



GENERAL CONSTRUCTION NOTES:

- ALL WORK SHALL CONFORM TO ALL CURRENT APPLICABLE FEDERAL, STATE, AND LOCAL CODES, INCLUDING ANSI/EIA/TIA-222, AND COMPLY WITH VERIZON WIRELESS SPECIFICATIONS.
- CONTRACTOR SHALL CONTACT "MISS UTILITY" (1-800-552-7001) FOR IDENTIFICATION OF UNDERGROUND UTILITIES PRIOR TO START OF CONSTRUCTION.
- CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL REQUIRED INSPECTIONS.
- 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.
- DO NOT CHANGE SIZE OR SPACING OF STRUCTURAL ELEMENTS.
- DETAILS SHOWN ARE TYPICAL; SIMILAR DETAILS APPLY TO SIMILAR CONDITIONS UNLESS OTHERWISE NOTED.
- THESE DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY WHICH IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
- CONTRACTOR SHALL BRACE STRUCTURES UNTIL ALL STRUCTURAL ELEMENTS NEEDED FOR STABILITY ARE INSTALLED. THESE ELEMENTS ARE AS FOLLOWS: LATERAL BRACING, ANCHOR BOLTS, ETC.
- CONTRACTOR SHALL DETERMINE EXACT LOCATION OF EXISTING UTILITIES, DRAIN PIPES, VENTS, ETC. BEFORE COMMENCING WORK.
- INCORRECTLY FABRICATED, DAMAGED, OR OTHERWISE MISFITTING OR NONCONFORMING MATERIALS OR CONDITIONS SHALL BE REPORTED TO THE OWNER PRIOR TO REMEDIAL OR CORRECTIVE ACTION. ANY SUCH REMEDIAL ACTION SHALL REQUIRE WRITTEN APPROVAL BY THE OWNER'S REPRESENTATIVE PRIOR TO PROCEEDING.
- EACH CONTRACTOR SHALL COOPERATE WITH THE OWNER'S REPRESENTATIVE, AND COORDINATE HIS WORK WITH THE WORK OF OTHERS.
- CONTRACTOR SHALL REPAIR ANY DAMAGE CAUSED BY CONSTRUCTION OF THIS PROJECT TO MATCH EXISTING PRE-CONSTRUCTION CONDITIONS TO THE SATISFACTION OF THE VERIZON WIRELESS CONSTRUCTION MANAGER.
- ALL CABLE/CONDUIT ENTRY/EXIT PORTS SHALL BE WEATHERPROOFED DURING INSTALLATION USING A SILICONE SEALANT.
- WHERE EXISTING CONDITIONS DO NOT MATCH THOSE SHOWN IN THIS PLAN SET, CONTRACTOR WILL NOTIFY ENGINEER, VERIZON WIRELESS PROJECT CONSTRUCTION MANAGER, AND LANDLORD IMMEDIATELY.
- CONTRACTOR SHALL ENSURE ALL SUBCONTRACTORS ARE PROVIDED WITH A CURRENT SET OF DRAWINGS AND SPECIFICATIONS FOR THIS PROJECT.
- ALL ROOF WORK SHALL BE DONE BY A QUALIFIED AND EXPERIENCED ROOFING CONTRACTOR IN COORDINATION WITH ANY CONTRACTOR WARRANTING THE ROOF TO ENSURE THAT THE WARRANTY IS MAINTAINED.
- CONTRACTOR SHALL REMOVE ALL RUBBISH AND DEBRIS FROM THE SITE AT THE END OF EACH DAY.
- CONTRACTOR SHALL COORDINATE WORK SCHEDULE WITH LANDLORD AND TAKE PRECAUTIONS TO MINIMIZE IMPACT AND DISRUPTION OF OTHER OCCUPANTS OF THE FACILITY.
- CONTRACTOR SHALL FURNISH VERIZON WIRELESS WITH THREE AS-BUILT SETS OF DRAWINGS UPON COMPLETION OF WORK.
- ANTENNAS AND CABLES ARE TYPICALLY PROVIDED BY VERIZON WIRELESS. PRIOR TO SUBMISSION OF BID, CONTRACTOR SHALL COORDINATE WITH VERIZON WIRELESS PROJECT MANAGER TO DETERMINE WHAT, IF ANY, ITEMS WILL BE PROVIDED BY VERIZON WIRELESS. ALL ITEMS NOT PROVIDED BY VERIZON WIRELESS SHALL BE PROVIDED AND INSTALLED BY THE CONTRACTOR. CONTRACTOR WILL INSTALL ALL ITEMS PROVIDED BY VERIZON WIRELESS.
- PRIOR TO SUBMISSION OF BID, CONTRACTOR WILL COORDINATE WITH VERIZON WIRELESS PROJECT MANAGER TO DETERMINE IF ANY PERMITS WILL BE OBTAINED BY VERIZON WIRELESS. ALL REQUIRED PERMITS NOT OBTAINED BY VERIZON WIRELESS MUST BE OBTAINED, AND PAID FOR, BY THE CONTRACTOR.
- GENERAL CONTRACTOR SHALL HAVE A LICENSED HVAC CONTRACTOR START THE HVAC UNITS, SYNCHRONIZE THE THERMOSTATS, ADJUST ALL SETTINGS ON EACH UNIT ACCORDING TO VERIZON WIRELESS CONSTRUCTION MANAGER'S SPECIFICATIONS, AND THOROUGHLY TEST AND BALANCE EACH UNIT TO ENSURE PROPER OPERATION PRIOR TO TURNING THE SITE OVER TO OWNER.
- CONTRACTOR SHALL INSTALL ALL SITE SIGNAGE IN ACCORDANCE WITH VERIZON WIRELESS SPECIFICATIONS AND REQUIREMENTS.
- CONTRACTOR SHALL SUBMIT ALL SHOP DRAWINGS TO ENGINEER FOR REVIEW AND APPROVAL PRIOR TO FABRICATION.
- UNLESS OTHERWISE NOTED VERIZON WIRELESS SHALL PROVIDE ALL REQUIRED RF MATERIAL FOR CONTRACTOR TO INSTALL, INCLUDING ANTENNAS, TMA'S, BIAS-T'S, COMBINERS, PDU, DC BLOCKS, SURGE ARRESTORS, GPS ANTENNA, GPS SURGE ARRESTOR, COAXIAL CABLE.
- PRIOR TO SUBMISSION OF BID, CONTRACTOR SHALL VERIFY ALL EQUIPMENT TO BE PROVIDED BY VERIZON WIRELESS FOR INSTALLATION BY CONTRACTOR.
- CONTRACTOR SHALL FURNISH AND INSTALL ANTENNA PLATFORM.
- ALL EQUIPMENT SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S SPECIFICATIONS AND LOCATED ACCORDING TO VERIZON WIRELESS SPECIFICATIONS, AND AS SHOWN IN THESE PLANS.
- EQUIPMENT CABINET FRAME/SHELTER SHALL BE ANCHORED TO FOUNDATION PER MANUFACTURER'S SPECIFICATIONS AND IN ACCORDANCE WITH THE VIRGINIA STATE BUILDING CODE.
- THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE PROJECT DESCRIBED HEREIN. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES AND FOR COORDINATING ALL PORTIONS OF THE WORK UNDER CONTRACT.
- CONTRACTOR SHALL NOTIFY THE ENGINEER A MINIMUM OF 48 HOURS IN ADVANCE PRIOR TO CONSTRUCTION START, MORE SPECIFICALLY BEFORE: SEALING ANY FLOOR, WALL OR ROOF PENETRATION, FINAL UTILITY CONNECTIONS, POURING CONCRETE, BACKFILLING UTILITY TRENCHES AND STRUCTURAL POST OR MOUNTING CONNECTIONS, FOR ENGINEERING REVIEW AND INSPECTION.
- 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.
- DETECTION WIRE SHALL BE BURIED DIRECTLY ABOVE NON-METALLIC PIPING AT A DISTANCE NOT TO EXCEED TWELVE (12) INCHES ABOVE THE TOP OF PIPE. THE WIRE SHALL EXTEND CONTINUOUSLY AND UNBROKEN FROM POINT OF ACCESS TO POINT OF ACCESS. THE ENDS OF THE WIRE SHALL TERMINATE WITH A MINIMUM OF THREE (3) FEET OF WIRE, COILED, REMAINING ACCESSIBLE AT TERMINATION POINTS. DETECTION WIRE SHALL BE 12 GAUGE FOR A BURIED DEPTH OF LESS THAN 4 FEET AND 4 GAUGE FOR A BURIED DEPTH GREATER THAN OR EQUAL TO 4 FEET.

STRUCTURAL NOTES:

- AS REQUIRED UNDER THE STRUCTURAL STANDARD FOR ANTENNA SUPPORTING STRUCTURES AND ANTENNA, ANSI/TIA-222-G, VERIZON WIRELESS SHALL PROVIDE A STRUCTURAL ANALYSIS OF THE TOWER PREPARED BY A LICENSED STRUCTURAL ENGINEER (LICENSED IN THE PROJECT STATE) CERTIFYING THAT THE EXISTING TOWER AND ANY REQUIRED IMPROVEMENTS AND REINFORCEMENTS HAVE SUFFICIENT CAPACITY TO SUPPORT ALL EXISTING AND PROPOSED ANTENNAS, SUPPORTS AND APPURTENANCES AND COMPLY WITH THE CURRENT STATE BUILDING CODE AND EIA/TIA CRITERIA. THE CONTRACTOR IS RESPONSIBLE TO CONFIRM THAT ANY IMPROVEMENTS AND REINFORCEMENTS REQUIRED BY THE STRUCTURAL ANALYSIS CERTIFICATION ARE PROPERLY INSTALLED PRIOR TO THE ADDITION OF ANTENNAS, SUPPORTS AND APPURTENANCES PROPOSED ON THESE DRAWINGS OR OTHERWISE NOTED IN THE STRUCTURAL ANALYSIS.
- FOR STRUCTURAL MODIFICATIONS REQUIRING FIELD WELDING, THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL REQUIRED PERMITS AND IMPLEMENTING ALL INDUSTRY STANDARDS FOR PROTECTION OF ALL EXISTING PROPERTY AND PERSONNEL FOR DAMAGE OR HARM. ALL PROPERTY DAMAGED DURING CONSTRUCTION OF THIS PROJECT SHALL BE REPLACED OR REPAIRED TO THE SATISFACTION OF THE OWNER.

FOUNDATION NOTES:

- BEAR NEW FOUNDATION ON EXISTING SOIL. REMOVE ANY LOOSE FILL AND ORGANIC MATERIAL. PROOF COMPACT PREPARED FOOTING BOTTOM WITH MINIMUM OF 4 PASSES OF A VIBRATORY PLATE COMPACTOR. REMOVE ANY LOOSE OR SOFT AREAS AND REPLACE WITH STRUCTURAL FILL.
- STRUCTURAL FILL MATERIAL BENEATH SLABS-ON-GRADE SHALL CONSIST OF WELL-GRADED GRANULAR SOIL WITH LESS THAN 15% NON-PLASTIC FINES AND A MAXIMUM PARTICLE SIZE OF 4-INCHES. FILL SHOULD BE PLACED IN MAXIMUM LIFT HEIGHTS OF 8-INCHES (LOOSE) AND COMPACTED TO 95% OF ITS MAXIMUM DRY DENSITY AT ±2% OF OPTIMUM MOISTURE CONTENT AS DETERMINED BY THE STANDARD PROCTOR TEST.
- FOUNDATION SHALL BE LOCATED ON SOIL WITH A MINIMUM BEARING CAPACITY OF 2000 PSF (e.g., UNITED SOIL CLASSIFICATION SYSTEM [ASTM DESIGNATION D-2487] GROUP SYMBOLS: GW, GP, GM, GC, SW, SP, SM, SC). ENGINEER SHALL BE NOTIFIED IF SOIL BEARING CAPACITY IS LESS THAN 2000 PSF.

CONCRETE AND REINFORCING STEEL NOTES:

- DESIGN AND CONSTRUCTION OF ALL CONCRETE ELEMENTS SHALL CONFORM TO THE LATEST EDITIONS OF ALL APPLICABLE CODES INCLUDING: ACI 301 "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS", AND ACI 318 "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE".
- MIX DESIGN SHALL BE APPROVED BY OWNER'S REPRESENTATIVE AND SUBMITTED TO ENGINEER PRIOR TO PLACING CONCRETE.
- CONCRETE SHALL BE NORMAL WEIGHT, 6% AIR ENTRAINED (+/- 1.5%) WITH A MAXIMUM 4" SLUMP AND HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 4000 PSI UNLESS OTHERWISE NOTED.
- THE FOLLOWING MATERIALS SHALL BE USED:  
PORTLAND CEMENT: ASTM C-150, TYPE 1 OR 2  
REINFORCEMENT: ASTM A-185, PLAIN STEEL WELDED WIRE FABRIC  
REINFORCEMENT BARS: ASTM A615, GRADE 60, DEFORMED  
NORMAL WEIGHT AGGREGATE: ASTM C-33  
WATER: DRINKABLE  
ADMIXTURES: NON-CHLORIDE CONTAINING
- MINIMUM CONCRETE COVER FOR REINFORCING STEEL SHALL BE AS FOLLOWS (UNLESS OTHERWISE NOTED):  
a. CONCRETE CAST AGAINST EARTH: 3"  
b. ALL OTHER CONCRETE: 2"
- A 3/4" CHAMFER SHALL BE PROVIDED AT ALL EXPOSED EDGES OF CONCRETE IN ACCORDANCE WITH ACI 301 SECTION 4.2.4, UNLESS NOTED OTHERWISE.
- INSTALLATION OF CONCRETE EXPANSION/WEDGE ANCHOR SHALL BE PER MANUFACTURER'S WRITTEN RECOMMENDED PROCEDURE. THE ANCHOR BOLT, DOWEL, OR ROD SHALL CONFORM TO MANUFACTURER'S RECOMMENDATION FOR EMBEDMENT DEPTH OR AS SHOWN ON THE DRAWINGS. NO REBAR SHALL BE CUT WITHOUT PRIOR ENGINEERING APPROVAL WHEN DRILLING HOLES IN CONCRETE.
- ADMIXTURES SHALL CONFORM TO THE APPROPRIATE ASTM STANDARD AS REFERENCED IN ACI 301.
- DO NOT WELD OR TACK WELD REINFORCING STEEL.
- ALL DOWELS, ANCHOR BOLTS, EMBEDDED STEEL, ELECTRICAL CONDUITS, PIPE SLEEVES, GROUNDS AND ALL OTHER EMBEDDED ITEMS AND FORMED DETAILS SHALL BE IN PLACE BEFORE START OF CONCRETE PLACEMENT.
- REINFORCEMENT SHALL BE COLD BENT WHENEVER BENDING IS REQUIRED.
- DO NOT PLACE CONCRETE IN WATER, ICE, OR ON FROZEN GROUND.
- DO NOT ALLOW CONCRETE OR SUBBASE TO FREEZE DURING CONCRETE CURING AND SETTING PERIOD, OR FOR A MINIMUM OF 3 DAYS AFTER PLACEMENT.
- FOR COLD-WEATHER AND HOT-WEATHER CONCRETE PLACEMENT, CONFORM TO APPLICABLE ACI CODES AND RECOMMENDATIONS. IN EITHER CASE, MATERIALS CONTAINING CHLORIDE, CALCIUM, SALTS, ETC. SHALL NOT BE USED. PROTECT FRESH CONCRETE FROM WEATHER FOR 7 DAYS, MINIMUM.
- CONCRETE SHALL BE RUBBED TO A ROUGH GROUT FINISH. PADS SHALL BE SEALED BY STEEL TROWEL.
- UNLESS OTHERWISE NOTED:  
a. ALL REINFORCING STEEL SHALL BE DEFORMED BARS CONFORMING TO ASTM A615, GRADE 60.  
b. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185.
- SPLICING OF REINFORCEMENT IS PERMITTED ONLY AT LOCATIONS SHOWN IN THE CONTRACT DRAWINGS OR AS ACCEPTED BY THE ENGINEER. UNLESS OTHERWISE SHOWN OR NOTED REINFORCING STEEL SHALL BE SPLICED TO DEVELOP ITS FULL TENSILE CAPACITY (CLASS A) IN ACCORDANCE WITH ACI 318.
- REINFORCING BAR DEVELOPMENT LENGTHS, AS COMPUTED IN ACCORDANCE WITH ACI 318, FORM THE BASIS FOR BAR EMBEDMENT LENGTHS AND BAR SPLICED LENGTHS SHOWN IN THE DRAWINGS. APPLY APPROPRIATE MODIFICATION FACTORS FOR TOP STEEL, BAR SPACING, COVER AND THE LIKE.
- DETAILING OF REINFORCING STEEL SHALL CONFORM TO "ACI MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES" (ACI 315).
- ALL SLAB CONSTRUCTION SHALL BE CAST MONOLITHICALLY WITHOUT HORIZONTAL CONSTRUCTION JOINTS, UNLESS SHOWN IN THE CONTRACT DRAWINGS.
- LOCATION OF ALL CONSTRUCTION JOINTS ARE SUBJECT TO THE REQUIREMENTS OF THE CONTRACT DOCUMENTS, CONFORMANCE WITH ACI 318, AND ACCEPTANCE OF THE ENGINEER. DRAWINGS SHOWING LOCATION OF DETAILS OF THE PROPOSED CONSTRUCTION JOINTS SHALL BE SUBMITTED WITH REINFORCING STEEL PLACEMENT DRAWINGS
- SPLICES OF WWF, AT ALL SPLICED EDGES, SHALL BE SUCH THAT THE OVERLAP MEASURED BETWEEN OUTERMOST CROSS WIRES OF EACH FABRIC SHEET IS NOT LESS THAN THE SPACING OF THE CROSS WIRE PLUS 2 INCHES, NOR LESS THAN 8".
- BAR SUPPORTS SHALL BE ALL GALVANIZED METAL WITH PLASTIC TIPS.
- ALL REINFORCEMENT SHALL BE SECURELY TIED IN PLACE TO PREVENT DISPLACEMENT BY CONSTRUCTION TRAFFIC OR CONCRETE. TIE WIRE SHALL BE 16 GAUGE CONFORMING TO ASTM A82.
- SLAB ON GROUND  
a. COMPACT STRUCTURAL FILL TO 95% DENSITY AND THEN PLACE 6" (COMPACTED) GRAVEL BENEATH SLAB.  
b. PROVIDE VAPOR BARRIER BENEATH SLAB ON GROUND.

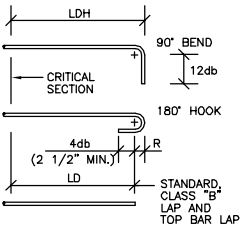
REBAR SPLICE AND HOOK SCHEDULE

REBAR SPLICE AND HOOK DIMENSIONS IN REINF. CONCRETE  
F'c = 3,000 PSI

ASTM BAR SIZE	LD	CLASS B LAP	TOP BAR LAP	LDH
3	12"	13"	17"	8 1/2"
4	14"	18"	23"	11"
5	17"	22"	28"	14"
6	20"	26"	34"	16 1/2"
7	29"	38"	49"	19 1/2"
8	33"	43"	56"	22"

REBAR SPLICE AND HOOK DIMENSIONS IN REINF. CONCRETE  
F'c = 4,000 PSI

ASTM BAR SIZE	LD	CLASS B LAP	TOP BAR LAP	LDH
3	12"	12"	16"	7 1/2"
4	12"	15"	20"	9 1/2"
5	15"	19"	24"	12"
6	18"	23"	29"	14 1/2"
7	25"	33"	43"	17"
8	29"	37"	49"	19"



LD - STANDARD DEVELOPMENT LENGTH OF BAR  
LDH - STANDARD DEVELOPMENT LENGTH OF HOOK  
F'c - SPECIFIED COMPRESSIVE STRENGTH OF CONCRETE  
db - BAR DIAMETER PER ASTM

NOTES:  
TOP BAR - DEFINED AS A BAR LOCATED SUCH THAT 12 IN. OR MORE OF FRESH CONCRETE IS CAST IN THE MEMBER BELOW THE SPLICE.  
MINIMUM OUTSIDE RADIUS OF BEND, R, SHALL BE 4db.



VERIZON WIRELESS  
1831 RADY COURT  
RICHMOND, VA 23222

CARTERS  
BRIDGE

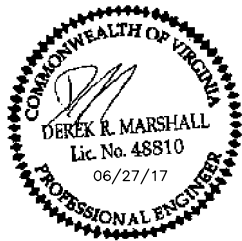
CONSTRUCTION DRAWINGS

0	06/27/17	FOR CONSTRUCTION



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DRAWN BY:	ARB
REVIEWED BY:	BAR
CHECKED BY:	DRM
PROJECT NUMBER:	50079910
SITE ADDRESS:	

4319 SCOTTSVILLE ROAD  
CHARLOTTESVILLE, VA 22902

SHEET TITLE

GENERAL NOTES

SHEET NUMBER



E&S NARRATIVE

PROJECT DESCRIPTION

THIS PROJECT INCLUDES THE INSTALLATION OF A NEW MONOPOLE. IN ADDITION TO THE NEW MONOPOLE A NEW EQUIPMENT PLATFORM GENERATOR, AND FIBER CABINET WILL BE INSTALLED IN A NEW FENCED COMPOUND. THE COMPOUND WILL BE ACCESSIBLE BY AN EXISTING GRAVEL DRIVEWAY AND A NEW GRAVEL ENTRANCEWAY.

STORMWATER RUNOFF CONSIDERATIONS

THE PROJECT SITE INCLUDES 2080 SQUARE FEET (0.048 ACRES) OF DISTURBED AREA OF WHICH 700 SQUARE FEET (0.016 ACRES) WILL BE NEW IMPERVIOUS AREA. THE EXISTING DRAINAGE PATTERN WILL REMAIN UNCHANGED.

