



The Republic of Uganda
MINISTRY OF WATER AND ENVIRONMENT
Directorate of Water Development
Rural Water and Sanitation Department

In Financial Cooperation with  **THE WORLD BANK**
IBRD • IDA

Bid For

ALA - ORA WATER SUPPLY & SANITATION SYSTEM

LOAN No.: _____
PROJECT ID No.: _____

LOT 1: CONSTRUCTION OF NYAGAK WATER SUPPLY AND SANITATION SYSTEM

MWE/WRKS/22-23/.....

BIDDING DOCUMENTS

VOLUME 4 – BOOK OF DRAWINGS

ISSUED ON: JANUARY 2023

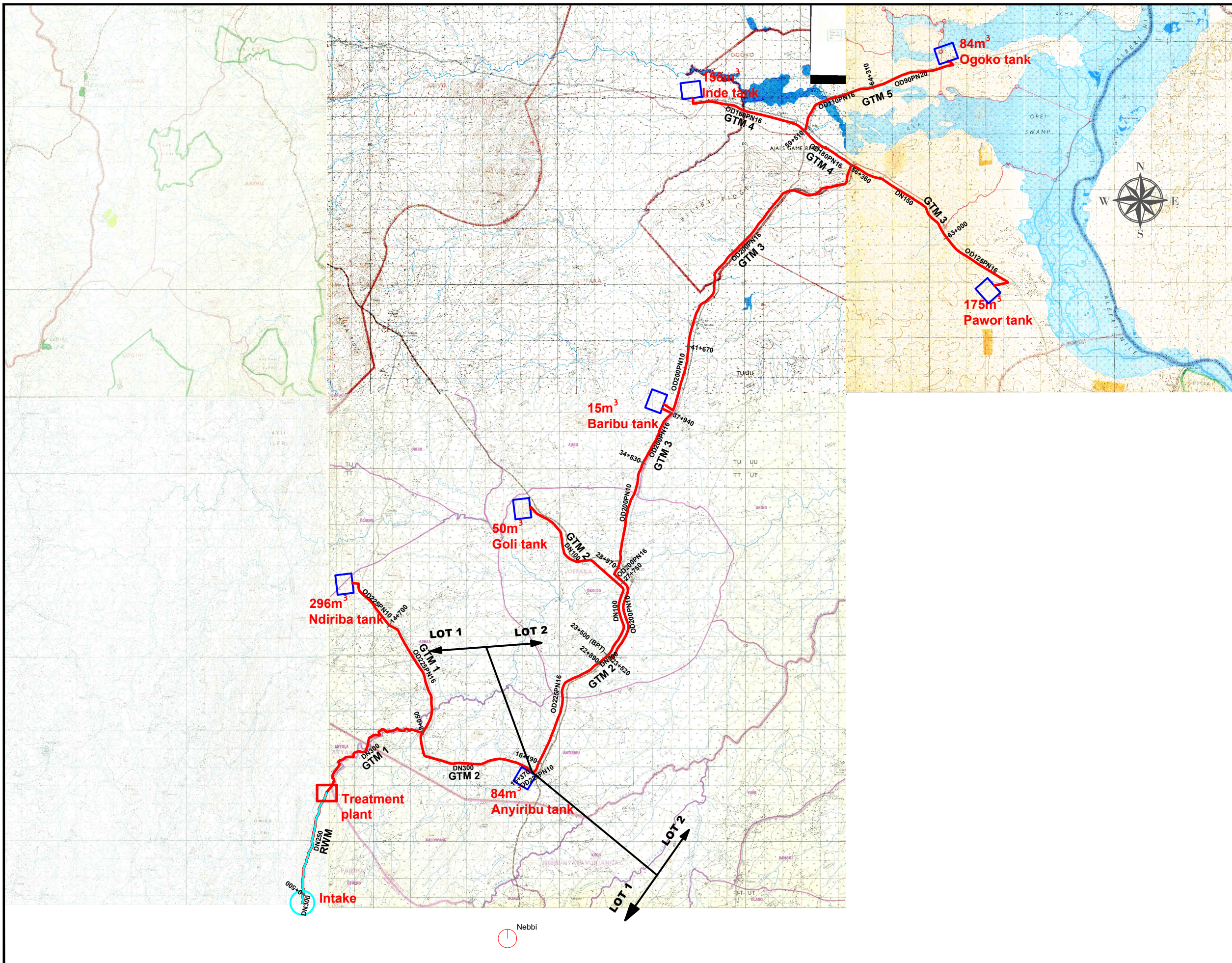
CONSTRUCTION OF NYAGAK WATER SUPPLY AND SANITATION SCHEME - LOT 1
BOOK OF DRAWINGS CONTENT

ITEM	DESCRIPTION	DWG. NO.	SHEETS	
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NDIRIBA SUPPLY AREA				
Gravity Transmission Main 1	Offaka Tee Ch 8+050 to Ndiriba Reservoir		20	
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ANYIRIBU SUPPLY AREA				
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NYAGAK WTP COMMUNITY SUPPLY AREA				
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Treatment Plant	Inlet Structure	AR/WSASS/NY/STR/003	1	
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	Flocculator	AR/WSASS/NY/STR/005	4	
	Sedimentation Tank	AR/WSASS/NY/STR/007	5	
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	Clear water Tank	AR/WSASS/NY/STR/010	4	
	Pump House	AR/WSASS/NY/STR/011	3	
	50m ³ Backwash Tank	AR/WSASS/NY/STR/012	2	
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296m ³ Reservoir		AR/WSASS/NY/STR/019	2	

STANDARD DRAWINGS			SHEETS
ITEM	DESCRIPTION	DWG. NO.	
0	General Notes	ALA-ORA-SD-000	1
1	Sign Board	ALA-ORA-SD-001	1
2	Gate Valve & Surface Box	ALA-ORA-SD-002	1
3	Fire Hydrant Chamber & Pipework	ALA-ORA-SD-003	1
4	Air Valve Chamber & Pipework	ALA-ORA-SD-004	1
5	Wash Out Details, Chamber & Outfall Structure	ALA-ORA-SD-005	1
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12	Fence Details	ALA-ORA-SD-012	2
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15	Stand Post	ALA-ORA-SD-015	1
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19	Manhole Details & Soak pit details	ALA-ORA-SD-018	1
20	Lightning Conductor	ALA-ORA-SD-019	1
21	Pipe Bridge ≤ 10m	ALA-ORA-SD-020	3
22	Pipe Bridge ≤ 15m	ALA-ORA-SD-021	3
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5	Elevated Water Tank	ALA-ORA-SAN-005	1
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7	Soak Pit Details	ALA-ORA-SAN-007	1



LEGEND


- Raw water main
- Gravity transmission Main
- Pumped transmission main
- Distribution Main
- Intake
- Water Treatment Plant
- Reservoirs
- District boundary
- Subcounty boundary

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NYAGAK WATER SUPPLY AND SANITATION SYSTEM

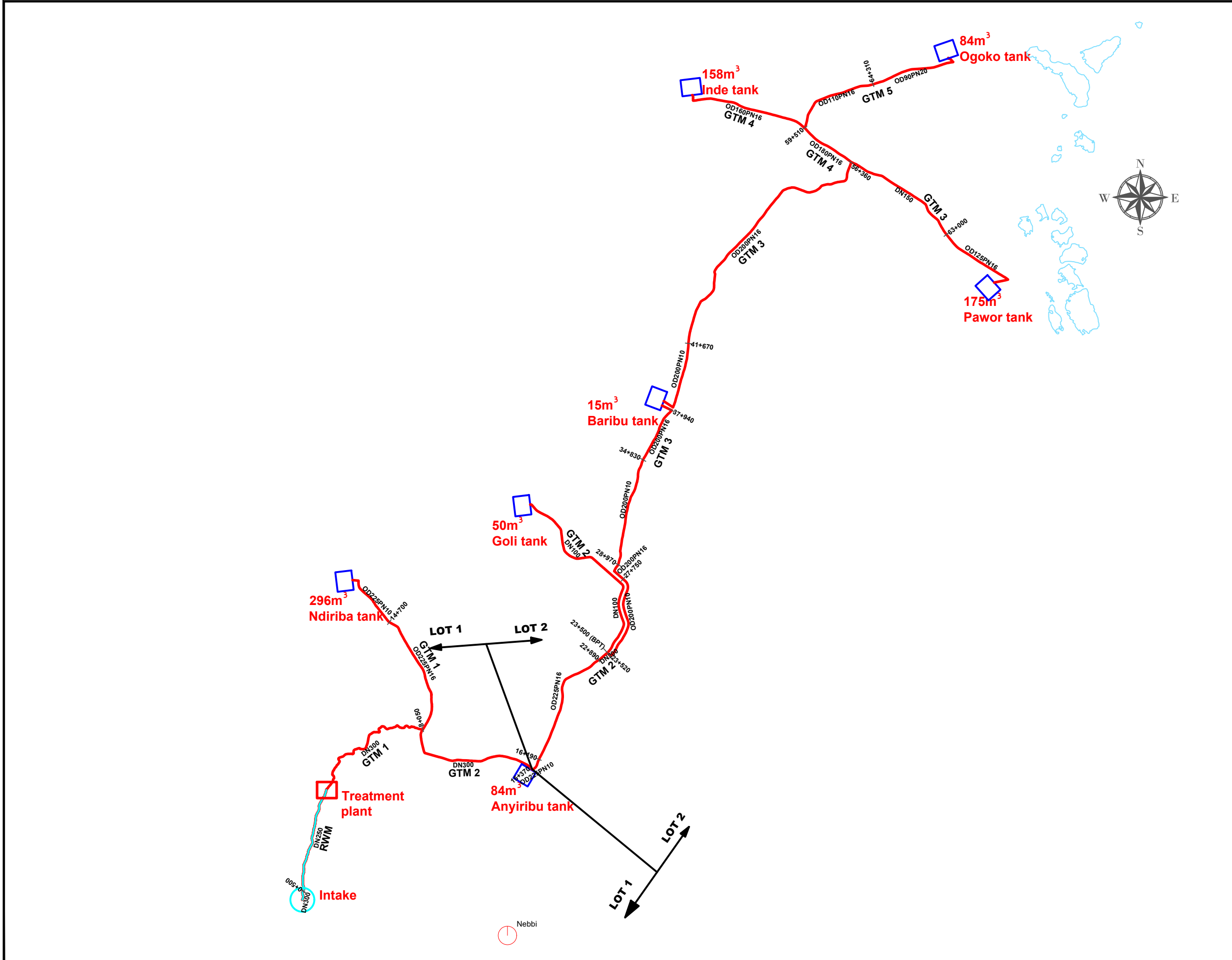
REVISIONS :

No	Date	Description

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GENERAL SCHEME LAYOUT


Surveyed by:	R.K
Drawn by:	J.B
Designed by:	W.G.M
Checked by:	J.K.K
Date:	JANUARY 2023
DRG. No.:	NYA-GL-001
Scale:	N.T.S
Sheet No.:	1 of 1



