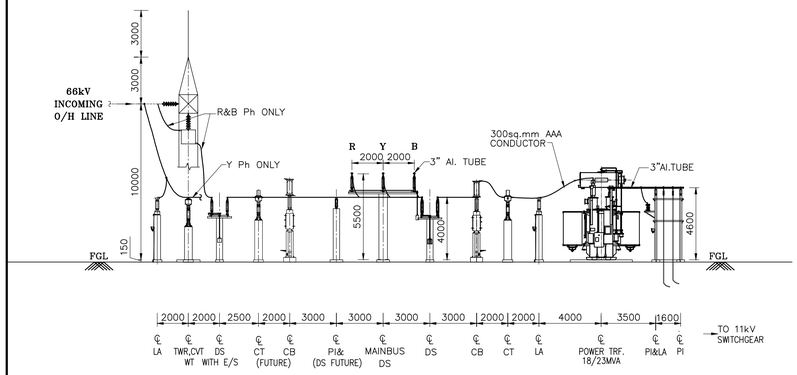
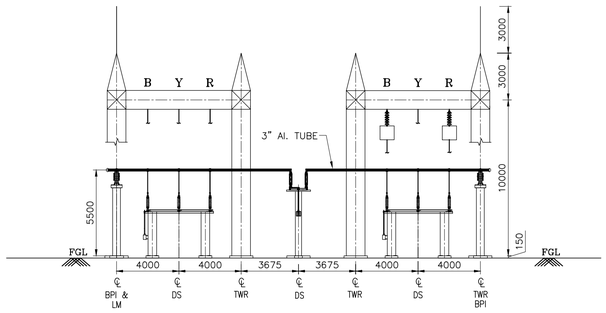
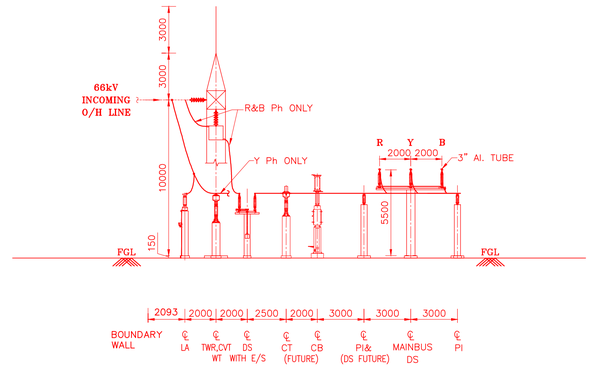


SECTION AA



SECTION BB



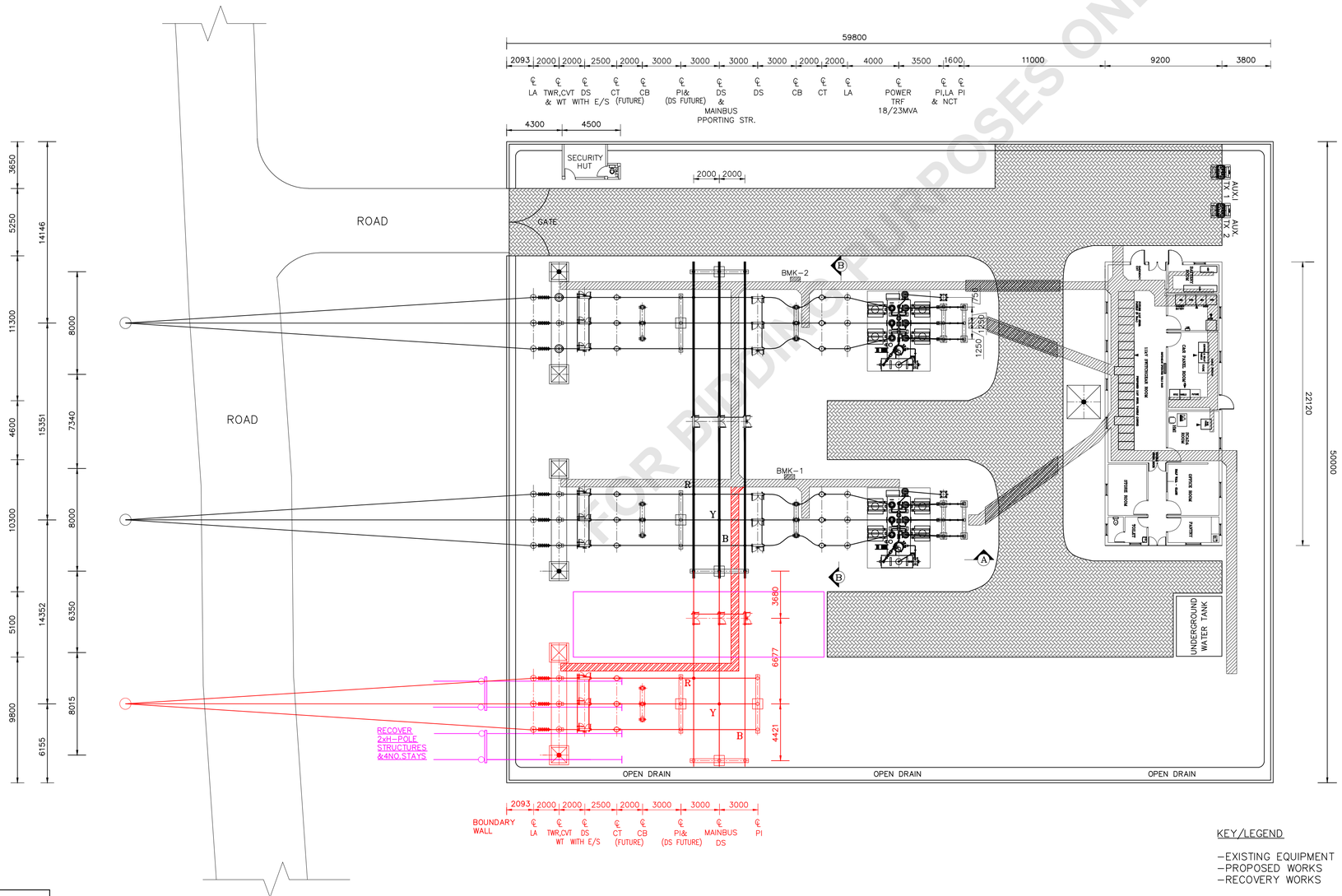
SECTION AA

NOTES:–

1. ALL DIMENSIONS ARE IN MM UNLESS OTHERWISE SPECIFIED.
2. GRAVELLING AND EARTHING WILL BE DONE FOR THE SWITCHYARD EQUIPMENT OCCUPIED AREA.
3. CONDUCTOR SIZE DETAILS
   (A) 66KV MAIN BUS : 3" AL.TUBE (SCH.40)
   66KV TRANSFORMER BAY AND LINE : 300sq.mm AAA CONDUCTOR
4. MINIMUM CLEARANCES IN MM :

