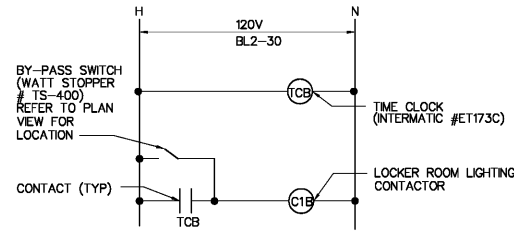


LIGHTING CONTROL DIAGRAM LCCA
SCALE: NONE

CONTACTOR DESIGNATION	AMP RATING	# OF POLES	CIRCUITS CONTROLLED	CONTROLLED BY
LCCA (ADJACENT TO PANEL FH)	C1A-30	12	FL-2,4,6,8,10,12,14,16,18	PC ON / TC OFF
	C2A-30	4	FL-36,40	PC ON / TC OFF
	C3A-30	2	FL-44	PC ON / TC OFF

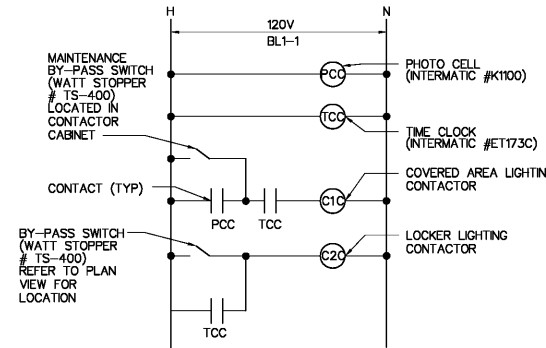
GENERAL NOTE:
1. REFER TO DRAWINGS FOR UNCONTROLLED CIRCUIT REQUIREMENTS, SOME CIRCUITS MAY BE PARTIALLY CONTROLLED.



LIGHTING CONTROL DIAGRAM LCCB
SCALE: NONE

CONTACTOR DESIGNATION	AMP RATING	# OF POLES	CIRCUITS CONTROLLED	CONTROLLED BY
LCC (ADJACENT TO PANEL BL2)	C1B-30	4	BL2-30	TC ON / TC OFF

GENERAL NOTE:
1. REFER TO DRAWINGS FOR UNCONTROLLED CIRCUIT REQUIREMENTS, SOME CIRCUITS MAY BE PARTIALLY CONTROLLED.



LIGHTING CONTROL DIAGRAM LCCC
SCALE: NONE

CONTACTOR DESIGNATION	AMP RATING	# OF POLES	CIRCUITS CONTROLLED	CONTROLLED BY
LCC (ADJACENT TO PANEL BL1)	C1C-30	3	BL1-3,9	PC ON / TC OFF
	C2C-30	3	BL1-7	TC ON / TC OFF

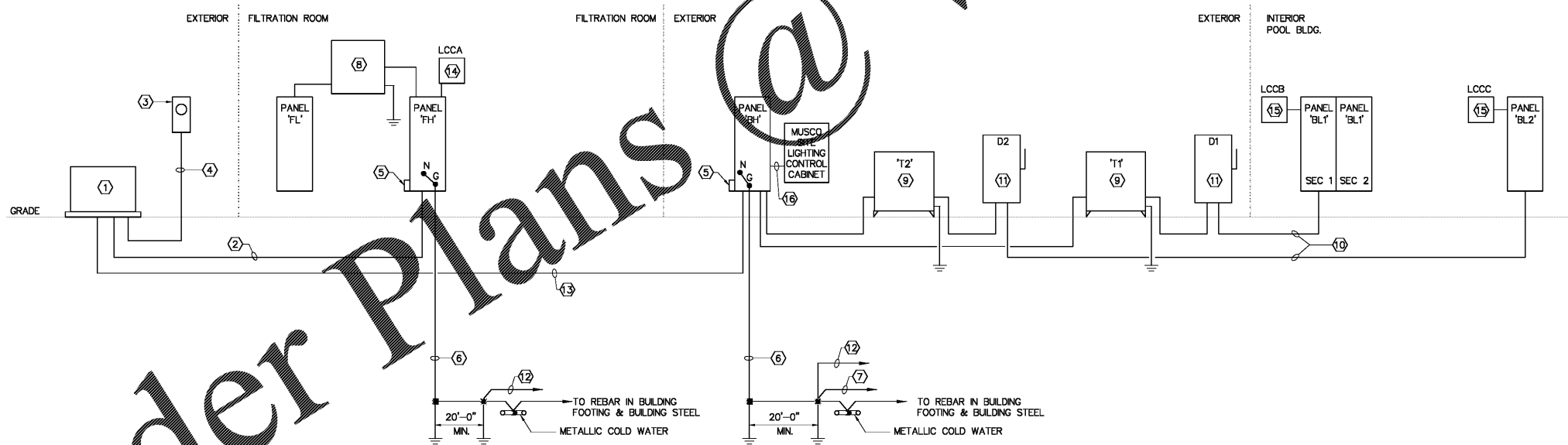
GENERAL NOTE:
1. REFER TO DRAWINGS FOR UNCONTROLLED CIRCUIT REQUIREMENTS, SOME CIRCUITS MAY BE PARTIALLY CONTROLLED.

