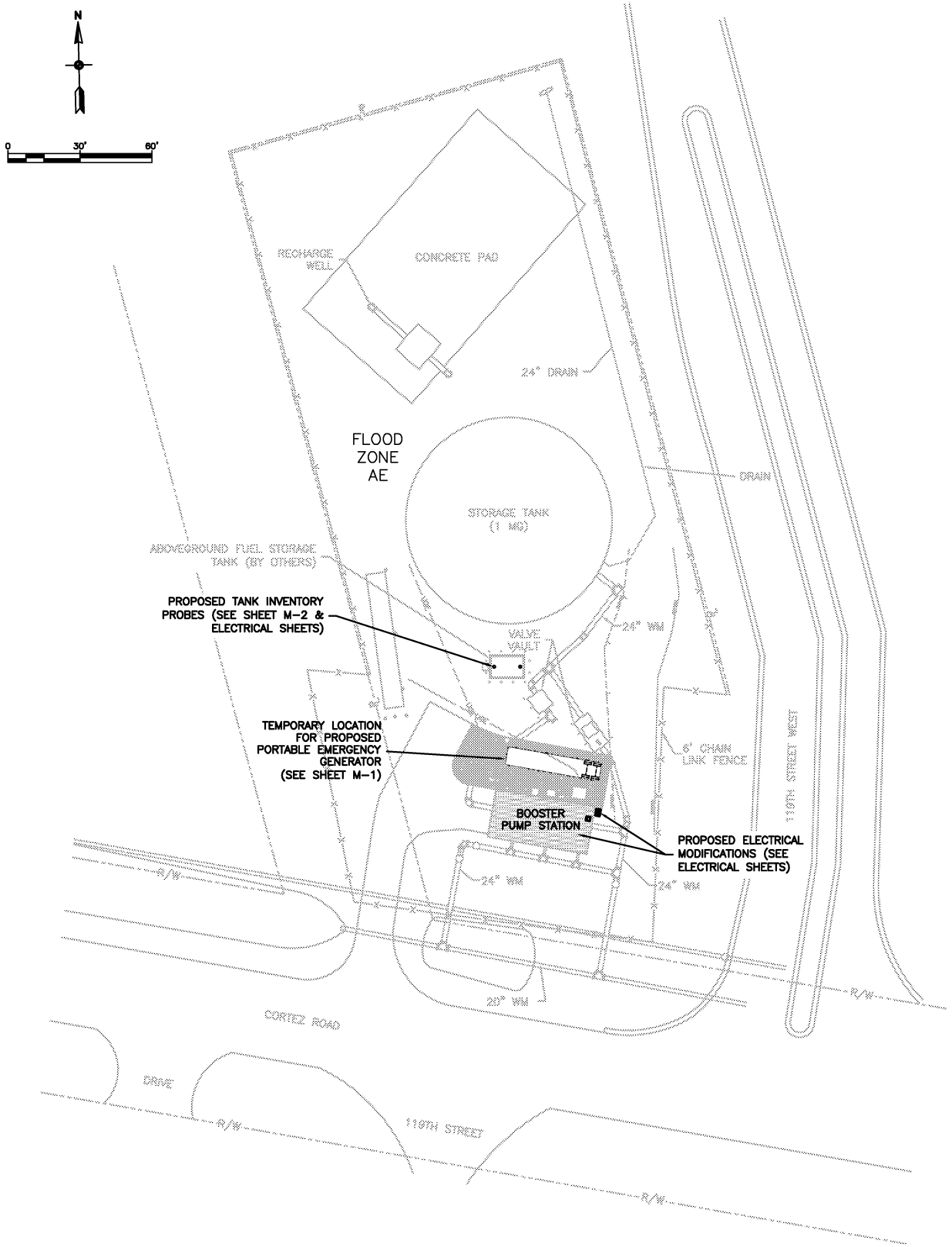
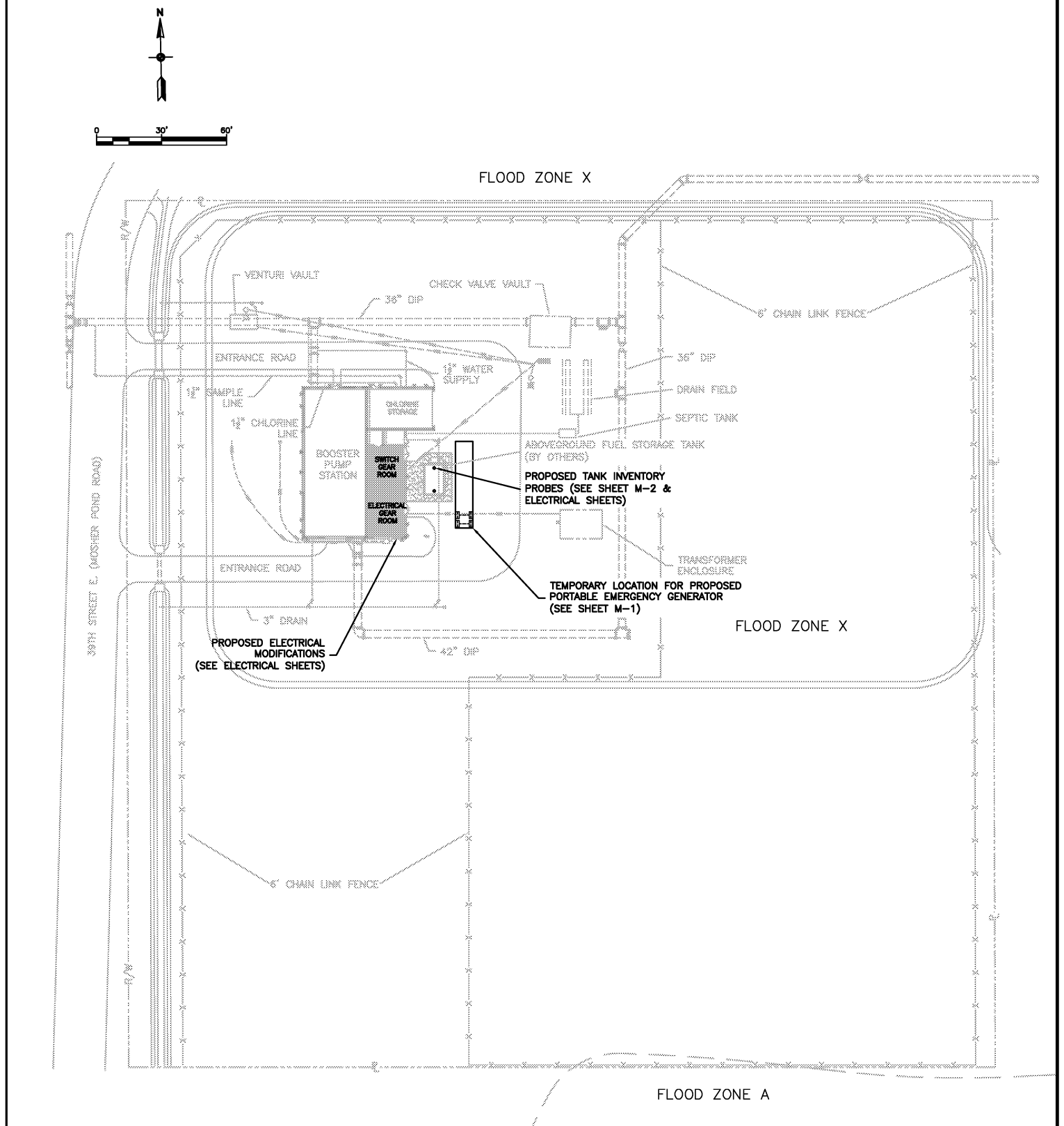


CORTEZ ROAD SITE PLAN



ELWOOD II SITE PLAN

URS 7650 West Courtney Campell Causeway Suite 700 Tampa, Florida 33607 Ph: (813) 286-1711 Fax: (813) 286-6587 Florida Engineering Number: 000002	NO. / BY / DATE / DESCRIPTION REVISIONS	URS JOB NUMBER 12006803 PM: C. OSMANSKI ENG: R. AVALOS DRW: J. SCHEUERMAN FILE SAVE DATE: January 14, 2009	CRAIG P. OSMANSKI FLORIDA P.E. NO. 46961	CORTEZ ROAD & ELWOOD II BOOSTER PUMP STATIONS PORTABLE EMERGENCY GENERATORS FOR MANATEE COUNTY GOVERNMENT MANATEE COUNTY, FLORIDA	OVERALL SITE PLANS	PROJECT STATUS BID SET JANUARY 2009 C-1

VERIFY SCALES: BAR IS ONE INCH ON ORIGINAL DRAWING 0 1 IF NOT ONE INCH ON THIS SHEET, ADJUST SCALE ACCORDINGLY

PLOTTED: January 14, 2009 11:04 AM PLOTTED BY: SCHEUERMAN, JAMES
X:\MANATEE PROJECTS\12006803 ELWOOD II & CORTEZ RD DESIGN\CADD\ELECTRICAL CONTRACTOR SET\C-2 CORTEZ SITE PLAN.DWG

EXISTING ABOVEGROUND STORAGE TANK

8.27

7.64

CO_2 STORAGE TANK

5,000 GAL ABOVEGROUND FUEL STORAGE TANK (BY OTHERS)

PROPOSED TANK INVENTORY PROBES (SEE SHEET M-2)

EXISTING BOLLARD (TYP)

7.22

6.97

6.93

6.85 6.93 7.17

7.38

8.37

8.36

VALVE VAULT 8.4

8.29

BOLLARDS (BY OTHERS)

8.27

8.42

8.48

8.45

VALVE VAULT

LIMITS OF SHELL DRIVE (BY OTHERS)

TEMPORARY BENCHMARK SET IRON ROD AND CAP LABELED WITNESS CORNER EL = 8.15

8.15 S.HUB

TEMPORARY LOCATION FOR PORTABLE EMERGENCY GENERATOR (SEE SHEET M-1)

SHELL DRIVE (BY OTHERS)

PROPERTY LINE

8.39

8.34

8.45

8.02

TEMPORARY BENCHMARK SET IRON ROD AND CAP LABELED WITNESS CORNER EL = 8.02

7.18

7.38

7.18

TOP OF BANK

3.48

3.48

TOE OF SLOPE

3.48

3.98

3.88

3.18

8' CHAIN LINK FENCE

N

0 5' 10'

7.08

7.86

8.51

8.3

8.31

A/C PAD

A/C PAD

1'-0" TYP

8.51

7.4

TRANSFORMER

7.98

PRECAST CONCRETE WHEEL STOP (BY OTHERS)

EXISTING SHELL DRIVEWAY

8.48 SEE NOTE 2
FF EL

7.93

EXISTING BOOSTER PUMP STATION

TOP OF BANK

TOE OF SLOPE

FLOOD ZONE AE

NOTE:
1) CONTRACTOR TO RESTORE ALL DISTURBED AREAS W/ SOD.

2) ELEVATION SHOWN ARE EXISTING, AS SURVEYED BY POLARIS ASSOCIATES ON JANUARY 31, 2007. TEMPORARY BENCHMARKS ARE BASED ON THE EXISTING PUMP STATION BUILDING FINISHED FLOOR ELEVATION OF 8.48 (NGVD-1929) FROM THE COUNTY RECORD DRAWINGS, WATER SYSTEM IMPROVEMENTS SECTION II BY RUSSELL & AXON DATED SEPTEMBER 1976.

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DRW: J. SCHEUERMAN
FILE SAVE DATE: January 14, 2009

CRAIG P. OSMANSKI
FLORIDA P.E. NO. 48961

MANATEE COUNTY FLORIDA

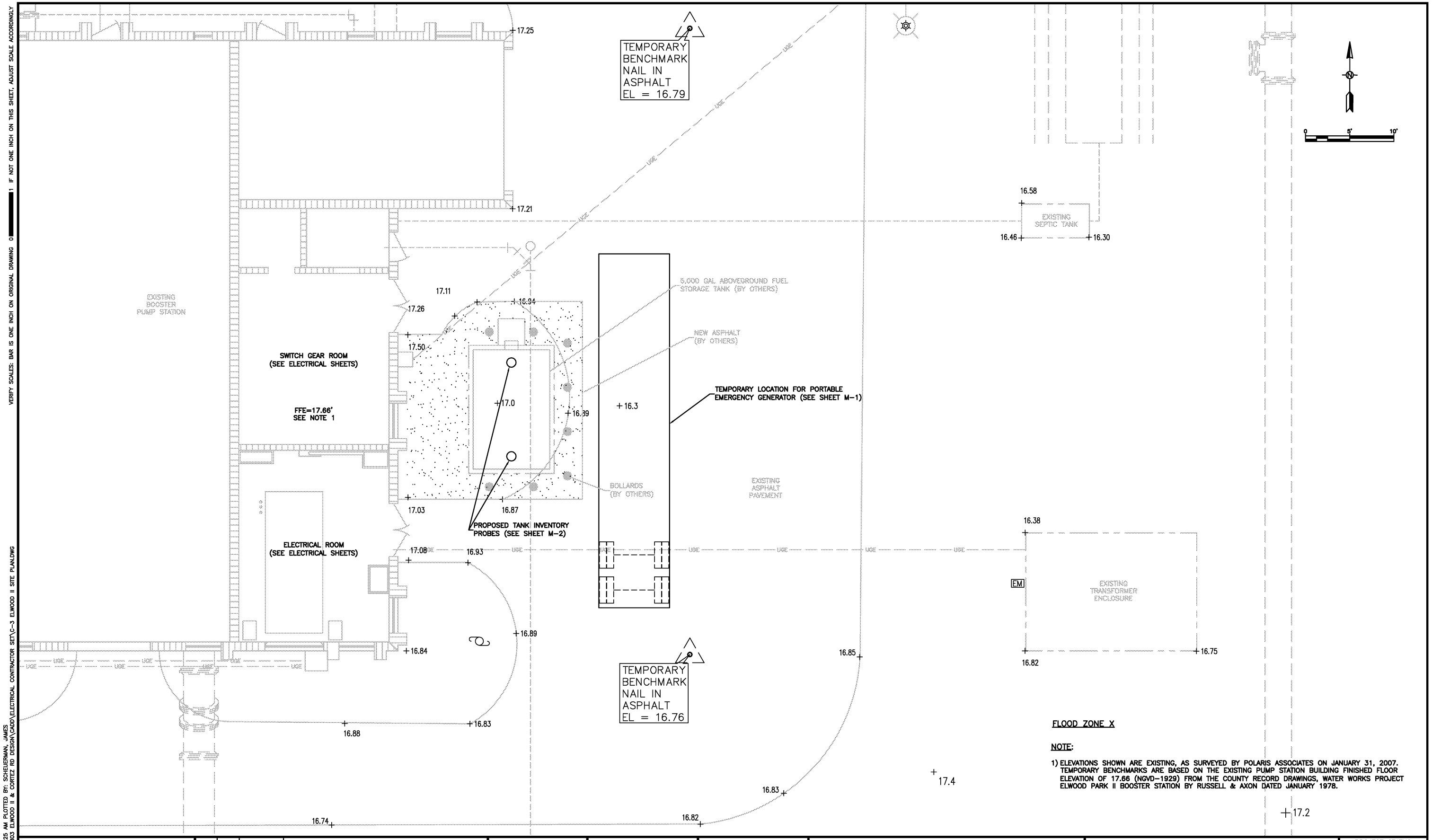
CORTEZ ROAD & ELWOOD II BOOSTER PUMP STATIONS PORTABLE EMERGENCY GENERATORS

FOR
MANATEE COUNTY GOVERNMENT
MANATEE COUNTY, FLORIDA

CORTEZ SITE PLAN

PROJECT STATUS
BID SET
JANUARY 2009

C-2



FLOOD ZONE X

NOTE:

1) ELEVATIONS SHOWN ARE EXISTING, AS SURVEYED BY POLARIS ASSOCIATES ON JANUARY 31, 2007. TEMPORARY BENCHMARKS ARE BASED ON THE EXISTING PUMP STATION BUILDING FINISHED FLOOR ELEVATION OF 17.66 (NGVD-1929) FROM THE COUNTY RECORD DRAWINGS, WATER WORKS PROJECT ELWOOD PARK II BOOSTER STATION BY RUSSELL & AXON DATED JANUARY 1978.

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FILE SAVE DATE: January 13, 2009

CRAIG P. OSMANSKI
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CORTEZ ROAD & ELWOOD II
BOOSTER PUMP STATIONS
PORTABLE EMERGENCY GENERATORS
FOR
MANATEE COUNTY GOVERNMENT
MANATEE COUNTY, FLORIDA

ELWOOD II SITE PLAN

PROJECT STATUS
BID SET
JANUARY 2009

C-3

ABBREVIATIONS:

A	AMPS, AMPERE
AC	ALTERNATING CURRENT
AF	AMP FRAME, AMP FUSE
AFF	ABOVE FINISHED FLOOR
AL	ALUMINUM
ALT.	ALTERNATE
AM	AMMETER
AMPS	AMPERES
APPROX.	APPROXIMATE
ASPH.	ASPHALT
AST	ABOVEGROUND STORAGE TANK
ASTM	AMERICAN SOCIETY OF TESTING AND MATERIALS
AT	AMP TRIP
ATS	AUTOMATIC TRANSFER SWITCH
AUX.	AUXILIARY
AUTO.	AUTOMATIC
AVG.	AVERAGE
AWG	AMERICAN WIRE GAUGE
&	AND
@	AT
BATT.	BATTERY
BC	BARE COPPER, BOLT CIRCLE
BET.	BETWEEN
BIS	BITS PER SECOND
BIL	BASIC IMPULSE LEVEL
BLDG	BUILDING
BKR	BREAKER
BNC	BAYONET-NIELL-CONCELMAN
BOT.	BOTTOM
C	CONDUIT, CONDUCTOR
CAB.	CABINET
CAT.	CATALOG
CATV	CABLE TELEVISION
CB	CIRCUIT BREAKER, CATCH BASIN
CEM.	CEMENT
CF	CUBIC FOOT
CIP	CAST-IN-PLACE
CKT	CIRCUIT
CLR	CLEAR
CL	CLASS, CENTERLINE, CURRENT LIMITING
CLG	CEILING
COL.	COLUMN
CMH	COMMUNICATIONS MANHOLE
COMM.	COMMUNICATION(S)
CONC.	CONCRETE
COND.	CONDUIT
CONN.	CONNECTION
CONST.	CONSTRUCTION
CONT.	CONTINUED
CONTR	CONTRACTOR
COORD.	COORDINATE
CPT	CONTROL POWER TRANSFORMER
CR	CONTROL RELAY
CRS	PVC COATED RIGID STEEL CONDUIT
CS	CONTROL STATION
CT	CURRENT TRANSFORMER
CTR	CENTER
CTRL	CONTROL
CU	COPPER
DB	DIRECT BURIED
dB	DECIBELS
DC	DIRECT CURRENT
DED.	DEDICATED
DEG.	DEGREES
DET.	DETAIL
DIA.	DIAMETER
DIV.	DIVISION
DIFF.	DIFFERENTIAL
DIM.	DIMENSIONS
DWG.	DRAWING
EA.	EACH
ELEC.	ELECTRIC, ELECTRICAL
EL.	ELEVATION
EMBT	EMBEDMENT
EMT	ELECTRICAL METALLIC TUBING
ENCL.	ENCLOSURE, ENCLOSED
ENGR	ENGINEER
EPO	EMERGENCY POWER OFF
EPR	ETHYLENE PROPYLENE RUBBER
EQ.	EQUAL
EQUIP.	EQUIPMENT
EQUIV.	EQUIVALENT
EXIST.	EXISTING
EXP.	EXPOSED

ABBREVIATIONS:

EXT.	EXTERIOR
F	FUSE
FA	FIRE ALARM
FAA	FUTURE FORCED AIR
FACP	FIRE ALARM CONTROL PANEL
FACS	FIRE ALARM CONTROL SYSTEM
FC	FOOT-CANDLE
FND	FOUNDATION
FDR	FEEDER
FHP	FRACTIONAL HORSEPOWER
FIN.	FINISHED
FIN. FL.	FINISHED FLOOR
FIXT.	FIXTURE
FLEX.	FLEXIBLE
FLR	FLOOR
FLUOR.	FLUORESCENT
FO	FIBER OPTIC
FT	FOOT, FEET
FTG	FOOTING
FU	FUSE
FUT.	FUTURE
FV	FULL VOLTAGE
FVR	FULL VOLTAGE REVERSING
FVNR	FULL VOLTAGE NON-REVERSING
GA	GAUGE
GALV.	GALVANIZED
GEN.	GENERATOR
GFI	GROUND FAULT INTERRUPTER
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GND	GROUND
GRS	GALVANIZED RIGID STEEL
H	HEIGHT
HD	HEAVY DUTY
HDPE	HIGH DENSITY POLYETHYLENE
HH	HANDHOLE
HID	HIGH INTENSITY DISCHARGE
HOA	HAND-OFF-AUTOMATIC
HORIZ.	HORIZONTAL
HP	HORSEPOWER
HPS	HIGH PRESSURE SODIUM
HR	HOUR
HZ	HERTZ
I.D.	INSIDE DIMENSION
IE	INVERT ELEVATION
IEEE	INSTITUTE OF ELECTRICAL & ELECTRONIC ENGINEERS
IES	ILLUMINATING ENGINEERING SOCIETY
IN.	INCH(ES)
INCL.	INCLUDING
INST.	INSTANTANEOUS
INSTR.	INSTRUMENT, INSTRUMENTATION
IMH	INSTRUMENTATION MANHOLE
INV.	INVERT
J, JB	JUNCTION BOX
JCT	JUNCTION
JT	JOINT
K	KIRK KEY INTERLOCK
KA	KILO AMPERES
KAIC	KILO AMPS INTERRUPTING CAPACITY
KCMIL	ONE THOUSAND CIRCULAR MILS
KV	KILOVOLTS
KVA	KILOVOLT AMPERES
KVAR	KILOVOLT AMPERES REACTIVE
KW	KILOWATTS
KWH	KILOWATT HOURS
KWHD	KILOWATT HOURS DEMAND
L	LENGTH
LB	POUND
LBS	POUNDS
LC	LOAD CENTER
LED	LIGHT EMITTING DIODE
LF	LINEAR FEET
LIN.	LINEAR
LOC	LOCATIONS
LPS	LIGHTNING PROTECTION SYSTEM
LS	LIMIT SWITCH
LT	LIGHT
LTG	LIGHTING
LTS	LIGHTS
LV	LOW VOLTAGE
LVMH	LOW VOLTAGE MANHOLE
L-G	LINE-TO-GROUND
L-L	LINE-TO-LINE

