



Board of Adjustment

Meeting Agenda

February 20, 2018 following the Planning Board
Council Chambers, 201 S Main St

1. Approve minutes of the December 19, 2017 meeting
2. New Business
 - A. Truby Cell Tower. An application for a variance for the restriction regarding addition of antenna on a Communications Tower located at 1360 Truby Drive.
3. Public comment on non-agenda items

A complete agenda packet is available at www.cityofgraham.com

CITY OF GRAHAM
BOARD OF ADJUSTMENT
December 19, 2017

There was a called meeting of the Board of Adjustment on Tuesday, December 19th, 2017 at 7:00 pm immediately following the Planning Board meeting. Members present were as follows: Ricky Hall, Bonnie Blalock, Michael Benesch, Dean Ward, Eric Crissman and Justin Moody. Staff members present were Nathan Page Planning Director, Alexa Powell City Planner, Aaron Holland, Assistant City Manager and Debbie Jolly, Zoning/Inspections Technician.

Chair Ricky Hall called the meeting to order, explained the function of the Board and gave the invocation.

1. Ricky Hall made a motion to approve the minutes from the May 16th meeting, second by Bonnie Blalock. All voted aye.
2. Swearing in of new members
 - a. Michael Benesch, Eric Crissman, and Justin Moody were sworn in as members of the Board of Adjustment. Mr. Crissman and Mr. Moody then left, as they are alternates and there were five members present.
3. New Business
 - A. VR1702 Whitfield Towing. An application for a variance for the restriction regarding construction of commercial structures in a residential zone. Swearing in of Nathan Page and Ted Wagoner. Nathan Page explained the rules regarding Quasi-Judicial Hearings, including providing a copy of a memo from Keith Whited to the City Council regarding a quasi-judicial Special Use Permit dated February 1, 2008. Mr. Page asked Mr. Hall to poll the Board to see if there are any conflicts of interest, and both Mr. Ward and Mr. Benesch indicated that they had known the Whitfields, but were not engaged in financial dealings. As such, the Board determined there were no conflicts.

Ted Wagoner 5352 Osprey Dr. Mebane N.C. 27302 made a presentation on behalf of the Whitfield. After a lengthy conversation between board members and Mr. Page it was stated that the owner could file for a rezoning on this property in order to become a conforming use. Mr. Wagoner stated the Whitfields did not want to rezone property. Mr. Hall stated that if this was in the county it would not be allowed, it would be concerned a junk yard. Mike Benesch made a statement that this board did not have a right to approve the variance as presented in the State of North Carolina due to the statutes. Nathan stated that he believed the only option was to rezone. Bonnie Blalock ask about the home on the property while being zoned commercial. Mr. Page stated a house is permitted to remain, but if it burned down or was destroyed they would be fall under the nonconforming use section. Mr. Hall closed public input.

Mr. Ward stated that we may be the ones that are causing the hardship on Mr. Whitfield. Mr. Page stated the board would have to decide what a hardship was. Mr. Ward asked about getting an interpretation on what qualifies as a hardship. Mr. Page read a letter from Keith White the City Attorney stating "A request for variance is to the BOA, not to the City Staff. So, I believe that the request should be allowed to be processed to the BOA. However, I don't think it should be allowed for a number of reasons: 1. Not timely (more than a year after the other building was removed, 2. No TRC review (even though it's a stretch to call this commercial development), 3. No hardship in the size, location or topography of the property, etc."

Mr. Hall made for a motion to deny and Mike Benesch seconded the motion 3 voted aye, Mr. Ward and Ms. Blalock opposed. Mr. Hall stated to Mr. Wagoner he was sorry but it was denied. Mr. Wagoner ask about appeal and Mr. Page stated it goes to Superior Court, escalation is no longer with the prevue of the city.

The meeting was adjourned.

Respectfully Submitted,
Debbie Jolly, Secretary



STAFF REPORT

Prepared by Nathan Page, Planning Director

Whitfield Towing (VR1702)

Type of Request: Variance

Meeting Dates

Board of Adjustment on December 19, 2017

Contact Information

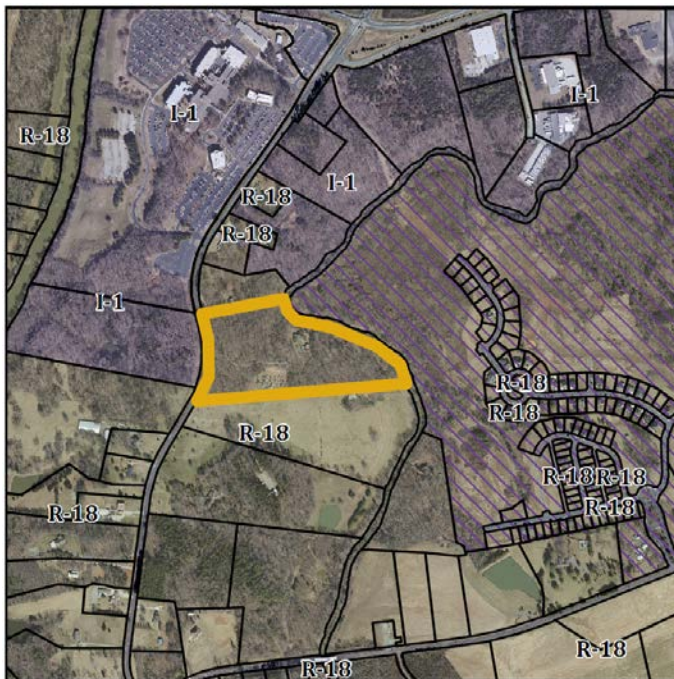
Robert Whitfield

P.O. Box 118, Haw River NC 27258

(336)516-1819

Summary

This is a request for a variance from the restriction regarding construction of commercial structures in residential zones.



Location

1452 Jimmie Kerr Rd

GPIN: 8894418325

Current Zoning

Low Density Residential (R-18)

Current Use

Storage Yard, Single Family Home

Surrounding Zoning

I-1, R-18, PUD

Surrounding Land Uses

Single Family Houses, Alamance
Community College, and Vacant

Attached is a **draft of a Resolution for the Board to consider** when making its decision. This draft Resolution should be modified as the Board sees fit and is only provided by staff as a template.



Application for a VARIANCE

RECEIVED

FEB 05 2018

CITY OF GRAHAM
INSP. / P.Z.

P.O. Drawer 357
201 South Main Street
Graham, NC 27253
(336) 570-6705
Fax (336) 570-6703
www.cityofgraham.com

Variance requests are heard by the Board of Adjustment. This is a quasi-judicial process, meaning that it is similar to a court of law. Decisions are based on evidence and testimony presented during the hearing. Applicants should submit enough evidence to support the request for a variance. Types of evidence might include maps, drawings, pictures, cost estimates, or other information that will clearly demonstrate that the four criteria for a variance, listed below, are met. Applicants should also refrain from discussing the request with any member of the Board of Adjustment.

Property on which a Variance is sought

Street Address: 1360 Truby Road
Tax Map#: 152824 GPIN: 8894555912
Current Zoning District(s): Light Industrial (I-1)
Overlay District, if applicable:
☐ Historic ☐ S Main St/Hwy 87 ☐ E Harden St/Hwy 54
Current Use: telecommunication tower
Property Owner: Crown Castle
Mailing Address: 3530 Toringdon Way, Suite 300
City, State, Zip: Charlotte, NC 28277

Applicant

☐ Property Owner Other Crown Castle
Name: Tony Stewart
Mailing Address: c/o 604 Lanford Street
City, State, Zip: Anderson, SC 29624
Phone # (864) 915-1122
Email: tstewart@telecomsite.com

I, the applicant, hereby petition the Board of Adjustment for a variance from the strict letter of the *Development Ordinance*, as described in this application.

I certify that all of the information presented by me in this application is accurate to the best of my knowledge, information and belief.

Signature of Applicant

Date

Purpose of Variance Request

Describe the purpose of this variance request. *What are you trying to do that the Development Ordinance is prohibiting? Attach evidence to illustrate and support your case.*

Variance of distance from property lines for an existing telecommunications tower

Nature of Variance Request

List the specific part(s) of the *Development Ordinance* from which you are seeking a variance (for example, setbacks).

Section 10.70 (setbacks)

Criteria for a Variance

When unnecessary hardships would result from carrying out the strict letter of the ordinance, the Board of Adjustment shall vary any of the provisions of the ordinance upon a showing of all of the following:

- Unnecessary hardship would result from the strict application of the ordinance. It shall not be necessary to demonstrate that, in the absence of the variance, no reasonable use can be made of the property.
- The hardship results from conditions that are peculiar to the property, such as location, size, or topography. Hardships resulting from personal circumstances, as well as hardships resulting from conditions that are common to the neighborhood or the general public, may not be the basis for granting a variance.
- The hardship did not result from actions taken by the applicant or the property owner. The act of purchasing property with knowledge that circumstances exist that may justify the granting of a variance shall not be regarded as a self-created hardship.
- The requested variance is consistent with the spirit, purpose, and intent of the ordinance, such that public safety is secured, and substantial justice is achieved.

Office Use Only: DEVID#

VR1801



Application for a VARIANCE

P.O. Drawer 357
201 South Main Street
Graham, NC 27253
(336) 570-6705
Fax (336) 570-6703
www.cityofgraham.com

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Overlay District, if applicable:
☐ Historic ☐ S Main St/Hwy 87 ☐ E Harden St/Hwy 54
Current Use: telecommunication tower
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Tony Stewart 2-
Signature of Applicant Date

Office Use Only. DEVID#

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City of Graham Certificate of Occupancy



This certificate is issued to Bellsouth who
has complied with all provisions set forth with
the issue of Building Permit No. 761 to erect-alter
said building at 1356 Truby Drive to be used as
a communications tower.

11-11-96

Date of Issue

Joe Greene
Building Inspector

JOHN A. SNEED, JR.
D.B. 558, PG. 904
ZONING : I-1

RECORD DRAWING
ALL RECORD DRAWING CHANGES, REVISIONS, AND
DIMENSIONS ARE BASED UPON INFORMATION
SUPPLIED BY THE GENERAL CONTRACTOR AND
HAVE NOT BEEN FIELD VERIFIED BY PIEDMONT
OLSEN HENSELEY.

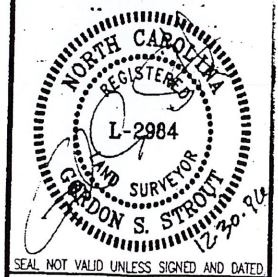
NO.	DATE	REVISION DESCRIPTION	BY	CHK
0	10/12/95	ISSUED FOR CONSTRUCTION	A	DE
A	10/2/95	ISSUED FOR PERMITTING, OWNER'S REVIEW AND BIDS	W.K.	G.S.

BELLSOUTH
Carolinas PCS, L.P.

09-062-003-A
HAW

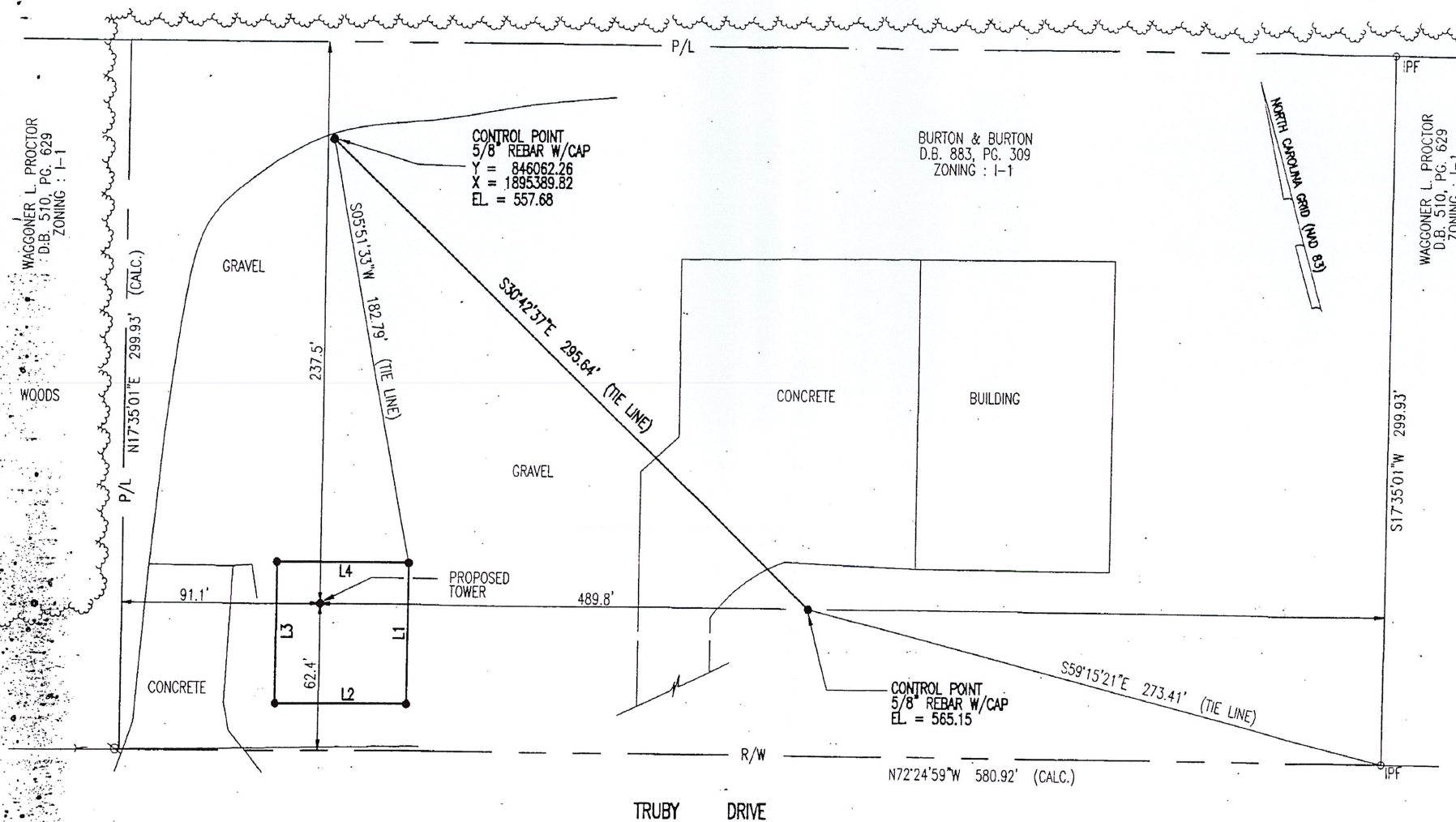
SITE SURVEY

copyright © 19 95
Piedmont Olsen Hensley
ENGINEERS/ARCHITECTS/PLANNERS
2301 Ramwood Drive
Post Office Box 31388, Raleigh, NC 27622-1388
Tel: 919/782-5511 Fax: 919/782-5905



PRELIMINARY PLAT
NOT FOR RECORDATION,
SALES, OR CONVEYANCES.

PROJECT MANAGER J. GARCEAU	DEPARTMENT MANAGER A. HALL
LEAD DESIGN PROF. W. KENT	CHECKED G. STROUT
DRAWN W. KENT	DATE 10/2/95
PROJECT NUMBER 22597-16	DRAWING NUMBER C-2

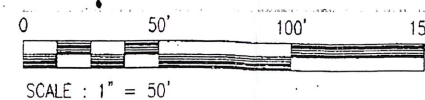


LINE	BEARING	DISTANCE
L1	S17°35'01\"W	60.00'
L2	N72°24'59\"W	60.00'
L3	N17°35'01\"E	60.00'
L4	S72°24'59\"E	60.00'

LEASE AREA = 3600 S.F.

