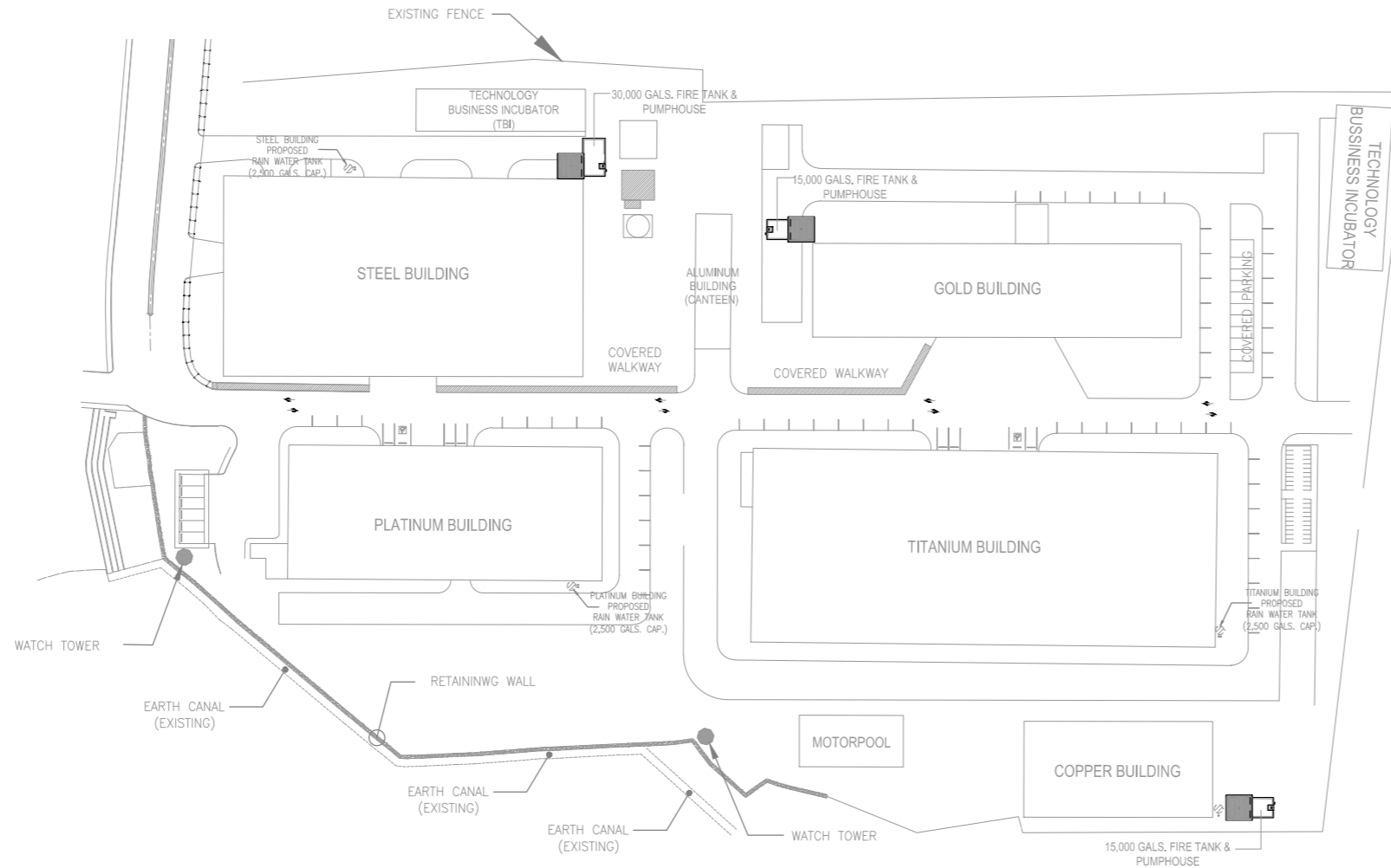


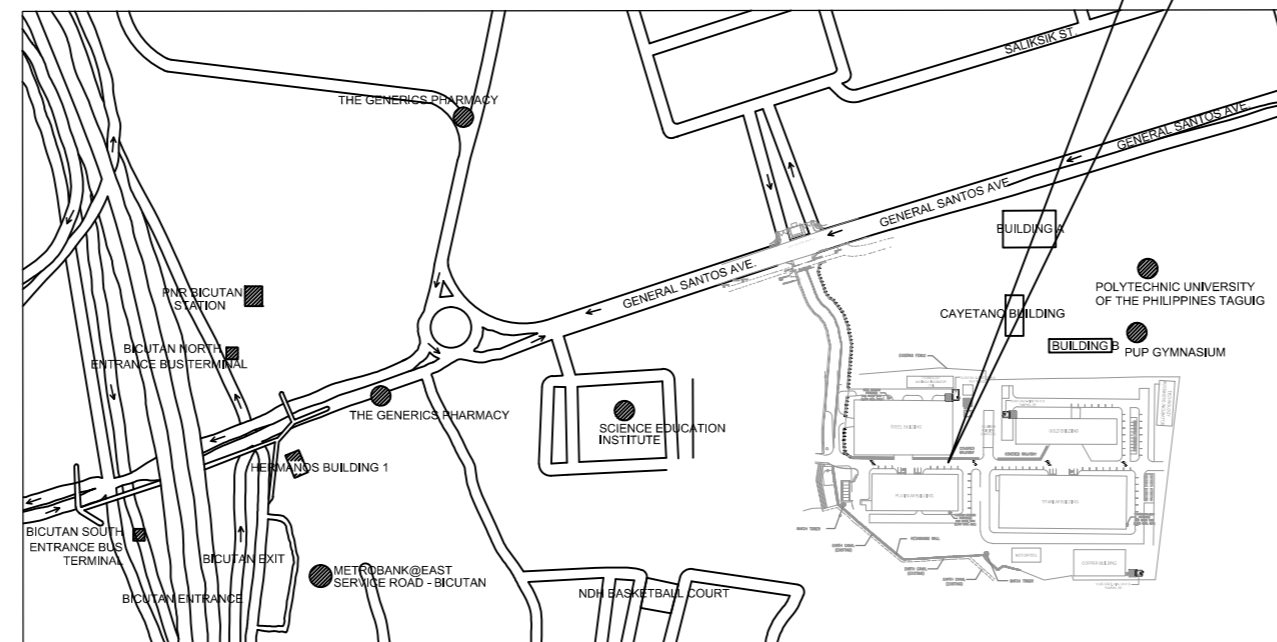
GENERAL NOTES:

- ALL ELECTRICAL WORKS HEREIN SHALL CONFORM TO THE PROVISIONS OF THE LATEST EDITION OF THE PHILIPPINE ELECTRICAL CODE, THE NATIONAL BUILDING CODE, THE RULES AND REGULATIONS OF BUILDING ADMINISTRATION AND THE UTILITY COMPANY SERVING THE SITE.
- ALL MATERIALS TO BE USED SHALL BE NEW AND OF THE APPROVED TYPE FOR THE LOCATION AND PURPOSE FOR WHICH THEY ARE INTENDED.
- ALL ELECTRICAL WORKS HERE IN SHALL BE DONE UNDER THE DIRECT SUPERVISION OF A DULY QUALIFIED AND LICENSED ELECTRICAL ENGINEER.
- AFTER COMPLETION OF ELECTRICAL WORKS, THE CONTRACTOR MUST PERFORM THE FOLLOWING TEST.
 - INSULATION/ MEGGER TEST
 - OPERATIONAL/ FUNCTIONAL TEST
- PLAN SHOWS DIAGRAMMATICALLY LOCATION OF OUTLETS, SWITCHES, CONDUIT RUNS, PANEL BOARDS, LIGHTING FIXTURES AND SERVICE ENTRANCE. FINAL LOCATION WILL BE DETERMINE UPON JOINT COORDINATION WITH ARCHITECTURAL, CIVIL, MECHANICAL, AND EQUIPMENT INSTALLER OR AS PER DIRECTIVE OF OWNER'S AUTHORIZED REPRESENTATIVE.
- LOCATION OF PANEL PP SHALL BE DETERMINED BY THE CONTRACTOR ON SITE TO SUIT ACTUAL FIELD CONDITION.

