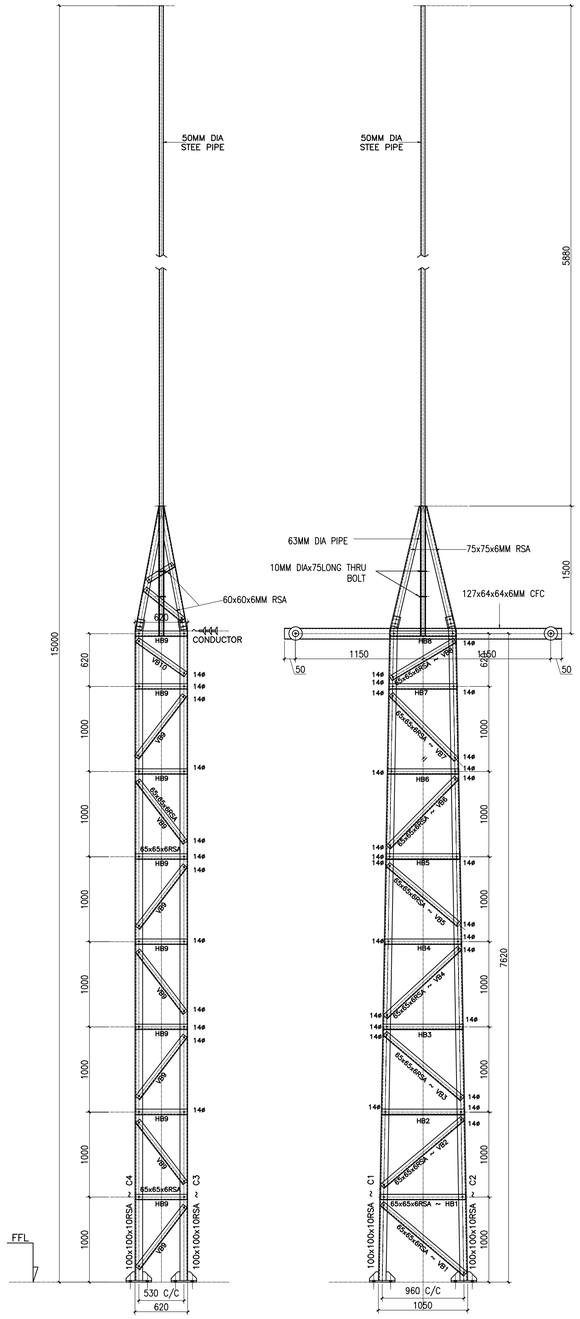
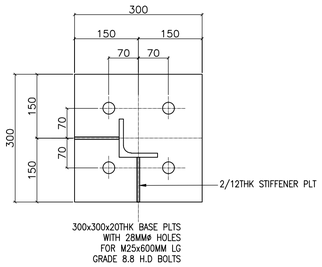
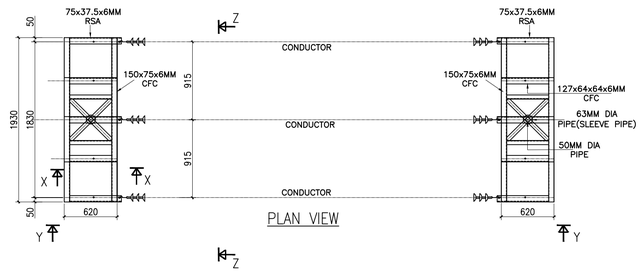


VIEW X – X

VIEW Z – Z



TYPICAL BASE PLATE DETAIL



PLAN VIEW

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.

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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 BUMALA 33/11KV SUB-STATION

