CONTRACT DOCUMENTS FOR
CONSTRUCTION OF THE

FY 21 MULTIPLE PUMP STATIONS PROJECTS
PROJECT NO. S5036

Prepared for the

COBB COUNTY WATER SYSTEM
COBB COUNTY, GEORGIA

VOLUME 2 OF 2 - DRAWINGS

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Jacobs

JACOBS Project No. JJX13603
AUGUST 2020

BID DOCUMENTS

FILENAME: 00-G-00_JJX13603.dgn

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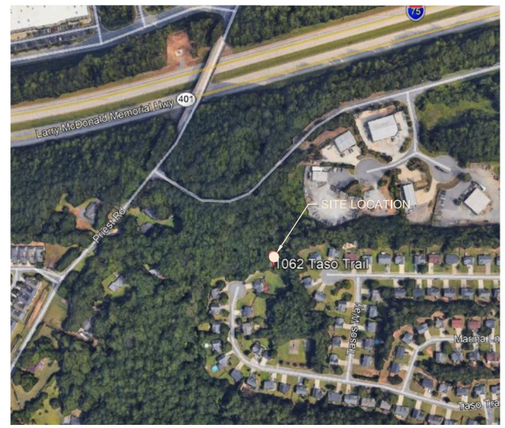
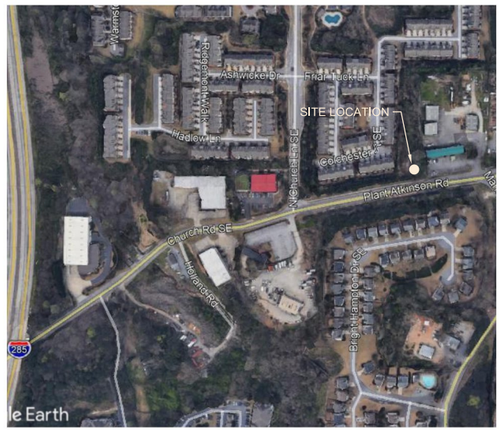
ALLATOONA BEACH
5112 ALLATOONA DRIVE
ACWORTH GA. 30101

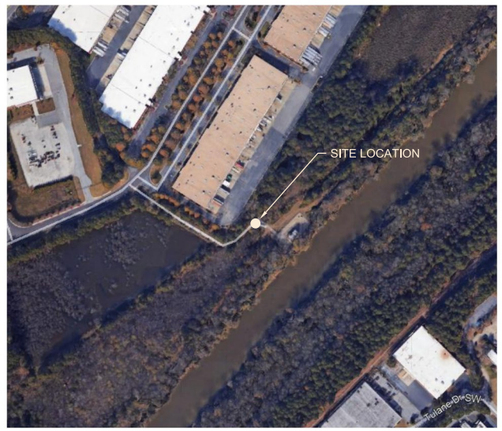
BRUSHY MOUNTAIN PUMP HOUSE
1751 NOONDAY CHURCH ROAD,
KENNESAW GA. 30144



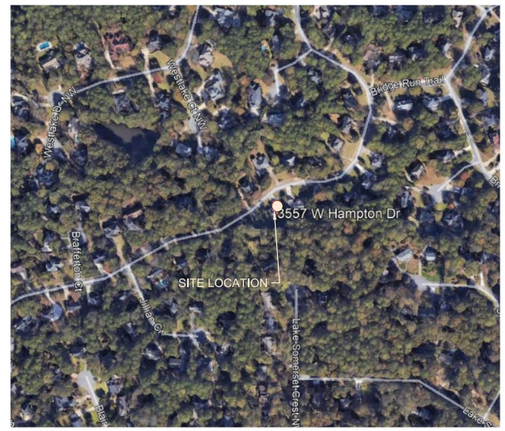
MARINA TRACE
1062 TASO TRAIL, NW
ACWORTH GA. 30101



PLANT ATKINSON ROAD
401 PLANT ATKINSON ROAD,
SMYRNA GA. 30080



SIX FLAGS
8110 TROON CIRCLE,
AUSTELL GA. 30168



WEST HAMPTON #1
3557B WEST HAMPTON DRIVE,
MARIETTA, GA 30064

WEST HAMPTON #2
170 WESTWOOD DRIVE,
MARIETTA, GA 30064

WOOD VALLEY
4539 WOODVALLEY DRIVE
ACWORTH GA. 30101

NO.	DATE	REVISION	BY	APVD
DSGN	I LILLEY	DR E GRIGGS CHK T WYNN	APVD	I LILLEY

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GA LIC # PEF000360 (EXP 6/30/2022)

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GENERAL

LOCATION MAP, DRAWING INDEX

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VERIFY SCALE

BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

DATE	JUNE 2020
PROJ	JJX13603
DWG	00-G-01
SHEET	of

ABBREVIATIONS

ABBREVIATION	DESCRIPTION
A	AMPERE, AUTOMATIC
AB SW	AIR-BREAK SWITCH
ABV	ABOVE
AC	ALTERNATING CURRENT
ACB	AIR-CIRCUIT BREAKER
ACSR	ALUMINUM CONDUCTOR STEEL-REINFORCED
ADJ	ADJUSTABLE
AF	AMPERE FRAME
AFD	ADJUSTABLE FREQUENCY DRIVE
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AHM	AMPERE-HOUR METER
AHU	AIR HANDLING UNIT
AL	ALUMINUM
AM	AMMETER
AMPL	AMPLIFIER
ANN	ANNUNCIATOR
ANT	ANTENNA
APPROX	APPROXIMATE
AS	AMMETER SWITCH, AMPERE SENSOR
ASC	AUXILIARY SWITCH NORMALLY CLOSED
ASO	AUXILIARY SWITCH NORMALLY OPEN
ASU	AIR SUPPLY UNIT
ATC	AUTOMATIC TRANSFER CONTROL
AT	AMPERE TRIP
ATS	AUTOMATIC TRANSFER SWITCH
AUTO	AUTOMATIC
AUX	AUXILIARY
AWG	AMERICAN WIRE GAGE
BAT	BATTERY
BC	BARE COPPER
BIL	BASIC IMPULSE LEVEL
BKR	BREAKER
BLDG	BUILDING
BOT	BOTTOM
C	CONDUIT, CONTACTOR, CONDUCTOR, CLOSE, CENTIGRADE
CB	CIRCUIT BREAKER
CC	CONTROL CABLE
CCS	CENTRAL CONTROL SYSTEM
CKT	CIRCUIT
CLF	CURRENT LIMITING FUSE
CLG	CEILING
COM	COMMUNICATIONS
CONN DIAG	CONNECTION DIAGRAM
CONT	CONTINUE
CP	CONTROL PANEL
CPT	CONTROL POWER TRANSFORMER
CPU	CENTRAL PROCESSING UNIT
CR	CONTROL RELAY
CS	CONTROL STATION:C=CLOSE, T=TRIP
CT	CURRENT TRANSFORMER, CABLE TRAY
CU	COPPER
DC	DIRECT CURRENT
DCS	DISTRIBUTED CONTROL SYSTEM
DIV	DIVISION
DN	DOWN
DP	DISTRIBUTION PANEL
DPDT	DOUBLE-POLE DOUBLE-THROW
DPST	DOUBLE-POLE SINGLE-THROW
DS	DISCONNECT SWITCH
E	EMPTY
EA	EACH
EDH	ELECTRIC DUCT HEATER
EF	EXHAUST FAN
EG	ENGINE GENERATOR
EL	ELEVATION
ELEC	ELECTRIC
ELEM	ELEMENTARY
EMER	EMERGENCY
EMS	ENERGY MONITORING SYSTEM
EMT	ELECTRICAL METALLIC TUBING
EMU	ENERGY MONITORING UNIT
ENCL	ENCLOSURE
EO	ELECTRIC OPERATED, ELECTRIC OPERATOR
EP	EXPLOSION-PROOF
EQPT	EQUIPMENT
ETM	ELAPSED TIME METER
EUH	ELECTRIC UNIT HEATER
EXH	EXHAUST
EXST	EXISTING
F	FORWARD, FREQ
FA	FIRE ALARM
FACP	FIRE ALARM CONTROL PANEL
FDR	FEEDER
FF	FINISHED FLOOR
FI	FLOW INDICATOR
FLEX	FLEXIBLE CONDUIT
FLR	FLOOR
FLUOR	FLUORESCENT
FPR	FEEDER PROTECTOR RELAY
FO	FIBER OPTIC
FP	FIELD PANEL
FREQ	FREQUENCY
FS	FLOAT SWITCH
FT	FLOW TRANSMITTER
FU	FUSE
FVNR	FULL VOLTAGE NON-REVERSING
FVR	FULL VOLTAGE REVERSING
FWD	FORWARD
G	GROUND
GALV	GALVANIZED
GEN	GENERATOR
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GFR	GROUND FAULT RELAY
GND	GROUND
GPR	GENERATOR PROTECTOR RELAY
GRS	GALVANIZED RIGID STEEL CONDUIT
H	HIGH SPEED
HGT	HEIGHT
HH	HANDHOLE
HID	HIGH INTENSITY DISCHARGE
HMI	HUMAN-MACHINE INTERFACE
HOA	HAND-OFF-AUTO
HOR	HAND-OFF-REMOTE
HP	HORSEPOWER
HPS	HIGH PRESSURE SODIUM
HS	HAND SWITCH
HV	HIGH VOLTAGE
HVAC	HEATING, VENTILATING & AIR CONDITIONING
HZ	HERTZ
IAW	IN ACCORDANCE WITH
IC	INTERRUPTING CAPACITY
I & C	INSTRUMENTATION AND CONTROL
IMC	INTERMEDIATE METALLIC CONDUIT
INCAND	INCANDESCENT
INST	INSTANTANEOUS
INT	INTERRUPTING
ISR	INTRINSICALLY SAFE RELAY
J,JB	JUNCTION BOX
K	KEY INTERLOCK
KA	KILOAMPERES
KAIC	KILOAMPERES INTERRUPTING CAPACITY
KCM	THOUSAND CIRCULAR MILS
KV	KILOVOLTS
KVA	KILOVOLT AMPERES
KW	KILOWATTS
KWH	KILOWATT HOURS
KWHD	KILOWATT HOURS DEMAND
L	LIGHTING CONTACTOR, LOW SPEED, LOWER
LC	LIGHTING CONTROLLER, LATCH COIL
LCP	LOCAL CONTROL PANEL
LE	LEVEL ELEMENT
LIT	LEVEL INDICATING TRANSMITTER
LOR	LOCAL-OFF-REMOTE
LP	LIGHTING PANEL
LPS	LOW PRESSURE SODIUM
LR	LOCAL/REMOTE
LS	LIMIT SWITCH, LEVEL SWITCH
LT	LEVEL TRANSMITTER
LT FLEX	LIQUID-TIGHT FLEX CONDUIT
M	MAGNETIC CONTACTOR COIL, MOTOR, MANUAL
MA	MILLIAMPERE
MAN	MANUAL
MAU	MAKE-UP AIR UNIT
MAX	MAXIMUM
MCC	MOTOR CONTROL CENTER
MDC	MOTORIZED DAMPER CONTROL
MECH	MECHANICAL
MFR	MANUFACTURER
MH	MANHOLE, METAL HALIDE, MOUNTING HEIGHT
MIN	MINIMUM
MO	MOTOR OPERATOR
MOP	MOTOR OPERATED POTENTIOMETER
MOV	METAL OXIDE VERISTOR, MOTOR OPERATED VALVE
MPR	MOTOR PROTECTION RELAY
MRCT	MULTI RATIO CURRENT TRANSFORMER
MS	MOTOR STARTER
MSC	MANUFACTURER SUPPLIED CABLE
MT	MOUNT
MTD	MOUNTED
MTS	MANUAL TRANSFER SWITCH
MV	MEDIUM VOLTAGE
MVA	MEGA-VOLT AMPERES
N	NEUTRAL, NORMAL
NA	NON-AUTOMATIC
NC	NORMALLY CLOSED
NEC	NATIONAL ELECTRICAL CODE
NESC	NATIONAL ELECTRICAL SAFETY CODE
NEUT	NEUTRAL
NIC	NOT IN CONTRACT
N.O.	NORMALLY OPEN
NP	NAMEPLATE
NTS	NOT TO SCALE
O	OPEN
OCA	OPEN-CLOSE-AUTO
OCB	OIL CIRCUIT BREAKER
OCR	OVERCURRENT RELAY
OHM	OHMMETER
OL	OVERLOAD RELAY
OO	ON-OFF
OOA	ON-OFF-AUTO
OOR	ON-OFF-REMOTE
OS	OCCUPANCY SENSOR
PB	PULL BOX
PC	PHOTOCELL
PCC	POINT OF COMMON COUPLING
PCB	POWER CIRCUIT BREAKER
PF	POWER FACTOR
PH	PHASE
PLC	PROGRAMMABLE LOGIC CONTROLLER
PNL	PANEL
POT	POTENTIOMETER
PP	POWER PACK
PS	PRESSURE SWITCH
PT	POTENTIAL TRANSFORMER
PVC	POLYVINYL CHLORIDE
PWR	POWER
R	RELAY,REVERSE,RUN,RAISE
RCPT	RECEPTACLE
REF	REFERENCE
REM	REMOTE
RGS	RIGID GALVANIZED STEEL CONDUIT
RIO	REMOTE INPUT/OUTPUT
RMS	ROOT MEAN SQUARE
RPM	REVOLUTIONS PER MINUTE
RTU	REMOTE TELEMETRY UNIT
RTD	RESISTANCE TEMPERATURE DETECTOR
RVNR	REDUCED VOLTAGE NON-REVERSING
RVR	REDUCED VOLTAGE REVERSING
SA	SURGE ARRESTER
SC	SPEED CONTROL
SCADA	SUPERVISORY CONTROL AND DATA ACQUITION SYSTEM
SCU	SPEED CONTROL UNIT
SF	SUPPLY FAN
SH	SPACE HEATER
S/N	SOLID NEUTRAL
SOL	SOLENOID
SP	SPARE
SPD	SPEED
SS	START STOP
SST	STAINLESS STEEL
ST	SHUNT TRIP
SUB	SUBSTATION
SV	SOLENOID VALVE
SW	SWITCH
SWBD	SWITCHBOARD
SWGR	SWITCHGEAR
SYMM	SYMMETRICAL
T	THERMOSTAT, TRANSFORMER
TB	TERMINAL BOARD, TEST BLOCK
TD	TEMPERATURE DETECTOR, TIME DELAY
TDC	TIME-DELAY CLOSING
TDO	TIME-DELAY OPENING
TDR	TIME DELAY RELAY
TEL	TELEPHONE
TEMP	TEMPERATURE
TJB	TERMINAL JUNCTION BOX
TSP	TWISTED SHIELDED PAIR
TST	TWISTED SHIELDED TRIAD
TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSOR
TYP	TYPICAL
UC	UNLATCH COIL
UH	UNIT HEATER
UNO	UNLESS NOTED OTHERWISE
UPS	UNINTERRUPTIBLE POWER SUPPLY
UVR	UNDER VOLTAGE RELAY
V	VOLTAGE, VOLTS
VCB	VACUUM CIRCUIT BREAKER
VFD	VARIABLE FREQUENCY DRIVE
VIB	VIBRATION
VM	VOLTMETER
VR	VOLTAGE REGULATOR
VS	VOLTMETER SWITCH
W	WATTS
WHD	WATT HOUR DEMAND METER
WM	WATTMETER
WP	WEATHERPROOF
XD	TRANSDUCER
XFMR	TRANSFORMER
XPDR	TRANSPONDER
Z	IMPEDANCE
ZS	POSITION SWITCH

NOTES:

1. CONTACT ENGINEER FOR ABBREVIATIONS USED BUT NOT SHOWN ON THIS DRAWING.

GENERAL NOTE:

1. THIS IS A STANDARD LEGEND SHEET. THEREFORE, NOT ALL OF THE INFORMATION SHOWN MAY BE USED ON THIS PROJECT.

NO.	DATE	DR	CHK	APVD	BY	APVD
DSGN	I LILLEY	E GRIGGS	T WYNN	APVD	R KOEKEMOER	

REVISION

10 10TH STREET, SUITE 1400
ATLANTA, GA 30309
GA LIC # PEF000350 (EXP 6/30/2022)

S5036 -
FY21 MULTIPLE PUMP STATIONS PROJECTS
COBB COUNTY WATER SYSTEM
GEORGIA

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GENERAL
ABBREVIATIONS

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0 1"

DATE	
PROJ	JJX13603
DWG	00-G-02
SHEET	of

BID DOCUMENTS

ONE-LINE DIAGRAM

SYMBOL	DESCRIPTION
	DRAWOUT AIR CIRCUIT BREAKER, LOW VOLTAGE
400	CIRCUIT BREAKER, THERMAL MAGNETIC TRIP SHOWN, 3 POLE, UNO
AS/AF OR AT/AF	CIRCUIT BREAKER, STATIC TRIP UNIT, SENSOR AMP TRIP AND FRAME RATINGS SHOWN, 3 POLE, UNO
100/M	CIRCUIT BREAKER, MAGNETIC TRIP ONLY, TRIP RATING SHOWN, 3 POLE, UNO
400 225	FUSED SWITCH, SWITCH AND FUSE CURRENT RATING INDICATED, 3 POLE, UNO
100	SWITCH, CURRENT RATING INDICATED, 3 POLE, UNO
60 (3)	FUSE, CURRENT RATING AND QUANTITY INDICATED
1	MAGNETIC STARTER WITH OVERLOAD, NEMA SIZE INDICATED, FVNR UNO
AFD	ELECTRONIC STARTER/SPEED CONTROL RVSS = REDUCED VOLTAGE SOFT STARTER AFD = AC ADJUSTABLE FREQUENCY DRIVE DC = DC ADJUSTABLE SPEED DRIVE RVAT = REDUCED VOLTAGE AUTO TRANSFORMER TYPE RVRT = REDUCED VOLTAGE REACTOR TYPE
	CABLE OR BUS CONNECTION POINT
K	KEY INTERLOCK
3	AC MOTOR, SQUIRREL CAGE INDUCTION - HORSEPOWER INDICATED
G 500/625	GENERATOR, KW/KVA RATING SHOWN
DPM	DIGITAL POWER METER (MULTIFUNCTION)
	GROUND
15 KVA 480-120/240V 1 PH	TRANSFORMER, SIZE, VOLTAGE RATINGS, AND PHASE INDICATED
	SHIELDED ISOLATION TRANSFORMER
480-120V (3)	POTENTIAL TRANSFORMER, VOLTAGE RATING AND QUANTITY INDICATED
100:5 (3)	CURRENT TRANSFORMER, RATIO(100:5) AND QUANTITY INDICATED (3)
	CONNECTION POINT TO EQUIPMENT SPECIFIED IN OTHER DIVISIONS. RACEWAY, CONDUCTOR AND CONNECTION IN THIS DIVISION
SPD	SURGE PROTECTIVE DEVICE
	TERMINAL BLOCK LUG
	DELTA CONNECTION
	WYE GROUNDED CONNECTION, SOLID GROUND
86	RELAY OR DEVICE, ANSI FUNCTION NUMBER AS INDICATED
MO	MOTOR OPERATOR, BREAKER OR SWITCH
MPR	MOTOR PROTECTION RELAY

CONTROL DIAGRAM

SYMBOL	DESCRIPTION
	PUSH-BUTTON SWITCH, MOMENTARY CONTACT, NORMALLY OPEN
	PUSH-BUTTON SWITCH, MOMENTARY CONTACT, NORMALLY CLOSED
	PUSH BUTTON SWITCH, MAINTAINED CONTACTS WITH MECHANICAL INTERLOCK
	3 POSITION SELECTOR SWITCH MAINTAINED CONTACT
HAND OFF REMOTE	SELECTOR SWITCH - MAINTAINED CONTACT - CHART IDENTIFIES OPERATION WHEN NEEDED FOR CLARITY:

	POSITION		
CKT	HAND	OFF	REMOTE
1	X	O	O
2	O	O	X

X - CLOSED CONTACT
O - OPEN CONTACT

SYMBOL	DESCRIPTION
	TOGGLE SWITCH, ON-OFF TYPE
ON OFF	SELECTOR SWITCH, ON-OFF TYPE
	MUSHROOM HEAD PUSHBUTTON SWITCH
A	PUSH-TO-TEST INDICATING LIGHT - LETTER INDICATES COLOR A - AMBER G - GREEN S - STROBE B - BLUE R - RED C - CLEAR W - WHITE
ETM	ELAPSED TIME METER
M	MOTOR STARTER CONTACTOR COIL
CRX	CONTROL RELAY, X INDICATES NUMERICAL ORDER IN CIRCUIT
TDR X	TIME DELAY RELAY, X INDICATES NUMERICAL ORDER IN CIRCUIT
SV X	SOLENOID VALVE, X INDICATES NUMERICAL ORDER IN CIRCUIT
	CONTACT - NORMALLY OPEN
	CONTACT - NORMALLY CLOSED
	REMOTE DEVICE
	MOTOR SPACE HEATER
	TERMINAL BLOCK, REMOTE
	TERMINAL BLOCK, INTERNAL
	FUSE, RATING INDICATED
CPT 120V	TRANSFORMER, CONTROL POWER
+ −	BATTERY

GROUND SYSTEM PLAN

SYMBOL	DESCRIPTION
	GROUND ROD
	GROUND ROD IN TEST WELL
G	GROUNDING CONDUCTOR
G	EQUIPMENT GROUND BUS
N	EQUIPMENT NEUTRAL BUS
G G G	CAD WELD CABLE CONNECTION
G R	CAD WELD CABLE TO REBAR WITH MINIMUM TWO INCH CONCRETE COVER IN OUTDOOR AREA
G C	UL CLAMP OR BOLTED CONNECTION TO EQUIPMENT, STRUCTURAL STEEL OR STUBBED UP REINFORCING STEEL (INDOORS)

POWER SYSTEM PLAN

SYMBOL	DESCRIPTION
MCC-A	MAJOR ELECTRICAL COMPONENT OR DEVICE - NAME OR IDENTIFYING SYMBOL AS SHOWN.
	PANELBOARD - SURFACE MOUNTED
LPXXA	PANELBOARD LETTER OR NUMBER FACILITY NUMBER LP - LOW VOLTAGE PANEL DP - DISTRIBUTION PANEL
	PANELBOARD - FLUSH MOUNTED
	TERMINAL JUNCTION BOX
M	MOTOR, SQUIRREL CAGE INDUCTION
G	GENERATOR, VOLTAGE AND SIZE AS INDICATED.
LPXXA	HOME RUN - DESTINATION SHOWN
or G	EXPOSED CONDUIT AND CONDUCTORS*
− − − or G	CONCEALED CONDUIT AND CONDUCTORS*

NOTE:
ALL UNMARKED CONDUIT RUNS CONSIST OF TWO NO. 12, ONE NO. 12 GROUND CONDUCTORS IN 3/4" CONDUIT. RUNS MARKED WITH CROSSHATCHES INDICATE NUMBER OF NO. 12 CONDUCTORS. CROSSHATCH WITH SUBSCRIPT "G" INDICATES GREEN GROUND WIRE.

SYMBOL	DESCRIPTION
G	CROSSHATCHES WITH BAR INDICATE NO.10 CONDUCTOR. SIZE CONDUIT ACCORDING TO SPECIFICATIONS AND APPLICABLE CODE.
[A1]	CONDUIT AND CONDUCTOR CALLOUT, SEE LEGEND.
	CONDUIT DOWN
	CONDUIT UP
	CONDUIT, STUBBED AND CAPPED
	CONDUIT TERMINATION AT CABLE TRAY
EX	EXISTING CONDUIT/ DUCT BANK
BD	BUS DUCT - SEE SPECIFICATIONS
CE	CONCRETE ENCASED CONDUIT
DB	DIRECT BURIED CONDUIT
FO	FIBER OPTIC CONDUIT
XXX	CONCRETE ENCASED DUCT BANK WHERE XXX IS THE DUCT BANK NAME. SEE DUCTBANK SECTIONS FOR CONTENTS
	CONCEALED CONDUIT ROUTING AREA
	CONDUIT ROUTING AREA
	CABLE TRAY
T	TRANSFORMER
J OR HH	GENERAL CONTROL OR WIRING DEVICE. LETTER SYMBOLS OR ABBREVIATIONS INDICATE TYPE OF DEVICE
CS	CONTROL STATION, SEE CONTROL DIAGRAMS FOR CONTROL DEVICE(S) REQUIRED.
30	NONFUSED DISCONNECT SWITCH, CURRENT RATING INDICATED, 3 POLE
60/40	FUSED DISCONNECT SWITCH, CURRENT RATING INDICATED (60/40, 60=SWITCH RATING / 40=FUSE RATING) 3 POLE
2	COMBINATION CIRCUIT BREAKER AND MAGNETIC STARTER, NEMA SIZE INDICATED
100/40	BREAKER, SEPARATELY MOUNTED, CURRENT RATING INDICATED (100/40, 100 = FRAME SIZE; 40 = TRIP RATING) 3 POLE

POWER SYSTEM PLAN

SYMBOL	DESCRIPTION
XX 2	CONVENIENCE RECEPTACLE - DUPLEX UNLESS NOTED OTHERWISE WP - WEATHERPROOF C - CLOCK HANGER TL - TWIST LOCK CRE - CORROSION RESISTANT GFCI - GROUND FAULT CIRCUIT INTERRUPTER SUBSCRIPT NUMBER AT RECEPTACLE INDICATES CIRCUIT
	CONVENIENCE RECEPTACLE - QUADRUPLEX
L20R 20	RECEPTACLE, SPECIAL PURPOSE-NEMA CONFIGURATION AND AMPERAGE INDICATED
T	THERMOSTAT
	UTILITY REVENUE METERING FACILITY
	UTILITY POLE

LIGHTING SYSTEM PLAN

SYMBOL	DESCRIPTION
1 OR 1	LUMINAIRE, SEE SCHEDULE
1	LUMINAIRE, SEE SCHEDULE
1 OR	LUMINAIRE WITH INTERNAL BATTERY BACKUP, SEE SCHEDULE
1	STRIP LUMINAIRE, SEE SCHEDULE
4 OR 4	LUMINAIRE AND POLE, SEE SCHEDULE
5 OR 5	WALL MOUNTED LUMINAIRE, SEE SCHEDULE
1	FLOOD LIGHTS - AIM IN THE DIRECTION SHOWN
	STANDBY LIGHTING UNIT, SURFACE MOUNTED, SEE SCHEDULE
XX OR	EXIT LIGHTS - FILLED SECTION INDICATES LIGHTED FACE, ARROW INDICATES EGRESS DIRECTIONAL INDICATORS, XX = FIXTURE NUMBER, SEE SCHEDULE
$a OR 2a	SMALL LETTER SUBSCRIPT AT SWITCH AND LUMINAIRE INDICATES SWITCHING. SUBSCRIPT NUMBER AT LUMINAIRE INDICATES CIRCUIT
$3	WALL SWITCH: 2- DOUBLE POLE P- PILOT LIGHT 3- THREE WAY K- KEY OPERATED 4- FOUR WAY D- DIMMER WP- WEATHERPROOF CRE- CORROSION RESISTANT EX- EXPLOSIONPROOF L- MOMENTARY 3-WAY M- MOTOR RATED MS- MANUAL STARTER WITH OVERLOADS
LC	LIGHTING CONTACTOR

NOTES:

1. THESE ARE STANDARD LEGEND SHEETS. SOME SYMBOLS AND ABBREVIATIONS MAY APPEAR ON THE LEGEND AND NOT ON THE DRAWINGS.
2. FOR ADDITIONAL ABBREVIATIONS OF OTHER DIVISIONS (HVAC, MECHANICAL, AND STRUCTURAL/ARCHITECTURAL) SEE OTHER LEGENDS.

NO.	DATE	DSGN	REVISION	BY	APVD
DR	TJ HOMAYOONI	G MESSER	CHK	KB HORTON	APVD	T HOMAYOONI

10 10TH STREET, SUITE 1400
ATLANTA, GA 30309
GA LIC # PEF000350 (EXP 6/30/2022)

S5036 -
FY21 MULTIPLE PUMP STATIONS PROJECTS
COBB COUNTY WATER SYSTEM
GEORGIA

GENERAL
ELECTRICAL LEGEND 1

BID DOCUMENTS

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

DATE	
PROJ	JJX13603
DWG	00-G-03
SHEET	of

CIRCUIT AND RACEWAY

GENERAL CIRCUIT CONDUCTOR AND CONDUIT IDENTIFICATION

POWER CIRCUIT CALLOUTS			
[P1]	[1/2"FLEX, 2#12,#12G]	[P26]	[1"C,3#8,5#14,1#10G]
[P2]	[3/4"C,2#12,1#12G]	[P27]	[1"C,2#6, 1#10G]
[P3]	[3/4"C,3#12,1#12G]	[P28]	[1"C,3#6, 1#8G]
[P4]	[3/4"C,4#12,1#12G]	[P29]	[1"C,3#6, 2#14,1#8G]
[P5]	[3/4"C,5#12,1#12G]	[P30]	[1"C,3#6, 3#14,1#8G]
[P6]	[3/4"C,6#12,1#12G]	[P31]	[1"C,3#6, 4#14,1#8G]
[P7]	[3/4"C,7#12,1#12G]	[P32]	[1"C,3#6, 5#14,1#8G]
[P8]	[3/4"C,8#12,1#12G]	[P33]	[1"C,3#4,1#8G]
[P9]	[3/4"C,3#12,2#14,1#12G]	[P34]	[1 1/4"C,3#4,3#14,1#8G]
[P10]	[3/4"C,3#12,3#14,1#12G]	[P35]	[1 1/4"C,3#4,5#14,1#8G]
[P11]	[3/4"C,3#12,4#14,1#12G]	[P36]	[1 1/4"C,3#3, 1#6G]
[P12]	[3/4"C,3#12,5#14,1#12G]	[P37]	[1 1/4"C,3#3, 3#14,1#6G]
[P13]	[3/4"C,3#12,6#14,1#12G]	[P38]	[1 1/4"C,3#2, 1#6G]
[P14]	[3/4"C,3#12,7#14,1#12G]	[P39]	[1 1/4"C,3#1, 1#6G]
[P15]	[3/4"C,2#10,1#10G]	[P40]	[1 1/2"C,4#2, 1#6G]
[P16]	[3/4"C,3#10,1#10G]	[P41]	[1 1/2"C,3#2/0, 1#4G]
[P17]	[3/4"C,3#10,2#14,1#10G]	[P42]	[2"C,3#3/0, 1#4G]
[P18]	[3/4"C,3#10,3#14,1#10G]	[P43]	[2"C,3#4/0, 1#3G]
[P19]	[3/4"C,3#10,4#14,1#10G]	[P44]	[2 1/2"C, 4#4/0, 1#4G]
[P20]	[3/4"C,3#10,5#14,1#10G]	[P45]	[2"C, 4#3/0, 1#4G]
[P21]	[1"C,2#8,1#10G]	[P46]	[1 1/2"C, 4#1/0, 1#6G]
[P22]	[1"C,3#8,1#10G]	[P47]	[3"C, 4#500KCM, 1#4G]
[P23]	[1"C,3#8,2#14,1#10G]	[P48]	[4"C, 3#350KCM, 1#3G]
[P24]	[1"C,3#8,3#14,1#10G]	[P49]	[2 EA [3"C, 3#350KCM, 1#1G]
[P25]	[1"C,3#8,4#14,1#10G]	[P50]	2 EA [2"C, 3#4/0, 1#2G]

EMPTY CONDUIT	
[EC-1]	[3/4"C,WITH PULL STRING]
[EC-2]	[1"C,WITH PULL STRING]
[EC-3]	[1 1/4"C,WITH PULL STRING]
[EC-4]	[1 1/2"C,WITH PULL STRING]
[EC-5]	[2"C,WITH PULL STRING]
[EC-6]	[3"C,WITH PULL STRING]
[EC-7]	[4"C,WITH PULL STRING]
[EC-8]	[5"C,WITH PULL STRING]

ANALOG CIRCUIT CALLOUTS	
[A1]	[3/4"C,1 TYPE 3]
[A2]	[1"C,2 TYPE 3]
[A3]	[1"C,3 TYPE 3]
[A4]	[1"C,4 TYPE 3]
[A5]	[1 1/4"C,5 TYPE 3]
[A6]	[1 1/4"C,6 TYPE 3]
[A7]	[1 1/2"C,7 TYPE 3]
[A8]	[1 1/2"C,8 TYPE 3]
[A9]	[1 1/2"C,9 TYPE 3]
[A10]	[2"C,10 TYPE 3]
[A11]	[2"C,11 TYPE 3]
[A12]	[2"C,12 TYPE 3]
[A13]	[2"C,13 TYPE 3]
[A14]	[2"C,14 TYPE 3]
[A15]	[3/4"C,1 TYPE 4]
[A16]	[3/4"C,2 TYPE 4]
[A17]	[1"C,3 TYPE 4]
[A18]	[1 1/4"C,4 TYPE 4]
[A19]	[1 1/4"C,5 TYPE 4]
[A20]	[1 1/4"C,6 TYPE 4]
[A21]	[1 1/2"C,7 TYPE 4]
[A22]	[1 1/2"C,8 TYPE 4]
[A23]	[2"C,9 TYPE 4]
[A24]	[3/4"C,1-4 pr. TYPE 5]
[A25]	[1"C,2-4 pr. TYPE 5]

CONTROL CIRCUIT CALLOUTS	
[C1]	[3/4"C,MSC]
[C2]	[3/4"C,2#14,1#14G]
[C3]	[3/4"C,3#14,1#14G]
[C4]	[3/4"C,4#14,1#14G]
[C5]	[3/4"C,5#14,1#14G]
[C6]	[3/4"C,6#14,1#14G]
[C7]	[3/4"C,7#14,1#14G]
[C8]	[3/4"C,8#14,1#14G]
[C9]	[3/4"C,9#14,1#14G]
[C10]	[3/4"C,10#14,1#14G]
[C11]	[3/4"C,11#14,1#14G]
[C12]	[3/4"C,12#14,1#14G]
[C13]	[3/4"C,13#14,1#14G]
[C14]	[3/4"C,14#14,1#14G]
[C15]	[3/4"C,15#14,1#14G]
[C16]	[3/4"C,16#14,1#14G]
[C17]	[3/4"C,17#14,1#14G]
[C18]	[3/4"C,18#14,1#14G]
[C19]	[3/4"C,19#14,1#14G]
[C20]	[1"C,20#14,1#14G]
[C21]	[1"C,21#14,1#14G]
[C22]	[1"C,22#14,1#14G]
[C23]	[1"C,23#14,1#14G]
[C24]	[1"C,24#14,1#14G]
[C25]	[1"C,25#14,1#14G]

MULTICONDUCTOR CONTROL CABLE CIRCUIT CALLOUTS	
[CC5]	[3/4"C,1-5C TYPE 1]
[CC7]	[3/4"C,1-7C TYPE 1]
[CC9]	[1"C,1-9C TYPE 1]
[CC12]	[1"C,1-12C TYPE 1]
[CC19]	[1 1/2"C, 1-19C TYPE 1]
[CC25]	[1 1/2"C,1-25C TYPE 1]
[CC37]	[2"C,1-37C TYPE 1]
[CCC1]	[1-7C #12 TYPE 1]

NOTES:

1. FOR CABLE TYPES, SEE SPECIFICATIONS.
2. CONDUIT SIZES ARE BASE ON THE AREA OF THW CONDUCTORS.
3. SIZING OF CONDUCTORS #1AWG AND SMALLER BASED ON AMPACITIES AT 60 DEGREES C, SIZING OF CONDUCTORS #1/0AWG AND LARGER BASED ON AMPACITIES AT 75 DEGREES C.
4. WHERE CIRCUITS ARE UNDERGROUND, DIRECT BURIED OR CONCRETE ENCASED, MINIMUM CONDUIT SIZE SHALL BE 1".
5. FOR METRIC CONDUIT SIZES USE THE FOLLOWING CONVERSION:
   1/2" = 16 mm 1/4" = 35 mm
   3/4" = 21 mm 1 1/2" = 41 mm
   1" = 27 mm 2" = 53 mm

NO.	DATE	DR	REVISION	CHK	APVD	BY	APVD
DSGN	TJ HOMAYOONI		G MESSER	KB HORTON			T HOMAYOONI

10 10TH STREET, SUITE 1400
ATLANTA, GA 30309
GA LIC # PEF000350 (EXP 6/30/2022)

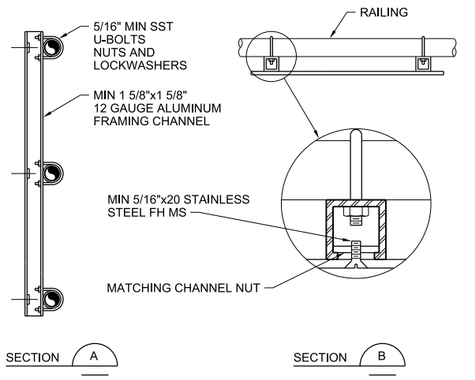
S5036 -
FY21 MULTIPLE PUMP STATIONS PROJECTS
COBB COUNTY WATER SYSTEM
GEORGIA

GENERAL
ELECTRICAL LEGEND 2

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

DATE	
PROJ	JJX13603
DWG	00-G-04
SHEET	of

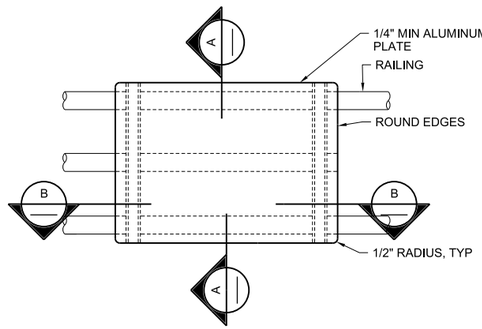
BID DOCUMENTS



DEVICE MOUNTING, RAILING MOUNTED EQUIPMENT SUPPORT

NTS

2605-007



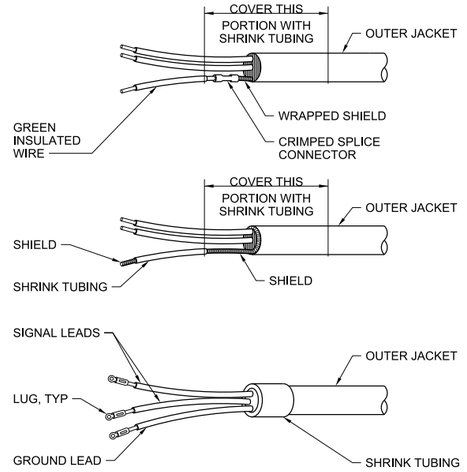
NOTES:

1. ALL HARDWARE SHALL BE STAINLESS STEEL. USE WASHERS AND LOCK WASHERS ON ALL NUTS AND BOLTS.
2. DIMENSIONS SHALL BE AS REQUIRED FOR EQUIPMENT TO BE MOUNTED. EDGE OF MOUNTING PLATE SHALL EXTEND A MINIMUM OF 2 INCHES EACH SIDE OF THE MOUNTED EQUIPMENT.
3. THIS DETAIL SHALL BE USED FOR MOUNTING EQUIPMENT AND JUNCTION BOXES WEIGHING LESS THAN 50 LBS ON RAILING WHETHER DETAIL IS CALLED OUT OR NOT. EQUIPMENT MOUNTING SHALL NOT REDUCE THE WIDTH OF A WALKWAY TO LESS THAN 3'-0".
4. COORDINATE EQUIPMENT LOAD WITH RAILING MANUFACTURER.
5. SUBMIT FINAL DESIGN AND CALCULATIONS FOR SUPPORT AND ANCHORAGE AS SPECIFIED.

