

Client:



General Key Plan:

NOTES :

SCHEDULE OF HYBRID PV SYSTEMS				
OPTION #	1	2	3	4
SYSTEM OUTPUT	SINGLE PHASE	SINGLE PHASE	SINGLE PHASE	SINGLE PHASE
PV PANELS	6	8	14	18
PV POWER OUTPUT (W)	540	540	540	540
INVERTER SIZE (KW)	3.5	5.0	8.0	10.0
INVERTER TYPE MPPT CHARGER	HYBRID	HYBRID	HYBRID	HYBRID
DC SYSTEM VOLTAGE	24V	48V	48V	48V
BATTERIES AH @20 DEG. C	200Ah	200Ah	200Ah	200Ah
BATTERY TYPE	TUBULAR, C10	TUBULAR, C10	TUBULAR, C10	TUBULAR, C10
NUMBER OF BATT.	2	4	4	4
BATTERIES IN SERIES	2	4	4	4
BATTERY VOLTAGE	12V	12V	12V	12V

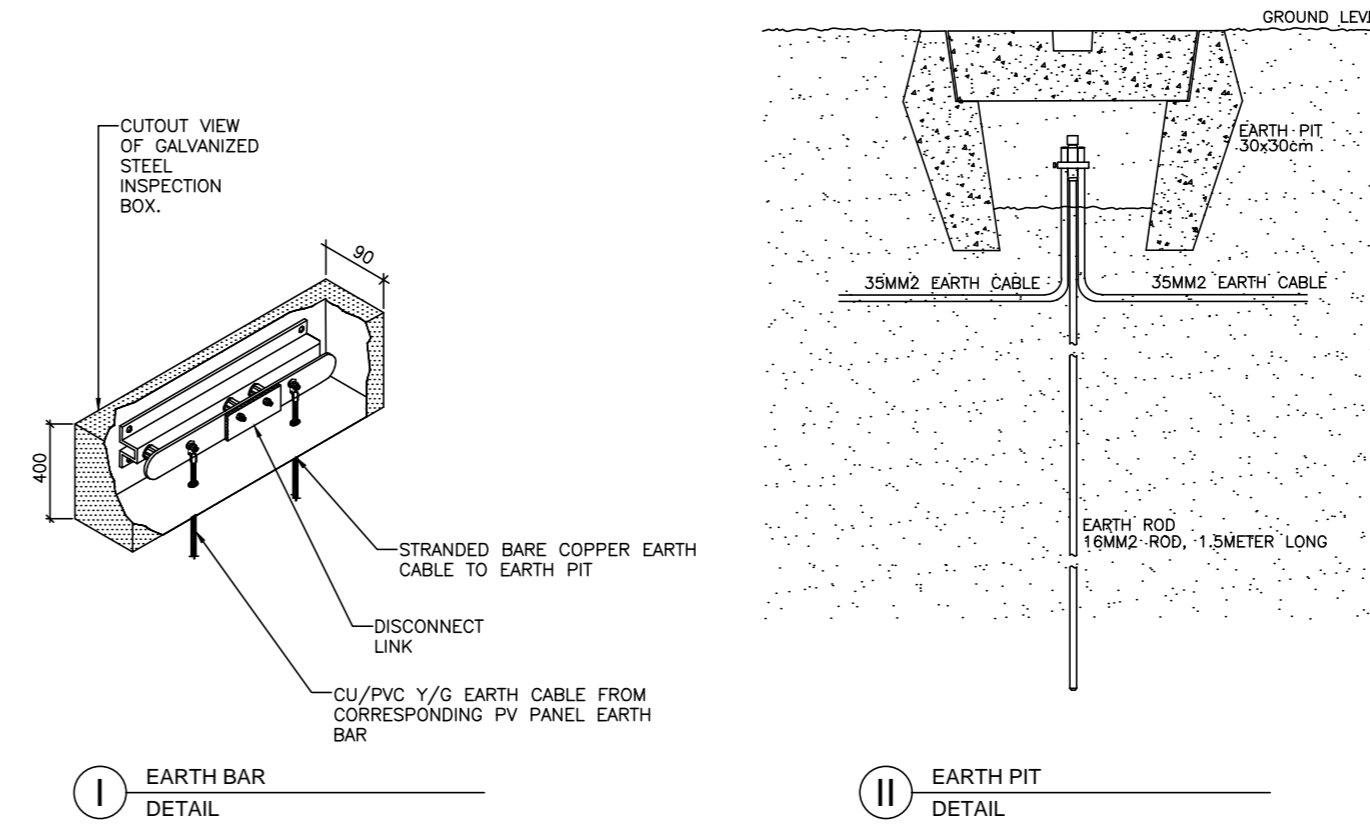
SCHEDULE OF OFF-GRID SYSTEMS				
OPTION #	1A	2A	3A	4A
SYSTEM OUTPUT	SINGLE PHASE	SINGLE PHASE	SINGLE PHASE	SINGLE PHASE
INVERTER SIZE (KW)	3.5	5.0	8.0	10.0
INVERTER TYPE	OFF-GRID	OFF-GRID	OFF-GRID	OFF-GRID
DC SYSTEM VOLTAGE	24V	48V	48V	48V
BATTERIES AH @20 DEG. C	200Ah	200Ah	200Ah	200Ah
BATTERY TYPE	TUBULAR, C10	TUBULAR, C10	TUBULAR, C10	TUBULAR, C10
NUMBER OF BATT.	2	4	4	4
BATTERIES IN SERIES	2	4	4	4
BATTERY VOLTAGE	12V	12V	12V	12V