EXISTING SITE CONDITIONS

THE SITE INCLUDES WOODAND VEGETATIVE COVER. IT IS LOCATED DIRECTLY ADJACENT TO AN EXISTING GRAVEL ACCESS ROAD.

SOILS

SEE THIS SHEET. SOILS LOCATED ON SITE ARE AS FOLLOWS:

710 – RABUN CLAY LOAM, 15 TO 25 PERCENT SLOPES

ADJACENT PROPERTY

THE PROPOSED IMPROVEMENTS ARE LOCATED IN A WOODED AREA WITHIN A RURAL PARCEL THAT CONTAINS AN EXISTING RESIDENCE, POLE BARN, CAR PORT, GRAVEL ACCESS ROAD, AND MONOPOLE/COMPOUND.

CRITICAL AREAS

THERE ARE NO CRITICAL AREAS WITHIN THE PROJECT LIMITS. THE PLAN HAS BEEN DEVELOPED TO MINIMIZE LAND DISTURBANCE. WHERE GRADING IS NECESSARY, ADEQUATE PRECAUTIONS SHALL BE TAKEN TO MINIMIZE EROSION AND TO CONTAIN SILT THROUGH PROPER EROSION AND SEDIMENT CONTROL PRACTICES.

MANAGEMENT STRATEGIES

- CONSTRUCTION WILL BE SEQUENCED SO THAT GRADING OPERATIONS CAN BEGIN AND END AS QUICKLY AS POSSIBLE.
- PERMANENT SEEDING WILL BEGIN IMMEDIATELY FOLLOWING GRADING OPERATIONS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION AND MAINTENANCE OF ALL EROSION AND SEDIMENT CONTROL PRACTICES.
- AFTER ACHIEVING ADEQUATE STABILIZATION, THE TEMPORARY E&S CONTROLS WILL BE CLEANED UP AND REMOVED IMMEDIATELY.

EROSION AND SEDIMENT CONTROL MEASURES

THE INTENT OF THIS EROSION AND SEDIMENT CONTROL PLAN IS TO GUIDE THE CONTRACTOR IN IMPLEMENTING ACCEPTABLE MEASURES, INFRASTRUCTURE, AND MAINTENANCE PROGRAMS THAT WILL MINIMIZE THE AMOUNT OF EROSION AND RESULTING SEDIMENT THAT WILL TAKE PLACE DURING THE CONSTRUCTION OF THIS PROJECT. ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES WILL BE CONSTRUCTED AND MAINTAINED ACCORDING TO THE MINIMUM STANDARDS AND SPECIFICATIONS OF THE VA EROSION & SEDIMENT CONTROL HANDBOOK.

STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES

CONSTRUCTION ENTRANCE (VESCH STD. & SPEC. 3.02):

STABILIZED STONE PAD WITH A FILTER FABRIC UNDERLINER LOCATED AT POINTS OF VEHICULAR INGRESS AND EGRESS. CONSTRUCTION ENTRANCES REDUCE THE AMOUNT OF MUD TRANSPORTED ONTO PAVED PUBLIC ROADS BY VEHICLES OR RUNOFF. CONSTRUCTION ENTRANCES SHALL BE LIMITED TO THOSE SHOWN ON THE PLANS OR OTHERWISE APPROVED BY THE SOIL EROSION OFFICER. SUPPLEMENTAL DRAWINGS SHALL BE PROVIDED BY THE CONTRACTOR FOR APPROVAL IF ADDITIONAL ENTRANCES ARE REQUIRED.

SILT FENCE (VESCH STD. & SPEC. 3.05):

A TEMPORARY SEDIMENT BARRIER CONSISTING OF A FILTER FABRIC STRETCHED ACROSS AND ATTACHED TO SUPPORTING POSTS AND ENTRENCHED. SILT FENCE IS INSTALLED TO INTERCEPT AND DETAIN SMALL AMOUNTS OF SEDIMENT FROM DISTURBED AREAS DURING CONSTRUCTION IN ORDER TO PREVENT SEDIMENT FROM LEAVING THE SITE AND TO DECREASE THE VELOCITY OF SHEET FLOWS AND LOW-TO-MODERATE CHANNEL FLOWS.

TEMPORARY AND PERMANENT STABILIZATION

TEMPORARY SEEDING SHALL BE APPLIED WITHIN SEVEN DAYS TO DENUDED AREAS THAT MAY NOT BE AT FINAL GRADE, BUT WILL REMAIN DORMANT FOR LONGER THAN 30 DAYS AND LESS THAN ONE YEAR. THIS INCLUDES, BUT IS NOT LIMITED TO, STOCKPILES.

SODDING SHALL BE APPLIED AND A PERENNIAL VEGETATIVE COVERING SHALL BE ESTABLISHED ON DISTURBED AREAS WITHIN SEVEN DAYS OF BEING BROUGHT TO FINAL GRADE ON AREAS NOT OTHERWISE PROTECTED. SELECTION OF THE SEED MIXTURE SHALL DEPEND ON THE TIME OF YEAR IT IS TO BE APPLIED.

SEE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK STD. & SPEC. 3.31 AND 3.32 FOR ACCEPTABLE SEED MIXTURES AND SCHEDULES AS WELL AS LIMING, MULCHING, AND FERTILIZING REQUIREMENTS.

SOIL STOCKPILES AND BORROW AREAS

NO STOCKPILES AND/OR BORROW AREAS ARE ANTICIPATED ON THE SITE. IF STOCKPILES AND/OR BORROW AREAS ARE NEEDED, THE CONTRACTOR SHALL IMPLEMENT THE REQUIRED EROSION CONTROL DEVICES PER THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK AND OBTAIN REQUIRED PERMITS.

EROSION AND SEDIMENT CONTROL MAINTENANCE

IN GENERAL, ALL THE EROSION AND SEDIMENT CONTROL MEASURES SHALL BE CHECKED WEEKLY AND AFTER EACH RUNOFF PRODUCING RAINFALL EVENT TO ENSURE THEY ARE IN WORKING ORDER. THE FOLLOWING ITEMS WILL BE CHECKED IN PARTICULAR:

- SILT FENCE: SEDIMENT DEPOSITS SHALL BE REMOVED WHEN DEPOSITS REACH APPROXIMATELY ONE-HALF THE HEIGHT OF THE BARRIER. FABRIC SHALL BE REPLACED IF IT HAS DECOMPOSED OR BECOME INEFFECTIVE.
- INLET PROTECTION: SEDIMENT DEPOSITS SHALL BE REMOVED WHEN DEPOSITS REACH APPROXIMATELY ONE-HALF THE DESIGN DEPTH OF THE TRAP.
- SEEDING: THE SEEDED AREAS SHALL BE CHECKED REGULARLY TO ENSURE THAT A GOOD STAND IS MAINTAINED. AREAS SHOULD BE FERTILIZED AND RESEEDDED AS NEEDED.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING AN EMPLOYEE WHO WILL BE IN CHARGE OF THE EROSION AND SEDIMENT CONTROL PLAN AND REQUIREMENTS FOR THE PROJECT THAT IS CERTIFIED BY THE VIRGINIA DEPARTMENT OF CONSERVATION AND RECREATION AS A RESPONSIBLE LAND DISTURBER (RLD). THE NAME OF THE CONTRACTOR'S RLD AND COPY OF HIS CURRENT CERTIFICATION SHALL BE PROVIDED TO THE OWNER, ENGINEER AND EROSION & SEDIMENT CONTROL PLAN APPROVING AUTHORITY PRIOR TO ISSUANCE OF THE NOTICE TO PROCEED FOR THE PROJECT.

PLANT PROTECTION

TREES AND VEGETATION ADJACENT TO THE ACTUAL WORK AREA OR BORROW AREA ARE TO BE PROTECTED WITH TEMPORARY CONSTRUCTION SAFETY FENCE TO PRESERVE EXISTING ITEMS INDICATED TO REMAIN AND TO PREVENT DAMAGE TO PROPERTY.

UNDERGROUND UTILITIES SHALL BE LOCATED SO THAT CONSTRUCTION WILL NOT DAMAGE OR DESTROY THE PLANTS TO REMAIN. UTILITY TRENCHING SHALL NOT BE LOCATED CLOSER THAN 1'-0" FOR EACH 1" IN DIAMETER UP TO A MAXIMUM OF 20'-0" FOR TREES TO REMAIN. DAMAGED TREES AND PLANTS SHALL BE RESTORED TO THE SATISFACTION OF THE OWNER.

THE PARKING OF VEHICLES AND STORAGE OF ANY CONSTRUCTION EQUIPMENT OR MATERIALS SHALL NOT OCCUR UNDER THE DRIP LINE OF TREES TO BE PROTECTED.

EROSION AND SEDIMENT CONTROL NOTES

- NO MORE THAN 200 LINEAR FEET OF TRENCH MAY BE OPENED AT ONE TIME. AT THE END OF EACH WORK DAY, ALL EXCAVATION SHALL BE FILLED OR PLATTERED.
- EXCAVATED MATERIAL SHALL BE PLACED ON THE UPHILL SIDE OF TRENCHES. CONTRACTOR SHALL PROVIDE APPROPRIATE PROTECTION TO CONTROL SEDIMENT WASHING INTO THE TRENCH.
- WHERE CONSTRUCTION VEHICLE ACCESS ROUTES INTERSECT PAVED PUBLIC ROADS, PROVISIONS SHALL BE MADE TO MINIMIZE THE TRANSPORT OF SEDIMENT BY TRACKING ONTO THE PAVED SURFACE. WHERE SEDIMENT IS TRANSPORTED ONTO A PUBLIC ROAD SURFACE, THE ROAD SHALL BE CLEANED THOROUGHLY AT THE END OF EACH DAY. SEDIMENT SHALL BE REMOVED FROM THE ROADS BY SHOVELING OR SWEEPING AND TRANSPORTED TO A DISPOSAL AREA.
- ALL EROSION CONTROL DEVICES SHALL BE IN PLACE AND FUNCTIONAL AT ALL TIMES AND IF REMOVED FOR CONSTRUCTION PROGRESS, SHALL BE REPLACED BY THE CLOSE OF EACH WORKDAY.
- FINAL REMOVAL OF EROSION CONTROL DEVICES SHALL NOT OCCUR UNTIL THE OWNER OR HIS DESIGNATED AGENT DEEMS THE SITE STABILIZED.
- SOD IS TO BE IN ACCORDANCE WITH THE SODDING SCHEDULE PROVIDED IN THE LATEST EDITION OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR SATISFYING ANY AND ALL EROSION CONTROL (EC) AND STORM WATER MANAGEMENT (SWM) REQUIREMENTS FOR ANY LAND DISTURBING ACTIVITIES INCLUDING BUT NOT LIMITED TO ON-SITE OR OFF-SITE BORROW, ON-SITE OR OFF-SITE STOCKPILING OR DISPOSAL OF WASTE MATERIALS. BEFORE UNDERTAKING ANY LAND EROSION CONTROL AND STORM WATER MANAGEMENT, THE CONTRACTOR SHALL CONTACT THE CHESTERFIELD COUNTY ENVIRONMENTAL ENGINEERING DEPARTMENT TO DETERMINE WHAT EC AND SWM MEASURES ARE NECESSARY. ALL EC AND SWM MEASURES MUST BE APPROVED BY THE CHESTERFIELD INSPECTOR AND THE OWNER BEFORE IMPLEMENTATION. THE CONTRACTOR SHALL COMPLETELY SATISFY ALL REQUIREMENTS OF THE CHESTERFIELD COUNTY ENVIRONMENTAL ENGINEERING DEPARTMENT BEFORE CONTINUING WITH THE CONCERNED ACTIVITY. THE TEMPORARY EROSION AND SEDIMENT CONTROL ITEMS SHOWN ON THE E&S CONTROL PLANS ARE INTENDED TO PROVIDE A GENERAL PLAN FOR CONTROLLING EROSION AND SILTATION WITHIN THE PROJECT LIMITS.

GENERAL NOTES

- THE INFORMATION AND DATA SHOWN OR INDICATED WITH RESPECT TO EXISTING UNDERGROUND FACILITIES AT OR CONTIGUOUS TO THE SITE IS BASED ON INFORMATION AND DATA FURNISHED TO THE ENGINEER BY THE OWNER. THE OWNER AND ENGINEER SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF ANY SUCH INFORMATION OR DATA. THE CONTRACTOR SHALL HAVE FULL RESPONSIBILITY FOR REVIEWING AND CHECKING ALL SUCH INFORMATION AND DATA, FOR LOCATING ALL UNDERGROUND FACILITIES SHOWN OR INDICATED PRIOR TO CONSTRUCTION, FOR COORDINATION OF THE WORK WITH THE OWNERS OF SUCH UNDERGROUND FACILITIES DURING CONSTRUCTION, FOR THE SAFETY AND PROTECTION THEREOF RESULTING FROM THE WORK, ALL OF WHICH WILL BE AT NO ADDITIONAL COST TO THE OWNER. CONTRACTOR SHALL CONTACT "MISS UTILITY" OF VIRGINIA AT 1-800-552-7001 72 HOURS PRIOR TO THE START OF CONSTRUCTION.
- WHEN WORKING ADJACENT TO EXISTING STRUCTURES, POLES, ETC., CONTRACTOR SHALL USE WHATEVER METHODS THAT ARE NECESSARY TO PROTECT STRUCTURES FROM DAMAGE. CONTRACTOR SHALL HAND EXCAVATE WITHIN 5' OF ALL BUILDINGS, WALLS AND STRUCTURES. REPLACEMENT OF DAMAGED STRUCTURES SHALL BE AT THE CONTRACTOR'S EXPENSE.
- CONTRACTOR SHALL IMMEDIATELY REPORT ANY DISCREPANCIES BETWEEN EXISTING CONDITIONS AND CONTRACT DOCUMENTS TO THE ENGINEER.
- THE LOCATION OF ALL EXISTING UTILITIES ACROSS THE LINES OF THE PROPOSED WORK ARE NOT NECESSARILY SHOWN ON THE PLANS, AND WHERE SHOWN ARE ONLY APPROXIMATE. THE CONTRACTOR SHALL LOCATE ALL UNDERGROUND LINES AND STRUCTURES AS NECESSARY PRIOR TO CONSTRUCTION.
- ALL MATERIALS AND CONSTRUCTION SHALL COMPLY WITH THE CONSTRUCTION DOCUMENTS.
- DATUM FOR ALL ELEVATIONS IS BASED ON NAVD 88 PER COMMERCIAL SITE DESIGN SURVEY.
- CERTIFICATION THAT 95% COMPACTION IS OBTAINED SHALL BE PROVIDED FOR ALL FILL AREAS, INCLUDING UNDER UTILITIES AND APPURTENANCES. THE CERTIFICATE SHALL STATE THE EXACT AREA THAT THE CERTIFICATION APPLIES TO. COMPACTION SHALL BE ACHIEVED IN ACCORDANCE WITH ASTM-D698, STANDARD PROCTOR DENSITY FOR COMPACTION.
- ANY ALTERATIONS AND CONNECTIONS TO ANY UTILITY MUST BE COORDINATED WITH THE OWNER.
- CONTRACTOR WORK DAYS AND HOURS SHALL BE MONDAY THROUGH FRIDAY 7 AM TO 6 PM. ANY DEVIATION FROM THIS SCHEDULE SHALL BE APPROVED BY THE OWNER. SHUTDOWNS WILL BE PERFORMED AT NIGHT AND WEEKENDS WITH 10 DAYS WRITTEN NOTICE AND WRITTEN APPROVAL OF CHESTERFIELD COUNTY UTILITIES DEPARTMENT.
- TOPOGRAPHIC SURVEY, COORDINATES, AND ELEVATIONS PROVIDED BY AMERICAN NATIONAL.
- CONTRACTOR SHALL VERIFY DEPTHS OF ALL UTILITY CROSSINGS PRIOR TO CONSTRUCTION.
- CONTRACTOR SHALL PROVIDE ALL CONSTRUCTION SIGNS.
- THE CONTRACTOR SHALL VERIFY ELEVATIONS OF ALL POINTS OF CONNECTION OF PROPOSED WORK TO EXISTING STORM DRAIN PRIOR TO CONSTRUCTION.

MINIMUM STANDARDS

- PERMANENT OR TEMPORARY SOIL STABILIZATION SHALL BE APPLIED TO DENUDED AREAS WITHIN SEVEN DAYS AFTER FINAL GRADE IS REACHED ON ANY PORTION OF THE SITE. TEMPORARY SOIL STABILIZATION SHALL BE APPLIED WITHIN SEVEN DAYS TO DENUDED AREAS THAT MAY NOT BE AT FINAL GRADE BUT WILL REMAIN DORMANT FOR LONGER THAN 30 DAYS. PERMANENT STABILIZATION SHALL BE APPLIED TO AREAS THAT ARE TO BE LEFT DORMANT FOR MORE THAN ONE YEAR. SPECIFIC FERTILIZER, NUTRIENT, AND SEED APPLICATION MUST MEET E.S.C. TECHNICAL BULLETIN NO. 4. NUTRIENT MANAGEMENT FOR DEVELOPMENT PROJECTS. DOWNLOAD AT [http://www.dcr.virginia.gov/soil&\\_water/documents/vegetation.pdf](http://www.dcr.virginia.gov/soil&_water/documents/vegetation.pdf). MULCHING REQUIREMENTS MUST MEET VESC HANDBOOK MULCHING TABLE 3.35A.
- DURING CONSTRUCTION OF THE PROJECT, SOIL STOCKPILES AND BORROW AREAS SHALL BE STABILIZED OR PROTECTED WITH SEDIMENT TRAPPING MEASURES. THE APPLICANT IS RESPONSIBLE FOR THE TEMPORARY PROTECTION AND PERMANENT STABILIZATION OF ALL SOIL STOCKPILES ON SITE AS WELL AS BORROW AREAS AND SOIL INTENTIONALLY TRANSPORTED FROM THE PROJECT SITE. ANY BORROW, FILL OR WASTE, SUCH AS DEMOLITION MATERIAL MUST BE PROVIDED FROM OR HAULED TO A PERMITTED/APPROVED SUPPLY OR WASTE AREA. ALL OFFSITE ACTIVITY IS NOT PART OF THIS PERMIT/PLAN SET AND IS ADDRESSED UNDER SEPARATE COVER.
- A PERMANENT VEGETATIVE COVER SHALL BE ESTABLISHED ON DENUDED AREAS NOT OTHERWISE PERMANENTLY STABILIZED. PERMANENT VEGETATION SHALL NOT BE CONSIDERED ESTABLISHED UNTIL A GROUND COVER IS ACHIEVED THAT IS UNIFORM, MATURE ENOUGH TO SURVIVE AND WILL INHIBIT EROSION.
- SEDIMENT BASINS AND TRAPS, PERIMETER DIKES, SEDIMENT BARRIERS AND OTHER MEASURES INTENDED TO TRAP SEDIMENT SHALL BE CONSTRUCTED AS A FIRST STEP IN ANY LAND-DISTURBING ACTIVITY AND SHALL BE MADE FUNCTIONAL BEFORE UPSLOPE LAND DISTURBANCE TAKES PLACE.
- STABILIZATION MEASURES SHALL BE APPLIED TO EARTHEN STRUCTURES SUCH AS DAMS, DIKES AND DIVERSIONS IMMEDIATELY AFTER INSTALLATION.
- SEDIMENT TRAPS AND SEDIMENT BASINS SHALL BE DESIGNED AND CONSTRUCTED BASED UPON THE TOTAL DRAINAGE AREA TO BE SERVED BY THE TRAP OR BASIN.
  - THE MINIMUM STORAGE CAPACITY OF A SEDIMENT TRAP SHALL BE 134 CUBIC YARDS PER ACRE OF DRAINAGE AREA AND THE TRAP SHALL ONLY CONTROL DRAINAGE AREAS LESS THAN THREE ACRES.
  - SURFACE RUNOFF FROM DISTURBED AREAS THAT IS COMPRISED OF FLOW FROM DRAINAGE AREAS GREATER THAN OR EQUAL TO THREE ACRES SHALL BE CONTROLLED BY A SEDIMENT BASIN. THE MINIMUM STORAGE CAPACITY OF A SEDIMENT BASIN SHALL BE 134 CUBIC YARDS PER ACRE OF DRAINAGE AREA. THE OUTFALL SYSTEM SHALL, AT A MINIMUM, MAINTAIN THE STRUCTURAL INTEGRITY OF THE BASIN DURING A 25-YEAR STORM OF 24-HOUR DURATION. RUNOFF COEFFICIENTS USED IN RUNOFF CALCULATIONS SHALL CORRESPOND TO A BARE EARTH CONDITION OR THOSE CONDITIONS EXPECTED TO EXIST WHILE THE SEDIMENT BASIN IS UTILIZED.
- CUT AND FILL SLOPES SHALL BE DESIGNED AND CONSTRUCTED IN A MANNER THAT WILL MINIMIZE EROSION. SLOPES THAT ARE FOUND TO BE ERODING EXCESSIVELY WITHIN ONE YEAR OF PERMANENT STABILIZATION SHALL BE PROVIDED WITH ADDITIONAL SLOPE STABILIZING MEASURES UNTIL THE PROBLEM IS CORRECTED.
- CONCENTRATED RUNOFF SHALL NOT FLOW DOWN CUT OR FILL SLOPES UNLESS CONTAINED WITHIN AN ADEQUATE TEMPORARY OR PERMANENT CHANNEL, FLUME OR SLOPE DRAIN STRUCTURE.
- WHenever WATER SEEPS FROM A SLOPE FACE, ADEQUATE DRAINAGE OR OTHER PROTECTION SHALL BE PROVIDED.
- ALL STORM SEWER INLETS THAT ARE MADE OPERABLE DURING CONSTRUCTION SHALL BE PROTECTED SO THAT SEDIMENT-LADEN WATER CANNOT ENTER THE CONVEYANCE SYSTEM WITHOUT FIRST BEING FILTERED OR OTHERWISE TREATED TO REMOVE SEDIMENT.
- BEFORE NEWLY CONSTRUCTED STORMWATER CONVEYANCE CHANNELS OR PIPES ARE MADE OPERATIONAL, ADEQUATE OUTLET PROTECTION AND ANY REQUIRED TEMPORARY OR PERMANENT CHANNEL LINING SHALL BE INSTALLED IN BOTH THE CONVEYANCE CHANNEL AND RECEIVING CHANNEL.
- WHEN WORK IN A LIVE WATERCOURSE IS PERFORMED, PRECAUTIONS SHALL BE TAKEN TO MINIMIZE ENCRoACHMENT, CONTROL SEDIMENT TRANSPORT AND STABILIZE THE WORK AREA TO THE GREATEST EXTENT POSSIBLE DURING CONSTRUCTION. NONERODIBLE MATERIAL SHALL BE USED FOR THE CONSTRUCTION OF CAUSEWAYS AND COFFERDAMS. EARTHEN FILL MAY BE USED FOR THESE STRUCTURES IF ARMORED BY NONERODIBLE COVER MATERIALS.
- WHEN A LIVE WATERCOURSE MUST BE CROSSED BY CONSTRUCTION VEHICLES MORE THAN TWICE IN ANY SIX-MONTH PERIOD, A TEMPORARY VEHICULAR STREAM CROSSED OF NONERODIBLE MATERIAL SHALL BE PROVIDED.
- ALL APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS PERTAINING TO WORKING IN OR CROSSING LIVE WATERCOURSES SHALL BE MET.
- THE BED AND BANKS OF A WATERCOURSE SHALL BE STABILIZED IMMEDIATELY AFTER WORK IN THE WATERCOURSE IS COMPLETED.
- UNDERGROUND UTILITY LINES SHALL BE INSTALLED IN ACCORDANCE WITH THE FOLLOWING STANDARDS IN ADDITION TO OTHER APPLICABLE CRITERIA:
  - NO MORE THAN 200 LINEAR FEET OF TRENCH MAY BE OPENED AT ONE TIME.
  - EXCAVATED MATERIAL SHALL BE PLACED ON THE UPHILL SIDE OF TRENCHES.
  - EFFLUENT FROM DEWATERING OPERATIONS SHALL BE FILTERED OR PASSED THROUGH AN APPROVED SEDIMENT TRAPPING DEVICE, OR BOTH, AND DISCHARGED IN A MANNER THAT DOES NOT ADVERSELY AFFECT FLOWING STREAMS OR OFF-SITE PROPERTY.
  - MATERIAL USED FOR BACKFILLING TRENCHES SHALL BE PROPERLY COMPACTED IN ORDER TO MINIMIZE EROSION AND PROMOTE STABILIZATION.
  - RE-STABILIZATION SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THESE REGULATIONS.
  - APPLICABLE SAFETY REGULATIONS SHALL BE COMPLIED WITH.
- WHERE CONSTRUCTION VEHICLE ACCESS ROUTES INTERSECT PAVED OR PUBLIC ROADS, PROVISIONS SHALL BE MADE TO MINIMIZE THE TRANSPORT OF SEDIMENT BY VEHICULAR TRACKING ONTO THE PAVED SURFACE. WHERE SEDIMENT IS TRANSPORTED ONTO A PAVED OR PUBLIC ROAD SURFACE, THE ROAD SURFACE SHALL BE CLEANED THOROUGHLY AT THE END OF EACH DAY. SEDIMENT SHALL BE REMOVED FROM THE ROADS BY SHOVELING OR SWEEPING AND TRANSPORTED TO A SEDIMENT CONTROL DISPOSAL AREA. STREET WASHING SHALL BE ALLOWED ONLY AFTER SEDIMENT IS REMOVED IN THIS MANNER. THIS PROVISION SHALL APPLY TO INDIVIDUAL DEVELOPMENT LOTS AS WELL AS TO LARGER AND-DISTURBING ACTIVITIES.
- ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED WITHIN 30 DAYS AFTER FINAL SITE STABILIZATION OR AFTER THE TEMPORARY MEASURES ARE NO LONGER NEEDED, UNLESS OTHERWISE AUTHORIZED BY THE REGULATORY AUTHORITY. TRAPPED SEDIMENT AND THE DISTURBED SOIL AREAS RESULTING FROM THE DISPOSITION OF TEMPORARY MEASURES SHALL BE PERMANENTLY STABILIZED TO PREVENT FURTHER EROSION AND SEDIMENTATION.
- PROPERTIES AND WATERWAYS DOWNSTREAM FROM DEVELOPMENT SITES SHALL BE PROTECTED FROM SEDIMENT DEPOSITION, EROSION AND DAMAGE DUE TO INCREASES IN VOLUME, VELOCITY AND PEAK FLOW RATE OF STORMWATER RUNOFF FOR THE STATED FREQUENCY STORM OF 24-HOUR DURATION IN ACCORDANCE WITH THE STANDARDS AND CRITERIA FOUND IN VESC REGULATION 4VAC50-30-40 MS-19 PARTS A-K.

