



April 13, 2023

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

RE: **EM-VER-057-220616** – Cellco Partnership d/b/a Verizon Wireless notice of intent to modify an existing telecommunications facility located at 36 Ritch Avenue, Greenwich, Connecticut. Verizon Site # 13701270

Dear Ms. Bachman,

Enclosed please find three (3) sets of Exempt Modification application packages for the above referenced site and check number 00041487 in the amount of Six Hundred Twenty Five Dollars (\$625.00). The application package consists of the Exempt Modification Letter and:

- Exhibit 1 – Property Card and GIS Map
- Exhibit 2 – Construction Drawings
- Exhibit 3 – Modification Drawings
- Exhibit 4 – Structural Analysis Report
- Exhibit 5 – Antenna Mount Analysis Report
- Exhibit 5 – EME Study Report
- Exhibit 6 – Four (4) Notice Confirmations
- Exhibit 7 – Letter of Authorization

A pdf copy of these same documents has been emailed to your office this day.

As always, if you have any questions or comments, please feel free to contact me.

Sincerely,

A handwritten signature in blue ink, appearing to read 'JA', is written over the printed name 'Jack Andrews'.

Jack Andrews
Zoning Manager, Centerline Communications
10130 Donleigh Drive
Columbia, MD 21046
443-677-0144



March 21, 2023

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

RE: **EM-VER-057-220616** – Cellco Partnership d/b/a Verizon Wireless notice of intent to modify an existing telecommunications facility located at 36 Ritch Avenue, Greenwich, Connecticut.
Verizon Site # 13701270

Dear Ms. Bachman,

Cellco Partnership d/b/a Verizon Wireless currently maintains twelve (12) antennas at the fifty seven (57) foot elevation on the existing seventy seven (77) foot tall camouflaged “monopine” tower, located at 36 Ritch Avenue West, Greenwich, CT, AKA 48 Ritch Avenue West. The tower is owned by American Tower. The property is owned by 36 Ritch Avenue LLC. The tower was initially approved by the Connecticut Siting Council, Docket No. 50, on July 9, 1985. The Council approved Verizon Wireless’ use of the existing tower on July 14, 2011, in Docket number 414. Most recently, the Council denied Verizon’s request in EM-VER-057-220616, because the applicant failed to reply to the Council’s Incomplete Letter seeking a revised EME Report.

Verizon Wireless now seeks Council approval to remove nine (9) antenna, six (6) RRH’s, one (1) OVP and associated cabling, and install mount modifications with nine (9) new antennas, nine (9) RRH’s, three (3) diplexers and related cables, as more fully illustrated in the enclosed Construction Drawings.

Please accept this application as notification in accordance with 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 the following individuals: American Tower Corporation as Tower Operator/Owner; 36 Ritch Avenue LLC., as Property Owner; Fred Camillo, First Selectman of Greenwich; and Patrick LaRow, Greenwich Director of Planning & Zoning.

The applicant’s proposal falls 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 structure.
2. The proposed modifications will NOT require an 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 operation of the modified facility will NOT increase radio frequency emissions at the facility to a level at or above the Federal Communications Commission (FCC) safety standard. Please see the RF emissions calculation for Verizon’s modified facility enclosed herewith.



5. The proposed modifications will NOT cause an ineligible change or alteration in the physical or environmental characteristics of the site.
6. The existing structure and its foundation can support the proposed loading. Please see the structural analysis enclosed herewith.

For the foregoing reasons, Verizon respectfully requests that the Council approve this request for the exempt modifications under R.C.S.A. § 16-50j-72(b)(2), for this tower located at 48 Ritch Avenue West, Greenwich, Connecticut.

If you have any questions, please feel free to contact me.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Jack Andrews', is written over a circular blue stamp or watermark.

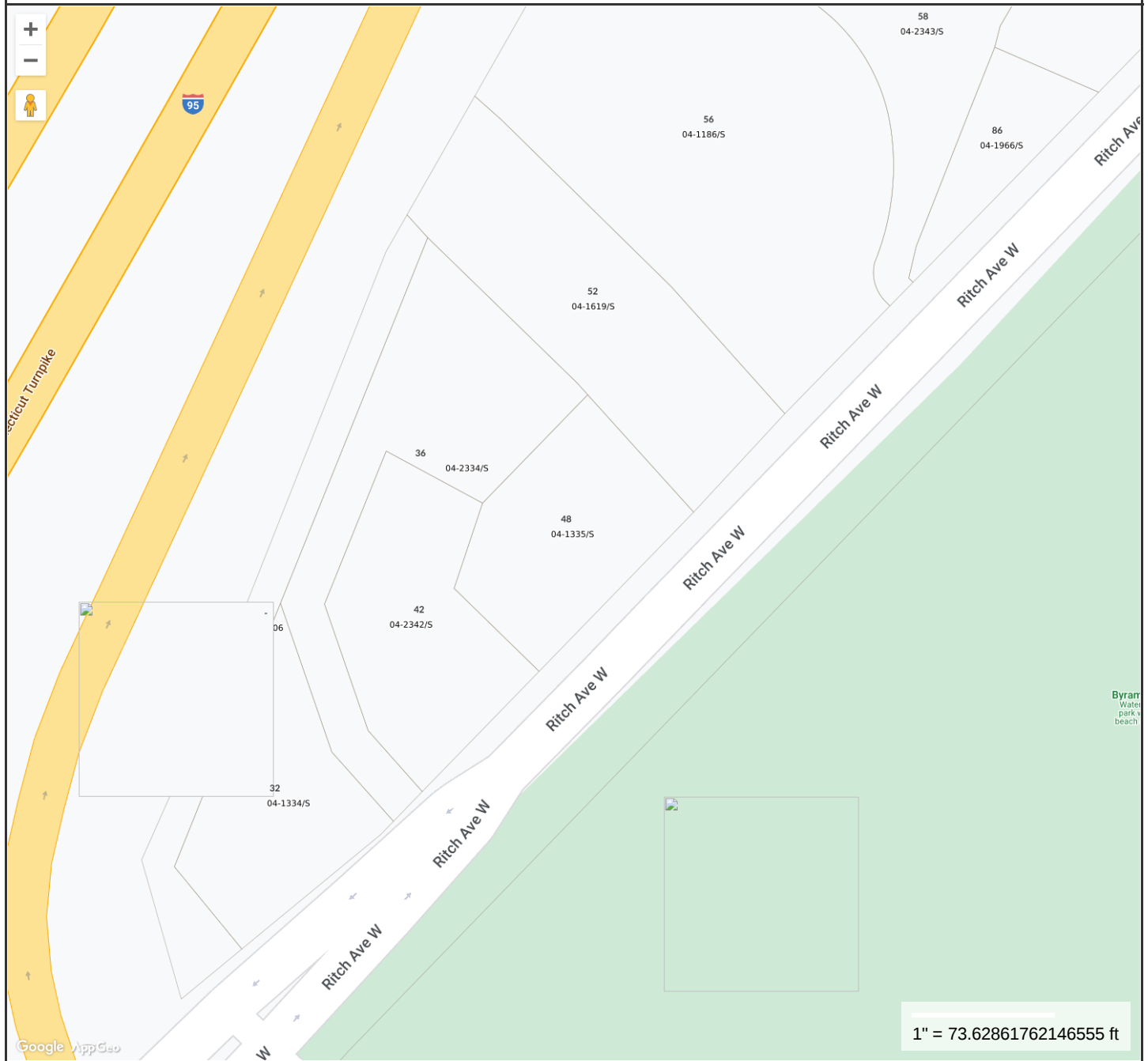
Jack Andrews
Zoning Manager, Centerline Communications
10130 Donleigh Drive
Columbia, MD 21046
443-677-0144

Enclosures:

- Exhibit 1 – Letter of Authorization
- Exhibit 2 – GIS Map
- Exhibit 3 – Construction/Mount Modification Drawings
- Exhibit 4 – Structural Analysis Report
- Exhibit 5 – Antenna Mount Analysis Report
- Exhibit 6 – EME Study Report
- Exhibit 7 – (4) Notice Confirmations
- Exhibit 8 – CSC Tower Decisions

cc: American Tower Corporation - Tower Operator/Owner
36 Ritch Avenue LLC - Property Owner
Fred Camillo - First Selectman of Greenwich
Patrick LaRow, Greenwich Director of Planning & Zoning

48 Ritch Ave West, Greenwich CT



1" = 73.62861762146555 ft

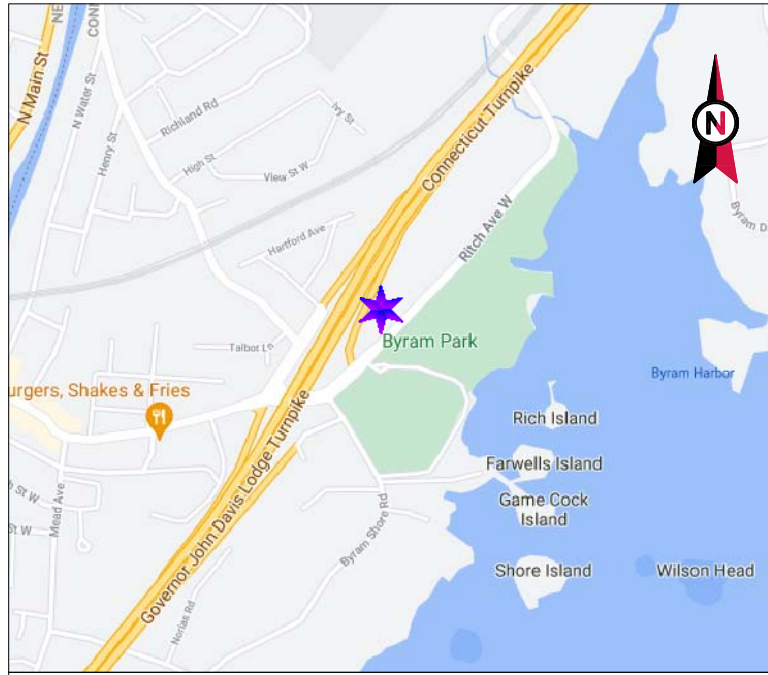


**MAP FOR REFERENCE ONLY
NOT A LEGAL DOCUMENT**

Regional Map Viewer makes no claims and no warranties, expressed or implied, concerning the validity or accuracy of the GIS data presented on this map.

Geometry updated 03/25/2022
Data updated 07/05/2022

Print map scale is approximate. Critical layout or measurement activities should not be done using this resource.



VICINITY MAP



AMERICAN TOWER®

ATC SITE NAME: BYRAM PARK CT
 ATC SITE NUMBER: 414240
 VERIZON SITE NAME: BYRAM PARK CT
 VERIZON SITE NUMBER: 468044
 SITE ADDRESS: 48 RITCH AVENUE WEST
 GREENWICH, CT 06830-9992



LOCATION MAP

AMERICAN TOWER®
 A.T. ENGINEERING SERVICE, PLLC
 3500 REGENCY PARKWAY
 SUITE 100
 CARY, NC 27518
 PHONE: (919) 468-0112
 COA: P-1177

NB+C™
 TOTALLY COMMITTED.
 NB+C ENGINEERING SERVICES, LLC.
 8601 SIX FORKS ROAD, SUITE 540
 RALEIGH, NC 27615
 (919) 657-9131

REV.	DESCRIPTION	BY	DATE
A	PRELIM	TH	07/23/21
0	FOR CONSTRUCTION	BIW	09/21/21

ATC SITE NUMBER:
414240

ATC SITE NAME:
BYRAM PARK CT

VERIZON SITE NAME:
BYRAM PARK CT

SITE ADDRESS:
36 RITCH AVE WEST
GREENWICH, CT 06830-9992



DATE DRAWN:	09/21/21
ATC JOB NO:	13701270
CUSTOMER ID:	BYRAM PARK CT
CUSTOMER #:	468044

TITLE SHEET

SHEET NUMBER:	REVISION:
G-001	0

VERIZON
ANTENNA AMENDMENT DRAWINGS

COMPLIANCE CODE	PROJECT SUMMARY	PROJECT DESCRIPTION	SHEET INDEX				
ALL WORK SHALL BE PERFORMED AND MATERIALS INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNMENT AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THESE CODES. 1. INTERNATIONAL BUILDING CODE (IBC) 2. NATIONAL ELECTRIC CODE (NEC) 3. LOCAL BUILDING CODE 4. CITY/COUNTY ORDINANCES	<u>SITE ADDRESS:</u> 48 RITCH AVENUE WEST GREENWICH, CT 06830-9992 COUNTY: FAIRFIELD <u>GEOGRAPHIC COORDINATES:</u> LATITUDE: 41.00506388 LONGITUDE: -73.64831111 GROUND ELEVATION: 53' AMSL	THE PROPOSED PROJECT INCLUDES MODIFYING GROUND BASED AND TOWER MOUNTED EQUIPMENT AS INDICATED PER BELOW: REMOVE (9) ANTENNA(S), (6) RRH(S), (1) OVP(S), AND (2) 1-5/8" HYBRID CABLE(S) INSTALL MOUNT MODIFICATIONS, (9) ANTENNA(S), (9) RRH(S), (3) DIPLEXER(S), (1) OVP(S), AND (2) 1-5/8" HYBRID CABLE(S) EXISTING (3) ANTENNA(S), AND (16) 1-5/8" COAX CABLE(S) TO REMAIN	SHEET NO:	DESCRIPTION:	REV:	DATE:	BY:
	<u>PROJECT TEAM</u> <u>TOWER OWNER:</u> AMERICAN TOWER 10 PRESIDENTIAL WAY WOBURN, MA 01801 <u>ENGINEER:</u> NB+C ENGINEERING SERVICES, LLC 8601 SIX FORKS ROAD, SUITE 540 RALEIGH, NC 27615 <u>PROPERTY OWNER:</u> 36 RITCH AVENUE LLC 48 RITCH AVENUE WEST GREENWICH, CT 06830-9992	<u>PROJECT NOTES</u> 1. THE FACILITY IS UNMANNED. 2. A TECHNICIAN WILL VISIT THE SITE APPROXIMATELY ONCE A MONTH FOR ROUTINE INSPECTION AND MAINTENANCE. 3. THE PROJECT WILL NOT RESULT IN ANY SIGNIFICANT LAND DISTURBANCE OR EFFECT OF STORM WATER DRAINAGE. 4. NO SANITARY SEWER, POTABLE WATER OR TRASH DISPOSAL IS REQUIRED. 5. HANDICAP ACCESS IS NOT REQUIRED. 6. THE PROJECT DEPICTED IN THESE PLANS QUALIFIES AS AN ELIGIBLE FACILITIES REQUEST ENTITLED TO EXPEDITED REVIEW UNDER 47 U.S.C. 1455(A) AS A MODIFICATION OF AN EXISTING WIRELESS TOWER THAT INVOLVES THE COLLOCATION REMOVAL AND/OR REPLACEMENT OF TRANSMISSION EQUIPMENT THAT IS NOT A SUBSTANTIAL CHANGE UNDER CFR 1.61000 (B)(7).					
<u>UTILITY COMPANIES</u> POWER COMPANY: EVERSOURCE PHONE: (866) 554-6025 TELEPHONE COMPANY: UNKNOWN PHONE: (000) 000-0000		<u>PROJECT LOCATION DIRECTIONS</u> TAKE RITCH AVE W AND HAMILTON AVE TO GLEN ST IN GREENWICH, 4 MIN (1.6 MI), HEAD NORTHEAST ON I-95 N, 0.2 MI, TAKE EXIT 2 FOR BYRAM TOWARD DELAVAN AVE, 0.2 MI, CONTINUE ONTO DORAN AVE, 361 FT, TURN LEFT ONTO BYRAM SHORE RD, 167 FT, TURN RIGHT ONTO RITCH AVE W, 0.6 MI, CONTINUE ONTO HAMILTON AVE, 0.5 MI, TAKE RODWELL AVE TO HAMILTON AVE, 43 S (0.2 MI), TURN RIGHT ONTO GLEN ST, 351 FT, GLEN ST TURNS LEFT AND BECOMES RODWELL AVE, 476 FT, RODWELL AVE TURNS LEFT AND BECOMES STONE AVE, 358 FT, CONTINUE ON HAMILTON AVE, DRIVE TO RITCH AVE W, 3 MIN (1.1 MI), TURN LEFT ONTO HAMILTON AVE, 0.6 MI, CONTINUE ONTO RITCH AVE W, DESTINATION WILL BE ON THE RIGHT.					



Know what's below.
Call before you dig.

GENERAL CONSTRUCTION NOTES:

1. OWNER FURNISHED MATERIALS, VERIZON "THE COMPANY" WILL PROVIDE AND THE CONTRACTOR WILL INSTALL
 - A. BTS EQUIPMENT FRAME (PLATFORM) AND ICEBRIDGE SHELTER (GROUND BUILD/CO-LOCATE ONLY)
 - B. AC/TELCO INTERFACE BOX (PPC)
 - C. ICE BRIDGE (CABLE TRAY WITH COVER) (GROUND BUILD/CO-LOCATE ONLY, GC TO FURNISH AND INSTALL FOR ROOFTOP INSTALLATION)
 - D. TOWERS, MONOPOLES
 - E. TOWER LIGHTING
 - F. GENERATORS & LIQUID PROPANE TANK
 - G. ANTENNA STANDARD BRACKETS, FRAMES AND PIPES FOR MOUNTING
 - H. ANTENNAS (INSTALLED BY OTHERS)
 - I. TRANSMISSION LINE
 - J. TRANSMISSION LINE JUMPERS
 - K. TRANSMISSION LINE CONNECTORS WITH WEATHERPROOFING KITS
 - L. TRANSMISSION LINE GROUND KITS
 - M. HANGERS
 - N. HOISTING GRIPS
 - O. BTS EQUIPMENT
2. THE CONTRACTOR IS RESPONSIBLE TO PROVIDE ALL OTHER MATERIALS FOR THE COMPLETE INSTALLATION OF THE SITE INCLUDING, BUT NOT LIMITED TO, SUCH MATERIALS AS FENCING, STRUCTURAL STEEL SUPPORTING SUB-FRAME FOR PLATFORM, ROOFING LABOR AND MATERIALS, GROUNDING RINGS, GROUNDING WIRES, COPPER-CLAD OR XIT CHEMICAL GROUND ROD(S), BUSS BARS, TRANSFORMERS AND DISCONNECT SWITCHES WHERE APPLICABLE, TEMPORARY ELECTRICAL POWER, CONDUIT, LANDSCAPING COMPOUND STONE, CRANES, CORE DRILLING, SLEEPERS AND RUBBER MATTING, REBAR, CONCRETE CAISSONS, PADS AND/OR AUGER MOUNTS, MISCELLANEOUS FASTENERS, CABLE TRAYS, NON-STANDARD ANTENNA FRAMES AND ALL OTHER MATERIAL AND LABOR REQUIRED TO COMPLETE THE JOB ACCORDING TO THE DRAWINGS AND SPECIFICATIONS. IT IS THE POSITION OF VERIZON TO APPLY FOR PERMITTING AND CONTRACTOR RESPONSIBLE FOR PICKUP AND PAYMENT OF REQUIRED PERMITS.
3. ALL WORK SHALL CONFORM TO ALL CURRENT APPLICABLE FEDERAL, STATE, AND LOCAL CODES, INCLUDING ANSI/EIA/TIA-222, AND COMPLY WITH ATC CONSTRUCTION SPECIFICATIONS.
4. CONTRACTOR SHALL CONTACT LOCAL 811 FOR IDENTIFICATION OF UNDERGROUND UTILITIES PRIOR TO START OF CONSTRUCTION.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL REQUIRED INSPECTIONS.
6. ALL DIMENSIONS TO, OF, AND ON EXISTING BUILDINGS, DRAINAGE STRUCTURES, AND SITE IMPROVEMENTS SHALL BE VERIFIED IN FIELD BY CONTRACTOR WITH ALL DISCREPANCIES REPORTED TO THE ENGINEER.
7. DO NOT CHANGE SIZE OR SPACING OF STRUCTURAL ELEMENTS.
8. DETAILS SHOWN ARE TYPICAL; SIMILAR DETAILS APPLY TO SIMILAR CONDITIONS UNLESS OTHERWISE NOTED.
9. THESE DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY WHICH SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
10. CONTRACTOR SHALL BRACE STRUCTURES UNTIL ALL STRUCTURAL ELEMENTS NEEDED FOR STABILITY ARE INSTALLED. THESE ELEMENTS ARE AS FOLLOWS: LATERAL BRACING, ANCHOR BOLTS, ETC.
11. CONTRACTOR SHALL DETERMINE EXACT LOCATION OF EXISTING UTILITIES, GROUNDS DRAINS, DRAIN PIPES, VENTS, ETC. BEFORE COMMENCING WORK.
12. INCORRECTLY FABRICATED, DAMAGED, OR OTHERWISE MISFITTING OR NONCONFORMING MATERIALS OR CONDITIONS SHALL BE REPORTED TO THE VERIZON REP PRIOR TO REMEDIAL OR CORRECTIVE ACTION. ANY SUCH REMEDIAL ACTION SHALL REQUIRE WRITTEN APPROVAL BY THE VERIZON REP PRIOR TO PROCEEDING.
13. EACH CONTRACTOR SHALL COOPERATE WITH THE VERIZON REP, AND COORDINATE HIS WORK WITH THE WORK OF OTHERS.
14. CONTRACTOR SHALL REPAIR ANY DAMAGE CAUSED BY CONSTRUCTION OF THIS PROJECT TO MATCH EXISTING PRE-CONSTRUCTION CONDITIONS TO THE SATISFACTION OF THE VERIZON CONSTRUCTION MANAGER.
15. ALL CABLE/CONDUIT ENTRY/EXIT PORTS SHALL BE WEATHERPROOFED DURING INSTALLATION USING A SILICONE SEALANT.
16. WHERE EXISTING CONDITIONS DO NOT MATCH THOSE SHOWN IN THIS PLAN SET, CONTRACTOR SHALL NOTIFY THE VERIZON REP AND ENGINEER OF RECORD IMMEDIATELY.
17. CONTRACTOR SHALL ENSURE ALL SUBCONTRACTORS ARE PROVIDED WITH A COMPLETE AND CURRENT SET OF DRAWINGS AND SPECIFICATIONS FOR THIS PROJECT.
18. CONTRACTOR SHALL REMOVE ALL RUBBISH AND DEBRIS FROM THE SITE AT THE END OF EACH DAY.
19. CONTRACTOR SHALL COORDINATE WORK SCHEDULE WITH AMERICAN TOWER CORPORATION (ATC) AND TAKE PRECAUTIONS TO MINIMIZE IMPACT AND DISRUPTION OF OTHER OCCUPANTS OF THE FACILITY.
20. CONTRACTOR SHALL FURNISH VERIZON AND AMERICAN TOWER CORPORATION (ATC) WITH A PDF MARKED UP AS-BUILT SET OF DRAWINGS UPON COMPLETION OF WORK.
21. PRIOR TO SUBMISSION OF BID, CONTRACTOR SHALL COORDINATE WITH VERIZON REP TO DETERMINE WHAT, IF ANY, ITEMS WILL BE PROVIDED. ALL ITEMS NOT PROVIDED SHALL BE PROVIDED AND INSTALLED BY THE CONTRACTOR. CONTRACTOR WILL INSTALL ALL ITEMS PROVIDED.

22. PRIOR TO SUBMISSION OF BID, CONTRACTOR SHALL COORDINATE WITH VERIZON REP TO DETERMINE IF ANY PERMITS WILL BE OBTAINED BY CONTRACTOR. ALL REQUIRED PERMITS NOT OBTAINED BY VERIZON MUST BE OBTAINED, AND PAID FOR, BY THE CONTRACTOR.
23. CONTRACTOR SHALL INSTALL ALL SITE SIGNAGE IN ACCORDANCE WITH VERIZON SPECIFICATIONS AND REQUIREMENTS.
24. CONTRACTOR SHALL SUBMIT ALL SHOP DRAWINGS TO VERIZON FOR REVIEW AND APPROVAL PRIOR TO FABRICATION.
25. ALL EQUIPMENT SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S SPECIFICATIONS AND LOCATED ACCORDING TO VERIZON SPECIFICATIONS, AND AS SHOWN IN THESE PLANS.
26. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE PROJECT DESCRIBED HEREIN. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL THE CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES AND FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT.
27. CONTRACTOR SHALL NOTIFY VERIZON REP A MINIMUM OF 48 HOURS IN ADVANCE OF POURING CONCRETE OR BACKFILLING ANY UNDERGROUND UTILITIES, FOUNDATIONS OR SEALING ANY WALL, FLOOR OR ROOF PENETRATIONS FOR ENGINEERING REVIEW AND APPROVAL.
28. CONTRACTOR SHALL BE RESPONSIBLE FOR SITE SAFETY INCLUDING COMPLIANCE WITH ALL APPLICABLE OSHA STANDARDS AND RECOMMENDATIONS AND SHALL PROVIDE ALL NECESSARY SAFETY DEVICES INCLUDING PPE AND PPM AND CONSTRUCTION DEVICES SUCH AS WELDING AND FIRE PREVENTION, TEMPORARY SHORING, SCAFFOLDING, TRENCH BOXES/SLOPING, BARRIERS, ETC.
29. THE CONTRACTOR SHALL PROTECT AT HIS OWN EXPENSE, ALL EXISTING FACILITIES AND SUCH OF HIS NEW WORK LIABLE TO INJURY DURING THE CONSTRUCTION PERIOD. ANY DAMAGE CAUSED BY NEGLIGENCE ON THE PART OF THIS CONTRACTOR OR HIS REPRESENTATIVES, OR BY THE ELEMENTS DUE TO NEGLIGENCE ON THE PART OF THIS CONTRACTOR OR HIS REPRESENTATIVES, EITHER TO THE EXISTING WORK, OR TO HIS WORK OR THE WORK OF ANY OTHER CONTRACTOR, SHALL BE REPAIRED AT HIS EXPENSE TO THE OWNER'S SATISFACTION.
30. ALL WORK SHALL BE INSTALLED IN A FIRST CLASS, NEAT AND WORKMANLIKE MANNER BY MECHANICS SKILLED IN THE TRADE INVOLVED. THE QUALITY OF WORKMANSHIP SHALL BE SUBJECT TO THE APPROVAL OF THE VERIZON REP. ANY WORK FOUND BY THE VERIZON REP TO BE OF INFERIOR QUALITY AND/OR WORKMANSHIP SHALL BE REPLACED AND/OR REWORKED AT CONTRACTOR EXPENSE UNTIL APPROVAL IS OBTAINED.
31. IN ORDER TO ESTABLISH STANDARDS OF QUALITY AND PERFORMANCE, ALL TYPES OF MATERIALS LISTED HEREINAFTER BY MANUFACTURER'S NAMES AND/OR MANUFACTURER'S CATALOG NUMBER SHALL BE PROVIDED BY THESE MANUFACTURERS AS SPECIFIED.
32. VERIZON FURNISHED EQUIPMENT SHALL BE PICKED-UP AT THE VERIZON WAREHOUSE, NO LATER THAN 48HR AFTER BEING NOTIFIED INSURED, STORED, UNCRATE, PROTECTED AND INSTALLED BY THE CONTRACTOR WITH ALL APPURTENANCES REQUIRED TO PLACE THE EQUIPMENT IN OPERATION, READY FOR USE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE EQUIPMENT AFTER PICKING IT UP.
33. VERIZON OR HIS ARCHITECT/ENGINEER RESERVES THE RIGHT TO REJECT ANY EQUIPMENT OR MATERIALS WHICH, IN HIS OWN OPINION ARE NOT IN COMPLIANCE WITH THE CONTRACT DOCUMENTS, EITHER BEFORE OR AFTER INSTALLATION AND THE EQUIPMENT SHALL BE REPLACED WITH EQUIPMENT CONFORMING TO THE REQUIREMENTS OF THE CONTRACT DOCUMENTS BY THE CONTRACTOR AT NO COST TO VERIZON OR THEIR ARCHITECT/ENGINEER.

STRUCTURAL STEEL NOTES:

1. STRUCTURAL STEEL SHALL CONFORM TO THE LATEST EDITION OF THE AISC "SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS."
2. STRUCTURAL STEEL ROLLED SHAPES, PLATES AND BARS SHALL CONFORM TO THE FOLLOWING ASTM DESIGNATIONS:
 - A. ASTM A-572, GRADE 50 - ALL W SHAPES, UNLESS NOTED OR A992 OTHERWISE
 - B. ASTM A-36 - ALL OTHER ROLLED SHAPES, PLATES AND BARS UNLESS NOTED OTHERWISE.
 - C. ASTM A-500, GRADE B - HSS SECTION (SQUARE, RECTANGULAR, AND ROUND)
 - D. ASTM A-325, TYPE SC OR N - ALL BOLTS FOR CONNECTING STRUCTURAL MEMBERS
 - E. ASTM F-1554 07 - ALL ANCHOR BOLTS, UNLESS NOTED OTHERWISE
3. ALL EXPOSED STRUCTURAL STEEL MEMBERS SHALL BE HOT-DIPPED GALVANIZED AFTER FABRICATION PER ASTM A123, EXPOSED STEEL HARDWARE AND ANCHOR BOLTS SHALL BE GALVANIZED PER ASTM A153 OR B695.
4. ALL FIELD CUT SURFACES, FIELD DRILLED HOLES AND GROUND SURFACES WHERE EXISTING PAINT OR GALVANIZATION REMOVAL WAS REQUIRED SHALL BE REPAIRED WITH (2) BRUSHED COATS OF ZRC GALVILITE COLD GALVANIZING COMPOUND PER ASTM A780 AND MANUFACTURER'S RECOMMENDATIONS.
5. DO NOT DRILL HOLES THROUGH STRUCTURAL STEEL MEMBERS EXCEPT AS SHOWN AND DETAILED ON STRUCTURAL DRAWINGS.
6. CONNECTIONS:
 - A. ALL WELDING TO BE PERFORMED BY AWS CERTIFIED WELDERS AND CONDUCTED IN ACCORDANCE WITH THE LATEST EDITION OF THE AWS WELDING CODE D1.1.

- B. ALL WELDS SHALL BE INSPECTED VISUALLY. 25% OF WELDS SHALL BE INSPECTED WITH DYE PENETRANT OR MAGNETIC PARTICLE TO MEET THE ACCEPTANCE CRITERIA OF AWS D1.1. REPAIR ALL WELDS AS NECESSARY.
- C. INSPECTION SHALL BE PERFORMED BY AN AWS CERTIFIED WELD INSPECTOR.
- D. IT IS THE CONTRACTORS RESPONSIBILITY TO PROVIDE BURNING/WELDING PERMITS AS REQUIRED BY LOCAL GOVERNING AUTHORITY AND IF REQUIRED SHALL HAVE FIRE DEPARTMENT DETAIL FOR ANY WELDING ACTIVITY.
- E. ALL ELECTRODES TO BE LOW HYDROGEN, MATCHING FILLER METAL, PER AWS D1.1, UNLESS NOTED OTHERWISE.
- F. MINIMUM WELD SIZE TO BE 0.1875 INCH FILLET WELDS, UNLESS NOTED OTHERWISE.
- G. PRIOR TO FIELD WELDING GALVANIZING MATERIAL, CONTRACTOR SHALL GRIND OFF GALVANIZING 1/2" BEYOND ALL FIELD WELD SURFACES. AFTER WELD AND WELD INSPECTION IS COMPLETE, REPAIR ALL GROUND AND WELDED SURFACES WITH ZRC GALVILITE COLD GALVANIZING COMPOUND PER ASTM A780 AND MANUFACTURERS RECOMMENDATIONS.
- H. THE CONTRACTOR SHALL PROVIDE ADEQUATE SHORING AND/OR BRACING WHERE REQUIRED DURING CONSTRUCTION UNTIL ALL CONNECTIONS ARE COMPLETE.
- I. ANY FIELD CHANGES OR SUBSTITUTIONS SHALL HAVE PRIOR APPROVAL FROM THE ENGINEER, AND T- MOBILE PROJECT MANAGER IN WRITING

SPECIAL CONSTRUCTION

ANTENNA INSTALLATION NOTES:

1. WORK INCLUDED:
 - A. ANTENNA AND COAXIAL CABLES ARE FURNISHED BY VERIZON UNDER A SEPARATE CONTRACT. THE CONTRACTOR SHALL ASSIST ANTENNA INSTALLATION CONTRACTOR IN TERMS OF COORDINATION AND SITE ACCESS. ERECTION SUBCONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF PERSONNEL AND
 - B. INSTALL ANTENNA AS INDICATE ON DRAWINGS AND VERIZON SPECIFICATIONS.
 - C. INSTALL GALVANIZED STEEL ANTENNA MOUNTS AS INDICATED ON DRAWINGS
 - D. INSTALL FURNISHED GALVANIZED STEEL OR ALUMINUM WAVEGUIDE AND PROVIDE PRINTOUT OF THAT TEST.
 - E. CONTRACTOR SHALL PROVIDE FOUR (4) SETS OF SWEEP TESTS USING ANRITZU-PACKARD 8713B RF SCALAR NETWORK ANALYZER. SUBMIT FREQUENCY DOMAIN REFLECTOMETER(FDR) TESTS RESULTS TO THE PROJECT MANAGER. SWEEP TESTS SHALL BE AS PER ATTACHED RFS "MINIMUM FIELD TESTING RECOMMENDED FOR ANTENNA AND HELIAX COAXIAL CABLE SYSTEMS" DATED 10/5/93. TESTING SHALL BE PERFORMED BY AN INDEPENDENT TESTING SERVICE AND BE BOUND AND SUBMITTED WITHIN ONE WEEK OF WORK COMPLETION.
 - F. INSTALL COAXIAL CABLES AND TERMINATING BETWEEN ANTENNAS AND EQUIPMENT PER MANUFACTURER'S RECOMMENDATIONS. WEATHERPROOF ALL CONNECTIONS BETWEEN THE ANTENNA AND EQUIPMENT PER MANUFACTURER'S REQUIREMENTS. TERMINATE ALL COAXIAL CABLE THREE (3) FEET IN EXCESS OF ENTRY PORT LOCATION UNLESS OTHERWISE STATED.
 - G. ANTENNA AND COAXIAL CABLE GROUNDING:

2. ALL EXTERIOR #6 GREED GROUND WIRE "DAISY CHAIN" CONNECTIONS ARE TO BE WEATHER SEALED WITH RFS CONNECTORS/SPLICE WEATHERPROOFING KIT #221213 OR EQUAL.
3. ALL COAXIAL CABLE GROUNDING KITS ARE TO BE INSTALLED ON STRAIGHT RUNS OF COAXIAL CABLE (NOT WITHIN BENDS)

ALL DISCREPANCIES FROM WHAT IS SHOWN ON THESE CONSTRUCTION DRAWINGS SHALL BE COMMUNICATED TO ATC ENGINEERING IMMEDIATELY FOR CORRECTION OR RE-DESIGN. FAILURE TO COMMUNICATE DIRECTLY WITH ATC ENGINEERING OR ANY CHANGES FROM THE DESIGN CONDUCTED WITHOUT PRIOR APPROVAL FROM ATC ENGINEERING SHALL BE THE SOLE RESPONSIBILITY OF THE GENERAL CONTRACTOR.



AMERICAN TOWER®
A.T. ENGINEERING SERVICE, PLLC
 3500 REGENCY PARKWAY
 SUITE 100
 CARY, NC 27518
 PHONE: (919) 468-0112
 COA: P-1177



NB+C ENGINEERING SERVICES, LLC.
 8601 SIX FORKS ROAD, SUITE 540
 RALEIGH, NC 27615
 (919) 657-9131

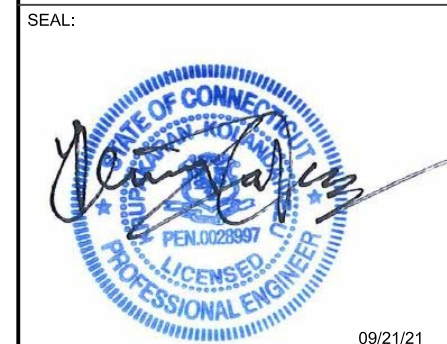
REV.	DESCRIPTION	BY	DATE
A	PRELIM	TH	07/23/21
0	FOR CONSTRUCTION	BIW	09/21/21

ATC SITE NUMBER:
414240

ATC SITE NAME:
BYRAM PARK CT

VERIZON SITE NAME:
BYRAM PARK CT

SITE ADDRESS:
 36 RITCH AVE WEST
 GREENWICH, CT 06830-9992



DATE DRAWN:	09/21/21
ATC JOB NO:	13701270
CUSTOMER ID:	BYRAM PARK CT
CUSTOMER #:	468044

GENERAL NOTES

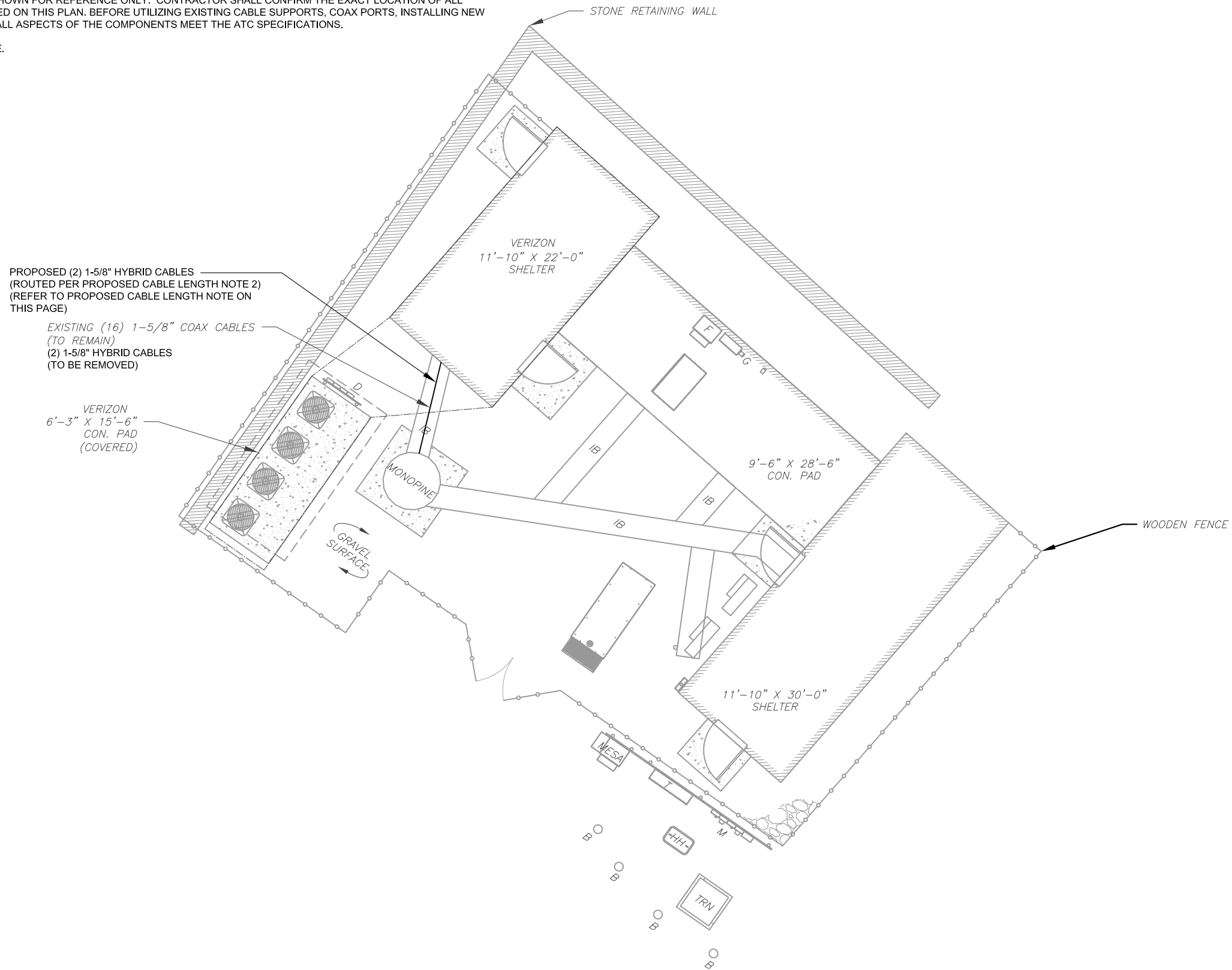
SHEET NUMBER: G-002	REVISION: 0
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SITE PLAN NOTES:

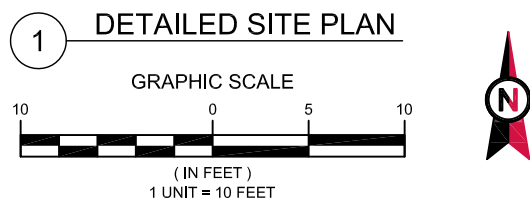
1. THIS SITE PLAN REPRESENTS THE BEST PRESENT KNOWLEDGE AVAILABLE TO THE ENGINEER AT THE TIME OF THIS DESIGN. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO CONSTRUCTION AND VERIFY ALL EXISTING CONDITIONS RELATED TO THE SCOPE OF WORK FOR THIS PROJECT.
2. ICE BRIDGE, CABLE LADDER, COAX PORT, AND COAX CABLE ARE SHOWN FOR REFERENCE ONLY. CONTRACTOR SHALL CONFIRM THE EXACT LOCATION OF ALL PROPOSED AND EXISTING EQUIPMENT AND STRUCTURES DEPICTED ON THIS PLAN. BEFORE UTILIZING EXISTING CABLE SUPPORTS, COAX PORTS, INSTALLING NEW PORTS OR ANY OTHER EQUIPMENT, CONTRACTOR SHALL VERIFY ALL ASPECTS OF THE COMPONENTS MEET THE ATC SPECIFICATIONS.
3. THIS PROJECT INCLUDES NO INSTALL OR MODIFICATION AT GRADE.

LEGEND	
⊗	GROUNDING TEST WELL
ATS	AUTOMATIC TRANSFER SWITCH
B	BOLLARD
CSC	CELL SITE CABINET
D	DISCONNECT
E	ELECTRICAL
F	FIBER
GEN	GENERATOR
G	GENERATOR RECEPTACAL
HH, V	HAND HOLE, VAULT
IB	ICE BRIDGE
K	KENTROX BOX
LC	LIGHTING CONTROL
M	METER
PB	PULL BOX
PP	POWER POLE
T	TELCO
TRN	TRANSFORMER
— x —	CHAINLINK FENCE



PROPOSED CABLE LENGTH:

1. ESTIMATED LENGTH OF PROPOSED CABLE IS 75. ESTIMATED LENGTH OF CABLE WAS PROVIDED BY CUSTOMER OR CALCULATED BY ADDING THE RAD CENTER AND THE DISTANCE FROM THE SHELTER ENTRY PLATE TO THE TOWER (ALONG THE ICE BRIDGE) AND A SAFETY FACTOR MEASUREMENT OF 15% (OF THE TWO PREVIOUS VALUES), CDS DEFER TO GREATEST CABLE LENGTH.
2. ROUTE PROPOSED CABLES ALONG SAME PATH AS EXISTING CABLES AND IN ACCORDANCE WITH STRUCTURAL ANALYSIS. IF ADEQUATE SPACE EXISTS, ROUTE CABLES THROUGH ENTRY PORT HOLE, UP INSIDE OF MONOPOLE, AND THROUGH EXIT PORT HOLE. IF ROUTING OUTSIDE THE MONOPOLE, ATTACH CABLES USING STAND-OFF ADAPTERS MOUNTED TO TOWER USING STAINLESS STEEL BANDING. ADEQUATELY SECURE CABLES USING EITHER APPROPRIATELY SIZED STAINLESS STEEL SNAP-INS OR MOUNTING HARDWARE AND BRACKETS AS SPECIFIED BY CABLE MANUFACTURER.



