

1

2

3

4

5

6

7

8

9

10

11

12

13

LEGEND:

— — — — —

UNDERGROUND ELECTRIC

— — — — —

CENTER LINE

— — — — —

TO BE REMOVED

— . . . — —

GAS LINE

— — — — —

PROPERTY LINE

—————

NEW INSTALLATION

—————

EXISTING

— × — × —

FENCE

FIBER OPTIC CABLE

— . . — —

OVERHEAD ELECTRICAL

— - - - -

EDGE OF GRAVEL

CODED DRAWING NOTE

POLE MOUNTED TRANSFORMER

EXISTING UTILITY POLE

GROUND BAR (MGB, CGB, EGB, IGB OR TGB)

GROUND ROD

INSPECTION WELL

BOLTED CONNECTION (APPLY NO-OX GREASE BETWEEN SURFACES)

EXOTHERMIC WELDED CONNECTION

GROUND STINGER, 10' COIL ABOVE GRADE FOR FUTURE GROUND CONNECTION

FIBER OPTIC MARKER POLE

ABBREVIATIONS:

A.B.

ANCHOR BOLT

AGL

ABOVE GROUND LEVEL

AMSL

ABOVE MEAN SEA LEVEL

APPROX

APPROXIMATE

ASR

ANTENNA STRUCTURE REGISTRATION

ATS

AUTOMATIC TRANSFER SWITCH

AWG

AMERICAN WIRE GAUGE

BCW

BARE COPPER WIRE

BTCW

BARE TINNED COPPER WIRE

CGB

COAX GROUND BAR (SHELTER)

CLR

CLEAR

COMM

COMMUNICATIONS

COND

CONDUIT

CU

COPPER

DET

DETAIL

DIA

DIAMETER

DV

DIVERSITY

DWG

DRAWING

EGB

EXTERIOR GROUND BAR

EL =

ELEVATION EQUALS (AMSL, UNLESS OTHERWISE NOTED)

EQUIP

EQUIPMENT

EW

EACH WAY

EXP

EXPANSION

FDN

FOUNDATION

FFE

FINISHED FLOOR ELEVATION

FLEX

FLEXIBLE

FOC

FIBER OPTIC CABLE

GA

GAUGE

GALV

GALVANIZED

GEN

GENERATOR

GFCI

GROUND FAULT CIRCUIT INTERRUPTER

HDPE

HIGH DENSITY POLYETHYLENE

HVAC

HEATING, VENTILATION & AIR CONDITIONING

I.D.

INTERIOR DIAMETER

IGB

INTERMEDIATE GROUND BAR

IGR

INTERIOR GROUND RING (SHELTER)

kVA

KILOVOLT AMPERES

LMR

LAND MOBILE RADIO

LPG

LIQUID PETROLEUM GAS

MAS

MULTIPLE ADDRESS (RADIO) SYSTEM

MAX

MAXIMUM

MGB

MASTER GROUND BAR

MIN

MINIMUM

MISC

MISCELLANEOUS

MTS

MANUAL TRANSFER SWITCH

MW

MICROWAVE

MW-DV

MICROWAVE DIVERSITY

O.C.

ON CENTER

PLCS

PLACES

PSI

POUNDS per SQUARE INCH

PVC

POLYVINYL CHLORIDE (CONDUIT)

REQ'D

REQUIRED

RGS

RIGID GALVANIZED STEEL (CONDUIT)

SCHED

SCHEDULE

SCHEM

SCHEMATIC

SYS

SYSTEM

T&B

TOP AND BOTTOM

TBD(or tbd)

TO BE DETERMINED

TELCO

TELEPHONE COMPANY

TGB

TOWER GROUND BAR

T.O.C.

TOP OF CONCRETE

T.O.S.

TOP/TOE OF SLOPE

TYP

TYPICAL

XFMR

TRANSFORMER

GENERAL NOTES:

1. THIS PROJECT SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE APPLICABLE CODES AND STANDARDS LISTED ON T-1.

2. THE SUBCONTRACTOR SHALL FOLLOW THE SPECIFICATIONS BELOW.

SPECIFICATIONS:

02 41 16 STRUCTURE DEMOLITION

03 10 00 CONCRETE FORMWORK

03 20 00 CONCRETE REINFORCEMENT

03 30 00 CONCRETE

13 34 23 COMMUNICATIONS SHELTER

26 05 04 WIRE AND CABLE

26 05 26 SITE GROUNDING

26 05 33 CONDUIT AND ACCESSORIES

26 32 13 EMERGENCY GENERATORS

27 05 28 PATHWAYS FOR COMMUNICATIONS SYSTEMS

31 20 00 SITE PREP AND EARTHWORK

31 63 29 DRILLED SHAFT FOUNDATIONS

32 31 00 FENCE AND GATES

33 81 16 ANTENNA TOWER ERECTION

33 82 00 COMMUNICATIONS DISTRIBUTION

no.

date

by

ckd

description

0

03/31/23

DPK

JJW

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KEVIN BURENHEIDE

LICENSE NUMBER: 89259

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8400 WARD PARKWAY
KANSAS CITY, MO 64114
816-333-9400

date

03/31/23

detailed

DPK

designed

DPK

checked

JJW

DUKE ENERGY

FORT WHITE

LEGEND AND ABBREVIATIONS

project

147057

contract

-

drawing

N-1 — 0

rev.

0

sheet

of

sheets

file

A

B

C

D

E

F

G

H

I



OWNER:
TITF/DEP-REC & PARKS
PARCEL ID:
23-6S-15-00508-000

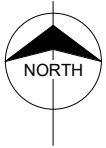
OWNER:
FLORIDA POWER CORP.
PARCEL ID:
23-6S-15-00507-003

PROPOSED TELECOM
SITE SEE DRAWING
C-3 FOR DETAILS

OWNER:
FLORIDA POWER CORP.
PARCEL ID:
23-6S-15-00509-000

SW US HIGHWAY 27 SEE NOTE 2

OVERALL SITE LAYOUT
NOT TO SCALE



GENERAL NOTES:

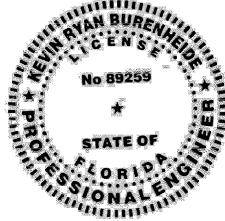
- FOR LEGEND AND ABBREVIATIONS DETAILS SEE N-1.
- OVERALL FENCE DIMENSIONS, GATE LOCATIONS, ELECTRICAL EQUIPMENT, AND STRUCTURE LOCATION ARE APPROXIMATE AND ARE SHOWN FOR ORIENTATION ONLY.
- CENTERLINE ELEVATION OF US HIGHWAY 27 IS 40'.

LEGEND:

- EXISTING
- NEW INSTALLATION
- NEW FENCE
- NEW GRAVEL DRIVE
- OWNER PROPERTY BOUNDARY
- PROPERTY BOUNDARY

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**BURNS
MCDONNELL**

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KANSAS CITY, MO 64114
816-333-9400

date	03/31/23	detailed	DPK
designed	DPK	checked	JJW



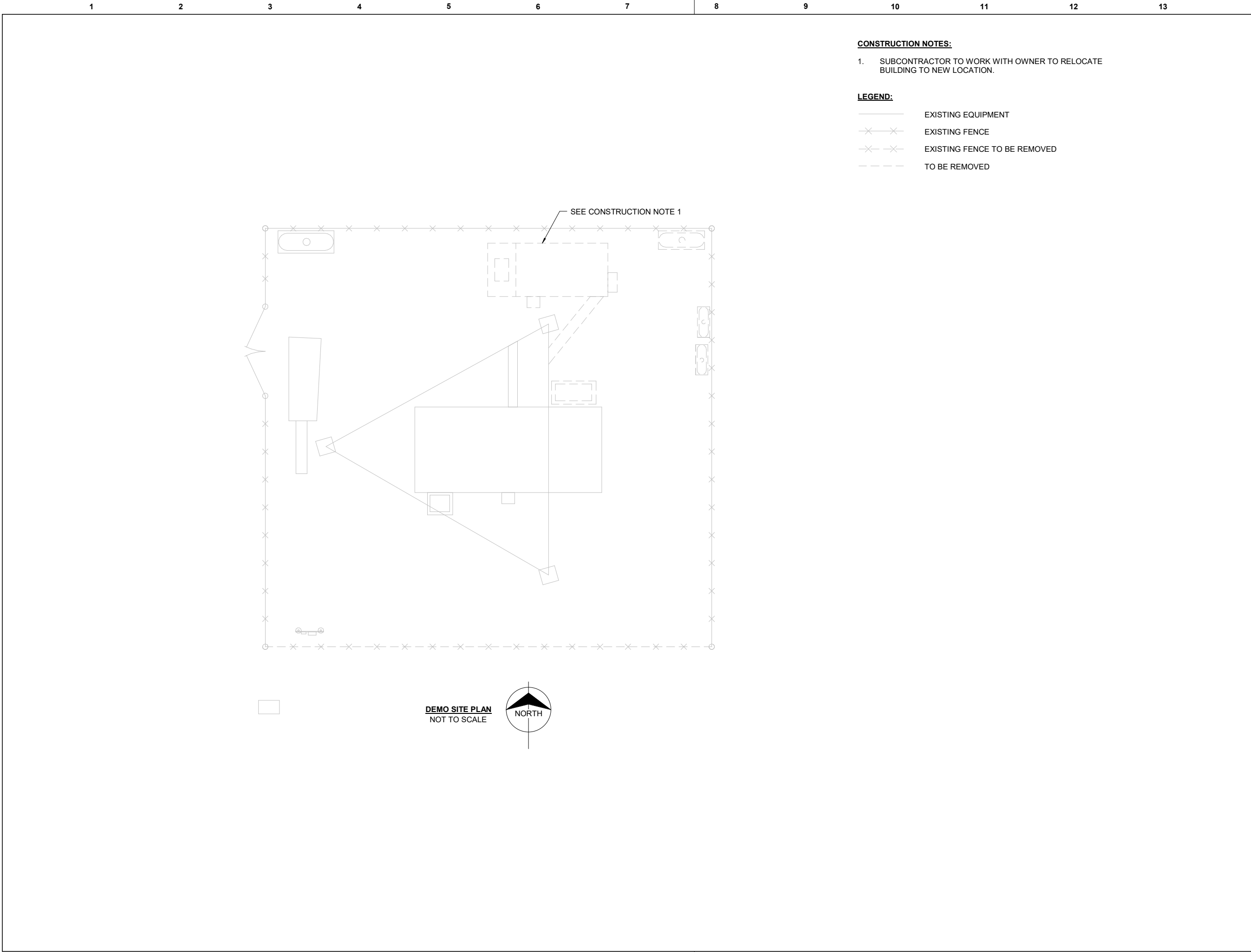
DUKE ENERGY
FORT WHITE
OVERALL SITE LAYOUT

project	147057	contract	-
drawing	C-1	rev.	0
sheet	of	sheets	file

ANY EXCAVATION WITHIN THE PROXIMITY
OF UNDERGROUND SERVICES SHALL BE
PERFORMED BY HAND

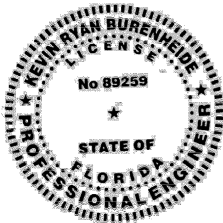


Sunshine 811,
800-432-4770 or 811



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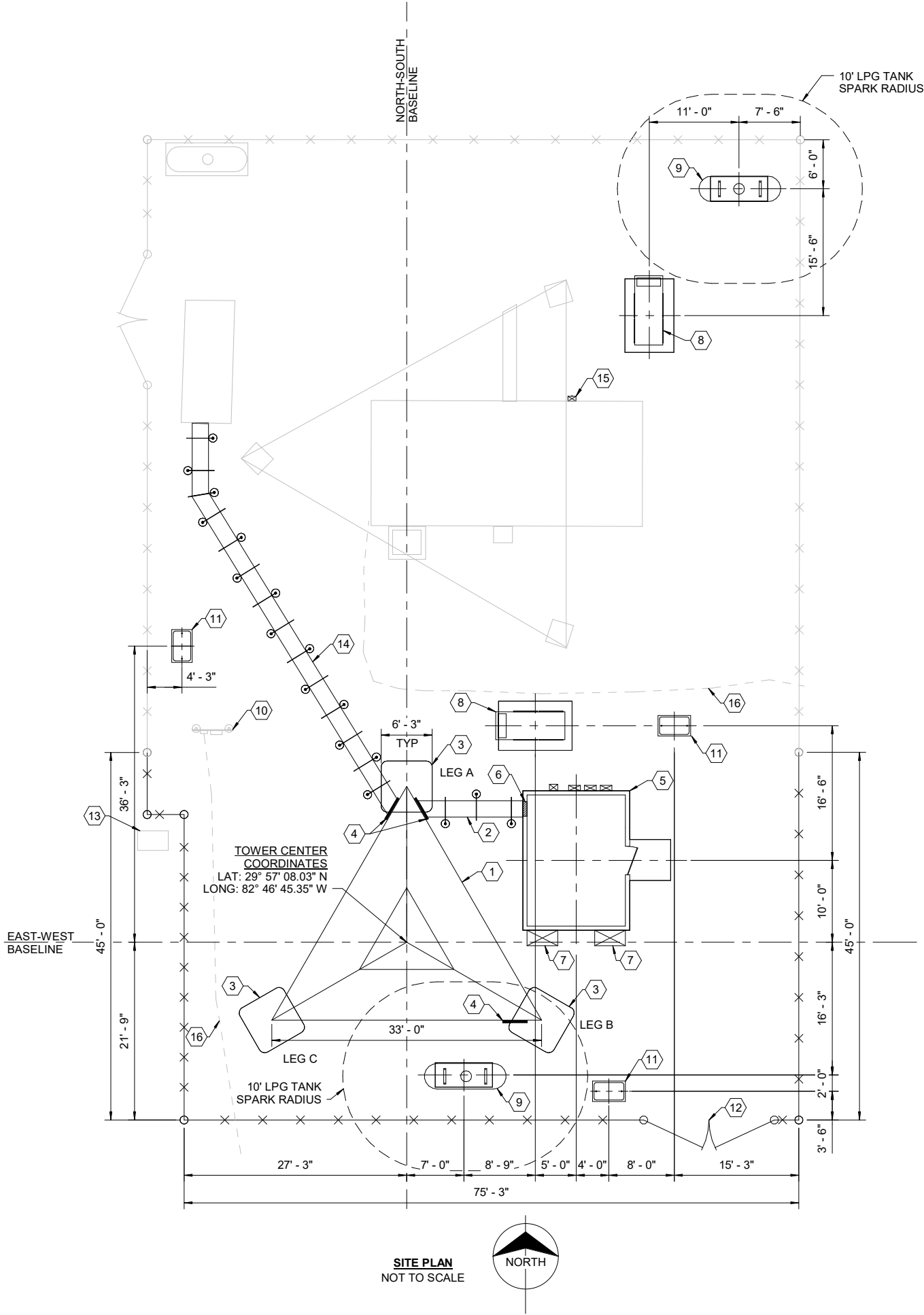
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KANSAS CITY, MO 64114
816-333-9400

date	03/31/23	detailed	DPK
designed	DPK	checked	JJW



DUKE ENERGY
FORT WHITE
DEMO SITE PLAN

project	147057	contract	-
drawing	C-3.1 — 0		
sheet	of	sheets	
file			



GENERAL NOTES:

- FOR LEGEND AND ABBREVIATIONS DETAILS SEE N-1.
- COORDINATE FOR THE CENTER OF THE TOWER SHALL BE THE CONTROLLING POINT.
- OVERALL FENCE DIMENSIONS, GATE LOCATIONS, ELECTRICAL EQUIPMENT AND STRUCTURE LOCATIONS ARE APPROXIMATE AND ARE SHOWN FOR ORIENTATION ONLY.
- FOUNDATION INSTALLER SHALL VERIFY ALL DIMENSIONS AND OTHER INFORMATION GIVEN ON THE DRAWINGS PRIOR TO LAYING OUT ALL WORK. REPORT ALL DIFFERENCES TO THE ENGINEER OF RECORD FOR THEIR DETERMINATION OF WHAT ACTIONS, IF ANY, ARE REQUIRED.
- FOUNDATION INSTALLER IS RESPONSIBLE FOR LOCATING EXISTING UNDERGROUND OBSTRUCTIONS, UTILITIES, PIPING, ETC. PRIOR TO BEGINNING OF CONSTRUCTION. NOTIFY ENGINEER OF RECORD IF CONFLICTS OCCUR. SHOULD UNCHARTED, OR INCORECTLY CHARTED, PIPING OR OTHER UTILITIES BE ENCOUNTERED DURING EXCAVATION, CONTACT OWNER AND ENGINEER OF RECORD IMMEDIATELY FOR DIRECTIONS.
- REFER TO PLAN C-12 FOR COORDINATE BASIS, ELEVATION DATUM, TOP OF CONCRETE (TOC) ELEVATIONS, AND TOWER FOUNDATION COORDINATES.
- REFER TO SPECIFICATIONS AND C-15 FOR ADDITIONAL FOUNDATION AND GRADING REQUIREMENTS.

CONSTRUCTION NOTES:

- SUBCONTRACTOR TO CONFIRM LOCATION OF EXISTING BURIED ELECTRICAL LINE PRIOR TO FOUNDATION INSTALLATION.

LEGEND:

- EXISTING EQUIPMENT
- EXISTING FENCE
- NEW INSTALLATION
- NEW FENCE
- BASELINE
- CODED DRAWING NOTE

CODED DRAWING NOTES:

ITEM NUMBER	ITEM DESCRIPTION
1	NEW 340' SELF SUPPORTED TOWER
2	NEW 13'-6" ICE BRIDGE
3	TOWER FOUNDATIONS (DESIGNED BY OTHERS)
4	CABLE LADDER
5	NEW 13'-1"x17'-1" EQUIPMENT SHELTER (SEE C-13 FOR FDN DETAILS)
6	FEEDLINE ENTRY
7	SHELTER HVAC
8	NEW 50kW GENERATOR (SEE C-14 FOR FDN DETAILS)
9	NEW 500 GALLON LPG TANK (SEE C-14 FOR FDN DETAILS)
10	EXISTING SERVICE FRAME, 200A DISCONNECT AND METER
11	NEW 30"x48" PULL BOX
12	NEW CHAIN LINK FENCE AND 16' WIDE DOUBLE GATE
13	EXISTING HANDHOLE
14	FUTURE ICE BRIDGE (BY OTHERS)
15	NEW JLL ALARM BOX
16	EXISTING UNDERGROUND CONDUIT (SEE CONSTRUCTION NOTE 1)

no.	date	by	ckd	description
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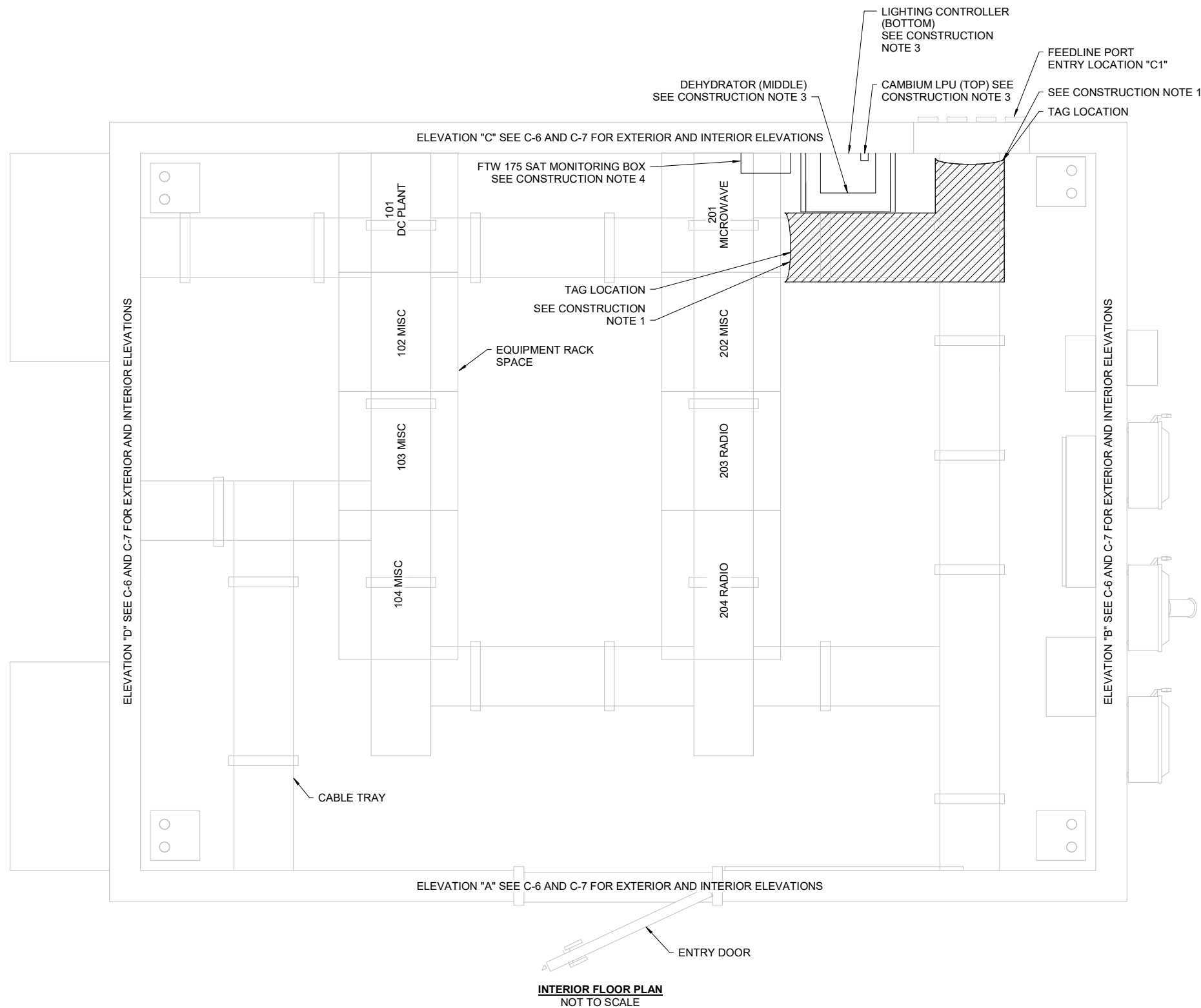
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KANSAS CITY, MO 64114
816-333-9400

date 03/31/23	detailed DPK
designed DPK	checked JJW

DUKE ENERGY
FORT WHITE
SITE PLAN

project 147057	contract -
drawing	rev.
C-3.2 — 0	
sheet	of
file	sheets





GENERAL NOTES:

1. FOR LEGEND AND ABBREVIATIONS SEE N-1.
2. EQUIPMENT IN RACKS INSTALLED BY OTHERS.
3. FOR ALPHA NUMERIC FEEDLINE PORT ASSIGNMENT INFORMATION, SEE S-3.

CONSTRUCTION NOTES:

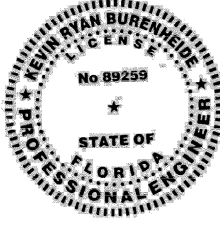


1. SUPPORT WAVEGUIDE FROM CEILING USING
THREADED ROD KITS AND HANGERS EVERY 3 FEET.
2. SUBCONTRACTOR IS RESPONSIBLE FOR INSTALLING
WAVEGUIDE/COAX TO DEMARC WITHIN SHELTER. SEE
ANTENNA SYSTEM BLOCK DIAGRAMS.
3. SUBCONTRACTOR TO INSTALL LIGHTING CONTROLLER,
DEHYDRATOR, AND CAMBIUM LPU.
4. SUBCONTRACTOR TO INSTALL LIGHT MONITORING
SYSTEM. SEE REFERENCE INSTALLATION MANUAL FOR
MORE DETAILS.