SEQUENCE OF CONSTRUCTION

- A PRECONSTRUCTION MEETING SHALL BE SCHEDULED BY THE CONTRACTOR WITH AN INSPECTOR FROM THE LOCAL JURISDICTION AT LEAST 48 HOURS PRIOR TO ANY VEGETATION OR LAND DISTURBANCE ACTIVITIES.
- CONSTRUCTION SHALL BE SEQUENCED SUCH THAT GRADING OPERATIONS CAN BEGIN AND END AS QUICKLY AS POSSIBLE.
- THE CONTRACTOR IS RESPONSIBLE FOR THE INSTALLATION AND MAINTENANCE OF ALL EROSION AND SEDIMENT CONTROL PRACTICES.
- THE CONTRACTOR IS TO INSTALL THE EROSION AND SEDIMENT CONTROL MEASURES INCLUDING: CONSTRUCTION ENTRANCE, SILT FENCE, AND INLET PROTECTION.
- LAND DISTURBANCE OUTSIDE THE PRELIMINARY LIMITS OF DISTURBANCE MAY NOT OCCUR UNTIL THE INITIAL ESC MEASURES INSTALLATION HAS BEEN APPROVED BY THE ENVIRONMENTAL INSPECTOR.
- PHASE I:
  - INSTALL EROSION AND SEDIMENT CONTROL DEVICES.
  - DEMO & REMOVE IDENTIFIED ITEMS.
  - INSTALL PROPOSED UTILITIES.
  - TEMPORARY SEED AND MULCH DISTURBED AREAS.
- PHASE II:
  - PERMANENTLY SEED TO STABILIZE SITE
- UPON APPROVAL BY THE COUNTY INSPECTOR, THE CONTRACTOR IS TO REMOVE ALL TEMPORARY EROSION AND SEDIMENT CONTROL DEVICES ONCE ALL AREAS ARE STABILIZED.

GENERAL EROSION AND SEDIMENT CONTROL NOTES

ES-1: UNLESS OTHERWISE INDICATED, ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES WILL BE CONSTRUCTED AND MAINTAINED ACCORDING TO MINIMUM STANDARDS AND SPECIFICATIONS OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK AND THE VIRGINIA EROSION AND SEDIMENT CONTROL REGULATIONS (9VAC25-870-40).

ES-2: THE PLAN-APPROVING AUTHORITY MUST BE NOTIFIED ONE WEEK PRIOR TO THE PRE-CONSTRUCTION CONFERENCE, ONE WEEK PRIOR TO THE COMMENCEMENT OF LAND DISTURBING ACTIVITY, AND ONE WEEK PRIOR TO THE FINAL INSPECTION. THE NAME OF THE RESPONSIBLE LAND DISTURBER MUST BE PROVIDED TO THE PLAN-APPROVING AUTHORITY PRIOR TO ACTUAL ENGAGEMENT IN THE LAND-DISTURBING ACTIVITY SHOWN ON THE APPROVED PLAN. IF THE NAME IS NOT PROVIDED PRIOR TO ENGAGING IN THE LAND-DISTURBING ACTIVITY, THE PLAN'S APPROVAL WILL BE REVOKED.

ES-3: ALL EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE PLACED PRIOR TO OR AS THE FIRST STEP IN CLEARING.

ES-4: A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN SHALL BE MAINTAINED ON THE SITE AT ALL TIMES.

ES-5: PRIOR TO COMMENCING LAND DISTURBING ACTIVITIES IN AREAS OTHER THAN INDICATED ON THESE PLANS (INCLUDING, BUT NOT LIMITED TO, OFF-SITE BORROW OR WASTE AREAS), THE CONTRACTOR SHALL SUBMIT SUPPLEMENTARY EROSION CONTROL PLAN TO THE OWNER FOR REVIEW AND APPROVAL BY THE PLAN-APPROVING AUTHORITY.

ES-6: THE CONTRACTOR IS RESPONSIBLE FOR INSTALLATION OF ANY ADDITIONAL EROSION CONTROL MEASURES NECESSARY TO PREVENT EROSION AND SEDIMENTATION AS DETERMINED BY THE PLAN-APPROVING AUTHORITY.

ES-7: ALL DISTURBED AREAS ARE TO DRAIN TO APPROVED SEDIMENT CONTROL MEASURES AT ALL TIMES DURING LAND DISTURBING ACTIVITIES AND DURING SITE DEVELOPMENT UNTIL FINAL STABILIZATION IS ACHIEVED, AFTER WHICH, UPON APPROVAL OF THE PLAN-APPROVING AUTHORITY, THE CONTROLS SHALL BE REMOVED. TRAPPED SEDIMENT AND THE DISTURBED SOIL AREAS RESULTING FROM THE REMOVAL OF TEMPORARY MEASURES SHALL BE PERMANENTLY STABILIZED TO PREVENT FURTHER EROSION AND SEDIMENTATION.

ES-8: DURING DEWATERING OPERATIONS, WATER SHALL BE PUMPED INTO AN APPROVED FILTERING DEVICE.

ES-9: THE CONTRACTOR SHALL INSPECT ALL EROSION CONTROL MEASURES AT LEAST EVERY 2 WEEKS AND IMMEDIATELY AFTER EACH RUNOFF-PRODUCING RAINFALL EVENT. ANY NECESSARY REPAIRS OR CLEANUP TO MAINTAIN THE EFFECTIVENESS OF THE EROSION CONTROL DEVICES SHALL BE MADE IMMEDIATELY.

ES-10: THE CONTRACTOR IS RESPONSIBLE FOR THE DAILY REMOVAL OF SEDIMENT THAT HAS BEEN TRANSPORTED ONTO A PAVED OR PUBLIC ROAD SURFACE.

ES-11: SEEDING OPERATIONS SHALL BE INITIATED WITHIN 7 DAYS AFTER REACHING FINAL GRADE OR UPON SUSPENSION OF GRADING OPERATIONS FOR ANTICIPATED DURATION OF GREATER THAN 30 DAYS OR UPON COMPLETION OF GRADING OPERATIONS FOR A SPECIFIC AREA.

ES-12: THE CONTRACTOR SHALL BE RESPONSIBLE FOR PREVENTING SURFACE AND AIR MOVEMENT OF DUST FROM EXPOSED SOILS WHICH MAY PRESENT HEALTH HAZARDS, TRAFFIC SAFETY PROBLEMS, OR HARM ANIMAL OR PLANT LIFE.

ES-13: A VIRGINIA STORMWATER MANAGEMENT PROGRAM PERMIT (VSMPP) FOR THE DISCHARGE OF STORMWATER FROM CONSTRUCTION ACTIVITIES IS REQUIRED FOR PROJECTS DISTURBING 1 ACRE OR GREATER. A VSMPP IS ALSO REQUIRED FOR PROJECTS DISTURBING 2,500 SQUARE FEET OR GREATER IN A DESIGNATED CHESAPEAKE BAY PRESERVATION AREA. VISIT THE VIRGINIA STORMWATER MANAGEMENT PROGRAM PERMITTING WEB PAGE AT [HTTP://WWW.DEQ.VIRGINIA.GOV/PROGRAMS/WATER/STORMWATERMANAGEMENT/VSMPPPERMITS.ASPX](http://www.deq.virginia.gov/PROGRAMS/WATER/STORMWATERMANAGEMENT/VSMPPPERMITS.ASPX) FOR MORE INFORMATION.

SOIL MAP



VERIZON WIRELESS  
1831 RADY COURT  
RICHMOND, VA 23222

CARTERS  
BRIDGE

CONSTRUCTION DRAWINGS

0	06/27/17	FOR CONSTRUCTION



Dewberry Engineers Inc.

4805 Lake Brook Drive, Suite 200  
Glen Allen, VA 23060  
Phone: 804.290.7957  
Fax: 804.290.7928  
[www.dewberry.com](http://www.dewberry.com)



DRAWN BY: ARB

REVIEWED BY: BAR

CHECKED BY: DRM

PROJECT NUMBER: 50079910

SITE ADDRESS:

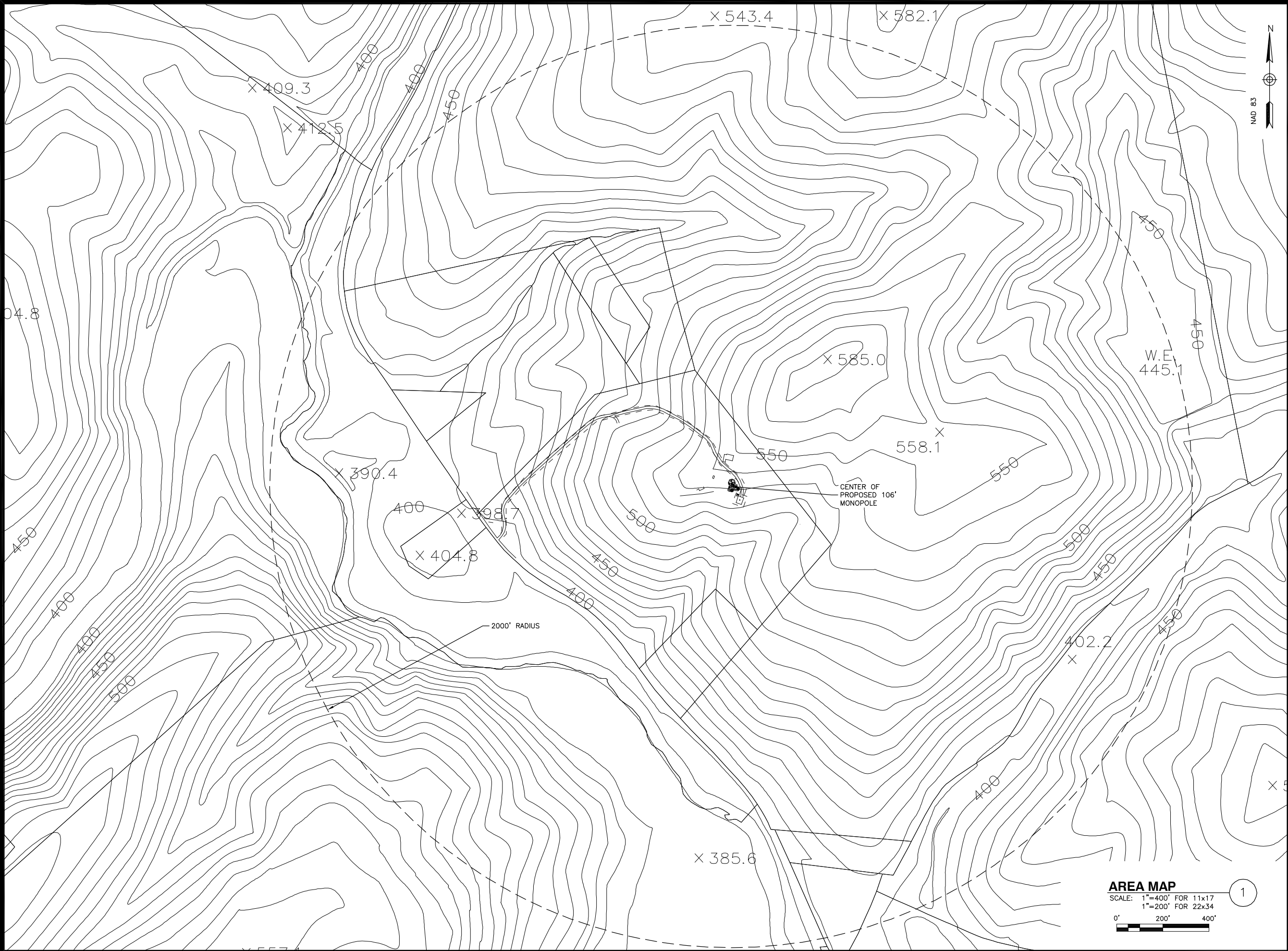
4319 SCOTTSVILLE ROAD  
CHARLOTTESVILLE, VA 22902

SHEET TITLE

EROSION CONTROL NOTES

SHEET NUMBER





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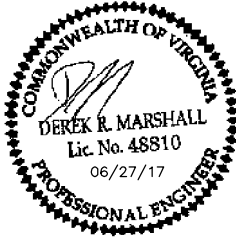
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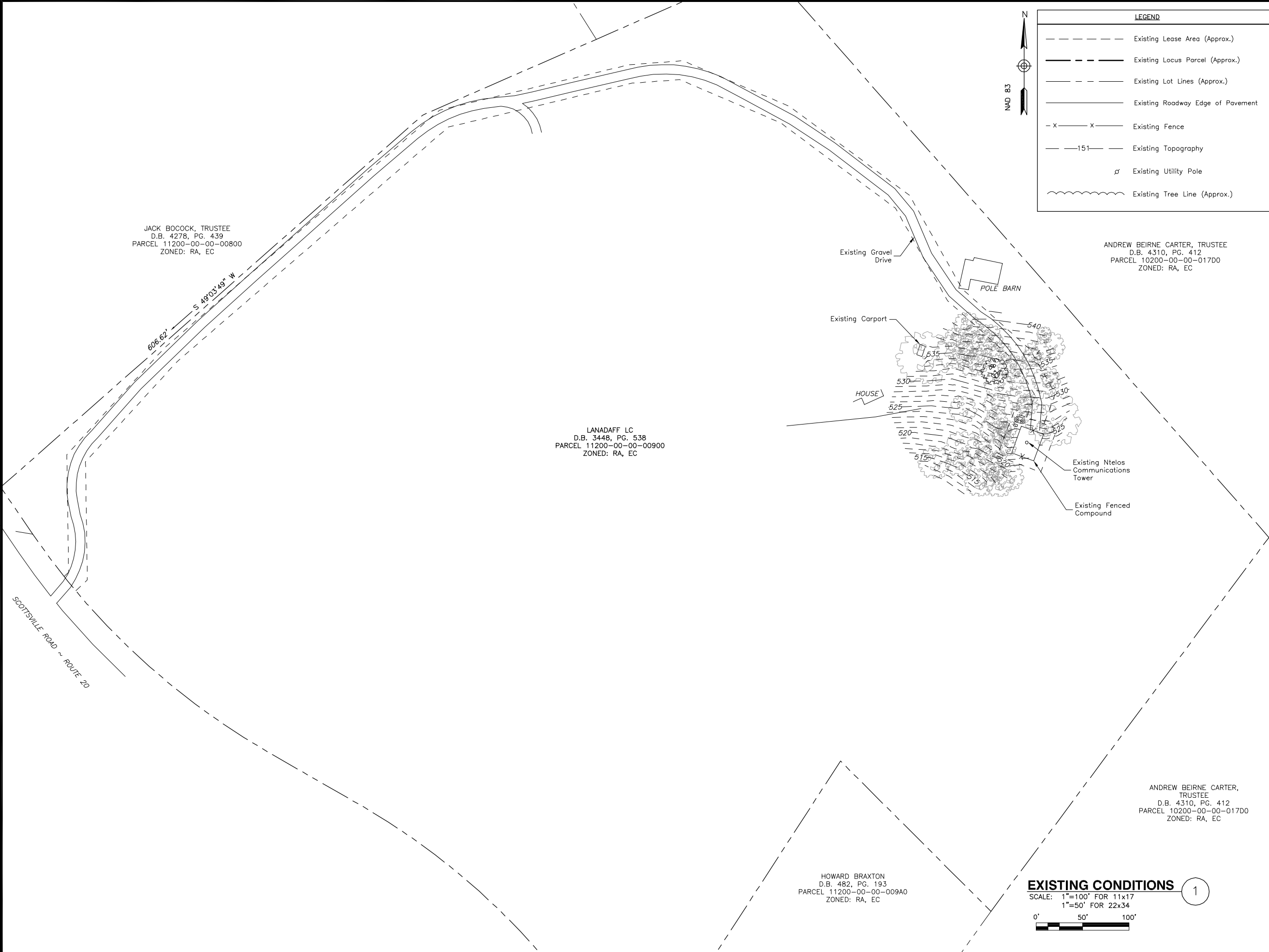
4319 SCOTTSVILLE ROAD  
CHARLOTTESVILLE, VA 22902

