



SITE NAME: COLHURST
5G LSUB6 - CARRIER ADD

1319 INGLERIDGE FARM LANE
CHARLOTTESVILLE, VA 22901
ALBEMARLE COUNTY

SITE INFORMATION

PROJECT DESCRIPTION:

PROJECT CONSISTS OF REMOVING (1) ANTENNA STANDOFF MOUNT ASSEMBLY, (6) ANTENNAS, (12) DIPLEXERS, (3) TMAS, & (12) COAX CABLES ON TOWER, AND (3) RRUS ON GROUND FOLLOWED BY INSTALLING (1) DUAL ANTENNA POLE MOUNT ASSEMBLY, (6) ANTENNAS, (3) INTEGRATED ANTENNA/RRUS, (2) OVPS, (6) RRUS, & (2) HYBRID CABLES ON TOWER, AND INSTALLING UPCONVERTERS, OVPS WITH CORRESPONDING EQUIPMENT AND KITS AS LISTED IN RFDS AT GROUND LEVEL. THE FINAL TOWER CONFIGURATION WILL BE (6) ANTENNAS, (3) INTEGRATED ANTENNA/RRUS, (6) RRUS, (2) HYBRID CABLES, & (2) OVPS.

SITE ADDRESS:

1319 INGLERIDGE FARM LANE
CHARLOTTESVILLE, VA 22901

LATITUDE (NAD 83):

38° 4' 15.4992" (38.070972")

LONGITUDE (NAD 83):

-78° 31' 18.0012" (-78.521667")

GROUND ELEVATION:

517.9' ± (AMSL)

JURISDICTION:

ALBEMARLE COUNTY

ZONING:

RA (RURAL AREAS)

PARCEL ID:

06000-00-00-002A1

PARCEL AREA:

44.69 ACRES

PARCEL OWNER:

RMC7 LLC
5195 MAGNOLIA RDG RD
CHARLOTTESVILLE, VA 22901

TOWER OWNER:

DOMINION ENERGY
120 TREDEGAR STREET, 6TH FLOOR
RICHMOND, VA 23219

STRUCTURE TYPE:

ELECTRIC TRANSMISSION TOWER

STRUCTURE HEIGHT:

139.0'±AGL

RAD CENTER:

135.0' & 129.0' AGL

TOTAL LEASE AREA:

400 SQ. FT.

POWER PROVIDER:

DOMINION VA POWER (866) 366-4357

TELCO PROVIDER:

CENTURYLINK (800) 871-9244

EMERGENCY INFORMATION:

FIRE & RESCUE DEPARTMENT:

(434) 973-1717

POLICE DEPARTMENT:

(434) 293-3223

VICINITY MAP

DIRECTIONS

FROM 2501 GOODES BRIDGE RD, RICHMOND, VA 23224:
HEAD NORTH ON GOODES BRIDGE RD. TURN RIGHT ONTO US-360 E. MERGE ONTO VA-150 N/CHIPPENHAM PKWY VIA THE RAMP TO I-95 N/POWHITE PKWY. MERGE ONTO VA-150 N/CHIPPENHAM PKWY. USE THE RIGHT 2 LANES TO MERGE ONTO VA-76 N/POWHITE PKWY. KEEP LEFT AT THE FORK TO CONTINUE ON VA-76 N. CONTINUE ONTO I-195 N. USE THE LEFT 2 LANES TO TAKE THE I-64 W EXIT TOWARD CHARLOTTESVILLE. MERGE ONTO I-64. TAKE EXIT 124 FOR US-250 TOWARD CHARLOTTESVILLE/SHADWELL. KEEP RIGHT AT THE FORK AND MERGE ONTO US-250 W. TAKE THE CO RD 654/BARRACKS RD. TURN RIGHT ONTO INGLERIDGE FARM LN. ACCESS ROAD WILL BE ON THE RIGHT.

CODE COMPLIANCE

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

2018 VIRGINIA CONSTRUCTION CODE

ANSI/TIA-222-H

2017 NATIONAL ELECTRICAL CODE

TIA 607

2018 NFPA 101, LIFE SAFETY CODE

INSTITUTE FOR ELECTRICAL & ELECTRONICS ENGINEER 81

2018 VIRGINIA STATEWIDE FIRE PREVENTION CODE

IEEE C2 NATIONAL ELECTRIC SAFETY CODE LATEST EDITION

AMERICAN CONCRETE INSTITUTE

TELCORDIA GR-1275

AMERICAN INSTITUTE OF STEEL CONSTRUCTION

ANSI/T 311

MANUAL OF STEEL CONSTRUCTION 15TH EDITION

CONTRACTOR PMI REQUIREMENTS

PMI ACCESSED AT:

HTTPS://PMI.VZWSMART.COM

SMART TOOL VENDOR PROJECT NUMBER:

10202126

VERIZON LOCATION CODE (PSLC):

229818

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

MOUNT REPLACEMENT REQUIRED

YES

VERIZON APPROVED VENDORS

* REFER TO CONSTRUCTION DRAWINGS.

DRAWING INDEX

T-1

TITLE SHEET

T-2

GENERAL NOTES

Z-1

SITE PLAN

C-1

COMPOUND PLAN

C-2

ELEVATION

A-1

EQUIPMENT SCHEDULE

A-2

EQUIPMENT DETAILS

A-3

RF PLUMBING DIAGRAM

G-1

GROUNDING RISER DIAGRAM & DETAILS

APPX-1

APPENDIX I

APPX-2

APPENDIX II

DO NOT SCALE DRAWINGS

THESE DRAWINGS ARE FORMATTED TO BE FULL-SIZE AT 24"X36". CONTRACTOR SHALL VERIFY ALL PLANS AND EXISTING DIMENSIONS AND CONDITIONS ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY THE DESIGNER / ENGINEER IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR MATERIAL ORDERS OR BE RESPONSIBLE FOR THE SAME. CONTRACTOR SHALL USE BEST MANAGEMENT PRACTICE TO PREVENT STORM WATER POLLUTION DURING CONSTRUCTION.

APPLICANT

APPLICANT:

VERIZON WIRELESS
1831 RADY COURT
RICHMOND, VA 23222
MEG BROWN
(804) 543-9908

PROJECT TEAM

APPLICANT:

VERIZON WIRELESS
1831 RADY COURT
RICHMOND, VA 23222

CONSTRUCTION MANAGEMENT FIRM:

NETWORK BUILDING + CONSULTING, LLC.
120 EASTSHORE DRIVE, SUITE 300
GLEN ALLEN, VA 23059
(804) 548-4079

ENGINEERING FIRM:

NB+C ENGINEERING SERVICES, LLC.
120 EASTSHORE DRIVE, SUITE 300
GLEN ALLEN, VA 23059
(804) 548-4079
tsnarr@nbclic.com

ENGINEER

NB+C ENGINEERING SERVICES, LLC.
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APPLICANT

1831 RADY COURT
RICHMOND, VA 23222

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NB+C PROJ. #100352
1319 INGLERIDGE FARM LANE
CHARLOTTESVILLE, VA 22901
ALBEMARLE COUNTY

DESIGN RECORD

REVISIONS

REV	DATE	DESCRIPTION	BY
1	01/25/24	REVISED RFDS	AT
0	07/11/23	FINALS	KLB
A	05/25/23	PRELIMINARY ZDS	AT

PROFESSIONAL STAMP

ENGINEER

TRENT T. SNARR, P.E.
VA PROFESSIONAL ENGINEER LIC. #49978

SHEET TITLE

TITLE SHEET

SHEET NUMBER

T-1

SITE ACTIVITY REQUIREMENTS:

1.

PRIOR TO THE START OF CONSTRUCTION, ALL REQUIRED JURISDICTIONAL PERMITS SHALL BE OBTAINED. THIS INCLUDES, BUT IS NOT LIMITED TO, BUILDING, ELECTRICAL, MECHANICAL, FIRE, FLOOD ZONE, ENVIRONMENTAL AND ZONING. AFTER ONSITE ACTIVITIES AND CONSTRUCTION ARE COMPLETED, ALL REQUIRED PERMITS SHALL BE SATISFIED AS CLOSED OUT ACCORDING TO LOCAL JURISDICTIONAL REQUIREMENTS.
2.

ALL CONSTRUCTION MEANS AND METHODS; INCLUDING BUT NOT LIMITED TO, ERECTION PLANS, RIGGING PLANS, CLIMBING PLANS, AND RESCUE PLANS SHALL BE THE RESPONSIBLY OF THE GENERAL CONTRACTOR RESPONSIBLE FOR THE EXECUTION OF THE WORK CONTAINED HEREON, AND SHALL MEET ANIS/ASSE A10.48 (LATEST EDITION): FEDERAL, STATE, AND LOCAL REGULATIONS; AND ANY APPLICABLE INDUSTRY CONSENSUS STANDARDS RELATED TO THE CONSTRUCTION ACTIVITIES BEING PERFORMED. ALL RIGGING PLANS SHALL ADHERE TO ANSI/ASSE A10.48 (LATEST EDITION) AND THE REQUIRED INVOLVEMENT OF A QUALIFIED ENGINEER FOR CLASS IV CONSTRUCTION, TO CERTIFY THE SUPPORTING STRUCTURE(S) IN ACCORDANCE WITH ANSI/TIA-322 (LATEST EDITION).
3.

ALL SITE WORK TO COMPLY WITH OAS-STD-10068 "INSTALLATION STANDARDS FOR CONSTRUCTION ACTIVITIES" STANDARD FOR INSTALLATION OF MOUNTS AND APPURTENANCES, AND LATEST VERSION OF ANSI/TIA-1019-A-2012 "STANDARD FOR INSTALLATION, ALTERATION, AND MAINTENANCE OF ANTENNA SUPPORTING STRUCTURES AND ANTENNAS."
4.

IF THE SPECIFIED EQUIPMENT CAN NOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE CONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION FOR APPROVAL BY TOWER OWNER PRIOR TO PROCEEDING WITH ANY SUCH CHANGE OF INSTALLATION.
5.

ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES REGULATIONS AND ORDINANCES. CONTRACTOR SHALL ISSUE ALL APPROPRIATE NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF THE WORK. ALL WORK CARRIED OUT SHALL COMPLY WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND LOCAL JURISDICTIONAL CODES, ORDINANCES AND APPLICABLE REGULATIONS.
6.

THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.
7.

THE CONTRACTOR SHALL CONTACT UTILITY LOCATING SERVICES PRIOR TO THE START OF CONSTRUCTION.
8.

ALL EXISTING ACTIVE SEWER, WATER, GAS, ELECTRIC AND OTHER UTILITIES WHERE ENCOUNTERED IN THE WORK, SHALL BE PROTECTED AT ALL TIMES AND WHERE REQUIRED FOR THE PROPER EXECUTION OF THE WORK, SHALL BE RELOCATED AS DIRECTED BY CONTRACTOR. EXTREME CAUTION SHOULD BE USED BY THE CONTRACTOR WHEN EXCAVATING OR DRILLING PIERS AROUND OR NEAR UTILITIES. CONTRACTOR SHALL PROVIDE SAFETY TRAINING FOR THE WORKING CREW. THIS WILL INCLUDE BUT NOT BE LIMITED TO A) FALL PROTECTION B) CONFINED SPACE C) ELECTRICAL SAFETY D) TRENCHING AND EXCAVATION E) CONSTRUCTION SAFETY PROCEDURES.
9.

ALL SITE WORK SHALL BE AS INDICATED ON THE STAMPED CONSTRUCTION DRAWINGS AND PROJECT SPECIFICATIONS, LATEST APPROVED REVISION.
10.

CONTRACTOR SHALL KEEP THE SITE FREE FROM ACCUMULATING WASTE MATERIAL, DEBRIS, AND TRASH AT THE COMPLETION OF THE WORK. IF NECESSARY, RUBBISH, STUMPS, DEBRIS, STICKS, STONES AND OTHER REFUSE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF LEGALLY.
11.

ALL EXISTING INACTIVE SEWER, WATER, GAS, ELECTRIC AND OTHER UTILITIES, WHICH INTERFERE WITH THE EXECUTION OF THE WORK, SHALL BE REMOVED AND/OR CAPPED, PLUGGED OR OTHERWISE DISCONTINUED AT POINTS WHICH WILL NOT INTERFERE WITH THE EXECUTION OF THE WORK, SUBJECT TO THE APPROVAL OF CONTRACTOR, TOWER OWNER AND/OR LOCAL UTILITIES.
12.

THE CONTRACTOR SHALL PROVIDE SITE SIGNAGE IN ACCORDANCE WITH THE TECHNICAL SPECIFICATION FOR SITE SIGNAGE REQUIRED BY LOCAL JURISDICTION AND SIGNAGE REQUIRED ON INDIVIDUAL PIECES OF EQUIPMENT, ROOMS, AND SHELTERS.
13.

THE SITE SHALL BE GRADED TO CAUSE SURFACE WATER TO FLOW AWAY FROM THE CARRIER'S EQUIPMENT AND TOWER AREAS.
14.

THE SUB GRADE SHALL BE COMPACTED AND BROUGHT TO A SMOOTH UNIFORM GRADE PRIOR TO FINISHED SURFACE APPLICATION.
15.

THE AREAS OF THE OWNERS PROPERTY DISTURBED THE WORK AND NOT COVERED BY THE TOWER, EQUIPMENT OR DRIVEWAY, SHALL BE GRADED TO A UNIFORM SLOPE, AND STABILIZED TO PREVENT EROSION AS SPECIFIED ON THE CONSTRUCTION DRAWINGS AND/OR PROJECT SPECIFICATIONS.
16.

CONTRACTOR SHALL MINIMIZE DISTURBANCE TO EXISTING SITE DURING CONSTRUCTION. EROSION CONTROL MEASURES, IF REQUIRED DURING CONSTRUCTION, SHALL BE N CONFORMANCE WITH THE LOCAL GUIDELINES FOR EROSION AND SEDIMENT CONTROL.
17.

THE CONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING AND STRUCTURES. ANY DAMAGED PART SHALL BE REPAIRED AT CONTRACTOR'S EXPENSE TO THE SATISFACTION OF OWNER.
18.

CONTRACTOR SHALL LEGALLY AND PROPERLY DISPOSE OF ALL SCRAP MATERIALS SUCH AS COAXIAL CABLES AND OTHER ITEMS REMOVED FROM THE EXISTING FACILITY. ANTENNAS REMOVED SHALL BE RETURNED TO THE OWNER'S DESIGNATED LOCATION.
19.

CONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION. TRASH AND DEBRIS SHOULD BE REMOVED FROM SITE ON A DAILY BASIS.
20.

NO FILL OR EMBANKMENT MATERIAL SHALL BE PLACED ON FROZEN GROUND. FROZEN MATERIALS, SNOW OR ICE SHALL NOT BE PLACED IN ANY FILL OR EMBANKMENT.

GROUNDING NOTES:

1.

ALL GROUND ELECTRODE SYSTEMS (INCLUDING TELECOMMUNICATIONS, RADIO, LIGHTNING PROTECTION AND AC POWER GES'S) SHALL BE BONDED TOGETHER AT OR BELOW GRADE, BY TWO OR MORE COPPER BONDING CONDUCTORS IN ACCORDANCE WITH THE NEC.
2.

THE CONTRACTOR SHALL PERFORM IEEE FALL-OF-POTENTIAL RESISTANCE TO EARTH TESTING (PER IEEE 1100 AND B1) FOR GROUND ELECTRODE SYSTEMS, THE CONTRACTOR SHALL FURNISH AND INSTALL SUPPLEMENTAL GROUND ELECTRODES AS NEEDED TO ACHIEVE A TEST RESULT OF 5 OHMS OR LESS.
3.

THE CONTRACTOR IS RESPONSIBLE FOR PROPERLY SEQUENCING GROUNDING AND UNDERGROUND CONDUIT INSTALLATION AS TO PREVENT ANY LOSS OF CONTINUITY IN THE GROUNDING SYSTEM OR DAMAGE TO THE CONDUIT AND PROVIDE TESTING RESULTS.
4.

METAL CONDUIT AND TRAY SHALL BE GROUNDED AND MADE ELECTRICALLY CONTINUOUS WITH LISTED BONDING FITTINGS OR BY BONDING ACROSS THE DISCONTINUITY WITH #6 COPPER WIRE UL APPROVED GROUNDING TYPE CONDUIT CLAMPS.
5.

METAL RACEWAY SHALL NOT BE USED AS THE NEC REQUIRED EQUIPMENT GROUND CONDUCTOR. STRANDED COPPER CONDUCTORS WITH GREEN INSULATION, SIZED IN ACCORDANCE WITH THE NEC, SHALL BE FURNISHED AND INSTALLED WITH THE POWER CIRCUITS TO BTS EQUIPMENT.
6.

EACH CABINET FRAME SHALL BE DIRECTLY CONNECTED TO THE MASTER GROUND BAR WITH GREEN INSULATED SUPPLEMENTAL EQUIPMENT GROUND WIRES, #6 STRANDED COPPER OR LARGER FOR INDOOR BTS; #2 BARE SOLID TINNED COPPER FOR OUTDOOR BTS.
7.

CONNECTIONS TO THE GROUND BUS SHALL NOT BE DOUBLED UP OR STACKED BACK TO BACK. CONNECTIONS ON OPPOSITE SIDE OF THE GROUND BUS ARE PERMITTED.
8.

ALL EXTERIOR GROUND CONDUCTORS BETWEEN EQUIPMENT/GROUND BARS AND THE GROUND RING SHALL BE #2 SOLID TINNED COPPER UNLESS OTHERWISE INDICATED.
9.

ALUMINUM CONDUCTOR OR COPPER CLAD STEEL CONDUCTOR SHALL NOT BE USED FOR GROUNDING CONNECTIONS.
10.

USE OF 90° BENDS IN THE PROTECTION GROUNDING CONDUCTORS SHALL BE AVOIDED WHEN 45° BENDS CAN BE ADEQUATELY SUPPORTED.
11.

EXOTHERMIC WELDS SHALL BE USED FOR ALL GROUNDING CONNECTIONS BELOW GRADE.
12.

ALL GROUND CONNECTIONS ABOVE GRADE (INTERIOR AND EXTERIOR) SHALL BE FORMED USING HIGH PRESS CRIMPS.
13.

COMPRESSION GROUND CONNECTIONS MAY BE REPLACED BY EXOTHERMIC WELD CONNECTIONS.
14.

