

VICINITY MAP

PROJECT INFORMATION:

PROPOSED TELECOMMUNICATIONS FACILITY

SITE NAME:

OAKRIDGE RIVER ROAD

AERONAUTICAL STUDY NO:

2019-ASO-25741-OE

SITE ADDRESS:

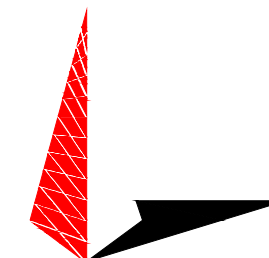
1979 OAKRIDGE RIVER ROAD FUQUAY-VARINA, NC 27526 (HARNETT COUNTY)

APPLICANT/OWNER:



108 EAST FRONT STREET
LILLINGTON, NC 27546
OFFICE: (910) 814-6431

PLANS PREPARED BY:



TOWER ENGINEERING PROFESSIONALS
326 TYRON ROAD
RALEIGH, NC 27603-3530
OFFICE: (919) 661-6351
www.tepgroup.net

N.C. LICENSE # C-1794



IF YOU DIG IN
NORTH CAROLINA...
CALL US FIRST!
1-800-632-4949

NORTH CAROLINA ONE CALL
IT'S THE LAW

THE UTILITIES SHOWN HEREON ARE FOR THE CONTRACTORS CONVENIENCE ONLY. THERE MAY BE OTHER UTILITIES NOT SHOWN ON THESE PLANS. THE ENGINEER/SURVEYOR ASSUMES NO RESPONSIBILITY FOR THE LOCATIONS SHOWN AND IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL UTILITIES WITHIN THE LIMITS OF THE WORK. ALL DAMAGE MADE TO EXISTING UTILITIES BY THE CONTRACTOR SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

UTILITY STATEMENT

REV	DATE	ISSUED FOR:
1	06-30-20	CONSTRUCTION
0	10-10-19	PRELIMINARY CONSTRUCTION

DRAWN BY: G5B CHECKED BY: JBG

Reviewed For Code Compliance By:
D. Banks Wallace
Chief Deputy Fire Marshal
08/12/2020 10:21:58 AM



LOCATION MAP

FROM RALEIGH, NC: TAKE EAST EDENTON STREET TO US-401 S/US-70 E/N DAWSON STREET. TURN LEFT ONTO US-401 S/US-70 E/N DAWSON STREET. KEEP RIGHT TO CONTINUE ON US-401 S. TURN RIGHT ONTO NC-42 W/W ACADEMY STREET. TURN LEFT ON BAREFOOT ROAD. CONTINUE ONTO CHRISTIAN LIGHT ROAD. TURN RIGHT ONTO OAKRIDGE RIVER ROAD. FOLLOW OAKRIDGE RIVER ROAD AS IT CURVES. AT THE INTERSECTION OF OAKRIDGE AND REVELS ROAD THE SITE WILL BE ON THE RIGHT.

DRIVING DIRECTIONS

LATITUDE N 35° 31' 19.93" (NAD '83)*
LONGITUDE W 78° 52' 54.65" (NAD '83)*
GROUND ELEVATION = 345.18'± (AMSL)*
* PER 1A CERTIFICATION LETTER BY TOWER ENGINEERING PROFESSIONALS, INC. DATED: AUGUST 19th, 2019

TOWER COORDINATES

ALL WORK AND MATERIALS SHALL BE PERFORMED AND INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNING AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THE LATEST EDITIONS OF THE FOLLOWING:
1. NC BUILDING CODE (2018 EDITION) 5. CITY/COUNTY ORDINANCES
2. ANSI/TIA/EIA-222-G
3. NC ELECTRIC CODE (2017 EDITION) (NEC 2017 & W/ NC ADDENDUMS)
4. LOCAL BUILDING CODE

CODE COMPLIANCE

TOWER OWNER:
NAME HARNETT COUNTY
ADDRESS 108 EAST FRONT STREET
CITY, STATE, ZIP LILLINGTON, NC 27546
CONTACT MAIN OFFICE
PHONE (910) 814-6431

APPLICANT / LESSEE:
NAME HARNETT COUNTY
ADDRESS 108 EAST FRONT STREET
CITY, STATE, ZIP LILLINGTON, NC 27546
CONTACT MAIN OFFICE
PHONE (910) 814-6431

PROPERTY OWNER:
NAME HARNETT COUNTY
ADDRESS P.O. BOX 759
CITY, STATE, ZIP LILLINGTON, NC 27546
CONTACT COUNTY MANAGER
PHONE (910) 893-7555

AREA OF CONSTRUCTION: 5,000 SQ. FT.±
PRESENT OCCUPANCY TYPE: RAWLAND
PROPOSED OCCUPANCY TYPE: TELECOMMUNICATIONS FACILITY
CURRENT ZONING: RA-30
PIN: 0634-540565.000
JURISDICTION: HARNETT COUNTY

UTILITIES:
POWER COMPANY: UNKNOWN
CONTACT: N/A
PHONE: N/A
POLE # NEAR SITE: N/A
TELEPHONE COMPANY: CENTURYLINK
CONTACT: CUSTOMER SERVICE
PHONE: (866) 642-0444
PEDESTAL # NEAR SITE: 1418 RP43N

PROJECT SUMMARY

SURVEYOR:
NAME TOWER ENGINEERING PROFESSIONALS, INC.
ADDRESS 326 TRYON RD
CITY, STATE, ZIP RALEIGH, NC 27603
CONTACT TIMOTHY L. FISH, P.L.S.
PHONE (919) 661-6351

CIVIL ENGINEER:
NAME TOWER ENGINEERING PROFESSIONALS, INC.
ADDRESS 326 TRYON RD
CITY, STATE, ZIP RALEIGH, NC 27603
CONTACT JOHN B. GOINS, P.E.
PHONE (919) 661-6351

STRUCTURAL ENGINEER:
NAME N/A
ADDRESS N/A
CITY, STATE, ZIP N/A
CONTACT N/A
PHONE N/A

ELECTRICAL ENGINEER:
NAME TOWER ENGINEERING PROFESSIONALS, INC.
ADDRESS 326 TRYON RD
CITY, STATE, ZIP RALEIGH, NC 27603
CONTACT MARK S. QUAKENBUSH, P.E.
PHONE (919) 661-6351

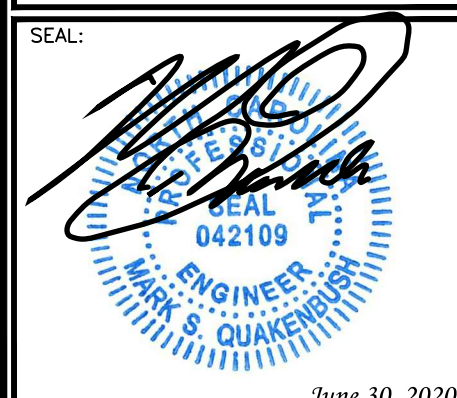
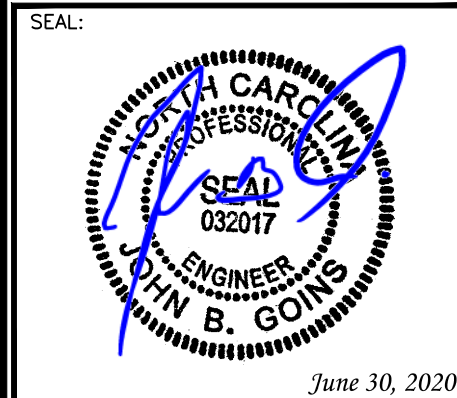
GEOTECHNICAL ENGINEER:
NAME TOWER ENGINEERING PROFESSIONALS, INC.
ADDRESS 326 TRYON RD
CITY, STATE, ZIP RALEIGH, NC 27603
CONTACT JOHN D. LONGEST, P.E.
PHONE (919) 661-6351

TOWER MANUFACTURER:
NAME T.B.D.
ADDRESS T.B.D.
CITY, STATE, ZIP T.B.D.
CONTACT T.B.D.
PHONE T.B.D.

PROJECT TEAM

SHEET	DESCRIPTION	REV
T1	TITLE SHEET	1
T2	N.C. APPENDIX B, PART I	1
T3	N.C. APPENDIX B, PART II	1
T4	N.C. APPENDIX B, PART III	1
T5	N.C. APPENDIX B, PART IV	1
T6	N.C. APPENDIX B, PART V	1
N1	PROJECT NOTES	1
C1	SITE PLAN	1
C2	COMPOUND DETAIL	1
C3	TOWER ELEVATION	1
C4	SHELTER ELEVATIONS	1
C5	SHELTER FOUNDATION DETAILS	1
C6	GENERATOR FOUNDATION DETAILS	1
C7	ICE BRIDGE DETAILS	1
C8	ANTENNA & COAX MOUNTING DETAILS	1
C9	FENCE DETAILS	1
C10	GRADING PLAN	1
E1	ELECTRICAL NOTES	1
E2	SERVICE ROUTING PLAN	1
E3	ONE LINE DIAGRAM, PANEL SCHEDULE & NOTES	1
E4	EQUIPMENT GROUNDING PLAN & NOTES	1
E5	GROUNDING DETAILS I	1
E6	GROUNDING DETAILS II	1

INDEX OF SHEETS



SHEET NUMBER: **T-1** REVISION: **1**
TEP#: 153676.258201

**2018 APPENDIX B
BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS**

(EXCEPT 1 AND 2-FAMILY DWELLINGS AND TOWNHOUSES)
(Reproduce the following data on the building plans sheet 1 or 2)

Name of Project: OAKRIDGE RIVER ROAD
 Address: 1979 OAKRIDGE RIVER ROAD, FUQUAY-VARINA, NC Zip Code 27526
 Owner/Authorized Agent: STATE OF N.C. Phone # (919) 662 - 4440 E-Mail _____
 Owned By: City/County Private State
 Code Enforcement Jurisdiction: City _____ County _____ State

CONTACT: JOHN GOINS, P.E.

DESIGNER	FIRM	NAME	LICENSE #	TELEPHONE #	E-MAIL
Architectural	N/A			()	
Civil	TEP, INC	JOHN B. GOINS, P.E.	032017	(919) 661-6351	
Electrical	TEP, INC	MARK S. QUAKENBUSH, P.E.	042109	(919) 661-6351	
Fire Alarm				()	
Plumbing				()	
Mechanical				()	
Sprinkler-Standpipe				()	
Structural				()	
Retaining Walls >5' High				()	
Other				()	

(*Other* should include firms and individuals such as truss, precast, pre-engineered, interior designers, etc.)

2018 NC BUILDING CODE: New Building Addition Renovation
 1st Time Interior Completion
 Shell/Core - Contact the local inspection jurisdiction for possible additional procedures and requirements
 Phased Construction - Shell/Core- Contact the local inspection jurisdiction for possible additional procedures and requirements

2018 NC EXISTING BUILDING CODE: EXISTING: Prescriptive Repair Chapter 14
 Alteration: Level I Level II Level III
 Historic Property Change of Use

CONSTRUCTED: (date) _____ **CURRENT OCCUPANCY(S)** (Ch. 3): _____
RENOVATED: (date) _____ **PROPOSED OCCUPANCY(S)** (Ch. 3): _____

OCCUPANCY CATEGORY (Table 1604.5): **Current:** I II III IV
Proposed: I II III IV

BASIC BUILDING DATA
Construction Type: I-A II-A III-A IV V-A
 (check all that apply) I-B II-B III-B V-B
Sprinklers: No Partial Yes NFPA 13 NFPA 13R NFPA 13D
Standpipes: No Yes Class I II III Wet Dry
Fire District: No Yes **Flood Hazard Area:** No Yes
Special Inspections Required: No Yes (Contact the local inspection jurisdiction for additional procedures and requirements.)

Gross Building Area Table			
FLOOR	EXISTING (SQ FT)	NEW (SQ FT)	SUB-TOTAL
3 rd Floor			
2 nd Floor			
Mezzanine			
1 st Floor	0	219	219
Basement			
TOTAL			219

ALLOWABLE AREA

Primary Occupancy Classification(s): Select one Select one Select one Select one Select one Select one

Assembly A-1 A-2 A-3 A-4 A-5
 Business
 Educational
 Factory F-1 Moderate F-2 Low
 Hazardous H-1 Detonate H-2 Deflagrate H-3 Combust H-4 Health H-5 HPM
 Institutional I-1 Condition 1 2
 I-2 Condition 1 2
 I-3 Condition 1 2 3 4 5
 I-4
 Mercantile
 Residential R-1 R-2 R-3 R-4
 Storage S-1 Moderate S-2 Low High-piled
 Parking Garage Open Enclosed Repair Garage
 Utility and Miscellaneous

Accessory Occupancy Classification(s): _____

Incidental Uses (Table 509): _____

Special Uses (Chapter 4 – List Code Sections): _____

Special Provisions: (Chapter 5 – List Code Sections): _____


Mixed Occupancy: No Yes Separation: _____ Hr. Exception: _____

Non-Separated Use (508.3) - The required type of construction for the building shall be determined by applying the height and area limitations for each of the applicable occupancies to the entire building. The most restrictive type of construction, so determined, shall apply to the entire building.

Separated Use (508.4) - See below for area calculations for each story, the area of the occupancy shall be such that the sum of the ratios of the actual floor area of each use divided by the allowable floor area for each use shall not exceed 1.

$$\frac{\text{Actual Area of Occupancy A}}{\text{Allowable Area of Occupancy A}} + \frac{\text{Actual Area of Occupancy B}}{\text{Allowable Area of Occupancy B}} \leq 1$$


$$\text{_____} + \text{_____} + \dots = \text{_____} \leq 1.00$$

PLANS PREPARED FOR:

 108 EAST FRONT STREET
 LILLINGTON, NC 27546
 OFFICE: (910) 814-6431

PROJECT INFORMATION:
OAKRIDGE RIVER ROAD
 1979 OAKRIDGE RIVER ROAD
 FUQUAY-VARINA, NC 27526
 (HARNETT COUNTY)

PLANS PREPARED BY:

TOWER ENGINEERING PROFESSIONALS
 326 TRYON ROAD
 RALEIGH, NC 27603-3530
 OFFICE: (919) 661-6351
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 N.C. LICENSE # C-1794

SEAL:


REV	DATE	ISSUED FOR:
1	06-30-20	CONSTRUCTION
0	10-10-19	PRELIMINARY CONSTRUCTION

DRAWN BY: G5B CHECKED BY: JBG

SHEET TITLE:
NC APPENDIX B, PART I

SHEET NUMBER: **T-2** REVISION: **1**
 TEP#: 153676.258201

STORY NO.	DESCRIPTION AND USE	(A) BLDG AREA PER STORY (ACTUAL)	(B) TABLE 506.2 ⁴ AREA	(C) AREA FOR FRONTAGE INCREASE ^{1,5}	(D) ALLOWABLE AREA PER STORY OR UNLIMITED ^{2,3}
1	EQUIPMENT ROOM	219	19,000	N/A	19,000

- ¹ Frontage area increases from Section 506.2 are computed thus:
- Perimeter which fronts a public way or open space having 20 feet minimum width = _____ (F)
 - Total Building Perimeter = _____ (P)
 - Ratio (F/P) = _____ (F/P)
 - W = Minimum width of public way = _____ (W)
 - Percent of frontage increase $I_f = 100[F/P - 0.25] \times W/30 =$ _____ (%)

- ² Unlimited area applicable under conditions of Section 507.
³ Maximum Building Area = total number of stories in the building x D (maximum 3 stories) (506.2).
⁴ The maximum area of open parking garages must comply with Table 406.5.4. The maximum area of air traffic control towers must comply with Table 412.3.1.
⁵ Frontage increase is based on the unsprinklered area value in Table 506.2.

ALLOWABLE HEIGHT

	ALLOWABLE	SHOWN ON PLANS	CODE REFERENCE
Building Height in Feet (Table 504.3)	65	9'-2"	
Building Height in Stories (Table 504.4)	1	1	

¹ Provide code reference if the "Shown on Plans" quantity is not based on Table 504.3 or 504.4.

FIRE PROTECTION REQUIREMENTS

BUILDING ELEMENT	FIRE SEPARATION DISTANCE (FEET)	RATING		DETAIL # AND SHEET #	DESIGN # FOR RATED ASSEMBLY	SHEET # FOR RATED PENETRATION	SHEET # FOR RATED JOINTS
		REQ'D	PROVIDED (W/ REDUCTION) *				
Structural Frame, including columns, girders, trusses		N/A					
Bearing Walls							
Exterior							
North		1	2	203953			
East		1	2	Sheet			
West		1	2	8 of 8			
South		1	2				
Interior		N/A					
Nonbearing Walls and Partitions							
Exterior walls							
North		N/A					
East		N/A					
West		N/A					
South		N/A					
Interior walls and partitions		N/A					
Floor Construction							
Including supporting beams and joists		0	2	203953 Sheet 8 of 8			
Floor Ceiling Assembly		N/A					
Columns Supporting Floors		N/A					
Roof Construction, including supporting beams and joists		0	2	203953 Sht. 8 of 8			
Roof Ceiling Assembly		N/A					
Columns Supporting Roof		N/A					
Shaft Enclosures - Exit		N/A					
Shaft Enclosures - Other		N/A					
Corridor Separation		N/A					
Occupancy/Fire Barrier Separation		N/A					
Party/Fire Wall Separation		N/A					
Smoke Barrier Separation		N/A					
Smoke Partition		N/A					
Tenant/Dwelling Unit/Sleeping Unit Separation		N/A					
Incidental Use Separation		N/A					

* Indicate section number permitting reduction

PLANS PREPARED FOR:



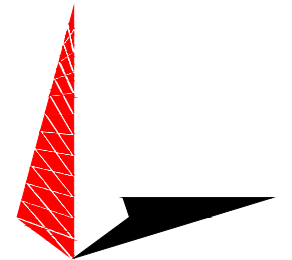
108 EAST FRONT STREET
LILLINGTON, NC 27546
OFFICE: (910) 814-6431

PROJECT INFORMATION:

OAKRIDGE RIVER ROAD

1979 OAKRIDGE RIVER ROAD
FUQUAY-VARINA, NC 27526
(HARNETT COUNTY)

PLANS PREPARED BY:



TOWER ENGINEERING PROFESSIONALS

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RALEIGH, NC 27603-3530
OFFICE: (919) 661-6351
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N.C. LICENSE # C-1794

SEAL:



June 30, 2020

REV	DATE	ISSUED FOR:
1	06-30-20	CONSTRUCTION
0	10-10-19	PRELIMINARY CONSTRUCTION

DRAWN BY: G5B CHECKED BY: JBG

SHEET TITLE:

NC APPENDIX B, PART II

SHEET NUMBER:	REVISION:
T-3	1
	TEP#: 153676.258201

PERCENTAGE OF WALL OPENING CALCULATIONS

FIRE SEPARATION DISTANCE (FEET) FROM PROPERTY LINES	DEGREE OF OPENINGS PROTECTION (TABLE 705.8)	ALLOWABLE AREA (%)	ACTUAL SHOWN ON PLANS (%)
>30' (North)	UP/NS	NO LIMIT	4

LIFE SAFETY SYSTEM REQUIREMENTS

- Emergency Lighting: No Yes
 Exit Signs: No Yes
 Fire Alarm: No Yes
 Smoke Detection Systems: No Yes Partial _____
 Panic Hardware: No Yes

LIFE SAFETY PLAN REQUIREMENTS

Life Safety Plan Sheet #: N/A

- Fire and/or smoke rated wall locations (Chapter 7)
- Assumed and real property line locations (if not on the site plan)
- Exterior wall opening area with respect to distance to assumed property lines (705.8)
- Occupancy Use for each area as it relates to occupant load calculation (Table 1004.1.2)
- Occupant loads for each area
- Exit access travel distances (1017)
- Common path of travel distances (Tables 1006.2.1 & 1006.3.2(1))
- Dead end lengths (1020.4)
- Clear exit widths for each exit door
- Maximum calculated occupant load capacity each exit door can accommodate based on egress width (1005.3)
- Actual occupant load for each exit door
- A separate schematic plan indicating where fire rated floor/ceiling and/or roof structure is provided for purposes of occupancy separation
- Location of doors with panic hardware (1010.1.10)
- Location of doors with delayed egress locks and the amount of delay (1010.1.9.7)
- Location of doors with electromagnetic egress locks (1010.1.9.9)
- Location of doors equipped with hold-open devices
- Location of emergency escape windows (1030)
- The square footage of each fire area (202)
- The square footage of each smoke compartment for Occupancy Classification I-2 (407.5)
- Note any code exceptions or table notes that may have been utilized regarding the items above

ACCESSIBLE DWELLING UNITS N/A
(SECTION 1107)

TOTAL UNITS	ACCESSIBLE UNITS REQUIRED	ACCESSIBLE UNITS PROVIDED	TYPE A UNITS REQUIRED	TYPE A UNITS PROVIDED	TYPE B UNITS REQUIRED	TYPE B UNITS PROVIDED	TOTAL ACCESSIBLE UNITS PROVIDED

ACCESSIBLE PARKING N/A
(SECTION 1106)

LOT OR PARKING AREA	TOTAL # OF PARKING SPACES		# OF ACCESSIBLE SPACES PROVIDED			TOTAL # ACCESSIBLE PROVIDED
	REQUIRED	PROVIDED	REGULAR WITH 5' ACCESS AISLE	VAN SPACES WITH		
				132" ACCESS AISLE	8' ACCESS AISLE	
TOTAL						

PLUMBING FIXTURE REQUIREMENTS N/A
(TABLE 2902.1)

USE		WATERCLOSETS			URINALS	LAVATORIES			SHOWERS /TUBS	DRINKING FOUNTAINS	
		MALE	FEMALE	UNISEX		MALE	FEMALE	UNISEX		REGULAR	ACCESSIBLE
SPACE	EXIST'G										
	NEW										
	REQ'D										

SPECIAL APPROVALS

Special approval: (Local Jurisdiction, Department of Insurance, OSC, DPI, DHHS, etc., describe below)

N/A

PLANS PREPARED FOR:



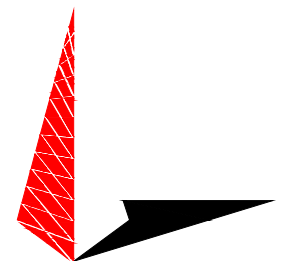
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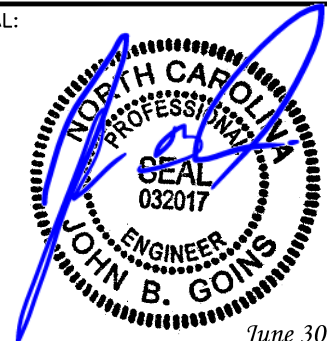


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DRAWN BY: G5B CHECKED BY: JBG

SHEET TITLE:

**NC APPENDIX B,
PART III**

SHEET NUMBER: T-4	REVISION: 1 TEP#: 153676.258201
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ENERGY SUMMARY

ENERGY REQUIREMENTS:

The following data shall be considered minimum and any special attribute required to meet the energy code shall also be provided. Each Designer shall furnish the required portions of the project information for the plan data sheet. If performance method, state the annual energy cost for the standard reference design vs annual energy cost for the proposed design.

