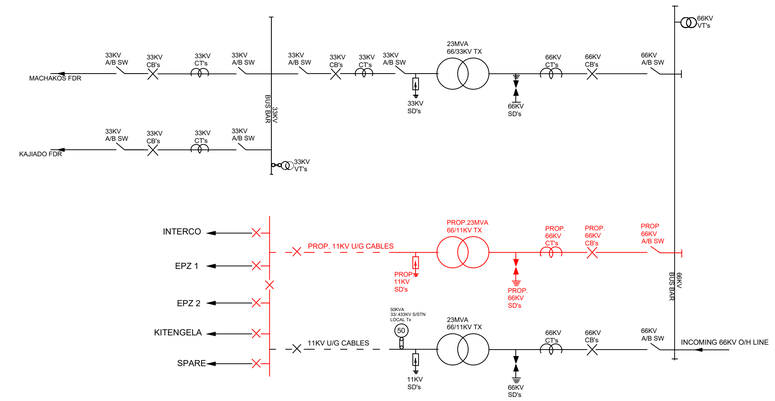
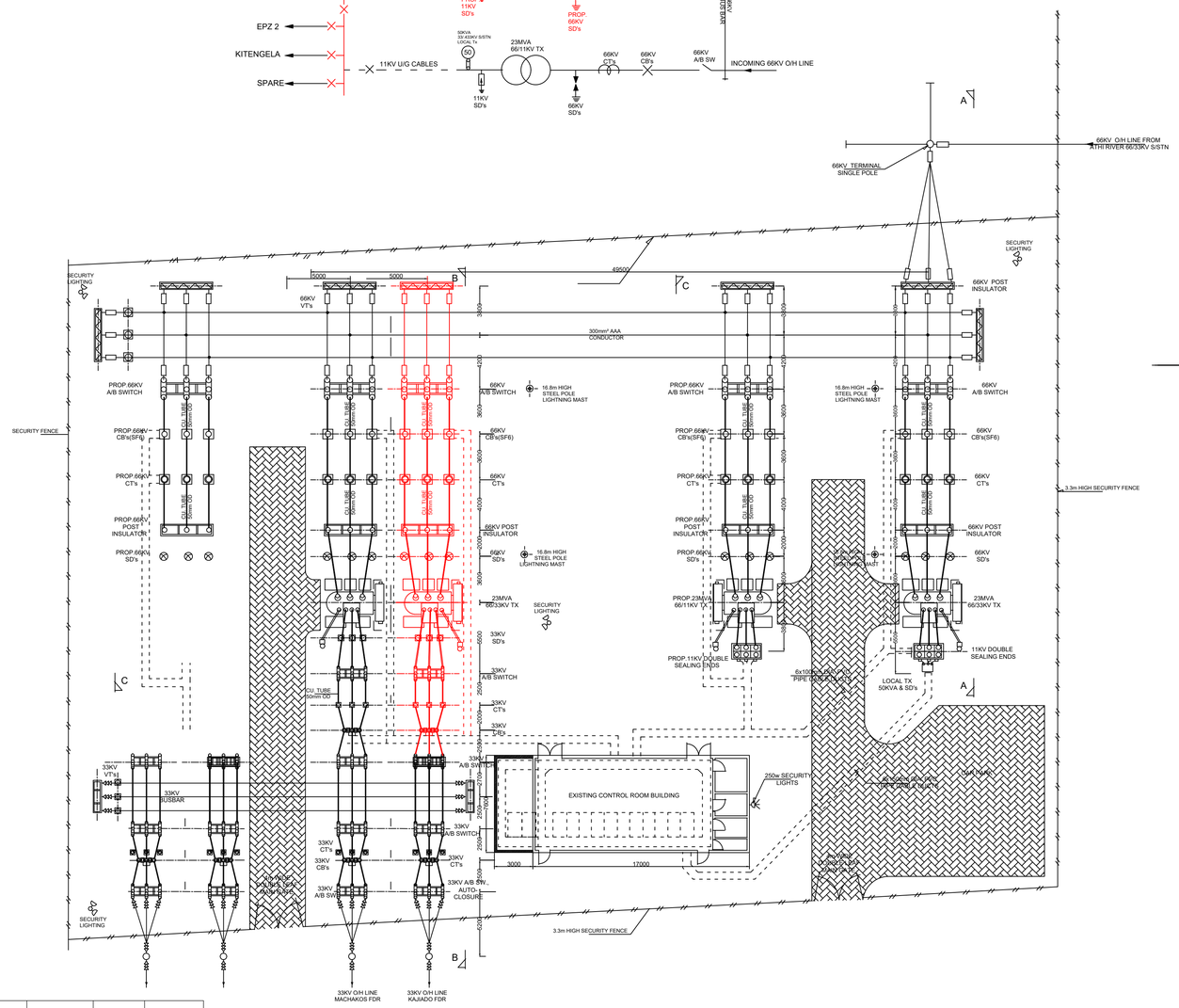
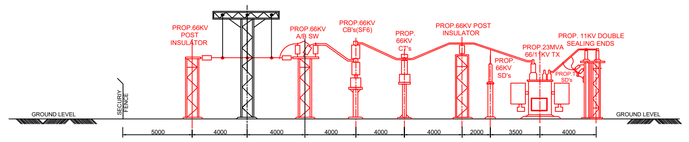
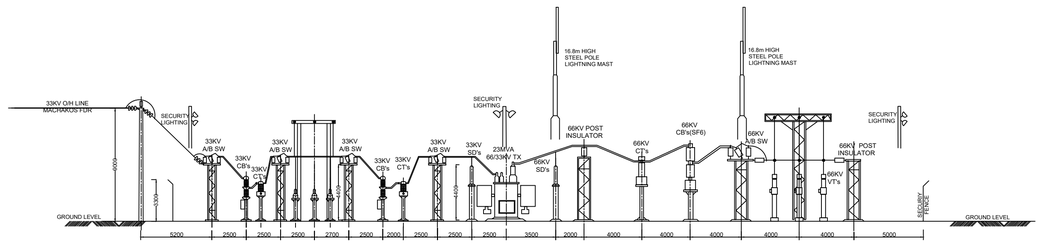