REVISED: 12-Dec-17
FAULT CURRENT STUDY
CABLE IMPEDANCE VALUES BASED ON IEEE STD. 241-1990, TABLE 65.
PROJECT: NORTHPORT AQUATIC CENTER
NORTHPORT, FL

SYSTEM VOLTAGE:	480	WIRE TYPE CU-1:					
ASSUMED BASE KVA:	300	WIRE TYPE AL-2:					
UTILITY COMPANY AFC:	28190	PVC CONDUIT:					
UTILITY COMPANY X/R RATIO:	12						
BUS	SOURCE AFC	SOURCE X/R	WIRE SIZE	WIRE TYPE	# OF RUNS	BUS X/R	BUS AFC
PANEL FH	28190	12.00	350	1	2	5.38	24671
PANEL BH	28190	12.00	3/0	1	2	0.88	2500

NOTE:
THE FAULT CURRENT STUDY ABOVE IS BASED UPON A 300 KVA UTILITY TRANSFORMER. ELECTRICAL CONTRACTOR SHALL CONFIRM UTILITY TRANSFORMER SIZE AND AVAILABLE FAULT CURRENT PRIOR TO ORDERING GEAR. IF UTILITY TRANSFORMER IS DIFFERENT THAN AS INDICATED ABOVE, THE ELECTRICAL CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO PROCEEDING FOR SUITABLE AIC RATING. INTEGRATED SERIES RATINGS OF CIRCUIT BREAKERS IS PERMITTED. EC OBTAIN SITE SPECIFIC AIC RATING FOR INSTALLED TRANSFORMER FROM THE UTILITY PROVIDER AND MAKE AVAILABLE FOR INSPECTOR PRIOR TO INITIAL ELECTRICAL INSPECTION.