SHEET TITLE

AREA MAP

SHEET NUMBER

C-0



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SHEET TITLE

EXISTING CONDITIONS

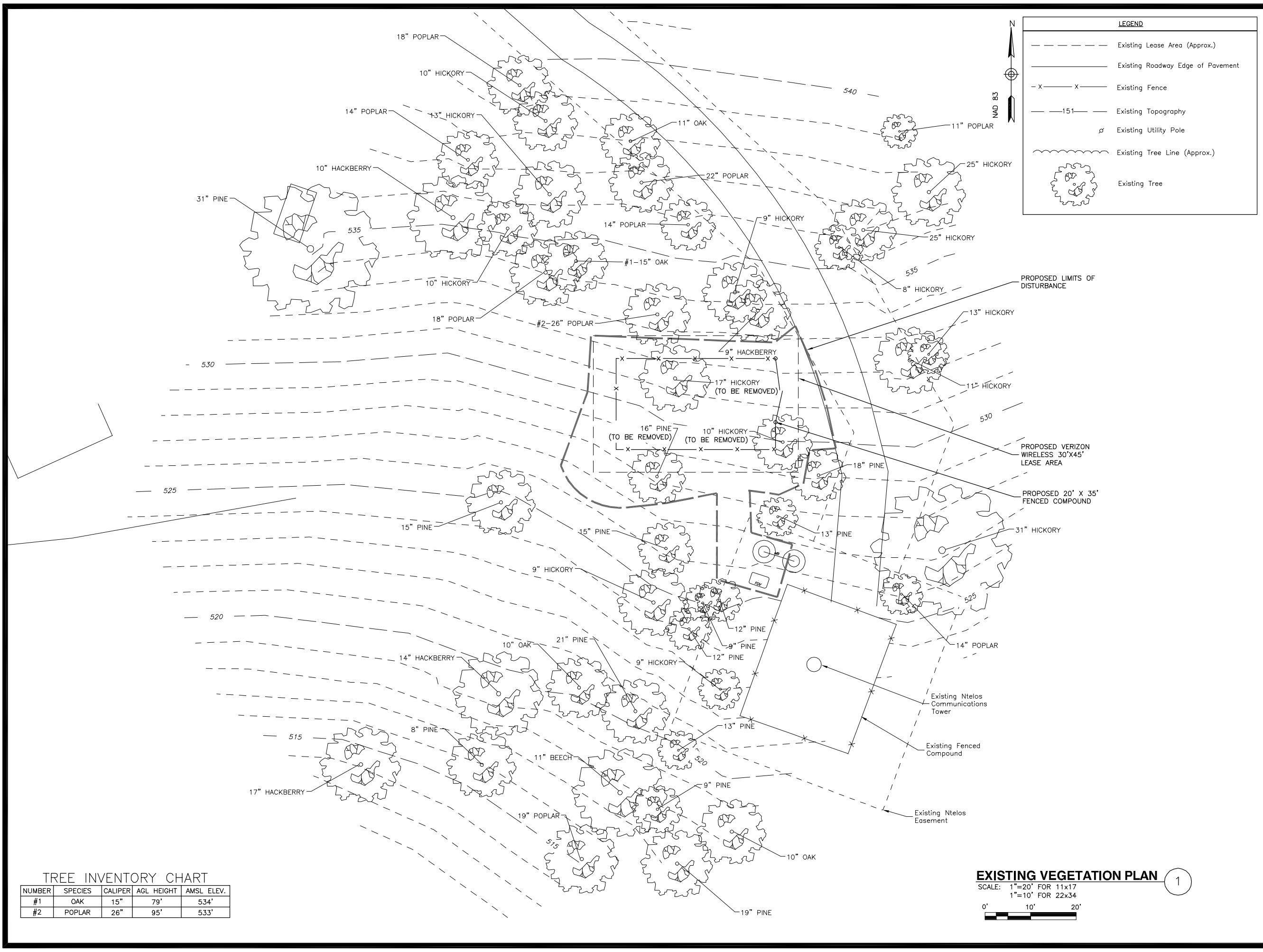
SHEET NUMBER

C-1

EXISTING CONDITIONS

SCALE: 1"=100' FOR 11x17  
1"=50' FOR 22x34





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CHARLOTTESVILLE, VA 22902

SHEET TITLE
EXISTING VEGETATION PLAN
SHEET NUMBER

C-2

LEGEND

Existing Easement

Existing Locus Parcel (Approx.)

Existing Lot Lines (Approx.)

Existing Roadway Edge of Pavement

- X - X -

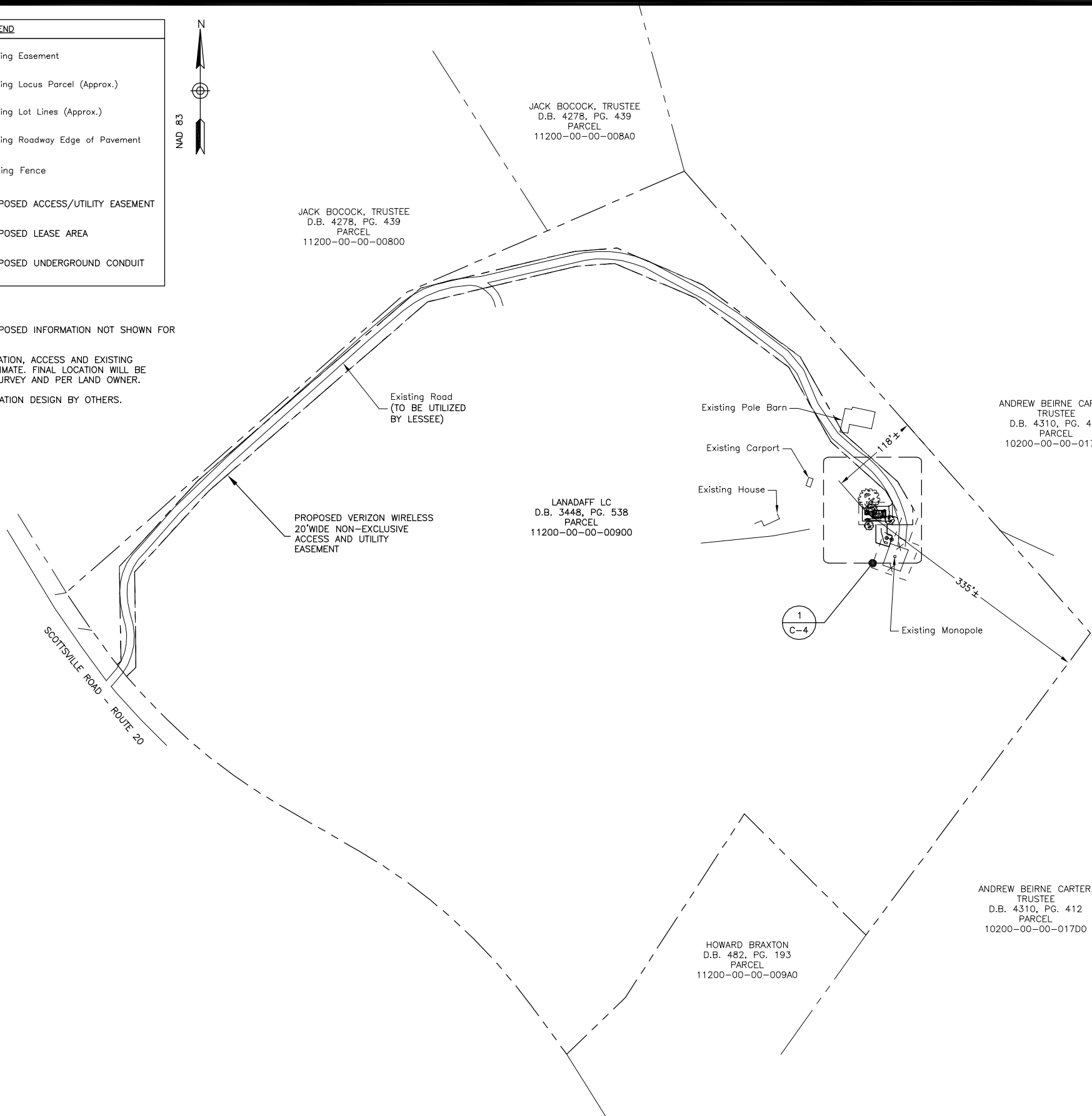
Existing Fence

PROPOSED ACCESS/UTILITY EASEMENT

PROPOSED LEASE AREA

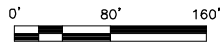
PROPOSED UNDERGROUND CONDUIT

- NOTES:
- SOME EXISTING & PROPOSED INFORMATION NOT SHOWN FOR CLARITY.
  - PROPOSED TOWER LOCATION, ACCESS AND EXISTING FEATURES ARE APPROXIMATE. FINAL LOCATION WILL BE VERIFIED WITH FIELD SURVEY AND PER LAND OWNER.
  - MONOPOLE AND FOUNDATION DESIGN BY OTHERS.



OVERALL SITE PLAN

SCALE: 1"=160' FOR 11x17  
1"=80' FOR 22x34



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SITE ADDRESS:	

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SHEET TITLE

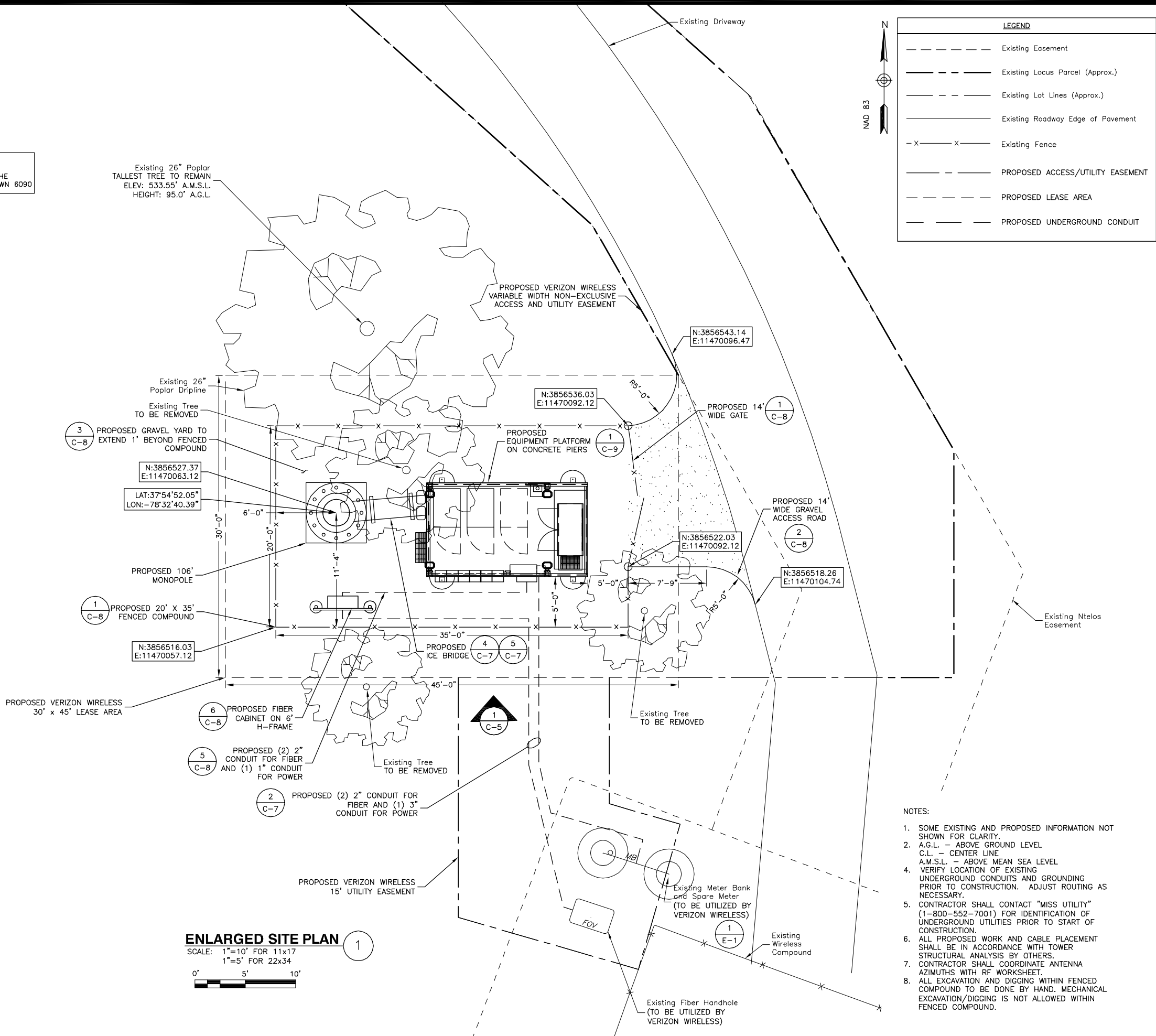
OVERALL SITE PLAN

SHEET NUMBER

C-3



NOTE:  
ALL EQUIPMENT VISIBLE FROM OUTSIDE THE  
COMPOUND SHALL BE PAINTED JAVA BROWN 6090



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PROJECT NUMBER:	50079910
SITE ADDRESS:	

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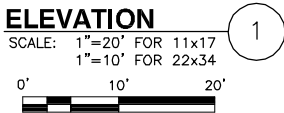
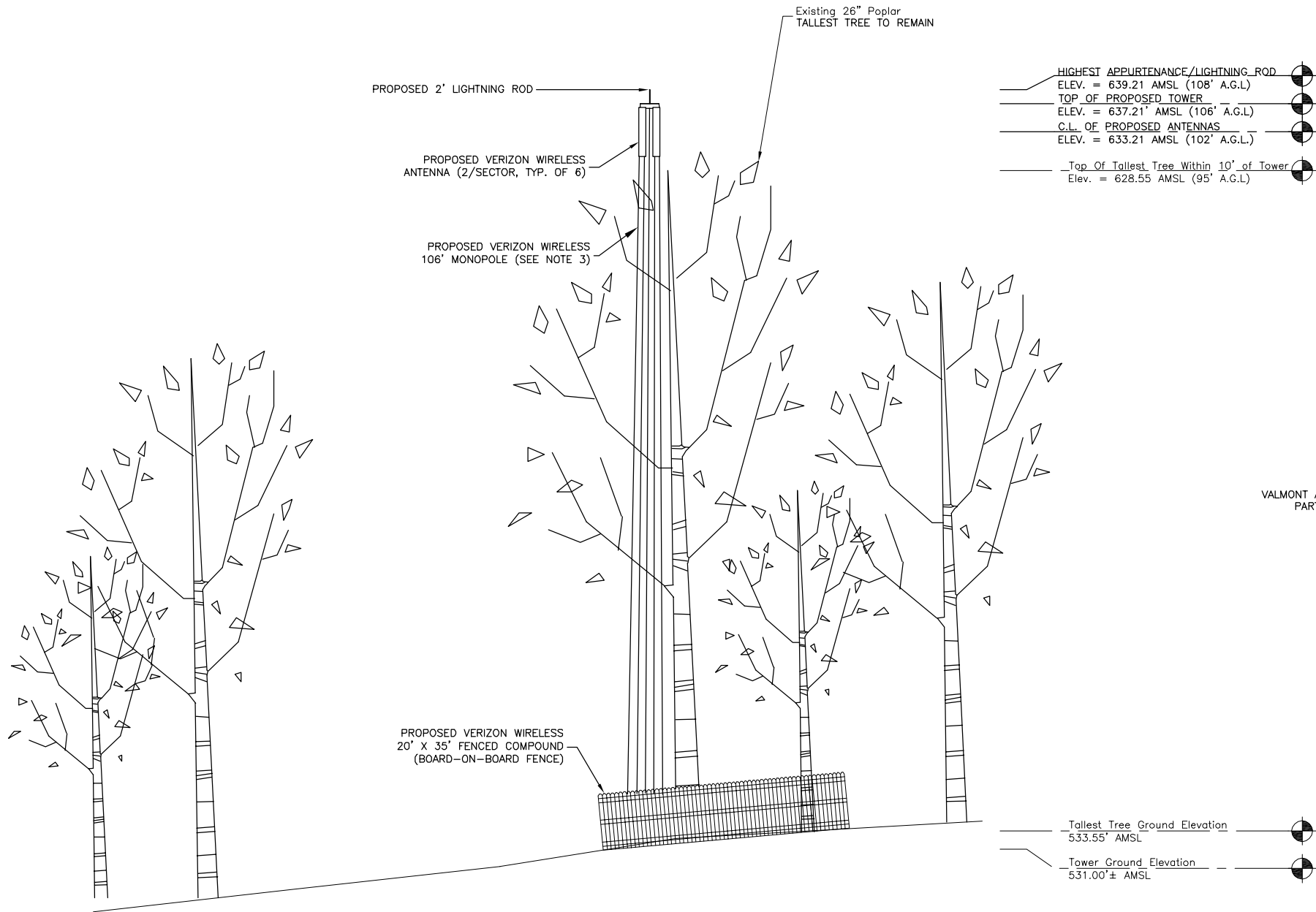
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ENLARGED SITE PLAN

SHEET NUMBER

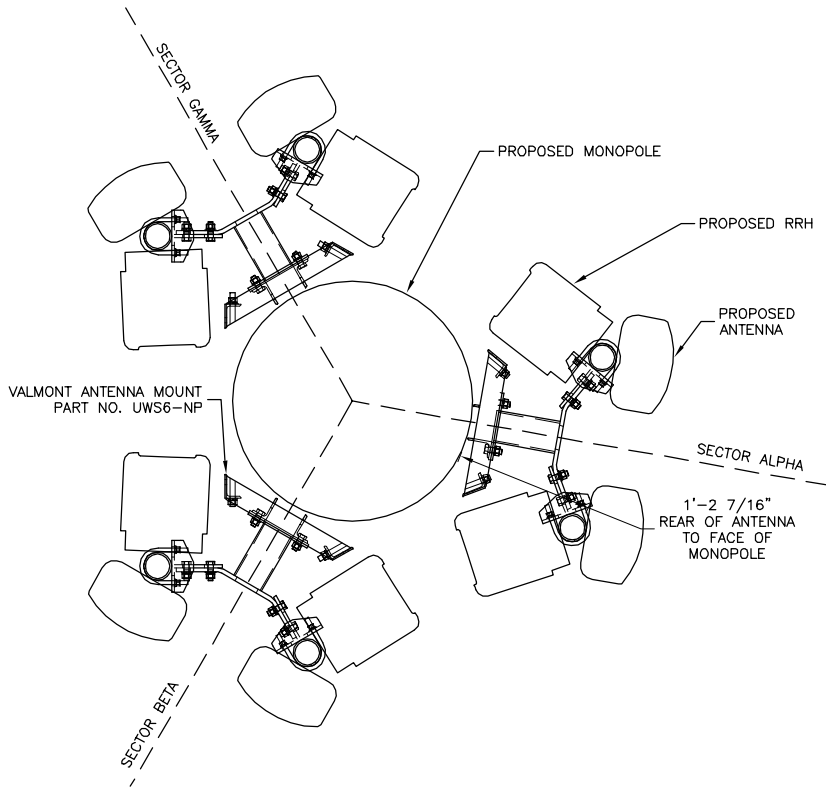
C-4





LEGEND		
A.G.L.	-	ABOVE GROUND LEVEL
C.L.	-	CENTER LINE

- NOTES:**
- SOME EXISTING & PROPOSED INFORMATION NOT SHOWN FOR CLARITY.
  - PROPOSED TOWER LOCATION, ACCESS AND EXISTING FEATURES ARE APPROXIMATE. FINAL LOCATION WILL BE VERIFIED WITH FIELD SURVEY AND PER LAND OWNER.
  - MONOPOLE AND FOUNDATION DESIGN BY OTHERS.



**ANTENNA LAYOUT PLAN** 2

SCALE: NTS

- ANTENNA NOTES:**
- ANTENNAS WILL BE INSTALLED WITH A MODIFIED FLUSH MOUNT DESIGN, USING LOW-PROFILE MOUNTING BRACKETS.
  - PROPOSED ANTENNAS: (6) ANDREW JAHH-65C-R3B MEASURING 95.7"x13.8"x8.2" (LxWxD)
  - MONOPOLE, ANTENNAS, MOUNTS, RRHS, OVPS, AND GROUND EQUIPMENT WILL BE PAINTED COUNTY APPROVED COLOR - SHERWIN WILLIAMS #6090: JAVA BROWN.
  - PER ALBEMARLE COUNTY TIER II PWSF REQUIREMENTS, NO POINT ON THE BACK OF THE ANTENNAS SHALL BE MORE THAN 18" FROM THE FACE OF THE MONOPOLE, AS DETAILED IN THE ANTENNA LAYOUT PLAN PROVIDED ON THIS SHEET.
  - THE PROPOSED MONOPOLE SHALL NOT EXCEED A 30" DIAMETER AT ITS BASE AND 18" DIAMETER AT ITS TOP.