SITE SURVEY

SCALE : 1\" = 50'



NOTES:

- SEE DRAWING C-1 FOR GENERAL NOTES AND LEGEND.

813377

CITY OF GRAHAM
PERMIT TO BUILD

Permit Date: 06/14/00

Permit #: 1964

Permission has been granted to NEXTEL COMMUNICATIONS
to ALTER a n/a story, 0 room, n/a bath Building located at
1360 TRUBY DR at an estimated Cost of \$ 50,000.00.

This Building is to be altered, erected or moved in accordance with
the ordinances of the CITY OF GRAHAM, N.C. and the General Building Laws
of the STATE OF NORTH CAROLINA, as they relate to construction, health,
and safety.

The size of the Building is: SEE FILE PLANS.

The size of the Lot is: SEE FILE PLANS. Census:

Setback-Front: 15 Side: 15 Rear: 15 Tax Map: 13-14-52

Category: A Residential/Commercial/Public: CO Zone: I-1

Contractor: R & R COMM
Phone #: 770 483 2173


Useage: CO-LOCATION/COMM.TOWER

General License #: 35821	Building Fee:	168.00
Electrcal Contr: GODFREY ELEC	Driveway Fee:	0.00
Heating Contr:	Sign Fee:	0.00
Plumbing Contr:	Home Recovery:	0.00
Insultn Contr:	Sewer/Water Tap:	0.00
	Set Meter:	0.00
	Total Fee:	168.00

Flood:N Flood Panel:
Base Flood Elevation:Flood Zone:
Req Finish Floor Elev:

Elevation Certificate:N Engineer:

A permit shall expire six (6) months after the date of issuance if
the work authorized by the permit has not been commenced. If after
commencement, the work is discontinued for a period of twelve (12)
months the permit shall expire. Work authorized by any permit that
has expired shall not continue until a new permit has been secured.


City Inspector

813377

CITY OF GRAHAM
ELECTRICAL PERMIT

Elec Permit#: 2828 Bldg Permit#: 1964 Date: 06/14/00

Contractor: GODFREY SERVICES

New/Existing: E

Address: 704 596 0584

License #: 10594

Residential/Commercial:

CO

Owner: NEXTEL COMMUNICATIONS

Address: 1360 TRUBY DR

Architect/Engineer:

Saw Service:

Miscellaneous:
200 AMP SERVICE

Misc. Appliances:

Size of Service: 50.00

Fee: 50.00

The applicant hereby agrees to begin the work herein specified at once. The Electrical Contractor agrees to notify the Electrical Inspector immediately upon completion of the above work so a final inspection may be made as required by law.


Electrical Inspector

By (Initials) DM Date 6/17/02 BUN 813377
200 update _____ License _____ Site ID _____ Dist. Type _____

Inspections/
Permits

GRAHAM, N. C.
Phone **570-6705**

BUILDING INSPECTION DEPARTMENT

NOTICE

PERMIT NO. 1964 DATE 6-14-00
OWNER Nextel Communications
LOCATION 1360 Truby Dr
City Inspector Joe Greene/dd

This notice must be posted in a conspicuous place on the job.

REQUIRED INSPECTIONS

BUILDING INSPECTIONS

Footing _____

Foundation _____

Framing _____

Final _____

ELECTRICAL INSPECTIONS

Saw Service _____

Rough _____

Final _____

PLUMBING INSPECTIONS

Rough _____

Final _____

HEATING & AIR COND. INSPECTIONS

Rough _____

Final _____

INSULATION

Rough _____

Final _____

SITE PLAN NOTES

1. INFORMATION ON THIS PLAN WAS INCORPORATED FROM THE ALAMANCE COUNTY GIS AND A SITE VISIT MADE BY KIMLEY-HORN AND ASSOCIATES ON JANUARY 3, 2006.
2. THE PARENT TRACT IS OWNED N/F BY BURTON AND BURTON (D.B.: 883 PG.: 309).
3. THE PROPOSED TOWER SITE LIES WITHIN FLOOD ZONE "X" WHICH IS NOT A FLOOD HAZARD ZONE (REFERENCE FEMA FIRM FOR ALAMANCE COUNTY, NC MAP NUMBER 37001C0128E DATED DECEMBER 22, 1998).
4. THE PROPOSED DEVELOPMENT WILL RESULT IN NO NET CHANGE IN IMPERVIOUS COVERAGE ON THE SITE.

EXISTING 200' SELF-SUPPORTING TOWER
 LATITUDE: 36° 4' 15.05" N
 LONGITUDE: 79° 21' 15.03" W
 EXISTING GROUND ELEVATION = 560'± AMSL

JOHN ABNER SHEED JR.
 PARCEL ID# 8894469497
 D.B. 558 PG. 904
 22.3 ACRES

SECOND PARTNERS LLC
 PARCEL ID# 8894453334
 D.B. 1407 PG. 254
 55.3 ACRES

BURTON AND BURTON
 PARCEL ID# 8894555912
 D.B. 883 PG. 309
 P.B. 44118 PG. LT2
 4.0 ACRES

SONIM LLC
 PARCEL ID# 8894559729
 D.B. 1263 PG. 646
 1.5 ACRES

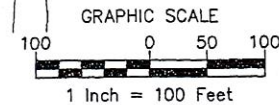
CFJ PLAZA COMPANY LLC
 C/O BURR WOLFF LP
 PARCEL ID# 8894553256
 D.B. 1285 PG. 35
 20 ACRES

PROPOSED 16' X 22' ALLTEL LEASE
 AREA (352 SQ. FT.) (SEE SHEET C2
 FOR COMPOUND LAYOUT)

SITE PLAN

SCALE: 1" = 100'

NOT FOR RECORDATION, SALES OR CONVEYANCES



 Kimley-Horn and Associates, Inc. Raleigh, North Carolina P.O. Box 33584 Raleigh, NC 27624-0584 (919) 877-2709	
SCALE: DESIGNED: ECH DRAWING: JJA CHECKED: LVL	AS NOTED REVISION: 0
LVL JJA BY	DATE NO.
ISSUED FOR PERMITTING AND CONSTRUCTION REVISION DESCRIPTION	
 Alltel Communications, Inc. LESTER LOWE ENGINEER	
SITE PLAN 145° CO-LOCATION ALLTEL - TROLLINGWOOD GRAHAM ALAMANCE COUNTY NORTH CAROLINA	
DOCUMENT NO. 011348342 C1	



Mail Processing Center
Federal Aviation Administration
Southwest Regional Office
Obstruction Evaluation Group
2601 Meacham Boulevard
Fort Worth, TX 76137

Aeronautical Study No.
2012-ASO-821-OE
Prior Study No.
2011-ASO-2466-OE

Issued Date: 03/05/2012

Lisa Minney
Crown Castle for ATT
2000 Corporate Drive
Canonsburg, PA 15317

****DETERMINATION OF NO HAZARD TO AIR NAVIGATION FOR TEMPORARY STRUCTURE****

The Federal Aviation Administration has conducted an aeronautical study under the provisions of 49 U.S.C., Section 44718 and if applicable Title 14 of the Code of Federal Regulations, part 77, concerning:

Structure:	Crane 813377/Haw River
Location:	Graham, NC
Latitude:	36-04-24.81N NAD 83
Longitude:	79-21-15.02W
Heights:	559 feet site elevation (SE)
	217 feet above ground level (AGL)
	776 feet above mean sea level (AMSL)

This aeronautical study revealed that the temporary structure does not exceed obstruction standards and would not be a hazard to air navigation provided the following condition(s), if any, is (are) met:

As a condition to this Determination, the structure is marked/lighted in accordance with FAA Advisory circular 70/7460-1 K Change 2, Obstruction Marking and Lighting, flags/red lights - Chapters 3(Marked),4,5(Red),&12.

This determination expires on 09/05/2013 unless extended, revised or terminated by the issuing office.

NOTE: REQUEST FOR EXTENSION OF THE EFFECTIVE PERIOD OF THIS DETERMINATION MUST BE E-FILED AT LEAST 15 DAYS PRIOR TO THE EXPIRATION DATE. AFTER RE-EVALUATION OF CURRENT OPERATIONS IN THE AREA OF THE STRUCTURE TO DETERMINE THAT NO SIGNIFICANT AERONAUTICAL CHANGES HAVE OCCURRED, YOUR DETERMINATION MAY BE ELIGIBLE FOR ONE EXTENSION OF THE EFFECTIVE PERIOD.

This determination is based, in part, on the foregoing description which includes specific coordinates and heights. Any changes in coordinates and/or heights will void this determination. Any future construction or alteration, including increase to heights, requires separate notice to the FAA.

This determination does include temporary construction equipment such as cranes, derricks, etc., which may be used during actual construction of a structure. However, this equipment shall not exceed the overall heights as indicated above. Equipment which has a height greater than the studied structure requires separate notice to the FAA.

This determination concerns the effect of this temporary structure on the safe and efficient use of navigable airspace by aircraft and does not relieve the sponsor of compliance responsibilities relating to any law, ordinance, or regulation of any Federal, State, or local government body.

Any failure or malfunction that lasts more than thirty (30) minutes and affects a top light or flashing obstruction light, regardless of its position, should be reported immediately to (877) 487-6867 so a Notice to Airmen (NOTAM) can be issued. As soon as the normal operation is restored, notify the same number.

A copy of this determination will be forwarded to the Federal Aviation Administration Flight Procedures Office if the structure is subject to the issuance of a Notice To Airman (NOTAM).

If you have any questions, please contact our office at (816) 329-2508. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2012-ASO-821-OE

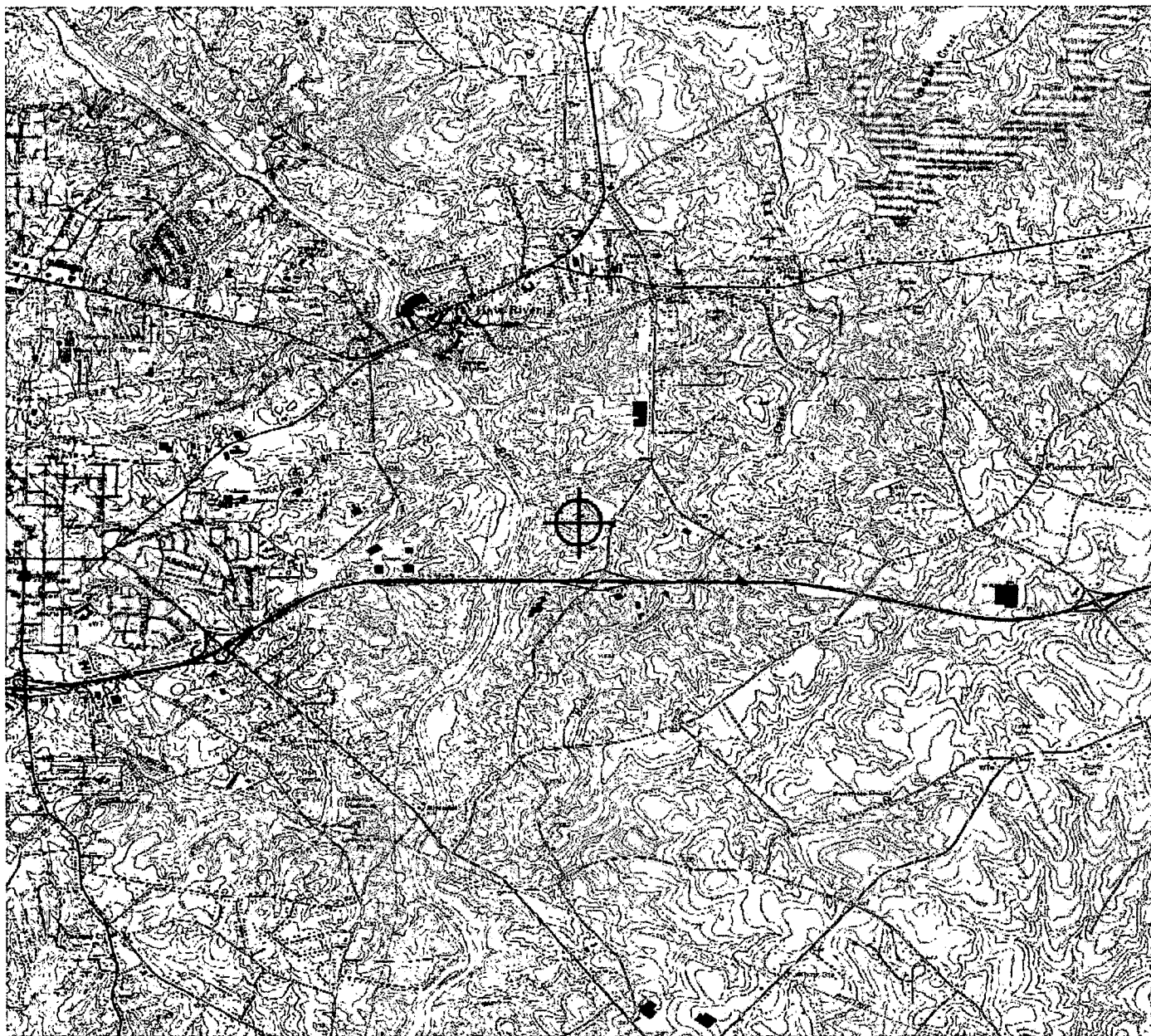
Signature Control No: 158684975-159982551

(TMP)

Vee Stewart
Specialist

Attachment(s)
Map(s)

TOPO Map for ASN 2012-ASO-821-OE



CITY OF GRAHAM
Permit to Build
(336) 570-6705

PD 12/10/12
OK # 6964

Permit Date: 12/6/2012

Permit #: 4955

Permission has been granted to CROWN CASTLE to ALTER
a story, room, bath Building located at 1360 TRUBY DRIVE
at an Estimated Cost of \$ 22,500.00
Subdivision: Lot #:

This Building is to be altered, erected or moved in accordance with the ordinances
of the CITY OF GRAHAM, N.C. and the General Building Laws of the STATE OF
NORTH CAROLINA, as they relate to construction, health, and safety.

The size of the Building is: Square Footage:
The size of the Lot is: Census: GPIN: 8894555912
Setback-Front: N/A Left: N/A Right: N/A Rear: N/A Tax Map: 13-14-52
Category: A Residential/Commercial/Public: CO Zone: 11

Contractor: M & B CONSTRUCTION Usage: REMOVE & REPL ANT&CABINET
Phone #: 919-992-9320

General License #:	29888	Building Fee:	\$87.00
Electrical Contr:	J & W ELECTRIC	Driveway Fee:	\$0.00
Heating Contr #1:		Sign Fee:	\$0.00
Heating Contr #2:		Home Recovery:	\$0.00
Plumbing Contr:		Water Tap:	\$0.00
Insulation Contr:		Sewer Tap:	\$0.00
		Set Meter:	\$0.00
		Water Conn:	\$0.00
		Sewer Conn:	\$0.00
		Total Fee:	\$87.00

Flood: N Flood Panel: Flood Zone:
Base Flood Elevation: Req Finish Floor Elev:
Elevation Certificate: False Engineer:

A permit shall expire six (6) months after the date of issuance if
the work authorized by the permit has not been commenced. If after
commencement, the work is discontinued for a period of twelve (12)
months the permit shall expire. Work authorized by any permit that
has expired shall not continue until a new permit has been secured.