LEGEND


- Raw water main
- Gravity transmission Main
- Pumped transmission main
- Distribution Main
- Intake
- Water Treatment Plant
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- District boundary
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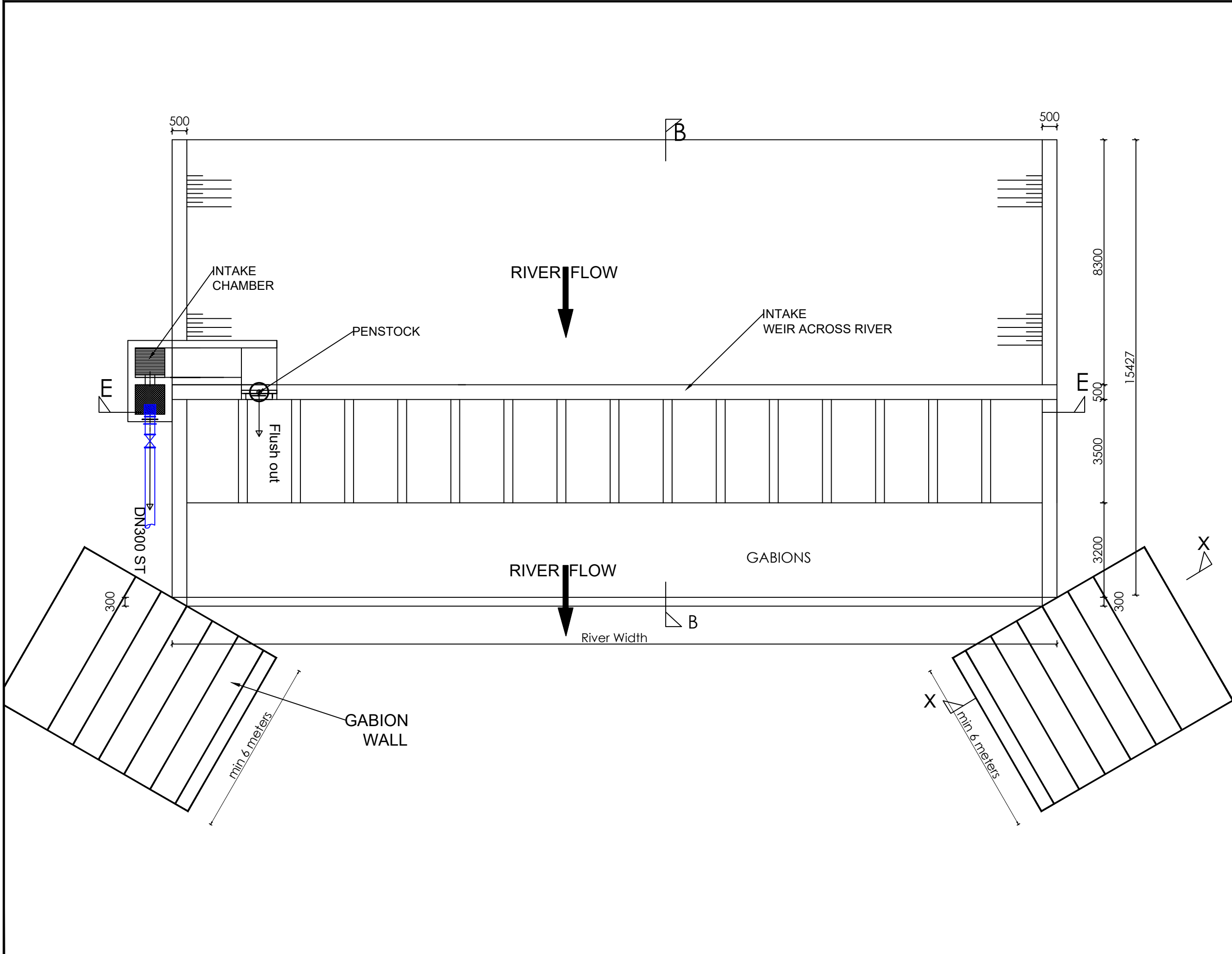
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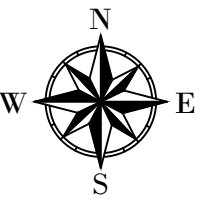
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DRG. No.:	NYA-GL-001
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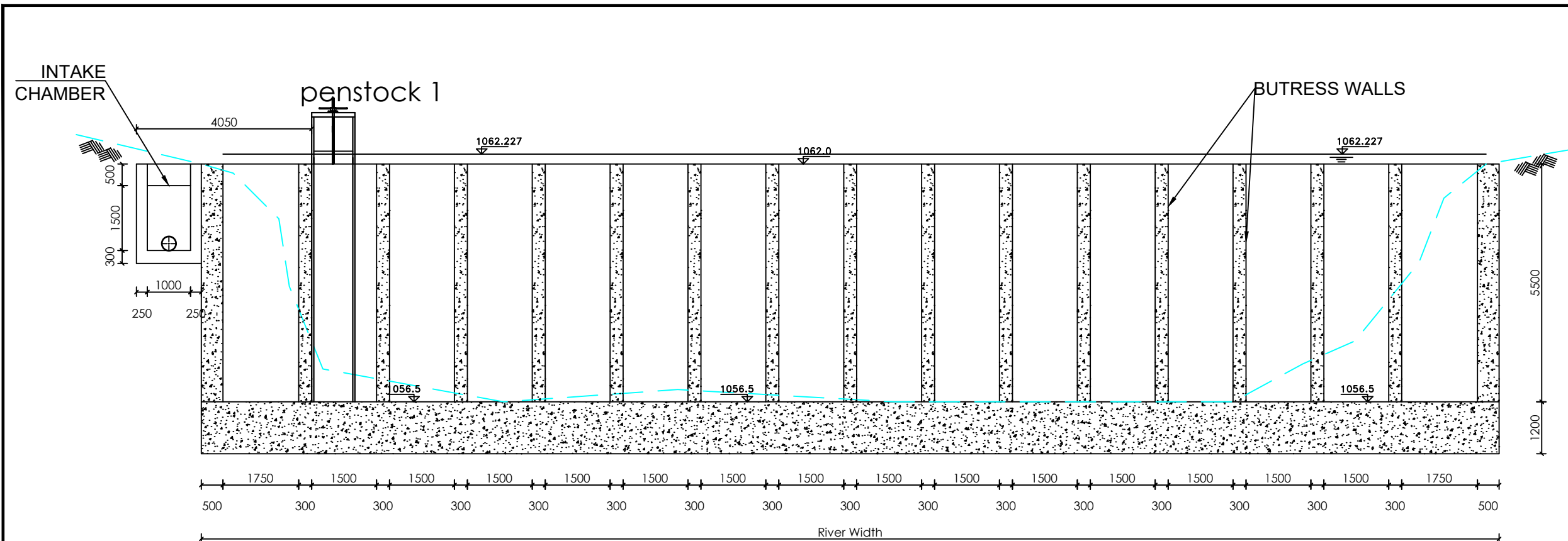
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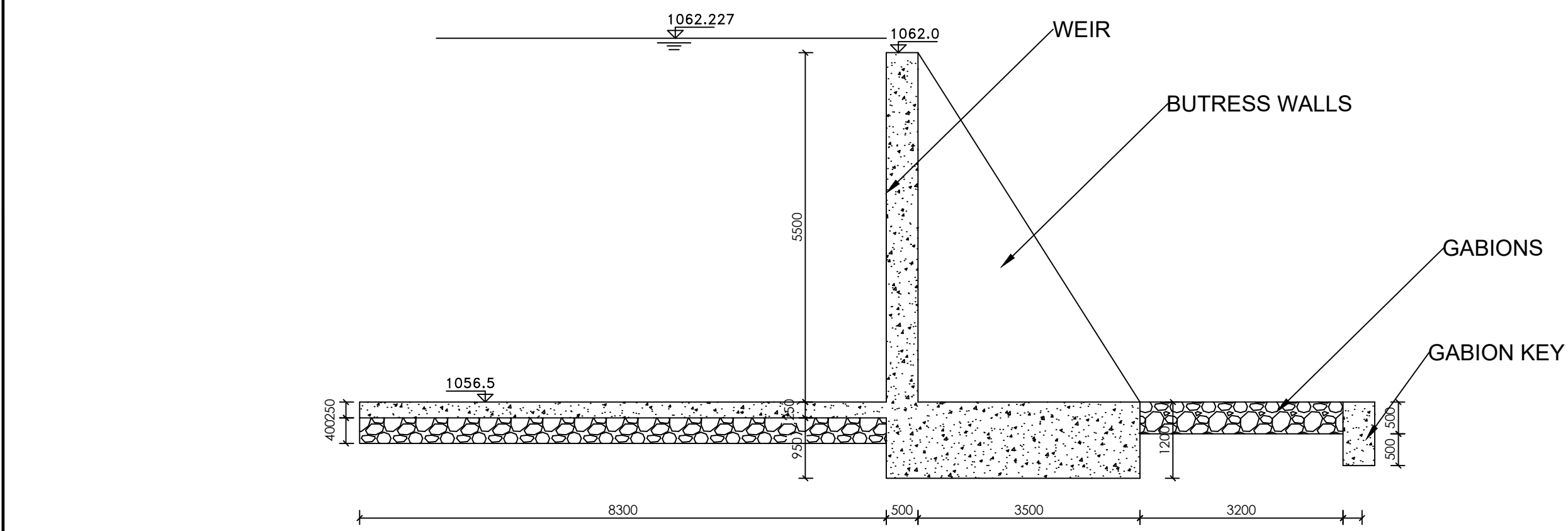
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Drawn by:	A.K
Designed by:	W.G.M
Checked by:	J.K.K
Date:	January 2023
DRG. No.:	NYA-INT-001
Scale:	1:125
Sheet No.:	1 of 3

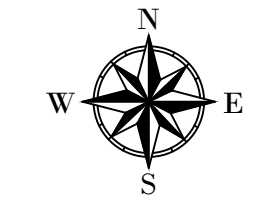


SECTION E-E




SECTION B-B
Scale- 1:75

LEGEND



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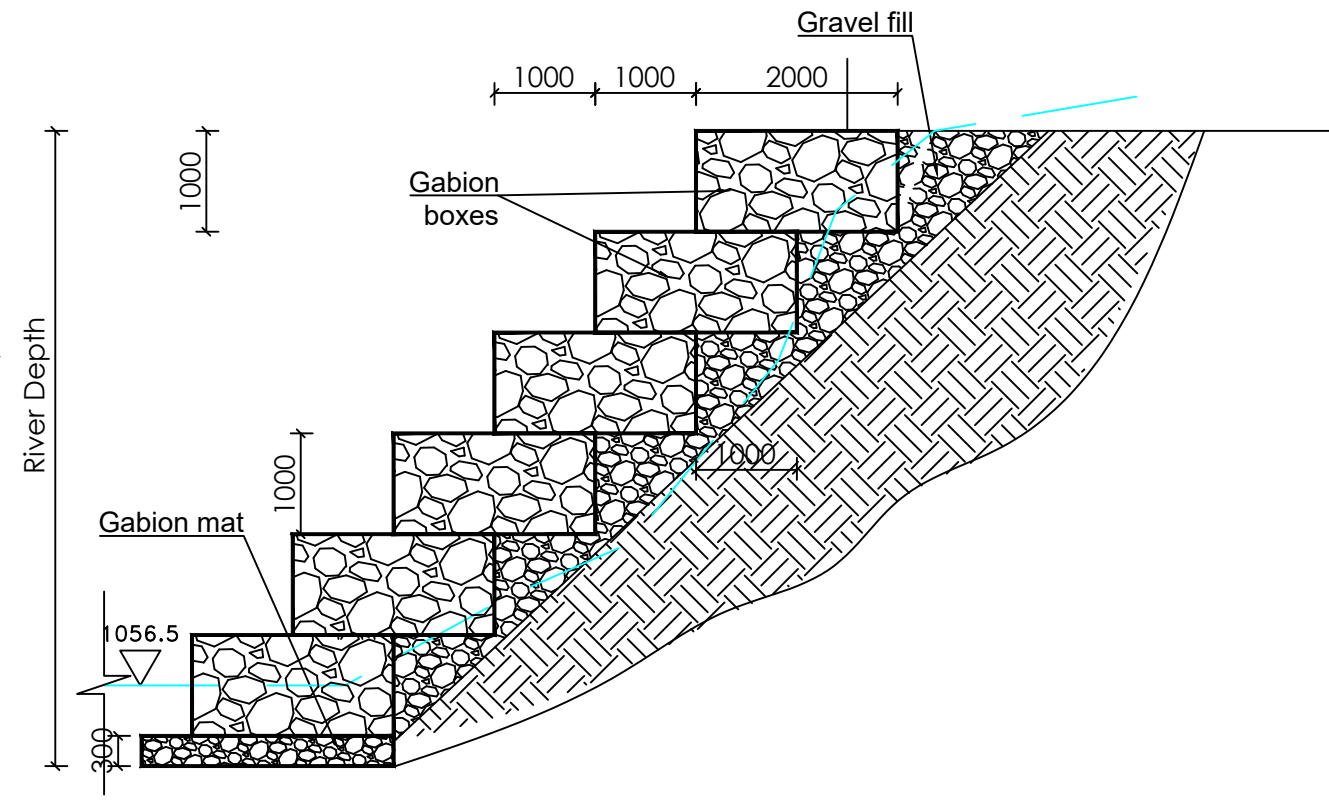
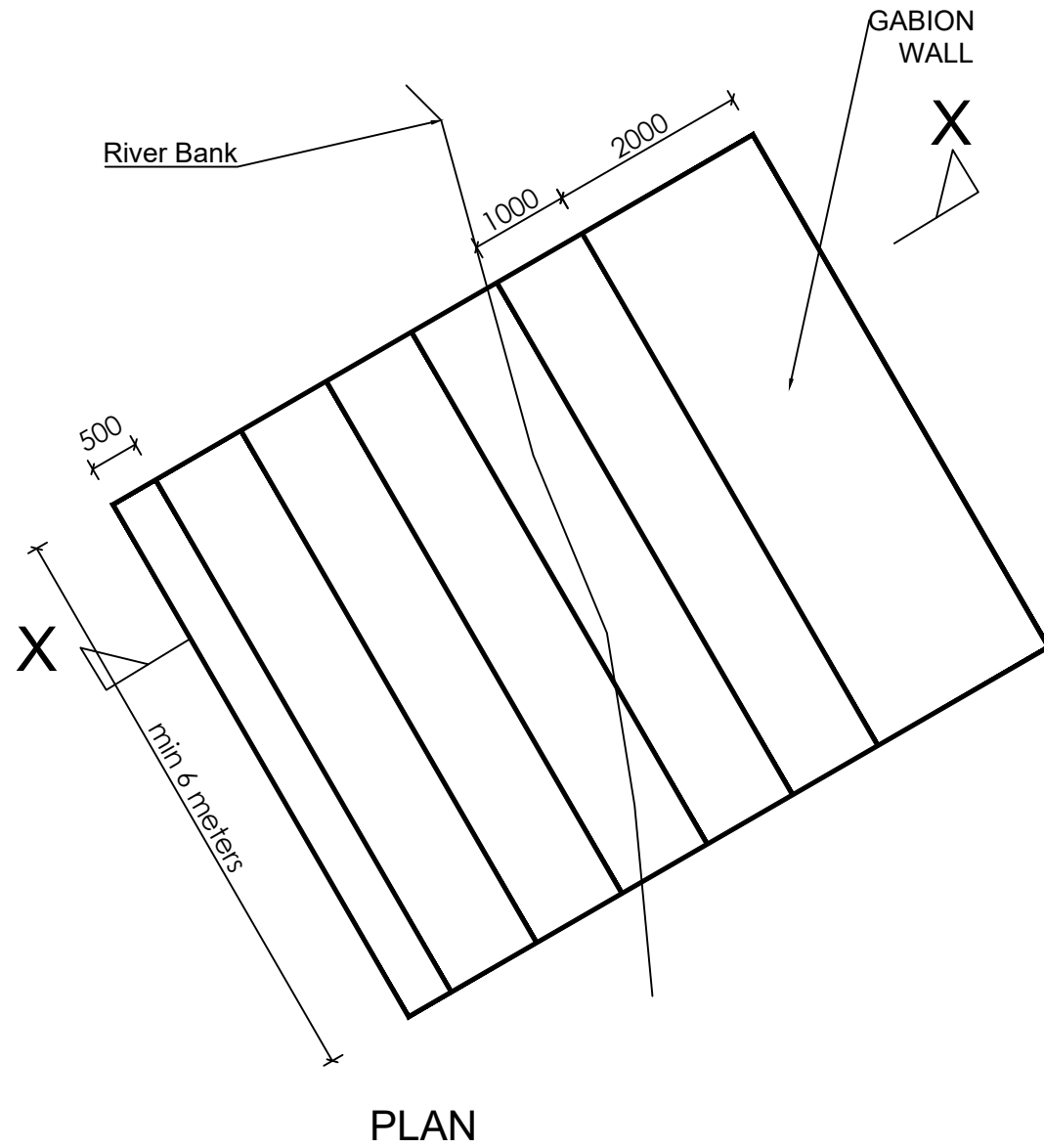
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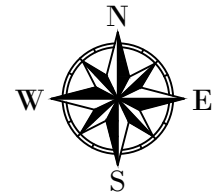
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Sheet No.:	2 of 3

GABION DETAILS



SECTION X-X

LEGEND



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 SANITATION PROJECT**

**NYAGAK WATER SUPPLY AND
 SANITATION SYSTEM**

REVISIONS :

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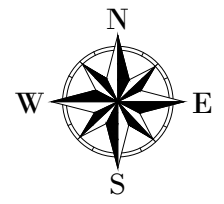
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Designed by:	W.G.M
Checked by:	J.K.K
Date:	January 2023
DRG. No.:	NYA-INT-001
Scale:	1:75
Sheet No.:	3 of 3

LEGEND

SCHEDULE OF PIPEWORK AND FITTINGS

- 1. 1 No Penstock valve for DN 300 opening
- 2. 2 No DN300 Pipe with Puddle Flange
- 3. 1 No. DN300 Gate Valve
- 4. 1 No. DN 300 Strainer