ICE BRIDGE BONDING CONDUCTORS SHALL BE EXOTHERMICALLY BONDED OR BOLTED TO THE BRIDGE AND THE TOWER GROUND BAR.
15.

APPROVED ANTIOXIDANT COATINGS (I.E. CONDUCTIVE GEL OR PASTE) SHALL BE USED ON ALL COMPRESSION AND BOLTED GROUND CONNECTIONS.
16.

ALL EXTERIOR GROUND CONNECTIONS SHALL BE COATED WITH A CORROSION RESISTANT MATERIAL.
17.

MISCELLANEOUS ELECTRICAL AND NON-ELECTRICAL METAL BOXES, FRAMES AND SUPPORTS SHALL BE BONDED TO THE GROUND RING, IN ACCORDANCE WITH THE NEC.
18.

BOND ALL METALLIC OBJECTS WITHIN 6FT OF MAIN GROUND RING WITH (1) #2 BARE SOLID TINNED COPPER GROUND CONDUCTOR.
19.

GROUND CONDUCTORS USED FOR THE FACILITY GROUNDING AND LIGHTNING PROTECTION SYSTEMS SHALL NOT BE ROUTED THROUGH METALLIC OBJECTS THAT FORM A RING AROUND THE CONDUCTOR, SUCH AS METALLIC CONDUITS, METAL SUPPORT CUPS OR SLEEVES THROUGH WALLS OR FLOORS. WHEN IT IS REQUIRED TO BE HOUSED IN CONDUIT TO MEET CODE REQUIREMENTS OR LOCAL CONDITIONS, NON-METALLIC MATERIAL SUCH AS PVC CONDUIT SHALL BE USED, WHERE USE OF METAL CONDUIT IS UNAVOIDABLE (I.E., NONMETALLIC CONDUIT PROHIBITED BY LOCAL CODE) THE GROUND CONDUCTOR SHALL BE BONDED TO EACH END OF THE METAL CONDUIT.
20.

ALL GROUNDS THAT TRANSITION FROM BELOW GRADE TO ABOVE GRADE MUST BE #2 BARE SOLID TINNED COPPER N 3/4" NON-METALLIC, FLEXIBLE CONDUIT FROM 24" BELOW GRADE TO WITHIN 3" TO 6" OF CAD-WELD TERMINATION POINT. THE EXPOSED END OF THE CONDUIT MUST BE SEALED WITH SILICONE CAULK. (ADD TRANSITIONING GROUND STANDARD DETAIL AS WELL).
21.

BUILDINGS WHERE THE MAIN GROUNDING CONDUCTORS ARE REQUIRED TO BE ROUTED TO GRADE, THE CONTRACTOR SHALL ROUTE TWO GROUNDING CONDUCTORS FROM THE ROOFTOP, TOWERS, AND WATER TOWERS GROUNDING RING TO THE EXISTING GROUNDING SYSTEM, THE GROUNDING CONDUCTORS SHALL NOT BE SMALLER THAN 2/0 COPPER. ROOFTOP GROUNDING RING SHALL BE BONDED TO THE EXISTING GROUNDING SYSTEM, THE BUILDING STEEL COLUMNS, LIGHTNING PROTECTION SYSTEM, AND BUILDING MAIN WATER LINE (FERROUS OR NONFERROUS METAL PIPING ONLY).

CONCRETE, FOUNDATIONS, AND REINFORCING STEEL:

1.

ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE AC 301, AC 318, ACI 336, ASTM A184, ASTM A185 AND THE DESIGN AND CONSTRUCTION SPECIFICATION FOR CAST-IN-PLACE CONCRETE.
2.

UNLESS NOTED OTHERWISE, SOIL BEARING PRESSURE USED FOR DESIGN OF SLABS AND FOUNDATIONS IS ASSUMED TO BE 1000 PSF.
3.

ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS, UNLESS NOTED OTHERWISE. NO MORE THAN 90 MINUTES SHALL PASS FROM BATCH TIME TO TIME OF PLACEMENT UNLESS APPROVED BY THE ENGINEER OF RECORD. TEMPERATURE OF CONCRETE SHALL NOT EXCEED 90 DEGREE FAHRENHEIT AT TIME OF PLACEMENT.
4.

CONCRETE EXPOSED TO FREEZE-THAW CYCLES SHALL CONTAIN AIR ENTRAINING ADMIXTURES. AMOUNT OF AIR ENTRAINMENT TO BE BASED ON SIZE OF AGGREGATE AND F3 CLASS EXPOSURE (VERY SEVERE). CEMENT USED TO BE TYPE II PORTLAND CEMENT WITH A MAXIMUM WATER-TO-CEMENT RATIO (W/C) OF 0.45.
5.

ALL STEEL REINFORCING SHALL CONFORM TO ASTM A615, ALL WELDED WIRE FABRIC (WWF) SHALL CONFORM TO ASTM A185. ALL SPLICES SHALL BE CLASS "B" TENSION SPLICES, UNLESS NOTED OTHERWISE. ALL HOOKS SHALL BE STANDARD 90° HOOKS, UNLESS NOTED OTHERWISE. YIELD STRENGTH (FY) OF STANDARD DEFORMED BARS ARE AS FOLLOW:
#4 BARS AND SMALLER.....40 KSI
#5 BARS AND LARGER.....60 KSI
6.

THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCING STEEL UNLESS SHOWN OTHERWISE ON DRAWINGS:
CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH..... 3"
CONCRETE EXPOSED TO EARTH OR WEATHER:
#6 BARS AND LARGER.....2"
#5 BARS AND SMALLER.....1-1/2"
7.

CONCRETE NOT EXPOSED TO EARTH OR WEATHER:
SLAB AND WALLS.....3/4"
BEAMS AND COLUMNS.....1-1/2"
8.

A TOOLED EDGE OR A 3/4 CHAMFER SHALL BE PROVIDED AT ALL EXPOSED EDGES OF CONCRETE, UNLESS NOTED OTHERWISE, IN ACCORDANCE WITH ACI 301 SECTION 4.2.4.

GENERAL NOTES:

1.

THESE DRAWINGS HAVE BEEN PREPARED USING STANDARDS OF PROFESSIONAL CARE AND COMPLETENESS NORMALLY EXERCISED UNDER SIMILAR CIRCUMSTANCES BY REPUTABLE ENGINEERS IN THIS OR SIMILAR LOCALITIES. ITS ASSUMED THAT THE WORK DEPICTED WILL BE PERFORMED BY AN EXPERIENCED CONTRACTOR AND/OR WORKPEOPLE WHO HAVE A WORKING KNOWLEDGE OF THE APPLICABLE CODE STANDARDS AND REQUIREMENTS AND OF INDUSTRY ACCEPTED STANDARD GOOD PRACTICE. AS NOT EVERY CONDITION OR ELEMENT IS (OR CAN BE) EXPLICITLY SHOWN ON THESE DRAWINGS, THE CONTRACTOR SHALL USE INDUSTRY ACCEPTED STANDARD GOOD PRACTICE FOR MISCELLANEOUS WORK NOT EXPLICITLY SHOWN.
2.

THESE DRAWINGS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE MEANS OR METHODS OF CONSTRUCTION. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY FOR PROTECTION OF LIFE AND PROPERTY DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE, BUT NOT LIMITED TO, BRACING, FRAMEWORK, SHORING, ETC. SITE VISITS BY THE ENGINEER OR HIS REPRESENTATIVE WILL NOT INCLUDE INSPECTION OF THESE ITEMS AND IS FOR STRUCTURAL OBSERVATION OF THE FINISHED STRUCTURE ONLY.
3.

NOTES AND DETAILS IN THE CONSTRUCTION DRAWINGS SHALL TAKE PRECEDENCE OVER GENERAL NOTES AND TYPICAL DETAILS. WHERE NO DETAILS ARE SHOWN, CONSTRUCTION SHALL CONFORM TO SIMILAR WORK ON THE PROJECT, AND/OR AS PROVIDED FOR IN THE CONTRACT DOCUMENTS. WHERE DISCREPANCIES OCCUR BETWEEN PLANS, DETAILS, GENERAL NOTES, AND SPECIFICATIONS, THE GREATER, MORE STRICT REQUIREMENTS, SHALL GOVERN. IF FURTHER CLARIFICATION IS REQUIRED CONTACT THE ENGINEER OF RECORD.
4.

SUBSTANTIAL EFFORT HAS BEEN MADE TO PROVIDE ACCURATE DIMENSIONS AND MEASUREMENTS ON THE DRAWINGS TO ASSIST IN THE FABRICATION AND/OR PLACEMENT OF CONSTRUCTION ELEMENTS BUT IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO FIELD VERIFY THE DIMENSIONS, MEASUREMENTS, AND/OR CLEARANCES SHOWN IN THE CONSTRUCTION DRAWINGS PRIOR TO FABRICATION OR CUTTING OF ANY NEW OR EXISTING CONSTRUCTION ELEMENTS.
5.

IF ITS DETERMINED THAT THERE ARE DISCREPANCIES AND/OR CONFLICTS WITH THE CONSTRUCTION DRAWINGS THE ENGINEER OF RECORD IS TO BE NOTIFIED AS SOON AS POSSIBLE.
6.

PRIOR TO THE SUBMISSION OF BIDS, THE BIDDING CONTRACTOR SHALL VISIT THE CELL SITE TO FAMILIARIZE WITH THE EXISTING CONDITIONS AND TO CONFIRM THAT THE WORK CAN BE ACCOMPLISHED AS SHOWN ON THE CONSTRUCTION DRAWINGS. ANY DISCREPANCY FOUND SHALL BE BROUGHT TO THE ATTENTION OF VERIZON WIRELESS AND THE TOWER OWNER.
7.

ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS AND ORDINANCES. CONTRACTOR SHALL ISSUE ALL APPROPRIATE NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF THE WORK. ALL WORK CARRIED OUT SHALL COMPLY WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND LOCAL JURISDICTIONAL CODES, ORDINANCES AND APPLICABLE REGULATIONS.
8.

UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS. THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.
9.

IF THE SPECIFIED EQUIPMENT CAN NOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE CONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION FOR APPROVAL BY THE CARRIER AND TOWER OWNER PRIOR TO PROCEEDING WITH ANY SUCH CHANGE OF INSTALLATION.
10.

CONTRACTOR IS TO PERFORM A SITE INVESTIGATION AND IS TO DETERMINE THE BEST ROUTING OF ALL CONDUITS FOR POWER, TELCO AND FOR GROUNDING CABLES AS SHOWN IN THE POWER, TELCO, AND GROUNDING PLAN.
11.

THE CONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING AND STRUCTURES. ANY DAMAGED PART SHALL BE REPAIRED AT CONTRACTOR'S EXPENSE TO THE SATISFACTION OF THE TOWER OWNER.
12.

CONTRACTOR SHALL LEGALLY AND PROPERLY DISPOSE OF ALL SCRAP MATERIALS SUCH AS COAXIAL CABLES AND OTHER ITEMS REMOVED FROM THE EXISTING FACILITY. ANTENNAS REMOVED SHALL BE RETURNED TO THE OWNER'S DESIGNATED LOCATION.
13.

CONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION. TRASH AND DEBRIS SHOULD BE REMOVED FROM SITE ON A DAILY BASIS.

ENGINEER



NB+C ENGINEERING SERVICES, LLC.
120 EASTSHORE DRIVE, SUITE 300
GLEN ALLEN, VA 23059
(804) 548-4079

APPLICANT



1831 RADY COURT
RICHMOND, VA 23222

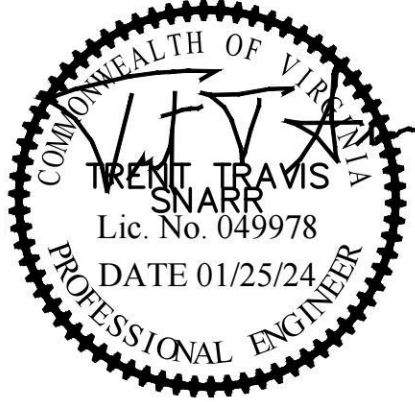
SITE INFORMATION

COLHURST
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1	01/25/24	REVISED RFDS	AT
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REV	DATE	DESCRIPTION	BY

PROFESSIONAL STAMP



ENGINEER

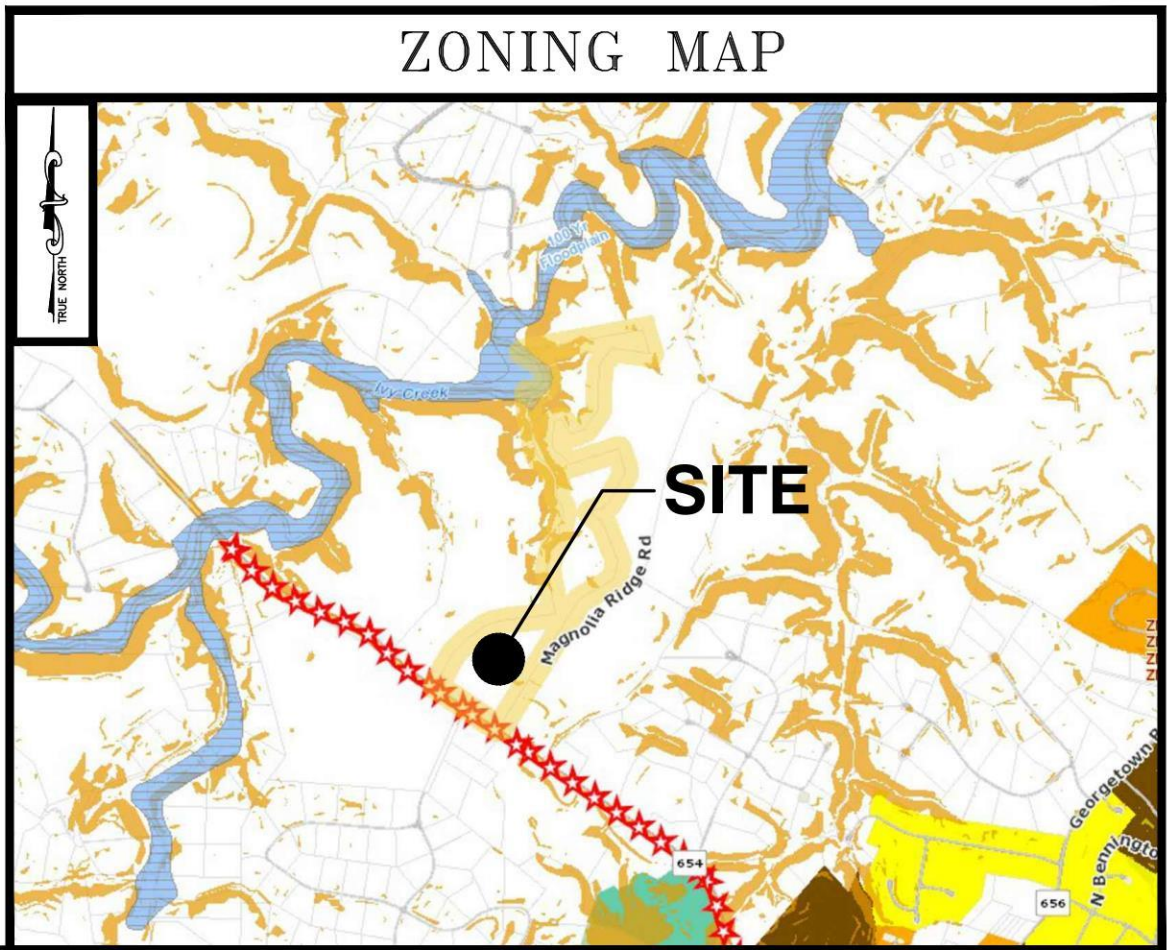
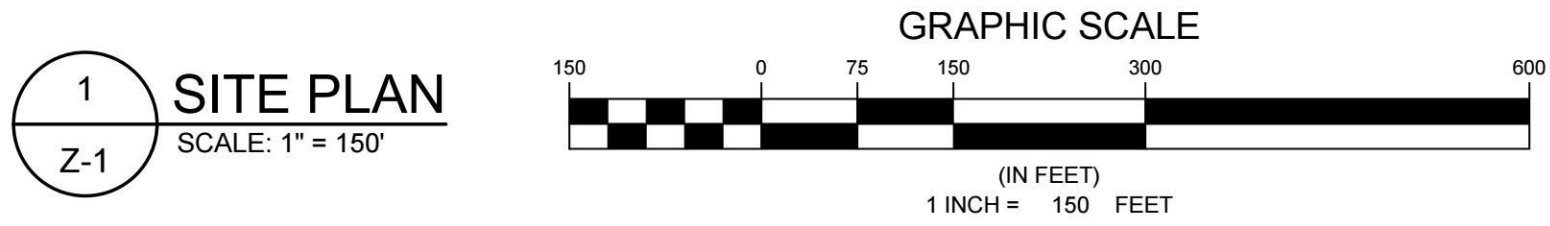
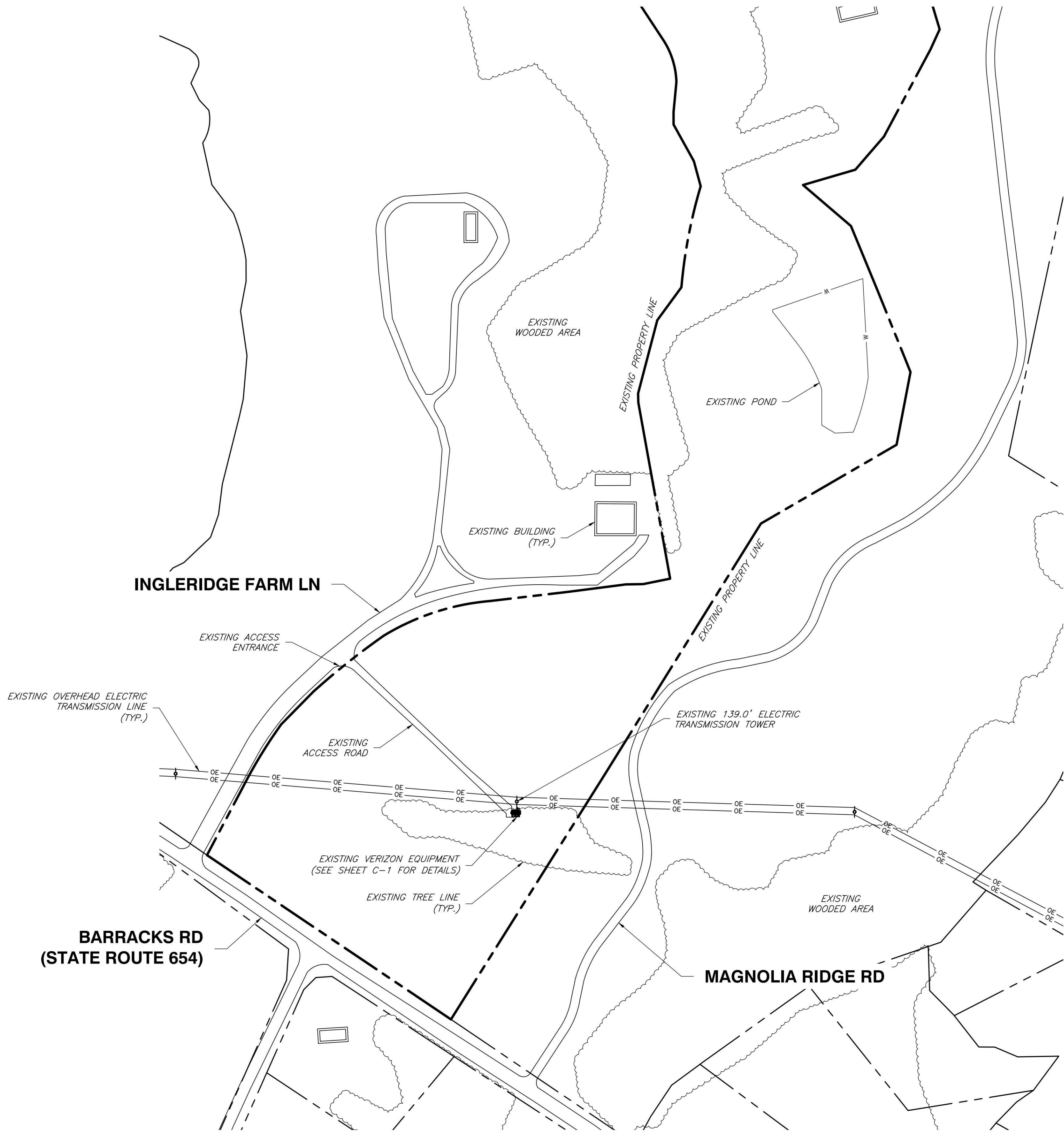
TRENT T. SNARR, P.E.
VA PROFESSIONAL ENGINEER LIC. #49978