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1831 RADY COURT  
RICHMOND, VA 23222

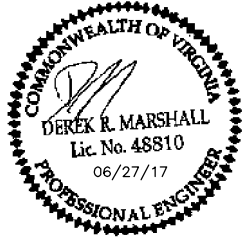
**CARTERS  
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CONSTRUCTION DRAWINGS

0	06/27/17	FOR CONSTRUCTION



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4805 Lake Brook Drive, Suite 200  
Glen Allen, VA 23060  
Phone: 804.290.7257  
Fax: 804.290.7928  
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DRAWN BY:	ARB
REVIEWED BY:	BAR
CHECKED BY:	DRM
PROJECT NUMBER:	50079910
SITE ADDRESS:	

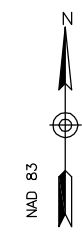
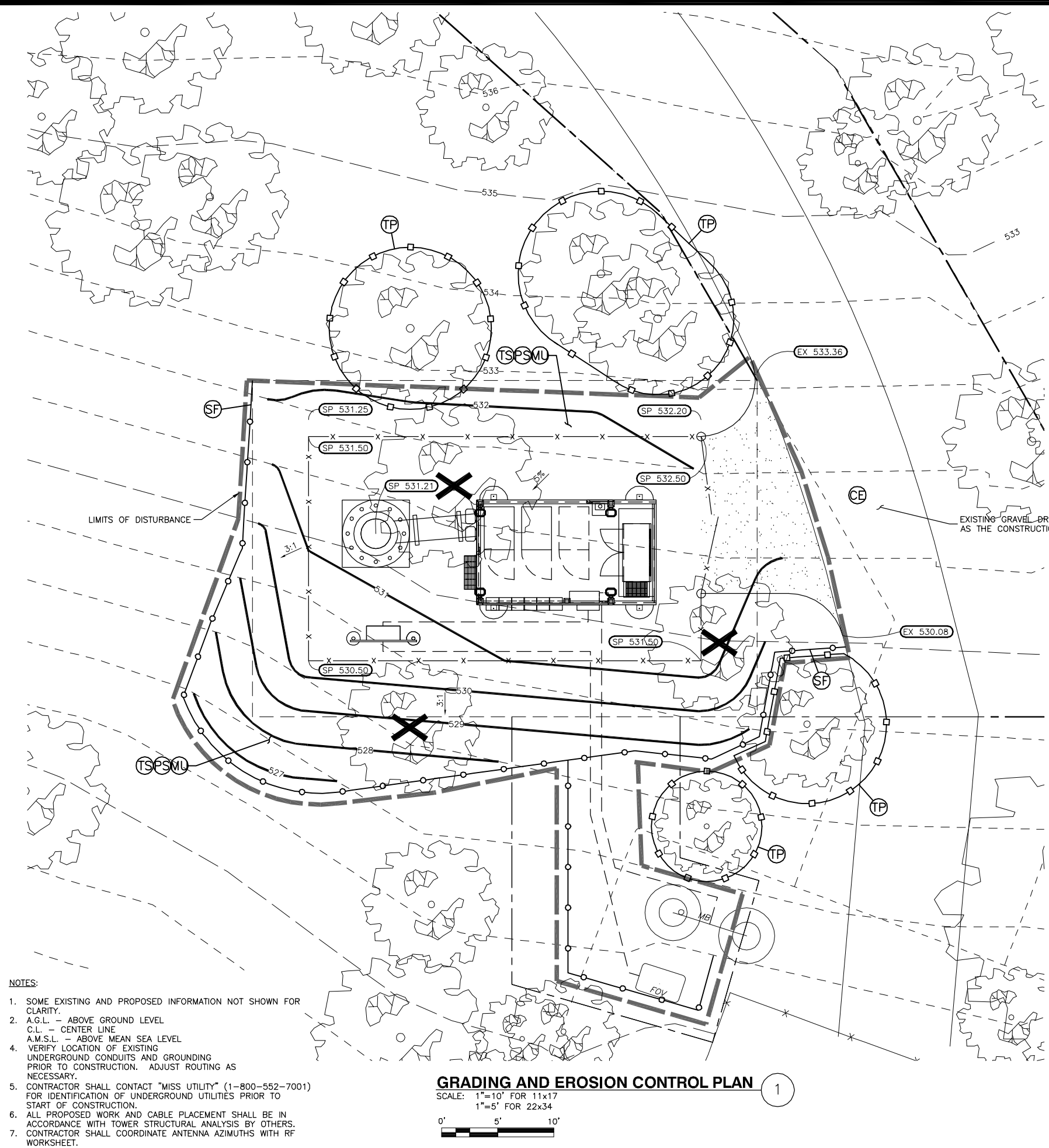
4319 SCOTTSVILLE ROAD  
CHARLOTTESVILLE, VA 22902

SHEET TITLE

ELEVATION

SHEET NUMBER

C-5



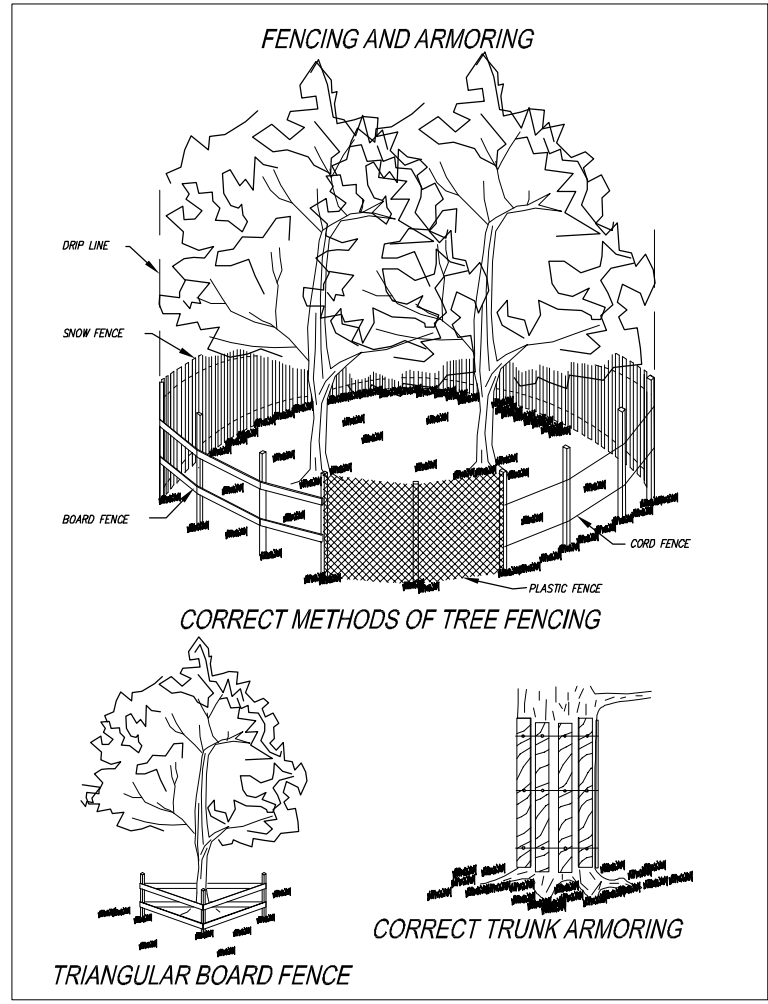
LEGEND	
	Existing Access Rd/Compound Equip.
	PROPOSED ACCESS EASEMENT
	PROPOSED UNDERGROUND CONDUITS
	PROPOSED FENCE
	PROPOSED CLEARING LIMITS
	PROPOSED LIMITS OF DISTURBANCE
	PROPOSED SILT FENCE
	PROPOSED TREE PROTECTION
	TREE TO BE REMOVED
	PROPOSED CONTOUR
	Existing Contour
	PROPOSED GRADING FLOW ARROW
	PROPOSED SPOT ELEVATION
SP	SPOT GRADE
EX	EXISTING GRADE

VIRGINIA UNIFORM CODING SYSTEM  
FOR EROSION AND SEDIMENT CONTROL PRACTICES

3.02	CONSTRUCTION ENTRANCE	CE
3.05	SILT FENCE	SF
3.31	TEMPORARY SEEDING	TS
3.32	PERMANENT SEEDING	PS
3.35	MULCHING	ML
3.38	TREE PRESERVATION AND PROTECTION	TP

- NOTES:
- SOME EXISTING AND PROPOSED INFORMATION NOT SHOWN FOR CLARITY.
  - A.G.L. - ABOVE GROUND LEVEL  
C.L. - CENTER LINE  
A.M.S.L. - ABOVE MEAN SEA LEVEL
  - VERIFY LOCATION OF EXISTING UNDERGROUND CONDUITS AND GROUNDING PRIOR TO CONSTRUCTION. ADJUST ROUTING AS NECESSARY.
  - CONTRACTOR SHALL CONTACT "MISS UTILITY" (1-800-552-7001) FOR IDENTIFICATION OF UNDERGROUND UTILITIES PRIOR TO START OF CONSTRUCTION.
  - ALL PROPOSED WORK AND CABLE PLACEMENT SHALL BE IN ACCORDANCE WITH TOWER STRUCTURAL ANALYSIS BY OTHERS.
  - CONTRACTOR SHALL COORDINATE ANTENNA AZIMUTHS WITH RF WORKSHEET.

**GRADING AND EROSION CONTROL PLAN** 1  
SCALE: 1"=10' FOR 11x17  
1"=5' FOR 22x34  
0' 5' 10'



VERIZON WIRELESS  
1831 RADY COURT  
RICHMOND, VA 23222

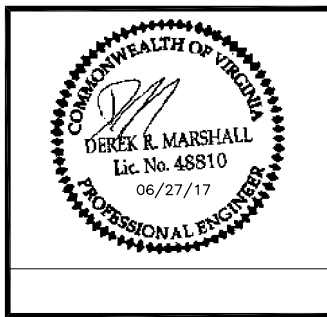
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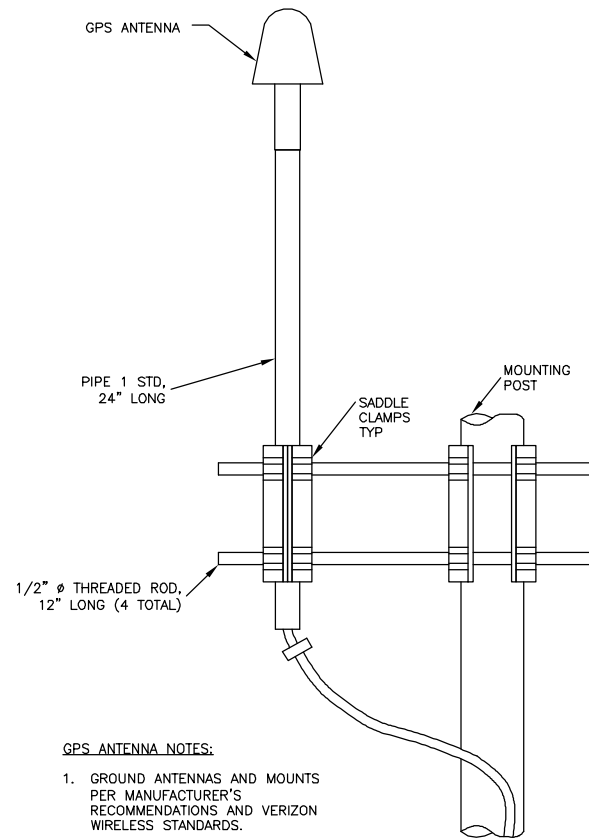
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4319 SCOTTSVILLE ROAD  
CHARLOTTESVILLE, VA 22902

SHEET TITLE

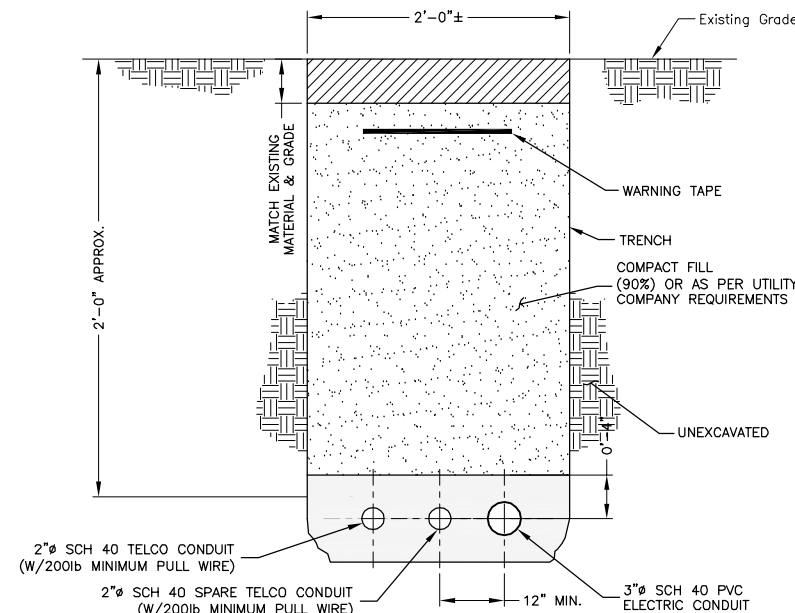
GRADING & EROSION  
CONTROL PLAN

SHEET NUMBER



**GPS POLE MOUNTED**  
SCALE: N.T.S.

1



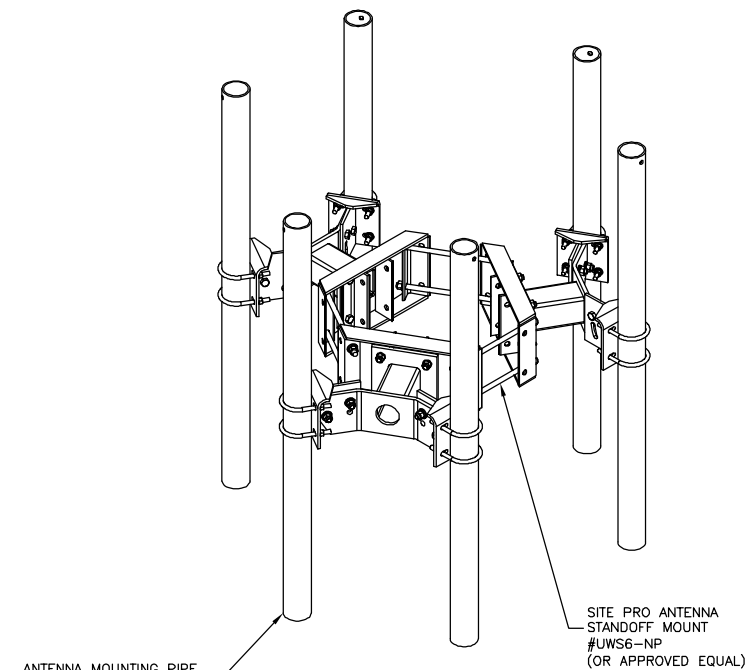
**NOTES:**

1. IF FREE OF ORGANIC OR OTHER DELETERIOUS MATERIAL, EXCAVATED MATERIAL MAY BE USED FOR BACKFILL.
2. IF NOT, PROVIDE CLEAN, COMPACTIBLE MATERIAL. COMPACT IN 8" LIFTS. REMOVE ANY LARGE ROCKS PRIOR TO BACKFILLING. CONTRACTOR TO VERIFY LOCATION OF EXISTING U/G UTILITIES PRIOR TO DIGGING.
3. CONTRACTOR SHALL HAND DIG U/G TRENCHING WHERE NEEDED.
4. INSTALLATION PER THE NEC.
5. DETECTION WIRE SHALL BE BURIED DIRECTLY ABOVE NON-METALLIC PIPING AS INDICATED IN THE CONSTRUCTION DOCUMENTS AND AS DIRECTED BY THE CONSTRUCTION MANAGER.

**JOINT SERVICE TRENCH**

SCALE: N.T.S.

2



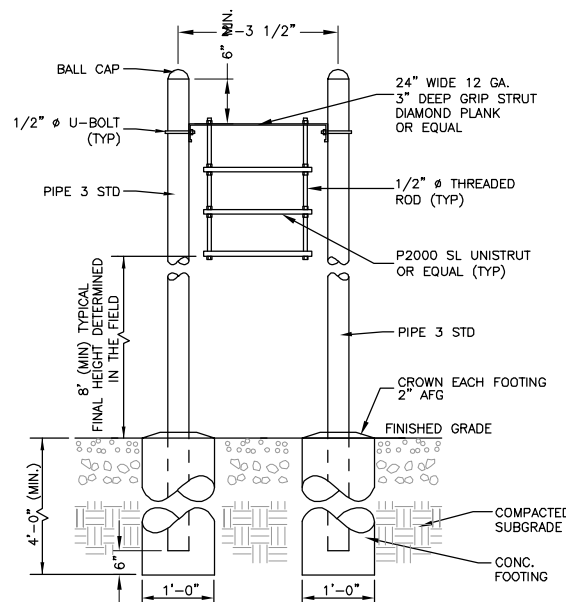
**NOTES:**

1. ANTENNA MOUNTING FRAME TO BE INSTALLED PER TOWER DESIGN & STRUCTURAL ANALYSIS.
2. AZIMUTHS BASED ON TRUE NORTH.
3. CONTRACTOR TO VERIFY FINAL AZIMUTHS PRIOR TO ANTENNA INSTALLATION.
4. IN THE EVENT THE RRH'S ARE TO BE MOUNTED ON THE ANTENNA PIPE MOUNT WITH ANTENNA, THE CONTRACTOR SHALL ENSURE THE ANTENNA MOUNT IS REINFORCED AND APPROVED BY A LICENSED STRUCTURAL ENGINEER.
5. FITS 10 3/4" TO 28" DIAMETER MONOPOLES. FOR POLE SIZES 28" TO 42" DIAMETER ORDER SEPARATELY PART # LP-42

**ANTENNA STANDOFF MOUNTING DETAIL**

SCALE: N.T.S.

3

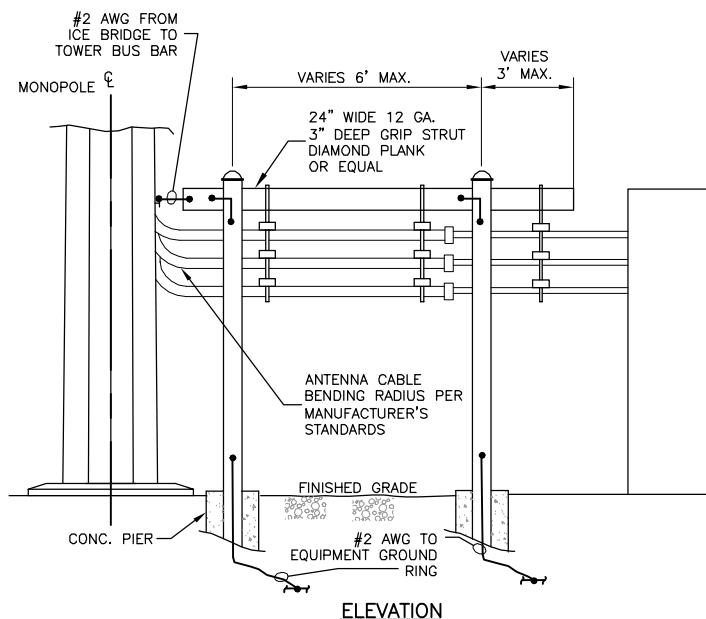


**ICE BRIDGE NOTES:**

1. ALL COMPONENTS SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S SPECIFICATIONS.
2. CONTRACTOR SHALL DETERMINE REQUIRED QUANTITY OF ALL ICE BRIDGE COMPONENTS.
3. SNAP-IN HANGERS, SPLICE KITS, HINGE KITS, EXTENSION KITS, STIFFENERS, AND OTHER MISCELLANEOUS HARDWARE SHALL BE PROVIDED BY THE CONTRACTOR AS REQUIRED.
4. ICE BRIDGE SHALL BE ROUTED TO ACCOMMODATE THE MINIMUM BENDING RADIUS OF THE COAXIAL CABLE.
5. ICE BRIDGE COMPONENTS SHOWN ARE SCHEMATIC, CONSULT MANUFACTURER FOR EXACT AND CURRENT SPECIFICATIONS.
6. MAINTAIN 3' CLEAR FOR COAX FROM GENERATOR AND 4' FROM EXHAUST.

**ICE BRIDGE DETAIL**  
SCALE: N.T.S.

4



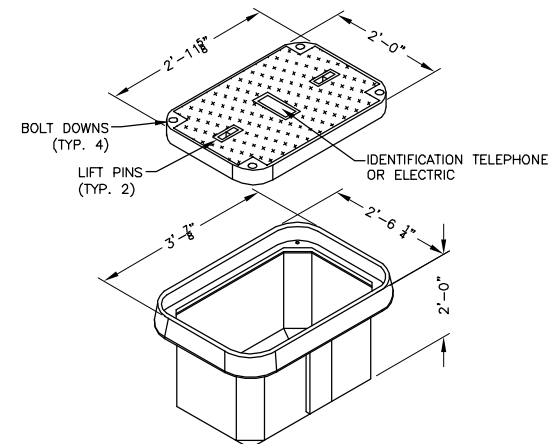
**ICE BRIDGE DETAIL**

SCALE: N.T.S.

5

**ICE BRIDGE NOTES:**

1. #2 AWG TO BE IN 3/4" PVC CONDUIT AT ALL GROUND PENETRATIONS.



**NOTE:**

1. ALL STUB-UP CONDUITS INSIDE PULL BOXES WILL BE 6" FROM TOP OF BOX AND HAVE PULL STRING AND CAPS.

**HAND HOLE/  
PULL BOX DETAIL**

SCALE: N.T.S.

6



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**CARTERS  
BRIDGE**

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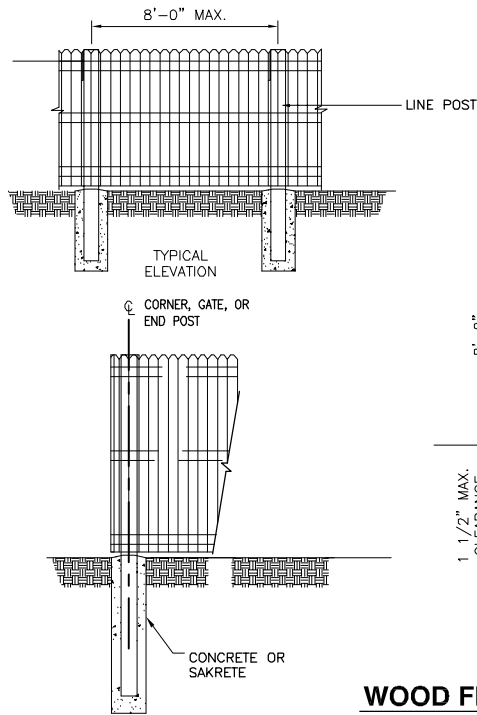
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**CONSTRUCTION DETAILS**

SHEET NUMBER

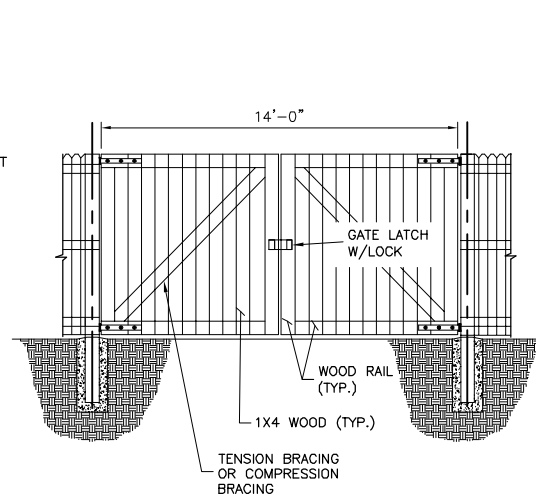
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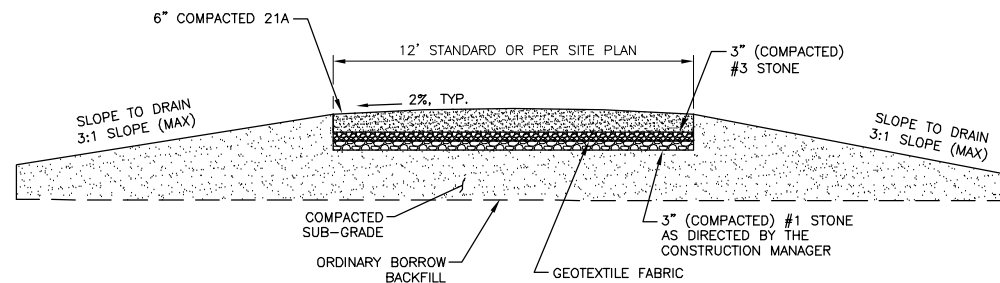
### WOOD FENCE DETAIL

SCALE: N.T.S.