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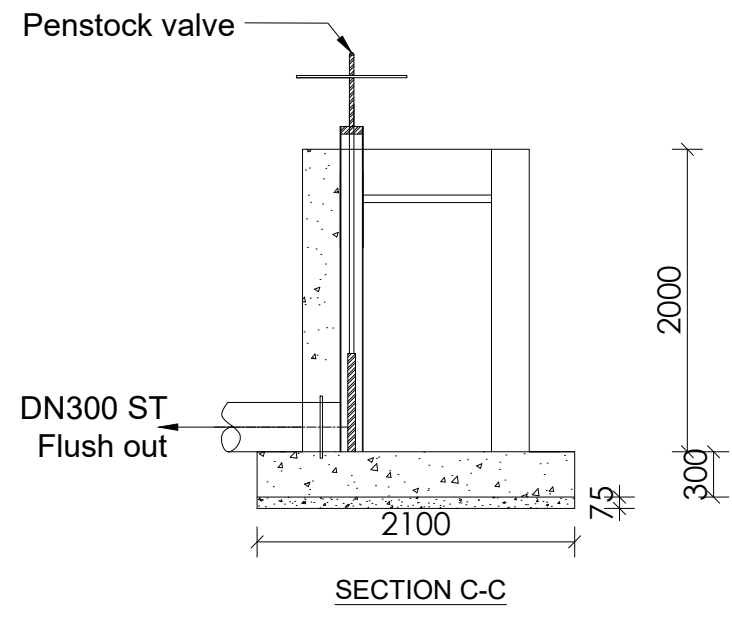
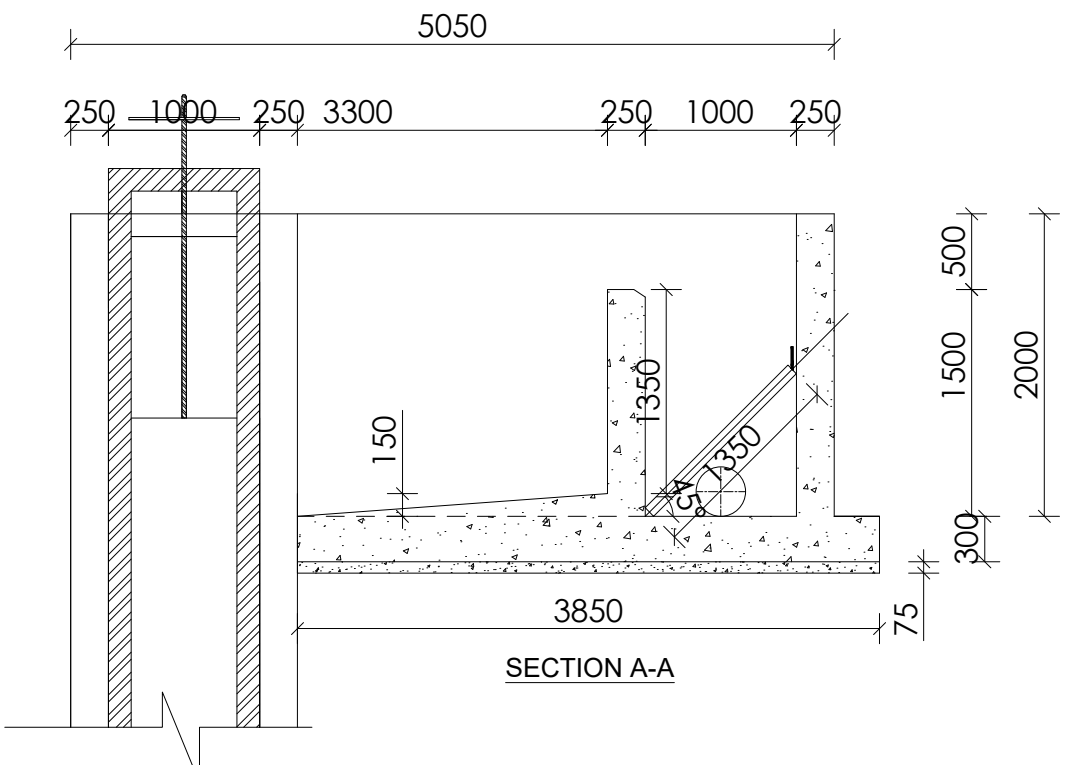
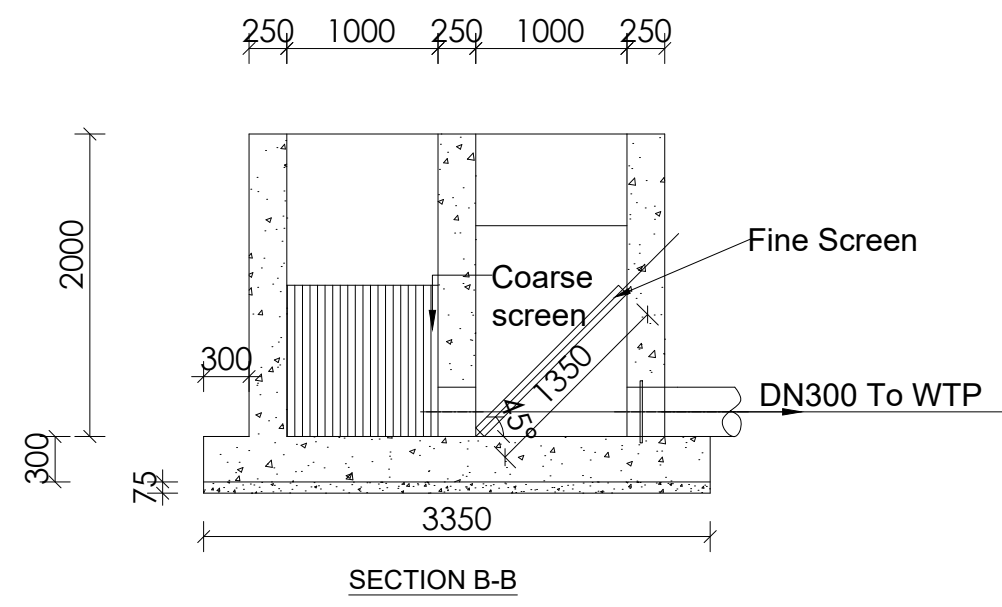
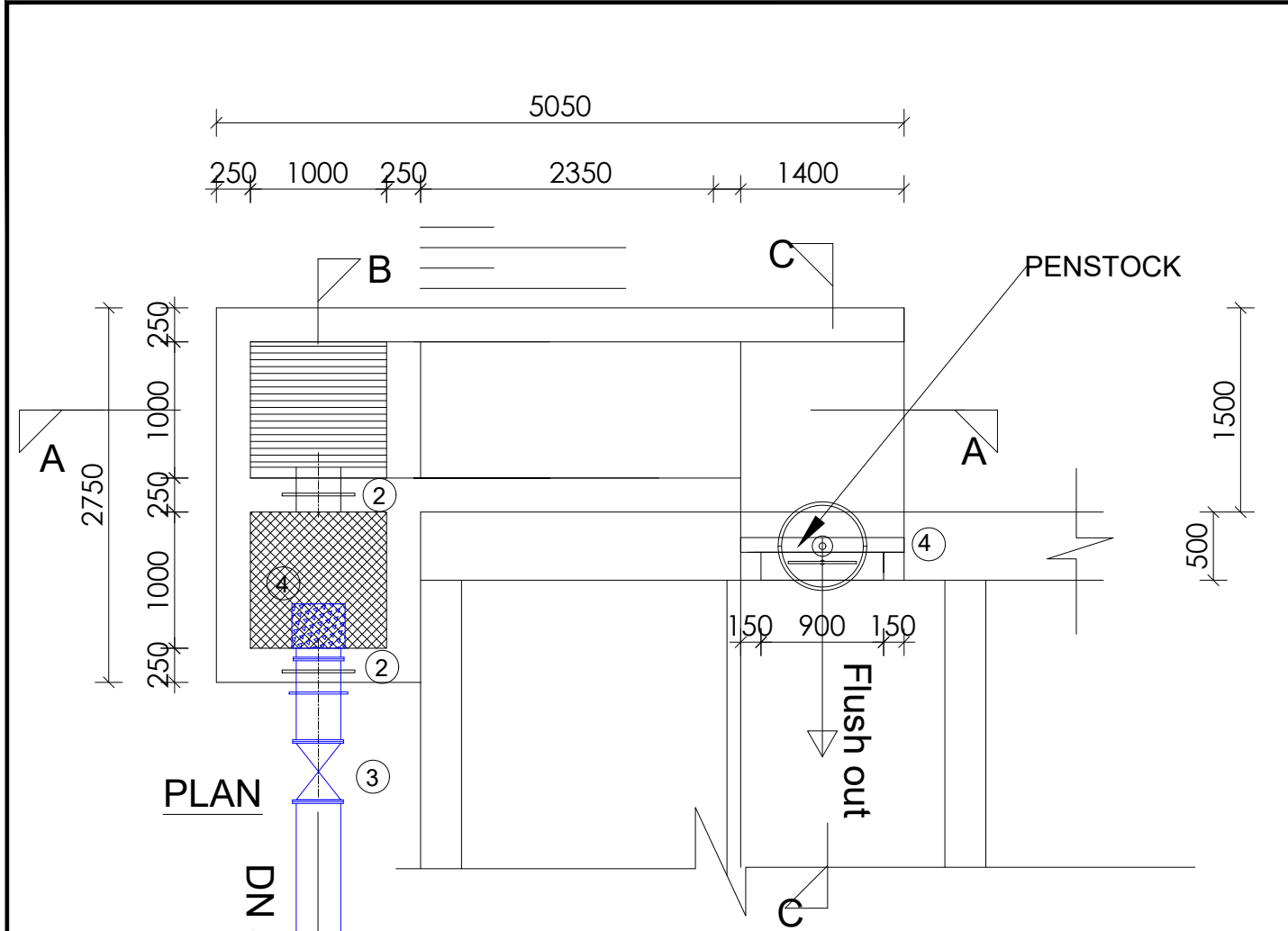
NYAGAK WATER SUPPLY AND SANITATION SYSTEM

REVISIONS :

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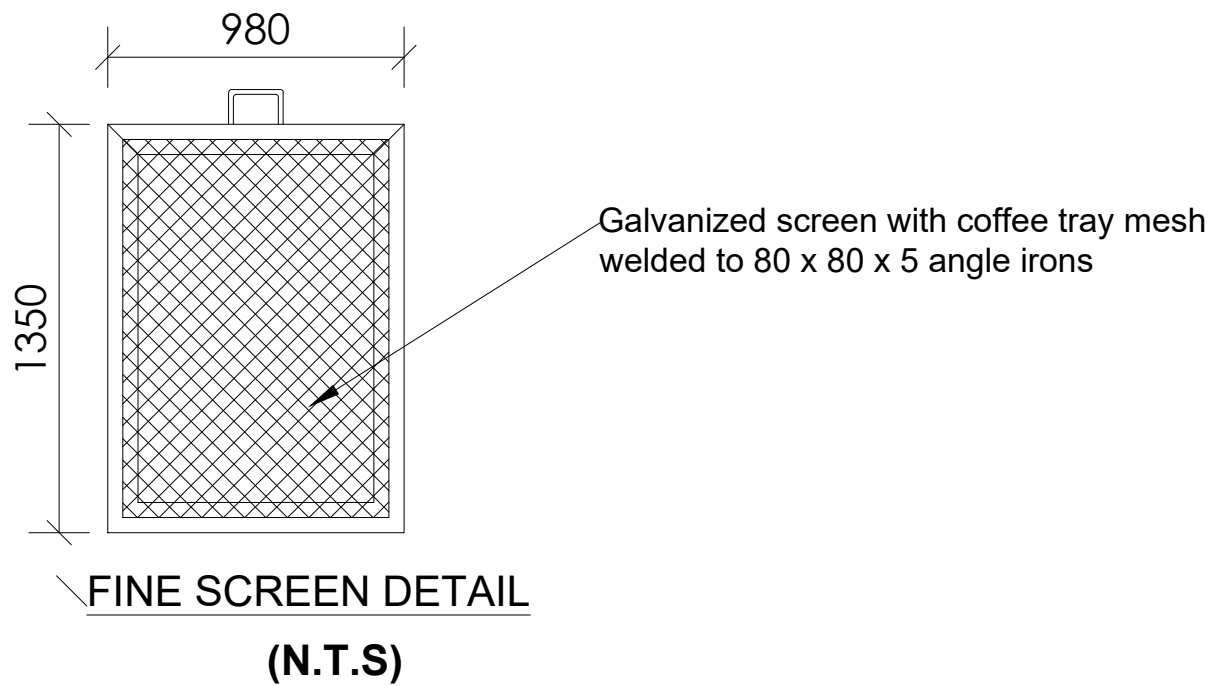
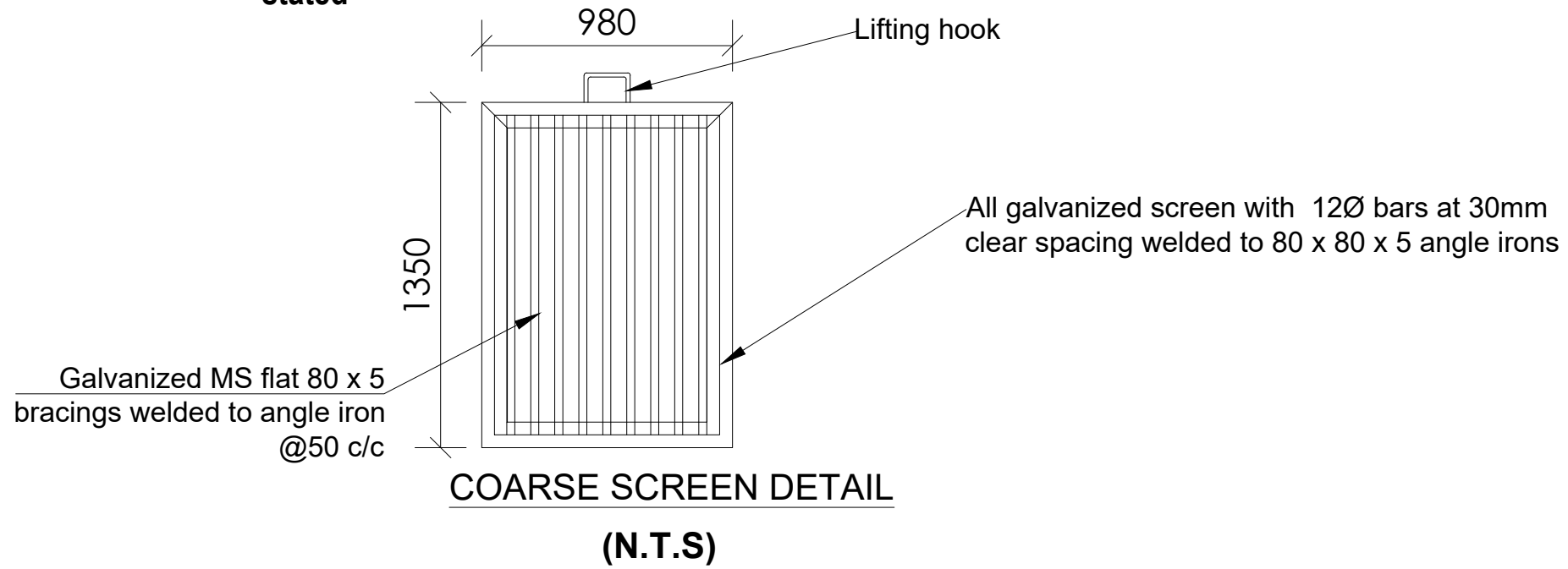
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Plan & Sections

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Drawn by:	A.K
Designed by:	W.G.M
Checked by:	J.K.K
Date:	January 2023
DRG. No.:	NYA-INT-002
Scale:	1:50
Sheet No.:	1 of 3

