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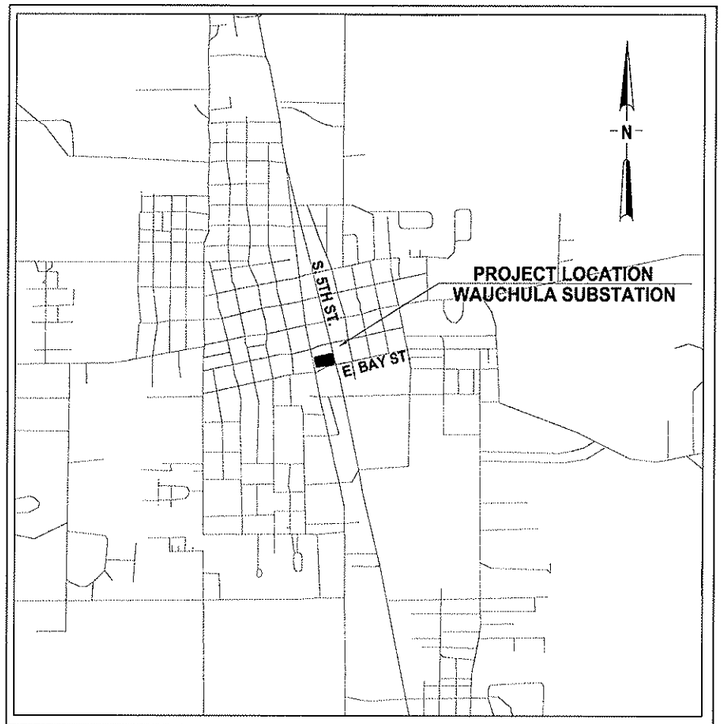
Edited: 00/00/00 0:00 login

WAUCHULA SUBSTATION RESTORATION/EXPANSION PROCUREMENT PACKAGE

WAUCHULA, FLORIDA



SITE VICINITY MAP

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E-03	NOT USED
E-04	ELECTRICAL PLAN
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E-30	NOT USED
E-31	DC MONITORING DIAGRAM
E-32	NOT USED
E-33	NOT USED

DRAWING INDEX

DWG. NO.	DESCRIPTION
S-01	FOUNDATION PLAN
S-02	FOUNDATION DETAILS
S-03	FOUNDATION DETAILS
S-04	NOT USED
S-05	NOT USED
S-06	CONTROL BUILDING FOUNDATION DETAILS
D-1 TO D-28	1981 DIS-TRAN ELECTRICAL PLAN

PREPARED BY:

JONES EDMUNDS
730 NE WALDO ROAD, GAINESVILLE, FLORIDA 32641 / (352) 377-5821
CERTIFICATE OF AUTHORIZATION #1841
PROJECT MANAGER'S LOCATION
1100 CESERY BLVD - SECOND FLOOR, JACKSONVILLE, FLORIDA 32211 / (904) 744-5401

FOR CONSTRUCTION

PROJECT NO: 07602-032-01

DATE: JUNE 2009

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POWER LINE LEGEND

DESCRIPTION	SYMBOL
POLE, CONCRETE, WOOD or STEEL	□, O or O
EXISTING POLE TO BE REPLACED	◪, ◐ or ◑
DOWN GUY(S)	——→
SPAN GUY(S)	∿∿
OVERHEAD PRIMARY CIRCUIT, SINGLE PHASE (1Ø)	——OE——
OVERHEAD PRIMARY CIRCUIT, TWO PHASE (2Ø)	——OE——
OVERHEAD PRIMARY CIRCUIT, THREE PHASE (3Ø)	——OE——
OVERHEAD SECONDARY CIRCUIT	— — — —
OVERHEAD SHIELD WIRE ONLY	——S——
OVERHEAD STREET LIGHT CIRCUIT	——SL——
UNDERGROUND STREET LIGHT CIRCUIT	——UGSL——
OVERHEAD TELEPHONE LINE	——T——
UNDERGROUND TELEPHONE LINE	——UGT——
CONDUIT	——C——
PILOT WIRE	——PW——
UNDERGROUND PRIMARY CIRCUIT	——UGE——
UNDERGROUND DUCT OR CONDUIT, (4 WAY 4 INCH ETC.)	4W 4"
MATERIAL ITEM REFERENCE NO. NUMBERS IN ( ) INDICATE QUANTITY WHERE MORE THAN 1.	②( )

CIVIL LEGEND

DESCRIPTION	SYMBOL
BASE LINE	——B———
PROPERTY LINE	——P———
RIGHT-OF-WAY LINE	——R/W———
EASEMENT LINE	——— ———
FENCE	—X——— —X
CATCH BASIN or DRAINAGE	——▥———
MANHOLE, STORM, or DRAIN	——●———
BORING LOCATION AND NUMBER	⊕ B1
CONCRETE MONUMENT	■ CM
IRON PIPE	○ I.P.
EXISTING CONTOUR	— —141— —
NEW CONTOUR	——141——

GROUNDING LEGEND

DESCRIPTION	SYMBOL
GROUND	—⊥—
ELECTRICAL CONNECTION	—⊥—
GROUND ROD	⊙
GROUND TEST WELL	◎

MISCELLANEOUS ITEMS LEGEND

DESCRIPTION	SYMBOL
SIMPLEX RECEPTACLE-NEMA 6-20R	⊲
DUPLEX RECEPTACLE-NEMA 5-20R	⊸
LOCAL TERMINAL BOARD	LTB
MATERIAL ITEM REFERENCE NO.	②—
OUTDOOR SUBSTATION LIGHT	⊸
TEST DEVICE, AS INDICATED OR REQUIRED	TD
NOT IN CONTRACT	N.I.C.

RELAY LEGEND

DESCRIPTION	SYMBOL
RELAY *: 2 -TIME DELAY; 21 -DISTANCE; 21G -GROUND DISTANCE; 25 -SYNCHRO-VERIFIER; 49 -TRANSFORMER T.R.O. "HOT SPOT"; 50 -INSTANTANEOUS OVERCURRENT; 51 -TIME OVERCURRENT; 51N -NEUTRAL TIME OVERCURRENT; 59 -OVER VOLTAGE; 62 -TIME RELAY STOPPING; 63 -FAULT PRESSURE; 64 -TANK GROUND; 67 -AC DIRECTIONAL OVERCURRENT; 79 -AC RECLOSING; 81 -UNDER FREQUENCY; 85 -CARRIER or AC PILOT WIRE RECEIVER; 86 -LOCKOUT; 87 -DIFFERENTIAL; 89 -LINE SWITCH, MOTOR OPERATED; 94 -TRIPPING	DEVICE (PER ANSI STD. C37.5) or DEVICE CONTROL REF. NO.

INSTRUMENTATION LEGEND

DESCRIPTION	SYMBOL
AMMETER	AM
AMMETER SWITCH	AS
AMMETER-AMP TRANSDUCER	AM/T
AMMETER-THERMAL DEMAND	ATD
MOTOR	M
MOTOR CONTROL	MC
SUPERVISORY CONTROL	SC
VOLTMETER-INDICATING	VM
VOLTMETER-RECORDING	VMR
VOLTMETER SWITCH	VS
VOLTMETER-VOLT TRANSDUCER	VM/T
VAR METER-VAR TRANSDUCER	VARM/T
KILOWATT HOUR METER	WHM
WATT METER-WATT TRANSDUCER	WM/T
AMP TRANSDUCER	AT
KILOWATT DEMAND METER	KWD
CARRIER TUNING UNIT	TV
VAR TRANSDUCER (INCLUDING PHASE SHIFTING TRANSFORMER)	VT
WATT TRANSDUCER	WT
WATT/VAR RECORDING METER	W/V REC.
CUTOUT	C.O.

EQUIPMENT APPARATUS LEGEND

DESCRIPTION	SYMBOL
FAULT ISOLATOR, FUSED CONTACT	∿
FUSE, 600 VAC	—▭—
CIRCUIT RECLOSER	—R—
SWITCH, HOOK STICK OPERATED	⁄
SWITCH, FUSED HOOK STICK OPERATED	⁄
SWITCH, GANG OPERATED AIR BREAK	⁄
SWITCH, MOTOR OPERATED	⁄ Ⓜ
CIRCUIT SWITCHING DEVICE	C/S
CIRCUIT BREAKER, NUMBER BELOW LINE IS REFERENCE NUMBER MECHANISM END DEPICTED	52 A LM

EQUIP. APPARATUS LEGEND CONT.

DESCRIPTION	SYMBOL
SURGE ARRESTER	⊥
CAPACITOR BANK	—⊣⊢—
CIRCUIT BREAKER CONTROL SWITCH	R G 52
COUPLING CAPACITOR, VOLTAGE DEVICE	
AUTO TRANSFORMER, POWER	
POWER TRANSFORMER	
POWER TRANSFORMER WITH LTC ON LOW VOLTAGE SIDE	
POTENTIAL TRANSFORMER OR STATION SERVICE TRANSFORMER	
BUSHING CURRENT TRANSFORMER	
LINE TRAP	
VOLTAGE REGULATOR	
SURGE ARRESTER	
CAPACITOR BANK	
CIRCUIT BREAKER CONTROL SWITCH	
COUPLING CAPACITOR, VOLTAGE DEVICE	
AUTO TRANSFORMER, POWER	
POWER TRANSFORMER	
POWER TRANSFORMER WITH LTC ON LOW VOLTAGE SIDE	
POTENTIAL TRANSFORMER OR STATION SERVICE TRANSFORMER	
BUSHING CURRENT TRANSFORMER	
LINE TRAP	
VOLTAGE REGULATOR	

ABBREVIATIONS

DESCRIPTION	
AFF	ABOVE FINISHED FLOOR
CL	CENTERLINE
CT	CURRENT TRANSFORMER
CU	COPPER
DPM	DIGITAL POWER METER
FB	FEEDER BREAKER
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
IDP11	INDOOR PANEL NO 11
IDP12	INDOOR PANEL NO 12
LOR	LOCKOUT RELAY
MB	MAIN BREAKER
MRCT	MULTI-RATIO CURRENT TRANSFORMER
MV	MERCURY VAPOR
ODP1	OUTDOOR PANEL NO 1
ODP2	OUTDOOR PANEL NO 2
ODPAC	OUTDOOR AC PANELBOARD
ODPDC	OUTDOOR DC PANELBOARD
PEF	PROGRESS ENERGY FLORIDA
PPE	PERSONAL PROTECTION EQUIPMENT
PT	POTENTIAL TRANSFORMER
SDBSC	SOFT DRAWIN BARE STRANDED COPPER
TBR	TO BE REMOVED
TECO	TAMPA ELECTRIC COMPANY
TVSS	TRANSIENT VOLTAGE SURGE SUPRESSOR
WP	DENOTES WEATHERPROOF

CONTROL HOUSE LEGEND

DESCRIPTION	SYMBOL
A.C. PANELBOARD 120/240V	
D.C. PANELBOARD 48VDC	
DUPLEX RECEPTACLE- NEMA 5-20; 18" A.F.F.	
DUPLEX RECEPTACLE- NEMA 5-20; 18" A.F.F. WEATHER PROOF	WP
SWITCH- S.P.S.T.; 20AMP, 120 VOLT 3-THREEWAY; a- LIGHTS CONTROLLED; 48" A.F.F.	$
1'x4' FLUORESCENT FIXTURE	
WALL MOUNTED FIXTURE	
CONDUIT- EXPOSED	
BATTERY	
WEATHERHEAD	▽
NORMALLY CLOSED CONTACT (N.C.)	
NORMALLY OPEN CONTACT (N.O.)	
PILOT LIGHT: 'R' DENOTES RED, 'G' DENOTES GREEN.	R
THERMOSTAT: PROVIDED WITH PTAC-1	T
4'x7.5" 3 LAMP, SURFACE MOUNTED FLUORESCENT LIGHTING FIXTURE WITH FIBERGLASS BODY AND ACRYLIC VAPOR TIGHT LENSE. BASIS OF DESIGN: DAYBRIGHT MODEL V2-AE332-120-1/3EB	

MOTOR, FAN, PUMP OR AIR CONDITIONING UNIT	
NEW GROUND WIRE	— — —G— — —
AC RECEPTACLE	
DENOTES NOTE REFERENCE	#
DENOTES FEEDER OR UTILITY REFERENCE	#
GENERATOR RECEPTACLE	
JUNCTION BOX	J
TRANSFORMER	▼

HOMERUN TO PANELBOARD
DASHES INDICATE NO. OF WIRE (WHERE MORE THAN THREE
NO. OF ARROWS INDICATE NO. OF CIRCUITS
PANELBOARD — A-1,3
POLE POSITIONS

CONTROL CABLE SYMBOLS

VOLTAGE CODE PRIMARY		CONNECTIONS	
1. 2.4/4.16 kV	5. 69 kV	△ BROKEN DELTA	BUS NO.
2. 7.2/12.47 kV	6. UNASSIGNED	Y WYE	VOLTAGE CODE
3. UNASSIGNED	7. UNASSIGNED	1Ø SINGLE PHASE	CONNECTION
4. UNASSIGNED	8. UNASSIGNED		

INDICATES ITEMS NOT REQUIRED AS PART OF THE STRUCTURE OR BUILDING PROCUREMENT CONTRACT.

OMIT DESIGNATION

A A — INDICATES ONE OR MORE SECTIONS CUT AND SHOWN ON THE SAME DETAIL

SECTION DESIGNATION

A 1 — DIRECTION OF SECTION; SECTION DESIGNATION; DWG NUMBER SECTION APPEARS ON

SECTION DESIGNATION

1 2 — DETAIL/SECTION DESIGNATION; DWG NUMBER DETAIL OR SECTION APPEARS ON

DETAIL/SECTION DESIGNATION

FOR CONSTRUCTION

LTR.	DATE	REVISIONS	BY	APPRD.

DESIGNED AO
DRAWN AO
CHECKED PW

JONES EDMUNDS
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1100 CESERY BLVD - SECOND FLOOR, JACKSONVILLE, FLORIDA 32211 / (904) 744-5401

WAUCHULA SUBSTATION RESTORATION/EXPANSION
WAUCHULA, FLORIDA

LEGEND AND GENERAL NOTES

CERTIFICATE OF AUTHORIZATION #1841
APPROVED BY
PHIL WEBER
P.E. # 36601

DATE JULY 2009
PROJECT NO. 07602-032-01
SCALE NONE
DWG. NO. G-02

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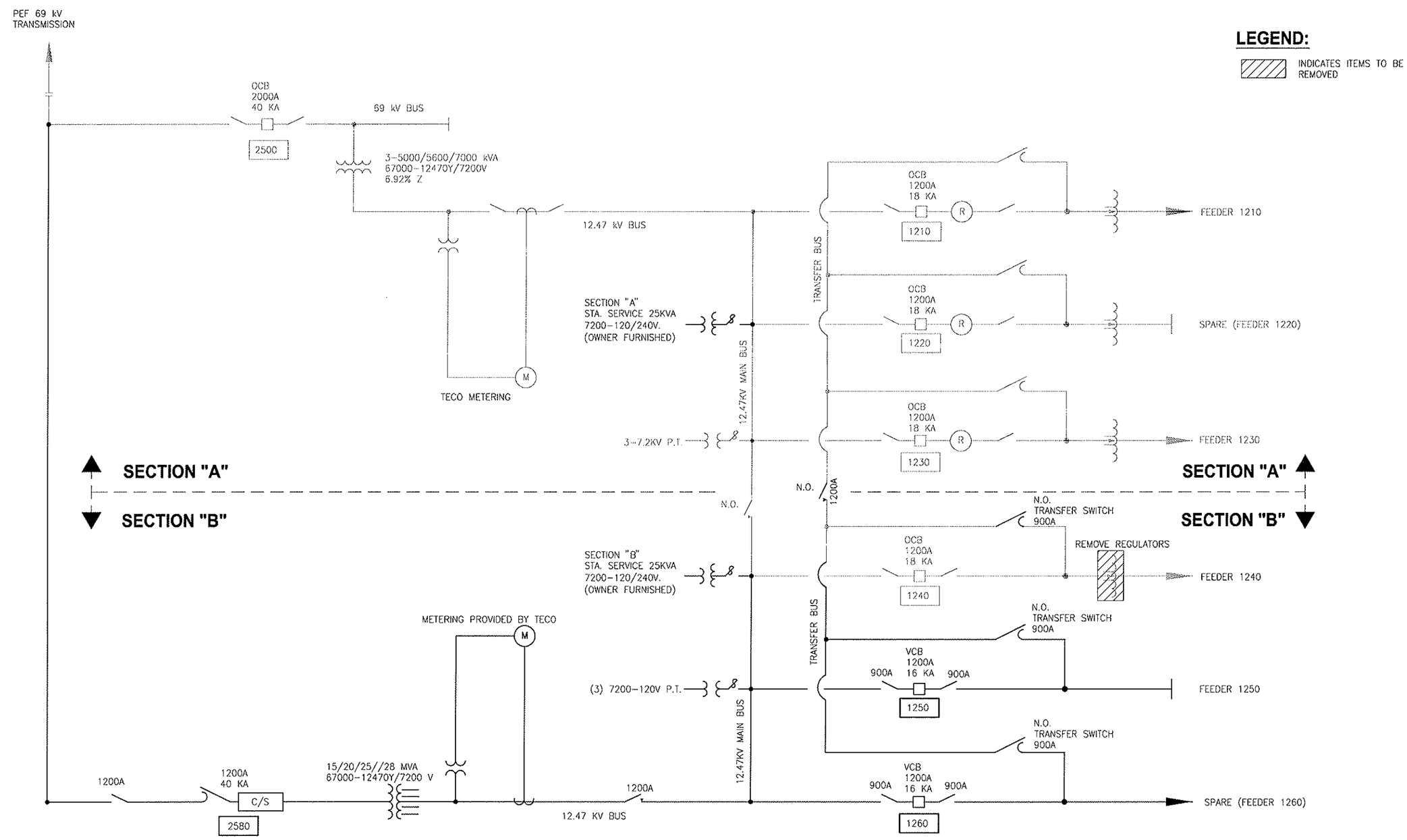

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LTR.	DATE	REVISIONS	BY	APPRD.

DESIGNED AO
DRAWN AO
CHECKED PW

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WAUCHULA SUBSTATION RESTORATION/EXPANSION
WAUCHULA, FLORIDA

SINGLE-LINE DIAGRAM

CERTIFICATE OF AUTHORIZATION #1841
APPROVED BY
PHIL WEBER
P.E. # 36601

DATE JULY 2009
PROJECT NO. 07602-032-01
SCALE NONE
DWG. NO. E-01

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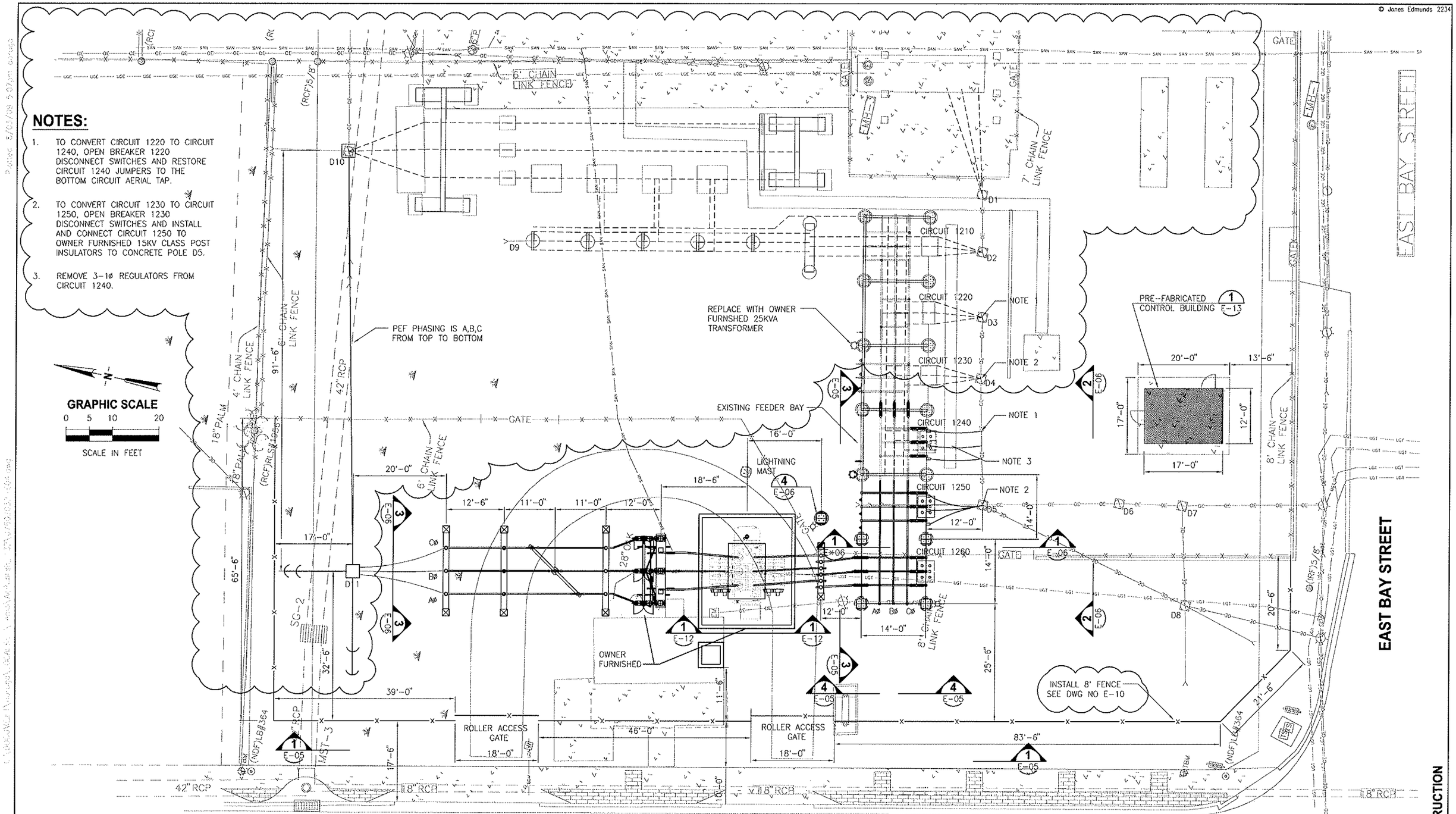
NOTES:

1. TO CONVERT CIRCUIT 1220 TO CIRCUIT 1240, OPEN BREAKER 1220 DISCONNECT SWITCHES AND RESTORE CIRCUIT 1240 JUMPERS TO THE BOTTOM CIRCUIT AERIAL TAP.
2. TO CONVERT CIRCUIT 1230 TO CIRCUIT 1250, OPEN BREAKER 1230 DISCONNECT SWITCHES AND INSTALL AND CONNECT CIRCUIT 1250 TO OWNER FURNISHED 15KV CLASS POST INSULATORS TO CONCRETE POLE D5.
3. REMOVE 3-1ø REGULATORS FROM CIRCUIT 1240.



FOR CONSTRUCTION

LTR.	DATE	REVISIONS	BY	APPRD.