Existing building envelope complies with code: No Yes (The remainder of this section is not applicable)

Exempt Building: No Yes (Provide code or statutory reference): _____

Climate Zone: 3A 4A 5A

Method of Compliance: Energy Code Performance Prescriptive
 ASHRAE 90.1 Performance Prescriptive
 (If "Other" specify source here) _____

THERMAL ENVELOPE (Prescriptive method only)

Roof/ceiling Assembly (each assembly)

Description of assembly: CONCRETE + INSULATION
 U-Value of total assembly: 0.0909
 R-Value of insulation: 6.53
 Skylights in each assembly: _____
 U-Value of skylight: _____
 total square footage of skylights in each assembly: _____

Exterior Walls (each assembly)

Description of assembly: CONCRETE + INSULATION
 U-Value of total assembly: 0.0909
 R-Value of insulation: R-11
 Openings (windows or doors with glazing)
 U-Value of assembly: _____
 Solar heat gain coefficient: _____
 projection factor: _____
 Door R-Values: R-4

Walls below grade (each assembly) N/A

Description of assembly: _____
 U-Value of total assembly: _____
 R-Value of insulation: _____

Floors over unconditioned space (each assembly) N/A

Description of assembly: _____
 U-Value of total assembly: _____
 R-Value of insulation: _____

Floors slab on grade N/A

Description of assembly: _____
 U-Value of total assembly: _____
 R-Value of insulation: _____
 Horizontal/vertical requirement: _____
 slab heated: _____

**2018 APPENDIX B
 BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS**

**STRUCTURAL DESIGN
 (PROVIDE ON THE STRUCTURAL SHEETS IF APPLICABLE)**

DESIGN LOADS:

Importance Factors: Snow (I_s) 1.2
 Seismic (I_E) 1.5

Live Loads: Roof 100 psf
 Mezzanine N/A psf
 Floor 125 psf

Ground Snow Load: 100 psf

Wind Load: Basic Wind Speed 90 mph (ASCE-7)
 Exposure Category C

SEISMIC DESIGN CATEGORY: A B C D

Provide the following Seismic Design Parameters:

Risk Category (Table 1604.5) I II III IV
Spectral Response Acceleration S_s 17.6 %g S₁ 8.4 %g

Site Classification (ASCE 7) A B C D E F
 Data Source: Field Test Presumptive Historical Data

Basic structural system Bearing Wall Dual w/Special Moment Frame
 Building Frame Dual w/Intermediate R/C or Special Steel
 Moment Frame Inverted Pendulum

Analysis Procedure: Simplified Equivalent Lateral Force Dynamic

Architectural, Mechanical, Components anchored? Yes No

LATERAL DESIGN CONTROL: Earthquake Wind

SOIL BEARING CAPACITIES:

Field Test (provide copy of test report) N/A psf
 Presumptive Bearing capacity 2000 psf
 Pile size, type, and capacity N/A

PLANS PREPARED FOR:



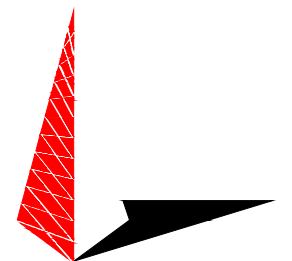
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SHEET TITLE:

**NC APPENDIX B,
 PART IV**

SHEET NUMBER: **T-5** REVISION: **1**
 TEP#: 153676.258201

**2018 APPENDIX B
BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS
MECHANICAL DESIGN
(PROVIDE ON THE MECHANICAL SHEETS IF APPLICABLE)**

MECHANICAL SUMMARY

MECHANICAL SYSTEMS, SERVICE SYSTEMS AND EQUIPMENT

Thermal Zone

winter dry bulb: 20 F
summer dry bulb: 95 F

Interior design conditions

winter dry bulb: 70 F
summer dry bulb: 75 F
relative humidity: 50 %

Building heating load: NONE

Building cooling load: 40,000 BTU/H

Mechanical Spacing Conditioning System

Unitary
description of unit: BARD 24,000 BTU/H COOLING (2 UNITS)
heating efficiency: NONE
cooling efficiency: 9.0 EER
size category of unit: 24,000 BTU/H (2 UNITS)

Boiler
Size category. If oversized, state reason.: N/A

Chiller
Size category. If oversized, state reason.: N/A

List equipment efficiencies: _____

**2018 APPENDIX B
BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS
ELECTRICAL DESIGN
(PROVIDE ON THE ELECTRICAL SHEETS IF APPLICABLE)**

ELECTRICAL SUMMARY

ELECTRICAL SYSTEM AND EQUIPMENT

Method of Compliance: Energy Code Performance Prescriptive
ASHRAE 90.1 Performance Prescriptive

Lighting schedule (each fixture type)

lamp type required in fixture 34 W FL
number of lamps in fixture 2
ballast type used in the fixture ELEC
number of ballasts in fixture 2
total wattage per fixture 60
total interior wattage specified vs. allowed (whole building or space by space) 600 VS. 331
total exterior wattage specified vs. allowed N/A (ONLY LIT WHEN OCCUPIED)

**Additional Efficiency Package Options
(When using the 2018 NCECC; not required for ASHRAE 90.1)**

- C406.2 More Efficient HVAC Equipment Performance
- C406.3 Reduced Lighting Power Density
- C406.4 Enhanced Digital Lighting Controls
- C406.5 On-Site Renewable Energy
- C406.6 Dedicated Outdoor Air System
- C406.7 Reduced Energy Use in Service Water Heating

PLANS PREPARED FOR:



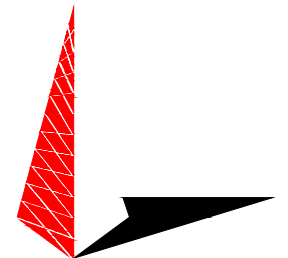
108 EAST FRONT STREET
LILLINGTON, NC 27546
OFFICE: (910) 814-6431

PROJECT INFORMATION:

**OAKRIDGE RIVER
ROAD**

1979 OAKRIDGE RIVER ROAD
FUQUAY-VARINA, NC 27526
(HARNETT COUNTY)

PLANS PREPARED BY:



TOWER ENGINEERING PROFESSIONALS

326 TRYON ROAD
RALEIGH, NC 27603-3530
OFFICE: (919) 661-6351
www.tepgroup.net

N.C. LICENSE # C-1794

SEAL:



June 30, 2020

REV	DATE	ISSUED FOR:
1	06-30-20	CONSTRUCTION
0	10-10-19	PRELIMINARY CONSTRUCTION

DRAWN BY: G5B CHECKED BY: JBG

SHEET TITLE:

**NC APPENDIX B,
PART V**

SHEET NUMBER: T-6	REVISION: 1 TEP#: 153676.258201
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GENERAL NOTES:

1. ALL REFERENCES TO OWNER IN THESE DOCUMENTS SHALL BE CONSIDERED HARNETT COUNTY OR ITS DESIGNATED REPRESENTATIVE.
2. ALL WORK PRESENTED ON THESE DRAWINGS MUST BE COMPLETED BY THE CONTRACTOR UNLESS NOTED OTHERWISE. THE CONTRACTOR MUST HAVE CONSIDERABLE EXPERIENCE IN PERFORMANCE OF WORK SIMILAR TO THAT DESCRIBED HEREIN. BY ACCEPTANCE OF THIS ASSIGNMENT, THE CONTRACTOR IS ATTESTING THAT HE DOES HAVE SUFFICIENT EXPERIENCE AND ABILITY, THAT HE IS KNOWLEDGEABLE OF THE WORK TO BE PERFORMED AND THAT HE IS PROPERLY LICENSED AND PROPERLY REGISTERED TO DO THIS WORK IN THE STATE OF NORTH CAROLINA.
3. WORK SHALL BE COMPLETED IN ACCORDANCE WITH THE NORTH CAROLINA BUILDING CODE, 2018 EDITION.
4. UNLESS SHOWN OR NOTED OTHERWISE ON THE CONTRACT DRAWINGS, OR IN THE SPECIFICATIONS, THE FOLLOWING NOTES SHALL APPLY TO THE MATERIALS LISTED HEREIN, AND TO THE PROCEDURES TO BE USED ON THIS PROJECT.
5. ALL HARDWARE ASSEMBLY MANUFACTURER'S INSTRUCTIONS SHALL BE FOLLOWED EXACTLY AND SHALL SUPERCEDE ANY CONFLICTING NOTES ENCLOSED HEREIN.
6. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO DETERMINE ERECTION PROCEDURE AND SEQUENCE TO INSURE THE SAFETY OF THE STRUCTURE AND IT'S COMPONENT PARTS DURING ERECTION AND/OR FIELD MODIFICATIONS. THIS INCLUDES, BUT IS NOT LIMITED TO, THE ADDITION OF TEMPORARY BRACING, GUYS OR TIE DOWNS THAT MAY BE NECESSARY. SUCH MATERIAL SHALL BE REMOVED AND SHALL REMAIN THE PROPERTY OF THE CONTRACTOR AFTER THE COMPLETION OF THE PROJECT.
7. ALL DIMENSIONS, ELEVATIONS, AND EXISTING CONDITIONS SHOWN ON THE DRAWINGS SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO BEGINNING ANY MATERIALS ORDERING, FABRICATION OR CONSTRUCTION WORK ON THIS PROJECT. CONTRACTOR SHALL NOT SCALE CONTRACT DRAWINGS IN LIEU OF FIELD VERIFICATIONS. ANY DISCREPANCIES SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE OWNER AND THE OWNER'S ENGINEER. THE DISCREPANCIES MUST BE RESOLVED BEFORE THE CONTRACTOR IS TO PROCEED WITH THE WORK. THE CONTRACT DOCUMENTS DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK AND SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES. OBSERVATION VISITS TO THE SITE BY THE OWNER AND/OR THE ENGINEER SHALL NOT INCLUDE INSPECTION OF THE PROTECTIVE MEASURES OR THE PROCEDURES.
8. ALL MATERIALS AND EQUIPMENT FURNISHED SHALL BE NEW AND OF GOOD QUALITY, FREE FROM FAULTS AND DEFECTS AND IN CONFORMANCE WITH THE CONTRACT DOCUMENTS. ANY AND ALL SUBSTITUTIONS MUST BE PROPERLY APPROVED AND AUTHORIZED IN WRITING BY THE OWNER AND ENGINEER PRIOR TO INSTALLATION. THE CONTRACTOR SHALL FURNISH SATISFACTORY EVIDENCE AS TO THE KIND AND QUALITY OF THE MATERIALS AND EQUIPMENT BEING SUBSTITUTED.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INITIATING, MAINTAINING, AND SUPERVISING ALL SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK. THE CONTRACTOR IS RESPONSIBLE FOR INSURING THAT THIS PROJECT AND RELATED WORK COMPLIES WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL SAFETY CODES AND REGULATIONS GOVERNING THIS WORK.
10. ACCESS TO THE PROPOSED WORK SITE MAY BE RESTRICTED. THE CONTRACTOR SHALL COORDINATE INTENDED CONSTRUCTION ACTIVITY, INCLUDING WORK SCHEDULE AND MATERIALS ACCESS, WITH THE RESIDENT LEASING AGENT FOR APPROVAL.
11. BILL OF MATERIALS AND PART NUMBERS LISTED ON CONSTRUCTION DRAWINGS ARE INTENDED TO AID CONTRACTOR. CONTRACTOR SHALL VERIFY PARTS AND QUANTITIES WITH MANUFACTURER PRIOR TO BIDDING AND/OR ORDERING MATERIALS.
12. ALL PERMITS THAT MUST BE OBTAINED ARE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR WILL BE RESPONSIBLE FOR ABIDING BY ALL CONDITIONS AND REQUIREMENTS OF THE PERMITS.
13. 24 HOURS PRIOR TO THE BEGINNING OF ANY CONSTRUCTION, THE CONTRACTOR MUST NOTIFY THE APPLICABLE JURISDICTIONAL (STATE, COUNTY OR CITY) ENGINEER.
14. THE CONTRACTOR SHALL REWORK (DRY, SCARIFY, ETC.) ALL MATERIAL NOT SUITABLE FOR SUBGRADE IN IT PRESENT STATE. AFTER REWORKING, IF THE MATERIAL REMAINS UNSUITABLE, THE CONTRACTOR SHALL UNDERCUT THIS MATERIAL AND REPLACE WITH APPROVED MATERIAL. ALL SUBGRADES SHALL BE PROOFROLLED WITH A FULLY LOADED TANDEM AXLE DUMP TRUCK PRIOR TO PAVING. ANY SOFTER MATERIAL SHALL BE REWORKED OR REPLACED.
15. THE CONTRACTOR IS REQUIRED TO MAINTAIN ALL PIPES, DITCHES, AND OTHER DRAINAGE STRUCTURES FREE FROM OBSTRUCTION UNTIL WORK IS ACCEPTED BY THE OWNER. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGES CAUSED BY FAILURE TO MAINTAIN DRAINAGE STRUCTURE IN OPERABLE CONDITION.
16. ALL MATERIALS AND WORKMANSHIP SHALL BE WARRANTED FOR ONE YEAR FROM ACCEPTANCE DATE.
17. ALL BUILDING DIMENSIONS SHALL BE VERIFIED WITH THE PLANS (LATEST REVISION) PRIOR TO COMMENCING CONSTRUCTION. NOTIFY THE ENGINEER IMMEDIATELY IF ANY DISCREPANCIES ARE DISCOVERED. THE OWNER SHALL HAVE A SET OF APPROVED PLANS AVAILABLE AT THE SITE AT ALL TIMES WHILE WORK IS BEING PERFORMED. A DESIGNATED RESPONSIBLE EMPLOYEE SHALL BE AVAILABLE FOR CONTACT BY GOVERNING AGENCY INSPECTORS.

PLANS PREPARED FOR:



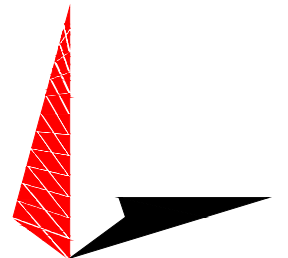
108 EAST FRONT STREET
LILLINGTON, NC 27546
OFFICE: (910) 814-6431

PROJECT INFORMATION:

OAKRIDGE RIVER ROAD

1979 OAKRIDGE RIVER ROAD
FUQUAY-VARINA, NC 27526
(HARNETT COUNTY)

PLANS PREPARED BY:



TOWER ENGINEERING PROFESSIONALS
326 TRYON ROAD
RALEIGH, NC 27603-3530
OFFICE: (919) 661-6351
www.tepgroup.net

N.C. LICENSE # C-1794

SEAL:



I	06-30-20	CONSTRUCTION
O	10-10-19	PRELIMINARY CONSTRUCTION
REV	DATE	ISSUED FOR:

DRAWN BY: G5B CHECKED BY: JBG

SHEET TITLE:
PROJECT NOTES

SHEET NUMBER: **N-1** REVISION: **1**
TEP#: 153676.258201

NOTES:

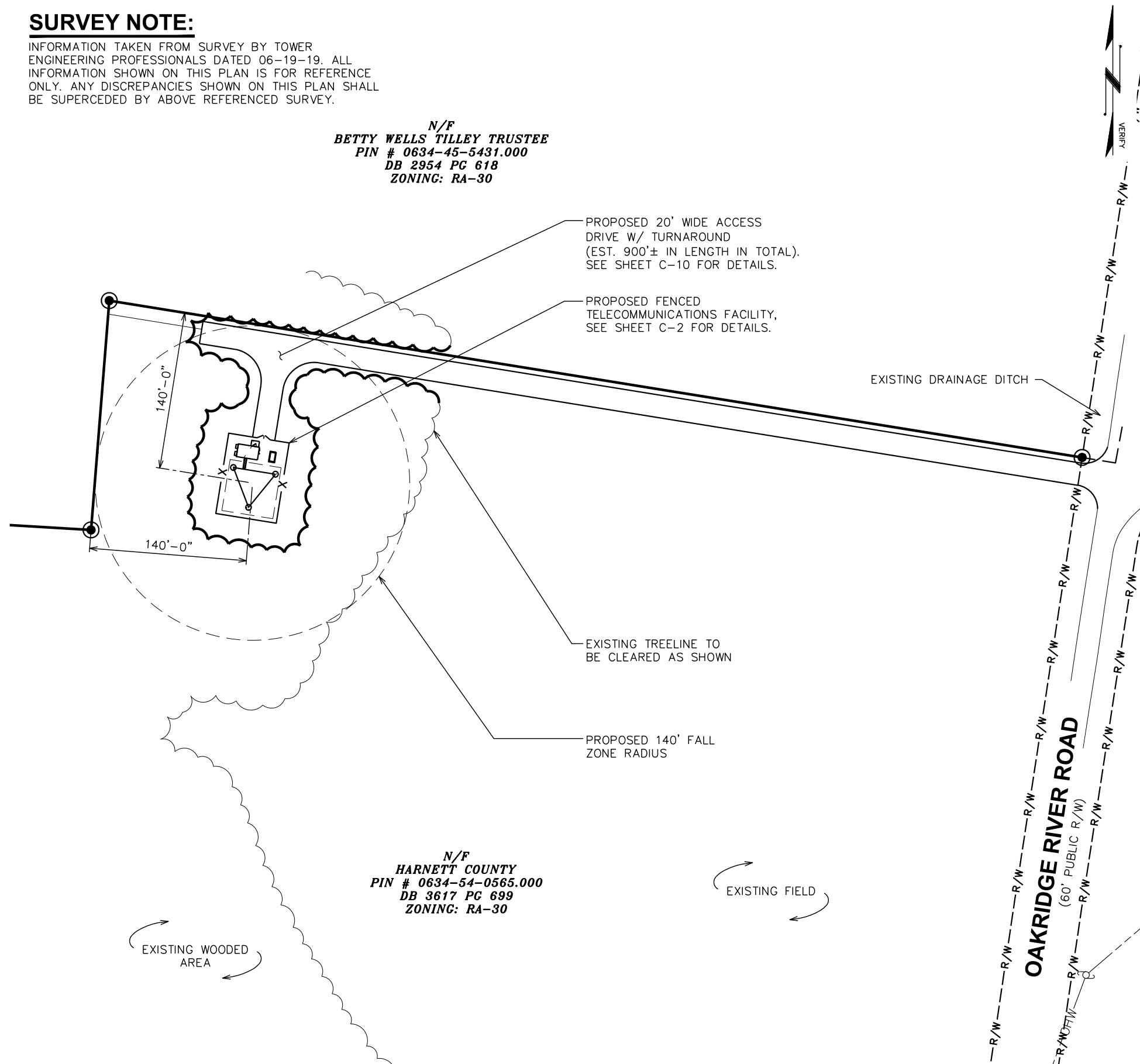
1. THIS PLAN DOES NOT REPRESENT A TITLE SURVEY.
2. THE BASIS OF THE BEARINGS AND COORDINATES IS THE NORTH CAROLINA STATE PLANE COORDINATE SYSTEM, NORTH AMERICAN DATUM (NAD 83/2011) BASED ON DIFFERENTIAL GPS OBSERVATIONS PERFORMED ON JUNE 17, 2019; TIED TO THE NATIONAL SPATIAL REFERENCE SYSTEM VIA CORS STATION AND OPUS; AND EXPRESSED IN US SURVEY FEET.
3. VERTICAL INFORMATION SHOWN, BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD '88) IN US SURVEY FEET.
4. ALL DISTANCES ARE GROUND UNLESS OTHERWISE NOTED.
5. THE PROPOSED LOCATION OF THE TOWER IS LOCATED IN FLOOD ZONE "X", AREA TO BE DETERMINED OUTSIDE 0.2% ANNUAL CHANCE FLOODPLAIN. (FEMA/FIRM MAP NUMBER 3720062400J, EFFECTIVE OCTOBER 3, 2006).
6. PROPERTY OWNER: HARNETT COUNTY

SURVEY NOTE:

INFORMATION TAKEN FROM SURVEY BY TOWER ENGINEERING PROFESSIONALS DATED 06-19-19. ALL INFORMATION SHOWN ON THIS PLAN IS FOR REFERENCE ONLY. ANY DISCREPANCIES SHOWN ON THIS PLAN SHALL BE SUPERCEDED BY ABOVE REFERENCED SURVEY.

