

**NOTE:**  
 SITE IS LOCATED WITHIN FEMA FLOOD MAP  
 AREA 3710979600K DATED 02/02/2007  
 WITHIN FLOOD ZONE X.

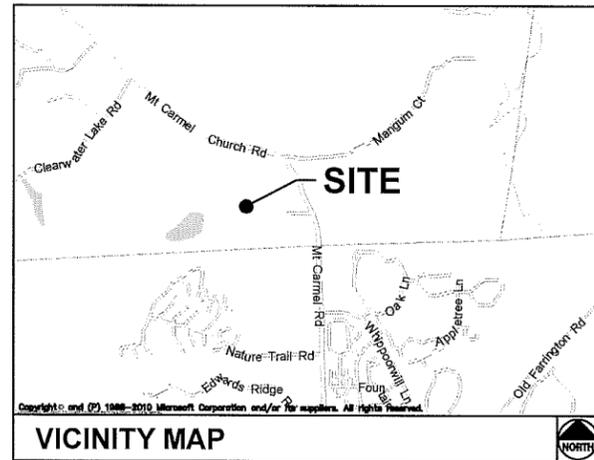
# TowerCom®

WITH VERIZON WIRELESS  
 PROPOSED 195' MONOPOLE

## CLEARWATER LAKE

### SITE ADDRESS

1941 MT. CARMEL CHURCH ROAD  
 CHAPEL HILL, NC 27514  
 ORANGE COUNTY  
 LATITUDE: 35° 51' 52.848" N  
 LONGITUDE: 79° 01' 50.836" W  
 TAX/PIN #: 9796099658  
 ZONING: RB



**VICINITY MAP**

FROM CHARLOTTE OFFICE: START OUT GOING SOUTHWEST ON RESEARCH DRIVE TOWARDS HARRIS BLVD 0.4 MILE; TURN LEFT ONTO W WT HARRIS BLVD 0.4 MILE; TURN LEFT ONTO THE I-85N RAMP 0.3 MILE; MERGE ONTO I-85N 42.1 MILES; KEEP LEFT AT THE FORK TO STAY ON I-85N 32.8 MILES; KEEP RIGHT AT THE FORK TO CONTINUE ON I-85BUS N/ US-29N/ US-70E, FOLLOWING SIGNS FOR GREENSBORO 12.0 MILES; MERGE ONTO I-40E/ I-85N 15.8 MILES; TAKE EXIT 148 FOR NC-54 TOWARD CHAPEL HILL/ CARRBORO 0.3 MILE; TURN RIGHT ONTO NC-54E/ E HARDEN ST 23.3 MILES; TAKE THE US-15S/ US-501S RAMP TO NC-86N/ UNC CHAPEL HILL/ PITTSBORO 0.2 MILE; TURN RIGHT ONTO US-15S/ US-501S/ S COLUMBIA ST 0.1 MILE; TURN LEFT AT THE 1ST CROSS STREET ONTO MT CARMEL CHURCH RD 2.3 MILES; ARRIVE AT DESTINATION ON THE RIGHT.

### DRIVING DIRECTIONS

**MUNICIPALITY:**  
 ORANGE COUNTY

**STATE:**  
 NORTH CAROLINA

**TOWER TYPE:**  
 MONOPOLE TOWER

**TOWER HEIGHT:**  
 195' (199' TO HIGHEST APPURTENANCE)

**NUMBER OF CARRIERS:**  
 0 EXISTING, 1 PROPOSED

**USE:**  
 PROPOSED TELECOMMUNICATIONS TOWER AND UNMANNED EQUIPMENT SHELTER

**CONSULTANT**  
 KIMLEY-HORN AND ASSOCIATES, INC.  
 2 SUN COURT, SUITE 450  
 PEACHTREE CORNERS, GEORGIA 30092  
 PHONE: (678) 533-3928  
 ATTN.: KEITH MARKLAND

### PROJECT SUMMARY

**DEVELOPER**  
 TOWERCOM  
 5611 HWY 55, SUITE 201  
 DURHAM, NC 27713  
 PHONE: (919) 666-2903  
 ATTN: GEORGE DAVIS

**POWER COMPANY**  
 DUKE PROGRESS  
 PHONE: (800) 769-3766  
 ATTN.: CUSTOMER SERVICE

**TELEPHONE COMPANY**  
 AT&T  
 PHONE: (800) 344-7485  
 ATTN.: CUSTOMER SERVICE

**PROPERTY OWNER**  
 BUCKNER FAMILY FARM TRUST  
 109 W FRANKLIN ST. STE 101  
 ROCKINGHAM, NC 28379  
 PHONE: (910) 997-5076  
 ATTN.: RIC BUCKNER

### CONTACTS

| SHEET | DESCRIPTION                             | REV. |
|-------|---|------|
| T1    | COVER SHEET                             | 1    |
| T2    | APPENDIX B: BUILDING CODE SUMMARY       | 0    |
| --    | SITE SURVEY (SHEET 1 OF 3)              | 0    |
| --    | SITE SURVEY (SHEET 2 OF 3)              | 0    |
| --    | SITE SURVEY (SHEET 3 OF 3)              | 0    |
| C1    | OVERALL SITE PLAN                       | 1    |
| C2    | SITE PLAN                               | 1    |
| C3    | FOUNDATION AND SHELTER TIE DOWN DETAILS | 0    |
| C4    | SHELTER ELEVATIONS                      | 0    |
| C5    | FENCE, GATE, AND COMPOUND DETAILS       | 0    |
| C6.1  | GRADING PLAN 1 OF 2                     | 1    |
| C6.2  | GRADING PLAN 2 OF 2                     | 1    |
| C7.1  | EROSION CONTROL PLAN PHASE 1 1 OF 2     | 1    |
| C7.2  | EROSION CONTROL PLAN PHASE 1 2 OF 2     | 1    |
| C7.3  | EROSION CONTROL PLAN PHASE 2 1 OF 2     | 1    |
| C7.4  | EROSION CONTROL PLAN PHASE 2 2 OF 2     | 1    |
| C8    | GRADING AND EROSION CONTROL DETAILS     | 0    |
| C8.1  | GRADING AND EROSION CONTROL DETAILS     | 0    |
| C8.2  | GRADING AND EROSION CONTROL DETAILS     | 1    |
| C9    | ACCESS ROAD DETAILS                     | 0    |
| C10   | SITE SIGNAGE DETAILS                    | 0    |
| C11   | WAVEGUIDE BRIDGE DETAILS                | 0    |
| C12   | ANTENNA AND TOWER ELEVATION DETAILS     | 0    |
| L1    | LANDSCAPING PLAN                        | 0    |
| L2    | LANDSCAPING NOTES                       | 0    |
| E1    | BASIC SERVICE ROUTING PLAN              | 0    |
| E2    | GROUNDING PLAN                          | 0    |
| E3    | SINGLE-LINE DIAGRAM                     | 0    |
| E4    | ELECTRICAL DETAILS                      | 0    |
| E5    | H-FRAME DETAIL                          | 0    |
| E6    | GROUNDING DETAIL                        | 0    |

### SHEET INDEX

**ORANGE COUNTY PLANNING & INSPECTIONS**  
 200 S. CAMERON ST  
 HILLSBOROUGH, NC 27278  
 PHONE: (919) 732-8181  
 ATTN.: CUSTOMER SERVICE

### PERMIT INFORMATION

# TowerCom

**PROJECT INFORMATION:**  
**VERIZON NAME:**  
 CLEARWATER LAKE  
**VERIZON No.:** TBD  
 1941 MT. CARMEL CHURCH ROAD  
 CHAPEL HILL, NC 27517  
 ORANGE COUNTY

**CURRENT ISSUE DATE:**  
 09/30/16

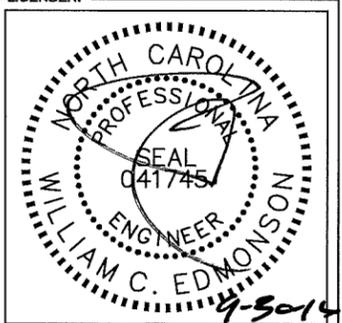
**ISSUED FOR:**  
 CONSTRUCTION

| REV. | DATE     | ISSUED FOR   | BY  |
|------|----------|--------------|-----|
| 0    | 09/01/16 | CONSTRUCTION | WCE |
| 1    | 09/30/16 | CONSTRUCTION | WCE |

**CONSULTANT:**  
**Kimley»Horn**  
 2 SUN COURT, SUITE 450  
 PEACHTREE CORNERS, GA 30092  
 PHONE: 770-825-0744  
 WWW.KIMLEY-HORN.COM  
 NC License F-0102

**CONSULTANT:**

**DRAWN BY:** MWD  
**CHK.:** KRM  
**APV.:** WCE



**SHEET TITLE:**

**COVER SHEET**

**SHEET NUMBER:** T1  
**REVISION:** 1  
 012055945

K:\ATL\_Wireless\TowerCom\CLEARWATER LAKE\CAD\CD\Rev1-9-30-16\CLEARWATER LAKE\_CD\_R1.dwg September 30, 2016 10:37 AM by: Emily.Flood

**2012 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: **VERIZON WIRELESS - CLEARWATER LAKE**  
 Address: **1941 MT. CARMEL CHURCH ROAD, CHAPEL HILL, NC** Zip Code **27517**  
 Proposed Use: **WIRELESS COMMUNICATION SERVICES**  
 Owner/Authorized Agent: **KEITH MARKLAND** Phone # ( **678** ) **533 - 3928** E-Mail **keith.markland@kimley-horn.com**  
 Owned By:  City/County  Private  State  **Kimley-Horn**  
 Code Enforcement Jurisdiction:  City **CHAPEL HILL**  County **ORANGE**  State

LEAD DESIGN PROFESSIONAL: **WILLIAM C. EDMONSON, P.E. (#041745)**

| DESIGNER                 | FIRM                            | NAME                       | LICENSE #     | TELEPHONE #           | E-MAIL |
|--------------------------|---------------------------------|----------------------------|---------------|-----------------------|--------|
| Architectural            | <b>KIMLEY-HORN &amp; ASSOC.</b> | <b>WILLIAM C. EDMONSON</b> | <b>041745</b> | <b>(404) 201-6156</b> |        |
| Civil                    |                                 |                            |               |                       |        |
| Electrical               | <b>APOSE CONSULTING</b>         | <b>JOHN K. MASON</b>       | <b>23894</b>  | <b>(919) 856-7420</b> |        |
| Fire Alarm               |                                 |                            |               |                       |        |
| Plumbing                 |                                 |                            |               |                       |        |
| Mechanical               |                                 |                            |               |                       |        |
| Sprinkler-Standpipe      |                                 |                            |               |                       |        |
| Structural               |                                 |                            |               |                       |        |
| Retaining Walls >5' High |                                 |                            |               |                       |        |
| Other                    |                                 |                            |               |                       |        |

2012 EDITION OF NC CODE FOR:  New Construction  Addition  Upfit  
 EXISTING:  Reconstruction  Alteration  Repair  Renovation  
 CONSTRUCTED: (date) \_\_\_\_\_ ORIGINAL USE(S) (Ch. 3): **TELECOMMUNICATIONS SITE**  
 RENOVATED: (date) \_\_\_\_\_ CURRENT USE(S) (Ch. 3): **TELECOMMUNICATIONS SITE**  
 PROPOSED USE(S) (Ch. 3): **TELECOMMUNICATIONS SITE**

**BASIC BUILDING DATA**

Construction Type:  I-A  II-A  III-A  IV  V-A  
 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 (Primary) Flood Hazard Area:  No  Yes

Building Height: (feet) **10'**

Gross Building Area:

| FLOOR                 | EXISTING (SQ FT) | NEW (SQ FT) | SUB-TOTAL   |
|-----------------------|------------------|-------------|-------------|
| 6 <sup>th</sup> Floor |                  |             |             |
| 5 <sup>th</sup> Floor |                  |             |             |
| 4 <sup>th</sup> Floor |                  |             |             |
| 3 <sup>rd</sup> Floor |                  |             |             |
| 2 <sup>nd</sup> Floor |                  |             |             |
| Mezzanine             |                  |             |             |
| 1 <sup>st</sup> Floor |                  | <b>339'</b> | <b>339'</b> |
| Basement              |                  |             |             |
| <b>TOTAL</b>          |                  | <b>339'</b> | <b>339'</b> |

**ALLOWABLE AREA**

Occupancy:  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  I-2  I-3  I-4  I-3 Condition  1  2  3  4  5  
 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 Occupancies:  
 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  I-2  I-3  I-4  I-3 Condition  1  2  3  4  5  
 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

Incidental Uses (Table 508.2.5):  
 Furnace room where any piece of equipment is over 400,000 Btu per hour input  
 Rooms with boilers where the largest piece of equipment is over 15 psi and 10 horsepower  
 Refrigerant machine room  
 Hydrogen cutoff rooms, not classified as Group H  
 Incinerator rooms  
 Paint shops, not classified as Group H, located in occupancies other than Group F  
 Laboratories and vocational shops, not classified as Group H, located in a Group E or I-2 occupancy  
 Laundry rooms over 100 square feet  
 Group I-3 cells equipped with padded surfaces  
 Group I-2 waste and linen collection rooms  
 Waste and linen collection rooms over 100 square feet  
 Stationary storage battery systems having a liquid electrolyte capacity of more than 50 gallons, or a lithium-ion capacity of 1,000 pounds used for facility standby power, emergency power or uninterrupted power supplies  
 Rooms containing fire pumps  
 Group I-2 storage rooms over 100 square feet  
 Group I-2 commercial kitchens  
 Group I-2 laundries equal to or less than 100 square feet  
 Group I-2 rooms or spaces that contain fuel-fired heating equipment  
 Special Uses:  402  403  404  405  406  407  408  409  410  411  412  413  414  415  416  417  418  419  420  421  422  423  424  425  426  427  
 Special Provisions:  509.2  509.3  509.4  509.5  509.6  509.7  509.8  509.9

Mixed Occupancy:  No  Yes Separation: \_\_\_\_\_ Hr. Exception: \_\_\_\_\_  
 Incidental Use Separation (508.2.5)  
 This separation is not exempt as a Non-Separated Use (see exceptions).  
 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.

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

| STORY NO. | DESCRIPTION AND USE | (A) BLDG AREA PER STORY (ACTUAL) | (B) TABLE AREA | (C) AREA FOR FRONTAGE INCREASE <sup>2</sup> | (D) AREA FOR SPRINKLER INCREASE <sup>2</sup> | (E) ALLOWABLE AREA OR UNLIMITED <sup>3</sup> | (F) MAXIMUM BUILDING AREA <sup>4</sup> |
|-----------|---------------------|----------------------------------|----------------|---|--|--|--|
|           |                     |                                  |                |   |  |  |  |

<sup>1</sup> Frontage area increases from Section 506.2 are computed thus:  
 a. Perimeter which fronts a public way or open space having 20 feet minimum width = \_\_\_\_\_ (F)  
 b. Total Building Perimeter = \_\_\_\_\_ (P)  
 c. Ratio (F/P) = \_\_\_\_\_ (F/P)  
 d. W = Minimum width of public way = \_\_\_\_\_ (W)  
 e. Percent of frontage increase  $I_f = 100 [ (F/P) - 0.25 ] \times W/30 = \_\_\_\_\_\_ (\%)$   
<sup>2</sup> The sprinkler increase per Section 506.3 is as follows:  
 a. Multi-story building  $I_s = 200$  percent  
 b. Single-story building  $I_s = 300$  percent  
<sup>3</sup> Unlimited area applicable under conditions of Section 507.  
<sup>4</sup> Maximum Building Area = total number of stories in the building x E (506.4).  
<sup>5</sup> The maximum area of open parking garages must comply with Table 406.3.5. The maximum area of air traffic control towers must comply with Table 412.1.2.

**ALLOWABLE HEIGHT**

| ALLOWABLE (TABLE 503)      | INCREASE FOR SPRINKLERS | SHOWN ON PLANS | CODE REFERENCE |
|----------------------------|-------------------------|----------------|----------------|
| <b>N/A</b>                 |                         |                |                |
| Type of Construction       |                         | Type           |                |
| Building Height in Feet    | Feet = H + 20' = _____  |                |                |
| Building Height in Stories | Stories + 1 = _____     |                |                |

**FIRE PROTECTION REQUIREMENTS**

| BUILDING ELEMENT                                      | FIRE SEPARATION DISTANCE (FEET) | RATING REQ'D | RATING PROVIDED (W/ REDUCTION) | DETAIL # AND SHEET # | DESIGN # FOR RATED ASSEMBLY | DESIGN # FOR RATED PENETRATION | DESIGN # FOR RATED JOINTS |
|---|---------------------------------|--------------|--------------------------------|----------------------|-----------------------------|--------------------------------|---------------------------|
| Structural Frame, including columns, girders, trusses |                                 |              | N/A                            |                      |                             |                                |                           |
| Bearing Walls   |                                 |              |                                |                      |                             |                                |                           |
| Exterior  |                                 |              |                                |                      |                             |                                |                           |
| North   | N/A                             | 2            |                                |                      |                             |                                |                           |
| East  | N/A                             | 2            |                                |                      |                             |                                |                           |
| West  | N/A                             | 2            |                                |                      |                             |                                |                           |
| South   | N/A                             | 2            |                                |                      |                             |                                |                           |
| Interior  |                                 |              | N/A                            |                      |                             |                                |                           |
| Nonbearing Walls and Partitions                       |                                 |              |                                |                      |                             |                                |                           |
| Exterior walls  |                                 |              |                                |                      |                             |                                |                           |
| North   | N/A                             | N/A          |                                |                      |                             |                                |                           |
| East  | N/A                             | N/A          |                                |                      |                             |                                |                           |
| West  | N/A                             | N/A          |                                |                      |                             |                                |                           |
| South   | N/A                             | N/A          |                                |                      |                             |                                |                           |
| Interior walls and partitions                         |                                 |              | N/A                            |                      |                             |                                |                           |
| Floor Construction                                    |                                 |              |                                |                      |                             |                                |                           |
| Including supporting beams and joists                 |                                 | 2            |                                |                      |                             |                                |                           |
| Roof Construction                                     |                                 |              |                                |                      |                             |                                |                           |
| Including supporting beams and joists                 |                                 | 2            |                                |                      |                             |                                |                           |
| Shaft Enclosures - Exit                               |                                 |              | N/A                            |                      |                             |                                |                           |
| Shaft Enclosures - Other                              |                                 |              | N/A                            |                      |                             |                                |                           |
| Corridor Separation                                   |                                 |              | N/A                            |                      |                             |                                |                           |
| Occupancy Separation                                  |                                 |              | N/A                            |                      |                             |                                |                           |
| Party/Fire Wall Separation                            |                                 |              | N/A                            |                      |                             |                                |                           |
| Smoke Barrier Separation                              |                                 |              | N/A                            |                      |                             |                                |                           |
| Tenant Separation                                     |                                 |              | N/A                            |                      |                             |                                |                           |
| Incidental Use Separation                             |                                 |              | N/A                            |                      |                             |                                |                           |

**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  
 Exterior wall opening area with respect to distance to assumed property lines (705.8)  
 Existing structures within 30' of the proposed building

**ACCESSIBLE DWELLING UNITS (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 (SECTION 1106)**

| LOT OR PARKING AREA | TOTAL # OF PARKING SPACES REQUIRED | TOTAL # OF PARKING SPACES PROVIDED | # OF ACCESSIBLE SPACES PROVIDED |                |               | TOTAL # ACCESSIBLE PROVIDED |
|---------------------|------------------------------------|------------------------------------|---------------------------------|----------------|---------------|-----------------------------|
|                     |                                    |                                    | TYPE A ACCESSIBLE               | 15' ACCESSIBLE | 5' ACCESSIBLE |                             |
|                     |                                    |                                    |                                 |                |               |                             |
| <b>TOTAL</b>        |                                    |                                    |                                 |                |               |                             |

**STRUCTURAL DESIGN**

DESIGN LOADS:

Importance Factors: Wind ( $I_w$ ) **1.0**  
 Snow ( $I_s$ ) **1.0**  
 Seismic ( $I_e$ ) **1.0**

Live Loads: Roof **93** psf  
 Mezzanine **N/A** psf  
 Floor **208** psf

Ground Snow Load: **102** psf

Wind Load: Basic Wind Speed **150** mph (ASCE-7)  
 Exposure Category **C**  
 Wind Base Shears (for MWFRS)  $V_x = \mathbf{128}$   $V_y = \mathbf{128}$

SEISMIC DESIGN CATEGORY:  A  B  C  D

Provide the following Seismic Design Parameters:  
 Occupancy Category (Table 1604.5)  I  II  III  IV  
 Spectral Response Acceleration  $S_a$  **3.0** %g  $S_1$  **0.75** %g  
 Site Classification (Table 1613.5.2)  A  B  C  D  E  F  
 Data Source:  Field Test  Presumptive  Historical Data

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

Seismic base shear:  $V_x = \mathbf{79.9}$   $V_y = \mathbf{79.9}$   
 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 \_\_\_\_\_

SPECIAL INSPECTIONS REQUIRED:  Yes  No

**PLUMBING FIXTURE REQUIREMENTS (TABLE 2902.1)**

| SPACE | EXISTING | WATERCLOSETS |        | URINALS |        | LAVATORIES |        | SHOWERS/TUBS |            | DRINKING FOUNTAINS |            |
|-------|----------|--------------|--------|---------|--------|------------|--------|--------------|------------|--------------------|------------|
|       |          | MALE         | FEMALE | MALE    | FEMALE | MALE       | FEMALE | REGULAR      | ACCESSIBLE | REGULAR            | ACCESSIBLE |
|       |          |              |        |         |        |            |        |              |            |                    |            |
|       | NEW      |              |        |         |        |            |        |              |            |                    |            |
|       | REQUIRE  |              |        |         |        |            |        |              |            |                    |            |

**SPECIAL APPROVALS**

Special approval: (Local Jurisdiction, Department of Insurance, OSC, DFI, DHHS, ICC, etc., describe below)  
**N/A**

**ELECTRICAL SUMMARY**

ELECTRICAL SYSTEM AND EQUIPMENT

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

Lighting schedule (each fixture type)  
 lamp type required in fixture \_\_\_\_\_  
 number of lamps in fixture \_\_\_\_\_  
 ballast type used in the fixture \_\_\_\_\_  
 number of ballasts in fixture \_\_\_\_\_  
 total wattage per fixture \_\_\_\_\_  
 total interior wattage specified vs. allowed (whole building or space by space) \_\_\_\_\_  
 total exterior wattage specified vs. allowed \_\_\_\_\_

Additional Prescriptive Compliance  
 506.2.1 More Efficient Mechanical Equipment  
 506.2.2 Reduced Lighting Power Density  
 506.2.3 Energy Recovery Ventilation Systems  
 506.2.4 Higher Efficiency Service Water Heating  
 506.2.5 On-Site Supply of Renewable Energy  
 506.2.6 Automatic Daylighting Control Systems

**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.

Climate Zone:  3  4  5

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

**THERMAL ENVELOPE**

Roof/Ceiling Assembly (each assembly)  
 Description of assembly: \_\_\_\_\_  
 U-Value of total assembly: \_\_\_\_\_  
 R-Value of insulation: \_\_\_\_\_  
 Skylights in each assembly: \_\_\_\_\_  
 U-Value of skylight: \_\_\_\_\_  
 total square footage of skylights in each assembly: \_\_\_\_\_

Exterior Walls (each assembly)  
 Description of assembly: \_\_\_\_\_  
 U-Value of total assembly: \_\_\_\_\_  
 R-Value of insulation: \_\_\_\_\_  
 Openings (windows or doors with glazing)  
 U-Value of assembly: \_\_\_\_\_  
 Sol-air heat gain coefficient: \_\_\_\_\_  
 projection factor: \_\_\_\_\_  
 Door R-Values: \_\_\_\_\_

Walls below grade (each assembly)  
 Description of assembly: \_\_\_\_\_  
 U-Value of total assembly: \_\_\_\_\_  
 R-Value of insulation: \_\_\_\_\_

Floors over unconditioned space (each assembly)  
 Description of assembly: \_\_\_\_\_  
 U-Value of total assembly: \_\_\_\_\_  
 R-Value of insulation: \_\_\_\_\_

Floors slab on grade  
 Description of assembly: \_\_\_\_\_  
 U-Value of total assembly: \_\_\_\_\_  
 R-Value of insulation: \_\_\_\_\_  
 Horizontal/vertical requirement: \_\_\_\_\_  
 slab heated: \_\_\_\_\_

**MECHANICAL SUMMARY**

MECHANICAL SYSTEMS, SERVICE SYSTEMS AND EQUIPMENT

Thermal Zone  
 winter dry bulb: \_\_\_\_\_  
 summer dry bulb: \_\_\_\_\_

Interior design conditions  
 winter dry bulb: \_\_\_\_\_  
 summer dry bulb: \_\_\_\_\_  
 relative humidity: \_\_\_\_\_

Building heating load: \_\_\_\_\_

Building cooling load: \_\_\_\_\_

Mechanical Spacing Conditioning System  
 Unitary description of unit: \_\_\_\_\_  
 heating efficiency: \_\_\_\_\_  
 cooling efficiency: \_\_\_\_\_  
 size category of unit: \_\_\_\_\_  
 Boiler size category. If oversized, state reason: \_\_\_\_\_  
 Chiller size category. If oversized, state reason: \_\_\_\_\_

List equipment efficiencies: \_\_\_\_\_

NOTE: INFORMATION SHOWN HERE IS FOR ILLUSTRATIVE PURPOSES ONLY. SEE MANUFACTURER'S APPROVED SHELTER DRAWINGS FOR DETAILS.



PROJECT INFORMATION:  
**VERIZON NAME: CLEARWATER LAKE**  
**VERIZON No.: TBD**  
 1941 MT. CARMEL CHURCH ROAD  
 CHAPEL HILL, NC 27517  
 ORANGE COUNTY

CURRENT ISSUE DATE:  
**09/01/16**

ISSUED FOR:  
**CONSTRUCTION**

REV. DATE: \_\_\_\_\_ ISSUED FOR: \_\_\_\_\_ BY: \_\_\_\_\_

| 0 | 09/01/16 | CONSTRUCTION | WCE |
|---|----------|--------------|-----|
|   |          |              |     |

CONSULTANT:  
**Kimley»Horn**  
 2 SUN COURT, SUITE 450  
 PEACHTREE CORNERS, GA 30092  
 PHONE: 770-825-0744  
 WWW.KIMLEY-HORN.COM  
 NC License F-0102

DRAWN BY: \_\_\_\_\_ CHK.: \_\_\_\_\_ APV.: \_\_\_\_\_  

|     |     |     |
|-----|-----|-----|
| MWD | KRM | WCE |
|-----|-----|-----|

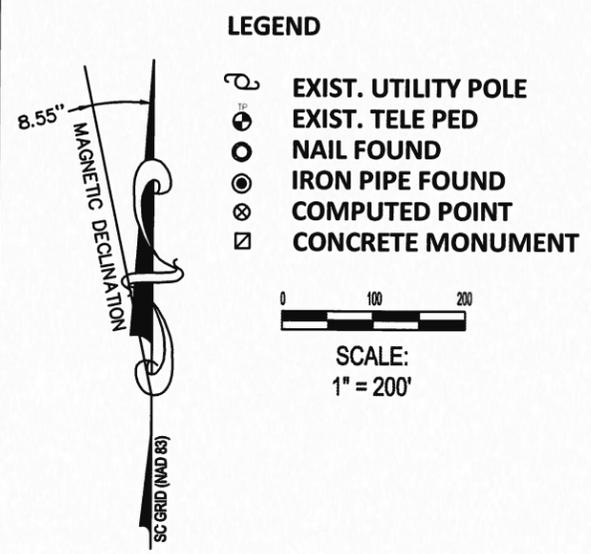
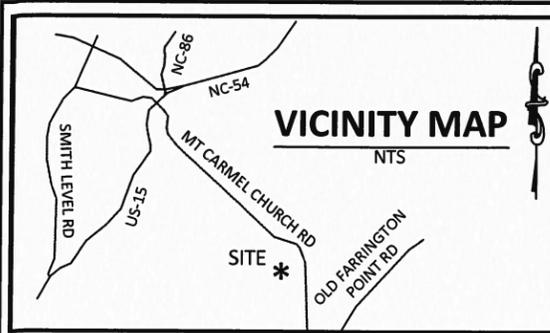
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**FOR INFORMATION PURPOSES ONLY- REFER TO MANUFACTURER'S APPROVED SHELTER DRAWINGS**

SHEET TITLE:  
**APPENDIX B: BUILDING CODE SUMMARY**

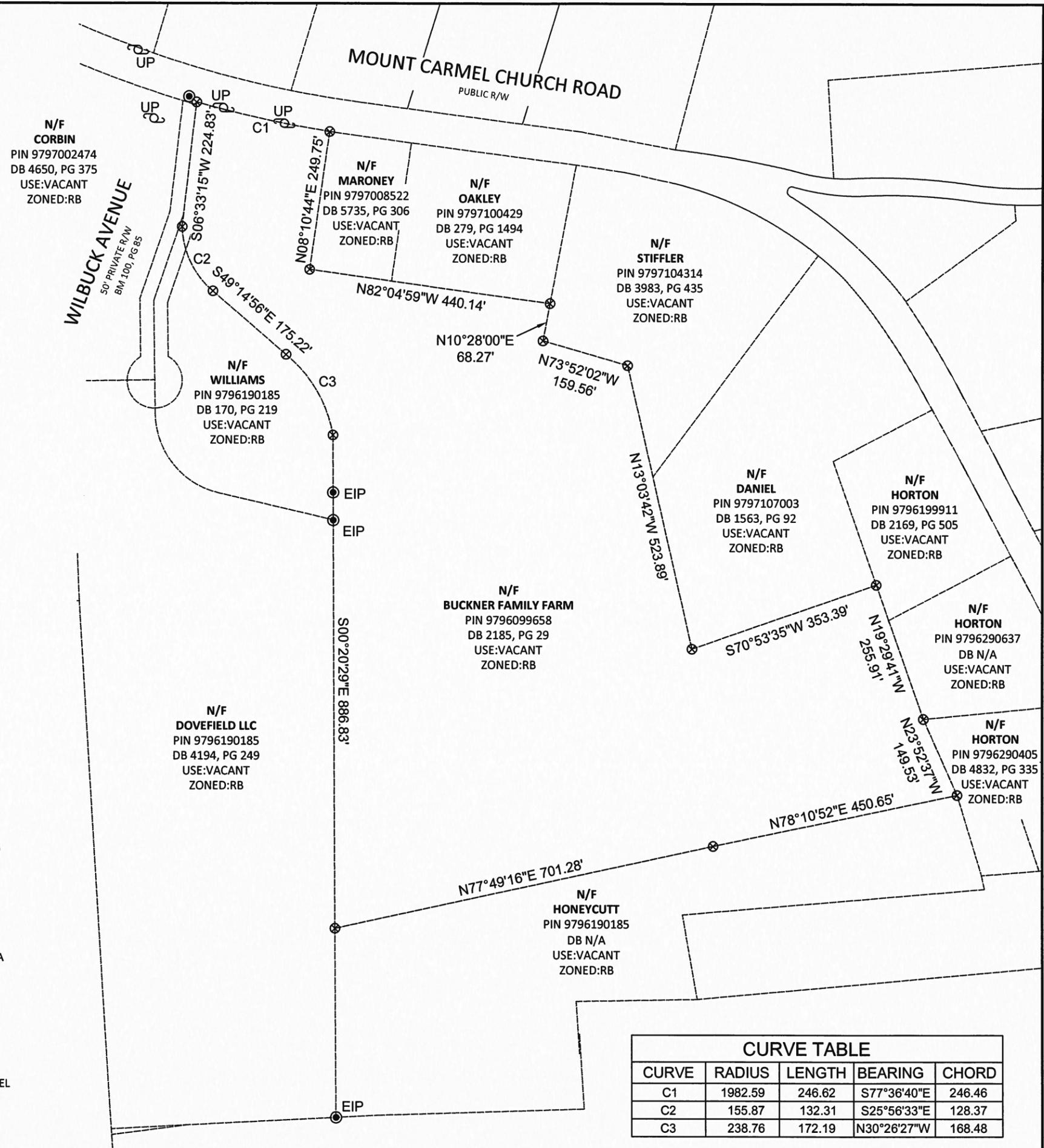
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K:\ATL\_Wireless\_TowerCom\Clearwater Lake\_CAD\CD\_Rev1-9-30-16\Clearwater Lake\_CD\_R1.dwg September 30, 2016 10:37 AM by: Emily.Flood



**GENERAL NOTES**

1. THIS SURVEY WAS PREPARED BY BATEMAN CIVIL SURVEY CO., UNDER THE SUPERVISION OF JEFFREY W. BAKER, PLS.
2. THIS PLAN HAS BEEN PREPARED FOR LAYOUT AND PERMITTING PURPOSES ONLY.
3. THIS IS NOT A BOUNDARY SURVEY. PROPERTY LINES SHOWN WERE TAKEN FROM EXISTING FIELD EVIDENCE, EXISTING DEEDS AND PLATS OF PUBLIC RECORD, AND INFORMATION SUPPLIED TO THE SURVEYOR BY THE CLIENT
4. VERTICAL DATUM , THE LATITUDE, LONGITUDE AND STATE PLANE COORDINATES, IF SHOWN, ARE GIVEN IN NORTH AMERICAN DATUM OF 1983 (NAD83).
5. FIELD EQUIPMENT USED: TOPCON TOTAL STATION, EPOCH 35.
6. ALL DISTANCES ARE HORIZONTAL GROUND DISTANCES AND ALL BEARINGS ARE NORTH CAROLINA STATE PLANE COORDINATE SYSTEM UNLESS OTHERWISE SHOWN.
7. PROPERTY OWNER: BUCKNER FAMILY FARM TRUST  
109 W. FRANKLIN STREET, SUITE 1, ROCKINGHAM, NC, 28379
8. THIS MAP IS NOT A CERTIFIED SURVEY AND HAS NOT BEEN REVIEWED BY A LOCAL GOVERNMENT AGENCY FOR COMPLIANCE WITH ANY APPLICABLE LAND DEVELOPMENT REGULATIONS.
9. ALL EQUIPMENT AND IMPROVEMENTS ARE LOCATED WITHIN THE LEASE AREA.
10. THE PROPERTY LIES IN ZONE "X" , PER NATIONAL FLOOD INSURANCE PROGRAM FLOOD INSURANCE PANEL 9797, RATE MAP 3710979700K, DATED: FEBRUARY 2, 2007 AND PANEL 9796, RATE MAP 3710979600K, DATED: FEBRUARY 2, 2007.
11. PROPERTY INFORMATION DERIVED FROM ORANGE COUNTY GIS.



| CURVE TABLE |         |        |             |        |
|-------------|---------|--------|-------------|--------|
| CURVE       | RADIUS  | LENGTH | BEARING     | CHORD  |
| C1          | 1982.59 | 246.62 | S77°36'40"E | 246.46 |
| C2          | 155.87  | 132.31 | S25°56'33"E | 128.37 |
| C3          | 238.76  | 172.19 | N30°26'27"W | 168.48 |

**BCSC**  
BATEMAN CIVIL SURVEY COMPANY

Bateman Civil Survey Co, PC  
2524 Reliance Avenue, Apex, NC 27539  
Phone: 919.577.1080 Fax: 919.577.1081  
NCBLS FIRM # C-2378

