DRAWING INDEX

DRAWING NO.	DESCRIPTION
T1	TITLE SHEET
S1-S2-S3	SURVEY
C2	CONSTRUCTION NOTES
C3 & C4	SITE PLANS
C4.1-C4.4	STORM WATER DESIGN & DETAILS
C5A-C5B-C5C	GRADING & EROSION CONTROL; SITE DET
C5D	DRIVEWAY TURNOUT DETAIL
C5E	CROSS DRAIN MITERED END SECTION
C6	ELEVATION & ANTENNA DETAILS
C7	LTE & CABLE DETAILS / RFDS
C8	CABLING DIAGRAM
C9	MICROWAVE DATA SHEET & COLOR CODE
C10	MICROWAVE DISH MOUNTING DETAILS
C11	MICROWAVE PATH POWER BUDGET
C12	EQUIPMENT FOUNDATION DETAILS
C12A	CANOPY DETAILS
C13	ICE BRIDGE DETAILS
C14	FENCE DETAILS
C14A	ACCESS GATE DETAILS
C15	GUY ANCHOR FENCE DETAILS
C16	ELECTRICAL NOTES
C17-C17A	ELECTRICAL PLAN
C18	ELECTRICAL DETAILS
C19	GROUNDING PLAN
C20	GROUNDING DETAILS

PROPOSED TOWER DATA (NAD 83)

TOWER:	350' GUYED TOWER
LATITUDE:	30° 49' 52.55" NORTH
LONGITUDE:	87° 19' 55.61" WEST
GROUND ELEVATION (EXISTING):	104.1' AMSL

ZONING INFORMATION

PERMITTING JURISDICTION:	ESCAMBIA COUNTY
ZONING / FUTURE USE:	RR / RC
PARCEL REFERENCE NUMBER:	27-4N-31-1000-000-003

PROJECT DESCRIPTION

PROPOSED EQUIPMENT AT NEW SITE TO INCLUDE:

1. ADDITION OF EQUIPMENT PAD & CANOPY
2. ADDITION OF (1) LTE CABINET
3. ADDITION OF (1) HSM16 FUEL STORAGE CABINET
4. ADDITION OF (3) LTE ANTENNAS, (3) RRUS, & (3) NOTCH FILTERS ON (3) NEW "SKYMOUNT" (1) PER SECTOR.
5. ADDITION OF (1) HYBRID FIBER CABLE
6. ADDITION OF (2) MICROWAVE ANTENNA
7. ADDITION OF (4) 3/8"Ø MICROWAVE COAXIAL CABLES

PROJECT CONTACTS

LESSEE

SOUTHERNLINC WIRELESS
4601 SOUTHLAKE PARKWAY, SUITE 150
HOOVER, AL 35244
CONTACT: ED MURRAY
OFFICE: (205) 257-4987
MOBILE: (205) 807-5800
EMAIL: elmurray@southernco.com

TOWER OWNER

EMPIRE TOWER I, LLC
1350 N. LOUISVILLE AVE.
TULSA, OK 74115
CONTACT: JOHN R. HEMPHILL
PHONE: (918) 834-2200

POWER PROVIDER

ESCAMBIA RIVER ELECTRIC COOPERATIVE
PHONE: (850) 675-4521

DRAWINGS BY

EXCELL COMMUNICATIONS, INC
3608 7TH COURT SOUTH
BIRMINGHAM, AL 35222
PHONE: (205) 956-0198
CONTACT: CLINT STEWART
E-MAIL: clintstewart@excellcommunications.com
PHONE: (205) 547-3579

Approved
ESCAMBIA COUNTY DRC PLAN REVIEW

DRC Chairman Signature
Development Services Director or Designee — Date 6/27/18

This document has been reviewed in accordance with the requirements of applicable Escambia County Regulations and Ordinances, and does not in any way relieve the submitting Architect, Engineer, Surveyor or other signatory from responsibility of details as drawn. A Development Order must be obtained from the Development Review Committee (DRC) prior to the commencement of construction. This approval by the DRC does not constitute approval by any other agency. All additional state/federal permits shall be provided to the county prior to approval of a final plat or the issuance of state/federal permits shall be provided to the county prior to approval of a final plat or the issuance of a building permit.

VICINITY MAP

Southern Linc©

SITE NAME: BOGIA
SITE NUMBER: F-8119
2401 S. CENTURY BLVD.
McDAVID, FL 32568

811 Know what's below. Call before you dig.

SEEKING APPROVAL FOR A CONDITIONAL USE/VARIANCE TO ALLOW A 350' GUYED TOWER AND WIRELESS COMMUNICATION FACILITY.

"THE SUBJECT PROPERTY AS SHOWN HEREON IS LOCATED IN FLOOD ZONE X, (MINIMAL RISK OUTSIDE THE 1% AND .2% ANNUAL FLOOD CHANCE FLOODPLAINS. NO BFE'S OR BASE FLOOD DEPTHS ARE SHOWN WITHIN THESE ZONES), AS DETERMINED FROM THE FEDERAL EMERGENCY MANAGEMENT AGENCY FLOOD INSURANCE RATE MAP OF ESCAMBIA COUNTY, FLORIDA, COMMUNITY 120080, FIRM MAP PANEL NUMBERS 12033C0155G, MAP REVISION DATED SEPTEMBER 29, 2006"

Conditional Use Case # 2017-11, 27-4N 31-1000-00-003, 2700 Blk Century Blvd.
Approved by BOA on November 15, 2017

APPLICABLE BUILDING CODES AND STANDARDS

CONTRACTOR'S WORK SHALL COMPLY WITH ALL APPLICABLE NATIONAL, STATE, AND LOCAL CODES AS ADOPTED BY THE LOCAL AUTHORITY HAVING JURISDICTION (AHJ) FOR THE LOCATION. THE EDITION OF THE AHJ ADOPTED CODES AND STANDARDS IN EFFECT ON THE DATE OF CONTRACT AWARD SHALL GOVERN THE DESIGN.

2014 FLORIDA BUILDING CODES 5TH EDITION, INCLUDING THE 2011 NATIONAL ELECTRIC CODES

CONTRACTOR'S WORK SHALL COMPLY WITH THE LATEST EDITION OF THE FOLLOWING STANDARDS:
AMERICAN CONCRETE INSTITUTE (ACI) 318, BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE
AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC), MANUAL OF STEEL CONSTRUCTION, THIRTEENTH EDITION
TELECOMMUNICATIONS INDUSTRY ASSOCIATION (TIA) 222, REVISION CURRENTLY ENFORCED STRUCTURAL STANDARDS FOR STEEL ANTENNA TOWER AND ANTENNA SUPPORTING STRUCTURES TIA 607, COMMERCIAL BUILDING GROUNDING AND BONDING REQUIREMENTS FOR TELECOMMUNICATIONS

INSTITUTE FOR ELECTRICAL AND ELECTRONICS ENGINEERS (IEEE) 81, GUIDE FOR MEASURING EARTH RESISTIVELY, GROUND IMPEDANCE, AND EARTH SURFACE POTENTIALS OF A GROUND SYSTEM
IEEE 1100 (1999) RECOMMENDED PRACTICE FOR POWERING AND GROUNDING OF ELECTRONIC EQUIPMENT

IEEE C62.41, RECOMMENDED PRACTICES ON SURGE VOLTAGES IN LOW VOLTAGE AC POWER CIRCUITS (FOR LOCATION CATEGORY "C3" AND "HIGH SYSTEM EXPOSURE")

ANSI T1.311, FOR TELECOM - DC POWER SYSTEMS - TELECOM, ENVIRONMENTAL PROTECTION

FOR ANY CONFLICTS BETWEEN SECTIONS OF LISTED CODES AND STANDARDS REGARDING MATERIAL, METHODS OF CONSTRUCTION, OR OTHER REQUIREMENTS, THE MOST RESTRICTIVE REQUIREMENT SHALL GOVERN. WHERE THERE IS CONFLICT BETWEEN A GENERAL REQUIREMENT AND A SPECIFIC REQUIREMENT, THE SPECIFIC REQUIREMENT SHALL GOVERN.

STRUCTURAL NOTE

1. DESIGN REQUIREMENTS FOR ANTENNA SUPPORTING STRUCTURES, ANTENNAS, EQUIPMENT CABINETS, AND PPC CABINETS PER 2009 INTERNATIONAL BUILDING CODE, 2011 NATIONAL ELECTRIC CODE, AND THE ANSI/TIA-222-G STRUCTURAL STANDARD FOR ANTENNA SUPPORTING STRUCTURES AND ANTENNAS.

GENERAL NOTES

1. 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 & 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 AND/OR COUNTY IN WHICH IT IS PERFORMED.
2. 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.
3. 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.
4. ALL DIMENSIONS SHALL BE VERIFIED WITH THE PLANS (LATEST REVISION) PRIOR TO COMMENCING CONSTRUCTION. NOTIFY THE OWNER IMMEDIATELY IF DISCREPANCIES ARE DISCOVERED.
5. ALL MATERIALS AND WORKMANSHIP SHALL BE WARRANTED FOR ONE (1) YEAR FROM DATE OF ACCEPTANCE.

DRIVING DIRECTIONS

DRIVING DIRECTIONS ARE FROM 4601 SOUTHLAKE PARKWAY, HOOVER, AL 35244

TAKE I-65 SOUTH TOWARD MONTGOMERY, AND DRIVE FOR 177.6 MILES TO EXIT 69, SR-113. TURN LEFT ONTO SR-113 AND TRAVEL 13.6 MILES TO US-29/SR-113/US-31S. TURN RIGHT ONTO US-29/SR-113/US-31S AND TRAVEL 1.1 MILE, TURN LEFT AND CONTINUE ON US-29/SR-113/US-31S FOR 15.2 MILES. THE SITE WILL BE ON THE RIGHT.

Southern Linc

APPROVALS
CARRIER
LANDLORD
LEASING
CONSTRUCTION

PROJECT NO:

DRAWN BY: JAL

CHECKED BY: JMB

APPROVED BY: CBS

V	DATE	DESCRIPTION
3	07/25/17	REV. PER JURISDICTION
2	02/09/17	ISSUED FOR CONSTR.
1	01/10/17	ISSUED FOR REVIEW
0	11/15/16	ISSUED FOR REVIEW

PROFESSIONAL ENGINEER
CLINTON B. STEWART LICENSE No. 61406 STATE OF FLORIDA PROFESSIONAL ENGINEER 8/16/17

CLINTON B. STEWART P.E. #61406
EXCELL COMMUNICATIONS C.A. # 27488

EXCELL COMMUNICATIONS, INC.

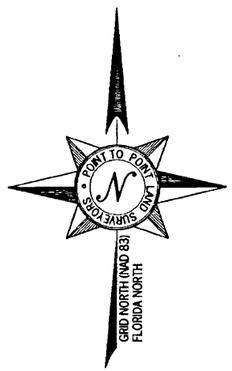
EXCELL COMMUNICATIONS, INC.
3608 7th COURT SOUTH
BIRMINGHAM, ALABAMA 35222
PHONE: 205.956.0198
FAX: 205.956.2632

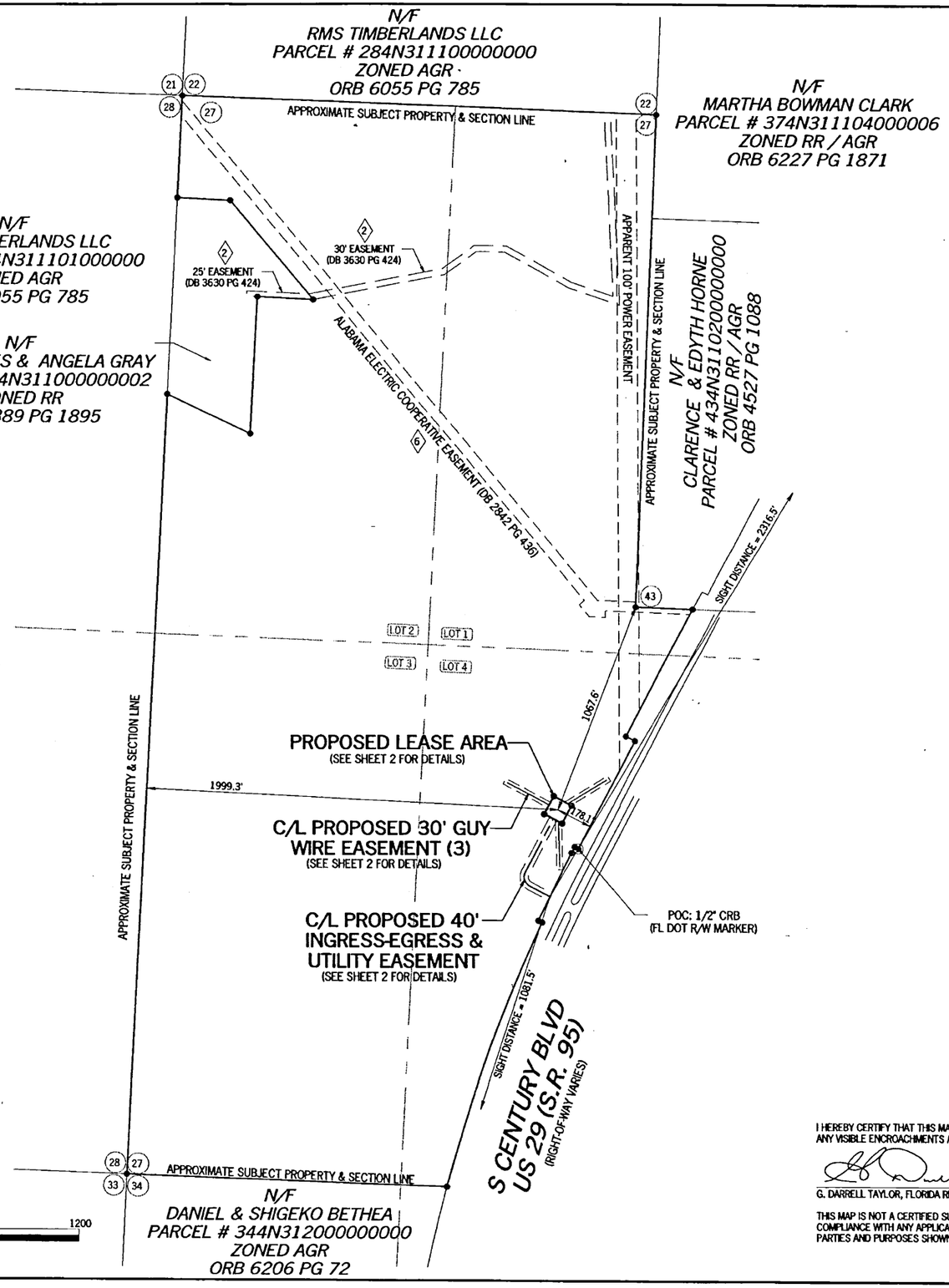
SITE NAME
BOGIA
F-8119

SITE ADDRESS
2401 S. CENTURY BLVD.
McDAVID, FL 32568

SHEET TITLE
TITLE SHEET

SHEET NUMBER
T1





SUBJECT PROPERTY

OWNER: DANIEL K. & DEBORAH L. CARPENTER

SITE ADDRESS: (2700 BLOCK) CENTURY BLVD, MCDAVID, FL 32568

PARCEL ID: 274N311000000003

AREA: 252.2 ACRES (PER TAX ASSESSOR)

ZONED: RR (RURAL RESIDENTIAL) / AGR (AGRICULTURAL)

ALL ZONING INFORMATION SHOULD BE VERIFIED WITH THE PROPER ZONING OFFICIALS

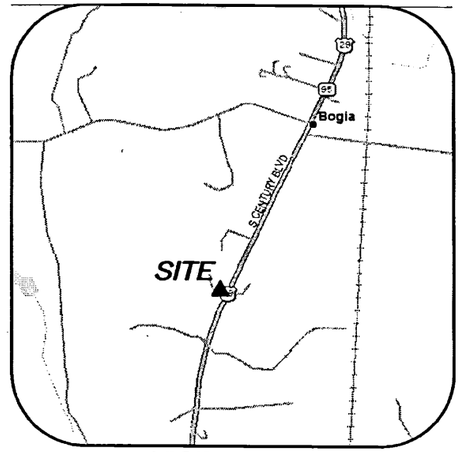
REFERENCE: OFFICIAL RECORD BOOK 5437 PAGE 1073

LEGEND

POB	POINT OF BEGINNING
POC	POINT OF COMMENCEMENT
IPS	IRON PIN SET
IPF	IRON PIN FOUND
CMF	CONCRETE MONUMENT FOUND
UP	UTILITY POLE
HTUP	HIGH TENSION UTILITY POLE
LP	LIGHT POLE
FP	FLAG POLE
SSMH	SANITARY SEWER MANHOLE
SDMH	STORM DRAIN MANHOLE
INV	INVERT
FH	FIRE HYDRANT
EP	EDGE OF PAVEMENT
TC	TOP OF CURB
BC	BACK OF CURB
TW	TOP OF WALL
BW	BOTTOM OF WALL
OU	OVERHEAD UTILITY
UE	UNDERGROUND UTILITY
CMP	CORRUGATED METAL PIPE
RCP	REINFORCED CONCRETE PIPE
PVC	POLYVINYL CHLORIDE PIPE
GW	GUY WIRE ANCHOR
TR	TRANSFORMER
JB	JUNCTION BOX
SWCB	SINGLE WING CATCH BASIN
DWCB	DOUBLE WING CATCH BASIN
CLF	CHAIN LINK FENCE
WV	WATER VALVE
WM	WATER METER
CO	SEWER CLEAN-OUT
GV	GAS VALVE
N/F	NOW OR FORMERLY
IB	ICE BRIDGE
IBP	ICE BRIDGE POLE

300 0 600 1200

GRAPHIC SCALE IN FEET
SCALE: 1" = 600'



VICINITY MAP

NOT TO SCALE

GENERAL NOTES

* THIS SPECIFIC PURPOSE SURVEY IS FOR THE LEASED PREMISES AND EASEMENTS ONLY. THIS SPECIFIC PURPOSE SURVEY WAS PREPARED FOR THE EXCLUSIVE USE OF SOUTHERNLINC WIRELESS AND EXCLUSIVELY FOR THE TRANSFERRAL OF THE PROPOSED LEASED PREMISES AND THE RIGHTS OF EASEMENT SHOWN HEREON AND SHALL NOT BE USED AS AN EXHIBIT OR EVIDENCE IN THE FEE SIMPLE TRANSFERRAL OF THE PARENT PARCEL NOR ANY PORTION OR PORTIONS THEREOF. BOUNDARY INFORMATION SHOWN HEREON HAS BEEN COMPILED FROM TAX MAPS AND DEED DESCRIPTIONS ONLY. NO BOUNDARY SURVEY OF THE PARENT PARCEL WAS PERFORMED.

THIS DRAWING DOES NOT REPRESENT A BOUNDARY SURVEY.

THE FIELD DATA UPON WHICH THIS SPECIFIC PURPOSE SURVEY IS BASED HAS A CLOSURE PRECISION OF ONE FOOT IN 20,000+ FEET AND AN ANGULAR ERROR OF 5.0" PER ANGLE POINT AND WAS ADJUSTED USING LEAST SQUARES.

EQUIPMENT USED FOR ANGULAR & LINEAR MEASUREMENTS: LEICA TPS 1200 ROBOTIC & GEOMAX ZENITH 20 (DATE OF LAST FIELD VISIT: 8/9/16)

THE 2' CONTOURS AND SPOT ELEVATIONS SHOWN ON THIS SPECIFIC PURPOSE SURVEY ARE ADJUSTED TO NAVD 88 DATUM (COMPUTED USING GEOID 12B) AND HAVE A VERTICAL ACCURACY OF ± 1'. CONTOURS OUTSIDE THE IMMEDIATE SITE AREA ARE APPROXIMATE.

BEARINGS SHOWN ON THIS SPECIFIC PURPOSE SURVEY ARE BASED ON GRID NORTH (NAD 83) FLORIDA NORTH ZONE.

BENCHMARKS USED: DM5371, DL7331, DM3973

NO PORTION OF THIS PROPERTY IS LOCATED IN A SPECIAL FLOOD AREA AS PER F.I.R.M. COMMUNITY PANEL NO. 12033C0155G DATED SEPTEMBER 29, 2006.

NO WETLAND AREAS HAVE BEEN INVESTIGATED BY THIS SPECIFIC PURPOSE SURVEY.

ALL ZONING INFORMATION SHOULD BE VERIFIED WITH THE PROPER ZONING OFFICIALS.

ANY UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM ABOVE GROUND FIELD SURVEY INFORMATION. THE SURVEYOR MAKES NO GUARANTEES THAT ANY UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN-SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT ANY UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED ANY UNDERGROUND UTILITIES.

ADDITIONS OR DELETIONS TO THIS SURVEY MAP BY OTHER THAN THE SIGNING PARTY IS PROHIBITED WITHOUT WRITTEN CONSENT OF THE SIGNING PARTY.

ORIGINAL SURVEY IS KEPT ON FILE IN THE SURVEYOR'S OFFICE.

I HEREBY CERTIFY THAT THIS MAP IS CORRECT AND WAS DRAWN UNDER MY DIRECT SUPERVISION. ANY VISIBLE ENCROACHMENTS ARE SHOWN HEREON.

DATE: 8/23/2016

G. DARRELL TAYLOR, FLORIDA REGISTERED LAND SURVEYOR #LS6904

THIS MAP IS NOT A CERTIFIED SURVEY AND HAS NOT BEEN REVIEWED BY A LOCAL GOVERNMENT AGENCY FOR COMPLIANCE WITH ANY APPLICABLE LAND DEVELOPMENT REGULATIONS. THIS MAP IS ONLY INTENDED FOR THE PARTIES AND PURPOSES SHOWN. THIS MAP IS NOT FOR RECORDATION. NO TITLE REPORT PROVIDED.

SURVEY NOT VALID WITHOUT SHEETS 2 & 3 OF 3

G. DARRELL TAYLOR
License Number
6904
STATE OF FLORIDA
Professional Surveyor and Mapper

NO.	DATE	REVISION
1	11/21/2016	ADDED TITLE - NRW

SPECIFIC PURPOSE SURVEY PREPARED BY:

POINT TO POINT
LAND SURVEYORS
1010 Pennsylvania Avenue
McDonough, GA 30253
(p) 678.565.4440 (f) 678.565.4497
(w) pointtopointsurvey.com

SPECIFIC PURPOSE SURVEY PREPARED FOR:

SouthernLINC Wireless
A Southern Company

"BOGIA"

SITE NO.
F8119

GOVERNMENT LOT 4,
FRACTIONAL SECTION 27,
TOWNSHIP 4 NORTH, RANGE 31 WEST,
ESCAMBIA COUNTY, FLORIDA

DRAWN BY: EAL	SHEET: 1
CHECKED BY: JKL	
APPROVED: C. INER	
DATE: AUGUST 23, 2016	
P2P JOB #: G160451	OF 3

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SITE INFORMATION

PROPOSED LEASE AREA = 10,000 SQUARE FEET (.02296 ACRES)

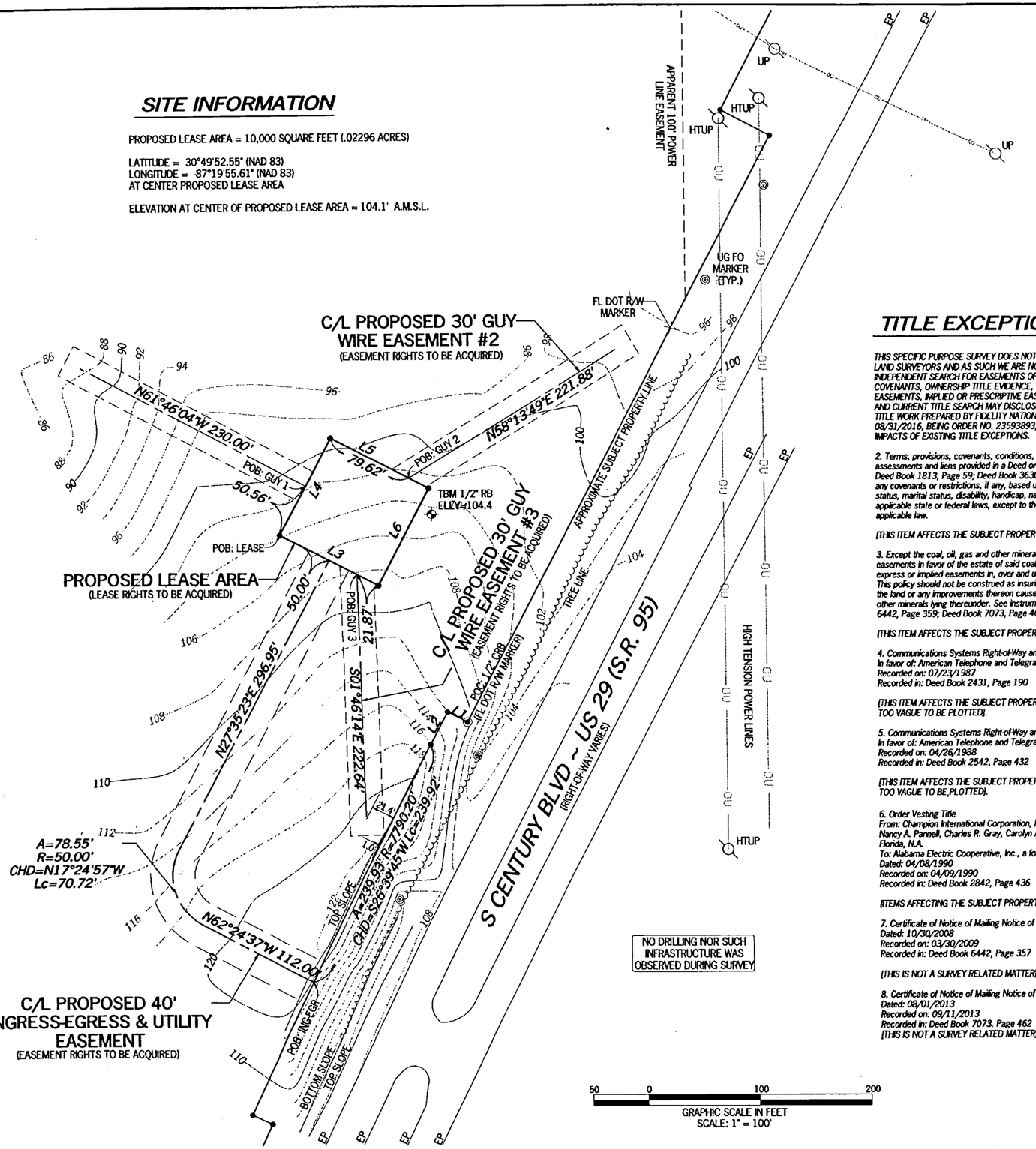
LATITUDE = 30°49'52.55" (NAD 83)
LONGITUDE = -87°19'55.61" (NAD 83)
AT CENTER PROPOSED LEASE AREA

ELEVATION AT CENTER OF PROPOSED LEASE AREA = 104.1' A.M.S.L.

GRID NORTH (NAD 83)
FLORIDA NORTH

LINE TABLE

LINE	BEARING	DISTANCE
L1	N62°25'43"W	20.00'
L2	S27°34'17"W	33.20'
L3	N62°24'37"W	100.00'
L4	N27°35'23"E	100.00'
L5	S62°24'37"E	100.00'
L6	S27°35'23"W	100.00'



LEGEND

POB	POINT OF BEGINNING
POC	POINT OF COMMENCEMENT
IPS	IRON PIN SET
IPF	IRON PIN FOUND
CMF	CONCRETE MONUMENT FOUND
UP	UTILITY POLE
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LP	LIGHT POLE
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SSMH	SANITARY SEWER MANHOLE
SDMH	STORM DRAIN MANHOLE
INV	INVERT
FH	FIRE HYDRANT
EP	EDGE OF PAVEMENT
TC	TOP OF CURB
BC	BACK OF CURB
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BW	BOTTOM OF WALL
OU	OVERHEAD UTILITY
UE	UNDERGROUND UTILITY
CMP	CORRUGATED METAL PIPE
RCP	REINFORCED CONCRETE PIPE
PVC	POLYVINYL CHLORIDE PIPE
GW	GUY WIRE ANCHOR
TR	TRANSFORMER
JB	JUNCTION BOX
SWCB	SINGLE WING CATCH BASIN
DWCB	DOUBLE WING CATCH BASIN
CLF	CHAIN LINK FENCE
WV	WATER VALVE
WM	WATER METER
CO	SEWER CLEAN-OUT
GV	GAS VALVE
N/F	NOW OR FORMERLY
IB	ICE BRIDGE
IBP	ICE BRIDGE POLE

TITLE EXCEPTIONS

THIS SPECIFIC PURPOSE SURVEY DOES NOT CONSTITUTE A TITLE SEARCH BY POINT TO POINT LAND SURVEYORS AND AS SUCH WE ARE NOT RESPONSIBLE FOR THE INVESTIGATION OR INDEPENDENT SEARCH FOR EASEMENTS OF RECORD, ENCUMBRANCES, RESTRICTIVE COVENANTS, OWNERSHIP TITLE EVIDENCE, UNRECORDED EASEMENTS, AUGMENTING EASEMENTS, IMPLIED OR PRESCRIPTIVE EASEMENTS, OR ANY OTHER FACTS THAT AN ACCURATE AND CURRENT TITLE SEARCH MAY DISCLOSE. THIS SURVEY WAS COMPLETED WITH THE AID OF TITLE WORK PREPARED BY FIDELITY NATIONAL TITLE INSURANCE COMPANY, ISSUE DATE OF 08/31/2016, BEING ORDER NO. 23593893, FOR THE SUBJECT PROPERTY, TO DETERMINE THE IMPACTS OF EXISTING TITLE EXCEPTIONS.

2. Terms, provisions, covenants, conditions, restrictions, reservations, easements, charges, assessments and liens provided in a Deed or Covenants, Conditions and Restrictions recorded in Deed Book 1813, Page 59; Deed Book 3630, Page 424; Deed Book 3652, Page 159, but omitting any covenants or restrictions, if any, based upon race, color, religion, sex, sexual orientation, familial status, marital status, disability, handicap, national origin, ancestry, or source of income, as set forth in applicable state or federal laws, except to the extent that said covenant or restriction is permitted by applicable law.

[THIS ITEM AFFECTS THE SUBJECT PROPERTY. PLOTTABLE ITEMS SHOWN HEREON].

3. Except the coal, oil, gas and other minerals underlying the surface of said land and all rights and easements in favor of the estate of said coal, oil, gas and other minerals; including, but not limited to, express or implied easements in, over and under that estate for the entry and removal of minerals. This policy should not be construed as insuring against loss or damage resulting to the surface of the land or any improvements thereon caused by surface entry or by the removal of the oil, gas, and other minerals lying thereunder. See instrument recorded in Deed Book 1826, Page 617; Deed Book 6442, Page 359; Deed Book 7073, Page 464.

[THIS ITEM AFFECTS THE SUBJECT PROPERTY].

4. Communications Systems Right-of-Way and Easement
In favor of: American Telephone and Telegraph Company
Recorded on: 07/23/1987
Recorded in: Deed Book 2431, Page 190

[THIS ITEM AFFECTS THE SUBJECT PROPERTY. DESCRIPTION OF THE EASEMENT IS TOO VAGUE TO BE PLOTTED].

5. Communications Systems Right-of-Way and Easement
In favor of: American Telephone and Telegraph Company
Recorded on: 04/26/1988
Recorded in: Deed Book 2542, Page 432

[THIS ITEM AFFECTS THE SUBJECT PROPERTY. DESCRIPTION OF THE EASEMENT IS TOO VAGUE TO BE PLOTTED].

6. Order Vesting Title
From: Champion International Corporation, Marshall Reid Godwin, Arthur R. Pannell, Nancy A. Pannell, Charles R. Gray, Carolyn A. Gray, Helen Keener Batson and Sun Bank/West Florida, N.A.
To: Alabama Electric Cooperative, Inc., a foreign corporation
Dated: 04/08/1990
Recorded on: 04/09/1990
Recorded in: Deed Book 2842, Page 436

[ITEMS AFFECTING THE SUBJECT PROPERTY ARE PLOTTED HEREON].

7. Certificate of Notice of Mailing Notice of Application for Tax Deed
Dated: 10/30/2008
Recorded on: 03/30/2009
Recorded in: Deed Book 6442, Page 357

[THIS IS NOT A SURVEY RELATED MATTER].

8. Certificate of Notice of Mailing Notice of Application for Tax Deed
Dated: 08/01/2013
Recorded on: 09/11/2013
Recorded in: Deed Book 7073, Page 462
[THIS IS NOT A SURVEY RELATED MATTER].

SURVEY NOT VALID WITHOUT SHEETS 1 & 3 OF 3

G. DARRELL TAYLOR
License Number 6904
STATE OF FLORIDA
Professional Surveyor and Mapper

NO.	DATE	REVISION
1	11/21/2016	ADDED TITLE - NRW

SPECIFIC PURPOSE SURVEY PREPARED BY:
POINT TO POINT LAND SURVEYORS
1010 Pennsylvania Avenue
McDonough, GA 30253
(p) 678.565.4440 (f) 678.565.4497
(w) pointtopointsurvey.com

SPECIFIC PURPOSE SURVEY PREPARED FOR:

SouthernLINC Wireless
A Southern Company

"BOGIA"

SITE NO.
F8119
GOVERNMENT LOT 4,
FRACTIONAL SECTION 27,
TOWNSHIP 4 NORTH, RANGE 31 WEST,
ESCAMBIA COUNTY, FLORIDA

DRAWN BY: EAL
CHECKED BY: JKL
APPROVED: C. INER
DATE: AUGUST 23, 2016
P2P JOB #: G160451

SHEET: 2 OF 3

E:\Dropbox (Point To Point)\P2P Current Jobs\2016\G160451-Bogia\G160451.pro

LEGAL DESCRIPTION SHEET

PROPOSED LEASE AREA

ALL THAT TRACT OR PARCEL OF LAND, LYING AND BEING IN GOVERNMENT LOT 4, FRACTIONAL SECTION 27, TOWNSHIP 4 NORTH, RANGE 31 WEST, ESCAMBIA COUNTY, FLORIDA, AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

TO FIND THE POINT OF BEGINNING, COMMENCE AT A ½-INCH CAPPED REBAR (CAP: FL DOT R/W MARKER) FOUND ON THE WESTERLY RIGHT-OF-WAY LINE OF SOUTH CENTURY BOULEVARD / U.S. 29 (HAVING A VARIABLE WIDTH RIGHT-OF-WAY); THENCE RUNNING ALONG SAID RIGHT-OF-WAY LINE, NORTH 62°25'43" WEST, 20.00 FEET TO A POINT; THENCE CONTINUING ALONG SAID RIGHT-OF-WAY LINE, SOUTH 27°34'17" WEST, 33.20 FEET TO A POINT; THENCE CONTINUING ALONG SAID RIGHT-OF-WAY LINE, 239.93 FEET ALONG THE ARC OF A CURVE TO THE LEFT, HAVING A RADIUS OF 7790.20 FEET AND BEING SCRIBED BY A CHORD BEARING, SOUTH 26°39'45" WEST, 239.92 FEET TO A POINT; THENCE LEAVING SAID RIGHT-OF-WAY LINE AND RUNNING, NORTH 62°24'37" WEST, 112.00 FEET TO A POINT; THENCE, 78.55 FEET ALONG THE ARC OF A CURVE TO THE RIGHT, HAVING A RADIUS OF 50.00 FEET AND BEING SCRIBED BY A CHORD BEARING, NORTH 17°24'57" WEST, 70.72 FEET TO A POINT; THENCE, NORTH 27°35'23" EAST, 296.95 FEET TO A POINT; NORTH 62°24'37" WEST, 50.00 FEET TO A POINT AND THE TRUE POINT OF BEGINNING; THENCE, NORTH 27°35'23" EAST, 100.00 FEET TO A POINT; THENCE, SOUTH 62°24'37" EAST, 100.00 FEET TO A POINT; THENCE, SOUTH 27°35'23" WEST, 100.00 FEET TO A POINT; THENCE, NORTH 62°24'37" WEST, 100.00 FEET TO A POINT; AND THE POINT OF BEGINNING.

SAID TRACT CONTAINS 0.2296 ACRES (10,000 SQUARE FEET), MORE OR LESS.

PROPOSED 40' INGRESS-EGRESS & UTILITY EASEMENT

TOGETHER WITH A PROPOSED 40-FOOT INGRESS-EGRESS AND UTILITY EASEMENT, LYING AND BEING IN GOVERNMENT LOT 4, FRACTIONAL SECTION 27, TOWNSHIP 4 NORTH, RANGE 31 WEST, ESCAMBIA COUNTY, FLORIDA, AND BEING MORE PARTICULARLY DESCRIBED BY THE FOLLOWING CENTERLINE DATA:

TO FIND THE POINT OF BEGINNING, COMMENCE AT A ½-INCH CAPPED REBAR (CAP: FL DOT R/W MARKER) FOUND ON THE WESTERLY RIGHT-OF-WAY LINE OF SOUTH CENTURY BOULEVARD / U.S. 29 (HAVING A VARIABLE WIDTH RIGHT-OF-WAY); THENCE RUNNING ALONG SAID RIGHT-OF-WAY LINE, NORTH 62°25'43" WEST, 20.00 FEET TO A POINT; THENCE CONTINUING ALONG SAID RIGHT-OF-WAY LINE, SOUTH 27°34'17" WEST, 33.20 FEET TO A POINT; THENCE CONTINUING ALONG SAID RIGHT-OF-WAY LINE, 239.93 FEET ALONG THE ARC OF A CURVE TO THE LEFT, HAVING A RADIUS OF 7790.20 FEET AND BEING SCRIBED BY A CHORD BEARING, SOUTH 26°39'45" WEST, 239.92 FEET TO A POINT AND THE TRUE POINT OF BEGINNING; THENCE LEAVING SAID RIGHT-OF-WAY LINE AND RUNNING, NORTH 62°24'37" WEST, 112.00 FEET TO A POINT; THENCE, 78.55 FEET ALONG THE ARC OF A CURVE TO THE RIGHT, HAVING A RADIUS OF 50.00 FEET AND BEING SCRIBED BY A CHORD BEARING, NORTH 17°24'57" WEST, 70.72 FEET TO A POINT; THENCE, NORTH 27°35'23" EAST, 296.95 FEET TO A POINT TO THE ENDING AT A POINT.

PROPOSED GUY WIRE EASEMENT #1

TOGETHER WITH A PROPOSED 30-FOOT GUY WIRE EASEMENT, LYING AND BEING IN GOVERNMENT LOT 4, FRACTIONAL SECTION 27, TOWNSHIP 4 NORTH, RANGE 31 WEST, ESCAMBIA COUNTY, FLORIDA, AND BEING MORE PARTICULARLY DESCRIBED BY THE FOLLOWING CENTERLINE DATA:

TO FIND THE POINT OF BEGINNING, COMMENCE AT A ½-INCH CAPPED REBAR (CAP: FL DOT R/W MARKER) FOUND ON THE WESTERLY RIGHT-OF-WAY LINE OF SOUTH CENTURY BOULEVARD / U.S. 29 (HAVING A VARIABLE WIDTH RIGHT-OF-WAY); THENCE RUNNING ALONG SAID RIGHT-OF-WAY LINE, NORTH 62°25'43" WEST, 20.00 FEET TO A POINT; THENCE CONTINUING ALONG SAID RIGHT-OF-WAY LINE, SOUTH 27°34'17" WEST, 33.20 FEET TO A POINT; THENCE CONTINUING ALONG SAID RIGHT-OF-WAY LINE, 239.93 FEET ALONG THE ARC OF A CURVE TO THE LEFT, HAVING A RADIUS OF 7790.20 FEET AND BEING SCRIBED BY A CHORD BEARING, SOUTH 26°39'45" WEST, 239.92 FEET TO A POINT; THENCE LEAVING SAID RIGHT-OF-WAY LINE AND RUNNING, NORTH 62°24'37" WEST, 112.00 FEET TO A POINT; THENCE, 78.55 FEET ALONG THE ARC OF A CURVE TO THE RIGHT, HAVING A RADIUS OF 50.00 FEET AND BEING SCRIBED BY A CHORD BEARING, NORTH 17°24'57" WEST, 70.72 FEET TO A POINT; THENCE, NORTH 27°35'23" EAST, 296.95 FEET TO A POINT AND THE TRUE POINT OF BEGINNING; THENCE RUNNING, NORTH 61°46'04" WEST, 230.00 FEET TO THE ENDING AT A POINT.