	66kV	11kV
1. PHASE TO PHASE –	790	250
2. PHASE TO EARTH –	700	500
3. BUSBARS PHASE TO PHASE –	2000	1250
4. HEIGHT TO LIVE PARTS ABOVE GROUND –	3500	2900
5. LOWEST PART OF INSULATOR ABOVE GROUND –	2500	2500

5. ALTITUDE LEVEL : 2200M
6. PLINTH LEVEL FOR EQUIPMENT IS 150MM ABOVE FINISHED GROUND LEVEL.
7. ▨ ROAD CROSSING FOR CABLE TRENCH
8. ✻ LOCATION OF 66kV & 11kV TERMINATION POLES SHALL BE FINALISED ON RECEIPT OF TOWER SPOT DRAWING FROM KPLC



FOR BIDDING PURPOSES ONLY

D.K.M

LEGEND:

	DISCONNECTOR
	CIRCUIT BREAKER
	CURRENT TRANSFORMER
	LIGHTNING ARRESTER
	DISCONNECTOR WITH EARTH SWITCH
	POST INSULATOR
	CAPACITIVE VOLTAGE TRANSFORMER
	POWER TRANSFORMER
	AUX. TRANSFORMER
	LIGHTNING MAST
	TOWER WITH PEAK

KEY/LEGEND

–EXISTING EQUIPMENT
–PROPOSED WORKS
–RECOVERY WORKS

REFERENCE DRAWINGS

1. FOR PROTECTION SINGLE LINE DIAGRAM REFER DRG. NO : NCC/KPLC/LAN/E–DWG–S–001
2. FOR CONTROL ROOM REFER DRG. NO : NCC/KPLC/LAN/E–DWG–S–016

	NAME	DATE	SIGN
APPROVED BY CHIEF ENGINEER	S.NGULI	OCTOBER 2025	
CHECKED ENGINEER I/C	Z.KIPKORIR	OCTOBER 2025	
CHECKED PRINCIPAL DMAN	B.OWINO	OCTOBER 2025	
SURVEYED	A.MUCHILWA	OCTOBER 2025	
DRAWN	D.WANDEYI	OCTOBER 2025	

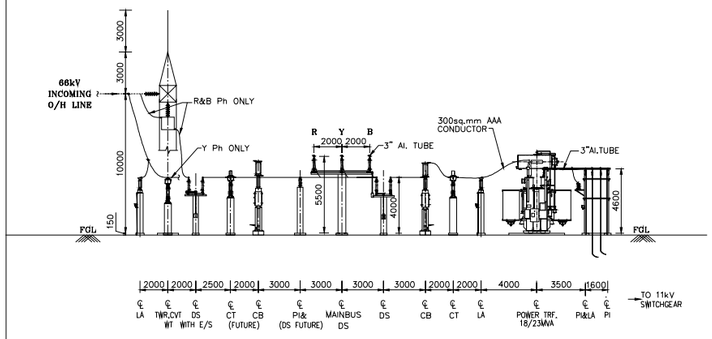
REF:	REVISION	CHECKED	NAME	DATE	SIGN
1.					
2.					
3.					
4.					
5.					
6.					