N/F
BETTY WELLS TILLEY TRUSTEE
 PIN # 0634-45-5431.000
 DB 2954 PC 618
 ZONING: RA-30

N/F
HARNETT COUNTY
 PIN # 0634-54-0565.000
 DB 3617 PC 699
 ZONING: RA-30



LEGEND	
—	EXIST. PROPERTY LINE
- - -	ADJ. PROPERTY LINE
⊙	PROPERTY CORNER
●	IRON ROD FOUND
⊠	CONCRETE MONUMENT
⊕	EXIST. UTILITY POLE
Ⓛ	EXIST. TELCO PEDESTAL
Ⓧ	EXIST. POWER PEDESTAL
---200---	EXIST. CONTOUR LINE
///	EDGE OF PAVEMENT
--OHW--	OVERHEAD WIRE
— X —	CHAIN LINK FENCE
~~~~~	EXISTING TREE LINE

**SITE PLAN**

SCALE: 1" = 100'



PLANS PREPARED FOR:

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 LILLINGTON, NC 27546  
 OFFICE: (910) 814-6431

PROJECT INFORMATION:

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 FUQUAY-VARINA, NC 27526  
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PLANS PREPARED BY:

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 326 TRYON ROAD  
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 www.tepgroup.net  
 N.C. LICENSE # C-1794

SEAL:

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DRAWN BY: G5B CHECKED BY: JBG

SHEET TITLE:

**SITE PLAN**

SHEET NUMBER: **C-1** REVISION: **1**  
 TEP#: 153676.258201





- 399'-0" FAA MAXIMUM ALLOWABLE HEIGHT
- 398'-0" T/ HIGHEST APPURTENANCE
- 380'-0" T/ TOWER
- PROPOSED ANTENNA #18
- PROPOSED ANTENNA #17 (FUTURE)
- PROPOSED ANTENNA MOUNT (TYP),  
FOR DETAILS SEE SHEET C-8.
- 350'-0" PROPOSED ANTENNA #16
- PROPOSED ANTENNA #15 (FUTURE)
- PROPOSED TTA #14
- 320'-0" PROPOSED ANTENNA #13
- PROPOSED ANTENNA #12 (FUTURE)
- 300'-0" PROPOSED ANTENNAS #10 & #11  
(FUTURE)
- PROPOSED 380'-0" SELF-SUPPORT  
TOWER
- 260'-0"  $\phi$  PROPOSED MICROWAVE #9
- 250'-0" PROPOSED ANTENNA #8
- 225'-0"  $\phi$  PROPOSED MICROWAVE #7
- PROPOSED MICROWAVE MOUNT (TYP)
- 195'-0"  $\phi$  PROPOSED MICROWAVE #6
- 180'-0"  $\phi$  PROPOSED MICROWAVE #5
- 160'-0"  $\phi$  PROPOSED MICROWAVE #4  
(FUTURE)
- 150'-0"  $\phi$  PROPOSED MICROWAVE #3  
(FUTURE)
- 130'-0"  $\phi$  PROPOSED MICROWAVE #2  
(FUTURE)
- 120'-0"  $\phi$  PROPOSED MICROWAVE #1  
(FUTURE)

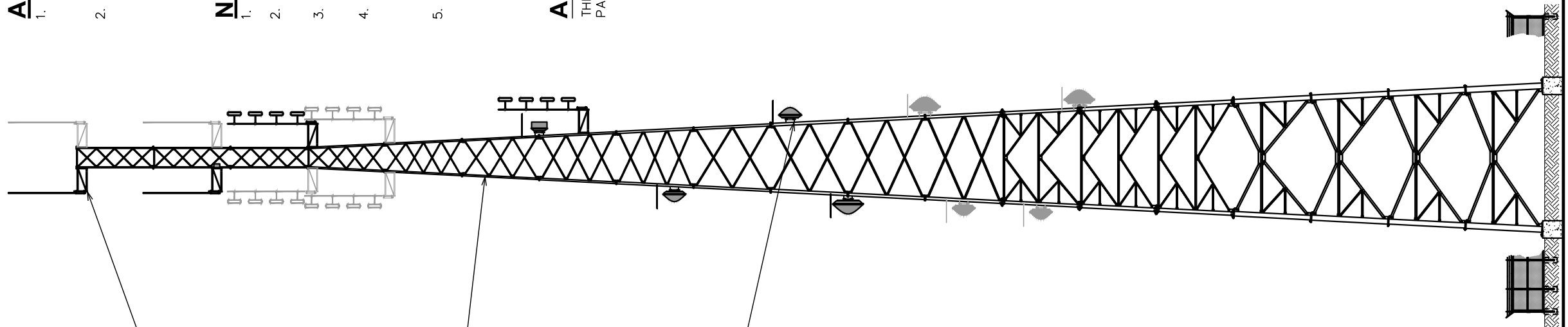
**ANTENNA & MOUNT NOTE:**

1. PROPOSED HARNETT COUNTY ANTENNAS AND MOUNTS SHOWN ON THIS SHEET. SEE SHEET C-8 FOR FUTURE ANTENNAS BY HARNETT COUNTY AND OTHERS.
  2. PROPOSED ANTENNA/MICROWAVE MOUNTS ARE TO BE SUPPLIED BY MOTOROLA. MOUNTS SPECIFIED ON SHEET C-8 SHOULD NOT BE DUPLICATED IF EXISTING MOUNTS ARE PRESENT. SHEET C-8 SHOULD ALSO BE REFERENCED FOR ANY ANTENNA/MICROWAVE SPECIFIC INFORMATION.
- NOTES:**
1. PROPOSED COAX TO BE MOUNTED TO WAVEGUIDE LADDER.
  2. HARNETT COUNTY ANTENNAS, MOUNTS, AND ASSOCIATED HARDWARE TO BE SUPPLIED AND INSTALLED BY CONTRACTOR.
  3. NCSHP MOUNTS, ANTENNAS, AND LINES TO BE SUPPLIED AND INSTALLED BY OTHERS.
  4. THE FAA CONDUCTED AN AERONAUTICAL STUDY (NO. 2019-ASO-25741-OE) AND DETERMINED THAT THIS TOWER POSES NO HAZARD TO AIR NAVIGATION AND DOES NOT REQUIRE OBSTRUCTION LIGHTING.
  5. A SINGLE SIGN, 2 FEET SQUARE, IN A VISIBLE LOCATION SHALL BE REQUIRED WITH NAME AND EMERGENCY TELEPHONE NUMBER OF THE TOWER OWNER AND ALL COMPANIES OPERATING ON THE TOWER. NO ADVERTISING SHALL BE ATTACHED TO THE TOWER.

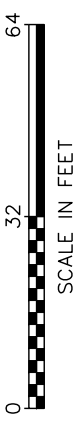
**ANSI/TIA-222-G DESIGN NOTE:**

THE PROPOSED TOWER SHALL BE DESIGNED PER THE FOLLOWING PARAMETERS:

- STRUCTURE CLASSIFICATION: III
- EXPOSURE CATEGORY: C
- TOPOGRAPHIC CATEGORY: I
- * DESIGN WIND SPEED:  
95mph(3sec GUST)



**TOWER ELEVATION**  
SCALE: 1/32" = 1'-0"



PLANS PREPARED FOR:



108 EAST FRONT STREET  
LILLINGTON, NC 27546  
OFFICE: (910) 814-6431

PROJECT INFORMATION:

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FUQUAY-VARINA, NC 27526  
(HARNETT COUNTY)

PLANS PREPARED BY:



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326 TRYON ROAD  
RALEIGH, NC 27603-3530  
OFFICE: (919) 661-6351  
www.tepgroup.net  
N.C. LICENSE # C-1794

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DRAWN BY: G5B      CHECKED BY: JBG

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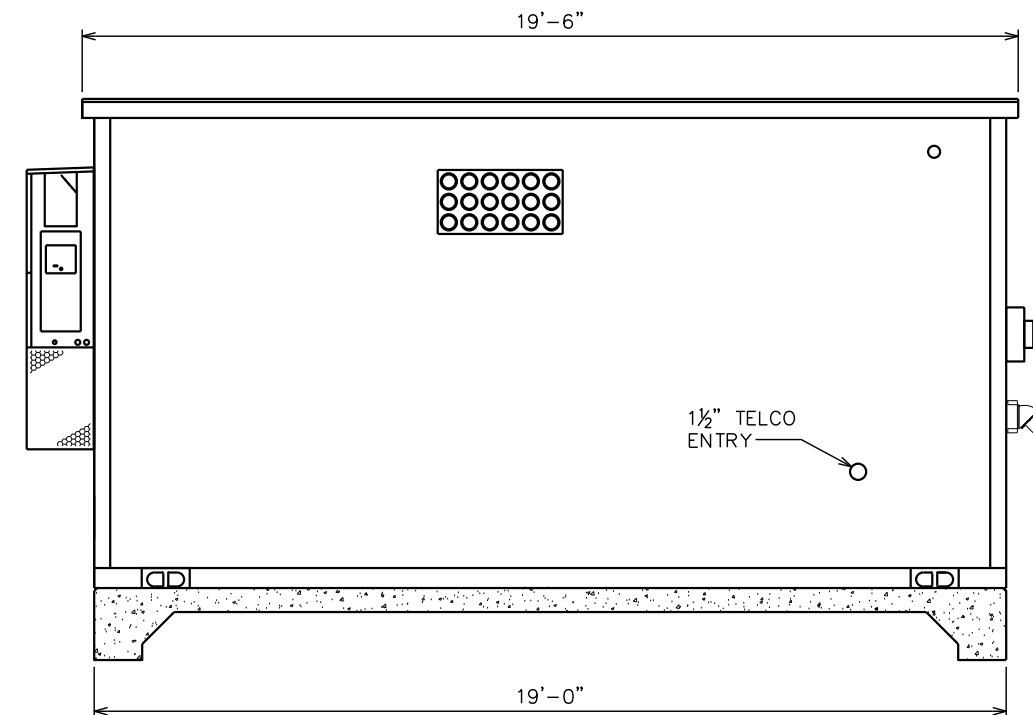
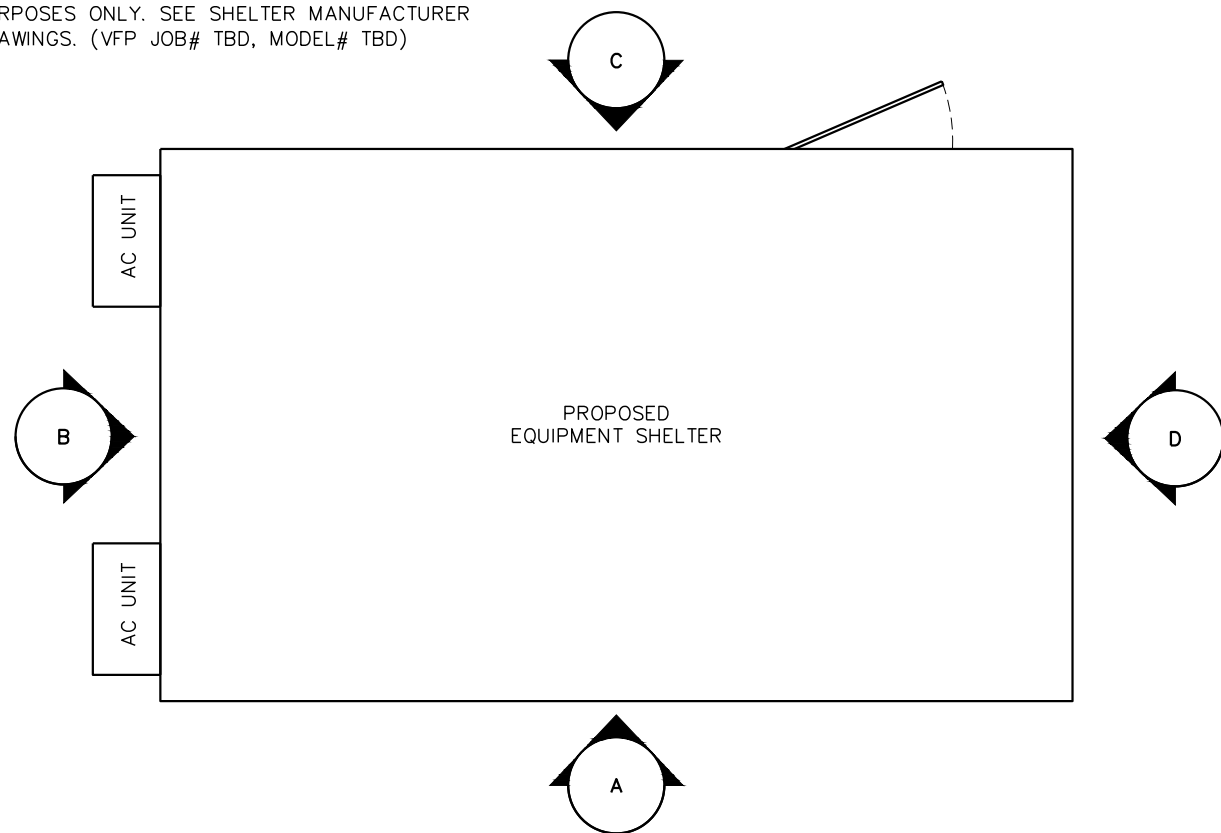
**TOWER ELEVATION**

SHEET NUMBER: **C-3**      REVISION: **1**

TEP#: 153676.258201

**NOTE:**

EQUIPMENT SHELTER LAYOUT SHOWN FOR LAYOUT PURPOSES ONLY. SEE SHELTER MANUFACTURER DRAWINGS. (VFP JOB# TBD, MODEL# TBD)



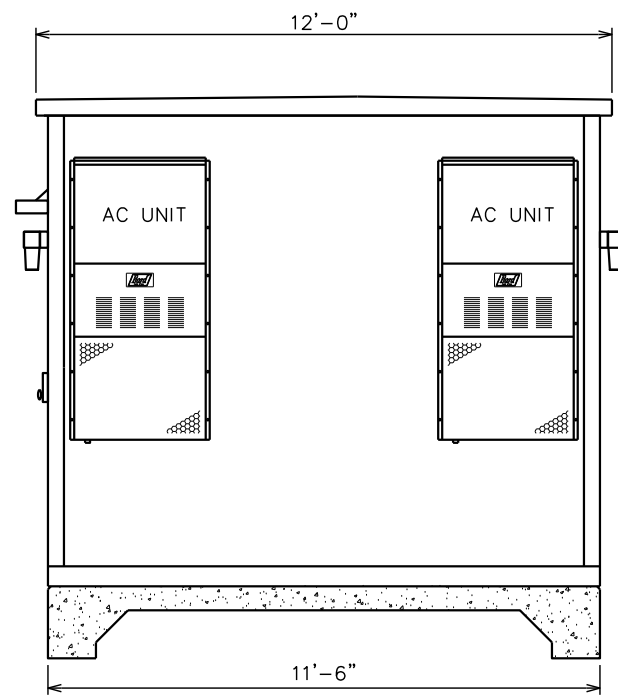
**ELEVATION KEY**

SCALE: 1/4" = 1'-0"



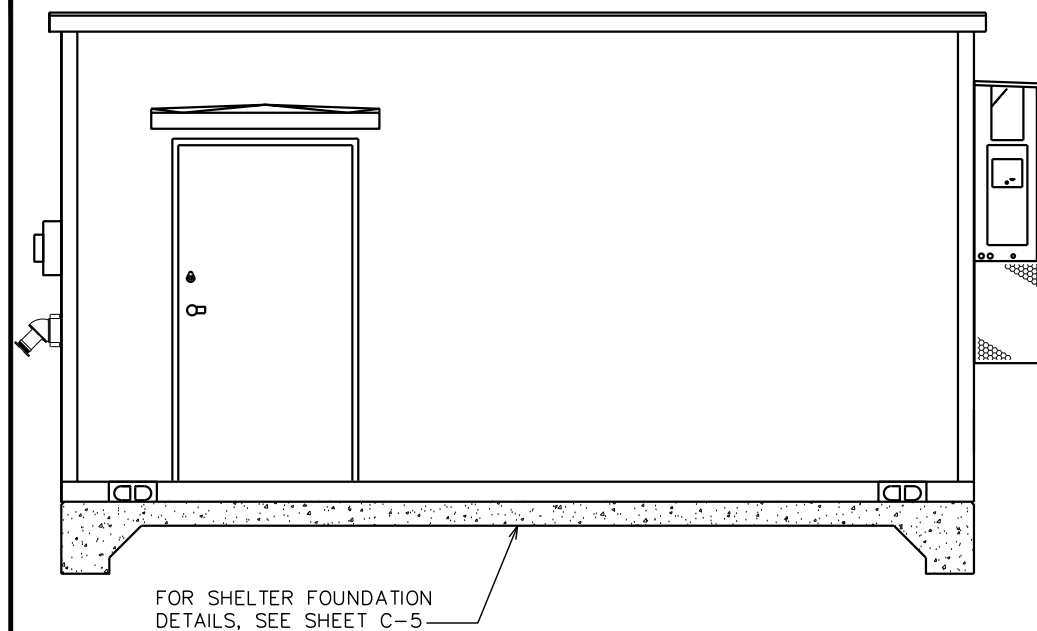
**ELEVATION A**

SCALE: 1/4" = 1'-0"



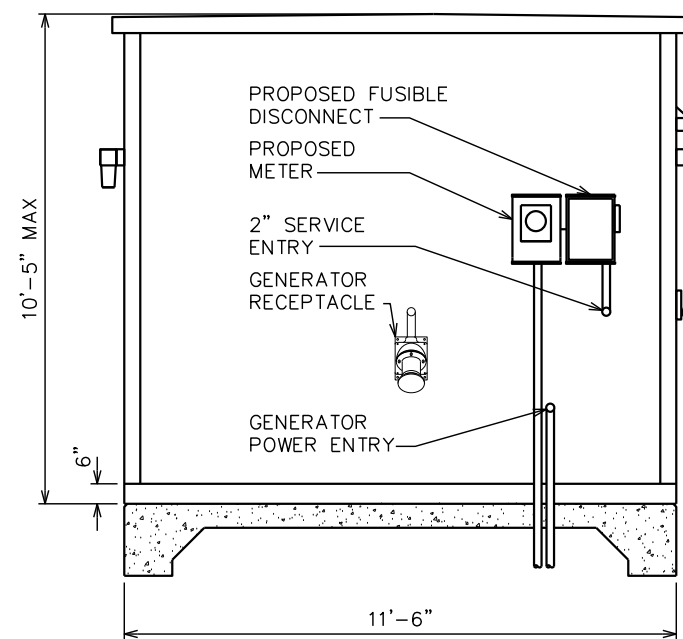
**ELEVATION B**

SCALE: 1/4" = 1'-0"



**ELEVATION C**

SCALE: 1/4" = 1'-0"



**ELEVATION D**

SCALE: 1/4" = 1'-0"

PLANS PREPARED FOR:



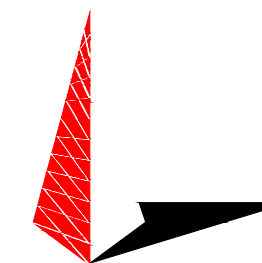
108 EAST FRONT STREET  
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SHEET TITLE:

**SHELTER ELEVATIONS**

SHEET NUMBER:

**C-4**

REVISION:

**1**

TEP#: 153676.258201

**FOUNDATION NOTES:**

1. FOUNDATION DESIGN BASED ON 2,000 PSF SOIL BEARING CAPACITY. IF OTHER CONDITIONS EXIST, FOUNDATION SHALL BE REDESIGNED. CONTRACTOR SHALL HAVE SOIL BEARING CAPACITY VERIFIED BY A LICENSED PROFESSIONAL GEOTECHNICAL ENGINEER PRIOR TO INITIATION OF CONSTRUCTION.
2. CONCRETE SHALL BE 3,000 PSI.
3. REINFORCING STEEL  $F_y = 60,000$  PSI
4. ALL BACKFILL SHALL BE THOROUGHLY COMPACTED TO A MINIMUM OF 95% DENSITY USING THE MODIFIED PROCTOR METHOD.
5. SURFACE OF FINISHED SLAB SHALL BE LEVEL AND FLAT WITHIN  $\frac{1}{4}$ ".
6. CONTRACTOR SHALL VERIFY WITH MANUFACTURER ACTUAL DIMENSIONS OF SHELTER PRIOR TO LAYING OUT FOUNDATION.

**GENERAL STRUCTURAL NOTES:**

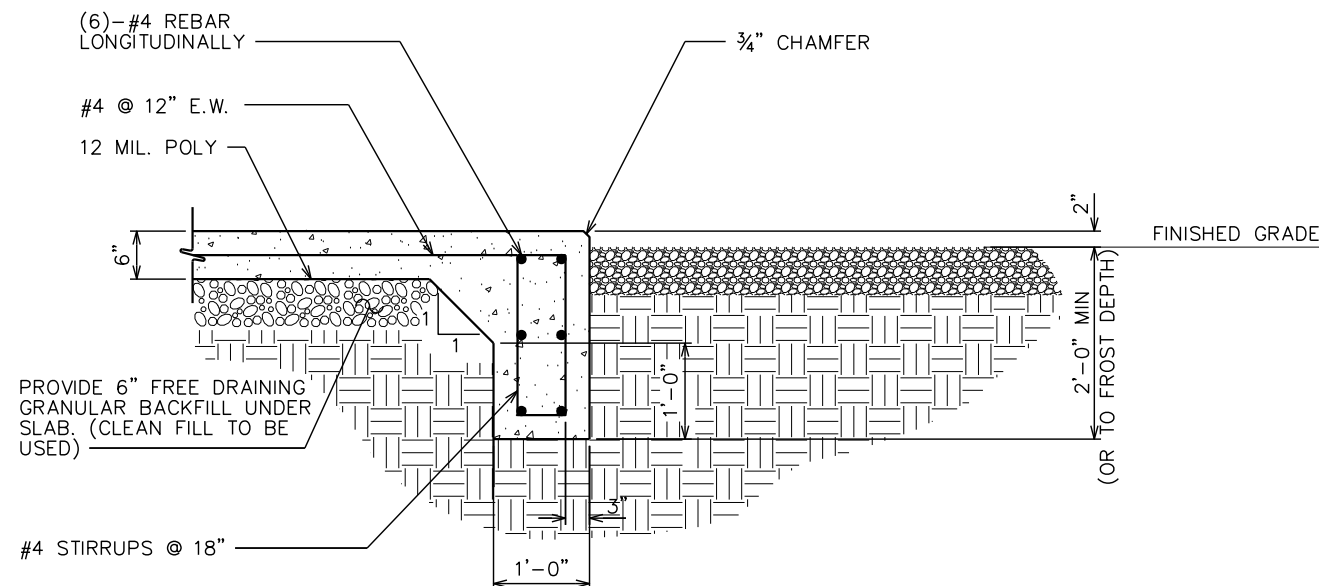
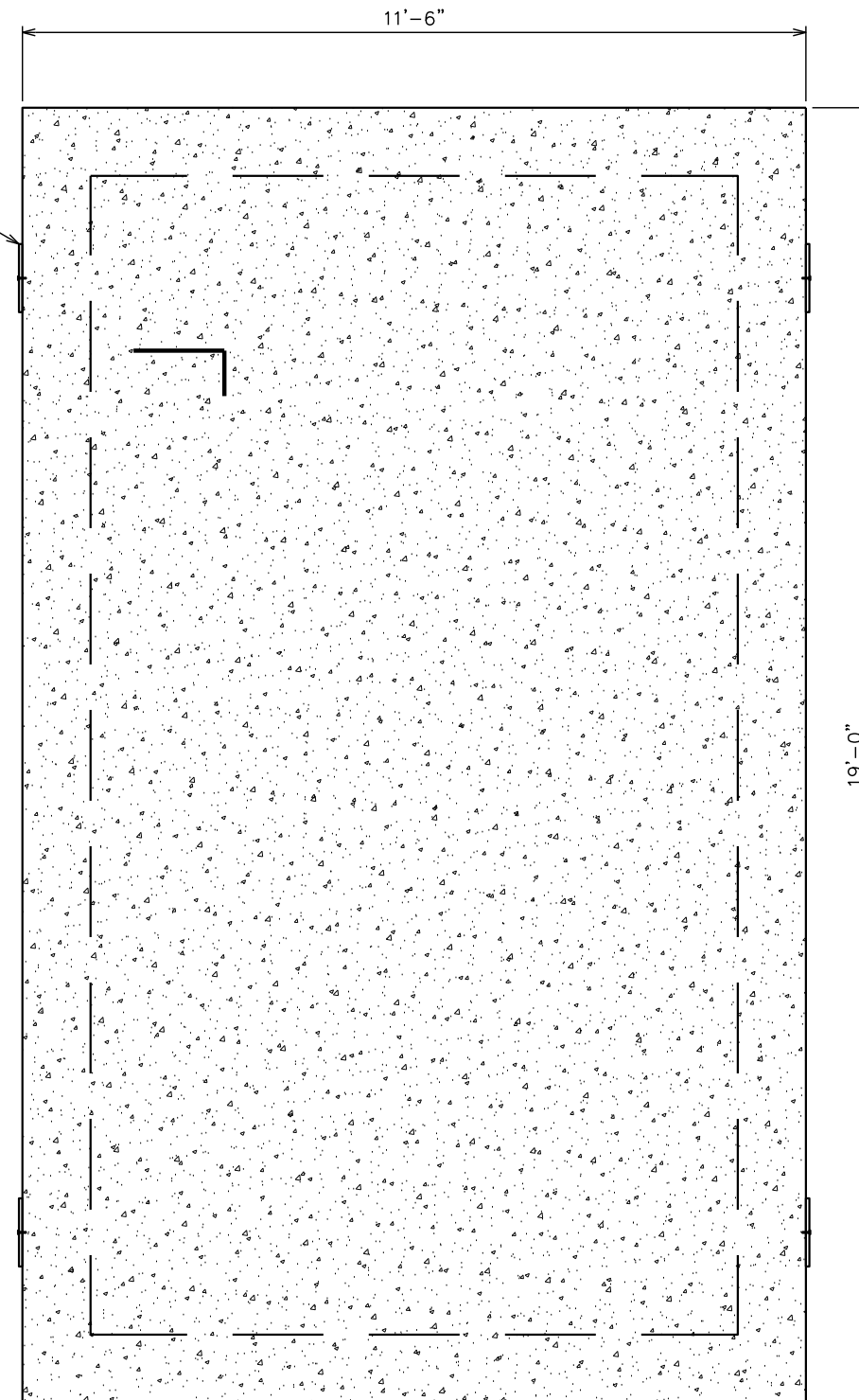
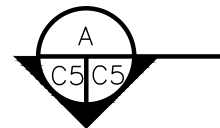
SPECIFICATIONS / CODES:

1. ALL CONCRETE WORK SHALL BE PERFORMED IN ACCORDANCE WITH LATEST EDITION OF THE ACI CODE.
2. STEEL WORK SHALL BE PERFORMED IN ACCORDANCE WITH AISC STEEL CONSTRUCTION MANUAL, 15th EDITION.
3. ALL WELDING SHALL BE PERFORMED IN ACCORDANCE WITH AMERICAN WELDING SOCIETY (AWS) D1.1-15 "STRUCTURAL WELDING CODE-STEEL".
4. REINFORCING STEEL SHALL BE PLACED IN ACCORDANCE WITH THE CONCRETE REINFORCING STEEL INSTITUTE (CRSI). "MANUAL OF STANDARD PRACTICE".

**NOTES:**

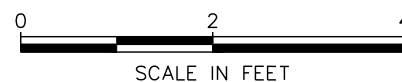
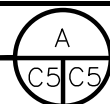
1. SHELTER TIE DOWN PLATE AND HARDWARE SUPPLIED BY SHELTER MANUFACTURER.
2. CONTRACTOR TO VERIFY THAT TIE DOWN PLATE LOCATED NEAR SHELTER DOOR DOES NOT INTERFERE WITH ACCESS RAMP. CONTRACTOR TO RELOCATE AS NEEDED.

TIE DOWN PLATE  
LOCATED AT LIFT POINTS  
(TYP OF 4)



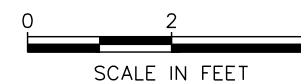