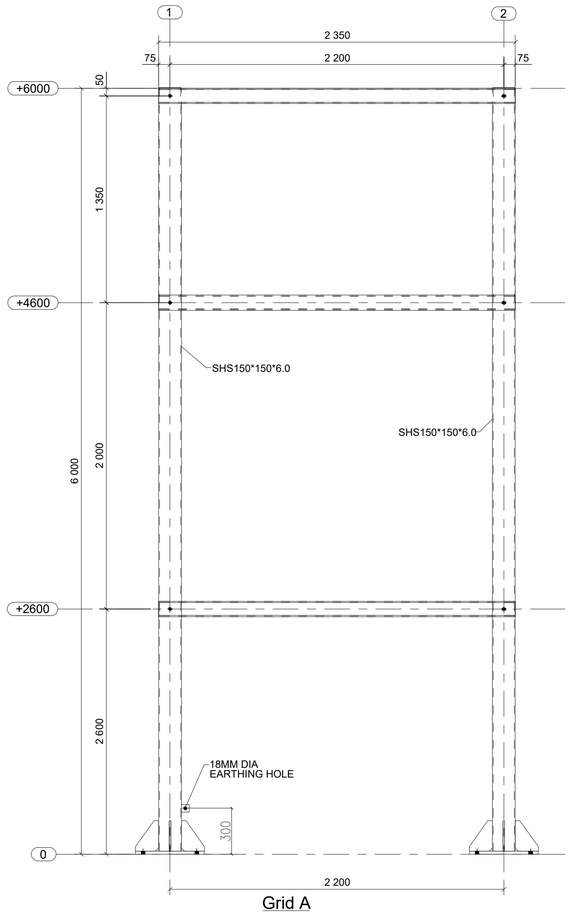
CONSTRUCTION DRAWINGS

T-BUS BAR SWITCH

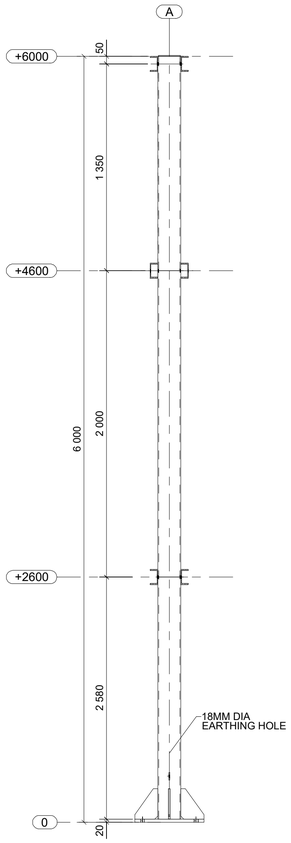
BUS SECTION SWITCH

BML-STRUCTURE 001

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



Grid A



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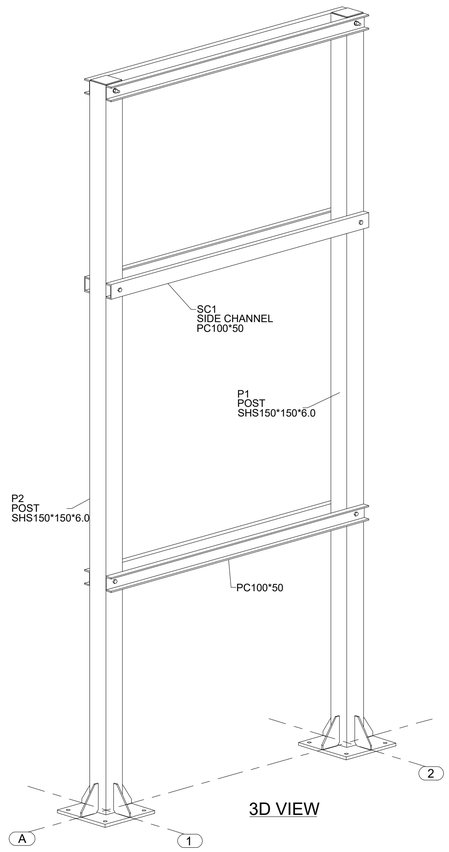
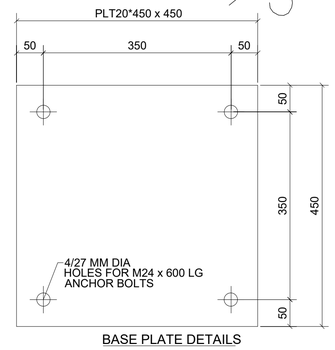
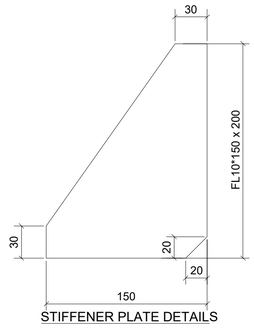


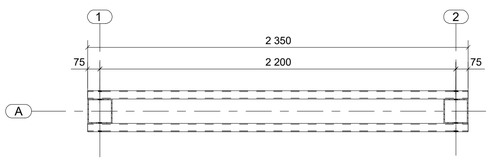
3D VIEW



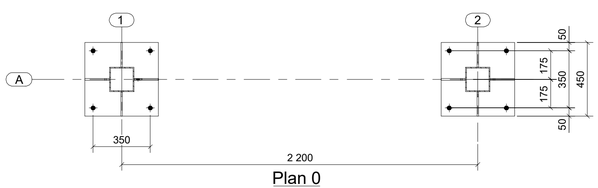
BASE PLATE DETAILS



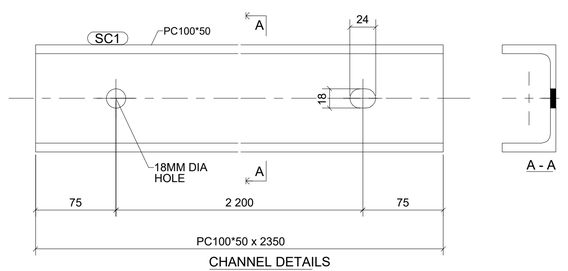
STIFFENER PLATE DETAILS



Plan +1600, +3600 & +5000



Plan 0



CHANNEL DETAILS

33KV POST INSULATOR

NOTES

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

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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