DESIGNED AO
DRAWN AO
CHECKED PW

JONES EDMUNDS
730 NE WALDO ROAD, GAINESVILLE, FLORIDA 32641 / (352) 377-5821
1100 CESERY BLVD - SECOND FLOOR, JACKSONVILLE, FLORIDA 32211 / (904) 744-5401

WAUCHULA SUBSTATION RESTORATION/EXPANSION
WAUCHULA, FLORIDA

ELECTRICAL PLAN

CERTIFICATE OF AUTHORIZATION #1841
APPROVED BY
PHIL WEBER
P.E. # 36601

DATE JULY 2009
SCALE 1" =8'
PROJECT NO. 07602-032-01
DWG. NO. E-04

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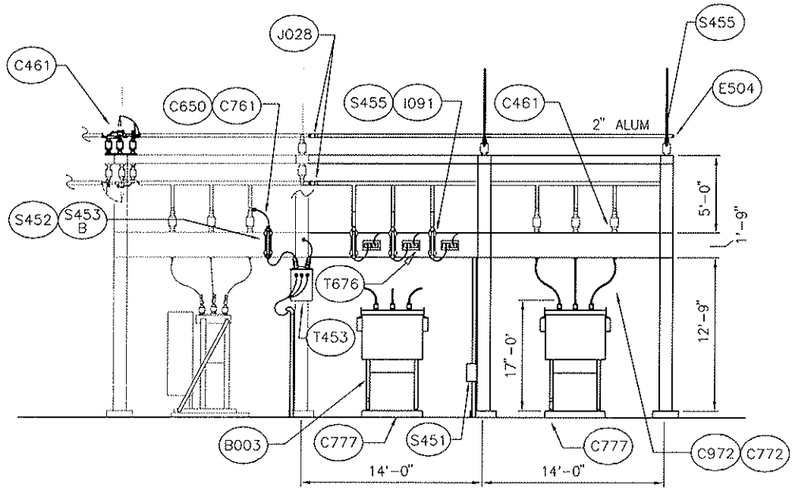
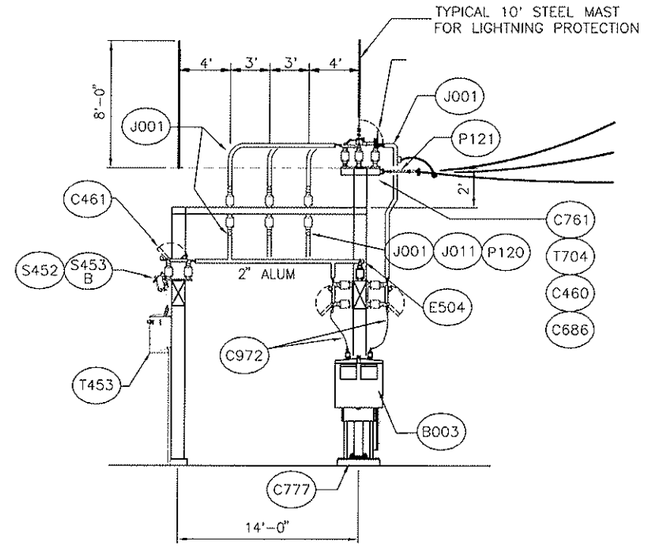
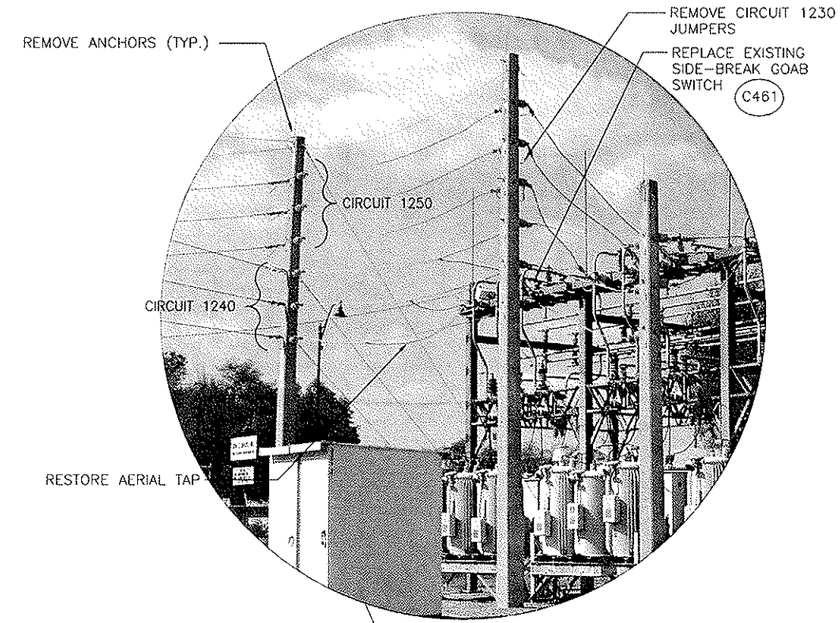
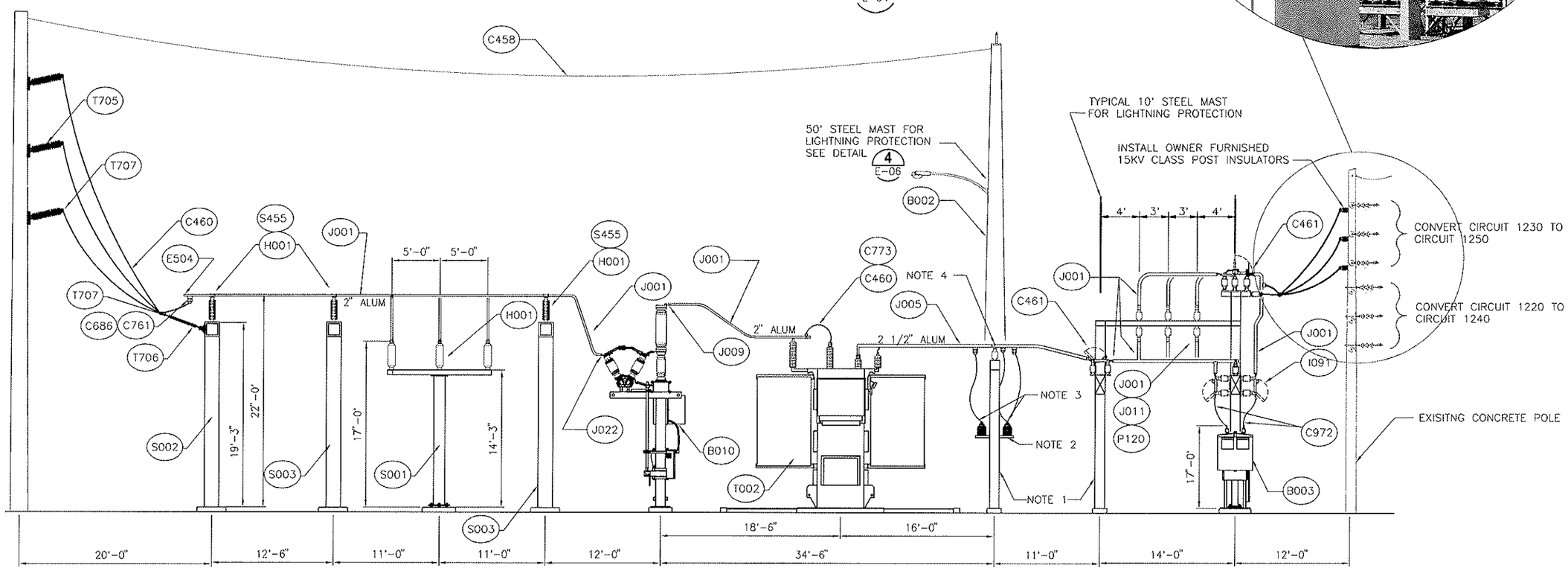


SECTION 3 E-04



SECTION 4 E-04





SECTION 1 E-04

NOTES:

1. SEE 1981 DISTRAN REFERENCE DRAWINGS FOR STRUCTURAL DETAILS. BYPASS SWITCHES WILL NOT BE USED.
2. METERING STRUCTURE WILL SUPPORT (3) PTs AND (3) CTs
3. METERING INCLUDING PTs AND CTs WILL BE PROVIDED BY TECO – FURNISHED AND INSTALLED.
   PTs WILL BE ABB MODEL #KON-11 7524A25G15
   CTs WILL BE ABB MODEL #VOY-11 7525A23G07

FOR CONSTRUCTION

LTR.	DATE	REVISIONS	BY	APPRD.

DESIGNED AO
DRAWN AO
CHECKED PW

JONES EDMUNDS
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1100 CESERY BLVD - SECOND FLOOR, JACKSONVILLE, FLORIDA 32211 / (904) 744-5401

WAUCHULA SUBSTATION RESTORATION/EXPANSION
WAUCHULA, FLORIDA

ELEVATIONS - 69KV AND 12.47KV

CERTIFICATE OF AUTHORIZATION #1841
APPROVED BY
PHIL WEBER
P.E. # 36601

DATE JULY 2009
SCALE 1"=6'
PROJECT NO. 07602-032-01
DWG. NO. E-05

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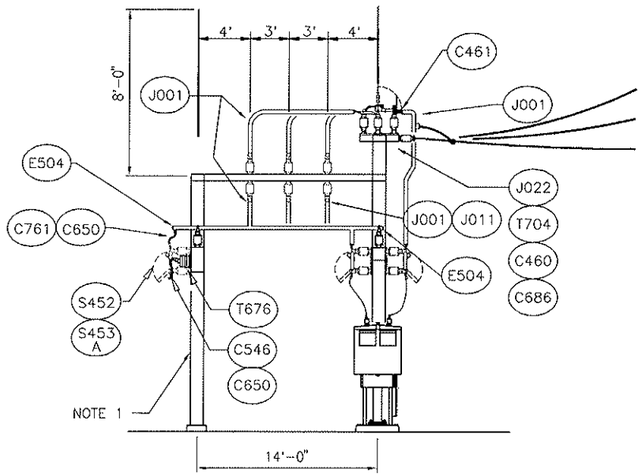
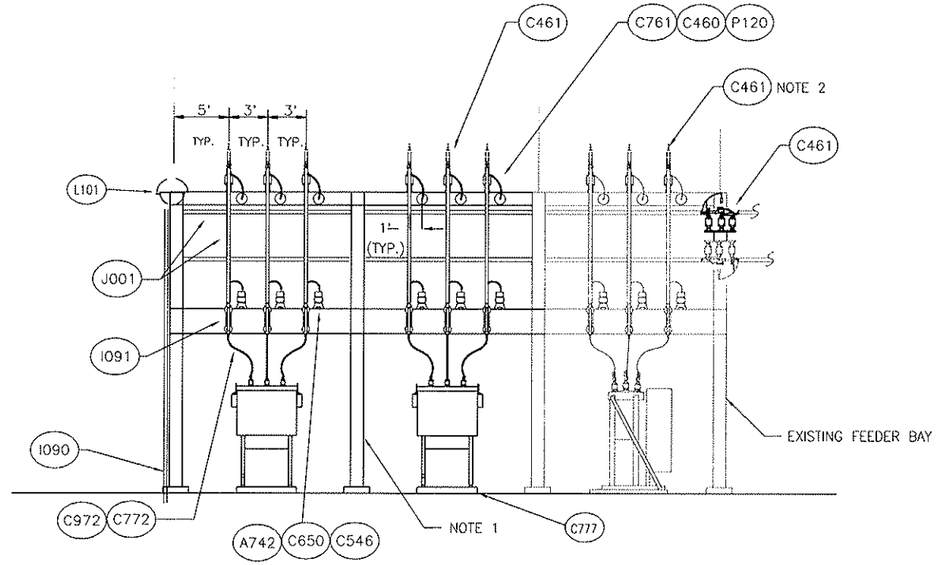
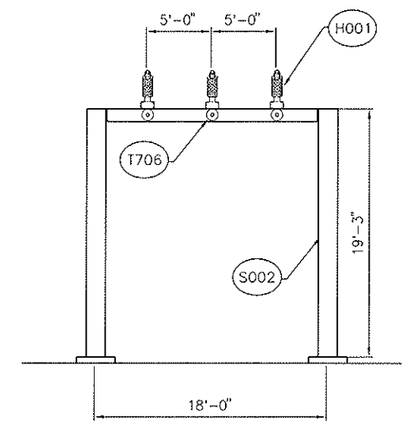


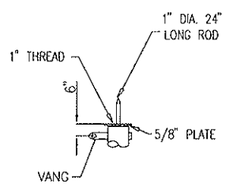
SECTION 1 / E-04



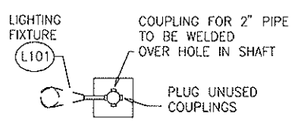
SECTION 2 / E-04



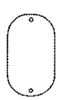
SECTION 3 / E-04



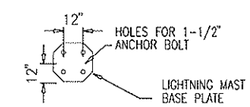
DETAIL 1 / E-06



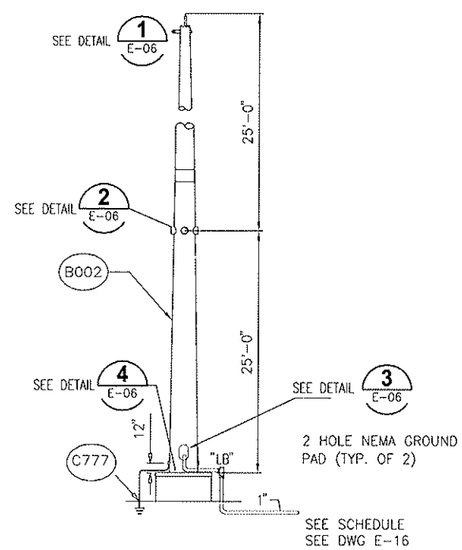
DETAIL 2 / E-06



DETAIL 3 / E-06



DETAIL 4 / E-06



LIGHTNING MAST DETAIL

SECTION 4 / E-04

NOTES:

1. SEE 1981 DISTRAN REFERENCE DRAWINGS FOR STRUCTURAL DETAILS.
2. PROVIDE REPLACEMENT GROUP-OPERATED SWITCH SEE 1981 DISTRAN DRAWINGS FOR MOUNTING REQUIREMENTS.

FOR CONSTRUCTION

LTR.	DATE	REVISIONS	BY	APPRD.

DESIGNED AO
DRAWN AO
CHECKED PW

JONES EDMUNDS
730 NE WALDO ROAD, GAINESVILLE, FLORIDA 32641 / (352) 377-5821
1100 CESERY BLVD - SECOND FLOOR, JACKSONVILLE, FLORIDA 32211 / (904) 744-5401

WAUCHULA SUBSTATION RESTORATION/EXPANSION
WAUCHULA, FLORIDA

ELEVATIONS - 69KV AND 12.47KV

CERTIFICATE OF AUTHORIZATION #1841
APPROVED BY
PHIL WEBER
P.E. # 36601

DATE JULY 2009
SCALE 1" = 6'
PROJECT NO. 07602-032-01
DWG. NO. E-06

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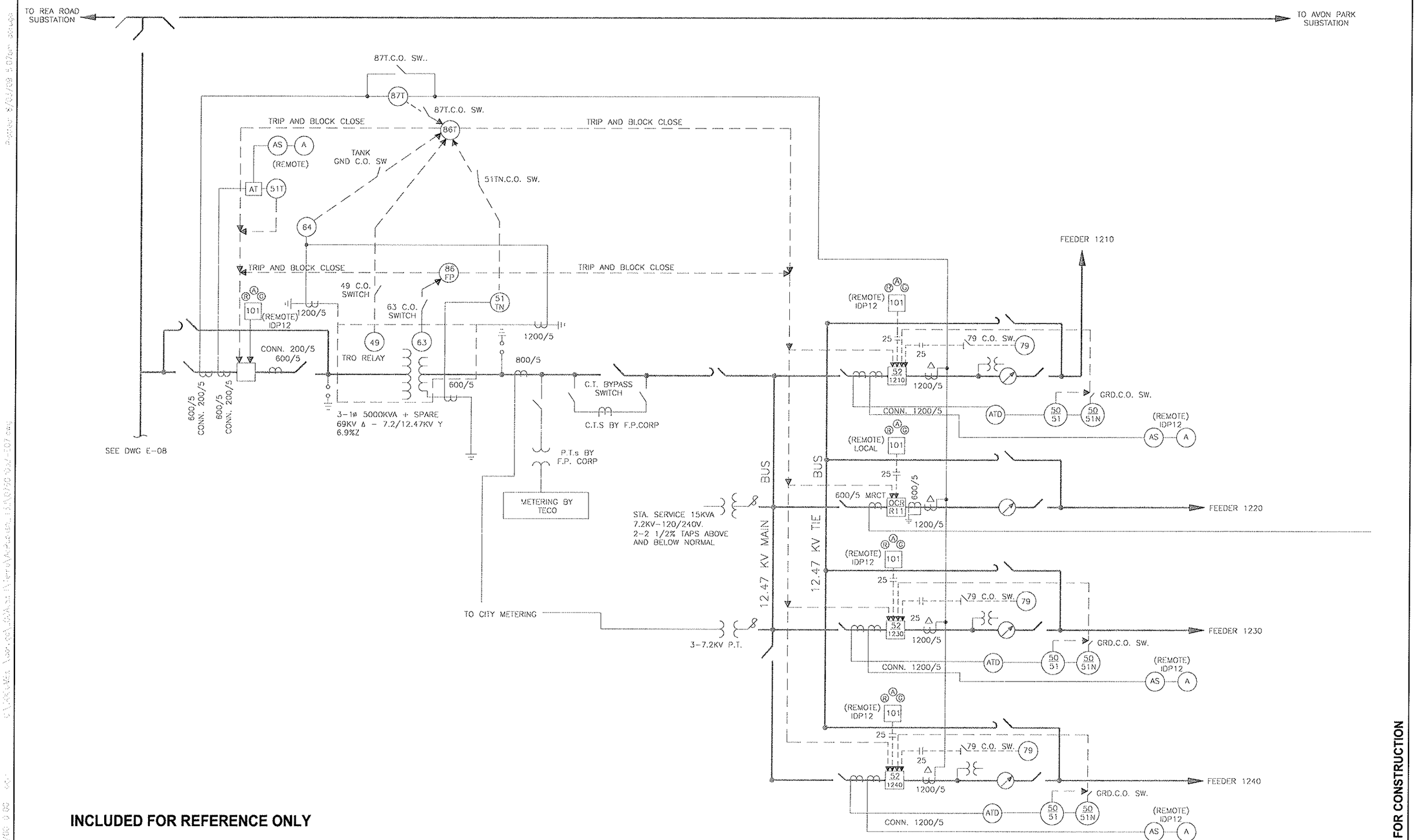

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FOR CONSTRUCTION

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730 NE WALDO ROAD, GAINESVILLE, FLORIDA 32641 / (352) 377-5821
1100 CESERY BLVD - SECOND FLOOR, JACKSONVILLE, FLORIDA 32211 / (904) 744-5401

WAUCHULA SUBSTATION RESTORATION/EXPANSION
WAUCHULA, FLORIDA

SECTION "A" EXISTING RELAY AND METERING ONE-LINE DIAGRAM

CERTIFICATE OF AUTHORIZATION #1841
APPROVED BY
PHIL WEBER
P.E. # 36601

DATE JULY 2009
PROJECT NO. 07602-032-01
SCALE NONE
DWG. NO. E-07

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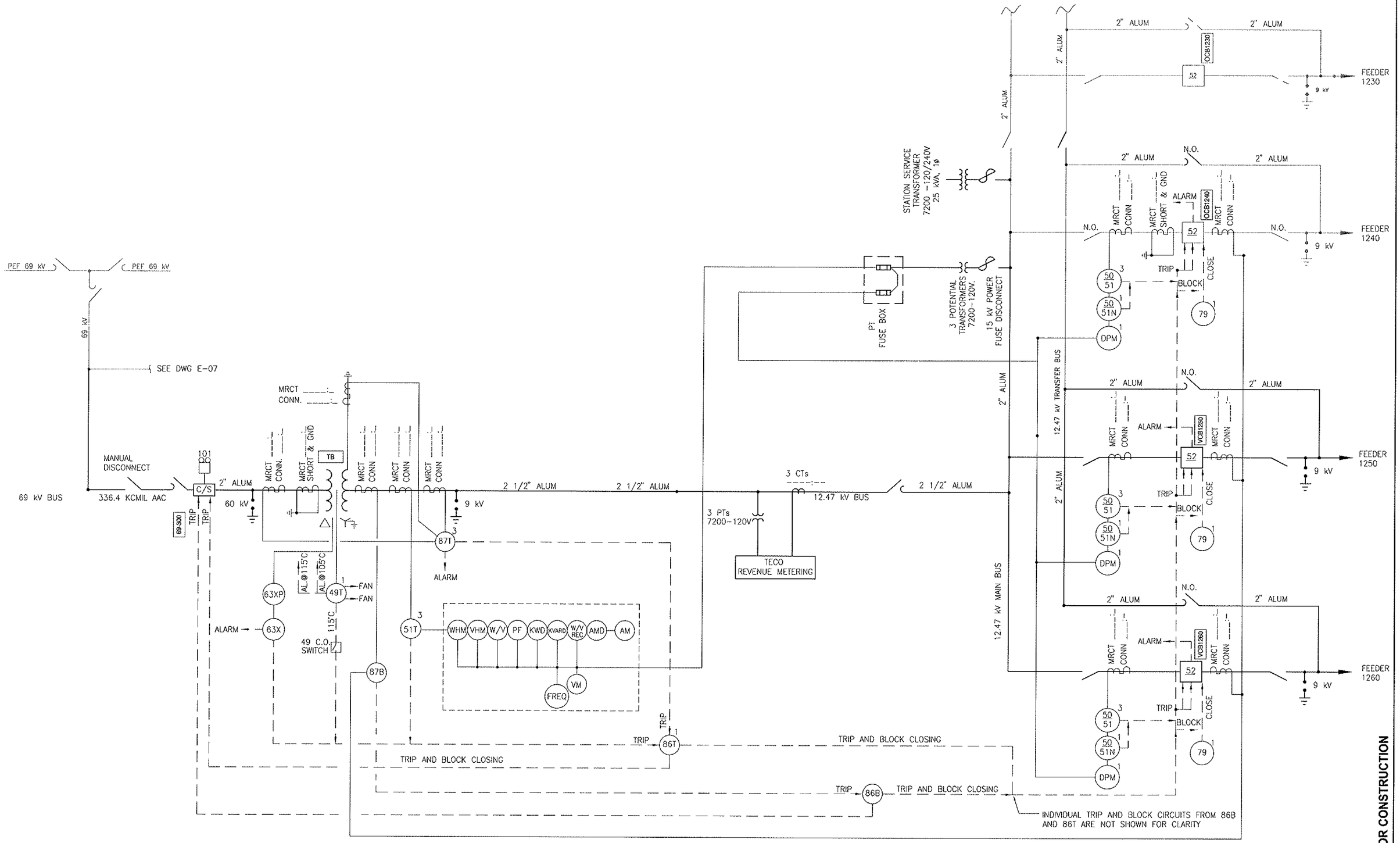

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DRAWN AO
CHECKED PW

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730 NE WALDO ROAD, GAINESVILLE, FLORIDA 32641 / (352) 377-5821
1100 CESERY BLVD - SECOND FLOOR, JACKSONVILLE, FLORIDA 32211 / (904) 744-5401

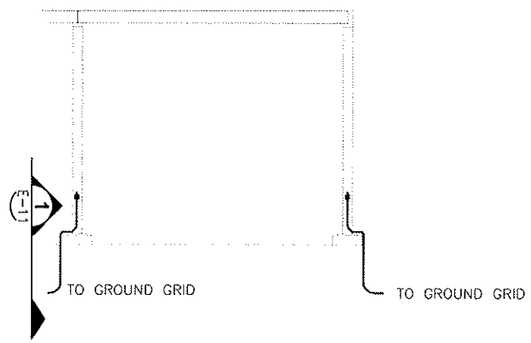
WAUCHULA SUBSTATION RESTORATION/EXPANSION
WAUCHULA, FLORIDA

PROPOSED RELAY AND METERING ONE-LINE DIAGRAM

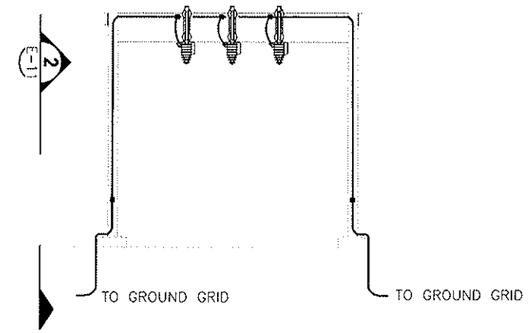
CERTIFICATE OF AUTHORIZATION #1841
APPROVED BY
PHIL WEBER
P.E. # 36601

DATE	PROJECT NO.
JULY 2009	07602-032-01
SCALE	DWG. NO.
1"=8'	E-08

© Jones Edmunds 2234

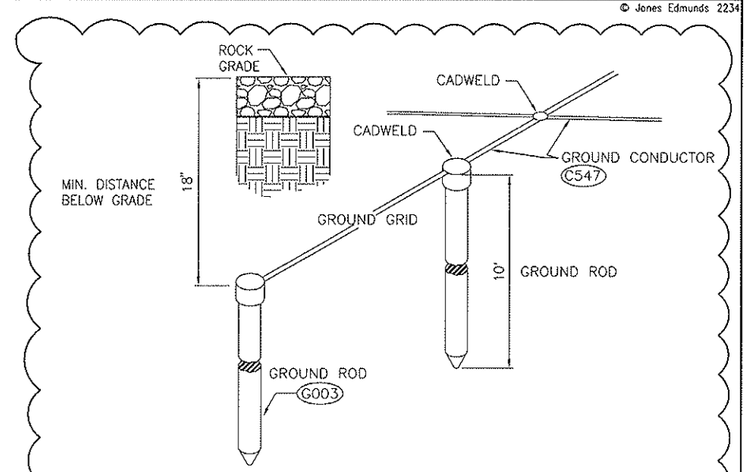


BAYS WITHOUT EQUIPMENT
(SINGLE COLUMN STRUCTURE SIMILAR)

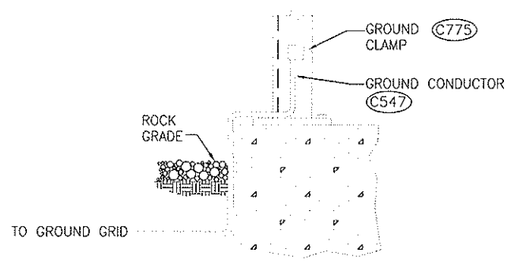


END BAY WITH P.T.'S
(BAY WITH ARRESTERS SIMILAR)

12.47 KV FEEDER STRUCTURE GROUNDING

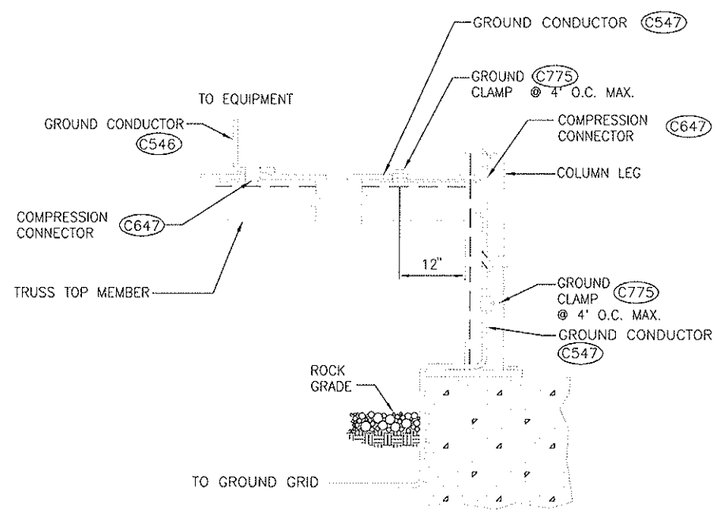


TYPICAL GROUND ROD CONNECTION



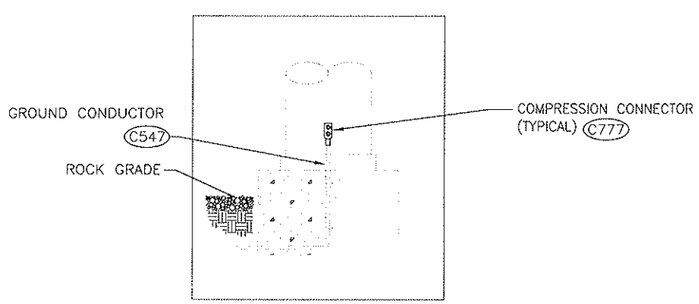
SECTION 1
E-11

TYPICAL STRUCTURE WITHOUT EQUIPMENT GROUNDING CONNECTION

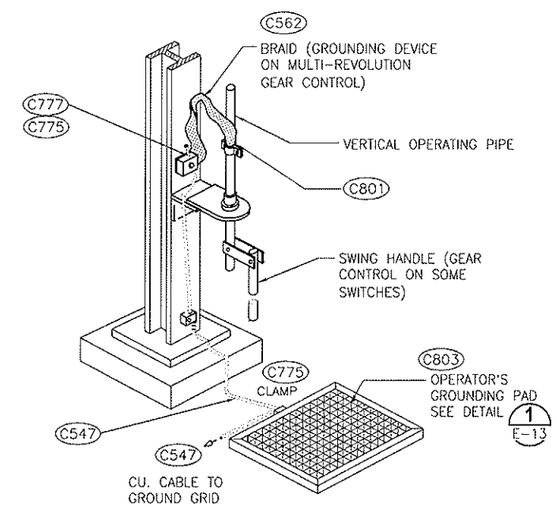


SECTION 2
E-11

TYPICAL STRUCTURE WITH EQUIPMENT GROUNDING CONNECTION



LIGHTNING MAST GROUNDING (2 REQ.)



