

CABLE/FEEDER SCHEDULE/VOLTAGE DROP/WIRE SIZE CALCULATIONS										
CABLE #	LOADS	LOCATION	BRK. RATING	VOLTAGE	RATED CURRENT	CIRCUIT	DISTANCE METER (FT)	VOLTAGE DROP	FEEDER SIZE	JUNCTION BOX SIZE
①	R1a	PC#1	30	120	24	D-5	34(112)	2.64	6	200x200x100
②	R1b	PC#1	20	120	16	D-7	34(112)	2.80	8	
③	R1c	PC#1	20	120	16	D-9	34(112)	2.80	8	
④	R2a	PC#2	20	120	16	D-11	10(33)	2.09	12	400x400x200
⑤	R2b	PC#2	20	120	16	D-13	10(33)	2.09	12	
⑥	R2c	PC#2	20	120	16	D-15	10(33)	2.09	12	
⑦	R2d	PC#2	20	120	16	D-17	10(33)	2.09	12	400x400x200
⑧	R2e	PC#2	30	120	24	D-8	10(33)	1.97	10	
⑨	R3a	PC#3	150	240	120	D-1,3	28(92)	2.70	1/0	
⑩	R8a	PC#8	20	120	16	C-1	27(89)	2.23	8	200x200x100
⑪	R8b	PC#8	20	120	16	C-3	27(89)	2.23	8	
⑫	R9a	PC#9	20	120	16	C-5	54(178)	2.80	6	
⑬	R9b	PC#9	20	120	16	C-7	54(178)	2.80	6	200x200x100
⑭	R10a	PC#10	20	120	16	-	36(120)	3.00	8	
⑮	R10b	PC#10	30	120	24	-	36(120)	2.83	6	
⑯	R10c	PC#10	30	120	24	-	36(120)	2.83	6	200x200x100
⑰	R11a	PC#11	20	120	16	-	57(190)	2.99	6	
⑱	R11b	PC#11	30	120	24	-	57(190)	2.82	4	
⑲	R11c	PC#11	30	120	24	-	57(190)	2.82	4	
⑳	-	-	-	-	-	-	-	-	-	
㉑	DERRICK	PC#8	-	-	-	-	27(89)	-	-	
㉒	FUEL TANK	PC#8	20	120	16	D-10	28(92)	2.30	8	
㉓	DECK/SERVICE LIGHTS	COAST GUARD LIGHTS	15	347	8	B-1	128(420)	2.08	4	
㉔	DECK LIGHTS	WHARF LIGHTS	15	347	1	A-1	54(178)	2.23	8	
㉕	DECK LIGHTS	WHARF LIGHTS	15	347	2	F-1	57(190)	2.38	8	
㉖	SHED #2	-	100	600	60	A-2,4,6	100(328)	2.53	4/0	

LOAD CALCULATION (DEMAND) - PORT BICKERTON

1. RECEPTACLE LOAD (CEC 78-056)

• (1 x 150A x 240V)	100%	=	36,000W
• (3 x 30A x 120V)	100%	=	10,800W
• (4 x 30A x 120V)	65%	=	9,360W
• (1 x 30A x 120V)	50%	=	1,800W
• (4 x 20A x 120V)	50%	=	4,800W
• (6 x 20A x 120V)	25%	=	3,600W
SUBTOTAL = 66,360W x 1.25 = 83 kVA			