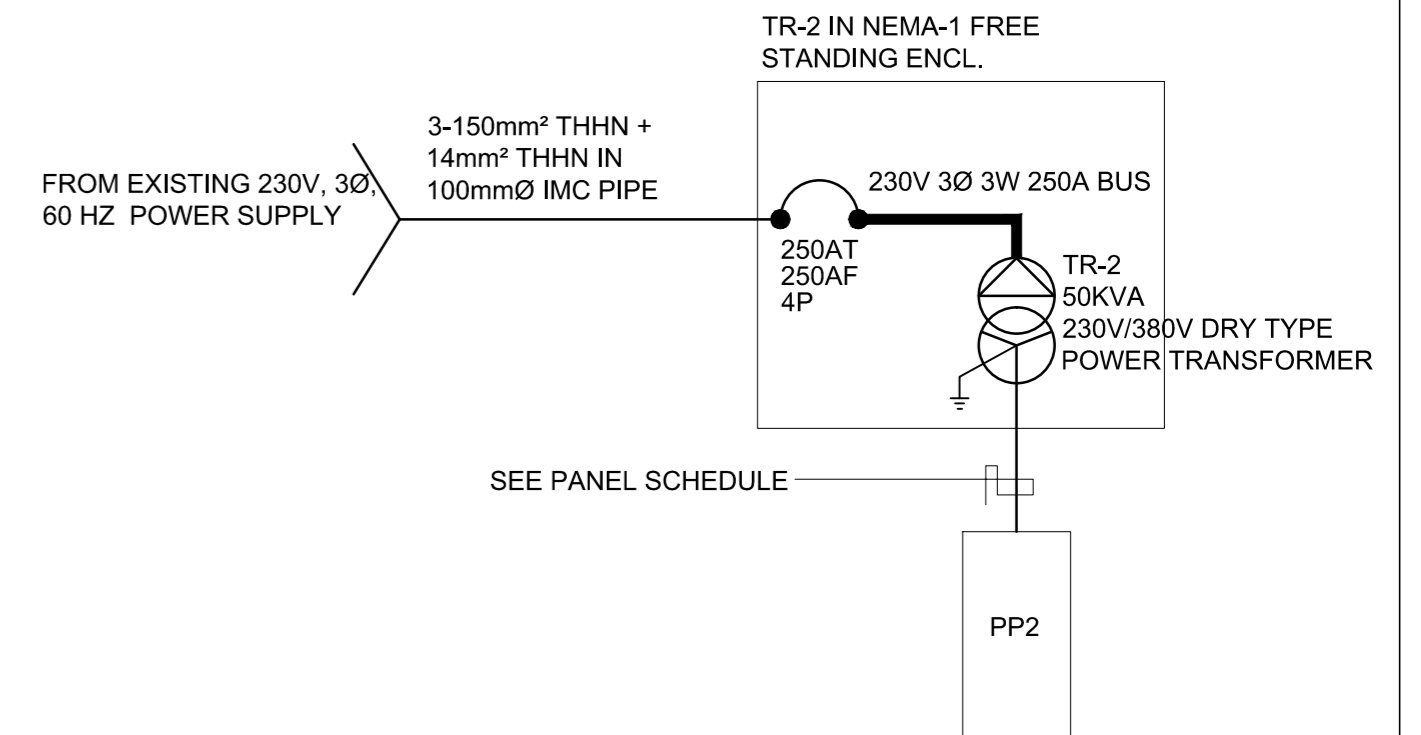