NOTE:

1. FENCE COLOR SHALL BE JAVA BROWN 6090

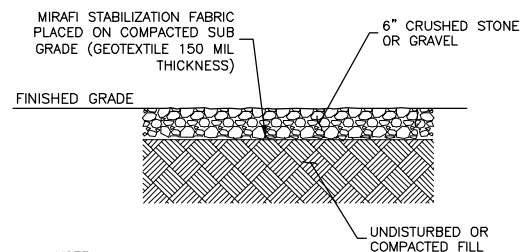


NOTES:

1. SUBGRADE AND FILL SHALL CONSIST OF CLEAN SOIL. NO DELETERIOUS MATERIALS OR ORGANICS TO BE USED.
2. REMOVE MINIMUM OF 12" OF TOP SOIL AND ORGANICS BEFORE COMMENCING ACCESS ROAD.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CLEARING AND GRUBBING.
4. THE CONTRACTOR SHALL COMPLY WITH THE RECOMMENDATIONS CONTAINED WITHIN THE GEOTECHNICAL REPORT WHEN NECESSARY PREPARED FOR THIS SITE.
5. ALL GRANULAR FILL SHALL BE COMPACTED TO 95% STANDARD PROCTOR WITHIN 3% OF OPTIMUM MOISTURE CONTENT OR AS OTHERWISE DIRECTED BY THE GEOTECHNICAL ENGINEER.
6. ALL STONE SHALL BE IN ACCORDANCE W/DOT STANDARD SPECIFICATION.

### ROAD CROSS SECTION

SCALE: N.T.S.

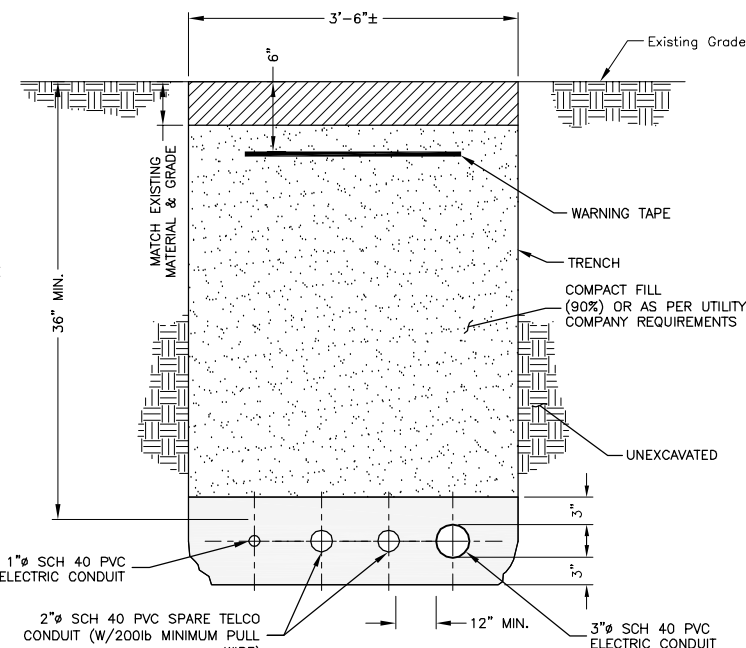


NOTE:

1. FILL SHALL CONSIST OF CLEAN SOIL. NO DELETERIOUS MATERIALS OR ORGANICS TO BE USED.

### GRAVEL YARD DETAIL

SCALE: N.T.S.

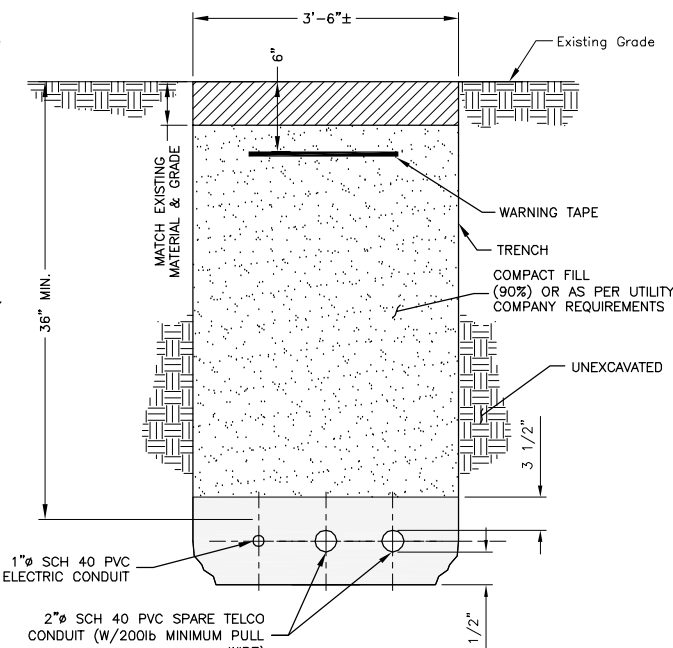


NOTES:

1. IF FREE OF ORGANIC OR OTHER DELETERIOUS MATERIAL, EXCAVATED MATERIAL MAY BE USED FOR BACKFILL.
2. SAND BACKFILL SHALL BE CLEAN, WASHED AND FREE OF DEBRIS OR ROCKS LARGER THAN 1/8".
3. IF NOT, PROVIDE CLEAN, COMPACTIBLE MATERIAL. COMPACT IN 8" LIFTS. REMOVE ANY LARGE ROCKS PRIOR TO BACKFILLING. CONTRACTOR TO VERIFY LOCATION OF EXISTING U/G UTILITIES PRIOR TO DIGGING.
4. IF CURRENT AS-BUILT DRAWINGS ARE NOT AVAILABLE SUBCONTRACTOR SHALL HAND DIG U/G TRENCHING.
5. INSTALLATION PER THE NEC.
6. DETECTION WIRE SHALL BE BURIED DIRECTLY ABOVE NON-METALLIC PIPING AS INDICATED IN THE CONSTRUCTION DOCUMENTS AND AS DIRECTED BY THE CONSTRUCTION MANAGER.

### JOINT SERVICE TRENCH

SCALE: N.T.S.

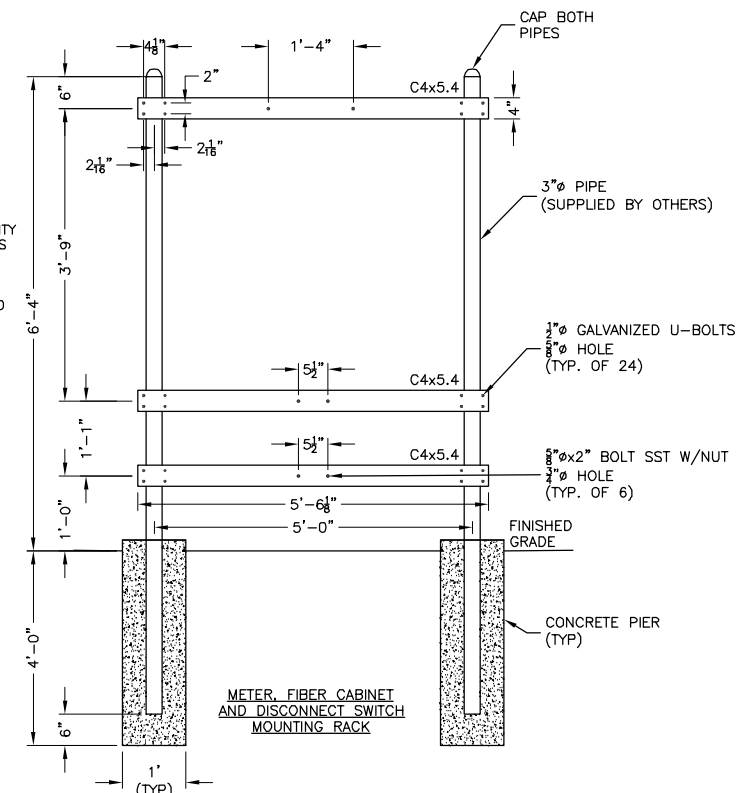


NOTES:

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### TELCO/FIBER SERVICE TRENCH

SCALE: N.T.S.



### UTILITY SERVICE STAND

SCALE: N.T.S.

NOTES:

1. HOT DIP GALVANIZE AFTER FABRICATION.
2. COORDINATE ALL DIMENSIONS WITH MESA SPAN SPECIFICATIONS.

**verizon**

VERIZON WIRELESS  
1831 RADY COURT  
RICHMOND, VA 23222

### CARTERS BRIDGE

### CONSTRUCTION DRAWINGS

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**Dewberry**

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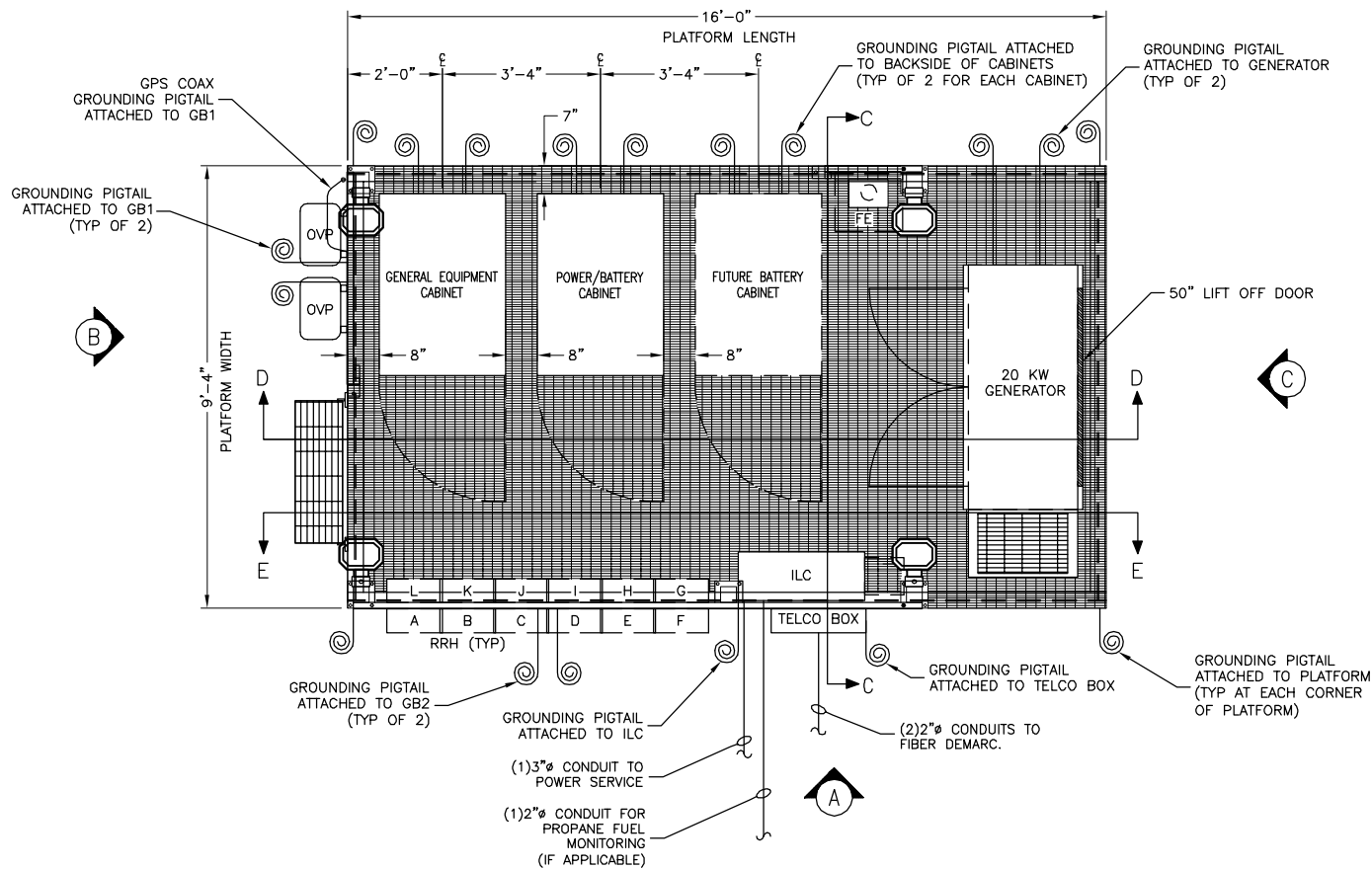
4319 SCOTTSVILLE ROAD  
CHARLOTTESVILLE, VA 22902

SHEET TITLE

### CONSTRUCTION DETAILS

SHEET NUMBER

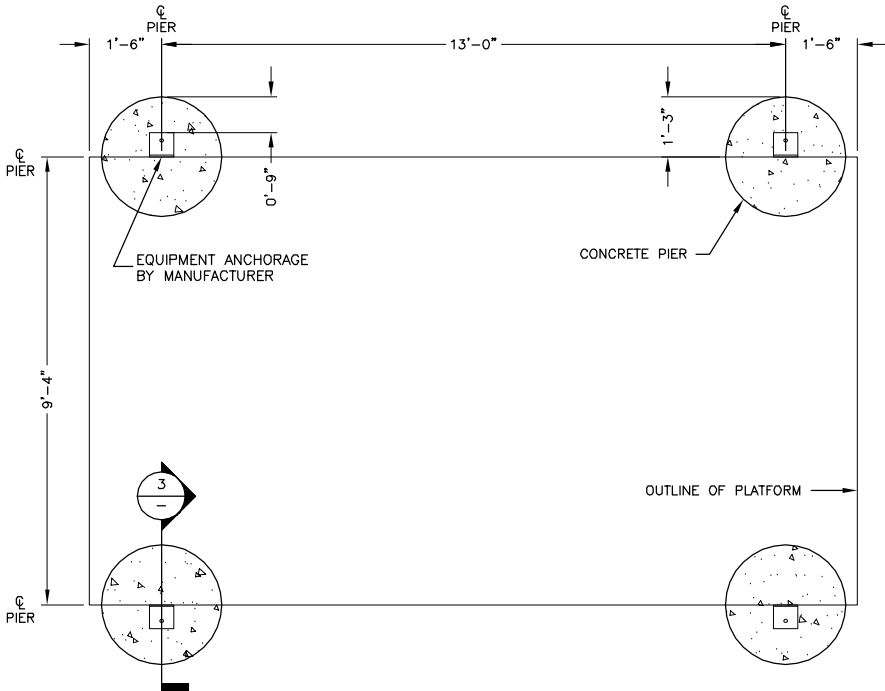
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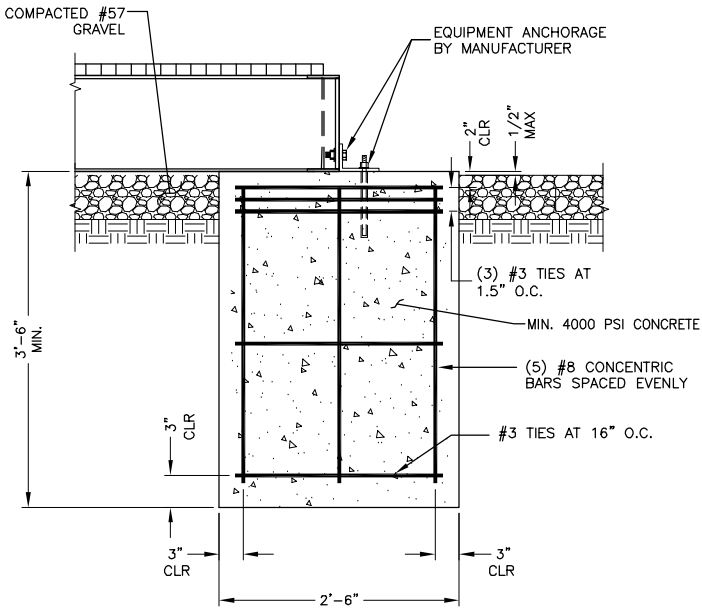
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**PLATFORM PLAN**  
SCALE: N.T.S.

**GROUNDING NARRATIVE:**

1. INSTALL PLATFORM GROUND RING.
2. PROVIDE 18 GROUNDING PIGTAILS. REFER TO PLATFORM PLAN FOR LOCATIONS.
3. ALL GROUNDING PIGTAILS SHALL BE #2 AWG SOLID TINNED, UNLESS OTHERWISE NOTED. ALL PIGTAILS SHALL BE 10' LONG AND TYWRAPPED.
4. ALL GROUNDING PIGTAILS SHALL BE BONDED TO PLATFORM GROUND RING.



2  
**PIER FOUNDATION PLAN**  
SCALE: N.T.S.



3  
**CONCRETE PIER FOUNDATION**  
SCALE: N.T.S.

**NOTE:**

1. THIS DESIGN ASSUMES A 1500 psf SOIL BEARING PRESSURE.
2. CONCRETE AIR CONTENT SHALL BE 5.5% PLUS OR MINUS 1.5%.

**VFP STEEL PLATFORM SELECTION**

PLATFORM TYPE <sup>1</sup> :	GROUND LEVEL STEEL PLATFORM (GLPS)	
PLATFORM SIZE <sup>2</sup> :	9'-4" X 16'-0" (3 CABINETS W/ GENERAT.)	VZWA-9.4x16-GLSP-3
GENERAL OPTIONS		
	TELCO/FIBER DEMARCATION BOX (24"x24"x6")	VZ-DEMAR BOX
	FOLD DOWN LAPTOP SHELF	VZ-SHELF-EXTERIOR
	ONE 10LB FIRE EXTINGUISHER	VZ-FE-10#CO2/BOX
	STEPS - ANTI SLIP TREAD (1 STEP) <sup>3</sup>	VZ-FLIP STEP
	SAFETY CHAIN ASSEMBLY FOR ENTRANCE <sup>4</sup>	VZ-SAFETY CHAIN
	GROUND BAR FOR OVP'S	VZ-GROUND-OVP
	GROUND BAR FOR RRH'S, SEE NOTE 6	VZ-GROUND-RRH
GRATED STEEL PLATFORM OPTIONS		
	PLATFORM FRAME BASE SUPPORTS	VZ-PLATFORM BASE-STANDARD
SAFETY RAILING OPTIONS		
	FB-SR-AATB57	SAFETY RAILINGS - REMOVABLE ANGLED IRON W/TOE BOARDS - 9.4x16 (3 CABINETS W/GENERATOR)
ICE BRIDGE OPTIONS		
	COVERING EQUIPMENT CABINET - 3 CABINET	VZ9.4X16-CNTLVR-ICE SHIELD
GENERATOR INSTALLATION OPTIONS		
	MODEL	MTU 20KW DIESEL AC GENERATOR - DG04RZ055VQM00001
	AC GENERATOR INSTALLATION	FB-ACGEN-II
	AC CIRCUIT - BATTERY CHARGER	FB-ACCIR-BC
	AC CIRCUIT - BLOCK HEATER	FB-ACCIR-BH
ILC PANEL OPTIONS		
	NEMA 3R INTERSECT: 1PH, TVSS, ATS 30-POS	AA300G-1PH-3R
	ILC INSTALLATION WITH ATS AND TVSS	VZ-NEMA3-ILC-INSTALL-ATS
OTHER INSTALLATION OPTIONS		
	CHARLES BATTERY & BTS CABINET INSTALLATION	NICD-GLCS-CEL & PWR-COM-GLCS-CEL (QTY 1)
	AC RECTIFIER DROPS & WIRING TO POWER PLANT	RECT-GLCS-CEL (QTY 16) (20 amp)
	THREE WALL MOUNT OVP INSTALL	RAY3315-GLCS-CEL (QTY 3)

**NOTES:**

1. GROUND LEVEL IS THE GENERAL OPTION. IN CASE THAT NEEDED ELEVATED PLATFORM ELEVATED STEEL PLATFORMS (ESP) VFP MODELS TO BE USED.
2. 9'-4"x16'-0" PLATFORMS TO BE USED. CONSULT VERIZON PROJECT MANAGER IN CASE THAT OTHER SIZES NEED TO BE USED. SEE ORDERING GUIDE FOR AVAILABLE OPTIONS.
3. NUMBER OF STEPS TO ACCOMMODATE DESIGN REQUIREMENTS.
4. SAFETY RAILING TO ACCOMMODATE DESIGN REQUIREMENTS. SUGGESTED FOR HEIGHT OF PLATFORM FROM GROUND OVER 30".
5. SAFETY RAILING TO ACCOMMODATE DESIGN REQUIREMENTS. SUGGESTED FOR HEIGHT OF PLATFORM FROM GROUND OVER 30".
6. ONLY FOR 16' PLATFORM.