**erizon wireless.**  
8921 RESEARCH DRIVE  
CHARLOTTE, NORTH CAROLINA 28262

**Kimley»Horn**

2 Sun Court, Suite 450  
Peachtree Corners, GA  
30092

DRAWN BY: JCH  
CHECKED BY: SPC  
DRAWING DATE: 3/11/15

STATE OF NORTH CAROLINA  
PLANNING AND SURVEYOR  
JEFFREY W. BAKER, NC PL 04121  
3/11/2015

| REVISIONS | NO. | DATE    | DESCRIPTION                                 |
|-----------|-----|---------|---|
|           | 1.  | 6/03/15 | Relocate Rights of Way & Legal Title Report |
|           | 2.  | 6/29/15 | Relocate Rights of Way & Legal Title Report |
|           | 3.  | 7/01/15 | Relocate Rights of Way & Legal Title Report |
|           | 4.  | 7/10/15 | Field Locate House & Barn                   |
|           | 5.  | 7/22/15 | Submit Final Survey                         |

**CLEARWATER LAKE**  
301003  
1941 MT. CARMEL CHURCH RD.  
CHAPEL HILL, NC, 27517  
ORANGE COUNTY

DATE OF SURVEY: 3-11-2015  
BCSC JOB # 150237  
SHEET TITLE: SURVEY  
SHEET NUMBER 1 OF 3



- LEGEND**
- EXIST. UTILITY POL
  - EXIST. TELE PED
  - NAIL FOUND
  - IRON PIPE FOUND
  - COMPUTED POINT
  - CONCRETE MONUMENT
  - OHW OVERHEAD WIRE
  - WM WATERMETER

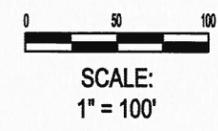
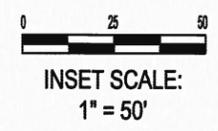
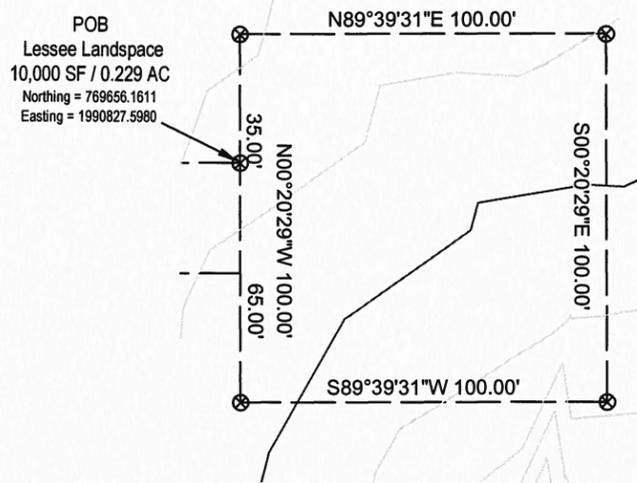
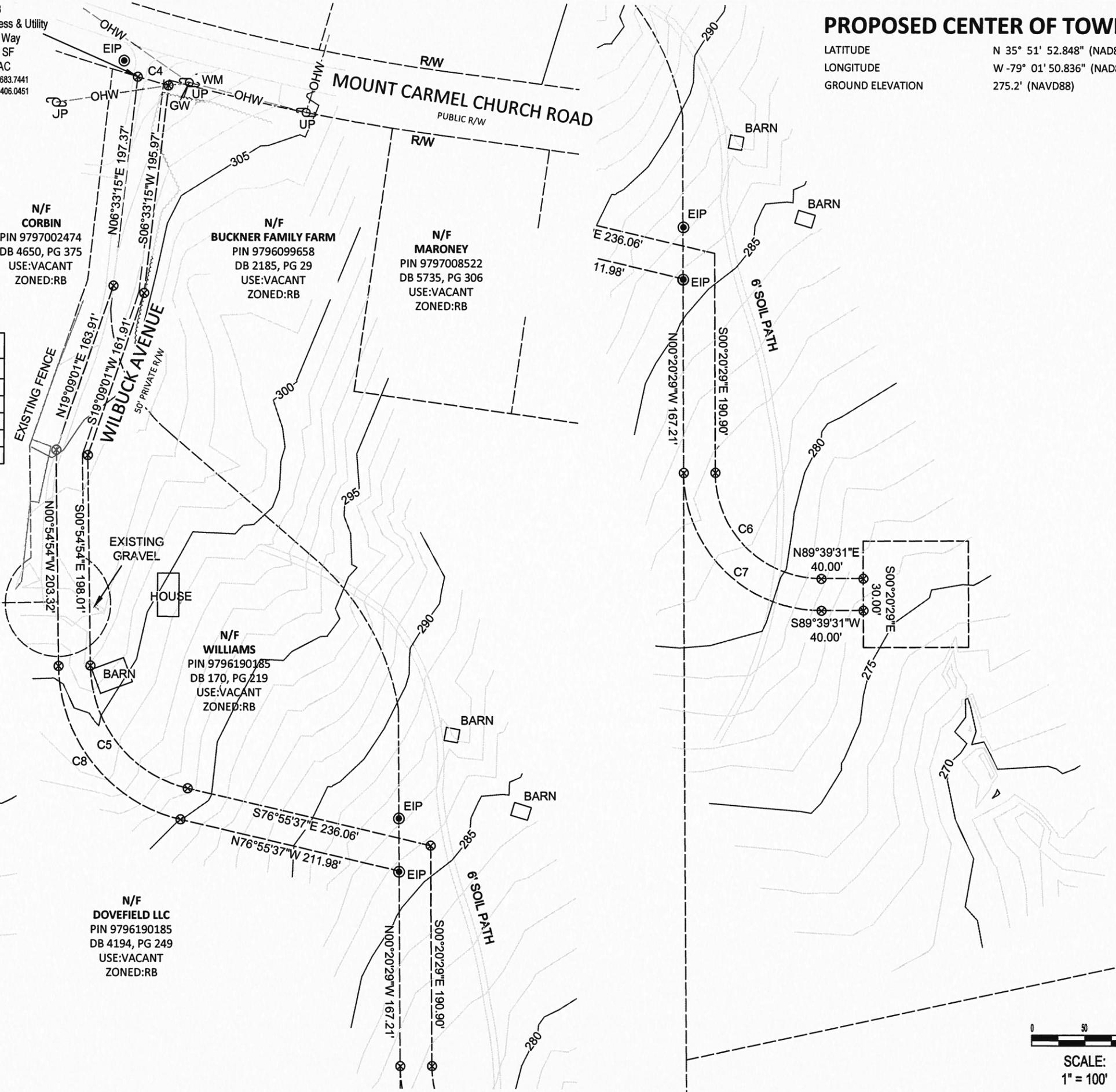
POB  
30' Lessee Access & Utility  
Rights of Way  
41,396 SF  
0.950 AC  
Northing = 770683.7441  
Easting = 1990406.0451

**PROPOSED CENTER OF TOWER**

LATITUDE N 35° 51' 52.848" (NAD83)  
LONGITUDE W -79° 01' 50.836" (NAD83)  
GROUND ELEVATION 275.2' (NAVD88)

**CURVE TABLE**

| CURVE | RADIUS  | LENGTH | BEARING     | CHORD  |
|-------|---------|--------|-------------|--------|
| C4    | 1987.59 | 30.37  | S74°30'32"E | 30.37  |
| C5    | 120.00  | 159.20 | S38°55'16"E | 147.78 |
| C6    | 100.00  | 157.08 | S45°20'29"E | 141.42 |
| C7    | 130.00  | 204.20 | S45°20'29"W | 183.85 |
| C8    | 150.00  | 198.99 | N38°55'16"W | 184.72 |



**BCSC**  
BATEMAN CIVIL SURVEY COMPANY

**Bateman Civil Survey Co, PC**  
2524 Reliance Avenue, Apex, NC 27539  
Phone: 919.577.1080 Fax: 919.577.1081  
NCBLS FIRM # C-2378

**erizon wireless**

8921 RESEARCH DRIVE  
CHARLOTTE, NORTH CAROLINA 28262

**Kimley»Horn**

2 Sun Court, Suite 450  
Peachtree Corners, GA  
30092

DRAWN BY: JCH  
CHECKED BY: JSC  
DRAWING DATE: 3/11/15

JEFFREY W. BAKER, NC PL. SURV.

| REVISIONS | NO. | DATE    | DESCRIPTION                    |
|-----------|-----|---------|--------------------------------|
|           | 1.  | 6/01/15 | Relocate Rights of Way & Legal |
|           | 2.  | 6/29/15 | Title Report                   |
|           | 3.  | 7/01/15 | Relocate Rights of Way & Legal |
|           | 4.  | 7/10/15 | Field Locate House & Barn      |
|           | 5.  | 7/22/15 | Submit Final Survey            |

**CLEARWATER LAKE**  
301003  
1941 MT. CARMEL CHURCH RD.  
CHAPEL HILL, NC, 27517  
ORANGE COUNTY

|                           |
|---------------------------|
| DATE OF SURVEY: 3-11-2015 |
| BCSC JOB # 150237         |
| SHEET TITLE: SURVEY       |
| SHEET NUMBER 2 OF 3       |

**OPINION OF TITLE**  
**BLANCO TACKABERY & MATAMOROS, P.A.**  
**FILE # 15-0046(RE)**  
**DATED MAY 14, 2015**  
**PROPOSED INSURED: VERIZON WIRELESS**

1. Line of credit Deed of Trust in favor of Central Carolina Bank & Trust Company, National Association recorded at Book 627, Page 184.  
(Does Not Affect Verizon Wireless Land Space or Access & Utility Rights of Way)
2. Deed of Trust in favor of Bank of America, NA recorded at Book 4500, Page 410.  
(Does Not Affect Verizon Wireless Land Space or Access & Utility Rights of Way)
3. Shared Driveway Agreement recorded at Book 741, Page 597.  
(Does Not Affect Verizon Wireless Land Space or Access & Utility Rights of Way)
4. Portion of the Property lying within the right of way of Mt. Carmel Church Road.  
(Does Not Affect Verizon Wireless Land Space or Access & Utility Rights of Way)
5. No opinion of title given to any portion of the property lying in Chatham County - See Plat Book 100, Page 85. The majority of the original parent parcel as described in deed recorded at Book 152, Page 223 was located in Orange County; however, a small portion was located in Chatham County. Please note the the Proposed Tower Tract as it is described today in the vesting deed recorded at Book 2185, Page 29 lies entirely within Orange County according to the Orange County GIS System and tax records.  
(Does Not Affect Verizon Wireless Land Space or Access & Utility Rights of Way)
6. Subject to spousal interest of any spouse of Helga W. Horton, if any.  
(Does Not Affect Verizon Wireless Land Space or Access & Utility Rights of Way)
7. Declaration of Cross Easements and Provisions for Private Road Maintenance recorded in Book 4110, Page 274. See also Plat Book 100, Page 85.  
(Does Not Affect Verizon Wireless Land Space or Access & Utility Rights of Way)
8. Any right, title or interest of any party to the actual right of way of the railroad running along the Eastern property line.  
Please note that this instrument references the proposed tower tract as also being accessed by a private easement know as Jay Thomas Road. the only recorded instrument describing this easement is recorded in Book 741, Page 597; however, this instrument does not grant easement rights to the proposed parent tract. Use of this road as depicted on the County GIS system appears to not be by recorded instrument or right. Jay Thomas Drive appears to be the proposed access route to gain access to the tower compound to be constructed on the proposed tower tract. Jay Thomas Drive is a private road according to the Orange County Mapping Department.  
(Does Not Affect Verizon Wireless Land Space or Access & Utility Rights of Way)
9. For informational purposes; The vesting deed for proposed easement tract 1 was into James T. Horton and wife Helga W. Horton. James T. Horton passed away February 16, 2013 vesting title solely in Helga W. Horton  
(Does Not Affect Verizon Wireless Land Space or Access & Utility Rights of Way)

**LESSEE LAND SPACE DESCRIPTION**

All that certain parcel of land, situate in Chapel Hill, Orange County, North Carolina, being on the lands of Buckner Family Farm as described in Deed Book 2185 at Page 29, Orange County Records, and being more particularly described as follows:

Beginning at the NorthWestern property corner of Buckner Family Farm and NorthEastern property corner of Corbin, Orange County Records, said corner also being on the Southern Right-of-Way of Mount Carmel Church Road having State Plane Coordinates N:770683.7441, E:1990406.0451; thence along a curve to the Left having a radius of 1987.59', a length of 30.37', and a chord of S74°30'32"E, 30.37' along the Right-of-Way to a point; thence S06°33'15"W, 195.97' to a point; thence S19°09'01"W, 161.91' to a point; thence S00°54'54"E, 198.01' to a point of curvature; a curve to the Left having a radius of 120.00', a length of 159.20' and a chord of S38°55'16"E, 147.78' to a point; thence S76°55'37"E, 236.06' to a point; thence S00°20'29"E, 190.90' to a point of curvature; a curve to the Left having a radius of 100.00', a length of 157.08' and a chord of S45°20'29"E, 141.42' to a point; thence N89°39'31"E, 40.00' to a point; the Point of Beginning; thence N00°20'29"W, 35.00' to a point; thence N89°39'31"E, 100.00' to a point; thence S00°20'29"W, 100.00' to a point; thence S89°39'31"W, 100.00' to a point; thence N00°20'29"E, 65.00' to a point; said point being the Point of Terminus of the Lessee Land Space. Said Lessee Land Space contains 10,000 square feet, more or less.

**30' LESSEE ACCESS & UTILITY RIGHTS OF WAY DESCRIPTION**

All that certain parcel of land, situate in Chapel Hill, Orange County, North Carolina, being on the lands of Buckner Family Farm as described in Deed Book 2185 at Page 29, Orange County Records, and being more particularly described as follows:

Beginning at the NorthWestern property corner of Buckner Family Farm and NorthEastern property corner of Corbin, Orange County Records, said corner also being on the Southern Right-of-Way of Mount Carmel Church Road having State Plane Coordinates N:770683.7441, E:1990406.0451; thence along a curve to the Left having a radius of 1987.59', a length of 30.37', and a chord of S74°30'32"E, 30.37' along the Right-of-Way to a point; thence S06°33'15"W, 195.97' to a point; thence S19°09'01"W, 161.91' to a point; thence S00°54'54"E, 198.01' to a point of curvature; a curve to the Left having a radius of 120.00', a length of 159.20' and a chord of S38°55'16"E, 147.78' to a point; thence S76°55'37"E, 236.06' to a point; thence S00°20'29"E, 190.90' to a point of curvature; a curve to the Left having a radius of 100.00', a length of 157.08' and a chord of S45°20'29"E, 141.42' to a point; thence N89°39'31"E, 40.00' to a point; S00°20'29"E, 30.00' to a point; thence S89°39'31"W, 40.00' to a point of curvature; a curve to the Right having a radius of 130.00', a length of 204.20, and a chord of N45°20'29"W, 183.85' to a point; thence N00°20'29"W, 167.21' to a point; thence N76°55'37"W, 211.98' to a point of curvature; a curve to the Right having a radius of 150.00', a length of 198.99', and a chord of N38°55'16"W, 184.72' to a point; thence N00°54'54"W, 203.32' to a point; thence N19°09'01"E, 163.91' to a point; thence N06°33'15"E, 197.37' to a point; said point being the Point of Beginning of the 30' Lessee Access & Utility Rights of Way. Said 30' Lessee Access & Utility Rights of Way contains 41,396 square feet more or less.

**Kimley»Horn**

2 Sun Court, Suite 450  
 Peachtree Corners, GA  
 30092

DRAWN BY: JWB  
 CHECKED BY: JWB  
 DRAWING DATE: 3/13/15

| REVISIONS | NO. | DATE    | DESCRIPTION                    |
|-----------|-----|---------|--------------------------------|
|           | 1.  | 6/01/15 | Relocate Rights of Way & Legal |
|           | 2.  | 6/29/15 | Title Report                   |
|           | 3.  | 7/01/15 | Relocate Rights of Way & Legal |
|           | 4.  | 7/10/15 | Field Locate House & Barn      |
|           | 5.  | 7/22/15 | Submit Final Survey            |
|           |     |         |                                |
|           |     |         |                                |

**CLEARWATER LAKE**  
 301003  
 1941 MT. CARMEL CHURCH RD.  
 CHAPEL HILL, NC, 27517  
 ORANGE COUNTY

DATE OF SURVEY: 3-11-2015

BCSC JOB # 150237

SHEET TITLE: SURVEY

SHEET NUMBER 3 OF 3

PROJECT INFORMATION:

**VERIZON NAME:**  
**CLEARWATER LAKE**  
**VERIZON No.:** TBD  
 1941 MT. CARMEL CHURCH ROAD  
 CHAPEL HILL, NC 27517  
 ORANGE COUNTY

CURRENT ISSUE DATE:

09/30/16

ISSUED FOR:

**CONSTRUCTION**

REV.: DATE: ISSUED FOR: BY:

| REV. | DATE     | ISSUED FOR   | BY  |
|------|----------|--------------|-----|
| 0    | 09/01/16 | CONSTRUCTION | WCE |
| 1    | 09/30/16 | CONSTRUCTION | WCE |

CONSULTANT:

**Kimley»Horn**

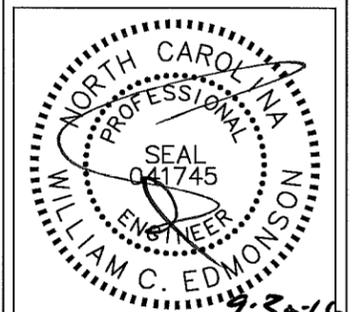
2 SUN COURT, SUITE 450  
 PEACHTREE CORNERS, GA 30092  
 PHONE: 770-825-0744  
 WWW.KIMLEY-HORN.COM  
 NC License F-0102

CONSULTANT:

DRAWN BY: CHK.: APV.:

MWD KRM WCE

LICENSER:



SHEET TITLE:

**OVERALL SITE PLAN**

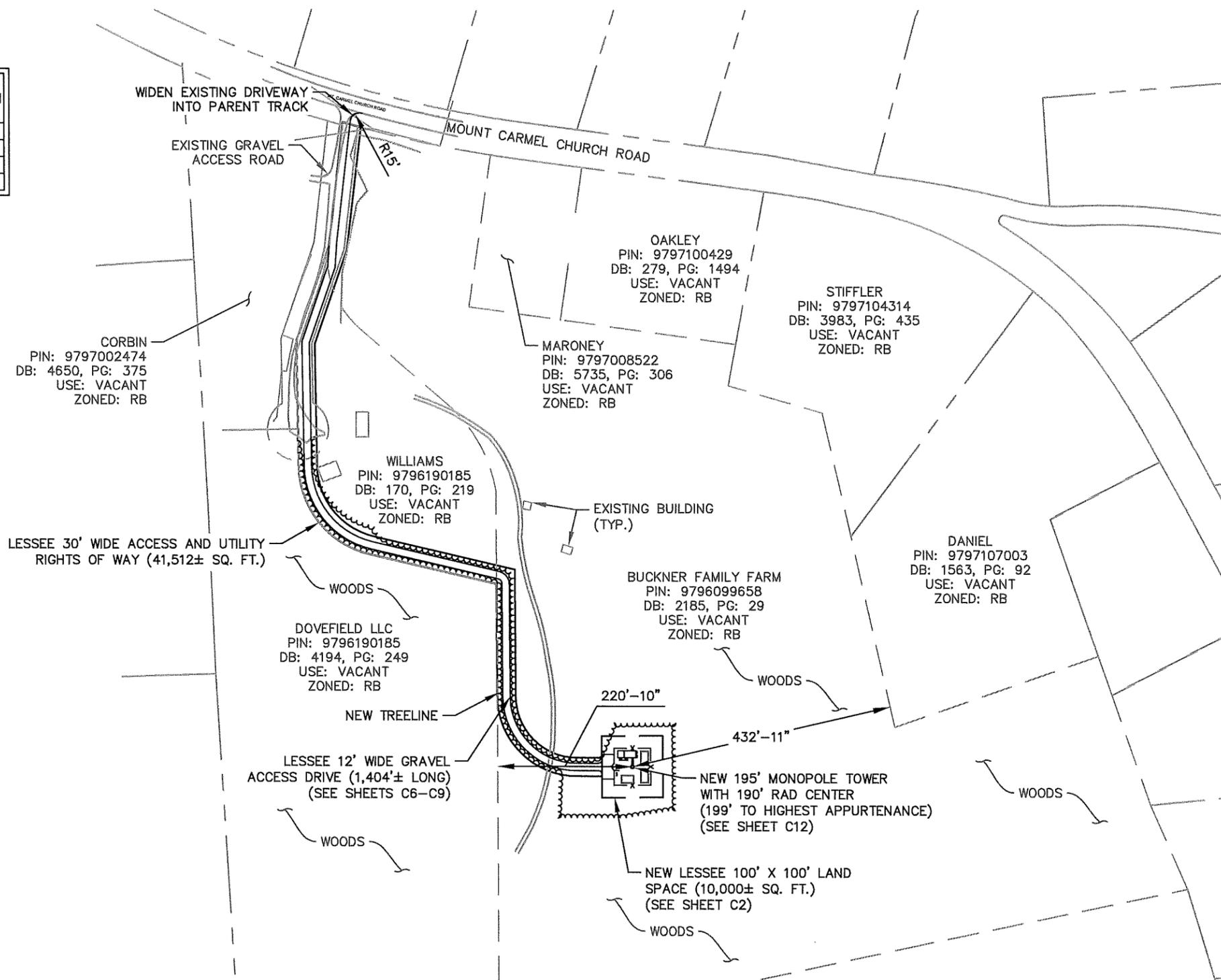
SHEET NUMBER: REVISION:

**C1**

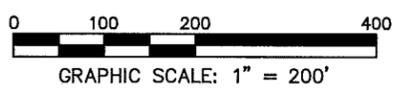
**1**

012055945

| TOWER SETBACKS TO PROPERTY LINES (FROM TOWER CENTER) |          |
|--|----------|
| NORTH  | 703'-6"  |
| SOUTH  | 382'-1"  |
| EAST   | 432'-11" |
| WEST   | 220'-10" |



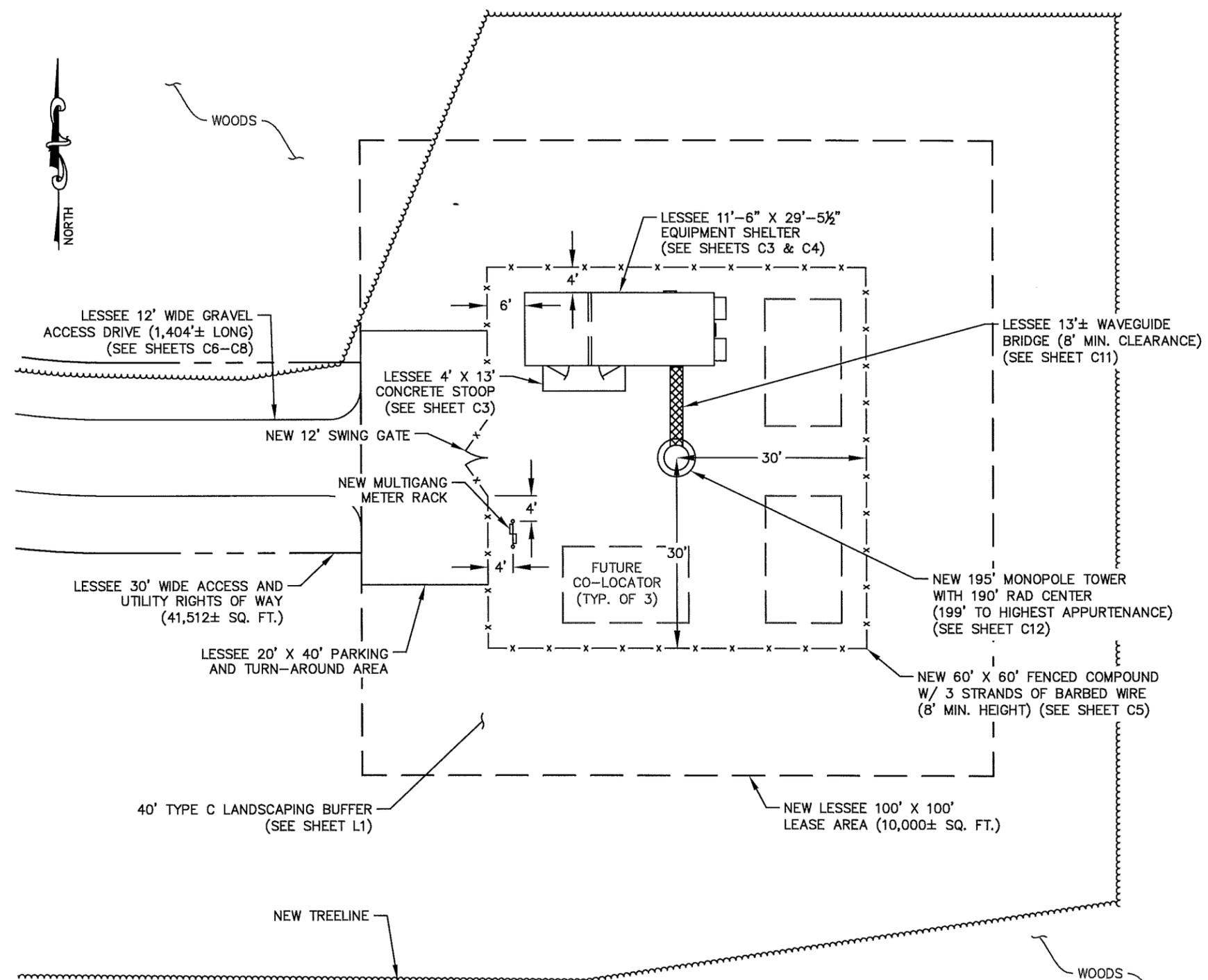
**1**  
**C1** **OVERALL SITE PLAN**  
 SCALE: 1" = 200'



**SURVEY NOTE:**  
 1. TOWERCIN PROJECT MANAGER SHALL COORDINATE WITH THE PROPERTY OWNER TO OBTAIN THE PROPER EASEMENT AGREEMENTS TO CONSTRUCT AND MAINTAIN EQUIPMENT IN AND AROUND THE TOWER COMPOUND.  
 2. PROPOSED COMPOUND LAYOUT BASED ON SURVEY PROVIDED BY BATEMAN CIVIL SURVEY CO. DATED 03/13/2015 AND SITE VISIT ON 02/19/2015.

K:\ATL\_Wireless\TowerCom\CLEARWATER LAKE\CAD\CD\Rev1-9-30-16\CLEARWATER LAKE\_CD\_R1.dwg September 30, 2016 10:37 AM By: Emily.Flood

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**1**  
**C2** **SITE PLAN**  
SCALE: 1" = 20'  
GRAPHIC SCALE: 1" = 20'

**SURVEY NOTE:**  
1. TOWERCOM PROJECT MANAGER SHALL COORDINATE WITH THE PROPERTY OWNER TO OBTAIN THE PROPER EASEMENT AGREEMENTS TO CONSTRUCT AND MAINTAIN EQUIPMENT IN AND AROUND THE TOWER COMPOUND.  
2. PROPOSED COMPOUND LAYOUT BASED ON SURVEY PROVIDED BY BATEMAN CIVIL SURVEY CO. DATED 03/13/2015 AND SITE VISIT ON 02/19/2015.

**SHELTER NOTE:**  
1. CONTRACTOR TO CONFIRM WITH VERIZON CONSTRUCTION MANAGER THAT THE SHELTER SHOWN ABOVE HAS BEEN ORDERED/SCHEDULED FOR DELIVERY TO THIS SITE.

**COAX NOTE:**  
1. ROUTE COAX/FIBER UP TOWER PER TOWER DESIGN DRAWING BY TOWER OWNER.

**TOWER NOTE:**  
1. TOWER DIMENSIONS SHOWN ON THIS PLAN ARE FOR TOWER CENTER LOCATION. CONTRACTOR TO OBTAIN COPY OF TOWER ERECTION DRAWINGS FROM VERIZON CONSTRUCTION MANAGER PRIOR TO DRILLING TOWER FOUNDATIONS. CASSIONS AND TOWER SHOWN ON THIS PLAN ARE ILLUSTRATIVE, SEE DESIGN DRAWING BY OTHERS. DO NOT SCALE.

**LANDSCAPING NOTE:**  
1. LANDSCAPING BUFFER EASEMENT, NOT FOR TOWER FACILITY EXPANSION. SEE SHEET L1 FOR LANDSCAPING PLAN AND NOTES.

- GENERAL NOTES:**
1. ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE DRAWINGS AND SPECIFICATIONS. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE LATEST EDITION OF THE STATE, LOCAL AND NATIONAL CODES, ORDINANCES AND OR REGULATIONS APPLICABLE TO THIS PROJECT.
  2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE WORK OF ALL TRADES AND SHALL CHECK ALL DIMENSIONS. ALL DISCREPANCIES SHALL BE CALLED TO THE ATTENTION OF THE PROJECT MANAGER AND/OR ENGINEER AND BE RESOLVED BEFORE PROCEEDING WITH WORK. WHERE THERE IS A CONFLICT BETWEEN DRAWING AND VERIZON SPECIFICATIONS, THE VERIZON PROJECT ENGINEER SHOULD BE CONTACTED FOR CLARIFICATION.
  3. ALL INFORMATION SHOWN ON THE DRAWINGS RELATIVE TO EXISTING CONDITIONS IS GIVEN AS THE BEST PRESENT KNOWLEDGE, BUT WITHOUT GUARANTEE OF ACCURACY. WHERE ACTUAL CONDITIONS CONFLICT WITH THE DRAWINGS, THEY SHALL BE REPORTED TO THE PROJECT MANAGER AND/OR ENGINEER SO THAT PROPER REVISIONS MAY BE MADE. MODIFICATION OF DETAILS OF CONSTRUCTION SHALL NOT BE MADE WITHOUT WRITTEN APPROVAL OF THE PROJECT MANAGER AND/OR ENGINEER.
  4. CONTRACTOR SHALL REVIEW AND BE FAMILIAR WITH SITE CONDITIONS AS SHOWN ON THE ATTACHED SITE PLAN AND/OR SURVEY DRAWINGS.
  5. WAVEGUIDE BRIDGE AND PRE-FAB SHELTER ARE SHOWN FOR REFERENCE ONLY. REFER TO SEPARATE PRE-ENGINEERED DRAWINGS FOR SPECIFIC INFORMATION INCLUDING FOOTINGS AND WAVEGUIDE BRIDGE LOCATION.
  6. ALL FINISHED GRADES SHALL SLOPE MINIMUM 1/4 IN./FT. AWAY FROM EQUIPMENT IN ALL DIRECTIONS. CONTRACTOR SHALL SLOPE SWALES AS REQUIRED ALONG EXISTING TERRAIN TO DRAIN AWAY FROM COMPOUND AND ACCESS DRIVE.
  7. THE PROPOSED TOWER AND TOWER FOUNDATIONS WERE DESIGNED BY OTHERS. TOWER INFORMATION PROVIDED ON THESE PLANS ARE PROVIDED FOR REFERENCE PURPOSES ONLY. NOTIFY ENGINEER OR PROJECT MANAGER OF ANY CONFLICTS OR DISCREPANCIES. CONTRACTOR TO OBTAIN COPY OF TOWER DESIGN DRAWINGS FROM VERIZON PROJECT MANAGER TO CONFIRM COAX ROUTING AND ANTENNA MOUNT INFORMATION.
  8. THE CONTRACTOR SHALL PROVIDE ADEQUATE EXCAVATION SLOPING, SHORING, BRACING, AND GUYS IN ACCORDANCE WITH ALL NATIONAL, STATE, AND LOCAL SAFETY ORDINANCES.
  9. UPON COMPLETION OF CONSTRUCTION, CONTRACTOR IS RESPONSIBLE FOR REPAIRING ANY DAMAGE CAUSED BY CONSTRUCTION ACTIVITIES TO THE EXISTING ACCESS ROAD AND COMPOUND GRAVEL AREAS. ANY NEW FILL MATERIALS SHALL BE COMPACTED.
  10. THE CONTRACTOR IS HEREBY NOTIFIED THAT PRIOR TO COMMENCING CONSTRUCTION, HE IS RESPONSIBLE FOR CONTACTING THE UTILITY COMPANIES INVOLVED AND SHALL REQUEST A VERIFICATION AT THE CONSTRUCTION SITE OF THE LOCATIONS OF THEIR UNDERGROUND UTILITIES AND WHERE THEY MAY POSSIBLY CONFLICT WITH THE PLACEMENT OF IMPROVEMENTS AS SHOWN ON THESE PLANS. THE CONTRACTOR OR ANY SUBCONTRACTOR FOR THIS CONTRACT WILL BE REQUIRED TO NOTIFY "NORTH CAROLINA 811" 48 HOURS IN ADVANCE OF PERFORMING ANY WORK BY CALLING THE TOLL FREE NUMBER (800) 632-4949 (OR 811). ANY UTILITIES DAMAGED BY CONSTRUCTION ACTIVITIES SHALL BE REPAIRED BY THE CONTRACTOR, AT NO EXPENSE TO THE OWNER.
  11. CONTRACTOR TO PROVIDE DUMPSTER AND PORTABLE TOILET FACILITY DURING CONSTRUCTION.
  12. CONTRACTOR TO PROVIDE STYMIE LOCK, DAISY CHAIN OR EQUIVALENT AS APPROVED BY CONSTRUCTION MANAGER.
  13. CONTRACTOR TO PROVIDE ANY NECESSARY SIGNAGE PER TOWERCOM PROJECT MANAGERS INSTRUCTIONS. SEE DETAIL ON SHEET C10.