PROPOSED NEW 66kV INCOMER AT LANGATA 66/11kV SUBSTATION ---------- NAIROBI

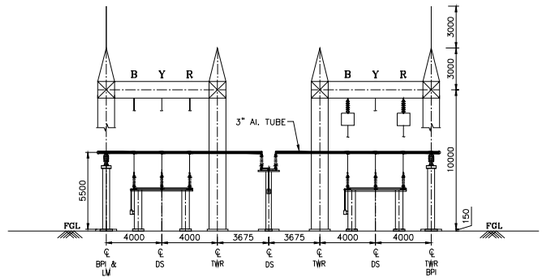
SCALE ------ 1,1000

KENYA POWER

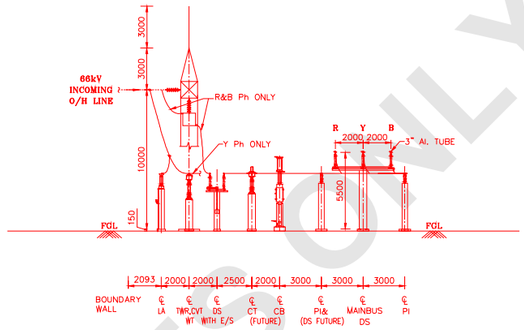
SK. NO. 11374



SECTION AA



SECTION BB



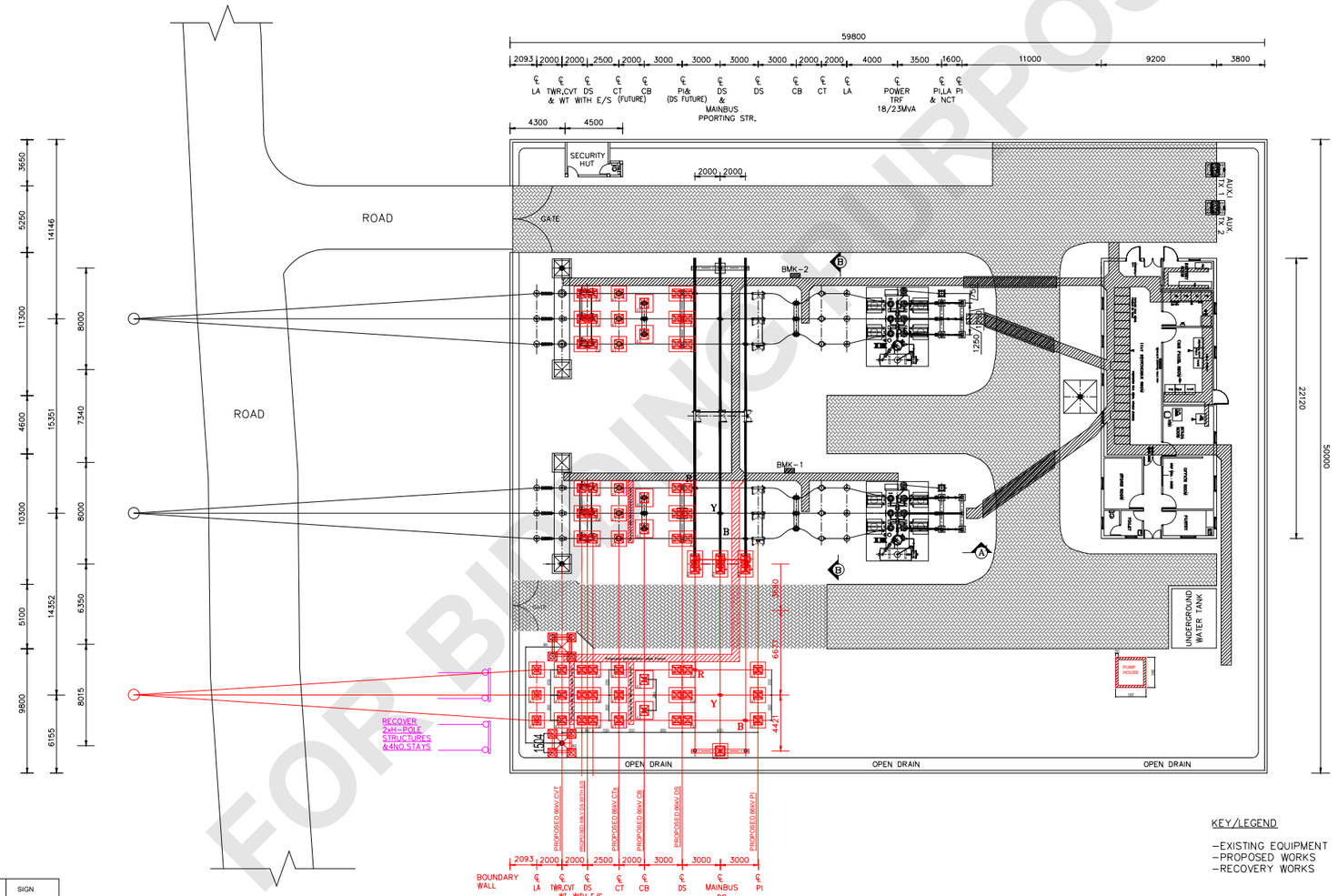
SECTION AA

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1. ALL DIMENSIONS ARE IN MM UNLESS OTHERWISE SPECIFIED.
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5. ALTITUDE LEVEL : 2200M
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7. ▨ ROAD CROSSING FOR CABLE TRENCH
8. ✱ LOCATION OF 66kV & 11kV TERMINATION POLES SHALL BE FINALISED ON RECEIPT OF TOWER SPOT DRAWING FROM KPLC



KEY/LEGEND

- EXISTING EQUIPMENT
- PROPOSED WORKS
- RECOVERY WORKS

LEGEND:	
	DISCONNECTOR
	CIRCUIT BREAKER
	CURRENT TRANSFORMER
	LIGHTNING ARRESTER
	DISCONNECTOR WITH EARTH SWITCH
	POST INSULATOR
	CAPACITIVE VOLTAGE TRANSFORMER
	POWER TRANSFORMER
	AUX. TRANSFORMER
	LIGHTNING MAST
	TOWER WITH PEAK

REFERENCE DRAWINGS

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2. FOR CONTROL ROOM REFER DRG. NO : NCC/KPLC/LAN/E-DWG-S-016

D.K.M

	NAME	DATE	SIGN
APPROVED BY CHIEF ENGINEER	S.NGULI	OCTOBER 2025	
CHECKED ENGINEER I/C	Z.KIPKORIR	OCTOBER 2025	
CHECKED PRINCIPAL D'MAN	B.OWINO	OCTOBER 2025	
SURVEYED	A.MUCHILWA	OCTOBER 2025	
DRAWN	D.WANDEYI	OCTOBER 2025	

REF:	REVISION	CHECKED	NAME	DATE	SIGN
1.	NEW 66KV BAY IN LANGATA S/S	A.AKUTE	DENNIS	NOV 2026	
2.					
3.					
4.					
5.					
6.					

CIVIL DRAWINGS FOR LANGATA 66/11kV SUBSTATION

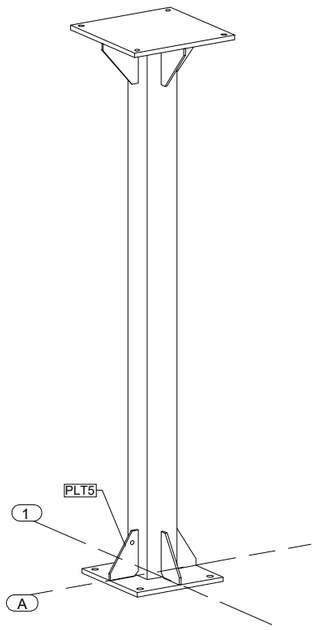
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PROPOSED NEW 66kV INCOMER AT LANGATA 66/11kV SUBSTATION ---------- NAIROBI