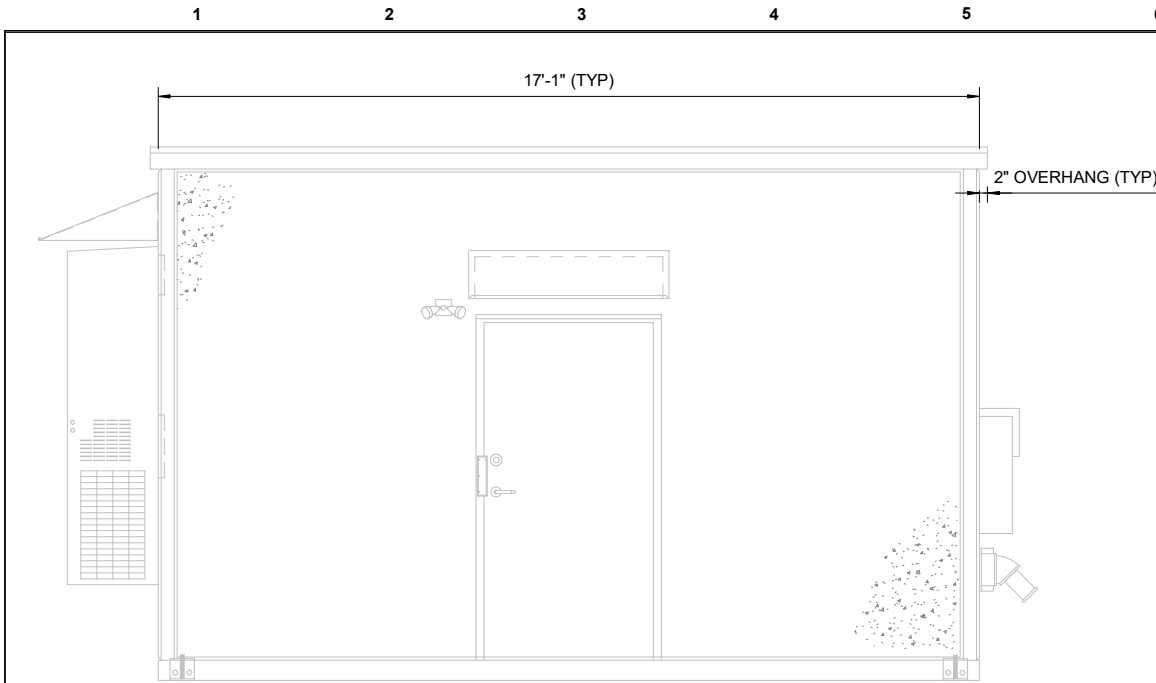
LEGEND:

 FEEDLINE ROUTE
 NEW INSTALLATION
 EXISTING

REFERENCE DRAWINGS:

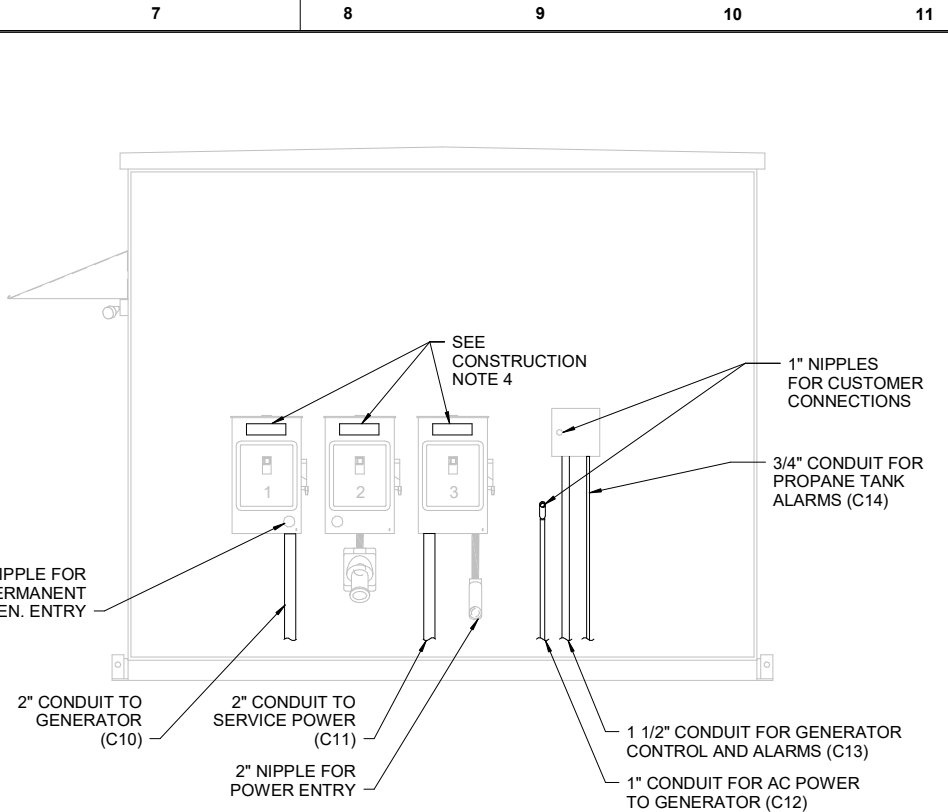
C-3 SITE PLAN
C-6 COMM SHELTER EXTERIOR ELEVATIONS
C-7 COMM SHELTER INTERIOR ELEVATIONS
S-3 FEEDLINE DETAILS

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<div></div> <div>03/31/23 4:10 PM</div>				
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ISSUED FOR PERMITTING				
<div><div>9400 WARD PARKWAY KANSAS CITY, MO 64114 816-333-9400</div></div>				
date 03/31/23		detailed DPK		
designed DPK		checked JWJ		
				
DUKE ENERGY FORT WHITE COMM SHELTER INTERIOR FLOOR PLAN				
project 147057		contract -		
drawing		rev. C-5 — 0		
sheet file		of		sheets



FRONT ELEVATION (WALL A)

NOT TO SCALE



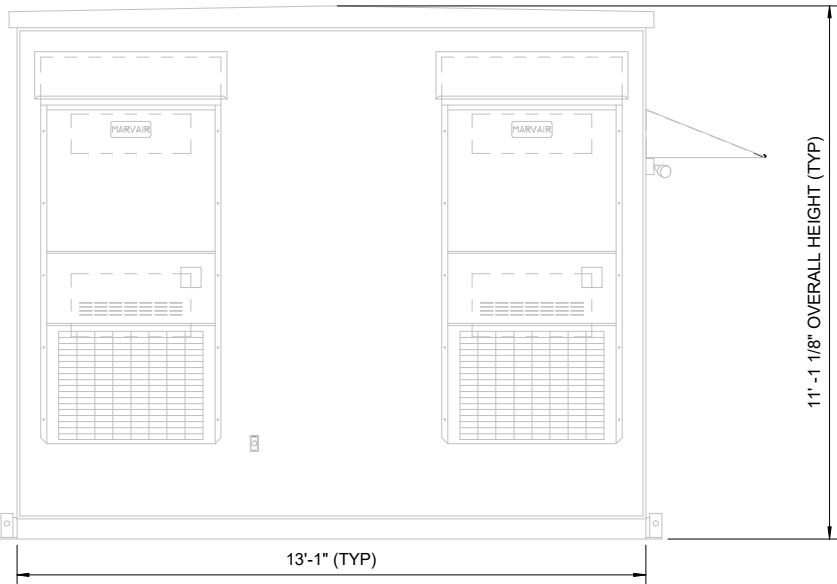
RIGHT ELEVATION (WALL B)

NOT TO SCALE



REAR ELEVATION (WALL C)

NOT TO SCALE



LEFT ELEVATION (WALL D)

NOT TO SCALE

GENERAL NOTES:

- FOR LEGEND AND ABBREVIATIONS SEE N-1.
- SEE MANUFACTURER DOCUMENT FOR SHELTER SPECIFICATIONS AND NOTES.

CONSTRUCTION NOTES:

- SHELTER MANUFACTURER SHALL PROVIDE DRAWINGS FOR COMPLETE INSTALLATION AND BILL OF MATERIAL INFORMATION.
- ALL CU GROUND LEADS SHALL BE CONNECTED TO THE GROUND GRID WITH APPROPRIATE EXOTHERMIC WELDS.
- CU LEADS PROVIDED BY SHELTER MANUFACTURER SHALL BE CONNECTED TO GROUND GRID BY SUBCONTRACTOR. ENCLOSE LEADS IN PVC CONDUIT TO A MIN. OF 6" BELOW GRADE.
- SHELTER DISCONNECT SWITCHES SHALL BE FURNISHED WITH A POP-RIVETED BAKELITE LABEL, OR AS REQUIRED BY LOCAL ELECTRICAL INSPECTOR, WITH THE FOLLOWING INFORMATION.

SHELTER DISCONNECT #1
120/240V 1Ø 3W
FED FROM GENERATOR

SHELTER DISCONNECT #2
120/240V 1Ø 3W
FED FROM PORTABLE GENERATOR

SHELTER DISCONNECT #3
120/240V 1Ø 3W
FED FROM H-FRAME DISCONNECT

LEGEND:

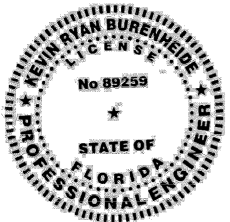
- NEW INSTALLATION
- EXISTING

REFERENCE DRAWINGS:

- C-5 COMM SHELTER INTERIOR FLOOR PLAN
- C-7 COMM SHELTER INTERIOR ELEVATIONS
- E-1 ELECTRICAL ONE LINE
- E-4 ELECTRICAL SITE PLAN

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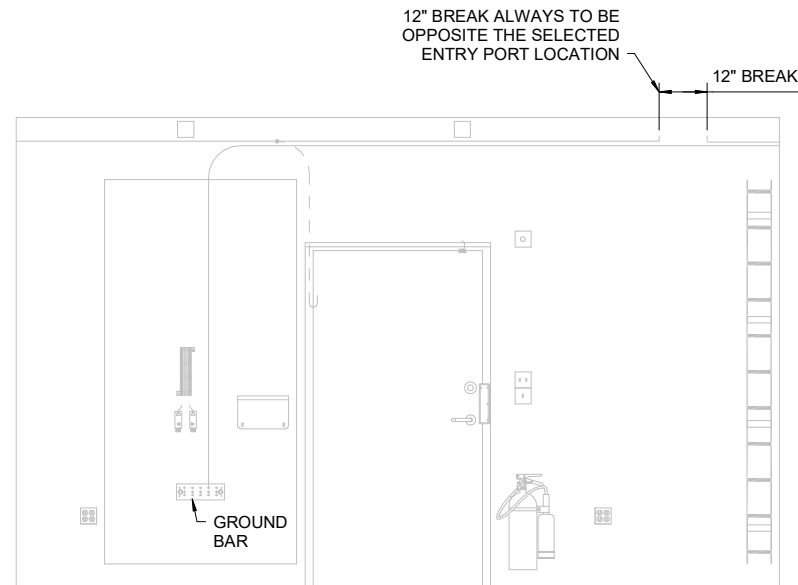

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816-333-9400

date	03/31/23	detailed	DPK
designed	DPK	checked	JJW



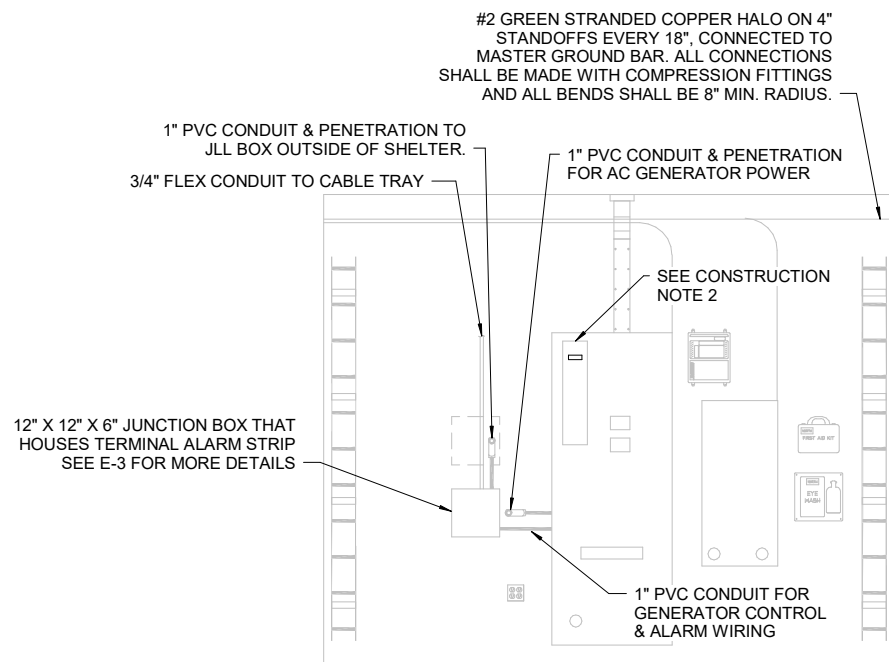
DUKE ENERGY
FORT WHITE
COMM SHELTER EXTERIOR ELEVATIONS

project	147057	contract	-
drawing	C-6 — 0		rev.
sheet	of	sheets	
file			



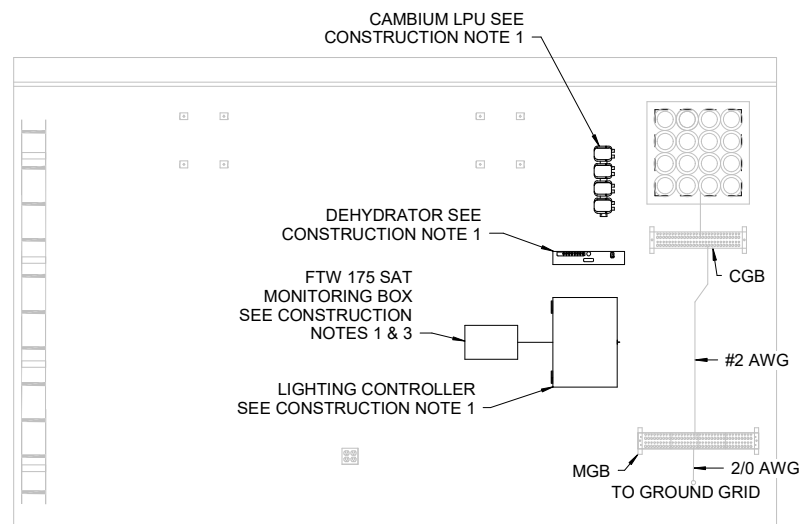
INTERIOR ELEVATION "A"

NOT TO SCALE



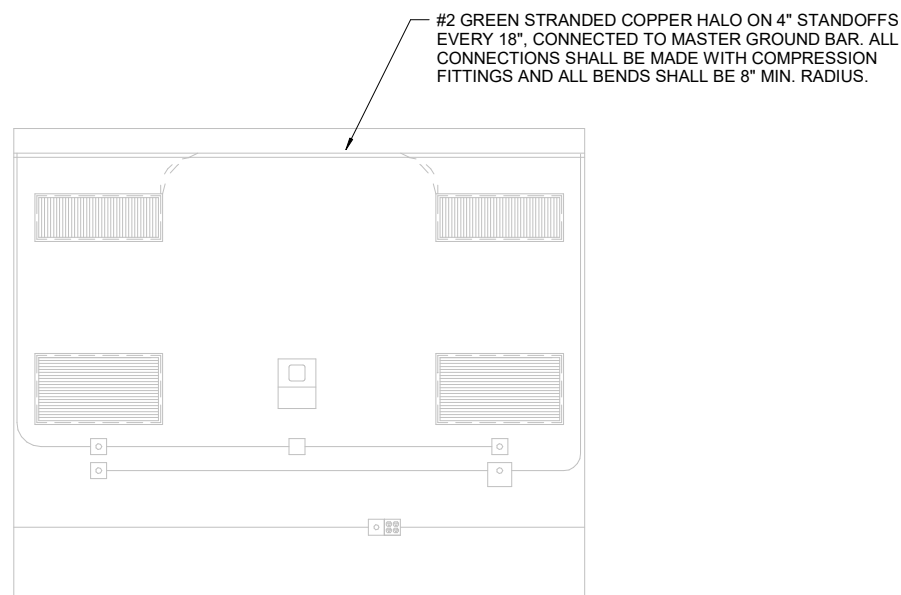
INTERIOR ELEVATION "B"

NOT TO SCALE



INTERIOR ELEVATION "C"

NOT TO SCALE



INTERIOR ELEVATION "D"

NOT TO SCALE

GENERAL NOTES:

1. FOR LEGEND AND ABBREVIATIONS SEE N-1.

CONSTRUCTION NOTES:

1. SUBCONTRACTOR TO INSTALL AND GROUND USING #6 AWG THE DEHYDRATOR, LIGHTING CONTROLLER, SATELLITE MONITORING BOX, AND CAMBIUM LPU.

2. AC PANEL TO BE FURNISHED WITH A LABEL CONTAINING THE FOLLOWING INFORMATION:

AC PANEL
120/240 1Ø 3W
FED FROM DISCONNECT #3

3. SUBCONTRACTOR TO INSTALL LIGHT MONITORING SYSTEM. SEE REFERENCE INSTALLATION MANUAL FOR MORE DETAILS.

LEGEND:

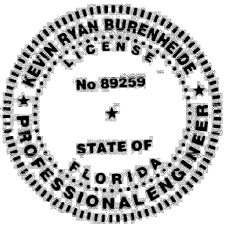
- _____ NEW INSTALLATION
 _____ EXISTING

REFERENCE DRAWINGS:

- C-5 COMM SHELTER INTERIOR FLOOR PLAN
C-6 COMM SHELTER EXTERIOR ELEVATIONS
E-3 ALARM WIRING DETAILS

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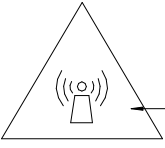





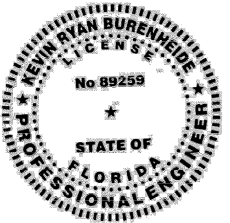


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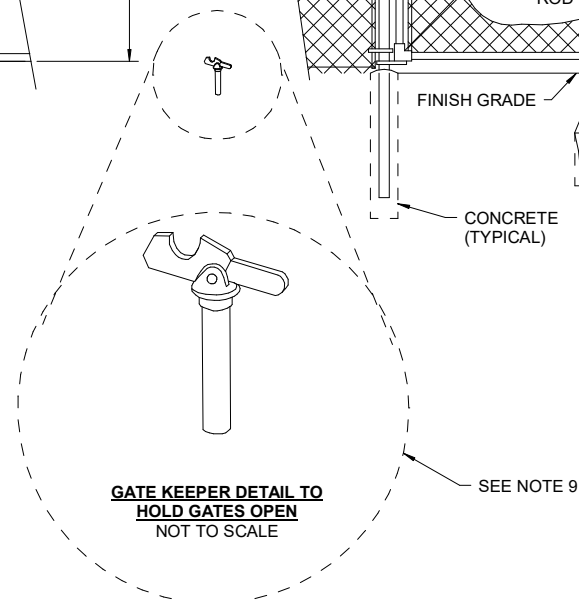
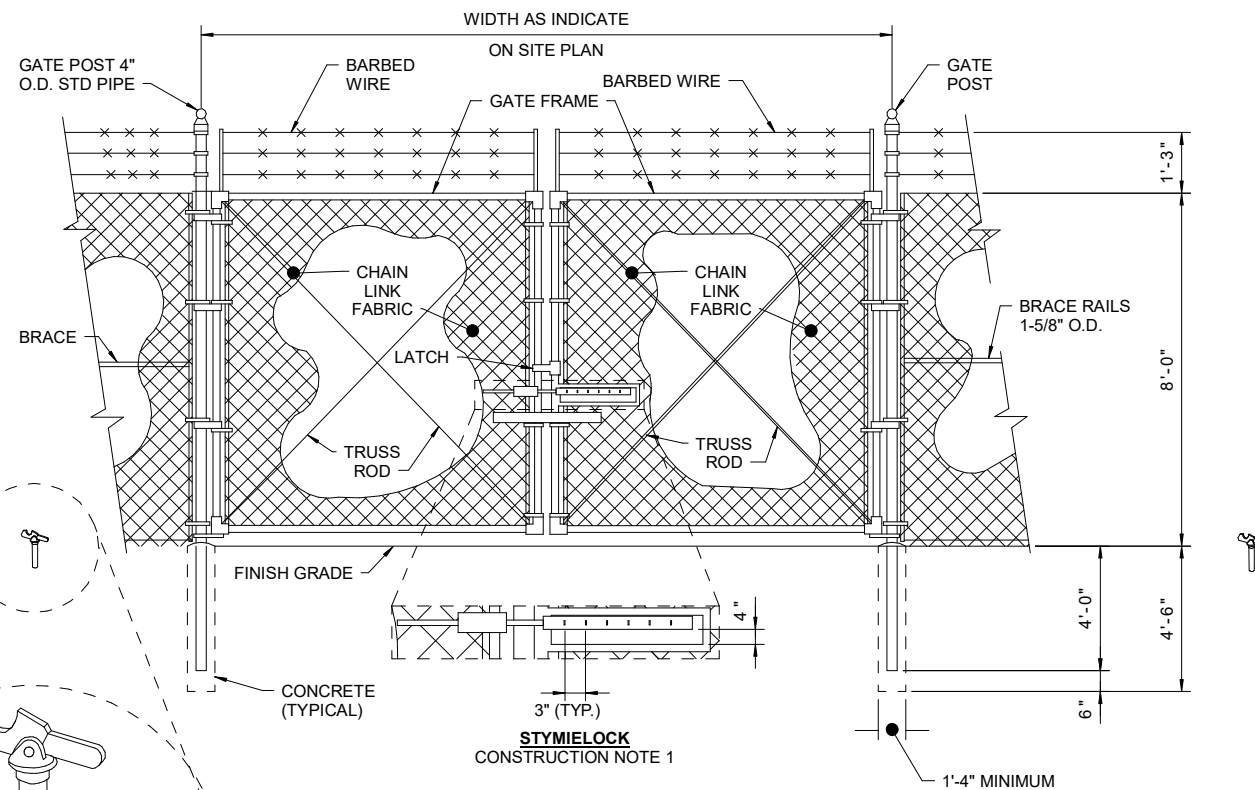
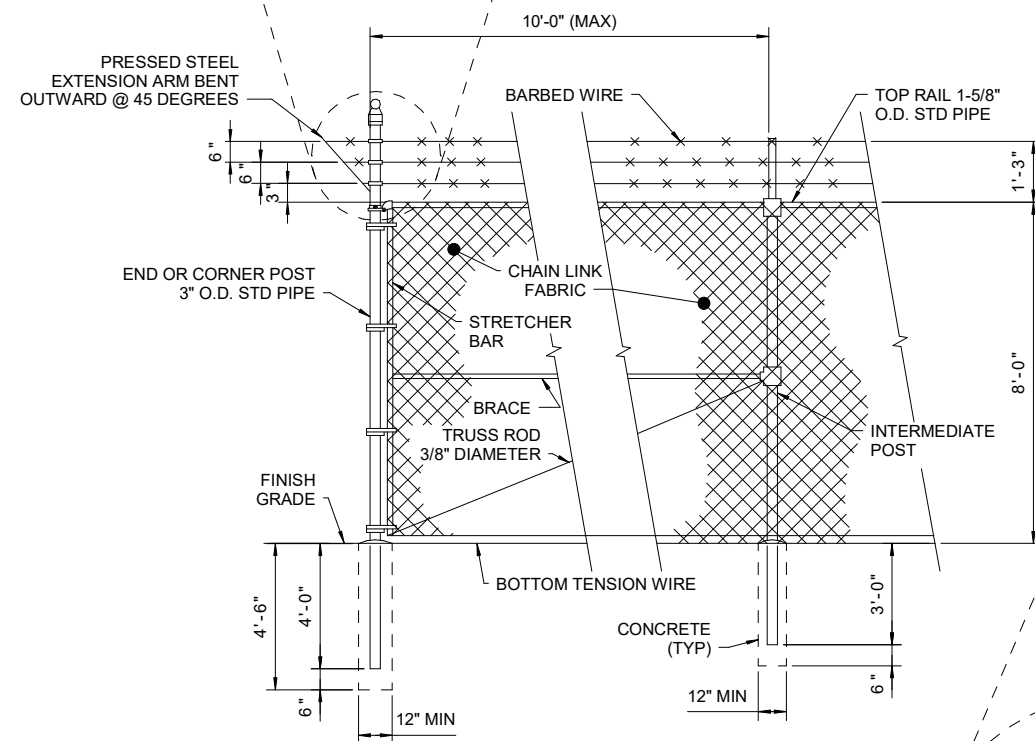
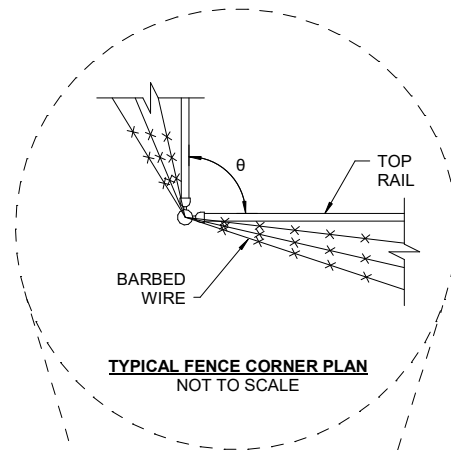
date 03/31/23	detailed DPK
designed DPK	checked JJW