SHEET TITLE

GENERAL NOTES

SHEET NUMBER

T-2



GENERAL NOTES

1. THIS PLAN IS SUBJECT TO ALL EASEMENTS AND RESTRICTIONS OF RECORD.
2. NO SIGNIFICANT NOISE, SMOKE, DUST, OR ODOR WILL RESULT FROM THIS FACILITY.
3. THE FACILITY IS UNMANNED AND NOT INTENDED FOR HUMAN HABITATION. THERE IS NO HANDICAP ACCESS REQUIRED.
4. THE FACILITY IS UNMANNED AND DOES NOT REQUIRE POTABLE WATER OR SANITARY SERVICE.

LEGEND	
	PROPERTY LINE - SUBJECT PARCEL
	PROPERTY LINE - ABUTTERS
	EXISTING ROAD
	EXISTING FENCE
	PROPOSED EASEMENT
	PROPOSED LEASE AREA
	EXISTING EASEMENT
	PROPOSED FENCE
	EXISTING BUILDING

ENGINEER

APPLICANT

SITE INFORMATION

DESIGN RECORD

PROFESSIONAL STAMP

ENGINEER

SHEET TITLE

SHEET NUMBER

NB+C
TOTALLY COMMITTED.

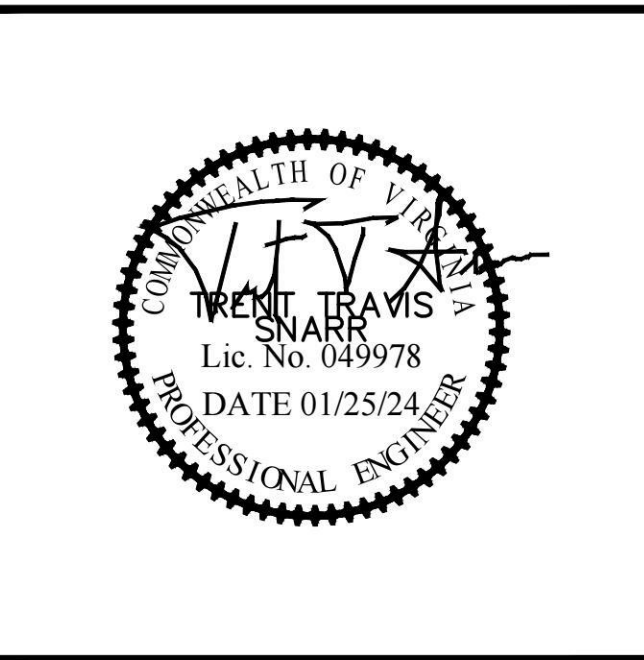
NB+C ENGINEERING SERVICES, LLC.
120 EASTSHORE DRIVE, SUITE 300
GLEN ALLEN, VA 23059
(804) 548-4079

verizon

1831 RADY COURT
RICHMOND, VA 23222

COLHURST
5G LSUB6 - CARRIER ADD
NB+C PROJ. #100352
1319 INGLERIDGE FARM LANE
CHARLOTTESVILLE, VA 22901
ALBEMARLE COUNTY

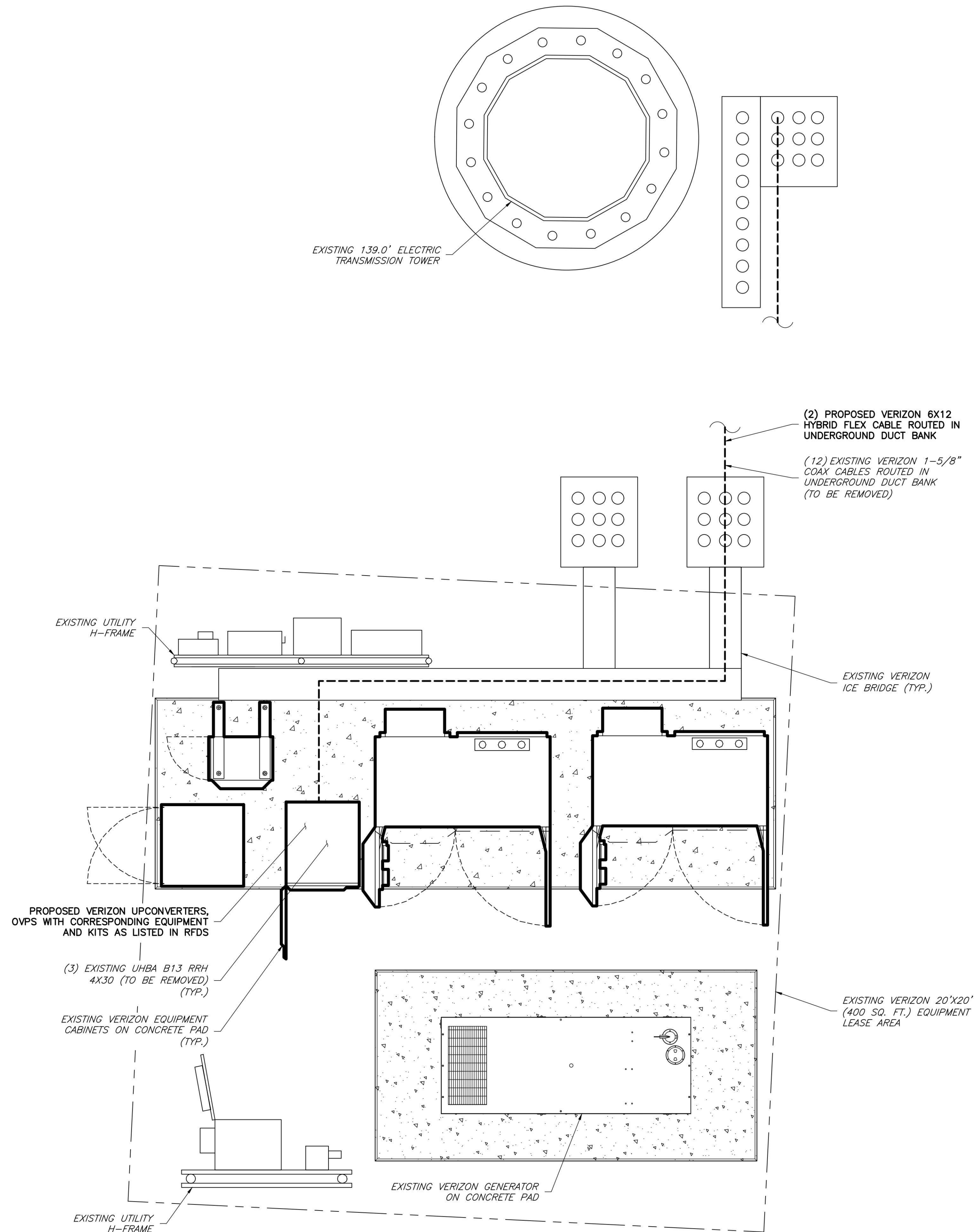
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1	01/25/24	REVISED RFDS	AT
0	07/11/23	FINALS	KLB
A	05/25/23	PRELIMINARY ZDS	AT
REV	DATE	DESCRIPTION	BY



TRENT T. SNARR, P.E.
VA PROFESSIONAL ENGINEER LIC. #49978

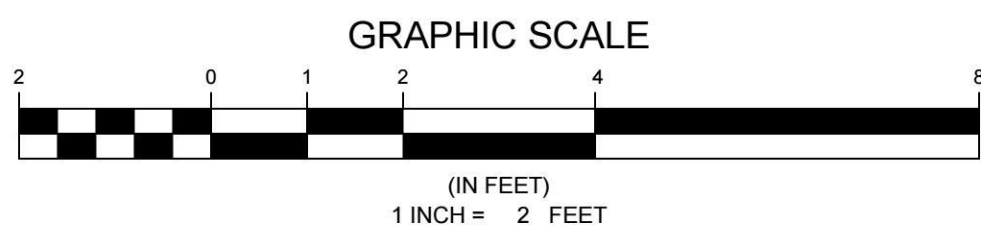
SITE PLAN

Z-1



1
C-1

COMPOUND PLAN
SCALE: 1/2" = 1'



ENGINEER

NB+CTM
TOTALLY COMMITTED.
NB+C ENGINEERING SERVICES, LLC.
120 EASTSHORE DRIVE, SUITE 300
GLEN ALLEN, VA 23059
(804) 548-4079

APPLICANT

verizon[✓]
1831 RADY COURT
RICHMOND, VA 23222

SITE INFORMATION

COLHURST
5G LSUB6 - CARRIER ADD
NB+C PROJ. #100352
1319 INGLERIDGE FARM LANE
CHARLOTTESVILLE, VA 22901
ALBEMARLE COUNTY

DESIGN RECORD

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PROFESSIONAL STAMP



ENGINEER

TRENT T. SNARR, P.E.
VA PROFESSIONAL ENGINEER LIC. #49978

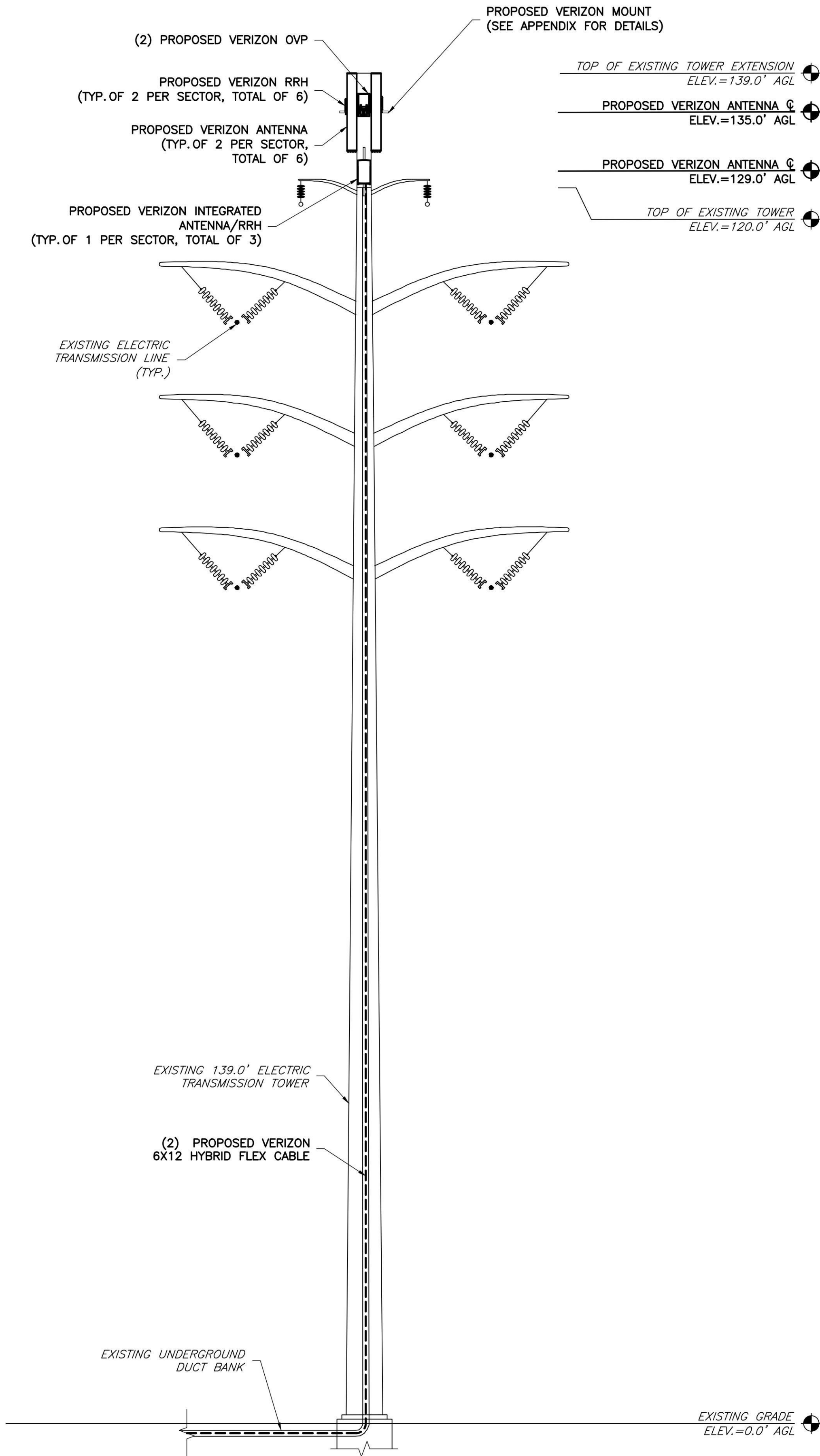
SHEET TITLE

**COMPOUND
PLAN**

SHEET NUMBER

C-1

STRUCTURAL NOTES:
1. THE PE STRUCTURAL ANALYSIS OF THE EXISTING STRUCTURE WITH THE EXISTING & PROPOSED LOADS WAS PERFORMED BY MESA ASSOCIATES, INC., DATED 12/14/2023.
2. POST-MODIFICATION INSPECTION (PMI) REQUIRED ON ALL SITES. REFER TO THE MOUNT ANALYSIS PREPARED BY TOWER ENGINEERING SOLUTIONS, LLC DATED 12/26/2023 FOR ADDITIONAL DETAILS.
3. REPLACEMENT OF THE EXISTING MOUNT IS REQUIRED BEFORE ANY INSTALL CAN OCCUR, PLEASE REFER TO THE APPENDIX SHEET AND THE MOUNT ANALYSIS REPORT PROVIDED BY TOWER ENGINEERING SOLUTIONS, LLC DATED, 12/26/2023.



GENERAL NOTES

1. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE CODES ORDINANCES, LAWS AND REGULATIONS OF ALL MUNICIPALITIES, UTILITIES COMPANY OR OTHER PUBLIC AUTHORITIES.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS AND INSPECTIONS THAT MAY BE REQUIRED BY ANY FEDERAL, STATE, COUNTY OR MUNICIPAL AUTHORITIES.
3. 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. MINOR OMISSIONS OR ERRORS IN THE BID DOCUMENTS SHALL NOT RELIEVE THE CONTRACTOR FROM RESPONSIBILITY FOR THE OVERALL INTENT OF THESE DRAWINGS.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL EXISTING SITE IMPROVEMENTS PRIOR TO COMMENCING CONSTRUCTION. THE CONTRACTOR SHALL REPAIR ANY DAMAGE CAUSED AS A RESULT OF CONSTRUCTION OF THIS FACILITY.
5. 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 THE MANUFACTURER'S RECOMMENDATIONS.
6. THE CONTRACTOR SHALL VISIT THE PROJECT SITE PRIOR TO SUBMITTING A BID TO VERIFY THAT THE PROJECT CAN BE CONSTRUCTED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
7. CONTRACTOR SHALL VERIFY ANTENNA ELEVATION AND AZIMUTH WITH RF ENGINEERING PRIOR TO INSTALLATION.
8. TRANSMITTER EQUIPMENT AND ANTENNAS ARE DESIGNED TO MEET ANSI/TIA 222-H REQUIREMENTS.
9. ALL STRUCTURAL ELEMENTS SHALL BE HOT DIPPED GALVANIZED STEEL.
10. CONTRACTOR SHALL MAKE A UTILITY "ONE CALL" TO LOCATE ALL UTILITIES PRIOR TO EXCAVATING.
11. IF ANY UNDERGROUND UTILITIES OR STRUCTURES EXIST BENEATH THE PROJECT AREA, CONTRACTOR MUST LOCATE IT AND CONTACT THE APPLICANT & THE OWNER'S REPRESENTATIVE.
12. OCCUPANCY IS LIMITED TO PERIODIC MAINTENANCE AND INSPECTION BY TECHNICIANS APPROXIMATELY 2 TIMES PER MONTH.
13. PRIOR TO THE INSTALLATION OF THE PROPOSED EQUIPMENT OR MODIFICATION OF THE EXISTING STRUCTURE, A STRUCTURAL ANALYSIS SHALL BE PERFORMED BY THE OWNER'S AGENT TO CERTIFY THAT THE EXISTING/PROPOSED COMMUNICATION STRUCTURE AND COMPONENTS ARE STRUCTURALLY ADEQUATE TO SUPPORT ALL EXISTING AND PROPOSED ANTENNAS, COAXIAL CABLES AND OTHER APPURTENANCES.
14. PROPERTY LINE INFORMATION WAS PREPARED USING DEEDS, TAX MAPS, AND PLANS OF RECORD AND SHOULD NOT BE CONSTRUED AS AN ACCURATE BOUNDARY SURVEY.
15. THIS PLAN IS SUBJECT TO ALL EASEMENTS AND RESTRICTIONS OF RECORD.
16. THE PROPOSED FACILITY WILL CAUSE ONLY A "DE MINIMIS" INCREASE IN STORMWATER RUNOFF. THEREFORE, NO DRAINAGE STRUCTURES ARE PROPOSED.
17. NO SIGNIFICANT NOISE, SMOKE, DUST, OR ODOR WILL RESULT FROM THIS FACILITY.
18. THE FACILITY IS UNMANNED AND NOT INTENDED FOR HUMAN HABITATION (NO HANDICAP ACCESS REQUIRED).
19. THE FACILITY IS UNMANNED AND DOES NOT REQUIRE POTABLE WATER OR SANITARY SERVICE.
20. POWER TO THE FACILITY WILL BE MONITORED BY A SEPARATE METER.