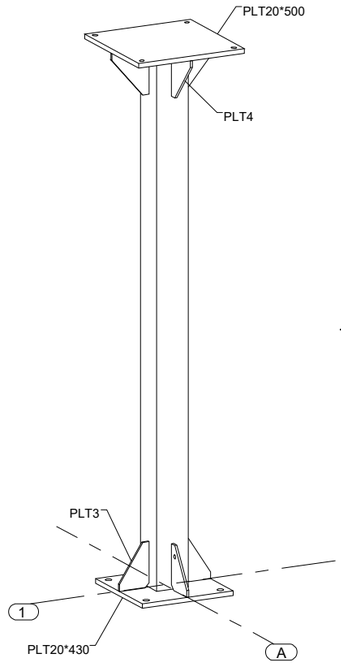
KENYA POWER

SK. NO. 11374

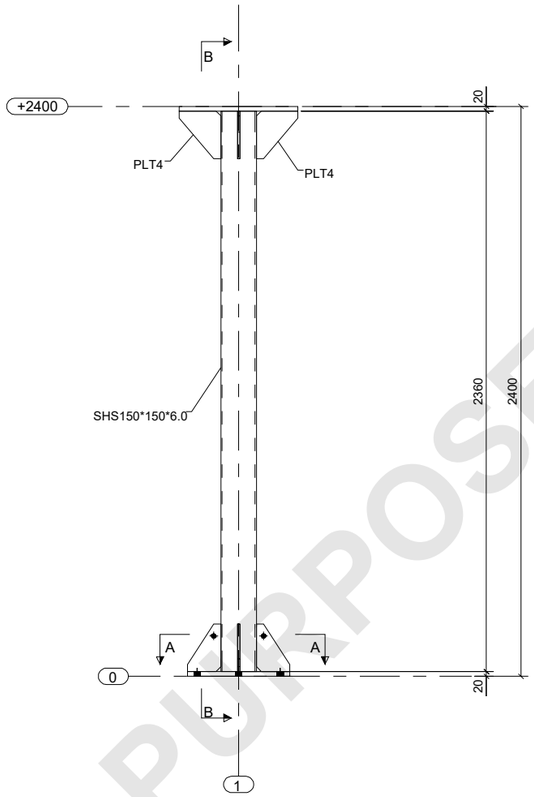
FOR BIDDING PURPOSES ONLY



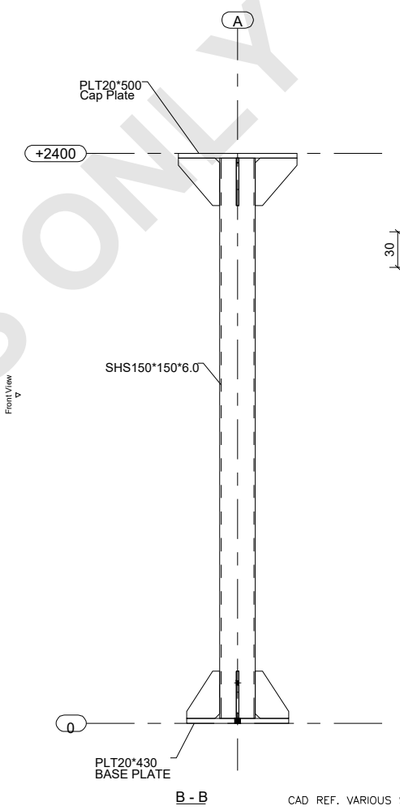
3D VIEW 1



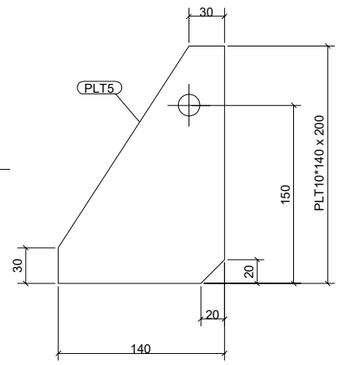
3D VIEW 2



Grid A



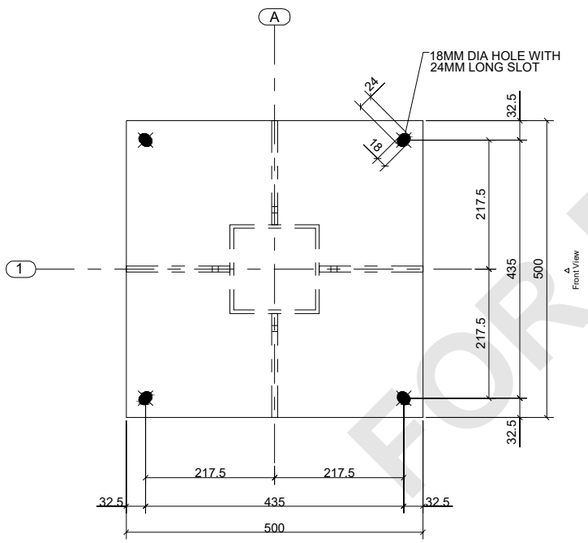
B - B



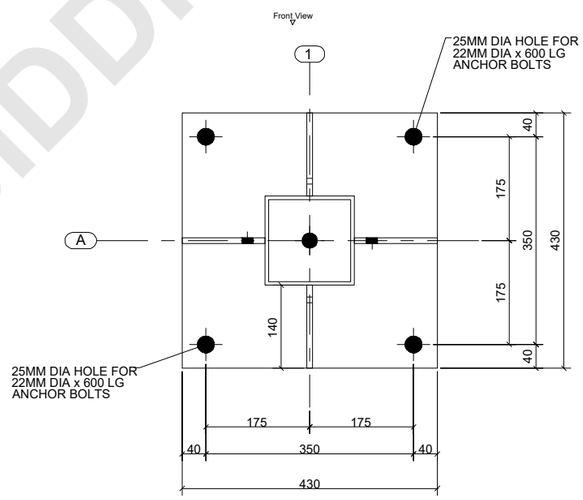
STIFFENER MARKED PLT5 DETAILS

CAD REF. VARIOUS STRUCTURES FOR KPLC-REV 2 – WITH LATEST GANTRY

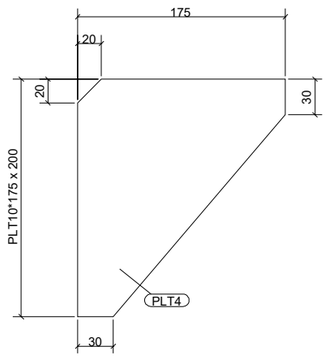
66/11KV CTs & VTs STRUCTURE



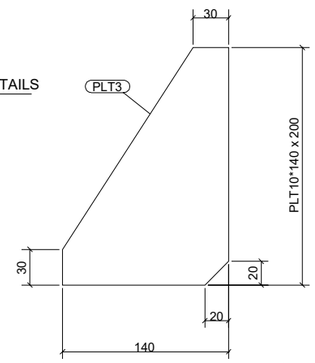
PLAN VIEW



A - A



TOP STIFFENER DETAILS



STIFFENER MARKED PLT3 DETAILS

REVISION		DATE
A		
B		
C		
D		
E		
F		
G		

CONSULTANT:
KENYA POWER.

CLIENT:

JOB:
SUPPLY OF VARIOUS STRUCTURES

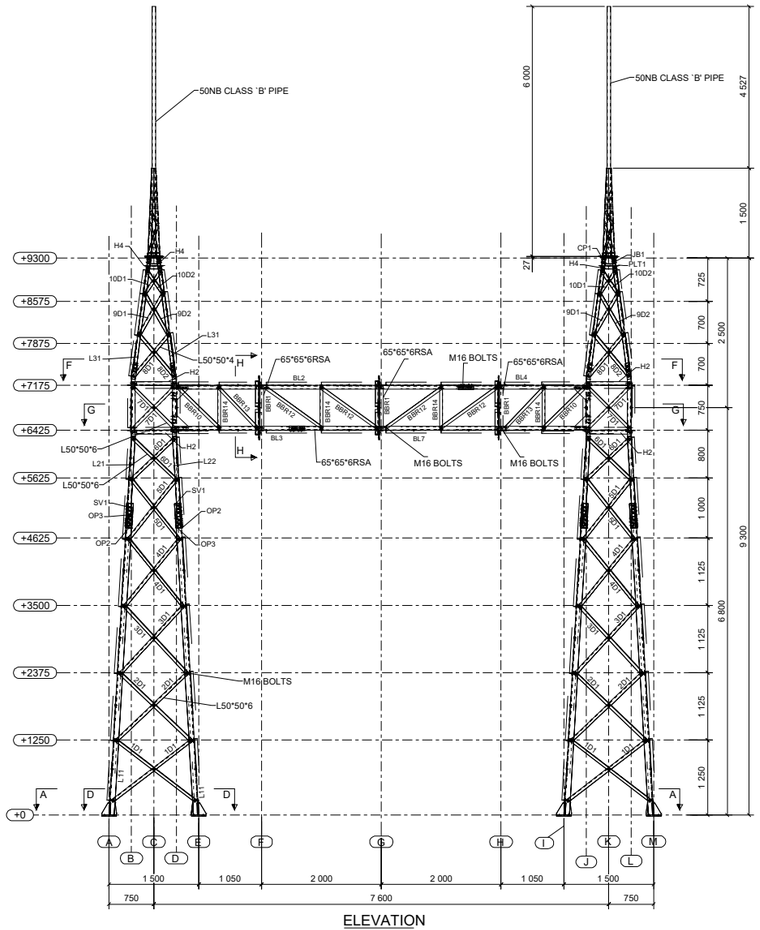
SITE:
LANGATA 66/11kV SUBSTATION.

