

ISSUE	REVISION	DATE
0	INITIAL ISSUE	10/04/10
1	ADDED UTILITY EASEMENT TO SURVEY	10/19/10
2	REV. ROBIN ROAD R/W, ADDED V3	10/26/10
3	REV. TOWER AND COMPOUND LOCATION	10/28/10
4	REVISED CDs	11/05/10

NOTE:
E911 ADDRESS WILL BE ISSUED
DURING PLAN REVIEW.

A PROJECT FOR:

BERKLEY GROUP LLC

CATAWBA COLLEGE
2300 W. INNES ST.
SALISBURY, NC 28144
ROWAN COUNTY

DIRECTIONS:

FROM CHARLOTTE, NC: MERGE ONTO I-277 S/US-74 W. FROM W. HILL ST. CONTINUE FOR APPROX. 0.6 MILES. MERGE ONTO I-77 N/US-21 N.VIA EXIT 1C TOWARD STATESVILLE. CONTINUE FOR APPROX. 3.4 MILES. MERGE ONTO I-85 N.VIA EXIT 13A TOWARD GREENSBORO. CONTINUE FOR APPROX. 36.3 MILES. TAKE US-601 N/JAKE ALEXANDER BLVD, EXIT 75. CONTINUE FOR APPROX. 0.2 MILES. TURN LEFT ONTO US-601/JAKE ALEXANDER BLVD S. CONTINUE FOR APPROX. 2.5 MILES. TURN RIGHT ONTO BRENNER AVE. CONTINUE FOR APPROX. 1.6 MILES. TURN RIGHT ONTO STATESVILLE BLVD. CONTINUE FOR APPROX. 0.1 MILES. TURN LEFT ONTO W.INNES ST. CONTINUE FOR APPROX. 0.3 MILES. AND END AT 2300 W. INNES ST., SALISBURY, NC.



VICINITY MAP



DRAWING INDEX

SURVEY

V1	SITE SURVEY (SHEET 1 OF 3)
V2	SITE SURVEY (SHEET 2 OF 3)
V3	SITE SURVEY (SHEET 3 OF 3)

GENERAL

G1	GENERAL ABBREVIATIONS
G2	BUILDING CODE APPENDIX B (SHEET 1 OF 2)
G2A	BUILDING CODE APPENDIX B (SHEET 2 OF 2)

CIVIL

C1	GENERAL NOTES AND SYMBOLS
C2	SITE LAYOUT PLAN
C3	SITE GRADING PLAN
C3A	ACCESS ROAD GRADING PLAN
C4	COMPOUND FENCE DETAILS
C5	SITE DETAILS
C6	TOWER ELEVATION, ANTENNA LAYOUT COAXIAL CABLE SCHEDULE AND NOTES

STRUCTURAL

S1	EQUIPMENT SLAB PLAN AND NOTES
S2	SECTIONS AND DETAILS

ELECTRICAL

E1	GENERAL ELECTRICAL NOTES AND LEGEND
E2	SERVICES ROUTING PLAN
E3	SITE GROUNDING PLAN
E4	ONE LINE DIAGRAM
E5	GROUNDING DETAILS
E6	ICE BRIDGE AND GROUNDING DETAILS
E7	GROUNDING DETAILS
E8	UTILITY RACK AND TRENCH DETAILS

SITE INFORMATION:

PROPERTY OWNER:

CATAWBA COLLEGE
2300 W. INNES ST.
SALISBURY, NC 28144

PARCEL ID #:

93690000

SURVEYOR:

SANDERS SURVEYING AND
MAPPING SERVICES, INC.
510 AVENA ROAD
BLACK MOUNTAIN, NC 28711
(828) 669-2777

APPLICANT:

BERKLEY GROUP LLC
10612-D PROVIDENCE ROAD, PMB 742
CHARLOTTE, NC 28277
BILL GODDARD – PROJECT MANAGER
TEL: (704) 643-9101

POWER:

DUKE ENERGY
(800) 777-9898

TELCO:

AT&T
(866) 620-6000

TOWER INFORMATION:

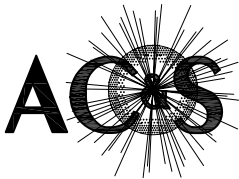
PROPOSED 175’ MONOPOLE
PROPOSED RAD CENTER – 175.0’
LATITUDE: 35°41’35.46” N
LONGITUDE: 80°29’08.21” W
GROUND ELEVATION: 658.0’

ZONING INFORMATION:

JURISDICTION: CITY OF SALISBURY
CLASSIFICATION: I-C
OCCUPANCY: INSTITUTIONAL CAMPUS

BUILDING INSPECTIONS:

CITY OF SALISBURY
217 S. MAIN STREET
SALISBURY, NC. 28144
(704) 638-5242



Engineering, Inc.
3 Marcus Drive
Greenville, SC 29615
Ph. (864) 288-0553
Fax. (864) 288-0559

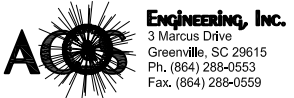
ID.	PROPERTY INFO
001 011	N/F CATAWBA COLLEGE 2300 W. INNES ST. SALISBURY, NC 28144
001 001	N/F CATAWBA COLLEGE 2300 W. INNES ST. SALISBURY, NC 28144 DB 1157 PG 391
039 024	N/F FRED S ROSEMAN JR. & GLADYS B ROSEMAN 2503 DUKE CIR. SALISBURY, NC 28144
039 004	N/F DENNIS C. LAMB DB 1067 PG 364 506 SPRING FOREST RD. GREENVILLE, SC 29615
039 005	N/F ANNE J. PALMER 304 N. PARK DR. SALISBURY, NC 28144
039 006	N/F MRS. BRUCE A WENTZ 230 N. PARK DR. SALISBURY, NC 28144
039 007	N/F ANNE J. PALMER 304 N. PARK DR. SALISBURY, NC 28144
039 00701	N/F CATAWBA COLLEGE 2300 W. INNES ST. SALISBURY, NC 28144
039 009	N/F HEIRS OF JENKINS RAYMOND 2300 W. INNES ST. SALISBURY, NC 28144
039 010	N/F CATAWBA COLLEGE 2300 W. INNES ST. SALISBURY, NC 28144

ID.	PROPERTY INFO
001 017	N/F CATAWBA COLLEGE 2300 W. INNES ST. SALISBURY, NC 28144
001 016	N/F CATAWBA COLLEGE 2300 W. INNES ST. SALISBURY, NC 28144
001 026	N/F CATAWBA COLLEGE 2300 W. INNES ST. SALISBURY, NC 28144
001 015	N/F CATAWBA COLLEGE 2300 W. INNES ST. SALISBURY, NC 28144

ID.	PROPERTY INFO
001 013	N/F CATAWBA COLLEGE 2300 W. INNES ST. SALISBURY, NC 28144
001 012	N/F CATAWBA COLLEGE 2300 W. INNES ST. SALISBURY, NC 28144
001 00101	N/F CATAWBA COLLEGE 2300 W. INNES ST. SALISBURY, NC 28144
001 014	N/F CATAWBA COLLEGE 2300 W. INNES ST. SALISBURY, NC 28144

LEGEND

BEARING & DISTANCE	LINE SURVEYED
(BEARING & DISTANCE)	LINE NOT SURVEYED
(BY DEED OR PLAT)	RIGHT-OF-WAY
R/W	NOW OR FORMERLY
N/F	TAX MAP
TM	DEED BOOK
DB	PLAT BOOK
PB	

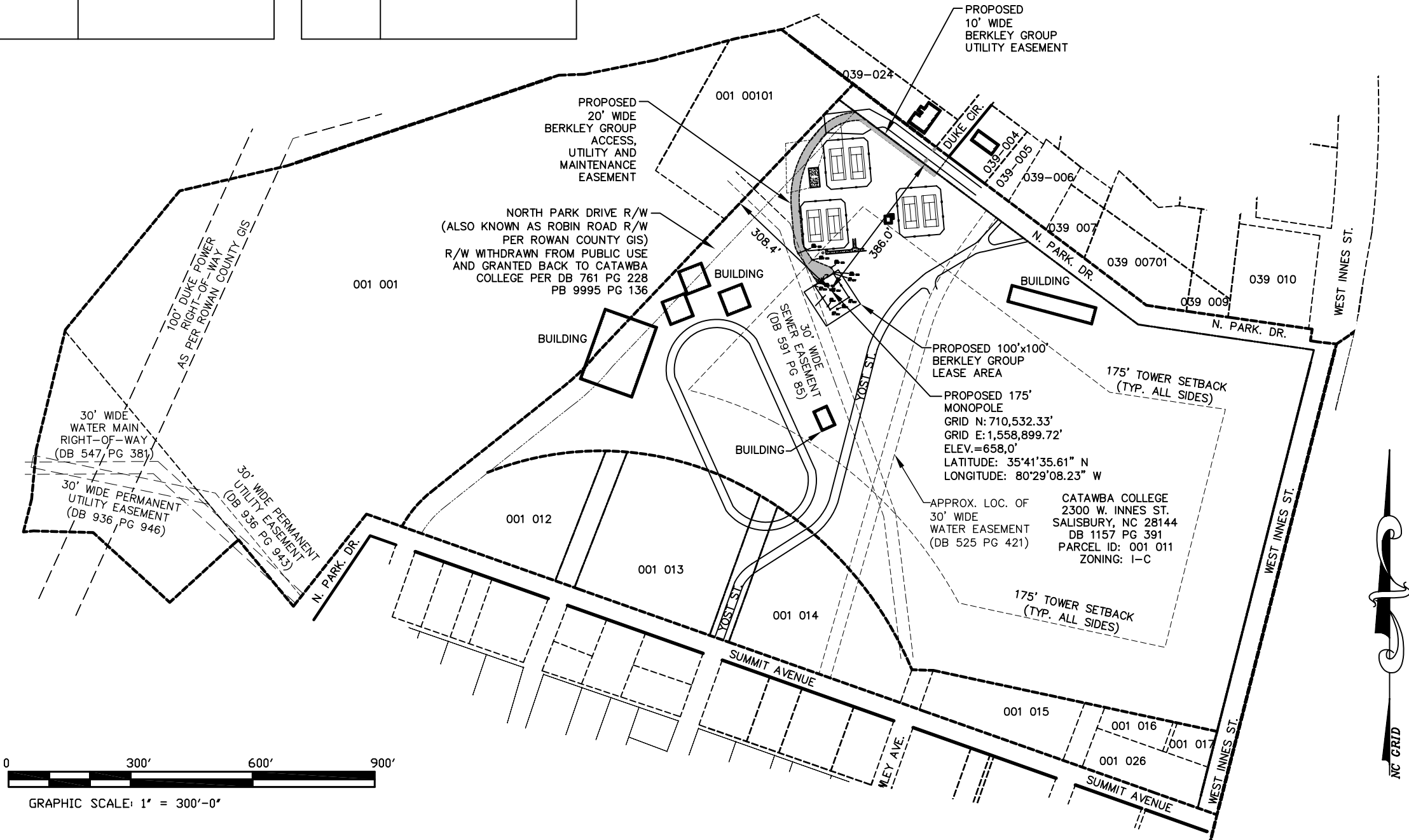


SANDERS SURVEYING & MAPPING SERVICES, INC.
510 AVENA ROAD,
BLACK MOUNTAIN,
NORTH CAROLINA, 28711
(828) 669-2777
C-2384

THIS IS A PRELIMINARY PLAT
IT IS NOT FOR RECORDATION, SALES
OR CONVEYANCE.



BASE TRANSCIVER SITE
CATAWBA COLLEGE
2300 W. INNES ST.
SALISBURY, NC 28144
ROWAN COUNTY



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11/05/10	REVISED CD's

PROJECT NUMBER:
10049.001

SHEET CONTENTS:

SITE
SURVEY
SHEET 1 OF 3

SHEET NUMBER:

V1

INVESTORS TITLE INSURANCE COMPANY

P.O. DRAWER 2687
CHAPEL HILL, NORTH CAROLINA 2751 5–2687

COMMITMENT NO. 201000151CA2
COMMITMENT DATE: 06/24/2010

SCHEDULE B – SECTION II
EXCEPTIONS

ANY POLICY WE ISSUE WILL HAVE THE FOLLOWING EXCEPTIONS UNLESS THEY ARE TAKEN CARE OF TO OUR SATISFACTION.

1. TAXES FOR THE YEAR 2010, AND SUBSEQUENT YEARS, NOT YET DUE AND PAYABLE. (NOT A SURVEY ISSUE, NOT PLOTABLE)

2. SANITARY SEWER RIGHT–OF–WAY AGREEMENT TO THE CITY OF SALISBURY RECORDED IN BOOK 373 AT PAGE 397. (NOT PLOTABLE, DOES NOT APPEAR TO AFFECT SUBJECT PROPERTY)

3. SANITARY SEWER RIGHT–OF–WAY AGREEMENT TO THE CITY OF SALISBURY RECORDED IN BOOK 453 AT PAGE 197. (NOT PLOTABLE, DOES NOT APPEAR TO AFFECT SUBJECT PROPERTY)

4. RIGHT OF WAY AGREEMENT TO THE CITY OF SALISBURY RECORDED IN BOOK 525 AT PAGE 421. (AFFECTS CATAWBA COLLEGE PROPERTY, AS SHOWN ON PLAT, SHEETS V1 AND V2)

5. DEED OF EASEMENT TO THE CITY OF SALISBURY RECORDED IN BOOK 547 AT PAGE 381. (AFFECTS CATAWBA COLLEGE PROPERTY, AS SHOWN ON PLAT, SHEET V1)

6. GENERAL PERMIT TO SOUTHERN BELL TELEPHONE AND TELEGRAPH COMPANY RECORDED IN BOOK 555 AT PAGE 882. (MAY OR MAY NOT AFFECT SUBJECT PROPERTY, DOCUMENT NOT LEGIBLE)

7. DEED OF EASEMENT TO THE CITY OF SALISBURY RECORDED IN BOOK 591 AT PAGE 85. (AFFECTS SUBJECT PROPERTY, AS SHOWN ON PLAT, SHEETS V1 AND V2)

8. RIGHT–OF–WAY EASEMENT TO SOUTHERN BELL TELEPHONE AND TELEGRAPH COMPANY RECORDED IN BOOK 614 AT PAGE 307. (NOT LEGIBLE, DOES NOT APPEAR TO AFFECT SUBJECT PROPERTY)

9. EASEMENT TO DUKE POWER COMPANY RECORDED IN BOOK 615 AT PAGE 690. (BLANKET IN NATURE)

10. ROAD MAINTENANCE AGREEMENT RECORDED IN BOOK 648 AT PAGE 630. (NOT PLOTABLE, DOES NOT APPEAR TO AFFECT SUBJECT PROPERTY)

11. DECLARATION OF WITHDRAWAL OF STREET FROM PUBLIC USE RECORDED IN BOOK 761 AT PAGE 228. (AFFECTS SUBJECT PROPERTY, AS SHOWN ON PLAT, SHEETS V1 AND V2)

12. DEED OF EASEMENT TO THE CITY OF SALISBURY RECORDED IN BOOK 936 AT PAGE 943. (AFFECT CATAWBA COLLEGE PROPERTY, AS SHOWN ON PLAT, SHEET V1)

13. DEED OF EASEMENT TO THE CITY OF SALISBURY RECORDED IN BOOK 936 AT PAGE 946. (AFFECT CATAWBA COLLEGE PROPERTY, AS SHOWN ON PLAT, SHEET V1)

14. EASEMENT AND MEMORANDUM OF AGREEMENT TO TIME WARNER ENTERTAINMENT – ADVANCE/NEWHOUSE PARTNERSHIP RECORDED IN BOOK 1098 AT PAGE 401. (BLANKET IN NATURE)

15. SUBORDINATION, NON–DISTURBANCE AND ATTORNMENT AGREEMENT RECORDED IN BOOK 1157 AT PAGE 813. (NOT A SURVEY ISSUE)

17. DEED OF TRUST TO RBC BANK (USA), RECORDED IN BOOK 1157 AT PAGE 391, TO SECURE \$58, 000, 000. 00. (NOT A SURVEY ISSUE)

18. DEED OF TRUST TO SECRETARY OF HOUSING AND URBAN DEVELOPMENT, RECORDED IN BOOK M–398 AT PAGE 476, TO SECURE \$543,000.00. (NOT A SURVEY ISSUE)

19. UCC FINANCING STATEMENT TO RBC BANK (USA) RECORDED IN BOOK 1157 AT PAGE 392. (NOT A SURVEY ISSUE)

20. SUBJECT TO THE FEE SIMPLE INTEREST OF CATAWBA COLLEGE, A NORTH CAROLINA CORPORATION. (NOT A SURVEY ISSUE)

21. LOSS OR DAMAGE RESULTING FROM FAILURE TO COMPLY WITH THE TERMS AND PROVISIONS OF LEASE SET FORTH UNDER SCHEDULE A HEREOF, CREATING THE LEASEHOLD ESTATE INSURED. (NOT A SURVEY ISSUE)

22. ANY ENCROACHMENT, ENCUMBRANCE, VIOLATION, VARIATION, OR ADVERSE CIRCUMSTANCE AFFECTING THE TITLE THAT WOULD BE DISCLOSED BY AN ACCURATE AND COMPLETE LAND SURVEY OF THE LAND. THE TERM "ENCROACHMENT" INCLUDES ENCROACHMENTS OF EXISTING IMPROVEMENTS LOCATED ON THE LAND ONTO ADJOINING LAND, AND ENCROACHMENTS ONTO THE LAND OF EXISTING IMPROVEMENTS LOCATED ON ADJOINING LAND. PARAGRAPH 2 (C) OF THE COVERED RISKS IS HEREBY DELETED. NOTE: UPON RECEIPT OF SATISFACTORY PLAT OF SURVEY AND SURVEYOR'S REPORT, THIS EXCEPTION WILL BE ELIMINATED OR AMENDED IN ACCORDANCE WITH THE FACTS DISCLOSED THEREBY.

NOTES:

1. BEARINGS ARE NORTH CAROLINA GRID AND DISTANCES ARE GROUND UNLESS OTHERWISE SHOWN OR NOTED. COORDINATES ARE ON NORTH CAROLINA GRID (NAD 83) AND THE VERTICAL DATUM IS (NAVD 88).
2. GRID COORDINATES SHOWN WERE OBTAINED FROM USE OF GPS OBSERVATION, USING A TOPCON HIPER+ SURVEY GRADE RECIEVER (DUAL FREQUENCY). USING "NGS OPUS SOLUTION".
3. ALL IPS ARE 5/8" IRON REBAR UNLESS OTHERWISE NOTED.
4. THE RATIO OF PRECISION OF THE UNBALANCED TRAVERSE MEETS OR EXCEEDS 1 : 10,000.
5. THE FEATURE SYMBOL LOCATIONS ARE TO THE CENTER OF THE SYMBOL AND MAY BE ENLARGED FOR CLARITY.
6. THE UNDERGROUND UTILITIES SHOWN HEREON HAVE BEEN LOCATED FROM FILED SURVEY INFORMATION AND EXISTING DRAWINGS MADE AVAILABLE AND PROVIDED TO THE UNDERSIGNED SURVEYOR. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED, ALTHOUGH THE UNDERSIGNED DOES STATE THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM THE INFORMATION AVAILABLE AND PROVIDED. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.
7. THE UNDERSIGNED, DOES NOT WARRANT THE EXISTENCE OR NONEXISTENCE OF ANY HAZARDOUS WASTE ON THE SURVEY SITE.
8. THE UNDERSIGNED DOES NOT WARRANT THE EXISTENCE OR NONEXISTENCE OF ANY JURISDICTIONAL WETLANDS ON THE SURVEY SITE OTHER THAN SHOWN, IF ANY. WETLANDS SHOWN ARE SUBJECT TO FINAL APPROVAL BY THE U.S. CORPS. OF ENGINEERS.
9. THIS PLAT WAS PREPARED AS A PROFESSIONAL SERVICE FOR THE EXCLUSIVE USE OF THE PERSON, PERSONS, OR ENTITY NAMED WITHIN THE HEREON STATEMENT AND/OR TITLE. SAID STATEMENT DOES NOT EXTEND TO ANY UNNAMED PERSON, PERSONS OR ENTITY WITHOUT THE EXPRESSED PERMISSION OF AC&S, NAMING SAID PERSON, PERSONS, OR ENTITY.
10. AREA COMPUTED BY DMD METHOD.
11. THE SURVEY IS OF AN EXISTING PARCEL OR PARCELS OF LAND AND DOES NOT CREATE A NEW STREET OR CHANGE AN EXISTING STREET.

TO BERKLEY GROUP AND INVESTORS TITLE INSURANCE COMPANY:

THIS IS TO CERTIFY THAT THIS MAP OR PLAT AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE "MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA / ACSM LAND TITLE SURVEYS JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS IN 2005, AND INCLUDES ITEMS 1–18 OF TABLE A THEREOF. PURSUANT TO THE ACCURACY STANDARDS AS ADOPTED BY ALTA AND NSPS AND IN EFFECT ON THE DATE OF THIS CERTIFICATION,, UNDERSIGNED FURTHER CERTIFIES THAT IN MY PROFESSIONAL OPINION, AS A LAND SURVEYOR REGISTERED IN THE STATE OF NORTH CAROLINA, THE RELATIVE POSITIONAL ACCURACY OF THIS SURVEY DOES NOT EXCEED THAT WHICH IS SPECIFIED THEREIN.

DATE: 10/28/10

.....
KEITH R. SANDERS L–4379

PROPOSED 100'X100' BERKLEY GROUP LEASE AREA
LEGAL DESCRIPTION PER SURVEYOR

BEING A PORTION OF THAT CERTAIN PIECE, PARCEL OR TRACT OF LAND SITUATED, LYING AND BEING IN SALISBURY, ROWAN COUNTY, NORTH CAROLINA, NOW OR FORMERLY OWNED BY CATAWBA COLLEGE, AS DESCRIBED IN DEED BOOK 1070, PAGE 434, AS RECORDED IN ROWAN COUNTY REGISTRY, CONTAINING 0.23 ACRES AS SHOWN ON PLAT ENTITLED "SITE SURVEY, SHEET 2 OF 3", PREPARED BY AC&S ENGINEERING, INC, DATED 10/04/10, LAST REVISED 10/26/10.

COMMENCING AT 1/2" REBAR FOUND, LOCATED ON THE INTERSECTION OF SOUTHEASTERN RIGHT–OF–WAY OF DUKE CIRCLE AND NORTHEASTERN RIGHT–OF–WAY OF NORTH PARK DRIVE (50' R/W), ALSO BEING WESTERN MOST CORNER OF PROPERTY NOW OR FORMERLY OWNED BY DENNIS C. LAMB, AS DESCRIBED IN DEED BOOK 1067, PAGE 364, AS RECORDED IN ROWAN COUNTY REGISTRY, HAVING A NORTH CAROLINA STATE PLANE COORDINATES (NAD 83) N: 710,859.39, E: 1,559,190.31. THENCE ALONG A TIE LINE S 44'21'45" W, A DISTANCE OF 388.77 FEET TO A 5/8" REBAR SET ON THE NORTHERN MOST CORNER OF 100'X100' BERKLEY GROUP LEASE AREA, THIS POINT BEING THE POINT OF BEGINNING.

THENCE S 32'58'11" E, A DISTANCE OF 100.00 FEET TO A 5/8" REBAR SET;
THENCE S 57'01'49" W, A DISTANCE OF 100.00 FEET TO A 5/8" REBAR SET;
THENCE N 32'58'11" W, A DISTANCE OF 100.00 FEET TO A 5/8" REBAR SET;
THENCE N 57'01'49" E, A DISTANCE OF 100.00 FEET TO THE POINT OF BEGINNING.
THIS LEASE AREA TO CONTAIN 10,000 SQ. FT. OR 0.23 ACRES MORE OR LESS.

PROPOSED 20' WIDE BERKLEY GROUP ACCESS, UTILITY AND MAINTENANCE EASEMENT
LEGAL DESCRIPTION PER SURVEYOR

BEING A PORTION OF THAT CERTAIN PIECE, PARCEL OR TRACT OF LAND SITUATED, LYING AND BEING IN SALISBURY, ROWAN COUNTY, NORTH CAROLINA, NOW OR FORMERLY OWNED BY CATAWBA COLLEGE, AS DESCRIBED IN DEED BOOK 1070, PAGE 434, AS RECORDED IN ROWAN COUNTY REGISTRY, CONTAINING 0.26 ACRES AS SHOWN ON PLAT ENTITLED "SITE SURVEY, SHEET 2 OF 3", PREPARED BY AC&S ENGINEERING, INC, DATED 10/04/10, LAST REVISED 10/26/10.