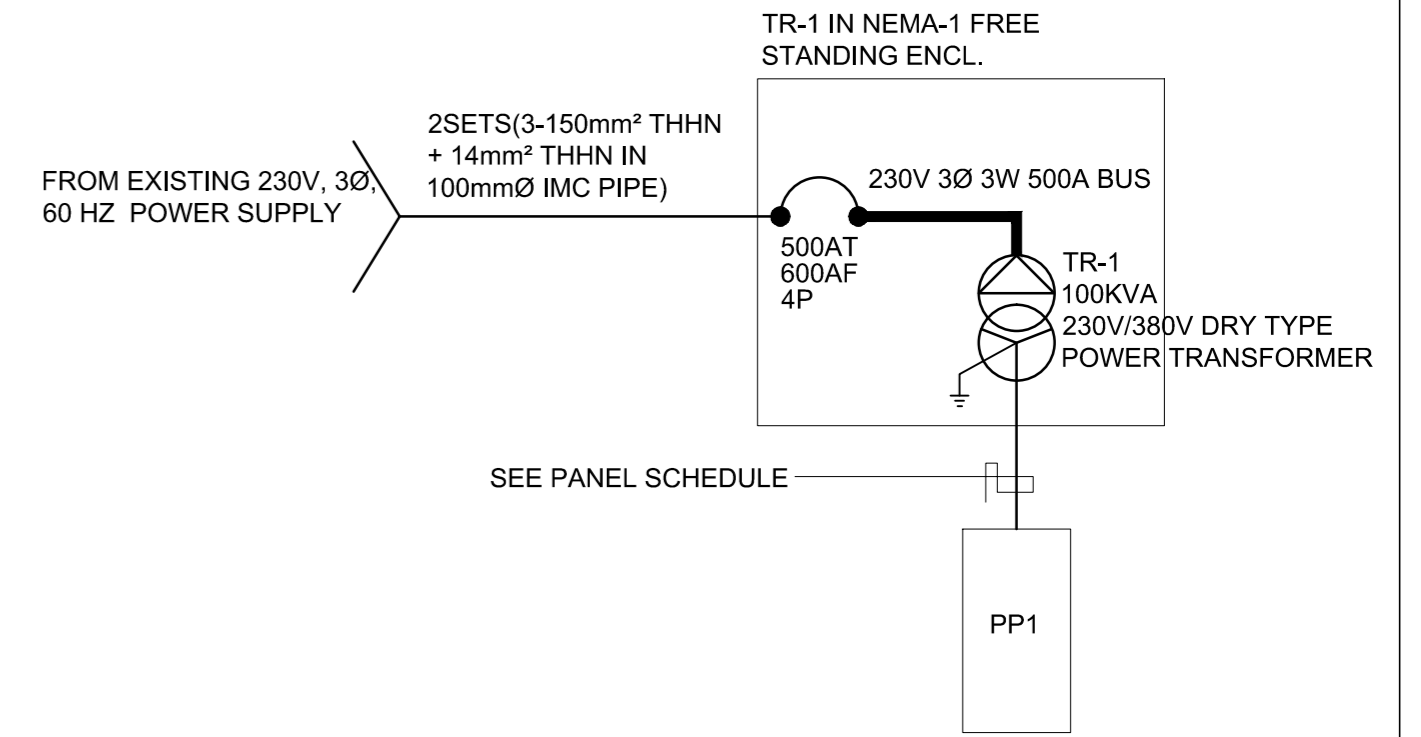