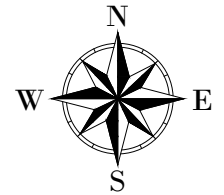


NOTES

1. All dimensions are in millimetres unless otherwise stated



LEGEND



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NYAGAK WATER SUPPLY AND SANITATION SYSTEM

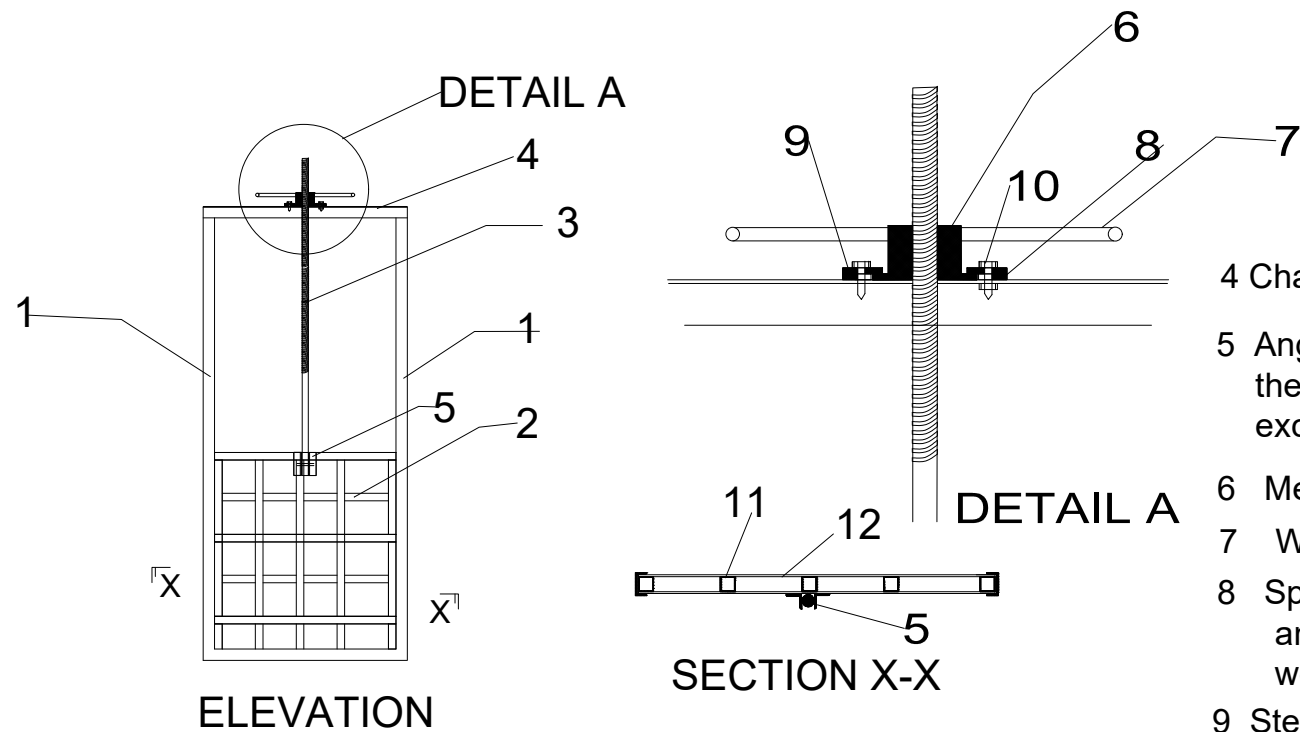
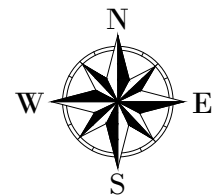
REVISIONS :

No	Date	Description

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Designed by:	W.G.M
Checked by:	J.K.K
Date:	January 2023
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Sheet No.:	2 of 3

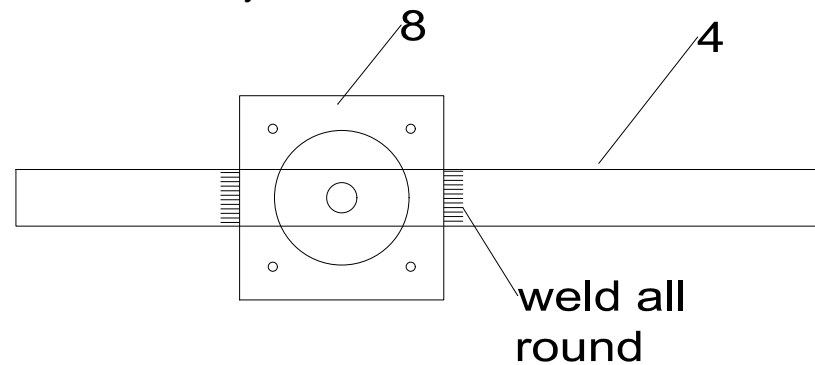
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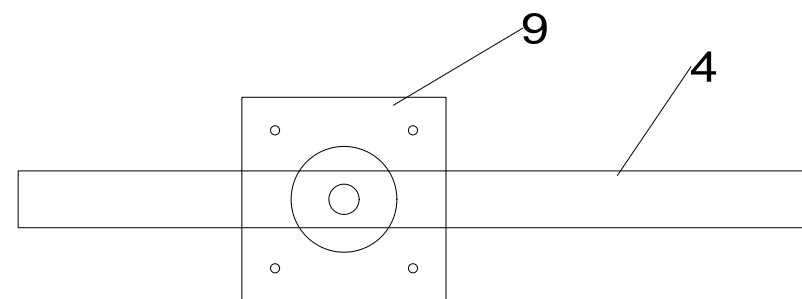
- 4 Channel section 75x38x6mm
- 5 Angle brackets 50X50x6mm fixing the shaft to the board with a pin that can shear on excessive turning of closing wheel 75x38x6mm
- 6 Metal piece with female thread to move the gate shaft
- 7 Wheel welded to part 6 above
- 8 Spacer plate 270x270x12mm with central hole 178mm dia and 4 No holes 12mm dia for bolts (see detail) It is welded all round to item 4
- 9 Steel plate 270x270x12mm with central hole 140mm dia and 4 No holes 12mm dia for bolts (see detail)
- 10 Bolts 10mm dia with necessary washers and nut
- 11 frame of SHS 50x50x3mm spaced at 270mm both ways
- 12 Steel Plate 1200x600x6mm covering each of the sides of steel sections

ELEVATION

- 1 Channel section 75x38x6mm
- 2 Gate board formed by sandwiching a frame of SHS 50x50x3mm spaced at 270mm both ways
- 3 Threaded shaft 40mm dia attached to check board moved by mechanism in detail A 38x6mm



Detail of plate 8



Detail of plate 9

DETAILS OF PENSTOCKS

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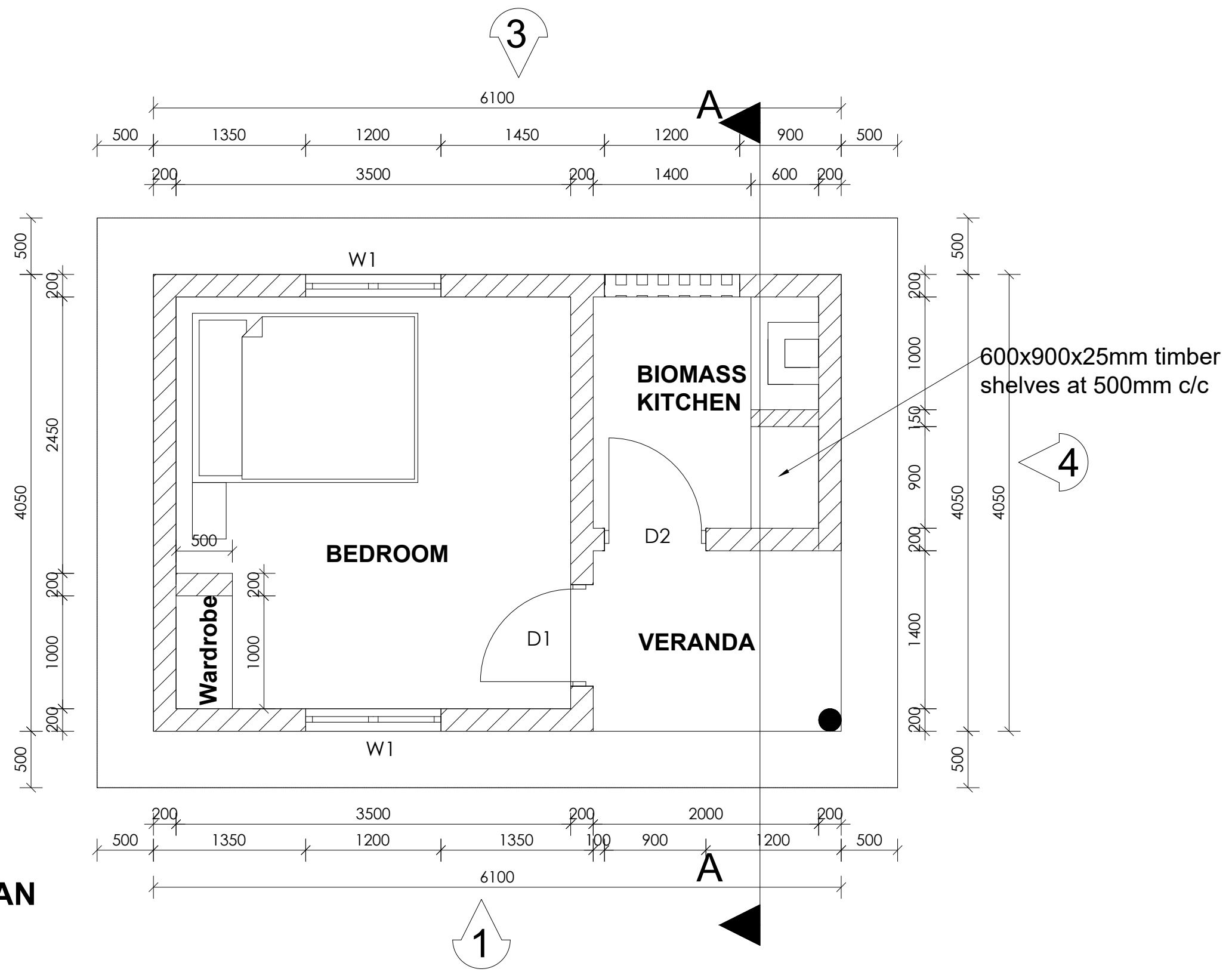
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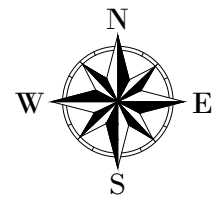
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Drawn by:	A.K
Designed by:	W.G.M
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Date:	January 2023
DRG. No.:	NYA-INT-002
Scale:	1:50
Sheet No.:	3 of 3

PLAN



LEGEND



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**NYAGAK WATER SUPPLY AND
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REVISIONS :

No	Date	Description

DRAWING TITLE : **INTAKE GUARD HOUSE
 Plan**

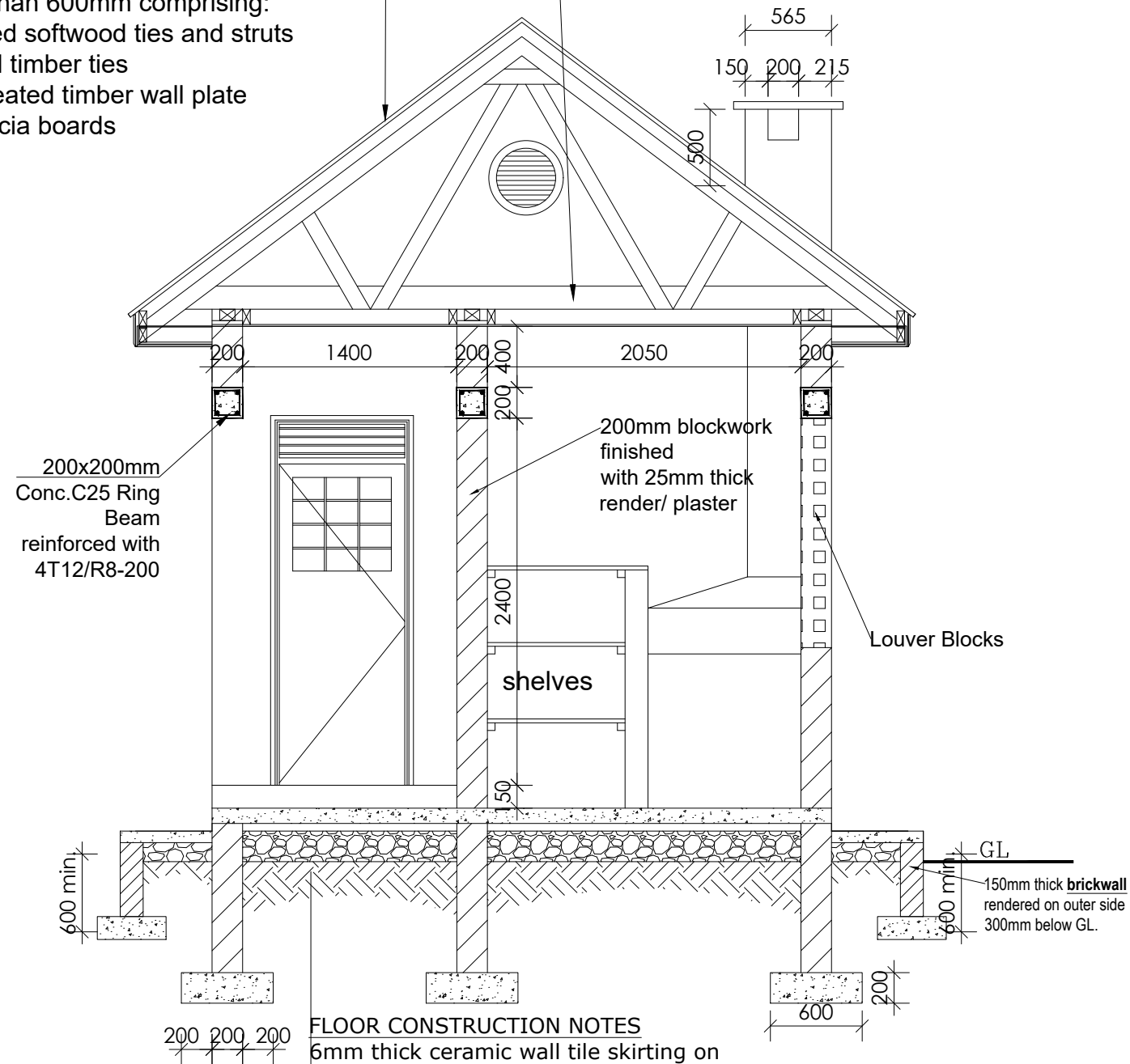
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 Designed by: W.G.M
 Checked by: J.K.K
 Date: January 2023
 DRG. No.: **NYA-INT-003**
 Scale: 1:40 Sheet No.: 1 of 5

Roof Pitch -37°

Fire clay ridge cap/ mangalore roofing tiles on 50 x 25 timber battens with gauge 32 GI plane sheet on chicken mesh
 Pressure treated roofing soft wood timber
 100 x 50mm treated timber rafters
 100 x 50 mm treated soft wood purlins on trusses spaced not more than 600mm comprising:
 100 x 50mm treated softwood ties and struts
 150x50mm treated timber ties on 150 x 75mm treated timber wall plate
 250mm plastic fascia boards

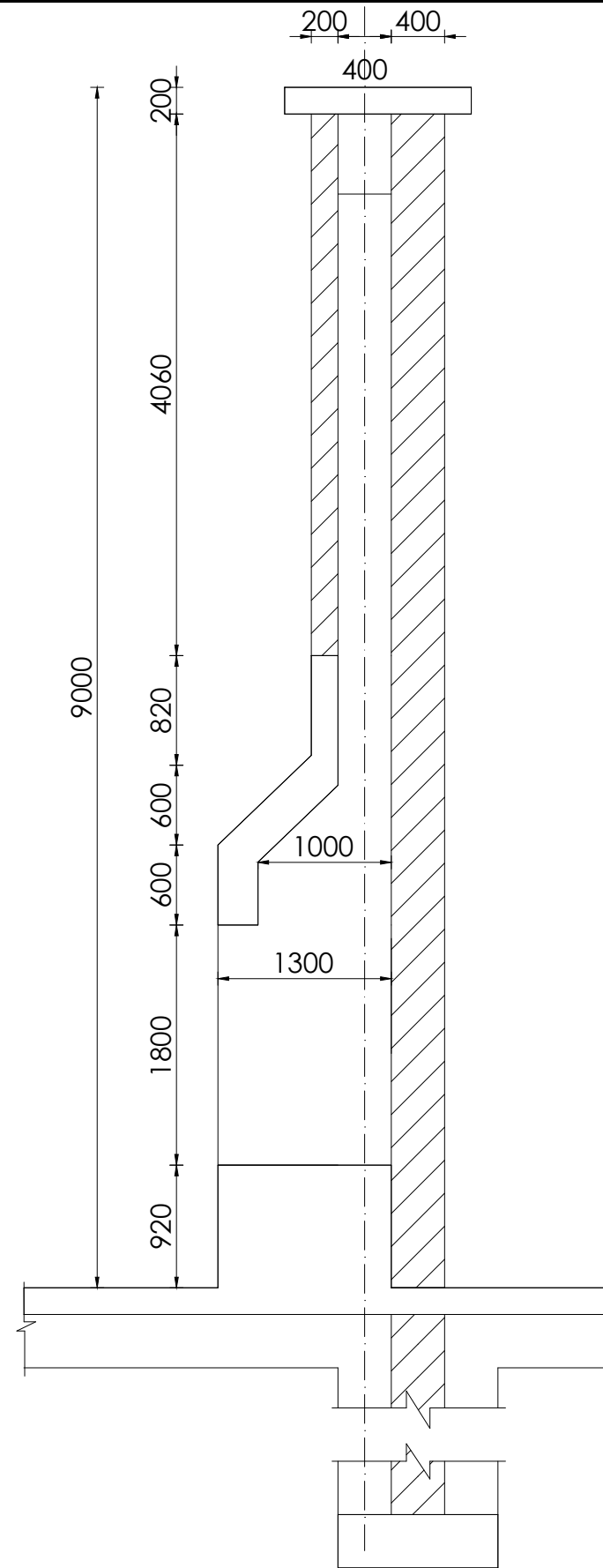
Ceiling notes

20mm thick cement and sand plaster on 12mm expanded metal lathing on 50 x 50mm ceiling branderings at 600mm centres
 100 x 50mm ceiling joists at 1200mm centres