**SECTION**

SCALE:  $\frac{1}{2}$ " = 1'-0"



**FOUNDATION PLAN**

SCALE:  $\frac{3}{8}$ " = 1'-0"



PLANS PREPARED FOR:



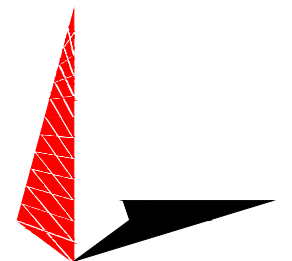
108 EAST FRONT STREET  
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PROJECT INFORMATION:

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PLANS PREPARED BY:

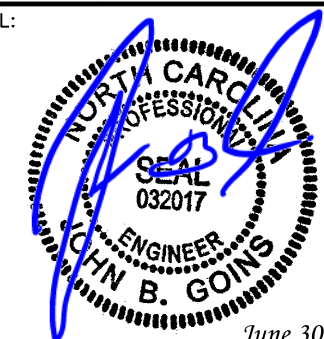


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DRAWN BY: G5B CHECKED BY: JBG

SHEET TITLE:

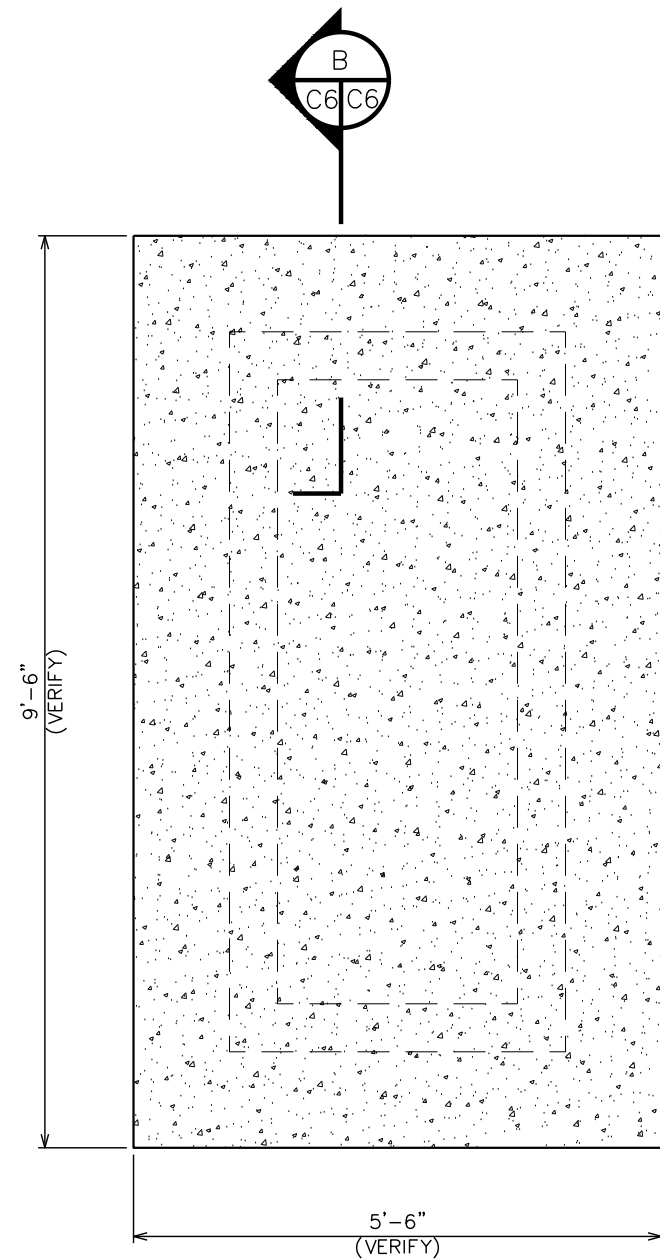
**SHELTER FOUNDATION DETAILS**

SHEET NUMBER: **C-5** REVISION: **1**

TEP#: 153676.258201

**GENERATOR ANCHORAGE:**

THE GENERATOR CONNECTION TO THE CONCRETE SLAB IS ACHIEVED WITH (8) 1/2"Ø EXPANSION BOLT ASSEMBLIES [(4) BOLTS PER GENERATOR SIDE]. THE CURRENT GENERATOR ATTACHMENT SPECIFICATION IS TO USE (8) 1/2"Ø BOA COIL ANCHORS BY RED HEAD EMBEDDED AT A MINIMUM DEPTH OF 2" OR APPROVED EQUAL. CONTACT TEP FOR APPROVAL OF ALTERNATE ATTACHMENT METHOD.



**SPECIFICATIONS / CODES:**

1. ALL CONCRETE WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST EDITION OF THE AMERICAN CONCRETE INSTITUTE (ACI) BUILDING CODE.
2. ALL STEEL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) MANUAL, 15th EDITION.
3. ALL WELDING SHALL BE PERFORMED IN ACCORDANCE WITH THE AMERICAN WELDING SOCIETY (AWS), D1.1-15 "STRUCTURAL WELDING CODE-STEEL".
4. REINFORCING STEEL SHALL BE PLACED IN ACCORDANCE WITH THE CONCRETE REINFORCING STEEL INSTITUTE (CRSI), "MANUAL OF STANDARD PRACTICE".

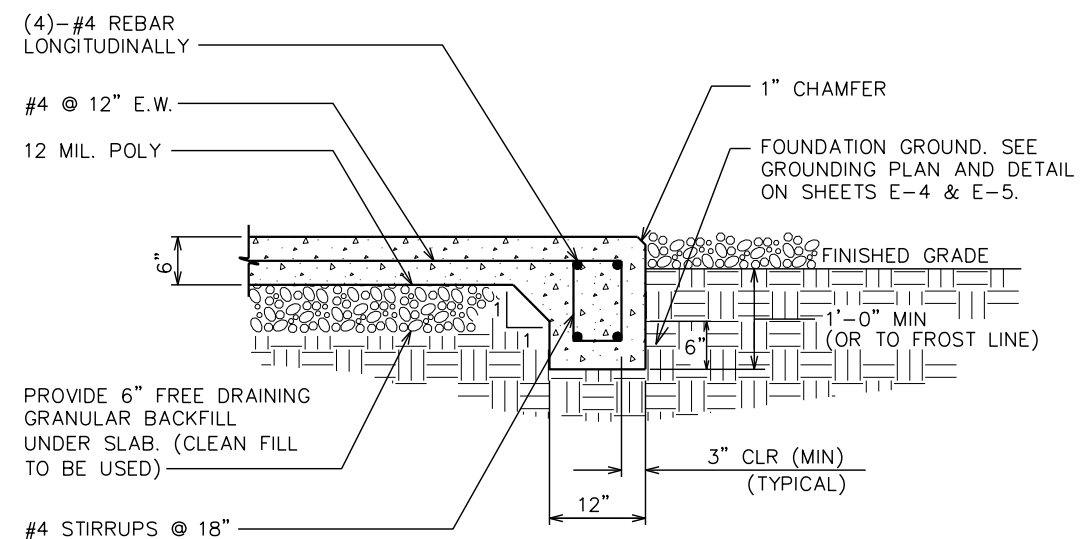
**GENERAL STRUCTURAL NOTES:**

SCALE: N.T.S.

1. FOUNDATION DESIGN IS BASED ON A 2,000 PSF SOIL BEARING CAPACITY. IF OTHER CONDITIONS EXIST, FOUNDATION SHALL BE REDESIGNED. CONTRACTOR SHALL HAVE SOIL BEARING CAPACITY VERIFIED BY A LICENSED PROFESSIONAL GEOTECHNICAL ENGINEER PRIOR TO INITIATION OF CONSTRUCTION ACTIVITIES.
2. CONCRETE SHALL BE 3,000 PSI @ 28 DAYS.
3. REBAR  $F_y = 60,000$  PSI ASTM A615 GRADE 60
4. ALL BACKFILL SHALL BE THOROUGHLY COMPACTED TO A MINIMUM OF 95% DENSITY USING THE PROCTOR METHOD.
5. SURFACE OF FINISHED SLAB SHALL BE LEVEL AND FLAT WITHIN 1/4".
6. CONTRACTOR SHALL VERIFY WITH THE MANUFACTURER ACTUAL DIMENSIONS OF THE GENERATOR PRIOR TO LAYING OUT FOUNDATION.

**FOUNDATION NOTES:**

SCALE: N.T.S.



PLANS PREPARED FOR:



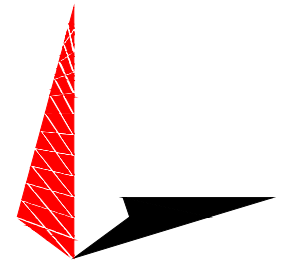
108 EAST FRONT STREET  
LILLINGTON, NC 27546  
OFFICE: (910) 814-6431

PROJECT INFORMATION:

**OAKRIDGE RIVER ROAD**

1979 OAKRIDGE RIVER ROAD  
FUQUAY-VARINA, NC 27526  
(HARNETT COUNTY)

PLANS PREPARED BY:



**TOWER ENGINEERING PROFESSIONALS**  
326 TRYON ROAD  
RALEIGH, NC 27603-3530  
OFFICE: (919) 661-6351  
www.tepgroup.net

N.C. LICENSE # C-1794

SEAL:



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0	10-10-19	PRELIMINARY CONSTRUCTION

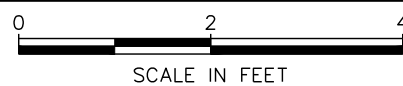
DRAWN BY: G5B CHECKED BY: JBG

SHEET TITLE:  
**GENERATOR FOUNDATION DETAILS**

SHEET NUMBER: **C-6** REVISION: **1**  
TEP#: 153676.258201

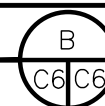
**GENERATOR FOUNDATION PLAN**

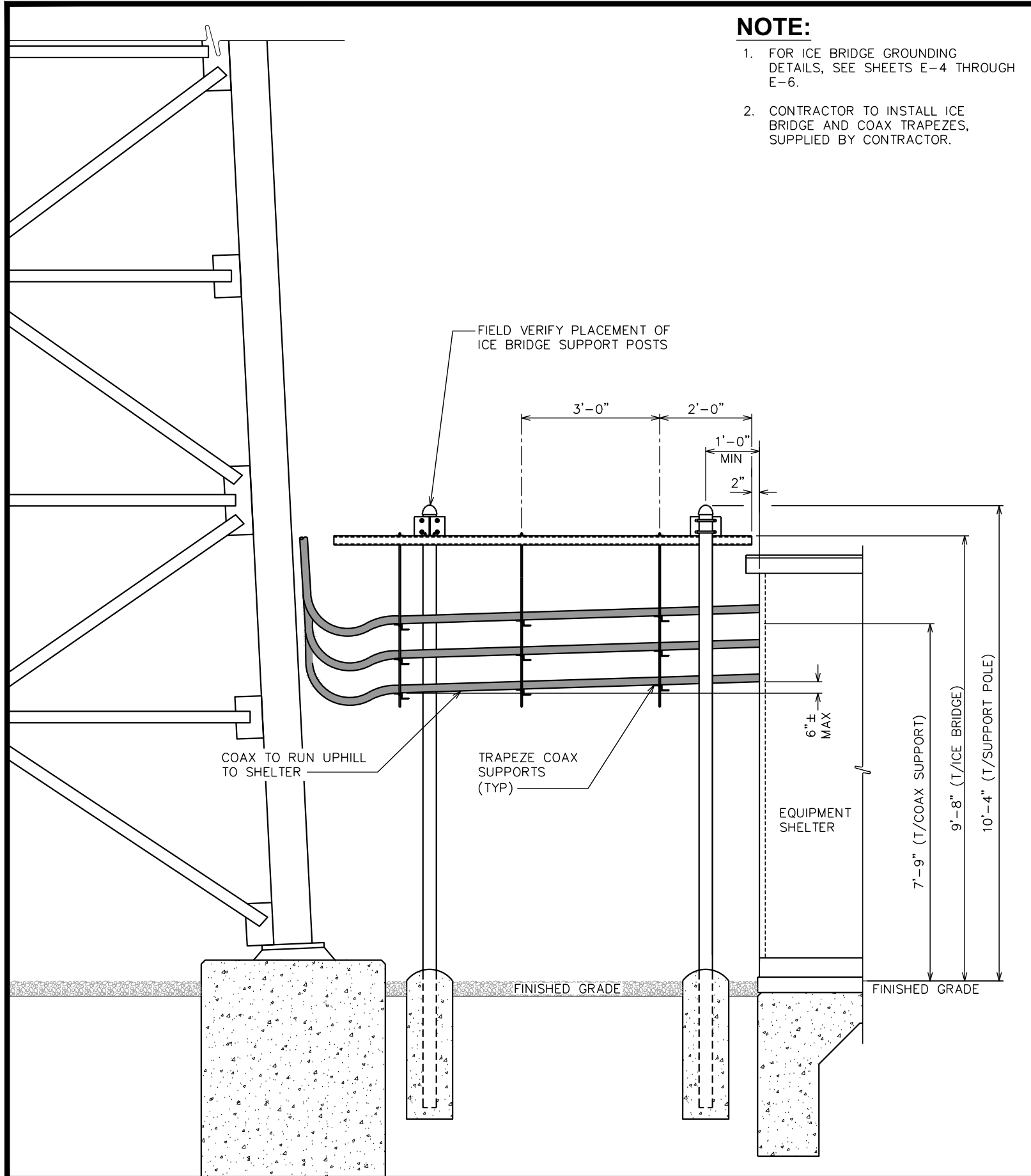
SCALE: 1/2" = 1'-0"



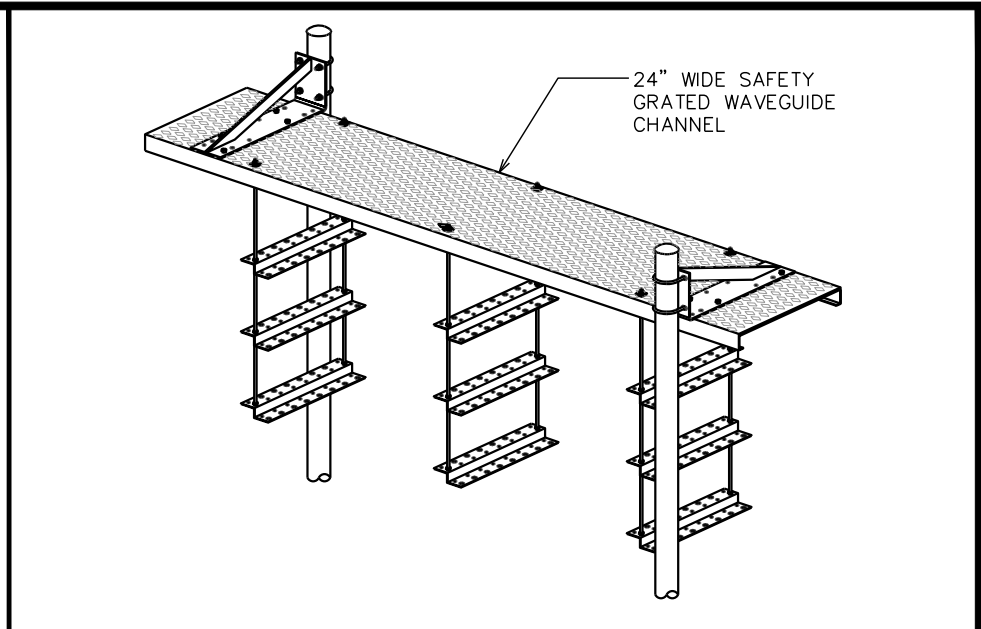
**SECTION**

SCALE: 3/4" = 1'-0"



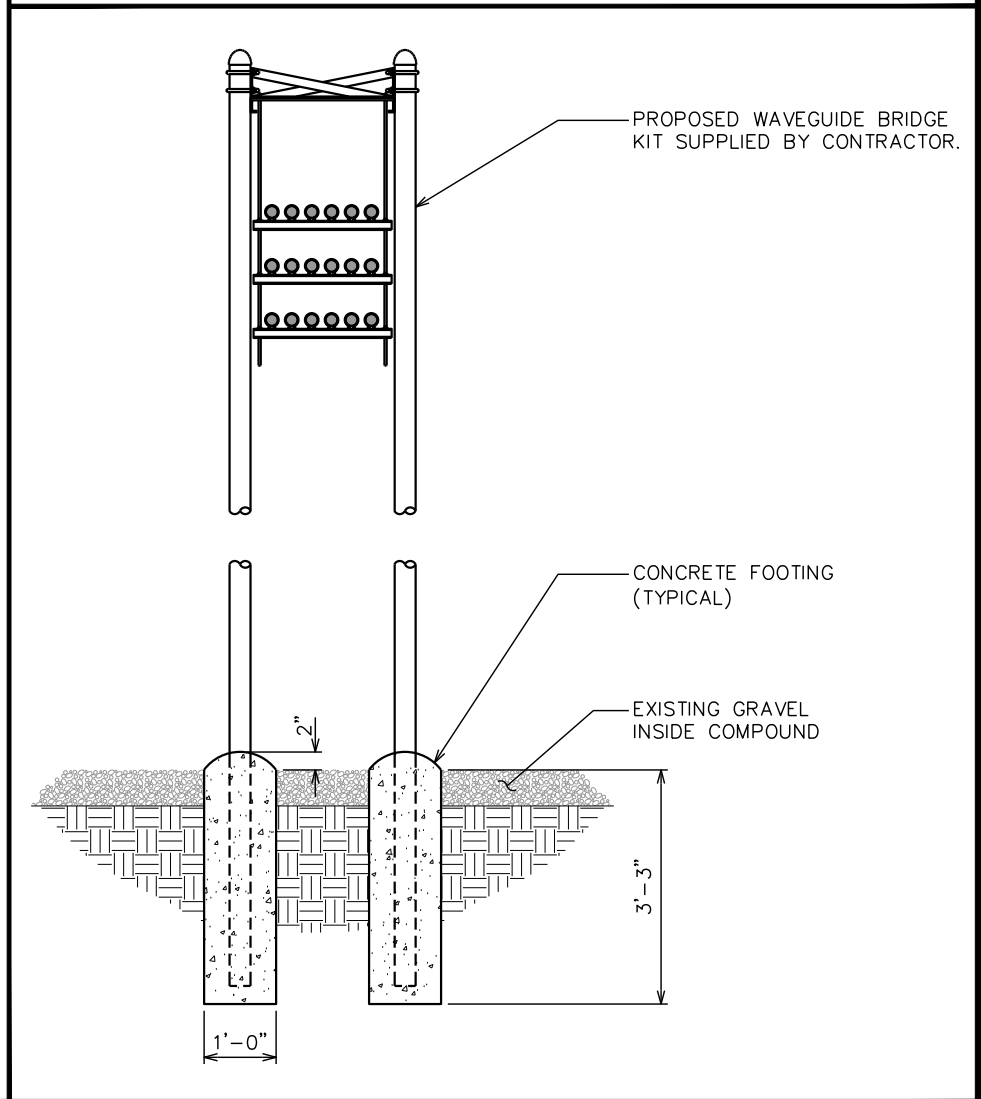


- NOTE:**
1. FOR ICE BRIDGE GROUNDING DETAILS, SEE SHEETS E-4 THROUGH E-6.
  2. CONTRACTOR TO INSTALL ICE BRIDGE AND COAX TRAPEZES, SUPPLIED BY CONTRACTOR.



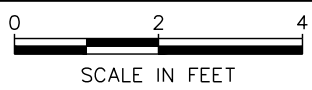
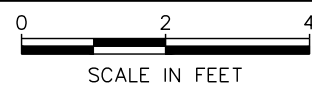
**ISOMETRIC VIEW**

SCALE: N.T.S.



**SIDE VIEW**

SCALE:  $\frac{3}{8}$ " = 1'-0"



**ICE BRIDGE DETAIL**

SCALE:  $\frac{3}{8}$ " = 1'-0"

PLANS PREPARED FOR:

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SEAL:

June 30, 2020

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DRAWN BY: G5B CHECKED BY: JBG

SHEET TITLE:

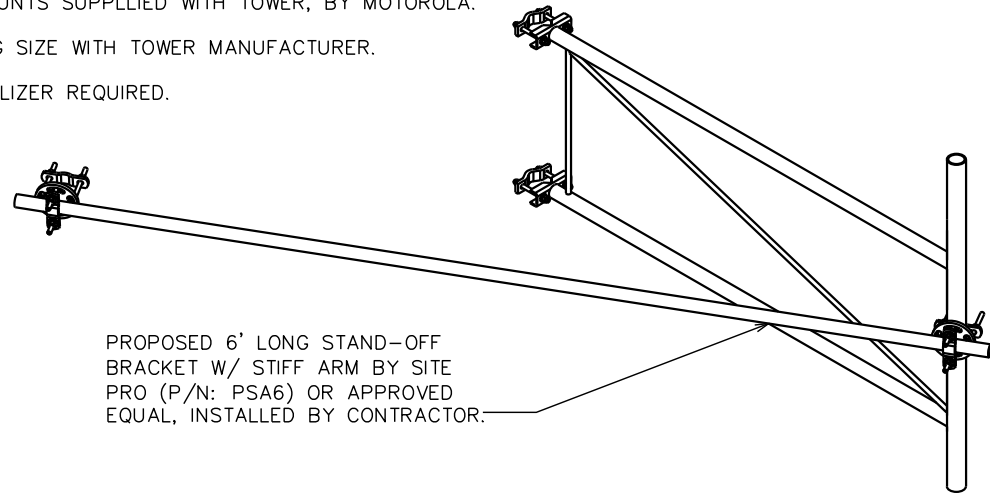
**ICE BRIDGE DETAILS**

SHEET NUMBER: **C-7** REVISION: **1**

TCP#: 153676.258201

**NOTE:**

1. NCSHP MOUNTS SUPPLIED WITH TOWER, BY MOTOROLA.
2. VERIFY LEG SIZE WITH TOWER MANUFACTURER.
3. SIDE STABILIZER REQUIRED.



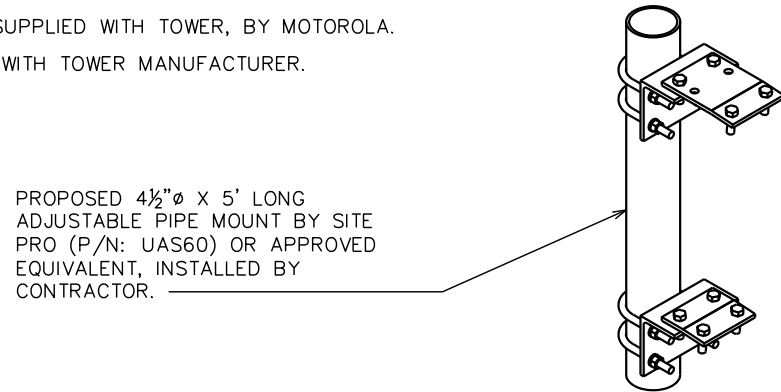
PROPOSED 6' LONG STAND-OFF BRACKET W/ STIFF ARM BY SITE PRO (P/N: PSA6) OR APPROVED EQUAL, INSTALLED BY CONTRACTOR.

**TYPICAL OMNI MOUNT DETAIL**

SCALE: N.T.S.

**NOTE:**

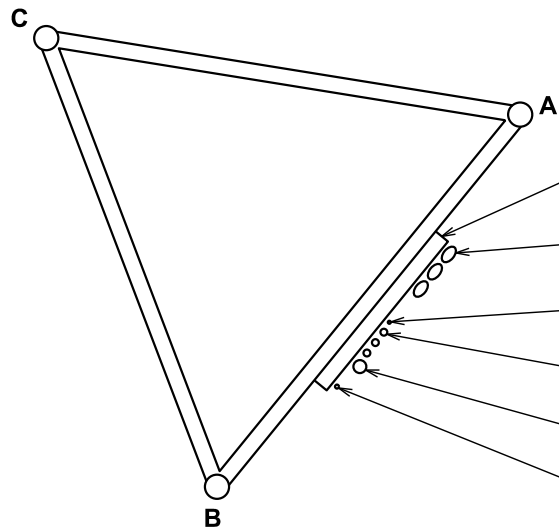
1. NCSHP MOUNTS SUPPLIED WITH TOWER, BY MOTOROLA.
2. VERIFY LEG SIZE WITH TOWER MANUFACTURER.



PROPOSED 4 1/2" Ø X 5' LONG ADJUSTABLE PIPE MOUNT BY SITE PRO (P/N: UAS60) OR APPROVED EQUIVALENT, INSTALLED BY CONTRACTOR.

**TYPICAL MICROWAVE MOUNT DETAIL**

SCALE: N.T.S.



**NOTE:**

COAX TO BE PLACED BY CONTRACTOR AND PER STRUCTURAL ANALYSIS.

WAVEGUIDE LADDER. CONTRACTOR TO VERIFY PROPOSED WAVEGUIDE LADDER LOCATION PRIOR TO CONSTRUCTION. SEE NOTE, THIS SHEET.

(3) EW63 CABLE TO BE ROUTED TO 180', 195', & 225' ON PROPOSED WAVEGUIDE LADDER

3/8" CABLE TO BE ROUTED TO 260' ON PROPOSED WAVEGUIDE LADDER

(3) 7/8" CABLE TO BE ROUTED TO 250', 320', & 350' ON PROPOSED WAVEGUIDE LADDER

1 1/8" CABLE TO BE ROUTED TO 380' ON PROPOSED WAVEGUIDE LADDER

1/2" CABLE TO BE ROUTED TO 350' ON PROPOSED WAVEGUIDE LADDER

**COAX PLAN**

SCALE: N.T.S.

**NOTE:**

1. TX/RX ANTENNAS TO BE INSTALLED BY CONTRACTOR.
2. AZIMUTH OF TOWER A-LEG IS 69°. SEE SHEET C-1 & C-2 FOR DETAILS.
3. COAX LENGTH TO BE VERIFIED BEFORE CONSTRUCTION.
4. NEW EQUIPMENT IN BOLD.

**ANTENNA / COAX SCHEDULE**

ITEM	MANUFACTURER (MODEL #)	SYSTEM	ITEM DESCRIPTION	AZIMUTH	TILT	LEG	*MOUNT HEIGHT	CABLE MAKE/MODEL	COAX SIZE	COAX LENGTH
1	+ RFS PAD8-65AC7S1R	(FUTURE) NCSHP M/W	DISH	TBD	TBD	TBD	120'-0"±	COMMSCOPE EW63	EW63	140'±
2	+ RFS SP6-W60CC	(FUTURE) NCSHP M/W	DISH	TBD	TBD	TBD	130'-0"±	COMMSCOPE EW63	EW63	150'±
3	+ RFS SB6-W60CC	(FUTURE) NCSHP M/W	DISH	TBD	TBD	TBD	150'-0"±	COMMSCOPE EW63	EW63	170'±
4	+ RFS PAD8-65AC7S1R	(FUTURE) NCSHP M/W	DISH	TBD	TBD	TBD	160'-0"±	COMMSCOPE EW63	EW63	180'±
5	<b>+ RFS SB6-W60CC</b>	<b>NCSHP M/W TO DUNCAN</b>	<b>DISH</b>	<b>41.69°</b>	<b>0.21°</b>	<b>A</b>	<b>180'-0"±</b>	<b>COMMSCOPE EW63</b>	<b>EW63</b>	<b>200'±</b>
6	<b>+ RFS SB6-W60CC</b>	<b>NCSHP M/W TO TRAMWAY</b>	<b>DISH</b>	<b>250°</b>	<b>0.07°</b>	<b>C</b>	<b>195'-0"±</b>	<b>COMMSCOPE EW63</b>	<b>EW63</b>	<b>220'±</b>
7	<b>+ RFS PAD8-65AC7S1R</b>	<b>NCSHP M/W TO TRAMWAY</b>	<b>DISH</b>	<b>250°</b>	<b>0.07°</b>	<b>C</b>	<b>225'-0"±</b>	<b>COMMSCOPE EW63</b>	<b>EW63</b>	<b>250'±</b>
8	RFI CC807-11	(FUTURE) NCSHP 700 MHz (Tx)	OMNI	N/A	N/A	B	350'-0"±	-	1 1/8"	370'±
