New Addition Dated: 08 May 2024

Engineering Procurement and Construction (EPC) Service for a New 15 MWp PV Plant in Tanzania

DETAILED SCOPE OF WORKS AND MATERIAL OFFERING

Contents

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SPENOMATIC RESPONSES

Following to technical clarification meeting Dated 27 Mar 2024, we are submitting detailed scope of work & responses to the clarifications are raised during the meeting.

SCOPE OF SUPPLY FOR SOLAR PLANT

SOLAR PV MODULES	
Make	Jinko Solar/JA Solar/Trina/Longi Solar
Peak Power (Wp)	625 Wp
Type	Mono Crystalline **n Type Bifacial**
No of Modules	24,000 No's
Warranty	12 Years Product Warranty 30 Year Performance Warranty

SOLAR INVERTER	
Make	Huawei
Capacity	330 kW
Input Voltage	1500 V
Nominal Output Voltage	800 V
Type	String Inverter / Distributed Inverter Multi MPPT design and inbuilt dc combiner box and switches
No of Modules	40 No's
Warranty	10 Years

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MODULE MOUNTING STRUCTURE	
Make	Sun Rack / V Tech/ Pennar Industries / Rukmani Infra
Capacity	15 MWp
Type	Hot Dip Galvanized Iron & Galvalume
Designed	Withstand up to **170 kmph windspeed**
Warranty	10 Years
Design	Attached in Annexure

AC COMBINER BOX	
Breaker Make	ABB/Schenider/Simens
Breaker Capacity	Suitable Breaker Capacity, 800 V ACB
Type	10 In 1 Out (800V)
Quantity	4 N o's

AC DISTRIBUTION BOX	
Breaker Make	ABB/Schenider/Simens
Breaker Capacity	Suitable Breaker Capacity, 800 V ACB
Type	4 In 4 Out
Quantity	1 No

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CABLES	
DC CABLES	
Make	Polycab/Elsewedy/Havells
Type	Copper
Size	1C x 1R x 6 Sq.mm
Capacity & Protection	1800 VDC Grade UV Resistant Halogen Free XLPO Insulated
Warranty	1 Year (Qualifies Owners requirement)
AC CABLES (String Inverter to ACCB)	
Make	Polycab/Havells/KEI/Elsewedy
Type	Aluminum
Size	1R x 4C X 185 SQ.MM
Capacity & Protection	1100 – 1900 V AC Grade XLPE Insulated
AC CABLES (ACCB to 800V ACDB)	
Make	Polycab/Havells/KEI/Elsewedy
Type	Aluminum
Size	8R x 4C X 300 SQ.MM
Capacity & Protection	1100 – 1900 V AC Grade XLPE Insulated
AC CABLES (800V ACDB to Step Up Transformer)	
Make	Polycab/Havells/KEI/Elsewedy
Type	Aluminum
Size	11R x 4C X 300 SQ.MM
Capacity & Protection	1100 – 1900 V AC Grade XLPE Insulated

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AC CABLES (Step Up Transformer to 33 kV MV Panel)	
Make	Polycab/Havells/KEI/Elsewedy
Type	Aluminum
Size	1R x 4C X 120 SQ.MM
Capacity & Protection	33 kV AC Grade XLPE Insulated
AC CABLES (Step Up Transformer to 33 kV MV Panel)	
Make	Polycab/Havells/KEI/Elsewedy
Type	Aluminum
Size	1R x 4C X 240 SQ.MM
Capacity & Protection	33 kV AC Grade XLPE Insulated
TRANSMISION LINES (Solar Farm to Twiga's Substation)	
33kV Transmission Line for Approx. 3 KM Long has been envisaged with Single pole Tubular Pole structure across the distance Transmission of Generated Power to 3.3 KV Substation Board Existing of Cement Plant.	
Type of Bare Conductor	ACSR Dog/Panther (Aluminum)
Nominal Voltage	33 kV
AC CABLES (Transmission Line to HT panel (33kV)	
Make	Polycab/Havells/KEI/Elsewedy
Type	Copper
Size	1R x 3C X 240 SQ.MM
Capacity & Protection	33 kV AC Grade XLPE Insulated
AC CABLES (HT Panel to Step Down Transformer)	
Make	Polycab/Havells/KEI/Elsewedy
Type	Copper

Size	1R x 3C X 70 SQ.MM
Capacity & Protection	33 kV AC Grade XLPE Insulated
AC CABLES (Step Down Transformer to 3.3 kV HT Panel)	
Make	Polycab/Havells/KEI/Elsewedy
Type	Copper
Size	2R x 3C X 300 SQ.MM
Capacity & Protection	3.3 kV AC Grade XLPE Insulated
AC CABLES (3.3 kV HT Panel to Customer Board)	
Make	Polycab/Havells/KEI/Elsewedy
Type	Copper
Size	7R x 3C X 300 SQ.MM
Capacity & Protection	3.3 kV AC Grade XLPE Insulated

TRANSFORMERS	
We are proposing transformer make of T&R / Esennar / Voltamp / Reputed Make. These are largest manufacturers in India and having global export presence even in Africa region. The proposed transformers are solar inverter duty transformers and it provides high efficiency.	
TRANSFORMER AT SOLAR YARD	
Make	T&R / Esennar / Voltamp /Electrotherm
Capacity	4 MVA
Type	Oil Type Step up Transformer

LV Winding	0.8 / 33 kV
HV Winding	33 kV
Quantity	4 No's for 100% redundancy
GTP	Attached in Annexure
TRANSFORMER AT TWIGA FACTORY	
Make	T&R / Esennar / Voltamp / Elecrotherm
Capacity	4 MVA
Type	Oil Type Step down Transformer
HV Winding	33 kV
MV Winding	3.3 kV
Quantity	4 No for 100% redundancy
GTP	Attached in Annexure

SWITCHGEAR / ICOG	
Breaker Make	ABB/Schenider/Simens
Breaker Capacity	Refer Single Line Diagram
Type	VCB - 4 In 1 Out (33 kV Indoor) VCB – 1 In 4 Out (33 kV Indoor) VCB – 4 In 2 Out (3.3 kV Indoor)
Quantity	33 kV – 2 No 3.3 kV – 1 No
Design	Attached in Annexure

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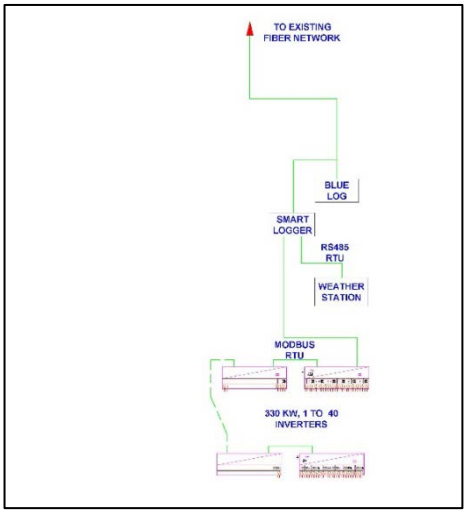
SCADA

We proposed SCADA make of Meteocontrol which is German brand which widely used across globe. Meteocontrol has 25 years experinece as global leader in renewable energy sector and supplied monitoring system for 27 GWp across globe.

The proposed SCADA system will integrate with exisitng Twiga's SCADA (Simens PCS7). Solar Power Plant SCADA will read and communicate to Twiga's SCADA and the solar power plant will be displayed in Simens PCS7.

Communication Block Diagram



SYNCHRONIZATION

The operation of the solar PV plant is realized by the **DEIF ASC 150** which is a hybrid controller sending commands to the inverters through the **Smart logger 3000B**.

The **DEIF ASC 150** is placed at the existing substation at Twiga, having **MODBUS RTU** metering inputs from TANSECO and the standby Diesel Generator. The DEIF ASC is able to send commands to the PV plant inverter manager via existing Fiber network.

During Grid operation, The DEIF controller monitors the power draw from TANSECO and

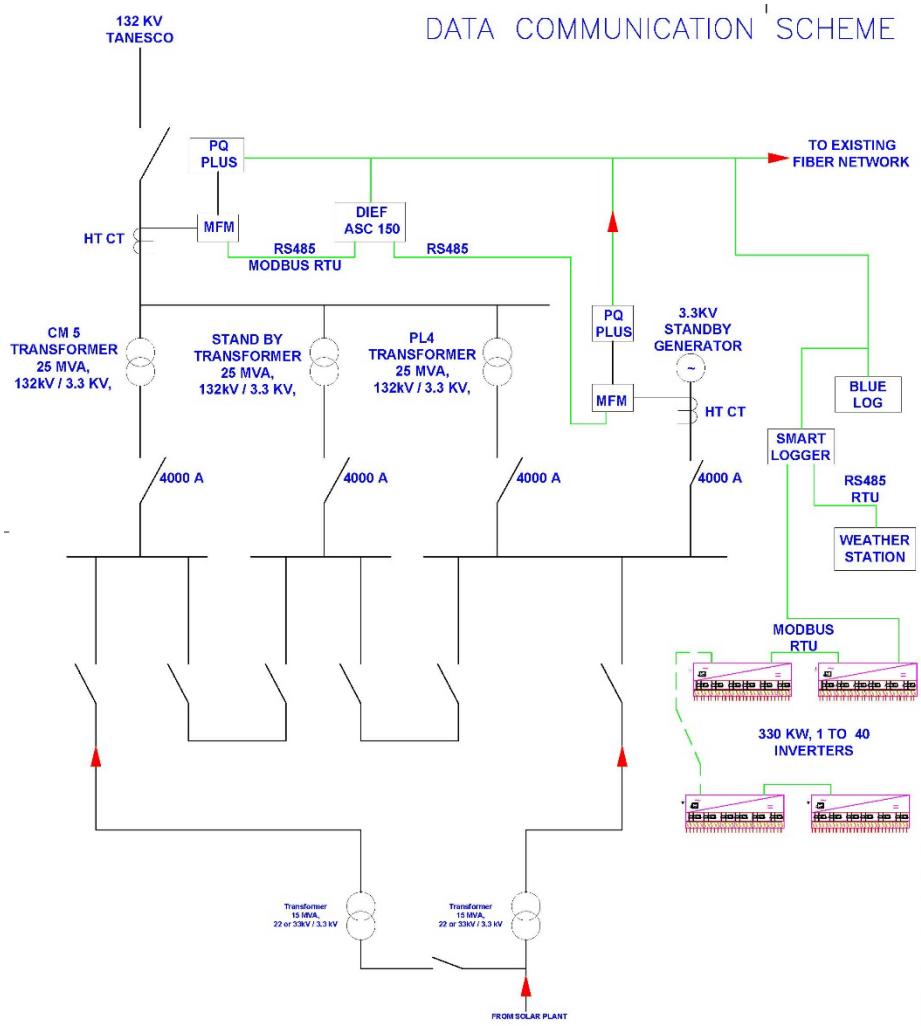
sends set points to the inverter manager to ensure maximum solar generation without feeding back to the grid.