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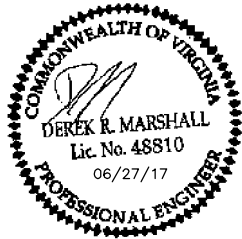
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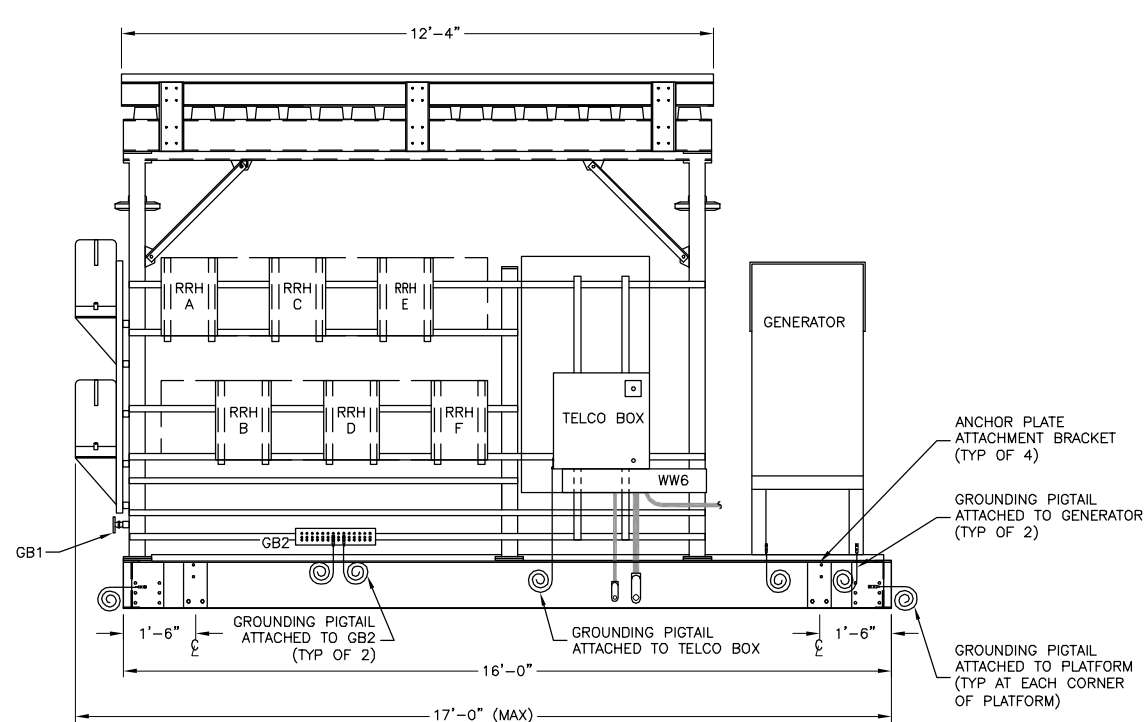
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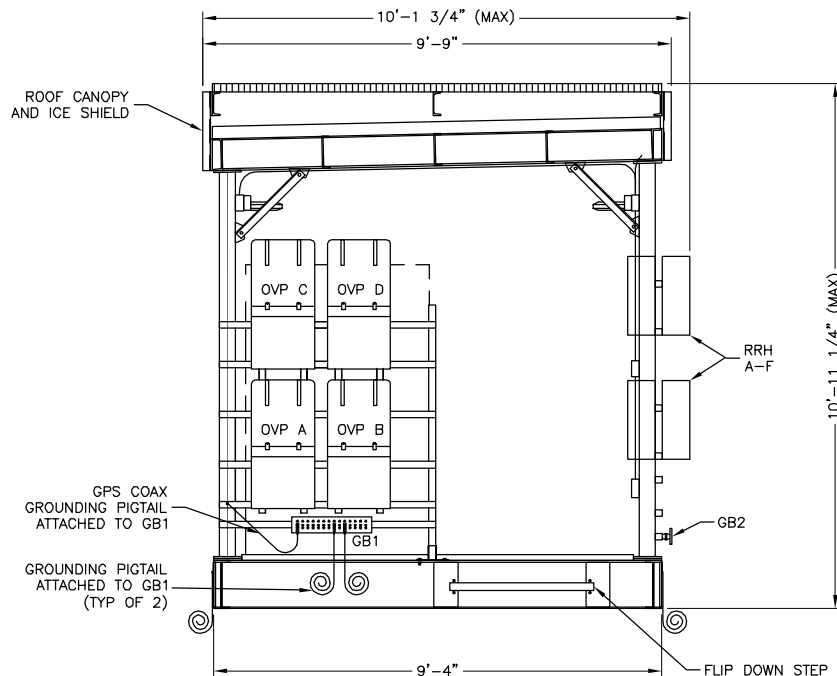
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VFP EQUIPMENT  
PLATFORM DETAILS

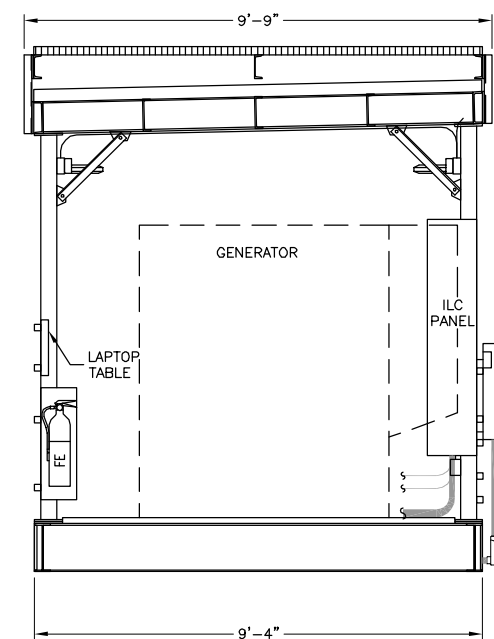
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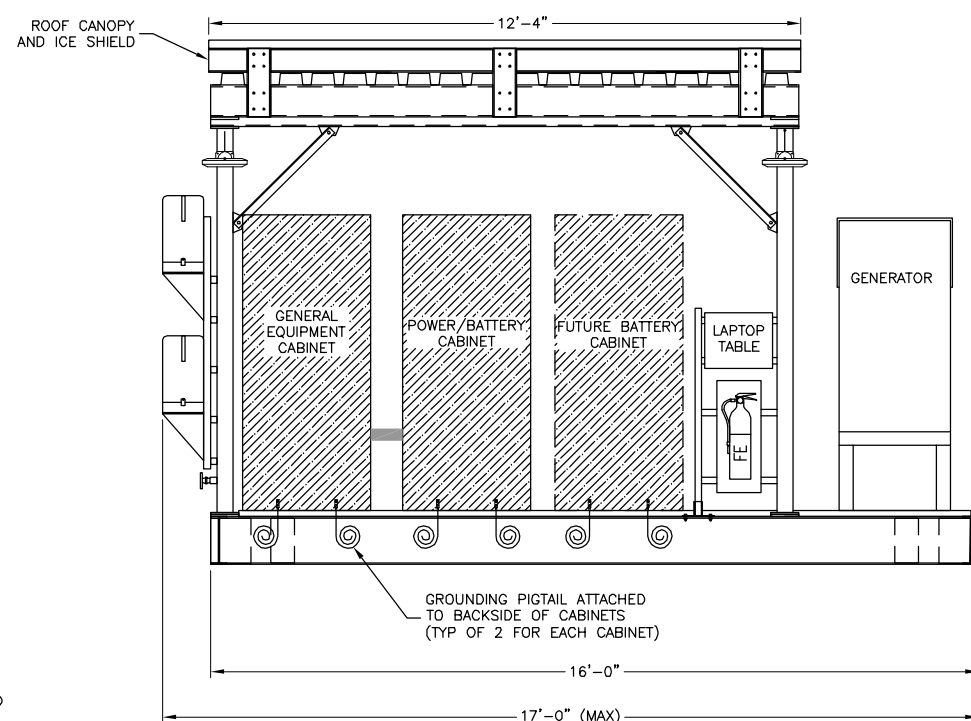
**PLATFORM ELEVATION 'A'**  
SCALE: N.T.S.



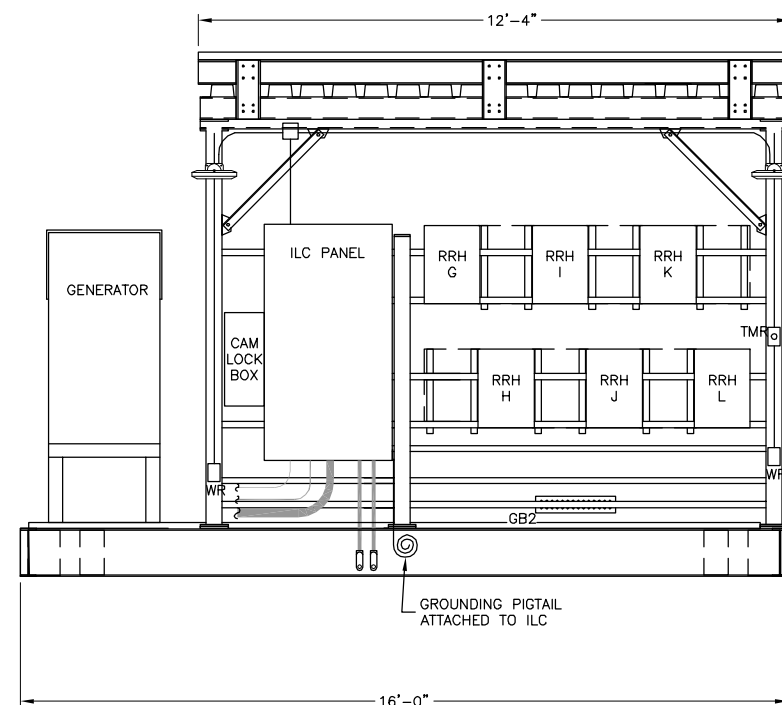
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SCALE: N.T.S.



**PLATFORM SECTION 'C'**  
SCALE: N.T.S.



**PLATFORM SECTION 'D'**  
SCALE: N.T.S.



**PLATFORM SECTION 'E'**  
SCALE: N.T.S.

**GROUNDING NARRATIVE:**

1. INSTALL PLATFORM GROUND RING.
2. PROVIDE 18 GROUNDING PIGTAILS. REFER TO PLATFORM PLAN FOR LOCATIONS.
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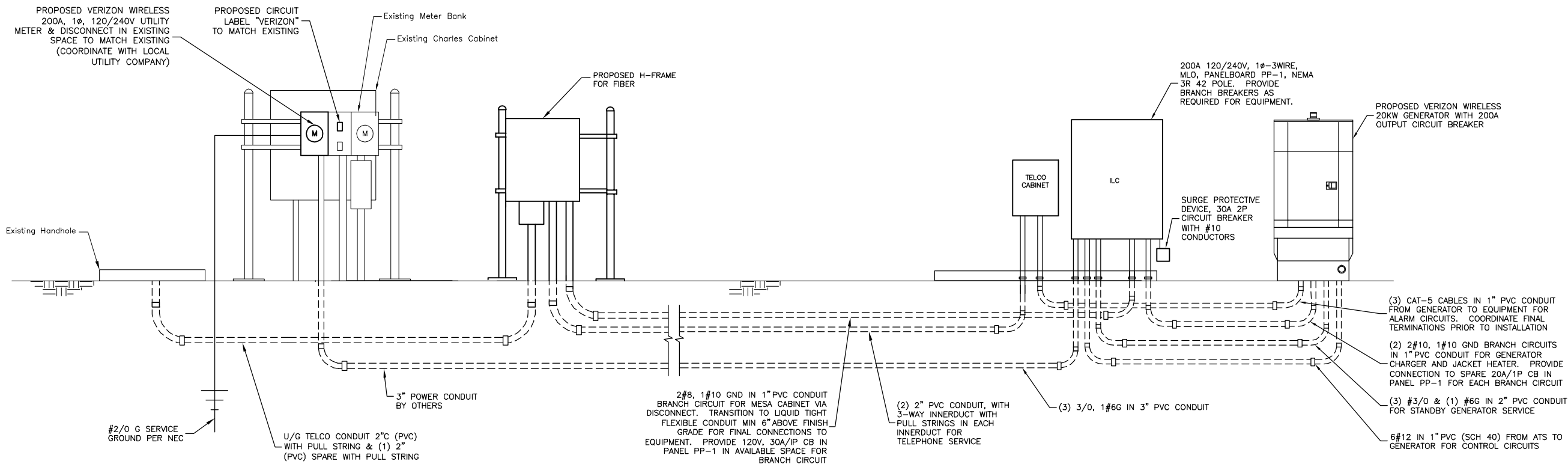
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VFP EQUIPMENT  
ELEVATION DETAILS

SHEET NUMBER

C-10





ELECTRICAL RISER DIAGRAM  
AND SERVICE ENTRANCE (SCHEMATIC)

SCALE: N.T.S.

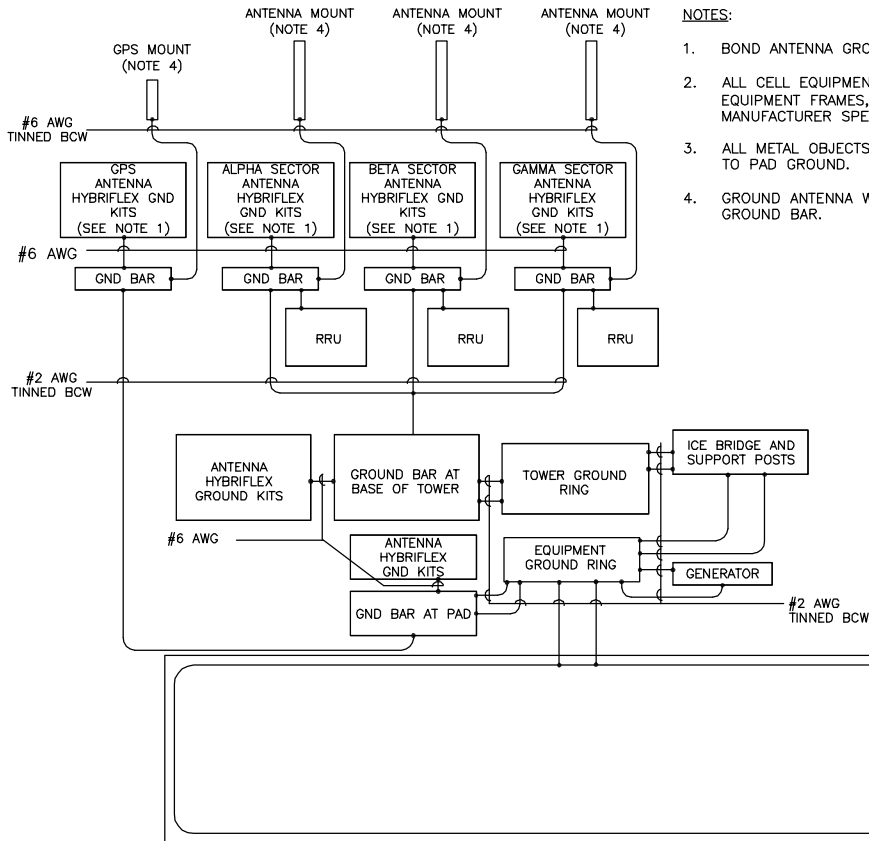
1

NOTES:

1. FINAL UTILITY DESIGN AND ROUTING TO BE CONFIRMED WITH VERIZON WIRELESS C.M., LOCAL UTILITY COMPANY AND PROPERTY OWNER PRIOR TO CONSTRUCTION.
2. TIE ELECTRICAL SERVICE INTO PROPOSED GENERATOR/TRANSFER SWITCH. CONFIRM ALL WIRE SIZES WITH MANUFACTURER PRIOR TO CONNECTION.

ELECTRICAL GENERAL NOTES

1. SUBMITTAL OF BID INDICATES CONTRACTOR IS COGNIZANT OF ALL JOB SITE CONDITIONS AND WORK TO BE PERFORMED UNDER THIS CONTRACT. CONTRACTOR IS RESPONSIBLE FOR ALL FIELD VERIFICATION.
2. THESE PLANS ARE DIAGRAMMATIC ONLY, AND NOT TO BE SCALED.
3. CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIALS, INSURANCE, EQUIPMENT, INSTALLATION, CONSTRUCTION TOOLS, TRANSPORTATION, ETC. FOR A COMPLETE AND PROPERLY OPERATIVE SYSTEM ENERGIZED THROUGHOUT AND AS INDICATED ON DRAWINGS, AS SPECIFIED HEREIN AND/OR AS OTHERWISE REQUIRED.
4. ALL MATERIALS AND EQUIPMENT SHALL BE NEW AND IN PERFECT CONDITION WHEN INSTALLED AND SHALL BE OF THE BEST GRADE AND OF THE SAME MANUFACTURER THROUGHOUT FOR EACH CLASS OR GROUP OF EQUIPMENT. MATERIALS SHALL BE LISTED AND APPROVED BY UNDERWRITER'S LABORATORY AND SHALL BEAR THE INSPECTION LABEL "J" WHERE SUBJECT TO SUCH APPROVAL. MATERIALS SHALL MEET WITH APPROVAL OF THE DIVISION OF INDUSTRIAL SAFETY AND ALL GOVERNING BODIES HAVING JURISDICTION. MATERIALS SHALL BE MANUFACTURED IN ACCORDANCE WITH APPLICABLE STANDARDS ESTABLISHED BY ANSI, NEMA, AND NBFU.
5. ALL CONDUIT INSTALLED SHALL BE SURFACE MOUNTED UNLESS OTHERWISE NOTED.
6. ELECTRICAL CONTRACTOR SHALL CARRY OUT HIS WORK IN ACCORDANCE WITH ALL GOVERNING STATE, COUNTY, LOCAL ELECTRICAL CODES AND O.S.H.A.
7. ELECTRICAL CONTRACTOR SHALL SECURE ALL NECESSARY ELECTRICAL PERMITS, AND PAY ALL REQUIRED FEES.
8. COMPLETE JOB SHALL BE GUARANTEED FOR A PERIOD OF NO LESS THAN ONE YEAR AFTER THE DATE OF JOB ACCEPTANCE BY OWNER. ANY WORK, MATERIAL, OR EQUIPMENT FOUND TO BE FAULTY DURING THAT PERIOD SHALL BE CORRECTED AT ONCE, UPON WRITTEN NOTIFICATION AT THE EXPENSE OF THE CONTRACTOR.
9. ALL CONDUIT ONLY (C.O.) SHALL HAVE A PULL WIRE OR ROPE.
10. PROVIDE THE OWNER WITH ONE SET OF COMPLETE ELECTRICAL "AS BUILT" DRAWINGS AT THE COMPLETION OF THE JOB, SHOWING ACTUAL DIMENSIONS AND CIRCUITS, WITHIN 10 WORKING DAYS OF PROJECT COMPLETION.
11. ALL BROCHURES, OPERATION MANUALS, CATALOGS, SHOP DRAWINGS, ETC. SHALL BE TURNED OVER TO PROJECT MANAGER AT JOB COMPLETION.
12. USE T-TAP CONNECTIONS ON ALL MULTI-CIRCUITS WITH COMMON NEUTRAL CONDUCTOR FOR LIGHTING FIXTURE.
13. ALL CONDUCTORS SHALL BE COPPER.
14. ALL CIRCUIT BREAKERS, FUSES AND ELECTRICAL EQUIPMENT SHALL HAVE AN INTERRUPTING RATING NOT LESS THAN THE MAXIMUM SHORT CIRCUIT CURRENT TO WHICH THEY MAY BE SUBJECTED, AND A MINIMUM OF 10,000 A.I.C.
15. THE ENTIRE ELECTRICAL INSTALLATION SHALL BE GROUNDED AS REQUIRED BY ALL APPLICABLE CODES.
16. PATCH, REPAIR AND PAINT ANY AREA THAT HAS BEEN DAMAGED IN THE COURSE OF THE ELECTRICAL WORK.
17. IN DRILLING HOLES INTO CONCRETE WHETHER FOR FASTENING OR ANCHORING PURPOSES, OR PENETRATIONS THROUGH THE FLOOR FOR CONDUIT RUNS, PIPE RUNS, ETC. IT MUST BE CLEARLY UNDERSTOOD THAT TENDONS AND REBAR WILL NOT BE DRILLED INTO, CUT, OR DAMAGED UNDER ANY CIRCUMSTANCES.
18. LOCATION OF TENDONS AND RE-BARS ARE NOT DEFINITELY KNOWN AND THEREFORE MUST BE SEARCHED FOR BY APPROPRIATE METHODS AND EQUIPMENT VIA X-RAY, OR OTHER DEVICES THAT CAN ACCURATELY LOCATE THE REINFORCING STEEL TENDONS.
19. ALL EXISTING UNDERGROUND LINES ON SITE TO BE LOCATED PRIOR TO CONSTRUCTION.
20. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS AND/OR CATALOG CUT-SHEETS ON ALL NON-SPECIFIED ORIGINAL MATERIALS AND EQUIPMENT.
21. UPON COMPLETION OF WORK, CONDUCT CONTINUITY SHORT CIRCUIT, AND FALL OF POTENTIAL GROUNDING TEST WITH WRITTEN REPORT SUBMITTED TO THE PROJECT MANAGER FOR REVIEW AND APPROVAL.
22. CLEAN PREMISES OF ALL DEBRIS RESULTING FROM WORK AND LEAVE WORK IN A COMPLETE AND UNDAMAGED CONDITION.
23. ALL EXTERIOR WALL PENETRATIONS SHALL BE SILICONE SEALED.
24. ALL DOWNLEADS #2 TINNED COPPER TO BE PROTECTED BY 1/2" P.V.C. PIPE AND SECURED TO EQUIPMENT OR TOWER.
25. COMPRESSION FITTINGS TO BE USED ON ALL "EMT" CONDUITS (NO SETSCREWS).
26. ALL #6 STRANDED COPPER WITH GREEN INSULATION TO BE ATTACHED WITH CRIMPED DOUBLE LUG BOLTED ATTACHED WITH CAD PLATED BOLTS AND STAR WASHERS TYPICAL AND NO-OX GREASE.
27. COORDINATE ALL METER WORK WITH LOCAL UTILITY COMPANY.