ABBREVIATIONS:

M	MOTOR
MAX.	MAXIMUM
MCM	ONE THOUSAND CIRCULAR MILS
MCOV	MAXIMUM CIRCUIT OPERATING VOLTAGE
MECH.	MECHANICAL
MEMB.	MEMBRANE
MFR	MANUFACTURER
MH	MANHOLE
MIN.	MINIMUM
MISC.	MISCELLANEOUS
MOV	METAL OXIDE VARISTOR
MLO	MAIN LUGS ONLY
MTD	MOUNTED
MTR	MOTOR
MTS	MANUAL TRANSFER SWITCH
MV	MEDIUM VOLTAGE
MVA	MEGAVOLT AMPERES
N	NEUTRAL
NC	NORMALLY CLOSED
NE	NORTH EAST
NEC	NATIONAL ELECTRICAL CODE
NEMA	NATIONAL ELECTRICAL MANUFACTURES ASSOCIATION
NEUT.	NEUTRAL
NIC	NOT IN CONTRACT
NO	NORMALLY OPEN
NO.	NUMBER
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
NPT	NOMINAL PIPE THREAD
NTS	NOT TO SCALE
O.C.	ON CENTER(S)
O.D.	OUTSIDE DIAMETER
OH	OVERHEAD
OL	OVERLOADS
OPP.	OPPOSITE
OPER.	OPERATOR
OWS	OIL WATER SEPARATOR
P	POLE
PB	PULL BOX, PUSH BUTTON
PE	PHOTOELECTRIC DEVICE
PF	POWER FACTOR
PH OR ø	PHASE
PLC	PROGRAMMABLE LOGIC CONTROLLER
PLCS	PLACES
PM	POWER METER
PMH	PRIMARY MANHOLE
PNL	PANEL
PNLBD	PANEL BOARD
PR	PAIR
PRI.	PRIMARY
PROJ.	PROJECT
PS	PRESSURE SENSOR, POWER SUPPLY
PSI	POUNDS PER SQUARE INCH
PT	POTENTIAL TRANSFORMER, PRESSURE TRANSMITTER
PVC	POLYVINYL CHLORIDE
PWR	POWER
%	PERCENT
QTY	QUANTITY
RECP.	RECEPTACLE
REF.	REFERENCE
REINF.	REINFORCEMENT
REQD	REQUIRED
REV.	REVISION, REVISED
RF	RATING FACTOR
RGS	RIGID GALVANIZED STEEL
RMS	ROOT-MEAN-SQUARE
RVAT	REDUCED VOLTAGE AUTO TRANSFORMER
RVNR	REDUCED VOLTAGE NON-REVERSING
R/W	RIGHT-OF-WAY
SA	SURGE ARRESTER
SCH.	SCHEDULE
SEC.	SECONDARY, SECOND(S)
SECT.	SECTION
SF	SQUARE FOOT, SQUARE FEET
SHLD	SHIELDED
SHT	SHEET
SI	SQUARE INCH, SQUARE INCHES
SIM.	SIMILAR
SMH	SECONDARY MANHOLE
SPDT	SINGLE POLE DOUBLE THROW
SPEC	SPECIFICATION(S)
SQ.	SQUARE
SS	STAINLESS STEEL
ST.	STREET

ABBREVIATIONS:

STA.	STATION
STD	STANDARD
STL	STEEL
STR	STRANDED
SW.	SWITCH
SWBD	SWITCHBOARD
SYM.	SYMMETRICAL
SYNC.	SYNCHRONOUS
SY	SQUARE YARD, SQUARE YARDS
SYS.	SYSTEM
TB	TERMINAL BLOCK
TBD	TO BE DETERMINED
TD	TIME DELAY
TELE.	TELEPHONE
TEMP.	TEMPORARY, TEMPERATURE
TERM.	TERMINAL
THHN	HEAT RESISTANT THERMOPLASTIC INSULATION
THK	THICK
THWN	HEAT AND MOISTURE RESISTANT THERMOPLASTIC INSULATION
THRU	THROUGH
T.O.S.	TOP OF STEEL, TOP OF SLAB
TYP.	TYPICAL
TSP	TWISTED SHIELDED PAIR
UBC	UNIFORM BUILDING CODE
UG	UNDERGROUND
UL	UNDERWRITERS LABORATORY
UNO	UNLESS NOTED OTHERWISE
UPS	UNINTERRUPTABLE POWER SUPPLY
UTP	UNSHIELDED TWISTED PAIR
UVIR	ULTRAVIOLET INFRARED
V	VOLTS, VOLTAGE
VAR	VOLT AMPERES REACTIVE
VERT.	VERTICAL
VFD	VARIABLE FREQUENCY DRIVE
VM	VOLT METER
VOL.	VOLUME
VT	VOLTAGE TRANSFORMER
W	WATT, WIDE, WIDTH, WIRE
WF	WASTE FUEL
WH	WATT-HOUR
WM	WATT-HOUR METER
W/O	WITHOUT
WP	WEATHERPROOF
WT	WEIGHT
WWF	WELDED WIRE FABRIC
W/	WITH
X	REACTANCE
XFMR	TRANSFORMER
XHHW	HEAT AND MOISTURE RESISTANT CROSS LINKED SYNTHETIC POLYMER
XP	EXPLOSION PROOF
Z	IMPEDANCE

GENERAL NOTES:

1. REFER TO MECHANICAL DRAWINGS FOR PROJECT LOCATION, TANK LOCATIONS AND LOCATIONS OF BUILDINGS ON SITE PLAN.
2. ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH:
   ACI 347 "RECOMMENDED PRACTICE FOR CONCRETE FORMWORK"
   ACI 304 "RECOMMENDED PRACTICE FOR MEASURING, MIXING, TRANSPORTING AND PLACING CONCRETE"
   ACI 309 "CONSOLIDATION OF CONCRETE"
3. THE PROPOSED CONCRETE MIX WITH CERTIFIED TEST RESULTS, SHALL BE SUBMITTED FOR THE OWNER'S APPROVAL AT LEAST 15 WORKING DAYS PRIOR TO ITS USE. PROTECT FRESHLY PLACED CONCRETE FROM PREMATURE DRYING AND EXCESSIVE COLD OR HOT TEMPERATURES. ANY DEFECTS IN WORKMANSHIP SHALL BE REPAIRED OR REPLACED TO THE OWNER'S SATISFACTION AT CONTRACTORS EXPENSE.
4. ALL REINFORCEMENT TO BE DETAILED AND FABRICATED IN ACCORDANCE WITH ACI 315-94.
5. ALL ALUMINUM SURFACES IN CONTACT WITH CONCRETE &/OR GROUT SHALL BE COATED WITH 16 MILS OF BITUMASTIC COAL TAR EPOXY (8 MILS PER COAT).

LEGEND:

- (#) REFERENCE NOTE TAG
- (#) DEMOLITION NOTE TAG
- (#) FEEDER NOTE TAG
- DRIVEN GROUNDING ROD ELECTRODE
- CONNECTION POINT
- CONDUIT.
- CONDUIT UNDERGROUND.
- A — 2 X 32W FLUORESCENT LAMP PENDANT MOUNTED LIGHT FIXTURE, REFER TO LIGHTING FIXTURE SCHEDULES ON E-6 AND E-11.
- B — HPS WALL MOUNT LIGHT FIXTURE, REFER TO LIGHTING FIXTURE SCHEDULES ON E-6 AND E-11.
- $#T — LIGHT SWITCH, "#" INDICATES NUMBER OF WAYS FOR SWITCH, "T" INDICATES SWITCH INCLUDES TIME DELAYED AUTOMATIC SHUTOFF.
- GFCI — DUPLEX RECEPTACLE, NEMA 5-20R, INDUSTRIAL SPECIFICATION GRADE. "GFCI" INDICATES THAT RECEPTACLE INCLUDES GROUND FAULT CIRCUIT INTERRUPTER.
- CIRCUITING SYMBOLOGY FEEDER. REFER TO SINGLE-LINE DIAGRAM FOR CONDUIT AND WIRE SPECIFICATION.
- HOMERUNS TO PANEL. PANEL & CIRCUIT DESIGNATIONS AS INDICATED. NO TICK MARKS INDICATE THREE (3) CONDUCTORS, TICK MARKS INDICATE NUMBER OF CONDUCTORS IF THERE IS MORE THAN THREE (3) CONDUCTORS; (\) INDICATES PHASE CONDUCTOR, (|) INDICATES NEUTRAL CONDUCTOR, (⏚) INDICATES GROUND CONDUCTOR
- (P) PHOTO CELL
- JB — JUNCTION BOX
- TO BE REMOVED

ELECTRICAL DRAWINGS LIST:

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			REVISIONS

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DRW: G. DAVIS
FILE SAVE DATE: January 9, 2009

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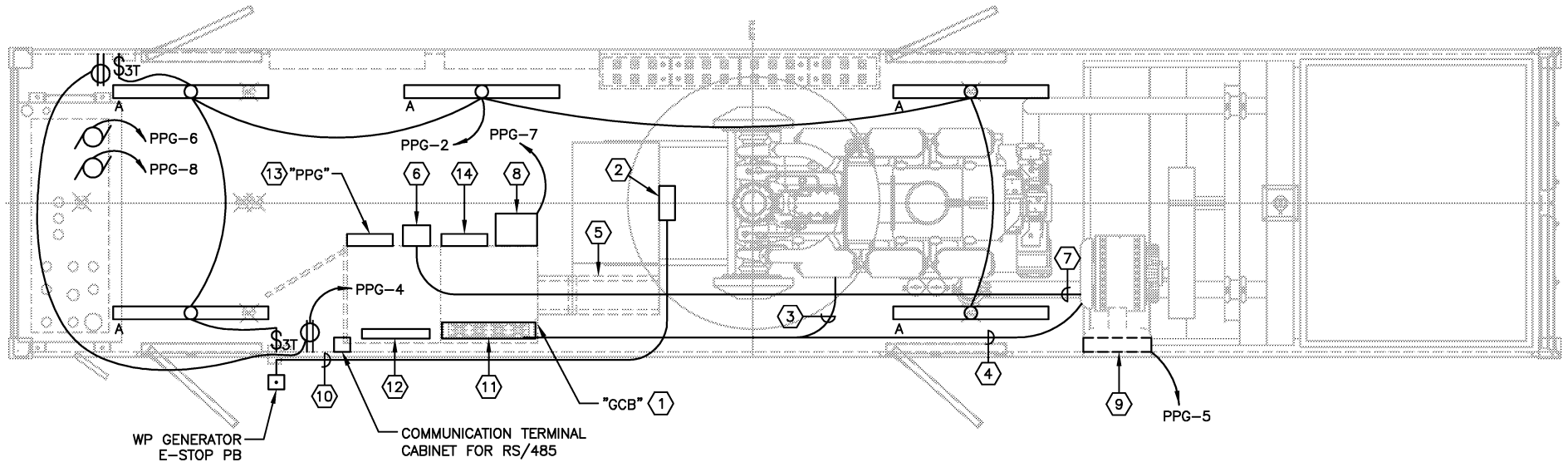
FLORIDA P.E. NO. 66443

CORTEZ ROAD & ELWOOD II
BOOSTER PUMP STATIONS
PORTABLE EMERGENCY GENERATORS
FOR
MANATEE COUNTY GOVERNMENT
MANATEE COUNTY, FLORIDA

ABBREVIATIONS, ELECTRICAL DRAWINGS LIST, LEGEND AND GENERAL NOTES

PROJECT STATUS
BID SET
JANUARY 2009

E-1



1 / E-5 PLAN

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

GENERAL NOTES:

1. THE CONTRACTOR SHALL COORDINATE AND PAY FOR THE SERVICES OF RINGPOWER TO PROVIDE AND INSTALL ALL REQUIRED GENERATOR APPURTENANCES INCLUDING BUT NOT LIMITED TO: COOLANT JACKET HEATER, ELECTRONIC GOVERNOR, STARTING SYSTEM (CRANKING MOTOR, BATTERIES, BATTERY CHARGER AND CABLES), CONTROL AND MONITORING, STRIP HEATER AND VOLTAGE REGULATOR.
2. ALL PVC UNDERGROUND CONDUITS SHALL TRANSITION TO RGS CONDUIT PRIOR TO CONDUIT TRANSITION FROM HORIZONTAL TO VERTICAL. ALL EXTERIOR VERTICAL CONDUITS SHALL BE RGS.
3. CONDUIT ROUTING IS SHOWN FOR DIAGRAMMATIC PURPOSES ONLY, ACTUAL CONDUIT ROUTING SHALL BE DETERMINED BY AND COORDINATED WITH GENERATOR TRAILER MANUFACTURER AND SHALL MEET THE REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE.

REFERENCE NOTES:

1. PROVIDE THERMAL-MAGNETIC MOLDED CASE CIRCUIT BREAKER "GCB" IN NEMA TYPE 12 FREE STANDING ENCLOSURE.
2. COORDINATE AND PAY FOR THE SERVICES FOR RINGPOWER TO PROVIDE AND INSTALL NEW GENERATOR CONTROL PANEL.
3. PROVIDE #2/0 AWG BARE STRANDED TINNED COPPER GROUNDING CONDUCTOR IN PVC BETWEEN GENERATOR SKID AND GROUND BAR IN LOAD CONNECTION BOX. EXOTHERMICALLY WELD GROUNDING CONDUCTOR TO GENERATOR SKID.
4. PROVIDE #2/0 AWG BARE STRANDED TINNED COPPER GROUNDING CONDUCTOR IN PVC CONDUIT BETWEEN RADIATOR SKID AND GROUND BAR IN LOAD CONNECTION BOX. EXOTHERMICALLY WELD GROUNDING CONDUCTOR TO RADIATOR SKID.
5. PROVIDE ALUMINUM CABLE TRAY OVERHEAD EXPOSED BETWEEN "GCB" AND GENERATOR TERMINATION BOX.
6. PROVIDE NEMA SIZE 2 MOTOR COMBINATION STARTER WITH 50A DUAL ELEMENT TIME DELAY FUSED DISCONNECT IN A NEMA TYPE 12 ENCLOSURE.
7. PROVIDE 1 IN. RGS CONDUIT BETWEEN MOTOR COMBINATION STARTER AND RADIATOR MOTOR. PROVIDE LIQUID-TIGHT FLEXIBLE METAL CONDUIT FOR LAST 18 IN. OF CONDUIT RUN ADJACENT TO MOTOR TERMINATION BOX.
8. LOCATE BATTERY CHARGER ON SIDE OF "GCB" ENCLOSURE. LOCATION SHOWN FOR BATTERY CHARGER ON PLAN IS FOR DIAGRAMMATIC PURPOSES ONLY.
9. PROVIDE POWER CONNECTIONS, THERMOSTAT & RELAY FOR EXHAUST FAN. FAN SHALL BE CONTROLLED VIA THERMOSTAT.
10. PROVIDE ONE (1) 3/4 IN. RGS CONDUIT ROUTED EXPOSED BETWEEN GENERATOR CONTROLLER AND GENERATOR E-STOP PB.
11. PROVIDE LOAD CONNECTION BOX CONTAINING COPPER BUS STABS MINIMUM 1/4" X 4" WITH NEMA HOLE PUNCHING FOR A MINIMUM OF EIGHT (8) CABLES PER PHASE, NEUTRAL AND GROUND.
12. PROVIDE HOUSE POWER CONNECTION BOX FOR "PPG" LINE CONTAINING COPPER BUS STABS, MINIMUM 1/4" x 2" WITH NEMA HOLE PUNCHING FOR A MINIMUM OF TWO (2) CABLES PER PHASE, NEUTRAL AND GROUND.
13. PROVIDE 100A, 120/240V PANELBOARD IN NEMA TYPE 1 ENCLOSURE SURFACE MOUNTED TO GENERATOR CUBICLE.
14. PROVIDE VENT FAN CONTROLLER WITH ADJUSTABLE THERMOSTAT.

GRAPHIC SCALE
0 1' 2' 4'
SCALE: 1/2" = 1'-0"

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CORTEZ ROAD & ELWOOD II
BOOSTER PUMP STATIONS
PORTABLE EMERGENCY GENERATORS
FOR
MANATEE COUNTY GOVERNMENT
MANATEE COUNTY, FLORIDA

PORTABLE GENERATOR ELECTRICAL DETAIL

PROJECT STATUS
BID SET
JANUARY 2009

E-10

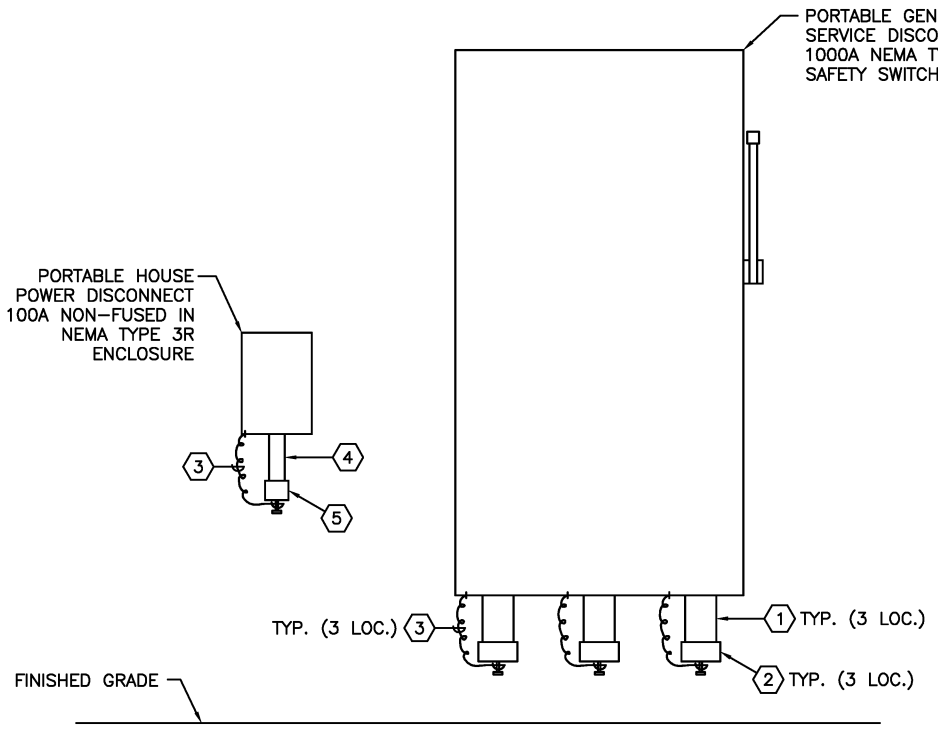
VERIFY SCALES: BAR IS ONE INCH ON ORIGINAL DRAWING 0 1 IF NOT ONE INCH ON THIS SHEET, ADJUST SCALE ACCORDINGLY

REFERENCE NOTES:

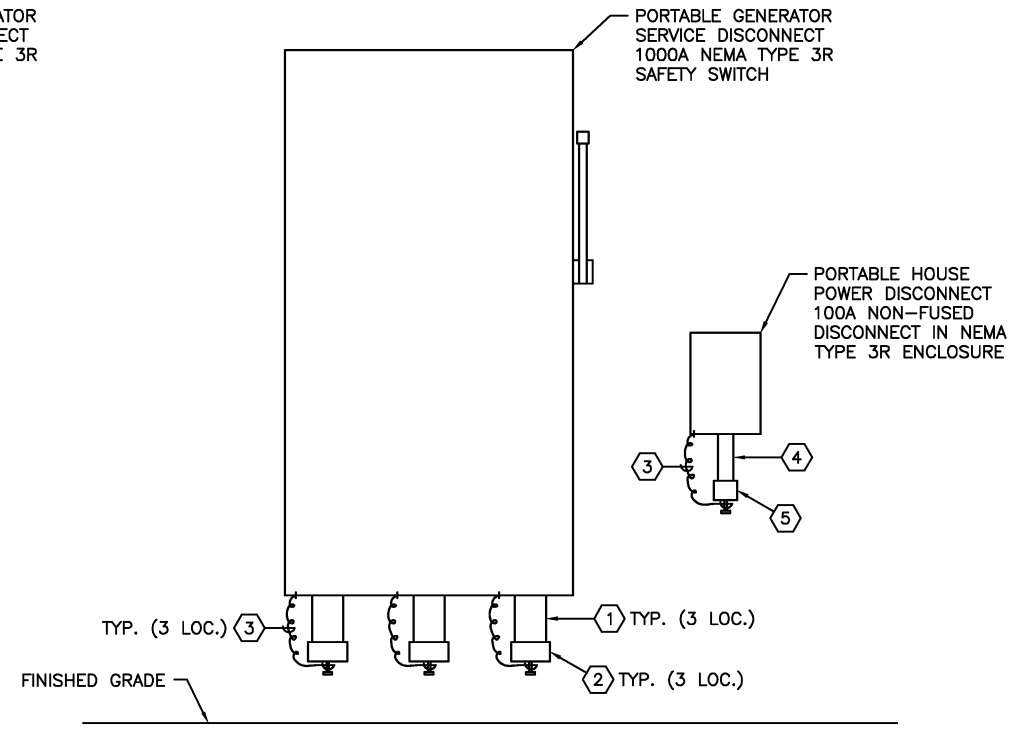
1. PROVIDE 6 IN. LONG 4 IN. RGS CONDUIT NIPPLE.
2. PROVIDE 4 IN. RGS CONDUIT CAP.
3. PROVIDE 12 IN. MIN. LENGTH OF STAINLESS STEEL CHAIN PERMENENTY ATTACHED TO BOTTOM OF SAFETY SWITCH ENCLOSURE. INSTALL BOLT TO CENTER OF CAP TO ALLOW FREE MOVEMENT OF CHAIN ABOUT THE BOLT.
4. PROVIDE 6 IN. LONG 2 IN. RGS CONDUIT NIPPLE.
5. PROVIDE 2 IN. RGS CONDUIT CAP.
6. PROVIDE ONE (1) 1IN. SCHEDULE 80 PVC CONDUIT UG BETWEEN TANK INVENTORY SYSTEM CONTROLLER AND FUEL TANK OVERFILL ALARM.