DUKE ENERGY
FORT WHITE
COMM SHELTER INTERIOR ELEVATIONS

project	contract
147057	-
drawing	rev.
C-7 - 0	
sheet	of sheets
file	

<div><div></div><div>SITE NAME: FORT WHITE SITE NO: TBD ANTENNA SITE REG. NO.: 1324060</div><div>UPON ENTRY & EXIT CALL: 1-888-333-8251</div><div>In case of emergency or if you have any concerns regarding the condition of this site, please call the number above or Corporate Security Command Center at 1-888-275-4357</div><div>WHITE BACKGROUND WITH BLACK LETTERING QUANTITY: (1) (TO BE MOUNTED NEXT TO ALL GATES PROVIDING ACCESS TO THE SITE) (USE MAILBOX-STYLE NUMBERS AND LETTERS TO ADD SITE INFORMATION) (SEE DETAIL 1)</div><div>SIGN 1 - FCC ASR NUMBER - SITE INFORMATION</div></div>	<div><div>NOTICE</div><div></div><div>Radio frequency fields beyond this point may exceed the FCC general public exposure limit.</div><div>Obey all posted signs and site guidelines for working in radio frequency environments.</div><div>Follow all posted signs and site guidelines for working in a RF environment. Ref. FCC 47CFR1.1307 (b)</div><div>WHITE / BLUE BACKGROUND WITH BLACK LETTERING QUANTITY: (1) (TO BE MOUNTED NEXT TO ALL GATES PROVIDING ACCESS TO THE SITE) (SEE DETAIL 1)</div><div>SIGN 2 - RF NOTICE SIGN</div></div>	<div><div><div>CAUTION</div><div></div></div><div>ON THIS TOWER: Radio Frequency fields near some antennas may exceed FCC rules for human exposure.</div><div>Personnel climbing this tower should be trained for working in radio frequency environments and use a personal RF monitor.</div><div>In accordance with Federal Communication Commission rules on radio frequency emissions 47 CFR 1 1307 (b)</div><div>WHITE / YELLOW BACKGROUND WITH BLACK LETTERING QUANTITY: (1) (TO BE MOUNTED AT EYE LEVEL ON TOWER NEAR SAFETY CLIMB) (SEE DETAIL 1)</div><div>SIGN 3 - RF CAUTION SIGN</div></div>	<div><div><div>NOTICE</div><div></div></div><div>GUIDELINES FOR WORKING IN RADIO FREQUENCY ENVIRONMENTS</div><div><ul style="list-style-type: none">All personnel should have electromagnetic energy (EME) awareness training.All personnel entering this site must be authorized. Obey all posted signs.Assume all antennas are active.Before working on antennas, notify owners and disable appropriate transmitters.Maintain minimum 3 feet clearance from all antennas. Do not stop in front of antennas.Use personal RF monitors while working near antennas.Never operate transmitters without shields during normal operation.Do not operate base station antennas in equipment room.</div><div>YELLOW BACKGROUND WITH BLACK LETTERING QUANTITY: (1) (TO BE MOUNTED AT EYE LEVEL IN EQUIPMENT BUILDING USING ADHESIVE BACKING OR DOUBLE SIDED TAPE) (SEE DETAIL 1)</div><div>SIGN 4 - SITE GUIDELINE PLACARD</div></div>	<table><tr><th>no.</th><th>date</th><th>by</th><th>ckd</th><th>description</th></tr><tr><td>0</td><td>03/31/23</td><td>DPK</td><td>JJW</td><td>ISSUED FOR PERMITTING</td></tr></table> <div>A</div> <div>B</div> <div>C</div>	no.	date	by	ckd	description	0	03/31/23	DPK	JJW	ISSUED FOR PERMITTING
no.	date	by	ckd	description										
0	03/31/23	DPK	JJW	ISSUED FOR PERMITTING										
<div><div><div>DANGER</div><div></div><div>PROPANE NO SMOKING OR OPEN FLAMES</div></div><div>WHITE BACKGROUND WITH BLACK LETTERING QUANTITY: (1 TYPICAL) (TO BE MOUNTED ON PROPANE TANKS WITH ADHESIVE BACKING.) (SEE DETAIL 1)</div><div>SIGN 5 - LP FUEL DANGER SIGN</div></div>	<div><div>12341</div><div>US HWY 27</div><div>WHITE BACKGROUND WITH BLACK LETTERING QUANTITY: (1 TYPICAL) (TO BE MOUNTED NEXT TO ALL GATES PROVIDING ACCESS TO THE SITE) (SEE DETAIL 1) (SEE NOTE 2)</div><div>SIGN 6 - E911 ADDRESS SIGN</div></div>	<div><div><div>NO TRESPASSING</div><div>VIOLATORS WILL BE PROSECUTED</div></div><div></div><div>AUTHORIZED PERSONNEL ONLY!</div><div>In case of emergency, or prior to performing maintenance on this site, call NOC at 1-888-333-8251 and reference Antenna Site Registration Number.</div><div>WHITE / BLUE BACKGROUND WITH BLACK LETTERING QUANTITY: (4) (TO BE MOUNTED ON AT EACH SIDE OF COMPOUND FENCE, THIS SIGN WILL BE SUPPLIED BY DUKE ENERGY) (SEE DETAIL 1)</div><div>SIGN 7 - AUTHORIZED ENTRY SIGN</div></div>	<div><div>DO NOT CLIMB TOWER WITHOUT OWNER'S WRITTEN PERMISSION</div><div>WHITE BACKGROUND WITH RED LETTERING QUANTITY: (1) (TO BE MOUNTED AT EYE LEVEL ON TOWER NEAR SAFETY CLIMB) (SEE DETAIL 1)</div><div>SIGN 8 - TOWER CLIMBING SIGN</div></div>	<div>THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY KEVIN BURENHEIDE ON THE DATE ADJACENT TO THE SEAL. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.</div> <div></div> <div>03/31/23 4:10 PM</div> <div>KEVIN BURENHEIDE LICENSE NUMBER: 89259</div> <div>ISSUED FOR PERMITTING</div> <div></div> <div>8400 WARD PARKWAY KANSAS CITY, MO 64114 816-333-9400</div> <div>date03/31/23designedDPKdetailedDPKcheckedJJW</div> <div>G</div>										
<div><div><div>WARNING</div><div>ARC FLASH AND SHOCK HAZARD APPROPRIATE PPE REQUIRED</div></div><div>WHITE / ORANGE BACKGROUND WITH BLACK LETTERING QUANTITY: (1) SIZE: 7" x 5" (TO BE MOUNTED AT EVERY PANEL AND DISCONNECT) (SEE DETAIL 1)</div><div>SIGN 9 - ARC FLASH SIGN</div></div>	<div><div><div>1</div><div>X</div><div>X</div><div>X</div><div>X</div><div>X</div></div><div>2" TAG HOLDER (6 CHARACTER)</div><div>2" BLACK LETTERS ON YELLOW BACKGROUND</div><div>REGISTRATION NUMBER (VARIES BY SITE)</div><div>NOTES: 1. NUMBERS SHALL BE 2" TALL "EVERLAST" POLY "INDESTRUCTIBLE" TAGS IN A 2" ALUMINUM, 6 CHARACTER TAG HOLDER, OR APPROVED EQUAL. 2. THE TOWER ASR TAG SHALL BE SUPPLIED AND PERMANENTLY MOUNTED BY THE CONTRACTOR A MINIMUM OF 10 FT AGL AND SHALL BE CLEARLY VISIBLE FROM THE OUTSIDE THE COMPOUND, PREFERABLY FROM THE GATE/DRIVE AREA.</div><div>SIGN 10 - TOWER ASR TAG</div></div>	<div><div>PANEL/DISCONNECT NAME</div><div>###/###V #Ø #W</div><div>FED FROM (SOURCE)</div><div>BLACK BACKGROUND WITH WHITE LETTERING QUANTITY: (4) SIZE: 5" x 3" (TO BE MOUNTED ON EVERY DISCONNECT) (SEE C-6, C-7, AND E-7 FOR SPECIFIC LABELS)</div><div>SIGN 11 - SOURCE POWER SIGN</div></div>	<div><div><div>FIBER OPTIC CABLE MARKER POST</div><div>2" HDPE CONDUIT</div><div>FIBER OPTIC CABLE (IN INNERDUCT)</div><div>"TEE" OR "U" POST</div><div>METAL FIBER OPTIC CAUTION SIGN OPTIONS</div><div>BURY POST "SPADE" 3" MIN BELOW GRADE</div></div><div>PRE-FAB MARKER OPTION</div><div>POST & SIGN OPTION</div><div>MARKER NOTE: STYLE AND SIGNAGE FOR MARKERS SHOWN FOR EXAMPLE ONLY. ACTUAL STYLE AND/OR SIGNAGE SHALL BE APPROVED BY OWNER.</div><div>SIGN 12 - FIBER OPTIC MARKER</div></div>	<div></div> <div>DUKE ENERGY FORT WHITE SIGNAGE DETAILS</div> <div>project147057contractrev.C-8.2 — 0sheetofsheetsfiling</div> <div>I</div>										



GENERAL FENCE NOTES:

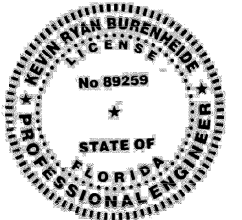
1. ALL MATERIAL AND HARDWARE FOR THE CHAIN LINK FENCE SHALL BE OF A HOT DIP GALVANIZED FINISH.
2. CHAIN LINK FABRIC TO BE 8 FT. HIGH, 9 GA. WIRE, 2 IN. MESH WITH TWISTED SELVAGE TOP AND BOTTOM. (ASTM A392)
3. BARED WIRE TO CONSIST OF 3 NO. 12-1/2" GA. GALVANIZED STEEL WIRE WITH 4 POINT BARBS OF NO. 14 GA. GALVANIZED STEEL.
4. POST, RAIL, AND GATE FITTINGS TO BE PRESSED STEEL OR MALLEABLE CASTING. (ASTM A153)
5. ALL POSTS SHALL HAVE WEATHER CAPS INSTALLED.
6. POSTS TO SET IN 3000 PSI CONCRETE. BOTTOM OF CONCRETE TO BE 6" MIN. FROM BOTTOM OF POST.
7. TIE WIRES TO BE 9 GA. ALUMINUM SPACES AT 12" O.C. POSTS/GATES AND 24" O.C. RAILS/WIRE.
8. TENSION BARS TO BE 3/16 X 3/4 INCH CARBON STEEL ATTACHED TO TERMINAL POSTS BY MEANS OF BEVELED EDGE BANDS.
9. PROVIDE TWO GATE KEEPER HOLD OPEN DEVICES FOR SWING GATES. GATE KEEPERS TO ALLOW GATES TO OPEN APPROX. 180 DEGREES.
10. DUKE ENERGY WILL PROVIDE A STANDARD LOCK FOR GATE.
11. ALL FENCE POST FOUNDATIONS SHALL BE ROUNDED AT TOP AS SHOWN TO DIVERT WATER AWAY FROM THE POSTS.
12. THE FABRIC SHALL BE SET SO THERE IS NO GAP BETWEEN THE FENCE FABRIC AND THE FINISH GRADE.
13. 3" O.D. STD PIPE FOR CORNER AND END POSTS.
14. 2 1/2" O.D. STD PIPE FOR INTERMEDIATE POSTS.
15. 4" O.D. STD PIPE FOR GATE POST.

CONSTRUCTION NOTE:

1. SUBCONTRACTOR TO SUPPLY AND INSTALL A STYMILOCK CAPABLE OF SUPPORTING SIZE LOCKS AND PROVIDE A RE-ENFORCED OPENING IN THE FENCE AREA FABRIC OF 4" BELOW THE STYMILOCK MECHANISM TO ALLOW ACCESS FROM BOTH SIDES OF THE GATE.

no.	date	by	ckd	description
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KEVIN BURENHEIDE
LICENSE NUMBER: 89259

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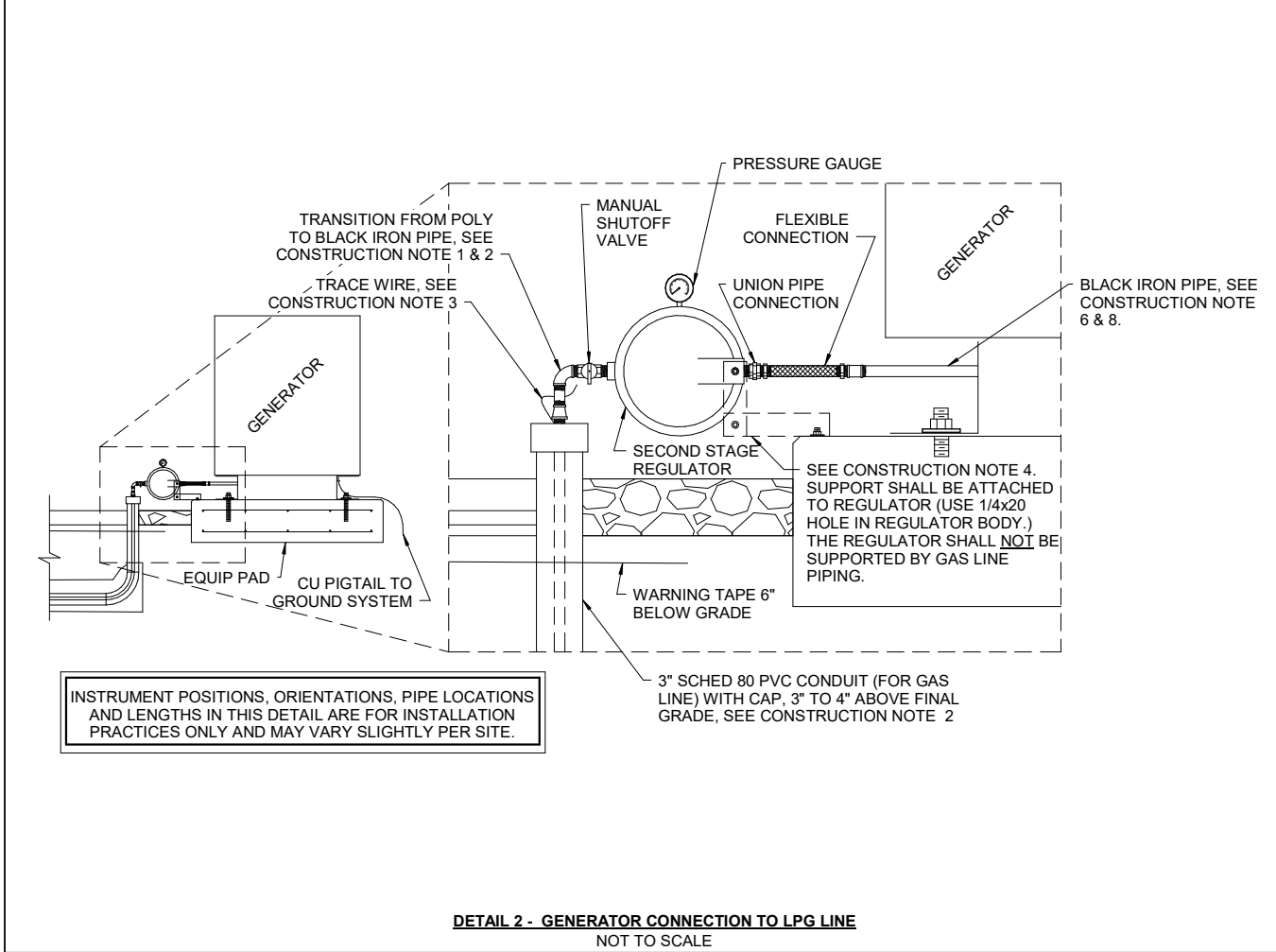
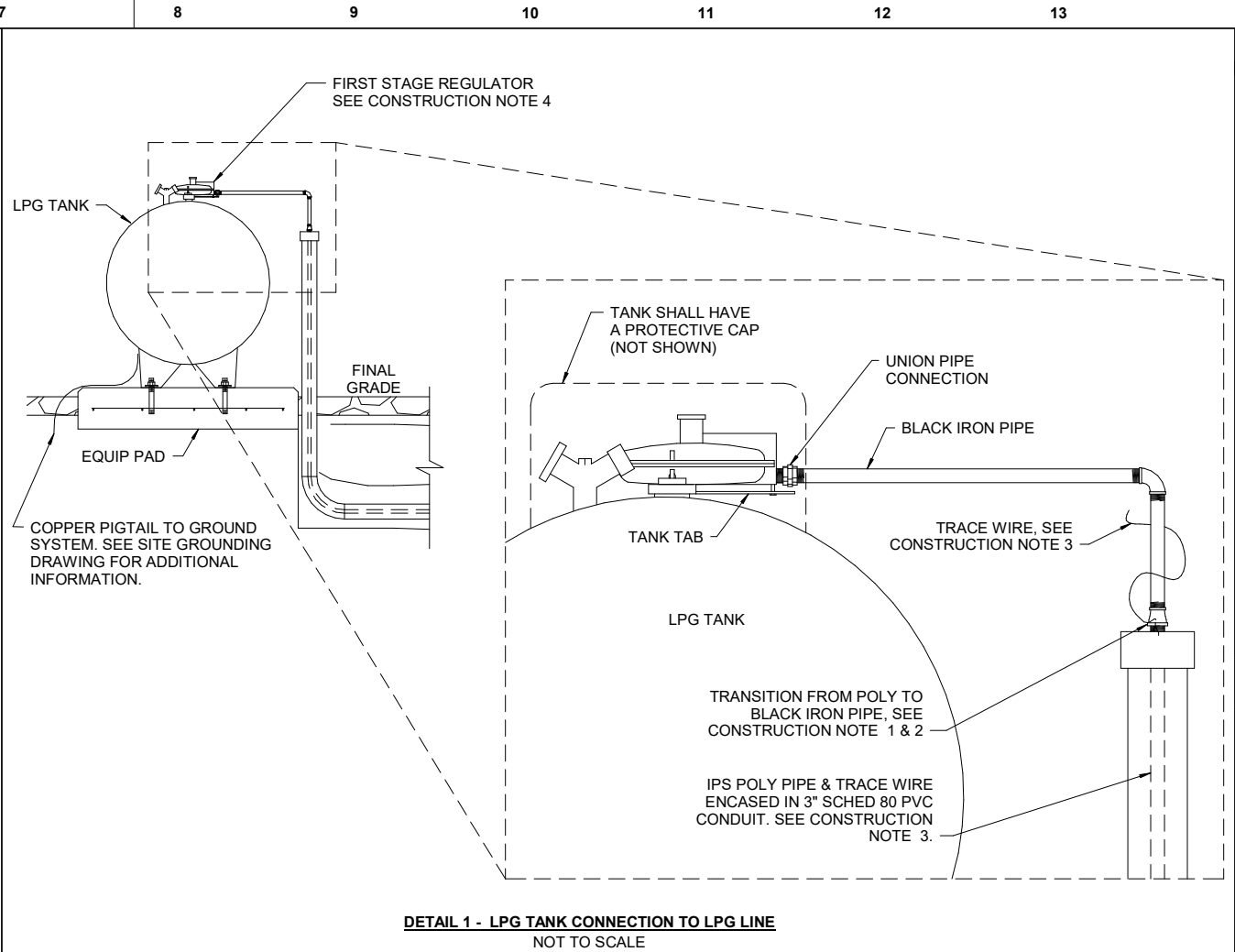
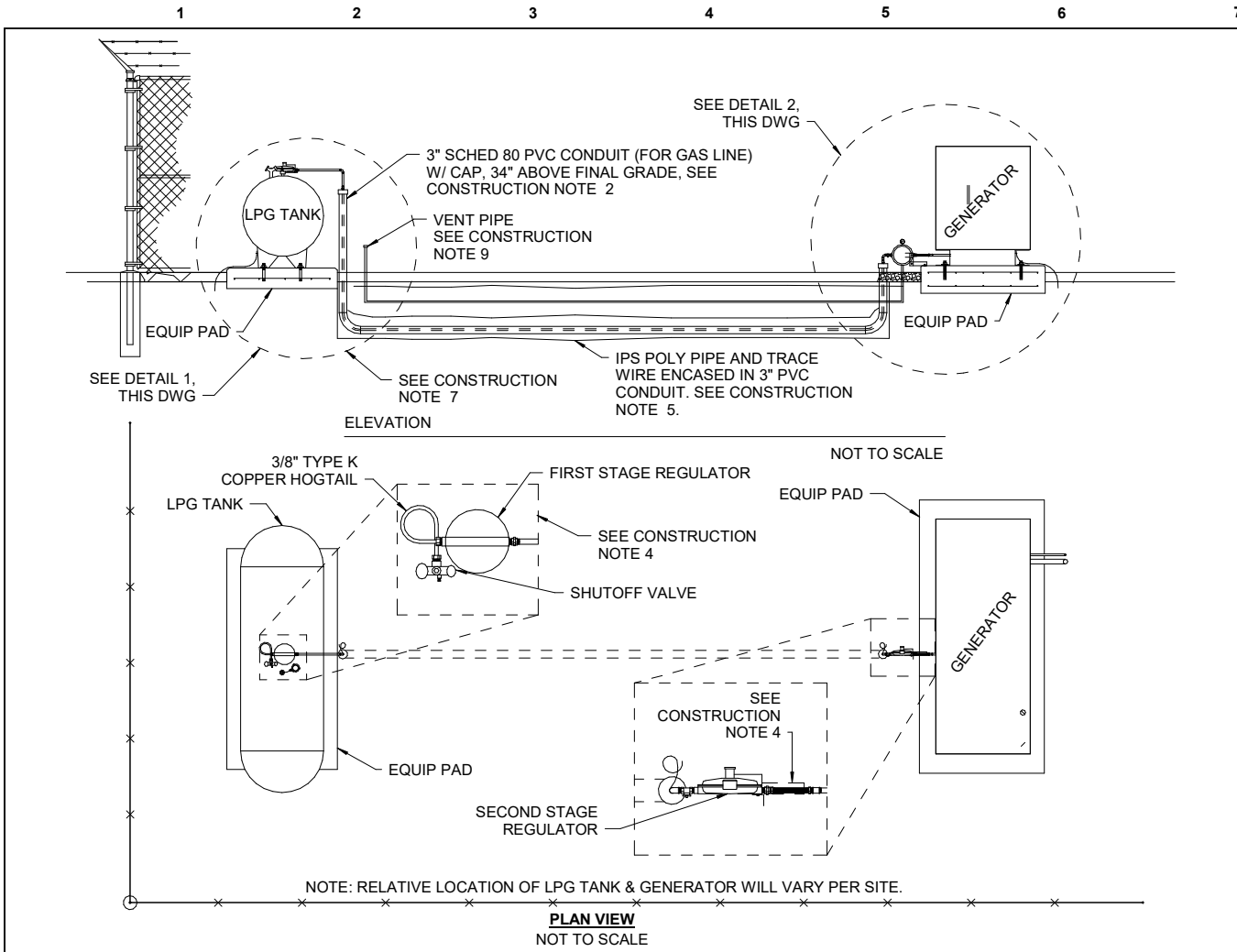
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KANSAS CITY, MO 64114
816-333-9400

date 03/31/23	detailed DPK
designed DPK	checked JJW



DUKE ENERGY
FORT WHITE
FENCE DETAILS

project	contract
147057	-
drawing	rev.
C-9 - 0	
sheet	of sheets
file	



GENERAL NOTES:

- FOR LEGEND AND ABBREVIATIONS SEE N-1.

CONSTRUCTION NOTES:

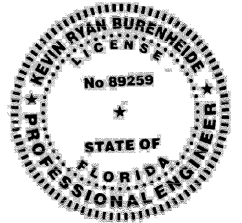
- THE TRANSITION FROM POLY PIPE TO BLACK IRON PIPE SHALL BE ABOVE THE PVC CAP AND ACCESSIBLE (TO FACILITATE LEAK CHECKS.)
- DO **NOT** GLUE THE PVC CAP TO THE PVC PIPE TO FACILITATE REPAIR OR REPLACEMENT OF THE POLY PIPE IF REQUIRED. SEAL THE CAP WITH SILICONE AROUND THE POLY PIPE TO PREVENT INGRESS OF MOISTURE.
- INSTALL A TRACE WIRE (#14 SOLID COPPER CONDUCTOR WITH A YELLOW JACKET) ALONGSIDE AND TAPE TO THE POLY PIPE INSIDE THE 3" PVC CONDUIT. EXTEND CONDUCTOR A MINIMUM OF 12" BEYOND THE PVC CAP AT EACH END AND SECURE IT TO THE BLACK IRON PIPE (COILED AND TAPED OR ZIP TIED TO THE PIPE). PLACE A WIRE NUT ON EACH END TO PREVENT CONTACT WITH THE BLACK IRON PIPE. CARE MUST BE TAKEN TO ENSURE THE TRACE WIRE IS NOT PINCHED AT THE PVC ELBOWS DURING PULLING OR AT COMPLETION.
- THE FIRST STAGE REGULATOR SHALL BE SECURED TO THE LPG TANK TAB. THE SECOND STAGE REGULATOR SHALL BE SUPPORTED AT OR ABOVE TOP OF CONCRETE AT THE GENERATOR FOUNDATION (AN ANGLE OR "SPADE" SUPPORT IS ACCEPTABLE WHERE APPROPRIATE).
- SEE TYPICAL LPG LINE TRENCH DETAIL, C-10 DETAIL 7.
- THE SUBCONTRACTOR SHALL PROVIDE FITTINGS AS NECESSARY FOR PROPER INSTALLATION BETWEEN THE FLEXIBLE CONNECTION AND THE GENERATOR GAS INLET, AND SHALL SIZE ALL GAS PIPING PER THE GENERATOR MANUFACTURER'S REQUIREMENTS.
- THE SUBCONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT THE LPG TANK IS INSTALLED WITH PROPER SETBACKS AND DISTANCES FROM COMBUSTIBLES AS REQUIRED BY CODE.
- THE SUBCONTRACTOR SHALL CLEAN & CAREFULLY SPRAY COLD GALVANIZING COMPOUND ON THE BLACK IRON PIPE.
- SUBCONTRACTOR TO RUN VENT PIPE FROM SECOND STAGE REGULATOR AWAY FROM GENERATOR TO MEET NFPA AND LOCAL CODES.

REFERENCE DRAWINGS:

C-10 ICE BRIDGE & TRENCH DETAILS
E-4 ELECTRICAL SITE PLAN

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KEVIN BURENHEIDE
LICENSE NUMBER: 89259

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**BURNS
MCDONNELL**

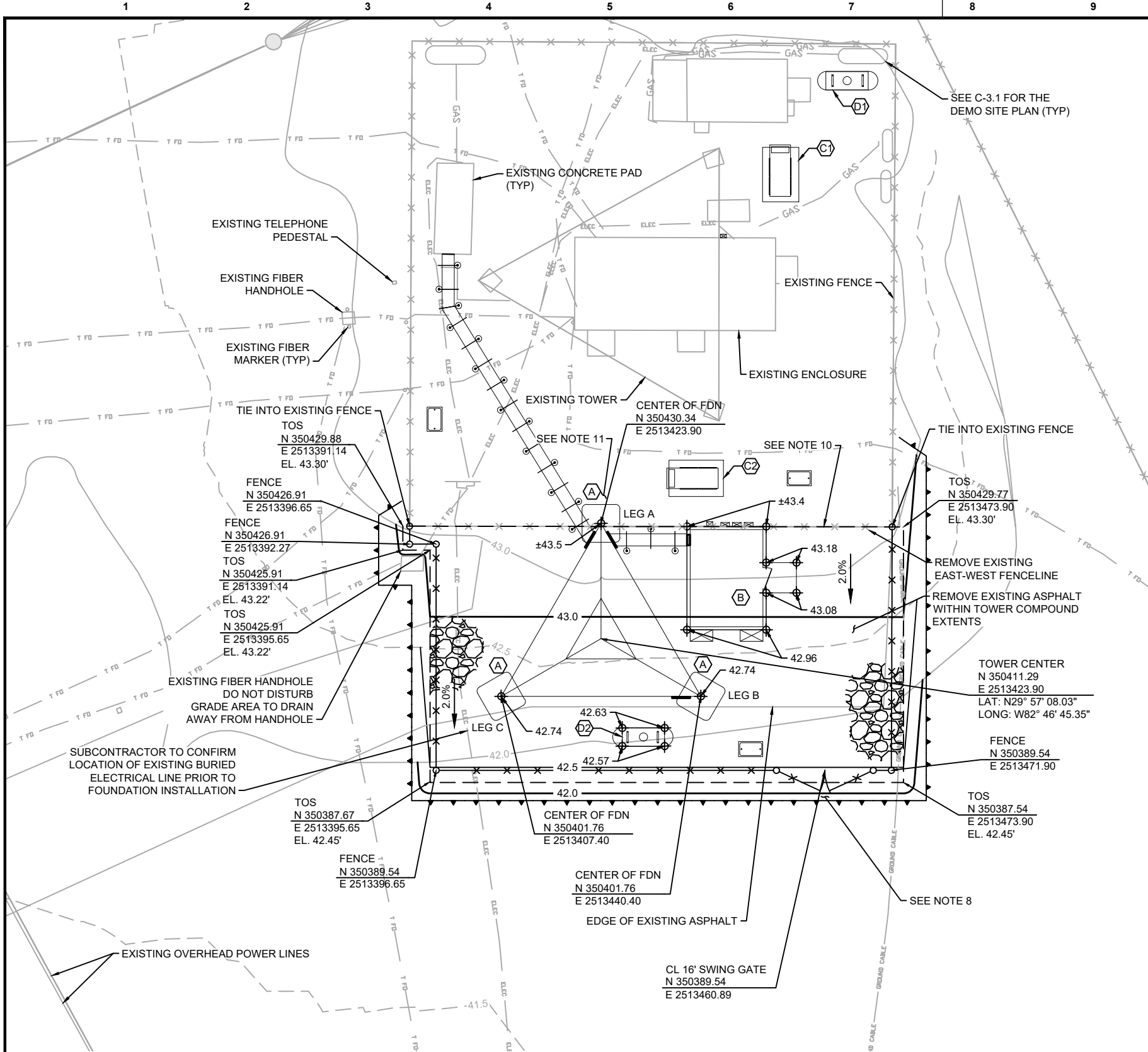
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date	detailed
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designed	checked
DPK	JJW



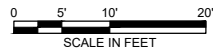
DUKE ENERGY
FORT WHITE
TYPICAL LPG LINE INSTALLATION

project	contract
147057	-
drawing	rev.
	C-11 — 0
sheet	of
file	sheets



- LEGEND**
- 43.0 ——— EXISTING MAJOR CONTOUR
 - - - 42.5 ——— EXISTING MINOR CONTOUR
 - 43.0 ——— PROPOSED MAJOR CONTOUR
 - 42.5 ——— PROPOSED MINOR CONTOUR
 - - - - - TOP OF SLOPE
 - x - x - x - CHAIN LINK FENCE
 - x - x - x - EXISTING FENCE
 - x - x - x - FILTER SOCK
 - - - - - EXISTING UG GAS LINE
 - - - - - EXISTING UG GROUND CABLE

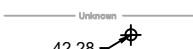
GRADING PLAN



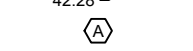
GRAVEL



EXISTING UG FIBER OPTIC LINE



EXISTING UG ELECTRIC LINE



EXISTING UG UNKNOWN LINE



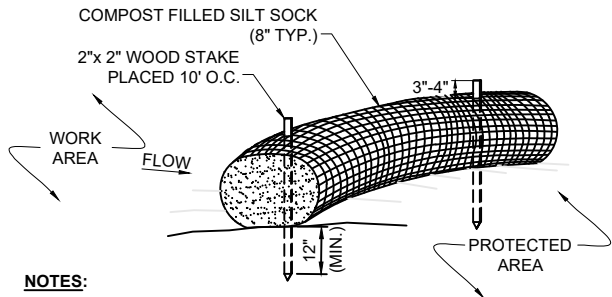
TOC CALLOUT

FDN ELEV ID	FDN DESCRIPTION	T.O.C./T.O.S.* ELEVATION
(A)	TOWER*	43.70
(B)	SHELTER	43.70
(C1) & (C2)	GENERATOR	6" ABOVE FINISHED GRADE
(D1)	PROPANE TANK	6" ABOVE FINISHED GRADE
(D2)	PROPANE TANK	43.10

*T.O.S. (TOP OF STEEL) ELEVATION INDICATES THE TOP OF THE ASSEMBLED HELICAL PILE GRILLAGE. SEE MAGNUM HELICAL PILE GRILLAGE DRAWINGS FOR DETAILS. CONTACT CONTRACTOR IF T.O.S. ELEVATION RESULTS IN A PILE REVEAL GREATER THAN 6" ABOVE SUBGRADE.