SWITCH HANDLE GROUNDING DETAIL
N.T.S.
TYPICAL

FOR CONSTRUCTION

LTR.	DATE	REVISIONS	BY	APPRD.

DESIGNED AO
DRAWN AO
CHECKED PW

JONES EDMUNDS
730 NE WALDO ROAD, GAINESVILLE, FLORIDA 32641 / (352) 377-5821
1100 CESERY BLVD · SECOND FLOOR, JACKSONVILLE, FLORIDA 32211 / (904) 744-5401

WAUCHULA SUBSTATION RESTORATION/EXPANSION
WAUCHULA, FLORIDA

GROUNDING DETAILS

CERTIFICATE OF AUTHORIZATION #1841
APPROVED BY
PHIL WEBER
P.E. # 36601

DATE JULY 2009
PROJECT NO. 07602-032-01
SCALE NTS
DWG. NO. E-11

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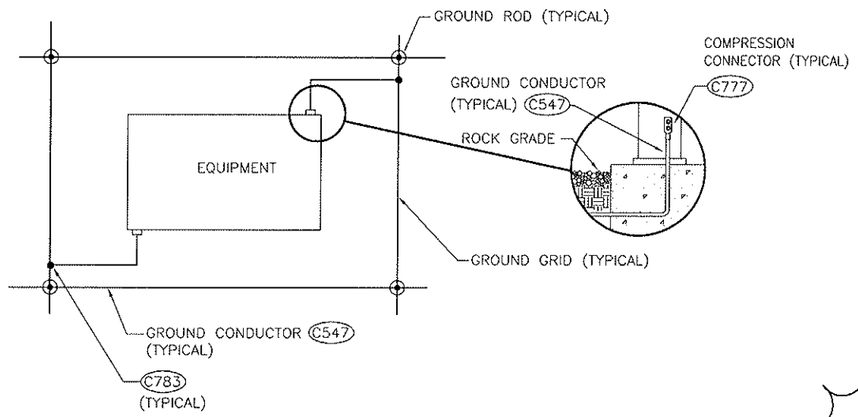
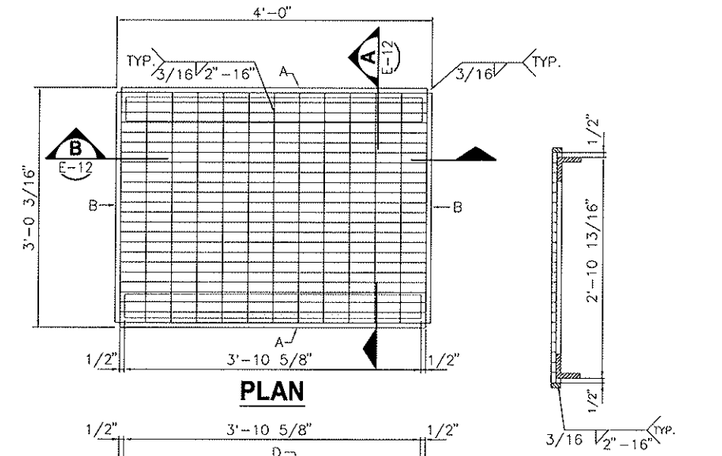


CIRCUIT BREAKER TYPICAL EQUIPMENT CONNECTION



PLAN

SECTION A E-12

SECTION B E-12

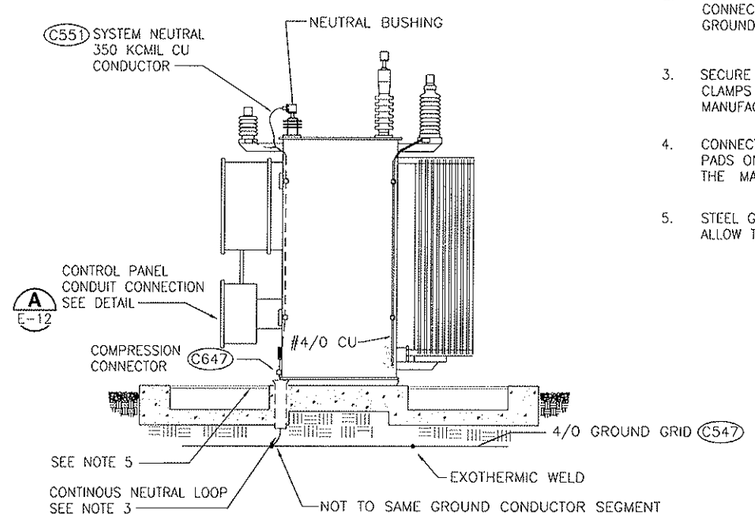
NOTE:
1. HOT DIP GALVANIZED AFTER FABRICATION

NOTES:

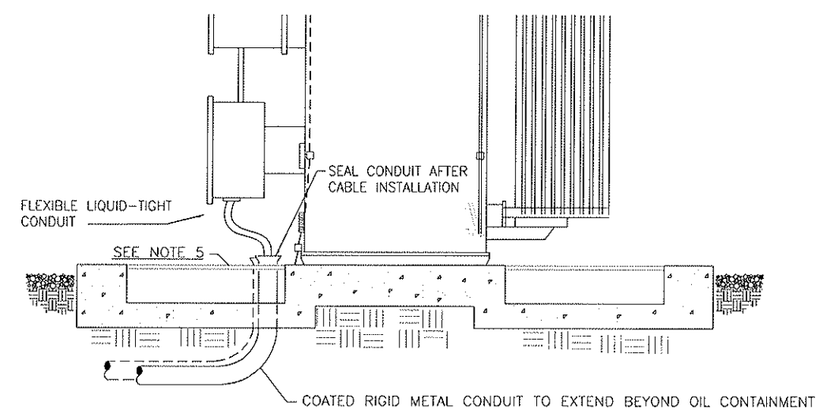
1. SECURE ARRESTER GROUNDS TO TANK USING APPROPRIATE CABLE CLAMPS.
2. NEUTRAL CONDUCTOR SHALL BE A CONTINOUS LOOP CONNECTED FROM THE GROUND PAD TO THE GROUND GRID USING CAD WELD AT BOTH ENDS.
3. SECURE SYSTEM NEUTRAL TO TANK USING CABLE CLAMPS FURNISHED BY THE TRANSFORMER MANUFACTURER.
4. CONNECT RISER FROM GROUND GRID TO GROUND PADS ON TANK USING CONNECTORS FURNISHED BY THE MANUFACTURER.
5. STEEL GRATING SHALL BE FABRICATED OR CUT TO ALLOW THE PENETRATION OF CONDUITS.

MATERIAL LIST FOR ONE (1) GROUND PAD		
MARK	QUA.	DESCRIPTION
A	2	BAR 1 1/2"X3/16"X3'-11 5/8"
B	2	BAR 1 1/2"X3/16"X2'-11 3/16"
C	2	ANGLE 4X4X1/4X3'-10 5/8"
D	1	GRATING (BORDEN TYPE B-4 OR EQUAL)

SWITCH OPERATOR'S GROUNDING PAD



POWER TRANSFORMER GROUNDING 1 E-12



CONTROL PANEL CONDUIT CONNECTION A E-12

FOR CONSTRUCTION

LTR.	DATE	REVISIONS	BY	APPRD.

DESIGNED AO
DRAWN AO
CHECKED PW

JONES EDMUNDS
730 NE WALDO ROAD, GAINESVILLE, FLORIDA 32641 / (352) 377-5821
1100 CESERY BLVD · SECOND FLOOR, JACKSONVILLE, FLORIDA 32211 / (904) 744-5401

WAUCHULA SUBSTATION RESTORATION/EXPANSION
WAUCHULA, FLORIDA

GROUNDING DETAILS

CERTIFICATE OF AUTHORIZATION #1841
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P.E. # 36601

DATE JULY 2009
PROJECT NO. 07602-032-01
SCALE NTS
DWG. NO. E-12

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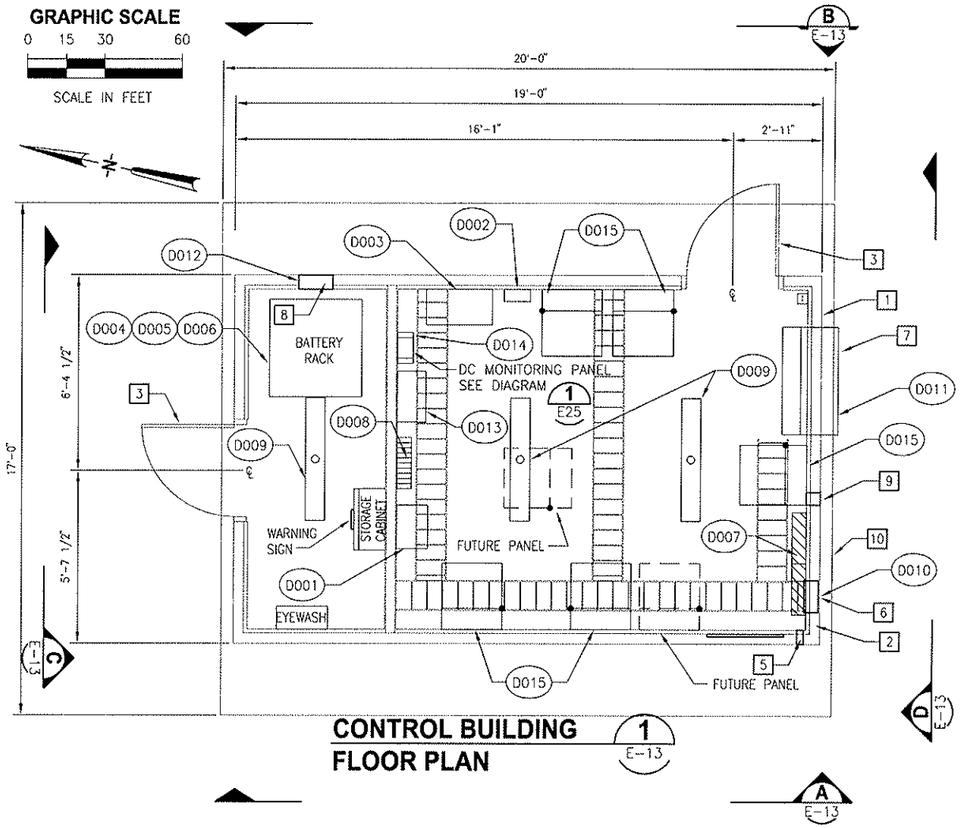


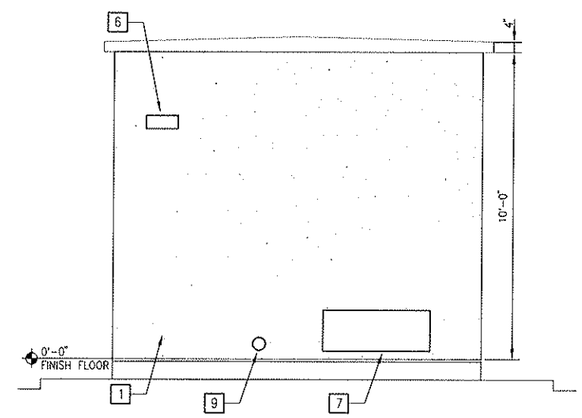
CONTROL BUILDING FLOOR PLAN 1 E-13

NEW WORK KEYNOTES:

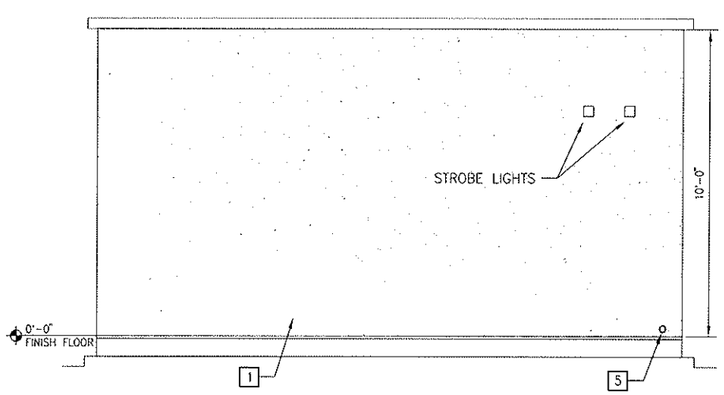
1. MINIMUM 4" THICK PRECAST CONCRETE WALL PANEL.
2. MINIMUM 1-1/2" RIGID INSULATION WITH RFP WOOD PANEL FINISH AS SPECIFIED.
3. 3'-0" X 9'-0" EXTERIOR HOLLOW METAL DOORS.
4. 12" X 8" FILTERED DOOR GRILLE
5. PROVIDE 2-1/2"ø PVC SLEEVE OPENING AT 3" AFF. COORDINATE EXACT LOCATION WITH ELECTRICAL DRAWINGS.
6. PROVIDE 12-1/2" X 5" OPENING AT 7'-6" AFF FOR CABLE TRAY. COORDINATE EXACT LOCATION WITH ELECTRICAL DRAWINGS.
7. PROVIDE 42-1/4" X 16-1/4" OPENING AT 3-1/4" AFF (MIN.) OPENING FOR PTAC-1. SEE DRAWING E-14 FOR ADDITIONAL INFORMATION.
8. PROVIDE 13-1/4" SQ. OPENING AT 7'-9" AFF FOR EXHAUST FAN. COORDINATE EXACT LOCATION WITH ELECTRICAL DRAWINGS.
9. PROVIDE 5"ø PVC SLEEVE OPENING AT 6" AFF. FOR FUTURE COMMUNICATIONS CABLING COORDINATE EXACT LOCATION WITH ELECTRICAL DRAWINGS.
10. EDGE OF CONCRETE FOUNDATION SLAB.

GENERAL NOTES:

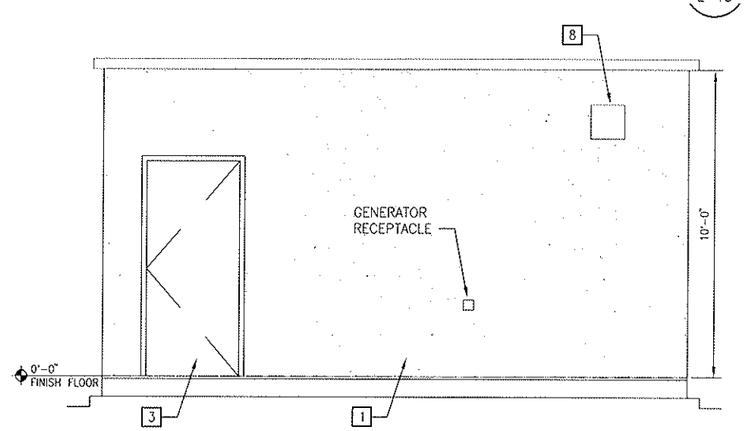
1. THE BUILDING SHALL BE A PRECAST CONCRETE BUILDING AND SHALL BE DESIGNED IN ACCORDANCE WITH THE STRUCTURAL DESIGN CRITERIA SPECIFIED.
2. EXTERIOR FINISH SHALL BE EXPOSED AGGREGATE.
3. PLAN AND ELEVATIONS REPRESENT A TYPICAL PRECAST CONCRETE BUILDING.
4. COORDINATE EXACT LOCATION WITH ELECTRICAL DRAWINGS.
5. REFER TO SPECIFICATION SECTION 13100 PRECAST CONCRETE BUILDING PRE-ASSEMBLED FOR COMPLETE SPECIFICATION INFORMATION.
6. MANUFACTURER WILL PROVIDE AN ACRYLIC COATING FOR EXPOSED CONCRETE AND MASONRY, AND FOR AN ATMOSPHERIC WEATHERING ENVIRONMENT.
   - A. TYPE: ACRYLIC ENAMEL OR ACRYLIC LATEX HAVING A MINIMUM VOLUME SOLIDS OF 36%
   - B. SERVICE CONDITIONS: EXPOSED CONCRETE OR MASONRY EXPOSED TO NORMAL SUNLIGHT AND WEATHERING.
   - C. PRIME COAT: [NOTE: CONSIDER USING AN EPOXY FILLER FOR GREATER DURABILITY AND ADHESION TO THE SUBSTRATE.] WATER-BORNE ACRYLIC OR CEMENTITIOUS ACRYLIC EMULSION HAVING A MINIMUM SOLIDS VOLUME OF 40%. APPLY ONE COAT OF CARBOLINE "FLEXIDE" MASONRY BLOCK FILLER TO FILL ALL VOIDS, PORES, AND CRACKS; ICI DEVOE BLOXFILL 4000; AMERLOCK 400 BF; TNEMEC 54-562 MASONRY FILLER SINGLE COMPONENT EPOXY; INTERNATIONAL INTERCRYL 320WB; SHERWIN-WILLIAMS HEAVY DUTY BLOCK FILLER B42W46 AT 10.0-18.0 MILS DFT; PPG SPEEDHIDE® INT/EXT ACRYLIC MASONRY BLOCK FILLER 6-15; OR EQUAL. [NOTE: FOR GREATER FILLING REQUIREMENTS USE TNEMEC SERIES 130 ENVIROFIL.]
   - D. FINISH COAT: TWO COATS OF CARBOLINE 3350, TWO COATS OF ICI DEVOE 4208; TWO COATS OF AMERON 220; TWO COATS TNEMEC SERIES 6 AT 2.0-3.0 MILS PER COAT; TWO COATS OF INTERNATIONAL INTERCRYL 530WB 520; SHERWIN-WILLIAMS METALATEX SEMI-GLOSS B42 SERIES AT 2.0-4.0 MILS DFT/COAT; TWO COATS OF PPG INT/EXT SEMI-GLOSS ACRYLIC METAL FINISH 7-374 SERIES; OR EQUAL. APPLY TO A THICKNESS OF 2 MILS PER COAT.



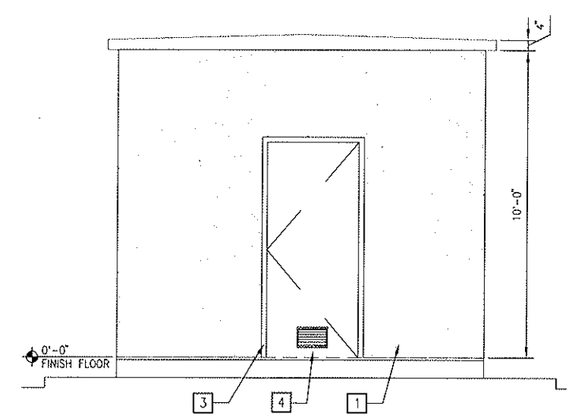
SECTION D E-13



SECTION A E-13



SECTION B E-13



SECTION C E-13

FOR CONSTRUCTION

LTR.	DATE	REVISIONS	BY	APPRD.

DESIGNED AO
DRAWN AO
CHECKED PW

JONES EDMUNDS
730 NE WALDO ROAD, GAINESVILLE, FLORIDA 32641 / (352) 377-5821
1100 CESERY BLVD · SECOND FLOOR, JACKSONVILLE, FLORIDA 32211 / (904) 744-5401

WAUCHULA SUBSTATION RESTORATION/EXPANSION
WAUCHULA, FLORIDA

CONTROL BUILDING
PLAN AND ELEVATIONS

CERTIFICATE OF AUTHORIZATION #1841
APPROVED BY
PHIL WEBER
P.E. # 36601

DATE JULY 2009
SCALE NTS
PROJECT NO. 07602-032-01
DWG. NO. E-13

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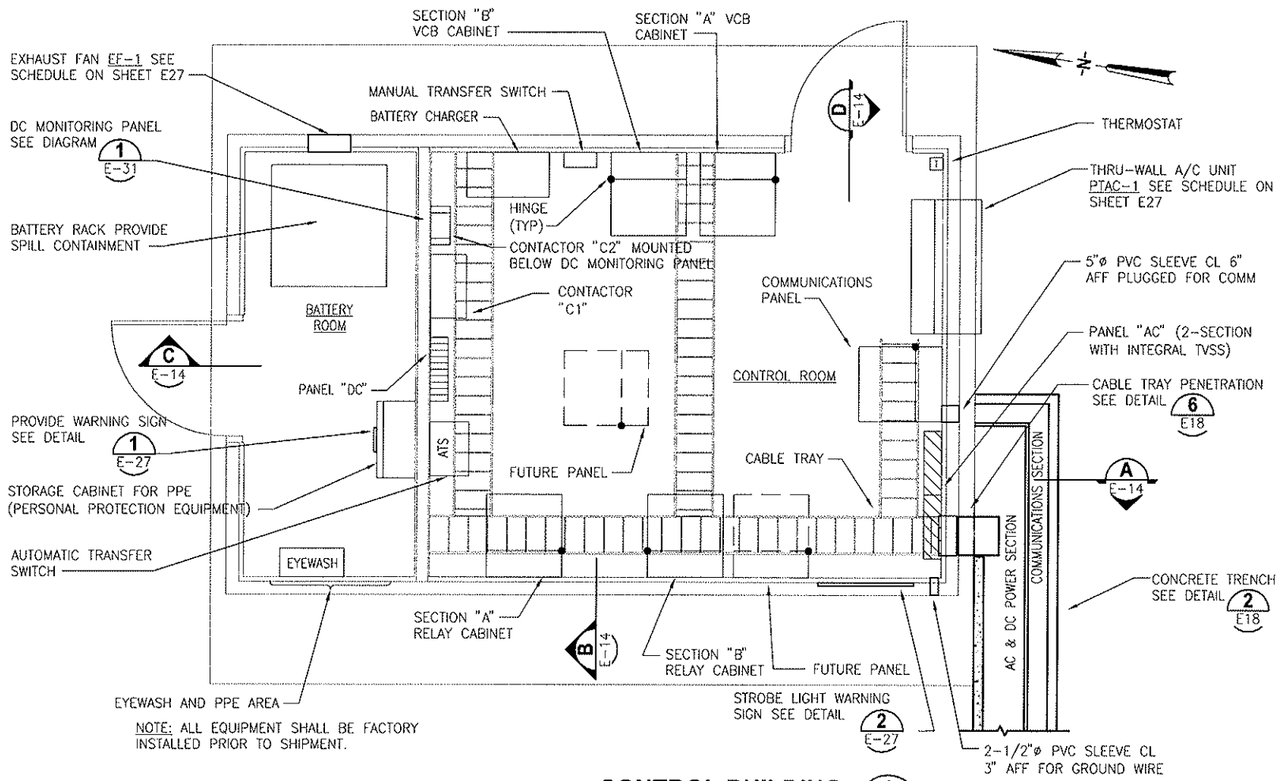
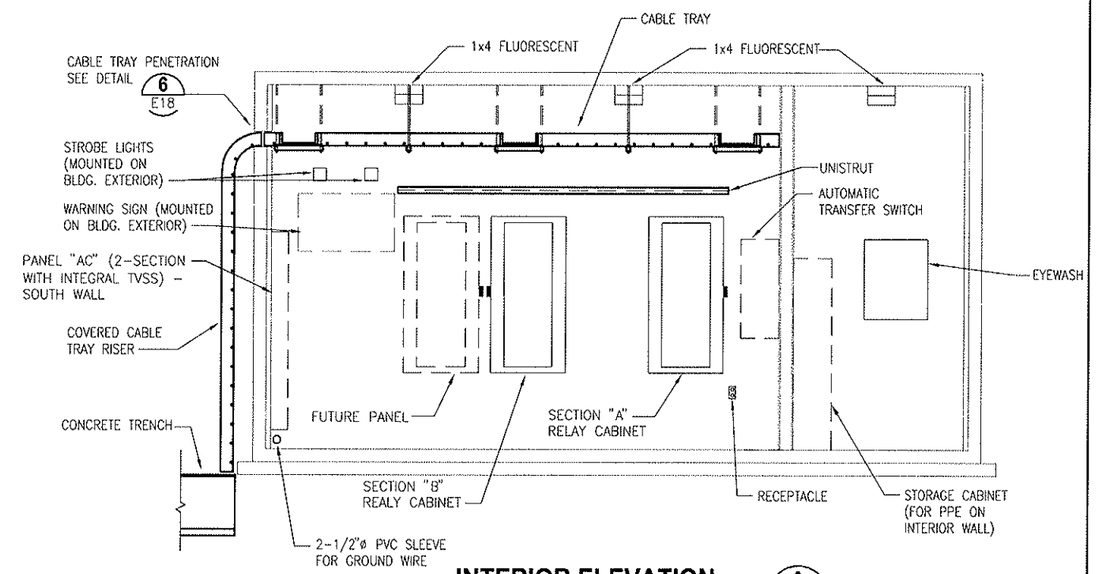
NOTES:

1. PROVIDE GUTTER FOR ROUTING BETWEEN WALL PENETRATION & BOTTOM OF COMMUNICATION PANEL.

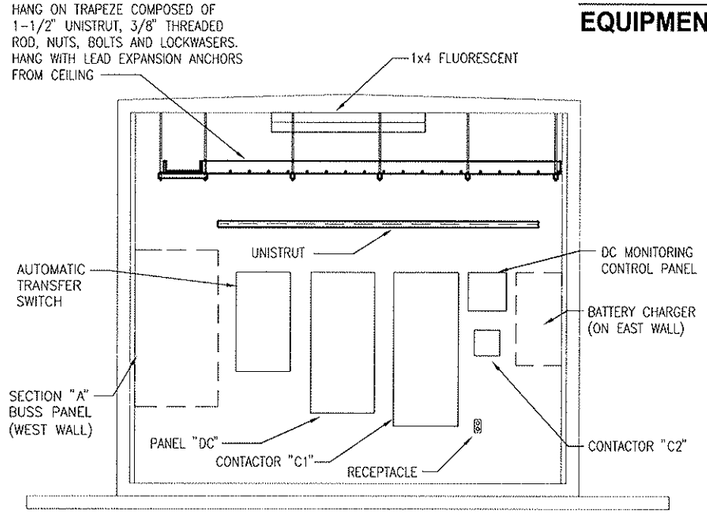


NOTE: ALL EQUIPMENT SHALL BE FACTORY INSTALLED PRIOR TO SHIPMENT.