COMMENCING AT 1/2" REBAR FOUND, LOCATED ON THE INTERSECTION OF SOUTHEASTERN RIGHT–OF–WAY OF DUKE CIRCLE AND NORTHEASTERN RIGHT–OF–WAY OF NORTH PARK DRIVE (50' R/W), ALSO BEING WESTERN MOST CORNER OF PROPERTY NOW OR FORMERLY OWNED BY DENNIS C. LAMB, AS DESCRIBED IN DEED BOOK 1067, PAGE 364, AS RECORDED IN ROWAN COUNTY REGISTRY, HAVING A NORTH CAROLINA STATE PLANE COORDINATES (NAD 83) N: 710,859.39, E: 1,559,190.31. THENCE ALONG A TIE LINE N 64'30'09" W, A DISTANCE OF 253.73 FEET TO A POINT LOCATED ON THE SOUTHWESTERN RIGHT–OF–WAY OF NORTH PARK DRIVE AND ON NORTHEASTERN BOUNDARY OF SAID ROWAN COLLEGE PROPERTY, THIS POINT BEING THE POINT OF BEGINNING.

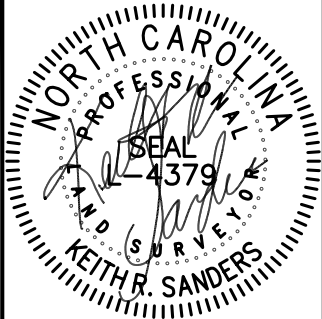
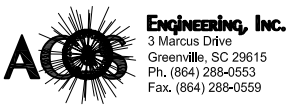
THENCE ALONG SAID SOUTHWESTERN RIGHT–OF–WAY OF NORTH PARK DRIVE S 53'08'15" E, A DISTANCE OF 37.22 FEET TO A POINT;
THENCE LEAVING SAID NORTH PARK DRIVE RIGHT–OF–WAY AND RUNNING ALONG A CURVE TO THE LEFT HAVING A RADIUS OF 110.0 FEET, A CURVE LENGTH OF 117.78 FEET AND A CHORD BEARING AND DISTANCE OF S 71'32'54" W, 112.23 FEET TO A POINT;
THENCE S 40'52'26" W, A DISTANCE OF 11.59 FEET TO A POINT;
THENCE ALONG A CURVE TO THE LEFT HAVING A RADIUS OF 225.00 FEET, A CURVE LENGTH OF 179.55 FEET, AND A CHORD BEARING AND DISTANCE OF S 18'00'45" W, A DISTANCE OF 174.83 FEET TO A POINT;
THENCE S 04'50'56" E, A DISTANCE OF 84.42 FEET TO A POINT;
THENCE ALONG A CURVE TO THE LEFT HAVING A RADIUS OF 40.00 FEET, A CURVE LENGTH OF 19.90 FEET AND A CHORD BEARING AND DISTANCE OF S 19'05'58" E, 19.69 FEET TO A POINT;
THENCE S 33'21'01" E, A DISTANCE OF 31.96 FEET TO A POINT;
THENCE S 67'31'05" E, A DISTANCE OF 50.86 FEET TO A POINT;
THENCE S 32'58'11" E, A DISTANCE OF 14.00 FEET TO A POINT ON NORTHERN BOUNDARY OF BERKLEY GROUP 100'X100' LEASE AREA;
THENCE ALONG THAT NORTHERN BOUNDARY OF SAID LEASE AREA S 57'01'49" W, A DISTANCE OF 48.47 FEET TO A POINT;
THENCE LEAVING SAID LEASE AREA N 33'21'01" W, A DISTANCE OF 87.72 FEET TO A POINT;
THENCE ALONG A CURVE TO THE RIGHT HAVING A RADIUS OF 60.00 FEET, A CURVE LENGTH OF 29.85 FEET AND A CHORD BEARING AND DISTANCE OF N 19'05'58" W, 29.54 FEET TO A POINT;
THENCE N 04'50'56" W, A DISTANCE OF 84.42 FEET TO A POINT;
THENCE ALONG A CURVE TO THE RIGHT HAVING A RADIUS OF 245.00 FEET, A CURVE LENGTH OF 195.51 FEET AND A CHORD BEARING AND DISTANCE OF N 18'00'45" E, 190.37 FEET TO A POINT;
THENCE N 40'52'26" E, A DISTANCE OF 11.59 FEET TO A POINT;
THENCE ALONG A CURVE TO THE RIGHT HAVING A RADIUS OF 130.00 FEET, A CURVE LENGTH OF 104.97 FEET AND A CHORD BEARING AND DISTANCE OF N 64'00'18" E, 102.14 FEET TO THE POINT OF BEGINNING.
THIS EASEMENT TO CONTAIN 11,128 SQ. FT OR 0.26 ACRES MORE OR LESS.

PROPOSED 10' WIDE BERKLEY GROUP UTILITY EASEMENT
LEGAL DESCRIPTION PER SURVEYOR

BEING A PORTION OF THAT CERTAIN PIECE, PARCEL OR TRACT OF LAND SITUATED, LYING AND BEING IN SALISBURY, ROWAN COUNTY, NORTH CAROLINA, NOW OR FORMERLY OWNED BY CATAWBA COLLEGE, AS DESCRIBED IN DEED BOOK 1070, PAGE 434, AS RECORDED IN ROWAN COUNTY REGISTRY, CONTAINING 0.05 ACRES AS SHOWN ON PLAT ENTITLED "SITE SURVEY, SHEET 2 OF 3", PREPARED BY AC&S ENGINEERING, INC, DATED 10/04/10, LAST REVISED 10/26/10.

COMMENCING AT 1/2" REBAR FOUND, LOCATED ON THE INTERSECTION OF SOUTHEASTERN RIGHT–OF–WAY OF DUKE CIRCLE AND NORTHEASTERN RIGHT–OF–WAY OF NORTH PARK DRIVE (50' R/W), ALSO BEING WESTERN MOST CORNER OF PROPERTY NOW OR FORMERLY OWNED BY DENNIS C. LAMB, AS DESCRIBED IN DEED BOOK 1067, PAGE 364, AS RECORDED IN ROWAN COUNTY REGISTRY, HAVING A NORTH CAROLINA STATE PLANE COORDINATES (NAD 83) N: 710,859.39, E: 1,559,190.31. THENCE ALONG A TIE LINE S 36'51'45" W, A DISTANCE OF 50.00 FEET TO POINT ON THE SOUTHWESTERN RIGHT–OF–WAY OF NORTH PARK DRIVE, THIS POINT BEING THE POINT OF BEGINNING.

THENCE LEAVING SAID RIGHT–OF–WAY S 36'51'45" W, A DISTANCE OF 10.00 FEET TO A POINT;
THENCE N 53'08'15" W, A DISTANCE OF 228.94 FEET TO A POINT ON THE 20' WIDE BERKLEY GROUP ACCESS, UTILITY AND MAINTENANCE EASEMENT;
THENCE ALONG SAID EASEMENT AND ALONG A CURVE TO THE RIGHT HAVING A RADIUS OF 110 FEET, A CURVE LENGTH OF 20.10 FEET AND A CHORD BEARING AND DISTANCE OF S 83'00'47" E, 20.08 FEET TO A POINT ON THE SOUTHWESTERN RIGHT–OF–WAY OF NORTH PARK DRIVE;
THENCE ALONG SAID RIGHT–OF–WAY S 53'08'15" E, A DISTANCE OF 211.53 FEET TO THE POINT OF BEGINNING.
THIS EASEMENT TO CONTAIN 2,209 SQ. FT OR 0.05 ACRES MORE OR LESS.



SANDERS SURVEYING &
MAPPING SERVICES, INC.



510 AVENA ROAD,
BLACK MOUNTAIN,
NORTH CAROLINA, 28711
(828) 669–2777
C–2384

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BERKLEY GROUP LLC

BASE TRANSCIVER SITE
CATAWBA COLLEGE
2300 W. INNES ST.
SALISBURY, NC 28144
ROWAN COUNTY

ISSUE	REVISION	DATE	
		INITIAL	DATE
Δ	ADDED UTILITY EASEMENT TO SURVEY	10/04/10	10/19/10
Δ	REV. ROBIN ROAD R/W, ADDED V3	10/26/10	10/28/10
Δ	REV. TOWER AND COMPOUND LOCATION	10/28/10	11/05/10
Δ	REVISED CD's		

PROJECT NUMBER:
10049.001

SHEET CONTENTS:

**SITE
SURVEY
SHEET 3 OF 3**

SHEET NUMBER:

V3

A	
A	ACRE
A/C	AIR CONDITIONING
AB	ANCHOR BOLT
ABV	ABOVE
AC	ALTERNATING CURRENT
ACC	ACCESSIBLE, AIR COOLED CHILLER
ACCU	AIR COOLED CONDENSING UNIT
ACI	AMERICAN CONCRETE INSTITUTE
ACM	ANALOG CONTROL MODULE
ACS DR	ACCESS DOOR
ACS PNL	ACCESS PANEL
ACST	ACOUSTIC
ADA	AMERICAN WITH DISABILITIES ACT
ADAA	AMERICAN DISABILITIES ACT ACCESSIBILITIES
ADL	GUIDE LINES
ADDL	ADDITIONAL
ADJ	ADJACENT, ADJUSTABLE
AF	AMPERE FRAME
AFC	ABOVE FINISHED CEILING
AFF	ABOVE FINISHED FLOOR
AFF	AQUEOUS FILM FORMING FOAM
AFG	ABOVE FINISHED GARAGE
AGA	AMERICAN GAS ASSOCIATION
AHJ	AUTHORITY HAVING JURISDICTION
AHU	AIR HANDLING UNIT
AIC	AMPERE INTERRUPTING CURRENT
AIM	ADDRESSABLE INPUT MODULE
AISC	AMERICAN INSTITUTE OF STEEL
ALUM	CONSTRUCTION
ALUM	ALUMINUM
AMB	AMBIENT
AMP	AMPERE
API	AMERICAN PETROLEUM INSTATE
APPROX	APPROXIMATE
ARCH	ARCHITECT
ARI	AIR CONDITIONING AND REFRIGERATION
ARM	INSTITUTE
ASHRAE	AGENT RELEASE MODULE
	AMERICAN SOCIETY OF HEATING,
	REFRIGERATION, AND AIR CONDITIONING
	ENGINEERS
ASME	AMERICAN SOCIETY OF MECHANICAL
	ENGINEERS
ASPH	ASPHALT
ASTM	AMERICAN SOCIETY FOR TESTING AND
	MATERIALS
AT	AMPERE TRIP
ATC	ACOUSTICAL TILE CEILING
ATO	AUTOMATIC THROWOVER
ATS	AUTOMATIC TRANSFER SWITCH
AUX	AUXILIARY
AV	AIR VENT
AVG	AVERAGE
AWG	AMERICAN WIRE GAUGE
AWS	AMERICAN WELDING SOCIETY
AWWA	AMERICAN WATER WORKS ASSOCIATION

B	
B PL	BASE PLATE
B	BOTTOM OF
B/B, B-B	BACK TO BACK
BAT	BATTERY
B-B	BACK TO BACK OF CURBS
BC	BACK OF CURB
BC	BOTTOM CHORD, BUILDING CONTRACTOR
BDD	BACKDRAFT DAMPER
BEG	BEGIN
BEVL	BEVEL
BFF	BELOW FINISH FLOOR
BFV	BUTTERFLY VALVE
BFW	BOILER FEED WATER
BLDG	BUILDING
BL	BASE LINE
BLWDN	BLOWDOWN
BM	BENCH MARK
BMS	BUILDING MANAGEMENT SYSTEM
BOD	BOTTOM OF DUCT
BOF	BOTTOM OF FOOTING
BOP	BOTTOM OF PIPE
BOS	BOTTOM OF STRUCTURE
BRG	BEARING
BRG PL	BEARING PLATE
BRKR	BREAKER
BRKT	BRACKET
BS	BOTH SIDES
BSMT	BASEMENT
BTU	BRITISH THERMAL UNIT
BV	BALL VALVE
BW	BOTH WAYS

C	
C	CELSIUS
C/S	CONCRETE SLAB
CAB	CABINET
CB	CURB
CC	CENTER TO CENTER
CCT	CHLORINE CONTACT TANK, CIRCUIT
CCTV	CLOSED CIRCUIT TELEVISION
CCU FT	CUBIC FEET
CD	CONDENSATE DRAIN (COLD)
CFH	CUBIC FEET PER HOUR
CFM	CUBIC FEET PER MINUTE
CFS	CUBIC FEET PER SECOND
CHKV	CHECK VALVE
CHWR	CHILLED WATER RETURN
CHWS	CHILLED WATER SUPPLY
CI	CAST IRON, CURB INLET
CIP	CAST IN PLACE
CIRC	CIRCULATING
CJ	CONTROL JOINT
CL	CENTER LINE, CLASS
CLNG	CEILING
CLR	CLEAR
CM	CENTIMETER
CMP	CORRUGATED METAL PIPE
CMU	CONCRETE MASONRY UNIT
CND	CONDUIT
CNG	COMPRESSED NATURAL GAS
CO	CLEAN OUT
COL	COLUMN
CONC	CONCRETE, CONCENTRIC
CONN	CONNECT

C (CONTINUED)	
CONN	CONNECTION
CONST	CONSTRUCTION
CONT	CONTINUOUS, CONTINUATION, CONTROLLER
CONTR	CONTRACTOR
CORR	CORRIDOR
CPH	CONTROL POINT HORIZONTAL
CPV	CONTROL POINT VERTICAL
CPVC	CHLORINATED POLYVINYL CHLORIDE
CRAC	COMPUTER ROOM AIR CONDITIONING UNIT
CRR	CONDENSATE RETURN
CRS	COLD ROLLED STEEL
CRT	CATHODE RAY TUBE
CSK	COUNTER SUNK
CT	CERAMIC TILE, CURRENT TRANSFORMER
CTB	CEMENT TREATED BASE
CTR	CENTER
CTV	CABLE TELEVISION
CW	CONDENSER UNIT
Cu	COPPER
CW	COLD WATER
CWR	CONDENSER WATER RETURN
CWS	CONDENSER WATER SUPPLY

D	
D	DEPTH
DA	DRAINAGE AREA
DB	DECIBEL
DC	DIRECT CIRCUIT
DDC	DIRECT DIGITAL CONTROL
DEF	DEFLECTION, DEFORM, DEFORMED
DEG	DEGREE
DES	DESIGNATION
DET	DETAIL
DI	DUCTILE IRON
DIA	DIAMETER
DIAG	DIAGONAL
DIM	DIMENSION
DIP	DUCTILE IRON PIPE
DISC	DISCONNECT
DISTR PNL	DISTRIBUTION PANEL
DL	DEAD LOAD
DMPF	DAMP PROOFING
DN	DOWN
DOT	DEPARTMENT OF TRANSPORTATION
DPDT	DOUBLE POLE, DOUBLE THROW
DPST	DOUBLE POLE, SINGLE THROW
DR	DRIVE
DR OPNG	DOOR OPENING
DS	DOWNSPOUT
DW	DOMESTIC WATER
DWG	DRAWING
DWL	DOWEL
DX	DIRECT EXPANSION

E	
E	EAST (FOR COORDINATES)
EA	EACH
EAT	ENTERING AIR TEMPERATURE
EC	ELECTRICAL CONTRACTOR
ECC	ECCENTRIC
ECU	ENHANCED CONTROL UNIT
EDBT	ENTERING DRY BULB TEMPERATURE
EF	EACH FACE
EG	EDGE OF GRAVEL
EJ	EXPANSION JOINT
EL	ELEVATION
ELB	ELBOW
ELEC	ELECTRIC
EMER	EMERGENCY
EMT	ELECTRICAL METALLIC TUBING
ENCL	ENCLOSURE
ENTR	ENTRANCE
EOL	END OF LINE RESISTOR
EP	EDGE OF PAVEMENT
EPA	ENVIRONMENTAL PROTECTION AGENCY
EPDM	ETHYLENE PROPYLENE DIENE MONOMER
EPO	EMERGENCY POWER OFF
EQ	EQUAL
EQL SP	EQUALLY SPACED
EQUIP	EQUIPMENT
ESH/E	EMERGENCY SHOWER AND EYEWASH
ESP	EXTERNAL STATIC PRESSURE
ETR	EXISTING TO REMAIN
EW	EACH WAY
EWBT	ENTERING WET BULB TEMPERATURE
EW	ELECTRICAL WATER COOLER
EW	EACH WAY EACH FACE
EWT	ENTERING WATER TEMPERATURE
EXH	EXHAUST
EXH FN	EXHAUST FAN
EXIST	EXISTING
EXP	EXPANSION
EXP BT	EXPANSION BOLT
EXT	EXTERNAL

F	
F	FAHRENHEIT
F/F	FACE TO FACE
FAB	FIRE ALARM
FACF	FIRE ALARM CONTROL PANEL
FAV	FIRE ALARM VALVE
FB	FACE OF BUILDING
FBO	FURNISHED BY OWNER
FCO	FLOOR CLEAN OUT
FCU	FAN COIL UNIT
FD	FLAME DETECTOR, FLOOR DRAIN
FDMPR	FIRE DAMPER
FDV	FIRE DEPARTMENT VALVE
FE	FIRE EXTINGUISHER
FE	FIRE EXTINGUISHER CABINET
FF	FINISHED FLOOR
FG	FINISHED GRADE
FH	FIRE HYDRANT
FHR	FIRE HOSE RACK
FHMS	FLAT HEAD SHEET METAL SCREW
FHV	FIRE HOSE VALVE
FI	FUEL ISLAND
FIN	FINISH
FIN FLR	FINISH FLOOR

F (CONTINUED)	
FIN GR	FINISH GRADE
FL	FLOW LINE
FLG	FLANGE
FL SW	FLOW SWITCH
FLA	FULL LOAD AMPS
FLEX	FLEXIBLE
FLG	FLANGE
FLR	FLOW LINE
FLR	FLOOR
FLUOR	FLUORESCENT
FM	FORCE MAIN
FMA	FACILITY MANAGEMENT AND ALARM SYSTEM
	FACTORY MANUAL
FND	FOUNDATION
FO	FRAME OPENING
FOC	FACE OF CURB
FOR	FUEL OIL RETURN
FOS	FUEL OIL SUPPLY
FOV	FUEL OIL VENT
FP	FIRE PROTECTION
FP	FIRE PROTECTION CONTRACTOR
FPPLP	FIRE POWER LIMITED PLENUM
FPM	FEET PER MINUTE
FPR	FIRE PROTECTION USER
FR	FUEL RETURN, FIRE RATING
FRP	FIBERGLASS REINFORCED PIPE
FS	FINISHED SURFACE, FRONT SIDE, FUEL
	SUPPLY, FAR SIDE
FT	FLOW TRANSMITTER, FOOT
FTG	FOOTING
FTL	FEED-THROUGH LUGS
FW	FULL VOLTAGE NON-REVERSING
FVNR	FIRE WATER

G	
G	GAS (NATURAL), GALVANIZED IRON
G	GAUGE
GAL	GALLON, GALVANIZED
GALV	GALVANIZED
GC	GENERAL CONTRACTOR
GCO	GRADE CLEANOUT
GCU	GLAZED CLAY UNITS
GFI	GROUND FAULT
GFR	GROUND FAULT RELAY
GND	GROUND
GPD	GALLONS PER DAY
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
GR	GRADE
GR BM	GRADE BEAM
GRS	GALVANIZED RIGID STEEL
GUT	GUTTER
GYP	GYP SUM
GYP BD	GYP SUM BOARD
GV	GATE VALVE

H	
H	HEIGHT
HA	HECTARE
HB	HOSE BIB
HC	HANDICAP, HANDICAPPED
HD	HUB DRAIN
HDW	HARDWARE
HDWL	HEADWALL
HEX	HEXAGONAL
HGL	HYDRAULIC GRADE LINE
HID	HIGH INTENSITY DISCHARGE
HM	HOLLOW METAL
HMAC	HOT MIX ASPHALT CONCRETE
HOA	HAND-OFF- AUTO
HORIZ	HORIZONTAL
HPS	HIGH PRESSURE SODIUM
HPST	HIGH PRESSURE STEAM
HP	HORSEPOWER
HPT	HIGH POINT
HR	HOUR, HANDICAPPED RAMP
HSTAT	HUMIDISTAT
HSZBT	HORIZONTAL SINGLE-ZONE
HSZBT	BLOW-THROUGH
	HORIZONTAL SINGLE-ZONE
	DRAW-THROUGH
HT	HEIGHT
HTG	HEATING
HTR	HEATER
HTWR	HEATING WATER RETURN
HTWS	HEATING WATER SUPPLY
HVAC	HEATING, VENTILATING AND AIR
	CONDITIONING
HVU	HEATING AND VENTILATING UNIT
HW	DOMESTIC HOT WATER
HYD	HYDRANT
HZ	HERTZ, FREQUENCY

I	
ID	INSIDE DIAMETER, INTERNAL DIAMETER
IEEE	INSTITUTE OF ELECTRICAL AND
	ELECTRONICS ENGINEERS
IES	ILLUMINATING ENGINEERING SOCIETY
IF	INSIDE FACE
IG	ISOLATED GROUND
IN	INCH
IN WC	INCHES OF WATER
INSUL	INSULATION
INT	INTERIOR
INV	INVERT OF FLOW LINE
INV EL	INVERT ELEVATION
IW	INDUSTRIAL WASTE LINE

J	
JAN	JANITOR
JB	JUNCTION BOX
JST	JOIST
JT	JOINT
JRCP	JOINTED REINFORCED CONCRETE

K	
K	KIPS (1000 LBS)
KCMIL	1000 CIRCULAR MILS
Kg	KILOGRAM

K (CONTINUED)	
KO	KNOCKOUT
KSI	KIPS PER SQUARE INCH
kv	KILOVOLT
KVA	KILOVOLT-AMPS
KVAR	KILOVOLT-AMPS REACTIVE
KW	KILOWATT
KWH	KILOWATT HOUR

L	
L	LENGTH, LITER
LAT	LEAVING AIR TEMPERATURE
LAV	LAVATORY
LB.#	POUNDS
LD	DEVELOPMENT LENGTH
LDBT	LEAVING DRY BULB TEMPERATURE
LDG	LANDING
LF	LINEAR FEET (FOOT)
LG	LONG
LH	LEFT HAND
LL	LIVE LOAD
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LM	LINEAR METER
LONG	LONGITUDINAL
LP	LOW PRESSURE (MECHANICAL), LOW POINT
LPD	LOW POINT DRAIN
LPM	LITERS PER MINUTE
LPS	LOW PRESSURE STEAM
LT	LOW POINT
LRA	LOCKED ROTOR AMPS
LS	LIME STABILIZED
LT	LIGHT, LEFT
LTG	LIGHTING
LW	LONG WAY
LWBT	LEAVING WET BULB TEMPERATURE
LWC	LIGHTWEIGHT CONCRETE

M	
M	METER
MAS	MASONRY
MATL	MATERIAL
MATV	MASTER ANTENNA TELEVISION SYSTEM
MAX	MAXIMUM
MB	MACHINE BOLT, METAL BUILDING
MC	METAL BUILDING CONTRACTOR, MULTIPLE
MCA	BARREL CULVERT, MULTIPLE BOX CULVERT
MCB	1000 BTU PER HOUR
MCC	MECHANICAL CONTRACTOR
MD	MINIMUM CIRCUIT AMPS
MECH	MAIN CIRCUIT BREAKER
MEP	MOTOR CONTROL CENTER
MET	MOTORIZED DAMPER
MEZZ	MAIN DISTRIBUTION PANEL
MFG	MECHANICAL, ELECTRICAL, PLUMBING
MFR	METAL
MG	MEZZANINE
MGR	MANUFACTURE
MH	MANUFACTURER
MH	MANAGER
MI	MANHOLE
MIC	MALLEABLE IRON
MID	MICROPHONE
MIN	MIDDLE
MISC	MINIMUM
MJ	MISCELLANEOUS
MR	MECHANICAL JOINT
MLO	MARK
MO	MAIN LUGS ONLY
MPA	MASONRY OPENING
MRV	MEGAPASCAL
MS	MIDDLE STRIP
MSB	MANUAL RELIEF VALVE
MT	MIDDLE STRIP
MISC STL	MAIN SWITCHBOARD
MU	STRUCTURAL TEE CUT FROM
MV	MISCELLANEOUS STEEL
MW	MOUNTED
MZU	MAKE-UP
	MERCURY VAPOR
	MONITOR WELL
	MULTI-ZONE UNIT

N	
N	NORTH (FOR COORDINATES)
NA	NOT APPLICABLE
NC	NOISE CRITERIA, NORMALLY CLOSED
NEC	NATIONAL ELECTRIC CODE
NEMA	NATIONAL ELECTRICAL
	MANUFACTURER'S ASSOCIATION
N/F	NOW OR FORMERLY
NF	NEAR FACE
NFPA	NATIONAL FIRE PROTECTION
NIC	ASSOCIATION
NO	NOT IN CONTRACT
NOM	NORMALLY OPEN, NUMBER
NS	NOMINAL
NTS	NEAR SCALE

O	
OA	OUTSIDE AIR OR OVERALL
OB	OPPOSED BLADE DAMPER
OC	ON CENTER
OCEW	ON CENTER EACH WAY
OCV	ON CENTER VERTICALLY
OD	OUTSIDE DIAMETER
OF	OUTSIDE FACE
OHE	OVERHEAD ELECTRIC
OHT	OVERHEAD TELEPHONE
OPH	OPPOSITE HAND
OPNG	OPENING
OPP	OPPOSITE
OPT	OPTIONAL
ORBK	OFFICIAL RECORD BOOK
OS&Y	OUTSIDE STEM AND YOKE
OSHA	OCCUPATIONAL SAFETY AND
	HEALTH ADMINISTRATION