PROPOSED GUY WIRE EASEMENT #2

TOGETHER WITH A PROPOSED 30-FOOT GUY WIRE EASEMENT, LYING AND BEING IN GOVERNMENT LOT 4, FRACTIONAL SECTION 27, TOWNSHIP 4 NORTH, RANGE 31 WEST, ESCAMBIA COUNTY, FLORIDA, AND BEING MORE PARTICULARLY DESCRIBED BY THE FOLLOWING CENTERLINE DATA:

TO FIND THE POINT OF BEGINNING, COMMENCE AT A ½-INCH CAPPED REBAR (CAP: FL DOT R/W MARKER) FOUND ON THE WESTERLY RIGHT-OF-WAY LINE OF SOUTH CENTURY BOULEVARD / U.S. 29 (HAVING A VARIABLE WIDTH RIGHT-OF-WAY); THENCE RUNNING ALONG SAID RIGHT-OF-WAY LINE, NORTH 62°25'43" WEST, 20.00 FEET TO A POINT; THENCE CONTINUING ALONG SAID RIGHT-OF-WAY LINE, SOUTH 27°34'17" WEST, 33.20 FEET TO A POINT; THENCE CONTINUING ALONG SAID RIGHT-OF-WAY LINE, 239.93 FEET ALONG THE ARC OF A CURVE TO THE LEFT, HAVING A RADIUS OF 7790.20 FEET AND BEING SCRIBED BY A CHORD BEARING, SOUTH 26°39'45" WEST, 239.92 FEET TO A POINT; THENCE LEAVING SAID RIGHT-OF-WAY LINE AND RUNNING, NORTH 62°24'37" WEST, 112.00 FEET TO A POINT; THENCE, 78.55 FEET ALONG THE ARC OF A CURVE TO THE RIGHT, HAVING A RADIUS OF 50.00 FEET AND BEING SCRIBED BY A CHORD BEARING, NORTH 17°24'57" WEST, 70.72 FEET TO A POINT; THENCE, NORTH 27°35'23" EAST, 296.95 FEET TO A POINT; NORTH 62°24'37" WEST, 50.00 FEET TO A POINT; THENCE, NORTH 27°35'23" EAST, 100.00 FEET TO A POINT; THENCE, SOUTH 62°24'37" EAST, 79.62 FEET TO A POINT AND THE TRUE POINT OF BEGINNING; THENCE RUNNING, NORTH 58°13'49" EAST, 221.88 FEET TO THE ENDING AT A POINT.

PROPOSED GUY WIRE EASEMENT #3

TOGETHER WITH A PROPOSED 30-FOOT GUY WIRE EASEMENT, LYING AND BEING IN GOVERNMENT LOT 4, FRACTIONAL SECTION 27, TOWNSHIP 4 NORTH, RANGE 31 WEST, ESCAMBIA COUNTY, FLORIDA, AND BEING MORE PARTICULARLY DESCRIBED BY THE FOLLOWING CENTERLINE DATA:

TO FIND THE POINT OF BEGINNING, COMMENCE AT A ½-INCH CAPPED REBAR (CAP: FL DOT R/W MARKER) FOUND ON THE WESTERLY RIGHT-OF-WAY LINE OF SOUTH CENTURY BOULEVARD / U.S. 29 (HAVING A VARIABLE WIDTH RIGHT-OF-WAY); THENCE RUNNING ALONG SAID RIGHT-OF-WAY LINE, NORTH 62°25'43" WEST, 20.00 FEET TO A POINT; THENCE CONTINUING ALONG SAID RIGHT-OF-WAY LINE, SOUTH 27°34'17" WEST, 33.20 FEET TO A POINT; THENCE CONTINUING ALONG SAID RIGHT-OF-WAY LINE, 239.93 FEET ALONG THE ARC OF A CURVE TO THE LEFT, HAVING A RADIUS OF 7790.20 FEET AND BEING SCRIBED BY A CHORD BEARING, SOUTH 26°39'45" WEST, 239.92 FEET TO A POINT; THENCE LEAVING SAID RIGHT-OF-WAY LINE AND RUNNING, NORTH 62°24'37" WEST, 112.00 FEET TO A POINT; THENCE, 78.55 FEET ALONG THE ARC OF A CURVE TO THE RIGHT, HAVING A RADIUS OF 50.00 FEET AND BEING SCRIBED BY A CHORD BEARING, NORTH 17°24'57" WEST, 70.72 FEET TO A POINT; THENCE, NORTH 27°35'23" EAST, 296.95 FEET TO A POINT; NORTH 62°24'37" WEST, 50.00 FEET TO A POINT; THENCE, NORTH 27°35'23" EAST, 100.00 FEET TO A POINT; THENCE, SOUTH 62°24'37" EAST, 100.00 FEET TO A POINT; THENCE, SOUTH 27°35'23" WEST, 21.87 FEET TO A POINT AND THE TRUE POINT OF BEGINNING; THENCE RUNNING, SOUTH 01°46'14" EAST, 222.64 FEET TO THE ENDING AT A POINT.

SURVEY NOT VALID WITHOUT SHEETS 1 & 2 OF 3

G. DARRELL TAYLOR
License Number
6904
STATE OF FLORIDA
Professional Surveyor and Mapper

NO.	DATE	REVISION
1	11/21/2016	ADDED TITLE - NRW

SPECIFIC PURPOSE SURVEY PREPARED BY:
POINT TO POINT LAND SURVEYORS
1010 Pennsylvania Avenue
McDonough, GA 30253
(p) 678.565.4440 (f) 678.565.4497
(w) pointtopointsurvey.com

SPECIFIC PURPOSE SURVEY PREPARED FOR:

SouthernLINC Wireless
A Southern Company

"BOGIA"

SITE NO.
F8119
GOVERNMENT LOT 4,
FRACTIONAL SECTION 27,
TOWNSHIP 4 NORTH, RANGE 31 WEST,
ESCAMBIA COUNTY, FLORIDA

DRAWN BY: EAL
CHECKED BY: JKL
APPROVED: C. INER
DATE: AUGUST 23, 2016
P2P JOB #: G160451

SHEET: 3 OF 3

E:\Dropbox (Point To Point)\P2P Current Jobs\2016\G160451-Bogia\G160451.pro

GENERAL NOTES:

1. FOR THE PURPOSE OF THE CONSTRUCTION DRAWINGS, THE FOLLOWING DEFINITIONS SHALL APPLY:

   CONTRACTOR – GENERAL CONTRACTOR (CONSTRUCTION)
   OWNER – SouthernLINC

2. PRIOR TO THE SUBMISSION OF BIDS, THE BIDDING CONTRACTOR SHALL VISIT THE CELL SITE TO FAMILIARIZE WITH THE EXISTING CONDITIONS AND TO CONFIRM THAT THE WORK CAN BE ACCOMPLISHED AS SHOWN ON THE CONSTRUCTION DRAWINGS. ANY DISCREPANCY FOUND SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER.

3. ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES. CONTRACTOR SHALL ISSUE ALL APPROPRIATE NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS, AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF THE WORK.

4. ALL WORK CARRIED OUT SHALL COMPLY WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND LOCAL JURISDICTIONAL CODES, ORDINANCES AND APPLICABLE REGULATIONS.

5. UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES, AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.

6. THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.

7. IF THE SPECIFIED EQUIPMENT CANNOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE CONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION FOR APPROVAL BY THE ENGINEER.

8. CONTRACTOR SHALL DETERMINE ACTUAL ROUTING OF CONDUIT, POWER, FIBER, AND GROUNDING CABLES AS SHOWN ON THE POWER & GROUNDING DRAWINGS.

9. THE CONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING AND STRUCTURES. ANY DAMAGED PART SHALL BE REPAIRED AT CONTRACTOR'S EXPENSE TO THE SATISFACTION OF OWNER.

10. CONTRACTOR SHALL LEGALLY AND PROPERLY DISPOSE OF ALL SCRAP MATERIALS SUCH AS COAXIAL CABLES AND OTHER ITEMS REMOVED FROM THE EXISTING FACILITY.

11. CONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION.

12. **CONTRACTOR SHALL HAVE A PRECONSTRUCTION MEETING WITH OWNER TO DISCUSS ALL ASPECTS OF THE CONSTRUCTION SCOPE OF THIS DRAWING TO ENSURE HE IS FAMILIAR AND UNDERSTANDS ALL REQUIREMENTS AND INTENT OF EACH ACTIVITY.**

13. THE GENERAL CONTRACTOR MUST VERIFY ALL DIMENSIONS, CONDITIONS AND ELEVATIONS BEFORE STARTING WORK. ALL DISCREPANCIES SHALL BE CALLED TO THE ATTENTION OF THE ENGINEER AND SHALL BE RESOLVED BEFORE PROCEEDING WITH THE WORK. ALL WORK SHALL BE PERFORMED IN A WORKMANLIKE MANNER IN ACCORDANCE WITH ACCEPTED CONSTRUCTION PRACTICES.

14. IT IS THE INTENTION OF THESE DRAWINGS TO SHOW THE COMPLETE INSTALLATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TEMPORARY BRACING, SHORING, TIES, FORMWORK, ETC. IN ACCORDANCE WITH ALL NATIONAL, STATE, AND LOCAL ORDINANCES, TO SAFELY EXECUTE ALL WORK AND SHALL BE RESPONSIBLE FOR SAME. ALL WORK SHALL BE IN ACCORDANCE WITH LOCAL CODES.

15. THE CONTRACTOR SHALL USE ADEQUATE NUMBERS OF SKILLED WORKMEN WHO ARE THOROUGHLY TRAINED AND EXPERIENCED IN THE NECESSARY CRAFTS, AND WHO ARE COMPLETELY FAMILIAR WITH THE SPECIFIED REQUIREMENTS AND METHODS NEEDED FOR PROPER PERFORMANCE OF THE WORK.

16. CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY, THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS, AND CONSTRUCTION CONTRACTOR FURTHER AGREES TO INDEMNIFY AND HOLD DESIGN ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH PERFORMANCE OF WORK ON THIS PROJECT. ALL WORK SHALL COMPLY WITH OSHA AND STATE SAFETY REQUIREMENTS. PROCEDURES FOR THE PROTECTION OF EXCAVATIONS, EXISTING CONSTRUCTION AND UTILITIES SHALL BE ESTABLISHED PRIOR TO FOUNDATION INSTALLATION.

SITE WORK GENERAL NOTES:

1. THE CONTRACTOR SHALL CONTACT UTILITY LOCATING SERVICES PRIOR TO THE START OF CONSTRUCTION.

2. ALL EXISTING ACTIVE SEWER, WATER, GAS, ELECTRIC, AND OTHER UTILITIES WHERE ENCOUNTERED IN THE WORK, SHALL BE PROTECTED AT ALL TIMES, AND WHERE REQUIRED FOR THE PROPER EXECUTION OF THE WORK, SHALL BE RELOCATED AS DIRECTED BY ENGINEER. EXTREME CAUTION SHOULD BE USED BY THE CONTRACTOR WHEN EXCAVATING OR DRILLING PIERS AROUND OR NEAR UTILITIES. CONTRACTOR SHALL PROVIDE SAFETY TRAINING FOR THE WORKING CREW. THIS WILL INCLUDE BUT NOT BE LIMITED TO A) FALL PROTECTION B) CONFINED SPACE C) ELECTRICAL SAFETY D) TRENCHING & EXCAVATION.

3. ALL SITE WORK SHALL BE AS INDICATED ON THE DRAWINGS AND PROJECT SPECIFICATIONS.

4. IF NECESSARY, RUBBISH, STUMPS, DEBRIS, STICKS, STONES AND OTHER REFUSE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF LEGALLY.

5. ALL EXISTING INACTIVE SEWER, WATER, GAS, ELECTRIC AND OTHER UTILITIES, WHICH INTERFERE WITH THE EXECUTION OF THE WORK, SHALL BE REMOVED AND/OR CAPPED, PLUGGED OR OTHERWISE DISCONTINUED AT POINTS WHICH WILL NOT INTERFERE WITH THE EXECUTION OF THE WORK, SUBJECT TO THE APPROVAL OF OWNER AND/OR LOCAL UTILITIES.

6. THE CONTRACTOR SHALL PROVIDE SITE SIGNAGE IN ACCORDANCE WITH THE TECHNICAL SPECIFICATION FOR SITE SIGNAGE.

7. THE SITE SHALL BE GRADED TO CAUSE SURFACE WATER TO FLOW AWAY FROM THE BTS EQUIPMENT AND TOWER AREAS.

8. NO FILL OR EMBANKMENT MATERIAL SHALL BE PLACED ON FROZEN GROUND. FROZEN MATERIALS, SNOW OR ICE SHALL NOT BE PLACED IN ANY FILL OR EMBANKMENT.

9. THE SUB GRADE SHALL BE COMPACTED TO 95% PROCTOR AND BROUGHT TO A SMOOTH UNIFORM GRADE PRIOR TO FINISHED SURFACE APPLICATION.

10. THE AREAS OF THE OWNERS PROPERTY DISTURBED BY THE WORK AND NOT COVERED BY THE TOWER, EQUIPMENT OR DRIVEWAY, SHALL BE GRADED TO A UNIFORM SLOPE, AND STABILIZED TO PREVENT EROSION AS SPECIFIED IN THE PROJECT SPECIFICATIONS.

11. CONTRACTOR SHALL MINIMIZE DISTURBANCE TO EXISTING SITE DURING CONSTRUCTION. EROSION CONTROL MEASURES, IF REQUIRED DURING CONSTRUCTION, SHALL BE IN CONFORMANCE WITH THE LOCAL GUIDELINES FOR EROSION AND SEDIMENT CONTROL.

STRUCTURAL STEEL NOTES:

1. ALL WELDING SHALL BE PERFORMED USING E70XX ELECTRODES AND WELDING SHALL CONFORM TO AISC. WHERE FILLET WELD SIZES ARE NOT SHOWN, PROVIDE THE MINIMUM SIZE PER TABLE J2.4 IN THE AISC "MANUAL OF STEEL CONSTRUCTION". PAINTED SURFACES SHALL BE TOUCHED UP.

2. BOLTED CONNECTIONS SHALL BE ASTM A325 BEARING TYPE CONNECTIONS AND SHALL HAVE MINIMUM OF TWO BOLTS UNLESS NOTED OTHERWISE.

CONCRETE AND REINFORCING STEEL NOTES:

1. ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE ACI 301, ACI 318, ACI 336, ASTM A184, ASTM A185 AND THE DESIGN AND CONSTRUCTION SPECIFICATION FOR CAST-IN-PLACE CONCRETE.

2. ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI AT 28 DAYS, UNLESS NOTED OTHERWISE. SLUMP: 2" MIN./4" MAX. AIR ENTRAINMENT: 4% TO 6% BY VOLUME. MAXIMUM COARSE AGGREGATE SIZE SHALL BE 1".

3. REINFORCING STEEL SHALL CONFORM TO ASTM A 615, GRADE 60, DEFORMED UNLESS NOTED OTHERWISE. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A 185 WELDED STEEL WIRE FABRIC UNLESS NOTED OTHERWISE. SPLICES SHALL BE CLASS "B" AND ALL HOOKS SHALL BE STANDARD, UNLESS NOTED OTHERWISE.

4. THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCING STEEL UNLESS SHOWN OTHERWISE ON DRAWINGS:

   CONCRETE CAST AGAINST EARTH.....3 IN.
   CONCRETE EXPOSED TO EARTH OR WEATHER:
   #6 AND LARGER.....3 IN.
   #5 AND SMALLER & WWF.....3 IN.
   CONCRETE NOT EXPOSED TO EARTH OR WEATHER OR NOT CAST AGAINST THE GROUND:
   SLAB AND WALL.....1-1/2 IN.
   BEAMS AND COLUMNS.....1-1/2 IN.

5. INSTALLATION OF CONCRETE EXPANSION/WEDGE ANCHOR, SHALL BE PER MANUFACTURER'S WRITTEN RECOMMENDED PROCEDURE. THE ANCHOR BOLT, DOWEL OR ROD SHALL CONFORM TO MANUFACTURER'S RECOMMENDATION FOR EMBEDMENT DEPTH OR AS SHOWN ON THE DRAWINGS. NO REBAR SHALL BE DAMAGED WITHOUT PRIOR CONTRACTOR APPROVAL WHEN DRILLING HOLES IN CONCRETE.

6. WELDING IS PROHIBITED ON REINFORCING STEEL AND EMBEDMENTS.

7. ALL CONCRETE SHALL BE READY-MIXED IN ACCORDANCE WITH ASTM C94. MAINTAIN TEMPERATURE OF CAST IN PLACE CONCRETE AT BETWEEN 50 DEGREES AND 90 DEGREES.

8. DO NOT USE RETEMPERED CONCRETE, OR ADD WATER TO READY-MIX CONCRETE AT THE JOBSITE.

9. FOUNDATION INSTALLER SHALL INSURE THAT ALL PROTRUDING THREADS ARE LEFT CLEAN AND FREE OF CONCRETE.

10. FOUNDATION DESIGN IS BASED ON SOIL WITH 2000 PSF BEARING CAPACITY. IF EXISTING SOIL DOES NOT HAVE A MINIMUM 2000 PSF BEARING CAPACITY CONTRACTOR SHALL EXTEND PERIMETER BEAM TO REACH SOIL WITH MINIMUM 2000 PSF BEARING CAPACITY.

Southern Linc

APPROVALS
CARRIER _____
LANDLORD _____
LEASING _____
CONSTRUCTION _____

PROJECT NO:

DRAWN BY: JAL

CHECKED BY: JMB

APPROVED BY: CBS

3	07/25/17	REV. PER JURISDICTION
2	02/09/17	ISSUED FOR CONSTR.
1	01/10/17	ISSUED FOR REVIEW
0	11/15/16	ISSUED FOR REVIEW
V	DATE	DESCRIPTION

PROFESSIONAL ENGINEER
CLINTON B. STEWART
LICENSE NO. 81406
7/25/17
STATE OF FLORIDA
CLINTON B. STEWART P.E. #81406
EXCELL COMMUNICATIONS GA #27408

EXCELL COMMUNICATIONS, INC.

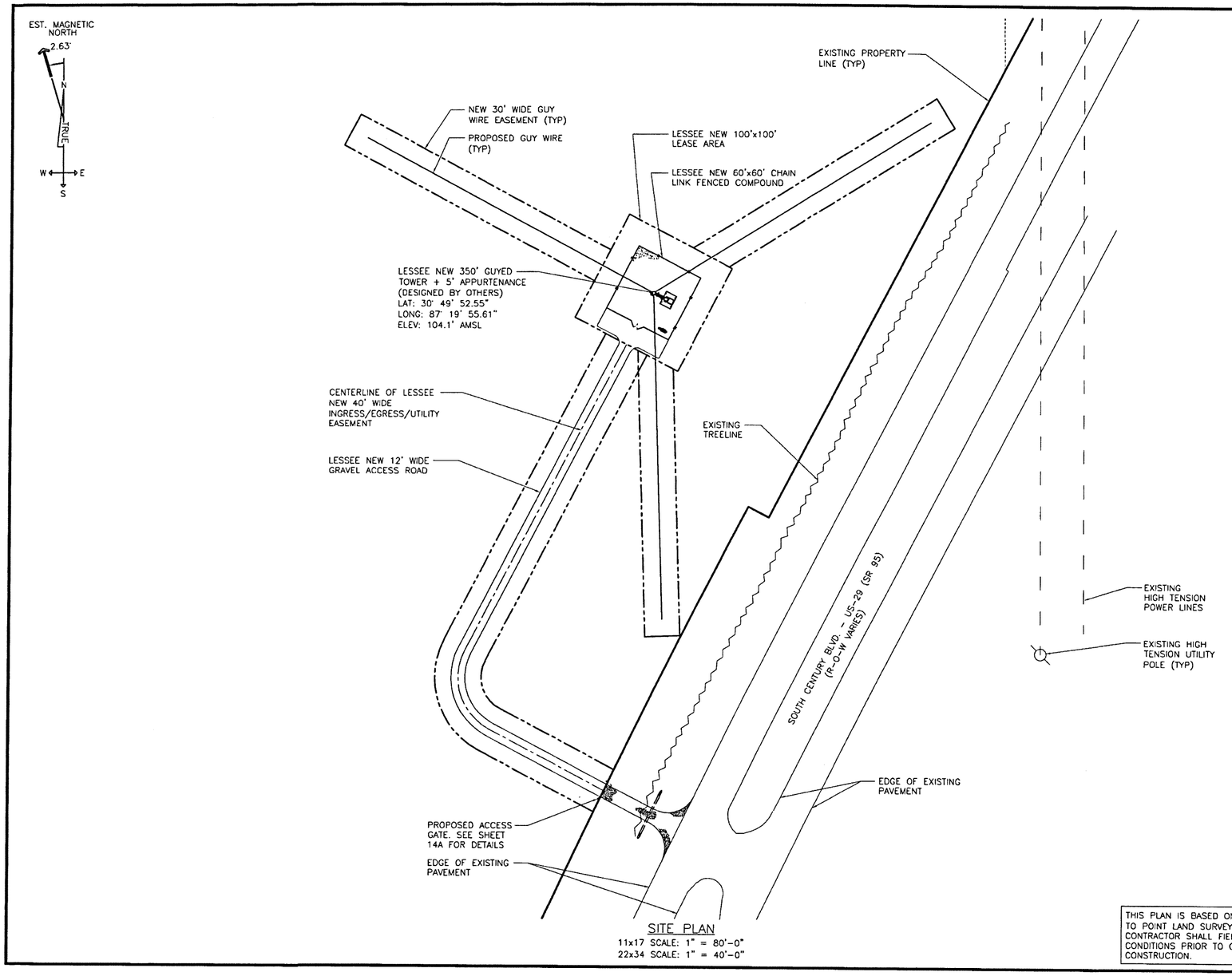
EXCELL COMMUNICATIONS, INC.
3608 7th COURT SOUTH
BIRMINGHAM, ALABAMA 35222
PHONE: 205.956.0198
FAX: 205.956.2632

SITE NAME
BOGIA
F-8119

SITE ADDRESS
2401 S. CENTURY BLVD.
McDAVID, FL 32568

SHEET TITLE
CONSTRUCTION NOTES

SHEET NUMBER
C2



SITE PLAN
11x17 SCALE: 1" = 80'-0"
22x34 SCALE: 1" = 40'-0"

THIS PLAN IS BASED ON A SURVEY BY POINT TO POINT LAND SURVEYORS, DATED 08/23/16. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO COMMENCEMENT OF CONSTRUCTION.

Southern Linc

APPROVALS
CARRIER _____
LANDLORD _____
LEASING _____
CONSTRUCTION _____

PROJECT NO:

DRAWN BY: JAL

CHECKED BY: JMB

APPROVED BY: CBS

V	DATE	DESCRIPTION
3	07/25/17	REV. PER JURISDICTION
2	02/09/17	ISSUED FOR CONSTR.
1	01/10/17	ISSUED FOR REVIEW
0	11/15/16	ISSUED FOR REVIEW

PROFESSIONAL ENGINEER
CLINTON F. STEWART, III
No. 61406
7/25
STATE OF FLORIDA
PROFESSIONAL ENGINEER
CLINTON F. STEWART, III, P.E. #61406
EXCELL COMMUNICATIONS C.A. # 27496

EXCELL COMMUNICATIONS, INC.

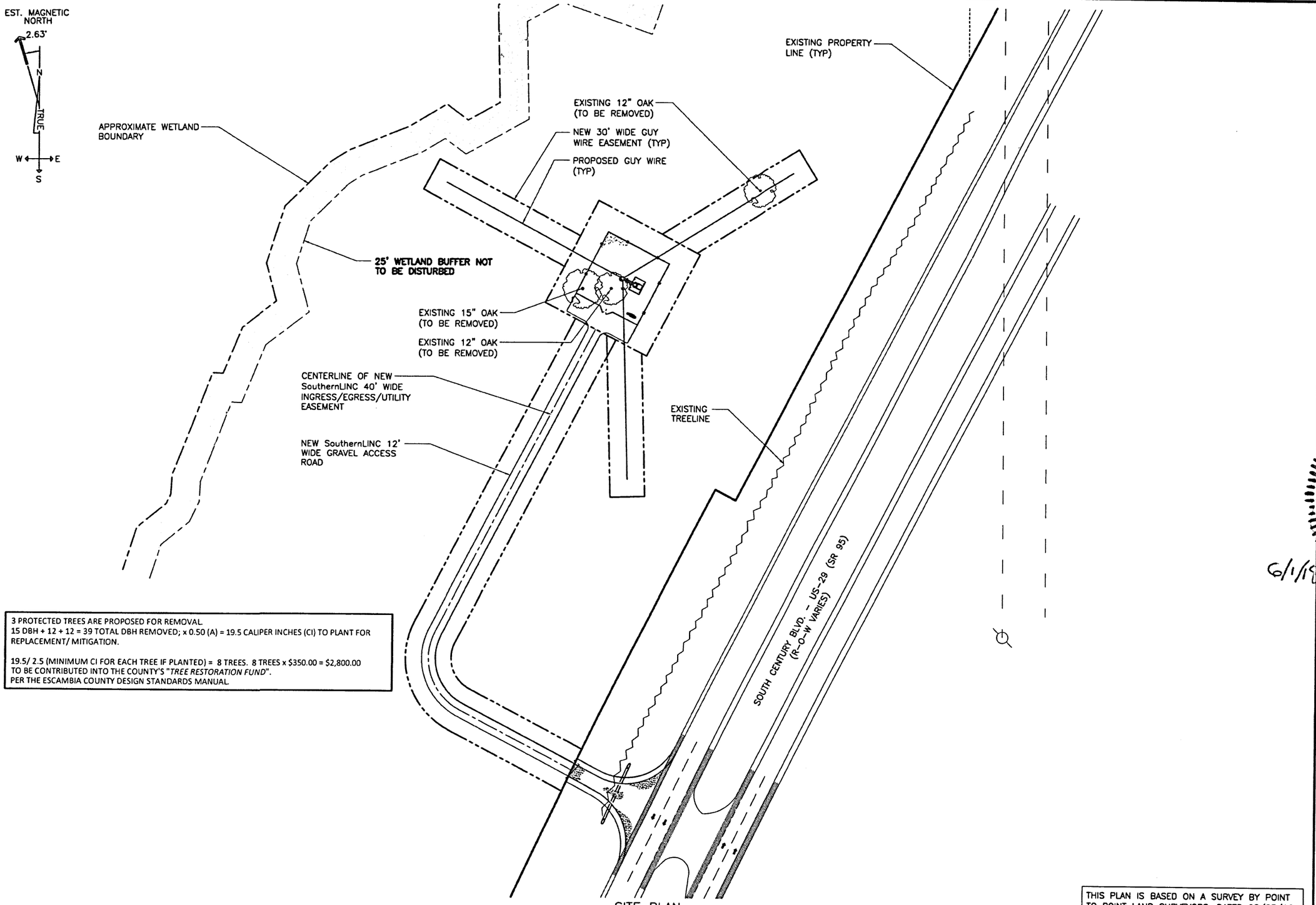
EXCELL COMMUNICATIONS, INC.
3608 7th COURT SOUTH
BIRMINGHAM, ALABAMA 35222
PHONE: 205.956.0198
FAX: 205.956.2632

SITE NAME
BOGIA
F-8119

SITE ADDRESS
2401 S. CENTURY BLVD.
McDAVID, FL 32568

SHEET TITLE
OVERALL SITE PLAN

SHEET NUMBER
C3



3 PROTECTED TREES ARE PROPOSED FOR REMOVAL.
15 DBH + 12 + 12 = 39 TOTAL DBH REMOVED; x 0.50 (A) = 19.5 CALIPER INCHES (CI) TO PLANT FOR REPLACEMENT/ MITIGATION.

19.5/ 2.5 (MINIMUM CI FOR EACH TREE IF PLANTED) = 8 TREES. 8 TREES x $350.00 = $2,800.00 TO BE CONTRIBUTED INTO THE COUNTY'S "*TREE RESTORATION FUND*". PER THE ESCAMBIA COUNTY DESIGN STANDARDS MANUAL.

SITE PLAN
11x17 SCALE: 1" = 80'-0"
22x34 SCALE: 1" = 40'-0"

THIS PLAN IS BASED ON A SURVEY BY POINT TO POINT LAND SURVEYORS, DATED 08/23/16. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO COMMENCEMENT OF CONSTRUCTION.

Southern Linc

APPROVALS
CARRIER _____
LANDLORD _____
LEASING _____
CONSTRUCTION _____

PROJECT NO:

DRAWN BY: JAL

CHECKED BY: JMB

APPROVED BY: CBS

6	01/03/18	REV. PER FDOT
5	11/09/17	REV. PER FDOT
4	09/20/17	REV. PER FDOT
3	07/25/17	REV. PER JURISDICTION
2	02/09/17	ISSUED FOR CONSTR.
1	01/10/17	ISSUED FOR REVIEW
0	11/15/16	ISSUED FOR REVIEW
V	DATE	DESCRIPTION

PROFESSIONAL ENGINEER
CLINTON B. STEWART
LICENSE
No. 61406
STATE OF FLORIDA
PROFESSIONAL ENGINEER
CLINTON B. STEWART - FL NO. 61406
EXCELL COMMUNICATIONS, INC. # 27498

6/1/18

EXCELL COMMUNICATIONS, INC.

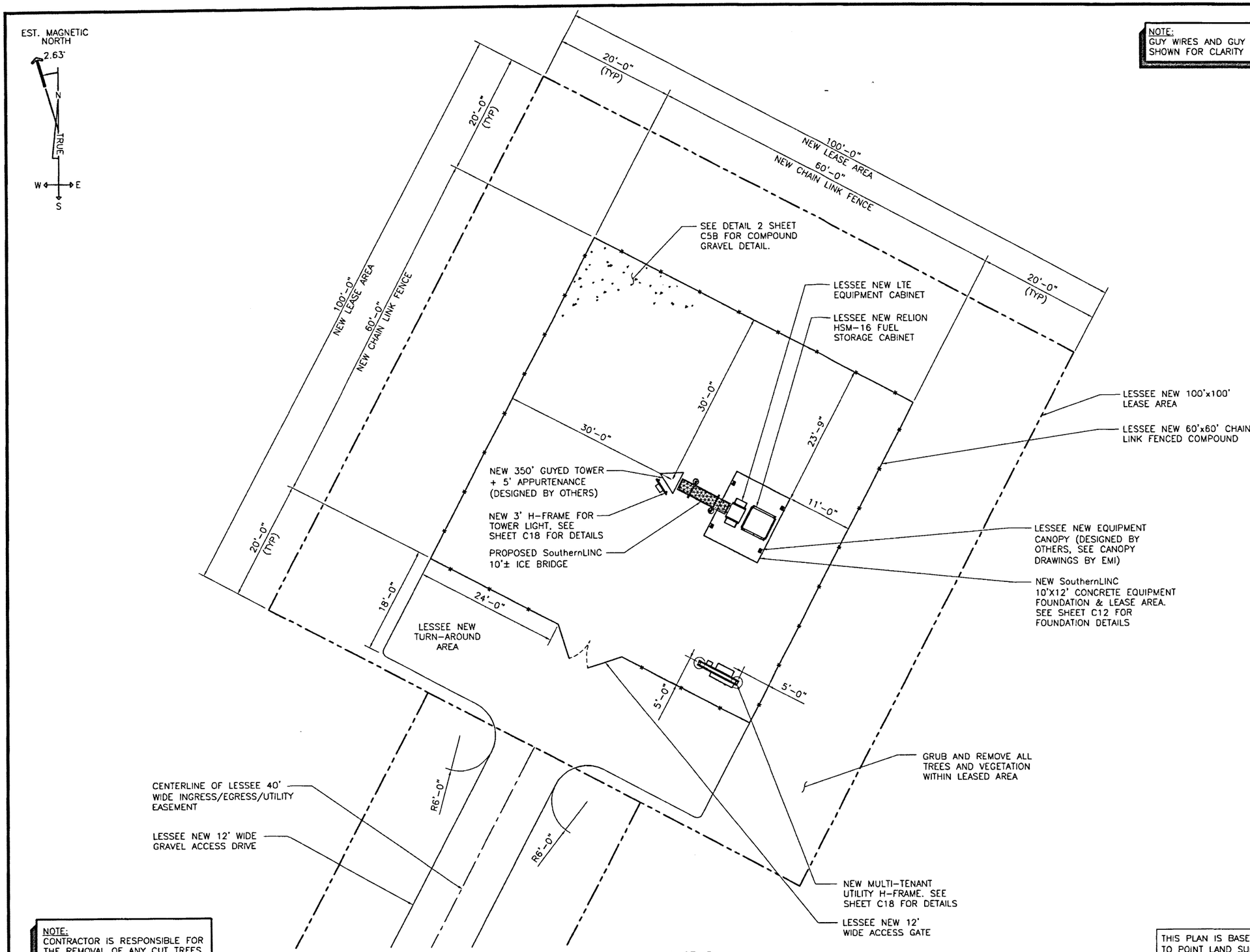
EXCELL COMMUNICATIONS, INC.
3608 7th COURT SOUTH
BIRMINGHAM, ALABAMA 35222
PHONE: 205.956.0198
FAX: 205.956.2632

SITE NAME
BOGIA
F-8119

SITE ADDRESS
2401 S. CENTURY BLVD.
McDAVID, FL 32568

SHEET TITLE
TREE PLAN

SHEET NUMBER
C3A



SITE PLAN
11x17 SCALE: 1/16" = 1'-0"
22x34 SCALE: 1/8" = 1'-0"

NOTE:
CONTRACTOR IS RESPONSIBLE FOR THE REMOVAL OF ANY CUT TREES, LIMBS, OR BRUSH.

THIS PLAN IS BASED ON A SURVEY BY POINT TO POINT LAND SURVEYORS, DATED 8/23/16. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO COMMENCEMENT OF CONSTRUCTION.

Southern Linc

APPROVALS
CARRIER _____
LANDLORD _____
LEASING _____
CONSTRUCTION _____

PROJECT NO:

DRAWN BY: JAL

CHECKED BY: JMB

APPROVED BY: CBS

3	07/25/17	REV. PER JURISDICTION
2	02/09/17	ISSUED FOR CONSTR.
1	01/10/17	ISSUED FOR REVIEW
0	11/15/16	ISSUED FOR REVIEW

CLINTON B. STEWART P.E. #61406
EXCELL COMMUNICATIONS C.A. # 27496

EXCELL COMMUNICATIONS, INC.

EXCELL COMMUNICATIONS, INC.
3608 7th COURT SOUTH
BIRMINGHAM, ALABAMA 35222
PHONE: 205.956.0198
FAX: 205.956.2632

SITE NAME
BOGIA
F-8119

SITE ADDRESS
2401 S. CENTURY BLVD.
McDAVID, FL 32568

SHEET TITLE
SITE PLAN

SHEET NUMBER
C4

LEGEND:

---222--- INDICATES EXISTING CONTOUR

F C-4.2 PROPOSED SILT FENCE 760 LF±

PROPOSED 350' GUYED TOWER

PROPOSED 100' x 100' LEASE AREA

PROPOSED 18' x 60' TURN-AROUND AREA

PROPOSED 60' x 60' FENCED COMPOUND

508 LF (2) ALTERNATIVE STORMWATER MANAGEMENT SYSTEM

E C-4.2

(1) 3480 SF ALTERNATIVE STORMWATER MANAGEMENT SYSTEM

D C-4.2

PROPOSED 12' WIDE GRAVEL ACCESS ROAD

A C-4.1 DIVERSION BERM 430 LF±

PROPOSED GRAVEL COMPOUND

PROPOSED 10' x 12' CONCRETE EQUIPMENT AREA

PROPOSED 40' WIDE ACCESS & UTILITY EASEMENT

S CENTURY BLVD
US 29 (S.R. 95)

NOTES:

1. BASED ON SURVEY PREPARED BY POINT TO POINT LAND SURVEYORS DATED AUGUST 9, 2016 NO WETLANDS AREAS HAVE BEEN INVESTIGATED FOR THIS PROJECT.

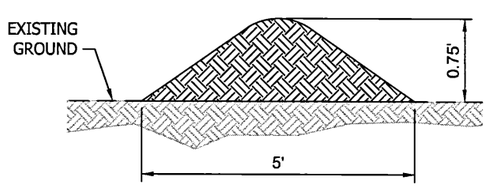
FLOOD ZONE NOTE:

NO PORTION OF THIS PROPERTY IS LOCATED IN A SPECIAL FLOOD AREA AS PER F.I.R.M. COMMUNITY PANEL NO. 12033C0155G DATED SEPTEMBER 29,2006.

KEY NOTES:

(1) AT GRADE GRAVEL COMPOUND PER DETAIL D SHEET C–4.2

(2) AT GRADE 12' WIDE GRAVEL ACCESS ROAD PER DETAIL E SHEET C–4.2



A **DIVERSION BERM**
N.T.S.

N

SCALE VERIFICATION
BAR IS ONE INCH ON ORIGINAL DRAWING. 0 — 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

SCALE: 1"=50'

CALL BEFORE YOU DIG
Sunshine State One Call
811 or 1-800-432-4770
811 Know what's below. Call before you dig.

Civil Engineer:

B+T Engineering, Inc.
840 E. McKellips Road, Bldg. 2, Suite 108
Mesa, Arizona 85203
(918) 587-4630 - Phone
B+T GRP (918) 295-0265 - Fax

Southern Linc

APPROVALS
CARRIER _____
LANDLORD _____
LEASING _____
CONSTRUCTION _____

PROJECT NO: -
DRAWN BY: CAH
CHECKED BY: GAM
APPROVED BY: GAM

V.	DATE	DESCRIPTION
0	7/13/17	ISSUED FOR REVIEW

JOHN KELLY III
PROFESSIONAL ENGINEER
REGISTRATION NO. 66194
Expires 12/31/18
LICENSE No. 66194
STATE OF FLORIDA
7/14/2017
PROFESSIONAL ENGINEER
(NOT VALID WITHOUT SIGNATURE & SEAL)

EXCELL COMMUNICATIONS, INC.