REFERENCE NOTES:

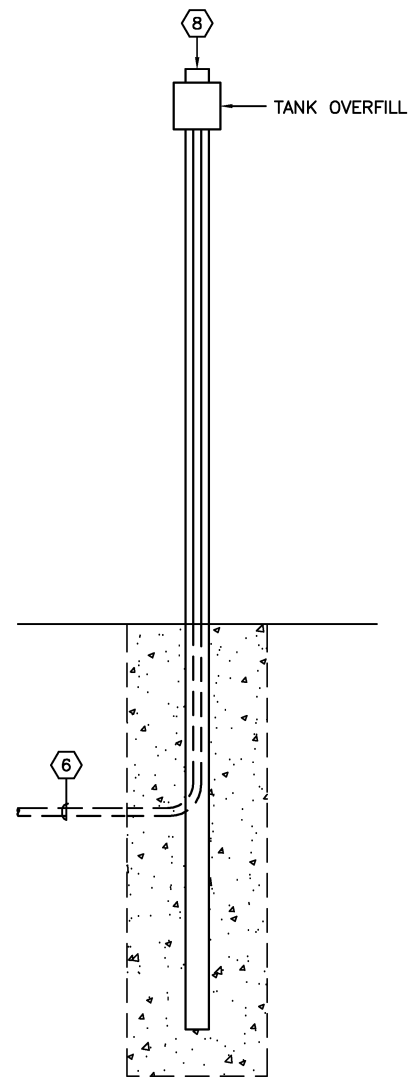
7. PROVIDE FUEL TANK OVERFILL ALARM AND ACKNOWLEDGEMENT SWITCH MOUNTED ON A 6IN. SQ. BY 8FT. LONG PRE-STRESSED CONCRETE POST. BASIS OF DESIGN: VEEDER-ROOT FORM NO. 790091-001 (OVERFILL ALARM), 790095-001 (SWITCH).
8. PROVIDE ONE 3"x9' SS SCHEDULE 40 PIPE SUPPORT POST WITH SS END CAPS, PLACE CONCRETE 6" AROUND AND UNDER EACH SUPPORT POST. CONCRETE SHALL HAVE MINIMUM STRENGTH AT 28 DAYS OF 3,000PSI. THE OUTSIDE EDGES OF THE SLAB SHALL BE CAST AGAINST FORMWORK.



1/E-4 DETAIL
GENERATOR CONNECTION LOCATION – CORTEZ
SCALE: NTS



2/E-8 DETAIL
GENERATOR CONNECTION LOCATION – ELWOOD II
SCALE: NTS



3/E-3 & E-7 DETAIL
FUEL TANK OVERFILL ALARM AND ACKNOWLEDGEMENT SWITCH
SCALE: NTS

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NO.	BY	DATE	DESCRIPTION

REVISIONS

URS JOB NUMBER 12006803

PM: C. OSMANSKI
ENG: G. DAVIS
DRW: G. DAVIS
FILE SAVE DATE: January 14, 2009

GLENN H. DAVIS
FLORIDA P.E. NO. 66443

CORTEZ ROAD & ELWOOD II
BOOSTER PUMP STATIONS
PORTABLE EMERGENCY GENERATORS
FOR
MANATEE COUNTY GOVERNMENT
MANATEE COUNTY, FLORIDA

ELECTRICAL DETAILS

PROJECT STATUS
BID SET
JANUARY 2009

E-11

PLOTTED: January 14, 2009 2:36 PM PLOTTED BY: SCHEUERMAN, JAMES
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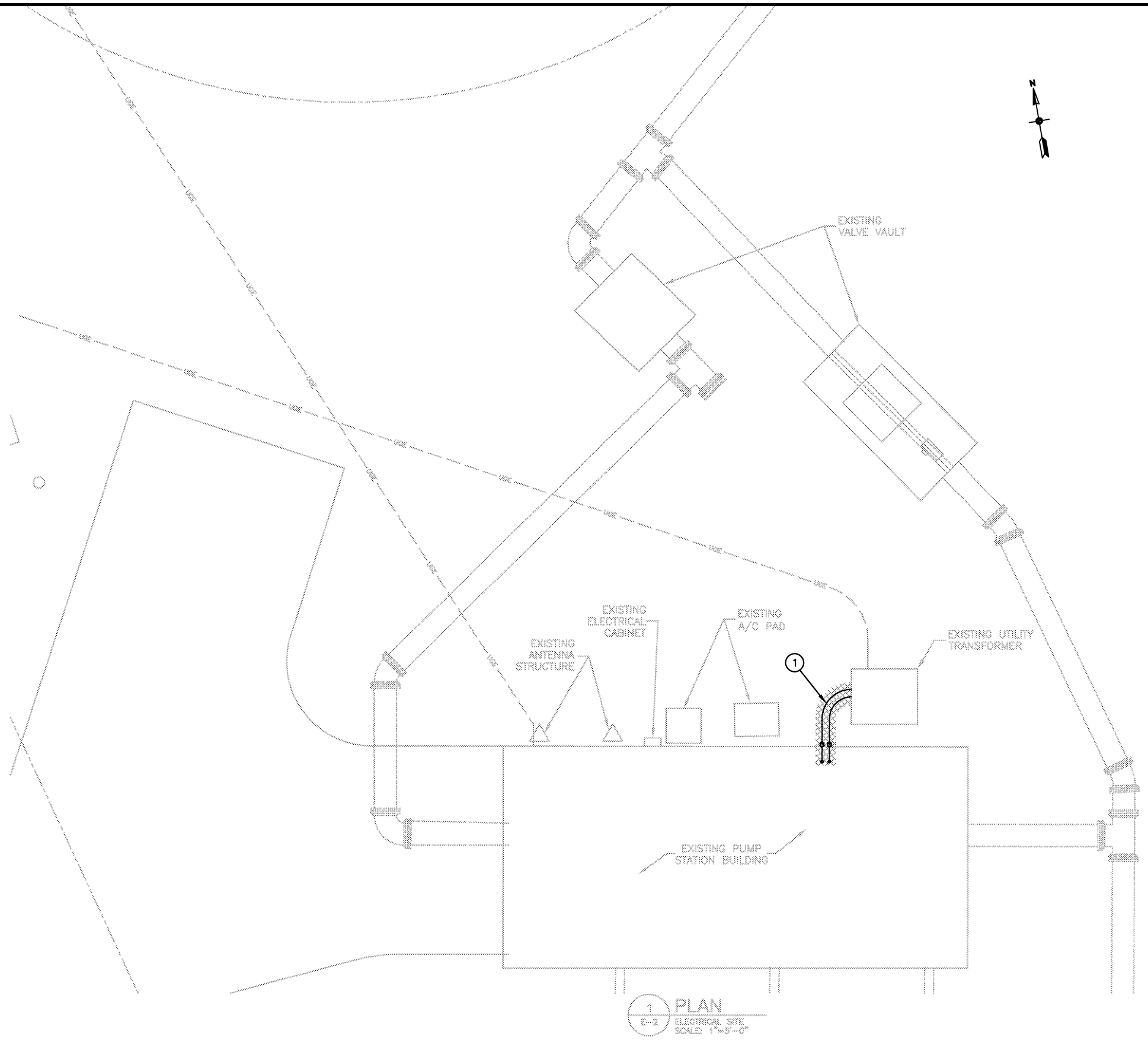

1 PLAN
E-2 ELECTRICAL SITE
SCALE: 1"=5'-0"

GENERAL NOTES:

1. NOT ALL ELECTRICAL EQUIPMENT, CONDUIT, ETC., ARE INDICATED. THIS DRAWING ONLY INDICATES ELECTRICAL ITEMS THAT ARE RELATED TO THIS PROJECT.
2. COORDINATE WITH POWER COMPANY FOR DE-ENERGIZING OF THE TRANSFORMER PRIOR TO COMMENCING ELECTRICAL SERVICE ENTRANCE WORK.
3. ELECTRICAL EQUIPMENT INDICATED AND ROUTING OF CONDUIT SHOWN ARE DIAGRAMMATIC ONLY. CONTRACTOR TO FIELD VERIFY.

DEMOLITION NOTES:

(1) DISCONNECT, REMOVE AND PROPERLY DISPOSE EXISTING SECONDARY CONDUIT AND CONDUCTORS. PATCH WALL PENETRATIONS AND RESTORE TO MATCH EXISTING FINISH.

TO BE REMOVED

GRAPHIC SCALE
0 5' 10'
SCALE: 1"=5'-0"

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NO.	BY	DATE	DESCRIPTION
1	CO	6/13/08	REVISED NOTES

REVISIONS

URS JOB NUMBER 12006803
PM: C. OSMANSKI
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FILE SAVE DATE: January 14, 2009

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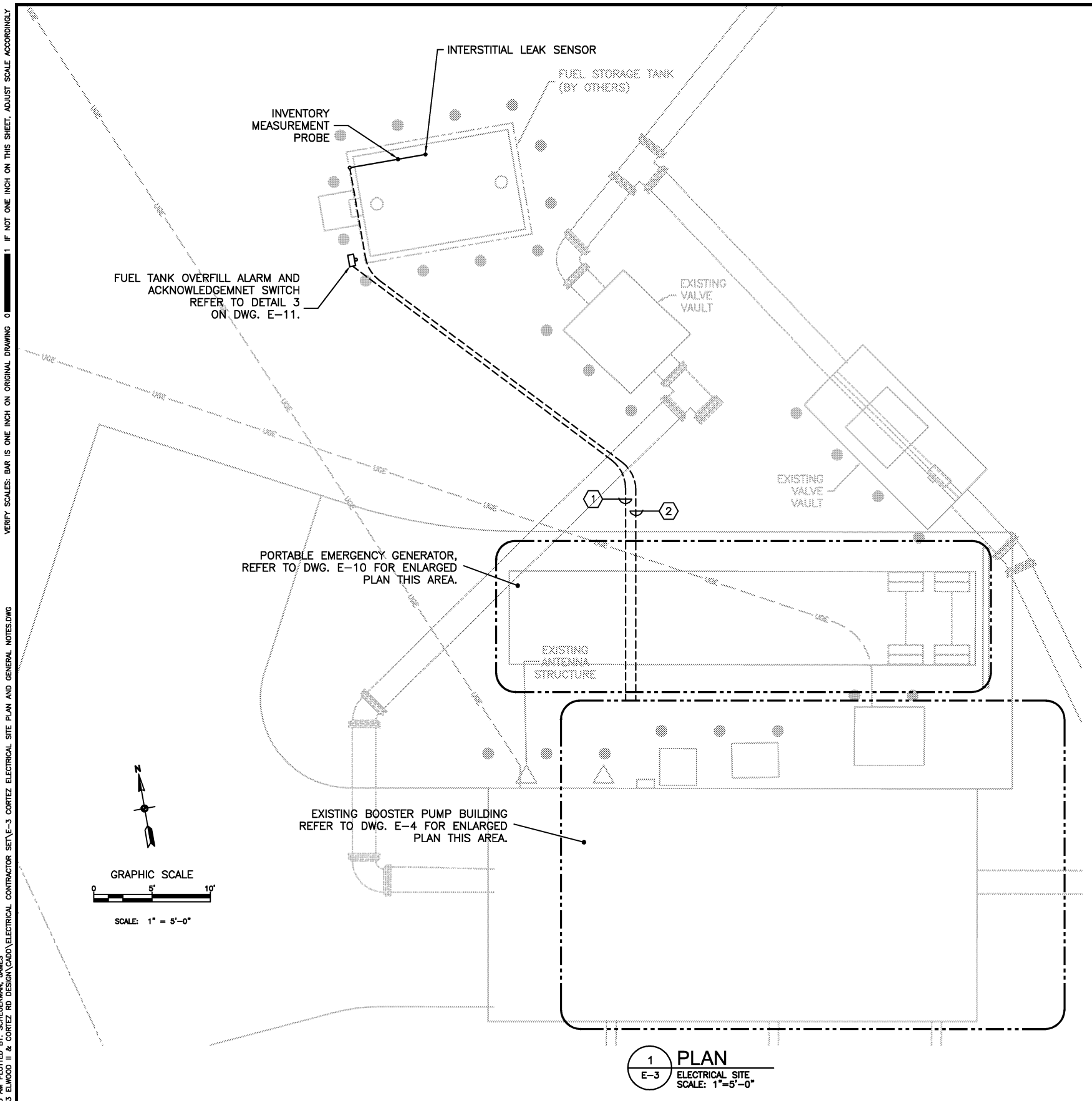
CORTEZ ROAD & ELWOOD II
BOOSTER PUMP STATIONS
PORTABLE EMERGENCY GENERATORS
FOR
MANATEE COUNTY GOVERNMENT
MANATEE COUNTY, FLORIDA

CORTEZ DEMOLITION PLAN AND NOTES

PROJECT STATUS
BID SET
JANUARY 2009

E-2



1 PLAN
E-3 ELECTRICAL SITE
SCALE: 1"=5'-0"

GENERAL NOTES:

1. REFER TO SINGLE LINE DIAGRAM FOR CONDUCTOR SIZES AND ADDITIONAL REQUIREMENTS.
2. ALL PVC UNDERGROUND CONDUITS SHALL TRANSITION TO RGS CONDUIT PRIOR TO CONDUIT TRANSITION FROM HORIZONTAL TO VERTICAL. ALL EXTERIOR VERTICAL CONDUITS ARE RGS.
3. CONTRACTOR IS RESPONSIBLE FOR COORDINATION ASSOCIATED WITH THE SERVICES OF FPL TO DE-ENERGIZE SERVICE, AND TERMINATE SECONDARY CONDUCTORS. FPL CONTACT FOR THIS SITE IS ANDREW HALL (941) 723-4428. REFER TO SPECIFICATION SECTION 01150.

REFERENCE NOTES:

(1) PROVIDE ONE (1) IN. CONCRETE ENCASED SCHEDULE 40 PVC CONDUIT UG BETWEEN BOOSTER PUMP BUILDING AND FUEL TANK OVERFILL ALARM AND ACKNOWLEDGEMENT SWITCH.

(2) PROVIDE TWO (2) IN. CONCRETE ENCASED SCHEDULE 40 PVC CONDUIT UG BETWEEN BOOSTER PUMP BUILDING AND INVENTORY MEASUREMENT PROBE AND INTERSTITIAL LEAK SENSOR.

VERIFY SCALES: BAR IS ONE INCH ON ORIGINAL DRAWING 0 IF NOT ONE INCH ON THIS SHEET, ADJUST SCALE ACCORDINGLY

PLOTTED: January 14, 2009 8:05 AM PLOTTED BY: SCHEUERMAN, JAMES
X:\MANATEE PROJECTS\12006803 ELWOOD II & CORTEZ RD DESIGN\CADD\ELECTRICAL CONTRACTOR SET\E-3 CORTEZ ELECTRICAL SITE PLAN AND GENERAL NOTES.DWG

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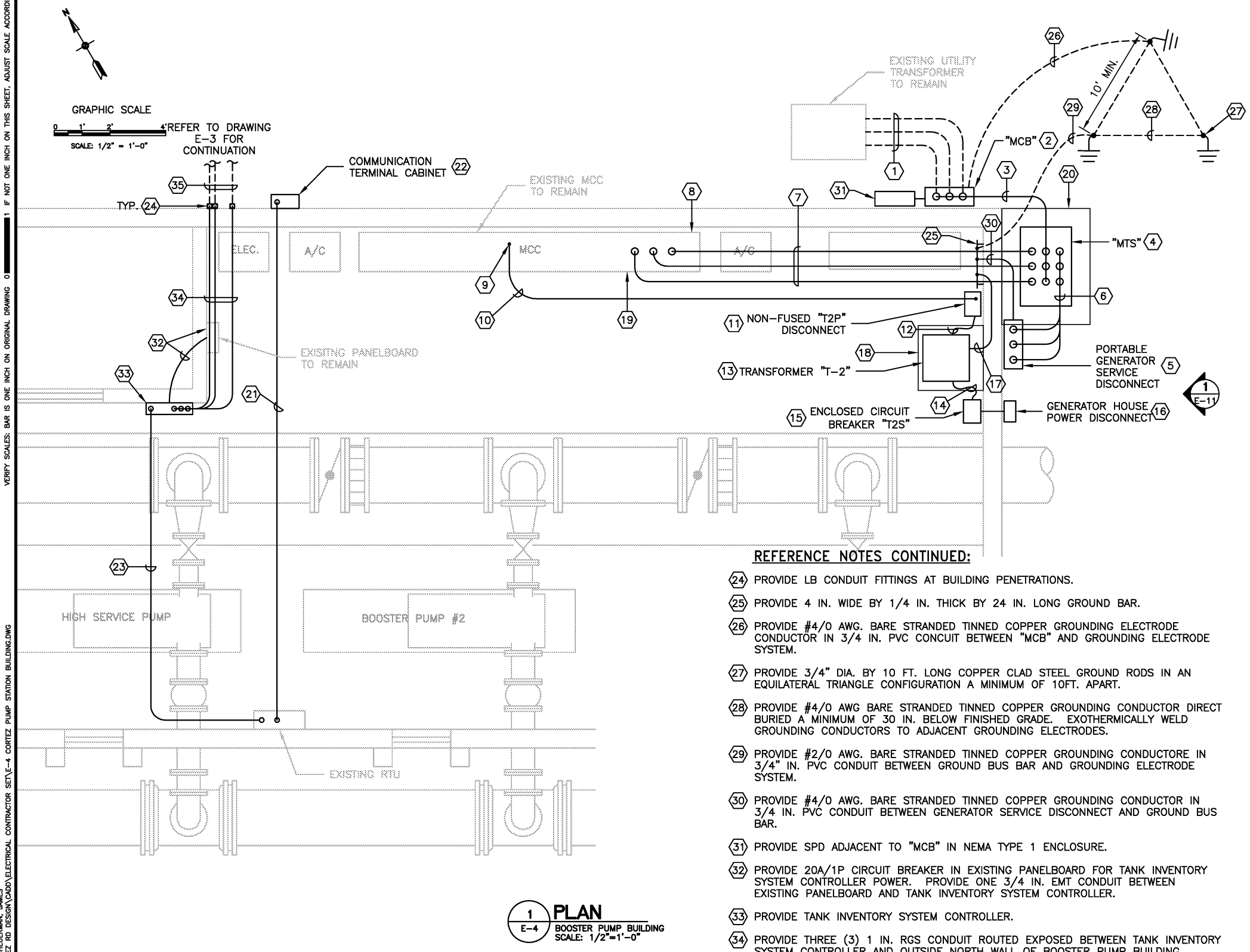
CORTEZ ROAD & ELWOOD II
BOOSTER PUMP STATIONS
PORTABLE EMERGENCY GENERATORS
FOR
MANATEE COUNTY GOVERNMENT
MANATEE COUNTY, FLORIDA

CORTEZ ELECTRICAL SITE PLAN AND GENERAL NOTES

PROJECT STATUS
BID SET
JANUARY 2009

E-3



1 E-4 **PLAN**
BOOSTER PUMP BUILDING
SCALE: 1/2"=1'-0"

GENERAL NOTES:

1. ALL PVC UNDERGROUND CONDUITS SHALL TRANSITION TO RGS CONDUIT PRIOR TO CONDUIT TRANSITION FROM HORIZONTAL TO VERTICAL. ALL EXTERIOR VERTICAL CONDUITS ARE RGS.
2. PROVIDE TWO (2) THERMOPLASTIC VENTILATORS PROPERLY INSTALLED TO PROVIDE RAINPROOF VENTILATION AND 3/4", TYPE 316 SS NEMA TYPE 4X BREATHER/DRAIN WITH CASTELLATED LOCKNUTS AND CAPTIVE "O" RING ON RECESS OF THE FACE FOR EACH STAINLESS STEEL ENCLOSURE.