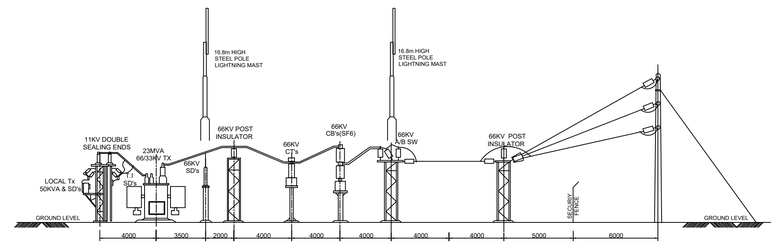




SECTION C - C



SECTION B - B



SECTION A - A

EXISTING WORKS

PROPOSED WORKS

	NAME	DATE	SIGN
APPROVED			
CHECKED ENGINEER I/C	Sakwa		
CHECKED HEAD D'MAN			
CHECKED H/SURVEYOR			
DRAWN	J.M.Kahare	04th Jan 2012	Kahare
SURVEYED			

REF	REVISION	DATE	SIGN	CHECKED	DATE
01					

SHEET 2A

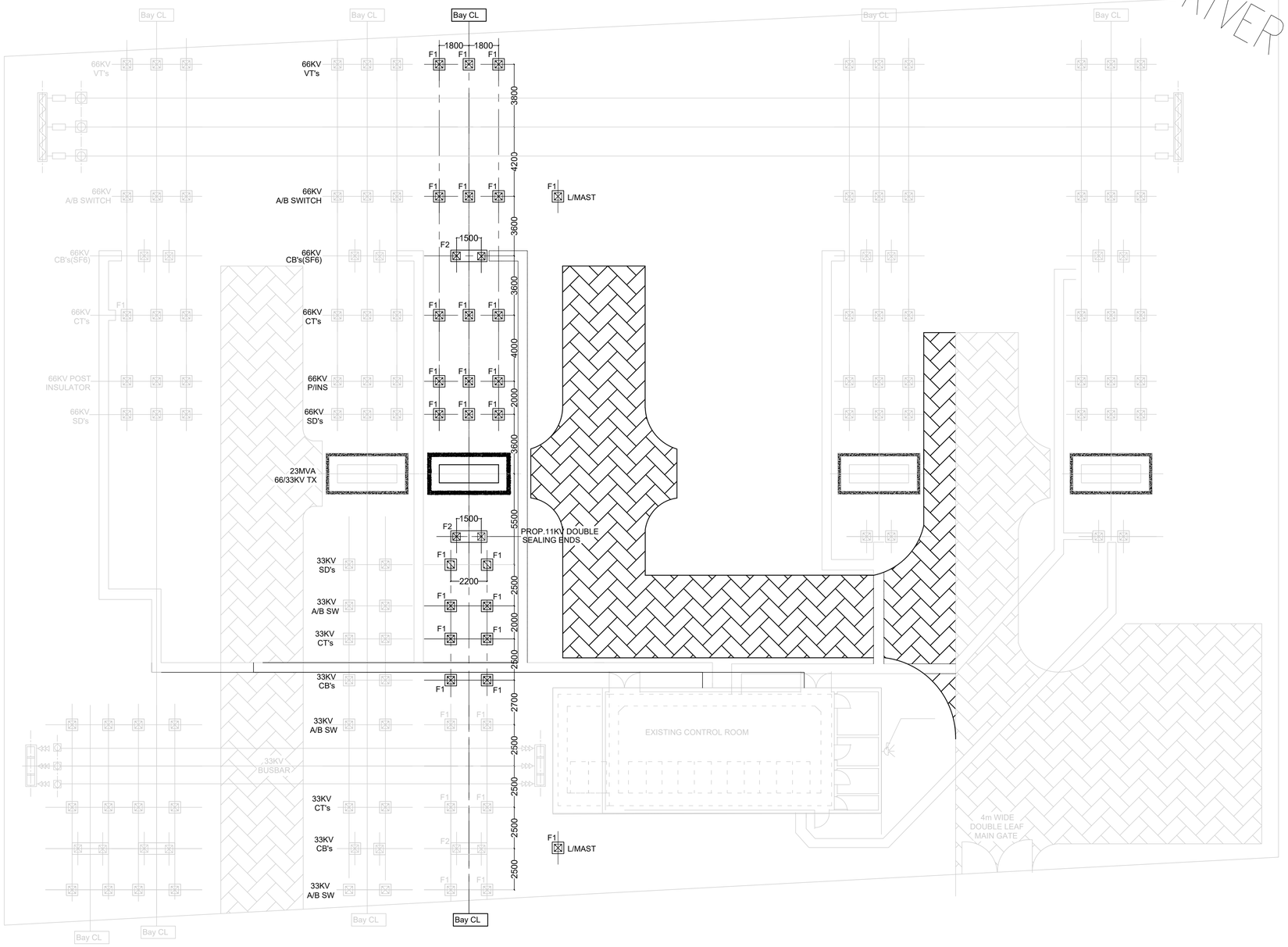
GENERAL ARRANGEMENT OF 66/11KV & PROPOSED 66/33KV EPZ SUBSTATION - ATHI RIVER

SCALE : 1 : 200

C:\Backup\KAHARE\From old\Kenya power Logo.jpg

KENYA POWER

SK. No. 09666



SCHEDULE OF COLUMN AND BASES				
Foundation	Base Size (mm)	No.	Column Size (mm)	No.
Type F1	1200x1200x250	25	700x700	25
Type F2	2000x1500x250	2	1500x1000	2

NOTES

1. All dimensions are in millimeters, unless otherwise stated.

2. This drawing must not be scaled ,only figured dimensions should be used.

3.This drawing must be read in conjunction with relevant Architectural drawings.

4.Reinforced concrete for all structural elements to be grade C20/25 to BS EN 206-1:2002, except for the ground floor slab (grade C16/20), and roof slab (C25/30).

5. Cover to main reinforcement to be as follows:
(a) Foundation = 50mm
(b) Columns = 40mm
(c) Beams = 30mm
(d) Slabs = 25mm

6."H" Denotes ribbed high yield bars to BS 4461 with a yield strength of 500N/mm2 to BS 4449-2005.

7. Reinforcement in walls and columns must be inspected by the Engineer before being enclosed in formwork.