2 SITE DEVELOPMENT PLAN
SCALE: N.T.S

THIS SITE
GEN. SANTOS AVE., BICUTAN,
TAGUIG CITY, METRO MANILA



1 VICINITY MAP
SCALE: N.T.S



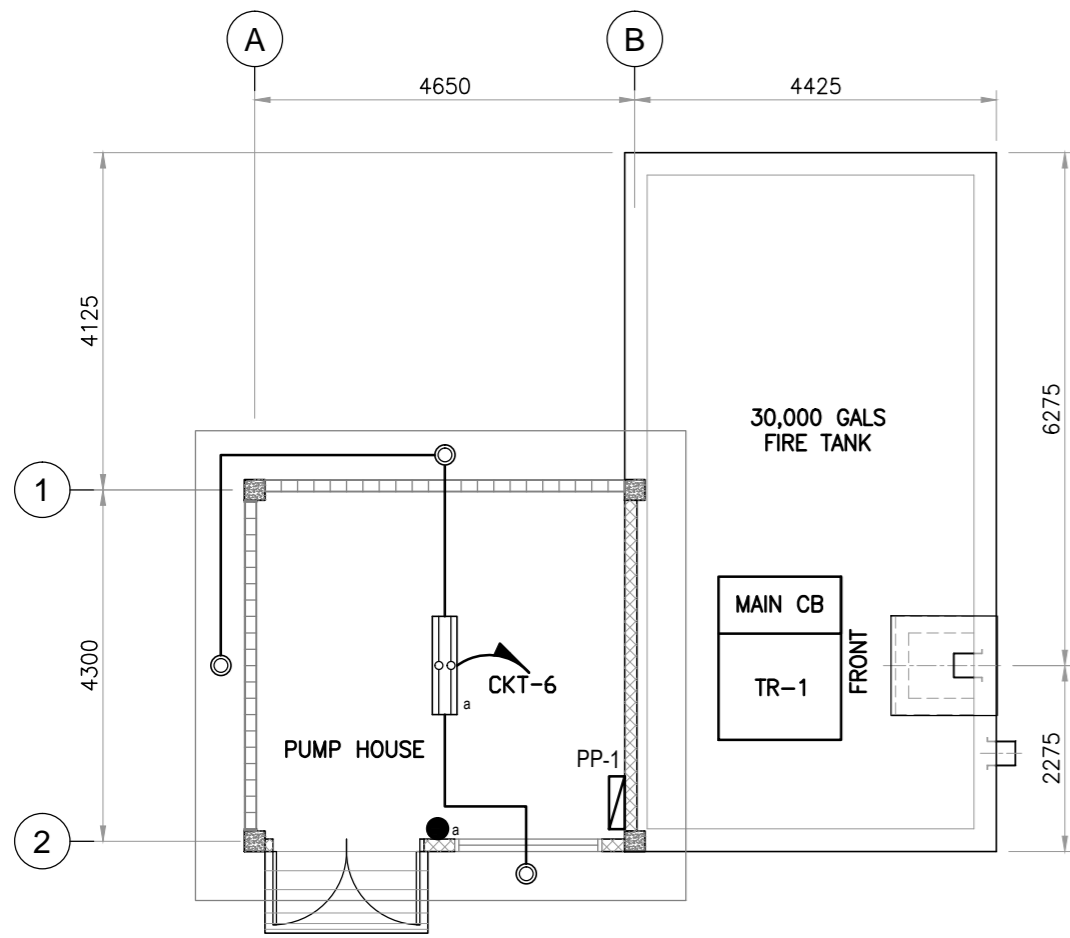
3 SINGLE LINE DIAGRAM
SCALE: N.T.S

LEGEND & SYMBOLS	
	300mm x 1200mm SURFACE MOUNTED MOISTURE / DUST PROOF FLUORESCENT LUMINAIRE (2 - 20W)
	SINGLE GANG SWITCH COMPLETE WITH PLATE COVER
	DUPLEX CONVENIENCE OUTLET
	150mm ROUND SURFACE MOUNTED PINLIGHT (1x20W)
	ELECTRIC MOTOR
	CIRCUIT HOMERUN
	PANELBOARD