AMERICAN TOWER®
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 PHONE: (919) 468-0112
 COA: P-1177

NB+C™
TOTALLY COMMITTED.
NB+C ENGINEERING SERVICES, LLC.
 8601 SIX FORKS ROAD, SUITE 540
 RALEIGH, NC 27615
 (919) 657-9131

REV.	DESCRIPTION	BY	DATE
A	PRELIM	TH	07/23/21
0	FOR CONSTRUCTION	BIW	09/21/21

ATC SITE NUMBER:
414240

ATC SITE NAME:
BYRAM PARK CT

VERIZON SITE NAME:
BYRAM PARK CT

SITE ADDRESS:
 36 RITCH AVE WEST
 GREENWICH, CT 06830-9992

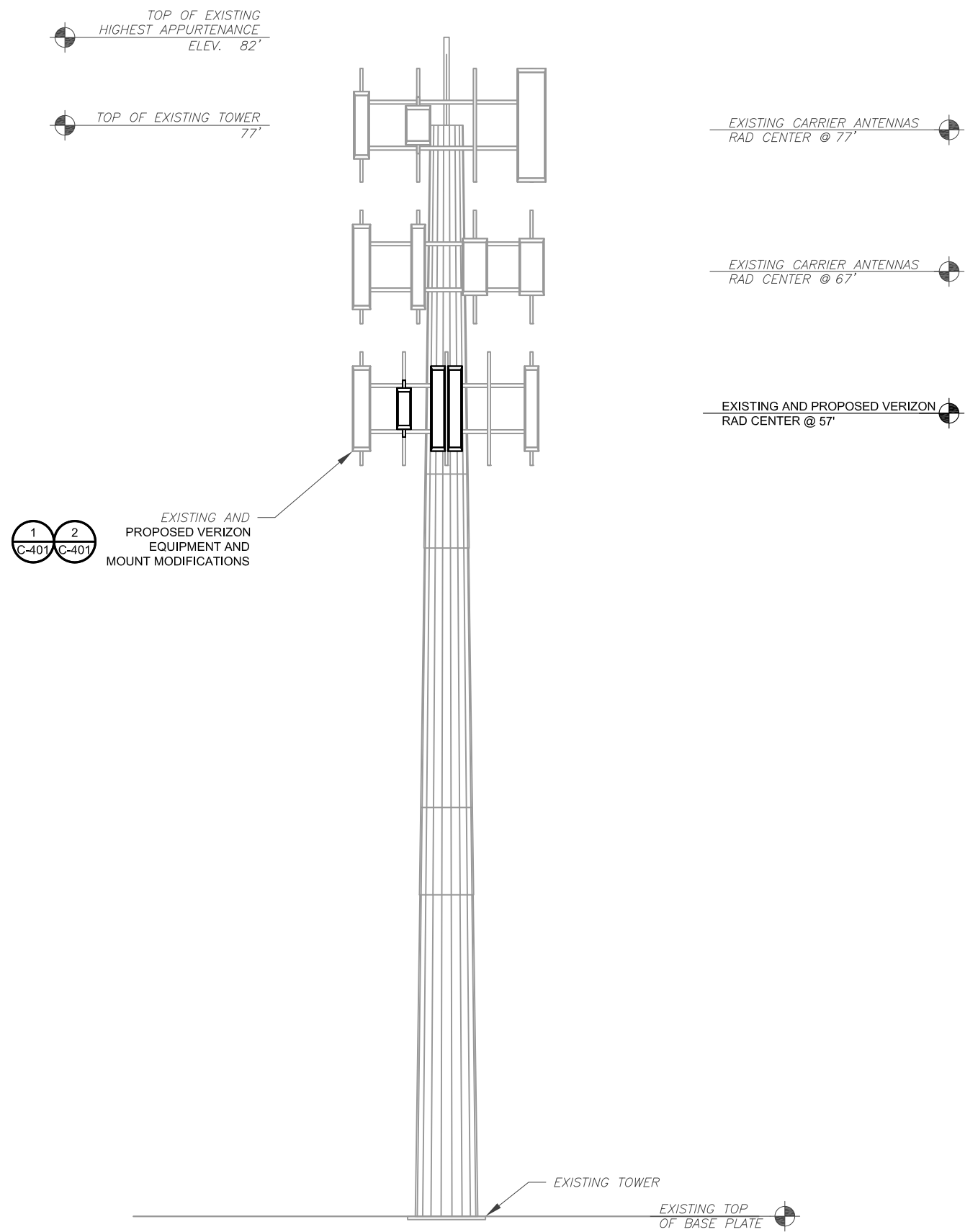
SEAL:



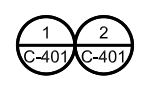
DATE DRAWN:	09/21/21
ATC JOB NO:	13701270
CUSTOMER ID:	BYRAM PARK CT
CUSTOMER #:	468044

DETAILED SITE PLAN	
SHEET NUMBER:	REVISION:
C-101	0

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PER MOUNT ANALYSIS COMPLETED BY MASER CONSULTING, DATED 07/07/2021, THE EXISTING MOUNT MUST BE MODIFIED TO ADEQUATELY SUPPORT THE PROPOSED LOADING. THE MOUNT MODIFICATION PROPOSED IN THE MOUNT ANALYSIS, INCLUDED AT THE END OF THIS PLAN SET, MUST BE INSTALLED PRIOR TO THE INSTALLATION OF THE PROPOSED ANTENNAS AND OTHER EQUIPMENT.



1 TOWER ELEVATION
SCALE: N.T.S.

- TOWER NOTE:**
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONFIRM WITH THE PROJECT MANAGER THAT THEY HAVE THE MOST RECENT VERSION OF THE STRUCTURAL ANALYSIS BEFORE COMMENCING WORK. EXISTING AND PROPOSED TOWER APPURTENANCES, MOUNTS, AND ANTENNAS ARE SHOWN BASED ON THE STRUCTURAL ANALYSIS.
 - WHERE APPLICABLE, ALL NEW ANTENNAS, EQUIPMENT, MOUNTS, CABLING, ETC. SHALL BE PAINTED/SOCKED TO MATCH EXISTING EQUIPMENT IN ACCORDANCE WITH FAA, JURISDICTION, AND/OR OTHER LOCAL REQUIREMENTS.
 - ROUTE PROPOSED CABLES ALONG SAME PATH AS EXISTING CABLES AND IN ACCORDANCE WITH STRUCTURAL ANALYSIS. IF ADEQUATE SPACE EXISTS, ROUTE CABLES THROUGH ENTRY PORT HOLE, UP INSIDE OF MONOPOLE, AND THROUGH EXIT PORT HOLE. IF ROUTING OUTSIDE THE MONOPOLE, ATTACH CABLES USING STAND-OFF ADAPTERS MOUNTED TO TOWER USING STAINLESS STEEL BANDING. ADEQUATELY SECURE CABLES USING EITHER APPROPRIATELY SIZED STAINLESS STEEL SNAP-INS OR MOUNTING HARDWARE AND BRACKETS AS SPECIFIED BY CABLE MANUFACTURER.
 - TOWER ELEVATIONS ARE MEASURED FROM TOP OF BASE PLATE TO MATCH STRUCTURAL ANALYSIS. ELEVATIONS DO NOT REFLECT TRUE ABOVE GROUND LEVEL (A.G.L.)



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 RALEIGH, NC 27615
 (919) 657-9131

REV.	DESCRIPTION	BY	DATE
A	PRELIM	TH	07/23/21
0	FOR CONSTRUCTION	BIW	09/21/21

ATC SITE NUMBER:
414240

ATC SITE NAME:
BYRAM PARK CT

VERIZON SITE NAME:
BYRAM PARK CT

SITE ADDRESS:
36 FITCH AVE WEST
GREENWICH, CT 06830-9992



DATE DRAWN:	09/21/21
ATC JOB NO:	13701270
CUSTOMER ID:	BYRAM PARK CT
CUSTOMER #:	468044

TOWER ELEVATION

SHEET NUMBER:	REVISION:
C-201	0

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 (919) 657-9131

REV.	DESCRIPTION	BY	DATE
A	PRELIM	TH	07/23/21
0	FOR CONSTRUCTION	BIW	09/21/21

ATC SITE NUMBER:
414240

ATC SITE NAME:
BYRAM PARK CT

VERIZON SITE NAME:
BYRAM PARK CT

SITE ADDRESS:
36 RITCH AVE WEST
GREENWICH, CT 06830-9992

SEAL:



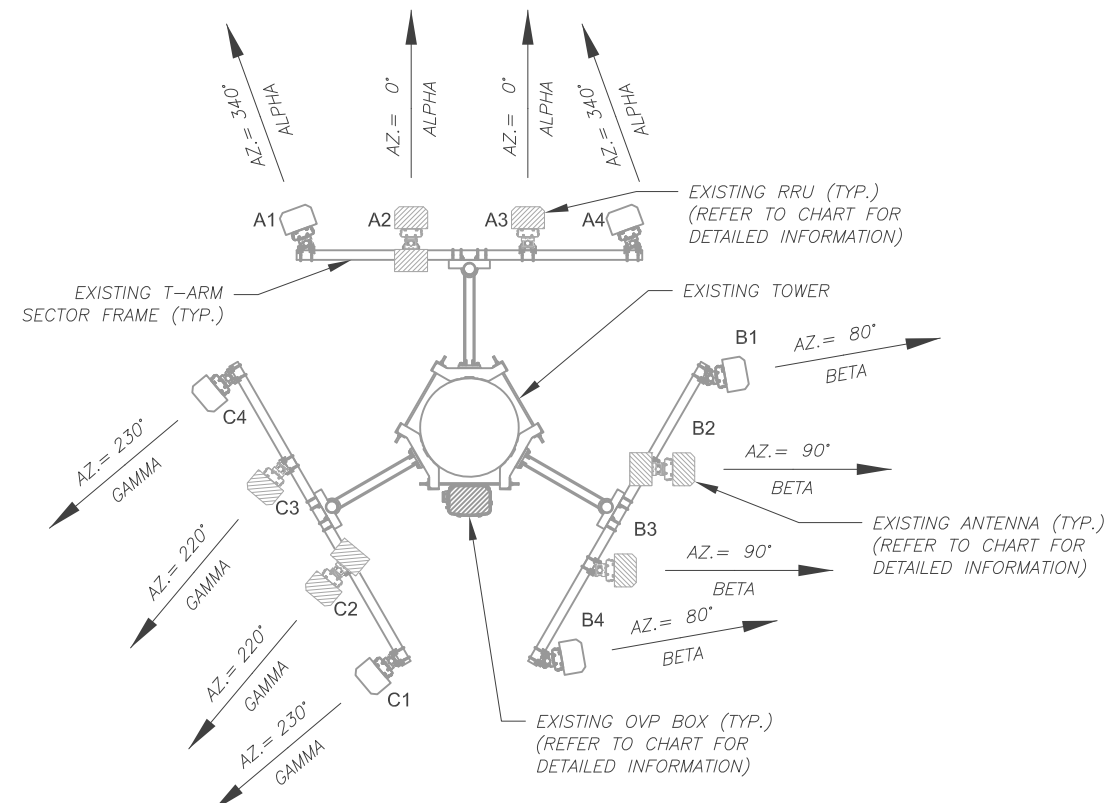
DATE DRAWN:	09/21/21
ATC JOB NO:	13701270
CUSTOMER ID:	BYRAM PARK CT
CUSTOMER #:	468044

ANTENNA INFORMATION & SCHEDULE

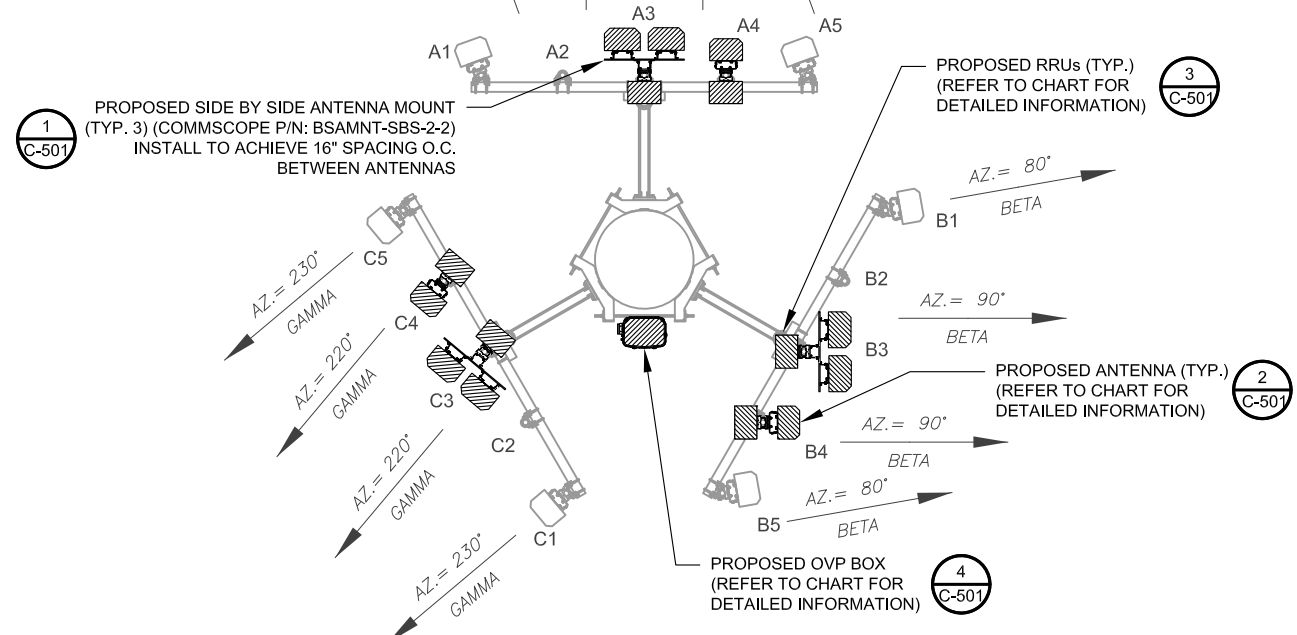
SHEET NUMBER:
C-401

REVISION:
0

PER MOUNT ANALYSIS COMPLETED BY MASER CONSULTING, DATED 07/07/2021, THE EXISTING MOUNT MUST BE MODIFIED TO ADEQUATELY SUPPORT THE PROPOSED LOADING. THE MOUNT MODIFICATION PROPOSED IN THE MOUNT ANALYSIS, INCLUDED AT THE END OF THIS PLAN SET, MUST BE INSTALLED PRIOR TO THE INSTALLATION OF THE PROPOSED ANTENNAS AND OTHER EQUIPMENT.



1 EXISTING ANTENNA PLAN
SCALE: N.T.S.



2 FINAL ANTENNA PLAN
SCALE: N.T.S.

EXISTING ANTENNA SCHEDULE									
LOCATION		ANTENNA SUMMARY					NON ANTENNA SUMMARY		
SECTOR	RAD	AZ	POS	ANTENNA	BAND	MECH/ELEC D-TILT	STATUS	ADDITIONAL TOWER MOUNTED EQUIPMENT	STATUS
ALPHA	57'	340°	A1	LPA-80063/6CF-EDIN-X	850 CDMA	2/0	RMN	-	-
		0°	A2	SBNHH-1D65A	700/AWS	0/4/2	RMV	UHBA B13 RRH 4X30 UHIE B66A RRH 4X45	RMV
		0°	A3	BXA-171063-12CF	-	-	RMV	-	-
		340°	A4	LPA-80063/6CF-EDIN-X	850 CDMA	2/0	RMN	-	-
BETA	57'	80°	B1	LPA-80063/6CF-EDIN-X	850 CDMA	2/0	RMN	-	-
		90°	B2	SBNHH-1D45A	700/AWS	0/6/3	RMV	UHBA B13 RRH 4X30 UHIE B66A RRH 4X45	RMV
		90°	B3	BXA-171063-12CF	-	-	RMV	-	-
		80°	B4	LPA-80063/6CF-EDIN-X	850 CDMA	2/0	RMN	-	-
GAMMA	57'	230°	C1	LPA-80063/6CF-EDIN-X	850 CDMA	2/0	RMN	-	-
		220°	C2	SBNHH-1D45A	700/AWS	0/6/2	RMV	UHBA B13 RRH 4X30 UHIE B66A RRH 4X45	RMV
		220°	C3	BXA-171063-12CF	-	-	RMV	-	-
		230°	C4	LPA-80063/6CF-EDIN-X	850 CDMA	2/0	RMN	-	-

NOTES

- CONFIRM WITH VERIZON REP FOR APPLICABLE UPDATES/REVISIONS AND MOST RECENT RFDS FOR NSN CONFIGURATION (CONFIG). GC TO CAP ALL UNUSED PORTS.
- CONFIRM SPACING OF PROPOSED EQUIP DOES NOT CAUSE TOWER CONFLICTS NOR IMPEDE TOWER CLIMBING PEGS.

STATUS ABBREVIATIONS

RMV: TO BE REMOVED
 RMN: TO REMAIN
 REL: TO BE RELOCATED
 ADD: TO BE ADDED

CABLE LENGTHS FOR JUMPERS

JUNCTION BOX TO RRU: 15'
 RRU TO ANTENNA: 10'

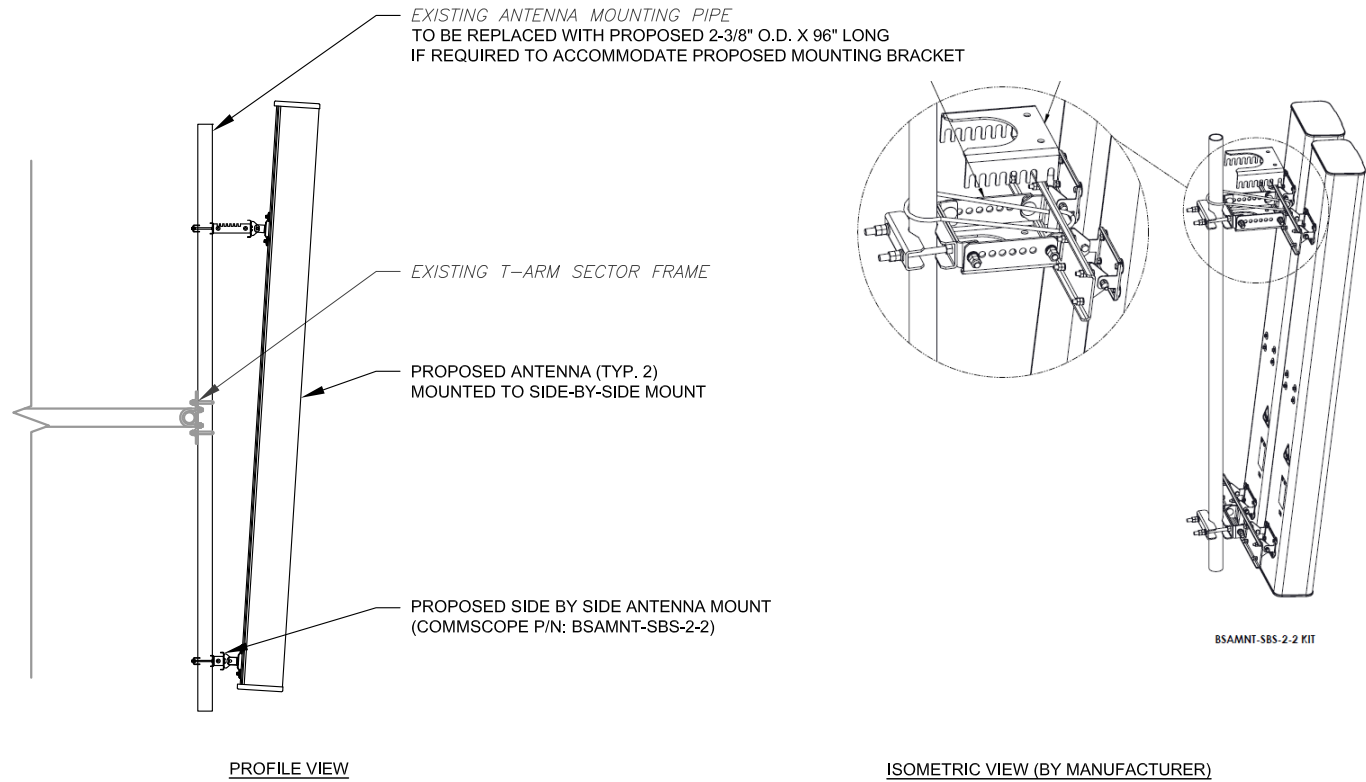
FINAL ANTENNA SCHEDULE									
LOCATION		ANTENNA SUMMARY					NON ANTENNA SUMMARY		
SECTOR	RAD	AZ	POS	ANTENNA	BAND	MECH/ELEC D-TILT	STATUS	ADDITIONAL TOWER MOUNTED EQUIPMENT	STATUS
ALPHA	57'	340°	A1	LPA-80063/6CF-EDIN-X	850 CDMA	2/0	RMN	-	-
		-	A2	-	-	-	-	-	-
		0°	A3	JAHH-65A-R3B	700/850/1900	0/4/4/2	ADD	B5/B13 RRH-BR04C	ADD
		0°	A3	JAHH-65A-R3B	700/850/AWS	0/4/4/2	ADD	CBC78T-DS-43-2X B2/B66A RRH-BR049	ADD
		0°	A4	MT6407-77A	L-SUB6	0/6	ADD	-	-
BETA	57'	340°	A5	LPA-80063/6CF-EDIN-X	850 CDMA	2/0	RMN	-	-
		80°	B1	LPA-80063/6CF-EDIN-X	850 CDMA	2/0	RMN	-	-
		-	B2	-	-	-	-	-	-
		90°	B3	JAHH-45A-R3B	700/850/1900	0/6/10/3	ADD	B5/B13 RRH-BR04C	ADD
		90°	B3	JAHH-45A-R3B	700/850/AWS	0/6/10/3	ADD	CBC78T-DS-43-2X B2/B66A RRH-BR049	ADD
GAMMA	57'	90°	B4	MT6407-77A	L-SUB6	0/6	ADD	-	-
		80°	B5	LPA-80063/6CF-EDIN-X	850 CDMA	2/0	RMN	-	-
		230°	C1	LPA-80063/6CF-EDIN-X	850 CDMA	2/0	RMN	-	-
		-	C2	-	-	-	-	-	-
		220°	C3	JAHH-45A-R3B	700/850/1900	0/6/6/2	ADD	B5/B13 RRH-BR04C	ADD
GAMMA	57'	220°	C3	JAHH-45A-R3B	700/850/AWS	0/6/6/2	ADD	CBC78T-DS-43-2X B2/B66A RRH-BR049	ADD
		220°	C4	MT6407-77A	L-SUB6	0/6	ADD	-	-
		230°	C5	LPA-80063/6CF-EDIN-X	850 CDMA	2/0	RMN	-	-

EXISTING FIBER DISTRIBUTION/OVP BOX		EXISTING CABLING SUMMARY		
MODEL NUMBER	STATUS	COAX	HYBRID	STATUS
RC2DC-4750-PF-48	RMV	(16) 1-5/8"	-	RMN
-	-	(1) 1-5/8"	(2) 1-5/8"	RMV

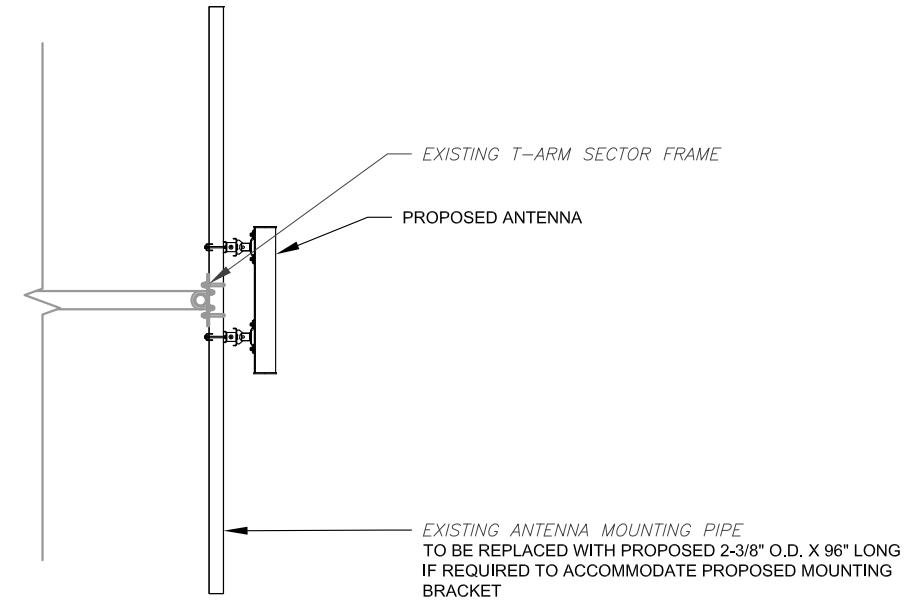
3 EQUIPMENT SCHEDULES

FINAL FIBER DISTRIBUTION / OVP BOX		FINAL CABLING SUMMARY		
MODEL NUMBER	STATUS	COAX	HYBRID	STATUS
RCMDC-6627-PF-48	ADD	(16) 1-5/8"	-	RMN
-	-	-	(2) 1-5/8"	ADD

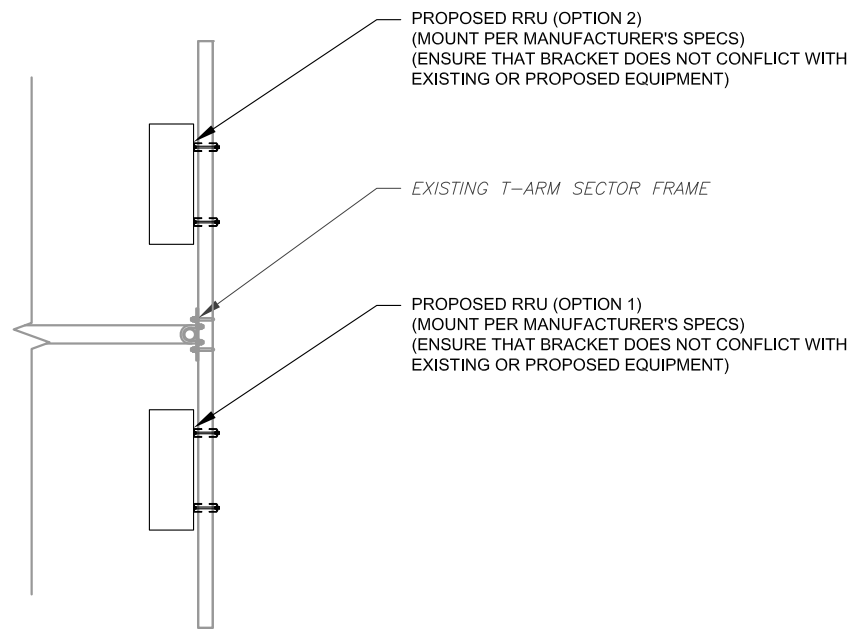
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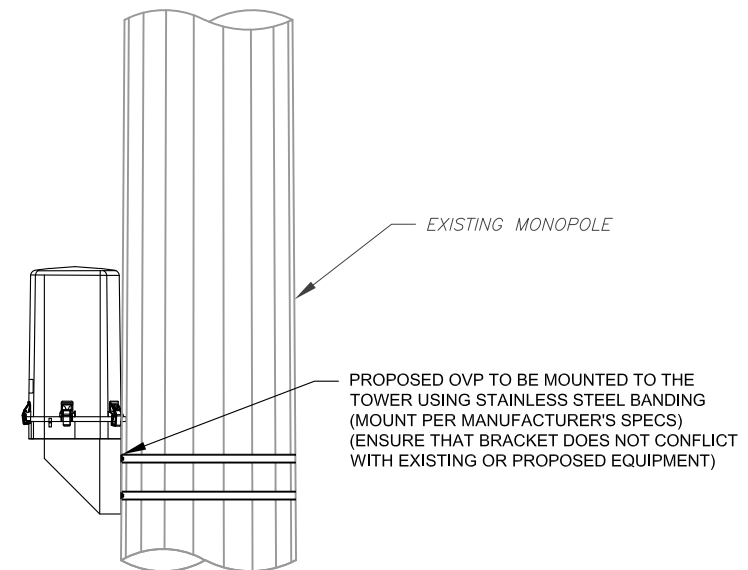
1 PROPOSED SIDE-BY-SIDE MOUNT
SCALE: NOT TO SCALE



2 PROPOSED 5G ANTENNA MOUNTING DETAIL - TYPICAL
SCALE: N.T.S.



3 PROPOSED RRU MOUNTING DETAIL - TYPICAL
SCALE: N.T.S.



4 PROPOSED OVP MOUNTING
SCALE: N.T.S.



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RALEIGH, NC 27615
(919) 657-9131

REV.	DESCRIPTION	BY	DATE
A	PRELIM	TH	07/23/21
0	FOR CONSTRUCTION	BIW	09/21/21

ATC SITE NUMBER:
414240

ATC SITE NAME:
BYRAM PARK CT

VERIZON SITE NAME:
BYRAM PARK CT

SITE ADDRESS:
36 FITCH AVE WEST
GREENWICH, CT 06830-9992

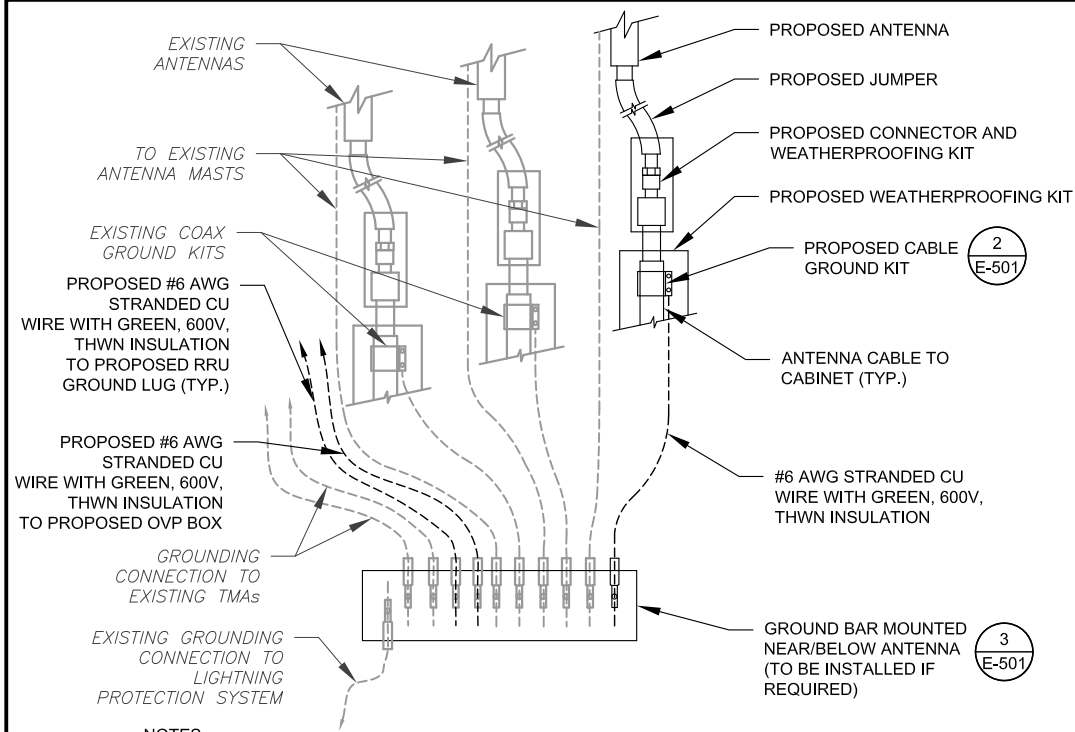
SEAL:



DATE DRAWN:	09/21/21
ATC JOB NO:	13701270
CUSTOMER ID:	BYRAM PARK CT
CUSTOMER #:	468044

CONSTRUCTION
DETAILS

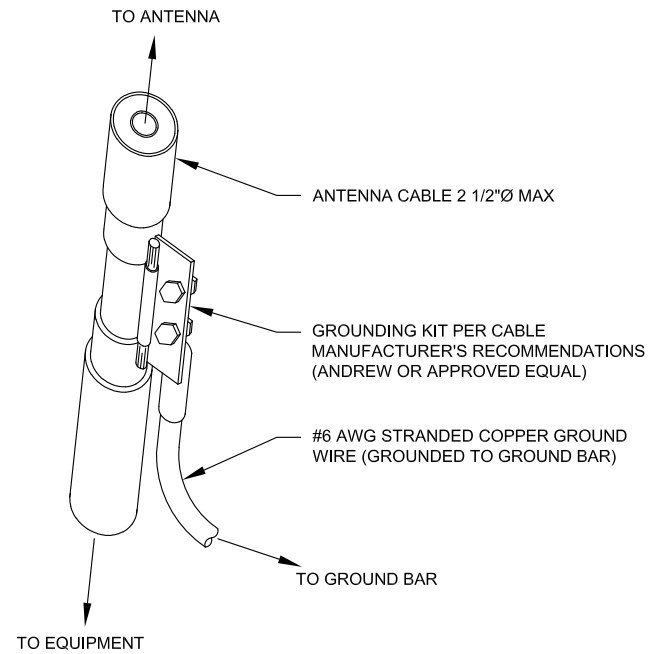
SHEET NUMBER:	REVISION:
C-501	0



NOTES:

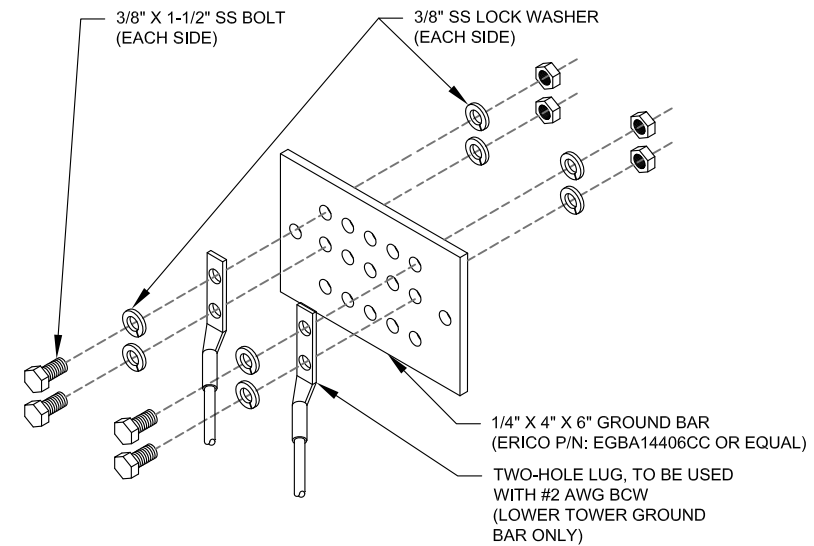
1. THIS DETAIL IS INTENDED TO SHOW THE GENERAL GROUNDING REQUIREMENTS. SLIGHT ADJUSTMENTS MAY BE REQUIRED BASED ON EXISTING SITE CONDITIONS. THE CONTRACTOR SHALL MAKE FIELD ADJUSTMENTS AS NEEDED AND INFORM THE CONSTRUCTION MANAGER OF ANY CONFLICTS.
2. SITE GROUNDING SHALL COMPLY WITH VERIZON GROUNDING STANDARDS, LATEST EDITION, AND COMPLY WITH VERIZON GROUNDING CHECKLIST, LATEST VERSION. WHEN NATIONAL AND LOCAL GROUNDING CODES ARE MORE STRINGENT THEY SHALL GOVERN.

1 TYPICAL ANTENNA GROUNDING DIAGRAM
SCALE: N.T.S.



- GROUND KIT NOTES:**
1. DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO GROUND BAR.
 2. CONTRACTOR SHALL PROVIDE WEATHERPROOFING KIT (ANDREW PART NUMBER 221213) AND INSTALL/TAPE PER MANUFACTURER'S SPECIFICATIONS.

2 CABLE GROUND KIT CONNECTION DETAIL
SCALE: N.T.S.



GROUND BAR NOTES:

1. GROUND BAR KITS COME WITH ALL HARDWARE, NUTS, BOLTS, WASHERS, ETC. EXCEPT THE STRUCTURAL MOUNTING MEMBER(S).
2. GROUND BAR TO BE BONDED DIRECTLY TO TOWER.

3 TOWER GROUND BAR DETAIL
SCALE: N.T.S.

AMERICAN TOWER®
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REV.	DESCRIPTION	BY	DATE
A	PRELIM	TH	07/23/21
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ATC SITE NUMBER:
414240

ATC SITE NAME:
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VERIZON SITE NAME:
BYRAM PARK CT

SITE ADDRESS:
36 RITCH AVE WEST
GREENWICH, CT 06830-9992

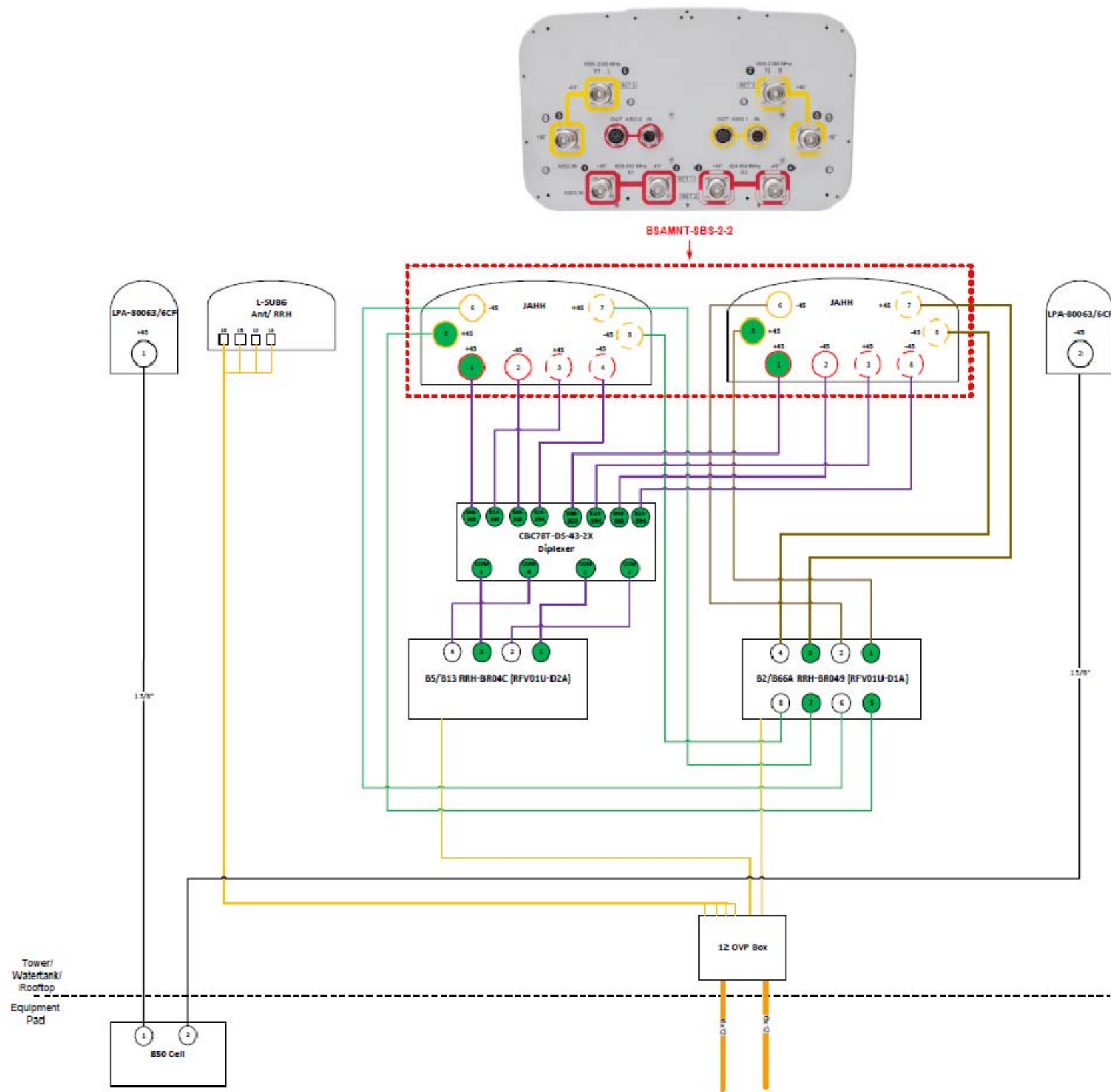
SEAL:

DATE DRAWN:	09/21/21
ATC JOB NO:	13701270
CUSTOMER ID:	BYRAM PARK CT
CUSTOMER #:	468044

GROUNDING DETAILS

SHEET NUMBER:	REVISION:
E-501	0

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1 PLUMBING DIAGRAM
SCALE: NOT TO SCALE

NOTE: THIS SHEET WAS CREATED BY OTHERS AND PROVIDED AT THE REQUEST OF THE CUSTOMER WITHOUT EDIT. PLEASE REFERENCE THE MOUNT ANALYSIS REPORT FOR COMPLETE MOUNT ANALYSIS CALCULATIONS AND DETAILS. SUPPLEMENTAL PAGES INCLUDED IN THE CONSTRUCTION DRAWINGS ARE FOR REFERENCE ONLY. GENERAL CONTRACTOR IS TO VERIFY THEY HAVE THE MOST RECENT MOUNT ANALYSIS PRIOR TO CONSTRUCTION.