8. All masonry walls must be reinforced with 25mm hoop iron after every two alternate courses. The hoop iron must be extended through the column sections.

9. To ensure enhanced bonding between the masonry and the R.C. columns, the masonry walling must be raised first before the columns are cast.

10. All mortar used to be of cement sand mix 1:3, with all the stone walling being laid in 200mm courses with 12mm mortar joints.

11. A minimum of 7.0N/mm2 average compressive strength of masonry in accordance with BS EN 771 and BS 5268 should be used for all wall sections.

12. Mass concrete to be grade 12/15 to BS EN 206-1:2002.

13. Double masonry walls to be built one at a time. Waterproofing plaster shall be applied to the inside of the first wall to Engineer's approval before the second is built .

REVISIONS

Date	Suffix	Descriptions	Issue

CLIENT

Kenya Power

PROJECT

PROPOSED CIVIL WORKS & STEEL STRUCTURES FOR 66/33KV EPZ SUB-STATION - ATHI RIVER

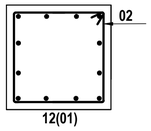
CONSTRUCTION DRAWINGS

GENERAL ARRANGEMENT

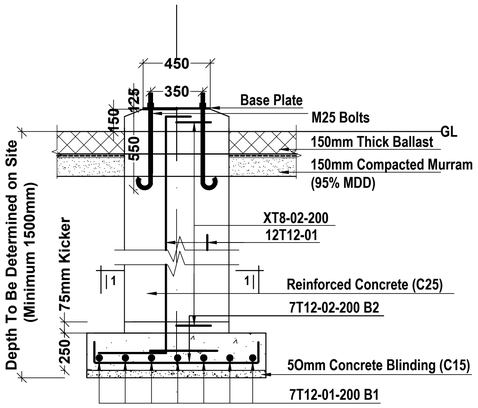
STRUCTURAL

EPZ - SHEET 001/025 (a)

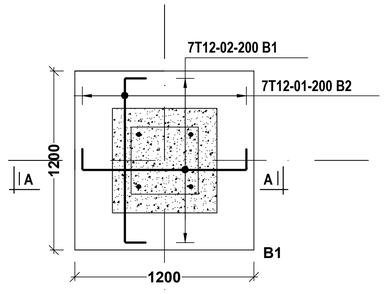
Drawn	D.WAITHERA	Scale(s)	AS INDICATED
Designed	D.WAITHERA	Date	APRIL, 2025
Checked	ENG. D.M.WAMBUGU	Date	APRIL, 2025
Approved	ENG. D.M.WAMBUGU	Date	APRIL, 2025
ISSUE DATE	APRIL, 2025		
JOB No.			