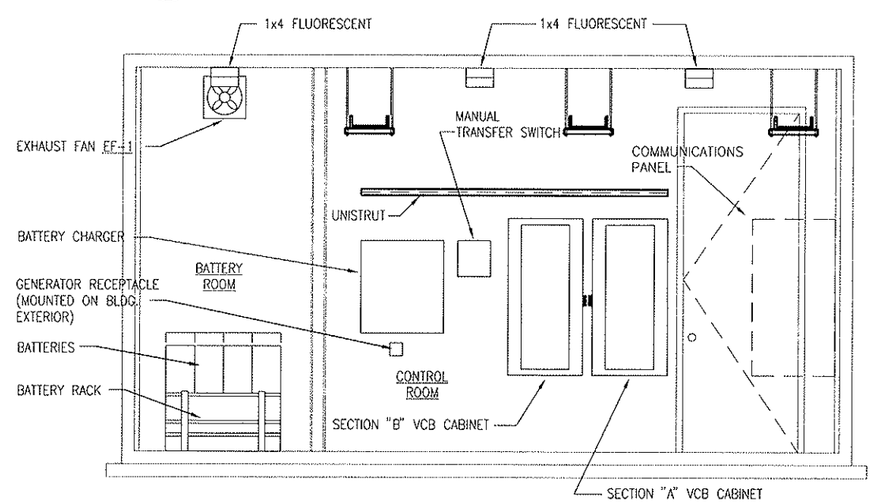
CONTROL BUILDING EQUIPMENT PLAN (1 / E-14)



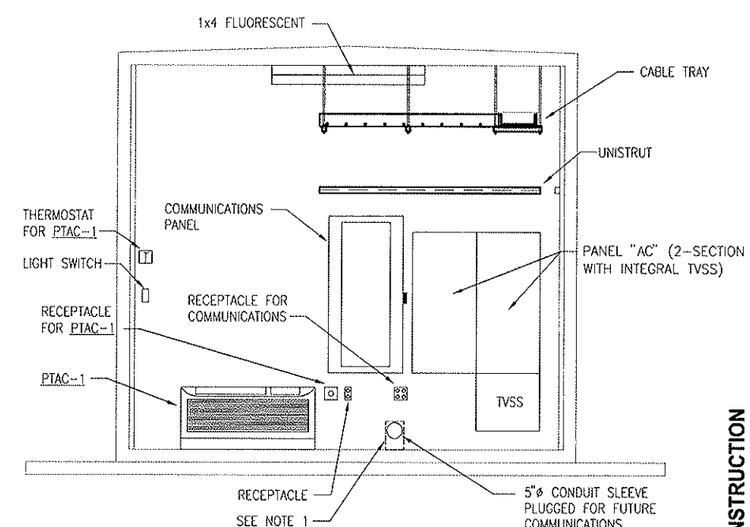
INTERIOR ELEVATION WEST PARTITION WALL (A / E-14)



INTERIOR ELEVATION NORTH PARTITION WALL (B / E-14)



INTERIOR ELEVATION EAST PARTITION WALL (C / E-14)



INTERIOR ELEVATION SOUTH PARTITION WALL (D / E-14)

FOR CONSTRUCTION

LTR.	DATE	REVISIONS	BY	APPRD.

DESIGNED AO
DRAWN AO
CHECKED PW

JONES EDMUNDS
730 NE WALDO ROAD, GAINESVILLE, FLORIDA 32641 / (352) 377-5821
1100 CESERY BLVD - SECOND FLOOR, JACKSONVILLE, FLORIDA 32211 / (904) 744-5401

WAUCHULA SUBSTATION RESTORATION/EXPANSION
WAUCHULA, FLORIDA

CONTROL BUILDING
PLAN AND DETAILS

CERTIFICATE OF AUTHORIZATION #1841
APPROVED BY
PHIL WEBER
P.E. # 36601

DATE JULY 2009
PROJECT NO. 07602-032-01
SCALE NTS
DWG. NO. E-14

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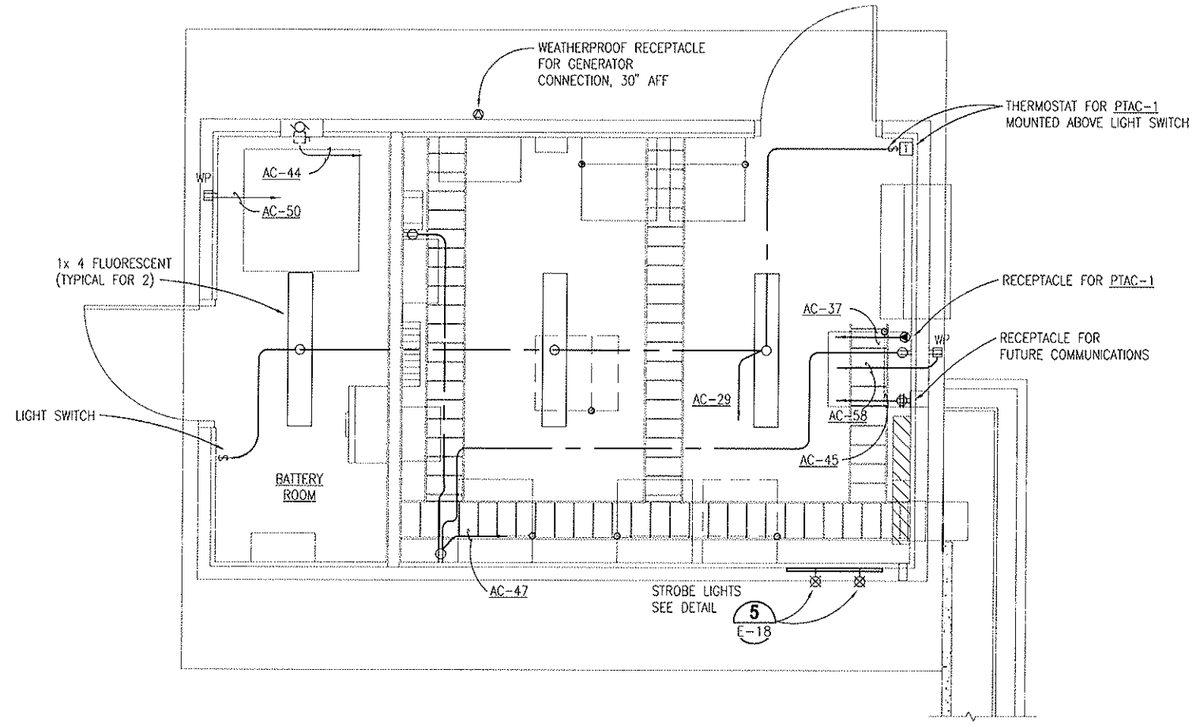
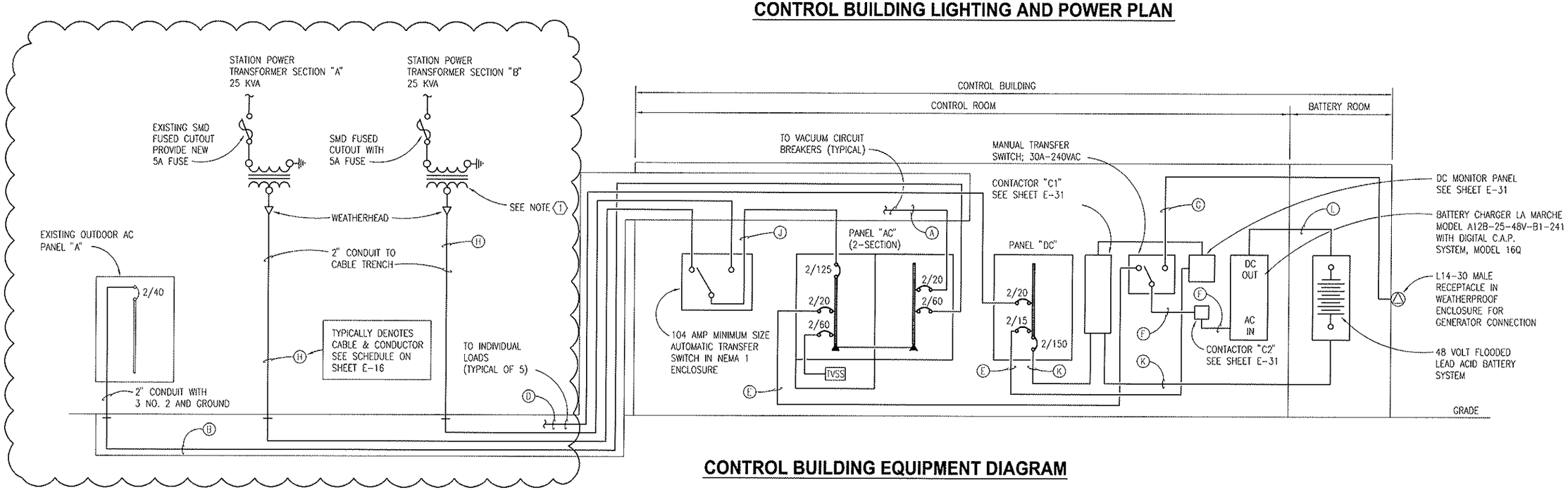
NOTE:

(1) OWNER WILL FURNISH (2) NEW 25 KVA 7200 – 120/240 VOLT AERIAL TRANSFORMERS.



CONTROL BUILDING LIGHTING AND POWER PLAN



CONTROL BUILDING EQUIPMENT DIAGRAM

FOR CONSTRUCTION

LTR.	DATE	REVISIONS	BY	APPRD.

DESIGNED AO
DRAWN AO
CHECKED PW

JONES EDMUNDS
730 NE WALDO ROAD, GAINESVILLE, FLORIDA 32641 / (352) 377-5821
1100 CESERY BLVD - SECOND FLOOR, JACKSONVILLE, FLORIDA 32211 / (904) 744-5401

WAUCHULA SUBSTATION RESTORATION/EXPANSION
WAUCHULA, FLORIDA

AC & DC SYSTEM
ONE-LINE DIAGRAM

CERTIFICATE OF AUTHORIZATION #1841
APPROVED BY
PHIL WEBER
P.E. # 36601

DATE JULY 2009
SCALE NTS
PROJECT NO. 07602-032-01
DWG. NO. E-15

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PANEL AC (2-SECTION)

120/240 VOLT, 1 PHASE, 3 WIRE, 125 AMP MAIN BREAKER, SURFACE MOUNTED. ALL BREAKERS SHALL HAVE A MINIMUM INTERRUPTING CAPACITY OF 10,000 RMS SYMMETRICAL AMPERES. WITH COPPER PHASE, NEUTRAL AND GROUND BUS.

CKT. NO.	POLE	TRIP	CABLE SCHEDULE	SERVES	CKT. NO.	POLE	TRIP	CABLE SCHEDULE	SERVES
1	2	20	A	VACUUM FEEDER BREAKER 1210	2	2	20	A	VACUUM FEEDER BREAKER 1240
3	--	--	--	----	4	--	--	--	----
5	1	20	C	FEEDER BREAKER 1210 - GFCI	6	1	20	C	FEEDER BREAKER 1240 - GFCI
7	2	20	A	VACUUM FEEDER BREAKER 1220	8	2	20	A	VACUUM FEEDER BREAKER 1250
9	--	--	--	----	10	--	--	--	----
11	1	20	C	FEEDER BREAKER 1220 - GFCI	12	1	20	C	FEEDER BREAKER 1250 - GFCI
13	2	20	A	VACUUM FEEDER BREAKER 1230	14	2	20	A	VACUUM FEEDER BREAKER 1260
15	--	--	--	----	16	--	--	--	----
17	1	20	C	FEEDER BREAKER 1230 - GFCI	18	1	20	C	FEEDER BREAKER 1260 - GFCI
19	2	20	F	BATTERY CHARGER (MTS)	20	2	???	A	OUTDOOR PANELBOARD "A"
21	--	--	--	----	22	--	--	--	----
23	1	20	--	SPARE	24	1	20	--	SPARE
25	2	20	--	SPARE	26	2	20	--	SPARE
27	--	--	--	----	28	--	--	--	----
29	1	20	--	SPARE	30	1	20	--	SPARE
31	2	30	A	SECTION "B" POWER TRANSFORMER	32	2	30	A	SECTION "B" CIRCUIT SWITCHER
33	-	--	--	----	34	--	--	--	----
35	1	20	C	SECTION "B" TRANSFORMER - GFCI	36	1	20	C	SECTION "B" SWITCHER - GFCI
37	2	15	F	PTAC-1	38	2	60	A	TVSS
39	--	--	--	----	40	--	--	--	-
41	1	20	C	SITE LIGHTING - LIGHTNING MAST #1	42	1	20	C	SITE LIGHTING - BAY 1260 #2
43	1	20	--	SPARE	44	1	20	E	EF-1
45	1	20	E	COMMUNICATION RECEPTACLE	46	2	20	B	SUMP PUMP - GFCI OUTLET
47	1	20	E	CONTROL ROOM RECEPTACLE	48	--	--	--	-
49	1	20	E	CONTROL ROOM LIGHTING	50	1	20	E	EXTERIOR GFCI OUTLET
51	--	--	--	----	52	1	20	E	EXTERIOR GFCI OUTLET
53	1	20	--	SPARE	54	1	20	--	SPARE
55	2	20	--	SPARE	56	2	20	--	SPARE
57	--	--	--	----	58	--	--	--	----
59	1	20	--	SPARE	60	1	20	--	SPARE

PANEL DC

48VDC VOLT, 1 PHASE, 2 WIRE, 150 AMP MAIN BREAKER, SURFACE MOUNTED. ALL BREAKERS SHALL HAVE A MINIMUM INTERRUPTING CAPACITY OF 10,000 RMS SYMMETRICAL AMPERES. WITH COPPER PHASE BUS

CKT. NO.	POLE	TRIP	CABLE SCHEDULE	SERVES	CKT. NO.	POLE	TRIP	CABLE SCHEDULE	SERVES
1	2	20	D	VACUUM FEEDER BREAKER 1210	2	2	20	D	VACUUM FEEDER BREAKER 1240
3	--	--	--	-	4	--	--	--	-
5	2	20	D	VACUUM FEEDER BREAKER 1220	6	2	20	D	VACUUM FEEDER BREAKER 1250
7	--	--	--	-	8	--	--	--	-
9	2	20	D	VACUUM FEEDER BREAKER 1230	10	2	20	D	VACUUM FEEDER BREAKER 1260
11	--	--	--	-	12	--	--	--	-
13	2	20	D	SECTION "B" POWER TRANSFORMER	14	2	20	D	SECTION "B" CIRCUIT SWITCHER
15	--	--	--	----	16	--	--	--	----
17	2	15	E	DC MONITORING PANEL	18	2	20	E	TRANSFORMER "B" RELAY CABINET
19	--	--	--	-	20	--	--	--	-
21	2	15	E	DISTRIBUTION FEEDER BRKR CABINET	22	2	20	E	SECTION "B" TECO METERING CABINET
23	--	--	--	-	24	--	--	--	-
25	2	20	E	SECTION "A" TECO METERING CABINET	26	2	15	E	SPARE
27	--	--	--	-	28	-	--	---	----
29	-	--	---	SPACE	30	-	--	---	SPACE

CABLE & CONDUCTOR SCHEDULE

- Ⓐ 3/C#12 WITH GROUND - TRAY CABLE
- Ⓑ 3/C#2 WITH GROUND - TRAY CABLE
- Ⓒ 2/C#12 WITH GROUND - TRAY CABLE
- Ⓓ 2/C#12 - TRAY CABLE
- Ⓔ (2) #12 WITH GROUND IN 3/4" CONDUIT
- Ⓕ (3) #12 WITH GROUND IN 3/4" CONDUIT
- Ⓖ (3) #10 WITH GROUND IN 3/4" CONDUIT
- Ⓗ 3/C#1/0 - TRAY CABLE
- Ⓙ (3) #1/0 WITH GROUND IN 2-1/2" CONDUIT
- Ⓚ (2) #1/0 WITH GROUND IN 2" CONDUIT
- Ⓛ (2) #10 STRANDED IN 3/4" CONDUIT

DC CABLE TAG SCHEDULE

VOLTAGE					
48 VDC	TO	F	B	#	1210
48 VDC	TO	F	B	#	1220
48 VDC	TO	F	B	#	1230
48 VDC	TO	F	B	#	1240
48 VDC	TO	F	B	#	1250
48 VDC	TO	F	B	#	1260
48 VDC	TO	TRFMR		#	2
48 VDC	TO	C/S		#	2
48 VDC	TO	TECO	METERING		
48 VDC	TO				
48 VDC	TO				

FUTURE

NOTE: REFERENCE DETAIL 4 / E-18

AC CABLE TAG SCHEDULE

VOLTAGE					
240 VAC	TO	F	B	#	1210
120 VAC	TO	F	B	#	1210
240 VAC	TO	F	B	#	1220
120 VAC	TO	F	B	#	1220
240 VAC	TO	F	B	#	1230
120 VAC	TO	F	B	#	1230
240 VAC	TO	F	B	#	1240
120 VAC	TO	F	B	#	1240
240 VAC	TO	F	B	#	1250
120 VAC	TO	F	B	#	1250
240 VAC	TO	F	B	#	1260
120 VAC	TO	F	B	#	1260
240 VAC	TO	TRAN		#	2
240 VAC	TO	TRAN		#	2
240 VAC	TO	C/S		#	2
120 VAC	TO	C/S		#	2
240 VAC	TO				
240 VAC	TO				
240 VAC	TO				
240 VAC	TO	SOURCE		#	1
240 VAC	TO	SOURCE		#	2
120 VAC	TO	SL	#	1	
120 VAC	TO	SL	#	2	
120 VAC	TO				

FUTURE

NOTE: REFERENCE DETAIL 4 / E-18

FOR CONSTRUCTION

LTR.	DATE	REVISIONS	BY	APPRD.

DESIGNED AO
DRAWN AO
CHECKED PW

JONES EDMUNDS
730 NE WALDO ROAD, GAINESVILLE, FLORIDA 32641 / (352) 377-5821
1100 CESERY BLVD - SECOND FLOOR, JACKSONVILLE, FLORIDA 32211 / (904) 744-5401

WAUCHULA SUBSTATION RESTORATION/EXPANSION
WAUCHULA, FLORIDA

AC & DC SYSTEM SCHEDULES

CERTIFICATE OF AUTHORIZATION #1841
APPROVED BY
PHIL WEBER
P.E. # 36601

DATE JULY 2009
SCALE NTS
PROJECT NO. 07602-032-01
DWG. NO. E-16

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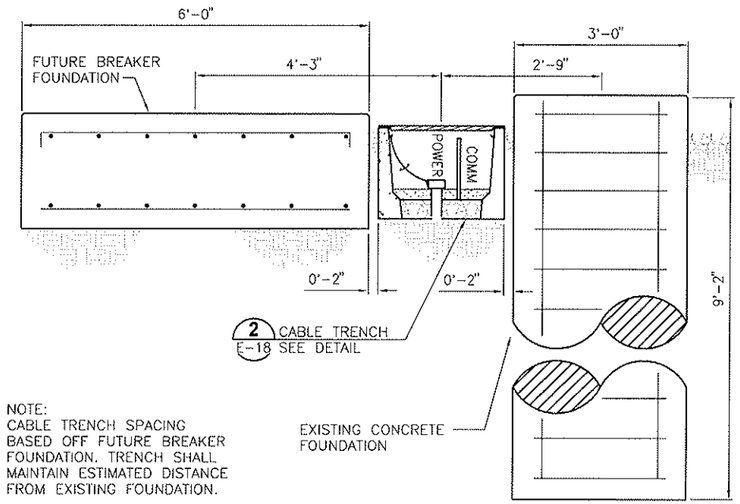
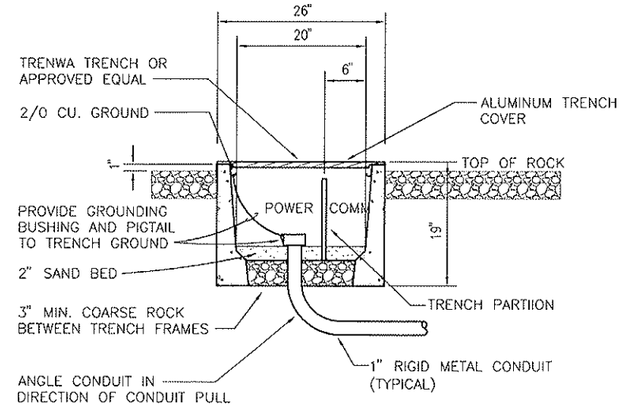
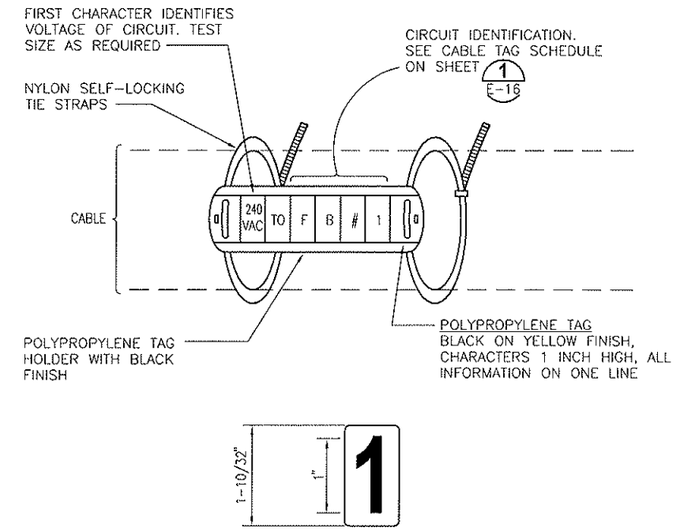


NOTE:
CABLE TRENCH SPACING BASED OFF FUTURE BREAKER FOUNDATION. TRENCH SHALL MAINTAIN ESTIMATED DISTANCE FROM EXISTING FOUNDATION.

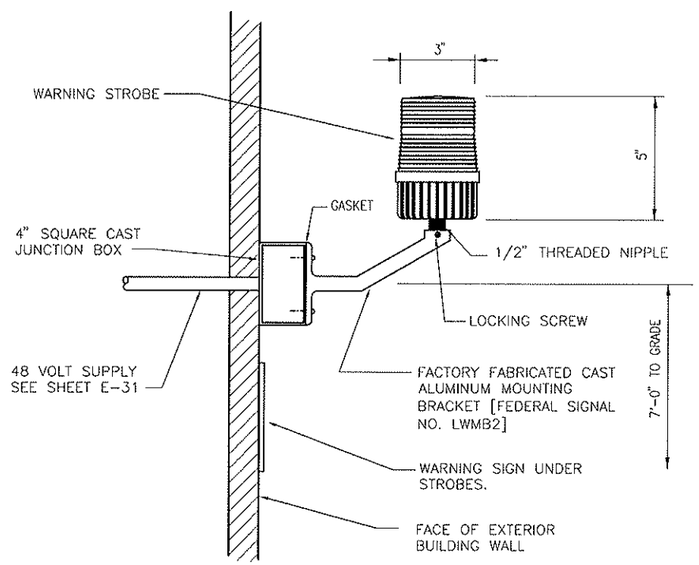
SECTION - TYPICAL PRECAST TRENCH (1 / E-18)



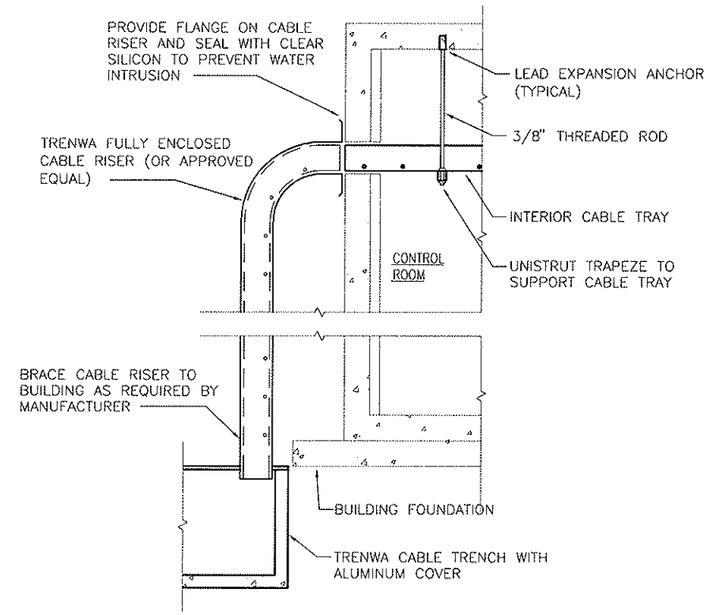
SECTION - TYPICAL PRECAST TRENCH DETAIL (2 / E-18)



CABLE IDENTIFICATION TAG (4 / E-18)



WARNING STROBE MOUNTING DETAIL (5 / E-18)



CABLE TRAY RISER DETAIL (6 / E-18)

FOR CONSTRUCTION

LTR.	DATE	REVISIONS	BY	APPRD.