**TowerCom**

PROJECT INFORMATION:  
**VERIZON NAME:**  
CLEARWATER LAKE  
**VERIZON No.:** TBD  
1941 MT. CARMEL CHURCH ROAD  
CHAPEL HILL, NC 27517  
ORANGE COUNTY

CURRENT ISSUE DATE:  
09/30/16

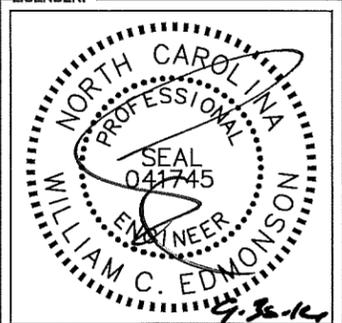
ISSUED FOR:  
CONSTRUCTION

|       |          |              |     |
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| REV.: | DATE:    | ISSUED FOR:  | BY: |
| 0     | 09/01/16 | CONSTRUCTION | WCE |
| 1     | 09/30/16 | CONSTRUCTION | WCE |

CONSULTANT:  
**Kimley»Horn**  
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CONSULTANT:

DRAWN BY: CHK.: APV.:  
MWD KRM WCE



SHEET TITLE:  
**SITE PLAN**

SHEET NUMBER: **C2** REVISION: **1**  
012055945

# FOUNDATION NOTES

## 1. GENERAL

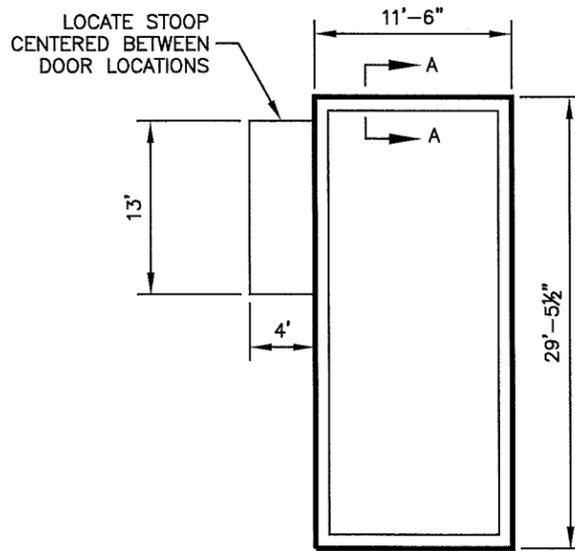
- 1.1 FOUNDATIONS ARE DESIGNED FOR A PRESUMPTIVE SOIL BEARING CAPACITY OF 2,000 PSF. CONTRACTOR SHALL VERIFY SOIL CONDITIONS PRIOR TO CONSTRUCTION.
- 1.2 EXCAVATE A MINIMUM 18" BELOW PROPOSED EQUIPMENT FOUNDATION(S) OF EXPANSIVE, ORGANIC, UNCONSOLIDATED OR OTHERWISE UNACCEPTABLE MATERIAL AND REPLACE WITH WELL-COMPACTED MATERIAL ACCEPTABLE TO VERIZON.
- 1.3 PERIMETER FOOTING FOR THE SHELTER FOUNDATION MUST BE A MINIMUM DEPTH OF 24" BELOW FINISH GRADE. (SEE SECTION A-A)
- 1.4 CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING, PROTECTING, AND RELOCATING AS REQUIRED ALL SERVICE AND UTILITY LINES IN VICINITY OF THE WORK SITE. ALL EXCAVATIONS NEAR THESE LINES TO BE CARRIED OUT WITH EXTREME CAUTION.
- 1.5 CONTRACTOR TO CUT/FILL FOUNDATION TO PROVIDE AN AREA AS LEVEL AS POSSIBLE FOR THE EQUIPMENT. ALL FILL AREAS ARE TO BE FILLED WITH SUITABLE MATERIALS. FILL MATERIALS ARE TO BE PLACED, COMPACTED, AND TESTED IN MAXIMUM LAYERS OF 8". COMPACTION OF ALL MATERIALS SHALL ACHIEVE 95% OF MAXIMUM DRY DENSITY AT OPTIMUM MOISTURE CONTENT IN ACCORDANCE WITH ASTM D698. ALL TESTS MUST MEET THE MINIMUM SPECIFIED SOIL BEARING CAPACITY. COMPACTION TESTING IS BY THE GEOTECHNICAL TESTING COMPANY DESIGNATED FOR THE PROJECT. SCHEDULING AND COORDINATION IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR. REPORTS OF ALL TESTING ARE TO BE PROMPTLY DELIVERED OR FAXED TO THE VERIZON WIRELESS PROJECT MANAGER.

## 2. MATERIALS

- 2.1 CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4,000 PSI AT 28 DAYS AND SHALL BE INSTALLED IN ACCORDANCE WITH THE LATEST REVISION TO ACI-318 BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE.
- 2.2 CONCRETE SHALL HAVE A SLUMP BETWEEN 3" AND 6".
- 2.3 REINFORCING BARS SHALL CONFORM TO THE LATEST REVISION OF ASTM-A615 GRADE 60 SPECIFICATIONS AND BE DETAILED IN ACCORDANCE WITH THE LATEST REVISION TO ACI-318.
- 2.4 AT THE REQUEST OF THE VERIZON WIRELESS PROJECT MANAGER, TEST CYLINDERS SHALL BE MOLDED AND LABORATORY CURED IN ACCORDANCE WITH ASTM C31. THREE CYLINDERS SHALL BE TAKEN FOR EACH DAY'S CONCRETE PLACEMENT. CYLINDERS SHALL BE TESTED IN ACCORDANCE WITH THE LATEST REVISION TO ASTM C39.
- 2.5 CHAMFER ALL EXPOSED EXTERNAL CORNERS OF CONCRETE WITH 3/4" x 45° CHAMFER, UNLESS OTHERWISE NOTED.
- 2.6 CONCRETE FORMWORK IS TO BE STRIPPED WITHIN 48 HOURS. VIBRATION OF THE CONCRETE MUST ASSURE THAT HONEYCOMBING WILL BE AT A MINIMUM. MECHANICAL VIBRATION OF ALL CONCRETE IS REQUIRED UNLESS OTHERWISE DIRECTED BY VERIZON WIRELESS' PROJECT MANAGER. ABOVE GRADE CONCRETE IS TO BE RUBBED AND PATCHED TO ASSURE SMOOTH FINISH AT TIME OF FORMS REMOVAL. CONTRACTOR SHALL PROVIDE A BROOM FINISH ON THE TOP SURFACE OF THE EQUIPMENT FOUNDATION.
- 2.7 CONCRETE REINFORCEMENT SHALL HAVE THE FOLLOWING PROTECTIVE COVER:
  - CONCRETE PLACED AGAINST EARTH OR GROUND.....3"
  - ALL OTHER LOCATIONS.....2"

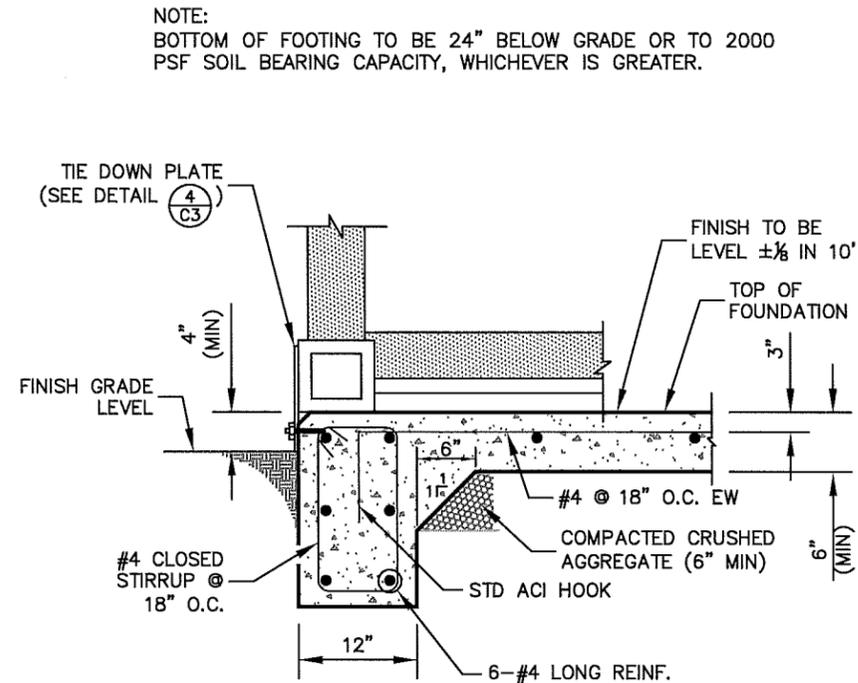
## 3. TOLERANCES

- 3.1 TOPS OF CONCRETE FOUNDATION MUST BE WITHIN 0.02' OF ELEVATION REQUIRED.



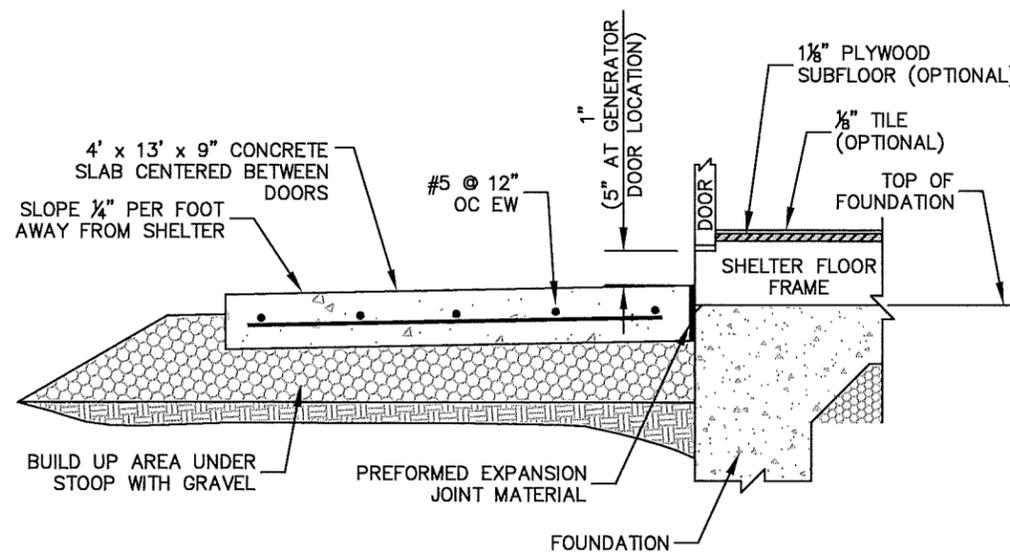
NOTE:  
SEE SHEET C2 FOR FOUNDATION LOCATION AND ORIENTATION.  
SEE SHELTER MANUFACTURERS DRAWINGS FOR ADDITIONAL INFORMATION REGARDING SLAB FOUNDATION DESIGN.

**1**  
**C3** VERIZON FOUNDATION PLAN  
NOT TO SCALE

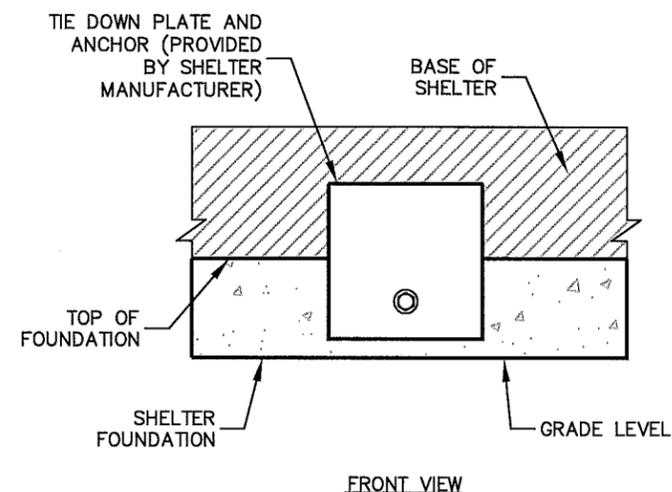


NOTE:  
BOTTOM OF FOOTING TO BE 24" BELOW GRADE OR TO 2000 PSF SOIL BEARING CAPACITY, WHICHEVER IS GREATER.

**2**  
**C3** SECTION "A-A"  
NOT TO SCALE



**3**  
**C3** VERIZON STOOP DETAIL  
NOT TO SCALE



**4**  
**C3** TIE DOWN PLATE (FRONT VIEW)  
NOT TO SCALE

**TowerCom**

PROJECT INFORMATION:

VERIZON NAME:  
CLEARWATER LAKE  
VERIZON No.: TBD  
1941 MT. CARMEL CHURCH ROAD  
CHAPEL HILL, NC 27517  
ORANGE COUNTY

CURRENT ISSUE DATE:

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CONSULTANT:

**Kimley»Horn**

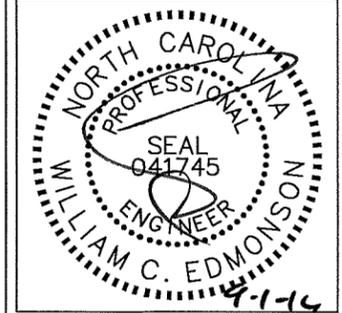
2 SUN COURT, SUITE 450  
PEACHTREE CORNERS, GA 30092  
PHONE: 770-825-0744  
WWW.KIMLEY-HORN.COM  
NC License F-0102

CONSULTANT:

DRAWN BY: CHK.: APV.:

MWD KRM WCE

LICENSER:



SHEET TITLE:

**FOUNDATION & SHELTER TIE DOWN DETAILS**

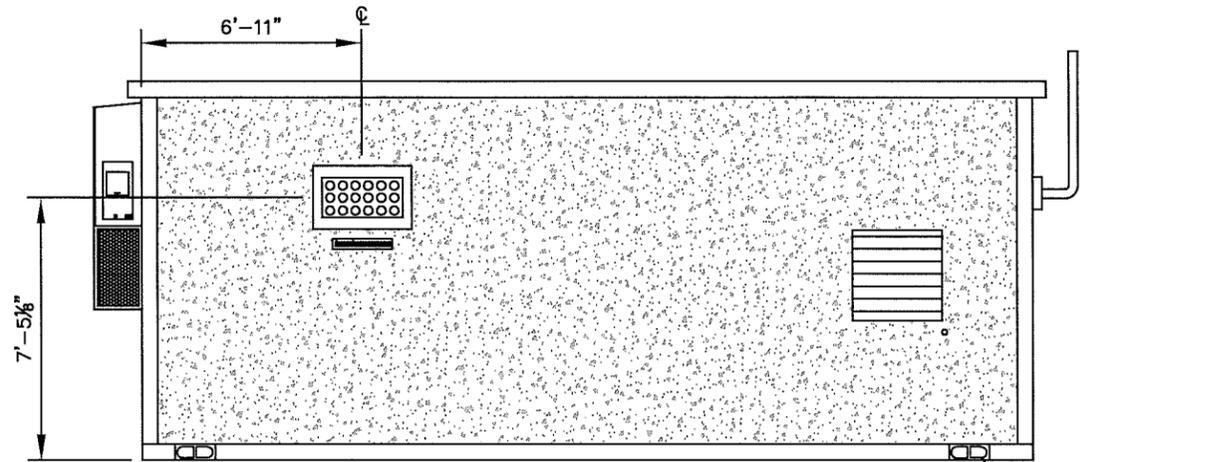
SHEET NUMBER: REVISION:

**C3**

**0**

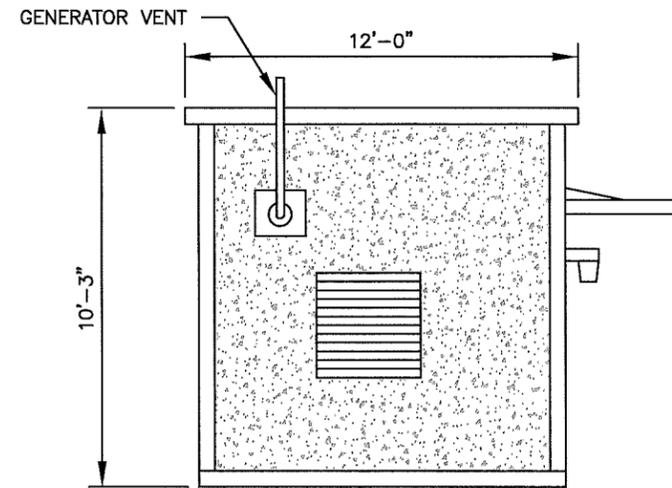
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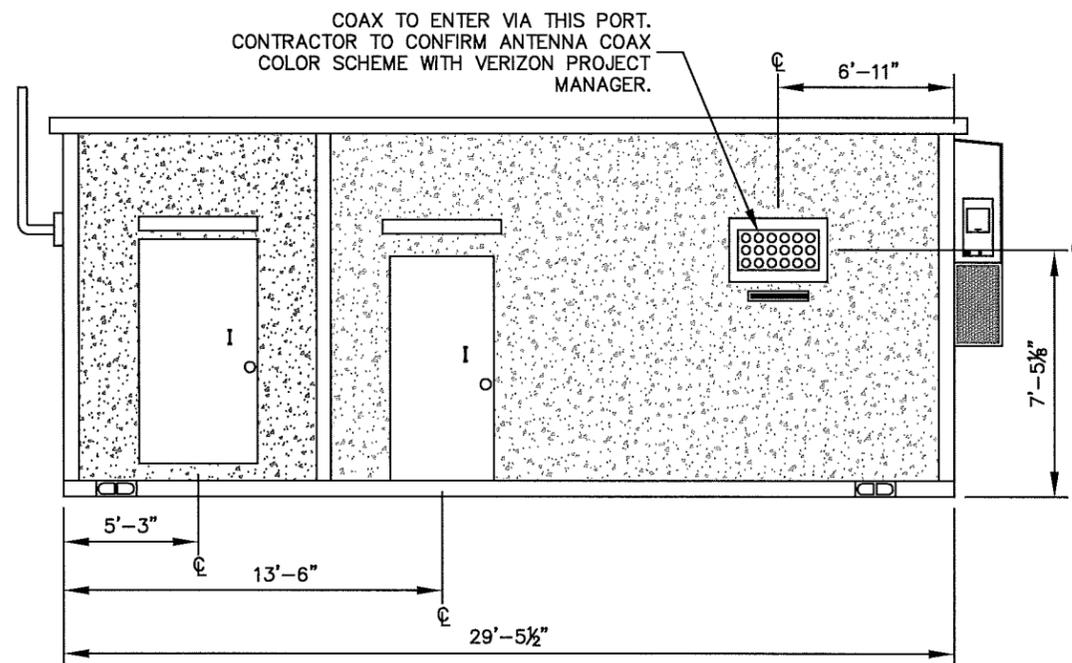


1 REAR WALL ELEVATION A  
C4 NOT TO SCALE

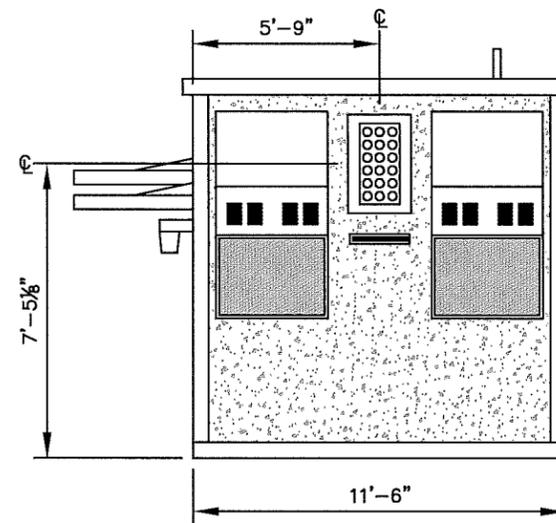
TIE DOWN PLATE  
(SEE DETAIL 4/C3)



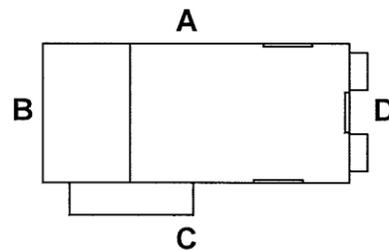
2 SIDE WALL ELEVATION B  
C4 NOT TO SCALE



3 FRONT WALL ELEVATION C  
C4 NOT TO SCALE



4 SIDE WALL ELEVATION D  
C4 NOT TO SCALE



5 TYPICAL WALL LAYOUT  
C4 NOT TO SCALE

NOTE:  
PRE-FAB BUILDING WAS DESIGNED BY OTHERS AND  
DRAWINGS WERE PROVIDED AS PART OF VERIZON WIRELESS  
STANDARD DETAILS. REFER TO CONCRETE SHELTER DRAWINGS  
FOR SPECIFIC INFORMATION.

**TowerCom**

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CONSULTANT:

DRAWN BY: CHK.: APV.:

MWD KRM WCE

LICENSER:

FOR  
ILLUSTRATIVE  
PURPOSES ONLY-  
REFER TO  
MANUFACTURER'S  
APPROVED  
SHELTER  
DRAWINGS

SHEET TITLE:

SHELTER  
ELEVATIONS

SHEET NUMBER: REVISION:

C4

0

012055945

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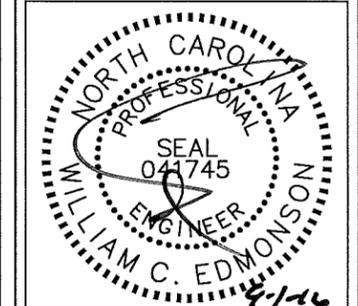
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 PHONE: 770-825-0744  
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CONSULTANT:

DRAWN BY: CHK.: APV.:

|     |     |     |
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| MWD | KRM | WCE |
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LICENSER:



SHEET TITLE:

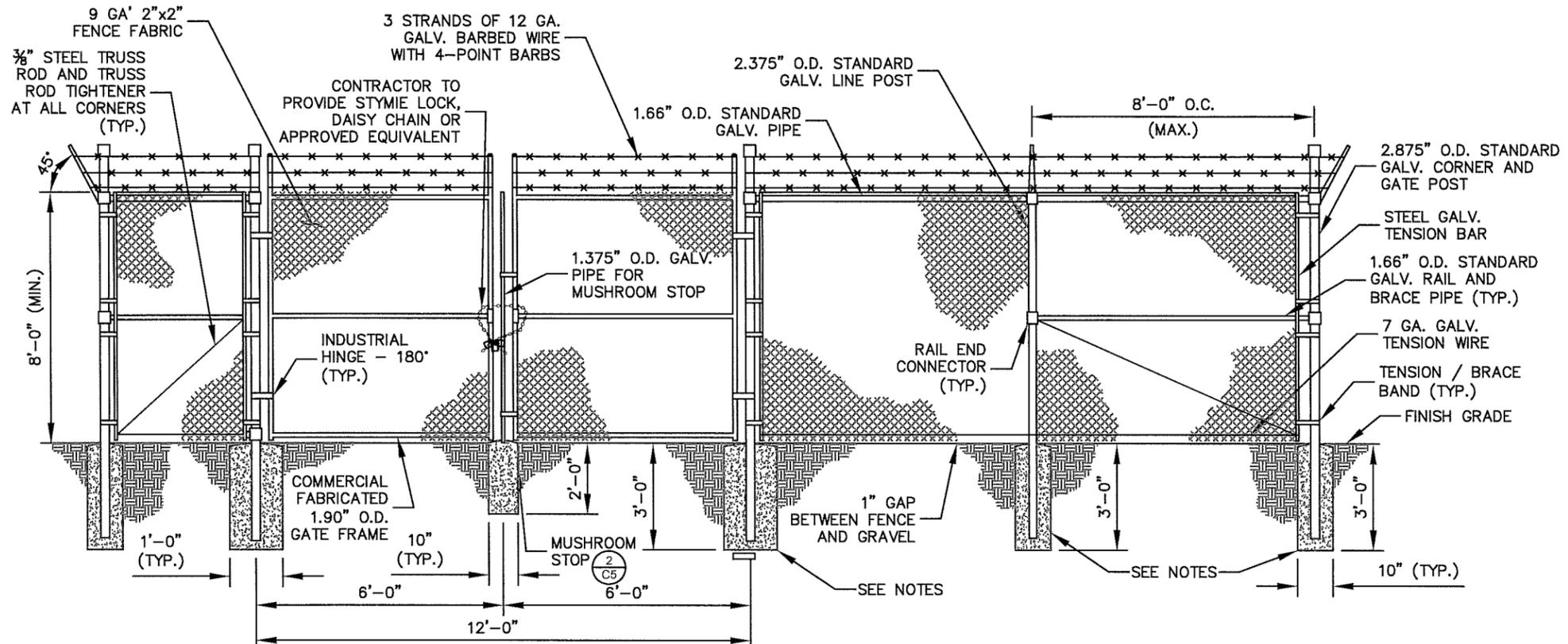
**FENCE, GATE, AND COMPOUND DETAILS**

SHEET NUMBER: REVISION:

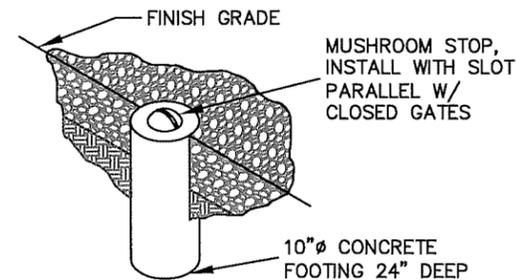
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**FENCE NOTES**

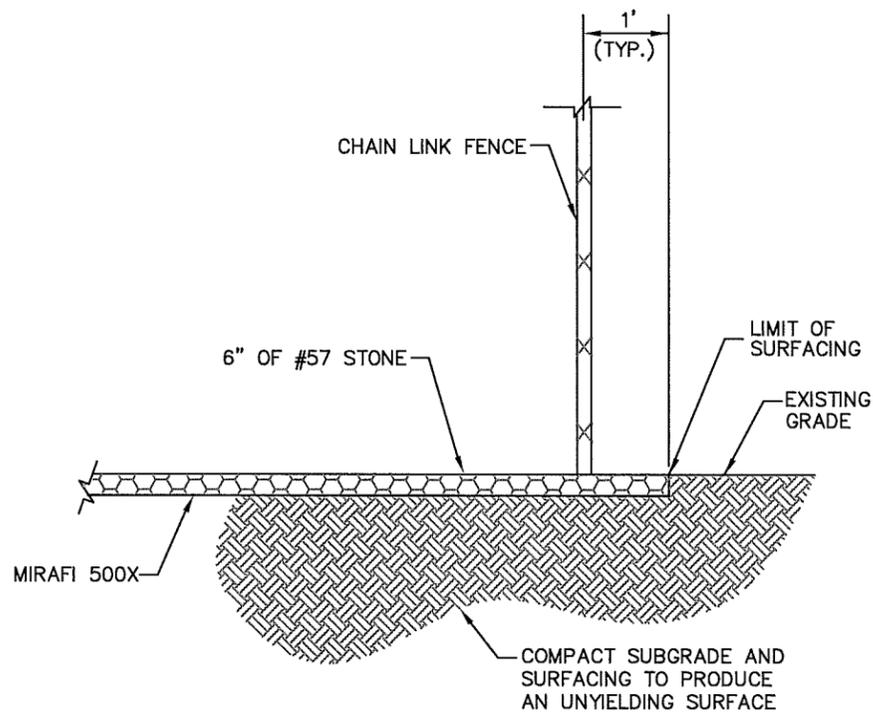
- USE 3,000-PSI CONCRETE, FULLY CONSOLIDATED AROUND THE POST. WHERE THE POST IS SET IN ROCK OR CONCRETE, CORE A HOLE 12" DEEP AND 1" LARGER IN DIAMETER THAN THE POST. SET THE POST AND GROUT IN PLACE USING NON-SHRINK GROUT.
- ALL POSTS MUST BE PLUMB AND ALIGNED WITH ONE ANOTHER IN BOTH HORIZONTAL AND VERTICAL PLANES.
- CORNERS AND GATEPOSTS FOR CHAIN LINK FENCES SHALL EXTEND ABOVE THE TOP STRAND OF BARBED WIRE TO PROVIDE TENSIONING FOR THE BARBED WIRE.
- PROVIDE MIDRAILS AND BRACING AT ALL CORNER POSTS WHERE THE FENCE CHANGES DIRECTION BY MORE THAN 30 DEGREES.
- THE GRADE OF THE SITE AND INSTALLATION OF THE FENCE SHALL PROVIDE FOR NO MORE THAN A 1" GAP BETWEEN THE BOTTOM OF THE FENCE MATERIAL AND FINISH GRADE.
- CONTRACTOR SHALL PROVIDE HOLD OPEN DEVICES FOR ALL GATES AT THE SPECIFIED OPEN POSITIONS, DRIVEN PIPE TYPE RECEIVERS ARE NOT AUTHORIZED.
- CONTRACTOR SHALL ALSO PROVIDE A MUSHROOM TYPE RECEIVER AT THE CLOSE POSITION.



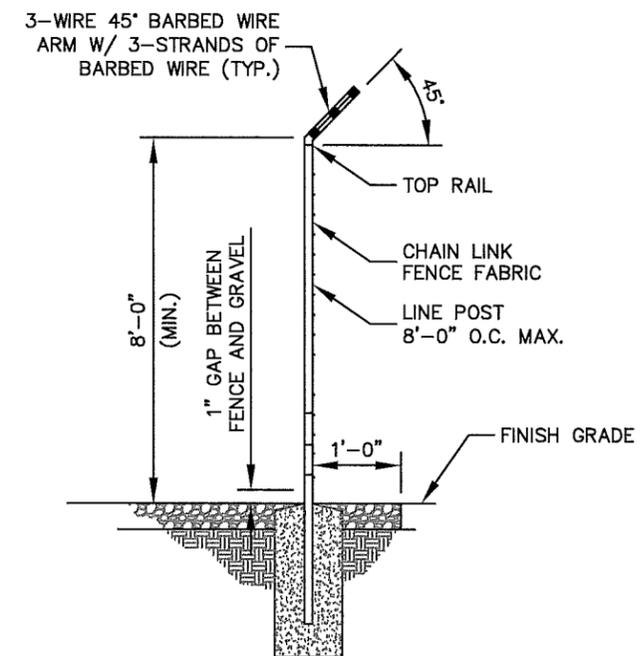
**1**  
**C5**  
**CHAIN LINK FENCE AND GATE ELEVATION**  
 NOT TO SCALE



**2**  
**C5**  
**MUSHROOM STOP**  
 NOT TO SCALE



**3**  
**C5**  
**SITE COMPOUND SURFACE DETAIL**  
 NOT TO SCALE



**4**  
**C5**  
**SECTION AT FENCE**  
 NOT TO SCALE

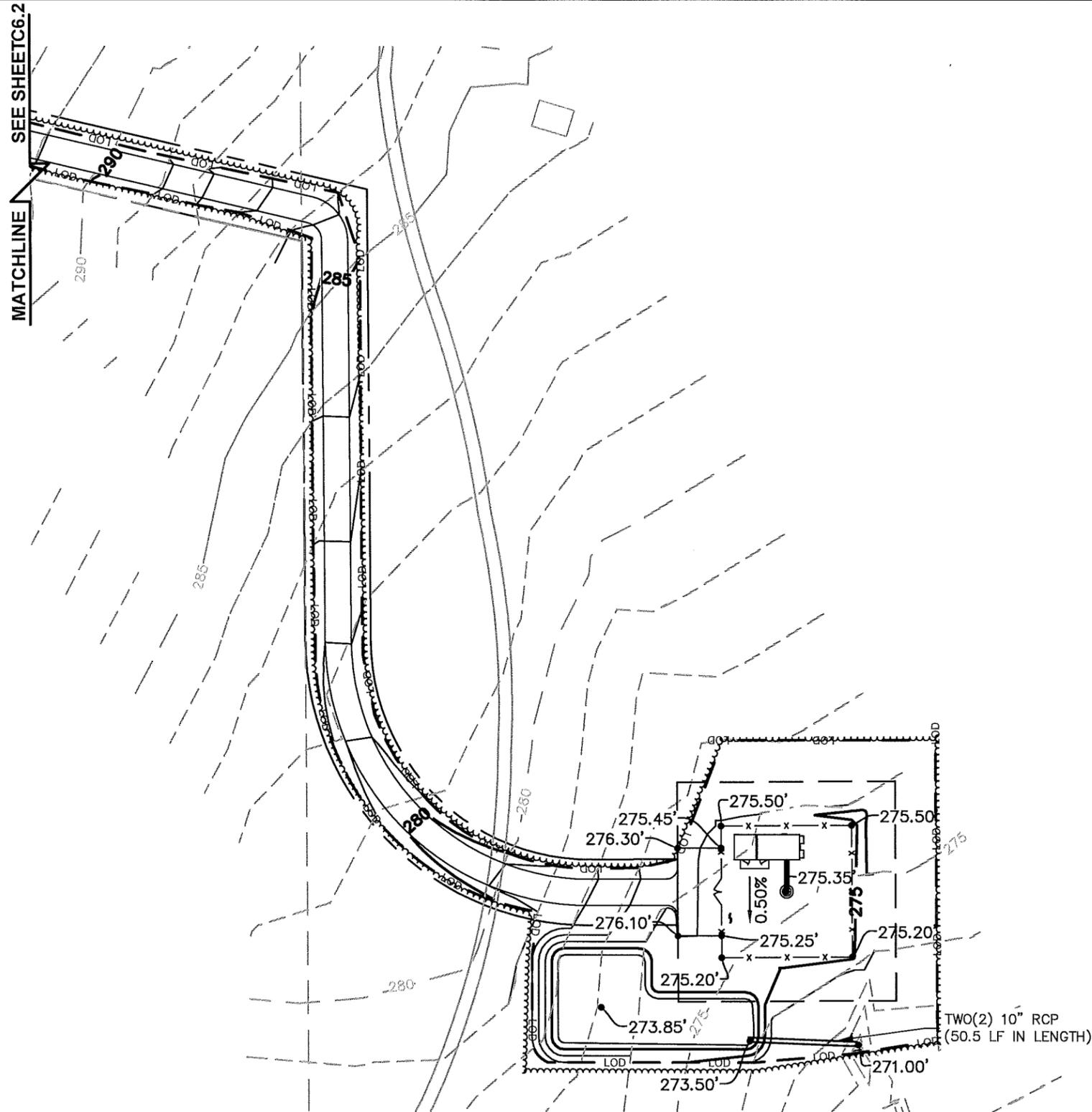
**NOTE:**  
 CURRENT DESIGN ANTICIPATES APPROXIMATELY 45.684± SQ. FT. (1.05 ACRES) OF CLEARING AND GRADING FOR THE PROPOSED PROJECT. IF ADDITIONAL CLEARING IS REQUIRED BEYOND WHAT IS SHOWN IN THE PLANS THE CONTRACTOR SHALL NOTIFY THE ENGINEER AND/OR PROJECT MANAGER. IF DURING THE BID WALK OR CONSTRUCTION IT IS DETERMINED THAT MORE THAN (1) ACRE OF LAND IS TO BE DISTURBED FOR CONSTRUCTION AN EROSION AND SEDIMENTATION CONTROL PLAN MUST BE FILED 30 DAYS PRIOR TO CONSTRUCTION.

**GRADING NOTES:**

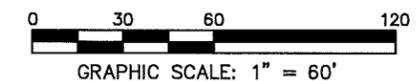
1. THE CONTRACTOR SHALL CLEAR AND GRUB THE SITE AND PLACE, COMPACT, AND MOISTURE CONDITION ALL FILL PER THE PROJECT GEOTECHNICAL ENGINEERS SPECIFICATIONS. FILL MATERIAL SHALL BE APPROVED BY THE GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT.
2. ALL PROPOSED CONTOURS AND SPOT ELEVATIONS REFLECT FINISHED GRADES.
3. CONTRACTOR SHALL BLEND EARTHWORK SMOOTHLY TO TRANSITION BACK TO EXISTING GRADE.
4. PORTIONS OF THE SITE NOT SPECIFICALLY MENTIONED WITHIN THE GEOTECHNICAL REPORT SHALL BE COMPACTED TO 95 PERCENT OF THE MATERIALS MAXIMUM DRY DENSITY WITHIN 3 PERCENT OF OPTIMUM MOISTURE CONTENT.
5. FILL SHALL BE PLACED IN MAXIMUM 8 INCH LOOSE LIFTS.
6. UNDISTURBED AREAS WITHIN 30' INGRESS/EGRESS EASEMENT NOT NEEDED FOR UTILITY ROUTING TO BE LEFT UNDISTURBED.
7. MAXIMUM CUT SLOPE = 2H:1V
8. MAXIMUM FILL SLOPE = 3H:1V
9. SEED ALL DISTURBED AREAS NOT TOPPED WITH GRAVEL PER SEEDING SCHEDULE ON DETAIL ON SHEET CB.

