWNER AND/OR THE EOR SHALL NOT INCLUDE INSPECTIONS OF THE PROTECTIVE MEASURES OR THE CONSTRUCTION PROCEDURES.

13. ANY SUPPORT SERVICES PERFORMED BY THE EOR DURING CONSTRUCTION ARE SOLELY FOR THE PURPOSE OF ASSISTING IN QUALITY CONTROL AND IN ACHIEVING GENERAL PERFORMANCE WITH CONTRACT DOCUMENTS. THEY DO NOT GUARANTEE CONTRACTORS PERFORMANCE AND SHALL NOT BE CONSTRUED AS SUPERVISION OF CONSTRUCTION.

14. THE CLIMBING FACILITIES, SAFETY CLIMB, AND ALL PARTS THEREOF SHALL NOT BE IMPEDED, MODIFIED, OR ALTERED WITHOUT THE APPROVAL OF THE EOR.

15. AFTER THE CONTRACTOR HAS SUCCESSFULLY COMPLETED THE INSTALLATION OF THE MODIFICATION SYSTEM AND THE WORK HAS BEEN ACCEPTED BY THE OWNER, THE OWNER WILL BE RESPONSIBLE FOR THE LONG TERM/PERPETUAL INSPECTION AND MAINTENANCE OF THE STRUCTURE AND MODIFICATION SYSTEM.

16. DO NOT SCALE DRAWINGS.

17. THE MOUNTING SYSTEM SHALL NOT BE USED FOR RIGGING PURPOSES. IF RIGGING TO THE MOUNT IS REQUIRED, ALL RIGGING PLANS SHALL ADHERE TO ANSI/ASSE A10.48 (LATEST EDITION), INCLUDING THE REQUIRED INVOLVEMENT OF A QUALIFIED ENGINEER FOR CLASS IV CONSTRUCTION TO CERTIFY THE SUPPORTING STRUCTURE(S) IN ACCORDANCE WITH THE ANSI/TIA-322 (LATEST EDITION).

18. ALL MANUFACTURER'S HARDWARE ASSEMBLY INSTRUCTIONS SHALL BE FOLLOWED, UNO. CONFLICTING NOTES SHALL BE BROUGHT TO THE ATTENTION OF THE EOR.

19. IF REMOVAL OF EXISTING MODIFICATIONS IS REQUIRED PER THE MODIFICATION SCOPE, THE GC SHALL CLEAN AND COLD GALVANIZE ANY EXISTING EMPTY BOLT HOLES, UNO. IF ADDITIONAL UNEXPECTED, OVERSIZED, OR SLOTTED HOLES ARE FOUND, THE GC SHALL CONTACT THE EOR FOR GUIDANCE PRIOR TO PROCEEDING WITH THE MODIFICATION.

STRUCTURAL STEEL:

1. STRUCTURAL STEEL MATERIALS, FABRICATION, DETAILING, AND WORKMANSHIP SHALL CONFORM TO THE LATEST ADDITION OF THE FOLLOWING REFERENCE STANDARDS:
   A. BY THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC):
      "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS"
      "SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM HIGH STRENGTH BOLTS" AS APPROVED BY THE RESEARCH COUNCIL ON STRUCTURAL CONNECTIONS.
      "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES"
   B. BY THE AMERICAN WELDING SOCIETY (AWS):
      "STRUCTURAL WELDING CODE- STEEL D1.1"
      "STANDARD SYMBOLS FOR WELDING, BRAZING, AND NON-DESTRUCTIVE EXAMINATION"

2. NEW STEEL (UNLESS NOTED OTHERWISE) SHALL CONFORM TO THE REQUIREMENTS OF THE ASTM STANDARD SPECIFICATION FOR STRUCTURAL STEEL NOTED BELOW:
   W - ASTM A992 (50 KSI YIELD POINT MATERIAL)
   HSS RECTANGULAR - ASTM A500 GR. B (46 KSI YIELD POINT MATERIAL)
   HSS ROUND - ASTM A500 GR. B (42 KSI YIELD POINT MATERIAL)
   PIPE - ASTM A53 GR. B (35 KSI YIELD POINT MATERIAL)
   C, MC, L, PLATES, BARS & ALL OTHER STEEL - ASTM A36 (36KSI YIELD POINT MATERIAL)
   BOLTS - ASTM A325
   U-BOLTS - ASTM A307 GRADE A, OR SAE J429 GRADE 2
   THREADED RODS - ASTM A36
   NUTS - ASTM A563 GRADE D/H
   WASHERS - ASTM F436 TYPE 1

3. ALL NEW STEEL SHALL BE HOT-DIP GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH ASTM A123, ASTM 153/A153M, OR ASTM A653 G90.

4. ALL BOLTS, U-BOLTS, AND THREADED RODS SHALL BE PROVIDED WITH LOCK-WASHERS, OR LOCK-NUTS, OR PAL-NUTS TORQUED TO THE SNUG-TIGHT CONDITION AS DEFINED BY AISC.

5. ALL HOLES, EITHER PUNCHED OR DRILLED, IN THE EXISTING STEEL MEMBERS SHALL BE 1/16 INCH LARGER THAN THE BOLT DIAMETER, UNLESS NOTED OTHERWISE. BURNING OF MEMBERS SHALL NOT BE PERMITTED. SLOTTED HOLES ARE NOT PERMITTED. THE MINIMUM BOLT SPACING SHALL BE 3 TIMES THE BOLT DIAMETER AND THE MINIMUM EDGE DISTANCE SHALL BE 1.5 TIMES THE BOLT DIAMETER UNLESS NOTED OTHERWISE. ALL BOLT HOLES SHALL BE PLACED AT AISC STANDARD GAGE DIMENSIONS, UNLESS NOTED OTHERWISE.

6. IF ANY EXISTING ASTM A325 BOLTS ARE REMOVED, THEY MUST BE REPLACED WITH NEW A325 BOLTS OR GREATER.

7. ALL EXISTING PAINTED OR GALVANIZED SURFACES DAMAGED DURING CONSTRUCTION SHALL BE WIRE BRUSHED CLEAN, REPAIRED BY COLD GALVANIZING BRUSH APPLIED PAINT (ZINGA OR EQUAL), AND REPAINTED TO MATCH THE EXISTING FINISH CONFORMING TO ASTM A780.

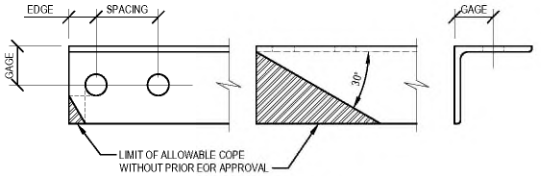
8. ALL PARTS ARE TO MARKED WITH ITEM NUMBERS USING 3/4" HIGH STEEL STENCILS.

9. SHOP SHALL ASSEMBLE AND VERIFY FIT AND GAPS BEFORE BREAKDOWN FOR GALVANIZING.

10. NO FIELD WELDING SHALL BE DONE TO THE EXISTING STRUCTURE WITHOUT THE PRIOR APPROVAL OF THE OWNER AND SUPERVISION BY THE INSPECTION/TESTING AGENCY.

11. ALL REQUIRED CUTS SHALL BE CUT WITHIN THE DIMENSIONS SHOWN ON THE DRAWINGS. NO CUTS SHALL EXTEND BEYOND THE OUTLINE OF THE DIMENSIONS SHOWN ON THE DRAWINGS. ALL CUT EDGES SHALL BE GROUND SMOOTH AND DE-BURRED. CONTRACTOR TO AVOID 90 DEGREE CORNERS. IT MAY BE NECESSARY TO DRILL STARTER HOLES AS REQUIRED TO MAKE THE CUT.

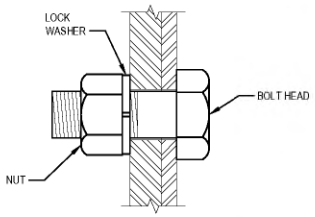
12. ALL JOINTS ARE BEARING TYPE CONNECTIONS, UNO. IF NO BOLT LENGTH IS GIVEN IN THE BILL OF MATERIALS, THE CONNECTION MAY INCLUDE THREADS IN THE SHEAR PLANE, AND THE GC IS RESPONSIBLE FOR SIZING THE LENGTH OF THE BOLT. IT IS NOT PERMITTED FOR THE BOLT END TO BE BELOW THE FACE OF THE NUT AFTER TIGHTENING IS COMPLETED.



ALLOWABLE COPING

BOLT SCHEDULE (IN)				
BOLT DIAMETER	STANDARD HOLE	SHORT SLOT	MIN EDGE DISTANCE	SPACING
1/2	9/16	9/16 x 11/16	7/8	1 1/2
5/8	11/16	11/16 x 7/8	1 1/8	1 7/8
3/4	13/16	13/16 x 1	1 1/4	2 1/4
7/8	15/16	15/16 x 1 1/8	1 1/2	2 5/8
1	1 1/16	1 1/16 x 1 5/16	1 3/4	3

WORKABLE GAGES (IN)	
LEG	GAGE
4	2 1/2
3 1/2	2
3	1 3/4
2 1/2	1 3/8
2	1 1/8



TYP BOLT ASSEMBLY

NOTE:

1. ALL DIMENSIONS REPRESENTED IN THE ABOVE TABLES ARE AISC MINIMUM REQUIREMENTS. CONTRACTOR SHALL VERIFY EXISTING CONDITIONS IN FIELD AND NOTIFY ENGINEER IF DISTANCES ARE LESS THAN THOSE PROVIDED.
2. THE DIMENSIONS PROVIDED ARE MINIMUM REQUIREMENTS. ACTUAL DIMENSIONS OF PROPOSED MEMBERS WITHIN THESE DRAWINGS MAY VARY FROM THE AISC MINIMUM REQUIREMENTS.
3. SHORT SLOT HOLES SHALL ONLY BE USED WHEN DEPICTED IN THE DRAWING.
4. MATCH EXISTING GAGES WHEN APPLICABLE, UNLESS MINIMUM EDGE DISTANCES ARE COMPROMISED.

REV	DATE	DESCRIPTION
1	9/15/21	NO CHANGE

STATE OF CONNECTICUT
JUSTIN T. KLINE
No. 30301
LICENSED
PROFESSIONAL ENGINEER
9-15-21

PJF PAUL J. FORD & COMPANY
250 E Broad St. Ste 600 · Columbus, OH 43215
Phone 614.221.6679
www.pauljford.com

VERIZON WIRELESS

468186-VZW / NAUGATUCK CT RELO
PROSPECT, CONNECTICUT
MOUNT MODIFICATION DRAWINGS

PROJECT No:	22721.0344.002.B191
DRAWN BY:	RJM
DESIGNED BY:	JRM
CHECKED BY:	STP
DATE:	8/12/2021

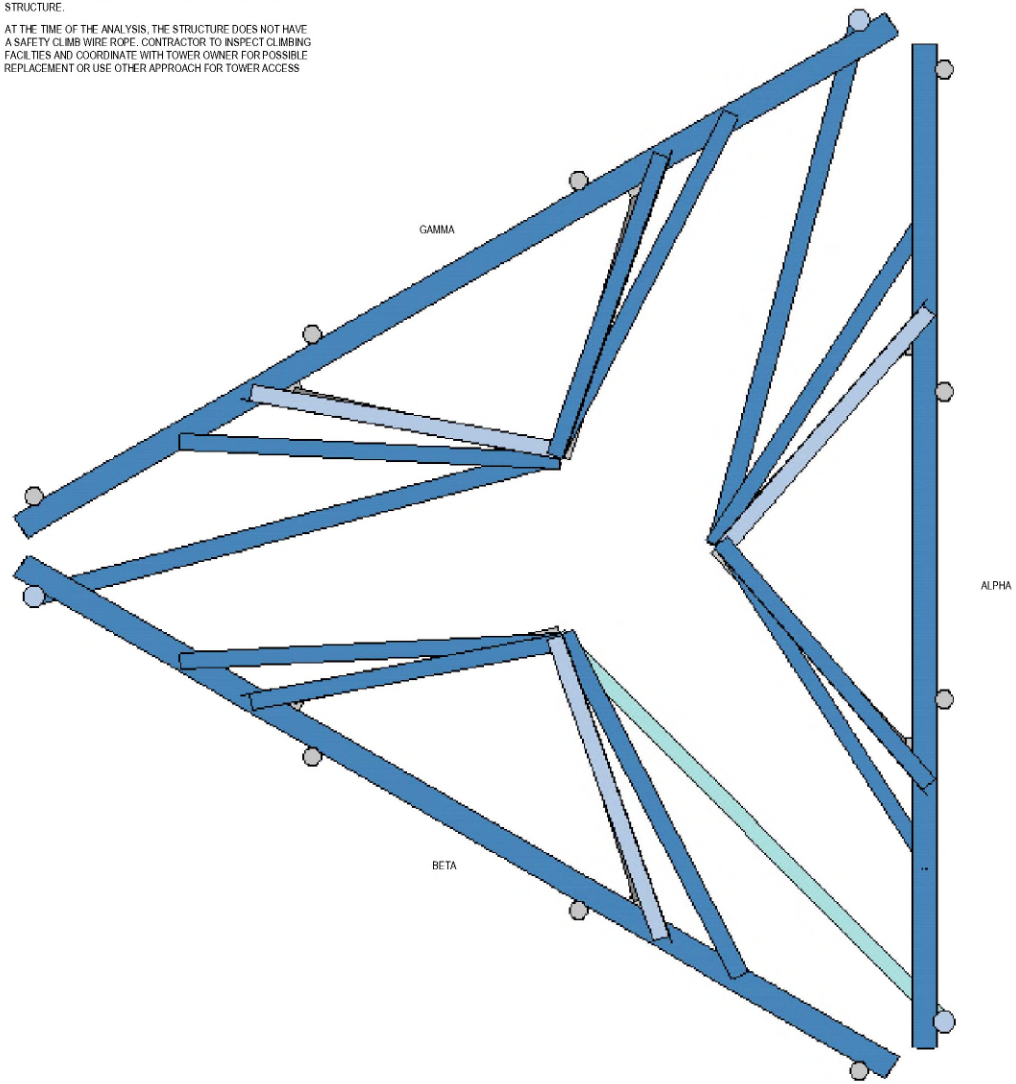
GENERAL NOTES

SGN-1

V2 0 22721.0344.002.DWG

NOTES:

1. INSTALL SHALL NOT CAUSE HARM TO THE STRUCTURE, CLIMBING FACILITY, SAFETY CLIMB OR ANY SYSTEM INSTALLED ON THE STRUCTURE.
2. AT THE TIME OF THE ANALYSIS, THE STRUCTURE DOES NOT HAVE A SAFETY CLIMB WIRE ROPE. CONTRACTOR TO INSPECT CLIMBING FACILITIES AND COORDINATE WITH TOWER OWNER FOR POSSIBLE REPLACEMENT OR USE OTHER APPROACH FOR TOWER ACCESS