DESIGNED AO
DRAWN AO
CHECKED PW

JONES EDMUNDS
730 NE WALDO ROAD, GAINESVILLE, FLORIDA 32641 / (352) 377-5821
1100 CESERY BLVD - SECOND FLOOR, JACKSONVILLE, FLORIDA 32211 / (904) 744-5401

WAUCHULA SUBSTATION RESTORATION/EXPANSION
WAUCHULA, FLORIDA

MISCELLANEOUS ELECTRICAL DETAILS

CERTIFICATE OF AUTHORIZATION #1841
APPROVED BY
PHIL WEBER
P.E. # 36601

DATE JULY 2009
PROJECT NO. 07602-032-01
SCALE NTS
DWG. NO. E-18

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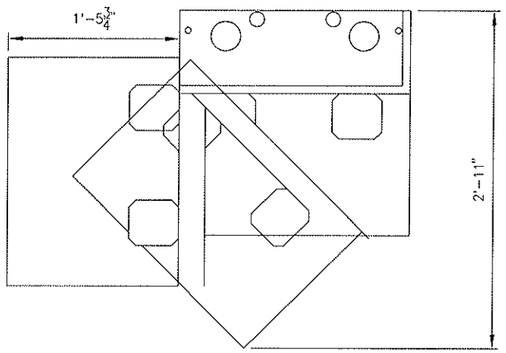
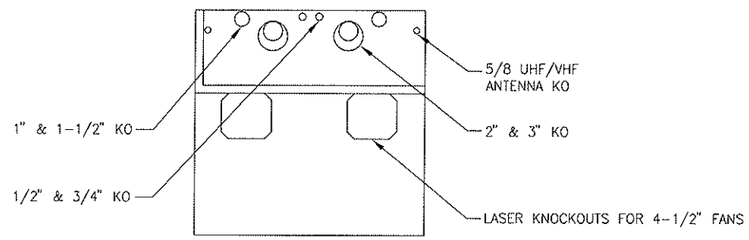
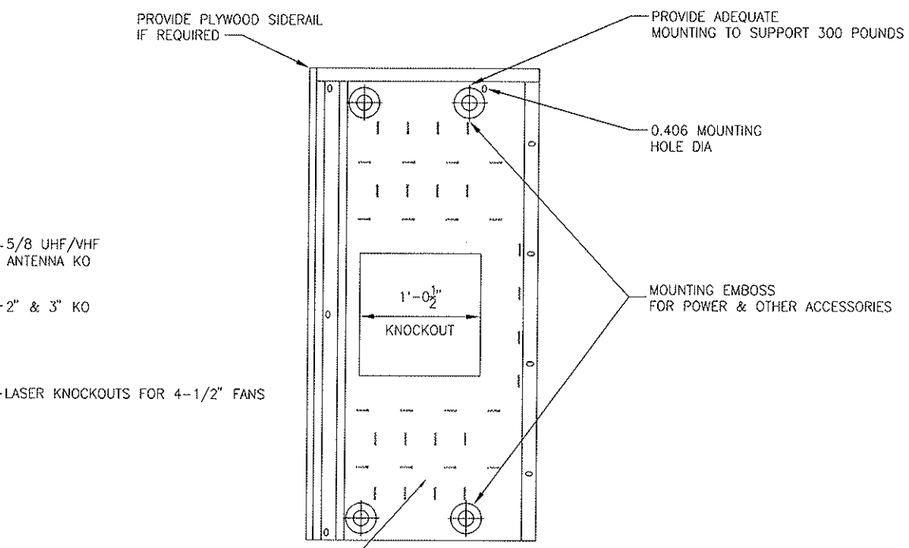


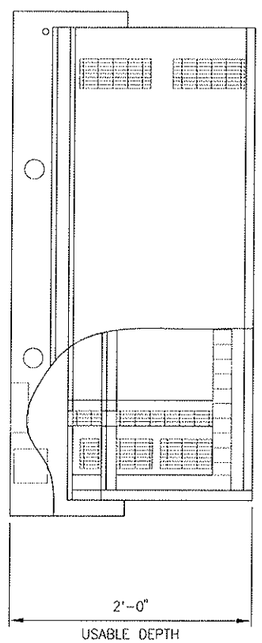
CENTER SECTION CLEARANCE



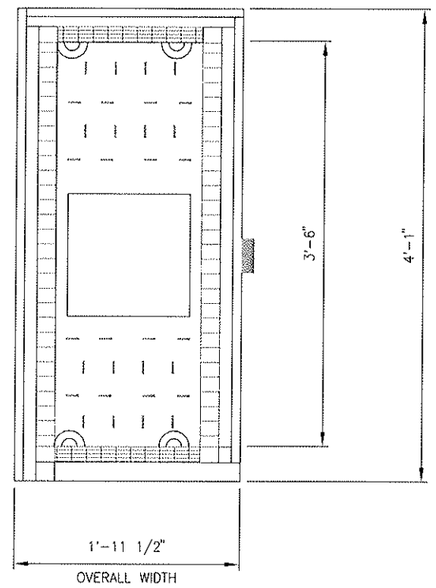
TOP VIEW



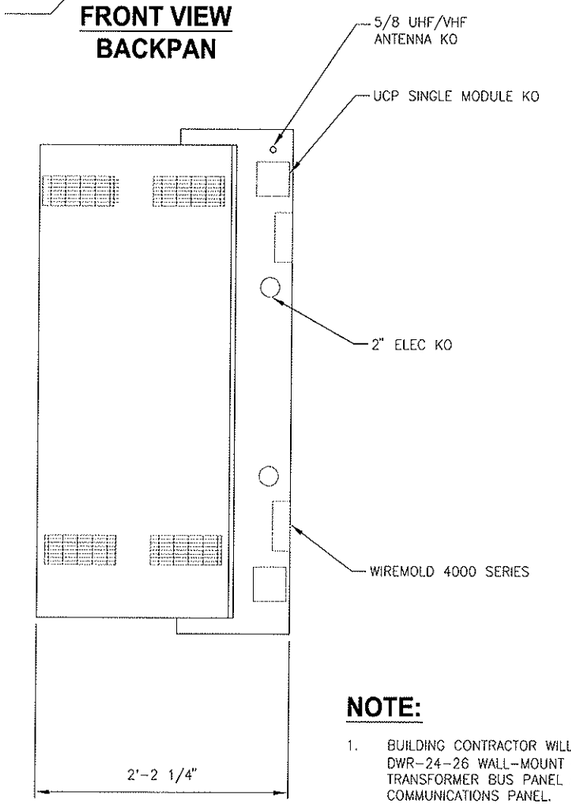
FRONT VIEW BACKPAN



SIDE VIEW



FRONT VIEW CENTER SECTION



SIDE VIEW

NOTE:

1. BUILDING CONTRACTOR WILL PROVIDE (2) EMPTY DWR-24-26 WALL-MOUNT CABINETS, FOR SECTION "A" TRANSFORMER BUS PANEL AND SUBSTATION COMMUNICATIONS PANEL.
2. ALL CABINETS WILL BE EQUIPPED WITH A 3/4" PLYWOOD BACKBOARDS. BACKBOARDS WILL BE COVERED WITH 2 COATS OF WHITE COLORED FIRE RETARDANT PAINT.

FOR CONSTRUCTION

LTR.	DATE	REVISIONS	BY	APPRD.

DESIGNED AO
DRAWN AO
CHECKED PW

JONES EDMUNDS
730 NE WALDO ROAD, GAINESVILLE, FLORIDA 32641 / (352) 377-5821
1100 CESERY BLVD - SECOND FLOOR, JACKSONVILLE, FLORIDA 32211 / (904) 744-5401

WAUCHULA SUBSTATION RESTORATION/EXPANSION
WAUCHULA, FLORIDA

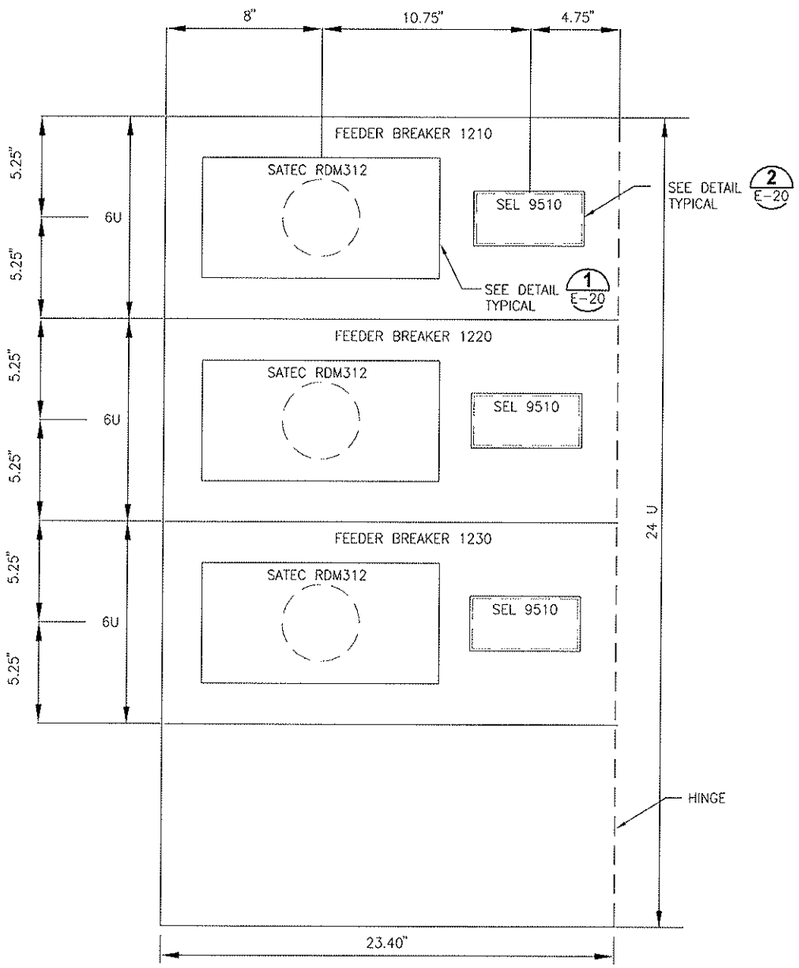
WALL MOUNTED CABINET DETAILS

CERTIFICATE OF AUTHORIZATION #1841
APPROVED BY
PHIL WEBER
P.E. # 36601

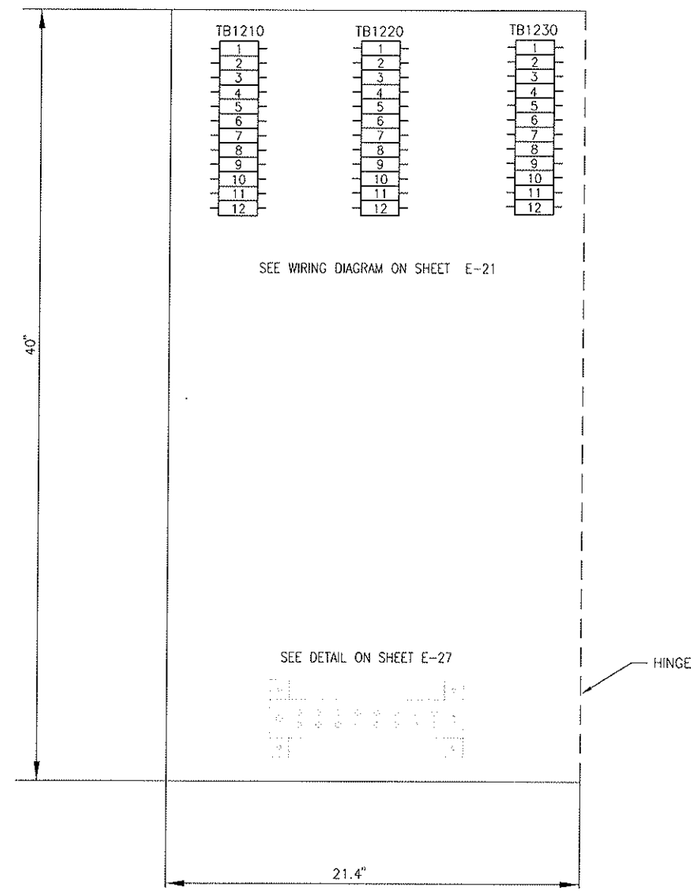
DATE JULY 2009
PROJECT NO. 07602-032-01
SCALE NONE
DWG. NO. E-19

© Jones Edmunds 2234

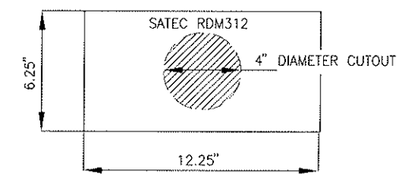
NOTE:
ACTUAL UNITS ARE 1/32" SHORTER THAN ACTUAL 1 3/4"



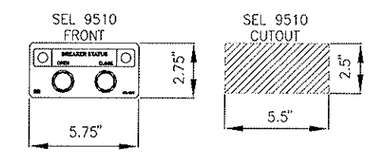
SECTION "A"
DISTRIBUTION FEEDER CABINET
(FRONT VIEW)



SECTION "A"
DISTRIBUTION FEEDER CABINET
(BACKPLANE)



SATEC RDM312 DETAILS 1 E-20



SEL 9510 DETAILS 2 E-20

FOR CONSTRUCTION

LTR.	DATE	REVISIONS	BY	APPRD.

DESIGNED AO
DRAWN AO
CHECKED PW

JONES EDMUNDS
730 NE WALDO ROAD, GAINESVILLE, FLORIDA 32641 / (352) 377-5821
1100 CESERY BLVD - SECOND FLOOR, JACKSONVILLE, FLORIDA 32211 / (904) 744-5401

WAUCHULA SUBSTATION RESTORATION/EXPANSION
WAUCHULA, FLORIDA

SECTION "A" DISTRIBUTION FEEDER
WALL MOUNTED CABINET DETAILS

CERTIFICATE OF AUTHORIZATION #1841
APPROVED BY
PHIL WEBER
P.E. # 36601

DATE JULY 2009
SCALE NONE
PROJECT NO. 07602-032-01
DWG. NO. E-20

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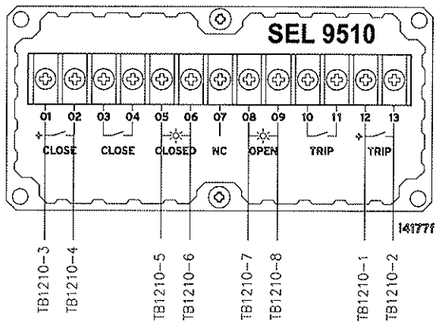
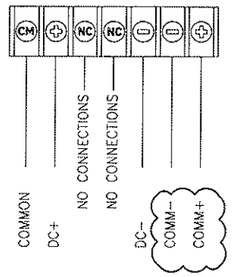
1210R



RDM312



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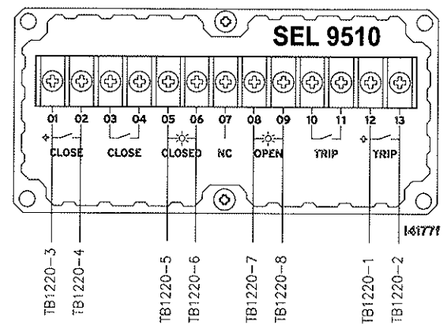

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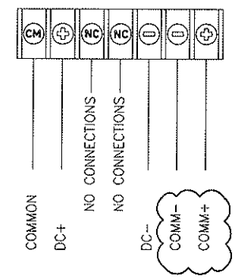

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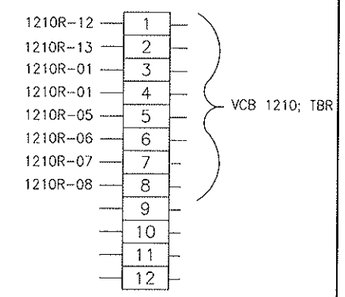
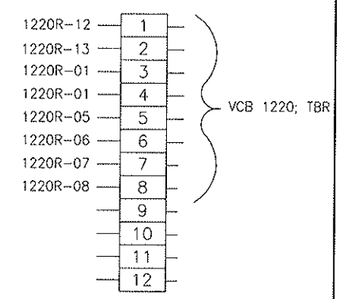


FEEDER BREAKER #1210

FEEDER BREAKER #1220

TB1220



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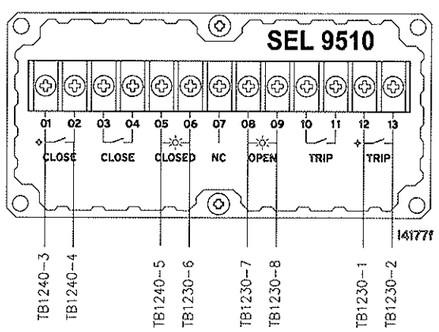

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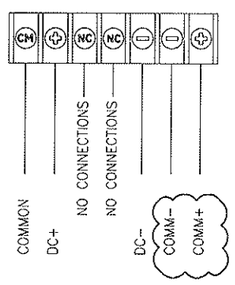
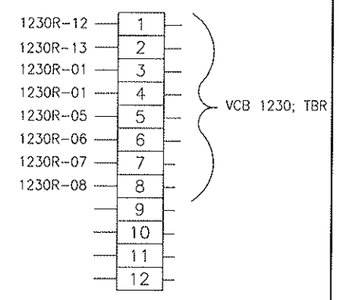


FEEDER BREAKER #1230

TB1230



FOR CONSTRUCTION

LTR.	DATE	REVISIONS	BY	APPRD.

DESIGNED AO
DRAWN AO
CHECKED PW

JONES EDMUNDS
730 NE WALDO ROAD, GAINESVILLE, FLORIDA 32641 / (352) 377-5821
1100 CESERY BLVD · SECOND FLOOR, JACKSONVILLE, FLORIDA 32211 / (904) 744-5401

WAUCHULA SUBSTATION RESTORATION/EXPANSION
WAUCHULA, FLORIDA

SECTION "A" DISTRIBUTION FEEDER
CABINET WIRING DIAGRAM

CERTIFICATE OF AUTHORIZATION #1841
APPROVED BY
PHIL WEBER
P.E. # 36601

DATE JULY 2009
PROJECT NO. 07602-032-01
SCALE NONE
DWG. NO. E-21

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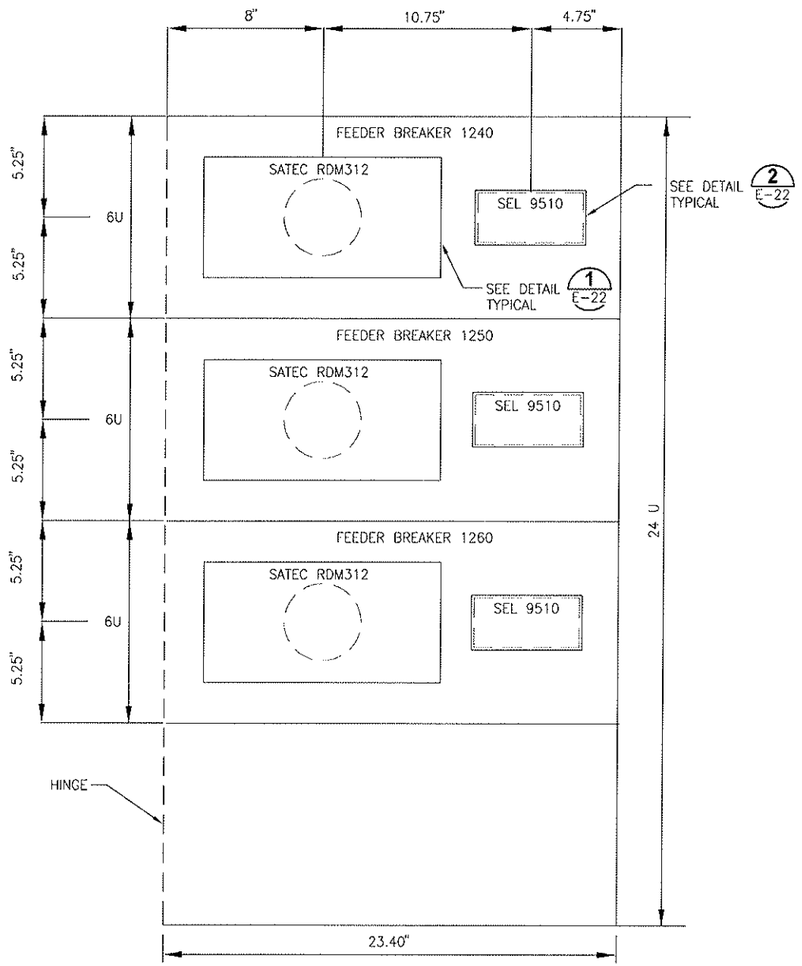
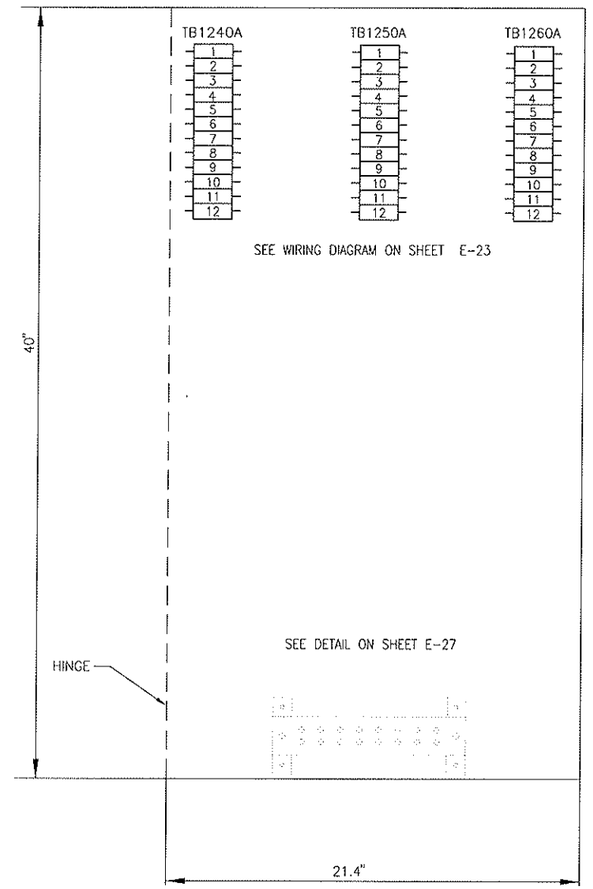
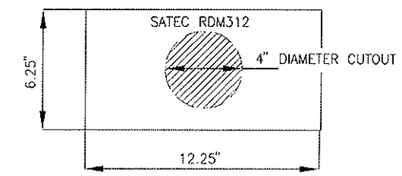
NOTE:
ACTUAL UNITS ARE 1/32" SHORTER THAN ACTUAL 1 3/4"



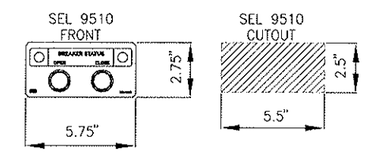
SECTION "B"
DISTRIBUTION FEEDER CABINET
(FRONT VIEW)



SECTION "B"
DISTRIBUTION FEEDER CABINET
(BACKPLANE)



SATEC RDM312 DETAILS 1 E-22



SEL 9510 DETAILS 2 E-22

FOR CONSTRUCTION

LTR.	DATE	REVISIONS	BY	APPRD.

DESIGNED AO
DRAWN AO
CHECKED PW

JONES EDMUNDS
730 NE WALDO ROAD, GAINESVILLE, FLORIDA 32641 / (352) 377-5821
1100 CESERY BLVD - SECOND FLOOR, JACKSONVILLE, FLORIDA 32211 / (904) 744-5401

WAUCHULA SUBSTATION RESTORATION/EXPANSION
WAUCHULA, FLORIDA

SECTION "B" DISTRIBUTION FEEDER
WALL MOUNTED CABINET DETAILS

CERTIFICATE OF AUTHORIZATION #1841
APPROVED BY
PHIL WEBER
P.E. # 36601

DATE JULY 2009
PROJECT NO. 07602-032-01
SCALE NONE
DWG. NO. E-22

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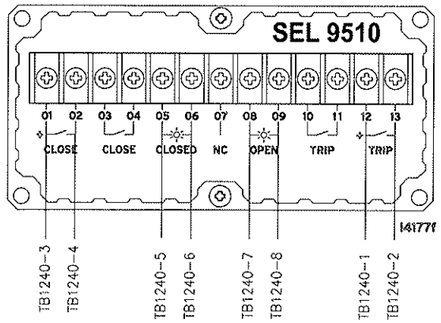
1240R



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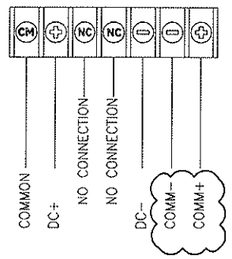
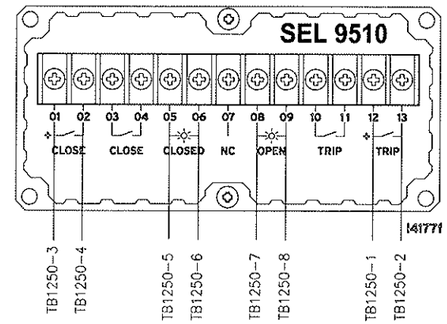


FEEDER BREAKER #1240

1250R



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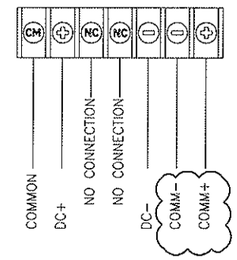

FEEDER BREAKER #1250

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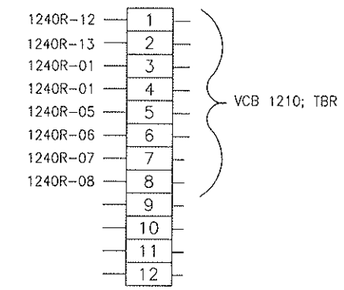

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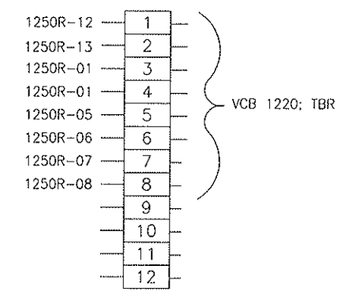

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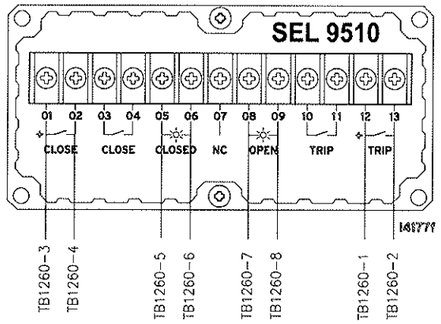
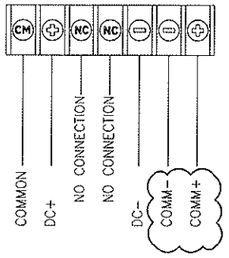
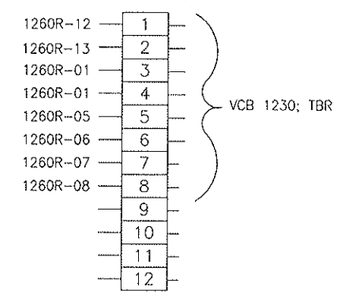


RDM312



FEEDER BREAKER #1260

TB1260



FOR CONSTRUCTION

LTR.	DATE	REVISIONS	BY	APPRD.