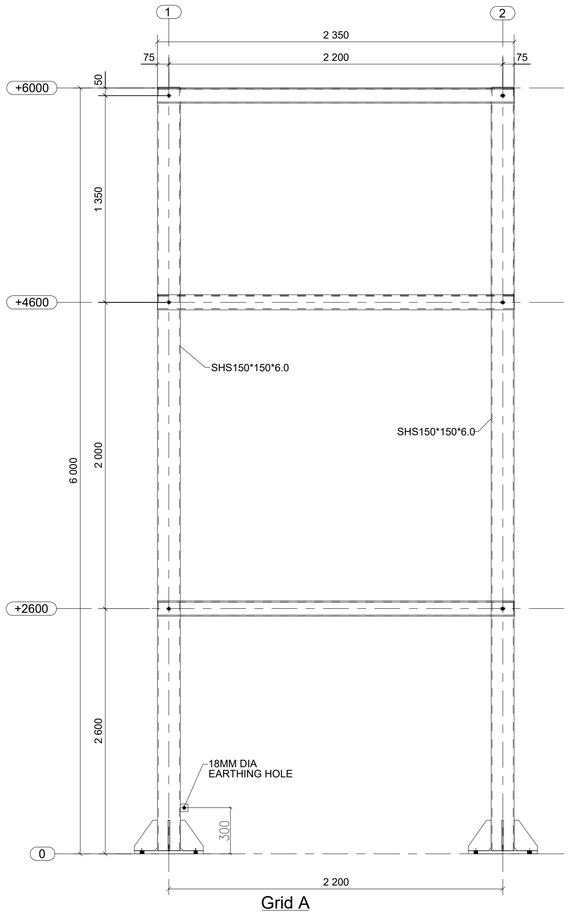
PROPOSED CIVIL WORKS & STEEL STRUCTURES FOR BUMALA 33/11KV SUB-STATION

CONSTRUCTION DRAWINGS

33KV POST INSULATOR

BML-STRUCTURE 002/025

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



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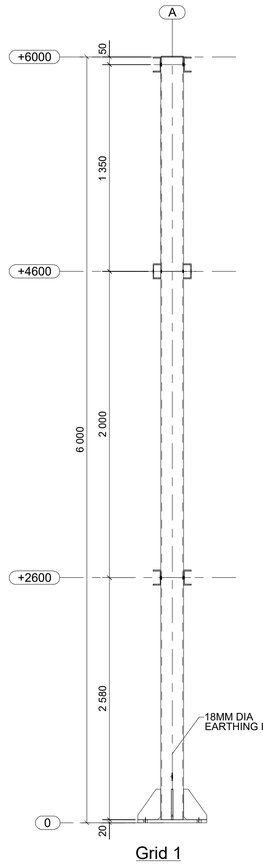

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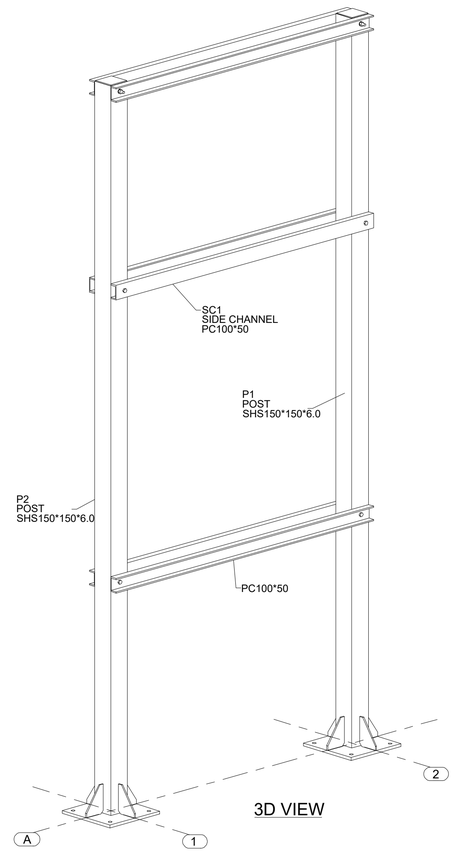
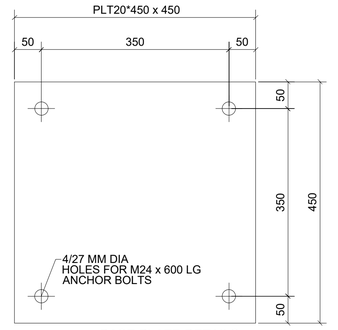
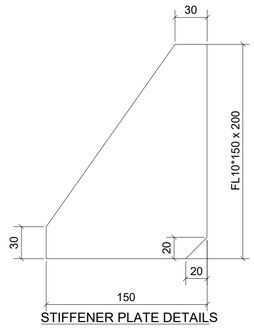