During Diesel Generator operation, The DEIF controller activates island mode whereby the genset operates at 30% of its maximum capacity, the rest of the load is supported by the solar generation. If more power is needed, then diesel generator output is increased.

The Inverters and Weather station signals at the solar PV plant are connected to the smart logger 3000B via MODBUS RTU (RS485).

The Smart logger 3000B communicates to rest of the system via existing Fiber network. The solar generation will be throttled to 0% whenever the Fiber network connection is interrupted between the smart logger and the DEIF ASC 150.

BLOCK DIAGRAM



BALANCE OF SYSTEM
• Lightning Arresting and Earthing systems • CCTV System • Fire Fighting system with alarms • Illumination at the Solar Power Plant • Electrical Fencing of the PV plant area with 2.5 Mtr. Height with GI Chain Link wire • Weather Management system and sensors with Data Loggers as per applicable specifications • Necessary BOS for Installation and Commissioning of Solar Plant

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CIVIL & MECHANICAL WORKS

LAND PREPARATION & STRUCTURE

- **Surveying Works**

  Control points will be densified the entire site. The pile coordinates will be then set out by a surveyor of all the pile points using Hi-Target V10 Pro GNSS receiver will be used with a maximum accuracy of +/-0.05 metres.

- **Land preparation/Land grading**

  It involves the removal of any existing vegetation, rocks, debris, or structures from the land to create a clean surface for further grading activities. Various heavy equipment such as bulldozers, graders, excavators, and compactors are used to perform grading activities efficiently. These machines help in shaping the land according to the desired contours and grades.

- **Drilling of Piles**

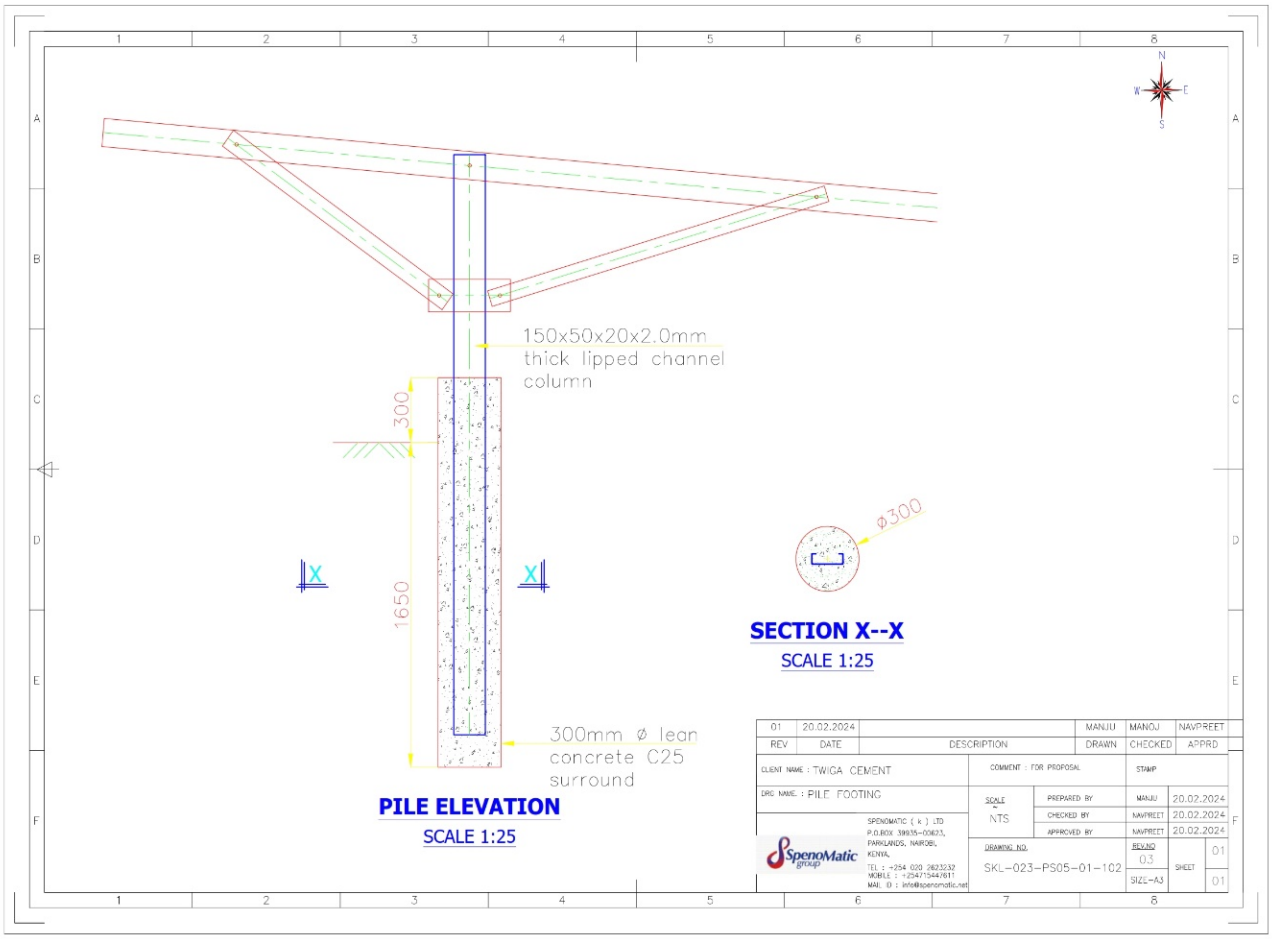
  After the pile points have been determined, the pile drilling machine will be positioned at the mark and drilling starts. And the first drill rod with a drill bit will be placed above the drill point and verticality will be achieved before starting drilling works. And the drilling will commence for an average of 1.5-1.6 metres depending on the site design. Where possible, manual excavation will be deployed but with specialized hole diggers and all precaution not to weaken soil structure.

- **Column Alignment**

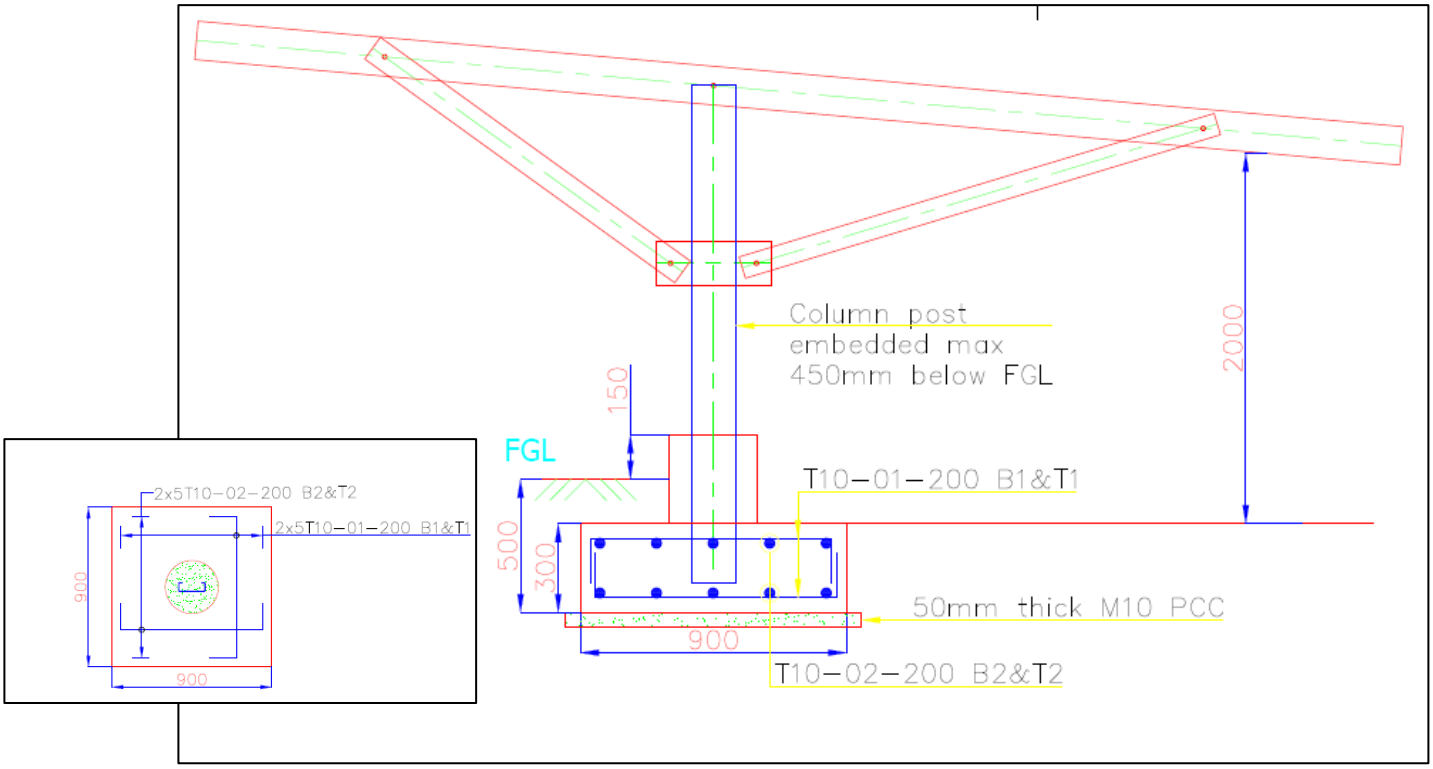
  The columns will be placed at design intervals, Vertical and Horizontal alignment will be done to achieve the minimum height off the original ground. Since generally the area is flat, there will be minimal challenge with alignment and thus the works will be done easily. However, some areas are depressed and waterlogged. The same method will apply with a maximum slope of 10% for the proposed structure unless otherwise backfilling is

done with dry density upto 100% mdd. Where there is hills or steep slope, levelling will be done to suit the site alignment. The proposed designs are;