- UTILITY COMPANY PAD MOUNTED TRANSFORMER WITH 277/480 VOLT SECONDARY.
 - SERVICE LATERAL CONSISTING OF (2) PARALLEL RUNS OF 4" C WITH (4) #350 KCMIL COPPER EACH.
 - PEDESTAL MOUNTED CT METER. PROVIDE METER SOCKET AS REQUIRED BY UTILITY COMPANY. PROVIDE #4 BARE COPPER MINIMUM GROUNDING ELECTRODE CONDUCTOR FROM METER SOCKET GROUND AND EXTEND UNBROKEN TO ONE (1) 3/4" X 10' L COPPER CLAD VERTICALLY DRIVEN GROUND ROD BENEATH METER.
 - 1-1/2" GRC WITH PULL STRING AND BUSHINGS FOR UTILITY CT METERING CONDUCTORS.
 - TYPE 1 SURGE PROTECTIVE DEVICE (SPD) PER NEC 285.
 - GROUNDING ELECTRODE CONDUCTOR TO CONSIST OF #3/0 FROM N-G BOND IN PANEL 'FH' AND EXTENDED UNBROKEN TO TWO (2) 3/4" X 10' L COPPER CLAD STEEL VERTICALLY DRIVEN GROUND RODS, NEAREST BUILDING STEEL BEAM, FOUNDATION STEEL (BELOW PANEL), COLD WATER PIPE (WITHIN 5FT. OF BUILDING ENTRY) IN ACCORDANCE WITH NEC 250.104. ROUTE EXPOSED PORTIONS OF GEC IN PVC. ALL CONCEALED CONNECTIONS SHALL BE BY EXOTHERMIC WELD CONNECTIONS.
 - EXTEND #6 COPPER CONDUCTOR TO TELEPHONE BOARD AND EXTEND AS REQUIRED TO PROVIDE CONNECTION OF ALL GROUNDING SYSTEMS TOGETHER (TV AND PHONE SERVICES, ETC). ROUTE EXTERIOR EXPOSED PORTIONS OF CONDUCTOR IN PVC. EC SHALL PROVIDE AN ADDITIONAL 10' OF CONDUCTOR COILED ON FLOOR IN VICINITY OF TELEPHONE BOARD.
 - GENERAL PURPOSE, DRY TYPE, THREE PHASE 75 KVA TRANSFORMER WITH 480 VOLT PRIMARY, 208Y/120 VOLT SECONDARY. PRIMARY FEEDER: 1-1/4" C WITH 3 #1, 1 #6 EG. SECONDARY FEEDER: 2-1/2" C WITH 4 #4/0, 1 #4 IG, 1 #4 EG. PROVIDE FLEXIBLE CONNECTION TO FINAL 24" PRIMARY AND SECONDARY. EXTEND BONDING JUMPER FROM TRANSFORMER XO TO PANEL GROUND BAR. GROUND AND BOND XO VIA #2 THIN TO NEAREST STEEL BEAM VIA EXOTHERMIC WELD CONNECTIONS. PROVIDE WITH RAIN SHIELD.
 - GENERAL PURPOSE, DRY TYPE, THREE PHASE 75 KVA TRANSFORMER WITH 480 VOLT PRIMARY, 208Y/120 VOLT SECONDARY. PRIMARY FEEDER: 1-1/4" C WITH 3 #1, 1 #6 EG. SECONDARY FEEDER: 2-1/2" C WITH 4 #4/0, 1 #4 IG, 1 #4 EG. LIMIT SECONDARY CONDUCTOR LENGTH TO 10' MAX. PROVIDE FLEXIBLE CONNECTION TO FINAL 24" PRIMARY AND SECONDARY. EXTEND BONDING JUMPER FROM TRANSFORMER XO TO PANEL GROUND BAR. GROUND AND BOND XO VIA #2 THIN TO NEAREST STEEL BEAM VIA EXOTHERMIC WELD CONNECTIONS. PROVIDE WITH RAIN SHIELD.
 - 2-1/2" C WITH 4 #4/0, 1 #4 EG.
 - 200/3/200A FUSE/NEMA 3R DISCONNECT.
 - EXTEND #8 SOLID COPPER CONDUCTOR TO BOND AND GROUND POOL EQUIPMENT AND AREA PER NEC 680.26. REFER TO SHEETS EF-2.0 AND ES-1.0 FOR ADDITIONAL INFORMATION. REFER TO DETAIL 4 ON SHEET EF-3.2 FOR TYPICAL POOL BOUNDING DETAIL.
 - SERVICE LATERAL CONSISTING OF (2) PARALLEL RUNS OF 4" C WITH (4) #3/0 COPPER EACH.
 - 30"X30"X6" DEEP, NEMA 3R, HINGED COVER BOX WITH CONTACTORS IN ACCORDANCE WITH SCHEDULES AND DIAGRAMS ON THIS SHEET AND TIME CLOCK.
 - 20"X20"X6" DEEP, NEMA 1, HINGED COVER BOX WITH CONTACTORS IN ACCORDANCE WITH SCHEDULES AND DIAGRAMS ON THIS SHEET AND TIME CLOCK.
 - PROVIDE (3) 1" NIPPLE WITH #10 CONDUCTORS FOR SITE LIGHTING CIRCUITS. REFER TO ELECTRICAL SITE PLAN FOR CONDUCTORS QUANTITY.
- GENERAL NOTES
1. REFER TO FAULT CURRENT STUDY THIS SHEET FOR AVAILABLE FAULT CURRENT AT EACH PANEL (BUS AFC). EC TO ENSURE PANELBOARDS ARE SUITABLE FOR FAULT CURRENT ENVIRONMENT (BUS AFC). SERIES RATINGS WITH UPSTREAM DEVICES WILL BE ACCEPTED.



POWER RISER DIAGRAM
SCALE: NONE

Kimley-Horn

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FLORIDA REGISTERED ENGINEERING FIRM BR-00000001
FLORIDA REGISTERED LANDSCAPE ARCHITECTURE FIRM LC-0000219
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Digitally signed by Daniel A. Sutyak
DN: cn=Daniel A. Sutyak, o=Kimley-Horn and Associates, Inc., email=d.sutyak@kimley-horn.com, c=US
Date: 2017.12.15 12:12:29 -0500
STATE OF FLORIDA
PROFESSIONAL ENGINEER
No. 12400
P.E. No. 74042

Daniel A. Sutyak

**BUTLER PARK
AQUATIC CENTER
CITY OF NORTHPORT, FL**

POWER RISER DIAGRAM

Scale: AS SHOWN
Designed by: DS
Drawn by: AS/APW
Checked by: DS
Date: DECEMBER 2017
Project No. 48285014

SHEET
EB-4.0

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This item has been electronically signed and sealed by Daniel A. Sutyak, PE. On 12/15/2017 using a Digital Signature.
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