REFERENCE NOTES:

1. PROVIDE THREE (3) 3 IN. SCHEDULE 80 PVC CONDUIT UG BETWEEN EXISTING UTILITY TRANSFORMER AND NEW MAIN SERVICE ENTRANCE CIRCUIT BREAKER.
2. PROVIDE 900A SERVICE ENTRANCE RATED ENCLOSED CIRCUIT BREAKER IN A NEMA TYPE 4X SS ENCLOSURE. PROVIDE PERMANENT PLAQUE MOUNTED TO FRONT OF 'MCB' WITH CONTRASTING COLOR AND MINIMUM OF 2IN. HIGH TEXT THAT STATES "BUILDING EQUIPPED FOR TEMPORARY GENERATOR SERVICE: GENERATOR SERVICE DISCONNECT LOCATED ON EAST WALL OF BUILDING".
3. PROVIDE THREE (3) 3 IN. RGS CONDUIT ROUTED EXPOSED BETWEEN 'MCB' AND 'MTS'.
4. PROVIDE 1000A, 480Y/277V MANUAL TRANSFER SWITCH IN A NEMA TYPE 4X SS FREE-STANDING ENCLOSURE.
5. PROVIDE 1000A, 480Y/277V WALL MOUNTED SAFETY SWITCH IN A NEMA TYPE 3R ENCLOSURE. PROVIDE PERMANENT PLAQUE MOUNTED TO FRONT OF DISCONNECT WITH CONTRASTING COLOR AND MINIMUM OF 2IN. HIGH TEXT THAT STATES "TEMPORARY GENERATOR SERVICE DISCONNECT: UTILITY SERVICE DISCONNECT LOCATED ON NORTH WALL OF BUILDING".
6. PROVIDE THREE (3) 3 IN. RGS CONDUIT ROUTED EXPOSED BETWEEN GENERATOR SERVICE DISCONNECT AND 'MTS'.
7. PROVIDE THREE (3) 3 IN. RGS CONDUIT ROUTED EXPOSED BETWEEN 'MTS' AND EXISTING MCC.
8. CONTRACTOR TO REMOVE EXISTING NEUTRAL TO GROUND BOND.
9. PROVIDE 45A, 2 POLE CIRCUIT BREAKER AS RECOMMENDED FOR USE BY THE EXISTING MCC MANUFACTURER, NEW CIRCUIT BREAKER SHALL HAVE A SYMMETRIC FAULT CURRENT RATING EQUAL OR GREATER THAN THE HIGHEST RATED BREAKER IN MCC.
10. PROVIDE ONE 1 IN. RGS CONDUIT ROUTED EXPOSED BETWEEN EXISTING MCC AND TRANSFORMER SAFETY DISCONNECT "T2P".
11. PROVIDE WALL MOUNTED NON-FUSED SAFETY DISCONNECT IN NEMA TYPE 12 ENCLOSURE.
12. PROVIDE ONE 1 IN. LIQUID-TIGHT FLEXIBLE METAL CONDUIT BETWEEN SAFETY DISCONNECT "T2P" AND TRANSFORMER "T-2".
13. PROVIDE GENERAL PURPOSE FLOORMOUNT DRY-TYPE TRANSFORMER.
14. PROVIDE ONE 1-1/2 IN. LIQUID-TIGHT FLEXIBLE METAL CONDUIT BETWEEN TRANSFORMER AND ENCLOSED CIRCUIT BREAKER "T2S".
15. PROVIDE NEW MOLDED CASE ENCLOSED CIRCUIT BREAKER IN NEMA TYPE 1 ENCLOSURE.
16. PROVIDE 100A NON-FUSED DISCONNECT IN A NEMA 3R ENCLOSURE.
17. PROVIDE #8 AWG BARE STRANDED TINNED COPPER GROUNDING CONDUCTOR BETWEEN TRANSFORMER AND GROUND BUS BAR.
18. PROVIDE 4 IN. HIGH 4000 PSI CONCRETE HOUSEKEEPING PAD WITH 6" X 6" WWF, 1.4W X 1.4W.
19. PROVIDE PERMANENT PLAQUE MOUNTED TO EXISTING 'MCC' WITH CONTRASTING COLOR AND MINIMUM OF 2 IN. HIGH TEXT THAT STATES "NORMAL AND EMERGENCY SERVICE DISCONNECTS TO THIS BUILDING ARE LOCATED IN GENERATOR ENCLOSURE.
20. PROVIDE 50IN. BY 38IN. BY 6IN. DEEP 4000 PSI CONCRETE PAD WITH TWO LAYERS OF 6" X 6" WWF, 1.4W X 1.4W.
21. PROVIDE 1-1/2 IN. RGS CONDUIT ROUTED EXPOSED BETWEEN EXISTING RTU AND COMMUNICATION TERMINAL CABINET ON NORTH SIDE OF BUILDING. PROVIDE 2-PAIR (24 AWG), TWISTED SHIELD FOR RS485/MODBUS COMMUNICATIONS BETWEEN PORTABLE GENERATOR AND EXISTING RTU.
22. PROVICE 12" SQ. BY 6" DEEP STAINLESS STEEL TERMINAL CABINET WITH TERMINAL BLOCK FOR PORTABLE GENERATOR RS485/MODBUS COMMUNICATIONS.
23. PROVIDE ONE 1 IN. RGS CONDUIT ROUTED EXPOSED BETWEEN EXISTING RTU AND TANK INVENTORY SYSTEM CONTROLLER.

REFERENCE NOTES CONTINUED:

24. PROVIDE LB CONDUIT FITTINGS AT BUILDING PENETRATIONS.
25. PROVIDE 4 IN. WIDE BY 1/4 IN. THICK BY 24 IN. LONG GROUND BAR.
26. PROVIDE #4/0 AWG. BARE STRANDED TINNED COPPER GROUNDING ELECTRODE CONDUCTOR IN 3/4 IN. PVC CONCUIT BETWEEN "MCB" AND GROUNDING ELECTRODE SYSTEM.
27. PROVIDE 3/4" DIA. BY 10 FT. LONG COPPER CLAD STEEL GROUND RODS IN AN EQUILATERAL TRIANGLE CONFIGURATION A MINIMUM OF 10FT. APART.
28. PROVIDE #4/0 AWG BARE STRANDED TINNED COPPER GROUNDING CONDUCTOR DIRECT BURIED A MINIMUM OF 30 IN. BELOW FINISHED GRADE. EXOTHERMICALLY WELD GROUNDING CONDUCTORS TO ADJACENT GROUNDING ELECTRODES.
29. PROVIDE #2/0 AWG. BARE STRANDED TINNED COPPER GROUNDING CONDUCTORE IN 3/4" IN. PVC CONDUIT BETWEEN GROUND BUS BAR AND GROUNDING ELECTRODE SYSTEM.
30. PROVIDE #4/0 AWG. BARE STRANDED TINNED COPPER GROUNDING CONDUCTOR IN 3/4 IN. PVC CONDUIT BETWEEN GENERATOR SERVICE DISCONNECT AND GROUND BUS BAR.
31. PROVIDE SPD ADJACENT TO "MCB" IN NEMA TYPE 1 ENCLOSURE.
32. PROVIDE 20A/1P CIRCUIT BREAKER IN EXISTING PANELBOARD FOR TANK INVENTORY SYSTEM CONTROLLER POWER. PROVIDE ONE 3/4 IN. EMT CONDUIT BETWEEN EXISTING PANELBOARD AND TANK INVENTORY SYSTEM CONTROLLER.
33. PROVIDE TANK INVENTORY SYSTEM CONTROLLER.
34. PROVIDE THREE (3) 1 IN. RGS CONDUIT ROUTED EXPOSED BETWEEN TANK INVENTORY SYSTEM CONTROLLER AND OUTSIDE NORTH WALL OF BOOSTER PUMP BUILDING.
35. PROVIDE THREE (3) 1 IN. CONCRETE ENCASED SCHEDULE 40 PVC CONDUIT UG BETWEEN BOOSTER PUMP BUILDING AND INTERSTITIAL LEAK SENSOR, TANK INVENTORY PROBE ON FUEL TANK AND TANK OVERFILL ALARM AND ACKNOWLEDGEMENT SWITCH.

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NO.	BY	DATE	DESCRIPTION

REVISIONS

URS JOB NUMBER 12006803

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FILE SAVE DATE: January 9, 2009

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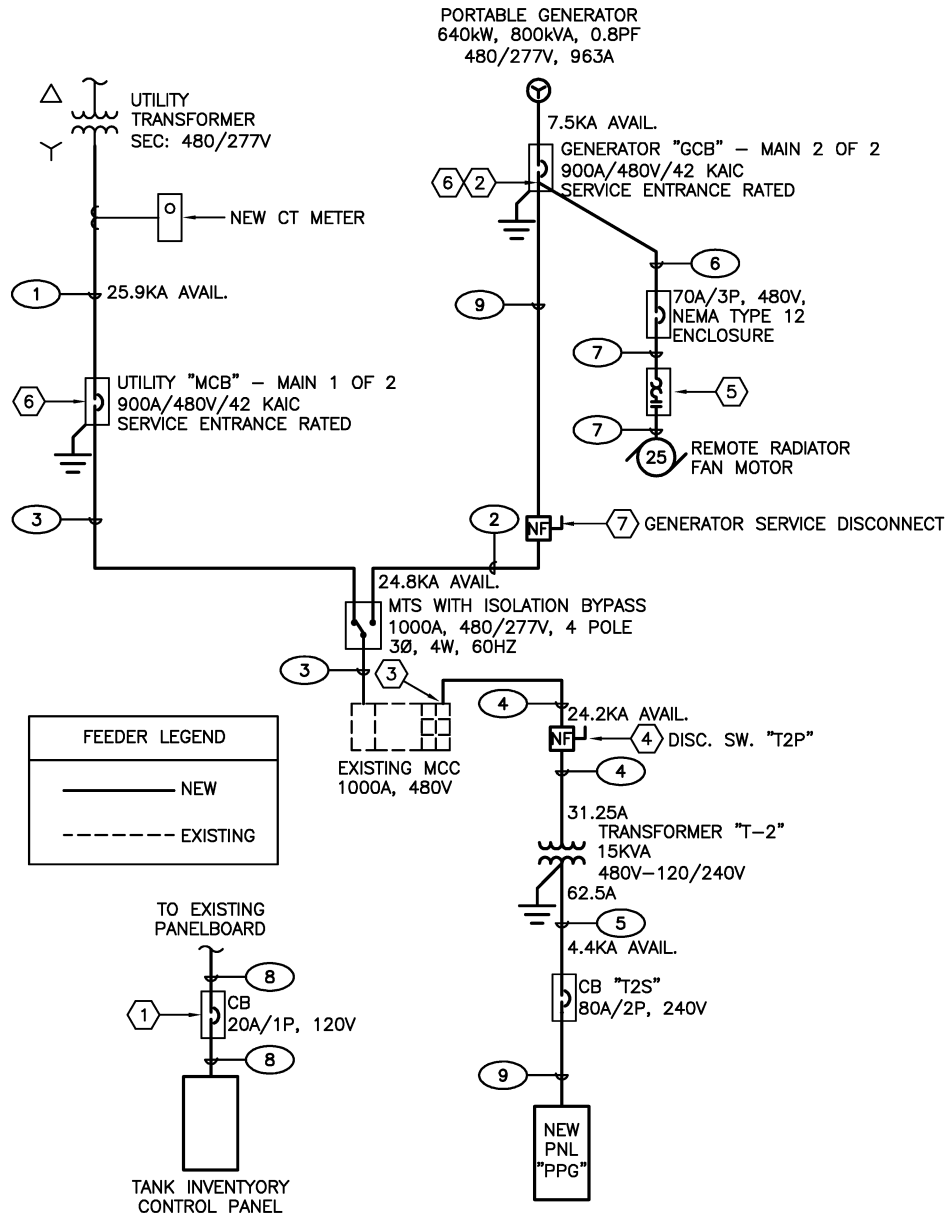
MANATEE COUNTY FLORIDA

CORTEZ ROAD & ELWOOD II
BOOSTER PUMP STATIONS
PORTABLE EMERGENCY GENERATORS
FOR
MANATEE COUNTY GOVERNMENT
MANATEE COUNTY, FLORIDA

CORTEZ PUMP STATION BUILDING

PROJECT STATUS
BID SET
JANUARY 2009

E-4



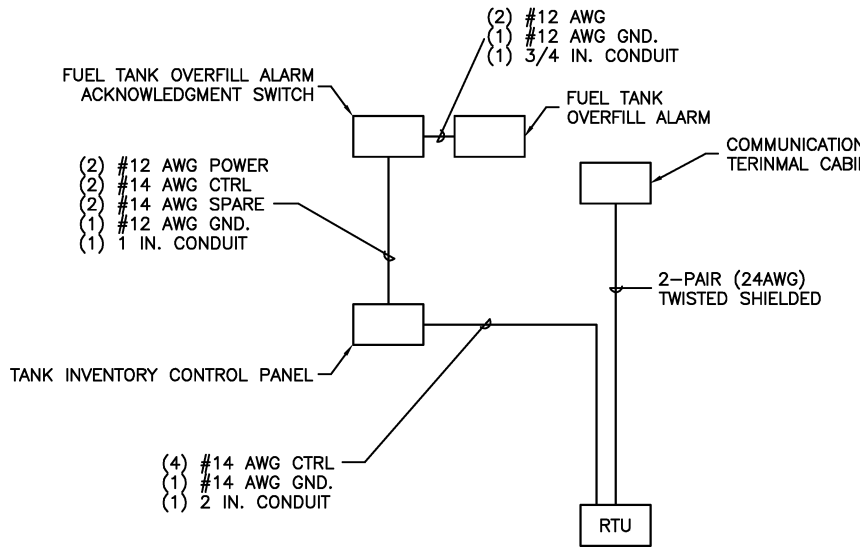
1 E–6 SCALE: NTS

SINGLE LINE DIAGRAM

PANEL "PPG"								MAINS: MCB AMPS: 80A MOUNTING: SURFACE							
VOLTAGE: 240/120V PHASE: 1 WIRE: 3 60HZ								MIN. INTERRUPTING RATING: 10,000 A NEMA: 3R							
CKT NO	DESCRIPTION/LOCATION	BREAKERS POLE	BREAKERS AMPS	KVA		BREAKERS AMPS	BREAKERS POLE	DESCRIPTION/LOCATION	CKT NO
1	JACKET WATER HEATER	1	30	2.50	0.58	30	1	LIGHTS	2
3	JACKET WATER HEATER	1	30	2.50	1.80	20	1	RECEPTACLES	4
5	EXHAUST FAN	1	20	1.50	2.40	30	1	DAY TANK PUMP 1	6
7	BATTERY CHARGER	1	20	0.10	2.40	30	1	DAY TANK PUMP 2	8
9	SPARE	1	30	–	–	20	1	SPARE	10
11	SPARE	1	30	–	–	20	1	SPARE	12
13	SPARE	1	30	–	–	20	1	SPARE	14
15	SPACE	1	–	–	–	–	1	SPACE	16
CONNECTED LOAD: 13.78 KVA									

GENERATOR PANEL SCHEDULE

SCALE: NTS



2 E–6 SCALE: NTS

CONTROL WIRING DIAGRAM

FEEDER SCHEDULE:

1. (4) SETS; THREE ACTIVE, ONE SPARE: (3) 350KCMIL PH. AND (1) 350KCMIL GROUNDED SERVICE CONDUCTOR IN 3 IN. CONDUIT.
2. (3) SETS; (3) 350KCMIL PH., (1) 350KCMIL NEUT. AND (1) #2/0 AWG GND. IN 3 IN. CONDUIT.
3. (4) SETS; THREE ACTIVE, ONE SPARE: (3) SETS; (3) 350KCMIL PH., (1) 350KCMIL NEUT. AND (1) #4/0 AWG GND. IN 3 IN. CONDUIT.
4. (2) #8 AWG PH. AND (1) #10 AWG GND. IN 1 IN. CONDUIT.
5. (2) #4 AWG PH., (1) #4 AWG NEUT. AND (1) #8 AWG GND. IN 1½ IN. CONDUIT.
6. (3) #3 AWG PH. AND (1) #3 AWG GND. IN 2IN. CONDUIT NIPPLE.
7. (3) #6 AWG PH. AND (1) #8 AWG GND. IN 1IN. CONDUIT.
8. (1) #12 AWG PH., (1) #12 AWG NEUT. AND (1) #12 GND. IN 1 IN. CONDUIT.
9. TEMPORARY GENERATOR CABLES.

REFERENCE NOTES:

1. PROVIDE NEW 20A/1P CIRCUIT BREAKER IN EXISTING PANELBOARD, MATCH MANUFACTURE AND STYLE, AIC RATING MUST BE EQUAL.
2. PROVIDE ADDITIONAL LOAD–SIDE LUGS FOR REMOTE RADIATOR FAN MOTOR CIRCUIT.
3. REPLACE EXISTING 20A/3P CIRCUIT BREAKER LABELED "VALVE ACTIVATOR NO. 2" WITH 45A/2P CIRCUIT BREAKER, REPLACE EXISTING PHENOLIC PLATE "VALVE ACTIVATOR NO. 2" WITH A MATCHING PHENOLIC PLATE LABELED "PORTABLE GENERATOR HOUSE POWER TRANSFORMER".
4. PROVIDE 60A/2P, 480V SAFETY SWITCH IN A NEMA TYPE 12 ENCLOSURE.
5. PROVIDE NEMA SIZE 2 MOTOR COMBINATION STARTER WITH 50A DUAL ELEMENT TIME DELAY FUSED DISCONNECT IN A NEMA TYPE 12 ENCLOSURE.
6. PROVIDE NEUTRAL TO GROUND BOND. GROUNDING ELECTRODE CONDUCTOR (GEC) TO CONSIST OF #4/0 AWG FROM N–G BOND IN CIRCUIT BREAKER ENCLOSURE AND EXTENDED UNBROKEN TO TWO (2) 3/4" X 10' L COPPER CLAD STEEL VERTICALLY DRIVEN GROUND RODS IN ACCORDANCE WITH NEC 250.104. ROUTE EXTERIOR EXPOSED PORTIONS OF GEC IN PVC. ALL CONCEALED CONNECTIONS SHALL BE BY EXOTHERMIC WELD PROCESS.
7. 1000A/3P SAFETY DISCONNECT.