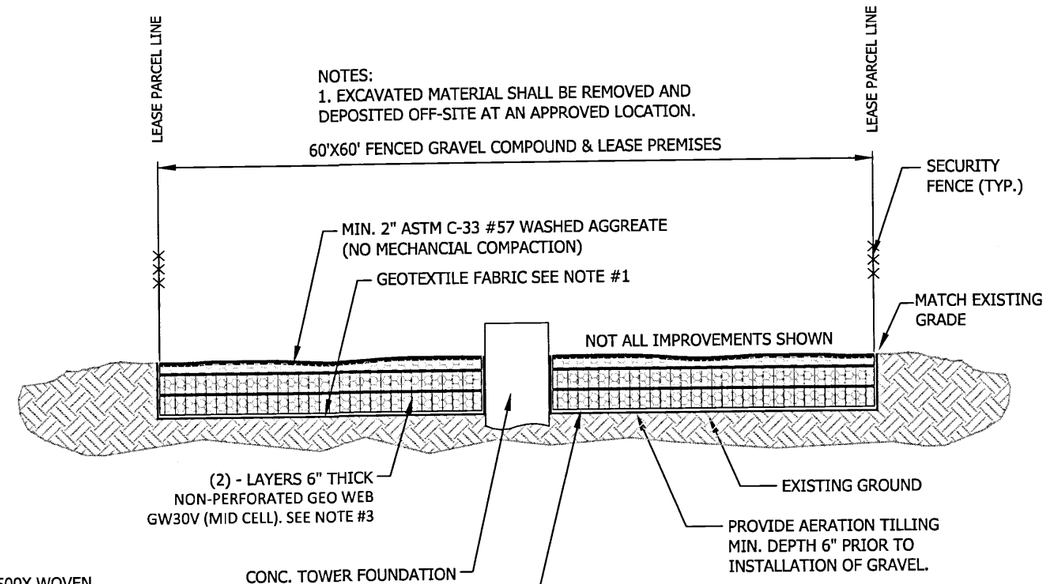
EXCELL COMMUNICATIONS, INC.
3608 7th COURT SOUTH
BIRMINGHAM, ALABAMA 35222
PHONE: 205.956.0198
FAX: 205.956.2632

SITE NAME
BOGIA
F-8119

SITE ADDRESS
2700 BLOCK OF CENTURY BLVD.
McDAVID, FL 32568

SHEET TITLE
STORMWATER PLAN

SHEET NUMBER
C4.1



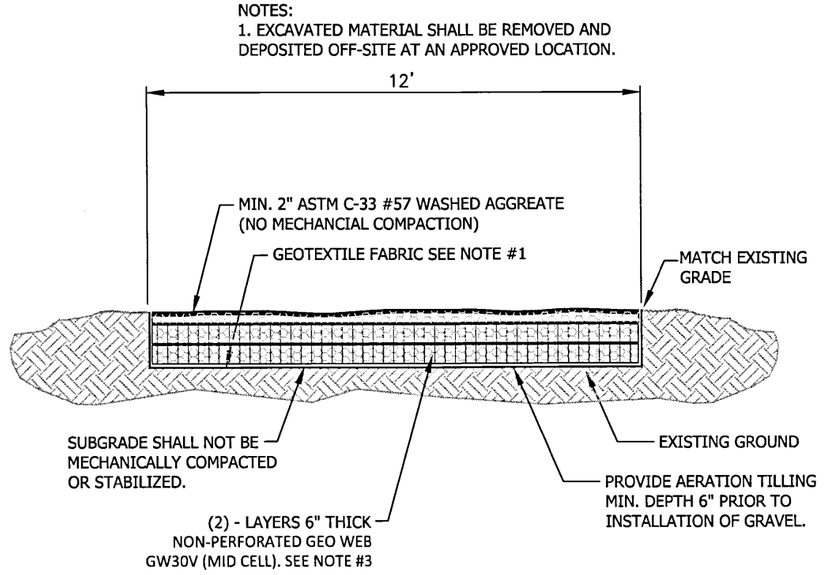
NOTES:

1. MIRAFI 500X WOVEN POLYPROPYLENE GEOTEXTILE FABRIC SHALL BE LAID AGAINST BARE SOIL UNDER ALL GRAVEL SURFACES.

2. PROPOSED TOWER FOUNDATION BY OTHERS.

3. INSTALL GEOWEB PER MANUFACTURE'S RECOMMENDATIONS SEE SHEET C4.4 FOR PRODUCT INFORMATION

"AT GRADE" GRAVEL COMPOUND SECTION N.T.S. (D)



NOTES:

1. MIRAFI 500X WOVEN POLYPROPYLENE GEOTEXTILE FABRIC SHALL BE LAID AGAINST BARE SOIL UNDER ALL GRAVEL SURFACES.

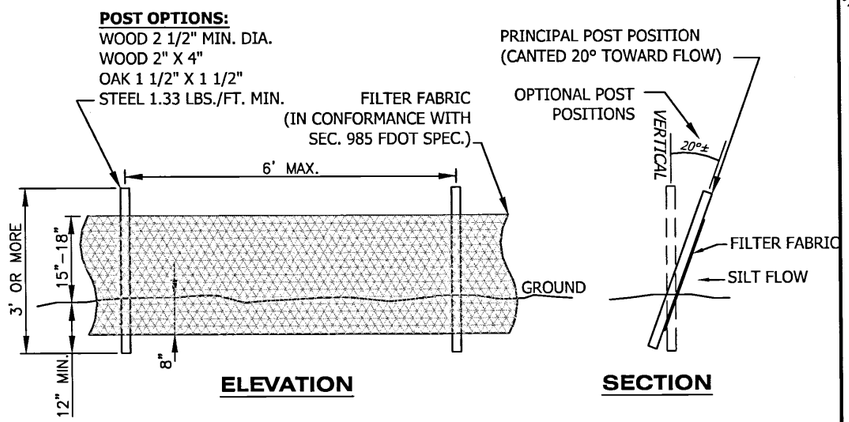
"AT GRADE" GRAVEL ROAD SECTION N.T.S. (E)

GENERAL CONSTRUCTION NOTES

1. **GRAVEL SURFACE SUBGRADE WORK** - THE CONTRACTOR SHALL CLEAR AND STRIP THE AREA TO BE IMPROVED AND EXCAVATE TO THE TOP OF THE SUBGRADE. WHEN IDENTIFIED, SOIL MATERIALS IN SOFT AREAS SHALL BE REMOVED AND THESE AREAS SHALL BE BACKFILLED AS DIRECTED BY THE OWNER'S REPRESENTATIVE. THE CONTRACTOR SHALL DISPOSE OF THE EXCAVATED SUBGRADE MATERIALS, IF UNSUITABLE FOR FILL, OFF SITE. THE SUBGRADE SHALL NOT BE MECHANICALLY COMPACTED OR STABILIZED. THE DRAINAGE/PERVIOUS CHARACTERISTICS OF THE EXISTING SUBGRADE SHALL BE MAINTAINED IN AN UNCHANGED STATE. AERATION TILLING, OR REPLACEMENT OF TOPSOIL TO RESTORE THE PERCOLATION CAPABILITY OF THE INSITU SOIL SHALL BE PROVIDED PRIOR TO THE APPLICATION OF THE WEARING SURFACE.

2. **OPERATIONAL MAINTENANCE** - THE ALTERNATIVE STORMWATER MANAGEMENT SYSTEM SUBGRADE MAINTENANCE SHALL BE PERFORMED ON A REGULAR BASIS AS NEEDED AND SHALL CONSIST OF REMOVAL OF SURFACE TRASH AND DEBRIS, THE STABILIZATION AND RESTORATION OF ERODED AREAS, AND AERATION TILLING, OR REPLACEMENT OF TOPSOIL AS NEEDED TO RESTORE THE PERCOLATION CAPABILITY OF THE SYSTEM.

3. **MONITORING REQUIREMENTS** - THE OPERATION AND MAINTENANCE ENTITY SHALL PROVIDE PERIODIC INSPECTIONS OF THE STORMWATER MANAGEMENT SYSTEM TO INSURE THAT THE SYSTEM IS FUNCTIONING AS DESIGNED AND PERMITTED. SUBMIT INSPECTION REPORTS TO THE ENGINEER OF RECORD TWO YEARS AFTER THE COMPLETION OF CONSTRUCTION AND EVERY TWO YEARS THEREAFTER.



F.D.O.T. TYPE III SILT FENCE DETAIL N.T.S. (F)

CALL BEFORE YOU DIG
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811 or 1-800-432-4770
Know what's below. Call before you dig.

Civil Engineer:
B+T Engineering, Inc.
840 E. McKellips Road, Bldg. 2, Suite 108
Mesa, Arizona 85203
(918) 587-4630 - Phone
B+T GRP (918) 295-0265 - Fax

Southern Linc

APPROVALS
CARRIER _____
LANDLORD _____
LEASING _____
CONSTRUCTION _____

PROJECT NO: -
DRAWN BY: CAH
CHECKED BY: GAM
APPROVED BY: GAM

V.	DATE	DESCRIPTION
0	7/13/17	ISSUED FOR REVIEW

JOHN KELLY
PROFESSIONAL ENGINEER
REGISTRATION NO. 66194
Expires 2/28/19
JOHN KELLY III LICENSE No. 66194 STATE OF FLORIDA PROFESSIONAL ENGINEER
7/14/2017
(NOT VALID WITHOUT SIGNATURE & SEAL)

EXCELL COMMUNICATIONS, INC.
EXCELL COMMUNICATIONS, INC.
3608 7th COURT SOUTH
BIRMINGHAM, ALABAMA 35222
PHONE: 205.956.0198
FAX: 205.956.2632

SITE NAME
BOGIA
F-8119

SITE ADDRESS
2700 BLOCK OF CENTURY BLVD.
McDAVID, FL 32568

SHEET TITLE
STORMWATER DETAILS

SHEET NUMBER
C4.2

SITE DATA			
DESCRIPTION	SF	AC	%
TOTAL PROJECT AREA	29,501	0.677	100%
FENCED COMPOUND	3,600	0.083	12%
GRAVEL SURFACE (Compound)	3,480	0.080	12%
IMPERVIOUS AREA	120	0.003	0%
GRAVEL ACCESS ROAD	6,969	0.160	24%
UTILITY-OPEN AREA	1,524	0.035	5%
OPEN AREA	17,408	0.400	59%
THE TOTAL DISTURBED AREA ASSOCIATED WITH THE PROPOSED		12093.00	S.F.
DEVELOPMENT IS APPROXIMATELY		0.278	AC

Discharge Volume Calculation

Disturbed Area

Surface	*'C'*	*Area (A)*	*C*A(ft²)*
Gravel (Compound)	*0.60*	*3,480*	*2,088*
Gravel (Access Road)	*0.60*	*6,969*	*4,182*
Grass	*0.20*	*1,524*	*305*
Totals		*11,973 ft²*	*6,575 ft²*

Weighted Coefficient ***0.55***

VOLUME PROVIDED					
GRAVEL SURFACE		AREA (S.F.)	GRAVEL DEPTH (FT)	VOID SPACE	VOL PRVD (C.F.)
COMPOUND		3,480	1.00	0.40	1392
ACCESS ROAD		6,969	1.00	0.40	2788
A x D x V = VOL. PRVD.				TOTAL VOL. PROVIDED	4180
VOLUME PROVIDED BASED ON #57 STONE VOID SPACE OF 40%					

GRAVEL VOID SPACE ALTERNATIVE STORMWATER MANAGEMENT SYSTEM CALCULATIONS

Civil Engineer:

B+T Engineering, Inc.
840 E. McKellips Road, Bldg. 2, Suite 108
Mesa, Arizona 85203
(918) 587-4630 - Phone
B+T GRP (918) 295-0265 - Fax

Southern Linc

APPROVALS
CARRIER
LANDLORD
LEASING
CONSTRUCTION

PROJECT NO: -
DRAWN BY: CAH
CHECKED BY: GAM
APPROVED BY: GAM

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JOHN KEELY III
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REGISTRATION #66194
Expires 2/28/19
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STATE OF FLORIDA
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SITE NAME
BOGIA
F-8119

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2700 BLOCK OF
CENTURY BLVD.
McDAVID, FL 32568

SHEET TITLE
STORMWATER DETAILS

SHEET NUMBER
C4.3

Presto GEOSYSTEMS

Perforated GEOWEB System
Performance & Material Specification Summary

	Property	Value		Test Method
Base Material	Material Composition	Polymer – Polyethylene with density of 58.4 - 60.2 lb/ft³ (0.935 – 0.965 g/cm³)		ASTM D 1505
	Color	Black - from Carbon Black	Tan, Green, Other colors with no heavy metal content	N A
	Stabilizer	Carbon black content 1.5% - 2% by weight	Hindered amine light stabilizer (HALS) 1.0% by weight of carrier	N A
	Minimum ESCR	5000 hr		ASTM D 1693
Strip Properties	Sheet Thickness	50 mil –5% +10%(1.27 mm -5% +10%)		ASTM D 5199
	Surface Treatment	**Performance:** The polyethylene strips shall be textured and perforated such that the peak friction angle between the surface of the textured / perforated plastic and #40 silica sand at 100% relative density shall be no less than 85% of the peak friction angle of the silica sand in isolation when tested by the direct shear method per ASTM D 5321.	**Material:** The polyethylene strips shall be textured with a multitude of rhomboidal (diamond shape) indentations. The rhomboidal indentations shall have a surface density of 140 - 200 per in² (22 - 31 per cm²). In addition, the strips shall be perforated with horizontal rows of 0.4 in (10 mm) diameter holes. Perforations within each row shall be 0.75 in (19 mm) on-center. Horizontal rows shall be staggered and separated 0.50 in (12 mm) relative to the hole centers. The edge of strip to the nearest edge of perforation shall be 0.3 in (8 mm) minimum and the centerline of the weld to the nearest edge of perforation shall be 0.7 in (18 mm) minimum. A slot with a dimension of 3.8 in x 1.3 in (10 mm x 35 mm) is standard in the center of the non-perforated areas and at the center of each weld.	

Cell Properties	Cell Details	Percent Cell Wall Open Area	Nominal Dimensions ±10% Length	Nominal Dimensions ±10% Width	Density per yd² (m²)	Nominal Area ±1%
	GW20V	21.2% ± 1.0%	8.8 in (224 mm)	10.2 in (259 mm)	28.9 yd² (34.6 m²)	44.8 in² (289 cm²)
	GW30V	16.8% ± 1.0%	11.3 in (287 mm)	12.6 in (320 mm)	18.2 yd² (21.7 m²)	71.3 in² (460 cm²)
	GW40V	19.89% ± 1.0%	18.7 in (475 mm)	20.0 in (508 mm)	6.9 yd² (8.3 m²)	187.0 in² (1,206 cm²)

Cell Seam Properties		Cell Depth	Minimum Certified Cell Seam Strength
	Short-term Seam Peel Strength	3 in (75 mm)	240 lbf (1060 N)
		4 in (100 mm)	320 lbf (1420 N)
		6 in (150 mm)	480 lbf (2130 N)
		8 in (200 mm)	640 lbf (2840 N)
	Long-term Seam Peel Strength	Long term seam peel-strength test shall be performed on all resin or pre-manufactured sheet or strips. A 4.0 in (100 mm) wide seam sample shall support a 160 lb (72.5 kg) load for a period of 168 hours (7 days) minimum in a temperature-controlled environment undergoing a temperature change on a 1-hour cycle from ambient room to 130°F (54°C). Ambient room temperature is per ASTM E 41.	
	10,000 hour Seam Peel Strength Certification	Presto shall provide data showing that the high-density polyethylene resin used to produce the GEOWEB® sections has been tested using an appropriate number of seam samples and varying loads to generate data indicating that the seam peel strength shall survive a loading of at least 209 lbf (95 kg) for a minimum of 10,000 hours.	

Section Properties	Section Dimension	Section Width Variable	Section Length Range (Cells Long: 18, 21, 25, 29, 34) Minimum	Maximum
	GW20V	7.7 ft (2.3 m) to 9.2 ft (2.8 m)	12.0 ft (3.7 m)	27.3 ft (8.3 m)
	GW30V		15.4 ft (4.7 m)	35.1 ft (10.7 m)
	GW40V		25.4 ft (7.7 m)	58.2 ft (17.8 m)

PRESTO GEOSYSTEMS® • PO BOX 2399, APPLETON, WI 54912-2399 • PHONE: 800-548-3424 or 920-738-1328 • FAX: 920-738-1222 • EMAIL: info@prestogeo.com • www.prestogeo.com

NOTE:

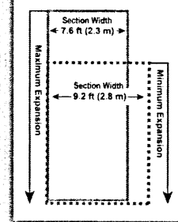
FOR ADDITIONAL PRODUCT INFORMATION VISIT MANUFACTURES WEB SITE
@ http://www.prestogeo.com/products/soil-stabilization/geoweb-geocells/

The GEOWEB® Cell Dimensions

Relative Size[1]	GW20V	GW30V		GW40V
Name	GW20V (small cell)	GW30V (mid cell) For all other Applications	For Earth Retention[4]	GW40V (large cell)
Nominal Length x Width[2]	8.8 x 10.2 in (224 x 259 mm)	11.3 x 12.6 in (287 x 320 mm)	10.5 x 13.0 in (267 x 330 mm)	18.7 x 20.0 in (475 x 508 mm)
Nominal Area[3]	44.8 in² (289 cm²)	71.3 in² (460 cm²)	68.3 in² (440 cm²)	187.0 in² (1206 cm²)
Cells per yd² (m²)	28.9 (34.6)	18.2 (21.7)	NA	6.9 (8.3)
Nominal Depths	3 in (75 mm), 4 in (100 mm), 6 in (150 mm), and 8 in (200 mm) for all cells			

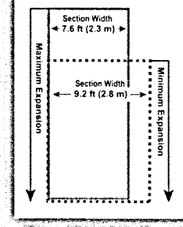
1 All details and dimensions are nominal and subject to manufacturing tolerances.
2 Cell length and width will vary approximately ±10% through the recommended expansion range.
3 Cell area will vary only ±1% through the recommended section expansion range.
4 Cell dimensions for Earth Retention sections are fixed and NOT variable or nominal.

The GW20V Section Dimensions



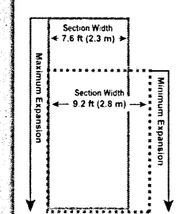
Cells Long	Length Minimum Expansion	Length Maximum Expansion	Nominal Area
18	12.0 ft (3.7 m)	14.5 ft (4.4 m)	112 ft² (10.4 m²)
21	14.0 ft (4.3 m)	16.9 ft (5.1 m)	131 ft² (12.1 m²)
25	16.7 ft (5.1 m)	20.1 ft (6.1 m)	156 ft² (14.5 m²)
29	19.4 ft (5.9 m)	23.3 ft (7.1 m)	181 ft² (16.8 m²)
34	22.7 ft (6.9 m)	27.3 ft (8.3 m)	212 ft² (19.7 m²)

The GW30V Section Dimensions



Cells Long	Length Minimum Expansion	Length Maximum Expansion	Nominal Area
18	15.4 ft (4.7 m)	18.6 ft (5.7 m)	143 ft² (13.3 m²)
21	18.0 ft (5.5 m)	21.7 ft (6.6 m)	167 ft² (15.5 m²)
25	21.4 ft (6.5 m)	25.8 ft (7.9 m)	198 ft² (18.4 m²)
29	24.8 ft (7.6 m)	30.0 ft (9.1 m)	230 ft² (21.4 m²)
34	29.1 ft (8.9 m)	35.1 ft (10.7 m)	270 ft² (25.0 m²)

The GW40V Section Dimensions



Cells Long	Length Minimum Expansion	Length Maximum Expansion	Nominal Area
18	25.4 ft (7.7 m)	30.8 ft (9.4 m)	234 ft² (21.7 m²)
21	29.6 ft (9.0 m)	36.0 ft (11.0 m)	273 ft² (25.3 m²)
25	35.2 ft (10.7 m)	42.8 ft (13.1 m)	325 ft² (30.2 m²)
29	40.9 ft (12.5 m)	49.7 ft (15.1 m)	377 ft² (35.0 m²)
34	47.9 ft (14.6 m)	58.2 ft (17.8 m)	441 ft² (41.0 m²)

GEO WEB DATA SHEET

Civil Engineer:

B+T Engineering, Inc.
840 E. McKellips Road, Bldg. 2, Suite 108
Mesa, Arizona 85203
(918) 587-4630 - Phone
B+T GRP (918) 295-0265 - Fax

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SITE NAME
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SITE ADDRESS
2700 BLOCK OF
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McDAVID, FL 32568

SHEET TITLE
PRODUCT INFORMATION

SHEET NUMBER
C4.4

PART 1 GENERAL

1.1 SUMMARY

A. Work Included: This Section includes providing all material, labor, tools and equipment for installation of Cellular Confinement System as shown in the Contract Documents and as specified in this Section.

B. The Cellular Confinement System shall be used for load support.

1.2 RELATED SECTIONS AND DIVISIONS

A. The applicable provisions of the General Conditions shall govern the work in this Section.

B. Section 0130000 - Administrative Requirements

C. Section 0220000 - Site Preparation

D. Section 312000 - Earth Moving

E. Section 312500 - Erosion and Sedimentation Control

1.3 REFERENCES

A. American Association of State Highway and Transportation Officials (AASHTO)

1. AASHTO M 218 - Steel Sheet, Zinc-Coated (Galvanized) for Corrugated Steel Pipe.
2. AASHTO M 288 - Geotextile Specification for Highway Applications

B. American Society of Testing and Materials (ASTM)

1. ASTM D 1505 - Density of Plastics by the Density-Gradient Technique.
2. ASTM D 1603 - Standard Test for Carbon Black in Olefin Plastics
3. ASTM D 1693 - Environmental Stress-Cracking of Ethylene Plastics.
4. ASTM D 5199 - Measuring Nominal Thickness of Geotextiles and Geomembranes.
5. ASTM E 41 - Terminology Relating to Conditioning.

1.4 SUBMITTALS

A. Submit Manufacturer's shop drawings in accordance with Section 0130000, including Manufacturer's product data, samples and section layout.

B. Manufacturer's Certificate of Analysis: Manufacturer shall supply certificate of analysis containing the following test results for the celluar confinement material used for project: Base Resin Lot Number(s), Resin Density per ASTM-1505, Production Lot Number(s), Material Thickness, Short Term Seam Peel Strength, and percentage of Carbon Black.

C. Submit qualifications of Manufacturer's field representative certifying the field representative is experienced in the installation of the specified products.

D. No material will be considered as an equivalent to the Geoweb material specified herein unless it meets all requirements of this specification, without exception. Manufacturers seeking to supply what they represent as equivalent material must submit records, data, independent test results, samples, certifications, and documentation deemed necessary by the Engineer to prove equivalency. The Engineer shall approve or disapprove other Manufacturers materials in accordance with the General Conditions after all information is submitted and reviewed. Any substitute materials submitted shall be subject to independent lab testing at the Contractor's expense.

1.5 QUALITY ASSURANCE AND CONTROL

A. The cellular confinement system material shall be provided from a single Manufacturer for the entire project.

B. The Manufacturer's Quality management system shall be certified and in accordance with ISO 9001:2008 and CE certification. Any substitute materials submitted shall provide a certification that their cellular confinement manufacturing process is part of an ISO program and a certification will be required specifically stating that their testing facility is certified and in accordance with ISO. An ISO certification for the substitute material will not be acceptable unless it is proven it pertains specifically to the Geoweb manufacturing operations.

C. The Manufacturer shall provide certification of compliance to all applicable testing procedures and related specifications upon the customer's written request. Request for certification shall be submitted no later than the date of order placement. The Manufacturer shall have a minimum of 20 years experience producing cellular confinement systems.

D. Pre-Installation Meeting: Prior to installation of any materials, conduct a pre-installation meeting to discuss the scope of work and review installation requirements. The pre-installation meeting shall be attended by all parties involved in the installation of the cellular confinement system.

E. Manufacturer's Field Representative Qualifications:

1. Manufacturer shall provide a qualified field representative on site at the start of construction to ensure the Geoweb system is installed in accordance with the Contract Documents.
2. Manufacturer's field representative shall have a minimum of 5 years installation experience with the specified products in the specified application.
3. Manufacturer of any substitute materials to be used shall certify that a representative can meet the above criteria and will be on site for initial construction start up. Manufacturers other than Presto shall be required to provide proof the representative meets these qualifications.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Deliver materials to site in Manufacturer's original, unopened containers and packaging, with labels clearly identifying product name and Manufacturer.

B. The materials shall be stored in accordance with Manufacturer's instructions. The materials shall be protected from damage and out of direct sunlight.

C. The materials shall be delivered, unloaded and installed in a manner to prevent damage.

1.7 WARRANTY

A. The Manufacturer shall warrant each Geoweb section that it ships to be free from defects in materials and workmanship at the time of manufacture. The Manufacturer's exclusive liability under this warranty or otherwise will be to furnish without charge to the original f.o.b. point a replacement for any section which proves to be defective under normal use and service during the 10-year period which begins on the date of shipment. The Manufacturer reserves the right to inspect any allegedly defective section in order to verify the defect and ascertain its cause.

B. This warranty shall not cover defects attributable to causes or occurrences beyond the Manufacturer's control and unrelated to the manufacturing process, including, but not limited to, abuse, misuse, mishandling, neglect, improper storage, improper installation, improper alteration or improper application.

C. In no event shall the Manufacturer be liable for any special, indirect, incidental or consequential damages for the breach of any express or implied warranty or for any other reason, including negligence, in connection with the cellular confinement system.

PART 2 PRODUCTS

2.1 ACCEPTABLE MANUFACTURER

A. Presto Geosystems, PO Box 2399, Appleton, Wisconsin 54912 2399.
Toll Free (800) 548 3424. Phone (920) 738 1328. Fax (920) 738 1222.
E Mail info@prestogeo.com. Website www.prestogeo.com.

2.2 GEOWEB CELLULAR CONFINEMENT SYSTEM

A. Manufacturing Certification

1. The manufacturer shall have earned a certificate of registration, which demonstrates that its quality-management system for its Geoweb cellular confinement system is currently registered to the ISO 9001:2008 and CE quality standards.

B. Base Materials

1. Polyethylene Stabilized with Carbon Black
   a) Density shall be 58.4 to 60.2 lbs/ft^3 (0.935 to 0.965 g/cm^3) in accordance with ASTM D 1505.
   b) Environmental Stress Crack Resistance (ESCR) shall be 5000 hours in accordance with ASTM D 1693.
   c) Ultra-Violet light stabilization with carbon black.
   d) Carbon Black content shall be 1.5 to 2 percent by weight, through addition of a carrier with certified carbon black content.
   e) Carbon black shall be homogeneously distributed throughout material.
   f) The manufacturer must have an in-place quality control to prevent irregularities in strip material.

C. Cell Properties

1. Individual cells shall be uniform in shape and size when expanded.
2. Individual cell dimensions (nominal) shall be plus or minus 10%.
3. GW30V-Cell
   a) Length shall be 11.3 inches (287 mm).
   b) Width shall be 12.6 inches (320 mm).
   c) Nominal area shall be 71.3 in^2 (460 cm^2) plus or minus 1%.
4. Nominal cell depth shall be 4, 6, and 8 inches as shown on the plan.

D. Strip Properties and Assembly

1. Non-Perforated Textured Strip/Cell
   a) Strip sheet thickness shall be 50 mils (1.27 mm), minus 5 percent, plus 10 percent in accordance with ASTM D 5199. Determine thickness flat, before surface disruption.
   b) Polyethylene strips shall be textured surface with a multitude of rhomboidal (diamond shape) indentations.
   c) Textured sheet thickness shall be 60 mils, plus or minus 6 mils (1.52 mm plus or minus 0.15 mm).
   d) Indentation surface density shall be 140 to 200 per in^2 (22 to 31 per cm^2).
   e) A slot with a dimension of 3/8 inch x 1-3/8 inch (10 mm x 35 mm) is standard in the center of the non-perforated areas and at the center of each weld.

E. Assembly of Cell Sections

1. Fabricate using strips of sheet polyethylene each with a length of 142 inches (3.61 m) and a width equal to cell depth.
2. Connect strips using full depth ultrasonic spot-welds aligned perpendicular to longitudinal axis of strip.
3. Ultrasonic weld melt-pool width shall be 1.0 inch (25 mm) maximum.
4. Weld spacing for GW30V-cell sections shall be 17.5 inches plus or minus 0.10 inch (445 mm plus or minus 2.5 mm).

F. Cell Seam Strength Tests

1. Minimum seam strengths are required by design and shall be reported in test results. Materials submitted with average or typical values will not be accepted. Written certification of minimum strengths must be supplied to the Engineer at the time of submittals.
2. Short-Term Seam Peel-Strength Test
   a) Cell seam strength shall be uniform over full depth of cell.
   b) Minimum seam peel strength shall be 640 lbf (2,840 N) for 8 inch (200 mm) depth.
3. Long-Term Seam Peel-Strength Test
   a) Conditions: Minimum of 7 days in a temperature-controlled environment that undergoes change on a 1 hour cycle from room temperature to 130 degrees F (54 degrees C).
   b) Room temperature shall be in accordance with ASTM E41.
   c) Test samples shall consist of two, 4 inch (100 mm) wide strips welded together.
   d) Test sample consisting of 2 carbon black stabilized strips shall support a 160 pound (72.5 kg) load for test period.

2.3 INTEGRAL COMPONENTS

A. ATRA® Clip

1. The ATRA Clip is a molded, high-strength polyethylene device available in standard (0.5 inch) and metric (10-12 mm) versions.
2. ATRA clips can be installed as an end cap on standard (0.5 inch) and metric (10-12 mm) steel reinforcing rods to form ATRA Anchors.
3. ATRA Clips can be used with tendons as load transfer restraint clips.

B. ATRA® Key

1. ATRA keys shall be constructed of polyethylene and provide a high strength connection.
2. ATRA keys shall be used to connect Geoweb panels together at each interleaf and end to end connection.

2.4 CELL INFILL MATERIALS

A. Cell infill material shall be crushed aggregate with a maximum particle size of ¾ inch with a fine content of less than 10%.

B. Infill material shall be free of any foreign material.

C. Clays, silts and organics are not acceptable infill material.

D. Infill material shall be free-flowing and not frozen when placed in the Geoweb sections.

Civil Engineer:

B+T Engineering, Inc.
840 E. McKellips Road, Bldg. 2, Suite 108
Mesa, Arizona 85203
(918) 587-4630 - Phone
B+T GRP (918) 295-0265 - Fax

Southern Linc

APPROVALS

CARRIER ____________

LANDLORD ____________

LEASING ____________

CONSTRUCTION ____________

PROJECT NO: -

DRAWN BY: CAH

CHECKED BY: GAM

APPROVED BY: GAM

V.	DATE	DESCRIPTION
0	7/13/17	ISSUED FOR REVIEW

JOHN KELLY
PROFESSIONAL ENGINEER
REGISTRATION No. 66194
Expires 2/28/19
JOHN W. KELLY III
LICENSE
No. 66194
STATE OF FLORIDA
PROFESSIONAL ENGINEER
7/14/2017
(NOT VALID WITHOUT SIGNATURE & SEAL)

EXCELL COMMUNICATIONS, INC.

EXCELL COMMUNICATIONS, INC.
3608 7th COURT SOUTH
BIRMINGHAM, ALABAMA 35222
PHONE: 205.956.0198
FAX: 205.956.2632

SITE NAME
BOGIA
F-8119

SITE ADDRESS
2700 BLOCK OF
CENTURY BLVD.
McDAVID, FL 32568

SHEET TITLE
GEOWEB
SPECIFICATIONS

SHEET NUMBER
C4.4

114849_Bogia_F8119_CD's.dwg - Sheet:C4.5 - User: chendricks - Jul 13, 2017 - 5:27pm

2.5 ADDITIONAL COMPONENTS

A. Geotextile

1. The geotextile separation layer shall be as specified in the Contract Documents.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify site conditions are as indicated on the drawings. Notify the Engineer if site conditions are not acceptable. Do not begin preparation or installation until unacceptable conditions have been corrected.

B. Verify layout of structure is as indicated on the drawings. Notify the Engineer if layout of structure is not acceptable. Do not begin preparation or installation until unacceptable conditions have been corrected.

3.2 INSTALLATION OF LOAD SUPPORT SYSTEMS

A. Prepare subgrade and install the Geoweb load support system in accordance with Manufacturer's instructions.

B. On-site time for installation assistance by the Manufacturer's field representative shall be 1 day(s) with one trip. All travel and expense costs for Manufacturer's field representative installation assistance shall be included in the base bid price.

C. Subgrade Preparation

1. Excavate and shape foundation soils as indicated on the drawings.
2. Ensure foundation soil meets minimum strength requirements through proof rolling or other conventional method and is approved by the Engineer. If unacceptable foundation soils are encountered, excavate and replace with suitable quality material as directed by the Engineer.
3. Install geotextile separation layer on prepared surfaces ensuring required overlaps are maintained and outer edges of the geotextile are buried in accordance with the Manufacturer's recommendations.
4. Install specified geotextile separation layer on top of prepared subbase ensuring required overlaps are maintained and outer edges of the geotextile are buried in accordance with the Manufacturer's recommendations.

D. Geoweb Section Placement and Connection

1. Place Geoweb sections and verify all sections are expanded uniformly to required dimensions and that outer cells of each section are correctly aligned. Interleaf or overlap edges of adjacent sections. Ensure upper surfaces of adjoining Geoweb sections are flush at joint and adjoining cells are fully aligned at the cell wall slot.
2. Connect the Geoweb sections with ATRA keys at each interleaf and end to end connection. Insert the ATRA key through the cell wall slot before inserting through the adjacent cell. Turn the ATRA key 90 degrees to lock the panels together.

E. Crushed Aggregate Infill Placement

1. Place the specified aggregate infill with suitable material handling equipment.
2. Infill material shall be free-flowing and not frozen when placed in the Geoweb sections.
3. Overfill cells with aggregate infill material. Limit the drop height of infill material to 3 feet (1 meter) to avoid damage or displacement of the cell wall.
4. Level surface approximately 2 inches (50 mm) above cell walls. Maintain the 2 inch wear surface over the Geoweb sections to prevent damage to the cell walls.
5. Compact infill to a minimum of 95 percent Standard Proctor.
6. Shape compacted surface to required elevation as indicated on the drawings.

Civil Engineer:

B+T Engineering, Inc.
840 E. McKellips Road, Bldg. 2, Suite 108
Mesa, Arizona 85203
(918) 587-4630 - Phone
B+T GRP (918) 295-0265 - Fax

Southern Linc

APPROVALS

CARRIER _____

LANDLORD _____

LEASING _____

CONSTRUCTION _____

PROJECT NO: -

DRAWN BY: CAH

CHECKED BY: GAM

APPROVED BY: GAM

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SITE NAME
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2700 BLOCK OF
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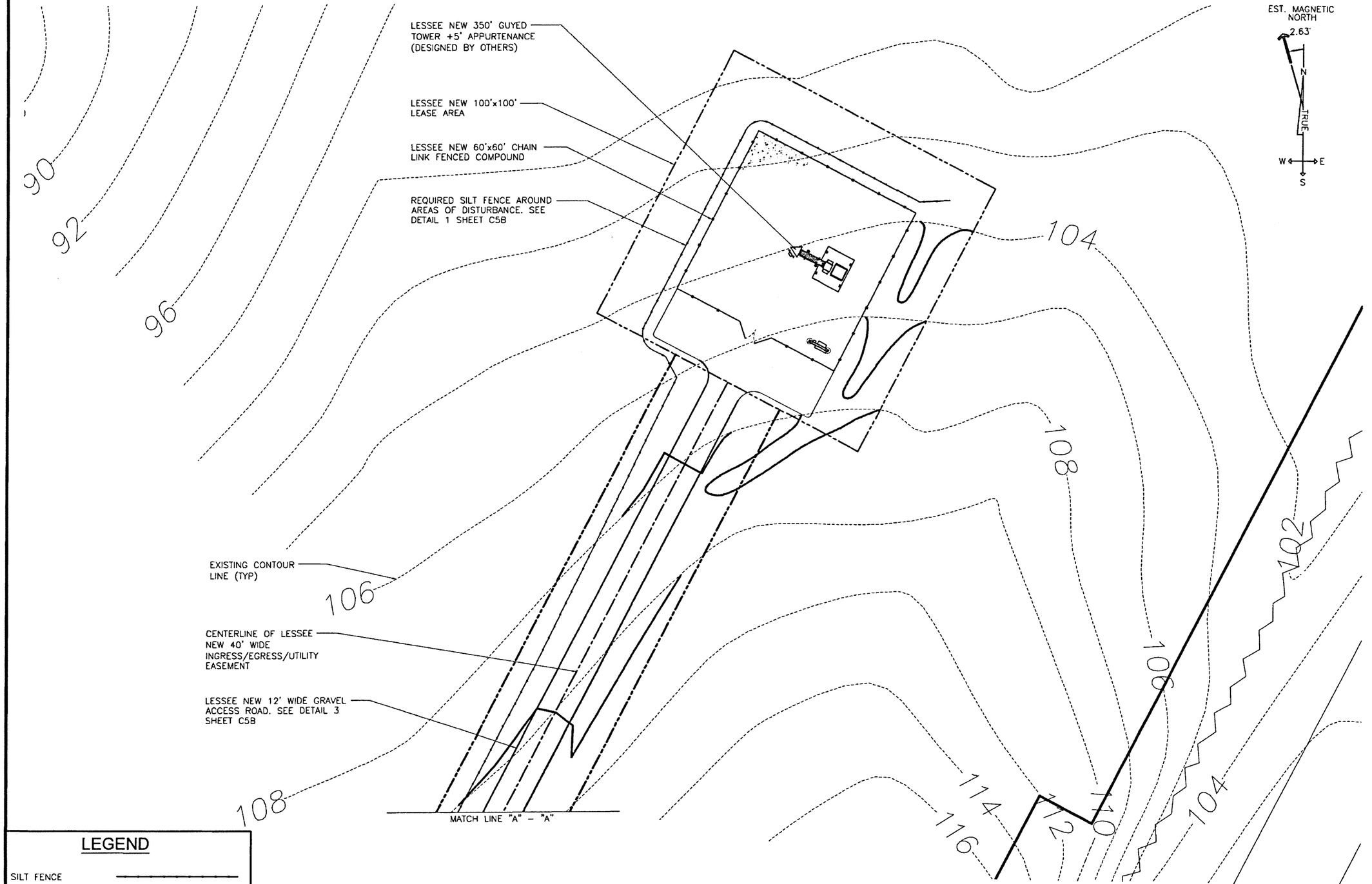
SHEET TITLE
GEOWEB
SPECIFICATIONS

SHEET NUMBER
C4.4



LEGEND

- SILT FENCE
- NEW CONTOURS
- EXISTING CONTOURS
- SPOT ELEVATION

SITE PLAN

11x17 SCALE: 1" = 80'-0"
22x34 SCALE: 1" = 40'-0"

THIS PLAN IS BASED ON A SURVEY BY POINT TO POINT LAND SURVEYORS, DATED 08/23/16. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO COMMENCEMENT OF CONSTRUCTION.