DEVICE MOUNTING, RAILING MOUNTED EQUIPMENT SUPPORT

NTS

2605-007b



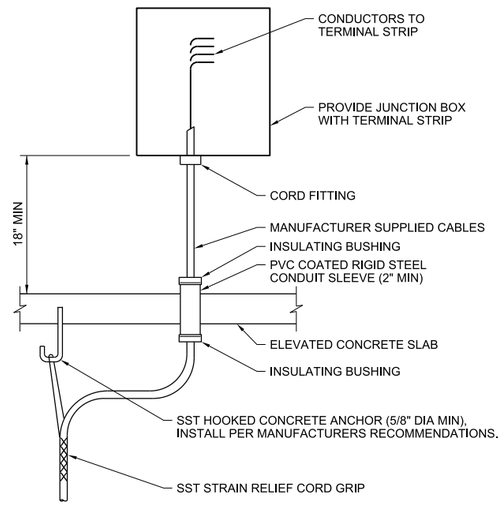
NOTES:

1. ALL SHIELDED INSTRUMENTATION CABLE SHALL BE TERMINATED IN ACCORDANCE WITH THIS DETAIL WHERE GROUNDING IS REQUIRED.

TERMINATION OF SHIELDED INSTRUMENTATION CABLE

NTS

2605-100b



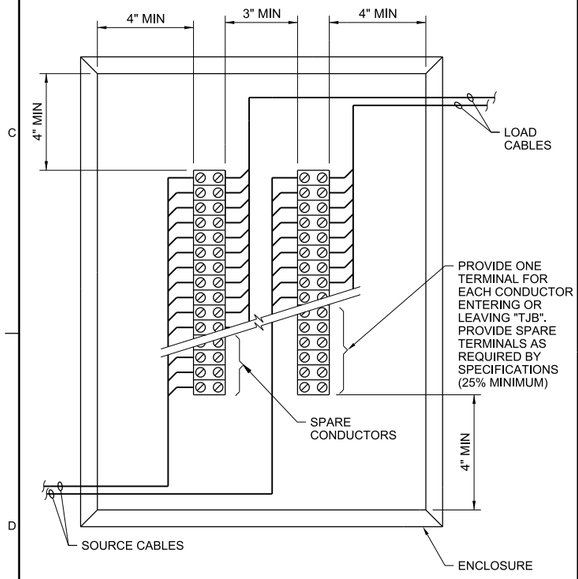
NOTES:

1. ALL HARDWARE SHALL BE STAINLESS STEEL.
2. THIS DETAIL SHALL BE USED FOR TERMINATION OF ALL MANUFACTURER SUPPLIED CABLES (MSC) EXITING A WET WELL IF NO OTHER DETAIL IS CALLED OUT ON THE DRAWINGS.
3. FILL CONDUIT SLEEVE WITH EXPANDABLE SEALING COMPOUND.

MSC CABLE TERMINATION

NTS

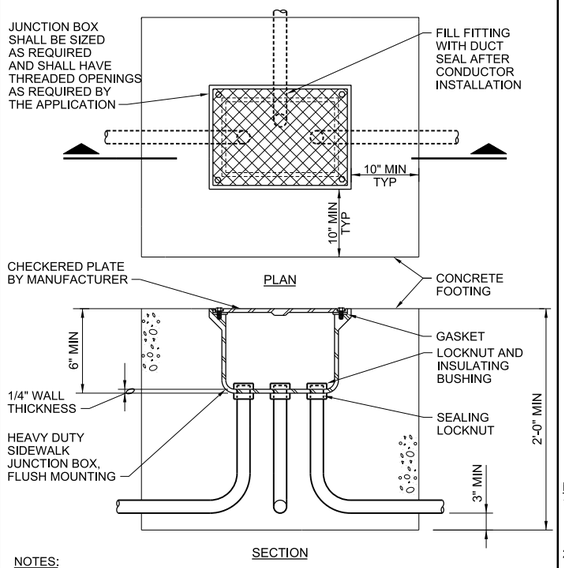
2605-101



TERMINAL JUNCTION BOX (TJB)

NTS

2605-102



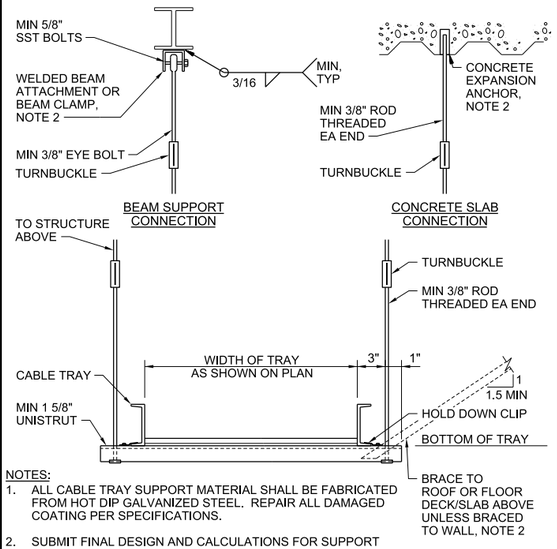
NOTES:

1. ALL JUNCTION BOXES IN CONCRETE SUPPORT FOOTINGS SHALL BE INSTALLED IN ACCORDANCE WITH THIS DETAIL.

DEVICE MOUNTING, FLUSH JUNCTION BOX IN CONCRETE SUPPORT FOOTING

NTS

2605-602



NOTES:

1. ALL CABLE TRAY SUPPORT MATERIAL SHALL BE FABRICATED FROM HOT DIP GALVANIZED STEEL. REPAIR ALL DAMAGED COATING PER SPECIFICATIONS.
2. SUBMIT FINAL DESIGN AND CALCULATIONS FOR SUPPORT AND ANCHORAGE AS SPECIFIED.
3. PROVIDE STAINLESS STEEL HARDWARE IN WET OR CORROSIVE AREAS.

CABLE TRAY SUPPORT

NTS

2605-700

NO.	DATE	DSGN	REVISION	CHK	DR
				APVD	BY
		TJ HOMAYOONI	G MESSER	KB HORTON	T HOMAYOONI

10 10TH STREET, SUITE 1400
ATLANTA, GA 30309
GA LIC # PEF000350 (EXP 6/30/2022)

S5036 -
FY21 MULTIPLE PUMP STATIONS PROJECTS
COBB COUNTY WATER SYSTEM
GEORGIA

Jacobs

GENERAL
ELECTRICAL STANDARD DETAILS

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

DATE	
PROJ	JJX13603
DWG	00-G-05
SHEET	of

BID DOCUMENTS

DESIGN CRITERIA

1. APPLICABLE CODE: 2018 INTERNATIONAL BUILDING CODE (IBC), AS AMENDED BY THE STATE OF GEORGIA IN 2020 AND APPLICABLE LOCAL AGENCIES.
2. REFER TO THE DRAWINGS FOR ADDITIONAL AND SPECIFIC STRUCTURE LOADINGS AND REQUIREMENTS.
3. ALL LOADS SHOWN ARE SERVICE LEVEL (UNFACTORED) UNLESS SPECIFICALLY NOTED OTHERWISE.
4. DEAD LOADS:
   SELF WEIGHT
5. ROOF LOADS:

SNOW EXPOSURE FACTOR, Ce	= 5 PSF
THERMAL FACTOR, Ct	= 0.9
SLOPE FACTOR, Cs	= 1.0
IMPORTANCE FACTOR, I	= 1.0
MINIMUM FLAT ROOF SNOW LOAD, Pf	= 1.10
	= 4 PSF
ROOF LIVE LOAD	= 20 PSF
MISCELLANEOUS MECHANICAL AND ELECTRICAL LOADS	= 10 PSF

   DEFLECTION CRITERIA FOR CONTRACTOR DESIGNED ROOF FRAMING MEMBERS:

TOTAL LOAD	L/240
LIVE LOAD	L/360
SNOW LOAD	L/360

6. WIND LOADS:

   BASIC WIND SPEED (3-SECOND GUST)

Vult	= 113 MPH
Vasd	= 88 MPH
EXPOSURE CATEGORY	C
RISK CATEGORY	= III
IMPORTANCE FACTOR, Iw	= 1.00

7. SEISMIC LOADS:

	ALLATOONA BEACH	WEST HAMPTON #2	PLANT ATKINSON	WOOD VALLEY	WEST HAMPTON #1	BUSHY MOUNTAIN	MARINA TRACE
MAPPED SPECTRAL RESPONSE ACCELERATIONS							
S_S	0.251g	0.224g	0.194g	0.250g	0.224g	0.223g	0.246g
S_1	0.092g	0.090g	0.087g	0.092g	0.090g	0.090g	0.092g
DESIGN SPECTRAL RESPONSE ACCELERATIONS							
S_{DS}	0.268g	0.238g	0.207g	0.266g	0.239g	0.238g	0.262g
S_{D1}	0.148g	0.144g	0.139g	0.148g	0.144g	0.144g	0.148g

   SITE CLASS = D

   SEISMIC DESIGN CATEGORY = C
   IMPORTANCE FACTOR, Ie = 1.25

9. FROST DEPTH: = 12 IN

GENERAL INFORMATION

1. FOR ABBREVIATIONS NOT LISTED, SEE ASME Y14.38 "ABBREVIATIONS AND ACRONYMS: PUBLICATION AS DISTRIBUTED BY THE AMERICAN SOCIETY OF MECHANICAL ENGINEERS (ASME).
2. DESIGN DETAILS ARE INTENDED TO BE TYPICAL AND SHALL APPLY TO SIMILAR SITUATIONS OCCURRING THROUGHOUT THE PROJECT, WHETHER OR NOT THEY ARE INDIVIDUALLY CALLED OUT.
3. VERIFY FINAL OPENING DIMENSIONS IN SLAB WITH OTHER DISCIPLINE DRAWINGS PRIOR TO CONSTRUCTION OF THESE ELEMENTS.
4. FOR NUMBER, TYPE, SIZE, ARRANGEMENT, AND/OR LOCATION OF EQUIPMENT PADS, SEE OTHER DISCIPLINE DRAWINGS. COORDINATE WITH EQUIPMENT SUPPLIER PRIOR TO PLACING SLABS, WALLS AND FOUNDATIONS. COORDINATE OPENINGS WITH OTHER DISCIPLINE DRAWINGS.
5. DO NOT CUT OR MODIFY STRUCTURAL MEMBERS FOR PIPES, DUCTS, ETC, UNLESS SPECIFICALLY DETAILED OR APPROVED IN WRITING BY THE ENGINEER.
6. VISITS TO THE JOB SITE BY THE ENGINEER TO OBSERVE THE CONSTRUCTION DO NOT IN ANY WAY MEAN THAT ENGINEER IS GUARANTOR OF CONSTRUCTOR'S WORK, NOR RESPONSIBLE FOR THE COMPREHENSIVE OR SPECIAL INSPECTIONS, COORDINATION, SUPERVISION, OR SAFETY AT THE JOB SITE.
7. INFORMATION (DETAILING, DIMENSIONS, CONFIGURATIONS, AND ELEVATIONS, ETC.) OF EXISTING CONSTRUCTION SHOWN REFLECTS AVAILABLE EXISTING DESIGN DOCUMENTS, AND DOES NOT NECESSARILY REPRESENT THE AS-CONSTRUCTED CONDITIONS. THE CONTRACTOR SHALL FIELD VERIFY DIMENSIONS, ELEVATIONS AND DETAILING OF THE EXISTING STRUCTURES PRIOR TO UNDERTAKING ANY WORK THAT IS AFFECTED BY THE EXISTING STRUCTURE. NOTIFY ENGINEER IF CONDITIONS VARY FROM THAT SHOWN PRIOR TO STARTING WORK

INSPECTION AND TESTING

1. SPECIAL INSPECTION DOES NOT INCLUDE OR WAIVE THE RESPONSIBILITY FOR INSPECTIONS REQUIRED BY THE BUILDING OFFICIAL. THE CONTRACTOR SHALL SCHEDULE BOTH INSPECTIONS.
2. SPECIFIED CONCRETE AND OTHER MATERIAL TESTING RELATED TO SPECIAL INSPECTION DURING CONSTRUCTION WILL BE OWNER FURNISHED.
3. SPECIFIED LABORATORY TEST MIXES AND SIMILAR TEST RESULTS TO VERIFY MATERIAL QUALITY AND CONFORMANCE TO SPECIFICATIONS, AND SUBMITTED FOR REVIEW PRIOR TO ACCEPTANCE FOR USE ON THE PROJECT, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
4. SPECIAL INSPECTION, TESTING AND OBSERVATION (OWNER FURNISHED) IS REQUIRED IN ACCORDANCE WITH IBC SECTIONS 110, 1704, AND 1705 AS INDICATED IN THE STATEMENT OF SPECIAL INSPECTIONS. REFER TO 014533 SPECIAL INSPECITON OBSERVATIONS AND TESTING.

FORMWORK, SHORING, AND BRACING

1. STRUCTURES SHOWN ON THE DRAWINGS HAVE BEEN DESIGNED FOR STABILITY UNDER FINAL CONDITIONS ONLY. DESIGN SHOWN DOES NOT INCLUDE NECESSARY COMPONENTS OR EQUIPMENT FOR STABILITY OF THE STRUCTURES DURING CONSTRUCTION. CONTRACTOR IS RESPONSIBLE FOR WORK RELATING TO CONSTRUCTION ERECTION METHODS, BRACING, SHORING, RIGGING, GUYS, SCAFFOLDING, FORMWORK, AND OTHER WORK AIDS REQUIRED TO SAFELY PERFORM THE WORK SHOWN.
2. TEMPORARY SHORING SHALL REMAIN IN PLACE UNTIL ELEVATED CONCRETE FLOOR OR SLABS HAVE REACHED 80 PERCENT OF THE 28 DAY COMPRESSIVE STRENGTH AS DETERMINED BY FIELD CYLINDER BREAKS.

CONCRETE REINFORCING

1. REINFORCING STEEL:
   TYPICAL: ASTM A615, GRADE 60
2. FABRICATION AND PLACEMENT OF REINFORCING STEEL SHALL BE IN ACCORDANCE WITH CRSI MSP-1 "MANUAL OF STANDARD PRACTICE"AND ACI 301 "SPECIFICATIONS FOR STRUCTURAL CONCRETE".
3. MINIMUM REINFORCING FOR CONCRETE WALLS AND SLABS SHALL BE AS FOLLOWS:

THICKNESS	REINF EACH WAY	LOCATION
6"	#4@12"	CENTERED
8"	#5@12"	CENTERED
10"	#4@12"	EACH FACE
12"	#5@12"	EACH FACE

   PROVIDE LARGER SIZES AND MORE REINFORCING IN SECTIONS OF CONCRETE WHERE REQUIRED BY THE DETAILS ON THE DRAWINGS OR BY THE SPECIFICATIONS.
4. CONCRETE COVER FOR REINFORCING, UNLESS SHOWN OTHERWISE, SHALL BE:
   WHEN CAST AGAINST EARTH: 3"
   TYPICAL: 2"
5. REINFORCEMENT BENDS AND LAPS, UNLESS OTHERWISE NOTED, SHALL SATISFY THE FOLLOWING MINIMUM REQUIREMENTS:

CONCRETE DESIGN STRENGTH = 4,000 PSI MIN AT 28 DAYS[3]		GRADE 60 REINFORCING STEEL								
BAR SIZE		#3	#4	#5	#6	#7	#8	#9	#10	#11
LAP SPLICE LENGTH										
SPACING = 3"	TOP BAR [2]	1'-4"	1'-8"	2'-1"	3'-0"	5'-2"	6'-8"	8'-6"	10'-10"	13'-4"
	OTHER BAR	1'-4"	1'-4"	1'-8"	2'-4"	4'-0"	5'-2"	6'-7"	8'-4"	10'-3"
SPACING = 4"	TOP BAR [2]	1'-4"	1'-8"	2'-0"	2'-5"	3'-10"	5'-0"	6'-5"	8'-1"	10'-0"
	OTHER BAR	1'-4"	1'-4"	1'-7"	1'-10"	3'-0"	3'-11"	4'-11"	6'-3"	7'-8"
SPACING ≥ 6"	TOP BAR [2]	1'-4"	1'-8"	2'-0"	2'-5"	3'-6"	4'-0"	5'-0"	6'-2"	7'-5"
	OTHER BAR	1'-4"	1'-4"	1'-7"	1'-10"	2'-9"	3'-1"	3'-10"	4'-9"	5'-8"
EMBEDMENT LENGTH										
SPACING = 3"	TOP BAR [2]	1'-0"	1'-3"	1'-8"	2'-4"	4'-0"	5'-2"	6'-7"	8'-4"	10'-3"
	OTHER BAR	1'-0"	1'-0"	1'-3"	1'-10"	3'-1"	4'-0"	5'-1"	6'-5"	7'-11"
SPACING = 4"	TOP BAR [2]	1'-0"	1'-3"	1'-7"	1'-10"	3'-0"	3'-11"	4'-11"	6'-3"	7'-8"
	OTHER BAR	1'-0"	1'-0"	1'-3"	1'-5"	2'-4"	3'-0"	3'-10"	4'-10"	5'-11"
SPACING ≥ 6"	TOP BAR [2]	1'-0"	1'-3"	1'-7"	1'-10"	2'-9"	3'-1"	3'-10"	4'-9"	5'-8"
	OTHER BAR	1'-0"	1'-0"	1'-3"	1'-5"	2'-1"	2'-5"	3'-0"	3'-8"	4'-5"

1. LAP LENGTHS ARE BASED ON MINIMUM CONCRETE COVER OF 2". LONGER LENGTHS ARE REQUIRED FOR CONCRETE COVER LESS THAN 2".
2. TOP BARS SHALL BE DEFINED AS ANY HORIZONTAL BARS PLACED SUCH THAT MORE THAN 12 INCHES OF CONCRETE IS CAST IN THE MEMBER BELOW THE BAR IN ANY SINGLE POUR. HORIZONTAL WALL BARS ARE CONSIDERED TOP BARS.
3. WHERE 3000 PSI CONCRETE IS USED, INCREASE ABOVE LENGTHS BY 16 PERCENT. WHERE 3500 PSI CONCRETE IS USED, INCREASE ABOVE LENGTHS BY 7 PERCENT.

CAST IN PLACE CONCRETE

1. 28-DAY COMPRESSIVE STRENGTHS (TO MEET STRUCTURAL STRENGTH REQUIREMENTS): 4000 PSI
2. DESIGN STRENGTHS ARE SAME AS 28-DAY COMPRESSIVE STRENGTHS.
3. CONSTRUCTION JOINTS INDICATED ARE SUGGESTED LOCATIONS. CONTRACTOR MAY REVISE LOCATION OF JOINTS, SUBJECT TO SPECIFIED REQUIREMENTS. LAYOUT SHOWING ALL CONSTRUCTION JOINT LOCATIONS SHALL BE SUBMITTED FOR REVIEW BY ENGINEER.
4. ROUGHEN AND CLEAN CONSTRUCTION JOINTS IN WALLS AND SLABS AS SPECIFIED PRIOR TO PLACING ADJACENT CONCRETE.
5. COORDINATE PLACEMENT OF OPENINGS, PIPE PENETRATIONS, CURBS, DOWELS, SLEEVES, CONDUITS, BOLTS AND INSERTS PRIOR TO PLACEMENT OF CONCRETE.
6. NO ALUMINUM CONDUIT OR PRODUCTS CONTAINING ALUMINUM OR ANY OTHER MATERIAL INJURIOUS TO THE CONCRETE SHALL BE EMBEDDED IN THE CONCRETE.
7. PATCH FORM TIE HOLES WITH POLYMER MODIFIED CONCRETE REPAIR MORTAR.

WELDING

1. WELDS SHALL CONFORM TO AMERICAN WELDING SOCIETY (AWSD1.1, STRUCTURAL WELDING CODE STEEL D1.2, STRUCTURAL WELDING CODE ALUMINUM D1.6, STRUCTURAL WELDING CODE STAINLESS STEEL
2. REPAIR WELDS FOUND DEFECTIVE IN ACCORDANCE WITH AWS D1.1 SECTION 5.26.
3. USE INTERMITTENT WELDS AT FIELD WELDS OF EMBED PLATES AND ANGLES TO AVOID SPALLING OR CRACKING OF THE EXISTING CONCRETE.

DEFERRED SUBMITTALS

1. DEFERRED SUBMITTALS ARE THOSE PORTIONS OF THE DESIGN WHICH ARE NOT SUBMITTED AT THE TIME OF PERMIT APPLICATION AND WHICH ARE TO BE SUBMITTED TO THE PERMITTING AGENCY FOR ACCEPTANCE PRIOR TO INSTALLATION OF THAT PORTION OF THE WORK OR ARE REQUIRED TO BE SUBMITTED FOR REVIEW ONLY BY THE ENGINEER.
2. WHERE DEFERRED SUBMITTALS INCLUDE ADDITIONAL MATERIALS, INSTALLATION, ANCHORAGE, OR CERTIFICATION OF COMPONENTS THAT REQUIRE SPECIAL INSPECTION AND/OR STRUCTURAL OBSERVATION TO MEET CODE REQUIREMENTS, THE DEFERRED SUBMITTAL SHALL INCLUDE SPECIFIC LINE ITEMS TO BE ADDED TO THE APPROPRIATE TABLES IN THE PROJECT'S STATEMENT OF SPECIAL INSPECTIONS PLAN IF THEY ARE NOT ALREADY IDENTIFIED.
3. THE FOLLOWING IS A LIST OF DEFERRED SUBMITTALS PER IBC SECTION 107.3.4.1 OF IBC THAT ARE EXPECTED TO CONTAIN STRUCTURAL CALCULATIONS OR SAFETY RELATED SYSTEM INFORMATION FOR REVIEW TO MEET BUILDING PERMITTING REQUIREMENTS FOR DESIGNED SYSTEMS. PRIOR TO INSTALLATION OF THE INDICATED STRUCTURAL ELEMENT, EQUIPMENT, DISTRIBUTION SYSTEM, OR COMPONENT OR ITS ANCHORAGE, THE CONTRACTOR SHALL SUBMIT THE REQUIRED CALCULATIONS AND SUPPORTING DATA AND DRAWINGS FOR REVIEW AND ACCEPTANCE BY THE ENGINEER. ADDITIONALLY, ACCEPTANCE INDICATED ON THE ENGINEER'S COMMENT FORM, ALONG WITH THE COMPLETED, FINAL SUBMITTAL SHALL THEN BE SUBMITTED BY THE CONTRACTOR TO THE PERMITTING AGENCY AND APPROVED PRIOR TO INSTALLATION OF THESE ITEMS.

SPECIFICATION SECTION	CODE REQUIRED DEFERRED SUBMITTALS FOR REVIEW BY PERMITTING AGENCY
18815	ANCHORAGE AND BRACING
13121	FABRICATED STRUCTURES
OTHER	ANY EQUIPMENT OR COMPONENT IN WHICH A TECHNICAL SPECIFICATION REQUIRES SUBMITTAL OF EQUIPMENT OR ANCHORAGE SYSTEM CALCULATIONS

NO.	DATE	REVISION	DR	CHK	APVD	BY	APVD
DSGN	R KOEKEMOER		E GRIGGS	L LILLEY		R KOEKEMOER	

10 10TH STREET, SUITE 1400
ATLANTA, GA 30309
GA LIC # PEF000360 (EXP 6/30/2022)

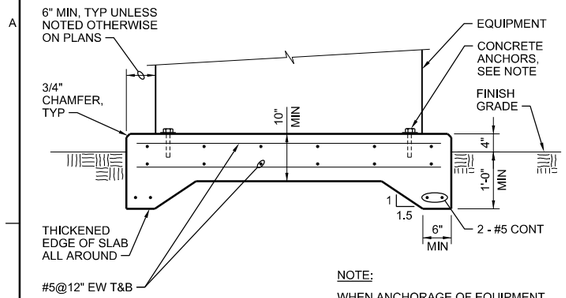
S5036 -
FY21 MULTIPLE PUMP STATIONS PROJECTS
COBB COUNTY WATER SYSTEM
GEORGIA

GENERAL
STRUCTURAL NOTES

NTS
VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"

DATE	
PROJ	JJX13603
DWG	00-G-06
SHEET	of

BID DOCUMENTS



NOTE:

WHEN ANCHORAGE OF EQUIPMENT TO PAD IS REQUIRED, USE CONCRETE ANCHORS SPECIFIED.

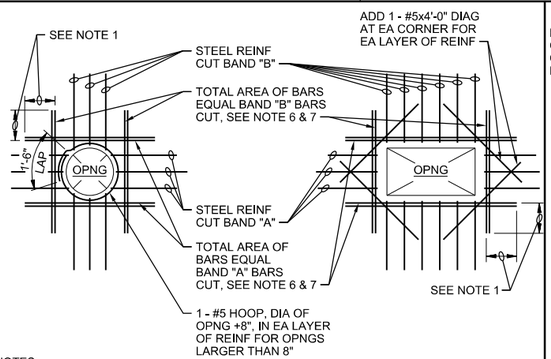
TYPE H

1. PAD SIZE SHALL BE MINIMUM INDICATED OR AS SHOWN ON THE PLANS OR AS INDICATED BY THE MANUFACTURER AND APPROVED BY THE ENGINEER.
2. THE SIZE, NUMBER, TYPE, LOCATION, AND THREAD PROJECTION OF THE ANCHOR BOLTS SHALL BE DETERMINED BY THE EQUIPMENT MANUFACTURER AND AS APPROVED BY THE ENGINEER. ANCHOR BOLTS SHALL BE HELD IN POSITION WITH A TEMPLATE OR OTHER ACCEPTABLE MEANS, MATCHING THE BASE PLATE, WHILE PAD IS BEING PLACED.
3. ANCHOR BOLT SLEEVES SHALL BE USED TO PROVIDE MINIMUM ANCHOR BOLT MOVEMENT OF 1/2" IN ALL HORIZONTAL DIRECTIONS. THE MINIMUM SLEEVE LENGTH SHALL BE 8 TIMES THE BOLT DIAMETER.
4. ANCHOR BOLT SLEEVES SHALL HAVE A MINIMUM INTERNAL DIAMETER 1" GREATER THAN BOLT DIAMETER AND A MAXIMUM INTERNAL DIAMETER 3" GREATER THAN ANCHOR BOLT DIAMETER. SLEEVES SHALL BE FILLED WITH NON-SHRINK GROUT AFTER BOLTS ARE ALIGNED. SEE (0330-057).
5. EQUIPMENT BASES SHALL BE INSTALLED LEVEL UNLESS INDICATED OTHERWISE.
6. WEDGES, SHIMS, OR LEVELING NUTS SHALL BE USED TO SUPPORT THE BASE WHILE THE GROUT IS PLACED. WEDGES OR SHIMS SHALL BE REMOVED AFTER GROUT IS SET AND PACK VOID WITH GROUT.
7. HEIGHT OF PADS SHALL BE MINIMUM REQUIRED FOR ANCHOR BOLT CLEARANCE TO KEEP ANCHOR BOLT ABOVE SUPPORTING SLAB (SEE TABLE BELOW). WHERE EQUIPMENT OR PIPING ELEVATION REQUIRE A PAD HEIGHT LESS THAN THE MINIMUM SHOWN, USE POST-INSTALLED CONCRETE ANCHORS AND EXTEND ANCHOR INTO SUPPORTING SLAB.
8. AT CONTRACTOR'S OPTION, POST-INSTALLED CONCRETE ANCHORS MAY BE USED IN LIEU OF CAST-IN-PLACE ANCHOR BOLTS WHEN APPROVED BY THE EQUIPMENT MANUFACTURER AND APPROVED BY THE ENGINEER. ANCHORS SHALL BE INSTALLED WITH 4" MINIMUM EDGE DISTANCE IN EACH DIRECTION.

AB DIA (IN.)	1/2	5/8	3/4	7/8	1	1 1/4	1 3/8	1 1/2	1 3/4	2
MIN PAD HT (IN.)	7	8 1/2	10	11	12 1/2	15	16 1/2	18	21	24

CONCRETE EQUIPMENT PAD - TYPE 'H'

(0330-056H)



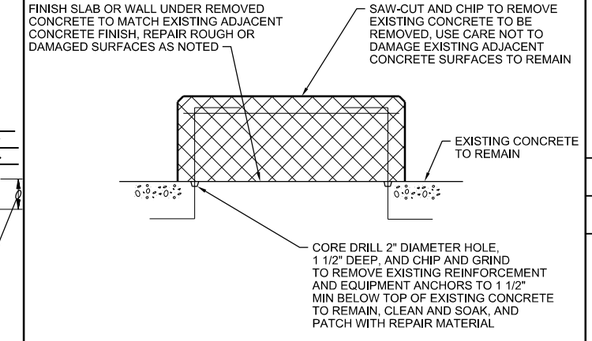
NOTES:

1. PROVIDE MINIMUM LAP, SEE GENERAL STRUCTURAL NOTES.
2. TYPICAL FOR ALL OPENINGS IN CONCRETE WALLS OF BELOW GRADE AND HYDRAULIC STRUCTURES AND ALL STRUCTURAL CONCRETE SLABS UNLESS INDICATED OTHERWISE ON PLANS.
3. DO NOT WELD REINFORCEMENT TO PIPE SLEEVES AND INSERTS.
4. PROVIDE A MINIMUM OF 2 "A" BARS AND 2 "B" BARS EACH SIDE OF OPENING (1 EACH FACE), INCLUDING DOWELS AND CORNER BARS, TYPICAL.
5. FOR OPENINGS LARGER THAN 8'-0", REINFORCE SAME AS FOR 8'-0" OPENINGS.
6. SPACE AT 3 BAR DIAMETERS (OR 3" MINIMUM) ON CENTER. LOCATE HALF OF TOTAL AREA ON EACH SIDE OF OPENING.
7. AT OPENINGS WITHIN 12" OF AN INTERSECTING WALL OR SLAB, PROVIDE ONLY THE EXTRA REINFORCEMENT WHICH WILL FIT, AT THE BAR SPACING IN NOTE 6.

CONCRETE OPENING

NTS

(0330-001)



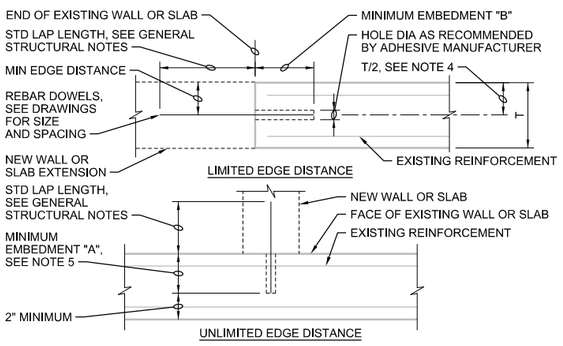
NOTES:

1. REMOVE CONCRETE OUT TO SOUND CONCRETE.
2. IF CHIPPING INTO THE SURFACE OF THE EXISTING SLAB OR WALL TO REMAIN IS REQUIRED, MAKE EDGES PERPENDICULAR TO THE SURFACE. DO NOT FEATHER EDGES.
3. FILL DEFECTIVE AREA WITH AN APPROVED PREPACKAGED REPAIR MATERIAL TO MATCH APPEARANCE OF ADJACENT CONCRETE SURFACES.
4. USE APPROVED BONDING AGENT ON SURFACES TO BE PATCHED PRIOR TO PLACING REPAIR MATERIAL.
5. DEMONSTRATE METHODS FOR REPAIR USING ACTUAL MATERIALS, METHODS, AND CURING PROCEDURES REQUIRED BY MATERIAL MANUFACTURERS. CONSULT WITH BONDING AGENT MANUFACTURER AND REPAIR MATERIAL MANUFACTURER ON TECHNIQUES.

CONCRETE DEMOLITION

NTS

(0330-143)



DOWEL SIZE	MINIMUM EDGE DISTANCE	MINIMUM EMBEDMENT "A"	MINIMUM EMBEDMENT "B"
#3	2 1/2"	5"	8"
#4	3 1/2"	7"	11"
#5	4"	8"	13"
#6	5"	10 1/2"	16"
#7	6"	12 1/2"	20"
#8	7"	14"	22"
#9	7 1/2"	15"	24"

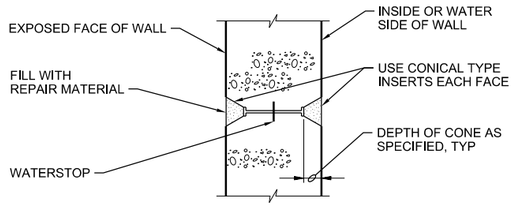
NOTES:

1. CONFORM TO REQUIREMENTS OF SPECIFICATION SECTION 03 63 00, CONCRETE DOWELING.
2. FOLLOW ADHESIVE MANUFACTURER'S INSTRUCTIONS FOR INSTALLATION.
3. USE MINIMUM EMBEDMENTS SHOWN, EXCEPT USE MANUFACTURER'S MINIMUM RECOMMENDED EMBEDMENT IF GREATER.
4. LOCATE DOWELS CENTERED IN WALL OR SLAB UNLESS OTHERWISE NOTED ON DRAWINGS. WHERE 2 ROWS OF DOWELS INDICATED, STAGGER SPACING & LOCATE ALTERNATING DOWELS AT MINIMUM EDGE DISTANCE FROM OPPOSITE FACES.
5. PROVIDE MINIMUM EMBEDMENT "A" SHOWN IN TABLE UNLESS SHORTER EMBEDMENT DEPTH IS CALLED OUT ON DRAWINGS.

ADHESIVE DOWEL

NTS

(0330-105)



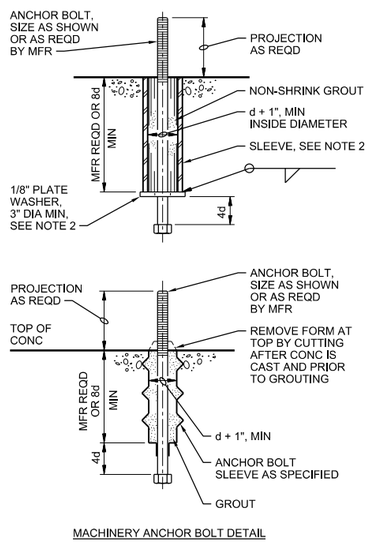
NOTE:

THE SPACING OF FORM TIES ON EXPOSED PORTIONS OF WALLS SHALL BE APPROXIMATELY EQUAL HORIZONTALLY AND VERTICALLY AND SHALL BE UNIFORM IN EACH DIRECTION.

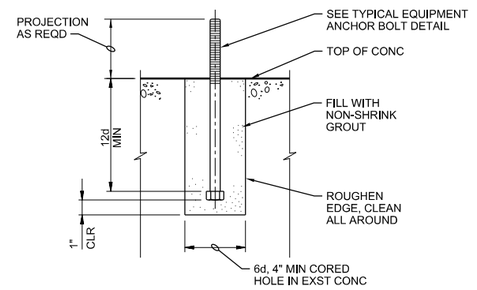
FORM SNAP-TIE HOLE

NTS

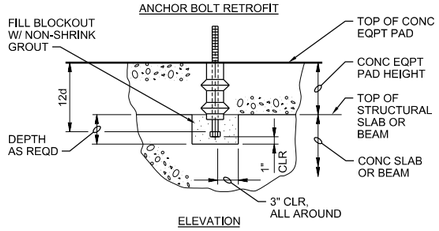
(0310-051)



MACHINERY ANCHOR BOLT DETAIL



ANCHOR BOLT RETROFIT



ELEVATION

ANCHOR BOLT BLOCKOUT

NOTES:

1. FOR CONCRETE EQUIPMENT PAD DETAILS AND NOTES NOT SHOWN SEE (0330-056)
2. MATERIAL TO MATCH BOLT.

ANCHOR BOLT DETAILS

NTS

(0330-057)

NO.	DATE	REVISION	DR	CHK	APVD	BY	APVD
DSGN	R KOEKEMOER		E GRIGGS	I LILLEY		R KOEKEMOER	

Jacobs
10 10TH STREET, SUITE 1400
ATLANTA, GA 30309
GA LIC # PEF000350 (EXP 6/30/2022)

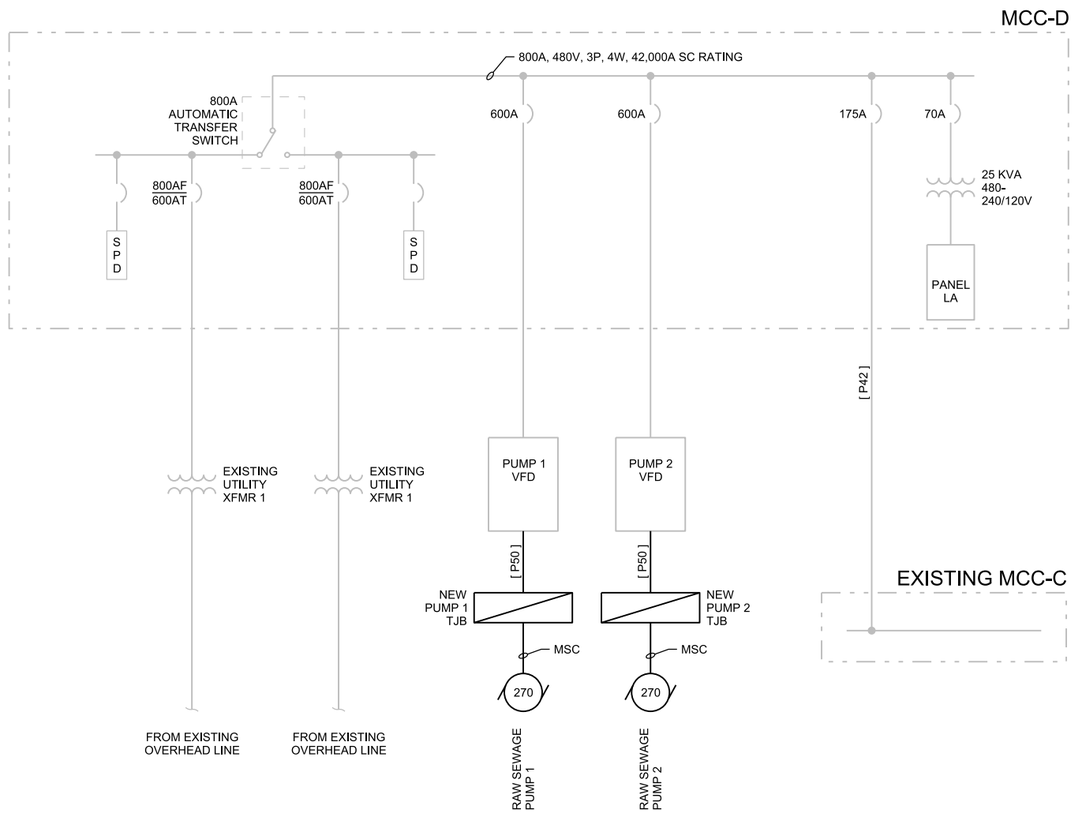
S5036 -
FY21 MULTIPLE PUMP STATIONS PROJECTS
COBB COUNTY WATER SYSTEM
GEORGIA

STRUCTURAL
STRUCTURAL STANDARD DETAILS

BID DOCUMENTS

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

DATE	
PROJ	JJX13603
DWG	00-G-07
SHEET	of



ONE LINE DIAGRAM

PANEL: LA			LOCATION: INSIDE MCC-D					
SERVICE VOLTAGE: 240/120V			PHASE: 1			WIRE: 3		
TOTAL LOAD KVA:	*		BUS SIZE: 125A			MAIN SIZE: 125A	TYPE: BKR	
REMARKS:			NEUTRAL: FULL			MOUNTING: INSIDE MCC-D		

LOAD IN VA			BKR	CKT	CKT	BKR		LOAD IN VA	
A	B	CIRCUIT DESCRIPTION	A/P	NO.	NO.	A/P	CIRCUIT DESCRIPTION	A	B
*		EXST LOAD	20/1	1	2	20/1	EXST LOAD	*	
	*	EXST LOAD	20/1	3	4	20/1	EXST LOAD		*
*		EXST LOAD	20/1	5	6	20/1	EXST LOAD	*	
	*	EXST LOAD	20/1	7	8	20/1	EXST LOAD		*
*		EXST LOAD	20/1	9	10	20/1	EXST LOAD	*	
	*	EXST LOAD	60/2	11	12	30/2	EXST LOAD		*
*		EXST LOAD		13	14			*	
	1.0	**NEW PUMP MAS 801 PANEL**	20/1	15	16	20/1	SPARE		0.0
0.0		SPARE	20/2	17	18	20/2	SPARE	0.0	
	0.0			19	20				0.0
*	*	TOTAL						*	*

* = EXISTING LOAD

NO.	DATE	DR	REVISION	CHK	APVD	BY	APVD
DSGN	T HOMAYOONI		G MESSER	KB HORTON		T HOMAYOONI	

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ATLANTA, GA 30309
GA LIC # PEF000350 (EXP 6/30/2022)