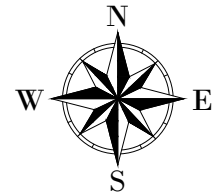
SECTION A-A

FLOOR CONSTRUCTION NOTES
 6mm thick ceramic wall tile skirting on 8mm thick ceramic floor tiles on 25mm cement and sand (1:3) screed on 100mm C15 Reinforced cement concrete slab/ A142 BRC on DPM placed on 200mm Hardcore stone bed blinded with 50mm sand 150mm selected well compacted natural murrum filling



SECTION THROUGH COOKING PLACE B-B
 Scale 1:50

LEGEND



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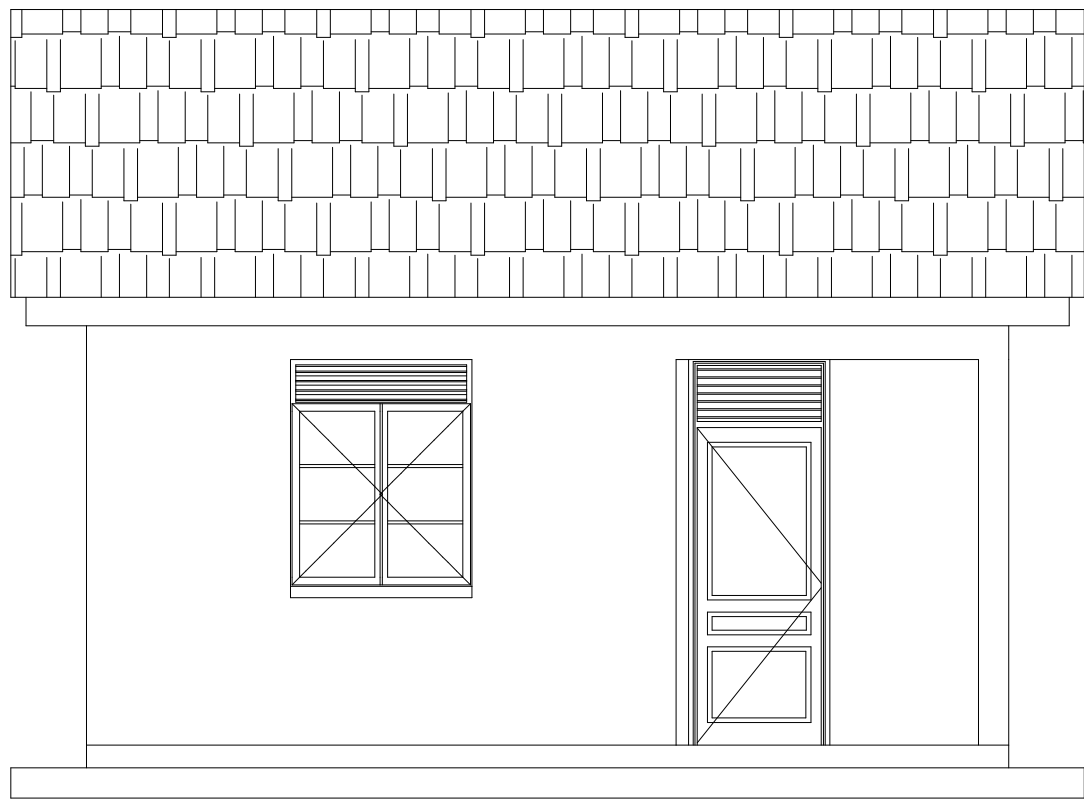
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NYAGAK WATER SUPPLY AND SANITATION SYSTEM

REVISIONS :

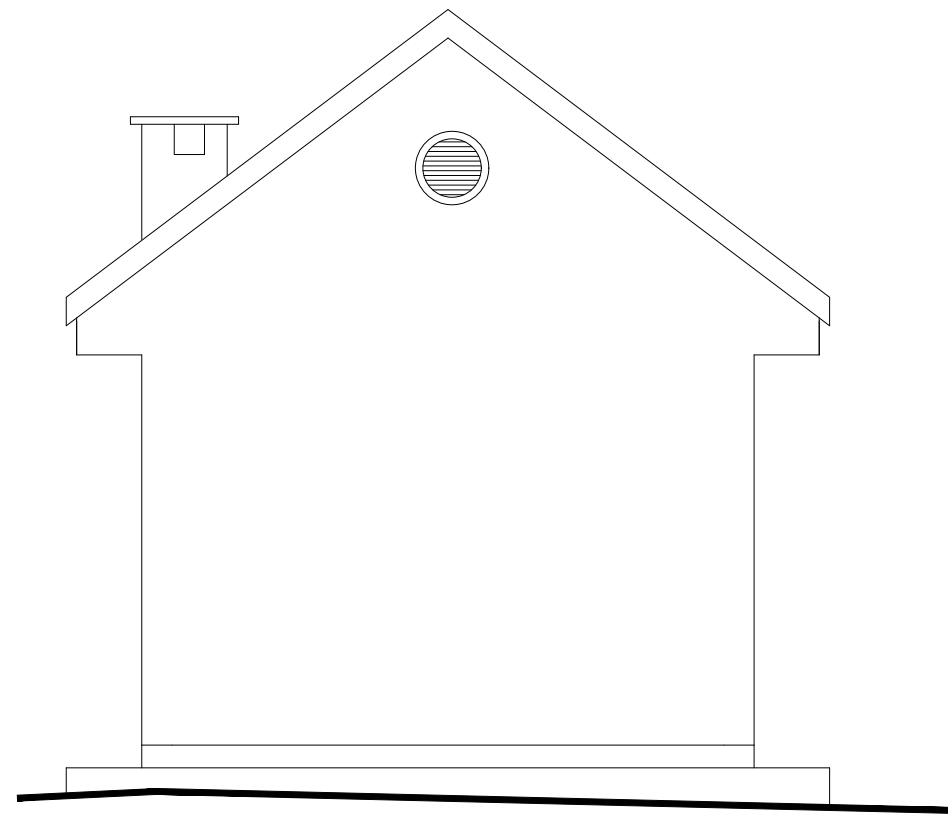
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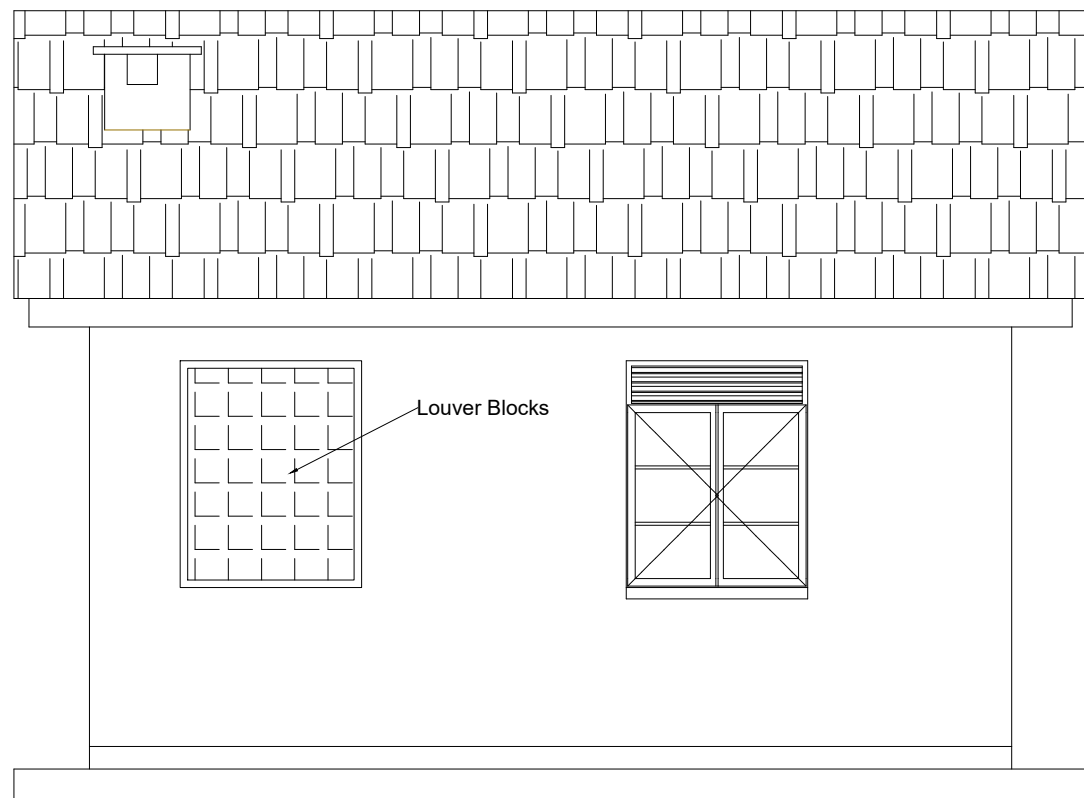
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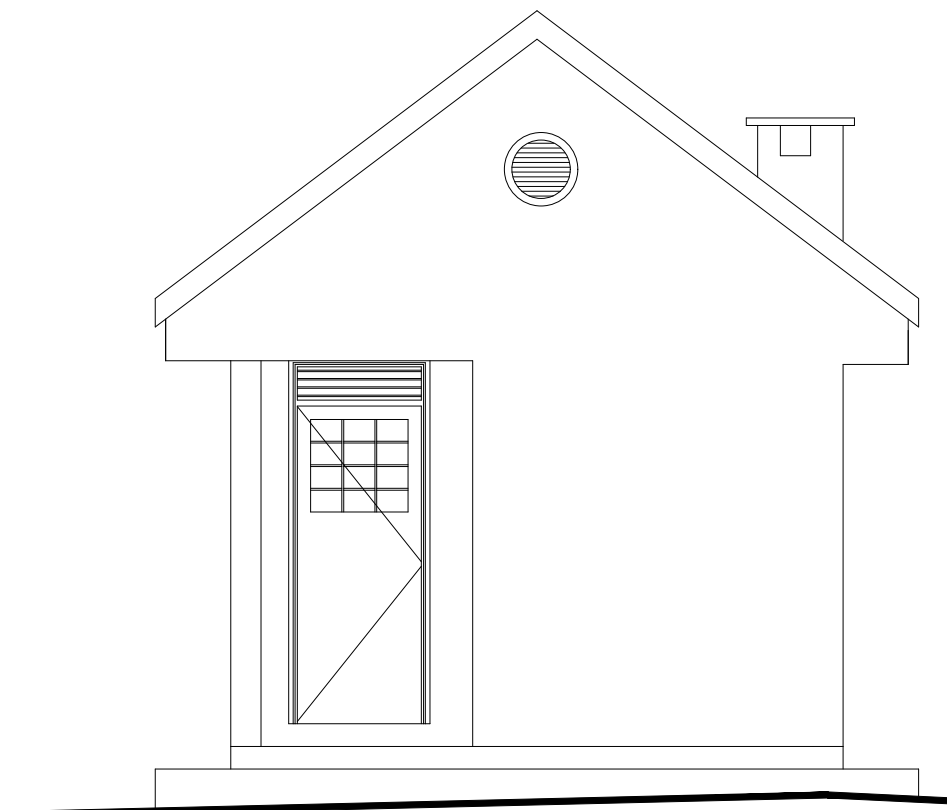
ELEVATION 1



ELEVATION 2

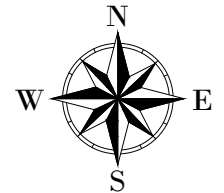


ELEVATION 3



ELEVATION 4

LEGEND



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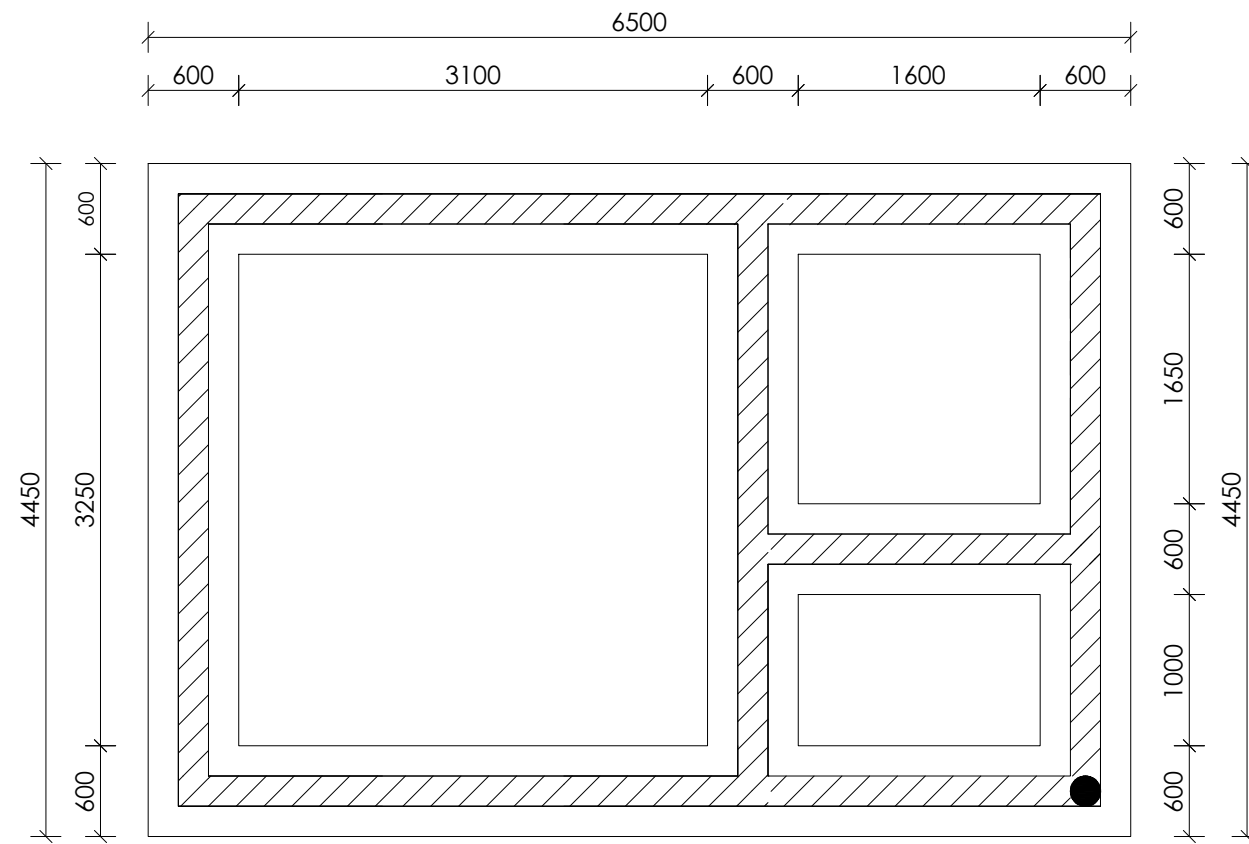
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 SANITATION SYSTEM**