DESIGNED AO
DRAWN AO
CHECKED PW

JONES EDMUNDS
730 NE WALDO ROAD, GAINESVILLE, FLORIDA 32641 / (352) 377-5821
1100 CESERY BLVD - SECOND FLOOR, JACKSONVILLE, FLORIDA 32211 / (904) 744-5401

WAUCHULA SUBSTATION RESTORATION/EXPANSION
WAUCHULA, FLORIDA

SECTION "B" DISTRIBUTION FEEDER
CABINET WIRING DIAGRAM

CERTIFICATE OF AUTHORIZATION #1841
APPROVED BY
PHIL WEBER
P.E. # 36601

DATE JULY 2009
PROJECT NO. 07602-032-01
SCALE NONE
DWG. NO. E-23

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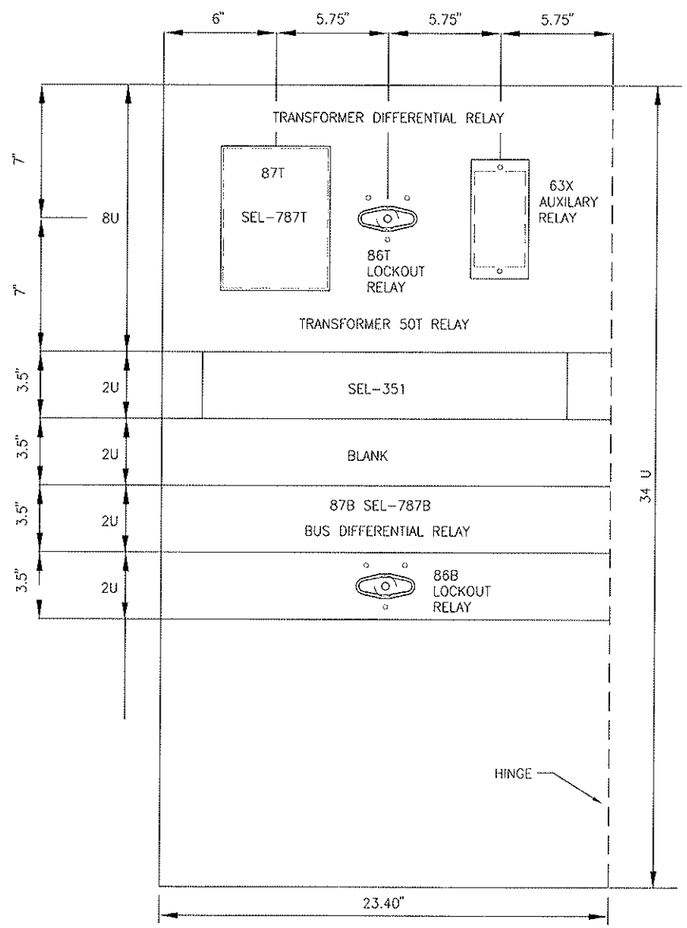
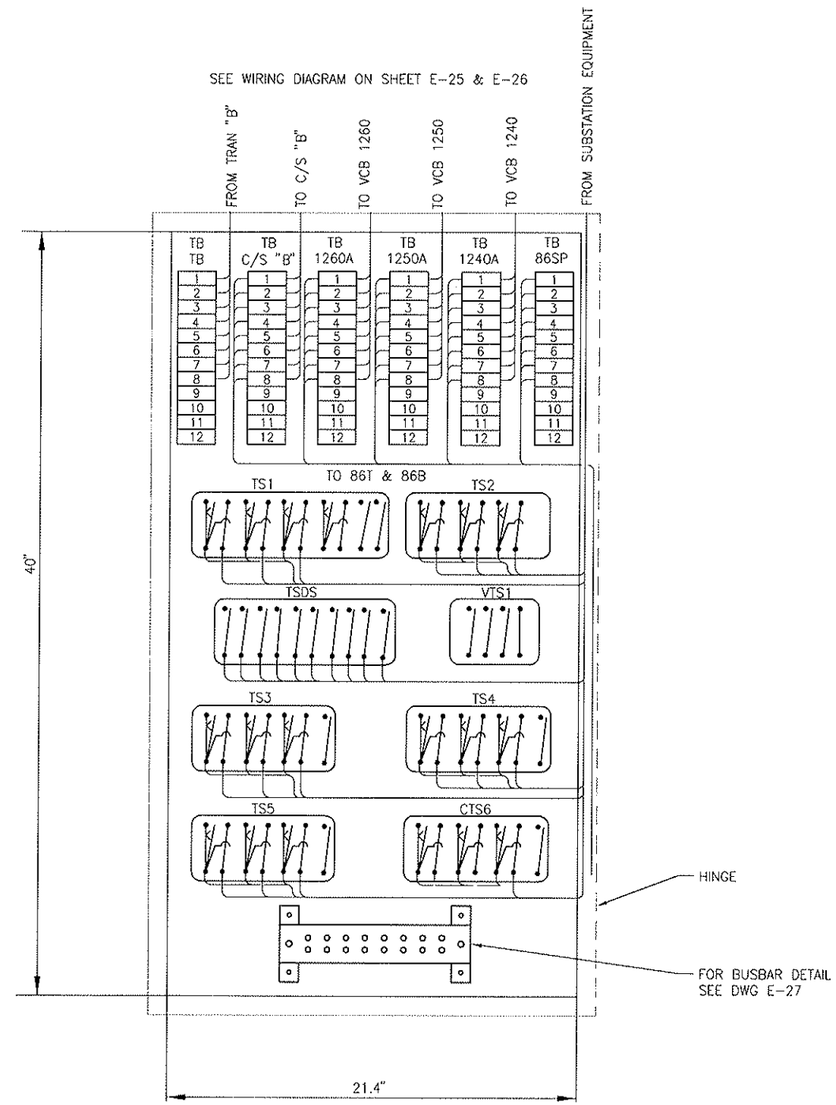
NOTES:

1. BACK PLANE IS 3/4" WOOD PANEL.
2. BUILDING CONTRACTOR WILL PROVIDE AN EMPTY WALL-MOUNT PANEL FOR THE SECTION "A" TRANSFORMER RELAY AND CONTROLS.
3. EMPTY WALL-MOUNT PANEL WILL BE A RACKMOUNT DWR-24-26, WITH PLYWOOD BACKBOARD. BACKBOARD WILL BE COVERED WITH 2 COATS OF WHITE COLORED FIRE RETARDANT PAINT



SECTION "B"
TRANSFORMER AND BUS
RELAYS AND CONTROLS
(FRONT VIEW SWINGING PANEL)



SECTION "B"
TRANSFORMER AND BUS
RELAYS AND CONTROLS
(BACK PLANE)

FOR CONSTRUCTION

LTR.	DATE	REVISIONS	BY	APPRD.

DESIGNED AO
DRAWN AO
CHECKED PW

JONES EDMUNDS
730 NE WALDO ROAD, GAINESVILLE, FLORIDA 32641 / (352) 377-5821
1100 CESERY BLVD - SECOND FLOOR, JACKSONVILLE, FLORIDA 32211 / (904) 744-5401

WAUCHULA SUBSTATION RESTORATION/EXPANSION
WAUCHULA, FLORIDA

SECTION "B" TRANSFORMER & BUS
WALL MOUNTED CABINET DETAILS

CERTIFICATE OF AUTHORIZATION #1841
APPROVED BY
PHIL WEBER
P.E. # 36601

DATE JULY 2009
PROJECT NO. 07602-032-01
SCALE NONE
DWG. NO. E-24

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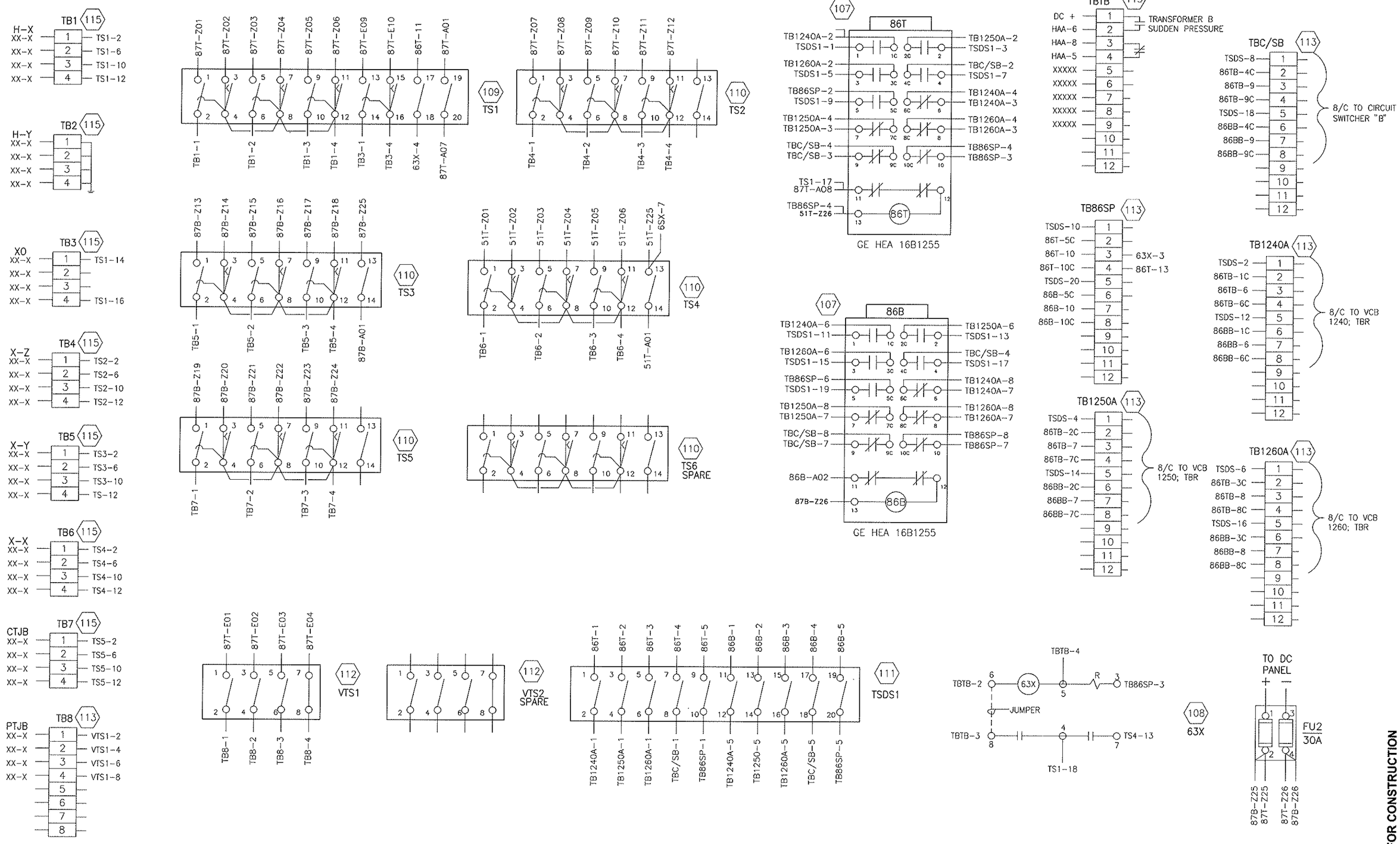

FOR CONSTRUCTION

LTR.	DATE	REVISIONS	BY	APPRD.

DESIGNED AO
DRAWN AO
CHECKED PW

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WAUCHULA SUBSTATION RESTORATION/EXPANSION
WAUCHULA, FLORIDA

SECTION "B" TRANSFORMER & BUS
WIRING DIAGRAM

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APPROVED BY
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DATE JULY 2009
SCALE NONE
PROJECT NO. 07602-032-01
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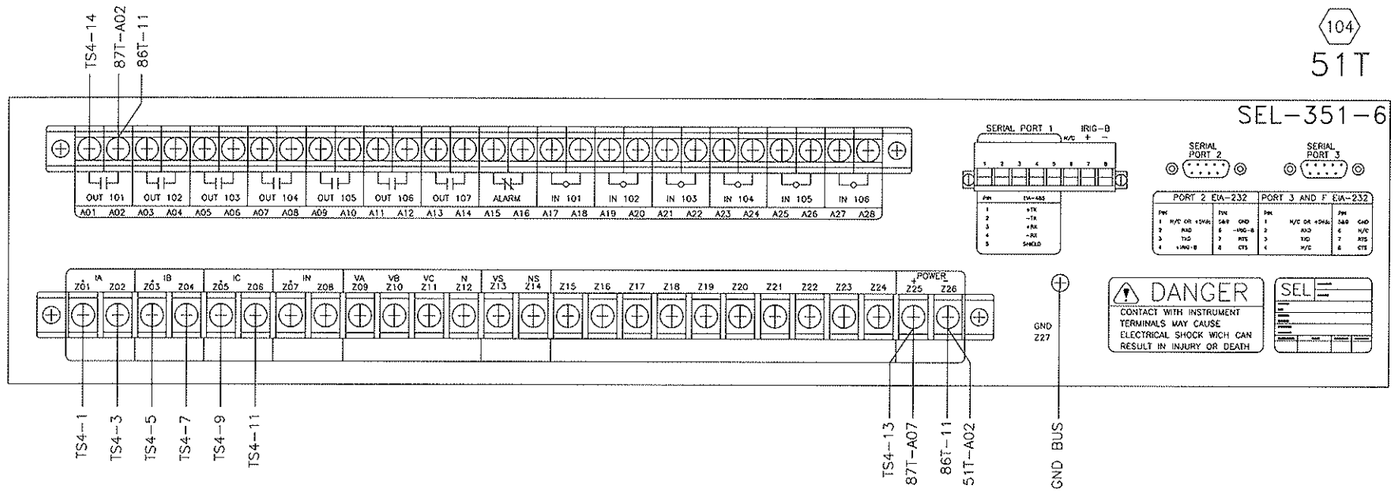
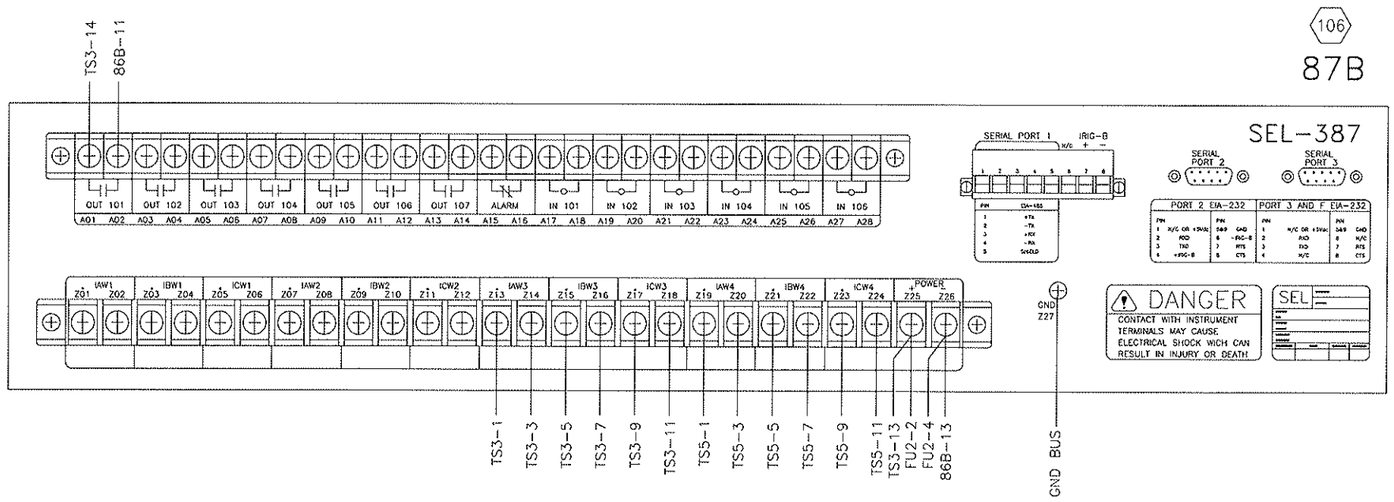
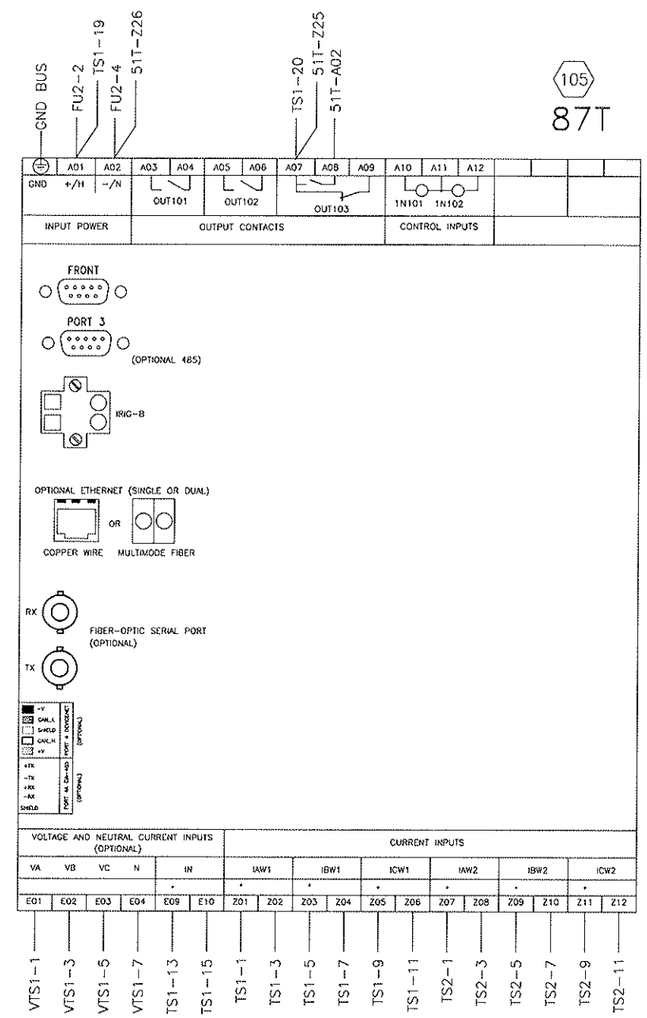


SEL-351
TRANSFORMER PROTECTION RELAY



SEL-387
BUS PROTECTION RELAY



SEL-787
TRANSFORMER PROTECTION RELAY

FOR CONSTRUCTION

LTR.	DATE	REVISIONS	BY	APPRD.

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WAUCHULA SUBSTATION RESTORATION/EXPANSION
WAUCHULA, FLORIDA

SECTION "B" TRANSFORMER & BUS
WIRING DIAGRAM

CERTIFICATE OF AUTHORIZATION #1841
APPROVED BY
PHIL WEBER
P.E. # 36601

DATE JULY 2009
PROJECT NO. 07602-032-01
SCALE NONE
DWG. NO. E-26

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THRU-THE-WALL A/C UNIT SCHEDULE

PLAN DESIGNATION	PTAC-1
INDOOR AIR FLOW RATE (CFM)	
WET COIL HIGH/LOW	210/170
DRY COIL HIGH/LOW	235/195
FRESH AIR CFM DRY COIL	70
INDOOR COIL E.A.T °F (DB/WB)	75/63
OUTDOOR COIL E.A.T. °F	95
SENSIBLE COOLING CAPACITY, BTUH	5,040
TOTAL COOLING CAPACITY, BTUH	7,200
HEATING DATA	
ELECTRICAL HEAT (KW)	2.0
ELECTRICAL DATA	
V/PH/HZ	230/1/60
AMPS COOLING MODE	5.3
TOTAL AMPS	8.9
MINIMUM CIRCUIT AMPACITY	11.1
MAXIMUM ELECTRICAL PROTECTIVE DEVICE AMPS	15
NEMA RATING (PLUG)	6-15P
EER	12.2

ACCESSORIES

1. SUBBASE
2. STANDARD GRILLE
3. DRAIN KIT.
4. WALL SLEEVE.
5. LEVELING LEGS.
6. WALL MOUNTED AUTOMATIC CHANGEOVER THERMOSTAT.
7. CORD & PLUG

FAN SCHEDULE

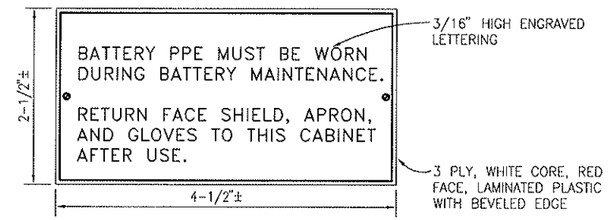
PLAN DESIGNATION	EF-1
CFM	115
EXT. STATIC PRESS. (IN.W.G.)	0.125
FAN RPM	1,690
FAN BRAKE HORSEPOWER	0.012
MOTOR HORSEPOWER	0.012
ELECTRICAL DATA (V/PH/HZ)	120/1/60
FAN TYPE	1
SOUND RATING (MAX. SONES)	5.7
ACCESSORIES	1,2,3
WEIGHT (LBS.)	53

FAN TYPE:

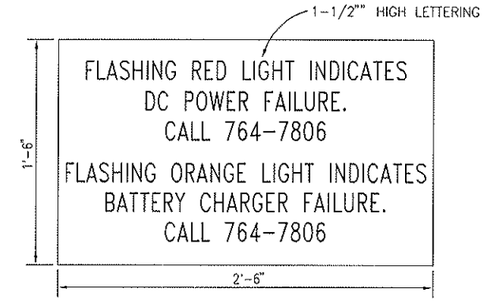
1. PACKAGED PROPELLER WALL FAN - DIRECT DRIVE

ACCESSORIES:

1. POWER DISCONNECT
2. GRAVITY SHUTTER AND BIRD SCREEN
3. INTERLOCK WITH BATTERY CHARGER; SEE ELECTRICAL DRAWINGS.



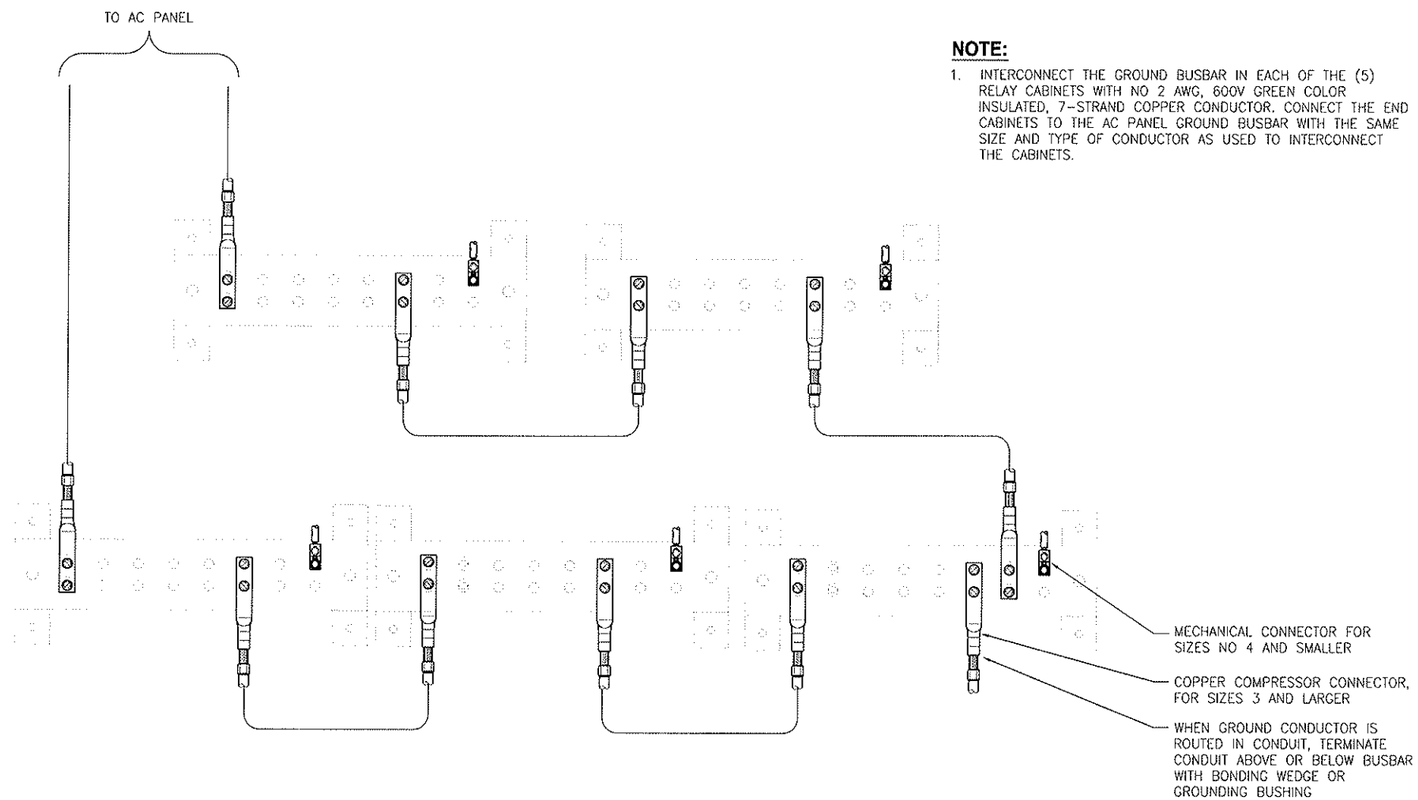
BATTERY PPE SIGN DETAIL (1 / E-27)



DC WARNING STROBE SIGN DETAIL (2 / E-27)

NOTE:

1. INTERCONNECT THE GROUND BUSBAR IN EACH OF THE (5) RELAY CABINETS WITH NO 2 AWG, 600V GREEN COLOR INSULATED, 7-STRAND COPPER CONDUCTOR. CONNECT THE END CABINETS TO THE AC PANEL GROUND BUSBAR WITH THE SAME SIZE AND TYPE OF CONDUCTOR AS USED TO INTERCONNECT THE CABINETS.