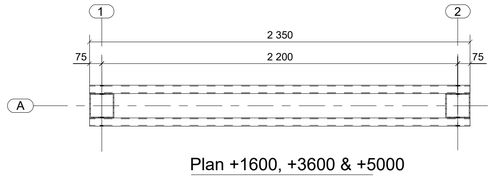
3D VIEW



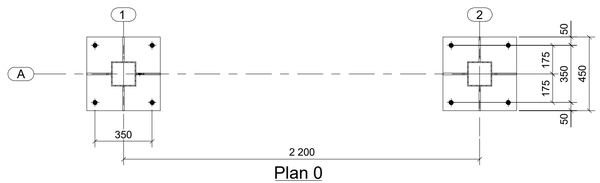
BASE PLATE DETAILS



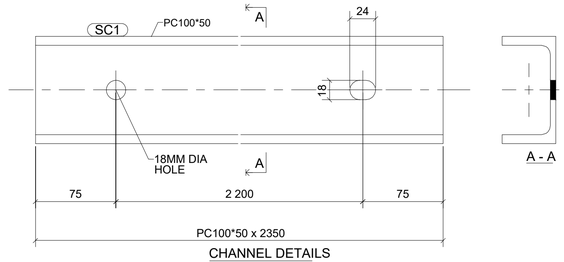
STIFFENER PLATE DETAILS



Plan +1600, +3600 & +5000



Plan 0



CHANNEL DETAILS

STEEL STRUCTURE WITH 33KV A/B SWITCH

NOTES

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(d) Slabs = 25mm

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REVISIONS

Date	Suffix	Descriptions	Issue

CLIENT

Kenya Power

PROJECT

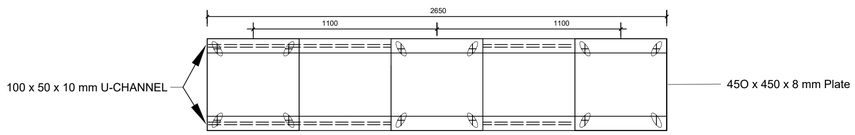
PROPOSED CIVIL WORKS & STEEL STRUCTURES FOR BUMALA 33/11KV SUB-STATION

CONSTRUCTION DRAWINGS

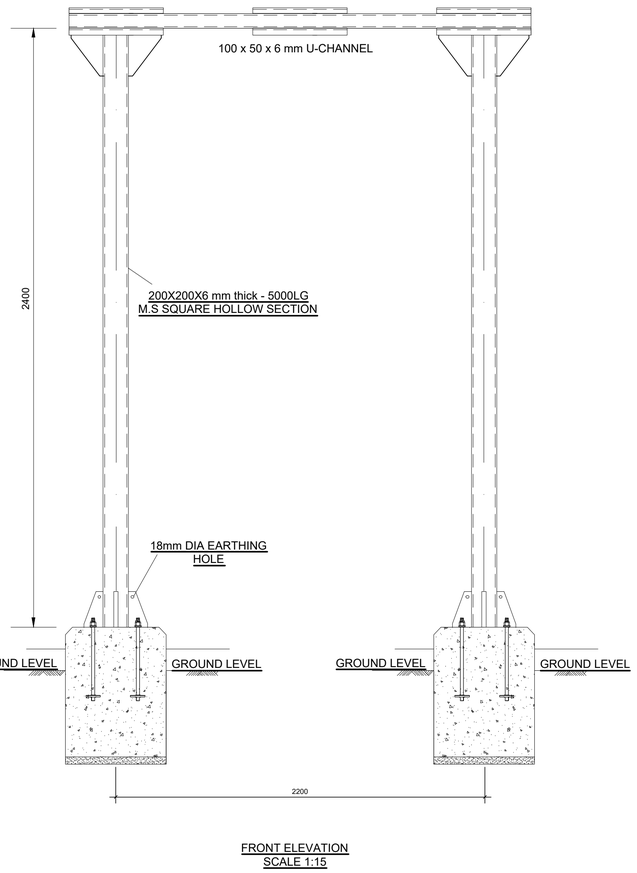
33KV A/B SWITCH

BML-STRUCTURE 003/025

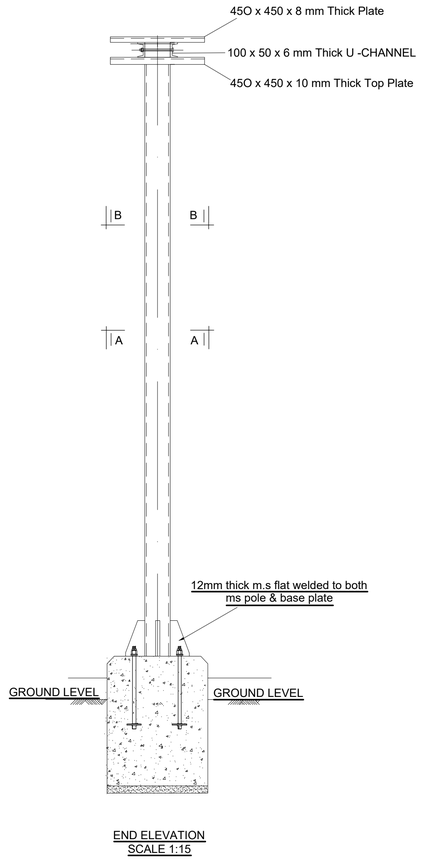
Drawn	D.WAITHERA	Scale(s)	AS INDICATED
Designed	D.WAITHERA	Date	MARCH, 2025
Checked	M.OKUMU	Date	MARCH, 2025
Approved	ENG. D.M.WAMBUGU	Date	MARCH, 2025
ISSUE DATE	MARCH, 2025		
JOB No.			