- Pile Design-To be used in areas that are generally flat or sloping up to a maximum 10% slope with a design wind speed of 170km/hr. The pile design is up to a maximum depth of 1.6 meters which is within design minimum load of 100kN/m2



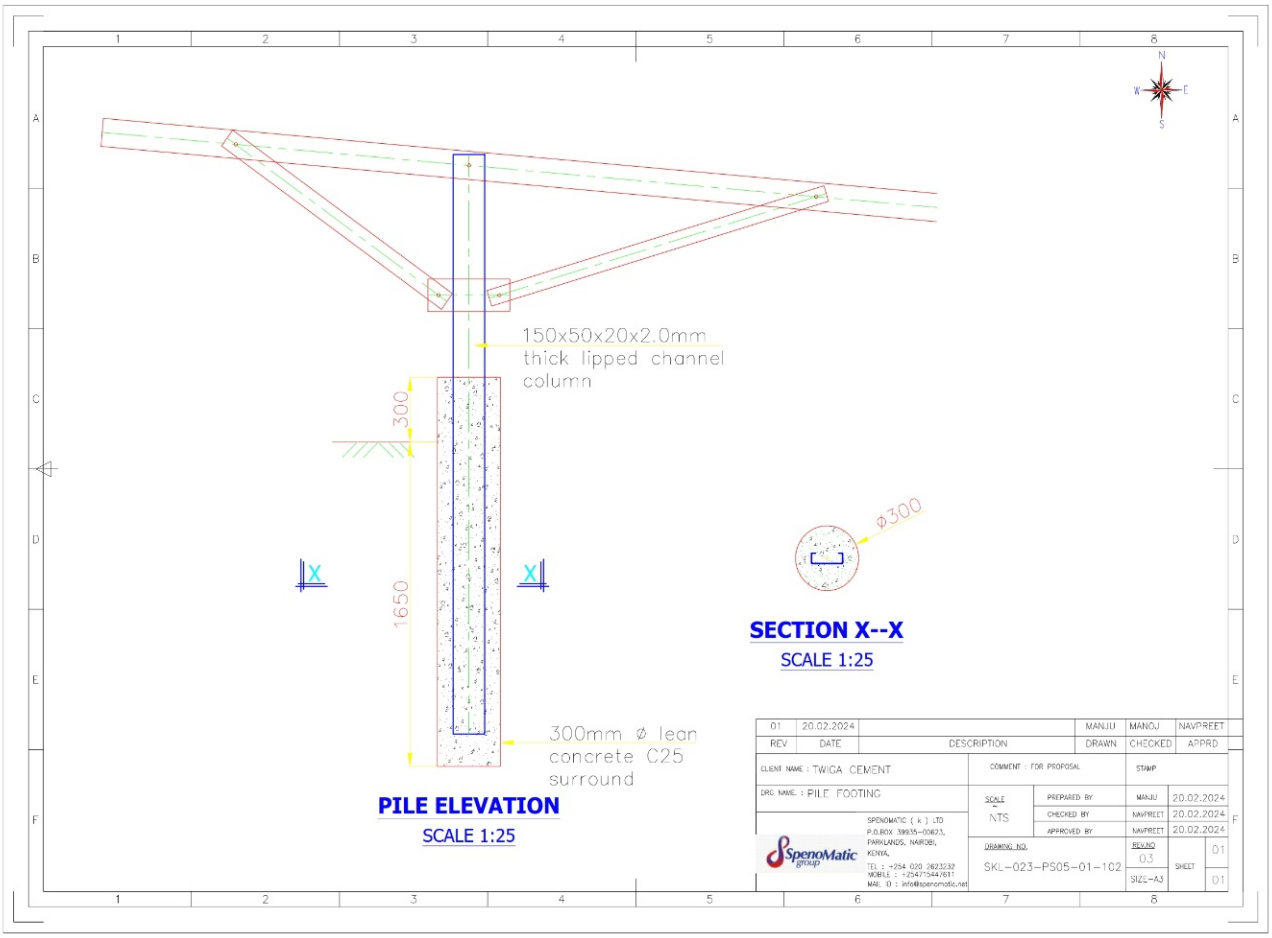
- Spread Footing; This design will be considered in a depressed area by use of open foundations and reinforcement up to a design speed of 170km/hr. This will ensure the columns are not below the threshold for possible shading.



Typical Design for Spead footing

➢ Concrete Works

First, all the concrete materials shall be stockpiled at the working site. After the approval that the materials are satisfactory for use, the foundation concrete for the poles is mixed according to the design mix and poured, the concrete mixing is strictly carried out according to the concrete mix ratio provided by mix design. At the same time, according to the requirements of the specification, a corresponding number of concrete cube molds shall be prepared for testing the concrete strength during pouring, this will depend with the volume of concrete being poured. Further slump tests will be carried out to achieve optimum mix for lean concrete.



➢ Curing

Curing shall be done for 7 days, and all the surfaces shall be kept wet at all times and covered with a hessian cloth or mud to retain the moisture.

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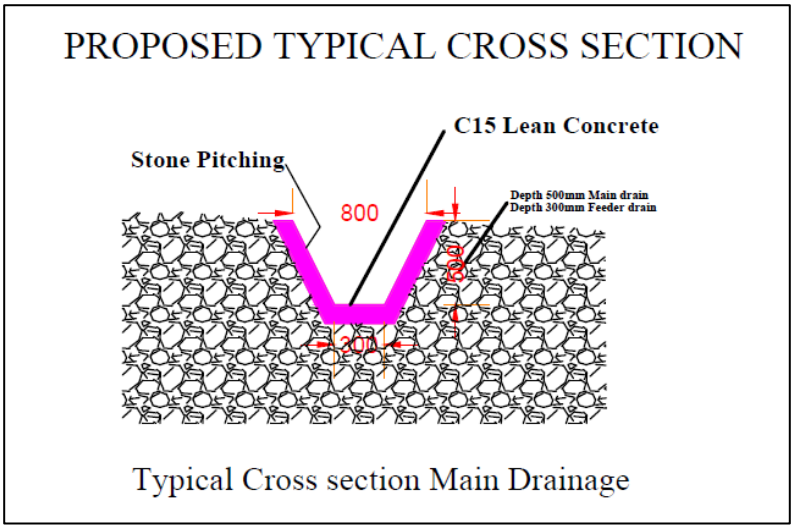
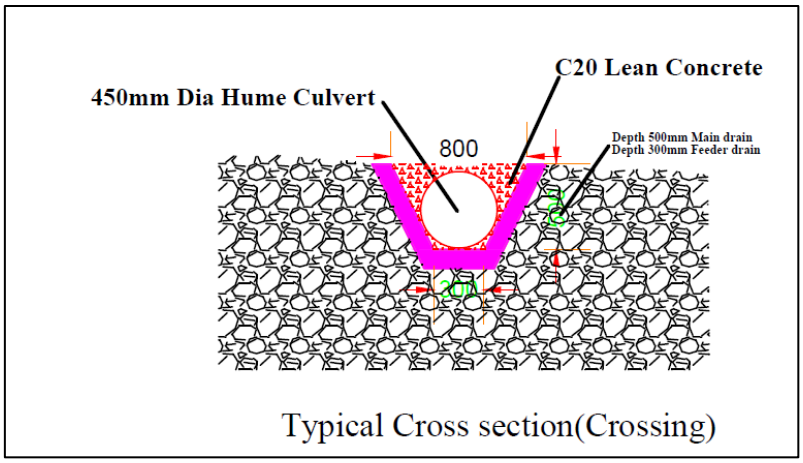
STORM WATER & DRAINAGE MANAGEMENT

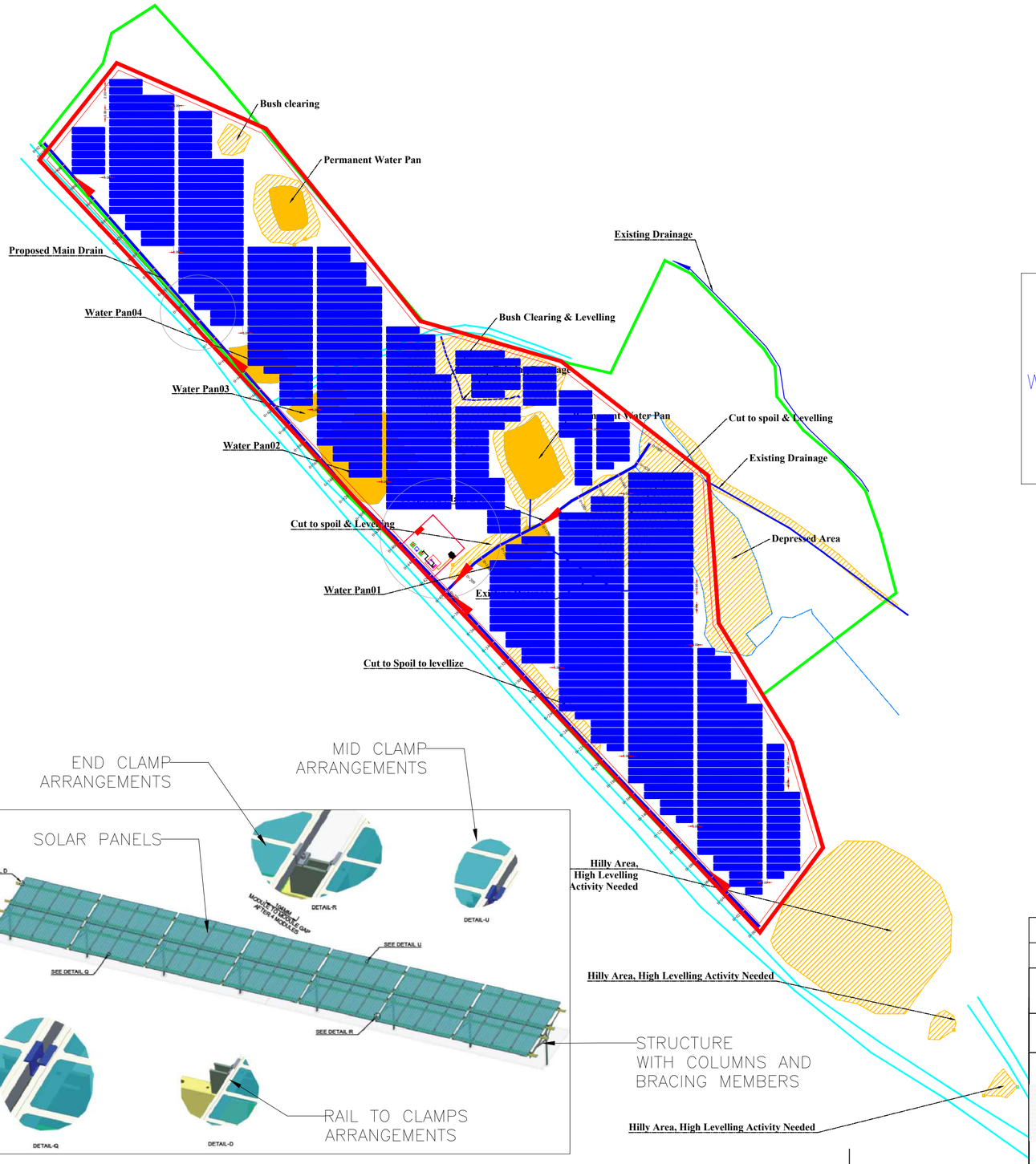
Initially, we do the geotechnical test and hydrology test for the project. Based on the hydrology and geotechnical report will do the detailed storm and drainage system. However, we have prepared preliminary storm & drainage system based on provided geotechnical report.