GRADING NOTES:

- COORDINATES PER SURVEY CONDUCTED BY ESP ASSOCIATES, INC., DATED 12/05/2022. THE COORDINATE BASIS FOR THIS PROJECT IS STATE PLANE COORDINATES, FLORIDA (NORTH ZONE) STATE PLANE VALUES (0903), BASED ON THE NAD83 2011 (NSRS 2011), NORTH AMERICAN VERTICAL DATUM (NAVD 88), US SURVEY FT.
- ALL CONTOURS ARE TO FINISH GRADE. FINISHED GRADE DEFINED AS TOP OF STONE WITHIN THE PAD. FINISHED GRADE IS DEFINED AS TOP OF SEEDED AREA OUTSIDE OF THE PAD.
- SUBCONTRACTOR SHALL VERIFY AND LOCATE ALL EXISTING UTILITIES PRIOR TO EARTHWORK ACTIVITIES (SUNSHINE 811, 1-800-432-4770). SUBCONTRACTOR SHALL HAND DIG AROUND UTILITIES. SUBCONTRACTOR SHALL IMMEDIATELY NOTIFY OWNER IF EXISTING UTILITY IS DISTURBED. COORDINATE WITH UTILITY IF UTILITY RELOCATION OR RE-ROUTE IS REQUIRED.
- SUBCONTRACTOR IS RESPONSIBLE FOR EROSION CONTROL MEASURES AND IMPLEMENTATION OF THE EROSION AND SEDIMENT CONTROL PLAN DETAILED ON THIS PLAN SHEET. ANY ADDITIONAL MEASURES REQUIRED FOR EROSION CONTROL SHALL BE IMPLEMENTED BY THE SUBCONTRACTOR AS REQUIRED.
- ALL SLOPES SHALL BE GRADED 4:1 AS SHOWN.
- REMOVE ASPHALT/TOPSOIL WITHIN AREA OF PROPOSED PAD. AFTER ASPHALT/TOPSOIL IS REMOVED, SITE PAD SHALL BE PROOF-ROLLED. SCARIFY AND RECOMPACT OR REPLACE SUBGRADE IN ACCORDANCE WITH SITE GEOTECH REPORT AS REQUIRED. STRUCTURAL FILL SHALL BE MOISTURE CONDITIONED TO WITHIN 3 PERCENT OF OPTIMUM, PLACED IN 8-INCH LOOSE LIFTS, AND COMPACTED TO 95 PERCENT OF THE MODIFIED PROCTOR MAXIMUM DRY DENSITY (ASTM D1557). SEE SHEET C-15 FOR FILL MATERIAL REQUIREMENTS. DISPOSE OF DEBRIS FROM CLEARING AND GRUBBING AT A LOCATION OFF THE JOB SITE, AS ARRANGED FOR BY SUBCONTRACTOR, AT NO ADDITIONAL COST TO OWNER. SUBCONTRACTOR SHALL PROVIDE DOCUMENTATION OF PROPER DISPOSAL TO DUKE EHS.
- GRAVEL SURFACE FOR SITE PAD SHALL BE 6" OF ASTM C33 SIZE NO. 67 STONE ABOVE A PERMEABLE GEOTEXTILE. EXTEND THE GRAVEL SURFACING AND GEOTEXTILE 2' OUTSIDE OF STATION FENCE ON THE EAST AND SOUTH SIDES OF THE PAD. GRAVEL SURFACING AND GEOTEXTILE SHALL EXTEND 1' OUTSIDE OF STATION FENCE ON THE WEST SIDE OF THE PAD. THE PERMEABLE GEOTEXTILE SHALL BE USED FOR SEPARATION BETWEEN THE GRAVEL SURFACING AND SUBGRADE SURFACE; SUBMIT PROPOSED MATERIAL TO ENGINEER OF RECORD FOR APPROVAL.
- PROVIDE SMOOTH TRANSITION AT INTERSECTION OF PROPOSED PAD AND SURROUNDING GRADE NEAR 16' SWING GATE TO FACILITATE VEHICLE ACCESS.
- REFER TO PLAN SHEET C-15 AND SECTION 31 20 00 FOR SPECIFICATIONS RELATED TO SITE PREPARATION AND EARTHWORK.
- VARY GRADE OF NORTH EDGE OF SITE PAD TO PROVIDE SMOOTH TRANSITION AT INTERSECTION OF SITE PAD AND EXISTING PAD.
- TOPOGRAPHIC SURFACE ELEVATION INFORMATION WAS NOT AVAILABLE INSIDE THE EXISTING TOWER COMPOUND. CONTACT ENGINEER OF RECORD IF THE EXISTING COMPOUND SURFACE WOULD RESULT IN TOWER FOUNDATION LEG A HAVING A FOUNDATION REVEAL LESS THAN 3".



NOTES:

- SILT SOCK SHALL BE FILTREXX™ SILTSOXX™ OR APPROVED EQUIVALENT.
- SILT SOCK SHALL BE INSPECTED PERIODICALLY AND AFTER ALL STORM EVENTS, AND REPAIR OR REPLACEMENT SHALL BE PERFORMED AS NEEDED.
- COMPOST MATERIAL SHALL BE DISPERSED ON SITE.

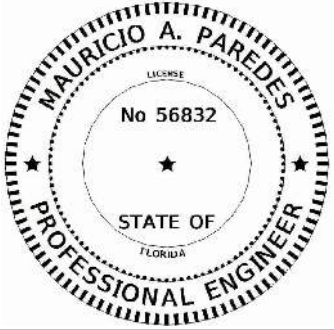
FILTER SOCK
NOT TO SCALE

IMPERVIOUS SURFACE CALCULATIONS	
ITEM	AREA (SQ. FT)
EXISTING IMPERVIOUS AREA REMOVED (ASPHALT)	2160
NEW IMPERVIOUS AREA INSTALLED (CRUSHED ROCK)	3330
TOTAL INCREASE IN IMPERVIOUS AREA	1170

no.	date	by	ckd	description
0	03/31/23	WFM	CJJ	ISSUED FOR PERMITTING

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MAURICIO A. PAREDES, PE#56832
4004 SUMMIT BOULEVARD NE, SUITE 1200, ATLANTA, GA 30319

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9400 WARD PARKWAY
KANSAS CITY, MO 64114
816-333-9400
FIRM. REG. NO. 253

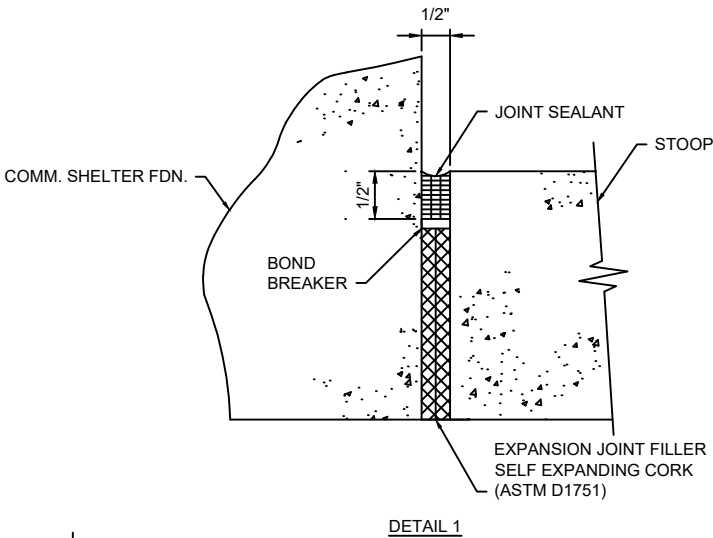
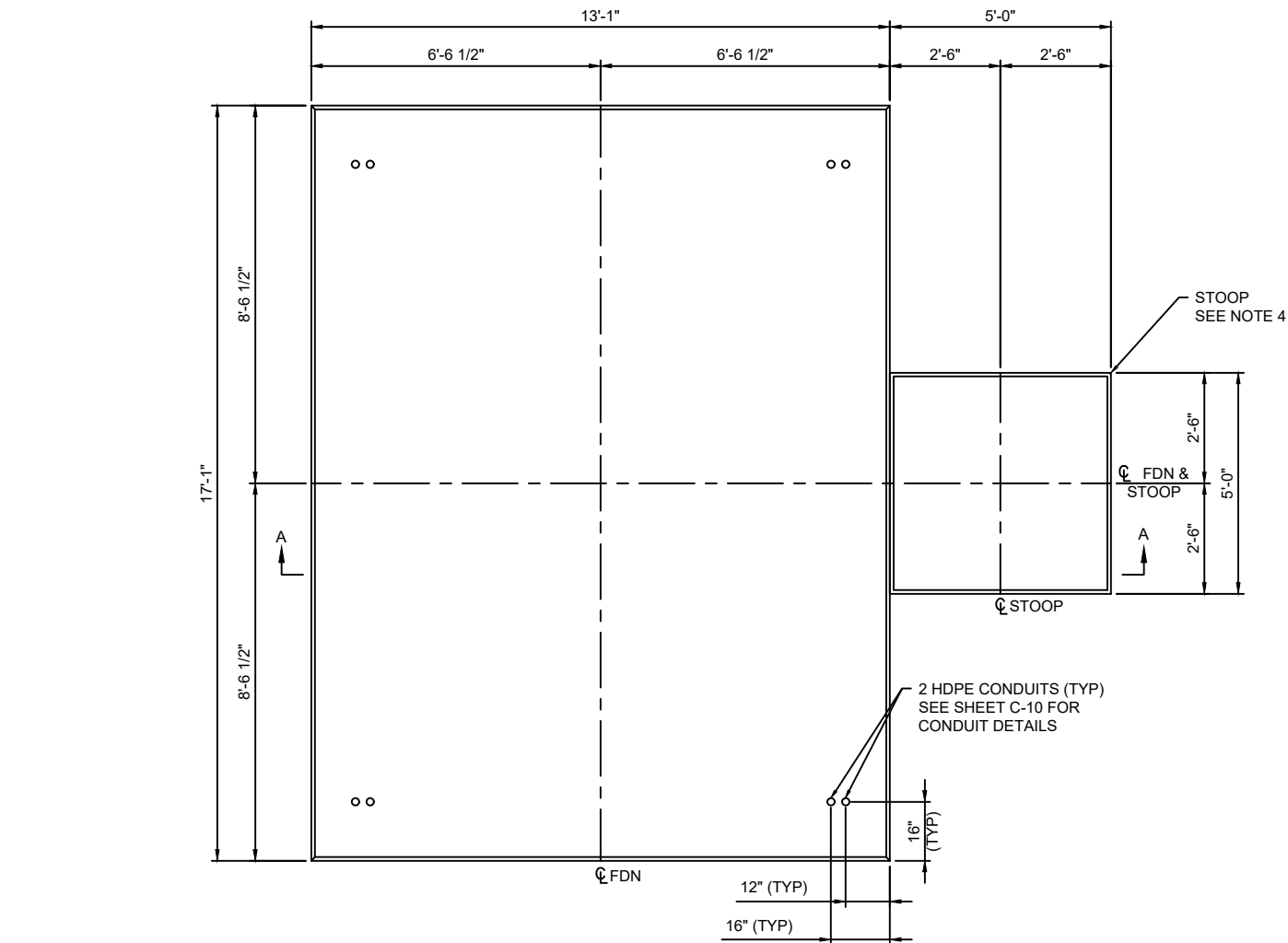
date	detailed
03/31/23	WFM
designed	checked
WFM	CJJ



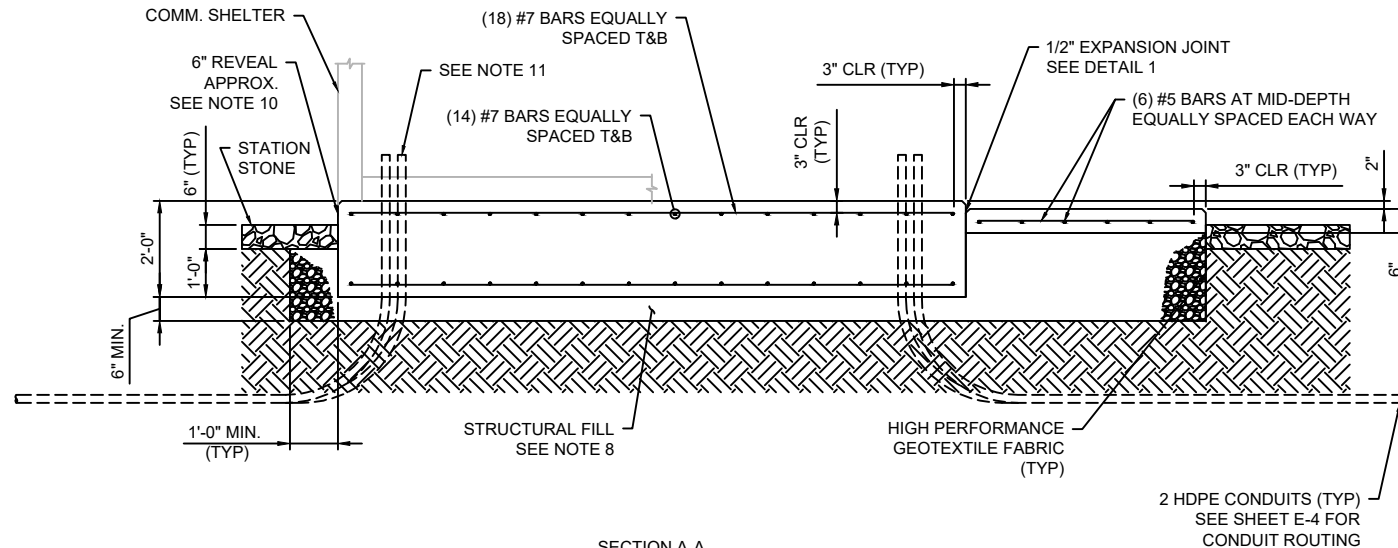
DUKE ENERGY
FORT WHITE
GRADING PLAN

project		contract	
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sheet	1	of	1
file		sheets	

1 2 3 4 5 6 7 8 9 10 11 12 13



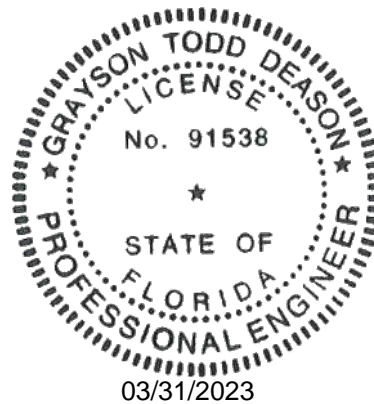
- NOTES:**
- SEE PLAN SHEET C-15 AND SPECIFICATIONS 033000, 031000, AND 032000 FOR COMPLETE REQUIREMENTS.
 - CHAMFER ALL EXPOSED EDGES 1".
 - SHELTER TO BE SECURED TO FOUNDATION PER SABRE FORT WHITE SITE DRAWING SDUK12 SHEET 7-3. INSTALL PER MANUFACTURER RECOMMENDATIONS.
 - STOOP SHALL RECEIVE A BROOMED FINISH.
 - FOUNDATION INSTALLATION TOLERANCES:
 - SLAB TOLERANCE FOR BOTH LENGTH AND WIDTH: PLUS AND MINUS $\frac{1}{4}$ "
 - MEASURED DIAGONAL LENGTHS SHALL BE WITHIN $\frac{1}{4}$ " OF EACH OTHER.
 - VARIATION FROM LEVEL:
 - IN ANY 10FT OF LENGTH - $\frac{1}{8}$ " MAX
 - FOR THE ENTIRE LENGTH - $\frac{1}{4}$ "
 - VARIATION FROM FLAT:
 - IN ANY 10FT OF LENGTH - $\frac{1}{8}$ " MAX
 - FOR THE ENTIRE LENGTH - $\frac{1}{4}$ " MAX
 - USE SHIMS AS REQUIRED TO ASSURE SHELTER IS BEARING AT PERIMETER. SEAL PERIMETER WITH CAULK OR GROUT AS DESIRED.
 - THE MATERIAL USED FOR STRUCTURAL FILL SHALL CONFORM WITH ASTM C33 SIZE NO. 57 AND BE PLACED IN LOOSE LIFTS NOT EXCEEDING 8 INCHES. STRUCTURAL FILL SHALL BE MOISTURE CONDITIONED AS NECESSARY TO BRING MOISTURE CONTENT TO WITHIN 3 PERCENT OF OPTIMUM AND COMPACTED TO 95% OF MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D1557 OR 85% OF RELATED DENSITY AS DETERMINED BY ASTM D4254.
 - A MINIMUM OF 1'-0" SHOULD BE EXCAVATED AROUND FOUNDATION PERIMETER.
 - PROVIDE PROPER DRAINAGE AWAY FROM FOUNDATION AND STOOP AT GRADE.
 - STUB CONDUITS A MINIMUM OF 11" ABOVE TOP OF SLAB.



SECTION A-A
COMM SHELTER AND STOOP FOUNDATION

0 2' 4'
SCALE IN FEET

no.	date	by	ckd	description
0	03/31/23	WFM	CJJ	ISSUED FOR PERMITTING



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GRAYSON TODD DEASON, PE#91538
2301 MAITLAND CENTER PKWY, MAITLAND, FL 32751

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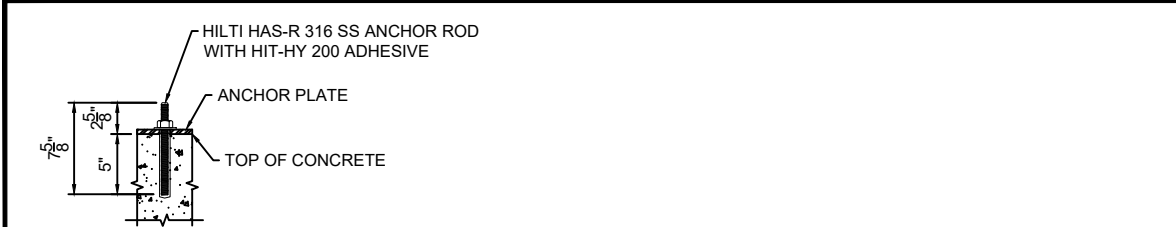


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816-333-9400
FIRM REG. NO. 253

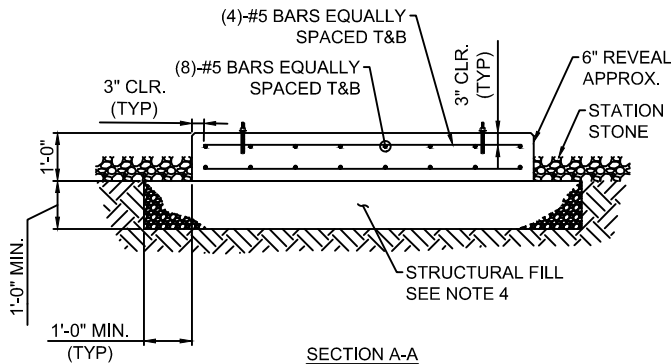
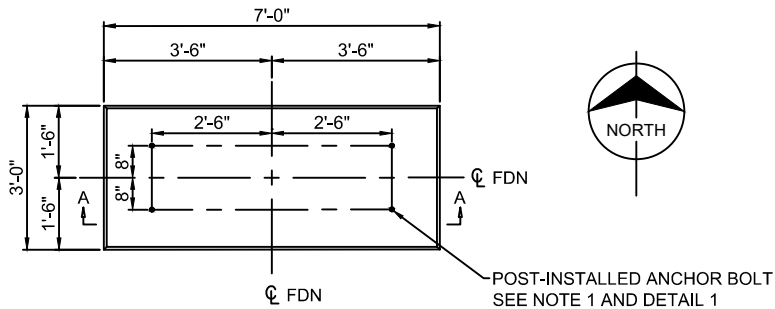
date	03/31/23	detailed	BWS
designed	WFM	checked	CJJ



DUKE ENERGY FORT WHITE 13'-1" x 17'-1" COMM. SHELTER & STOOP FOUNDATION DETAILS			
project	147057	contract	-
drawing	C-13 - 0		
sheet	1	of	1
file	sheets		



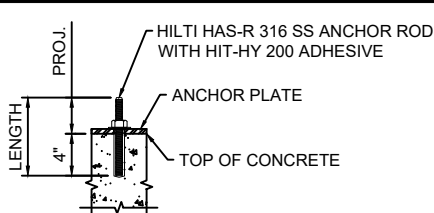
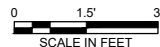
DETAIL 1 - 500-GALLON LPG TANK ANCHOR BOLT DETAIL
NOT TO SCALE



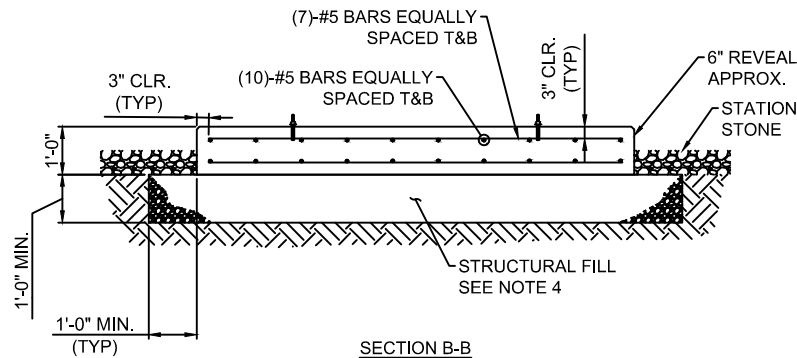
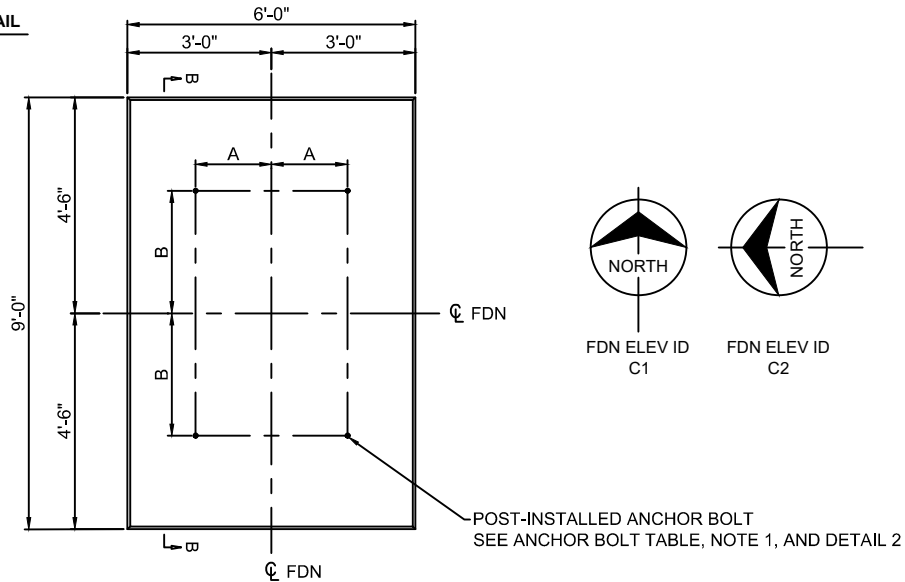
NOTES:

1. FIELD LOCATE (4) 5/8" DIA. X 7 5/8" LONG HILTI HAS-R 316 SS ANCHORS WITH MINIMUM 5" EMBEDMENT. USE HIT-HY-200 ADHESIVE. INSTALL PER MANUFACTURER'S RECOMMENDATIONS. SUBCONTRACTOR TO VERIFY ANCHOR LOCATIONS WITH EQUIPMENT PRIOR TO INSTALLING.
2. USE CONCRETE WITH A MINIMUM $f_c = 4500$ PSI AT 28 DAYS.
3. ALL REINFORCING SHALL BE GRADE 60 PER ASTM A615.
4. THE MATERIAL USED FOR STRUCTURAL FILL SHALL CONFORM WITH ASTM C33 SIZE NO. 57 AND BE PLACED IN LOOSE LIFTS NOT EXCEEDING 8 INCHES. STRUCTURAL FILL SHALL BE MOISTURE CONDITIONED AS NECESSARY TO BRING MOISTURE CONTENT TO WITHIN 3 PERCENT OF OPTIMUM AND COMPACTED TO 95% OF MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D1557 OR 85% OF RELATED DENSITY AS DETERMINED BY ASTM D4254.
5. CHAMFER ALL EXPOSED EDGES 1".
6. A MINIMUM OF 1'-0" SHOULD BE EXCAVATED AROUND THE FDN PERIMETER.
7. REFER TO SPECIFICATIONS AND SHEET C-15 FOR ADDITIONAL REQUIREMENTS.