SECTION 1-1
SCALE 1:30

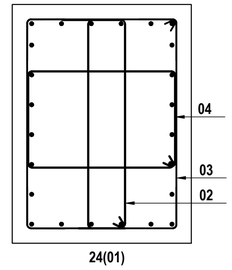


700X700 COLUMN C1 [25 NO. OFF]
SECTION A-A: BASE B1 ELEVATION DETAILS
SCALE 1:20

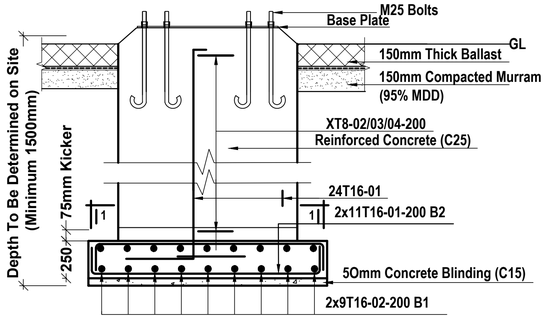


1200x1200x250 mm BASE B1
25 NO.OFF
SCALE 1:20

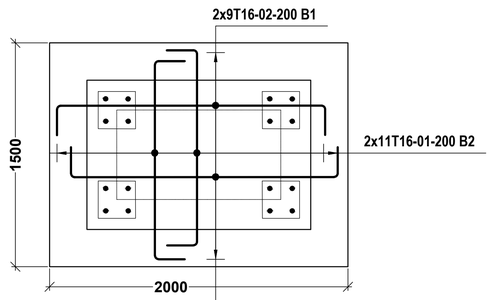
TYPICAL FOUNDATION DETAIL F1



SECTION 1-1
SCALE 1:30

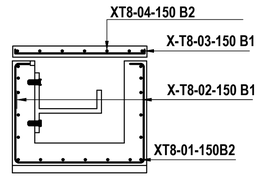


1500X1000 COLUMN C2 [2 NO. OFF]
SECTION C-C: BASE B2 ELEVATION DETAILS
SCALE 1:25

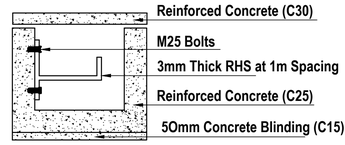


2000x1500x250 mm BASE B2
2 NO.OFF
SCALE 1:25

TYPICAL FOUNDATION DETAIL F2



600-1200 mm CABLE TRENCH
ELEVATION DETAILS
SCALE 1:25



600-1200 mm CABLE TRENCH
SCALE 1:25

TYPICAL FOUNDATION DETAIL
CABLE TRENCH

NOTES

1. All dimensions are in millimeters, unless otherwise stated.

2. This drawing must not be scaled ,only figured dimensions should be used.

3.This drawing must be read in conjunction with relevant Architectural drawings.

4.Reinforced concrete for all structural elements to be grade C20/25 to BS EN 206-1:2002, except for the ground floor slab (grade C16/20), and roof slab (C25/30).

5. Cover to main reinforcement to be as follows:
(a) Foundation = 50mm
(b) Columns = 40mm
(c) Beams = 30mm
(d) Slabs = 25mm

6."H" Denotes ribbed high yield bars to BS 4461 with a yield strength of 500N/mm2 to BS 4449-2005.

7. Reinforcement in walls and columns must be inspected by the Engineer before being enclosed in formwork.

8. All masonry walls must be reinforced with 25mm hoop iron after every two alternate courses. The hoop iron must be extended through the column sections.

9. To ensure enhanced bonding between the masonry and the R.C. columns, the masonry walling must be raised first before the columns are cast.

10. All mortar used to be of cement sand mix 1:3, with all the stone walling being laid in 200mm courses with 12mm mortar joints.

11. A minimum of 7.0N/mm2 average compressive strength of masonry in accordance with BS EN 771 and BS 5268 should be used for all wall sections.

12. Mass concrete to be grade 12/15 to BS EN 206-1:2002.

13. Double masonry walls to be built one at a time. Waterproofing plaster shall be applied to the inside of the first wall to Engineer's approval before the second is built .