ENGINEER

APPLICANT

SITE INFORMATION

DESIGN RECORD

PROFESSIONAL STAMP

ENGINEER

SHEET TITLE

SHEET NUMBER

NB+C
TOTALLY COMMITTED.

NB+C ENGINEERING SERVICES, LLC.
120 EASTSHORE DRIVE, SUITE 300
GLEN ALLEN, VA 23059
(804) 548-4079

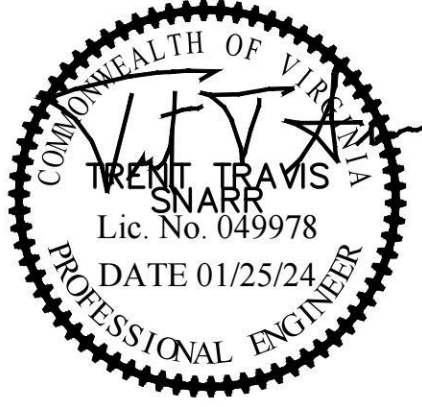
verizon

1831 RADY COURT
RICHMOND, VA 23222

COLHURST
5G LSUB6 - CARRIER ADD
NB+C PROJ. #100352
1319 INGLERIDGE FARM LANE
CHARLOTTESVILLE, VA 22901
ALBEMARLE COUNTY

REVISIONS

REV	DATE	DESCRIPTION	BY
1	01/25/24	REVISED RFDS	AT
0	07/11/23	FINALS	KLB
A	05/25/23	PRELIMINARY ZDS	AT



TRENT T. SNARR, P.E.
VA PROFESSIONAL ENGINEER LIC. #49978

ELEVATION

C-2

STRUCTURAL NOTES:
1. THE PE STRUCTURAL ANALYSIS OF THE EXISTING STRUCTURE WITH THE EXISTING & PROPOSED LOADS WAS PERFORMED BY MESA ASSOCIATES, INC., DATED 12/14/2023.
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3. REPLACEMENT OF THE EXISTING MOUNT IS REQUIRED BEFORE ANY INSTALL CAN OCCUR, PLEASE REFER TO THE APPENDIX SHEET AND THE MOUNT ANALYSIS REPORT PROVIDED BY TOWER ENGINEERING SOLUTIONS, LLC DATED, 12/26/2023.

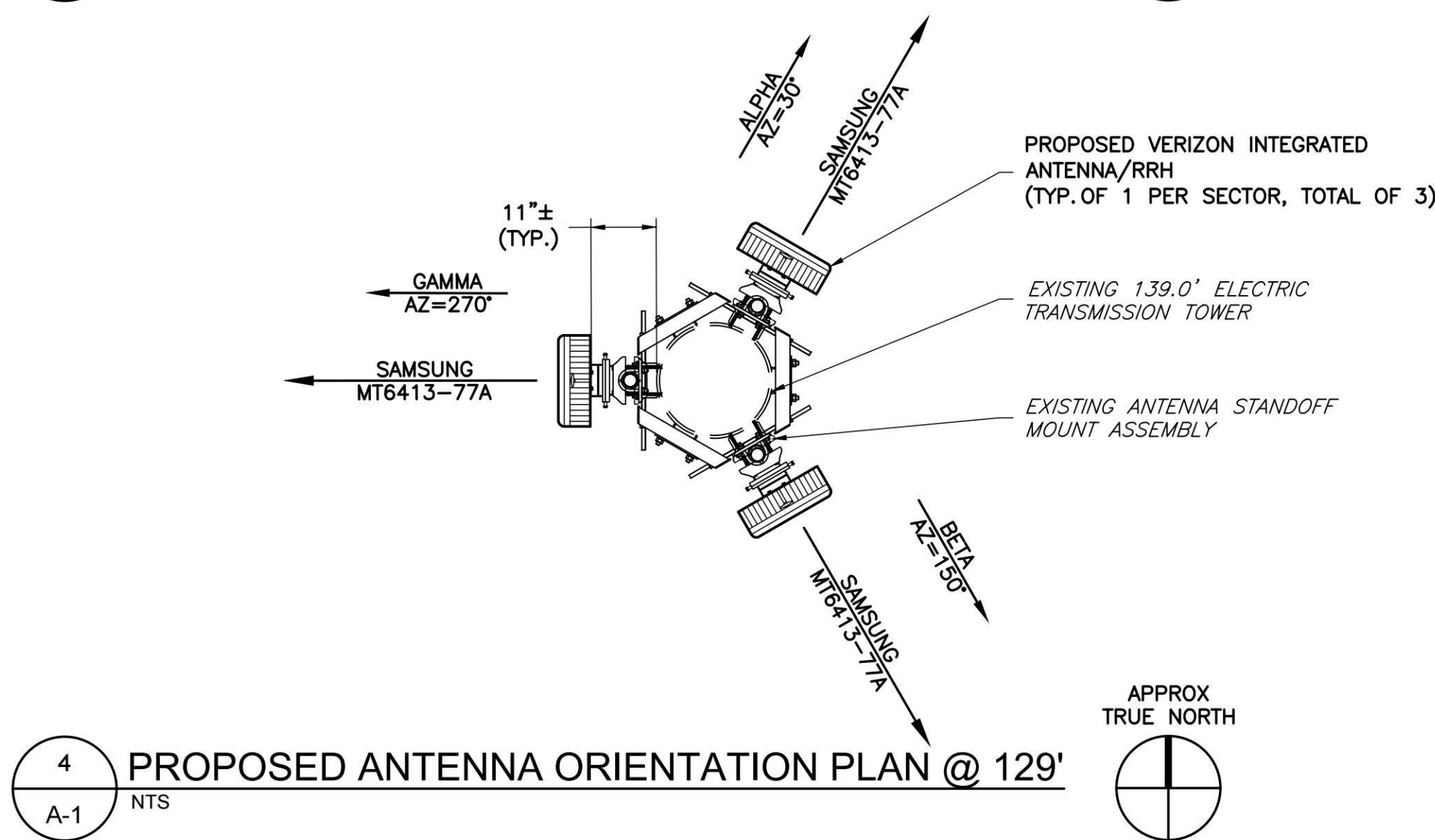
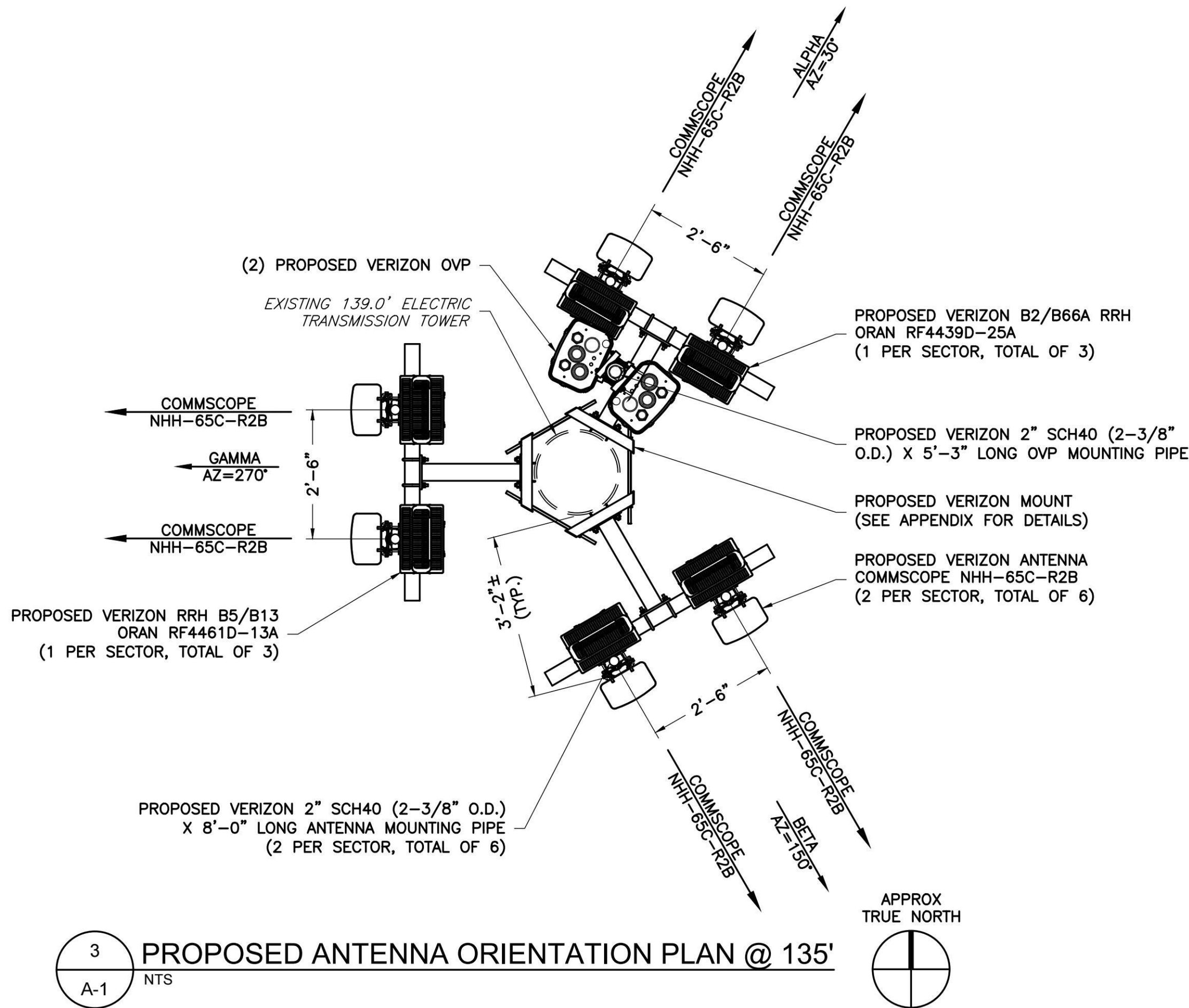
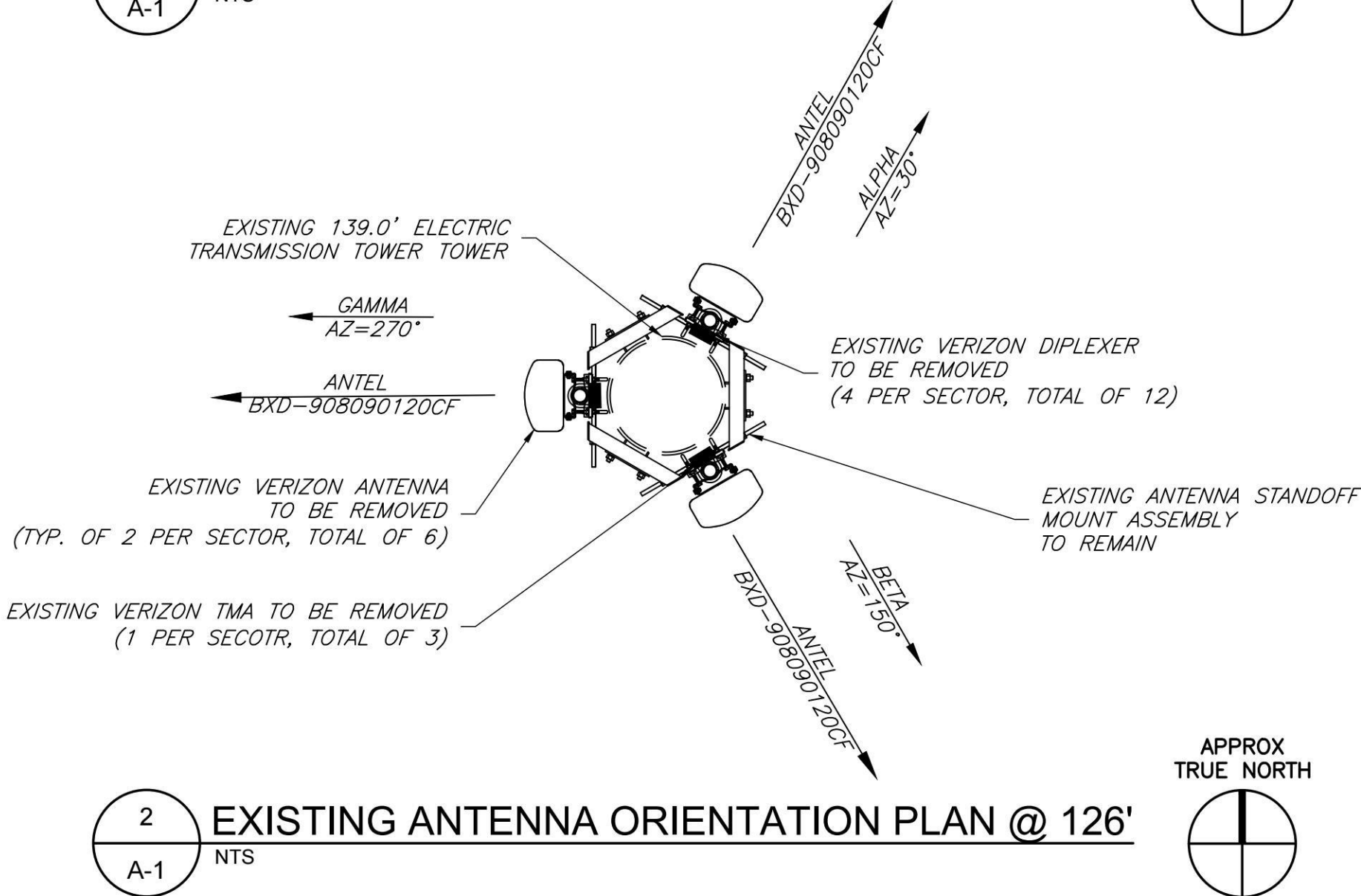
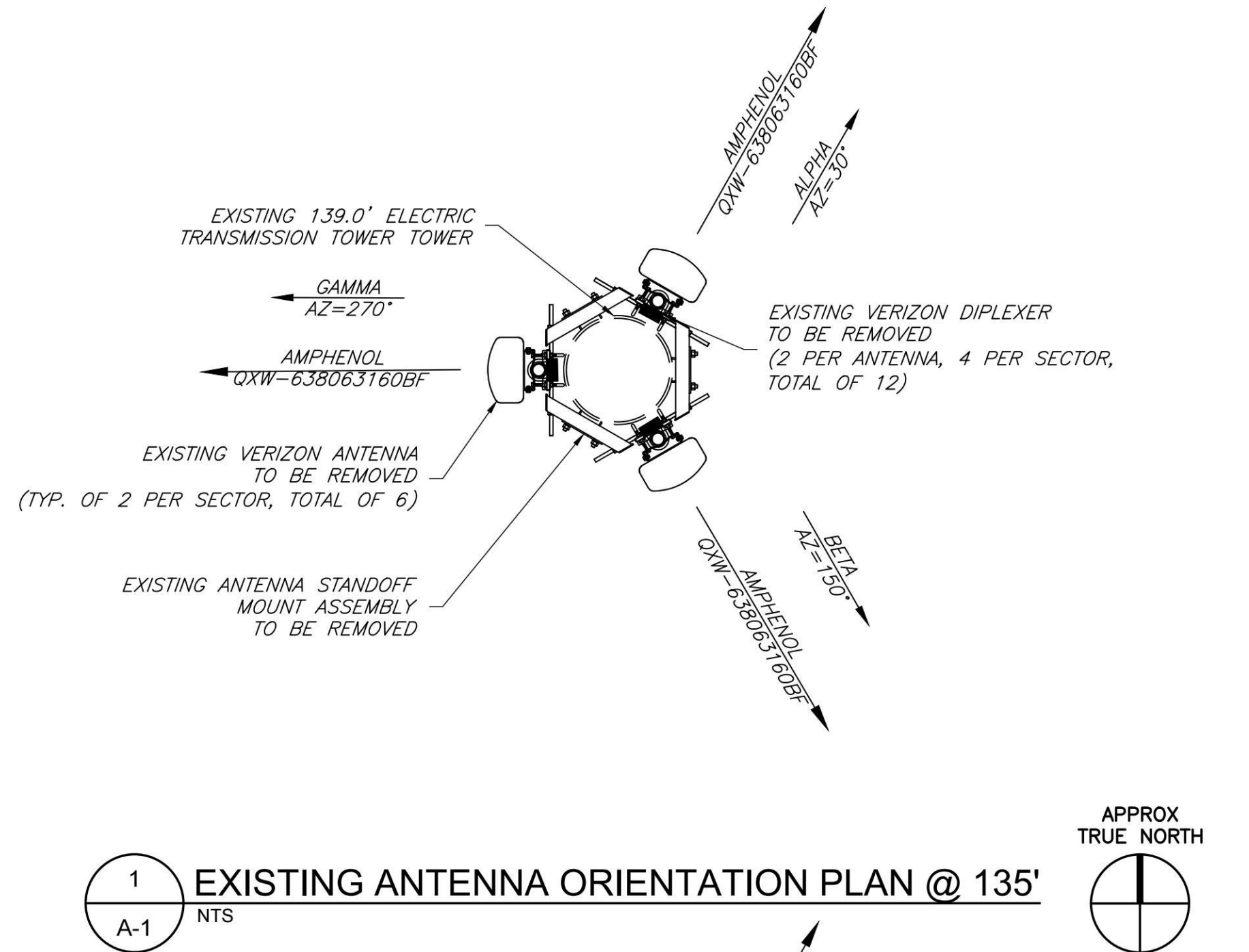
PROPOSED ANTENNA MODEL —
NHH-65C-R2B — 96.0"x11.9"x7.1" —
51.6 LBS. — 1142.4 SQ. IN.