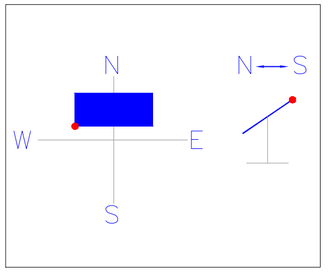
Drainage will be done according to the preliminary alignment and typical cross sections attached. However, the detailed inverts will guide further construction works using Stone pitching joined by mortar and bed casted with C15 concrete. Where necessary, Hume culverts will be installed to allow passage of human and vehicular traffic

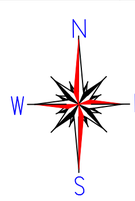


Drainage at 6 MWp done by Spenomatic





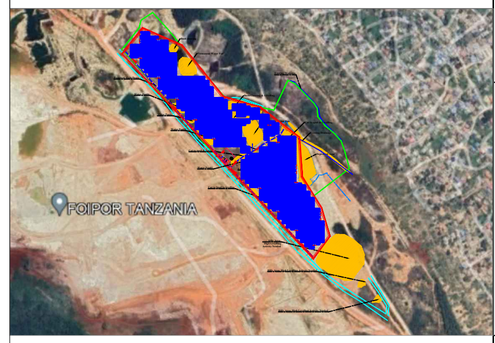


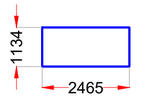


AZIMUTH : 0°
6°38'23.73"S,
39° 9'2.02"E

PV SYSTEM DETAILS:

SOLAR MODULE RATING	: 625 WP (BI FACIAL)
NO OF MODULES	: 24000 NOS
ARRAY TILT	: 5° FIXED TILT
CAPACITY	: 15 MWP (DC)





SOLAR PANEL – 625 Wp

MAIN CONTROL ROOM YARD DETAILS

NOTE :

1. REFER DRAWING NUMBER SKL–023–12–01–201 FOR DETAIL–A ACDB ROOM DETAILS
2. REFER DRAWING NUMBER SKL–023–12–01–601 FOR DETAIL–B VCB ROOM DETAILS
3. REFER DRAWING NUMBER SKL–023–12–01–501 FOR FENCE CONNECTION DETAILS

REV	DATE	DESCRIPTION	DRAWN	CHECKED	APPRD
01	09.04.2024	LAYOUT RE ARRANGED WRT SITE UPDATED SURVEY	MANJU	NAVPREET	NAVPREET

CLIENT NAME : TWIGA CEMENTS

COMMENT : FOR PROPOSAL

STAMP

DRG NAME. : ARRAY LAYOUT–15 MWp

SCALE ~ NTS

PREPARED BY	MANJU	19.12.2023
CHECKED BY	NAVPREET	19.12.2023
APPROVED BY	NAVPREET	19.12.2023

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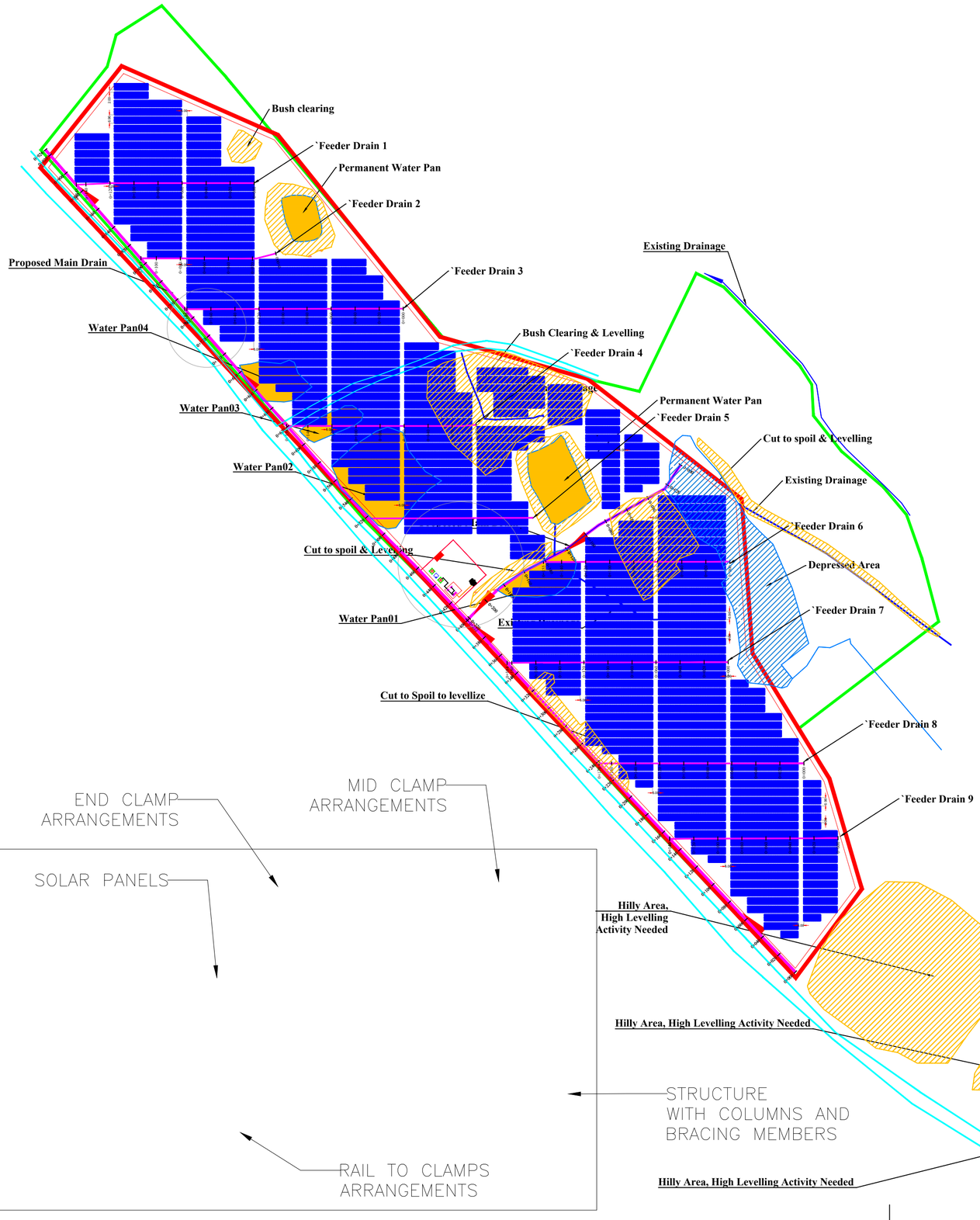
TEL : +254 020 2623232
MOBILE : +254715447611
MAIL ID : info@spenomatic.net

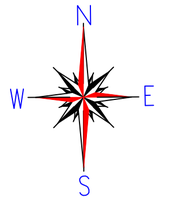
DRAWING NO. SKL–023–12–01–102

REV.NO 01

SIZE–A3

SHEET 01 / 01





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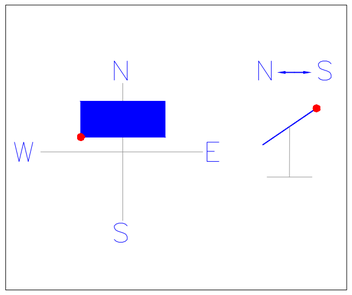
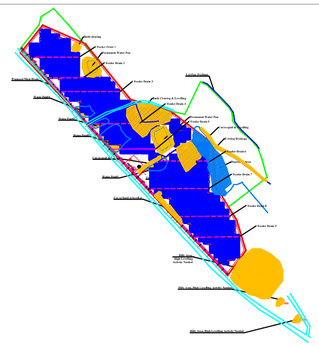
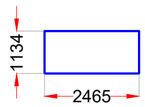


PV SYSTEM DETAILS:

SOLAR MODULE RATING	: 625 WP (BI FACIAL)
NO OF MODULES	: 24000 NOS
ARRAY TILT	: 5° FIXED TILT
CAPACITY	: 15 MWP (DC)





SOLAR PANEL – 625 Wp

MAIN CONTROL ROOM YARD DETAILS

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REV	DATE	DESCRIPTION	DRAWN	CHECKED	APPRD
01	09.04.2024	LAYOUT RE ARRANGED WRT SITE UPDATED SURVEY	MANJU	NAVPREET	NAVPREET