LOCATION OF CLIMBING FACILITY

PICTURE OF CLIMBING FACILITY

REV	DATE	DESCRIPTION
1	9/15/21	NO CHANGE

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PROSPECT, CONNECTICUT
MOUNT MODIFICATION DRAWINGS

PROJECT No:	22721.0344.002.8191
DRAWN BY:	RJM
DESIGNED BY:	JRM
CHECKED BY:	STP
DATE:	8/12/2021

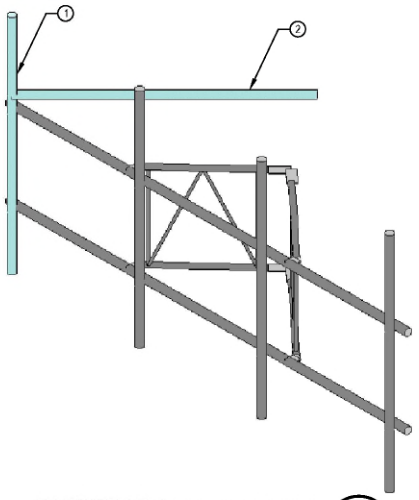
CLIMBING FACILITY DETAILS

SCF-1

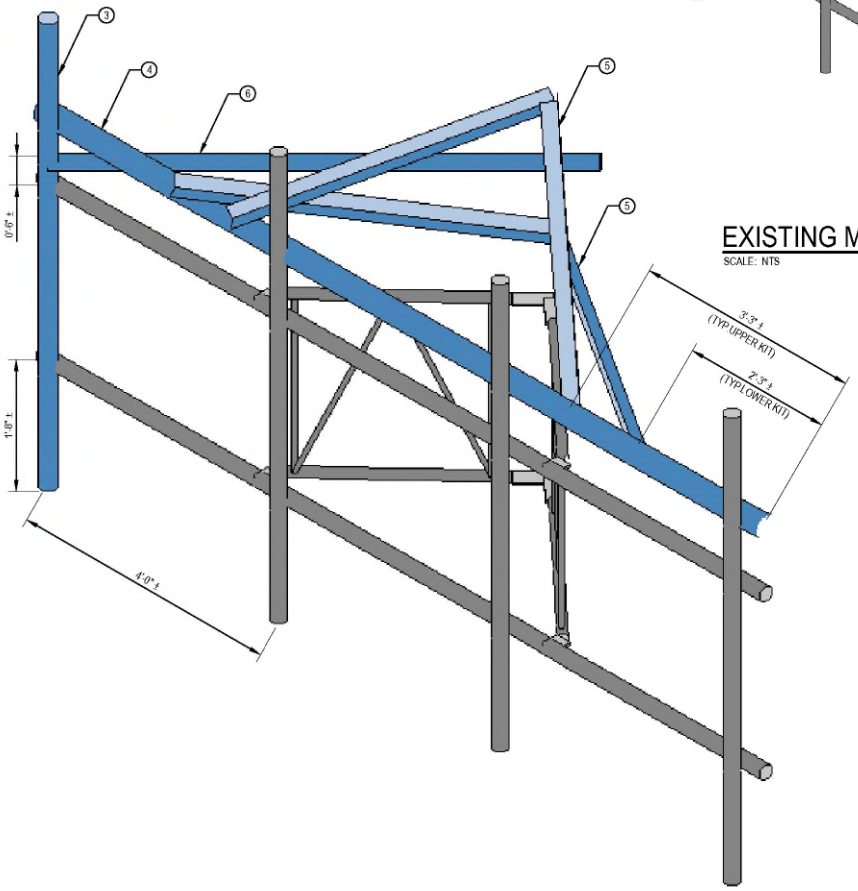
V2 0 22721.0344.002.DWG

NOTES:

1. PRIOR TO FABRICATION AND INSTALLATION, CONTRACTOR SHALL FIELD VERIFY ALL LENGTHS AND QUANTITIES GIVEN. LENGTH AND QUANTITIES PROVIDED ARE FOR QUOTING PURPOSE ONLY AND SHALL NOT BE USED FOR FABRICATION.
2. ALL MODIFICATIONS SHOWN ARE TYPICAL ALL SECTORS UNLESS NOTED OTHERWISE.
3. SOME MEMBERS NOT SHOWN FOR CLARITY.
4. RADIO AND/OR TME POSITIONS SHALL BE ADJUSTED VERTICALLY AS NEEDED IN ORDER TO ACHIEVE INSTALLATION OF MODIFICATION KITS AS SHOWN. EOR SHALL BE NOTIFIED IF EQUIPMENT NEEDS TO BE RELOCATED TO ANOTHER MOUNT PIPE.
5. MEMBERS IN BLUE COLOR ARE NEW REINFORCEMENTS AND MEMBERS IN AQUA COLOR (IF SHOWN) ARE REMOVED MEMBERS.
6. TIEBACK SHALL BE CONNECTED TO ADJACENT TOWER LEG.
7. NEW MOUNT PIPE TO BE FIELD TRIMMED TO 7'-0".

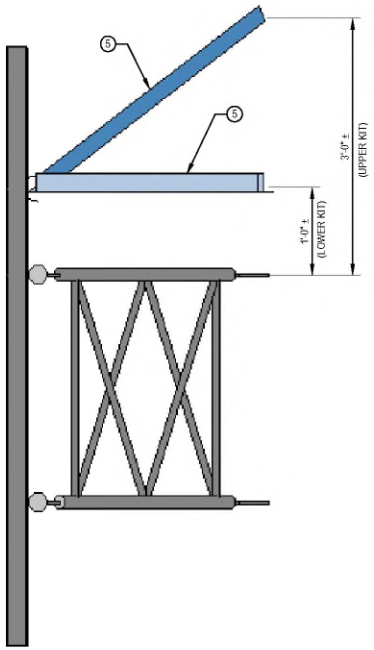


EXISTING MOUNT VIEW 1 SS-1
SCALE: NTS



ISOMETRIC MODIFIED MOUNT VIEW 2 SS-1
SCALE: NTS

MOUNT MODIFICATION SCHEDULE			
	ELEVATION	MOUNT MODIFICATION DESCRIPTION	REFERENCE SHEETS
1	153'-9" ±	REMOVE EXISTING MOUNT PIPE & ASSOCIATED CONNECTION HARDWARE	SS-1
2	153'-9" ±	REMOVE EXISTING TIE BACK	SS-1
3	153'-9" ±	INSTALL NEW MOUNT PIPE USING NEW CROSSOVER PLATES	SS-1
4	153'-9" ±	INSTALL HORIZONTAL BRACING PIPES USING CROSSOVER PLATES AT EACH MOUNT PIPE LOCATION	SS-1
5	153'-9" ±	INSTALL V-BRACING KITS ON NEW HORIZONTAL BRACING PIPE	SS-1
6	153'-9" ±	INSTALL NEW TIE BACK KIT	SS-1



SIDE VIEW 3 SS-1
SCALE: NTS

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VERIZON WIRELESS

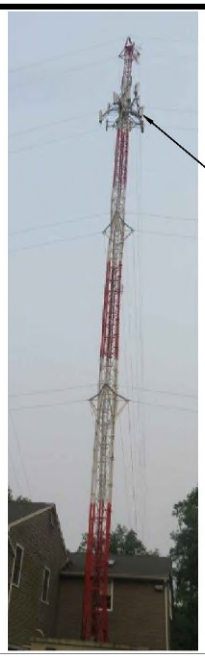
468186-VZW / NAUGATUCK CT RELO
PROSPECT, CONNECTICUT
MOUNT MODIFICATION DRAWINGS

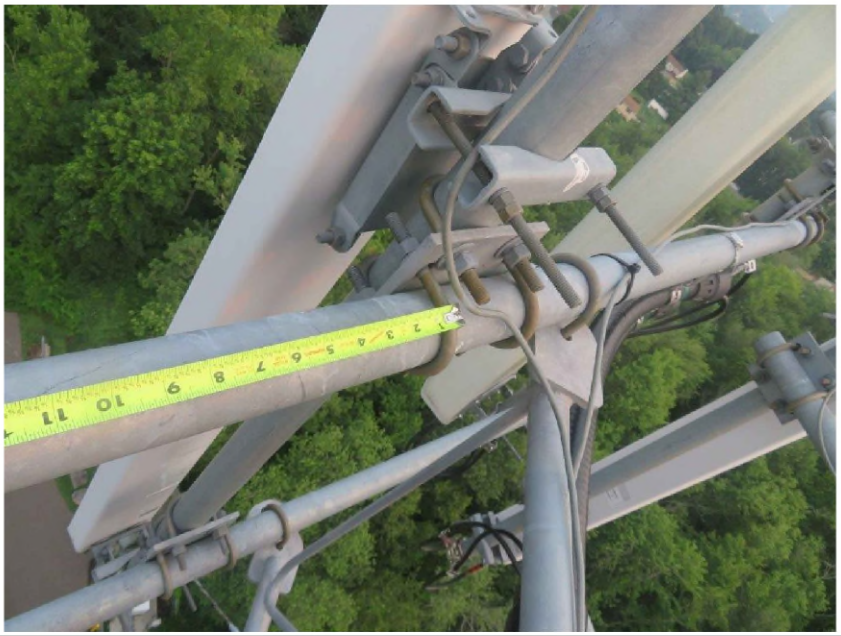
PROJECT No:	22721-0344.002.B191
DRAWN BY:	RJM
DESIGNED BY:	JRM
CHECKED BY:	STP
DATE:	8/12/2021

MODIFICATION DETAILS

SS-1

V2 0 22721.0344.002.DWG





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PROSPECT, CONNECTICUT

MOUNT MODIFICATION DRAWINGS

PROJECT No:	22721-0344.002.8191
DRAWN BY:	RJM
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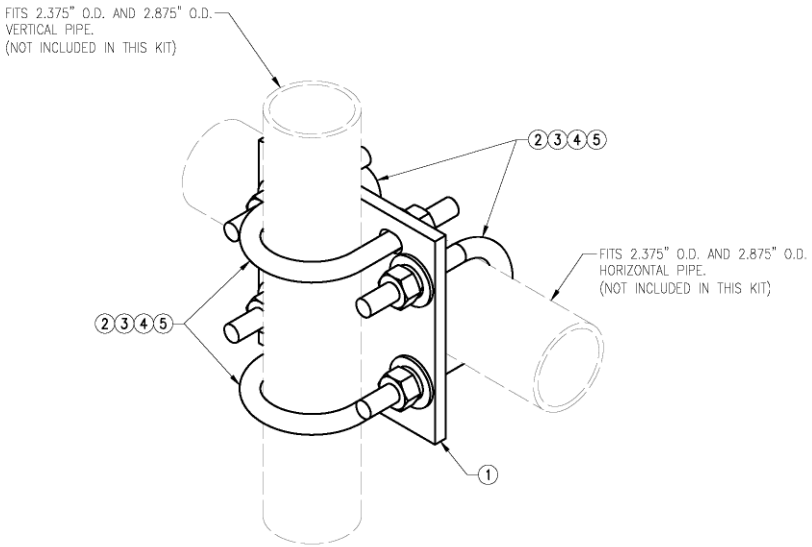
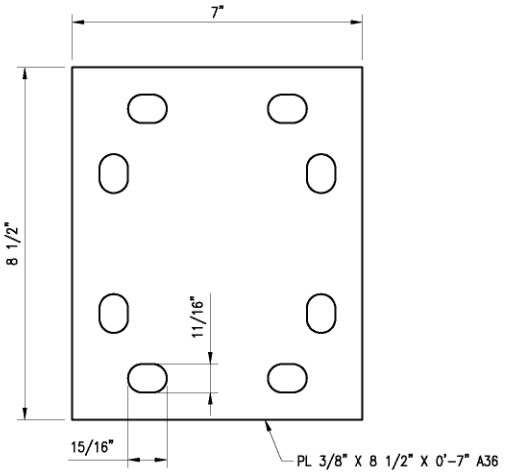
DATE:	8/12/2021

MOUNT PHOTOS

SS-2

V2 0 22721.0344.002.DWG





PL375-857

VZWSMART-MSK1 (CROSSOVER PLATE)					
ITEM NO.	QTY.	PART NO.	DESCRIPTION	SHEET #	WT
1	1	PL375-857	PL 3/8" X 8 1/2" X 0'-7" A36	MSK1-F1	6
2	4	MS02-625-300-500	RU-BOLT 5/8" X 3" I.W. X 5" I.L. A36 (OR EQUIV.)	RBC-1	5
3	8	FW-625	5/8" HDG USS FLAT WASHER	---	1
4	8	LW-625	5/8" HDG LOCK WASHER	---	0
5	8	NUT-625	5/8" HDG HEX NUT	---	1
				GALVANIZED WT	14

NOTES:
1. HOT-DIPPED GALVANIZED PER ASTM A123.

VzW SMART Tool© Vendor

verizon

For Reference Only

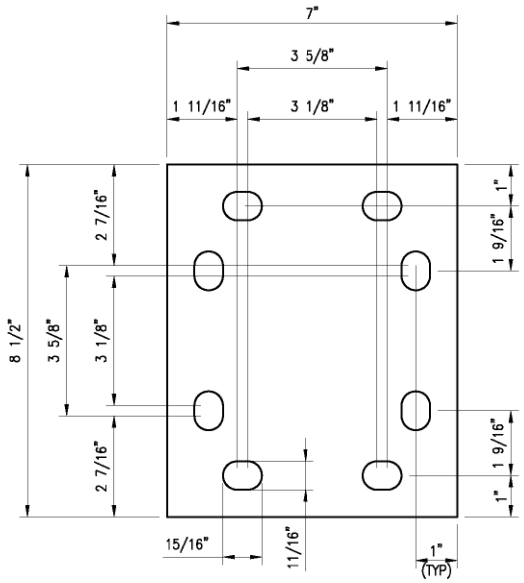
DRAWN BY: H.R | CHECKED BY: HMA

REV.	DESCRIPTION	BY	DATE
1	FIRST ISSUE	H.R	05/08/20

SHEET TITLE:
VZWSMART-MSK1
CROSSOVER PLATE

SHEET NUMBER: VZWSMART-MSK1

REV #: 0



PL375-857
PL 3/8" X 8 1/2" X 0'-7" A36
(6.42 LBS)

NOTES:
1. HOT-DIPPED GALVANIZED PER ASTM A123.