SUPPLEMENTAL

SHEET NUMBER:
R-601

REVISION:
0

Band	Sector 1 (Alpha) Color Codes							Sector 2 (Beta) Color Codes							Sector 3 (Gamma) Color Codes							
850 CDMA	R	R						B	B						G	G						
	R	R						B	B						G	G						
700	R	R	P					B	B	P					G	G	P					
	R	R	R	P				B	B	B	P				G	G	G	P				
850 LTE	R	R	R	R	P			B	B	B	B	P			G	G	G	G	P			
	R	R	R	R	P	P		B	B	B	B	P	P		G	G	G	G	P	P		
700 / 850	R	R	R	R	R	P		B	B	B	B	P	P		G	G	G	G	P	P		
	R	R	R	R	R	P	P		B	B	B	B	P	P	P		G	G	G	G	P	P
AWS	R	W						B	W						G	W						
	R	R	W					B	B	W					G	G	W					
PCS	R	R	R	W				B	B	B	W				G	G	G	W				
	R	R	R	R	W	W		B	B	B	B	W	W		G	G	G	G	W	W		
AWS / PCS	R	R	R	R	W	W		B	B	B	B	W	W		G	G	G	G	W	W		
	R	R	R	R	W	W	W		B	B	B	B	W	W	W		G	G	G	G	W	W
CBRS	R	Y						B	Y						G	Y						
	R	R	Y					B	B	Y					G	G	Y					
LAA	R	R	Y					B	B	B	Y				G	G	G	Y				
	R	R	Y	Y				B	B	Y	Y				G	G	Y	Y				

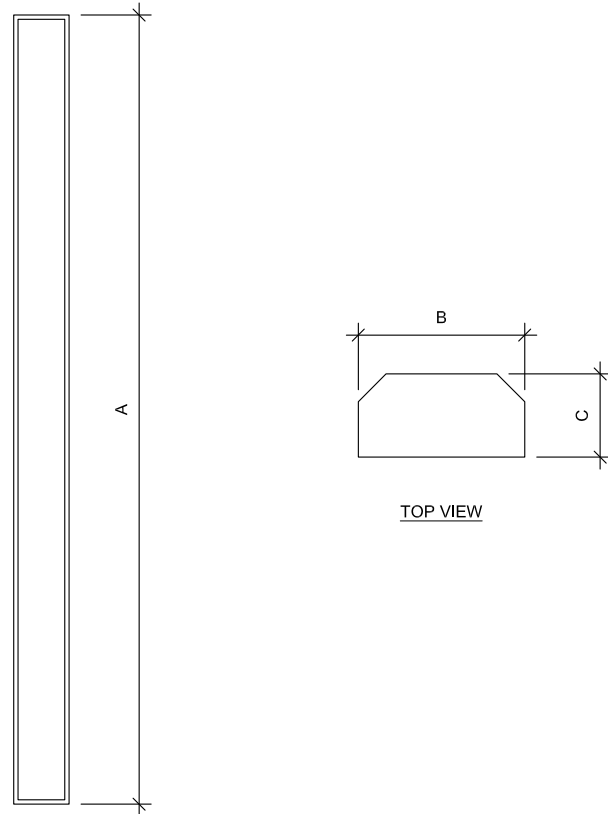
Band	Sector 4 (Delta) Color Codes							Sector 5 (Epsilon) Color Codes							Sector 6 (Zeta) Color Codes										
850 CDMA	Gray	R						Gray	B						Gray	G									
	Gray	R	R					Gray	B	B					Gray	G	G								
700	Gray	R	R	P				Gray	B	B	P				Gray	G	G	P							
	Gray	R	R	R	P			Gray	B	B	B	P			Gray	G	G	G	P						
850 LTE	Gray	R	R	R	R	P		Gray	B	B	B	B	P		Gray	G	G	G	G	P					
	Gray	R	R	R	R	P	P		Gray	B	B	B	B	P	P		Gray	G	G	G	G	P	P		
700 / 850	Gray	R	R	R	R	P		Gray	B	B	B	B	P		Gray	G	G	G	G	P					
	Gray	R	R	R	R	P	P		Gray	B	B	B	B	P	P		Gray	G	G	G	G	P	P		
AWS	Gray	R	W					Gray	B	W					Gray	G	W								
	Gray	R	R	W				Gray	B	B	W				Gray	G	G	W							
PCS	Gray	R	R	R	W			Gray	B	B	B	W			Gray	G	G	G	W						
	Gray	R	R	R	R	W	W		Gray	B	B	B	B	W	W		Gray	G	G	G	G	W	W		
AWS / PCS	Gray	R	R	R	R	W	W		Gray	B	B	B	B	W	W		Gray	G	G	G	G	W	W		
	Gray	R	R	R	R	W	W	W		Gray	B	B	B	B	W	W	W		Gray	G	G	G	G	W	W
CBRS	Gray	R	Y					Gray	B	Y					Gray	G	Y								
	Gray	R	R	Y				Gray	B	B	Y				Gray	G	G	Y							
LAA	Gray	R	R	Y				Gray	B	B	B	Y			Gray	G	G	G	Y						
	Gray	R	R	Y	Y			Gray	B	B	Y	Y			Gray	G	G	Y	Y						

1 CABLE COLOR GUIDE
SCALE: NOT TO SCALE

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SUPPLEMENTAL

SHEET NUMBER: R-602
REVISION: 0

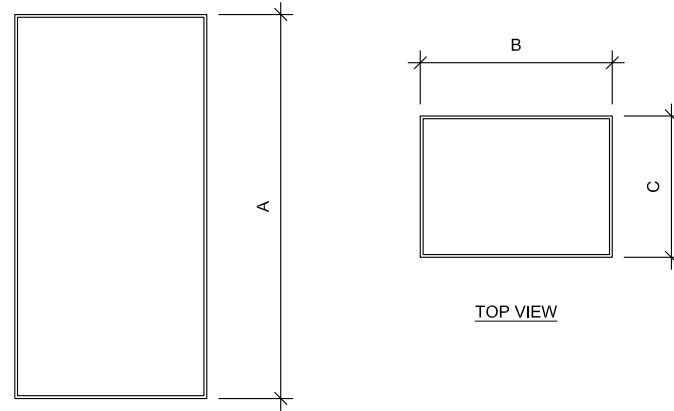


FRONT VIEW

TOP VIEW

1 ANTENNA SPECIFICATIONS
FOR ILLUSTRATIVE PURPOSES ONLY - NOT TO SCALE

ANTENNA SPECIFICATIONS				
ANTENNA MODEL	A	B	C	WEIGHT (LBS)
JAHH-65A-R3B	55.0"	13.8"	8.2"	50.7
JAHH-45A-R3B	55.0"	18.0"	7.0"	70.5
MT6407-77A	35.1"	16.1"	5.5"	81.6

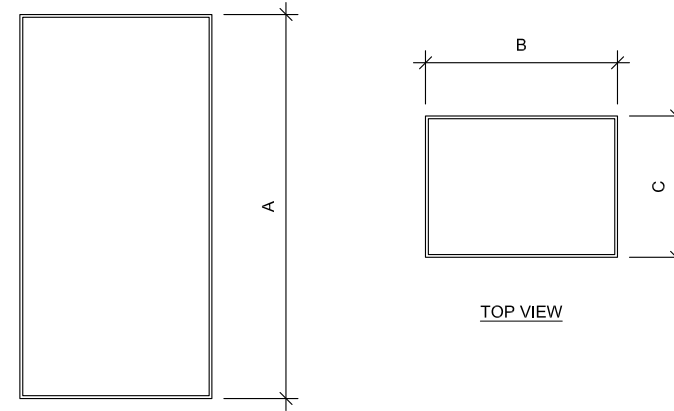


FRONT VIEW

TOP VIEW

2 RRU SPECIFICATIONS
FOR ILLUSTRATIVE PURPOSES ONLY - NOT TO SCALE

RRU SPECIFICATIONS				
RRU MODEL	A	B	C	WEIGHT (LBS)
B2/B66A RRH-BR049	15.0"	15.0"	10.0"	84.4
B5/B13 RRH-BR04C	15.0"	15.0"	8.1"	70.3



FRONT VIEW

TOP VIEW

3 TMA SPECIFICATIONS
FOR ILLUSTRATIVE PURPOSES ONLY - NOT TO SCALE

TMA SPECIFICATIONS				
TMA MODEL	A	B	C	WEIGHT (LBS)
CBC78T-DS-43-2X	9.6"	6.9"	6.4"	20.7

SUPPLEMENTAL

SHEET NUMBER: **R-603** REVISION: **0**



Maser Consulting Connecticut
 2000 Midlantic Drive, Suite 100
 Mount Laurel, NJ 08054
 856.797.0412
 Greg.Dulnik@colliersengineering.com

Mount Post-Modification Analysis Report
 (3) 10.00 T-Frame

July 7, 2021
 Site ID: 468044-VZW / Byram Park CT
 Page | 4

Post-Mod Antenna Mount Analysis Report and PMI Requirements

Mount Fix

SMART Tool Project #: 10084892
 Maser Consulting Connecticut Project #: 20777259A

July 7, 2021

Site Information

Site ID: 468044-VZW / Byram Park CT
 Site Name: Byram Park CT
 Carrier Name: Verizon Wireless
 Address: 36 Ritch Ave W
 Greenwich, Connecticut 06830
 Fairfield County
 Latitude: 41.005064°
 Longitude: -73.648312°

Structure Information

Tower Type: 79-Ft Monopole
 Mount Type: 10.00-Ft T-Frame
 FUZE ID # 16231909

Analysis Results

T-Frame: 79.9% Pass

***Contractor PMI Requirements:

Included at the end of this MA report

Available & Submitted via portal at <https://pmi.vzwsmart.com>

Contractor - Please Review Specific Site PMI Requirements Upon Award

Requirements also Noted on Mount Modification Drawings

Requirements may also be Noted on A & E drawings

Report Prepared By: Frank Centone



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. Maser Consulting Connecticut 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:
 - o Channel, Solid Round, Angle, Plate ASTM A36 (Gr. 36)
 - o HSS (Rectangular) ASTM 500 (Gr. B-46)
 - o Pipe ASTM A53 (Gr. B-35)
 - o Threaded Rod F1554 (Gr. 36)
 - o 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 Maser Consulting Connecticut.

Analysis Results:

Component	Utilization %	Pass/Fail
Mod Standoff	27.9%	Pass
Mod Face	20.3%	Pass
Antenna Pipe	71.2%	Pass
Face Horizontal	20.8%	Pass
Standoff	33.6%	Pass
Standoff Vertical	0.0%	Pass
Existing Connection	79.9%	Pass
MOD Connection	26.4%	Pass

Structure Rating – (Controlling Utilization of all Components)	79.9%
--	-------

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
6. TIA Adoption and Wind Speed Usage Letter

PROJECT NOTES

- SEE MODIFICATION NOTES
- THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE CODES, ORDINANCES, LAWS AND REGULATIONS OF ALL MUNICIPALITIES, UTILITY COMPANIES OR OTHER PUBLIC/GOVERNING AUTHORITIES.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS AND INSPECTIONS THAT MAY BE REQUIRED BY ANY FEDERAL, STATE, COUNTY OR MUNICIPAL AUTHORITIES.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- NO NOISE, SMOKE, DUST OR ODOR WILL RESULT FROM THIS FACILITY AS TO CAUSE A NUISANCE.
- THE FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION (NO HANDICAP ACCESS IS REQUIRED).



MOUNT MODIFICATION DRAWINGS EXISTING 10.00' T-ARM

SITE NAME: BYRAM PARK CT
SITE NUMBER: 468044

36 RITCH AVE W
GREENWICH, CT 06830
FAIRFIELD COUNTY

PROJECT INFORMATION	
SITE INFORMATION	
LATITUDE:	41.005064° N
LONGITUDE:	73.648312° W
JURISDICTION:	FAIRFIELD COUNTY
APPLICANT/LESSEE	
COMPANY:	VERIZON WIRELESS
CLIENT REPRESENTATIVE	
COMPANY:	VERIZON WIRELESS
ADDRESS:	118 FLANDERS ROAD, THIRD FLOOR
CITY, STATE, ZIP:	WESTBOROUGH, MA 01581
CONTACT:	ANDREW CANDIELLO
EMAIL:	ANDREW.CANDIELLO@VERIZONWIRELESS.COM
PROJECT MANAGER	
COMPANY:	MASER CONSULTING CONNECTICUT
CONTACT:	GREG DULNIK
PHONE:	(615) 686-2575
E-MAIL:	GREG.DULNIK@COLLIERSENGINEERING.COM

SHEET INDEX	
SHEET	DESCRIPTION
T-1	TITLE SHEET
S-1	BILL OF MATERIALS
S-2	MODIFICATION NOTES
S-3	MODIFICATION NOTES
S-4	MODIFICATION DETAILS
S-5	MODIFICATION DETAILS
S-6	MOUNT PHOTOS
	SPECIFICATION SHEETS

CONTRACTOR PMI REQUIREMENTS	
PMI LOCATION:	HTTPS://PMI.VZWSMART.COM
SMART TOOL PROJECT #:	10084892
VZW LOCATION CODE (PSLC):	468044
FUZE ID:	16231909

REFERENCED DOCUMENTS	
	FAILING MOUNT ANALYSIS REPORT
SMART TOOL PROJECT #:	10017683
MASER CONSULTING PROJECT #:	20777259A
ANALYSIS DATE:	7/2/2021

PMI REQUIREMENTS EMBEDDED WITHIN MOUNT MODIFICATION REPORT

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0	7/7/2021	ISSUED FOR CONSTRUCTION		

Derek R. Hartzell
 Digitally signed by Derek R. Hartzell
 Date: 2021.07.07 08:43:54-04'00'

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SITE NAME:

BYRAM PARK CT
468044

36 RITCH AVE W
GREENWICH, CT 06830
FAIRFIELD COUNTY

MT. LAUREL OFFICE
2000 Madison Drive
Suite 100
Mount Laurel, NJ 08054
Phone: 856.797.0412
Fax: 856.722.1120

SHEET TITLE:
TITLE SHEET

SHEET NUMBER:
T-1

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

GENERAL NOTES

- THESE MODIFICATIONS HAVE BEEN DESIGNED IN ACCORDANCE WITH THE GOVERNING PROVISIONS OF THE TELECOMMUNICATIONS INDUSTRY STANDARD TIA-222-H. MATERIALS AND SERVICES PROVIDED BY THE CONTRACTOR SHALL CONFORM TO THE ABOVE MENTIONED CODES.
- CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO PREVENT DAMAGE TO EXISTING STRUCTURES. ANY DAMAGE TO EXISTING STRUCTURES 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.
- CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS BEFORE BEGINNING WORK, ORDERING MATERIAL, AND PREPARING OF SHOP DRAWINGS. ANY DISCREPANCIES BETWEEN FIELD CONDITIONS AND THE CONTRACT DOCUMENTS SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ENGINEER. IF THE CONTRACTOR DISCOVERS ANY EXISTING CONDITIONS THAT ARE NOT REPRESENTED ON THESE DRAWINGS, OR ANY CONDITIONS THAT WOULD INTERFERE WITH THE INSTALLATION OF THE MODIFICATIONS, NOTIFY THE ENGINEER IMMEDIATELY.
- IT IS ASSUMED THAT ANY STRUCTURAL MODIFICATION WORK SPECIFIED ON THESE PLANS WILL BE ACCOMPLISHED BY KNOWLEDGEABLE WORKMEN WITH TOWER CONSTRUCTION EXPERIENCE.
- THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK AND SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION METHODS, MEANS, TECHNIQUES, SEQUENCES, AND PROCEDURES.
- ALL CONSTRUCTION MEANS AND METHODS; INCLUDING BUT NOT LIMITED TO, ERECTION PLANS, RIGGING PLANS, CLIMBING PLANS, AND RESCUE PLANS SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR RESPONSIBLE FOR THE EXECUTION OF THE WORK CONTAINED HEREIN AND SHALL MEET ANS/I/TIA-322 (LATEST EDITION), OSHA, AND GENERAL INDUSTRY STANDARDS. ALL RIGGING PLANS SHALL ADHERE TO ANS/I/TIA-322 (LATEST EDITION) INCLUDING THE REQUIRED INVOLVEMENT OF A QUALIFIED ENGINEER FOR CLASS IV CONSTRUCTION.
- THE CONTRACTOR IS SOLELY RESPONSIBLE FOR INITIATING, MAINTAINING, AND SUPERVISING ALL SAFETY PROGRAMS IN ACCORDANCE WITH APPLICABLE SAFETY CODES.
- WORK SHALL ONLY BE PERFORMED DURING CALM DRY DAYS (WINDS LESS THAN 30-MPH). THE STRUCTURE SHOWN ON THE DRAWINGS IS STRUCTURALLY SOUND ONLY IN THE COMPLETED FORM. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE STRENGTH AND STABILITY OF THE STRUCTURE DURING ERECTION. CONTRACTOR SHALL PROVIDE TEMPORARY SUPPORT, SHORING, BRACING AND ANY OTHER STRUCTURAL SYSTEMS AS REQUIRED TO RESIST ALL FORCES THAT MAY OCCUR DURING HANDLING AND ERECTION UNTIL THE STRUCTURE IS FULLY COMPLETED. TEMPORARY SUPPORTS, BRACING AND OTHER STRUCTURAL SYSTEMS REQUIRED DURING CONSTRUCTION SHALL REMAIN THE CONTRACTOR'S PROPERTY AFTER THEIR USE.
- ALL INSTALLATIONS PERFORMED ON THIS STRUCTURE SHALL BE COMPLETED IN ACCORDANCE WITH THE GOVERNING PROVISIONS OF THE STANDARD FOR INSTALLATION, ALTERATION AND MAINTENANCE OF ANTENNA SUPPORTING STRUCTURES AND ANTENNAS, ANS/I/TIA-322.
- CONTRACTOR SHALL SECURE SITE BACK TO EXISTING CONDITION UNDER SUPERVISION OF OWNER. ALL FENCE, STONE, GEOFABRIC, GROUNDING, AND SURROUNDING GRADE SHALL BE REPLACED AND REPAIRED AS REQUIRED TO ACHIEVE OWNER APPROVAL. POSITIVE DRAINAGE AWAY FROM TOWER SITE SHALL BE MAINTAINED.
- CONNECTIONS BETWEEN ITEMS SUPPORTED BY THE STRUCTURE AND THE STRUCTURE NOT SPECIFICALLY DETAILED IN THE CONTRACT DOCUMENTS ARE THE RESPONSIBILITY OF THE CONTRACTOR. SUCH CONNECTIONS SHALL BE DESIGNED, COORDINATED AND INSPECTED BY A PROFESSIONAL STRUCTURAL ENGINEER LICENSED IN THE STATE OF THE PROJECT. SUBMIT SIGNED AND SEALED CALCULATIONS DURING SHOP DRAWING REVIEW.
- DO NOT SCALE DRAWINGS.
- DO NOT USE THESE DRAWINGS FOR ANY OTHER SITE.
- ALL MATERIAL UTILIZED FOR THIS PROJECT MUST BE NEW AND FREE OF ANY DEFECTS. ANY MATERIAL SUBSTITUTIONS, INCLUDING BUT NOT LIMITED TO ALTERED SIZE AND/OR STRENGTHS, MUST BE APPROVED BY THE OWNER AND ENGINEER IN WRITING.
- THE MOUNT UNDER NO CIRCUMSTANCES SHOULD BE USED AS A TIE OFF POINT.

DESIGN LOADS

- WIND LOADS
- BASIC WIND SPEED (3 SECOND GUST), V = 116 MPH
 - EXPOSURE CATEGORY C
 - TOPOGRAPHIC CATEGORY I
 - MEAN BASE ELEVATION (AMSL) = 50.68'
- ICE LOADS
- ICE WIND SPEED (3 SECOND GUST), V = 50 MPH
 - ICE THICKNESS = 1.00 IN
- SEISMIC LOADS
- SEISMIC DESIGN CATEGORY B
 - SHORT TERM MCER GROUND MOTION, S_s = .277
 - LONG TERM MCER GROUND MOTION, S_l = .060

STRUCTURAL STEEL

- DESIGN, DETAILING, FABRICATION AND ERECTION OF STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING PUBLICATIONS EXCEPT AS SPECIFICALLY INDICATED IN THE CONTRACT DOCUMENTS.
 - AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) MANUAL OF STEEL CONSTRUCTION (15TH EDITION)
 - SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS
 - AISC CODE OF STANDARD PRACTICE
- STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING UNLESS OTHERWISE SHOWN:

CHANNELS, ANGLES, PLATES, ETC.	ASTM A36 (GR 36)
STEEL PIPE	ASTM A53 (GR 35)
BOLTS	ASTM A325
NUTS	ASTM A563
LOCK WASHERS	LOCKING STRUCTURAL GRADE
- ALL SUBSTITUTIONS PROPOSED BY THE CONTRACTOR SHALL BE APPROVED IN WRITING BY THE ENGINEER. CONTRACTOR SHALL PROVIDE DOCUMENTATION TO ENGINEER FOR VERIFYING THE SUBSTITUTE IS SUITABLE FOR USE AND MEETS ORIGINAL DESIGN CRITERIA. DIFFERENCES FROM THE ORIGINAL DESIGN, INCLUDING MAINTENANCE, REPAIR AND REPLACEMENT, SHALL BE NOTED. ESTIMATES OF COSTS/CREDITS ASSOCIATED WITH THE SUBSTITUTION (INCLUDING RE-DESIGN COSTS AND COSTS TO SUB-CONTRACTORS) SHALL BE PROVIDED TO THE ENGINEER. CONTRACTOR SHALL PROVIDE ADDITIONAL DOCUMENTATION AND/OR SPECIFICATIONS TO THE ENGINEER AS REQUESTED.
- PROVIDE STRUCTURAL STEEL SHOP DRAWINGS TO ENGINEER FOR APPROVAL PRIOR TO FABRICATION.
 - SUBMIT SHOP DRAWINGS TO GREG.DULNIK@COLLIERSENGINEERING.COM
 - PROVIDE MASER CONSULTING PROJECT # AND MASER CONSULTING PROJECT ENGINEER CONTACT IN THE BODY OF THE EMAIL.
- DRILL NO HOLES IN ANY NEW OR EXISTING STRUCTURAL STEEL MEMBERS OTHER THAN THOSE SHOWN ON STRUCTURAL DRAWINGS WITHOUT THE APPROVAL OF THE ENGINEER OF RECORD.
- GALVANIZED ASTM A325 BOLTS SHALL NOT BE REUSED.
- ALL NEW STEEL SHALL BE HOT BE DIPPED GALVANIZED FOR FULL WEATHER PROTECTION. IN ADDITION ALL NEW STEEL SHALL BE PAINTED TO MATCH EXISTING STEEL. CONTRACTOR SHALL OBTAIN WRITTEN PERMISSION TO PROTECT STEEL BY ANY OTHER MEANS.
- ALL BOLT ASSEMBLIES FOR STRUCTURAL MEMBERS REPRESENTED IN THIS DRAWING REQUIRE LOCKING DEVICES TO BE INSTALLED IN ACCORDANCE WITH TIA-222-H SECTION 4.9.2 REQUIREMENTS.
- WHERE CONNECTIONS ARE NOT FULLY DETAILED ON THESE DRAWINGS, FABRICATOR SHALL DESIGN CONNECTIONS TO RESIST LOADS AND FORCES WHERE SHOWN ON DRAWINGS AND AS OUTLINED IN SPECIFICATIONS.
- FOR MEMBERS BEING REPLACED, PROVIDE NEW BOLTS AND MATCH EXISTING SIZE AND GRADE. MAINTAIN AISC REQUIREMENTS FOR MINIMUM BOLT DISTANCE AND SPACING.
- ALL PROPOSED AND/OR REPLACED BOLTS SHALL BE OF SUFFICIENT LENGTH SUCH THAT THE END OF THE BOLT IS AT LEAST FLUSH WITH THE FACE OF THE NUT. IT IS NOT PERMITTED FOR THE BOLT END TO BE BELOW THE FACE OF THE NUT AFTER TIGHTENING IS COMPLETED.
- GALVANIZED ASTM A325 BOLTS SHALL NOT BE REUSED.
- ALL NEW STEEL SHALL BE HOT BE DIPPED GALVANIZED FOR FULL WEATHER PROTECTION. CONTRACTOR SHALL OBTAIN WRITTEN PERMISSION TO

PROTECT STEEL BY ANY OTHER MEANS.

- ALL EXISTING PAINTED/GALVANIZED SURFACES DAMAGED DURING REHAB INCLUDING AREAS UNDER STIFFENER PLATES SHALL BE WIRE BRUSHED CLEAN, REPAIRED BY COLD GALVANIZING (ZINGA OR ZINC COTE), AND REPAINTED TO MATCH THE EXISTING FINISH (IF APPLICABLE).
- ALL HOLES IN STEEL MEMBERS SHALL BE SIZED 1/16" LARGER THAN THE BOLT DIAMETER. STANDARD HOLES SHALL BE USED UNLESS NOTED OTHERWISE.



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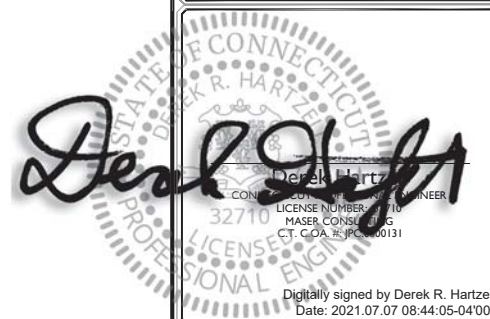
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SCALE: AS SHOWN JOB NUMBER: 20777259A

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SITE NAME:
BYRAM PARK CT
468044
36 RITCH AVE W
GREENWICH, CT 06830
FAIRFIELD COUNTY

MT. LAUREL OFFICE
2000 Millstone Drive
Suite 100
Mount Laurel, NJ 08054
Phone: 856.797.0412
Fax: 856.722.1120

SHEET TITLE:
MODIFICATION NOTES

SHEET NUMBER:
S-2

MODIFICATION INSPECTION NOTES

MI CHECKLIST	
CONSTRUCTION/ INSTALLATION INSPECTIONS AND TESTING REQUIRED (COMPLETED BY EOR)	REPORT ITEM
PRE-CONSTRUCTION	
X	MI CHECKLIST DRAWING
X	EOR APPROVED SHOP DRAWINGS
NA	FABRICATION INSPECTION
NA	FABRICATOR CERTIFIED WELD INSPECTION
X	MATERIAL TEST REPORT (MTR)
NA	FABRICATOR NDE INSPECTION
X	PACKING SLIPS
ADDITIONAL TESTING AND INSPECTIONS:	
CONSTRUCTION	
X	CONSTRUCTION INSPECTIONS
NA	CONTRACTOR'S CERTIFIED WELD INSPECTION AND NDE REPORTS
X	ON SITE COLD GALVANIZING VERIFICATION
X	GC AS-BUILT DOCUMENTS
ADDITIONAL TESTING AND INSPECTIONS:	
POST-CONSTRUCTION	
X	MI INSPECTOR REDLINE OR RECORD DRAWING(S)
X	VZW PMI DOCUMENTS
X	PHOTOGRAPHS
ADDITIONAL TESTING AND INSPECTIONS:	

NOTE: X DENOTES A DOCUMENT REQUIRED FOR THE MI REPORT
 NA DENOTES A DOCUMENT THAT IS NOT REQUIRED FOR THE MI REPORT

THE MODIFICATION INSPECTION (MI) IS A VISUAL INSPECTION OF MODIFICATIONS AND A REVIEW OF CONSTRUCTION INSPECTIONS AND OTHER REPORTS TO ENSURE THE INSTALLATION WAS CONSTRUCTED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS, NAMELY THE MODIFICATION DRAWINGS, AS DESIGNED BY THE ENGINEER OF RECORD (EOR).

THE MI IS TO CONFIRM INSTALLATION CONFIGURATION AND WORKMANSHIP ONLY AND IS NOT A REVIEW OF THE MODIFICATION DESIGN ITSELF, NOR DOES THE MI INSPECTOR TAKE OWNERSHIP OF THE MODIFICATION DESIGN. OWNERSHIP OF THE STRUCTURAL MODIFICATION DESIGN EFFECTIVENESS AND INTEGRITY RESIDES WITH THE EOR AT ALL TIMES.

TO ENSURE THAT THE REQUIREMENTS OF THE MI ARE MET, IT IS VITAL THAT THE GENERAL CONTRACTOR (GC) AND THE MI INSPECTOR BEGIN COMMUNICATING AND COORDINATING AS SOON AS A PURCHASE ORDER (PO) IS RECEIVED. IT IS EXPECTED THAT EACH PARTY WILL BE PROACTIVE IN REACHING OUT TO THE OTHER PARTY.

MI INSPECTOR

THE MI INSPECTOR IS REQUIRED TO CONTACT THE GC AS SOON AS RECEIVING A PO FOR THE MI TO, AT A MINIMUM:

- REVIEW THE REQUIREMENTS OF THE MI CHECKLIST
- WORK WITH THE GC TO DEVELOP A SCHEDULE TO CONDUCT ON-SITE INSPECTIONS

THE MI INSPECTOR IS RESPONSIBLE FOR COLLECTING ALL GC INSPECTION AND TEST REPORTS, REVIEWING THE DOCUMENTS FOR ADHERENCE TO THE CONTRACT DOCUMENTS, CONDUCTING THE IN-FIELD INSPECTIONS, AND SUBMITTING THE MI REPORT TO EOR.

GENERAL CONTRACTOR

THE GC IS REQUIRED TO CONTACT THE MI INSPECTOR AS SOON AS RECEIVING A PO FOR THE MODIFICATION INSTALLATION OR TURNKEY PROJECT TO, AT A MINIMUM:

- REVIEW THE REQUIREMENTS OF THE MI CHECKLIST
- WORK WITH THE MI INSPECTOR TO DEVELOP A SCHEDULE TO CONDUCT ON-SITE MI INSPECTIONS, INCLUDING FOUNDATION INSPECTIONS
- BETTER UNDERSTAND ALL INSPECTION AND TESTING REQUIREMENTS

THE GC SHALL PERFORM AND RECORD THE TEST AND INSPECTION RESULTS IN ACCORDANCE WITH THE REQUIREMENTS OF THE MI CHECKLIST.

RECOMMENDATIONS

THE FOLLOWING RECOMMENDATIONS AND SUGGESTIONS ARE OFFERED TO ENHANCE THE EFFICIENCY AND EFFECTIVENESS OF DELIVERING AN MI REPORT:

- IT IS SUGGESTED THAT THE GC PROVIDE A MINIMUM OF 5 BUSINESS DAYS NOTICE, PREFERABLY 10, TO THE MI INSPECTOR AS TO WHEN THE SITE WILL BE READY FOR THE MI TO BE CONDUCTED.
- THE GC AND MI INSPECTOR COORDINATE CLOSELY THROUGHOUT THE ENTIRE PROJECT.
- WHEN POSSIBLE, IT IS PREFERRED TO HAVE THE GC AND MI INSPECTOR ON-SITE SIMULTANEOUSLY FOR ANY GUY WIRE TENSIONING OR RE-TENSIONING OPERATIONS.
- IT MAY BE BENEFICIAL TO INSTALL ALL MODIFICATIONS PRIOR TO CONDUCTING THE FOUNDATION INSPECTIONS TO ALLOW THE FOUNDATION AND MI INSPECTION(S) TO COMMENCE WITH ONE SITE VISIT.
- WHEN POSSIBLE, IT IS PREFERRED TO HAVE THE GC AND MI INSPECTOR ON-SITE DURING THE MI TO HAVE ANY DEFICIENCIES CORRECTED DURING THE INITIAL MI. THEREFORE, THE GC MAY CHOOSE TO COORDINATE THE MI CAREFULLY TO ENSURE ALL CONSTRUCTION FACILITIES ARE AT THEIR DISPOSAL WHEN THE MI INSPECTOR IS ON SITE.

CORRECTION OF FAILING MI'S

IF THE MODIFICATION INSTALLATION WOULD FAIL THE MI ("FAILED MI"), THE GC SHALL WORK WITH THE OWNER TO COORDINATE A REMEDIATION PLAN:

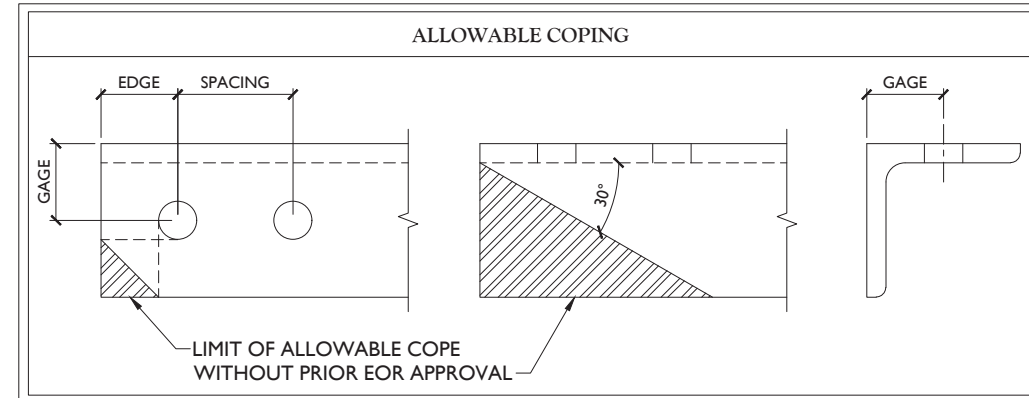
- CORRECT FAILING ISSUES TO COMPLY WITH THE SPECIFICATIONS CONTAINED IN THE ORIGINAL CONTRACT DOCUMENTS AND COORDINATE A SUPPLEMENT MI.

REQUIRED PHOTOS

BETWEEN THE GC AND THE MI INSPECTOR THE FOLLOWING PHOTOGRAPHS, AT A MINIMUM, ARE TO BE TAKEN AND INCLUDED IN THE MI REPORT:

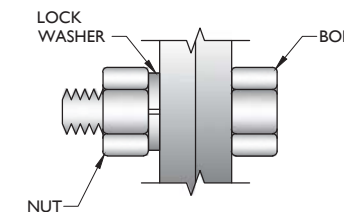
- PRE-CONSTRUCTION GENERAL SITE CONDITION
- PHOTOGRAPHS DURING THE REINFORCEMENT MODIFICATION CONSTRUCTION/ERECTION AND INSPECTION
 - RAW MATERIALS
 - PHOTOS OF ALL CRITICAL DETAILS
 - FOUNDATION MODIFICATIONS
 - WELD PREPARATION
 - BOLT INSTALLATION
 - FINAL INSTALLED CONDITION
 - SURFACE COATING REPAIR
- POST CONSTRUCTION PHOTOGRAPHS
 - FINAL INFIELD CONDITION

PHOTOS OF ELEVATED MODIFICATIONS TAKEN ONLY FROM THE GROUND SHALL BE CONSIDERED INADEQUATE.



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

NOTES:

- 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.
- THE DIMENSIONS PROVIDED ARE MINIMUM REQUIREMENTS. ACTUAL DIMENSIONS OF PROPOSED MEMBERS WITHIN THESE DRAWINGS MAY VARY FROM THE AISC MINIMUM REQUIREMENTS.
- SHORT SLOT HOLES SHALL ONLY BE USED WHEN DEPICTED IN THE DRAWINGS
- MATCH EXISTING GAGES WHEN APPLICABLE, UNLESS MINIMUM EDGE DISTANCES ARE COMPROMISED.

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Digitally signed by Derek R. Hartzell
 Date: 2021.07.07 08:44:05-04'00'

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SITE NAME:
 BYRAM PARK CT
 468044
 36 RITCH AVE W
 GREENWICH, CT 06830
 FAIRFIELD COUNTY

MT. LAUREL OFFICE
 2000 Hillstone Drive
 Suite 100
 Mount Laurel, NJ 08054
 Phone: 856.797.0412
 Fax: 856.722.1120

SHEET TITLE:
 MODIFICATION NOTES

SHEET NUMBER:
 S-3



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Derek R. Hartzell
Derek R. Hartzell, P.E.
LICENSE NUMBER: 32710
MASER CONSULTING
C.T. C.O.A. # JCE-00131
Digitally signed by Derek R. Hartzell
Date: 2021.07.07 08:44:05-04'00'

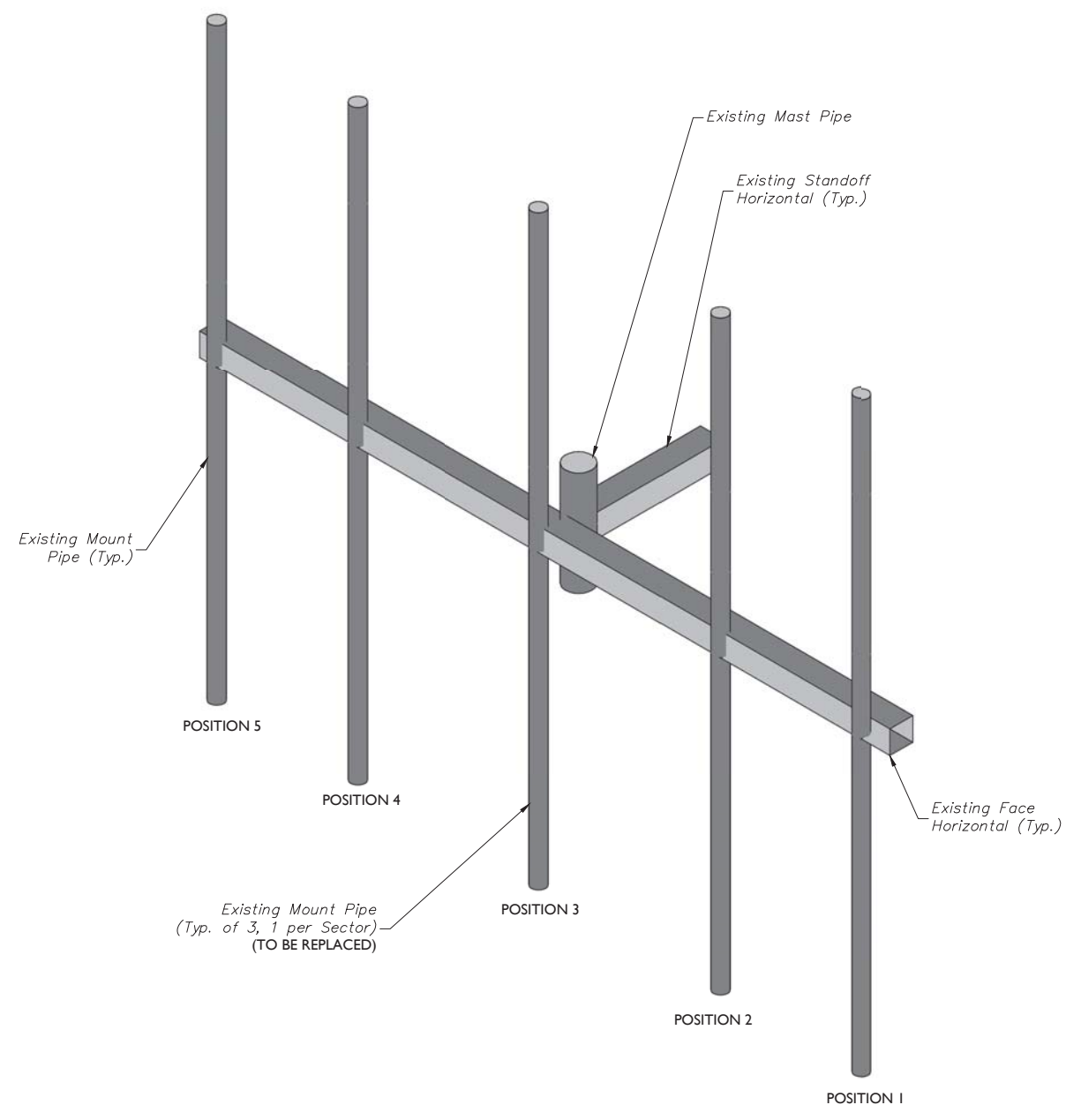
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FAIRFIELD COUNTY

MT. LAUREL OFFICE
2000 Mountain Drive
Suite 100
Mount Laurel, NJ 08054
Phone: 856.797.0412
Fax: 856.722.1120

SHEET TITLE:
MODIFICATION DETAILS

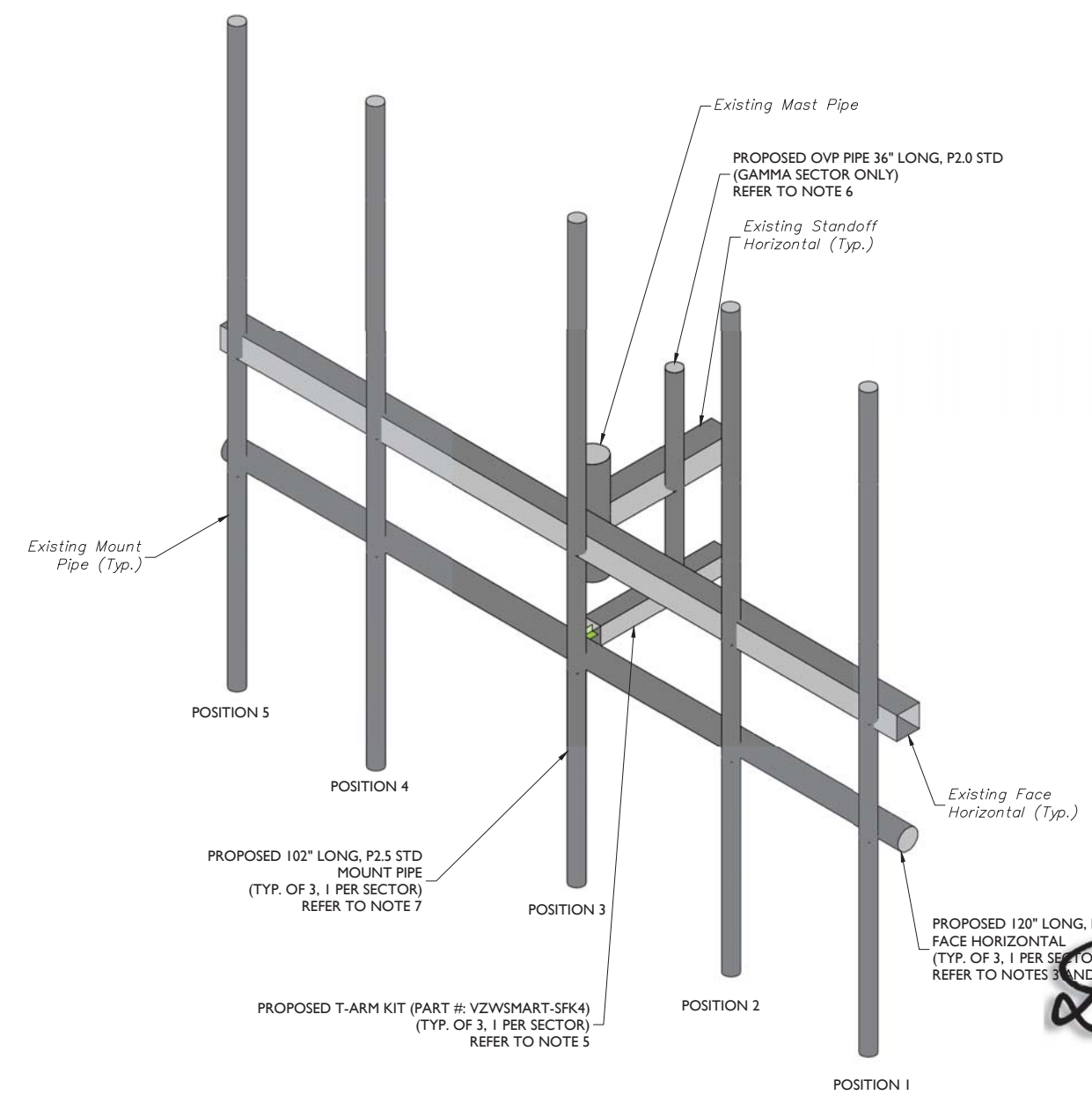
SHEET NUMBER:
S-4



1 EXISTING T-ARM ISOMETRIC VIEW (TYP. ALL SECTORS)
SCALE : N.T.S.

STRUCTURAL NOTES:

- PER THE MOUNT MAPPING COMPLETED BY TOWER ENGINEERING PROFESSIONALS ON 10/21/2020, THE SAFETY CLIMB AND CLIMBING FACILITIES UP TO THE VERIZON MOUNT ELEVATION (56'-0") ARE IN GOOD CONDITION. MASER DOES NOT WARRANT THIS INFORMATION.
- INSTALL SHALL NOT CAUSE HARM TO THE STRUCTURE, CLIMBING FACILITY, SAFETY CLIMB, OR ANY SYSTEM INSTALLED ON THE STRUCTURE. TIMELY NOTICE AND DOCUMENTATION SHALL BE PROVIDED BY CONTRACTORS TO THE EOR (OF STRUCTURAL DESIGN) IF AN OBSTRUCTION WAS REQUIRED TO MEET THE RF SYSTEM DESIGN REQUIREMENTS AND PERFORMANCES.
- CONTRACTOR TO REMOVE AND REPLACE ARTIFICIAL BRANCHES AS NEEDED FOR INSTALLATION.
- CONTRACTOR TO WORK WITH TOWER OWNER TO REMOVE TOWER BRANCHES AS NEEDED TO INSTALL PROPOSED MOUNT CONNECTION.



2 PROPOSED T-ARM ISOMETRIC VIEW (TYP. ALL SECTORS)
SCALE : N.T.S.

MODIFICATION NOTES:

- MOUNT MEMBERS NOT SHOWN FOR CLARITY U.N.O.
- CONTRACTOR TO VERIFY THE LENGTH REQUIRED AND TRIM AS NECESSARY IN ACCORDANCE WITH THE 'STRUCTURAL STEEL' NOTES ON SHEET S-2.
- RADIO AND/OR TME POSITIONS SHALL BE ADJUSTED VERTICALLY AS NEEDED IN ORDER TO ACHIEVE INSTALLATION OF HORIZONTAL AS SHOWN. EOR SHALL BE NOTIFIED IF EQUIPMENT NEEDS TO BE RELOCATED TO ANOTHER MOUNT PIPE.
- CONNECT NEW HORIZONTAL TO ALL VERTICAL MOUNT PIPES WITH CROSSOVER PLATES (PART #: VZWSMART-MSK2).
- CONNECT OTHER END OF T-ARM KIT TO MONOPOLE COLLAR MOUNT ASSEMBLY (PART #: VZWSMART-PLK7).
- CONNECT NEW OVP PIPE TO EXISTING STANDOFF HORIZONTAL WITH CROSSOVER PLATE (PART #: SITE PRO 1 - SQCX4-K, OR EOR APPROVED EQUAL).
- CONNECT NEW MOUNT PIPE TO EXISTING FACE HORIZONTAL WITH CROSSOVER PLATE (PART #: SITE PRO 1 - SQCX4-K, OR EOR APPROVED EQUAL).