9	<b>RFI CC807-11</b>	<b>NCSHP 700 MHz (Rx)</b>	<b>OMNI</b>	<b>N/A</b>	<b>N/A</b>	<b>A</b>	<b>350'-0"±</b>	<b>-</b>	<b>7/8"</b>	<b>370'±</b>
10	<b>TX/RX CORP</b>	<b>NCSHP 700 MHz</b>	<b>TTA</b>	<b>N/A</b>	<b>N/A</b>	<b>A</b>	<b>350'-0"±</b>	<b>-</b>	<b>1/2"</b>	<b>370'±</b>
11	RFI CC807-11	(FUTURE) NCSHP 700 MHz (Rx)	OMNI	N/A	N/A	B	380'-0"±	-	7/8"	400'±
12	<b>RFI CC807-11</b>	<b>NCSHP 700 MHz (Tx)</b>	<b>OMNI</b>	<b>N/A</b>	<b>N/A</b>	<b>A</b>	<b>380'-0"±</b>	<b>-</b>	<b>1 1/8"</b>	<b>400'±</b>

**NON-NCSHP ANTENNA / COAX SCHEDULE**

ITEM	MANUFACTURER (MODEL #)	SYSTEM	ITEM DESCRIPTION	AZIMUTH	LEG	*MOUNT HEIGHT	CABLE MAKE/MODEL	COAX SIZE	COAX LENGTH
1	<b>ANDREW DB-224</b>	<b>COUNTY</b>	<b>DIPOLE</b>	<b>N/A</b>	<b>C</b>	<b>250'-0"±</b>	<b>-</b>	<b>7/8"</b>	<b>270'±</b>
2	<b>+ RADIOWAVES HPD4-4.7</b>	<b>COUNTY M/W</b>	<b>DISH</b>	<b>N/A</b>	<b>C</b>	<b>260'-0"±</b>	<b>-</b>	<b>3/8"</b>	<b>280'±</b>
3	ANDREW DB-224	(FUTURE) COUNTY	DIPOLE	N/A	B	300'-0"±	-	7/8"	320'±
4	ANDREW DB-224	(FUTURE) COUNTY	DIPOLE	N/A	C	300'-0"±	-	7/8"	320'±
5	ANDREW DB-224	(FUTURE) COUNTY	DIPOLE	N/A	C	320'-0"±	-	7/8"	340'±
6	<b>ANDREW DB-224</b>	<b>COUNTY</b>	<b>DIPOLE</b>	<b>N/A</b>	<b>C</b>	<b>320'-0"±</b>	<b>-</b>	<b>7/8"</b>	<b>340'±</b>

+ ICE SHIELD, SUPPLIED BY CONTRACTOR, TO BE INSTALLED ABOVE MICROWAVE

* MICROWAVE AND DIPOLE ELEVATIONS ARE CENTERLINE, ALL OTHER ANTENNAS ARE LISTED AT TOP OF MOUNT

**ANTENNA LOADING SCHEDULE**

SCALE: N.T.S.

PLANS PREPARED FOR:



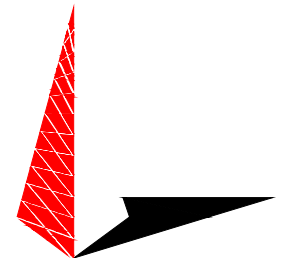
108 EAST FRONT STREET  
LILLINGTON, NC 27546  
OFFICE: (910) 814-6431

PROJECT INFORMATION:

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FUQUAY-VARINA, NC 27526  
(HARNETT COUNTY)

PLANS PREPARED BY:

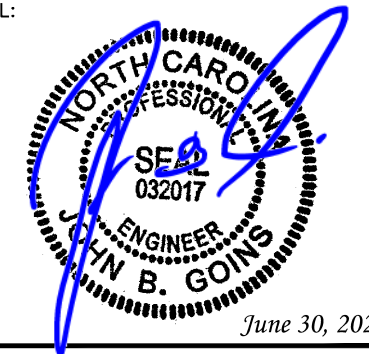


**TOWER ENGINEERING PROFESSIONALS**

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N.C. LICENSE # C-1794

SEAL:



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DRAWN BY: G5B CHECKED BY: JBG

SHEET TITLE:

**ANTENNA & COAX MOUNTING DETAILS**

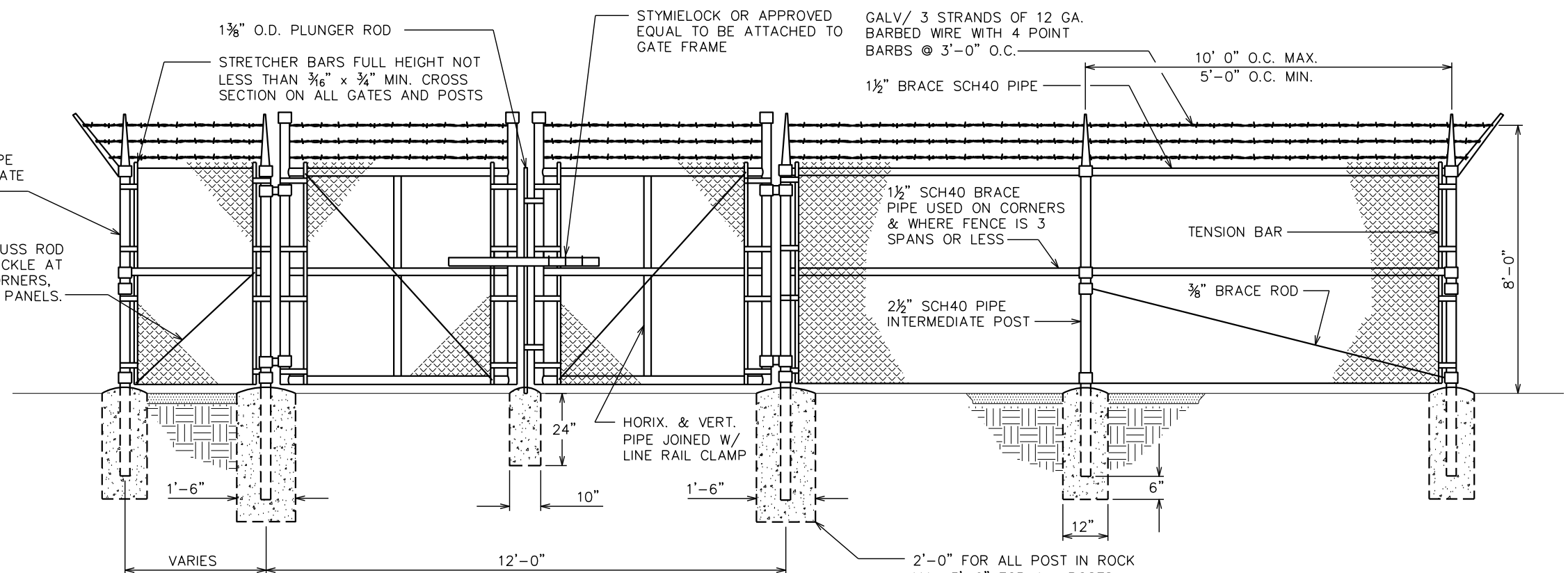
SHEET NUMBER:

**C-8**

REVISION:

**1**

TEP#: 153676.258201

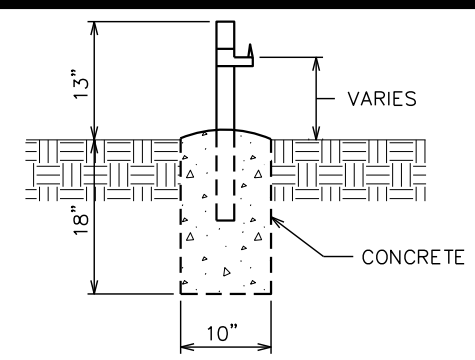


**NOTES:**

1. GATE LATCH: 1-3/8" O.D. PLUNGER ROD WITH MUSHROOM TYPE CATCH AND LOCK, KEYED ALIKE FOR ALL SITES IN A GIVEN MTA.
2. LOCAL ORDINANCE OF BARBED WIRE PERMIT REQUIREMENT SHALL BE COMPLIED IF REQUIRED.
3. HEIGHT = 7' VERTICAL (UNLESS NOTED OTHERWISE) OR MATCH EXISTING FENCE (IF APPLICABLE AND 1' BARBED WIRE VERTICAL DIMENSION).
4. WARNING SIGNS USING THE INTERNATIONAL SYMBOL OF ELECTRICAL SHOCK HAZARD SHALL BE FURNISHED AND INSTALLED ON THE EXTERIOR OF ALL SIDES OF THE MAIN PERIMETER FENCE AND THE GATE. ADDITIONALLY, SIGNS SHALL BE FURNISHED AND INSTALLED THAT STATE "NO TRESPASSING" IN ENGLISH. THE SIGNS SHALL BE IMPERVIOUS TO WEATHERING AND BE MOUNTED TO AVOID EASE OF REMOVAL BY VANDALS.
5. MAXIMUM 1 1/2" GAP UNDER FENCE.
6. ALL OPEN POST REQUIRE CAPS.
7. INSTALL DUCK BILL OPEN GATE HOLDER. VERIFY LOCATION IN FIELD PRIOR TO INSTALLATION.
8. TENSION WIRE: 6 GA. MIN. GALVANIZED STEEL, SHOULD BE CONTINUOUS.

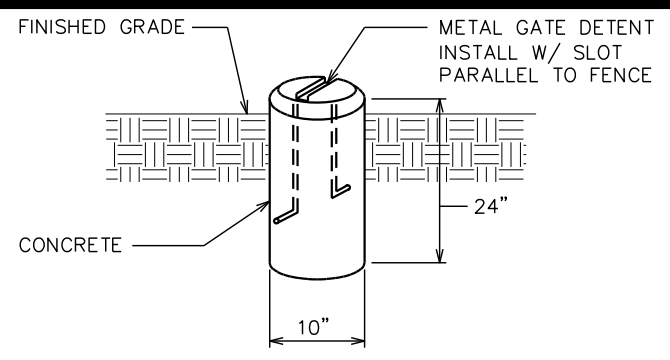
**TYPICAL FENCE ELEVATION**

SCALE: N.T.S.



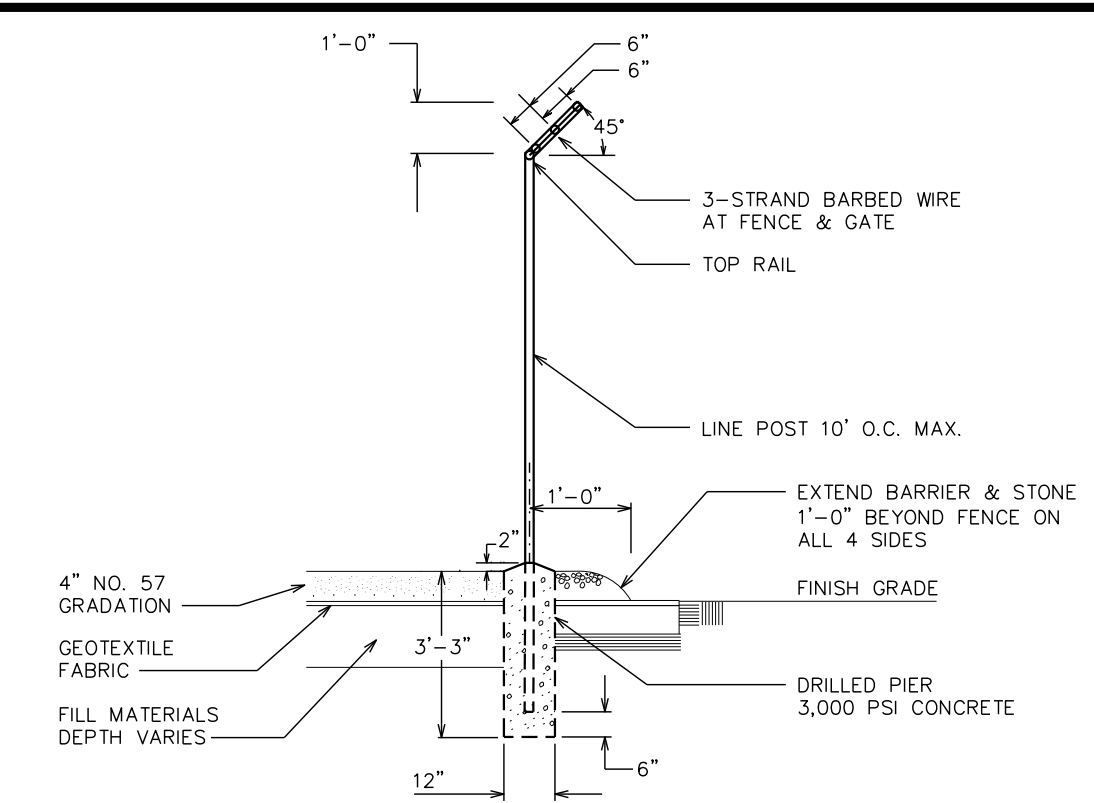
**GATE STOP / KEEPER DETAIL**

SCALE: N.T.S.



**GATE DETENT DETAIL**

SCALE: N.T.S.



**FENCE / BARBED WIRE ARM DETAIL**

SCALE: N.T.S.

PLANS PREPARED FOR:  
  
 108 EAST FRONT STREET  
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SEAL:  
  
 June 30, 2020

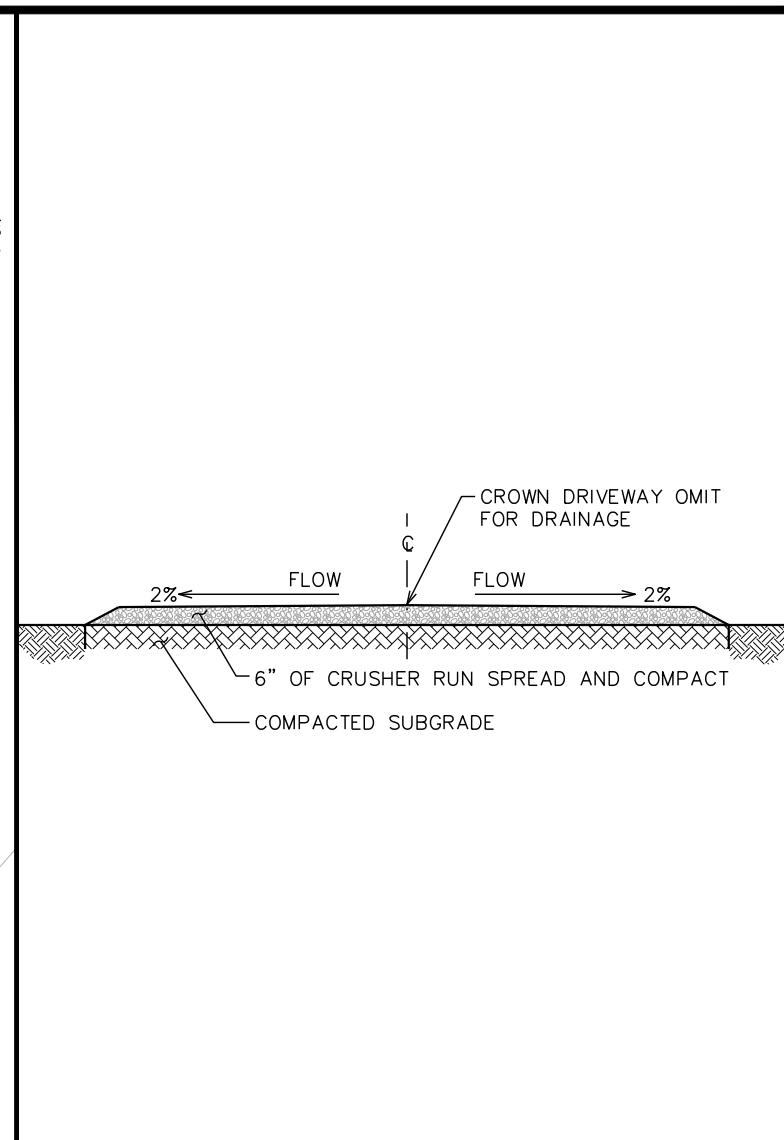
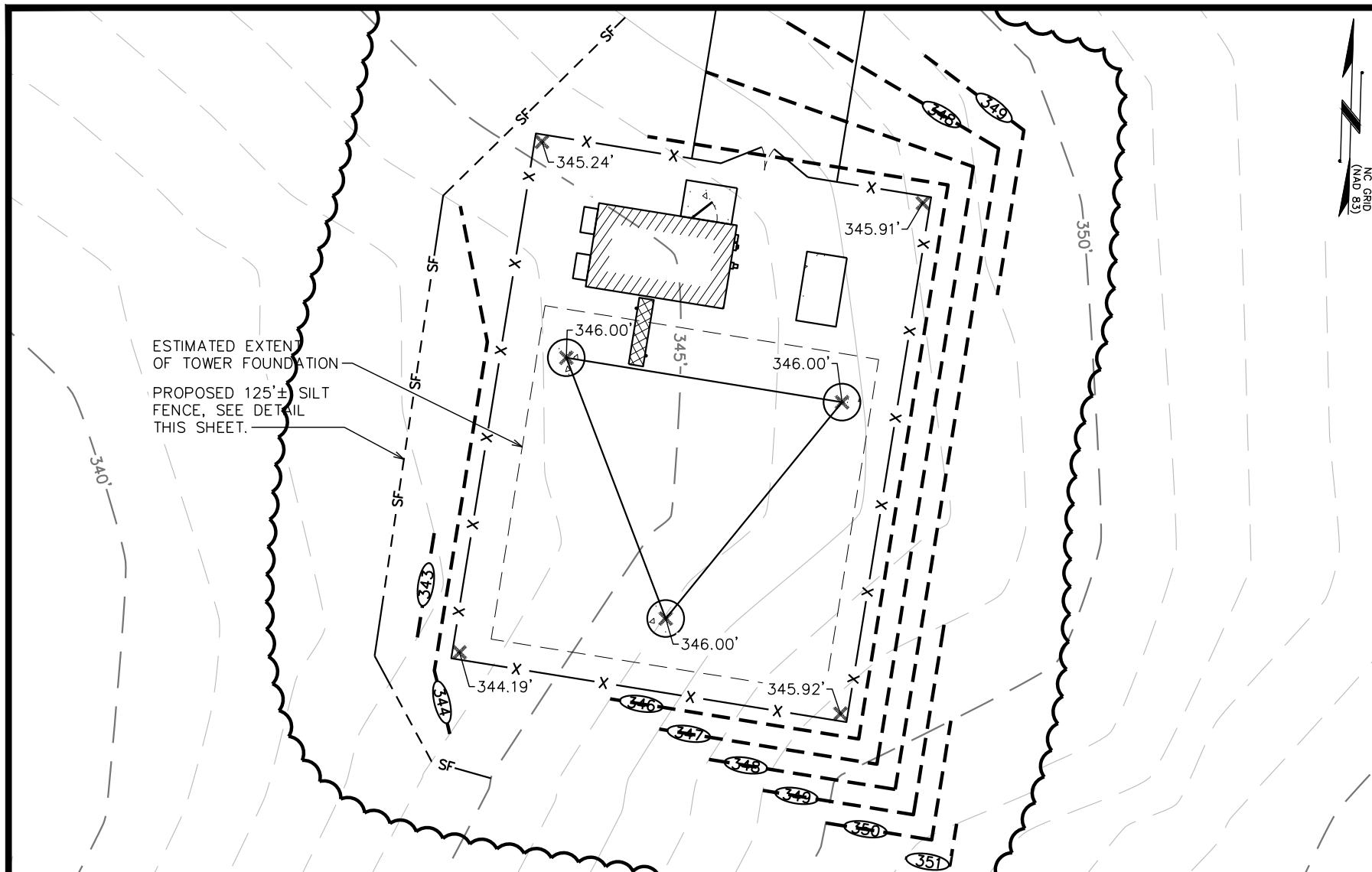
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SHEET TITLE:  
**FENCE DETAILS**

SHEET NUMBER: **C-9** REVISION: **1**  
 TEP#: 153676.258201





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 108 EAST FRONT STREET  
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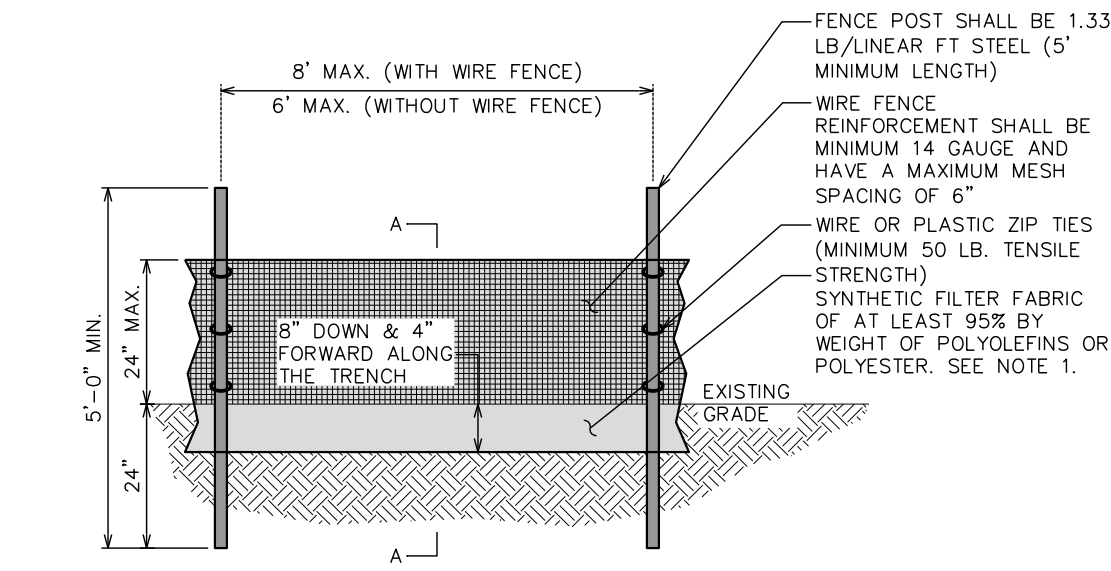
SEAL:  
  
 JOHN B. GOINS  
 ENGINEER  
 NORTH CAROLINA PROFESSIONAL SEAL  
 032017  
 June 30, 2020

**SITE GRADING PLAN**  
 SCALE: 1" = 20'  
 0 20 40  
 SCALE IN FEET

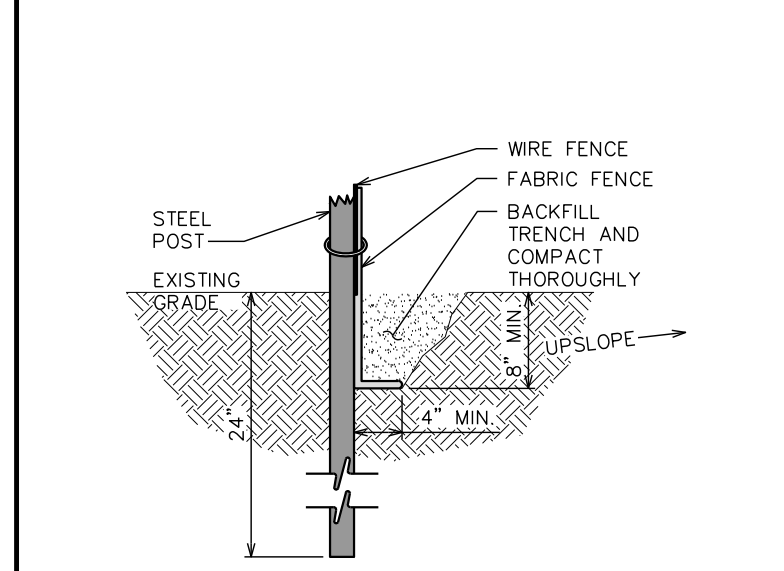
**STANDARD ROAD SECTION**  
 SCALE: 1/4" = 1'-0"

**SILT FENCE NOTES:**

1. FILTER FABRIC SHALL CONFORM TO THE REQUIREMENTS LISTED IN ASTM D 6461.
2. ENDS OF INDIVIDUAL FILTER FABRIC SHALL BE SECURELY FASTENED AT A SUPPORT POST WITH 4 FEET MINIMUM OVERLAP TO THE NEXT POST
3. PLACE 12 INCHES OF FABRIC ALONG THE BOTTOM AND SIDE OF THE TRENCH.
4. INSPECT SEDIMENT FENCE(S) AT LEAST ONCE A WEEK AND AFTER EACH RAINFALL.
5. REMOVE SEDIMENT DEPOSITS AS NECESSARY TO PROVIDE ADEQUATE STORAGE VOLUME FOR THE NEXT RAIN AND TO REDUCE PRESSURE ON THE FENCE.
6. AFTER CONSTRUCTION IS COMPLETE, THE CONTRACTOR SHALL REMOVE ALL FENCING MATERIALS AND UNSTABLE SEDIMENT DEPOSITS, BRING THE AREA TO GRADE AND PROPERLY STABILIZE THE SITE.



**SILT FENCE DETAIL**  
 SCALE: 1/4" = 1'-0"  
 0 4 8  
 SCALE IN FEET



**SECTION A-A**  
 SCALE: 1/4" = 1'-0"  
 0 4 8  
 SCALE IN FEET

REV	DATE	ISSUED FOR:
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DRAWN BY: G5B CHECKED BY: JBG

SHEET TITLE:  
**GRADING PLAN**

SHEET NUMBER: **C-10** REVISION: **1**  
 TEP#: 153676.258201

**SCOPE:**

ALL ELECTRICAL WORK SHALL BE PERFORMED BY COMPANIES PROPERLY LICENSED BY THE NC STATE ELECTRICAL BOARD OF EXAMINERS. SCOPE SHALL INCLUDE ALL LABOR, MATERIALS AND APPLIANCES REQUIRED FOR THE FURNISHING, INSTALLING AND TESTING, COMPLETE AND READY FOR OPERATION OF ALL WORK SHOWN ON THE DRAWING AS SPECIFIED HEREIN:

- 1. ELECTRIC SERVICE
- 2. CONDUIT AND RACEWAY
- 3. CONDUCTORS
- 4. MISCELLANEOUS MATERIALS
- 5. TELEPHONE CONDUITS
- 6. LIGHTNING ARRESTING SYSTEM

**CODES:**

THE INSTALLATION SHALL COMPLY WITH ALL LAWS APPLYING TO ELECTRICAL INSTALLATION IN EFFECT WITH THE REGULATIONS OF THE LATEST EDITION OF THE NATIONAL ELECTRICAL SAFETY CODE AND THE NEC 2017 (WITH NORTH CAROLINA AMENDMENTS), ADMINISTRATIVE RULES WITH THE NATIONAL ELECTRIC CODE, ALL LOCAL GOVERNING CODES AND ORDINANCES WITH THE REGULATION OF THE SERVING UTILITY COMPANY, AND FULLY COMPLIANT WITH THE STATE CONSTRUCTION OFFICE ELECTRICAL GUIDELINES. ALL PERMITS REQUIRED SHALL BE OBTAINED AND, AFTER COMPLETION OF WORK, THE OWNER SHALL BE FURNISHED A CERTIFICATE OF FINAL INSPECTION AND APPROVAL.

**MATERIALS:**

MATERIALS TO BE NEW. USE OF USED OR SUB STANDARD MATERIAL IS NOT ACCEPTABLE. IN THE CASE OF EXISTING METERING EQUIPMENT OR PANELS, REQUIRED COMPONENTS SHALL BE NEW.

**TESTING:**

UPON COMPLETION OF THE INSTALLATION, OPERATE AND ADJUST ALL EQUIPMENT AND SYSTEMS TO MEET SPECIFIED PERFORMANCE REQUIREMENTS. ALL TESTING SHALL BE DONE BY QUALIFIED PERSONNEL.