S5036 -
FY21 MULTIPLE PUMP STATIONS PROJECTS
COBB COUNTY WATER SYSTEM
GEORGIA

Jacobs

ELECTRICAL

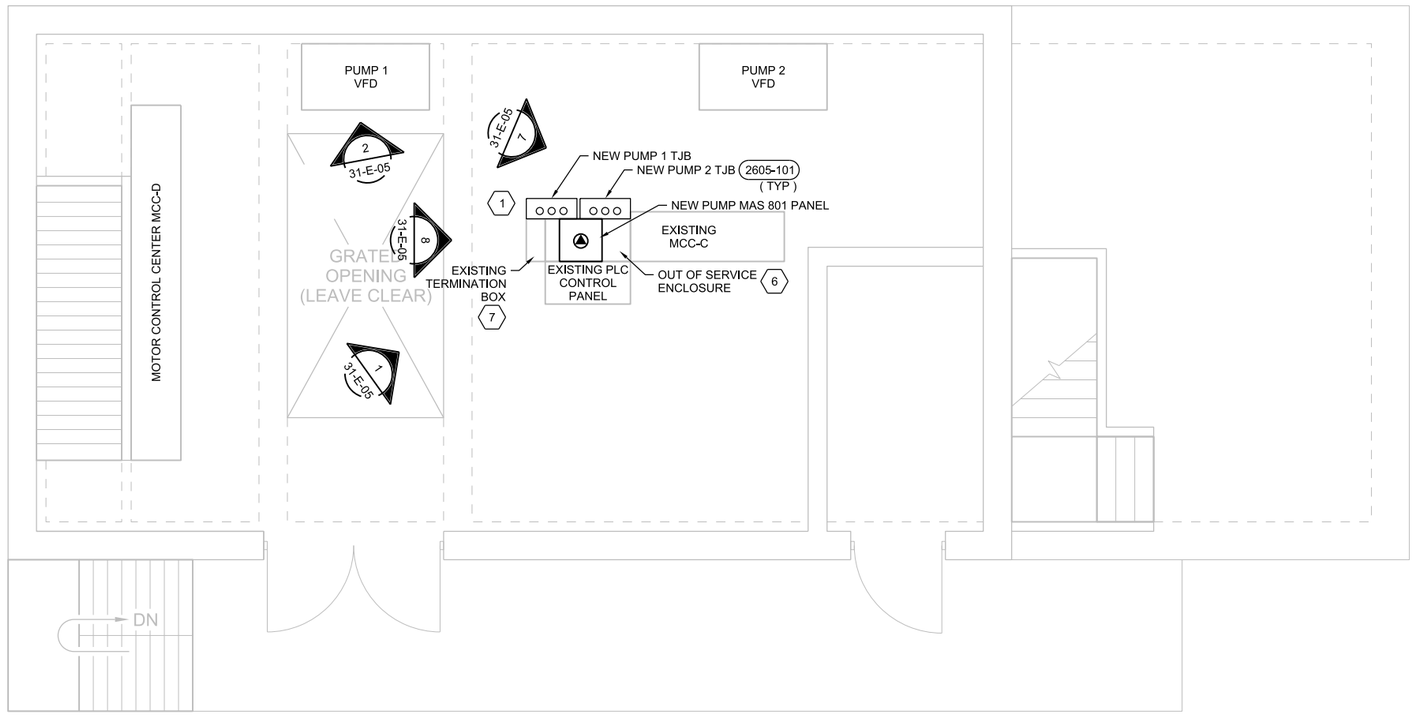
SIX FLAGS PUMP STATION ONE LINE DIAGRAM AND PANEL SCHEDULE

VERIFY SCALE

BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

DATE	
PROJ	JJX13603
DWG	31-E-01
SHEET	of

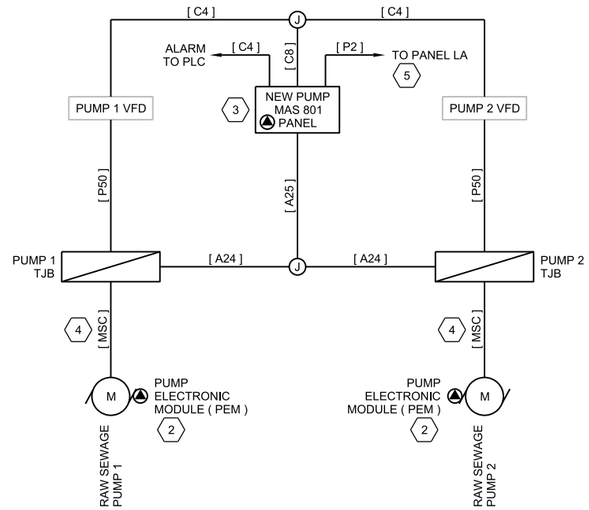
BID DOCUMENTS



N

UPPER LEVEL PLAN

3/8"=1'-0"



WIRING DIAGRAM

SHEET KEYNOTES

1. NEW PUMP TJBS TO BE INSTALLED BELOW THE NEW PUMP MAS 801 PANEL. CONTRACTOR REQUIRED TO DESIGN, PROVIDE, AND INSTALL SUPPORTS AS REQUIRED FOR NEW PUMP TJBS AND NEW PUMP MAS 801 PANEL.
2. PUMP ELECTRONIC MODULE (PEM) IS INTEGRATED IN PUMP WHICH MONITOR TEMPERATURE AND LEAKAGE.
3. PUMP MAS 801 PANEL TO BE FURNISHED BY PUMP MANUFACTURER CONTAINS THE DISPLAY UNIT, BASE UNIT (BU) FOR EACH PUMP AND CENTRAL UNIT (CU) WHICH CONTROLS BOTH PUMP BASE UNIT MODULES. REFER TO MAS 801 SYSTEM USER MANUAL FOR ADDITIONAL INFORMATION.
4. MANUFACTURER SUPPLIED CABLE (MSC) CONTAINS BOTH POWER AND COMMUNICATION CABLES (SUBCAB CABLE). TERMINATE THE CABLE IN TERMINAL JUNCTION BOX (TJB) AND SPLIT THE POWER AND COMMUNICATION CABLES. SEPARATE THE COMMUNICATION CABLE FROM POWER CABLE WITH >30 CM (0.984 FT). EACH PUMP WILL BE SUPPLIED WITH TWO PARALLEL CABLES.
5. PROVIDE 120V FOR NEW PUMP MAS 801 PANEL FROM EXISTING LIGHTING PANEL LA.
6. DEMOLISH THE OUT OF SERVICE ENCLOSURE. CONTRACTOR TO FIELD VERIFY AND RECORD ALL WIRING GOING THROUGH THIS ENCLOSURE TO EXISTING PLC AND RECONNECT.
7. EXISTING TERMINATION BOX TO REMAIN. PROVIDE SUPPORT. CONTRACTOR REQUIRED TO DESIGN, PROVIDE, AND INSTALL SUPPORTS AS REQUIRED FOR THE EXISTING TERMINATION BOX.
8. CONNECT THE AVAILABLE ALARM CONTACTS FROM NEW PUMP MAS 801 PANEL TO THE EXISTING PLC. REFER TO MAS 801 USER MANUAL FOR ADDITIONAL INFORMATION

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DSGN	T HOMAYOONI		G MESSER	KB HORTON		T HOMAYOONI	

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FY21 MULTIPLE PUMP STATIONS PROJECTS
COBB COUNTY WATER SYSTEM
GEORGIA

Jacobs

ELECTRICAL

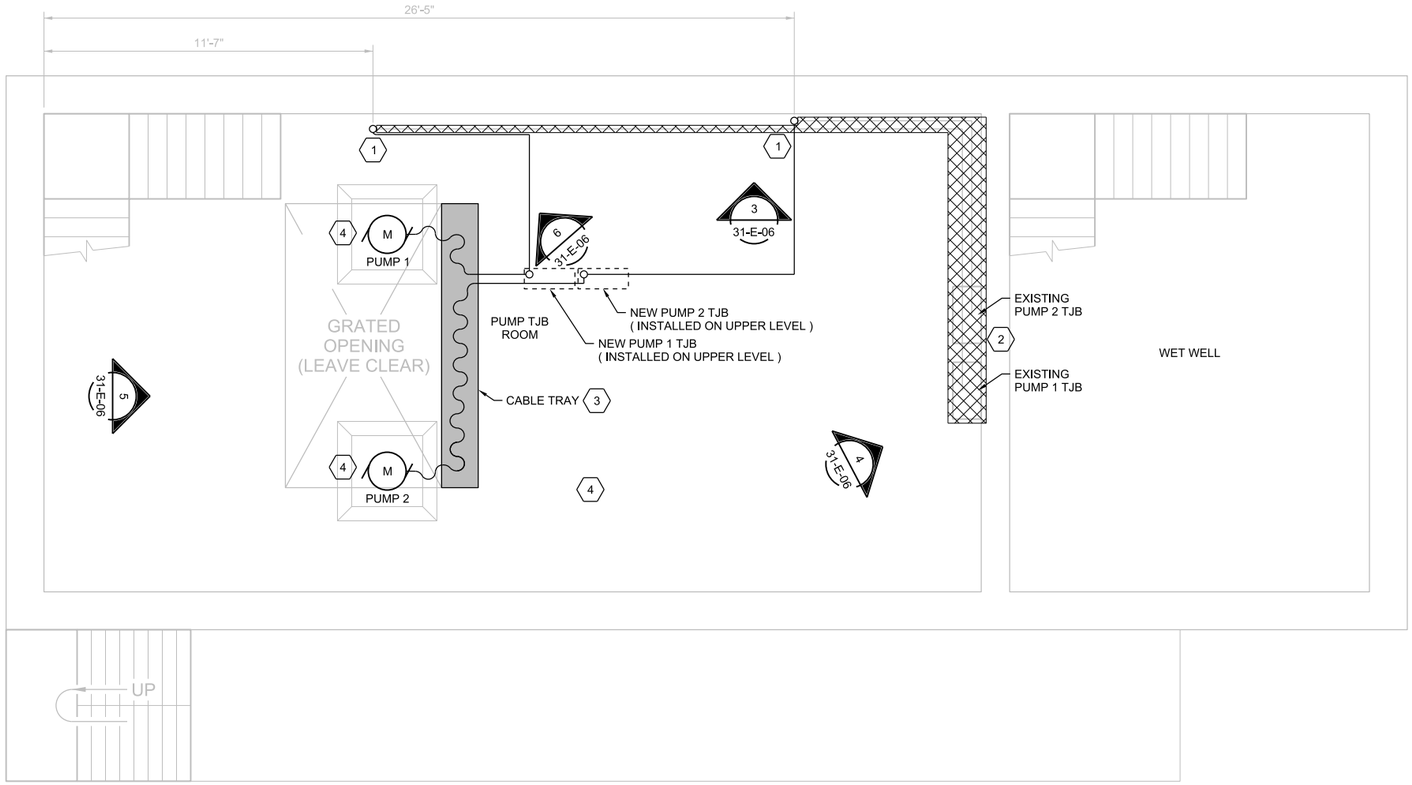
SIX FLAGS PUMP STATION
UPPER LEVEL POWER PLAN

VERIFY SCALE

BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

DATE	
PROJ	JJX13603
DWG	31-E-02
SHEET	of

BID DOCUMENTS



N

LOWER LEVEL PLAN

3/8"=1'-0"

SHEET KEYNOTES

1. CONNECT NEW CONDUITS FROM NEW TJB'S ON UPPER LEVEL TO VFD'S BY INTERCEPTING THE EXISTING CONDUITS GOING TO VFD'S VIA EXISTING PENETRATIONS. INSTALL NEW CONDUCTORS FROM NEW TJB'S TO VFD'S. REFER TO WIRING DIAGRAM ON 31-E-02.
2. REMOVE EXISTING TJB'S, MANUFACTURER SUPPLIED CABLES FROM PUMP ROOM TO EXISTING TJB'S, AND CONDUITS / CONDUCTORS FROM TJB'S TO VFD'S.
3. ROUTE THE MANUFACTURER SUPPLIED CABLES VIA A NEW CABLE TRAY. 18"x6" CABLE TRAY SUSPENDED BY S.S. RODS. SECURE CABLES WITH TYWRAPS TO CABLE TRAY, LEAVING SUFFICIENT SLACK TO PREVENT STRECHING CABLES AT PUMPS. TYPICAL TWO CABLES FOR EACH PUMP. SEE DRAWING 31-PR-01 FOR MORE DETAILS.
4. PROVIDE CABLE SUPPORT TO MOTOR POWER CABLE AT MOTOR. PROVIDE ADEQUATE SUPPORT SO THAT CABLE IS NOT RESTING ON MOTOR FRAME.

NO.	DATE	REVISION	BY	APVD
DSGN	T HOMAYOONI	DR G MESSER	CHK KB HORTON	APVD T HOMAYOONI

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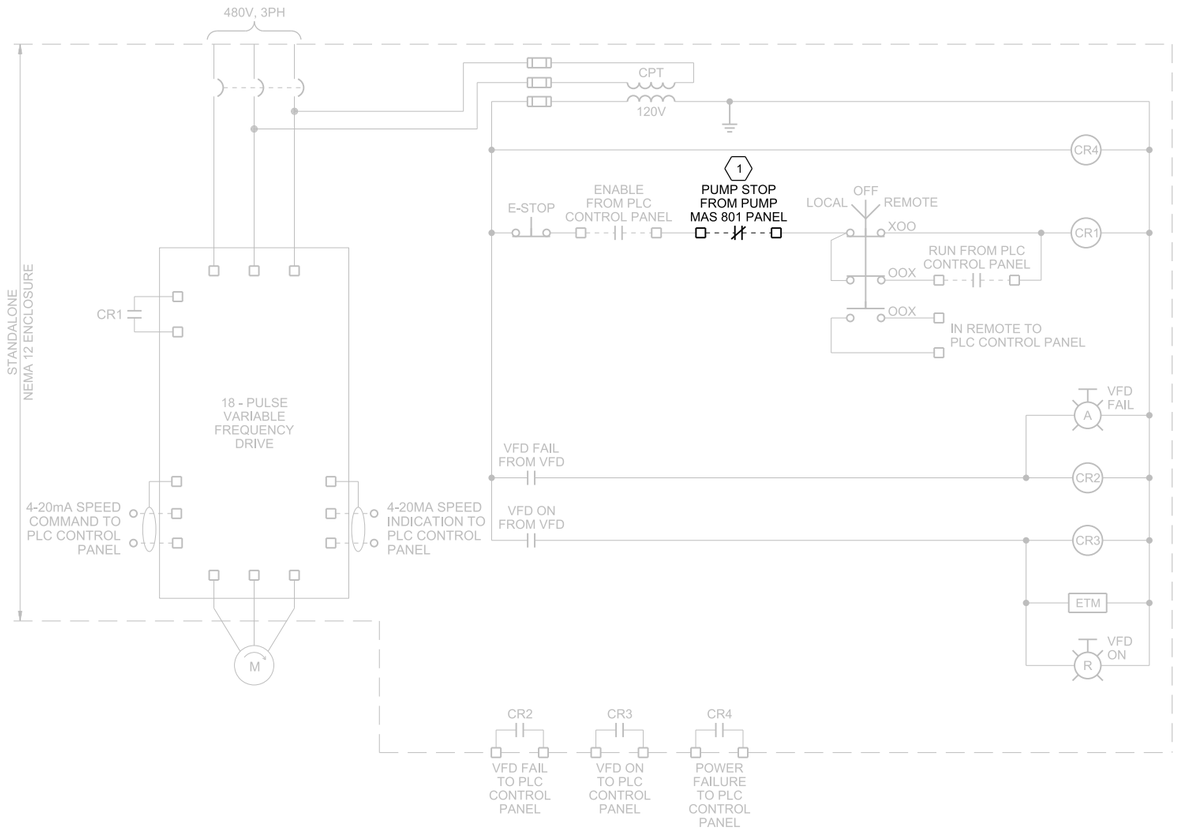
COBB COUNTY WATER SYSTEM
GEORGIA

ELECTRICAL
SIX FLAGS PUMP STATION
LOWER LEVEL POWER PLAN

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

DATE	
PROJ	JJX13603
DWG	31-E-03
SHEET	of

BID DOCUMENTS



RAW SEWAGE PUMP NO. 1
RAW SEWAGE PUMP NO. 2

X = 1, 2

SHEET KEYNOTES

1. MOTOR PROTECTION MODULE (MAS 801) TO MONITOR HIGH TEMPERATURE AND MOISTURE LEAK, PROVIDED BY PUMP VENDER, INSTALLED IN NEW PUMP MAS 801 PANEL.

NO.	DATE	REVISION	BY	APVD
DSGN	T HOMAYOONI	DR	G MESSER	APVD
		CHK	KB HORTON	T HOMAYOONI

10 10TH STREET, SUITE 1400
ATLANTA, GA 30309
GA LIC # PEF000350 (EXP 6/30/2022)

S5036 -
FY21 MULTIPLE PUMP STATIONS PROJECTS
COBB COUNTY WATER SYSTEM
GEORGIA

ELECTRICAL

SIX FLAGS PUMP STATION CONTROL DIAGRAM

BID DOCUMENTS

VERIFY SCALE

BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

DATE	
PROJ	JJX13603
DWG	31-E-04
SHEET	of

1 PHOTO DETAIL
NTS
31-E-02

2 PHOTO DETAIL
NTS
31-E-02

7 PHOTO DETAIL
NTS
31-E-02

8 PHOTO DETAIL
NTS
31-E-02

SHEET KEYNOTES

1. DEMOLISH THE OUT OF SERVICE ENCLOSURE. CONTRACTOR TO FIELD VERIFY AND RECORD ALL WIRING GOING THROUGH THIS ENCLOSURE TO EXISTING PLC AND RECONNECT. REMOVE ANY EMPTY OR UNUSED CONDUIT AND CONDUCTORS. EXTEND THE CONDUITS TO EXISTING PLC AS NEEDED,
2. EXISTING TERMINATION BOX TO REMAIN. PROVIDE SUPPORT. PROTECT THE EXISTING CABLES.
3. INSTALL NEW PUMP TJBS AND NEW PUMP MAS801 PANEL. PROVIDE ADEQUATE SUPPORT FOR NEW TJBS AND NEW PUMP MAS 801 PANEL.

NO.	DATE	REVISION	DR	CHK	APVD	BY	APVD
DSGN	T HOMAYOONI	G MESSER	KB HORTON	APVD	T HOMAYOONI		

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S5036 -
FY21 MULTIPLE PUMP STATIONS PROJECTS
COBB COUNTY WATER SYSTEM
GEORGIA

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ELECTRICAL

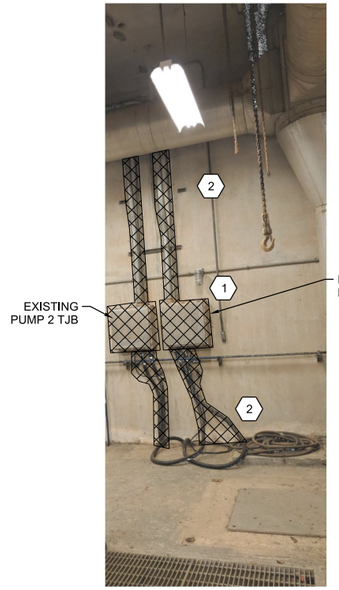
SIX FLAGS PUMP STATION UPPER LEVEL PHOTO DETAILS

BID DOCUMENTS

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

DATE	
PROJ	JJX13603
DWG	31-E-05
SHEET	of

3 PHOTO DETAIL
NTS
31-E-03



4 PHOTO DETAIL
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31-E-03

5 PHOTO DETAIL
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6 PHOTO DETAIL
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31-E-03

SHEET KEYNOTES

1. CONTRACTOR SHALL DEMOLISH THE EXISTING PUMP TJBS.
2. CONTRACTOR TO DEMOLISH THE EXISTING CONDUITS AND CONDUCTORS TO/FROM EXISTING PUMP TJBS.
3. CONNECT NEW CONDUITS FROM NEW TJBS ON ELECTRICAL ROOM TO VFD'S BY INTERCEPTING EXISTING CONDUITS GOING TO VFDS VIA PENETRATIONS. INSTALL NEW CONDUITS FROM NEW TJBS TO VFDS.

NO.	DATE	REVISION	BY	APVD
DSGN	T HOMAYOONI	DR G MESSER	CHK KB HORTON	APVD T HOMAYOONI

10 10TH STREET, SUITE 1400
ATLANTA, GA 30309
GA LIC # PEF000350 (EXP 6/30/2022)

S5036 -
FY21 MULTIPLE PUMP STATIONS PROJECTS
COBB COUNTY WATER SYSTEM
GEORGIA

Jacobs

ELECTRICAL

SIX FLAGS PUMP STATION
LOWER LEVEL PHOTO DETAILS

BID DOCUMENTS

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

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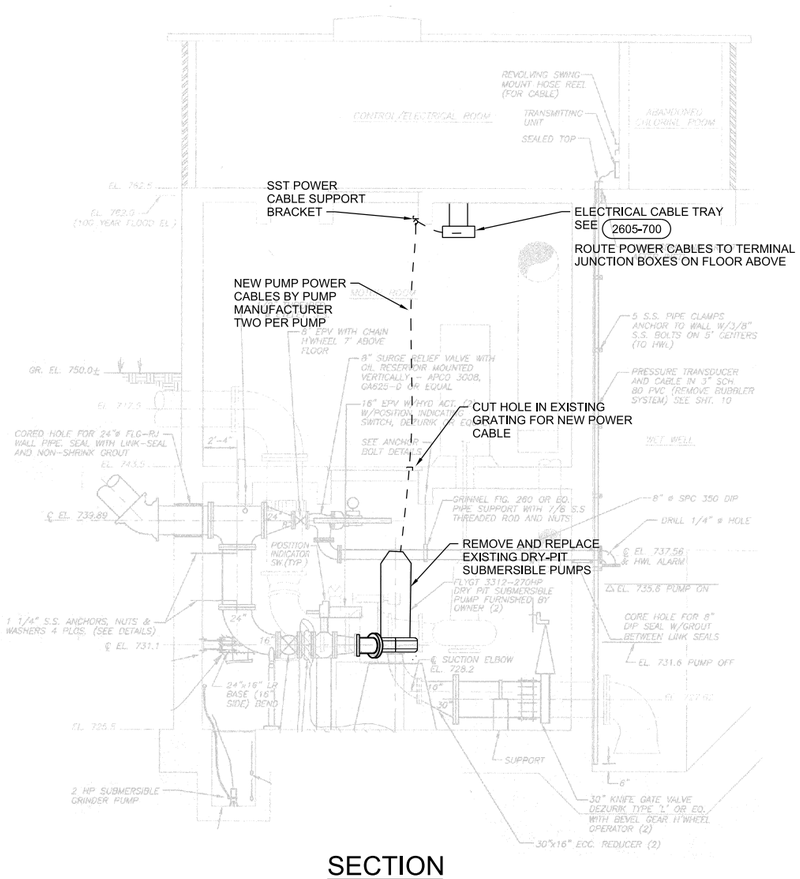
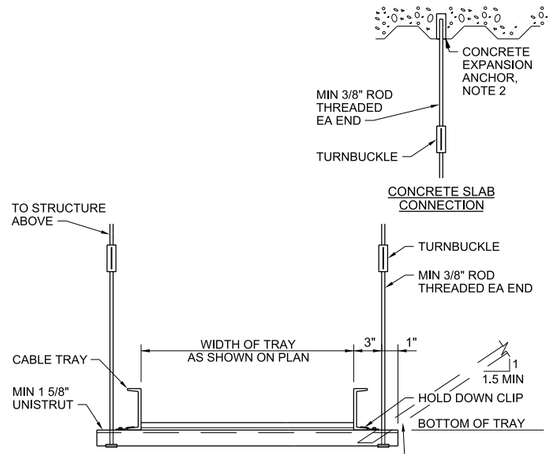
PROJ	JJX13603
DWG	31-E-06
SHEET	of



SECTION
3/16 "= 1'



NOTES:
1. ALL CABLE TRAY SUPPORT MATERIAL SHALL BE FABRICATED FROM HOT DIP GALVANIZED STEEL. REPAIR ALL DAMAGED COATING PER SPECIFICATIONS.
2. SUBMIT FINAL DESIGN AND CALCULATIONS FOR SUPPORT AND ANCHORAGE AS SPECIFIED.
3. PROVIDE STAINLESS STEEL HARDWARE IN WET OR CORROSIVE AREAS.

CABLE TRAY SUPPORT
NTS

2605-700

GENERAL NOTES

1 CONFIRM CONNECTION AND ANCHORAGE REQUIREMENTS BEFORE ORDERING NEW PIPING.

2 PUMP REMOVAL AND REPLACEMENT SHALL BE PERFORMED ONE AT A TIME.

3 ISOLATE PUMP ELECTRICALLY USING CCWS TAG-OUT/LOCK OUT PROCEDURES.

4 ISOLATE PUMP USING EXISTING VALVES.

5 REMOVE PUMP AND POWER CABLE.

6 INSTALL NEW PUMP. CONNECT TO EXISTING SUCTION AND DISCHARGE PIPING. PUMP SHALL BE A XYLEM CT 3312, 63-630, 480mm IMPELLER, 1200 RPM, 460 VOLT/3PHASE, 280 HP. SEE SPECIFICATION 11305 FOR ADDITIONAL PUMP DETAILS.

7 ANCHOR PUMP TO EXISTING PUMP SUPPORT USING EXISTING ANCHOR BOLTS. GROUT PUMP BASEPLATE.

8 INSTALL NEW POWER CABLE. SEE ELECTRICAL DRAWINGS FORE DETAILS.

9 INSTALL AND CONNECT PUMP PROTECTIVE MAS UNIT CONSISTING OF A PUMP ELECTRONIC MODULE(PEM), BASE UNIT AND CONTROL UNIT. THE BASE UNIT AND COMMON CONTROL UNIT SHALL BE MOUNTED IN A NEW ENCLOSURE PROVIDED BY THE PUMP MFR. CONNECT MAS SYSTEM AS SHOWN ON THE ELECTRICAL DRAWINGS AND MANUFACTURER DETAILS.

10 PROVIDE MANUFACTURER SERVICES TO INSPECT INSTALLATION AND ASSIST IN START-UP. MANUFACTURER SHALL CERTIFY PUMP INSTALLATION PRIOR TO START-UP.

11 RESTORE POWER AND START-UP PUMP.

12 PERFORM PUMP START-UP AND FIELD TESTING. PERFORM 48 HR FUNCTIONAL TESTING. CONFIRM PUMP OPERATION USING BOTH EXISTING 20-INCH AND 30-INCH FORCE MAINS. RECORD PUMP PERFORMANCE DATA AND PROVIDE START-UP REPORT.

13 PLACE PUMP INTO SERVICE.

14 REPEAT FOR ABOVE PROCEDURE FOR NEXT PUMP.

15. ROUTE THE MANUFACTURER SUPPLIED CABLES VIA A NEW CABLE TRAY. 18" x 6" CABLE TRAY SUSPENDED BY S.S. RODS. SECURE CABLES WITH TYWRAPS TO CABLE TRAY. LEAVING SUFFICIENT SLACK TO PREVENT STRETCHING CABLES AT PUMPS. TYPICAL TWO CABLES FOR EACH PUMP. SEE ELECTRICAL DRAWINGS FOR CONNECTION DETAILS.

16. PROVIDE CABLE SUPPORT TO MOTOR POWER CABLE AT MOTOR. PROVIDE ADEQUATE SUPPORT SO THAT CABLE IS NOT RESTING ON MOTOR FRAME.

EXISTING PUMP 1

EXISTING PUMP 2

NO.	DATE	DSGN	DR	CHK	APVD	BY	REVISION
		T WYNN	E GRIGGS	I LILLY	APVD	T WYNN	

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S5036 -
FY21 MULTIPLE PUMP STATIONS PROJECTS
COBB COUNTY WATER SYSTEM
GEORGIA

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PROCESS MECHANICAL

SIX FLAGS PUMP STATION SECTION

BID DOCUMENT

1/4"=1'
VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

DATE	
PROJ	JJX13603
DWG	31-PR-01
SHEET	of

KEY NOTES

1. REMOVE EXISTING FENCE GATE AND INSTALL FENCE GATE IN NEW LOCATION. SEE SPEC 02821.
2. REMOVE AND REPLACE 9' x 12' CANTILEVER GATE.
3. REMOVE EXISTING GENERATOR AND REPLACE. REFER TO DRAWING 00-G-07.
4. EXISTING GENERATOR PAD 12' x 6'.
5. REMOVE AND REPLACE EXIST. 10FT x 8FT PRE-FABRICATED FRP BUILDING. PROVIDE AND INSTALL NEW 10FT x 8FT PRE-FABRICATED FRP BUILDING. PER SPECIFICATION 13121 PROVIDE TEMPORARY SUPPORT OF EXISTING EQUIPMENT. ANCHOR NEW FRP BUILDING TO EXISTING SLAB IN ACCORDANCE WITH SECTION 0519 AND MANUFACTURER DETAILS USING 1/2" 316 SST EXPANSION ANCHOR BOLTS.
6. EXISTING 8' WETWELL.
7. PUMP REPLACEMENT. SEE DRAWING 45-PR-01.
8. EXISTING VALVE VAULT.
9. BORE HOLE

N 1 394 582.00
E 2 203 125.77

N 1 394 537.57
E 2 203 141.75

N 1 394 536.05
E 2 203 089.30

N 1 394 510.04
E 2 203 107.27

N 1 394 504.33
E 2 203 076.79

PROPERTY LINE

N
1/4" = 1'

15'-6"
5'-8"
12'-0"
11'-6"
6'-0"
3'-9"
6'-0"

136" CMP 37 L.F.
1.05%

PUMP STATION ENTRANCE

LEGEND:

- ELECTRICAL
- WATER
- SANITARY SEWER
- FORCE MAIN
- PROPERTY LINE
- UNDERGROUND ELECTRICAL
- WOODEN FENCE
- CHAIN LINK FENCE
- EDGE OF CONCRETE
- 1010 CONTOUR LEVEL

NO.	DATE	DR	REVISION	CHK	APVD	BY	APVD
DSGN	J PACHECO	E GRIGGS		T WYNN			I LILLEY

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S5036 -
FY21 MULTIPLE PUMP STATIONS PROJECTS
COBB COUNTY WATER SYSTEM
GEORGIA

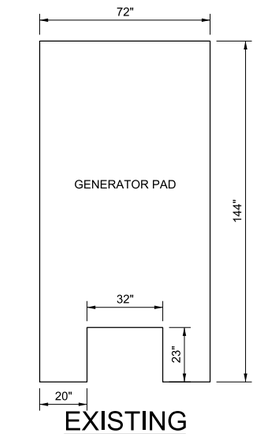
Jacobs

CIVIL

PLANT ATKINSON ROAD PUMP STATION SITE LAYOUT

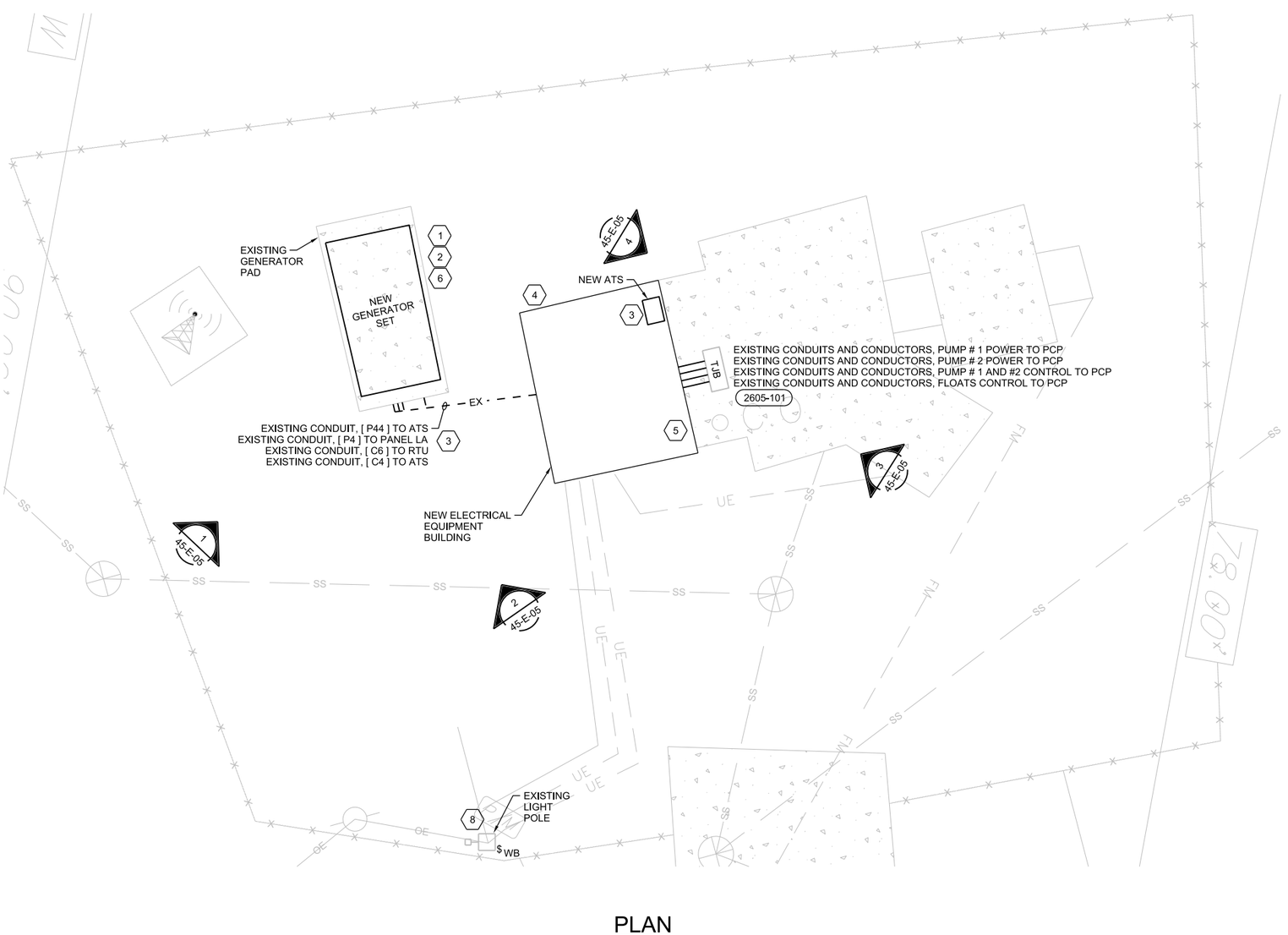
BID DOCUMENTS

1/4"=1'	
VERIFY SCALE	
BAR IS ONE INCH ON ORIGINAL DRAWING. IF NOT ONE INCH ADJUST SCALE ACCORDINGLY	
DATE	
PROJ	JJX13603
DWG	45-C-01
SHEET	of



EXISTING GENERATOR PAD

3/8" = 1'-0"



PLAN

1/4" = 1'-0"

LEGEND:

- CHAIN LINK FENCE
- EDGE OF CONCRETE
- 1010 CONTOUR LEVEL

SHEET KEYNOTES

1. REMOVE THE EXISTING GENERATOR AND INSTALL NEW GENERATOR IN THE SAME LOCATION. PROVIDE STATE TANK PER COBB COUNTY FIRE MARSHAL REQUIREMENTS (SEE 16230B - SUPPLEMENT). EXISTING GENERATOR PAD SIZE IS 144" X 72". CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MODIFICATIONS REQUIRED TO MODIFY THE GENERATOR PAD TO MATCH THE SELECTED NEW DIESEL GENERATOR.
2. CONTRACTOR SHALL REUSE THE EXISTING CONDUITS TO AND FROM GENERATOR. THE EXISTING CONDUCTORS THAT ARE CURRENTLY INSTALLED SHALL BE DEMOLISHED. ADDITIONALLY, THE CONTRACTOR SHALL PROVIDE AND INSTALL NEW CONDUCTORS WITHIN THE EXISTING CONDUITS AS SHOWN ON DRAWINGS. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MODIFICATIONS REQUIRED TO CONDUITS FOR THE NEW GENERATORS. FIELD VERIFY THE EXACT CONDUIT STUB-UP.
3. CONTRACTOR SHALL FIELD VERIFY AND RECORD ALL THE EXISTING CONDUITS AND CONDUCTORS TO AND FROM EXISTING GENERATOR AND ATS PRIOR TO REPLACE THEM WITH NEW GENERATOR AND ATS.
4. EXISTING ELECTRICAL EQUIPMENT BUILDING TO BE REMOVED AND REPLACED WITH NEW BUILDING IN KIND ON THE EXISTING CONCRETE PAD, MANUFACTURED BY KENCO PLASTIC CO. SEE DRAWING 45-E-02 FOR THE NEW ELECTRICAL EQUIPMENT BUILDING LAYOUT.
5. SEE DRAWING 45-E-03 FOR ONE LINE AND CONDUITS ROUTING WITHIN THE ELECTRICAL EQUIPMENT BUILDING.
6. BOUND NEW GENERATOR SET TO GROUND LOOP.
7. PROVIDE PORTABLE FIRE EXTINGUISHER PER COBB COUNTY FIRE MARSHAL REQUIREMENTS. FIRE EXTINGUISHER SHALL COMPLY WITH NPFA 10.
8. INSTALL A NEW WATER PROOF LIGHT SWITCH AT THE EXISTING POLE AND CONNECT IT TO THE EXISTING POLE LIGHT.