P	
P	PAGE
PAVT	PAVEMENT
PB	POND BOTTOM
PC	POINT OF CURVATURE
PCC	PRECAST CONCRETE
PCF	POUNDS PER CUBIC FOTT
PCHR	PRIMARY CHILLED WATER RETURN
PCHS	PRIMARY CHILLED WATER SUPPLY
PCR	PUMPED CONDENSATE RETURN
PD	PRESSURE DROP OR DIFFERENCE
PDF	POWER DISTRIBUTION FEED
PDI	PLUMBING AND DRAINAGE INSTITUTE
POU	POWER DISTRIBUTION UNIT
PERIM	PERIMETER
PERP	PERPENDICULAR
PF	POWER FACTOR
PH	PRESSURE GAUGE, PRE STRESSED GRINDER
PHWR	PHASE
PHWS	PRIMARY HEATING WATER RETURN
PI	PRIMARY HEATING WATER SUPPLY
PIV	POINT OF INTERSECTION
PL	PRESSURE INDICATOR SWITCH
PLBG	POST INDICATOR VALVE
PLYMD	PLATE, PROPERTY LINE
PM	PLUMBING
PNEU	PLYWOOD
POL	PRESSED METAL
POV	PNEUMATIC
PP	PANEL
PR	POLISHED
PRCST	PRIVATELY OWNED VEHICLE
PREFAB	POWER POLE
PRELIM	PAIR
PREMOLD	PREFABRICATED
PROJ	PRELIMINARY
PRV	PREMOLDED
PSF	PROJECTION
PSI	PRESSURE REDUCING VALVE
PSIG	POUNDS PER SQUARE FOOT
PSV	POUNDS PER SQUARE INCH
PT	POUNDS PER SQUARE INCH ABSOLUTE
	THREADED
PTD	THROUGH
PV	TEMPERED
PVC	TOP OF
	TOP OF BEAM
PVI	TOP OF CURB
PVMT	TOP OF CONCRETE
	TOP OF FOOTING
	TOP OF JOIST
	TOP OF PAVEMENT
	TOP OF STEEL
	TOP OF SLAB
	TOP OF WALL
	TRANSVERSAL
	STRUCTURAL TUBING
	TUBULAR STEEL SYSTEM
	TOTAL STATIC PRESSURE
	TRANSIENT VOLTAGE SURGE SUPPRESSOR
	TOP OF WALL
	THROUGH WALL AIR CONDITIONING UNIT
	TYPICAL

QT	QUARRY TILE
QTY	QUANTITY

P

P

PAVT

PB

PCC

PCF

PCHR

PCHS

PCR

PCDF

PDI

PDJ

PERIM

PERP

PF

PG

PH

PHWR

PHWS

PI

PIS

PIV

PL

PLBG

PLYWD

PM

PNEU

PNL

POL

POV

PP

PR

PRCST

PREFAB

PRELIM

PRMLD

PROJ

PRV

PSI

PSF

PSIA

PSIG

PSV

PT

PTD

PV

PVC

PVI

PVT

PVMT

PAVE

PAVEMENT

POIN BOTTOM

POINT OF CURVATURE

PRECAST CONCRETE

POUNDS PER CUBIC FOTT

PRIMARY CHILLED WATER RETURN

PRIMARY CHILLED WATER SUPPLY

PUMPED CONDENSATE RETURN

PRESSURE DROP OR DIFFERENCE

PUMP DISTRIBUTION FEED

PLUMBING AND DRAINAGE INSTITUTE

POWER DISTRIBUTION UNIT

PERIMETER

PERPENDICULAR

POWER FACTOR

PRESSURE GAUGE, PRE STRESSED GRINDER

PHASE

PRIMARY HEATING WATER RETURN

PRIMARY HEATING WATER SUPPLY

POINT OF INTERSECTION

PRESSURE INDICATOR SWITCH

PORT INDICATOR VALVE

PLATE, PROPERTY LINE

PLUMBING

PLYWOOD

PRESSED METAL

PNEUMATIC

PANEL

POLISHED

PRIVATELY OWNED VEHICLE

POWER POLE

PAIR

PRECAST

PREFABRICATED

PRELIMINARY

PREMOLDED

PROJECTION

PRESSURE REDUCING VALVE

POUNDS PER SQUARE FOOT

POUNDS PER SQUARE INCH

POUNDS PER SQUARE INCH ABSOLUTE

POUNDS PER SQUARE INCH GAUGE

PRESSURE SAFETY VALVE, RELIEF

PRESSURE TRANSMITTER, POINT, POINT OF TANGENCY

PAINTED

PLUG VALVE

POLYVINYL CHLORIDE PIPE, POINT OF VERTICAL CURVE

POINT OF VERTICAL INTERSECTION

POINT OF VERTICAL TANGENCY

PAVEMENT

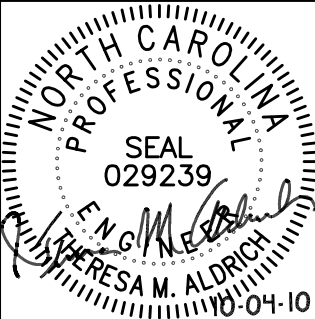
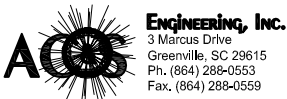
CIVIL SYMBOLS

EXISTING	ITEM	NEW
	POWER POLE WITH LIGHT	
	LIGHT POLE	
	POWER POLE	
	GUY ANCHOR	
	OVERHEAD ELECTRIC	
	ELECTRIC MANHOLE	
	COMMUNICATIONS MANHOLE	
	UTILITY BOX	
	BUILDING	
	POST	
	SIGN	
	GAS METER	
	GAS VALVE	
	GAS LINE	
	SANITARY SEWER LINE & MANHOLE	
	SANITARY SEWER CLEAN OUT	
	FIRE HYDRANT	
	POST INDICATOR VALVE	
	WATER LINE & VALVE	
	WATER METER	
	FIRE WATER LINE	
	ABANDONED UTILITY	
	CULVERT WITH HEADWALLS	
	STORM DRAIN	
	STORM DRAIN HEADWALL	
	AREA INLET	
	STORM DRAIN MANHOLE	
	☒ DRAINAGE DITCH	
	FLOW DIRECTION	
	CONTOURS	
X 712.13	SPOT ELEV.	
	SIDEWALK/GRAVEL	
	CONCRETE PAVING	
	ASPHALT SURFACE COURSE	
	CURB & GUTTER	
	EDGE OF PAVEMENT	
	CHAIN LINK FENCE	
	ITEM TO BE REMOVED	
	PARKING STRIPING / HC PARKING	
	HC RAMP	
	BOLLARD	
	IRON PIN SET	
	WOODS	
	SILT FENCE	

NOTE :
THIS IS A GENERAL LEGEND. SOME
ITEMS MAY NOT APPLY.

GENERAL NOTES

- THE FACILITY IS AN UNOCCUPIED WIRELESS FACILITY.
- PLANS ARE NOT TO BE SCALED AND ARE INTENDED TO BE A DIAGRAMMATIC OUTLINE ONLY, UNLESS NOTED OTHERWISE. THE WORK WILL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES, AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.
- PRIOR TO THE SUBMISSION OF BIDS, THE CONTRACTORS WILL VISIT THE JOB SITE AND BE RESPONSIBLE FOR ALL CONTRACT DOCUMENTS, FIELD CONDITIONS AND DIMENSIONS, AND CONFIRMING THAT THE WORK MAY BE ACCOMPLISHED AS SHOWN PRIOR TO PROCEEDING WITH CONSTRUCTION. ANY DISCREPANCIES ARE TO BE BROUGHT TO THE ATTENTION OF THE PROJECT ENGINEER AND ARCHITECT/ENGINEER PRIOR TO PROCEEDING WITH THE WORK.
- WRITTEN AUTHORIZATION IS REQUIRED BEFORE STARTING WORK ON ANY ITEM NOT CLEARLY DEFINED OR IDENTIFIED BY THE CONTRACT DOCUMENTS.
- CONTACT LOCAL DIGGERS HOTLINE 48 HOURS PRIOR TO PROCEEDING WITH ANY EXCAVATION, SITE WORK OR CONSTRUCTION.
- INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY INDICATED OTHERWISE OR WHERE LOCAL CODES OR REGULATIONS TAKE PRECEDENCE.
- ALL WORK PERFORMED AND MATERIALS INSTALLED WILL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES. THE CONTRACTOR WILL GIVE ALL NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS, AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF THE WORK. MECHANICAL AND ELECTRICAL SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS, AND LOCAL AND STATE JURISDICTIONAL CODES, ORDINANCES, AND APPLICABLE REGULATIONS.
- THE GENERAL CONTRACTOR WILL SUPERVISE AND DIRECT THE WORK, USING THE BEST SKILLS AND ATTENTION. THE CONTRACTOR WILL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES, AND FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT INCLUDING CONTACT AND COORDINATION WITH THE PROJECT ENGINEER AND WITH THE LANDLORD'S AUTHORIZED REPRESENTATIVE.
- DETAILS ARE INTENDED TO SHOW END RESULT OF DESIGN. MINOR MODIFICATIONS MAY BE REQUIRED TO SUIT JOB DIMENSIONS OR CONDITIONS, AND SUCH MODIFICATIONS WILL BE INCLUDED AS PART OF THE WORK.
- REPRESENTATIONS OF TRUE NORTH, OTHER THAN THOSE FOUND ON THE PLAT OF THE SURVEY DRAWING, WILL NOT BE USED TO IDENTIFY OR ESTABLISH THE BEARING OF TRUE NORTH AT THE SITE. THE CONTRACTOR WILL RELY SOLELY ON THE PLAT OF SURVEY DRAWING AND ANY SURVEYOR'S MARKINGS AT THE SITE FOR THE ESTABLISHMENT OF TRUE NORTH, AND WILL NOTIFY THE ARCHITECT/ENGINEER PRIOR TO PROCEEDING WITH THE WORK IF ANY DISCREPANCY IS FOUND BETWEEN THE VARIOUS ELEMENTS OF THE WORKING DRAWINGS AND THE TRUE NORTH ORIENTATION AS DEPICTED ON THE PLAT OF SURVEY. THE CONTRACTOR WILL ASSUME SOLE LIABILITY FOR ANY FAILURE TO NOTIFY THE ARCHITECT/ENGINEER.



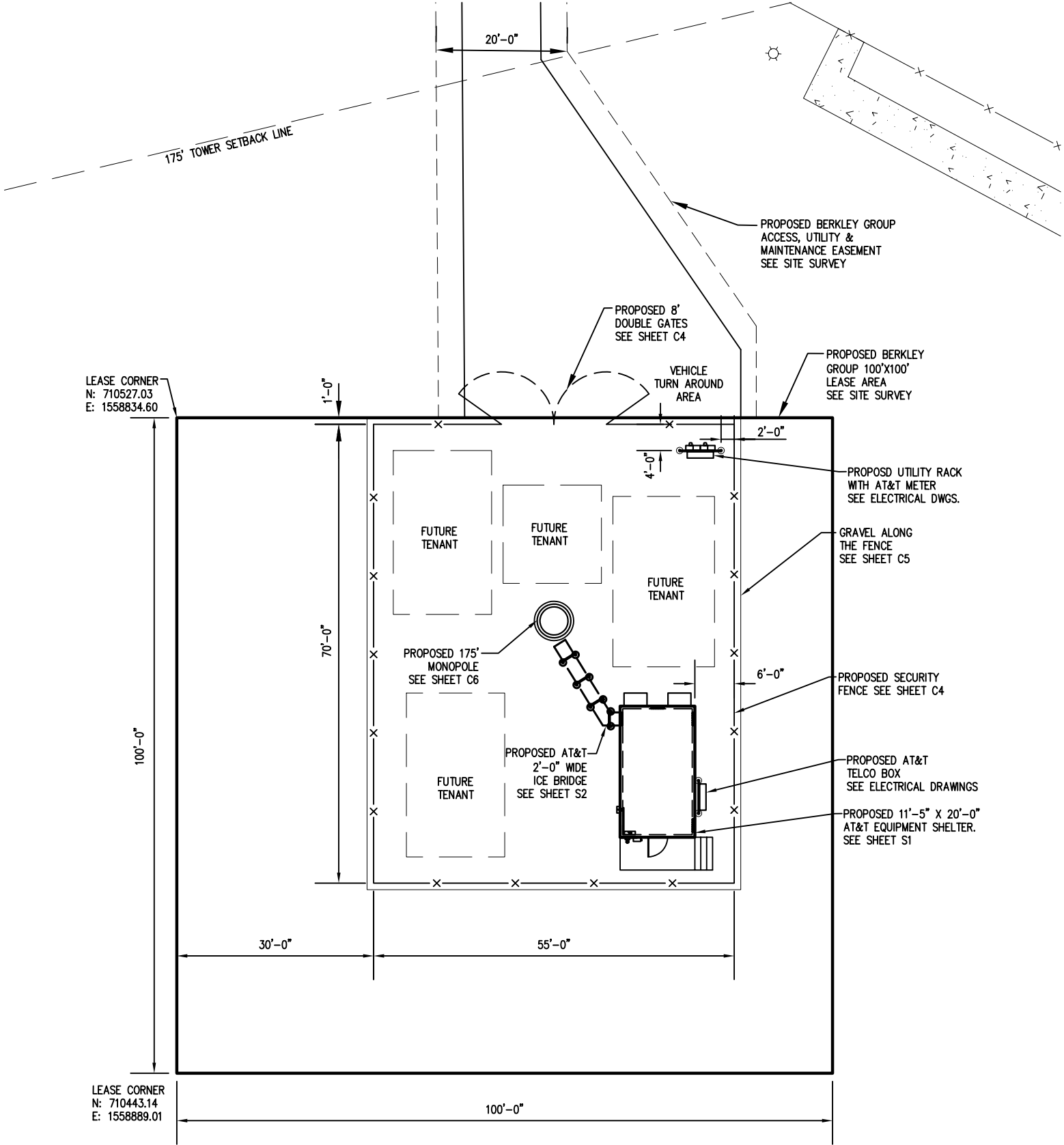
DATE	10/04/10
REVISION	
INITIAL ISSUE	
ISSUE	

PROJECT NUMBER:
10049.001
SHEET CONTENTS:

GENERAL NOTES
AND SYMBOLS

SHEET NUMBER:

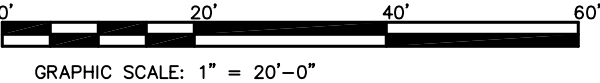
C1



GENERAL NOTES

1. SEE G1 FOR GENERAL ABBREVIATIONS.
2. SEE C1 FOR GENERAL NOTES AND SYMBOLS.
3. SEE SITE SURVEY FOR LIMITS OF LEASE AREA AND ADDITIONAL SURVEY INFORMATION.
4. PARKING FOR SERVICE VEHICLES WILL BE PROVIDED IN THE VEHICLE TURNAROUND AREA.
5. AFTER ALL HEAVY TRAFFIC IS COMPLETE (CONCRETE, TRUCKS, TRAILERS, DRILL RIG, ETC.) CONTRACTOR SHALL REGRADE THE ROAD/PARKING AREA COMPLETELY, ADDING AND COMPACTING ADDITIONAL CRUSHED STONE AS NECESSARY.


CATAWBA COLLEGE
PROPOSED 175' MONOPOLE
LAT. = 35° 41' 35.46" N
LONG. = 80° 29' 08.21" W
ELEV.=658.28'





Engineering, Inc.
3 Marcus Drive
Greenville, SC 29615
Ph. (864) 288-0553
Fax. (864) 288-0559





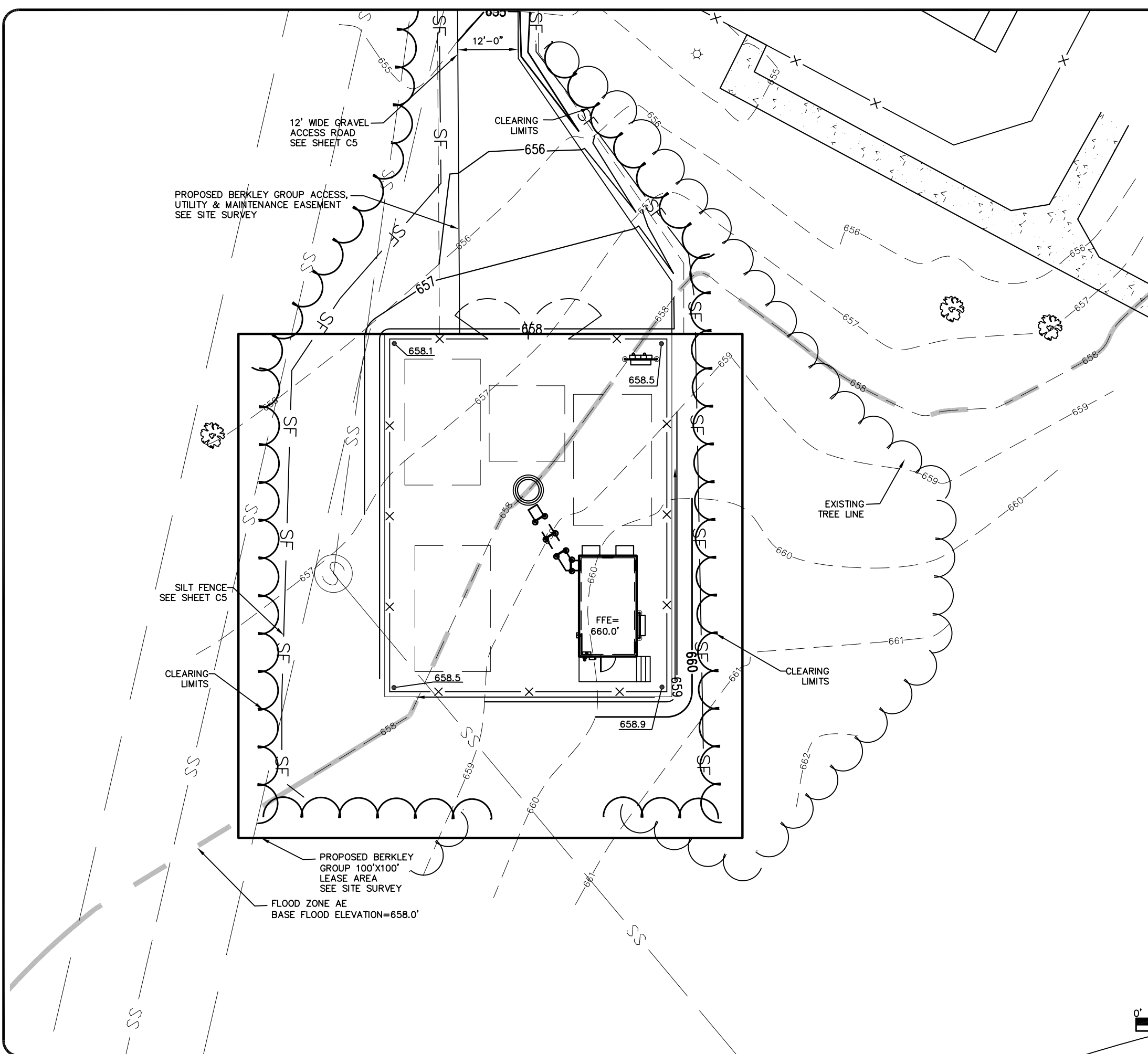
BASE TRANSCIVER SITE
CATAWBA COLLEGE
2300 W. INNES ST.
SALISBURY, NC 28144
ROWAN COUNTY

ISSUE	REVISION	DATE
INITIAL ISSUE		10/04/10
ADDED UTILITY EASEMENT TO SURVEY		10/19/10
REV. ROBIN ROAD R/W, ADDED V3		10/26/10
REV. TOWER AND COMPOUND LOCATION		10/28/10
REVISED CD's		11/05/10

PROJECT NUMBER:
10049.001

SHEET CONTENTS:
SITE LAYOUT PLAN

SHEET NUMBER:
C2



GENERAL NOTES

- 1. SEE G1 FOR GENERAL ABBREVIATIONS.
- 2. SEE C1 FOR GENERAL NOTES AND SYMBOLS.
- 3. SEE SITE SURVEY FOR LIMITS OF LEASE AREA AND ADDITIONAL SURVEY INFORMATION.
- 4. DISTURBED AREAS TO BE SEEDED AND MULCHED IMMEDIATELY AFTER COMPLETION OF CONSTRUCTION.
- 5. PLACE STONE TO ENSURE PROPER DRAINAGE AWAY FROM CONCRETE PAD AND EQUIPMENT.

NOTE:
LANDSCAPING REQUIREMENTS TO BE
WAIVED DUE TO EXISTING TREES.

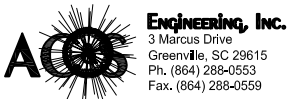
FLOOD INSURANCE RATE MAP
ROWAN COUNTY, NC
AND INCORPORATED AREAS
MAP #: 3710575100J
EFFECTIVE: JUNE 16 ,2009
FLOOD ZONE: AE
BFE: 658.0'



GRID



GRAPHIC SCALE: 1" = 20'-0"



BASE TRANSCIVER SITE
CATAWBA COLLEGE
2300 W. INNES ST.
SALISBURY, NC 28144
ROWAN COUNTY

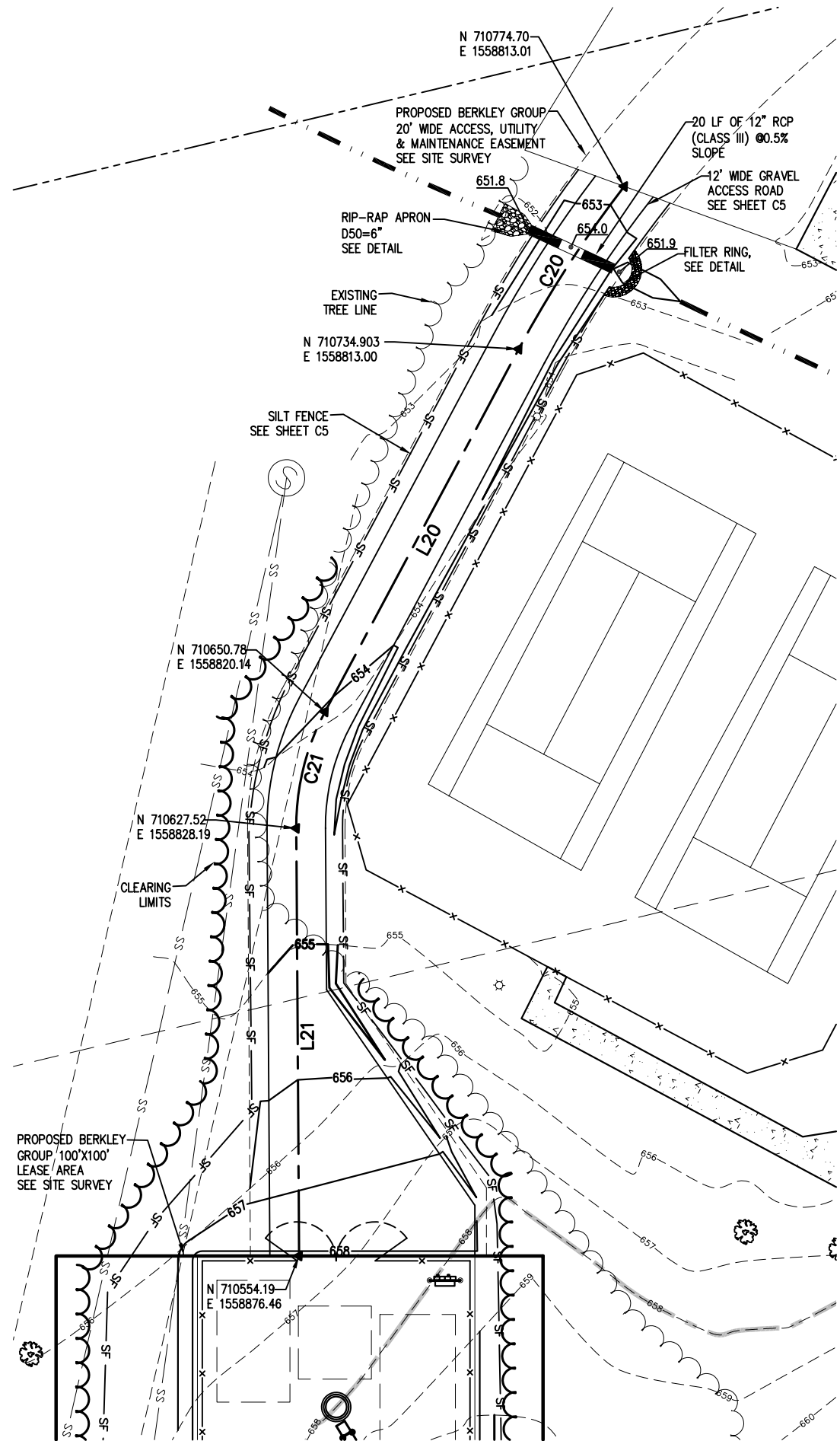
ISSUE	REVISION	DATE
Δ	INITIAL ISSUE	10/04/10
Δ	ADDED UTILITY EASEMENT TO SURVEY	10/19/10
Δ	REV. ROBIN ROAD R/W, ADDED V3	10/25/10
Δ	REV. TOWER AND COMPOUND LOCATION	10/28/10
Δ	REVISED CDS	11/05/10