Southern Linc

APPROVALS

CARRIER _____

LANDLORD _____

LEASING _____

CONSTRUCTION _____

PROJECT NO:

DRAWN BY: JAL

CHECKED BY: JMB

APPROVED BY: CBS

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2	02/09/17	ISSUED FOR CONSTR.
1	01/10/17	ISSUED FOR REVIEW
0	11/15/16	ISSUED FOR REVIEW
v	DATE	DESCRIPTION

CLINTON B. STEWART
PROFESSIONAL ENGINEER
LICENSE
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PROFESSIONAL ENGINEER

CLINTON B. STEWART P.E. #61406
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F-8119

SITE ADDRESS

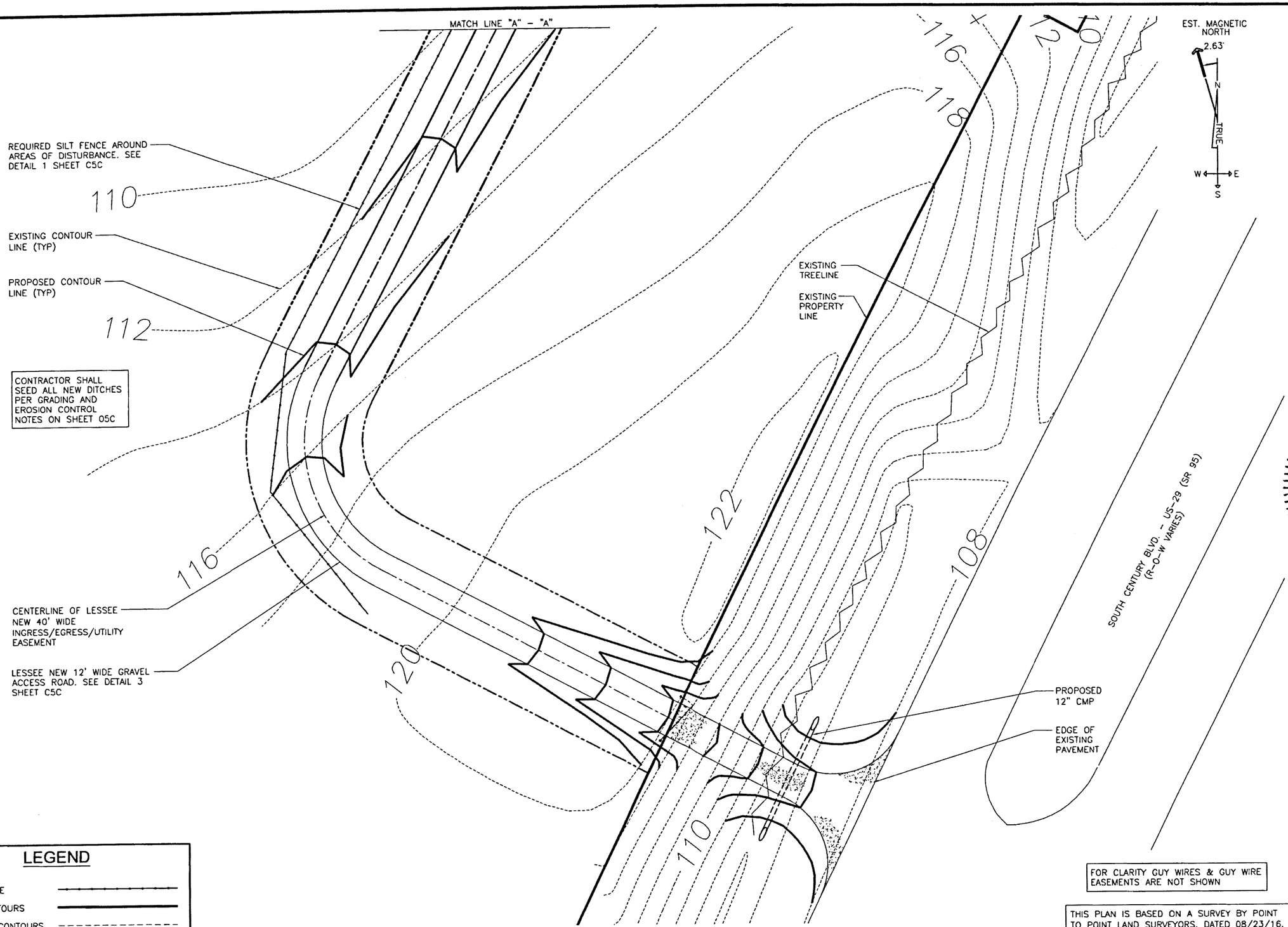
2401 S. CENTURY BLVD.
McDAVID, FL 32568

SHEET TITLE

GRADING & EROSION CONTROL

SHEET NUMBER

C5A



LEGEND

- SILT FENCE
- NEW CONTOURS
- EXISTING CONTOURS
- SPOT ELEVATION ▲

SITE PLAN
11x17 SCALE: 1/32" = 1'-0"
22x34 SCALE: 1/16" = 1'-0"

FOR CLARITY GUY WIRES & GUY WIRE EASEMENTS ARE NOT SHOWN

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Southern Linc

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CLINTON B. STEWART
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SITE NAME
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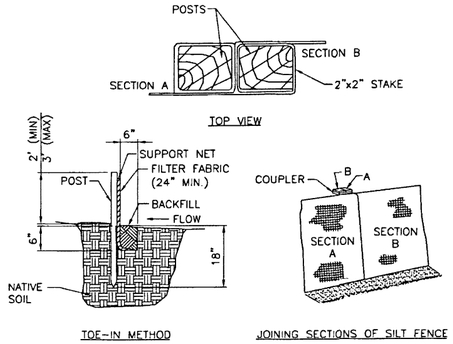
SITE ADDRESS
2401 S. CENTURY BLVD.
McDAVID, FL 32568

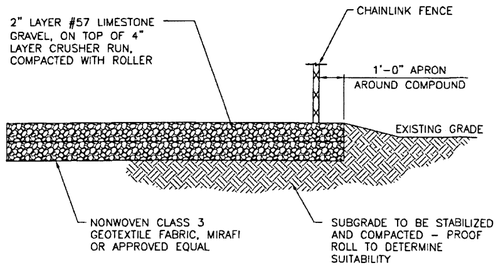
SHEET TITLE
GRADING & EROSION CONTROL

SHEET NUMBER
C5B



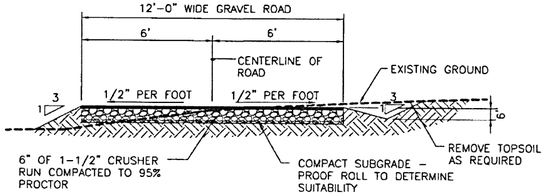
TYPE C SILT FENCE DETAIL

DETAIL 1 / NTS



TYPICAL COMPOUND SECTION

DETAIL 2 / NTS



TYPICAL 12' WIDE GRAVEL ROAD SECTION

DETAIL 3 / NTS

GRADING/EROSION CONTROL NOTES

1. NEW CONTOURS AND SPOT ELEVATIONS ARE SHOWN AT TOP OF CRUSHED STONE, TOP OF FOUNDATION, OR TOP OF TOPSOIL, SEE PLAN FOR THICKNESS OF CRUSHED STONE. MASS GRADED AREAS AND CRUSHED STONE SHALL BE FINISHED WITHIN 2" OF GRADES SHOWN. FOUNDATIONS SHALL BE FINISHED WITHIN 0.5" OF GRADES SHOWN.
2. ALL TREES, ROOTS, BRUSH AND ORGANIC MATTER (TOPSOIL) SHALL BE REMOVED BEFORE BEGINNING FILL. FILL MATERIAL SHALL BE CLEAN SOIL CONTAINING NO ROCKS LARGER THAN 6 INCHES.
3. ALL AREAS TO RECEIVE FILL SHALL FIRST BE PROOF ROLLED UNDER THE SUPERVISION OF THE ENGINEER OR TESTING LAB PERSONNEL. ANY AREAS WHICH EXHIBIT "PUMPING" SHALL BE UNDERCUT (OR OTHERWISE STABILIZED) TO A FIRM SOIL BEFORE PLACING FILL. ALSO, ALL FINAL SUBGRADES, WHETHER IN CUT OR FILL, SHALL BE PROOF ROLLED PRIOR TO CONSTRUCTING SLABS OR PAVEMENTS, CONTACT ENGINEER FOR DIRECTION IN SITUATIONS WHERE SOIL COMPACTION OR BEARING CAPACITY MAY BE INADEQUATE.
4. FILL SHALL BE FORMED OF SATISFACTORY MATERIAL PLACED IN SUCCESSIVE HORIZONAL LAYERS OF NOT MORE THAN 6 INCHES IN LOOSE DEPTH FOR THE FULL WIDTH OF EACH STRIP. SLOPES SHALL BE WARRANTEED FOR A PERIOD OF 1 YEAR.
5. FILL SOIL SHALL BE PLACED AT A MOISTURE CONTENT THAT IS WITHIN MINUS 1% OR PLUS 3% POINTS OF THE OPTIMUM MOISTURE CONTENT AND TO 95% OF THE MAXIMUM DRY DENSITY AS DETERMINED BY ASTM 698 (STANDARD PROCTOR). THE UPPER 12 INCHES OF FILL SHALL BE COMPACTED TO 95%.
6. STANDARD PROCTOR TEST (ASTM 698) SHALL BE DONE BY AN INDEPENDANT TESTING LABORATORY EMPLOYED BY THE CONTRACTOR. IN-PLACE DENSITY TESTS SHALL BE PERFORMED ON EACH LIFT TO ENSURE PROPER PLACEMENT OF FILL MATERIAL.
7. ALL DISTURBED AREAS SHALL RECEIVE GROUND COVER. ALL AREAS TO RECEIVE GROUND COVER SHALL HAVE A MINIMUM OF 4 INCHES OF TOPSOIL. ALL FOREIGN DEBRIS SHALL BE REMOVED BEFORE PLACING TOP SOIL. AREAS WITH LESS THAN 4:1 SLOPE SHALL BE SEEDED WITH FOUR POUNDS OF KENTUCKY 31 FESCUE AND ONE POUND OF ANNUAL RYE PER 1,000 SQUARE FEET. SLOPES STEEPER THAN 4:1 SHALL BE SEEDED WITH A MIXTURE OF ¼ POUND SCARIFIED SERCEALESPEDEZA, ¼ POUND CROWN FETCH, AND ONE POUND KENTUCKY 31 FESCUE PER 1,000 SQUARE FEET WITH 30 POUNDS PER 1,000 SQUARE FEET OF 6-12-12 FERTILIZER. SLOPES 3:1 OR STEEPER SHALL BE COVERED WITH NORTH AMERICAN GREEN EROSION CONTROL BLANKET S150 INSTALLED PER MANUFACTURER'S SPECIFICATIONS (OR ENGINEER APPROVED EQUAL) TO PREVENT EROSION. CONTRACTORS SHALL WARRANTY GROUND COVER AND SLOPES FOR A PERIOD OF 1 YEAR. MUST APPLY AS SOON AS EXCAVATION IS COMPLETE.
8. CONFINE ALL CONSTRUCTION ACTIVITY TO LEASE AREA. DO NOT ENTER ADJACENT PROPERTY WITHOUT OBTAINING WRITTEN APPROVAL THROUGH THE TENANT.
9. CONTRACTOR IS RESPONSIBLE FOR REMOVING SILT FENCE AND OTHER TEMPORARY EROSION CONTROL MEASURES AFTER GRASS IS ESTABLISHED AND STABILIZED.
10. ALL EROSION & SEDIMENT CONTROL MEASURES & BEST PRACTICES SHALL BE INSTALLED & MAINTAINED IN ACCORDANCE WITH TENNESSEE HANDBOOK FOR EROSION CONTROL, SEDIMENT CONTROL, & STORM WATER MANAGEMENT ON CONSTRUCTION SITES & URBAN AREAS, LATEST EDITION.

SILT FENCE INSTALLATION

1. THE FENCE SHOULD BE PLACED ACROSS THE SLOPE ALONG A LINE OF UNIFORM ELEVATION (PERPENDICULAR TO THE DIRECTION OF THE FLOW). THE FENCE SHOULD BE LOCATED AT LEAST 10' FROM THE TOE OF STEEP SLOPES TO PROVIDE SEDIMENT STORAGE AND ACCESS FOR MAINTENANCE AND CLEANOUT.
2. DRIVE THE 2"x2" WOOD POSTS AT LEAST 18" INTO THE GROUND, SPACING THEM NO FURTHER THAN 6' APART.
3. POSTS SHOULD BE INSTALLED, WITH 1" TO 2" OF THE POST PROTRUDING ABOVE THE TOP OF THE FABRIC AND NO LESS THAN 3' OF THE POST SHOULD PROTRUDE ABOVE THE GROUND. THE MINIMUM FENCE HEIGHT (HEIGHT OF FILTER FABRIC ABOVE GRADE) SHALL BE 24". THE MAXIMUM FENCE HEIGHT (HEIGHT OF FILTER FABRIC ABOVE GRADE) SHALL BE 36".
4. THE FILTER FABRIC SHOULD BE PURCHASED IN A CONTINUOUS ROLL AND CUT TO LENGTH OF THE BARRIER TO AVOID THE USE OF JOINTS. WHEN JOINTS ARE NECESSARY, FILTER CLOTH SHOULD BE WRAPPED TOGETHER ONLY AT A SUPPORT POST WITH BOTH ENDS SECURELY FASTENED TO THE POST, WITH A MINIMUM 6" OVERLAP.
5. EXTRA-STRENGTH FILTER CLOTH (50 POUND / LINEAR INCH MINIMUM TENSILE STRENGTH) SHOULD BE USED. A 2" WIDE LATHE SHALL BE STAPLED OVER THE FILTER FABRIC TO SECURELY FASTEN IT TO THE UPSLOPE SIDE OF THE POSTS. THE STAPLES USED SHOULD BE 1.5" HEAVY-DUTY WIRE STAPLES SPACED AT A MAXIMUM OF 8" APART.
6. PLACE THE BOTTOM 16" OF THE FILTER FABRIC INTO THE 12" DEEP TRENCH, EXTENDING THE REMAINING 4" TOWARDS THE UPSIDE OF THE TRENCH AND BACK FILL THE TRENCH WITH SOIL OR GRAVEL AND COMPACTED.

INSPECTION AND MAINTENANCE

1. INSPECT SILT FENCE EVERY SEVEN (7) CALENDAR DAYS WITHIN 24 HOURS AFTER EACH RAINFALL EVENT THAT PRODUCES 1/2" OR MORE OF PRECIPITATION. CHECK FOR AREAS WHERE RUN-OFF HAS ERODED A CHANNEL BENEATH THE FENCE, OR WHERE THE FENCE WAS CAUSED TO SAG OR COLLAPSE BY RUNOFF OVER TOPPING THE FENCE.
2. IF THE FENCE FABRIC TEARS, BEGINS TO DECOMPOSE, OR IN ANY OTHER WAY BECOMES INEFFECTIVE, REPLACE THE AFFECTED SECTION OF THE FENCE IMMEDIATELY.
3. SEDIMENT MUST BE REMOVED WHEN IT REACHES APPROXIMATELY 1/3 OF THE HEIGHT OF THE FENCE, ESPECIALLY IF HEAVY RAINS ARE EXPECTED.
4. SILT FENCE SHOULD BE REMOVED WITHIN 30 DAYS AFTER FINAL SITE STABILIZATION IS ACHIEVED OR AFTER TEMPORARY BMPs ARE NO LONGER NEEDED. TRAPPED SEDIMENT SHOULD BE REMOVED OR STABILIZED ON SITE. DISTURBED AREAS RESULTING FROM FENCE REMOVAL SHALL BE PERMANENTLY STABILIZED.

Southern Linc

APPROVALS
CARRIER
LANDLORD
LEASING
CONSTRUCTION

PROJECT NO:

DRAWN BY: JAL

CHECKED BY: JMB

APPROVED BY: CBS

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PROFESSIONAL ENGINEER
CLINTON B. STEWART
LICENSE
No. 61406
STATE OF FLORIDA
PROFESSIONAL ENGINEER
CLINTON B. STEWART P.E. #61406
EXCELL COMMUNICATIONS C.A. # 27498

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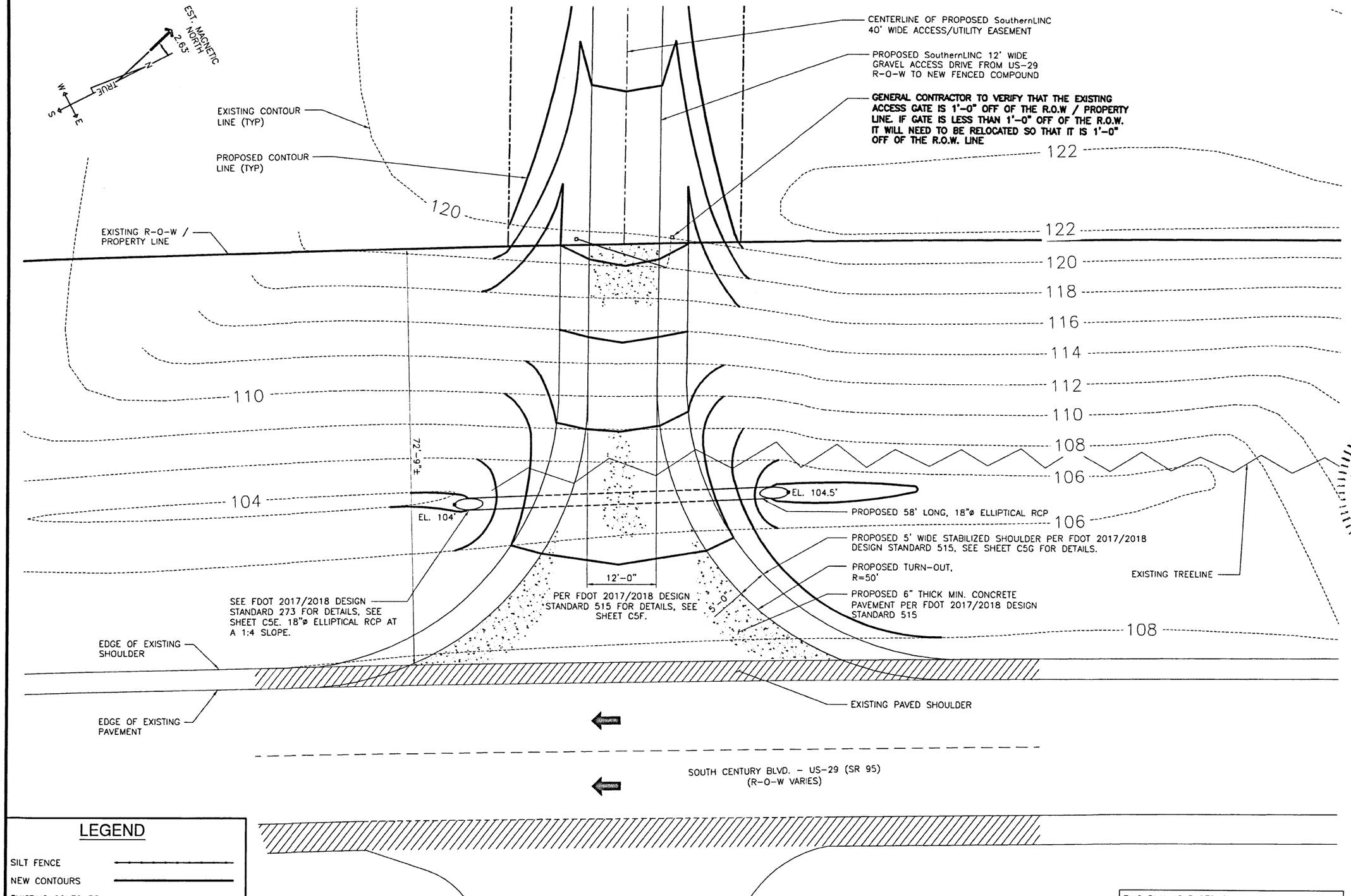
SITE NAME
BOGIA
F-8119

SITE ADDRESS
2401 S. CENTURY BLVD.
McDAVID, FL 32568

SHEET TITLE
SITE
DETAILS

SHEET NUMBER
C5C



LEGEND

- SILT FENCE
- NEW CONTOURS
- EXISTING CONTOURS
- SPOT ELEVATION ▲

DRIVEWAY TURNOUT DETAIL

22x34 SCALE: 1/8" = 1'-0"
11x17 SCALE: 1/16" = 1'-0"

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LANDLORD _____

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7	01/08/18	REV. PER FDOT
6	01/03/18	REV. PER FDOT
5	11/09/17	REV. PER FDOT
4	09/20/17	REV. PER FDOT
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PROFESSIONAL ENGINEER
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No. 61406
STATE OF FLORIDA
PROFESSIONAL ENGINEER
CLINTON B. STEWART P.E. #61406
EXCELL COMMUNICATIONS C.A. # 27468

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SITE NAME
BOGIA
F-8119

SITE ADDRESS
2401 S. CENTURY BLVD.
McDAVID, FL 32568

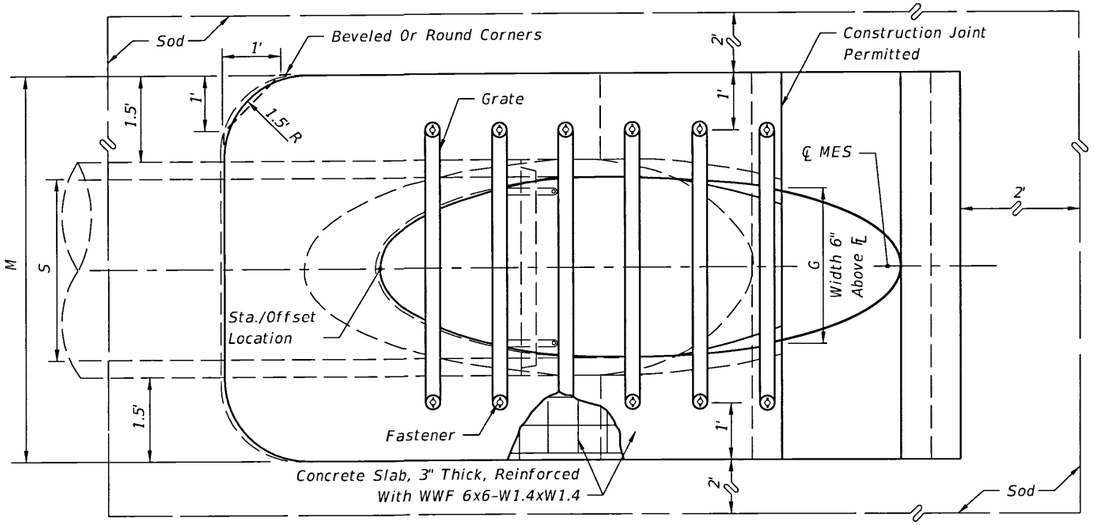
SHEET TITLE
DRIVEWAY TURNOUT DETAIL

SHEET NUMBER:
C5D

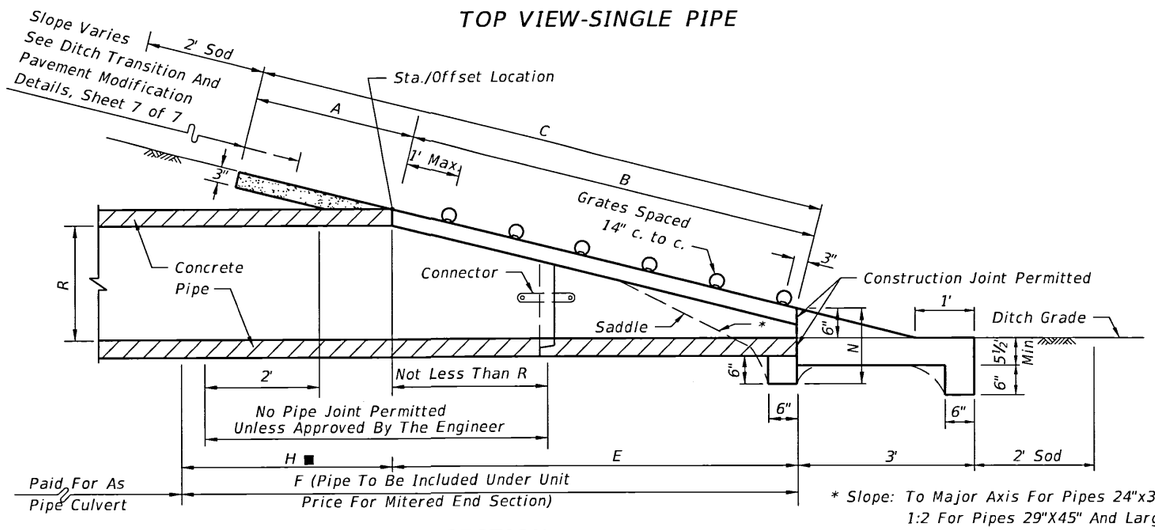
DIMENSIONS & QUANTITIES

Rise R	Span S	X	A	B	C	E	F	G	H ■	M				N	GRATE SIZES		CONCRETE (CY)				SODDING (SY)			
										Single Pipe	Double Pipe	Triple Pipe	Quad. Pipe		Standard Weight Pipe	Extra Strong Pipe	Single Pipe	Double Pipe	Triple Pipe	Quad. Pipe	Single Pipe	Double Pipe	Triple Pipe	Quad. Pipe
12"	18"	2'-10"	2.36'	3.06'	5.42'	3.03'	5'	1.50'	2.0'	4.92'	7.75'	10.58'	13.42'	1.21'			0.68	1.04	1.41	1.77	8	9	11	12
14"	23"	3'-4"	2.44'	3.75'	6.19'	3.70'	6'	1.90'	2.3'	5.38'	8.71'	12.04'	15.38'	1.23'			0.76	1.19	1.63	2.05	9	10	12	13
19"	30"	4'-0"	2.62'	5.47'	8.09'	5.36'	8'	2.37'	2.6'	6.04'	10.04'	14.04'	18.04'	1.27'	2½"	3"	0.95	1.52	2.09	2.65	10	12	13	15
24"	38"	5'-0"	2.79'	7.18'	9.97'	7.03'	10'	2.85'	3.0'	6.79'	11.79'	16.79'	21.79'	1.31'	2½"	3"	1.18	1.95	2.74	3.53	11	13	15	18
29"	45"	5'-11"	3.05'	8.90'	11.95'	8.70'	12'	3.19'	3.3'	7.50'	13.42'	19.33'	25.25'	1.38'	2½"	3½"	1.41	2.42	3.44	4.45	12	15	18	20
34"	53"	7'-0"	3.22'	10.62'	13.84'	10.36'	13'	3.57'	2.6'	8.25'	15.25'	22.25'	29.25'	1.42'	3"	3½"	1.63	2.92	4.22	5.52	13	17	20	23
38"	60"	7'-10"	3.39'	11.99'	15.38'	11.70'	15'	3.95'	3.3'	8.92'	16.75'	24.58'	32.42'	1.46'	3"	4"	1.83	3.36	4.89	6.41	14	18	21	25
43"	68"	8'-11"	3.56'	13.71'	17.27'	13.36'	17'	4.28'	3.6'	9.67'	18.58'	27.50'	36.42'	1.50'	3"	4"	2.09	3.95	5.80	7.65	16	20	23	27
48"	76"	9'-11"	3.73'	15.43'	19.16'	15.03'	19'	4.59'	4.0'	10.42'	20.33'	30.25'	40.17'	1.54'	3"	HSS 5"x5/16"	2.37	4.54	6.73	8.92	17	21	26	30
53"	83"	10'-8"	3.91'	17.15'	21.06'	16.70'	20'	4.77'	3.3'	11.08'	21.75'	32.42'	43.08'	1.58'	3"	HSS 5"x5/16"	2.61	5.09	7.56	10.03	18	23	27	32
58"	91"	11'-8"	4.08'	18.87'	22.95'	18.36'	22'	5.01'	3.6'	11.83'	23.50'	35.17'	46.83'	1.63'	3½"	HSS 5"x3/8"	2.91	5.77	8.64	11.50	19	24	29	35

■ Values shown for estimating pipe quantities and are for information only.

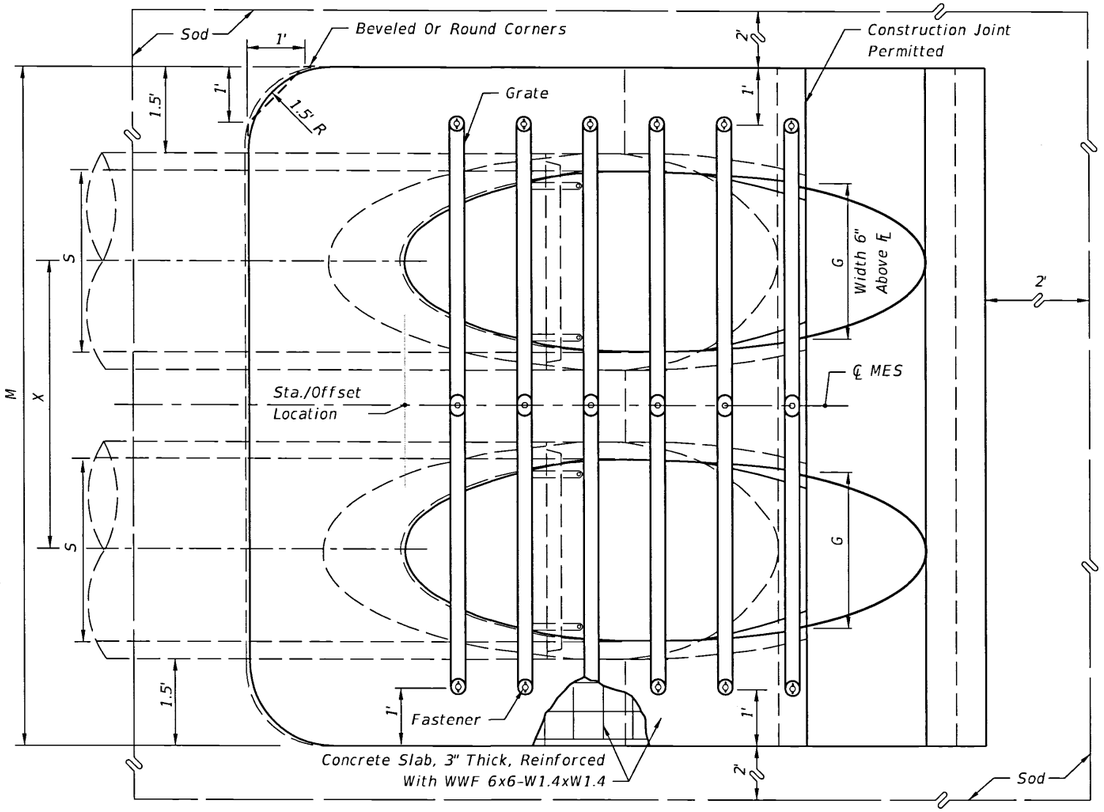


TOP VIEW-SINGLE PIPE



SECTION

* Slope: To Major Axis For Pipes 24"x38" And Smaller. 1:2 For Pipes 29"X45" And Larger.



TOP VIEW-MULTIPLE PIPE

NOTE: See Sheets 6 and 7 for details and general notes.

SINGLE AND MULTIPLE ELLIPTICAL CONCRETE PIPE

10/26/2016 5:34:39 AM

LAST REVISION	REVISION	DESCRIPTION:	FDOT FY 2017-18 DESIGN STANDARDS	SIDE DRAIN MITERED END SECTION	INDEX NO.	SHEET NO.
11/01/16					273	4 of 7

Drain Size	s	n	L	La
CONCRETE PIPE (ROUND)				
15"	3	4	4'-0"	4'-11"
18"	4	5	5'-2"	6'-1"
24"	6	7	7'-6"	8'-5"
30"	7	8	8'-8"	9'-7"
36"	9	10	11'-0"	11'-11"
42"	11	12	13'-4"	14'-3"
48"	13	14	15'-8"	16'-7"
54"	14	15	16'-10"	17'-9"
60"	16	17	19'-2"	20'-1"
CORRUGATED METAL PIPE (ROUND)				
15"	2	3	2'-10"	3'-9"
18"	3	4	4'-0"	4'-11"
24"	5	6	6'-4"	7'-3"
30"	7	8	8'-8"	9'-7"
36"	8	9	9'-10"	10'-9"
42"	10	11	12'-2"	13'-1"
48"	12	13	14'-6"	15'-5"
54"	14	15	16'-10"	17'-9"
60"	15	16	18'-0"	18'-11"

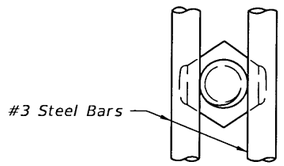
** To be used only when grates are called for in the plans.

Drain Size	s	n	L	La
ELLIPTICAL CONCRETE PIPE				
12"x18"	2	3	2'-10"	3'-9"
14"x23"	3	4	4'-0'	4'-11"
19"x30"	4	5	5'-2"	6'-1"
24"x38"	5	6	6'-4"	7'-3"
29"x45"	7	8	8'-8"	9'-7"
34"x53"	8	9	9'-10"	0'-9"
38"x60"	10	11	12'-2"	13'-1"
43"x68"	11	12	13'-4"	14'-3"
48"x76"	13	14	15'-8"	16'-7"
53"x83"	14	15	16'-10"	17'-9"
58"x91"	15	16	18'-0"	18'-11"
CORRUGATED METAL PIPE (ARCH) ***				
17"x13"	1	2	1'-8"	2'-7"
21"x15"	2	3	2'-10"	3'-9"
28"x20"	4	5	5'-2"	6'-1"
35"x24"	5	6	6'-4"	7'-3"
42"x29"	6	7	7'-6"	8'-5"
49"x33"	7	8	8'-8"	9'-7"
57"x38"	9	10	11'-0"	11'-11"
64"x43"	10	11	12'-2"	13'-1"
71"x47"	12	13	14'-6"	15'-5"

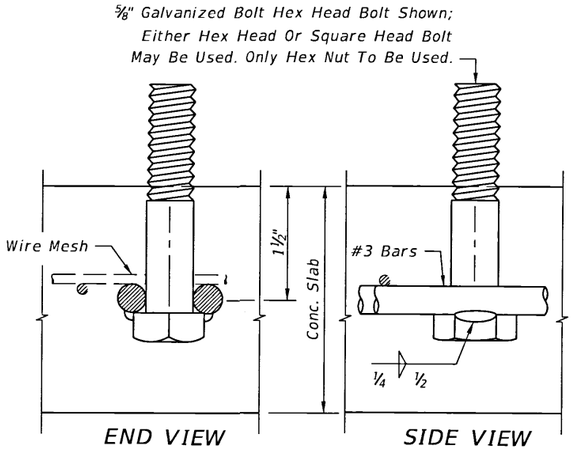
*** 1974 AASHTO Pipe Arch Sizes.

Note: 5/8" x 3" bolts are standard for all grate fasteners, except when the contractor elects to use the slotted upper holes for the intermediate fasteners on multiple drain pipes, which will require the following bolt lengths:

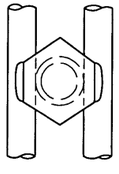
Grate Size (Std. & X-Stg.)	Bolt Length
2½"	5½"
3"	6"
3½"	6½"
4"	7"



TOP VIEW

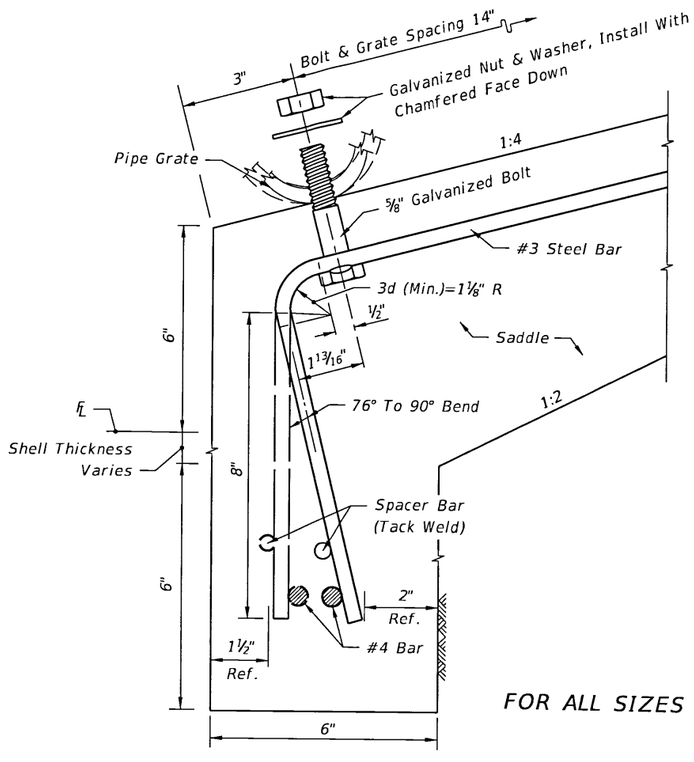


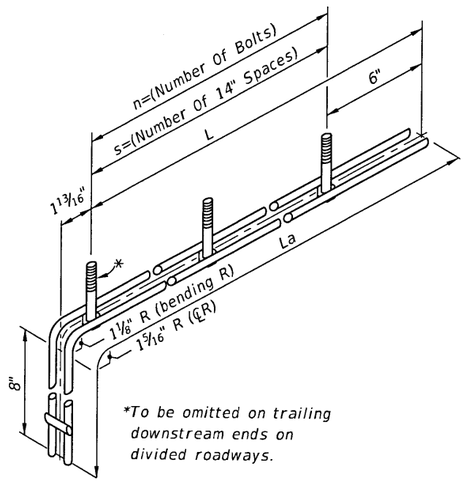
END VIEW SIDE VIEW



BOTTOM VIEW

The specified weld shall be made when the fabricated unit is subject to hazardous hauls and repeated handling. Tack welds are permitted for local or job site fabrication. Galvanizing over welded surface not required.





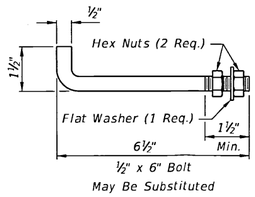
*To be omitted on trailing downstream ends on divided roadways.

FOR ALL SIZES OF SINGLE AND MULTIPLE DRAIN PIPE FASTENER UNIT

DETAILS FOR CONCRETE & CORRUGATED METAL PIPE

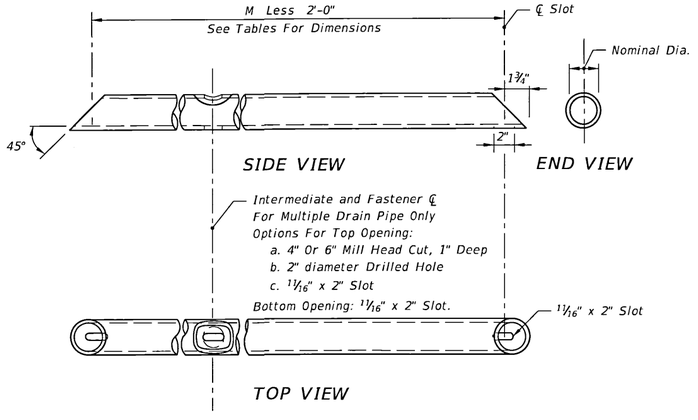
10/11/2016 10:36:58 AM

LAST REVISION	REVISION	DESCRIPTION:	FDOT FY 2017-18 DESIGN STANDARDS	SIDE DRAIN MITERED END SECTION	INDEX NO.	SHEET NO.
07/01/00					273	5 of 7



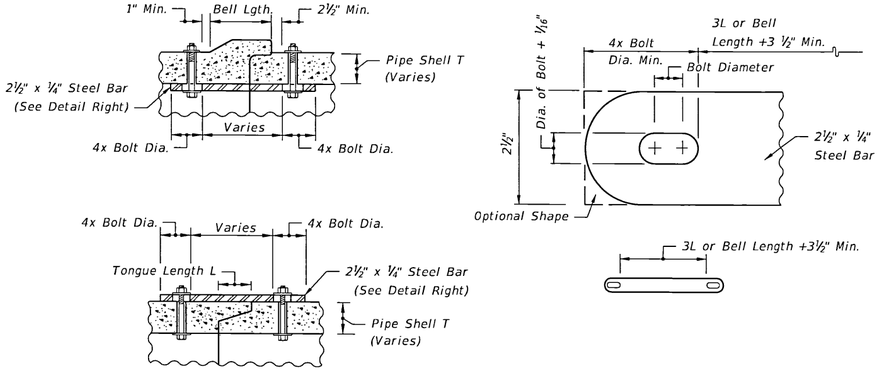
Notes:
Anchors required for CMP only.
Anchor, washer and nuts to be galvanized steel.
Bend anchor where required to center in concrete slab.
Damaged surfaces to be repaired after bending.
Anchors are to be spaced a distance equal to four (4) corrugations.
Place the anchors in the outside crest of corrugation.
Flat washer to be placed on inside wall of pipe.
Holes in the mitered end pipe are to be drilled or punched; burning not permitted.

ANCHOR DETAIL



FOR SINGLE & MULTIPLE DRAIN PIPE
GRATE DETAIL

See General Notes, Sheet 7.



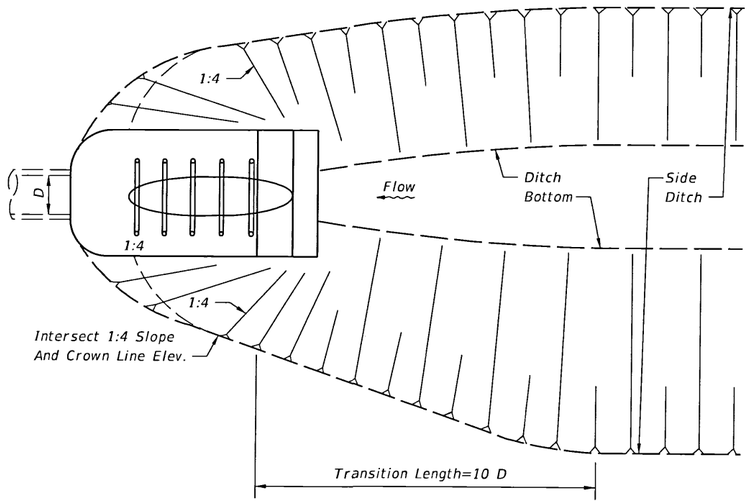
All bars, bolts, nuts and washers are to be galvanized steel.
Bolt diameters shall be ⅜" for 15" to 36" pipe and ⅝" for 42" to 60" pipe.
Two connectors required per joint, located 60° right and left of bottom center of pipe.
Bolt holes in pipe shell are to be drilled.

CONCRETE PIPE CONNECTOR DETAIL

DETAILS FOR CONCRETE & CORRUGATED METAL PIPE

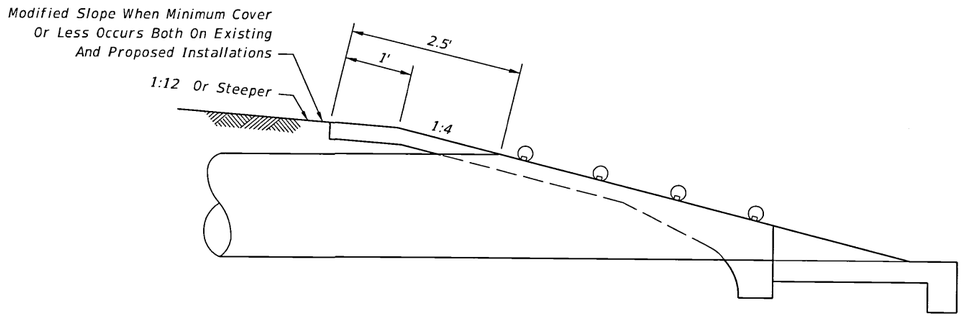
10/11/2016 10:37:01 AM

LAST REVISION	REVISION	DESCRIPTION:	FDOT FY 2017-18 DESIGN STANDARDS	SIDE DRAIN MITERED END SECTION	INDEX NO.	SHEET NO.
07/01/00					273	6 of 7



PLAN

DITCH TRANSITION



PERMISSIBLE PAVEMENT MODIFICATION

GENERAL NOTES

1. Unless otherwise designated in the plans, concrete pipe mitered end sections may be used with any type of side drain pipe; corrugated steel pipe mitered end sections may be used with any type of side drain pipe except aluminum pipe; and, corrugated aluminum mitered end sections may be used with any type of side drain pipe except steel pipe. When bituminous coated metal pipe is specified for side drain pipe, construct the mitered end sections with like pipe or concrete pipe. When the mitered end section pipe is dissimilar to the side drain pipe, construct a concrete jacket in accordance with Index 280.

2. Use either corrugated metal or concrete mitered end sections for corrugated polyethylene pipe (HDPE), polyvinyl-chloride pipe (PVC) and polypropylene pipe (PPP). When used in conjunction with corrugated mitered end sections, make connection using either a formed metal band specifically designated to join HDPE or PVC pipe, with metal pipe or other coupler approved by the State Drainage Engineer. When used in conjunction with a concrete mitered end sections, concrete jacket constructed in accordance with Index 280.

3. Select lengths of concrete pipe that avoid excessive connections in the assembly of the mitered end section.

4. Repair corrugated metal pipe galvanizing that is damaged during beveling and perforating.

5. Prior to placing concrete slab apply a bituminous coating to any portion of corrugated metal pipe in direct contact with concrete. Extend the coating 12" beyond the concrete slab.

6. When existing multiple side drain pipes are spaced other than the dimensions shown in this Index, have nonparallel axes, or non-uniform sections, either construct the mitered end sections separately as single pipe or collectively as multiple pipe end sections as directed by the Engineer.

7. Class NS concrete cast-in-place reinforced slabs are required for all sizes of side drain pipes.

8. Install grates on all round pipes 30" or greater, pipe-arches 35"x24" or greater, and elliptical pipe 19"x30" or greater, unless excluded in the Plans. Install grates on smaller size pipes only when called for in the Plans. Omit the lower grate on the downstream end of mitered end sections along divided highways.

9. Use Schedule 80 pipe for the lower grate on all traffic approach ends and Schedule 40 pipe for all remaining grates. Fabricate the grates from ASTM A53, Grade B, black steel pipe and hot dip galvanize after fabrication in accordance with ASTM A123 for all corrosive environments.