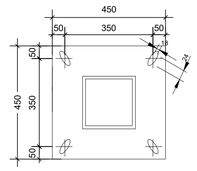
PLAN VIEW
SCALE 1:10



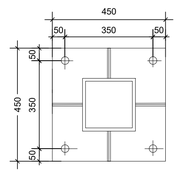
FRONT ELEVATION
SCALE 1:15



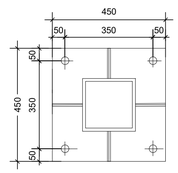
END ELEVATION
SCALE 1:15



DETAILS OF 8 mm THICK PLATE
SCALE 1:10



DETAILS OF 10 mm THICK TOP PLATE
SECTION B-B
SCALE 1:10



DETAILS OF 20mm THICK BASE PLATE
SECTION A-A
SCALE 1:10

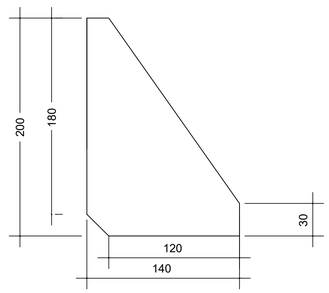


PLATE STIFFENER (20mm Thick)
8NO.
SCALE 1:3

33 KV CIRTCUIT TRANSFORMER

NOTES

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(d) Slabs = 25mm

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REVISIONS

Date	Suffix	Descriptions	Issue

CLIENT

Kenya Power

PROJECT

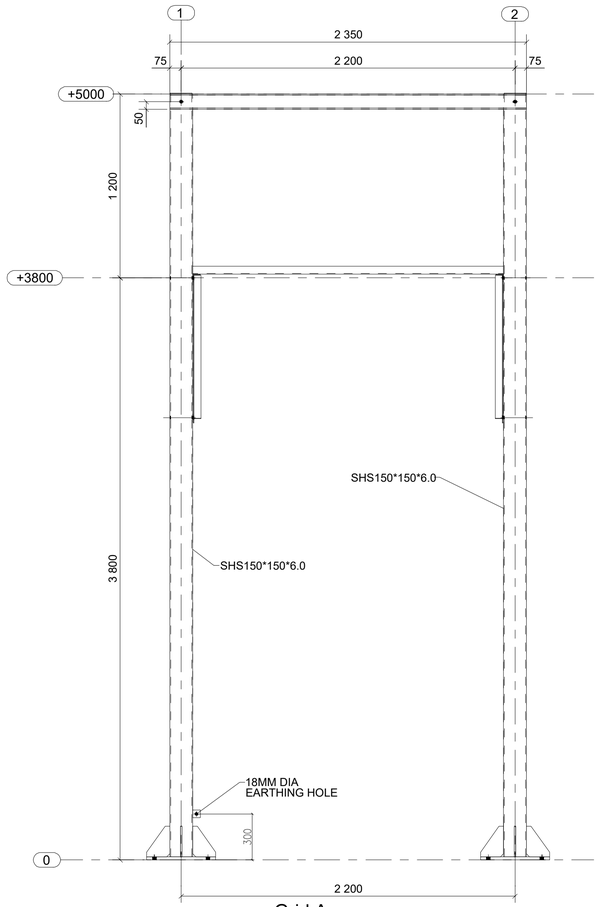
PROPOSED CIVIL WORKS & STEEL STRUCTURES FOR BUMALA 33/11KV SUB-STATION

CONSTRUCTION DRAWINGS

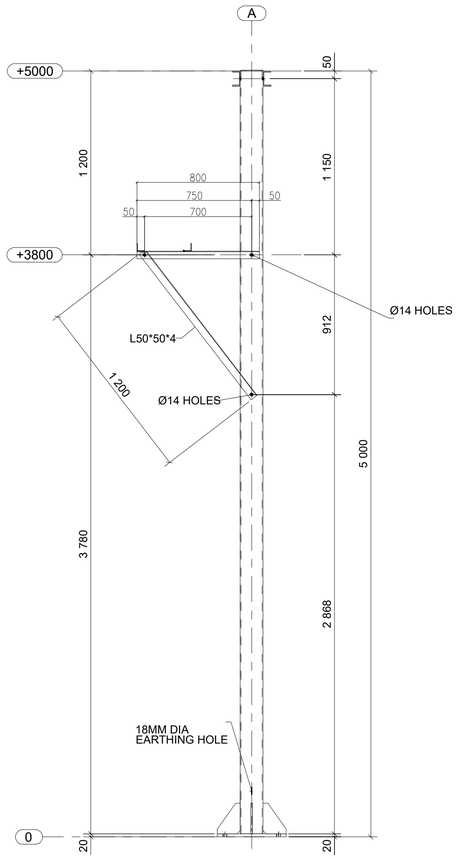
33KV CIRCUIT T

BML-STRUCTURE 004/025

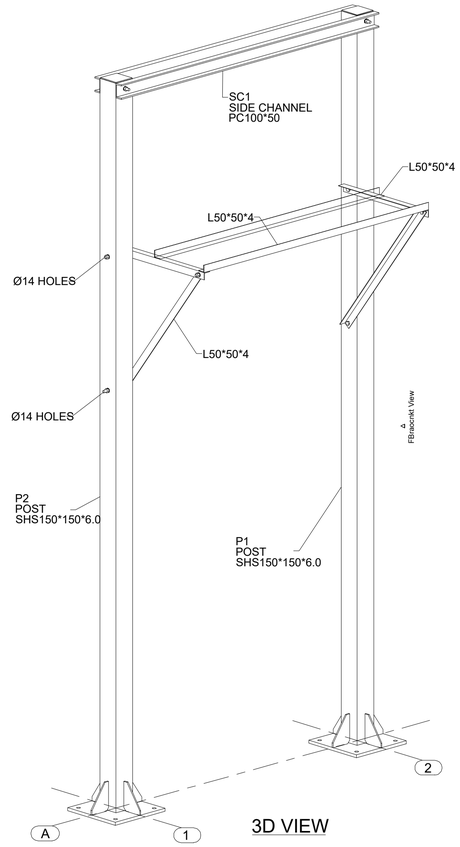
Drawn	D.WAITHERA	Scale(s)	AS INDICATED
Designed	D.WAITHERA	Date	MARCH, 2025
Checked	M.OKUMU	Date	MARCH, 2025
Approved	ENG. D.M.WAMBUGU	Date	MARCH, 2025
ISSUE DATE	MARCH, 2025		
JOB No.			