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Derek R. Hartzell

Derek R. Hartzell
Professional Engineer
LICENSE NUMBER: 32710
MASER CONSULTING
C.T. C.O.A. # JCE 00131

Digitally signed by Derek R. Hartzell
Date: 2021.07.07 08:44:05-04'00'

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468044

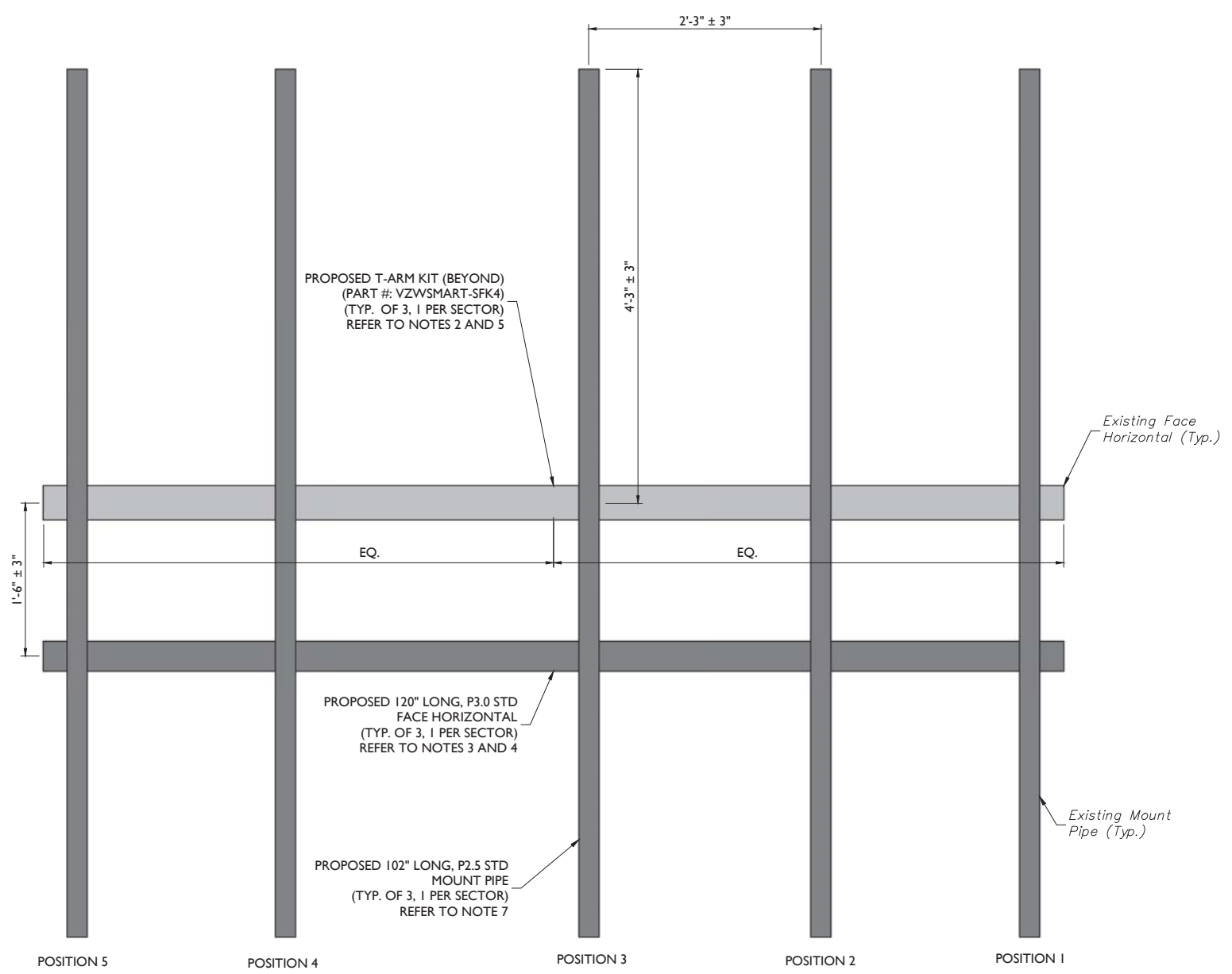
36 RITCH AVE W
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FAIRFIELD COUNTY

MT. LAUREL OFFICE
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Suite 100
Mount Laurel, NJ 08054

Phone: 856.797.0412
Fax: 856.722.1120

SHEET TITLE:
MODIFICATION DETAILS

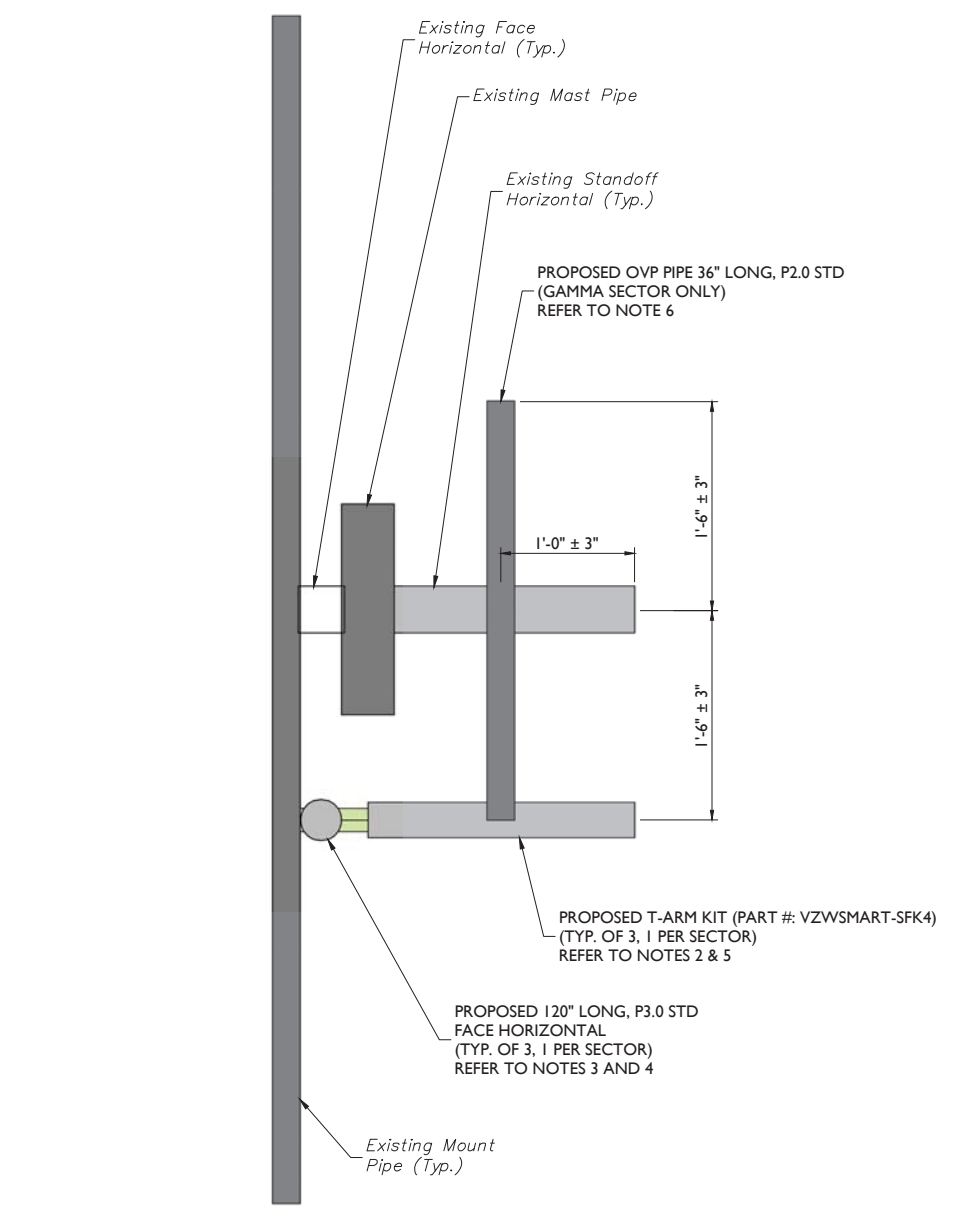
SHEET NUMBER:
S-5



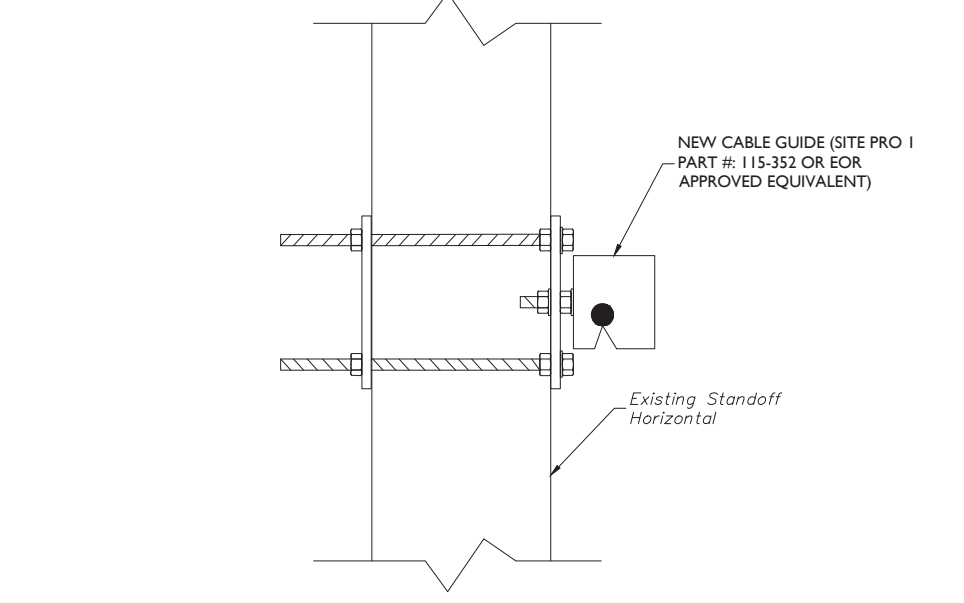
1 PROPOSED FRONT ELEVATION (TYP. ALL SECTORS)
SCALE : N.T.S.

MODIFICATION NOTES:

1. MOUNT MEMBERS NOT SHOWN FOR CLARITY U.N.O.
2. CONTRACTOR TO VERIFY THE LENGTH REQUIRED AND TRIM AS NECESSARY IN ACCORDANCE WITH THE 'STRUCTURAL STEEL' NOTES ON SHEET S-2.
3. RADIO AND/OR TME POSITIONS SHALL BE ADJUSTED VERTICALLY AS NEEDED IN ORDER TO ACHIEVE INSTALLATION OF HORIZONTAL AS SHOWN. EOR SHALL BE NOTIFIED IF EQUIPMENT NEEDS TO BE RELOCATED TO ANOTHER MOUNT PIPE.
4. CONNECT NEW HORIZONTAL TO ALL VERTICAL MOUNT PIPES WITH CROSSOVER PLATES (PART #: VZWSMART-MSK2).
5. CONNECT OTHER END OF T-ARM KIT TO MONOPOLE COLLAR MOUNT ASSEMBLY (PART #: VZWSMART-PLK7).
6. CONNECT NEW OVP PIPE TO EXISTING STANDOFF HORIZONTAL WITH CROSSOVER PLATE (PART #: SITE PRO I - SQCX4-K, OR EOR APPROVED EQUAL).
7. CONNECT NEW MOUNT PIPE TO EXISTING FACE HORIZONTAL WITH CROSSOVER PLATE (PART #: SITE PRO I - SQCX4-K, OR EOR APPROVED EQUAL).



2 PROPOSED SIDE ELEVATION (TYP. ALL SECTORS)
SCALE : N.T.S.



3 PROPOSED CABLE GUIDE STANDOFF SQUARE TUBE ATTACHMENT - PLAN VIEW
SCALE : N.T.S.



MOUNT PHOTO 1



MOUNT PHOTO 2



MOUNT PHOTO 3



MOUNT PHOTO 4



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 Derek R. Hartzell
 PROFESSIONAL ENGINEER
 LICENSE NUMBER: 32710
 MASER CONSULTING
 CT. C.O.A. # JPC 00131
 Digitally signed by Derek R. Hartzell
 Date: 2021.07.07 08:44:06-04'00'

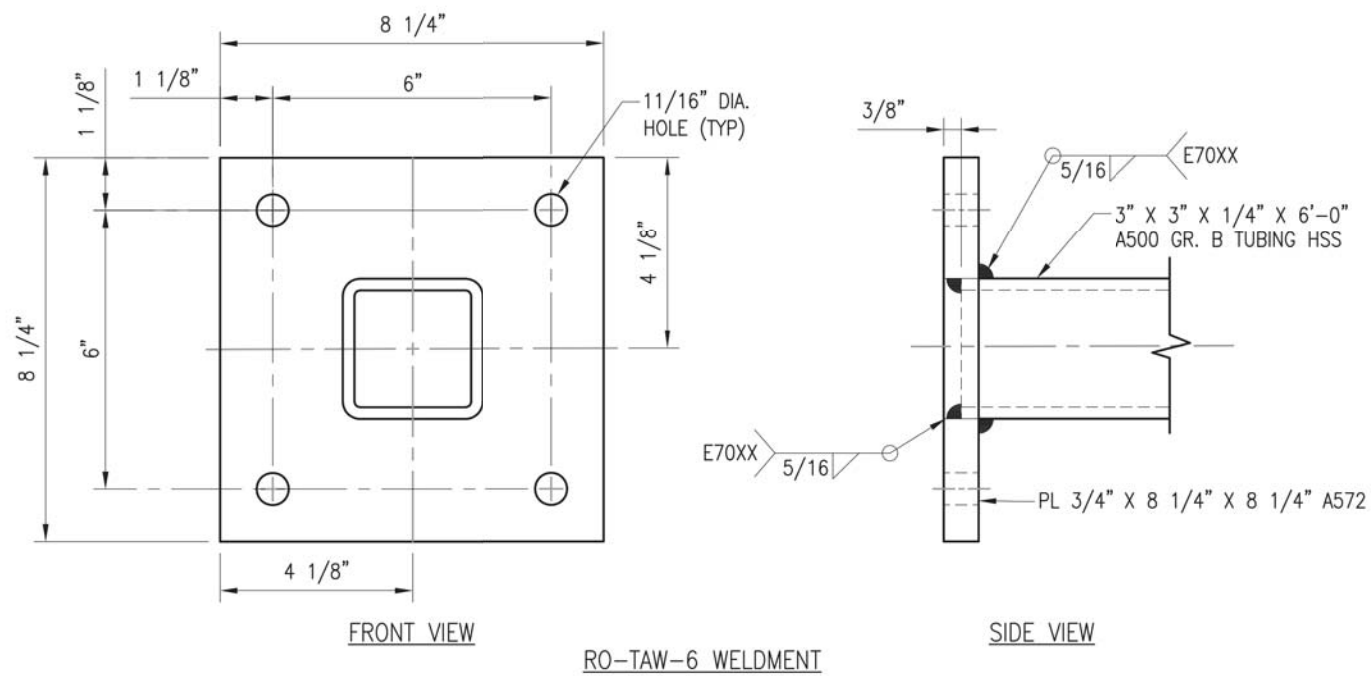
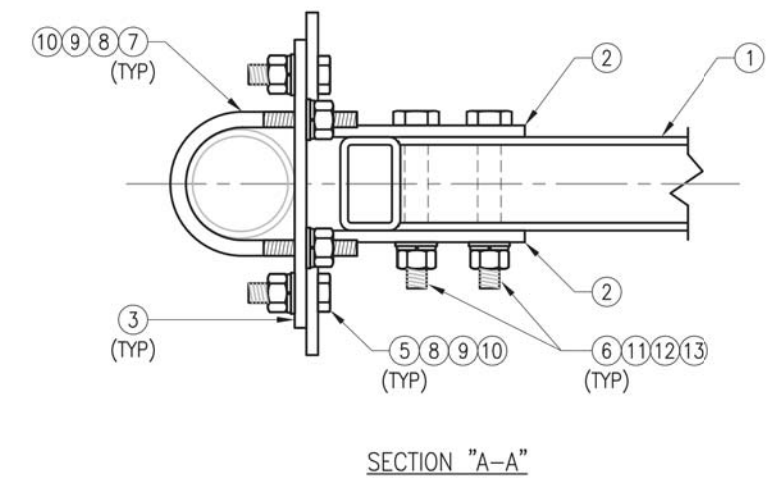
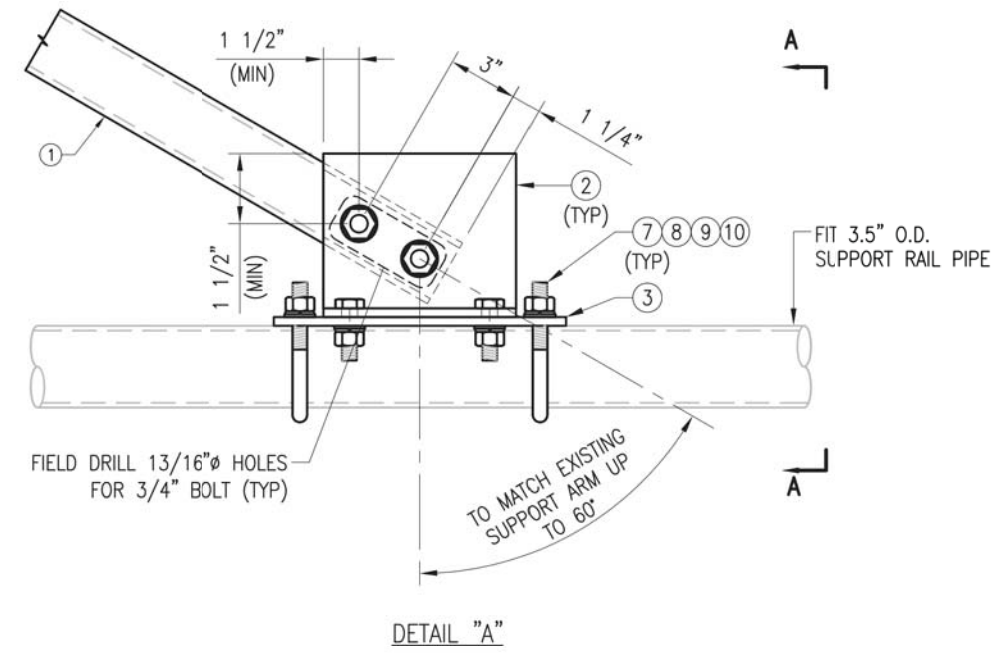
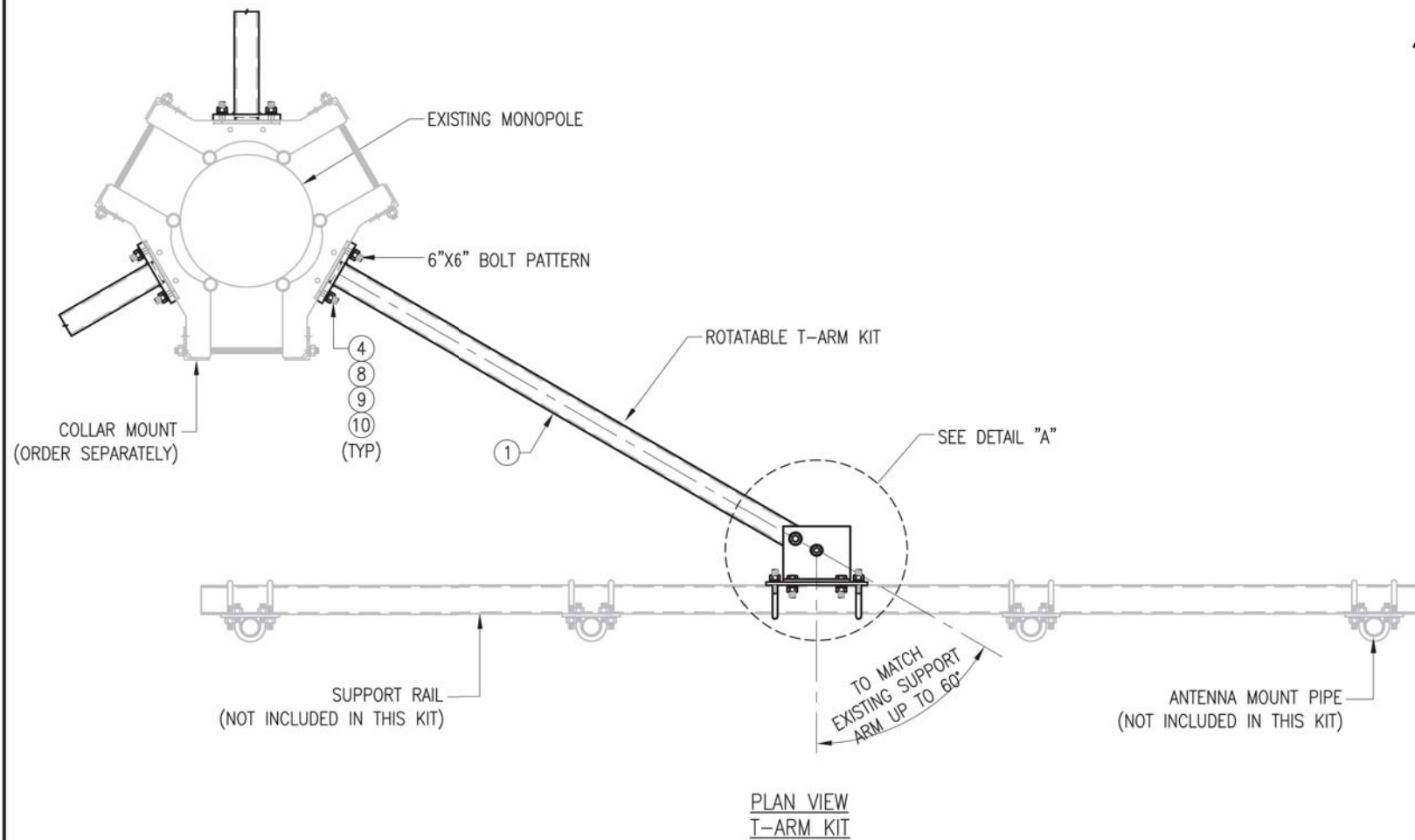
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 FAIRFIELD COUNTY

MT. LAUREL OFFICE
 2000 Millstone Drive
 Suite 100
 Mount Laurel, NJ 08054
 Phone: 856.797.0412
 Fax: 856.722.1120

SHEET TITLE:
 MOUNT PHOTOS

SHEET NUMBER:
 S-6



VZSMART-SFK4 (T-ARM KIT)					
ITEM NO.	QTY.	PART NO.	DESCRIPTION	SHEET #	WT
1	1	RO-TAW-6	T-ARM WELDMENT	SFK4-F1	71
2	2	BP825-94375	PL 3/8" X 8 1/4" X 9 7/16" A36 BEND PLATE	SFK4-F2	17
3	1	PL375-92512025	PL 3/8" X 9 1/4" X 1'-0 1/2" A36	SFK4-F3	12
4	4	---	BOLT 5/8" X 2 1/4" A325	---	0
5	4	---	BOLT 5/8" X 2" A325	---	0
6	2	---	BOLT 3/4" X 5 1/4" A325	---	0
7	2	MS02-625-3625-600	RU-BOLT 5/8" X 3 5/8" I.W. X 6" I.L. A36 (OR EQUIV.)	RBC-1	3
8	12	FW-625	5/8" HDG USS FLAT WASHER	---	1
9	12	LW-625	5/8" HDG LOCK WASHER	---	0
10	12	NUT-625	5/8" HDG HEX NUT	---	1
11	2	FW-75	3/4" HDG USS FLAT WASHER	---	0
12	2	LW-75	3/4" HDG LOCK WASHER	---	0
13	2	NUT-75	3/4" HDG HEX NUT	---	0
GALVANIZED WT					106

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

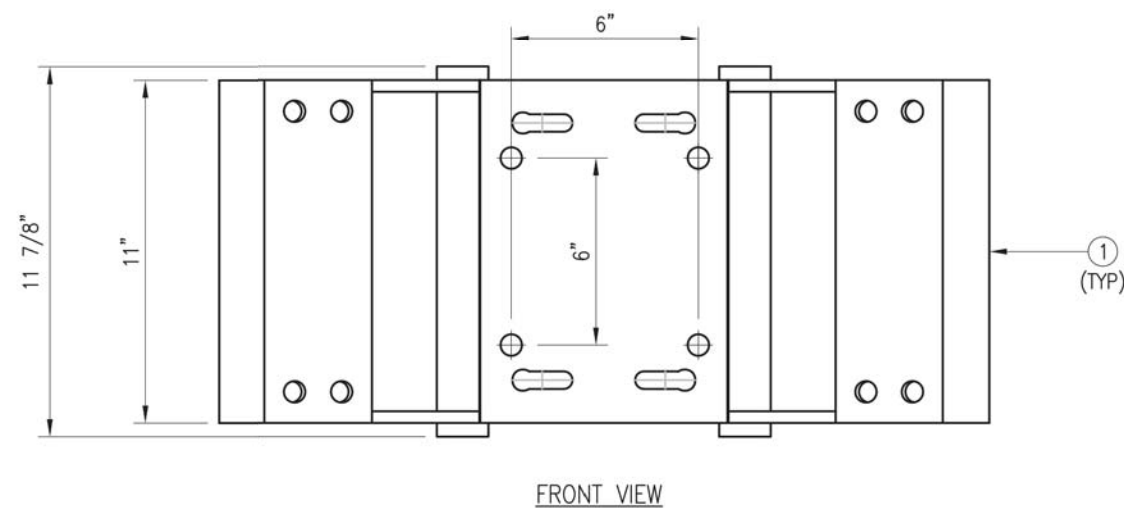
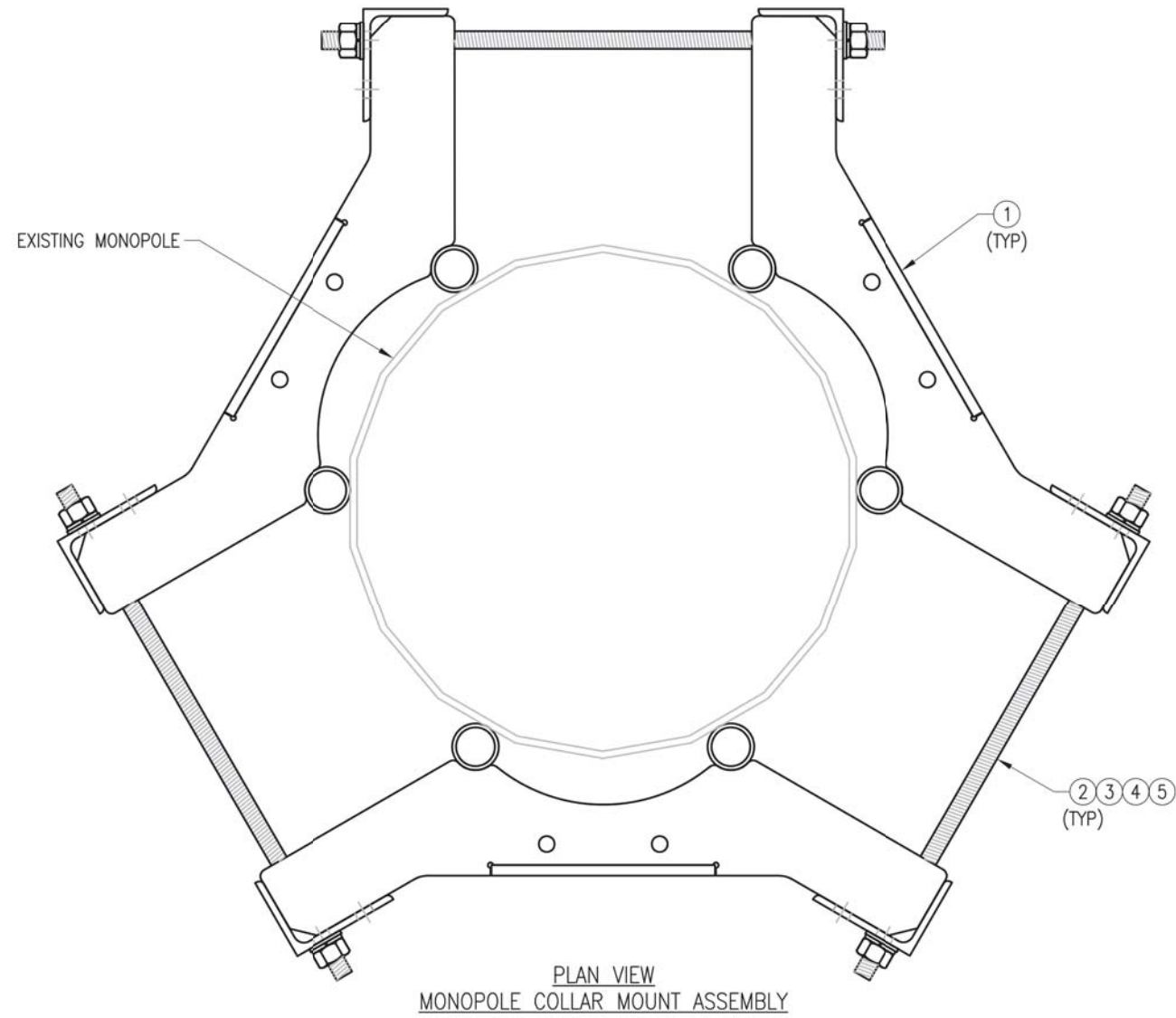
DRAWN BY: BT | CHECKED BY: HMA/KW

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

SHEET TITLE:

VZSMART-SFK4
T-ARM KIT

SHEET NUMBER: VZSMART-SFK4 | REV #: 0



NOTES:
 1. FIT 12" TO 45" DIA MONOPOLE.
 2. HOT-DIPPED GALVANIZED PER ASTM A123.

VZSMART-PLK7 (MONOPOLE COLLAR MOUNT ASSEMBLY)					
ITEM NO.	QTY.	PART NO.	DESCRIPTION	SHEET #	WT
1	3	CM-1245	COLLAR MOUNT ASSEMBLY	PLK7-F1	147
2	6	---	THREADED ROD 5/8" X 4'-0" A193-B7	---	---
3	12	FW-625	5/8" HDG USS FLAT WASHER	---	1
4	12	LW-625	5/8" HDG LOCK WASHER	---	0
5	12	NUT-625	5/8" HDG HEX NUT	---	1
GALVANIZED WT					150

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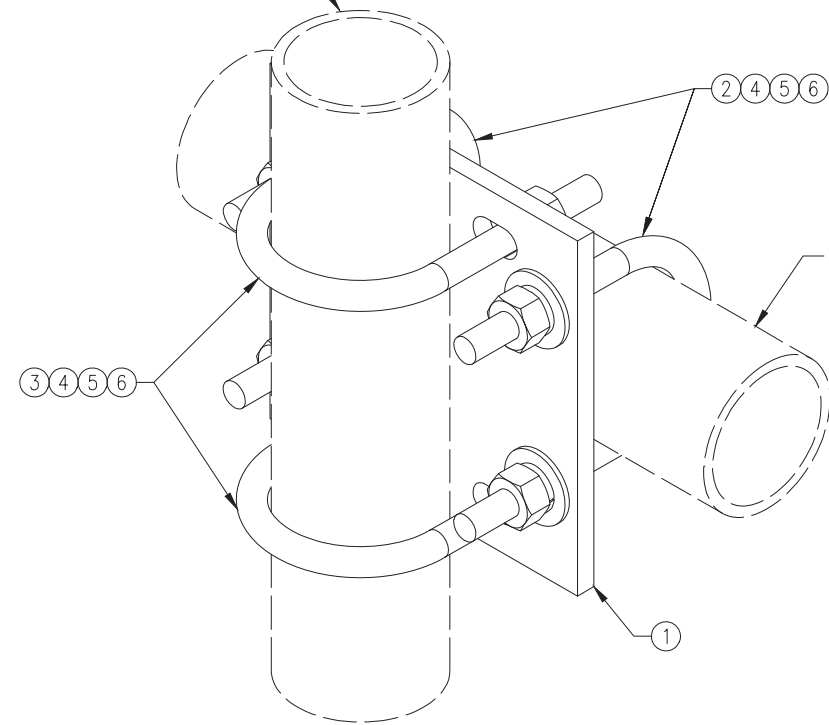
REV.	DESCRIPTION	BY	DATE
△	FIRST ISSUE	BT	05/11/20
△			
△			
△			

SHEET TITLE:
 VZSMART-PLK7
 MONOPOLE COLLAR
 MOUNT ASSEMBLY

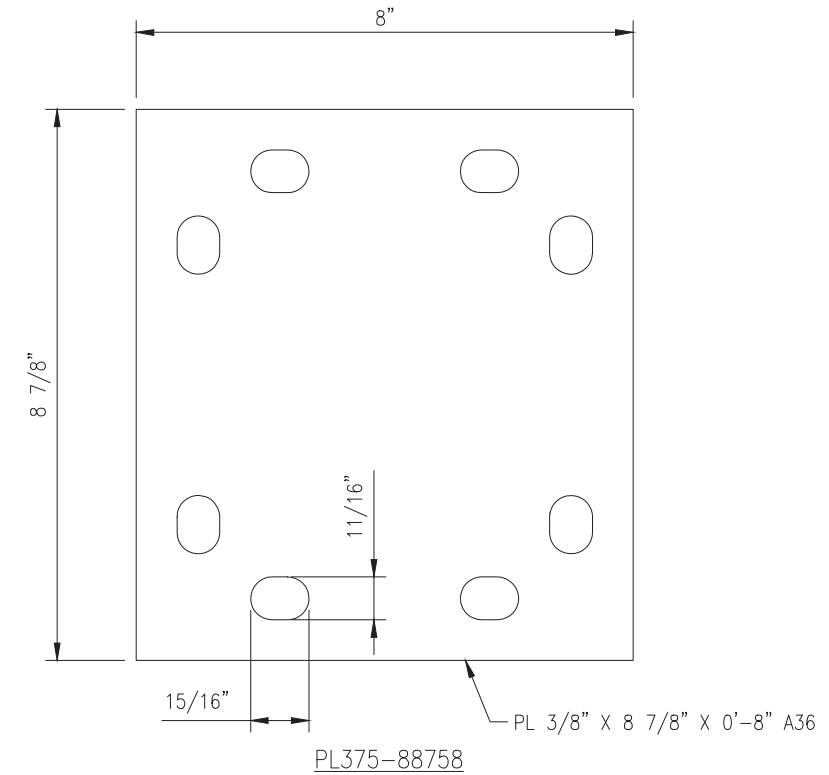
SHEET NUMBER: VZSMART-PLK7 | REV #: 0



FITS 2.375" O.D. AND 2.875" O.D.
 VERTICAL PIPE.
 (NOT INCLUDED IN THIS KIT)



FITS 3.5" O.D. AND 4" O.D.
 HORIZONTAL PIPE.
 (NOT INCLUDED IN THIS KIT)



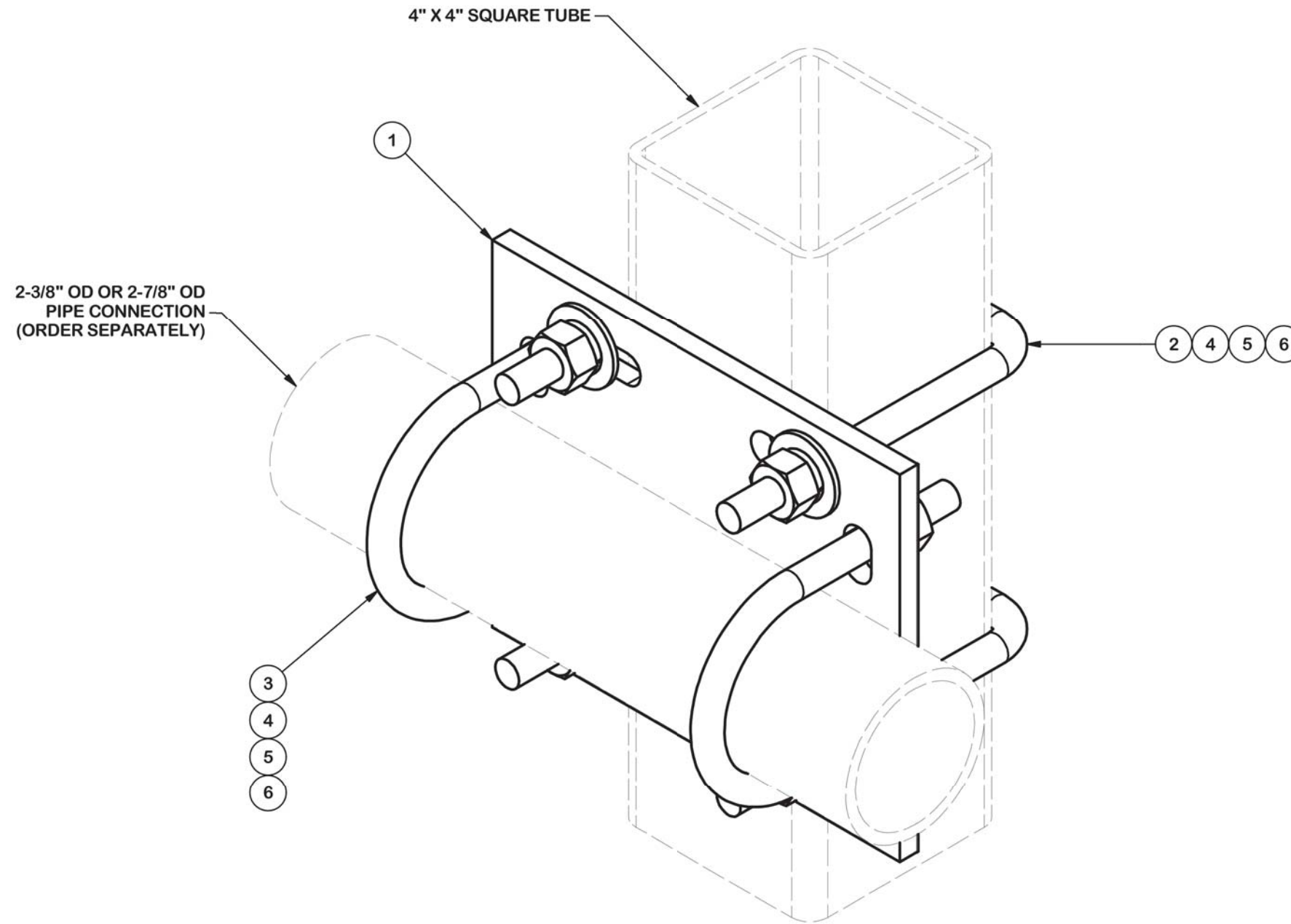
NOTES:
 1. HOT-DIPPED GALVANIZED PER ASTM A123.

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

DRAWN BY: H.R		CHECKED BY: HMA	
REV.	DESCRIPTION	BY	DATE
1	FIRST ISSUE	H.R	05/08/20

SHEET TITLE:	
VZWSMART-MSK2 CROSSOVER PLATE	
SHEET NUMBER:	REV #:
VZWSMART-MSK2	0

ITEM	QTY	PART NO.	PART DESCRIPTION	LENGTH	UNIT WT.	NET WT.
1	1	SCX4	CROSSOVER PLATE	8 1/2 in	6.02	6.02
2	2	X-SUB1418	SQUARE U-BOLT 0.5" DIA. X 4.125" IW X 6" IL X 3" TR		0.98	1.95
3	2	X-UB1212	1/2" X 2-1/2" X 4-1/2" X 2" U-BOLT (HDG.)		0.60	1.19
3	2	X-UB1300	1/2" X 3" X 5" X 2" U-BOLT (HDG.)		0.67	1.34
4	8	G12FW	1/2" HDG USS FLATWASHER	3/32 in	0.03	0.27
5	8	G12LW	1/2" HDG LOCKWASHER	1/8 in	0.01	0.11
6	8	G12NUT	1/2" HDG HEAVY 2H HEX NUT		0.07	0.57
					TOTAL WT. #	11.35



TOLERANCE NOTES

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

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DESCRIPTION
**CROSSOVER PLATE KIT
 W/ SQUARE U-BOLTS AND STD. U-BOLTS**

SITE PRO 1
 A valmont COMPANY

Engineering Support Team:
 1-888-753-7446

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

CPD NO.	DRAWN BY	ENG. APPROVAL
	CSL 9/18/2018	3RD PARTY
CLASS	SUB	DRAWING USAGE
87	02	CUSTOMER
	CHECKED BY	
	BMC 11/12/2018	

PART NO.	SQCX4-K
DWG. NO.	SQCX4-K

PROJECT NOTES

1. SEE MODIFICATION NOTES
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. NO NOISE, SMOKE, DUST OR ODOR WILL RESULT FROM THIS FACILITY AS TO CAUSE A NUISANCE.
11. THE FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION (NO HANDICAP ACCESS IS REQUIRED).