DESIGN NOTES

1. Do not use grates until the debris transport potential has been evaluated by the drainage engineer and appropriate adjustments made. Ditch grades in excess of 3% or pipe with less than 1.5' of cover and grades in excess of 1% will require such an evaluation (General Note 10).

2. The design engineer must determine and designate in the plans which alternate types of mitered end section will not be permitted. Restrict use based on corrosive or structural requirements.

3. Contact the District Drainage Engineer for possible alternate treatment of side drain mitered end sections where a minimum spacing of 30' will not result between the toe points of the mitered end sections.

4. Provide ditch transitions on all grades in excess of 3%.

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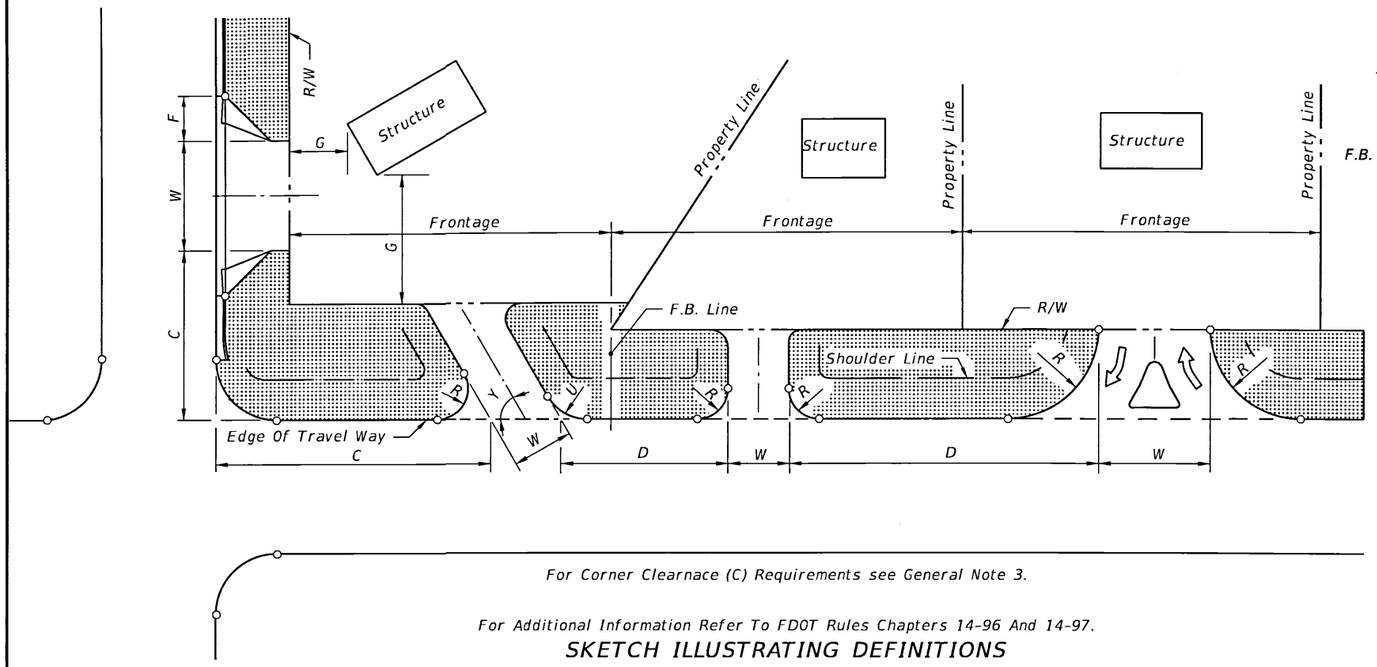
NOTES & INFORMATION

LAST REVISION 11/01/16	REVISION	DESCRIPTION:	FDOT FY 2017-18 DESIGN STANDARDS	SIDE DRAIN MITERED END SECTION	INDEX NO. 273	SHEET NO. 7 of 7



For Corner Clearnace (C) Requirements see General Note 3.

For Additional Information Refer To FDOT Rules Chapters 14-96 And 14-97.

SKETCH ILLUSTRATING DEFINITIONS

LEGEND

⊸	Return Radius Point Or Flare Point
▩	Buffer Areas
F.B. Line	Frontage Boundary Line
W	Driveway Width
Y	Driveway Angle
C	Corner Clearance
G	Setback
R	Outside Radius
U	Inside Radius
D	Distance Between Connections
F	Flare

ELEMENT DESCRIPTION	CURBED ROADWAYS			FLUSH SHOULDER ROADWAYS		
	1-20 Trips/Day or 1-5 Trips/Hour	21-600 Trips/Day or 6-60 Trips/Hour	601-4000 Trips/Day ◪ or 61-400 Trips/Hour	1-20 Trips/Day or 1-5 Trips/Hour	21-600 Trips/Day or 6-60 Trips/Hour	601-4000 Trips/Day ◪ or 61-400 Trips/Hour
		2-Way □	2-Way □		2-Way □	2-Way □
CONNECTION WIDTH W	12' Min. 24' Max.	24' Min. 36' Max. ☆	24' Min. 36' Max. ☆	12' Min. 24' Max.	24' Min. 36' Max. ☆	24' Min. 36' Max. ☆
FLARE (Drop Curb) F	10' Min.	10' Min.	N/A	N/A	N/A	N/A
RETURNS (Radius) R & U	N/A	△	25' Min. 50' Std. 75' Max.	15' Min. 25' Std. 50' Max.	25' Min. 50' Std. 75' Max.	25' Min. 50' Std. (Or 3-Centered Curves)
ANGLE OF DRIVE Y		60°-90°	60°-90°		60°-90°	60°-90°
DIVISIONAL ISLAND (Throat Median)		4'-22' Wide	4'-22' Wide		4'-22' Wide	4'-22' Wide
SETBACK G	12' Min., All categories. See General Note No. 5.					

◪ Side road intersection design, with possible auxiliary lanes and channelization, may be necessary. Intersection design, with possible auxiliary lanes and channelization, should be considered for connections with more than 4000 trips/days.

□ "2-Way" refers to one "in" movement and one "out" movement i.e., not exclusive left or right turn lanes on the connection.

☆ When more than 2 lanes in the turnout connection are required, the 36' max. width may be increased to relieve interference between entering and exiting traffic which adversely affects traffic flow. These cases require documented site specific study and design.

△ Small radii may be used in lieu of flares as approved by the Department.

DESIGN NOTE: 1-Way connections will be designed to effectively eliminate unpermitted movements.

NOT INTENDED FOR FULL INTERSECTION DESIGN

SUMMARY OF GEOMETRIC REQUIREMENTS FOR DRIVEWAY TURNOUTS

GENERAL NOTES

1. For definitions and descriptions of access connection "Categories" and access "Classifications" of highway segments, and for other detailed information on access to the State Highway System, refer to FDOT Rule Chapter 14-96, "State Highway Connection Permits Administrative Process" and Rule Chapter 14-97, "State Highway System Access Management Classification System And Standards."

2. For this index the term 'turnout' applies to that portion of driveways or side roads adjoining the outer roadway. For this index the term 'connection' encompasses a driveway or side road and their appurtenant islands, separators, transition tapers, auxiliary lanes, travelway flares, drainage pipes and structures, crossovers, sidewalks, curb cut ramps, signing, pavement marking, required signalization, maintenance of traffic or other means of access to or from controlled access facilities. The turnout requirements set forth in this index do not provide complete intersection design, construction or maintenance requirements.

3. The location, positioning, orientation, spacing and number of connections and median openings shall be in conformance with FDOT Rule Chapter 14-97.

4. On Department construction projects all driveways not shown on the plans shall be reconstructed at their existing location in conformance to these standards, or, in conformance to permits issued during the construction project.

5. Driveways shall have sufficient length and size for all vehicular queueing, stacking, maneuvering, standing and parking to be carried out completely beyond the right of way line. Except for vehicles stopping to enter the highway, the turnout areas and drives within the right of way shall be used only for moving vehicles entering or leaving the highway.

6. Connections with expected daily traffic over 4000 vpd shall be constructed as intersecting side roads. The design requirement of this index and that of the local government will be used to select appropriate connection widths, radii and intersection design, subject to the approval of the Department. For connections with expected daily traffic less than 4000 vpd, the Department will determine if a drop curb or radius returns are required in accordance with existing or planned connections. Where radius returns apply, the design requirements of this index and that of the local government will be used to select appropriate connection widths, radii and intersection design, subject to the approval of the Department.

   For connections that are intended to daily accommodate either multi-unit vehicles or single unit vehicles exceeding 30' in length, returns with 50' radii shall be used, unless otherwise called for in the plans or otherwise stipulated by permit. Where large numbers of multi-unit vehicles will use the connection, the connection width and radii shall be increased and auxiliary lanes, tapers, lane flares, separators and/or islands constructed, as determined by the Department to be necessary for safe turning movements.

7. Any connection requiring or having a specified median opening with left turn storage and served directly by that opening shall have radial returns.

8. Where a connection is intended to align with a connection across the highway, the through lanes shall align directly with the corresponding through lanes.

9. For new connections and for connections on all new construction and reconstruction projects, pavement materials and thicknesses shall meet the requirements applicable to either that detailed for "Curbed Roadway-Flared Turnouts", or, that described in "Table 515-1" for connections with radial returns and/or auxiliary lanes.

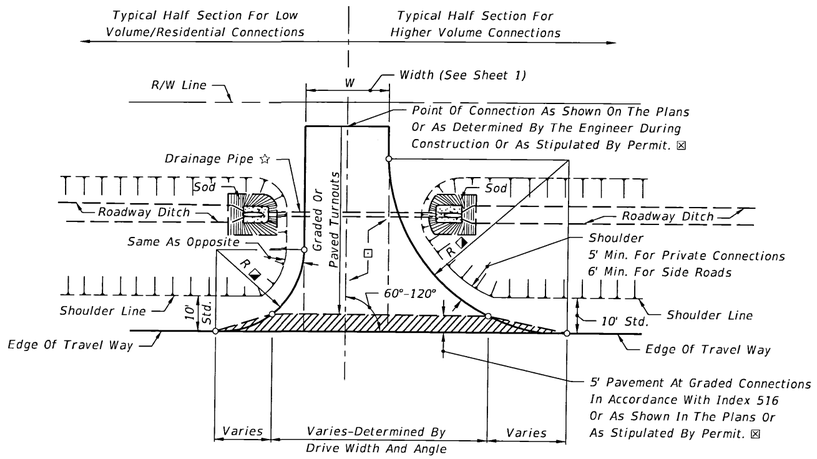
10. The responsibility for the cost of construction or alteration to an access connection shall be in accordance with FDOT Rule Chapter 14-96.

DESIGN NOTES

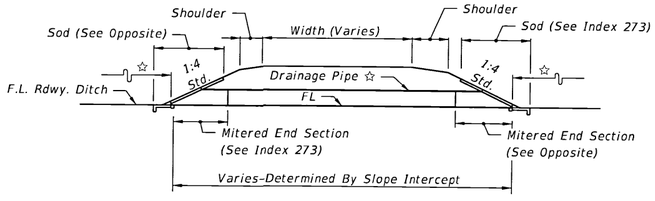
1. Prior to the adoption of FDOT Rules Chapters 14-96 and 14-97, connections to the State Highway System were defined and permitted by Classes. Connections have been redfined by Categories under Rule 14-96; and, the term "Class" has been applied to highway segments of the State Highway System as defined under Rule 14-97.

10/12/2016 10:56:52 AM

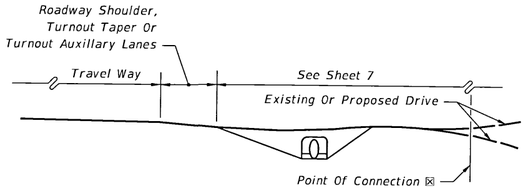
LAST REVISION	REVISION	DESCRIPTION:	FDOT	FY 2017-18 DESIGN STANDARDS	TURNOUTS AND DRIVEWAYS	INDEX NO.	SHEET NO.
11/01/16						515	1 of 7



PLAN

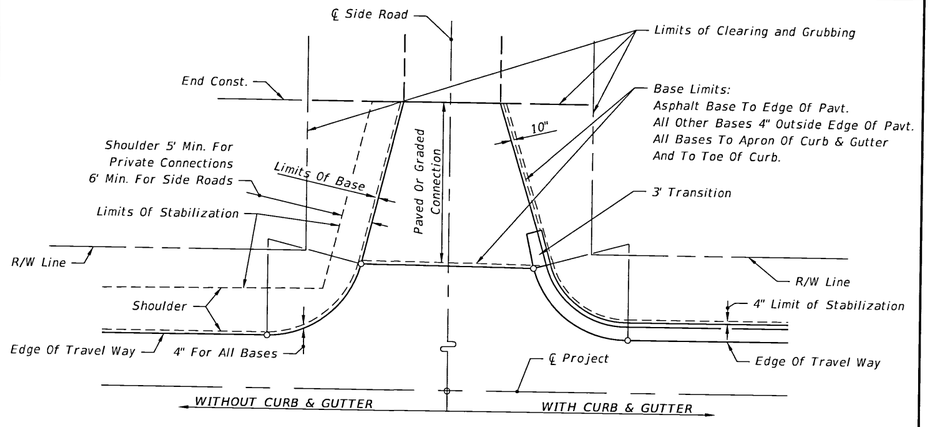


DRAINAGE SECTION



TURNOUT PROFILE AND END VIEW

FLUSH SHOULDER ROADWAY - TURNOUT CONSTRUCTION



PLAN

LIMITS OF CLEARING & GRUBBING, STABILIZING AND BASE AT INTERSECTIONS

INTERSECTIONS NOTES:

○ Return Radius Point or Transition Point.

DRIVE ENTRANCES NOTES:

☆ Drainage pipe size and length shall be that shown on the plans, or as stipulated by permit, or, as determined by the Engineer during construction. The size shall be at least that established by the FDOT District, but not less than 15" diameter or equivalent. For minimum cover over drainage pipe see Specification Section 125. Pipe arch or elliptical pipe may be required to obtain necessary cover. At minimal cover applications a modified pavement apron is permitted. See 'PERMISSIBLE PAVEMENT MODIFICATION' Index 273. For spacing between adjacent pipe end treatments see Index 273.

⊡ Stable material may be required for graded turnouts to private property as directed by the Engineer in accordance with Section 102-8 of the Standard Specifications.

⊠ The 5' pavement at graded connections is not required where there is paved shoulder 4' or more in width. The 5' pavement requirement may be waived for connections serving one or two homes or field entrances with less than 20 trips per day, or 5 trips per hour as approved by permit or by the Engineer, or when not itemized in the plans.

Paved turnouts shall be constructed for all paved connecting facilities. The connecting point will be determined by the Engineer.

Paved turnouts shall be constructed for all business, commercial, industrial or high volume residential graded connecting facilities. The connecting point shall be 30' from edge of travel way or at R/W line, whichever is less.

Paved turnouts shall be constructed for all connecting facilities over 4000 vehicles per day. The connecting point shall be at the R/W line.

◪ See "Summary Of Geometric Requirements For Turnouts" chart for return radii lengths and supplemental information.

○ Return Radius Point or Flare Point.

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LAST REVISION 11/01/16	REVISION	DESCRIPTION:	FDOT FY 2017-18 DESIGN STANDARDS	TURNOUTS AND DRIVEWAYS	INDEX NO. 515	SHEET NO. 5 of 7

MATERIAL TYPES AND THICKNESSES IN DRIVING AREAS FOR ALL CONNECTIONS

Course	Materials ②	Thickness (in.) ①	
		Connections ③	Roadway ④
Structural	Asphaltic Concrete	1"	1½"
Bases	Optional Base (See Spec. Section 285)	O.B.G. 1	O.B.G. 3

① Minimum thickness.
② All materials shall be approved by the Department prior to being placed.
③ Connection structure other than traffic lanes. See Notes 1 and 2 below.
④ Travel way flares (bypass lanes), auxiliary lanes serving more than a single connection, and all median crossovers including their auxiliary lanes and/or transition tapers. See Notes 1 and 2 below.

NOTES

1. The pavement should be structurally adequate to meet the expected traffic loads and should not be less than that shown above, except as approved by the Department for graded connections. Other Department-approved equivalent pavements may be used at the discretion of the Engineer.

2. Auxiliary lanes and their transition tapers shall be the same structure as the abutting travel way pavement thickness or any of the roadway structures tabulated above, whichever is thicker.

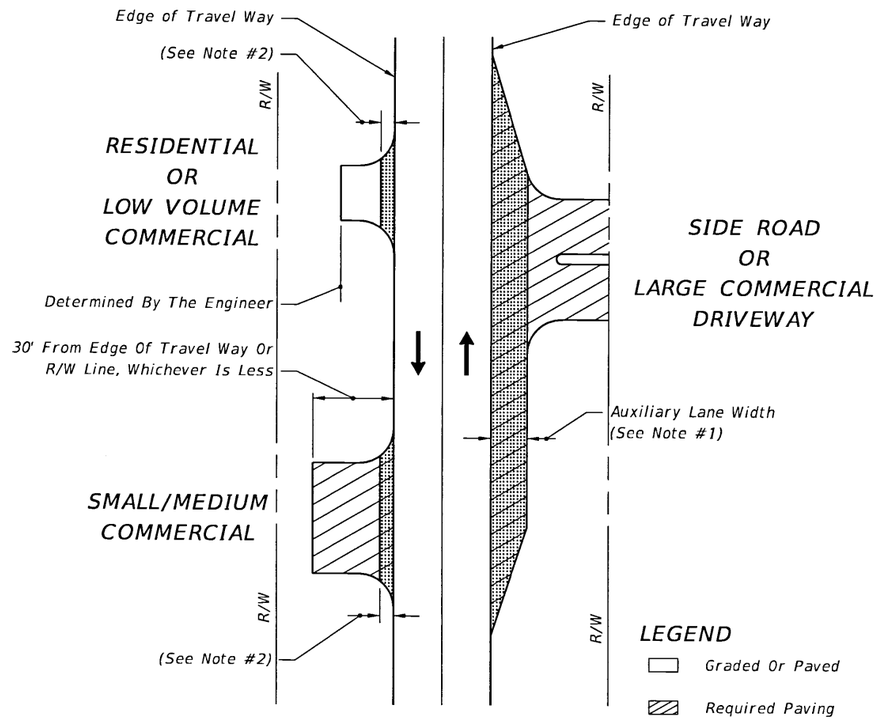
3. If an asphalt base course is used for a turnout, its thickness may be increased to match the edge of travel way pavement thickness in lieu of a separate structural course. 6" of Portland cement concrete will be acceptable in lieu of the asphalt base and structural courses. See Notes 4 and 5 below.

4. A structural course is required for flexible pavements when they are used for auxiliary lanes serving more than a single connection.

5. Connections paved with Portland cement concrete shall be Class NS concrete at least 6" thick. The Department may require greater thickness when called for in the plans or stipulated by permit. Materials and construction shall conform with FDOT Standard Specifications Sections 347, 350 and 522.

6. The Department may require other pavement criteria where local conditions warrant.

PAVEMENT STRUCTURE FOR TURNOUTS AND AUXILIARY LANES TABLE 515-1



NOTES

1. Auxiliary lane pavements and crossover pavements shall be maintained by the Department.

2. Department maintenance of turnout pavement extends 5' from edge of the travel way or to the edge of paved shoulder, whichever is greater. The remainder of any turnout paved area on the right of way shall be maintained by the owner or his authorized agent. As a function of routinely reworking shoulders, the Department may grade and shape existing material on nonpaved areas beyond the maintained pavement.

3. Control and maintenance of drainage facilities within the right of way shall be solely the responsibility of the Department, unless specified differently by Department permit.

4. The maintenance and operation of highway lighting, traffic signals, associated equipment, and other necessary devices shall be the responsibility of a public agency.

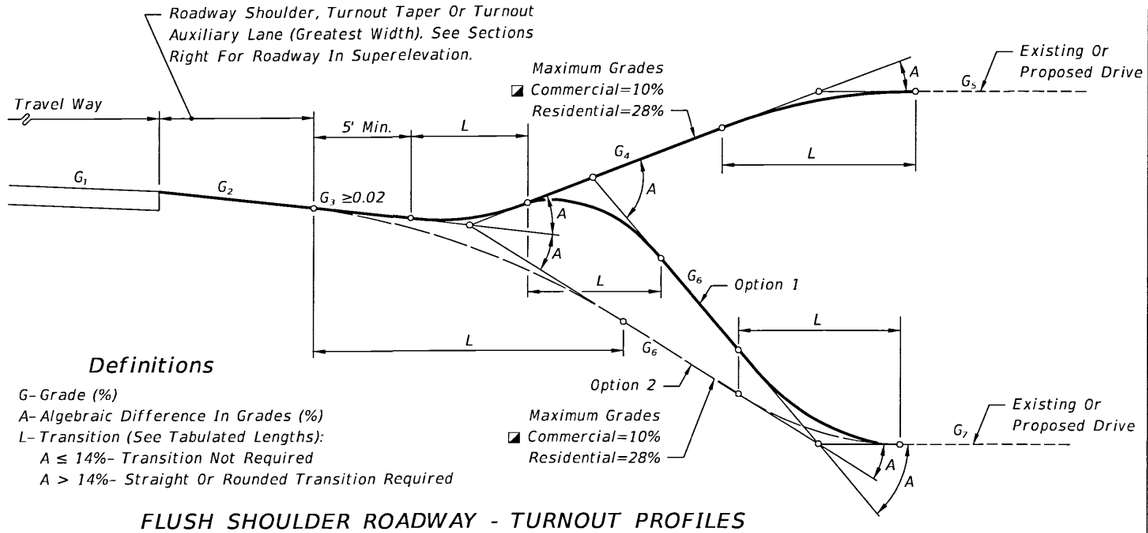
5. All pavement markings on the State highways, including acceleration and deceleration lane markings, and signing installed for the operation of the State highway shall be maintained by the Department.

6. All signing and marking installed for the operation of the connection (such as stop bars and stop signs for the connection) shall be the responsibility of the permittee.

LIMITS OF CONSTRUCTION AND MAINTENANCE FOR FLUSH SHOULDER ROADWAY CONNECTIONS

10/12/2016 10:57:04 AM

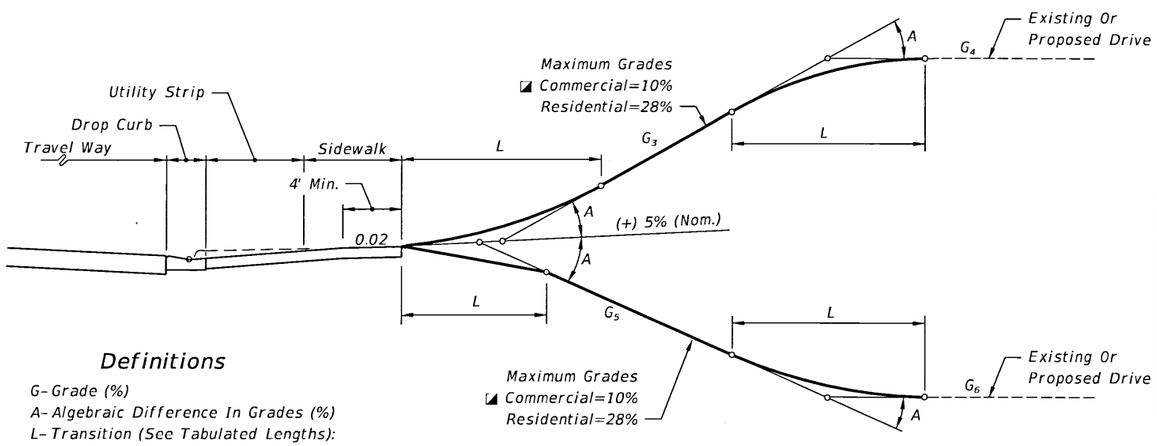
LAST REVISION	REVISION	DESCRIPTION:	FDOT FY 2017-18 DESIGN STANDARDS	TURNOUTS AND DRIVEWAYS	INDEX NO.	SHEET NO.
11/01/16					515	6 of 7



Definitions

G- Grade (%)
A- Algebraic Difference In Grades (%)
L- Transition (See Tabulated Lengths):
A ≤ 14%- Transition Not Required
A > 14%- Straight Or Rounded Transition Required

FLUSH SHOULDER ROADWAY - TURNOUT PROFILES



Definitions

G- Grade (%)
A- Algebraic Difference In Grades (%)
L- Transition (See Tabulated Lengths):
A ≤ 14%- Transition Not Required
A > 14%- Straight Or Rounded Transition Required

CURBED ROADWAY - TURNOUT PROFILES

◪ When restoring or reconstructing existing commercial turnout connections on new construction and reconstruction projects, the maximum 10% commercial grade may be exceeded provided this does not create adverse roadway operational or safety impacts. This shall be approved by the District Design Engineer and supported by documented site specific findings.

A	LENGTHS (L) (FT.)							
	CRESTS				SAGS			
	STRAIGHT		ROUNDED		STRAIGHT		ROUNDED	
	Desirable	Minimum	Desirable	Minimum	Desirable	Minimum	Desirable	Minimum
6-13%	3	0	5	0	3	0	5	0
14%	3	0	10	0	3	0	10	0
15%	3	2.5	10	3	5	3	10	5
16%	5	3	10	4	6	4	10	6
17%	6	3.5	10	5	8	5	10	7
18%	6	4	10	6	9	6	10	8
19%	7	4.5	10	7	11	7	12	9
20%	8	5	11	8	12	8	13	10
21%	9	5.5	12	9	13	8.5	14	11
22%	10	6	13	10	14	9	16	12
23%	10	6.5	14	10.5	14	9.5	16	12.5
24%	11	7	15	11	15	10	17	13
25%	12	7.5	15	11.5	16	10.5	18	13.5
26%	12	8	16	12	17	11	18	14
27%	13	8.5	17	12.5	17	11.5	19	14.5
28%	14	9	17	13	18	12	20	15
29%	NA	NA	22	14	NA	NA	21	17
30-31%	NA	NA	23	15	NA	NA	22	18
32-33%	NA	NA	24	16	NA	NA	23	20
34-36%	NA	NA	26	17	NA	NA	25	21
37-38%	NA	NA	27	18	NA	NA	26	22
39-41%	NA	NA	29	19	NA	NA	28	24
42-43%	NA	NA	30	20	NA	NA	29	25
44-46%	NA	NA	32	21	NA	NA	31	26
47-48%	NA	NA	33	22	NA	NA	32	27
49-51%	NA	NA	34	23	NA	NA	34	28
52-54%	NA	NA	36	24	NA	NA	35	30
55-56%	NA	NA	37	25	NA	NA	36	31

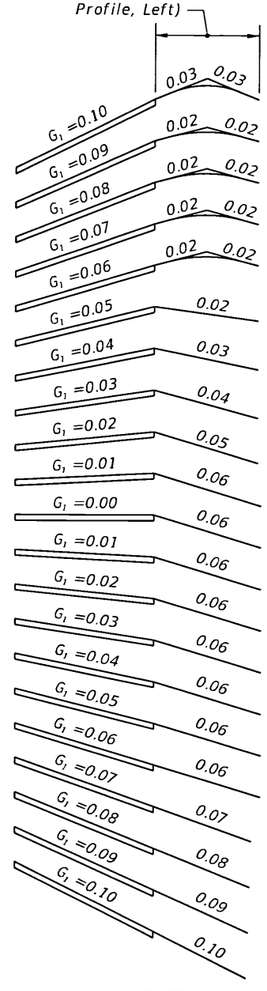
Rounded: Either circular, parabolic, or spline curvature. The plans or the Engineer may specify a particular type of curvature.

Desirable: Desirable minimum lengths
Minimum: Absolute minimum lengths

{Greater lengths than minimum and desirable are recommended where practical for flatter and smoother profile.}

RECOMMENDED TURNOUT PROFILE TRANSITION LENGTHS (L) (FT.)

G_2 Slopes (See Flush Shoulder Roadway - Turnout Profile, Left)



ROADWAY PAVEMENT SLOPES AND SLOPES OF ABUTTING FLUSH SHOULDER ROADWAY TURNOUT SURFACES (G_2)

STORMWATER RUNOFF AND PROFILE OPTION NOTES

1. Turnouts shall neither cause water to flow on or across the roadway pavement, nor cause water ponding or erosion within the State right of way. On all Flush Shoulder Roadway turnouts the transition (L) nearest the roadway shall be sloped or crowned to direct stormwater runoff to the roadside ditch. Inlets, flumes or other appropriate runoff control devices shall be constructed when runoff volumes are sufficient to cause erosion of the shoulder. Similar runoff control devices shall be constructed as necessary to properly direct and control the stormwater runoff on Curbed Roadway turnouts.

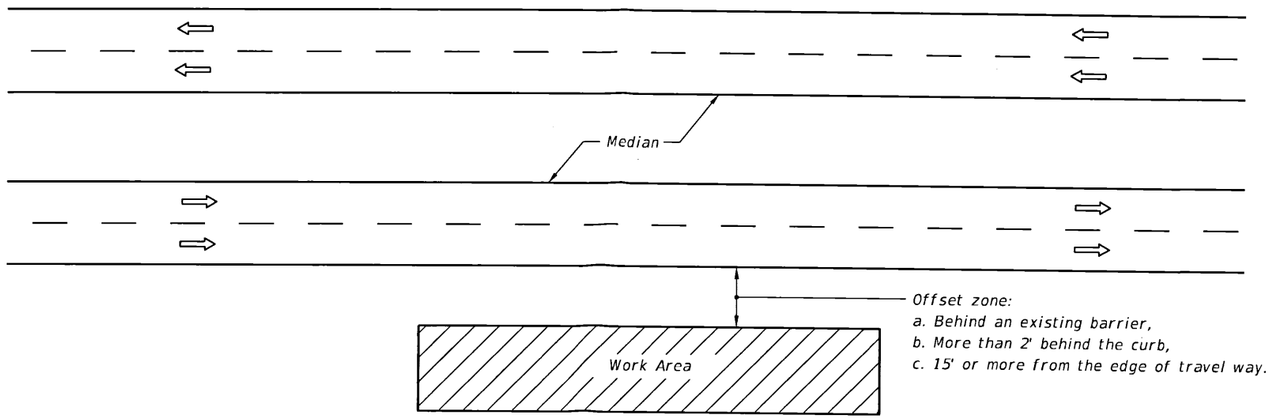
2. The Option 1 profile is intended for locations where roadway, turnout taper and auxiliary lane stormwater runoff volumes are relatively large. The Option 2 profile is intended for locations where runoff volumes are relatively small and/or where there is no roadside ditch.

SUPERELEVATION SECTIONS

TURNOUT PROFILES

10/12/2016 10:57:07 AM

LAST REVISION	REVISION	DESCRIPTION:	FDOT FY 2017-18 DESIGN STANDARDS	TURNOUTS AND DRIVEWAYS	INDEX NO.	SHEET NO.
11/01/16					515	7 of 7



GENERAL NOTES

1. If the work operation (excluding establishing and terminating the work area), requires that two or more work vehicles cross the offset zone in any one hour, traffic control will be in accordance with Index No. 612.
2. No special signing is required.
3. This index also applies when work is being performed on a multilane undivided highway.
4. This index also applies to work performed in the median behind an existing barrier or more than 15' from the edge of travel way, both roadways. Work performed in the median behind curb and gutter shall be in accordance with Index No. 612.
5. When a side road intersects the highway within the work area, additional traffic control devices shall be placed in accordance with other applicable TCZ Indexes.
6. When construction activities encroach on a sidewalk, refer to Index No. 660.
7. For general TCZ requirements and additional information, refer to Index No. 600.

SYMBOLS

Work Area

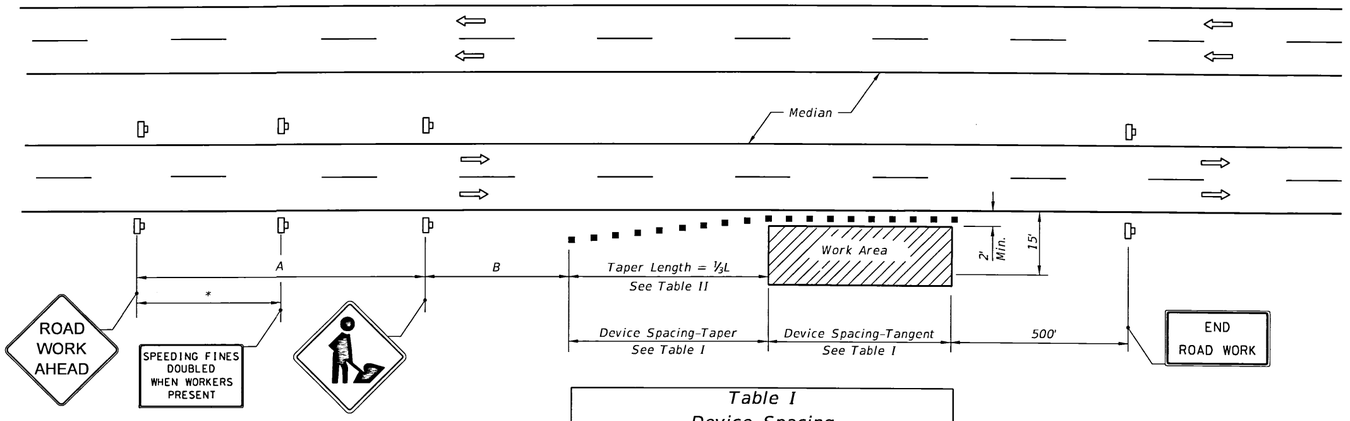
Lane Identification + Direction of Traffic

CONDITIONS

WHERE ANY VEHICLE, EQUIPMENT, WORKERS AND THEIR ACTIVITIES ARE BEHIND AN EXISTING BARRIER, MORE THAN 2' BEHIND THE CURB, OR 15' OR MORE FROM THE EDGE OF TRAVEL WAY.

10/12/2016 1:10:15 PM

LAST REVISION	REVISION	DESCRIPTION:	FDOT FY 2017-18 DESIGN STANDARDS	MULTILANE WORK OUTSIDE SHOULDER	INDEX NO.	SHEET NO.
07/01/05					611	1 of 1



DISTANCE BETWEEN SIGNS		
Speed	Spacing (ft.)	
	A	B
40 mph or less	200	200
45 mph	350	350
50 mph or greater	500	500

*250' beyond the ROAD WORK AHEAD sign or midway between signs whichever is less.

Table I
Device Spacing

Speed (mph)	Max. Distance Between Devices (ft.)			
	Cones or Tubular Markers		Type I or Type II Barricades or Vertical Panels or Drums	
	Taper	Tangent	Taper	Tangent
25	25	50	25	50
30 to 45	25	50	30	50
50 to 70	25	50	50	100

Table II
Taper Length - Shoulder

Speed (mph)	⅓L (ft.)			Notes
	8' Shldr.	10' Shldr.	12' Shldr.	
25	28	35	42	$L=\frac{WS^2}{60}$
30	40	50	60	
35	55	68	82	
40	72	90	107	
45	120	150	180	L=WS
50	133	167	200	
55	147	183	220	
60	160	200	240	
65	173	217	260	
70	187	233	280	

8' minimum shoulder width.

⅓L = Length of shoulder taper in feet

W = Width of total shoulder in feet (combined paved and unpaved width)

S = Posted speed limit (mph)

SYMBOLS

- Work Area
- Channelizing Device (See Index No. 600)
- Work Zone Sign
- Lane Identification + Direction of Traffic

GENERAL NOTES

1. When a high volume of work vehicles are entering and leaving the Work Area at speeds slower than 10 MPH below the posted speed, place an MOT-5-06 sign in the ROAD WORK AHEAD sign location and shift the ROAD WORK AHEAD sign upstream 500 ft.
2. This TCZ plan also applies to work performed in the median more than 2' but less than 15' from the edge of travelway.
3. When work is being performed on a multilane undivided roadway the signs normally mounted in the median (as shown) shall be omitted.
4. WORKERS signs to be removed or fully covered when no work is being performed.
5. SHOULDER WORK sign may be used as an alternate to the WORKER symbol sign.
6. When a side road intersects the highway within the TTC zone, additional TTC devices shall be placed in accordance with other applicable TCZ Indexes.
7. For general TCZ requirements and additional information, refer to Index No. 600.

DURATION NOTES

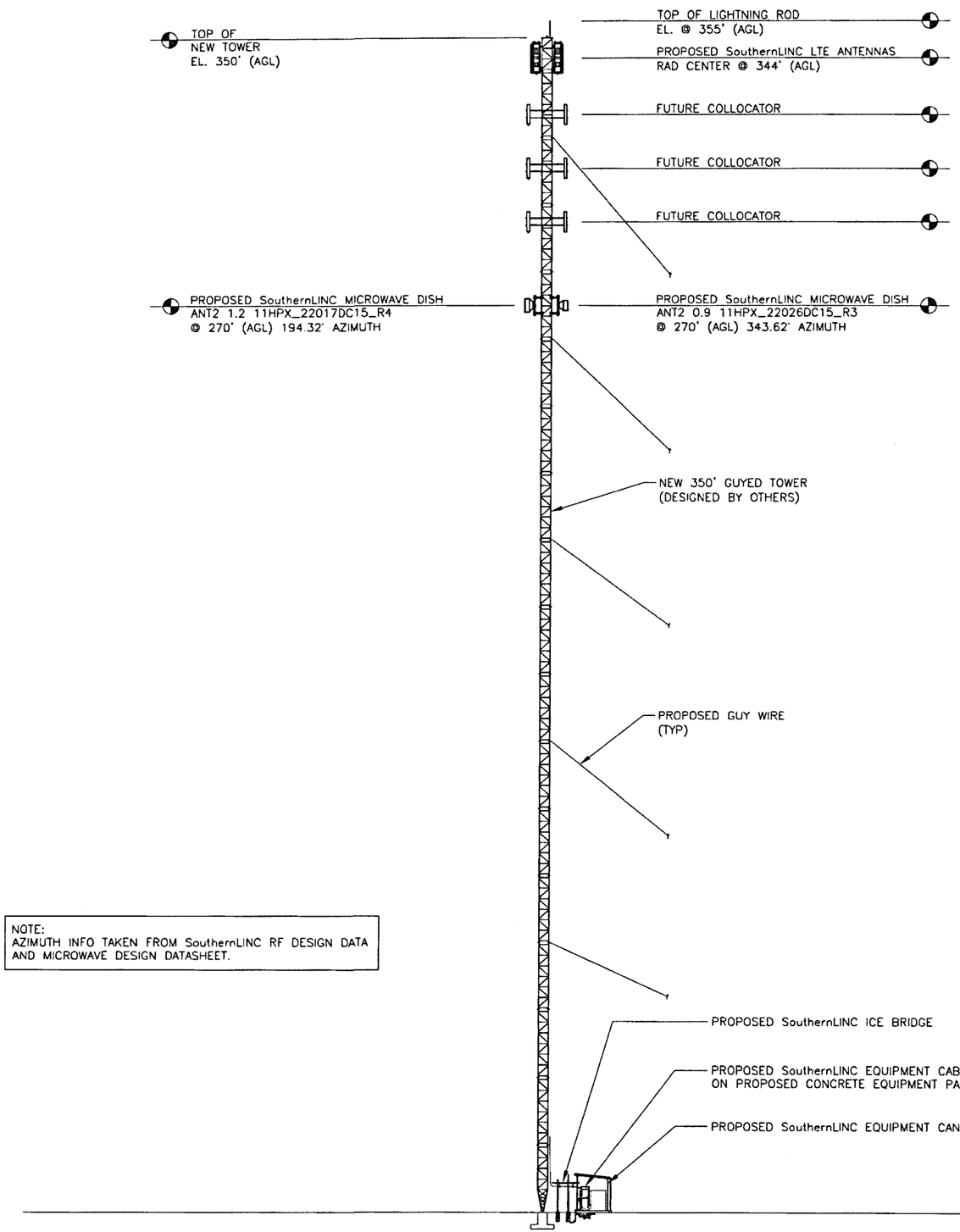
1. Signs and channelizing devices may be omitted if all of the following conditions are met:
   a. Work operations are 60 minutes or less.
   b. Vehicles in the work area have high-intensity, rotating, flashing, oscillating, or strobe lights operating.

CONDITIONS

WHERE ANY VEHICLE, EQUIPMENT, WORKERS OR THEIR ACTIVITIES ENCROACH THE AREA CLOSER THAN 15' BUT NOT CLOSER THAN 2' TO THE EDGE OF TRAVEL WAY.