PROJECT NUMBER:
10049.001
SHEET CONTENTS:

SITE
GRADING PLAN

SHEET NUMBER:

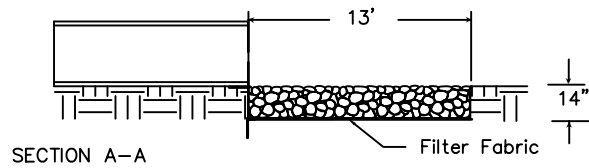
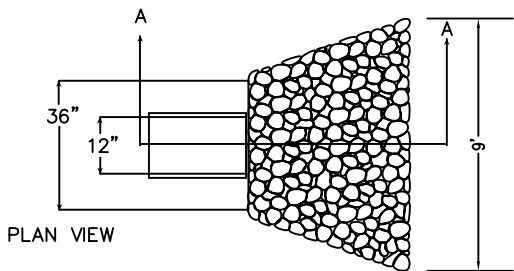
C3



LINE TABLE – C/L OF PROPOSED GRAVEL		
LINE	BEARING	DISTANCE
L20	S04°50'56"E	84.42'
L21	S33°21'01"E	87.79'

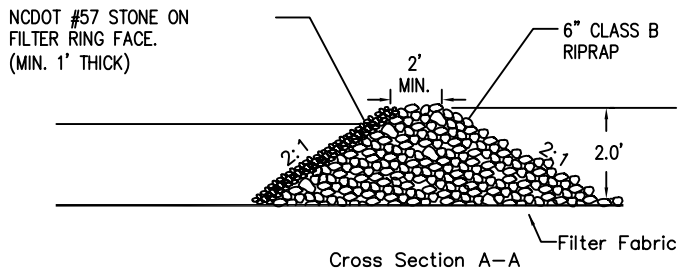
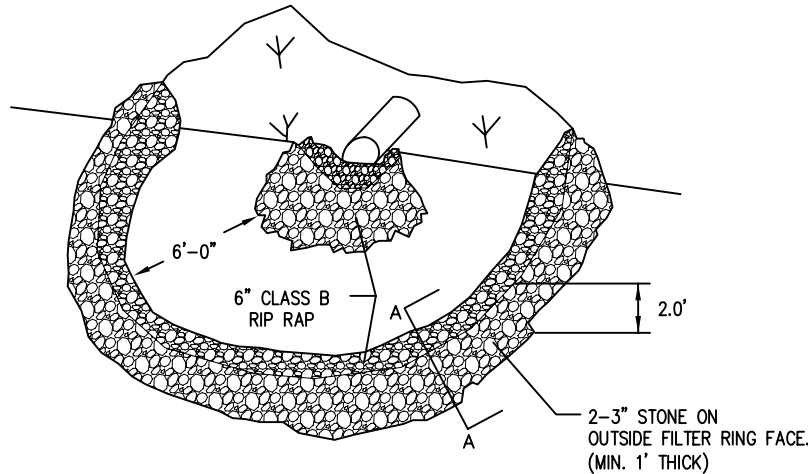
CURVE TABLE – C/L OF PROPOSED GRAVEL					
CURVE	LENGTH	RADIUS	CHORD	BEARING	DELTA
C20	39.85	235.00	39.81	S00°00'34"W	9°43'00"
C21	24.87	50.00	24.62	S19°05'58"E	28°30'05"

PIPE OUTLET TO FLAT AREA
- NO WELL DEFINED CHANNEL

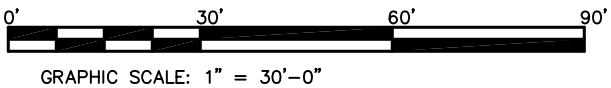


1 RIP-RAP APRON DETAIL
C3A SCALE:N.T.S.

- NOTES:
1. La is the length of the riprap apron.
 2. d=1.5 times the maximum stone diameter but not less than 6".
 3. In a well defined channel, extend the apron up the channel banks to an elevation of 6" above the maximum tailwater depth or to the bank, whichever is less.
 4. A filter blanket or filter fabric should be installed between the riprap and soil foundation.



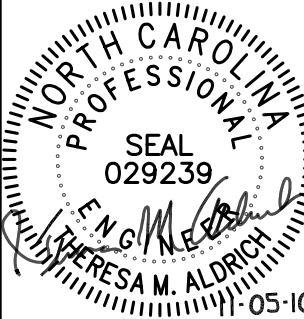
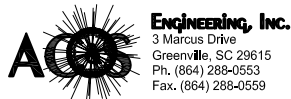
2 FILTER RING DETAIL
C3A SCALE:N.T.S.



GRAPHIC SCALE: 1" = 30'-0"

GENERAL NOTES

1. SEE G1 FOR GENERAL ABBREVIATIONS.
2. SEE C1 FOR GENERAL NOTES AND SYMBOLS.
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4. DISTURBED AREAS TO BE SEEDED AND MULCHED IMMEDIATELY AFTER COMPLETION OF CONSTRUCTION.
5. PLACE STONE TO ENSURE PROPER DRAINAGE AWAY FROM CONCRETE PAD AND EQUIPMENT.



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ROWAN COUNTY

DATE	REVISION	ISSUE
10/04/10	INITIAL ISSUE	Δ
10/19/10	ADDED UTILITY EASEMENT TO SURVEY	Δ
10/25/10	REV. ROBIN ROAD R/W, ADDED V3	Δ
10/28/10	REV. TOWER AND COMPOUND LOCATION	Δ
11/05/10	REVISED C08	Δ

PROJECT NUMBER:
10049.001
SHEET CONTENTS:

ACCESS ROAD
GRADING PLAN

SHEET NUMBER:

C3A



GATE KEEPER DETAIL
TO HOLD GATES OPEN

VEHICULAR GATES

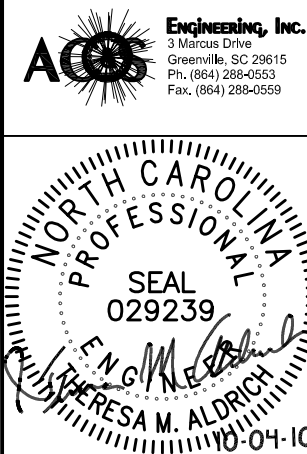
NOTES:

1. ALL MATERIALS AND HARDWARE FOR THE CHAIN LINK FENCE SHALL BE OF A HOT DIP GALVANIZED FINISH.
2. CHAIN LINK FABRIC TO BE 8 FT. HIGH, 9 GA. WIRE, 2 IN. MESH WITH TWISTED SELVAGE TOP AND BOTTOM. (ASTM A392)
3. BARBED WIRE TO CONSIST OF 3 NO. 12-1/2 GA. GALVANIZED STEEL WIRE WITH 4 POINT BARBS OF NO. 14 GA. GALVANIZED STEEL.
4. POST, RAIL, AND GATE FITTINGS TO BE PRESSED STEEL OR MALLEABLE CASTING. (ASTM A153)
5. ALL POSTS SHALL HAVE WEATHER CAPS INSTALLED.
6. POSTS TO SET IN 2000 PSI CONCRETE. BOTTOM OF CONCRETE TO BE 2" MIN. FROM BOTTOM OF POST.
7. TIE WIRES TO BE 9 GA. ALUMINUM SPACED AT 12" O.C. POSTS/GATES AND 24" O.C. RAILS/WIRE.
8. TENSION BARS TO BE 3/16 x 3/4 INCH CARBON STEEL ATTACHED TO TERMINAL POSTS BY MEANS OF BEVELED EDGE BANDS.
9. PROVIDE TWO GATE KEEPER HOLD OPEN DEVICES FOR SWING GATES. GATE KEEPERS TO ALLOW GATES TO OPEN APPROX. 180 DEGREES.
10. PROVIDE COMBINATION LOCK FOR COMPOUND GATE AND ONE LOCK FOR ANY OTHER GATE (I.E. ACCESS GATE, GUY WIRE FENCE GATE, ETC.)

1 STANDARD PANEL SECTION

GENERAL NOTES

1. SEE G1 FOR GENERAL ABBREVIATIONS.
2. SEE C1 FOR GENERAL NOTES AND SYMBOLS.

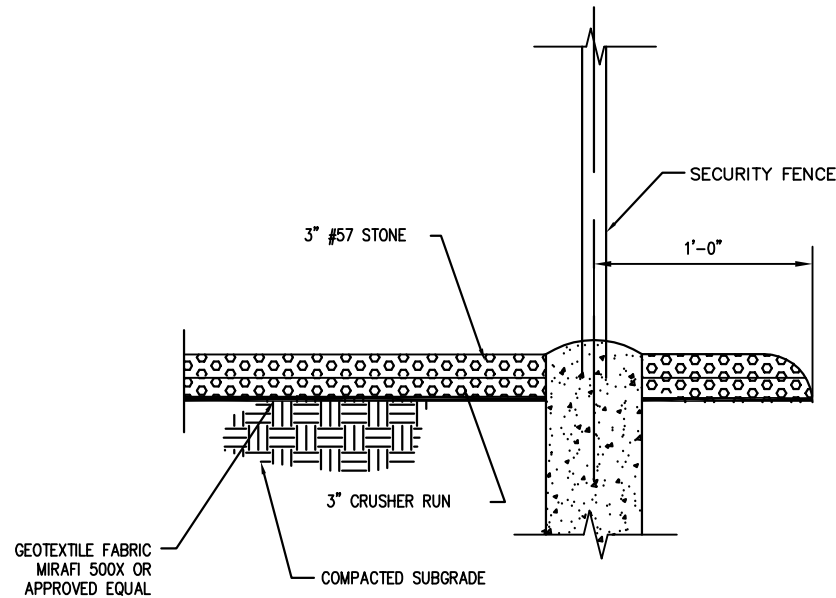
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PROJECT NUMBER:
10049.001
SHEET CONTENTS:

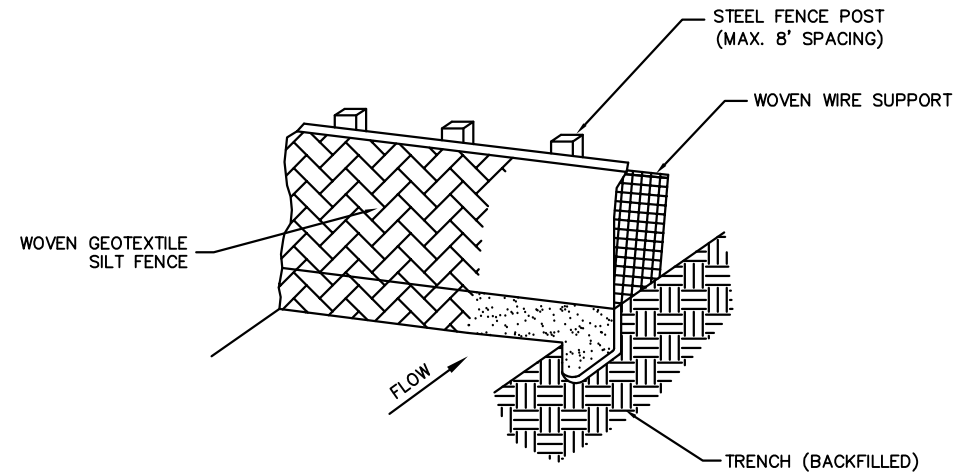
COMPOUND FENCE DETAILS

SHEET NUMBER:

C4



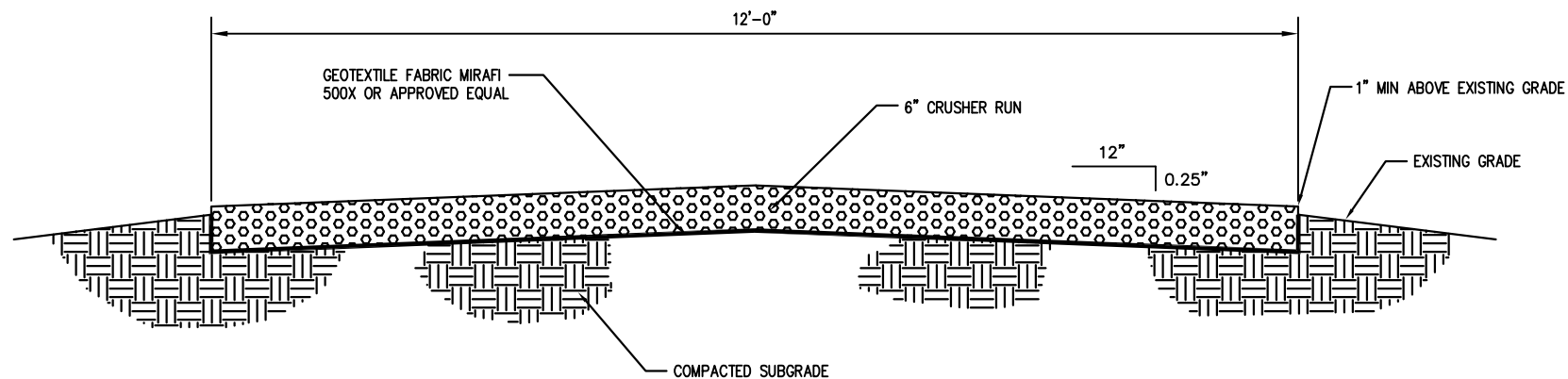
1 COMPOUND GRAVEL
C5 SCALE:NTS



SILT FENCE NOTES:

1. STEEL POSTS WHICH SUPPORT THE SILT FENCE SHALL BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE.
2. THE TOE OF THE SILT FENCE SHALL BE TRENCHED IN WITH A SPADE OR MECHANICAL TRENCHER, SO THAT THE DOWNSLOPE FACE OF THE TRENCH IS FLAT AND PERPENDICULAR TO THE LINE OF FLOW.
3. THE TRENCH SHOULD BE A MINIMUM OF 6 INCHES DEEP AND ALLOW FOR THE SILT FENCE TO BE LAID IN THE GROUND AND BACKFILLED.
4. SILT FENCE SHOULD BE SECURELY FASTENED TO WOVEN WIRE, WHICH IS IN TURN ATTACHED TO THE STEEL FENCE POSTS.
5. INSPECTION SHALL BE FREQUENT AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
6. SILT FENCE SHALL BE REMOVED WHEN IT HAS SERVED ITS USEFULNESS, SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.
7. ACCUMULATED SILT SHALL BE REMOVED WHEN IT REACHES A DEPTH OF 6 INCHES AND DISPOSED OF IN AN APPROVED SPOIL SITE.
8. SILT FENCE SHALL BE A MINIMUM HEIGHT OF 30" MEASURED FROM THE EXISTING OR GRADED GROUND.
9. SILT FENCE SHALL BE BURLAP, POLYPROPYLENE FABRIC, NYLON REINFORCED WITH POLYESTER NETTING OR OTHER MATERIAL (AS APPROVED & IF APPLICABLE). THE MULLEN BURST STRENGTH SHALL BE GREATER THAN 150 PSI. THE EDGES SHALL BE TREATED TO PREVENT UNRAVELING.

2 SILT FENCE DETAIL
C5 SCALE:NTS



3 GRAVEL ACCESS ROAD
C5 SCALE:NTS

DATE	10/04/10
REVISION	
INITIAL	
ISSUE	

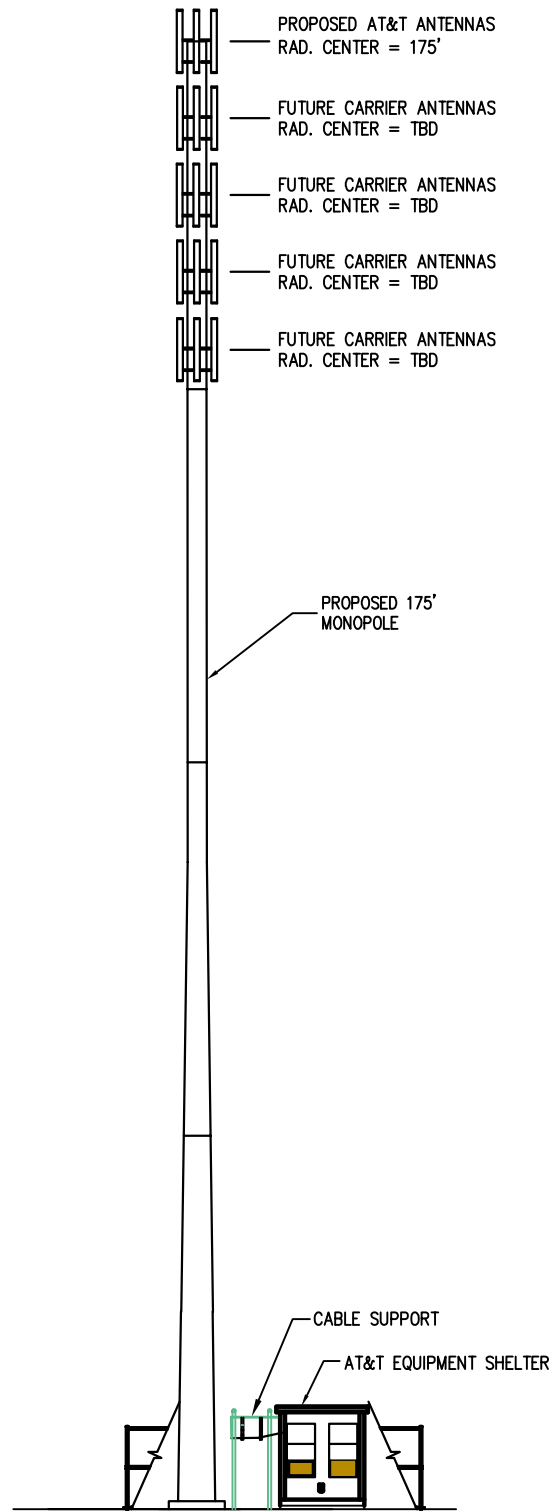
PROJECT NUMBER:
10049.001
SHEET CONTENTS:

**SITE
DETAILS**

SHEET NUMBER:

C5

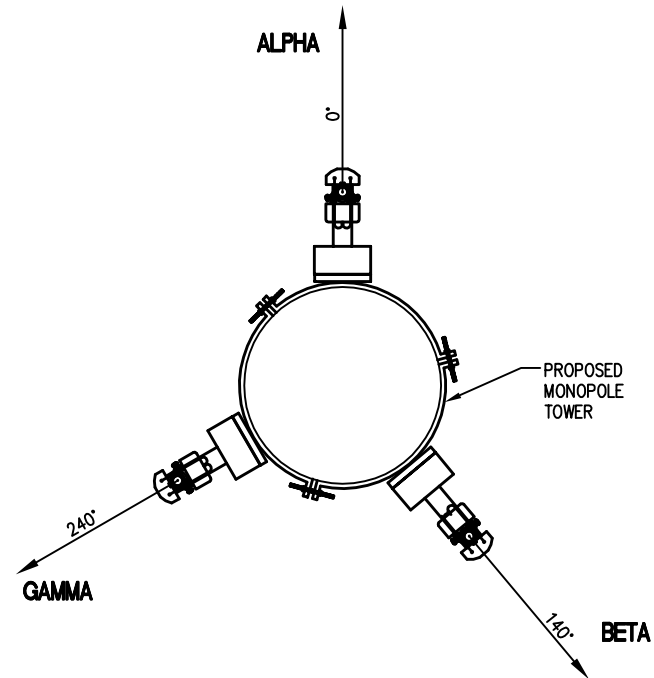
NOTE :
THE TOWER DRAWING IS ONLY A
GRAPHIC REPRESENTATION OF THE
STRUCTURE. THE ACTUAL TOWER IN
THE FIELD MAY VARY.



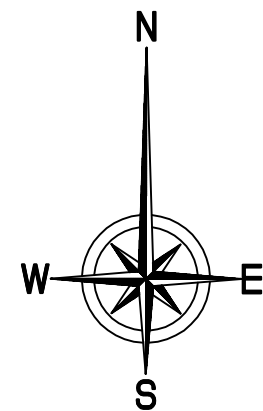
1 TOWER ELEVATION
C6 SCALE:NTS

GENERAL NOTES

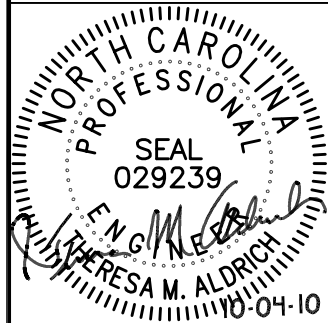
1. ANTENNA CENTERLINE HEIGHT BASED ON TOP OF FOOTING ELEVATION.
2. ALL ANTENNA BRACKETS PER ANTENNA MANUFACTURER, OR EQUAL, CONTRACTOR TO COORDINATE REQUIRED MECHANICAL DOWNTILT WITH APPROPRIATE CARRIER.
3. ALL ANTENNA INFORMATION TO BE CONFIRMED WITH AT&T PRIOR TO INSTALLATION.



2 ANTENNA LAYOUT
C6 SCALE:NTS



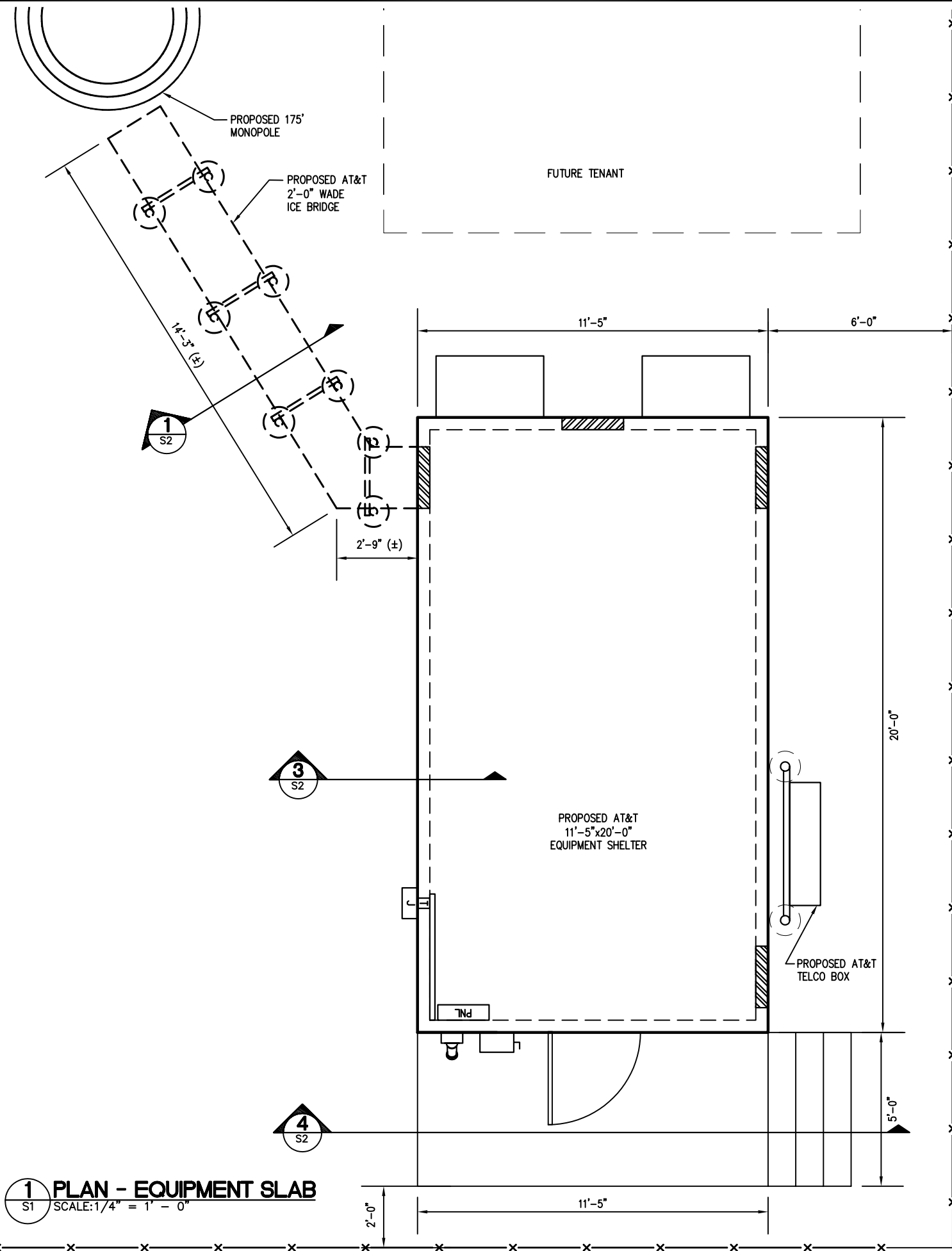
ANTENNA AND COAXIAL CABLE SCHEDULE							
SECTOR	DESCRIPTION OF ANTENNA	ANTENNA ORIENT.	ANT. QTY.	COAX QTY.	RAD CENTER	COAX CABLE	CABLE LENGTH
ALPHA	KATHREIN 742-236	0°	1	4	175'	1 5/8" RFS	205'
BETA	KATHREIN 742-236	140°	1	4	175'	1 5/8" RFS	205'
GAMMA	KATHREIN 742-236	240°	1	4	175'	1 5/8" RFS	205'
TOTAL			3	12			



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INITIAL ISSUE	
ISSUE	

PROJECT NUMBER:
10049.001
SHEET CONTENTS:
**TOWER ELEVATION,
ANTENNA LAYOUT,
COAXIAL CABLE
SCHEDULE AND NOTES**
SHEET NUMBER:
C6



CONCRETE NOTES

1. PROVIDE CONCRETE THAT COMPLIES WITH THE FOLLOWING SCHEDULE:
- | ELEMENT | COMPRESSIVE STRENGTH @ 28 DAYS (PSI) | UNIT WEIGHT (PCF) | MAX. COARSE AGGREGATE SIZE (INCHES) |
|---------------------------------------|--------------------------------------|-------------------|-------------------------------------|
| FOOTINGS | 4,000 | 150 | 3/4 |
| SLABS, TRENCHES & CONDUIT ENCASEMENTS | 3,500 | 150 | 3/4 |
2. PROVIDE NEW BILLET STEEL REINFORCING CONFORMING TO THE STANDARDS OF ASTM A615, GRADE 60.
3. NOT USED.
4. PROVIDE ANCHOR BOLTS CONFORMING TO THE STANDARDS OF ASTM A36 UNLESS OTHER WISE NOTED.
5. PROVIDE DETAILING, FABRICATION, AND INSTALLATION OF REINFORCING IN ACCORDANCE WITH ACI 315 AND ACI 318.
6. PROVIDE CLASS "B" REINFORCEMENT SPLICES. PROVIDE STANDARD 90 DEGREE HOOKS IN ACCORDANCE WITH ACI 318, UNLESS NOTED OTHERWISE. STAGGER SPLICES UNLESS SPECIFICALLY NOTED.
7. MAINTAIN THE FOLLOWING COVERAGE FOR REINFORCING STEEL UNLESS ITS OTHERWISE NOTED:
CONCRETE CAST AGAINST EARTH 3"
CONCRETE EXPOSED TO WEATHER OR EARTH:
NO. 6 AND LARGER 2"
NO. 5 AND SMALLER 1 1/2"
CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND:
SLABS, WALLS & JOISTS
NO. 11 AND SMALLER 3/4"
BEAM STIRRUPS & COLUMN TIES
SHELLS AND FOLDED PLATE MEMBERS
NO. 6 AND LARGER 3/4"
NO. 5 AND SMALLER 1/2"
8. ALL EXPOSED CONCRETE EDGES TO HAVE TOOLED FINISH.
9. DO NOT WELD OR BEND ANY REINFORCEMENT IN THE FIELD UNLESS SPECIFICALLY SHOWN.
10. WHERE REQUIRED, PROVIDE DOWELS TO MATCH THE SIZE AND SPACING OF THE MAIN REINFORCING.
11. WIRE BRUSH AND CLEAN CONSTRUCTION JOINTS IMMEDIATELY PRIOR TO POURING NEW CONCRETE.
12. CAREFULLY COORDINATE THE PLACEMENT OF CAST-IN-PLACE EMBEDS AND ANCHOR BOLTS. SET ANCHOR BOLTS WITH A TEMPLATE. SECURELY ATTACH ALL EMBED ITEMS TO FORM WORK OR REINFORCING.

