**ATC SITE NUMBER:** 

ATC SITE NAME: **GUM SPRING NC** 

PROJECT DESCRIPTION: **PROPOSED WIRELESS TELECOMMUNICATIONS** 

**FACILITY** 

**TOWER TYPE:** SITE ADDRESS: **300' SELF SUPPORT** (315' OVERALL HEIGHT) WHITE SMITH ROAD

> PITTSBORO, NC 27312 (CHATHAM COUNTY)

(LEASE AREA & ACCESS DRIVE)

JURISDICTION: **CHATHAM COUNTY** 

**DISTURBED AREA:** 19,602 ± SQ. FT.

**PRESENT** 

**OCCUPANCY TYPE: AGRICULTURAL** 

**CURRENT ZONING:** UNZONED

10519

## PROJECT INFORMATION

LATITUDE N 35° 47' 21.436" (NAD '27) LONGITUDE W 79° 18' 44.767" (NAD '27)

LATITUDE N 35° 47' 21.946" (NAD '83) LONGITUDE W 79° 18' 43.829" (NAD '83)

GROUND ELEV. (AMSL) = 601.9' (NAVD '88)

# 1-A CERTIFICATION



# **LOCATION MAP**

TAKE US-421 S FROM I-40 IN GREENSBORO, NC AND GO 29.5 MILES. AT EXIT 171, TAKE A LEFT ONTO US 64-E AND GO 1.1 MILES. TAKE A LEFT ONTO SILK HOPE ROAD AND GO 4.3 MILES. TURN RIGHT ONTO SILK HOPE GUM SPRINGS ROAD AND GO 2.9 MILES. TURN LEFT ONTO WHITE SMITH ROAD AND GO 1.06 M. SITE ON THE RIGHT. ENTER AT CLEARING WHERE LOGGING ROAD IS.

# **DRIVING DIRECTIONS**



# MERICAN TOWER CORPORATION

SITE PLAN

**AT&T SITE #: 368-512** 

**ATC SITE #: 282296** 

ATC SITE NAME: GUM SPRING NC

WHITE SMITH ROAD PITTSBORO, NC 27312

ALL WORK AND MATERIALS SHALL BE PERFORMED AND INSTALLED IN

ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES
AS ADOPTED BY THE LOCAL GOVERNING AUTHORITIES, NOTHING IN THESE
PLANS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THE

1. NORTH CAROLINA BUILDING CODE (2012 EDITION) 4. 2012 NCEC (NEC 2011 & ADDENDUM) 5. LOCAL BUILDING CODE 6. CITY/COUNTY ORDINANCES

CODE COMPLIANCE

SHEET

DESCRIPTION

**INDEX OF SHEETS** 

TITLE SHEET

N1 GENERAL NOTES

#### SITE PROJECT MANAGER:

NAME: AMERICAN TOWERS LLC
ADDRESS: 3500 REGENCY PARKWAY, STE 100
CITY, STATE, ZIP: CARY, NC 27518 NAME:

JILL HOUSE (919) 446-5163 PHONE:

#### SITE APPLICANT:

AMERICAN TOWERS LLC 3500 REGENCY PARKWAY, STE 100 NAME: CITY, STATE, ZIP: CARY, NC 27518

CONTACT: (919) 446-5163

#### SURVEYOR:

TOWER ENGINEERING PROFESSIONALS 3703 JUNCTION BOULEVARD NAME: ADDRESS:

CITY, STATE, ZIP: CLIFFORD C. BYRD, P.L.S. (919) 661-6351

# **CIVIL ENGINEER:**

TOWER ENGINEERING PROFESSIONALS 3703 JUNCTION BOULEVARD NAME: ADDRESS:

CITY, STATE, ZIP: RALEIGH, NC 27603
CONTACT: KIMBERLY S. MARTIN, P.E.

(919) 661-6351

# **ELECTRICAL ENGINEER:**

TOWER ENGINEERING PROFESSIONALS 3703 JUNCTION BOULEVARD NAME:

ADDRESS: CITY, STATE, ZIP: RALEIGH, NC 27603

FREDERICK T. HERB, P.E. (919) 661-6351 PHONE:

# **PROPERTY OWNER:**

NAME: HAROLD AND RITA ROGERS ADDRESS: 1296 WHITE SMITH ROAD
CITY, STATE, ZIP:
CONTACT: HAROLD ROGERS (919) 742-4406

**CONTACT INFORMATION** 

#### **UTILITIES:**

3. ANSI/TIA-222-G-2-2009

POWER COMPANY: CONTACT: PROGRESS ENERGY CUSTOMER SERVICE (800) 452-2777 METER # NEAR SITE:

TELEPHONE COMPANY: CONTACT:

800-331-0500 PHONE # NEAR SITE: PEDESTAL # NEAR SITE:

SPRINT CUSTOMER SERVICE

ı	C1	SITE PLAN	1
ı	C1A	SITE LAYOUT	1
ı	C2	COMPOUND DETAIL	1
ı	C3	TOWER ELEVATION	1
ı	C4	SHELTER ELEVATIONS	1
ı	C5	SHELTER FOUNDATION DETAILS	1
ı	C6	GENERATOR & FUEL TANK ELEVATIONS	1
	C7	GENERATOR FOUNDATION DETAILS	1
l	C8	ICE BRIDGE DETAILS I	1
l	C9	ICE BRIDGE DETAILS II	1
l	C10	FENCE DETAILS	1
	C10A	ACCESS GATE DETAILS	1
	C11	SIGNAGE DETAILS	1
	C12	CULVERT & DRIVEWAY DETAILS	1
	C13	SOIL & EROSION CONTROL PLAN AND DETAILS	1
	C14	PIPE PROTECTION DETAILS	1
	C15	SILT FENCE OUTLET & CHECK DAM DETAILS	1
	L1	LANDSCAPING PLAN	1
	L2	LANDSCAPING DETAILS	1
	E1	ELECTRICAL NOTES	1
	E2	SERVICE ROUTING PLAN & ONE LINE DIAGRAM	1
	E3	TOWER & SHELTER GROUNDING PLAN	1
	E4	PANELBOARD SCHEDULE	1
	E5	SERVICE RACK DETAILS I	1
	E5A	SERVICE RACK DETAILS II	1
	E6	GROUNDING DETAILS I	1
	E7	GROUNDING DETAILS II	
		REFERENCE DWG (GENERAC 80KW GENERAL	
		ASSEMBLY & INSTALLATION SUPPLEMENT)	
ı			

# TOWER ENGINEERING PROFESSIONALS 3703 JUNCTION BOULEVARD

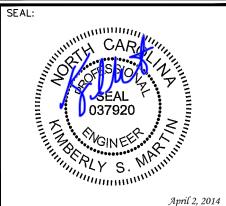
RALEIGH, NC 27603-5263 OFFICE: (919) 661-6351 www.tepgroup.net

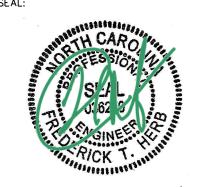
N.C. LICENSE # C-1794

Ī	04-02-14	CONSTRUCTION
0	03-13-14	PRELIMINARY
REV	DATE	ISSUED FOR:

DRAWN BY: EWK CHECKED BY:

**REV** 





April 2, 2014

SHEET NUMBER: T-1

**REVISION:** TEP #: 5218

- ALL REFERENCES MADE TO OWNER IN THESE DOCUMENTS SHALL BE CONSIDERED ATC OR IT'S DESIGNATED REPRESENTATIVE.
- 2. ALL WORK PRESENTED ON THESE DRAWINGS MUST BE COMPLETED BY THE CONTRACTOR UNLESS NOTED OTHERWISE. THE CONTRACTOR MUST HAVE CONSIDERABLE EXPERIENCE IN PERFORMANCE OF WORK SIMILAR TO THAT DESCRIBED HEREIN. BY ACCEPTANCE OF THIS ASSIGNMENT, THE CONTRACTOR IS ATTESTING THAT HE DOES HAVE SUFFICIENT EXPERIENCE AND ABILITY, THAT HE IS KNOWLEDGEABLE OF THE WORK TO BE PERFORMED AND THAT HE IS PROPERLY LICENSED AND PROPERLY REGISTERED TO DO THIS WORK IN THE STATE OF NORTH CAROLINA
- 3. THE STRUCTURE SHALL BE DESIGNED IN ACCORDANCE WITH ANSI/TIA-222-G-2-2009. THIS CONFORMS TO THE REQUIREMENTS OF THE NORTH CAROLINA BUILDING CODE, 2012 EDITION.
- 4. WORK SHALL BE COMPLETED IN ACCORDANCE WITH THE NORTH CAROLINA BUILDING CODE, 2012 EDITION.
- 5. UNLESS SHOWN OR NOTED OTHERWISE ON THE CONTRACT DRAWINGS, OR IN THE SPECIFICATIONS, THE FOLLOWING NOTES SHALL APPLY TO THE MATERIALS LISTED HEREIN, AND TO THE PROCEDURES TO BE USED ON THIS PROJECT.
- 6. ALL HARDWARE ASSEMBLY MANUFACTURER'S INSTRUCTIONS SHALL BE FOLLOWED EXACTLY AND SHALL SUPERSEDE ANY CONFLICTING NOTES ENCLOSED HEREIN.
- 7. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO DETERMINE ERECTION PROCEDURE AND SEQUENCE TO INSURE THE SAFETY OF THE STRUCTURE AND IT'S COMPONENT PARTS DURING ERECTION AND/OR FIELD MODIFICATIONS. THIS INCLUDES, BUT IS NOT LIMITED TO, THE ADDITION OF TEMPORARY BRACING, GUYS OR TIE DOWNS THAT MAY BE NECESSARY. SUCH MATERIAL SHALL BE REMOVED AND SHALL REMAIN THE PROPERTY OF THE CONTRACTOR AFTER THE COMPLETION OF THE PROJECT.
- 8. ALL DIMENSIONS, ELEVATIONS, AND EXISTING CONDITIONS SHOWN ON THE DRAWINGS SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO BEGINNING ANY MATERIALS ORDERING, FABRICATION OR CONSTRUCTION WORK ON THIS PROJECT. CONTRACTOR SHALL NOT SCALE CONTRACT DRAWINGS IN LIEU OF FIELD VERIFICATION. ANY DISCREPANCIES SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE OWNER AND THE OWNER'S ENGINEER. THE DISCREPANCIES MUST BE RESOLVED BEFORE THE CONTRACTOR IS TO PROCEED WITH THE WORK. THE CONTRACT DOCUMENTS DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK AND SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES. OBSERVATION VISITS TO THE SITE BY THE OWNER AND/OR THE ENGINEER SHALL NOT INCLUDE INSPECTION OF THE PROTECTIVE MEASURES OR THE PROCEDURES.
- 9. ALL MATERIALS AND EQUIPMENT FURNISHED SHALL BE NEW AND OF GOOD QUALITY, FREE FROM FAULTS AND DEFECTS AND IN CONFORMANCE WITH THE CONTRACT DOCUMENTS. ANY AND ALL SUBSTITUTIONS MUST BE PROPERLY APPROVED AND AUTHORIZED IN WRITING BY THE OWNER AND ENGINEER PRIOR TO INSTALLATION. THE CONTRACTOR SHALL FURNISH SATISFACTORY EVIDENCE AS TO THE KIND AND QUALITY OF THE MATERIALS AND EQUIPMENT BEING SUBSTITUTED.
- 10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INITIATING, MAINTAINING, AND SUPERVISING ALL SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK. THE CONTRACTOR IS RESPONSIBLE FOR INSURING THAT THIS PROJECT AND RELATED WORK COMPLIES WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL SAFETY CODES AND REGULATIONS GOVERNING THIS WORK. RENTAL CHARGES, SAFETY, PROTECTION AND MAINTENANCE OF RENTED EQUIPMENT SHALL BE THE CONTRACTOR'S RESPONSIBILITY.
- 11. ACCESS TO THE PROPOSED WORK SITE MAY BE RESTRICTED. THE CONTRACTOR SHALL COORDINATE INTENDED CONSTRUCTION ACTIVITY, INCLUDING WORK SCHEDULE AND MATERIALS ACCESS, WITH THE AT&T PROJECT MANAGER
- 12. BILL OF MATERIALS AND PART NUMBERS LISTED ON CONSTRUCTION DRAWINGS ARE INTENDED TO AID CONTRACTOR/OWNER. CONTRACTOR/OWNER SHALL VERIFY PARTS AND QUANTITIES WITH MANUFACTURER PRIOR TO BIDDING AND/OR ORDERING MATERIALS.
- 13. ALL PERMITS THAT MUST BE OBTAINED ARE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR WILL BE RESPONSIBLE FOR ABIDING BY ALL CONDITIONS AND REQUIREMENTS OF THE PERMITS.
- 14. 24 HOURS PRIOR TO THE BEGINNING OF ANY CONSTRUCTION, THE CONTRACTOR MUST NOTIFY THE APPLICABLE JURISDICTIONAL (STATE, COUNTY OR CITY) ENGINEER.
- 15. THE CONTRACTOR SHALL REWORK (DRY, SCARIFY, ETC.) ALL MATERIAL NOT SUITABLE FOR SUBGRADE IN ITS PRESENT STATE. AFTER REWORKING, IF THE MATERIAL REMAINS UNSUITABLE, THE CONTRACTOR SHALL UNDERCUT THIS MATERIAL AND REPLACE WITH APPROVED MATERIAL. ALL SUBGRADES SHALL BE PROOFROLLED WITH A FULLY LOADED TANDEM AXLE DUMP TRUCK PRIOR TO PAVING. ANY SOFT MATERIAL SHALL BE REWORKED OR REPLACED.
- 16. THE CONTRACTOR IS REQUIRED TO MAINTAIN ALL PIPES, DITCHES, AND OTHER DRAINAGE STRUCTURES FREE FROM OBSTRUCTION UNTIL WORK IS ACCEPTED BY THE OWNER. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGES CAUSED BY FAILURE TO MAINTAIN DRAINAGE STRUCTURE IN OPERABLE CONDITION.
- 17. THE OWNER SHALL HAVE A SET OF APPROVED PLANS AVAILABLE AT THE SITE AT ALL TIMES WHILE WORK IS BEING PERFORMED. A DESIGNATED RESPONSIBLE EMPLOYEE SHALL BE AVAILABLE FOR CONTACT BY GOVERNING AGENCY INSPECTORS.

- 18. ANY BUILDINGS ON THIS SITE ARE INTENDED TO SHELTER EQUIPMENT WHICH WILL ONLY BE PERIODICALLY MAINTAINED AND ARE NOT INTENDED FOR HUMAN OCCUPANCY.
- 19. TEMPORARY FACILITIES FOR PROTECTION OF TOOLS AND EQUIPMENT SHALL CONFORM TO LOCAL REGULATIONS AND SHALL BE THE CONTRACTOR'S RESPONSIBILITY.
- 20. THE CONTRACTOR AND ITS SUBCONTRACTORS SHALL CARRY LIABILITY INSURANCE IN THE AMOUNTS AND FORM IN ACCORDANCE WITH AT&T SPECIFICATIONS. CERTIFICATES DEMONSTRATING PROOF OF COVERAGE SHALL BE PROVIDED TO AT&T PRIOR TO THE START OF THE WORK ON THE PROJECT.
- 1. THE CONTRACTOR SHALL CONTACT ALL APPLICABLE UTILITY SERVICES TO VERIFY LOCATIONS OF EXISTING UTILITIES AND REQUIREMENTS FOR NEW UTILITY CONNECTIONS PRIOR TO EXCAVATING.
- 22. THE CONTRACTOR SHALL MAINTAIN THE JOB CLEAR OF TRASH AND DEBRIS. ALL WASTE MATERIALS SHALL BE REMOVED FROM THE SITE PRIOR TO SUBSTANTIAL COMPLETION AND PRIOR TO FINAL ACCEPTANCE. THE CONTRACTOR SHALL FURNISH ONE 55 GALLON BARREL, AND TRASH BAGS, AND SHALL REMOVE TRASH, DEBRIS, ETC., ON A DAILY BASIS.
- 23. THE CONTRACTOR SHALL VISIT THE SITE AND BECOME FAMILIAR WITH ALL CONDITIONS PRIOR TO SUBMITTING HIS PROPOSAL. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS SHOWN ON THESE DRAWINGS WITH THOSE AT THE SITE. ANY VARIATION WHICH REQUIRES PHYSICAL CHANGE SHALL BE BROUGHT TO THE ATTENTION OF THE ATC PROJECT ENGINEER FOR FACILITIES/CONSTRUCTION.
- 24. THE CONTRACTOR SHALL GUARANTEE THE WORK PERFORMED ON THE PROJECT BY THE CONTRACTOR AND ANY OR ALL OF THE SUBCONTRACTORS WHO PERFORMED WORK FOR THE CONTRACTOR ON THIS PROJECT. THE GUARANTEE SHALL BE FOR A FULL YEAR FOLLOWING ISSUANCE OF THE FINAL PAYMENT OF RETAINAGE. ALL MATERIALS AND WORKMANSHIP SHALL BE WARRANTED FOR ONE YEAR FROM ACCEPTANCE DATE.