**GUARANTEE:**

IN ADDITION TO THE GUARANTEE OF THE EQUIPMENT BY THE MANUFACTURER, EACH PIECE OF EQUIPMENT SPECIFIED HEREIN SHALL ALSO BE GUARANTEED FOR DEFECTS OF MATERIAL OR WORKMANSHIP OCCURRING DURING A PERIOD OF ONE (1) YEAR FROM FINAL ACCEPTANCE OF THE WORK BY THE OWNER WITHOUT EXPENSE TO THE OWNER. ALL WARRANTEE CERTIFICATES AND GUARANTEES FURNISHED BY THE MANUFACTURERS SHALL BE TURNED OVER TO THE OWNER.

**COORDINATION:**

CONTRACTOR SHALL COORDINATE ALL WORK WITH THE POWER AND TELEPHONE COMPANIES AND SHALL COMPLY WITH ALL SERVICE REQUIREMENTS OF EACH UTILITY COMPANY.

**EXAMINATION OF SITE:**

PRIOR TO BEGINNING WORK, THE CONTRACTOR SHALL VISIT THE SITE OF THE JOB AND SHALL FAMILIARIZE HIMSELF WITH ALL CONDITIONS AFFECTING THE PROPOSED ELECTRICAL INSTALLATION AND SHALL MAKE PROVISIONS AS TO THE COST THEREOF. FAILURE TO COMPLY WITH THE INTENT OF THIS PARAGRAPH WILL IN NO WAY RELIEVE THE CONTRACTOR OF PERFORMING ALL WORK NECESSARY FOR A COMPLETE AND WORKING SYSTEM OR SYSTEMS.

**CUTTING, PATCHING AND EXCAVATION:**

- 1. COORDINATION OF ALL SLEEVES, CHASES, ETC., WILL BE REQUIRED PRIOR TO THE CONSTRUCTION OF ANY PORTION OF THE WORK. ALL CUTTING AND PATCHING OF WALLS, PARTITIONS, FLOORS, AND CHASES IN CONCRETE, WOOD, STEEL OR MASONRY SHALL BE DONE AS PROVIDED ON THE DRAWINGS.
- 2. ALL EXCAVATIONS AND BACKFILLING INCIDENTAL TO THE WORK UNLESS SPECIFICALLY NOTED OTHERWISE ON THE DRAWINGS SHALL BE PROVIDED BY THE CONTRACTOR.

**EXTERIOR CONDUIT:**

UNDERGROUND RACEWAYS SHALL COMPLY WITH STATE CONSTRUCTION ELECTRICAL GUIDELINES, SECTION 26 05 33. ALL EXPOSED CONDUIT SHALL BE NEATLY INSTALLED AND RUN PARALLEL OR PERPENDICULAR TO STRUCTURAL ELEMENTS. SUPPORTS AND MOUNTING HARDWARE SHALL BE HOT DIPPED GALVANIZED STEEL.

**RACEWAYS:**

- 1. ALL CONDUCTORS SHALL BE INSTALLED IN CONDUIT. CONDUIT SHALL BE RIGID STEEL, EMT, OR SCH40 PVC. AS INDICATED ON THE DRAWINGS. ALUMINUM CONDUIT SHALL NOT BE ALLOWED.
- 2. WHERE INSTALLED ON EXTERIORS AND EXPOSED TO DAMAGE, ALL CONDUIT SHALL BE RIGID STEEL.
- 3. CONCEALED CONDUIT IN WALLS OR INTERIOR SPACES ABOVE GRADE MAY BE EMT.
- 4. UNDERGROUND CONDUITS SHALL BE RIGID STEEL OR SCH40 PVC AS INDICATED ON THE DRAWINGS.
- 5. ALL CONDUIT RUNS SHALL USE APPROVED COUPLINGS AND CONNECTORS. PROVIDE INSULATED BUSHING FOR ALL CONDUIT TERMINATIONS. ALL CONDUIT RUNS IN A WET LOCATIONS SHALL HAVE WATERPROOF FITTINGS. ALL EMT TERMINATIONS AND COUPLINGS SHALL BE MADE UTILIZING HEXAGONAL COMPRESSION CONNECTORS. NO POT METAL, SETSCREW, OR INDENTED TYPE FITTINGS SHALL BE UTILIZED.
- 6. PROVIDE SUPPORTS FOR ALL CONDUITS IN ACCORDANCE WITH NEC REQUIREMENTS. ALL CONDUITS SHALL BE SIZED AS REQUIRED BY NEC.
- 7. BURIAL DEPTH OF ALL CONDUITS SHALL BE AS REQUIRED BY CODE FOR EACH SPECIFIC CONDUIT TYPE AND APPLICATION.
- 8. CONDUIT ROUTES ARE SCHEMATIC. CONTRACTOR SHALL FIELD VERIFY BEFORE BID. COORDINATE ROUTE WITH WIRELESS CARRIER AND BUILDING OWNER.
- 9. UNDERGROUND AND ABOVE GROUND RACEWAYS SHALL NOT BE RELIED ON FOR GROUNDING CONTINUITY.

**EQUIPMENT:**

- 1. ALL DISCONNECT SWITCHES SHALL BE SERVICE ENTRANCE RATED, HEAVY DUTY TYPE.
- 2. NEW CIRCUIT BREAKERS SHALL BE RATED TO WITHSTAND THE MAXIMUM AVAILABLE FAULT CURRENT AS DETERMINED BY THE LOCAL UTILITY. CONTRACTOR SHALL VERIFY MAXIMUM AVAILABLE FAULT CURRENT, AND COORDINATE INSTALLATION WITH THE LOCAL UTILITY BEFORE STARTING WORK. CONTACT TEP IF FAULT CURRENT EXCEEDS BREAKER RATING.

**CONDUCTORS:**

- 1. FURNISH AND INSTALL CONDUCTORS CALLED FOR IN THE DRAWINGS. ALL CONDUCTORS SHALL HAVE TYPE THWN OR THW (75 °C) INSULATION, RATED FOR 600 VOLTS.
- 2. ALL CONDUCTORS SHALL BE COPPER, THE USE OF ALUMINUM CONDUCTORS SHALL NOT BE ALLOWED. ALL CONDUCTORS SHALL BE UL LISTED AND SHALL BE PROVIDED AND INSTALLED AS FOLLOWS:
  - A. MINIMUM WIRE SIZE SHALL BE #12 AWG.
  - B. ALL CONDUCTORS SIZE #8 AND LARGER SHALL BE STRANDED. CONDUCTORS SIZED #10 AND SMALLER MAY BE SOLID OR STRANDED.
  - C. CONNECTION FOR #10 AWG AND SMALLER SHALL BE BY TWISTING TIGHT AND INSTALLING INSULATED PRESSURE OR WIRE NUT CONNECTORS.
  - D. CONNECTION FOR #8 AWG AND LARGER SHALL BE BY USE OF STEEL CRIMP-ON SLEEVES WITH NYLON INSULATOR.
- 3. ALL CONDUCTORS SHALL BE COLOR CODED IN ACCORDANCE WITH NEC STANDARDS.
- 4. THE RACEWAY SYSTEM SHALL BE COMPLETE BEFORE INSTALLING CONDUCTORS.
- 5. A FULL SIZE NEUTAL SHALL BE PROVIDED FOR EACH CIRCUIT. NO SHARING OF NEUTRAL BETWEEN CIRCUITS ALLOWED.

**PENETRATIONS:**

CONTRACTOR SHALL COMPLY WITH THE LATEST UL PENETRATION DETAILS FOR PENETRATIONS OF ALL RATED WALLS, ROOF, ETC. SEE SHELTER MANUFACTURER DRAWINGS FOR ANY AND ALL PENETRATION DETAILS.

**GROUNDING:**

- 1. ALL ELECTRICAL NEUTRALS, RACEWAYS AND NON-CURRENT CARRYING PARTS OF ELECTRICAL EQUIPMENT AND ASSOCIATED ENCLOSURES SHALL BE GROUNDED IN ACCORDANCE WITH NEC ARTICLE 250. THIS SHALL INCLUDE NEUTRAL CONDUCTORS, CONDUITS, SUPPORTS, CABINETS, BOXES, GROUND BUSSES, ETC. THE NEUTRAL CONDUCTOR FOR EACH SYSTEM SHALL BE GROUNDED BY ONE POINT ONLY.
- 2. PROVIDE GROUND CONDUCTOR IN ALL RACEWAYS.
- 3. PROVIDE BONDING AND GROUND TO MEET NFPA 780 – LIGHTNING PROTECTION AS A MINIMUM.
- 4. PROVIDE GROUNDING SYSTEM AS INDICATED ON THE DRAWINGS, AS REQUIRED BY THE NATIONAL ELECTRIC CODE AND EQUIPMENT MANUFACTURER’S GROUNDING SPECIFICATIONS.

**INSPECTION:**

- 1. THE CONTRACTOR IS TO CONTACT THE OFFICE OF THE STATE ELECTRICAL INSPECTOR TO SCHEDULE THE REQUIRED INSPECTIONS.

**ABBREVIATIONS AND LEGEND**

A	- AMPERE	PNL	- PANEL
AFG	- ABOVE FINISHED GRADE	PNLBD	- PANELBOARD
ATS	- AUTOMATIC TRANSFER SWITCH	PVC	- SCH40 RIGID NON-METALLIC CONDUIT
AWG	- AMERICAN WIRE GAUGE	RGS	- RIGID GALVANIZED STEEL CONDUIT
BCW	- BARE COPPER WIRE	UL	- UNDERWRITERS LABORATORIES
BFG	- BELOW FINISHED GRADE	V	- VOLTAGE
BKR	- BREAKER	W	- WATTS
CKT	- CIRCUIT	XFMR	- TRANSFORMER
DISC	- DISCONNECT	XMTR	- TRANSMITTER
EMT	- ELECTRIC METALLIC TUBING		
FSC	- FLEXIBLE STEEL CONDUIT		
GEN	- GENERATOR		
GPS	- GLOBAL POSITIONING SYSTEM		
GRD	- GROUND		
IGB	- ISOLATED GROUND BAR		
IGR	- INTERIOR GROUND RING (HALO)		
KW	- KILOWATTS		
NEC	- NATIONAL ELECTRIC CODE		
PH	- PHASE		

----	E	----	UNDERGROUND ELECTRICAL CONDUIT
----	T	----	UNDERGROUND TELEPHONE CONDUIT
			⏚ KILOWATT-HOUR METER
----		----	UNDERGROUND BONDING AND GROUNDING CONDUCTOR.
		⊘	GROUND ROD
		●	CADWELD
		⊗	GROUND ROD WITH INSPECTION WELL

PLANS PREPARED FOR:



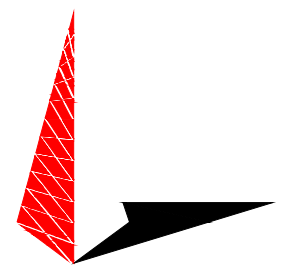
108 EAST FRONT STREET  
LILLINGTON, NC 27546  
OFFICE: (910) 814-6431

PROJECT INFORMATION:

**OAKRIDGE RIVER ROAD**

1979 OAKRIDGE RIVER ROAD  