REVISIONS

Date	Suffix	Descriptions	Issue

CLIENT

Kenya Power

PROJECT

PROPOSED CIVIL WORKS & STEEL STRUCTURES FOR 66/33KV EPZ SUB-STATION - ATHI RIVER

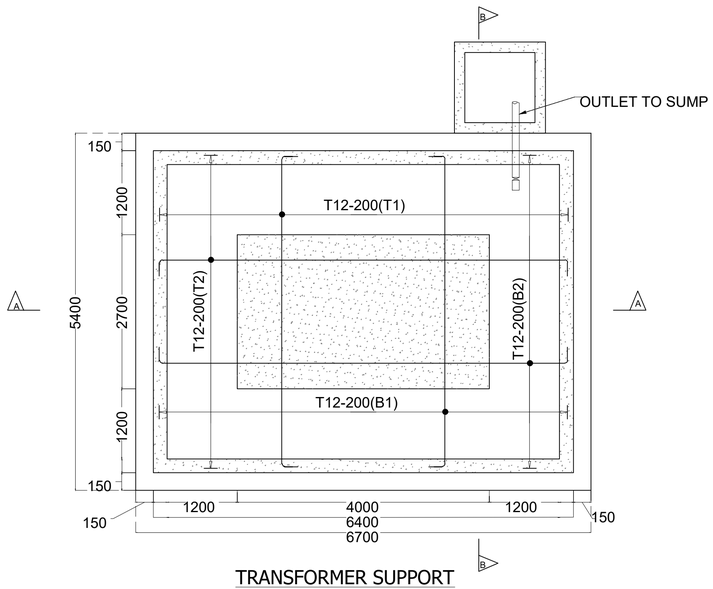
CONSTRUCTION DRAWINGS

GENERAL ARRANGEMENT

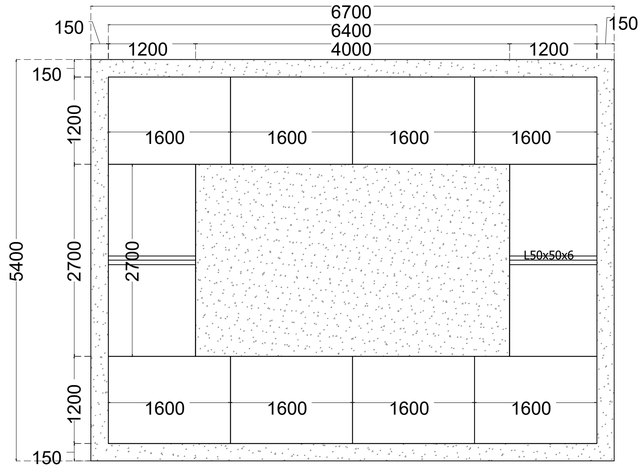
SECTION DETAILS

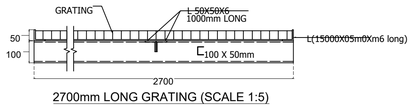
EPZ - SHEET 001/025 (b)

Drawn	D.WAITHERA	Scale(s)	AS INDICATED
Designed	D.WAITHERA	Date	APRIL, 2025
Checked	ENG. D.M.WAMBUGU	Date	APRIL, 2025
Approved	ENG. D.M.WAMBUGU	Date	APRIL, 2025
ISSUE DATE	APRIL, 2025		
JOB No.			

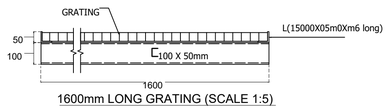


TRANSFORMER SUPPORT
PAD BASE DETAILS

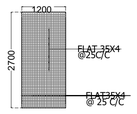




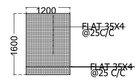
2700mm LONG GRATING (SCALE 1:5)



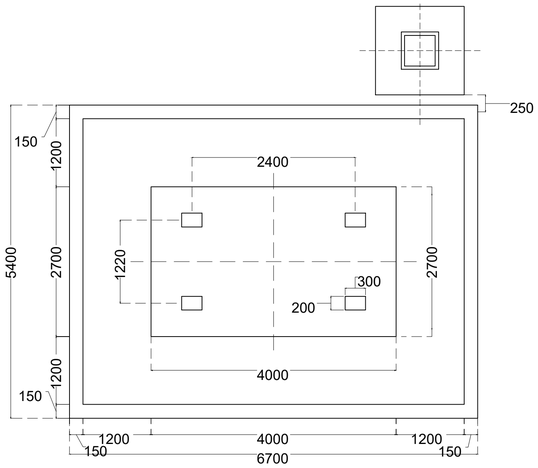
1600mm LONG GRATING (SCALE 1:5)



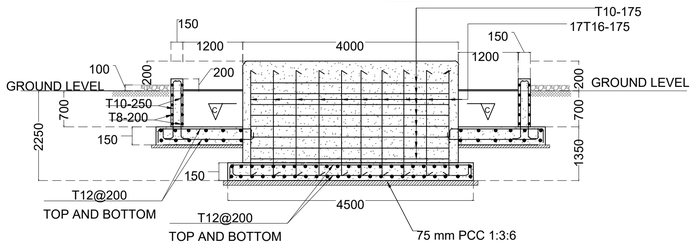
TYPICAL GRATING
DETAIL - PLAN



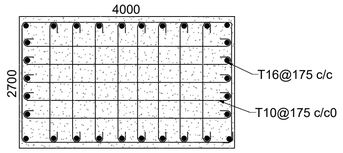
TYPICAL GRATING
DETAIL - PLAN



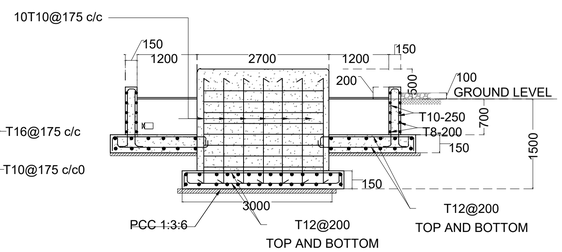
PLAN



SECTION A-A



PEDESTAL DETAIL
SECTION C-C



SECTION B-B

FOR TENDERING PURPOSES ONLY
EPZ ATHI RIVER SUB-STATION

NOTES

1. All dimensions are in millimeters, unless otherwise stated.

2. This drawing must not be scaled ,only figured dimensions should be used.

3.This drawing must be read in conjunction with relevant Architectural drawings.

4.Reinforced concrete for all structural elements to be grade C20/25 to BS EN 206-1:2002, except for the ground floor slab (grade C16/20), and roof slab (C25/30).

5. Cover to main reinforcement to be as follows:
(a) Foundation = 50mm
(b) Columns = 40mm
(c) Beams = 30mm
(d) Slabs = 25mm

6."H" Denotes ribbed high yield bars to BS 4461 with a yield strength of 500N/mm2 to BS 4449-2005.