CLIENT NAME : TWIGA CEMENTS

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STAMP

DRG NAME. : ARRAY LAYOUT–15 MWp

SCALE ~ NTS

PREPARED BY	MANJU	19.12.2023
CHECKED BY	NAVPREET	19.12.2023
APPROVED BY	NAVPREET	19.12.2023

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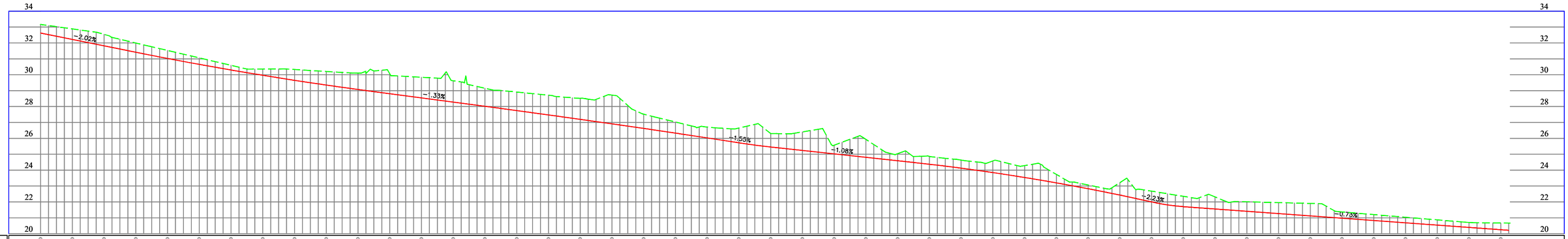
DRAWING NO. SKL–023–12–01–102

REV.NO 01

SIZE–A3

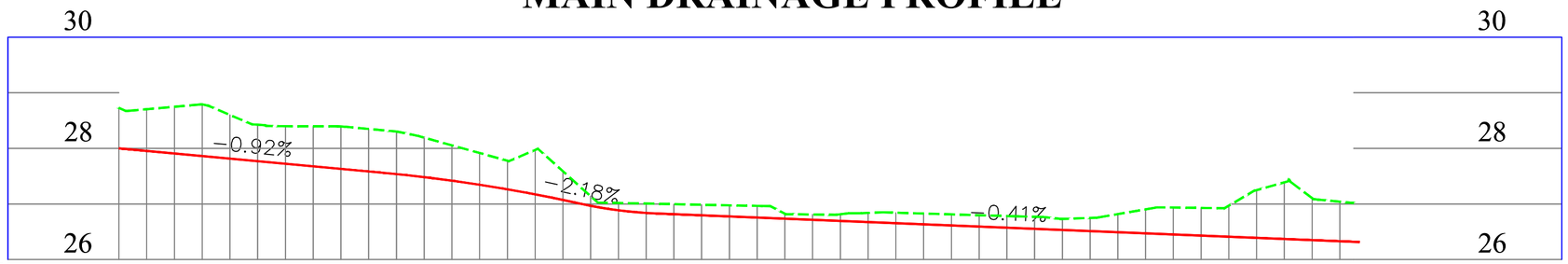
SHEET 01 / 01

MAIN DRAINAGE PROFILE

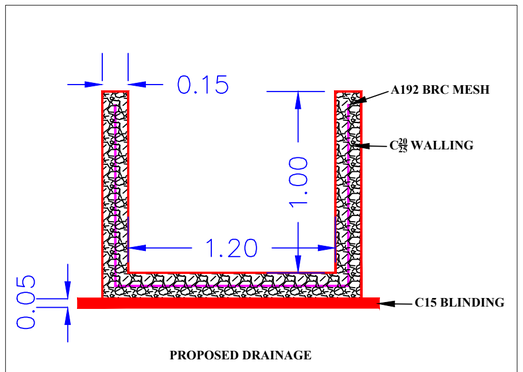


CHAINAGES	0+000	0+020	0+040	0+060	0+080	0+100	0+120	0+140	0+160	0+180	0+200	0+220	0+240	0+260	0+280	0+300	0+320	0+340	0+360	0+380	0+400	0+420	0+440	0+460	0+480	0+500	0+520	0+540	0+560	0+580	0+600	0+620	0+640	0+660	0+680	0+700	0+720	0+740	0+760	0+780	0+800	0+820	0+840	0+860	0+880	0+900	0+920
OGL	33.17	32.89	32.54	32.00	31.53	31.06	30.59	30.56	30.33	30.21	30.10	30.06	29.84	29.62	29.15	28.91	28.72	28.52	28.72	27.52	27.03	26.71	26.65	26.30	26.41	25.57	25.93	25.04	24.86	24.63	24.58	24.29	23.73	23.07	23.21	22.68	22.55	22.32	22.01	21.41	21.27	21.96	21.81	21.12	21.57	21.20	21.04	20.87	20.71	20.68
INVERT	32.62	32.22	31.82	31.41	31.02	30.65	30.30	29.96	29.65	29.35	29.07	28.83	28.54	28.28	28.01	27.75	27.47	27.20	26.91	26.62	26.33	26.03	25.72	25.46	25.24	25.02	24.81	24.59	24.37	24.12	23.85	23.54	23.20	22.83	22.43	22.00	21.71	21.56	21.41	21.27	21.12	20.98	20.83	20.69	20.54	20.39	20.25
CUT	-0.54	-0.67	-0.72	-0.58	-0.51	-0.41	-0.29	-0.39	-0.68	-0.86	-1.03	-1.26	-1.30	-1.35	-1.14	-1.17	-1.24	-1.32	-1.81	-0.89	-0.70	-0.68	-0.93	-0.84	-1.17	-0.55	-1.13	-0.44	-0.49	-0.51	-0.73	-0.75	-0.53	-0.23	-0.78	-0.68	-0.65	-0.76	-0.60	-0.69	-0.78	-0.39	-0.37	-0.35	-0.33	-0.32	-0.43

MAIN DRAINAGE PROFILE

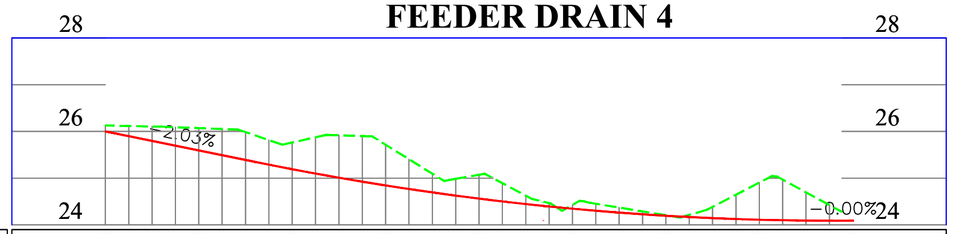


CHAINAGES	0+000	0+020	0+040	0+060	0+080	0+100	0+120	0+140	0+160	0+180	0+200	0+220
OGL	28.73	28.60	28.39	28.05	27.59	27.00	26.83	26.84	26.78	26.82	26.97	27.04
INVERT	28.00	27.82	27.63	27.42	27.07	26.82	26.73	26.65	26.57	26.49	26.41	26.33
CUT	-0.73	-0.79	-0.76	-0.64	-0.52	-0.18	-0.09	-0.19	-0.21	-0.33	-0.56	-0.71



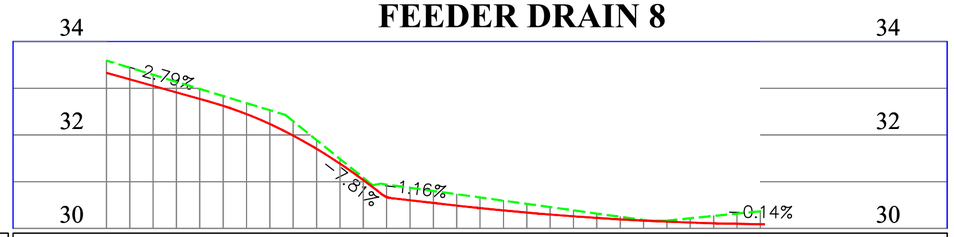
PROPOSED DRAINAGE

FEEDER DRAIN 4



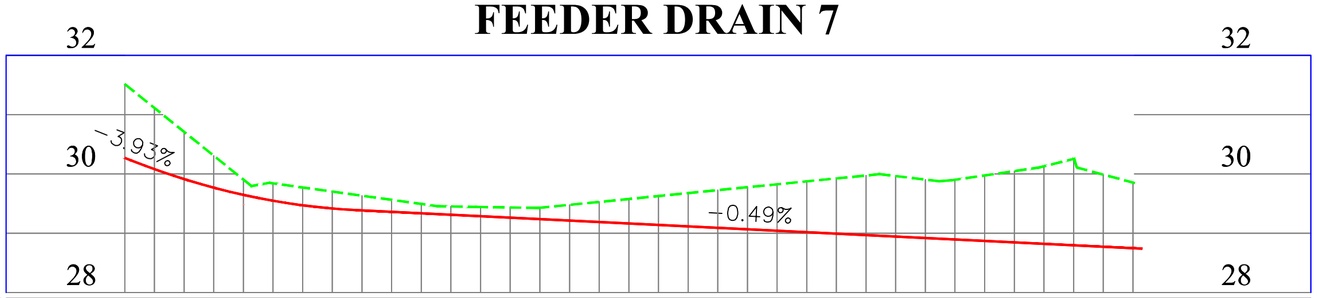
CHAINAGES	0+000	0+020	0+040	0+060	0+080	0+100	0+120	0+140	0+160
OGL	26.13	26.07	25.76	25.72	25.07	24.43	24.21	24.90	
INVERT	26.13	26.07	25.76	25.72	25.07	24.43	24.21	24.90	
CUT	-0.13	-0.48	-0.57	-0.87	-0.51	-0.08	-0.01	-0.79	

FEEDER DRAIN 8

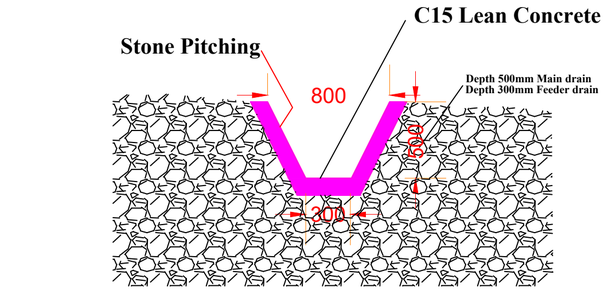


CHAINAGES	0+000	0+020	0+040	0+060	0+080	0+100	0+120	0+140	0+160
OGL	33.59	32.99	32.29	30.94	30.66	30.39	30.17	30.37	
INVERT	33.59	32.99	32.29	30.94	30.66	30.39	30.17	30.37	
CUT	-0.26	-0.21	-0.31	-0.27	-0.23	-0.13	-0.02	-0.28	