MOUNT MODIFICATION DRAWINGS EXISTING 10.00' T-ARM

**SITE NAME: BYRAM PARK CT
SITE NUMBER: 468044**

**36 RITCH AVE W
GREENWICH, CT 06830
FAIRFIELD COUNTY**

PROJECT INFORMATION	SHEET INDEX
SITE INFORMATION LATITUDE: 41.005964° N LONGITUDE: 73.648312° W JURISDICTION: FAIRFIELD COUNTY	SHEET DESCRIPTION T-1 TITLE SHEET S-1 BILL OF MATERIALS S-2 MODIFICATION NOTES S-3 MODIFICATION NOTES S-4 MODIFICATION DETAILS S-5 MODIFICATION DETAILS S-6 MOUNT PHOTOS SPECIFICATION SHEETS
APPLICANT/LESSEE COMPANY: VERIZON WIRELESS	
CLIENT REPRESENTATIVE COMPANY: VERIZON WIRELESS ADDRESS: 118 FLANDERS ROAD, THIRD FLOOR CITY, STATE, ZIP: WESTBOROUGH, MA 01581 CONTACT: ANDREW CANDIELLO EMAIL: ANDREW.CANDIELLO@VERIZONWIRELESS.COM	
PROJECT MANAGER COMPANY: MASER CONSULTING CONNECTICUT CONTACT: GREG DULNIK PHONE: (615) 686-2575 E-MAIL: GREG.DULNIK@COLLIERSENGINEERING.COM	

CONTRACTOR PMI REQUIREMENTS	REFERENCED DOCUMENTS
PMI LOCATION: HTTPS://PMI.VZWSMART.COM SMART TOOL PROJECT #: 10084892 VZWS LOCATION CODE (PSLC): 468044 FUZE ID: 16231909	FILING MOUNT ANALYSIS REPORT SMART TOOL PROJECT #: 10017463 MASER CONSULTING PROJECT #: 20777259A ANALYSIS DATE: 7/2/2021

PMI REQUIREMENTS EMBEDDED WITHIN MOUNT MODIFICATION REPORT

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Deal Draft

Derek R. Hartzell
32711 LICENSE NUMBER
MASER CONSULTING
CT CDA 20130131
PROFESSIONAL ENGINEER

Digitally signed by Derek R. Hartzell
Date: 2021.07.07 08:43:54-0400

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**BYRAM PARK CT
468044**
**36 RITCH AVE W
GREENWICH, CT 06830
FAIRFIELD COUNTY**

M **MT. LAUREL OFFICE**
3000 Frederic Drive
Suite 100
Mount Laurel, NJ 08054
Phone: 856.797.0412
Fax: 856.722.1120

DRAWING TITLE: **TITLE SHEET**

DRAWING NUMBER: **T-1**

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION

BILL OF MATERIALS

VZWSMART KITS				
QUANTITY	MANUFACTURER	PART NUMBER	DESCRIPTION	NOTES
3	VZWSMART	VZWSMART-SFK4	T-ARM KIT	CONTRACTOR TO VERIFY THE LENGTH REQUIRED AND TRIM AS NECESSARY IN ACCORDANCE WITH THE 'STRUCTURAL STEEL' NOTES ON SHEET S-2
1		VZWSMART-PLK7	MONOPOLE COLLAR MOUNT ASSEMBLY	
15		VZWSMART-MSK2	CROSSOVER PLATE	
OTHER REQUIRED PARTS				
QUANTITY	MANUFACTURER	PART NUMBER	DESCRIPTION	NOTES
3	-	-	120" LONG, P3.0 STD	GALVANIZED
3	-	-	102" LONG, P2.5 STD	GALVANIZED
4	SITE PRO I	SQCX4-K	CROSSOVER PLATE KIT W/ SQUARE U-BOLTS AND STD. U-BOLTS	OR EOR APPROVED EQUAL, CONTACT MASER CONSULTING FOR APPROVAL OF SUBSTITUTION
1	-	-	36" LONG, P2.0 STD	GALVANIZED

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

VZWSMART KITS - APPROVED VENDORS	
COMMSCOPE	
CONTACT	SALVADOR ANGUIANO
PHONE	(817) 304-7492
EMAIL	SALVADOR.ANGUIANO@COMMSCOPE.COM
WEBSITE	WWW.COMMSCOPE.COM
METROSITE FABRICATORS, LLC	
CONTACT	KENT RAMEY
PHONE	(706) 335-7045 (O), (706) 982-9788 (M)
EMAIL	KENT@METROSITELLC.COM
WEBSITE	METROSITEFABRICATORS.COM
PERFECTVISION	
CONTACT	WIRELESS SALES
PHONE	(844) 887-6723
EMAIL	WWW.PERFECT-VISION.COM
WEBSITE	WIRELESSALES@PERFECT-VISION.COM
SABRE INDUSTRIES, INC.	
CONTACT	ANGIE WELCH
PHONE	(866) 428-6937
EMAIL	AKWELCH@SABREINDUSTRIES.COM
WEBSITE	WWW.SABRESITESOLUTIONS.COM
SITE PRO I	
CONTACT	PAULA BOSWELL
PHONE	(972) 236-9843
EMAIL	PAULA.BOSWELL@VALMONT.COM
WEBSITE	WWW.SITEPROI.COM

NOTE: WHEN SPECIFIED, VZWSMART KITS SHALL BE REQUIRED AND WILL BE VERIFIED DURING THE DESKTOP PMI

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REV	DATE	DESCRIPTION	DRAWN BY	CHECKED BY
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 FAIRFIELD COUNTY

MT LAUREL OFFICE
 3007 Frederick Drive, Suite 100
 Mount Laurel, NJ 08054
 Phone: 856.797.0412
 Fax: 856.722.1120

PROJECT TITLE: **BILL OF MATERIALS**

GENERAL NOTES

- 1. THESE MODIFICATIONS HAVE BEEN DESIGNED IN ACCORDANCE WITH THE GOVERNING PROVISIONS OF THE TELECOMMUNICATIONS INDUSTRY STANDARD TIA-222-H. MATERIALS AND SERVICES PROVIDED BY THE CONTRACTOR SHALL CONFORM TO THE ABOVE MENTIONED CODES.
2. CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO PREVENT DAMAGE TO EXISTING STRUCTURES. ANY DAMAGE TO EXISTING STRUCTURES 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.
3. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS BEFORE BEGINNING WORK, ORDERING MATERIAL, AND PREPARING OF SHOP DRAWINGS. ANY DISCREPANCIES BETWEEN FIELD CONDITIONS AND THE CONTRACT DOCUMENTS SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ENGINEER. IF THE CONTRACTOR DISCOVERS ANY EXISTING CONDITIONS THAT ARE NOT REPRESENTED ON THESE DRAWINGS, OR ANY CONDITIONS THAT WOULD INTERFERE WITH THE INSTALLATION OF THE MODIFICATIONS, NOTIFY THE ENGINEER IMMEDIATELY.
4. IT IS ASSUMED THAT ANY STRUCTURAL MODIFICATION WORK SPECIFIED ON THESE PLANS WILL BE ACCOMPLISHED BY KNOWLEDGEABLE WORKMEN WITH TOWER CONSTRUCTION EXPERIENCE.
5. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK AND SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION METHODS, MEANS, TECHNIQUES, SEQUENCES, AND PROCEDURES.
6. ALL CONSTRUCTION MEANS AND METHODS, INCLUDING BUT NOT LIMITED TO, ERECTION PLANS, RIGGING PLANS, CLIMBING PLANS, AND RESCUE PLANS SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR RESPONSIBLE FOR THE EXECUTION OF THE WORK CONTAINED HEREIN AND SHALL MEET ANSITIA-322 (LATEST EDITION), OSHA, AND GENERAL INDUSTRY STANDARDS. ALL RIGGING PLANS SHALL ADHERE TO ANSITIA-322 (LATEST EDITION) INCLUDING THE REQUIRED INVOLVEMENT OF A QUALIFIED ENGINEER FOR CLASS IV CONSTRUCTION.
7. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR INITIATING, MAINTAINING, AND SUPERVISING ALL SAFETY PROGRAMS IN ACCORDANCE WITH APPLICABLE SAFETY CODES.
8. WORK SHALL ONLY BE PERFORMED DURING CALM DRY DAYS (WINDS LESS THAN 30-MPH). THE STRUCTURE SHOWN ON THE DRAWINGS IS STRUCTURALLY SOUND ONLY IN THE COMPLETED FORM. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE STRENGTH AND STABILITY OF THE STRUCTURE DURING ERECTION. CONTRACTOR SHALL PROVIDE TEMPORARY SUPPORT, SHORING, BRACING AND ANY OTHER STRUCTURAL SYSTEMS AS REQUIRED TO RESIST ALL FORCES THAT MAY OCCUR DURING HANDLING AND ERECTION UNTIL THE STRUCTURE IS FULLY COMPLETED. TEMPORARY SUPPORTS, BRACING AND OTHER STRUCTURAL SYSTEMS REQUIRED DURING CONSTRUCTION SHALL REMAIN THE CONTRACTOR'S PROPERTY AFTER THEIR USE.
9. ALL INSTALLATIONS PERFORMED ON THIS STRUCTURE SHALL BE COMPLETED IN ACCORDANCE WITH THE GOVERNING PROVISIONS OF THE STANDARD FOR INSTALLATION, ALTERATION AND MAINTENANCE OF ANTENNA SUPPORTING STRUCTURES AND ANTENNAS, ANSITIA-322.
10. CONTRACTOR SHALL SECURE SITE BACK TO EXISTING CONDITION UNDER SUPERVISION OF OWNER. ALL FENCE, STONE, GEOTEXTILE, GROUNDING, AND SURROUNDING GRADE SHALL BE REPLACED AND REPAIRED AS REQUIRED TO ACHIEVE OWNER APPROVAL. POSITIVE DRAINAGE AWAY FROM TOWER SITE SHALL BE MAINTAINED.
11. CONNECTIONS BETWEEN ITEMS SUPPORTED BY THE STRUCTURE AND THE STRUCTURE NOT SPECIFICALLY DETAILED IN THE CONTRACT DOCUMENTS ARE THE RESPONSIBILITY OF THE CONTRACTOR. SUCH CONNECTIONS SHALL BE DESIGNED, COORDINATED AND INSPECTED BY A PROFESSIONAL STRUCTURAL ENGINEER LICENSED IN THE STATE OF THE PROJECT. SUBMIT SIGNED AND SEALED CALCULATIONS DURING SHOP DRAWING REVIEW.
12. DO NOT SCALE DRAWINGS.
13. DO NOT USE THESE DRAWINGS FOR ANY OTHER SITE.
14. ALL MATERIAL UTILIZED FOR THIS PROJECT MUST BE NEW AND FREE OF ANY DEFECTS. ANY MATERIAL SUBSTITUTIONS, INCLUDING BUT NOT LIMITED TO ALTERED SIZE AND/OR STRENGTHS, MUST BE APPROVED BY THE OWNER AND ENGINEER IN WRITING.
15. THE MOUNT UNDER NO CIRCUMSTANCES SHOULD BE USED AS A TIE OFF POINT.

DESIGN LOADS

- WIND LOADS
a. BASIC WIND SPEED (3 SECOND GUST), V = 116 MPH
b. EXPOSURE CATEGORY C
c. TOPOGRAPHIC CATEGORY I
d. MEAN BASE ELEVATION (AMSL) = 50.68'
ICE LOADS
a. ICE WIND SPEED (3 SECOND GUST), V = 50 MPH
b. ICE THICKNESS = 1.00 IN
SEISMIC LOADS
a. SEISMIC DESIGN CATEGORY B
b. SHORT TERM MCEER GROUND MOTION, S_s = .277
c. LONG TERM MCEER GROUND MOTION, S_1 = .060

STRUCTURAL STEEL

- 1. DESIGN, DETAILING, FABRICATION AND ERECTION OF STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING PUBLICATIONS EXCEPT AS SPECIFICALLY INDICATED IN THE CONTRACT DOCUMENTS.
a. AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) MANUAL OF STEEL CONSTRUCTION (15TH EDITION)
b. SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS
c. AISC CODE OF STANDARD PRACTICE
2. STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING UNLESS OTHERWISE SHOWN:
CHANNELS, ANGLES, PLATES, ETC. ASTM A36 (GR 36)
STEEL PIPE ASTM A53 (GR 35)
BOLTS ASTM A325
NUTS ASTM A563
LOCK WASHERS LOCKING STRUCTURAL GRADE
3. ALL SUBSTITUTIONS PROPOSED BY THE CONTRACTOR SHALL BE APPROVED IN WRITING BY THE ENGINEER. CONTRACTOR SHALL PROVIDE DOCUMENTATION TO ENGINEER FOR VERIFYING THE SUBSTITUTE IS SUITABLE FOR USE AND MEETS ORIGINAL DESIGN CRITERIA. DIFFERENCES FROM THE ORIGINAL DESIGN, INCLUDING MAINTENANCE, REPAIR AND REPLACEMENT, SHALL BE NOTED. ESTIMATES OF COSTS/CREDITS ASSOCIATED WITH THE SUBSTITUTION (INCLUDING RE-DESIGN COSTS AND COSTS TO SUB-CONTRACTORS) SHALL BE PROVIDED TO THE ENGINEER. CONTRACTOR SHALL PROVIDE ADDITIONAL DOCUMENTATION AND/OR SPECIFICATIONS TO THE ENGINEER AS REQUESTED.
4. PROVIDE STRUCTURAL STEEL SHOP DRAWINGS TO ENGINEER FOR APPROVAL PRIOR TO FABRICATION.
a. SUBMIT SHOP DRAWINGS TO GREG.DULNIK@COLLIERSENGINEERING.COM
b. PROVIDE MASER CONSULTING PROJECT # AND MASER CONSULTING PROJECT ENGINEER CONTACT IN THE BODY OF THE EMAIL.
5. DRILL NO HOLES IN ANY NEW OR EXISTING STRUCTURAL STEEL MEMBERS OTHER THAN THOSE SHOWN ON STRUCTURAL DRAWINGS WITHOUT THE APPROVAL OF THE ENGINEER OF RECORD.
6. GALVANIZED ASTM A325 BOLTS SHALL NOT BE REUSED.
7. ALL NEW STEEL SHALL BE HOT BE DIPPED GALVANIZED FOR FULL WEATHER PROTECTION. IN ADDITION ALL NEW STEEL SHALL BE PAINTED TO MATCH EXISTING STEEL. CONTRACTOR SHALL OBTAIN WRITTEN PERMISSION TO PROTECT STEEL BY ANY OTHER MEANS.
8. ALL BOLT ASSEMBLIES FOR STRUCTURAL MEMBERS REPRESENTED IN THIS DRAWING REQUIRE LOCKING DEVICES TO BE INSTALLED IN ACCORDANCE WITH TIA-222-H SECTION 4.9.2 REQUIREMENTS.
9. WHERE CONNECTIONS ARE NOT FULLY DETAILED ON THESE DRAWINGS, FABRICATOR SHALL DESIGN CONNECTIONS TO RESIST LOADS AND FORCES WHERE SHOWN ON DRAWINGS AND AS OUTLINED IN SPECIFICATIONS.
10. FOR MEMBERS BEING REPLACED, PROVIDE NEW BOLTS AND MATCH EXISTING SIZE AND GRADE. MAINTAIN AISC REQUIREMENTS FOR MINIMUM BOLT DISTANCE AND SPACING.
11. ALL PROPOSED AND/OR REPLACED BOLTS SHALL BE OF SUFFICIENT LENGTH SUCH THAT THE END OF THE BOLT IS AT LEAST FLUSH WITH THE FACE OF THE NUT. IT IS NOT PERMITTED FOR THE BOLT END TO BE BELOW THE FACE OF THE NUT AFTER TIGHTENING IS COMPLETED.
12. GALVANIZED ASTM A325 BOLTS SHALL NOT BE REUSED.
13. ALL NEW STEEL SHALL BE HOT BE DIPPED GALVANIZED FOR FULL WEATHER PROTECTION. CONTRACTOR SHALL OBTAIN WRITTEN PERMISSION TO

PROTECT STEEL BY ANY OTHER MEANS.

- 14. ALL EXISTING PAINTED/GALVANIZED SURFACES DAMAGED DURING REHAB INCLUDING AREAS UNDER STIFFENER PLATES SHALL BE WIRE BRUSHED CLEAN, REPAIRED BY COLD GALVANIZING (ZINGA OR ZINC COTE), AND REPAINTED TO MATCH THE EXISTING FINISH (IF APPLICABLE).
15. ALL HOLES IN STEEL MEMBERS SHALL BE SIZED 1/16" LARGER THAN THE BOLT DIAMETER. STANDARD HOLES SHALL BE USED UNLESS NOTED OTHERWISE.

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Table with 4 columns: REV, DATE, DESCRIPTION, DRAWN BY, CHECKED BY. Row 1: 0, 7/7/2021, SUBMIT FOR CONSTRUCTION, RAC, DH

Professional Engineer Seal for Derek R. Hartzoff, License No. 32713, State of Connecticut, dated 2021.07.07 08:44:05-0400.

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36 RITCH AVE W
GREENWICH, CT 06830
FAIRFIELD COUNTY

MASER CONSULTING logo and contact information for Fairfield Office: 3000 Fenwick Drive, Suite 100, Mount Laurel, NJ 08054. Phone: 856.797.0412, Fax: 856.722.1120.

MODIFICATION NOTES

PREPARED BY: S-2

NOTE: DO NOT SCALE DRAWINGS FOR CONSTRUCTION.

MODIFICATION INSPECTION NOTES

MI CHECKLIST	
CONSTRUCTION/ INSTALLATION INSPECTIONS AND TESTING REQUIRED (COMPLETED BY EOR)	REPORT ITEM
PRE-CONSTRUCTION	
X	MI CHECKLIST DRAWING
X	EOB APPROVED SHOP DRAWINGS
NA	FABRICATION INSPECTION
NA	FABRICATOR CERTIFIED WELD INSPECTION
X	MATERIAL TEST REPORT (MTR)
NA	FABRICATOR NDE INSPECTION
X	PACKING SLIPS
ADDITIONAL TESTING AND INSPECTIONS:	
CONSTRUCTION	
X	CONSTRUCTION INSPECTIONS
NA	CONTRACTOR'S CERTIFIED WELD INSPECTION AND NDE REPORTS
X	ON SITE COLD GALVANIZING VERIFICATION
X	GC AS-BUILT DOCUMENTS
ADDITIONAL TESTING AND INSPECTIONS:	
POST-CONSTRUCTION	
X	MI INSPECTOR REDLINE OR RECORD DRAWING(S)
X	VZV PMI DOCUMENTS
X	PHOTOGRAPHS
ADDITIONAL TESTING AND INSPECTIONS:	

NOTE: X DENOTES A DOCUMENT REQUIRED FOR THE MI REPORT
 NA DENOTES A DOCUMENT THAT IS NOT REQUIRED FOR THE MI REPORT

THE MODIFICATION INSPECTION (MI) IS A VISUAL INSPECTION OF MODIFICATIONS AND A REVIEW OF CONSTRUCTION INSPECTIONS AND OTHER REPORTS TO ENSURE THE INSTALLATION WAS CONSTRUCTED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS, NAMELY THE MODIFICATION DRAWINGS, AS DESIGNED BY THE ENGINEER OF RECORD (EOR).

THE MI IS TO CONFIRM INSTALLATION CONFIGURATION AND WORKMANSHIP ONLY AND IS NOT A REVIEW OF THE MODIFICATION DESIGN ITSELF, NOR DOES THE MI INSPECTOR TAKE OWNERSHIP OF THE MODIFICATION DESIGN. OWNERSHIP OF THE STRUCTURAL MODIFICATION DESIGN EFFECTIVENESS AND INTEGRITY RESIDES WITH THE EOR AT ALL TIMES.

TO ENSURE THAT THE REQUIREMENTS OF THE MI ARE MET, IT IS VITAL THAT THE GENERAL CONTRACTOR (GC) AND THE MI INSPECTOR BEGIN COMMUNICATING AND COORDINATING AS SOON AS A PURCHASE ORDER (PO) IS RECEIVED. IT IS EXPECTED THAT EACH PARTY WILL BE PROACTIVE IN REACHING OUT TO THE OTHER PARTY.

MI INSPECTOR

THE MI INSPECTOR IS REQUIRED TO CONTACT THE GC AS SOON AS RECEIVING A PO FOR THE MI TO, AT A MINIMUM:

- REVIEW THE REQUIREMENTS OF THE MI CHECKLIST
- WORK WITH THE GC TO DEVELOP A SCHEDULE TO CONDUCT ON-SITE INSPECTIONS

THE MI INSPECTOR IS RESPONSIBLE FOR COLLECTING ALL GC INSPECTION AND TEST REPORTS, REVIEWING THE DOCUMENTS FOR ADHERENCE TO THE CONTRACT DOCUMENTS, CONDUCTING THE IN-FIELD INSPECTIONS, AND SUBMITTING THE MI REPORT TO EOR.

GENERAL CONTRACTOR

THE GC IS REQUIRED TO CONTACT THE MI INSPECTOR AS SOON AS RECEIVING A PO FOR THE MODIFICATION INSTALLATION OR TURNKEY PROJECT TO, AT A MINIMUM:

- REVIEW THE REQUIREMENTS OF THE MI CHECKLIST
- WORK WITH THE MI INSPECTOR TO DEVELOP A SCHEDULE TO CONDUCT ON-SITE MI INSPECTIONS, INCLUDING FOUNDATION INSPECTIONS
- BETTER UNDERSTAND ALL INSPECTION AND TESTING REQUIREMENTS

THE GC SHALL PERFORM AND RECORD THE TEST AND INSPECTION RESULTS IN ACCORDANCE WITH THE REQUIREMENTS OF THE MI CHECKLIST.

RECOMMENDATIONS

THE FOLLOWING RECOMMENDATIONS AND SUGGESTIONS ARE OFFERED TO ENHANCE THE EFFICIENCY AND EFFECTIVENESS OF DELIVERING AN MI REPORT:

- IT IS SUGGESTED THAT THE GC PROVIDE A MINIMUM OF 5 BUSINESS DAYS NOTICE, PREFERABLY 10, TO THE MI INSPECTOR AS TO WHEN THE SITE WILL BE READY FOR THE MI TO BE CONDUCTED.
- THE GC AND MI INSPECTOR COORDINATE CLOSELY THROUGHOUT THE ENTIRE PROJECT.
- WHEN POSSIBLE, IT IS PREFERRED TO HAVE THE GC AND MI INSPECTOR ON-SITE SIMULTANEOUSLY FOR ANY GUY WIRE TENSIONING OR RE-TENSIONING OPERATIONS.
- IT MAY BE BENEFICIAL TO INSTALL ALL MODIFICATIONS PRIOR TO CONDUCTING THE FOUNDATION INSPECTIONS TO ALLOW THE FOUNDATION AND MI INSPECTION(S) TO COMMENCE WITH ONE SITE VISIT.
- WHEN POSSIBLE, IT IS PREFERRED TO HAVE THE GC AND MI INSPECTOR ON-SITE DURING THE MI TO HAVE ANY DEFICIENCIES CORRECTED DURING THE INITIAL MI. THEREFORE, THE GC MAY CHOOSE TO COORDINATE THE MI CAREFULLY TO ENSURE ALL CONSTRUCTION FACILITIES ARE AT THEIR DISPOSAL WHEN THE MI INSPECTOR IS ON SITE.

CORRECTION OF FAILING MIs

IF THE MODIFICATION INSTALLATION WOULD FAIL THE MI ("FAILED MI"), THE GC SHALL WORK WITH THE OWNER TO COORDINATE A REMEDIATION PLAN:

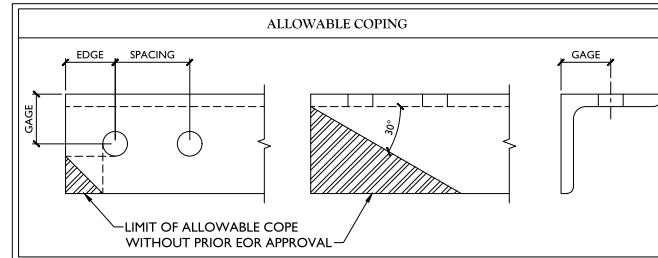
- CORRECT FAILING ISSUES TO COMPLY WITH THE SPECIFICATIONS CONTAINED IN THE ORIGINAL CONTRACT DOCUMENTS AND COORDINATE A SUPPLEMENT MI.

REQUIRED PHOTOS

BETWEEN THE GC AND THE MI INSPECTOR THE FOLLOWING PHOTOGRAPHS, AT A MINIMUM, ARE TO BE TAKEN AND INCLUDED IN THE MI REPORT:

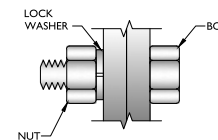
- PRE-CONSTRUCTION GENERAL SITE CONDITION
- PHOTOGRAPHS DURING THE REINFORCEMENT MODIFICATION CONSTRUCTION/ERECTION AND INSPECTION
 - RAW MATERIALS
 - PHOTOS OF ALL CRITICAL DETAILS
 - FOUNDATION MODIFICATIONS
 - WELD PREPARATION
 - BOLT INSTALLATION
 - FINAL INSTALLED CONDITION
 - SURFACE COATING REPAIR
- POST CONSTRUCTION PHOTOGRAPHS
 - FINAL INFIELD CONDITION

PHOTOS OF ELEVATED MODIFICATIONS TAKEN ONLY FROM THE GROUND SHALL BE CONSIDERED INADEQUATE.



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

NOTES:

- 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.
- THE DIMENSIONS PROVIDED ARE MINIMUM REQUIREMENTS. ACTUAL DIMENSIONS OF PROPOSED MEMBERS WITHIN THESE DRAWINGS MAY VARY FROM THE AISC MINIMUM REQUIREMENTS.
- SHORT SLOT HOLES SHALL ONLY BE USED WHEN DEPICTED IN THE DRAWINGS
- MATCH EXISTING GAGES WHEN APPLICABLE, UNLESS MINIMUM EDGE DISTANCES ARE COMPROMISED.

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 Date: 2021.07.07 08:44:05-0400

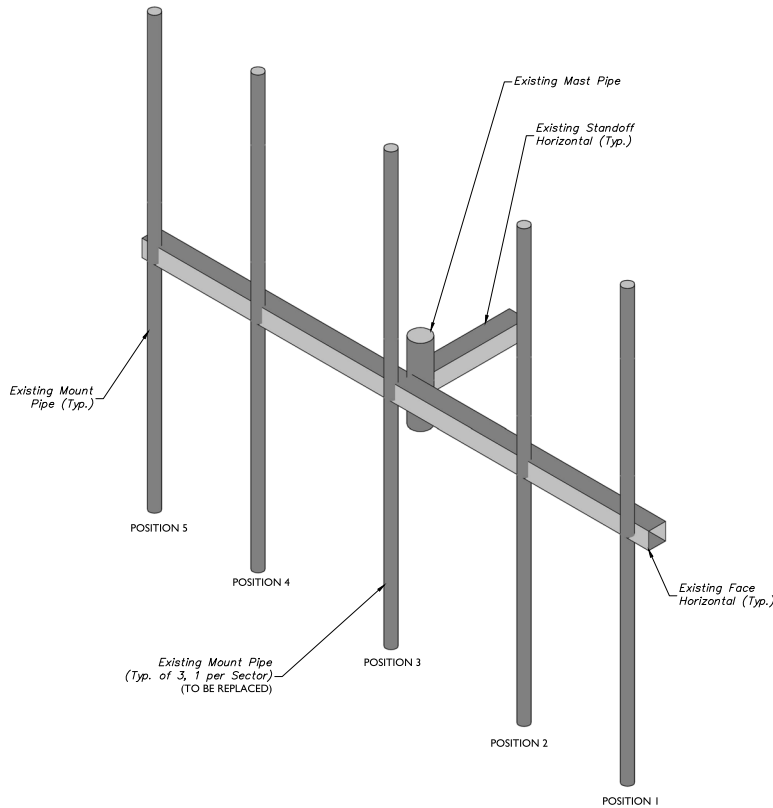
SITE NAME:
 BYRAM PARK CT
 468044
 36 RITCH AVE W
 GREENWICH, CT 06830
 FAIRFIELD COUNTY

MT. LAUREL OFFICE
 3000 Federal Drive
 Suite 100
 Mount Laurel, NJ 08054
 Phone: 856.797.0412
 Fax: 856.772.1120

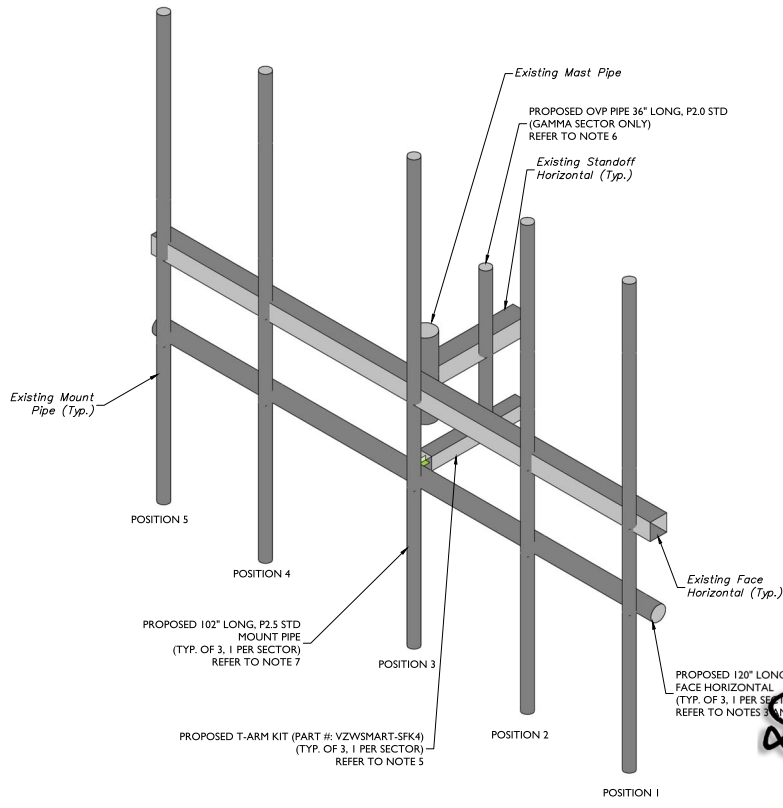
DRAWING TITLE: MODIFICATION NOTES

DATE: 7/7/2021

SCALE: S-3



1 EXISTING T-ARM ISOMETRIC VIEW (TYP. ALL SECTORS)
SCALE: N.T.S.



2 PROPOSED T-ARM ISOMETRIC VIEW (TYP. ALL SECTORS)
SCALE: N.T.S.

STRUCTURAL NOTES:

- PER THE MOUNT MAPPING COMPLETED BY TOWER ENGINEERING PROFESSIONALS ON 10/21/2020, THE SAFETY CLIMB AND CLIMBING FACILITIES UP TO THE VERIZON MOUNT ELEVATION (56'-0") ARE IN GOOD CONDITION. MASER DOES NOT WARRANT THIS INFORMATION.
- INSTALL SHALL NOT CAUSE HARM TO THE STRUCTURE, CLIMBING FACILITY, SAFETY CLIMB, OR ANY SYSTEM INSTALLED ON THE STRUCTURE. TIMELY NOTICE AND DOCUMENTATION SHALL BE PROVIDED BY CONTRACTORS TO THE EOR (OF STRUCTURAL DESIGN) IF AN OBSTRUCTION WAS REQUIRED TO MEET THE RF SYSTEM DESIGN REQUIREMENTS AND PERFORMANCES.
- CONTRACTOR TO REMOVE AND REPLACE ARTIFICIAL BRANCHES AS NEEDED FOR INSTALLATION.
- CONTRACTOR TO WORK WITH TOWER OWNER TO REMOVE TOWER BRANCHES AS NEEDED TO INSTALL PROPOSED MOUNT CONNECTION.

MODIFICATION NOTES:

- MOUNT MEMBERS NOT SHOWN FOR CLARITY U.N.O.
- CONTRACTOR TO VERIFY THE LENGTH REQUIRED AND TRIM AS NECESSARY IN ACCORDANCE WITH THE 'STRUCTURAL STEEL' NOTES ON SHEET S-2.
- RADIO AND/OR TME POSITIONS SHALL BE ADJUSTED VERTICALLY AS NEEDED IN ORDER TO ACHIEVE INSTALLATION OF HORIZONTAL AS SHOWN. EOR SHALL BE NOTIFIED IF EQUIPMENT NEEDS TO BE RELOCATED TO ANOTHER MOUNT PIPE.
- CONNECT NEW HORIZONTAL TO ALL VERTICAL MOUNT PIPES WITH CROSSOVER PLATES (PART #: VZWSMART-MSK2).
- CONNECT OTHER END OF T-ARM KIT TO MONOPOLE COLLAR MOUNT ASSEMBLY (PART #: VZWSMART-PLK7).
- CONNECT NEW OVP PIPE TO EXISTING STANDOFF HORIZONTAL WITH CROSSOVER PLATE (PART #: SITE PRO 1 - SQCX4-K, OR EOR APPROVED EQUAL).
- CONNECT NEW MOUNT PIPE TO EXISTING FACE HORIZONTAL WITH CROSSOVER PLATE (PART #: SITE PRO 1 - SQCX4-K, OR EOR APPROVED EQUAL).

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Scale	AS SHOWN	Job Number	20777259A
REV	DATE	DESCRIPTION	DRAWN BY / CHECKED BY
0	7/7/2021	ISSUED FOR CONSTRUCTION	RAC / DH

Derek R. Hartzell

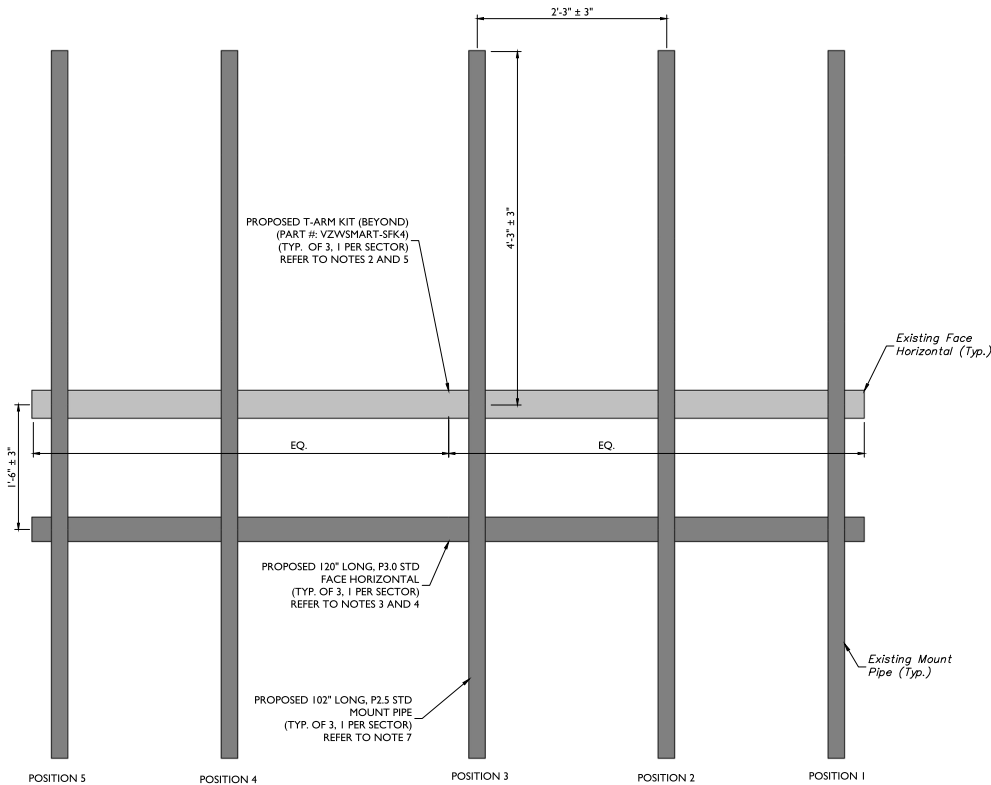
 Digitally signed by Derek R. Hartzell
Date: 2021.07.08 08:44:05-0400

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BYRAM PARK CT
468044
36 RITCH AVE W
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FAIRFIELD COUNTY

MT. LAUREL OFFICE
3007 FREDERICK DRIVE
MOUNT LAUREL, NJ 08054
Phone: 856.797.0412
Fax: 856.722.1120

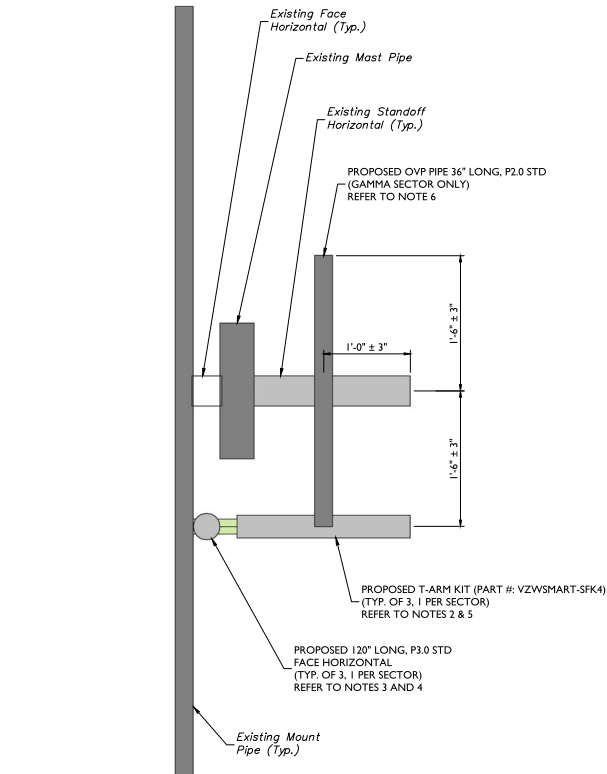
PROJECT: **MODIFICATION DETAILS**



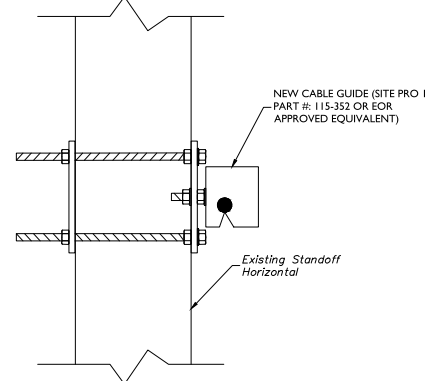
1 PROPOSED FRONT ELEVATION (TYP. ALL SECTORS)
SCALE: N.T.S.

MODIFICATION NOTES:

1. MOUNT MEMBERS NOT SHOWN FOR CLARITY U.N.O.
2. CONTRACTOR TO VERIFY THE LENGTH REQUIRED AND TRIM AS NECESSARY IN ACCORDANCE WITH THE 'STRUCTURAL STEEL' NOTES ON SHEET S-2.
3. RADIO AND/OR TME POSITIONS SHALL BE ADJUSTED VERTICALLY AS NEEDED IN ORDER TO ACHIEVE INSTALLATION OF HORIZONTAL AS SHOWN. EOR SHALL BE NOTIFIED IF EQUIPMENT NEEDS TO BE RELOCATED TO ANOTHER MOUNT PIPE.
4. CONNECT NEW HORIZONTAL TO ALL VERTICAL MOUNT PIPES WITH CROSSOVER PLATES (PART #: VZWSMART-MSK2).
5. CONNECT OTHER END OF T-ARM KIT TO MONOPOLE COLLAR MOUNT ASSEMBLY (PART #: VZWSMART-PLK7).
6. CONNECT NEW OVP PIPE TO EXISTING STANDOFF HORIZONTAL WITH CROSSOVER PLATE (PART #: SITE PRO 1 - SQCX4-K, OR EOR APPROVED EQUAL).
7. CONNECT NEW MOUNT PIPE TO EXISTING FACE HORIZONTAL WITH CROSSOVER PLATE (PART #: SITE PRO 1 - SQCX4-K, OR EOR APPROVED EQUAL).



2 PROPOSED SIDE ELEVATION (TYP. ALL SECTORS)
SCALE: N.T.S.



3 PROPOSED CABLE GUIDE STANDOFF SQUARE TUBE ATTACHMENT - PLAN VIEW
SCALE: N.T.S.



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Scale	AS SHOWN	Sheet No.	20777259A
REV	DATE	DESCRIPTION	DRAWN BY / CHECKED BY
0	7/7/2021	ISSUED FOR CONSTRUCTION	RAC / DH

Derek R. Hartzell
Derek R. Hartzell
32717
LICENSE NUMBER
MAKER, CONSOLE
CT. CDA. 20190131
Digitally signed by Derek R. Hartzell
Date: 2021.07.07 08:44:05-0400

SITE NAME:
BYRAM PARK CT
468044
36 RITCH AVE W
GREENWICH, CT 06830
FAIRFIELD COUNTY

MT. LAUREL OFFICE
1000 FREDERICK DRIVE
Suite 100
Mount Laurel, NJ 08054
Phone: 856.797.0412
Fax: 856.722.1120

PROJECT TITLE:
MODIFICATION DETAILS



MOUNT PHOTO 1



MOUNT PHOTO 2



MOUNT PHOTO 3



MOUNT PHOTO 4

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Scale:	AS SHOWN	Job Number:	20777259A	
REV	DATE	DESCRIPTION	DRAWN BY	CHECKED BY
0	7/7/2011	ESDSD FOR CONSTRUCTION	RAC	DH

Derek R. Hartzel
DIGITALLY SIGNED BY DEREK R. HARTZEL
Date: 2021.07.07 08:44:06-0400

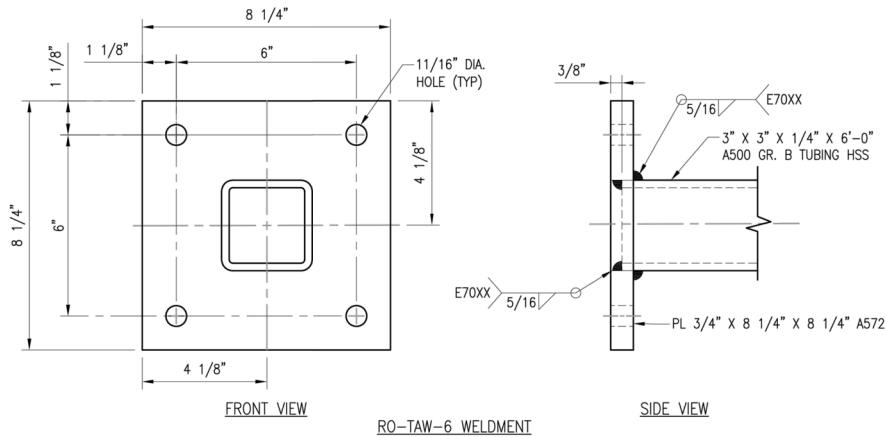
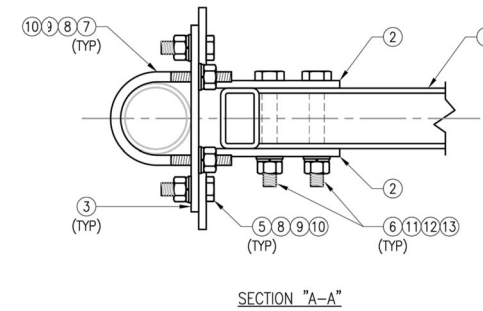
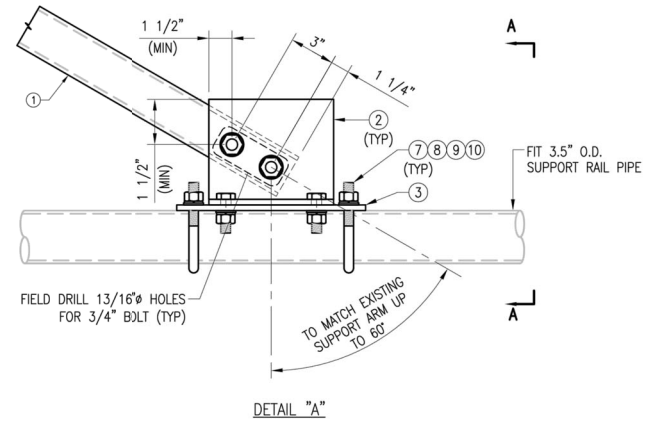
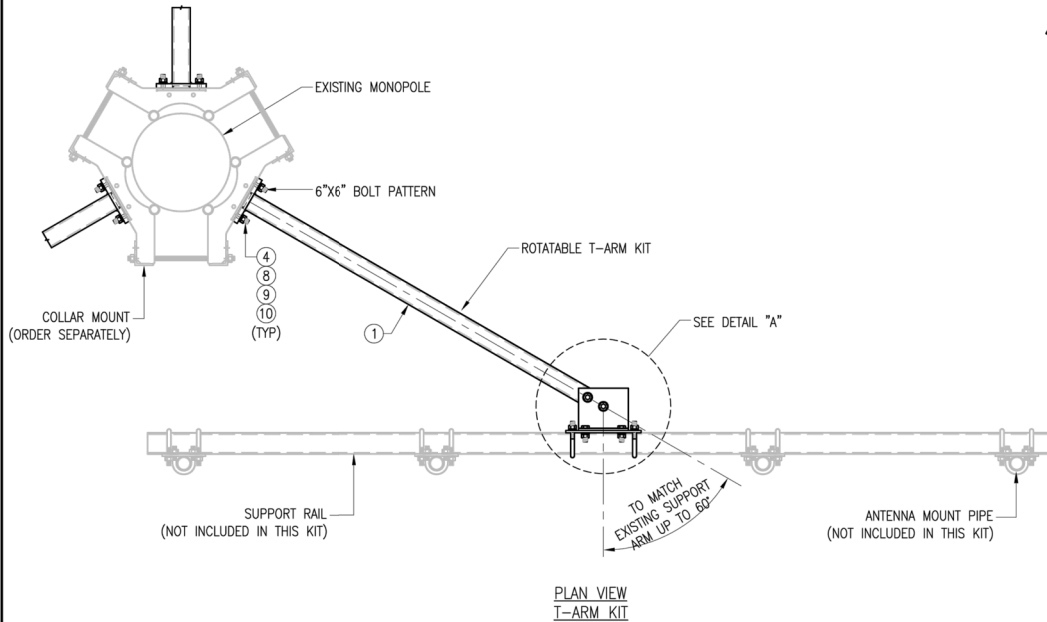
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GREENWICH, CT 06830
FAIRFIELD COUNTY

M MT. LAUREL OFFICE
3000 FREDERICK DRIVE
Suite 100
Mount Laurel, NJ 08054
Phone: 856.797.0412
Fax: 856.722.1120

PLOT TITLE:
MOUNT PHOTOS

PLOT NUMBER:
S-6

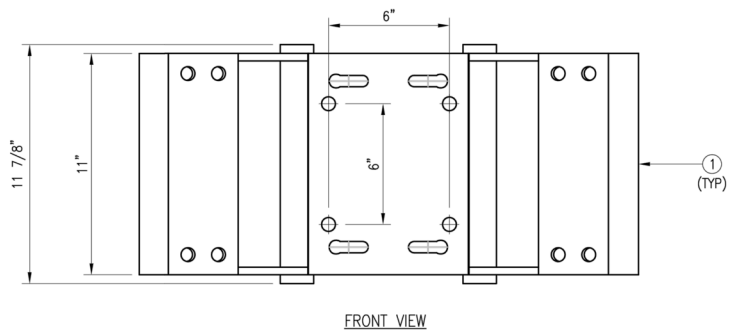
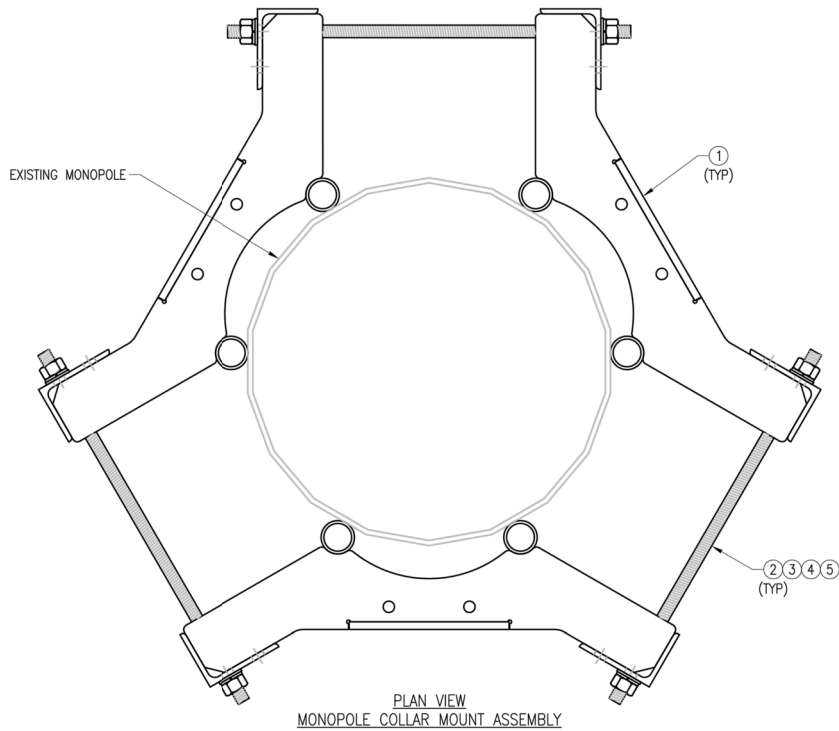


VZSMART-SFK4 (T-ARM KIT)					
ITEM NO.	QTY.	PART NO.	DESCRIPTION	SHEET #	WT
1	1	RO-TAW-6	T-ARM WELDMENT	SFK4-F1	71
2	2	BP825-94375	PL 3/8" X 8 1/4" X 9 7/16" A36 BEND PLATE	SFK4-F2	17
3	1	PL375-92512025	PL 3/8" X 9 1/4" X 1'-0 1/2" A36	SFK4-F3	12
4	4	---	BOLT 5/8" X 2 1/4" A325	---	0
5	4	---	BOLT 5/8" X 2" A325	---	0
6	2	---	BOLT 3/4" X 5 1/4" A325	---	0
7	2	MS02-625-3625-600	RU-BOLT 5/8" X 3 5/8" L.W. X 6" I.L. A36 (OR EQUIV.)	RBC-1	3
8	12	FW-625	5/8" HDG USS FLAT WASHER	---	1
9	12	LW-625	5/8" HDG LOCK WASHER	---	0
10	12	NUT-625	5/8" HDG HEX NUT	---	1
11	2	FW-75	3/4" HDG USS FLAT WASHER	---	0
12	2	LW-75	3/4" HDG LOCK WASHER	---	0
13	2	NUT-75	3/4" HDG HEX NUT	---	0
GALVANIZED WT					106

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

DRAWN BY: BT	CHECKED BY: HMA/KW
REV. DESCRIPTION BY DATE	
△ FIRST ISSUE	BT 05/08/20
△	
△	
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SHEET TITLE:	
VZSMART-SFK4 T-ARM KIT	
SHEET NUMBER:	REV #:
VZSMART-SFK4	0



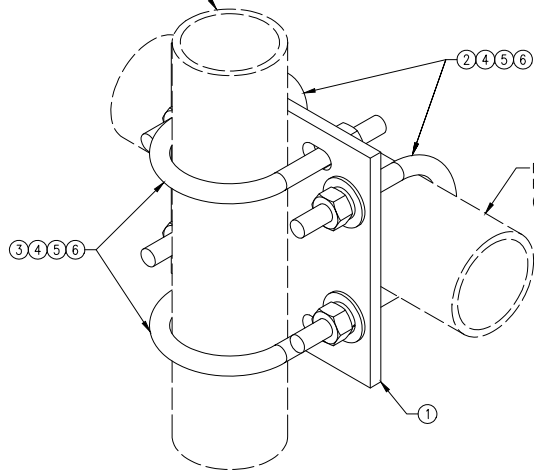
- NOTES:**
 1. FIT 12" TO 45" DIA MONOPOLE.
 2. HOT-DIPPED GALVANIZED PER ASTM A123.