PROPOSED INTEGRATED ANTENNA MODEL —
MT6413-77A — 28.9"x15.75"x5.51" —
57.32 LBS. — 455.17 SQ. IN.

ANTENNA INFORMATION CHART

SECTOR	STATUS	ANTENNA MANUFACTURER	ANTENNA MODEL	RAD CENTER	AZIMUTH	MECHANICAL DOWN TILT	ELECTRICAL DOWN TILT	RRH QUANTITY & MODEL
A1	PROPOSED	COMMSCOPE	NHH-65C-R2B	135.0'	30°	0°	SEE RFDS	(1) SAMSUNG B5/B13 RRH ORAN RF4461D-13A
A2	PROPOSED	COMMSCOPE	NHH-65C-R2B	135.0'	30°	0°	SEE RFDS	(1) SAMSUNG B2/B66A RRH ORAN RF4439D-25A
A3	PROPOSED	SAMSUNG	INTEGRATED ANTENNA W/ RRH	129.0'	30°	0°	SEE RFDS	(1) SAMSUNG MT6413-77A
B1	PROPOSED	COMMSCOPE	NHH-65C-R2B	135.0'	150°	0°	SEE RFDS	(1) SAMSUNG B5/B13 RRH ORAN RF4461D-13A
B2	PROPOSED	COMMSCOPE	NHH-65C-R2B	135.0'	150°	0°	SEE RFDS	(1) SAMSUNG B2/B66A RRH ORAN RF4439D-25A
B3	PROPOSED	SAMSUNG	INTEGRATED ANTENNA W/ RRH	129.0'	150°	0°	SEE RFDS	(1) SAMSUNG MT6413-77A
C1	PROPOSED	COMMSCOPE	NHH-65C-R2B	135.0'	270°	0°	SEE RFDS	(1) SAMSUNG B5/B13 RRH ORAN RF4461D-13A
C2	PROPOSED	COMMSCOPE	NHH-65C-R2B	135.0'	270°	0°	SEE RFDS	(1) SAMSUNG B2/B66A RRH ORAN RF4439D-25A
C3	PROPOSED	SAMSUNG	INTEGRATED ANTENNA W/ RRH	129.0'	270°	0°	SEE RFDS	(1) SAMSUNG MT6413-77A

NOTES:
1. CONTRACTOR TO VERIFY PROPOSED ANTENNA INFORMATION IS THE MOST CURRENT DATA AT TIME OF CONSTRUCTION.
2. CONTRACTOR TO CONFIRM CABLE LENGTHS PRIOR TO CONSTRUCTION.
3. CONTRACTOR TO VERIFY ALL PROPOSED AND EXISTING ANTENNA AND CABLES WERE CONSIDERED AND PASSED A STRUCTURAL ANALYSIS PERFORMED BY A LICENSED ENGINEER PRIOR TO INSTALLATION.



ENGINEER

APPLICANT

SITE INFORMATION

DESIGN RECORD

PROFESSIONAL STAMP

ENGINEER

SHEET TITLE

SHEET NUMBER

NB+C
TOTALLY COMMITTED.

NB+C ENGINEERING SERVICES, LLC.
120 EASTSHORE DRIVE, SUITE 300
GLEN ALLEN, VA 23059
(804) 548-4079

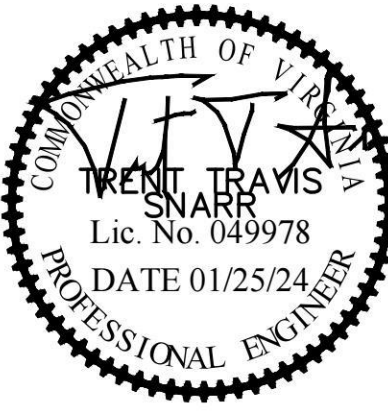
verizon

1831 RADY COURT
RICHMOND, VA 23222

COLHURST
5G LSUB6 - CARRIER ADD
NB+C PROJ. #100352
1319 INGLERIDGE FARM LANE
CHARLOTTESVILLE, VA 22901
ALBEMARLE COUNTY

REVISIONS

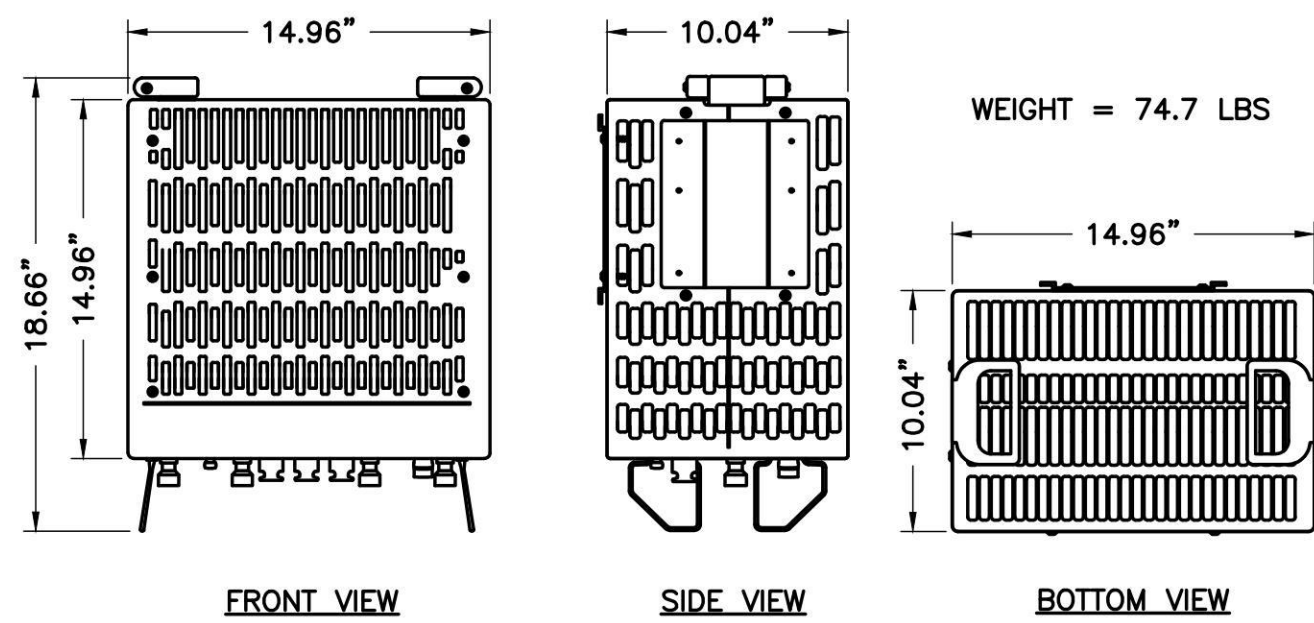
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0	07/11/23	FINALS	KLB
A	05/25/23	PRELIMINARY ZDS	AT



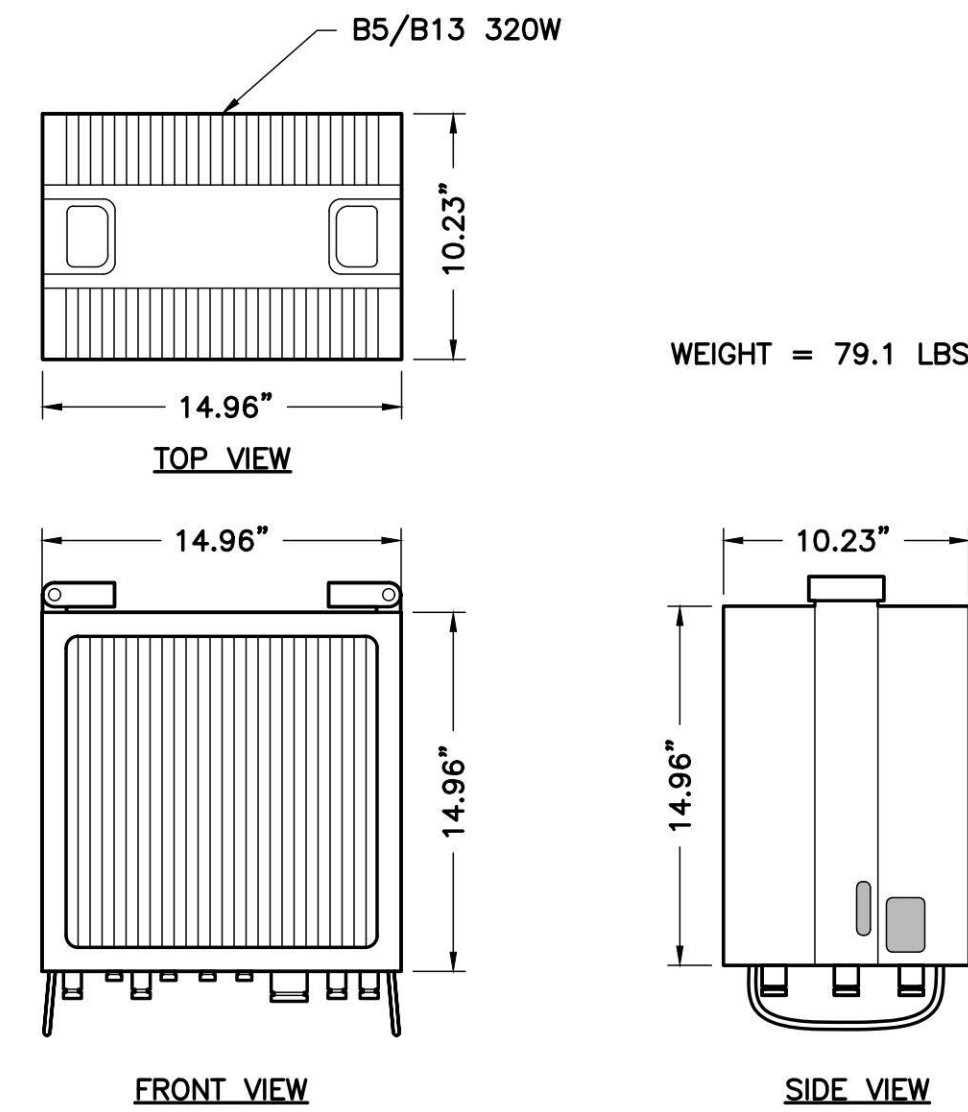
TRENT T. SNARR, P.E.
VA PROFESSIONAL ENGINEER LIC. #49978

EQUIPMENT SCHEDULE

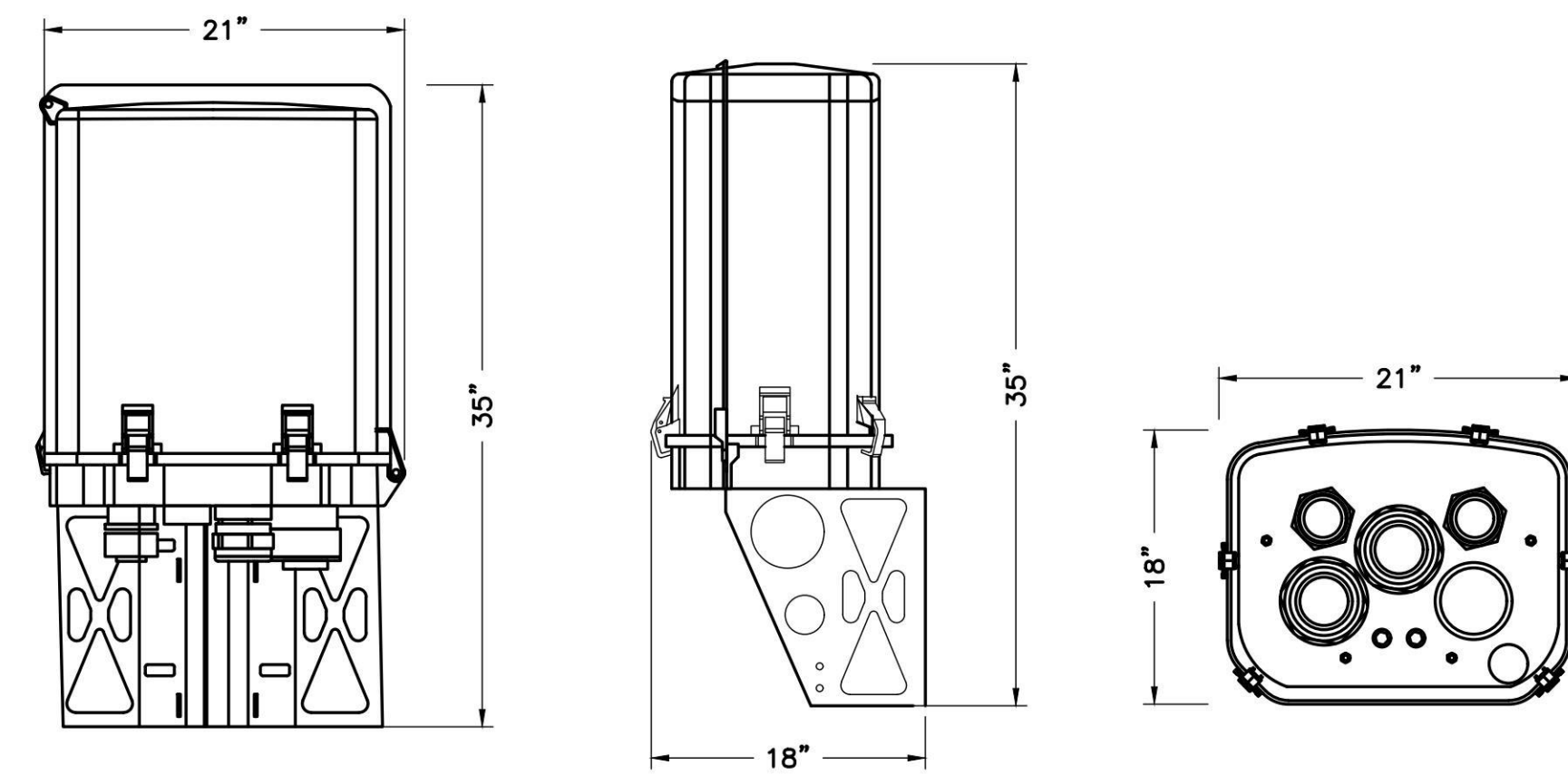
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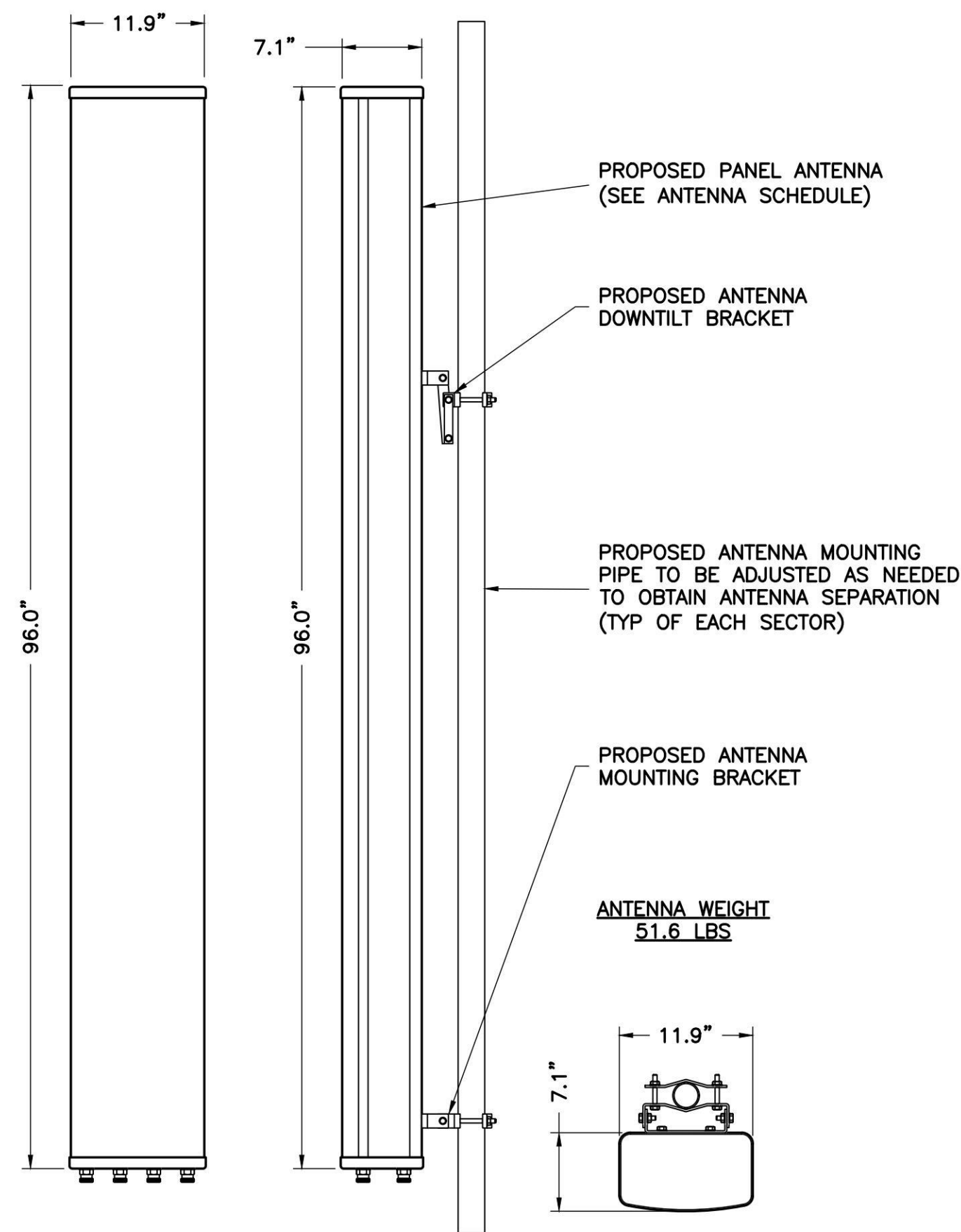
1 SAMSUNG B2/B66A RRH ORAN RF4439d-25A
A-2 NTS