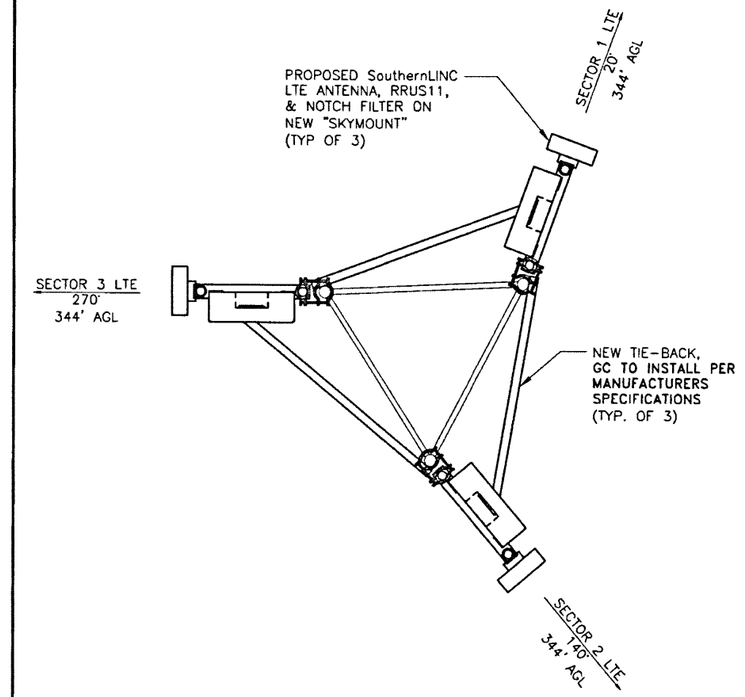
10/12/2016 1:10:36 PM

LAST REVISION	REVISION	DESCRIPTION:	FDOT FY 2017-18 DESIGN STANDARDS	MULTILANE, WORK ON SHOULDER	INDEX NO.	SHEET NO.
01/01/16					612	1 of 1



NOTE:
AZIMUTH INFO TAKEN FROM SouthernLINC RF DESIGN DATA AND MICROWAVE DESIGN DATASHEET.

TOWER ELEVATION
NTS



ANTENNA MOUNT DETAIL
NTS

Southern Linc

APPROVALS
CARRIER _____
LANDLORD _____
LEASING _____
CONSTRUCTION _____

PROJECT NO:

DRAWN BY: JAL

CHECKED BY: JMB

APPROVED BY: CBS

V	DATE	DESCRIPTION
3	07/25/17	REV. PER JURISDICTION
2	02/09/17	ISSUED FOR CONSTR.
1	01/10/17	ISSUED FOR REVIEW
0	11/15/16	ISSUED FOR REVIEW

PROFESSIONAL ENGINEER
No. 61406
STATE OF FLORIDA
CLINTON B. STEWART P.E. #61406
EXCELL COMMUNICATIONS C.A. # 27498

EXCELL COMMUNICATIONS, INC.

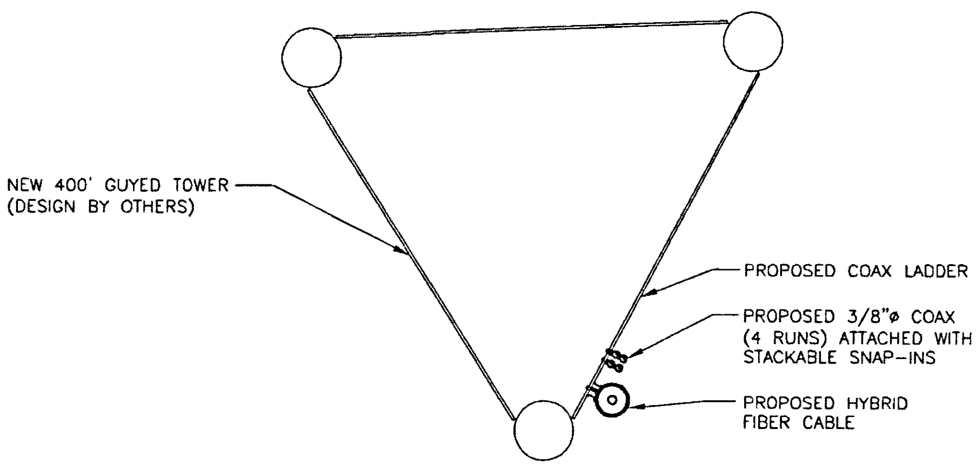
EXCELL COMMUNICATIONS, INC.
3608 7th COURT SOUTH
BIRMINGHAM, ALABAMA 35222
PHONE: 205.956.0198
FAX: 205.956.2632

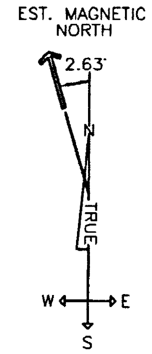
SITE NAME
BOGIA
F-8119

SITE ADDRESS
2401 S. CENTURY BLVD.
McDAVID, FL 32568

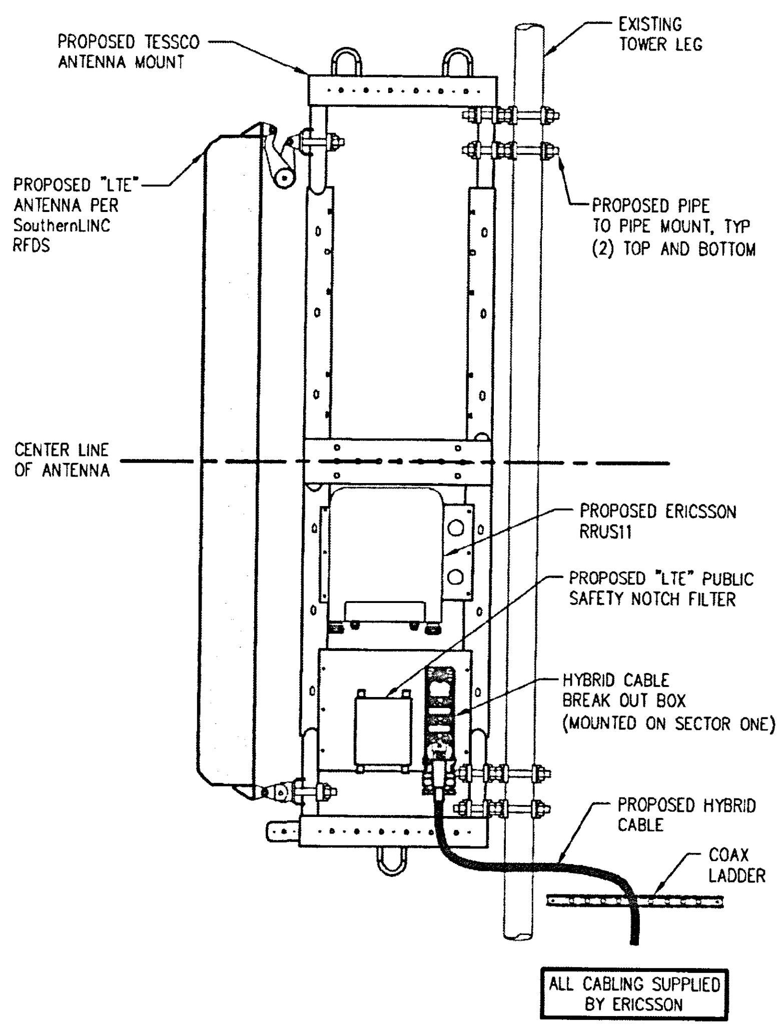
SHEET TITLE
ELEVATION &
ANTENNA DETAILS

SHEET NUMBER
C6





CABLE LADDER DETAIL



LTE ANTENNA MOUNT DETAIL

THESE DRAWINGS ARE PREPARED BASED ON RFDS DATED 09-08-2016. GENERAL CONTRACTOR TO VERIFY AND INCORPORATE MOST RECENT VERSION OF THE RFDS WITH SouthernLINC and ERICSSON PRIOR TO CONSTRUCTION. G.C. TO USE THE MOST CURRENT RFDS.

SouthernLINC
A Southern Company

LTE RFDS

Thursday, September 08, 2016

SITE NAME:	BOGIA		
SITE #:	F8119		
DESCRIPTION:	Collocation on a new BTS tower		
iDEN RADIATION CENTE			
OWNER:	BTS		
STRUCTURE TYPE:	Tower (Guyed, Self Supporting or Monopole)		
LATITUDE:	30°49'52.55"N		
LONGITUDE:	87°19'55.61"W		
GROUND ELEV (ft.):	104.1		
SITE TYPE:	LTE		
#OF CELLS/SECTORS:	3		
LTE	SECTOR # 1	SECTOR #2	SECTOR #3
ANTENNA TYPE:	Kathrein 80010736V01	Kathrein 80010736V01	Kathrein 80010736V01
ANTENNA QTY:	1	1	1
RADIATION CENTER(ft):	344	344	344
AZIMUTH(degrees):	20	140	270
MECHANICAL DOWNTILT(degrees)	0	0	0
HYBRID CABLE TYPE:	Huber Suhner MLUH 3X3 6 AWG		
HYBRID CABLE SIZE (mm):	23.9		
# OF HYBRID CABLE RUNS:	1	0	0
REMOTE RADIO UNIT TYPE:	Ericsson RRUS 11	Ericsson RRUS 11	Ericsson RRUS 11
RRU SIZE-HxlxD(inches):	17.8 x 17.0 x 7.3	17.8 x 17.0 x 7.3	17.8 x 17.0 x 7.3
RRU WEIGHT (lbs.):	50	50	50
# OF RRUs:	1	1	1
NOTCH FILTER TYPE:	Ericsson Public Safety	Ericsson Public Safety	Ericsson Public Safety
FILTER SIZE-HxLxD (inches):	15 x 7.9 x 3.9	15 x 7.9 x 3.9	15 x 7.9 x 3.9
FILTER WEIGHT (lbs.):	13	13	13
# OF FILTERS):	1	1	1
Comments	1A Coordinates.		

Southern Linc

APPROVALS

CARRIER ________
LANDLORD ________
LEASING ________
CONSTRUCTION ________

PROJECT NO:

DRAWN BY: JAL

CHECKED BY: JMB

APPROVED BY: CBS

3	07/25/17	REV. PER JURISDICTION
2	02/09/17	ISSUED FOR CONSTR.
1	01/10/17	ISSUED FOR REVIEW
0	11/15/16	ISSUED FOR REVIEW
V	DATE	DESCRIPTION

PROFESSIONAL ENGINEER
No. 81406
STATE OF FLORIDA
PROFESSIONAL ENGINEER
7/25/17

CLINTON B. STEWART P.E. #81406
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FAX: 205.956.2632

SITE NAME

BOGIA
F-8119

SITE ADDRESS

2401 S. CENTURY BLVD.
McDAVID, FL 32568

SHEET TITLE

LTE & CABLE DETAILS / RFDS

SHEET NUMBER

C7

CABLING DIAGRAM CALLOUTS

1. NEW EQUIPMENT CABINET
2. MLUH 3X3 "X" AWG HYBRID CABLE (1)
3. POWER BRANCH DC CABLES
4. FIBER BRANCH CABLES
5. RRUS 11
6. JUMPERS
7. RET CABLE JUMPERS
8. PUBLIC SAFETY NOTCH FILTER
9. KATHREIN 80010736V01 LTE ANTENNA
10. BREAK OUT BOX (2)

(1) "X"=10 FOR HYBRID CABLE LENGTHS ≤ 60 METERS
"X"=8 FOR HYBRID CABLE LENGTHS > 60 METERS BUT < 100 METERS
"X"=6 FOR HYBRID CABLE LENGTHS ≥ 100 METERS
"X" INCLUDES TOTAL LENGTH OF HYBRID TRUNK PLUS JUMPERS

(2) BREAK OUT BOX TO BE MOUNTED ON SECTOR 1

JUMPER COLOR CODE

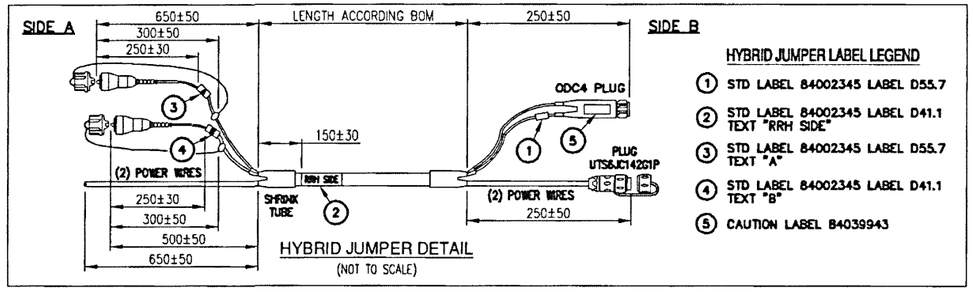
SECTOR	COLOR	ANTENNA PORT
1	RED	+45 = 1 STRIPE -45 = 2 STRIPE
2	BLUE	+45 = 1 STRIPE -45 = 2 STRIPE
3	GREEN	+45 = 1 STRIPE -45 = 2 STRIPE

FIBER OPTIC

RRH #	SIDE A		SIDE B		
	ODC #	ODC PIN	LC PIN	LC/MARKING SLEEVE #	BREAKOUT LENGTH [mm]
1	1R	1	B	1	800±25
		2	A		
		3	B	2	750±25
		4	A		
2	2R	1	B	3	700±25
		2	A		
		3	B	4	650±25
		4	A		
3	3R	1	B	5	600±25
		2	A		
		3	B	6	550±25
		4	A		

POWER

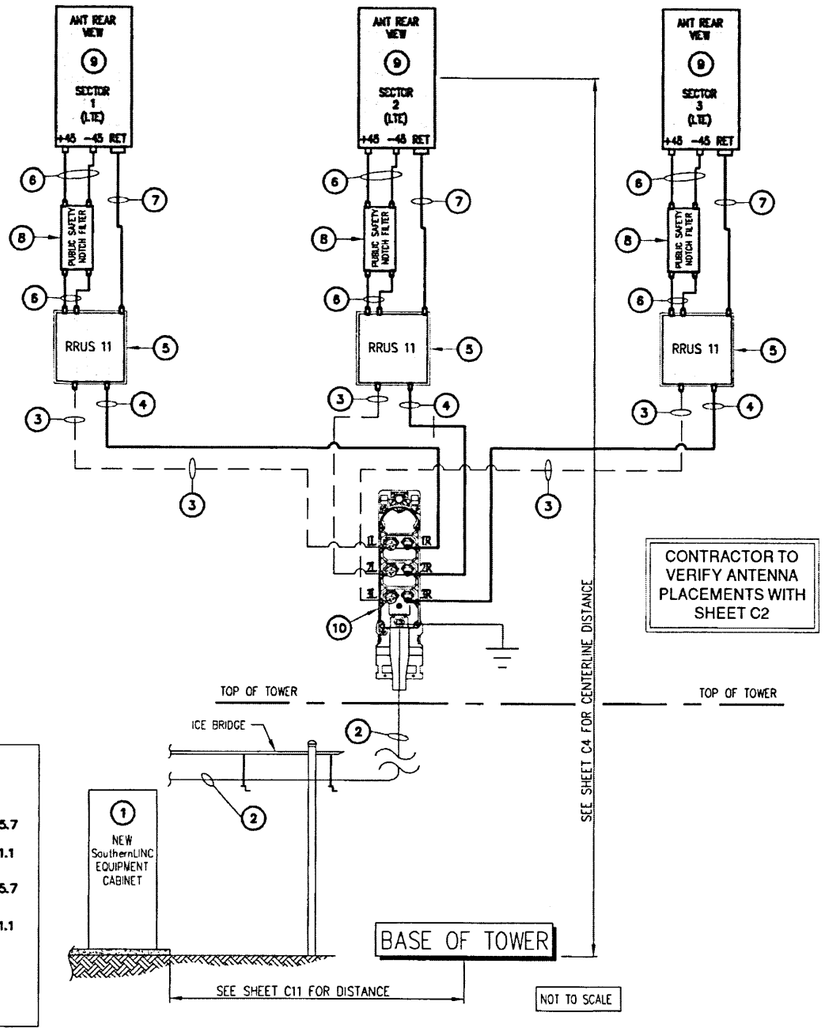
RRH #	RRH HOOK-UP	SIDE A #	SIDE A PIN	SIDE A WIRE NO.	SIDE B WIRE NO.	SIDE B WIRE COLOR (UL VERSION)
1	-48V	1L	1	1	1	BLACK
	0V		2	2	2	WHITE
	GROUND		⏚	DRAIN	COMMON DRAIN	DRAIN
2	-48V	2L		3	3	RED
	0V			4	4	GREEN
	GROUND		⏚	DRAIN	COMMON DRAIN	DRAIN
3	-48V	3L		5	5	ORANGE
	0V			6	6	BLUE
	GROUND		⏚	DRAIN	COMMON DRAIN	DRAIN



HYBRID JUMPER DETAIL
(NOT TO SCALE)

HYBRID JUMPER LABEL LEGEND

1. STD LABEL 84002345 LABEL D55.7
2. STD LABEL 84002345 LABEL D41.1 TEXT "RRH SIDE"
3. STD LABEL 84002345 LABEL D55.7 TEXT "A"
4. STD LABEL 84002345 LABEL D41.1 TEXT "B"
5. CAUTION LABEL 84039943



CONTRACTOR TO VERIFY ANTENNA PLACEMENTS WITH SHEET C2

Southern Linc

APPROVALS
CARRIER _____
LANDLORD _____
LEASING _____
CONSTRUCTION _____

PROJECT NO:

DRAWN BY: JAL

CHECKED BY: JMB

APPROVED BY: CBS

3	07/25/17	REV. PER JURISDICTION
2	02/09/17	ISSUED FOR CONSTR.
1	01/10/17	ISSUED FOR REVIEW
0	11/15/16	ISSUED FOR REVIEW
V	DATE	DESCRIPTION

PROFESSIONAL ENGINEER
STATE OF FLORIDA
CLINTON S. STEWART P.E. #61406
EXCELL COMMUNICATIONS C.A. # 27498

EXCELL COMMUNICATIONS, INC.

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SITE NAME
BOGIA
F-8119

SITE ADDRESS
2401 S. CENTURY BLVD.
McDAVID, FL 32568

SHEET TITLE
CABLING DIAGRAM

SHEET NUMBER
C8

MICROWAVE COLOR CODE

DISH/PATH #1 – BLUE
DISH/PATH #2 – ORANGE
DISH/PATH #3 – GREEN
DISH/PATH #4 – BROWN
DISH/PATH #5 – WHITE
DISH/PATH #6 – RED
DISH/PATH #7 – YELLOW

ONE STRIPE FOR HORIZONTAL POLARIZATION

TWO STRIPES FOR VERTICAL POLARIZATION

EACH STRIPE MUST BE MINIMUM OF 2 INCHES WIDE.

THESE DRAWINGS ARE PREPARED BASED ON THE MICROWAVE SPEC SHEET DATED 12-15-2016. GENERAL CONTRACTOR TO VERIFY AND INCORPORATE MOST RECENT VERSION OF THE SPEC SHEET WITH SouthernLINC and ERICSSON PRIOR TO CONSTRUCTION. G.C. TO USE THE MOST CURRENT SPEC SHEET.

LTE MICROWAVE SPEC SHEET
PRELIMINARY 12/15/16

Site #:	F8119
Site Name:	Bogia
Structure Type/Owner:	Guyed
Latitude & Longitude: (DD-MM-SS)	30-49-52.55 N, 87-19-55.61 W
Number of MW Antennas:	2
Comments:	Rev.1 – 12/15/16 – Site coordinates changed. Rev.0 – 01/15/16 – initial loading.

NOTE: Each antenna listed below will have two (2) runs of Andrew LDF2-50 3/8" Coaxial Cable unless otherwise noted.

Dish 1 (Bratt)

Azimuth:	343.62
Frequency Band:	11 GHz
Antenna Size:	3ft
Antenna Model:	ANT2 0.9 11 HPX_22026dc15_r3
Antenna Height:	270
RAU Height:	270
Cable Length:	TBD
Comment:	

Dish 2 (Molino)

Azimuth:	194.32
Frequency Band:	11 GHz
Antenna Size:	4 ft
Antenna Model:	ANT2 1.2 11 HPX_22017dc15_r4
Antenna Height:	270
RAU Height:	270
Cable Length:	TBD
Comment:	

Southern Linc

APPROVALS
CARRIER _____
LANDLORD _____
LEASING _____
CONSTRUCTION _____

PROJECT NO:

DRAWN BY: JAL

CHECKED BY: JMB

APPROVED BY: CBS

V	DATE	DESCRIPTION
3	07/25/17	REV PER JURISDICTION
2	02/09/17	ISSUED FOR CONSTR
1	01/10/17	ISSUED FOR REVIEW
0	11/15/16	ISSUED FOR REVIEW

PROFESSIONAL ENGINEER
CLINTON S. STEWART
No. 81408
STATE OF FLORIDA
PROFESSIONAL ENGINEER
CLINTON S. STEWART P.E. #81408
EXCELL COMMUNICATIONS, INC.

EXCELL COMMUNICATIONS, INC.
3608 7th COURT SOUTH
BIRMINGHAM, ALABAMA 35222
PHONE: 205.956.0198
FAX: 205.956.2632

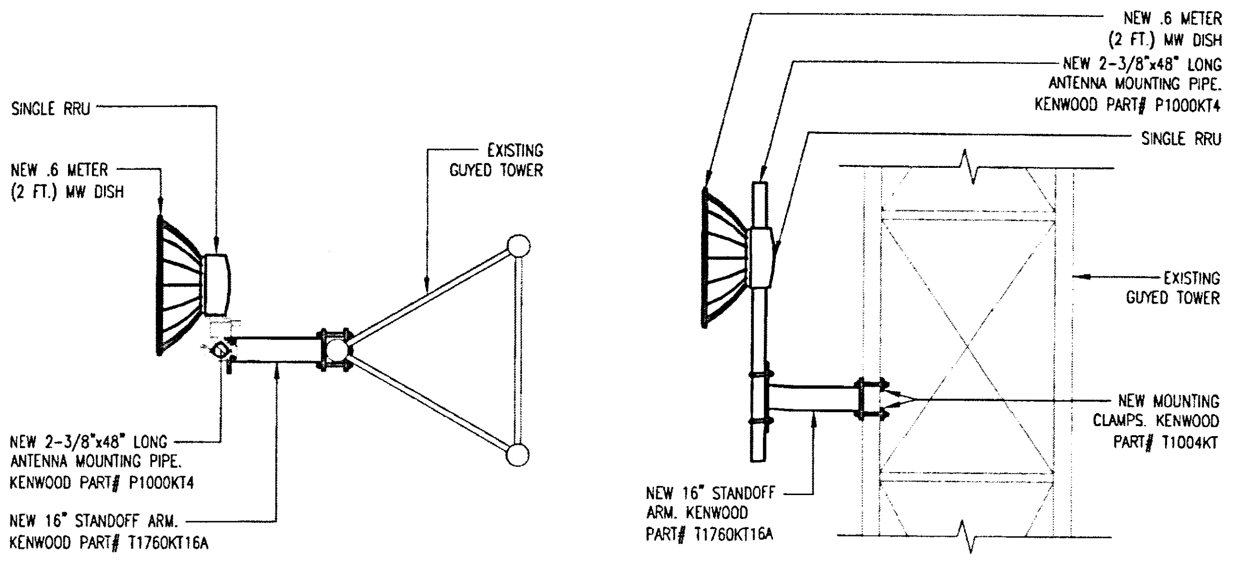
SITE NAME
BOGIA
F-8119

SITE ADDRESS
2401 S. CENTURY BLVD.
McDAVID, FL 32568

SHEET TITLE
MICROWAVE DATA SHEET & COLOR CODE

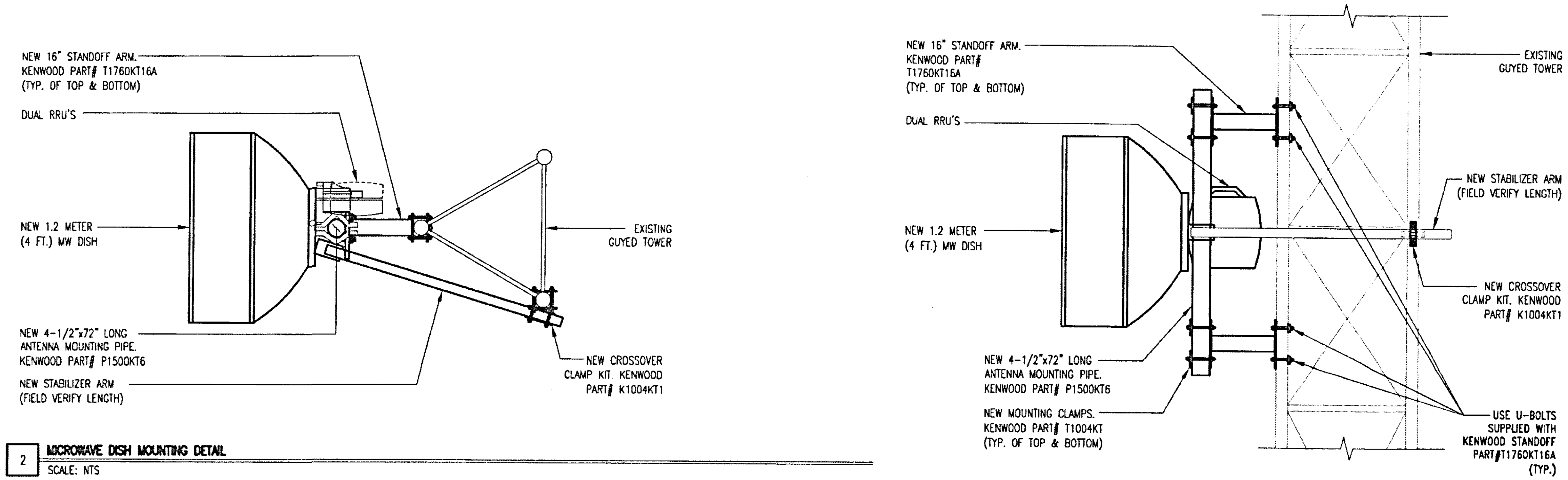
SHEET NUMBER
C9

GUYED TOWER MOUNT FOR .6M MW DISH



1 MICROWAVE DISH MOUNTING DETAIL
SCALE: NTS

GUYED TOWER MOUNT FOR .9M, 1.2M & 1.8M MW DISH



2 MICROWAVE DISH MOUNTING DETAIL
SCALE: NTS

1. THE STABILIZER ARM(S) ARE SUPPLIED WITH 1.2 AND 1.8 M DISHES, STABILIZER ARM(S) ARE NOT REQUIRED FOR .6 AND .9 M DISHES.

Southern Linc

APPROVALS

CARRIER ______
LANDLORD ______
LEASING ______
CONSTRUCTION ______

PROJECT NO:

DRAWN BY: JAL

CHECKED BY: JMB

APPROVED BY: CBS

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PROFESSIONAL ENGINEER

CLINTON B. STEWART
No. 61406
STATE OF FLORIDA
PROFESSIONAL ENGINEER

CLINTON B. STEWART P.E. 61406
EXCELL COMMUNICATIONS C.A. 27496

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SITE NAME

BOGIA
F-8119

SITE ADDRESS

2401 S. CENTURY BLVD.
McDAVID, FL 32568

SHEET TITLE

MICROWAVE DISH MOUNTING DETAILS

SHEET NUMBER

C10

COMSEARCH iQ•linkXG - Main Engineering Report

	Site A	Site B
Sites		
Location ID:	Gulf Western	Gulf Western
Site/Sector ID:	F8119	F9118
Name:	Bogia	Bratt
Gov't Approval #:		
Latitude:	30-49-52.5 N	30-56-45.3 N
Longitude:	87-19-55.6 W	87-22-16.4 W
UTM Zone:	16:	16:
Northing Easting:	3410948.9 / 468238.6	3423666.6 / 464540.8
Ground Elevation:	104.99 ft	269.03 ft
Structure Height:	350.00 ft	350.00 ft
Antenna/Path Azimuth:	343.62 Deg	163.60 Deg
Mech./Elec./Path Tilt:	0.15 Up	0.23 Down
Path Length:	8.23 mi	
Frequencies		
Band:	11.00 GHz	
Plan:	High	Low
Channel/Frequency Pol.:	105 11385.000 V	105 10895.000 V
	106 11425.000 H	106 10935.000 H
Radios		
Make:	ERICSSON	ERICSSON
Model:	TN11/2XAHA/040/A2	TN11/2XAHA/040/A2
Bit Rate:	231 Mb/s / 128QAM ACM (2+0)	231 Mb/s / 128QAM ACM (2+0)
Bandwidth:	40 MHz	40 MHz
Emission:	36M8D7W	36M8D7W
Power:	29.00 dBm	29.00 dBm
Branching Loss:	Tx: 0.00 dB | Rx: 0.00 dB	Tx: 0.00 dB | Rx: 0.00 dB
Antennas		
Primary		
Make:	Ericsson	Ericsson
Model:	ANT2 0.9 11 HPX_22026dc15_r3	ANT2 0.9 11 HPX_22026dc15_r3
Gain:	39.06 dBi	39.06 dBi
Height:	270.00 ft AGL	250.00 ft AGL
Latitude/Longitude:	30-49-52.5 N/87-19-55.6 W	30-56-45.3 N/87-22-16.4 W
EIRP:	68.06 dBm	68.06 dBm
Secondary		
Make:		
Model:		
Gain:		
Height:		
Waveguides		
Models:	NIL	NIL
Total Length:		
Total Loss:		
Attenuators		
Common Tx Rx:	dB dB dB	dB dB dB
Other Common Losses:	0.00 dB	0.00 dB
Other		
Field Margin:	1.00 dB	
Absorption Loss:	0.21 dB	
Free Space Loss:	135.72 dB	
Total Propagation Loss:	135.93 dB	
Receive Signal Level:	-28.81 dBm	-28.81 dBm

Date Printed: December 15, 2016 Region: Alabama Link ID: F8119-F9118-1 Primary

COMSEARCH iQ•linkXG - Main Engineering Report

	Site A	Site B
Sites		
Location ID:	Gulf Western	Gulf Western
Site/Sector ID:	F9113	F8119
Name:	Molino	Bogia
Gov't Approval #:		
Latitude:	30-43-56.1 N	30-49-52.5 N
Longitude:	87-21-40.9 W	87-19-55.6 W
UTM Zone:	16:	16:
Northing Easting:	3399984.0 / 465404.8	3410948.9 / 468238.6
Ground Elevation:	200.13 ft	104.99 ft
Structure Height:	460.00 ft	350.00 ft
Antenna/Path Azimuth:	14.31 Deg	194.32 Deg
Mech./Elec./Path Tilt:	0.09 Down	0.02 Up
Path Length:	7.04 mi	
Frequencies		
Band:	11.00 GHz	
Plan:	Low	High
Channel/Frequency Pol.:	102 10775.000 H	102 11265.000 H
	103 10815.000 V	103 11305.000 V
Radios		
Make:	ERICSSON	ERICSSON
Model:	TN11/2XAHA/040/A2	TN11/2XAHA/040/A2
Bit Rate:	263 Mb/s / 256QAM ACM (2+0)	263 Mb/s / 256QAM ACM (2+0)
Bandwidth:	40 MHz	40 MHz
Emission:	36M8D7W	36M8D7W
Power:	28.00 dBm	28.00 dBm
Branching Loss:	Tx: 0.00 dB | Rx: 0.00 dB	Tx: 0.00 dB | Rx: 0.00 dB
Antennas		
Primary		
Make:	Ericsson	Ericsson
Model:	ANT2 1.2 11 HPX_22017DC15_R4	ANT2 1.2 11 HPX_22017DC15_R4
Gain:	40.82 dBi	40.82 dBi
Height:	210.00 ft AGL	270.00 ft AGL
Latitude/Longitude:	30-43-56.1 N/87-21-40.9 W	30-49-52.5 N/87-19-55.6 W
EIRP:	68.82 dBm	68.82 dBm
Secondary		
Make:		
Model:		
Gain:		
Height:		
Waveguides		
Models:	NIL	NIL
Total Length:		
Total Loss:		
Attenuators		
Common Tx Rx:	dB dB dB	dB dB dB
Other Common Losses:	0.00 dB	0.00 dB
Other		
Field Margin:	1.00 dB	
Absorption Loss:	0.18 dB	
Free Space Loss:	134.36 dB	
Total Propagation Loss:	134.54 dB	
Receive Signal Level:	-24.90 dBm	-24.90 dBm

Date Printed: December 15, 2016 Region: Alabama Link ID: F9113-F8119-1 Primary

Southern Linc

APPROVALS

CARRIER _____

LANDLORD _____

LEASING _____

CONSTRUCTION _____

PROJECT NO:

DRAWN BY: JAL

CHECKED BY: JMB

APPROVED BY: CBS

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PROFESSIONAL ENGINEER

FOR INFORMATIONAL PURPOSES

CLINTON B. STEWART P.E. #61406
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3608 7th COURT SOUTH
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FAX: 205.956.2632

SITE NAME

BOGIA
F-8119

SITE ADDRESS

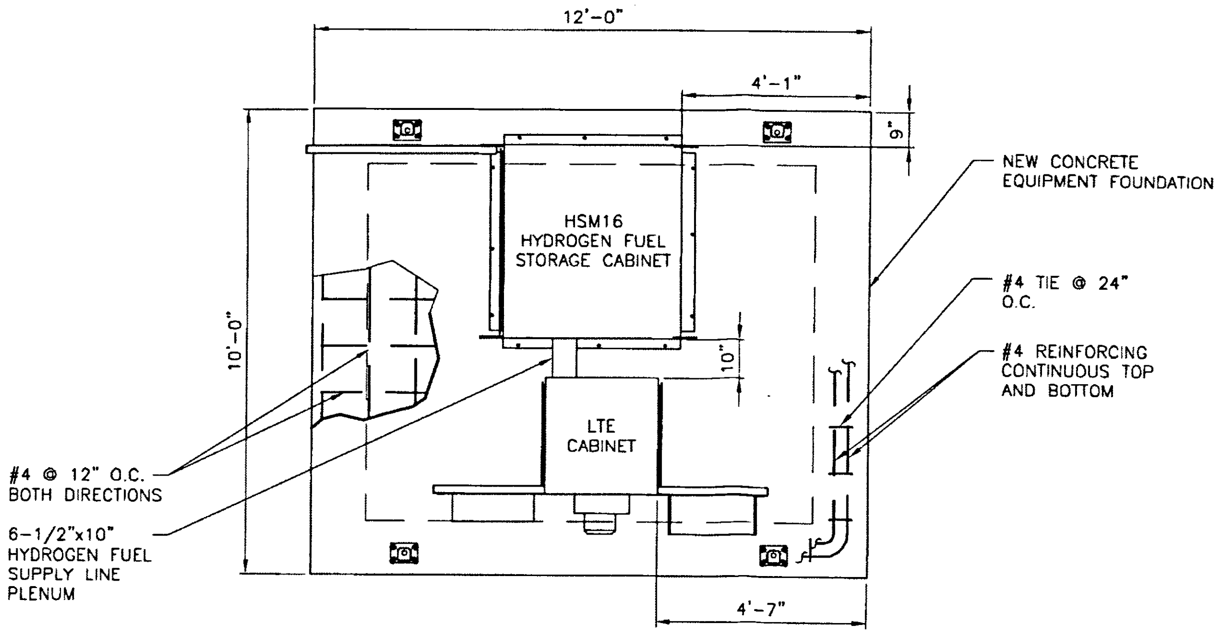
2401 S. CENTURY BLVD.
McDAVID, FL 32568

SHEET TITLE

MICROWAVE PATH POWER BUDGET

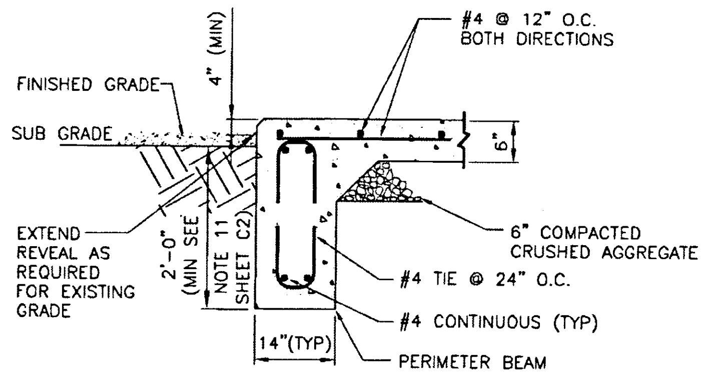
SHEET NUMBER

C11



EQUIPMENT FOUNDATION DETAIL

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



CONTINUOUS PERIMETER FOOTING (EQUIPMENT)

DETAIL 2
NTS

Southern Linc

APPROVALS

CARRIER ______
LANDLORD ______
LEASING ______
CONSTRUCTION ______

PROJECT NO:

DRAWN BY: JAL

CHECKED BY: JMB

APPROVED BY: CBS

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SITE NAME

BOGIA
F-8119

SITE ADDRESS

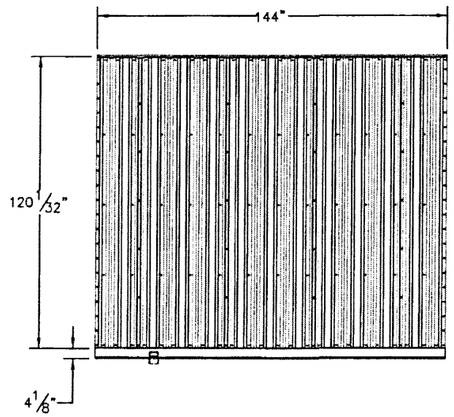
2401 S. CENTURY BLVD.
McDAVID, FL 32568

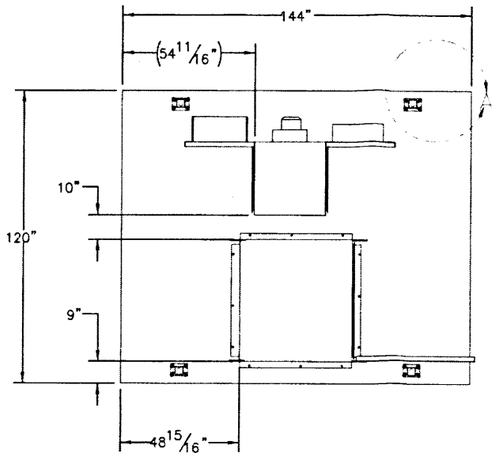
SHEET TITLE

EQUIPMENT FOUNDATION DETAILS

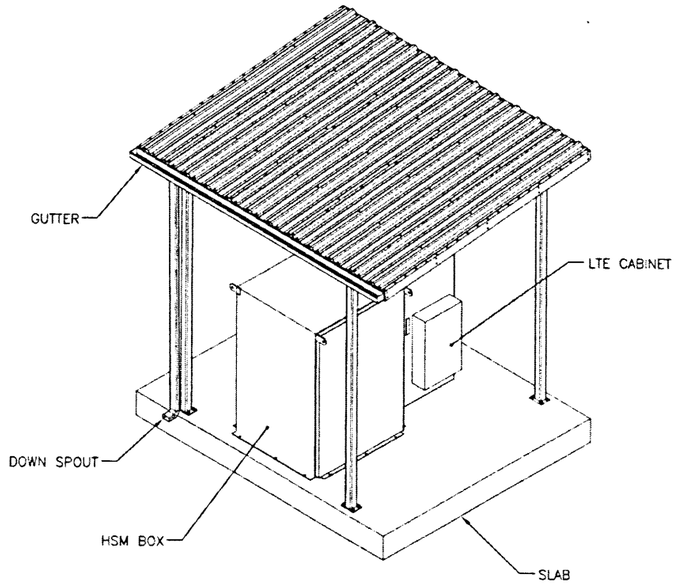
SHEET NUMBER

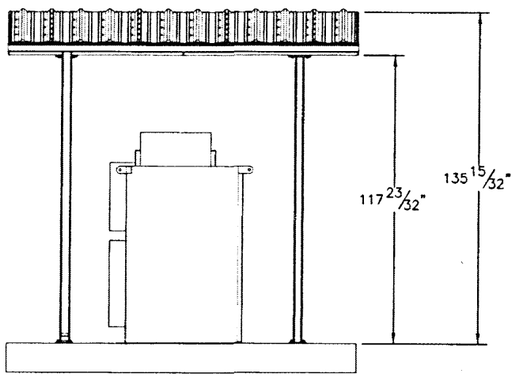
C12

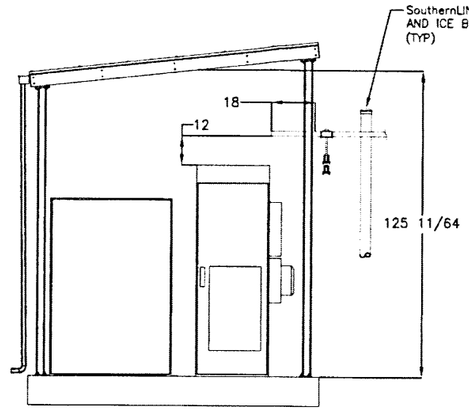


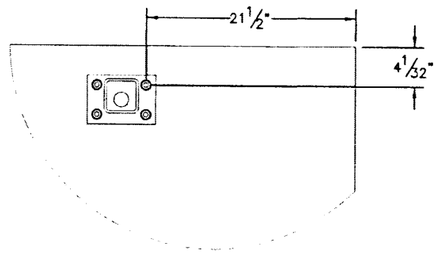


CANOPY REMOVED FOR CLARITY









DETAIL A
TYP. CANOPY MOUNT

CABINETS CAN BE ROTATED 90°, 180°, OR 270° AND STILL MEET HEIGHT REQUIREMENT.