PLANS PREPARED FOR:



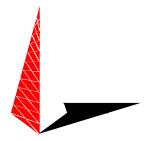
3500 REGENCY PARKWAY, SUITE 100 CARY, NC 27518

PROJECT INFORMATION:

### AT&T SITE #: 368-512 ATC SITE #: 282296 GUM SPRING NC

WHITE SMITH ROAD PITTSBORO, NC 27312 (CHATHAM COUNTY)

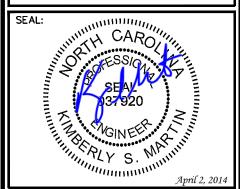
PLANS PREPARED BY:



#### **TOWER ENGINEERING PROFESSIONALS**

3703 JUNCTION BOULEVARD RALEIGH, NC 27603-5263 OFFICE: (919) 661-6351 www.tepgroup.net

N.C. LICENSE # C-1794



- 1	04-02-14	CONSTRUCTION
0	03-13-14	PRELIMINARY
REV	DATE	ISSUED FOR:

DRAWN BY: SCB | CHECKED BY: GMA

SHEET TITLE:

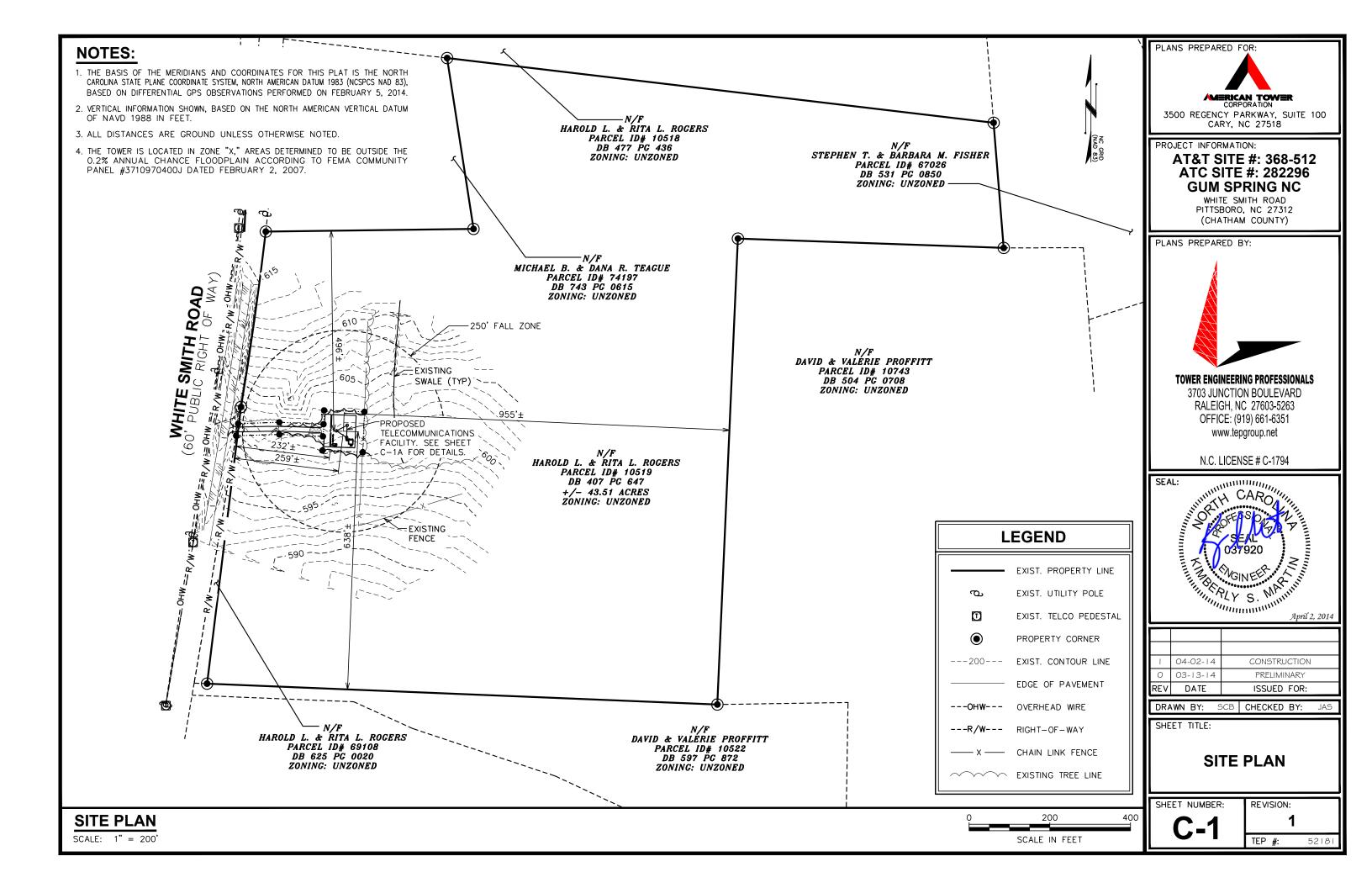
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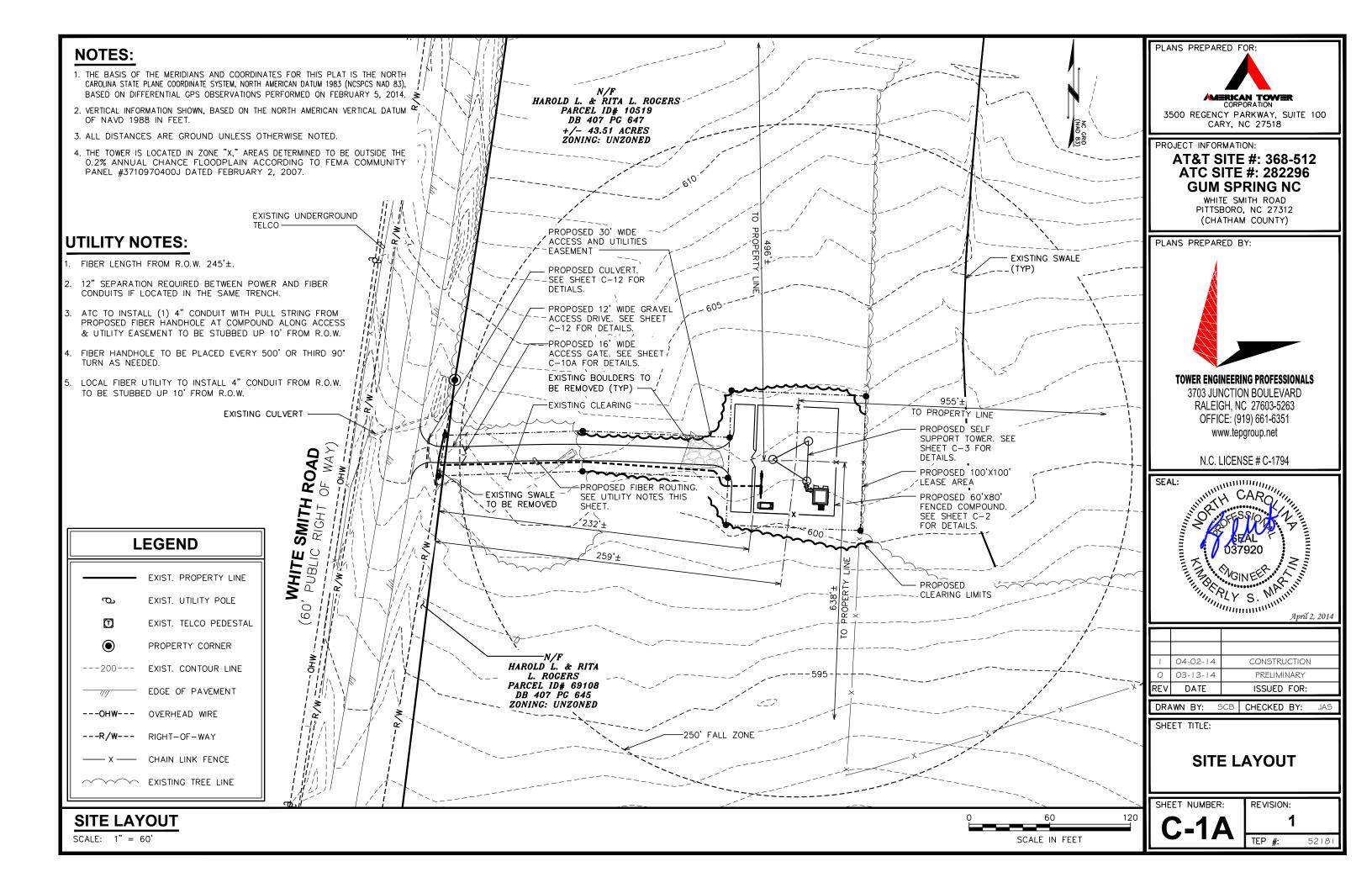
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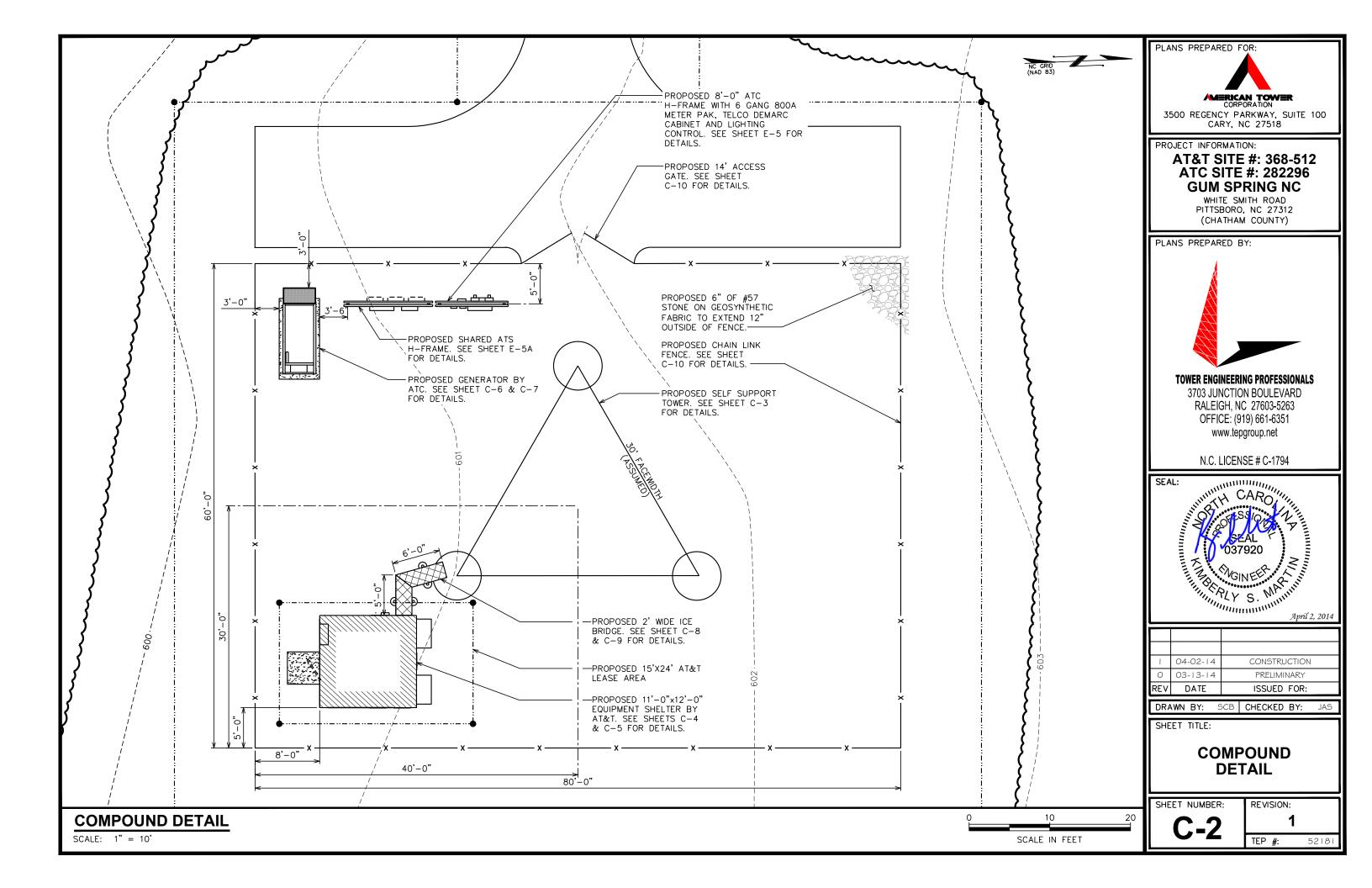
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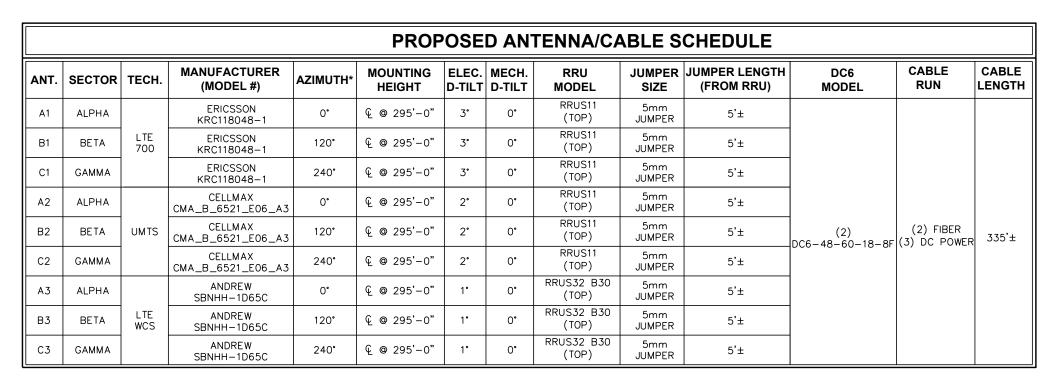
TEP #: 52181