BUSBAR DETAIL

FOR CONSTRUCTION

LTR.	DATE	REVISIONS	BY	APPRD.

DESIGNED AO
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WAUCHULA SUBSTATION RESTORATION/EXPANSION
WAUCHULA, FLORIDA

SIGN AND BUSBAR DETAILS

CERTIFICATE OF AUTHORIZATION #1841
APPROVED BY
PHIL WEBER
P.E. # 36601

DATE JULY 2009
PROJECT NO. 07602-032-01
SCALE NTS
DWG. NO. E-27

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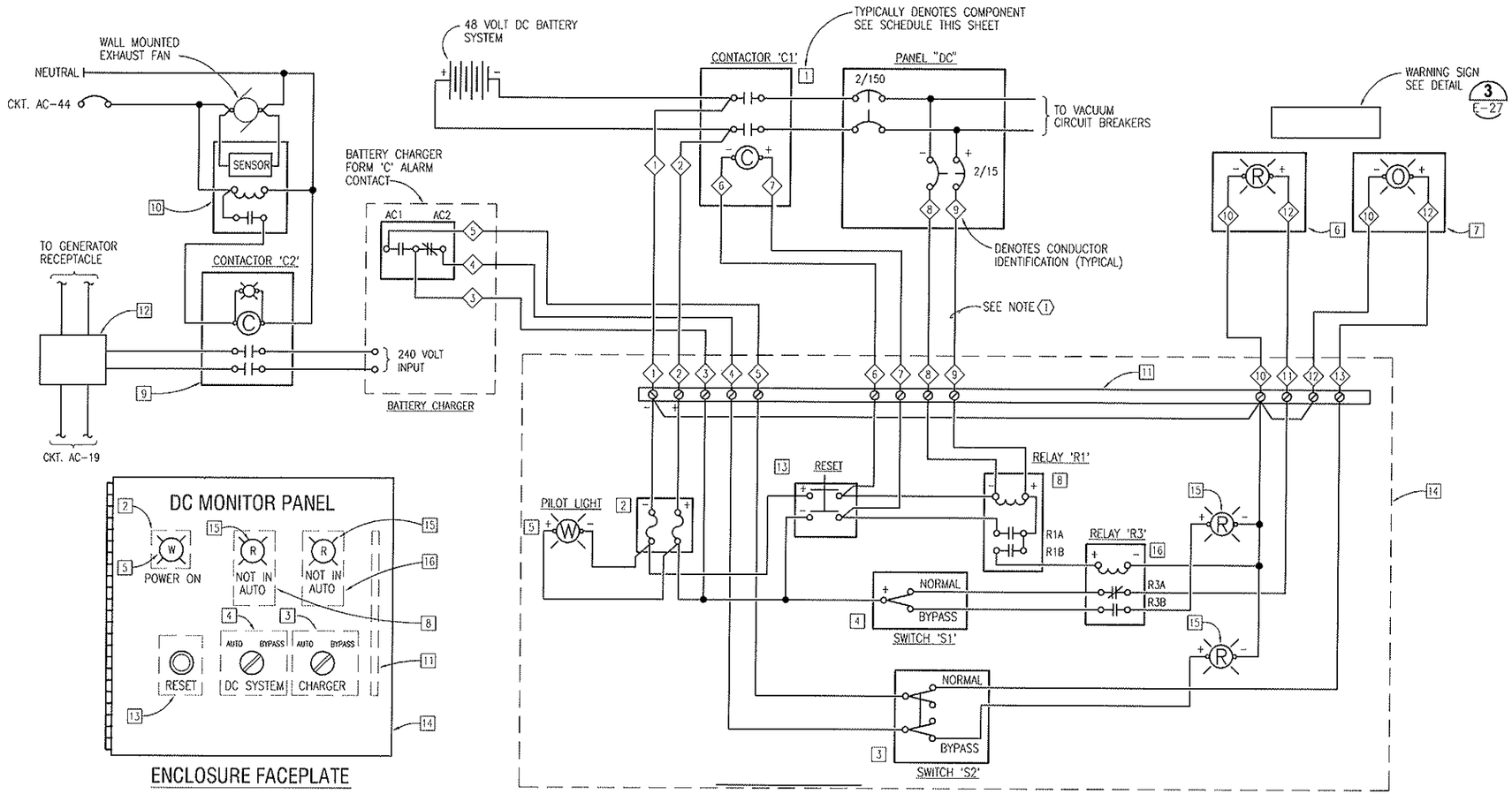

DC MONITORING SYSTEM CONNECTION DIAGRAM

SEQUENCE OF OPERATIONS

NORMAL MODE

SWITCH 'S1' IS IN THE NORMAL MODE. THE SYSTEM HAS BEEN RESET AND THE BATTERY SYSTEM PROVIDES 48 VOLT DC POWER TO VOLTAGE SENSING RELAY COIL 'R1' WHICH CAUSES:

CONTACT 'R1A' IS CLOSED AND APPLIES POWER TO CONTACTOR 'C1' COIL CLOSING THE CONTACTOR CONTACTS AND ALLOWING POWER FLOW TO THE CIRCUIT BREAKER SYSTEMS.

CONTACT 'R1B' IS CLOSED AND APPLIES POWER TO INTERPOSING RELAY 'R3' COIL.

CONTACT 'R3A' IS OPEN PREVENTING OPERATION OF THE RED WARNING STROBE.

CONTACT 'R3B' IS CLOSED BUT DOES NOT POWER THE AUDIBLE DEVICE BECAUSE SWITCH 'S1' IS IN THE NORMAL POSITION.

THE WHITE PILOT LIGHT REMAINS ON AT ALL TIMES TO DESIGNATE THAT OPERATING POWER FOR THE WARNING STROBES IS AVAILABLE. A BLOWN FUSE WILL EXTINGUISH THE PILOT LIGHT.

UNDERVOLTAGE MODE

48 VOLT DC POWER TO VOLTAGE SENSING RELAY COIL 'R1' FALLS BELOW 42 VOLTS AND RELAY 'R1' COIL DROPS OUT WHICH CAUSES:

CONTACT 'R1A' OPENS AND DISRUPTS POWER TO CONTACTOR 'C1' COIL OPENING THE CONTACTOR CONTACTS AND INTERRUPTING POWER FLOW TO THE CIRCUIT BREAKER SYSTEMS PREVENTING FURTHER DRAINAGE OF THE BATTERY SYSTEM.

CONTACT 'R1B' OPENS AND DEEENERGIZES INTERPOSING RELAY 'R3' COIL.

CONTACT 'R3A' CLOSES TO ACTIVATE THE RED WARNING STROBE.

CONTACT 'R3B' OPENS AND IS IN A STANDBY MODE.

WHILE CORRECTIVE WORK IS PERFORMED, SWITCH 'S1' IS PLACED IN THE BYPASS POSITION TO TURN OFF THE WARNING STROBE. WHEN CORRECTIVE WORK IS COMPLETED AND ALL CONTACTS ARE RESTORED TO NORMAL MODE, CONTACT 'R3B' CLOSES AND APPLIES POWER THE AUDIBLE DEVICE TO REMIND SERVICE PERSONNEL TO RETURN SWITCH 'S1' TO THE NORMAL POSITION.

SYSTEM RESET

UPON A FAILURE WHICH OPENS CONTACTOR 'C1' A MANUAL RESET IS REQUIRED. PRESSING THE MANUAL REST BUTTON CAUSES POWER TO BE DIRECTLY APPLIED TO CONTACTOR 'C1' COIL. THIS WILL ALLOW POWER TO FLOW TO THE COIL OF RELAY 'R1' TO ALLOW CONTACTOR 'C1' TO LATCH WHICH RETURNS THE SYSTEM TO NORMAL MODE.

CHARGING MODE

WITH SWITCH 'S2' IS IN THE NORMAL POSITION AND THE BATTERY CHARGER FUNCTIONING PROPERLY ALARM CONTACT 'AC2' IS OPEN PREVENTING OPERATION OF THE YELLOW WARNING STROBE. CONTACT 'AC1' IS CLOSED BUT DOES NOT POWER THE AUDIBLE DEVICE BECAUSE SWITCH 'S2' IS IN THE NORMAL POSITION. WHEN THE BATTERY CHARGER LOSES INPUT POWER OR MALFUNCTIONS THE ALARM CONTACTS CHANGE STATE WHICH CAUSES:

CONTACT 'AC2' CLOSES AND ACTIVATES THE ORANGE WARNING STROBE.

CONTACT 'AC1' OPENS AND IS IN STANDBY MODE.

WHILE CORRECTIVE WORK IS PERFORMED, SWITCH 'S2' IS PLACED IN THE BYPASS POSITION TO TURN OFF THE WARNING STROBE. WHEN CORRECTIVE WORK IS COMPLETED AND ALL CONTACTS ARE RESTORED TO NORMAL MODE, CONTACT 'AC1' CLOSES AND APPLIES POWER THE AUDIBLE DEVICE TO REMIND SERVICE PERSONNEL TO RETURN SWITCH 'S2' TO THE NORMAL POSITION.

FAN FAILURE OR POWER LOSS

WHEN THE CURRENT SENSING RELAY DETECTS NO CURRENT FLOW TO THE WALL FAN THE RALY CONTACT WILL OPEN TO DE-ENERGIZE CONTACTOR 'C2' COIL TO SHUT DOWN POWER TO BATTERY CHARGER.

NOTE

(1) ALL POWER WIRING CONDUCTORS SHALL BE AS NOTED ON PLANS AND POWER DIAGRAMS. ALL CONTROL CONDUCTORS SHALL BE NO. 12 TYPE 'THWN' STRANDED COPPER. PROVIDE NUMBERED WIRE MARKERS AT EACH END OF EACH CONTROL CONDUCTOR AS INDICATED. ALL CONDUCTORS NOT WITHIN THE CONTROL ENCLOSURE SHALL BE ROUTED IN DEDICATED CONTROL CONDUITS.

SYSTEM DESCRIPTION

THE MONITORING SYSTEM AS SHOWN ON THIS PLAN IS PROVIDED TO ALERT MAINTENANCE PERSONNEL THAT THERE IS A PROBLEM WITH THE DC POWER SUPPLY SYSTEM. THE SYSTEM WILL PROVIDE ALERTS FOR BATTERY CHARGER FAILURE, VENTILATION FAN FAILURE, AND LOW BATTERY CONDITIONS.

COMPONENT SCHEDULE

1. CONTACTOR 'C1': 2 POLE, 200 AMPERE DC ELECTRICALLY HELD CONTACTOR WITH CONTINUOUS DUTY 48 VOLT DC COIL, AND NEMA 1 ENCLOSURE.
2. DC RATED FUSE BLOCK WITH TWO 15.0 AMPERE, 48 VOLT FUSES. BASIS OF DESIGN EATON C350 SERIES.
3. SWITCH 'S2': PANEL MOUNTED TWO POSITION DOUBLE POLE DOUBLE THROW ROTARY TYPE MAINTAINED CONTACT SELECTOR SWITCH WITH 10 AMPERE, 48 VOLT DC CONTACTS. LABEL SWITCH ' BATTERY SYSTEM' AND LABEL SWITCH POSITIONS AS INDICATED. BASIS OF DESIGN EATON EM22X561WW.
4. SWITCH 'S1': PANEL MOUNTED TWO POSITION SINGLE POLE DOUBLE THROW ROTARY TYPE MAINTAINED CONTACT SELECTOR SWITCH WITH 10 AMPERE, 48 VOLT DC CONTACTS. LABEL SWITCH ' BATTERY CHARGER' AND LABEL SWITCH POSITIONS AS INDICATED. BASIS OF DESIGN EATON EM22X561C.
5. PILOT LIGHT: PROVIDE A PANEL MOUNT 48 VOLT DC LED PILOT LIGHT WITH WHITE LENS. BASIS OF DESIGN EATON E22HV5X91.
6. WALL MOUNTED VISUAL FLASHING WARNING STROBE 48 VOLT DC WITH 'RED' LENS UL LISTED FOR WET LOCATIONS. BASIS OF DESIGN TOMAR MICROSTROBE 490S-RED-48VDC.
7. WALL MOUNTED VISUAL FLASHING WARNING STROBE 48 VOLT DC WITH 'AMBER' LENS UL LISTED FOR WET LOCATIONS. BASIS OF DESIGN TOMAR MICROSTROBE 490S-AMBER-48VDC.
8. RELAY 'R1': SOCKET MOUNTED VOLTAGE SENSING RELAY WITH ADJUSTABLE SENSING COIL RATED 32 TO 52 VOLTS DC, AND TWO FORM 'C' CONTACTS RATED 10 AMPERES, 48 VOLT DC. SET RELAY COIL TO DROP OUT AT 42 VOLTS. BASIS OF DESIGN EATON D65VAKPW1 WITH SOCKET.
9. CONTACTOR 'C2': 2 POLE, 30 AMPERE ELECTRICALLY HELD CONTACTOR WITH CONTINUOUS DUTY 120 VOLT COIL, AND NEMA 1 ENCLOSURE. BASIS OF DESIGN EATON ECL03C1A2A.
10. CURRENT RELAY: PROVIDE SOCKET MOUNTED CURRENT SENSING RELAY WITH 120 VOLT OPERATOR, ADJUSTABLE CURRENT RANGE OF 0.5 TO 5.0 AMPERES SET AT 2.0 AMPERES AND 10.0 AMPERE SINGLE POLE DOUBLE THROW CONTACT. BASIS OF DESIGN EATON D65CL1C5A. MOUNT IN A NEMA 1 ENCLOSURE AT FAN AND LABEL 'CURRENT SENSING RELAY'.
11. SCREW TYPE TERMINAL STRIP. BASIS OF DESIGN EATON TB SERIES.
12. MANUAL TRANSFER SWITCH. SEE CONTROL BUILDING EQUIPMENT PLAN SHEET E-15.
13. RESET PUSHBUTTON: PANEL MOUNTED MOMENTARY CONTACT PUSHBUTTON STATION WITH TWO 10 AMPERE 48 VOLT DC NORMALLY OPEN CONTACTS. BASIS OF DESIGN EATON E22PB1D.
14. ENCLOSURE: NOMINAL 12" SQUARE, 6" DEEP NEMA 1 ENCLOSURE WITH PAINTED STEEL BACKPLATE, AND HINGED DOOR. BASIS OF DESIGN HOFFMAN AHE12X12X6.
15. PILOT LIGHT: PROVIDE A PANEL MOUNT 48 VOLT DC LED PILOT LIGHT WITH RED LENS. BASIS OF DESIGN EATON E22HV2X53.
16. INTERPOSING RELAY: PROVIDE SOCKET MOUNTED GENERAL PURPOSE RELAY WITH 48 VOLT DC COIL AND TWO 10.0 AMPERE SINGLE POLE DOUBLE THROW CONTACT. BASIS OF DESIGN EATON D2PR2W1.

FOR CONSTRUCTION

LTR.	DATE	REVISIONS	BY	APPRD.

DESIGNED AO
DRAWN AO
CHECKED PW

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WAUCHULA SUBSTATION RESTORATION/EXPANSION
WAUCHULA, FLORIDA

SECTION B TRANSFORMER & BUS WIRING DIAGRAM

CERTIFICATE OF AUTHORIZATION #1841
APPROVED BY
PHIL WEBER
P.E. # 36601

DATE JULY 2009
PROJECT NO. 07602-032-01
SCALE NONE
DWG. NO. E-31

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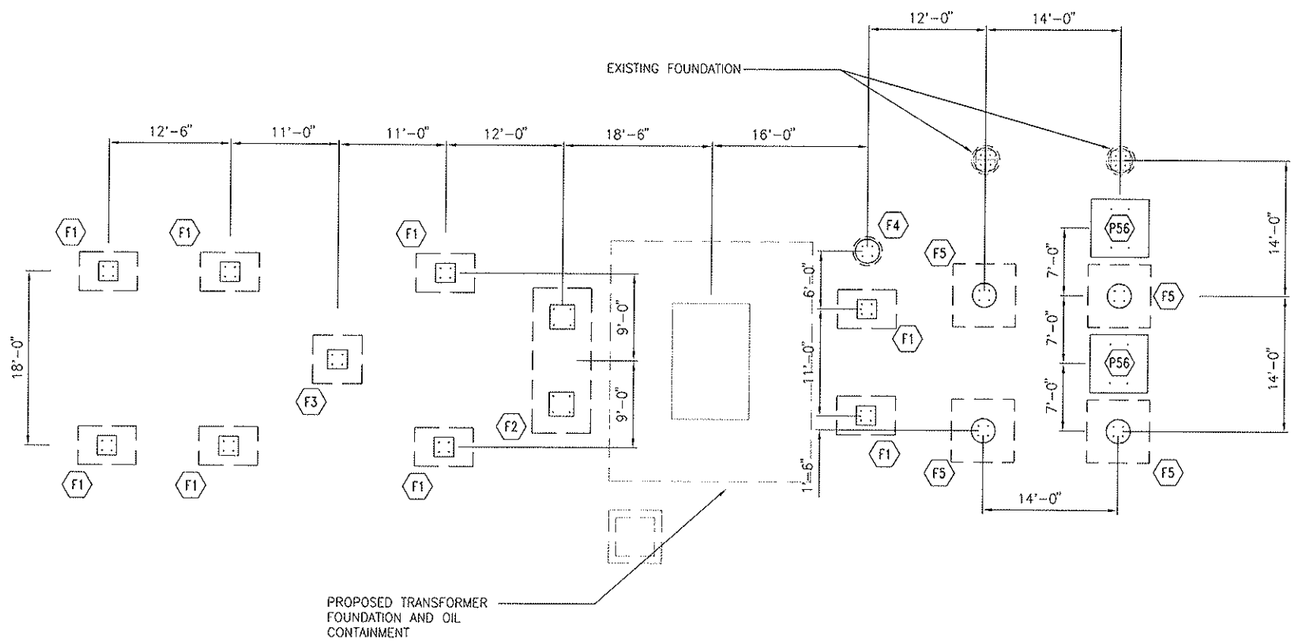

FOUNDATION NOTES :

1. FOUNDATION DESIGN BASED ON: MAXIMUM ALLOWABLE BEARING PRESSURE – 2500 P.S.F. MINIMUM DEPTH 18" BELOW GRADE.
2. CONCRETE TESTING FOR QUALITY IS THE RESPONSIBILITY OF THE CONTRACTOR AND THE FREQUENCY AND TYPES OF TESTING SHALL BE DETERMINED BY THE OWNER.
3. EARTH WALLS SHALL BE PROTECTED FROM CAVE–INS AND INTRUSION OF WATER. (IF NECESSARY, PROTECTION SHALL BE VIA TEMPORARY STEEL LINER. LINER SHALL BE REMOVED AS CONCRETE IS POURED).
4. ALL WATER SHALL BE PUMPED FROM EXCAVATION BEFORE CONCRETE IS POURED; OTHERWISE CONCRETE SHALL BE PLACED VIA UNDERWATER TREMIE.
5. ALL CONCRETE POURS MADE WHEN TEMPERATURES RANGE BETWEEN 50°F AND 90°F, CAN BE MADE WITHOUT SPECIAL PROVISIONS.
6. CONCRETE SHALL BE MADE FROM TYPE I OR III CEMENT. CONCRETE FOR FOUNDATIONS, PIERS, WALLS, AND PADS SHALL HAVE A MINIMUM ULTIMATE COMPRESSIVE STRENGTH OF 4000 P.S.I. AT 28 DAY TEST. CONCRETE FOR POLE FOUNDATION SHALL HAVE A MINIMUM ULTIMATE COMPRESSIVE STRENGTH OF 4000 P.S.I. AT 28 DAY TEST.
7. ALL REINFORCING STEEL SHALL BE NEW BILLET, 60 KSI DEFORMED BARS (ASTM A–615).
8. ALL DETAILING, FABRICATION, PLACING AND SUPPORTING OF REINFORCEMENT SHALL BE IN ACCORDANCE WITH ACI 318–08 AND C.R.S.I.
9. ALL REINFORCING AND ANCHOR BOLTS SHALL BE RIGIDLY SECURED IN POSITION BY TEMPLATE PRIOR TO THE PLACING OF CONCRETE.
10. ALL CONCRETE SHALL HAVE A MAXIMUM 4" SLUMP (UNLESS APPROVED ADMIXTURES ARE USED).
11. THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCEMENT:

	MIN. COVER (IN)
(A) CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH	3"
(B) CONCRETE EXPOSED TO EARTH AND WEATHER	3"
(C) POLE FOUNDATION	3/4"

12. ALL REINFORCEMENT AND WELDED WIRE FABRIC SHALL BE FREE OF RUST, DIRT, OIL AND MILL SCALE PRIOR TO PLACEMENT OF CONCRETE.
13. ALL ANCHOR BOLTS SHALL BE ASTM A–36, WITH (2) ASTM A–307 HEAVY HEX NUTS AND (2) FW OR ASTM A615–GR75, WITH (2) ASTM A–563 HEAVY HEX NUTS AND (2) FW EACH, AND SHALL BE GALVANIZED ACCORDING TO ASTM A–123, UNLESS NOTED OTHERWISE.
14. PORTLAND CEMENT SHALL CONFORM TO ASTM C150.
15. AGGREGATE FOR CONCRETE SHALL CONFORM TO ASTM C33, SIZE #57.
16. PROVIDE BAR SUPPORTS, SPACERS, AND OTHER ACCESSORIES AS REQUIRED BY THE LATEST CRSI MANUAL OF STANDARD PRACTICE.
17. REINFORCING BARS SHALL NOT BE WELDED.
18. PROVIDE HOOKS AT DISCONTINUOUS ENDS OF TOP BARS.
19. ONLY CONCRETE ABOVE THE GROUNDLINE SHALL BE FORMED.
20. ALL EXPOSED EDGES OF THE CONCRETE FOUNDATION SHALL BE BEVELED 3/4".
21. ALL BACKFILL MUST BE COMPACTED
22. SLAB ON GRADE FOUNDATIONS TO BE PLACED ON A MINIMUM OF 1'–0" OF COMPACTED STRUCTURAL FILL. THOROUGHLY COMPACT THE SELECT GRANULAR FILL TO THE ACCEPTANCE OF THE OWNER.
23. SHORING MAY BE NECESSARY FOR FOOTING CONSTRUCTION IF HORIZONTAL CLEARANCE TO EXISTING STRUCTURES DOES NOT ALLOW FOR A 2:1 EXCAVATION SLOPE TO THE BOTTOM OF FOOTING ELEVATION.
24. POLE FOUNDATIONS ARE DESIGNED AND ASSUMED TO BE CAST–IN–PLACE CONCRETE DRILLED SHAFT, DEEP FOUNDATIONS.
25. VERIFY ALL DIMENSIONS AND SITE CONDITIONS PRIOR TO STARTING CONSTRUCTION. NOTIFY THE ENGINEER OF ANY DISCREPANCIES OR INCONSISTENCIES.
26. DO NOT SCALE DRAWINGS.
27. THE ELEVATIONS ON THE SURVEY ARE GIVEN FOR THE TOP OF ROCK, NOT SOIL. THERE IS TYPICALLY 4" TO 6" OF ROCK ON TOP OF THE SOIL. TOP OF FOUNDATIONS SHALL BE AT EL. 105.4 WITH TOP OF ROCK 4" BELOW THE TOP OF FOUNDATION.
28. THE POLE FOUNDATION CONTRACTOR SHALL HAVE BEEN ENGAGED IN THE SUCCESSFUL INSTALLATION OF DEEP FOUNDATIONS FOR AT LEAST THREE YEARS.
29. WIND LOADS CALCULATION ARE IN ACCORDANCE WITH ASCE 7–05. THE WIND VELOCITY: 110 MPH, IMPORTANCE FACTOR I=1.15 AND EXPOSURE "C"
30. COMPACT BEARING SOIL TO A MINIMUM OF 95% FOR SLAB ON GRADE.
31. REMOVE FREE STANDING WATER FROM EXCAVATIONS BEFORE PLACING CONCRETE. POLE FOUNDATION CONCRETE SHALL BE PLACED IN SUCH A MANNER AS TO ENSURE THE EXCLUSION OF ANY FOREIGN MATTER AND TO SECURE A FULL–SIZED SHAFT. CONCRETE SHALL NOT BE PLACED THROUGH WATER EXCEPT WHERE A TREMIE OR OTHER APPROVED METHOD IS USED.
32. IF CASING WILL BE SELECTED, CYLINDER CASING SHALL BE OF SUFFICIENT STRENGTH AND RIGIDITY TO WITHSTAND ALL INSTALLATION STRESSES, TO PREVENT COLLAPSE DUE TO SOIL OR HYDROSTATIC PRESSURE.
33. THE MAXIMUM PERMISSIBLE VARIATION OF THE CENTER OF PILE FROM THE REQUIRED LOCATION IS 2 INCHES AT THE GROUND SURFACE. NO PILE SHALL BE OUT OF REQUIRED AXIAL ALIGNMENT BY MORE THAN 2 PERCENT.
34. THE CONTRACTOR MAY CHANGE THE DESIGNED DIAMETER AND LENGTH OF THE DEEP FOUNDATION DURING TO COMPENSATE FOR UNANTICIPATED SOIL CONDITION. REVIEW AND WRITTEN APPROVAL SHALL BE REQUIRED PRIOR TO ANY CHANGES.
35. IN CASE THE FOUNDATION WILL BE INSTALLED BY THE "WET CONSTRUCTION METHOD," FDOT SUPPLEMENTAL SPECIFICATION 455 SHALL BE CONFIRMED.
36. NON–SHRINK, NON–METALLIC GROUT SHALL MEET THE REQUIREMENTS OF ASTM C–1107 GRADE B. THE MINIMUM COMPRESSIVE STRENGTH SHALL BE 7000 PSI AT 28 DAYS. "DAYTON SUPERIOR" 1107 ADVANTAGE GROUT IS RECOMMENDED.
37. SEE DWGS. E07 & E08 FOR FOUNDATION DETAILS.
38. ANCHOR BOLT SIZES AND PATTERNS ARE BASED ON EQUIPMENT AND WIND LOADS. IF PROPOSED ANCHOR BOLT SIZES AND/OR PATTERNS DIFFER FROM THOSE INDICATED ON THE CONTRACT DRAWINGS, PLEASE NOTIFY THE ENGINEER OF RECORD AND PROVIDE FOR REVIEW SIGNED AND SEALED CALCULATIONS FOR THE PROPOSED ANCHOR BOLTS.