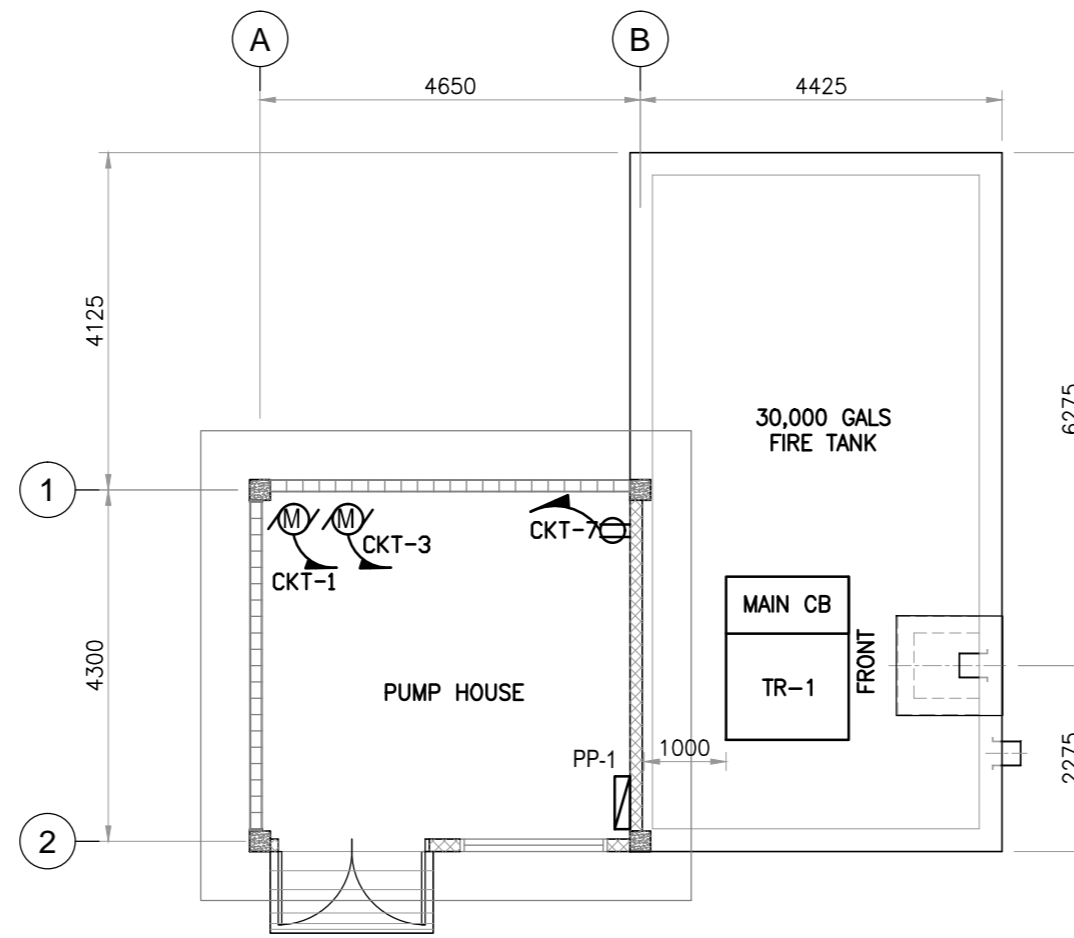
GIBMA Engineering Services
Design - Construction - Project Management - Surveys

93 Kalikasan Street Karangalan Village Phase 2A, Dela Paz, Pasig City 1611
Tel. No.: 682 7114 Fax. No.: 682 8467 Cellphone No.: 0920 9226441
URL: www.gibma.com E-mail: gibma2003@yahoo.com

PROFESSIONAL ELECTRICAL ENGINEER :	PROJECT TITLE :	OWNER :	REVIEWED & CHECKED BY :	DESIGNED BY :	SHEET CONTENTS :	DRAWING NO. :
	DESIGN OF FIRE FIGHTING SYSTEM FOR MIRDC BUILDINGS	METAL INDUSTRY RESEARCH AND DEVELOPMENT CENTER (MIRDC)			15,000 / 30,000 GALS. FIRE TANK & PUMPHOUSE	E - 1
REG. NO. : PTR NO. :	LOCATION :	ADDRESS :	RECOMMENDED BY :	CADD BY :	SITE DEVELOPMENT, VICINITY MAP	SHEET NO. :
DATE : ISSUED ON :	GEN. SANTOS AVE., BICUTAN, TAGUIG CITY, METRO MANILA	GEN. SANTOS AVE., BICUTAN, TAGUIG CITY, METRO MANILA			GENERAL NOTES, LEGEND & SYMBOLS	
TIN : ISSUED AT :			APPROVED BY :	CHECKED BY :		
				APPROVED BY :		
				DATE :		