VZSMART-PLK7 (MONOPOLE COLLAR MOUNT ASSEMBLY)					
ITEM NO.	QTY.	PART NO.	DESCRIPTION	SHEET #	WT
1	3	CM-1245	COLLAR MOUNT ASSEMBLY	PLK7-F1	147
2	6	---	THREADED ROD 5/8" X 4'-0" A193-B7	---	---
3	12	FW-625	5/8" HDG USS FLAT WASHER	---	1
4	12	LW-625	5/8" HDG LOCK WASHER	---	0
5	12	NUT-625	5/8" HDG HEX NUT	---	1
GALVANIZED WT					150

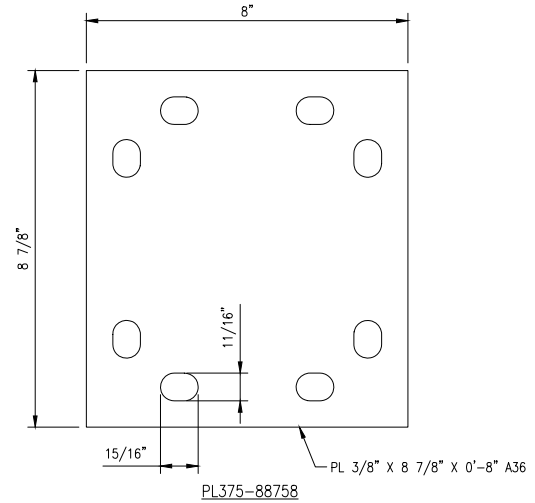
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REV. DESCRIPTION BY DATE	
△ FIRST ISSUE	BT 05/11/20
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△	
△	

SHEET TITLE:	
VZSMART-PLK7 MONOPOLE COLLAR MOUNT ASSEMBLY	
SHEET NUMBER:	REV #:
VZSMART-PLK7	0

FITS 2.375" O.D. AND 2.875" O.D.
VERTICAL PIPE.
(NOT INCLUDED IN THIS KIT)



FITS 3.5" O.D. AND 4" O.D.
HORIZONTAL PIPE.
(NOT INCLUDED IN THIS KIT)



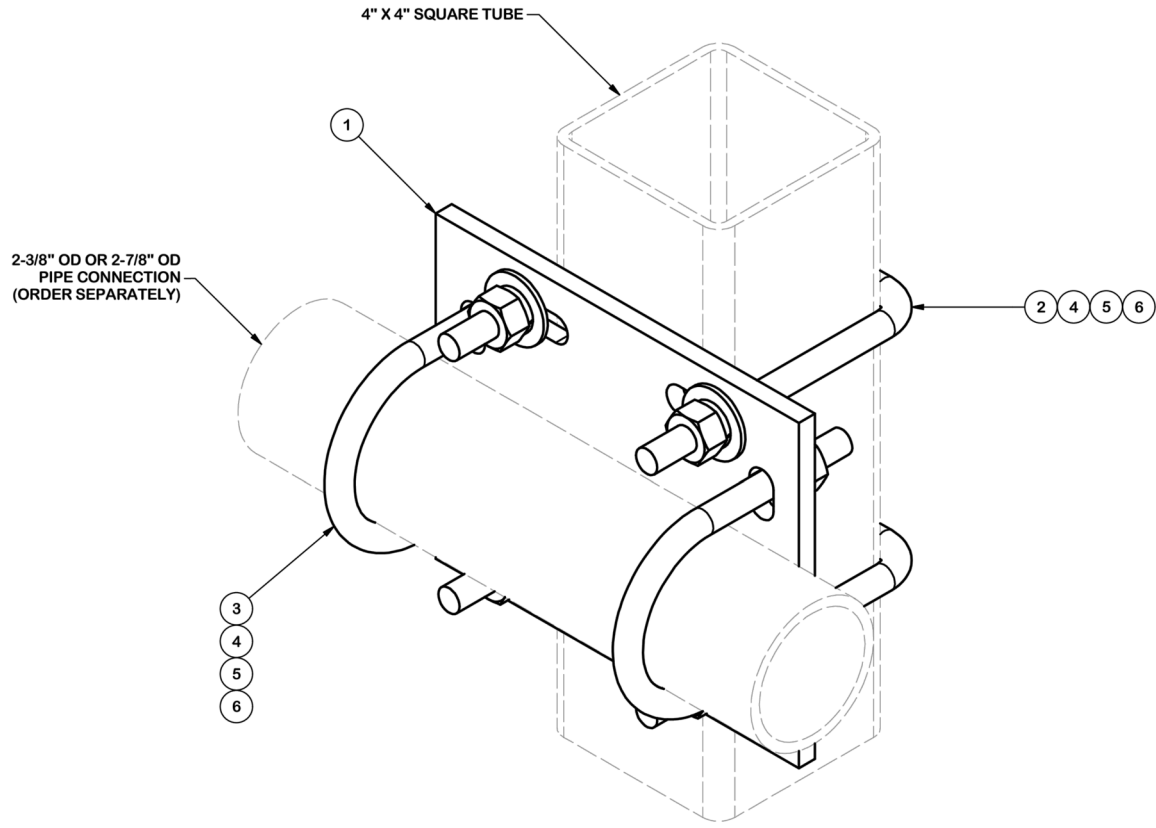
NOTES:
1. HOT-DIPPED GALVANIZED PER ASTM A123.

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

DRAWN BY: H.R.	CHECKED BY: HMA
REV. DESCRIPTION BY DATE	
△ FIRST ISSUE H.R. 05/08/20	
△	
△	
△	
△	

SHEET TITLE:	
VZWSMART-MSK2 CROSSOVER PLATE	
SHEET NUMBER:	REV #:
VZWSMART-MSK2	0

ITEM	QTY	PART NO.	PART DESCRIPTION	LENGTH	UNIT WT.	NET WT.
1	1	SCX4	CROSSOVER PLATE	8 1/2 in	6.02	6.02
2	2	X-SU31418	SQUARE U-BOLT 0.5" DIA. X 4.125" IW X 6" IL X 3" TR		0.98	1.95
3	2	X-UB1212	1/2" X 2-1/2" X 4-1/2" X 2" U-BOLT (HDG.)		0.60	1.19
3	2	X-UB1300	1/2" X 3" X 5" X 2" U-BOLT (HDG.)		0.67	1.34
4	8	G12FW	1/2" HDG USS FLATWASHER	3/32 in	0.03	0.27
5	8	G12LW	1/2" HDG LOCKWASHER	1/8 in	0.01	0.11
6	8	G12NUT	1/2" HDG HEAVY 2H HEX NUT		0.07	0.57
					TOTAL WT. #	11.35



TOLERANCE NOTES

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

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DESCRIPTION		
CROSSOVER PLATE KIT W/ SQUARE U-BOLTS AND STD. U-BOLTS		

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	Engineering Support Team: 1-888-753-7446

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	CSL 9/18/2018	3RD PARTY
CLASS	DRAWING USAGE	CHECKED BY
87	02 CUSTOMER	BMC 11/12/2018

PART NO.	SQCX4-K	PAGE 1 OF 1
DWG. NO.	SQCX4-K	



AMERICAN TOWER®
CORPORATION

Structural Analysis Report

Structure : 83.2 ft Monopine
ATC Site Name : Byram Park CT, CT
ATC Asset Number : 414240
Engineering Number : 13701270_C3_02
Proposed Carrier : VERIZON WIRELESS
Carrier Site Name : BYRAM PARK CT
Carrier Site Number : 468044
Site Location : 48 RITCH AVENUE WEST
GREENWICH, CT 06830-9992
41.005100,-73.648300
County : Fairfield
Date : July 28, 2021
Max Usage : 96%
Result : Pass

Prepared By:
Sarah Kramer
Structural Engineer

Sarah D. Kramer

Reviewed By:



COA: PEC.0001553



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Introduction

The purpose of this report is to summarize results of a structural analysis performed on the 83.2 ft monopine to reflect the change in loading by VERIZON WIRELESS.

Supporting Documents

Tower Drawings	EI Project #16733 Rev. 3, dated December 9, 2011
Foundation Drawing	Centek Engineering Job #09129 Rev. 0, dated February 14, 2012
Geotechnical Report	DET Job #2010.14, dated October 4, 2010
Modifications	ATC Project #OAA711130_C6_09, dated October 26, 2018

Analysis

The tower was analyzed using American Tower Corporation's tower analysis software. This program considers an elastic three-dimensional model and second-order effects per ANSI/TIA-222.

Basic Wind Speed:	113.06 mph (3-Second Gust)
Basic Wind Speed w/ Ice:	48.73 mph (3-Second Gust) w/ 0.85" radial ice concurrent
Code:	ANSI/TIA-222-H / 2015 IBC / 2018 Connecticut State Building Code
Exposure Category:	D
Risk Category:	II
Topographic Factor Procedure:	Method 1
Topographic Category:	1
Crest Height (H):	0 ft
Spectral Response:	$S_s = 0.28, S_1 = 0.06$
Site Class:	D - Stiff Soil

**Wind load and Ice thickness have been reduced by applicable existing structure load modification factors in accordance with TIA-222-H, Annex S.

Conclusion

Based on the analysis results, the structure meets the requirements per the applicable codes listed above. The tower and foundation can support the equipment as described in this report.

If you have any questions or require additional information, please contact American Tower via email at Engineering@americantower.com. Please include the American Tower site name, site number, and engineering number in the subject line for any questions.



Existing and Reserved Equipment

Elev. ¹ (ft)	Qty	Equipment	Mount Type	Lines	Carrier
89.0	2	dbSpectra DS7C09P36U-D	Pole Mount	(2) 1/2" Coax	TOWN OF GREENWICH, CT
	1	Bird 428D-831-01-T		(2) 7/8" Coax	
77.0	3	Ericsson AIR32 B66Aa/B2a	T-Arm	(6) 1 1/4" (1.25"-31.8mm) Fiber (1) 1 1/4" Hybriflex Cable (3) 1 5/8" (1.63"-41.3mm) Fiber	T-MOBILE
	3	RFS APXVAARR24_43-U-NA20			
	3	Ericsson RRUS 32 B66			
	3	Ericsson Air6449 B41			
	3	Ericsson Radio 4449 B71 B85A			
	3	Commscope CBC1923Q-43			
	3	Ericsson RRUS 4415 B25			
67.0	6	CCI DMP65R-BU4D	Site Pro 1 RMV12-496 T-Arms	(2) 0.39" (10mm) Fiber Trunk (8) 0.78" (19.7mm) 8 AWG 6 (12) 1 5/8" Coax (1) 2" conduit (3) 3" conduit	AT&T MOBILITY
	3	CCI OPA-65R-LCUU-H6			
	3	Powerwave Allgon P65-16-XLH-RR			
	6	CCI DTMAPB7819VG12A			
	1	Raycap DC6-48-60-0-8C-EV			
	2	Raycap DC6-48-60-18-8F(32.8 lbs)			
	3	Ericsson RRUS 4426 B66			
	3	Ericsson RRUS 4449 B5, B12			
	3	Ericsson RRUS 4478 B14			
	3	Ericsson RRUS 32 B2			
56.0	6	Amphenol Antel LPA-80063-6CF-EDIN-X	T-Arm	(16) 1 5/8" Coax (1) 1 5/8" Hybriflex	VERIZON WIRELESS
	1	VZW Unused Reserve (14306.88 sqin)			

Equipment to be Removed

Elev. ¹ (ft)	Qty	Equipment	Mount Type	Lines	Carrier
56.0	3	Alcatel-Lucent RRH 2X60-1900	-	(1) 1 5/8" (1.63"-41.3mm) Fiber	VERIZON WIRELESS
	3	Alcatel-Lucent RRH2x60 700			
	3	Alcatel-Lucent B66 RRH4x45			
	4	Commscope SBNHH-1D45A			
	3	Amphenol Antel BXA-171063-12CF			
	2	Commscope SBNHH-1D65A			
	2	Commscope RC2DC-4750-PF-48			



Proposed Equipment

Elev. ¹ (ft)	Qty	Equipment	Mount Type	Lines	Carrier
56.0	3	Commscope CBC78T-DS-43-2X	T-Arm	(1) 1 5/8" Hybriflex	VERIZON WIRELESS
	3	Samsung B2/B66A RRH-BR049			
	3	Samsung B5/B13 RRH-BR04C			
	3	Samsung MT6407-77A			
	1	Raycap RCMDC-6627-PF-48			
	2	Commscope JAHH-65A-R3B			
	4	Commscope JAHH-45A-R3B			

¹ Contracted elevations are shown for appurtenances within contracted installation tolerances. Appurtenances outside of contract limits are shown at installed elevations.

Install proposed lines inside the pole shaft.



Structure Usages

Structural Component	Controlling Usage	Pass/Fail
Anchor Bolts	46%	Pass
Shaft	96%	Pass
Base Plate	23%	Pass
Flanges	4%	Pass

Foundations

Reaction Component	Original Design Reactions	Factored Design Reactions*	Analysis Reactions	% of Design
Moment (Kips-Ft)	4,725.0	4,725.0	2,646.4	56%
Shear (Kips)	75.6	75.6	49.9	66%

The structure base reactions resulting from this analysis are acceptable when compared to those shown on the original structure drawings, therefore no modification or reinforcement of the foundation will be required.

Deflection and Sway*

Antenna Elevation (ft)	Antenna	Carrier	Deflection (ft)	Sway (Rotation) (°)
56.0	Commscope CBC78T-DS-43-2X	VERIZON WIRELESS	0.172	0.325
	Samsung B2/B66A RRH-BR049			
	Samsung B5/B13 RRH-BR04C			
	Raycap RCMDC-6627-PF-48			
	Samsung MT6407-77A			
	Commscope JAHH-65A-R3B			
	Commscope JAHH-45A-R3B			

*Deflection and Sway was evaluated considering a design wind speed of 60 mph (3-Second Gust) per ANSI/TIA-222-H



Standard Conditions

All engineering services performed by A.T. Engineering Service, PLLC are prepared on the basis that the information used is current and correct. This information may consist of, but is not limited to the following:

- Information supplied by the client regarding antenna, mounts and feed line loading
- Information from drawings, design and analysis documents, and field notes in the possession of A.T. Engineering Service, PLLC

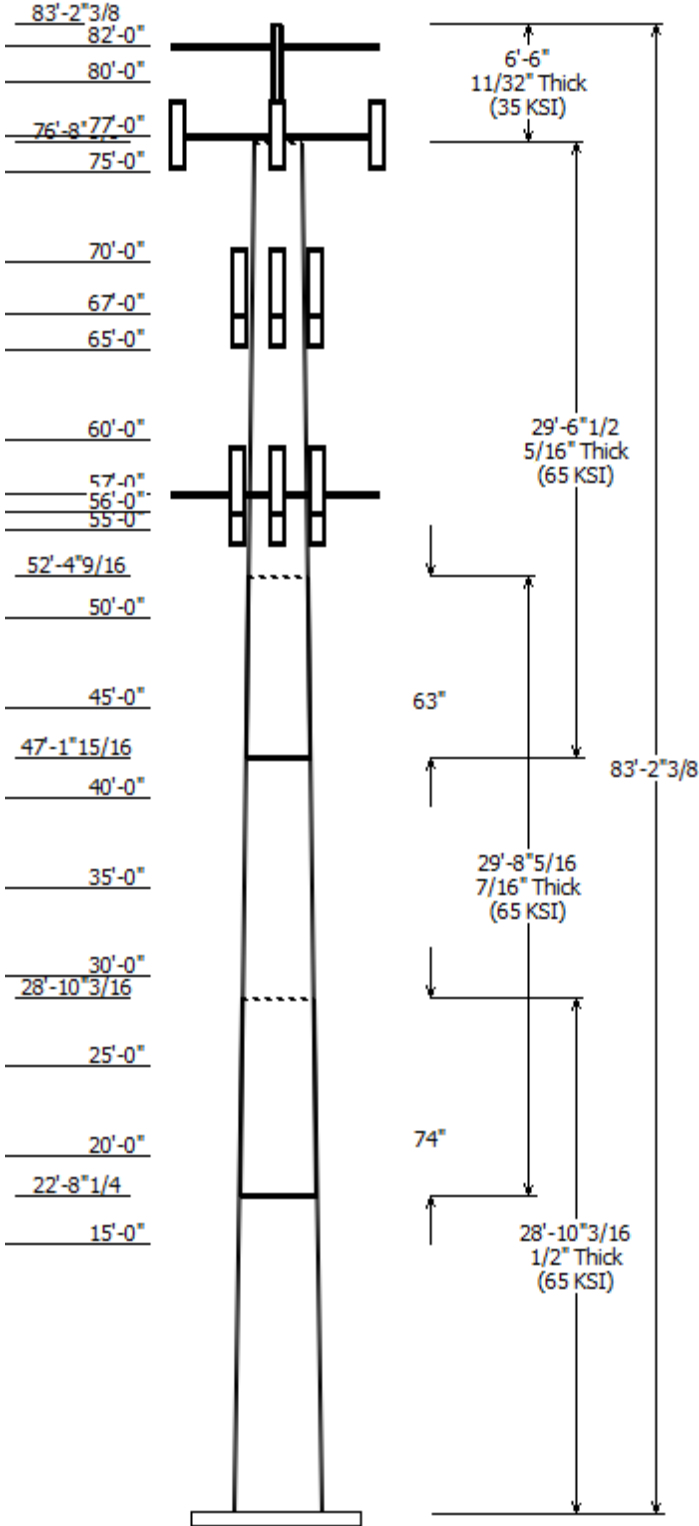
It is the responsibility of the client to ensure that the information provided to A.T. Engineering Service, PLLC and used in the performance of our engineering services is correct and complete.

All assets of American Tower Corporation, its affiliates and subsidiaries (collectively "American Tower") are inspected at regular intervals. Based upon these inspections and in the absence of information to the contrary, American Tower assumes that all structures were constructed in accordance with the drawings and specifications.

Unless explicitly agreed by both the client and A.T. Engineering Service, PLLC, all services will be performed in accordance with the current revision of ANSI/TIA-222.

All services are performed, results obtained, and recommendations made in accordance with generally accepted engineering principles and practices. A.T. Engineering Service, PLLC is not responsible for the conclusions, opinions and recommendations made by others based on the information supplied herein.

Job Information	
Client : VERIZON WIRELESS	Code: ANSI/TIA-222-H
Pole : 414240	
Location : Byram Park CT, CT	
Description : 83.2 ft monopine	Risk Category : II
Shape : 18 Sides	Exposure : D
Height : 83.20 (ft)	Topo Method : Method 1
Base Elev (ft): 0.00	Topographic Category : 1
Taper: 0.335724in/ft	



Sections Properties						
Shaft Section	Length (ft)	Diameter (in)		Thick Joint (in)	Overlap Length (in)	Steel Grade
		Top	Bottom			
1	28.852	42.31	52.00	0.500	0.000	18 Sides 65
2	29.693	35.29	45.25	0.438 Slip Joint	73.969	18 Sides 65
3	29.541	27.75	37.66	0.313 Slip Joint	62.656	18 Sides 65
4	6.500	4.500	4.500	0.337 Butt Joint	0.000	Round 35

Discrete Appurtenance			
Attach Elev (ft)	Force Elev (ft)	Qty	Description
89.000	89.000	2	dbSpectra DS7C09P36U-D
89.000	89.000	1	Bird 428D-831-01-T
82.000	82.000	2	Pole Mount
80.000	80.000	1	Pine Branches
77.000	77.000	3	Ericsson AIR32 B66Aa/B2a
77.000	77.000	3	Ericsson Air6449 B41
77.000	77.000	3	Ericsson RRUS 32 B66
77.000	77.000	3	RFS APXVAARR24_43-U-NA20
77.000	77.000	3	Ericsson RRUS 4415 B25
77.000	77.000	3	Ericsson Radio 4449 B71 B85A
77.000	77.000	3	Commscope CBC1923Q-43
77.000	77.000	3	Flat T-Arms
75.000	75.400	1	Pine Branches
70.000	70.000	1	Pine Branches
67.000	68.000	3	Powerwave Allgon P65-16-
67.000	68.000	3	Ericsson RRUS-32 (77 lbs)
67.000	68.000	3	Ericsson RRUS 32 B2
67.000	67.000	3	Ericsson RRUS 4478 B14
67.000	67.000	3	Ericsson RRUS 4449 B5, B12
67.000	68.000	3	Ericsson RRUS 4426 B66
67.000	68.000	2	Raycap DC6-48-60-18-8F(32.8 lb
67.000	67.000	1	Raycap DC6-48-60-0-8C-EV
67.000	68.000	6	CCI DTMABP7819VG12A
67.000	67.000	3	Site PRO1, RMV12-496
67.000	68.000	3	CCI OPA-65R-LCUU-H6
67.000	67.000	6	CCI DMP65R-BU4D
65.000	65.000	1	Pine Branches
60.000	60.000	1	Pine Branches
57.000	57.000	3	Flat T-Arm
56.000	56.000	1	VZW Unused Reserve
56.000	57.000	6	Amphenol Antel LPA-80063-
56.000	56.000	4	Commscope JAHH-45A-R3B
56.000	56.000	2	Commscope JAHH-65A-R3B
56.000	56.000	1	Raycap RCMD-6627-PF-48
56.000	56.000	3	Samsung MT6407-77A
56.000	56.000	3	Samsung B5/B13 RRH-BR04C
56.000	56.000	3	Samsung B2/B66A RRH-BR049
56.000	56.000	3	Commscope CBC78T-DS-43-2X
55.000	55.000	1	Pine Branches
50.000	50.000	1	Pine Branches
45.000	45.000	1	Pine Branches
40.000	40.000	1	Pine Branches
35.000	35.000	1	Pine Branches
30.000	30.000	1	Pine Branches

25.000	25.000	1	Pine Branches
20.000	20.000	1	Pine Branches
15.000	15.000	1	Pine Branches

Linear Appurtenance

Elev (ft)		Description	Exposed To Wind
From	To		
0.000	56.000	1 5/8" Coax	No
0.000	56.000	1 5/8" Hybriflex	No
0.000	56.000	1 5/8" Hybriflex	No
0.000	67.000	0.39" (10mm)	No
0.000	67.000	0.78" (19.7mm) 8	No
0.000	67.000	0.78" (19.7mm) 8	No
0.000	67.000	1 5/8" Coax	No
0.000	67.000	2" conduit	No
0.000	67.000	3" conduit	No
0.000	77.000	1 1/4" (1.25")	No
0.000	77.000	1 1/4" (1.25")	No
0.000	77.000	1 1/4" Hybriflex	No
0.000	77.000	1 5/8" (1.63")	No
0.000	89.000	1/2" Coax	No
0.000	89.000	7/8" Coax	No

Load Cases

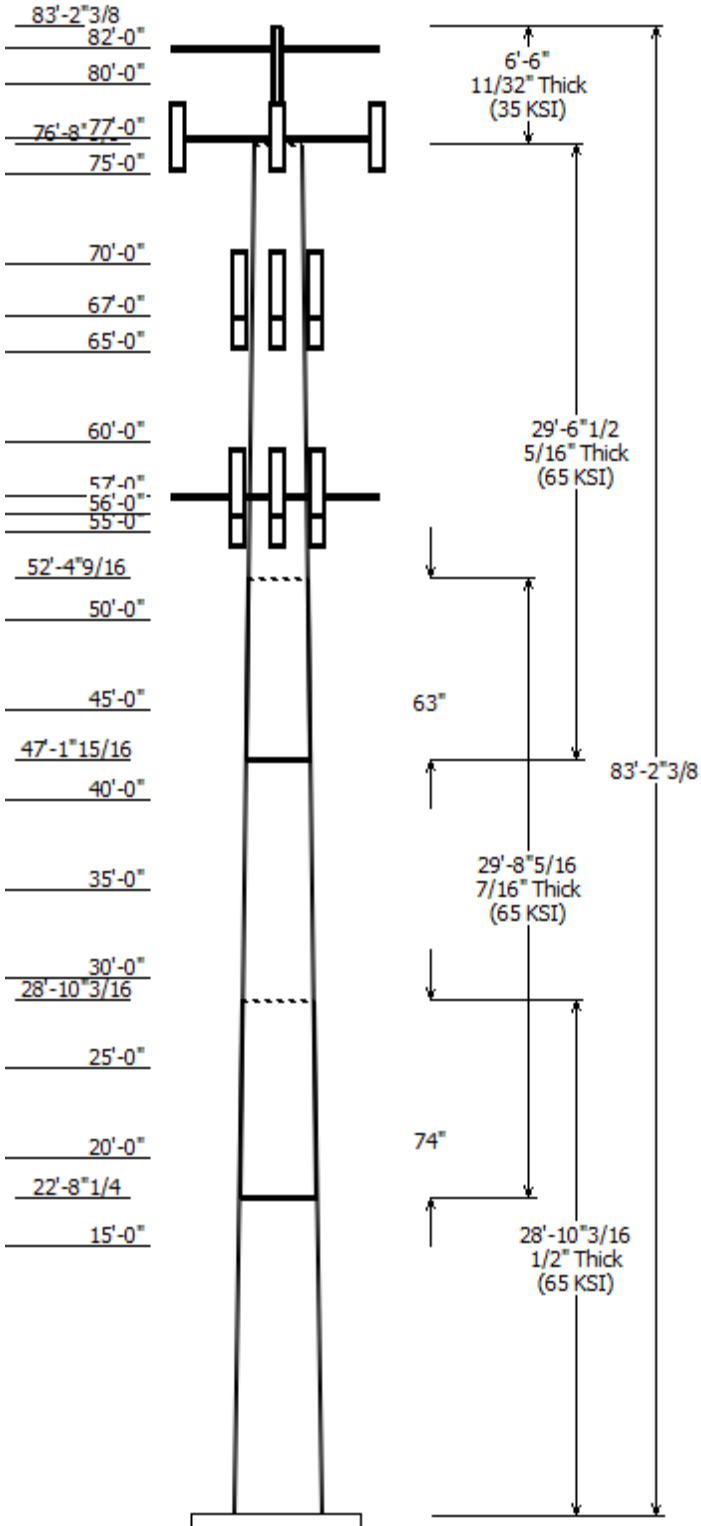
1.2D + 1.0W	113 mph with No Ice
0.9D + 1.0W	113 mph with No Ice (Reduced DL)
1.2D + 1.0Di + 1.0Wi	49 mph with 0.85 in Radial Ice
1.2D + 1.0Ev + 1.0Eh	Seismic
0.9D - 1.0Ev + 1.0Eh	Seismic (Reduced DL)
1.0D + 1.0W	Serviceability 60 mph

Reactions

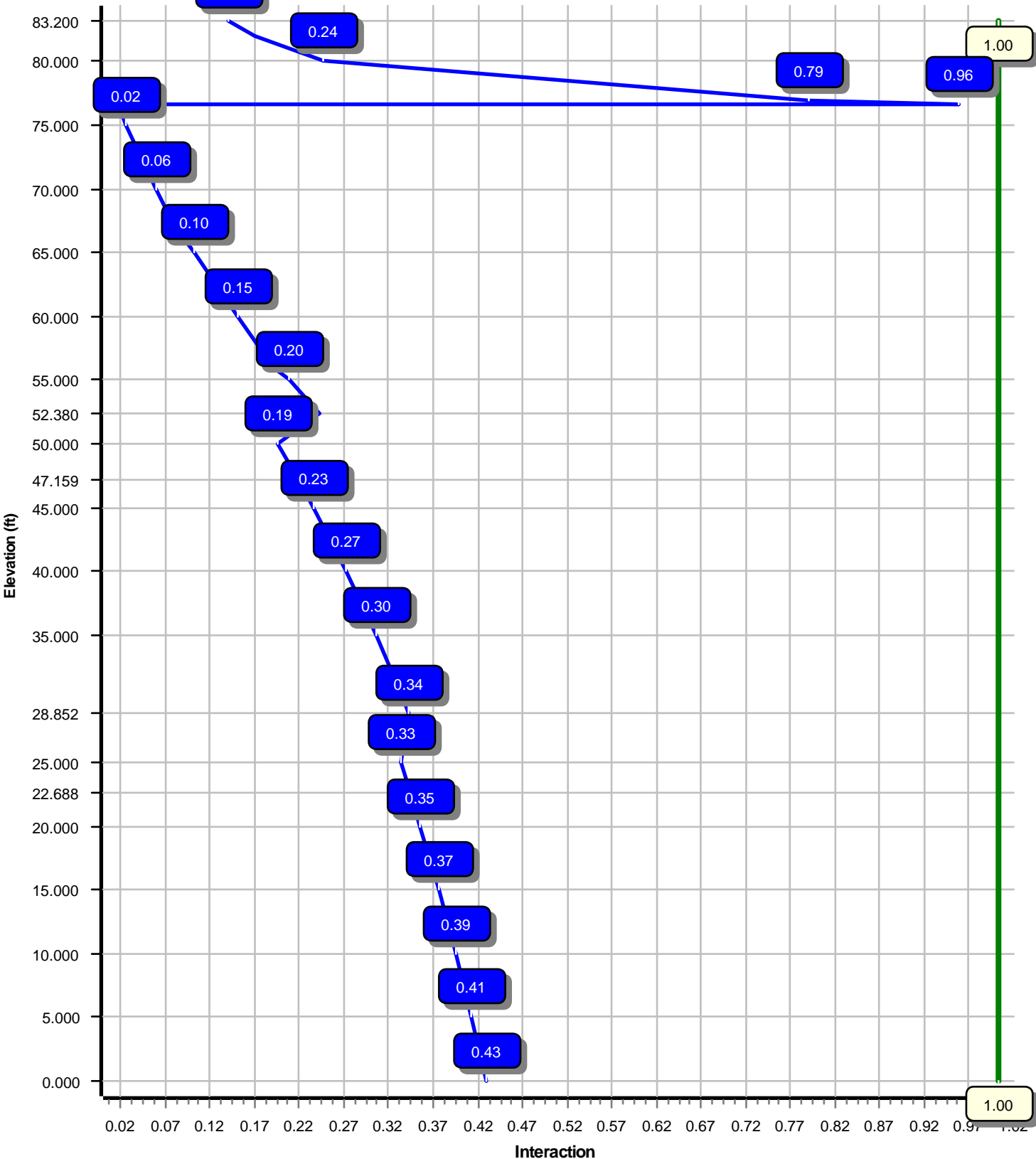
Load Case	Moment (kip-ft)	Shear (kip)	Axial (kip)
1.2D + 1.0W	2646.41	49.86	45.98
0.9D + 1.0W	2640.27	49.84	34.47
1.2D + 1.0Di + 1.0Wi	667.14	12.70	56.25
1.2D + 1.0Ev + 1.0Eh	177.57	3.14	46.11
0.9D - 1.0Ev + 1.0Eh	177.01	3.14	30.84
1.0D + 1.0W	666.45	12.57	38.36

Dish Deflections

Load Case	Attach Elev (ft)	Deflection (in)	Rotation (deg)
	0.00	0.000	0.000



Load Case : 1.2D + 1.0W
Max Ratio 95.60% at 76.7 ft



Site Number: 414240

Code: ANSI/TIA-222-H

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Site Name: Byram Park CT, CT

Engineering Number: 13701270_C3_02

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Customer: VERIZON WIRELESS

Analysis Parameters

Location :	Fairfield County, CT	Height (ft) :	83.2
Code :	ANSI/TIA-222-H	Base Diameter (in) :	52.00
Shape :	18 Sides, Sect 4: Round	Top Diameter (in) :	4.50
Pole Type :	Custom	Taper (in/ft) :	0.336
Pole Manufacturer :	EEL	Rotation (deg) :	0.00
Kd (non-service) :	0.95	Ke :	1.00

Ice & Wind Parameters

Exposure Category:	D	Design Wind Speed Without Ice:	113 mph
Risk Category:	II	Design Wind Speed With Ice:	49 mph
Topographic Factor Procedure:	Method 1	Operational Wind Speed:	60 mph
Topographic Category:	1	Design Ice Thickness:	0.85 in
Crest Height:	0 ft	HMSL:	50.00 ft

Seismic Parameters

Analysis Method:	Equivalent Lateral Force Method		
Site Class:	D - Stiff Soil		
Period Based on Rayleigh Method (sec):	0.78		
T _L (sec):	6	p:	1
S _s :	0.277	S ₁ :	0.060
F _a :	1.578	F _v :	2.400
S _{ds} :	0.291	S _{d1} :	0.096
		C _s :	0.082
		C _s Max:	0.082
		C _s Min:	0.030

Load Cases

1.2D + 1.0W	113 mph with No Ice
0.9D + 1.0W	113 mph with No Ice (Reduced DL)
1.2D + 1.0Di + 1.0Wi	49 mph with 0.85 in Radial Ice
1.2D + 1.0Ev + 1.0Eh	Seismic
0.9D - 1.0Ev + 1.0Eh	Seismic (Reduced DL)
1.0D + 1.0W	Serviceability 60 mph

Site Number: 414240

Code: ANSI/TIA-222-H

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Site Name: Byram Park CT, CT

Engineering Number: 13701270_C3_02

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Customer: VERIZON WIRELESS

Shaft Section Properties

Sect Info	Length (ft)	Thick (in)	Fy (ksi)	Joint Type	Joint Len (in)	Weight (lb)	Bottom						Top							
							Dia (in)	Elev (ft)	Area (in ²)	Ix (in ⁴)	W/t Ratio	D/t Ratio	Dia (in)	Elev (ft)	Area (in ²)	Ix (in ⁴)	W/t Ratio	D/t Ratio	Taper (in/ft)	
1-18	28.852	0.5000	65		0.00	7,269	52.00	0.00	81.73	27386.5	16.93	104.00	42.31	28.85	66.36	14658.0	13.51	84.63	0.335724	
2-18	29.693	0.4375	65	Slip	73.97	5,589	45.25	22.69	62.24	15796.5	16.83	103.45	35.29	52.38	48.39	7427.0	12.81	80.66	0.335724	
3-18	29.541	0.3125	65	Slip	62.66	3,230	37.66	47.16	37.05	6532.0	19.84	120.54	27.75	76.70	27.21	2588.4	14.25	88.80	0.335724	
4-R	6.500	0.3370	35	Butt	0.00	97	4.500	76.70	4.41	9.6	0.00	13.35	4.500	83.20	4.41	9.6	0.00	13.35	0.000000	
Shaft Weight						16,186														

Discrete Appurtenance Properties

Attach Elev (ft)	Description	Qty	Ka	Vert Ecc (ft)	Weight (lb)	No Ice EPAa (sf)	Orientation Factor	Weight (lb)	Ice EPAa (sf)	Orientation Factor
89.00	Bird 428D-831-01-T	1	1.00	0.000	8.90	0.465	1.00	18.26	0.719	1.00
89.00	dbSpectra DS7C09P36U-D	2	1.00	0.000	70.00	3.550	1.00	119.07	6.250	1.00
82.00	Pole Mount	2	1.00	0.000	40.00	1.630	1.00	65.19	2.236	1.00
80.00	Pine Branches	1	1.00	0.000	600.00	45.000	1.00	822.47	61.685	1.00
77.00	Commscope CBC1923Q-43	3	0.80	0.000	7.30	0.318	0.50	13.17	0.532	0.50
77.00	Ericsson Radio 4449 B71 B85A	3	0.80	0.000	75.00	1.650	0.50	106.94	2.101	0.50
77.00	Ericsson RRUS 4415 B25	3	0.80	0.000	46.00	1.842	0.50	72.04	2.318	0.50
77.00	Ericsson RRUS 32 B66	3	0.80	0.000	53.00	2.743	0.67	92.06	3.364	0.67
77.00	Ericsson Air6449 B41	3	0.80	0.000	104.00	5.682	0.63	176.38	6.525	0.63
77.00	Ericsson AIR32 B66Aa/B2a	3	0.80	0.000	132.20	6.510	0.71	216.97	7.673	0.71
77.00	Flat T-Arms	3	0.75	0.000	250.00	12.900	0.67	361.00	17.243	0.67
77.00	RFS APXVAARR24_43-U-NA20	3	0.80	0.000	127.90	20.243	0.63	336.40	22.213	0.63
75.00	Pine Branches	1	1.00	0.400	600.00	45.000	1.00	820.71	61.553	1.00
70.00	Pine Branches	1	1.00	0.000	600.00	45.000	1.00	819.46	61.459	1.00
67.00	CCI DTMABP7819VG12A	6	0.80	1.000	19.20	0.972	0.50	32.52	1.315	0.50
67.00	Raycap DC6-48-60-0-8C-EV	1	0.80	0.000	16.00	1.020	1.00	39.69	1.315	1.00
67.00	Raycap DC6-48-60-18-8F(32.8	2	0.80	1.000	32.80	1.470	1.00	65.07	1.835	1.00
67.00	Ericsson RRUS 4426 B66	3	0.80	1.000	48.40	1.650	0.50	71.75	2.094	0.50
67.00	Ericsson RRUS 4449 B5, B12	3	0.80	0.000	71.00	1.969	0.50	104.71	2.457	0.50
67.00	Ericsson RRUS 4478 B14	3	0.80	0.000	59.40	2.021	0.67	91.50	2.514	0.67
67.00	Ericsson RRUS 32 B2	3	0.80	1.000	53.00	2.743	0.67	91.47	3.355	0.67
67.00	Ericsson RRUS-32 (77 lbs)	3	0.80	1.000	77.00	3.314	0.71	127.87	3.985	0.71
67.00	Powerwave Allgon P65-16-XLH-	3	0.80	1.000	53.00	8.133	0.67	139.16	9.591	0.67
67.00	CCI DMP65R-BU4D	6	0.80	0.000	67.90	8.280	0.62	162.37	9.339	0.62
67.00	CCI OPA-65R-LCUU-H6	3	0.80	1.000	73.00	9.658	0.66	179.46	11.108	0.66
67.00	Site PRO1, RMV12-496	3	0.75	0.000	452.60	9.700	0.67	617.53	13.235	0.67
65.00	Pine Branches	1	1.00	0.000	600.00	45.000	1.00	817.45	61.309	1.00
60.00	Pine Branches	1	1.00	0.000	600.00	45.000	1.00	816.02	61.202	1.00
57.00	Flat T-Arm	3	0.75	0.000	250.00	12.900	0.67	357.64	17.112	0.67
56.00	Commscope CBC78T-DS-43-2X	3	0.80	0.000	20.70	0.552	0.50	32.06	0.813	0.50
56.00	Samsung B2/B66A RRH-BR049	3	0.80	0.000	84.40	1.875	0.50	117.20	2.339	0.50
56.00	Samsung B5/B13 RRH-BR04C	3	0.80	0.000	70.30	1.875	0.50	99.71	2.339	0.50
56.00	Raycap RCMDC-6627-PF-48	1	0.80	0.000	32.00	4.056	1.00	97.34	4.758	1.00
56.00	Samsung MT6407-77A	3	0.80	0.000	81.60	4.709	0.61	134.00	5.490	0.61
56.00	Commscope JAHH-65A-R3B	2	0.80	0.000	50.70	6.673	0.76	132.01	7.772	0.76
56.00	Commscope JAHH-45A-R3B	4	0.80	0.000	70.50	8.420	0.63	162.31	9.548	0.63
56.00	Amphenol Antel LPA-80063-6CF-	6	0.80	1.000	27.00	9.732	0.75	161.15	11.140	0.75
56.00	VZW Unused Reserve (14306.88	1	0.80	0.000	1,151.60	99.353	0.90	1,564.04	134.936	0.90
55.00	Pine Branches	1	1.00	0.000	600.00	45.000	1.00	814.17	61.063	1.00
50.00	Pine Branches	1	1.00	0.000	600.00	45.000	1.00	812.04	60.903	1.00
45.00	Pine Branches	1	1.00	0.000	600.00	45.000	1.00	809.23	60.692	1.00
40.00	Pine Branches	1	1.00	0.000	600.00	45.000	1.00	806.62	60.497	1.00
35.00	Pine Branches	1	1.00	0.000	600.00	45.000	1.00	803.69	60.277	1.00
30.00	Pine Branches	1	1.00	0.000	600.00	45.000	1.00	801.67	60.126	1.00
25.00	Pine Branches	1	1.00	0.000	600.00	45.000	1.00	797.48	59.811	1.00
20.00	Pine Branches	1	1.00	0.000	600.00	45.000	1.00	791.46	59.360	1.00
15.00	Pine Branches	1	1.00	0.000	600.00	45.000	1.00	785.13	58.885	1.00

Site Number: 414240

Code: ANSI/TIA-222-H

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Site Name: Byram Park CT, CT

Engineering Number: 13701270_C3_02

7/28/2021 2:56:37 PM

Customer: VERIZON WIRELESS

Totals Num Loadings:47 111 17,531.50 27,202.09

Linear Appurtenance Properties Load Case Azimuth (deg) :