REVISIONS :

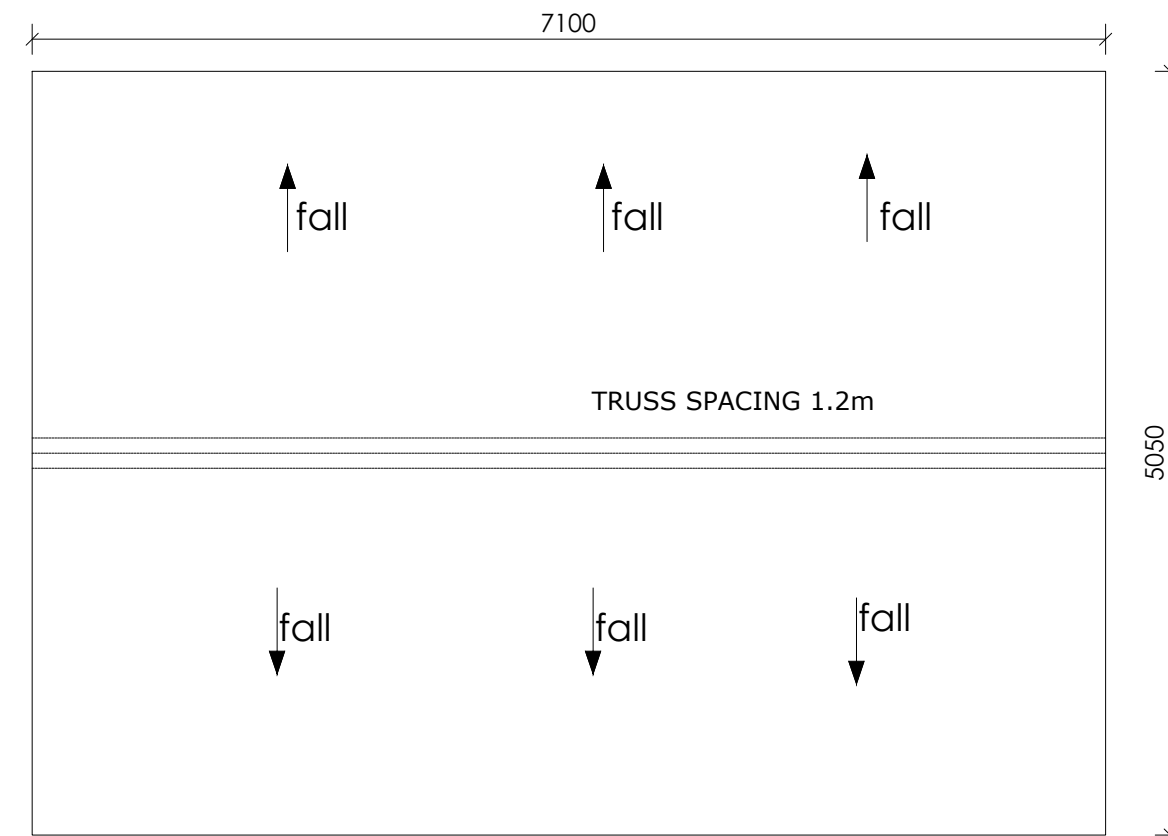
No	Date	Description

DRAWING TITLE : **INTAKE GUARD HOUSE**
 Elevation

Surveyed by:	R.K
Drawn by:	A.K
Designed by:	W.G.M
Checked by:	J.K.K
Date:	January 2023
DRG. No.:	NYA-INT-003
Scale:	1:50
Sheet No.:	3 of 5

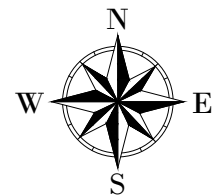


FOUNDATION LAYOUT



ROOF LAYOUT

LEGEND



CLIENT :

 THE REPUBLIC OF UGANDA
MINISTRY OF WATER AND ENVIRONMENT

CO-FINANCED BY:

THE WORLD BANK
 IBRD • IDA | WORLD BANK GROUP

CONSULTANT :
 Alliance Consultants Ltd
In Association with

Infra-Consult Ltd

PROJECT :
 ALA-ORA WATER SUPPLY AND
 SANITATION PROJECT

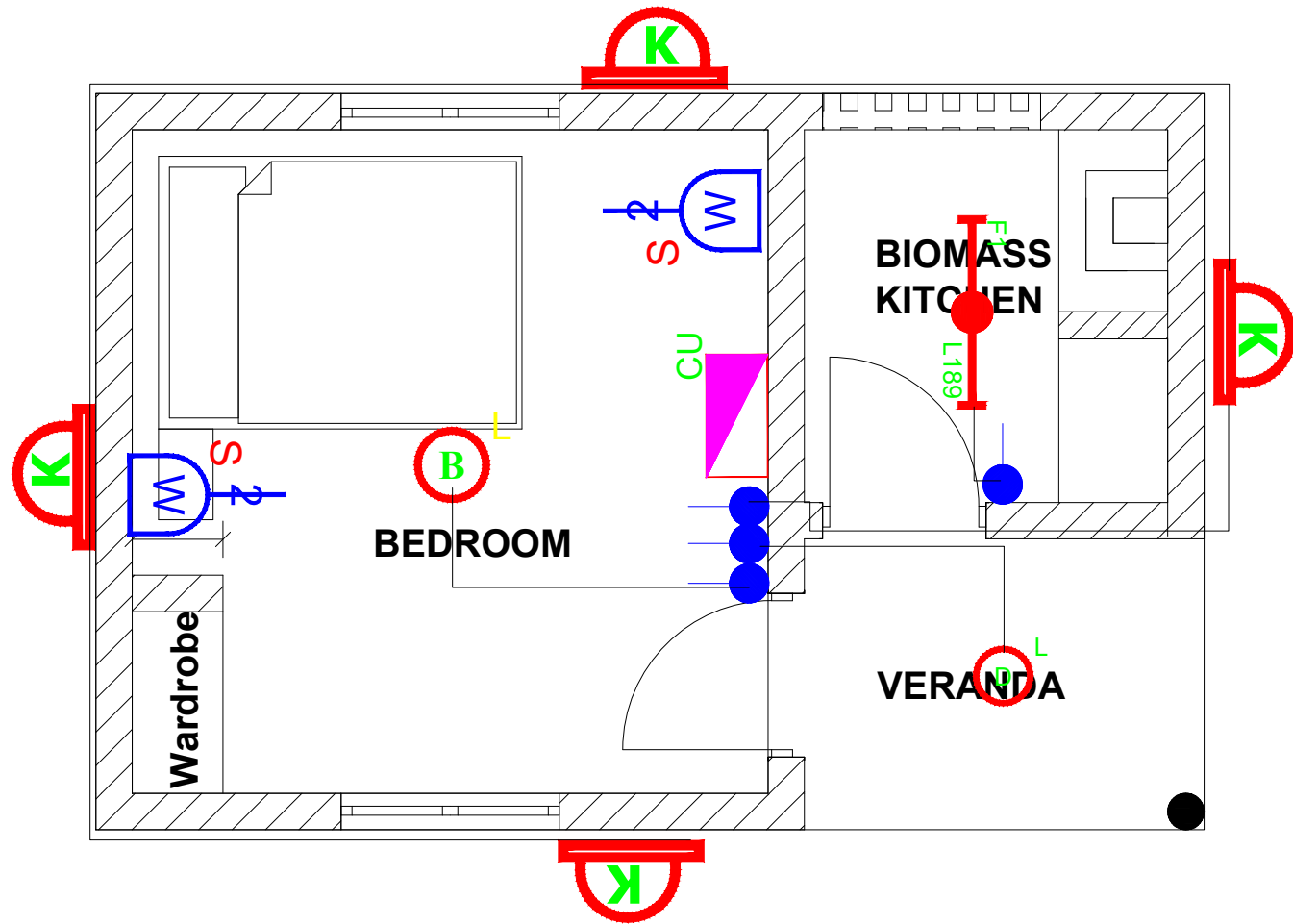
**NYAGAK WATER SUPPLY AND
 SANITATION SYSTEM**

REVISIONS :

No	Date	Description

DRAWING TITLE : **INTAKE GUARD HOUSE**
 Roof & Foundation Layout

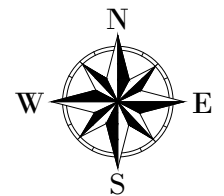
Surveyed by:	R.K
Drawn by:	A.K
Designed by:	W.G.M
Checked by:	J.K.K
Date:	January 2023
DRG. No.:	NYA-INT-003
Scale:	1:50
Sheet No.:	4 of 5



- 1). ALL WALL BRACKETS SHALL BE MOUNTED 1800mm ABOVE FINISHED FLOOR LEVEL
- 2). TELEPHONE, SOCKETS, T.V AND COMPUTER OUTLETS SHALL BE MOUNTED 300mm ABOVE FINISHED FLOOR LEVEL EXCEPT WHERE THERE IS A WORKTOP.
- 3). WHERE THERE IS A WORKTOP, TELEPHONE, SOCKETS, T.V AND COMPUTER OUTLETS SHALL BE MOUNTED 150mm ABOVE WORKTOPS.
- 4). CONSUMER UNITS SHALL BE 1800mm ABOVE FINISHED FLOOR LEVEL
- 5). ALL SWITCHES SHALL BE 1400mm ABOVE FINISHED FLOOR LEVEL
- 6). ALL OUTSIDE SOCKETS SHOULD BE WEATHER PROOF
- 7). ALL SHAVER SOCKETS SHOULD BE ON THE RIGHT HAND SIDE OF THE WASH HAND BASIN
- 8). ALL CABLES MUST BE STRANDED

SYMBOL	DESCRIPTION
	1200mm 18W LED batten with a removable LED engine. IP20 As Thorn PopPack LED. or equal approved. (Light Type F1)
	Pedant lighting fitting comprising ceiling Rose 300mm 3x1.5mm² flexible copper cable lamp holder and 6W LED Lamp
	Pedant lighting fitting comprising ceiling Rose 300mm 3x1.5mm² flexible copper cable lamp holder and 6W LED Lamp
	Pedant lighting fitting comprising ceiling Rose 300mm 3x1.5mm² flexible copper cable lamp holder and 6W LED Lamp
	Decorative Bed side lamp complete with flexible spot light arm as LEDS-C4 BALI (05-3217-19-82 + PAN-157-BY) to client's approval.
	wall mounted light
	Socket outlet on Wall
	Consumer's Unit
	One Gang 2way Switch
	Two Gang 2way Switch
	Three Gang 2way Switch
	One Gang 1way Switch
	Two Gang 1way Switch
	Three Gang 1way Switch
	Intermediate Switch
	Photo - Cell

LEGEND



CLIENT :



CO-FINANCED BY:



CONSULTANT :



PROJECT :

ALA-ORA WATER SUPPLY AND SANITATION PROJECT

NYAGAK WATER SUPPLY AND SANITATION SYSTEM

REVISIONS :

No	Date	Description

DRAWING TITLE : **INTAKE GUARD HOUSE Electrical Layout**

Surveyed by:

R.K

Drawn by:

A.K

Designed by:

W.G.M

Checked by:

J.K.K

Date:

January 2023

DRG. No.:

NYA-INT-003

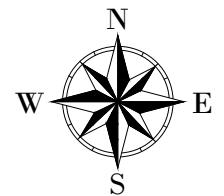
Scale:

1:40

Sheet No.:

5 of 5

LEGEND



CLIENT :

 THE REPUBLIC OF UGANDA
MINISTRY OF WATER AND ENVIRONMENT

CO-FINANCED BY:

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CONSULTANT :