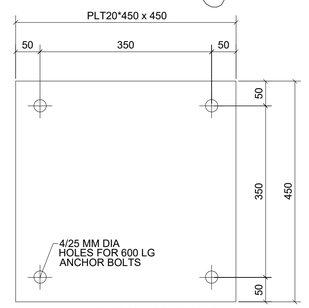
Grid A



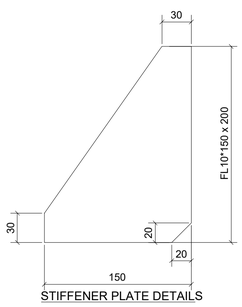
Grid 1



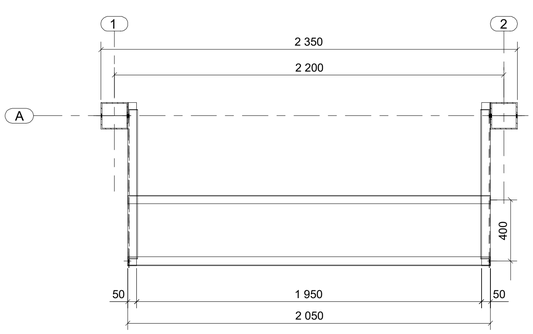
3D VIEW



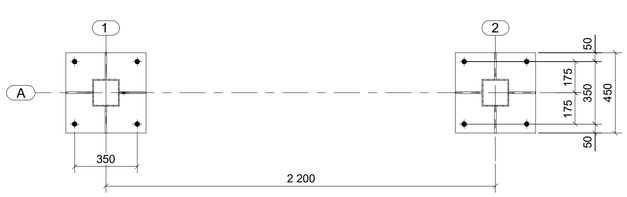
BASE PLATE DETAILS



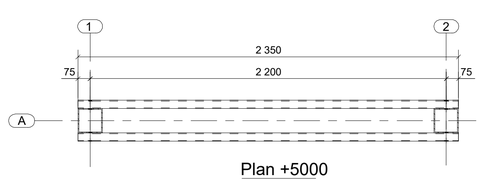
STIFFENER PLATE DETAILS



Plan +3800



Plan 0



Plan +5000

11KV POST INSULATOR / SURGE DIVERTER/ VOLTAGE TRANSFORMER

NOTES

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REVISIONS

Date	Suffix	Descriptions	Issue

CLIENT

Kenya Power

PROJECT

PROPOSED CIVIL WORKS & STEEL STRUCTURES FOR BUMALA 33/11KV SUB-STATION

CONSTRUCTION DRAWINGS

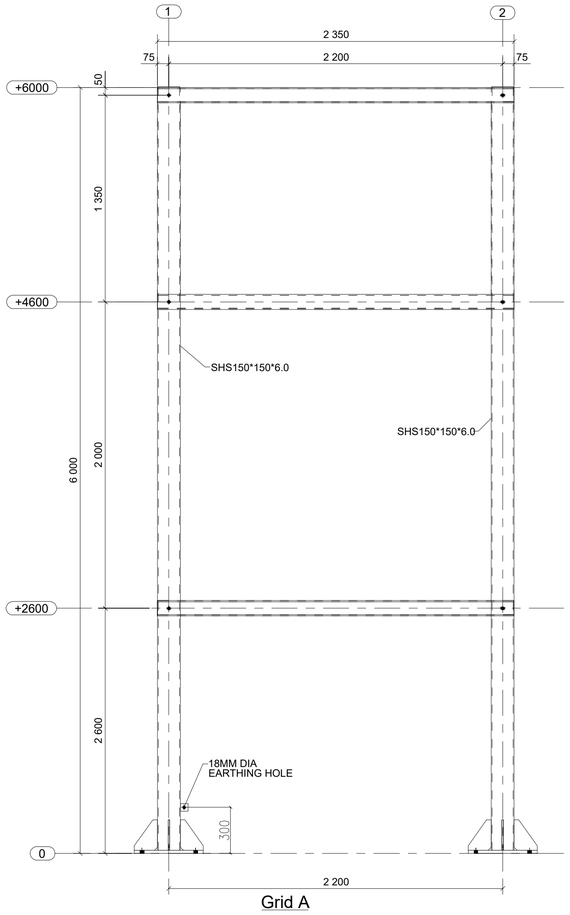
11KV POST INSULATOR/

SURGE DIVERTER/

VOLTAGE TRANSFORMER

BML-STRUCTURE 005/025

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



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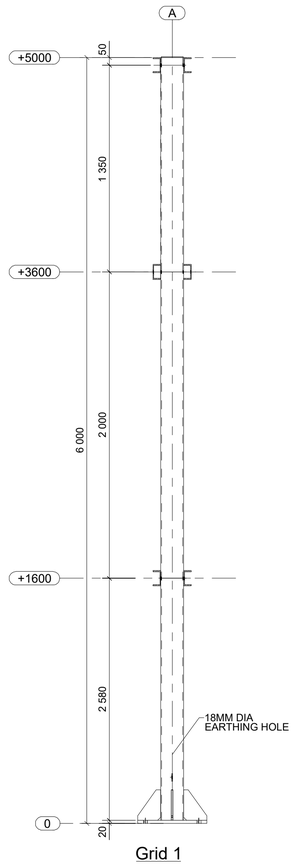
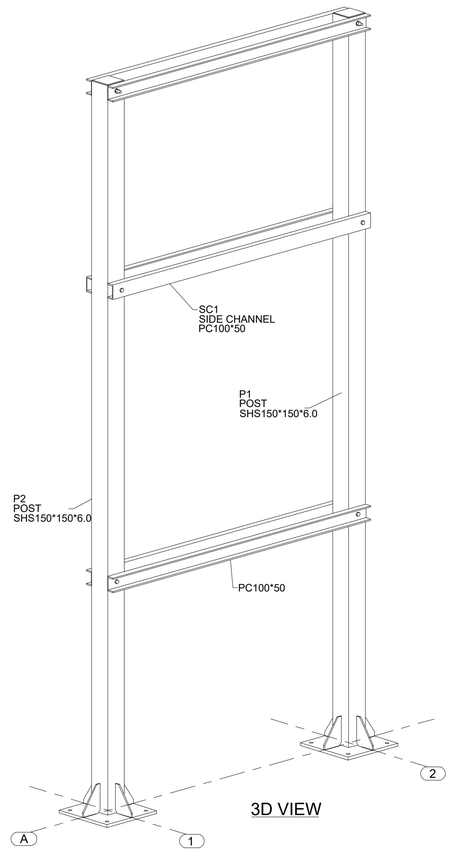
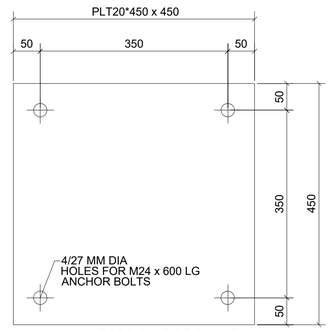