GENERAL NOTES

1. VERIFY EXISTING CONDITIONS AND DIMENSIONS PRIOR TO BEGINNING WORK OR FABRICATING MATERIALS. NOTIFY A/E OF DISCREPANCIES BEFORE PROCEEDING WITH ANY PHASE OF WORK.
2. DO NOT SCALE CONTRACT DRAWINGS FOR THE PURPOSE OF ESTABLISHING DIMENSIONS.
3. DETAILS LABELED "TYPICAL DETAILS" ON DRAWINGS APPLY TO SITUATIONS OCCURRING ON THE PROJECT THAT ARE THE SAME OR SIMILAR TO THOSE SPECIFICALLY DETAILED. SUCH DETAILS TO APPLY WHETHER OR NOT THEY ARE KEYED IN AT EACH LOCATION. QUESTIONS REGARDING APPLICABILITY OF "TYPICAL DETAILS," TO BE DETERMINED BY THE ENGINEER.
4. CONTRACTOR TO BE RESPONSIBLE FOR DESIGN, ADEQUACY AND SAFETY OF ERECTION BRACING, SHORING, TEMPORARY SUPPORTS AND OTHER METHODS OF CONSTRUCTION.
5. PROVIDE MEASURES NECESSARY TO PROTECT THE STRUCTURE AND SAFETY OF WORKMEN DURING CONSTRUCTION. COMPLY WITH APPLICABLE REQUIREMENTS OF OSHA AND OTHER GOVERNING BODIES HAVING JURISDICTION AT THE SITE.
6. STRIP EXISTING GRADE OF ALL TOPSOIL, VEGETATION AND OTHER UNDESIRABLE MATERIALS. REPLACE ANY SOFT AREAS WITH WELL-COMPACTED FILL.
7. DO NOT PLACE CONCRETE AGAINST SUBGRADE CONTAINING FREE WATER, FROST OR ICE.
8. OPEN EXCAVATIONS MUST REMAIN DRY. BACKFILL AGAINST FOUNDATIONS AS SOON AS PRACTICAL. PUMP OPEN EXCAVATIONS OF WATER IF EXCAVATIONS ARE FLOODED PRIOR TO BACKFILLING. KEEP WATER OR DRAINAGE LINES AT LEAST 10 FT AWAY FROM THE LOCATION OF THE PROPOSED FOUNDATION.



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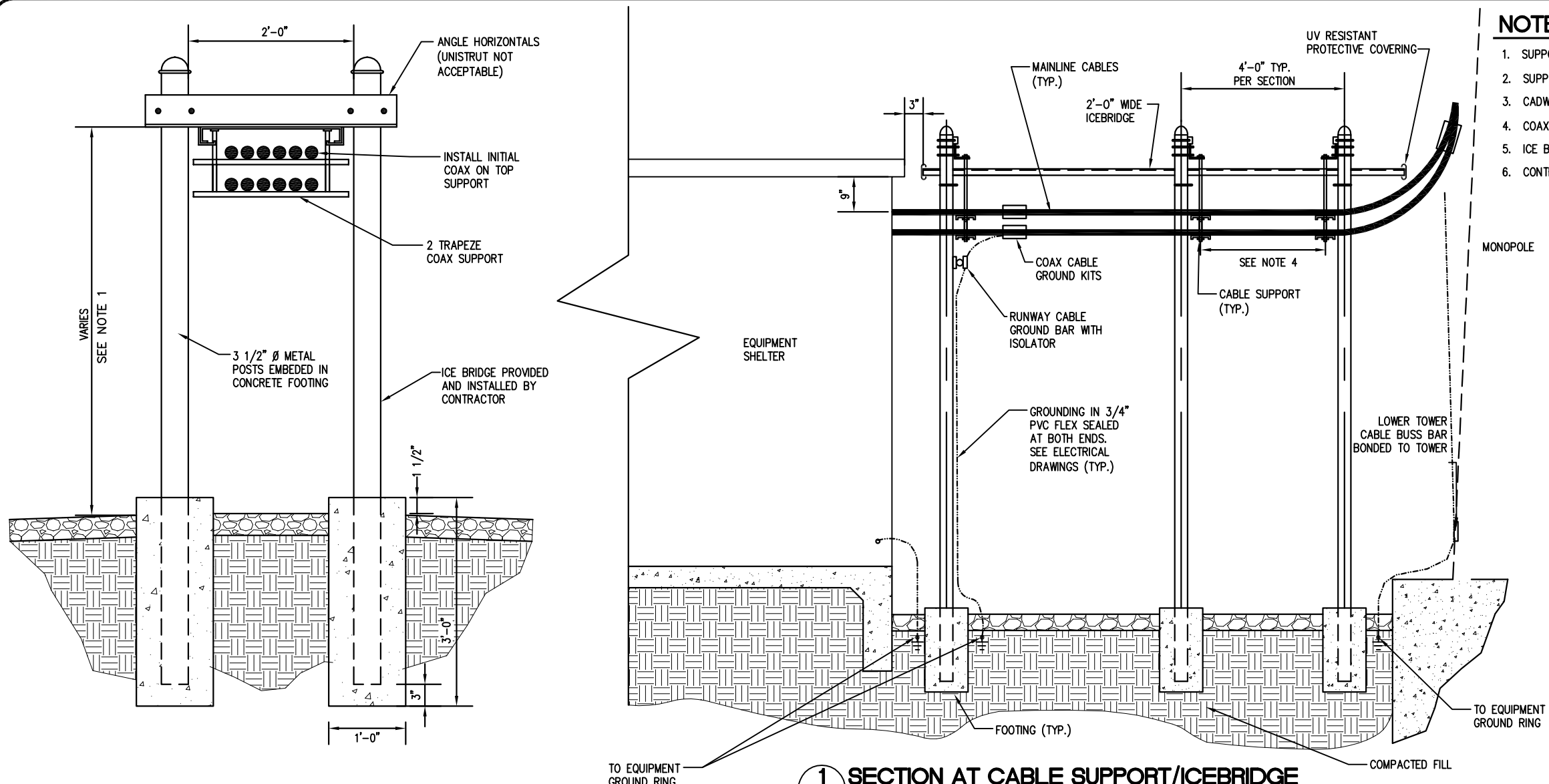
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SHEET CONTENTS:

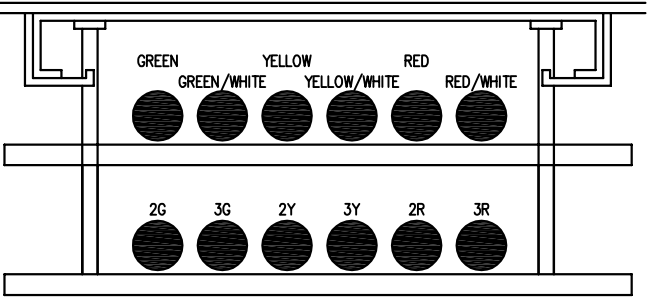
EQUIPMENT
SLAB PLAN
AND NOTES

SHEET NUMBER:

S1

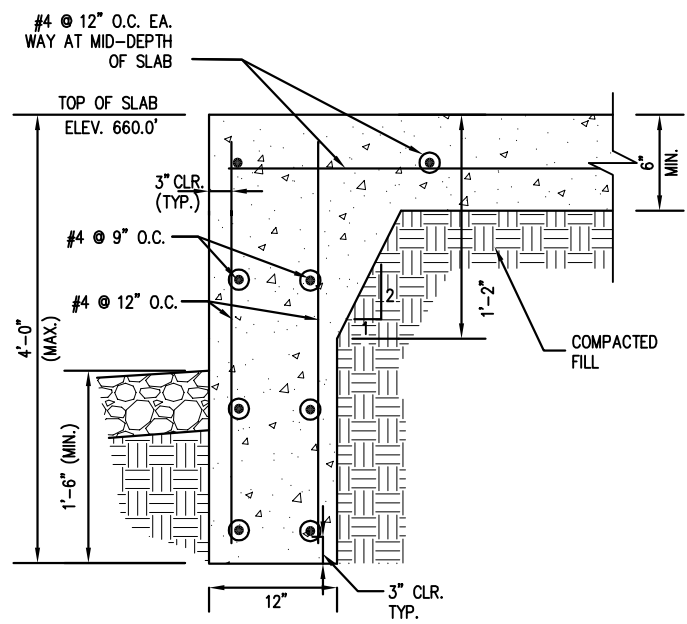


1 SECTION AT CABLE SUPPORT/ICEBRIDGE
S2 SCALE: N.T.S.

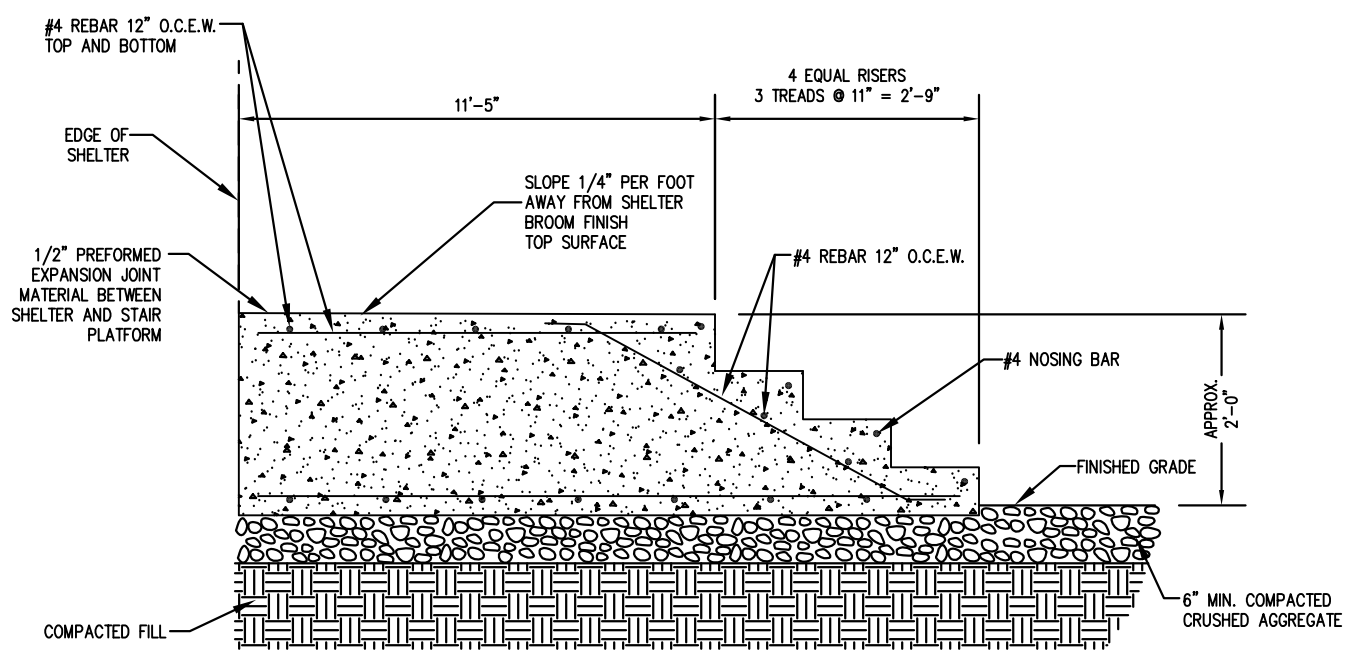


NOTE: SECTION LOOKING FROM SHELTER TOWARD TOWER

2 COAX COLOR SCHEDULE
S2 SCALE: N.T.S.



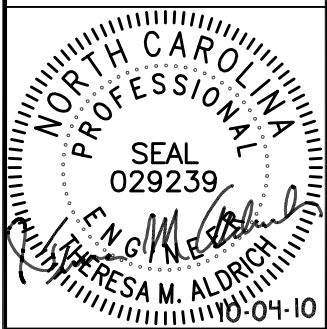
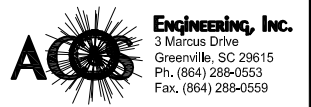
3 SHELTER SLAB EDGE DETAIL
S2 SCALE: N.T.S.



4 SECTION AT DOOR STOOP
S2 SCALE: N.T.S.

NOTES

1. SUPPORT SHALL BE AS REQUIRED FOR SHELTER (12'-0" MAX.).
2. SUPPORT POSTS TO BE SPACED @ 4'-0" MAX.
3. CADWELD EACH SUPPORT LEG TO GROUND RING.
4. COAX SUPPORT SPACING TO BE 3'-0" O.C. MAX.
5. ICE BRIDGE SHALL BE GALVANIZED GRIP-STRUT.
6. CONTRACTOR TO SUPPLY CABLE SUPPORT STRUCTURE.



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SHEET CONTENTS:

**SECTIONS
AND DETAILS**

SHEET NUMBER:

S2

GENERAL CONSTRUCTION NOTES:

1. THE FACILITY IS AN UNOCCUPIED WIRELESS FACILITY.
2. PLANS ARE NOT TO BE SCALED AND ARE INTENDED TO BE A DIAGRAMMATIC OUTLINE ONLY, UNLESS NOTED OTHERWISE. THE WORK WILL INCLUDE PROVIDING MATERIALS, EQUIPMENT, APPURTENANCES, AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.
3. ALL EXISTING UTILITIES, FACILITIES, CONDITIONS, AND THEIR DIMENSIONS SHOWN ON PLANS HAVE BEEN PLOTTED FROM AVAILABLE RECORDS. THE ARCHITECT/ENGINEER AND OWNER ASSUME NO RESPONSIBILITY AS TO SUFFICIENCY OR ACCURACY OF THE INFORMATION SHOWN ON THE PLANS OR THE MANNER OF THEIR REMOVAL OR ADJUSTMENT. CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING EXACT LOCATION OF EXISTING UTILITIES AND FACILITIES PRIOR TO START OF CONSTRUCTION. CONTRACTOR SHALL ALSO OBTAIN FROM EACH UTILITY COMPANY, DETAILED INFORMATION RELATIVE TO WORKING SCHEDULES AND METHODS OF REMOVING OR ADJUSTING EXISTING UTILITIES.
4. PRIOR TO THE SUBMISSION OF BIDS, THE CONTRACTORS WILL VISIT THE JOB SITE AND BE RESPONSIBLE FOR ALL CONTRACT DOCUMENTS, FIELD CONDITIONS AND DIMENSIONS, AND CONFIRMING THAT THE WORK MAY BE ACCOMPLISHED AS SHOWN PRIOR TO PROCEEDING WITH CONSTRUCTION. ANY DISCREPANCIES ARE TO BE BROUGHT TO THE ATTENTION OF THE IMPLEMENTATION ENGINEER AND ARCHITECT/ENGINEER PRIOR TO PROCEEDING WITH THE WORK.
5. WRITTEN AUTHORIZATION IS REQUIRED BEFORE STARTING WORK ON ANY ITEM NOT CLEARLY DEFINED OR IDENTIFIED BY THE CONTRACT DOCUMENTS.
6. PRIOR TO SITE EXCAVATION, CONTRACTOR SHALL LOCATE EXISTING SERVICES. DAMAGE CAUSED TO EXISTING SERVICES SHALL BE REPAIRED BY CONTRACTOR AT CONTRACTOR'S EXPENSE.
7. INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY INDICATED OTHERWISE OR WHERE LOCAL CODES OR REGULATIONS TAKE PRECEDENCE.
8. ALL WORK PERFORMED AND MATERIALS INSTALLED WILL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES INCLUDING THE 2009 NC BUILDING CODE, 2008 NEC AND 2006 IBC WITH NC AMENDMENTS. THE CONTRACTOR WILL GIVE ALL NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS, AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF THE WORK. ELECTRICAL SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS, AND LOCAL AND STATE JURISDICTIONAL CODES, ORDINANCES, AND APPLICABLE REGULATIONS.
9. THE GENERAL CONTRACTOR WILL SUPERVISE AND DIRECT THE WORK USING THE BEST SKILLS AND ATTENTION. THE CONTRACTOR WILL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES AND FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT INCLUDING CONTACT AND COORDINATION WITH THE OWNER AND WITH THE LANDLORD'S AUTHORIZED REPRESENTATIVE.
10. DETAILS ARE INTENDED TO SHOW END RESULT OF DESIGN. MINOR MODIFICATIONS MAY BE REQUIRED TO SUIT JOB DIMENSIONS OR CONDITIONS, AND SUCH MODIFICATIONS WILL BE INCLUDED AS PART OF THE WORK.
11. REPRESENTATIONS OF TRUE NORTH, OTHER THAN THOSE FOUND ON THE PLAT OF THE SURVEY DRAWING, WILL NOT BE USED TO IDENTIFY OR ESTABLISH THE BEARING OF TRUE NORTH AT THE SITE. THE CONTRACTOR WILL RELY SOLELY ON THE PLAT OF SURVEY DRAWING AND ANY SURVEYOR'S MARKINGS AT THE SITE FOR THE ESTABLISHMENT OF TRUE NORTH, AND WILL NOTIFY THE ARCHITECT/ENGINEER PRIOR TO PROCEEDING WITH THE WORK IF ANY DISCREPANCY IS FOUND BETWEEN THE VARIOUS ELEMENTS OF THE WORKING DRAWINGS AND THE TRUE NORTH ORIENTATION AS DEPICTED ON THE PLAT OF SURVEY. THE CONTRACTOR WILL ASSUME SOLE LIABILITY FOR ANY FAILURE TO NOTIFY THE ARCHITECT/ENGINEER.
12. COORDINATE WORK WITH LOCAL UTILITY COMPANY AND CONSTRUCT TO UTILITY COMPANY ENGINEERING PLANS AND SPECIFICATIONS. PROVIDE TRENCHING AND BACKFILL, AND PAY ALL UTILITY FEES UNLESS NOTED OTHERWISE. THE WORK WILL INCLUDE PROVIDING MATERIALS, EQUIPMENT, APPURTENANCES, AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.
13. BEFORE PURCHASING EQUIPMENT, THE ELECTRICAL CONTRACTOR SHALL CONTACT THE POWER COMPANY AND GET IN WRITING THE MAXIMUM SHORT CIRCUIT CURRENT THE POWER COMPANY IS FURNISHING TO THE POINT OF SERVICE. ALL EQUIPMENT SHALL BE RATED AND COORDINATED TO NO LESS THAN THE MAXIMUM SHORT CIRCUIT CURRENT PROVIDED BY POWER COMPANY, WITH A MINIMUM SHORT CIRCUIT RATING OF 10,000 AMPS.

SERVICE ROUTING NOTES: (DWG E2)

1. CONTRACTOR SHALL TERMINATE THE POWER CABLES AT THE UTILITY METER LOCATED AT THE METER CENTER. COORDINATE EXACT METER BASE TYPE AND REQUIREMENTS WITH LOCAL UTILITY.
2. CONDUIT LINES SHALL HAVE A CONTINUOUS SLOPE DOWNWARD AND AWAY FROM THE EQUIPMENT TO THE PROPERTY LINE SO THAT WATER WILL FLOW AWAY FROM THE EQUIPMENT. TRENCHES SHALL BE EXCAVATED ALONG STRAIGHT LINES BEFORE CONDUITS ARE LAID SO THAT THE ELEVATION CAN BE ADJUSTED, IF NECESSARY, TO AVOID UNSEEN OBSTRUCTIONS. MANUFACTURED BENDS SHALL HAVE A MINIMUM RADIUS OF 36" FOR CONDUITS.
3. ALL CONDUITS SHALL BE SEALED WEATHER TIGHT ON INTERIOR AND EXTERIOR OF EQUIPMENT TO PREVENT MOISTURE INFILTRATION. SEALANTS SHALL BE IDENTIFIED FOR USE WITH THE CABLE INSULATION SHIELD OR OTHER COMPONENTS.
4. CELLULAR EQUIPMENT SHELTER SHALL BE FURNISHED BY RESPECTIVE CARRIER AND INSTALLED BY CONTRACTOR. CONTRACTOR SHALL OBTAIN SHELTER DRAWINGS AND SPECIFICATIONS TO VERIFY EXACT INSTALLATION DETAILS AND REQUIREMENTS WHICH MAY NOT BE SPECIFICALLY ADDRESSED WITHIN THESE DRAWINGS.
5. CONTRACTOR SHALL FURNISH AND INSTALL PULL BOXES IN CONDUIT RUNS AT EACH OCCURRENCE WHERE EXCEEDING 360 DEGREES IN TOTAL BENDS OR 300' IN LENGTH AT A CONVENIENT INTERMEDIATE LOCATION. PULL BOXES SHALL BE SIZED PER NEC 370.
6. ON SPARE CONDUITS, PROVIDE 2 PULL STRINGS SECURELY FASTENED AT EACH END OF THE CONDUITS. PULL STRINGS SHALL BE 200LB TEST POLYETHYLENE CORD. PROVIDE CAP ON END OF THE CONDUITS AND MARK AS SHOWN ON THE SERVICES ROUTING PLAN.
7. MAINTAIN MINIMUM BENDING RADIUS FOR CONDUIT INSTALLATIONS PER CONDUIT/FIBER MANUFACTURER RECOMMENDATIONS.
8. REFERENCE E4 FOR ONE-LINE, CONDUIT AND WIRE SIZE, AND SPECIFICATIONS.
9. PROVIDE MINIMUM OF 36 INCHES WORK CLEARANCE IN FRONT OF EQUIPMENT AND EQUIPMENT RACKS.
10. WARNING TAPE SHALL BE PLACED IN TRENCHES AND SHALL READ EITHER "UTILITIES" OR "ELECTRIC".
11. ENDS OF WARNING TAPE SHALL EXTEND 6" MINIMUM ABOVE FINAL GRADE.
12. ALL CONDUIT SHALL BE SCHEDULE 40 OR 80 PVC UNLESS NOTED OTHERWISE. EXPOSED CONDUIT SHALL BE UV RESISTANT.