NO.	DATE	DSGN	DR	CHK	REVISION	BY	APVD
		T HOMAYOONI	G MESSER	KB HORTON	APVD	T HOMAYOONI	

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ATLANTA, GA 30309
GA LIC # PEF000350 (EXP 6/30/2022)

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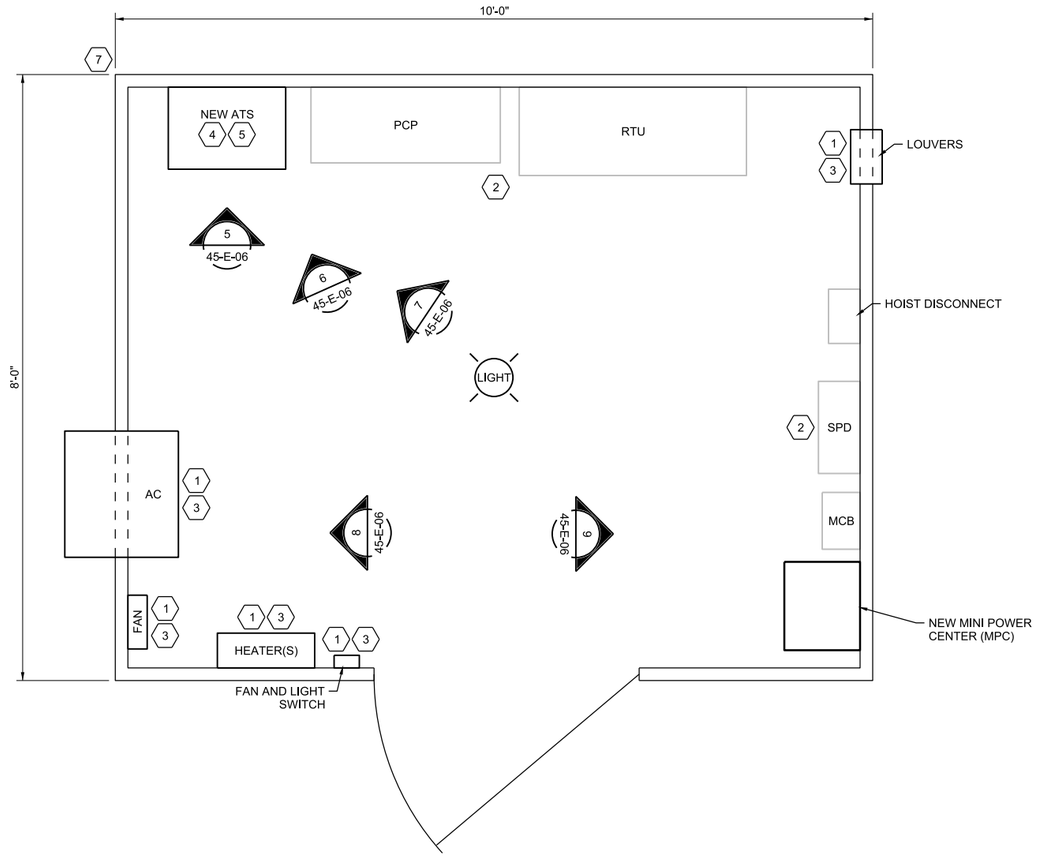
S5036 -
FY21 MULTIPLE PUMP STATIONS PROJECTS
COBB COUNTY WATER SYSTEM
GEORGIA

ELECTRICAL
PLANT ATKINSON ROAD
PUMP STATION
ELECTRICAL SITE PLAN

BID DOCUMENTS

	1/4"=1'
	VERIFY SCALE
	BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"
DATE	
PROJ	JJX13603
DWG	45-E-01
SHEET	of



ELECTRICAL EQUIPMENT BUILDING LAYOUT

1" = 1'-0"

PANEL: LP			LOCATION: PLANT ATKINSON P.S					
SERVICE VOLTAGE: 120/240V			PHASE: 1			WIRE: 3		
TOTAL LOAD KVA: 7.1			BUS SIZE: 50A			MAIN SIZE: 50A	TYPE: BREAKER	
REMARKS:			NEUTRAL: FULL			MOUNTING: SURFACE		

LOAD IN KVA			BKR	CKT	CKT	BKR		LOAD IN KVA	
A	B	CIRCUIT DESCRIPTION	A/P	NO.	NO.	A/P	CIRCUIT DESCRIPTION	A	B
0.4		RECEPTACLES	20/1	1	2	20/1	FAN	0.5	
	0.2	INT. LIGHT	20/1	3	4	20/1	HVAC		0.5
0.5		SITE LIGHT	20/1	5	6	20/1	HEATER 1	1.5	
	0.5	RTU	20/1	7	8	20/1	HEATER 2		1.5
0.5		GEN. BATT. CHARGER	20/1	9	10	20/1	GEN. HEATER	1.0	
		SPARE	20/1	11	12	20/1	SPARE		
		SPARE	20/1	13	14	20/1	SPARE		
		SPARE	20/1	15	16	20/1	SPARE		
		SPARE	20/2	17	18	20/2	SPARE		
				19	20				
1.4	0.7	TOTAL						3.0	2.0

SHEET KEYNOTES

1. EXISTING BUILDING TO BE REMOVED AND REPLACED WITH NEW BUILDING IN KIND ON THE EXISTING CONCRETE PAD. FAN, HEATER, INTERIOR LIGHT, AC UNIT, RECEPTACLES, AND ASSOCIATED SWITCHES WILL BE FURNISHED BY BUILDING VENDOR (KENCO PLASTIC CO.) CONTRACTOR SHALL PROVIDE NEW CONDUITS AND CONDUCTORS.
2. EXISTING EQUIPMENT AND SUPPORTS TO REMAIN. DISCONNECT THE EXISTING UNISTRUT FROM THE WALLS. PROVIDE TEMPORARY SUPPORT TO ENSURE EQUIPMENT AND ASSOCIATED CONDUITS ARE STABLE AND PROTECTED. RECONNECT TO NEW BUILDING STRUCTURE.
3. COORDINATE WITH BUILDING VENDOR (KENCO PLASTIC CO.) TO ENSURE THE LOCATION FOR NEW AC, HEATER, FAN, AND LOUVERS DO NOT CONFLICT WITH EXISTING BUILDING LAYOUT AND EQUIPMENT THAT ARE TO BE REMAIN.
4. REMOVE THE EXISTING ATS AND INSTALL NEW ATS IN THE SAME LOCATION. CONTRACTOR SHALL FIELD VERIFY AND RECORD ALL THE EXISTING CONDUITS AND CONDUCTORS TO AND FROM EXISTING ATS PRIOR TO REPLACE IT WITH NEW ATS. BOUND NEW ATS TO GROUND LOOP.
5. CONTRACTOR SHALL REUSE THE EXISTING CONDUITS. THE EXISTING CONDUCTORS THAT ARE CURRENTLY INSTALLED SHALL BE DEMOLISHED. ADDITIONALLY, THE CONTRACTOR SHALL PROVIDE AND INSTALL NEW CONDUCTORS WITHIN THE EXISTING CONDUITS AS SHOWN ON DRAWINGS. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MODIFICATIONS REQUIRED TO CONDUITS.
6. SEE DRAWING 45-E-03 FOR ONE LINE DIAGRAM.
7. BOND NEW BUILDING, ALL RACK EQUIPMENT, AND SUPPORT TO GROUND LOOP.
8. PROVIDE PORTABLE FIRE EXTINGUISHER INSIDE THE BUILDING PER COBB COUNTY FIRE MARSHALL REQUIREMENTS.
9. CONTRACTOR SHALL MINIMIZE THE TIME THAT PUMP STATION WILL BE OUT OF SERVICE DUE EQUIPMENT REPLACEMENT (<2 HOURS). COORDINATE THE OUT OF SERVICE DATE, TIME , AND DURATION WITH COBB COUNTY WATER SYSTEM.

NO.	DATE	DSGN	DR	CHK	APVD	BY	REVISION
	T HOMAYOONI	T HOMAYOONI	G MESSER	KB HORTON	APVD	T HOMAYOONI	

10 10TH STREET, SUITE 1400
ATLANTA, GA 30309
GA LIC # PEF000350 (EXP 6/30/2022)

S5036 -
FY'21 MULTIPLE PUMP STATIONS PROJECTS
COBB COUNTY WATER SYSTEM
GEORGIA

Jacobs

ELECTRICAL

PLANT ATKINSON ROAD PUMP STATION ELECTRICAL EQUIPMENT BUILDING LAYOUT AND PANEL SCHEDULE

BID DOCUMENTS

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
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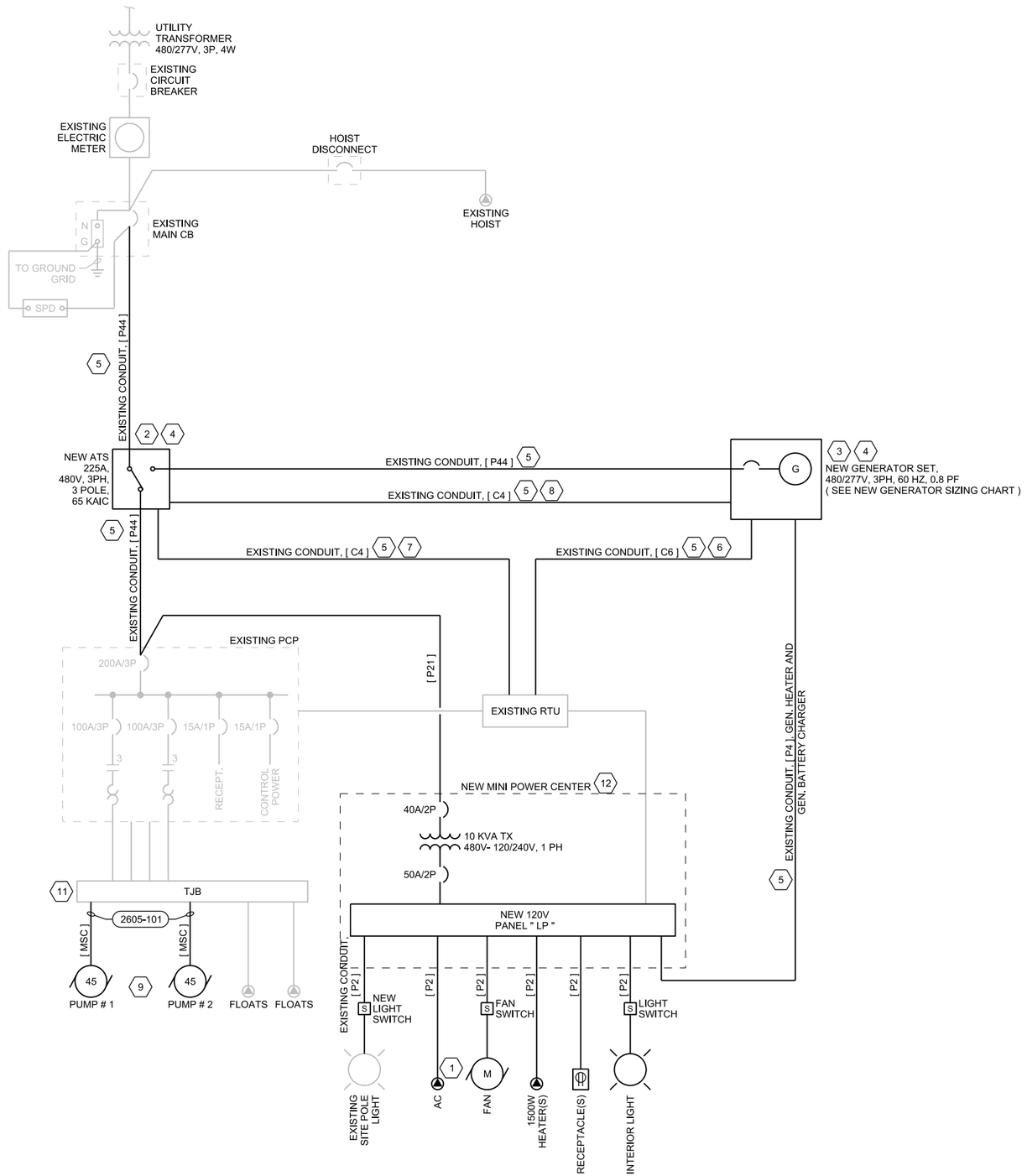
DATE	
PROJ	JJX13603
DWG	45-E-02
SHEET	of



NEW GENERATOR SIZING CHART

CATEPILLAR	125 KW
KOHLER	150 KW
CUMMINS	125 KW

GENERAL SHEET NOTES

1. PROVIDE ALL NEW CONDUITS / CABLES SHOWN ON ONE LINE. FIELD ROUTE THE CONDUITS / CABLES.

⬡ SHEET KEYNOTES

1. FAN, HEATER, INTERIOR LIGHT, AC UNIT, RECEPTACLES, AND ASSOCIATED SWITCHES WILL BE FURNISHED BY BUILDING VENDOR (KENCO PLASTIC CO.) CONTRACTOR SHALL PROVIDE NEW CONDUITS AND CONDUCTORS.
2. REMOVE THE EXISTING ATS AND INSTALL NEW ATS IN THE SAME LOCATION. SEE DRAWING 45-E-01 FOR ADDITIONAL INFORMATION. BOND NEW ATS TO GROUND LOOP.
3. REMOVE THE EXISTING GENERATOR AND INSTALL NEW GENERATOR IN THE SAME LOCATION. BOND NEW GENERATOR SET TO GROUND LOOP. SEE DRAWING 45-E-01 FOR ADDITIONAL INFORMATION.
4. CONTRACTOR SHALL FIELD VERIFY AND RECORD ALL THE EXISTING CONDUITS AND CONDUCTORS TO AND FROM EXISTING GENERATOR AND ATS PRIOR TO REPLACING THEM WITH NEW GENERATOR AND ATS.
5. CONTRACTOR SHALL REUSE THE EXISTING CONDUITS, THE EXISTING CONDUCTORS THAT ARE CURRENTLY INSTALLED SHALL BE DEMOLISHED. ADDITIONALLY, THE CONTRACTOR SHALL PROVIDE AND INSTALL NEW CONDUCTORS WITHIN THE EXISTING CONDUITS AS SHOWN ON DRAWINGS. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MODIFICATIONS REQUIRED TO CONDUITS.
6. CONTROL WIRES FOR GENERATOR SET, ON, FAULT, AND LOW FUEL. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY REQUIRED MODIFICATIONS TO EXISTING RTU FOR CONNECTIONS FROM GENERATOR SET.
7. CONTROL WIRES FOR AUTOMATIC TRANSFER SWITCH (ATS). ATS IN "NORMAL" POSITION. ATS IN "GENERATOR" POSITION. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY REQUIRED MODIFICATIONS TO EXISTING RTU FOR CONNECTIONS FROM ATS.
8. CONTROL WIRES FOR GENERATOR SET, START/STOP.
9. INSTALL NEW PUMPS. TERMINATE THE MANUFACTURER SUPPLIED CABLES (MSC) IN THE EXISTING TERMINAL JUNCTION BOX(TJB). REUSE THE EXISTING POWER AND CONTROL CABLES FROM TJB TO PUMP CONTROL PANEL (PCP).
10. SEE DRAWING 45-E-02 FOR ELECTRICAL EQUIPMENT BUILDING LAYOUT.
11. LEAVE 18" AIR GAP BETWEEN THE STUBBED UP CONDUITS AND BOTTOM OF JUNCTION BOX. SEAL CONDUITS WITH OZ-GENDEY "DUX" .
12. CONTRACTOR SHALL PROVIDE A NEW MINI POWER CENTER (MPC) TO REPLACE THE EXISTING ONE. ADDITIONALLY, CONTRACTOR SHALL PROVIDE NEW CONDUITS AND CONDUCTORS AS SHOWN ON DRAWINGS. SEE DRAWING 45-E-02 FOR PANEL SCHEDULE.

NO.	DATE	DSGN	REVISION	BY	CHK
		T HOMAYOONI	G MESSER	DR	KB HORTON
				T HOMAYOONI	APVD

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S5036 -
FY21 MULTIPLE PUMP STATIONS PROJECTS
COBB COUNTY WATER SYSTEM
GEORGIA

Jacobs

ELECTRICAL

PLANT ATKINSON ROAD PUMP STATION ONE LINE DIAGRAM

BID DOCUMENTS

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

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PROJ	JJX13603
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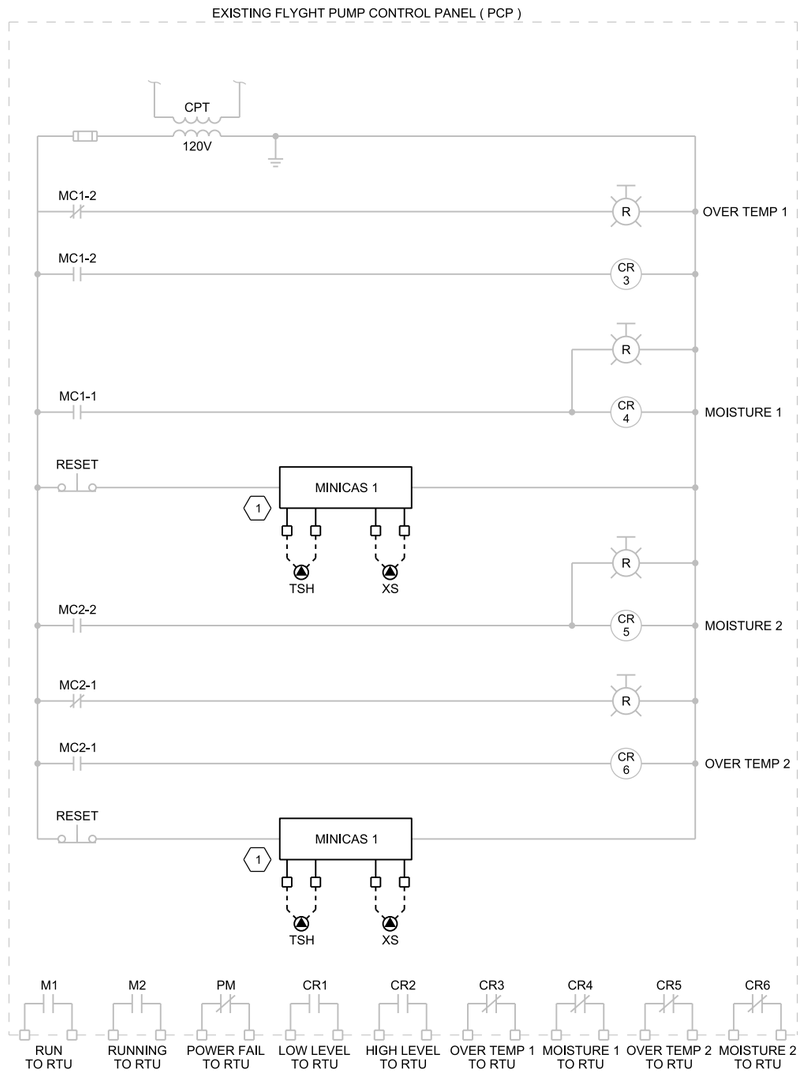

SHEET KEYNOTES

1. REPLACE THE EXISTING MINICAS FOR BOTH PUMPS WITH NEW MINICAS II UNITS PROVIDED BY PUMP MANUFACTURER. MINICAS UNITS TO BE INSTALLED IN THE SAME LOCATION AS THE EXISTING UNITS, IN THE EXISTING PUMP CONTROL PANEL(PCP). MINICAS II UNITS INCLUDE MOTOR OVER TEMPERATURE MONITORING RELAY AND MOISTURE MONITORING RELAY.

NO.	REVISION	DR	CHK	APVD	BY	APVD
DSGN	DATE	T HOMAYOONI	G MESSER	KB HORTON	T HOMAYOONI	

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COBB COUNTY WATER SYSTEM
GEORGIA

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ELECTRICAL
PLANT ATKINSON ROAD
PUMP STATION
CONTROL DIAGRAM

BID DOCUMENTS

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

DATE	
PROJ	JJX13603
DWG	45-E-04
SHEET	of

1 PHOTO DETAIL
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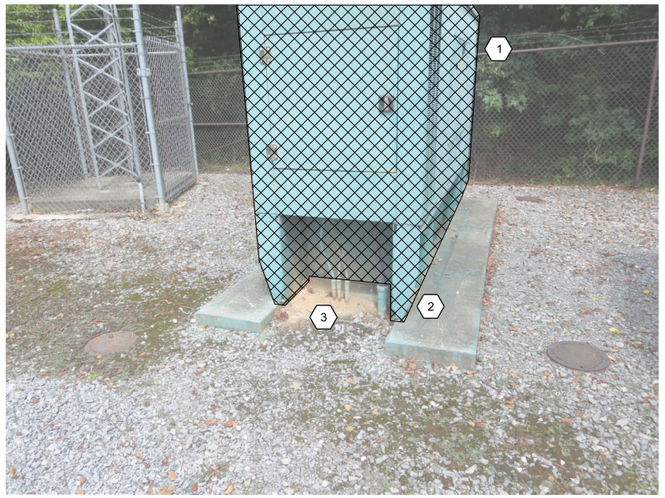
45-E-01



2 PHOTO DETAIL
NTS
45-E-01

3 PHOTO DETAIL
NTS
45-E-01

4 PHOTO DETAIL
NTS
45-E-01

SHEET KEYNOTES

1. EXISTING GENERATOR TO BE REMOVED AND REPLACED WITH NEW GENERATOR. BOUND NEW GEN. SET TO GROUND LOOP. SEE DRAWING 45-E-03 FOR ONE LINE AND GENERATOR SIZING CHART.
2. EXISTING GENERATOR PAD SIZE IS 144" X 72". CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MODIFICATIONS REQUIRED TO MODIFY THE GENERATOR PAD TO MATCH THE SELECTED NEW DIESEL GENERATOR.
3. CONTRACTOR SHALL REUSE THE EXISTING CONDUITS TO AND FROM GENERATOR. THE EXISTING CONDUCTORS THAT ARE CURRENTLY INSTALLED SHALL BE DEMOLISHED. ADDITIONALLY, THE CONTRACTOR SHALL PROVIDE AND INSTALL NEW CONDUCTORS WITHIN THE EXISTING CONDUITS AS SHOWN ON DRAWINGS. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MODIFICATIONS REQUIRED TO CONDUITS FOR THE NEW GENERATORS. FIELD VERIFY THE EXACT CONDUIT STUB-UP.
4. EXISTING BUILDING TO BE REMOVED AND REPLACED WITH NEW BUILDING IN KIND. SEE DRAWING 45-E-02 FOR ELECTRICAL EQUIPMENT BUILDING LAYOUT.
5. TERMINATE THE MANUFACTURER SUPPLIED CABLES (MSC) FOR THE NEW PUMPS IN THE EXISTING TERMINAL JUNCTION BOX(TJB). REUSE THE EXISTING POWER AND CONTROL CABLES FROM TJB TO PUMP CONTROL PANEL (PCP).

NO.	DATE	REVISION	BY	APVD
DSGN	T HOMAYOONI	DR	T HOMAYOONI	APVD
		CHK	G MESSER	KB HORTON

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COBB COUNTY WATER SYSTEM
GEORGIA

ELECTRICAL

PLANT ATKINSON ROAD
PUMP STATION
PHOTO DETAILS

BID DOCUMENTS

VERIFY SCALE
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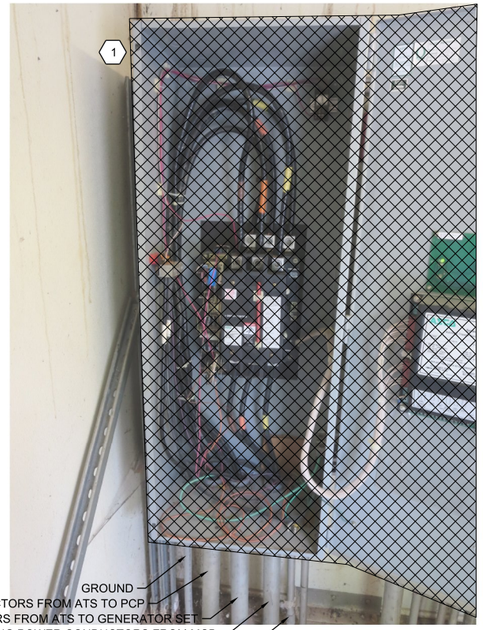

5 PHOTO DETAIL
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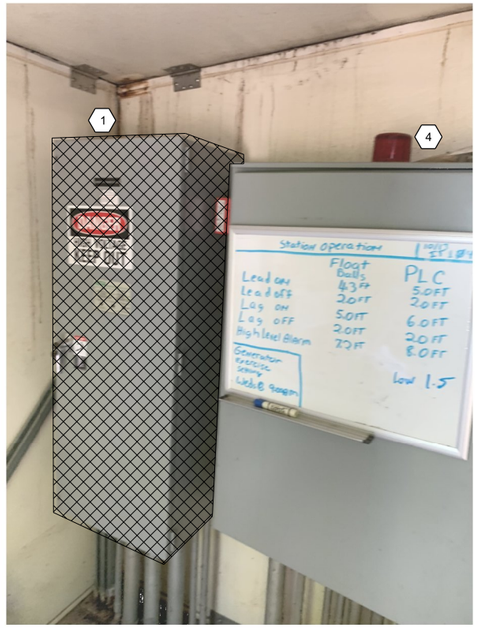
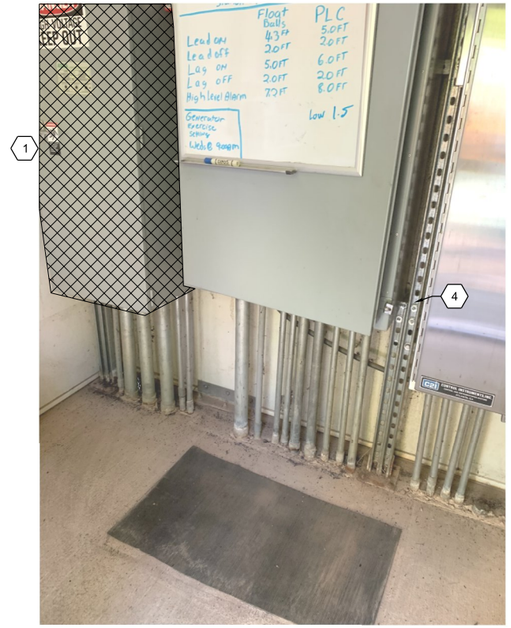
45-E-02



6 PHOTO DETAIL
NTS
45-E-02



7 PHOTO DETAIL
NTS
45-E-02

8 PHOTO DETAIL
NTS
45-E-02

9 PHOTO DETAIL
NTS
45-E-02

SHEET KEYNOTES

1. EXISTING AUTOMATIC TRANSFER SWITCH (ATS) TO BE REMOVED AND REPLACED WITH NEW ATS AT THE SAME LOCATION. SEE DRAWING 45-E-03 FOR ONE LINE. BOUND NEW ATS TO GROUND LOOP.
2. CONTRACTOR SHALL REUSE THE EXISTING CONDUITS TO AND FROM ATS. THE EXISTING CONDUCTORS THAT ARE CURRENTLY INSTALLED SHALL BE DEMOLISHED. ADDITIONALLY, THE CONTRACTOR SHALL PROVIDE AND INSTALL NEW CONDUCTORS WITHIN THE EXISTING CONDUITS AS SHOWN ON DRAWINGS. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MODIFICATIONS REQUIRED TO CONDUITS FOR THE NEW ATS. FIELD VERIFY THE EXACT CONDUIT STUB-UP.
3. EXISTING BUILDING TO BE REMOVED AND REPLACED WITH NEW BUILDING IN KIND. FAN, HEATER, INTERIOR LIGHT, AC UNIT, RECEPTACLES, AND ASSOCIATED SWITCHES WILL BE FURNISHED BY BUILDING VENDOR (KENCO PLASTIC CO.) CONTRACTOR SHALL PROVIDE NEW CONDUITS AND CONDUCTORS.
4. EXISTING EQUIPMENT AND SUPPORTS TO REMAIN. DISCONNECT THE EXISTING UNISTRUT FROM THE WALLS. PROVIDE TEMPORARY SUPPORT TO ENSURE EQUIPMENT AND ASSOCIATED CONDUITS ARE STABLE AND PROTECTED. RECONNECT TO NEW BUILDING STRUCTURE.
5. REMOVE THE EXISTING MINI POWER CENTER (MPC) AND REPLACE IT WITH A NEW MPC. CONNECT THE LOADS AS SHOWN ON DRAWINGS.

NO.	DATE	REVISION	BY	APVD
DSGN	T HOMAYOONI	DR	G MESSER	CHK	KB HORTON	APVD	T HOMAYOONI

10 10TH STREET, SUITE 1400
ATLANTA, GA 30309
GA LIC # PEF000350 (EXP 6/30/2022)

Jacobs

S5036 -
FY21 MULTIPLE PUMP STATIONS PROJECTS
COBB COUNTY WATER SYSTEM
GEORGIA

ELECTRICAL
PLANT ATKINSON ROAD
PUMP STATION
PHOTO DETAILS

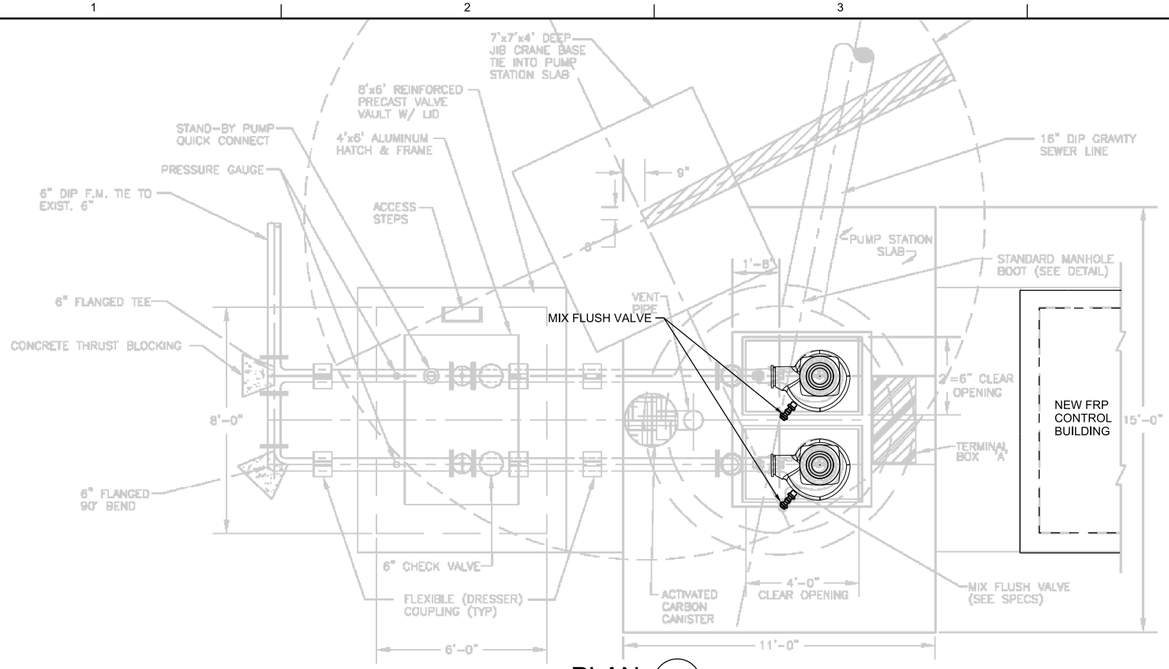
BID DOCUMENTS

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

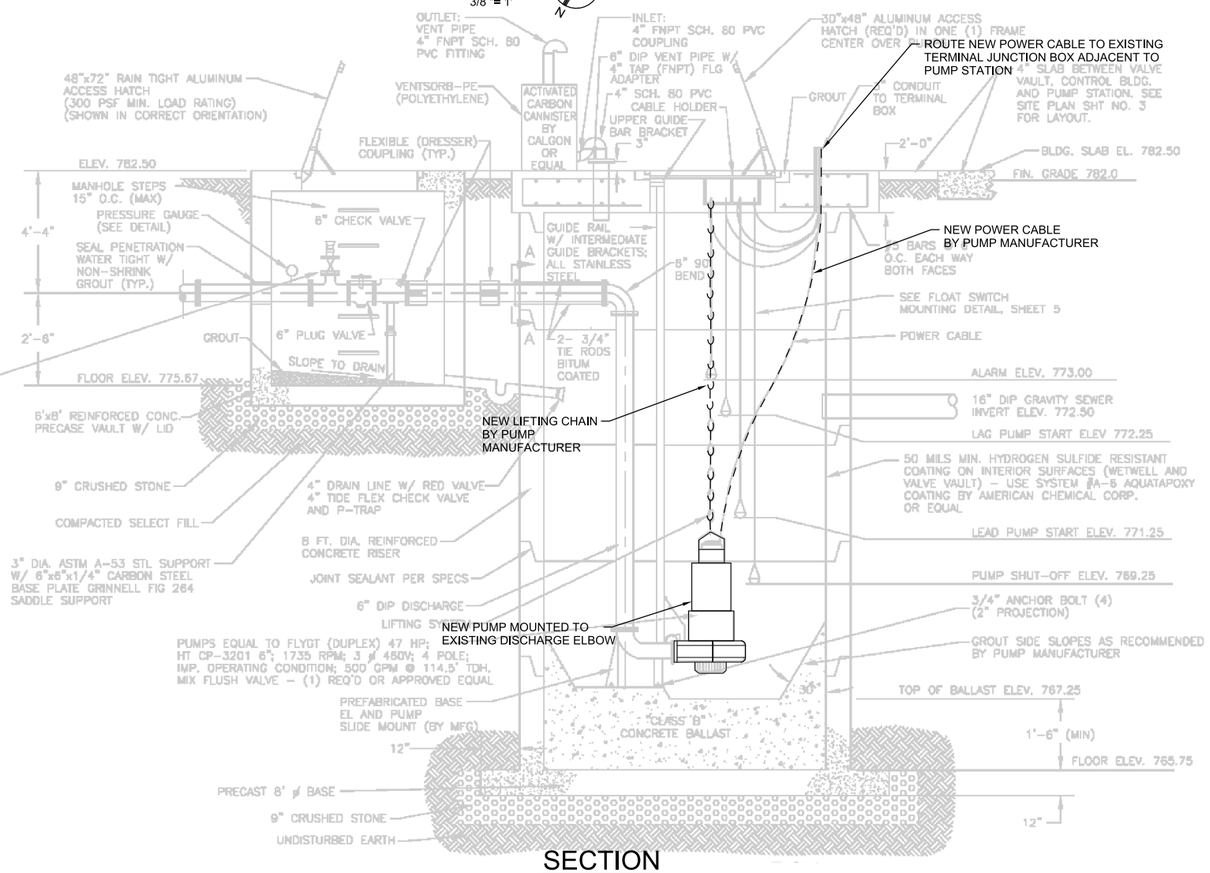
DATE	
PROJ	JJX13603
DWG	45-E-06
SHEET	of

GENERAL NOTES

1. PUMP REMOVAL AND REPLACEMENT SHALL BE PERFORMED ONE AT A TIME.
2. ISOLATE PUMP ELECTRICALLY USING CCWS TAG -OUT/LOCK-OUT PROCEDURES.
3. ISOLATE PUMP USING EXISTING VALVES.
4. REMOVE EXISTING PUMP AND POWER CABLES.
5. INSTALL NEW PUMP. CONNECT TO EXISTING PUMP DISCHARGE ELBOW. PUMP SHALL BE A XYLEM NP 3203-462, 1775 RPM, 460 VOLT/3PHASE, 45 HP, SEE SPECIFICATION 11305 FOR ADDITIONAL PUMP INSTALLATION AND START-UP DETAILS AND REQUIREMENTS.
6. INSTALL NEW POWER CABLE. SEE ELECTRICAL DRAWINGS FOR CONNECTION DETAILS.
7. REMOVE EXISTING AND INSTALL AND CONNECT NEW PUMP PROTECTIVE RELAYS, MINI-CAS, IN EXISTING PUMP CONTROL PANEL LOCATED IN FRP CONTROL BUILDING ADJACENT TO PUMP STATION. SEE ELECTRICAL DRAWINGS FOR DETAILS.
8. PROVIDE MANUFACTURER SERVICES TO INSPECT INSTALLATION AND ASSIST IN START-UP. MANUFACTURER SHALL CERTIFY PUMP INSTALLATION PRIOR TO START-UP.
9. RESTORE POWER AND START-UP PUMP.
10. PERFORM PUMP START-UP AND FIELD TESTING. PERFORM 48 HR FUNCTIONAL TESTING. RECORD PUMP PERFORMANCE DATA AD PROVIDE START-UP-REPORT.
11. REPLACE PUMP INTO SERVICE.
12. REPEAT PROCEDURE FOR NEXT PUMP.



PLAN
3/8 "= 1'



SECTION
3/8 "= 1'

NO.	DATE	DSGN	DR	CHK	APVD	BY	REVISION
		T WYNN	E GRIGGS	I LILLY	I LILLY	T WYNN	

10 10TH STREET, SUITE 1400
ATLANTA, GA 30309
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S5036 -
FY21 MULTIPLE PUMP STATIONS PROJECTS
COBB COUNTY WATER SYSTEM
GEORGIA

PROCESS MECHANICAL
PLANT ATKINSON ROAD PUMP STATION PLAN AND SECTION

1/4"=1'
VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

DATE	
PROJ	JJX13603
DWG	45-PR-01
SHEET	of

BID DOCUMENTS

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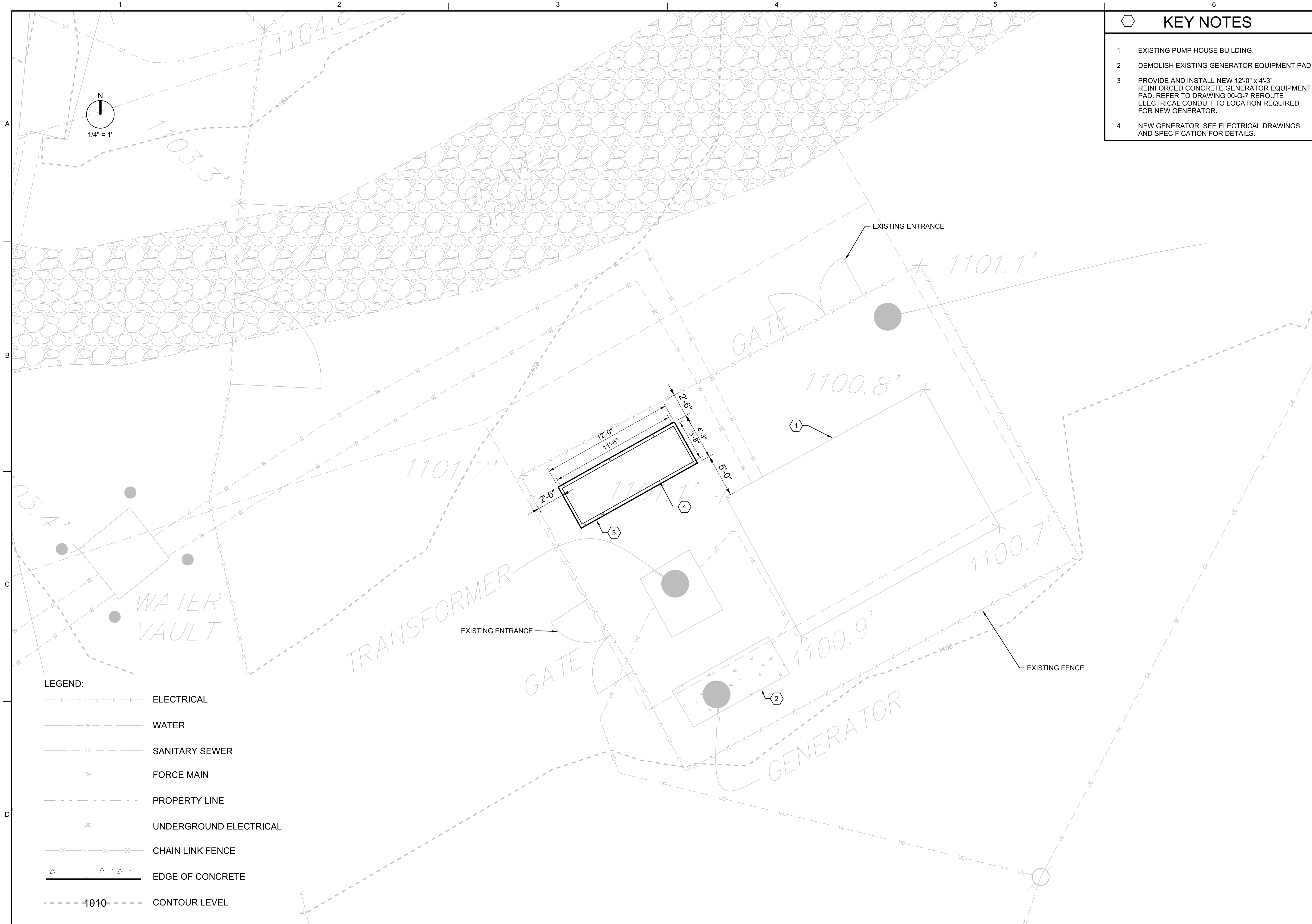


KEY NOTES

1. EXISTING PUMP HOUSE BUILDING.
2. DEMOLISH EXISTING GENERATOR EQUIPMENT PAD.
3. PROVIDE AND INSTALL NEW 12'-0" x 4'-3" REINFORCED CONCRETE GENERATOR EQUIPMENT PAD. REFER TO DRAWING 00-G-7 REROUTE ELECTRICAL CONDUIT TO LOCATION REQUIRED FOR NEW GENERATOR.
4. NEW GENERATOR. SEE ELECTRICAL DRAWINGS AND SPECIFICATION FOR DETAILS.