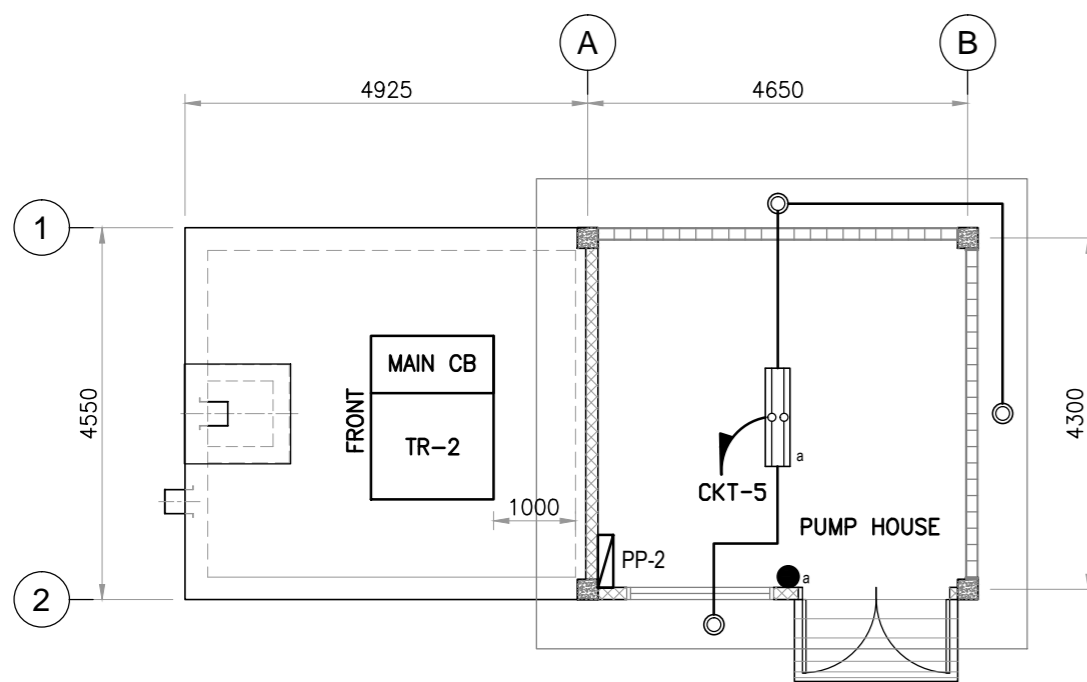
30,000 GALS. FIRE TANK & PUMPHOUSE
LIGHTING LAYOUT
 SCALE: 1:75 M.



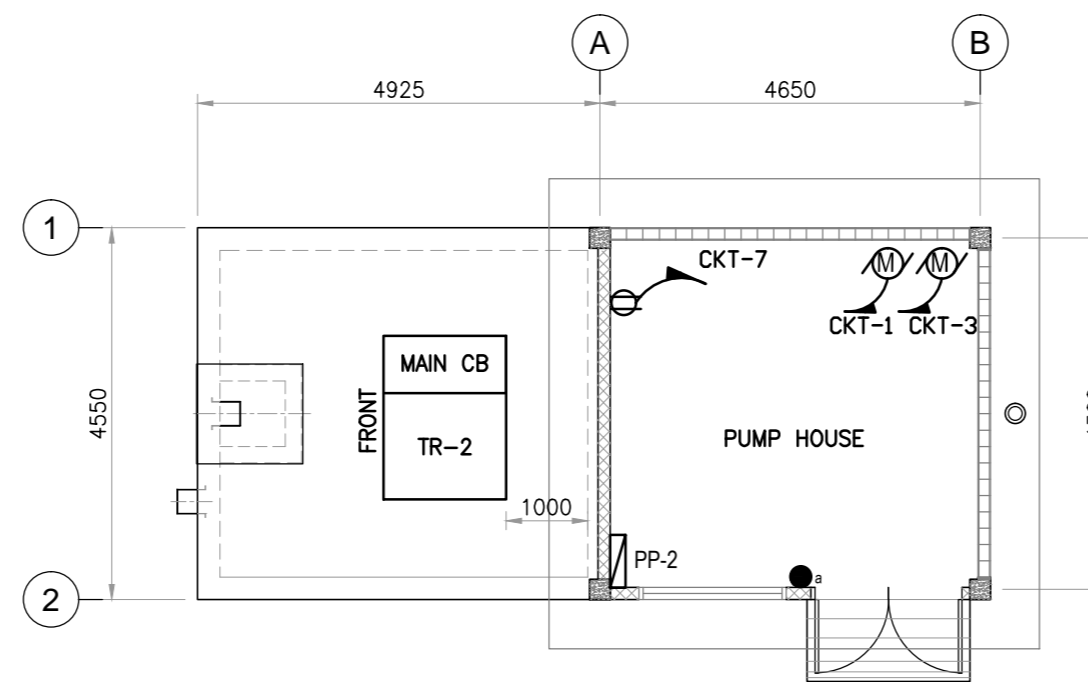
30,000 GALS. FIRE TANK & PUMPHOUSE
POWER & AUXILIARY LAYOUT
 SCALE: 1:75 M.