GROUNDING NOTES: (DWG E3)

1. ALL DETAILS ARE SHOWN IN GENERAL TERMS. ACTUAL GROUNDING INSTALLATION REQUIREMENTS AND CONSTRUCTION MAY VARY ACCORDING TO SITE CONDITIONS. VERIFY EXACT EQUIPMENT GROUNDING WITH EQUIPMENT MANUFACTURER AND OWNER.
2. GROUND RODS SHALL BE DRIVEN AT 10'-0" INTERVALS OF THE GROUND RING OR RADIALS. GROUND RODS SHALL NOT BE PLACED CLOSER THAN 6'-0" APART PER NEC 250-56.
3. INSTALL GROUND CONDUCTORS AND GROUND RODS A MINIMUM OF 24" (MAXIMUM 36") FROM EQUIPMENT CONCRETE SLAB, SPREAD FOOTING, OR FENCE.
4. ALL BELOW GRADE CONNECTIONS: EXOTHERMIC WELD TYPE; ABOVE GRADE CONNECTIONS: EXOTHERMIC WELD TYPE (FENCE AND TOWER) OR MECHANICAL TYPE (2-HOLE LUGS WITH MECHANICAL CONNECTORS AT EQUIPMENT). ALL HARDWARE SHALL BE STAINLESS STEEL WITH LOCKWASHERS.
5. CLEAN EXOTHERMIC WELD CONNECTIONS ON GALVANIZED SURFACES THOROUGHLY AND COVER W/ (2) TWO COATS SHERWIN WILLIAMS GALVITE PAINT B350W3 (OR EQUIVALENT).
6. ALL ELECTRICAL AND MECHANICAL GROUND CONNECTIONS SHALL BE TO BARE BRIGHT SURFACES AND HAVE ANTI-OXIDATION COMPOUND APPLIED TO CONNECTION (THOMAS AND BETTS KOPR-SHIELD).
7. THE MINIMUM BEND RADIUS FOR GROUND CONDUCTORS SHALL BE 8 INCHES FOR #6 AWG WIRE AND 12 INCHES FOR #2 AWG AND GREATER WIRE.
8. ITEMS TO BE BONDED TO THE GROUND RING INCLUDE BUT ARE NOT LIMITED TO: CORNER FENCE POSTS AND FENCE POSTS WITHIN 6' OF GROUND RING, GROUND BUS BARS, EQUIPMENT CABINETS, EQUIPMENT RACKS, CABLE SUPPORT STRUCTURES, TOWER, GENERATOR, ANY OTHER METAL OBJECTS WITHIN 6' OF GROUND RING.
9. GROUNDING INSTALLATIONS AND CONNECTIONS SHALL BE MADE BY ELECTRICAL CONTRACTOR.
10. OBSERVE N.E.C. AND LOCAL UTILITY REQUIREMENTS FOR ELECTRICAL SERVICE GROUNDING.
11. GROUNDING ATTACHMENT TO TOWER SHALL BE PER MANUFACTURER'S RECOMMENDATIONS OR AT GROUNDING POINTS PROVIDED (3 MINIMUM).
12. GROUND COAXIAL RF CABLES USING GROUND KITS TO GROUND BARS AT TOP, MIDDLE, AND BOTTOM OF TOWER, SEE DRAWING E7 FOR DETAILS.
13. ALL EXPOSED GROUND LEADS SHALL BE ROUTED INSIDE 1/2" (MIN.) PVC OR FLEXIBLE PVC CONDUIT (NON-METALLIC), TO 18" (MIN.) BELOW GRADE.

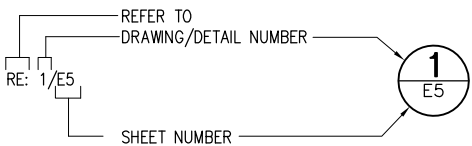
ABBREVIATIONS

A, AMP	AMPERES	LTG	LIGHTING
ABT	ABOUT	MIGB	MASTER ISOLATED GROUND BAR
AFF	ABOVE FINISHED FLOOR	MCB	MAIN CIRCUIT BREAKER
AFG	ABOVE FINISHED GRADE	MLO	MAIN LUGS ONLY
AWG	AMERICAN WIRE GAUGE	MTD	MOUNTED
BCW	BARE COPPER WIRE	N	NEUTRAL
BLDG	BUILDING	NEC	NATIONAL ELECTRICAL CODE
BTS	BASE TRANSMISSION SYSTEM	NIC	NOT IN CONTRACT
C	CONDUIT	NO	NUMBER
CAT	CATALOG	NTS	NOT TO SCALE
CIGBE	COAX ISOLATED GROUND BAR EXTERNAL	PPC	POWER PROTECTION CABINET
CKT	CIRCUIT	RECEPT	RECEPTACLE
DWG	DRAWING(S)	RGS	RIGID GALVANIZED STEEL
EQPT	EQUIPMENT	REQD	REQUIRED
EXIST	EXISTING	SCH	SCHEDULE
FBO	FURNISHED BY OTHERS	TYP	TYPICAL
FWE	FURNISHED W/ EQUIPMENT	UG	UNDERGROUND
GFI	GROUND FAULT INTERRUPTER	UNO	UNLESS NOTED OTHERWISE
GND	GROUND	V	VOLT(S)
GPS	GLOBAL POSITIONING SYSTEM	WP	INDICATES WEATHERPROOF
JB	JUNCTION BOX	XFMR	TRANSFORMER

ELECTRICAL LEGEND

①	DRAWING NOTE REFERENCE (NOTES BY SYMBOL)
⊗	5/8"ø X 8'-0" LONG COPPER CLAD STEEL GROUND ROD
⊗ ⊗	5/8"ø X 8'-0" LONG COPPER CLAD STEEL GROUND ROD IN INSPECTION SLEEVE
•	EXOTHERMIC WELD CONNECTION
■	MECHANICAL CONNECTION
Ⓜ	METER
Ⓢ	CIRCUIT BREAKER
Ⓜ GEN	GENERATOR
Ⓜ	GENERATOR RECEPTACLE
Ⓜ	DISCONNECT SWITCH
— G —	GROUND CONDUCTOR, TYPE AND SIZE AS NOTED, 18"-24" BELOW GRADE
— G —	EXISTING UNDERGROUND GROUND CONDUCTOR
— — —	EXPOSED POWER CIRCUIT OR CONDUIT, TYPE AND SIZE AS NOTED
— E —	UNDERGROUND ELECTRIC POWER CONDUIT, TYPE AND SIZE AS NOTED
— T —	UNDERGROUND TELCO CONDUIT, TYPE AND SIZE AS NOTED
— OHE —	OVERHEAD ELECTRIC POWER LINE, TYPE AND SIZE AS NOTED
— OHT —	OVERHEAD TELCO LINE, TYPE AND SIZE AS NOTED

DETAIL REFERENCE KEY



Sturkie & Associates
Engineering, PC
414 Cherokee Drive
Greenville, SC 29615
Ph: 864-363-4855



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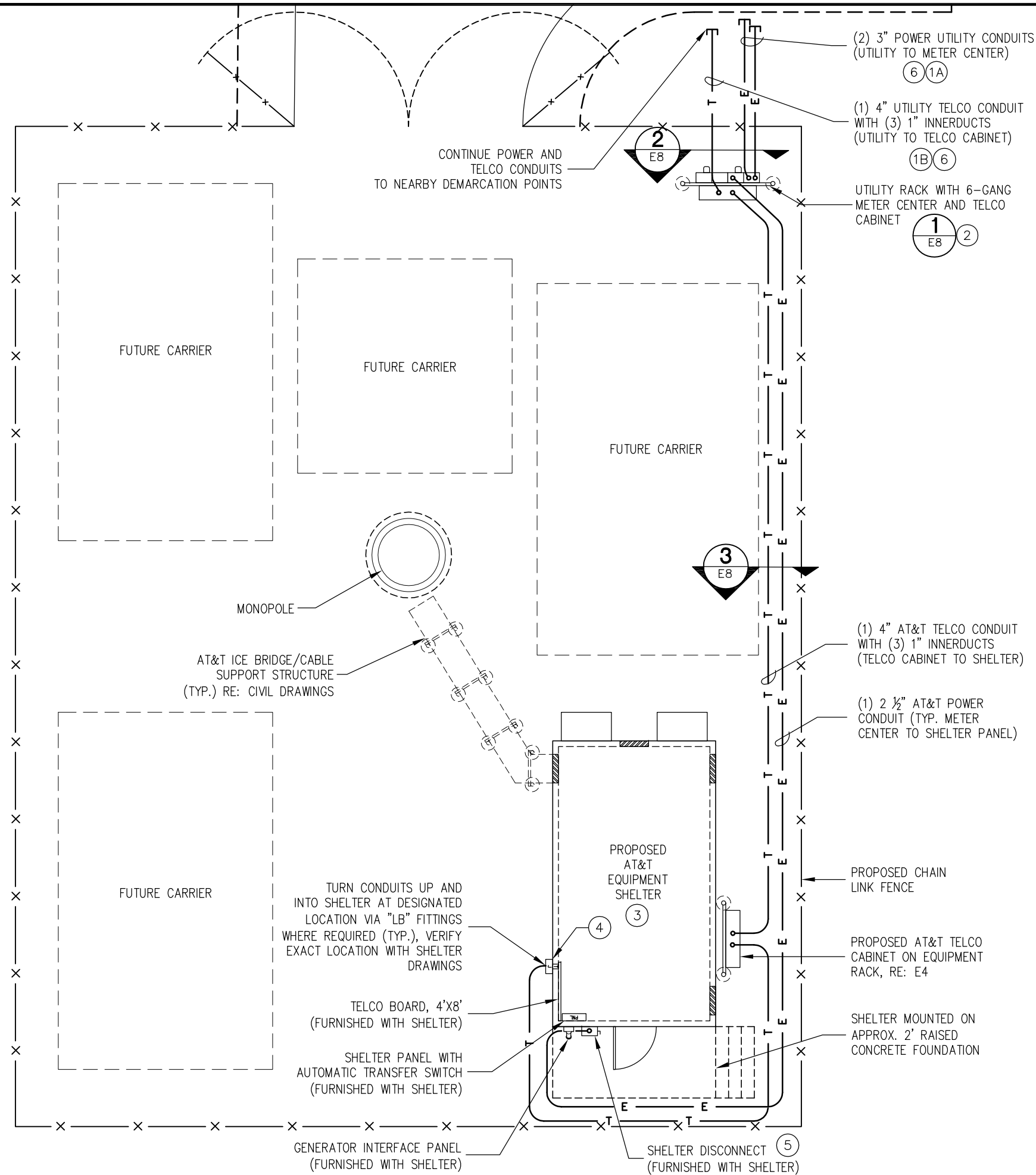
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GENERAL
ELECTRICAL
NOTES AND
LEGEND

SHEET NUMBER:

E1



GENERAL NOTES

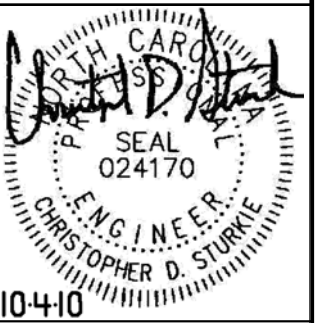
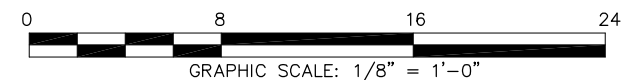
- REFER TO DRAWING E1 FOR GENERAL NOTES PERTAINING TO THIS DRAWING.
- PROVIDE TWO (2) SIGNS, 8" x 12", WHITE BACKGROUND WITH 4" BLACK LETTERS, ON POWER CABINET WITH NOTES AS FOLLOWS:
 - SITE NUMBER [AT&T SITE NUMBER]
 - "IN CASE OF EMERGENCY CALL [PHONE NUMBER]"INSTALL ONE SIGN ON POWER CABINET DOOR CLOSEST TO GATE USING LIQUID NAILS OR EQUAL. OWNER MAY FURNISH AND CONTRACTOR SHALL INSTALL ADDITIONAL SIGNAGE AS REQUIRED. COORDINATE WITH CONSTRUCTION MANAGER FOR SITE NUMBER AND EXACT PLACEMENT LOCATIONS.
- PROVIDE ONE (1) SIGN, 8" x 12", WHITE BACKGROUND WITH 4" BLACK LETTERS TO INCLUDE
 - E-911 STREET ADDRESSINSTALL SIGN ON SITE MAIN GATE USING ALUMINUM HOG RINGS. FURNISH AND INSTALL ADDITIONAL SIGNAGE AS REQUIRED BY CONSTRUCTION MANAGER. REFER TO AT&T SPEC. SECTION 10.
- CONTRACTOR SHALL VERIFY EXACT CONDUIT ROUTING AND PENETRATION LOCATIONS WITH CONSTRUCTION MANAGER AND EQUIPMENT MANUFACTURER/SPECIFICATIONS.

NOTES BY SYMBOL " O "

- ROUTE TWO (2) 3" POWER CONDUITS TO POWER DEMARCATION POINT AS DIRECTED BY LOCAL UTILITY. COORDINATE CONNECTION OF SERVICES WITH LOCAL UTILITY COMPANY.
- ROUTE ONE (1) 4" TELCO CONDUIT TO TELCO DEMARCATION POINT AS DIRECTED BY LOCAL UTILITY. COORDINATE CONNECTION OF SERVICES WITH LOCAL UTILITY COMPANY.
- UTILITY RACK WITH 6-GANG METER CENTER AND TELCO CABINET, FURNISHED AND INSTALLED BY CONTRACTOR.
- EQUIPMENT SHELTER, FURNISHED BY AT&T AND INSTALLED BY CONTRACTOR. REFER TO MANUFACTURER DRAWINGS FOR ADDITIONAL INFORMATION AND PENETRATION LOCATIONS.
- 12"x12"x6" PVC JUNCTION BOX (PER NEC 314) AT SHELTER TELCO ENTRY LOCATION, FURNISHED WITH SHELTER. TURN TELCO CONDUIT UP INTO JUNCTION BOX. COORDINATE EXACT LOCATION WITH SHELTER DRAWINGS AND CONSTRUCTION MANAGER.
- SHELTER DISCONNECT IS FURNISHED WITH SHELTER AND INSTALLED BY CONTRACTOR. SHELTER DISCONNECT MAY BE OMITTED IF APPROVED BY AT&T AS SERVICE DISCONNECT IS PROVIDED ON EQUIPMENT RACK.
- FIELD VERIFY EXACT LOCATION OF UTILITY SERVICES AND ROUTE CONDUITS AS REQUIRED TO MAKE CONNECTIONS. COORDINATE EXACT ROUTING AND CONNECTION OF CONDUITS WITH EXISTING FIELD CONDITIONS, OWNER, AND LOCAL UTILITIES.

1 SERVICES ROUTING PLAN

E2 SCALE: 1/8" = 1'-0"



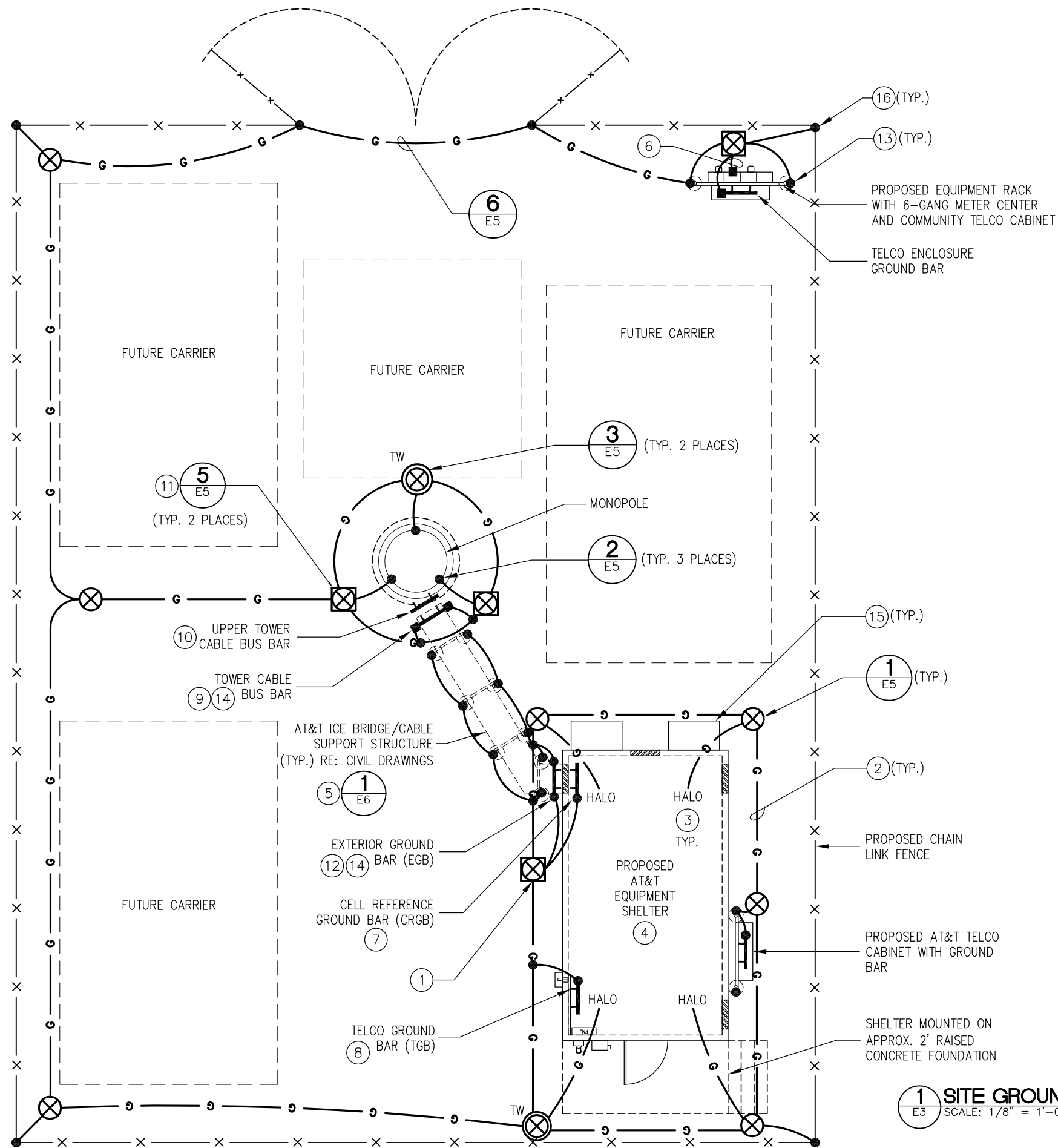
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**SERVICES
ROUTING
PLAN**

SHEET NUMBER:

E2



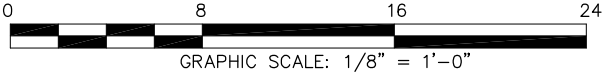
GENERAL NOTES

1. REFER TO DRAWING E1 FOR GENERAL NOTES PERTAINING TO THIS DRAWING.

NOTES BY SYMBOL "○"

- 1. SINGLE POINT GROUND, RE: 4/E5. ROUTE TWO (2) #2 AWG SOLID TINNED COPPER GROUND CONDUCTORS THROUGH (1) 1" PVC CONDUIT TO THE EGB AND CRGB USING DOUBLE HOLE LUGGED CONNECTION.
- 2. GROUNDING SYSTEM SHALL BE COMPRISED OF #2 AWG SOLID TINNED BARE COPPER CONDUCTOR, UNLESS NOTED OTHERWISE, BURIED AT 18"-24" BELOW FINISHED GRADE. ALL CONNECTIONS SHALL BE EXOTHERMIC WELD, UNLESS NOTED OTHERWISE.
- 3. CONTRACTOR SHALL BOND SHELTER/HALO TO GROUND RING AT EACH CORNER USING #2 AWG SOLID TINNED COPPER CONDUCTORS COILED UP INSIDE SHELTER VIA PVC SLEEVES. REFER TO SHELTER DRAWINGS FOR DETAILS.
- 4. EQUIPMENT SHELTER, FURNISHED BY AT&T AND INSTALLED BY CONTRACTOR. REFER TO MANUFACTURER DRAWINGS FOR ADDITIONAL GROUNDING REQUIREMENTS AND DETAILS NOT NECESSARILY INCLUDED WITHIN THESE DRAWINGS.
- 5. BOND ICE BRIDGE/CABLE SUPPORT POSTS FROM BASE TO GROUND RING USING #2 AWG SOLID BARE TINNED COPPER CONDUCTOR EXOTHERMICALLY WELDED AT EACH END. ADDITIONALLY BOND CENTER POST AND EACH ICE BRIDGE SECTION USING #2 AWG GREEN INSULATED STRANDED WIRE TO ENSURE CONTINUITY BETWEEN EACH MEMBER.
- 6. GROUNDING ELECTRODE. PROVIDE #2/0 GREEN INSULATED STRANDED COPPER GROUNDING ELECTRODE CONDUCTOR TO METER CENTER NEUTRAL-TO-GROUND BOND PER NEC 250. REFER TO ONE-LINE DIAGRAM ON E4.
- 7. CELL REFERENCE GROUND BAR/SITE MASTER GROUND BAR (CRGB/SMGB), 30"x4"x1/4" COPPER (FURNISHED WITH SHELTER). BOND TO GROUND RING USING #2 AWG SOLID TINNED COPPER WIRE COILED UP INSIDE SHELTER VIA PVC SLEEVE. REFER TO SHELTER DRAWINGS FOR DETAILS.
- 8. TELCO GROUND BAR (TGB), 10"x4"x1/4" COPPER (FURNISHED WITH SHELTER). TGB IS ALSO TO GROUNDING SYSTEM LOCATED INSIDE SHELTER. REFER TO SHELTER DRAWINGS FOR DETAILS.
- 9. LOWER TOWER CABLE GROUNDING BUS BAR, RE: 1/E7, 5/E7. MOUNT TO TOWER AND BOND TO GROUND RING USING TWO (2) #2 AWG SOLID TINNED COPPER CONDUCTORS. BUS BAR WILL BE SUPPLIED BY CONTRACTOR.
- 10. UPPER TOWER CABLE GROUNDING BUS BAR. BOND DIRECTLY TO TOWER, RE: 1/E7, 4/E7. BUS BAR WILL BE SUPPLIED BY CONTRACTOR.
- 11. COORDINATE EXACT PLACEMENT OF GROUND RODS WITH FOUNDATION PROVIDED (i.e. SHIFT TO OUTSIDE OF MAT IF REQUIRED).
- 12. EXTERIOR GROUND BAR (EGB), 24"x4"x1/4" COPPER TINNED (FURNISHED WITH SHELTER). BOND TO WAVEGUIDE ENTRY ON SHELTER. ADDITIONALLY, BOND TO SINGLE POINT GROUND OR GROUND RING USING TWO (2) #2 AWG SOLID TINNED COPPER CONDUCTORS. GROUND BAR SHALL BE LOCATED ON THE OUTSIDE WALL OF THE SHELTER JUST BELOW THE WAVEGUIDE PLATE. REFER TO SHELTER DRAWINGS FOR DETAILS.
- 13. BOND LEGS OF UTILITY RACK TO GROUNDING SYSTEM WITH #2 AWG SOLID TINNED BARE COPPER CONDUCTOR USING EXOTHERMIC WELD.
- 14. ALL VISIBLE GROUND BARS SHALL BE COPPER TINNED.
- 15. ALTHOUGH NOT NECESSARILY INDICATED ON PLAN, BOND METALLIC EQUIPMENT MOUNTED TO EXTERIOR OF SHELTER TO GROUND RING USING COILED WIRE PROVIDED WITH EQUIPMENT. ITEMS INCLUDE BUT NOT LIMITED TO GENERATOR INTERFACE PANEL, SHELTER DISCONNECT, DOOR FRAME, HVAC UNITS, ETC. REFER TO SHELTER DRAWINGS FOR DETAILS.
- 16. BOND TO FENCE POST USING EXOTHERMIC WELD.