LIGHTING FIXTURE SCHEDULE

FIXT. TYPE	FIXTURE DESCRIPTION	MANUFACTURER & BASIS OF DESIGN	NO. AND TYPE OF LAMPS	VOLT	MOUNTING	REMARKS
A	4' SUSPENDED FLUORESCENT ENCLOSED AND GASKETED INDUSTRIAL FIXTURE RATED FOR USE IN DAMP LOCATIONS WITH HIGH–IMPACT 50% DR ACRYLIC DIFFUSER, STAINLESS STEEL LATCHED, RAPID START, UL LISTED AND STEEL ENCLOSURE WIREWAY.	LITHONIA LIGHTING – DM SERIES	(2) 32W, T8	120	SUSPENDED	

SERVICE LOAD SUMMARY

AVAILABLE DEMAND FOR SERVICE	831 KVA
HIGHEST HISTORICAL DEMAND FROM UTILITY COMPANY	235 KW
ASSUM P.F.=0.90	261 KVA
NEC 220–87	X 1.25 KVA
SUBTOTAL	326 KVA
ADDITIONAL LOAD FOR PROJECT	8.4 KVA
TOTAL	334.4 KVA
TOTAL AT 480 VOLT, 3 PHASE	402 AMPS

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ENG: G. DAVIS
DRW: G. DAVIS
FILE SAVE DATE: January 9, 2009

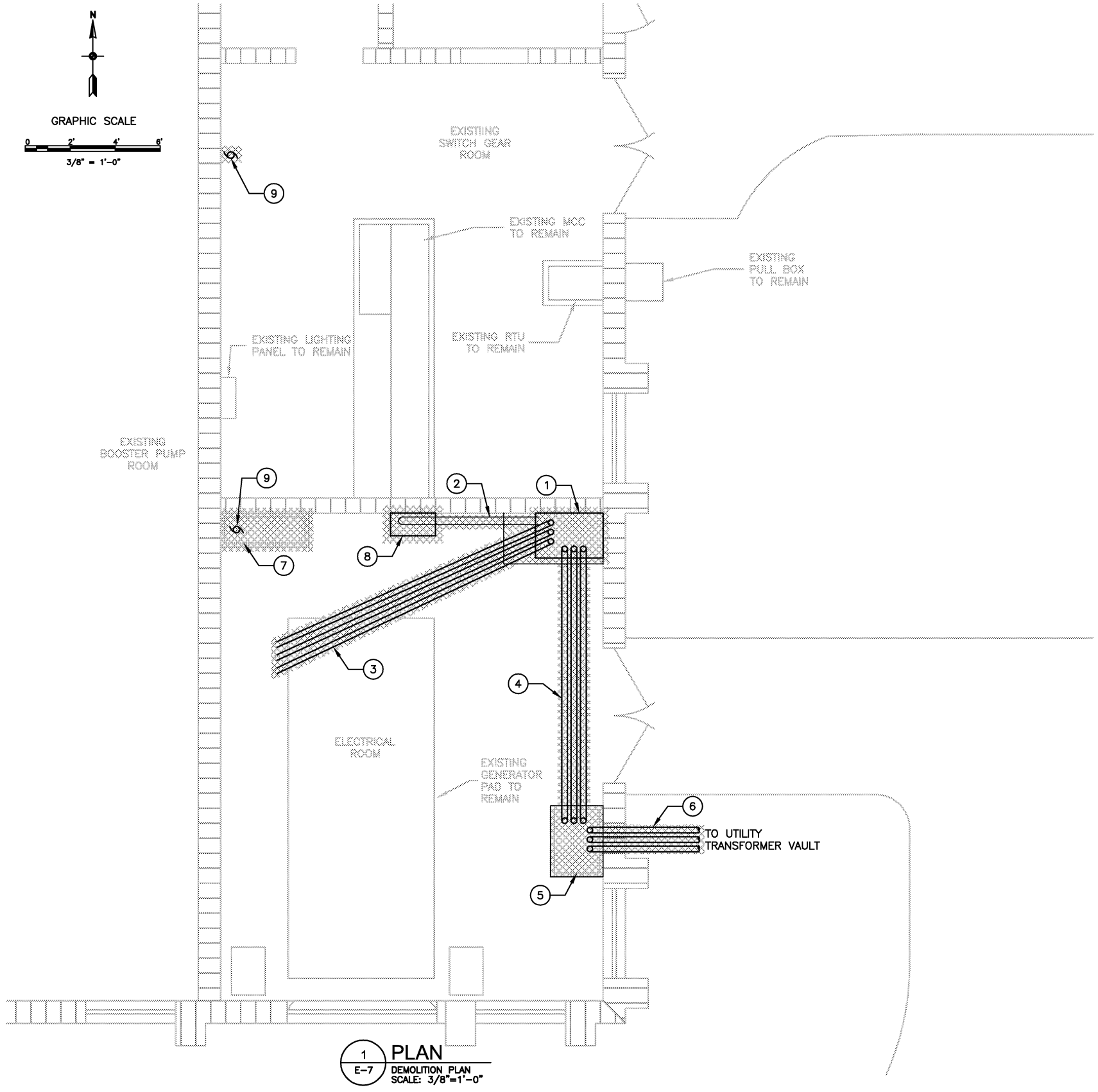
GLENN H. DAVIS
FLORIDA P.E. NO. 66443

CORTEZ ROAD & ELWOOD II
BOOSTER PUMP STATIONS
PORTABLE EMERGENCY GENERATORS
FOR
MANATEE COUNTY GOVERNMENT
MANATEE COUNTY, FLORIDA

CORTEZ SINGLE LINE DIAGRAM AND PANEL SCHEDULE

PROJECT STATUS
BID SET
JANUARY 2009

E–5



1 / E-7 PLAN
DEMOLITION PLAN
SCALE: 3/8"=1'-0"

GENERAL NOTES:

1. NOT ALL ELECTRICAL EQUIPMENT, CONDUIT, ETC., ARE INDICATED. THIS DRAWING ONLY INDICATES ELECTRICAL ITEMS THAT ARE RELATED TO THIS PROJECT.
2. COORDINATE WITH POWER COMPANY FOR DE-ENERGIZING OF THE TRANSFORMER PRIOR TO COMMENCING ELECTRICAL SERVICE ENTRANCE WORK.
3. FP&L WILL TERMINATE ALL (PRIMARY AND SECONDARY) CABLES IN THE FP&L TRANSFORMER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RUNNING THE SECONDARY CONDUIT AND CABLES TO THE TRANSFORMER.
4. ELECTRICAL EQUIPMENT INDICATED AND ROUTING OF CONDUIT SHOWN ARE DIAGRAMMATIC ONLY. CONTRACTOR TO FIELD VERIFY.

DEMOLITION NOTES:

(1) DE-ENERGIZE, DISCONNECT, REMOVE AND DISPOSE EXISTING ATS AND HOUSEKEEPING PAD.

(2) DE-ENERGIZE, DISCONNECT, REMOVE AND DISPOSE EXISTING THREE (3) SETS OF 3-600KCMIL, 1-1/0 AWG IN 3-1/2 IN. CONDUITS.

(3) ABANDON CONDUITS IN PLACE. CUT CONDUITS 2 IN. BELOW FINISHED SLAB, FILL AND FINISH TO MATCH EXISTING FINISHED SURFACE.

(4) DE-ENERGIZE, DISCONNECT, REMOVE AND DISPOSE EXISTING THREE (3) SETS OF 3-600KCMIL, 1-1/0 AWG IN 3-1/2 IN. CONDUITS. CUT CONDUITS 2 IN. BELOW FINISHED SLAB, FILL AND FINISH TO MATCH EXISTING FINISHED SURFACE.

(5) DE-ENERGIZE, DISCONNECT, REMOVE AND DISPOSE EXISTING MAIN CIRCUIT BREAKER SWITCHBOARD.

(6) DE-ENERGIZE, DISCONNECT, REMOVE AND DISPOSE EXISTING THREE (3) SETS OF 3-600KCMIL, 1-1/0 AWG IN 3-1/2 IN. CONDUITS. CUT CONDUITS 2 IN. BELOW FINISHED SLAB, FILL AND FINISH TO MATCH EXISTING FINISHED SURFACE.

(7) DISCONNECT, REMOVE AND PROPERLY DISPOSE ABANDONED DAY TANK.

(8) DE-ENERGIZE, DISCONNECT, REMOVE AND DISPOSE OF EXISTING JUNCTION BOX.

(9) DISCONNECT, REMOVE & PROPERLY DISPOSE OF EXISTING EXHAUST FANS.

TO BE REMOVED

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DRW: G. DAVIS
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FLORIDA P.E. NO. 66443

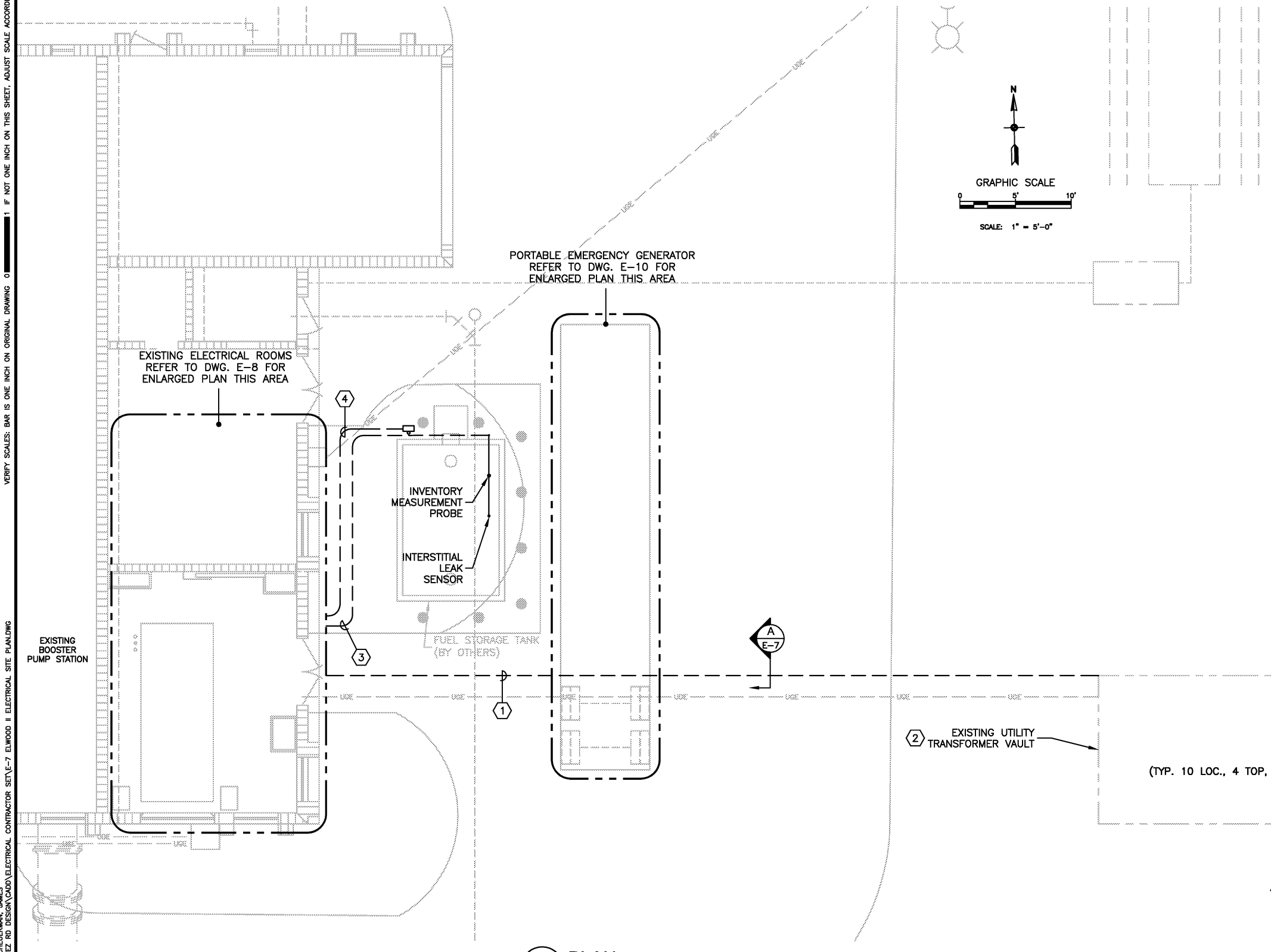
CORTEZ ROAD & ELWOOD II
BOOSTER PUMP STATIONS
PORTABLE EMERGENCY GENERATORS
FOR
MANATEE COUNTY GOVERNMENT
MANATEE COUNTY, FLORIDA

ELWOOD II DEMOLITION PLAN AND NOTES

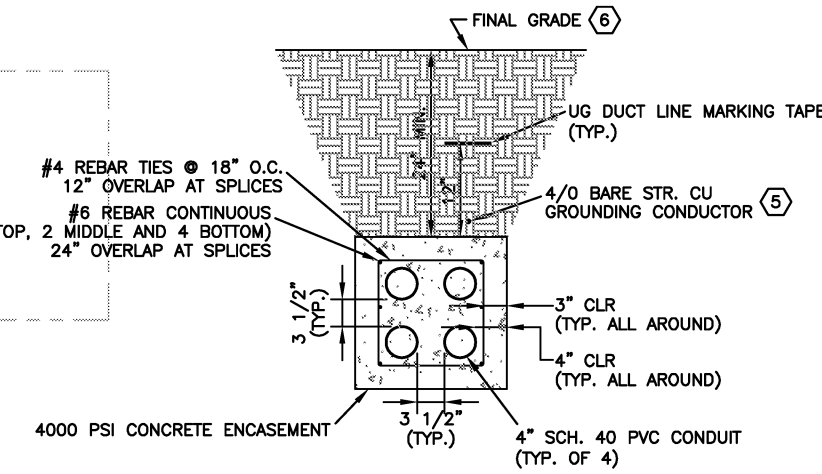
PROJECT STATUS
BID SET
JANUARY 2009

E-6

PLOTTED January 14, 2009 11:05 AM PLOTTED BY: SCHEUERMAN, JAMES
X:\MANATEE PROJECTS\12006803 ELWOOD II & CORTEZ RD DESIGN\CADD\ELECTRICAL CONTRACTOR SET\E-6 ELWOOD II DEMOLITION PLAN AND NOTES.DWG



1 E-8 PLAN
SITE
SCALE: 1" = 5'-0"



A E-7 SECTION
DUCT BANK
SCALE: NTS

GENERAL NOTES:

1. REFER TO SINGLE LINE DIAGRAM FOR CONDUCTOR SIZES AND ADDITIONAL REQUIREMENTS.
2. ALL PVC UNDERGROUND CONDUITS SHALL TRANSITION TO RGS CONDUIT PRIOR TO CONDUIT TRANSITION FROM HORIZONTAL TO VERTICAL. ALL EXTERIOR VERTICAL CONDUITS ARE RGS.
3. CONTRACTOR IS RESPONSIBLE FOR COORDINATION WITH FPL TO DE-ENERGIZE SERVICE, DISCONNECT EXISTING CONDUCTORS AND TERMINATE SECONDARY CONDUCTORS TO TRANSFORMER. FPL CONTACT FOR THIS SITE IS LARRY RUSSO (941)723-4424.

REFERENCE NOTES:

1. PROVIDE FOUR (4) 4 IN. SCHEDULE 80 PVC CONDUITS BETWEEN EXISTING UTILITY TRANSFORMER VAULT AND "MCB" IN ELECTRICAL ROOM.
2. CONTRACTOR TO COORDINATE FOR THE SERVICES REQUIRED BY THE UTILITY PROVIDER TO ROUTE NEW CONDUIT INTO TRANSFORMER VAULT, DISCONNECT EXISTING CONDUCTORS AND TERMINATE NEW CONDUCTORS.
3. PROVIDE TWO (2) 1 IN. CONCRETE ENCASED SCHEDULE 40 PVC CONDUIT UG BETWEEN BOOSTER PUMP BUILDING AND INVENTORY MEASUREMENT PROBE AND INTERSTITIAL LEAK SENSOR.
4. PROVIDE ONE 1 IN. CONCRETE ENCASED SCHEDULE 40 PVC CONDUIT UG BETWEEN BOOSTER PUMP BUILDING AND FUEL TANK OVERFILL ALARM AND ACKNOWLEDGEMENT SWITCH.
5. BOND GROUNDING CONDUCTOR TO PUMP STATION BUILDING GROUND.
6. "FINAL GRADE" SHALL BE UNDERSTOOD TO REFER TO THE "FINAL EARTHEN GRADE" AND "TOP OF PAVEMENT SURFACE", WHICHEVER IS PRESENT. RESTORE SURFACES DISTURBED BY CONSTRUCTION ACTIVITIES TO ORIGINAL CONDITION IN ACCORDANCE WITH THE REQUIREMENTS OF THE CONTRACT GOVERNING SURFACE RESTORATION.

VERIFY SCALES: BAR IS ONE INCH ON ORIGINAL DRAWING 0 IF NOT ONE INCH ON THIS SHEET, ADJUST SCALE ACCORDINGLY

PLOTTED January 14, 2009 8:05 AM PLOTTED BY: SCHUERMAN, JAMES
X:\MANATEE PROJECTS\12006803 ELWOOD II & CORTEZ RD DESIGN\CADD\ELECTRICAL CONTRACTOR SET\E-7 ELWOOD II ELECTRICAL SITE PLAN.DWG

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Florida Engineering Number: 000002

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			REVISIONS

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DRW: G. DAVIS
FILE SAVE DATE: January 13, 2009

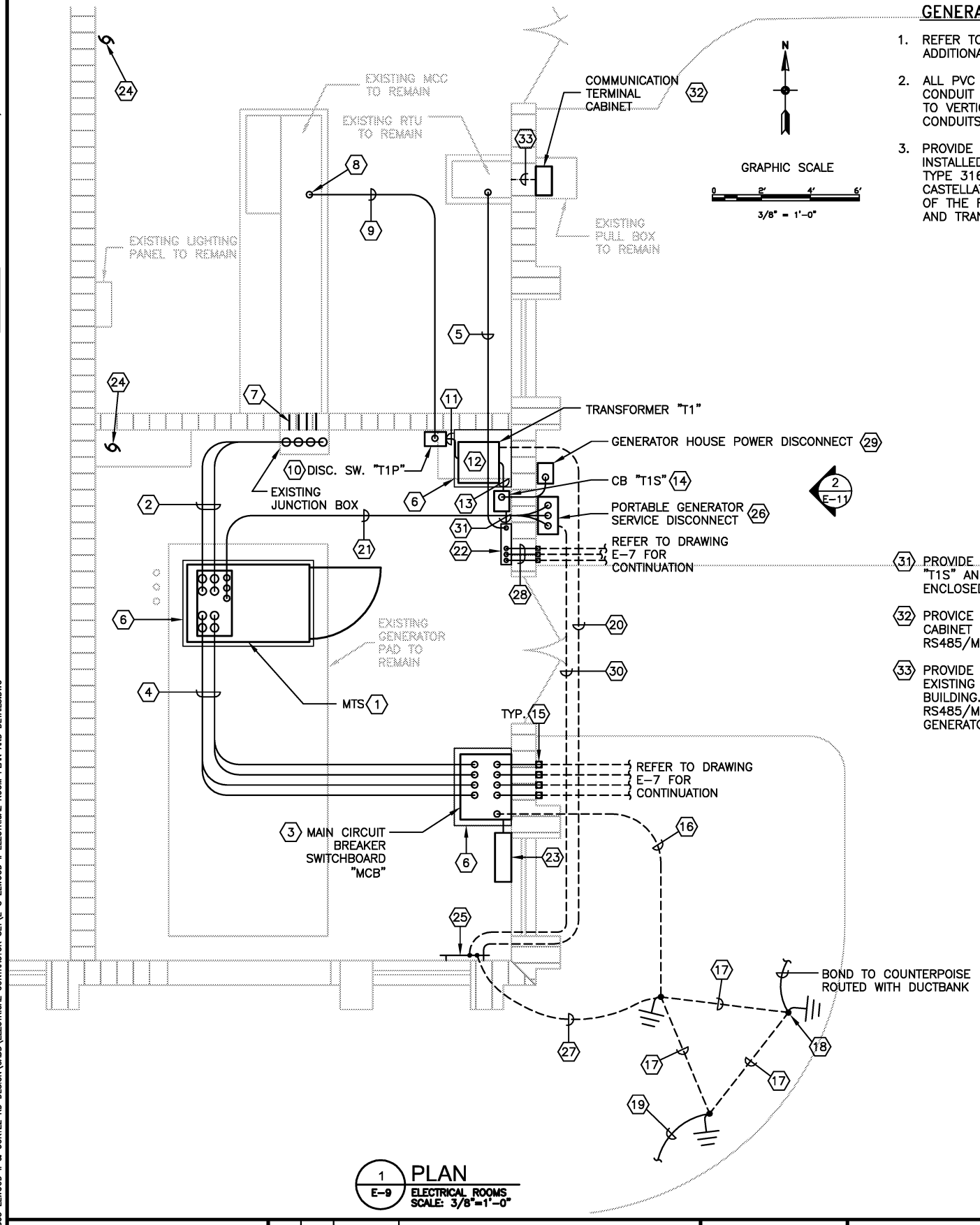
GLENN H. DAVIS
FLORIDA P.E. NO. 66443

CORTEZ ROAD & ELWOOD II
BOOSTER PUMP STATIONS
PORTABLE EMERGENCY GENERATORS
FOR
MANATEE COUNTY GOVERNMENT
MANATEE COUNTY, FLORIDA

ELWOOD II ELECTRICAL SITE PLAN

PROJECT STATUS
BID SET
JANUARY 2009

E-7



GENERAL NOTES:

1. REFER TO SINGLE LINE DIAGRAM FOR CONDUCTOR SIZES AND ADDITIONAL REQUIREMENTS.
2. ALL PVC UNDERGROUND CONDUITS SHALL TRANSITION TO RGS CONDUIT PRIOR TO CONDUIT TRANSITION FROM HORIZONTAL TO VERTICAL INSTALLATION. ALL EXTERIOR VERTICAL CONDUITS ARE RGS.
3. PROVIDE TWO (2) THERMO PLASTIC VENTILATORS PROPERLY INSTALLED TO PROVIDE RAINPROOF VENTILATION AND 3/4", TYPE 316 SS NEMA TYPE 4X BREATHER/DRAIN WITH CASTELLATED LOCKNUTS AND CAPTIVE "O" RING ON RECESS OF THE FACE FOR EACH STAINLESS STEEL CIRCUIT BREAKER AND TRANSFER SWITCH ENCLOSURE.

31 PROVIDE ONE 1" RGS CONDUIT ROUTED EXPOSED BETWEEN CB "T1S" AND TANK INVENTORY SYSTEM CONTROLLER VIA 20A/1P ENCLOSED CIRCUIT BREAKER.

32 PROVICE 12" SQ. BY 6" DEEP STAINLESS STEEL TERMINAL CABINET WITH TERMINAL BLOCK FOR PORTABLE GENERATOR RS485/MODBUS COMMUNICATIONS.

33 PROVIDE 1-1/2 IN. RGS CONDUIT ROUTED EXPOSED BETWEEN EXISTING RTU AND TERMINATION CABINET ON NORTH SIDE OF BUILDING. PROVIDE 2-PAIR (24 AWG), TWISTED SHIELD FOR RS485/MODBUS COMMUNICATIONS BETWEEN PORTABLE GENERATOR AND EXISTING RTU.

REFERENCE NOTES:

1 PROVIDE NEW 1600A, 277/480V, FOUR (4) POLE MANUAL TRANSFER SWITCH IN A NEMA TYPE 1 ENCLOSURE.

2 PROVIDE FOUR (4) 4 IN. RGS CONDUITS ROUTED EXPOSED BETWEEN MTS AND JUNCTION BOX FOR POWER CONDUCTORS.

3 PROVIDE 1600AF / 1500AT SERVICE ENTRANCE RATED MAIN CIRCUIT BREAKER SWITCHBOARD. PROVIDE PERMANENT PLAQUE MOUNTED TO "MCB" WITH CONTRASTING COLORS AND MINIMUM OF 2 IN. HIGH LETTERING THAT STATES "BUILDING EQUIPPED FOR TEMPORARY GENERATOR SERVICE: GENERATOR SERVICE DISCONNECT LOCATED ON OUTSIDE WEST WALL OF BOOSTER PUMP BUILDING".