Signed: _____

City Inspector

REMOVE & REPLACE ANTENNAS & CABINET AT CELL TOWER

AT&T ECA/WCA LTE 3C/4C FIRSTNET - MASTEC
PROPOSED EQUIPMENT UPGRADES



AT&T SITE ID:
062-003

TOWER OWNER ID:
813377

FA LOCATION:
10019320

SITE ADDRESS:
**1360 TRUBY DR
GRAHAM, NC 27258
(ALAMANCE COUNTY)**

SITE SUMMARY

SITE TYPE:	UPGRADE
TYPE OF OCCUPANCY:	TELECOMMUNICATIONS
TOWER TYPE:	SELF SUPPORT
TOWER LATITUDE:	36° 4' 24.81"
TOWER LONGITUDE:	-79° 21' 15.03"
ZONING JURISDICTION:	CITY OF GRAHAM
COUNTY:	ALAMANCE
PARCEL NUMBER:	152824
POWER COMPANY:	DUKE ENERGY (800) 777-9898
TELEPHONE COMPANY:	AT&T (866) 620-6000

PROJECT DIRECTORY

TOWER OWNER:	CROWN CASTLE 3530 TORINGDON WAY, SUITE 300 CHARLOTTE, NC 28277 CONTACT: SARA REA LOADHOLDT PHONE: (704) 405-6548
APPLICANT:	AT&T MOBILITY CORP. 2002 PISGAH CHURCH ROAD, SUITE 300 GREENSBORO, NC 27455 CONTACT: RYAN KEATON PHONE: (800) 638-2822
SITE DESIGNER:	FDH INFRASTRUCTURE SERVICES 6521 MERIDIEN DRIVE RALEIGH, NC 27616 CONTACT: JONATHAN WILKERSON PHONE: (919) 755-1012



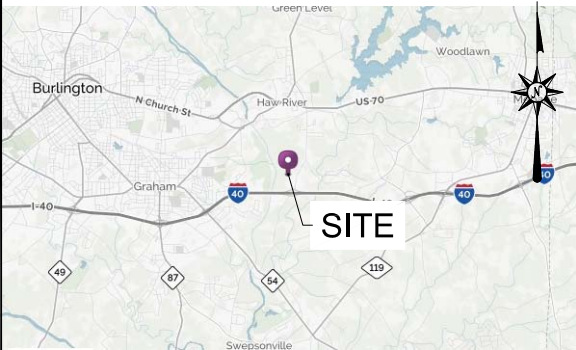
UNDERGROUND
SERVICE ALERT

811



48 HOURS BEFORE YOU DIG

VICINITY MAP



LOCAL MAP



DIRECTIONS TO THE SITE

FROM GREENSBORO, NC:
START OUT GOING SOUTHWEST ON PISGAH CHURCH RD TOWARD LAWNSDALE DR. TAKE THE 1ST LEFT ONTO LAWNSDALE DR. LAWNSDALE DR BECOMES US-220 S/BATTLEGROUND AVE. TAKE THE WENDOVER AVE E/US-220 RAMP. MERGE ONTO W WENDOVER AVE E. MERGE ONTO I-840 E. MERGE ONTO I-40 E VIA EXIT 21 TOWARD DURHAM / RALEIGH. TAKE EXIT 150 TOWARD HAW RIVER. KEEP LEFT TO TAKE THE RAMP TOWARD ROXBORO/HWA RIVER / GREEN LEVEL. TURN LEFT ONTO JIMMIE KERR RD. TURN LEFT ONTO TRUBY DR. SITE IS ON THE LEFT.

CODE COMPLIANCE

ALL WORK AND MATERIALS SHALL BE PERFORMED AND INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNING AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THE LATEST EDITIONS OF THE FOLLOWING:

- 2012 NC BUILDING CODE
- ANSI/TIA/EIA-222-G
- LOCAL BUILDING CODE
- CITY/COUNTY ORDINANCES
- FAA COMPLIANCE
- FCC COMPLIANCE
- 2014 NEC CODE COMPLIANCE
- 2012 INTERNATIONAL FIRE CODE
- 2012 INTERNATIONAL MECHANICAL CODE
- 2015 NC EXISTING BUILDING CODE (BASED ON 2012 IEBC)

PROJECT DESCRIPTION

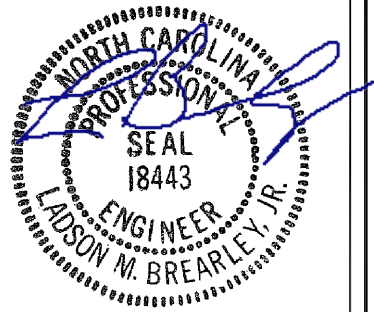
- REMOVE (6) ANTENNAS
- INSTALL (3) ANTENNAS
- INSTALL (6) RRU's
- SWAP DUS FOR 5216
- ADD (1) XMU03
- ADD SFP7
- DECOMM EXISTING GSM
- INSTALL (1) ODN512 CABINET
- ADD (6) 30 AMP BREAKERS
- ADD LOWER STAINLESS STEEL DC6

SHEET INDEX

SHEET NO.	DESCRIPTION	REV. NO.	REVISION DATE
T-1	TITLE SHEET	1	01/26/18
BC-1	APPENDIX B	1	01/26/18
G-1	GENERAL NOTES	1	01/26/18
C-1	EQUIPMENT LAYOUT PLANS	1	01/26/18
C-2	TOWER ELEVATION & ANTENNA LAYOUT PLANS	1	01/26/18
C-3	FINAL RF EQUIPMENT SCHEDULE	1	01/26/18
E-1	SERVICE ROUTING PLAN	1	01/26/18
E-2	SINGLE LINE DIAGRAM	1	01/26/18
E-3	RISER DIAGRAM	1	01/26/18

GENERAL NOTES

THE FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION, THEREFORE HANDICAP ACCESS IS NOT REQUIRED. A TECHNICIAN WILL VISIT THE SITE AS REQUIRED FOR ROUTINE MAINTENANCE. THE PROJECT WILL NOT RESULT IN ANY SIGNIFICANT DISTURBANCE OR EFFECT ON DRAINAGE; NO SANITARY SEWER SERVICE, POTABLE WATER, OR TRASH DISPOSAL IS REQUIRED AND NO COMMERCIAL SIGNAGE IS PROPOSED.



01/26/18
FDH INFRASTRUCTURE SERVICES, PLLC
COA#P-1390
LADSON M. BREARLEY, P.E.
NORTH CAROLINA LICENSE NO. 18443

DRAWN BY: JJW
CHECKED BY: JJW
APPV'D: LMB

SUBMITTALS

DATE	DESCRIPTION	REV	ISSUED BY
01/25/18	CONSTRUCTION	0	JJW
01/26/18	CONSTRUCTION	1	JJW

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AT&T SITE ID:
062-003

SITE ADDRESS:
**1360 TRUBY DR
GRAHAM, NC 27258**

FA LOCATION:
10019320

TOWER OWNER ID:
813377

SHEET TITLE:
**TITLE
SHEET**

SHEET NUMBER:
T-1

**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: 062-003
Address: 1360 Truby Dr., Graham, NC Zip Code 27258
Proposed Use: Cellular Communications Equipment
Owner/Authorized Agent: AT&T Mobility- Ryan Keaton Phone #: (800) 638-2822 E-Mail: _____
Owned By: ☐ City/County ☒ Private ☐ State
Code Enforcement Jurisdiction: ☒ City Graham ☐ County ☐ State

LEAD DESIGN PROFESSIONAL:

DESIGNER	FIRM	NAME	LICENSE #	TELEPHONE #	E-MAIL
Architectural					
Civil					
Electrical					
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): _____
RENOVATED: (date) _____ **CURRENT USE(S)** (Ch. 3): _____
_____ **PROPOSED USE(S)** (Ch. 3): _____

BASIC BUILDING DATA

Construction Type: ☒ I-A ☐ II-A ☐ III-A ☐ IV ☐ V-A
(check all that apply) ☐ I-B ☐ II-B ☐ III-B ☐ V-B
Sprinklers: ☒ No ☐ Partial ☐ Yes ☐ NFPA 13 ☐ NFPA 13R ☐ NFPA 13D
Standpipes: ☒ No ☐ Yes ☐ Class ☐ I ☐ II ☐ III ☐ Wet ☐ Dry
Fire District: ☒ No ☐ Yes (Primary) **Flood Hazard Area:** ☐ No ☐ Yes
Building Height: (feet) _____ **Number of Stories:** _____ **Mezzanine:** ☒ No ☐ Yes
Gross Building Area:

FLOOR	EXISTING (SQ FT)	NEW (SQ FT)	SUB-TOTAL
6 th Floor	N/A		
5 th Floor	N/A		
4 th Floor	N/A		
3 rd Floor	N/A		
2 nd Floor	N/A		
Mezzanine	N/A		
1 st Floor	N/A		
Basement	N/A		
TOTAL	N/A		

2012 NC Administrative Code and Policies

ALLOWABLE AREA

Occupancy:

Assembly	<input type="checkbox"/> A-1	<input type="checkbox"/> A-2	<input type="checkbox"/> A-3	<input type="checkbox"/> A-4	<input type="checkbox"/> A-5
Business					
Educational					
Factory	<input type="checkbox"/> F-1	<input type="checkbox"/> Moderate	<input type="checkbox"/> F-2	<input type="checkbox"/> Low	
Hazardous	<input type="checkbox"/> H-1	<input type="checkbox"/> Detonate	<input type="checkbox"/> H-2	<input type="checkbox"/> Deflagrate	<input type="checkbox"/> H-3
Institutional	<input type="checkbox"/> I-1	<input type="checkbox"/> I-2	<input type="checkbox"/> I-3	<input type="checkbox"/> I-4	<input type="checkbox"/> I-5
Merchandise					
Residential	<input type="checkbox"/> R-1	<input type="checkbox"/> R-2	<input type="checkbox"/> R-3	<input type="checkbox"/> R-4	
Storage	<input type="checkbox"/> S-1	<input type="checkbox"/> Moderate	<input type="checkbox"/> S-2	<input type="checkbox"/> Low	<input type="checkbox"/> High-piled
Utility and Miscellaneous	<input type="checkbox"/> Parking Garage	<input type="checkbox"/> Open	<input type="checkbox"/> Enclosed	<input type="checkbox"/> Repair Garage	

Accessory Occupancies:

Assembly	<input type="checkbox"/> A-1	<input type="checkbox"/> A-2	<input type="checkbox"/> A-3	<input type="checkbox"/> A-4	<input type="checkbox"/> A-5
Business					
Educational					
Factory	<input type="checkbox"/> F-1	<input type="checkbox"/> Moderate	<input type="checkbox"/> F-2	<input type="checkbox"/> Low	
Hazardous	<input type="checkbox"/> H-1	<input type="checkbox"/> Detonate	<input type="checkbox"/> H-2	<input type="checkbox"/> Deflagrate	<input type="checkbox"/> H-3
Institutional	<input type="checkbox"/> I-1	<input type="checkbox"/> I-2	<input type="checkbox"/> I-3	<input type="checkbox"/> I-4	<input type="checkbox"/> I-5
Merchandise					
Residential	<input type="checkbox"/> R-1	<input type="checkbox"/> R-2	<input type="checkbox"/> R-3	<input type="checkbox"/> R-4	
Storage	<input type="checkbox"/> S-1	<input type="checkbox"/> Moderate	<input type="checkbox"/> S-2	<input type="checkbox"/> Low	<input type="checkbox"/> High-piled
Utility and Miscellaneous	<input type="checkbox"/> Parking Garage	<input type="checkbox"/> Open	<input type="checkbox"/> Enclosed	<input type="checkbox"/> Repair Garage	

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 II
☐ 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 B 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)

2012 NC Administrative Code and Policies

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.

$$\frac{\text{Actual Area of Occupancy A}}{\text{Allowable Area of Occupancy A}} + \frac{\text{Actual Area of Occupancy B}}{\text{Allowable Area of Occupancy B}} \leq 1$$
$$\frac{\text{Actual Area of Occupancy C}}{\text{Allowable Area of Occupancy C}} + \frac{\text{Actual Area of Occupancy D}}{\text{Allowable Area of Occupancy D}} + \dots \leq 1.00$$

STORY NO.	DESCRIPTION AND USE	(A) BLDG AREA PER STORY (ACTUAL)	(B) TABLE 503 ¹ AREA	(C) AREA FOR FRONTAGE INCREASE ²	(D) AREA FOR SPRINKLER INCREASE ³	(E) ALLOWABLE AREA OR UNLIMITED ⁴	(F) MAXIMUM BUILDING AREA ⁵

- ¹ Frontage area increases from Section 508.2 are computed thus:
- Perimeter which fronts a public way or open space having 20 feet minimum width = _____ (F)
 - Total Building Perimeter _____ (P)
 - Ratio (F/P) = _____ (F/P)
 - W = Minimum width of public way = _____ (W)
 - Percent of frontage increase $I_F = 100 [(F/P) - 0.25] \times W/30 = \text{_____} (\%)$
- ² The sprinkler increase per Section 506.3 is as follows:
- Multi-story building $I_s = 200$ percent
 - Single story building $I_s = 300$ percent
- ³ Unlimited area applicable under conditions of Section 508.4
- ⁴ Maximum Building Area = total number of stories x the building x E (506.4)
- ⁵ 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

Type of Construction	ALLOWABLE HEIGHT (TABLE 503) Type	INCREASE FOR SPRINKLERS SHOWN ON PLANS Type	CODE REFERENCE
Building Height in Feet		Feet = H + 20' = _____	
Building Height in Stories		Stories + 1 = _____	

2012 NC Administrative Code and Policies

FIRE PROTECTION REQUIREMENTS

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

* Indicate section number permitting reduction

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 #: _____

- ☐ Fire and/or smoke rated wall locations (Chapter 7)
☐ Assumed and real property line locations

2012 NC Administrative Code and Policies

- ☐ Exterior wall opening area with respect to distance to assumed property lines (705.8)
☐ Existing structures within 30' of the proposed building
☐ Occupancy types for each area as it relates to occupant load calculation (Table 1004.1.1)
☐ Occupant loads for each area
☐ Exit access travel distances (1016)
☐ Common path of travel distances (1014.3 & 1028.8)
☐ Dead end lengths (1018.4)
☐ Clear exit widths for each exit door
☐ Maximum calculated occupant load capacity each exit door can accommodate based on egress width (1005.1)
☐ Actual occupant load for each exit door
☐ A separate schematic plan indicating where fire rated floor/ceiling and/or roof structure is provided for purposes of occupancy separation
☐ Location of doors with panic hardware (1008.1.10)
☐ Location of doors with delayed egress locks and the amount of delay (1008.1.9.7)
☐ Location of doors with electromagnetic egress locks (1008.1.9.8)
☐ Location of doors equipped with hold-open devices
☐ Location of emergency escape windows (1029)
☐ The square footage of each fire area (902)
☐ The square footage of each smoke compartment (407.4)
☐ Note any code exceptions or table notes that may have been utilized regarding the items above

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	PROVIDED	# OF ACCESSIBLE SPACES PROVIDED		TOTAL # ACCESSIBLE PROVIDED
			REGULAR WITH 5' ACCESS AISLE	132' ACCESS SPACES WITH 8' ACCESS AISLE	
TOTAL					

DESIGN LOADS:

Importance Factors: Wind (I_w) _____
Snow (I_s) _____
Seismic (I_e) _____

SEE STRUCTURAL ANALYSIS ASSOCIATED WITH THIS PROJECT FOR STRUCTURAL DESIGN INFORMATION

Live Loads: Roof _____ psf
Mezzanine _____ psf
Floor _____ psf

Ground Snow Load: _____ psf

2012 NC Administrative Code and Policies

Wind Load: Basic Wind Speed _____ mph (ASCE-7)

Exposure Category _____
Wind Base Shears (for MWFRS) V_x = _____ V_y = _____

SEISMIC DESIGN CATEGORY:

Provide the following Seismic Design Parameters:
Occupancy Category (Table 1604.5) ☐ I ☐ II ☐ III ☐ IV
Spectral Response Acceleration S_s _____ %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 = _____ V_y = _____
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) _____ psf
Presumptive Bearing capacity _____ psf
File size, type, and capacity _____

SPECIAL INSPECTIONS REQUIRED: ☐ Yes ☐ No

PLUMBING FIXTURE REQUIREMENTS

(TABLE 2102.1)

USE		WATERCLOSETS		URINALS	LAVAS/URGES		SHOWERS/ TUBS	DRINKING FOUNTAINS	
		MALE	FEMALE		MALE	FEMALE		REGULAR	ACCESSIBLE
SPACE	EXISTING								
	NEW								
	REQUIRED								

SPECIAL APPROVALS

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

2012 NC Administrative Code and Policies

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: _____
Solar 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: _____

ELECTRICAL SUMMARY

ELECTRICAL SYSTEM AND EQUIPMENT

Method of Compliance:

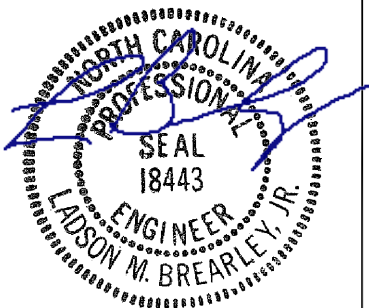
- Energy Code: ☐ Prescriptive ☐ Performance
ASHRAE 90.1: ☐ Prescriptive ☐ Performance

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



01/26/18

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LADSON M. BREARLEY, P.E.
NORTH CAROLINA LICENSE NO. 18443

DRAWN BY: JJW
CHECKED BY: JJW
APPVD: LMB

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GENERAL NOTES:

1.