**LEGEND**

- EXISTING CONTOURS ————
- PROPOSED CONTOURS ————
- SILT FENCE ————
- LOD ———— LOD ————
- TPF ———— TPF ———— TPF ————
- EXISTING SPOT ELEVATION x XXX
- PROPOSED SPOT ELEVATION • XXX



**1 GRADING PLAN**  
**C6.1** SCALE: 1" = 60'



**TowerCom**

PROJECT INFORMATION:  
**VERIZON NAME:**  
**CLEARWATER LAKE**  
**VERIZON No.: TBD**  
 1941 MT. CARMEL CHURCH ROAD  
 CHAPEL HILL, NC 27517  
 ORANGE COUNTY

CURRENT ISSUE DATE:  
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CONSULTANT:  
**Kimley»Horn**  
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 NC License F-0102

CONSULTANT:  
 (Blank space for consultant name)

DRAWN BY: CHK.: APV.:  
 MWD KRM WCE

LICENSER:



SHEET TITLE:  
**GRADING PLAN**  
**1 OF 2**

SHEET NUMBER: REVISION:  
**C6.1** **1**  
 012055945

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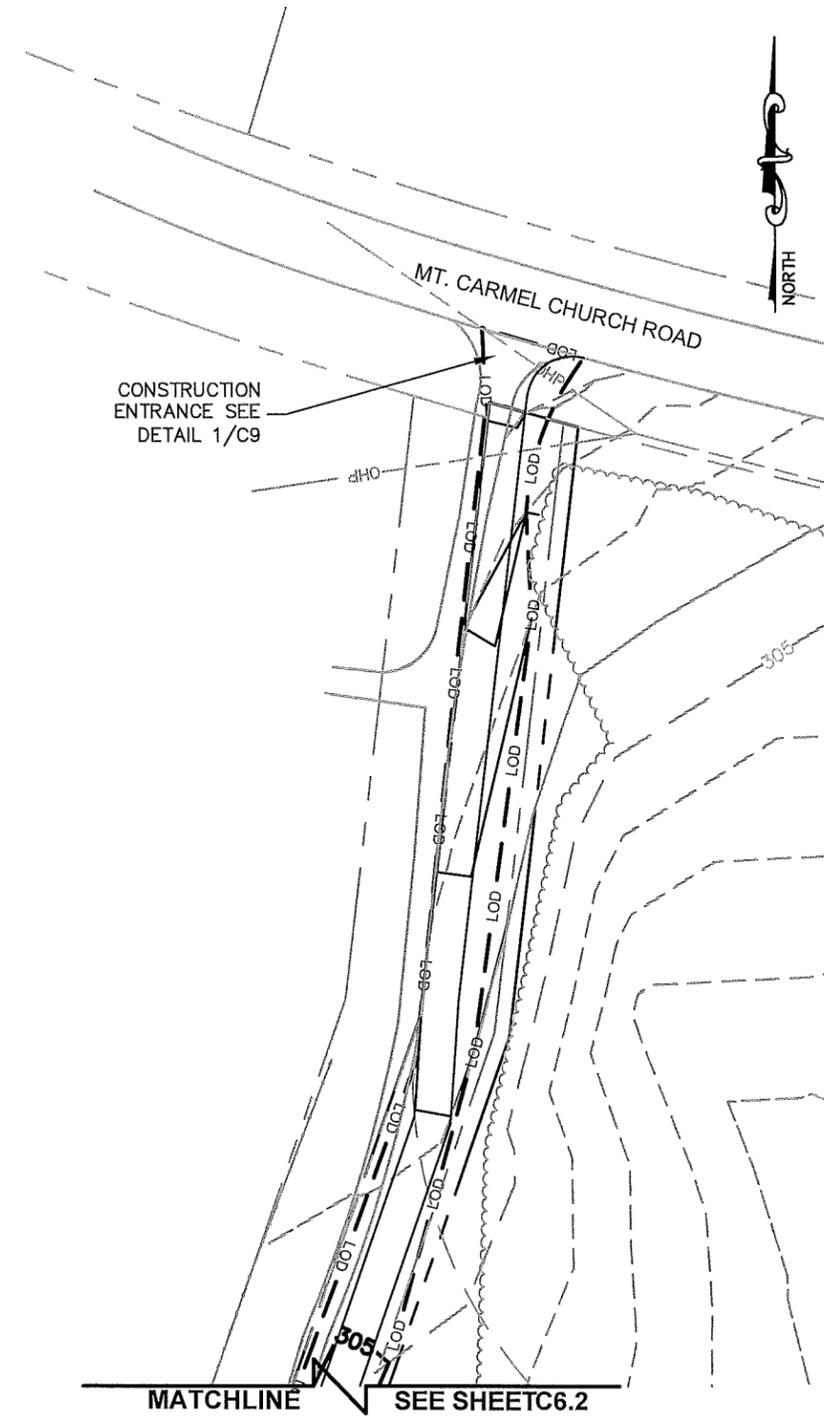
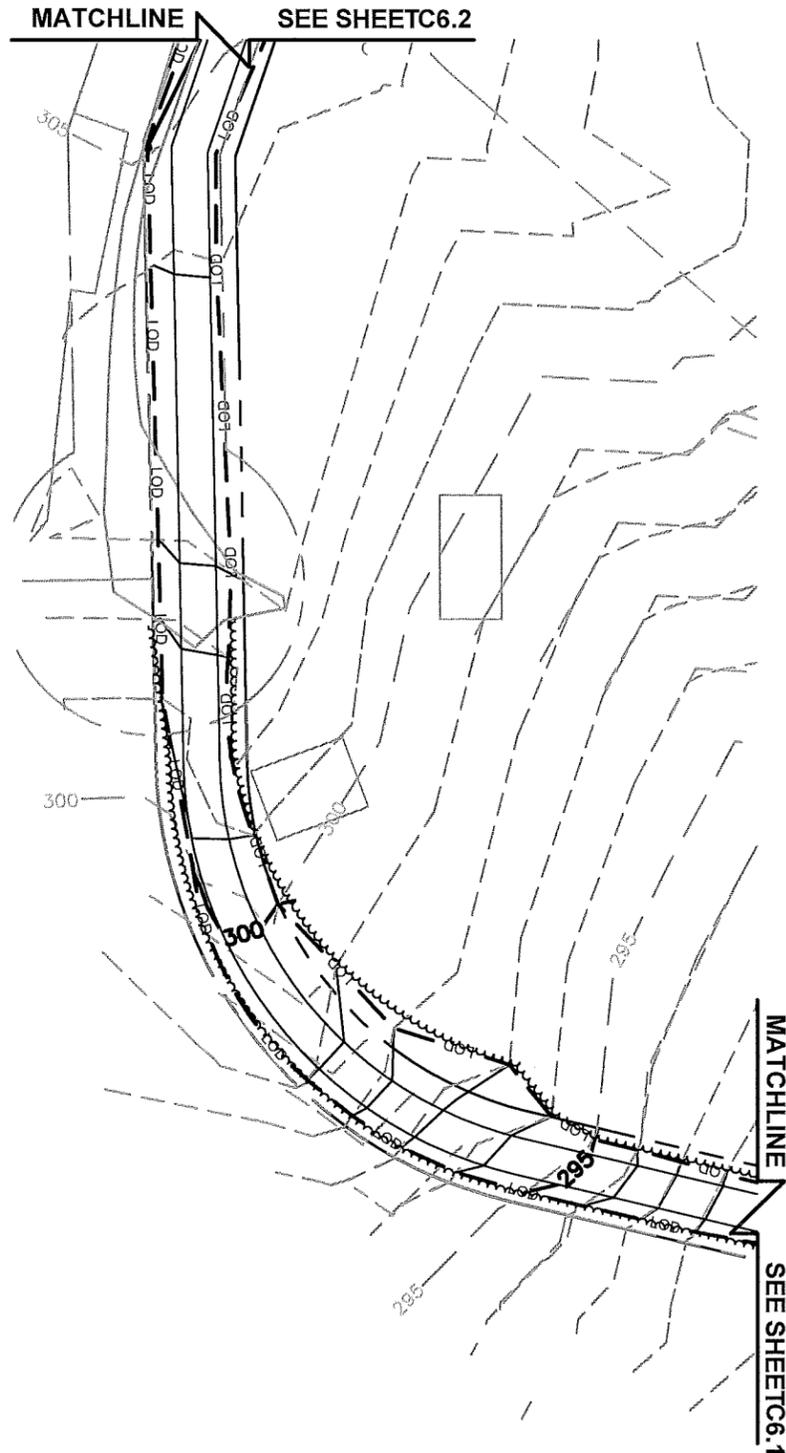
**NOTE:**  
 CURRENT DESIGN ANTICIPATES APPROXIMATELY 45,684± SQ. FT. (1.05 ACRES) OF CLEARING AND GRADING FOR THE PROPOSED PROJECT. IF ADDITIONAL CLEARING IS REQUIRED BEYOND WHAT IS SHOWN IN THE PLANS THE CONTRACTOR SHALL NOTIFY THE ENGINEER AND/OR PROJECT MANAGER. IF DURING THE BID WALK OR CONSTRUCTION IT IS DETERMINED THAT MORE THAN (1) ACRE OF LAND IS TO BE DISTURBED FOR CONSTRUCTION AN EROSION AND SEDIMENTATION CONTROL PLAN MUST BE FILED 30 DAYS PRIOR TO CONSTRUCTION.

**GRADING NOTES:**

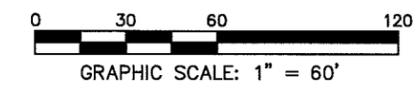
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7. MAXIMUM CUT SLOPE = 2H:1V
8. MAXIMUM FILL SLOPE = 3H:1V
9. SEED ALL DISTURBED AREAS NOT TOPPED WITH GRAVEL PER SEEDING SCHEDULE ON DETAIL ON SHEET C8.

**LEGEND**

- EXISTING CONTOURS — — — — —
- PROPOSED CONTOURS — — — — —
- SILT FENCE — — — — —
- LOD — — — — — LOD — — — — —
- TPF — — — — — TPF — — — — — TPF — — — — —
- EXISTING SPOT ELEVATION x XXX
- PROPOSED SPOT ELEVATION • XXX



1 GRADING PLAN  
 C6.2 SCALE: 1" = 60'



**TowerCom**

PROJECT INFORMATION:  
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 CLEARWATER LAKE  
**VERIZON No.:** TBD  
 1941 MT. CARMEL CHURCH ROAD  
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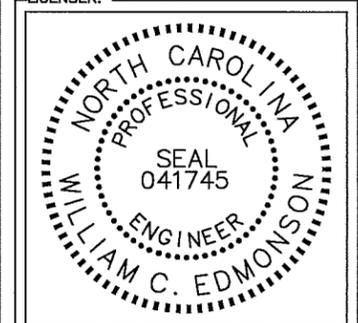
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CONSULTANT:

DRAWN BY: MWD  
 CHK.: KRM  
 APV.: WCE



SHEET TITLE:  
**GRADING PLAN**  
 2 OF 2

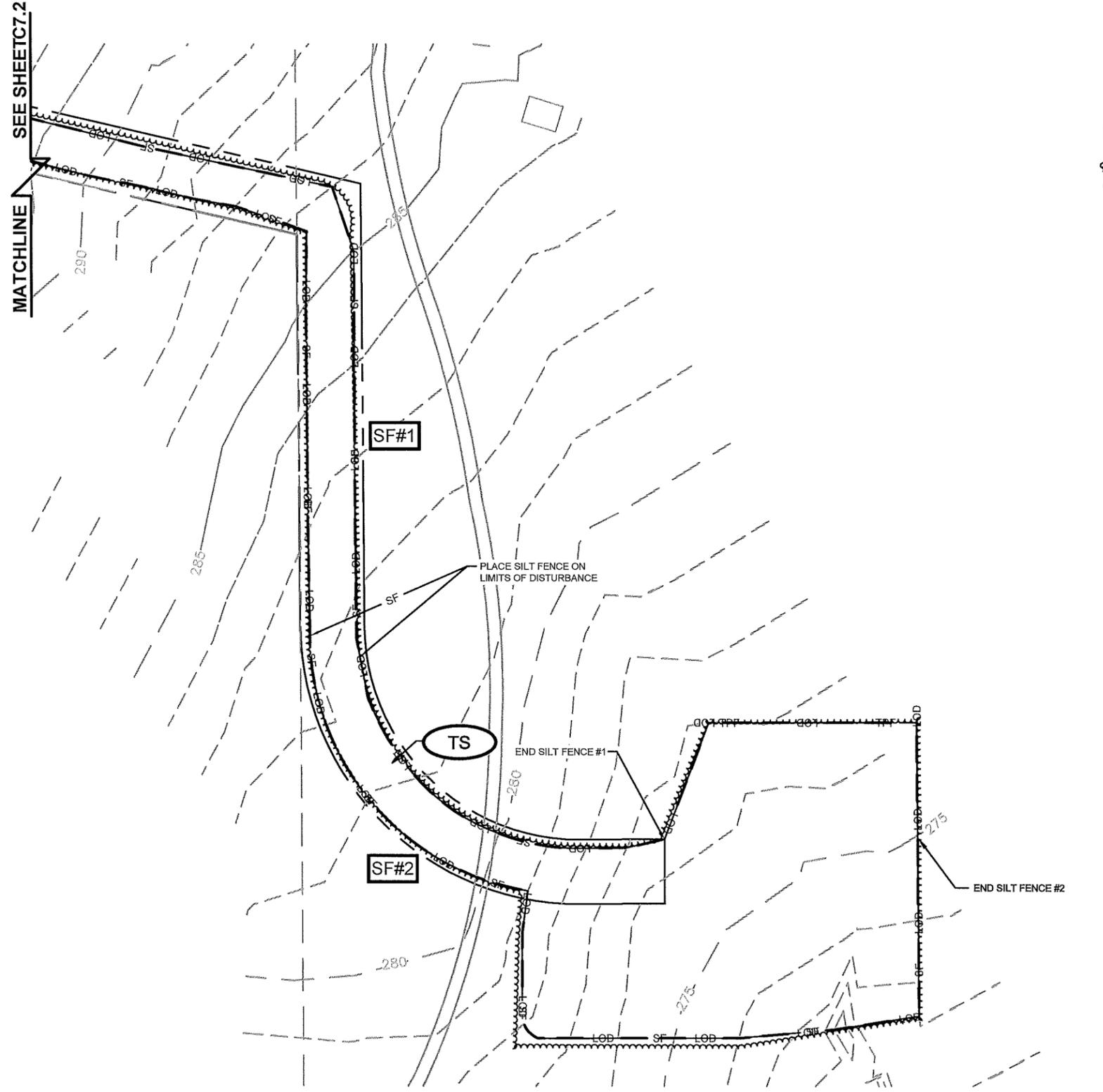
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 REVISION: 1  
 012055945

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**PHASE 1 SEQUENCING:**  
 1. INSTALL STABILIZED CONSTRUCTION EXIT.  
 2. INSTALL ALL SILT FENCE AS SHOWN ON PHASE 1 PLAN.  
 3. BEGIN CLEARING, GRUBBING AND STRIPPING THE SITE.  
 4. TEMPORARILY SEED, THROUGHOUT CONSTRUCTION, DENUDED AREAS THAT WILL BE INACTIVE FOR 7 DAYS OR MORE.

**DISTURBED AREA:** 52,699± SQ. FT. (1.21 AC)



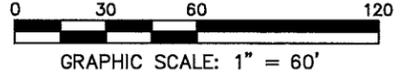
**LEGEND**

|                         |                 |
|-------------------------|-----------------|
| EXISTING CONTOURS       | ---             |
| SILT FENCE              | --- SF ---      |
| LOD                     | --- LOD --- //  |
| TPF                     | --- TPF --- TPF |
| EXISTING SPOT ELEVATION | x XXX           |
| TEMPORARY SEEDING       | ( TS )          |

1  
C7.1

**EROSION CONTROL PLAN PHASE 1**

SCALE: 1" = 60'



**TowerCom**

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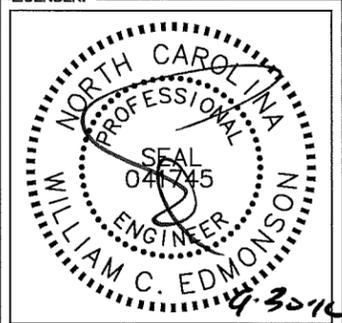
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CONSULTANT:

DRAWN BY: MWD    CHK.: KRM    APV.: WCE



SHEET TITLE:  
**EROSION CONTROL PLAN PHASE 1**  
**1 OF 2**

SHEET NUMBER: **C7.1**    REVISION: **1**  
 012055945

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**PHASE 1 SEQUENCING:**  
 1. INSTALL STABILIZED CONSTRUCTION EXIT.  
 2. INSTALL ALL SILT FENCE AS SHOWN ON PHASE 1 PLAN.  
 3. BEGIN CLEARING, GRUBBING AND STRIPPING THE SITE.  
 4. TEMPORARILY SEED, THROUGHOUT CONSTRUCTION, DENUDED AREAS THAT WILL BE INACTIVE FOR 7 DAYS OR MORE.

**DISTURBED AREA:** 52,699± SQ. FT. (1.21 AC)

**LEGEND**

EXISTING CONTOURS — — — — —

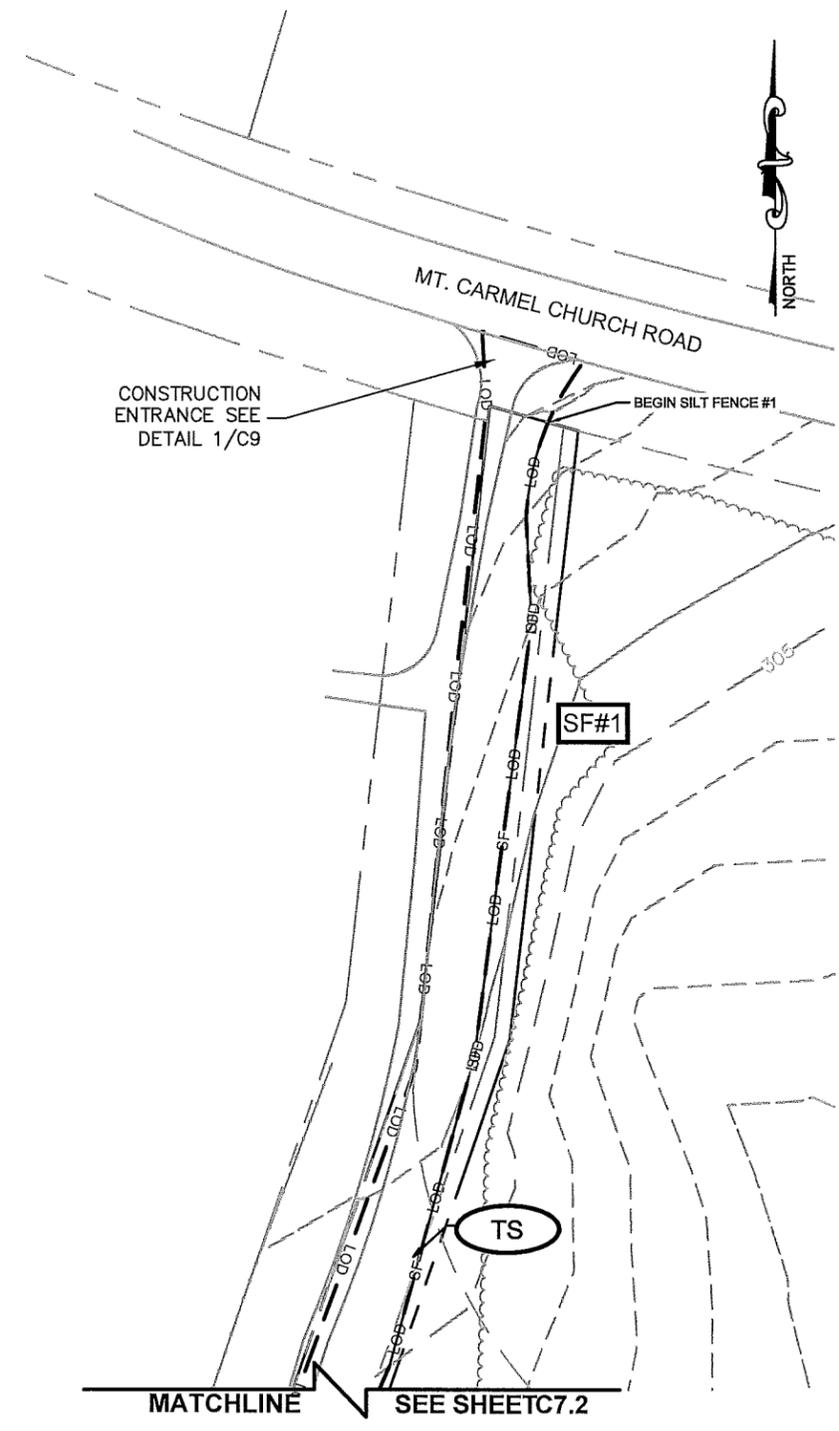
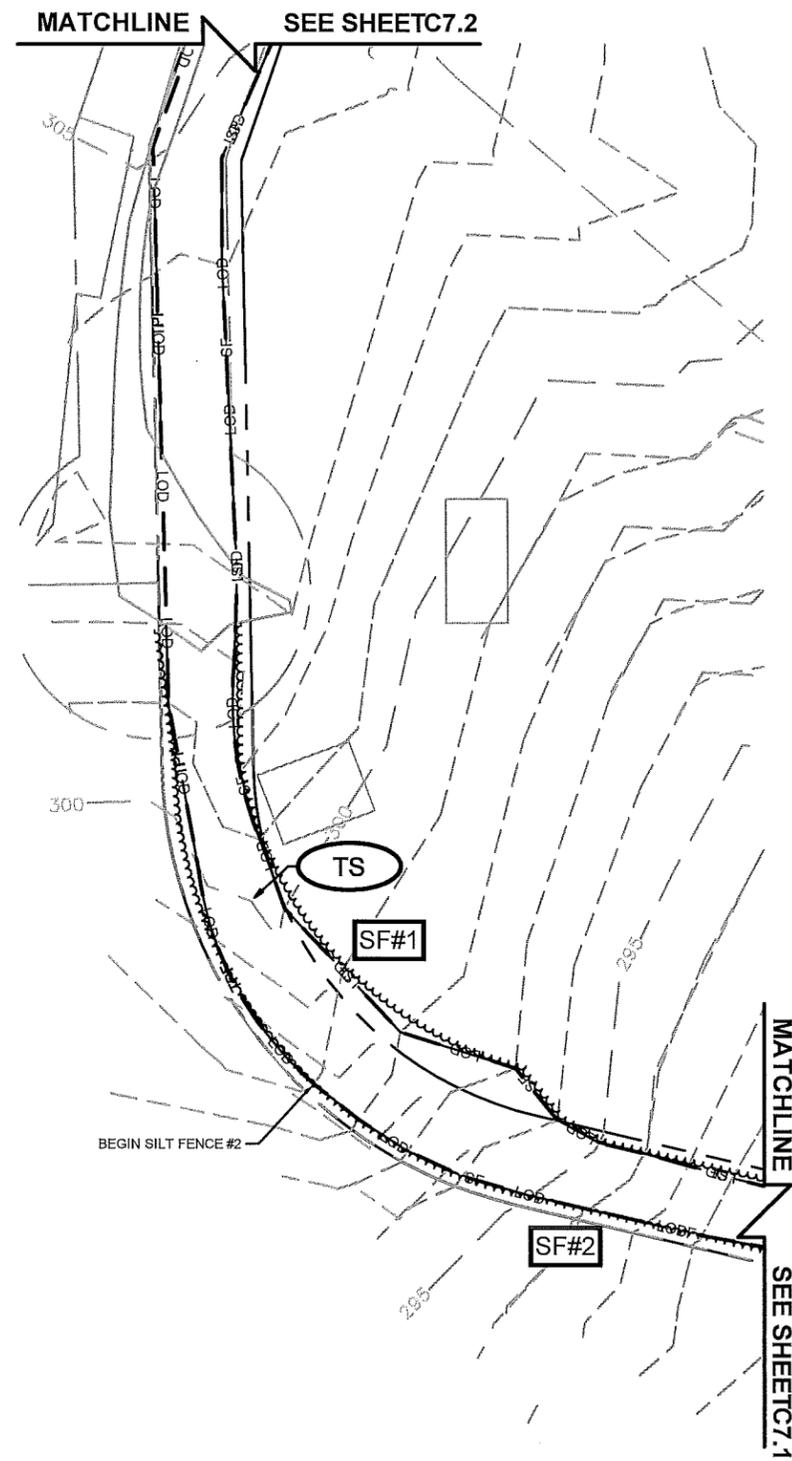
SILT FENCE ——— SF ——— **SF#**

LOD ——— LOD ——— ///

TPF ——— TPF ——— TPF

EXISTING SPOT ELEVATION × XXX

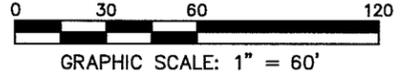
TEMPORARY SEEDING **TS**



1  
C7.2

**EROSION CONTROL PLAN PHASE 1**

SCALE: 1" = 60'



**TowerCom**

PROJECT INFORMATION:  
**VERIZON NAME:**  
 CLEARWATER LAKE  
**VERIZON No.:** TBD  
 1941 MT. CARMEL CHURCH ROAD  
 CHAPEL HILL, NC 27517  
 ORANGE COUNTY

CURRENT ISSUE DATE:  
 09/30/16

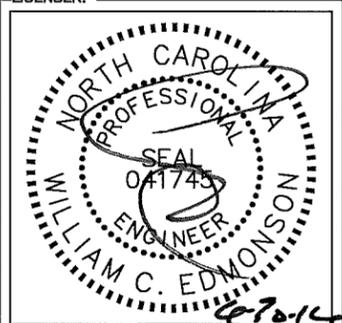
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 CONSTRUCTION

| REV. | DATE     | ISSUED FOR:  | BY: |
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| 0    | 09/01/16 | CONSTRUCTION | WCE |
| 1    | 09/30/16 | CONSTRUCTION | WCE |

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CONSULTANT:

DRAWN BY: CHK.: APV.:  
 MWD KRM WCE



SHEET TITLE:  
**EROSION CONTROL PLAN PHASE 1**  
 2 OF 2

SHEET NUMBER: REVISION:  
**C7.2** 1  
 012055945

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**PHASE 2 SEQUENCING:**  
 1. BEGIN GRADING OF THE SITE AS SHOWN ON THE PHASE 2 PLAN. PERMANENTLY STABILIZE GRAVEL DRIVE AREAS AS THEY ARE BROUGHT TO FINAL GRADE.  
 2. PERMANENTLY STABILIZE AREAS TO BE VEGETATED AS THEY ARE BROUGHT TO FINAL GRADE.  
 3. CONTINUE TO MAINTAIN SILT FENCE UNTIL CONCURRENCE WITH ORANGE COUNTY IS OBTAINED.

**DISTURBED AREA:** 52,699± SQ. FT. (1.21 AC)

**LEGEND**

EXISTING CONTOURS ————

SILT FENCE ———— SF ———— **SF#**

LOD ———— LOD ———— ///

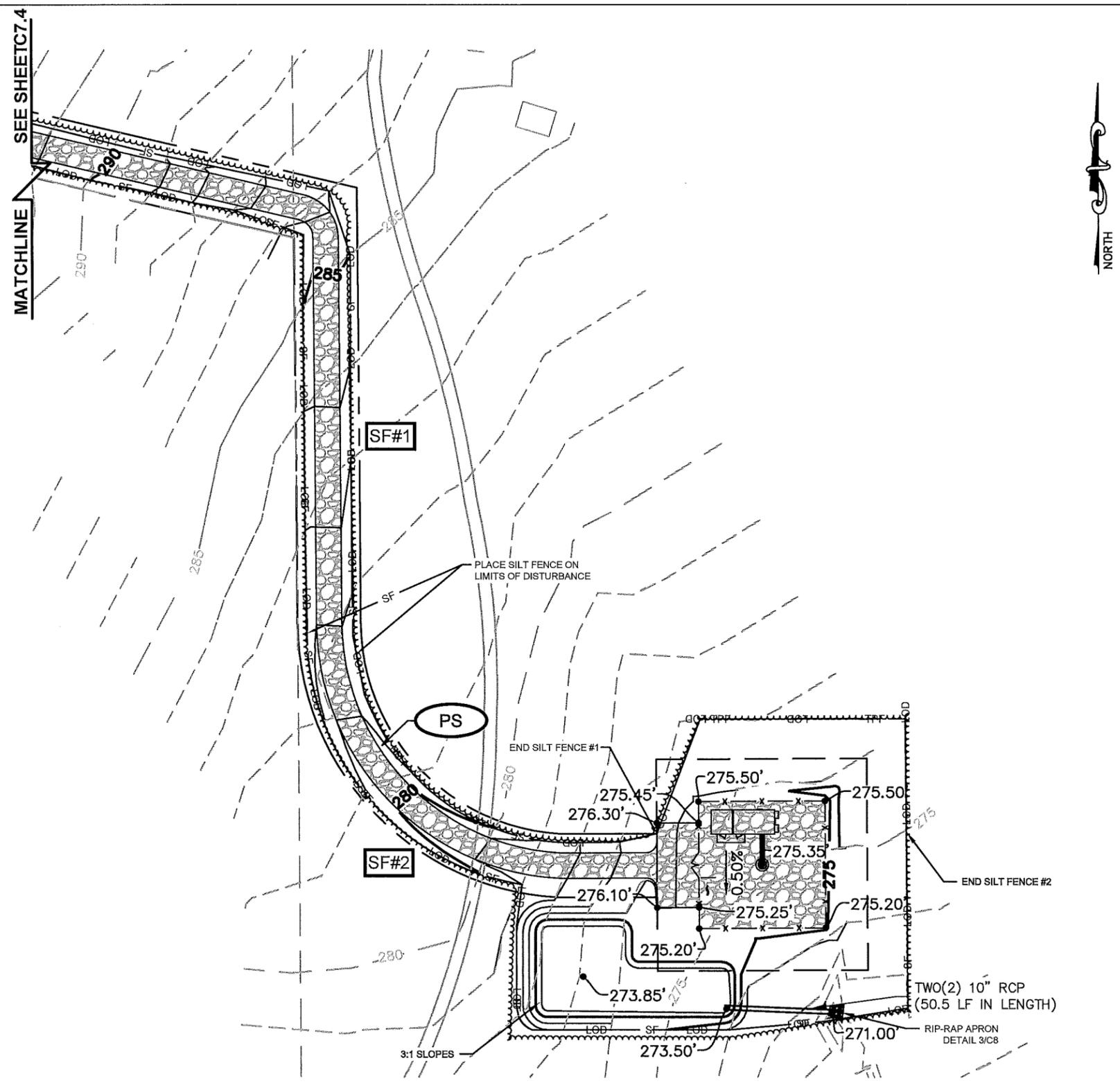
TPF ———— TPF ———— TPF

EXISTING SPOT ELEVATION × XXX

PROPOSED SPOT ELEVATION ● XXX

GRAVEL DRIVE 

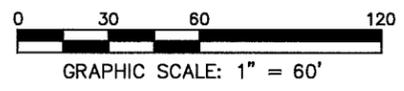
TEMPORARY SEEDING **PS**



1  
C7.3

**EROSION CONTROL PLAN PHASE 2**

SCALE: 1" = 60'



**TowerCom.**

PROJECT INFORMATION:  
**VERIZON NAME:**  
**CLEARWATER LAKE**  
**VERIZON No.:** TBD  
 1941 MT. CARMEL CHURCH ROAD  
 CHAPEL HILL, NC 27517  
 ORANGE COUNTY

CURRENT ISSUE DATE:  
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 WWW.KIMLEY-HORN.COM  
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CONSULTANT:

DRAWN BY: CHK.: APV.:  
 MWD KRM WCE

LICENSER:



SHEET TITLE:  
**EROSION CONTROL PLAN PHASE 2**  
**1 OF 2**

SHEET NUMBER: **C7.3** REVISION: **1**  
 012055945

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**PHASE 2 SEQUENCING:**  
 1. BEGIN GRADING OF THE SITE AS SHOWN ON THE PHASE 2 PLAN. PERMANENTLY STABILIZE GRAVEL DRIVE AREAS AS THEY ARE BROUGHT TO FINAL GRADE.  
 2. PERMANENTLY STABILIZE AREAS TO BE VEGETATED AS THEY ARE BROUGHT TO FINAL GRADE.  
 3. CONTINUE TO MAINTAIN SILT FENCE UNTIL CONCURRENCE WITH ORANGE COUNTY IS OBTAINED.