DRAWING TITLE:
GENERAL ARRANGEMENT OF STEELWORK FOR 66/11kV- CTs & VTs STRUCTURE

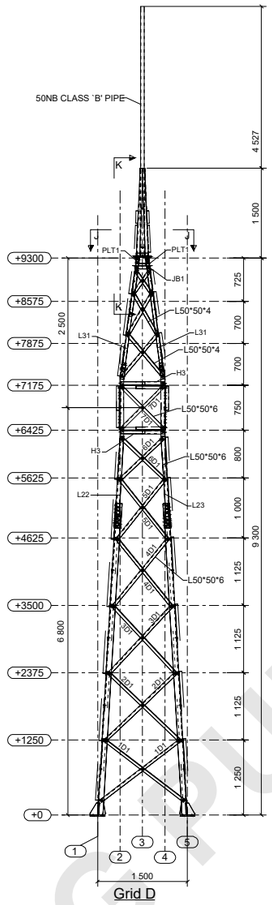
JOB No .	Scale N.T.S	M.L. No.
Drawn: DENNIS	Checked: ENG.D.W.M.	Date:11/26

Drg No DWG/CTs-VTs/003 REV. 0

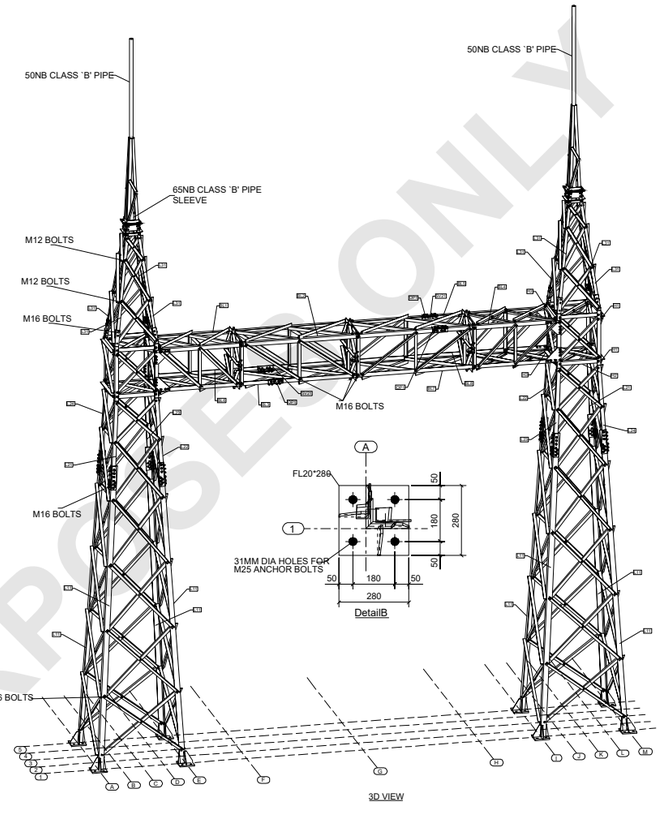
FOR BIDDING PURPOSES ONLY

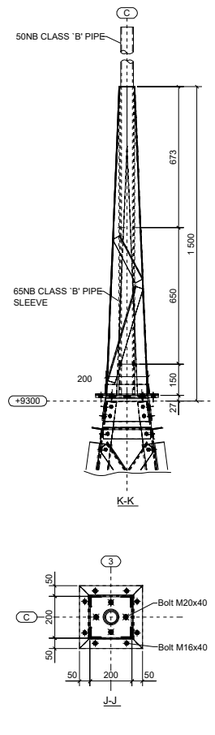


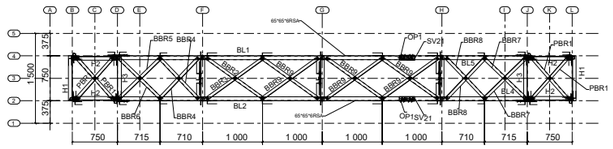
ELEVATION



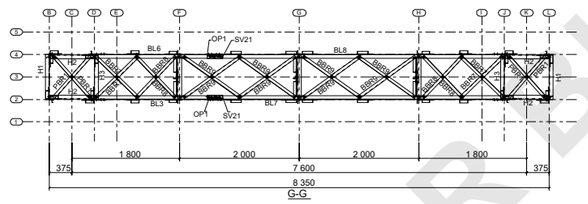
Grid D



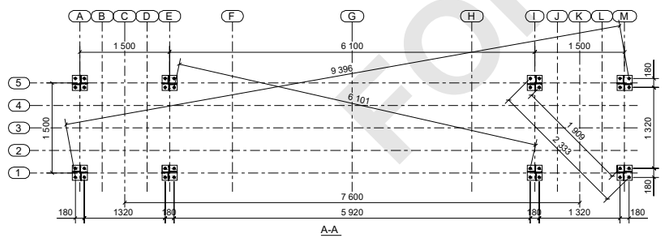




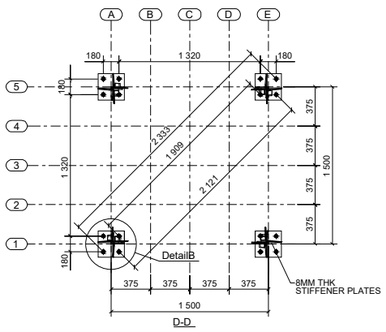
F-F



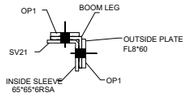
G-G



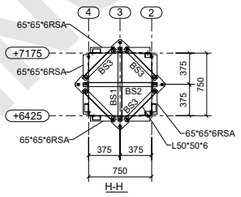
A-A



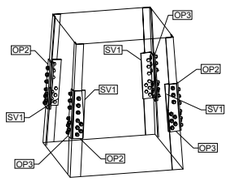
D-D



TYPICAL BOOM LEG TO LEG
CONNECTION DETAIL



H-H



3D VIEW OF LEG TO LEG CONNECTION

D.K.M

GENERAL ARRANGEMENT OF STEELWORK FOR - GANTRY AND BOOM

1 SET REQUIRED THUS

3	.	.
2	.	.
1	.	.
REVISION		DATE

CLIENT

KPLC

JOB

SUPPLY OF VARIOUS STRUCTURES

SITE

FOR BIDDING PURPOSES ONLY

FOR BIDDING PURPOSES ONLY

DRAWING TITLE

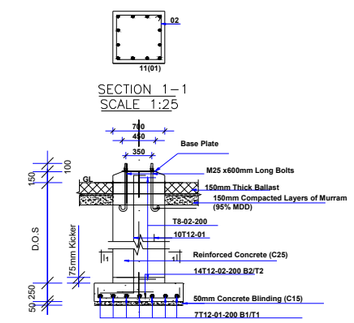
GENERAL ARRANGEMENT OF STEELWORK FOR GANTRY AND BOOM