1 SITE GROUNDING PLAN
E3 SCALE: 1/8" = 1'-0"



Sturkie & Associates
Engineering, PC
414 Cherokee Drive
Greenville, SC 29615
Ph: 864-363-4855



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CATAWBA COLLEGE
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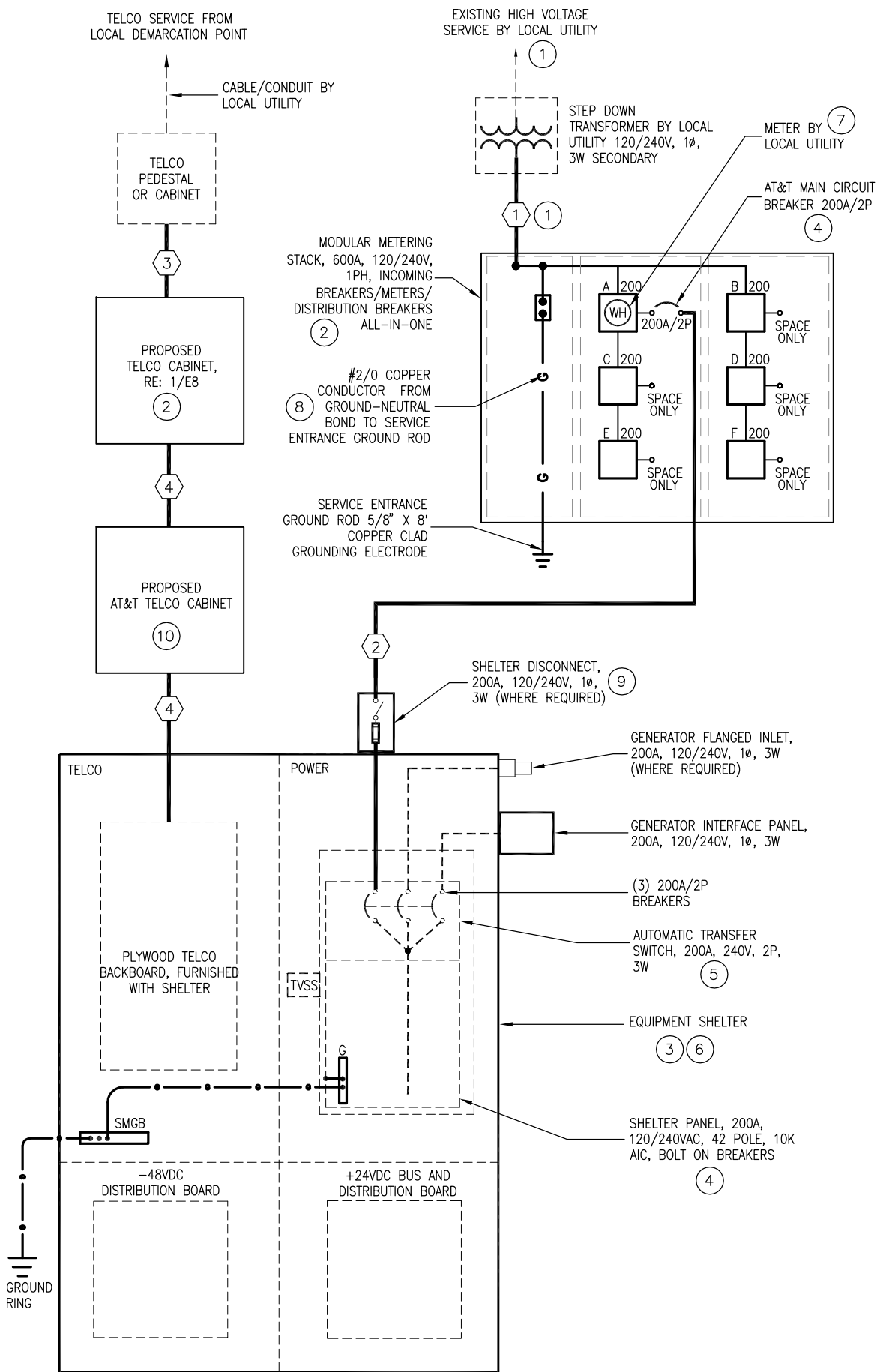
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PLAN

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E3



1 ONE LINE DIAGRAM
E4 SCALE: NTS

ONE LINE DIAGRAM NOTES BY SYMBOL "○"

- CONTRACTOR SHALL FURNISH AND INSTALL NEW CONDUITS AND CONDUCTORS FROM EQUIPMENT TO POWER AND TELCO DEMARCATION POINTS AS INDICATED. COORDINATE WITH LOCAL UTILITIES FOR CONNECTION OF SERVICES.
- CONTRACTOR SHALL PROVIDE METER CENTER, TELCO CABINET, AND ASSOCIATED RACKS/CONDUITS. REFER TO E8 FOR RACK ELEVATION DETAILS AND EQUIPMENT SPECIFICATIONS.
- EQUIPMENT SHELTER SHALL BE FURNISHED BY CARRIER AND SHALL BE INSTALLED BY CONTRACTOR. ALL ITEMS SHOWN WITHIN SHELTER ARE PROVIDED WITH THE SHELTER AND ARE SHOWN FOR REFERENCE ONLY UNLESS NOTED OTHERWISE. PROVIDE THE CONNECTIONS INDICATED. OBTAIN SHELTER DRAWINGS FOR CIRCUIT CONNECTIONS, BREAKER AND CONDUCTOR SIZES, AND ADDITIONAL INFORMATION.
- CONTRACTOR SHALL PROVIDE ALL CIRCUIT BREAKERS REQUIRED TO FEED AT&T EQUIPMENT. CONTRACTOR SHALL LABEL ALL CIRCUIT BREAKERS WITH RESPECT TO WHAT THEY FEED.
- EQUIPMENT SHELTER IS EQUIPPED WITH TRANSFER SWITCH FOR GENERATOR CONNECTIONS. REFER TO SHELTER DRAWINGS FOR DETAILS. BREAKERS ARE INTERLOCKED TO ALLOW ONLY 1 BREAKER CLOSED AT ANY GIVEN TIME.
- THE CONTRACTOR SHALL REFER TO SHELTER DRAWINGS AND SPECIFICATIONS FOR CONTROL AND ALARM WIRING. INTERIOR ALARMS ARE PRE-WIRED.
- CONTRACTOR SHALL PROVIDE AND INSTALL NAMEPLATE ON METER TO INDICATE "AT&T". NAMEPLATES SHALL BE PHENOLIC, WHITE LETTERS ON BLACK BACKGROUND.
- CONTRACTOR SHALL BOND NEUTRAL TO GROUND AT ONE LOCATION ONLY PER NEC 250 AND LOCAL CODE REQUIREMENTS.
- SHELTER DISCONNECT IS FURNISHED WITH SHELTER. ON SITES WHERE SERVICE IS OBTAINED FROM AN EXISTING SOURCE (METER CENTER), DISCONNECT MAY BE OMITTED.
- CONTRACTOR SHALL PROVIDE AND INSTALL TELCO CABINET, 48"Hx48"Wx12"D WITH GROUND BAR. COORDINATE EXACT REQUIREMENTS WITH OWNER/AT&T CONSTRUCTION MANAGER.

CABLE AND CONDUIT SCHEDULE

MARK	CONDUIT			WIRES EACH CONDUIT			EQUIPMENT			FROM	TO	RESPONSIBILITY	REMARKS
	QTY	SIZE	TYPE	QTY	SIZE	GROUND	VOLTS	AMPS	SUB. CAT.				
①	2	3"	PVC	3	350 kCMIL		240	600	AC POWER	XFMR/DEMARC	METER/SERVICE DISC	UTILITY/CONTRACTOR	INCOMING POWER BY LOCAL UTILITY
②	1	2 1/2"	PVC	3	#3/0	#4	240	200	AC POWER	SVC DISC	SHELTER PNL	NSORO	POWER TO SHELTER
③	1	4"	PVC	WITH (3) 1" INNERDUCTS					TELCO	DEMARC	HOFFMAN BX	UTILITY	INCOMING TELCO BY LOCAL UTILITY
④	1	4"	PVC	WITH (3) 1" INNERDUCTS - (1) 25 PR CAT 5e SHIELDED - 3#12 FOR DC POWER FOR FIBER					TELCO	COMMUNITY HOFFMAN BX	SHELTER	NSORO	25 PAIR AND 24 VDC POWER FOR FIBER VIA AT&T TELCO CABINET

FAULT CURRENT SUMMARY TABLE

FAULT LOCATION	AVAILABLE FAULT CURRENT (AMPS RMS SYMMETRICAL)		
	SCA L-L	SCA L-N	REMARKS
TRANSFORMER SECONDARY (*)	13,021	19,533	ASSUMING INFINITE AVAILABLE ON PRIMARY
METER CENTER	10,935	12,420	IMPEDANCE - 40' INCOMING SERVICE CONDUCTORS
SHELTER MAIN CIRCUIT BREAKER	8,021	6,805	IMPEDANCE - 50' FEEDER CONDUCTORS, MC TO SHELTER

* USING 50KVA, 120/240V, 1 PHASE TRANSFORMER, 1.6% IMPEDANCE

GENERAL NOTES

- CONTRACTOR SHALL COORDINATE INCOMING SERVICES WITH LOCAL UTILITIES PRIOR TO TRENCHING.
- ALL CONDUCTORS SHALL BE COPPER, 75 DEGREES C RATED, AND CONDUCTOR INSULATION SHALL BE THWN OR THHN.
- ALL TERMINATIONS SHALL BE LISTED AND IDENTIFIED FOR USE WITH 75°C RATED CONDUCTORS OPERATING AT 75°C.
- GROUND FAULT PROTECTION REQUIRED FOR UTILITY RECEPTACLES.
- SERVICE NEUTRAL SHALL BE GROUNDED AT ONE LOCATION ONLY.
- WHITE/NEUTRAL, GREEN/GROUND SHALL BE MAINTAINED THROUGHOUT THE SITE ELECTRICAL SYSTEM (TAPE WILL NOT BE ACCEPTABLE).
- EQUIPMENT LOCATED OUTSIDE OR EXPOSED TO MOISTURE SHALL BE NEMA 3R RATED.
- CONTRACTOR SHALL USE SCHEDULE 80 PVC CONDUIT THROUGHOUT, UNLESS OTHERWISE NOTED.
- ALL NEWLY INSTALLED EQUIPMENT SHALL BE RATED AT 10K AIC MINIMUM. HIGHER RATINGS SHALL BE REQUIRED WHERE AVAILABLE FAULT CURRENT EXCEEDS THIS VALUE. EXACT FAULT CURRENT AVAILABLE SHALL BE COORDINATED WITH LOCAL UTILITY BASED ON EXACT CONDITIONS (XFMR SIZE, PERCENT IMPEDANCE, LENGTH OF CONDUCTORS, ETC).



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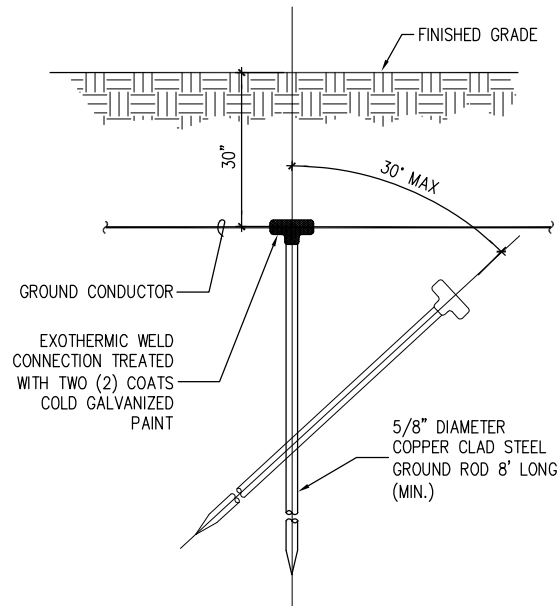
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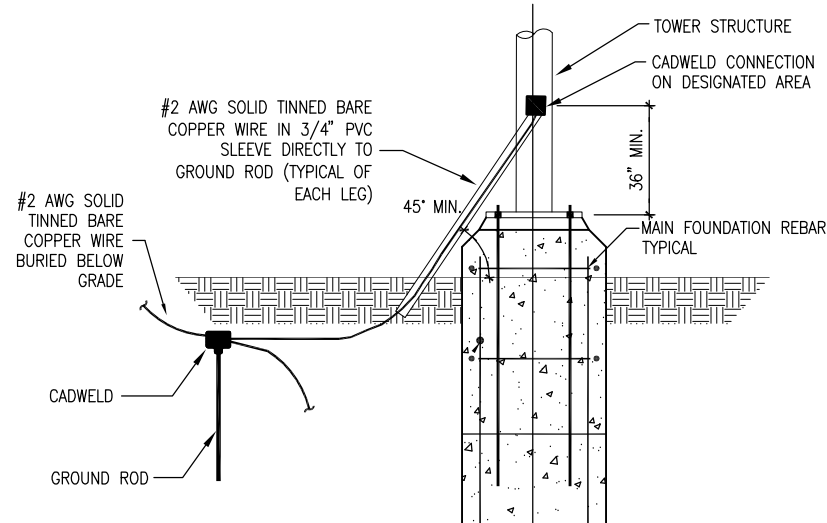
**ONE LINE
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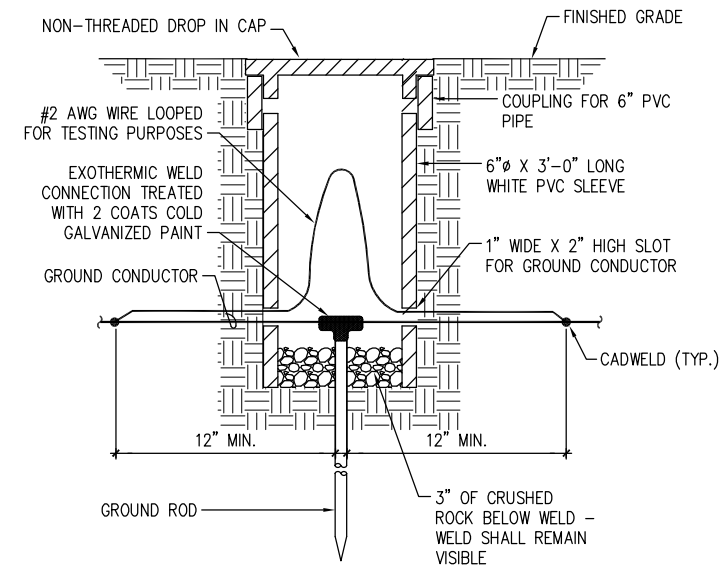
E4



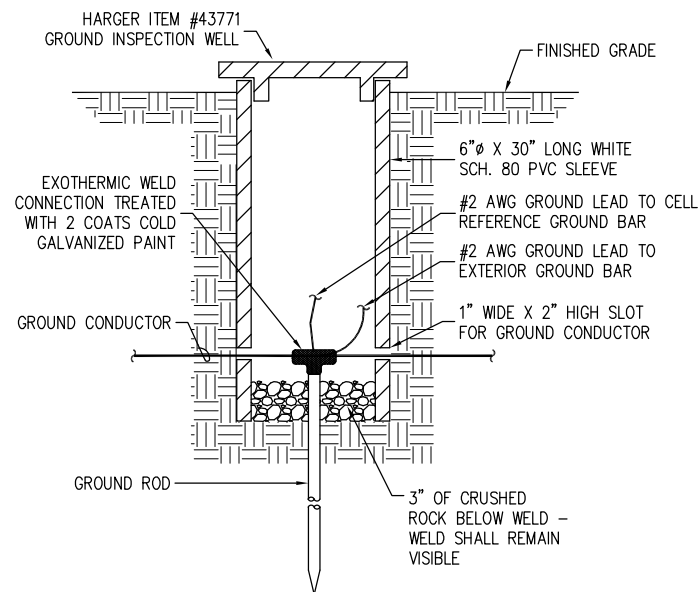
1 GROUND ROD DETAIL
E5 SCALE: N.T.S.



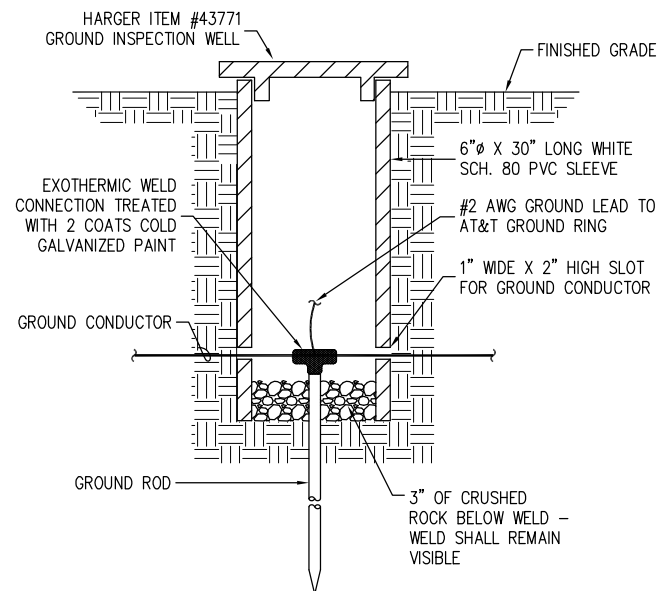
2 MONOPOLE GROUNDING DETAIL
E5 SCALE: N.T.S.



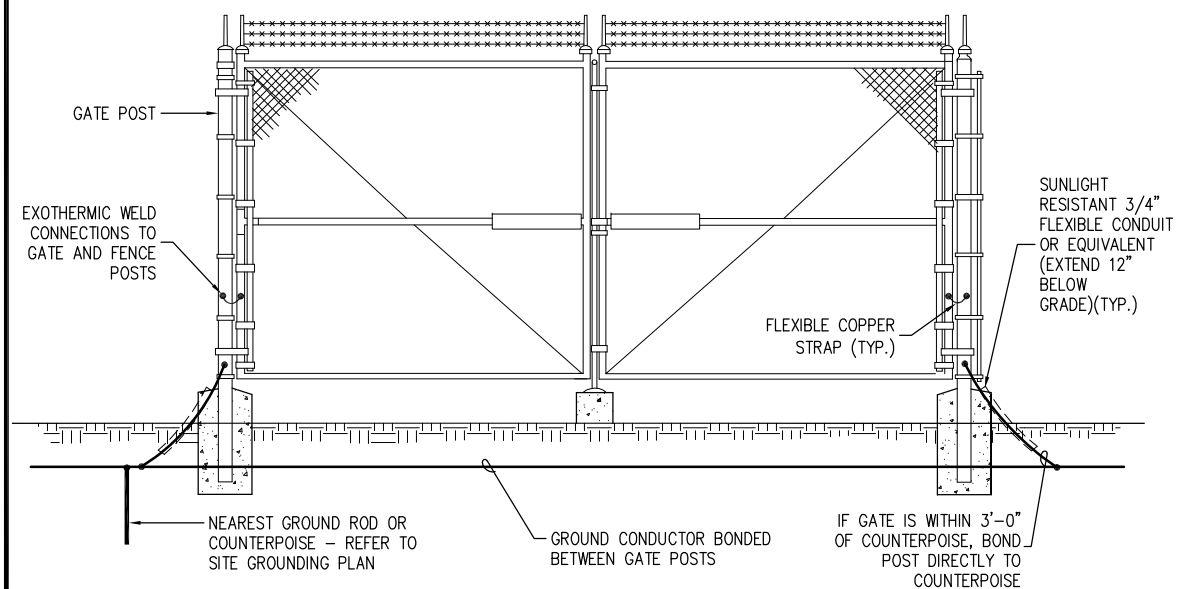
3 INSPECTION SLEEVE DETAIL-TESTING PURPOSES
E5 SCALE: N.T.S.



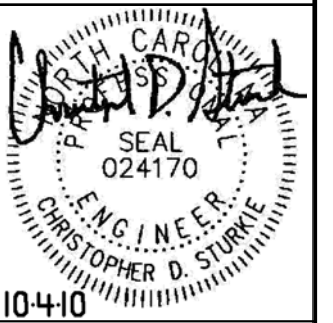
4 SINGLE POINT GROUND ROD WITH INSPECTION SLEEVE DETAIL
E5 SCALE: N.T.S.



5 GROUND LEAD TO TOWER GROUND RING WITH INSPECTION SLEEVE
E5 SCALE: N.T.S.



6 GROUNDING AT GATE POSTS
E5 SCALE: N.T.S.



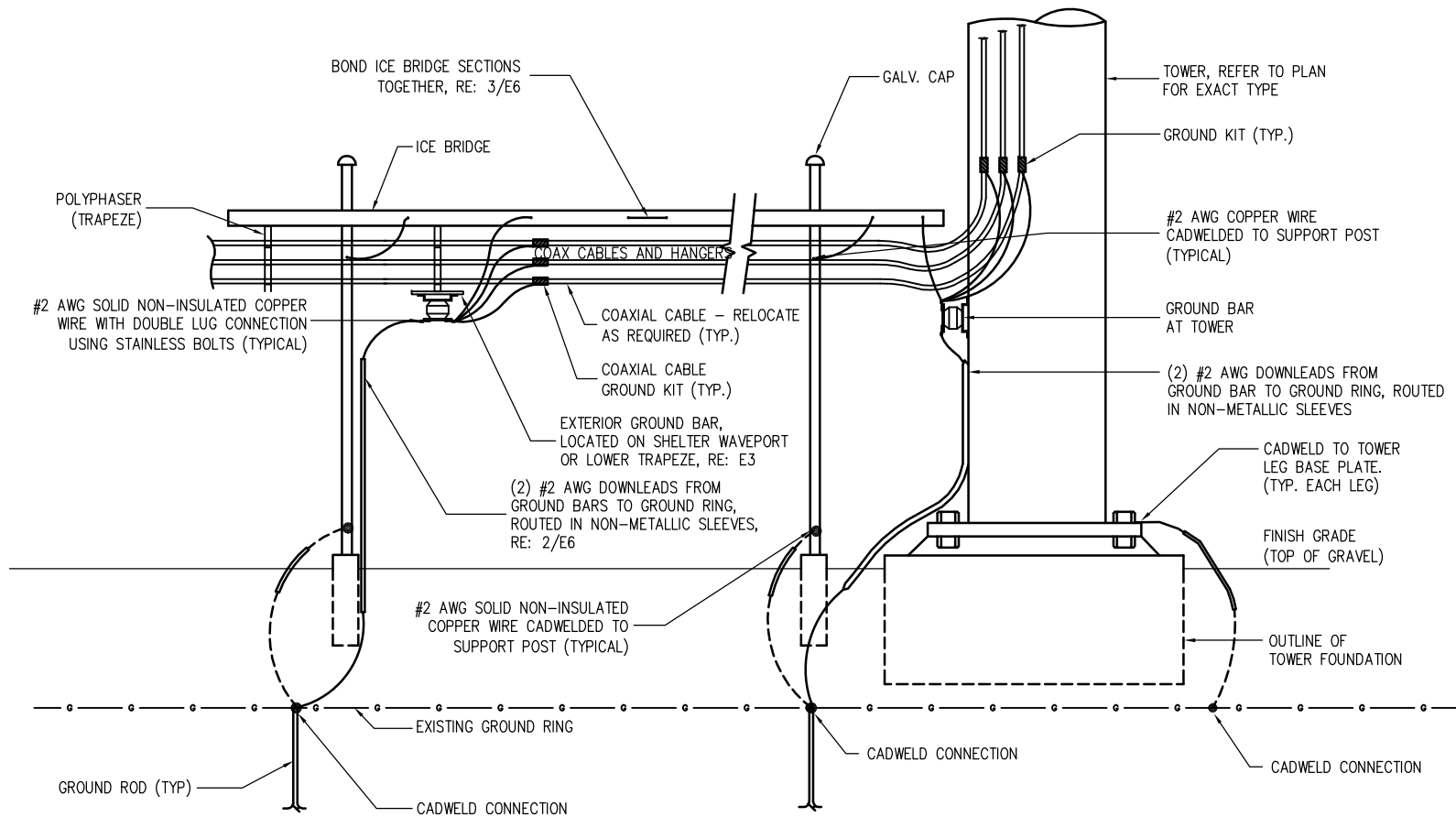
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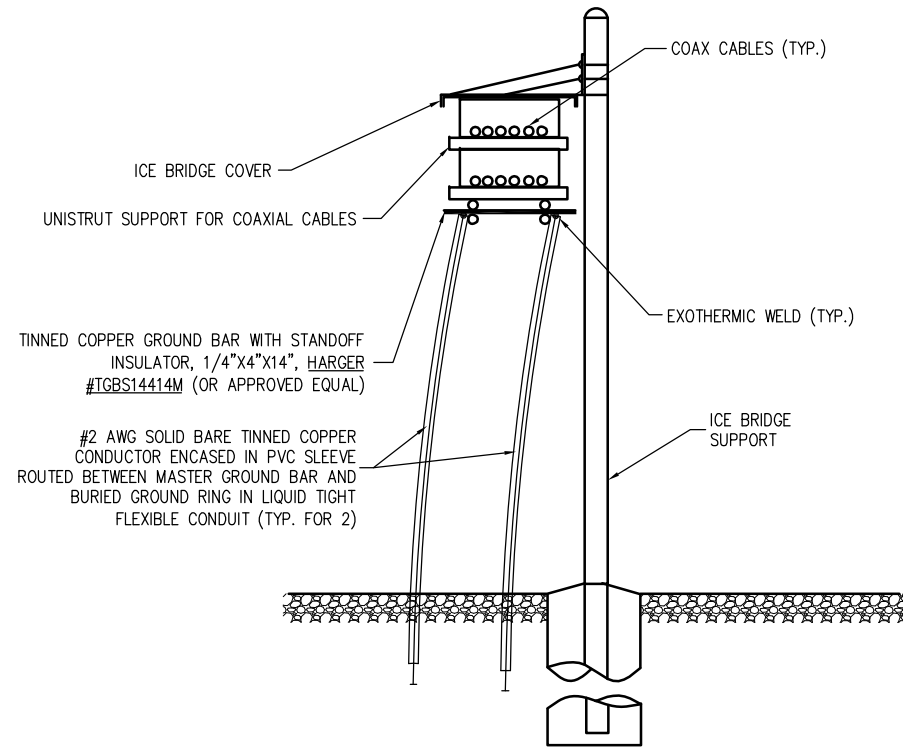
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DETAILS**

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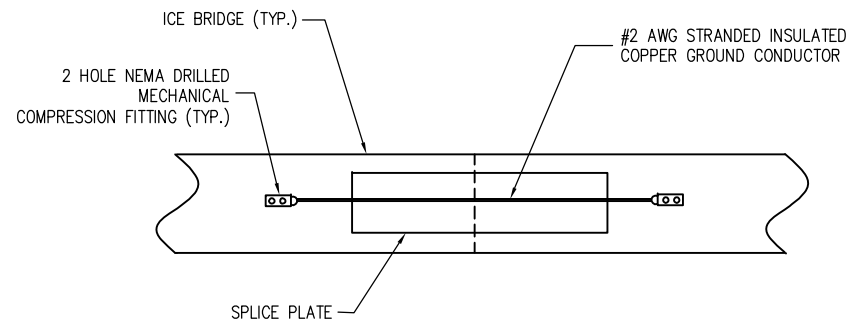
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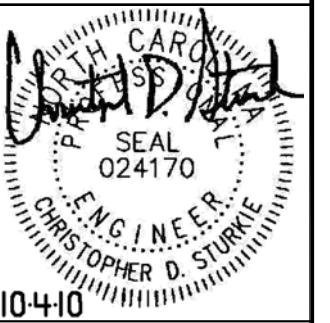
1 TYPICAL ICE BRIDGE/TOWER GROUNDING
E6 SCALE:N.T.S.