**DISTURBED AREA:** 52,699± SQ. FT. (1.21 AC)

**LEGEND**

EXISTING CONTOURS ————

SILT FENCE ———— SF ———— **SF#**

LOD ———— LOD ———— ///

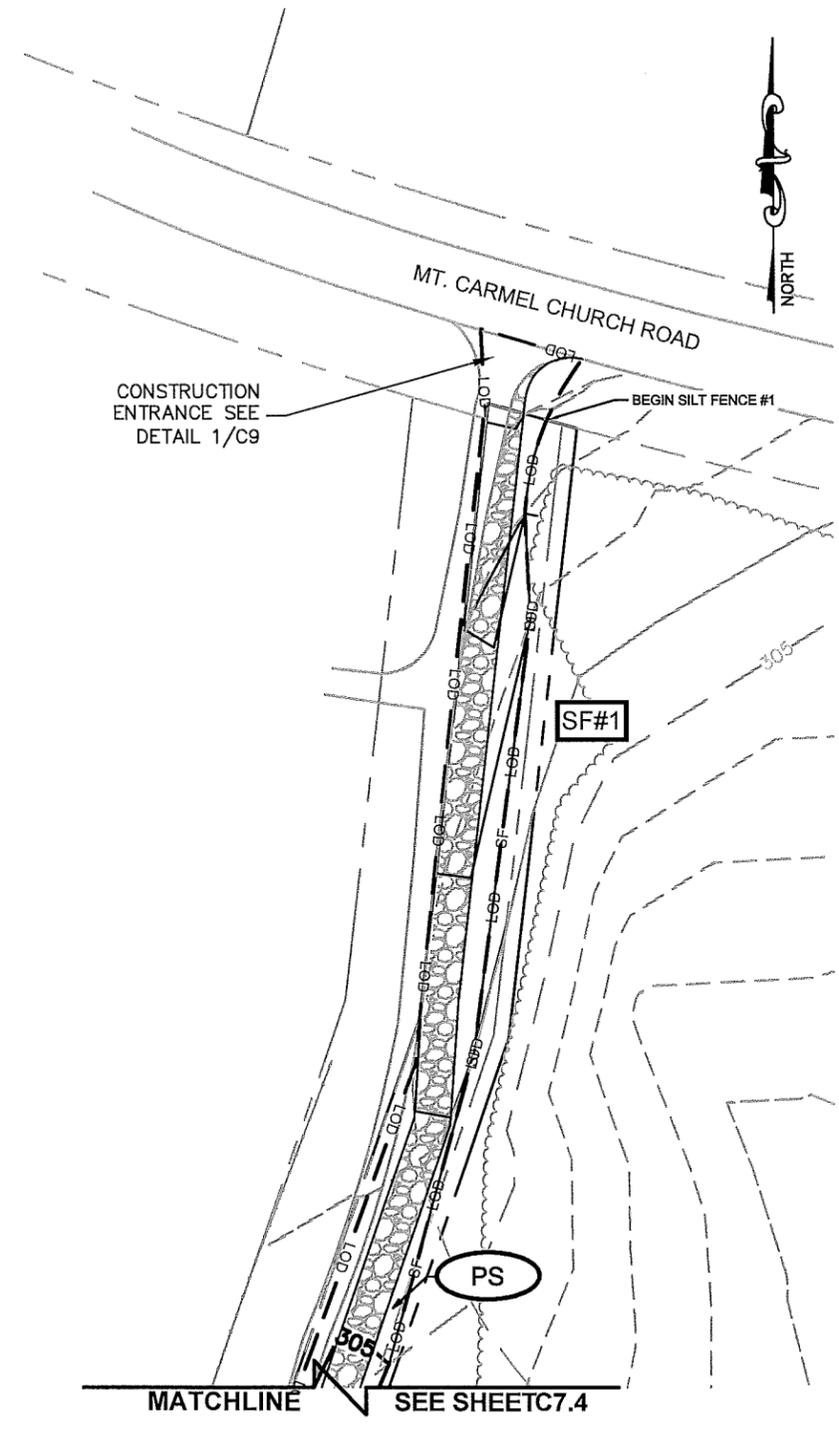
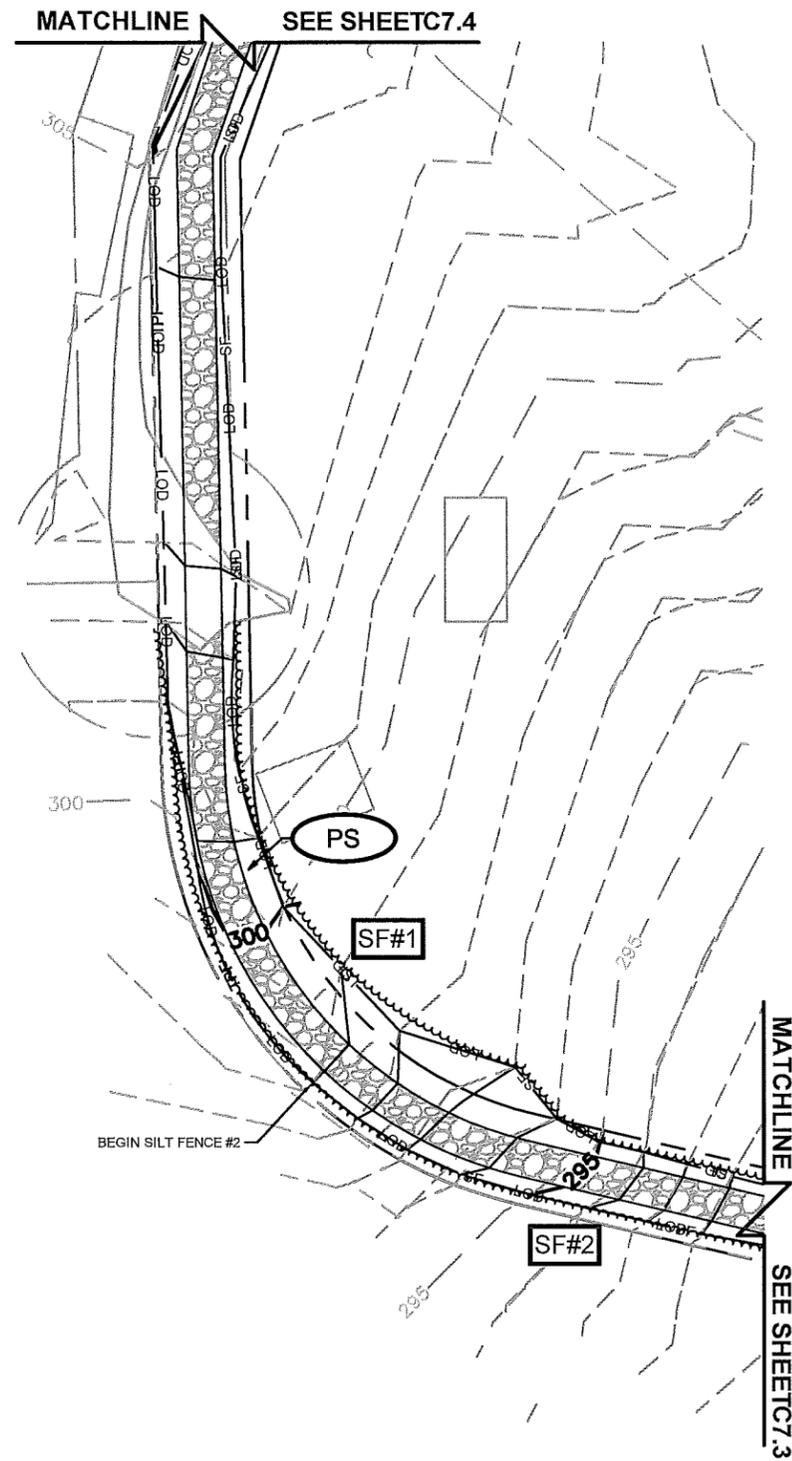
TPF ———— TPF ———— TPF

EXISTING SPOT ELEVATION x XXX

PROPOSED SPOT ELEVATION ● XXX

GRAVEL DRIVE 

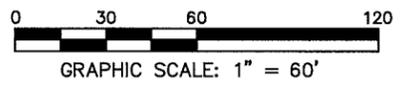
TEMPORARY SEEDING **PS**



1  
C7.4

**EROSION CONTROL PLAN PHASE 2**

SCALE: 1" = 60'



**TowerCom.**

PROJECT INFORMATION:  
**VERIZON NAME:**  
 CLEARWATER LAKE  
**VERIZON No.:** TBD  
 1941 MT. CARMEL CHURCH ROAD  
 CHAPEL HILL, NC 27517  
 ORANGE COUNTY

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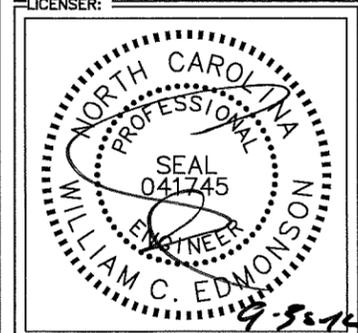
ISSUED FOR:  
**CONSTRUCTION**

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 NC License F-0102

CONSULTANT:

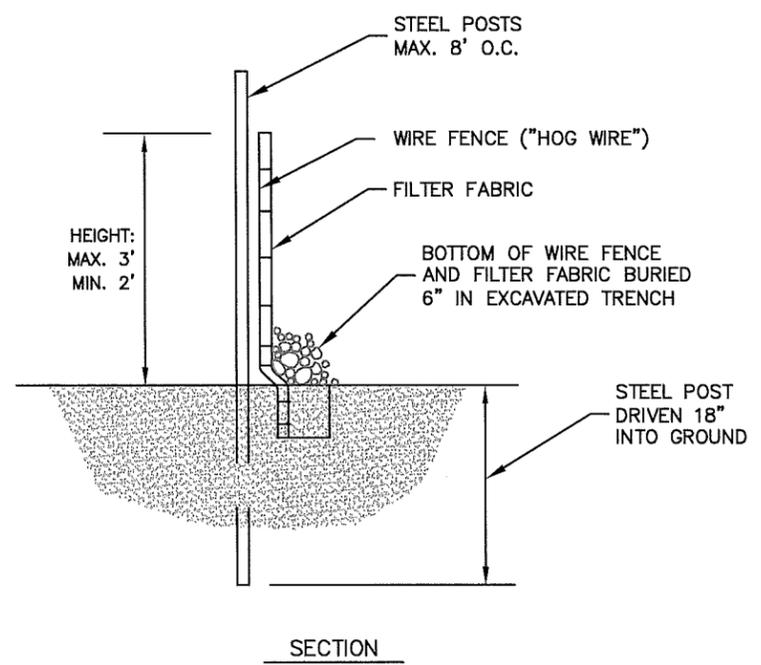
DRAWN BY: CHK.: APV.:  
 MWD KRM WCE



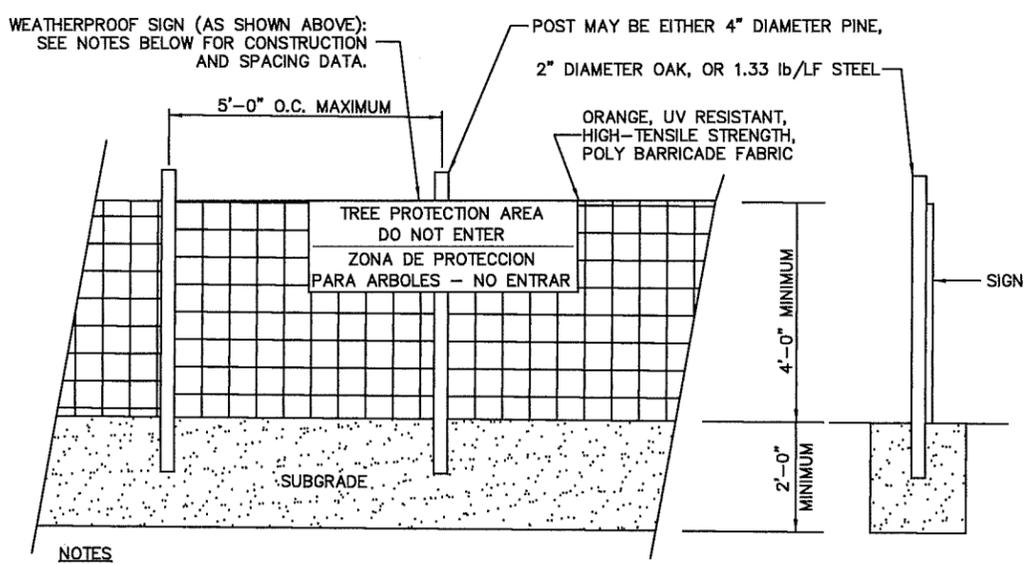
SHEET TITLE:  
**EROSION CONTROL PLAN PHASE 2**  
 2 OF 2

SHEET NUMBER: **C7.4** REVISION: **1**  
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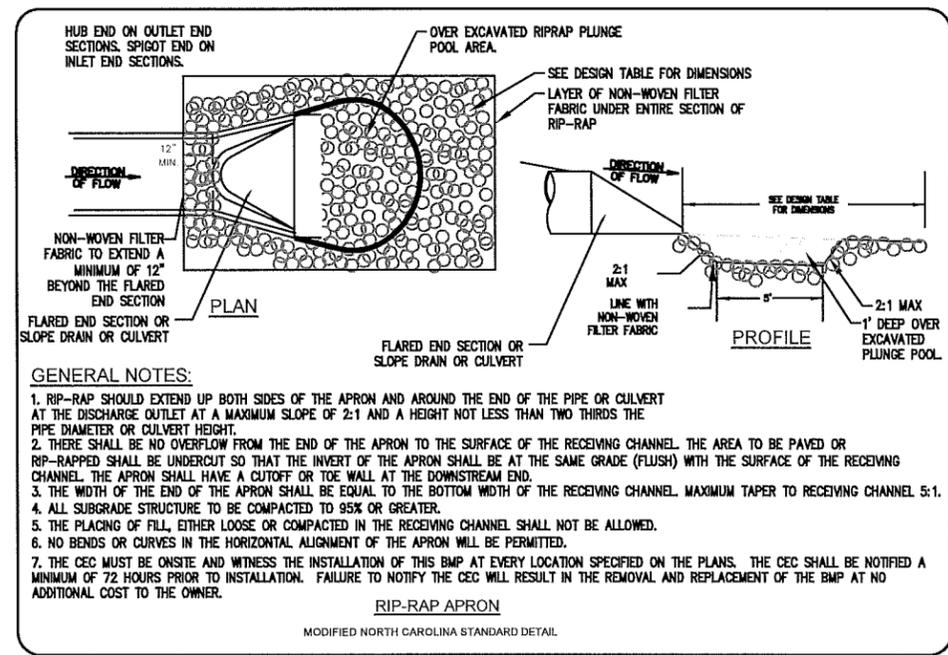


**1**  
C8  
**SEDIMENT FENCE (SILT FENCE)**  
NOT TO SCALE

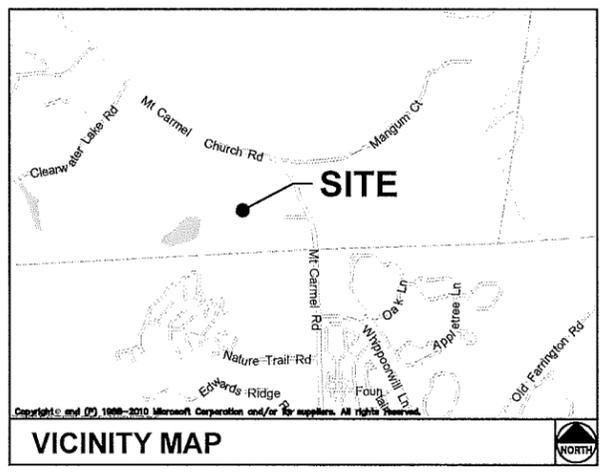


**NOTES**  
INSTALL TREE PROTECTION FENCE AND SIGNAGE PRIOR TO CALLING FOR SITE INSPECTION. MAINTAIN TREE PROTECTION FENCE THROUGHOUT DURATION OF PROJECT. ADDITIONAL SIGNS MAY BE REQUIRED BASED ON ACTUAL FIELD CONDITIONS.

**2**  
C8  
**TREE PROTECTION FENCE**  
NOT TO SCALE



**3**  
C8  
**RIP RAP APRON**  
NOT TO SCALE



**TowerCom**

PROJECT INFORMATION:  
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LICENSER:  
**WILLIAM C. EDMONSON**  
NORTH CAROLINA PROFESSIONAL ENGINEER  
SEAL 041745  
9-1-16

SHEET TITLE:  
**GRADING & EROSION CONTROL DETAILS**

SHEET NUMBER: REVISION:  
**C8** **0**  
012055945

**SEEDING SCHEDULE FOR WINTER / SPRING CONSTRUCTION ACTIVITIES**

**SEEDING MIXTURE**

| Species  | Rate (lb/acre) |
|--|----------------|
| Rye (grain)  | 120            |
| Annual lespedeza (Kobe in Piedmont and Coastal Plain, Korean in Mountains) | 50             |

Omit annual lespedeza when duration of temporary cover is not to extend beyond June.

**SEEDING DATES**

Mountains-- Above 2500 ft: Feb 15 - May 15  
 Below 2500 ft.: feb. 1 - May 1  
 Piedmont--Jan. 1 - May 1  
 Coastal Plain--Dec. 1 - Apr. 15

**SOIL AMENDMENTS**

Follow recommendations of soil tests or apply 2,000 lb/acre ground agricultural limestone and 750 lb/acre 10-10-10 fertilizer.

**MULCH**

Apply 4,000 lb/acre straw. Anchor straw by tacking with asphalt, netting, or a mulch anchoring tool. A disk with blades set nearly straight can be used as a mulch anchoring tool.

**MAINTENANCE**

Refertilize if growth is not fully adequate. Reseed, refertilize and mulch immediately following erosion or other damage.

**SEEDING SCHEDULE FOR SUMMER CONSTRUCTION ACTIVITIES**

**SEEDING MIXTURE**

| Species             | Rate (lb/acre)               |
|---------------------|------------------------------|
| Common Bermudagrass | 40-80 (1-2 lb/1,000 sq. ft.) |

**SEEDING DATES**

Coastal Plain--Apr. 1 - July  
 Piedmont--Apr. 15 - June 30

**SOIL AMENDMENTS**

Apply lime and fertilizer according to soil tests, or apply 3,000 lb/acre ground agricultural limestone and 500 lb/acre 10-10-10 fertilizer.

**MULCH**

Use jute, excelsior matting, or other effective channel lining material to cover the bottom of channels and ditches. The lining should extend above the highest calculated depth of flow. On channel side slopes above this height, and in drainages not requiring temporary lining, apply 4,000 lb/acre grain straw and anchor straw by stapling netting over the top.

**MAINTENANCE**

A minimum of 3 weeks is required for establishment. Inspect and repair mulch frequently. Refertilize the following Apr. with 50 lb/acre nitrogen.

**SEEDING SCHEDULE FOR FALL CONSTRUCTION ACTIVITIES**

**SEEDING MIXTURE**

| Species     | Rate (lb/acre) |
|-------------|----------------|
| Rye (Grain) | 120            |

**SEEDING DATES**

Mountains--Aug. 15 - Dec. 15  
 Coastal Plain and Piedmont--Aug. 15 - Dec. 30

**SOIL AMENDMENTS**

Follow soil tests or apply 2,000 lb/acre ground agricultural limestone and 1,000 lb/acre 10-10-10 fertilizer..

**MULCH**

Apply 4,000 lb/acre straw. anchor straw by tacking with asphalt, netting, or a mulch anchoring tool. a disk with blades set nearly straight can be used as a mulch anchoring tool.

**MAINTENANCE**

Repair and refertilize damaged areas immediately. Topdress with 50 lb/acre of nitrogen in March. If it is necessary to extend temporary cover beyond June 15, overseed with 50 lb/acre Kobe (Piedmont and Coastal Plain) or Korean (Mountains) lespedeza in late February or early March.

**PERMANENT SEEDING**

REBEL II FESCUE  
 FESCUE AT 5-6 LBS/1,000 SF  
 10-10-10 FERTILIZER AT 20 LBS/1,000 SF  
 LIME AT 100 LBS/1,000 SF  
 STRAW MULCH AT 1 ½ BALES /1,000 SF

ADD 30 LBS/ACRE ANNUAL RY GRAIN TO KY 31 FESCUE IF SEEDING BETWEEN NOVEMBER AND FEBRUARY.

| GROUND STABILIZATION                         |                          |  |
|--|--------------------------|--|
| SITE AREA DESCRIPTION                        | STABILIZATION TIME FRAME | STABILIZATION TIME FRAME EXCEPTIONS  |
| PERIMETER DIKES, SWALES, DITCHES AND SLOPES  | 7 DAYS                   | NONE   |
| HIGH QUALITY WATER (HQW) ZONES               | 7 DAYS                   | NONE   |
| SLOPES STEEPER THAN 3:1                      | 7 DAYS                   | IF SLOPES ARE 10' OF LESS IN LENGTH AND ARE NOT STEEPER THAN 2:1, 14 DAYS ARE ALLOWED. |
| SLOPES 3:1 OR FLATTER                        | 14 DAYS                  | 7-DAYS FOR SLOPES GREATER THAN 50' IN LENGTH   |
| ALL OTHER AREAS WITH SLOPES FLATTER THAN 4:1 | 14 DAYS                  | NONE (EXCEPT FOR PERIMETERS AND HQW ZONES)   |

**TowerCom.**

PROJECT INFORMATION:

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 CHAPEL HILL, NC 27517  
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CONSULTANT:

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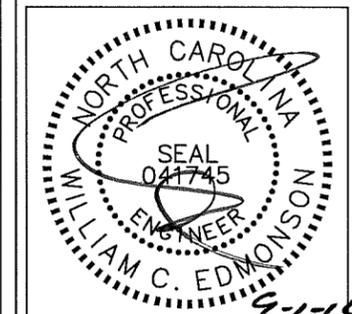
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CONSULTANT:

DRAWN BY: CHK.: APV.:

| MWD | KRM | WCE |
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LICENSER:



SHEET TITLE:

**GRADING & EROSION CONTROL DETAILS**

SHEET NUMBER: REVISION:

**C8.1**

**0**

012055945

# EROSION CONTROL NOTES

**EROSION CONTROL:**  
DISTURBED AREA = 1.21 AC

**SOIL TYPES:**  
Wsb = WHITE STORE LOAM

THE EROSION AND SEDIMENT CONTROL PLAN IS COMPRISED OF THE "EROSION AND SEDIMENT CONTROL PLAN/SITE MAP", THE STANDARD DETAILS, THE PLAN NARRATIVE, PLUS THE PERMIT AND ALL SUBSEQUENT REPORTS AND RELATED DOCUMENTS.

ALL CONTRACTORS AND SUBCONTRACTORS INVOLVED WITH STORM WATER POLLUTION PREVENTION SHALL OBTAIN A COPY OF THE EROSION AND SEDIMENT CONTROL PLAN AND THE STATE OF NORTH CAROLINA DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES DIVISION OF WATER QUALITY GENERAL PERMIT TO DISCHARGE STORMWATER UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES PERMIT) AND BECOME FAMILIAR WITH THEIR CONTENTS.

CONTRACTOR SHALL IMPLEMENT BEST MANAGEMENT PRACTICES AS REQUIRED BY THE ESCP. ADDITIONAL BEST MANAGEMENT PRACTICES SHALL BE IMPLEMENTED AS DICTATED BY CONDITIONS AT NO ADDITIONAL COST TO OWNER THROUGHOUT ALL PHASES OF CONSTRUCTION.

BEST MANAGEMENT PRACTICES (BMP'S) AND CONTROLS SHALL CONFORM TO FEDERAL, STATE, OR LOCAL REQUIREMENTS OR MANUAL OF PRACTICE, AS APPLICABLE. CONTRACTOR SHALL IMPLEMENT ADDITIONAL CONTROLS AS DIRECTED BY PERMITTING AGENCY OR OWNER.

CONTRACTOR SHALL MINIMIZE CLEARING TO THE MAXIMUM EXTENT PRACTICAL OR AS REQUIRED BY THE GENERAL PERMIT.

GENERAL CONTRACTOR SHALL DENOTE ON PLAN THE TEMPORARY PARKING AND STORAGE AREA WHICH SHALL ALSO BE USED AS THE EQUIPMENT MAINTENANCE AND CLEANING AREA, EMPLOYEE PARKING AREA, AND AREA FOR LOCATING PORTABLE FACILITIES, OFFICE TRAILERS, AND TOILET FACILITIES.

ALL WASH WATER (CONCRETE TRUCKS, VEHICLE CLEANING, EQUIPMENT CLEANING, ETC.) SHALL BE DETAINED AND PROPERLY TREATED OR DISPOSED.

SUFFICIENT OIL AND GREASE ABSORBING MATERIALS AND FLOATATION BOOMS SHALL BE MAINTAINED ON SITE OR READILY AVAILABLE TO CONTAIN AND CLEAN-UP FUEL OR CHEMICAL SPILLS AND LEAKS.

DUST ON THE SITE SHALL BE CONTROLLED. THE USE OF MOTOR OILS AND OTHER PETROLEUM BASED OR TOXIC LIQUIDS FOR DUST SUPPRESSION OPERATIONS IS PROHIBITED.

RUBBISH, TRASH, GARBAGE, LITTER, OR OTHER SUCH MATERIALS SHALL BE DEPOSITED INTO SEALED CONTAINERS. MATERIALS SHALL BE PREVENTED FROM LEAVING THE PREMISES THROUGH THE ACTION OF WIND OR STORMWATER DISCHARGE INTO DRAINAGE DITCHES OR JURISDICTIONAL WATERS.

ALL STORM WATER POLLUTION PREVENTION MEASURES PRESENTED ON THE "EROSION AND SEDIMENT CONTROL PLAN/SITE MAP", AND IN THE EROSION AND SEDIMENTATION CONTROL PLAN, SHALL BE INITIATED AS SOON AS PRACTICABLE.

DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY HAS STOPPED FOR AT LEAST 7 DAYS SHALL BE TEMPORARILY SEEDED. THESE AREAS SHALL BE SEEDED NO LATER THAN 7 DAYS FROM THE LAST CONSTRUCTION ACTIVITY OCCURRING IN THESE AREAS.

DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY HAS PERMANENTLY STOPPED SHALL BE PERMANENTLY SEEDED. THESE AREAS SHALL BE SEEDED IMMEDIATELY AFTER THE LAST CONSTRUCTION ACTIVITY OCCURRING IN THESE AREAS. REFER TO THE GRADING PLAN AND/OR LANDSCAPE PLAN.

IF THE ACTION OF VEHICLES TRAVELING OVER THE GRAVEL CONSTRUCTION ENTRANCES IS NOT SUFFICIENT TO REMOVE THE MAJORITY OF DIRT OR MUD, THEN THE TIRES MUST BE WASHED BEFORE THE VEHICLES ENTER A PUBLIC ROAD. IF WASHING IS USED, PROVISIONS MUST BE MADE TO INTERCEPT THE WASH WATER AND TRAP THE SEDIMENT BEFORE IT IS CARRIED OFF THE SITE.

ALL MATERIALS SPILLED, DROPPED, WASHED, OR TRACKED FROM VEHICLES ONTO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY. SEDIMENT SHALL BE REMOVED FROM THE ROADS BY SHOVELING OR SWEEPING AND TRANSPORTED TO A SEDIMENT CONTROL DISPOSAL AREA. STREET WASHING SHALL BE ALLOWED ONLY AFTER SEDIMENT IS REMOVED IN THIS MANNER.

CONTRACTORS OR SUBCONTRACTORS WILL BE RESPONSIBLE FOR REMOVING SEDIMENT FROM THE EROSION CONTROL BASINS AND ANY SEDIMENT THAT MAY HAVE COLLECTED IN THE STORM SEWER DRAINAGE SYSTEMS IN CONJUNCTION WITH THE STABILIZATION OF THE SITE.

DURING CONSTRUCTION OF THE PROJECT, ON-SITE AND OFF-SITE SOIL STOCKPILES AND BORROW AREAS SHALL BE STABILIZED OR PROTECTED WITH SEDIMENT TRAPPING MEASURES. THE APPLICANT IS RESPONSIBLE FOR THE TEMPORARY PROTECTION AND PERMANENT STABILIZATION OF ALL SOIL STOCKPILES ON SITE AS WELL AS SOIL INTENTIONALLY TRANSPORTED FROM THE PROJECT SITE. STOCKPILES AND BORROW AREAS ARE TO BE PERMITTED IN ACCORDANCE WITH GENERAL PERMIT REQUIREMENTS.

SLOPES SHALL BE LEFT IN A ROUGHENED CONDITION DURING THE GRADING PHASE TO REDUCE RUNOFF VELOCITIES AND EROSION.

DUE TO THE GRADE CHANGES DURING THE DEVELOPMENT OF THE PROJECT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTING THE EROSION CONTROL MEASURES (SILT FENCES, DIVERSION DITCHES, ETC.) TO PREVENT EROSION.

ALL CONSTRUCTION SHALL BE STABILIZED AT THE END OF EACH WORKING DAY. THIS INCLUDES BACKFILLING OF TRENCHES FOR UTILITY CONSTRUCTION AND PLACEMENT OF GRAVEL OR BITUMINOUS PAVING FOR ROAD CONSTRUCTION.

THE CONTRACTOR SHALL INSTALL AND MAINTAIN THROUGHOUT THE PROJECT CONSTRUCTION ALL EROSION CONTROL MEASURES SHOWN WITHIN THESE PLANS IN ACCORDANCE WITH APPLICABLE NORTH CAROLINA DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCE (NCDENR) AND CITY OF HIGH POINT EROSION AND SEDIMENT CONTROL REGULATIONS.

ALL EROSION CONTROL MEASURES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE NCDENR AND ORANGE COUNTY EROSION AND SEDIMENT CONTROL REGULATIONS, U.S. DEPARTMENT OF AGRICULTURE, AND U.S. SOIL CONSERVATION SERVICE REGULATIONS.

THE CONTRACTOR SHALL DILIGENTLY AND CONTINUOUSLY MAINTAIN ALL EROSION CONTROL DEVICES AND STRUCTURES TO MINIMIZE EROSION. THE CONTRACTOR SHALL MAINTAIN CLOSE CONTACT WITH THE NCDENR AND ORANGE COUNTY INSPECTOR SO THAT PERIODIC INSPECTIONS CAN BE PERFORMED AT APPROPRIATE STAGES OF CONSTRUCTION.

APPROVAL OF THIS PLAN IS NOT AN AUTHORIZATION TO GRADE ADJACENT PROPERTIES. WHEN FIELD CONDITIONS WARRANT OFF-SITE GRADING, PERMISSION MUST BE OBTAINED FROM THE AFFECTED PROPERTY OWNERS. CONTACT PROJECT ENGINEER AND PROJECT EROSION CONTROL INSPECTOR TO ENSURE ADDITIONAL EROSION CONTROL MEASURES ARE INSTALLED PRIOR TO OFF-SITE GRADING.

STABILIZATION IS THE BEST FORM OF EROSION CONTROL. ALL DISTURBED AREAS WHICH ARE NOT OTHERWISE STABILIZED SHALL BE TOP SOILED AND SEEDED, TEMPORARILY OR PERMANENTLY IN ACCORDANCE WITH THE NCDENR AND ORANGE COUNTY. PERMANENT SEEDING AND GRASS ESTABLISHMENT IS REQUIRED PRIOR TO PROJECT COMPLETION AND ACCEPTANCE.

ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED WITHIN 15 DAYS AFTER FINAL SITE STABILIZATION OR AFTER THE TEMPORARY MEASURES ARE NO LONGER NEEDED. TRAPPED SEDIMENT AND THE DISTURBED SOIL AREAS RESULTING FROM THE DISPOSITION OF TEMPORARY MEASURES SHALL BE PERMANENTLY STABILIZED TO PREVENT FURTHER EROSION AND SEDIMENTATION.

WHEN A CRUSHED STONE CONSTRUCTION ENTRANCE HAS BEEN COVERED WITH SOIL OR HAS BEEN PUSHED INTO THE SOIL BY CONSTRUCTION TRAFFIC, IT SHALL BE REPLACED WITH A DEPTH OF STONE EQUAL TO THAT OF THE ORIGINAL APPLICATION.

ALL DRAINAGE INLETS SHALL BE PROTECTED FROM SILTATION. INEFFECTIVE PROTECTION DEVICES SHALL BE IMMEDIATELY REPLACED AND THE INLET CLEANED. FLUSHING IS NOT AN ACCEPTABLE METHOD OF CLEANING.

SEDIMENT BASINS, PERIMETER DIKES, SEDIMENT BARRIERS AND OTHER MEASURES INTENDED TO TRAP SEDIMENT SHALL BE CONSTRUCTED AS A FIRST STEP IN ANY LAND-DISTURBING ACTIVITY AND SHALL BE MADE FUNCTIONAL BEFORE UPSLOPE LAND DISTURBANCE TAKES PLACE.

STABILIZATION MEASURES SHALL BE APPLIED TO STRUCTURES SUCH AS DAMS, DIKES AND DIVERSIONS IMMEDIATELY AFTER INSTALLATION.

LIMITS OF GRADING SHOWN ON THE PLAN ARE MAXIMUM LIMITS FOR EROSION CONTROL PURPOSES ONLY. SURVEYOR TO DETERMINE ACTUAL LIMIT.

ANY GRADING BEYOND THE DISTURBED LIMITS SHOWN ON THE PLAN IS A VIOLATION OF THE NCDENR AND ORANGE COUNTY EROSION CONTROL ORDINANCE, AND IS SUBJECT TO A FINE.

GRADING MORE THAN ONE ACRE WITHOUT AN APPROVED EROSION CONTROL PLAN IS A VIOLATION OF THE NCDENR AND ORANGE COUNTY EROSION CONTROL ORDINANCE AND IS SUBJECT TO A FINE.

SLOPES SHALL BE GRADED NO STEEPER THAN 2.5:1.

ALL STANDARD NUMBERS REFER TO THE NORTH CAROLINA EROSION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL AND ORANGE COUNTY REGULATIONS.

IF NECESSARY, SLOPES THAT EXCEED EIGHT (8) VERTICAL FEET SHOULD BE STABILIZED WITH SYNTHETIC OR VEGETATIVE MATS, IN ADDITION TO HYDROSEEDING. IT MAY BE NECESSARY TO INSTALL TEMPORARY SLOPE DRAINS DURING CONSTRUCTION. TEMPORARY BERMS MAY BE NEEDED UNTIL THE SLOPE IS BROUGHT TO GRADE.

STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICABLE IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED, BUT IN NO CASE MORE THAN FOURTEEN (14) DAYS AFTER WORK HAS CEASED, UNLESS ACTIVITY IN THAT PORTION OF THE SITE WILL RESUME WITHIN FOURTEEN (14) DAYS.

ALL SEDIMENT AND EROSION CONTROL DEVICES SHALL BE INSPECTED DAILY BY THE PROJECT SUPERINTENDENT, BI-WEEKLY BY THE CONTRACTOR'S COMPLIANCE OFFICER, AND MONTHLY BY THE OWNER'S CONSTRUCTION MANAGER AND AFTER EACH RAINFALL OCCURRENCE THAT EXCEEDS ONE-HALF (1/2) INCH. DAMAGED OR INEFFECTIVE DEVICES SHALL BE REPAIRED OR REPLACED, AS NECESSARY.

PROVIDE SILT FENCE AND/OR OTHER CONTROL DEVICES, AS MAY BE REQUIRED, TO CONTROL SOIL EROSION DURING UTILITY CONSTRUCTION. ALL DISTURBED AREAS SHALL BE CLEANED, GRADED, AND STABILIZED WITH GRASSING IMMEDIATELY AFTER THE UTILITY INSTALLATION.

ALL EROSION CONTROL DEVICES SHALL BE PROPERLY MAINTAINED DURING ALL PHASES OF CONSTRUCTION UNTIL THE COMPLETION OF ALL CONSTRUCTION ACTIVITIES AND DISTURBED AREAS HAVE BEEN STABILIZED. ADDITIONAL CONTROL DEVICES MAY BE REQUIRED DURING CONSTRUCTION IN ORDER TO CONTROL EROSION AND/OR OFFSITE SEDIMENTATION. ALL TEMPORARY CONTROL DEVICES SHALL BE REMOVED ONCE CONSTRUCTION IS COMPLETE AND THE SITE IS STABILIZED.

THE CONTRACTOR MUST TAKE NECESSARY ACTION TO MINIMIZE THE TRACKING OF MUD ONTO THE PAVED ROADWAY CONSTRUCTION AREAS. THE CONTRACTOR SHALL DAILY REMOVE MUD/SOIL FROM PAVEMENT, AS MAY BE REQUIRED.

TEMPORARY DIVERSION BERMS AND/OR DITCHES WILL BE PROVIDED AS NEEDED DURING CONSTRUCTION TO PROTECT WORK AREAS FROM UPSLOPE RUNOFF AND/OR DIVERT SEDIMENT - LADEN WATER TO APPROPRIATE TRAPS OR STABLE OUTLETS.

SITE IS PART OF THE CAPE FEAR RIVER BASIN.

STORMWATER FLOWS TO CUB CREEK. THE PORTION OF CUB CREEK THAT STORMWATER OUTFALLS TO IS NOT LISTED IN THE NORTH CAROLINA 303D LIST.

EARTHWORK REMOVED FROM SITE MUST BE TAKEN TO A PERMITTED SITE.