VzW SMART Tool© Vendor

verizon

For Reference Only

DRAWN BY: H.R	CHECKED BY: HMA

REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	H.R	05/08/20

SHEET TITLE:

FABRICATION DETAILS

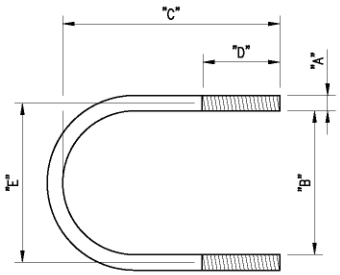
SHEET NUMBER:	REV #:
MSK1-F1	0

STANDARD RU-BOLT CHART							
DESCRIPTION	(EQUIVALENT PART NO.)	"A"	"B"	"C"	"D"	"E"	"WGT"
3/8" RU-BOLT	MS02-375-8125-1625	3/8"	13/16"	1 5/8"	7/8"	1 3/16"	0.26
3/8" RU-BOLT	MS02-375-100-225	3/8"	1"	2 1/4"	1 1/4"	1 3/8"	0.30
3/8" RU-BOLT	MS02-375-125-225	3/8"	1 1/4"	2 1/4"	1 1/4"	1 5/8"	0.30
3/8" RU-BOLT	MS02-375-1125-18125	3/8"	1 1/8"	1 13/16"	1 1/4"	1 1/2"	0.27
3/8" RU-BOLT	MS02-375-150-250	3/8"	1 1/2"	2 1/2"	1 1/4"	1 7/8"	0.32
3/8" RU-BOLT	MS02-375-150-275	3/8"	1 1/2"	2 3/4"	1 5/8"	1 7/8"	0.34
3/8" RU-BOLT	MS02-375-150-300	3/8"	1 1/2"	3"	1 3/4"	1 7/8"	0.35
3/8" RU-BOLT	MS02-375-175-275	3/8"	1 3/4"	2 3/4"	1 1/8"	2 1/8"	0.34
3/8" RU-BOLT	MS02-375-200-2625	3/8"	2"	2 5/8"	1 1/4"	2 3/8"	0.34
3/8" RU-BOLT	MS02-375-200-125	3/8"	2"	3"	1-1/4"	2-3/8"	0.40
3/8" RU-BOLT	MS02-375-2125-300	3/8"	2 1/8"	3"	1 1/4"	2 1/2"	0.36
3/8" RU-BOLT	MS02-375-250-30625	3/8"	2 1/2"	3 1/16"	1 1/4"	2 7/8"	0.38
3/8" RU-BOLT	MS02-375-250-3125	3/8"	2 1/2"	3 1/8"	1 1/4"	2 7/8"	0.37
3/8" RU-BOLT	MS02-375-250-3625	3/8"	2 1/2"	3-5/8"	1 3/4"	2 7/8"	0.45
3/8" RU-BOLT	MS02-375-300-3625	3/8"	3"	3 5/8"	1 1/4"	3 3/8"	0.42
3/8" RU-BOLT	MS02-375-300-425	3/8"	3"	4 1/4"	2"	3 3/8"	0.50
3/8" RU-BOLT	MS02-375-300-6625	3/8"	3	6 5/8"	3	3 3/8"	0.53
3/8" RU-BOLT	MS02-375-350-4125	3/8"	3 1/2"	4 1/8"	1 1/4"	3 7/8"	0.46
3/8" RU-BOLT	MS02-375-350-475	3/8"	3 1/2"	4 3/4"	2"	3 7/8"	0.50
3/8" RU-BOLT	MS02-375-400-575	3/8"	4"	5 3/4"	2 1/2"	4 3/8"	0.60
1/2" RU-BOLT	MS02-500-75-350	1/2"	3/4"	3 1/2"	2 1/2"	1 1/4"	0.60
1/2" RU-BOLT	MS02-500-1563-350	1/2"	1 9/16"	3 1/2"	2"	2 1/16"	0.62
1/2" RU-BOLT	MS02-500-200-300	1/2"	2"	3"	1 1/4"	2 1/2"	0.55
1/2" RU-BOLT	MS02-500-200-375	1/2"	2"	3 3/4"	1 3/4"	2 1/2"	0.67
1/2" RU-BOLT	MS02-500-20625-500	1/2"	2 1/16"	5	3"	2 9/16"	0.80
1/2" RU-BOLT	MS02-500-225-450	1/2"	2 1/4"	4 1/2"	2 1/2"	2 3/4"	0.76
1/2" RU-BOLT	MS02-500-2438-3625	1/2"	2 7/16"	3 5/8"	1 3/4"	2 15/16"	0.67
1/2" RU-BOLT	MS02-500-2438-5375	1/2"	2 7/16"	5 3/8"	3"	2 15/16"	0.86
1/2" RU-BOLT	MS02-500-250-400	1/2"	2 1/2"	4"	2 1/2"	3"	0.70
1/2" RU-BOLT	MS02-500-250-450	1/2"	2 1/2"	4 1/2"	2 1/2"	3"	0.76
1/2" RU-BOLT	MS02-500-29375-575	1/2"	2 15/16"	5 3/4"	3"	3 7/16"	0.92
1/2" RU-BOLT	MS02-500-300-4125	1/2"	3"	4 1/8"	2"	3 1/2"	0.74
1/2" RU-BOLT	MS02-500-300-450	1/2"	3"	4 1/2"	1 5/8"	3 1/2"	0.73
1/2" RU-BOLT	MS02-500-300-500	1/2"	3"	5"	2 1/2"	3 1/2"	0.84
1/2" RU-BOLT	MS02-500-350-500	1/2"	3 1/2"	5"	1 1/2"	4"	0.78
1/2" RU-BOLT	MS02-500-350-850	1/2"	3 1/2"	8 1/2"	3"	4"	1.09
1/2" RU-BOLT	MS02-500-3625-550	1/2"	3 5/8"	5 1/2"	3"	4 1/8"	1.10
1/2" RU-BOLT	MS02-500-3625-600	1/2"	3 5/8"	6"	2 1/2"	4 1/8"	0.97
1/2" RU-BOLT	MS02-500-3563-450	1/2"	3 9/16"	4 1/2"	2"	4 1/16"	0.80
1/2" RU-BOLT	MS02-500-3563-650	1/2"	3 9/16"	6 1/2"	3"	4 1/16"	1.02
1/2" RU-BOLT	MS02-500-400-550-B	1/2"	4"	5 1/2"	1 1/2"	4 1/2"	0.84
1/2" RU-BOLT	MS02-500-400-550	1/2"	4"	5 1/2"	2"	4 1/2"	0.92
1/2" RU-BOLT	MS02-500-4063-700	1/2"	4 1/16"	7"	3"	4 9/16"	1.09
1/2" RU-BOLT	MS02-500-4125-600	1/2"	4 1/8"	6"	2 1/2"	4 5/8"	0.98
1/2" RU-BOLT	MS02-500-450-600	1/2"	4 1/2"	6"	1 1/2"	5"	0.89
1/2" RU-BOLT	MS02-500-4625-700	1/2"	4 5/8"	7"	2 1/2"	5 1/8"	1.11
1/2" RU-BOLT	MS02-500-4563-750	1/2"	4 9/16"	7 1/2"	3"	5 1/16"	1.16
1/2" RU-BOLT	MS02-500-5625-725	1/2"	5 5/8"	7 1/4"	2"	6 1/8"	1.04
1/2" RU-BOLT	MS02-500-4563-575	1/2"	4 9/16"	5 3/4"	2"	5 1/16"	0.97
1/2" RU-BOLT	MS02-500-5563-700	1/2"	5 9/16"	7"	2"	6 1/16"	1.14
1/2" RU-BOLT	MS02-500-575-750	1/2"	5 3/4"	7 1/2"	2 1/2"	6 1/4"	1.22
1/2" RU-BOLT	MS02-500-6625-800	1/2"	6 5/8"	8"	3"	7 1/8"	1.28
1/2" RU-BOLT	MS02-500-675-850	1/2"	6 3/4"	8 1/2"	2 1/2"	7 1/4"	1.17
1/2" RU-BOLT	MS02-500-675-8375	1/2"	6 3/4"	8 3/8"	2"	7 1/4"	1.24
1/2" RU-BOLT	MS02-500-8750-1025	1/2"	8 3/4"	10 1/4"	3"	9 1/4"	1.60
1/2" RU-BOLT	MS02-500-875-10375	1/2"	8 3/4"	10 3/8"	2"	9 1/4"	1.34
1/2" RU-BOLT	MS02-500-10875-1300	1/2"	10 7/8"	1'-1"	3"	11 3/8"	1.98

NOTES:

IF EQUIVALENT U-BOLTS ARE USED, THE FOLLOWING SPECIFICATIONS ARE REQUIRED:

1. THE MATERIAL SHALL BE HOT ROLLED STEEL WITH A MINIMUM YIELD STRENGTH OF 36 KSI.
2. ALL U-BOLTS SHALL BE HOT DIP GALVANIZED PER ASTM A153-78.
3. TOLERANCE: FOR "C" AND "D" +/- 1/16", "B" AND "E" + 1/16", "A" +/- 1/32".



STANDARD RU-BOLT CHART							
DESCRIPTION	(EQUIVALENT PART NO.)	"A"	"B"	"C"	"D"	"E"	"WGT"
5/8" RU-BOLT	MS02-625-200-375	5/8"	2"	3 3/4"	2"	2 5/8"	1.15
5/8" RU-BOLT	MS02-625-2063-500	5/8"	2 1/16"	5"	3"	2 11/16"	1.32
5/8" RU-BOLT	MS02-625-2438-5375	5/8"	2 7/16"	5 3/8"	3"	3 1/16"	1.40
5/8" RU-BOLT	MS02-625-250-400	5/8"	2 1/2"	4"	2 1/2"	3 1/8"	1.17
5/8" RU-BOLT	MS02-625-2625-450	5/8"	2 5/8"	4 1/2"	2"	3 1/4"	1.20
5/8" RU-BOLT	MS02-625-2563-550	5/8"	2 9/16"	5 1/2"	3"	3 3/16"	1.43
5/8" RU-BOLT	MS02-625-2938-5875	5/8"	2 15/16"	5 7/8"	3"	3 9/16"	1.52
5/8" RU-BOLT	MS02-625-300-400	5/8"	3"	4"	2"	3 5/8"	1.20
5/8" RU-BOLT	MS02-625-300-500	5/8"	3"	5"	3"	3 5/8"	1.37
5/8" RU-BOLT	MS02-625-3063-600	5/8"	3 1/16"	6"	3"	3 11/16"	1.54
5/8" RU-BOLT	MS02-625-3625-600	5/8"	3 5/8"	6"	3"	4 1/4"	1.45
5/8" RU-BOLT	MS02-625-3563-650	5/8"	3 9/16"	6 1/2"	3"	4 3/16"	1.65
5/8" RU-BOLT	MS02-625-4063-700	5/8"	4 1/16"	7"	3"	4 11/16"	1.77
5/8" RU-BOLT	MS02-625-4125-600	5/8"	4 1/8"	6"	3"	4 3/4"	1.60
5/8" RU-BOLT	MS02-625-4625-700	5/8"	4 5/8"	7"	3"	5 1/4"	1.60
5/8" RU-BOLT	MS02-625-4563-750	5/8"	4 9/16"	7 1/2"	3"	5 3/16"	1.87
5/8" RU-BOLT	MS02-625-4813-775	5/8"	4 13/16"	7 3/4"	3"	5 7/16"	1.93
5/8" RU-BOLT	MS02-625-500-700	5/8"	5"	7"	3"	5 5/8"	1.96
5/8" RU-BOLT	MS02-625-5063-800	5/8"	5 1/16"	8"	3"	5 11/16"	1.99
5/8" RU-BOLT	MS02-625-5625-85625	5/8"	5 5/8"	8 9/16"	3"	6 1/4"	2.11
5/8" RU-BOLT	MS02-625-575-800	5/8"	5 3/4"	8"	3"	6 3/8"	2.02
5/8" RU-BOLT	MS02-625-6688-9625	5/8"	6 11/16"	9 5/8"	3"	7 5/16"	2.35
5/8" RU-BOLT	MS02-625-6750-900	5/8"	6 3/4"	9"	3"	7 3/8"	2.24
5/8" RU-BOLT	MS02-625-8688-11625	5/8"	8 11/16"	11 5/8"	3"	9 3/16"	2.80
5/8" RU-BOLT	MS02-625-875-1100	5/8"	8 3/4"	11"	3"	9 3/8"	2.70
5/8" RU-BOLT	MS02-625-10688-1375	5/8"	10 13/16	13 3/4"	3"	11 7/16"	3.27
5/8" RU-BOLT	MS02-625-12875-1575	5/8"	12 7/8"	15 3/4"	3"	13 1/2"	3.72
5/8" RU-BOLT	MS02-625-14125-1700	5/8"	14 1/8"	17"	3"	14 3/4"	4.01

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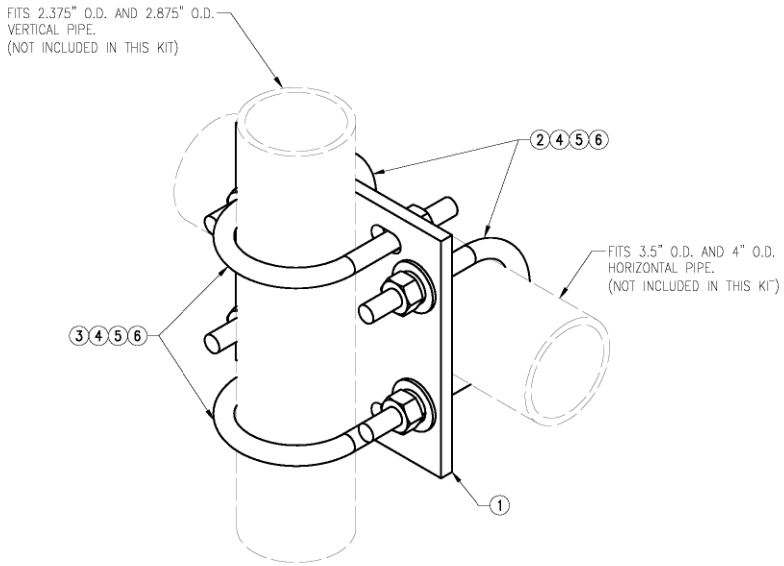
REV.	DESCRIPTION	BY	DATE
1	FIRST ISSUE	H.R	05/08/20

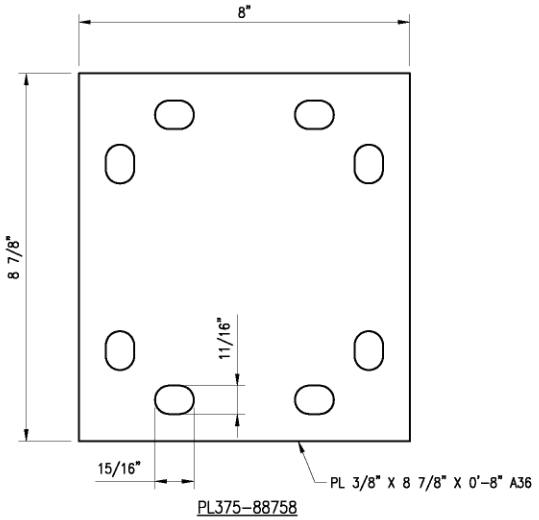
SHEET TITLE:

RU-BOLT CHART

SHEET NUMBER: RBC-1

REV #: 0





PL375-88758

NOTES:
1. HOT-DIPPED GALVANIZED PER ASTM A123.

VZWSMART-MSK2 (CROSSOVER PLATE)

ITEM NO.	QTY.	PART NO.	DESCRIPTION	SHEET #	WT
1	1	PL375-88758	PL 3/8" X 8 3/4" X 0'-8" A36	MSK2-F1	8
2	2	MS02-625-4125-600	RU-BOLT 5/8" X 4 1/8" I.W. X 6" I.L. A36 (OR EQUIV.)	RBC-1	3
3	2	MS02-625-300-500	RU-BOLT 5/8" X 3" I.W. X 5" I.L. A36 (OR EQUIV.)	RBC-1	3
4	8	FW-625	5/8" HDG USS FLAT WASHER	---	1
5	8	LW-625	5/8" HDG LOCK WASHER	---	0
6	8	NUT-625	5/8" HDG HEX NUT	---	1
				GALVANIZED WT	15

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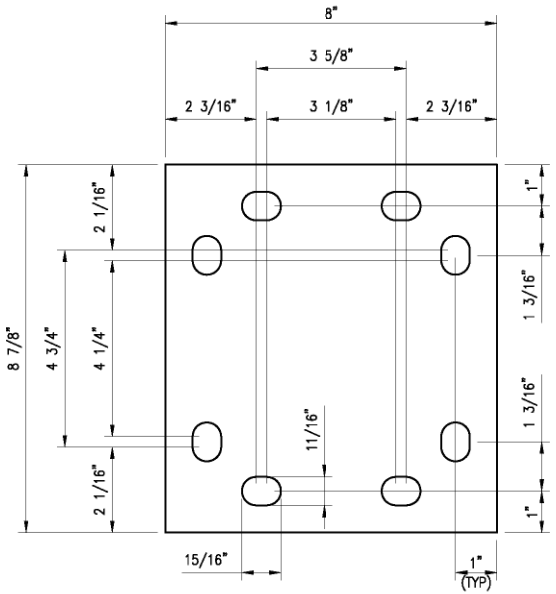
REV.	DESCRIPTION	BY	DATE
1	FIRST ISSUE	H.R	05/08/20

SHEET TITLE:
VZWSMART-MSK2
CROSSOVER PLATE

SHEET NUMBER: VZWSMART-MSK2

REV #: 0



PL375-88758
PL 3/8" X 8 7/8" X 0'-8" A36
(7.65 LBS)

NOTES:
1. HOT-DIPPED GALVANIZED PER ASTM A123.

