

X:\Active Projects\Kimley-Horn\Carroll County Peace River PS & SWS_Bidset\Design\NOTES.dwg 4/24/2020 2:56:20 PM dmm

This document, together with the concepts and designs presented herein, is intended only for the specific purpose and client for which it was prepared. Reuse of and improper reliance on this document without written authorization and adaptation by Kimley-Horn and Associates, Inc. shall be without liability to Kimley-Horn and Associates, Inc.

PLAN SYMBOLS		
	HOME RUN TO PANELBOARD. NO. OF ARROWS INDICATE NO. OF CIRCUITS, HASH MARKS INDICATE NO. OF #12 AWG. CONDUCTORS. NO HASH MARKS INDICATE 2 #12 CONDUCTORS.	
	CONDUIT CONCEALED IN WALL, IN SLAB ABOVE, OR ABOVE CEILING	
	CONDUIT CONCEALED IN OR BELOW FLOOR OR UNDERGROUND.	
	CONDUIT RUN EXPOSED. RUN PARALLEL OR PERPENDICULAR TO STRUCTURE OR WALL.	
	FLEXIBLE CONDUIT WITH EQUIPMENT CONNECTION.	
	CONCRETE ENCASED DUCTBANK.	
	WALL MOUNTED LED LIGHTING FIXTURE.	
	LED LIGHTING FIXTURE, CEILING MOUNTED.	
	EXTERIOR LED LUMINAIRE AND MOUNTING STANDARD.	
	EXISTING EXTERIOR LIGHTING.	
	EMERGENCY BATTERY PACK LIGHTING FIXTURE.	
	JUNCTION BOX N.E.C. SURFACE MOUNTED UNLESS INDICATED OTHERWISE.	
	JUNCTION BOX PER N.E.C., NEMA 4X 316 SSS, FLUSH MOUNTED UNLESS INDICATED OTHERWISE.	
	FLUSH OR SURFACE MOUNTED LIGHTING PANELBOARD.	
	FLUSH OR SURFACE MOUNTED POWER PANELBOARD.	
	DRY TYPE TRANSFORMER. NO. INDICATES KVA RATING.	
	LIQUID FILLED TRANSFORMER, KVA RATING AS SHOWN	
	FLUSH MOUNTED RECEPTACLE WITH USB OUTLET	
	20A, 125V, 3W DUPLEX RECEPTACLE IN FLUSH OUTLET BOX, 18" ABOVE FINISHED FLOOR.	
	20A, 125V, 3W GFI DUPLEX RECEPTACLE IN FLUSH OUTLET BOX, 48" ABOVE FINISHED FLOOR OR 6" ABOVE FINISHED COUNTER AS REQUIRED (AFC)	
	20A, 125V, 3W DUPLEX RECEPTACLE, SURFACE MOUNTED.	
	SURFACE MOUNTED GROUND FAULT WEATHERPROOF RECEPTACLE 20A, 125V, 3W - MOUNTED 48" ABOVE FINISHED FLOOR, UNLESS OTHERWISE NOTED.	
	20A, 125, 3W DOUBLE DUPLEX RECEPTACLE IN FLUSH OUTLET BOX.	
	FLUSH MOUNTED GROUND FAULT WEATHERPROOF DUPLEX RECEPTACLE 20A, 125V, 3W -MOUNTED 48" ABOVE FINISHED FLOOR.	
	FLUSH MOUNTED GFI WP DUPLEX RECEPTACLE WITH COVER RATED NEMA 4 WHILE IN USE.	
	DISCONNECT RACK MOUNTED.	
	OFF REMOTE/DISCONNECT RACK MOUNTED WITH JUNCTION BOX MOUNTED BELOW OFF REMOTE. NEMA 3R SS UNLESS OTHERWISE NOTED.	
	SINGLE POLE SWITCH IN FLUSH OUTLET BOX, 48" ABOVE FINISHED FLOOR, UNLESS OTHERWISE NOTED (TYPICAL).	
	SINGLE POLE SWITCH, SURFACE MOUNTED.	
	THREE-WAY SWITCH IN FLUSH OUTLET BOX.	
	FOUR-WAY SWITCH IN FLUSH OUTLET BOX.	
	NON-FUSIBLE DISCONNECT SWITCH, 30A,3P NEMA 4X 316 SS UNLESS OTHERWISE INDICATED.	
	NON-FUSIBLE DISCONNECT SWITCH, 30A,3P UNLESS OTHERWISE INDICATED, WITH REMOTE CONTROL STATION AS REQUIRED BY ELEMENTARY DIAGRAMS OR SPECS.	
	ELECTRIC A.C. MOTOR, NO. INDICATES HORSEPOWER.	
	FUSED DISCONNECT SWITCH(30/20: 30=SWITCH RATING, 20=FUSE RATING) 3 POLE--UNLESS NOTED OTHERWISE.	
	MOTORIZED VALVE	
	COMBINATION MOTOR STARTER, DISCONNECT SWITCH	
	VARIABLE FREQUENCY DRIVE	
	THERMOSTAT	
	ELECTRIC HEATER	