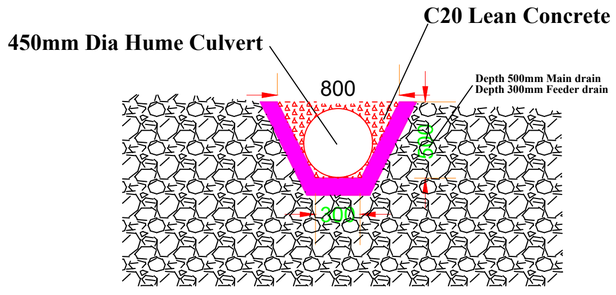
FEEDER DRAIN 7



CHAINAGES	0+000	0+020	0+040	0+060	0+080	0+100	0+120	0+140	0+160	0+180
OGL	31.52	29.91	29.63	29.44	29.53	29.73	29.93	29.90	30.25	
INVERT	31.52	29.91	29.63	29.44	29.53	29.73	29.93	29.90	30.25	
CUT	-1.25	-0.26	-0.25	-0.16	-0.34	-0.64	-0.93	-1.01	-1.46	

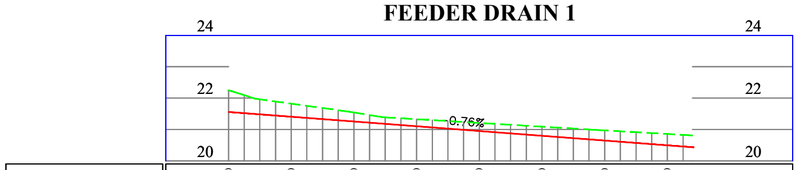


Typical Cross section Feeder Drainage



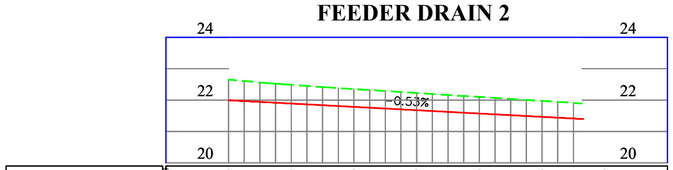
Typical Cross section(Road Crossing)

FEEDER DRAIN 1



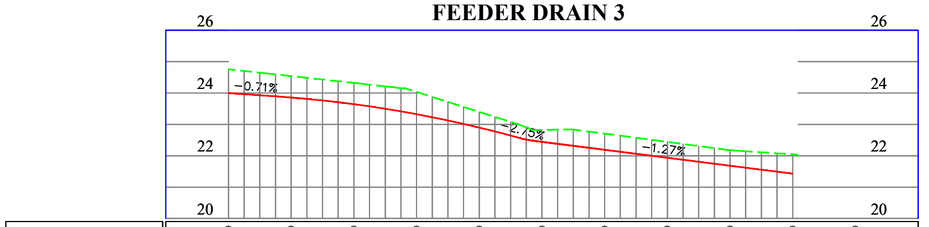
CHAINAGES	0+000	0+020	0+040	0+060	0+080	0+100	0+120	0+140
OGL	22.25	21.82	21.54	21.33	21.21	21.09	20.97	20.86
INVERT	22.25	21.82	21.54	21.33	21.21	21.09	20.97	20.86
CUT	-0.69	-0.41	-0.29	-0.22	-0.26	-0.29	-0.32	-0.36

FEEDER DRAIN 2



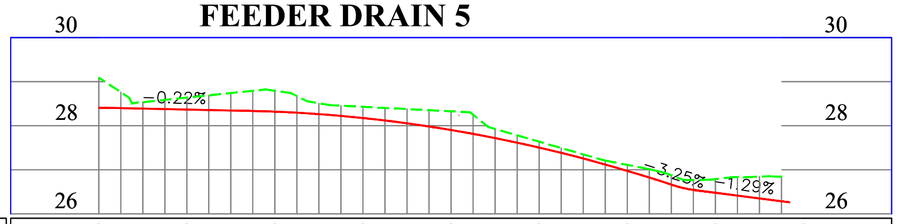
CHAINAGES	0+000	0+020	0+040	0+060	0+080	0+100	0+120
OGL	22.66	22.49	22.35	22.23	22.10	21.97	
INVERT	22.66	22.49	22.35	22.23	22.10	21.97	
CUT	-0.66	-0.60	-0.57	-0.55	-0.53	-0.51	

FEEDER DRAIN 3



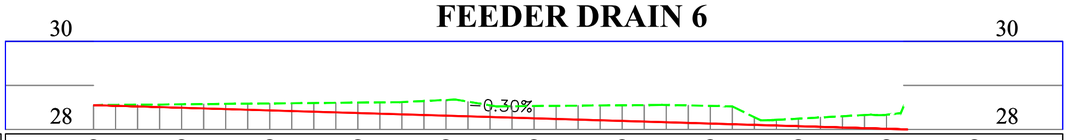
CHAINAGES	0+000	0+020	0+040	0+060	0+080	0+100	0+120	0+140	0+160	0+180	0+200
OGL	24.76	24.54	24.32	24.04	23.40	23.82	22.71	22.44	22.18	22.05	
INVERT	24.76	24.54	24.32	24.04	23.40	23.82	22.71	22.44	22.18	22.05	
CUT	-0.76	-0.68	-0.68	-0.71	-0.50	-0.38	-0.52	-0.51	-0.50	-0.62	

FEEDER DRAIN 5



CHAINAGES	0+000	0+020	0+040	0+060	0+080	0+100	0+120	0+140	0+160
OGL	29.09	28.64	28.79	28.43	28.33	27.64	27.11	26.79	
INVERT	29.09	28.64	28.79	28.43	28.33	27.64	27.11	26.79	
CUT	-0.68	-0.27	-0.47	-0.25	-0.42	-0.13	-0.14	-0.31	

FEEDER DRAIN 6



CHAINAGES	0+000	0+020	0+040	0+060	0+080	0+100	0+120	0+140	0+160	0+180	0+200
OGL	28.55	28.57	28.59	28.61	28.67	28.53	28.55	28.54	28.25	28.33	
INVERT	28.55	28.57	28.59	28.61	28.67	28.53	28.55	28.54	28.25	28.33	
CUT	0.00	-0.08	-0.16	-0.24	-0.36	-0.28	-0.36	-0.40	-0.17	-0.32	

New Addition Dated: 08 May 2024

TRANSFORMER FOUNDATION

Transformer foundation will be designed based on the transformer size and the process will involve STAAD reports, excavations, Steel fixing, Concreting and Installation of U channels.

Soak pit

Excavation of the pit with dimensions suitable for the expected volume of transformer oil and based on local regulations and guidelines will be done, where the pit should typically be at least 1 meter deep and large enough to accommodate the transformer base and any necessary clearance around it. Walling will be done using reinforced concrete with provision of oil spill sleeves and top cover. The soak pit will be water tight. Installation of proper signage indicating the presence of the transformer soak pit and warning against dumping or tampering.

0.415/33 kV Transformer installation by Spenomatic at Finlays Tea, Kenya

New Addition Dated: 08 May 2024

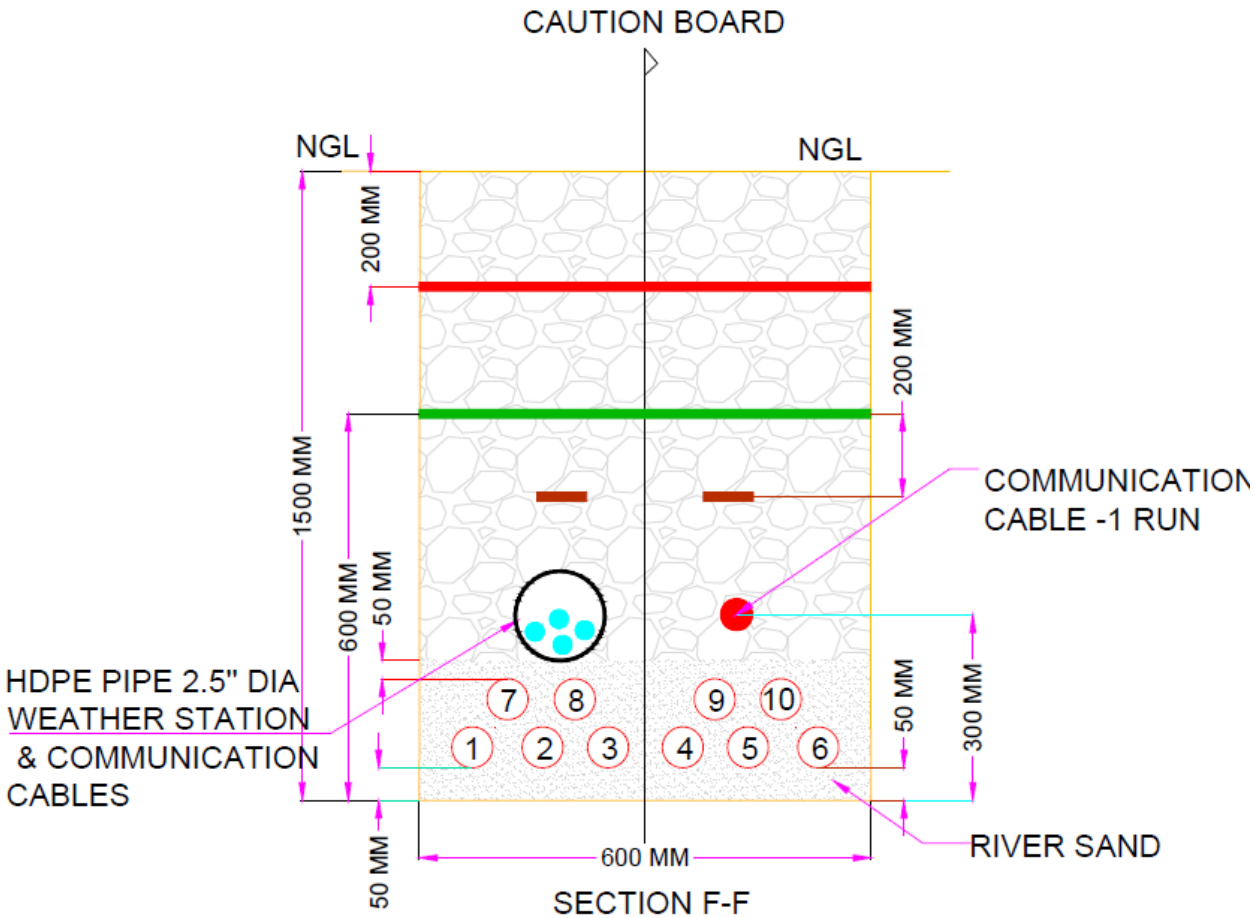
CABLE MANAGEMENT & TRENCHING

The route of the cables, considering factors such as terrain, obstacles, and required depth and setting out based on the design specifications will be determined. Clearing the area of any obstructions or debris along the planned route and marking the boundaries of the trench using marks or pegs using GNSS receiver.