ALL WORK PERFORMED AND MATERIALS INSTALLED WILL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES INCLUDING THE LATEST VERSIONS OF THE NEC AND IBC. THE CONTRACTOR WILL GIVE ALL NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS, AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF THE WORK. ELECTRICAL SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS, AND LOCAL AND STATE JURISDICTIONAL CODES, ORDINANCES, AND APPLICABLE REGULATIONS.
2.

BIDDING REQUIREMENTS

a.

PRIOR TO THE SUBMISSION OF BIDS, VISIT THE JOB SITE TO BECOME FAMILIAR WITH ALL CONDITIONS AFFECTING THE PROPOSED PROJECT. VISIT THE SITE WITH THE CONSTRUCTION DOCUMENTS TO VERIFY FIELD DIMENSIONS AND CONDITIONS TO CONFIRM THAT THE PROJECT WILL BE ACCOMPLISHED AS SHOWN.

b.

PROVIDE NOTIFICATION TO OWNER'S REPRESENTATIVE IN WRITING OF ANY CONFLICTS, ERRORS, OR OMISSIONS PRIOR TO SUBMISSION OF PRICE PROPOSAL. IN THE EVENT OF DISCREPANCIES, PRICE THE MORE COSTLY OR EXTENSIVE WORK, UNLESS DIRECTED OTHERWISE.

c.

WHEN TOWER IS OWNED BY A THIRD PARTY, CONTACT TOWER OWNER REPRESENTATIVE FOR PARTICIPATION IN BID WALK.

d.

WHERE ANCHORING TO A CONCRETE ROOF SLAB, CONFIRM (PRIOR TO SUBMITTING BID) THE PRESENCE OF POST TENSION TENDONS. INCLUDE PROVISIONS FOR X-RAY PROCEDURES TO LOCATE THE TENDONS PRIOR TO CONSTRUCTION.
3.

DRAWINGS ARE NOT TO BE SCALED. WRITTEN DIMENSIONS TAKE PRECEDENCE. CONSTRUCTION DOCUMENTS ARE INTENDED FOR DIAGRAMMATIC PURPOSES ONLY, UNO.
4.

FURNISH ALL MATERIALS, EQUIPMENT, LABOR, AND ANY REQUIREMENTS NECESSARY TO COMPLETE PROJECT AS DESCRIBED IN THE CONSTRUCTION DOCUMENTS.
5.

SUPERVISE AND DIRECT THE PROJECT DESCRIBED IN THE CONSTRUCTION DOCUMENTS. PROVIDE ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT.
6.

ALL WORK PERFORMED ON THE PROJECT AND MATERIALS INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES. GIVE ALL NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY, MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS, AND LOCAL AND STATE JURISDICTIONAL CODES APPLICABLE TO THE WORK.
7.

CONSTRUCTION COORDINATION REQUIREMENTS

a.

NOTIFY OWNER'S REPRESENTATIVE OF ANY DISCREPANCIES PRIOR TO START OF WORK.

b.

OBTAIN ALL PERMITS. SCHEDULE AND COORDINATE ALL INSPECTIONS.

c.

PROVIDE, AT THE PROJECT SITE, A FULL, CURRENT SET OF CONSTRUCTION DOCUMENTS FOR USE BY ALL PERSONNEL INVOLVED WITH THE PROJECT.

d.

RECEIVE WRITTEN AUTHORIZATION TO PROCEED WITH CONSTRUCTION PRIOR TO STARTING WORK ON ANY ITEM NOT CLEARLY DEFINED BY THE CONSTRUCTION DOCUMENTS.

e.

PERFORM WORK DURING OWNER'S PREFERRED HOURS TO AVOID DISTURBING NORMAL BUSINESS.

f.

PROVIDE FALL PROTECTION IN ACCORDANCE WITH FEDERAL, STATE, LOCAL, AND OWNER REQUIREMENTS.

g.

IF FAA LIGHTING AND MARKING IS PRESENT ON SITE AND IS POWERED BY ELECTRICAL SERVICE THAT IS TO BE INTERRUPTED, MAINTAIN THE NECESSARY LIGHTS DURING CONSTRUCTION AND NOTIFY THE PROPER AUTHORITIES IN THE EVENT OF A DISRUPTION.

h.

PROVIDE A PORTABLE FIRE EXTINGUISHER WITH A RATING OF NOT LESS THAN 2-A OR 2-A10BC WITHIN 75 FEET TRAVEL DISTANCE TO ALL PORTIONS OF PROJECT AREA DURING CONSTRUCTION.

i.

STRUCTURAL COMPONENTS OF ADJACENT FACILITIES SHALL NOT BE ALTERED BY THIS CONSTRUCTION PROJECT, UNO. ENSURE THAT EXCAVATION DOES NOT AFFECT ADJACENT STRUCTURES.

j.

SEAL ALL PENETRATIONS THROUGH FIRE-RATED AREAS WITH U.L. LISTED OR FIRE MARSHALL-APPROVED MATERIALS, IF APPLICABLE.

k.

BURIED UTILITIES MAY EXIST IN THE AREA AND UTILITY INFORMATION SHOWN MAY NOT BE COMPLETE. CONTACT THE UTILITY LOCATE SERVICE A MINIMUM OF 48 HOURS PRIOR TO CONSTRUCTION.

l.

COORDINATE ALL POWER INSTALLATION WITH POWER COMPANY AS REQUIRED. REPORT POWER INSTALLATION COORDINATION SOLUTION(S) TO OWNER'S REPRESENTATIVE.

m.

PROTECT EXISTING IMPROVEMENTS, EASEMENTS, PAVING, CURBING, ETC. DURING CONSTRUCTION. UPON COMPLETION OF WORK, REPAIR ANY DAMAGE THAT MAY HAVE OCCURRED DUE TO CONSTRUCTION ON OR ABOUT THE PROPERTY.

n.

KEEP GENERAL WORK AREA CLEAN AND HAZARD FREE DURING CONSTRUCTION AND DISPOSE OF ALL DIRT, DEBRIS, AND RUBBISH. REMOVE EQUIPMENT NOT SPECIFIED AS REMAINING ON THE PROPERTY OR PREMISES. SITE SHALL BE LEFT IN CLEAN CONDITION AND FREE FROM PAINT SPOTS, DUST, OR SMUDGES OF ANY NATURE.

o.

MAINTAIN THE INTEGRITY OF THE BUILDING ENVELOPE AND CONSTRUCT BARRIERS IN THE AREA OF WORK TO PREVENT DAMAGE FROM WEATHER AS WELL AS FROM CONSTRUCTION DUST AND DEBRIS.
8.

INSTALL ALL EQUIPMENT AND MATERIALS ACCORDING TO MANUFACTURER'S SPECIFICATIONS, UNO, OR WHERE LOCAL CODES OR ORDINANCES DIRECT OTHERWISE.

9.

PLACE STONE TO ENSURE PROPER DRAINAGE AWAY FROM EQUIPMENT PAD. REPAIR EXISTING WEED / GEOTEXTILE MAT AS REQUIRED.
10.

EXISTING ACCESS ROAD AND SITE TO BE RESTORED TO PRE CONSTRUCTION CONDITIONS.
11.

ANY SUBSTITUTIONS OF MATERIALS AND/OR EQUIPMENT, MUST BE APPROVED BY OWNER'S REPRESENTATIVE.
12.

DOCUMENT ALL CHANGES MADE IN THE FIELD BY MARKING UP THE APPROVED CONSTRUCTION DRAWINGS AND SUBMITTING THE REDLINED SET TO OWNER'S REPRESENTATIVE UPON COMPLETION. DOCUMENT ALL WORK PERFORMED WITH PHOTOGRAPHS TO BE SUBMITTED WITH REDLINED CONSTRUCTION DRAWINGS.
13.

PROVIDE SUPPORTS FOR CABLES TO THE ELEVATION OF ALL INITIAL AND FUTURE ANTENNAS IN ACCORDANCE WITH ALL MANUFACTURER'S REQUIREMENTS.
14.

A STRUCTURAL ANALYSIS AND A MOUNT ANALYSIS (IF REQUIRED) TO DETERMINE THE STRUCTURAL CAPACITY TO SUPPORT THIS PROPOSED EQUIPMENT WAS PERFORMED OUTSIDE THE SCOPE OF THIS PROJECT.
15.

CONFIRM THAT THE REQUIREMENTS OF THE STRUCTURAL ANALYSIS, MOUNT ANALYSIS AND ANY ASSOCIATED MODIFICATIONS HAVE BEEN FOLLOWED AND COMPLETED AS REQUIRED TO SUPPORT THE EQUIPMENT ASSOCIATED WITH THIS PROJECT.

SPECIAL INSPECTIONS:

1.

WHEN REQUIRED, PROVIDE SPECIAL INSPECTIONS PERFORMED BY AN INDEPENDENT INSPECTOR, APPROVED BY OWNER'S REPRESENTATIVE AND THE LOCAL JURISDICTION.
2.

THE SPECIAL INSPECTOR SHALL PROVIDE A COPY OF THE REPORT TO THE OWNER'S REPRESENTATIVE, STRUCTURAL ENGINEER, CONTRACTOR, AND BUILDING OFFICIAL.

ABBREVIATIONS

A/C	AIR CONDITIONING	L	LENGTH
AFF	ABOVE FINISHED FLOOR	LBS	POUNDS
AGL	ABOVE GROUND LEVEL,	LTE	LONG TERM EVOLUTION
	ABOVE GRADE LEVEL	MAX	MAXIMUM
AWS	ADVANCED WIRELESS SERVICE	MECH	MECHANICAL
BBU	BATTERY BACKUP UNIT	MTL	METAL
BLDG	BUILDING	MFR	MANUFACTURE
BLK	BLOCKING	MGR	MANAGER
CLG	CEILING	MIN	MINIMUM
CLR	CLEAR	MISC	MISCELLANEOUS
CONC	CONCRETE	NA	NOT APPLICABLE
CONT	CONTINUOUS	NIC	NOT IN CONTRACT
D	DEPTH	NO	NUMBER
DBL	DOUBLE	NTS	NOT TO SCALE
DEG	DEGREE	OC	ON CENTER
Ø, DIA	DIAMETER	OD	OUTSIDE DIAMETER
DIAG	DIAGONAL	PCS	PERSONAL COMMUNICATION SERVICE
DN	DOWN	PDU	POWER DISTRIBUTION UNIT
DET	DETAIL	PROJ	PROJECT
DWG	DRAWING	PROP	PROPERTY
E	EXISTING	PT	PRESSURE TREATED
EA	EACH	PVC	POLYVINYL CHLORIDE
ELEV, EL	ELEVATION	REQ	REQUIRED
ELEC	ELECTRICAL	RF	RADIO FREQUENC
EQ	EQUAL	RM	ROOM
EQUIP	EQUIPMENT	RO	ROUGH OPENING
EXT	EXTERIOR	RRH	REMOTE RADIO HEAD
FIF	FIBER INTERFACE FRAME,	SHT	SHEET
	FACILITY INTERFACE FRAME	SIM	SIMILAR
FIN	FINISH	SPEC	SPECIFICATION
FLUOR	FLUORESCENT	SF	SQUARE FOOT
FLR	FLOOR	SS	STAINLESS STEEL
FT	FOOT, FEET	STL	STEEL
GA	GAUGE	SUSP	SUSPENDED
GALV	GALVANIZED	TMA	TOWER MOUNTED AMPLIFIER
GC	GENERAL CONTRACTOR	TND	TINNED
GRND	GROUND	TYP	TYPICAL
GSM	GLOBAL SYSTEM MOBILE	UMTS	UNIVERSAL MOBILE
GYP	GYPSPUM BOARD		TELECOMMUNICATION SERVICE
HORZ	HORIZONTAL	UNO	UNLESS NOTED OTHERWISE
HR	HOUR	VERT	VERTICAL
HT	HEIGHT	W/	WITH
ID	INSIDE DIAMETER	W/O	WITHOUT
IN	INCH, INCHES	WCS	WIRELESS COMMUNICATION SERVICE
INSUL	INSULATION	WP	WATER PROOF
INT	INTERIOR		

PROJECT NOTES

1.

THE FOLLOWING INFORMATION HAS BEEN PROVIDED BY CROWN FOR THIS PROJECT AND HAS NOT BEEN FIELD VERIFIED AS PART OF THIS PROJECT.

a.

SITE LAYOUT INFORMATION AND ORIENTATION

b.

EXISTING TOWER, MOUNT AND EQUIPMENT ELEVATIONS

c.

DESIGN PACKAGE BASED ON THE APPLICATION #: 420486, Rev.0
2.

A STRUCTURAL ANALYSIS TO DETERMINE THE TOWER CAPACITY TO SUPPORT THIS PROPOSED EQUIPMENT WAS PERFORMED FOR CROWN OUTSIDE THE SCOPE OF THIS PROJECT.

a.

STRUCTURAL ANALYSIS BY: GPD ENGINEERING AND ARCHITECTURE PROF. CORP.

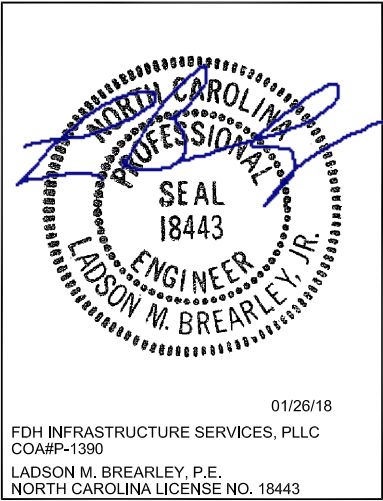
b.

DATED: 01/18/18

c.

RESULTS: SUFFICIENT CAPACITY
3.