7. Reinforcement in walls and columns must be inspected by the Engineer before being enclosed in formwork.

8. All masonry walls must be reinforced with 25mm hoop iron after every two alternate courses. The hoop iron must be extended through the column sections.

9. To ensure enhanced bonding between the masonry and the R.C. columns, the masonry walling must be raised first before the columns are cast.

10. All mortar used to be of cement sand mix 1:3, with all the stone walling being laid in 200mm courses with 12mm mortar joints.

11. A minimum of 7.0N/mm2 average compressive strength of masonry in accordance with BS EN 771 and BS 5268 should be used for all wall sections.

12. Mass concrete to be grade 12/15 to BS EN 206-1:2002.

13. Double masonry walls to be built one at a time. Waterproofing plaster shall be applied to the inside of the first wall to Engineer's approval before the second is built .

REVISIONS

Date	Suffix	Descriptions	Issue

CLIENT

Kenya Power

PROJECT

PROPOSED CIVIL WORKS & STEEL STRUCTURES FOR 66/33KV EPZ SUB-STATION - ATHI RIVER

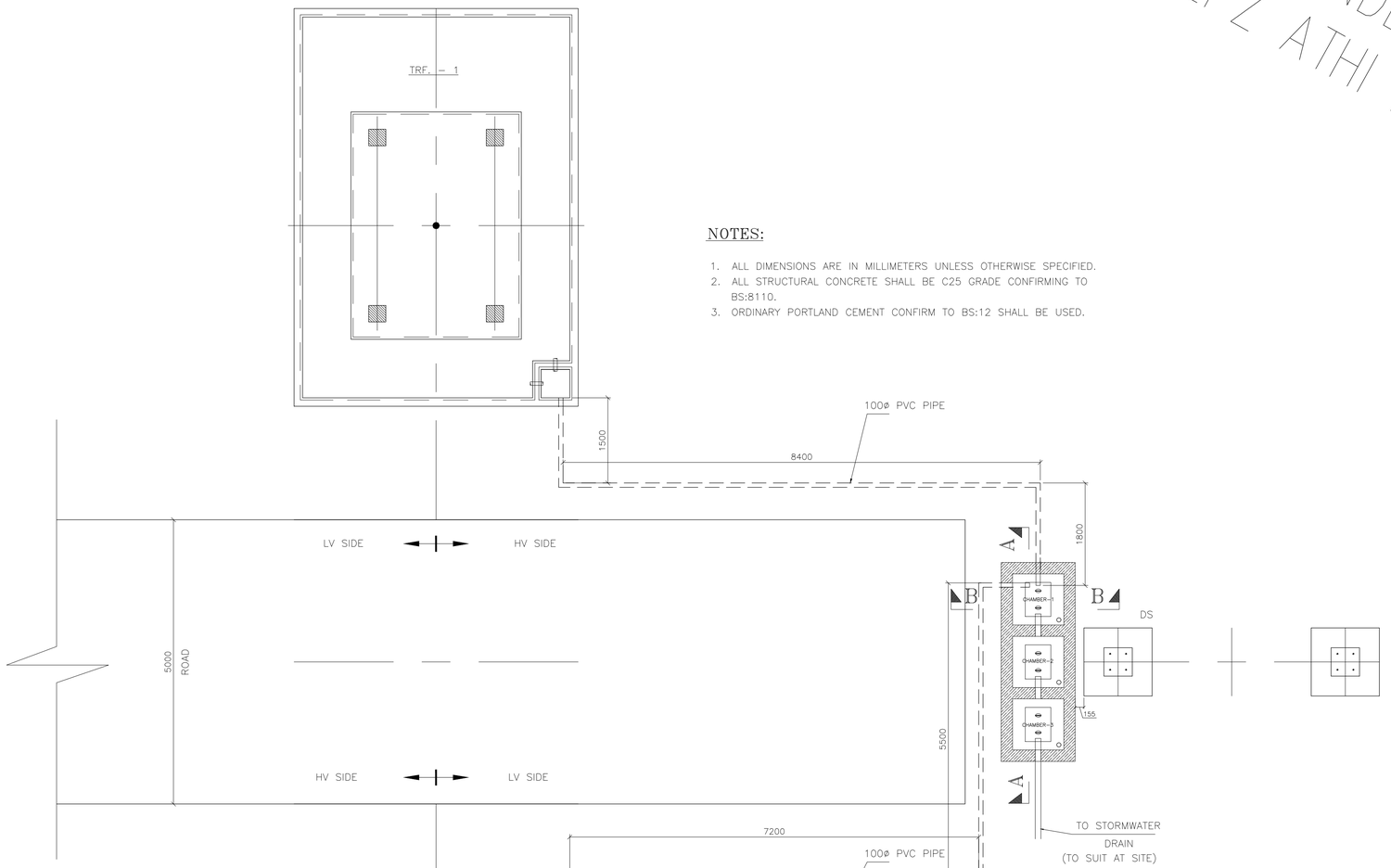
CONSTRUCTION DRAWINGS

TRANSFORMER

PLINTH

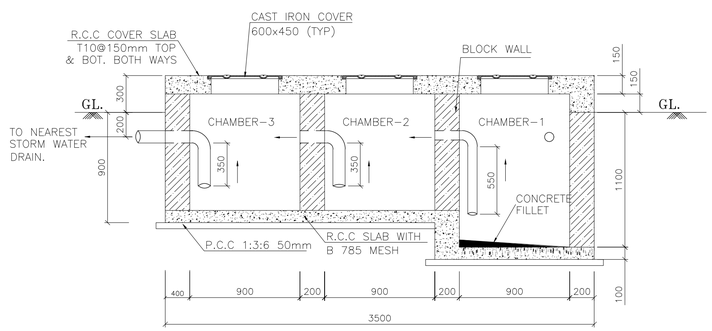
EPZ - SHEET 002/025 (a)