4 PROVIDE FOUR (4) 4 IN. RGS CONDUIT ROUTED EXPOSED BETWEEN "MCB" AND MTS.

5 PROVIDE ONE 1 IN. RGS CONDUIT ROUTED EXPOSED BETWEEN TANK INVENTORY SYSTEM CONTROLLER AND EXISTING RTU FOR CONTROL WIRING.

6 PROVIDE 4 IN. 4000 PSI CONCRETE HOUSEKEEPING PADS WITH 6" X 6" WWF, 1.4W X 1.4W, FOR FLOOR MOUNTED ELECTRICAL EQUIPMENT.

7 PROVIDE FOUR (4) 4 IN. CONDUIT STUBBED THROUGH WALL INTO EXISTING MCC. TERMINATE NEW CONDUCTORS ON EXISTING MCC INCOMING LUGS.

8 PROVIDE 45A, 2 POLE CIRCUIT BREAKER AS RECOMMENDED FOR USE BY THE EXISTING MCC MANUFACTURER, NEW CIRCUIT BREAKER SHALL HAVE A SYMMETRIC FAULT CURRENT RATING EQUAL OR GREATER THAN THE HIGHEST RATED BREAKER IN MCC.

9 PROVIDE ONE 1-1/2 IN. RGS CONDUIT ROUTED EXPOSED BETWEEN EXISTING MCC AND DISC. SW. "T1P".

10 PROVIDE 60A, 2 POLE, WALL MOUNTED SAFETY DISCONNECT IN NEMA TYPE 1 ENCLOSURE.

11 PROVIDE ONE 1 IN. LIQUID-TIGHT FLEXIBLE METAL CONDUIT BETWEEN DISC. SWITCH "T1P" AND TRANSFORMER "T1".

12 PROVIDE GENERAL PURPOSE FLOOR MOUNT DRY TYPE TRANSFORMER.

13 PROVIDE ONE 1-1/2 IN. LIQUID-TIGHT FLEXIBLE METAL CONDUIT BETWEEN TRANSFORMER "T1" AND ENCL. CB "T1S".

14 PROVIDE 80A, 3 POLE MOLDED CASE ENCLOSED CIRCUIT BREAKER IN NEMA TYPE 1 ENCLOSURE.

15 PROVIDE LB CONDUIT FITTINGS AT BUILDING PENETRATIONS.

16 PROVIDE #4/0 AWG BARE STRANDED TINNED COPPER GROUNDING ELECTRODE CONDUCTOR IN 1-1/2" PVC CONDUIT BETWEEN "MCB" AND GROUNDING TRIANGLE.

17 PROVIDE #4/0 AWG BARE STRANDED TINNED COPPER GROUNDING CONDUCTOR DIRECT BURIED A MINIMUM OF 30 IN. BELOW FINISHED GRADE. EXOTHERMICALLY WELD GROUNDING CONDUCTORS TO ADJACENT GROUNDING ELECTRODES.

18 PROVIDE 3/4" DIA. BY 10 FT. LONG COPPER CLAD STEEL GROUND RODS IN AN EQUILATERAL TRIANGLE CONFIGURATION A MINIMUM OF 10FT. APART.

19 PROVIDE #4/0 AWG BARE STRANDED TINNED COPPER GROUNDING CONDUCTOR IN PVC CONDUIT BETWEEN GROUNDING ELECTRODE AND EXISTING BUILDING COUNTERPOISE GROUNDING.

20 PROVIDE #6 AWG BARE STRANDED TINNED COPPER GROUNDING ELECTRODE CONDUCTOR IN 3/4" PVC CONDUIT BETWEEN TRANSFORMER AND GROUNDING ELECTRODE.

21 PROVIDE THREE (3) 3 IN. RGS CONDUITS ROUTED EXPOSED BETWEEN CONDUIT LB AND MTS.

22 PROVIDE TANK INVENTORY SYSTEM CONTROLLER.

23 PROVIDE SURGE PROTECTIVE DEVICE ADJACENT TO "MCB" IN NEMA TYPE 1 ENCLOSURE.

24 PROVIDE (2) NEW 2,246 CFM, 1/8" SP CENTRIFUGAL ROOF MOUNTED EXHAUST FANS W/ 1/2 HP MOTOR TO REPLACE EXISTING FANS. UTILIZE EXISTING CIRCUITRY AND MATCH FAN VOLTAGE WITH EXISTING CONDITIONS. FAN TO BE MOUNTED IN 18" SQUARE OPENING. CONTRACTOR TO VERIFY FIELD CONDITIONS PRIOR TO BID.

25 PROVIDE 4 IN. WIDE BY 1/4 IN. THICK BY 24 IN. LONG GROUND BAR.

26 PROVIDE 1000A, 480Y/277V WALL MOUNTED SAFETY SWITCH IN A NEMA TYPE 3R ENCLOSURE. PROVIDE PERMANENT PLAQUE MOUNTED TO FRONT OF DISCONNECT WITH CONTRASTING COLOR AND MINIMUM OF 2IN. HIGH TEXT THAT STATES "TEMPORARY GENERATOR SERVICE DISCONNECT: UTILITY SERVICE DISCONNECT LOCATED INSIDE BOOSTER PUMP BUILDING".

27 PROVIDE #2/0 AWG. BARE STRANDED TINNED COPPER GROUNDING CONDUCTORE IN 3/4" IN. PVC CONDUIT BETWEEN GROUND BUS BAR AND GROUNDING ELECTRODE SYSTEM.

28 PROVIDE THREE (3) 1 IN. RGS CONDUIT BETWEEN TANK INVENTORY SYSTEM CONTROLLER AND OUTSIDE EAST WALL OF BOOSTER PUMP BUILING.

29 PROVIDE 100A NON-FUSED DISCONNECT SWITCH IN NEMA TYPE 3R ENCLOSURE.

30 PROVIDE #4/0 AWG. BARE STRANDED TINNED COPPER GROUNDING CONDUCTOR BETWEEN TRASFORMER "T1" AND GROUND BAR.

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FILE SAVE DATE: January 14, 2009

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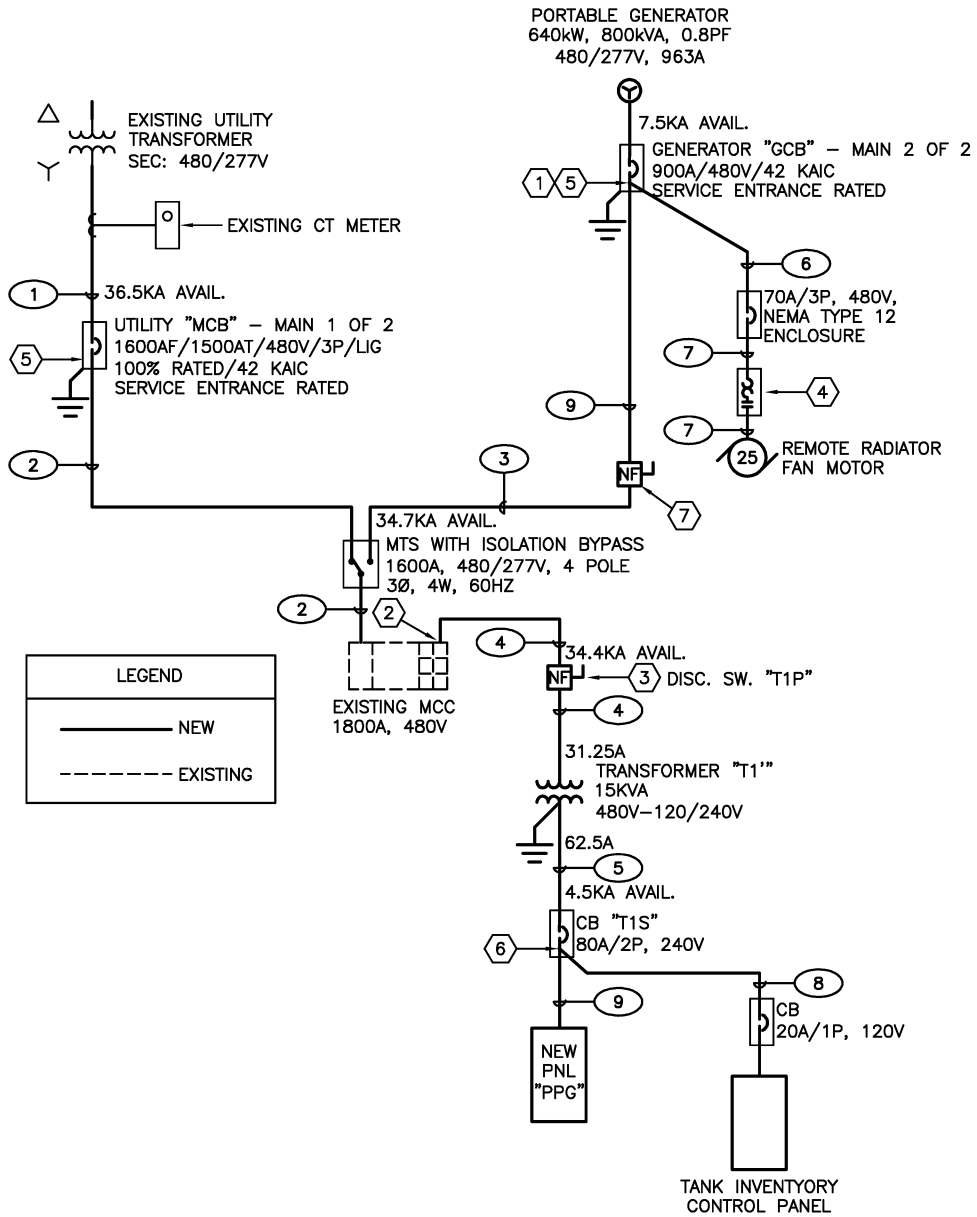
CORTEZ ROAD & ELWOOD II
BOOSTER PUMP STATIONS
PORTABLE EMERGENCY GENERATORS
FOR
MANATEE COUNTY GOVERNMENT
MANATEE COUNTY, FLORIDA

ELWOOD II ELECTRICAL ROOM PLAN AND DETAILS

PROJECT STATUS
BID SET
JANUARY 2009

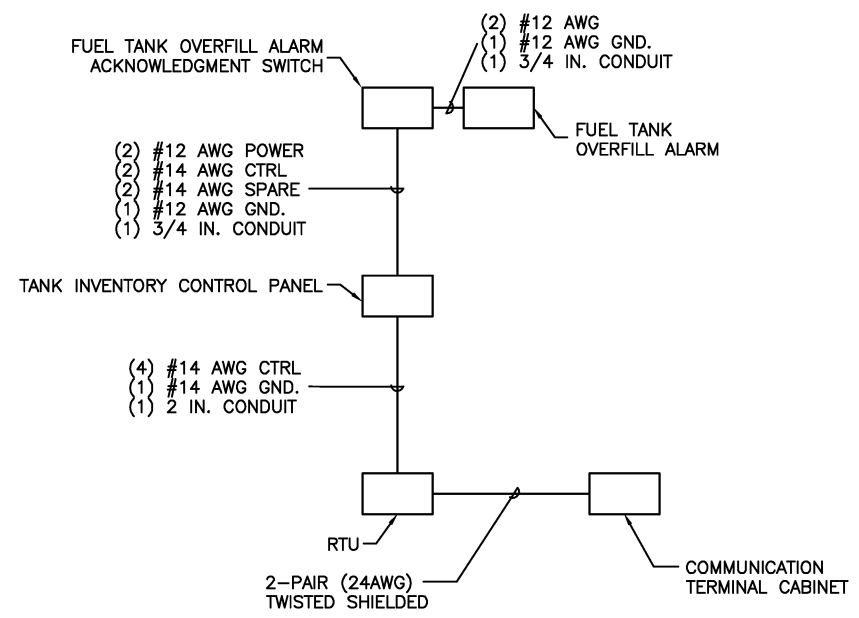
E-8



1 SINGLE LINE DIAGRAM
E–9 SCALE: NTS

PANEL "PPG"						MAINS: MCB	AMPS: 80A	MOUNTING: SURFACE	
VOLTAGE: 240/120V	PHASE: 1	WIRE: 3	60HZ		MIN. INTERRUPTING RATING: 10,000 A		NEMA:	12	
CKT NO	DESCRIPTION/LOCATION	BREAKERS POLE	BREAKERS AMPS	KVA	KVA	BREAKERS AMPS	BREAKERS POLE	DESCRIPTION/LOCATION	CKT NO
1	JACKET WATER HEATER	1	30	2.50	0.58	20	1	LIGHTS	2
3	JACKET WATER HEATER	1	30	2.50	1.80	20	1	RECEPTACLES	4
5	EXHAUST FAN	1	20	1.50	2.40	30	1	DAY TANK PUMP 1	6
7	BATTERY CHARGER	1	20	0.10	2.40	30	1	DAY TANK PUMP 2	8
9	SPARE	1	30	–	–	20	1	SPARE	10
11	SPARE	1	30	–	–	20	1	SPARE	12
13	SPARE	1	30	–	–	20	1	SPARE	14
15	SPACE	1	–	–	–	–	1	SPACE	16
CONNECTED LOAD: 13.78 KVA									

GENERATOR PANEL SCHEDULE
SCALE: NTS



2 CONTROL WIRING DIAGRAM
E–9 SCALE: NTS

FEEDER SCHEDULE:

1. (4) SETS: (3) 500KCMIL PH. AND (1) 500KCMIL GROUNDED SERVICE CONDUCTOR IN 4 IN. CONDUIT.
2. (4) SETS: (3) 500KCMIL PH., (1) 500KCMIL NEUT. AND (1) #4/0 AWG GND. IN 4 IN. CONDUIT.
3. (3) SETS: (3) 350KCMIL PH., (1) 350KCMIL NEUT. AND (1) #2/0 AWG GND. IN 3 IN. CONDUIT.
4. (2) #8 AWG PH. AND (1) #10 AWG GND. IN 1 IN. CONDUIT.
5. (2) #4 AWG PH., (1) #4 AWG NEUT. AND (1) #8 AWG GND. IN 1–½ IN. CONDUIT.
6. (3) #3 AWG PH. AND (1) #3 AWG GND. IN 2 IN. CONDUIT NIPPLE.
7. (3) #6 AWG PH. AND (1) #8 AWG GND. IN 1–1/2" IN. CONDUIT.
8. (1) #10 AWG PH., (1) #10 AWG NEUT. AND (1) #10 GND. IN 1 IN. CONDUIT.
9. TEMPORARY GENERATOR CABLES.

REFERENCE NOTES:

1. PROVIDE ADDITIONAL LOAD–SIDE LUGS FOR REMOTE RADIATOR FAN MOTOR CIRCUIT.
2. PROVIDE 45A/2P CIRCUIT BREAKER IN SPACE ADJACENT TO INCOMING MCC SECTION.
3. PROVIDE 60A/2P, 480V SAFETY SWITCH IN A NEMA TYPE 12 ENCLOSURE.
4. PROVIDE NEMA SIZE 2 MOTOR COMBINATION STARTER WITH 50A DUAL ELEMENT TIME DELAY FUSED DISCONNECT IN A NEMA TYPE 12 ENCLOSURE.
5. PROVIDE NEUTRAL TO GROUND BOND. GROUNDING ELECTRODE CONDUCTOR (GEC) TO CONSIST OF #4/0 AWG FROM N–G BOND IN CIRCUIT BREAKER ENCLOSURE AND EXTENDED UNBROKEN TO TWO (2) 3/4" X 10' L COPPER CLAD STEEL VERTICALLY DRIVEN GROUND RODS IN ACCORDANCE WITH NEC 250.104. ROUTE EXTERIOR EXPOSED PORTIONS OF GEC IN PVC. ALL CONCEALED CONNECTIONS SHALL BE BY EXOTHERMIC WELD PROCESS.
6. PROVIDE ADDITIONAL LOAD–SIDE LUGS FOR TANK INVENTORY CONTROL PANEL POWER.
7. 1000A/3P SAFETY DISCONNECT.

LIGHTING FIXTURE SCHEDULE						
FIXT. TYPE	FIXTURE DESCRIPTION	MANUFACTURER & BASIS OF DESIGN	NO. AND TYPE OF LAMPS	VOLT	MOUNTING	REMARKS
A	4' SUSPENDED FLUORESCENT ENCLOSED AND GASKETED INDUSTRIAL FIXTURE RATED FOR USE IN DAMP LOCATIONS WITH HIGH–IMPACT 50% DR ACRYLIC DIFFUSER, STAINLESS STEEL LATCHED, RAPID START, UL LISTED AND STEEL ENCLOSURE WIREWAY.	LITHONIA LIGHTING – DM SERIES	(2) 32W, T8	120	SUSPENDED	

SERVICE LOAD SUMMARY	
AVAILABLE DEMAND FOR SERVICE	831 KVA
HIGHEST HISTORICAL DEMAND FROM UTILITY COMPANY	497 KW
ASSUM P.F.=0.90	552 KVA
NEC 220–87	X 1.25 KVA
SUBTOTAL	690 KVA
ADDITIONAL LOAD FOR PROJECT	8.4 KVA
TOTAL	698.4 KVA
TOTAL AT 480 VOLT, 3 PHASE	840 AMPS

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FILE SAVE DATE: January 9, 2009

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CORTEZ ROAD & ELWOOD II
BOOSTER PUMP STATIONS
PORTABLE EMERGENCY GENERATORS
FOR
MANATEE COUNTY GOVERNMENT
MANATEE COUNTY, FLORIDA

ELWOOD II SINGLE LINE DIAGRAM, PANEL & LIGHTING FIXTURE SCHEDULES

PROJECT STATUS
BID SET
JANUARY 2009

E–9

VERIFY SCALES: BAR IS ONE INCH ON ORIGINAL DRAWING 0 1 IF NOT ONE INCH ON THIS SHEET, ADJUST SCALE ACCORDINGLY

PLOTTED: January 14, 2009 11:06 AM PLOTTED BY: SCHEUERMAN, JAMES
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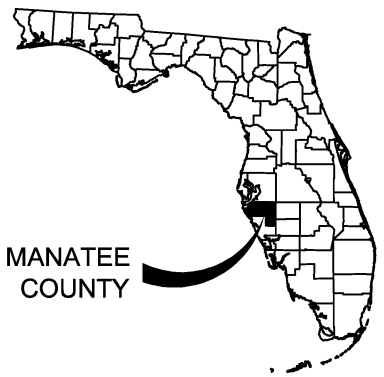
CORTEZ ROAD & ELWOOD II WATER BOOSTER STATION IMPROVEMENTS PORTABLE EMERGENCY GENERATORS, PROJECT NO. 6025972 & 60507, JANUARY 2009, BID SET