500-GALLON LPG TANK FOUNDATION INSTALLATION
(2 - REQUIRED)



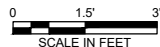
DETAIL 2 - 50 kW GENERATOR ANCHOR BOLT DETAIL
NOT TO SCALE



NOTES:

1. FIELD LOCATE (4) HILTI HAS-R 316 SS ANCHORS WITH MINIMUM 4" EMBEDMENT. USE HIT-HY-200 ADHESIVE. INSTALL PER MANUFACTURER'S RECOMMENDATIONS. SUBCONTRACTOR TO VERIFY ANCHOR LOCATIONS WITH EQUIPMENT PRIOR TO INSTALLING.
2. USE CONCRETE WITH A MINIMUM $f_c = 4500$ PSI AT 28 DAYS.
3. ALL REINFORCING SHALL BE GRADE 60 PER ASTM A615.
4. THE MATERIAL USED FOR STRUCTURAL FILL SHALL CONFORM WITH ASTM C33 SIZE NO. 57 AND BE PLACED IN LOOSE LIFTS NOT EXCEEDING 8 INCHES. STRUCTURAL FILL SHALL BE MOISTURE CONDITIONED AS NECESSARY TO BRING MOISTURE CONTENT TO WITHIN 3 PERCENT OF OPTIMUM AND COMPACTED TO 95% OF MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D1557 OR 85% OF RELATED DENSITY AS DETERMINED BY ASTM D4254.
5. CHAMFER ALL EXPOSED EDGES 1".
6. A MINIMUM OF 1'-0" SHOULD BE EXCAVATED AROUND THE FDN PERIMETER.
7. REFER TO SPECIFICATIONS AND SHEET C-15 FOR ADDITIONAL REQUIREMENTS.

50 kW GENERATOR FOUNDATION INSTALLATION
(2 - REQUIRED)



ANCHOR BOLT TABLE					
GENERATOR	A	B	DIA.	LENGTH	PROJ.
CUMMINS 50kW	1'-7"	1'-6 1/2"	5/8"	7 5/8"	3 5/8"
KOHLER 50kW	1'-7"	2'-6 5/8"	1/2"	6 1/2"	2 1/2"

no.	date	by	ckd	description
0	03/31/23	WFM	CJJ	ISSUED FOR PERMITTING

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GRAYSON TODD DEASON, PE#91538
2301 MAITLAND CENTER PKWY, MAITLAND, FL 32751

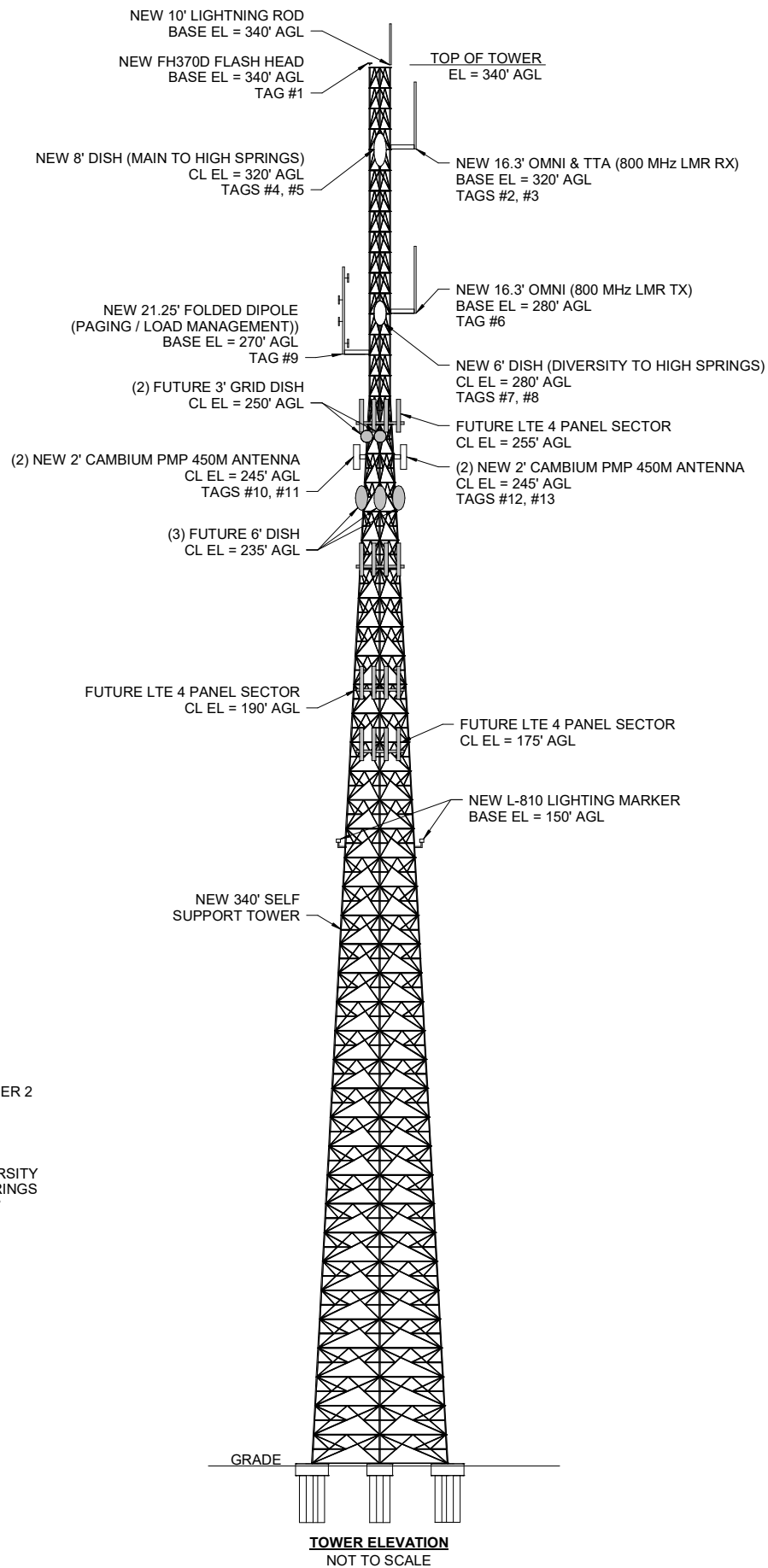
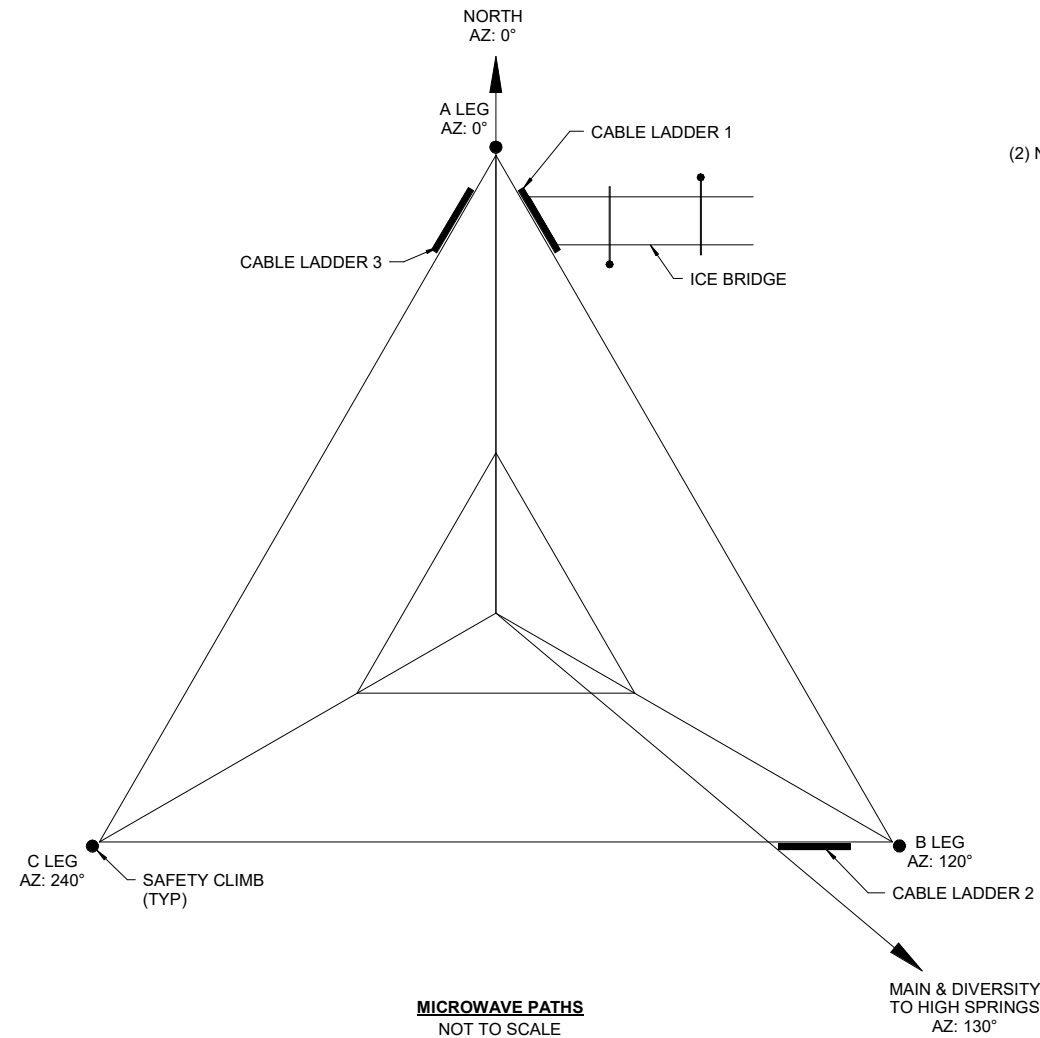
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9400 WARD PARKWAY
KANSAS CITY, MO 64114
816-333-9400
FIRM. REG. NO. 253

date	03/31/23	detailed	BWS
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DUKE ENERGY FORT WHITE GENERATOR & PROPANE TANK FOUNDATION DETAILS	
project	contract
147057	-
drawing	rev.
C-14	0
sheet 1 of 1	sheets
file	

1	2	3	4	5	6	7	8	9	10	11	12	13																																																											
<div>DESIGN LOADING, CODES, AND STANDARDS</div> <div><div><div>1. THE PROJECT DESIGN, ENGINEERING, PROCUREMENT, AND CONSTRUCTION ACTIVITIES TO BE IN ACCORDANCE WITH THE FOLLOWING APPLICABLE CODES AND STANDARDS:<div><div>A. 2020 FLORIDA BUILDING CODE (IBC 2018 W/ AMENDMENTS)<div><div>A.A. AMERICAN SOCIETY OF CIVIL ENGINEERS (ASCE), ASCE/SEI 7-16 "MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES"</div><div>A.B. AMERICAN CONCRETE INSTITUTE (ACI), 318-14</div></div></div><div>B. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA)</div><div>C. CONCRETE REINFORCING STEEL INSTITUTE (CRSI), MANUAL OF STANDARD PRACTICE</div></div></div><div>2. DESIGN LOADING:<div><div>A. FOUNDATION DESIGN LOADING FOR SHELTER ON SHEET C-13 BASED ON SABRE FORT WHITE SITE DRAWING SET SDUK12. DATED 07/27/20.</div></div></div><div>3. DESIGN PARAMETERS<div><div>A. ALLOWABLE SOIL BEARING CAPACITY FOR FOUNDATION DESIGN:<div><div>A.A. SHELTER: 1000 PSF</div><div>A.B. ANCILLARY: 1000 PSF</div></div></div><div>B. IF SOIL CONDITIONS VARY ONSITE CONTACT THE CONTRACTOR IMMEDIATELY.</div></div></div><div>GENERAL NOTES:</div><div><div>G1. CONSTRUCTION SHALL CONFORM TO THE FLORIDA BUILDING CODE AND OSHA REGULATIONS. FOUNDATION INSTALLER IS RESPONSIBLE FOR ALL MEANS AND METHODS OF CONSTRUCTION AND ALL JOB SITE SAFETY.</div><div>G2. FOUNDATION INSTALLER SHALL VERIFY ALL DIMENSIONS AND OTHER INFORMATION GIVEN ON THE DRAWINGS. PRIOR TO LAYING OUT ALL WORK, REPORT ALL DIFFERENCES TO THE ENGINEER FOR THEIR DETERMINATION OF WHAT ACTIONS, IF ANY, ARE REQUIRED.</div><div>G3. FOUNDATION INSTALLER IS RESPONSIBLE FOR LOCATING EXISTING UNDERGROUND OBSTRUCTIONS, UTILITIES, PIPING, ETC. PRIOR TO BEGINNING OF CONSTRUCTION. NOTIFY ENGINEER IF CONFLICTS OCCUR. SHOULD UNCHARTED, OR INCORRECTLY CHARTED, PIPING OR OTHER UTILITIES BE ENCOUNTERED DURING EXCAVATION, CONTACT OWNER IMMEDIATELY FOR DIRECTIONS.</div></div><div>FOUNDATIONS:</div><div><div>F1. SUBSURFACE INFORMATION IN THE FORM OF A SUBSURFACE INFORMATION DOCUMENT WAS OBTAINED FROM S&ME, INC., DATED JANUARY 6, 2023, FOR USE IN DESIGN OF THIS PROJECT. THIS INFORMATION IS AVAILABLE UPON REQUEST.</div><div>F2. SLOPE SIDES OF EXCAVATIONS TO COMPLY WITH LOCAL CODES AND ORDINANCES HAVING JURISDICTION. SHORE AND BRACE WHERE SLOPING IS NOT POSSIBLE BECAUSE OF SPACE RESTRICTIONS, ADJACENT STRUCTURES, OR STABILITY OF MATERIAL EXCAVATED. MAINTAIN SIDES AND SLOPES OF EXCAVATIONS IN SAFE CONDITION UNTIL COMPLETION OF BACKFILLING.</div><div>F3. PLAN FOR AND PROVIDE THE STRUCTURES, EQUIPMENT, AND CONSTRUCTION FOR THE COLLECTION AND DISPOSAL OF SURFACE AND SUBSURFACE WATER ENCOUNTERED DURING CONSTRUCTION. DRAIN OR PUMP AS REQUIRED TO LOWER THE GROUNDWATER LEVEL TO 3' BELOW THE BOTTOM OF SPREAD FOOTING AND MAT FOUNDATIONS. CONTINUALLY MAINTAIN ALL EXCAVATIONS FREE OF WATER OR MUD. DEWATERING OPERATIONS SHALL BE IN ACCORDANCE WITH APPLICABLE LOCAL, STATE AND FEDERAL REGULATIONS. DEWATERING EQUIPMENT SHALL BE OPERATED CONTINUOUSLY UNTIL THE EXCAVATION HAS BEEN BACKFILLED TO A LEVEL ABOVE THE WATER TABLE OR PERCHED AQUIFER.</div></div></div><td colspan="7"><div>F4. SURFACE WATER SHALL BE DIRECTED AWAY FROM EXCAVATION AND CONSTRUCTION SITES SO AS TO PREVENT EROSION AND UNDERMINING OF FOUNDATIONS. DIVERSION DITCHES, DIKES AND GRADING SHALL BE PROVIDED AND MAINTAINED AS NECESSARY DURING CONSTRUCTION. GROUNDWATER FLOWING TOWARD OR INTO EXCAVATIONS SHALL BE CONTROLLED TO PREVENT SLOUGHING OF EXCAVATION SLOPES AND WALLS, BOILS, UPLIFT AND HEAVE IN THE EXCAVATION, MOVEMENT OF NEW CONSTRUCTION DUE TO FLOATATION, TO AVOID SURFACE WATER PONDING, AND TO ELIMINATE INTERFERENCE WITH ORDERLY PROGRESS OF CONSTRUCTION.</div><div>F5. A SMALL WALK-BEHIND VIBRATORY PLATE COMPACTOR OR DRUM ROLLER SHOULD BE USED TO RE-COMPACT THE BASE OF FOUNDATION EXCAVATIONS. THE SUBGRADE SHOULD BE PROOFROLLED TO DELINEATE ANY LOOSE AREAS. 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THE MOST RESTRICTIVE REQUIREMENT SHOWN ON EITHER THIS DRAWING OR THE PROJECT SPECIFICATION SHALL APPLY.</div></td><td colspan="7"><div>REUSE OF EXCAVATED SOILS</div><div>ON-SITE SOILS GENERALLY APPEAR SUITABLE FOR USE AS BACKFILL.</div><div>OFF-SITE BORROW CAN BE USED AS FILL SO LONG AS THE MATERIAL DOES NOT CLASSIFY AS FAT CLAY (CH), ORGANIC SILT (OL), ELASTIC SILT (MH), ORGANIC CLAY (OH), AND DOES NOT CONTAIN EXCESSIVE ORGANICS OR LARGER ROCK CONTENTS.</div><div>DIFFICULT EXCAVATION</div><div>ANY MATERIAL ENCOUNTERED DURING EXCAVATION SHALL NOT BE CONSIDERED AS ROCK UNLESS IT MEETS THE FOLLOWING:</div><div>ANY MATERIAL WHICH CANNOT BE EXCAVATED WITH A SINGLE TOOTH RIPPER DRAWN BY A CRAWLER TRACTOR HAVING A MINIMUM FLYWHEEL POWER RATED AT NOT LESS THAN 305 HORSEPOWER (CATERPILLAR D-8N OR EQUIVALENT) AND OCCUPYING AN ORIGINAL VOLUME OF AT LEAST ONE CUBIC YARD OR MORE; AND/OR ANY MATERIAL WHICH CANNOT BE EXCAVATED WITH A CATERPILLAR 345 OR EQUIVALENT, OCCUPYING AN ORIGINAL VOLUME OF AT LEAST 1/2 CUBIC YARD OR MORE, AND WHICH REQUIRES BLASTING OR OTHER ROCK EXCAVATION METHODS.</div></td><td colspan="6"><table><tr><td>no.</td><td>date</td><td>by</td><td>ckd</td><td colspan="2">description</td></tr><tr><td>0</td><td>03/31/23</td><td>WFM</td><td>CJJ</td><td colspan="2">ISSUED FOR PERMITTING</td></tr></table><div><div><div><div><div><div></div><div>GRAYSON TODD DEASON</div><div>LICENSE</div><div>No. 91538</div><div>★</div><div>STATE OF FLORIDA</div><div>PROFESSIONAL ENGINEER</div></div><div>03/31/2023</div></div></div><div>THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY GRAYSON TODD DEASON ON 03/31/2023.</div><div>PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.</div></div><div>GRAYSON TODD DEASON, PE#91538 2301 MAITLAND CENTER PKWY, MAITLAND, FL 32751</div><div>ISSUED FOR PERMITTING</div><div><div><div><div><div></div><div>BURNS MEDONNELL</div></div><div>9400 WARD PARKWAY KANSAS CITY, MO 64114 816-333-9400 FIRM. REG. NO. 253</div></div></div><table><tr><td>date</td><td>03/31/23</td><td>detailed</td><td>BWS</td></tr><tr><td>designed</td><td>WFM</td><td>checked</td><td>CJJ</td></tr></table><div><div><div><div><div></div><div>DUKE ENERGY</div></div></div></div><div>DUKE ENERGY FORT WHITE FOUNDATION & GRADING GENERAL NOTES</div><table><tr><td>project</td><td>147057</td><td>contract</td><td>-</td></tr><tr><td>drawing</td><td>C-15</td><td>rev.</td><td>0</td></tr><tr><td>sheet</td><td>1</td><td>of</td><td>1</td></tr><tr><td>file</td><td colspan="3"></td></tr></table></div></div></div></td><td>A</td><td>B</td><td>C</td><td>D</td><td>E</td><td>F</td><td>G</td><td>H</td><td>I</td></div>							<div>F4. SURFACE WATER SHALL BE DIRECTED AWAY FROM EXCAVATION AND CONSTRUCTION SITES SO AS TO PREVENT EROSION AND UNDERMINING OF FOUNDATIONS. DIVERSION DITCHES, DIKES AND GRADING SHALL BE PROVIDED AND MAINTAINED AS NECESSARY DURING CONSTRUCTION. 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GENERAL NOTES:

1. FOR LEGEND AND ABBREVIATIONS SEE N-1.
2. EXISTING COMMUNICATIONS SHALL STAY IN SERVICE UNTIL SCHEDULED CUTOVER TIME. ALL EFFORTS WILL BE MADE TO KEEP OUTAGE TO A MINIMUM.
3. SEE TOWER LOADING DOCUMENTS FOR MORE DETAIL ABOUT TOWER LIGHTS, ANTENNAS AND OTHER ATTACHMENTS.
4. TOWER & FOUNDATION DESIGN BY SABRE.
5. SEE TOWER ERECTION DETAIL FROM TOWER MANUFACTURER FOR CABLE LADDER DETAILS. CABLE LADDER 1 IS DESIGNATED AS LONGEST, CABLE LADDER 2 MIDDLE LENGTH, AND CABLE LADDER 3 AS SHORTEST.

CONSTRUCTION NOTES:

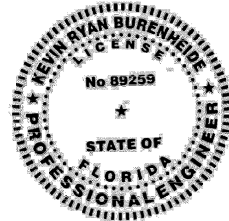
1. SUBCONTRACTOR TO INSTALL A GROUND BAR EVERY 75 FT AT MINIMUM AND 10 FT FROM TOP OF TOWER.

REFERENCE DRAWINGS:

C-3	SITE PLAN
S-2	ANTENNA MOUNTING DETAILS
S-3	FEEDLINE DETAILS
E-9	TYPICAL TOWER GROUNDING DETAILS
E-10	TOWER LIGHTING SYSTEM
D-1	6 GHz ANTENNA SYSTEM BLOCK DIAGRAM
D-4	CAMBium RADIO ANTENNA SYSTEM BLOCK DIAGRAM
D-8.1	800 MHz LMR ANTENNA SYSTEM BLOCK DIAGRAM
D-8.2	800 MHz LMR ANTENNA SYSTEM BLOCK DIAGRAM
D12	LOAD MANAGEMENT ANTENNA SYSTEM BLOCK DIAGRAM

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0	03/31/23	DPK	JJW	ISSUED FOR PERMITTING

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03/31/23 4:10 PM

KEVIN BURENHEIDE
LICENSE NUMBER: 8925

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PERMITTING**



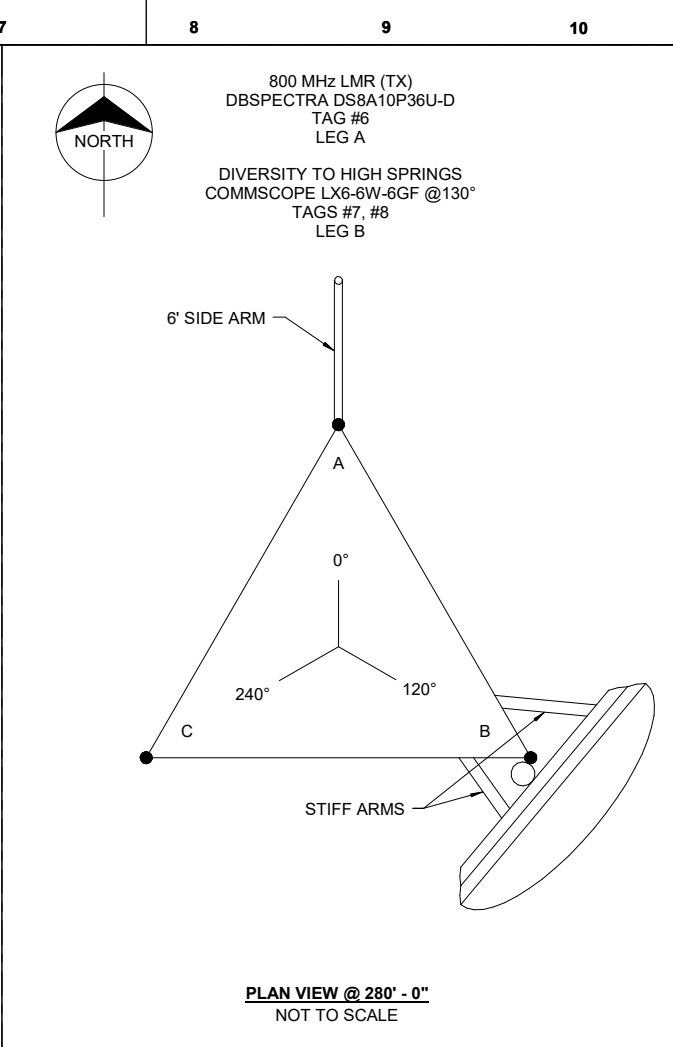
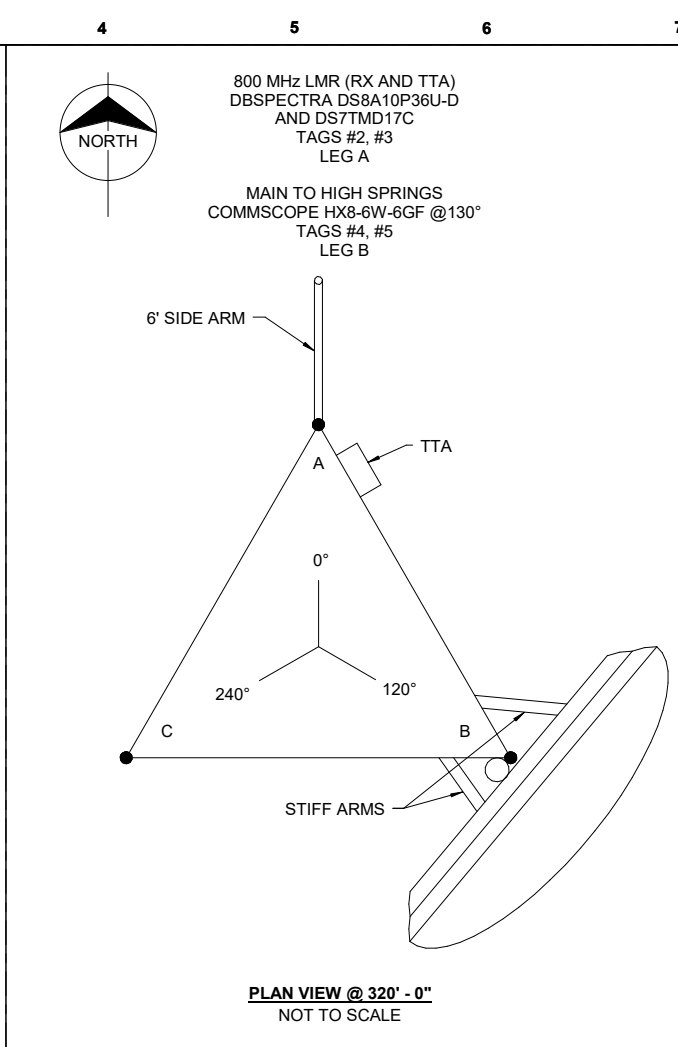
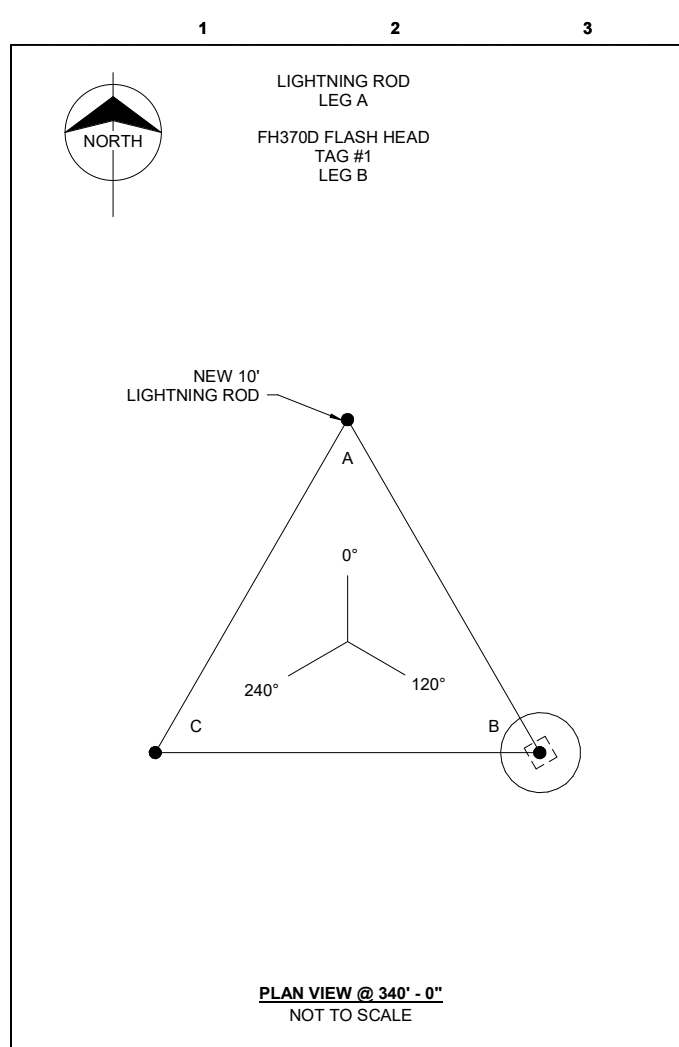
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816-333-9400