Drawn	D.WAITHERA	Scale(s)	AS INDICATED
Designed	D.WAITHERA	Date	APRIL, 2025
Checked	ENG. D.M.WAMBUGU	Date	APRIL, 2025
Approved	ENG. D.M.WAMBUGU	Date	APRIL, 2025
ISSUE DATE	APRIL, 2025		
JOB No.			



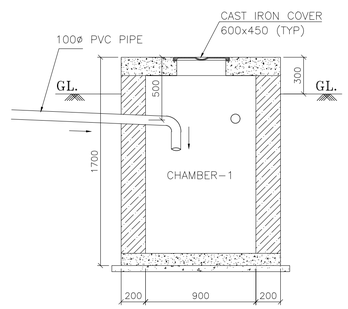
NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SPECIFIED.
2. ALL STRUCTURAL CONCRETE SHALL BE C25 GRADE CONFIRMING TO BS:8110.
3. ORDINARY PORTLAND CEMENT CONFIRM TO BS:12 SHALL BE USED.



SECTION:A–A

(SCALE–1:4)



SECTION:B–B

(SCALE–1:4)

NOTES

1. All dimensions are in millimeters, unless otherwise stated.
2. This drawing must not be scaled ,only figured dimensions should be used.
3. This drawing must be read in conjunction with relevant Architectural drawings.
4. Reinforced concrete for all structural elements to be grade C20/25 to BS EN 206-1:2002, except for the ground floor slab (grade C16/20), and roof slab (C25/30).
5. Cover to main reinforcement to be as follows:
   (a) Foundation = 50mm
   (b) Columns = 40mm
   (c) Beams = 30mm
   (d) Slabs = 25mm
6. "H" Denotes ribbed high yield bars to BS 4461 with a yield strength of 500N/mm2 to BS 4449-2005.
7. Reinforcement in walls and columns must be inspected by the Engineer before being enclosed in formwork.
8. All masonry walls must be reinforced with 25mm hoop iron after every two alternate courses. The hoop iron must be extended through the column sections.
9. To ensure enhanced bonding between the masonry and the R.C. columns, the masonry walling must be raised first before the columns are cast.
10. All mortar used to be of cement sand mix 1:3, with all the stone walling being laid in 200mm courses with 12mm mortar joints.
11. A minimum of 7.0N/mm2 average compressive strength of masonry in accordance with BS EN 771 and BS 5268 should be used for all wall sections.
12. Mass concrete to be grade 12/15 to BS EN 206-1:2002.
13. Double masonry walls to be built one at a time. Waterproofing plaster shall be applied to the inside of the first wall to Engineer's approval before the second is built .