PLAN SYMBOLS (CONTINUED)	
	FLOW SWITCH
	FLOW ELEMENT
	LEVEL ELEMENT
	LIMIT SWITCH
	PRESSURE SWITCH
	SOLENOID VALVE
	LIQUID LEVEL SWITCH
	VIBRATION SWITCH
	ANALYSIS INDICATING TRANSMITTER
	FLOW INDICATING TRANSMITTER
	LEVEL INDICATING TRANSMITTER
	WEIGHT INDICATING TRANSMITTER
	TEMPERATURE SWITCH
	TORQUE SWITCH
	WEIGHT INDICATOR
	SPACE HEATER
	VIBRATION SWITCH
	ANALYTICAL ELEMENT
	DISCHARGE TEMPERATURE SWITCH

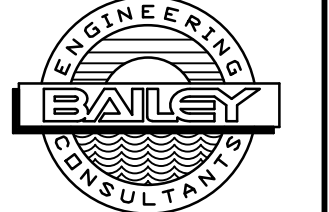
SINGLE LINE DIAGRAM SYMBOLS	
	COMBINATION MOTOR STARTER
	EMERGENCY STOP
	GROUND FAULT INTERRUPTER
	WATT HOUR METER
	FUSE
	CAPACITOR
	DRAW-OUT CIRCUIT BREAKER
	MOLDED CASE CIRCUIT BREAKER
	TYPICAL SELECTOR SWITCH AND CONTROL. SEE ELEMENTARY DIAGRAMS FOR EXACT TYPE.
	ELECTRIC A.C. MOTOR, NO. INDICATES HORSEPOWER.
	SERVICE OR EQUIPMENT GROUND.
	NON-FUSIBLE DISCONNECT SWITCH, 30A,3P NEMA 4X 316 SS UNLESS OTHERWISE INDICATED.
	NON-FUSIBLE DISCONNECT SWITCH, 30A,3P UNLESS OTHERWISE INDICATED, WITH REMOTE CONTROL STATION AS REQUIRED BY ELEMENTARY DIAGRAMS OR SPECS.
	CROUSE HINDS EYSR FITTING w/CHICO SPEED SEAL COMPOUND
	CROUSE HINDS EYS FITTING w/ CHICO SPEED SEAL COMPOUND
	LIGHTING PANELBOARD
	POWER PANELBOARD.
	CURRENT TRANSFORMERS
	POTENTIAL TRANSFORMERS.
	FIBER PATCH PANEL
	NEMA 4X 316 STAINLESS STEEL JUNCTION BOX, UNLESS OTHERWISE NOTED

CONTROL DIAGRAM SYMBOLS	
	NORMALLY OPEN CONTACT
	NORMALLY CLOSED CONTACT
	LIMIT SWITCH, NORMALLY OPEN
	LIMIT SWITCH, NORMALLY CLOSED
	PRESSURE SWITCH, NORMALLY OPEN
	PRESSURE SWITCH, NORMALLY CLOSED
	FLOAT SWITCH, NORMALLY OPEN
	FLOAT SWITCH, NORMALLY CLOSED
	FLOW SWITCH, NORMALLY OPEN
	FLOW SWITCH, NORMALLY CLOSED
	TEMPERATURE SWITCH, NORMALLY OPEN
	TEMPERATURE SWITCH, NORMALLY CLOSED
	NORMALLY OPEN, TIMED TO CLOSE CONTACT
	NORMALLY CLOSED, TIMED TO CLOSE CONTACT
	NORMALLY OPEN, TIMED TO OPEN CONTACT
	LIMIT SWITCH
	FLOW SWITCH
	PRESSURE SWITCH
	SOLENOID VALVE
	LIQUID LEVEL SWITCH
	VIBRATION SWITCH
	SMOKE DETECTOR
	ALARM RELAY
	ALARM TIMER
	CONTROL RELAY
	MOTOR STARTER
	TIMING RELAY
	TORQUE SWITCH
	ALARM INDICATING LIGHT
	RUN INDICATING LIGHT
	MOMENTARY CONTACT PUSHBUTTON
	MOMENTARY BREAK PUSHBUTTON OR RESET
	KEYED SWITCH
	MAINTAINED CONTACT ON-OFF SWITCH
	START/STOP(S/S) CONTROL SWITCH MAINTAINED CONTACT
	THREE POSITION MAINTAINED CONTACT SELECTOR SWITCH
	FUSE
	MOLDED CASE CIRCUIT BREAKER
	CONTROL POWER TRANSFORMER
	REMOTE TERMINAL BLOCK POINT