NOTES:

- SYSTEM TO COMPLY WITH OFFICIAL MANUFACTURER PV SYSTEM CERTIFICATIONS FOR: IEC 61215, IEC 61730, IEC 61701, UL 1703, IEC 62716 & IEC 60068.
- PV STRUCTURE SHALL BE MADE OF ANODIZED ALUMINUM WITH STAINLESS STEEL ACCESSORIES WITH CONCRETE CURBS FOR FLAT ROOFS AND REINFORCEMENT FOR HIGH INSTALLED STRUCTURES AND PITCHED ROOFS.
- PV PANELS VOLTAGE AT MAXIMUM POWER AND OPEN CIRCUIT VOLTAGE SHOULD COMPLY WITH THE INVERTER.

EARTHING LAYOUT FOR HYBRID SYSTEM:

- COPPER CONDUCTOR BURIED IN NATURAL SOIL;
- EARTH PIT WITH 16mm2 ROD, 1.5METER LONG LESS THAN 5 OHM;
- EARTH BAR (EARTHING TO BE TESTED LESS THAN 5 OHM);
- 35MM2 BARE CONDUCTOR IF NEEDED FOR ADDITIONAL EARTHING.



OFF-GRID/HYBRID PV SYSTEM GENERAL NOTES:

- THE SCOPE OF WORK SHALL INCLUDE THE SUPPLY AND INSTALLATION OF BACKUP SYSTEMS, WITHOUT BEING LIMITED TO:
 - 540Wp SOLAR PV PANELS;
 - INVERTERS;
 - BATTERIES;
 - SPD DC AND AC;
 - PV SOLAR CABLES (1x4mm2);
 - MC4 CONNECTORS.
 - STEEL STRUCTURE FOR PANELS (FLOOR MOUNTED OR HIGH STRUCTURE AS PER SITE CONDITIONS);
 - ALL PROTECTIONS, BREAKERS, WIRING, CONTROL CABLES, POWER CABLES, CONDUITS, BOXES, CONNECTIONS TO ELECTRICAL DB, METER AND ENCLOSURE;
 - THE CONTRACTOR SHOULD PROVIDE, UNDER FULL RESPONSIBILITY, ALL COORDINATION WITH THE EXISTING INSTALLATIONS TO ENSURE PROPER CONNECTION OF THE NEW SYSTEM AND ITS INTEGRATION IN THE KG NETWORK.
 - THE CONTRACTOR SHOULD PROVIDE ALL WARRANTIES NEEDED FOR A PROPER AND GOOD OPERATION OF THE SYSTEM (MINIMUM OF 5 YEARS WARRANTY ON BATTERIES AND 10 YEARS ON INVERTERS).
- ALL EXPOSED CONDUITS SHALL BE RIGID PVC.
- ALL EQUIPMENT SHALL BE PROPERLY GROUNDED INCLUDING PV MODULES, STRUCTURE, METAL ENCLOSURES, RACEWAYS AND ALL EXPOSED METAL PARTS.
- CONDUITS SHALL BE TERMINATED SO AS TO PERMIT NEAT CONNECTIONS TO EQUIPMENT.
- ALL OUTDOOR CONNECTIONS AND BOXES TO BE WEATHERPROOF.
- THE ROUTING OF CABLES FROM PV PANELS TO THE ENCLOSURE TO BE COORDINATED WITH THE EXISTING STRUCTURE.
- THE ELECTRICAL RISER SHALL BE READ IN CONJUNCTION WITH THE ACTUAL SITE CONDITION OF EACH KG. THE RISER SHOWS GENERAL ARRANGEMENT AND LAYOUT OF THE WORKS AND DO NOT INDICATE ALL THE CONSTRUCTION DETAILS. THE CONTRACTOR SHALL PREPARE FULLY DETAILED SHOP DRAWINGS AND SCHEDULE. IN PARTICULAR THE CONTRACTOR SHALL CHECK TO INSURE THAT CONFLICTS WITH EXISTING WORKS OF ELECTRICAL TRADES ARE AVOIDED.

NO.	Date	Description	Appr.
0	29.04.2022	TENDER PHASE	---

Revisions
 Job # ---
 Scale 1/50 @ A2
 Drawn ---
 Designed ---
 Checked ---
 Approved ---
 Title

GENERAL NOTES AND SYSTEMS SCHEDULES

Sheet