CONFIRM THAT THE REQUIREMENTS OF THE STRUCTURAL ANALYSIS, MOUNT ANALYSIS AND ANY ASSOCIATED MODIFICATIONS HAVE BEEN FOLLOWED AND COMPLETED AS REQUIRED TO SUPPORT THE EQUIPMENT ASSOCIATED WITH THIS PROJECT.



DRAWN BY:	JJW
CHECKED BY:	JJW
APPVD:	LMB

SUBMITTALS			
DATE	DESCRIPTION	REV	ISSUED BY
01/25/18	CONSTRUCTION	0	JJW
01/26/18	CONSTRUCTION	1	JJW

THE INFORMATION CONTAINED IN THIS SET OF DOCUMENTS IS PROPRIETARY BY NATURE. REPRODUCTION OR CAUSING TO BE REPRODUCED THE WHOLE OR ANY PART OF THESE DRAWINGS WITHOUT THE PERMISSION OF FDH VELOCITEL IS PROHIBITED.

AT&T SITE ID:
062-003

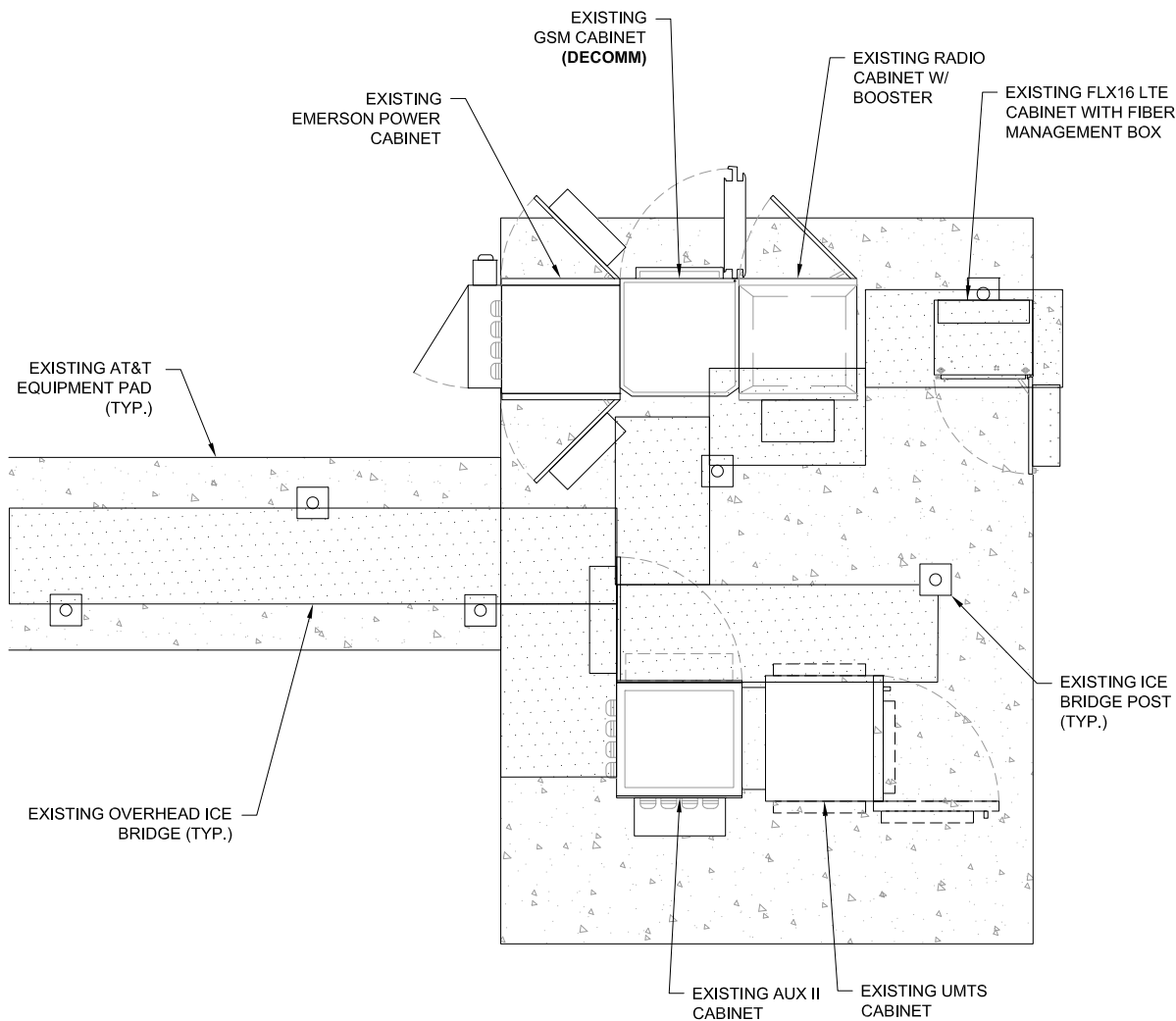
SITE ADDRESS:
1360 TRUBY DR
GRAHAM, NC 27258

FA LOCATION:
10019320

TOWER OWNER ID:
813377

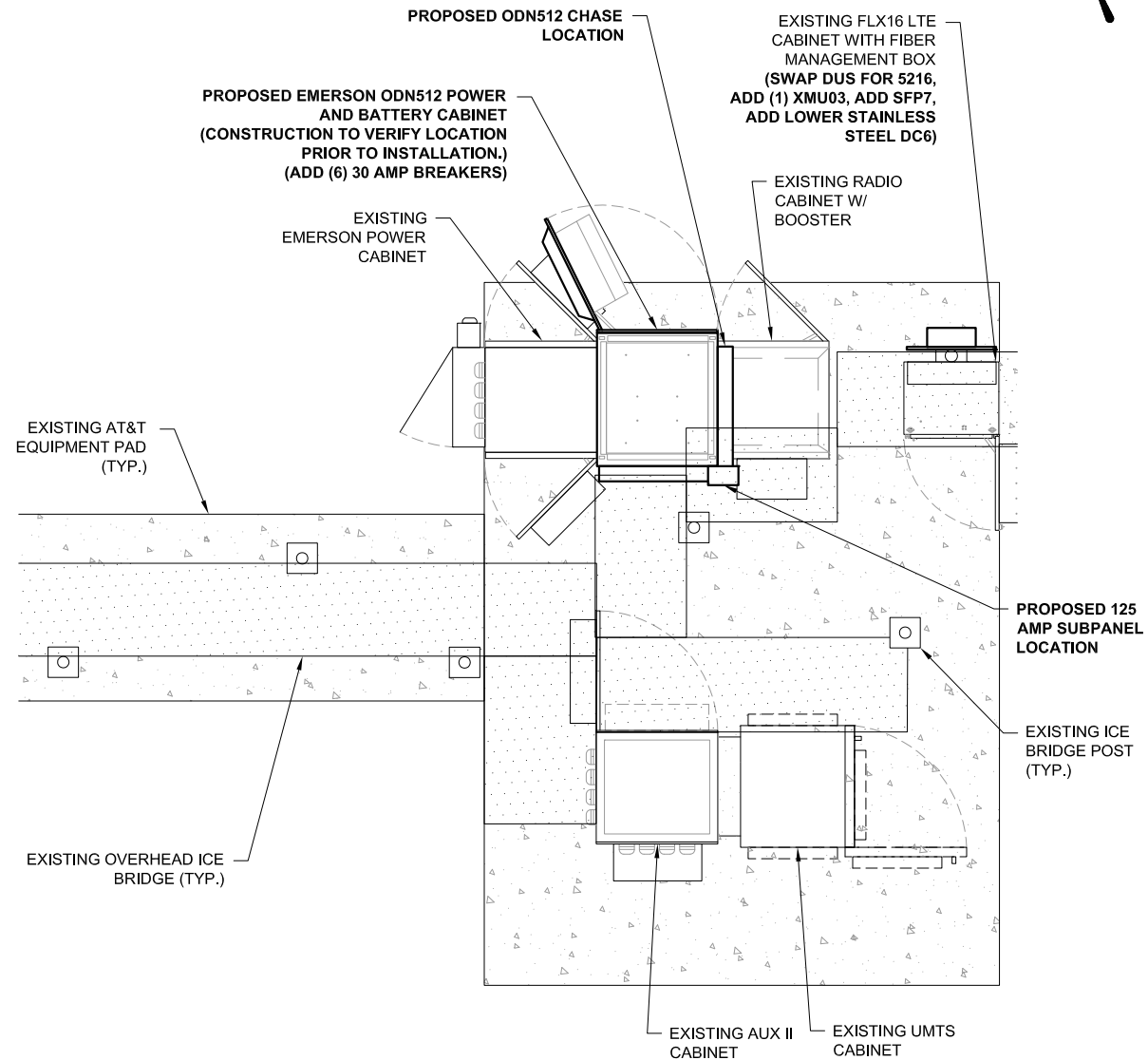
SHEET TITLE:
GENERAL NOTES

SHEET NUMBER:
G-1



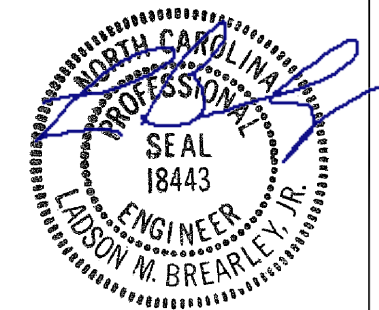
EXISTING EQUIPMENT LAYOUT

11"x17" SCALE: 1"=4'
24"x36" SCALE: 1"=2'



PROPOSED EQUIPMENT LAYOUT

11"x17" SCALE: 1"=4'
24"x36" SCALE: 1"=2'



01/26/18
FDH INFRASTRUCTURE SERVICES, PLLC
COA#P-1390
LADSON M. BREARLEY, P.E.
NORTH CAROLINA LICENSE NO. 18443

DRAWN BY: JJW
CHECKED BY: JJW
APPVD: LMB

SUBMITTALS			
DATE	DESCRIPTION	REV	ISSUED BY
01/25/18	CONSTRUCTION	0	JJW
01/26/18	CONSTRUCTION	1	JJW

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AT&T SITE ID:
062-003

SITE ADDRESS:
1360 TRUBY DR
GRAHAM, NC 27258

FA LOCATION:
10019320

TOWER OWNER ID:
813377

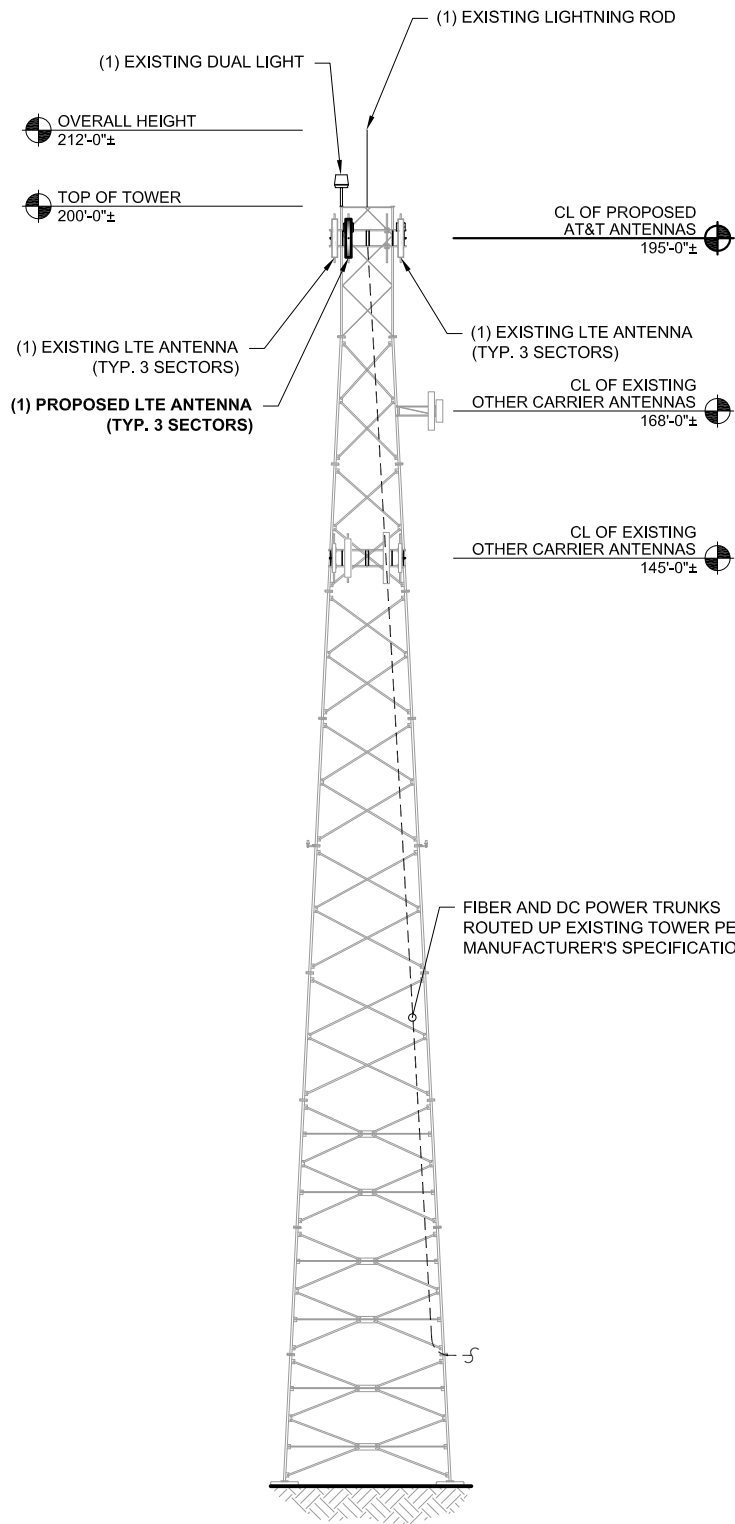
SHEET TITLE:
EQUIPMENT
LAYOUT PLANS

SHEET NUMBER:

C-1

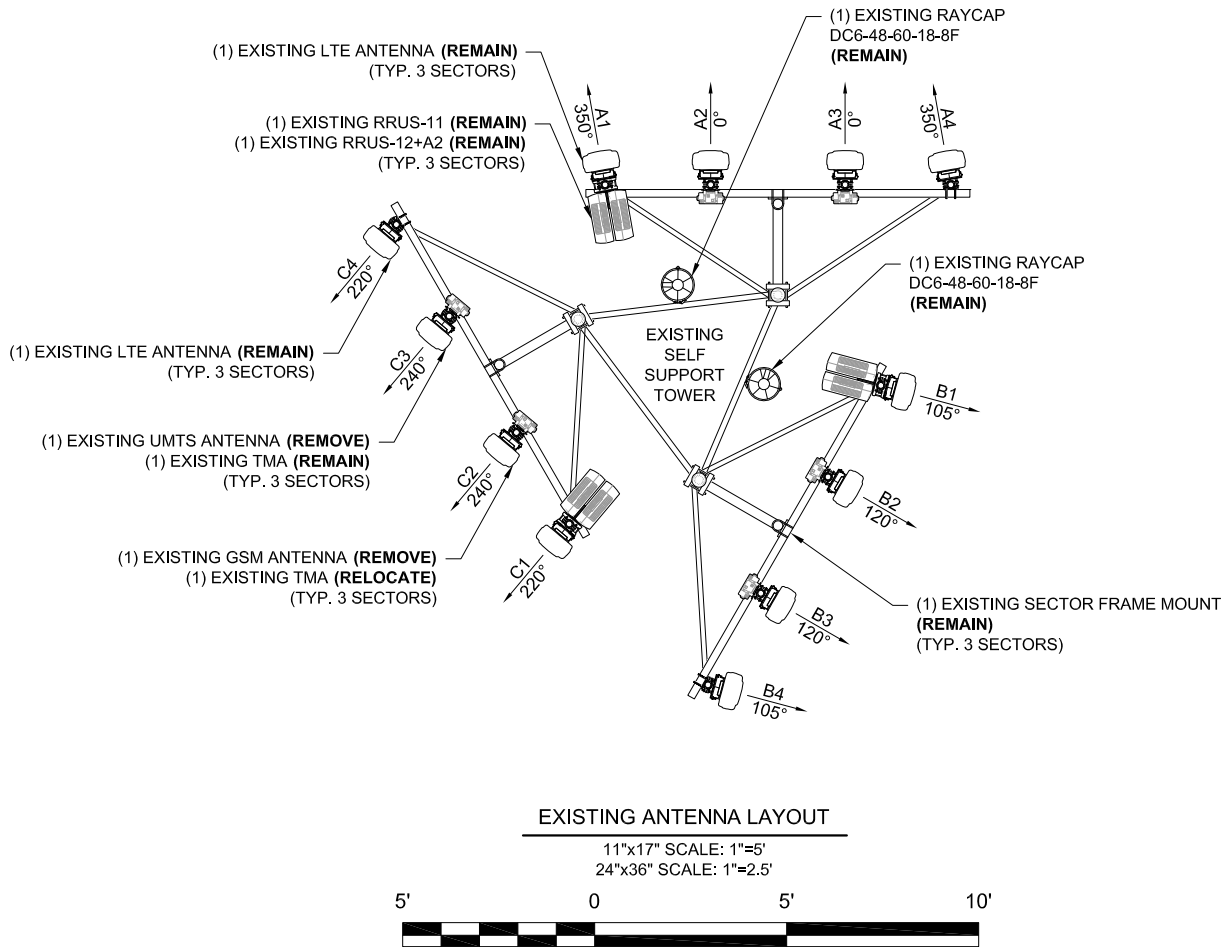
NOTE:
EXISTING AZIMUTHS TO
BE VERIFIED DURING
CONSTRUCTION.