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REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	H.R	05/08/20

SHEET TITLE:
FABRICATION DETAILS

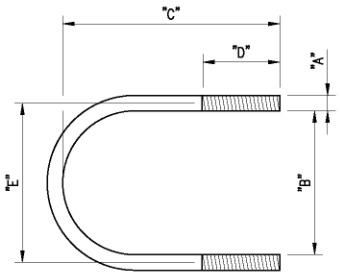
SHEET NUMBER: MSK2-F1
REV #: 0

STANDARD RU-BOLT CHART							
DESCRIPTION	(EQUIVALENT PART NO.)	"A"	"B"	"C"	"D"	"E"	"WGT"
3/8" RU-BOLT	MS02-375-8125-1625	3/8"	13/16"	1 5/8"	7/8"	1 3/16"	0.26
3/8" RU-BOLT	MS02-375-100-225	3/8"	1"	2 1/4"	1 1/4"	1 3/8"	0.30
3/8" RU-BOLT	MS02-375-125-225	3/8"	1 1/4"	2 1/4"	1 1/4"	1 5/8"	0.30
3/8" RU-BOLT	MS02-375-1125-18125	3/8"	1 1/8"	1 13/16"	1 1/4"	1 1/2"	0.27
3/8" RU-BOLT	MS02-375-150-250	3/8"	1 1/2"	2 1/2"	1 1/4"	1 7/8"	0.32
3/8" RU-BOLT	MS02-375-150-275	3/8"	1 1/2"	2 3/4"	1 5/8"	1 7/8"	0.34
3/8" RU-BOLT	MS02-375-150-300	3/8"	1 1/2"	3"	1 3/4"	1 7/8"	0.35
3/8" RU-BOLT	MS02-375-175-275	3/8"	1 3/4"	2 3/4"	1 1/8"	2 1/8"	0.34
3/8" RU-BOLT	MS02-375-200-2625	3/8"	2"	2 5/8"	1 1/4"	2 3/8"	0.34
3/8" RU-BOLT	MS02-375-200-125	3/8"	2"	3"	1-1/4"	2-3/8"	0.40
3/8" RU-BOLT	MS02-375-2125-300	3/8"	2 1/8"	3"	1 1/4"	2 1/2"	0.36
3/8" RU-BOLT	MS02-375-250-30625	3/8"	2 1/2"	3 1/16"	1 1/4"	2 7/8"	0.38
3/8" RU-BOLT	MS02-375-250-3125	3/8"	2 1/2"	3 1/8"	1 1/4"	2 7/8"	0.37
3/8" RU-BOLT	MS02-375-250-3625	3/8"	2 1/2"	3-5/8"	1 3/4"	2 7/8"	0.45
3/8" RU-BOLT	MS02-375-300-3625	3/8"	3"	3 5/8"	1 1/4"	3 3/8"	0.42
3/8" RU-BOLT	MS02-375-300-425	3/8"	3"	4 1/4"	2"	3 3/8"	0.50
3/8" RU-BOLT	MS02-375-300-6625	3/8"	3	6 5/8"	3	3 3/8"	0.53
3/8" RU-BOLT	MS02-375-350-4125	3/8"	3 1/2"	4 1/8"	1 1/4"	3 7/8"	0.46
3/8" RU-BOLT	MS02-375-350-475	3/8"	3 1/2"	4 3/4"	2"	3 7/8"	0.50
3/8" RU-BOLT	MS02-375-400-575	3/8"	4"	5 3/4"	2 1/2"	4 3/8"	0.60
1/2" RU-BOLT	MS02-500-75-350	1/2"	3/4"	3 1/2"	2 1/2"	1 1/4"	0.60
1/2" RU-BOLT	MS02-500-1563-350	1/2"	1 9/16"	3 1/2"	2"	2 1/16"	0.62
1/2" RU-BOLT	MS02-500-200-300	1/2"	2"	3"	1 1/4"	2 1/2"	0.55
1/2" RU-BOLT	MS02-500-200-375	1/2"	2"	3 3/4"	1 3/4"	2 1/2"	0.67
1/2" RU-BOLT	MS02-500-20625-500	1/2"	2 1/16"	5	3"	2 9/16"	0.80
1/2" RU-BOLT	MS02-500-225-450	1/2"	2 1/4"	4 1/2"	2 1/2"	2 3/4"	0.76
1/2" RU-BOLT	MS02-500-2438-3625	1/2"	2 7/16"	3 5/8"	1 3/4"	2 15/16"	0.67
1/2" RU-BOLT	MS02-500-2438-5375	1/2"	2 7/16"	5 3/8"	3"	2 15/16"	0.86
1/2" RU-BOLT	MS02-500-250-400	1/2"	2 1/2"	4"	2 1/2"	3"	0.70
1/2" RU-BOLT	MS02-500-250-450	1/2"	2 1/2"	4 1/2"	2 1/2"	3"	0.76
1/2" RU-BOLT	MS02-500-29375-575	1/2"	2 15/16"	5 3/4"	3"	3 7/16"	0.92
1/2" RU-BOLT	MS02-500-300-4125	1/2"	3"	4 1/8"	2"	3 1/2"	0.74
1/2" RU-BOLT	MS02-500-300-450	1/2"	3"	4 1/2"	1 5/8"	3 1/2"	0.73
1/2" RU-BOLT	MS02-500-300-500	1/2"	3"	5"	2 1/2"	3 1/2"	0.84
1/2" RU-BOLT	MS02-500-350-500	1/2"	3 1/2"	5"	1 1/2"	4"	0.78
1/2" RU-BOLT	MS02-500-350-850	1/2"	3 1/2"	8 1/2"	3"	4"	1.09
1/2" RU-BOLT	MS02-500-3625-550	1/2"	3 5/8"	5 1/2"	3"	4 1/8"	1.10
1/2" RU-BOLT	MS02-500-3625-600	1/2"	3 5/8"	6"	2 1/2"	4 1/8"	0.97
1/2" RU-BOLT	MS02-500-3563-450	1/2"	3 9/16"	4 1/2"	2"	4 1/16"	0.80
1/2" RU-BOLT	MS02-500-3563-650	1/2"	3 9/16"	6 1/2"	3"	4 1/16"	1.02
1/2" RU-BOLT	MS02-500-400-550-B	1/2"	4"	5 1/2"	1 1/2"	4 1/2"	0.84
1/2" RU-BOLT	MS02-500-400-550	1/2"	4"	5 1/2"	2"	4 1/2"	0.92
1/2" RU-BOLT	MS02-500-4063-700	1/2"	4 1/16"	7"	3"	4 9/16"	1.09
1/2" RU-BOLT	MS02-500-4125-600	1/2"	4 1/8"	6"	2 1/2"	4 5/8"	0.98
1/2" RU-BOLT	MS02-500-450-600	1/2"	4 1/2"	6"	1 1/2"	5"	0.89
1/2" RU-BOLT	MS02-500-4625-700	1/2"	4 5/8"	7"	2 1/2"	5 1/8"	1.11
1/2" RU-BOLT	MS02-500-4563-750	1/2"	4 9/16"	7 1/2"	3"	5 1/16"	1.16
1/2" RU-BOLT	MS02-500-5625-725	1/2"	5 5/8"	7 1/4"	2"	6 1/8"	1.04
1/2" RU-BOLT	MS02-500-4563-575	1/2"	4 9/16"	5 3/4"	2"	5 1/16"	0.97
1/2" RU-BOLT	MS02-500-5563-700	1/2"	5 9/16"	7"	2"	6 1/16"	1.14
1/2" RU-BOLT	MS02-500-575-750	1/2"	5 3/4"	7 1/2"	2 1/2"	6 1/4"	1.22
1/2" RU-BOLT	MS02-500-6625-800	1/2"	6 5/8"	8"	3"	7 1/8"	1.28
1/2" RU-BOLT	MS02-500-675-850	1/2"	6 3/4"	8 1/2"	2 1/2"	7 1/4"	1.17
1/2" RU-BOLT	MS02-500-675-8375	1/2"	6 3/4"	8 3/8"	2"	7 1/4"	1.24
1/2" RU-BOLT	MS02-500-8750-1025	1/2"	8 3/4"	10 1/4"	3"	9 1/4"	1.60
1/2" RU-BOLT	MS02-500-875-10375	1/2"	8 3/4"	10 3/8"	2"	9 1/4"	1.34
1/2" RU-BOLT	MS02-500-10875-1300	1/2"	10 7/8"	1'-1"	3"	11 3/8"	1.98

NOTES:

IF EQUIVALENT U-BOLTS ARE USED, THE FOLLOWING SPECIFICATIONS ARE REQUIRED:

1. THE MATERIAL SHALL BE HOT ROLLED STEEL WITH A MINIMUM YIELD STRENGTH OF 36 KSI.
2. ALL U-BOLTS SHALL BE HOT DIP GALVANIZED PER ASTM A153-78.
3. TOLERANCE: FOR "C" AND "D" +/- 1/16", "B" AND "E" + 1/16", "A" +/- 1/32".



STANDARD RU-BOLT CHART							
DESCRIPTION	(EQUIVALENT PART NO.)	"A"	"B"	"C"	"D"	"E"	"WGT"
5/8" RU-BOLT	MS02-625-200-375	5/8"	2"	3 3/4"	2"	2 5/8"	1.15
5/8" RU-BOLT	MS02-625-2063-500	5/8"	2 1/16"	5"	3"	2 11/16"	1.32
5/8" RU-BOLT	MS02-625-2438-5375	5/8"	2 7/16"	5 3/8"	3"	3 1/16"	1.40
5/8" RU-BOLT	MS02-625-250-400	5/8"	2 1/2"	4"	2 1/2"	3 1/8"	1.17
5/8" RU-BOLT	MS02-625-2625-450	5/8"	2 5/8"	4 1/2"	2"	3 1/4"	1.20
5/8" RU-BOLT	MS02-625-2563-550	5/8"	2 9/16"	5 1/2"	3"	3 3/16"	1.43
5/8" RU-BOLT	MS02-625-2938-5875	5/8"	2 15/16"	5 7/8"	3"	3 9/16"	1.52
5/8" RU-BOLT	MS02-625-300-400	5/8"	3"	4"	2"	3 5/8"	1.20
5/8" RU-BOLT	MS02-625-300-500	5/8"	3"	5"	3"	3 5/8"	1.37
5/8" RU-BOLT	MS02-625-3063-600	5/8"	3 1/16"	6"	3"	3 11/16"	1.54
5/8" RU-BOLT	MS02-625-3625-600	5/8"	3 5/8"	6"	3"	4 1/4"	1.45
5/8" RU-BOLT	MS02-625-3563-650	5/8"	3 9/16"	6 1/2"	3"	4 3/16"	1.65
5/8" RU-BOLT	MS02-625-4063-700	5/8"	4 1/16"	7"	3"	4 11/16"	1.77
5/8" RU-BOLT	MS02-625-4125-600	5/8"	4 1/8"	6"	3"	4 3/4"	1.60
5/8" RU-BOLT	MS02-625-4625-700	5/8"	4 5/8"	7"	3"	5 1/4"	1.60
5/8" RU-BOLT	MS02-625-4563-750	5/8"	4 9/16"	7 1/2"	3"	5 3/16"	1.87
5/8" RU-BOLT	MS02-625-4813-775	5/8"	4 13/16"	7 3/4"	3"	5 7/16"	1.93
5/8" RU-BOLT	MS02-625-500-700	5/8"	5"	7"	3"	5 5/8"	1.96
5/8" RU-BOLT	MS02-625-5063-800	5/8"	5 1/16"	8"	3"	5 11/16"	1.99
5/8" RU-BOLT	MS02-625-5625-85625	5/8"	5 5/8"	8 9/16"	3"	6 1/4"	2.11
5/8" RU-BOLT	MS02-625-575-800	5/8"	5 3/4"	8"	3"	6 3/8"	2.02
5/8" RU-BOLT	MS02-625-6688-9625	5/8"	6 11/16"	9 5/8"	3"	7 5/16"	2.35
5/8" RU-BOLT	MS02-625-6750-900	5/8"	6 3/4"	9"	3"	7 3/8"	2.24
5/8" RU-BOLT	MS02-625-8688-11625	5/8"	8 11/16"	11 5/8"	3"	9 3/16"	2.80
5/8" RU-BOLT	MS02-625-875-1100	5/8"	8 3/4"	11"	3"	9 3/8"	2.70
5/8" RU-BOLT	MS02-625-10688-1375	5/8"	10 13/16	13 3/4"	3"	11 7/16"	3.27
5/8" RU-BOLT	MS02-625-12875-1575	5/8"	12 7/8"	15 3/4"	3"	13 1/2"	3.72
5/8" RU-BOLT	MS02-625-14125-1700	5/8"	14 1/8"	17"	3"	14 3/4"	4.01

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DRAWN BY: H.R | CHECKED BY: HMA

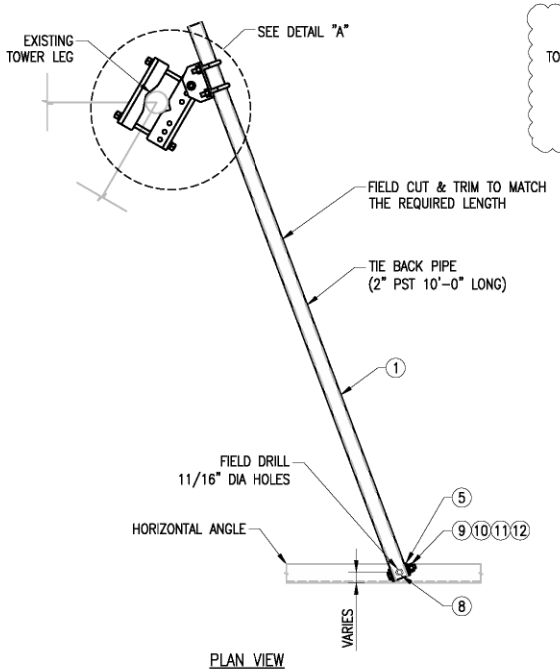
REV.	DESCRIPTION	BY	DATE
1	FIRST ISSUE	H.R	05/08/20

SHEET TITLE:

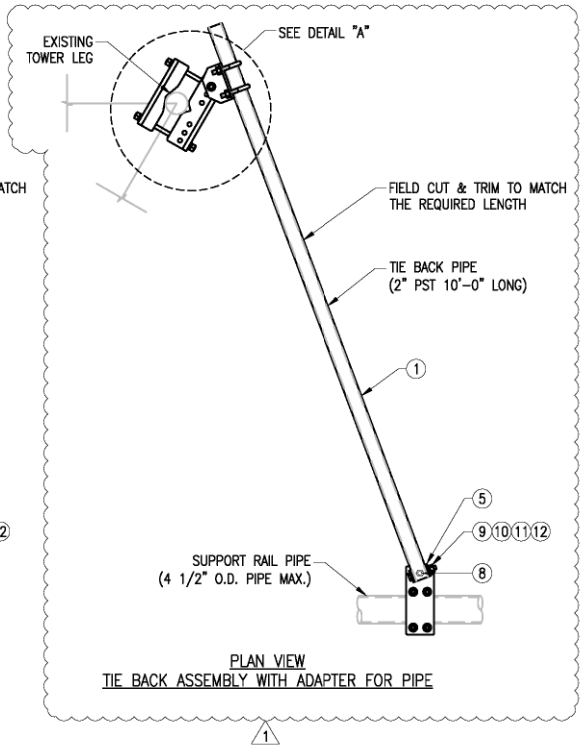
RU-BOLT CHART

SHEET NUMBER: RBC-1

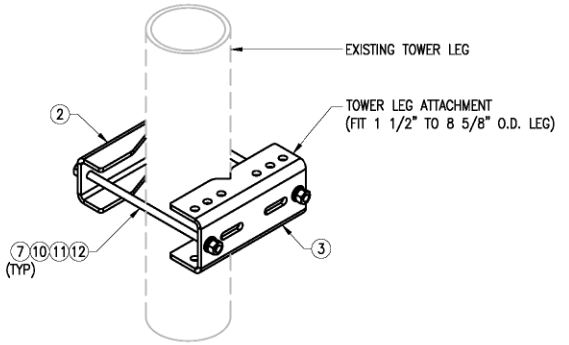
REV #: 0



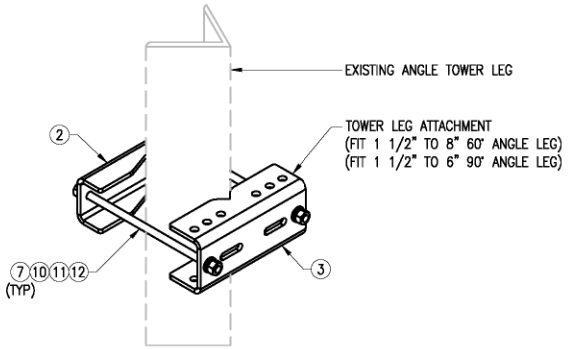
PLAN VIEW
TIE BACK ASSEMBLY



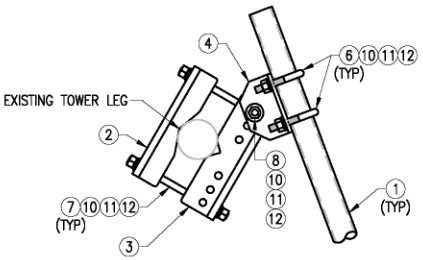
PLAN VIEW
TIE BACK ASSEMBLY WITH ADAPTER FOR PIPE



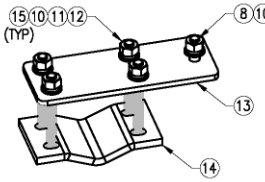
ROUND TOWER LEG ATTACHMENT DETAIL



ANGLE TOWER LEG ATTACHMENT DETAIL



DETAIL "A"



ADAPTER FOR PIPE CONNECTION

1

NOTES:
1. HOT-DIPPED GALVANIZED PER ASTM A123.

VZWSMART-SFK1 (TIE BACK ASSEMBLY)

ITEM NO.	QTY.	PART NO.	DESCRIPTION	SHEET #	WT
1	1	PST2375-10	2" PST (2.375" O.D. X 0.154" THK) X 10'-0" A53 GR-B .35KSI	SFK1-F1	38
2	1	BP825-12	PL 3/8" X 8 1/4" X 1'-0" A36 BENT PLATE	SFK1-F2	11
3	1	BP11125-12	PL 3/8" X 11 1/8" X 1'-0" A36 BENT PLATE	SFK1-F3	14
4	1	BP6-9375	PL 3/8" X 6" X 9 3/8" A36 BENT PLATE	SFK1-F4	6
5	1	BP2-875	PL 1/4" X 2" X 8 3/4" A36 BENT PLATE	SFK1-F4	1
6	2	MS02-625-300-500	RU-BOLT 5/8" X 3" I.W. X 5" I.L. A36 (OR EQUIV.)	RBC-1	2
7	2	---	THREADED ROD 5/8" DIA. X 1'-6" F1554-36 HDG	---	0
8	2	---	BOLT 5/8" X 2" A325	---	0
9	1	---	BOLT 5/8" X 4 1/4" A325	---	0
10	15	FW-625	5/8" HDG USS FLAT WASHER	---	1
11	15	LW-625	5/8" HDG LOCK WASHER	---	0
12	15	NUT-625	5/8" HDG HEX NUT	---	2
13	1	PL375-4511	PL 3/8" X 4 1/2" X 11" A36	SFK1-F1	4
14	1	V-CLAMP	PL 1/2" X 4 1/4" X 8 5/8" A36 BEND PLATE	SFK1-F5	5
15	4	---	BOLT 5/8" X 6" FULL THREAD SAE GR 5	---	0
			GALVANIZED WT		84

1

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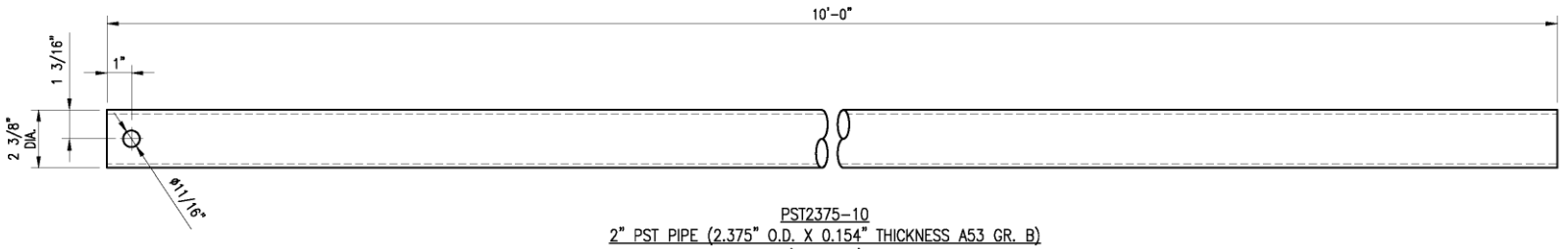
REV.	DESCRIPTION	BY	DATE
1	FIRST ISSUE	BT	05/08/20
1	REVISED	BT	04/10/21

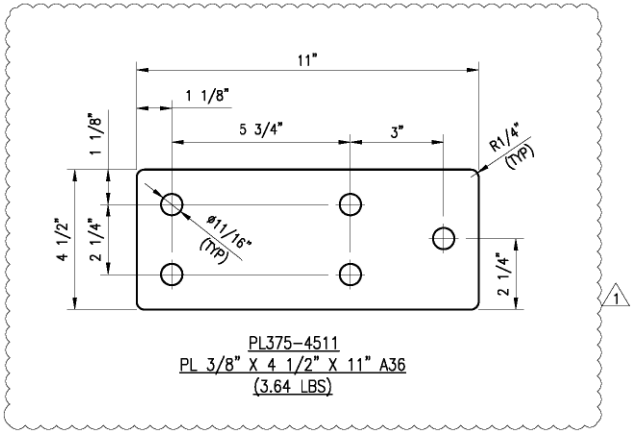
SHEET TITLE:
VZWSMART-SFK1
TIE BACK ASSEMBLY

SHEET NUMBER: VZWSMART-SFK1

REV #: 1



PST2375-10
2" PST PIPE (2.375" O.D. X 0.154" THICKNESS A53 GR. B)
(37.7 LBS)



PL375-4511
PL 3/8" X 4 1/2" X 11" A36
(3.64 LBS)

NOTES:
1. HOT-DIPPED GALVANIZED PER ASTM A123.

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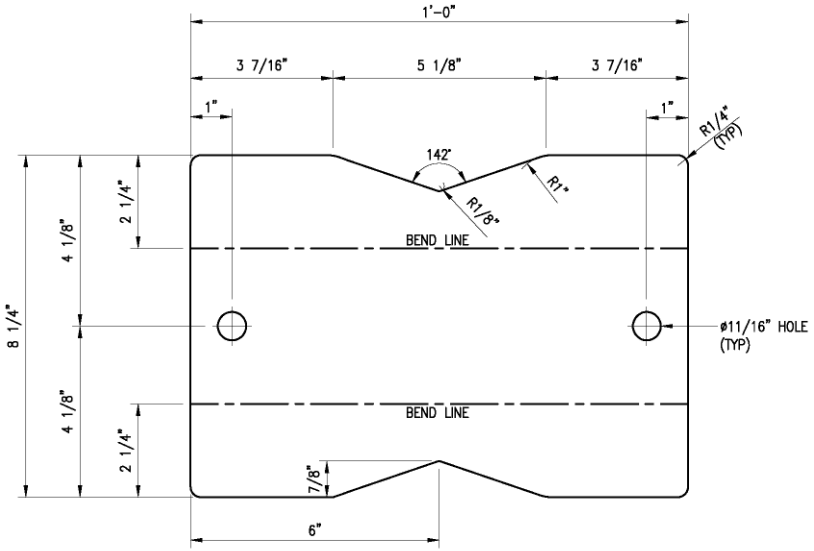
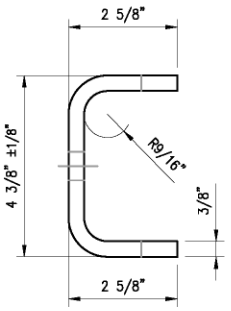
REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	BT	05/08/20
1	REVISED	BT	04/10/21

SHEET TITLE:
FABRICATION DETAILS

SHEET NUMBER: SFK1-F1
REV #: 1



BEFORE BENDING



AFTER BENDING

BP825-12
PL 3/8" X 8 1/4" X 1'-0" A36 BENT PLATE
(10.67 LBS)

NOTES:
1. HOT-DIPPED GALVANIZED PER ASTM A123.

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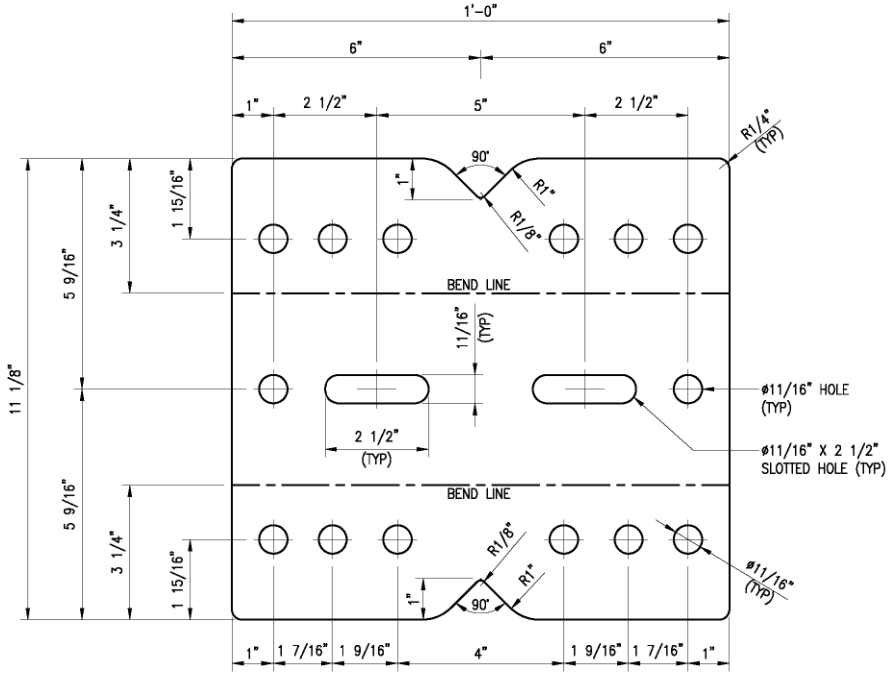
REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	BT	05/08/20

SHEET TITLE:

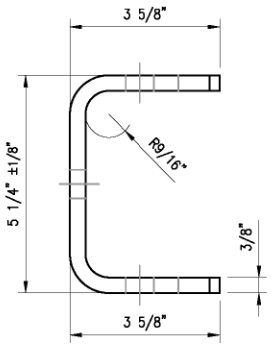
FABRICATION DETAILS

SHEET NUMBER:	REV #:
SFK1-F2	0



BEFORE BENDING

BP11125-12
PL 3/8" X 11 1/8" X 1'-0" A36 BENT PLATE
(14.39 LBS)



AFTER BENDING

NOTES:
1. HOT-DIPPED GALVANIZED PER ASTM A123.

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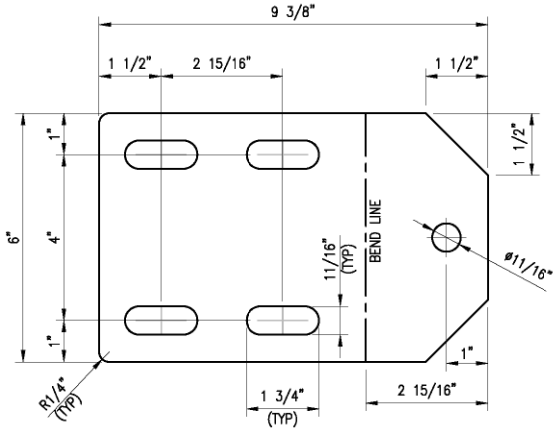
DRAWN BY: BT	CHECKED BY: HMA/KW

REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	BT	05/08/20

SHEET TITLE:

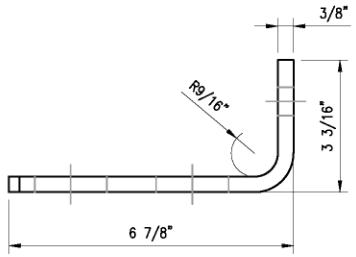
FABRICATION DETAILS

SHEET NUMBER:	REV #:
SFK1-F3	0

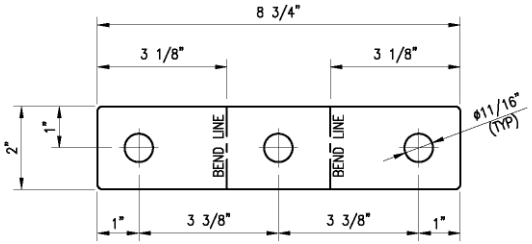


BEFORE BENDING

BP6-9375
PL 3/8" X 6" X 9 3/8" A36 BENT PLATE
(6.07 LBS)

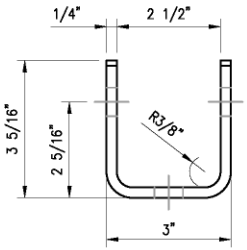


AFTER BENDING



BEFORE BENDING

BP2-875
PL 1/4" X 2" X 8 3/4" A36 BENT PLATE
(1.27 LBS)



AFTER BENDING

NOTES:
1. HOT-DIPPED GALVANIZED PER ASTM A123.