**TowerCom**

PROJECT INFORMATION:

**VERIZON NAME:**  
CLEARWATER LAKE  
**VERIZON No.:** TBD  
1941 MT. CARMEL CHURCH ROAD  
CHAPEL HILL, NC 27517  
ORANGE COUNTY

CURRENT ISSUE DATE:

09/30/16

ISSUED FOR:

CONSTRUCTION

REV. DATE ISSUED FOR BY

|   |          |              |     |
|---|----------|--------------|-----|
| 0 | 09/01/16 | CONSTRUCTION | WCE |
| 1 | 09/30/16 | CONSTRUCTION | WCE |

CONSULTANT:

**Kimley»Horn**

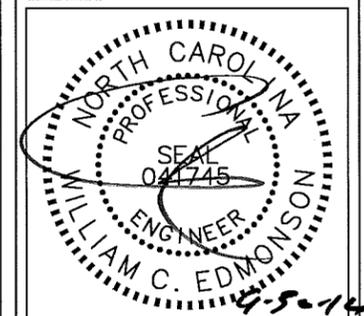
2 SUN COURT, SUITE 450  
PEACHTREE CORNERS, GA 30092  
PHONE: 770-825-0744  
WWW.KIMLEY-HORN.COM  
NC License F-0102

CONSULTANT:

DRAWN BY: CHK.: APV.:

MWD KRM WCE

LICENSER:



SHEET TITLE:

**GRADING & EROSION CONTROL DETAILS**

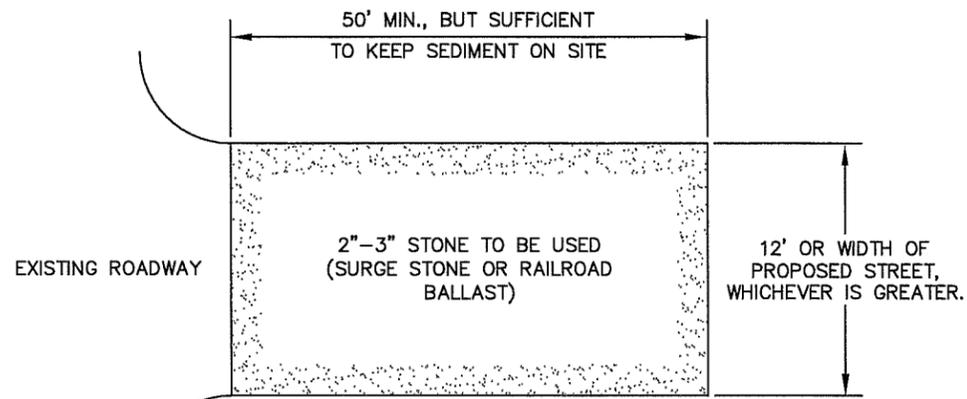
SHEET NUMBER: REVISION:

**C8.2**

**1**

012055945

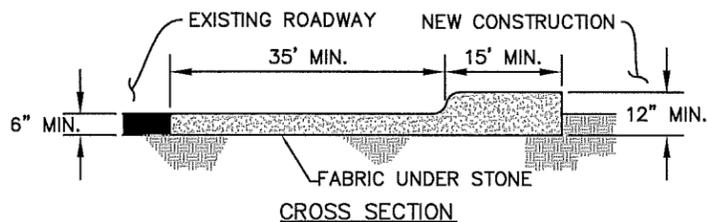
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PLAN

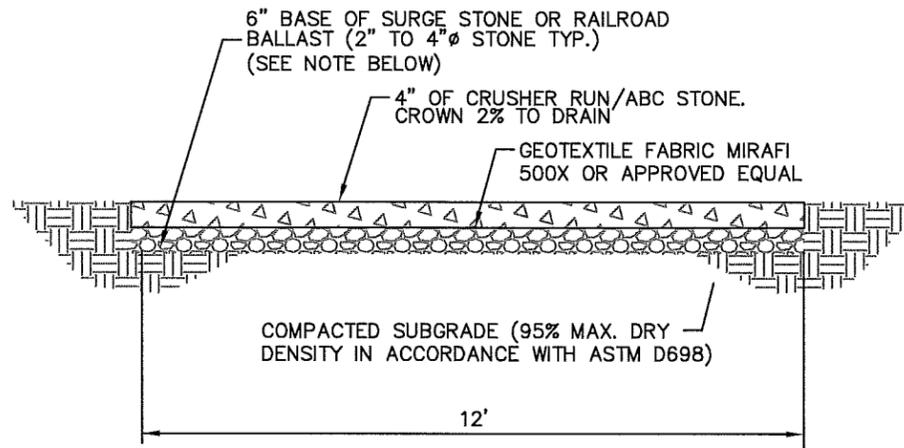
NOTES:

1. PUT SILT FENCE OR TREE PROTECTION FENCE UP TO ENSURE CONSTRUCTION ENTRANCE IS USED.
2. IF CONSTRUCTION ON THE SITES ARE SUCH THAT THE MUD IS NOT REMOVED BY THE VEHICLE TRAVEL-ING OVER THE STONE, THEN THE TIRES OF THE VEHICLES MUST BE WASHED BEFORE ENTERING THE PUBLIC ROAD.
3. IF A PROJECT CONTINUES TO PULL MUD AND DEBRIS ON TO THE PUBLIC ROAD, THE GOVERNING AUTHORITY WILL CLEAN THE AREA AND INVOICE THE FINANCIALLY RESPONSIBLE PERSON AS INDICATED ON THE FINANCIAL RESPONSIBILITY FORM.



CROSS SECTION

1 CONSTRUCTION ENTRANCE  
C9 NOT TO SCALE



NOTE:  
IF DETERMINED NECESSARY DURING GRADING AND CONSTRUCTION OF THE ACCESS ROAD BY THE CONSTRUCTION MANAGER, THE CONTRACTOR SHALL INSTALL 6" BASE OF SURGE STONE OR RAILROAD BALLAST (2" TO 4" Ø STONE TYP.)

2 STANDARD ACCESS ROAD DETAIL  
C9 NOT TO SCALE

**TowerCom**

PROJECT INFORMATION:

VERIZON NAME:  
CLEARWATER LAKE  
VERIZON No.: TBD  
1941 MT. CARMEL CHURCH ROAD  
CHAPEL HILL, NC 27517  
ORANGE COUNTY

CURRENT ISSUE DATE:

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| REV. | DATE     | ISSUED FOR   | BY  |
|------|----------|--------------|-----|
| 0    | 09/01/16 | CONSTRUCTION | WCE |

CONSULTANT:

**Kimley»Horn**

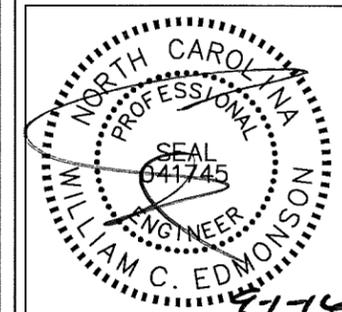
2 SUN COURT, SUITE 450  
PEACHTREE CORNERS, GA 30092  
PHONE: 770-825-0744  
WWW.KIMLEY-HORN.COM  
NC License F-0102

CONSULTANT:

DRAWN BY: CHK.: APV.:

MWD KRM WCE

LICENSER:



SHEET TITLE:

ACCESS ROAD  
DETAILS

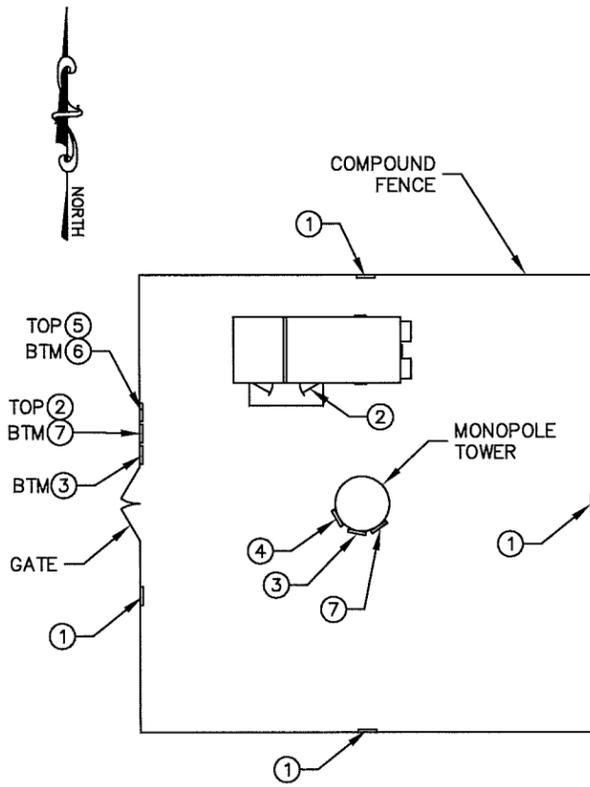
SHEET NUMBER: REVISION:

C9

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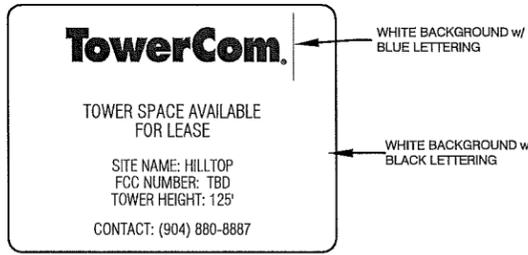


NOTE: SEE TYPICAL SIGNS AND SPECIFICATIONS DETAIL ON THIS SHEET FOR SIGN DESIGNATIONS.

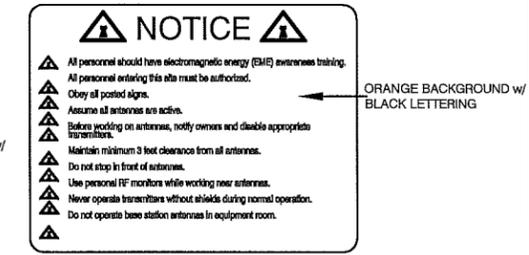
**1**  
OVERALL SIGN PLACEMENT PLAN VIEW  
NOT TO SCALE  
C10



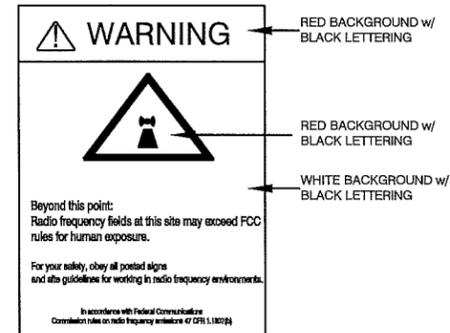
**1** NO-TRESPASSING SIGN  
18" HIGH X 24" WIDE  
(OPERATIONS PROVIDED)



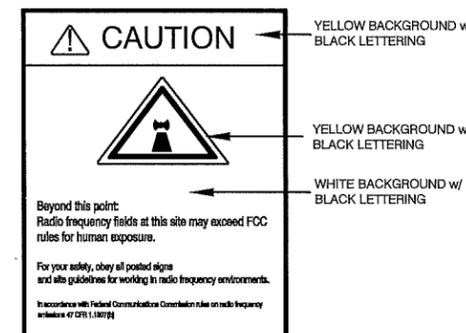
**2** TOWER COM-SITE ID SIGN  
18" HIGH X 24" WIDE  
(OPERATIONS PROVIDED)



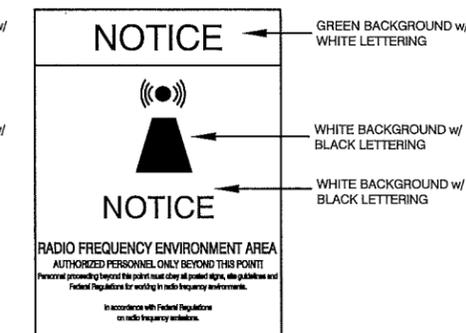
**3** NOTICE-RFE SIGN  
12" WIDE X 18" HIGH  
(OPERATIONS PROVIDED)



**4** WARNING-RF SIGN (RED)  
12" WIDE X 18" HIGH



**5** CAUTION-RF SIGN (YELLOW)  
12" WIDE X 18" HIGH

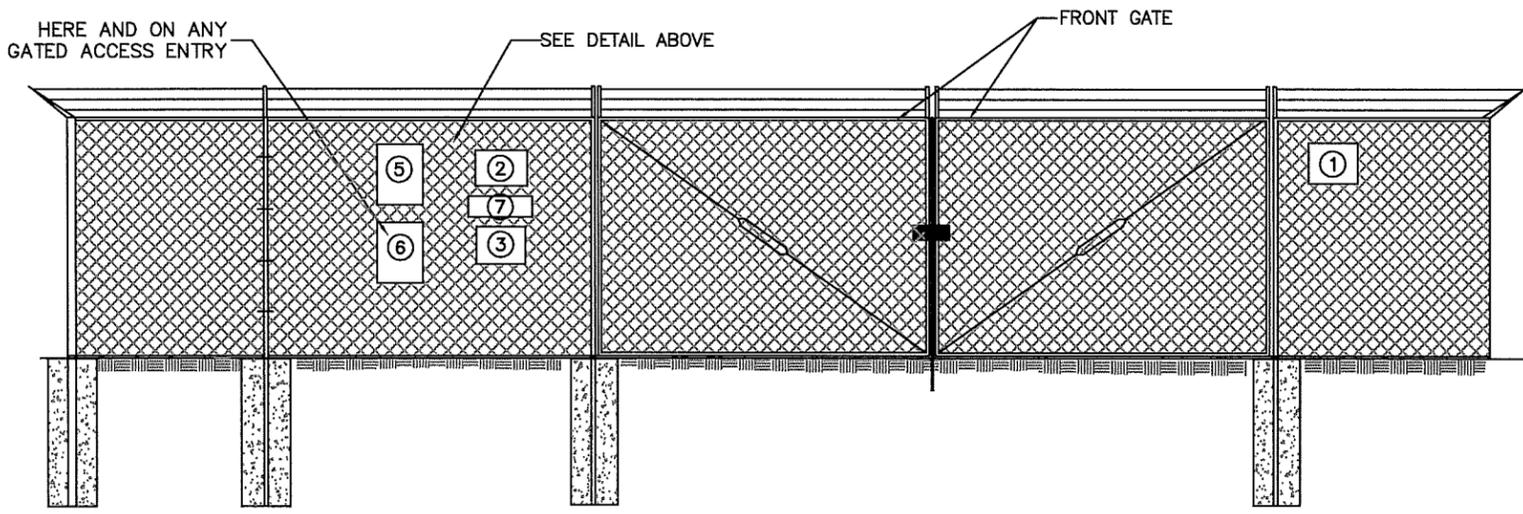


**6** NOTICE-RF SIGN (BLUE)  
12" WIDE X 18" HIGH



**7** FCC REGISTRATION SIGN  
20 WIDE X 4" HIGH

**2**  
TYPICAL SIGNS AND SPECIFICATIONS  
NOT TO SCALE  
C10



**3**  
SITE SIGNAGE FRONT GATE VIEW  
NOT TO SCALE  
C10

**SIGNAGE NOTES:**  
1. SIGNS SHALL BE FABRICATED FROM CORROSION RESISTANT PRESSED METAL, AND PAINTED WITH LONG LASTING UV RESISTANT COATINGS.  
2. SIGNS (EXCEPT WHERE NOTED OTHERWISE) SHALL BE MOUNTED TO THE TOWER, GATE, AND FENCE USING A MINIMUM OF 9 GAUGE ALUMINUM WIRE, HOG RINGS (AS UTILIZED IN FENCE INSTALLATIONS) OR BRACKETS WHERE NECESSARY. BRACKETS SHALL BE OF SIMILAR METAL AS THE STRUCTURE TO AVOID GALVANIC CORROSION.  
3. ONE VERIZON SITE ID SIGN SHALL BE MOUNTED ON RIGHT DOOR OF THE SHELTER. TWO-SIDED TAPE SHALL BE UTILIZED AT EACH CORNER ON THE BACKSIDE TO AID PLACEMENT UNTIL ADHESIVE SETS.

**TowerCom.**

PROJECT INFORMATION:  
**VERIZON NAME:**  
CLEARWATER LAKE  
**VERIZON No.:** TBD  
1941 MT. CARMEL CHURCH ROAD  
CHAPEL HILL, NC 27517  
ORANGE COUNTY

CURRENT ISSUE DATE:  
09/01/16

ISSUED FOR:  
CONSTRUCTION

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| REV.: | DATE:    | ISSUED FOR:  | BY: |
| 0     | 09/01/16 | CONSTRUCTION | WCE |

CONSULTANT:  
**Kimley»Horn**  
2 SUN COURT, SUITE 450  
PEACHTREE CORNERS, GA 30092  
PHONE: 770-825-0744  
WWW.KIMLEY-HORN.COM  
NC License F-0102

CONSULTANT:

DRAWN BY: CHK.: APV.:  
MWD KRM WCE

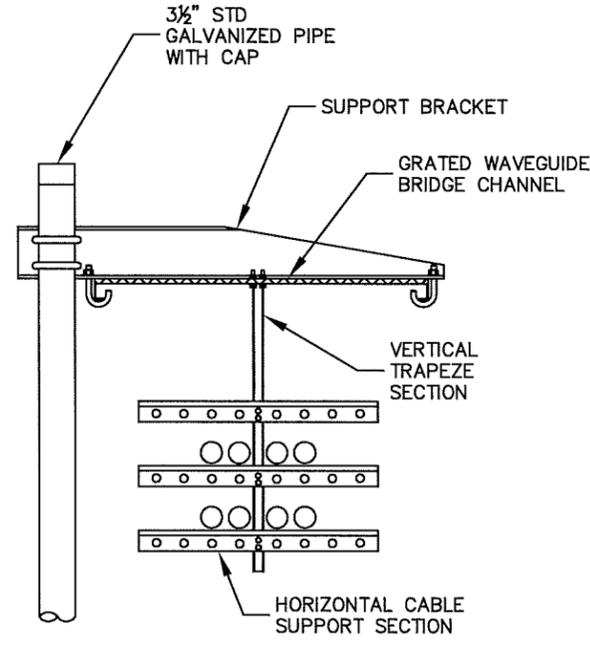
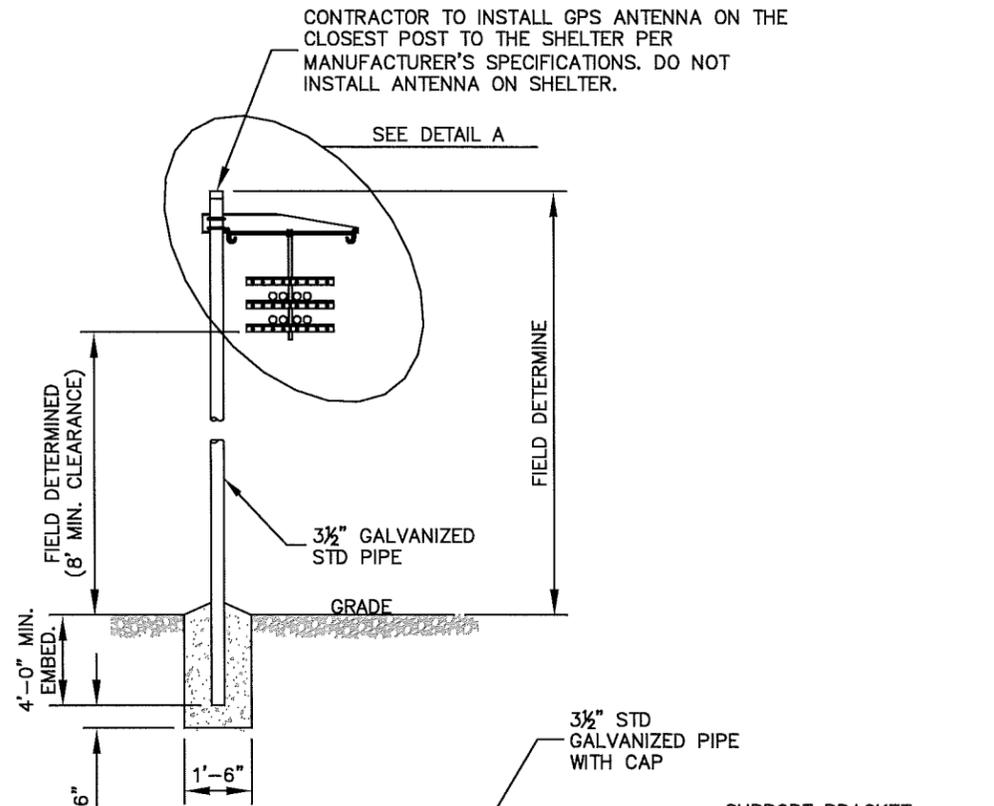
LICENSER:



SHEET TITLE:  
SITE SIGNAGE DETAILS

SHEET NUMBER: C10  
REVISION: 0  
012055945

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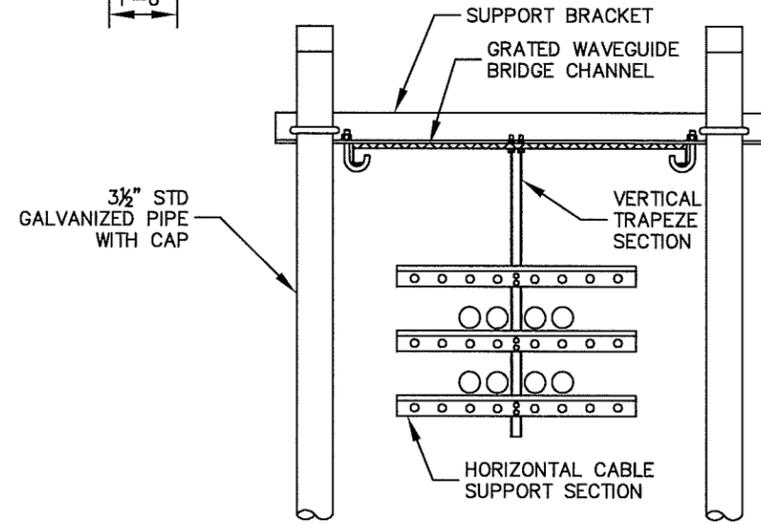
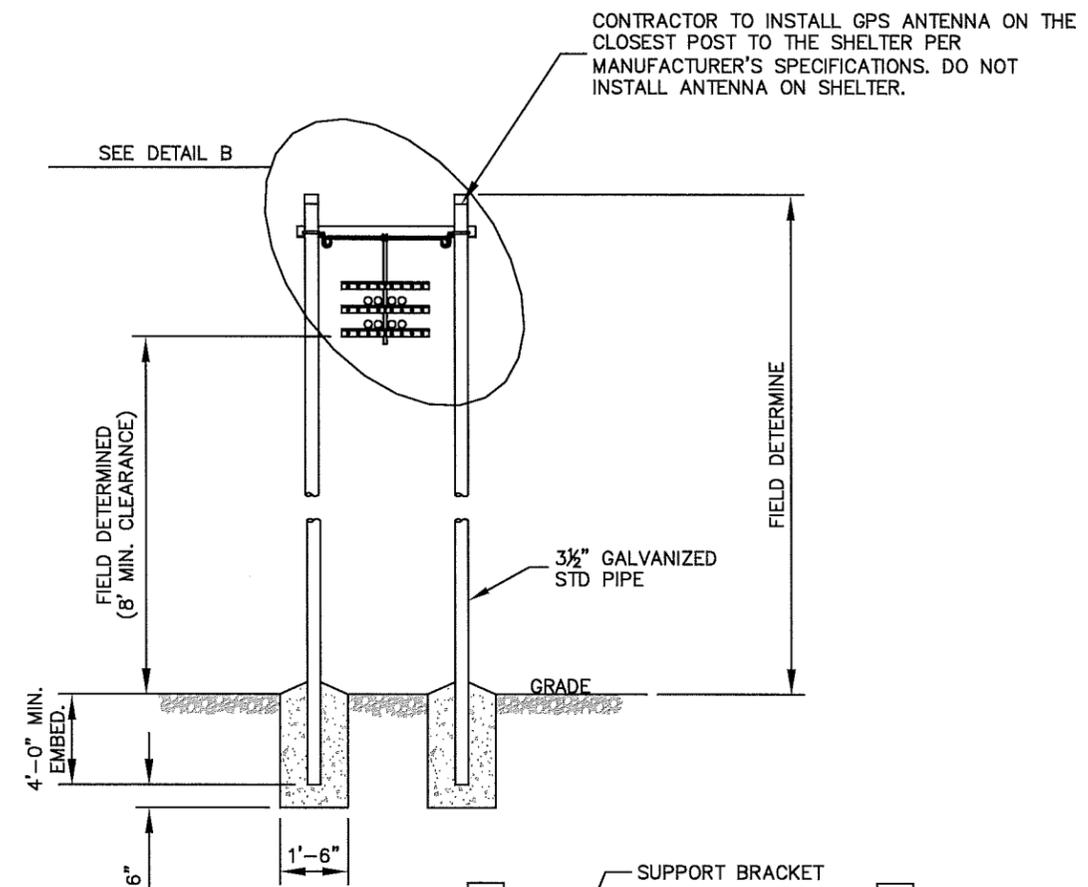


**DETAIL A**

ANDREW 2 POST WAVEGUIDE BRIDGE KIT (PART #: WB-K210-B15, OR APPROVED EQUIVALENT)

- NOTES:**
1. ALL MATERIALS FURNISHED BY CONTRACTOR UNLESS OTHERWISE NOTED.
  2. REFER TO GENERAL NOTES ON SHEET C2.

**1** WAVEGUIDE BRIDGE DETAIL  
C11 NOT TO SCALE



**DETAIL B**

ANDREW 4 POST WAVEGUIDE BRIDGE KIT (PART #: WB-K410-B15, OR APPROVED EQUIVALENT)

- NOTES:**
1. ALL MATERIALS FURNISHED BY CONTRACTOR UNLESS OTHERWISE NOTED.
  2. REFER TO GENERAL NOTES ON SHEET C2.

**2** WAVEGUIDE BRIDGE DETAIL  
C11 (ALTERNATIVE DESIGN WITH 2 PIPE COLUMNS) NOT TO SCALE



PROJECT INFORMATION:  
**VERIZON NAME:**  
 CLEARWATER LAKE  
**VERIZON No.:** TBD  
 1941 MT. CARMEL CHURCH ROAD  
 CHAPEL HILL, NC 27517  
 ORANGE COUNTY

CURRENT ISSUE DATE:  
 09/01/16

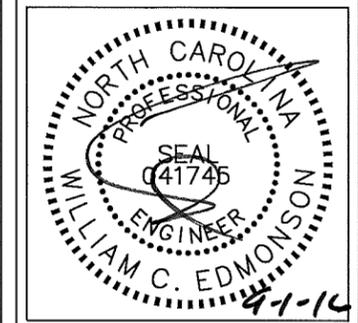
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 CONSTRUCTION

| REV.: | DATE:    | ISSUED FOR:  | BY: |
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| 0     | 09/01/16 | CONSTRUCTION | WCE |
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CONSULTANT:  
**Kimley»Horn**  
 2 SUN COURT, SUITE 450  
 PEACHTREE CORNERS, GA 30092  
 PHONE: 770-825-0744  
 WWW.KIMLEY-HORN.COM  
 NC License F-0102

CONSULTANT:  
 DRAWN BY: CHK.: APV.:  
 MWD KRM WCE

LICENSER:



SHEET TITLE:  
**WAVEGUIDE BRIDGE DETAILS**

SHEET NUMBER: REVISION:  
**C11** 0  
 012055945

PROJECT INFORMATION:

VERIZON NAME:  
 CLEARWATER LAKE  
 VERIZON No.: TBD  
 1941 MT. CARMEL CHURCH ROAD  
 CHAPEL HILL, NC 27517  
 ORANGE COUNTY

CURRENT ISSUE DATE:

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|   |          |              |     |
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CONSULTANT:

**Kimley»Horn**

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 NC License F-0102

CONSULTANT:

DRAWN BY: CHK.: APV.:

|     |     |     |
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| MWD | KRM | WCE |
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LICENSER:

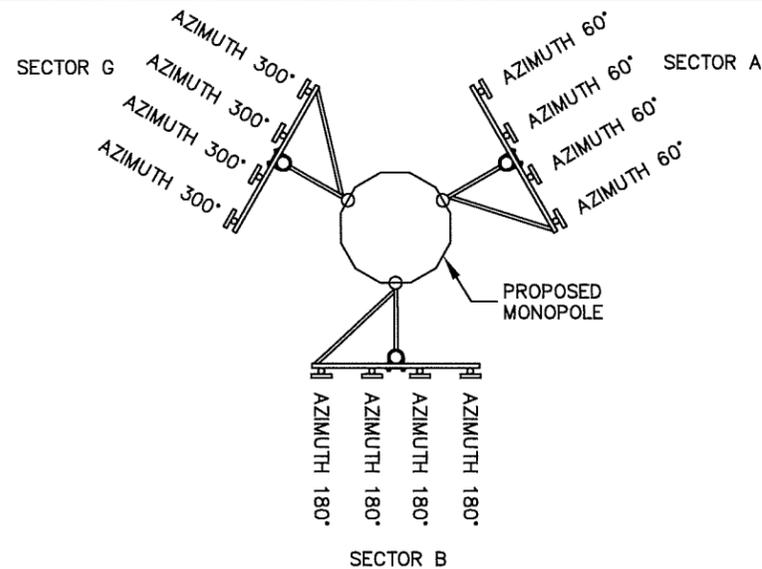
**FOR ILLUSTRATIVE PURPOSES ONLY - NO SIGNATURE REQUIRED**

SHEET TITLE:

**ANTENNA AND TOWER ELEVATION DETAILS**

SHEET NUMBER: REVISION:

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|------------|-----------|
| <b>C12</b> | <b>0</b>  |
|            | 012055945 |

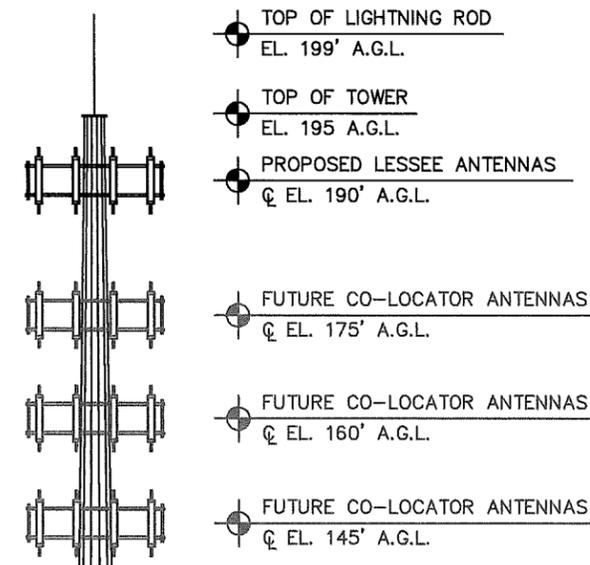


**1 ANTENNA ORIENTATION PLAN**  
 (NOT TO SCALE, FOR ILLUSTRATIVE PURPOSES ONLY, SEE STRUCTURAL ANALYSIS BY OTHERS TO CONFIRM ANTENNA MOUNT TYPE)

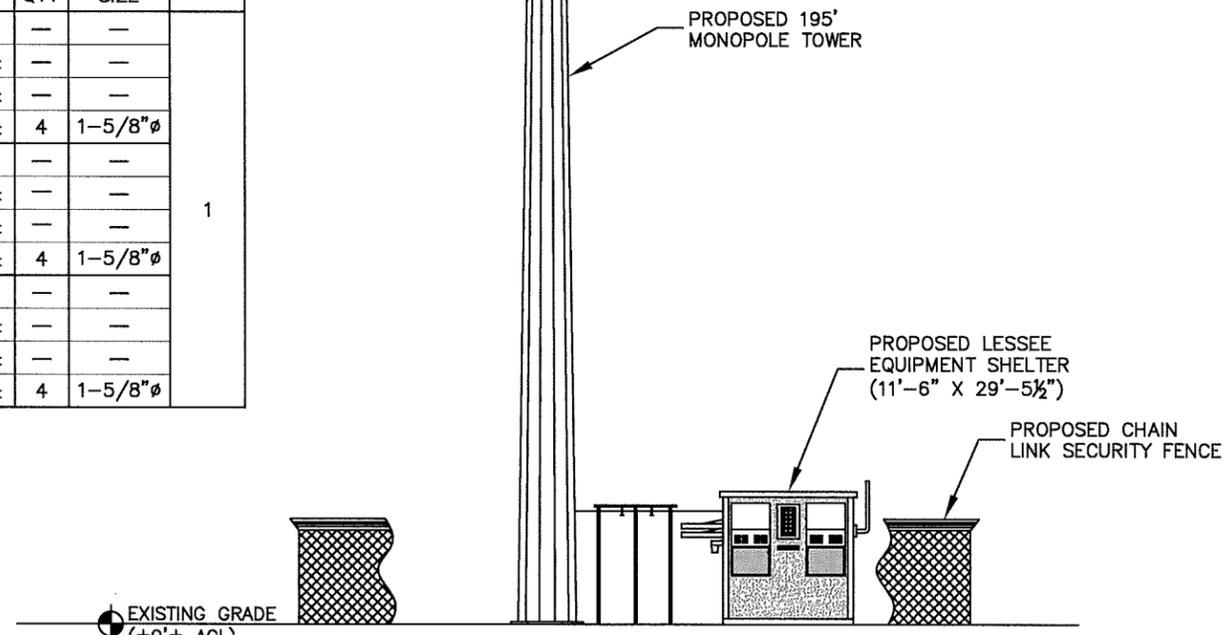
| ANTENNA SECTOR | AZIMUTH IN DEGREES | MECHANICAL DOWN TILT | LICENSED FREQUENCY | ANTENNA* (QTY) MAKE/MODEL  | REMOTE RADIO UNIT | COMPOSITION CABLES |               |              |
|----------------|--------------------|----------------------|--------------------|----------------------------|-------------------|--------------------|---------------|--------------|
|                |                    |                      |                    |                            |                   | LENGTH             | COAX QTY SIZE | TOTAL HYBRID |
| SECTOR A       | 60°                | 0°                   | 850                | -                          | -                 | -                  | -             | -            |
|                | 60°                | 0°                   | 1900               | (1) ANDREW/ HBXX6516DS-A2M | RRUSB12-B2 W/A2   | 260'±              | -             | -            |
|                | 60°                | 0°                   | 2100               | (1) ANDREW/ HBXX6516DS-A2M | RRUSB12-B4 W/A2   | 260'±              | -             | -            |
|                | 60°                | 0°                   | 700                | (2) ANDREW/ LNX-6515DS-A1M | -                 | 260'±              | 4             | 1-5/8"φ      |
| SECTOR B       | 180°               | 0°                   | 850                | -                          | -                 | -                  | -             | -            |
|                | 180°               | 0°                   | 1900               | (1) ANDREW/ HBXX6516DS-A2M | RRUSB12-B2 W/A2   | 260'±              | -             | -            |
|                | 180°               | 0°                   | 2100               | (1) ANDREW/ HBXX6516DS-A2M | RRUSB12-B4 W/A2   | 260'±              | -             | -            |
|                | 180°               | 0°                   | 700                | (2) ANDREW/ LNX-6515DS-A1M | -                 | 260'±              | 4             | 1-5/8"φ      |
| SECTOR G       | 300°               | 0°                   | 850                | -                          | -                 | -                  | -             | -            |
|                | 300°               | 0°                   | 1900               | (1) ANDREW/ HBXX6516DS-A2M | RRUSB12-B2 W/A2   | 260'±              | -             | -            |
|                | 300°               | 0°                   | 2100               | (1) ANDREW/ HBXX6516DS-A2M | RRUSB12-B4 W/A2   | 260'±              | -             | -            |
|                | 300°               | 0°                   | 700                | (2) ANDREW/ LNX-6515DS-A1M | -                 | 260'±              | 4             | 1-5/8"φ      |

\* CONTRACTOR ALSO TO INSTALL ANY RAYCAP BOXES AS NECESSARY. VERIFY WITH VERIZON WIRELESS PROJECT MANAGER PRIOR TO INSTALLATION.