**GENERAL NOTES** 

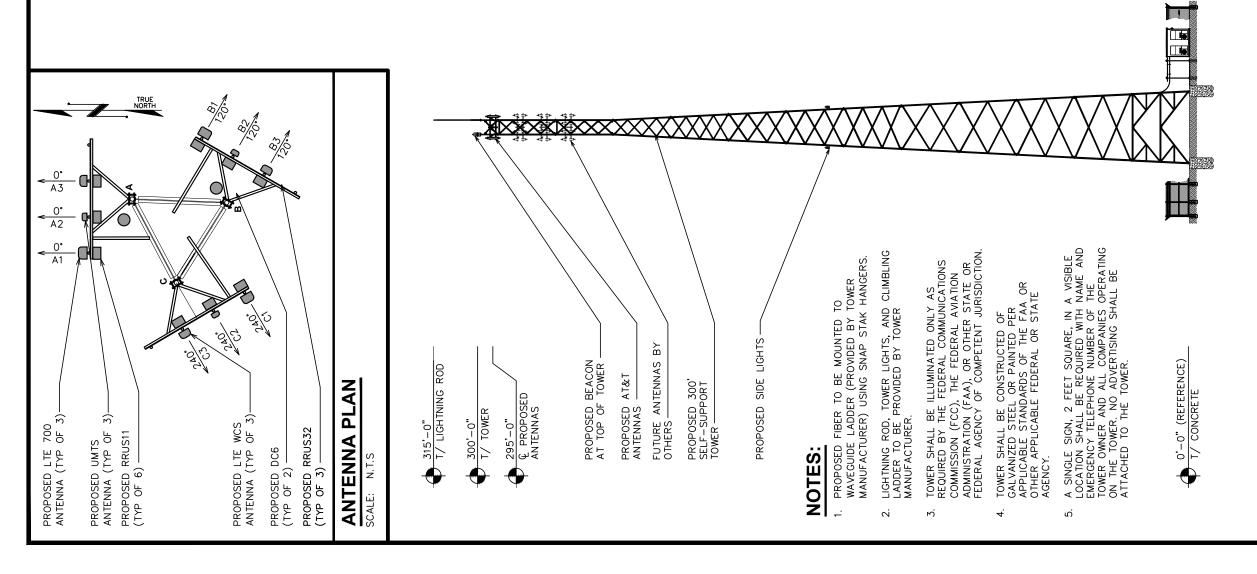


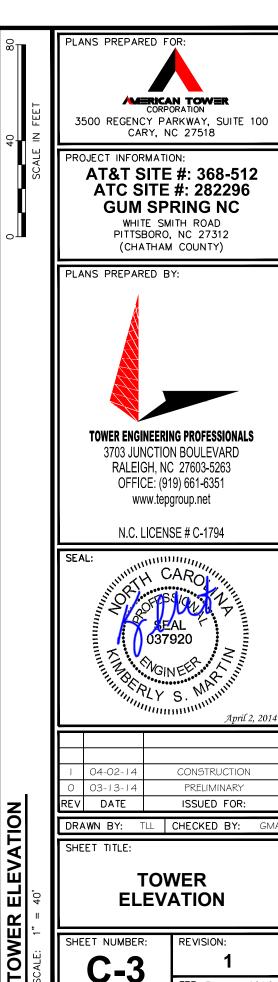






- \* AZIMUTHS BASED ON TRUE NORTH
- \* ANTENNA MDOEL AND AZIMUTH INFORMATION IS ASSUMED AND MAY NOT REPRESENT FINAL CONFIGURATION.





CHECKED BY:

REVISION:

TEP #:

52181

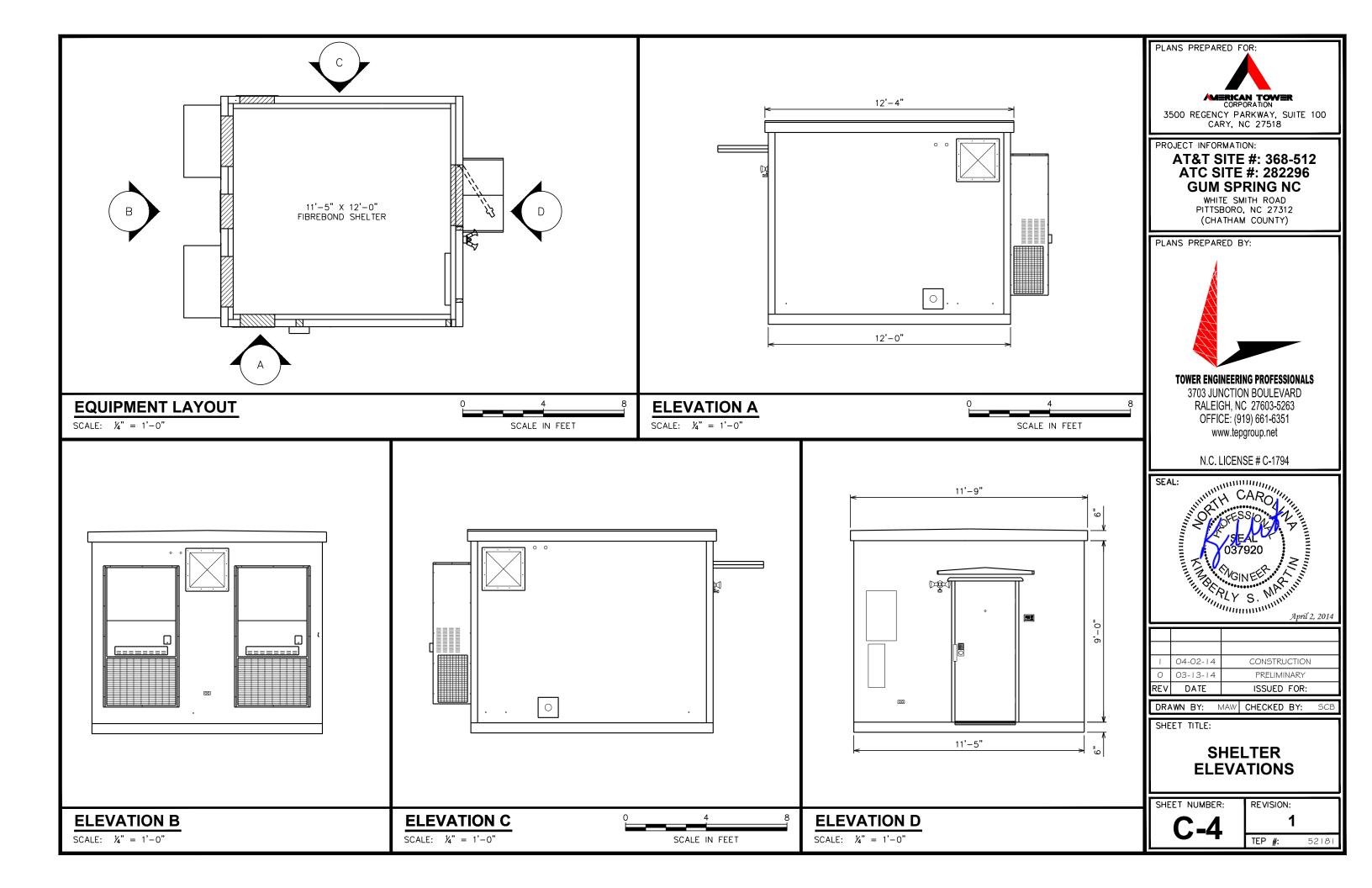
**TOWER** 

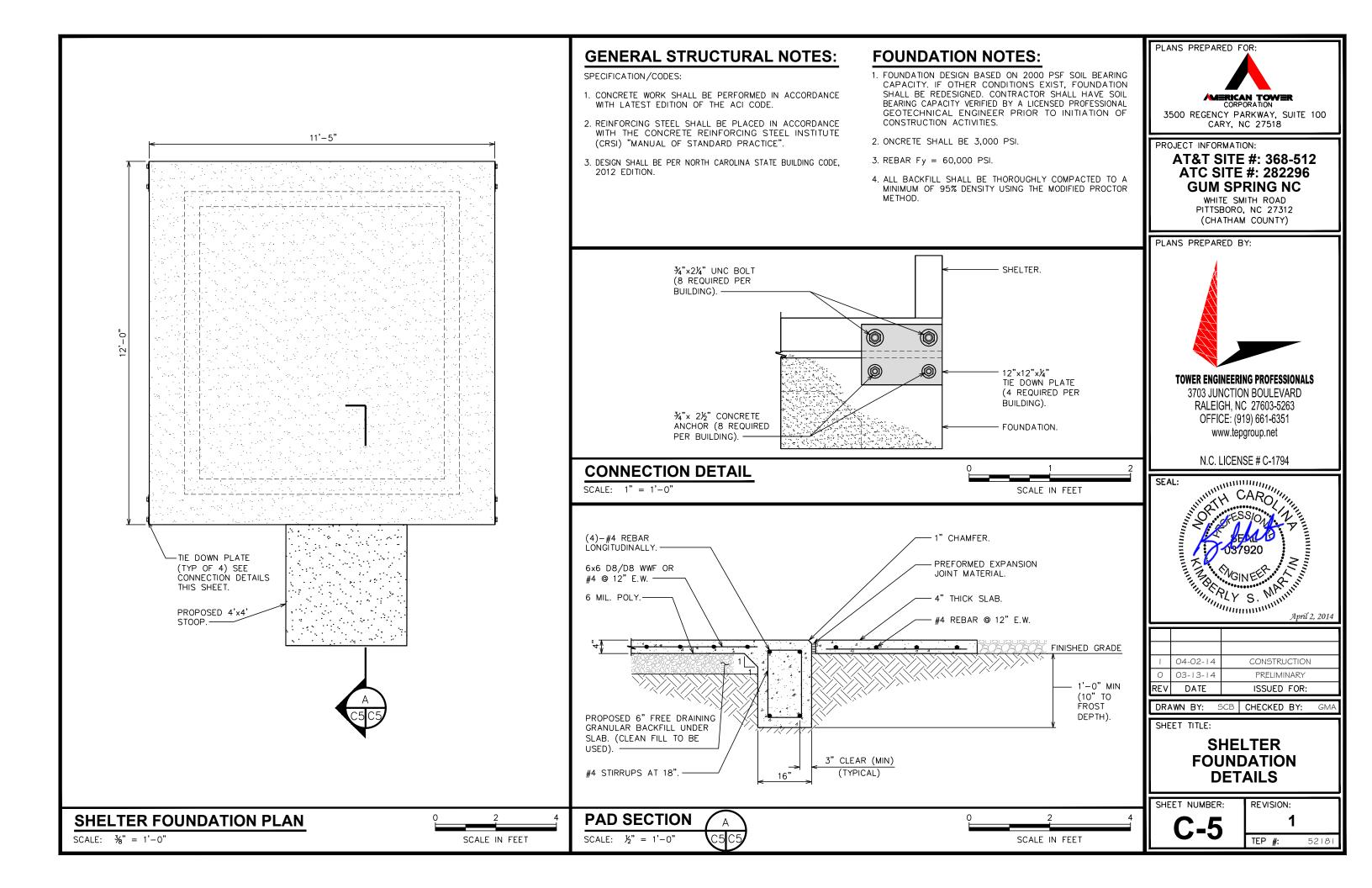
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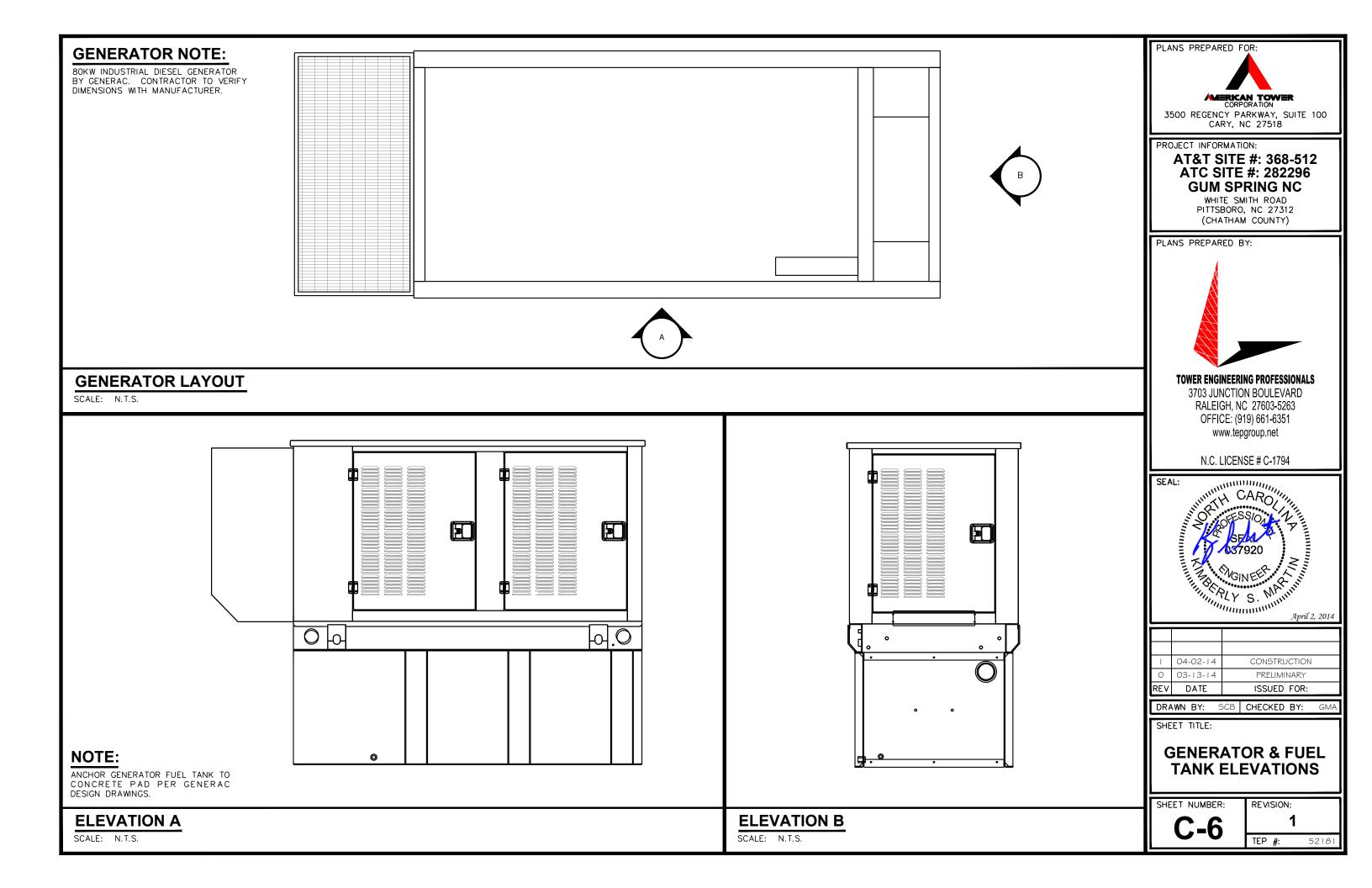
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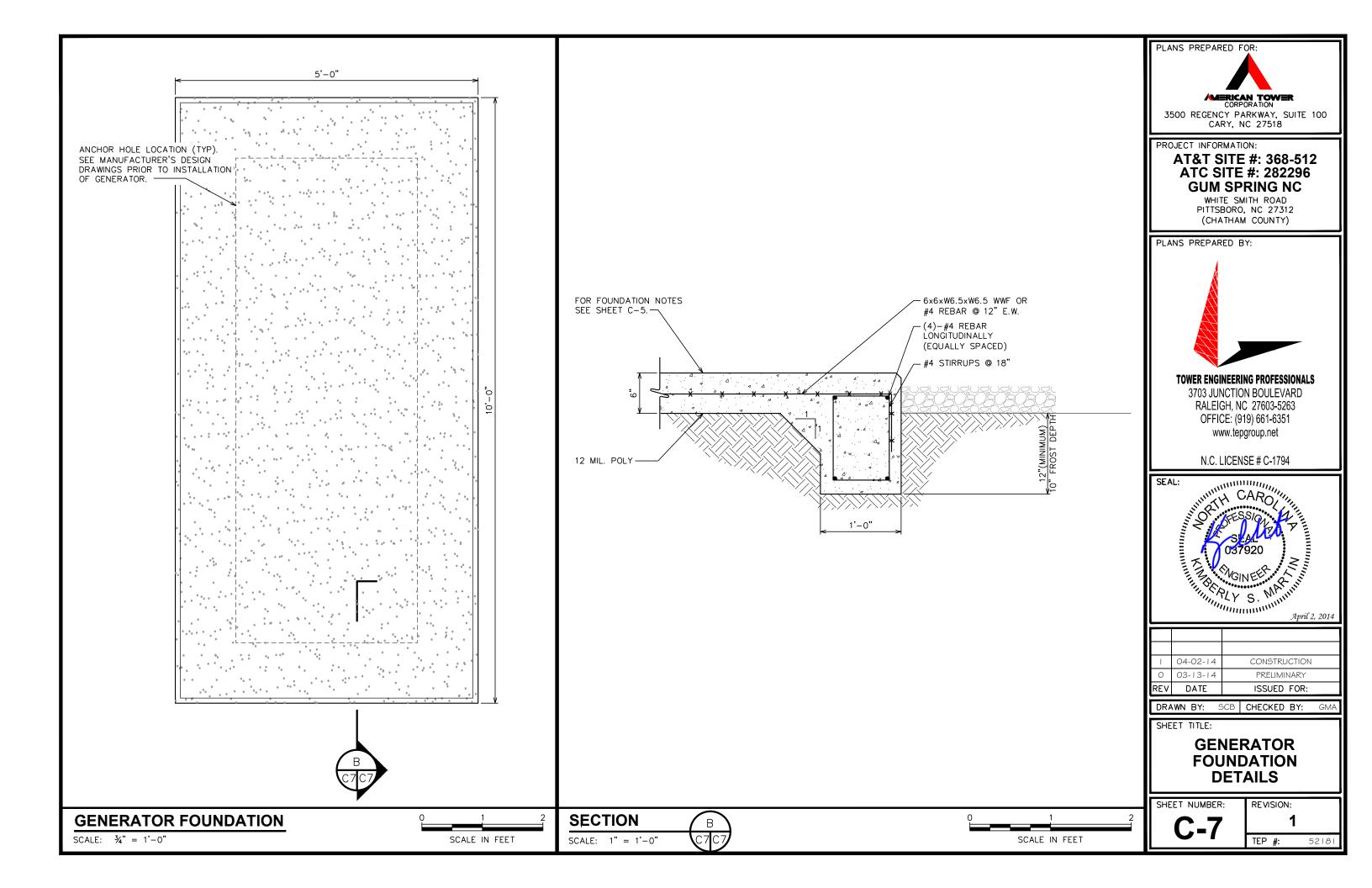
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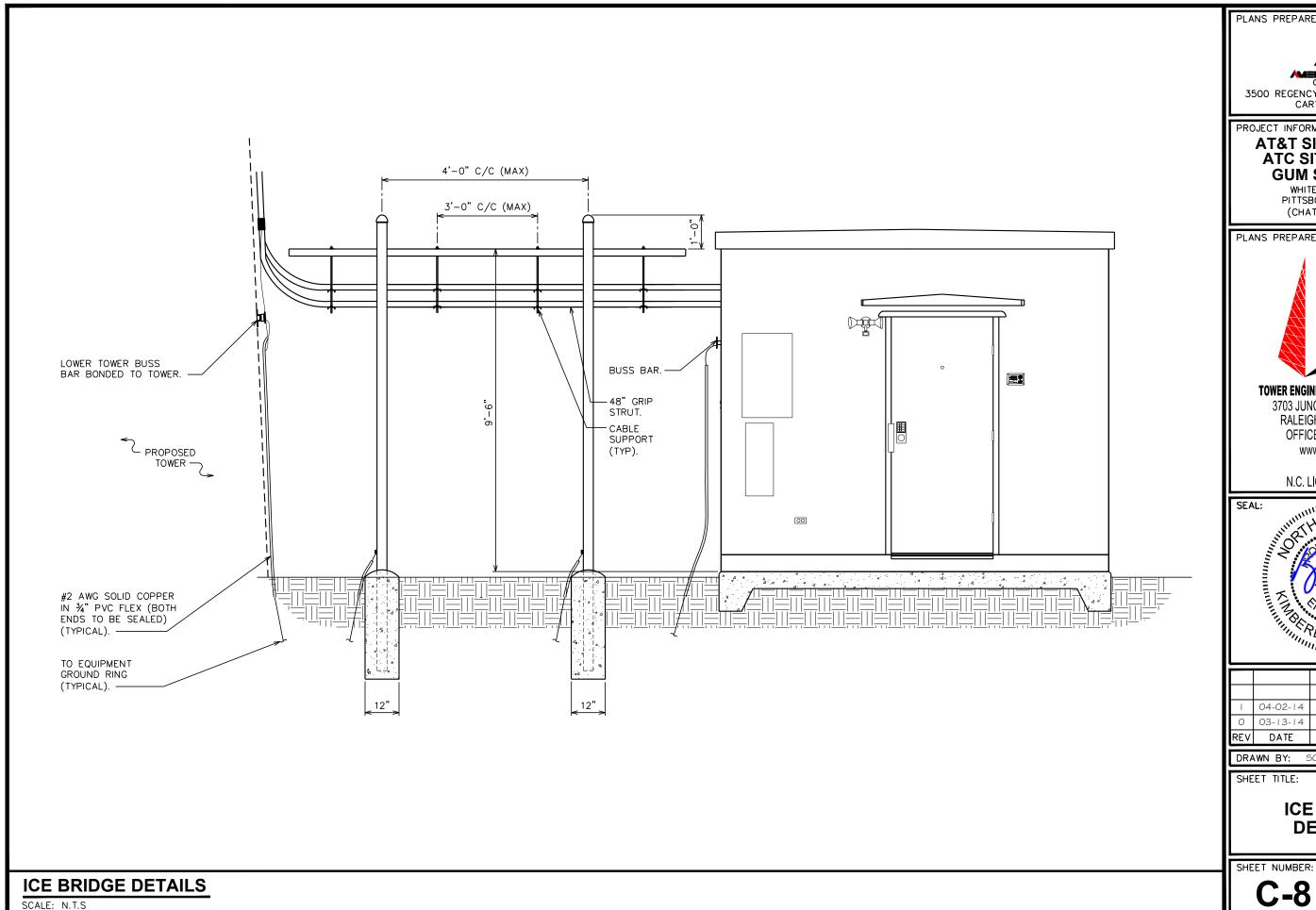
SHEET NUMBER:











3500 REGENCY PARKWAY, SUITE 100 CARY, NC 27518

PROJECT INFORMATION:

# AT&T SITE #: 368-512 **ATC SITE #: 282296 GUM SPRING NC**

WHITE SMITH ROAD PITTSBORO, NC 27312 (CHATHAM COUNTY)

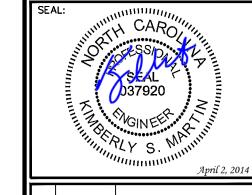
PLANS PREPARED BY:



#### **TOWER ENGINEERING PROFESSIONALS**

3703 JUNCTION BOULEVARD RALEIGH, NC 27603-5263 OFFICE: (919) 661-6351 www.tepgroup.net

N.C. LICENSE # C-1794



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REV	DATE	ISSUED FOR:

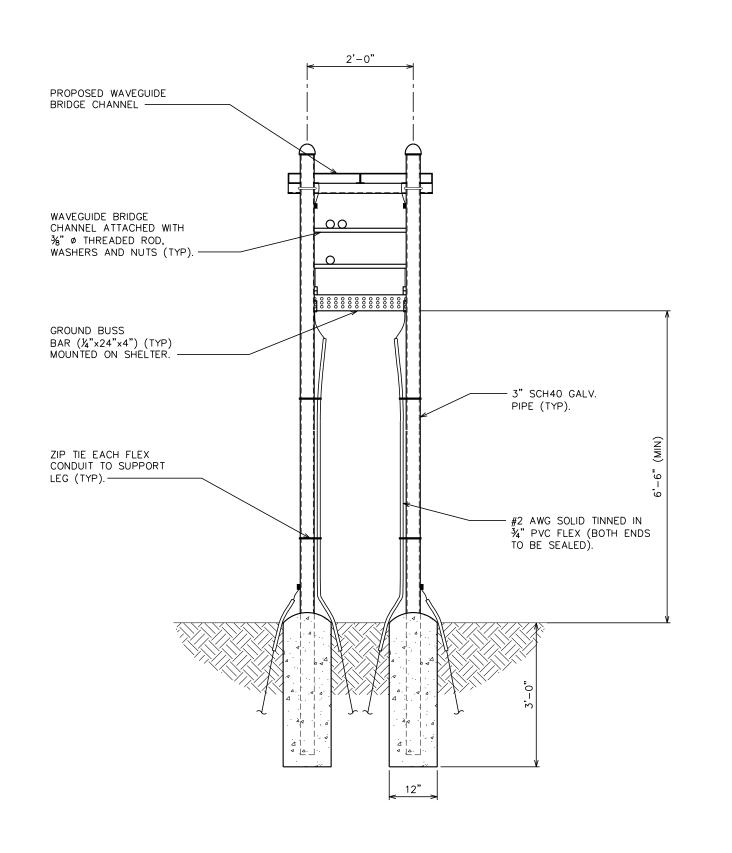
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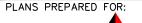
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# **ICE BRIDGE DETAILS I**

REVISION:

TEP #: 52181







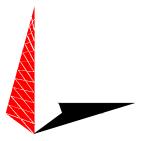
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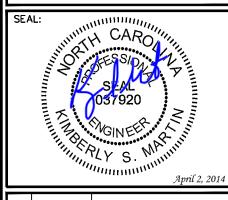
PLANS PREPARED BY:



#### **TOWER ENGINEERING PROFESSIONALS**

3703 JUNCTION BOULEVARD RALEIGH, NC 27603-5263 OFFICE: (919) 661-6351 www.tepgroup.net

N.C. LICENSE # C-1794



- 1	04-02-14	CONSTRUCTION
0	03-13-14	PRELIMINARY
REV	DATE	ISSUED FOR:

DRAWN BY: JJM CHECKED BY:

SHEET TITLE:

# **ICE BRIDGE DETAILS II**

SHEET NUMBER:

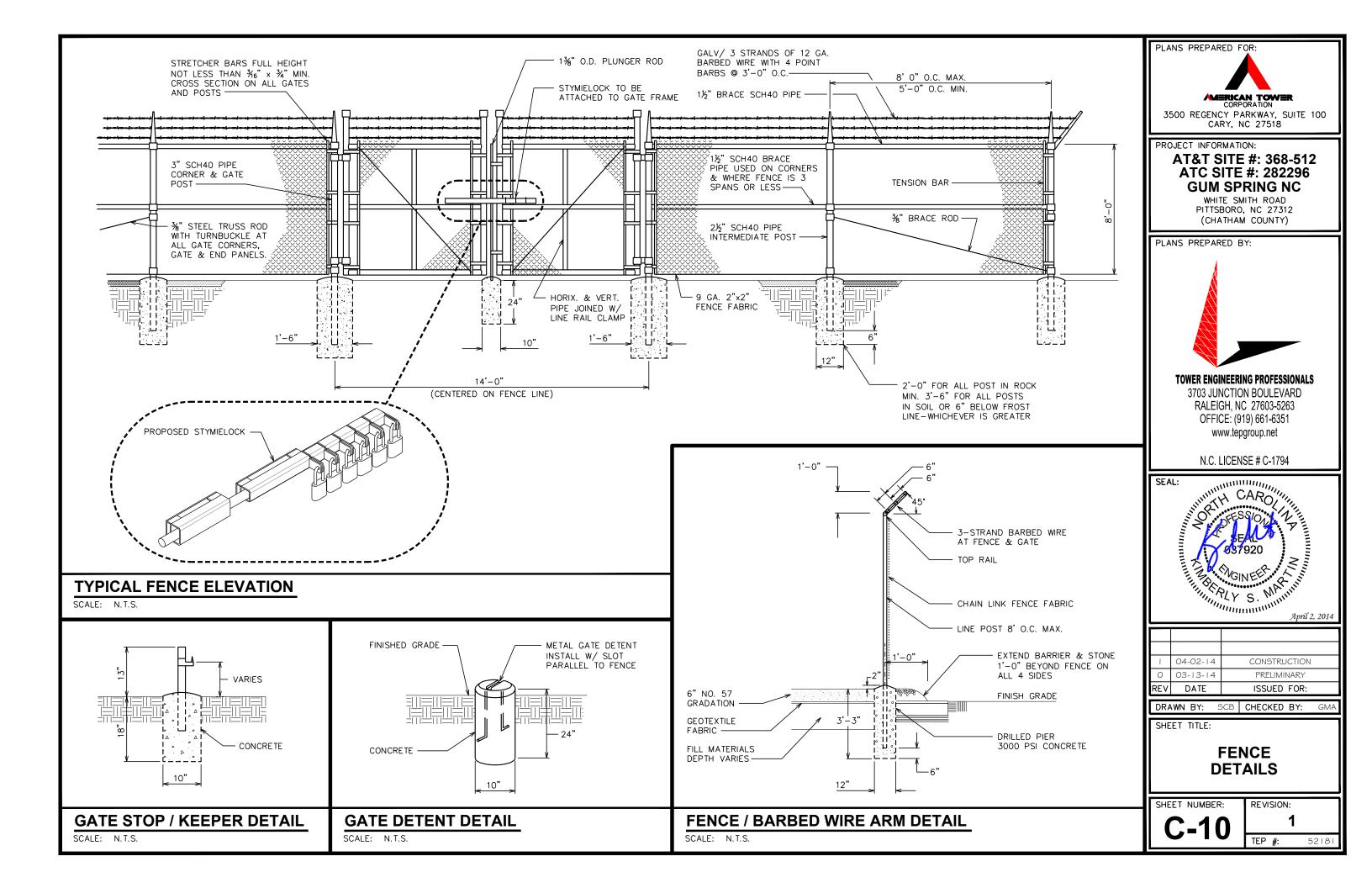
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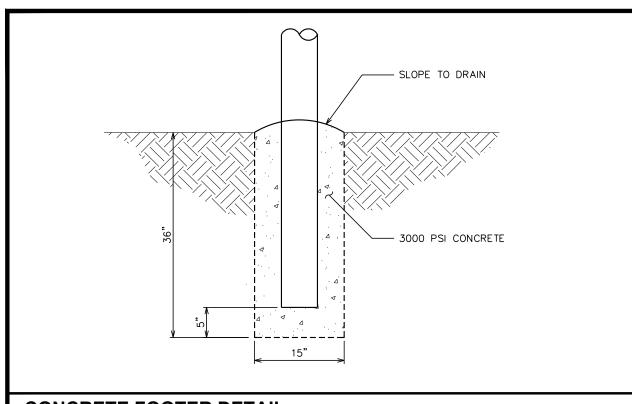
TEP #: 52181

**ICE BRIDGE DETAILS** 

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

SCALE IN FEET





- 1. PANELS TO BE 4'x8' GALVANIZED TUBULAR STEEL 2" ODx16 GAUGE HIGH TENSILE WELDED STEEL. HEAVY DUTY MOUNT HARDWARE TO BE WELDED TO THE SUPPORT POSTS.
- 2. 6"ODx8' SCHEDULE 40 STEEL INSTALLED 36" BELOW EXISTING GRADE CONCRETE TO 1" ABOVE EXISTING GRADE AT THE POST BASE AND TAPER. FILL POST COMPLETELY WITH CONCRETE CAP.
- 3. CONTRACTOR TO INSTALL ATC SIGNAGE TO THE NEWLY INSTALLED ACCESS GATE. SIGNAGE TO BE INSTALLED USING GALVANIZED METAL SCREWS IN 4 PLACES. NO PLASTIC WIRE TIES WILL BE USED.
- 4. STYMIE SECURITY LOCK: STANDARD GALVANIZED 2" LOCK SYSTEM WELDED TO GATE CROSS SUPPORTS 4-2" SLEEVES WITH SLOTTED HASPS.