LEGEND:

- ELECTRICAL
- WATER
- SANITARY SEWER
- FORCE MAIN
- PROPERTY LINE
- UNDERGROUND ELECTRICAL
- CHAIN LINK FENCE
- EDGE OF CONCRETE
- 1010 CONTOUR LEVEL

NO.	DATE	REVISION	BY	APVD

DSGN J PACHECO | DR E GRIGGS | CHK T WYNN | APVD I LILLEY

Jacobs

10 10TH STREET, SUITE 1400
ATLANTA, GA 30309
GA LIC # PEF000350 (EXP 6/30/2022)

S5036 -
FY21 MULTIPLE PUMP STATIONS PROJECTS
COBB COUNTY WATER SYSTEM
GEORGIA

CIVIL
BRUSHY MOUNTAIN PUMP HOUSE PUMP HOUSE LAYOUT

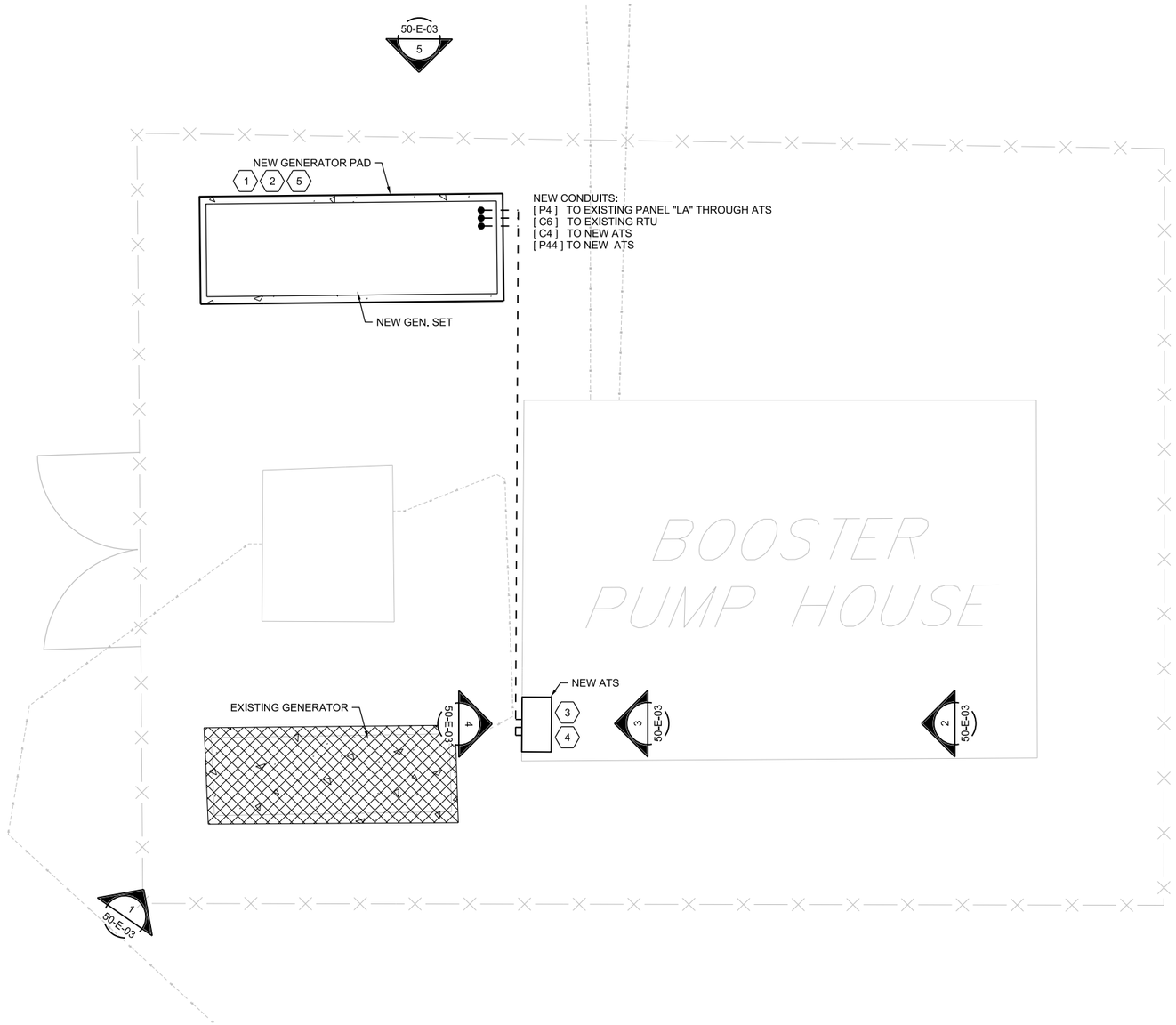
1/4"=1'

VERIFY SCALE

BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

DATE	
PROJ	JJX13603
DWG	50-C-01
SHEET	of

BID DOCUMENTS



PLAN
3/8" = 1'-0"

SHEET KEYNOTES

1. REMOVE THE EXISTING GENERATOR AND INSTALL NEW GENERATOR IN THE PROPOSED LOCATION. PROVIDE STATE TANK PER COBB COUNTY FIRE MARSHAL REQUIREMENTS (SEE 16230B-SUPPLEMENT). DEMOLISH THE EXISTING GENERATOR PAD. CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING NEW GENERATOR PAD FOR THE SELECTED NEW DIESEL GENERATOR. MINIMUM GENERATOR PAD SIZE = 144" X 51".
2. CONTRACTOR SHALL DEMOLISH THE EXISTING CONDUITS AND CONDUCTORS TO AND FROM EXISTING GENERATOR. ADDITIONALLY, CONTRACTOR SHALL PROVIDE NEW CONDUITS AND CONDUCTORS TO AND FROM NEW GENERATOR AS SHOWN ON DRAWINGS.
3. CONTRACTOR SHALL FIELD VERIFY AND RECORD ALL THE EXISTING CONDUITS AND CONDUCTORS TO AND FROM EXISTING GENERATOR AND ATS PRIOR TO REPLACING THEM WITH NEW GENERATOR AND ATS.
4. SEE DRAWING 50-E-02 FOR ONE LINE.
5. BOUND NEW GEN. SET TO GROUND LOOP.
6. PROVIDE PORTABLE FIRE EXTINGUISHER PER COBB COUNTY FIRE MARSHAL REQUIREMENTS. FIRE EXTINGUISHER SHALL COMPLY WITH NPFA.
7. CONTRACTOR SHALL MINIMIZE THE TIME THAT PUMP STATION WILL BE OUT OF SERVICE DUE TO EQUIPMENT REPLACEMENT (<2 HOURS). COORDINATE THE OUT OF SERVICE DATE, TIME, AND DURATION WITH COBB COUNTY WATER SYSTEM.

NO.	DATE	REVISION	BY	APVD
DSGN	T HOMAYOONI	DR	G MESSER	CHK	KB HORTON	APVD	T HOMAYOONI

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ATLANTA, GA 30309
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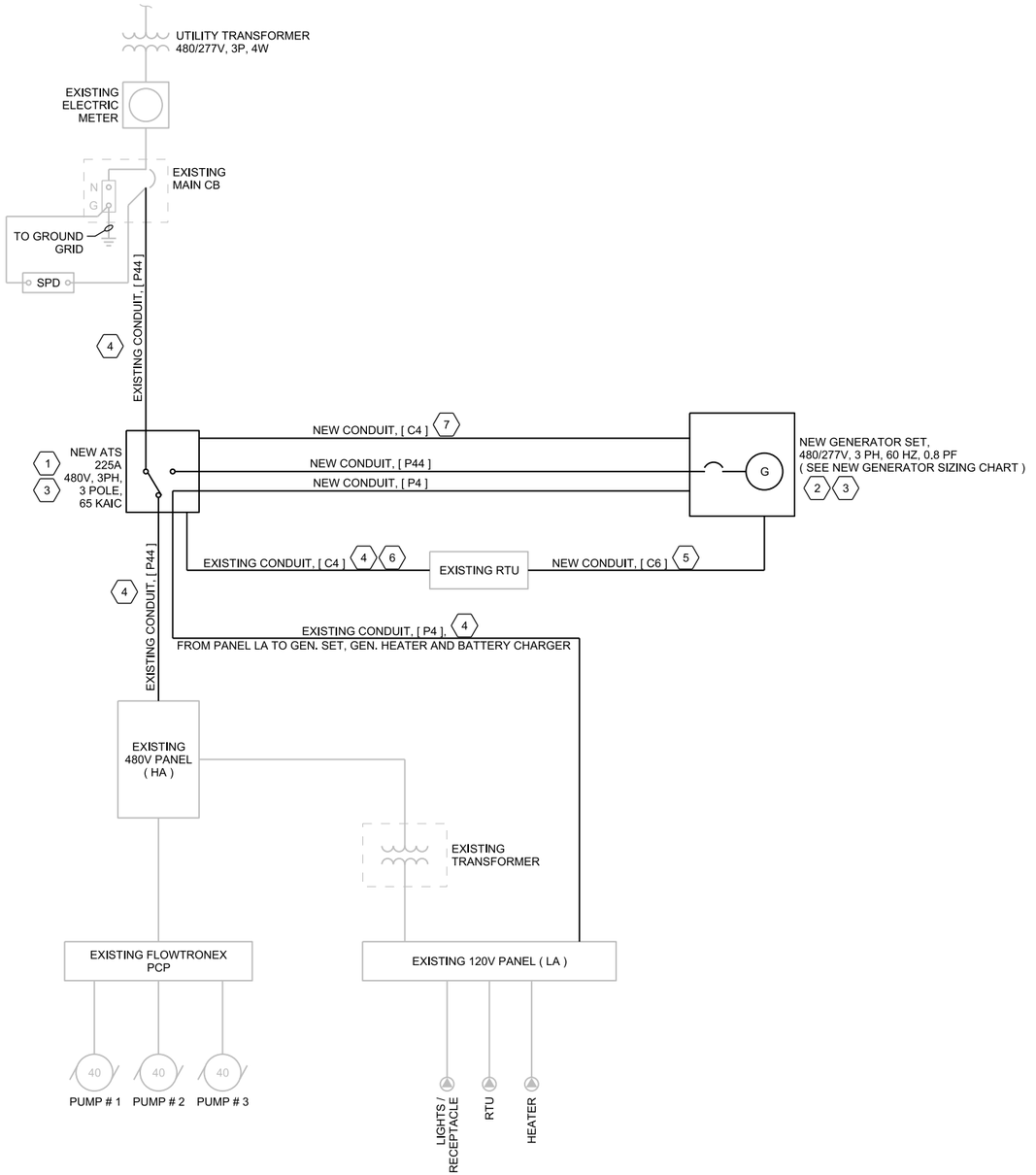
S5036 -
FY21 MULTIPLE PUMP STATIONS PROJECTS
COBB COUNTY WATER SYSTEM
GEORGIA

ELECTRICAL
BRUSHY MOUNTAIN PUMP HOUSE ELECTRICAL SITE PLAN

BID DOCUMENTS

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

DATE	
PROJ	JJX13603
DWG	50-E-01
SHEET	of



ONE LINE DIAGRAM
NTS

NEW GENERATOR SIZING CHART

CATEPILLAR	125 KW
KOHLER	150 KW
CUMMINS	125 KW

GENERAL SHEET NOTES

1. PROVIDE ALL NEW CONDUITS / CABLES SHOWN ON ONE LINE. FIELD ROUTE THE CONDUITS / CABLES.

SHEET KEYNOTES

1. REMOVE THE EXISTING ATS AND INSTALL NEW ATS IN THE SAME LOCATION. BOUND NEW ATS TO GROUND LOOP.
2. REMOVE THE EXISTING GENERATOR AND INSTALL NEW GENERATOR IN THE PROPOSED LOCATION. BOUND NEW GEN. SET TO GROUND.
3. CONTRACTOR SHALL FIELD VERIFY AND RECORD ALL THE EXISTING CONDUITS AND CONDUCTORS TO AND FROM EXISTING GENERATOR AND ATS PRIOR TO REPLACING THEM WITH NEW GENERATOR AND ATS.
4. CONTRACTOR SHALL REUSE THE EXISTING CONDUITS. THE EXISTING CONDUCTORS THAT ARE CURRENTLY INSTALLED SHALL BE DEMOLISHED. ADDITIONALLY, THE CONTRACTOR SHALL PROVIDE AND INSTALL NEW CONDUCTORS WITHIN THE EXISTING CONDUITS AS SHOWN ON DRAWINGS. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MODIFICATIONS REQUIRED TO CONDUITS.
5. CONTROL WIRES FOR GENERATOR SET, ON, FAULT, AND LOW FUEL. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY REQUIRED MODIFICATIONS TO EXISTING RTU FOR CONNECTIONS FROM GEN. SET.
6. CONTROL WIRES FOR AUTOMATIC TRANSFER SWITCH (ATS). ATS IN "NORMAL" POSITION. ATS IN "GENERATOR" POSITION. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY REQUIRED MODIFICATIONS TO EXISTING RTU FOR CONNECTIONS FROM GEN. SET.
7. CONTROL WIRES FOR GENERATOR SET, START/STOP.

NO.	DATE	DSGN	DR	CHK	APVD	BY	REVISION
		T HOMAYOONI	G MESSER	KB HORTON	APVD	T HOMAYOONI	

10 10TH STREET, SUITE 1400
ATLANTA, GA 30309
GA LIC # PEF000350 (EXP 6/30/2022)

Jacobs

S5036 -
FY21 MULTIPLE PUMP STATIONS PROJECTS
COBB COUNTY WATER SYSTEM
GEORGIA

ELECTRICAL

BRUSHY MOUNTAIN PUMP HOUSE ONE LINE DIAGRAM

BID DOCUMENTS

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

DATE	
PROJ	JJX13603
DWG	50-E-02
SHEET	of

1 PHOTO DETAIL
NTS
50-E-01

2 PHOTO DETAIL
NTS
50-E-01

3 PHOTO DETAIL
NTS
50-E-01

4 PHOTO DETAIL
NTS
50-E-01

5 PHOTO DETAIL
NTS
50-E-01

SHEET KEYNOTES

1. EXISTING GENERATOR AND GENERATOR PAD TO BE REMOVED AND REPLACED WITH NEW GENERATOR AT PROPOSED LOCATION. BOND NEW GEN. SET TO GROUND LOOP. SEE DRAWING 50-E-02 FOR ONE LINE AND GENERATOR SIZING CHART.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING NEW GENERATOR PAD TO MATCH THE SELECTED NEW DIESEL GENERATOR.
3. CONTRACTOR SHALL INSTALL NEW CONDUITS AND CONDUCTORS TO AND FROM GENERATOR. THE EXISTING CONDUITS AND CONDUCTORS THAT ARE CURRENTLY INSTALLED SHALL BE DEMOLISHED.
4. EXISTING AUTOMATIC TRANSFER SWITCH (ATS) TO BE REMOVED AND REPLACED WITH NEW ATS AT THE SAME LOCATION. SEE DRAWING 50-E-02 FOR ONE LINE. BOUND NEW ATS TO GROUND LOOP.
5. CONTRACTOR SHALL REUSE THE EXISTING CONDUITS TO AND FROM ATS. THE EXISTING CONDUCTORS THAT ARE CURRENTLY INSTALLED SHALL BE DEMOLISHED. ADDITIONALLY, THE CONTRACTOR SHALL PROVIDE AND INSTALL NEW CONDUCTORS WITHIN THE EXISTING CONDUITS AS SHOWN ON DRAWINGS. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MODIFICATIONS REQUIRED TO CONDUITS FOR THE NEW ATS. FIELD VERIFY THE EXACT CONDUIT STUB-UP.
6. USE THE EXISTING PENETRATION TO CONNECT NEW CONDUCTORS FROM GENERATOR TO ATS AND RTU.

NO.	DATE	REVISION	BY	APVD
DSGN	T HOMAYOONI	DR G MESSER	CHK KB HORTON	APVD T HOMAYOONI

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S5036 -
FY21 MULTIPLE PUMP STATIONS PROJECTS
COBB COUNTY WATER SYSTEM
GEORGIA

Jacobs

ELECTRICAL
BRUSHY MOUNTAIN
PUMP HOUSE
PHOTO DETAILS

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

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PROJ	JJX13603
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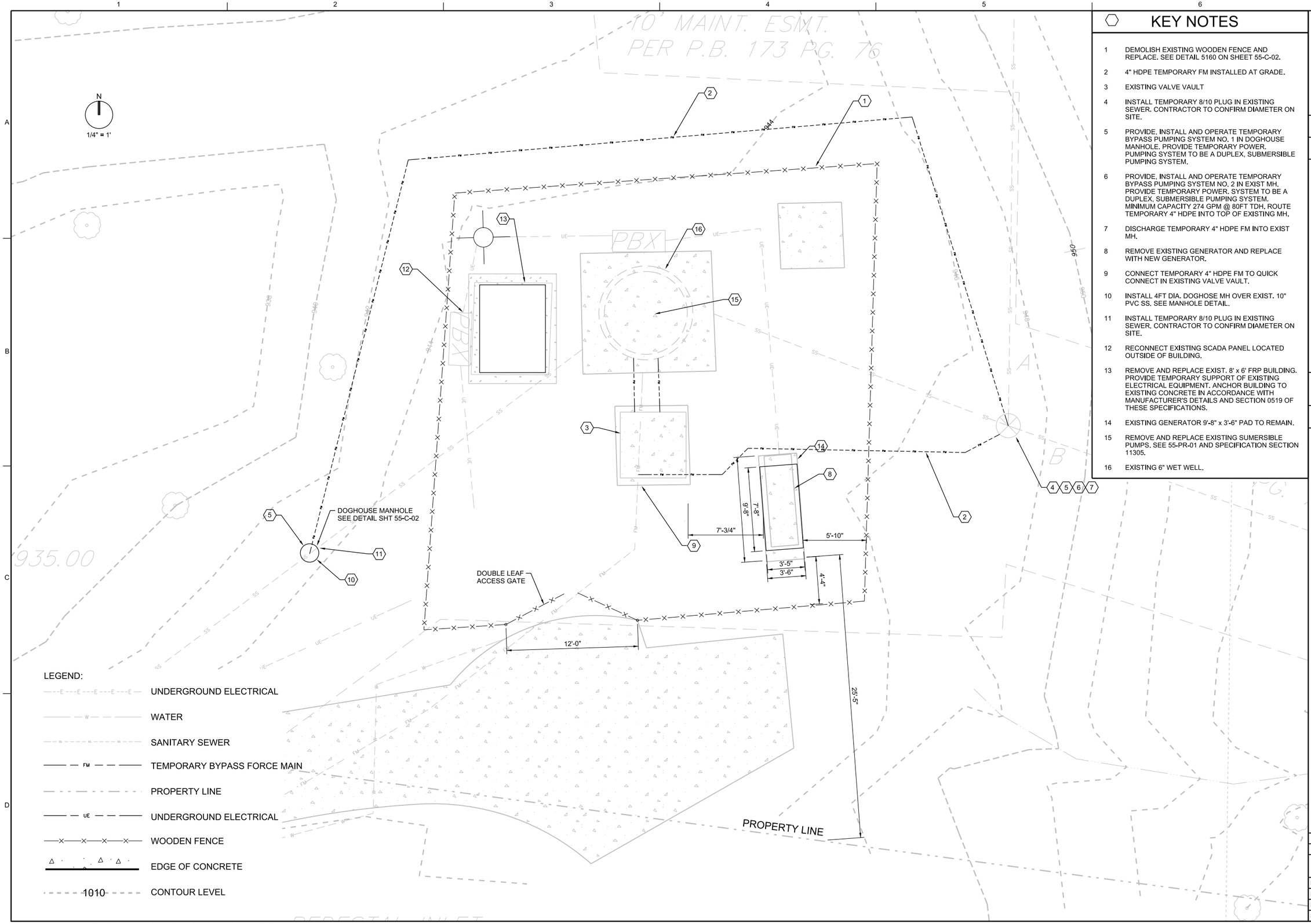
SHEET	of

BID DOCUMENTS



KEY NOTES

1. DEMOLISH EXISTING WOODEN FENCE AND REPLACE. SEE DETAIL 5160 ON SHEET 55-C-02.
2. 4" HDPE TEMPORARY FM INSTALLED AT GRADE.
3. EXISTING VALVE VAULT
4. INSTALL TEMPORARY 8/10 PLUG IN EXISTING SEWER. CONTRACTOR TO CONFIRM DIAMETER ON SITE.
5. PROVIDE, INSTALL AND OPERATE TEMPORARY BYPASS PUMPING SYSTEM NO. 1 IN DOGHOUSE MANHOLE. PROVIDE TEMPORARY POWER. PUMPING SYSTEM TO BE A DUPLEX, SUBMERSIBLE PUMPING SYSTEM.
6. PROVIDE, INSTALL AND OPERATE TEMPORARY BYPASS PUMPING SYSTEM NO. 2 IN EXIST MH. PROVIDE TEMPORARY POWER. SYSTEM TO BE A DUPLEX, SUBMERSIBLE PUMPING SYSTEM. MINIMUM CAPACITY 274 GPM @ 80FT TDH. ROUTE TEMPORARY 4" HDPE INTO TOP OF EXISTING MH.
7. DISCHARGE TEMPORARY 4" HDPE FM INTO EXIST MH.
8. REMOVE EXISTING GENERATOR AND REPLACE WITH NEW GENERATOR.
9. CONNECT TEMPORARY 4" HDPE FM TO QUICK CONNECT IN EXISTING VALVE VAULT.
10. INSTALL 4FT DIA. DOGHOSE MH OVER EXIST. 10" PVC SS. SEE MANHOLE DETAIL.
11. INSTALL TEMPORARY 8/10 PLUG IN EXISTING SEWER. CONTRACTOR TO CONFIRM DIAMETER ON SITE.
12. RECONNECT EXISTING SCADA PANEL LOCATED OUTSIDE OF BUILDING.
13. REMOVE AND REPLACE EXIST. 8' x 6' FRP BUILDING. PROVIDE TEMPORARY SUPPORT OF EXISTING ELECTRICAL EQUIPMENT. ANCHOR BUILDING TO EXISTING CONCRETE IN ACCORDANCE WITH MANUFACTURER'S DETAILS AND SECTION 0519 OF THESE SPECIFICATIONS.
14. EXISTING GENERATOR 9'-8" x 3'-6" PAD TO REMAIN.
15. REMOVE AND REPLACE EXISTING SUMERSIBLE PUMPS. SEE 55-PR-01 AND SPECIFICATION SECTION 11305.
16. EXISTING 6" WET WELL.

NO.	DATE	DSGN	DR	CHK	APVD	BY	REVISION
	J PACHECO	E GRIGGS	T WYNN	APVD	L LILLEY		

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ATLANTA, GA 30309
GA LIC # PEF000350 (EXP 6/30/2022)

S5036 -
FY21 MULTIPLE PUMP STATIONS PROJECTS
COBB COUNTY WATER SYSTEM
GEORGIA

Jacobs

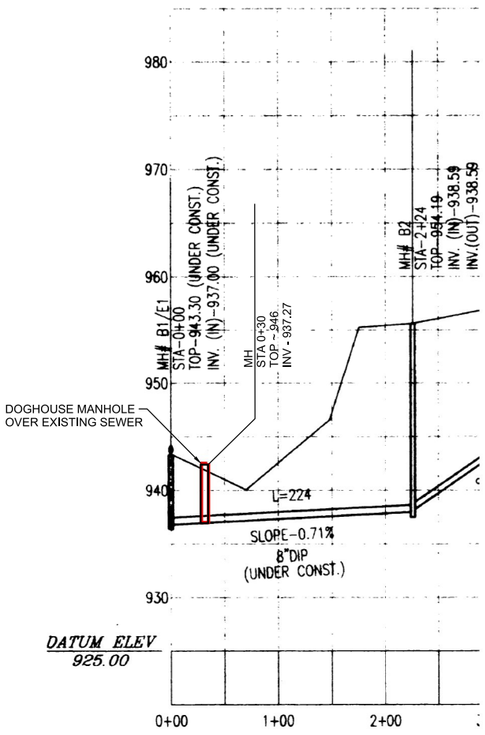
CIVIL

MARINA TRACE PUMP STATION SITE LAYOUT

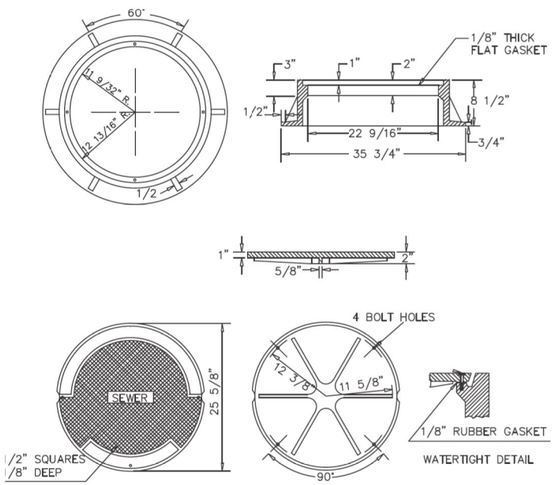
BID DOCUMENTS

1/4"=1'
VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

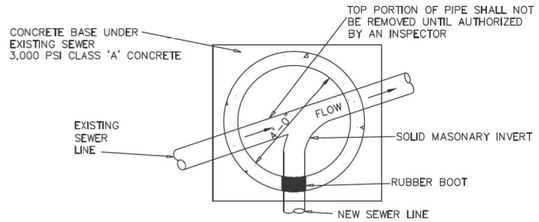
DATE	
PROJ	JJX13603
DWG	55-C-01
SHEET	of

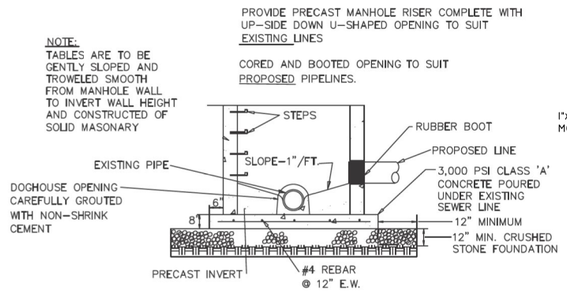


PROFILE
NTS

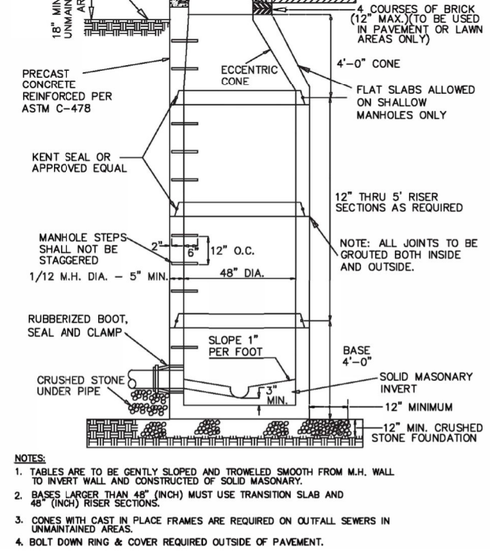


BOLT DOWN FRAME COVER
NTS TO BE APPROVED BY OWNER

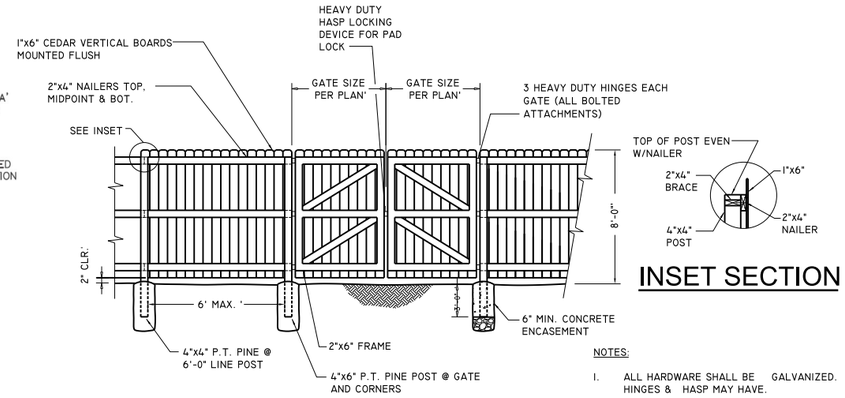




DOGHOUSE MANHOLE
NTS



PRECAST MANHOLE SECTION
NTS



INSET SECTION

NOTES:

1. ALL HARDWARE SHALL BE GALVANIZED. HINGES & HASP MAY HAVE.
2. OPTIONAL FLAT BLACK FINISH. ALL PINE SHALL BE MIN.
3. #2 SOUTHERN YELLOW PINE PRESSURE TREATED FOR IN GROUND USE.

WOODEN FENCE (5160)
NTS

NO.	DATE	REVISION	BY	APVD
DSGN	J PACHECO	DR E GRIGGS CHK	T WYNN	APVD L LILLEY

10 10TH STREET, SUITE 1400
ATLANTA, GA 30309
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S5036 -
FY21 MULTIPLE PUMP STATIONS PROJECTS
COBB COUNTY WATER SYSTEM
GEORGIA

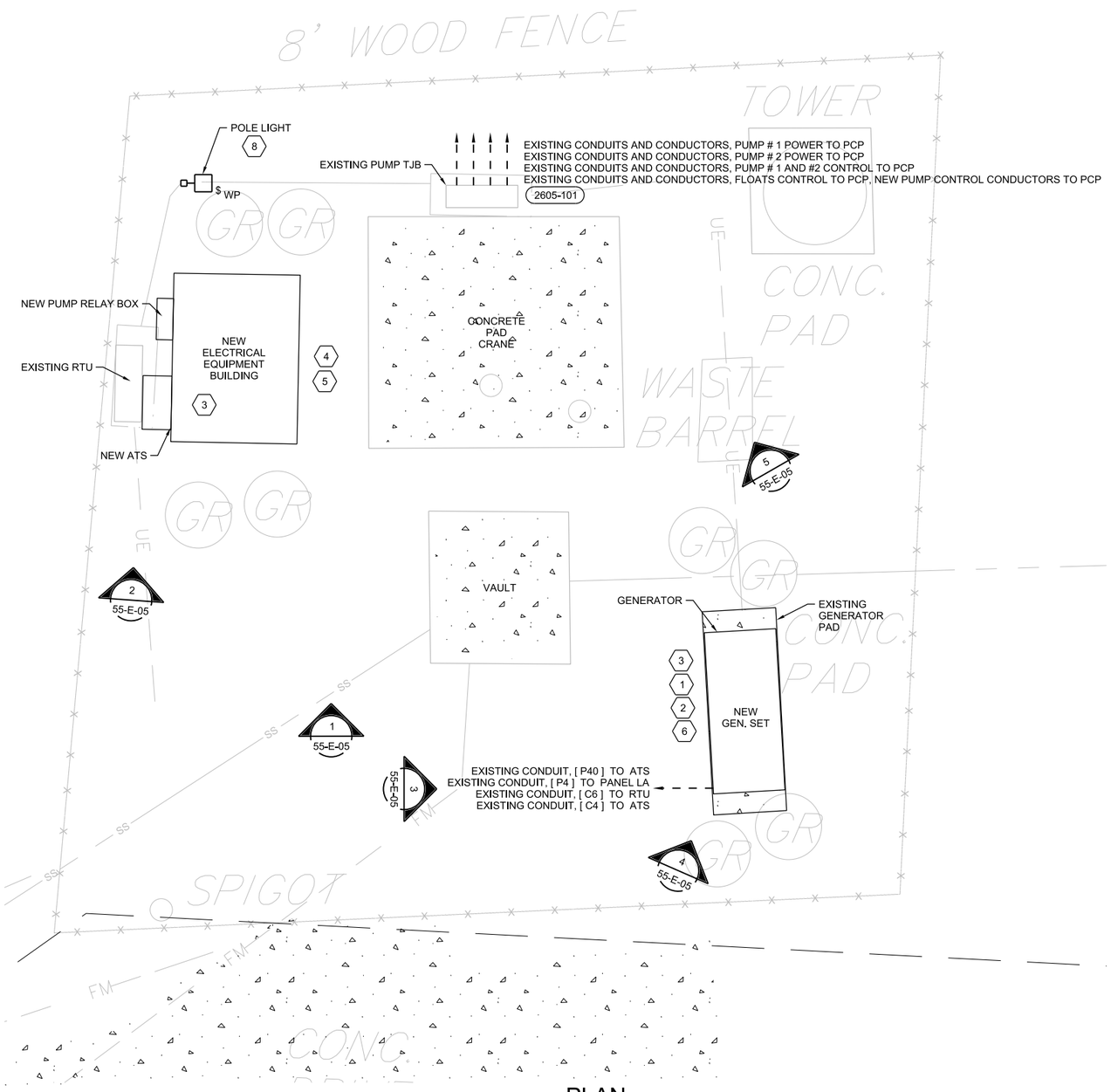
Jacobs

CIVIL
MARINA TRACE
MANHOLE AND FENCE
DETAILS

BID DOCUMENTS

1/4"=1'
VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"

DATE	
PROJ	JJX13603
DWG	55-C-02
SHEET	of



PLAN
3/8" = 1'-0"

LEGEND:

WOOD FENCE

EDGE OF CONCRETE

1010 CONTOUR LEVEL

SHEET KEYNOTES

1. REMOVE THE EXISTING GENERATOR AND INSTALL NEW GENERATOR IN THE SAME LOCATION. EXISTING GENERATOR PAD SIZE IS 116" X 42". CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MODIFICATIONS REQUIRED TO MODIFY THE GENERATOR PAD TO MATCH THE SELECTED NEW DIESEL GENERATOR.
2. CONTRACTOR SHALL REUSE THE EXISTING CONDUITS TO AND FROM GENERATOR. THE EXISTING CONDUCTORS THAT ARE CURRENTLY INSTALLED SHALL BE DEMOLISHED. ADDITIONALLY, THE CONTRACTOR SHALL PROVIDE AND INSTALL NEW CONDUCTORS WITHIN THE EXISTING CONDUITS AS SHOWN ON DRAWINGS. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MODIFICATIONS REQUIRED TO CONDUITS FOR THE NEW GENERATORS. FIELD VERIFY THE EXACT CONDUIT STUB-UP.
3. CONTRACTOR SHALL FIELD VERIFY AND RECORD ALL THE EXISTING CONDUITS AND CONDUCTORS TO AND FROM EXISTING GENERATOR AND ATS PRIOR TO REPLACE THEM WITH NEW GENERATOR AND ATS.
4. EXISTING ELECTRICAL EQUIPMENT BUILDING TO BE REMOVED AND REPLACED WITH NEW BUILDING IN KIND ON THE EXISTING CONCRETE PAD. MANUFACTURED BY KENCO PLASTIC CO. SEE DRAWING 55-E-02 THE NEW ELECTRICAL EQUIPMENT BUILDING LAYOUT.
5. SEE DRAWING 55-E-03 FOR ONE LINE AND CONDUITS ROUTING WITHIN THE NEW ELECTRICAL EQUIPMENT BUILDING.
6. BOUND NEW GEN. SET TO GROUND LOOP.
7. PROVIDE PORTABLE FIRE EXTINGUISHER PER COBB COUNTY FIRE MARSHAL REQUIREMENTS. FIRE EXTINGUISHER SHALL COMPLY WITH NPFA 10.
8. REPLACE THE EXISTING POLE LIGHT FIXTURE WITH NEW LED FIXTURE. LED AREA LIGHT, DIE-CAST ALUMINUM HOUSING, -400C TO 400C OPERATING TEMPERATURE, 60 LED HEAD, 700MA DRIVER, 5000K COLOR TEMPERATURE, 70 CRI, TYPE 3 LIGHT DISTRIBUTION, 5 YEAR WARRANTY. HUBBLE CIMARRON LED SERIES, "CL1-60L-A-5K-3 OR APPROVED EQUAL. INSTALL A NEW WATER PROOF LIGHT SWITCH AT THE EXISTING POLE AND CONNECT IT TO THE NEW LIGHT.

NO.	DATE	DSGN	DR	CHK	APVD
REVISION		T HOMAYOONI	G MESSER	KB HORTON	APVD
BY	APVD				
T HOMAYOONI					

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S5036 -
FY21 MULTIPLE PUMP STATIONS PROJECTS
COBB COUNTY WATER SYSTEM
GEORGIA

ELECTRICAL
MARINA TRACE PUMP STATION
ELECTRICAL SITE PLAN

1/4"=1'
VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

DATE	
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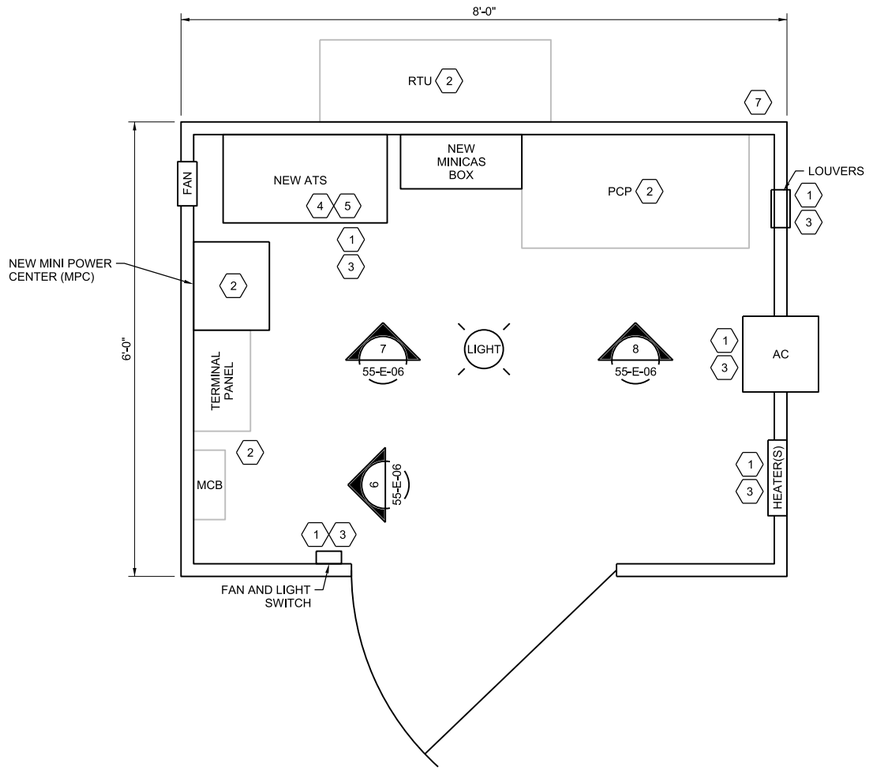
BID DOCUMENTS



ELECTRICAL EQUIPMENT BUILDING LAYOUT

1" = 1'-0"

PANEL: LP			LOCATION: MARINA TRACE P.S					
SERVICE VOLTAGE: 120/240V			PHASE: 1		WIRE: 3			
TOTAL LOAD KVA: 7.1			BUS SIZE: 50A		MAIN SIZE: 50A		TYPE: BREAKER	
REMARKS:			NEUTRAL: FULL		MOUNTING: SURFACE			
LOAD IN KVA			BKR	CKT	CKT	BKR		LOAD IN KVA
A	B	CIRCUIT DESCRIPTION	A/P	NO.	NO.	A/P	CIRCUIT DESCRIPTION	A	B
0.4		RECEPTACLES	20/1	1	2	20/1	FAN	0.5	
	0.2	INT. LIGHT	20/1	3	4	20/1	HVAC		0.5
0.5		SITE LIGHT	20/1	5	6	20/1	HEATER 1	1.5	
	0.5	RTU	20/1	7	8	20/1	HEATER 2		1.5
0.5		GEN. BATT. CHARGER	20/1	9	10	20/1	GEN. HEATER	1.0	
		SPARE	20/1	11	12	20/1	SPARE		
		SPARE	20/1	13	14	20/1	SPARE		
		SPARE	20/1	15	16	20/1	SPARE		
		SPARE	20/2	17	18	20/2	SPARE		
				19	20				
1.4	0.7	TOTAL						3.0	2.0

SHEET KEYNOTES

1. EXISTING BUILDING TO BE REMOVED AND REPLACED WITH NEW BUILDING IN KIND ON THE EXISTING CONCRETE PAD. FAN, HEATER, INTERIOR LIGHT, AC UNIT, RECEPTACLES, AND ASSOCIATED SWITCHES WILL BE FURNISHED BY BUILDING VENDOR (KENCO PLASTIC CO.) CONTRACTOR SHALL PROVIDE NEW CONDUITS AND CONDUCTORS.
2. EXISTING EQUIPMENT AND SUPPORTS TO REMAIN. DISCONNECT THE EXISTING UNISTRUT FROM THE WALLS. PROVIDE TEMPORARY SUPPORT TO ENSURE EQUIPMENT AND ASSOCIATED CONDUITS ARE STABLE AND PROTECTED. RECONNECT TO NEW BUILDING STRUCTURE.
3. COORDINATE WITH BUILDING VENDOR (KENCO PLASTIC CO.) TO ENSURE THE LOCATION FOR NEW AC, HEATER, FAN, AND LOUVERS DO NOT CONFLICT WITH EXISTING BUILDING LAYOUT AND EQUIPMENT THAT ARE TO BE REMAIN.
4. REMOVE THE EXISTING ATS AND INSTALL NEW ATS IN THE LOCATION SHOWN. CONTRACTOR SHALL FIELD VERIFY AND RECORD ALL THE EXISTING CONDUITS AND CONDUCTORS TO AND FROM EXISTING ATS PRIOR TO REPLACE IT WITH NEW ATS. BOUND NEW ATS TO GROUND LOOP.
5. CONTRACTOR SHALL REUSE THE EXISTING CONDUITS. THE EXISTING CONDUCTORS THAT ARE CURRENTLY INSTALLED SHALL BE DEMOLISHED. ADDITIONALLY, THE CONTRACTOR SHALL PROVIDE AND INSTALL NEW CONDUCTORS WITHIN THE EXISTING CONDUITS AS SHOWN ON DRAWINGS. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MODIFICATIONS REQUIRED TO CONDUITS.
6. SEE DRAWING 55-E-03 FOR ONE LINE DIAGRAM.
7. BOND NEW BUILDING, ALL RACK EQUIPMENT, AND SUPPORT TO GROUND LOOP.
8. PROVIDE PORTABLE FIRE EXTINGUISHER INSIDE THE BUILDING PER COBB COUNTY FIRE MARSHALL REQUIREMENTS.
9. CONTRACTOR SHALL MINIMIZE THE TIME THAT PUMP STATION WILL BE OUT OF SERVICE DUE EQUIPMENT REPLACEMENT (<2 HOURS). COORDINATE THE OUT OF SERVICE DATE, TIME , AND DURATION WITH COBB COUNTY WATER SYSTEM.