ANCHOR BOLT SCHEDULE

MARK	ø (IN)	LENGTH (IN)	HOOK (IN)	PROJECTION (IN)
AB6	1	33	3 (90°)	5
AB8	1–1/2	33	3 (90°)	5
AB8P	1	20	3 (180°)	5

POLE FOUNDATION SCHEDULE

MARK	STRUC. HEIGHT (FT)	DESIGN MOMENT (KIP–FT)	DESIGN SHEAR (KIP)	POLE BASE (DIA)	FOOTING DIAMETER "D"	FOOTING DEPTH "L"	VERTICAL REINFORCE	HORIZONTAL TIES		NOTE
								TA (OC)	TB (OC)	
F4	50.0	113	4.2	1'–6"	2'–6"	20'–0"	(17)–#11	#3 @ 8"	#3 @16"	

FOUNDATION & PAD SCHEDULE

MARK	DIMENSION WIDTH x LENGTH	DEPTH (IN)	PIER	REINFORCING	TOP OF FOUNDATION ELEVATION	NOTES
F1	4'–0"x6'–0"	18	30"x3'–0" (D)	(5)–#5 LONGITUDINAL & (4)–#5 TRANSVERSE, TOP & BOTT	105.4	(8) AB8 ANCHOR BOLTS & PIER, SEE DETAIL
~~F2~~	~~15'–0"x6'–0"~~	~~18~~	~~(2)–30øx3'–0" (D)~~	~~(8)–#5 EACH WAY, TOP & BOTT~~	~~105.4~~	~~(8) AB8 ANCHOR BOLTS & PIER, SEE DETAIL~~
F3	5'–0"x5'–0"	18	30"x3'–0" (D)	(6)–#5 EACH WAY, TOP & BOTT	105.4	(8) AB8 ANCHOR BOLTS & PIER, SEE DETAIL
F5	6'–6"x6'–6"	18	30"x3'–0" (D)	(5)–#5 EACH WAY, TOP & BOTT	105.4	(4) AB8 ANCHOR BOLTS & PIER, SEE DETAIL
~~P56~~	~~5'–0"x6'–0"~~	~~24~~	~~N/A~~	~~(6)–#5 LONGITUDINAL & (7)–#5 TRANSVERSE, TOP & BOTT~~	~~105.4~~	~~AB8P ANCHOR BOLTS, SEE DETAIL~~

GRAPHIC SCALE

0 3 6 12

SCALE IN FEET

FOR CONSTRUCTION

LTR.	DATE	REVISIONS	BY	APPRD.

DESIGNED RDH
DRAWN RDH
CHECKED WL

JONES EDMUNDS
730 NE WALDO ROAD, GAINESVILLE, FLORIDA 32641 / (352) 377-5821
1100 CESERY BLVD - SECOND FLOOR, JACKSONVILLE, FLORIDA 32211 / (904) 744-5401

WAUCHULA SUBSTATION EXPANSION
WAUCHULA, FLORIDA

FOUNDATION PLAN

CERTIFICATE OF AUTHORIZATION #1841
APPROVED BY
WENJUN LI
P.E. # 56104

DATE JUNE 2009
SCALE 1-1/2"=1'
PROJECT NO. 07602-032-01
DWG. NO. S-01

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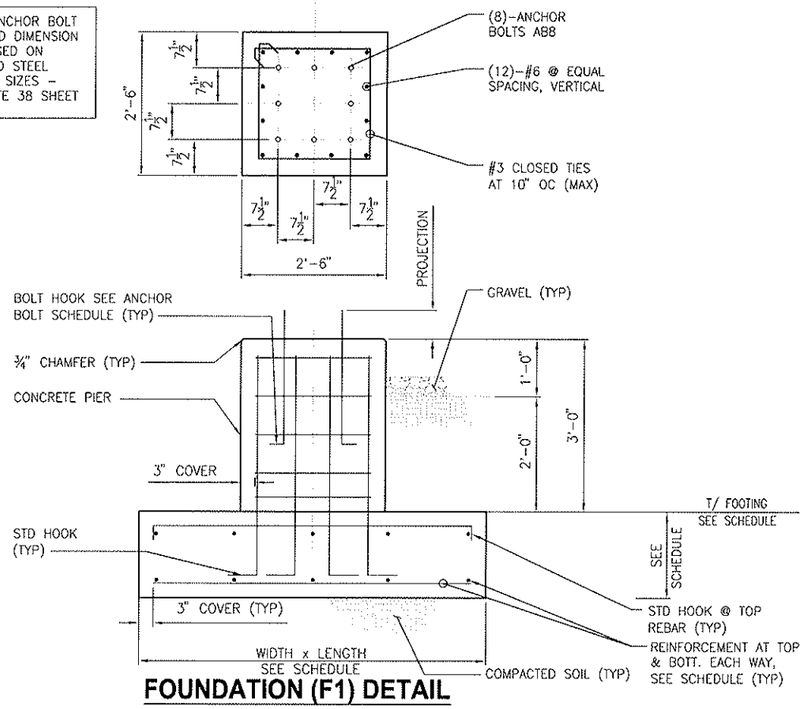
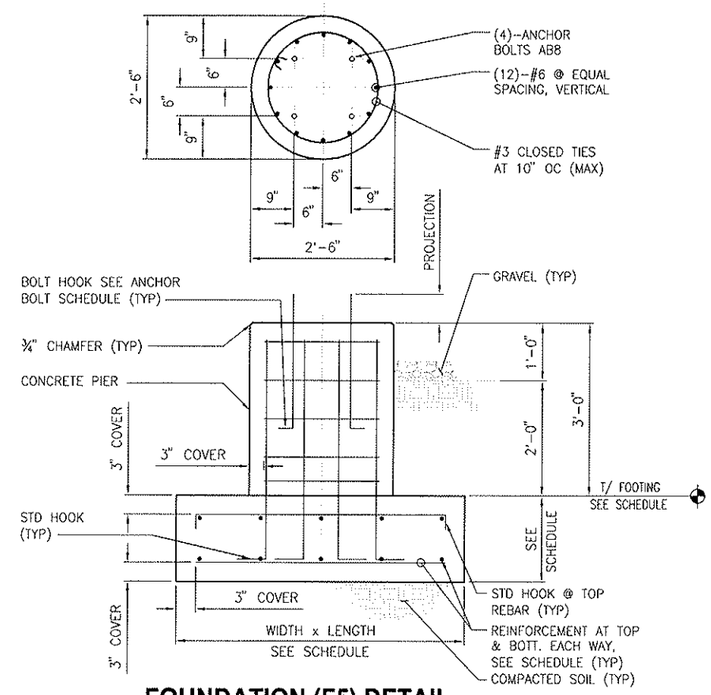
NOTE: ANCHOR BOLT SIZE AND DIMENSION ARE BASED ON ASSUMED STEEL MEMBER SIZES – SEE NOTE 38 SHEET E-06.



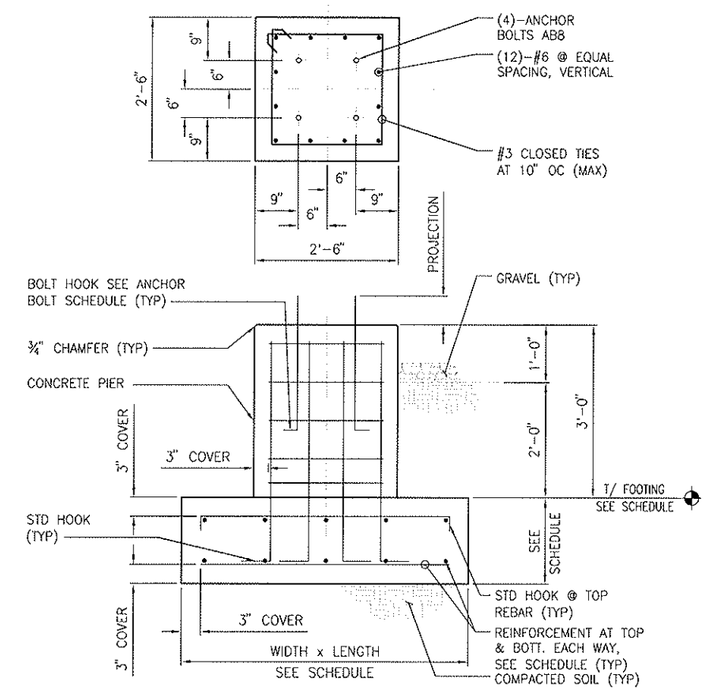
FOUNDATION (F1) DETAIL

SCALE: 3/4" = 1'-0"



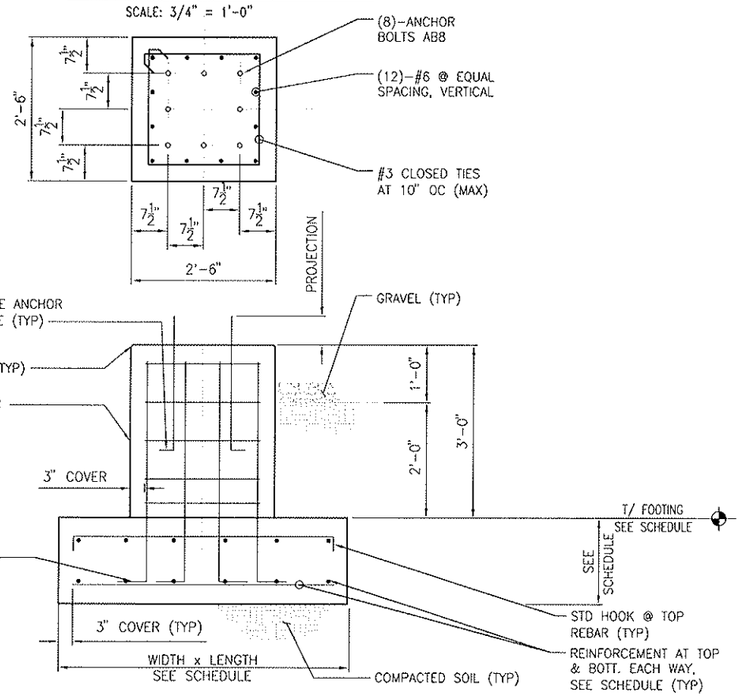
FOUNDATION (F5) DETAIL

SCALE: 3/4" = 1'-0"



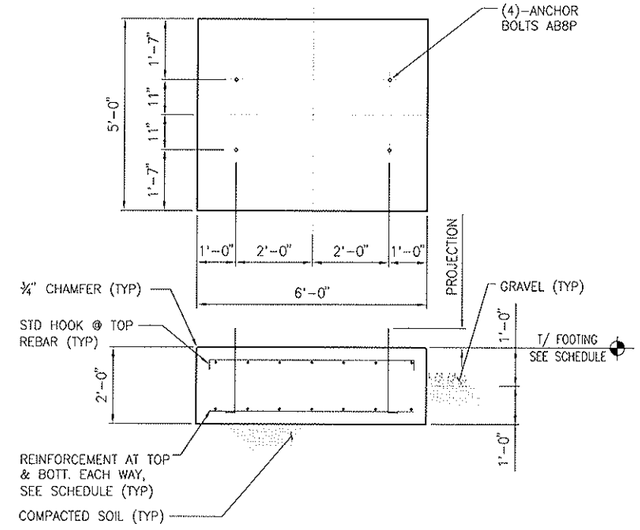
OPTIONAL FOUNDATION (F5) DETAIL

SCALE: 3/4" = 1'-0"



FOUNDATION (F3) DETAIL

SCALE: 3/4" = 1'-0"



PAD FOUNDATION (P56) DETAIL

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

FOR CONSTRUCTION

LTR.	DATE	REVISIONS	BY	APPRD.

DESIGNED RDH
DRAWN RDH
CHECKED WL

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WAUCHULA SUBSTATION EXPANSION
WAUCHULA, FLORIDA

FOUNDATION DETAILS

CERTIFICATE OF AUTHORIZATION #1841
APPROVED BY
WENJUN LI
P.E. #56104

DATE	PROJECT NO.
JUNE 2009	07602-032-01
SCALE	DWG. NO.
AS NOTED	S-02

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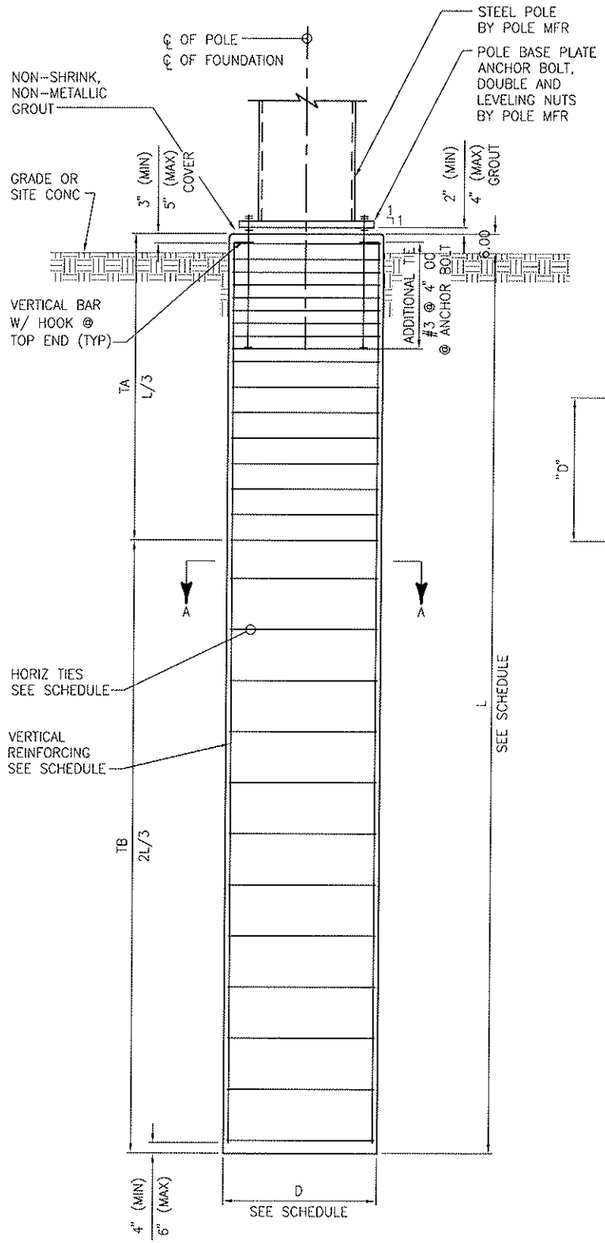
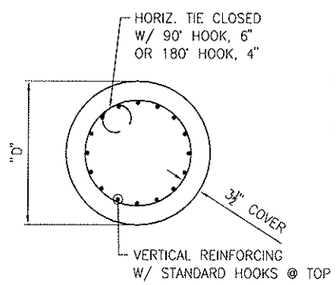
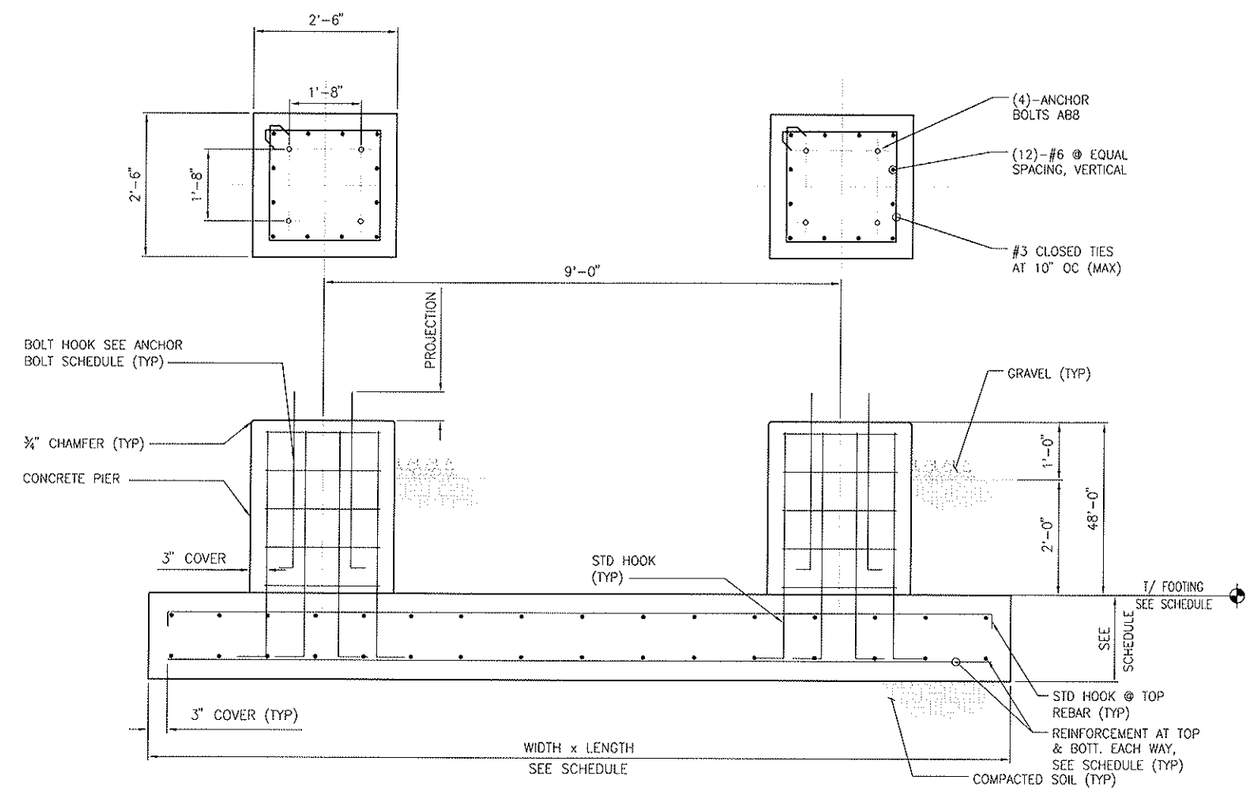




SECTION A-A



FOUNDATION (F2) DETAIL

SCALE: 3/4" = 1'-0"

LIGHTNING MAST FOUNDATION (F4) DETAIL

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

FOR CONSTRUCTION

LTR.	DATE	REVISIONS	BY	APPRD.

DESIGNED RDH
DRAWN RDH
CHECKED WL

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WAUCHULA SUBSTATION EXPANSION
WAUCHULA, FLORIDA

FOUNDATION DETAILS

CERTIFICATE OF AUTHORIZATION #1841
APPROVED BY
WENJUN LI
P.E. #56104

DATE	PROJECT NO.
JUNE 2009	07602-032-01
SCALE	DWG. NO.
AS NOTED	S-03

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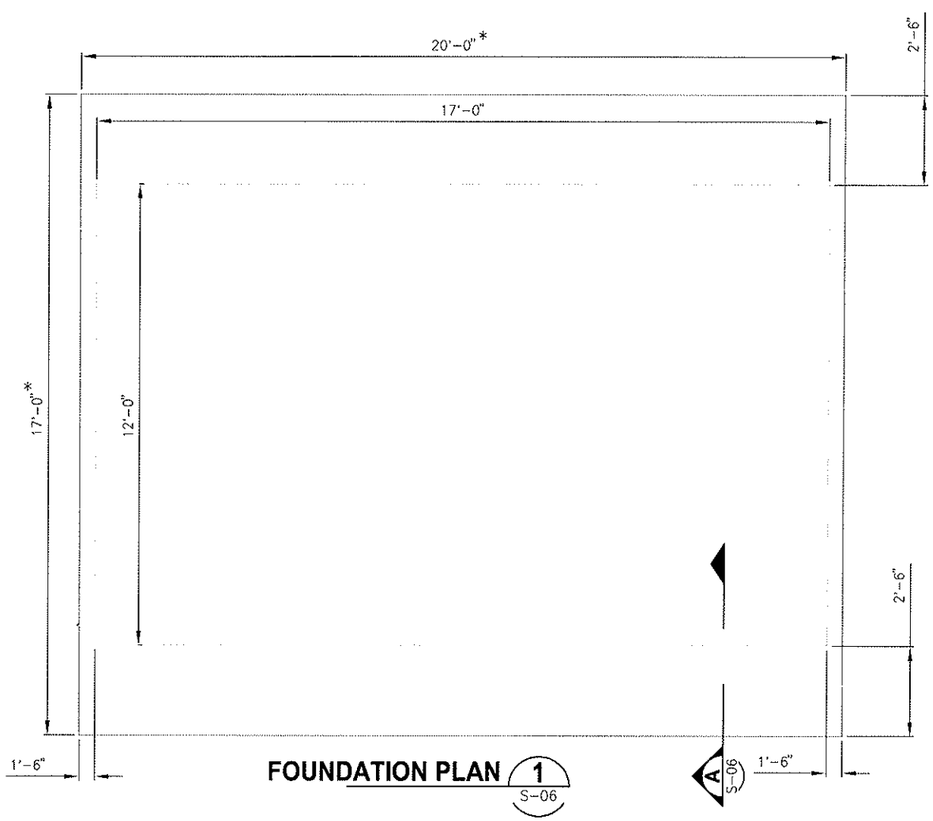
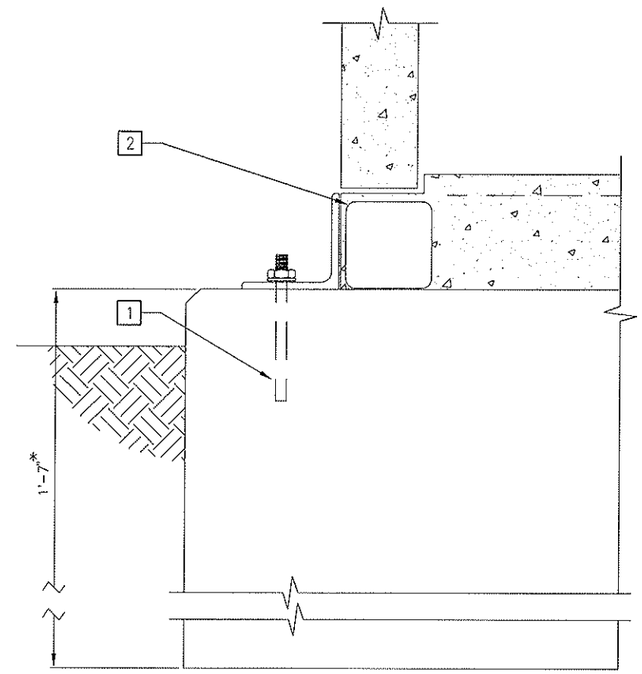


FOUNDATION PLAN 1 S-06



BUILDING ATTACHMENT A S-06

GENERAL NOTES:

1. THE CONSTRUCTION CONTRACTOR IS RESPONSIBLE FOR THE PREPARATION OF THE EXISTING FOUNDATION INCLUDING REPAIR OF THE EXPOSED STEEL ANCHOR BOLTS. THE ANCHOR BOLTS SHALL BE REMOVED BY A MINIMUM OF 1 INCH FROM THE TOP OF THE SLAB AND COATED WITH A CORROSION INHIBITOR. TO LEVEL THE BOLT AREA, FILL WITH A CONCRETE PATCH.
2. MODULAR BUILDING SHALL BE PROPERLY ANCHORED TO THE SUPPORT FOUNDATION BASE SLAB TO WITHSTAND THE STRUCTURAL DESIGN REQUIREMENT PER FBC, CHAPTER 16.
3. DIMENSIONS MARKED WITH "*" SHALL BE FIELD-VERIFIED BY THE CONSTRUCTION CONTRACTOR PRIOR TO THE MODULAR BUILDING INSTALLATION.

NEW WORK KEYNOTES:

1 EPOXY ANCHOR, 3/4" X 6-1/4"

2 6" PRECAST CONCRETE FLOOR PANEL WITH LIFTING ASSEMBLY

GRAPHIC SCALE

0 15 30 60

SCALE IN FEET

FOR CONSTRUCTION

LTR.	DATE	REVISIONS	BY	APPRD.

DESIGNED DESIGNED
DRAWN DRAWN
CHECKED CHECKED

JONES EDMUNDS
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WAUCHULA SUBSTATION RESTORATION/EXPANSION
WAUCHULA, FLORIDA

CONTROL BUILDING
FOUNDATION DETAILS

CERTIFICATE OF AUTHORIZATION #1841
APPROVED BY
WENJUN LI
P.E. # 56104

DATE JULY 2009
PROJECT NO. 07602-032-01
SCALE NTS
DWG. NO. S-06