# **NOTES:**

# CARY, NC 27518 PROJECT INFORMATION:

# AT&T SITE #: 368-512 **ATC SITE #: 282296 GUM SPRING NC**

3500 REGENCY PARKWAY, SUITE 100

WHITE SMITH ROAD PITTSBORO, NC 27312 (CHATHAM COUNTY)

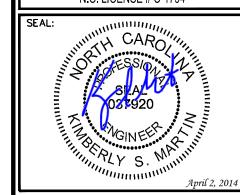
PLANS PREPARED BY:



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MAW CHECKED BY: DRAWN BY:

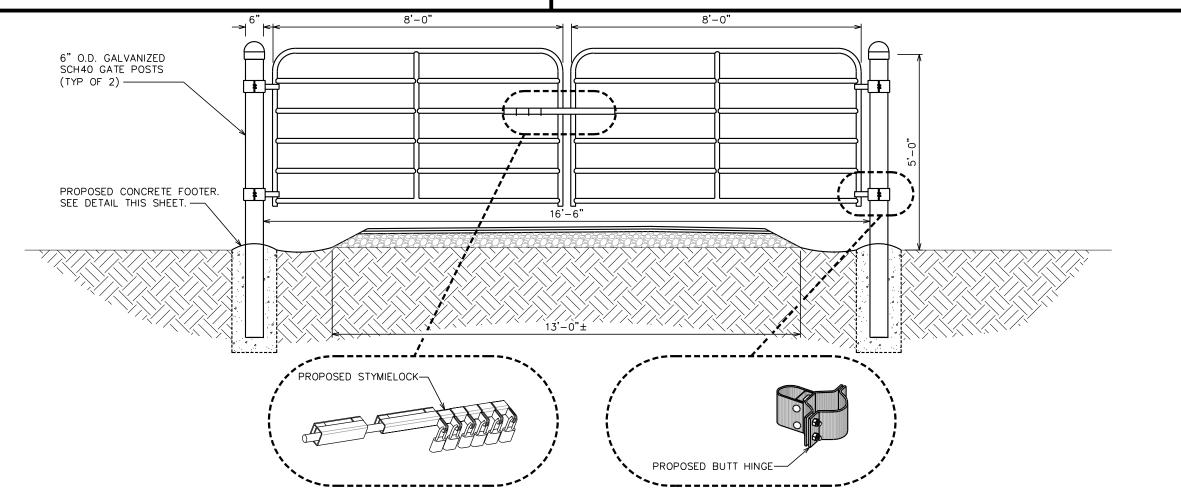
SHEET TITLE:

**ACCESS GATE DETAILS** 

# **CONCRETE FOOTER DETAIL**

SCALE: NTS

# **ACCESS GATE NOTES**



**CATTLE GATE DETAIL** 

property of



# AUTHORIZED PERSONNEL ONLY!

In case of emergency or prior to performing maintenance on this site, call 1-800-638-2822 and reference cell site number:

1) WHITE/BLUE BACKGROUND W/ BLACK LETTERING QUANTITY: (1)

SIZE: 9"X12"

(TO BE MOUNTED ON UNIVERSAL POWER CABINET DOOR ADJACENT TO COMPOUND ENTRY — SEE

# NO TRESPASSING

VIOLATORS WILL BE PROSECUTED

property of



In case of emergency or prior to performing maintenance on this site, call 1-800-830-3365 and reference cell site number:

3 WHITE/RED BACKGROUND W/ BLACK LETTERING QUANTITY: (4)

SIZE: 12"X12"

(ONE TO BE MOUNTED ON EACH SIDE OF COMPOUND FENCE)

# DO NOT CLIMB TOWER WITHOUT OWNER'S WRITTEN PERMISSION

4 WHITE BACKGROUND W/ RED LETTERING
QUANTITY: (1)

(TO BE MOUNTED AT EYE LEVEL ON TOWER
NEAR SAFETY CLIMB)

**NOTICE** 



Radio Frequency fields beyond this point may exceed the FCC general public exposure limit.

OBEY ALL POSTED SIGNS AND SITE GUIDELINES FOR WORKING IN RADIO FREQUENCY

In occordance with Federal Communications Commission rule on radio frequency exposure 47 CFR 1.1307(b)

2) WHITE/BLUE BACKGROUND W/ BLACK LETTERING QUANTITY: (1)
(TO BE MOUNTED AT EYE LEVEL ON TOWER NEAR SAFETY CLIMB)

000

5 WHITE BACKGROUND W/ BLACK LETTERING
E911 STREET #
QUANTITY: (1 TYP)
LETTERS MUST BE A MINIMUM 6" TALL
(TO BE MOUNTED ON THE GATE OF COMPOUND)

- 1) SITE IDENTIFICATION SIGN
- (2) FCC/RF EXPOSURE SIGN
- (3) AUTHORIZED ENTRY SIGN
- (4) TOWER CLIMBING SIGN
- (5) STREET ADDRESS SIGN
- (6) INFORMATION RF EXPOSURE SIGN
- (7) TOWER REGISTRATION SIGN

INFORMATION

AMERICAN TOWER operates telecommunications equipment at this location

Stay back a minimum of 3 feet from any antenna.

Obey all posted signs and guidelines.

Do not cross into areas restricted by striping and/or

Contact the owner(s) of the antenna(s) and follow their instructions prior to performing any repairs or maintenance within a restricted area of closer than 3 feet from the antenna

Contact AMERICAN TOWER at 1-800-830-3365 prior to doing any work near AMERICAN TOWER structures. This is site #-----.

Contact the management office if this door/hatch/gate is found unlocked.

6 WHITE BACKGROUND W/ BLACK LETTERING QUANTITY: (1) PER ACCESS GATE (TO BE MOUNTED ON COMPOUND ACCESS GATE)

# FCC TOWER REGISTRATION NO.: 0123456789

(7) WHITE BACKGROUND W/ BLACK LETTERING QUANTITY: (1)

(TO BE MOUNTED ON COMPOUND ACCESS GATE — SEE NOTE 5)

NOTE: NUMBER SHOWN IS GENERIC, CONTACT CONSTRUCTION MANAGER
FOR ACTUAL FCC TOWER REG. #.

# **NOTES:**

- SIGNS SHALL MEASURE 8"x12", 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. AMERICAN TOWER SITE # AND EMERGENCY CONTACT # SHALL BE MOUNTED ON THE UNIVERSAL POWER CABINET DOOR ADJACENT TO THE COMPOUND ENTRY WITH PERMANENT SET ADHESIVE. TWO-SIDED TAPE SHALL BE UTILIZED AT EACH CORNER ON THE BACKSIDE TO AID PLACEMENT UNTIL ADHESIVE SETS.
- 4. ADDITIONAL E911 ADDRESS SIGNS ARE REQUIRED AT EACH ACCESS ROAD GATE LEADING TO THE COMPOUND AS WELL AS ON THE COMPOUND GATE ITSELF. LETTERING ON 911 ADDRESS SIGNS MUST BE A MINIMUM OF 6" TALL.
- 5. ADDITIONAL FCC REGISTRATION # SIGNS ARE REQUIRED AT EACH ACCESS ROAD GATE LEADING TO THE COMPOUND AS WELL AS ON THE COMPOUND GATE ITSELF.
- 6. RECOMMENDED SOURCE FOR OBTAINING SIGNAGE:

ST. CLAIR SIGNS 3184 WADE HAMPTON BLVD. TAYLORS, SC 29687 (864) 244-0040 RF EXPOSURE SIGNS RICHARD TELL ASSOCIATES 3433 RINGSTAR ROAD, SUITE 3 NORTH LAS VEGAS, NV 89030 (702) 645-3338 AMERICAN TOWN

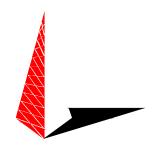
3500 REGENCY PARKWAY, SUITE 100 CARY, NC 27518

PROJECT INFORMATION:

## AT&T SITE #: 368-512 ATC SITE #: 282296 GUM SPRING NC

WHITE SMITH ROAD PITTSBORO, NC 27312 (CHATHAM COUNTY)

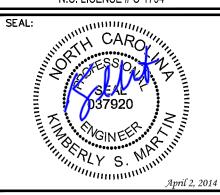
PLANS PREPARED BY:



#### **TOWER ENGINEERING PROFESSIONALS**

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N.C. LICENSE # C-1794



1	04-02-14	CONSTRUCTION
0	03-13-14	PRELIMINARY
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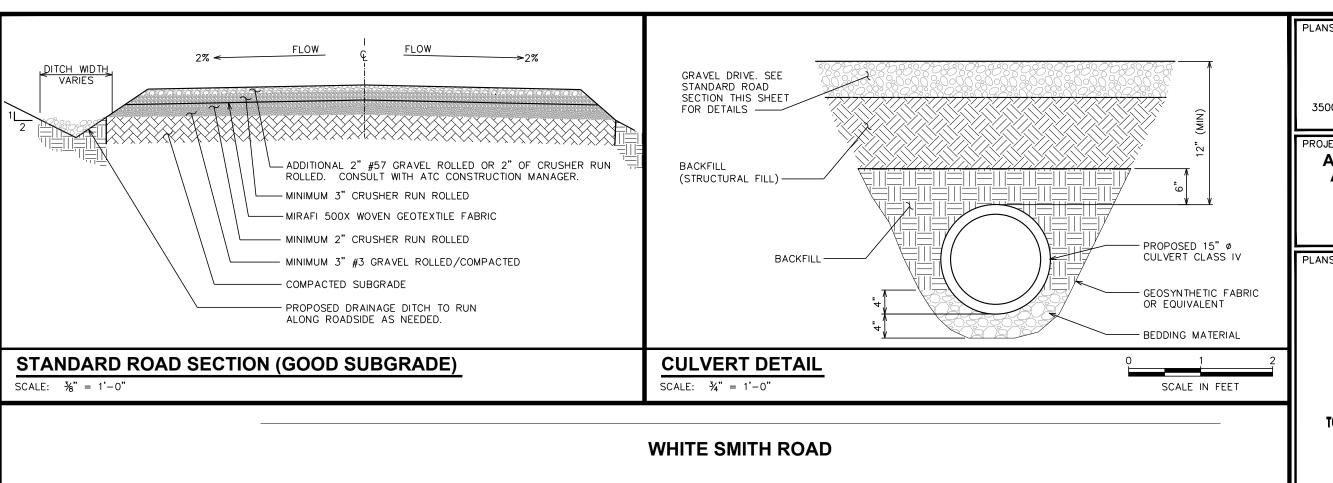
SIGNAGE DETAILS

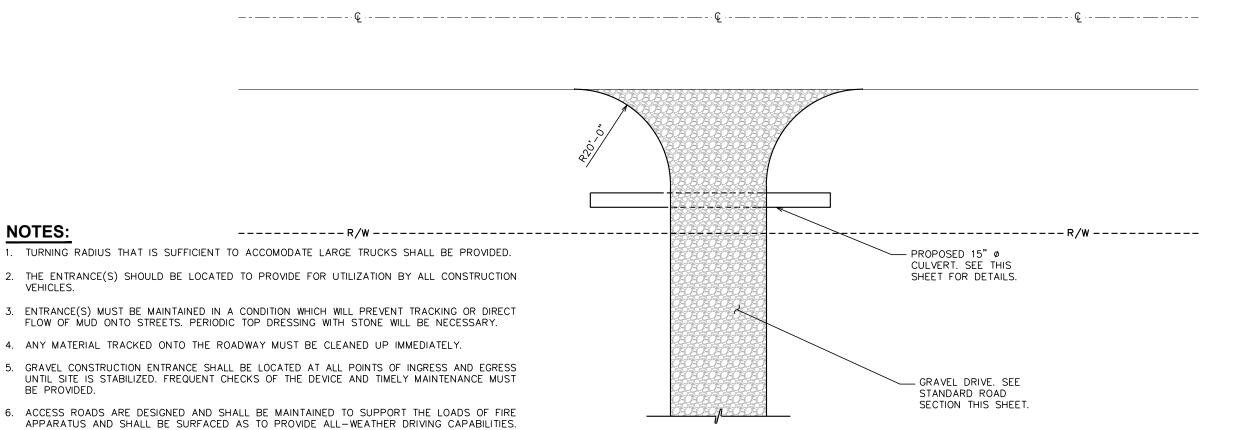
SHEET NUMBER:

REVISION:

TEP #: 52181

**TYPICAL SIGNS AND SPECIFICATIONS** 





3500 REGENCY PARKWAY, SUITE 100 CARY, NC 27518

PROJECT INFORMATION:

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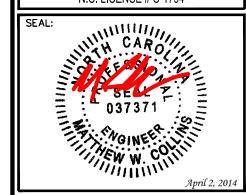
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# **CULVERT & DRIVEWAY DETAILS**

TEP #:

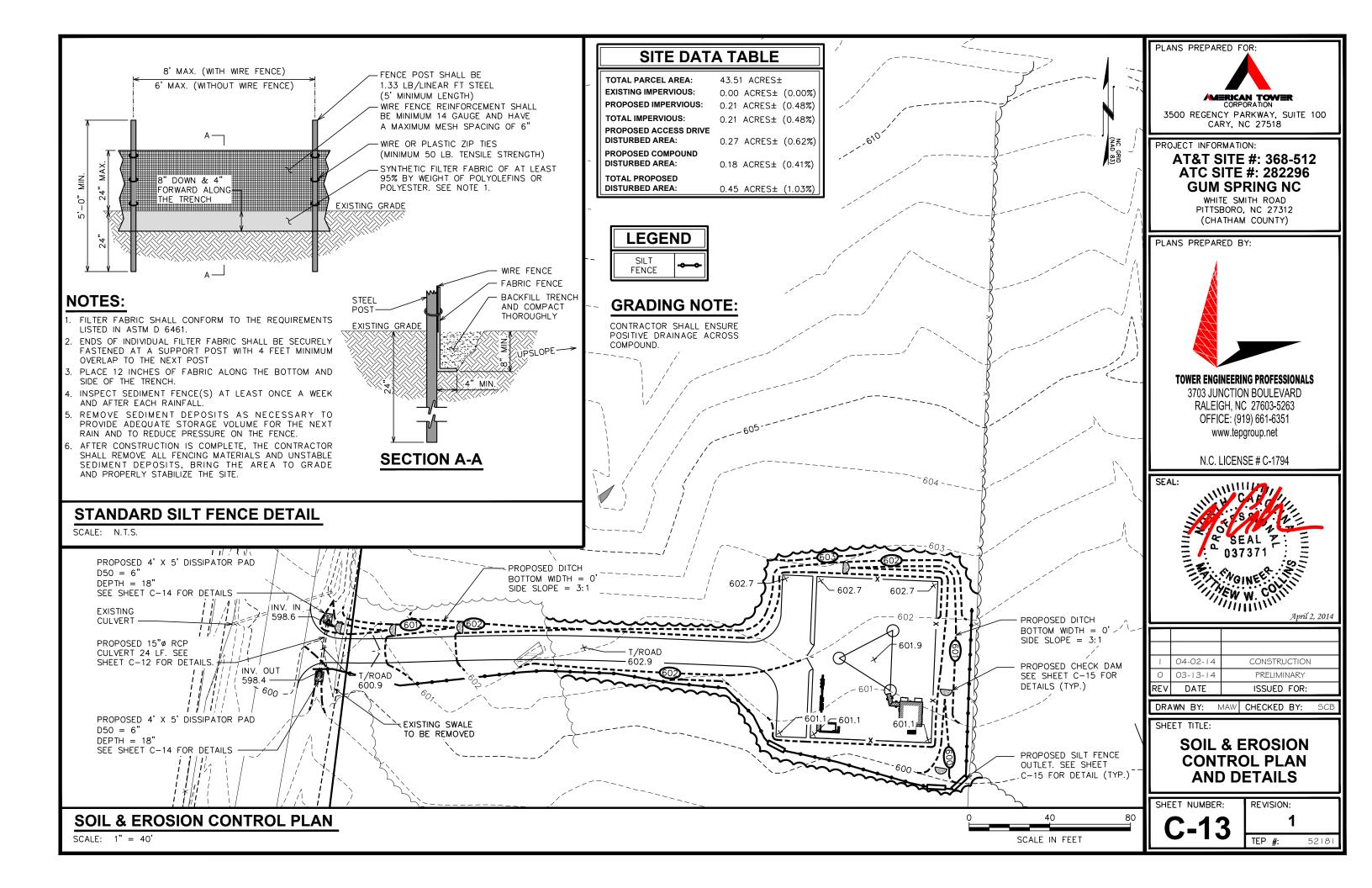
# STABILIZED CONSTRUCTION ENTRANCE

7 DRIVEWAY DETAILS PER CHATHAM COUNTY. CONTACT: JUSTIN RICHARDSON (336)318-4000 NCDOT

NOTES:

VEHICLES.