JOB No .	Scale N.T.S	M.L. No.
Drawn DKM	Checked ENG. D.W.M	Date: NOV 2026

Drg No DWG/GTY/07 REV. 0

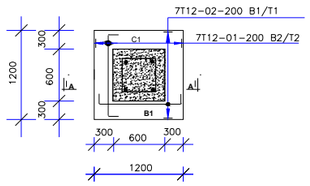
FOR BIDDING PURPOSES ONLY

FOUNDATION TYPE F1



SECTION 1–1
SCALE 1:25

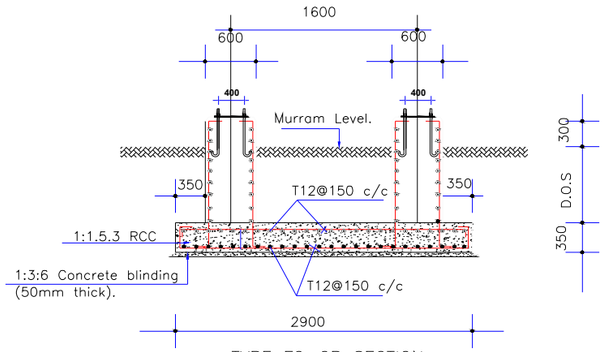
600X600 COLUMN C1 [4 NO. THUS]
SECTION A–A: BASE F1 ELEVATION DETAILS
SCALE 1:30



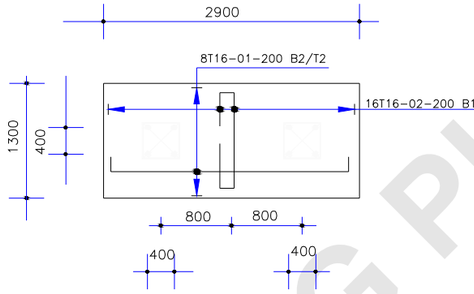
1200x1200x250mm BASE TYPE F1
SCALE 1:25

TYPICAL FOUNDATION DETAIL (A–A)
DETAILS F1
CURRENT TRANSFORMER & ISOLATORS

FOUNDATION TYPE F2

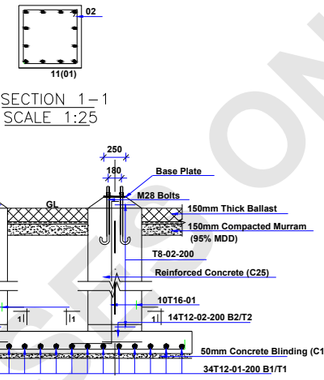


TYPE F2–CB SECTION.
~SCALE=1:25



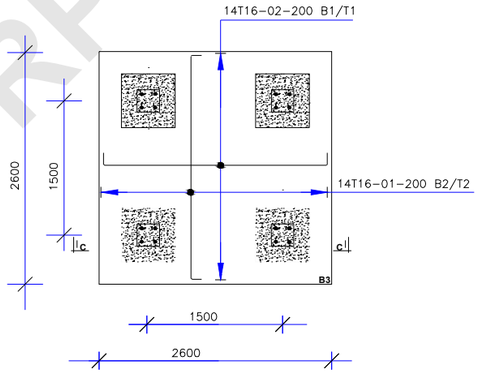
2900x1300x350mm BASE TYPE F2
SCALE 1:25

FOUNDATION TYPE B3



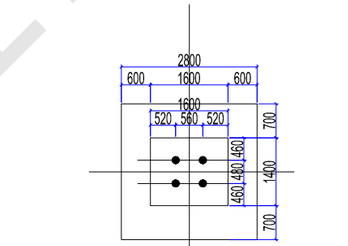
SECTION 1–1
SCALE 1:25

500X500 COLUMN C3
SECTION C–C: BASE TYPE B3 ELEVATION DETAILS
SCALE 1:30

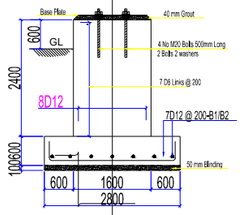


2600x2600x250 mm BASE TYPE B3
SCALE 1:25

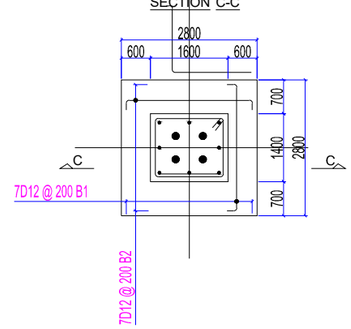
TYPICAL FOUNDATION DETAIL(C–C)
GANTRY



66 kV CB FOUNDATION BOLTS POSITION



SECTION C-C



TYPICAL F3 BASE DETAILS

D.K.M

FOR BIDDING PURPOSES ONLY

ALL DIMENSIONS AND LEVELS ARE TO BE VERIFIED ON SITE BY THE CONTRACTOR BEFORE COMMENCING ANY WORK.

THE COPYRIGHT IN THIS DRAWING, INCLUDING THE DESIGN AND DETAILS SHOWN HEREON, IS RESERVED BY THE ENGINEERS.

THIS DRAWING IS NOT TO USED IN WHOLE OR PART OTHER THAN FOR THE INTENDED, PURPOSE AND PROJECT, AS DEFINED ON THIS DRAWING. REFER TO THE CONTRACT FOR FULL TERMS AND AND CONDITIONS.

GENERAL NOTES:

1:THE MINIMUM 28 DAYS CONCRETE STRENGTH SHOULD BE;
COLUMN CLASS 25/30
WATER TANK & LIFT SHAFT WALLS CLASS 25/30
ALL OTHER STRUCTURAL MEMBERS CLASS 20/25

2:REINFORCEMENT TO BE HIGH YIELD RIBBED ('T') BARS WITH MINIMUM TENSILE STRENGTH OF 500N/mm2

3: MINIMUM COVER TO MAIN REINFORCEMENT TO BE;
COLUMNS =40mm
CONCRETE WALLS =40mm
FLOOR BEAMS =25mm
FLOOR SLABS =20mm
STAIRCASE =20mm

4: MINIMUM LAPS ARE 50 x DIAMETER OF THE BAR

5: ALL REINFORCEMENT TO BE INSPECTED BY THE STRUCTURAL ENGINEER BEFORE CONCRETING

6: THE STRUCTURAL DRAWING TO BE READ IN CONJUNCTION WITH ARCHITECTURAL & M.E.P DRAWINGS

7: ALL FOUNDATIONS TO BE TAKEN DOWN TO FIRM BEARING STRATA TO ENGINEER'S APPROVAL.