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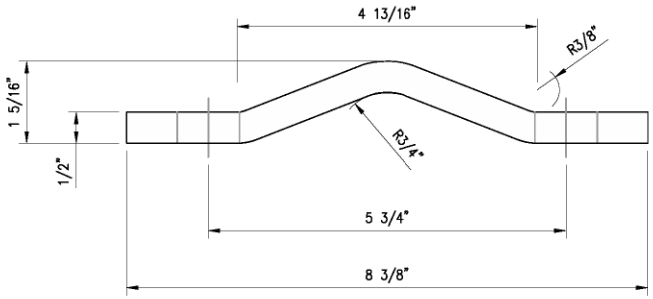
REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	BT	05/08/20

SHEET TITLE:

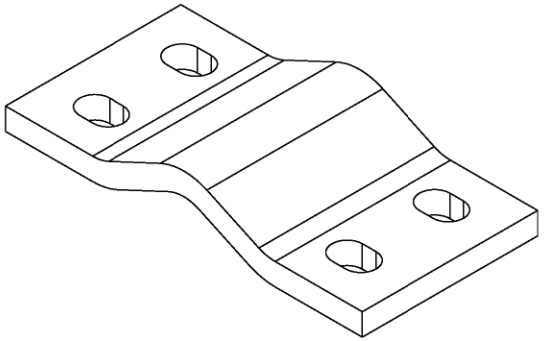
FABRICATION DETAILS

SHEET NUMBER: SFK1-F4

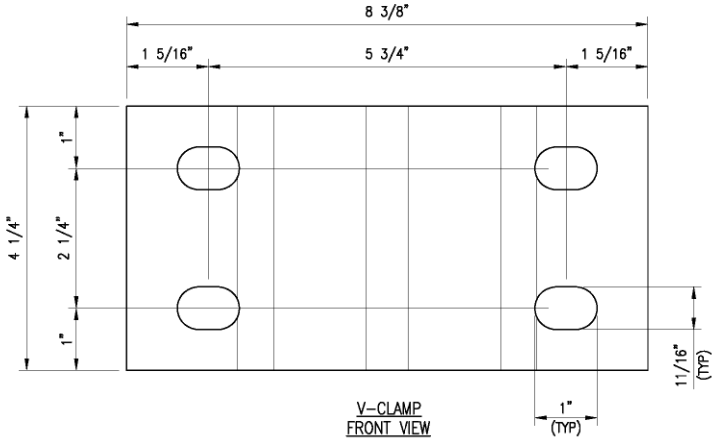
REV #: 0



V-CLAMP
TOP VIEW



V-CLAMP
ISOMETRIC VIEW



V-CLAMP
FRONT VIEW

V-CLAMP
PL 1/2" X 4 1/4" X 8 5/8" A36 BENT PLATE

NOTES:
1. HOT-DIPPED GALVANIZED PER ASTM A123.

△1

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REV.	DESCRIPTION	BY	DATE
△1	FIRST ISSUE	BT	05/08/20
1	REVISED	BT	04/10/21

SHEET TITLE:
FABRICATION DETAILS

SHEET NUMBER: SFK1-F5

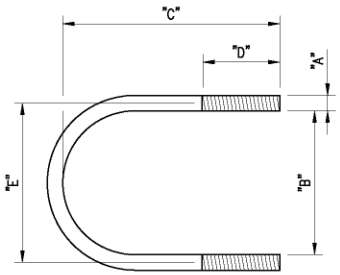
REV #: 1

STANDARD RU-BOLT CHART							
DESCRIPTION	(EQUIVALENT PART NO.)	"A"	"B"	"C"	"D"	"E"	"WGT"
3/8" RU-BOLT	MS02-375-8125-1625	3/8"	13/16"	1 5/8"	7/8"	1 3/16"	0.26
3/8" RU-BOLT	MS02-375-100-225	3/8"	1"	2 1/4"	1 1/4"	1 3/8"	0.30
3/8" RU-BOLT	MS02-375-125-225	3/8"	1 1/4"	2 1/4"	1 1/4"	1 5/8"	0.30
3/8" RU-BOLT	MS02-375-1125-18125	3/8"	1 1/8"	1 13/16"	1 1/4"	1 1/2"	0.27
3/8" RU-BOLT	MS02-375-150-250	3/8"	1 1/2"	2 1/2"	1 1/4"	1 7/8"	0.32
3/8" RU-BOLT	MS02-375-150-275	3/8"	1 1/2"	2 3/4"	1 5/8"	1 7/8"	0.34
3/8" RU-BOLT	MS02-375-150-300	3/8"	1 1/2"	3"	1 3/4"	1 7/8"	0.35
3/8" RU-BOLT	MS02-375-175-275	3/8"	1 3/4"	2 3/4"	1 1/8"	2 1/8"	0.34
3/8" RU-BOLT	MS02-375-200-2625	3/8"	2"	2 5/8"	1 1/4"	2 3/8"	0.34
3/8" RU-BOLT	MS02-375-200-125	3/8"	2"	3"	1-1/4"	2-3/8"	0.40
3/8" RU-BOLT	MS02-375-2125-300	3/8"	2 1/8"	3"	1 1/4"	2 1/2"	0.36
3/8" RU-BOLT	MS02-375-250-30625	3/8"	2 1/2"	3 1/16"	1 1/4"	2 7/8"	0.38
3/8" RU-BOLT	MS02-375-250-3125	3/8"	2 1/2"	3 1/8"	1 1/4"	2 7/8"	0.37
3/8" RU-BOLT	MS02-375-250-3625	3/8"	2 1/2"	3-5/8"	1 3/4"	2 7/8"	0.45
3/8" RU-BOLT	MS02-375-300-3625	3/8"	3"	3 5/8"	1 1/4"	3 3/8"	0.42
3/8" RU-BOLT	MS02-375-300-425	3/8"	3"	4 1/4"	2"	3 3/8"	0.50
3/8" RU-BOLT	MS02-375-300-6625	3/8"	3	6 5/8"	3	3 3/8"	0.53
3/8" RU-BOLT	MS02-375-350-4125	3/8"	3 1/2"	4 1/8"	1 1/4"	3 7/8"	0.46
3/8" RU-BOLT	MS02-375-350-475	3/8"	3 1/2"	4 3/4"	2"	3 7/8"	0.50
3/8" RU-BOLT	MS02-375-400-575	3/8"	4"	5 3/4"	2 1/2"	4 3/8"	0.60
1/2" RU-BOLT	MS02-500-75-350	1/2"	3/4"	3 1/2"	2 1/2"	1 1/4"	0.60
1/2" RU-BOLT	MS02-500-1563-350	1/2"	1 9/16"	3 1/2"	2"	2 1/16"	0.62
1/2" RU-BOLT	MS02-500-200-300	1/2"	2"	3"	1 1/4"	2 1/2"	0.55
1/2" RU-BOLT	MS02-500-200-375	1/2"	2"	3 3/4"	1 3/4"	2 1/2"	0.67
1/2" RU-BOLT	MS02-500-20625-500	1/2"	2 1/16"	5	3"	2 9/16"	0.80
1/2" RU-BOLT	MS02-500-225-450	1/2"	2 1/4"	4 1/2"	2 1/2"	2 3/4"	0.76
1/2" RU-BOLT	MS02-500-2438-3625	1/2"	2 7/16"	3 5/8"	1 3/4"	2 15/16"	0.67
1/2" RU-BOLT	MS02-500-2438-5375	1/2"	2 7/16"	5 3/8"	3"	2 15/16"	0.86
1/2" RU-BOLT	MS02-500-250-400	1/2"	2 1/2"	4"	2 1/2"	3"	0.70
1/2" RU-BOLT	MS02-500-250-450	1/2"	2 1/2"	4 1/2"	2 1/2"	3"	0.76
1/2" RU-BOLT	MS02-500-29375-575	1/2"	2 15/16"	5 3/4"	3"	3 7/16"	0.92
1/2" RU-BOLT	MS02-500-300-4125	1/2"	3"	4 1/8"	2"	3 1/2"	0.74
1/2" RU-BOLT	MS02-500-300-450	1/2"	3"	4 1/2"	1 5/8"	3 1/2"	0.73
1/2" RU-BOLT	MS02-500-300-500	1/2"	3"	5"	2 1/2"	3 1/2"	0.84
1/2" RU-BOLT	MS02-500-350-500	1/2"	3 1/2"	5"	1 1/2"	4"	0.78
1/2" RU-BOLT	MS02-500-350-850	1/2"	3 1/2"	8 1/2"	3"	4"	1.09
1/2" RU-BOLT	MS02-500-3625-550	1/2"	3 5/8"	5 1/2"	3"	4 1/8"	1.10
1/2" RU-BOLT	MS02-500-3625-600	1/2"	3 5/8"	6"	2 1/2"	4 1/8"	0.97
1/2" RU-BOLT	MS02-500-3563-450	1/2"	3 9/16"	4 1/2"	2"	4 1/16"	0.80
1/2" RU-BOLT	MS02-500-3563-650	1/2"	3 9/16"	6 1/2"	3"	4 1/16"	1.02
1/2" RU-BOLT	MS02-500-400-550-B	1/2"	4"	5 1/2"	1 1/2"	4 1/2"	0.84
1/2" RU-BOLT	MS02-500-400-550	1/2"	4"	5 1/2"	2"	4 1/2"	0.92
1/2" RU-BOLT	MS02-500-4063-700	1/2"	4 1/16"	7"	3"	4 9/16"	1.09
1/2" RU-BOLT	MS02-500-4125-600	1/2"	4 1/8"	6"	2 1/2"	4 5/8"	0.98
1/2" RU-BOLT	MS02-500-450-600	1/2"	4 1/2"	6"	1 1/2"	5"	0.89
1/2" RU-BOLT	MS02-500-4625-700	1/2"	4 5/8"	7"	2 1/2"	5 1/8"	1.11
1/2" RU-BOLT	MS02-500-4563-750	1/2"	4 9/16"	7 1/2"	3"	5 1/16"	1.16
1/2" RU-BOLT	MS02-500-5625-725	1/2"	5 5/8"	7 1/4"	2"	6 1/8"	1.04
1/2" RU-BOLT	MS02-500-4563-575	1/2"	4 9/16"	5 3/4"	2"	5 1/16"	0.97
1/2" RU-BOLT	MS02-500-5563-700	1/2"	5 9/16"	7"	2"	6 1/16"	1.14
1/2" RU-BOLT	MS02-500-575-750	1/2"	5 3/4"	7 1/2"	2 1/2"	6 1/4"	1.22
1/2" RU-BOLT	MS02-500-6625-800	1/2"	6 5/8"	8"	3"	7 1/8"	1.28
1/2" RU-BOLT	MS02-500-675-850	1/2"	6 3/4"	8 1/2"	2 1/2"	7 1/4"	1.17
1/2" RU-BOLT	MS02-500-675-8375	1/2"	6 3/4"	8 3/8"	2"	7 1/4"	1.24
1/2" RU-BOLT	MS02-500-8750-1025	1/2"	8 3/4"	10 1/4"	3"	9 1/4"	1.60
1/2" RU-BOLT	MS02-500-875-10375	1/2"	8 3/4"	10 3/8"	2"	9 1/4"	1.34
1/2" RU-BOLT	MS02-500-10875-1300	1/2"	10 7/8"	1'-1"	3"	11 3/8"	1.98

NOTES:

IF EQUIVALENT U-BOLTS ARE USED, THE FOLLOWING SPECIFICATIONS ARE REQUIRED:

1. THE MATERIAL SHALL BE HOT ROLLED STEEL WITH A MINIMUM YIELD STRENGTH OF 36 KSI.
2. ALL U-BOLTS SHALL BE HOT DIP GALVANIZED PER ASTM A153-78.
3. TOLERANCE: FOR "C" AND "D" +/- 1/16", "B" AND "E" + 1/16", "A" +/- 1/32".



STANDARD RU-BOLT CHART							
DESCRIPTION	(EQUIVALENT PART NO.)	"A"	"B"	"C"	"D"	"E"	"WGT"
5/8" RU-BOLT	MS02-625-200-375	5/8"	2"	3 3/4"	2"	2 5/8"	1.15
5/8" RU-BOLT	MS02-625-2063-500	5/8"	2 1/16"	5"	3"	2 11/16"	1.32
5/8" RU-BOLT	MS02-625-2438-5375	5/8"	2 7/16"	5 3/8"	3"	3 1/16"	1.40
5/8" RU-BOLT	MS02-625-250-400	5/8"	2 1/2"	4"	2 1/2"	3 1/8"	1.17
5/8" RU-BOLT	MS02-625-2625-450	5/8"	2 5/8"	4 1/2"	2"	3 1/4"	1.20
5/8" RU-BOLT	MS02-625-2563-550	5/8"	2 9/16"	5 1/2"	3"	3 3/16"	1.43
5/8" RU-BOLT	MS02-625-2938-5875	5/8"	2 15/16"	5 7/8"	3"	3 9/16"	1.52
5/8" RU-BOLT	MS02-625-300-400	5/8"	3"	4"	2"	3 5/8"	1.20
5/8" RU-BOLT	MS02-625-300-500	5/8"	3"	5"	3"	3 5/8"	1.37
5/8" RU-BOLT	MS02-625-3063-600	5/8"	3 1/16"	6"	3"	3 11/16"	1.54
5/8" RU-BOLT	MS02-625-3625-600	5/8"	3 5/8"	6"	3"	4 1/4"	1.45
5/8" RU-BOLT	MS02-625-3563-650	5/8"	3 9/16"	6 1/2"	3"	4 3/16"	1.65
5/8" RU-BOLT	MS02-625-4063-700	5/8"	4 1/16"	7"	3"	4 11/16"	1.77
5/8" RU-BOLT	MS02-625-4125-600	5/8"	4 1/8"	6"	3"	4 3/4"	1.60
5/8" RU-BOLT	MS02-625-4625-700	5/8"	4 5/8"	7"	3"	5 1/4"	1.60
5/8" RU-BOLT	MS02-625-4563-750	5/8"	4 9/16"	7 1/2"	3"	5 3/16"	1.87
5/8" RU-BOLT	MS02-625-4813-775	5/8"	4 13/16"	7 3/4"	3"	5 7/16"	1.93
5/8" RU-BOLT	MS02-625-500-700	5/8"	5"	7"	3"	5 5/8"	1.96
5/8" RU-BOLT	MS02-625-5063-800	5/8"	5 1/16"	8"	3"	5 11/16"	1.99
5/8" RU-BOLT	MS02-625-5625-85625	5/8"	5 5/8"	8 9/16"	3"	6 1/4"	2.11
5/8" RU-BOLT	MS02-625-575-800	5/8"	5 3/4"	8"	3"	6 3/8"	2.02
5/8" RU-BOLT	MS02-625-6688-9625	5/8"	6 11/16"	9 5/8"	3"	7 5/16"	2.35
5/8" RU-BOLT	MS02-625-6750-900	5/8"	6 3/4"	9"	3"	7 3/8"	2.24
5/8" RU-BOLT	MS02-625-8688-11625	5/8"	8 11/16"	11 5/8"	3"	9 3/16"	2.80
5/8" RU-BOLT	MS02-625-875-1100	5/8"	8 3/4"	11"	3"	9 3/8"	2.70
5/8" RU-BOLT	MS02-625-10688-1375	5/8"	10 13/16	13 3/4"	3"	11 7/16"	3.27
5/8" RU-BOLT	MS02-625-12875-1575	5/8"	12 7/8"	15 3/4"	3"	13 1/2"	3.72
5/8" RU-BOLT	MS02-625-14125-1700	5/8"	14 1/8"	17"	3"	14 3/4"	4.01

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For Reference Only

DRAWN BY: BT | CHECKED BY: HMA/KW

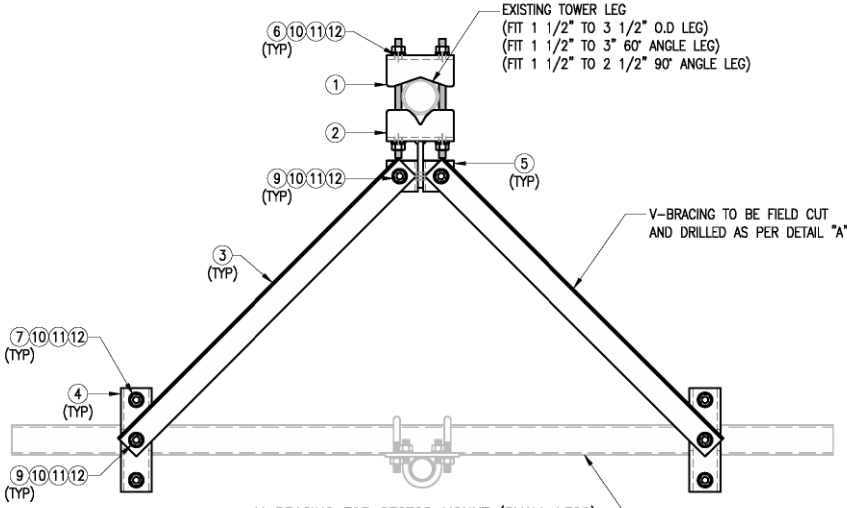
REV.	DESCRIPTION	BY	DATE
1	FIRST ISSUE	BT	05/08/20