NOTES:

1. BOND ANTENNA GROUNDING KIT CABLE TO GROUND BAR (GND BAR).
2. ALL CELL EQUIPMENT (BTS, BATTERY FRAME, POWER CABINETS, MISC. EQUIPMENT FRAMES, ETC.) SHALL BE GROUNDED IN ACCORDANCE WITH MANUFACTURER SPECIFICATIONS.
3. ALL METAL OBJECTS AT EQUIPMENT PAD SHALL BE BONDED AND JUMPERED TO PAD GROUND.
4. GROUND ANTENNA WITH #2 AWG TINNED BCW DEDICATED LEAD BACK TO GROUND BAR.

GROUNDING DIAGRAM

SCALE: N.T.S.

2



VERIZON WIRELESS  
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CARTERS  
BRIDGE

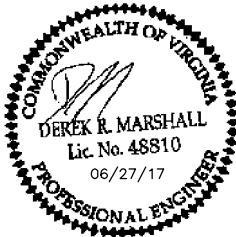
CONSTRUCTION DRAWINGS

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DRAWN BY:	ARB
REVIEWED BY:	BAR
CHECKED BY:	DRM
PROJECT NUMBER:	50079910
SITE ADDRESS:	

4319 SCOTTSVILLE ROAD  
CHARLOTTESVILLE, VA 22902








SHEET TITLE

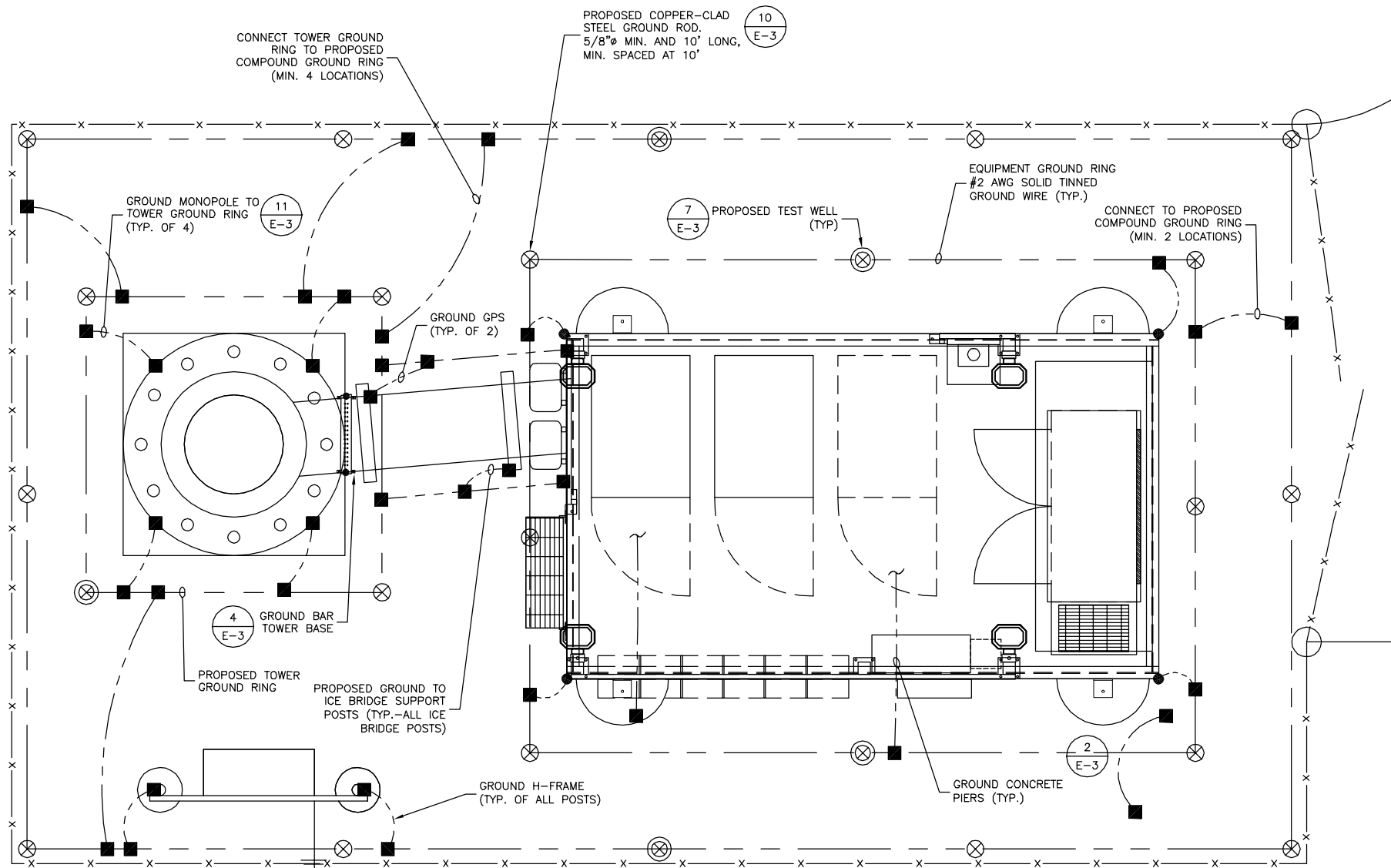
RISER DIAGRAM &  
GROUNDING SCHEMATIC

SHEET NUMBER

E-1

## GROUNDING LEGEND

	GROUND BAR
	GROUND COPPER WIRE, SIZE AS NOTED
	MECHANICAL GROUND CONNECTION
	5/8"X10' COPPER CLAD STEEL GROUND ROD
	TEST WELL
	EXOTHERMIC (CADWELL) CONNECTION
	PROPOSED GROUND RING



## GROUNDING NOTES:

- GROUNDING SYSTEM RESISTANCE SHALL NOT EXCEED 5 OHMS. IF THE RESISTANCE VALUE IS EXCEEDED, NOTIFY THE OWNER FOR FURTHER INSTRUCTION ON METHODS FOR REDUCING THE RESISTANCE VALUE. CONTRACTOR SHALL SUBMIT TO THE PROJECT MANAGER ALL TEST REPORTS AND ONE COMPLETE SET OF PRINTS SHOWING "INSTALLED WORK".
- UPON COMPLETION OF WORK, CONDUCT CONTINUITY, AND FALL POTENTIAL GROUNDING TESTS FOR APPROVAL. SUBMIT TEST REPORTS TO PROJECT MANAGER. CLEAN PREMISES OF ALL DEBRIS RESULTING FROM WORK AND LEAVE WORK IN A COMPLETE AND UNDAMAGED CONDITION.
- ALL EXPOSED GROUND WIRES ROUTED ALONG THE SIDE OF EQUIPMENT CABINETS OR ROUTED OVER CONCRETE FOUNDATIONS OR OTHER EXISTING STRUCTURES SHALL BE INSTALLED IN PROPERLY ANCHORED 3/4" (MIN.) PVC CONDUIT.
- CONTRACTOR SHALL NOT DISTURB EXISTING GROUNDING SYSTEM. ANY DAMAGE SHALL BE REPAIRED IMMEDIATELY AT NO ADDITIONAL COST.
- ALL ELEMENTS OF ICE BRIDGE AND VERIZON WIRELESS UTILITY BACKBOARD MUST BE BONDED AND JUMPERED TO GROUNDED COMPONENTS OF THESE SYSTEMS.
- ALL INTERIOR CABLES AND WIRING SHALL BE NEATLY ROUTED IN OVERHEAD LADDER RACK AND FASTENED TO LADDER RACK WITH WAX COATED STRING PER LUCENT TECHNOLOGIES INSTALLATION STANDARDS. PLASTIC CABLE TIES SHALL NOT BE USED.
- ALL GROUNDING CONDUCTORS SHALL BE ROUTED DOWNWARDS FROM POINT OF ORIGIN TO TERMINATION POINT (GROUND BAR, GROUND RING, ETC.). CONNECTIONS TO OVERHEAD HALO GROUND SHALL BE THE ONLY EXCEPTION.
- GROUNDING CONDUCTORS SHALL NOT REVERSE DIRECTION (EXCEPT HALO AND BURIED GROUND RINGS). OTHER EXCEPTIONS NEED TO BE APPROVED BY VERIZON WIRELESS PROJECT MANAGER PRIOR TO INSTALLATION.
- GROUNDING CONDUCTORS SHALL HAVE A MINIMUM BENDING RADIUS OF 8".
- FENCE POSTS AT THIS SITE MAY NOT BE BONDED TO GROUND RING. ANY FENCE POST WITHIN 6' OF ANY VERIZON WIRELESS EQUIPMENT (EQUIPMENT CABINETS, GENERATOR, FUEL TANK, ICE BRIDGE, ETC.) SHALL BE BONDED TO THE VERIZON WIRELESS EQUIPMENT CABINETS GROUND RING OR COMPOUND GROUND RING.
- VERIZON WIRELESS EQUIPMENT CABINETS GROUND RING SHALL BE BONDED TO TOWER AND COMPOUND GROUND RINGS IN 2 PLACES EACH.
- PRIOR TO POURING CONCRETE, ALL REBAR LOCATED NEAR THE BOTTOM OF THE FOUNDATION SHALL BE BONDED TOGETHER TO FORM A SINGLE GROUNDING ELECTRODE, BY STEEL TIES OR OTHER EFFECTIVE MEANS APPROVED BY NEC 2011 AND STRUCTURAL ENGINEER, AND BONDED TO THE GROUND RING AS DETAILED IN THESE PLANS. (INSPECTION MAY BE REQUIRED PRIOR TO POURING CONCRETE AND MUST BE COORDINATED BY CONTRACTOR.)
- IN ACCORDANCE WITH NEC 2011 REQUIREMENTS, ALL GROUNDING ELECTRODES PRESENT ON SITE SHALL BE BONDED TOGETHER (REFERENCE 2011 NEC ARTICLE 250.50)

### NOTE:

- CONTRACTOR TO VERIFY ALL EQUIPMENT/CABINET GROUNDING BY MANUFACTURER HAS BEEN INSTALLED AND IS FUNCTIONING PROPERLY.
- PIGTAILS FROM PLATFORM ARE NOT SHOWN FOR CLARITY. THE CONTRACTOR SHALL TIE ALL PLATFORM PIGTAILS TO THE PLATFORM GROUND RING. SEE PLATFORM PLAN/VFP EQUIPMENT PLATFORM DETAILS FOR EXACT NUMBER AND LOCATION OF EQUIPMENT PLATFORM PIGTAILS.

### NOTE:

- GROUND METER PER N.E.C. STANDARDS.

## GROUNDING PLAN

SCALE: N.T.S.

1



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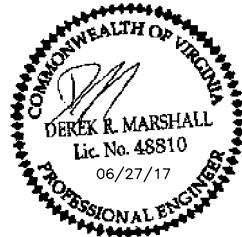
## CARTERS BRIDGE

## CONSTRUCTION DRAWINGS

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REVIEWED BY: BAR

CHECKED BY: DRM

PROJECT NUMBER: 50079910

SITE ADDRESS:

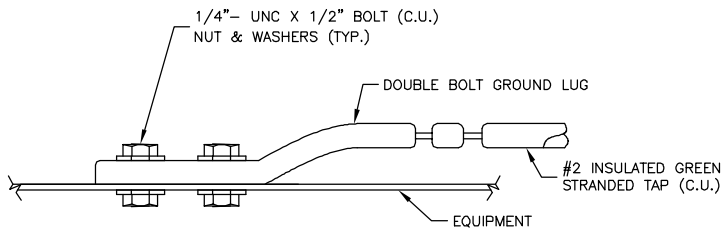
4319 SCOTTSVILLE ROAD  
CHARLOTTESVILLE, VA 22902

SHEET TITLE

GROUNDING PLAN

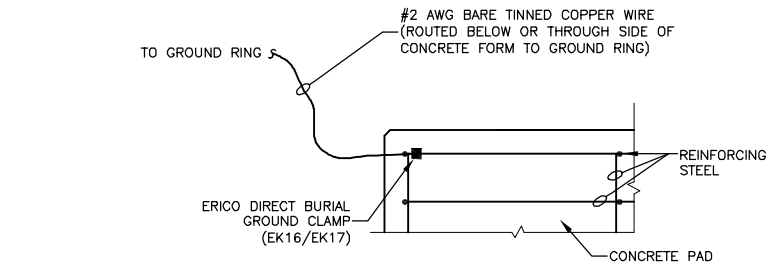
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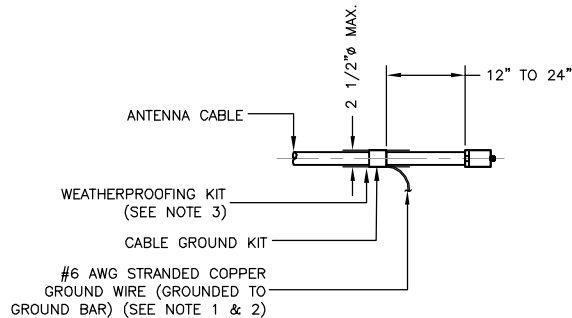
### CONNECTION TO EQUIPMENT DETAIL

SCALE: N.T.S.



### REBAR GROUNDING DETAIL

SCALE: N.T.S.

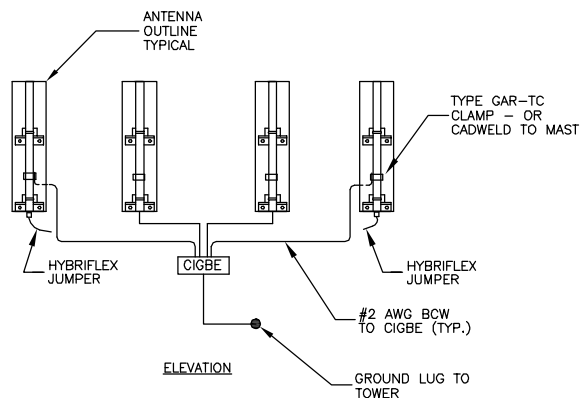


#### NOTES:

- DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO GROUND BAR.
- GROUNDING KIT SHALL BE ANDREW SUREGROUND TYPE KIT WITH TWO-HOLE LUG.
- WEATHER PROOFING SHALL BE ANDREW TWO-PART TAPE SUPPLIED WITH KIT. COLD SHRINK SHALL NOT BE USED.

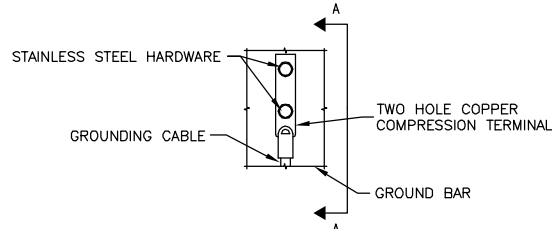
### CONNECTION OF CABLE GROUND KIT TO ANTENNA CABLE DETAIL

SCALE: N.T.S.

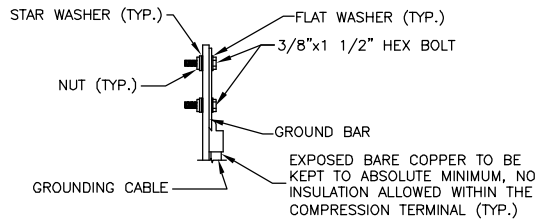


### ANTENNA MOUNT GROUNDING DETAIL

SCALE: N.T.S.



#### ELEVATION



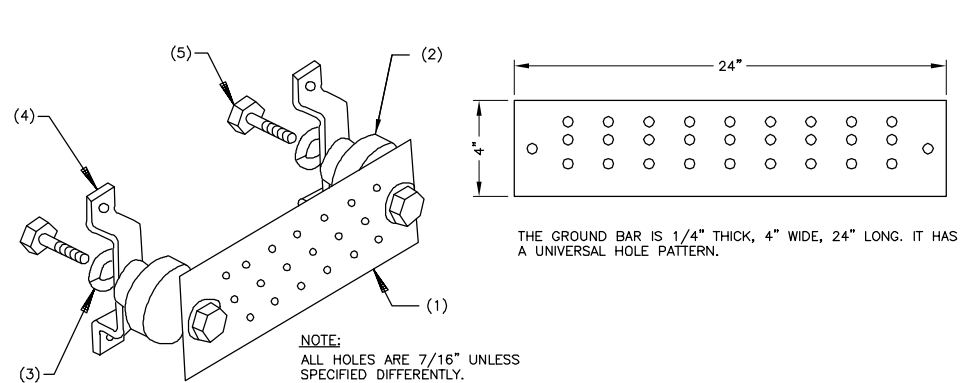
#### SECTION 'A-A'

#### NOTES:

- DOUBLING UP OR STACKING OF CONNECTIONS IS NOT PERMITTED.
- OXIDE INHIBITING COMPOUND TO BE USED AT ALL LOCATIONS.

### TYPICAL GROUND BAR MECHANICAL CONNECTION DETAIL

SCALE: N.T.S.



#### NOTE:

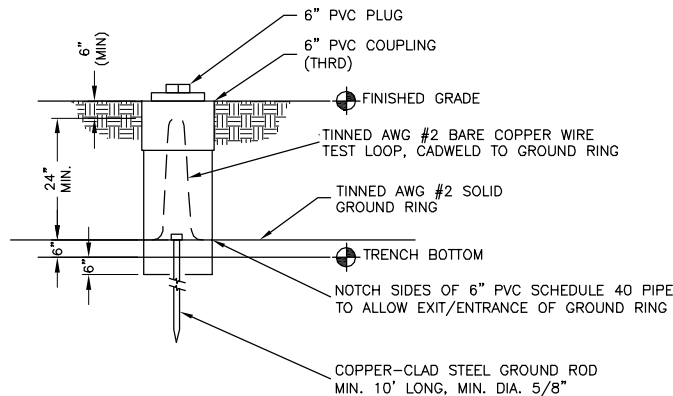
ALL HOLES ARE 7/16\"/>

#### LEGEND

- GALVANIZED GROUND BAR, 1/4\"/>

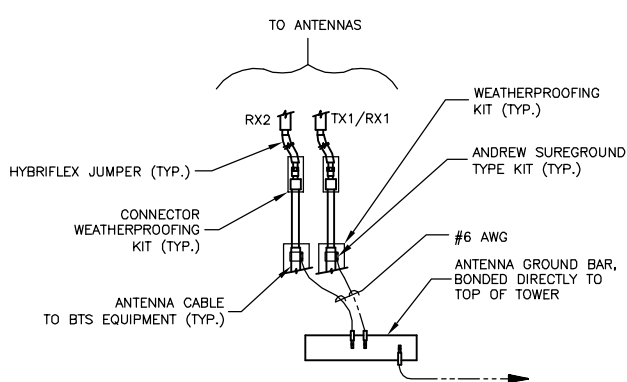
### GROUND BAR DETAIL

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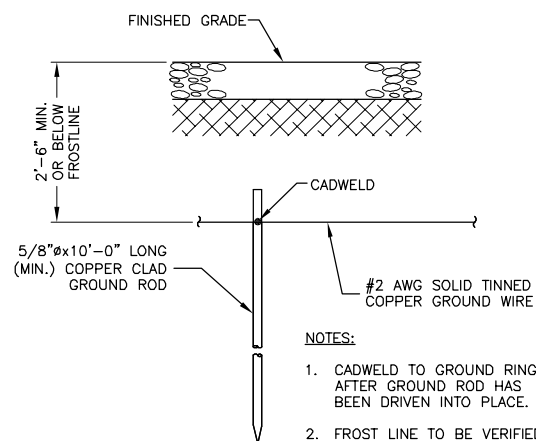
### METER SOCKET GROUNDING

SCALE: N.T.S.



### CONNECTION OF GROUND WIRE TO GROUNDING BAR DETAIL

SCALE: N.T.S.

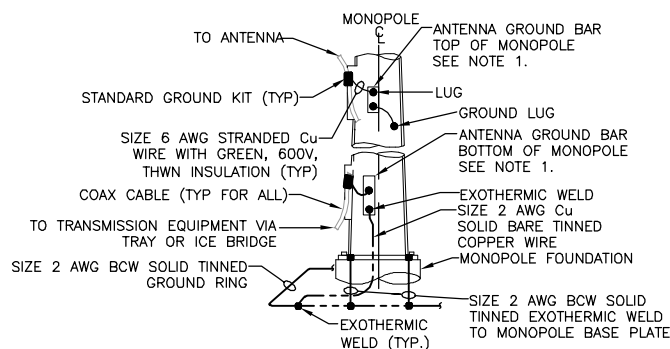


#### NOTES:

- CADWELD TO GROUND RING AFTER GROUND ROD HAS BEEN DRIVEN INTO PLACE.
- FROST LINE TO BE VERIFIED.

### GROUND ROD

SCALE: N.T.S.



#### NOTE:

- NUMBER OF GROUND BARS MAY VARY DEPENDING ON THE TYPE OF MONOPOLE, ANTENNA LOCATION AND CONNECTION ORIENTATION. PROVIDE AS REQUIRED. GROUND BAR IS NOT REQUIRED FOR SITES WITH ONE COAX CABLE.

### MONOPOLE GROUNDING

SCALE: N.T.S.



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### CARTERS BRIDGE

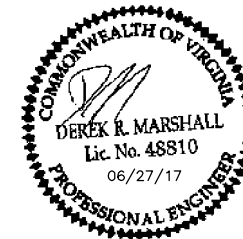
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