ABBREVIATIONS	
A	AMPERES
ACP	AERATOR CONTROL PANEL
ACCU	AIR COOLED CONDENSING UNIT
AFF	ABOVE FINISHED FLOOR
AHU	AIR HANDLING UNIT
AIC	AMPS INTERRUPTING CURRENT BREAKER
BKR	BREAKER
BLDG	BUILDING
CP	CONTROL PANEL
CPT	CONTROL POWER TRANSFORMER
CU	CONDENSING UNIT
CT	CURRENT TRANSFORMER
DEF	DUKE ENERGY OF FLORIDA
DO	DISSOLVED OXYGEN
EFF	EFFLUENT
ELEC	ELECTRICAL
EM	EMERGENCY
ENCL	ENCLOSURE
ETM	ELAPSED TIME METER
EUH	ELECTRIC UNIT HEATER
EWH	ELECTRIC WATER HEATER
EXH	EXHAUST
EXIST	EXISTING
FPP	FIBER PATCH PANEL
FRP	FIBERGLASS REINFORCED PLASTIC
FTC	FLOAT CABLE TERMINATION CABINET
FVNR	FULL VOLTAGE NON-REVERSING GENERATOR CONTROL PANEL
GCP	GROUND FAULT RECEPTACLE
GFR	GROUND FAULT INTERRUPTER
GFI	GROUND FAULT INTERRUPTER
GND	GROUND
GRS	GALVANIZED RIGID STEEL
GST	GROUND STORAGE TANK
HOA	HAND-OFF-AUTOMATIC
HOR	HAND-OFF-REMOTE
HP	HORSEPOWER
HSP	HIGH SERVICE PUMP
KVA	KILO VOLT-AMPERES
KW	KILOWATT
LCP	LOCAL CONTROL PANEL
LTG	LIGHTING
LP	LOOP NUMBER
MAX	MAXIMUM
MCB	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MFR	MANUFACTURER
MIN	MINIMUM
MLO	MAIN LUGS ONLY
MTD	MOUNTED
MTS	MANUAL TRANSFER SWITCH
NEC	NATIONAL ELECTRIC CODE
N	NEUTRAL
NTS	NOT TO SCALE
ODP	ODOR CONTROL PANEL
OH	OVERHEAD
P	POLE
PCP	PROCESS CONTROL PANEL
PICS	PROCESS & INSTRUMENTATION CONTROL SYSTEM
PMP	PRESSURE MONITORING PANEL
SC	SURGE CAPACITOR
SH	SHIELDED
SS	STAINLESS STEEL
STR	STARTER
SW	SWITCH
SWBD	SWITCHBOARD
TBR	TO BE REMOVED
TC	TERMINATION CABINET
TYP	TYPICAL
UG	UNDERGROUND
UPS	UNINTERRUPTIBLE POWER SUPPLY
V	VOLT
VFD	VARIABLE FREQUENCY DRIVE
W	WATT
W/	WITH
WP	WEATHERPROOF
ø	PHASE