2 ICE BRIDGE GROUNDING DETAIL
E6 SCALE:N.T.S.



3 ICE BRIDGE SPLICE GROUNDING DETAIL
E6 SCALE:N.T.S.



10-4-10



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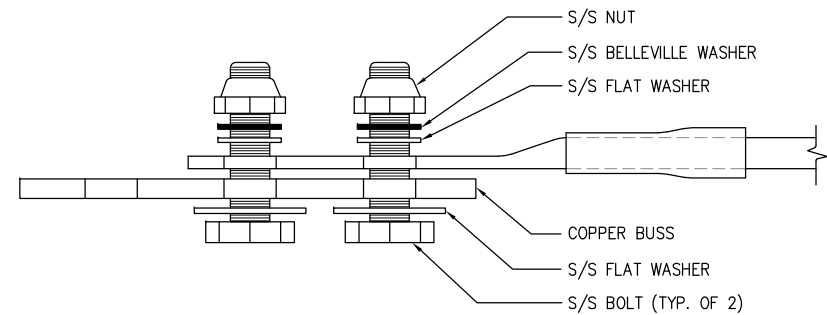
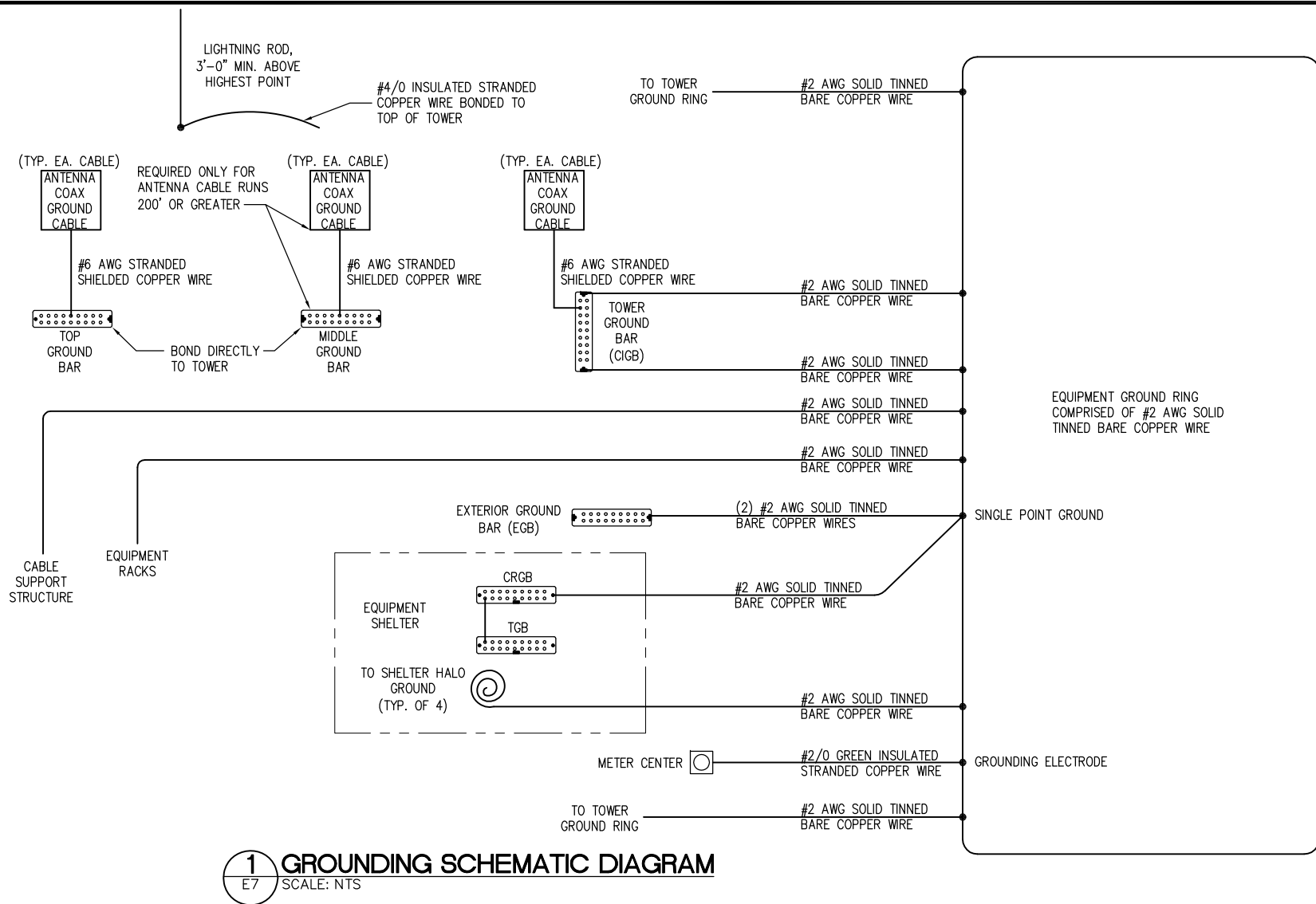
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ISSUE	

PROJECT NUMBER:
10049.001
SHEET CONTENTS:

**ICE BRIDGE
AND GROUNDING
DETAILS**

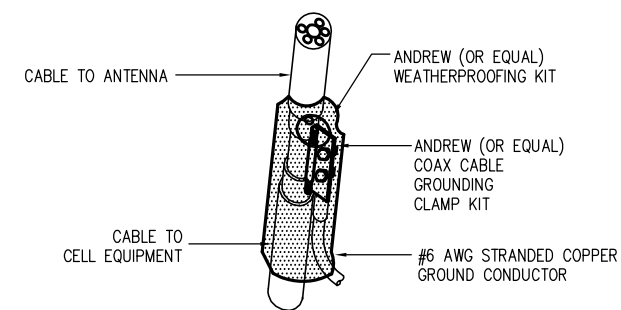
SHEET NUMBER:

E6



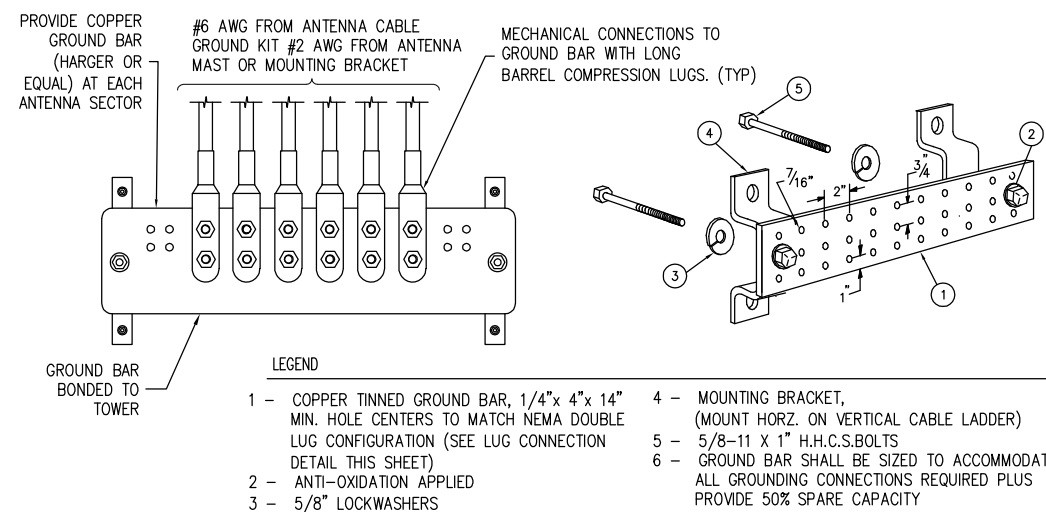
NOTES:

- ALL HARDWARE 18-8 STAINLESS STEEL INCLUDING BELLEVILLES. COAT ALL SURFACES WITH KOPR-SHIELD BEFORE MATING.
- FOR GROUND BOND TO STEEL ONLY: INSERT A DRAGON TOOTH WASHER BETWEEN LUG AND STEEL. COAT ALL SURFACES WITH KOPR-SHIELD.



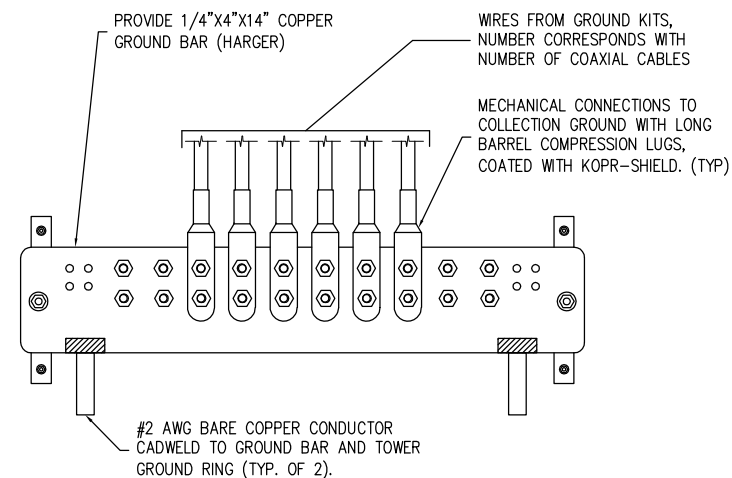
NOTES:

- DO NOT INSTALL CABLE GROUND KIT AT A BEND IN CABLE.
- ALWAYS DIRECT GROUND WIRE DOWN TO GROUND BAR.
- 2-1/2" DIA. MAX FOR TX/RX ANTENNA CABLES.
- ALLOW FOR 1/2" DEFLECTION IN CABLES.



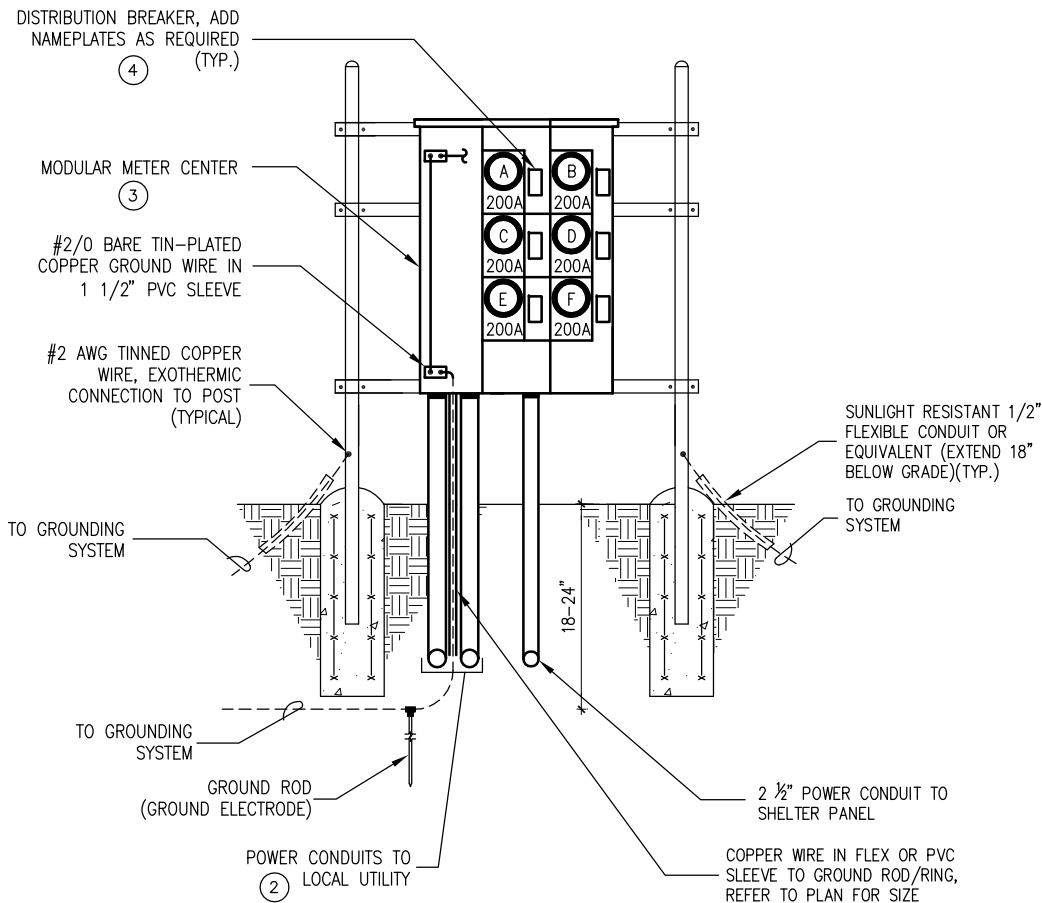
NOTES:

- COPPER GROUND BAR 1/4"x4"x14" 2-HOLE CENTERS TO MATCH NEMA DOUBLE LUG CONFIGURATION.
- ALL HARDWARE SHALL BE STAINLESS STEEL OR GALVANIZED UNLESS NOTED OTHERWISE.
- STACKING OF LUGS IS NOT ACCEPTABLE. BACK-TO-BACK LUGS WILL ONLY BE ACCEPTED WHEN OTHER HOLES ARE UNAVAILABLE.
- GROUND LEADS SHALL BE RUN IN DOWNWARD DIRECTION, IN THE STRAIGHTEST PATH POSSIBLE TO TERMINATION POINT.
- ALL GROUND KIT WRAPPINGS SHALL BE SEALED WITH SCOTCHKOTE.
- WRAPLOCK SHALL BE CABLEWAVE STRAPTITE PART #910061 OR EQUAL.
- GROUND BARS LOCATED AT GROUND LEVEL SHALL BE INSULATED FROM MOUNTING SURFACE USING INSULATORS, AND BONDED TO THE GROUND RING. GROUND BARS LOCATED ON THE TOWER SHALL BE BONDED TO THE TOWER.

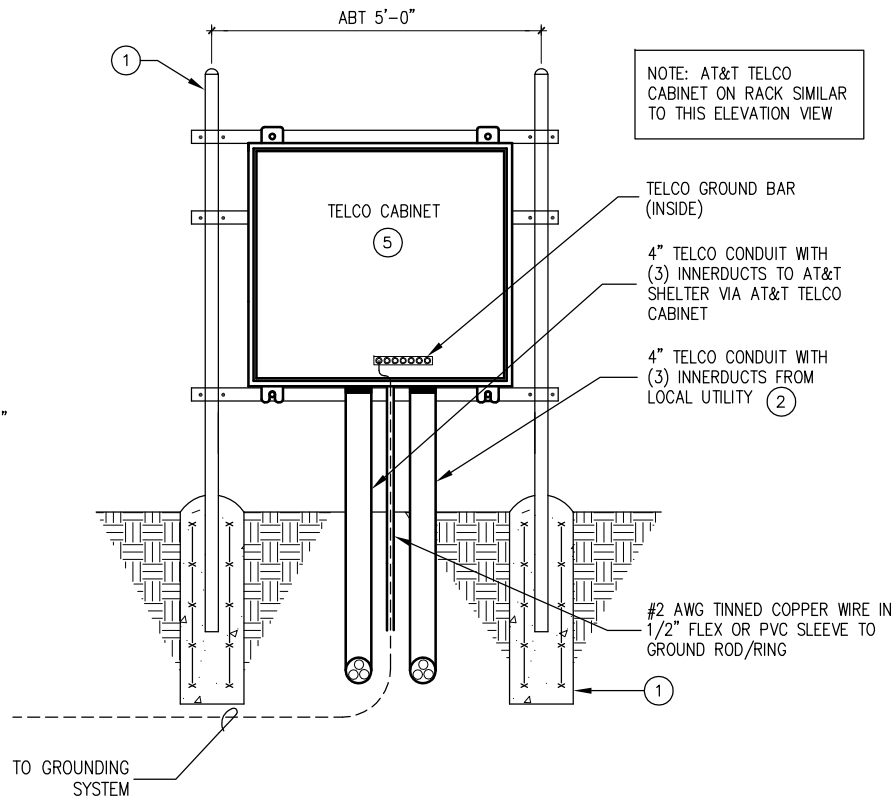


NOTES:

- ALL #2 AWG CONDUCTORS SHALL USE 2 HOLE LUGS THOMAS A BETTS MODEL 54201.
- ALL FIELD SIZED LUGS WILL CONFORM TO NEMA STANDARDS.
- ALL HARDWARE SHALL BE STAINLESS STEEL. COAT ALL SURFACES WITH KOPR-SHIELD BEFORE MATING.
- FOR GROUND BOND TO STEEL ONLY, INSERT AN EXTERNAL TOOTH LOCKWASHER BETWEEN LUG AND STEEL. COAT ALL SURFACES WITH KOPR-SHIELD.
- ALL HOLES ARE COUNTER SUNK 1/16".



FRONT VIEW



REAR VIEW

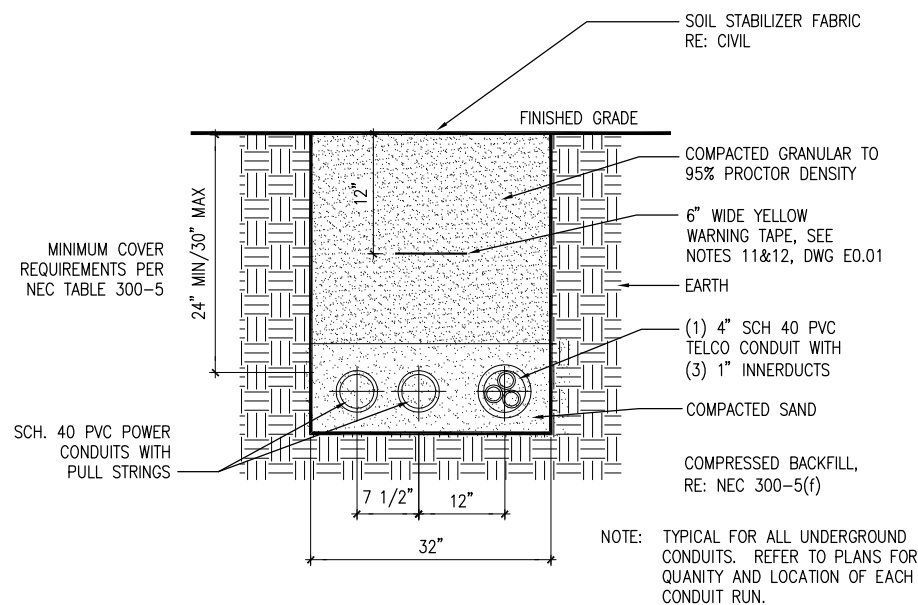
1 UTILITY RACK DETAIL
E8 SCALE: N.T.S.

GENERAL NOTES

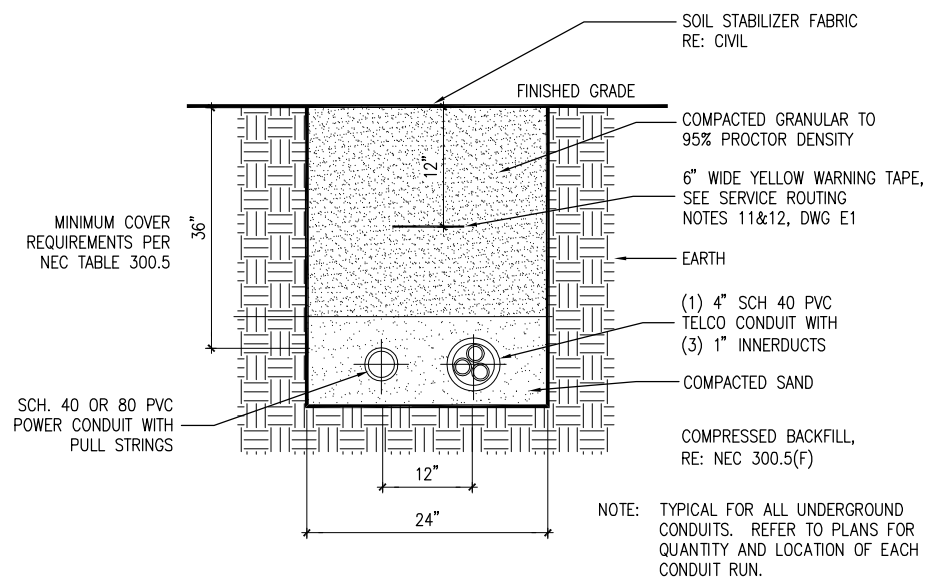
- DIMENSIONS SHOWN ARE APPROXIMATE. EXACT DIMENSIONS MAY BE MODIFIED SLIGHTLY BASED ON EXACT EQUIPMENT OBTAINED, SITE CONDITIONS, AND OWNER PREFERENCES.
- POWER EQUIPMENT SHALL BE SQUARE D, SIEMENS, CUTLER HAMMER, OR GENERAL ELECTRIC. ALL EQUIPMENT MUST BE OF ONE MANUFACTURER.
- UNUSED CONDUITS SHALL BE SEALED TO PREVENT MOISTURE INSIDE CONDUITS. USED CONDUITS SHALL BE SEALED AFTER SERVICES HAVE BEEN RUN.

UTILITY RACK NOTES BY SYMBOL "O"

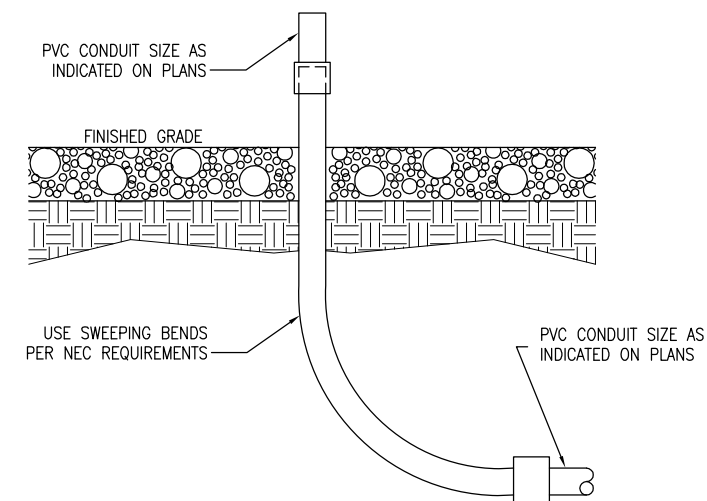
- EQUIPMENT RACK SHALL BE APPROXIMATELY 5'-0" WIDE AND A MAXIMUM OF 6'-6" HIGH. POSTS SHALL BE 3" GALVANIZED STEEL PIPE WITH CAP. CONTRACTOR SHALL PROVIDE "END CAPS" ON HORIZONTAL UNISTRUT MEMBERS. CROSS MEMBERS SHALL BE UNISTRUT, ANCHORED TO POSTS WITH U-CLAMPS AND 3/8" STAINLESS STEEL BOLTS AND WASHERS. RACK FOUNDATION SHALL BE 1'-0" DIAMETER BY 3'-0" DEEP, CONCRETE REINFORCED WITH 6X6-W1.4XW1.4 WWF CAGE.
- CONTRACTOR SHALL COORDINATE WITH LOCAL UTILITY COMPANY FOR INSTALLATION OF INCOMING SERVICE CONDUCTORS.
- PROVIDE MODULAR METERING MAIN SERVICE CENTER RATED FOR 120/240V, 600A, SINGLE PHASE, 3 WIRE, 22K AIC (MIN), NEMA 3R, WITH SIX (6) 200A METER SOCKETS.
- CONTRACTOR SHALL PROVIDE AND INSTALL NAMEPLATE ON METER TO INDICATE "AT&T". NAMEPLATES SHALL BE PHENOLIC, WHITE LETTERS ON BLACK BACKGROUND.
- CONTRACTOR SHALL PROVIDE AND INSTALL TELCO CABINET, 48"Hx48"Wx12"D WITH GROUND BAR. COORDINATE EXACT REQUIREMENTS WITH OWNER/AT&T CONSTRUCTION MANAGER.



2 UTILITY TRENCH DETAIL
E8 SCALE: N.T.S.



3 AT&T TRENCH DETAIL
E8 SCALE: N.T.S.



4 CONDUIT TRANSITION DETAIL
E8 SCALE: N.T.S.