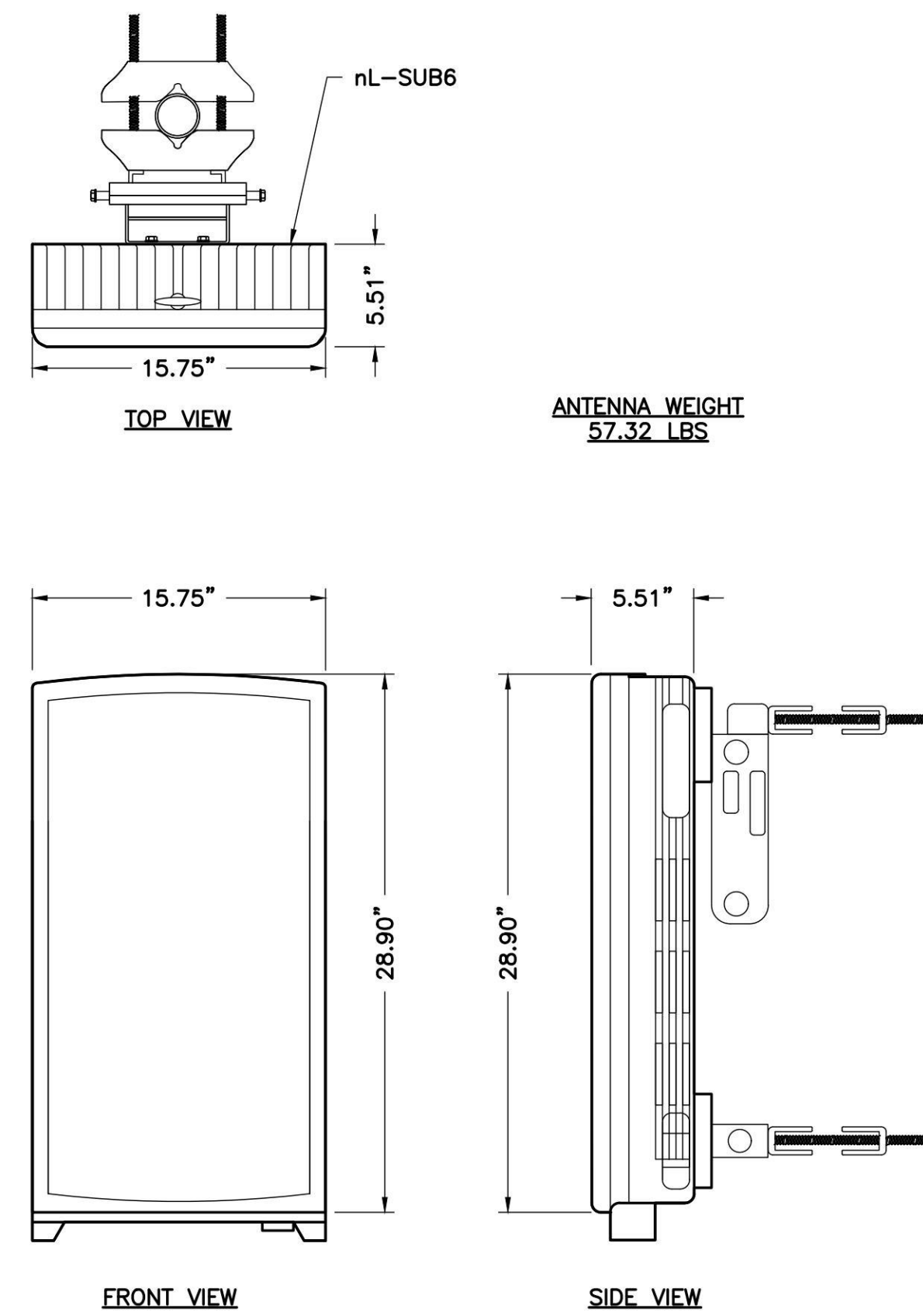
2 B5/B13 RF4461D-13A RRH (REMOTE RADIO HEAD)
A-2 NTS



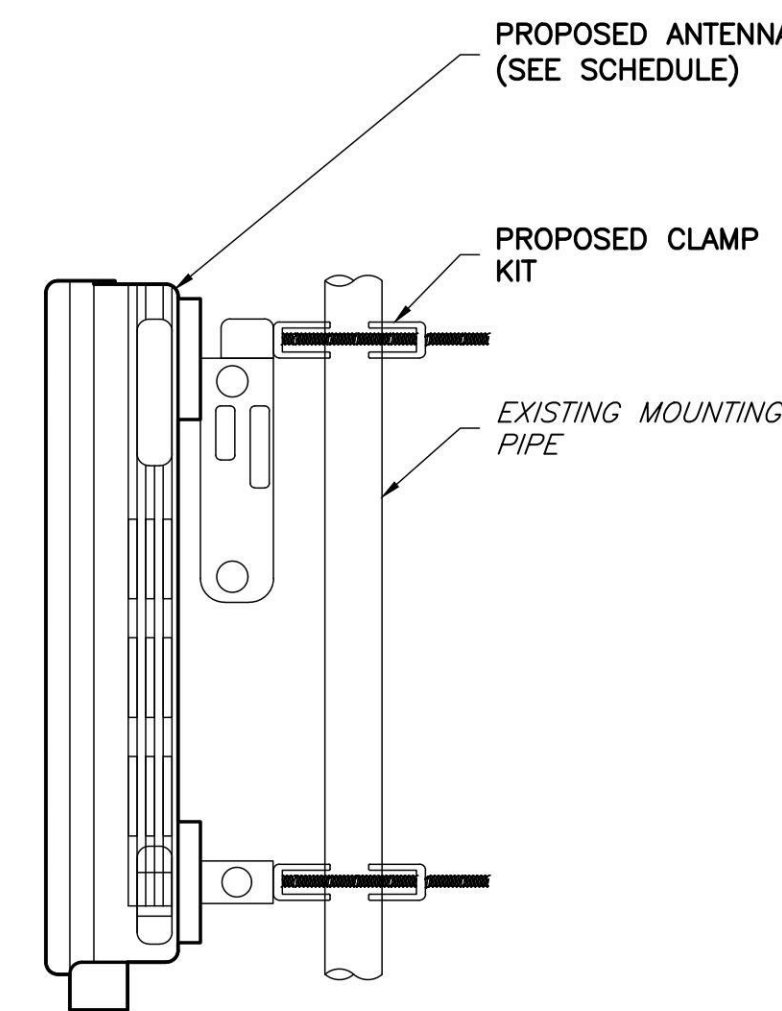
3 COMMSCOPE RCMD-6627-PF-48
A-2 NTS



4 COMMSCOPE NHH-65C-R2B
A-2 NTS



5 MT6413-77A INTEGRATED ANTENNA
A-2 NTS



6 ANTENNA MOUNTING DETAILS
A-2 NTS

ENGINEER

NB+C
TOTALLY COMMITTED.
NB+C ENGINEERING SERVICES, LLC.
120 EASTSHORE DRIVE, SUITE 300
GLEN ALLEN, VA 23059
(804) 548-4079

APPLICANT

verizon
1831 RADY COURT
RICHMOND, VA 23222

SITE INFORMATION

COLHURST
5G LSUB6 - CARRIER ADD
NB+C PROJ. #100352
1319 INGLERIDGE FARM LANE
CHARLOTTESVILLE, VA 22901
ALBEMARLE COUNTY

DESIGN RECORD

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0	07/11/23	FINALS	KLB	
A	05/25/23	PRELIMINARY ZDS	AT	

PROFESSIONAL STAMP



ENGINEER

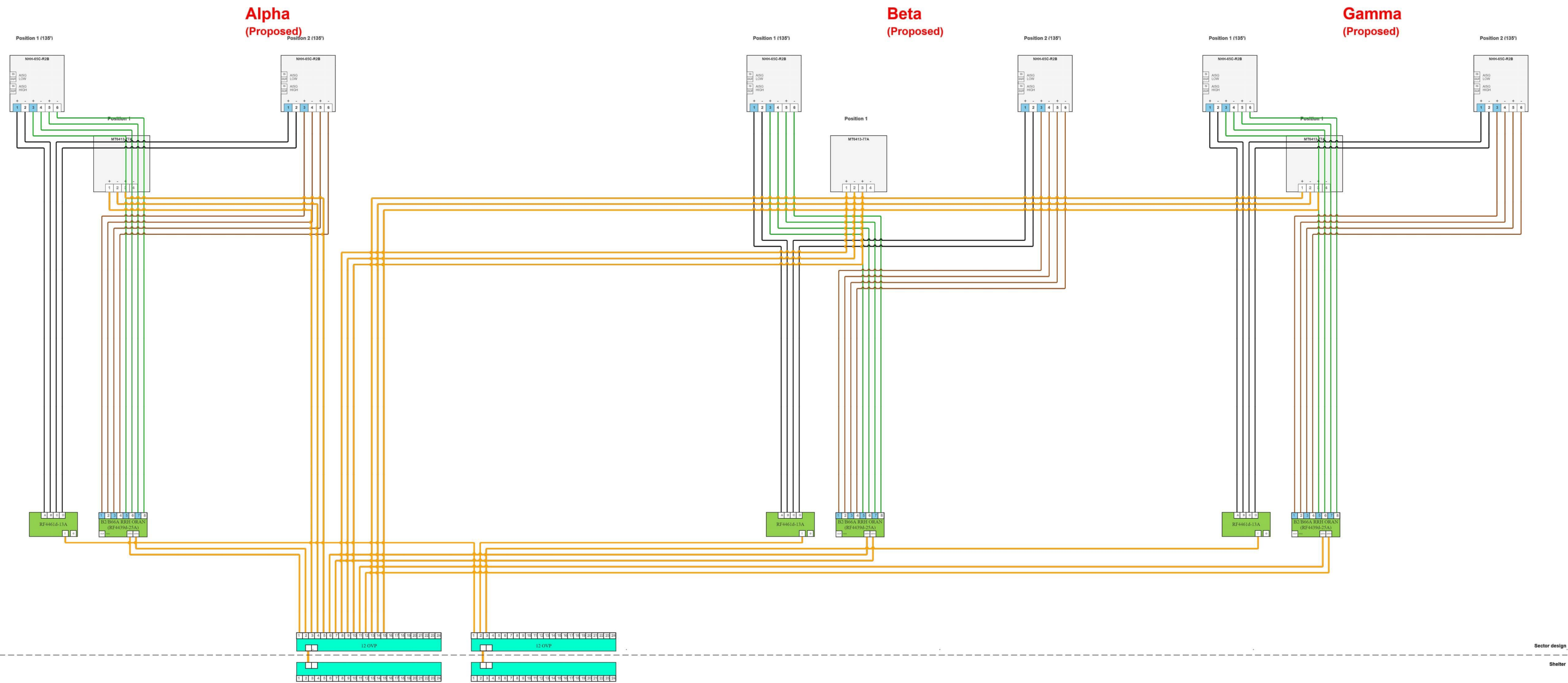
TRENT T. SNARR, P.E.
VA PROFESSIONAL ENGINEER LIC. #49978

SHEET TITLE




**EQUIPMENT
DETAILS**

SHEET NUMBER

A-2

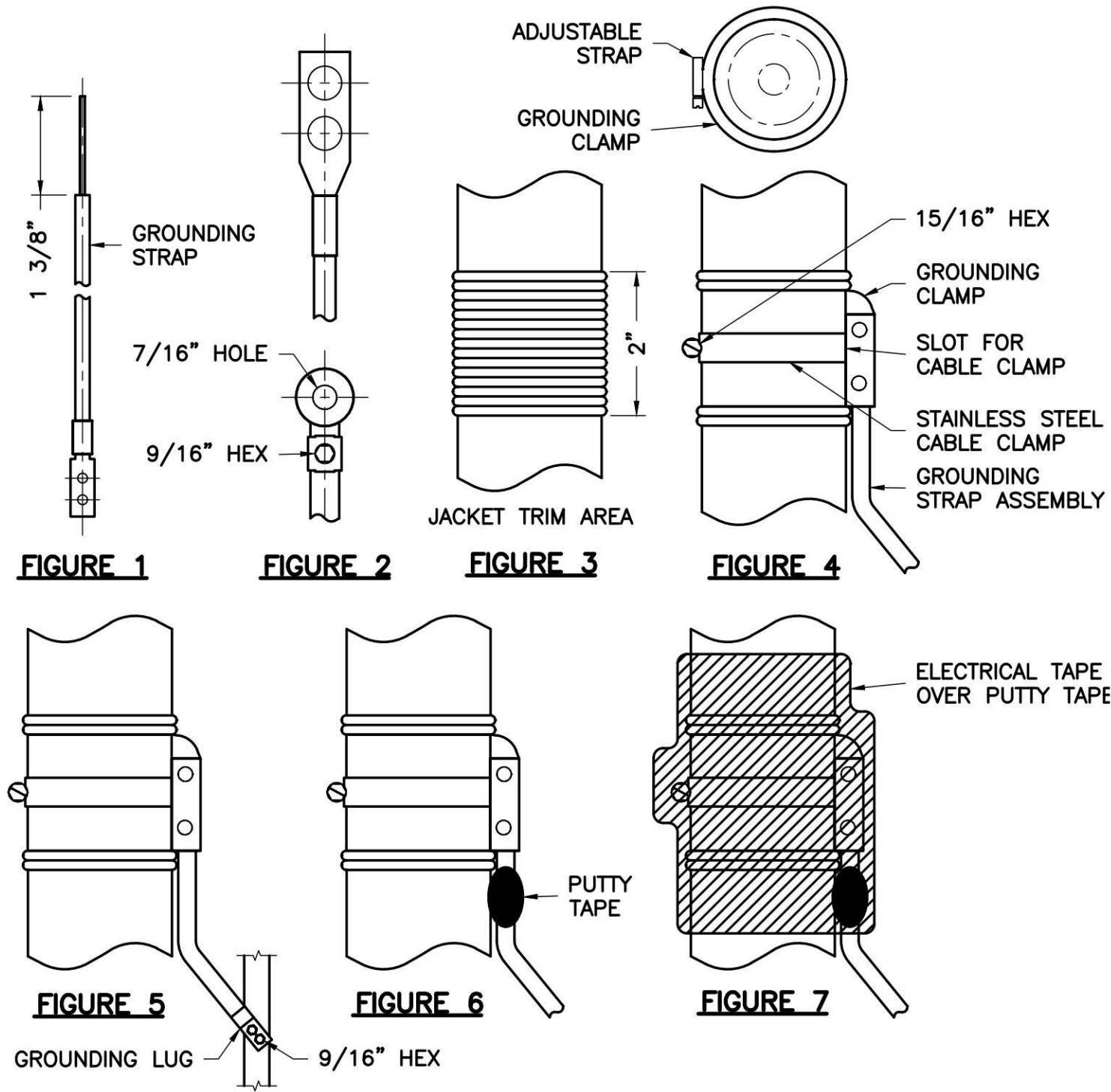


1 RF PLUMBING DIAGRAM
A-3 NTS

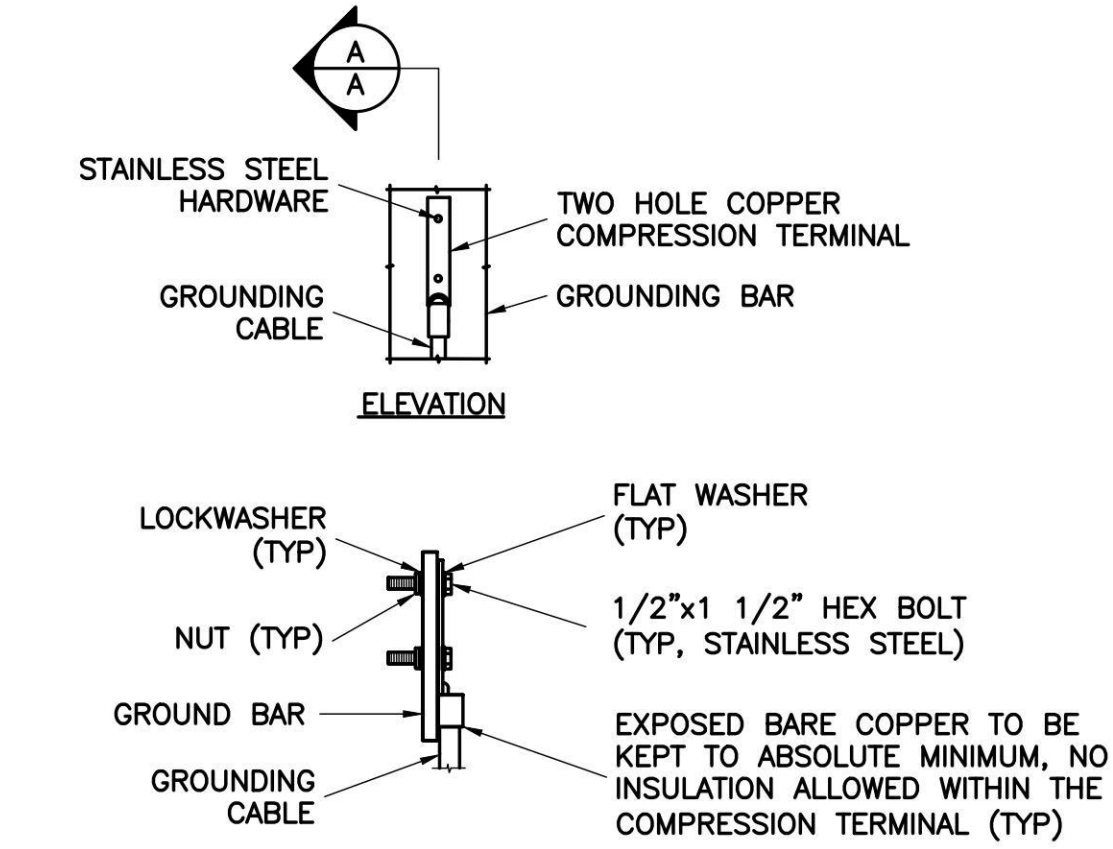
ENGINEER	<div><p>TOTALLY COMMITTED.</p><p>NB+C ENGINEERING SERVICES, LLC. 120 EASTSHORE DRIVE, SUITE 300 GLEN ALLEN, VA 23059 (804) 548-4079</p></div>																				
APPLICANT	<div><p>1831 RADY COURT RICHMOND, VA 23222</p></div>																				
SITE INFORMATION	<p>COLHURST 5G LSUB6 - CARRIER ADD NB+C PROJ. #100352 1319 INGLERIDGE FARM LANE CHARLOTTESVILLE, VA 22901 ALBEMARLE COUNTY</p>																				
DESIGN RECORD	<table><tr><th colspan="4">REVISIONS</th></tr><tr><th>REV</th><th>DATE</th><th>DESCRIPTION</th><th>BY</th></tr><tr><td>1</td><td>01/25/24</td><td>REVISED RFDS</td><td>AT</td></tr><tr><td>0</td><td>07/11/23</td><td>FINALS</td><td>KLB</td></tr><tr><td>A</td><td>05/25/23</td><td>PRELIMINARY ZDS</td><td>AT</td></tr></table>	REVISIONS				REV	DATE	DESCRIPTION	BY	1	01/25/24	REVISED RFDS	AT	0	07/11/23	FINALS	KLB	A	05/25/23	PRELIMINARY ZDS	AT
REVISIONS																					
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PROFESSIONAL STAMP	<div></div>																				
ENGINEER	<p>TRENT T. SNARR, P.E. VA PROFESSIONAL ENGINEER LIC. #49978</p>																				
SHEET TITLE	<p>RF PLUMBING DIAGRAM</p>																				
SHEET NUMBER	<p>A-3</p>																				