NO.	DATE	DR	REVISION	CHK	APVD	BY	APVD
DSGN T HOMAYOONI		G MESSER		KB HORTON		T HOMAYOONI	

10 10TH STREET, SUITE 1400
ATLANTA, GA 30309
GA LIC # PEF000350 (EXP 6/30/2022)

S5036 -
FY21 MULTIPLE PUMP STATIONS PROJECTS
COBB COUNTY WATER SYSTEM
GEORGIA

Jacobs

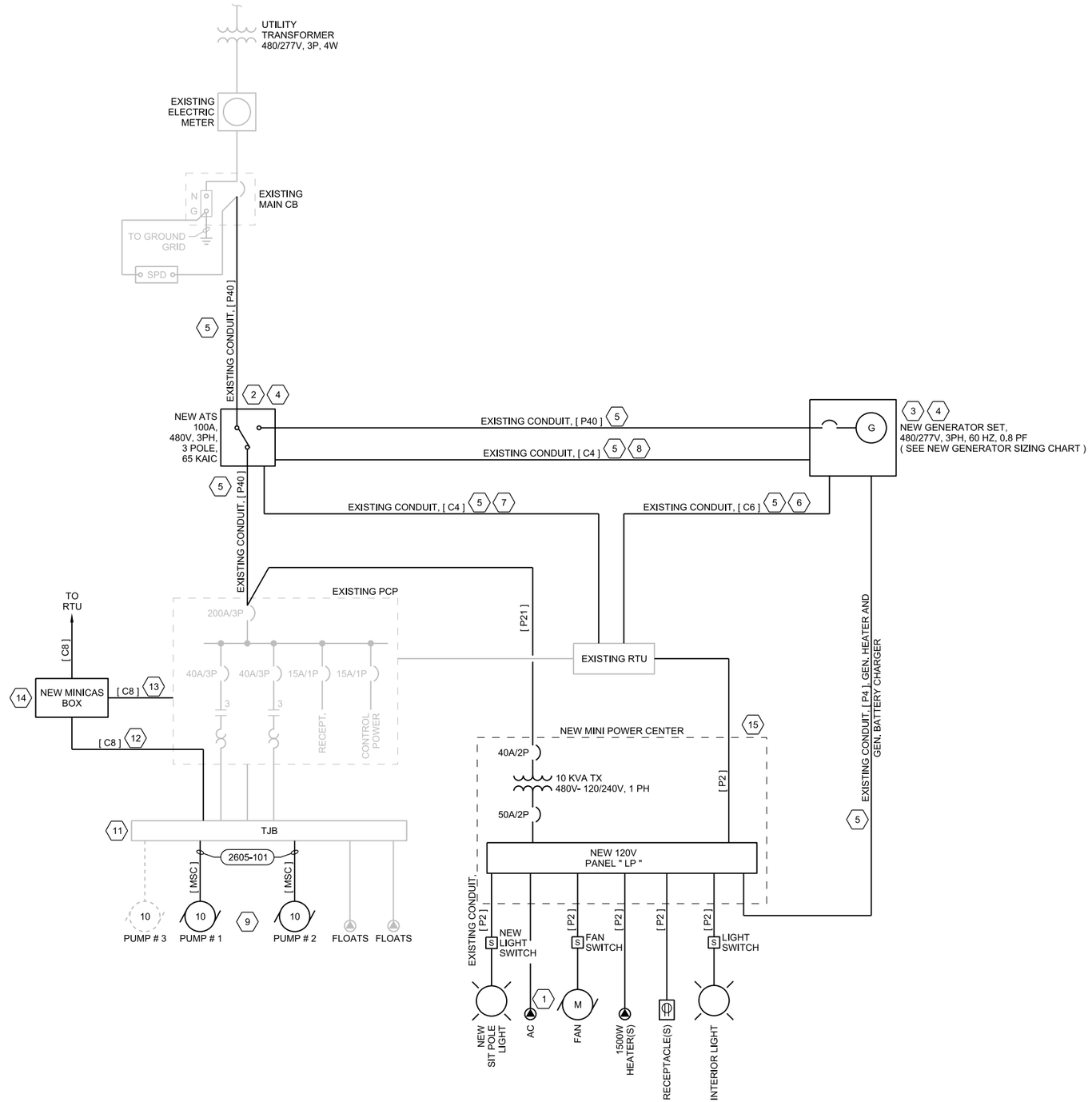
ELECTRICAL

MARINA TRACE PUMP STATION
ELECTRICAL EQUIPMENT BUILDING
LAYOUT AND PANEL SCHEDULE

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

DATE	
PROJ	JJX13603
DWG	55-E-02
SHEET	of

BID DOCUMENTS



NEW GENERATOR SIZING CHART

CATEPILLAR	40 KW
KOHLER	40 KW
CUMMINS	40 KW

GENERAL SHEET NOTES

1. PROVIDE ALL NEW CONDUITS / CABLES SHOWN ON ONE LINE. FIELD ROUTE THE CONDUITS / CABLES.

SHEET KEYNOTES

1. MINI POWER CENTER, FAN, HEATER, INTERIOR LIGHT, AC UNIT, RECEPTACLES, AND ASSOCIATED SWITCHES WILL BE FURNISHED BY BUILDING VENDOR (KENCO PLASTIC CO.) CONTRACTOR SHALL PROVIDE NEW CONDUITS AND CONDUCTORS.
2. REMOVE THE EXISTING ATS AND INSTALL NEW ATS IN THE SAME LOCATION. SEE DRAWING 55-E-02 FOR ADDITIONAL INFORMATION. BOND NEW ATS TO GROUND LOOP.
3. REMOVE THE EXISTING GENERATOR AND INSTALL NEW GENERATOR IN THE SAME LOCATION. BOND NEW GENERATOR SET TO GROUND LOOP. SEE DRAWING 55-E-01 FOR ADDITIONAL INFORMATION.
4. CONTRACTOR SHALL FIELD VERIFY AND RECORD ALL THE EXISTING CONDUITS AND CONDUCTORS TO AND FROM EXISTING GENERATOR AND ATS PRIOR TO REPLACING THEM WITH NEW GENERATOR AND ATS.
5. CONTRACTOR SHALL REUSE THE EXISTING CONDUITS. THE EXISTING CONDUCTORS THAT ARE CURRENTLY INSTALLED SHALL BE DEMOLISHED. ADDITIONALLY, THE CONTRACTOR SHALL PROVIDE AND INSTALL NEW CONDUCTORS WITHIN THE EXISTING CONDUITS AS SHOWN ON DRAWINGS. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MODIFICATIONS REQUIRED TO CONDUITS.
6. CONTROL WIRES FOR GENERATOR SET, ON, FAULT, AND LOW FUEL. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY REQUIRED MODIFICATIONS TO EXISTING RTU FOR CONNECTIONS FROM GENERATOR SET.
7. CONTROL WIRES FOR AUTOMATIC TRANSFER SWITCH (ATS), ATS IN "NORMAL" POSITION. ATS IN "GENERATOR" POSITION. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY REQUIRED MODIFICATIONS TO EXISTING RTU FOR CONNECTIONS FROM ATS.
8. CONTROL WIRES FOR GENERATOR SET, START/STOP.
9. INSTALL NEW PUMPS. TERMINATE THE MANUFACTURER SUPPLIED CABLES (MSC) IN THE EXISTING TERMINAL JUNCTION BOX(TJB). REUSE THE EXISTING POWER CABLES FROM TJB TO PUMP CONTROL PANEL (PCP). RUN NEW CONDUCTORS FROM EXISTING TJB TO NEW PUMP RELAY BOX FOR PUMP PROTECTION MODULES.
10. SEE DRAWING 55-E-02 FOR ELECTRICAL EQUIPMENT BUILDING LAYOUT.
11. LEAVE 18" AIR GAP BETWEEN THE STUBBED UP CONDUITS AND BOTTOM OF JUNCTION BOX. SEAL CONDUITS WITH OZ-GENDEY "DUX" .
12. CONTROL WIRES FROM PUMP TJB TO PUMP #1 AND #2 MINI CAS UNITS.
13. CONTROL AND POWER WIRES TO EXISTING PCP. SEE DRAWING 55-E-04 FOR CONTROL DIAGRAM.
14. INSTALL NEW BOX TO HOUSE NEW MINICAS UNITS AND ASSOCIATED RELAYS FOR PUMP #1 AND #2. BOX SHALL BE HOFFMAN ,CONTINUOUS HINGE WITH CLAMPS, NEMA 12, 20"(W) X 20"(H) X8"(D), OR APPROVED EQUAL.
15. CONTRACTOR SHALL PROVIDE A NEW MINI POWER CENTER (MPC) TO REPLACE THE EXISTING ONE. ADDITIONALLY, CONTRACTOR SHALL PROVIDE NEW CONDUITS AND CONDUCTORS AS SHOWN ON DRAWINGS. SEE DRAWING 45-E-02 FOR PANEL SCHEDULE.

NO.	DATE	DSGN	REVISION	CHK	APVD
	T HOMAYOONI	G MESSER	DR	KB HORTON	APVD
				BY	APVD
				T HOMAYOONI	

10 10TH STREET, SUITE 1400
ATLANTA, GA 30309
GA LIC # PEF000350 (EXP 6/30/2022)

S5036 -
FY21 MULTIPLE PUMP STATIONS PROJECTS
COBB COUNTY WATER SYSTEM
GEORGIA

Jacobs

ELECTRICAL

MARINA TRACE PUMP STATION ONE LINE DIAGRAM

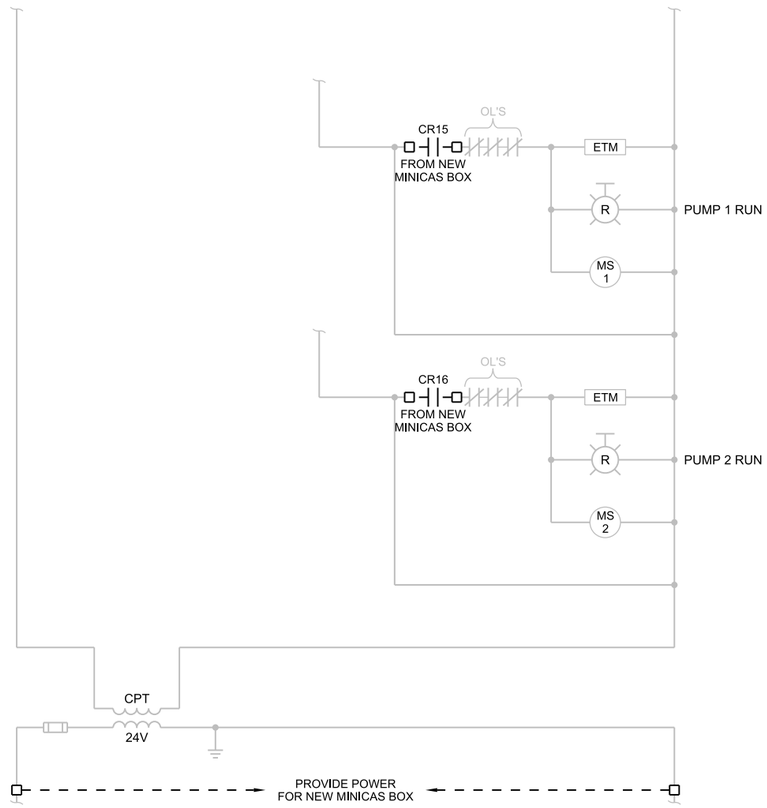
VERIFY SCALE

BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

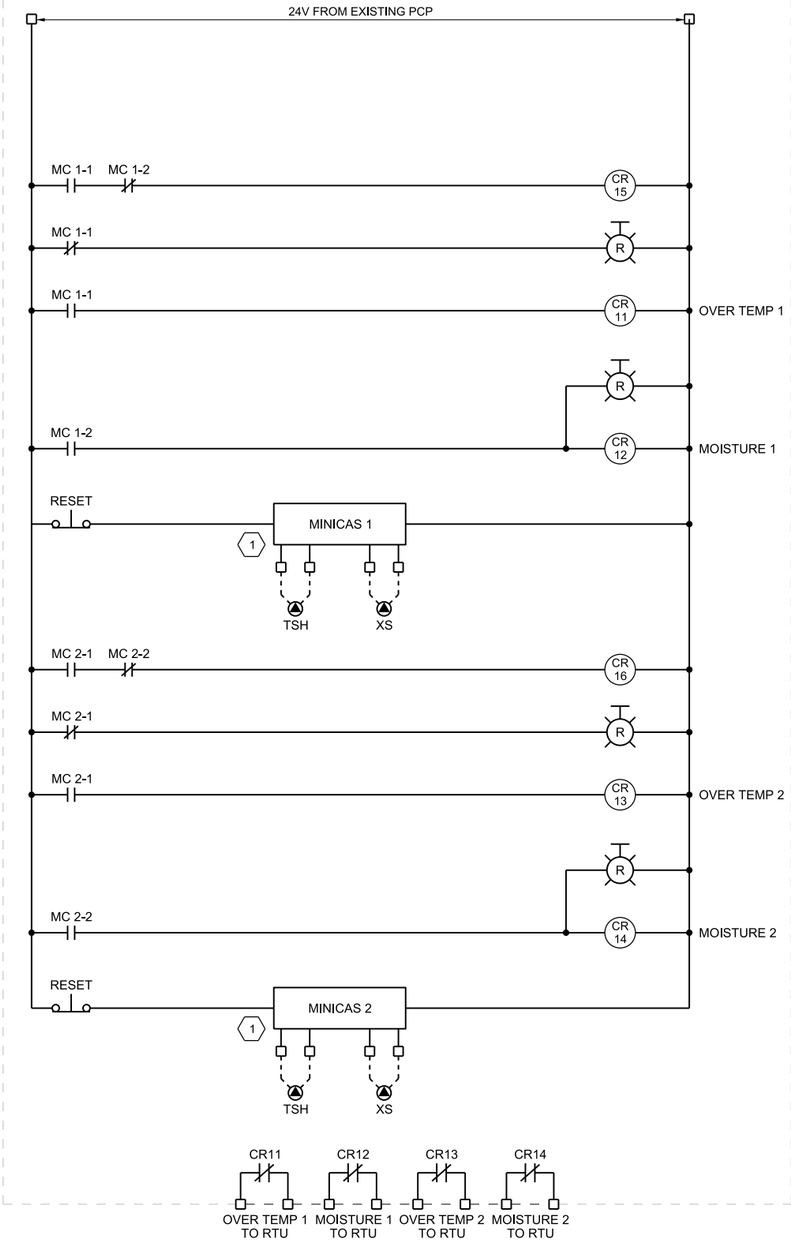
DATE	
PROJ	JJX13603
DWG	55-E-03
SHEET	of

BID DOCUMENTS

EXISTING PUMP CONTROL PANEL (PCP)



NEW NEMA 12 MINICAS BOX



SHEET KEYNOTES

1. INSTALL NEW MINICAS II UNITS PROVIDED BY PUMP MANUFACTURER AND ASSOCIATED RELAYS AND WIRING TERMINALS INSIDE NEW NEMA 12 BOX. MINICAS II UNITS INCLUDE MOTOR OVER TEMPERATURE MONITORING RELAY AND MOISTURE MONITORING RELAY.

NO.	DATE	DSGN
REVISION		
DR	G MESSER	
CHK	KB HORTON	
APVD		
BY	T HOMAYOONI	
APVD		

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ATLANTA, GA 30309
GA LIC # PEF000350 (EXP 6/30/2022)

S5036 -
FY21 MULTIPLE PUMP STATIONS PROJECTS
COBB COUNTY WATER SYSTEM
GEORGIA

ELECTRICAL
MARINA TRACE PUMP STATION CONTROL DIAGRAM

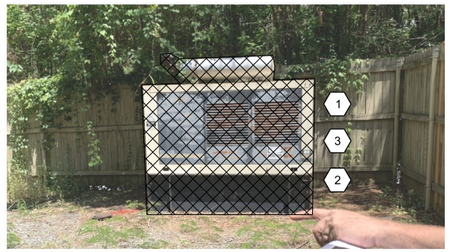
BID DOCUMENTS

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

DATE	
PROJ	JJX13603
DWG	55-E-04
SHEET	of

1 PHOTO DETAIL
NTS
55-E-01

2 PHOTO DETAIL
NTS
55-E-01



3 PHOTO DETAIL
NTS
55-E-01

4 PHOTO DETAIL
NTS
55-E-01

5 PHOTO DETAIL
NTS
55-E-01

SHEET KEYNOTES

1. EXISTING GENERATOR TO BE REMOVED AND REPLACED WITH NEW GENERATOR. BOUND NEW GEN. SET TO GROUND LOOP. SEE DRAWING 55-E-03 FOR ONE LINE AND GENERATOR SIZING CHART.
2. EXISTING GENERATOR PAD SIZE IS 116" X 42". CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MODIFICATIONS REQUIRED TO MODIFY THE GENERATOR PAD TO MATCH THE SELECTED NEW DIESEL GENERATOR.
3. CONTRACTOR SHALL REUSE THE EXISTING CONDUITS TO AND FROM GENERATOR. THE EXISTING CONDUCTORS THAT ARE CURRENTLY INSTALLED SHALL BE DEMOLISHED. ADDITIONALLY, THE CONTRACTOR SHALL PROVIDE AND INSTALL NEW CONDUCTORS WITHIN THE EXISTING CONDUITS AS SHOWN ON DRAWINGS. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MODIFICATIONS REQUIRED TO CONDUITS FOR THE NEW GENERATORS. FIELD VERIFY THE EXACT CONDUIT STUB-UP.
4. EXISTING BUILDING TO BE REMOVED AND REPLACED WITH NEW BUILDING IN KIND. SEE DRAWING 55-E-02 FOR ELECTRICAL EQUIPMENT BUILDING LAYOUT.
5. TERMINATE THE MANUFACTURER SUPPLIED CABLES (MSC) FOR THE NEW PUMPS IN THE EXISTING TERMINAL JUNCTION BOX (TJB). REUSE THE EXISTING POWER CONDUCTORS FROM TJB TO PUMP CONTROL PANEL (PCP). RUN NEW CONDUCTORS FROM EXISTING TJB TO NEW PUMP RELAY BOX FOR PUMP PROTECTION MODULES.

NO.	DATE	REVISION	BY	APVD
DSGN	T HOMAYOONI	DR G MESSER	CHK KB HORTON	APVD T HOMAYOONI

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COBB COUNTY WATER SYSTEM
GEORGIA

Jacobs

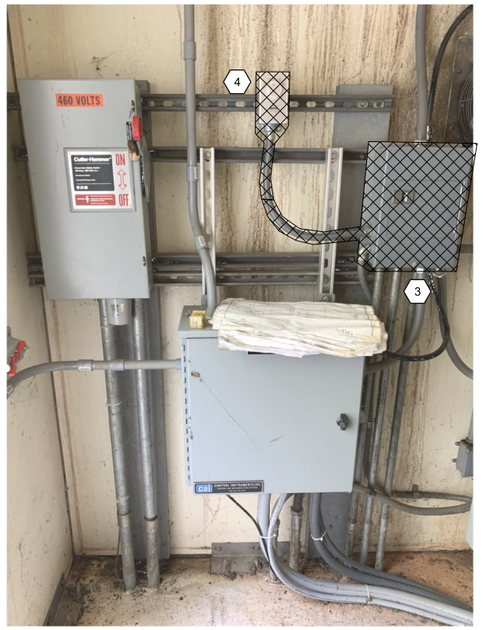
ELECTRICAL

MARINA TRACE PUMP STATION PHOTO DETAILS

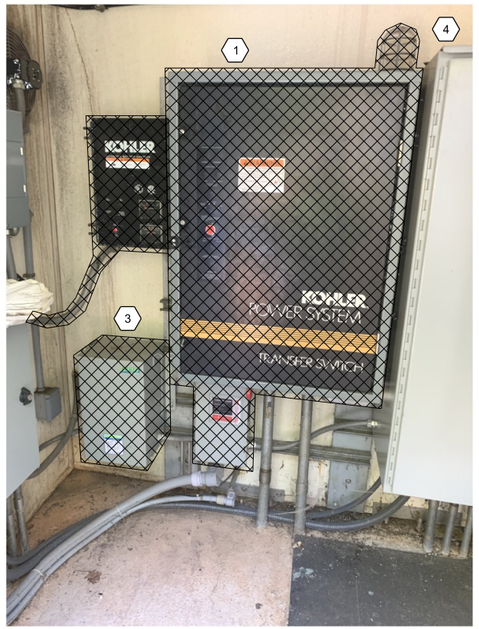
BID DOCUMENTS

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

DATE	
PROJ	JJX13603
DWG	55-E-05
SHEET	of



6 PHOTO DETAIL
NTS
55-E-02



7 PHOTO DETAIL
NTS
55-E-02

8 PHOTO DETAIL
NTS
55-E-02

9 PHOTO DETAIL
NTS
55-E-02

SHEET KEYNOTES

1. EXISTING AUTOMATIC TRANSFER SWITCH (ATS) TO BE REMOVED AND REPLACED WITH NEW ATS AT THE SAME LOCATION. SEE DRAWING 55-E-03 FOR ONE LINE. BOUND NEW ATS TO GROUND LOOP.
2. CONTRACTOR SHALL REUSE THE EXISTING CONDUITS TO AND FROM ATS. THE EXISTING CONDUCTORS THAT ARE CURRENTLY INSTALLED SHALL BE DEMOLISHED. ADDITIONALLY, THE CONTRACTOR SHALL PROVIDE AND INSTALL NEW CONDUCTORS WITHIN THE EXISTING CONDUITS AS SHOWN ON DRAWINGS. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MODIFICATIONS REQUIRED TO CONDUITS FOR THE NEW ATS. FIELD VERIFY THE EXACT CONDUIT STUB-UP.
3. EXISTING BUILDING TO BE REMOVED AND REPLACED WITH NEW BUILDING IN KIND. FAN, HEATER, INTERIOR LIGHT, AC UNIT, RECEPTACLES, AND ASSOCIATED SWITCHES WILL BE FURNISHED BY BUILDING VENDOR (KENCO PLASTIC CO.) CONTRACTOR SHALL PROVIDE NEW CONDUITS AND CONDUCTORS.
4. EXISTING EQUIPMENT AND SUPPORTS TO REMAIN. DISCONNECT THE EXISTING UNISTRUT FROM THE WALLS. PROVIDE TEMPORARY SUPPORT TO ENSURE EQUIPMENT AND ASSOCIATED CONDUITS ARE STABLE AND PROTECTED. RECONNECT TO NEW BUILDING STRUCTURE.

NO.	DATE	REVISION	BY	APVD
DSGN	T HOMAYOONI	DR G MESSER	CHK KB HORTON	APVD T HOMAYOONI

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ATLANTA, GA 30309
GA LIC # PEF000350 (EXP 6/30/2022)

S5036 -
FY21 MULTIPLE PUMP STATIONS PROJECTS
COBB COUNTY WATER SYSTEM
GEORGIA

Jacobs

ELECTRICAL

MARINA TRACE PUMP STATION PHOTO DETAILS

BID DOCUMENTS

VERIFY SCALE
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0 1"

DATE	
PROJ	JJX13603
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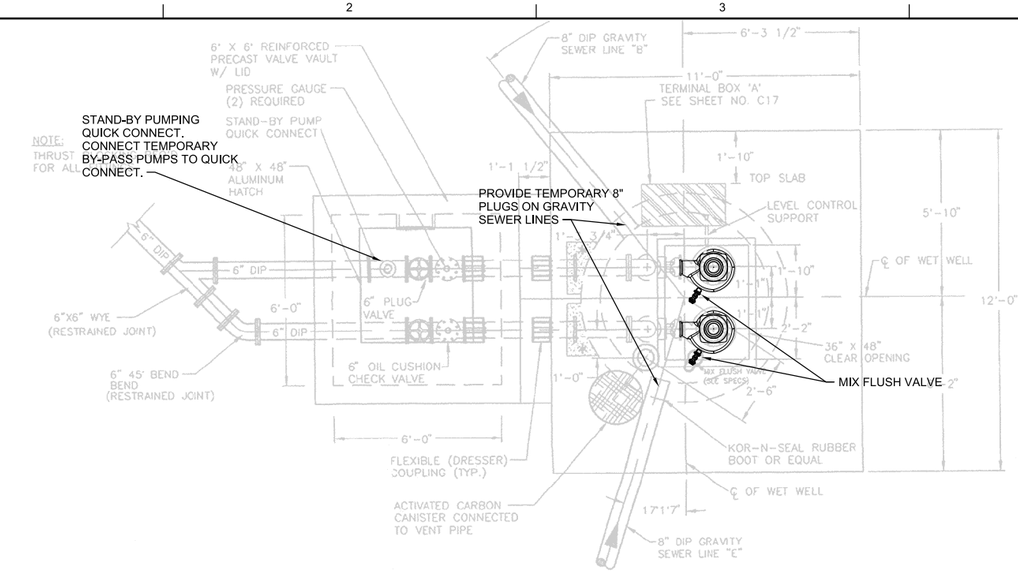
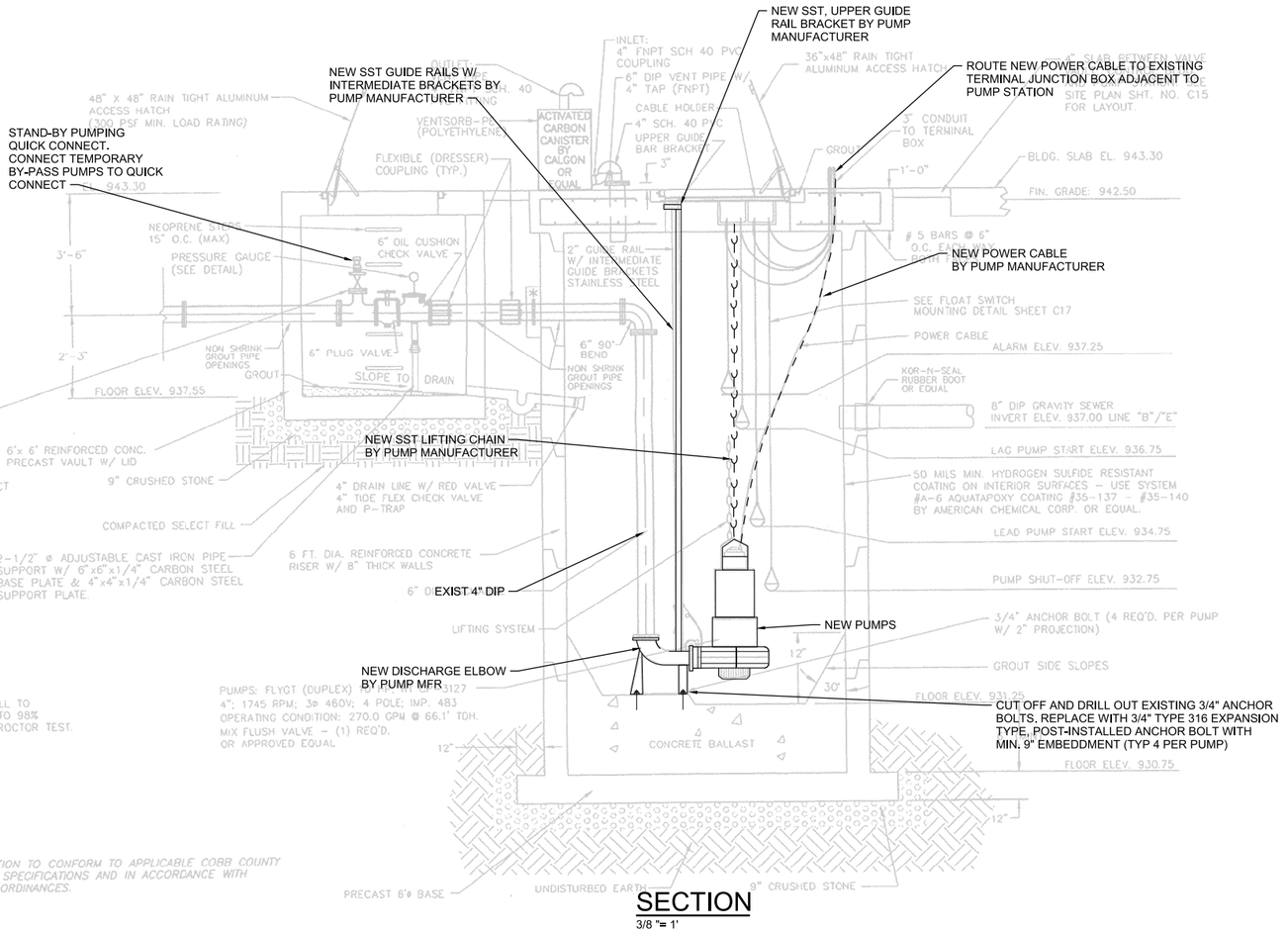
SHEET	of



PLAN

3/8 "= 1'



SECTION

3/8 "= 1'

GENERAL NOTES

1. REMOVE STATION FROM SERVICE. PROVIDE TEMPORARY BY-PASS PUMPING TO 3" STAND-BY PUMP QUICK CONNECT LOCATED IN VALVE VAULT. PROVIDE TEMPORARY PLUGS ON 8" GRAVITY SEWER LINES INTO WETWELL. SEE SITE PLAN 55-C-01 FOR BYPASS PUMPING SYSTEM LOCATIONS AND DETAILS.
2. ISOLATE PUMP ELECTRICALLY USING CCWS TAG -OUT/LOCK-OUT PROCEDURES.
3. ISOLATE PUMP USING EXISTING VALVES.
4. REMOVE PUMPS, POWER CABLES, DISCHARGE ELBOW, AND GUIDE RAILS.
5. INSTALL NEW PUMP AND DISCHARGE ELBOW AND GUIDE RAILS. PUMPS SHALL BE XYLEM NP 3127-388, 1775 RPM, 460 VOLT/3PHASE, 10 HP. SEE SPECIFICATION 11305 FOR ADDITIONAL PUMP INSTALLATION AND START-UP DETAILS AND REQUIREMENTS.
6. INSTALL NEW PUMP EXPANSION TYPE POST-INSTALLEDANCHOR BOLTS PER SPECIFICATION 5019.
7. INSTALL NEW POWER CABLES. SEE ELECTRICAL DRAWINGS FOR DETAILS.
8. INSTALL AND CONNECT NEW PUMP PROTECTIVE RELAYS, MINI-CAS, IN NEW ENCLOSURE MOUNTED TO THE SIDE OF THE EXISTING PUMP CONTROL PANEL LOCATED IN FRP CONTROL BUILDING ADJACENT TO PUMP STATION, SEE ELECTRICAL DRAWINGS FOR CONNECTION DETAILS.
9. PROVIDE MANUFACTURER SERVICES TO INSPECT INSTALLATION AND ASSIST IN START-UP. MANUFACTURER SHALL CERTIFY PUMP INSTALLATION PRIOR TO START-UP.
10. RESTORE POWER AND START-UP PUMPS.
11. PERFORM PUMP START-UP AND FIELD TESTING. PERFORM 48 HR FUNCTIONAL TESTING. RECORD PUMP PERFORMANCE DATA AND PROVIDE START-UP REPORT.
12. PLACE PUMP STATION INTO SERVICE.
13. REMOVE TEMPORARY PUMPING SYSTEMS.
14. COAT NEW ELBOW WITH TNEMEC SERIES 431 PERMA-SHEILD PL CERAMIC POLYAMINE EPOXY OR TNEMEC SERIES N69 EPOXY.

NO.	DATE	DSGN	DR	CHK	APVD	BY	REVISION
		T WYNN	E GRIGGS	I LILLEY	APVD	T WYNN	

10 10TH STREET, SUITE 1400
ATLANTA, GA 30309
GA LIC # PEF000350 (EXP 6/30/2022)

S5036 -
FY21 MULTIPLE PUMP STATIONS PROJECTS
COBB COUNTY WATER SYSTEM
GEORGIA

Jacobs

PROCESS MECHANICAL

MARINA TRACE PUMP STATION
PLAN AND SECTION

1/4"=1'
VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

DATE	
PROJ	JJX13603
DWG	55-PR-01
SHEET	of

BID DOCUMENTS

KEY NOTES

1. EXISTING 10' x 5' GENERATOR PAD TO BE DEMOLISHED.
2. NEW 12' x 4'-3" GENERATOR PAD. REFER TO DRAWING 00-G-07 AND ELECTRICAL DRAWINGS FOR INSTALLATION AND CONNECTION DETAILS.
3. REMOVE AND REPLACE GENERATOR.
4. EXISTING FRP BUILDING.
5. EXISTING WET WELL
6. EXISITING VALVE VAULT
7. EXISTING FENCE

N

1/4" = 1'

TOP=867.19'
INV. IN=841.39'
INV.OUT=841.19'

70.47'

12"P.V.C.

N60°15'26"E

RADIO TOWER

7' CHAIN LINK

EASEMENT LINE

865

8' WOODEN PRIVACY

SHED

4

5

LP/M

LID

LID

12'-10"

5'-10 1/8"

4'-4"

3'-8"

5'-0"

12'-0"

11'-6"

10'-0"

3'-11"

14'-0"

7

6

3

2

1

CRAIN

LID

CONC.

GENERATOR

S29°24'23"E
45.41'

S60°08'13"W
33.61'

S33°59'46"E
35.28'

6'08"W
60.90'

863

864

866

GRAVEL

12"D.I.P.

W/M

(2)

(1)

LEGEND:

- ELECTRICAL
- WATER
- SANITARY SEWER
- FORCE MAIN
- PROPERTY LINE
- UNDERGROUND ELECTRICAL
- WOODEN FENCE
- EDGE OF CONCRETE
- 1010 CONTOUR LEVEL

NO.	DATE	REVISION	DR	CHK	APVD	BY	APVD
DSGN	J PACHECO		E GRIGGS	L LILLEY		T WYNN	

10 10TH STREET, SUITE 1400
ATLANTA, GA 30309
GA LIC # PEF000350 (EXP 6/30/2022)

S5036 -
FY21 MULTIPLE PUMP STATIONS PROJECTS
COBB COUNTY WATER SYSTEM
GEORGIA

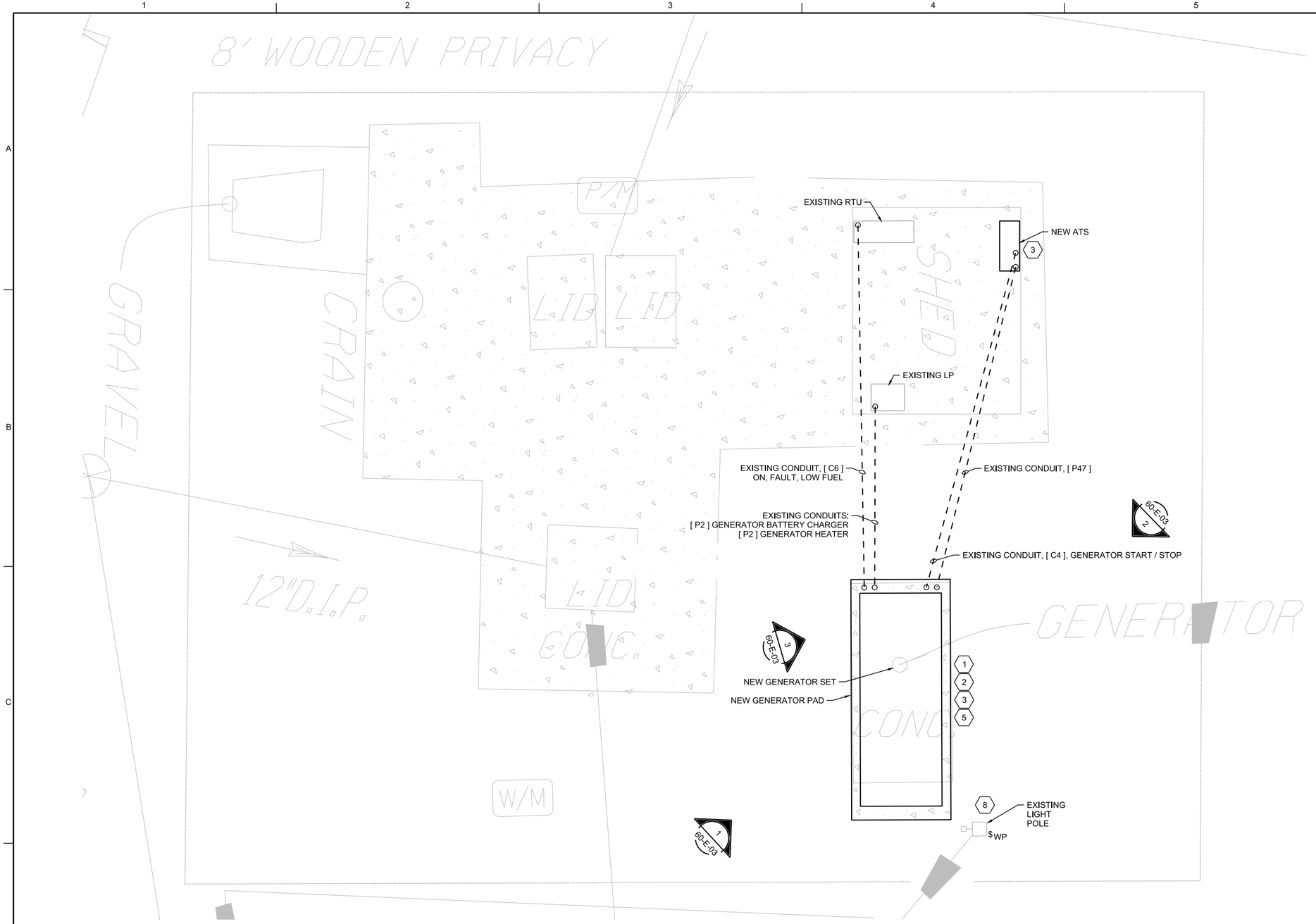
Jacobs

CIVIL

ALLATOONA BEACH PUMP STATION LAYOUT

BID DOCUMENTS

1/4"=1'	
VERIFY SCALE	
BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"	
DATE	
PROJ	JJX13603
DWG	60-C-01
SHEET	of



PLAN
3/8" = 1'-0"

LEGEND:

—×—×—×—×—	WOODEN FENCE
△ · · △ · · △	EDGE OF CONCRETE
----1010----	CONTOUR LEVEL

SHEET KEYNOTES

1. REMOVE THE EXISTING GENERATOR AND INSTALL NEW GENERATOR IN THE SAME LOCATION. PROVIDE STATE TANK PER COBB COUNTY FIRE MARSHAL REQUIREMENTS. (SEE 16230B-SUPPLEMENT). EXISTING GENERATOR PAD SIZE IS 120" X 60". CONTRACTOR SHALL BE RESONSIBLE FOR REPLACING THE EXISTING GENERATOR PAD WITH NEW GENERATOR PAD FOR THE SELECTED NEW DIESEL GENERATOR. MINIMUM GENERATOR PAD SIZE = 144" X 51".
2. CONTRACTOR SHALL REUSE THE EXISTING CONDUITS TO AND FROM GENERATOR. THE EXISTING CONDUCTORS THAT ARE CURRENTLY INSTALLED SHALL BE DEMOLISHED. ADDITIONALLY, THE CONTRACTOR SHALL PROVIDE AND INSTALL NEW CONDUCTORS WITHIN THE EXISTING CONDUITS AS SHOWN ON DRAWINGS. CONTRACTOR SHALL BE RESONSIBLE FOR ALL MODIFICATIONS REQUIRED TO CONDUITS FOR THE NEW GENERATORS. FIELD VERIFY THE CONDUITS TH EXACT CONDUIT STUB-UP.
3. CONTRACTOR SHALL FIELD VERIFY AND RECORD ALL THE EXISTING CONDUITS AND CONDUCTORS TO AND FROM EXISTING GENERATOR AND ATS PRIOR TO REPLACING THEM WITH NEW GENERATOR AND ATS.
4. SEE DRAWING 60-E-02 FOR ONE LINE AND CONDUITS ROUTING WITHIN THE ELECTRICAL EQUIPMENT BUILDING.
5. BOUND NEW GEN. SET TO GROUND LOOP.
6. PROVIDE PORTABLE FIRE EXTINGUISHER PER COBB COUNTY FIRE MARSHAL REQUIREMENTS. FIRE EXTINGUISHER SHALL COMPLY WITH NPFA 10.
7. CONTRACTOR SHALL MINIMIZE THE THE TIME THAT PUMP STATION WILL BE OUT OF SERVICE DUE EQUIPMENT REPLACEMENT (<2 HOURS). COORDINATE THE OUT OF SERVICE DATE, TIME , AND DURATION WITH COBB COUNTY WATER SYSTEM.
8. INSTALL A NEW WATER PROOF LIGHT SWITCH AT THE EXISTING POLE AND CONNECT IT TO THE EXISTING LIGHT.