Elev From (ft)	Elev To (ft)	Qty	Description	Coax Dia (in)	Coax Wt (lb/ft)	Max Flat	Coax / Row	Dist Between Rows (in)	Dist Between Cols (in)	Azimuth (deg)	Dist From Face (in)	Exposed To Wind	Carrier
0.00	89.00	2	1/2" Coax	0.63	0.15	N	0	0.00	0.00	0	0.00	N	TOWN OF
0.00	89.00	2	7/8" Coax	1.09	0.33	N	0	0.00	0.00	0	0.00	N	TOWN OF
0.00	77.00	3	1 1/4" (1.25"- 31.8mm)	1.25	1.05	N	0	0.00	0.00	0	0.00	N	T-MOBILE
0.00	77.00	3	1 1/4" (1.25"- 31.8mm)	1.25	1.05	N	0	0.00	0.00	0	0.00	N	T-MOBILE
0.00	77.00	1	1 1/4" Hybriflex Cable	1.54	1.00	N	0	0.00	0.00	0	0.00	N	T-MOBILE
0.00	77.00	3	1 5/8" (1.63"-41.3mm)	1.63	1.61	N	0	0.00	0.00	0	0.00	N	T-MOBILE
0.00	67.00	2	0.39" (10mm) Fiber	0.39	0.06	N	0	0.00	0.00	0	0.00	N	AT&T MOBILITY
0.00	67.00	6	0.78" (19.7mm) 8 AWG	0.78	0.59	N	0	0.00	0.00	0	0.00	N	AT&T MOBILITY
0.00	67.00	2	0.78" (19.7mm) 8 AWG	0.78	0.59	N	0	0.00	0.00	0	0.00	N	AT&T MOBILITY
0.00	67.00	12	1 5/8" Coax	1.98	0.82	N	0	0.00	0.00	0	0.00	N	AT&T MOBILITY
0.00	67.00	1	2" conduit	2.38	3.65	N	0	0.00	0.00	0	0.00	N	AT&T MOBILITY
0.00	67.00	3	3" conduit	3.50	7.58	N	0	0.00	0.00	0	0.00	N	AT&T MOBILITY
0.00	56.00	16	1 5/8" Coax	1.98	0.82	N	0	0.00	0.00	0	0.00	N	VERIZON WIRELESS
0.00	56.00	1	1 5/8" Hybriflex	1.98	1.30	N	0	0.00	0.00	0	0.00	N	VERIZON WIRELESS
0.00	56.00	1	1 5/8" Hybriflex	1.98	1.30	N	0	0.00	0.00	0	0.00	N	VERIZON WIRELESS

Site Number: 414240

Code: ANSI/TIA-222-H

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Site Name: Byram Park CT, CT

Engineering Number: 13701270_C3_02

7/28/2021 2:56:37 PM

Customer: VERIZON WIRELESS

Segment Properties (Max Len : 5. ft)

Seg Top Elev (ft)	Description	Thick (in)	Flat Dia (in)	Area (in ²)	Ix (in ⁴)	W/t Ratio	D/t Ratio	F'y (ksi)	S (in ³)	Z (in ³)	Weight (lb)
0.00		0.5000	52.000	81.728	27,386.5	16.93	104.00	81.5	1037.	0.0	0.0
5.00		0.5000	50.321	79.064	24,794.9	16.34	100.64	82.2	970.5	0.0	1,367.8
10.00		0.5000	48.643	76.400	22,372.1	15.74	97.29	82.6	905.9	0.0	1,322.5
15.00		0.5000	46.964	73.736	20,112.6	15.15	93.93	82.6	843.5	0.0	1,277.2
20.00		0.5000	45.286	71.072	18,010.6	14.56	90.57	82.6	783.3	0.0	1,231.9
22.69	Bot - Section 2	0.5000	44.383	69.640	16,943.8	14.24	88.77	82.6	751.9	0.0	643.4
25.00		0.5000	43.607	68.408	16,060.4	13.97	87.21	82.6	725.4	0.0	1,028.6
28.85	Top - Section 1	0.4375	43.189	59.363	13,707.9	16.00	98.72	82.6	625.1	0.0	1,672.9
30.00		0.4375	42.803	58.828	13,340.4	15.84	97.84	82.6	613.9	0.0	230.9
35.00		0.4375	41.125	56.497	11,816.7	15.16	94.00	82.6	565.9	0.0	981.1
40.00		0.4375	39.446	54.166	10,413.6	14.49	90.16	82.6	520.0	0.0	941.4
45.00		0.4375	37.767	51.835	9,126.3	13.81	86.33	82.6	475.9	0.0	901.8
47.16	Bot - Section 3	0.4375	37.043	50.829	8,605.0	13.52	84.67	82.6	457.5	0.0	377.1
50.00		0.4375	36.089	49.505	7,949.7	13.13	82.49	82.6	433.9	0.0	838.6
52.38	Top - Section 2	0.3125	35.915	35.312	5,654.9	18.85	114.93	79.2	310.1	0.0	685.7
55.00		0.3125	35.035	34.439	5,246.1	18.36	112.11	79.8	294.9	0.0	310.9
56.00		0.3125	34.699	34.106	5,095.4	18.17	111.04	80.0	289.2	0.0	116.6
57.00		0.3125	34.364	33.773	4,947.6	17.98	109.96	80.3	283.6	0.0	115.5
60.00		0.3125	33.357	32.774	4,521.4	17.41	106.74	80.9	267.0	0.0	339.7
65.00		0.3125	31.678	31.110	3,866.8	16.46	101.37	82.0	240.4	0.0	543.5
67.00		0.3125	31.007	30.444	3,623.7	16.08	99.22	82.5	230.2	0.0	209.5
70.00		0.3125	29.999	29.445	3,278.6	15.52	96.00	82.6	215.3	0.0	305.7
75.00		0.3125	28.321	27.780	2,753.3	14.57	90.63	82.6	191.5	0.0	486.8
76.70	Top - Section 3	0.3125	27.750	27.214	2,588.4	14.25	88.80	82.6	183.7	0.0	159.1
76.70	Bot - Section 4	0.3370	4.500	4.407	9.6	0.00	13.35	35.0	4.2	5.9	
77.00		0.3370	4.500	4.407	9.6	0.00	13.35	35.0	4.2	5.9	4.5
80.00		0.3370	4.500	4.407	9.6	0.00	13.35	35.0	4.2	5.9	45.0
82.00		0.3370	4.500	4.407	9.6	0.00	13.35	35.0	4.2	5.9	30.0
83.20		0.3370	4.500	4.407	9.6	0.00	13.35	35.0	4.2	5.9	18.0
16,185.5											

Load Case: 1.2D + 1.0W	113 mph with No Ice	16 Iterations
Gust Response Factor :1.10		
Dead Load Factor :1.20		
Wind Load Factor :1.00		

Applied Segment Forces Summary

Seg Elev (ft)	Description	Shaft Forces		Discrete Forces			Linear Forces		Sum of Forces				
		Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Torsion MY (lb-ft)	Moment MZ (lb)
0.00		277.8	0.0					0.0	0.0	277.8	0.0	0.0	0.0
5.00		546.5	1,641.4					0.0	419.3	546.5	2,060.7	0.0	0.0
10.00		528.2	1,587.0					0.0	419.3	528.2	2,006.3	0.0	0.0
15.00	Appurtenance(s)	516.9	1,532.6	1,582.5	0.0	0.0	720.0	0.0	419.3	2,099.4	2,671.9	0.0	0.0
20.00	Appurtenance(s)	396.5	1,478.2	1,663.7	0.0	0.0	720.0	0.0	419.3	2,060.2	2,617.5	0.0	0.0
22.69	Bot - Section 2	261.3	772.1					0.0	225.4	261.3	997.4	0.0	0.0
25.00	Appurtenance(s)	325.2	1,234.4	1,729.6	0.0	0.0	720.0	0.0	193.9	2,054.8	2,148.3	0.0	0.0
28.85	Top - Section 1	263.3	2,007.5					0.0	323.0	263.3	2,330.5	0.0	0.0
30.00	Appurtenance(s)	321.0	277.1	1,785.3	0.0	0.0	720.0	0.0	96.3	2,106.3	1,093.4	0.0	0.0
35.00	Appurtenance(s)	517.3	1,177.3	1,833.8	0.0	0.0	720.0	0.0	419.3	2,351.1	2,316.6	0.0	0.0
40.00	Appurtenance(s)	507.9	1,129.7	1,876.9	0.0	0.0	720.0	0.0	419.3	2,384.8	2,269.0	0.0	0.0
45.00	Appurtenance(s)	357.9	1,082.1	1,915.7	0.0	0.0	720.0	0.0	419.3	2,273.6	2,221.4	0.0	0.0
47.16	Bot - Section 3	247.4	452.5					0.0	181.0	247.4	633.5	0.0	0.0
50.00	Appurtenance(s)	257.0	1,006.3	1,951.2	0.0	0.0	720.0	0.0	238.2	2,208.2	1,964.6	0.0	0.0
52.38	Top - Section 2	242.2	822.8					0.0	199.6	242.2	1,022.4	0.0	0.0
55.00	Appurtenance(s)	173.6	373.1	1,983.8	0.0	0.0	720.0	0.0	219.7	2,157.3	1,312.8	0.0	0.0
56.00	Appurtenance(s)	94.8	139.9	6,503.6	0.0	1,554.1	3,000.0	0.0	83.9	6,598.4	3,223.8	0.0	0.0
57.00	Appurtenance(s)	187.0	138.6	862.6	0.0	0.0	900.0	0.0	65.0	1,049.7	1,103.6	0.0	0.0
60.00	Appurtenance(s)	366.1	407.6	2,014.0	0.0	0.0	720.0	0.0	195.0	2,380.2	1,322.6	0.0	0.0
65.00	Appurtenance(s)	314.4	652.1	2,042.2	0.0	0.0	720.0	0.0	325.0	2,356.7	1,697.1	0.0	0.0
67.00	Appurtenance(s)	217.5	251.3	4,147.5	0.0	2,062.9	3,919.7	0.0	130.0	4,365.0	4,301.0	0.0	0.0
70.00	Appurtenance(s)	337.7	366.8	2,068.7	0.0	0.0	720.0	0.0	47.1	2,406.5	1,133.9	0.0	0.0
75.00	Appurtenance(s)	276.9	584.2	2,095.6	0.0	838.3	720.0	0.0	78.5	2,372.6	1,382.7	0.0	0.0
76.70	Top - Section 3	71.1	190.9					0.0	26.7	71.1	217.6	0.0	0.0
77.00	Appurtenance(s)	27.3	5.4	3,679.4	0.0	0.0	2,863.4	0.0	4.7	3,706.8	2,873.6	0.0	0.0
80.00	Appurtenance(s)	41.5	54.0	2,117.3	0.0	0.0	720.0	0.0	3.5	2,158.8	777.4	0.0	0.0
82.00	Appurtenance(s)	26.6	36.0	154.0	0.0	0.0	96.0	0.0	2.3	180.7	134.3	0.0	0.0
83.20		10.0	21.6					0.0	1.4	10.0	23.0	0.0	0.0
Totals:										49,718.8	45,856.8	0.00	0.00

Load Case: 1.2D + 1.0W

113 mph with No Ice

16 Iterations

Gust Response Factor :1.10

Dead Load Factor :1.20

Wind Load Factor :1.00

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-45.98	-49.86	0.00	-2,646.41	0.00	2,646.41	5,994.05	1,434.32	6,672.27	6,339.93	0.00	0.00	0.426
5.00	-43.80	-49.41	0.00	-2,397.12	0.00	2,397.12	5,848.22	1,387.57	6,244.46	5,982.13	0.07	-0.13	0.409
10.00	-41.69	-48.97	0.00	-2,150.08	0.00	2,150.08	5,676.12	1,340.82	5,830.83	5,608.53	0.28	-0.26	0.392
15.00	-38.92	-46.94	0.00	-1,905.23	0.00	1,905.23	5,478.21	1,294.07	5,431.37	5,222.30	0.63	-0.39	0.373
20.00	-36.25	-44.92	0.00	-1,670.53	0.00	1,670.53	5,280.30	1,247.31	5,046.08	4,849.84	1.11	-0.52	0.353
22.69	-35.20	-44.69	0.00	-1,549.80	0.00	1,549.80	5,173.92	1,222.19	4,844.84	4,655.34	1.42	-0.59	0.341
25.00	-33.02	-42.66	0.00	-1,446.46	0.00	1,446.46	5,082.39	1,200.56	4,674.96	4,491.17	1.72	-0.64	0.330
28.85	-30.65	-42.40	0.00	-1,282.17	0.00	1,282.17	4,410.41	1,041.83	4,023.22	3,870.44	2.28	-0.74	0.340
30.00	-29.53	-40.32	0.00	-1,233.48	0.00	1,233.48	4,370.63	1,032.43	3,950.99	3,800.59	2.46	-0.76	0.333
35.00	-27.17	-37.99	0.00	-1,031.91	0.00	1,031.91	4,197.46	991.53	3,644.15	3,503.90	3.33	-0.89	0.302
40.00	-24.87	-35.61	0.00	-841.98	0.00	841.98	4,024.29	950.62	3,349.71	3,219.28	4.32	-1.00	0.269
45.00	-22.65	-33.33	0.00	-663.93	0.00	663.93	3,851.11	909.71	3,067.67	2,946.70	5.42	-1.10	0.233
47.16	-22.00	-33.08	0.00	-591.99	0.00	591.99	3,776.34	892.05	2,949.72	2,832.74	5.93	-1.14	0.216
50.00	-20.05	-30.85	0.00	-497.99	0.00	497.99	3,677.94	868.80	2,798.03	2,686.19	6.63	-1.19	0.192
52.38	-19.02	-30.60	0.00	-424.56	0.00	424.56	2,517.80	619.72	1,992.88	1,842.71	7.23	-1.23	0.240
55.00	-17.74	-28.42	0.00	-344.40	0.00	344.40	2,473.70	604.41	1,895.64	1,765.31	7.92	-1.27	0.204
56.00	-14.66	-21.76	0.00	-314.42	0.00	314.42	2,456.62	598.57	1,859.17	1,736.02	8.19	-1.29	0.188
57.00	-13.56	-20.69	0.00	-292.66	0.00	292.66	2,439.40	592.72	1,823.05	1,706.88	8.46	-1.31	0.178
60.00	-12.28	-18.29	0.00	-230.59	0.00	230.59	2,386.97	575.19	1,716.81	1,620.34	9.30	-1.35	0.148
65.00	-10.63	-15.90	0.00	-139.12	0.00	139.12	2,296.90	545.97	1,546.84	1,479.25	10.75	-1.41	0.100
67.00	-6.44	-11.43	0.00	-105.25	0.00	105.25	2,259.94	534.28	1,481.33	1,423.98	11.35	-1.43	0.077
70.00	-5.36	-9.00	0.00	-70.95	0.00	70.95	2,187.59	516.75	1,385.73	1,332.71	12.25	-1.45	0.056
75.00	-4.04	-6.60	0.00	-25.10	0.00	25.10	2,063.89	487.53	1,233.47	1,185.51	13.78	-1.47	0.023
76.70	-3.82	-6.52	0.00	-13.89	0.00	13.89	2,021.83	477.60	1,183.72	1,137.43	14.31	-1.47	0.014
76.70	-3.82	-6.52	0.00	-13.89	0.00	13.89	138.83	41.65	15.24	15.36	14.31	-1.47	0.956
77.00	-1.02	-2.75	0.00	-11.93	0.00	11.93	138.83	41.65	15.24	15.36	14.40	-1.47	0.788
80.00	-0.31	-0.57	0.00	-3.69	0.00	3.69	138.83	41.65	15.24	15.36	15.59	-2.17	0.243
82.00	-0.19	-0.38	0.00	-2.56	0.00	2.56	138.83	41.65	15.24	15.36	16.54	-2.36	0.168
83.20	0.00	-0.37	0.00	-2.10	0.00	2.10	138.83	41.65	15.24	15.36	17.14	-2.44	0.137

Load Case: 0.9D + 1.0W	113 mph with No Ice (Reduced DL)	16 Iterations
Gust Response Factor :1.10		
Dead Load Factor :0.90		
Wind Load Factor :1.00		

Applied Segment Forces Summary

Seg Elev (ft)	Description	Shaft Forces		Discrete Forces			Linear Forces		Sum of Forces				
		Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Torsion MY (lb-ft)	Moment MZ (lb)
0.00		277.8	0.0					0.0	0.0	277.8	0.0	0.0	0.0
5.00		546.5	1,231.1					0.0	314.5	546.5	1,545.5	0.0	0.0
10.00		528.2	1,190.3					0.0	314.5	528.2	1,504.7	0.0	0.0
15.00	Appurtenance(s)	516.9	1,149.5	1,582.5	0.0	0.0	540.0	0.0	314.5	2,099.4	2,003.9	0.0	0.0
20.00	Appurtenance(s)	396.5	1,108.7	1,663.7	0.0	0.0	540.0	0.0	314.5	2,060.2	1,963.1	0.0	0.0
22.69	Bot - Section 2	261.3	579.1					0.0	169.0	261.3	748.1	0.0	0.0
25.00	Appurtenance(s)	325.2	925.8	1,729.6	0.0	0.0	540.0	0.0	145.4	2,054.8	1,611.2	0.0	0.0
28.85	Top - Section 1	263.3	1,505.6					0.0	242.2	263.3	1,747.8	0.0	0.0
30.00	Appurtenance(s)	321.0	207.8	1,785.3	0.0	0.0	540.0	0.0	72.2	2,106.3	820.1	0.0	0.0
35.00	Appurtenance(s)	517.3	883.0	1,833.8	0.0	0.0	540.0	0.0	314.5	2,351.1	1,737.4	0.0	0.0
40.00	Appurtenance(s)	507.9	847.3	1,876.9	0.0	0.0	540.0	0.0	314.5	2,384.8	1,701.7	0.0	0.0
45.00	Appurtenance(s)	357.9	811.6	1,915.7	0.0	0.0	540.0	0.0	314.5	2,273.6	1,666.0	0.0	0.0
47.16	Bot - Section 3	247.4	339.4					0.0	135.8	247.4	475.2	0.0	0.0
50.00	Appurtenance(s)	257.0	754.8	1,951.2	0.0	0.0	540.0	0.0	178.7	2,208.2	1,473.4	0.0	0.0
52.38	Top - Section 2	242.2	617.1					0.0	149.7	242.2	766.8	0.0	0.0
55.00	Appurtenance(s)	173.6	279.8	1,983.8	0.0	0.0	540.0	0.0	164.8	2,157.3	984.6	0.0	0.0
56.00	Appurtenance(s)	94.8	105.0	6,503.6	0.0	1,554.1	2,250.0	0.0	62.9	6,598.4	2,417.9	0.0	0.0
57.00	Appurtenance(s)	187.0	103.9	862.6	0.0	0.0	675.0	0.0	48.7	1,049.7	827.7	0.0	0.0
60.00	Appurtenance(s)	366.1	305.7	2,014.0	0.0	0.0	540.0	0.0	146.2	2,380.2	991.9	0.0	0.0
65.00	Appurtenance(s)	314.4	489.1	2,042.2	0.0	0.0	540.0	0.0	243.7	2,356.7	1,272.8	0.0	0.0
67.00	Appurtenance(s)	217.5	188.5	4,147.5	0.0	2,062.9	2,939.8	0.0	97.5	4,365.0	3,225.8	0.0	0.0
70.00	Appurtenance(s)	337.7	275.1	2,068.7	0.0	0.0	540.0	0.0	35.3	2,406.5	850.5	0.0	0.0
75.00	Appurtenance(s)	276.9	438.1	2,095.6	0.0	838.3	540.0	0.0	58.9	2,372.6	1,037.0	0.0	0.0
76.70	Top - Section 3	71.1	143.2					0.0	20.0	71.1	163.2	0.0	0.0
77.00	Appurtenance(s)	27.3	4.0	3,679.4	0.0	0.0	2,147.6	0.0	3.5	3,706.8	2,155.2	0.0	0.0
80.00	Appurtenance(s)	41.5	40.5	2,117.3	0.0	0.0	540.0	0.0	2.6	2,158.8	583.1	0.0	0.0
82.00	Appurtenance(s)	26.6	27.0	154.0	0.0	0.0	72.0	0.0	1.7	180.7	100.7	0.0	0.0
83.20		10.0	16.2					0.0	1.0	10.0	17.2	0.0	0.0
Totals:										49,718.8	34,392.6	0.00	0.00

Load Case: 0.9D + 1.0W

113 mph with No Ice (Reduced DL)

16 Iterations

Gust Response Factor :1.10

Dead Load Factor :0.90

Wind Load Factor :1.00

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-34.47	-49.84	0.00	-2,640.27	0.00	2,640.27	5,994.05	1,434.32	6,672.27	6,339.93	0.00	0.00	0.423
5.00	-32.81	-49.37	0.00	-2,391.05	0.00	2,391.05	5,848.22	1,387.57	6,244.46	5,982.13	0.07	-0.13	0.407
10.00	-31.20	-48.91	0.00	-2,144.19	0.00	2,144.19	5,676.12	1,340.82	5,830.83	5,608.53	0.28	-0.26	0.389
15.00	-29.10	-46.86	0.00	-1,899.65	0.00	1,899.65	5,478.21	1,294.07	5,431.37	5,222.30	0.63	-0.39	0.370
20.00	-27.08	-44.83	0.00	-1,665.34	0.00	1,665.34	5,280.30	1,247.31	5,046.08	4,849.84	1.10	-0.52	0.350
22.69	-26.28	-44.59	0.00	-1,544.86	0.00	1,544.86	5,173.92	1,222.19	4,844.84	4,655.34	1.41	-0.58	0.338
25.00	-24.64	-42.55	0.00	-1,441.74	0.00	1,441.74	5,082.39	1,200.56	4,674.96	4,491.17	1.71	-0.64	0.327
28.85	-22.85	-42.29	0.00	-1,277.84	0.00	1,277.84	4,410.41	1,041.83	4,023.22	3,870.44	2.27	-0.73	0.337
30.00	-22.00	-40.21	0.00	-1,229.27	0.00	1,229.27	4,370.63	1,032.43	3,950.99	3,800.59	2.45	-0.76	0.330
35.00	-20.22	-37.87	0.00	-1,028.25	0.00	1,028.25	4,197.46	991.53	3,644.15	3,503.90	3.32	-0.88	0.300
40.00	-18.50	-35.49	0.00	-838.90	0.00	838.90	4,024.29	950.62	3,349.71	3,219.28	4.30	-0.99	0.267
45.00	-16.83	-33.21	0.00	-661.44	0.00	661.44	3,851.11	909.71	3,067.67	2,946.70	5.40	-1.10	0.230
47.16	-16.33	-32.97	0.00	-589.74	0.00	589.74	3,776.34	892.05	2,949.72	2,832.74	5.91	-1.14	0.214
50.00	-14.88	-30.74	0.00	-496.08	0.00	496.08	3,677.94	868.80	2,798.03	2,686.19	6.61	-1.19	0.190
52.38	-14.10	-30.49	0.00	-422.92	0.00	422.92	2,517.80	619.72	1,992.88	1,842.71	7.21	-1.23	0.238
55.00	-13.15	-28.32	0.00	-343.03	0.00	343.03	2,473.70	604.41	1,895.64	1,765.31	7.90	-1.27	0.202
56.00	-10.87	-21.67	0.00	-313.16	0.00	313.16	2,456.62	598.57	1,859.17	1,736.02	8.17	-1.29	0.186
57.00	-10.06	-20.61	0.00	-291.49	0.00	291.49	2,439.40	592.72	1,823.05	1,706.88	8.44	-1.30	0.176
60.00	-9.10	-18.22	0.00	-229.66	0.00	229.66	2,386.97	575.19	1,716.81	1,620.34	9.27	-1.35	0.147
65.00	-7.88	-15.83	0.00	-138.59	0.00	138.59	2,296.90	545.97	1,546.84	1,479.25	10.72	-1.41	0.098
67.00	-4.76	-11.39	0.00	-104.86	0.00	104.86	2,259.94	534.28	1,481.33	1,423.98	11.31	-1.42	0.076
70.00	-3.96	-8.97	0.00	-70.68	0.00	70.68	2,187.59	516.75	1,385.73	1,332.71	12.21	-1.44	0.055
75.00	-2.99	-6.57	0.00	-25.01	0.00	25.01	2,063.89	487.53	1,233.47	1,185.51	13.74	-1.47	0.023
76.70	-2.82	-6.49	0.00	-13.84	0.00	13.84	2,021.83	477.60	1,183.72	1,137.43	14.26	-1.47	0.014
76.70	-2.82	-6.49	0.00	-13.84	0.00	13.84	138.83	41.65	15.24	15.36	14.26	-1.47	0.946
77.00	-0.75	-2.74	0.00	-11.90	0.00	11.90	138.83	41.65	15.24	15.36	14.36	-1.47	0.784
80.00	-0.23	-0.56	0.00	-3.68	0.00	3.68	138.83	41.65	15.24	15.36	15.54	-2.17	0.242
82.00	-0.14	-0.38	0.00	-2.56	0.00	2.56	138.83	41.65	15.24	15.36	16.49	-2.35	0.168
83.20	0.00	-0.37	0.00	-2.10	0.00	2.10	138.83	41.65	15.24	15.36	17.09	-2.43	0.137

Load Case: 1.2D + 1.0Di + 1.0Wi

49 mph with 0.85 in Radial Ice

15 Iterations

Gust Response Factor :1.10

Ice Dead Load Factor :1.00

Dead Load Factor :1.20

Ice Importance Factor :1.00

Wind Load Factor :1.00

Applied Segment Forces Summary

Seg Elev	Description	Shaft Forces		Discrete Forces			Linear Forces		Sum of Forces				
		Wind FX	Dead Load	Wind FX	Torsion MY	Moment MZ	Dead Load	Wind FX	Dead Load	Wind FX	Dead Load	Torsion MY	Moment MZ
(ft)		(lb)	(lb)	(lb)	(lb-ft)	(lb-ft)	(lb)	(lb)	(lb)	(lb)	(lb)	(lb-ft)	(lb)
0.00		87.0	0.0					0.0	0.0	87.0	0.0	0.0	0.0
5.00		171.4	1,851.2					0.0	419.3	171.4	2,270.4	0.0	0.0
10.00		166.2	1,813.8					0.0	419.3	166.2	2,233.0	0.0	0.0
15.00	Appurtenance(s)	163.1	1,763.3	384.7	0.0	0.0	845.1	0.0	419.3	547.8	3,027.7	0.0	0.0
20.00	Appurtenance(s)	125.3	1,708.6	407.7	0.0	0.0	851.5	0.0	419.3	533.0	2,979.3	0.0	0.0
22.69	Bot - Section 2	82.7	895.9					0.0	225.4	82.7	1,121.3	0.0	0.0
25.00	Appurtenance(s)	103.0	1,342.4	427.1	0.0	0.0	857.5	0.0	193.9	530.1	2,393.8	0.0	0.0
28.85	Top - Section 1	83.5	2,184.4					0.0	323.0	83.5	2,507.4	0.0	0.0
30.00	Appurtenance(s)	101.9	329.9	443.2	0.0	0.0	861.7	0.0	96.3	545.1	1,287.9	0.0	0.0
35.00	Appurtenance(s)	164.5	1,400.4	456.4	0.0	0.0	863.7	0.0	419.3	620.8	2,683.4	0.0	0.0
40.00	Appurtenance(s)	161.8	1,347.1	468.8	0.0	0.0	866.6	0.0	419.3	630.6	2,633.0	0.0	0.0
45.00	Appurtenance(s)	114.2	1,293.1	480.0	0.0	0.0	869.2	0.0	419.3	594.3	2,581.6	0.0	0.0
47.16	Bot - Section 3	79.1	542.7					0.0	181.0	79.1	723.7	0.0	0.0
50.00	Appurtenance(s)	82.2	1,124.6	490.6	0.0	0.0	872.0	0.0	238.2	572.8	2,234.9	0.0	0.0
52.38	Top - Section 2	77.6	920.3					0.0	199.6	77.6	1,119.9	0.0	0.0
55.00	Appurtenance(s)	55.6	478.3	500.1	0.0	0.0	874.2	0.0	219.7	555.8	1,572.2	0.0	0.0
56.00	Appurtenance(s)	30.4	179.9	1,516.0	0.0	330.5	4,578.8	0.0	83.9	1,546.4	4,842.5	0.0	0.0
57.00	Appurtenance(s)	60.1	178.2	212.6	0.0	0.0	1,132.9	0.0	65.0	272.7	1,376.1	0.0	0.0
60.00	Appurtenance(s)	117.9	523.5	508.9	0.0	0.0	876.0	0.0	195.0	626.8	1,594.5	0.0	0.0
65.00	Appurtenance(s)	101.4	837.1	516.9	0.0	0.0	877.5	0.0	325.0	618.3	2,039.5	0.0	0.0
67.00	Appurtenance(s)	70.3	324.2	930.2	0.0	457.3	5,619.8	0.0	130.0	1,000.5	6,074.0	0.0	0.0
70.00	Appurtenance(s)	109.4	473.1	524.9	0.0	0.0	879.5	0.0	47.1	634.4	1,399.6	0.0	0.0
75.00	Appurtenance(s)	89.9	752.6	532.6	0.0	213.0	880.7	0.0	78.5	622.5	1,711.8	0.0	0.0
76.70	Top - Section 3	23.1	247.3					0.0	26.7	23.1	274.0	0.0	0.0
77.00	Appurtenance(s)	9.1	7.2	815.2	0.0	0.0	4,132.2	0.0	4.7	824.3	4,144.1	0.0	0.0
80.00	Appurtenance(s)	13.9	72.4	539.2	0.0	0.0	882.5	0.0	3.5	553.1	958.3	0.0	0.0
82.00	Appurtenance(s)	8.9	48.3	39.3	0.0	0.0	132.8	0.0	2.3	48.2	183.5	0.0	0.0
83.20		3.4	29.0					0.0	1.4	3.4	30.4	0.0	0.0
Totals:									12,651.3	55,997.9	0.00	0.00	

Site Number: 414240

Code: ANSI/TIA-222-H

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Site Name: Byram Park CT, CT

Engineering Number: 13701270_C3_02

7/28/2021 2:56:46 PM

Customer: VERIZON WIRELESS

Load Case: 1.2D + 1.0Di + 1.0Wi

49 mph with 0.85 in Radial Ice

15 Iterations

Gust Response Factor :1.10

Ice Dead Load Factor :1.00

Dead Load Factor :1.20

Ice Importance Factor :1.00

Wind Load Factor :1.00

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-56.25	-12.70	0.00	-667.14	0.00	667.14	5,994.05	1,434.32	6,672.27	6,339.93	0.00	0.00	0.115
5.00	-53.97	-12.56	0.00	-603.64	0.00	603.64	5,848.22	1,387.57	6,244.46	5,982.13	0.02	-0.03	0.110
10.00	-51.73	-12.42	0.00	-540.86	0.00	540.86	5,676.12	1,340.82	5,830.83	5,608.53	0.07	-0.07	0.106
15.00	-48.70	-11.89	0.00	-478.76	0.00	478.76	5,478.21	1,294.07	5,431.37	5,222.30	0.16	-0.10	0.101
20.00	-45.72	-11.37	0.00	-419.29	0.00	419.29	5,280.30	1,247.31	5,046.08	4,849.84	0.28	-0.13	0.095
22.69	-44.59	-11.30	0.00	-388.72	0.00	388.72	5,173.92	1,222.19	4,844.84	4,655.34	0.36	-0.15	0.092
25.00	-42.20	-10.78	0.00	-362.59	0.00	362.59	5,082.39	1,200.56	4,674.96	4,491.17	0.43	-0.16	0.089
28.85	-39.69	-10.70	0.00	-321.08	0.00	321.08	4,410.41	1,041.83	4,023.22	3,870.44	0.57	-0.19	0.092
30.00	-38.40	-10.16	0.00	-308.79	0.00	308.79	4,370.63	1,032.43	3,950.99	3,800.59	0.62	-0.19	0.090
35.00	-35.71	-9.55	0.00	-257.98	0.00	257.98	4,197.46	991.53	3,644.15	3,503.90	0.84	-0.22	0.082
40.00	-33.08	-8.92	0.00	-210.24	0.00	210.24	4,024.29	950.62	3,349.71	3,219.28	1.08	-0.25	0.074
45.00	-30.50	-8.33	0.00	-165.62	0.00	165.62	3,851.11	909.71	3,067.67	2,946.70	1.36	-0.28	0.064
47.16	-29.77	-8.25	0.00	-147.64	0.00	147.64	3,776.34	892.05	2,949.72	2,832.74	1.49	-0.29	0.060
50.00	-27.54	-7.67	0.00	-124.21	0.00	124.21	3,677.94	868.80	2,798.03	2,686.19	1.66	-0.30	0.054
52.38	-26.42	-7.59	0.00	-105.95	0.00	105.95	2,517.80	619.72	1,992.88	1,842.71	1.82	-0.31	0.068
55.00	-24.85	-7.03	0.00	-86.06	0.00	86.06	2,473.70	604.41	1,895.64	1,765.31	1.99	-0.32	0.059
56.00	-20.01	-5.46	0.00	-78.70	0.00	78.70	2,456.62	598.57	1,859.17	1,736.02	2.06	-0.32	0.054
57.00	-18.64	-5.18	0.00	-73.24	0.00	73.24	2,439.40	592.72	1,823.05	1,706.88	2.13	-0.33	0.051
60.00	-17.05	-4.55	0.00	-57.70	0.00	57.70	2,386.97	575.19	1,716.81	1,620.34	2.33	-0.34	0.043
65.00	-15.01	-3.92	0.00	-34.95	0.00	34.95	2,296.90	545.97	1,546.84	1,479.25	2.70	-0.35	0.030
67.00	-8.94	-2.88	0.00	-26.66	0.00	26.66	2,259.94	534.28	1,481.33	1,423.98	2.85	-0.36	0.023
70.00	-7.55	-2.24	0.00	-18.01	0.00	18.01	2,187.59	516.75	1,385.73	1,332.71	3.07	-0.36	0.017
75.00	-5.84	-1.61	0.00	-6.59	0.00	6.59	2,063.89	487.53	1,233.47	1,185.51	3.46	-0.37	0.008
76.70	-5.56	-1.58	0.00	-3.86	0.00	3.86	2,021.83	477.60	1,183.72	1,137.43	3.59	-0.37	0.006
76.70	-5.56	-1.58	0.00	-3.86	0.00	3.86	138.83	41.65	15.24	15.36	3.59	-0.37	0.293
77.00	-1.42	-0.73	0.00	-3.38	0.00	3.38	138.83	41.65	15.24	15.36	3.61	-0.37	0.231
80.00	-0.47	-0.17	0.00	-1.18	0.00	1.18	138.83	41.65	15.24	15.36	3.92	-0.57	0.080
82.00	-0.29	-0.12	0.00	-0.83	0.00	0.83	138.83	41.65	15.24	15.36	4.17	-0.63	0.056
83.20	0.00	-0.12	0.00	-0.68	0.00	0.68	138.83	41.65	15.24	15.36	4.34	-0.66	0.044

Load Case: 1.0D + 1.0W	Serviceability 60 mph	15 Iterations
Gust Response Factor :1.10		
Dead Load Factor :1.00		
Wind Load Factor :1.00		

Applied Segment Forces Summary

Seg Elev (ft)	Description	Shaft Forces		Discrete Forces			Linear Forces		Sum of Forces				
		Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Torsion MY (lb-ft)	Moment MZ (lb-ft)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Wind FX (lb)	Dead Load (lb)	Torsion MY (lb-ft)	Moment MZ (lb)
0.00		70.0	0.0					0.0	0.0	70.0	0.0	0.0	0.0
5.00		137.7	1,367.8					0.0	349.4	137.7	1,717.2	0.0	0.0
10.00		133.1	1,322.5					0.0	349.4	133.1	1,671.9	0.0	0.0
15.00	Appurtenance(s)	130.2	1,277.2	398.8	0.0	0.0	600.0	0.0	349.4	529.0	2,226.6	0.0	0.0
20.00	Appurtenance(s)	99.9	1,231.9	419.2	0.0	0.0	600.0	0.0	349.4	519.1	2,181.3	0.0	0.0
22.69	Bot - Section 2	65.8	643.4					0.0	187.8	65.8	831.2	0.0	0.0
25.00	Appurtenance(s)	81.9	1,028.6	435.8	0.0	0.0	600.0	0.0	161.6	517.8	1,790.2	0.0	0.0
28.85	Top - Section 1	66.4	1,672.9					0.0	269.1	66.4	1,942.0	0.0	0.0
30.00	Appurtenance(s)	80.9	230.9	449.8	0.0	0.0	600.0	0.0	80.3	530.7	911.2	0.0	0.0
35.00	Appurtenance(s)	130.3	981.1	462.1	0.0	0.0	600.0	0.0	349.4	592.4	1,930.5	0.0	0.0
40.00	Appurtenance(s)	128.0	941.4	472.9	0.0	0.0	600.0	0.0	349.4	600.9	1,890.8	0.0	0.0
45.00	Appurtenance(s)	90.2	901.8	482.7	0.0	0.0	600.0	0.0	349.4	572.9	1,851.2	0.0	0.0
47.16	Bot - Section 3	62.3	377.1					0.0	150.9	62.3	528.0	0.0	0.0
50.00	Appurtenance(s)	64.8	838.6	491.6	0.0	0.0	600.0	0.0	198.5	556.4	1,637.2	0.0	0.0
52.38	Top - Section 2	61.0	685.7					0.0	166.3	61.0	852.0	0.0	0.0
55.00	Appurtenance(s)	43.7	310.9	499.9	0.0	0.0	600.0	0.0	183.1	543.6	1,094.0	0.0	0.0
56.00	Appurtenance(s)	23.9	116.6	1,638.8	0.0	391.6	2,500.0	0.0	69.9	1,662.6	2,686.5	0.0	0.0
57.00	Appurtenance(s)	47.1	115.5	217.4	0.0	0.0	750.0	0.0	54.2	264.5	919.6	0.0	0.0
60.00	Appurtenance(s)	92.3	339.7	507.5	0.0	0.0	600.0	0.0	162.5	599.7	1,102.2	0.0	0.0
65.00	Appurtenance(s)	79.2	543.5	514.6	0.0	0.0	600.0	0.0	270.8	593.8	1,414.3	0.0	0.0
67.00	Appurtenance(s)	54.8	209.5	1,045.1	0.0	519.8	3,266.4	0.0	108.3	1,099.9	3,584.2	0.0	0.0
70.00	Appurtenance(s)	85.1	305.7	521.3	0.0	0.0	600.0	0.0	39.3	606.4	944.9	0.0	0.0
75.00	Appurtenance(s)	69.8	486.8	528.1	0.0	211.2	600.0	0.0	65.4	597.8	1,152.3	0.0	0.0
76.70	Top - Section 3	18.1	159.1					0.0	22.3	18.1	181.3	0.0	0.0
77.00	Appurtenance(s)	8.8	4.5	927.1	0.0	0.0	2,386.2	0.0	3.9	935.9	2,394.6	0.0	0.0
80.00	Appurtenance(s)	13.3	45.0	533.5	0.0	0.0	600.0	0.0	2.9	546.8	647.9	0.0	0.0
82.00	Appurtenance(s)	8.6	30.0	38.8	0.0	0.0	80.0	0.0	1.9	47.4	111.9	0.0	0.0
83.20		3.2	18.0					0.0	1.2	3.2	19.1	0.0	0.0
Totals:										12,535.4	38,214.0	0.00	0.00

Load Case: 1.0D + 1.0W

Serviceability 60 mph

15 Iterations

Gust Response Factor :1.10

Dead Load Factor :1.00

Wind Load Factor :1.00

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-38.36	-12.57	0.00	-666.45	0.00	666.45	5,994.05	1,434.32	6,672.27	6,339.93	0.00	0.00	0.112
5.00	-36.63	-12.45	0.00	-603.61	0.00	603.61	5,848.22	1,387.57	6,244.46	5,982.13	0.02	-0.03	0.107
10.00	-34.96	-12.34	0.00	-541.36	0.00	541.36	5,676.12	1,340.82	5,830.83	5,608.53	0.07	-0.07	0.103
15.00	-32.72	-11.82	0.00	-479.68	0.00	479.68	5,478.21	1,294.07	5,431.37	5,222.30	0.16	-0.10	0.098
20.00	-30.54	-11.31	0.00	-420.57	0.00	420.57	5,280.30	1,247.31	5,046.08	4,849.84	0.28	-0.13	0.093
22.69	-29.70	-11.25	0.00	-390.17	0.00	390.17	5,173.92	1,222.19	4,844.84	4,655.34	0.36	-0.15	0.090
25.00	-27.91	-10.74	0.00	-364.15	0.00	364.15	5,082.39	1,200.56	4,674.96	4,491.17	0.43	-0.16	0.087
28.85	-25.97	-10.67	0.00	-322.78	0.00	322.78	4,410.41	1,041.83	4,023.22	3,870.44	0.57	-0.19	0.089
30.00	-25.05	-10.15	0.00	-310.53	0.00	310.53	4,370.63	1,032.43	3,950.99	3,800.59	0.62	-0.19	0.088
35.00	-23.12	-9.56	0.00	-259.79	0.00	259.79	4,197.46	991.53	3,644.15	3,503.90	0.84	-0.22	0.080
40.00	-21.23	-8.96	0.00	-211.98	0.00	211.98	4,024.29	950.62	3,349.71	3,219.28	1.09	-0.25	0.071
45.00	-19.38	-8.39	0.00	-167.17	0.00	167.17	3,851.11	909.71	3,067.67	2,946.70	1.36	-0.28	0.062
47.16	-18.85	-8.33	0.00	-149.07	0.00	149.07	3,776.34	892.05	2,949.72	2,832.74	1.49	-0.29	0.058
50.00	-17.21	-7.76	0.00	-125.41	0.00	125.41	3,677.94	868.80	2,798.03	2,686.19	1.67	-0.30	0.051
52.38	-16.36	-7.70	0.00	-106.93	0.00	106.93	2,517.80	619.72	1,992.88	1,842.71	1.82	-0.31	0.065
55.00	-15.27	-7.15	0.00	-86.76	0.00	86.76	2,473.70	604.41	1,895.64	1,765.31	1.99	-0.32	0.055
56.00	-12.59	-5.48	0.00	-79.21	0.00	79.21	2,456.62	598.57	1,859.17	1,736.02	2.06	-0.32	0.051
57.00	-11.67	-5.21	0.00	-73.74	0.00	73.74	2,439.40	592.72	1,823.05	1,706.88	2.13	-0.33	0.048
60.00	-10.57	-4.60	0.00	-58.11	0.00	58.11	2,386.97	575.19	1,716.81	1,620.34	2.34	-0.34	0.040
65.00	-9.16	-4.00	0.00	-35.09	0.00	35.09	2,296.90	545.97	1,546.84	1,479.25	2.71	-0.36	0.028
67.00	-5.58	-2.88	0.00	-26.56	0.00	26.56	2,259.94	534.28	1,481.33	1,423.98	2.86	-0.36	0.021
70.00	-4.64	-2.27	0.00	-17.91	0.00	17.91	2,187.59	516.75	1,385.73	1,332.71	3.09	-0.36	0.016
75.00	-3.49	-1.67	0.00	-6.35	0.00	6.35	2,063.89	487.53	1,233.47	1,185.51	3.47	-0.37	0.007
76.70	-3.31	-1.65	0.00	-3.52	0.00	3.52	2,021.83	477.60	1,183.72	1,137.43	3.60	-0.37	0.005
76.70	-3.31	-1.65	0.00	-3.52	0.00	3.52	138.83	41.65	15.24	15.36	3.60	-0.37	0.254
77.00	-0.92	-0.70	0.00	-3.02	0.00	3.02	138.83	41.65	15.24	15.36	3.63	-0.37	0.204
80.00	-0.28	-0.14	0.00	-0.93	0.00	0.93	138.83	41.65	15.24	15.36	3.93	-0.55	0.063
82.00	-0.17	-0.10	0.00	-0.65	0.00	0.65	138.83	41.65	15.24	15.36	4.17	-0.60	0.043
83.20	0.00	-0.09	0.00	-0.53	0.00	0.53	138.83	41.65	15.24	15.36	4.32	-0.62	0.034

Equivalent Lateral Forces Method Analysis

Spectral Response Acceleration for Short Period (S_s):	0.28
Spectral Response Acceleration at 1.0 Second Period (S_{d1}):	0.06
Long-Period Transition Period (T_L):	6
Importance Factor (I_E):	1.00
Site Coefficient F_a :	1.58
Site Coefficient F_v :	2.40
Response Modification Coefficient (R):	1.50
Design Spectral Response Acceleration at Short Period (S_{ds}):	0.29
Design Spectral Response Acceleration at 1.0 Second Period (S_{d1}):	0.10
Seismic Response Coefficient (C_s):	0.08
Upper Limit C_s	0.08
Lower Limit C_s	0.03
Period based on Rayleigh Method (sec):	0.78
Redundancy Factor (ρ):	1.00
Seismic Force Distribution Exponent (k):	1.14
Total Unfactored Dead Load:	38.36 k
Seismic Base Shear (E):	3.14 k