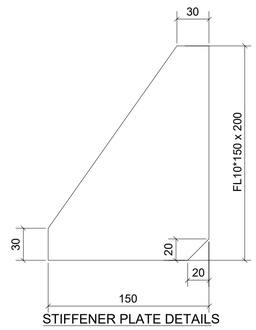
Grid 1



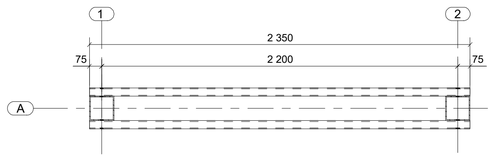
3D VIEW



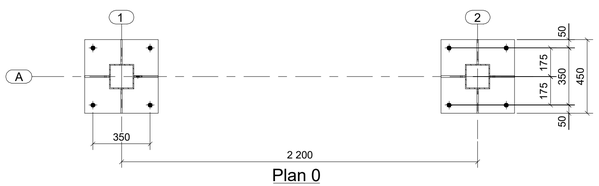
BASE PLATE DETAILS



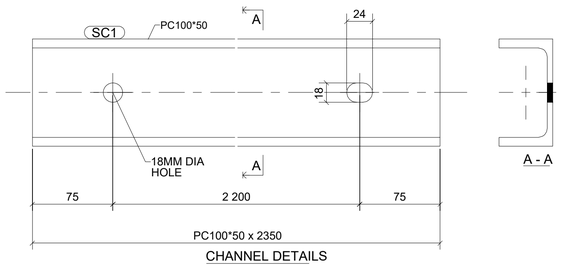
STIFFENER PLATE DETAILS



Plan +1600, +3600 & +5000



Plan 0



CHANNEL DETAILS

A - A

STEEL STRUCTURE WITH 11KV A/B SW, TAPLIN ISOLATOR & AUTO RECLOSURE

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

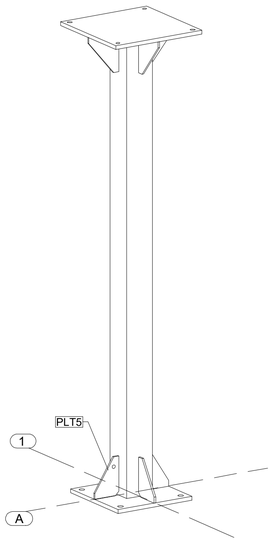
PROPOSED CIVIL WORKS & STEEL STRUCTURES FOR BUMALA 33/11KV SUB-STATION

CONSTRUCTION DRAWINGS

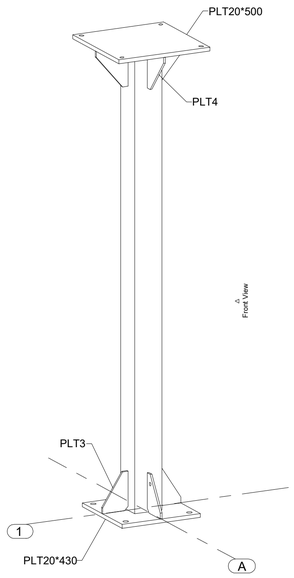
A/B SWITCH

BML-STRUCTURE 006/025

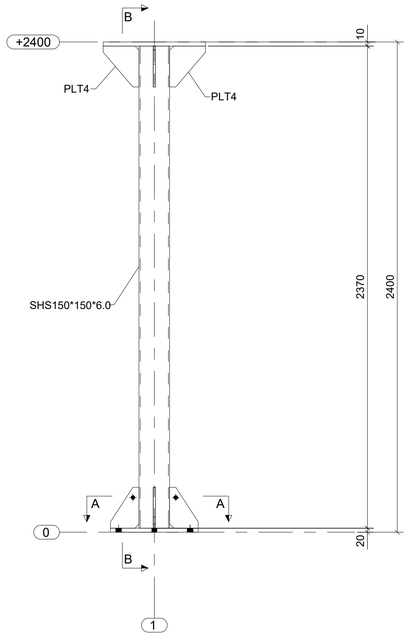
Drawn	D.WAITHERA	Scale(s)	AS INDICATED
Designed	D.WAITHERA	Date	MARCH, 2025
Checked	M.OKUMU	Date	MARCH, 2025