NO.	DATE	REVISION	BY	APVD
DSGN	T HOMAYOONI	DR	G MESSER	CHK	KB HORTON	APVD	T HOMAYOONI

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ATLANTA, GA 30309
GA LIC # PEF000350 (EXP 6/30/2022)

S5036 -
FY21 MULTIPLE PUMP STATIONS PROJECTS
COBB COUNTY WATER SYSTEM
GEORGIA

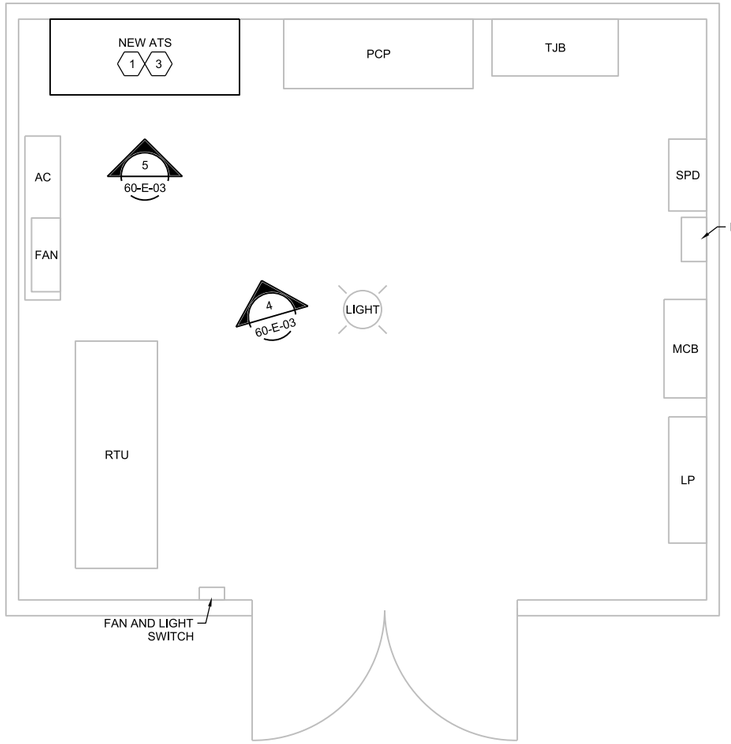
Jacobs

ELECTRICAL
ALLATOONA BEACH PUMP STATION ELECTRICAL SITE PLAN

1/4"=1'
VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

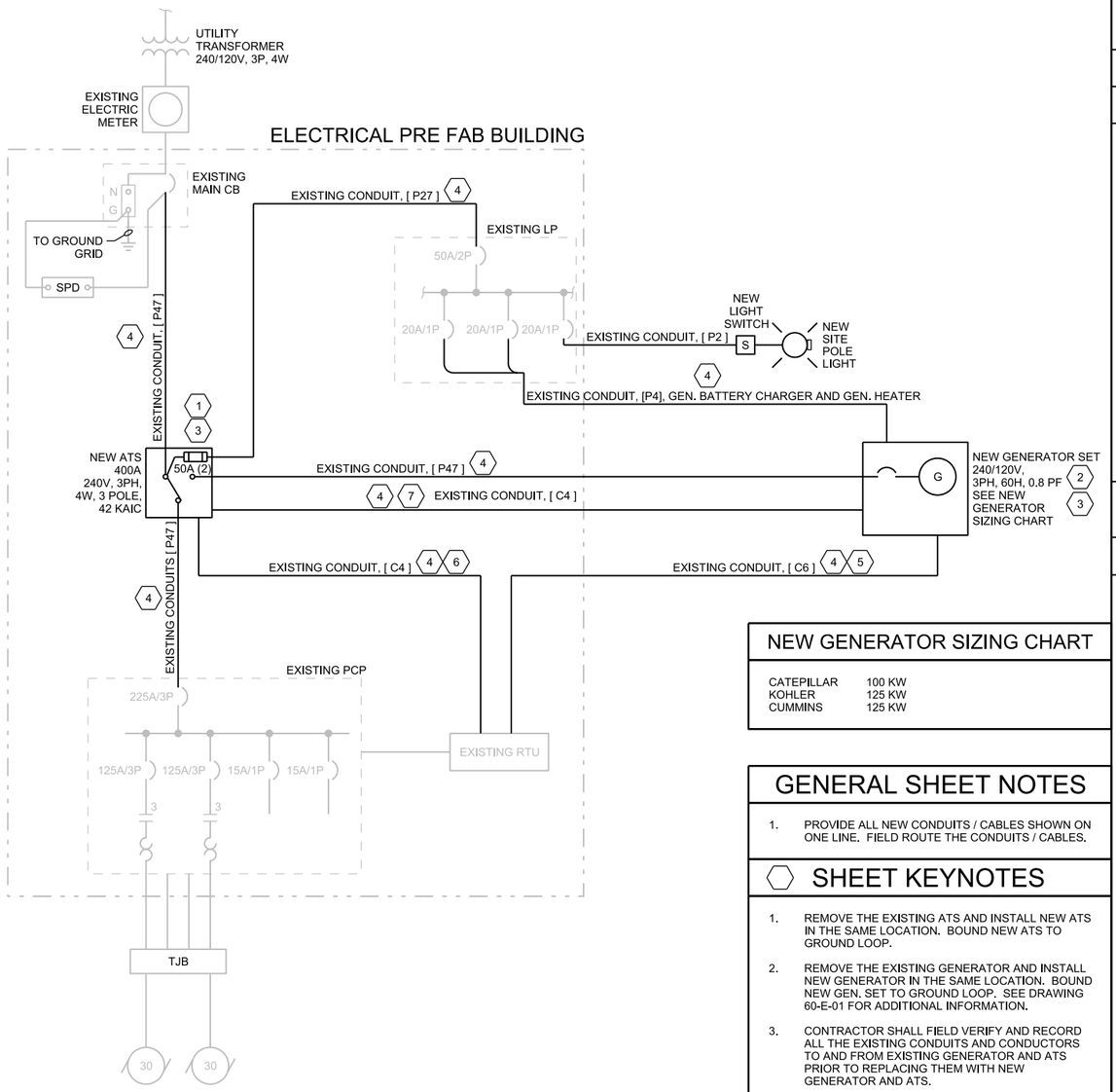
DATE	
PROJ	JJX13603
DWG	60-E-01
SHEET	of

BID DOCUMENTS



EXISTING ELECTRICAL EQUIPMENT BUILDING

1" = 1'-0"



ONE LINE DIAGRAM

NTS

NEW GENERATOR SIZING CHART

CATEPILLAR	100 KW
KOHLER	125 KW
CUMMINS	125 KW

GENERAL SHEET NOTES

1. PROVIDE ALL NEW CONDUITS / CABLES SHOWN ON ONE LINE. FIELD ROUTE THE CONDUITS / CABLES.

SHEET KEYNOTES

1. REMOVE THE EXISTING ATS AND INSTALL NEW ATS IN THE SAME LOCATION. BOUND NEW ATS TO GROUND LOOP.
2. REMOVE THE EXISTING GENERATOR AND INSTALL NEW GENERATOR IN THE SAME LOCATION. BOUND NEW GEN. SET TO GROUND LOOP. SEE DRAWING 60-E-01 FOR ADDITIONAL INFORMATION.
3. CONTRACTOR SHALL FIELD VERIFY AND RECORD ALL THE EXISTING CONDUITS AND CONDUCTORS TO AND FROM EXISTING GENERATOR AND ATS PRIOR TO REPLACING THEM WITH NEW GENERATOR AND ATS.
4. CONTRACTOR SHALL REUSE THE EXISTING CONDUITS. THE EXISTING CONDUCTORS THAT ARE CURRENTLY INSTALLED SHALL BE DEMOLISHED. ADDITIONALLY, THE CONTRACTOR SHALL PROVIDE AND INSTALL NEW CONDUCTORS WITHIN THE EXISTING CONDUITS AS SHOWN ON DRAWINGS. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MODIFICATIONS REQUIRED TO CONDUITS.
5. CONTROL WIRES FOR GENERATOR SET, ON, FAULT, AND LOW FUEL. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY REQUIRED MODIFICATIONS TO EXISTING RTU FOR CONNECTIONS FROM GEN. SET.
6. CONTROL WIRES FOR AUTOMATIC TRANSFER SWITCH (ATS). ATS IN "NORMAL" POSITION. ATS IN "GENERATOR" POSITION. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY REQUIRED MODIFICATIONS TO EXISTING RTU FOR CONNECTIONS FROM ATS.
7. CONTROL WIRES FOR GENERATOR SET, START/STOP.

NO.	DATE	DSGN	DR	CHK	APVD
REVISION			G MESSER	KB HORTON	APVD
					BY
		T HOMAYOONI	T HOMAYOONI		APVD

Jacobs
10 10TH STREET, SUITE 1400
ATLANTA, GA 30309
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S5036 -
FY21 MULTIPLE PUMP STATIONS PROJECTS
COBB COUNTY WATER SYSTEM
GEORGIA

ELECTRICAL

ALLATOONA BEACH PUMP STATION ONE LINE DIAGRAM, AND ELECTRICAL EQUIPMENT BUILDING LAYOUT

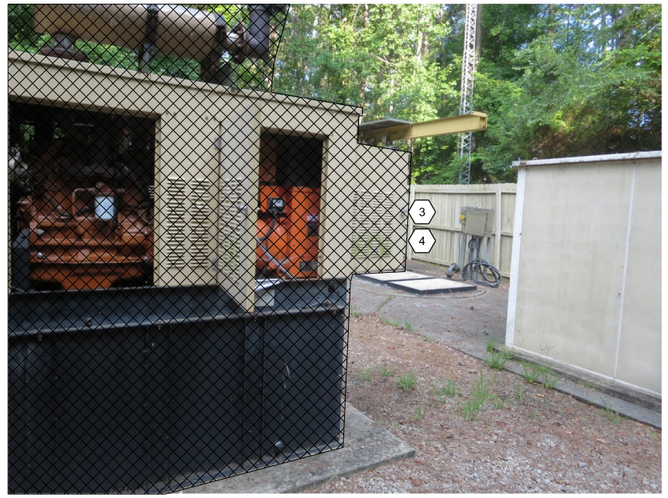
BID DOCUMENTS

VERIFY SCALE

BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

DATE	
PROJ	JJX13603
DWG	60-E-02
SHEET	of

1 PHOTO DETAIL
NTS
60-E-01



2 PHOTO DETAIL
NTS
60-E-01

3 PHOTO DETAIL
NTS
60-E-01

4 PHOTO DETAIL
NTS
60-E-02

5 PHOTO DETAIL
NTS
60-E-02

SHEET KEYNOTES

1. EXISTING GENERATOR TO BE REMOVED AND REPLACED WITH NEW GENERATOR. BOUND NEW GEN. SET TO GROUND LOOP. SEE DRAWING 60-E-02 FOR ONE LINE AND GENERATOR SIZING CHART.
2. EXISTING GENERATOR PAD SIZE IS 120" X 60". CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING THE GENERATOR PAD WITH NEW GENERATOR PAD TO MATCH THE SELECTED NEW DIESEL GENERATOR.
3. CONTRACTOR SHALL REUSE THE EXISTING CONDUITS TO AND FROM GENERATOR. THE EXISTING CONDUCTORS THAT ARE CURRENTLY INSTALLED SHALL BE DEMOLISHED. ADDITIONALLY, THE CONTRACTOR SHALL PROVIDE AND INSTALL NEW CONDUCTORS WITHIN THE EXISTING CONDUITS AS SHOWN ON DRAWINGS. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MODIFICATIONS REQUIRED TO CONDUITS FOR THE NEW GENERATORS. FIELD VERIFY THE EXACT CONDUIT STUB-UP.
4. EXISTING AUTOMATIC TRANSFER SWITCH (ATS) TO BE DEMOLISHED AND REPLACED WITH NEW ATS AT THE SAME LOCATION. SEE DRAWING 60-E-02 FOR ONE LINE. BOUND NEW ATS TO GROUND LOOP.
5. CONTRACTOR SHALL REUSE THE EXISTING CONDUITS TO AND FROM ATS. THE EXISTING CONDUCTORS THAT ARE CURRENTLY INSTALLED SHALL BE DEMOLISHED. ADDITIONALLY, THE CONTRACTOR SHALL PROVIDE AND INSTALL NEW CONDUCTORS WITHIN THE EXISTING CONDUITS AS SHOWN ON DRAWINGS. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MODIFICATIONS REQUIRED TO CONDUITS FOR THE NEW ATS. FIELD VERIFY THE EXACT CONDUIT STUB-UP.

NO.	DATE	DSGN	DR	CHK	APVD	BY	REVISION
		T HOMAYOONI	T HOMAYOONI	G MESSER	KB HORTON	APVD	T HOMAYOONI

10 10TH STREET, SUITE 1400
ATLANTA, GA 30309
GA LIC # PEF000350 (EXP 6/30/2022)

S5036 -
FY21 MULTIPLE PUMP STATIONS PROJECTS
COBB COUNTY WATER SYSTEM
GEORGIA

Jacobs

ELECTRICAL
ALLATOONA BEACH PUMP STATION PHOTO DETAILS

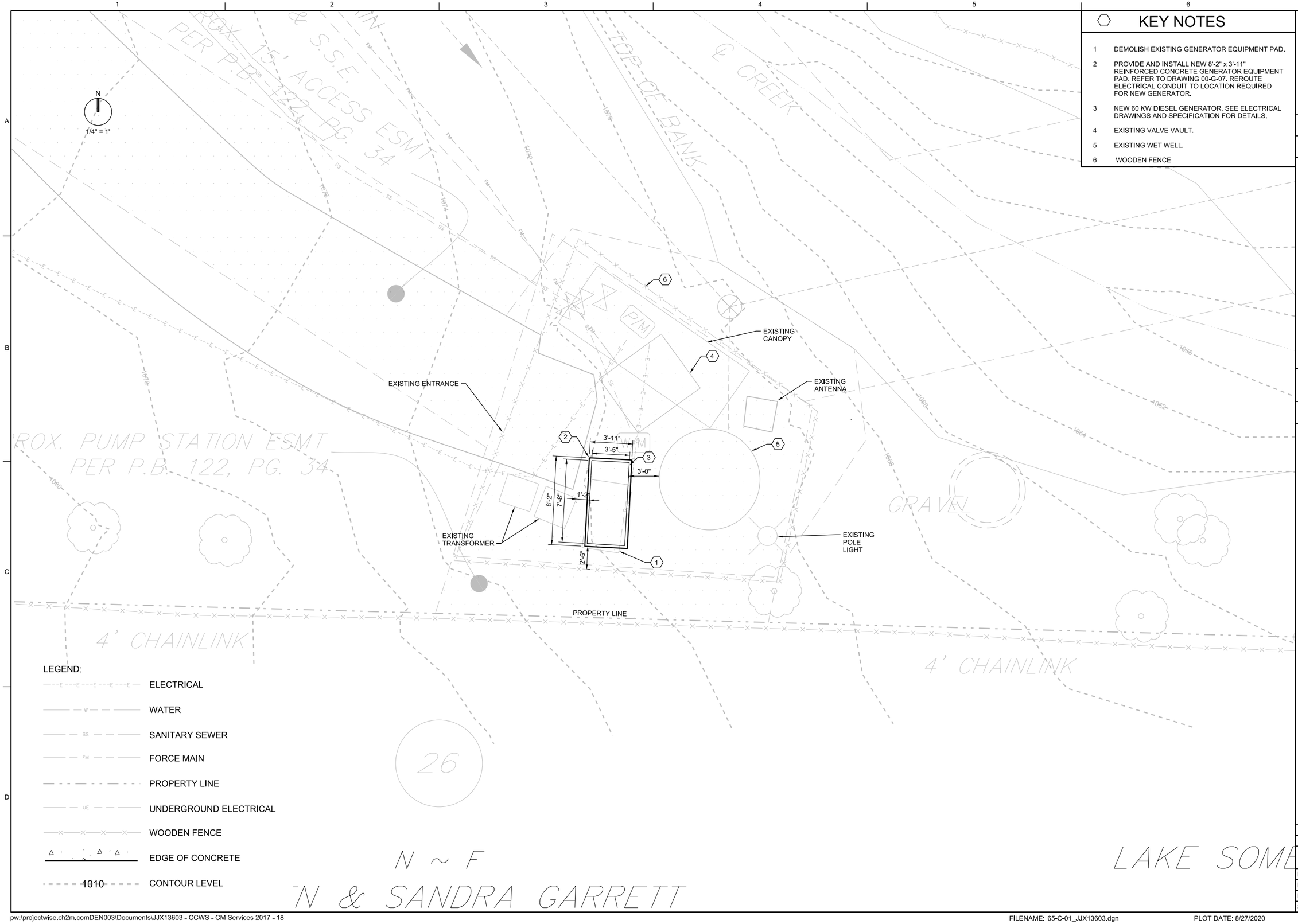
BID DOCUMENTS

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

DATE	
PROJ	JJX13603
DWG	60-E-03
SHEET	of

KEY NOTES

1. DEMOLISH EXISTING GENERATOR EQUIPMENT PAD.
2. PROVIDE AND INSTALL NEW 8'-2" x 3'-11" REINFORCED CONCRETE GENERATOR EQUIPMENT PAD. REFER TO DRAWING 00-G-07. REROUTE ELECTRICAL CONDUIT TO LOCATION REQUIRED FOR NEW GENERATOR.
3. NEW 60 KW DIESEL GENERATOR. SEE ELECTRICAL DRAWINGS AND SPECIFICATION FOR DETAILS.
4. EXISTING VALVE VAULT.
5. EXISTING WET WELL.
6. WOODEN FENCE



LEGEND:

- ELECTRICAL
- WATER
- SANITARY SEWER
- FORCE MAIN
- PROPERTY LINE
- UNDERGROUND ELECTRICAL
- WOODEN FENCE
- EDGE OF CONCRETE
- 1010 CONTOUR LEVEL

NO.	DATE	DR	REVISION	CHK	APVD	BY	APVD
DSGN	J PACHECO	E GRIGGS		T WYNN		I LILLEY	

10 10TH STREET, SUITE 1400
ATLANTA, GA 30309
GA LIC # PEF000350 (EXP 6/30/2022)

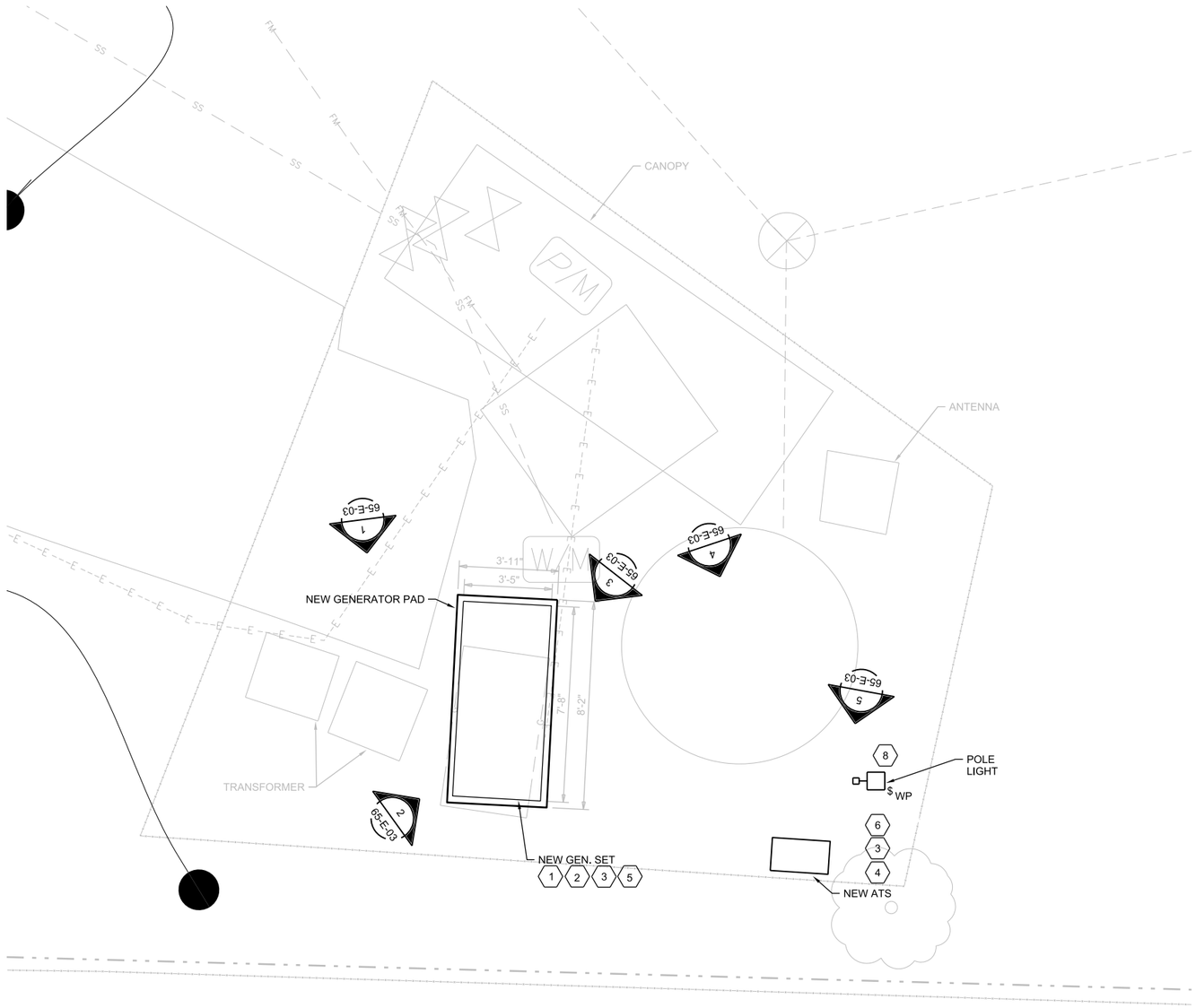
S5036 -
FY21 MULTIPLE PUMP STATIONS PROJECTS
COBB COUNTY WATER SYSTEM
GEORGIA

Jacobs

CIVIL
WEST HAMPTON # 1 PUMP STATION SITE LAYOUT

BID DOCUMENTS

1/4"=1'	
VERIFY SCALE	
BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"	
DATE	
PROJ	JJX13603
DWG	65-C-01
SHEET	of



N

SITE PLAN
3/8" = 1'-0"

LEGEND:

- ELECTRICAL
- WATER
- SANITARY SEWER
- FORCE MAIN
- PROPERTY LINE
- UNDERGROUND ELECTRICAL
- WOODEN FENCE
- EDGE OF CONCRETE
- 1010 CONTOUR LEVEL

SHEET KEYNOTES

1. REMOVE THE EXISTING GENERATOR AND INSTALL NEW GENERATOR IN THE SAME LOCATION. EXISTING GENERATOR PAD SIZE IS 77" X 42". CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING THE GENERATOR PAD WITH NEW GENERATOR PAD FOR THE SELECTED NEW DIESEL GENERATOR. MINIMUM GENERATOR PAD SIZE = 98" x 47".
2. CONTRACTOR SHALL REUSE THE EXISTING CONDUITS TO AND FROM GENERATOR. THE EXISTING CONDUCTORS THAT ARE CURRENTLY INSTALLED SHALL BE DEMOLISHED. ADDITIONALLY THE CONTRACTOR SHALL PROVIDE AND INSTALL NEW CONDUCTORS WITHIN THE EXISTING CONDUITS AS SHOWN ON DRAWINGS CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MODIFICATIONS REQUIRED TO CONDUITS FROM THE NEW GENERATORS FIELD VERIFY THE EXACT CONDUIT STUB-UP.
3. CONTRACTOR SHALL FIELD VERIFY AND RECORD ALL THE EXISTING CONDUITS AND CONDUCTORS TO AND FROM EXISTING GENERATOR AND ATS PRIOR TO REPLACING THEM WITH NEW GENERATOR AND ATS.
4. SEE DRAWING 65-E-02 FOR ONE LINE AND CONDUITS ROUTING WITHIN THE CONTROL ROOM.
5. BOUND NEW GEN. SET TO GROUND LOOP.
6. PROVIDE PORTABLE FIRE EXTINGUISHER PER COBB COUNTY FIRE MARSHAL REQUIREMENTS FIRE EXTINGUISHER SHALL COMPLY WITH NPFA 10.
7. CONTRACTOR SHALL MINIMIZE THE TIME THAT PUMP STATION WILL BE OUT OF SERVICE DUE EQUIPMENT REPLACEMENT (<2 HOURS). COORDINATE THE OUT OF SERVICE DATE, TIME, AND DURATION WITH COBB COUNTY WATER SYSTEM.
8. REPLACE THE EXISTING POLE LIGHT FIXTURE WITH NEW LED FIXTURE. LED AREA LIGHT, DIE-CAST ALUMINUM HOUSING, -400C TO 400C OPERATING TEMPERATURE, 60 LED HEAD, 700MA DRIVER, 5000K COLOR TEMPERATURE, 70 CRI, TYPE 3 LIGHT DISTRIBUTION, 5 YEAR WARRANTY, HUBBLE CIMARON LED SERIES, "CL1-60L-A-5K-3 OR APPROVED EQUAL. INSTALL A NEW WATER PROOF LIGHT SWITCH AT THE EXISTING POLE AND CONNECT IT TO THE NEW LIGHT.

NO.	DATE	REVISION	DR	CHK	BY	APVD
DSGN	T HOMAYOONI	A PASTRANA	KB HORTON	APVD	T HOMAYOONI	

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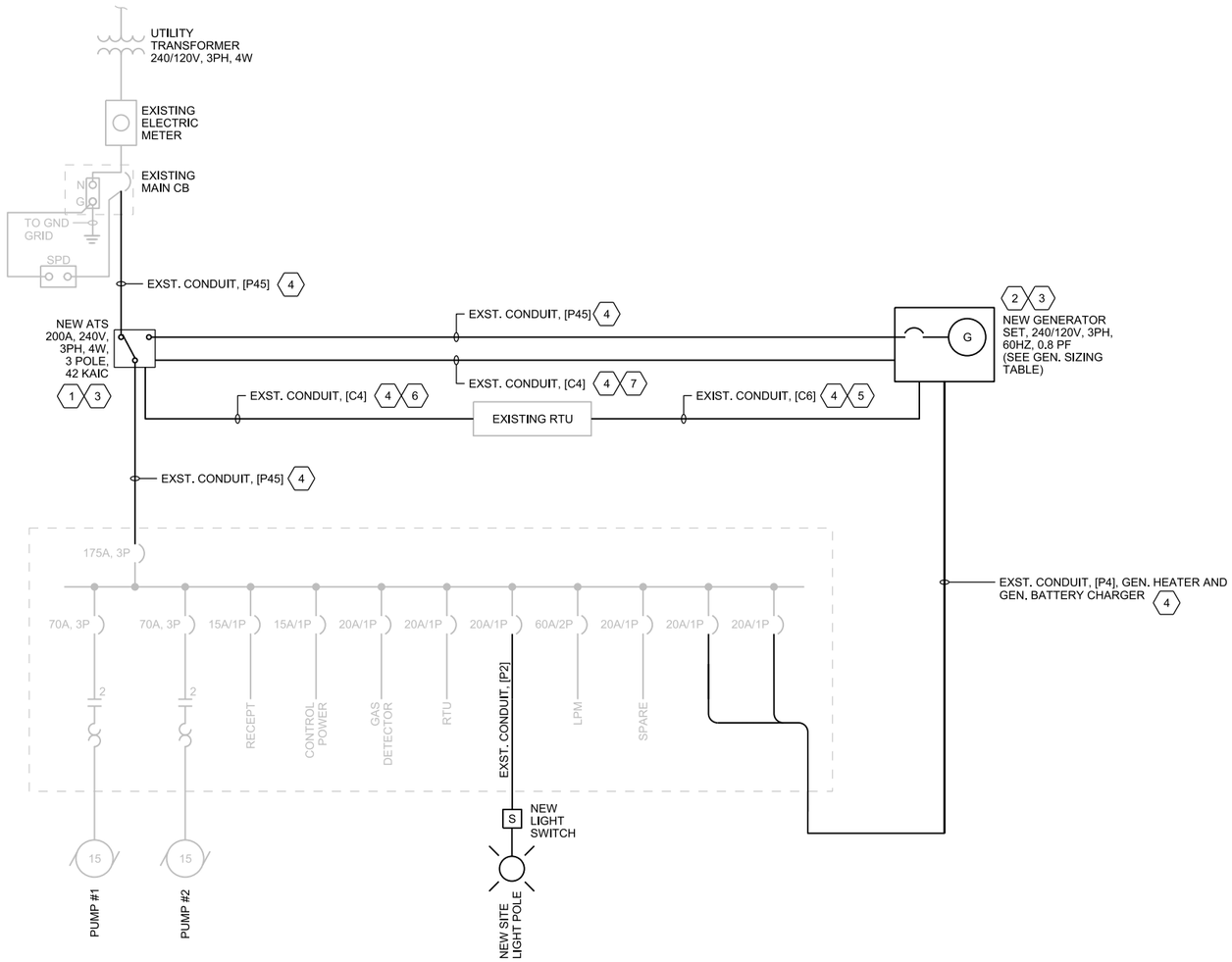
S5036 -
FY21 MULTIPLE PUMP STATIONS PROJECTS
COBB COUNTY WATER SYSTEM
GEORGIA

Jacobs

ELECTRICAL
WEST HAMPTON # 2 PUMP STATION ELECTRICAL SITE PLAN

BID DOCUMENTS

1/2"=1'	
VERIFY SCALE	
BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"	
DATE	
PROJ	JJX13603
DWG	65-E-01
SHEET	of



ONE-LINE DIAGRAM
NTS

NEW GENERATOR SIZING CHART

CATEPILLAR	60 KW
KOHLER	50 KW
CUMMINS	50 KW

GENERAL SHEET NOTES

1. PROVIDE ALL NEW CONDUITS / CABLES SHOWN ON ONE LINE. FIELD ROUTE THE CONDUITS / CABLES.

SHEET KEYNOTES

1. REMOVE THE EXISTING ATS AND INSTALL NEW ATS IN THE SAME LOCATION. BOUND NEW ATS TO GROUND LOOP.
2. REMOVE THE EXISTING GENERATOR AND INSTALL NEW GENERATOR IN THE SAME LOCATION. BOND NEW GEN. SET TO GROUND LOOP. SEE DRAWING 65-E-01 FOR ADDITIONAL INFORMATION.
3. CONTRACTOR SHALL FIELD VERIFY AND RECORD ALL THE EXISTING CONDUITS AND CONDUCTORS TO AND FROM EXISTING GENERATOR AND ATS PRIOR TO REPLACING THEM WITH NEW GENERATOR AND ATS.
4. CONTRACTOR SHALL REUSE THE EXISTING CONDUITS. THE EXISTING CONDUCTORS THAT ARE CURRENTLY INSTALLED SHALL BE DEMOLISHED. ADDITIONALLY, THE CONTRACTOR SHALL PROVIDE AND INSTALL NEW CONDUCTORS WITHIN THE EXISTING CONDUITS AS SHOWN ON DRAWINGS. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MODIFICATIONS REQUIRED TO CONDUITS.
5. CONTROL WIRES FOR GENERATOR SET, ON, FAULT, AND LOW FUEL. CONDUCTORS MAY BE ROUTED THROUGH ATS TO EXISTING RTU. FIELD VERIFY CONTRACTOR SHALL BE RESPONSIBLE FOR ANY REQUIRED MODIFICATIONS TO EXISTING RTU FOR CONNECTIONS FROM GEN. SET.
6. CONTROL WIRES FOR AUTOMATIC TRANSFER SWITCH (ATS). ATS IN "NORMAL" POSITION. ATS IN "GENERATOR" POSITION. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY REQUIRED MODIFICATIONS TO EXISTING RTU FOR CONNECTIONS FROM ATS.
7. CONTROL WIRES FOR GENERATOR SET, START/STOP.

NO.	DATE	DR	CHK	APVD	BY	REVISION
DSGN T HOMAYOONI		A PASTRANA	KB HORTON	APVD	T HOMAYOONI	

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S5036 -
FY21 MULTIPLE PUMP STATIONS PROJECTS
COBB COUNTY WATER SYSTEM
GEORGIA

ELECTRICAL
WEST HAMPTON # 1 PUMP STATION ONE-LINE DIAGRAM

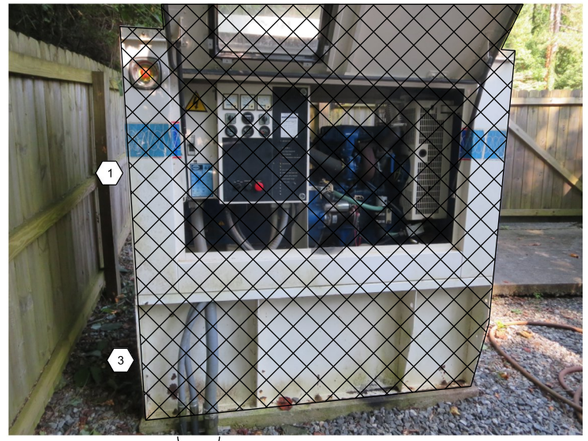
VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

DATE	
PROJ	JJX13603
DWG	65-E-02
SHEET	of

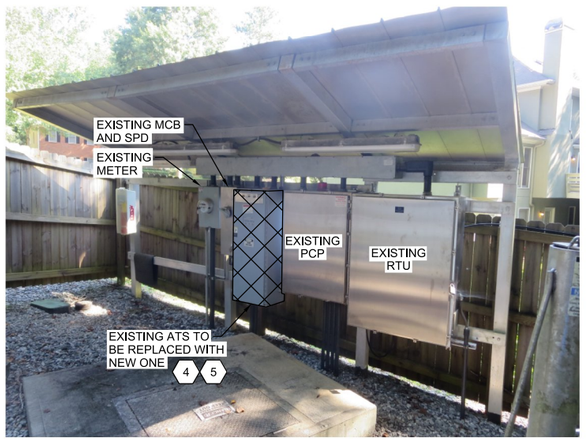
BID DOCUMENTS

1 PHOTO DETAIL
NTS
65-E-01

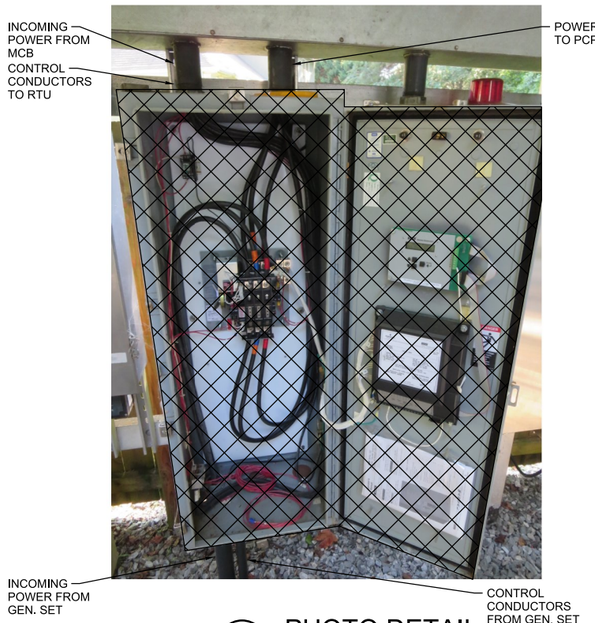
2 PHOTO DETAIL
NTS
65-E-01



3 PHOTO DETAIL
NTS
65-E-01



4 PHOTO DETAIL
NTS
65-E-01



5 PHOTO DETAIL
NTS
65-E-01

SHEET KEYNOTES

1. EXISTING GENERATOR TO BE REMOVED AND REPLACED WITH NEW GENERATOR. BOUND NEW GEN. SET TO GROUND LOOP. SEE DRAWING 65-E-02 FOR ONE-LINE DIAGRAM AND GENERATOR SIZING CHART.
2. EXISTING GENERATOR PAD SIZE IS 77" X 42". CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING THE GENERATOR PAD WITH NEW GENERATOR PAD FOR THE SELECTED NEW DIESEL GENERATOR.
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4. EXISTING AUTOMATIC TRANSFER SWITCH (ATS) TO BE REMOVED AND REPLACED WITH NEW ATS AT THE SAME LOCATION. BOUND NEW ATS TO GROUND LOOP. SEE DRAWING 65-E-02 FOR ONE LINE.
5. CONTRACTOR SHALL REUSE THE EXISTING CONDUITS TO AND FROM ATS. THE EXISTING CONDUCTORS THAT ARE CURRENTLY INSTALLED SHALL BE DEMOLISHED. ADDITIONALLY, THE CONTRACTOR SHALL PROVIDE AND INSTALL NEW CONDUCTORS WITHIN THE EXISTING CONDUITS AS SHOWN ON DRAWINGS. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MODIFICATIONS REQUIRED TO CONDUITS FOR THE NEW ATS. FIELD VERIFY THE EXACT CONDUIT STUB-UP.