FUQUAY-VARINA, NC 27526  
(HARNETT COUNTY)

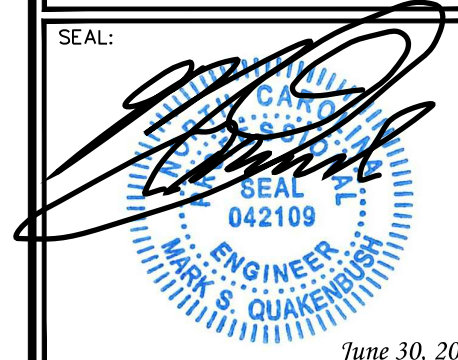
PLANS PREPARED BY:



**TOWER ENGINEERING PROFESSIONALS**  
326 TRYON ROAD  
RALEIGH, NC 27603-3530  
OFFICE: (919) 661-6351  
www.tepgroup.net

N.C. LICENSE # C-1794

SEAL:



REV	DATE	ISSUED FOR:
1	06-30-20	CONSTRUCTION
0	10-10-19	PRELIMINARY CONSTRUCTION

DRAWN BY: G5B CHECKED BY: JBG

SHEET TITLE:  
**ELECTRICAL NOTES**

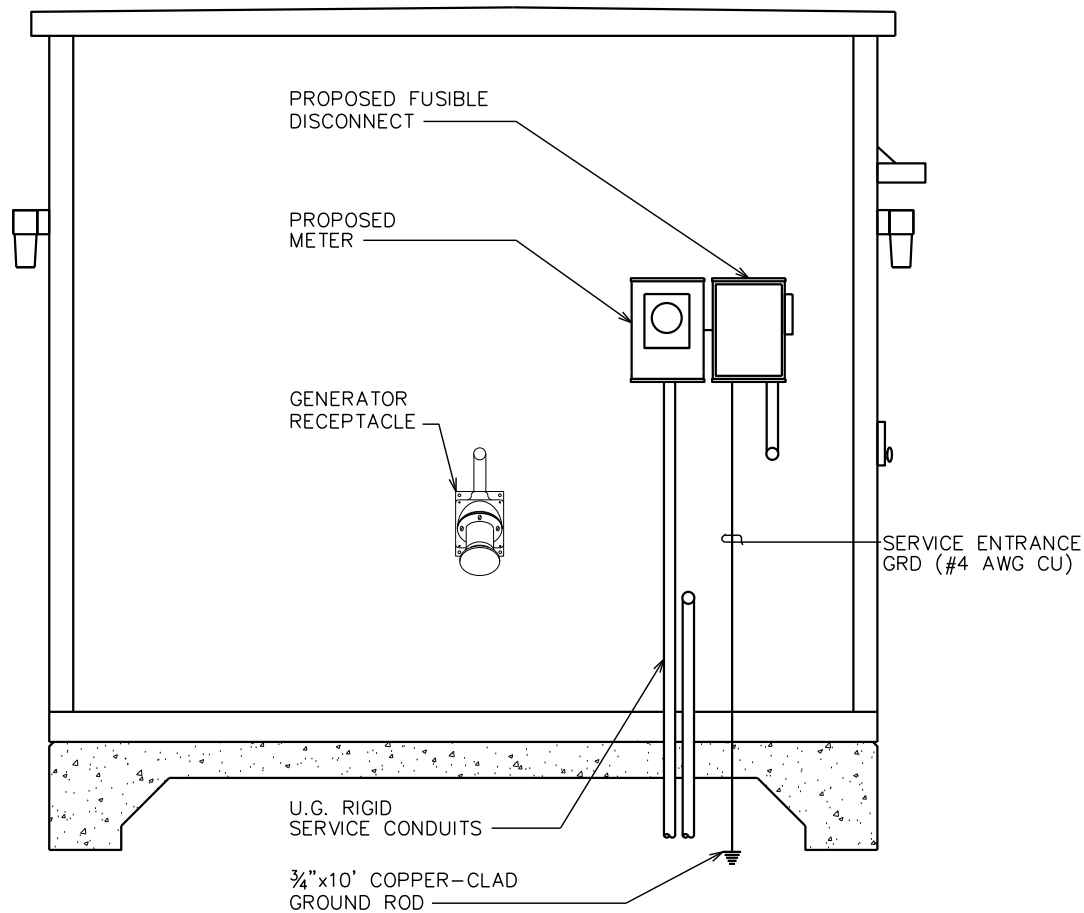
SHEET NUMBER: **E-1** REVISION: **1**  
TEP#: 153676.258201

**DRAWING NOTES:**

- ① 200 AMP, 1Ø METER
- ② 200 AMP, 1Ø DISCONNECT
- ③ 2½" PVC CONDUIT FOR GENERATOR SERVICE (200 AMP, 3W PLUS GROUND, 1Ø)
- ④ (2)-¾" PVC CONDUITS FOR GENERATOR CONTROL WIRING
- ⑤ 2½" PVC CONDUIT FOR MAIN SERVICE (200AMP, 120/240V, 3W, 1Ø)
- ⑥ GENERATOR RECEPTACLE BY APPLETON (P/N: ADJA20044-250 OR APPROVED EQUAL) W/ (4) WIRES - (2) POWER, (1) NEUTRAL, (1) GROUND TO BE INSTALLED ON EXTERIOR OF SHELTER. SEE RECEPTACLE ELEVATION, THIS SHEET. REQUIRED APPLETON PLUG (P/N: AP20044E)

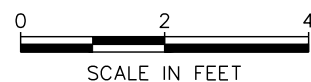
**NOTE:**

- 1. SEE SHEET E-3 FOR ONE-LINE DIAGRAM
- 2. SEE LEGEND, SHEET E-1



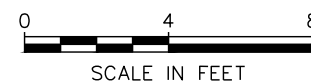
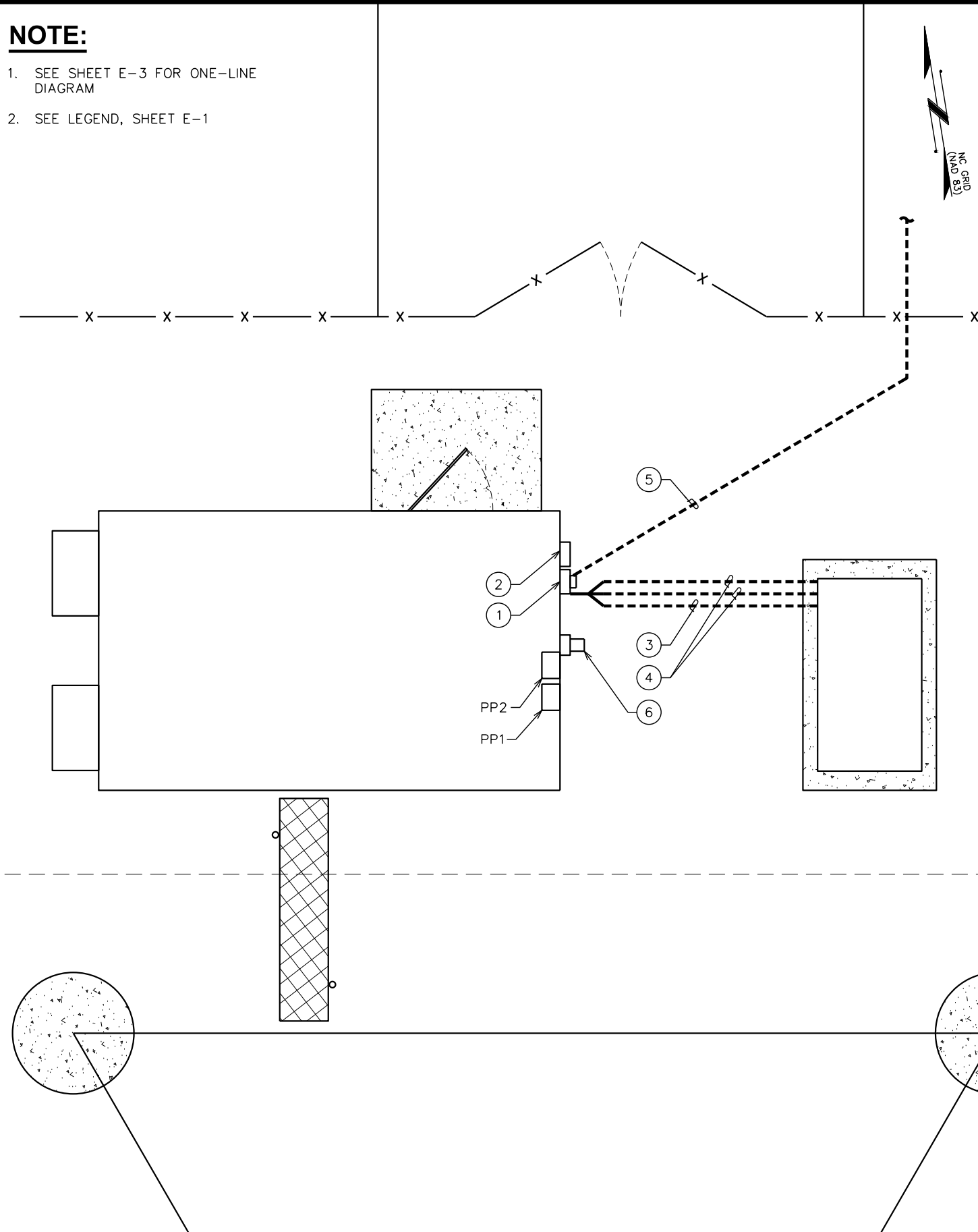
**SERVICE METER DETAILS**

SCALE: 3/8" = 1'-0"



**SERVICE ROUTING PLAN**

SCALE: 3/16" = 1'-0"



PLANS PREPARED FOR:



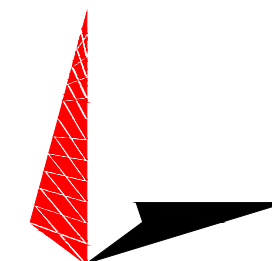
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PROJECT INFORMATION:

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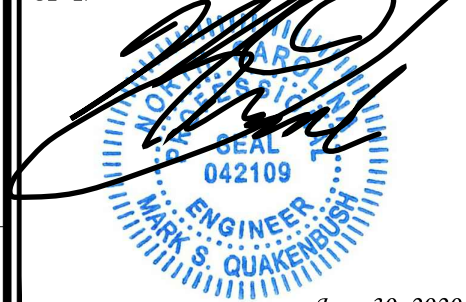
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June 30, 2020

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DRAWN BY: G5B CHECKED BY: JBG

SHEET TITLE:

**SERVICE ROUTING PLAN**

SHEET NUMBER:

**E-2**

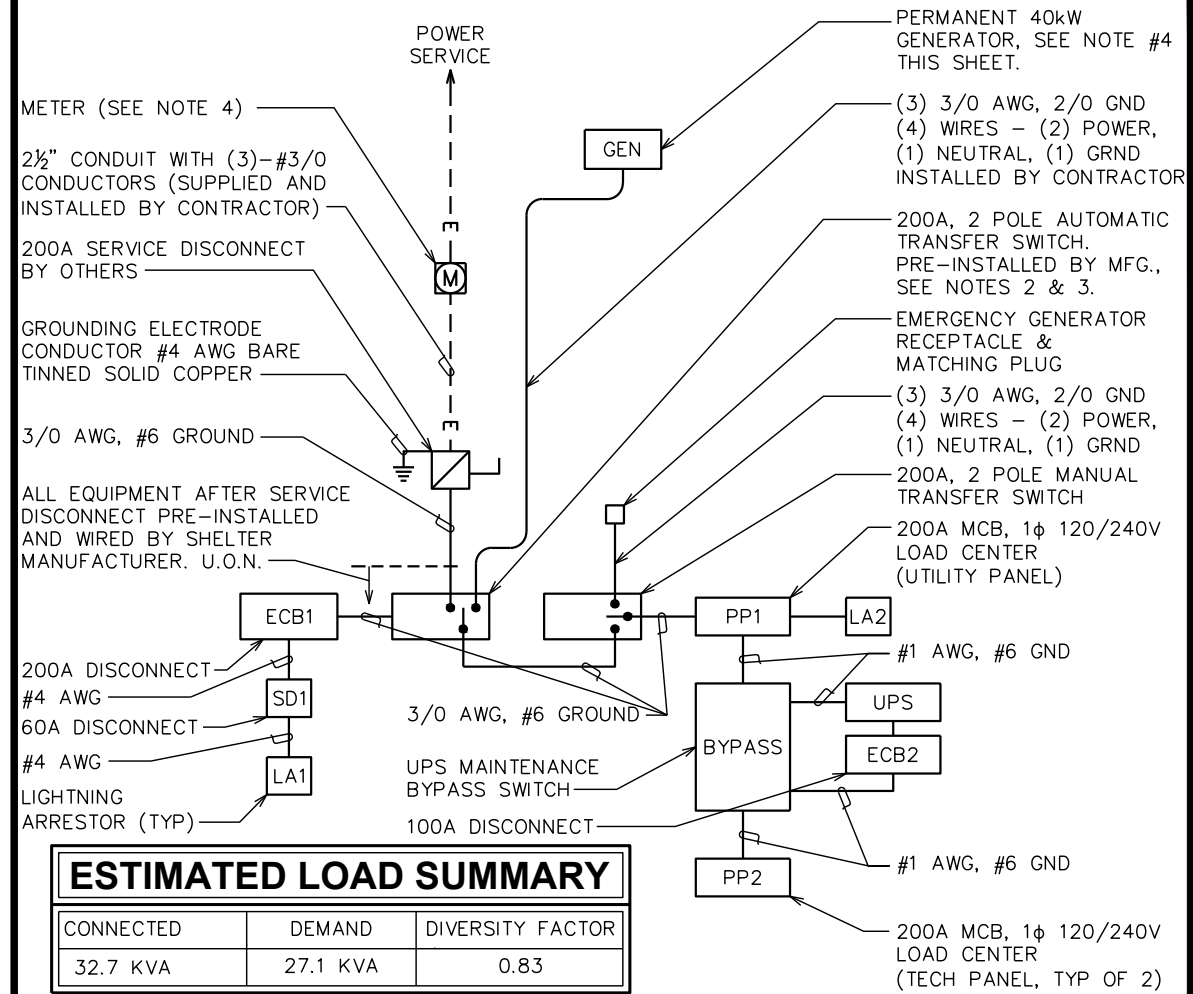
REVISION:

**1**

TEP#: 153676.258201

PP1 UTILITY 200AMP, 120/240VAC, 1Ø/3W, 60Hz, M.BKR, 10K AIC														
LOAD SERVED	VOLT AMPERES (WATTS)		WIRE	BREAKER		CKT #	PHASE	CKT #	BREAKER		WIRE	VOLT AMPERES (WATTS)		LOAD SERVED
	A	B		P	TRIP				TRIP	P		A	B	
LIGHTNING ARRESTOR	60		4	2	60	1	A	2	30	2	10	2880		ACH2
		60					B						2880	
ACH1	2880		10	2	30	5	A	6	20	1	12	540		INTERIOR RECEPTACLES
		2880					B						120	SMOKE DETECTOR
INTERIOR RECEPTACLES	540		12	1	20	9	A	10	125	2	1	5040		*UPS
INTERIOR LIGHTS		768	12	1	20	11	B						5040	TECH PANEL PP2
EXTERIOR RECEPTACLE	180		12	1	20	13	A	14	30	1	-	-	-	SPARE
EXTERIOR LIGHTS		200	12	1	20	15	B	16	20	1	-	-	-	SPARE
WATER HEATER JACKET	120		12	1	20	17	A	18	20	1	-	-	-	SPARE
GEN. BATT. CHARGER		120	12	1	20	19	B	20	20	1	-	-	-	SPARE
SPARE	-	-	-	1	20	21	A	22	20	1	-	-	-	SPARE
SPARE	-	-	-	1	20	23	B	24	20	1	-	-	-	SPARE
SPARE	-	-	-	1	20	25	A	26	20	1	-	-	-	SPARE
SPARE	-	-	-	1	20	27	B	28	20	1	-	-	-	SPARE
SPARE	-	-	-	1	20	29	A	30	20	1	-	-	-	SPARE
SPARE	-	-	-	1	20	31	B	32	20	1	-	-	-	SPARE
SPARE	-	-	-	1	20	33	A	34	20	1	-	-	-	SPARE
SPARE	-	-	-	1	20	35	B	36	20	1	-	-	-	SPARE
BATTERY CHARGER	2500		10	2	30	37	A	38	20	1	-	-	-	SPARE
		2500					B						-	SPARE
VOLT AMPS PER LEG	6280	6528										8460	8040	VOLT AMPS PER LEG
* ASSUMED LOADS								14740					14568	TOTAL VOLT AMPERES
								123					122	TOTAL AMPS PER LEG
												154		X 125% FOR GROWTH
												135		X 110% FOR MAIN

PP2 TECH 200AMP, 120/240VAC, 1Ø/3W, 60Hz, M.BKR, 10K AIC														
LOAD SERVED	VOLT AMPERES (WATTS)		WIRE	BREAKER		CKT #	PHASE	CKT #	BREAKER		WIRE	VOLT AMPERES (WATTS)		LOAD SERVED
	A	B		P	TRIP				TRIP	P		A	B	
* EQUIPMENT RCPT-1	360		12	1	20	1	A	2	20	1	12	360		* EQUIPMENT RCPT-2
* EQUIPMENT RCPT-3		360	12	1	20	7	B	8	20	1	12		360	* EQUIPMENT RCPT-4
* EQUIPMENT RCPT-5	360		12	1	20	5	A	6	20	1	12	360		* EQUIPMENT RCPT-6
* EQUIPMENT RCPT-7		360	12	1	20	7	B	8	20	1	12		360	* EQUIPMENT RCPT-8
* EQUIPMENT RCPT-9	360		12	1	20	9	A	10	20	1	12	360		* EQUIPMENT RCPT-10
* EQUIPMENT RCPT-11		360	12	1	20	11	B	12	20	1	12		360	* EQUIPMENT RCPT-12
* EQUIPMENT RCPT-13	360		12	1	20	13	A	14	20	1	12	360		* EQUIPMENT RCPT-14
* EQUIPMENT RCPT-15		360	12	1	20	15	B	16	20	1	12		360	* EQUIPMENT RCPT-16
* TRANS. CKT#17	360		12	1	20	17	A	18	20	1	12	360		* TRANS. CKT#18
* TRANS. CKT#19		360	12	1	20	19	B	20	20	1	12		360	* TRANS. CKT#20
* TRANS. CKT#21	360		12	1	20	21	A	22	20	1	12	360		* TRANS. CKT#22
* TRANS. CKT#23		360	12	1	20	23	B	24	20	1	12		360	* TRANS. CKT#24
* EQUIPMENT RCPT-25	360		12	1	20	25	A	26	20	1	12	360		* EQUIPMENT RCPT-26
* EQUIPMENT RCPT-27		360	12	1	20	27	B	28	20	1	12		360	* EQUIPMENT RCPT-28
SPARE	-	-	-	1	20	29	A	30	20	1	-	-	-	SPARE
SPARE	-	-	-	1	20	31	B	32	20	1	-	-	-	SPARE
SPARE	-	-	-	1	20	33	A	34	20	1	-	-	-	SPARE
SPARE	-	-	-	1	20	35	B	36	20	1	-	-	-	SPARE
SPARE	-	-	-	1	20	37	A	38	60	1	-	-	-	SPARE
SPARE	-	-	-	1	20	39	B	40	20	1	-	-	-	SPARE
VOLT AMPS PER LEG	2520	2520						5040				2520	2520	VOLT AMPS PER LEG
* ASSUMED LOADS								42					42	TOTAL VOLT AMPERES
														TOTAL AMPS PER LEG
												53		X 125% FOR GROWTH
												58		X 110% FOR MAIN



ESTIMATED LOAD SUMMARY		
CONNECTED	DEMAND	DIVERSITY FACTOR
32.7 KVA	27.1 KVA	0.83

- NOTES:**
- ELECTRICAL SERVICE SHALL BE 200A, 240/120V, 1Ø/3W.
  - PROVIDE SERVICE ENTRANCE RATED FUSIBLE SERVICE DISCONNECT SWITCH (200A, 3W, 1Ø, FUSED AT 200A). DOOR TO POWER PANEL CONTAINING MAIN DISCONNECT TO REMAIN UNLOCKED.
  - FOR COMPLETE INTERNAL WIRING AND ARRANGEMENT, REFER TO VENDOR PRINTS PROVIDED BY EQUIPMENT SHELTER MANUFACTURER.
  - GENERATOR CONDUCTORS SIZED BASED ON A MAXIMUM GENERATOR BREAKER RATING OF 200A.
  - PROPOSED METER EATON/CUTLER-HAMMER (P/N: UTH7213C) OR APPROVED EQUAL.
  - WHEN UTILITY COMPANY REQUIRES A SERVICE DISCONNECT OTHER THAN THE MAIN BREAKER IN POWER PANEL OF THE UTILITY CABINET, REMOVE BONDING JUMPER IN UTILITY CABINET AND BOND SERVICE DISCONNECT PER NEC REQUIREMENTS.
  - ELECTRICAL CONTRACTOR TO VERIFY LOAD. LOAD IS NOT TO EXCEED 200A. IF LOAD DOES EXCEED 200A CONTACT VFP, INC. ENGINEER OF RECORD FOR CORRECTIVE ACTION.
  - ALL EXTERIOR ENCLOSURES TO BE NEMA 3 RATED.
  - CONTRACTOR TO VERIFY BUILT-IN CIRCUIT BREAKER ON PERMANENT GENERATOR. ONE MUST BE PROVIDED BY PER NEC 700.12.
  - PERSONNEL WILL BE TRAINED ON THE USE OF THE PORTABLE GENERATOR AND MANUAL DISCONNECT SWITCH UNDER STANDARD OPERATING PROCEDURES.
  - AN EMERGENCY SIGN SHALL BE PLACED AT THE SERVICE ENTRANCE EQUIPMENT, INDICATING TYPE AND LOCATION OF ON-SITE EMERGENCY POWER SOURCES PER NEC 700.7 (B) & 702.7 (B).
  - AN WARNING SIGN SHALL BE PLACED AT THE PORTABLE GENERATOR POWER INLET, INDICATING TYPE AND LOCATION OF ON-SITE EMERGENCY POWER SOURCES PER NEC 702.7 (C).