GROUNDING NOTES

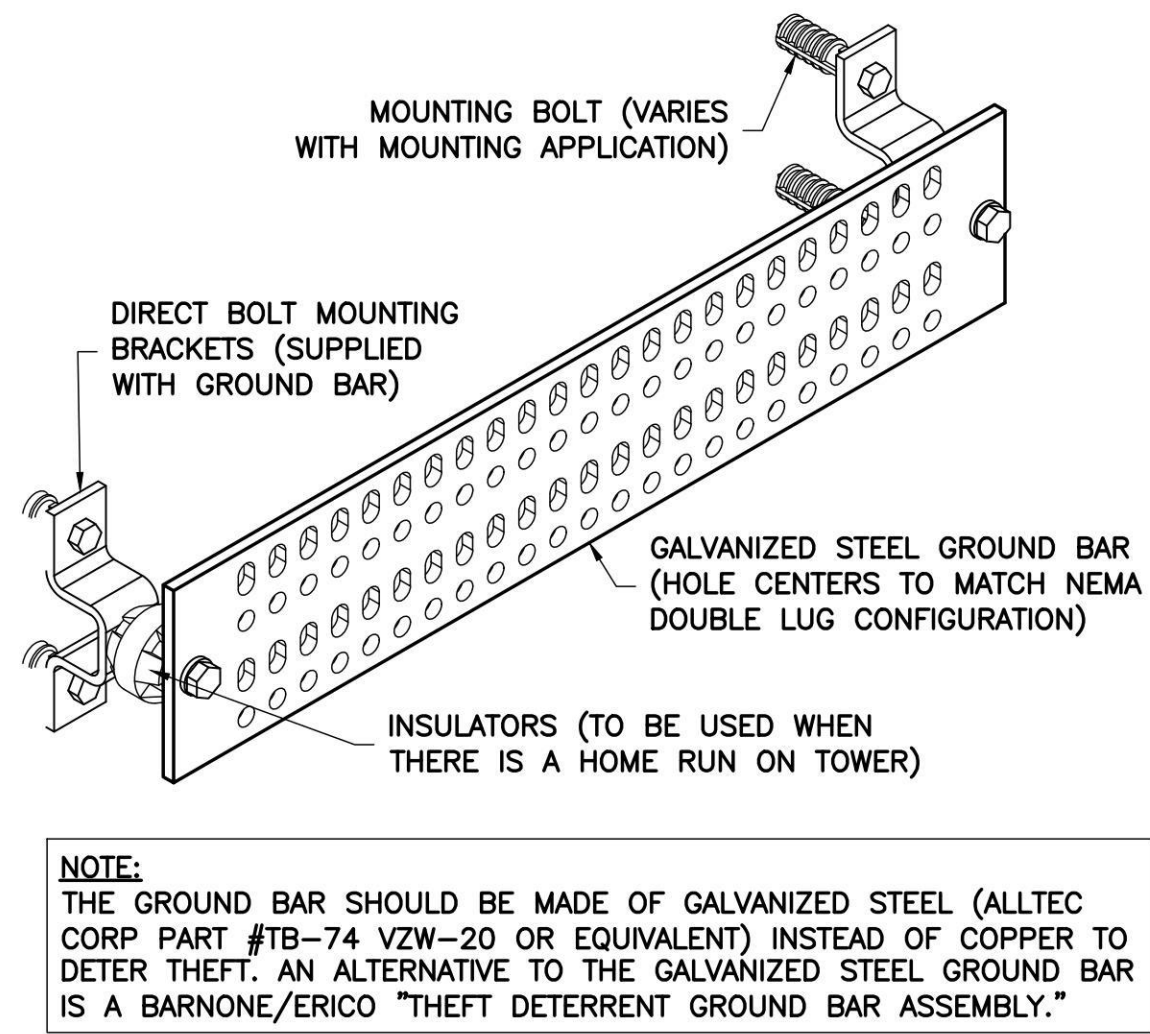
- GROUNDING SHALL COMPLY WITH NEC ART. 250. ADDITIONALLY, GROUNDING, BONDING AND LIGHTING PROTECTION SHALL BE DONE IN ACCORDANCE WITH VERIZON WIRELESS GROUNDING STANDARDS.
- GROUND CABLE SHIELDS MINIMUM AT BOTH ENDS USING MANUFACTURERS CABLE GROUNDING KITS SUPPLIED BY PROJECT OWNER.
- USE #6 COPPER STRANDED WIRE WITH GREEN COLOR INSULATION FOR ABOVE GRADE GROUNDING (UNLESS OTHERWISE SPECIFIED) AND #2 SOLID TINNED BARE COPPER WIRE FOR BELOW GRADE GROUNDING AS INDICATED ON THE DRAWING.
- ALL POWER AND GROUND CONNECTIONS TO BE CRIMP-STYLE, COMPRESSION WIRE LUGS AND WIRE NUTS BY HARGER (OR APPROVED EQUAL) RATED FOR OPERATION AT NO LESS THAN 75°C OR CADWELD EXOTHERMIC WELD. DO NOT ALLOW BARE COPPER WIRE TO BE IN CONTACT WITH GALVANIZED STEEL.
- ROUTE GROUNDING CONDUCTORS ALONG THE SHORTEST AND STRAIGHTEST PATH POSSIBLE, EXCEPT AS OTHERWISE INDICATED. GROUNDING LEADS SHOULD NEVER BE BENT AT RIGHT ANGLE. ALWAYS MAKE AT LEAST 12" RADIUS BENDS. #6 WIRE CAN BE BENT AT 6" RADIUS WHEN NECESSARY. BOND ANY METAL OBJECTS WITHIN 6 FEET OF PROJECT OWNER EQUIPMENT OR CABINET TO MASTER GROUND BAR OR GROUNDING RING.
- CONNECTIONS TO GROUND BARS SHALL BE MADE WITH TWO HOLE COMPRESSION TYPE COPPER LUGS. APPLY OXIDE INHIBITING COMPOUND TO ALL LOCATIONS.
- APPLY OXIDE INHIBITING COMPOUND TO ALL MECHANICAL GROUND CONNECTIONS.
- CONTRACTOR SHALL PROVIDE AND INSTALL OMNI DIRECTIONAL ELECTRONIC MARKER SYSTEM (EMS) BALLS OVER EACH GROUND ROD AND BONDING POINT BETWEEN EXISTING TOWER/ MONOPOLE GROUNDING RING AND EQUIPMENT GROUNDING RING.
- CONTRACTOR SHALL TEST COMPLETED GROUND SYSTEM AND RECORD RESULTS FOR PROJECT CLOSE-OUT DOCUMENTATION. 5 OHMS MINIMUM RESISTANCE REQUIRED.
- CONTRACTOR SHALL CONDUCT ANTENNA, CABLE, AND LNA RETURN-LOSS AND DISTANCE-TO-FAULT MEASUREMENTS (SWEEP TESTS) AND RECORD RESULTS FOR PROJECT CLOSE OUT.



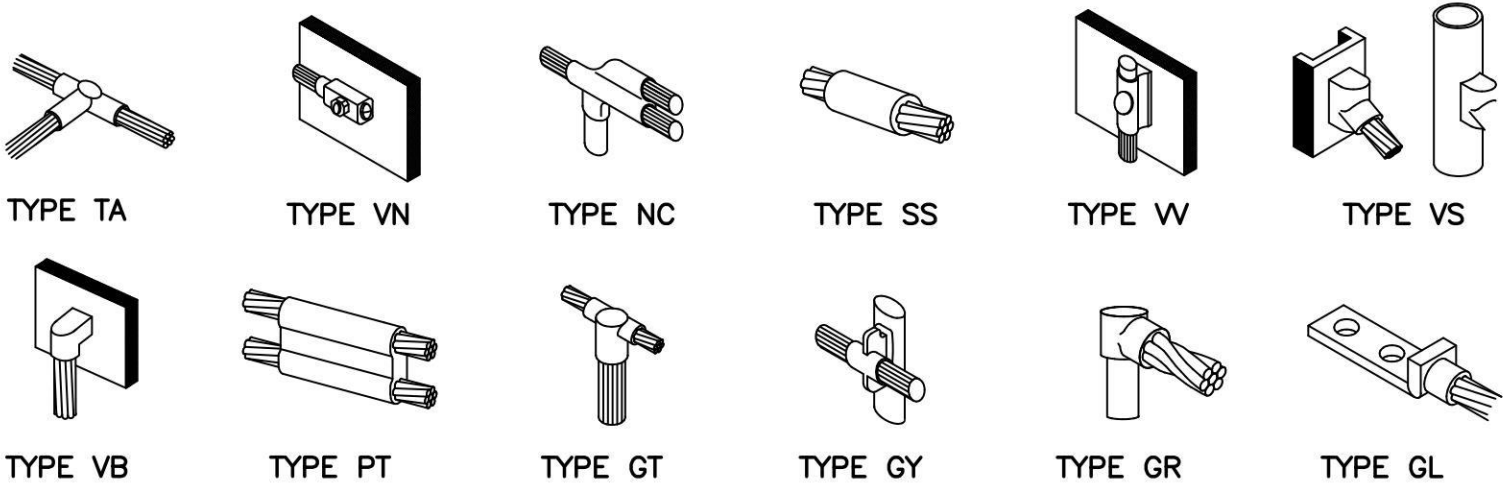
1 TYPICAL COAX WEATHERPROOFING DETAIL
G-1 NTS



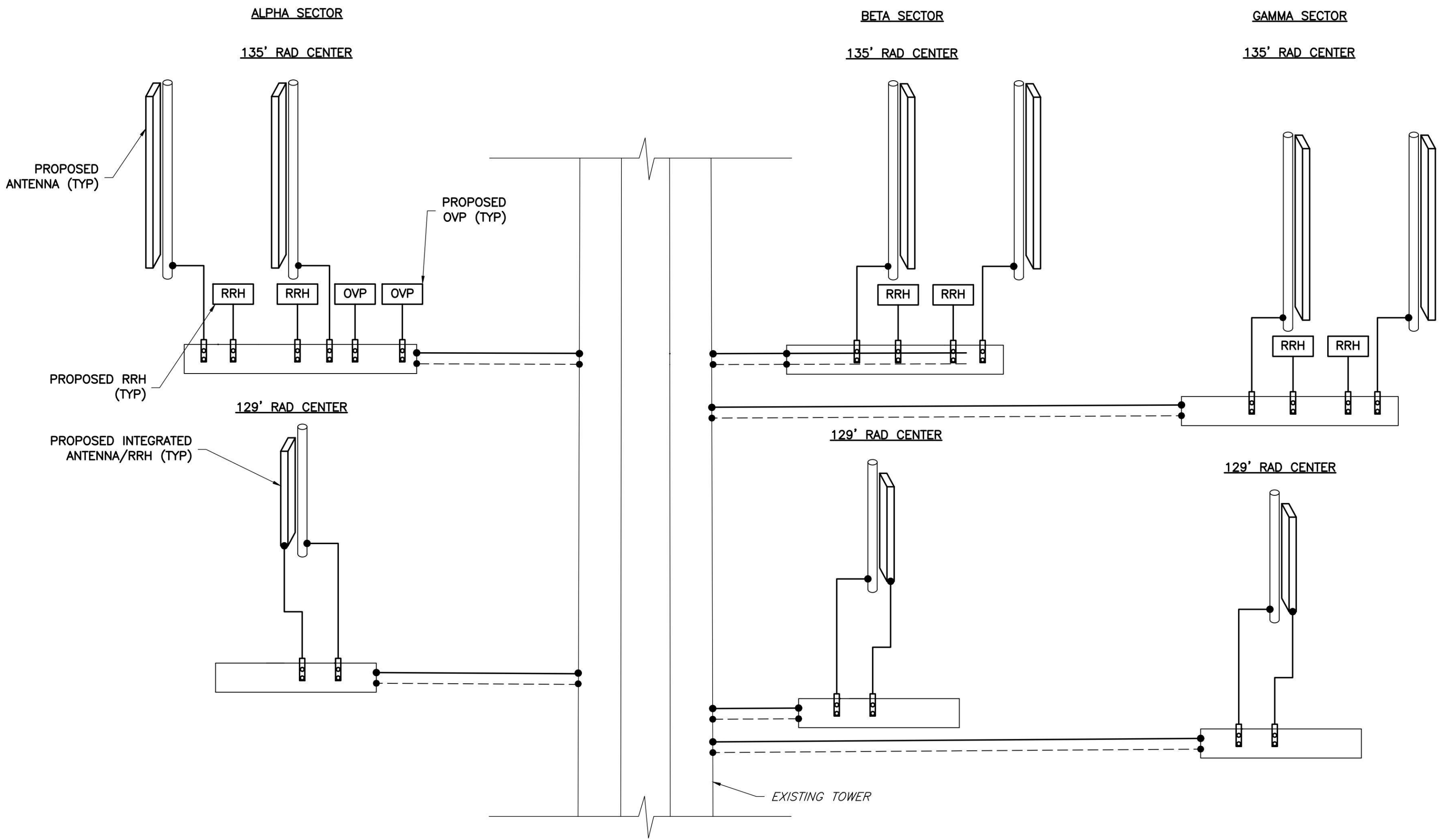
2 TYPICAL GROUND BAR CONNECTION DETAIL
G-1 NTS



3 GROUND BAR DETAIL
G-1 NTS



4 CADWELD GROUNDING CONNECTION DETAILS
G-1 NTS



5 GROUNDING RISER DIAGRAM
G-1 NTS

ENGINEER

APPLICANT

SITE INFORMATION

DESIGN RECORD

PROFESSIONAL STAMP

ENGINEER

SHEET TITLE

SHEET NUMBER

NB+C
TOTALLY COMMITTED.
NB+C ENGINEERING SERVICES, LLC.
120 EASTSHORE DRIVE, SUITE 300
GLEN ALLEN, VA 23059
(804) 548-4079

verizon
1831 RADY COURT
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COLHURST
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1319 INGLERIDGE FARM LANE
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ALBEMARLE COUNTY