PP1- FIRE PUMP PANEL				MAIN: 400AT/400AF, 3-POLE					
3-PHASE, 380/220V S/N VOLTS, 60 HERTZ, 4-WIRE + 1-GROUND				BRANCHES: ALL BOLT ON CB					
CKT #	DESCRIPTION	VOLTS	VA	AMPERE LOAD			3Ø	PROTECTION	WIRES & CONDUIT
				AN	BN	CN			
1	40 HP FIRE PUMP	380	59748				90.78	350AT,3P	3-250mm ² THHN + 30mm ² THHN IN 102mmØ IMC PIPE
2	SPACE FOR 400AF 3P CB								
3	3.0 HP JOCKEY PUMP	230	3876	9.73				40AT,1P	2-5.5mm ² THHN + 3.5mm ² THHN IN 25mmØ IMC PIPE
4	SPARE	230						30AT,1P	
5	LIGHTS	230	200		0.87			20AT,1P	2-3.5mm ² + 1-3.5mm ² THHN IN 15mmØ PVC PIPE
6	SPARE							20AT,1P	
7	OUTLETS	230	360			1.57		20AT,1P	2-3.5mm ² + 1-3.5mm ² THHN IN 15mmØ PVC PIPE
8	SPARE	230						30AT,1P	
TOTAL			64184	9.73	0.87	1.57	90.78		

MAIN FEEDER TOTAL CURRENT
 $I = [(64184 / 230 / 1.732 + (25\% \times 90.78))] \times 75\% \text{ DF}$
 $= 137.86 \text{ AMPS}$
 USE : 3 - 325mm² + 1 - 325mm² + 1 - 30mm² THHN IN Ø100mm RSC PIPE



15,000 GALS. FIRE TANK & PUMPHOUSE
LIGHTING LAYOUT
 SCALE: 1:75 M.



15,000 GALS. FIRE TANK & PUMPHOUSE
POWER AUXILIARY LAYOUT
 SCALE: 1:75 M.

PP2- FIRE PUMP PANEL				MAIN: 250AT/250AF, 3-POLE					
3-PHASE, 380/220V S/N VOLTS, 60 HERTZ, 4-WIRE + 1-GROUND				BRANCHES: ALL BOLT ON CB					
CKT #	DESCRIPTION	VOLTS	VA	AMPERE LOAD			3Ø	PROTECTION	WIRES & CONDUIT
				AN	BN	CN			
1	20 HP FIRE PUMP	380	29874				45.39	70AT,3P	3-14mm ² THHN + 8.0mm ² THHN IN 32mmØ IMC PIPE
2	SPACE FOR 250AF 3P CB								
3	1.5 HP JOCKEY PUMP	230	1936	4.86				30AT,2P	2-5.5mm ² THHN + 35mm ² THHN IN 35mmØ IMC PIPE
4	SPARE	230						30AT,1P	
5	LIGHTS	230	200		0.87			20AT,1P	2-3.5mm ² + 1-3.5mm ² THHN IN 15mmØ PVC PIPE
6	SPARE							20AT,1P	
7	OUTLETS	230	360			1.57		20AT,1P	2-3.5mm ² + 1-3.5mm ² THHN IN 15mmØ PVC PIPE
8	SPARE	230						30AT,1P	
TOTAL			32370	4.86	0.87	1.57	45.39		

MAIN FEEDER TOTAL CURRENT
 $I = [(32370 / 230 / 1.732 + 25\% \times 45.39)] \times 75\% \text{ DF}$
 $= 69.45 \text{ AMPS}$
 USE : 3 - 150mm² + 1 - 150mm² + 1 - 22mm² THHN IN Ø100mm RSC PIPE