  - THE SERVICE EQUIPMENT MUST BE MARKED IN THE FIELD WITH THE MAXIMUM AVAILABLE FAULT

**ONE LINE DIAGRAM**  
SCALE: N.T.S.

PLANS PREPARED FOR:

108 EAST FRONT STREET  
LILLINGTON, NC 27546  
OFFICE: (910) 814-6431

PROJECT INFORMATION:

**OAKRIDGE RIVER ROAD**

1979 OAKRIDGE RIVER ROAD  
FUQUAY-VARINA, NC 27526  
(HARNETT COUNTY)

PLANS PREPARED BY:

**TOWER ENGINEERING PROFESSIONALS**  
326 TRYON ROAD  
RALEIGH, NC 27603-3530  
OFFICE: (919) 661-6351  
www.tepgroup.net  
N.C. LICENSE # C-1794

SEAL:

June 30, 2020

REV	DATE	ISSUED FOR:
I	06-30-20	CONSTRUCTION
O	10-10-19	PRELIMINARY CONSTRUCTION

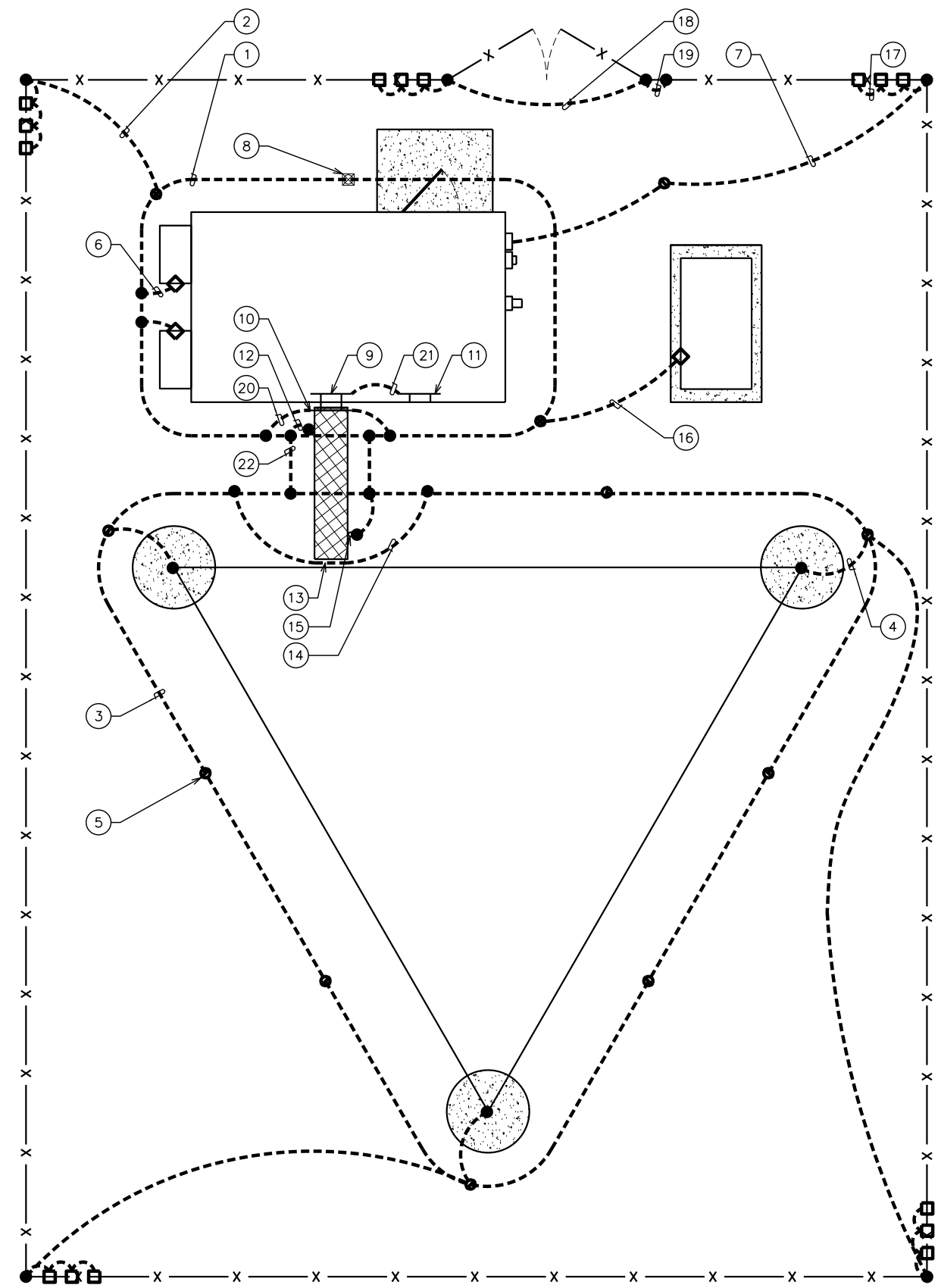
DRAWN BY: G5B CHECKED BY: JBG

SHEET TITLE:

**ONE-LINE DIAGRAM, PANEL SCHEDULE & NOTES**

SHEET NUMBER: **E-3** REVISION: 1  
TEP#: 153676.258201

**PANEL SCHEDULE**  
SCALE: N.T.S.



### GROUNDING NOTES

1. ALL GROUNDING IS TO BE INSTALLED PER MOTOROLA R-56 STANDARDS.
2. BONDING OF THE GROUNDED CONDUCTOR AND THE NEUTRAL CONDUCTOR SHALL BE AT THE SERVICE DISCONNECTING MEANS ONLY. BONDING JUMPER SHALL BE INSTALLED AT THE SERVICE DISCONNECT PER NEC 250.30. THE SERVICE DISCONNECT SHALL BE CONSIDERED ONLY THE METER DISCONNECT, THE GENERATOR FEED SHALL NOT CONSTITUTE A SEPARATELY DERIVED SYSTEM.
3. GROUND RING CONNECTION CONDUCTORS SHALL BE OF EQUAL SIZE, MATERIAL, AND BONDING TECHNIQUE.
4. CONTRACTOR SHALL ENSURE GROUND RING IS WITHIN 12 TO 36 INCHES OF THE SHELTER FOUNDATION. PROVIDE AND INSTALL GROUNDING CONNECTIONS SHOWN BELOW AS NEEDED PER EXISTING SITE GROUNDING SYSTEM. CONTRACTOR SHALL VERIFY ALL EXISTING SITE GROUNDING CONDITIONS BEFORE STARTING WORK OR PURCHASING EQUIPMENT.
5. BOND CGBE TO EXTERNAL GROUND RING WITH 2 RUNS OF #2 BARE, TINNED, SOLID COPPER CONDUCTOR IN PVC. CONNECT BAR END WITH 2 HOLE LUG, AND "CADWELD" THE OTHER END TO THE EXTERNAL GROUND ROD.
6. BONDING CONDUCTORS SHALL BE ROUTED THROUGH A 3/4" PVC CONDUIT SLEEVE RUN UNDER THE FOUNDATION. REFER TO THE GROUNDING PLAN BELOW.
7. BOND CGBE TO MGB WITH 2 RUNS OF #2 BARE, TINNED, SOLID COPPER CONDUCTOR.

### DRAWING NOTES:

- 1 #2 AWG SHELTER GROUND RING BURIED 30" BFG OR 6" BELOW FROST DEPTH (WHICHEVER IS GREATER).
- 2 #2 AWG BOND FROM SHELTER RING TO THE FENCE POST (TYP OF 2)
- 3 #2 AWG TOWER GROUND RING BURIED 30" BFG OR 6" BELOW FROST DEPTH (WHICHEVER IS GREATER). CONTRACTOR TO VERIFY LOCATION.
- 4 #2 AWG TOWER BOND TO TOWER GROUND RING (TYP OF 3).
- 5 3/4" X 10' COPPER CLAD STEEL GROUND ROD (TYP)
- 6 #2 AWG A/C BONDING CONDUCTOR (TYP OF 2)
- 7 #4 AWG SERVICE BONDING CONDUCTOR (COORDINATE WITH UTILITY)
- 8 GROUND ROD W/ INSPECTION WELL. SEE DETAIL, SHEET E-5
- 9 MASTER GROUND BAR (MGB). SEE NOTE #7, THIS SHEET.
- 10 COAX GROUND BAR EXTERIOR (CGBE) SEE NOTE #7, THIS SHEET.
- 11 TELCO GROUND BAR (AS NEEDED) (TGB)
- 12 #2 AWG ICE BRIDGE POST BONDING CONDUCTOR
- 13 TOWER BUSS BAR
- 14 #2 AWG TOWER BUSS BAR BONDING CONDUCTOR (TYP OF 2)
- 15 TYPICAL ICE BRIDGE POST
- 16 #2 AWG GENERATOR BONDING CONDUCTOR
- 17 FENCE FABRIC & DETERRENT WIRE BONDING JUMPER. SEE DETAIL, SHEET E-5.
- 18 #2 AWG GATE BONDING CONDUCTOR
- 19 GATE HINGE GROUND. SEE DETAIL, SHEET E-5.
- 20 CGBE BONDING CONDUCTOR (SEE NOTE #5, THIS SHEET)
- 21 #2 AWG BONDING CONDUCTOR
- 22 #2 AWG BONDING CONDUCTOR (TYP OF 2)



### EQUIPMENT GROUNDING PLAN

SCALE: N.T.S.

PLANS PREPARED FOR:



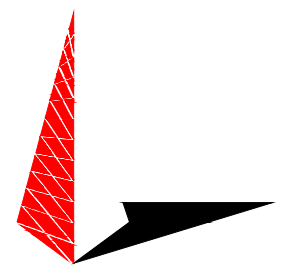
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OFFICE: (910) 814-6431

PROJECT INFORMATION:

### OAKRIDGE RIVER ROAD

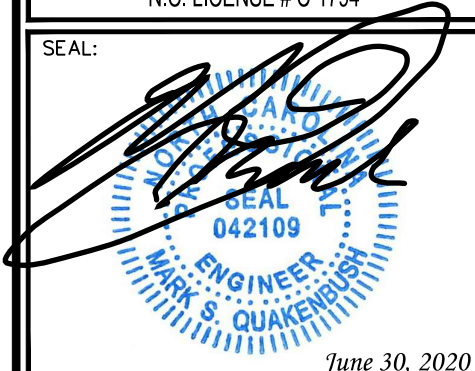
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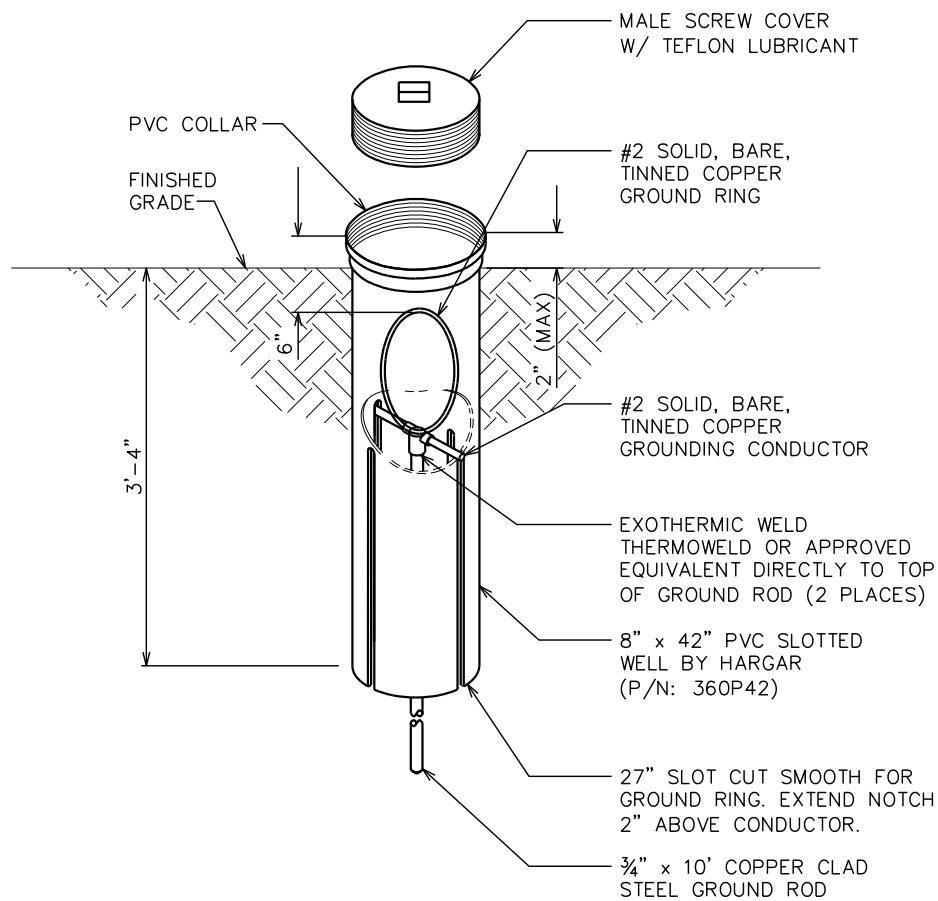


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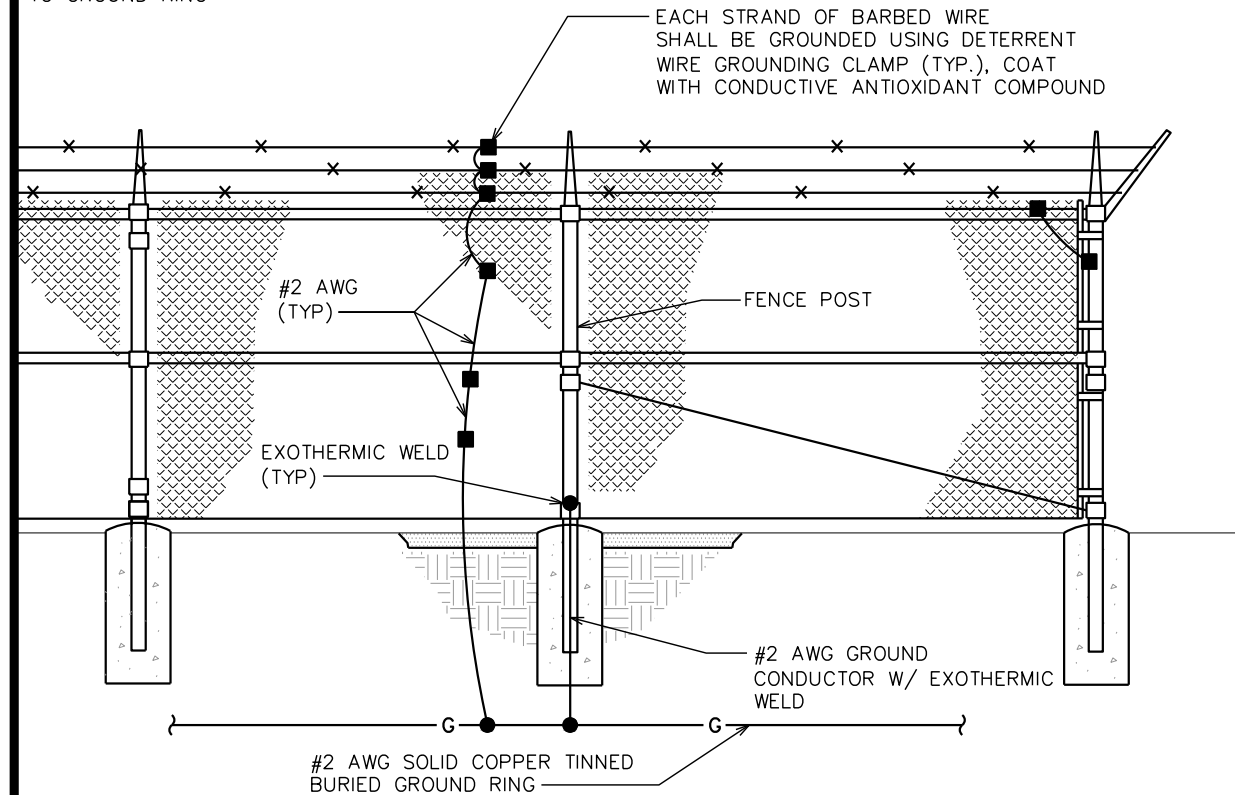
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SHEET TITLE:  
**EQUIPMENT GROUNDING PLAN AND NOTES**

SHEET NUMBER: **E-4** REVISION: **1**  
TEP#: 153676.258201



**NOTE:**  
GROUND EACH FENCE SECTION  
TO GROUND RING



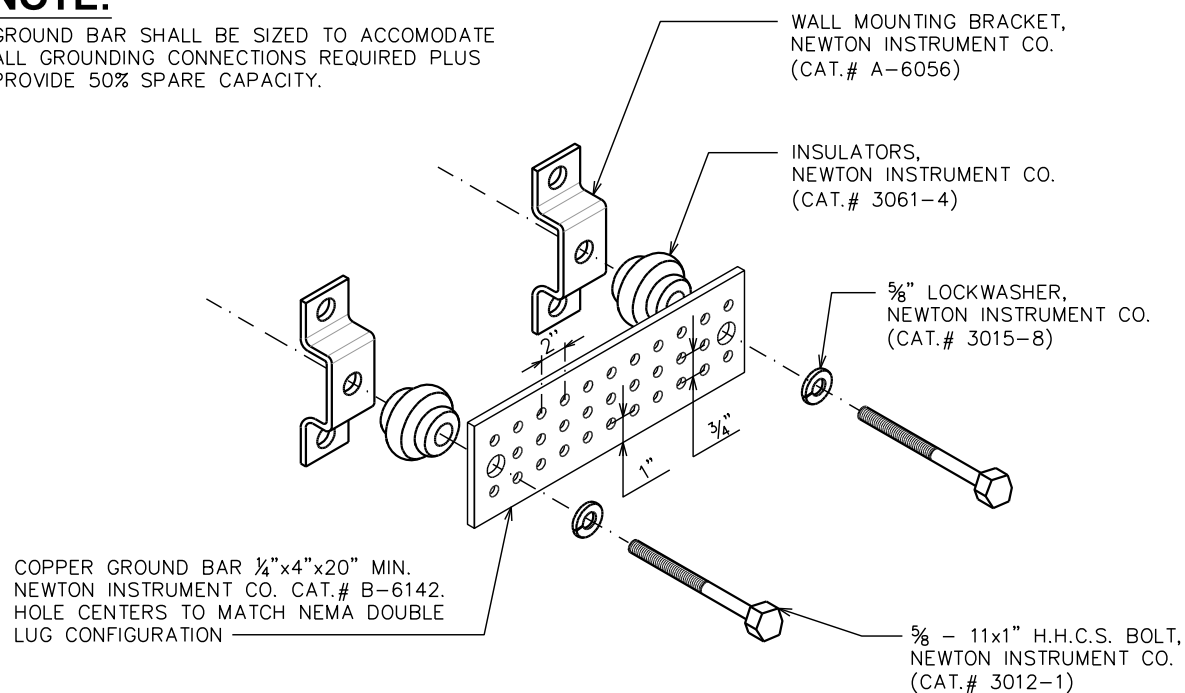
**GROUND ROD WITH INSPECTION WELL**

SCALE: N.T.S.

**FENCE FABRIC GROUNDING DETAIL**

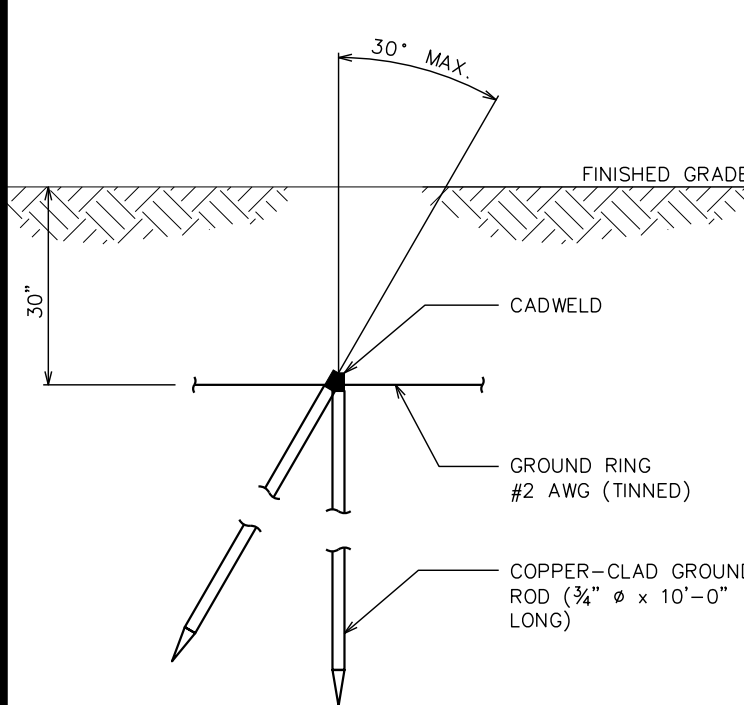
SCALE: N.T.S.

**NOTE:**  
GROUND BAR SHALL BE SIZED TO ACCOMMODATE  
ALL GROUNDING CONNECTIONS REQUIRED PLUS  
PROVIDE 50% SPARE CAPACITY.



**STANDARD GROUND BAR DETAIL**

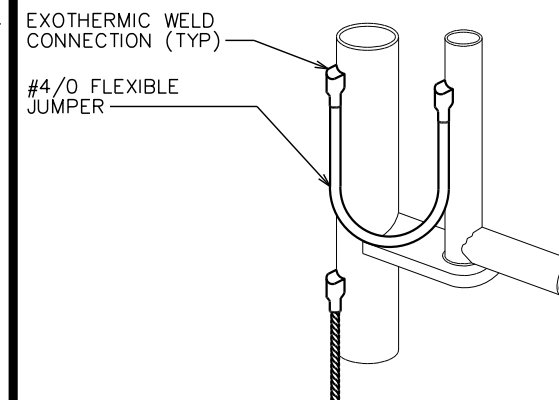
SCALE: N.T.S.



**COPPER-CLAD STEEL GROUND ROD**


SCALE: N.T.S.

**NOTE:**  
INSTALL AS NEEDED PER SITE CONDITIONS.

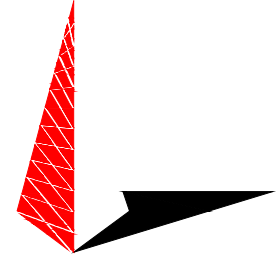


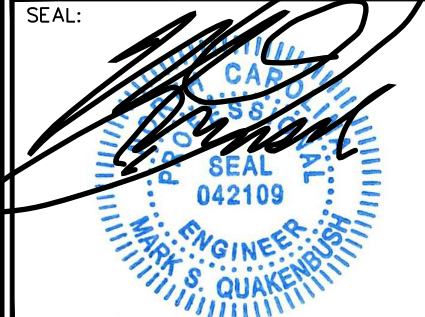
**GATE POST GROUND**

SCALE: N.T.S.

PLANS PREPARED FOR:  
  
108 EAST FRONT STREET  
LILLINGTON, NC 27546  
OFFICE: (910) 814-6431

PROJECT INFORMATION:  
**OAKRIDGE RIVER  
ROAD**  
1979 OAKRIDGE RIVER ROAD  
FUQUAY-VARINA, NC 27526  
(HARNETT COUNTY)

PLANS PREPARED BY:  
  
**TOWER ENGINEERING PROFESSIONALS**  
326 TRYON ROAD  
RALEIGH, NC 27603-3530  
OFFICE: (919) 661-6351  
www.tepgroup.net  
N.C. LICENSE # C-1794

SEAL:  
  
June 30, 2020

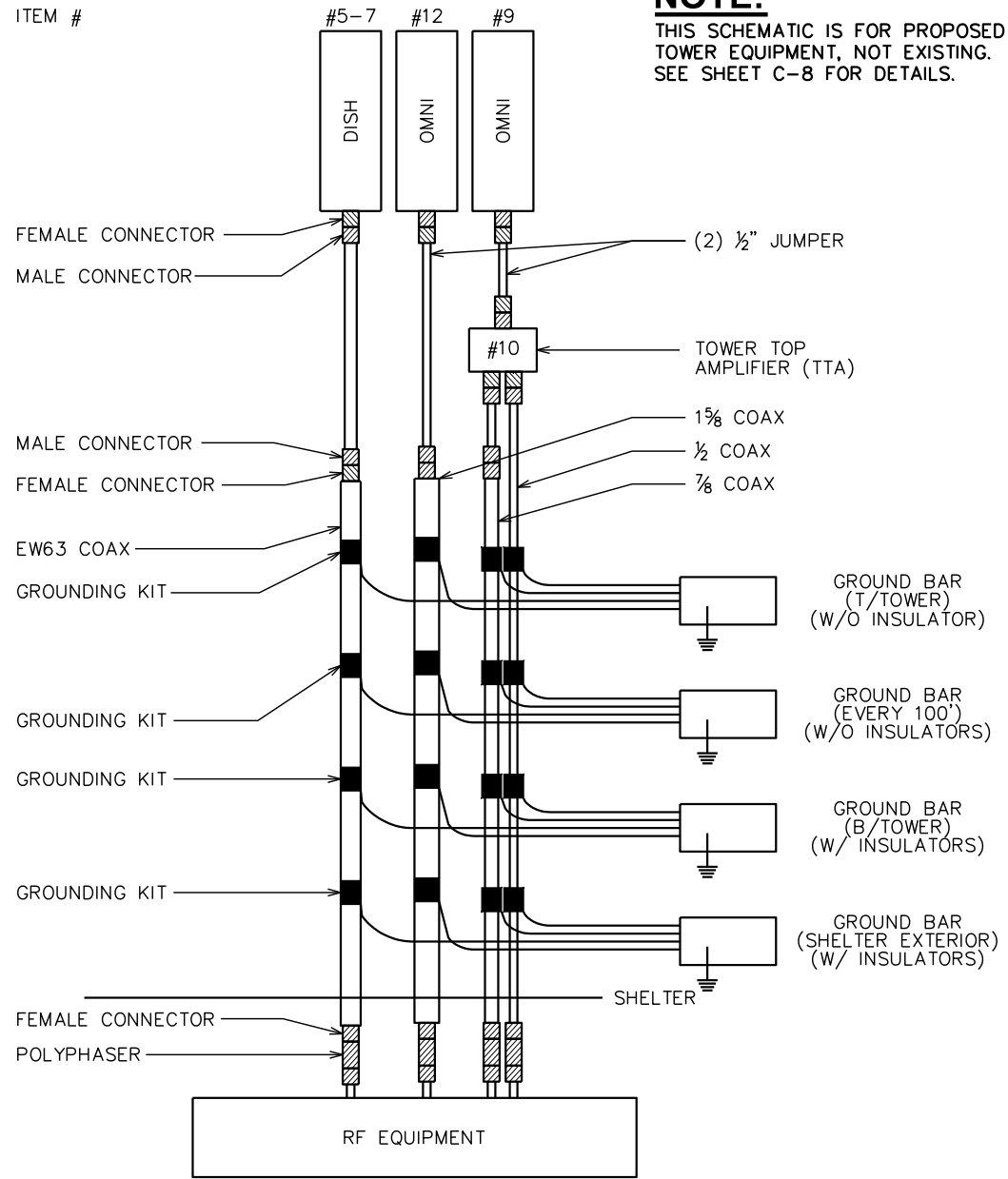
REV	DATE	ISSUED FOR:
1	06-30-20	CONSTRUCTION
0	10-10-19	PRELIMINARY CONSTRUCTION

DRAWN BY: G5B CHECKED BY: JBG

SHEET TITLE:  
**GROUNDING  
DETAILS I**

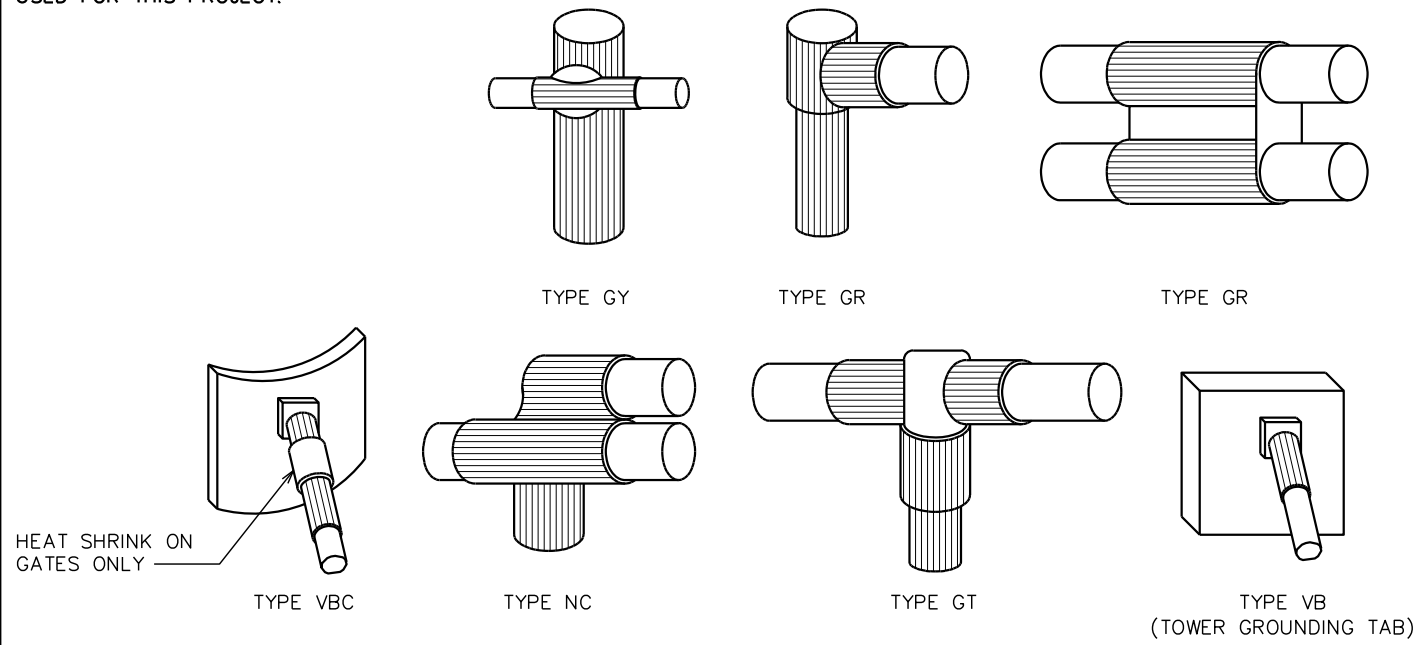
SHEET NUMBER: **E-5** REVISION: **1**  
TEP#: 153676.258201

ITEM #



**NOTE:**  
THIS SCHEMATIC IS FOR PROPOSED TOWER EQUIPMENT, NOT EXISTING. SEE SHEET C-8 FOR DETAILS.

**NOTE:**  
CADWELD "TYPES" SHOWN ARE EXAMPLES. CONSULT WITH PROJECT MANAGER FOR SPECIFIC TYPES OF CADWELDS TO BE USED FOR THIS PROJECT.



PLANS PREPARED FOR:  
  
108 EAST FRONT STREET  
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PROJECT INFORMATION:  
**OAKRIDGE RIVER ROAD**  
1979 OAKRIDGE RIVER ROAD  
FUQUAY-VARINA, NC 27526  
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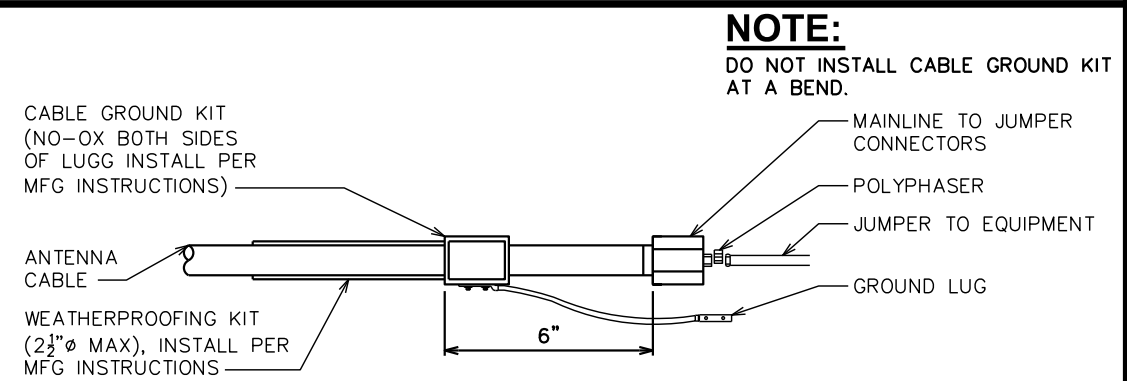
PLANS PREPARED BY:  
  
**TOWER ENGINEERING PROFESSIONALS**  
326 TRYON ROAD  
RALEIGH, NC 27603-3530  
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**CADWELD DETAILS**

SCALE: N.T.S.

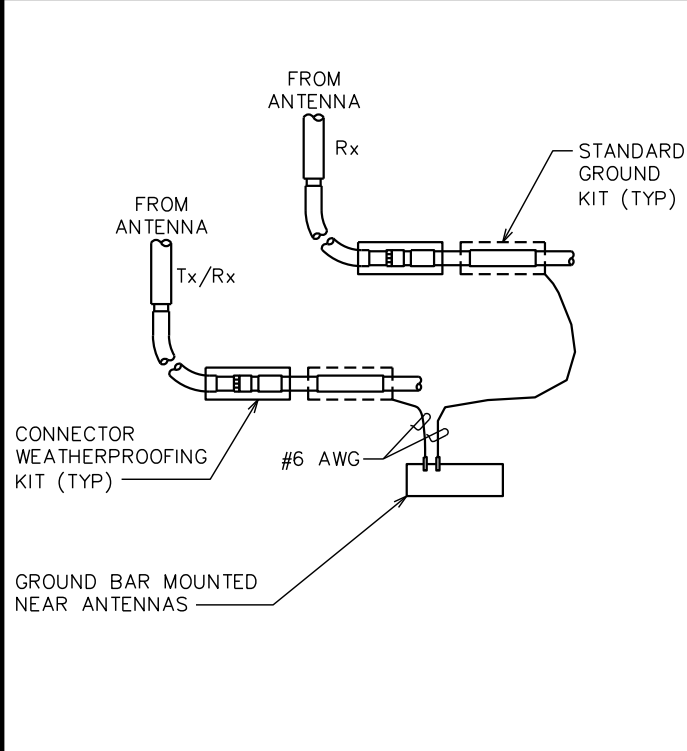
**ANTENNA CABLE & GROUNDING SCHEMATIC**

SCALE: N.T.S.



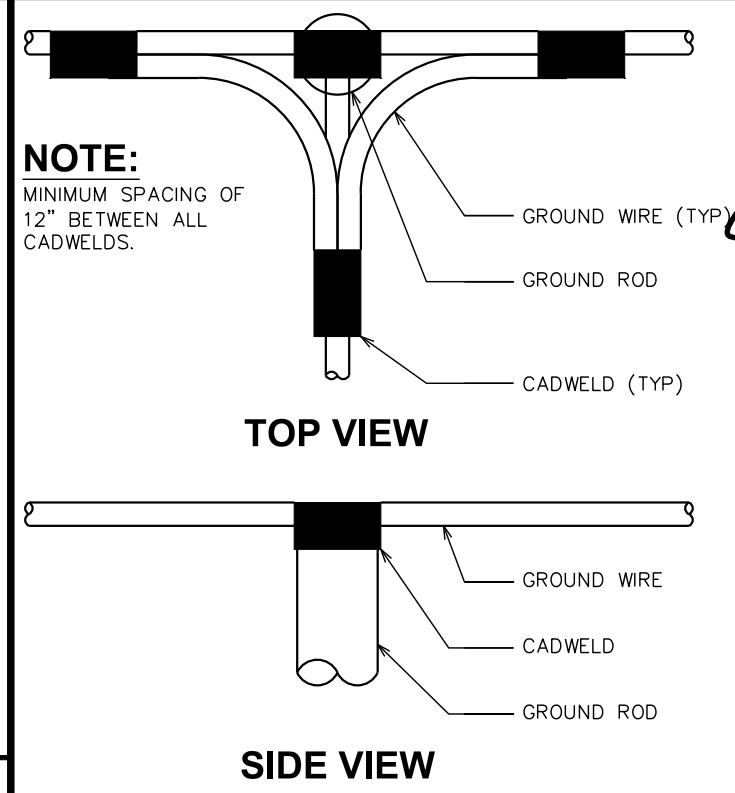
**CABLE GROUNDING DETAIL**

SCALE: N.T.S.



**GROUND WIRE TO GROUND BAR CONNECTION AT ANTENNA**

SCALE: N.T.S.



**CADWELD GROUNDING DETAIL**

SCALE: N.T.S.

SEAL:  
  
June 30, 2020

REV	DATE	ISSUED FOR:
1	06-30-20	CONSTRUCTION
0	10-10-19	PRELIMINARY CONSTRUCTION

DRAWN BY: G5B CHECKED BY: JBG

SHEET TITLE:  
**GROUNDING DETAILS II**

SHEET NUMBER:  
**E-6**

REVISION:  
**1**

T#:# 153676.258201