SURFACE FINISH	√ UNLESS OTHERWISE SPECIFIED	
MATERIAL	SEE PARTS LIST	
THIRD ANGLE PROJECTION		
NEXT ASSY	USED ON	
APPLICATIONS		

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES
.0 ± .06
.00 ± .01
.000 ± .005
FRACTIONS ± 1/16
ANGLES ± 25'
HOLES:
DRILLED OR PUNCHED +1/32
BURNED ±1/32

APPROVALS	DATE
DRAWN	
CHECKED	
ENGINEER/DESIGNER	
PRODUCTION	

ELECTRO MECHANICAL INDUSTRIES, INC.
11230 NEEDHAM DRIVE
HOUSTON, TEXAS 77065
1-800-453-0050

TITLE: CONCRETE SLAB CANOPY

SIZE B | DRAWING NO. 1001-0030-0012 SALES | REV -

SCALE: 1:50 | WEIGHT: 1469.0 lbs. | SHEET 1 OF 1

Southern Linc

APPROVALS
CARRIER _____
LANDLORD _____
LEASING _____
CONSTRUCTION _____

PROJECT NO:

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CHECKED BY: JMB

APPROVED BY: CBS

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PROFESSIONAL ENGINEER

FOR INFORMATIONAL PURPOSES

CLINTON B. STEWART P.E. #81406
EXCELL COMMUNICATIONS C.A. # 27466

EXCELL COMMUNICATIONS, INC.

EXCELL COMMUNICATIONS, INC.
3608 7th COURT SOUTH
BIRMINGHAM, ALABAMA 35222
PHONE: 205.956.0198
FAX: 205.956.2632

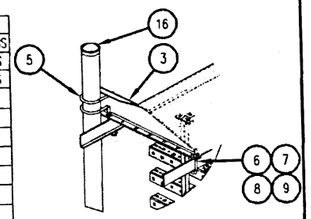
SITE NAME
BOGIA
F-8119

SITE ADDRESS
2401 S. CENTURY BLVD.
McDAVID, FL 32568

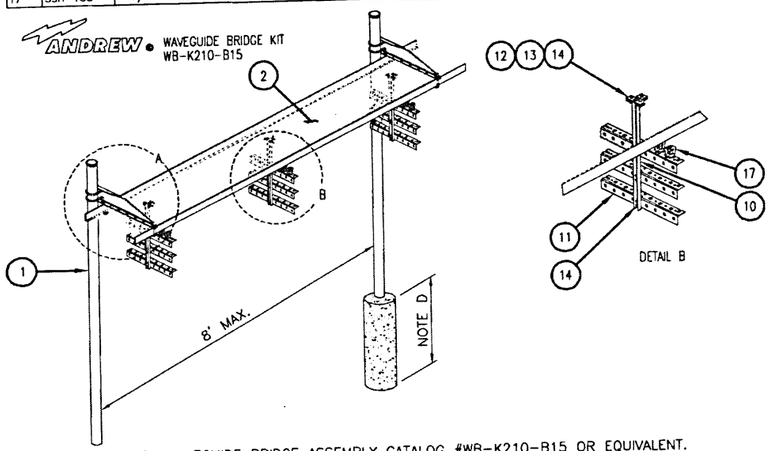
SHEET TITLE
PLATFORM & CANOPY DETAILS

SHEET NUMBER
C12A

ITEM	PART NO.	DESCRIPTION	QTY.	WEIGHT
1	MF-273	DIRECT BURIAL PIPE COLUMN, 15' 4"	2	116.00 LBS
2	WB-CY210	SAFETY GRATING 24" X 10' X 12 GAUGE	1	80.01 LBS
3	WBLB243.06	24" WAVEGUIDE BRIDGE SUPPORT BRACKET	2	12.72 LBS
4	WBK210BH	HARDWARE KIT ITEM # 5-18	1	
5	GUB-4356	1/2" X 3-5/8" X 6" GALV U-BOLT KIT	4	0.83 LBS
6	WB-JB-6	1/2" J-BOLT	4	0.49 LBS
7	GWF-04	1/2" GALV FLAT WASHER	4	0.02 LBS
8	GWL-04	1/2" GALV LOCK WASHER	4	0.01 LBS
9	GN-04	1/2" GALV HEX NUT	4	0.04 LBS
10	WBT243.01	VERTICAL TRAPEZE SECTION	3	2.55 LBS
11	WBT243.02	HORIZONTAL TRAPEZE SECTION	9	2.80 LBS
12	MT-387	SQUARE WASHER, 1 1/2" X 1 1/2" W / 7/16" HOLE	18	0.11 LBS
13	GB-03205	3/8" X 2" GALV BOLT KIT	9	0.08 LBS
14	GWF-03	3/8" GALV FLAT WASHER	9	0.02 LBS
15	GB-03105	3/8" X 1" GALV BOLT KIT	18	0.08 LBS
16	PC-034	PIPE CAP 3-1/2"	2	0.94 LBS
17	SSH-158	1-5/8" SNAP-IN HANGERS	AS REQUIRED	



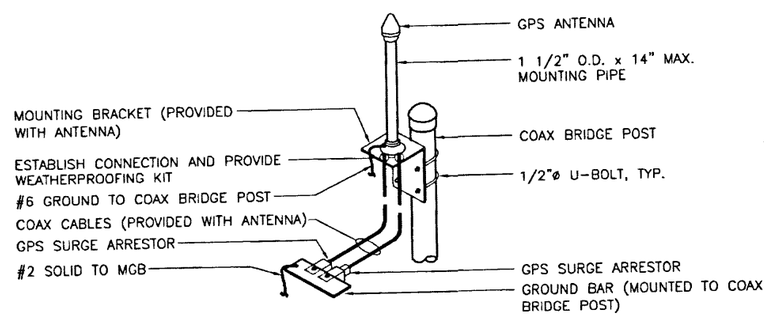
DETAIL A



DETAIL B

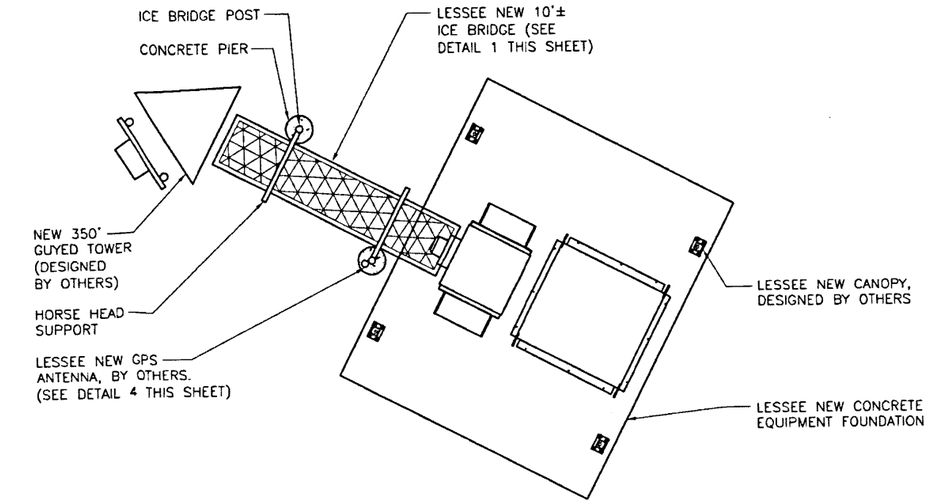
A. INSTALL ANDREW WAVEGUIDE BRIDGE ASSEMBLY CATALOG #WB-K210-B15 OR EQUIVALENT.
B. POSITION BRIDGE ASSEMBLY SO THAT BOTTOM OF WAVEGUIDE IS AT 10'-0" TO CLEAR NEW LTE CABINET AND CONNECT TO WAVEGUIDE OVER HSM16 CABINET. HEIGHT ABOVE GROUND MAY VARY ACCORDING TO SITE LAYOUT.
C. COAX SHALL BE SLOPED 1/8" TO THE FOOT, AWAY FROM SHELTER OR OUTDOOR EQUIPMENT.
D. FOR SOIL, USE 15" DIAM. 2'-0" DEEP PIER FILLED WITH 4000 PSI CONCRETE. INSTALL TOP OF PIER FLUSH WITH PROPOSED GRADE, AND PROVIDE CROWN FOR DRAINAGE.

DETAIL 1 / NTS



NOTES:
1. LOCATION OF ANTENNA MUST HAVE CLEAR VIEW OF SOUTHERN SKY AND CANNOT HAVE ANY BLOCKAGES EXCEEDING 25% OF THE SURFACE AREA OF A HEMISPHERE AROUND THE GPS ANTENNA.
2. ALL GPS ANTENNA LOCATIONS MUST BE ABLE TO RECEIVE CLEAR SIGNALS FROM A MINIMUM OF (4) SATELLITES. VERIFY WITH HANDHELD GPS BEFORE FINAL LOCATION OF GPS ANTENNA.

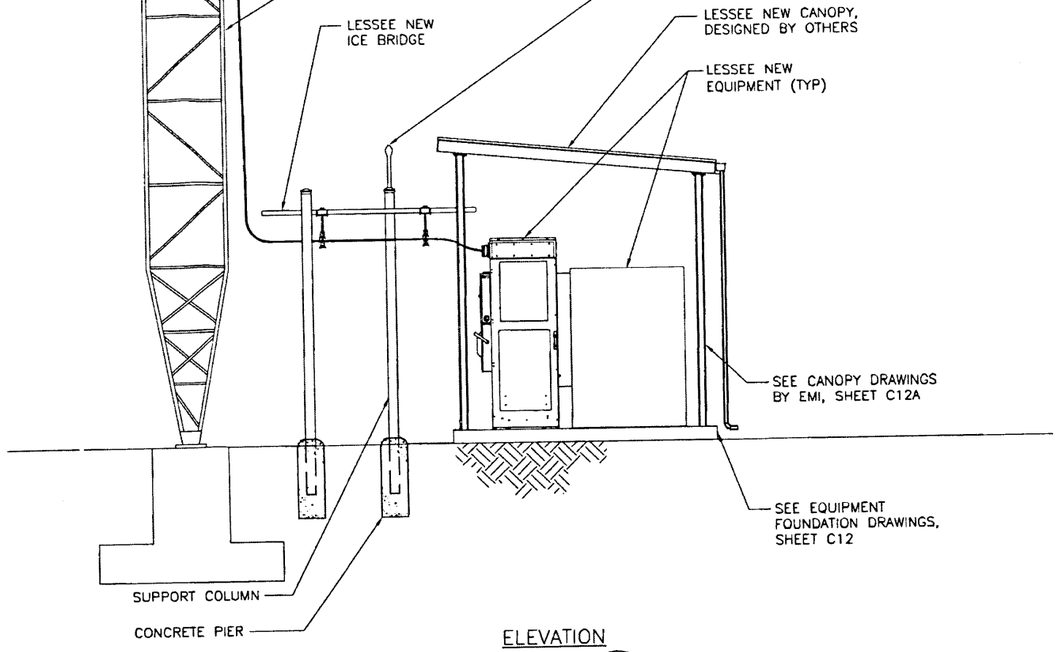
DETAIL 4 / NTS



NOTE:
CONTRACTOR TO CAP END OF ICE BRIDGE CHANNEL WITH COAX JACKET AS DIRECTED BY CONSTRUCTION MANAGER.

PLAN VIEW 2 / –
22x34 SCALE: 3/8" = 1'-0"
11x17 SCALE: 3/16" = 1'-0"

NOTE:
ICE BRIDGE TO TERMINATE 3" FROM TOWER FACE.



ELEVATION
DETAIL 3 / NTS

Southern Linc

APPROVALS
CARRIER _____
LANDLORD _____
LEASING _____
CONSTRUCTION _____

PROJECT NO:

DRAWN BY: JAL

CHECKED BY: JMB

APPROVED BY: CBS

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V	DATE	DESCRIPTION

PROFESSIONAL ENGINEER
CLINTON B. STEWART
LICENSE
NO. 31406
STATE OF FLORIDA
PROFESSIONAL ENGINEER
CLINTON B. STEWART P.E. No. 31406
EXCELL COMMUNICATIONS C.A. # 27498

EXCELL COMMUNICATIONS, INC.

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3608 7th COURT SOUTH
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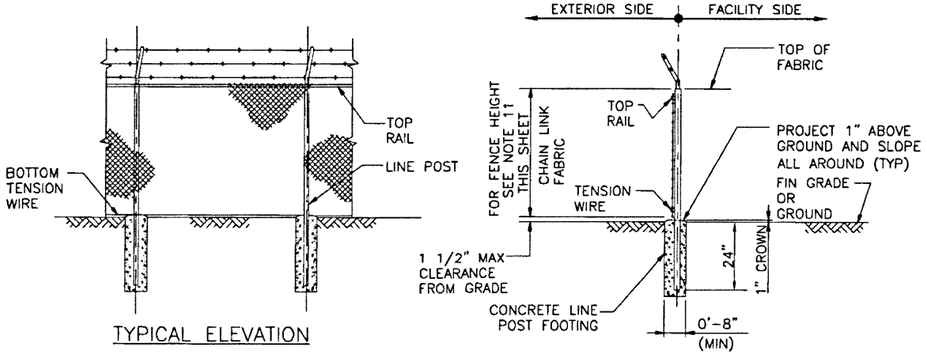
FAX: 205.956.2632

SITE NAME
BOGIA
F-8119

SITE ADDRESS
2401 S. CENTURY BLVD.
McDAVID, FL 32568

SHEET TITLE
ICE BRIDGE DETAILS

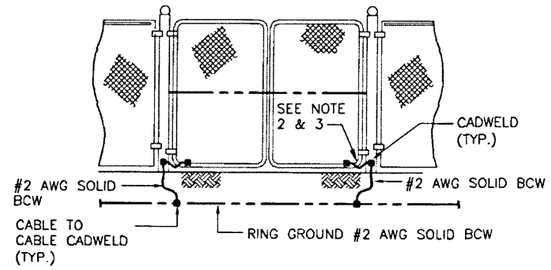
SHEET NUMBER
C13



TYPICAL ELEVATION

TYPICAL SECTION
WOVEN WIRE FENCE
WITH LINE POST

DETAIL 1 / NTS

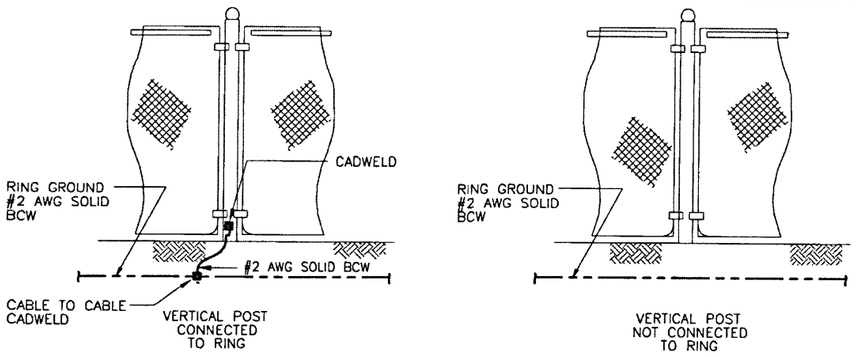


NOTES:

1. THE #2 AWG, BCW, FROM THE RING GROUND SHALL BE CADWELDED TO THE POST ABOVE GRADE.
2. GATE JUMPER SHALL BE #4/0 AWG WELDING CABLE OR FLEXIBLE COPPER BRAID BURNDY TYPE B WITH SLEEVES ON EACH END DESIGNED FOR EXOTHERMIC WELDING.
3. GATE JUMPER SHALL BE INSTALLED SO THAT IT WILL NOT BE SUBJECTED TO DAMAGING STRAIN WHEN GATE IS FULLY OPEN IN EITHER DIRECTION.

FENCE GATE GROUNDING

DETAIL 4 / NTS

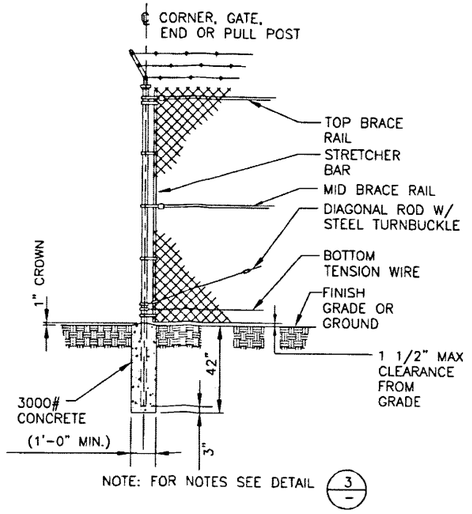


NOTE:

1. VERTICAL POSTS SHALL BE BONDED TO THE RING AT EACH CORNER AND AT EACH GATE POST. AS A MINIMUM ONE VERTICAL POST SHALL BE BONDED TO THE GROUND RING IN EVERY 100 FOOT STRAIGHT RUN OF FENCE.

FENCE GROUNDING

DETAIL 5 / NTS



NOTE: FOR NOTES SEE DETAIL 3 / —

WOVEN WIRE CORNER, GATE, END OR PULL POST

DETAIL 2 / NTS

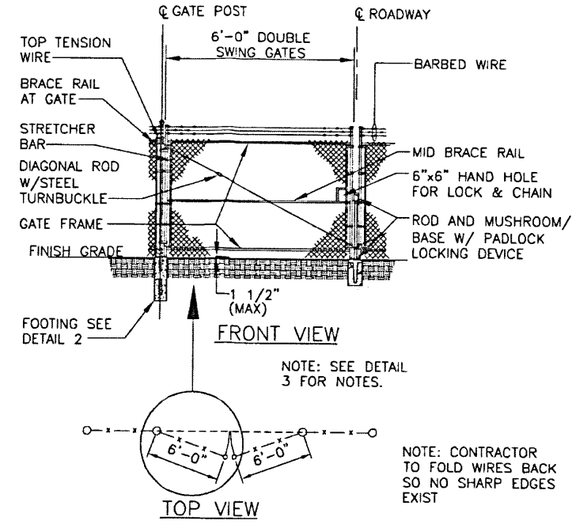
NOTES:

(INSTALL FENCING PER ASTM F-567, SWING GATES PER ASTM F- 900)

1. GATE POST, CORNER, TERMINAL OR PULL POST SHALL BE 3" SCHEDULE 40 PIPE FOR GATE WIDTHS UP THROUGH 6 FEET OR 12 FEET FOR DOUBLE SWING GATE PER ASTM-F1083.
2. LINE POST: 2" SCHEDULE 40 PIPE PER ASTM-F1083.
3. GATE FRAME: 1 1/2" SCHEDULE 40 PIPE PER ASTM-F1083.
4. TOP RAIL & BRACE RAIL: 1 1/2" SCHEDULE 40 PIPE PER ASTM-F1083.
5. FABRIC: 9 GA. CORE WIRE SIZE 2" MESH, CONFORMING TO ASTM-A392 CLASS 1.
6. TIE WIRE: MINIMUM 11 GA GALVANIZED STEEL INSTALL A SINGLE WRAP TIE WIRE AT POSTS AND RAILS AT MAX. 24" INTERVALS. INSTALL HOG RINGS ON TENSION WIRE AT 24" INTERVALS.
7. TENSION WIRE: 7 GA. GALVANIZED STEEL.
8. BARBED WIRE: 3 STRANDS OF DOUBLE STRANDED 12-1/2 GAUGE TWISTED WIRE, 4 PT. BARBS SPACED ON APPROXIMATELY 5" CENTERS.
9. GATE LATCH: 1-3/8" O.D. PLUNGER ROD W/ MUSHROOM TYPE CATCH AND LOCK (KEYED ALIKE FOR ALL SITES OR COMBINATION AS SPECIFIED BY LESSEE).
10. LOCAL ORDINANCE FOR BARBED WIRE PERMIT SHALL GOVERN INSTALLATION.
11. COMPOUND FENCE HEIGHT = 6' VERTICAL + 1' BARBED WIRE VERTICAL DIMENSION.
12. ALL WORK SHALL CONFORM WITH THE PROJECT SPECIFICATIONS.

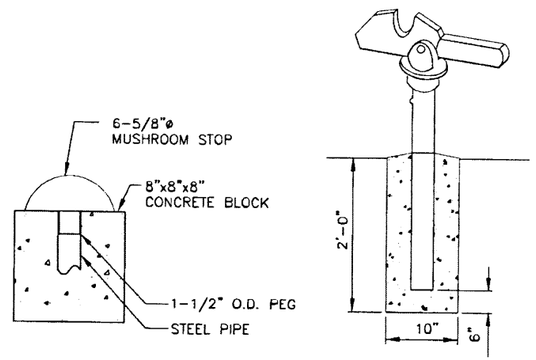
WOVEN WIRE FENCING NOTES

DETAIL 3 / NTS



WOVEN WIRE SWING GATE, DOUBLE

DETAIL 6 / NTS



MUSHROOM HEAD

GATE KEEPER

DETAIL 7 / NTS

Southern Linc

APPROVALS

CARRIER _____

LANDLORD _____

LEASING _____

CONSTRUCTION _____

PROJECT NO:

DRAWN BY: JAL

CHECKED BY: JMB

APPROVED BY: CBS

V	DATE	DESCRIPTION
3	07/25/17	REV. PER JURISDICTION
2	02/09/17	ISSUED FOR CONSTR.
1	01/10/17	ISSUED FOR REVIEW
0	11/15/16	ISSUED FOR REVIEW

PROFESSIONAL ENGINEER
CLINTON B. STEWART P.E. #61406
EXCELL COMMUNICATIONS, INC.
STATE OF FLORIDA

EXCELL COMMUNICATIONS

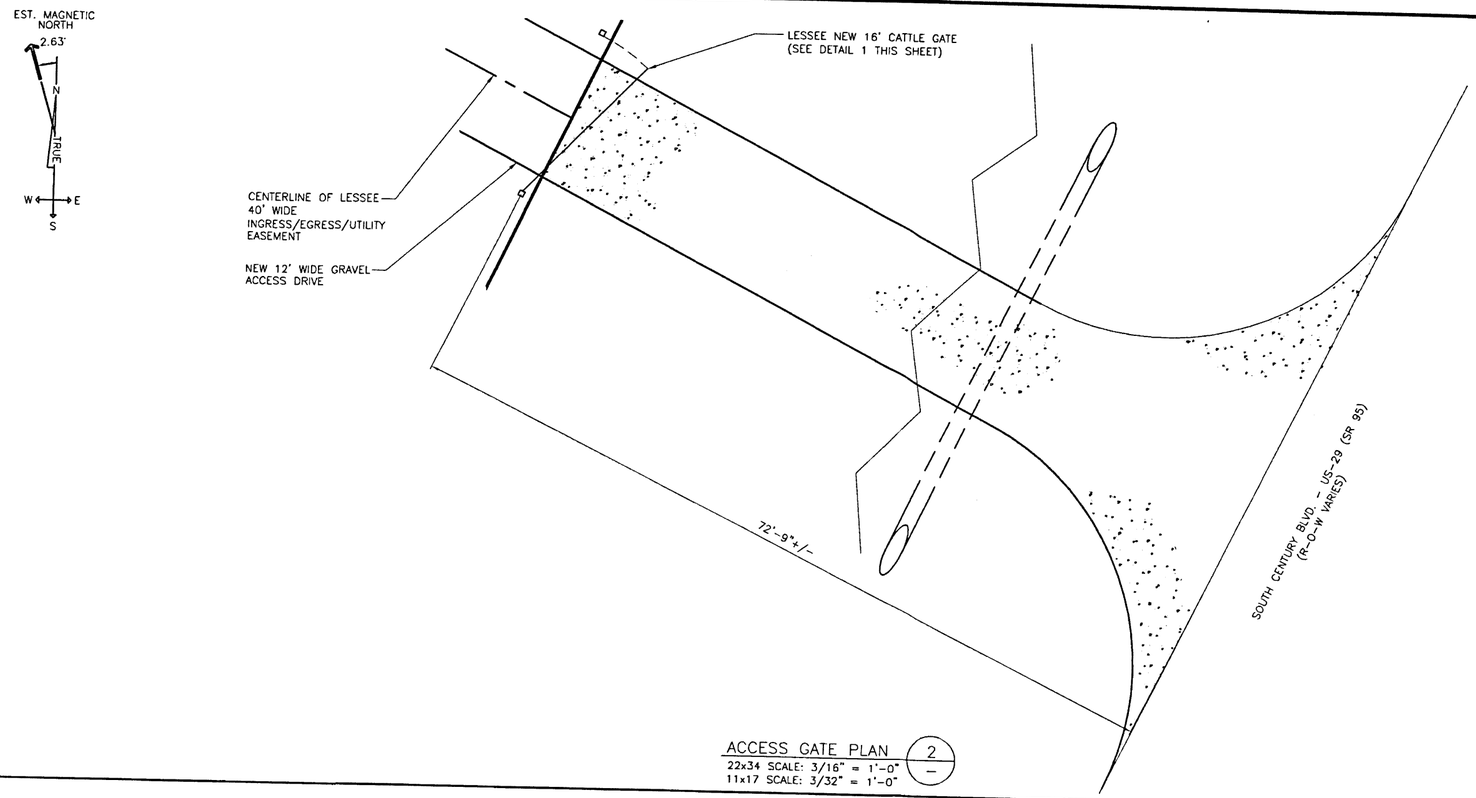
EXCELL COMMUNICATIONS, INC.
3608 7th COURT SOUTH
BIRMINGHAM, ALABAMA 35222
PHONE: 205.956.0198
FAX: 205.956.2632

SITE NAME
BOGIA
F-8119

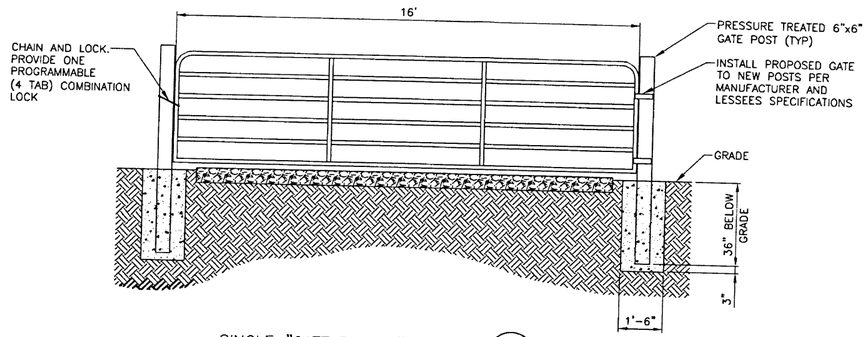
SITE ADDRESS
2401 S. CENTURY BLVD.
McDAVID, FL 32568

SHEET TITLE
FENCE DETAILS

SHEET NUMBER
C14



ACCESS GATE PLAN 2
22x34 SCALE: 3/16" = 1'-0"
11x17 SCALE: 3/32" = 1'-0"



SINGLE "CATTLE GATE" DETAIL 1
NTS

Southern Linc

APPROVALS
CARRIER
LANDLORD
LEASING
CONSTRUCTION

PROJECT NO.

DRAWN BY: JAL

CHECKED BY: JMB

APPROVED BY: CBS

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0	11/15/16	ISSUED FOR REVIEW

PROFESSIONAL ENGINEER
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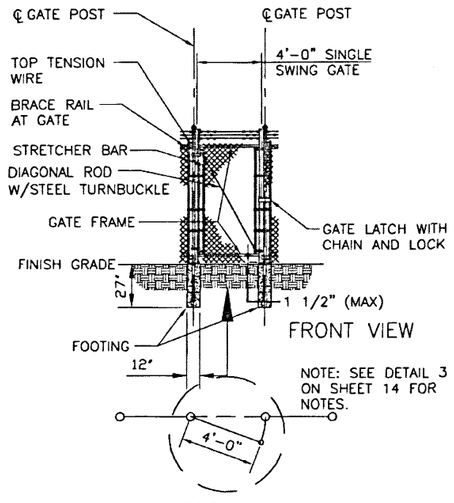
PHONE: 205.956.0198
FAX: 205.956.2632

SITE NAME
BOGIA
F-8119

SITE ADDRESS
2401 S. CENTURY BLVD.
McDAVID, FL 32568

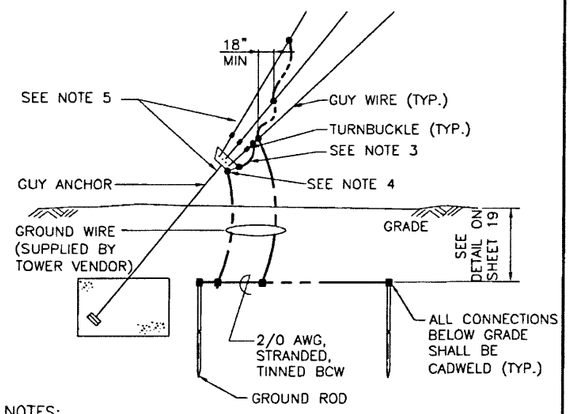
SHEET TITLE
ACCESS GATE DETAILS

SHEET NUMBER
C14A



WOVEN WIRE SWING GATE

DETAIL 1 / NTS

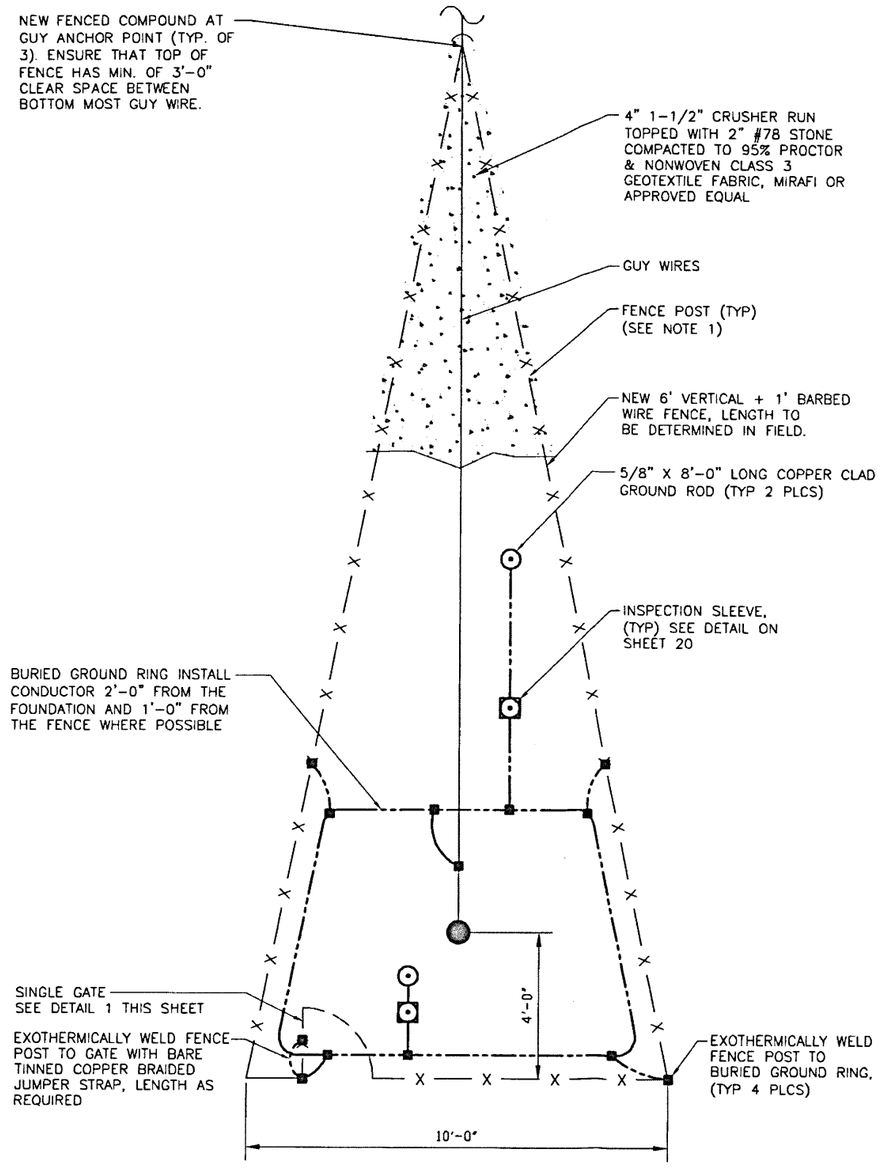


NOTES:

1. ALL REFERENCES TO THE TOWER COMPONENTS AND GUY FOUNDATION ARE DIRECTED TO THE DESIGN AND DETAIL DRAWINGS BY THE TOWER SUPPLIER.
2. GROUNDING DESIGN AND COMPONENTS SHALL BE INSTALLED PER TOWER SUPPLIER'S DRAWINGS.
3. BOND LOWEST GUY WIRE WITH 2/0 BCW TO GUY WIRE HEAD ACROSS TURNBUCKLE. EXOTHERMALLY WELD CONDUCTOR TO GUY WIRE HEAD.
4. EXOTHERMICALLY WELD LOWEST POINT OF GUY WIRE HEAD TO BURIED GROUND RING.
5. BIMETAL CLAMP SIZED FOR GUY WIRE OR ANCHOR RODS (TYP.) (SUPPLIED BY TOWER VENDOR)

ANCHOR RODS & GUY WIRE GROUNDING

DETAIL 2 / NTS



NOTES:

1. FOR TYPICAL FENCE DETAILS AND NOTES SEE DETAILS ON SHEET 14.

ANCHOR RODS & GUY WIRE GROUNDING PLAN

DETAIL 3 / NTS

LEGEND:

NEW ———

EXISTING ———

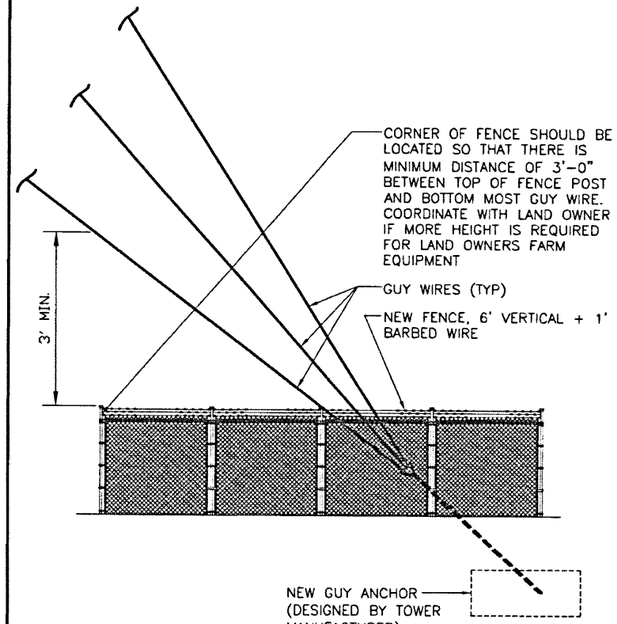
FENCE —x—x—x—x—

CADWELD ●

GROUND ROD ⊙

GROUND ROD WITH SLEEVE ⊙

CADWELD WITH SLEEVE ⊙



ELEVATION OF GUY ANCHOR POINT

DETAIL 4 / NTS

Southern Linc

APPROVALS

CARRIER _____

LANDLORD _____

LEASING _____

CONSTRUCTION _____

PROJECT NO:

DRAWN BY: JAL

CHECKED BY: JMB

APPROVED BY: CBS

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PROFESSIONAL ENGINEER
LICENSE
No. 61406
STATE OF FLORIDA
CLINTON B. STEWART P.E. #61406
EXCELL COMMUNICATIONS C.A. # 27498

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SITE NAME
BOGIA
F-8119

SITE ADDRESS
2401 S. CENTURY BLVD.
McDAVID, FL 32568

SHEET TITLE
GUY ANCHOR FENCE DETAILS

SHEET NUMBER
C15

ELECTRICAL INSTALLATION NOTES

1. ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS, NEC AND ALL APPLICABLE LOCAL CODES.
2. ALL ELECTRICAL EQUIPMENT AND ACCESSORIES SHALL BE U.L. APPROVED OR LISTED.
3. CONDUIT ROUTINGS ARE SCHEMATIC. CONTRACTOR SHALL INSTALL CONDUITS SO THAT ACCESS TO EQUIPMENT IS NOT BLOCKED.
4. WIRING, RACEWAY AND SUPPORT METHODS AND MATERIALS SHALL COMPLY WITH THE REQUIREMENTS OF THE NEC.
5. ALL CIRCUITS SHALL BE SEGREGATED AND MAINTAIN MINIMUM CABLE SEPARATION AS REQUIRED BY THE NEC.
6. CABLES SHALL NOT BE ROUTED THROUGH LADDER-STYLE CABLE TRAY RUNGS.
7. EACH END OF EVERY POWER, POWER PHASE CONDUCTOR (I.E., HOTS), GROUNDING, AND T1 CONDUCTOR AND CABLE SHALL BE LABELED WITH COLOR-CODED INSULATION OR ELECTRICAL TAPE (3M BRAND, 1/2 INCH PLASTIC ELECTRICAL TAPE WITH UV PROTECTION, OR EQUAL). THE IDENTIFICATION METHOD SHALL CONFORM WITH NEC & OSHA.
8. ALL ELECTRICAL COMPONENTS SHALL BE CLEARLY LABELED WITH ENGRAVED LAMACOID PLASTIC LABELS. ALL EQUIPMENT SHALL BE LABELED WITH THEIR VOLTAGE RATING, PHASE CONFIGURATION, WIRE CONFIGURATION, POWER OR AMPACITY RATING, AND BRANCH CIRCUIT ID NUMBERS (I.E., PANELBOARD AND CIRCUIT ID'S).
9. PANELBOARDS (ID NUMBERS) AND INTERNAL CIRCUIT BREAKERS (CIRCUIT ID NUMBERS) SHALL BE CLEARLY LABELED WITH ENGRAVED LAMACOID PLASTIC LABELS.
10. POWER, CONTROL, AND EQUIPMENT GROUND WIRING IN TUBING OR CONDUIT SHALL BE SINGLE CONDUCTOR (#14 AWG OR LARGER), 600 V, OIL RESISTANT THHN OR THWN-2, STRANDED COPPER CABLE RATED FOR 90°C (WET AND DRY) OPERATION; LISTED OR LABELED FOR THE LOCATION AND RACEWAY SYSTEM USED, UNLESS OTHERWISE SPECIFIED.
11. POWER AND CONTROL WIRING, NOT IN TUBING OR CONDUIT, SHALL BE MULTI-CONDUCTOR, TYPE USE-2 CABLE (#14 AWG OR LARGER), 600 V, OIL RESISTANT RHW-2 OR XHHW-2, STRANDED COPPER CABLE RATED FOR 90°C (WET AND DRY) OPERATION; WITH OUTER JACKET; LISTED OR LABELED FOR THE LOCATION USED, UNLESS OTHERWISE SPECIFIED.
12. ALL POWER AND GROUNDING CONNECTIONS SHALL BE CRIMP-STYLE, COMPRESSION WIRE LUGS AND WIRE NUTS BY THOMAS AND BETTS (OR EQUAL). LUGS AND WIRE NUTS SHALL BE RATED FOR OPERATION AT NO LESS THAN 90°C.
13. RACEWAY AND CABLE TRAY SHALL BE LISTED OR LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANSI/IEEE, AND NEC.
14. ELECTRICAL METALLIC TUBING (EMT) OR RIGID METALLIC CONDUIT (RMC) SHALL BE USED FOR EXPOSED INDOOR LOCATIONS.
15. ELECTRICAL METALLIC TUBING (EMT) OR RIGID METALLIC CONDUIT (RMC) SHALL BE USED FOR CONCEALED INDOOR LOCATIONS.
16. RIGID NON-METALLIC CONDUIT (I.E., RIGID PVC SCHEDULE 80) SHALL BE USED UNDERGROUND; DIRECT BURIED, IN AREAS OF OCCASIONAL LIGHT VEHICLE TRAFFIC OR IN AREAS OF HEAVY VEHICLE TRAFFIC, GALVANIZED RIGID CONDUIT SHALL BE USED.
17. ALL OUTDOOR EXPOSED CONDUIT SHALL BE RMC AND SHALL BE SUPPORTED ADEQUATELY.
18. LIQUID-TIGHT FLEXIBLE METALLIC CONDUIT (LIQUID-TITE FLEX) SHALL BE USED INDOORS AND OUTDOORS, WHERE VIBRATION OCCURS OR FLEXIBILITY IS NEEDED. LFMC SHALL CONFORM TO NEC ARTICLE 350.
19. CONDUIT AND TUBING FITTINGS SHALL BE THREADED OR COMPRESSION-TYPE AND APPROVED FOR THE LOCATION USED. SET SCREW FITTINGS ARE NOT ACCEPTABLE.
20. CABINETS, BOXES, AND WIREWAYS SHALL BE LISTED OR LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANSI/IEEE, AND NEC.
21. WIREWAYS SHALL BE EPOXY-COATED (GRAY) AND INCLUDE A HINGED COVER, DESIGNED TO SWING OPEN DOWNWARD; SHALL BE PANDUIT TYPE E (OR EQUAL); AND RATED NEMA 1 (OR BETTER) INDOORS, OR NEMA 3R (OR BETTER) OUTDOORS.
22. EQUIPMENT CABINETS, TERMINAL BOXES, JUNCTION BOXES, AND PULL BOXES SHALL BE GALVANIZED OR EPOXY-COATED SHEET STEEL, SHALL MEET OR EXCEED UL 50, AND RATED NEMA 1 (OR BETTER) INDOORS, OR NEMA 3R (OR BETTER) OUTDOORS
23. METAL RECEPTACLE, SWITCH, AND DEVICE BOXES SHALL BE GALVANIZED, EPOXY-COATED, OR NON-CORRODING; SHALL MEET OR EXCEED UL 514A AND NEMA OS 1; AND RATED NEMA 1 (OR BETTER) INDOORS, OR WEATHER PROTECTED (WP OR BETTER) OUTDOORS.
24. NON-METALLIC RECEPTACLE, SWITCH, AND DEVICE BOXES SHALL MEET OR EXCEED NEMA OS 2; AND RATED NEMA 1 (OR BETTER) INDOORS, OR WEATHER PROTECTED (WP OR BETTER) OUTDOORS.
25. CONTRACTOR SHALL APPLY FOR ELECTRICAL SERVICE AS SOON AS POSSIBLE AND COORDINATE REQUIREMENTS, SERVICE ROUTING, AND METER SOCKET TYPE WITH LOCAL POWER COMPANY.
26. CONTRACTOR SHALL APPLY FOR TELEPHONE SERVICE AS SOON AS POSSIBLE AND COORDINATE REQUIREMENTS AND SERVICE ROUTING WITH TELEPHONE COMPANY.
27. CONTRACTOR SHALL OBTAIN ALL PERMITS, PAY PERMIT FEES, AND SCHEDULE INSPECTIONS.