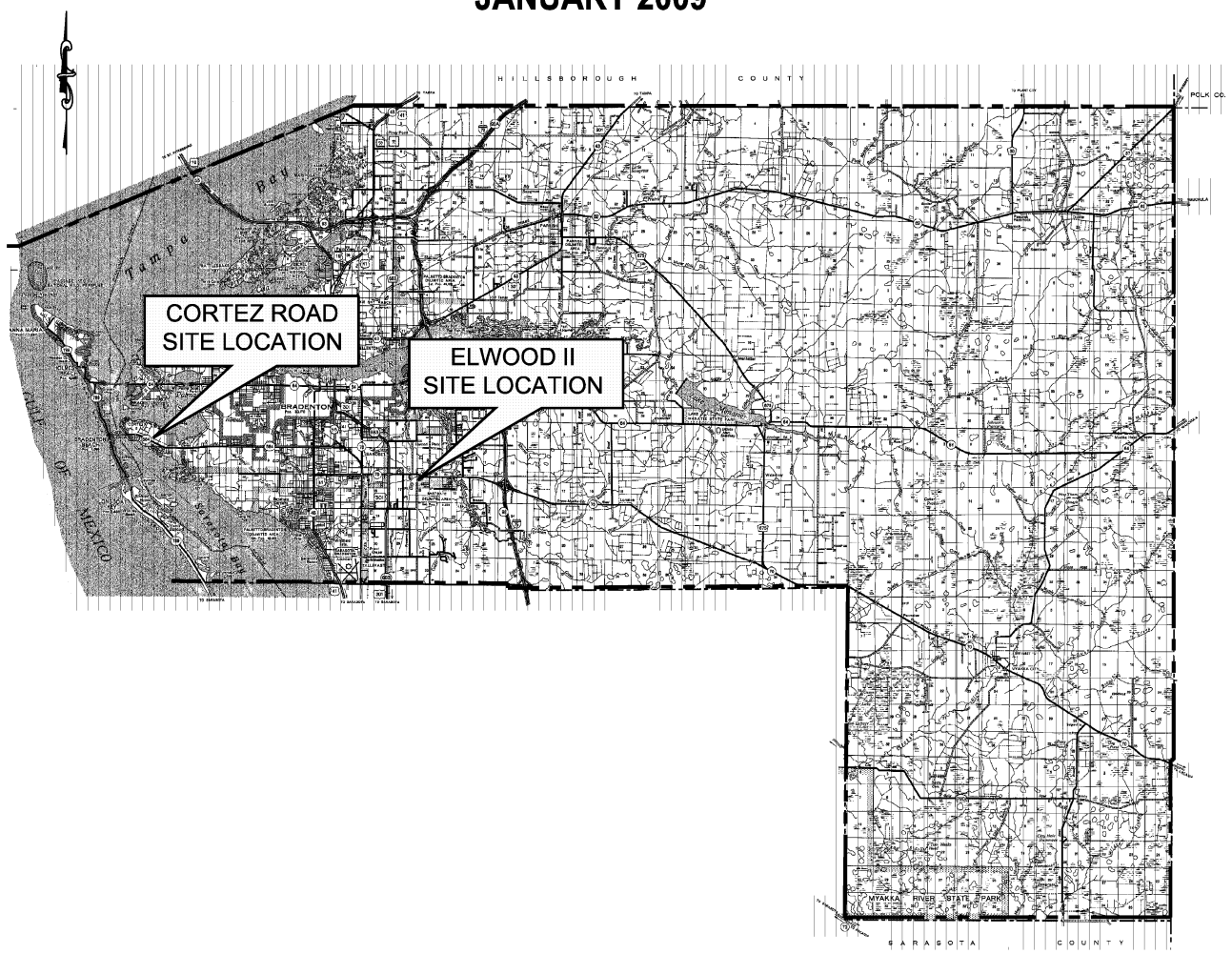
CORTEZ ROAD & ELWOOD II BOOSTER PUMP STATIONS PORTABLE EMERGENCY GENERATORS

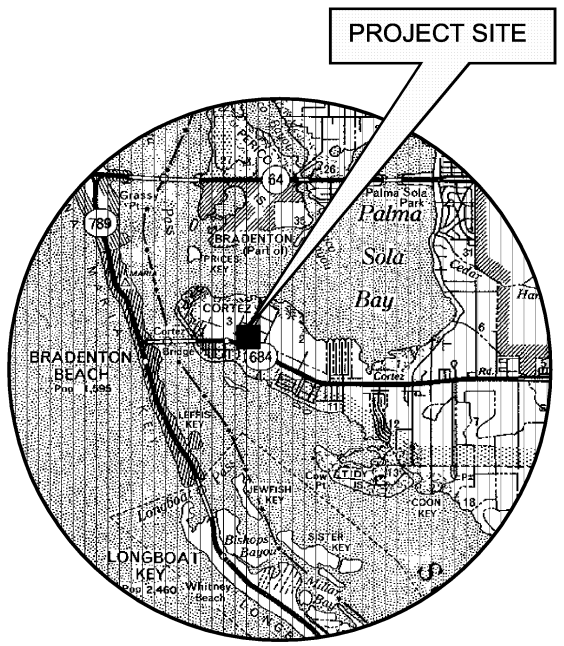
PROJECT NO. 6025972 & 60507

BID SET

JANUARY 2009

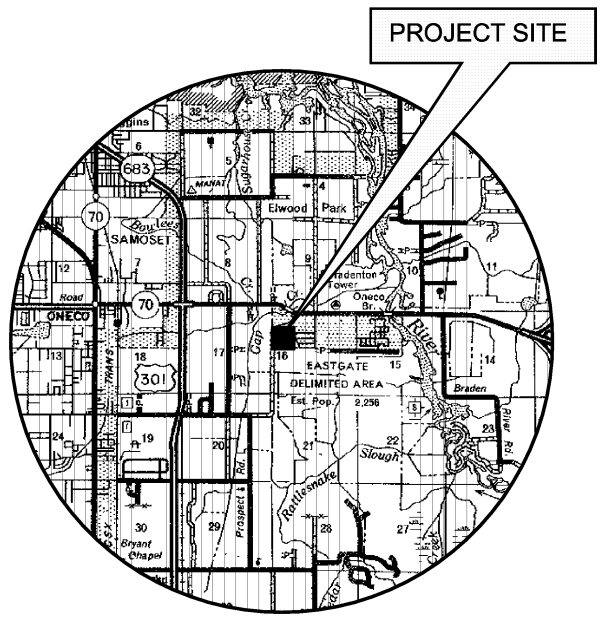






CORTEZ ROAD PROJECT MAP

CORTEZ ROAD & 119TH STREET WEST



ELWOOD II PROJECT MAP

5511 39TH STREET EAST

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CRAIG P. OSMANSKI
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CORTEZ ROAD & ELWOOD II
BOOSTER PUMP STATIONS
PORTABLE EMERGENCY GENERATORS
FOR
MANATEE COUNTY GOVERNMENT
MANATEE COUNTY, FLORIDA

COVER SHEET

PROJECT STATUS
BID SET
JANUARY 2009

G-1

GENERAL NOTES

1. ALL ELEVATIONS SHOWN ARE BASED ON THE BENCH MARK INDICATED AND ARE IN FEET.
2. LOCATION, ELEVATION, AND DIMENSIONS OF THE EXISTING UTILITIES, STRUCTURES, AND OTHER FEATURES ARE SHOWN ACCORDING TO THE BEST INFORMATION AVAILABLE AT TIME OF THE PREPARATION OF THESE PLANS. THE CONTRACTOR SHALL VERIFY THE LOCATIONS, ELEVATIONS, AND DIMENSIONS OF ALL EXISTING UTILITIES, STRUCTURES AND OTHER FEATURES AFFECTING THIS WORK PRIOR TO CONSTRUCTION.
3. THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION IN AREAS OF BURIED UTILITIES AND SHALL PROVIDE AT LEAST 48 HOURS NOTICE TO THE UTILITY COMPANIES PRIOR TO CONSTRUCTION TO OBTAIN FIELD LOCATIONS OF EXISTING UNDERGROUND UTILITIES. CALL SUNSHINE ONE CALL CENTER OF FLORIDA AT 1-800-432-4770 TO ARRANGE FIELD LOCATIONS. THE CONTRACTOR SHALL REPAIR ALL DAMAGES RESULTING FROM FAILURE TO COMPLY WITH THIS REQUIREMENT.
4. THE CONTRACTOR SHALL VERIFY THE LOCATION, ELEVATION, AND DIMENSIONS OF ALL EXISTING UTILITIES, STRUCTURES, AND OTHER FEATURES AFFECTING HIS WORK AND SHALL COMPLY WITH ALL STATE, COUNTY, AND LOCAL ORDINANCES AND OBTAIN ANY NECESSARY WORK PERMITS THAT MAY BE REQUIRED PRIOR TO CONSTRUCTION.
5. UNLESS OTHERWISE SPECIFIED IN THE CONTRACT DOCUMENTS AND SPECIFICATIONS, THE CONTRACTOR SHALL PROVIDE SUITABLE BORROW MATERIAL, APPROVED BY THE ENGINEER, AND INSTALL SAID MATERIAL IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS.
6. OVERALL CLEAN UP SHALL BE ACCOMPLISHED BY THE CONTRACTOR IN ACCORDANCE WITH COUNTY STANDARDS OR AS DIRECTED BY THE ENGINEER. ANY AND ALL EXPENSES INCURRED FOR THIS WORK SHALL BE INCLUDED IN THE CONTRACTOR'S BID.
7. THE CONTRACTOR SHALL ENDEAVOR TO PROTECT PRIVATE PROPERTY. ANY DAMAGE CAUSED BY THE CONTRACTOR IN THE PERFORMANCE OF HIS WORK SHALL BE CORRECTED TO THE SATISFACTION OF THE ENGINEER AT THE CONTRACTOR'S EXPENSE. PAYMENT SHALL NOT BE MADE FOR THIS WORK.
8. ANY DAMAGE TO STATE, COUNTY, OR LOCAL ROADS CAUSED BY THE CONTRACTOR'S HAULING OR EXCAVATION EQUIPMENT SHALL BE REPAIRED BY THE CONTRACTOR TO THE SATISFACTION OF THE COUNTY PROJECT ENGINEER. PAYMENT SHALL NOT BE MADE FOR THIS WORK.
9. ANY U.S.C. AND G.S. MONUMENT WITHIN LIMITS OF CONSTRUCTION IS TO BE PROTECTED. IF IN DANGER OF DAMAGE, THE CONTRACTOR SHALL NOTIFY. GEODETIC INFORMATION CENTER
   ATTN.: MARK MAINTENANCE CENTER
   ATTN.: N/CG-162
   6001 EXECUTIVE BLVD. ROCKVILLE,
   MARYLAND 20852 PH. (301)443-8319
10. THE CONTRACTOR(S) PERFORMING TRENCH EXCAVATION ON THIS CONTRACT, SHALL COMPLY WITH THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION'S (OSHA) TRENCH EXCAVATION SAFETY STANDARDS, 29 C.F.R., S.1926.650, SUBPART P, INCLUDING ALL SUBSEQUENT REVISIONS OR UPDATES TO THE STANDARDS AS ADOPTED BY THE DEPARTMENT OF LABOR AND EMPLOYMENT SECURITY (DLES).
11. UNLESS OTHERWISE SPECIFIED IN THE PLANS, EXISTING SOD, DISTURBED BY CONSTRUCTION, SHALL BE REPLACED IN KIND (OR BETTER, AS APPROVED BY THE COUNTY'S PROJECT MANAGER.)
12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL EXCESS MATERIAL AND THE PROPER DISPOSAL OF THE SAME.
13. CONTRACTOR IS TO PROVIDE EROSION CONTROL/SEDIMENTATION BARRIER (HAY BALES OR SILTATION CURTAIN) TO PREVENT SILTATION OF ADJACENT PROPERTY STREETS, STORM SEWERS, AND WATERWAYS. IF IN THE OPINION OF THE ENGINEER AND/OR LOCAL AUTHORITIES, EXCESSIVE QUANTITIES OF EARTH ARE TRANSPORTED OFF-SITE EITHER BY NATURAL DRAINAGE OR VEHICULAR TRAFFIC, THE CONTRACTOR IS TO REMOVE AND CLEAN SAID EARTH TO THE SATISFACTION OF THE ENGINEER AND/OR AUTHORITIES. THE MAINTENANCE OF EROSION CONTROL DEVICES AND THEIR COMPLETE REMOVAL ARE TO BE INCLUDED IN THE UNIT BID PRICE FOR EACH INDIVIDUAL ITEM.
14. THE CONTRACTOR SHALL PROVIDE ROUTINE MAINTENANCE OF PERMANENT AND TEMPORARY EROSION CONTROL FEATURES UNTIL THE PROJECT IS COMPLETE AND ALL BARED SOILS ARE STABILIZED.
15. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE MAINTENANCE OF THE EXISTING DRAINAGE SYSTEM WITHIN THE LIMITS OF THE PROJECT AREA, FOR THE DURATION OF THE PROJECT. NO ADDITIONAL PAYMENT WILL BE MADE FOR THE WORK INVOLVED.
16. THE CONTRACTOR IS RESPONSIBLE FOR REPAIRING ANY DAMAGE TO EXISTING FACILITIES, ABOVE OR BELOW GROUND THAT MAY OCCUR AS A RESULT OF THIS WORK PERFORMED IN THIS CONTRACT.
17. THE CONTRACTOR IS TO "PROTECT IN PLACE" THE FACILITIES THAT ARE NOT TO BE RELOCATED AND/OR REMOVED, BUT ARE TO REMAIN IN PLACE.
18. THE CONTRACTOR IS TO ADJUST OR RELOCATE ALL THE FACILITIES THAT FALL IN CONFLICT IN ACCORDANCE WITH COUNTY STANDARDS.
19. THE CONTRACTOR SHALL PROVIDE DETAILED REDLINE DRAWINGS, ANY AND ALL EXPENSES INCURRED FOR THIS WORK SHALL BE INCLUDED IN THE CONTRACTOR'S BID. REDLINE DRAWINGS SHALL BE CURRENT WITH EACH PAY APP SUBMITTED AND WILL BE CHECKED AS PART OF THE PAY APPLICATION REVIEW PROCESS.
20. ALL UTILITY CONSTRUCTION SHALL BE IN CONFORMANCE WITH THE LATEST VERSION OF THE MANATEE COUNTY UTILITY STANDARDS.
21. CONTRACTOR SHALL REFER TO EQUIPMENT SHOP DRAWINGS FOR SIZE AND POSITION OF ALL OPENINGS IN STRUCTURES REQUIRED BY THE EQUIPMENT. ENGINEERING DRAWINGS ARE APPROXIMATE.
22. CONTRACTOR SHALL COORDINATE AND SCHEDULE ANY ELECTRICAL SHUTDOWNS WITH PLANT OPERATIONS.
23. CONTRACTOR SHALL COORDINATE W/ COUNTY FOR LOCKING OF GATE AT CLOSE OF BUSINESS.

LEGEND OF SYMBOLS

TYPICAL EXISTING SYMBOLS | TYPICAL PROPOSED SYMBOLS

- BP = BACKFLOW PREVENTER
- = BOLLARD or POST
- CA = BOX, CABLE TELEVISION
- EB = BOX, ELECTRIC UTILITY
- = BOX, ELECTRIC UTILITY (TRANSFORMER)
- TB = BOX, TELEPHONE
- = DECORATIVE LIGHT POLE
- = FIRE HYDRANT
- = FLAGPOLE
- = FLARED END SECTION
- = GRATE INLET
- = GROUND LIGHT
- = GUY ANCHOR
- = LIGHT POLE, CONCRETE
- = LIGHT POLE, METAL
- = LIGHT POLE, WOOD
- MB = MAILBOX
- = MANHOLE, ELECTRIC
- = MANHOLE, GREASE TRAP
- = MANHOLE, SANITARY SEWER
- = MANHOLE, STORM SEWER
- = MANHOLE, TELEPHONE
- = METER, ELECTRIC
- = METER, GAS
- = METER, RECLAIMED WATER
- = METER, WATER
- = MITERED END SECTION
- = MONITORING WELL
- = PEDESTRIAN CROSSING SIGNAL
- = SANITARY CLEANOUT
- = SCHEDULE B-2 ITEM
- = TELEPHONE RISER
- = TRAFFIC SIGN
- TSB = TRAFFIC SIGNAL BOX
- TSP = TRAFFIC SIGNAL POLE

- CWS = UG CABLE TELEVISION WARNING SIGN
- EWS = UG ELECTRIC WARNING SIGN
- OWS = UG FIBER OPTIC WARNING SIGN
- FWS = UG FORCEMAIN WARNING SIGN
- GWS = UG GAS WARNING SIGN
- RWS = UG RECLAIMED WATER WARNING SIGN
- SWS = UG SANITARY SEWER WARNING SIGN
- TWS = UG TELEPHONE WARNING SIGN
- WWS = UG WATER WARNING SIGN
- = UTILITY POLE, CONCRETE
- = UTILITY POLE, METAL
- = UTILITY POLE, WOOD
- GV DOG = VALVE, GAS
- RV DOG = VALVE, RECLAIMED WATER
- SV DOG = VALVE, SANITARY
- WV DOG = VALVE, WATER
- W = WELL

- = CONCRETE
- = ASPHALT
- = CONCRETE PAVERS
- = BRICK

+ 25.25 = POINT OF ELEVATION

25.2' = DIMENSION FROM BUILDING TO BOUNDARY / RIGHT-OF-WAY LINE

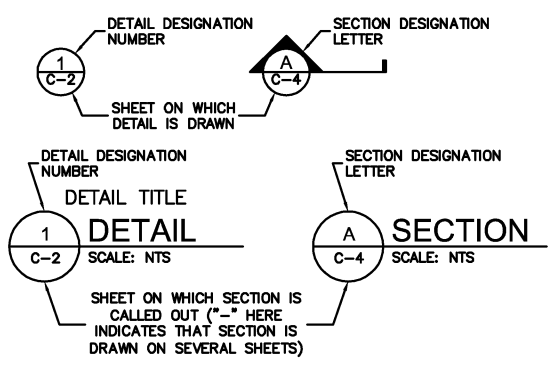
STORM CURB INLETS

- = CHAIN LINK FENCE
- = CHANNEL OUTLINE
- = CONTOUR
- OHC = OVERHEAD UTILITY
- TOS = TOE OF SLOPE
- TOB = TOP OF BANK
- = WOOD FENCE
- UGC = UG CABLE
- UGE = UG ELECTRIC
- UGFO = UG FIBER OPTIC
- GAS = UG GAS
- IRG = UG IRRIGATION
- RCW = UG RECLAIMED WATER
- SFM = UG SANITARY FORCEMAIN
- SAN = UG SANITARY SEWER
- STRM = UG STORM SEWER
- UGT = UG TELEPHONE
- WM = UG WATER MAIN
- = SILT FENCE
- = RIGHT-OF-WAY LINE
- = EASEMENT BOUNDARY
- = SECTION LINE

ABBREVIATIONS:

#	NUMBER	ID	INSIDE DIAMETER
		IE	INVERT ELEVATION
A/C	AIR CONDITIONER		
AC	ASBESTOS CEMENT PIPE	LF	LINER FEET
ADDL	ADDITIONAL	LG	LONG
ADJ	ADJUSTABLE	LT	LEFT
ADPT	ADAPTER		
ALUM	ALUMINUM	MATL	MATERIAL
APPROX	APPROXIMATE (LY)	MAX	MAXIMUM
ARV	AIR RELEASE VALVE	MECH	MECHANICAL
ASPH	ASPHALT	MFD	MANUFACTURED
AUTO	AUTOMATIC	MFG	MANUFACTURING
AUX	AUXILIARY	MFR	MANUFACTURER
AVG	AVERAGE	MH	MANHOLE
		MIN	MINIMUM
BM	BENCHMARK	MISC	MISCELLANEOUS
BV	BALL VALVE		
BFV	BUTTERFLY VALVE	NTS	NOT TO SCALE
BLDG	BUILDING		
BOT	BOTTOM	OC	ON CENTER
BWF	BARBED WIRE FENCE	OD	OUTSIDE DIAMETER
		O/E	OR EQUAL
CATV	CABLE TV	OPNG	OPENING
CHKD	CHECKED		
℄	CENTERLINE	PE	PLAIN END
CI	CAST IRON	ℙ	PROPERTY LINE
CMP	CORRUGATED METAL PIPE	PP	POWER POLE
CMU	CONCRETE MASONRY UNITS	PROP	PROPOSED
CO	CLEAN OUT	PS	PUMP STATION
CONC	CONCRETE	PSI	POUNDS PER SQUARE INCH
CONST	CONSTRUCTION	PVC	POLYVINYL CHLORIDE PIPE
CPLG	COUPLING	PVMT	PAVEMENT
CTR	CENTER (ED)	PW	POTABLE WATER
CV	CHECK VALVE		
		R/W	RIGHT-OF-WAY
D	DRAIN	RAD	RADIUS
DEMO	DEMOLITION	RCP	REINFORCED CONCRETE PIPE
DEPT	DEPARTMENT	RCW	RECLAIMED WATER
DI	DUCTILE IRON	RED	REDUCER
DIA	DIAMETER	RMJ	RESTRAINT MECHANICAL JOINT
DIAG	DIAGONAL	RR	RAILROAD
DIM	DIMENSION	RT	RIGHT
DN	DOWN	RW	RAW WATER
EA	EACH	SAN	SANITARY
ECC	ECCENTRIC	SCH	SCHEDULE
EFF	EFFLUENT	SFM	SANITARY FORCE MAIN
EL	ELEVATION	SHC	SODIUM HYPOCHLORITE
EOP	EDGE OF PAVEMENT	SHT	SHEET
EQ	EQUAL (LY)	SMH	SANITARY MANHOLE
EQUIP	EQUIPMENT	SPT	SOIL PENETRATION TEST
ESMT	EASEMENT	SQR	SQUARE
ETC	ETCETERA	SST	STAINLESS STEEL
EW	EACH WAY	STD	STANDARD
EXIST	EXISTING	STL	STEEL
EXP	EXPANSION	SW	SOLVENT WELD
		SWLK	SIDEWALK
FDOT	FLORIDA DEPARTMENT OF TRANSPORTATION	T&B	TOP AND BOTTOM
FF	FINISH FLOOR	TBM	TEMPORARY BENCHMARK
FH	FIRE HYDRANT	TEL	TELEPHONE
FIG	FIGURE	THD	THREADED
FIN	FINISH (ED)	THK	THICK (NESS)
FLG	FLANGE	TOS	TOP OF SLAB
FLR	FLOOR	TYP	TYPICAL
FM	FORCE MAIN		
FRP	FIBERGLASS REINFORCED PIPE	UD	UNDERDRAIN
FT	FOOT OR FEET	UG	UNDERGROUND
		VERT	VERTICAL
GAL	GALLON		
GALV	GALVANIZED	W/	WITH
GV	GATE VALVE	WM	WATERMAIN OR WATER METER
		WT	WEIGHT
HA	HAND AUGER	WV	WATER VALVE
HB	HOSE BIBB	WWF	WOVEN WIRE FABRIC
HDPE	HIGH DENSITY POLYETHYLENE	WWM	WOVEN WIRE MESH
HORZ	HORIZONTAL		
HT	HEIGHT	XFMR	TRANSFORMER

DETAIL & SECTION DESIGNATION



INDEX OF SHEETS

PIPE AND FITTING SYMBOLS

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NO.	BY	DATE	DESCRIPTION

REVISIONS

URS JOB NUMBER 12006803
PM: C. OSMANSKI
ENG: R. AVALOS
DRW: J. SCHEUERMAN
FILE SAVE DATE: January 7, 2009

CRAIG P. OSMANSKI
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CORTEZ ROAD & ELWOOD II
BOOSTER PUMP STATIONS
PORTABLE EMERGENCY GENERATORS
FOR
MANATEE COUNTY GOVERNMENT
MANATEE COUNTY, FLORIDA