Digging the trench along the planned route using appropriate excavation equipment, such as backhoes or trenching machines and ensuring the trench is excavated to the required depth and width, accounting for factors such as soil conditions and cable specifications. Laying the cables along the bottom of the trench in accordance with the design plan and ensuring proper separation and spacing between cables to prevent overheating and interference.

We will use appropriate cable laying techniques, such as pulling or laying directly into the trench. Once the cables are in place, backfilling the trench with suitable material will commence taking care not to damage the cables. Compacting the backfilled material in layers to ensure stability and minimize settling. Installation of necessary warning signs or markers will be done to indicate the presence of buried cables.

DC Cable Trench of 6 MWp Project in Kenya



AC Cable Trench Typical Design

INTERNAL ROADS

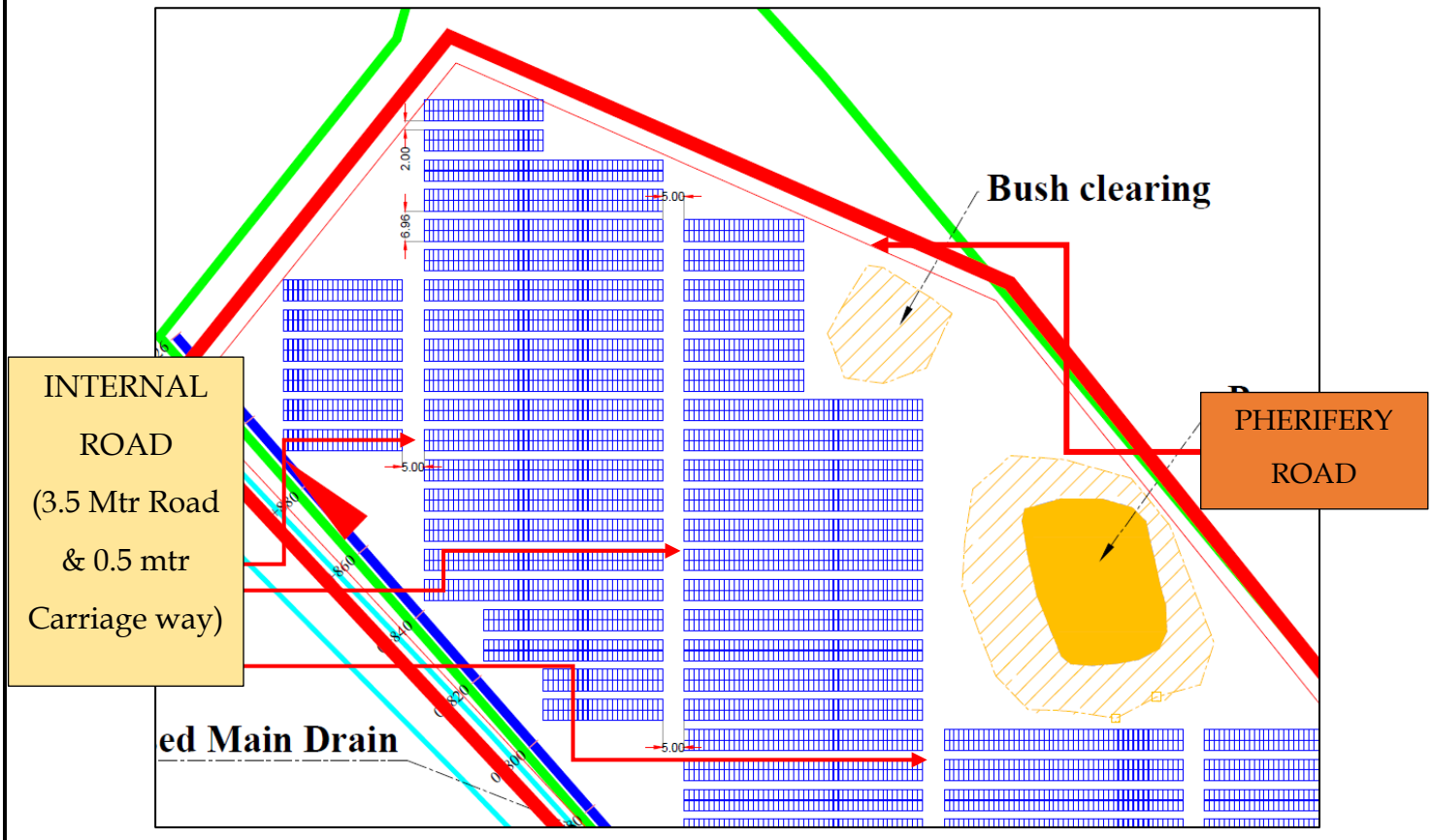
The internal roads will be constructed in between the solar panel roads for man movement and vehicle movement. The internal roads will be connected with peripheral road along the outer boundary. These internal roads enable to movement of vehicles during the construction and operation & maintenance.

The proposed roads are murram (a gravelly soil) in width of 5-meter width and 0.5 mtr carriage way which are main roads and internal roads will be 3.5 m width and 0.5 mtr carrier way.

This process is known as clearing and grubbing and involves the removal of all organic material from the roadbed. Earthworks involve shaping the roadbed to the required cross-sectional profile. This typically includes cutting down high spots, filling in low spots, and ensuring proper

drainage by establishing the road's crown and side slopes. Excavators, graders, and compactors will be used during this phase to achieve the desired grade and compaction. Further approved Murram will be laid and compacted to required standards and the road will be all weather for human and vehicular movements.

Internal Road of 6 MWp Project in Kenya

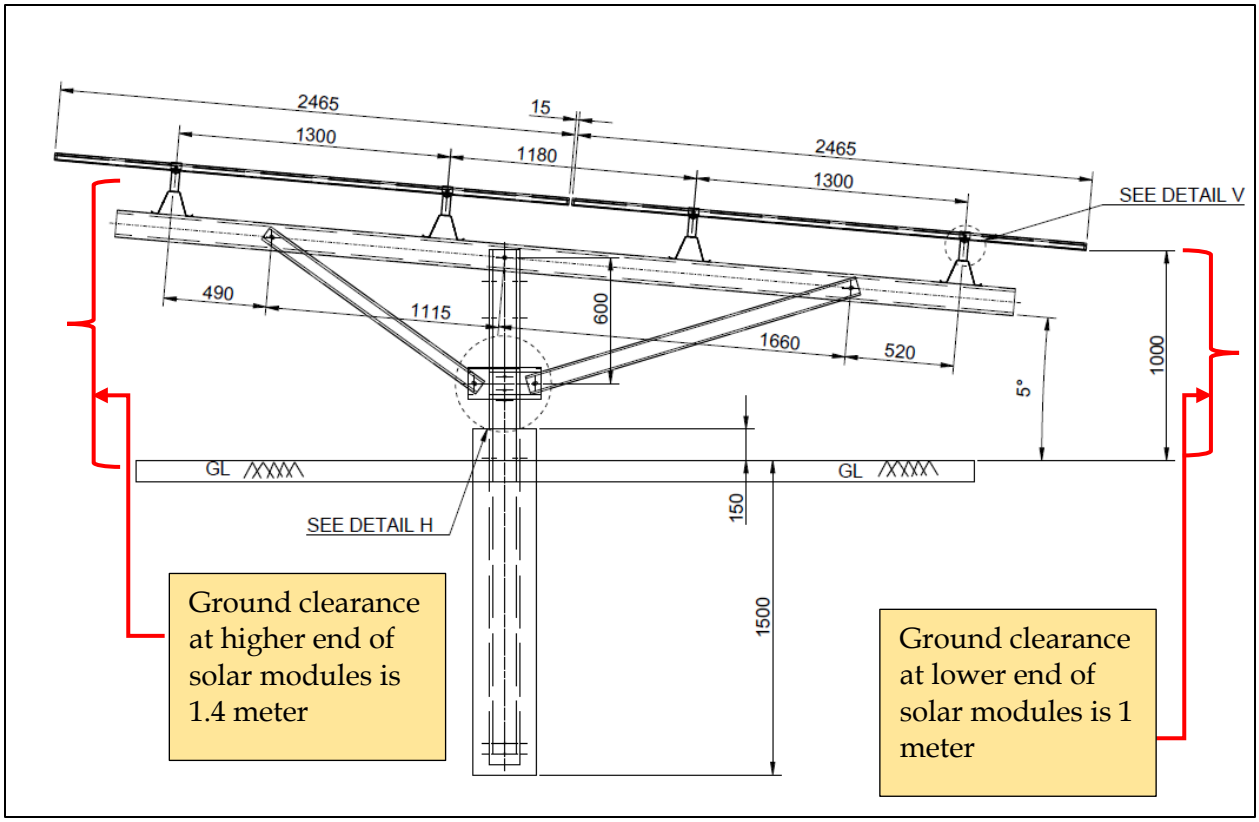


New Addition Dated: 08 May 2024

VEGITATION CLERANCE

The vegetation clearance can be through manual cutting using machinery or chemical herbicides. The solar panels have 1 meter clearance at lower end and more than 1.4 meter. It is sufficient to move the cutting machinery below the solar modules.

Use of hand tools such as pruning shears or mowers will be used to trim back vegetation around the base of each solar panel which has a minimum height of one metre off the ground. All grass, weeds, or small shrubs within the designated clearance zone will be cleared, taking care not to damage the solar panels or mounting structure. Collection of the cleared vegetation and debris in designated containers or piles will be done and disposed off properly.