NOTE:
PROPOSED ANTENNAS
MUST NOT BLOCK THE
BEACON LIGHT.

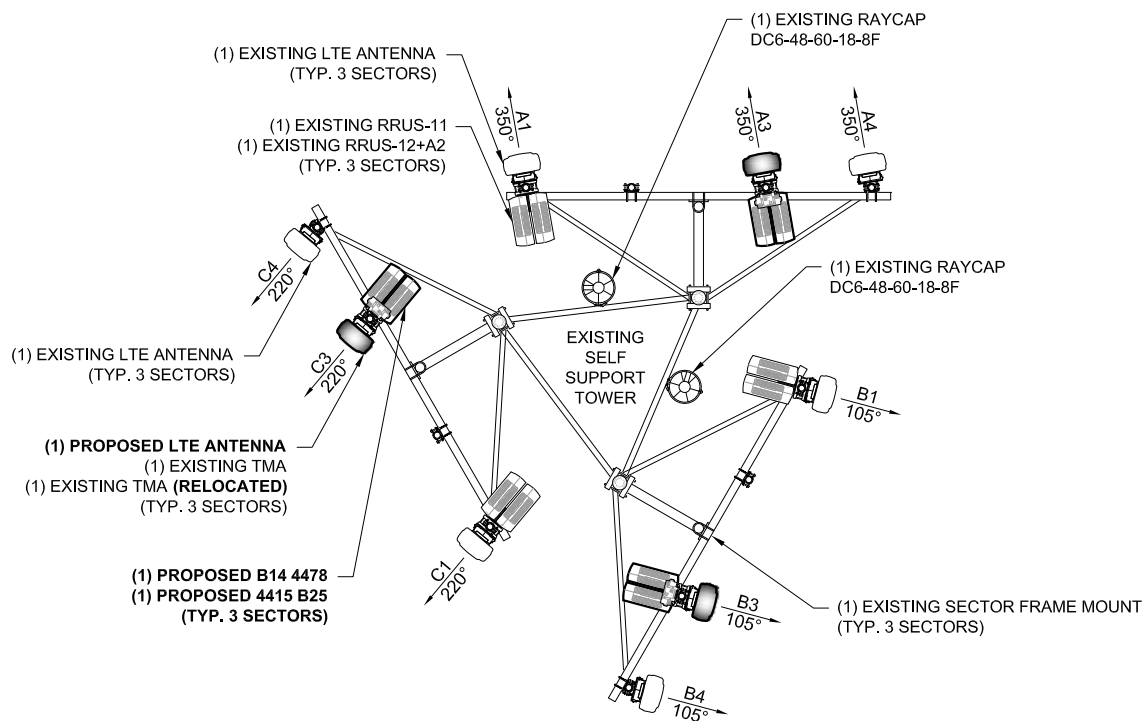


TOWER ELEVATION

11"x17" VERTICAL SCALE: 1"=30'
24"x36" VERTICAL SCALE: 1"=15'

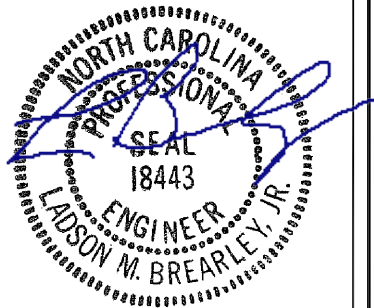


INSTALL RRU's ON DUAL RRU
MOUNTING BRACKETS SUPPLIED
BY AT&T



NOTE:
EXISTING AZIMUTHS TO
BE VERIFIED DURING
CONSTRUCTION.

NOTE:
CONTRACTOR TO
ROTATE ANTENNA
MOUNT AS NEEDED TO
ACHIEVE DESIRED
ANTENNA AZIMUTHS.



01/26/18
FDH INFRASTRUCTURE SERVICES, PLLC
COA#P-1390
LADSON M. BREARLEY, P.E.
NORTH CAROLINA LICENSE NO. 18443

DRAWN BY: JJW
CHECKED BY: JJW
APPVD: LMB

SUBMITTALS			
DATE	DESCRIPTION	REV	ISSUED BY
01/25/18	CONSTRUCTION	0	JJW
01/26/18	CONSTRUCTION	1	JJW

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AT&T SITE ID:
062-003

SITE ADDRESS:
1360 TRUBY DR
GRAHAM, NC 27258

FA LOCATION:
10019320

TOWER OWNER ID:
813377

SHEET TITLE:
TOWER ELEVATION &
ANTENNA LAYOUT PLANS

SHEET NUMBER:

C-2



01/26/18

FDH INFRASTRUCTURE SERVICES, PLLC
COA#P-1390
LADSON M. BREARLEY, P.E.
NORTH CAROLINA LICENSE NO. 18443

DRAWN BY: JJW

CHECKED BY: JJW

APPVD: LMB

SUBMITTALS			
DATE	DESCRIPTION	REV	ISSUED BY
01/25/18	CONSTRUCTION	0	JJW
01/26/18	CONSTRUCTION	1	JJW

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AT&T SITE ID:
062-003

SITE ADDRESS:
1360 TRUBY DR
GRAHAM, NC 27258

FA LOCATION:
10019320

TOWER OWNER ID:
813377

SHEET TITLE:
FINAL RF EQUIPMENT
SCHEDULE

SHEET NUMBER:
C-3

(P) = PROPOSED FINAL ANTENNA & CABLE SCHEDULE (ALL EQUIPMENT MOUNTED ON TOWER)											
SECTOR	MARK	BAND	ANTENNA MAKE/MODEL	RAD CENTER	ANTENNA AZIMUTH	E. TILT	M. TILT	TMA QTY./TYPE	RADIO QTY./TYPE	SURGE PROTECTION QTY./TYPE	CABLE QTY./TYPE
ALPHA	A1	LTE 700/AWS	ANDREW SBNHH-1D65C	195'	350°	5°/3°	0°	-	(1) RRUS-11 (1) RRUS-12+A2	(1) DC6-48-60-18-8F	(1) 3/8" FIBER (2) DC POWER TRUNKS (1) 3/8" RET (P)
	A2	-	-	-	-	-	-	-	-	-	-
	A3	LTE 700/1900 UMTS 1900	COMMSCOPE NNH4-65B-R6 (P)	195'	350°	10°/10°/2°/2°	0°	(2) RFS ATM192012-1	(1) B14 4478 (P) (1) 4415 B25 (P)	-	(2) 1-5/8" COAX (2) 1-5/8" COAX (INACTIVE)
	A4	LTE WCS	COMMSCOPE SBNHH-1D65C	195'	350°	1°	0°	-	-	-	-
BETA	B1	LTE 700/AWS	ANDREW SBNHH-1D65C	195'	105°	3°/1°	0°	-	(1) RRUS-11 (1) RRUS-12+A2	(1) DC6-48-60-18-8F	(1) 3/8" FIBER (2) DC POWER TRUNKS (1) 3/8" RET (P)
	B2	-	-	-	-	-	-	-	-	-	-
	B3	LTE 700/1900 UMTS 1900	COMMSCOPE NNH4-65B-R6 (P)	195'	105°	2°/2°/2°/2°	0°	(2) RFS ATM192012-1	(1) B14 4478 (P) (1) 4415 B25 (P)	-	(2) 1-5/8" COAX (2) 1-5/8" COAX (INACTIVE)
	B4	LTE WCS	COMMSCOPE SBNHH-1D65C	195'	105°	0°	0°	-	-	-	-
GAMMA	C1	LTE 700/AWS	ANDREW SBNHH-1D65C	195'	220°	2°/2°	0°	-	(1) RRUS-11 (1) RRUS-12+A2	-	-
	C2	-	-	-	-	-	-	-	-	-	-
	C3	LTE 700/1900 UMTS 1900	COMMSCOPE NNH4-65B-R6 (P)	195'	220°	6°/6°/2°/2°	0°	(2) RFS ATM192012-1	(1) B14 4478 (P) (1) 4415 B25 (P)	-	(2) 1-5/8" COAX (P) (1) 1-5/8" COAX (INACTIVE)
	C4	LTE WCS	COMMSCOPE SBNHH-1D65C	195'	220°	1°	0°	-	-	-	-

RESERVED ANTENNA & CABLE SCHEDULE			
ANTENNA	TMA	RRU/SPD	CABLE
(3) KATREIN 742-213	(2) RFS ATM192012-0	-	-

- ANTENNA NOTES:
- THIS ANTENNA ORIENTATION PLAN IS A SCHEMATIC. THE CONTRACTOR SHALL VERIFY TOWER ORIENTATION AND FIELD COORDINATE REQUIRED ADJUSTMENTS TO ACHIEVE THE DESIRED ANTENNA AZIMUTHS.
 - ANTENNA CENTERLINE HEIGHT REFERENCED FROM GROUND AT BASE OF TOWER, ASSUMING HEIGHT OF 0'-0" AT SAID REFERENCE POINT.
 - ALL ANTENNAS, CABLES AND MOUNTS SHALL BE INSTALLED IN ACCORDANCE WITH THE TOWER ENGINEER'S RECOMMENDATIONS IN A MANNER CONSISTENT WITH THE STRUCTURAL ANALYSIS REPORT.
 - ALL ANTENNA BRACKETS PER ANTENNA MANUFACTURER, OR EQUAL. CONTRACTOR TO COORDINATE REQUIRED MECHANICAL DOWNTILT WITH AT&T.
 - ALL ANTENNA INFORMATION TO BE CONFIRMED WITH AT&T RF DESIGN PRIOR TO INSTALLATION.

GENERAL NOTES:

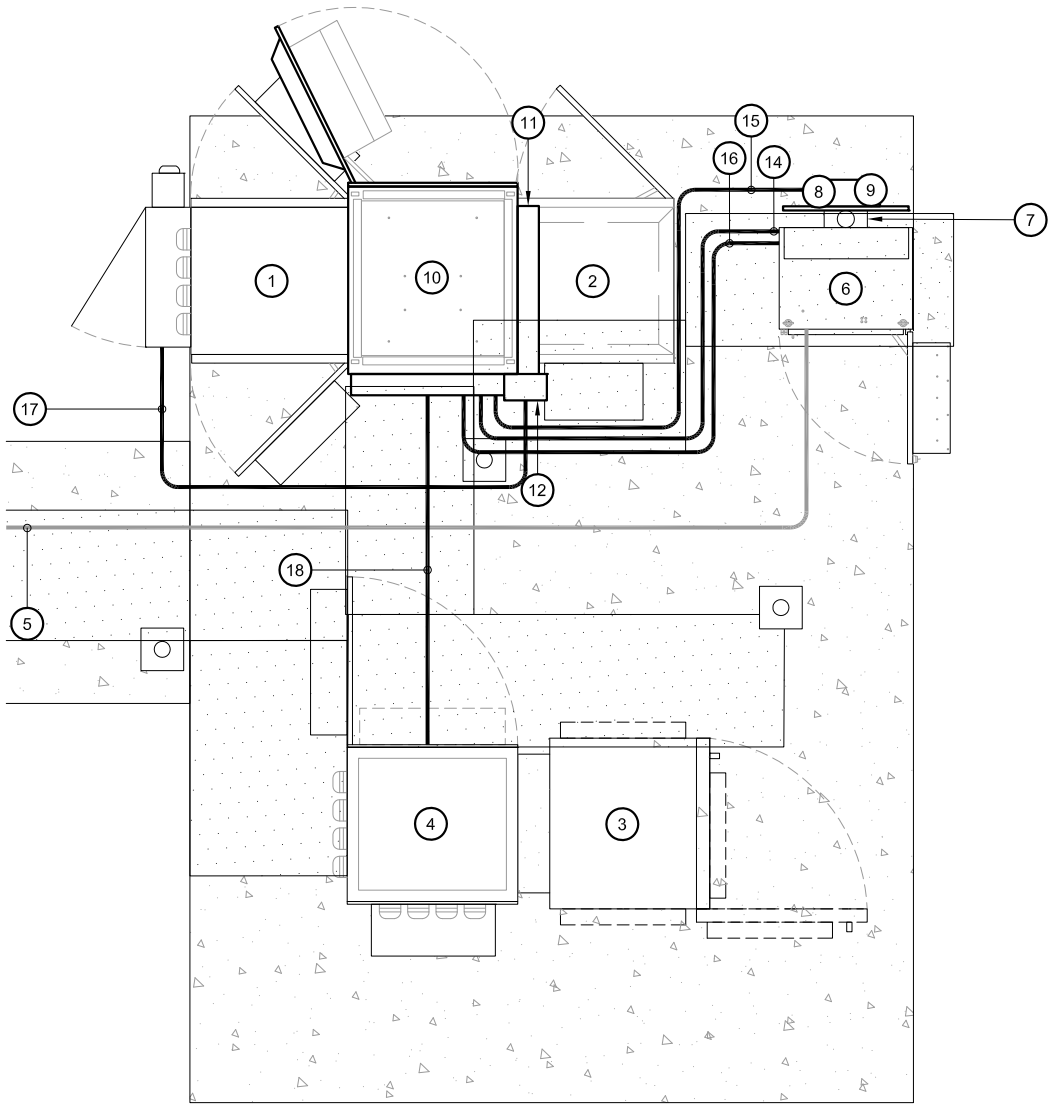
- ALL WORK PERFORMED AND MATERIALS INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES. THE CONTRACTOR WILL GIVE ALL NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES REGULATIONS, AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF THE WORK. ELECTRICAL SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS, AND LOCAL AND STATE JURISDICTIONAL CODES, ORDINANCES, AND APPLICABLE REGULATIONS.
- CONTRACTOR SHALL VERIFY EXACT CONDUIT ROUTING AND PENETRATION LOCATIONS WITH CONSTRUCTION MANAGER AND EQUIPMENT MANUFACTURER/SPECIFICATIONS.
- REFER TO CIVIL DRAWINGS FOR EXACT ITEMS BEING REMOVED AND/OR RELOCATED.
- ALL NEW CONDUITS SHALL BE FURNISHED WITH PULL STRINGS.