**NOTES:**  
 1. ALL INFORMATION ON THIS PAGE IS PROVIDED BY VERIZON WIRELESS AND IS SHOWN FOR ILLUSTRATIVE PURPOSES ONLY. CONTRACTOR SHALL CONTACT THE VERIZON WIRELESS CONSTRUCTION MANAGER PRIOR TO CONSTRUCTION FOR ALL DETAILED ANTENNA, AND COAX CABLE INFORMATION.  
 2. REFER TO STRUCTURAL ANALYSIS BY TOWER OWNER FOR ANALYSIS OF EXISTING TOWER.  
 3. IT IS UNDERSTOOD THAT KIMLEY-HORN MAKES NO WARRANTY, EITHER EXPRESSED OR IMPLIED, FINDINGS, DESIGNS, RECOMMENDATIONS, SPECIFICATIONS, OPINION, OR PROFESSIONAL ADVICE RELATING TO THE STRUCTURAL ADEQUACY OF THE EXISTING TOWER OR ATTACHMENT OF ANTENNAS OR OTHER APPURTENANCES.



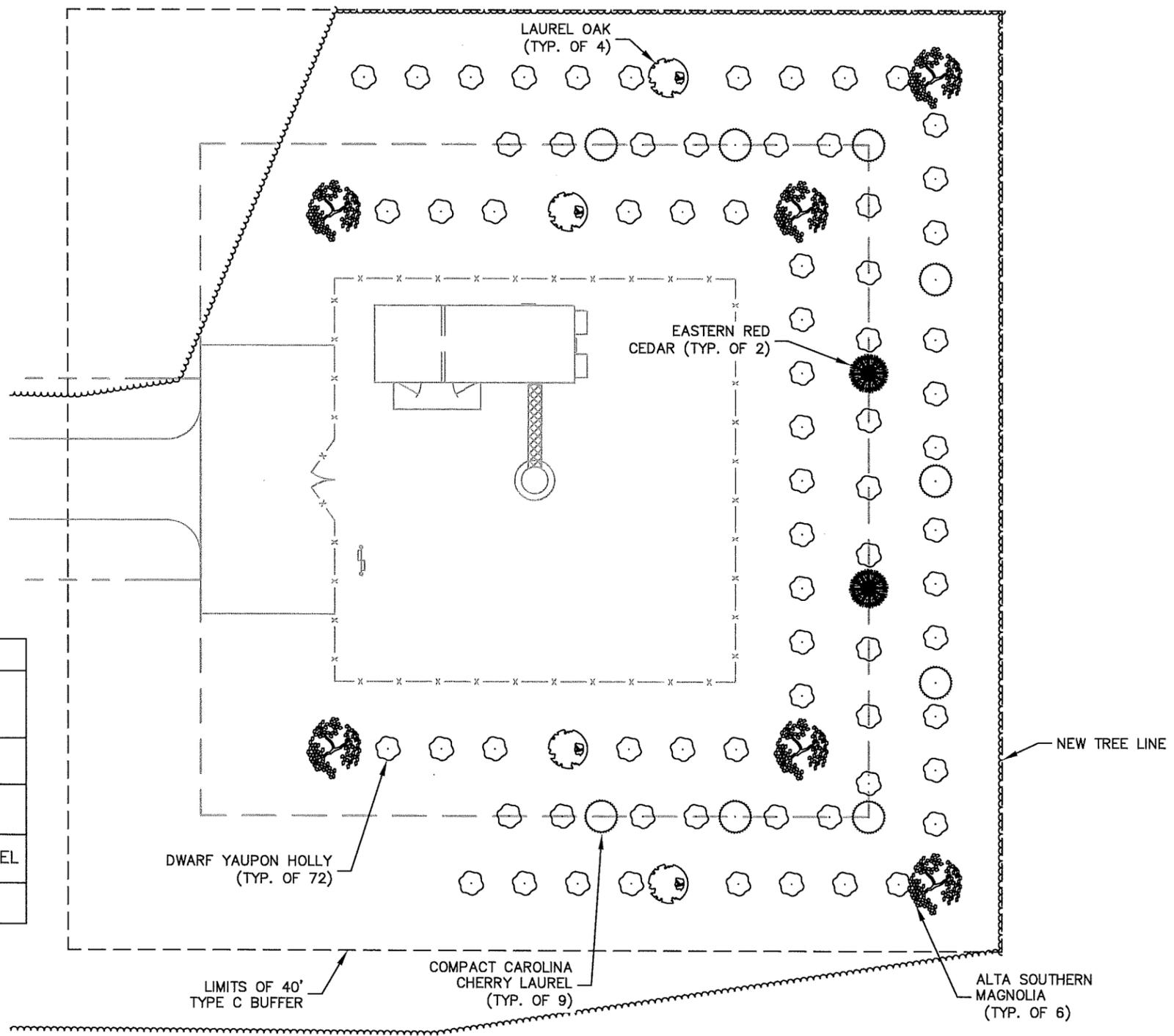
NOTE: FUTURE CO-LOCATORS RAD CENTERS TO BE DESIGNED FOR (12) 8'X1'X6" PANELS, (9) RRU 24"X13"X7" AND (12) 1-5/8" LINES



**2 MONOPOLE TOWER ELEVATION - EAST VIEW**  
 (FACING WEST) NOT TO SCALE

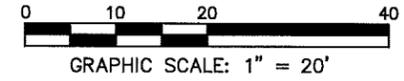
- NOTES:**
- ALL PROPOSED ATTACHMENTS TO TOWER BASED ON TOWER DESIGN DRAWINGS BY OTHERS (SEE GENERAL NOTE 7, SHEET C2).
  - THE TOWER ELEVATION SHOWN IS FOR REFERENCE ONLY.
  - FIBER/COAX CABLE LENGTHS ARE APPROXIMATE. CONTRACTOR TO VERIFY CORRECT LENGTH IN FIELD AT TIME OF CONSTRUCTION.
  - PROPOSED BUILDING WILL HAVE BROWN AGGREGATE FINISH.
  - PROPOSED TOWER WILL BE GALVANIZED STEEL-GRAY IN COLOR AND UNLIT.
  - PROPOSED ANTENNAS ALSO LIGHT GRAY IN COLOR.

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| LEGEND |                                |
|--------|--------------------------------|
|        | ALTA SOUTHERN MAGNOLIA         |
|        | EASTERN RED CEDAR              |
|        | LAUREL OAK                     |
|        | COMPACT CAROLINA CHERRY LAUREL |
|        | DWARF YAUPON HOLLY             |

1 LANDSCAPING PLAN  
L1 SCALE: 1" = 20'



**TowerCom.**

PROJECT INFORMATION:  
**VERIZON NAME:**  
 CLEARWATER LAKE  
**VERIZON No.:** TBD  
 1941 MT. CARMEL CHURCH ROAD  
 CHAPEL HILL, NC 27517  
 ORANGE COUNTY

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 09/30/16

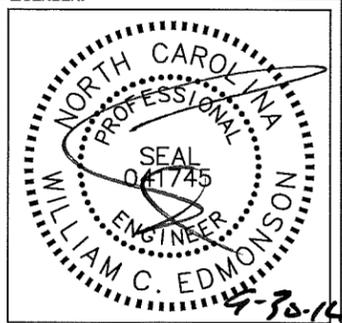
ISSUED FOR:  
 CONSTRUCTION

| REV.: | DATE:    | ISSUED FOR:  | BY: |
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|       |          |              |     |

CONSULTANT:  
**Kimley»Horn**  
 2 SUN COURT, SUITE 450  
 PEACHTREE CORNERS, GA 30092  
 PHONE: 770-825-0744  
 WWW.KIMLEY-HORN.COM  
 NC License F-0102

CONSULTANT:  
 (Blank space for consultant name)

DRAWN BY: CHK.: APV.:  
 MWD KRM WCE



SHEET TITLE:  
**LANDSCAPING PLAN**

SHEET NUMBER: REVISION:  
**L1** **0**  
 012055945

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**GENERAL LANDSCAPE NOTES:**

1. THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION OF HIS WORK WITH THAT OF ALL OTHER CONTRACTORS. THIS PLAN DOES NOT GUARANTEE THE EXISTENCE OR NON-EXISTENCE OF ANY UTILITIES. PRIOR TO COMMENCEMENT OF ANY WORK, THE LANDSCAPE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL ABOVE GROUND AND UNDERGROUND UTILITIES.
2. THE QUALITY AND SIZE OF ALL PLANT MATERIAL SHALL CONFORM TO THE MOST CURRENT STANDARDS AS SET FORTH IN ANSI Z60.180 - AMERICAN STANDARD FOR NURSERY STOCK.
3. ALL DISTURBED AREAS NOT COVERED BY HARDSCAPE OR PLANT MATERIALS SHALL BE COVERED WITH SEED AND STRAW.
4. PLANT SUBSTITUTION MAY BE PERMITTED ONLY AFTER PROOF THAT SPECIFIED PLANTS ARE UNAVAILABLE AND THE REQUEST HAS BEEN SUBMITTED TO THE OWNER OR LANDSCAPE ARCHITECT. THE CONTRACTOR SHALL PROVIDE THE NEAREST EQUIVALENT OBTAINABLE SIZE AND VARIETY OF THE PLANT HAVING THE SAME ESSENTIAL CHARACTERISTICS AS THE PLANT SPECIFIED
5. MINOR PLANT LOCATION ADJUSTMENTS MAY BE MADE IN THE FIELD TO ENSURE ACCESS TO UTILITY JUNCTION BOXES, FREE SITE LIGHTING OF FUTURE TREE CANOPY INTERFERENCE AND ALLOW UNINHIBITED PEDESTRIAN / VEHICULAR CIRCULATION ON ALL PAVEMENTS OR FOUNDATIONS.
6. ALL SHRUB MASSES OF TWO OR MORE SHALL BE EDGED INTO A PLANTING BED AND MULCHED PER DETAIL. ALL INDIVIDUAL TREES AND SHRUBS SHALL HAVE A MULCH SAUCER EQUAL IN DIAMETER TO THE PLANTING PIT DIAMETER AND SHALL BE MULCHED AS SHOWN ON THE DETAILS. UNLESS OTHERWISE INDICATED, ALL BED EDGES SHALL BE A DEEP CUT CLEAN SPADE EDGE.
7. THE CONTRACTOR SHALL VERIFY THAT EACH TREE OR SHRUB PIT WILL DRAIN BEFORE INSTALLING PLANT MATERIAL. HE SHALL FILL THE HOLE WITH SIX INCHES (6") OF WATER THAT SHOULD PERCOLATE OUT WITHIN TWENTY-FOUR HOURS. SHOULD ANY AREA NOT DRAIN PROPERLY, A PERFORATED DRAIN LINE SHALL BE INSTALLED, OR THE PLANTS RELOCATED.
8. THE CONTRACTOR SHALL NOTIFY THE OWNER IMMEDIATELY IF HE ENCOUNTERS ANY UNSUITABLE SURFACE OR SUBSURFACE DRAINAGE CONDITIONS, SOIL DEPTH, LATENT SOILS, HARD PAN, UTILITY LINES, OR OTHER CONDITIONS THAT WILL JEOPARDIZE THE HEALTH AND VIGOR OF THE PLANTS. SHOULD THE CONTRACTOR NOT NOTIFY THE OWNER OF A PROBLEM AREA, HE WARRANTS THAT THE AREAS ARE SUITABLE FOR PROPER GROWTH AND DEVELOPMENT OF ALL PLANTS INSTALLED.
9. THE CONTRACTOR SHOULD VERIFY LANDSCAPING/TREE PLANTING LOCATIONS WITH THE PUBLIC UTILITIES DEPARTMENT TO AVOID CONFLICTS WITH WATER, SEWER, AND GAS LINES.
10. PLANTS SHALL BE SO TRAINED IN DEVELOPMENT AND APPEARANCE AS TO BE UNQUESTIONABLE SUPERIOR IN FORM, COMPACTNESS AND SYMMETRY. THEY SHALL BE SOUND, HEALTHY, VIGOROUS, WELL BRANCHED AND DENSELY FOLIATED WHEN IN LEAF, AND FREE OF DISEASE AND INSECT ADULT EGGS, PUPAE OR LARVAE. THEY SHALL HAVE HEALTHY, WELL-DEVELOPED ROOT SYSTEMS AND SHALL BE FREE FROM PHYSICAL DAMAGE OR OTHER CONDITIONS THAT WOULD PREVENT THRIVING GROWTH.
11. THERE SHALL BE NO CIRCLING OR GIRDLING ROOTS. CIRCLING ROOTS SHOULD BE CUT IN AT LEAST ONE PLACE.
12. THERE SHOULD BE ONE DOMINANT LEADER TO THE TOP OF THE TREE WITH THE LARGEST BRANCHES SPACED AT LEAST 6 INCHES APART. THERE CAN BE TWO LEADERS IN THE TOP 10% OF THE TREE IF IT IS OTHERWISE OF GOOD QUALITY.
13. THE TREE CANOPY SHOULD BE SYMMETRICAL AND FREE OF LARGE VOIDS. CLEAR TRUNK SHOULD BE NO MORE THAN 40% OF TREE HEIGHT UNLESS OTHERWISE SPECIFIED IN THE PLANTING SPECIFICATIONS. CLEAR TRUNK SHALL BE OF SUFFICIENT HEIGHT TO CLEAR SURROUNDING USES THAT MAY BE IMPACTED BY THE FUTURE GROWTH OF THE TREE.
14. OPEN TRUNK AND BRANCH WOUNDS SHALL BE LESS THAN 10% OF THE CIRCUMFERENCE AT THE WOUND AND NO MORE THAN 2 INCHES TALL. PROPERLY MADE PRUNING CUTS ARE NOT CONSIDERED OPEN TRUNK WOUNDS. THERE SHOULD BE NO CONKS OR BLEEDING, AND THERE SHOULD BE NO SIGNS OF INSECTS OR DISEASE ON MORE THAN 5% OF THE TREE.
15. IF ANY OF THE ABOVE CONDITIONS ARE NOT MET, TREES MAY BE REJECTED.
16. TREE PROTECTION DEVICES MUST BE INSTALLED AND INSPECTED PRIOR TO ANY CLEARING, GRUBBING, OR GRADING OF THE SITE BY THE LOCAL ARBORIST.

| PLANTING LIST |      |                       |                                |                 |      |               |              |
|---------------|------|-----------------------|--------------------------------|-----------------|------|---------------|--------------|
| SYM./KEY      | QTY. | BOTANICAL NAME        | COMMON NAME                    | SPECIFICATION   |      |               |              |
|               |      |                       |                                | PLANTING HEIGHT | ROOT | CALIPER/ SIZE | SPACING      |
| ASM           | 6    | MAGNOLIA GRANDIFLORA  | ALTA SOUTHERN MAGNOLIA         | 8'-10'          | B&B  | 3" CAL.       | SEE PLAN     |
| ERC           | 2    | JUNIPERUS VIRGINIANA  | EASTERN RED CEDAR              | 8'-10'          | B&B  | 3" CAL.       | SEE PLAN     |
| LO            | 4    | QUERCUS LAURIFOLIA    | LAUREL OAK                     | 8'-10'          | B&B  | 3" CAL.       | 3' O.C.      |
| CCCL          | 9    | PRUNUS CAROLINIANA    | COMPACT CAROLINA CHERRY LAUREL | 4'-6'           | B&B  | 3 GAL.        | 20' O.C. MIN |
| DYP           | 72   | ILEX VOMITORIA 'NANA' | DWARF YAUPON HOLLY             | 2'-3'           | B&B  | 3 GAL.        | 8' O.C. MIN  |

| CLEARWATER LAKE - PLANTING CALCULATIONS  |  |
|--|--|
| PER ARTICLE 6: DEVELOPMENT STANDARDS; SECTION 6.8 LANDSCAPING, BUFFERS & TREE PROTECTION |  |
| BUFFER TYPE C - MINIMUM WIDTH 40 FEET  |  |
| → 3 CANOPY TREES/ PER 100 L.F.   |  |
| → 1 EVERGREEN TREE/ PER 100 L.F.   |  |
| → 2 DECIDUOUS UNDERSTORY TREES/ PER 100 L.F.   |  |
| → 5 EVERGREEN UNDERSTORY TREES/ PER 100 L.F.   |  |
| → 40 SHRUBS TREES/ PER 100 L.F.  |  |
| PROPOSED BUFFER - 180 L.F. OF PROPOSED SITE TO BE SCREENED                               |  |
| 3 CANOPY TREES/100 L.F. = 3 X 1.80 = 5.40 (6 PROVIDED)                                   |  |
| 1 EVERGREEN TREE/100 L.F. = 1 X 1.80 = 1.80 (2 PROVIDED)                                 |  |
| 2 DECIDUOUS UNDERSTORY TREES/100 L.F. = 2 X 1.80 = 3.60 (4 PROVIDED)                     |  |
| 5 EVERGREEN UNDERSTORY TREES/100 L.F. = 5 X 1.80 = 9.0 (9 PROVIDED)                      |  |
| 40 SHRUBS/100 L.F. = 40 X 1.80 = 72.0 (72 PROVIDED)                                      |  |

**1 LANDSCAPING NOTES**  
**L2**

**TowerCom.**

PROJECT INFORMATION:

**VERIZON NAME:**  
**CLEARWATER LAKE**  
**VERIZON No.: TBD**  
1941 MT. CARMEL CHURCH ROAD  
CHAPEL HILL, NC 27517  
ORANGE COUNTY

CURRENT ISSUE DATE:

09/30/16

ISSUED FOR:

CONSTRUCTION

REV.: DATE: ISSUED FOR: BY:

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|---|----------|--------------|-----|
| 0 | 09/30/16 | CONSTRUCTION | WCE |
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CONSULTANT:

**Kimley»Horn**

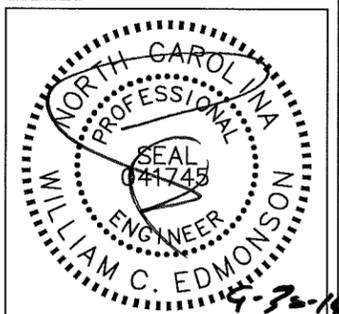
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DRAWN BY: CHK.: APV.:

MWD KRM WCE

LICENSER:



SHEET TITLE:

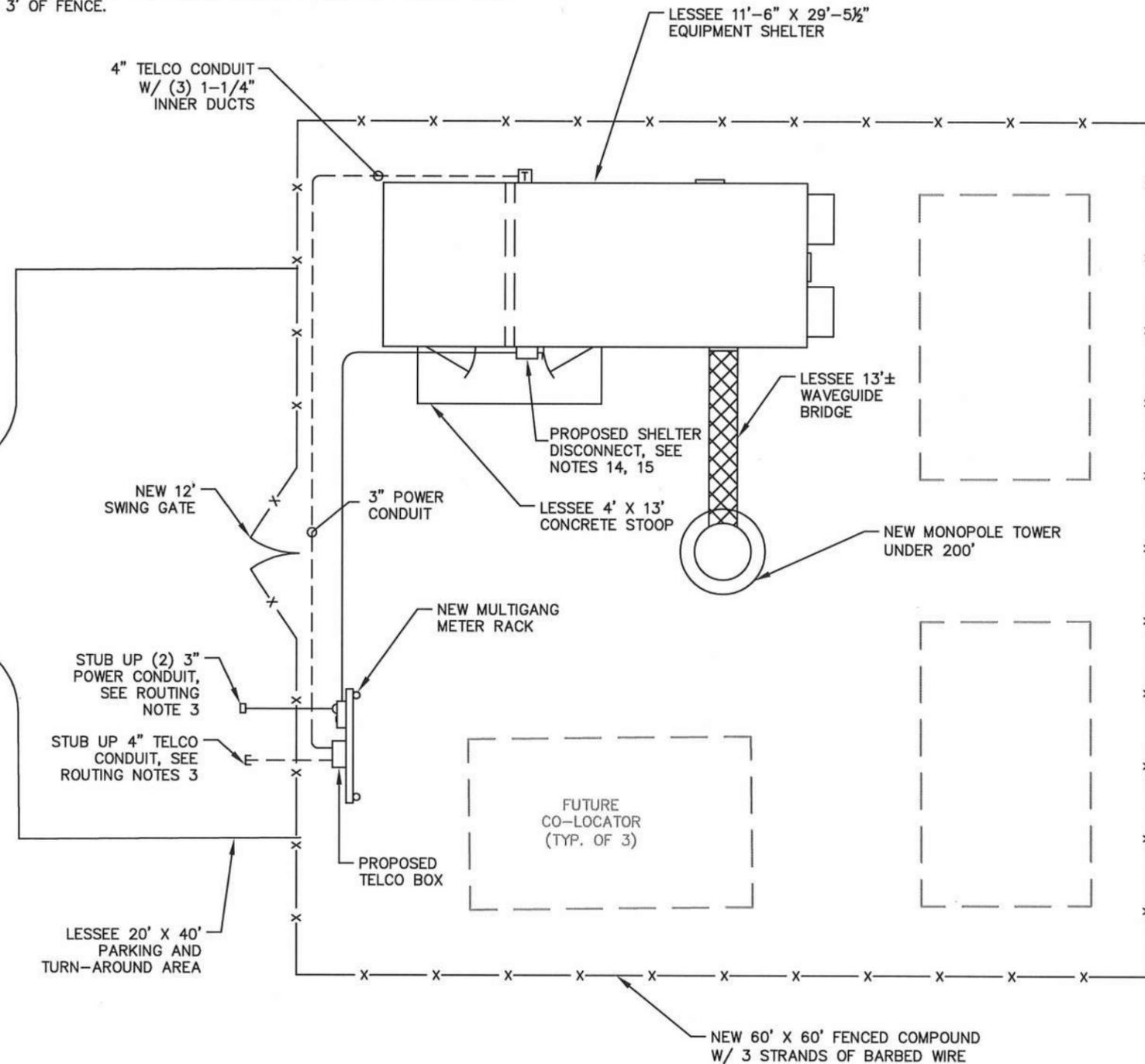
**LANDSCAPING NOTES**

SHEET NUMBER: REVISION:

**L2** **0**  
012055945

**ROUTING NOTES:**

1. CONTRACTOR TO PROVIDE PULL BOXES AS NEEDED TO ENSURE NO GREATER THAN 360 DEGREES OF BENDS BETWEEN PULL POINTS IN CONDUIT RUNS.
2. CONTRACTOR COORDINATE WITH LOCAL UTILITY COMPANY FOR SERVICE TO THIS POINT.
3. COORDINATE EXACT ROUTING, INSIDE OR OUTSIDE FENCE, WITH OWNER/TENANT CONSTRUCTION MANAGER. ROUTE CONDUIT WITHIN 3' OF FENCE.



1  
E1
**BASIC SERVICE ROUTING PLAN**  
 SCALE: 1" = 10'

**NOTES AND SPECIFICATIONS:**

1. ALL ELECTRICAL WORK SHALL COMPLY WITH NEC, STATE, AND LOCAL CODES. ALL ELECTRICAL DEVICES, MATERIALS, AND SERVICE EQUIPMENT SHALL BE LABEL-LISTED BY AN APPROVED THIRD PARTY TESTING AGENCY.
2. CONTRACTOR SHALL OBTAIN OWNER/TENANT SPECIFICATIONS AND REVIEW FOR ADDITIONAL DETAILS AND REQUIREMENTS THAT MAY NOT BE SHOWN IN THESE DRAWINGS. CONTRACTOR SHALL COMPLY WITH ANY ADDITIONAL OWNER/TENANT SPECIFICATIONS AND REQUIREMENTS.
3. CONTRACTOR SHALL APPLY FOR UTILITY SERVICES, BOTH ELECTRIC AND TELEPHONE, FOR THE OWNER/TENANT. THIS APPLICATION SHALL BE MADE NO LATER THAN THE NEXT BUSINESS DAY FOLLOWING THE AWARD OF THE CONTRACT. CONTRACTOR SHALL COORDINATE WITH THE ELECTRIC UTILITY FOR THE EXACT TRANSFORMER LOCATION, METERING REQUIREMENTS, AND SERVICE ROUTING. CONTRACTOR SHALL COORDINATE WITH THE TELEPHONE UTILITY FOR THE EXACT TELEPHONE REQUIREMENTS AND SERVICE ROUTING.
4. PRIOR TO PURCHASING EQUIPMENT, THE CONTRACTOR SHALL CONTACT THE ELECTRIC UTILITY AND OBTAIN IN WRITING THE MAXIMUM AVAILABLE FAULT CURRENT AT THE UTILITY SERVICE POINT. PROVIDE MAX AFC SIGNAGE AS REQUIRED PER NEC 110.24. THE CONTRACTOR SHALL ENSURE ALL ELECTRICAL EQUIPMENT, CIRCUIT BREAKERS, DISCONNECTS, FUSES, AND PANELBOARDS HAVE A FAULT CURRENT INTERRUPTING RATING GREATER THAN THE AVAILABLE FAULT CURRENT. IN NO CASE SHALL THE FAULT CURRENT INTERRUPTING RATING BE LESS THAN 10,000 AMPS.
5. CONTRACTOR TO PROVIDE 2-200 LB TEST POLYETHYLENE PULL CORDS SECURELY FASTENED AT EACH END OF POWER AND TELCO CONDUIT. PROVIDE CAPS ON ENDS OF UNUSED CONDUIT.
6. CONTRACTOR TO PROVIDE A REBAR MARKER WITH AT LEAST 2 FEET EXPOSED ABOVE GRADE AND PAINTED BRIGHT ORANGE TO INDICATE LOCATION OF CONDUIT CAPPED BELOW GRADE.
7. PRIOR TO TRENCHING CONTRACTOR SHALL LOCATE ALL EXISTING UNDERGROUND UTILITIES. CONTRACTOR SHALL REPAIR AT CONTRACTOR'S EXPENSE ANY DAMAGE TO EXISTING UTILITIES.
8. CONTRACTOR TO VERIFY EXACT ROUTING OF POWER AND TELCO CONDUIT WITH LOCAL UTILITIES AND OWNER/TENANT. ENSURE ALL CONDUIT STUB-UPS ACCOMMODATE EQUIPMENT REQUIREMENTS.
9. UNDERGROUND CONDUITS SHALL BE SCHEDULE 40 PVC UNLESS NOTED OTHERWISE. USE SCHEDULE 80 PVC UNDER ROADS. USE LONG-SWEEP RIGID GALVANIZED STEEL (RGS) FOR ELBOWS. USE RGS FOR RISERS TO EQUIPMENT. MANUFACTURED BENDS SHALL HAVE A MINIMUM RADIUS OF 36" FOR CONDUIT.
10. CONDUIT RUNS SHALL HAVE A CONTINUOUS SLOPE DOWNWARD AND AWAY FROM THE EQUIPMENT TO ALLOW WATER TO FLOW AWAY FROM THE EQUIPMENT AND SHELTER. EXCAVATE TRENCHES ALONG STRAIGHT LINES PRIOR TO INSTALLING CONDUIT TO ACCOMMODATE ADJUSTING THE ELEVATION, AS NEEDED.
11. CONDUIT ENTERING EQUIPMENT SHALL BE SEALED WITH A SEALANT THAT IS IDENTIFIED FOR USE WITH THE CABLE/CONDUCTOR INSULATION, SHIELDING, ETC.
12. THE OWNER SHALL FURNISH AND THE CONTRACTOR SHALL INSTALL ADDITIONAL SIGNAGE TO BE LOCATED AT THE COMPOUND FENCE. CONTRACTOR SHALL COORDINATE WITH OWNER/TENANT CONSTRUCTION MANAGER FOR PLACEMENT OF SIGNAGE.
13. UPON COMPLETION OF CONSTRUCTION, CONTRACTOR IS RESPONSIBLE FOR REPAIRING ANY DAMAGE CAUSED BY CONSTRUCTION ACTIVITIES TO THE LANDSCAPING AREA.
14. CONTRACTOR SHALL PROVIDE A LABEL TO READ: "OPENING THE SHELTER DISCONNECT WILL CAUSE THE SHELTER GENERATOR TO START. TO REMOVE POWER ENTIRELY FROM THE SHELTER, THE GENERATOR MUST BE TURNED OFF AND THE GENERATOR BREAKER MUST BE OPENED."
15. CONTRACTOR ENSURE A MINIMUM 3' WORKING CLEARANCE IN FRONT OF ELECTRICAL EQUIPMENT PER NEC.

**TowerCom**

PROJECT INFORMATION:  
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 CLEARWATER LAKE  
**VERIZON No.:** TBD  
 1941 MT. CARMEL CHURCH ROAD  
 CHAPEL HILL, NC 27517  
 ORANGE COUNTY

CURRENT ISSUE DATE:  
 07/16/15

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| REV.: | DATE:    | ISSUED FOR:  | BY: |
| 0     | 07/16/15 | CONSTRUCTION | JKM |
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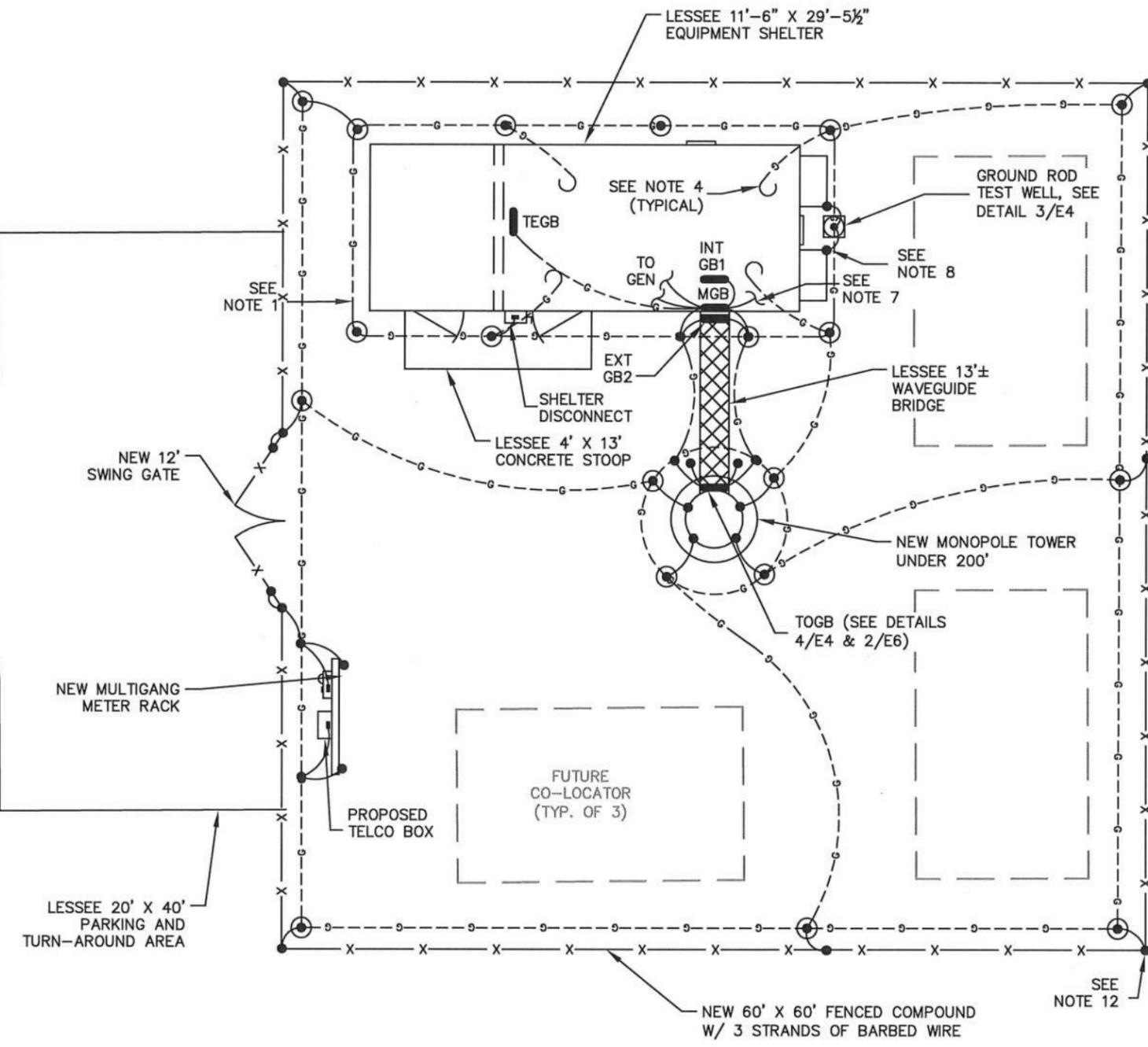
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 ACG PROJECT NO.: 2015-406

DRAWN BY: CHK. APV.:  
 AMM NAC JKM



SHEET TITLE:  
**BASIC SERVICE ROUTING PLAN**

SHEET NUMBER: **E1** REVISION: **0**  
 012055945



1  
E2
**GROUNDING PLAN**  
 SCALE: 1" = 10'

**NOTES AND SPECIFICATIONS:**

1. THE GROUND RING SHALL CONSIST OF 2 AWG TINNED SOLID BARE COPPER CONDUCTOR, UNLESS NOTED OTHERWISE, BURIED AT 30" BELOW FINISHED GRADE (OR BELOW FROSTLINE). ALL CONNECTIONS SHALL BE MADE USING AN EXOTHERMIC WELD, UNLESS NOTED OTHERWISE.
2. GROUND CONDUCTOR BEND RADIUS SHALL NOT BE LESS THAN 8".
3. MINIMUM SPACING BETWEEN GROUND RODS SHALL NOT BE LESS THAN 10', UNLESS NOTED OTHERWISE.
4. CONTRACTOR SHALL PROVIDE A 60", 2 AWG TINNED SOLID BARE COPPER CONDUCTOR PIGTAIL. BOND THE PIGTAIL TO THE SHELTER INTERIOR GROUND HALO PIGTAIL USING AN EXOTHERMIC WELD (TYPICAL OF 4).
5. CONTRACTOR SHALL BOND THE TOWER GROUND BAR (TOGB) TO THE GROUND RING USING A 2 AWG TINNED SOLID BARE COPPER CONDUCTOR AND AN EXOTHERMIC WELD.
6. SHELTER INTERIOR GROUNDING PROVIDED BY SHELTER SUPPLIER, SHOWN FOR CLARITY. CONTRACTOR SHALL BOND THE MAIN GROUND BAR (MGB) & EXTERNAL GROUND BAR (GB2) TO THE GROUND RING USING 2 AWG TINNED SOLID BARE COPPER CONDUCTORS AND EXOTHERMIC WELDS.
7. TO INTERNAL GROUND HALO (TYPICAL OF 2).
8. CONTRACTOR SHALL BOND THE OUTSIDE A/C UNITS TO THE GROUND RING USING 2 AWG TINNED SOLID BARE COPPER CONDUCTORS AND EXOTHERMIC WELDS.
9. ALL GROUNDING/BONDING CONDUCTORS LOCATED ABOVE FINISHED GRADE SHALL BE RUN IN 1" PVC CONDUIT.
10. CONTRACTOR SHALL NOTIFY THE OWNER/TENANT CONSTRUCTION MANAGER TO ALLOW THE OWNER/TENANT CONSTRUCTION MANAGER TO INSPECT THE GROUNDING SYSTEM PRIOR TO BACKFILLING.
11. CONTRACTOR SHALL HIRE AN INDEPENDENT 3RD PARTY (OTHER THAN THE GROUND SYSTEM INSTALLER) TO PERFORM AN IEEE 81 "FALL OF POTENTIAL" METHOD GROUND TEST. A VERIZON REPRESENTATIVE WILL BE PRESENT DURING THE TEST. CONTRACTOR SHALL SUBMIT A GROUND TEST DURING THE WALKTHROUGH.
12. WHERE SHELTER AND/OR EQUIPMENT WITH EXPOSED METAL PARTS IS WITHIN 6' OF THE FENCE, BOND TO THE NEAREST FENCE POST WITH 2 AWG TINNED SOLID BARE COPPER CONDUCTOR.