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03/31/23	DPK
designed	checked
DPK	JJW



DUKE ENERGY
FORT WHITE
TOWER ELEVATION

project	contract
147057	-
drawing	rev.
S-1 — 0	
sheet	of sheets
file	



- GENERAL NOTES:**

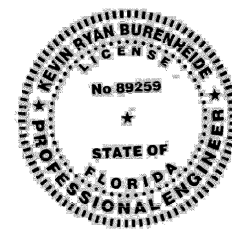
1. FOR LEGEND AND ABBREVIATIONS DETAILS SEE N-1.
2. SEE TOWER LOADING DOCUMENTS FOR MORE DETAIL ABOUT TOWER LIGHTS, ANTENNAS AND OTHER ATTACHMENTS.
3. DISH ANTENNAS SHALL BE MOUNTED AT THE ANTENNA CENTER AS SHOWN.
4. MICROWAVE DISH ANTENNAS SHALL BE SIZED AS INDICATED & SHOWN. 4' DISHES SHALL BE EQUIPPED WITH (1) STIFF ARM AND 6' AND LARGER DISHES WITH (2) STIFF ARMS.
5. FOLLOW MANUFACTURER'S MOUNTING INSTRUCTIONS FOR ALL ANTENNAS.
6. SEE S-3 FOR ANTENNA & FEEDLINE COLOR TAPING, KEY TAGGING, PORT ENTRY AND CABLE LADDER ASSIGNMENTS.
7. EXISTING COMMUNICATIONS SHALL STAY IN SERVICE UNTIL SCHEDULED CUTOVER TIME. ALL EFFORTS WILL BE MADE TO KEEP OUTAGE TO A MINIMUM.

REFERENCE DRAWINGS:

S-1	TOWER ELEVATION
S-3	FEEDLINE DETAILS
D-1	6 GHz ANTENNA SYSTEM BLOCK DIAGRAM
D-4	CAMBUIUM RADIO ANTENNA SYSTEM BLOCK DIAGRAM
D-8.1	800 MHZ LMR ANTENNA SYSTEM BLOCK DIAGRAM
D-8.2	800 MHZ LMR ANTENNA SYSTEM BLOCK DIAGRAM
D-12	LOAD MANAGEMENT ANTENNA SYSTEM BLOCK DIAGRAM

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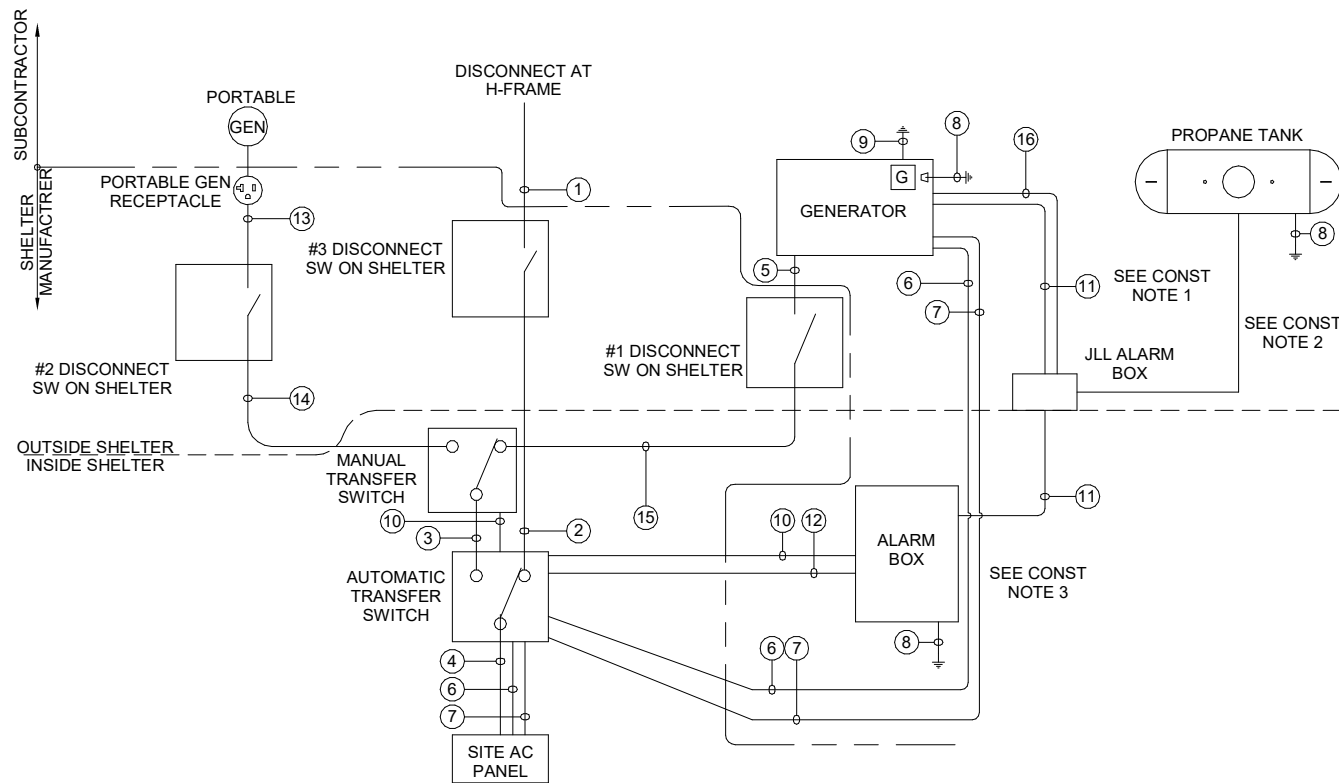
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DUKE ENERGY
FORT WHITE
ANTENNA MOUNTING DETAILS

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147057	-
drawing	rev.
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sheet	of
file	sheets



CIRCUIT DIAGRAM DETAIL

GENERAL NOTES:

1. FOR LEGEND AND ABBREVIATIONS SEE N-1.

CONSTRUCTION NOTES:

1. SUBCONTRACTOR TO LEAVE EXTRA PULL TAPE FOR FUTURE CABLE INSTALL BY OTHERS.
2. OTHERS WILL BE ROUTING CABLE FROM THE JLL BOX THROUGH CONDUIT TO THE PROPANE TANK FOR LPG LEVEL MONITORING.
3. ONLY CONTROL AND ALARM CABLES (10-12) WILL LAND IN THE DUKE ENERGY ALARM BOX. AC CABLES (6 & 7) WILL BE ROUTED FROM ATS TO GENERATOR IN THEIR OWN DEDICATED 1" CONDUIT.
4. SEE E-4 CONDUIT SCHEDULE AND ROUTE DETAILS.

CONDUIT SCHEDULE:

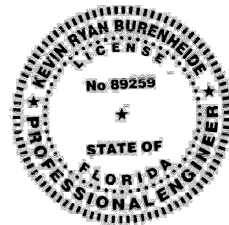
C10 2" SCHED 80 PVC
C11 2" SCHED 80 PVC
C12 1" SCHED 40 PVC
C13 1.5" SCHED 40 PVC
C14 3/4" SCHED 40 PVC
C15 3" SCHED 80 PVC
C16 2" SCHED 80 PVC

REFERENCE DRAWINGS:

C-5 COMM SHELTER INTERIOR FLOOR PLAN
C-6 COMM SHELTER EXTERIOR ELEVATIONS
C-7 COMM SHELTER INTERIOR ELEVATIONS
E-3 ALARM WIRING DETAILS
E-4 ELECTRICAL SITE PLAN
ENGINE CONTROL & ALARM DIAGRAMS (DUKE ENERGY DOCUMENT)

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DUKE ENERGY
FORT WHITE
ELECTRICAL ONE LINE

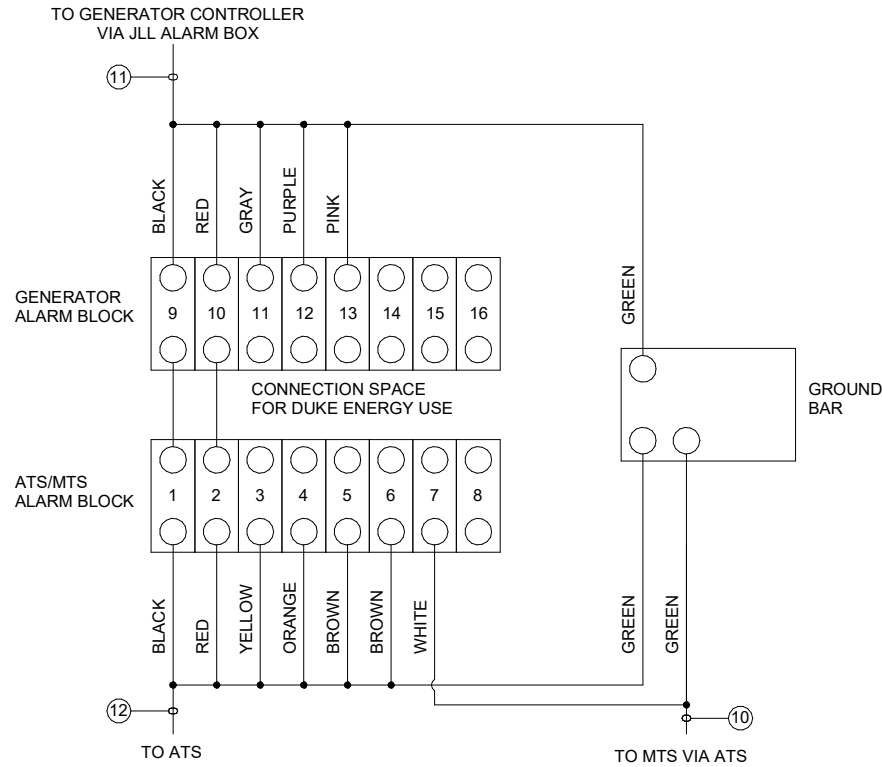
project	contract
147057	-
drawing	rev.
E-1 — 0	
sheet	sheets
file	of

GENERATOR ALARM TERIMANL
BLOCK ALARM ASSIGNMENT
(CABLE COLOR):

9. START (BLACK)
10. STOP (RED)
11. ENGN (GRAY)
12. ENGJ (PURPLE)
13. EETA (PINK)
14. FUTURE (TAN)
15. FUTURE (AQUA)
16. FUTURE (LIGHT BLUE)

ATS & MTS TERMINAL BLOCK ALARM
ASSIGNMENT (CABLE COLOR):

1. START (BLACK)
2. STOP (RED)
3. ACPF (YELLOW)
4. ENGR (ORANGE)
5. TVSJ (BROWN)
6. EPOT (BLUE)
7. MTSN (WHITE)
8. FUTURE (UNASSIGNED)



DETAIL 1 - TERMINAL BLOCK ALARM WIRING

NOTES:

1. SEE REFERENCE DOCUMENT (ENGINE CONTROL & ALARM DIAGRAMS) FOR EQUIPMENT SIDE TERMINATIONS.
2. SEE ELECTRICAL ONE LINE FOR CABLE TYPE AND DESTINATION ROUTING.
3. CABLE 10 (P/N: BELDEN 83351E) 4 CONDUCTOR #18 AWG SHIELDED. THIS WILL TERMINATE ON THE ATS/MTS ALARM BLOCK AND LAND IN THE MTS ROUTED VIA THE ATS.
4. CABLE 11 (P/N: BELDEN 8874MN) 15 CONDUCTOR #18 AWG SHIELDED. . . THIS CABLE WILL TERMINATE ON THE GENERATOR ALARM BLOCK AND LAND INSIDE THE GENERATOR.
5. CABLE 12 (P/N: BELDEN 8448) 8 CONDUCTOR #18 AWG. THIS CABLE WILL TERMINATE ON THE ATS/MTS ALARM BLOCK AND LAND INSIDE THE ATS.

CONSTRUCTION NOTES:

1. SUBCONTRACTOR TO CUT TO LENGTH AND COIL EXTRA CONDUCTORS.
2. NUMBERING TO FOLLOW WHAT IS DEPICTED IN DETAIL 1.
SUBCONTRACTOR TO LABEL BLOCK POSITIONS FOR EACH TERMINAL
BLOCK (P/N: UTILITECH GTB-408-UT)
3. SUBCONTRACTOR TO FOLLOW ALARM WIRING DIAGRAM TO TERMINATE
ALL ALARM WIRING CABLES.

CABLE NOTE:

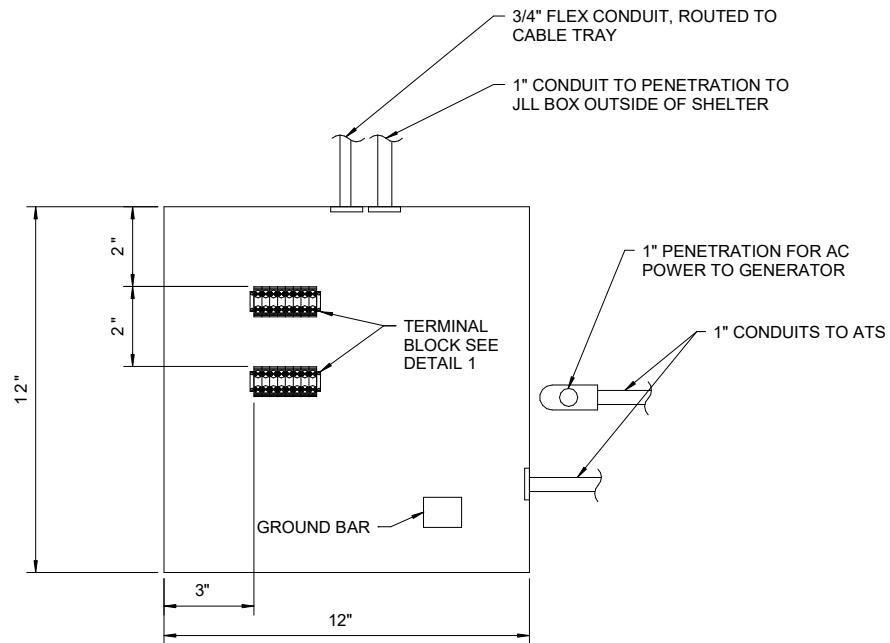
- ⑧ E-1 CABLE NUMBER

GENERAL NOTES:

1. FOR LEGENDS AND ABBREVIATIONS SEE N-1.

REFERENCE DRAWINGS:

- C-5 COMM SHELTER INTERIOR FLOOR PLAN
C-6 COMM SHELTER EXTERIOR ELEVATIONS
C-7 COMM SHELTER INTERIOR ELEVATIONS
E-1 ELECTRICAL ONE LINE
E-4 ELECTRICAL SITE PLAN
ENGINE CONTROL & ALARM DIAGRAMS (DUKE ENERGY DOCUMENT)



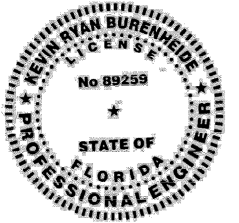
DETAIL 2 - DUKE ENERGY ALARM BOX INSTALLATION

NOTES:

1. DETAIL SHOWING JUNCTION BOX COVER REMOVED (P/N: EATON 12126HC)

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DUKE ENERGY
FORT WHITE
ALARM WIRING DETAILS

project	contract
147057	-
drawing	rev.
E-3 — 0	
sheet	of sheets
file	

CODED DRAWING NOTES:

ITEM NUMBER	ITEM DESCRIPTION
1	NEW 340' SELF SUPPORTED TOWER
2	NEW GAS LINE, ENCASED IN 3" PVC, SEE C-11 FOR DETAILS
3	EXISTING SERVICE FRAME, 200A DISCONNECT AND METER
4	NEW JLL ALARM BOX
5	STUB CONDUITS 6" ABOVE FINISHED GRADE. FINISH CONNECTION WITH FLEXIBLE CONDUIT PER GENERATOR MANUFACTURER'S SPECIFICATIONS. ONLY STRANDED CONDUCTOR SHALL BE USED FOR ALL CONNECTIONS TO GENERATOR.
6	SERVICE DISCONNECT SWITCH. LINE SIDE TERMINATIONS
7	EXISTING UNDERGROUND CONDUIT

GENERAL NOTES:

- FOR LEGEND AND ABBREVIATIONS SEE N-1.
- SEE E-1 FOR ELECTRICAL ONE-LINE AND CIRCUIT SCHEDULE.

CONSTRUCTION NOTES:

- SUBCONTRACTOR SHALL COORDINATE WITH LOCAL UTILITY FOR INSTALLATION OF NEW METER IN ONE OF THE EXISTING METER CAN LOCATIONS.
- SUBCONTRACTOR TO WORK WITH OWNER FOR CONNECTION FROM GENERATOR TO EXISTING BUILDING.

REFERENCE DRAWINGS:

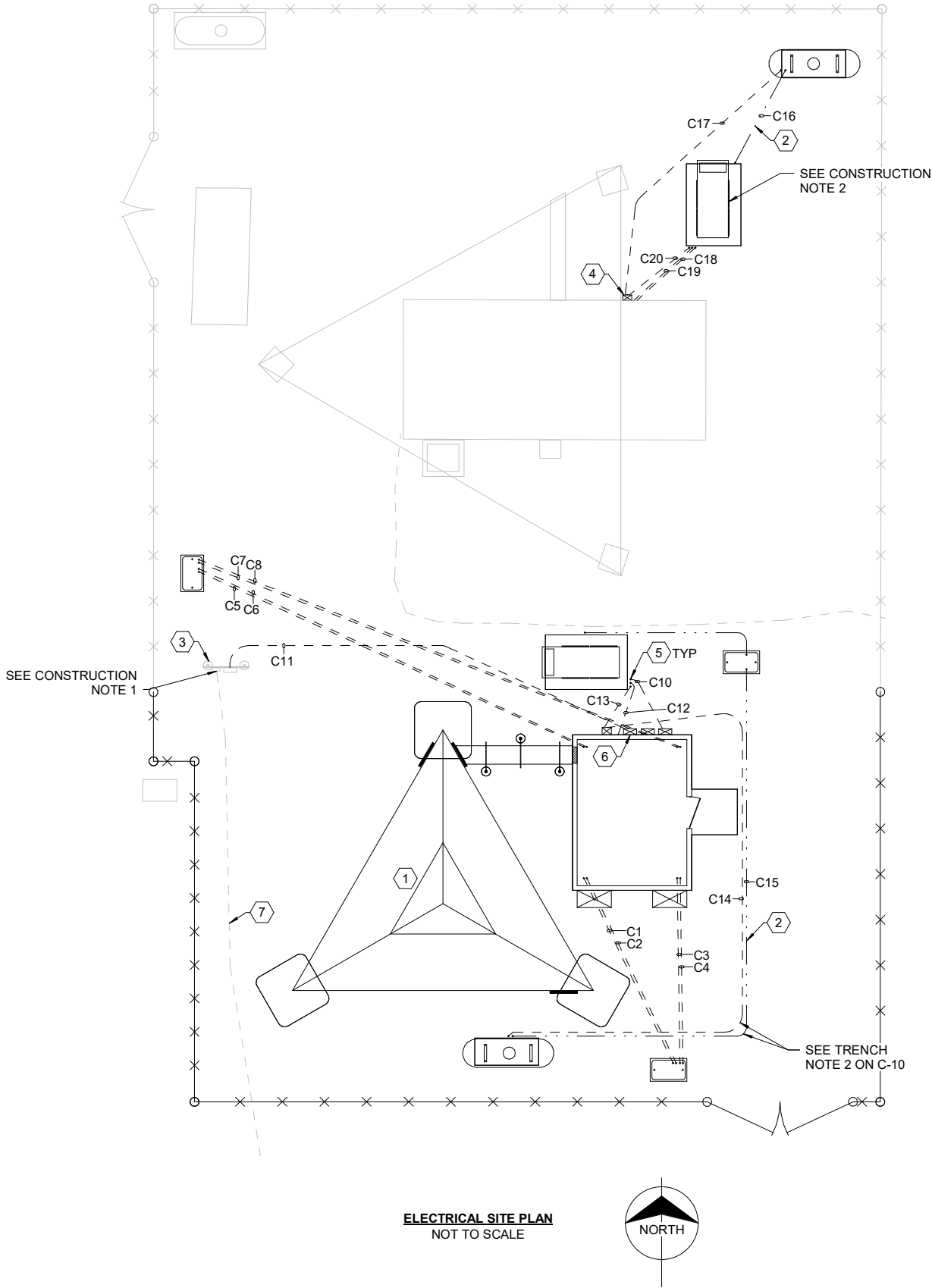
C-6 COMM SHELTER EXTERIOR ELEVATIONS
C-10 ICE BRIDGE & TRENCH DETAILS
C-11 TYPICAL LPG LINE INSTALLATION
E-1 ELECTRICAL ONE LINE
E-7 INCOMING SERVICE DETAILS

LEGEND:

	EXISTING EQUIPMENT
	EXISTING FENCE
	NEW FENCE
	UNDERGROUND CONDUIT
	NEW LPG LINE
	NEW INSTALLATION
	CODED DRAWING NOTE

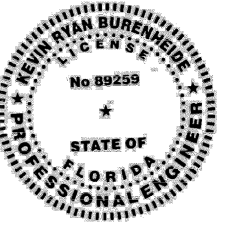
CONDUIT SCHEDULE:

C1 2" DURA LINE ORANGE SMOOTH WALL SDR11 HDPE OR APPROVED EQUAL
C2 2" DURA LINE ORANGE SMOOTH WALL SDR11 HDPE OR APPROVED EQUAL
C3 2" DURA LINE ORANGE SMOOTH WALL SDR11 HDPE OR APPROVED EQUAL
C4 2" DURA LINE ORANGE SMOOTH WALL SDR11 HDPE OR APPROVED EQUAL
C5 2" DURA LINE ORANGE SMOOTH WALL SDR11 HDPE OR APPROVED EQUAL
C6 2" DURA LINE ORANGE SMOOTH WALL SDR11 HDPE OR APPROVED EQUAL
C7 2" DURA LINE ORANGE SMOOTH WALL SDR11 HDPE OR APPROVED EQUAL
C8 2" DURA LINE ORANGE SMOOTH WALL SDR11 HDPE OR APPROVED EQUAL
C9 NOT USED
C10 2" SCHED 80 PVC
C11 2" SCHED 80 PVC
C12 1" SCHED 40 PVC
C13 1.5" SCHED 40 PVC
C14 3/4" SCHED 40 PVC
C15 4" SCHED 80 PVC
C16 3" SCHED 80 PVC
C17 3/4" SCHED 40 PVC
C18 2" SCHED 80 PVC
C19 1" SCHED 40 PVC
C20 1.5" SCHED 40 PVC