NOTES BY SYMBOL:

- EXISTING UPC CABINET
- EXISTING NOKIA RADIO CABINET
- EXISTING UMTS CABINET
- EXISTING AUZII CABINET
- EXISTING FIBER AND DC POWER TRUNKS FROM THE FLX16 LTE CABINET, ROUTED ACROSS ICE BRIDGE, UP THE TOWER TO THE EXISTING RAYCAP
- EXISTING FLX16 CABINET, FURNISHED BY AT&T AND INSTALLED BY CONTRACTOR. REFER TO INSTRUCTION MANUAL, MANUFACTURER DRAWINGS, AND SHEETS E-2 & E-3 FOR ADDITIONAL INFORMATION AND CONNECTIONS REQUIRED.
- EXISTING BASE SHOE AND POST FOR EXISTING FLX16 CABINET
- PROPOSED AT&T RAYCAP DC-6 SURGE PROTECTOR MOUNTED ABOVE EXISTING FLX16 CABINET. (CONTRACTOR TO VERIFY LOCATION PRIOR TO INSTALLATION)
- INSTALL DC-6 ON POLE WITH FLX16 CABINET AND GROUND TO MAIN GROUND BUS USING #6 AWG GREEN INSULATED STRANDED WIRE. WIRE ALARMS PER MANUFACTURER RECOMMENDATIONS AND AT&T INSTRUCTION MANUAL.
- PROPOSED EMERSON NETSURE ODN512 POWER AND BATTERY CABINET WITH PROPOSED 125 AMP SUBPANEL, FURNISHED BY AT&T AND INSTALLED BY CONTRACTOR. REFER TO INSTRUCTION MANUAL, MANUFACTURER DRAWINGS, AND SHEETS E-2 & E-3 FOR ADDITIONAL INFORMATION AND CONNECTIONS REQUIRED.
- PROPOSED ODN512 CHASE LOCATION
- PROPOSED 125 AMP SUBPANEL LOCATION
- ROUTE ALARM SERVICE IN (1) 2" SCHEDULE 80 PVC CONDUIT ALONG ICE BRIDGE BETWEEN PROPOSED NETSURE ODN512 POWER AND BATTERY CABINET AND PROPOSED FLX16 CABINET. REFER TO SHEET E-2 FOR WIRING AND CONNECTIONS. FIELD COORDINATE TERMINATIONS IN EACH CABINET WITH MANUFACTURER'S REQUIREMENTS.
- ROUTE -48VDC POWER CONDUCTORS IN (1) 2" SCHEDULE 80 PVC CONDUIT ALONG ICE BRIDGE FROM THE PROPOSED NETSURE ODN512 POWER AND BATTERY CABINET TO THE PROPOSED POLE MOUNTED DC-6 SURGE PROTECTOR. REFER TO SHEET E-2 FOR WIRING AND CONNECTIONS. FIELD COORDINATE TERMINATIONS IN EACH CABINET WITH MANUFACTURER'S REQUIREMENTS.
- ROUTE TELCO & ALARM SERVICE IN (1) 2" SCHEDULE 80 PVC CONDUIT ALONG ICE BRIDGE BETWEEN EXISTING UPC POWER AND BATTERY CABINET AND PROPOSED FLX16 CABINET. REFER TO SHEET E-2 FOR WIRING AND CONNECTIONS. FIELD COORDINATE TERMINATIONS IN EACH CABINET WITH MANUFACTURER'S REQUIREMENTS.
- ROUTE 120/240VAC POWER CONDUCTORS IN (1) 2" IMC CONDUIT ALONG ICE BRIDGE BETWEEN PANEL INSIDE UNIVERSAL POWER CABINET (UPC) AND THE PROPOSED 125 AMP SUBPANEL ON THE PROPOSED NETSURE ODN512 POWER AND BATTERY CABINET. REFER TO SHEET E-2 FOR WIRING AND CONNECTIONS.
- ROUTE -48VDC POWER CONDUCTORS IN (1) 2" SCHEDULE 80 PVC CONDUIT ALONG ICE BRIDGE FROM THE PROPOSED NETSURE ODN512 POWER AND BATTERY CABINET TO THE PDB INSIDE EXISTING FLX16 LTE CABINET. REFER TO SHEET E-2 FOR WIRING AND CONNECTIONS. FIELD COORDINATE TERMINATIONS IN EACH CABINET WITH MANUFACTURER'S REQUIREMENTS.
- RE-FEED EXISTING AUX CABINET FROM PROPOSED NETSURE ODN512 POWER AND BATTERY CABINET WITH 150A SERVICE VIA (1) 2" SCHEDULE 80 PVC CONDUIT ROUTED ALONG ICE BRIDGE. REFER TO SHEETS E-2 AND E-3 FOR WIRING AND CONNECTIONS. FIELD COORDINATE TERMINATIONS IN EACH CABINET WITH MANUFACTURER'S REQUIREMENTS.

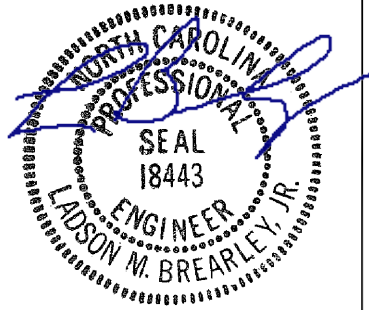
NOTES:

- CONTRACTOR SHALL REFER TO SINGLE LINE ON SHEET E-2 FOR POST-INSTALLATION CONFIGURATION OF EQUIPMENT AND WIRING. VERIFY EXACT CONFIGURATION OF EXISTING EQUIPMENT, CONDUIT LOCATIONS, AND CONNECTIONS AT TIME OF INSTALLATION. ADJUST LOCATIONS OF NEW EQUIPMENT AND WIRING AS NECESSARY BASED ON EXACT SITE CONDITIONS FOUND.
- UTILIZE EXISTING UTILITIES IN PLACE TO SERVE NEW CABINETS. REFER TO SINGLE LINE ON SHEET E-2 FOR DETAILS.
- REFER TO SHEET E-2, MANUFACTURER'S SPECIFICATIONS AND AT&T INSTALLATION MANUAL FOR GROUNDING OF EQUIPMENT.
- CONTRACTOR SHALL REFER TO AT&T LTE INSTRUCTION MANUAL FOR ADDITIONAL INSTALLATION INSTRUCTIONS NOT NECESSARILY INCLUDED WITHIN THESE DRAWINGS.
- CONTRACTOR TO USE INTERMEDIATE METAL CONDUIT "IMC" FROM POWER PLANT 125A SUBPANEL TO POWER PLANT RECTIFIER SHELVES.
- (SCHEDULE 80 PVC CAN BE USED IN PLACE OF THE IMC)



PROPOSED SERVICE LAYOUT

11"x17" SCALE: 1"=3'
24"x36" SCALE: 1"=1.5'



01/26/18
FDH INFRASTRUCTURE SERVICES, PLLC
COA#P-1390
LADSON M. BREARLEY, P.E.
NORTH CAROLINA LICENSE NO. 18443

DRAWN BY: JJW
CHECKED BY: JJW
APPV'D: LMB

SUBMITTALS			
DATE	DESCRIPTION	REV	ISSUED BY
01/25/18	CONSTRUCTION	0	JJW
01/26/18	CONSTRUCTION	1	JJW

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AT&T SITE ID:
062-003

SITE ADDRESS:
1360 TRUBY DR
GRAHAM, NC 27258

FA LOCATION:
10019320

TOWER OWNER ID:
813377

SHEET TITLE:
SERVICE ROUTING PLAN

SHEET NUMBER:

E-1

GENERAL NOTES:

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

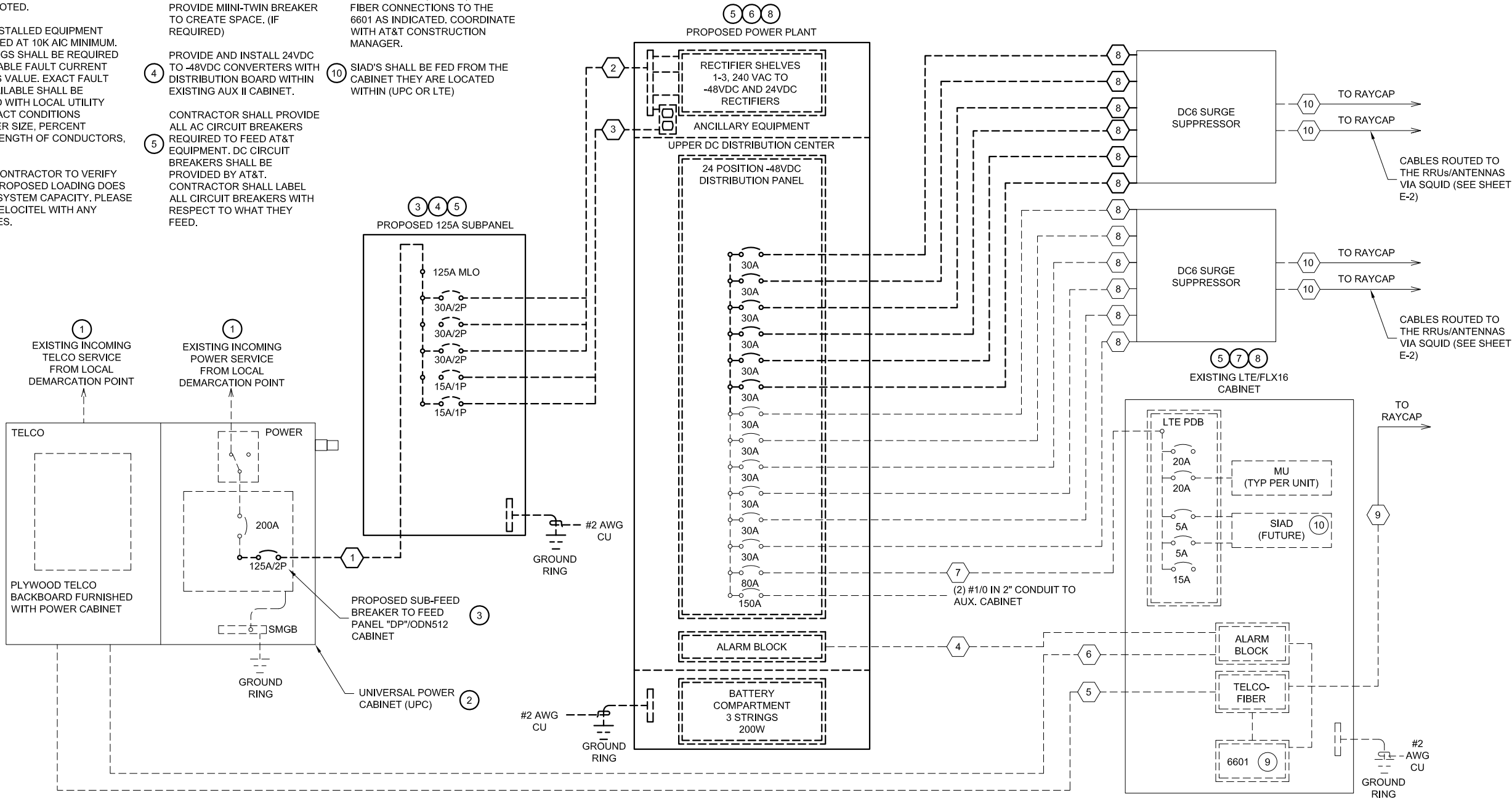
NOTES BY SYMBOL:

- EXISTING UTILITIES AND EQUIPMENT IN PLACE SHOULD BE USED TO FEED NEW CABINETS INDICATED.
- UNIVERSAL POWER CABINET (UPC) IS SERVICE ENTRANCE RATED, MEETING UL 67 AND UL 50. ALL ITEMS SHOWN WITHIN CABINET ARE PROVIDED WITH THE CABINET AND ARE SHOWN FOR REFERENCE ONLY UNLESS NOTED OTHERWISE. PROVIDE THE CONNECTIONS INDICATED. OBTAIN POWER CABINET DRAWINGS FOR ADDITIONAL INFORMATION.
- THE CONTRACTOR SHALL FURNISH AND INSTALL A 125A/2 POLE BREAKER WITHIN THE EXISTING UPC TO FEED THE PROPOSED DISTRIBUTION PANEL "SUBPANEL". TYPE VARIES WITH SAMPLE CDS AND AIC RATING OF BREAKER SHALL MATCH EXISTING (SQ D QO). WHERE NO SPACE IS AVAILABLE, CONSOLIDATE RECEPTACLE CIRCUITS AND PROVIDE MINI-TWIN BREAKER TO CREATE SPACE. (IF REQUIRED)
- PROVIDE AND INSTALL 24VDC TO -48VDC CONVERTERS WITH DISTRIBUTION BOARD WITHIN EXISTING AUX II CABINET.
- CONTRACTOR SHALL PROVIDE ALL AC CIRCUIT BREAKERS REQUIRED TO FEED AT&T EQUIPMENT. DC CIRCUIT BREAKERS SHALL BE PROVIDED BY AT&T. CONTRACTOR SHALL LABEL ALL CIRCUIT BREAKERS WITH RESPECT TO WHAT THEY FEED.
- POWER PLANT CABINET IS MANUFACTURED BY EMERSON AND CSA/UL RATED. ALL ITEMS SHOWN WITHIN CABINET ARE PROVIDED WITH THE CABINET AND ARE SHOWN FOR REFERENCE ONLY UNLESS NOTED OTHERWISE. PROVIDE THE CONNECTIONS INDICATED. OBTAIN POWER CABINET DRAWINGS FOR ADDITIONAL INFORMATION.
- THE CONTRACTOR SHALL REFER TO THE FLX16 LTE CABINET AND EQUIPMENT INSTALLATION MANUALS, SPECIFICATIONS, AND AT&T LTE CONSTRUCTION GUIDELINES FOR ADDITIONAL INFORMATION NOT NECESSARILY INCLUDED WITHIN THESE DRAWINGS.
- THE CONTRACTOR SHALL REFER TO EQUIPMENT DRAWINGS AND SPECIFICATIONS FOR CONTROL AND ALARM WIRING. INTERIOR ALARMS ARE PRE-WIRED.
- WHERE REQUIRED, PROVIDE -48VDC POWER, ALARM, AND FIBER CONNECTIONS TO THE 6601 AS INDICATED. COORDINATE WITH AT&T CONSTRUCTION MANAGER.
- SIAD'S SHALL BE FED FROM THE CABINET THEY ARE LOCATED WITHIN (UPC OR LTE)