**LEGEND:**

- G — GROUND ROD EXOTHERMICALLY WELDED TO GROUND RING (SEE DETAIL 2/E4)
- G — GROUND RING
- — EXOTHERMIC WELD
- ⊗ — GROUND ROD TEST WELL (SEE DETAIL 3/E4)



PROJECT INFORMATION:  
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 CLEARWATER LAKE  
**VERIZON No.:** TBD  
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 CHAPEL HILL, NC 27517  
 ORANGE COUNTY

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| 0     | 07/16/15 | CONSTRUCTION | JKM |
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 ACG PROJECT NO.: 2015-406

DRAWN BY: CHK. APV.:  
 AMM NAC JKM



SHEET TITLE:  
**GROUNDING PLAN**

SHEET NUMBER: **E2** REVISION: **0**  
 012055945

PROJECT INFORMATION:  
**VERIZON NAME:**  
 CLEARWATER LAKE  
**VERIZON No.:** TBD  
 1941 MT. CARMEL CHURCH ROAD  
 CHAPEL HILL, NC 27517  
 ORANGE COUNTY

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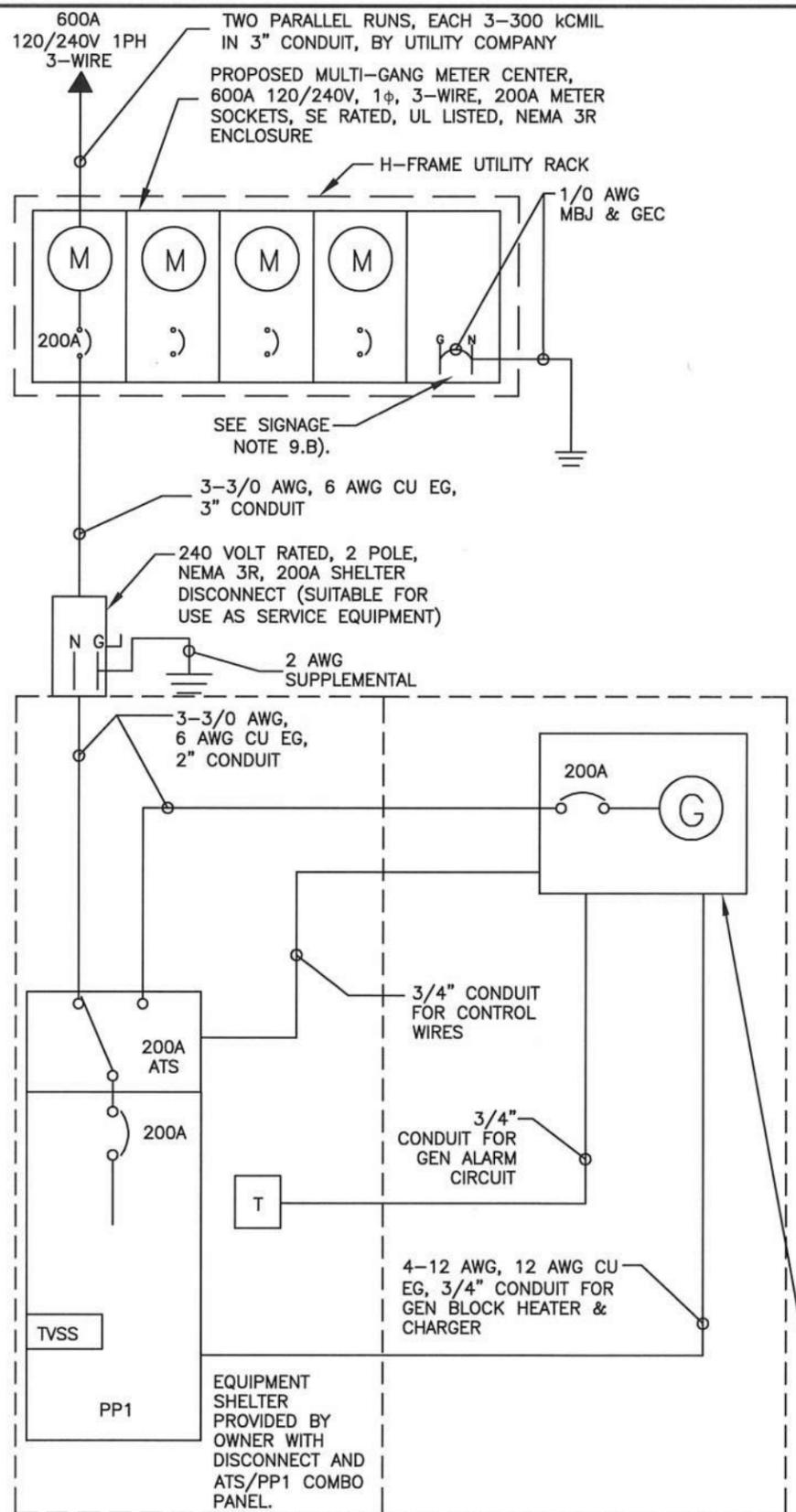
SHEET TITLE:  
**SINGLE-LINE DIAGRAM**

SHEET NUMBER: REVISION:  
**E3** **0**  
 012055945

**NOTES AND SPECIFICATIONS:**

- ELECTRIC UTILITY WILL PROVIDE METER AND INCOMING SERVICE LATERAL CONDUCTORS.
- ALL ELECTRICAL WORK SHALL COMPLY WITH NEC, STATE, AND LOCAL CODES.
- CONTRACTOR SHALL OBTAIN OWNER/TENANT EQUIPMENT SHELTER DRAWINGS AND REVIEW FOR ADDITIONAL DETAILS AND REQUIREMENTS THAT MAY NOT BE SHOWN IN THESE DRAWINGS. CONTRACTOR SHALL COMPLY WITH ANY ADDITIONAL OWNER/TENANT SPECIFICATIONS AND REQUIREMENTS THAT MAY BE ADDRESSED IN THE EQUIPMENT SHELTER DRAWINGS.
- PRIOR TO PURCHASING EQUIPMENT, THE CONTRACTOR SHALL CONTACT THE ELECTRIC UTILITY AND OBTAIN IN WRITING THE MAXIMUM AVAILABLE FAULT CURRENT AT THE UTILITY SERVICE POINT. PROVIDE MAX AFC SIGNAGE AS REQUIRED PER NEC 110.24. THE CONTRACTOR SHALL ENSURE ALL ELECTRICAL EQUIPMENT, CIRCUIT BREAKERS, DISCONNECTS, FUSES, AND PANELBOARDS HAVE A FAULT CURRENT INTERRUPTING RATING GREATER THAN THE AVAILABLE FAULT CURRENT. IN NO CASE SHALL THE FAULT CURRENT INTERRUPTING RATING BE LESS THAN 10,000 AMPS.
- THE GROUNDED SERVICE CONDUCTOR (NEUTRAL CONDUCTOR)

- SHALL BE GROUNDED AT THE SERVICE DISCONNECT ONLY.
- ALL POWER CIRCUITS SHALL USE COPPER CONDUCTORS WITH THHN/THWN INSULATION. ALL TERMINATIONS SHALL BE RATED FOR AT LEAST 75 DEGREES C.
  - CONTRACTOR SHALL PROVIDE GROUND FAULT CIRCUIT INTERRUPTER (GFCI) TYPE RECEPTACLES FOR ALL UTILITY RECEPTACLES.
  - CONTRACTOR SHALL ENSURE ALL NEUTRAL CONDUCTORS HAVE WHITE INSULATION AND EQUIPMENT GROUND CONDUCTORS HAVE GREEN INSULATION. COLOR TAPE IDENTIFICATION OF THESE CONDUCTORS IS NOT ALLOWED.
  - PER NEC ART 702 PROVIDE SIGNAGE AS FOLLOWS:  
 A) AT SHELTER PANEL PP1: "EMERGENCY POWER IS SUPPLIED BY STAND-BY GENERATOR LOCATED IN ADJACENT ROOM"  
 B) AT SERVICE DISCONNECT:  
**WARNING - SHOCK HAZARD EXISTS IF GROUNDING ELECTRODE CONDUCTOR OR BONDING JUMPER CONNECTION IN THIS EQUIPMENT IS REMOVED WHILE ALTERNATE SOURCE(S) IS ENERGIZED.**



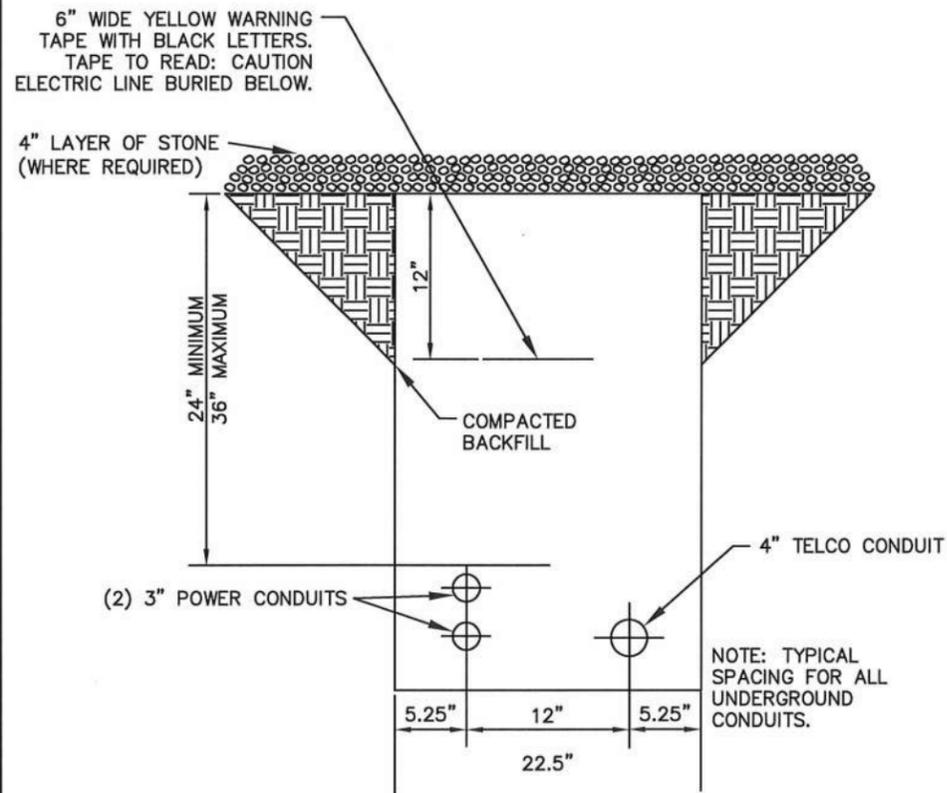
**1**  
**E3**  
**SINGLE-LINE DIAGRAM**  
 SCALE: NOT TO SCALE

**PP1** INTEGRATED LOAD CENTER (ILC)  
 GENERAC OR INTERSECT, 200 AMP, 42P,  
 1 PHASE, ATS, TYPE 2 SPD

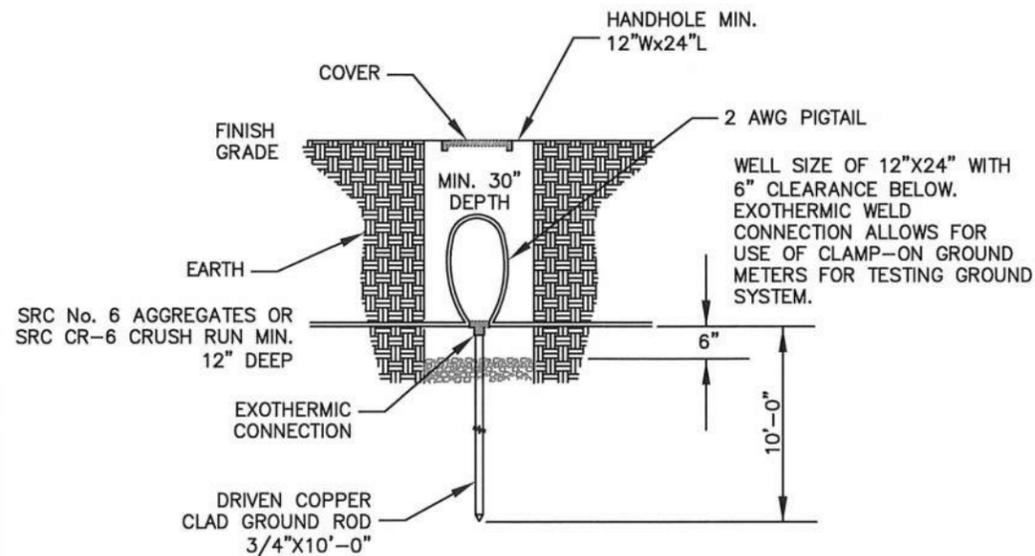
| LOAD IN KVA         |      | DESCRIPTION              | TRIP          | CKT               | CKT | TRIP  | DESCRIPTION               | LOAD IN KVA |       |
|---------------------|------|--------------------------|---------------|-------------------|-----|-------|---------------------------|-------------|-------|
| A                   | B    |                          |               |                   |     |       |                           | A           | B     |
| 1.00                | ---  | RECTIFIER NO. 1          | 2P-40         | 1                 | 2   | 2P-60 | HVAC 1                    | 4.80        | ---   |
| ---                 | 1.00 |                          |               | 3                 | 4   |       |                           | ---         | 4.80  |
| 1.00                | ---  | RECTIFIER NO. 2          | 2P-40         | 5                 | 6   | 2P-60 | HVAC 2                    | 4.80        | ---   |
| ---                 | 1.00 |                          |               | 7                 | 8   |       |                           | ---         | 4.80  |
| 1.00                | ---  | RECTIFIER NO. 3          | 2P-40         | 9                 | 10  | 2P-60 | HVAC (FUTURE)             | 0.00        | ---   |
| ---                 | 1.00 |                          |               | 11                | 12  |       |                           | ---         | 0.00  |
| 1.00                | ---  | RECTIFIER NO. 4          | 2P-40         | 13                | 14  | 2P-60 | HVAC (FUTURE)             | 0.00        | ---   |
| ---                 | 1.00 |                          |               | 15                | 16  |       |                           | ---         | 0.00  |
| 1.00                | ---  | RECTIFIER NO. 5          | 2P-40         | 17                | 18  | 1P-20 | INTERIOR LTS              | 0.53        | ---   |
| ---                 | 1.00 |                          |               | 19                | 20  | 1P-20 | EXTERIOR LTS              | ---         | 0.11  |
| 1.00                | ---  | RECTIFIER NO. 6          | 2P-40         | 21                | 22  | 1P-20 | GEN ROOM LOUVERS          | 0.10        | ---   |
| ---                 | 1.00 |                          |               | 23                | 24  | 1P-20 | HYDROGEN DETECTOR/BLOWER  | ---         | 0.05  |
| 0.00                | ---  | RECTIFIER NO. 7 (FUTURE) | 2P-40         | 25                | 26  | 1P-20 | CORD REEL OPTION          | 0.36        | ---   |
| ---                 | 0.00 |                          |               | 27                | 28  | 2P-20 | GEN ROOM HEATER/TIMER     | ---         | 1.00  |
| 0.00                | ---  | RECTIFIER NO. 8 (FUTURE) | 2P-40         | 29                | 30  | 1P-20 | INTERIOR RECEPTACLES      | ---         | 0.72  |
| ---                 | 0.00 |                          |               | 31                | 32  | 1P-20 | GEN RM LIGHTS             | 0.19        | ---   |
| 0.00                | ---  | SPARE                    | 2P-30         | 33                | 34  | 1P-20 | SPACE                     | ---         | 0.00  |
| ---                 | 0.00 |                          |               | 35                | 36  | ---   |                           | ---         | 0.00  |
| 0.00                | ---  | SPACE                    | ---           | 37                | 38  | 1P-20 | GEN BLOCK HEATER (OPTION) | 0.00        | ---   |
| ---                 | 0.00 | SPACE                    | ---           | 39                | 40  | 1P-15 | GEN BATTERY CHARGER       | ---         | 0.10  |
| 0.36                | ---  | EXT GFCI RECEPTACLE      | 1P-20         | 41                | 42  | 1P-20 | SMOKE DETECTOR            | 0.12        | ---   |
|                     |      |                          |               |                   |     |       |                           | 18.26       | 17.58 |
| TOTAL CONNECTED KVA |      |                          |               |                   |     |       |                           | 35.84       |       |
| DEMAND CALCULATIONS |      | CONNECTED LOAD (KVA)     | DEMAND FACTOR | DEMAND LOAD (KVA) |     |       |                           |             |       |
| LIGHTING            |      | 0.83                     | 1.25          | 1.04              |     |       |                           |             |       |
| RECEPTACLES         |      | 1.44                     | 1.18          | 1.44              |     |       |                           |             |       |
| LARGEST MOTOR       |      | 9.60                     | 1.25          | 12.00             |     |       |                           |             |       |
| ALL OTHERS          |      | 9.65                     | 1.00          | 9.65              |     |       |                           |             |       |
| RECTIFIERS          |      | 12.00                    | 1.25          | 15.00             |     |       |                           |             |       |
| MISCELLANEOUS       |      | 2.20                     | 1.00          | 2.20              |     |       |                           |             |       |
|                     |      | TOTAL DEMAND KVA         |               | 41.33             |     |       |                           |             |       |
|                     |      | TOTAL DEMAND AMPS        |               | 172 A             |     |       |                           |             |       |

50 KW DIESEL GENERATOR WITH 200A MAIN BREAKER. CONTRACTOR SHALL COORDINATE WITH OWNER/TENANT FOR GENERATOR CONFIGURATIONS AND OPTIONS. COMPLY WITH MANUFACTURER'S SPECIFICATIONS FOR EXACT WIRING REQUIREMENTS. GENERATOR PROVIDED BY AND INSTALLED BY BUILDING MANUFACTURER.

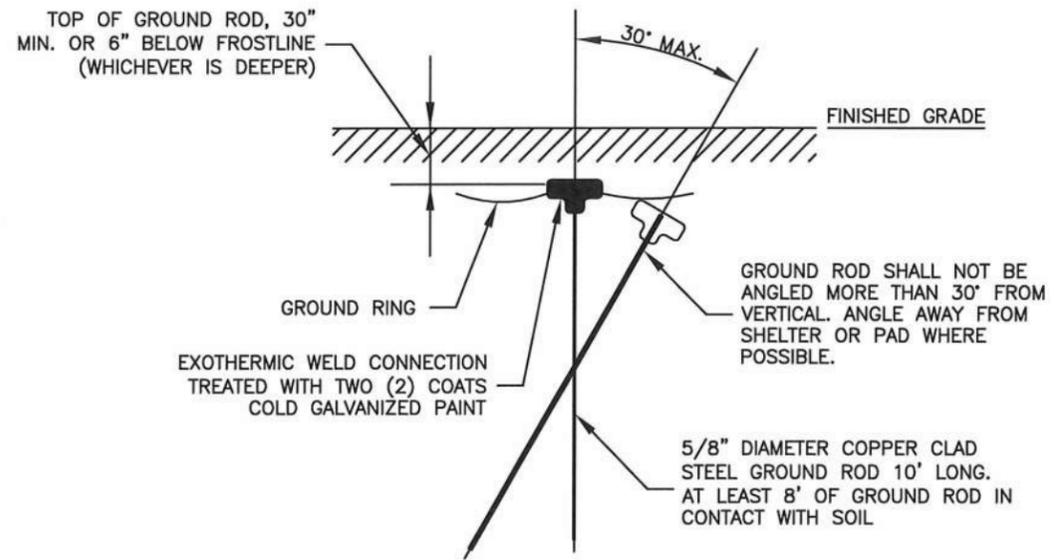
NOTE: THE GENERATOR USED IN CONJUNCTION WITH A 2-POLE AUTOMATIC TRANSFER SWITCH WITH A SOLID NEUTRAL IS NOT A SEPARATELY DERIVED SYSTEM. AS SUCH, DO NOT BOND THE NEUTRAL TO GROUND AT THE GENERATOR.



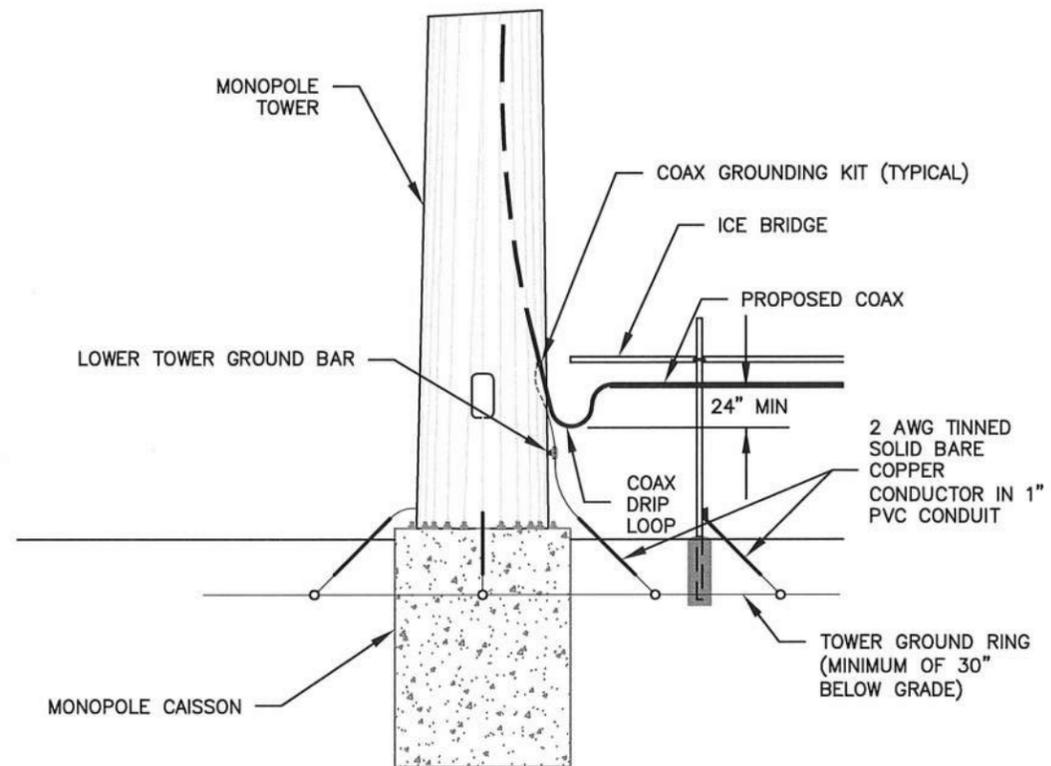
**1**  
E4  
**UTILITY TRENCH DETAIL (TYP.)**  
SCALE: NOT TO SCALE



**3**  
E4  
**GROUND ROD TEST WELL**  
SCALE: NOT TO SCALE



**2**  
E4  
**GROUND ROD DETAIL**  
SCALE: NOT TO SCALE



**4**  
E4  
**DRIP LOOP DETAIL**  
SCALE: NOT TO SCALE

**TowerCom**

PROJECT INFORMATION:  
**VERIZON NAME:**  
 CLEARWATER LAKE  
**VERIZON No.:** TBD  
 1941 MT. CARMEL CHURCH ROAD  
 CHAPEL HILL, NC 27517  
 ORANGE COUNTY

CURRENT ISSUE DATE:  
 07/16/15

ISSUED FOR:  
 CONSTRUCTION

|       |          |              |     |
|-------|----------|--------------|-----|
| REV.: | DATE:    | ISSUED FOR:  | BY: |
| 0     | 07/16/15 | CONSTRUCTION | JKM |
|       |          |              |     |
|       |          |              |     |
|       |          |              |     |

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 NC License # C-1848  
 ACG PROJECT NO.: 2015-406

DRAWN BY: CHK.: APV.:  
 AMM NAC JKM

LICENSER:  
 NORTH CAROLINA  
 PROFESSIONAL  
 SEAL  
 23894  
 JOHN ENGINEER  
 KEVIN MASON  
 7/16/15

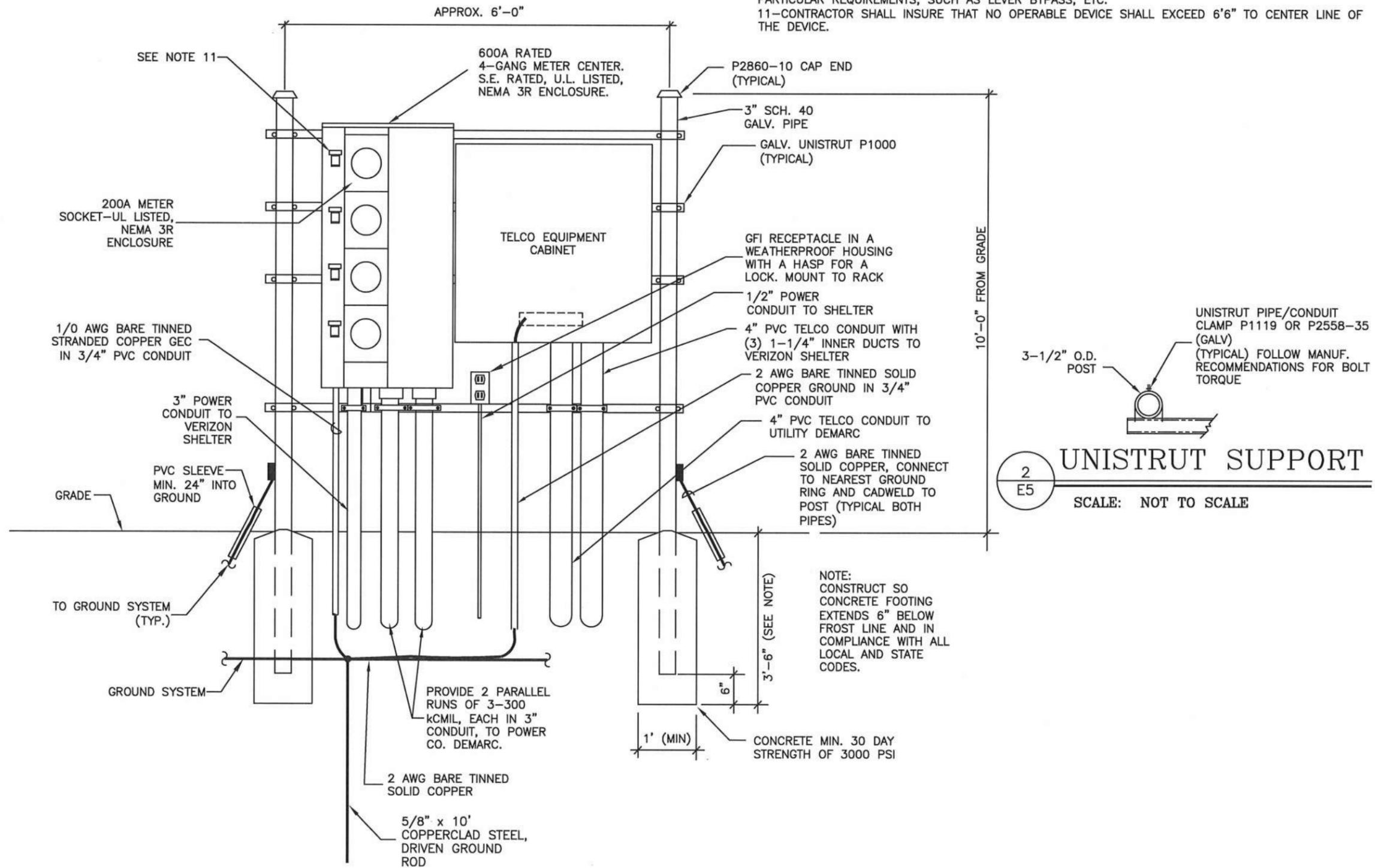
SHEET TITLE:  
**ELECTRICAL  
 DETAILS**

SHEET NUMBER: REVISION:  
**E4** **0**  
 012055945

# GENERAL NOTES:

- 1-ALL WORK SHALL CONFORM TO THE NATIONAL ELECTRICAL CODE, STATE BUILDING CODES AND THE LOCAL BUILDING CODES. ALL COMPONENTS SHALL BE U.L. LISTED.
- 2-REFER TO SITE LAYOUT PLAN FOR THE EXACT LOCATION OF H-FRAME.
- 3-CONTRACTOR TO COORDINATE WITH LOCAL UTILITY COMPANY FOR METER.
- 4-CONTRACTOR TO PROVIDE AND INSTALL METER SOCKET.
- 5-CONTRACTOR TO LOCATE METER RACK TO ENSURE WORKING SPACES REQUIRED BY THE NEC (ART. 110.26), STATE, OR LOCAL CODES ARE MAINTAINED BETWEEN FRONT OF ENCLOSURES AND THE CHAIN LINK FENCE.

- 6-SHOW LOCATION (INCLUDING DIMENSIONS) OF ALL CAPPED UNDERGROUND CONDUIT ON FINAL AS-BUILT DRAWINGS SUBMITTED TO OWNER.
- 7-COORDINATE EXACT LOCATION OF UNDERGROUND FEEDERS AND CIRCUITRY WITH THE OWNER.
- 8-CONTRACTOR SHALL COORDINATE WITH LOCAL ELECTRICAL AUTHORITY HAVING JURISDICTION (AHJ) AND OTHER TRADES TO DETERMINE "FROST" LINE, AND TYPES OF RACEWAYS REQUIRED FOR INSTALLATION.
- 9-ALL CONDUITS ABOVE GROUND SHALL BE GALVANIZED CONDUIT.
- 10-CONTRACTOR TO CONTACT LOCAL UTILITY PRIOR TO PURCHASING METER CENTER TO VERIFY ANY PARTICULAR REQUIREMENTS, SUCH AS LEVER BYPASS, ETC.
- 11-CONTRACTOR SHALL INSURE THAT NO OPERABLE DEVICE SHALL EXCEED 6'6" TO CENTER LINE OF THE DEVICE.



1 E5 H-FRAME DETAIL  
SCALE: NOT TO SCALE



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 ACG PROJECT NO.: 2015-406

DRAWN BY: CHK. AMM  
 APV.: NAC  
 JKM



SHEET TITLE:  
**ELECTRICAL DETAILS**

SHEET NUMBER: **E5**  
 REVISION: **0**  
 012055945

PROJECT INFORMATION:

VERIZON NAME:  
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 VERIZON No.: TBD  
 1941 MT. CARMEL CHURCH ROAD  
 CHAPEL HILL, NC 27517  
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CONSULTANT:

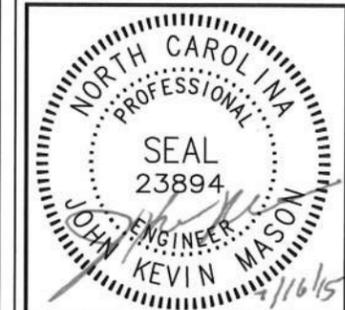
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Raleigh, NC  
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 (919) 858-7420

DRAWN BY: CHK.: APV.:

AMM      NAC      JKM

LICENSER:



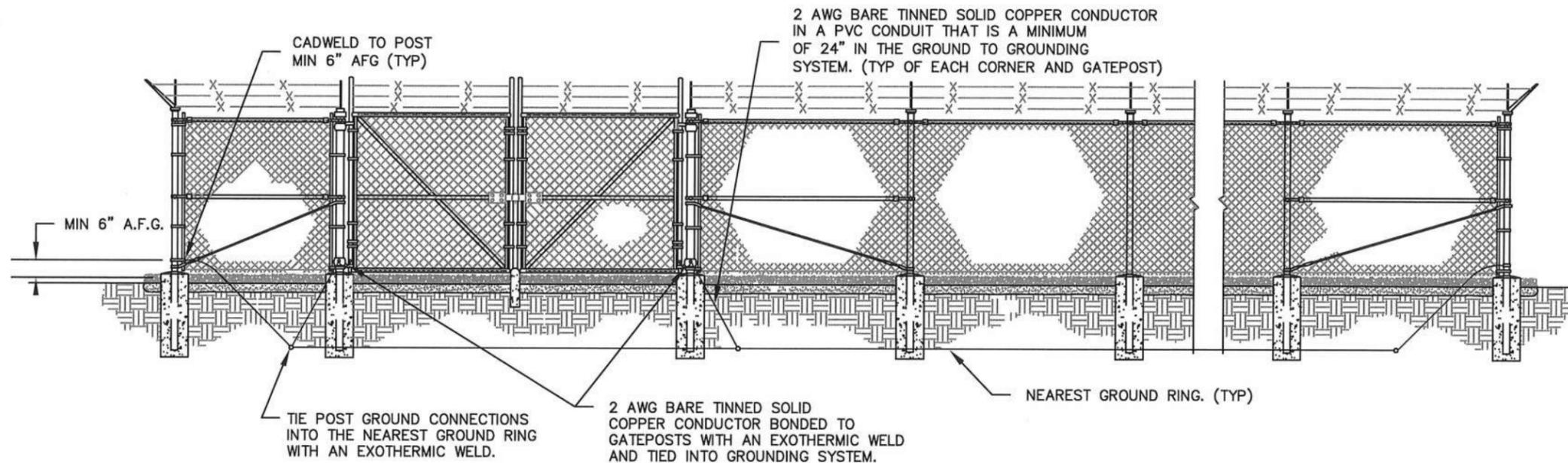
SHEET TITLE:

**ELECTRICAL  
 DETAILS**

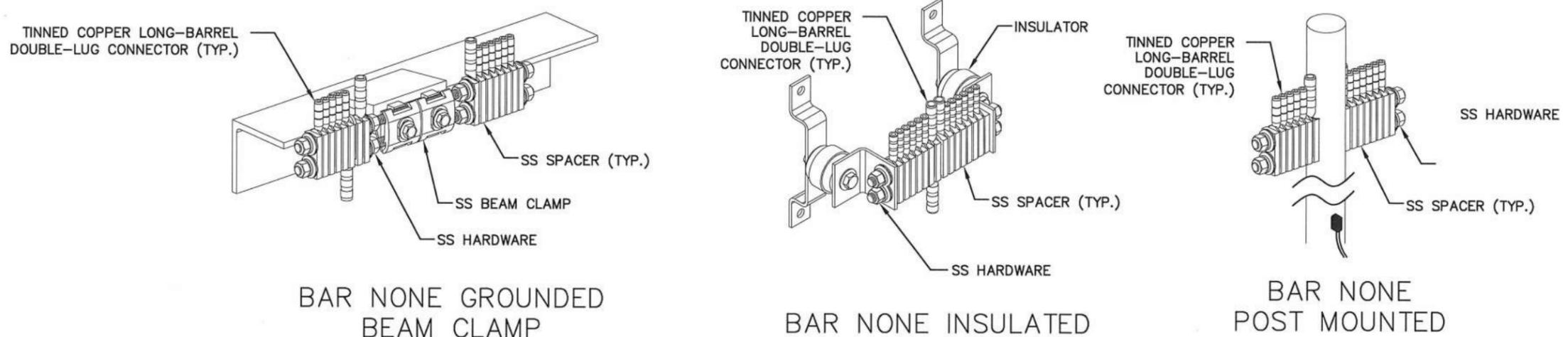
SHEET NUMBER: REVISION:

**E6      0**

012055945



**1**  
 E6  
**FENCE GROUNDING DETAIL**  
 SCALE: NOT TO SCALE



**2**  
 E6  
**BAR NONE GROUND BAR**  
 SCALE: NOT TO SCALE