Approved	ENG. D.M.WAMBUGU	Date	MARCH, 2025
ISSUE DATE	MARCH, 2025		
JOB No.			



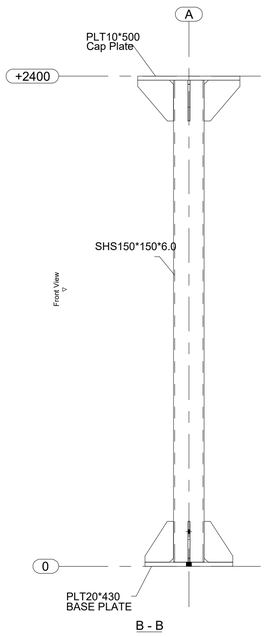
3D VIEW 1



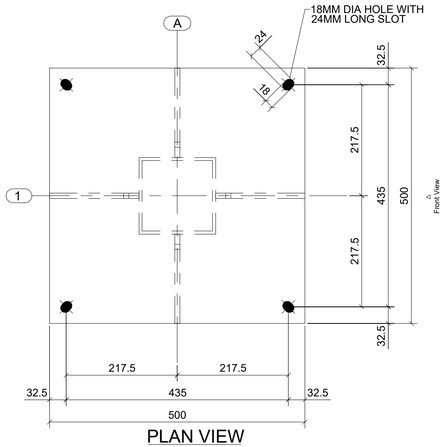
3D VIEW 2



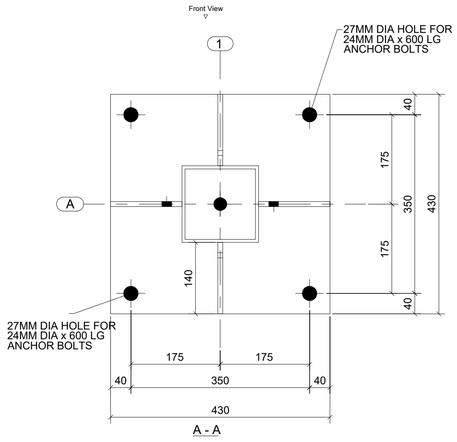
Grid A



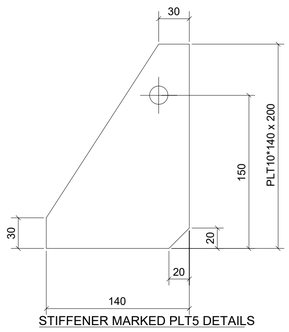
B - B



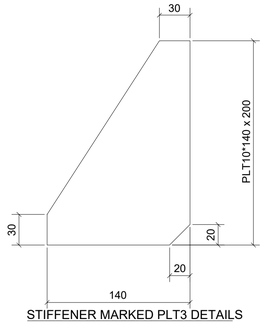
PLAN VIEW



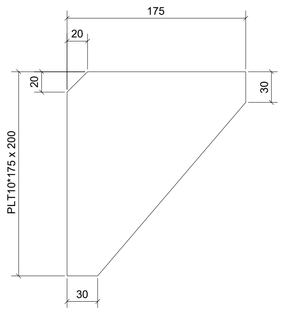
A - A



STIFFENER MARKED PLT5 DETAILS



STIFFENER MARKED PLT3 DETAILS



TOP STIFFENER DETAILS

NCT STEEL STRUCTURE

NOTES

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REVISIONS

Date	Suffix	Descriptions	Issue

CLIENT

Kenya Power

PROJECT

PROPOSED CIVIL WORKS & STEEL STRUCTURES FOR BUMALA 33/11KV SUB-STATION

CONSTRUCTION DRAWINGS

NCT STRUCTURE

BML-STRUCTURE 007/025

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