2. LIGHTING - WHARF AND FLOATING DOCKS

27 FIXTURES @ 138W (347V)	=	3,726W
SUBTOTAL = 3,726W x 1.25 = 4.7 kVA		

3. FUEL PUMP

1 HP @ 240V, 1PH,	=	
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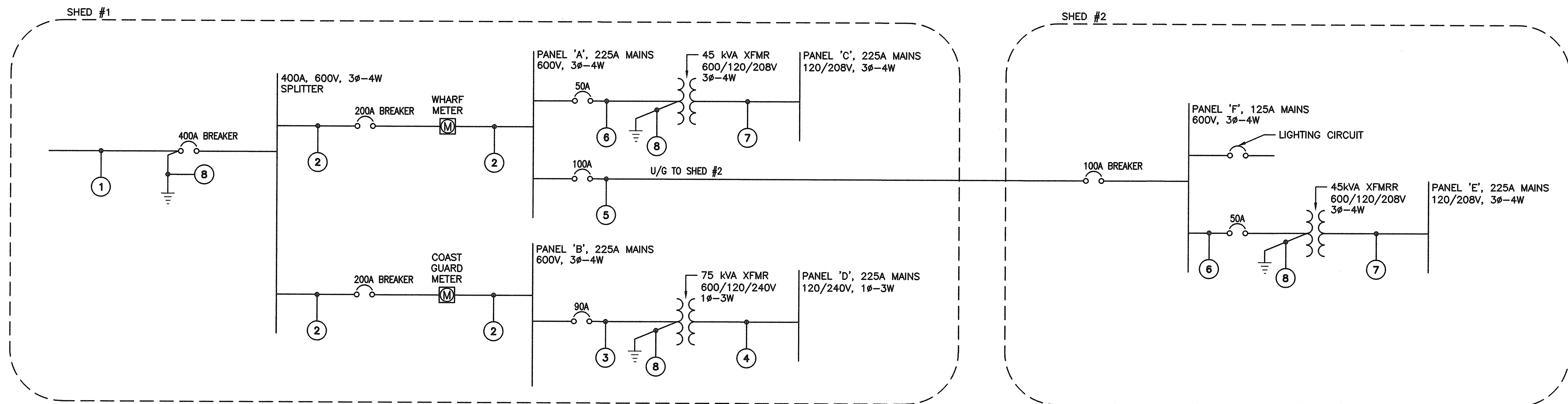
4. DERRICK @ 208V, 1PH

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5. ELECTRICAL BUILDING

	=	4,500W x 1.25 = 5.625 kVA
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TOTAL LOAD	=	66.36 kW
	=	3.726 kW
	=	0.94 kW
	=	4.5 kW
TOTAL	=	75.526 kW x 1.25 = 94.4 kVA
SERVICE LOADING	=	94.400 kVA/600 VOLTS, 3ϕ = 90.9 AMPS



POWER RISER DIAGRAM

SCALE : N.T.S.

CABLE SCHEDULE

- 2 RUNS OF 4#3/0 Cu. RUN IN 53mm (2") PVC CONDUIT c/w WEATHERHEAD
- 4#3/0 Cu. + #4 Cu. BOND RUN IN 63mm (2½") CONDUIT
- 3#3 Cu. + #8 Cu. BOND RUN IN 35mm (1½") CONDUIT
- 3#300 MCM Cu. + #4 Cu. BOND RUN IN 63mm (2½") CONDUIT
- 4#4/0 Cu. + #4 Cu. BOND RUN IN 63mm (2½") CONDUIT
- 3#8 Cu. + #10 Cu. BOND RUN IN 27mm (1") CONDUIT
- 4#1/0 Cu. + #6 Cu. BOND RUN IN 53mm (2") CONDUIT
- #6 Cu. INSULATED GREEN GROUND

0 ISSUED FOR TENDER JUN.05 2017

revisions revisions date

project project

HARBOUR
REDEVELOPMENT
PORT BICKERTON EAST
GUYSBOROUGH COUNTY
NOVA SCOTIA

drawing dessin

ELECTRICAL SINGLE LINE
DIAGRAM AND VOLTAGE
CALCULATIONS

designed M.N. conçu

date JUN 05, 2017

drawn D.C. dessiné

date JUN 05, 2017

approved approved

date 06/06/17

Tender Soumission

PWSC Project Manager Administrateur de projets TPSGC

project number no. du projet

R.082082.001

drawing no. no. du dessin

E3