SHEET TITLE:

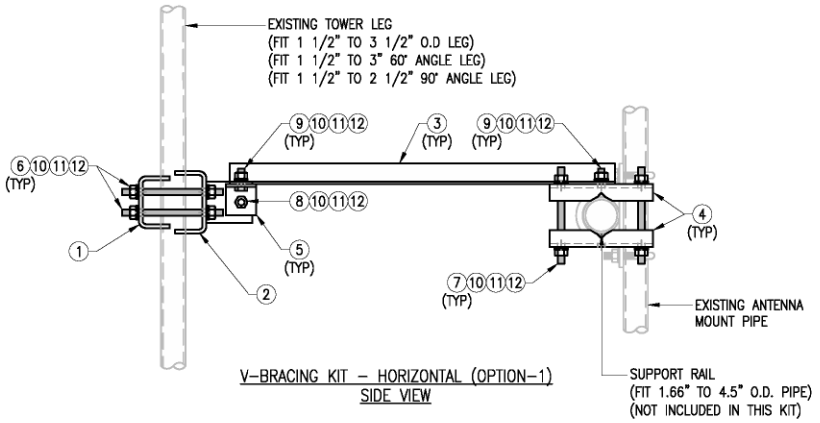
RU-BOLT CHART

SHEET NUMBER: RBC-1

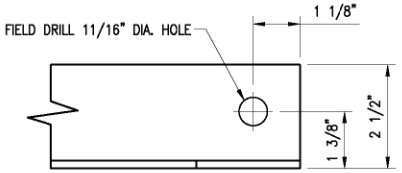
REV #: 0



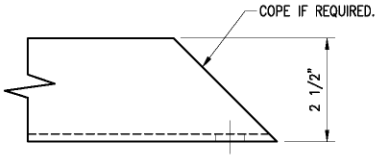
V-BRACING FOR SECTOR MOUNT (SMALL LEGS)
PLAN VIEW



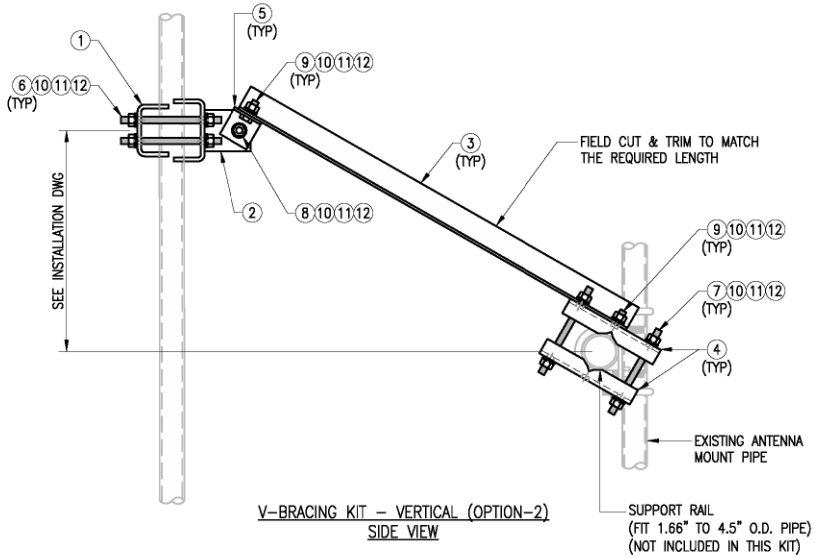
V-BRACING KIT – HORIZONTAL (OPTION-1)
SIDE VIEW



PLAN VIEW



FRONT VIEW
DETAIL "A"



V-BRACING KIT – VERTICAL (OPTION-2)
SIDE VIEW

NOTES:
1. HOT-DIPPED GALVANIZED PER ASTM A123.

VZWSMART-SFK3-SL (V-BRACING KIT FOR SMALL LEGS)

ITEM NO.	QTY.	PART NO.	DESCRIPTION	SHEET #	WT
1	1	BP9625-65	PL 3/8" X 9 5/8" X 6 1/2" A36 BENT PLATE	VBSM-SL-F1	12
2	1	BRKW-VBSM-SL	WELDMENT BRACKET	VBSM-SL-F3	11
3	2	L252525-8	L 2 1/2" X 2 1/2" X 1/4" X 8'-0" A36	VBSM-F5	67
4	4	BP6875-10	PL 3/8" X 6 7/8" X 10" A36 BENT PLATE	VBSM-F2	20
5	2	AL-333	L 3" X 3" X 1/4" X 3" A36	VBSM-F2	3
6	4	---	THREADED ROD 5/8" DIA. X 1'-0" F1554-36 HDG	---	--
7	4	---	THREADED ROD 5/8" DIA. X 10" F1554-36 HDG	---	--
8	1	---	BOLT 5/8" X 2 1/4" A325	---	--
9	4	---	BOLT 5/8" X 1 3/4" A325	---	--
10	21	FW-625	5/8" HDG USS FLAT WASHER	---	2
11	21	LW-625	5/8" HDG LOCK WASHER	---	0
12	21	NUT-625	5/8" HDG HEX NUT	---	2
				GALVANIZED WT	117

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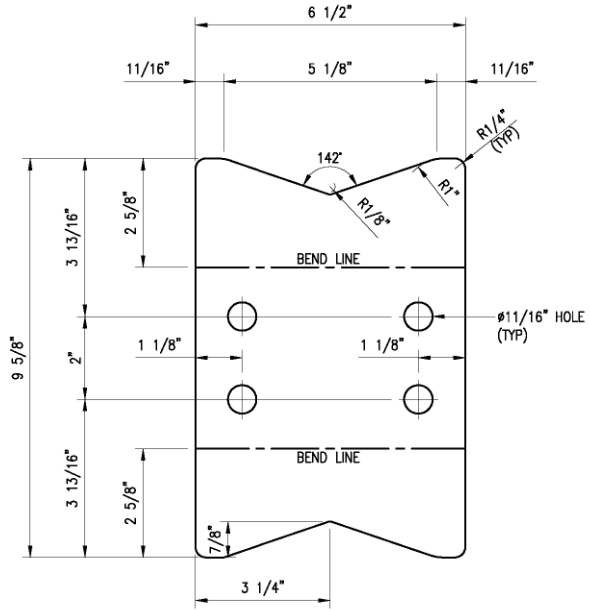
DRAWN BY: BT | CHECKED BY: HMA

REV.	DESCRIPTION	BY	DATE
1	FIRST ISSUE	BT	04/10/21

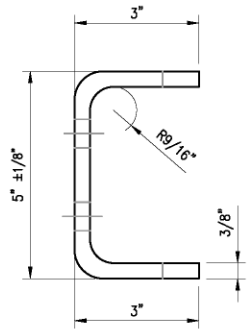
SHEET TITLE:
VZWSMART-SFK3-SL
V-BRACING KIT
FOR SMALL LEGS

SHEET NUMBER: VZWSMART-SFK3-SL
REV #: 0



BEFORE BENDING

BP9625-65
PL 3/8" X 9 5/8" X 6 1/2" A36 BENT PLATE
(6.75 LBS)



AFTER BENDING

NOTES:
1. HOT-DIPPED GALVANIZED PER ASTM A123.

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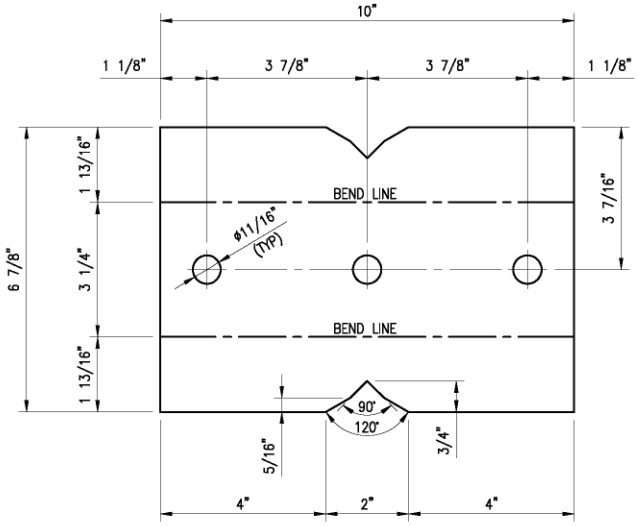
DRAWN BY: BT	CHECKED BY: HMA

REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	BT	04/10/21

SHEET TITLE:

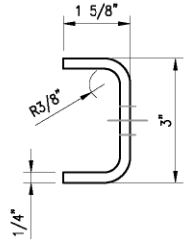
FABRICATION DETAILS

SHEET NUMBER:	REV #:
VBSM-SL-F1	0

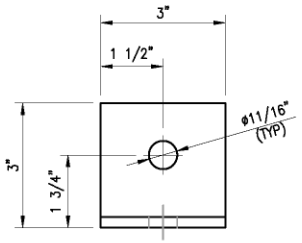


BEFORE BENDING

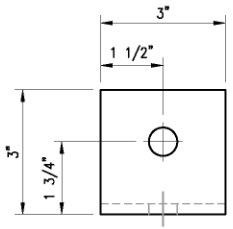
BP6875-10
PL 1/4" X 6 7/8" X 10" A36 BENT PLATE
(4.97 LBS)



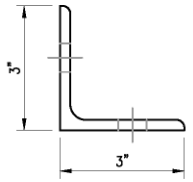
AFTER BENDING



PLAN VIEW



FRONT VIEW



SIDE VIEW

AL-333
L 3" X 3" X 1/4" X 3" A36
(1.25 LBS)

NOTES:
1. HOT-DIPPED GALVANIZED PER ASTM A123.

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DRAWN BY: BT	CHECKED BY: HMA

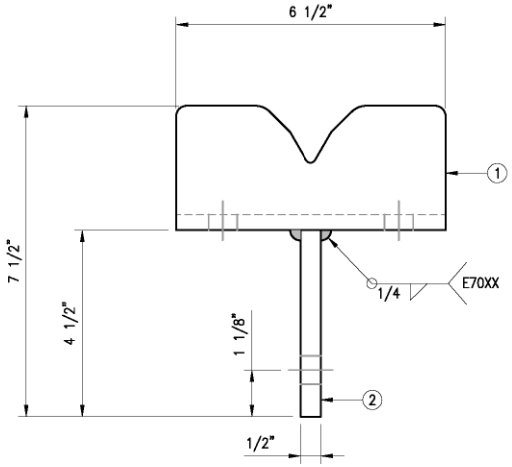
REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	BT	04/10/21

SHEET TITLE:

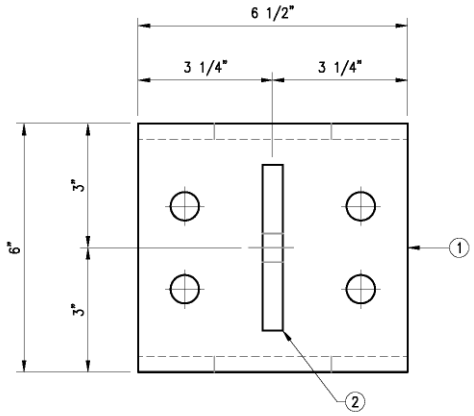
FABRICATION DETAILS

SHEET NUMBER:	REV #:
VBSM-F2	0

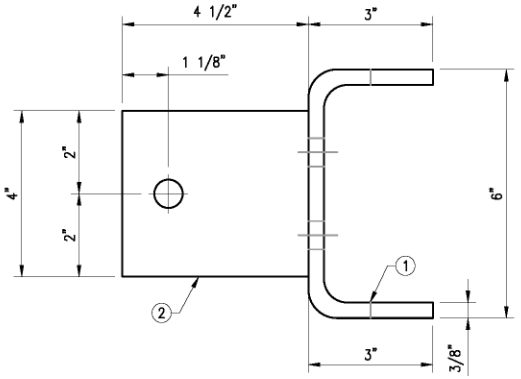
BRKW-VBSM-SL WELDMENT						
ITEM NO.	QTY.	PART NO.	DESCRIPTION	GRADE	SHEET #	WT
1	1	BP10625-65	PL 3/8" X 10 5/8" X 6 1/2"	A36	VBSM-SL-F4	7.5
2	1	PL500-4425	PL 1/2" X 4" X 0'-4 1/2"	A572	VBSM-SL-F4	2.58
					BLACK WT	10.0
					GALVANIZED WT	11



PLAN VIEW



FRONT VIEW



SIDE VIEW

BRKW-VBSM-SL
WELDMENT BRACKET
(11 LBS)

NOTES:
1. HOT-DIPPED GALVANIZED PER ASTM A123.

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DRAWN BY: BT | CHECKED BY: HMA

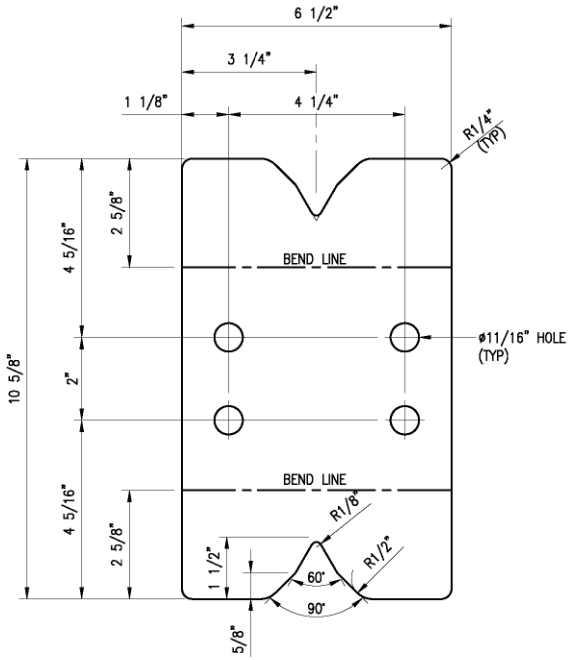
REV.	DESCRIPTION	BY	DATE
1	FIRST ISSUE	BT	04/10/21

SHEET TITLE:

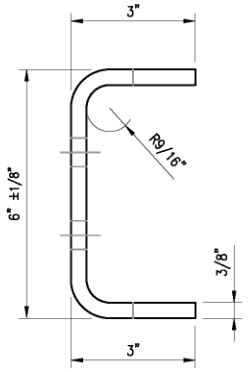
FABRICATION DETAILS

SHEET NUMBER: VBSM-SL-F3

REV #: 0

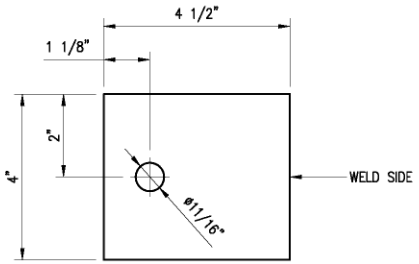


BEFORE BENDING



AFTER BENDING

BP10625-65
PL 3/8" X 10 5/8" X 6 1/2" A36 BENT PLATE
(7.45 LBS)



PL500-4425
PL 1/2" X 4" X 4 1/2" A36
(2.58 LBS)

NOTES:
1. HOT-DIPPED GALVANIZED PER ASTM A123.