REVISIONS

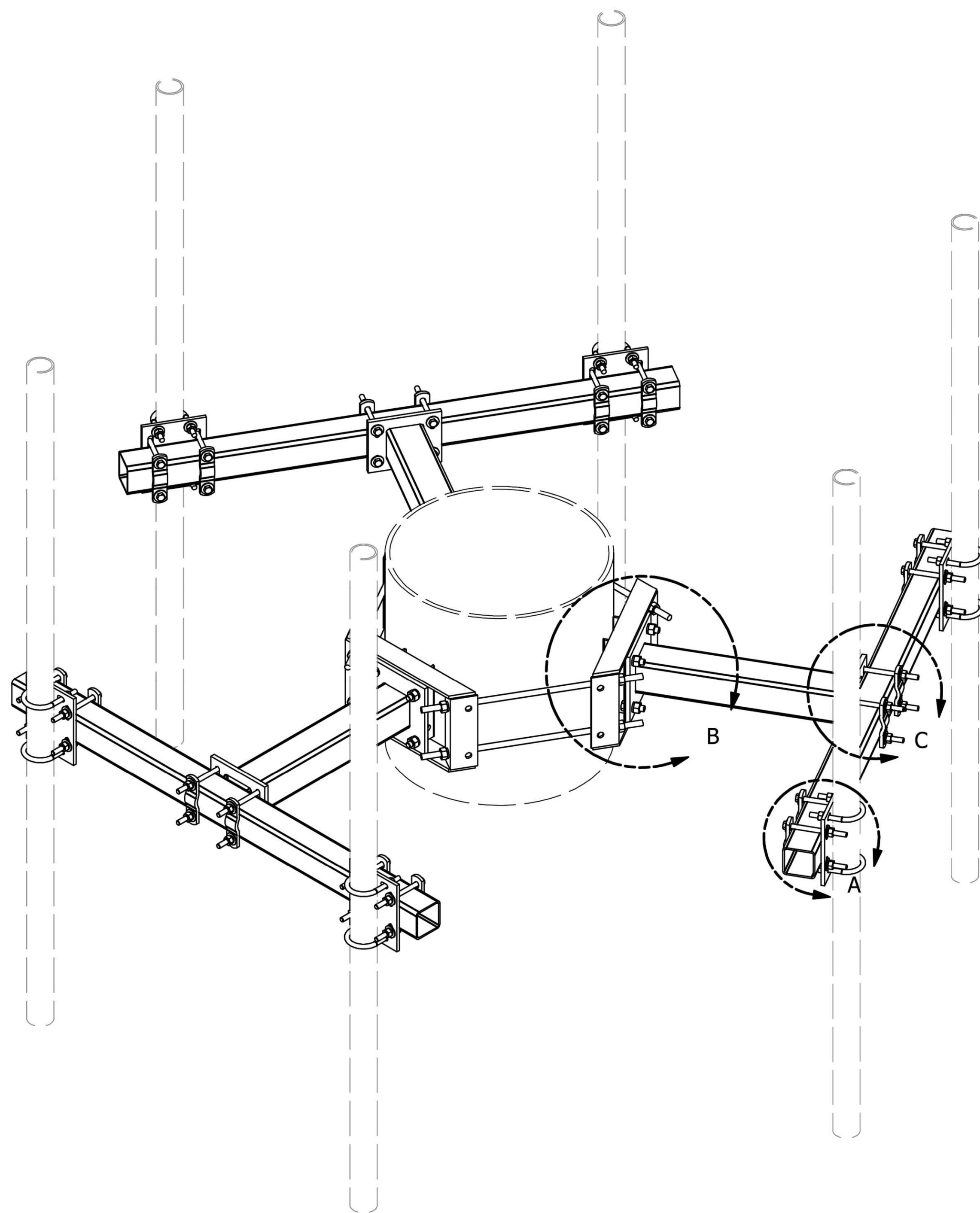
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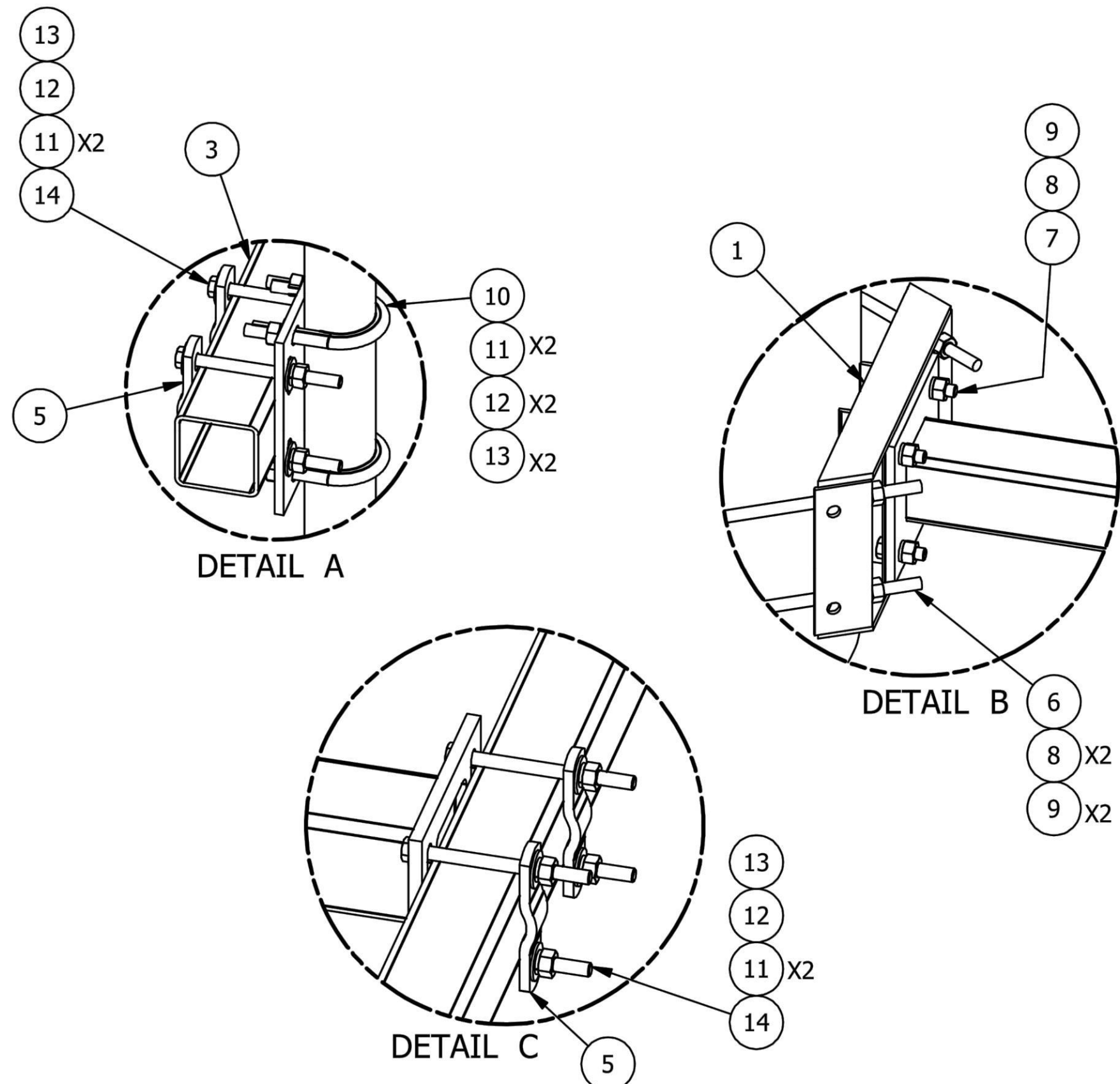
TRENT T. SNARR, P.E.
VA PROFESSIONAL ENGINEER LIC. #49978

GROUNDING
RISER DIAGRAM
& DETAILS

G-1



PARTS LIST						
ITEM	QTY	PART NO.	PART DESCRIPTION	LENGTH	UNIT WT.	NET WT.
1	3	X-UGLM	MINI RING MOUNT WELDMENT		21.67	65.00
2	3	X-WWM02	2' STAND-OFF ARM / WALL MOUNT		30.70	92.11
3	3	SQ360	3 1/2" X 60" SQUARE TUBE	60 in	43.23	129.70
4	6	SCX4	CROSSOVER PLATE	8 1/2 in	6.02	36.13
5	18	X-100064	CLAMP (4" V-CLAMP) GALVANIZED		0.91	16.43
6	6	G58R-14	5/8" x 14" THREADED ROD (HDG.)		0.40	2.39
6	6	G58R-24	5/8" x 24" THREADED ROD (HDG.)	24 in	0.40	2.39
7	12	G5802	5/8" x 2" HDG HEX BOLT GR5		0.27	3.24
8	24	G58LW	5/8" HDG LOCKWASHER		0.03	0.63
9	24	G58NUT	5/8" HDG HEAVY 2H HEX NUT		0.13	3.12
10	12	X-UB1212	1/2" X 2-1/2" X 4-1/2" X 2" U-BOLT (HDG.)		0.63	7.50
10	12	X-UB1300	1/2" X 3" X 5" X 2" U-BOLT (HDG.)		0.70	8.36
11	96	G12FW	1/2" HDG USS FLATWASHER	3/32 in	0.03	3.27
12	60	G12LW	1/2" HDG LOCKWASHER	1/8 in	0.01	0.83
13	60	G12NUT	1/2" HDG HEAVY 2H HEX NUT		0.07	4.30
14	36	G12065	1/2" x 6-1/2" HDG HEX BOLT GR5 FULL THREAD	6 1/2 in	0.41	14.74
TOTAL WT. #						405.22



TOLERANCE NOTES

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

PROPRIETARY NOTE:
THE DATA AND TECHNIQUES CONTAINED IN THIS DRAWING ARE PROPRIETARY INFORMATION OF VALMONT INDUSTRIES AND CONSIDERED A TRADE SECRET. ANY USE OR DISCLOSURE WITHOUT THE CONSENT OF VALMONT INDUSTRIES IS STRICTLY PROHIBITED.

DESCRIPTION
DUAL ANTENNA POLE MOUNT ASSEMBLY
32" STANDOFF
10-34" TO 28" MONOPOLE DIAMETER

CPD NO.	DRAWN BY CEK 4/27/2017	ENG. APPROVAL
CLASS 81	SUB 01	DRAWING USAGE CUSTOMER
	CHECKED BY BMC 5/12/2017	



A valmont COMPANY

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

Engineering
Support Team:
1-888-753-7446

PART NO.
UDS-SQNPL

DWG. NO.
UDS-SQNPL

PAGE
1 OF 2

ENGINEER

APPLICANT

SITE INFORMATION

DESIGN RECORD

PROFESSIONAL STAMP

ENGINEER

SHEET TITLE

SHEET NUMBER

NB+C
TOTALLY COMMITTED.

NB+C ENGINEERING SERVICES, LLC.
120 EASTSHORE DRIVE, SUITE 300
GLEN ALLEN, VA 23059
(804) 548-4079

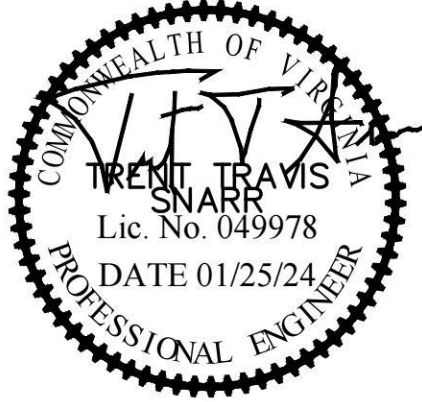
verizon

1831 RADY COURT
RICHMOND, VA 23222

COLHURST
5G LSUB6 - CARRIER ADD
NB+C PROJ. #100352
1319 INGLERIDGE FARM LANE
CHARLOTTESVILLE, VA 22901
ALBEMARLE COUNTY

REVISIONS

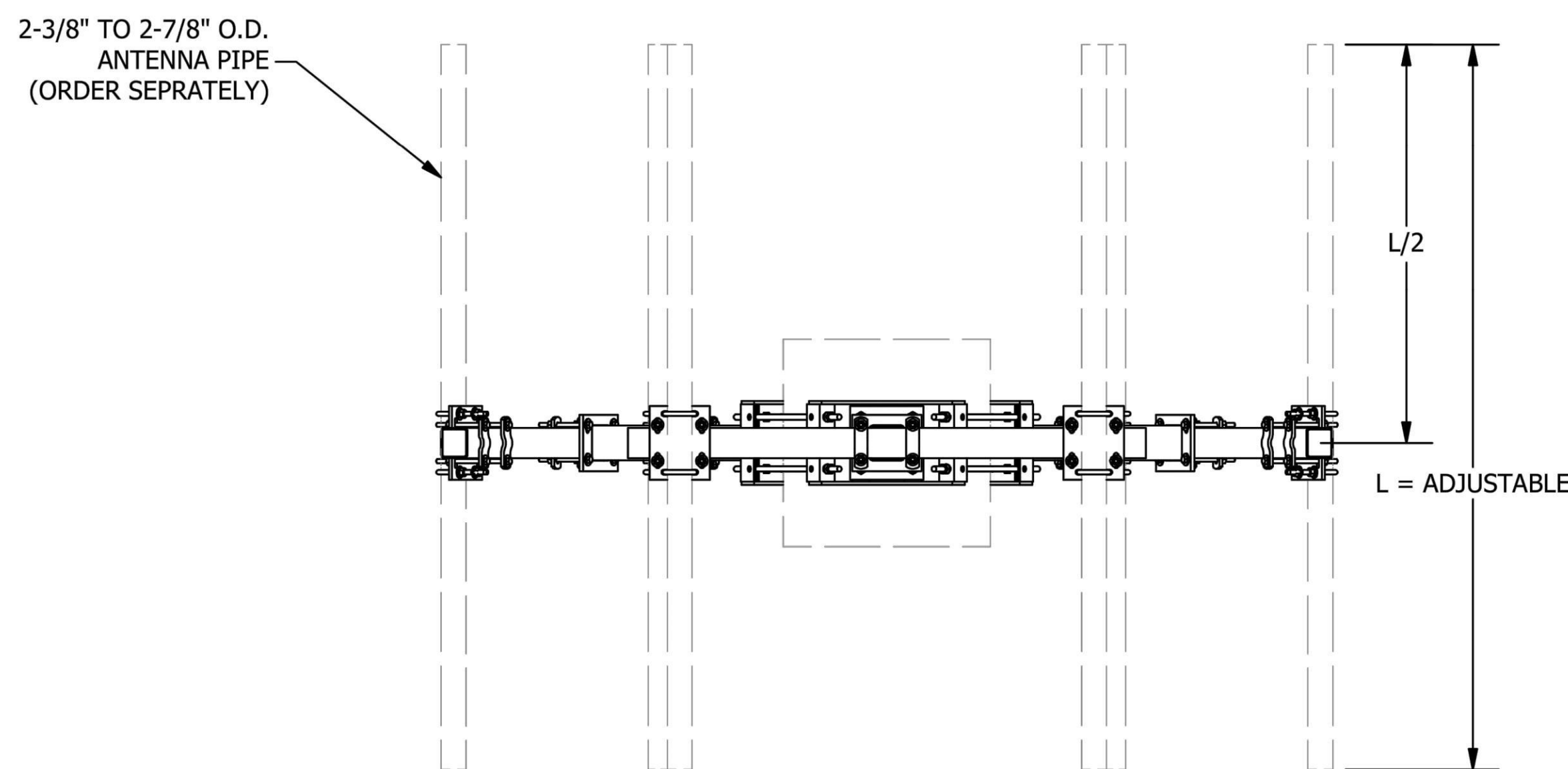
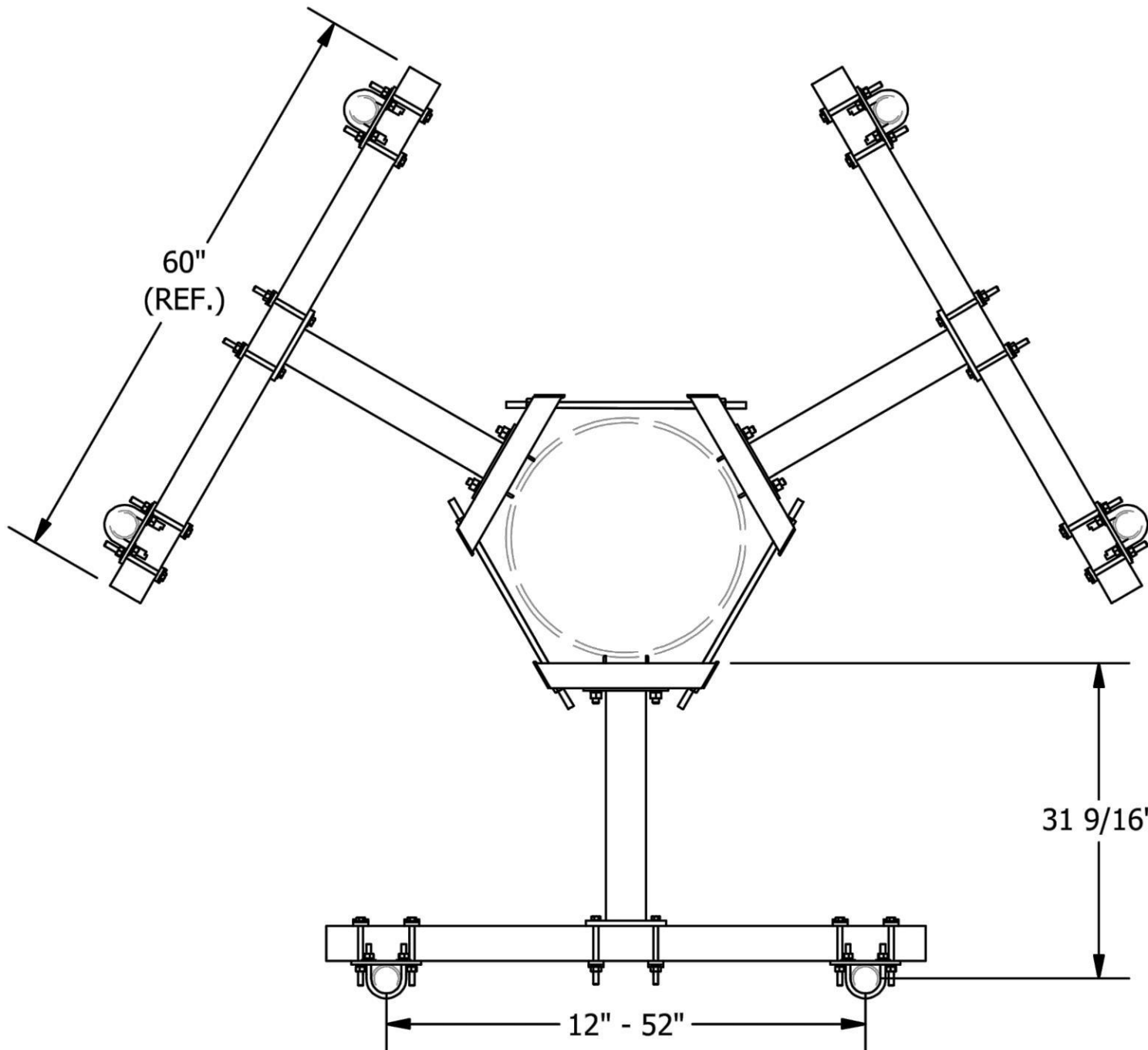
REV	DATE	DESCRIPTION	BY
1	01/25/24	REVISED RFDS	AT
0	07/11/23	FINALS	KLB
A	05/25/23	PRELIMINARY ZDS	AT



TRENT T. SNARR, P.E.
VA PROFESSIONAL ENGINEER LIC. #49978

APPENDIX I

APPX-1



<div>TOLERANCE NOTES</div> <div>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")</div> <div>PROPRIETARY NOTE: THE DATA AND TECHNIQUES CONTAINED IN THIS DRAWING ARE PROPRIETARY INFORMATION OF VALMONT INDUSTRIES AND CONSIDERED A TRADE SECRET. ANY USE OR DISCLOSURE WITHOUT THE CONSENT OF VALMONT INDUSTRIES IS STRICTLY PROHIBITED.</div>			<div>DESCRIPTION</div> <div>DUAL ANTENNA POLE MOUNT ASSEMBLY 32" STANDOFF 10-34" TO 28" MONOPOLE DIAMETER</div>			<div><div><div><div>SITE PRO 1</div></div><div>Engineering Support Team: 1-888-753-7446</div></div><div><div>Locations: New York, NY Atlanta, GA Los Angeles, CA Plymouth, IN Salem, OR Dallas, TX</div></div></div> <div><div>A valmont COMPANY</div></div>		
CPD NO.		DRAWN BY CEK 4/27/2017		ENG. APPROVAL		PART NO. UDS-SQNPL		PAGE 2 OF 2
CLASS 81	SUB 01	DRAWING USAGE CUSTOMER		CHECKED BY BMC 5/12/2017		DWG. NO. UDS-SQNPL		

ENGINEER

NB+CTM

TOTALLY COMMITTED.

NB+C ENGINEERING SERVICES, LLC.
120 EASTSHORE DRIVE, SUITE 300
GLEN ALLEN, VA 23059
(804) 548-4079

APPLICANT

verizon[✓]

1831 RADY COURT
RICHMOND, VA 23222

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COLHURST
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DESIGN RECORD

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1	01/25/24	REVISED RFDS	AT
0	07/11/23	FINALS	KLB
A	05/25/23	PRELIMINARY ZDS	AT
REV	DATE	DESCRIPTION	BY

PROFESSIONAL STAMP

COMMONWEALTH OF VIRGINIA

TRENT T. SNARR

Lic. No. 049978

DATE 01/25/24

PROFESSIONAL ENGINEER

ENGINEER

TRENT T. SNARR, P.E.
VA PROFESSIONAL ENGINEER LIC. #49978

SHEET TITLE

APPENDIX II

SHEET NUMBER

APPX-2