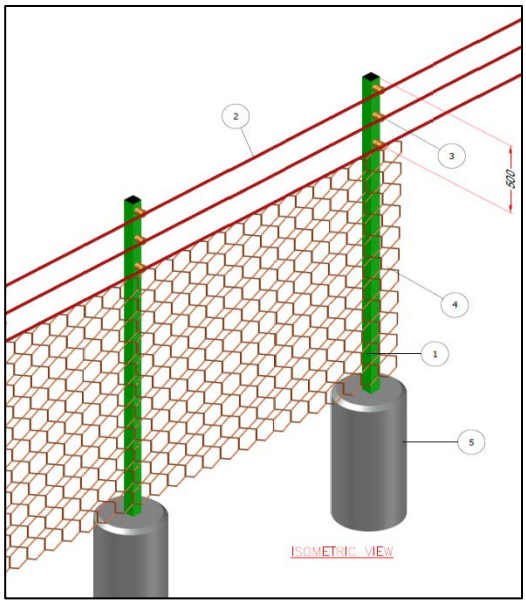


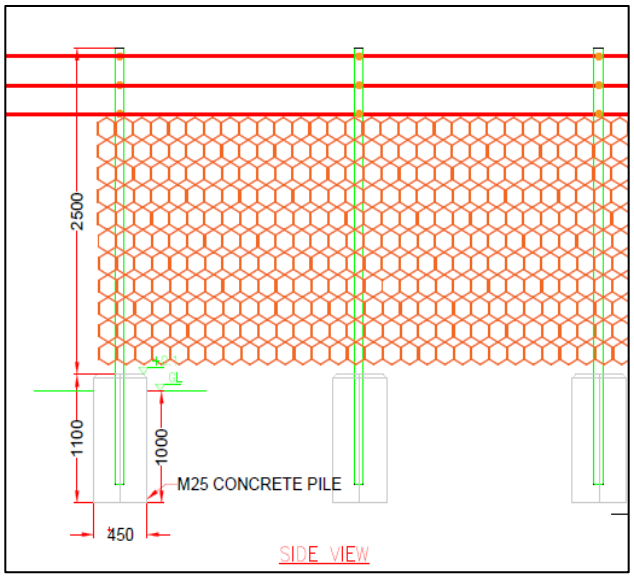
ELECTRIC FENCING – 2.5 MTR

Marking the locations for fence posts and clearing of vegetation along the planned fence line and spacing them according to the design specifications will be done. Digging of holes for the fence posts using a post hole digger or auger, ensuring they are deep enough to provide adequate stability. Installing line posts at regular intervals between the corner posts while maintaining consistent height and alignment will be done. Insulators will be attached to the fence posts at appropriate intervals to prevent the electrified wires from contacting the posts. String the electrified wires through the insulators, starting from the bottom and working upwards for 0.5 metres. The rest of the fence from the ground to the height of 2 metres will be done using chain-link of approved gauge and haunching will be done at the base.

Installing the energizer unit at a suitable location will be done preferably near a power source or solar panel for electrification by connecting the energizer to the fence wires using insulated lead-out wire, following the manufacturer's instructions. Proper grounding or earthing will be done.

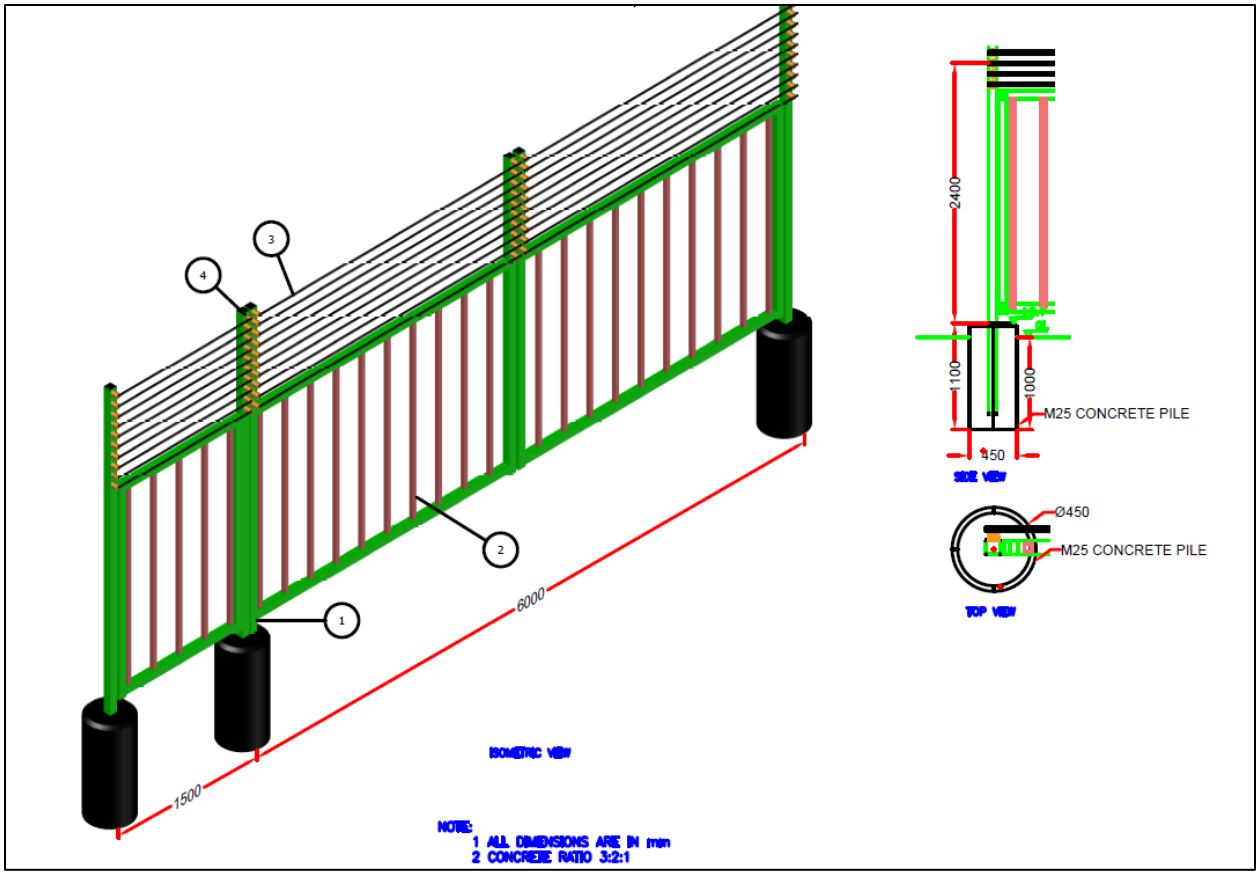
Testing the electric fence will be done using a voltmeter to ensure proper voltage levels are present throughout the fence and making any necessary adjustments to the energizer settings or wire connections to achieve optimal performance and safety. Warning signs will be installed at regular intervals along the fence to alert people of the electrified nature of the fence.





Typical Design for Electric Fencing

New Addition Dated: 08 May 2024



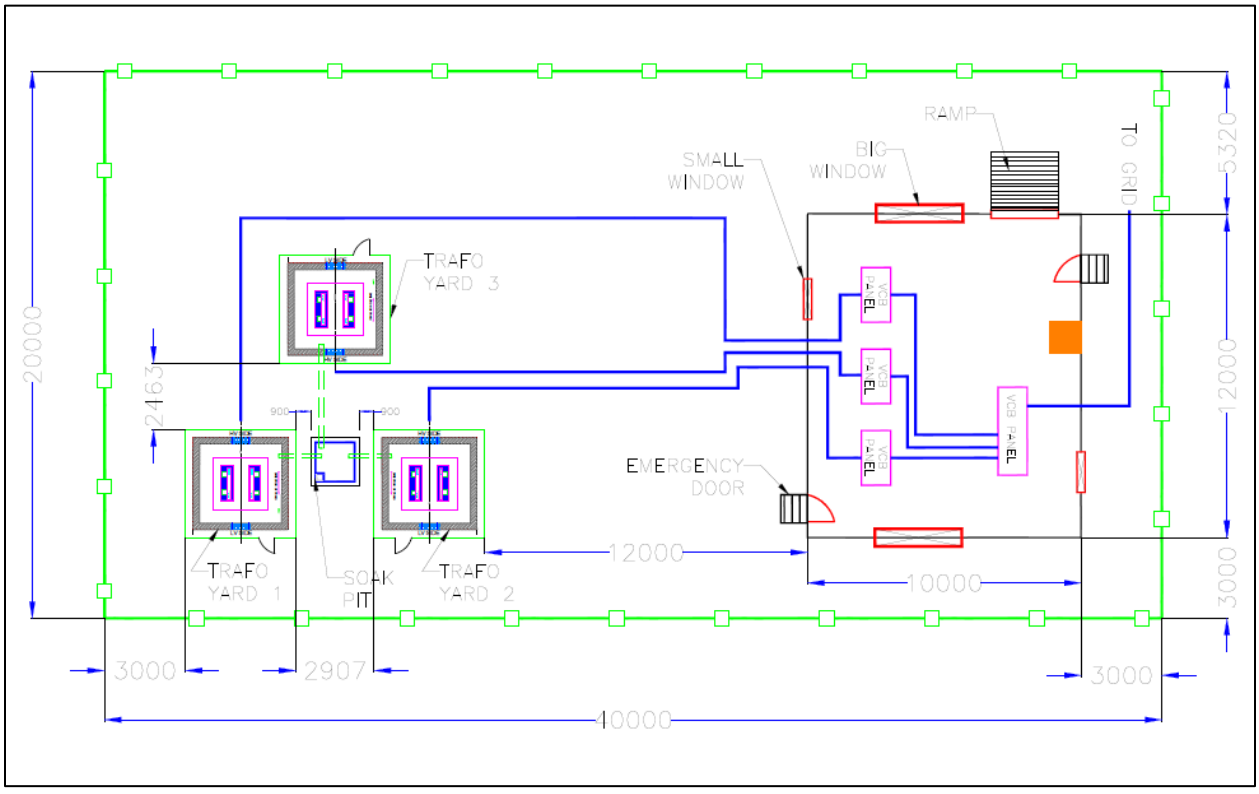
Typical Design for Main Gate

New Addition Dated: 08 May 2024

Control Room/All Buildings

Clearing and leveling of the construction site will be done and installation of temporary facilities such as site offices, storage areas, and worker accommodation. Excavation of foundation footings will be done, installation of foundation reinforcement, pouring of concrete footings & casting of foundation slabs or walls. Further installation of floors, walls, and roof structures and integration of plumbing, electrical, and mechanical systems.

Installation of doors, windows, and finishes such as plastering, painting, and tiling, all fittings and installations will follow with regular inspections to ensure compliance with design specifications and building codes and testing of materials and structures for strength, durability, and safety.



New Addition Dated: 08 May 2024

Control Room building at Finlays Project in Kenya