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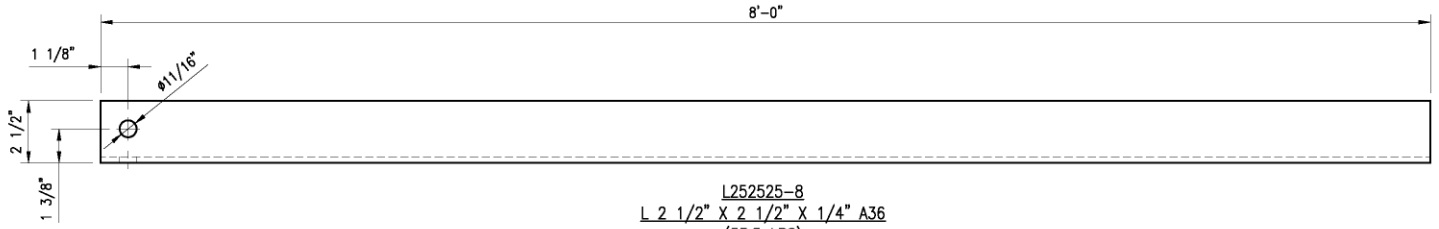
DRAWN BY: BT	CHECKED BY: HMA

REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	BT	04/10/21

SHEET TITLE:

FABRICATION DETAILS

SHEET NUMBER:	REV #:
VBSM-SL-F4	0



L252525-8
L 2 1/2" X 2 1/2" X 1/4" A36
(33.5 LBS)

NOTES:
1. HOT-DIPPED GALVANIZED PER ASTM A123.

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DRAWN BY: BT | CHECKED BY: HMA

REV.	DESCRIPTION	BY	DATE
0	FIRST ISSUE	BT	04/10/21

SHEET TITLE:
FABRICATION DETAILS

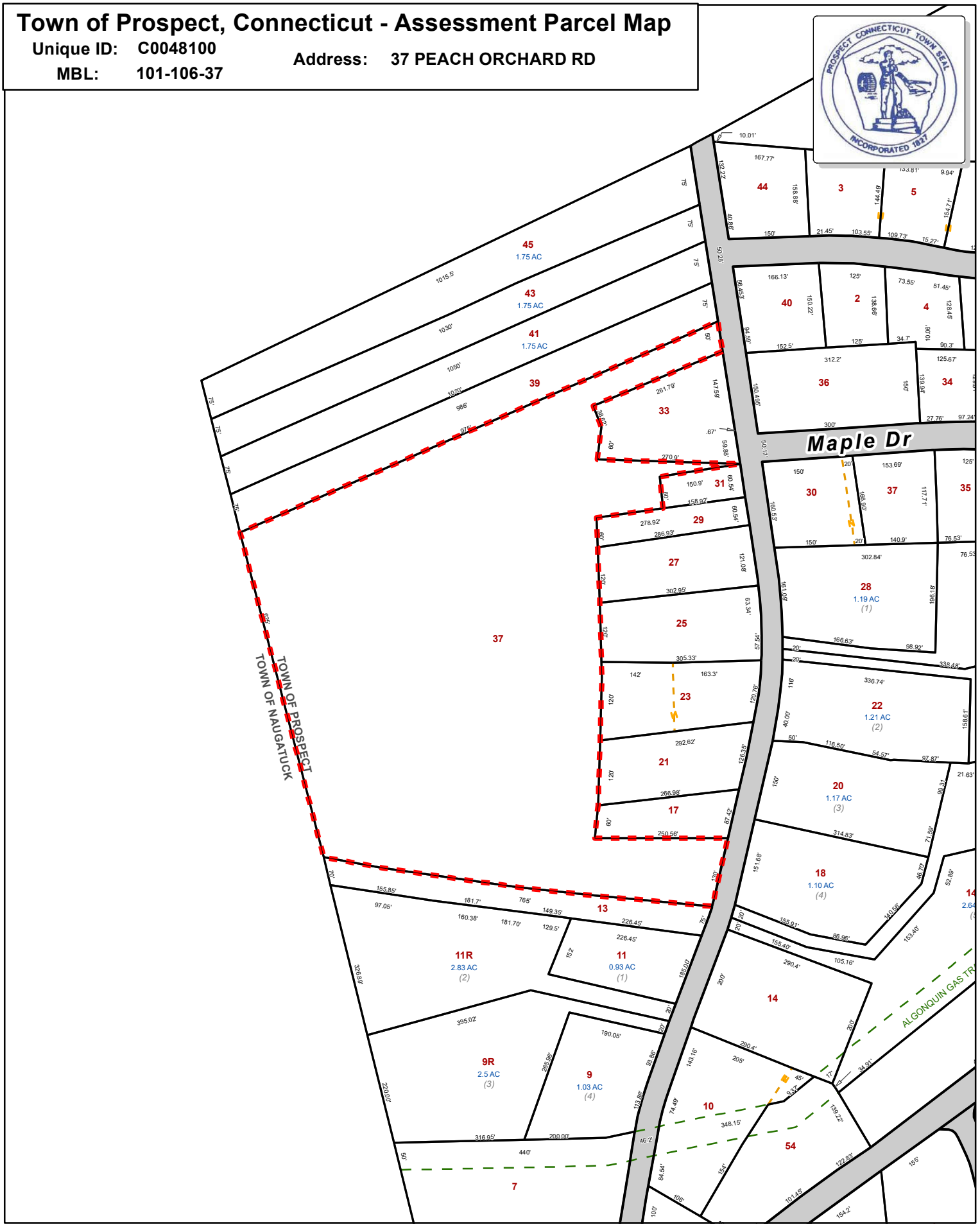
SHEET NUMBER: VBSM-F5

REV #: 0

ATTACHMENT 5

Town of Prospect, Connecticut - Assessment Parcel Map

Unique ID: C0048100
MBL: 101-106-37
Address: 37 PEACH ORCHARD RD



Approximate Scale:

1 inch = 300 feet

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

Map Produced
August 2021

Property Summary Information

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

Parcel Information

Location:	37 PEACH ORCHARD RD	Property Use:	Office	Primary Use:	Office Building
Unique ID:	C0048100	Map Block Lot:	101 106 37	Acres:	11.33
490 Acres:	0.00	Zone:	RA-1	Volume / Page:	0219/0152
Developers Map / Lot:		Census:	3472		

Value Information

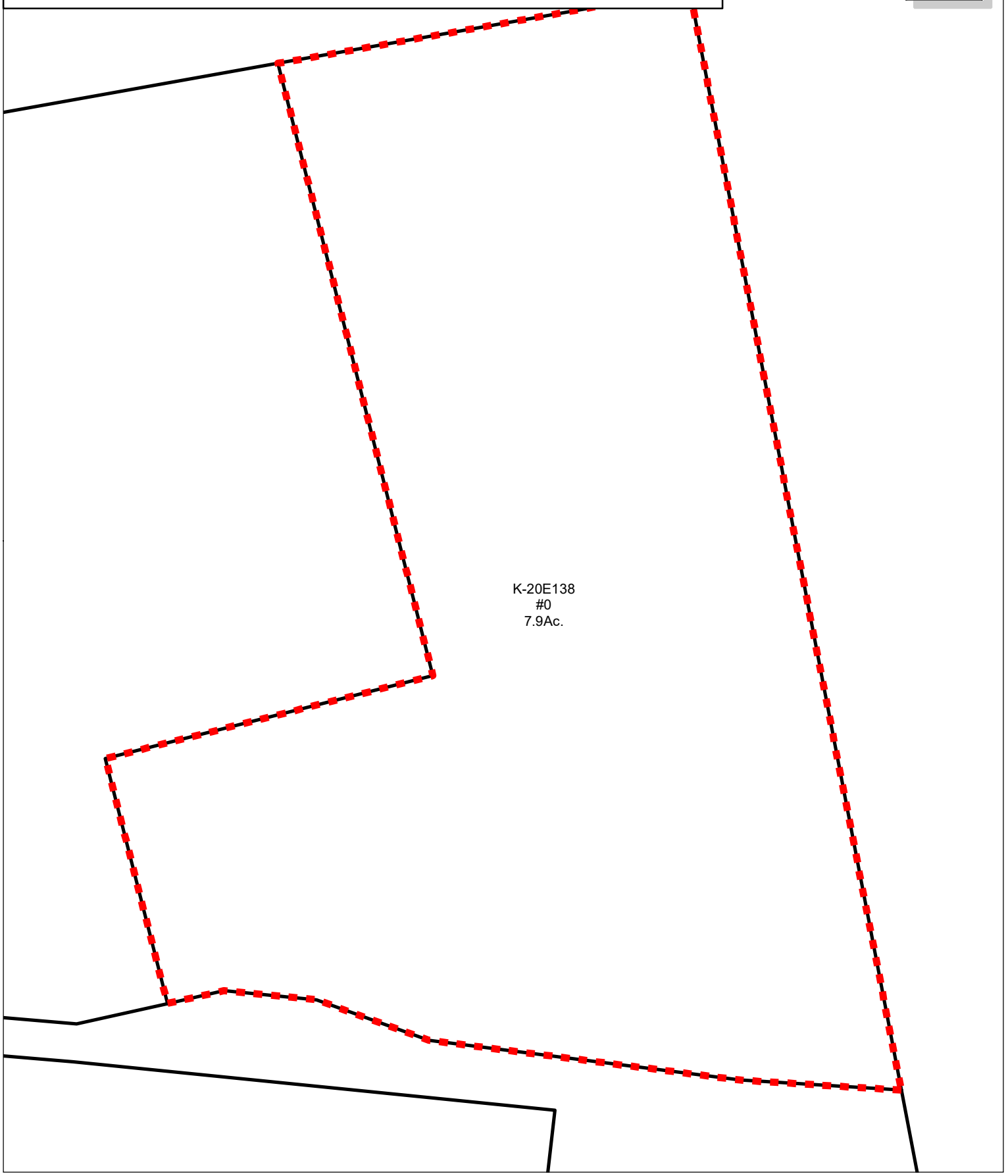
	Appraised Value	Assessed Value
Land	132,605	92,820
Buildings	853,996	597,800
Detached Outbuildings	323,638	226,550
Total	1,310,239	917,170

Owner's Information

Owner's Data
COUNTERPOINT COMMUNICATIONS INC 37 PEACH ORCHARD RD PROSPECT, CT 06712

Back To Search Print View

Borough of Naugatuck, Connecticut - Assessment Parcel Map
Parcel Account Number: 011-3060
Address: 0 CLARK HILL RD



0 25 50 75 100 Feet

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

Map Produced March 2019

Town of Naugatuck, CT

Property Listing Report

Map Block Lot	K-20E138-A	Building #	1	PID	1697	Account	011-3060

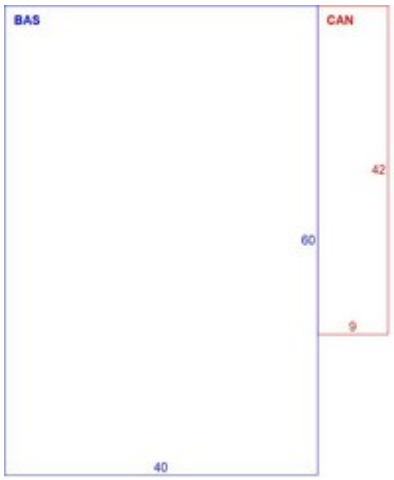
Property Information

Property Location	0 CLARK HILL RD
Owner	TEGNA BROADCAST HOLDINGS LLC
Co-Owner	
Mailing Address	8350 BROAD STREET TYSON VA 22102
Land Use	4330 RAD/TV TR
Land Class	I
Zoning Code	R15
Census Tract	

Neighborhood	D
Acreage	7.9
Utilities	
Lot Setting/Desc	
Book / Page	1035/1
Additional Info	

Photo

Sketch



Primary Construction Details

Year Built	1980
Building Desc.	RAD/TV TR
Building Style	Transmit Bldg
Building Grade	C
Stories	1
Occupancy	1.00
Exterior Walls	Pre-finsh Metl
Exterior Walls 2	Aluminum Sidng
Roof Style	Gable
Roof Cover	Metal/Tin
Interior Walls	Drywall
Interior Walls 2	NA
Interior Floors 1	Concrete
Interior Floors 2	

Heating Fuel	Electric
Heating Type	Forced Hot Air
AC Type	Central
Bedrooms	0
Full Bathrooms	0
Half Bathrooms	0
Extra Fixtures	0
Total Rooms	
Bath Style	NA
Kitchen Style	NA
Fin Bsmt Area	
Fin Bsmt Quality	
Bsmt Gar	0
Fireplaces	0

(*Industrial / Commercial Details)

Building Use	Ind/Comm
Building Condition	F
Sprinkler %	NA
Heat / AC	HEAT/AC SPLIT
Frame Type	STEEL
Baths / Plumbing	AVERAGE
Ceiling / Wall	CEIL & WALLS
Rooms / Prtns	AVERAGE
Wall Height	12.00
First Floor Use	NA
Foundation	NA

Report Created On 3/29/2022

Town of Naugatuck, CT

Property Listing Report | Map Block Lot **K-20E138-A** | Building # **1** | PID **1697** | Account **011-3060**

Valuation Summary (Assessed value = 70% of Appraised Value)

Item	Appraised	Assessed
Buildings	258640	181050
Extras	0	0
Improvements		
Outbuildings	393320	275330
Land	219000	153300
Total	870960	609680

Outbuilding and Extra Features

Type	Description
CELL BLDG	264 S.F.
CELL BLDG	140 S.F.
CELL BLDG	170 S.F.
CELL BLDG	360 S.F.
Fence 6 ft	500 L.F.
TV TOWER	280 HEIGHT
TV TOWER	980 HEIGHT

Sub Areas

Subarea Type	Gross Area (sq ft)	Living Area (sq ft)
First Floor	2400	2400
Canopy	378	0
Total Area	2778	2400

Sales History

Owner of Record	Book/ Page	Sale Date	Sale Price
TRIBUNE BROADCASTING COMPANY LLC	1034/883	2019-09-30	0
CT-WTIC LLC	1034/896	2019-09-30	10
TEGNA BROADCAST HOLDINGS LLC	1035/1	2019-09-30	611632
CHANNEL 20 INC C/O WTIC TV	0328/0466	1989-03-03	1800000

Report Created On **3/29/2022**

ATTACHMENT 6

UNITED STATES POSTAL SERVICE®

NAUGATUCK RELO

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	6	6	neopost 03/31/2022 US POSTAGE $003.65⁰ ZIP 06103 041L12203937
	Postmaster, per *(name of receiving employee)*		

USPS® Tracking Number / Firm-specific Identifier	Address (Name, Street, City, State, and ZIP Code™)	Postage	Fee	Special Handling	Parcel Airlift
1.	Robert Chatfield, Mayor Town of Prospect 36 Center Street Prospect, CT 06702				
2.	Mary Barton, Land Use Inspector Town of Prospect 36 Center Street Prospect, CT 06702				
3.	N. Warren "Pete" Hess III, Mayor Borough of Naugatuck 229 Church Street Naugatuck, CT 06770				
4.	Lori Rotella, Town Planner Borough of Naugatuck 229 Church Street Naugatuck, CT 06770				
5.	Counterpoint Communications Inc. 37 Peach Orchard Road Prospect, CT 06712				
6.	Tegna Broadcast Holdings LLC 8350 Broad Street Tyson, VA 22102				

OLD STATE HOUSE STATION 06103 MAR 31 2022 USPS