8: FOUNDATIONS DESIGNED FOR ALLOWABLE BEARING PRESSURE OF 250 KN/m2

SPECIFIC NOTES:

THE SUBSTATION LEVEL ADOPTED FOR KPLC SHOULD BE AS FOLLOWS:

1. CONTROL BUILDING SHOULD BE 1 METER ABOVE SWITCH YARD LEVEL.

2. SWITCH YARD LEVEL SHOULD BE 600MM ABOVE AVERAGE ADJACENT GROUND LEVEL (TO AVOID FLOODING)

3. THE AVERAGE ROAD LEVEL SHOULD DRAIN WATER OUTSIDE THE SUBSTATION PREMISE.

4. TOP OF TRANSFORMER LEVELS TO BE 500MM ABOVE SWITCH YARD

NO.	DATE	REVISION	CHECKED	SIGN

CONSULTANT:
KENYA POWER.

PROJECT:
STANDARD 66/11kV SUB-STATION

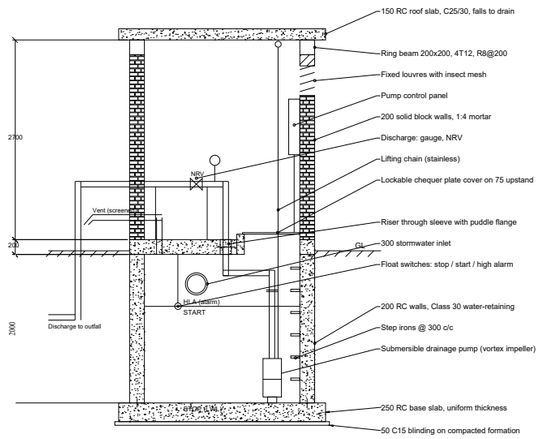
Project
PROPOSED WORKS ON LANGATA S/S
66/11kV SUBSTATION GENERAL ARRANGEMENT

Description: FOUNDATION DETAILS

Designed by: | Drawn by: DKM | Checked by: ENG. D.W.M

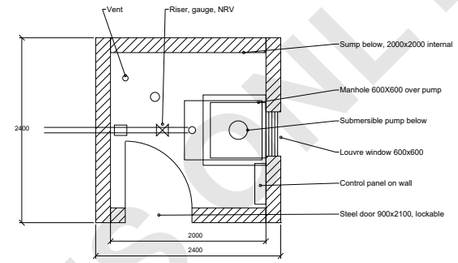
Scale 1:25/50/75/100 | Date NOVEMBER, 2026.

Project No | Drawing. Number **LA001**



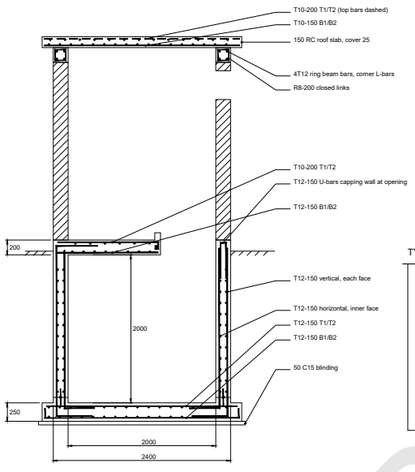
SECTION A-A

SCALE 1:25



PLAN AT PUMP HOUSE FLOOR

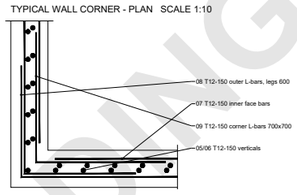
SCALE 1:25



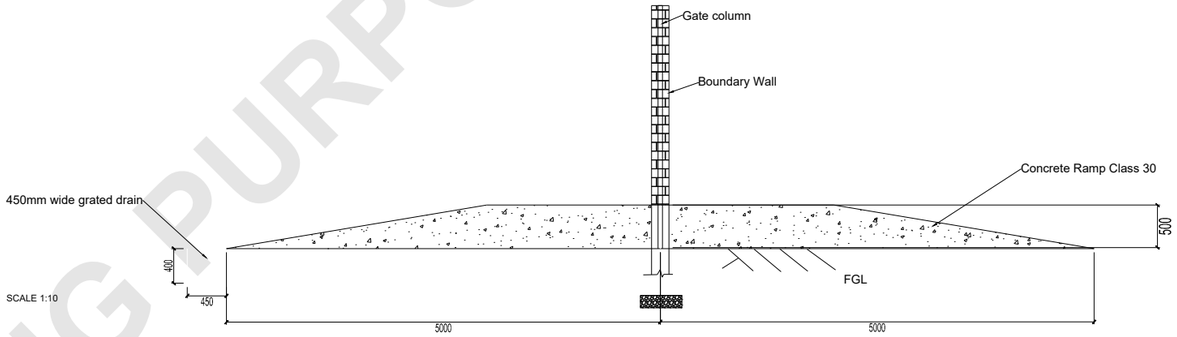
REINFORCEMENT DETAIL

SCALE 1:25

Sump 2000 x 2000 internal, 2000 internal height



TYPICAL WALL CORNER - PLAN SCALE 1:10



GATE RAMP DETAILS

D.K.M

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ALL DIMENSIONS AND LEVELS ARE TO BE VERIFIED ON SITE BY THE CONTRACTOR BEFORE COMMENCING ANY WORK.

THE COPYRIGHT IN THIS DRAWING, INCLUDING THE DESIGN AND DETAILS SHOWN HEREON, IS RESERVED BY THE ENGINEERS.

THIS DRAWING IS NOT TO USED IN WHOLE OR PART OTHER THAN FOR THE INTENDED, PURPOSE AND PROJECT, AS DEFINED ON THIS DRAWING. REFER TO THE CONTRACT FOR FULL TERMS AND AND CONDITIONS.

GENERAL NOTES:

1:THE MINIMUM 28 DAYS CONCRETE STRENGTH SHOULD BE;
COLUMN CLASS 25/30
WATER TANK & LIFT SHAFT WALLS CLASS 25/30
ALL OTHER STRUCTURAL MEMBERS CLASS 20/25

2:REINFORCEMENT TO BE HIGH YIELD RIBBED ('T') BARS WITH MINIMUM TENSILE STRENGTH OF 500N/mm2

3: MINIMUM COVER TO MAIN REINFORCEMENT TO BE;

COLUMNS	=40mm
CONCRETE WALLS	=40mm
FLOOR BEAMS	=25mm
FLOOR SLABS	=20mm
STAIRCASE	=20mm

4: MINIMUM LAPS ARE 50 x DIAMETER OF THE BAR

5: ALL REINFORCEMENT TO BE INSPECTED BY THE STRUCTURAL ENGINEER BEFORE CONCRETING

6: THE STRUCTURAL DRAWING TO BE READ IN CONJUNCTION WITH ARCHITECTURAL & M.E.P DRAWINGS

7: ALL FOUNDATIONS TO BE TAKEN DOWN TO FIRM BEARING STRATA TO ENGINEER'S APPROVAL.