BE PROVIDED.



# NOTES:

FABRIC

- 1. L = THE LENGTH OF THE RIPRAP APRON.
- d = 1.5 TIMES THE MAXIMUM STONE DIAMETER BUT NOT LESS THAN 6" (INCHES).
- 3. A FILTER BLANKET OR FILTER FABRIC SHOULD BE INSTALLED BETWEEN THE RIPRAP AND SOIL FOUNDATION.



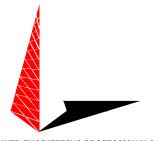
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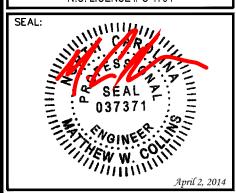
PLANS PREPARED BY:



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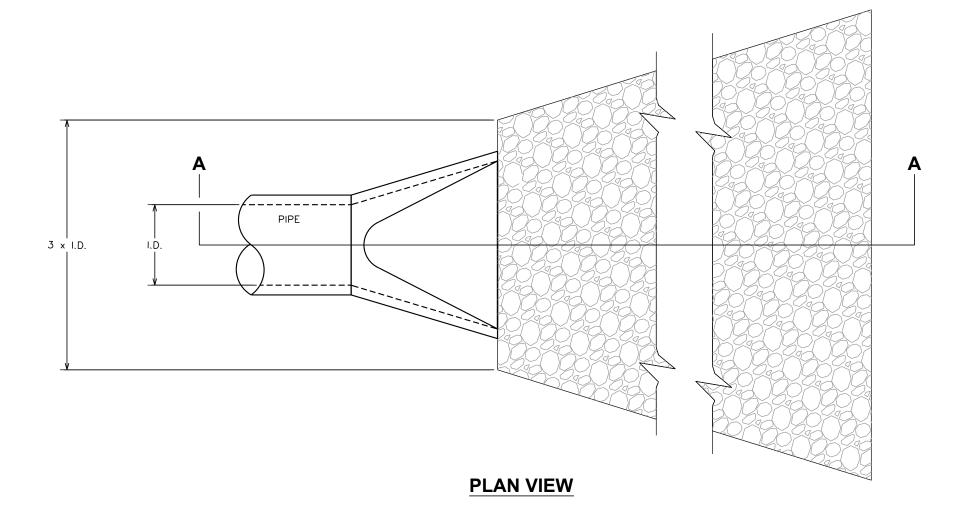
# PIPE PROTECTION DETAILS

SHEET NUMBER:

REVISION:

TEP #: 521





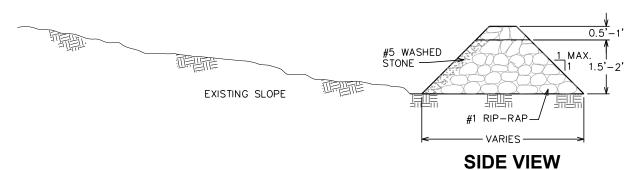
# PIPE OUTLET PROTECTION

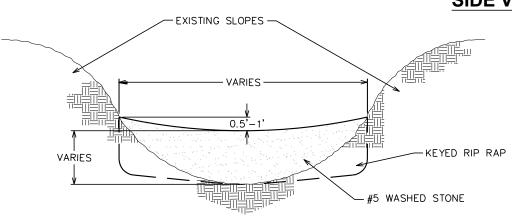
PIPE

# STEEL FENCE POST HARDWARE CLOTH-PLAN VIEW NOTE: USE SILT FENCE OUTLETS ONLY WHEN DRAINAGE AREA DOES NOT EXCEED 1/4 ACRE AND THERE IS A LOW AREA. USE AS A REPAIR OF SILT FENCE FAILURES. SIDE VIEW - <u>NOTE</u>; BURY WRE FENCE, HARDWARE CLOTH, AND SILT FENCE FABRIC 6 INCHES INTO THE TRENCH FRONT VIEW

# **NOTES:**

- REMOVE SEDIMENT ACCUMULATION FROM BEHIND CHECK DAMS TO PREVENT DAMAGE TO CHANNEL VEGETATION. FLOW SHOULD BE MAINTAINED THROUGH THE DAM.
- 2. KEY RIP RAP INTO THE DAM FOR STABILIZATION.





**FRONT VIEW** 

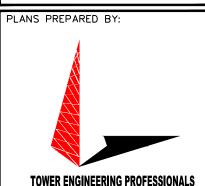


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SHEET TITLE:

**SILT FENCE OUTLET & CHECK DAM DETAILS** 

SHEET NUMBER:

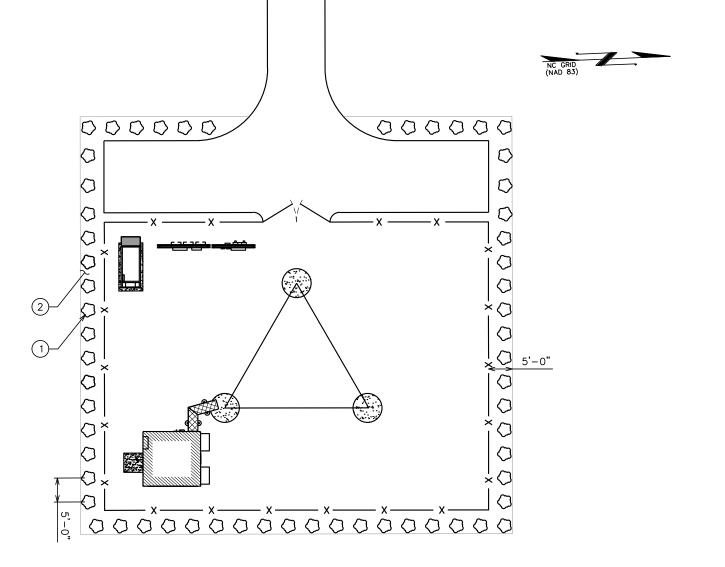
TEP #:

STANDARD SILT FENCE OUTLET DETAIL

**CHECK DAM DETAIL** 



- TOPSOIL TO BE PROVIDED BY SITE CONTRACTOR IN ROUGH GRADE TO WITHIN 1" OF FINISH GRADE.
- 2. EACH PLANT TO BE FREE FROM DISEASE, INSECT INFESTATION, AND MECHANICAL INJURIES, AND IN ALL RESPECTS BE SUITABLE FOR FIELD PLANTING.
- 3. ALL PLANTS TO BE FULLY GUARANTEED (LABOR AND MATERIALS) FOR A PERIOD OF NOT LESS THAN ONE (1) YEAR FROM DATE OF INSTALLATION.
- 4. ALL PLANTS SHALL CONFORM TO THE AMERICAN STANDARD FOR NURSERY STOCK, ANSI Z60.I-1973 IN REGARD TO SIZING, GROWING, AND B&B SPECIFICATIONS.
- 5. THE CONTRACTOR SHALL PROTECT ALL EXISTING TREES AND SHRUBS WITHIN THE CONSTRUCTION AREA IDENTIFIED AS "TO REMAIN" FROM DAMAGE BY EQUIPMENT AND CONSTRUCTION ACTIVITIES.



**LANDSCAPING PLAN** 

SCALE: 1" = 20'

0 20 40
SCALE IN FEET

PLANTING SCHEDULE

ITEM QTY. BOTANICAL NAME COMMON NAME HEIGHT @ PLANTING | 4 YRS. | SPREAD/ CALIPER | SPACING | REMARKS

SHRUBS

1 60 (MORELLA CERIFERA) WAX MYRTLE 2'-0" (MIN) 6'-0" (MIN) N/A 5' (MIN) SHOWN AS ...

MULCH

2 - MULCH - - APPLY 3"-4" DEEP WITHIN BUFFERYARD FOR GROUND COVER

PLANS PREPARED FOR:

3500 REGENCY PARKWAY, SUITE 100 CARY, NC 27518

PROJECT INFORMATION:

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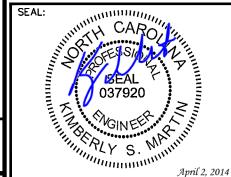
PLANS PREPARED BY:



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LANDSCAPING PLAN

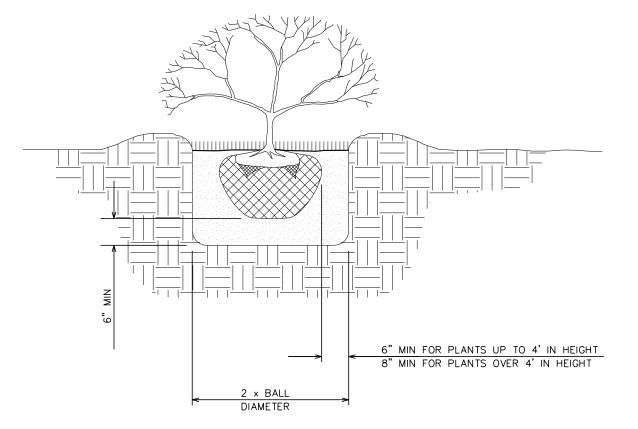
SHEET NUMBER:

REVISION:

TEP #: 52181

# NOTE:

SEE LANDSCAPING NOTES ON L-1







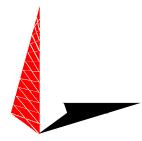
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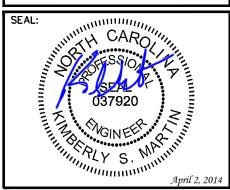
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DRAWN BY: JHJ CHECKED BY: GMA

SHEET TITLE:

# LANDSCAPING DETAILS

SHEET NUMBER:

L-2

REVISION:

TEP #: 52181

**LANDSCAPING DETAILS** 

# **ELECTRICAL NOTES:**

#### SCOPE:

- SHALL INCLUDE ALL LABOR, MATERIALS AND APPLIANCES REQUIRED FOR THE FURNISHING, INSTALLING AND TESTING, COMPLETE AND READY FOR OPERATION OF ALL WORK SHOWN ON THE DRAWING AS SPECIFIED
  - 1. ELECTRIC SERVICE
- 4. MISCELLANEOUS MATERIALS
- 2. CONDUIT AND RACEWAY
- 5. TELEPHONE CONDUITS
- CONDUCTORS
- 6. LIGHTNING ARRESTING SYSTEM

F. NCFC

#### CODES

- THE INSTALLATION SHALL COMPLY WITH ALL APPLICABLE LAWS AND CODES. THESE INCLUDE BUT ARE NOT LIMITED TO THE LATEST EDITIONS OF:
  - A. THE NATIONAL ELECTRICAL SAFETY CODE
- D. LOCAL AND STATE AMENDMENTS
- B. THE NATIONAL ELECTRIC CODE NFPA-70
- E. REGULATIONS OF THE SERVING UTILITY COMPANY
- C. THE INTERNATIONAL ELECTRIC CODE IEC
- 2. ALL PERMITS REQUIRED SHALL BE OBTAINED BY THE CONTRACTOR
- 3. AFTER COMPLETION AND FINAL INSPECTION OF THE WORK, THE OWNER SHALL BE FURNISHED A CERTIFICATE OF COMPLETION AND APPROVAL.

#### **TESTING**

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

#### **GUARANTEE**

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

#### **CO-ORDINATION:**

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

#### **EXAMINATION OF SITE**

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

#### **CUTTING, PATCHING AND EXCAVATION:**

- COORDINATION OF ALL SLEEVES, CHASES, ETC., WILL BE REQUIRED PRIOR TO THE CONSTRUCTION OF ANY PORTION OF THE WORK. ALL CUTTING AND PATCHING OF WALLS, PARTITIONS, FLOORS, AND CHASES IN CONCRETE, WOOD, STEEL OR MASONRY SHALL BE DONE AS PROVIDED ON THE DRAWINGS.
- 2. ALL NECESSARY EXCAVATIONS AND BACKFILLING INCIDENTAL TO THE WORK UNLESS SPECIFICALLY NOTED OTHERWISE ON THE DRAWING SHALL BE PROVIDED BY THIS CONTRACTOR.
- 3. SEAL ALL PENETRATION THROUGH WALL AND FLOORS WITH APPROVED GROUT.

#### **EXTERIOR CONDUIT:**

ALL EXPOSED CONDUIT SHALL BE NEATLY INSTALLED AND RUN PARALLEL OR PERPENDICULAR TO STRUCTURAL ELEMENTS. SUPPORTS AND MOUNTING HARDWARE SHALL BE HOT DIPPED GALVANIZED STEEL.

#### RACEWAYS

- ALL CONDUCTORS SHALL BE INSTALLED IN CONDUIT. ALL CONDUIT SHALL BE RIGID STEEL, EMT OR SCH40 PVC AS INDICATED ON THE DRAWINGS.
- 2. WHERE INSTALLED ON EXTERIORS AND EXPOSED TO DAMAGE, ALL CONDUIT SHALL BE RIGID STEEL. ALUMINUM CONDUIT SHALL NOT BE ALLOWED.
- 3. CONCEALED CONDUIT IN WALLS OR INTERIOR SPACES ABOVE GRADE MAY BE EMT.
- 4. UNDERGROUND CONDUITS SHALL BE RIGID STEEL OR SCHEDULE 40 PVC AS INDICATED ON THE DRAWINGS.
- ALL CONDUIT RUNS SHALL USE APPROVED COUPLINGS AND CONNECTORS, PROVIDE INSULATED BUSHING FOR ALL CONDUIT TERMINATIONS. ALL CONDUIT RUNS IN A WET LOCATION SHALL HAVE WATERPROOF
- 6. PROVIDE SUPPORTS FOR ALL CONDUITS IN ACCORDANCE WITH NEC REQUIREMENTS. ALL CONDUITS SHALL BE SIZED AS REQUIRED BY NEC.
- 7. BURIAL DEPTH OF ALL CONDUITS SHALL BE AS REQUIRED BY CODE FOR EACH SPECIFIC CONDUIT TYPE AND APPLICATION.
- 8. CONDUIT ROUTES ARE SCHEMATIC. CONTRACTOR SHALL FIELD VERIFY BEFORE BID. COORDINATE ROUTE WITH WIRELESS CARRIER AND BUILDING OWNER

#### **EQUIPMENT:**

- 1. ALL DISCONNECT SWITCHES SHALL BE SERVICE ENTRANCE RATED, HEAVY DUTY TYPE.
- 2. NEW CIRCUIT BREAKERS SHALL BE RATED TO WITHSTAND THE MAXIMUM AVAILABLE FAULT CURRENT AS DETERMINED BY THE LOCAL UTILITY. CONTRACTOR SHALL VERIFY MAXIMUM AVAILABLE FAULT CURRENT, AND COORDINATE INSTALLATION WITH THE LOCAL UTILITY BEFORE STARTING WORK.
- 3. ALL ELECTRICAL MATERIALS, DEVICES, APPLIANCES AND EQUIPMENT SHALL BE LABEL/LISTED BY UL OR A NORTH CAROLINA APPROVED THIRD PARTY TESTING AGENCY.