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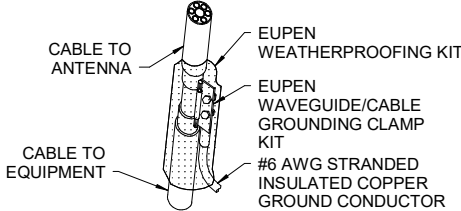
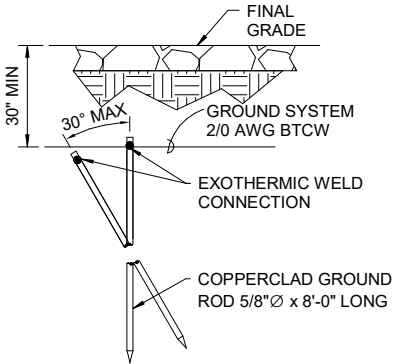
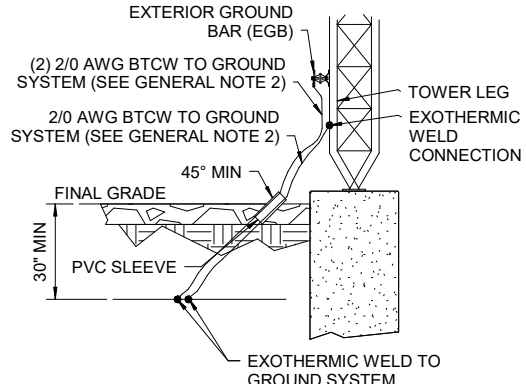
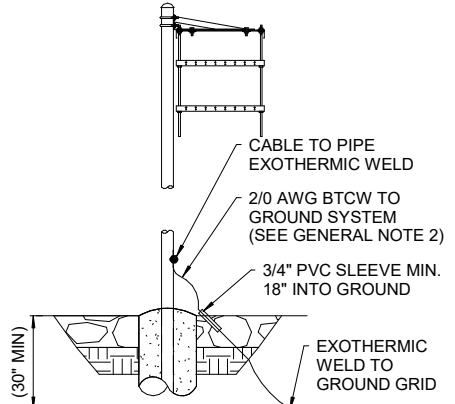
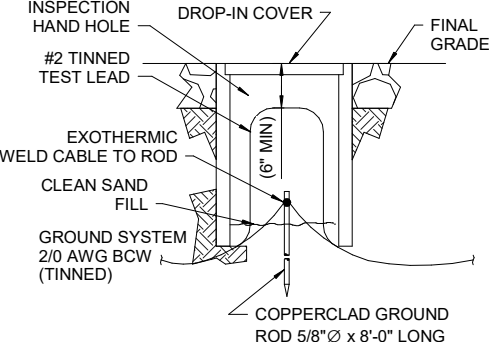
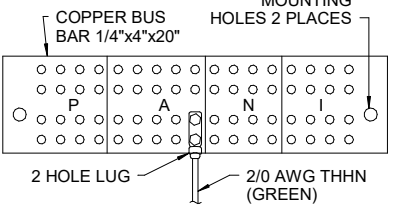
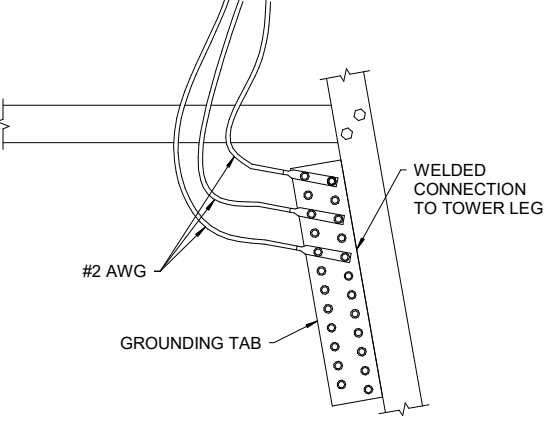
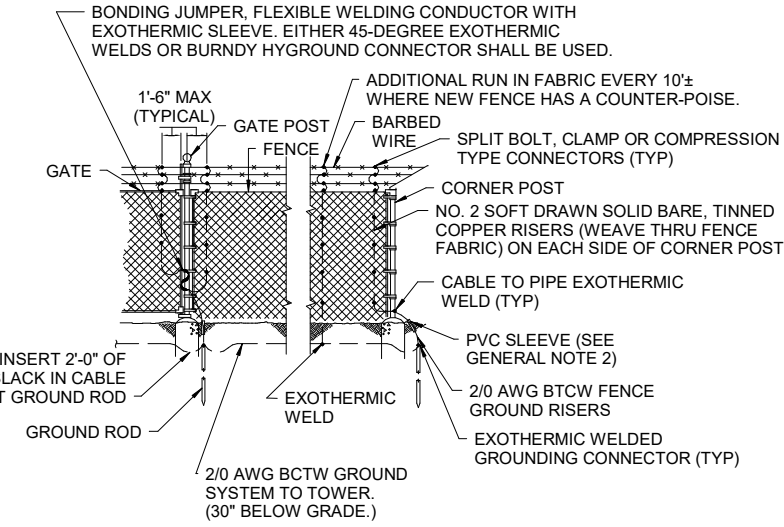
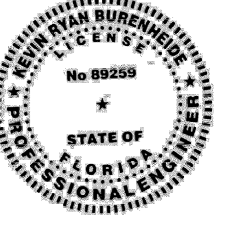


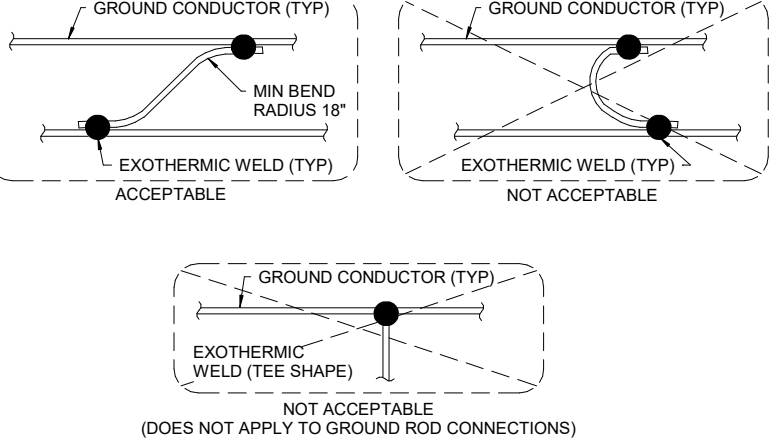
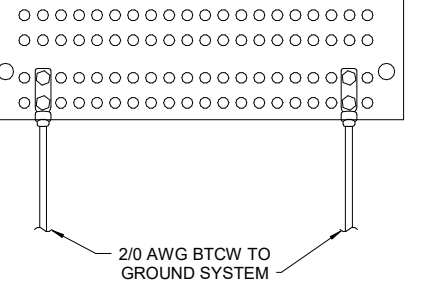
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DUKE ENERGY
FORT WHITE
ELECTRICAL SITE PLAN

project 147057	contract -
drawing E-4 — 0	rev. -
sheet file	of -
file	sheets

1	2	3	4	5	6	7	8	9	10	11	12	13									
<div></div> <div><p>NOTES:</p><ol style="list-style-type: none">DO NOT INSTALL CABLE GROUND KIT AT A BEND IN CABLE.ALWAYS DIRECT GROUND WIRE DOWN TO GROUND BAR OR GROUND TAB.SEE GENERAL NOTE 5.</div> <div><p>DETAIL 1 - FEEDLINE CABLE GROUND NOT TO SCALE</p></div>		<div></div> <div><p>NOTES:</p><ol style="list-style-type: none">SPACE GROUND RODS AT LEAST 16 FT APART.</div> <div><p>DETAIL 2 - GROUND ROD CONNECTION NOT TO SCALE</p></div>		<div></div> <div><p>DETAIL 3 - EGB (TOWER) LOCATION NOT TO SCALE</p></div>		<div></div> <div><p>NOTES:</p><ol style="list-style-type: none">GROUNDING IS FOR EACH STANCHION.</div> <div><p>DETAIL 4 - ICE BRIDGE GROUND NOT TO SCALE</p></div>		<div></div> <div><p>NOTES:</p><ol style="list-style-type: none">INSPECTION HAND HOLE MAY BE CONCRETE OR PVC AND SHALL BE 8" DIAMETER x A MINIMUM OF 18" DEEP.</div> <div><p>DETAIL 5 - GROUND INSPECTION WELL NOT TO SCALE</p></div>		<table><tr><th>no.</th><th>date</th><th>by</th><th>ckd</th><th>description</th></tr><tr><td>0</td><td>03/31/23</td><td>DPK</td><td>JJW</td><td>ISSUED FOR PERMITTING</td></tr></table>		no.	date	by	ckd	description	0	03/31/23	DPK	JJW	ISSUED FOR PERMITTING
no.	date	by	ckd	description																	
0	03/31/23	DPK	JJW	ISSUED FOR PERMITTING																	
<div></div> <div><p>NOTES:</p><ol style="list-style-type: none">COPPER BUS BAR (17 RUNS, 0.75", 0.815" OR 1" VARIABLE SPACING) WITH 2 HOLE LUG AND 2/0 AWG CU PIGTAIL.TWO HOLE LUGS SHALL BE USED.FOR MASTER GROUND BAR (INSIDE SHELTER), USE 2/0 AWG THHN (GREEN) CONDUCTOR.ALL EXTERNAL GROUND BARS SHALL BE TINNED.PANI SCHEME ONLY APPLIES TO MGB.</div> <div><p>DETAIL 6 - MGB, CGB, AND EGB ASSEMBLY NOT TO SCALE</p></div>		<div></div> <div><p>NOTES:</p><ol style="list-style-type: none">TWO HOLE LUGS SHALL BE USED.</div> <div><p>DETAIL 7 - TOWER GROUND TAB NOT TO SCALE</p></div>		<div></div> <div><p>DETAIL 8 - TYPICAL FENCE GROUNDING NOT TO SCALE</p></div>		<div><p>THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY KEVIN BURENHEIDE ON THE DATE ADJACENT TO THE SEAL. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.</p><p>03/31/23 4:09 PM</p><p>KEVIN BURENHEIDE LICENSE NUMBER: 89259</p><p>ISSUED FOR PERMITTING</p><p></p><p>9400 WARD PARKWAY KANSAS CITY, MO 64114 816-333-9400</p><table><tr><td>date 03/31/23</td><td>detailed DPK</td></tr><tr><td>designed DPK</td><td>checked JJW</td></tr></table><p>DUKE ENERGY FORT WHITE SITE GROUNDING DETAILS</p><table><tr><td>project 147057</td><td>contract -</td></tr><tr><td>drawing</td><td>rev. E-6 — 0</td></tr><tr><td>sheet</td><td>of sheets</td></tr><tr><td>file</td><td></td></tr></table></div>		date 03/31/23	detailed DPK	designed DPK	checked JJW	project 147057	contract -	drawing	rev. E-6 — 0	sheet	of sheets	file			
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project 147057	contract -																				
drawing	rev. E-6 — 0																				
sheet	of sheets																				
file																					
<div></div> <div><p>DETAIL 9 - EXOTHERMIC WELDS TO GRID NOT TO SCALE</p></div>		<div></div> <div><p>NOTES:</p><ol style="list-style-type: none">TINNED COPPER BUS BAR (MINIMUM 20 RUNS, 1" SPACING).TWO HOLE LUGS SHALL BE USED.</div> <div><p>DETAIL 10 - (EGB) EXTERIOR GROUND BAR NOT TO SCALE</p></div>		<p>GENERAL NOTES:</p> <ol style="list-style-type: none">FOR LEGEND AND ABBREVIATIONS SEE N-1.ALL EXPOSED 2/0 COPPER SHALL BE ROUTED AT A 45 DEGREE ANGLE THROUGH 3/4" PVC SLEEVE THAT EXTENDS A MINIMUM OF 18" INTO THE GROUND AND IS THEN BONDED TO THE GROUND RING USING AN EXOTHERMIC WELD.ANTI-OXIDATION COMPOUND SHALL BE USED ON ALL INTERNAL CONNECTIONS AND ON ALL INTERNAL GROUND BARS EXCEPT CONNECTIONS MADE TO EQUIPMENT SHELVES.ANTI-OXIDATION COMPOUND SHALL BE USED ON ALL EXTERNAL GROUND BARS EXCLUDING EXOTHERMIC GROUND WELDS.GROUND WAVEGUIDE AND COAX SHIELDS AT THE FOLLOWING PLACES: A. AT TOP NEAR ANTENNA B. AT BOTTOM OF TOWER C. OUTSIDE THE SHELTER ENTRY POINT D. INSIDE THE SHELTER ENTRY POINT E. APPROXIMATELY EVERY 75FT. ON THE TOWER																	

CODED DRAWING NOTES:

ITEM NUMBER	ITEM DESCRIPTION
1	NEW ELECTRICAL CONDUIT
2	EXISTING DISCONNECT SWITCH, METER, & H-FRAME
3	EXPANSION JOINT
4	SHELTER DISCONNECT SWITCH
5	FENCE
6	NEW SHELTER
7	SERVICE POLE
8	PVC CONDUIT INSTALLED BY UTILITY

REFERENCE DRAWINGS:

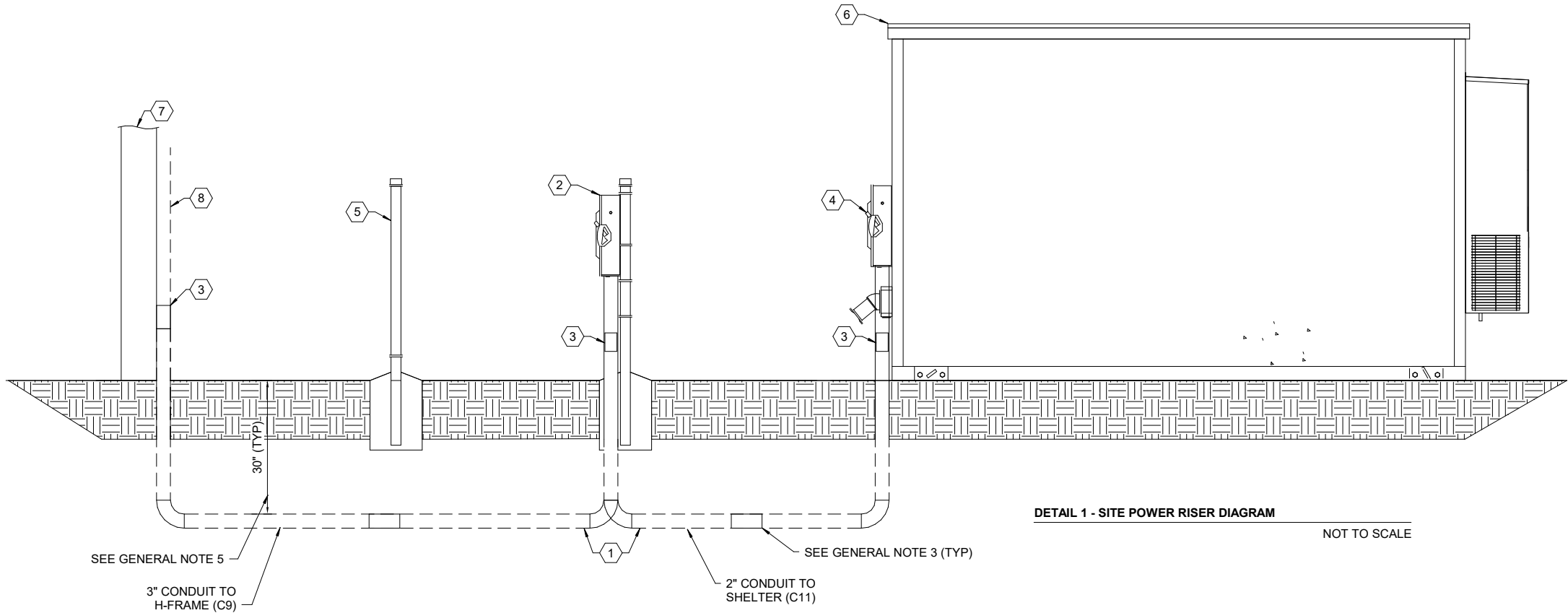
C-3 SITE PLAN
C-6 COMM SHELTER EXTERIOR ELEVATIONS
E-1 ELECTRICAL ONE LINE
E-4 ELECTRICAL SITE PLAN

GENERAL NOTES:

- FOR LEGEND AND ABBREVIATIONS SEE N-1.
- SEE E-1 FOR ELECTRICAL ONE-LINE AND CIRCUIT SCHEDULE.
- SEE E-1 FOR CABLE SIZING IN THE CIRCUIT SCHEDULE. UNDERGROUND PVC CONDUITS SHALL HAVE EXPANSION JOINTS EVERY 25-30 FT.
- SEE E-4 FOR CONDUIT SCHEDULE AND ROUTE.
- CONDUITS TO BE PLACED 30" DEEP TYPICAL UNLESS GOING UNDER A DRIVEABLE AREA IN WHICH CASE THEY SHALL BE PLACED 42" DEEP.

CONSTRUCTION NOTES:

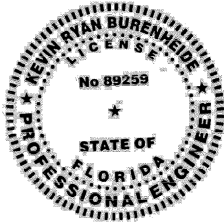
- SUBCONTRACTOR SHALL COORDINATE WITH LOCAL UTILITY COMPANY FOR INSTALLATION OF SERVICE CONDUCTOR.



DETAIL 1 - SITE POWER RISER DIAGRAM
NOT TO SCALE

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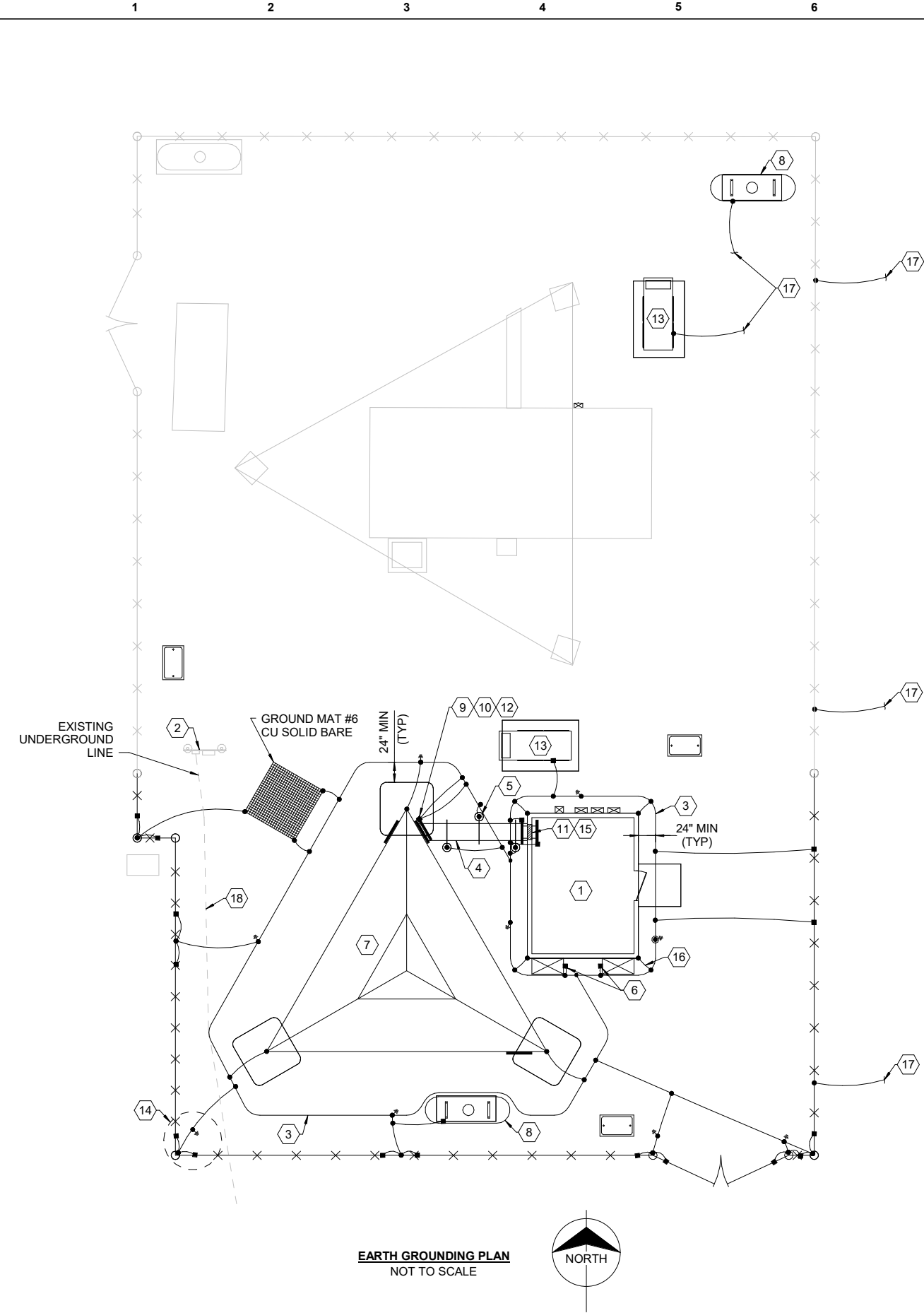
date	03/31/23	detailed	DPK
designed	DPK	checked	JJW



DUKE ENERGY

DUKE ENERGY
FORT WHITE
INCOMING SERVICE DETAILS

project	147057	contract	-
drawing	E-7 — 0		
sheet	of	sheets	
file			



EARTH GROUNDING PLAN
NOT TO SCALE

CODED DRAWING NOTES:

ITEM NUMBER	ITEM DESCRIPTION
1	NEW COMM SHELTER
2	EXISTING SERVICE FRAME, 200A DISCONNECT AND METER
3	2/0 TINNED BTCW EXTERIOR GROUND GRID. BURY GRID 30" BELOW GRADE & MIN. 24" FROM TOWER OR SHELTER FOUNDATION.
4	NEW ICE BRIDGE, BOND EACH SECTION
5	NEW ICE BRIDGE SUPPORT
6	ATTACH TO HVAC GROUND, SEE C-6.
7	NEW SELF SUPPORT TOWER
8	NEW PROPANE TANK
9	EGB, IGB, & TGB
10	SEE E-9 FOR TOWER GROUNDING
11	NEW FEEDLINE ENTRY PORT
12	SHIELD OF ANTENNA CABLES FROM ANTENNAS SHALL BE ATTACHED TO EGB, IGB, AND TGB
13	NEW GENERATOR
14	FENCE & GATE GROUND. PLACE GROUND ROD WITHIN 36" OF TERMINATION POST.
15	CGB, MGB, CABLES & TERMINATIONS
16	SHELTER TIE-DOWN PLATE, EXOTHERMIC WELD (4 PLACES TYP)
17	EXISTING SUBSTATION GROUNDING (SEE CONSTRUCTION NOTE 5)
18	EXISTING UNDERGROUND CONDUIT (SEE CONSTRUCTION NOTE 6)

GENERAL NOTES:

- FOR LEGEND AND ABBREVIATIONS SEE N-1.

CONSTRUCTION NOTES:

- THE EARTH GROUND SYSTEM SHALL HAVE A MINIMUM DISTANCE OF 24" FROM THE STRUCTURE AND SHALL BE OUTSIDE THE WATER DRIP LINE. IT SHALL BE AT LEAST 30" BELOW FINAL GRADE.
- RADIALS SHALL NOT BE GREATER THAN 70 FEET IN LENGTH. EACH RADIAL SHALL HAVE A GROUND ROD EXOTHERMICALLY WELDED TO IT EVERY 16 FT.
- PERFORM GROUND RESISTANCE TEST FROM GROUND INSPECTION WELL AND PROVIDE REPORT. RESISTANCE TO GROUND SHOULD BE LESS THAN 5 OHMS.
- GROUND RODS TO BE PLACED AT MINIMUM 16 FEET AWAY FROM OTHER GROUND RODS.
- CONTRACTOR TO CONNECT NEW GROUNDING TO EXISTING SUBSTATION GROUNDING.
- SUBCONTRACTOR TO CONFIRM LOCATION OF EXISTING BURIED ELECTRICAL LINE PRIOR AND ADJUST GROUNDING AS NEEDED.