8: FOUNDATIONS DESIGNED FOR ALLOWABLE BEARING PRESSURE OF 250 KN/m2

SPECIFIC NOTES:

THE SUBSTATION LEVEL ADOPTED FOR KPLC SHOULD BE AS FOLLOWS:

1. CONTROL BUILDING SHOULD BE 1 METER ABOVE SWITCH YARD LEVEL.
2. SWITCH YARD LEVEL SHOULD BE 600MM ABOVE AVERAGE ADJACENT GROUND LEVEL (TO AVOID FLOODING)
3. THE AVERAGE ROAD LEVEL SHOULD DRAIN WATER OUTSIDE THE SUBSTATION PREMISE.
4. TOP OF TRANSFORMER LEVELS TO BE 500MM ABOVE SWITCH YARD

NO.	DATE	REVISION	CHECKED	SIGN

CONSULTANT:

KENYA POWER.

PROJECT:

STANDARD 66/11kV SUB-STATION

Project

PROPOSED WORKS ON LANGATA S/S

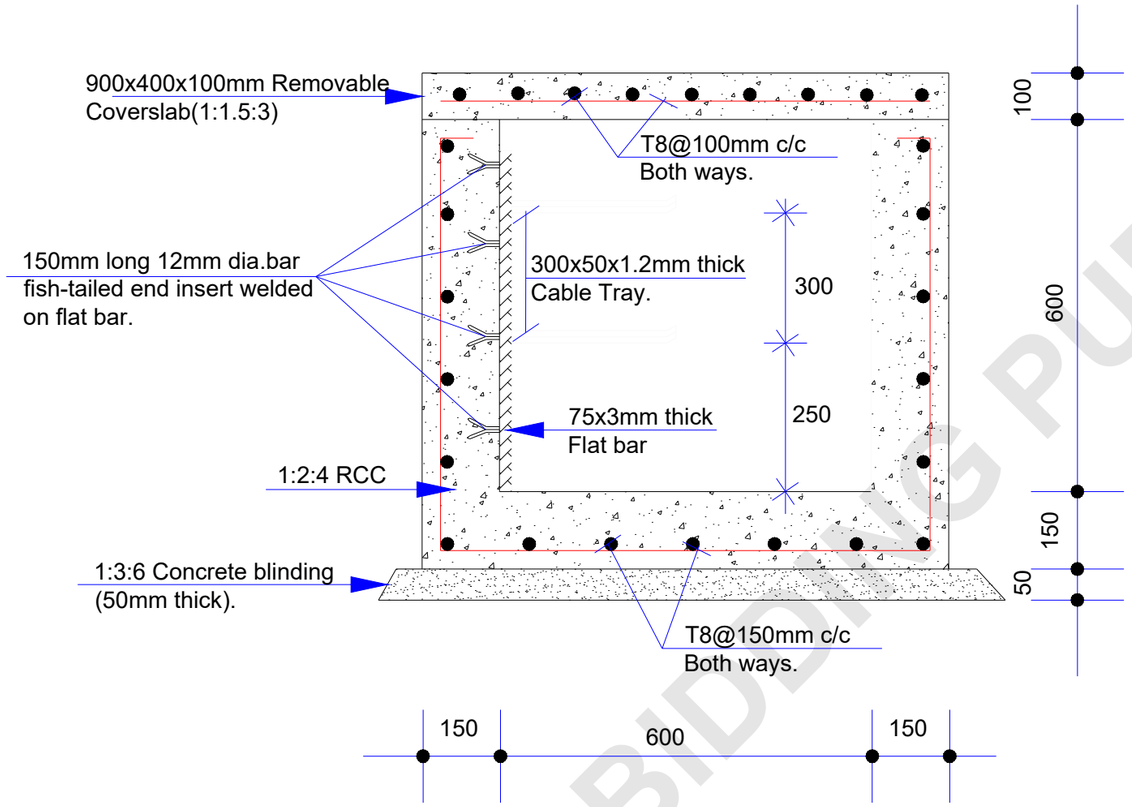
66/11kV SUBSTATION GENERAL ARRANGEMENT

Description: PUMP HOUSE & GATE DETAILS

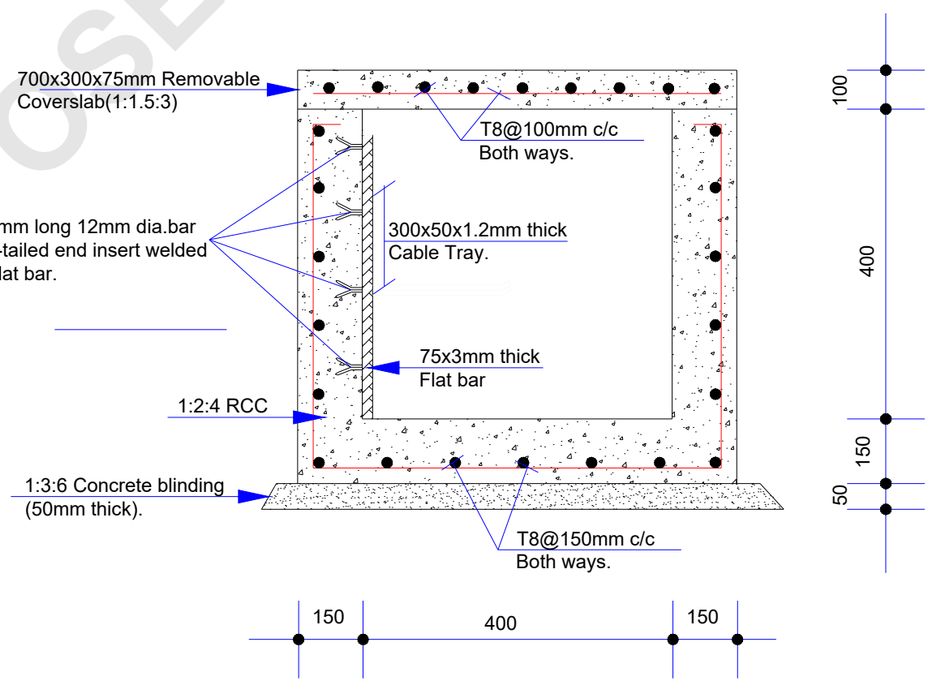
Designed by:	Drawn by: DKM	Checked by: ENG. D.W.M

Scale 1:25/50/75/100	Date NOVEMBER, 2026.
Project No	Drawing. Number **LA002**

CABLE TRENCH DETAILS



(600x600x150mm) CABLE TRENCHES. ~*SCALE=1:25*



(400x400x150mm) CABLE TRENCHES. ~*SCALE=1:25*

D.K.M

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NO.	DATE	REVISION	CHECKED	SIGN

CONSULTANT:
KENYA POWER.

Project
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66/11kV SUBSTATION GENERAL ARRANGEMENT

Description: CABLE TRENCH DETAILS

Designed by:	Drawn by: DKM	Checked by: ENG. D.W.M

Scale: | Date: NOVEMBER, 2026