Load Case 1.2D + 1.0Ev + 1.0Eh

Seismic

Segment	Height Above Base (ft)	Weight (lb)	W_z (lb-ft)	C_{vx}	Horizontal Force (lb)	Vertical Force (lb)
27	82.60	19	3	0.001	3	24
26	81.00	32	5	0.002	5	40
25	78.50	48	7	0.002	7	60
24	76.85	8	1	0.000	1	11
23	75.85	181	25	0.009	27	228
22	72.50	552	73	0.025	79	695
21	68.50	345	43	0.015	46	434
20	66.00	318	38	0.013	41	400
19	62.50	814	91	0.031	98	1,025
18	58.50	502	52	0.018	56	632
17	56.50	170	17	0.006	18	213
16	55.50	187	18	0.006	20	235
15	53.69	494	46	0.016	50	622
14	51.19	852	76	0.026	82	1,072
13	48.58	1,037	87	0.030	94	1,305
12	46.08	528	42	0.014	45	664
11	42.50	1,251	90	0.031	97	1,574
10	37.50	1,291	81	0.028	87	1,624
9	32.50	1,330	71	0.024	76	1,674
8	29.43	311	15	0.005	16	392
7	26.93	1,942	83	0.029	90	2,444
6	23.84	1,190	44	0.015	48	1,498
5	21.34	831	27	0.009	29	1,046
4	17.50	1,581	41	0.014	45	1,990
3	12.50	1,627	29	0.010	31	2,047

Site Number: 414240

Code: ANSI/TIA-222-H

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Site Name: Byram Park CT, CT

Engineering Number: 13701270_C3_02

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Customer: VERIZON WIRELESS

2	7.50	1,672	17	0.006	18	2,104
1	2.50	1,717	5	0.002	5	2,161
Bird 428D-83I-01-T	83.20	9	1	0.000	1	11
dbSpectra DS7C09P36U	83.20	140	22	0.007	23	176
Pole Mount	82.00	80	12	0.004	13	101
Pine Branches	80.00	600	89	0.030	96	755
Commscope CBC1923Q-4	77.00	22	3	0.001	3	28
Ericsson Radio 4449	77.00	225	32	0.011	34	283
Ericsson RRUS 4415 B	77.00	138	20	0.007	21	174
Ericsson RRUS 32 B66	77.00	159	23	0.008	24	200
Ericsson Air6449 B41	77.00	312	44	0.015	48	393
Ericsson AIR32 B66Aa	77.00	397	56	0.019	61	499
Flat T-Arms	77.00	750	106	0.036	115	944
RFS APXVAARR24_43-U-	77.00	384	54	0.019	59	483
Pine Branches	75.00	600	83	0.028	89	755
Pine Branches	70.00	600	76	0.026	82	755
CCI DTMAPBP7819VG12A	67.00	115	14	0.005	15	145
Raycap DC6-48-60-0-8	67.00	16	2	0.001	2	20
Raycap DC6-48-60-18-	67.00	66	8	0.003	9	83
Ericsson RRUS 4426 B	67.00	145	18	0.006	19	183
Ericsson RRUS 4449 B	67.00	213	26	0.009	28	268
Ericsson RRUS 4478 B	67.00	178	22	0.007	23	224
Ericsson RRUS 32 B2	67.00	159	19	0.007	21	200
Ericsson RRUS-32 (77	67.00	231	28	0.010	30	291
Powerwave Allgon P65	67.00	159	19	0.007	21	200
CCI DMP65R-BU4D	67.00	407	49	0.017	53	513
CCI OPA-65R-LCUU-H6	67.00	219	26	0.009	29	276
Site PRO1, RMV12-496	67.00	1,358	164	0.056	177	1,709
Pine Branches	65.00	600	70	0.024	76	755
Pine Branches	60.00	600	64	0.022	69	755
Flat T-Arm	57.00	750	75	0.026	81	944
Commscope CBC78T-DS-	56.00	62	6	0.002	7	78
Samsung B2/B66A RRH-	56.00	253	25	0.009	27	319
Samsung B5/B13 RRH-B	56.00	211	21	0.007	22	265
Raycap RCMDC-6627-PF	56.00	32	3	0.001	3	40
Samsung MT6407-77A	56.00	245	24	0.008	26	308
Commscope JAHH-65A-R	56.00	101	10	0.003	11	128
Commscope JAHH-45A-R	56.00	282	28	0.010	30	355
Amphenol Antel LPA-8	56.00	162	16	0.005	17	204
VZW Unused Reserve (56.00	1,152	113	0.039	123	1,449
Pine Branches	55.00	600	58	0.020	63	755
Pine Branches	50.00	600	52	0.018	56	755
Pine Branches	45.00	600	46	0.016	50	755
Pine Branches	40.00	600	40	0.014	43	755
Pine Branches	35.00	600	35	0.012	37	755
Pine Branches	30.00	600	29	0.010	31	755
Pine Branches	25.00	600	24	0.008	25	755
Pine Branches	20.00	600	18	0.006	20	755
Pine Branches	15.00	600	13	0.005	14	755
		38,363	2,913	1.000	3,144	48,272

Load Case 0.9D - 1.0Ev + 1.0Eh

Seismic (Reduced DL)

Segment	Height Above Base (ft)	Weight (lb)	W_z (lb-ft)	C_{vx}	Horizontal Force (lb)	Vertical Force (lb)
27	82.60	19	3	0.001	3	16
26	81.00	32	5	0.002	5	27
25	78.50	48	7	0.002	7	40
24	76.85	8	1	0.000	1	7
23	75.85	181	25	0.009	27	153
22	72.50	552	73	0.025	79	465

Site Number: 414240

Code: ANSI/TIA-222-H

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Site Name: Byram Park CT, CT

Engineering Number: 13701270_C3_02

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Customer: VERIZON WIRELESS

21	68.50	345	43	0.015	46	290
20	66.00	318	38	0.013	41	267
19	62.50	814	91	0.031	98	685
18	58.50	502	52	0.018	56	423
17	56.50	170	17	0.006	18	143
16	55.50	187	18	0.006	20	157
15	53.69	494	46	0.016	50	416
14	51.19	852	76	0.026	82	717
13	48.58	1,037	87	0.030	94	873
12	46.08	528	42	0.014	45	444
11	42.50	1,251	90	0.031	97	1,053
10	37.50	1,291	81	0.028	87	1,086
9	32.50	1,330	71	0.024	76	1,120
8	29.43	311	15	0.005	16	262
7	26.93	1,942	83	0.029	90	1,635
6	23.84	1,190	44	0.015	48	1,002
5	21.34	831	27	0.009	29	700
4	17.50	1,581	41	0.014	45	1,331
3	12.50	1,627	29	0.010	31	1,369
2	7.50	1,672	17	0.006	18	1,407
1	2.50	1,717	5	0.002	5	1,445
Bird 428D-831-01-T	83.20	9	1	0.000	1	7
dbSpectra DS7C09P36U	83.20	140	22	0.007	23	118
Pole Mount	82.00	80	12	0.004	13	67
Pine Branches	80.00	600	89	0.030	96	505
Commscope CBC1923Q-4	77.00	22	3	0.001	3	18
Ericsson Radio 4449	77.00	225	32	0.011	34	189
Ericsson RRUS 4415 B	77.00	138	20	0.007	21	116
Ericsson RRUS 32 B66	77.00	159	23	0.008	24	134
Ericsson Air6449 B41	77.00	312	44	0.015	48	263
Ericsson AIR32 B66Aa	77.00	397	56	0.019	61	334
Flat T-Arms	77.00	750	106	0.036	115	631
RFS APXVAARR24_43-U-	77.00	384	54	0.019	59	323
Pine Branches	75.00	600	83	0.028	89	505
Pine Branches	70.00	600	76	0.026	82	505
CCI DTMABP7819VG12A	67.00	115	14	0.005	15	97
Raycap DC6-48-60-0-8	67.00	16	2	0.001	2	13
Raycap DC6-48-60-18-	67.00	66	8	0.003	9	55
Ericsson RRUS 4426 B	67.00	145	18	0.006	19	122
Ericsson RRUS 4449 B	67.00	213	26	0.009	28	179
Ericsson RRUS 4478 B	67.00	178	22	0.007	23	150
Ericsson RRUS 32 B2	67.00	159	19	0.007	21	134
Ericsson RRUS-32 (77	67.00	231	28	0.010	30	194
Powerwave Allgon P65	67.00	159	19	0.007	21	134
CCI DMP65R-BU4D	67.00	407	49	0.017	53	343
CCI OPA-65R-LCUU-H6	67.00	219	26	0.009	29	184
Site PRO1, RMV12-496	67.00	1,358	164	0.056	177	1,143
Pine Branches	65.00	600	70	0.024	76	505
Pine Branches	60.00	600	64	0.022	69	505
Flat T-Arm	57.00	750	75	0.026	81	631
Commscope CBC78T-DS-	56.00	62	6	0.002	7	52
Samsung B2/B66A RRH-	56.00	253	25	0.009	27	213
Samsung B5/B13 RRH-B	56.00	211	21	0.007	22	178
Raycap RCMDC-6627-PF	56.00	32	3	0.001	3	27
Samsung MT6407-77A	56.00	245	24	0.008	26	206
Commscope JAHH-65A-R	56.00	101	10	0.003	11	85
Commscope JAHH-45A-R	56.00	282	28	0.010	30	237
Amphenol Antel LPA-8	56.00	162	16	0.005	17	136
VZW Unused Reserve (56.00	1,152	113	0.039	123	969
Pine Branches	55.00	600	58	0.020	63	505
Pine Branches	50.00	600	52	0.018	56	505
Pine Branches	45.00	600	46	0.016	50	505
Pine Branches	40.00	600	40	0.014	43	505
Pine Branches	35.00	600	35	0.012	37	505

Site Number: 414240

Code: ANSI/TIA-222-H

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Site Name: Byram Park CT, CT

Engineering Number: 13701270_C3_02

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Customer: VERIZON WIRELESS

Pine Branches	30.00	600	29	0.010	31	505
Pine Branches	25.00	600	24	0.008	25	505
Pine Branches	20.00	600	18	0.006	20	505
Pine Branches	15.00	600	13	0.005	14	505
		38,363	2,913	1.000	3,144	32,290

Load Case 1.2D + 1.0Ev + 1.0Eh

Seismic

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-46.11	-3.14	0.00	-177.57	0.00	177.57	5,994.05	1,434.32	6,672.27	6,339.93	0.00	0.00	0.036
5.00	-44.01	-3.13	0.00	-161.85	0.00	161.85	5,848.22	1,387.57	6,244.46	5,982.13	0.00	-0.01	0.035
10.00	-41.96	-3.11	0.00	-146.20	0.00	146.20	5,676.12	1,340.82	5,830.83	5,608.53	0.02	-0.02	0.033
15.00	-39.21	-3.05	0.00	-130.67	0.00	130.67	5,478.21	1,294.07	5,431.37	5,222.30	0.04	-0.03	0.032
20.00	-37.41	-3.01	0.00	-115.42	0.00	115.42	5,280.30	1,247.31	5,046.08	4,849.84	0.07	-0.04	0.031
22.69	-35.92	-2.96	0.00	-107.34	0.00	107.34	5,173.92	1,222.19	4,844.84	4,655.34	0.10	-0.04	0.030
25.00	-32.72	-2.85	0.00	-100.49	0.00	100.49	5,082.39	1,200.56	4,674.96	4,491.17	0.12	-0.04	0.029
28.85	-32.32	-2.83	0.00	-89.53	0.00	89.53	4,410.41	1,041.83	4,023.22	3,870.44	0.15	-0.05	0.030
30.00	-29.90	-2.72	0.00	-86.28	0.00	86.28	4,370.63	1,032.43	3,950.99	3,800.59	0.17	-0.05	0.030
35.00	-27.52	-2.60	0.00	-72.66	0.00	72.66	4,197.46	991.53	3,644.15	3,503.90	0.23	-0.06	0.027
40.00	-25.19	-2.46	0.00	-59.65	0.00	59.65	4,024.29	950.62	3,349.71	3,219.28	0.29	-0.07	0.025
45.00	-23.77	-2.37	0.00	-47.34	0.00	47.34	3,851.11	909.71	3,067.67	2,946.70	0.37	-0.08	0.022
47.16	-22.46	-2.27	0.00	-42.23	0.00	42.23	3,776.34	892.05	2,949.72	2,832.74	0.41	-0.08	0.021
50.00	-20.64	-2.13	0.00	-35.77	0.00	35.77	3,677.94	868.80	2,798.03	2,686.19	0.45	-0.08	0.019
52.38	-20.01	-2.08	0.00	-30.69	0.00	30.69	2,517.80	619.72	1,992.88	1,842.71	0.50	-0.09	0.025
55.00	-19.02	-2.00	0.00	-25.23	0.00	25.23	2,473.70	604.41	1,895.64	1,765.31	0.54	-0.09	0.022
56.00	-15.67	-1.71	0.00	-23.23	0.00	23.23	2,456.62	598.57	1,859.17	1,736.02	0.56	-0.09	0.020
57.00	-14.09	-1.57	0.00	-21.52	0.00	21.52	2,439.40	592.72	1,823.05	1,706.88	0.58	-0.09	0.018
60.00	-12.31	-1.40	0.00	-16.80	0.00	16.80	2,386.97	575.19	1,716.81	1,620.34	0.64	-0.09	0.016
65.00	-11.16	-1.29	0.00	-9.79	0.00	9.79	2,296.90	545.97	1,546.84	1,479.25	0.74	-0.10	0.011
67.00	-6.61	-0.80	0.00	-7.22	0.00	7.22	2,259.94	534.28	1,481.33	1,423.98	0.78	-0.10	0.008
70.00	-5.16	-0.64	0.00	-4.80	0.00	4.80	2,187.59	516.75	1,385.73	1,332.71	0.85	-0.10	0.006
75.00	-4.18	-0.52	0.00	-1.59	0.00	1.59	2,063.89	487.53	1,233.47	1,185.51	0.95	-0.10	0.003
76.70	-4.17	-0.52	0.00	-0.70	0.00	0.70	2,021.83	477.60	1,183.72	1,137.43	0.99	-0.10	0.003
76.70	-4.17	-0.52	0.00	-0.70	0.00	0.70	138.83	41.65	15.24	15.36	0.99	-0.10	0.076
77.00	-1.11	-0.14	0.00	-0.55	0.00	0.55	138.83	41.65	15.24	15.36	1.00	-0.10	0.044
80.00	-0.31	-0.04	0.00	-0.11	0.00	0.11	138.83	41.65	15.24	15.36	1.07	-0.13	0.010
82.00	-0.19	-0.03	0.00	-0.03	0.00	0.03	138.83	41.65	15.24	15.36	1.13	-0.14	0.003
83.20	0.00	-0.02	0.00	0.00	0.00	0.00	138.83	41.65	15.24	15.36	1.16	-0.14	0.000

Load Case 0.9D - 1.0Ev + 1.0Eh

Seismic (Reduced DL)

Calculated Forces

Seg Elev (ft)	Pu FY (-) (kips)	Vu FX (-) (kips)	Tu MY (ft-kips)	Mu MZ (ft-kips)	Mu MX (ft-kips)	Resultant Moment (ft-kips)	phi Pn (kips)	phi Vn (kips)	phi Tn (ft-kips)	phi Mn (ft-kips)	Total Deflect (in)	Rotation (deg)	Ratio
0.00	-30.84	-3.14	0.00	-177.01	0.00	177.01	5,994.05	1,434.32	6,672.27	6,339.93	0.00	0.00	0.033
5.00	-29.44	-3.13	0.00	-161.30	0.00	161.30	5,848.22	1,387.57	6,244.46	5,982.13	0.00	-0.01	0.032
10.00	-28.07	-3.10	0.00	-145.67	0.00	145.67	5,676.12	1,340.82	5,830.83	5,608.53	0.02	-0.02	0.031
15.00	-26.23	-3.04	0.00	-130.17	0.00	130.17	5,478.21	1,294.07	5,431.37	5,222.30	0.04	-0.03	0.030
20.00	-25.03	-3.00	0.00	-114.95	0.00	114.95	5,280.30	1,247.31	5,046.08	4,849.84	0.07	-0.04	0.028
22.69	-24.02	-2.95	0.00	-106.89	0.00	106.89	5,173.92	1,222.19	4,844.84	4,655.34	0.10	-0.04	0.028
25.00	-21.88	-2.84	0.00	-100.07	0.00	100.07	5,082.39	1,200.56	4,674.96	4,491.17	0.12	-0.04	0.027
28.85	-21.62	-2.82	0.00	-89.14	0.00	89.14	4,410.41	1,041.83	4,023.22	3,870.44	0.15	-0.05	0.028
30.00	-20.00	-2.71	0.00	-85.90	0.00	85.90	4,370.63	1,032.43	3,950.99	3,800.59	0.17	-0.05	0.027
35.00	-18.41	-2.59	0.00	-72.33	0.00	72.33	4,197.46	991.53	3,644.15	3,503.90	0.23	-0.06	0.025
40.00	-16.85	-2.45	0.00	-59.37	0.00	59.37	4,024.29	950.62	3,349.71	3,219.28	0.29	-0.07	0.023
45.00	-15.90	-2.36	0.00	-47.11	0.00	47.11	3,851.11	909.71	3,067.67	2,946.70	0.37	-0.08	0.020
47.16	-15.02	-2.26	0.00	-42.02	0.00	42.02	3,776.34	892.05	2,949.72	2,832.74	0.40	-0.08	0.019
50.00	-13.80	-2.12	0.00	-35.60	0.00	35.60	3,677.94	868.80	2,798.03	2,686.19	0.45	-0.08	0.017
52.38	-13.39	-2.07	0.00	-30.54	0.00	30.54	2,517.80	619.72	1,992.88	1,842.71	0.49	-0.09	0.022
55.00	-12.72	-1.99	0.00	-25.11	0.00	25.11	2,473.70	604.41	1,895.64	1,765.31	0.54	-0.09	0.019
56.00	-10.48	-1.70	0.00	-23.12	0.00	23.12	2,456.62	598.57	1,859.17	1,736.02	0.56	-0.09	0.018
57.00	-9.42	-1.56	0.00	-21.41	0.00	21.41	2,439.40	592.72	1,823.05	1,706.88	0.58	-0.09	0.016
60.00	-8.23	-1.40	0.00	-16.72	0.00	16.72	2,386.97	575.19	1,716.81	1,620.34	0.64	-0.09	0.014
65.00	-7.46	-1.28	0.00	-9.74	0.00	9.74	2,296.90	545.97	1,546.84	1,479.25	0.74	-0.10	0.010
67.00	-4.42	-0.80	0.00	-7.18	0.00	7.18	2,259.94	534.28	1,481.33	1,423.98	0.78	-0.10	0.007
70.00	-3.45	-0.64	0.00	-4.78	0.00	4.78	2,187.59	516.75	1,385.73	1,332.71	0.84	-0.10	0.005
75.00	-2.80	-0.52	0.00	-1.59	0.00	1.59	2,063.89	487.53	1,233.47	1,185.51	0.95	-0.10	0.003
76.70	-2.79	-0.52	0.00	-0.70	0.00	0.70	2,021.83	477.60	1,183.72	1,137.43	0.99	-0.10	0.002
76.70	-2.79	-0.52	0.00	-0.70	0.00	0.70	138.83	41.65	15.24	15.36	0.99	-0.10	0.066
77.00	-0.74	-0.14	0.00	-0.54	0.00	0.54	138.83	41.65	15.24	15.36	0.99	-0.10	0.041
80.00	-0.21	-0.04	0.00	-0.11	0.00	0.11	138.83	41.65	15.24	15.36	1.07	-0.13	0.009
82.00	-0.13	-0.03	0.00	-0.03	0.00	0.03	138.83	41.65	15.24	15.36	1.12	-0.14	0.003
83.20	0.00	-0.02	0.00	0.00	0.00	0.00	138.83	41.65	15.24	15.36	1.16	-0.14	0.000

Site Number: 414240

Code: ANSI/TIA-222-H

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Site Name: Byram Park CT, CT

Engineering Number: 13701270_C3_02

7/28/2021 2:56:49 PM

Customer: VERIZON WIRELESS

Analysis Summary

Load Case	Reactions						Max Usage	
	Shear FX (kips)	Shear FZ (kips)	Axial FY (kips)	Moment MX (ft-kips)	Moment MY (ft-kips)	Moment MZ (ft-kips)	Elev (ft)	Interaction Ratio
1.2D + 1.0W	49.86	0.00	45.98	0.00	0.00	2646.41	76.70	0.96
0.9D + 1.0W	49.84	0.00	34.47	0.00	0.00	2640.27	76.70	0.95
1.2D + 1.0Di + 1.0Wi	12.70	0.00	56.25	0.00	0.00	667.14	76.70	0.29
1.2D + 1.0Ev + 1.0Eh	3.14	0.00	46.11	0.00	0.00	177.57	76.70	0.08
0.9D - 1.0Ev + 1.0Eh	3.14	0.00	30.84	0.00	0.00	177.01	76.70	0.07
1.0D + 1.0W	12.57	0.00	38.36	0.00	0.00	666.45	76.70	0.25

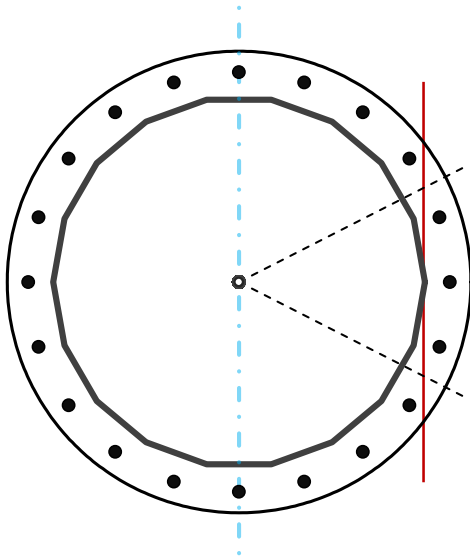
Base Plate & Anchor Rod Analysis

Pole Dimensions		
Number of Sides	18	-
Diameter	52	in
Thickness	1/2	in
Orientation Offset		°

Base Reactions		
Moment, Mu	2,646.4	k-ft
Axial, Pu	46.0	k
Shear, Vu	49.9	k
Neutral Axis	270	°

Report Capacities		
Component	Capacity	Result
Base Plate	23%	Pass
Anchor Rods	46%	Pass
Dwyidag	-	-

Base Plate		
Shape	Round	-
Diameter, ϕ	66	in
Thickness	2 3/4	in
Grade	A572-50	
Yield Strength, Fy	50	ksi
Tensile Strength, Fu	65	ksi
Clip	N/A	in
Orientation Offset		°
Anchor Rod Detail	d	$\eta=0.5$
Clear Distance	4 1/2	in
Applied Moment, Mu	596.1	k
Bending Stress, ϕMn	2601.6	k



Original Anchor Rods		
Arrangement	Radial	-
Quantity	20	-
Diameter, ϕ	2 1/4	in
Bolt Circle	60	in
Grade	A615-75	
Yield Strength, Fy	75	ksi
Tensile Strength, Fu	100	ksi
Spacing	9.4	in
Orientation Offset		°
Applied Force, Pu	112.4	k
Anchor Rods, ϕPn	243.6	k

Calculations for Monopole Base Plate & Anchor Rod Analysis

Reaction Distribution

Reaction	Shear Vu	Moment Mu	Factor
-	k	k-ft	-
Base Forces	49.9	2646.4	1.00
Anchor Rod Forces	49.9	2646.4	1.00
Additional Bolt (Grp1) Forces	0.0	0.0	0.00
Additional Bolt (Grp2) Forces	0.0	0.0	0.00
Dywidag Forces	0.0	0.0	0.00
Stiffener Forces	0.0	0.0	0.00

Geometric Properties

Section	Gross Area	Net Area	Individual Inertia	Threads per Inch	Moment of Inertia
-	in ²	in ²	in ⁴	#	in ⁴
Pole	80.4859	4.4714	0.3744		26690.34
Bolt	3.9761	3.2477	0.8393	4.5	26977.81
Bolt1	0.0000	0.0000	0.0000	0	0.00
Bolt2	0.0000	0.0000	0.0000	0	0.00
Dywidag	0.0000	0.0000	0.0000		0.00
Stiffener	0.0000	0.0000	0.0000		0.00

Base Plate		
Shape	Round	-
Diameter, D	66	in
Thickness, t	2.75	in
Yield Strength, Fy	50	ksi
Tensile Strength, Fu	65	ksi
Base Plate Chord	40.645	in
Detail Type	d	-
Detail Factor	0.50	-
Clear Distance	4.5	-

Anchor Rods		
Anchor Rod Quantity, N	20	-
Rod Diameter, d	2.25	in
Bolt Circle, BC	60	in
Yield Strength, Fy	75	ksi
Tensile Strength, Fu	100	ksi
Applied Axial, Pu	112.4	k
Applied Shear, Vu	1.2	k
Compressive Capacity, φPn	243.6	k
Tensile Capacity, φRnt	0.462	OK
Interaction Capacity	0.232	OK

External Base Plate		
Chord Length AA	34.485	in
Additional AA	5.500	in
Section Modulus, Z	75.597	in ³
Applied Moment, Mu	596.1	k-ft
Bending Capacity, φMn	3401.9	k-ft
Capacity, Mu/φMn	0.175	OK
Chord Length AB	33.238	in
Additional AB	5.500	in
Section Modulus, Z	73.239	in ³
Applied Moment, Mu	464.8	k-ft
Bending Capacity, φMn	3295.7	k-ft
Capacity, Mu/φMn	0.141	OK
Bend Line Length	30.579	in
Additional Bend Line	0.000	in
Section Modulus, Z	57.814	in ³
Applied Moment, Mu	596.1	k-ft
Bending Capacity, φMn	2601.6	k-ft
Capacity, Mu/φMn	0.229	OK

Internal Base Plate		
Arc Length	0.000	in
Section Modulus, Z	0.000	in ³
Moment Arm	0.000	in
Applied Moment, Mu	0.0	k-ft
Bending Capacity, φMn	0.0	k-ft
Capacity, Mu/φMn		

Flange Plate Analysis

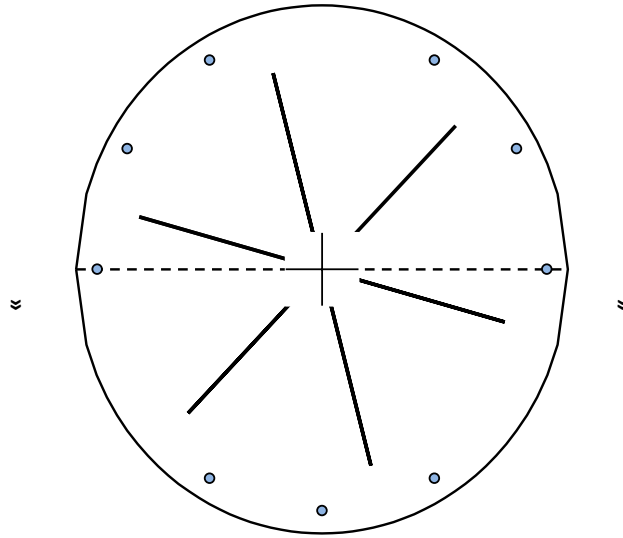
Flange Plate	Plate Type	Flange	@ 77.00 ft
	Pole Diameter	4.5	in
	Pole Thickness	0.337	in
	Plate Diameter	35	in
	Plate Thickness	1.5	in
	Plate Fy	50	ksi
	Weld Length	0.3125	in
	f _s Resistance Applied	936.85	k-in
		25.70	k-in

Code Rev.	H
Moment	13.9 k-ft
Axial	3.8 k

Date	7/28/2021
Engineer	SDK
Site #	414240
Carrier	VERIZON WIRELESS

Stiffeners	#	6	Show
	Thickness	0.75	in
	Length	12	in
	Height	12	in
	Chamfer	1.25	in
	Offset Angle	0	°
	Fy	50	ksi

Bolts	#	12	
	Bolt Circle (R)adial / (S)quare	32	in
	Bolt Gap	R	
	Diameter	6	in
	Hole Diameter	1	in
	Type	1.125	in
	Fy	A325	
	Fu	92	ksi
	f _s Resistance Applied	120	ksi
		54.52	k
	2.00	k	



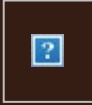
Reinforcement	#	0
---------------	---	----------

Plate Stress Ratio:
3% Pass

Bolt Stress Ratio:
4% Pass

Extra Bolts	#	0
-------------	---	----------

From: [UPS](#)
To: [John Andrews](#)
Subject: UPS Delivery Notification, Tracking Number 1Z9Y45030230846993
Date: Monday, March 27, 2023 9:37:01 AM



Hello, your package has been delivered.

Delivery Date: Monday, 03/27/2023

Delivery Time: 9:35 AM

Signed by: CALABRECE



Set Delivery Instructions

Manage Preferences

View My Packages

CENTERLINE SITE ACQUISITION

Tracking Number:	1Z9Y45030230846993
Ship To:	GREENWICH TOWN HALL 101 FIELD POINT ROAD FIRST FLOOR GREENWICH, CT 06830 US
Number of Packages:	1
UPS Service:	UPS 2nd Day Air®
Package Weight:	0.0 LBS
Reference Number:	13701270



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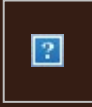
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To: [John Andrews](#)
Subject: UPS Delivery Notification, Tracking Number 1Z9Y45030217460862
Date: Monday, March 27, 2023 3:05:34 PM



Hello, your package has been delivered.

Delivery Date: Monday, 03/27/2023

Delivery Time: 3:03 PM

Left At: FRONT DOOR



[Set Delivery Instructions](#)

[Manage Preferences](#)

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CENTERLINE SITE ACQUISITION

Tracking Number:	1Z9Y45030217460862
Ship To:	36 RITCH AVENUE LLC 16B ARTHUR STREET GREENWICH, CT 06831 US
Number of Packages:	1
UPS Service:	UPS 2nd Day Air®
Package Weight:	0.0 LBS
Reference Number:	13701270 - OWNER



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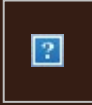
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From: [UPS](#)
To: [John Andrews](#)
Subject: UPS Delivery Notification, Tracking Number 1Z9Y45030231953606
Date: Monday, March 27, 2023 9:37:01 AM



Hello, your package has been delivered.

Delivery Date: Monday, 03/27/2023

Delivery Time: 9:35 AM

Signed by: CALABRECE

CENTERLINE SITE ACQUISITION

Tracking Number:	1Z9Y45030231953606
Ship To:	GREENWICH PLANNING & ZONING 101 FIELD POINT ROAD 2ND FLOOR GREENWICH, CT 06830 US
Number of Packages:	1
UPS Service:	UPS 2nd Day Air®
Package Weight:	0.0 LBS
Reference Number:	13701270 - DPZ

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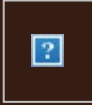
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From: [UPS](#)
To: [John Andrews](#)
Subject: UPS Delivery Notification, Tracking Number 1Z9Y45030227433382
Date: Monday, March 27, 2023 10:52:46 AM



Hello, your package has been delivered.

Delivery Date: Monday, 03/27/2023

Delivery Time: 10:51 AM

Signed by: ANCRI

CENTERLINE SITE ACQUISITION

Tracking Number:	1Z9Y45030227433382
Ship To:	AMERICAN TOWER CORPORATION 10 PRESIDENTIAL WAY WOBURN, MA 01801 US
Number of Packages:	1
UPS Service:	UPS 2nd Day Air®
Package Weight:	0.0 LBS
Reference Number:	13701270
Reference Number:	13683578

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March 21, 2023

36 Ritch Avenue LLC
16B Arther Street
Greenwich, CT 06831

RE: EM-VER-057-220616 – Cellco Partnership d/b/a Verizon Wireless notice of intent to modify an existing telecommunications facility located at 36 Ritch Avenue, Greenwich, Connecticut.
Verizon Site # 13701270

Dear Property Owner,

Cellco Partnership d/b/a Verizon Wireless currently maintains twelve (12) antennas at the fifty seven (57) foot elevation on the existing seventy seven (77) foot tall camouflaged “monopine” tower, located at 36 Ritch Avenue West, Greenwich, CT, AKA 48 Ritch Avenue West. The tower is owned by American Tower. The property is owned by 36 Ritch Avenue LLC. The tower was initially approved by the Connecticut Siting Council, Docket No. 50, on July 9, 1985. The Council approved Verizon Wireless’ use of the existing tower on July 14, 2011, in Docket number 414. Most recently, the Council denied Verizon’s request in EM-VER-057-220616, because the applicant failed to reply to the Council’s Incomplete Letter seeking a revised EME Report.

Verizon Wireless now seeks Council approval to remove nine (9) antenna, six (6) RRH’s, one (1) OVP and associated cabling, and install mount modifications with nine (9) new antennas, nine (9) RRH’s, three (3) diplexers and related cables, as more fully illustrated in the enclosed Construction Drawings.

This letter is intended to serve as the required notice to the owner of the property. As required by Regulations of Connecticut State Agencies (“RCSA”) 16-50j-73 the Connecticut Siting Council (“CSC”) has been notified of this proposal and will review this application. Please accept this letter as notification pursuant to RSCA 16-50j-73.

The enclosed letter and attachments to the CSC fully describe AT&T’s proposal for the site. However, if you have any questions or require any additional information concerning our plans or the CSC procedures, please contact me at 443-677-0144 or contact Melanie Bachmann, Executive Director of the CSC at 860-972-2935.

Respectfully Submitted,

A blue ink handwritten signature of Jack Andrews, consisting of several loops and a final horizontal stroke.

Jack Andrews
Zoning Manager, Centerline Communications
10130 Donleigh Drive
Columbia, MD 21046



March 21, 2023

Marc Grant
Project Manager, Site Development
American Tower Corporation
10 Presidential Way
Woburn, MA 01801

RE: EM-VER-057-220616 – Cellco Partnership d/b/a Verizon Wireless notice of intent to modify an existing telecommunications facility located at 36 Ritch Avenue, Greenwich, Connecticut.
Verizon Site # 13701270

Dear Tower Owner,

Cellco Partnership d/b/a Verizon Wireless currently maintains twelve (12) antennas at the fifty seven (57) foot elevation on the existing seventy seven (77) foot tall camouflaged “monopine” tower, located at 36 Ritch Avenue West, Greenwich, CT, AKA 48 Ritch Avenue West. The tower is owned by American Tower. The property is owned by 36 Ritch Avenue LLC. The tower was initially approved by the Connecticut Siting Council, Docket No. 50, on July 9, 1985. The Council approved Verizon Wireless’ use of the existing tower on July 14, 2011, in Docket number 414. Most recently, the Council denied Verizon’s request in EM-VER-057-220616, because the applicant failed to reply to the Council’s Incomplete Letter seeking a revised EME Report.

Verizon Wireless now seeks Council approval to remove nine (9) antenna, six (6) RRH’s, one (1) OVP and associated cabling, and install mount modifications with nine (9) new antennas, nine (9) RRH’s, three (3) diplexers and related cables, as more fully illustrated in the enclosed Construction Drawings.

This letter is intended to serve as the required notice to the owner of the tower. As required by Regulations of Connecticut State Agencies (“RCSA”) 16-50j-73 the Connecticut Siting Council (“CSC”) has been notified of this proposal and will review this application. Please accept this letter as notification pursuant to RSCA 16-50j-73.

The enclosed letter and attachments to the CSC fully describe AT&T’s proposal for the site. However, if you have any questions or require any additional information concerning our plans or the CSC procedures, please contact me at 443-677-0144 or contact Melanie Bachmann, Executive Director of the CSC at 860-972-2935.

Respectfully Submitted,

A handwritten signature in blue ink, appearing to read 'Jack Andrews', is written over a circular blue stamp or watermark.

Jack Andrews
Zoning Manager, Centerline Communications
10130 Donleigh Drive
Columbia, MD 21046



March 21, 2023

The Honorable Fred Camillo
101 Field Point Road
First Floor
Greenwich, CT 06830

RE: EM-VER-057-220616 – Cellco Partnership d/b/a Verizon Wireless notice of intent to modify an existing telecommunications facility located at 36 Ritch Avenue, Greenwich, Connecticut.
Verizon Site # 13701270

Dear First Selectman Camillo,

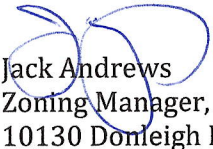
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This letter is intended to serve as the required notice to the chief elected official of the municipality. As required by Regulations of Connecticut State Agencies (“RCSA”) 16-50j-73 the Connecticut Siting Council (“CSC”) has been notified of this proposal and will review this application. Please accept this letter as notification pursuant to RSCA 16-50j-73.

The enclosed letter and attachments to the CSC fully describe AT&T’s proposal for the site. However, if you have any questions or require any additional information concerning our plans or the CSC procedures, please contact me at 443-677-0144 or contact Melanie Bachmann, Executive Director of the CSC at 860-972-2935.

Respectfully Submitted,


Jack Andrews
Zoning Manager, Centerline Communications
10130 Donleigh Drive
Columbia, MD 21046



March 21, 2023

Director Patrick LaRow
Greenwich Planning and Zoning
Town Hall, 2nd floor
101 Field Point Road
Greenwich, CT 06830

RE: EM-VER-057-220616 – Cellco Partnership d/b/a Verizon Wireless notice of intent to modify an existing telecommunications facility located at 36 Ritch Avenue, Greenwich, Connecticut.
Verizon Site # 13701270

Dear Director LaRow,

Cellco Partnership d/b/a Verizon Wireless currently maintains twelve (12) antennas at the fifty seven (57) foot elevation on the existing seventy seven (77) foot tall camouflaged “monopine” tower, located at 36 Ritch Avenue West, Greenwich, CT, AKA 48 Ritch Avenue West. The tower is owned by American Tower. The property is owned by 36 Ritch Avenue LLC. The tower was initially approved by the Connecticut Siting Council, Docket No. 50, on July 9, 1985. The Council approved Verizon Wireless’ use of the existing tower on July 14, 2011, in Docket number 414. Most recently, the Council denied Verizon’s request in EM-VER-057-220616, because the applicant failed to reply to the Council’s Incomplete Letter seeking a revised EME Report.

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This letter is intended to serve as the required notice to the chief Planning official of the municipality. As required by Regulations of Connecticut State Agencies (“RCSA”) 16-50j-73 the Connecticut Siting Council (“CSC”) has been notified of this proposal and will review this application. Please accept this letter as notification pursuant to RSCA 16-50j-73.

The enclosed letter and attachments to the CSC fully describe AT&T’s proposal for the site. However, if you have any questions or require any additional information concerning our plans or the CSC procedures, please contact me at 443-677-0144 or contact Melanie Bachmann, Executive Director of the CSC at 860-972-2935.

Respectfully Submitted,

A handwritten signature in blue ink, appearing to read 'Jack Andrews', is written over a faint, circular blue stamp or watermark.

Jack Andrews
Zoning Manager, Centerline Communications
10130 Donleigh Drive
Columbia, MD 21046



AMERICAN TOWER®
CORPORATION
LETTER OF AUTHORIZATION

CENTERLINE COMMUNICATIONS LLC/ AT&T MOBILITY

I, Margaret Robinson, Vice President, US Tower Legal Division on behalf of American Tower*, owner/operator of the tower facility located at the address identified below (the "Tower Facilities"), do hereby authorize AT&T MOBILITY, CENTERLINE COMMUNICATIONS LLC, its successors and assigns, to act as American Tower's non-exclusive agent for the purpose of filing and securing any zoning, land-use, building permit and/or electrical permit application(s) and approvals of the applicable jurisdiction for and to conduct the construction of the installation of antennas and related telecommunications equipment on the Tower Facility located at the above address. This installation shall not affect adjoining lands and will occur only within the area leased by American Tower.

American Tower understands that the application may be denied, modified or approved with conditions. The above authorization is limited to the acceptance by American Tower of conditions related to American Tower's installation. Any such conditions of approval or modifications will not be effective unless approved in writing by American Tower.

The above authorization does not permit AT&T MOBILITY, CENTERLINE COMMUNICATIONS LLC to modify or alter any existing permit(s) and/or zoning or land-use conditions or impose any additional conditions unrelated to American Tower's installation of telecommunications equipment without the prior written approval of American Tower.

*American Tower includes all affiliates and subsidiaries of American Tower Corporation.


ATC Asset #	Site Name	Project Number	Site Address
283420	STONEBROOK RD CT	13682835	23 Stonybrook Road, Stratford, Connecticut
243036	WEST HAVEN & RT 162 CT	13682841	668 Jones Hill Road, West Haven, Connecticut
302479	Rkhl - Rocky Hill	13683394	699 West Street, Rocky Hill, Connecticut
302537	Middletown CT 3	13747862	47 Inwood Road, Rocky Hill, Connecticut
302535	Milford CT 2	13748383	185 Research Drive, Milford, Connecticut
302473	E H F R - Prestige Park	13748397	310 Prestige Park Road, East Hartford, Connecticut
302505	Wshn - West Haven	13748405	204 Burwell Street, West Haven, Connecticut
302489	Enfd - Enfield	13753208	77 Town Farm Road, Enfield, Connecticut
302524	Beacon Falls	13753210	664 Rimmon Hill Road, Seymour, Connecticut
310968	WSPT-WESTPORT REBUILD CT	13753216	180A Bayberry Lane, Westport, Connecticut
302526	Naugatuck (telephone Pole)	13753218	585 South Main St. (soc. Club), Naugatuck, Connecticut
310972	WATERFORD REBUILD CT	13753547	15 Miner Lane, Waterford, Connecticut
302538	Parsonage Hill Aka Wallin	13753549	922 Northrop Road, Wallingford, Connecticut
370624	Mankes Silo	13754283	1338 Highland Ave, Cheshire, Connecticut



AMERICAN TOWER®
CORPORATION

88017	SHELTON-TRUMBULL	13755484	14 OXFORD DRIVE/BOOTH HILL RD, Shelton, Connecticut
414240	Byram Park CT	13755490	48 RITCH AVENUE WEST, Greenwich, Connecticut
283423	NAUGATUCK CT	13755758	880 Andrew Mountain Road, Naugatuck, Connecticut
302480	Woodbridge CT 1	13756843	77 Pease Road, Woodbridge, Connecticut
411183	WATERFORD CT	13756866	53 Dayton Rd. Waterford, Connecticut
302540	Madison CT 6	13757740	8 Old 79, Madison, Connecticut
411259	CT Collinsville CAC 802816 CT	13757764	650 Albany Turnpike, Collinsville, Connecticut
411256	CANTON CT	13757774	14 CANTON SPRINGS ROAD, Canton, Connecticut
302493	Nrwc - Norwich	13757776	225 Rogers Road, Norwich, Connecticut
302476	Wtbr - Waterbury	13757794	352 Garden Circle, Waterbury, Connecticut
302475	Sttn - Southington	13757796	80 Shuttle Meadow Road, Southington, Connecticut
302494	Hddm - Haddam	13757798	139 Morris Hubbard Rd, Higganum, Connecticut
283419	PINE ORCHARD BRANFORD CT	13757800	123 Pine Orchard Road, Branford, Connecticut
302482	North Havent CT 1	13757802	15 Dewight Street, North Haven, Connecticut
302485	Mdfd - Middlefield	13757806	134 Kikapoo Road, Middlefield, Connecticut
302500	Brst - Bristol	13757810	790 Willis Street, Bristol, Connecticut
302467	Bilkays Express	13757812	90 North Plains Industrial Rd. Wallingford, Connecticut
302536	Cherry Hill-branford	13759895	4 Beaver Road, Brandford, Connecticut
302482	North Havent CT 1	14050356	15 Dewight Street, North Haven, Connecticut
311305	GLFD-GUILFORD REBUILD CT	14050358	10 Tanner Marsh Road, Guilford, Connecticut
411261	CROMWELLSW CT	14089799	99 Christian Hill Road, Cromwell, Connecticut
302481	Hrfr - South	14090117	289 Mountain Street, Hartford, Connecticut

Signature: _____


Margaret Robinson, Vice President
US Tower Legal Division

See attached Notary Block



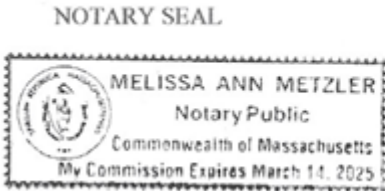
**LETTER OF AUTHORIZATION
CENTERLINE COMMUNICATIONS LLC/ AT&T MOBILITY**

NOTARY BLOCK

COMMONWEALTH OF MASSACHUSETTS
County of Middlesex

This instrument was acknowledged before me by Margaret Robinson, Vice President, UST Legal of American Tower (Tower Facility owner), personally known to me (or proved to me on the basis of satisfactory evidence) to be the person whose name is subscribed to the within instrument and acknowledged to me that he/she executed the same.

WITNESS my hand and official seal, this 30th day of June, 2022.



Notary Public 
My Commission Expires: March 14, 2025