#### CONDUCTORS

- FURNISH AND INSTALL CONDUCTORS CALLED FOR IN THE DRAWINGS. ALL CONDUCTORS SHALL HAVE TYPE THWN (MIN) (75° C) INSULATION, RATED FOR 600 VOLTS.
- 2. ALL CONDUCTORS SHALL BE COPPER, THE USE OF ALUMINUM CONDUCTORS SHALL NOT BE ALLOWED. ALL CONDUCTORS SHALL BE UL LISTED AND SHALL BE PROVIDED AND INSTALLED AS FOLLOWS:
  - MINIMUM WIRE SIZE SHALL BE #12 AWG
  - ALL CONDUCTORS SIZE #8 AND LARGER SHALL BE STRANDED. CONDUCTORS SIZED #10 AND SMALLER MAY BE SOLID OR STRANDED.
  - CONNECTION FOR #10 AWG AND SMALLER SHALL BE BY TWISTING TIGHT AND INSTALLING INSULATED PRESSURE OR WIRE NUT CONNECTIONS.
  - CONNECTION FOR #8 AWG AND LARGER SHALL BE BY USE OF STEEL CRIMP-ON SLEEVES WITH NYLON INSULATOR
- 3. ALL CONDUCTORS SHALL BE COLOR CODED IN ACCORDANCE WITH NEC STANDARDS.
- 4. THE RACEWAY SYSTEM SHALL BE COMPLETE BEFORE INSTALLING CONDUCTORS

#### **PENETRATIONS:**

1. CONTRACTOR SHALL COMPLY WITH UL PENETRATION DETAILS FOR PENETRATIONS OF ALL RATED WALLS, ROOF, ETC.

#### **GROUNDING**

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

# ABBREVIATIONS AND LEGEND

AMPERE

AFG ABOVE FINISHED GRADE

AUTOMATIC TRANSFER SWITCH AWG AMERICAN WIRE GAUGE

BCW BARE COPPER WIRE

BFG BELOW FINISHED GRADE

BKR BREAKER C CONDUIT

CKT CIRCUIT

DISC DISCONNECT

EGR EXTERNAL GROUND RING

EMT ELECTRIC METALLIC TUBING

FSC - FLEXIBLE STEEL CONDUIT GEN GENERATOR

GPS - GLOBAL POSITIONING SYSTEM

GRD GROUND

**IGR** 

IGB ISOLATED GROUND BAR

INTERIOR GROUND RING (HALO)

ΚW KILOWATTS

NEC NATIONAL ELECTRIC CODE

PCS - PERSONAL COMMUNICATION SYSTEM

PHASE РΗ PNL PANEL

PNLBD - PANELBOARD

 SCH40 RIGID NON-METALLIC CONDUIT RGS RIGID GALVANIZED STEEL CONDUIT

SWITCH

TGB TOWER GROUND BAR

- UNDERWRITERS LABORATORIES UI

V VOLTAGE W

WATTS XFMR TRANSFORMER

 TRANSMITTER XMTR

--E---- UNDERGROUND ELECTRICAL CONDUIT UNDERGROUND TELEPHONE CONDUIT

KILOWATT-HOUR METER UNDERGROUND BONDING AND GROUNDING CONDUCTOR

Ø GROUND ROD

CADWELD

Ø GROUND ROD WITH INSPECTION WELL PLANS PREPARED FOR:

3500 REGENCY PARKWAY, SUITE 100 CARY, NC 27518

PROJECT INFORMATION:

### AT&T SITE #: 368-512 **ATC SITE #: 282296 GUM SPRING NC**

WHITE SMITH ROAD PITTSBORO, NC 27312 (CHATHAM COUNTY)

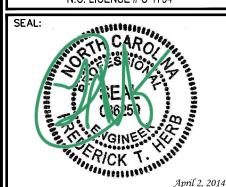
PLANS PREPARED BY:



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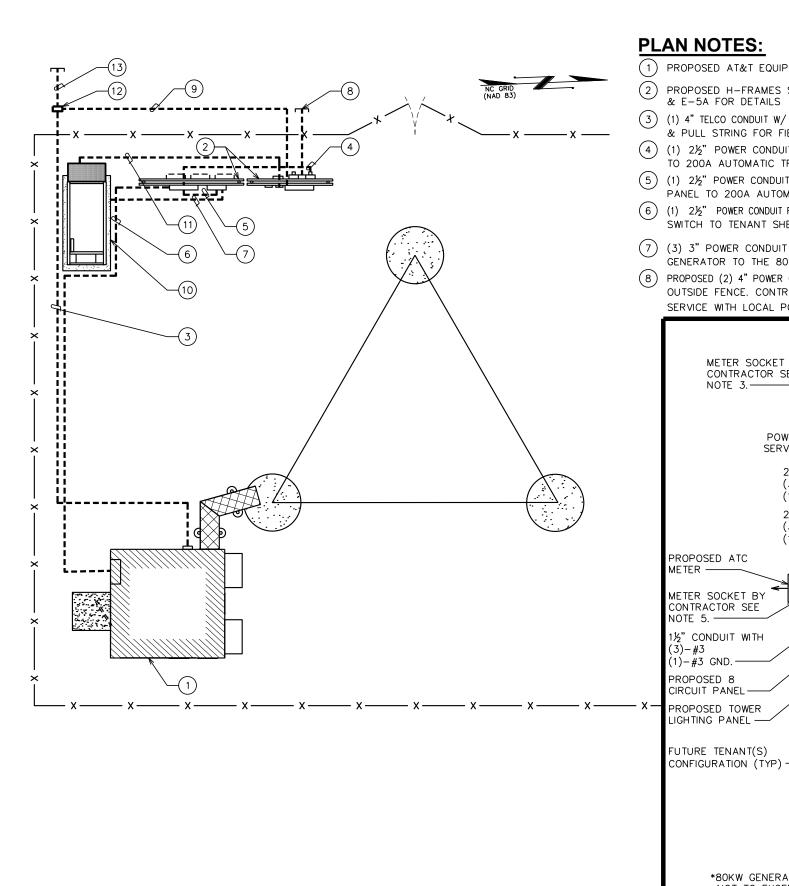
**ELECTRICAL** NOTES

SHEET NUMBER:

REVISION:

TEP #:

5218



SCALE: N.T.S.

# **PLAN NOTES:**

- PROPOSED AT&T EQUIPMENT SHELTER.
- PROPOSED H-FRAMES SEE SHEETS E-5 & E-5A FOR DETAILS
- (3) (1) 4" TELCO CONDUIT W/ (3) 11/4" FLEX INTERDUCT & PULL STRING FOR FIBER POWER LEADS.
- (1) 2岁" POWER CONDUIT FROM PROPOSED METER TO 200A AUTOMATIC TRANSFER SWITCH.
- (5) (1)  $2\frac{1}{2}$ " POWER CONDUIT FROM 800A DISTRIBUTION PANEL TO 200A AUTOMATIC TRANSFER SWITCH.
- (6) (1) 2½" POWER CONDUIT FROM 200A AUTOMATIC TRANSFER SWITCH TO TENANT SHELTER DISTRIBUTION PANEL.
- (7) (3) 3" POWER CONDUIT FROM THE PROPOSED GENERATOR TO THE 800A DISTRIBUTION PANEL
- PROPOSED (2) 4" POWER CONDUIT STUBBED UP 3' OUTSIDE FENCE. CONTRACTOR TO COORDINATE SERVICE WITH LOCAL POWER COMPANY.

- PROPOSED (1) 4" TELCO/FIBER CONDUIT FROM TELCO EQUIPMENT CABINET TO FIBER HANDHOLE.
- PROPOSED GENERATOR. SEE DETAILS SHEETS C-6
- (11) AUTOMATIC START-UP AND INTER CARRIER CONTROL BY GENERATOR COMPANY.
- PROPOSED FIBER HANDHOLE BY AT&T.

PROJECT INFORMATION:

PROPOSED 4" CONDUIT W/ PULL STRING FROM FIBER HANDHOLE TO BE STUBBED UP 10' FROM R.O.W. ROUTE TO FOLLOW ACCESS & UTILITY EASEMENT.

# TRENCHING NOTE:

PRIOR TO ANY DIGGING, THE CONTRACTOR SHALL IDENTIFY ALL EXISTING UTILITIES ON SITE.

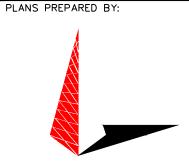
AT&T SITE #: 368-512 **ATC SITE #: 282296 GUM SPRING NC** WHITE SMITH ROAD

CORPORATION

3500 REGENCY PARKWAY, SUITE 100

CARY, NC 27518

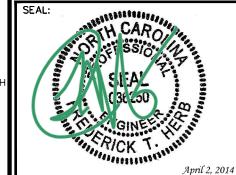
PITTSBORO, NC 27312 (CHATHAM COUNTY)



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SHEET TITLE:

# SERVICE ROUTING **PLAN & ONE-LINE DIAGRAM**

SHEET NUMBER: **E-2** 

REVISION:

TEP #: 52181

GROUNDING ELECTRODE METER SOCKET BY CONDUCTOR #4 AWG CONTRACTOR SEE 2½" CONDUIT WITH NOTE 3. BARE TINNED SOLID (3)-#3/0,COPPER. (1)-#4 GND. SERVICE ENTRANCE GROUND ROD. POWER **POWER** ATS **SERVICE** PANEL 2½" CONDUIT WITH INSIDE SHELTER) (3)-#3/0,- GENERATOR CONTROLS (1)-#4 GND. 2½" CONDUIT WITH (3) 3" CONDUIT EACH WITH (3)-#3/0,(3) - 300 KCM(1)-#4 GND. (1)-#2/0 GND. PROPOSED ATC 800A 80KW DISTRIBUTION METER -**GENERATOR\*** PANEL (1) 34" CONDUIT EACH WIT METER SOCKET BY CONTRACTOR SEE (4) - #12(2)-#12 GND. NOTE 5. FOR BLOCK HEATER & 1½" CONDUIT WITH BATTERY CHARGER (3) - #3(1)-#3 GND. POWER ο ATS PANFI PROPOSED 8 |(M)|CIRCUIT PANEL (INSIDE SHELTER) i PROPOSED TOWER LIGHTING PANEL **ONE LINE DIAGRAM NOTES:** FUTURE TENANT(S) 1. ELECTRICAL SERVICE SHALL BE 120/240V, 1ø, 3W, 200A.

PROVIDE SERVICE ENTRANCE RATED CIRCUIT BREAKER TYPE

3. INSTALL A 200 AMP METER BASE AS DIRECTED BY THE UTILITY COMPANY.

4. CONTRACTOR TO VERIFY BATTERY CHARGER AND BLOCK

INSTALL A 100 AMP METER BASE AS DIRECTED BY THE

\*80KW GENERATOR TO BE SUPPLIED WITH MAIN LINE CIRCUIT BREAKER NOT TO EXCEED THE MAXIMUM STANDBY OUTPUT OR 400A.

DISCONNECT SWITCH.

HEATER LOADING.

UTILITY COMPANY.

ONE LINE DIAGRAM

SCALE: N.T.S.

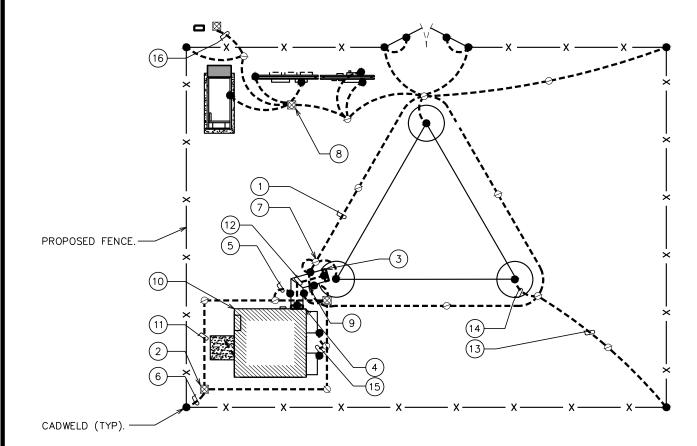
# **SERVICE ROUTING PLAN**

# **DRAWING NOTES:**

- 1) PROPOSED TOWER GROUND RING
- 2 INSPECTION WELL AT CONNECTION TO PROPOSED GROUND RING (TYP OF 2)
- 3) TOWER BUS BAR
- 4 ICE BRIDGE BUS BAR
- 5 #2 AWG ICE BRIDGE BOND BURIED 30" BFG (TYP)
- 6 #2 AWG BOND TO PROPOSED GROUND RING

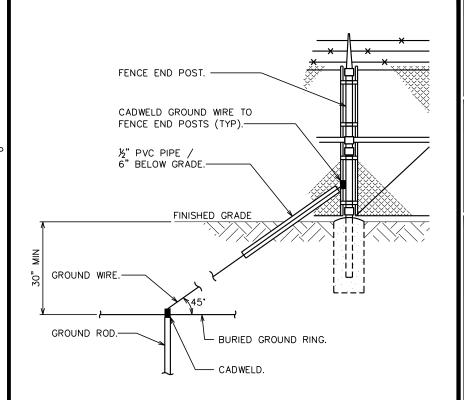
- (7)  $\frac{5}{8}$ " × 10' COPPER GROUND ROD (TYP)
- 8 SERVICE ENTRANCE GROUND ROD W/INSPECTION WELL. SEE E-6 FOR DETAIL.
- (9) ICE BRIDGE
- (10) EQUIPMENT SHELTER
- (11) #2 AWG GROUND RING BURIED 30" BFG
- #2 AWG BARE SOLID TINNED COPPER WIRE BETWEEN BUS BARS
- TOWER BONDING TO FENCE POST (TYP OF 4)
- (14) TOWER BONDING TO TOWER GROUND RING (TYP OF 3)
- 15) HVAC GROUNDING (TYP OF 2) (MECHANICAL FASTENERS AT ABOVE GROUND CONNECTIONS AS ALLOWED BY CODE.)
- (16) PROPOSED #2 GROUND TO BE STUBBED UP WITH FIBER CONDUIT.





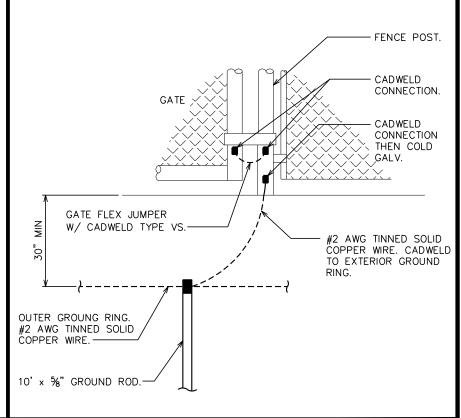
# **GROUNDING NOTES**

- 1. GROUNDING ELECTRODES SHALL BE CONNECTED IN A RING USING #2 AWG BARE TINNED COPPER WIRE. THE TOP OF THE GROUND RODS AND THE RING CONDUCTOR SHALL BE 2 FEET BELOW FINISHED GRADE. GROUNDING ELECTRODES SHALL BE DRIVEN ON 10'-0" CENTERS. (MIN. 15'-0" MAX)
- 2. BONDING OF THE GROUNDED CONDUCTOR (NEUTRAL) AND THE GROUNDING CONDUCTOR SHALL BE AT THE SERVICE DISCONNECTING MEANS. BONDING JUMPER SHALL BE INSTALLED PER N.E.C. ARTICLE 250.30.
- 3. CONTRACTOR SHALL NOTIFY THE CONSTRUCTION MANAGER WHEN THE GROUNDING SYSTEM IS COMPLETE. THE CONSTRUCTION MANAGER SHALL INSPECT THE GROUNDING SYSTEM PRIOR TO BACKFILLING.



# **FENCE GROUNDING**

SCALE: N.T.S.



# TYPICAL GATE POST GROUNDING DETAIL

SCALE: N.T.S.