REFERENCE DRAWINGS:

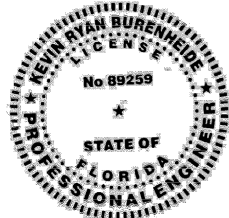
- C-6 COMM SHELTER EXTERIOR ELEVATIONS
C-10 ICE BRIDGE AND TRENCH DETAILS
E-1 ELECTRICAL ONE LINE
E-6 SITE GROUNDING DETAILS
E-9 TYPICAL TOWER GROUNDING DETAILS

LEGEND:

- EXISTING EQUIPMENT
—X—X— EXISTING FENCE
—X—X— NEW FENCE
— GROUND BAR (MGB, CGB, CGBE, IGB, EGB, OR TGB)
• GROUND ROD
• INSPECTION WELL
■ BOLTED CONNECTION
• EXOTHERMIC WELDED CONNECTION
— NEW GROUND CONDUCTOR, 2/0 UNLESS NOTED OTHERWISE
CODED DRAWING NOTE

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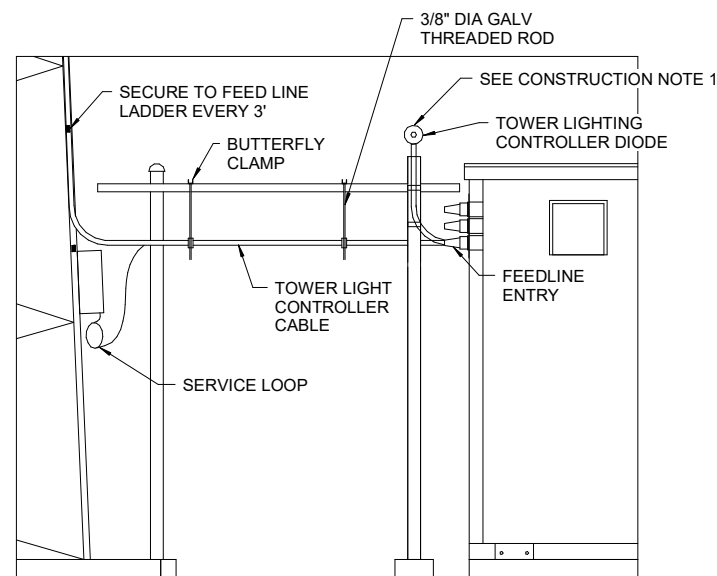
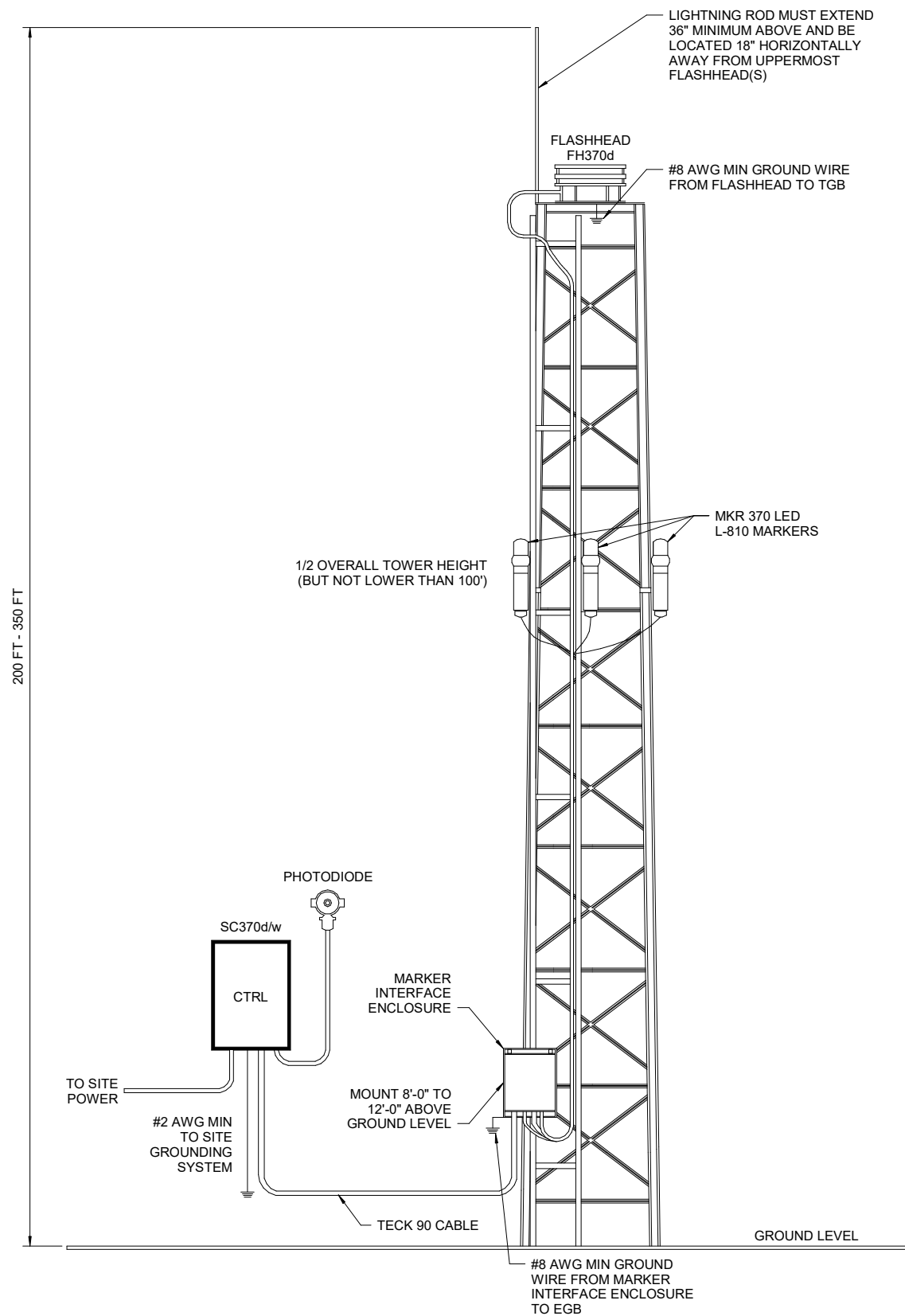
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DUKE ENERGY
FORT WHITE
EARTH GROUNDING PLAN

project 147057	contract -
drawing E-8 — 0	rev. -
sheet file	of sheets



DETAIL 1 - TOWER LIGHT CONTROLLER CONDUIT DETAIL

NOT TO SCALE

GENERAL NOTES:

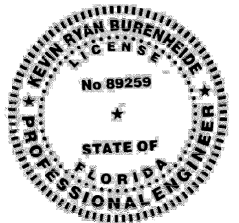
1. FOR LEGEND AND ABBREVIATIONS SEE N-1.
2. THIS SITE WILL UTILIZE E-1 TOWER LIGHTING.

CONSTRUCTION NOTES:

1. SUBCONTRACTOR TO MOUNT PHOTODIODE IN OPTIMAL LOCATION FOR THE SENSOR TO WORK PROPERLY. AVOID SHADED AREAS FROM SURROUNDING TREES AND TOWER.
2. FOLLOW SPX FLASH INSTALLATION AND COMMISSIONING GUIDELINES.
3. ROUTE THE TOWER LIGHTING CONTROL WIRES DOWN THE CABLE LADDER TO THE ICE BRIDGE.
4. TECK90 CABLE TO UTILIZE CABLE HANGERS THAT CONNECT IT TO THE CABLE LADDER, DO NOT USE TAPE METHOD TO HANG LIGHTING CABLE.

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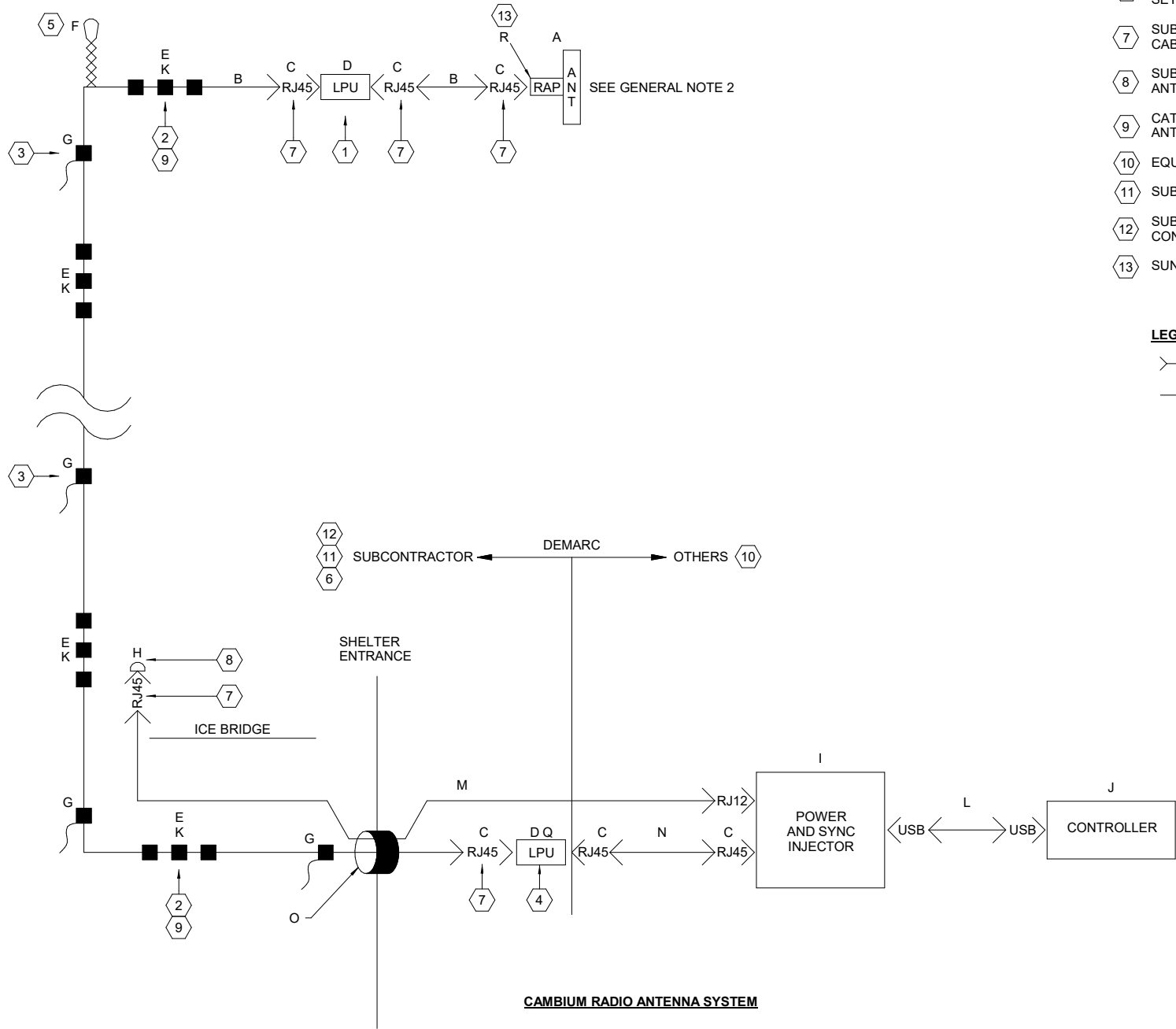
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DUKE ENERGY
FORT WHITE
TOWER LIGHTING SYSTEM

project	contract
147057	-
drawing	rev.
E-10 - 0	
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file	

CAMBIUM RADIO ANTENNA SYSTEM			
ITEM	DESCRIPTION	MANUFACTURER	PART NUMBER
A	PMP 450m 5 GHz AP, INTEGRATED 90 DEGREE SECTOR ANTENNA ACCESS POINT	CAMBIUM	C050045A112A
B	ARMORED CAT5E CABLE		WB3176A
C	RJ45 CONNECTOR	ANY	ANY
D	LIGHTNING PROTECTION UNIT (LPU)	CAMBIUM	C000065L007A
E	1-5/8" COAX SNAP-IN HANGERS, STACKABLE, KIT OF 10	EUPEN	SH-S158
F	HOISTING GRIP		HG-38L
G	CABLE GROUNDING KIT	CAMBIUM	1010419001
H	CNPULSE SYNC GENERATOR		C000000L066A
I	POWER AND SYNC INJECTOR (BY OTHERS)	ANY	TBD
J	CONTROLLER (BY OTHERS)		TBD
K	UNIVERSAL BARREL CUSHIONS	VALMONT	BCU158X
L	USB-A TO USB-B JUMPER	ANY	ANY
M	ETHERNET CABLE ADAPTER FOR CMM5; RJ45 TO RJ12; 20M	CAMBIUM	N000000L125A
N	CAT5e ETHERNET CABLE	ANY	ANY
O	4" BOOT ASSEMBLY KIT FOR (6) 3/8" CABLE	COMMSCOPE	SEC-638
P	ANTENNA TOWER MOUNT (NOT SHOWN)	VALMONT	P-200
Q	LIGHTNING PROTECTION UNIT GROUND BAR	HARGER	GBI14224.75LPU
R	CAMBIUM VENTS	CAMBIUM	N000000L141A



- GENERAL NOTES:**
- FOR LEGEND AND ABBREVIATIONS SEE N-1.
 - TYPICAL CAMBIUM SYSTEM INCLUDES 4 ANTENNAS. THIS DRAWING SHOWS DETAILS FOR WIRING ONE ANTENNA. SEE S-2 FOR NUMBER OF CAMBIUM INSTALLATIONS.

- CONSTRUCTION NOTES:**
- LPU SHALL BE INSTALLED WITHIN 3' FROM ANTENNA.
 - THE NUMBER OF HANGERS WILL DEPEND ON THE FEEDLINE'S LENGTH. (HANGER SPACING SHALL NOT EXCEED 3 FT.)
 - GROUNDING KIT TO BE USED NEAR THE ANTENNA AND DOWN THE TOWER EVERY 75 FT.
 - LPU SHALL BE INSTALLED WITHIN 12 INCHES AFTER CABLE ENTERS BUILDING
 - ALL FEEDLINE OVER 200' IN LENGTH SHALL BE HOISTED AT TWO POINTS, AT THE END AND AT THE MIDPOINT. LENGTH UNDER 200' MAY BE HOISTED ONLY AT THE END.
 - FOLLOW MANUFACTURERS INSTALLATION GUIDE FOR PROPER SETUP AND GROUNDING OF CAMBIUM SYSTEM.
 - SUBCONTRACTOR TO INSTALL CABLE GLAND AT EACH END OF CABLE PRIOR TO MAKING CONNECTION TO DEVICE.
 - SUBCONTRACTOR TO USE "TIMING PORT 1 (RJ12)" OF GPS ANTENNA.
 - CAT5 ETHERNET CABLES FOR ALL CAMBIUM SYSTEM ANTENNAS SHALL USE A SINGLE CUSHION.
 - EQUIPMENT PROCURED AND INSTALLED BY OTHERS.
 - SUBCONTRACTOR TO INSTALL EQUIPMENT BEFORE DEMARC.
 - SUBCONTRACTOR TO FOLLOW OWNER TURN UP GUIDE TO CONFIRM OPERATION OF RADIO.
 - SUNCONTRACTOR TO INSTALL VENTS IN AUXILARY PORT

- LEGEND:**
- FEMALE CONNECTOR
 - MALE CONNECTOR

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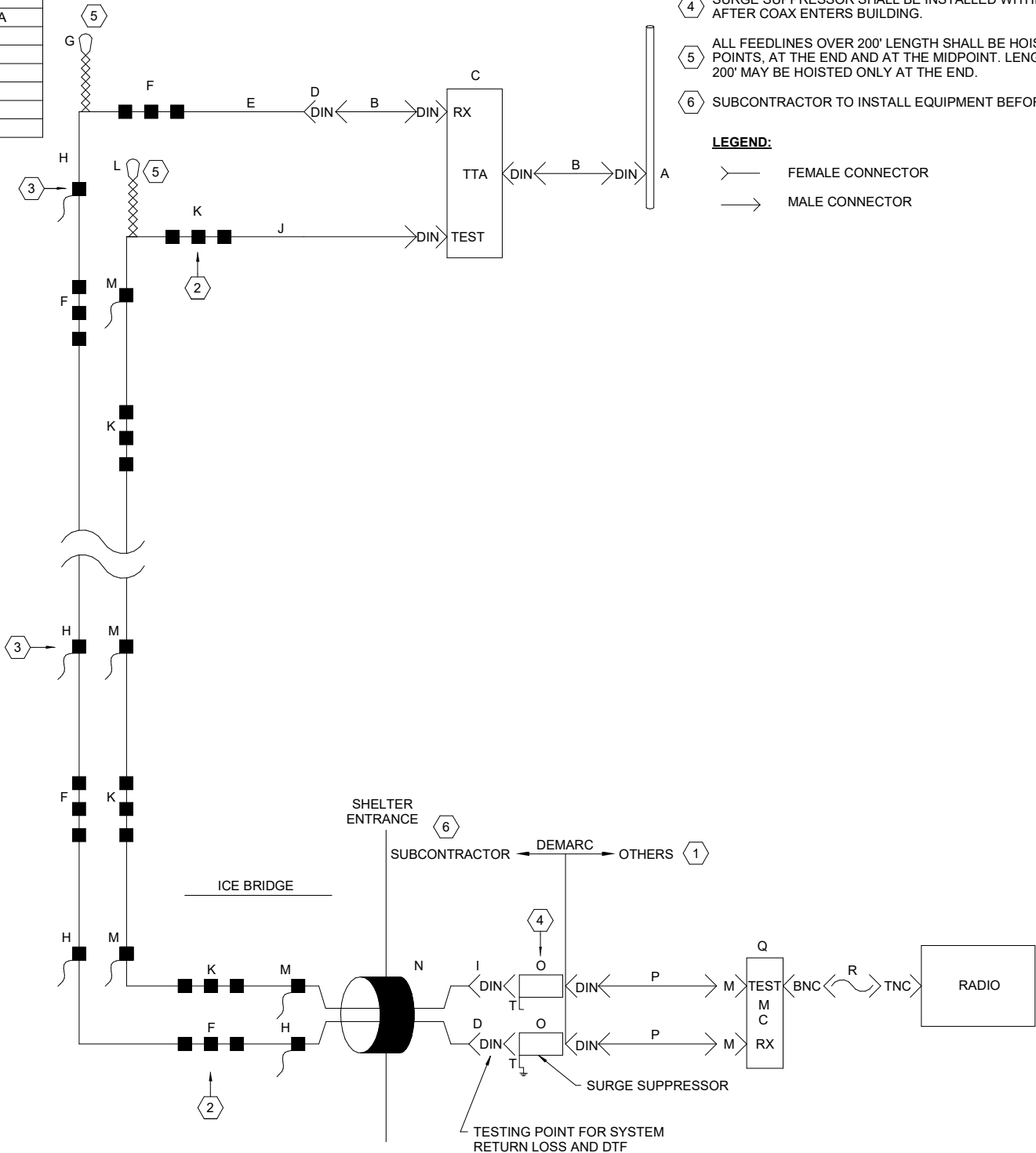
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FORT WHITE
CAMBIUM RADIO ANTENNA SYSTEM BLOCK DIAGRAM

project	147057	contract	-
drawing	D-4 — 0		
sheet	of	sheets	
file			

800 MHz (RX) ANTENNA SYSTEM			
ITEM	DESCRIPTION	MANUFACTURER	PART NUMBER
A	806-869 MHz OMNI ANTENNA, DIN (F)	DB SPECTRA	DS8A10P36U-D
B	JUMPER, COAX, 10", DIN (MALE) TO DIN (MALE), 1/2" HARDLINE	EUPEN	EC4-300-DMDM
C	TTA, 800 MHz SYSTEM	DB SPECTRA	DS7TMD17C
D	CONNECTOR, 7/16 DIN FEMALE INTERFACE, EC5-50A CABLE	EUPEN	7/16F50V78MA
E	7/8" FOAM COAXIAL CABLE (COAX)		EC5-50A
F	7/8" COAX SNAP-IN HANGERS, STACKABLE, KIT OF 10		SH-S78
G	HOIST GRIP FOR 7/8" COAX		HG78L
H	GROUNDING KIT FOR 7/8" COAX		GCK78
I	CONNECTOR, 7/16 DIN FEMALE INTERFACE, EC4-50		7/16F50V12
J	1/2" FOAM COAXIAL CABLE (COAX)		EC4-50
K	1/2" COAX SNAP-IN HANGERS, STACKABLE, KIT OF 10		SH-S12
L	HOIST GRIP FOR 1/2" COAX		HG12L
M	GROUNDING KIT FOR 1/2" COAX		GKC12
N	4" BOOT ASSEMBLY KIT FOR (1) 1/2" COAX & (2) 7/8" COAX	VALMONT	BA121M
O	400-2500 MHz SURGE SUPPRESSOR, DIN (MALE) - DIN (FEMALE), 24 VDC	POLYPHASER	DGXE+24DMDF-A
P	JUMPER, DIN (MALE) TO N (MALE), 1/2" HIGH FLEX (BY OTHERS)	EUPEN	TBD
Q	MULTICOUPLER, 8 PORT SYSTEM (BY OTHERS)	TX/RX	EXISTING
R	JUMPER, BNC (M) - TNC (M) (BY OTHERS)	N/A	N/A
S	BFD	POLYPHASER	BFD
T	CONNECTOR, 7/16 DIN MALE INTERFACE, EC4-50	EUPEN	7/16M50V12
U	ANTENNA TOWER MOUNT (NOT SHOWN)	VALMONT	HS6-K



GENERAL NOTES:

1. FOR LEGEND AND ABBREVIATIONS SEE N-1.

CONSTRUCTION NOTES:

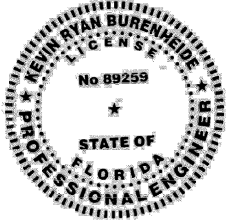
- OTHERS ARE RESPONSIBLE FOR PROCURING AND INSTALLING EVERYTHING AFTER THE DEMARC.
- THE NUMBER OF HANGERS WILL DEPEND ON THE FEEDLINES LENGTH (HANGER SPACING SHALL NOT EXCEED 3')
- GROUNDING KIT TO BE USED NEAR THE ANTENNA AND DOWN THE TOWER EVERY 75 FT.
- SURGE SUPPRESSOR SHALL BE INSTALLED WITHIN 18 INCHES AFTER COAX ENTERS BUILDING.
- ALL FEEDLINES OVER 200' LENGTH SHALL BE HOISTED AT TWO POINTS, AT THE END AND AT THE MIDPOINT. LENGTH UNDER 200' MAY BE HOISTED ONLY AT THE END.
- SUBCONTRACTOR TO INSTALL EQUIPMENT BEFORE DEMARC.

LEGEND:

- FEMALE CONNECTOR
- MALE CONNECTOR

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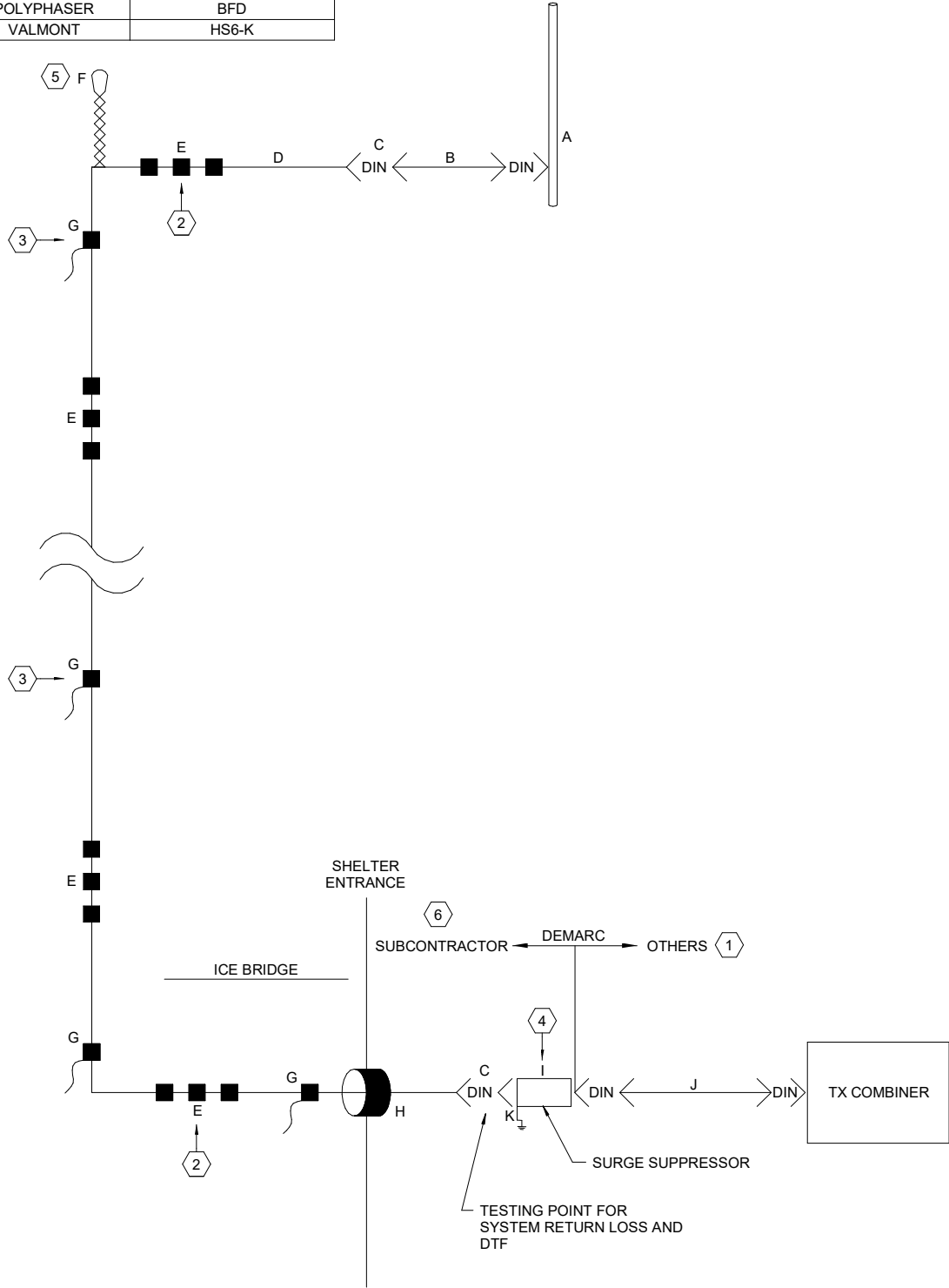
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DUKE ENERGY
FORT WHITE
800 MHz LMR ANTENNA SYSTEM BLOCK DIAGRAM

project 147057	contract -
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sheet file	of sheets

800 MHz (TX) ANTENNA			
ITEM	DESCRIPTION	MANUFACTURER	PART NUMBER
A	806-869 MHz OMNI ANTENNA, DIN (F)	DB SPECTRA	DS8A10P36U-D
B	JUMPER, COAX, 10', DIN (MALE) TO DIN (MALE), 1/2" HARDLINE	EUPEN	EC4-300-DMDM
C	CONNECTOR, 7/16 DIN FEMALE INTERFACE, EC7-50-A CABLE		7/16F50V158MA
D	1-5/8" FOAM COAXIAL CABLE (COAX)		EC7-50-A
E	1-5/8" COAX SNAP-IN HANGERS, STACKABLE, KIT OF 10		SH-S158
F	HOIST GRIP FOR 1-5/8" COAX		HG158L
G	GROUNDING KIT FOR 1-5/8" COAX		GKC158
H	4" BOOT ASSEMBLY KIT FOR (1) 1-5/8" COAX		BA-158-1A
I	300-1400 MHz SURGE SUPPRESSOR, DIN (MALE) - DIN (FEMALE)	POLYPHASER	TUSXDFM
J	JUMPER, COAX, 20', DIN (MALE) TO DIN (MALE), 1/2" HARDLINE (BY OTHERS)	EUPEN	EC4-609-DMDM
K	BFD FLANGE BRACKET	POLYPHASER	BFD
L	ANTENNA TOWER MOUNT (NOT SHOWN)	VALMONT	HS6-K



800 MHz (TX) ANTENNA SYSTEM

GENERAL NOTES:

1. FOR LEGEND AND ABBREVIATIONS SEE N-1.

GENERAL NOTES:

1. OTHERS ARE RESPONSIBLE FOR PROCURING AND INSTALLING EVERYTHING AFTER THE DEMARC.
2. THE NUMBER OF HANGERS WILL DEPEND ON THE FEEDLINES LENGTH (HANGER SPACING SHALL NOT EXCEED 3").
3. GROUNDING KIT TO BE USED NEAR THE ANTENNA AND DOWN THE TOWER EVERY 75 FT.
4. SURGE SUPPRESSOR SHALL BE INSTALLED WITHIN 18 INCHES AFTER COAX ENTERS BUILDING.
5. ALL FEEDLINES OVER 200' LENGTH SHALL BE HOISTED AT TWO POINTS, AT THE END AND AT THE MIDPOINT. LENGTH UNDER 200' MAY BE HOISTED ONLY AT THE END.
6. SUBCONTRACTOR TO INSTALL EQUIPMENT BEFORE DEMARC.

LEGEND:

- Female Connector
- Male Connector

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800 MHz LMR ANTENNA SYSTEM BLOCK DIAGRAM

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