Alliance Consultants Ltd
 In Association with

Infra-Consult Ltd

PROJECT :
ALA-ORA WATER SUPPLY AND SANITATION PROJECT

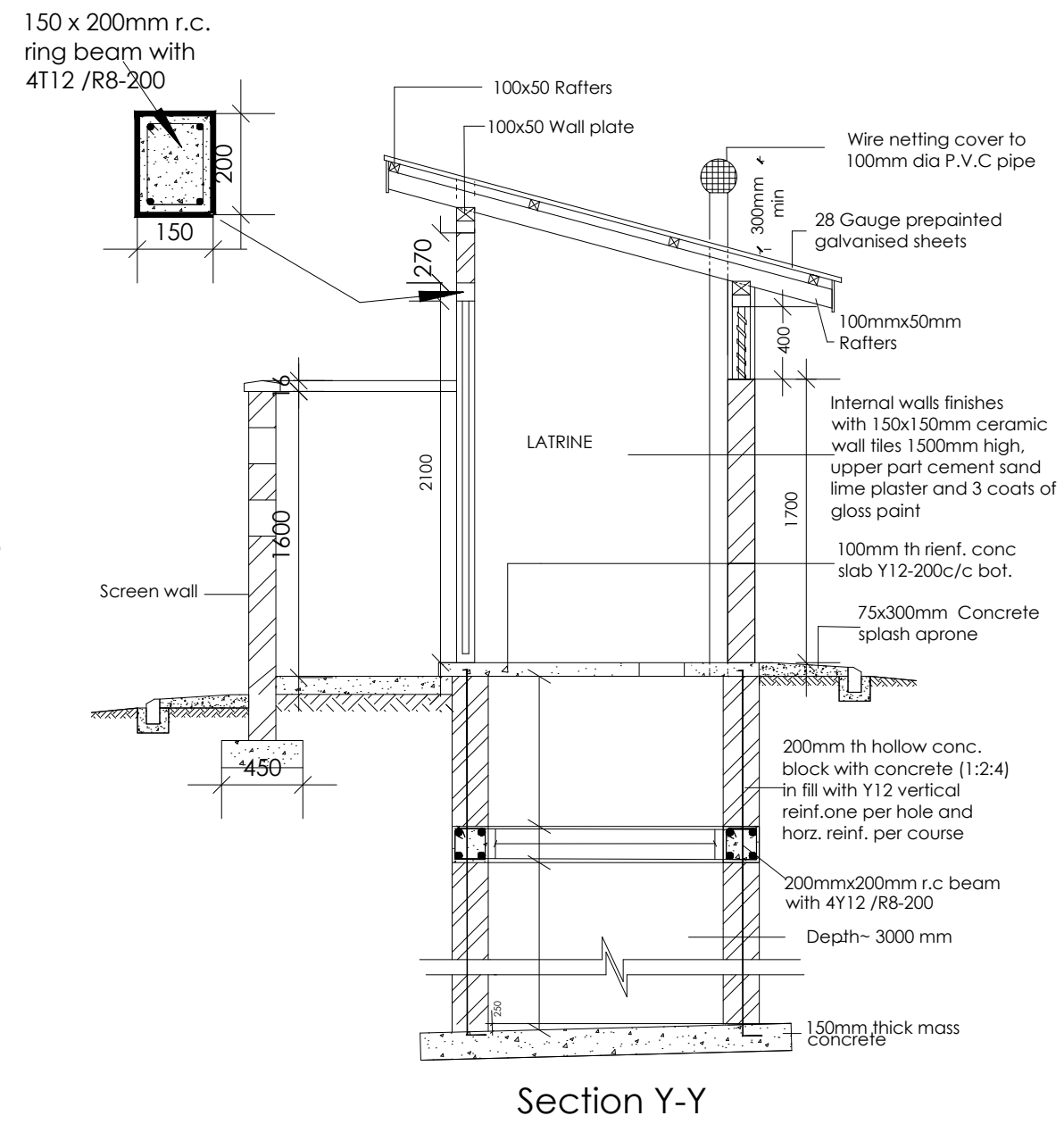
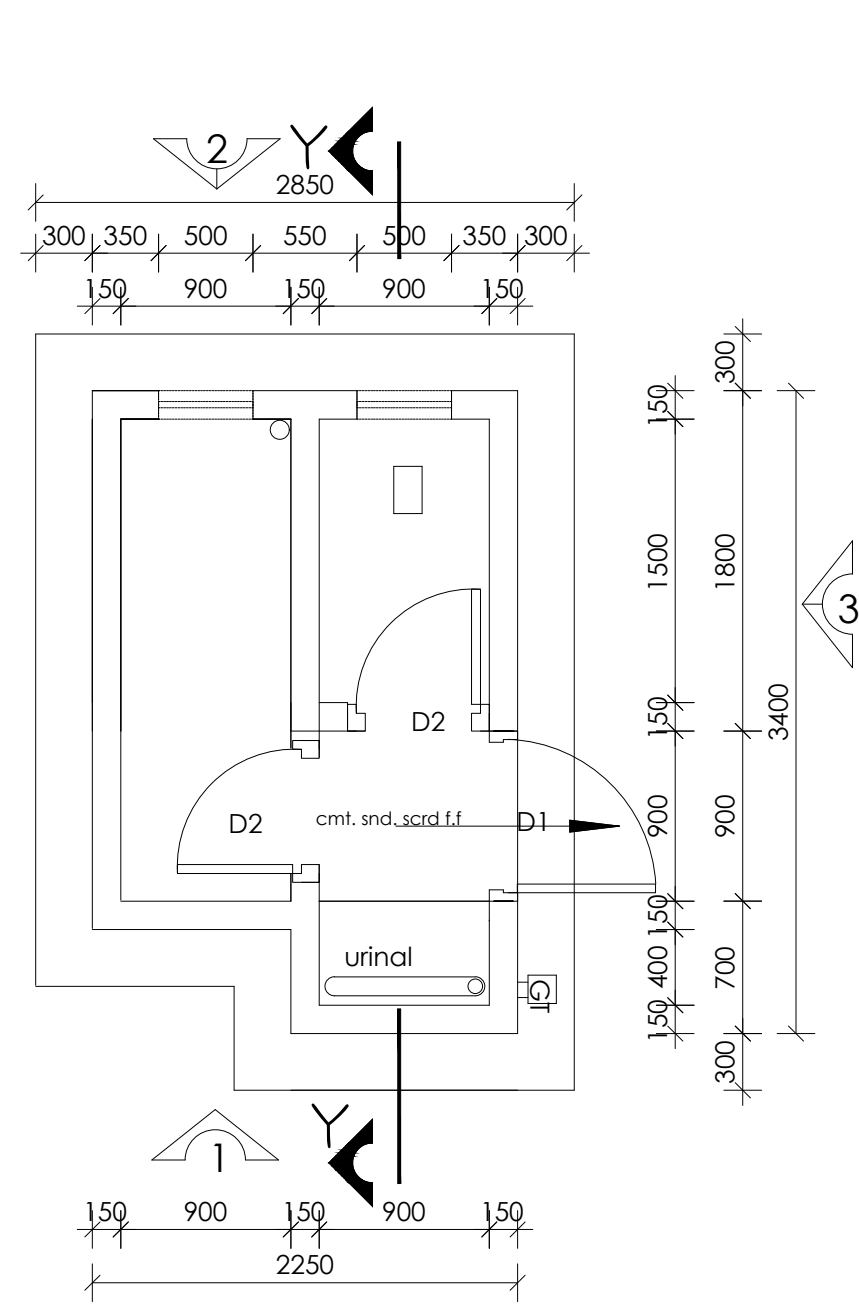
NYAGAK WATER SUPPLY AND SANITATION SYSTEM

REVISIONS :

No	Date	Description

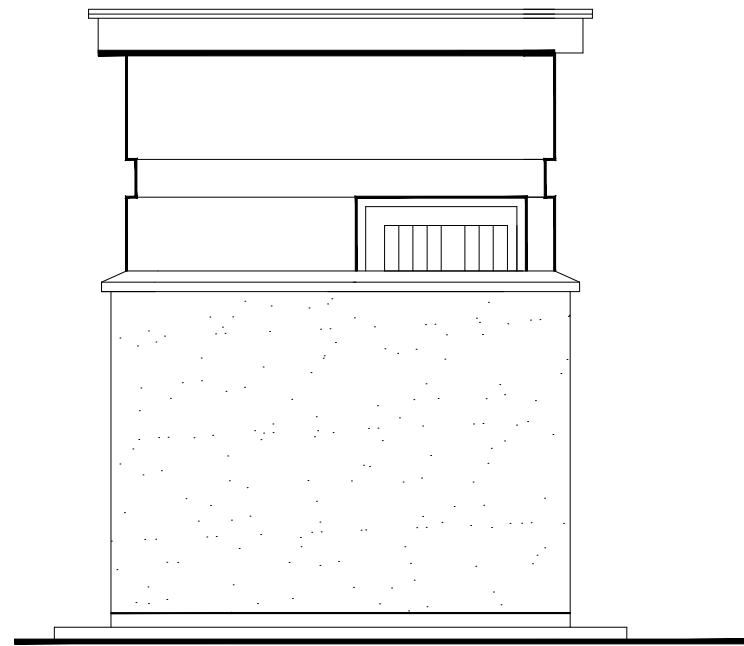
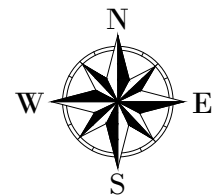
DRAWING TITLE : **TOILET (INTAKE)**
 Plan and Section

Surveyed by:	R.K
Drawn by:	A.K
Designed by:	W.G.M
Checked by:	J.K.K
Date:	January 2023
DRG. No.:	NYA-INT-004
Scale:	1:40
Sheet No.:	1 of 3

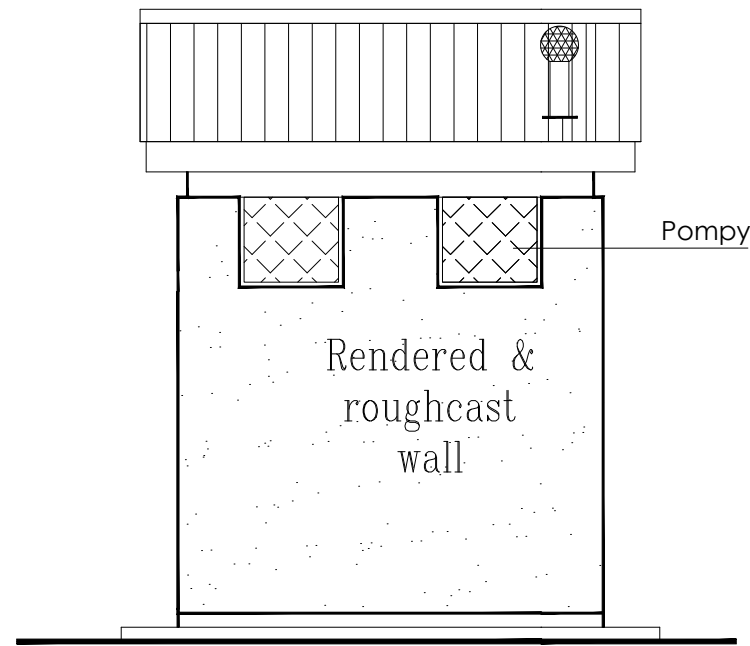


Section Y-Y

LEGEND



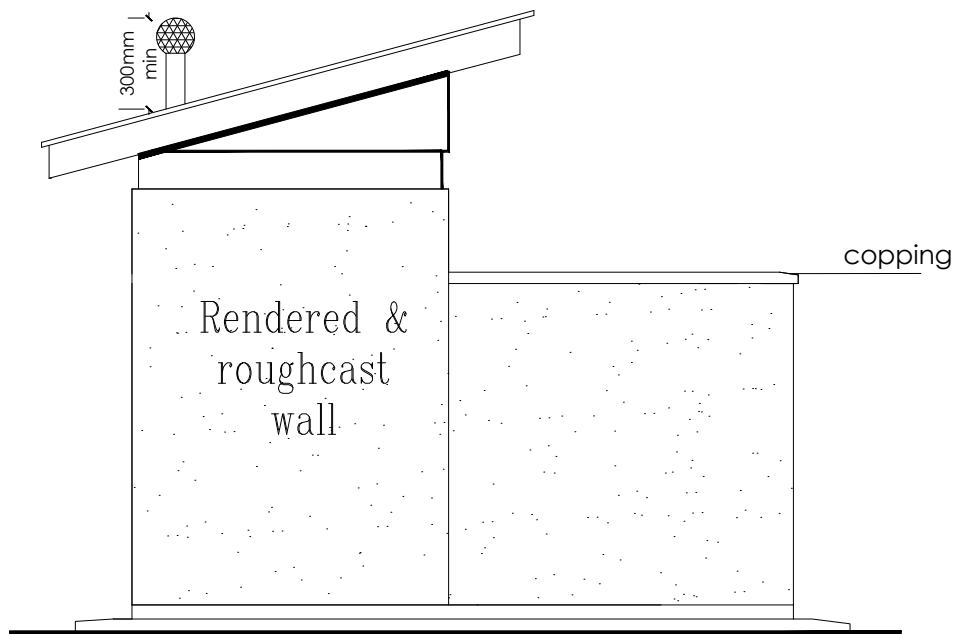
ELEVATION 1



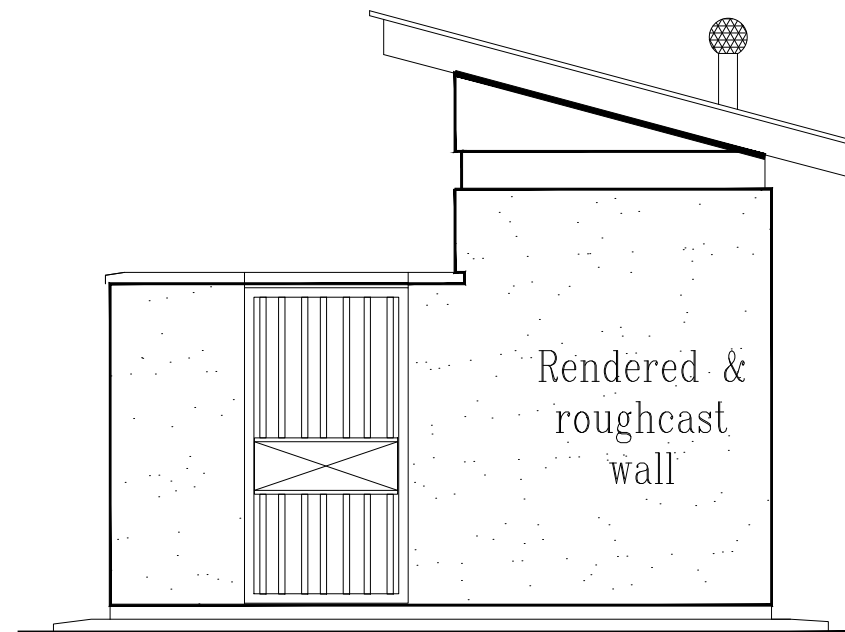
ELEVATION 2

Door and Window Schedule

Mark	Dimensions	No.	Description
D1		1	Metal Grill door to approval
D2		2	Similar to D#



ELEVATION 4



ELEVATION 3

2-STANCE, 1-URINAL TOILET BLOCK

CLIENT :

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MINISTRY OF WATER AND ENVIRONMENT

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PROJECT :
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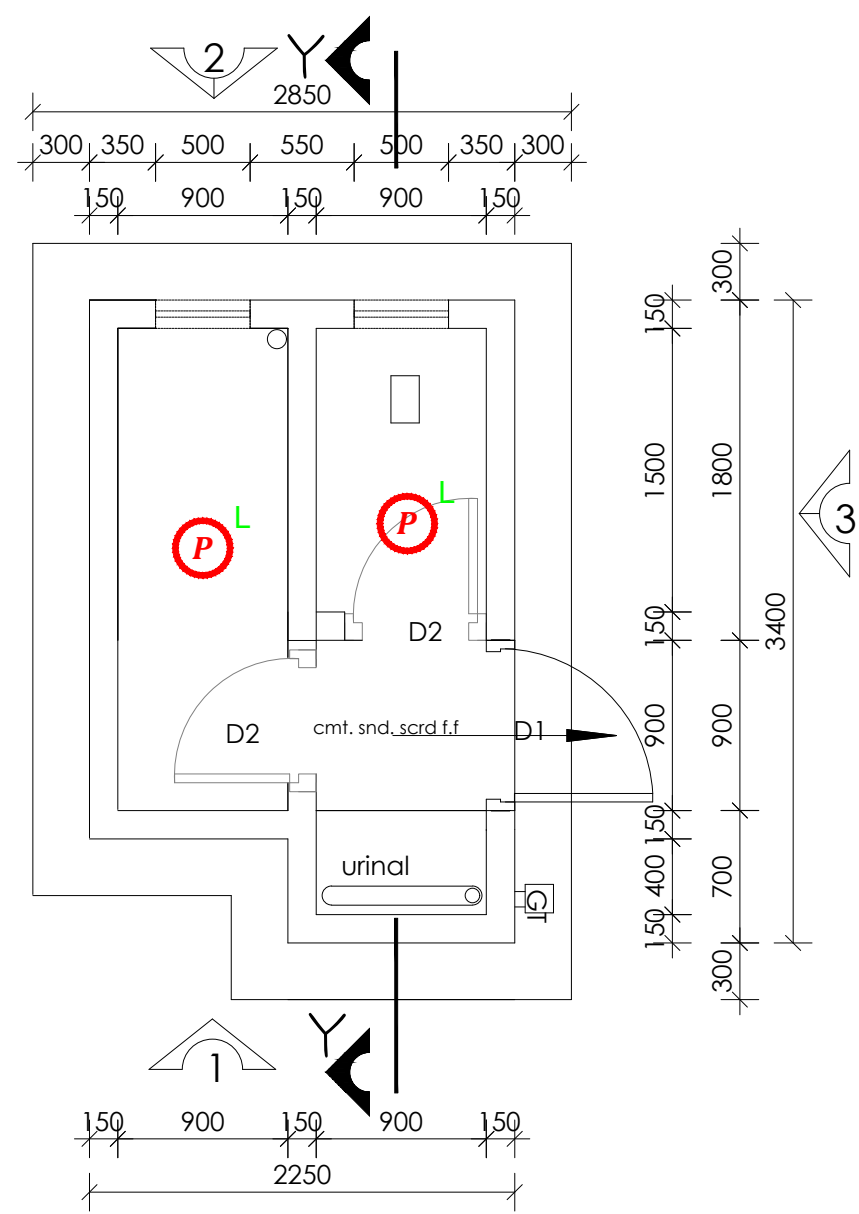
NYAGAK WATER SUPPLY AND SANITATION SYSTEM

REVISIONS :