3500 REGENCY PARKWAY, SUITE 100 CARY, NC 27518

PROJECT INFORMATION:

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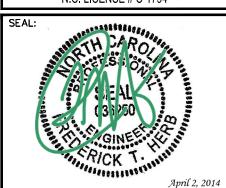
WHITE SMITH ROAD PITTSBORO, NC 27312 (CHATHAM COUNTY)



### **TOWER ENGINEERING PROFESSIONALS**

3703 JUNCTION BOULEVARD RALEIGH, NC 27603-5263 OFFICE: (919) 661-6351 www.tepgroup.net

N.C. LICENSE # C-1794



- 1	04-02-14	CONSTRUCTION
0	03-13-14	PRELIMINARY
REV	DATE	ISSUED FOR:

DRAWN BY: SCB | CHECKED BY: FTH

SHEET TITLE

# TOWER & SHELTER GROUNDING PLAN

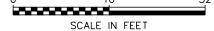
SHEET NUMBER:

REVISION:

TEP #: 52181

# TOWER GROUNDING PLAN

SCALE:  $\frac{1}{16}$ " = 1'-0"



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PLANS PREPARED FOR:

MERICAN TOWER

CORPORATION

3500 REGENCY PARKWAY, SUITE 100 CARY, NC 27518

PROJECT INFORMATION:

# AT&T SITE #: 368-512 ATC SITE #: 282296 GUM SPRING NC

WHITE SMITH ROAD PITTSBORO, NC 27312 (CHATHAM COUNTY)

TOWER ENGINEERING PROFESSIONALS
3703 JUNCTION BOULEVARD
RALEIGH, NC 27603-5263

N.C. LICENSE # C-1794

OFFICE: (919) 661-6351 www.tepgroup.net

SEAL:

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April 2, 2014

- 1	04-02-14	CONSTRUCTION
0	03-13-14	PRELIMINARY
REV	DATE	ISSUED FOR:

DRAWN BY: SCB CHECKED BY: FTH

SHEET TITLE:

# PANELBOARD SCHEDULE

SHEET NUMBER:

REVISION:

1
TEP #: 52181

PANELBOARD SCHEDULE



- 1. ELECTRIC SERVICE: 240/120V, 1ø, 3W, 800A UNDERGROUND SERVICE TO POLE RISER.
- USE COPPER STRANDED, 600V, TYPE THW/THWN, WITH CROSS-LINKED POLYETHYLENE INSULATION FOR #8 AWG AND LARGER WIRE.
- 3. UNDERGROUND CONDUITS SHALL BE SCHEDULE 40 PVC (MEET UL STANDARDS G51 AND NEMA TC2-1990). EXPOSED CONDUITS SHALL BE PVC UV RESISTANT OR RIGID GALVANIZED STEEL. ALL CONDUIT BENDS SHALL BE A MINIMUM OF 36" RADIUS.
- 4. GROUNDING CONDUCTOR SHALL BE 2 AWG SOLID BARE TINNED COPPER UNLESS OTHERWISE NOTED.

5. 4" PVC CONDUIT INSTALLED 30' (MINIMUM) BELOW GRADE FOR INCOMING SERVICE BY TELEPHONE COMPANY. PROVIDE PULL STRING — 200 LB. TEST POLYETHYLENE CORD.

**REAR VIEW** 

GROUND ROD.

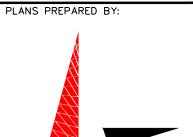
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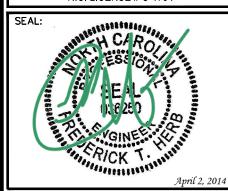
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SHEET TITLE:

# SERVICE RACK DETAILS I

E-5

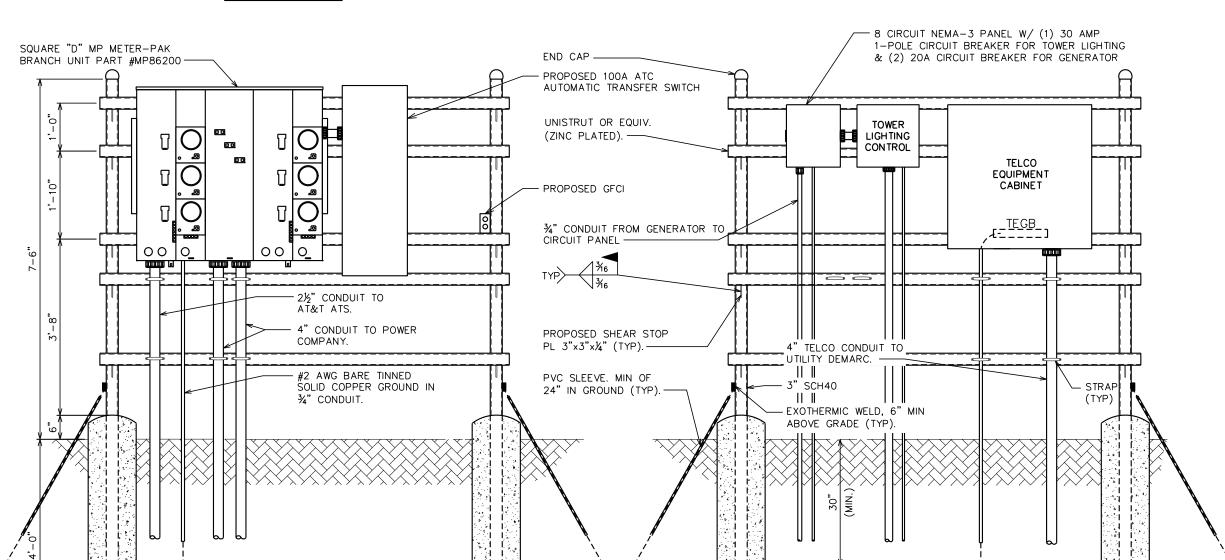
REVISION:

TEP #: 52181

**FRONT VIEW** 

GROUND ROD.

8'-0"



OUTER GROUND

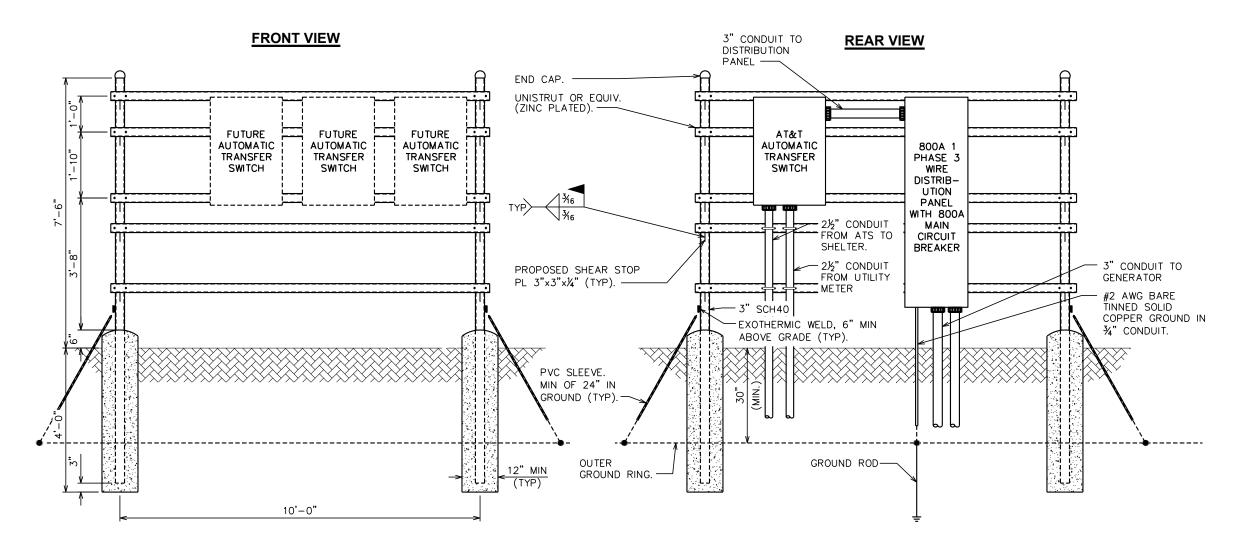
RING. -

12" MIN

**SERVICE RACK DETAILS** 

# NOTE:

SEE SHEET E-5 FOR SERVICE RACK NOTES.





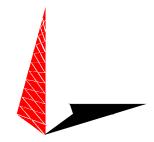
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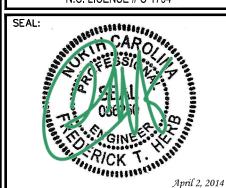




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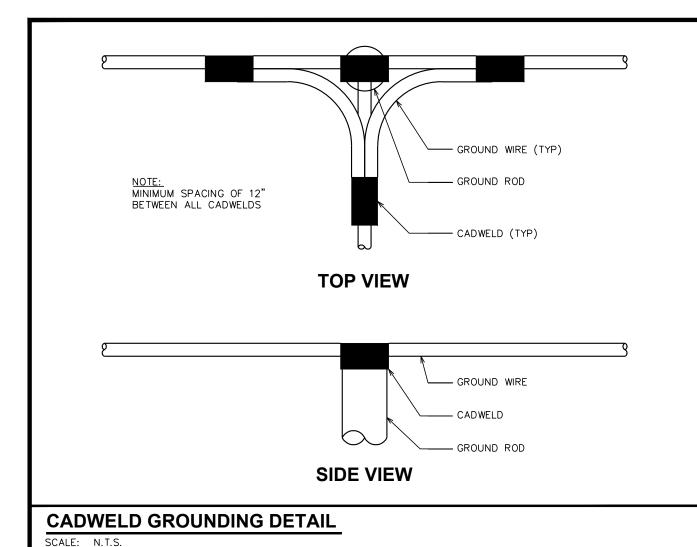
# SERVICE RACK DETAILS II

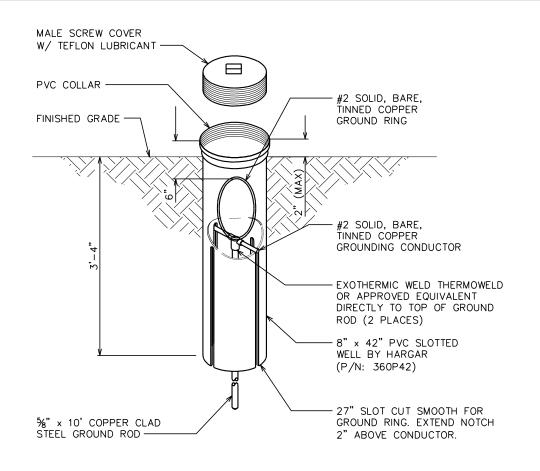
E-5A

REVISION:

TEP #: 52181

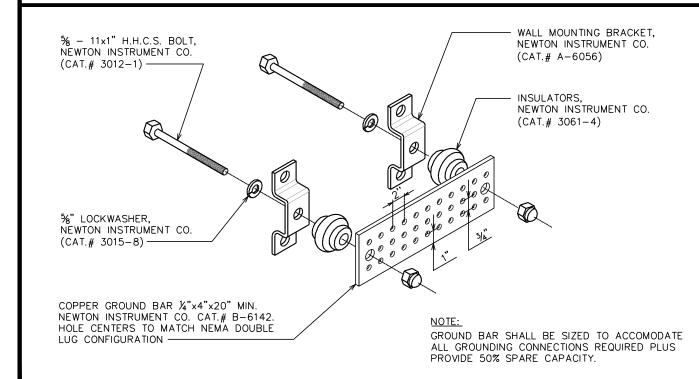
SERVICE RACK DETAILS





# **GROUND ROD WITH INSPECTION WELL**

SCALE: N.T.S.



STANDARD GROUND BAR DETAIL

30° MAX FINISHED GRADE CADWELD GROUND RING #2 AWG BCW (TINNED) COPPER GROUND ROD  $(\%" \phi \times 10'-0" LONG)$ 

# **COPPER-CLAD STEEL GROUND ROD**

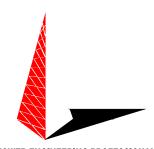
3500 REGENCY PARKWAY, SUITE 100 CARY, NC 27518

PROJECT INFORMATION:

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WHITE SMITH ROAD PITTSBORO, NC 27312 (CHATHAM COUNTY)

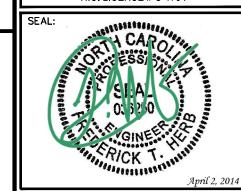
PLANS PREPARED BY:



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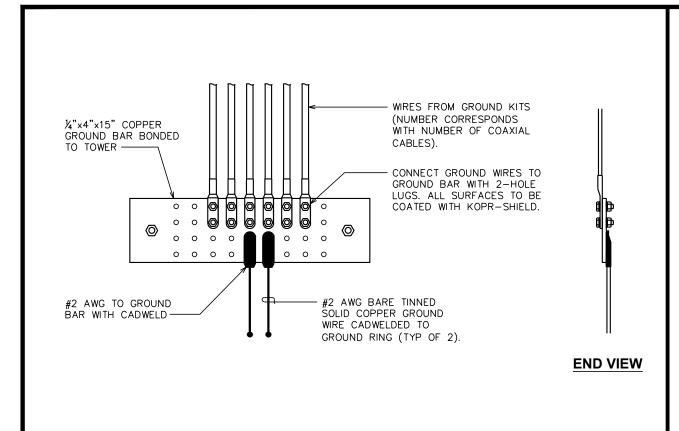
DRAWN BY: SCB CHECKED BY:

SHEET TITLE:

# **GROUNDING DETAILS I**

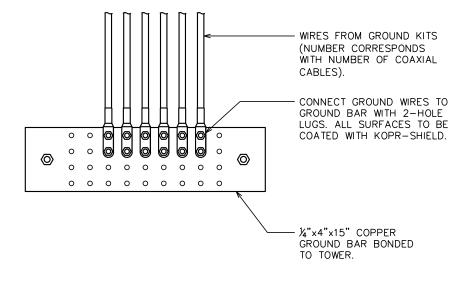
REVISION:

TEP #: 52181



# NOTE:

THE CONTRACTOR SHALL UTILIZE AN INTERMEDIATE GROUND BAR FOR ANTENNA RAD CENTERS OVER 200'.



GROUND LEADS

TO NEW EQUIPMENT

GROUND LEAD TO

INSPECTION WELL AT

EQUIPMENT GROUND

# MERICAN TOWER

3500 REGENCY PARKWAY, SUITE 100 CARY, NC 27518

PROJECT INFORMATION:

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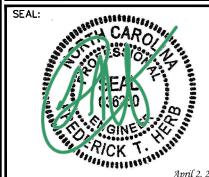
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SHEET TITLE:

# GROUNDING DETAILS II

SHEET NUMBER:

REVISION:

TEP #: 52181

# **LOWER GROUND BAR**

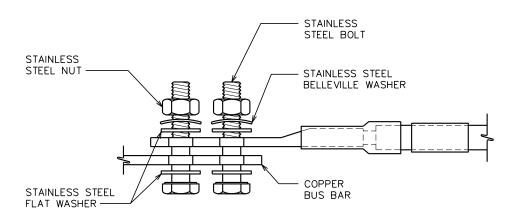
SCALE: N.T.S.

UPPER / INTERMEDIATE GROUND BAR

GROUND BAR LOCATED INSIDE TELCO CABINET -

CONNECT GROUND WIRES TO GROUND BAR WITH 2-HOLE LUGS. ALL SURFACES TO BE COATED WITH KOPR-SHIELD.

SCALE: N.T.S.



# **NOTES:**

- 1. ALL HARDWARE SHALL BE 18-8 STAINLESS STEEL, INCLUDING THE BELLEVILLE WASHERS. COAT ALL SURFACES WITH KOPR-SHIELD BEFORE MATING.
- 2. FOR GROUND BOND TO STEEL ONLY; INSERT A DRAGON TOOTH WASHER BETWEEN THE LUG AND STEEL. COAT ALL SURFACES WITH KOPR-SHIELD.

# GROUND BAR IN TELCO CABINET

**LUG DETAIL** 

SCALE: N.T.S.