REVISIONS

Date	Suffix	Descriptions	Issue

CLIENT

Kenya Power

PROJECT

PROPOSED CIVIL WORKS & STEEL STRUCTURES FOR 66/33KV EPZ SUB-STATION - ATHI RIVER

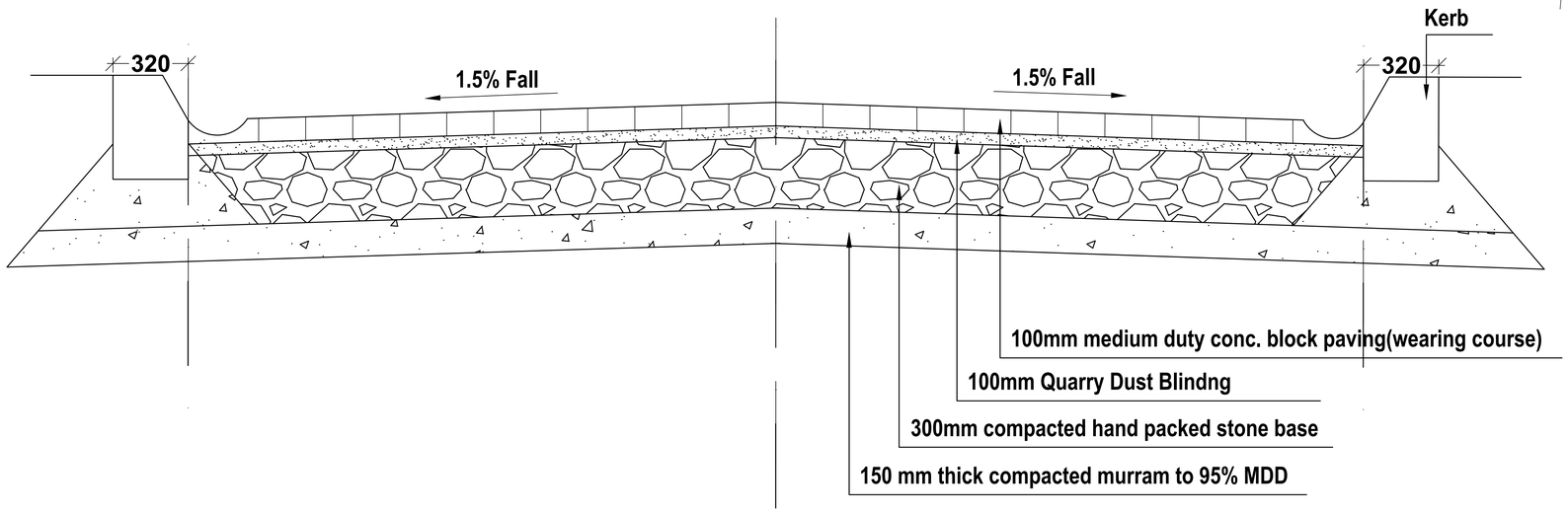
CONSTRUCTION DRAWINGS

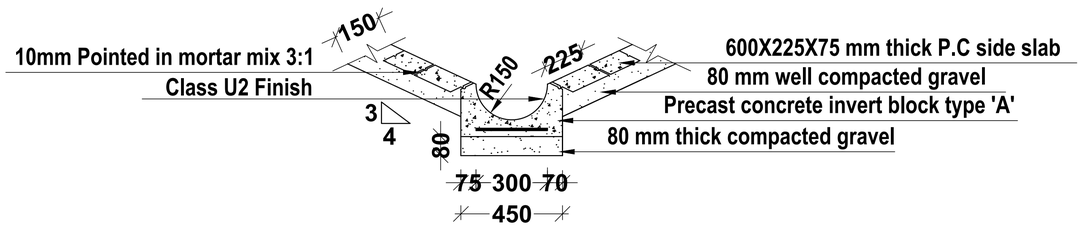
TRANSFORMER

OIL INTERCEPTOR

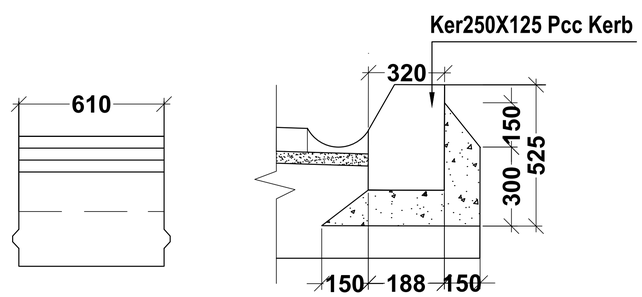
EPZ - SHEET 002/025 (b)

Drawn	D.WAITHERA	Scale(s)	AS INDICATED
Designed	D.WAITHERA	Date	APRIL, 2025
Checked	ENG. D.M.WAMBUGU	Date	APRIL, 2025
Approved	ENG. D.M.WAMBUGU	Date	APRIL, 2025
ISSUE DATE	APRIL, 2025		
JOB No.			





END ELEVATION



SIDE ELEVATION

NOTES

1. All dimensions are in millimeters, unless otherwise stated.

2. This drawing must not be scaled ,only figured dimensions should be used.

3.This drawing must be read in conjunction with relevant Architectural drawings.

4.Reinforced concrete for all structural elements to be grade C20/25 to BS EN 206-1:2002, except for the ground floor slab (grade C16/20), and roof slab (C25/30).

5. Cover to main reinforcement to be as follows:
(a) Foundation = 50mm
(b) Columns = 40mm
(c) Beams = 30mm
(d) Slabs = 25mm

6."H" Denotes ribbed high yield bars to BS 4461 with a yield strength of 500N/mm2 to BS 4449-2005.

7. Reinforcement in walls and columns must be inspected by the Engineer before being enclosed in formwork.

8. All masonry walls must be reinforced with 25mm hoop iron after every two alternate courses. The hoop iron must be extended through the column sections.

9. To ensure enhanced bonding between the masonry and the R.C. columns, the masonry walling must be raised first before the columns are cast.

10. All mortar used to be of cement sand mix 1:3, with all the stone walling being laid in 200mm courses with 12mm mortar joints.

11. A minimum of 7.0N/mm2 average compressive strength of masonry in accordance with BS EN 771 and BS 5268 should be used for all wall sections.

12. Mass concrete to be grade 12/15 to BS EN 206-1:2002.

13. Double masonry walls to be built one at a time. Waterproofing plaster shall be applied to the inside of the first wall to Engineer's approval before the second is built .

REVISIONS

Date	Suffix	Descriptions	Issue

CLIENT

Kenya Power

PROJECT

PROPOSED CIVIL WORKS & STEEL STRUCTURES FOR 66/33KV EPZ SUB-STATION - ATHI RIVER

CONSTRUCTION DRAWINGS

DRAINAGE & ACCESS ROAD

EPZ - SHEET 003/025

Drawn	D.WAITHERA	Scale(s)	AS INDICATED
Designed	D.WAITHERA	Date	APRIL, 2025
Checked	ENG. D.M.WAMBUGU	Date	APRIL, 2025
Approved	ENG. D.M.WAMBUGU	Date	APRIL, 2025
ISSUE DATE	APRIL, 2025		
JOB No.			