NO.	DATE	REVISION	DR	CHK	APVD	BY	APVD
DSGN	T HOMAYOONI		A PASTRANA	KB HORTON		T HOMAYOONI	

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GEORGIA

Jacobs

ELECTRICAL

WEST HAMPTON # 1 PUMP STATION PHOTO DETAILS

BID DOCUMENTS

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

DATE	
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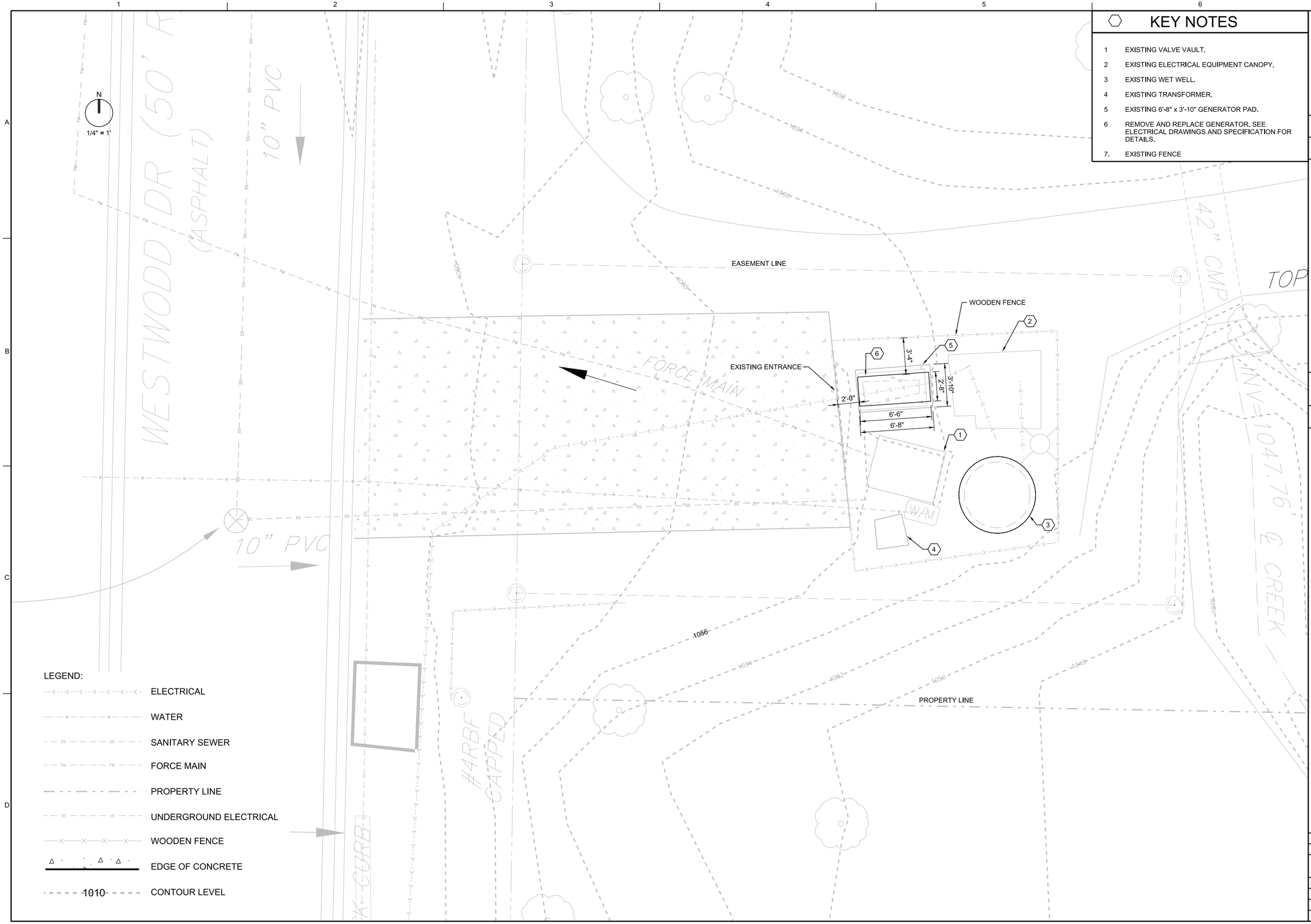

KEY NOTES

1. EXISTING VALVE VAULT.
2. EXISTING ELECTRICAL EQUIPMENT CANOPY.
3. EXISTING WET WELL.
4. EXISTING TRANSFORMER.
5. EXISTING 6'-8" x 3'-10" GENERATOR PAD.
6. REMOVE AND REPLACE GENERATOR. SEE ELECTRICAL DRAWINGS AND SPECIFICATION FOR DETAILS.
7. EXISTING FENCE

NO.	DATE	DSGN	DR	CHK	APVD	BY	REVISION
		J PACHECO	E GRIGGS	T WYNN	APVD	I LILLEY	

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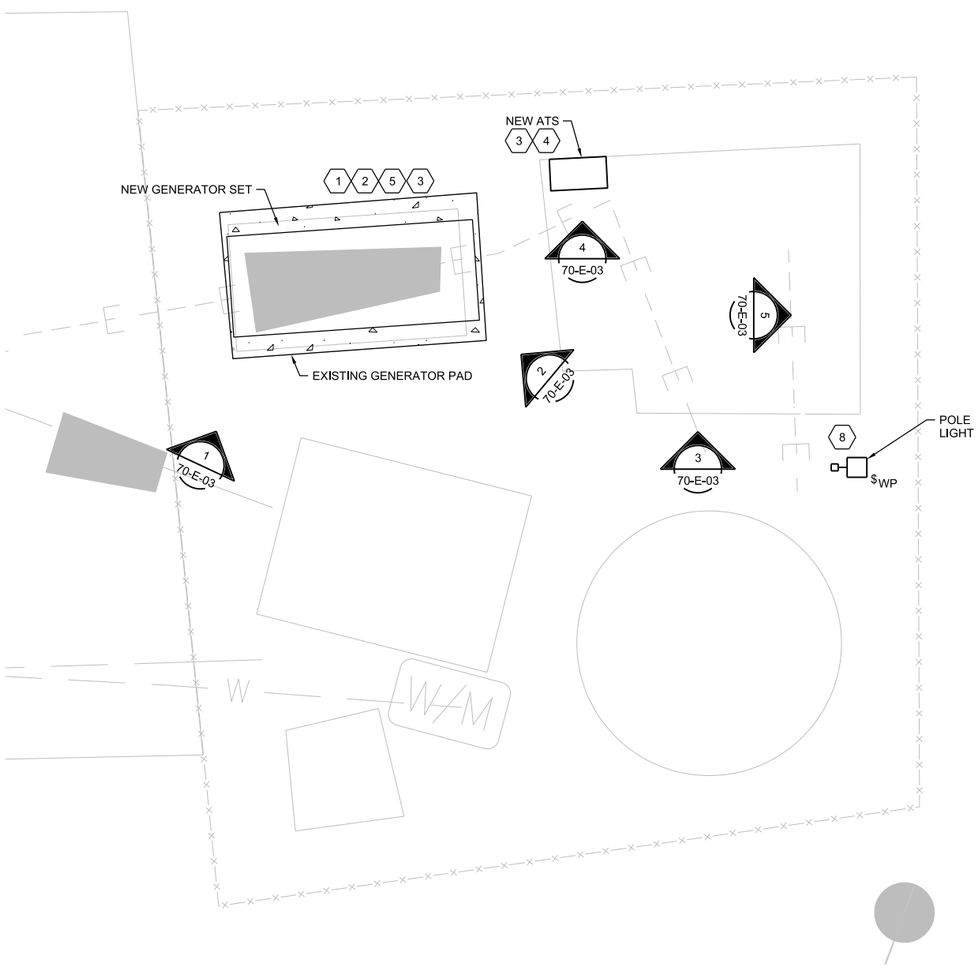
S5036 -
FY21 MULTIPLE PUMP STATIONS PROJECTS
COBB COUNTY WATER SYSTEM
GEORGIA

Jacobs

CIVIL
WEST HAMPTON # 2 PUMP STATION SITE LAYOUT

BID DOCUMENTS

1/4"=1'	
VERIFY SCALE	
BAR IS ONE INCH ON ORIGINAL DRAWING. 0 1"	
DATE	
PROJ	JJX13603
DWG	70-C-01
SHEET	of



N

SITE PLAN
1/2"=1'-0"

SHEET KEYNOTES

1. REMOVE THE EXISTING GENERATOR AND INSTALL NEW GENERATOR IN THE SAME LOCATION. EXISTING GENERATOR PAD SIZE IS 84" X 48". CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MODIFICATIONS REQUIRED TO MODIFY THE EXISTING GENERATOR PAD FOR THE SELECTED NEW DIESEL GENERATOR.
2. CONTRACTOR SHALL REUSE THE EXISTING CONDUITS TO AND FROM GENERATOR. THE EXISTING CONDUCTORS THAT ARE CURRENTLY INSTALLED SHALL BE DEMOLISHED. ADDITIONALLY THE CONTRACTOR SHALL PROVIDE AND INSTALL NEW CONDUCTORS WITHIN THE EXISTING CONDUITS AS SHOWN ON DRAWINGS CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MODIFICATIONS REQUIRED TO CONDUITS FROM THE NEW GENERATORS FIELD VERIFY THE EXACT CONDUIT STUB-UP.
3. CONTRACTOR SHALL FIELD VERIFY AND RECORD ALL THE EXISTING CONDUITS AND CONDUCTORS TO AND FROM EXISTING GENERATOR AND ATS PRIOR TO REPLACING THEM WITH NEW GENERATOR AND ATS.
4. SEE DRAWING 70-E-02 FOR ONE LINE AND CONDUITS ROUTING WITHIN THE CONTROL ROOM.
5. BOUND NEW GENERATOR SET TO GROUND LOOP.
6. PROVIDE PORTABLE FIRE EXTINGUISHER PER COBB COUNTY FIRE MARSHAL REQUIREMENTS FIRE EXTINGUISHER SHALL COMPLY WITH NPFA 10.
7. CONTRACTOR SHALL MINIMIZE THE TIME THAT PUMP STATION WILL BE OUT OF SERVICE DUE EQUIPMENT REPLACEMENT (<2 HOURS). COORDINATE THE OUT OF SERVICE DATE, TIME, AND DURATION WITH COBB COUNTY WATER SYSTEM.
8. REPLACE THE EXISTING POLE LIGHT FIXTURE WITH NEW LED FIXTURE, LED AREA LIGHT, DIE-CAST ALUMINUM HOUSING, -400C TO 400C OPERATING TEMPERATURE, 60 LED HEAD, 700MA DRIVER, 5000K COLOR TEMPERATURE, 70 CRI, TYPE 3 LIGHT DISTRIBUTION, 5 YEAR WARRANTY. HUBBLE CIMARON LED SERIES, "CL1-60L-A-5K-3 OR APPROVED EQUAL. INSTALL A NEW WATER PROOF LIGHT SWITCH AT THE EXISTING POLE AND CONNECT IT TO THE NEW LIGHT.

NO.	DATE	DSGN	DR	CHK	APVD
	REVISION	T HOMAYOONI	A PASTRANA	KB HORTON	APVD
	BY	T HOMAYOONI			
	APVD				

10 10TH STREET, SUITE 1400
ATLANTA, GA 30309
GA LIC # PEF000350 (EXP 6/30/2022)

Jacobs

S5036 -
FY21 MULTIPLE PUMP STATIONS PROJECTS
COBB COUNTY WATER SYSTEM
GEORGIA

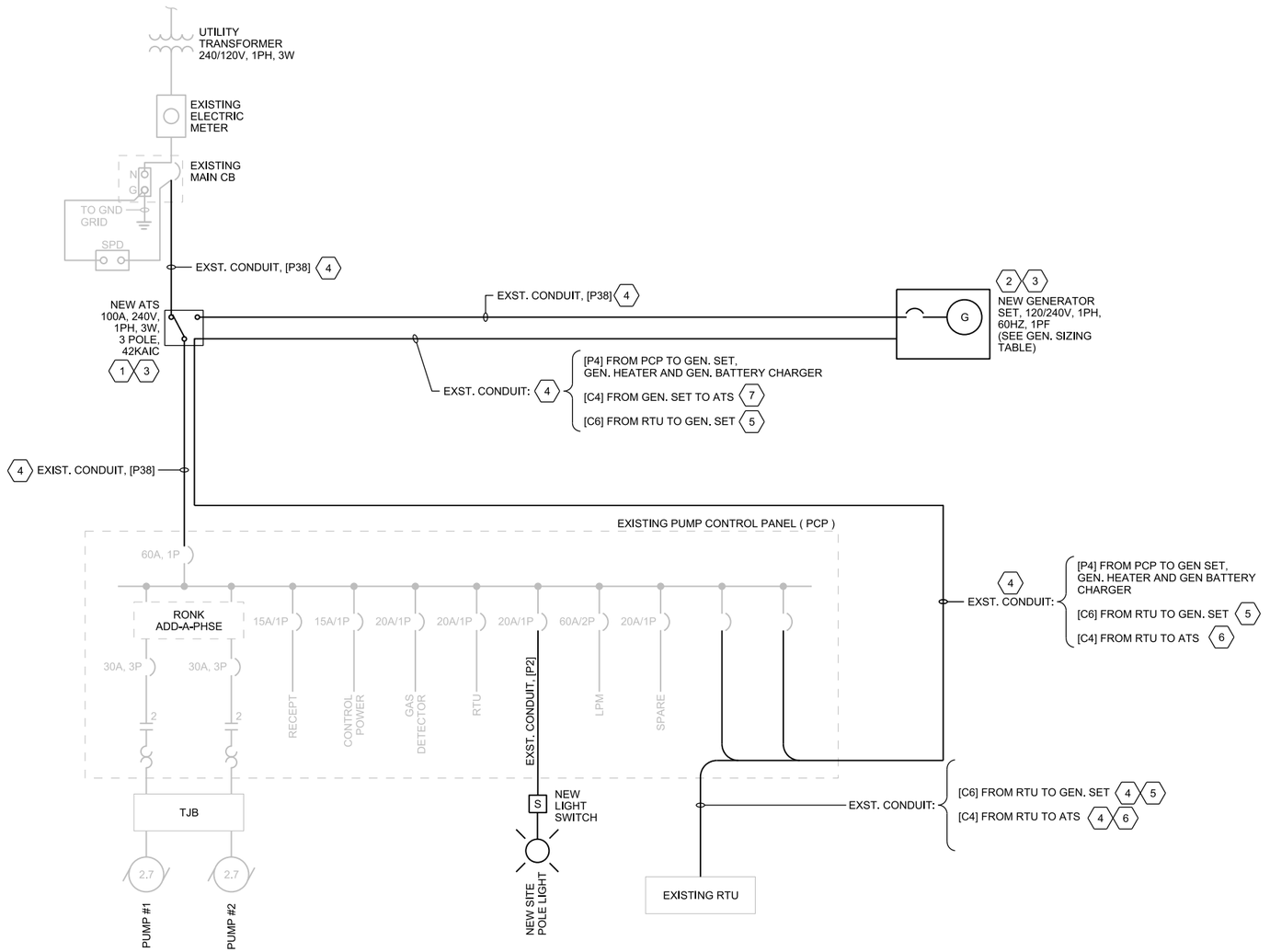
ELECTRICAL

WEST HAMPTON # 2 PUMP STATION ELECTRICAL SITE PLAN

BID DOCUMENTS

1/2"=1'
VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

DATE	
PROJ	JJX13603
DWG	70-E-01
SHEET	of



ONE-LINE DIAGRAM
NTS

NEW GENERATOR SIZING CHART

CATEPILLAR	40 KW
KOHLER	20 KW
CUMMINS	25 KW

GENERAL SHEET NOTES

1. PROVIDE ALL NEW CONDUITS / CABLES SHOWN ON ONE LINE. FIELD ROUTE THE CONDUITS / CABLES.

SHEET KEYNOTES

1. REMOVE THE EXISTING ATS AND INSTALL NEW ATS IN THE SAME LOCATION. BOUND NEW ATS TO GROUND LOOP.
2. REMOVE THE EXISTING GENERATOR AND INSTALL NEW GENERATOR IN THE SAME LOCATION. BOUND NEW GEN. SET TO GROUND LOOP. SEE DRAWING 70-E-01 FOR ADDITIONAL INFORMATION.
3. CONTRACTOR SHALL FIELD VERIFY AND RECORD ALL THE EXISTING CONDUITS AND CONDUCTORS TO AND FROM EXISTING GENERATOR AND ATS. PRIOR TO REPLACING THEM WITH NEW GENERATOR AND ATS.
4. CONTRACTOR SHALL REUSE THE EXISTING CONDUITS. THE EXISTING CONDUCTORS THAT ARE CURRENTLY INSTALLED SHALL BE DEMOLISHED. ADDITIONALLY, THE CONTRACTOR SHALL PROVIDE AND INSTALL NEW CONDUCTORS WITHIN THE EXISTING CONDUITS AS SHOWN ON DRAWINGS. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MODIFICATIONS REQUIRED TO CONDUITS.
5. CONTROL WIRES FOR GENERATOR SET, ON, FAULT, AND LOW FUEL. EXISTING CONDUCTORS RUN FROM GEN. SET THROUGH ATS AND PCP TO RTU. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY REQUIRED MODIFICATIONS TO EXISTING RTU FOR CONNECTIONS FROM GEN. SET.
6. CONTROL WIRES FOR AUTOMATIC TRANSFER SWITCH (ATS). ATS IN "NORMAL" POSITION. ATS IN "GENERATOR" POSITION. EXISTING CONDUCTORS RUN FROM ATS THROUGH PCP TO RTU. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY REQUIRED MODIFICATIONS TO EXISTING RTU FOR CONNECTIONS FROM ATS.
7. CONTROL WIRES FOR GENERATOR SET, START/STOP.

NO.	DATE	DSGN	DR	CHK	APVD	BY	REVISION
		T HOMAYOONI	A PASTRANA	KB HORTON	APVD	T HOMAYOONI	

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GEORGIA

Jacobs

ELECTRICAL

WEST HAMPTON #2 PUMP STATION ONE-LINE DIAGRAM

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

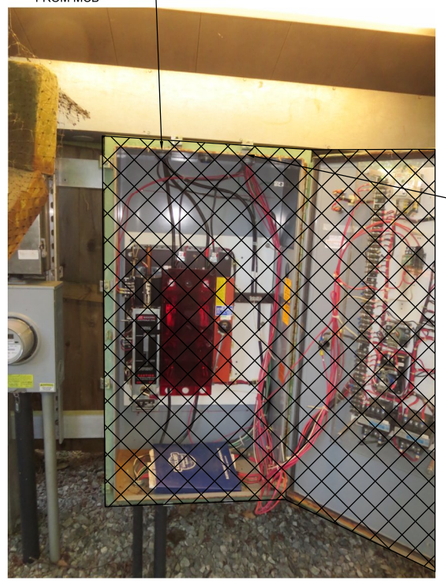
DATE	
PROJ	JJX13603
DWG	70-E-02
SHEET	of

BID DOCUMENTS

1 PHOTO DETAIL
NTS
70-E-01

2 PHOTO DETAIL
NTS
70-E-01

3 PHOTO DETAIL
NTS
70-E-01



4 PHOTO DETAIL
NTS
70-E-01

5 PHOTO DETAIL
NTS
70-E-01

SHEET KEYNOTES

1. EXISTING GENERATOR TO BE REMOVED AND REPLACED WITH NEW GENERATOR. BOUND NEW GEN. SET TO GROUND LOOP. SEE DRAWING 70-E-02 FOR ONE-LINE DIAGRAM AND GENERATOR SIZING CHART.
2. EXISTING GENERATOR PAD SIZE IS 84" X 48". CONTRACTOR SHALL BE RESPONSIBLE FOR MODIFYING THE EXISTING GENERATOR PAD FOR THE SELECTED NEW DIESEL GENERATOR.
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	T HOMAYOONI		A PASTRANA	KB HORTON				T HOMAYOONI

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ELECTRICAL

WEST HAMPTON #2 PUMP STATION PHOTO DETAILS

BID DOCUMENTS

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

DATE	
PROJ	JJX13603
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SHEET	of

KEY NOTES

1	EXISTING ELECTRICAL EQUIPMENT BUILDING 10' x 8'
2	EXISTING VALVE VAULT
3	EXISTING WET WELL
4	EXISTING 10'-8" x 4' x 5" CONCRETE PAD
5	EXISTING FENCE
6	DEMOLISH EXISTING GENERATOR AND REPLACE. SEE ELECTRICAL DRAWINGS FOR INSTALLATION AND CONNECTIONB DETAILS

N

1/4" = 1'

10'-8"
7'-8"
4'-5"
3'-5"
3'-7 1/4"
5'-0"

EXISTING ENTRANCE

8" DIP
15" CMP
12" PVC
INV.=861.21
MH
TOP=864.54
PBX

LEGEND:

- ELECTRICAL
- WATER
- SANITARY SEWER
- FORCE MAIN
- PROPERTY LINE
- UNDERGROUND ELECTRICAL
- WOODEN FENCE
- EDGE OF CONCRETE
- 1010 CONTOUR LEVEL

NO.	DATE	DR	REVISION	CHK	APVD	BY	APVD
DSGN	J PACHECO	E GRIGGS		I LILLEY		T WYNN	

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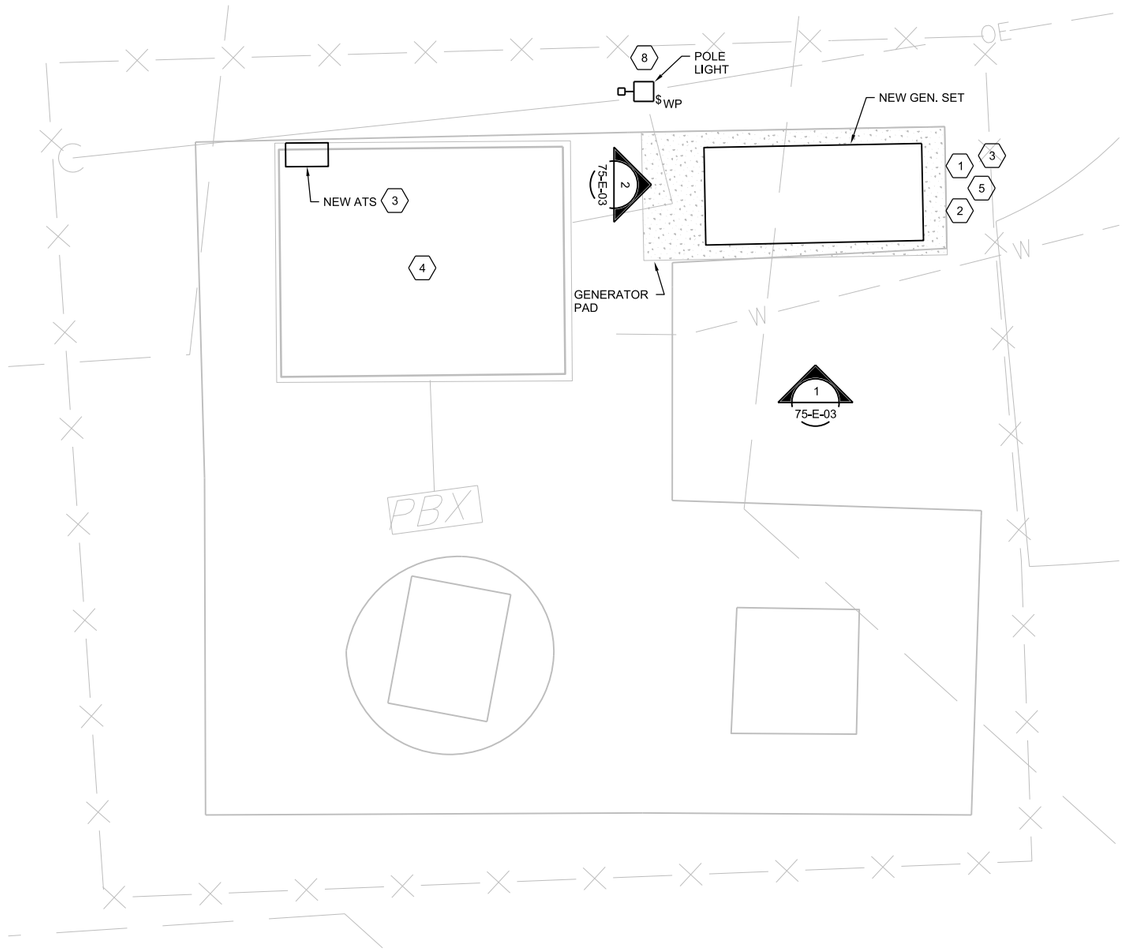
FY21 MULTIPLE PUMP STATIONS PROJECTS
COBB COUNTY WATER SYSTEM
GEORGIA

CIVIL
WOOD VALLEY PUMP STATION LAYOUT

BID DOCUMENTS

1/4"=1'	
VERIFY SCALE	
BAR IS ONE INCH ON ORIGINAL DRAWING. IF NOT ONE INCH ADJUST SCALE ACCORDINGLY	
DATE	
PROJ	JJX13603
DWG	75-C-01
SHEET	of



SITE PLAN
3/8"=1'-0"

SHEET KEYNOTES

1. REMOVE THE EXISTING GENERATOR AND INSTALL NEW GENERATOR IN THE SAME LOCATION. EXISTING GENERATOR PAD SIZE IS 129" x 54". CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MODIFICATIONS REQUIRED TO MODIFY THE GENERATOR PAD TO MATCH THE SELECTED NEW DIESEL GENERATOR.
2. CONTRACTOR SHALL REUSE THE EXISTING CONDUITS TO AND FROM GENERATOR. THE EXISTING CONDUCTORS THAT ARE CURRENTLY INSTALLED SHALL BE DEMOLISHED ADDITIONALLY, THE CONTRACTOR SHALL PROVIDE AND INSTALL NEW CONDUCTORS WITHIN THE EXISTING CONDUITS AS SHOWN ON DRAWINGS. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MODIFICATIONS REQUIRED TO CONDUITS FOR THE NEW GENERATORS FIELD VERIFY THE EXACT CONDUIT STUB-UP.
3. CONTRACTOR SHALL FIELD VERIFY AND RECORD ALL THE EXISTING CONDUITS AND CONDUCTORS TO AND FROM EXISTING GENERATOR AND ATS PRIOR TO REPLACING THEM WITH NEW GENERATOR AND ATS.
4. SEE DRAWING 75-E-02 FOR ONE LINE AND CONDUITS ROUTING WITHIN THE ELECTRICAL EQUIPMENT BUILDING.
5. BOUND NEW GEN. SET TO GROUND LOOP.
6. PROVIDE PORTABLE FIRE EXTINGUISHER PER COBB COUNTY FIRE MARSHAL REQUIREMENTS FIRE EXTINGUISHER SHALL COMPLY WITH NFPA 10.
7. CONTRACTOR SHALL MINIMIZE THE TIME THAT PUMP STATION WILL BE OUT OF SERVICE DUE EQUIPMENT REPLACEMENT (<2 HOURS). COORDINATE THE OUT OF SERVICE DATE, TIME, AND DURATION WITH COBB COUNTY WATER SYSTEM.
8. REPLACE THE EXISTING POLE LIGHT FIXTURE WITH NEW LED FIXTURE. LED AREA LIGHT, DIE-CAST ALUMINUM HOUSING, -400C TO 400C OPERATING TEMPERATURE, 60 LED HEAD, 700MA DRIVER, 5000K COLOR TEMPERATURE, 70 CRI, TYPE 3 LIGHT DISTRIBUTION, 5 YEAR WARRANTY. HUBBLE CIMARON LED SERIES, "CL1-60L-A-5K-3 OR APPROVED EQUAL. INSTALL A NEW WATER PROOF LIGHT SWITCH AT THE EXISTING POLE AND CONNECT IT TO THE NEW LIGHT.

NO.	DATE	DR	CHK	APVD	BY	APVD
DSGN	T HOMAYOONI	A PASTRANA	KB HORTON	APVD	T HOMAYOONI	

REVISION

10 10TH STREET, SUITE 1400
ATLANTA, GA 30309
GA LIC # PEF000350 (EXP 6/30/2022)

S5036 -
FY21 MULTIPLE PUMP STATIONS PROJECTS
COBB COUNTY WATER SYSTEM
GEORGIA

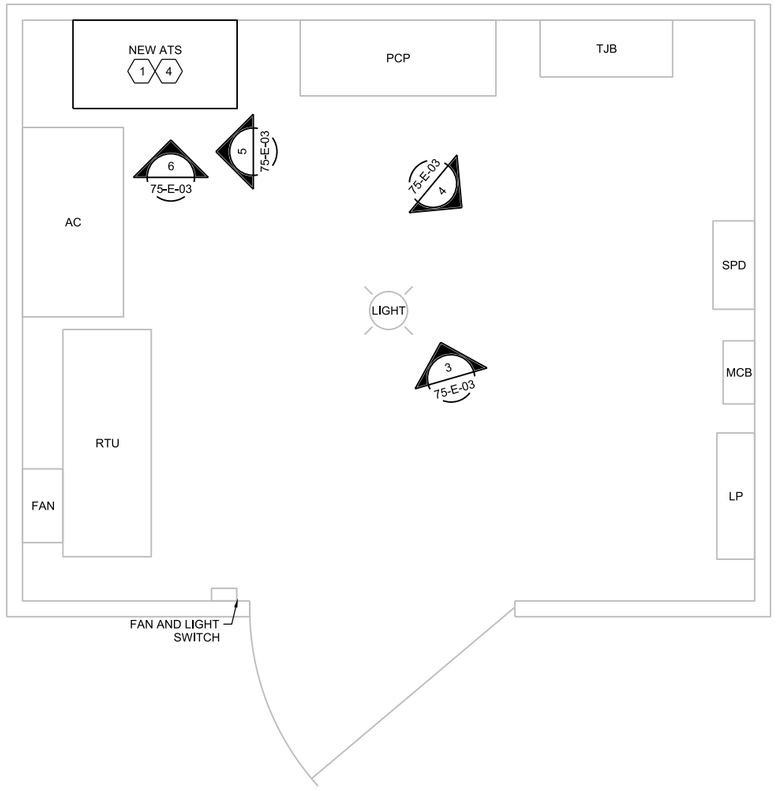
Jacobs

ELECTRICAL
WOOD VALLEY
PUMP STATION
ELECTRICAL SITE PLAN

3/8"=1'-0"
VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

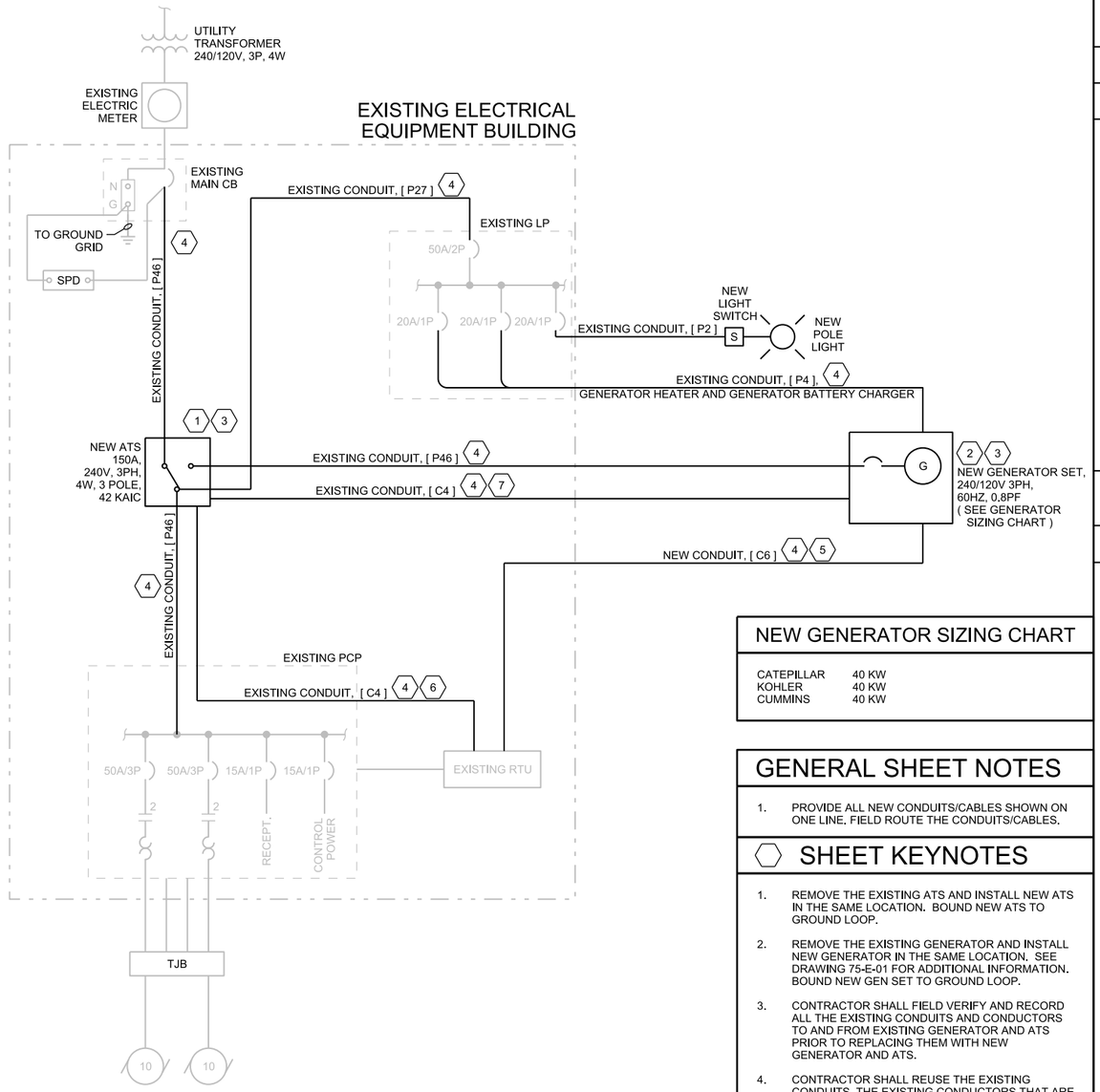
DATE	
PROJ	JJX13603
DWG	75-E-01
SHEET	of

BID DOCUMENTS



PRE FABRICATED ELECTRICAL EQUIPMENT BUILDING

1" = 1'-0"



ONE LINE DIAGRAM

NTS

NEW GENERATOR SIZING CHART

CATEPILLAR	40 KW
KOHLER	40 KW
CUMMINS	40 KW

GENERAL SHEET NOTES

1. PROVIDE ALL NEW CONDUITS/CABLES SHOWN ON ONE LINE. FIELD ROUTE THE CONDUITS/CABLES.

SHEET KEYNOTES

1. REMOVE THE EXISTING ATS AND INSTALL NEW ATS IN THE SAME LOCATION. BOUND NEW ATS TO GROUND LOOP.
2. REMOVE THE EXISTING GENERATOR AND INSTALL NEW GENERATOR IN THE SAME LOCATION. SEE DRAWING 75-E-01 FOR ADDITIONAL INFORMATION. BOUND NEW GEN SET TO GROUND LOOP.
3. CONTRACTOR SHALL FIELD VERIFY AND RECORD ALL THE EXISTING CONDUITS AND CONDUCTORS TO AND FROM EXISTING GENERATOR AND ATS PRIOR TO REPLACING THEM WITH NEW GENERATOR AND ATS.
4. CONTRACTOR SHALL REUSE THE EXISTING CONDUITS. THE EXISTING CONDUCTORS THAT ARE CURRENTLY INSTALLED SHALL BE DEMOLISHED. ADDITIONALLY, THE CONTRACTOR SHALL PROVIDE AND INSTALL NEW CONDUCTORS WITHIN THE EXISTING CONDUITS AS SHOWN ON DRAWINGS. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MODIFICATIONS REQUIRED TO CONDUITS.
5. CONTROL WIRES FOR GENERATOR SET, ON, FAULT, AND LOW FUEL. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY REQUIRED MODIFICATIONS TO EXISTING RTU FOR CONNECTIONS FROM GENERATOR SET.
6. CONTROL WIRES FOR AUTOMATIC TRANSFER SWITCH (ATS), ATS IN "NORMAL" POSITION. ATS IN "GENERATOR" POSITION. GENERATOR SET, ON, FAULT, AND LOW FUEL. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY REQUIRED MODIFICATIONS TO EXISTING RTU FOR CONNECTIONS FROM ATS.
7. CONTROL WIRES FOR GENERATOR SET, START/STOP.

NO.	DATE	DSGN	REVISION	CHK	DR	BY	APVD
	T HOMAYOONI		G MESSER	KB HORTON	T HOMAYOONI		

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S5036 -
FY'21 MULTIPLE PUMP STATIONS PROJECTS
COBB COUNTY WATER SYSTEM
GEORGIA

ELECTRICAL

WOOD VALLEY PUMP STATION ONE LINE DIAGRAM, AND ELECTRICAL EQUIPMENT BUILDING LAYOUT

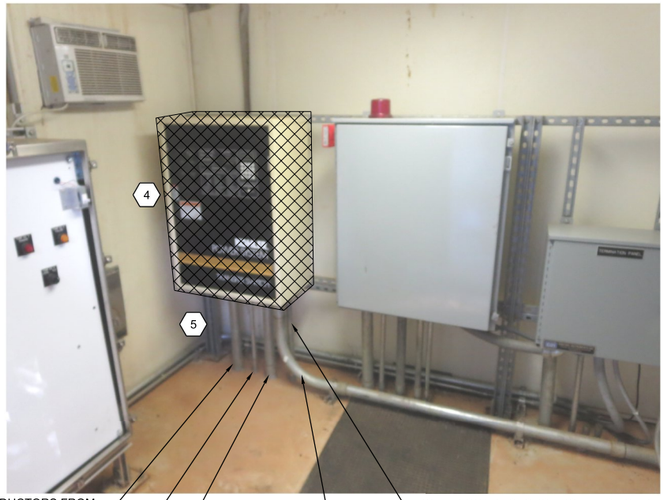
BID DOCUMENTS

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"

DATE	
PROJ	JJX13603
DWG	75-E-02
SHEET	of

1 PHOTO DETAIL
NTS
75-E-01

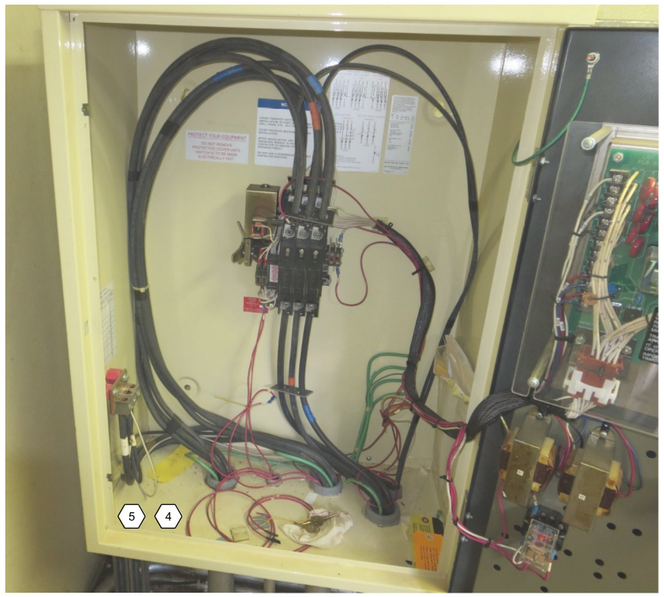
2 PHOTO DETAIL
NTS
75-E-01



3 PHOTO DETAIL
NTS
75-E-01

4 PHOTO DETAIL
NTS
75-E-01

5 PHOTO DETAIL
NTS
75-E-01



6 PHOTO DETAIL
NTS
75-E-01

SHEET KEYNOTES

1. EXISTING GENERATOR TO BE REMOVED AND REPLACED WITH NEW GENERATOR. SEE DRAWING 75-E-02 FOR ONE LINE AND GENERATOR SIZING CHART.
2. EXISTING GENERATOR PAD SIZE IS 129" X 54". CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MODIFICATIONS REQUIRED TO MODIFY THE GENERATOR PAD TO MATCH THE SELECTED NEW DIESEL GENERATOR.
3. CONTRACTOR SHALL REUSE THE EXISTING CONDUITS TO AND FROM GENERATOR. THE EXISTING CONDUCTORS THAT ARE CURRENTLY INSTALLED SHALL BE DEMOLISHED. ADDITIONALLY, THE CONTRACTOR SHALL PROVIDE AND INSTALL NEW CONDUCTORS WITHIN THE EXISTING CONDUITS AS SHOWN ON DRAWINGS. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MODIFICATIONS REQUIRED TO CONDUITS FOR THE NEW GENERATORS. FIELD VERIFY THE EXACT CONDUIT STUB-UP.
4. EXISTING AUTOMATIC TRANSFER SWITCH (ATS) TO BE REMOVED AND REPLACED WITH NEW ATS AT THE SAME LOCATION. SEE DRAWING 75-E-02 FOR ONE LINE.
5. CONTRACTOR SHALL REUSE THE EXISTING CONDUITS TO AND FROM ATS. THE EXISTING CONDUCTORS THAT ARE CURRENTLY INSTALLED SHALL BE DEMOLISHED. ADDITIONALLY, THE CONTRACTOR SHALL PROVIDE AND INSTALL NEW CONDUCTORS WITHIN THE EXISTING CONDUITS AS SHOWN ON DRAWINGS. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MODIFICATIONS REQUIRED TO CONDUITS FOR THE NEW ATS. FIELD VERIFY THE EXACT CONDUIT STUB-UP.

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ELECTRICAL
WOOD VALLEY PUMP STATION
PHOTO DETAILS

BID DOCUMENTS

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0 1"

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