GENERAL NOTES AND INDEX OF SHEETS

PROJECT STATUS
BID SET
JANUARY 2009

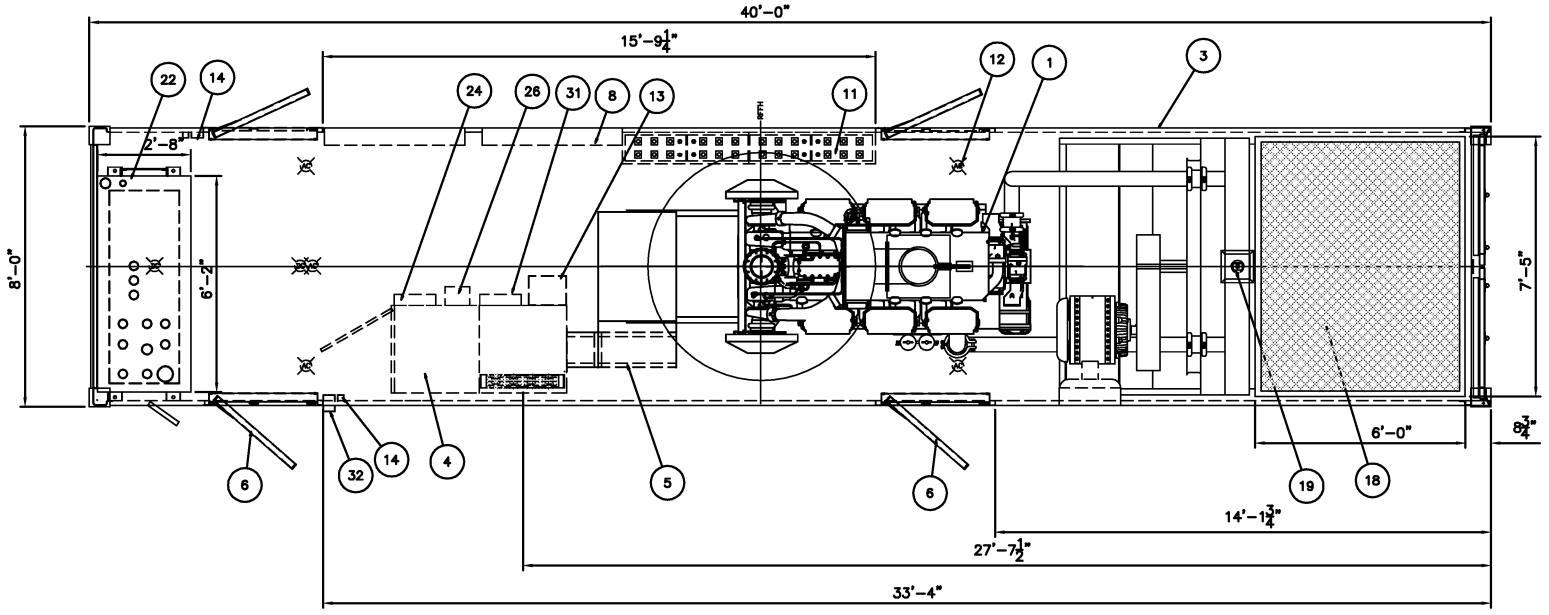
G-2

VERIFY SCALES: BAR IS ONE INCH ON ORIGINAL DRAWING 0 1 IF NOT ONE INCH ON THIS SHEET, ADJUST SCALE ACCORDINGLY

PLOTTED: January 14, 2009 11:04 AM PLOTTED BY: SCHEUERMAN, JAMES
X:\MANATEE PROJECTS\12006803 ELWOOD II & CORTEZ RD DESIGN\CADD\ELECTRICAL CONTRACTOR SET\M-1 PORTABLE GENERATOR CONTAINER MODULE.DWG

NOTES

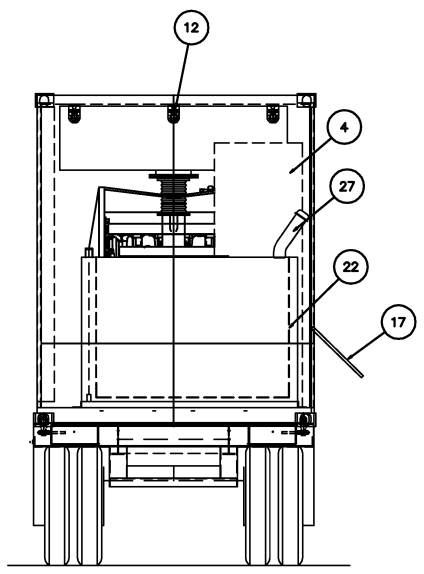
1. GENSET: CATERPILLAR (OWNER SUPPLIED)
   a) MODEL: D398 640 kW
   b) WEIGHT: 21,167 LBS. (WET)
   c) DIMENSIONS: 156"L X 62"W X 75"H
   d) PROVIDE VIBRATION ISOLATORS IN QUANTITY REQUIRED FOR ACTUAL SIZE WEIGHT OF GENSET BEING PROVIDED
2. RADIATOR: GENERAL THERMODYNAMICS (OWNER TO PROVIDE 1 RADIATOR FOR CONTRACTOR INSTALL. CONTRACTOR TO FURNISH & INSTALL 2ND RADIATOR)
   a) MODEL: B40-6-25
   b) WEIGHT: 3,932 LBS (DRY) / 4,315 LBS (WET)
   c) DIMENSIONS: 96.9"L X 87.9"W X 65"H.
3. REFER TO SHEET E-10 FOR ADDITIONAL ELECTRICAL REQUIREMENTS.



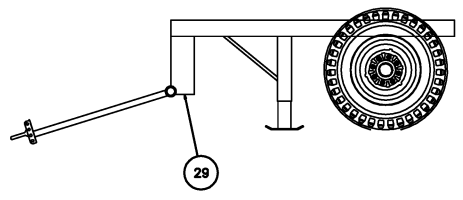
PLAN VIEW

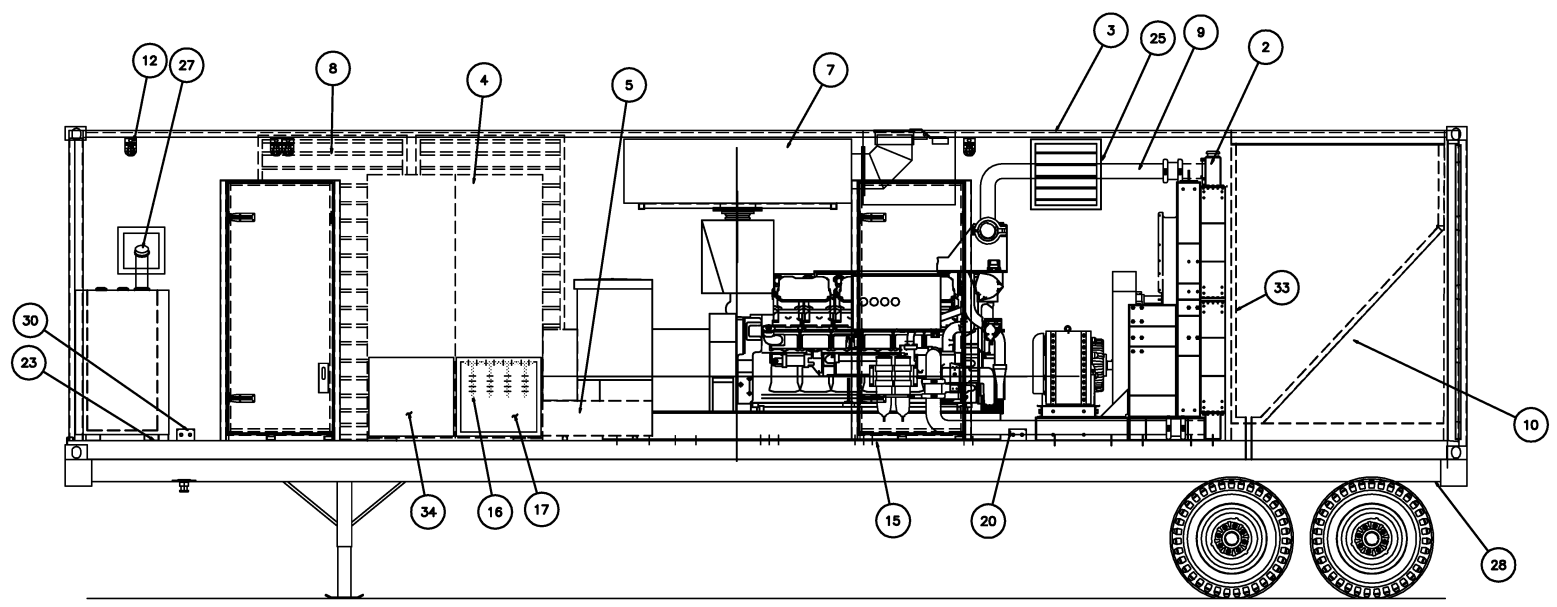
Parts List				
ITEM	QTY	NAME	VENDOR	NOTE
1	1	CATERPILLAR D-398 GENERATOR SET	OWNER	640 KW, 480V, 60HZ, 962 FULL LOAD AMPS WITH VAPOR RECOVERY BOX AND RACOR FUEL FILTERS
2	1	GTI B40 RADIATOR	OWNER / GTI	3@ 460V MOTOR
3	1	40' HIGH CUBE SHIPPING CONTAINER		MODIFIED AS GENERATOR SET ENCLOSURE
4	1	GENERATOR CUBICLE	CATERPILLAR	CONTROL PANEL & CIRCUIT BREAKER
5	1	CABLE TRAY GENERATOR TO GENERATOR CUBICLE		
6	4	36" X 80" PERSONNEL DOOR		WITH PANIC BAR EXIT HARDWARE
7	1	CRITICAL GRADE "COOL" EXHAUST SILENCER		WITH OUTLET ELBOW, RAINCAP AND SHIELD
8	2	ENGINE ROOM AIR INTAKE LOUVERS		48"WIDE X 96" HIGH
9	1	REMOTE RADIATOR PIPING		5" TUBE
10	1	RADIATOR DISCHARGE TURNING VANE		WITH WATER DRAINS, REMOVABLE FOR MAINTENANCE
11	1	ENGINE CRANKING BATTERIES		RACK MOUNTED
12	1	LIGHTING PACKAGE (5) AC AND (2) DC IN VAPORTIGHT FIXTURES		CEILING MOUNTED
13	1	BATTERY CHARGER	CATERPILLAR	MOUNTED ON GENERATOR CUBICLE
14	2	AC 3-WAY LIGHT SWITCH AND DUPLEX RECEPTACLE		
15	10	ENGINE ISOLATOR PADS		GENSET RETAINED WITH NUT PLATES UNDER FLOOR
16	5	LOAD CABLE COPPER BUS STABS 1/4" X 4" WITH NEMA HOLE PUNCHING FOR (8) CABLES PER PHASE & NEUTRAL		FOR TEMPORARY POWER FROM GENERATOR
17	1	LOAD CONNECTION BOX		SCREW RETAINED AND HINGED TOP WITH LATCH FOR EASY CABLE HOOK-UP
18	1	ALUMINUM RADIATOR AIR DISCHARGE SCREEN WITH GRAVITY DAMPERS		ROOF MOUNTED
19	2	RADIATOR FILL ACCESS DOOR		ROOF MOUNTED
20	1	OIL AND WATER DRAINS WITH BALL VALVES		PIPED TO SIDE OF CONTAINER
21	1	STANDARD CONTAINER DOORS		TURNING VANE ACCESS
22	1	DW 300 FUEL DAY TANK WITH SUPPLY & RETURN PUMPS, CONTROL PANEL, HOSES & HOSE RACK ALSO PROVIDED.		WITH FLOOR MOUNTED SCH 40 PIPING BETWEEN TANK AND GENSET
23	2	FUEL TANK MOUNTING ANGLES		
24	1	120/240V 100 AMP AC DISTRIBUTION PANEL		MOUNTED ON GENERATOR CUBICLE WALL, WIRED TO DEVICES POWERED FROM TERMINAL STRIP IN LOAD CABLE ACCESS AREA
25	1	20" VENT FAN WITH GRAVITY DAMPER		RATED 3635 CFM, THERMOSTATICALLY CONTROLLED
26	1	RADIATOR MOTOR STARTER WITH FUSED DISCONNECT		WIRED TO RADIATOR AND GENERATOR
27	1	DAYTANK 4" EXTERNAL FILL		BEHIND PAD LOCKABLE EXTERNAL DOOR
28	1	40' ISO SHIPPING CONTAINER CHASSIS		USED, RECONDITIONED
29	1	SINGLE AXLE CHASSIS DOLLY		USED, RECONDITIONED
30	1	FUEL CONNECTION PLATE		REMOTE FILL AND RETURN TO DAYTANK
31	1	VENT FAN RELAY CONTROL BOX		MOUNTED ON GENERATOR CUBICLE
32	1	WEATHERPROOF EMERGENCY STOP PUSHBUTTON		MOUNTED ADJACENT TO ENTRANCE DOOR
33	1	GRAVITY DAMPER		
34	1	HOUSE POWER CONNECTION BOX		

CONTRACTOR TO MOUNT OWNER SUPPLIED GENERATORS IN NEW PORTABLE GENERATOR CONTAINER MODULES

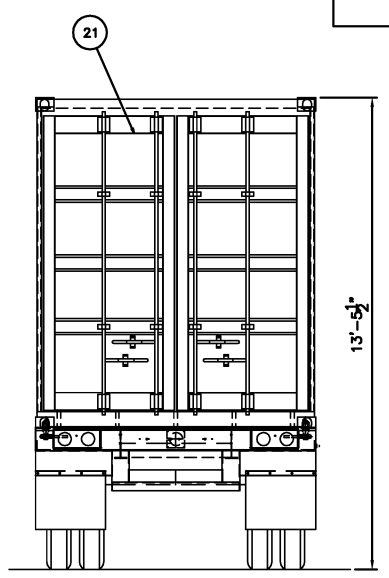


TRACTOR END VIEW





BUILDING SIDE VIEW



CARGO DOOR END VIEW

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NO.	BY	DATE	DESCRIPTION
			REVISIONS

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ENG: R. AVALOS
DRW: J. SCHEUERMAN
FILE SAVE DATE: January 14, 2009

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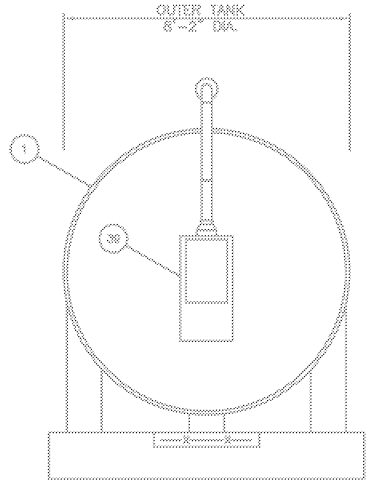
CORTEZ ROAD & ELWOOD II
BOOSTER PUMP STATIONS
PORTABLE EMERGENCY GENERATORS
FOR
MANATEE COUNTY GOVERNMENT
MANATEE COUNTY, FLORIDA

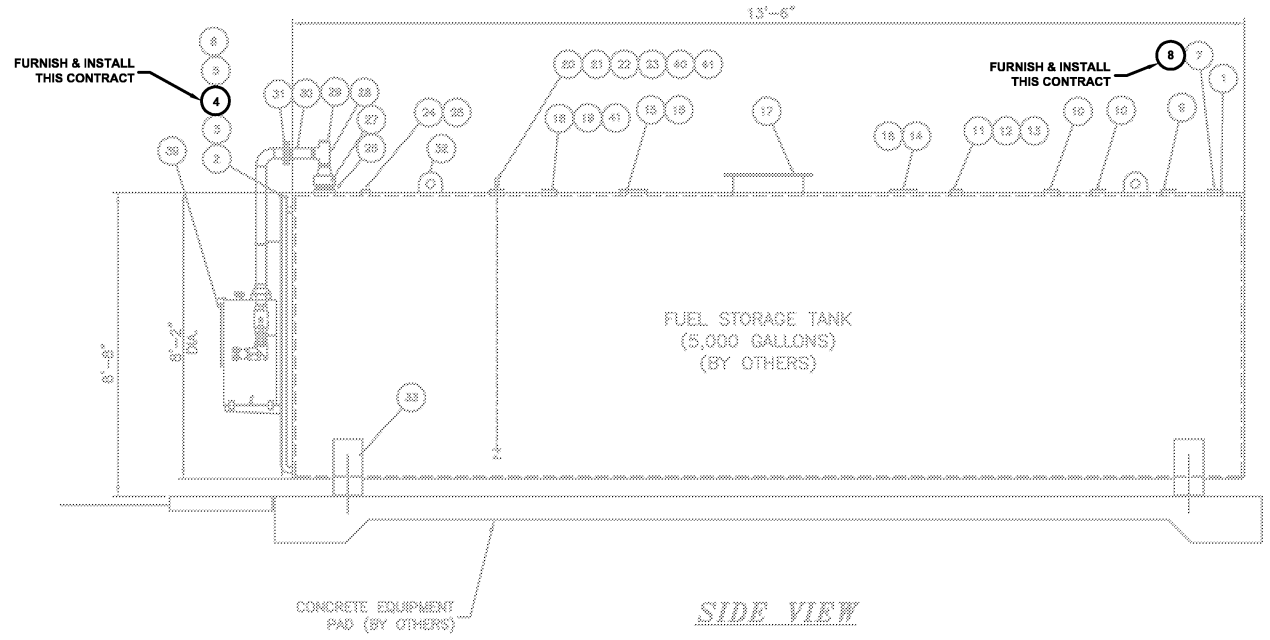
PORTABLE GENERATOR
CONTAINER MODULE

PROJECT STATUS
BID SET
JANUARY 2009

M-1



END VIEW



SIDE VIEW

MATERIALS LIST

ITEM	QTY	DESCRIPTION	VENDOR	NOTE
1	1	5,000 GALLON DOUBLE WALL CYLINDRICAL TANK		BY OTHERS
2	1	2" FOR LEAK SENSOR		BY OTHERS
3	1	4" FOR MANWAY		BY OTHERS
4	1	LEAK SENSOR	VEEDER ROOT	FURNISH & INSTALL THIS CONTRACT
5	1	2" X 3/4" REDUCER BUSHING W/ SECONDARY CAP		BY OTHERS
6	1	3/4" CODE RED TEE		BY OTHERS
7	1	4" FOR TANK INVENTORY PROBE W/ TEMPORARY CAP		BY OTHERS
8	1	TANK INVENTORY PROBE	VEEDER ROOT	FURNISH & INSTALL THIS CONTRACT
9	1	6" FOR TANK FUEL FILL POINT EMERGENCY VENTS		BY OTHERS
10	2	4" ELBOW		BY OTHERS
11	1	4" FOR PRIMARY VENT RISER ASSEMBLY		BY OTHERS
12	1	90° BALL VENT VALVE (LOCK)		BY OTHERS
13	1	90° ELBOW VENT		BY OTHERS
14	1	3" FOR SECONDARY EMERGENCY VENT		BY OTHERS
15	1	3" FOR PRIMARY EMERGENCY VENT		BY OTHERS
16	1	3" EMERGENCY VENT		BY OTHERS
17	1	93" MANWAY WITH MINIMAL LADDER		BY OTHERS
18	1	4" FOR FILL		BY OTHERS
19	1	4" X 1.5" REDUCER BUSHING		BY OTHERS
20	1	4" ENG FILL		BY OTHERS
21	1	4" X 12" DOUBLE TAP BUSHING		BY OTHERS
22	1	12" SUCTION TUBE ASSY		BY OTHERS
23	1	1.25" ANGLE PATTY FOOT VALVE		BY OTHERS
24	1	2" FOR VISUAL GAUGE		BY OTHERS
25	1	VISUAL GAUGE		BY OTHERS
26	1	6" FOR TANK FILL		BY OTHERS
27	1	FILL EMBLEM SET TO SHUT OFF @ 90% OF TANK CAPACITY		BY OTHERS
28	1	2" THREADED TEE		BY OTHERS
29	1	2" THREADED PLUG		BY OTHERS
30	1	2" CLOSE NIPPLE (LONG)		BY OTHERS
31	1	4" X 1.5" REDUCER BUSHING W/ RAISED FACE FLANGE		BY OTHERS
32	2	4" PIPE CAP SCH 40		BY OTHERS
33	2	6"H. UL 142 TANK SADDLE SUPPORT		BY OTHERS
34	1	PAINT TOUCH UP KIT		BY OTHERS
35	1	0" GAUGE STEM		BY OTHERS
36	1	SET OF DFT LOADING INSTRUCTIONS WITH TANK WARRANTY FORM		BY OTHERS
38				
39	1	18 GALLON SPADE FILL CONTAINMENT BOX		BY OTHERS
40	1	ANTISIPHON VALVE		BY OTHERS
41	4	BLACK REDUCERS W/ TEMPORARY CAP		BY OTHERS

ONLY ITEMS IN "BOLD" ARE INCLUDED IN THIS CONTRACT. ALL OTHER ITEMS ARE BY OTHERS & ARE INCLUDED FOR REFERENCE ONLY.

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MANATEE COUNTY, FLORIDA

ABOVEGROUND FUEL STORAGE TANK

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BID SET
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M-2