NOTES	
1.	ELECTRICAL CONTRACTOR SHALL SUPPLY AND INSTALL ALL NEW ELECTRICAL WORK INDICATED.
2.	ELECTRICAL CONTRACTOR SHALL VISIT JOB SITE AND FAMILIARIZE HIMSELF WITH ALL CONDITIONS AFFECTING ELECTRICAL INSTALLATION AND MAKE PROVISIONS AS TO THE COST THEREOF. EXISTING CONDITIONS OF ELECTRICAL EQUIPMENT, LIGHT FIXTURES, ETC... THAT ARE PART OF THE FINAL SYSTEM SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO SUBMITTING HIS BID.
3.	ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE 2017 FLORIDA CODE, THE 2014 NATIONAL ELECTRICAL CODE AND SHALL COMPLY WITH ALL LOCAL RULES AND ORDINANCES.
4.	MINIMUM WIRE SIZE SHALL BE #12 A.W.G. EXCLUDING CONTROL WIRING, UNLESS OTHERWISE NOTED.
5.	IT IS NOT THE INTENT OF THESE PLANS TO SHOW EVERY MINOR DETAIL OF CONSTRUCTION. THE CONTRACTOR IS EXPECTED TO FURNISH AND INSTALL ALL ITEMS FOR A COMPLETE ELECTRICAL SYSTEM AND PROVIDE ALL REQUIREMENTS NECESSARY FOR THE EQUIPMENT TO BE PLACED IN PROPER WORKING ORDER.
6.	ELECTRICAL SYSTEM SHALL BE COMPLETE AND EFFECTIVELY GROUNDED AS REQUIRED BY THE LATEST EDITION OF THE N.E.C. OR LOCAL CODES. ALL CONDUITS SHALL HAVE A BOND WIRE SIZED PER TABLE 250-122 OF THE NATIONAL ELECTRIC CODE.
7.	ALL MATERIALS SHALL BE NEW AND BEAR UNDERWRITERS' LABELS WHERE APPLICABLE.
8.	ALL WORK SHALL BE PERFORMED BY A LICENSED ELECTRICAL CONTRACTOR IN A FIRST CLASS WORKMANLIKE MANNER. THE COMPLETED SYSTEM SHALL BE FULLY OPERATIVE AND ACCEPTED BY ENGINEER/OWNER.
9.	CONTRACTOR SHALL GUARANTEE ALL MATERIALS AND WORKMANSHIP FREE FROM DEFECTS FOR A PERIOD OF NOT LESS THAN TWO YEARS FROM DATE OF ACCEPTANCE.
10.	CORRECTION OF ANY DEFECTS SHALL BE COMPLETED WITHOUT ADDITIONAL CHARGE AND SHALL INCLUDE REPLACEMENT OR REPAIR OF ANY OTHER PHASE OF THE INSTALLATION WHICH MAY HAVE BEEN DAMAGED.
11.	CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CUTTING AND PATCHING REQUIRED OF HIS WORK.
12.	ELECTRICAL CONTRACTOR SHALL LABEL ALL PANELS W/ TYPE WRITTEN DIRECTORIES (NEW & EXISTING).
13.	ALL ELECTRICAL WIRING SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR.
14.	DO NOT SCALE THE ELECTRICAL DRAWINGS. REFER TO THE MECHANICAL DRAWINGS & THE APPROVED MANUFACTURER'S SHOP DRAWINGS FOR THE EXACT LOCATION OF ALL EQUIPMENT.
15.	NON-SHADED TEXT DENOTES NEW EQUIPMENT, STRUCTURES AND WORK. SHADED AND SLANTED TEXT DENOTES EXISTING EQUIPMENT OR STRUCTURES.
16.	ALL CONTROL PANELS SHALL BE UL LISTED AND SHALL COMPLY WITH ARTICLE 409 OF THE NEC.
17.	ALL EMPTY CONDUITS SHALL BE INSTALLED WITH PULL STRING.
18.	IN ALL CASES WHERE NOTES, SPECIFICATIONS, SKETCHES, DETAILS OR SCHEDULES IN THE SPECIFICATIONS OR IN THE DRAWINGS, OR BETWEEN THE SPECIFICATIONS AND THE DRAWINGS CONFLICT, THE HIGH COST REQUIREMENT SHALL BE FURNISHED BY THE CONTRACTOR, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

10620 GRIFFIN ROAD, SUITE 202
COOPER CITY, FLORIDA 33328
PHONE: (954) 448-7930
C.O.A. NO. 6783
Stephen E. Bailey, P.E.
Florida P.E. No. 42461



BIDSET SUBMITTAL

No.	REVISIONS	DATE	BY

Kimley»Horn

1777 MAIN STREET, SUITE 200, SARASOTA, FL 34236
PHONE: 941-379-7600
WWW.KIMLEY-HORN.COM CA 00000696

KHA PROJECT
DATE 4/24/20
SCALE: AS NOTED
DESIGNED BY SEB
DRAWN BY SJL
CHECKED BY SEB

Sarasota County

PEACE RIVER INTERCONNECT AND POTABLE WATER TRANSMISSION MAIN

SARASOTA COUNTY

LICENSED PROFESSIONAL
STEPHEN E. BAILEY, P.E.
42461
FL DATE:

ELECTRICAL NOTES, SYMBOLS & ABBREVIATIONS

SHEET NUMBER
E-01