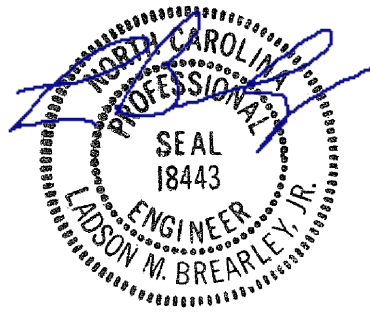
CABLE AND CONDUIT SCHEDULE						
MARK	CONDUIT		CABLE			REMARKS
	QUANT.	SIZE	QUANT.	SIZE	GROUND SIZE	
1	1 IMC	2"	3	#1	#6	AC POWER FROM UPC TO SUBPANEL (ASSUMED SIZE)
2	1 IMC	1 1/2"	6	#8	#8	AC POWER FROM SUBPANEL TO POWER PLANT (POWER FOR RECTIFIERS) (QUANTITY OF CONDUCTORS INDICATED IS PER BREAKER)
3	1 IMC	1"	3	#12	#12	AC POWER FROM SUBPANEL TO ANCILLIARY EQUIPMENT IN POWER PLANT
4	1	2"	BELDIN CABLES			ALARM CONTROL FROM POWER PLANT TO FLX16
5	1	2"	FIBER 18-PAIR (FB-L988-A0213-XXX)			FIBER FROM UPC TO FLX16, SWEEPING BENDS
6	1	2"	BELDIN CABLES			ALARM CONTROL FROM UPC TO FLX16
7	1	2"	1	#2	#2	DC POWER FROM POWER PLANT TO LTE PDB
8	1	2"	12	#8	#8	DC POWER FROM POWER PLANT TO DC-6 SURGE SUPPRESSOR
9	1	2"	2	FIBER 18-PAIR		FIBER FROM FLX16 TO RRU's, SWEEPING BENDS
10	1	2"	4	3PR DC #8 AWG		DC POWER FROM DC-6 SURGE SUPPRESSOR TO RRU's

SCOPING NOTES:

- SWAP DUS FOR 5216
- ADD (1) XMU03
- ADD SFP7
- DECOMM EXISTING GSM
- INSTALL (1) ODN512 CABINET
- ADD (6) 30 AMP BREAKERS
- ADD (1) STAINLESS STEEL DC6



6521 MERIDEN DRIVE RALEIGH, NC 27616
PHONE: 919-755-1012 FAX: 919-755-1031



01/26/18

FDH INFRASTRUCTURE SERVICES, PLLC
COA#P-1390
LADSON M. BREARLEY, P.E.
NORTH CAROLINA LICENSE NO. 18443

DRAWN BY: JJW
CHECKED BY: JJW
APPVD: LMB

SUBMITTALS			
DATE	DESCRIPTION	REV	ISSUED BY
01/25/18	CONSTRUCTION	0	JJW
01/26/18	CONSTRUCTION	1	JJW

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AT&T SITE ID:
062-003

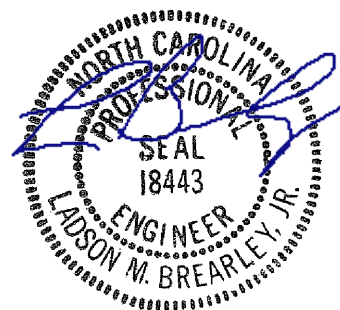
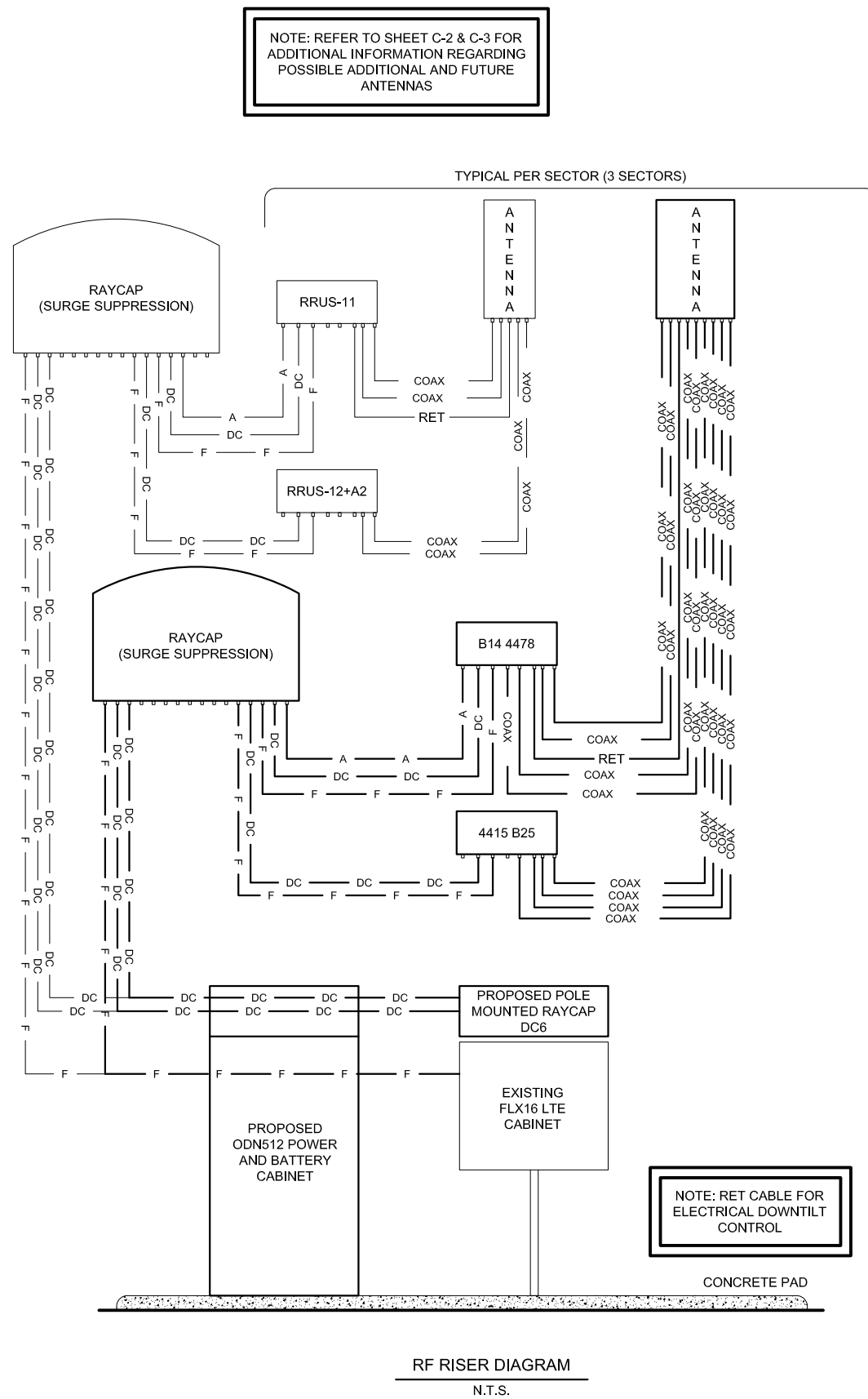
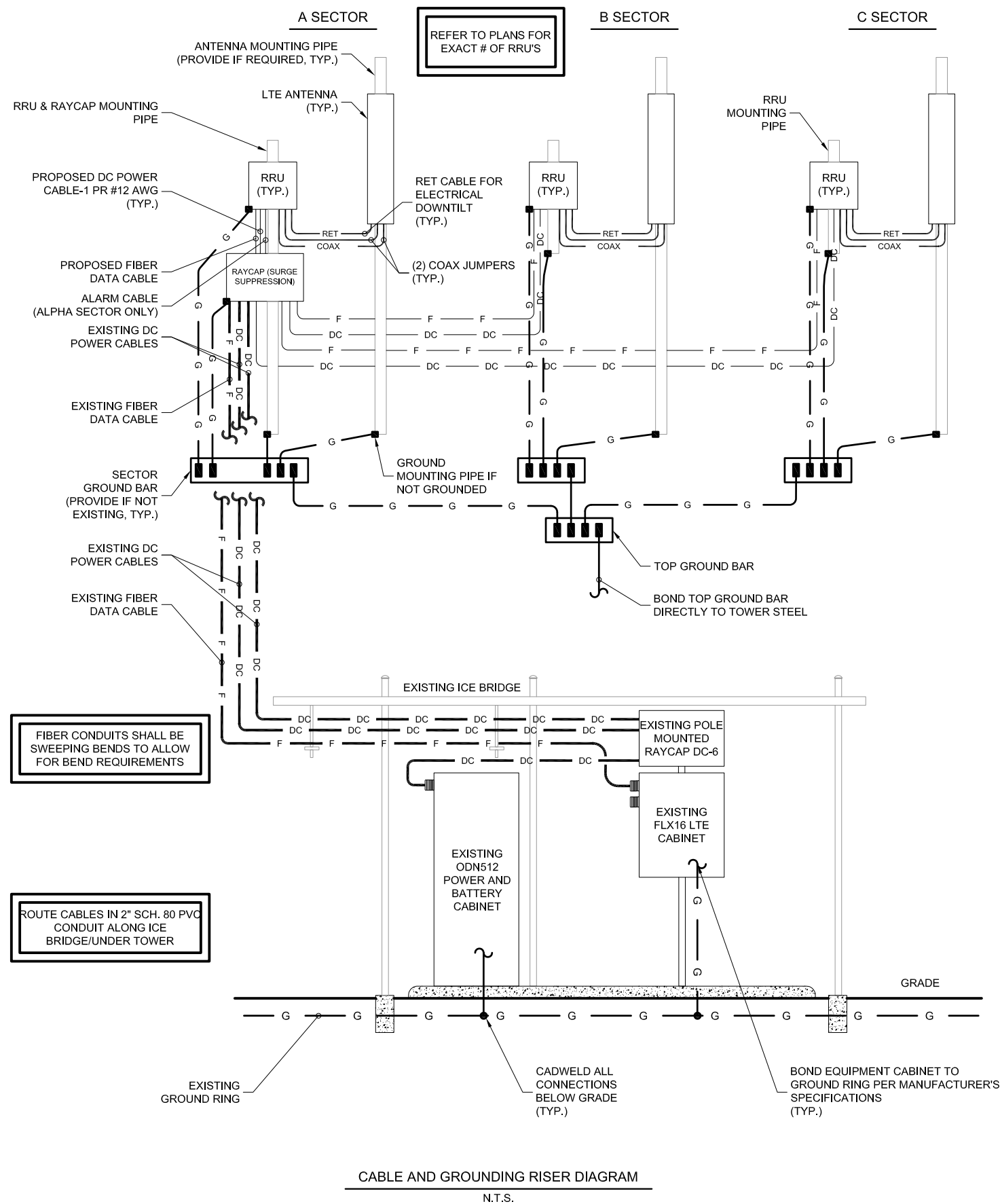
SITE ADDRESS:
1360 TRUBY DR
GRAHAM, NC 27258

FA LOCATION:
10019320

TOWER OWNER ID:
813377

SHEET TITLE:
SINGLE LINE DIAGRAM

SHEET NUMBER:
E-2



01/26/18
FDH INFRASTRUCTURE SERVICES, PLLC
COA#P-1390
LADSON M. BREARLEY, P.E.
NORTH CAROLINA LICENSE NO. 18443

DRAWN BY: JJW
CHECKED BY: JJW
APPVD: LMB

SUBMITTALS			
DATE	DESCRIPTION	REV	ISSUED BY
01/25/18	CONSTRUCTION	0	JJW
01/26/18	CONSTRUCTION	1	JJW

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AT&T SITE ID:
062-003

SITE ADDRESS:
1360 TRUBY DR
GRAHAM, NC 27258

FA LOCATION:
10019320

TOWER OWNER ID:
813377

SHEET TITLE:
RISER DIAGRAM

SHEET NUMBER:
E-3



Board of Adjustment

Resolution of Findings of Fact, Conclusions of Law and Decision

The Board of Adjustment for the City of Graham, North Carolina, having held a public hearing on **February 20, 2018** to consider **case number VR1801**, submitted by **Tony Stewart of Anderson, SC** at 604 Lanford Street, for a **variance from Development Ordinance section 10.70, prohibiting the addition of new or larger antenna**, and having heard all the evidence and arguments presented at the hearings, makes the following FINDINGS OF FACT and draws the following CONCLUSIONS OF LAW:

FINDINGS OF FACT

NOTE: These Findings of Fact were prepared by staff and should be modified by the Board as it sees fit.

1. The property that is the subject of this variance request, 1360 Truby Dr., is zoned light industrial (I-1).
2. A site plan was completed on October 2, 1995 by Bellsouth Carolinas PCS, LP for 1360 Truby Drive, which included a proposed cellular tower. This indicates that there was a development plan in place at the time of the subsequent adoption of regulations guiding the setbacks for the tower below.
3. At their March 5th, 1996 meeting, the Graham City Council adopted distance from property line standards specific to cellular towers, as well as a requirement for a Special Use Permit.
4. A Certificate of Occupancy was issued by Joe Green, Chief Building Inspector for the City of Graham for a tower located at "1356 Truby Drive".
5. In 2000, Nextel was issued, by the City of Graham, a building permit and an electrical permit for co-location at this site.
6. In 2012, Crown Castle was issued a permit by the City of Graham to remove and replace antennas and cabinets at the site.
7. The tower is 200 feet in height, and 62.4 feet from the closest property line, which happens to be a right-of-way dedicated to the City of Graham in Plat Book 44, Page 118, which was filed with the Alamance County Register of Deeds on October 2nd 1991.
8. The tower is a nonconforming building, as it was constructed prior to the additional setback requirements for communication towers.
9. No other communication towers are located within one mile of this tower.
10. The applicant, Crown Castle, is now proposing to remove six antennas, and install three larger antennas.

[insert additional Findings of Fact, if any are made]

CONCLUSIONS OF LAW

The Board of Adjustment shall vary any of the provisions of the ordinance upon a showing of all of the following:

NOTE: These Conclusions of Law were prepared by staff and should be modified by the Board as it sees fit.

1. No change in permitted uses may be authorized by variance. Appropriate conditions may be imposed on any variance, provided that the conditions are reasonably related to the variance. Any other ordinance that regulates land use or development may provide for variances consistent with the provisions of this subsection. *Under strict application of the ordinance, the applicant will be unable to enlarge the antenna on the tower. A granting of a variance from the Board of Adjustment will allow the applicant to, in effect, retroactively approve a Special Use Permit for this tower, which would allow for continued use and expansion of the existing tower.*
2. Unnecessary hardship would result from the strict application of the ordinance. It shall not be necessary to demonstrate that, in the absence of the variance, no reasonable use can be made of the property. *Under the strict application of the ordinance, the property owner would have to tear down the existing tower, apply for a Special Use Permit, and reconstruct the tower about 150 feet from the current location.*
2. The hardship results from conditions that are peculiar to the property, such as location, size, or topography. Hardships resulting from personal circumstances, as well as hardships resulting from conditions that are common to the neighborhood or the general public, may not be the basis for granting a variance. *The hardship is created by the size of the lot, which is smaller than those around it. Due to the requirement that a new cellular tower be the tower's height from a property line, there is no place on this lot where the tower could be constructed.*
3. The hardship did not result from actions taken by the applicant or the property owner. The act of purchasing property with knowledge that circumstances exist that may justify the granting of a variance shall not be regarded as a self-created hardship. *Planning for the cellular tower started before the City of Graham adopted our current ordinance.*
4. The requested variance is consistent with the spirit, purpose, and intent of the ordinance, such that public safety is secured, and substantial justice is achieved. *While it is the intention of the ordinance to have new communication towers further setback from property lines, the granting of this variance would not permit a new tower, it would merely allow for additional antennae on the existing structure.*

DECISION

In exercising its powers, the Board of Adjustment may grant or deny a variance and may impose any appropriate conditions on the variance, provided that the conditions are reasonably related to the variance. The concurring vote of four-fifths of the Board shall be necessary to grant a variance.

For the above reasons, the Board of Adjustment (Grants/Denies) the variance that is the subject of this application.

Staff recommends that, the variance be approved on the aforementioned grounds.

The resolution reflects the decision of the Board of Adjustment, made the 20th day of February, 2018.

Attest:

Ricky Hall, Chair

Debbie Jolly, Secretary