ELECTRICAL INSTALLATION NOTES, (cont.)

28. ALL SAFETY SWITCHES SHALL BE NEMA 1 FOR INDOOR, NEMA 3R FOR OUTDOOR, UL LISTED 200K SCCR RATED, REJECTION TYPE, WITH RK1 FUSES. FUSES SHALL HAVE AN AIR OF 200K AND SHALL HAVE A LIMITING RATING AS SHOWN IN THESE DRAWINGS. EQUIPMENT AND ACCESSORIES SHALL BE RATED FOR 75 DEGREES CELSIUS OR HIGHER.
29. ALL LOAD CENTERS SHALL BE 42 SPACE UNLESS NOTED OTHERWISE, NEMA 1 FOR INDOOR, NEMA 3R FOR OUTDOOR, MCB WITH CONVERTIBLE MAINS, UL LISTED 22K IA OR HIGHER SCCR, WITH 22K AIR BREAKERS. BREAKERS AND LOAD CENTER SHALL BE RATED FOR 75 DEGREES CELSIUS OR HIGHER. BREAKERS SHALL HAVE A LIMITING RATING AS SPECIFIED ON THESE DRAWINGS.
30. CONTRACTOR SHALL LABEL ELECTRICAL EQUIPMENT IN ACCORDANCE WITH NEC 110.16 AND 110.24.
31. CONTRACTOR SHALL VERIFY THAT THE MAIN BONDING JUMPER AND GROUNDING ELECTRODE CONDUCTOR IS INSTALLED PROPERLY AT SERVICE ENTRANCE.
32. CONTRACTOR SHALL SEAL AROUND ALL CONDUIT PENETRATIONS TO PREVENT MOISTURE PENETRATION OR VERMIN INFESTATIONS.
33. DURING TRENCH BACK-FILLING FOR EACH UNDERGROUND ELECTRICAL, TELEPHONE, SIGNAL AND COMMUNICATIONS LINE, PROVIDE A CONTINUOUS UNDERGROUND WARNING TAPE TWELVE INCHES BELOW FINISHED GRADE.

GROUNDING NOTES

1. ALL GROUNDING CONNECTIONS SHALL BE MADE USING EXOTHERMIC WELDING PROCESS (CAD WELD OR EQUAL) EXCEPT FOR EQUIPMENT THAT MAY BE MECHANICALLY FASTENED. ALL LUGS SHALL BE TWO HOLE, LONG BARREL TYPE, FOR COPPER, UNLESS OTHERWISE NOTED.
2. ALL GROUND RODS SHALL BE INSTALLED AT 30" BELOW GRADE PER MANUFACTURER'S SPECIFICATIONS. UNDERGROUND GROUNDING CONDUCTORS SHALL BE 30" BELOW GRADE.
3. ALL GROUND CONDUCTORS SHALL BE MIN. #2 AWG SOLID BARE TINNED COPPER WIRE. EQUIPMENT GROUND CONDUCTORS SHALL BE MIN. #6 GREEN INSULATED, UNLESS OTHERWISE NOTED.
4. GROUND RODS FOR GROUND RING SHALL BE LOCATED 10'-0" APART MAXIMUM.
5. ANY METAL OBJECT WITHIN 6 FEET OF THE TOWER OR EQUIPMENT GROUND RING SHALL BE BONDED DIRECTLY TO THE RING.
6. THE MINIMUM BENDING RADIUS FOR ALL GROUNDING CONDUCTORS #6 AWG OR LARGER SHALL BE 24".
7. ALL ABOVE GRADE GROUND CONDUCTORS SHALL BE ROUTED DOWNWARD TOWARD EARTH AND HORIZONTAL ONLY WHERE NECESSARY.
8. ALL CONDUCTORS SHALL BE ROUTED SUCH THAT THERE ARE NO INCLUSIVE ANGLES OF LESS THAN 90 DEGREES.
9. THE CONTRACTOR SHALL PERFORM IEEE FALL-OF-POTENTIAL RESISTANCE TO EARTH TESTING (PER IEEE 1100 AND 81) FOR GROUND ELECTRODE SYSTEMS. THE SUBCONTRACTOR SHALL FURNISH AND INSTALL SUPPLEMENTAL GROUND ELECTRODES AS NEEDED TO ACHIEVE A TEST RESULT OF 5 OHMS OR LESS.
10. ALL GROUNDING SHALL COMPLY WITH THE N.E.C. AND NFPA 780, "LIGHTNING PROTECTION CODE".
11. ALL GROUNDING COMPONENTS SHALL BE FURNISHED AND INSTALLED BY CONTRACTOR.
12. ANY METAL CONDUIT MOUNTED ON THE TOWER SHALL BE BONDED TO THE TOWER AT EACH END.
13. ALL EXPOSED GROUNDING SHALL BE IN NON-METALLIC FLEX CONDUIT AND SECURED AS NECESSARY.
14. WHEN BONDING TO EQUIPMENT, REMOVE PAINT TO BARE STEEL AND PROTECT WITH A COATING OF NO-OX.
15. APPROVED ANTIOXIDANT COATINGS SHALL BE USED ON ALL COMPRESSION AND BOLTED GROUND CONNECTIONS.
16. BOND ICE BRIDGE SECTIONS TOGETHER EXOTHERMICALLY OR WITH 2 HOLE LUGS. BOND ICE BRIDGE TO SUPPORT POSTS.
17. THESE NOTES ARE NOT ALL-ENCOMPASSING. REFER TO SouthernLINC STANDARDS COMPLETE GROUNDING GUIDELINES

Southern Linc

APPROVALS
CARRIER _____
LANDLORD _____
LEASING _____
CONSTRUCTION _____

PROJECT NO:

DRAWN BY: JAL

CHECKED BY: JMB

APPROVED BY: CBS

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V	DATE	DESCRIPTION

PROFESSIONAL ENGINEER
NO. 61406
STATE OF FLORIDA
PROFESSIONAL ENGINEER
CLINTON P. STEWART R.E. #61406
EXCELL COMMUNICATIONS C.A. # 27498

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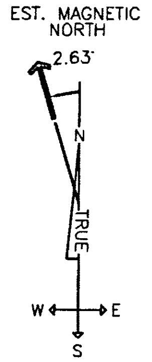
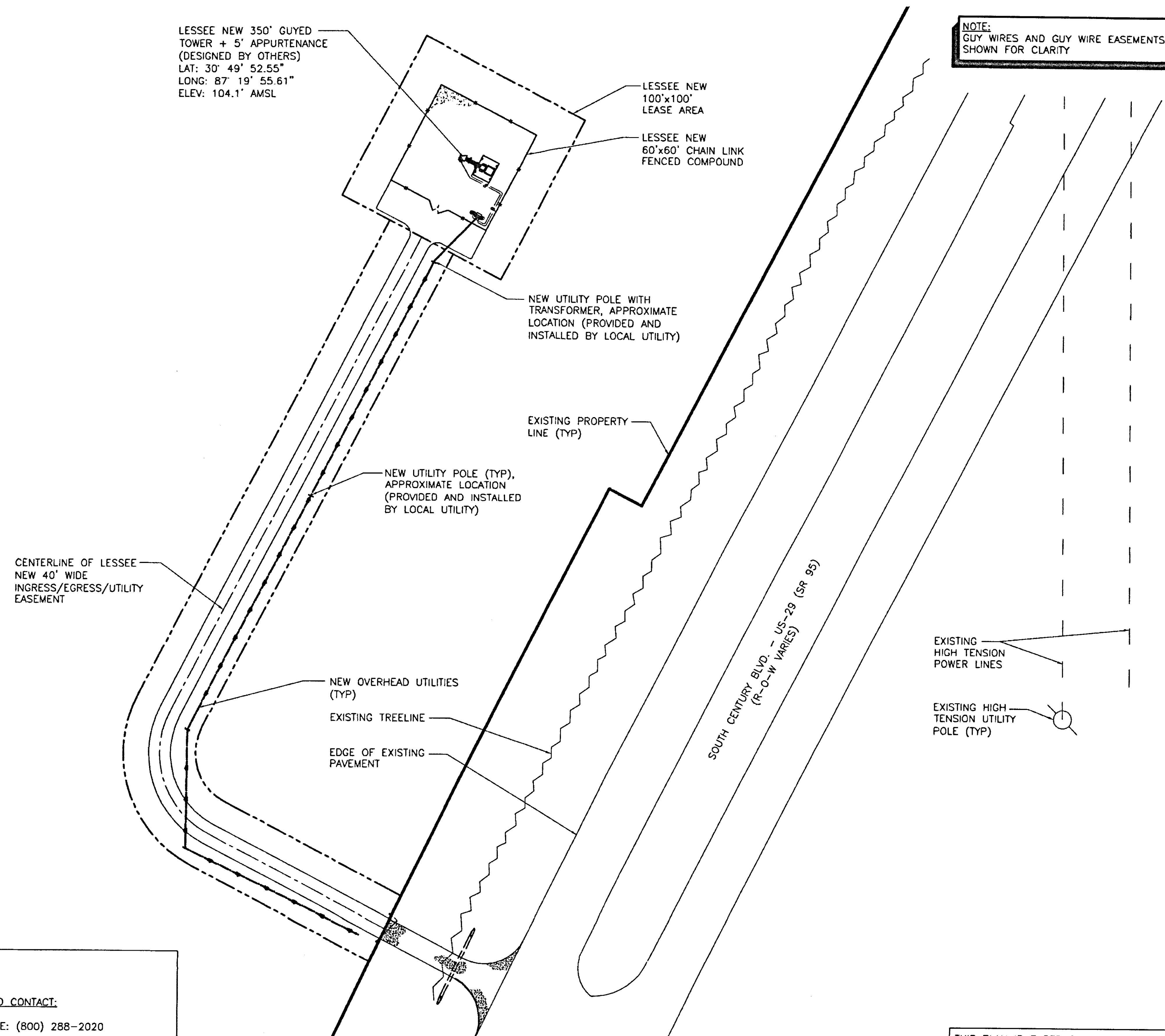
SITE NAME
BOGIA
F-8119

SITE ADDRESS
2401 S. CENTURY BLVD.
McDAVID, FL 32568

SHEET TITLE
ELECTRICAL NOTES

SHEET NUMBER
C16





NOTE:
GUY WIRES AND GUY WIRE EASEMENTS NOT SHOWN FOR CLARITY

CONTRACTOR SHALL VERIFY POWER ROUTE AND POWER PROVIDER REQUIREMENTS PRIOR TO CONSTRUCTION

UTILITY NOTES

POWER CONTACT:
ESCAMBIA RIVER ELECTRIC COOPERATIVE
PHONE: (850) 675-4521

TELCO CONTACT:
AT&T
PHONE: (800) 288-2020

OVERALL ELECTRICAL PLAN
11x17 SCALE: 1" = 60'-0"
22x34 SCALE: 1" = 30'-0"

THIS PLAN IS BASED ON A SURVEY BY POINT TO POINT LAND SURVEYORS, DATED 08/23/16. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO COMMENCEMENT OF CONSTRUCTION.

Southern Linc

APPROVALS

CARRIER ______
LANDLORD ______
LEASING ______
CONSTRUCTION ______

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PROFESSIONAL ENGINEER

CLINTON B. STEWART, No. 61406, STATE OF FLORIDA, PROFESSIONAL ENGINEER

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EXCELL COMMUNICATIONS, INC.
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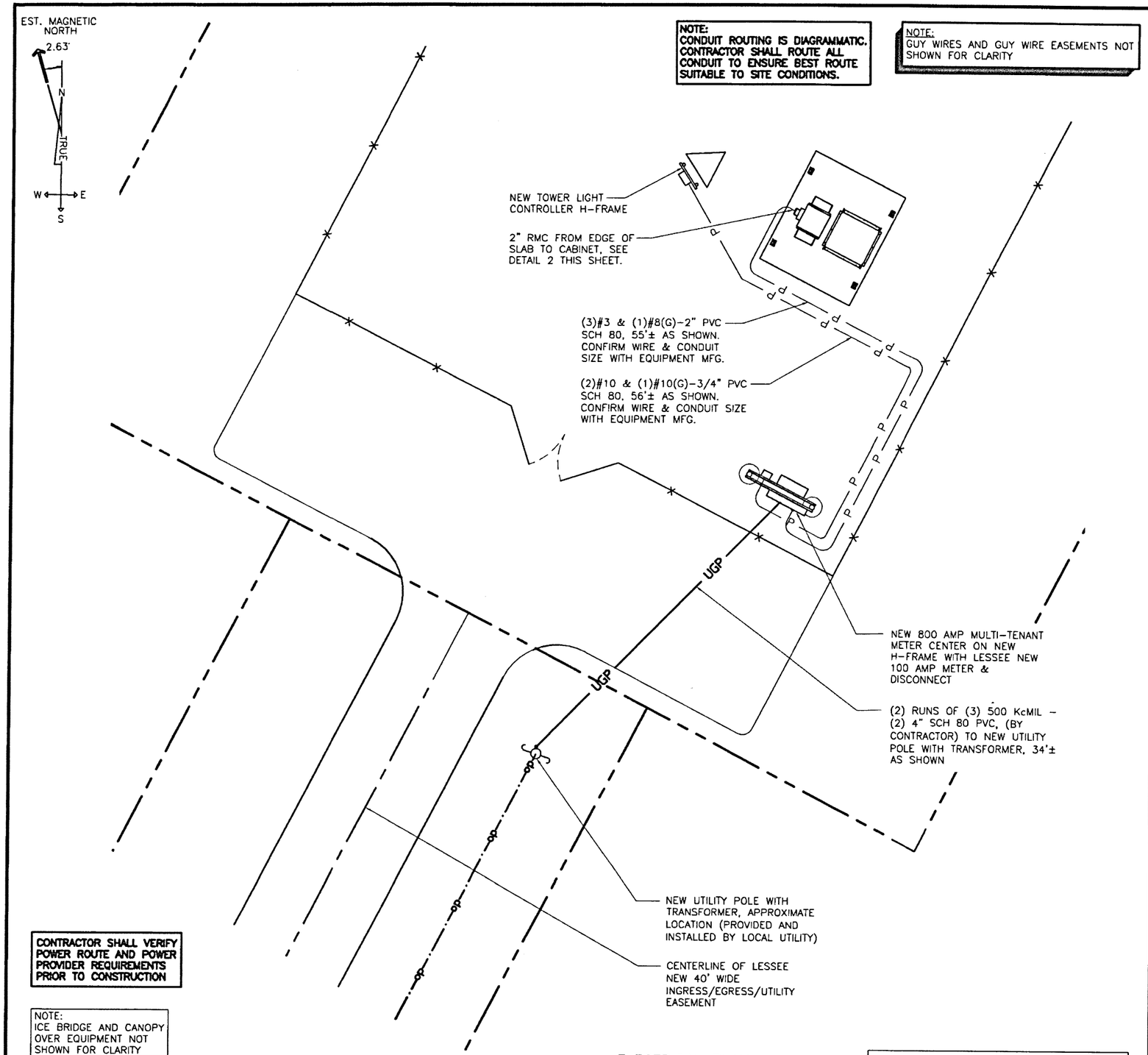
BIRMINGHAM, ALABAMA 35222
PHONE: 205.956.0198
FAX: 205.956.2632

SITE NAME
BOGIA
F-8119

SITE ADDRESS
2401 S. CENTURY BLVD.
McDAVID, FL 32568

SHEET TITLE
OVERALL ELECTRICAL PLAN

SHEET NUMBER
C17

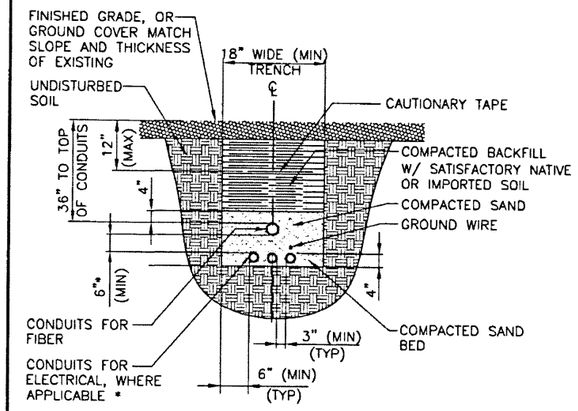


ELECTRICAL PLAN

11x17 SCALE: 3/32" = 1'-0"

22x34 SCALE: 3/16" = 1'-0"

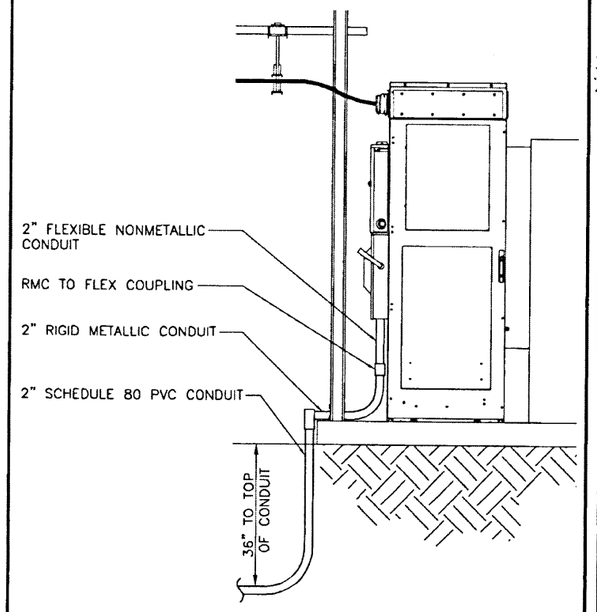
THIS PLAN IS BASED ON A SURVEY BY POINT TO POINT LAND SURVEYORS, DATED 08/23/16. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO COMMENCEMENT OF CONSTRUCTION.



*CONDUIT SIZE, TYPE, QUANTITY AND SEPARATION DIMENSION TO BE VERIFIED WITH LOCAL UTILITY COMPANY REQUIREMENTS

DIRECT BURIED CONDUIT

DETAIL 1 / NTS



CONDUIT ELEVATION

DETAIL 2 / NTS

Southern Linc

APPROVALS

CARRIER _____

LANDLORD _____

LEASING _____

CONSTRUCTION _____

PROJECT NO:

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PROFESSIONAL ENGINEER

CLINTON B. STEWART P.E. #41406

EXCELL COMMUNICATIONS C.A. # 27498

STATE OF FLORIDA PROFESSIONAL ENGINEER

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SITE NAME

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F-8119

SITE ADDRESS

2401 S. CENTURY BLVD.
McDAVID, FL 32568

SHEET TITLE

ELECTRICAL PLAN

SHEET NUMBER

C17A

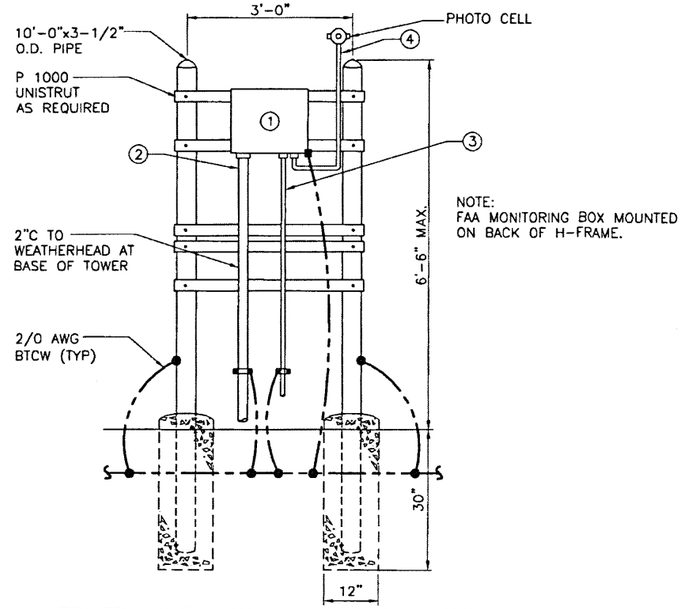
NOTE: ALL ABOVE-GRADE CONDUIT RISERS SHALL BE RGS. SEE DETAIL 1 SHEET 12

CONDUIT DESCRIPTIONS

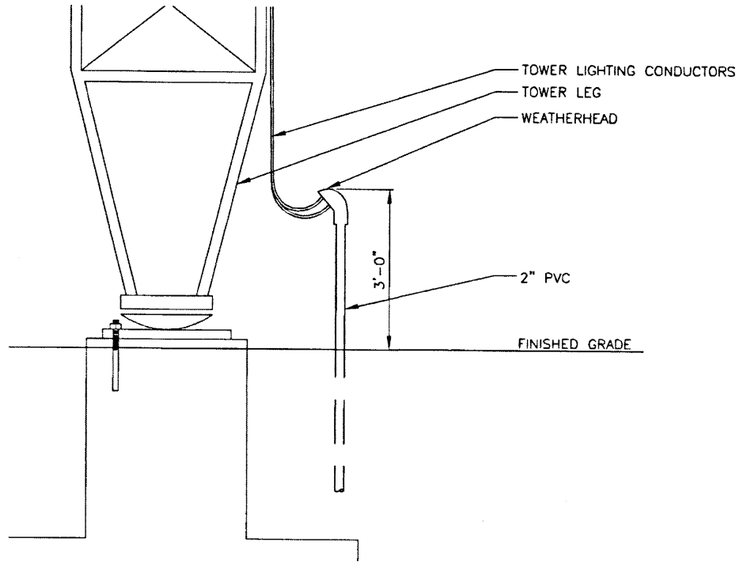
① FLASH TECH PC 324 POWER CONVERTER
② (1) FLASH TECH 6340 CABLE & (1) #12-3 CONDUCTOR S.O. CORD-2"C
③ (3) #10 AWG-3/4"C
④ (2) #16 AWG-1/2" RIGID C

GROUNDING NOTES:

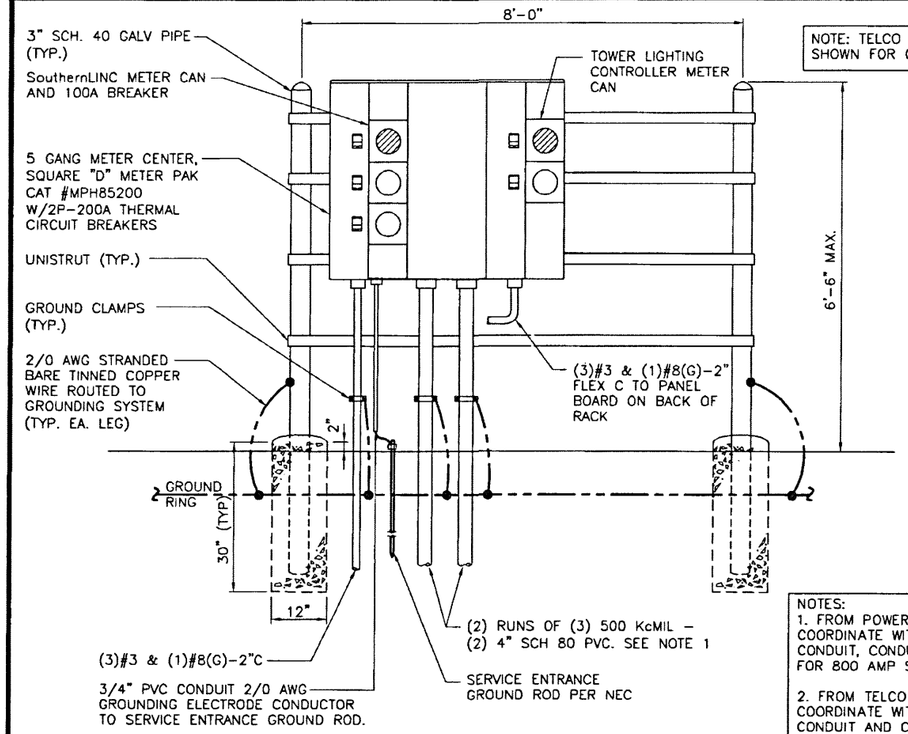
1. ALL GROUNDING CONDUCTORS SHALL BE 2/0 AWG STRANDED BARE TINNED COPPER WIRE UNO.
2. ALL BELOW GRADE GROUNDING CONNECTIONS SHALL BE PARALLEL EXOTHERMIC WELD UNO.
3. APPROVED ANTIOXIDANT COATINGS SHALL BE USED ON ALL COMPRESSION AND BOLTED GROUND CONNECTIONS.
4. ALL ELECTRICAL AND NON-ELECTRICAL METAL BOXES, FRAMES AND SUPPORTS SHALL BE BONDED TO THE GROUND RING, IN ACCORDANCE WITH THE NEC.



TOWER LIGHT CONTROLLER & H-FRAME
SCALE: NTS



WEATHERHEAD
SCALE: NTS



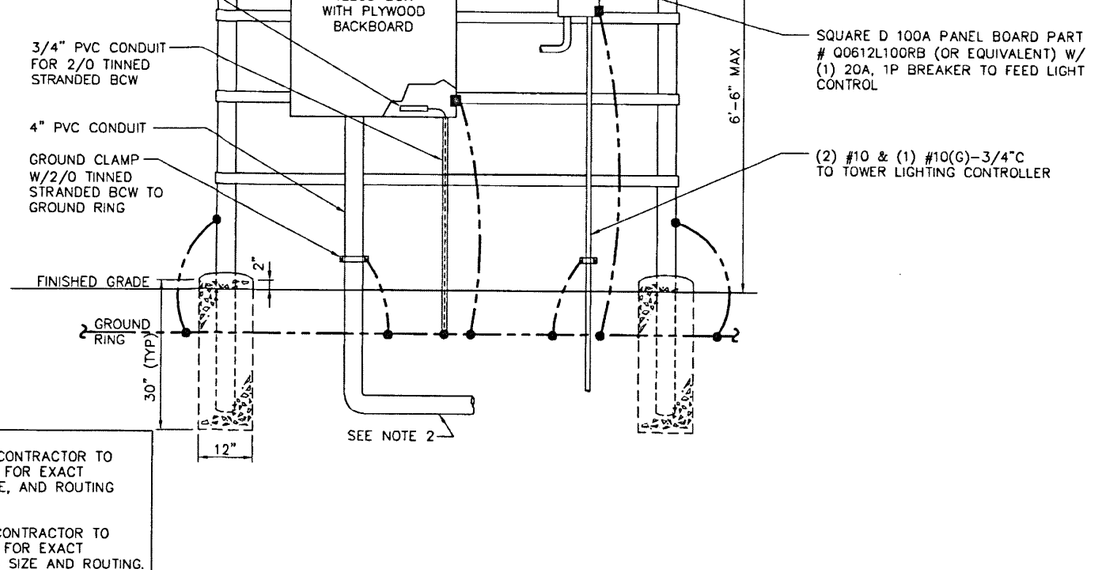
UTILITY H-FRAME FRONT ELEVATION

DETAIL 1

NOTES:
1. FROM POWER UTILITY. CONTRACTOR TO COORDINATE WITH UTILITY FOR EXACT CONDUIT, CONDUCTOR SIZE, AND ROUTING FOR 800 AMP SERVICE.

2. FROM TELCO UTILITY. CONTRACTOR TO COORDINATE WITH UTILITY FOR EXACT CONDUIT AND CONDUCTOR SIZE AND ROUTING.

3. ALL CONDUIT AND CONDUCTORS ARE CONTRACTOR FURNISHED, CONTRACTOR INSTALLED. ALL OTHER ITEMS ARE CONTRACTOR FURNISHED, CONTRACTOR INSTALLED UNLESS NOTED OTHERWISE.



UTILITY H-FRAME BACK ELEVATION

DETAIL 2

Southern Linc

APPROVALS
CARRIER
LANDLORD
LEASING
CONSTRUCTION

PROJECT NO:

DRAWN BY: JAL

CHECKED BY: JMB

APPROVED BY: CBS

3	07/25/17	REV. PER JURISDICTION
2	02/09/17	ISSUED FOR CONSTR.
1	01/10/17	ISSUED FOR REVIEW
0	11/15/16	ISSUED FOR REVIEW
V	DATE	DESCRIPTION

PROFESSIONAL ENGINEER
CLINTON B. STEWART P.E. #61406
EXCELL COMMUNICATIONS, INC. C.A. # 27466
STATE OF FLORIDA

EXCELL COMMUNICATIONS, INC.

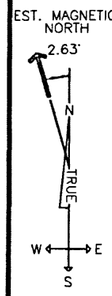
EXCELL COMMUNICATIONS, INC.
3608 7th COURT SOUTH
BIRMINGHAM, ALABAMA 35222
PHONE: 205.956.0198
FAX: 205.956.2632

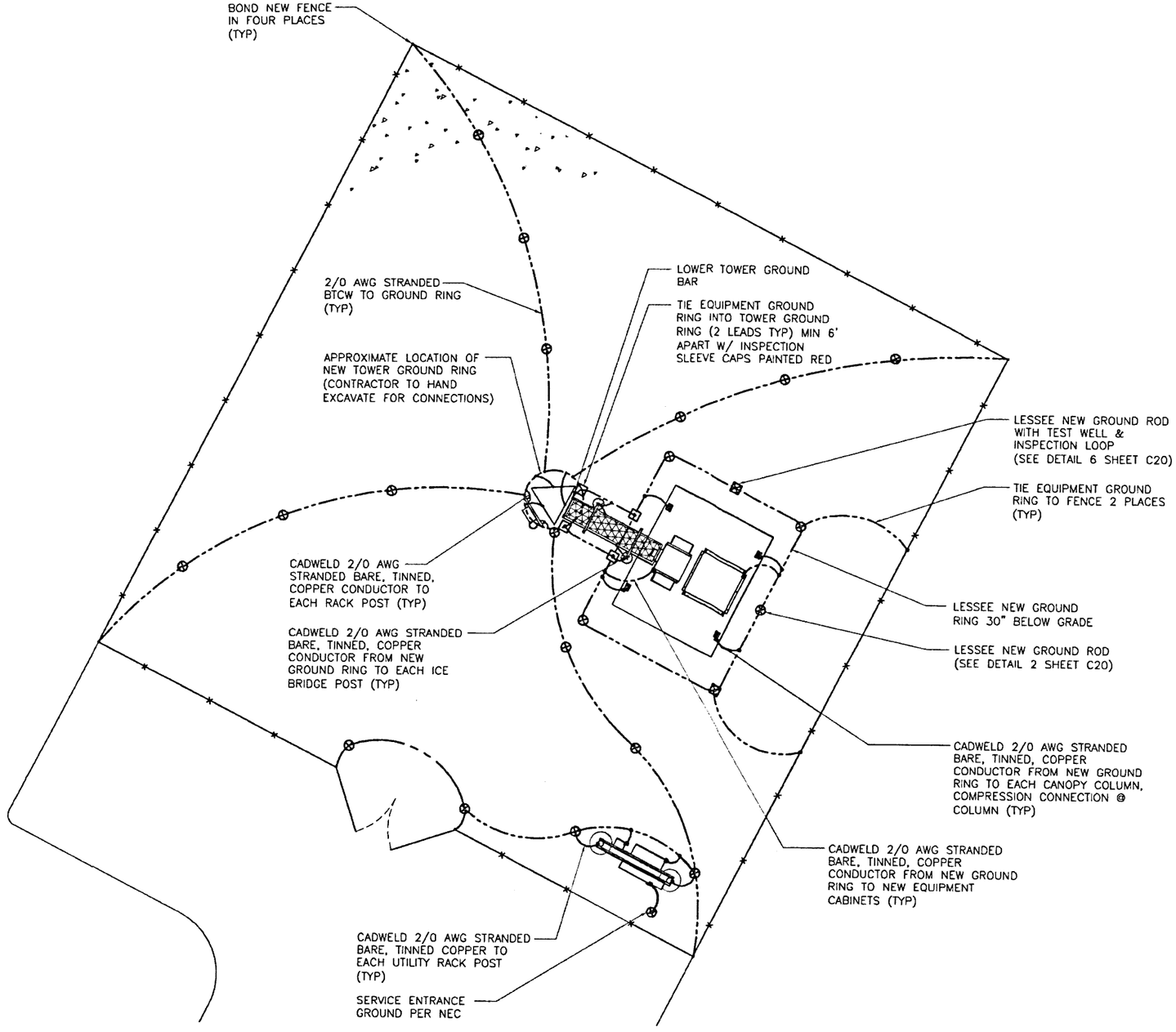
SITE NAME
BOGIA
F-8119

SITE ADDRESS
2401 S. CENTURY BLVD.
McDAVID, FL 32568

SHEET TITLE
ELECTRICAL DETAILS

SHEET NUMBER
C18





NOTE:
GUY WIRES AND GUY WIRE EASEMENTS NOT SHOWN FOR CLARITY

LEGEND:

NEW
EXISTING
FENCE
CADWELD
COMPRESSION CONNECTION
GROUND ROD
GROUND ROD WITH SLEEVE
CADWELD WITH SLEEVE

GROUNDING PLAN
11x17 SCALE: 3/32" = 1'-0"
22x34 SCALE: 3/16" = 1'-0"

THIS PLAN IS BASED ON A SURVEY BY POINT TO POINT LAND SURVEYORS, DATED 08/23/16. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO COMMENCEMENT OF CONSTRUCTION.

Southern Linc

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STATE OF FLORIDA
PROFESSIONAL ENGINEER
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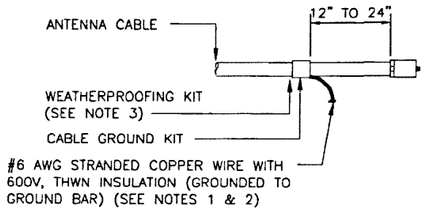
SHEET TITLE
GROUNDING PLAN

SHEET NUMBER
C19

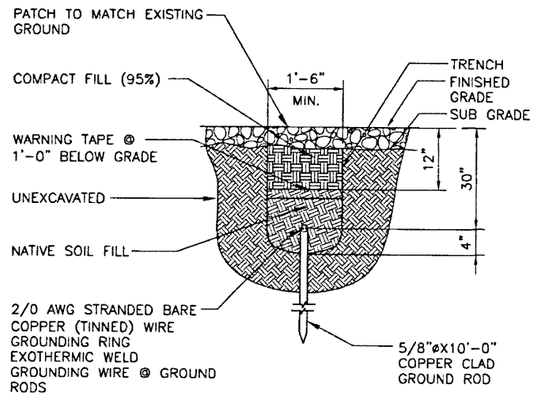


CONNECTION OF CABLE GROUND KIT TO ANTENNA CABLE

NOTES:

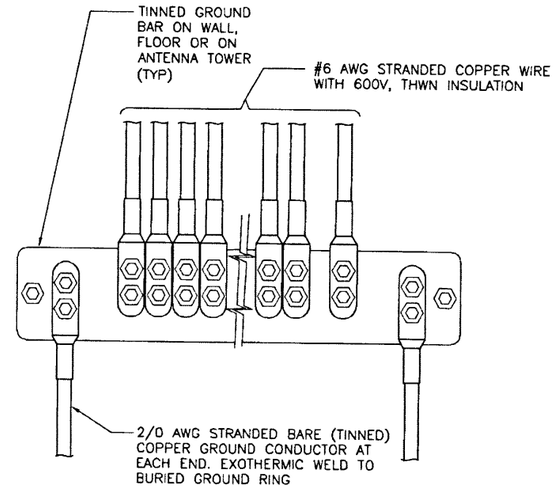
1. DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO GROUND BAR.
2. GROUNDING KIT SHALL BE TYPE AND PART NUMBER AS SUPPLIED OR RECOMMENDED BY CABLE MANUFACTURER.
3. WEATHER PROOFING SHALL BE (TYPE AND PART NUMBER AS SUPPLIED OR RECOMMENDED BY CABLE MANUFACTURER.)

DETAIL 1 / –



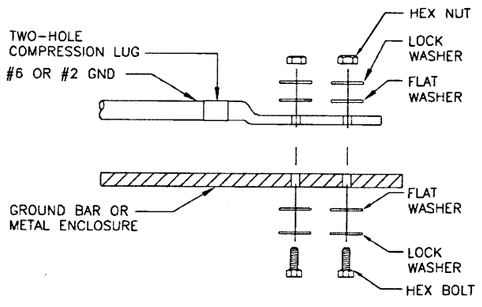
GROUND ROD

DETAIL 2 / – NTS



INSTALLATION OF GROUND WIRE TO COAX CABLE GROUND BAR

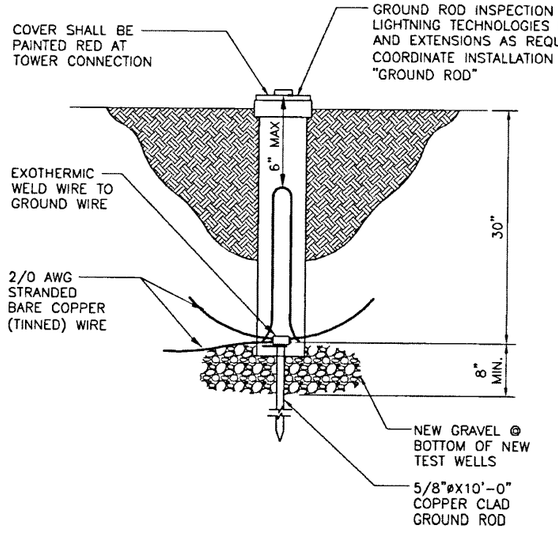
DETAIL 3 / –



INSTALLATION NOTES:

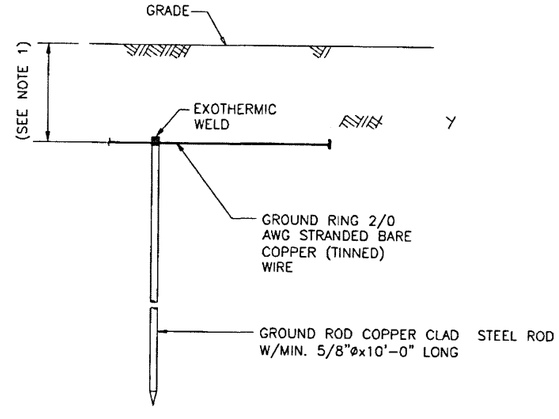
1. BOLTS, WASHERS AND NUTS SHALL BE STAINLESS STEEL.
2. SELECT BOLT LENGTH TO PROVIDE A MINIMUM TO TWO EXPOSED THREADS.
3. BURNISH MOUNTING SURFACE TO REMOVE PAINT IN THE AREA OF LUG CONTACT.
4. APPLY ANTI-OXIDANT COMPOUND TO MATING SURFACE OF LUG AND WIPE CLEAN EXCESS COMPOUND.
5. USE 1/4" HARDWARE FOR ATTACHMENT TO METAL ENCLOSURES & 3/8" FOR ATTACHMENT TO GROUND BARS.

DETAIL 4 / –



GROUND ROD WITH ACCESS AREA & TEST LOOP

DETAIL 6 / –



1. MIN. 30" OR LOCAL FROST DEPTH WHICHEVER IS GREATER.
2. GROUND ROD SHALL BE DRIVEN VERTICALLY, NOT TO EXCEED 45 DEGREES FROM THE VERTICAL.

GROUND ROD

DETAIL 7 / – NTS

Southern Linc

APPROVALS
CARRIER _____
LANDLORD _____
LEASING _____
CONSTRUCTION _____

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GROUNDING DETAILS

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