No	Date	Description

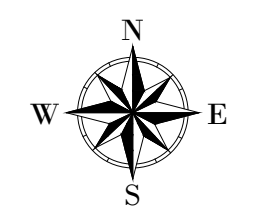
DRAWING TITLE : **TOILET (INTAKE) Elevations**

Surveyed by: R.K
 Drawn by: A.K
 Designed by: W.G.M
 Checked by: J.K.K
 Date: January 2023
 DRG. No.: **NYA-INT-004**
 Scale: 1:40 Sheet No.: 2 of 3



SYMBOL	DESCRIPTION
	1200mm 18W LED batten with a removable LED engine. IP20 As Thorn PopPack LED. or equal approved. (Light Type F1)
	Pedant lighting fitting comprising ceiling Rose 300mm 3x1.5mm ² flexible copper cable lamp holder and 6W LED Lamp
	Pedant lighting fitting comprising ceiling Rose 300mm 3x1.5mm ² flexible copper cable lamp holder and 6W LED Lamp
	Pedant lighting fitting comprising ceiling Rose 300mm 3x1.5mm ² flexible copper cable lamp holder and 6W LED Lamp
	Decorative Bed side lamp complete with flexible spot light arm as LEDS-C4 BALI (05-3217-19-82 + PAN-157-BY) to client's approval.
	wall mounted light

LEGEND



CLIENT :

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PROJECT :

ALA-ORA WATER SUPPLY AND SANITATION PROJECT

NYAGAK WATER SUPPLY AND SANITATION SYSTEM

REVISIONS :

No	Date	Description

DRAWING TITLE : **TOILET (INTAKE)**
Electrical Layout

Surveyed by: _____

Drawn by: P.K

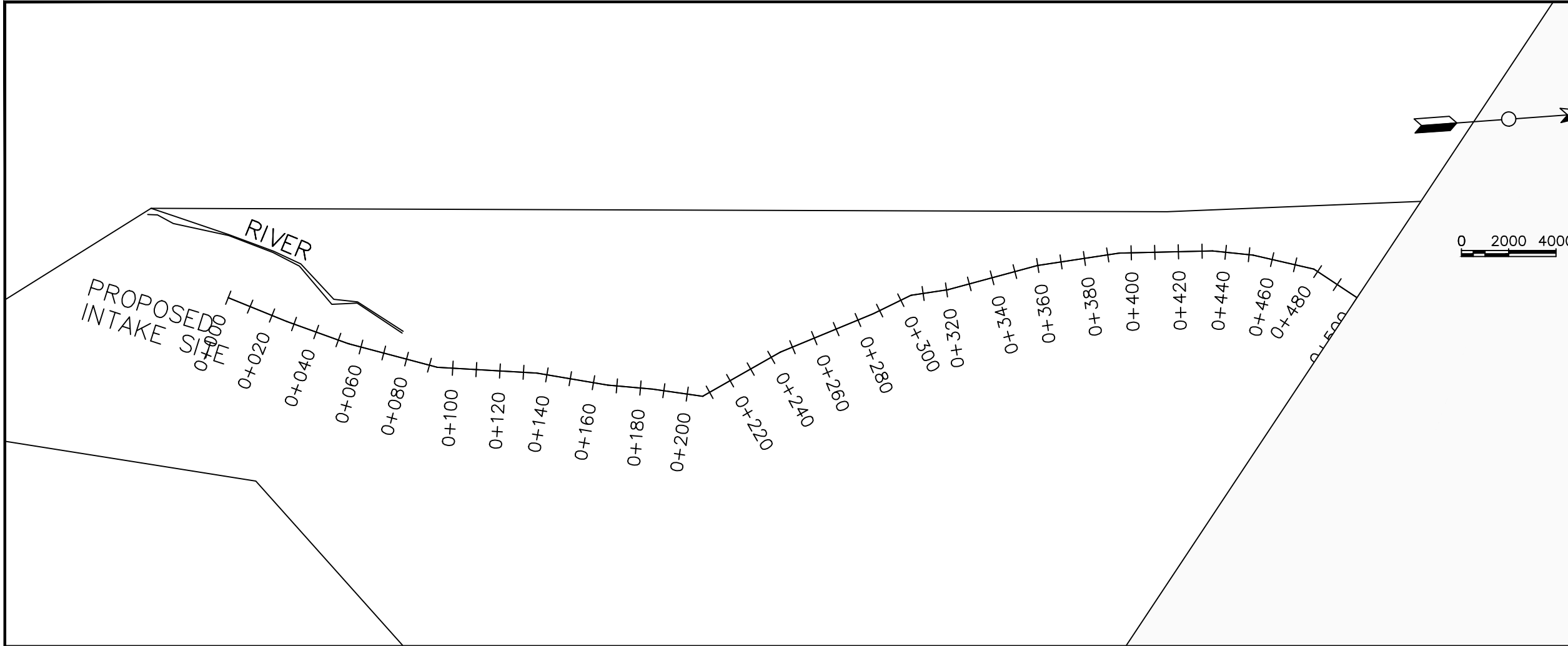
Designed by: P.K

Checked by: S.C.D

Date: January 2023

DRG. No.: **NYA-INT-004**

Scale: 1:40 Sheet No.: 3 of 3



LEGEND

Plan

- Transmission Main
- Distribution Main
- Road
- Building
- Contours

Profile

- Ground Level
- Invert Level
- AV Air Valve
- WO Washout
- Node detail No.

CLIENT :

THE REPUBLIC OF UGANDA
MINISTRY OF WATER AND ENVIRONMENT

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CONSULTANT :

Alliance Consultants Ltd
In Association with

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PROJECT :

ALA-ORA WATER SUPPLY AND SANITATION PROJECT

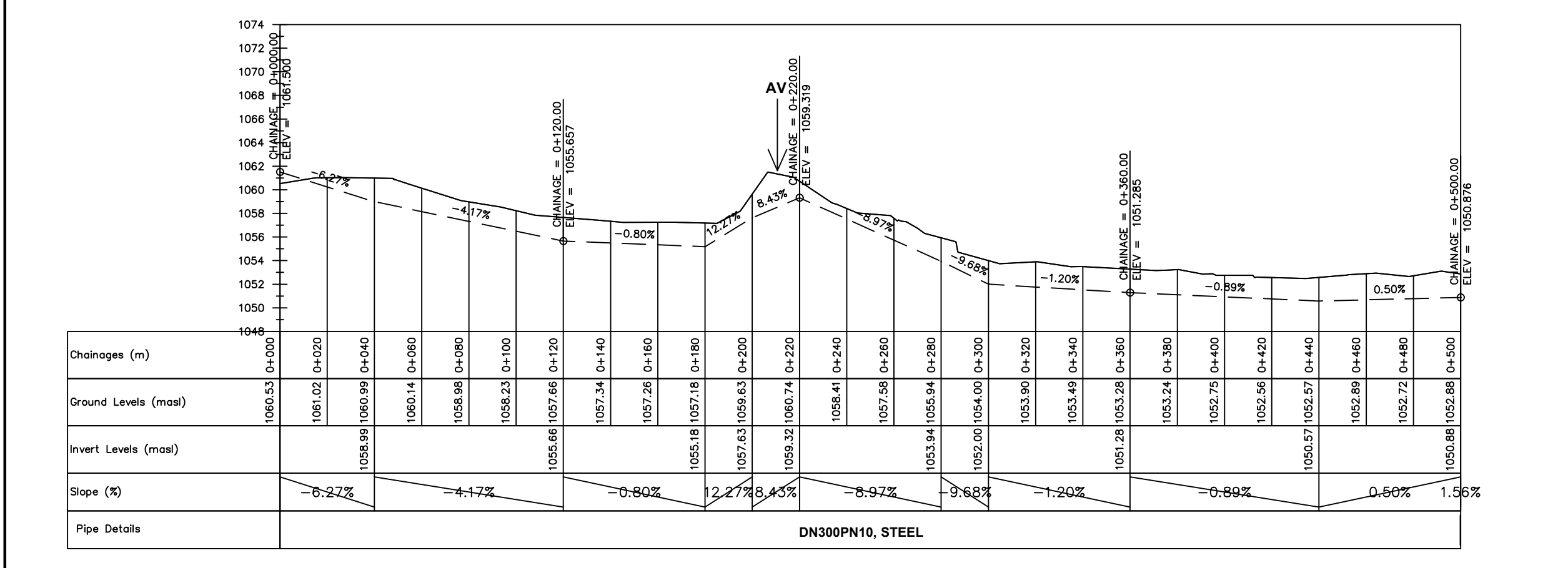
NYAGAK WATER SUPPLY AND SANITATION SYSTEM

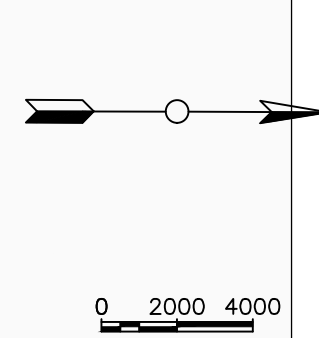
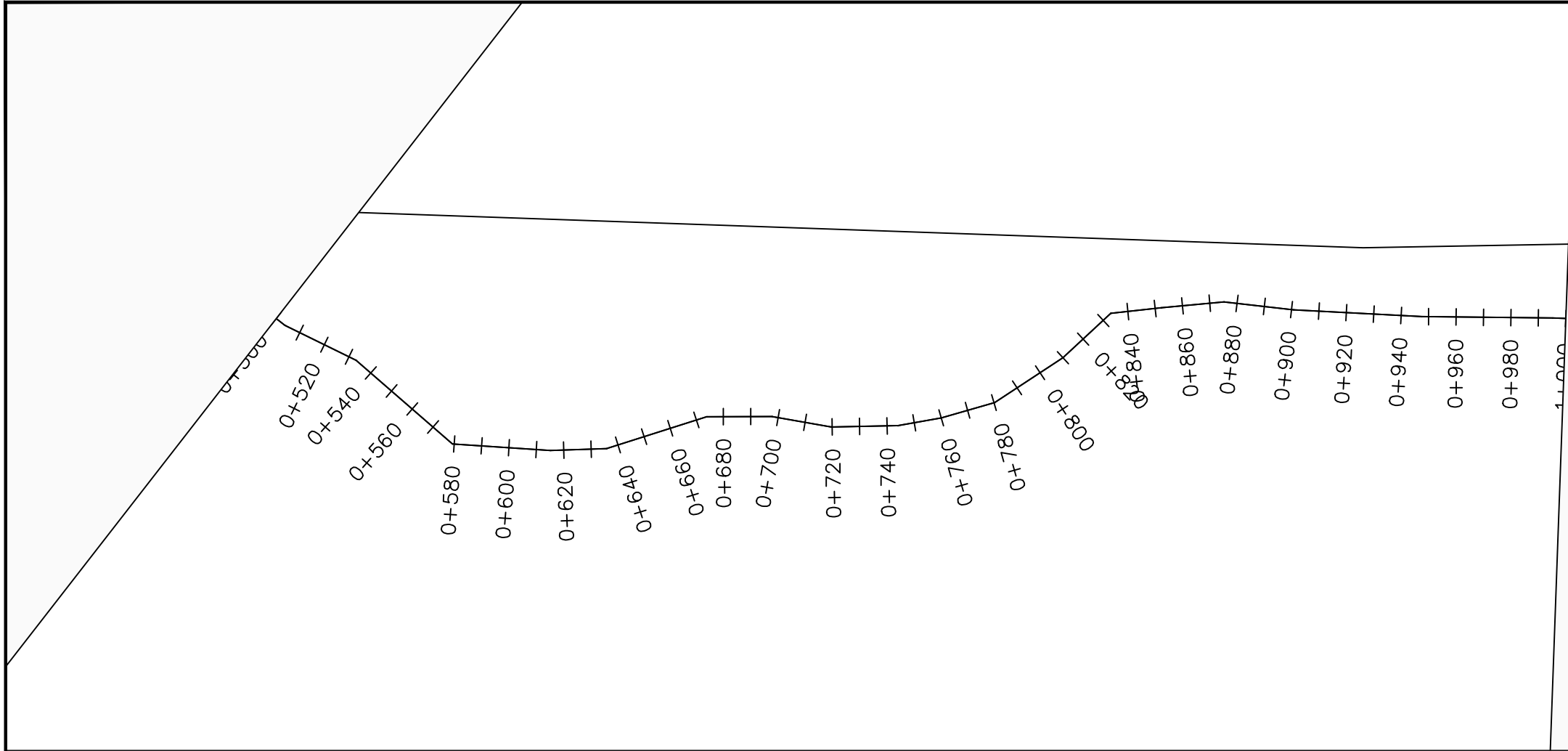
REVISIONS :

No	Date	Description

DRAWING TITLE : **RAW WATER MAIN**
0+000 - 0+500

Surveyed by:	R.K
Drawn by:	M.K
Designed by:	W.G.M
Checked by:	J.K.K
Date:	January 2023
DRG. No.:	NYA-RWM-001
Scale:	1:2000
Sheet No.:	1 of 13





LEGEND

Plan

- Transmission Main
- Distribution Main
- Road
- Building
- Contours

Profile

- Ground Level
- Invert Level
- AV Air Valve
- WO Washout
- Node detail No.

CLIENT :

THE REPUBLIC OF UGANDA
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CONSULTANT :

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In Association with

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PROJECT :

ALA-ORA WATER SUPPLY AND SANITATION PROJECT

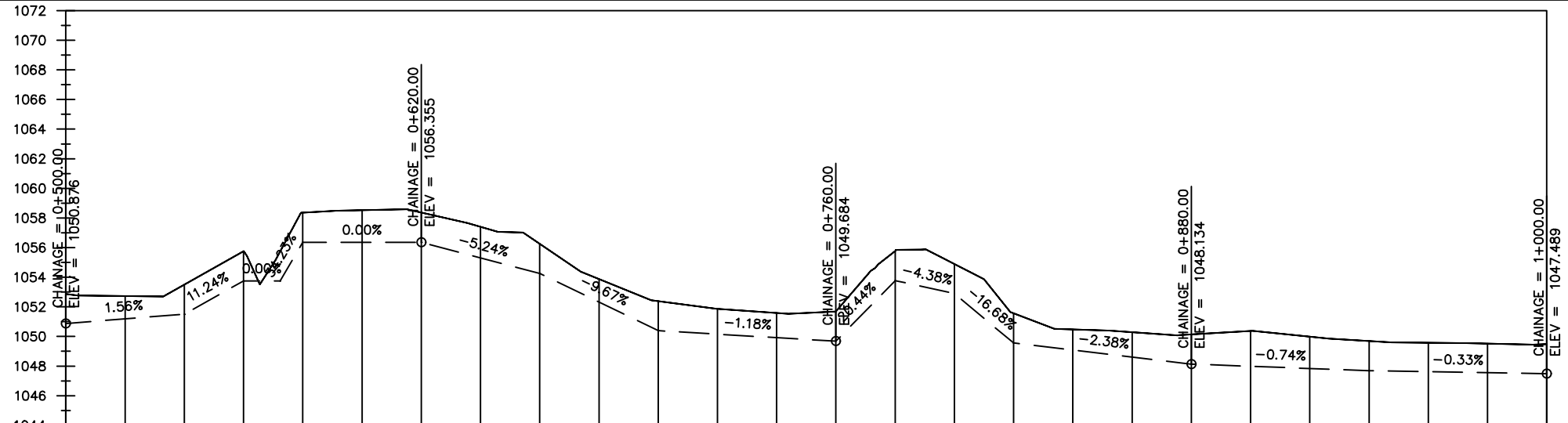
NYAGAK WATER SUPPLY AND SANITATION SYSTEM

REVISIONS :

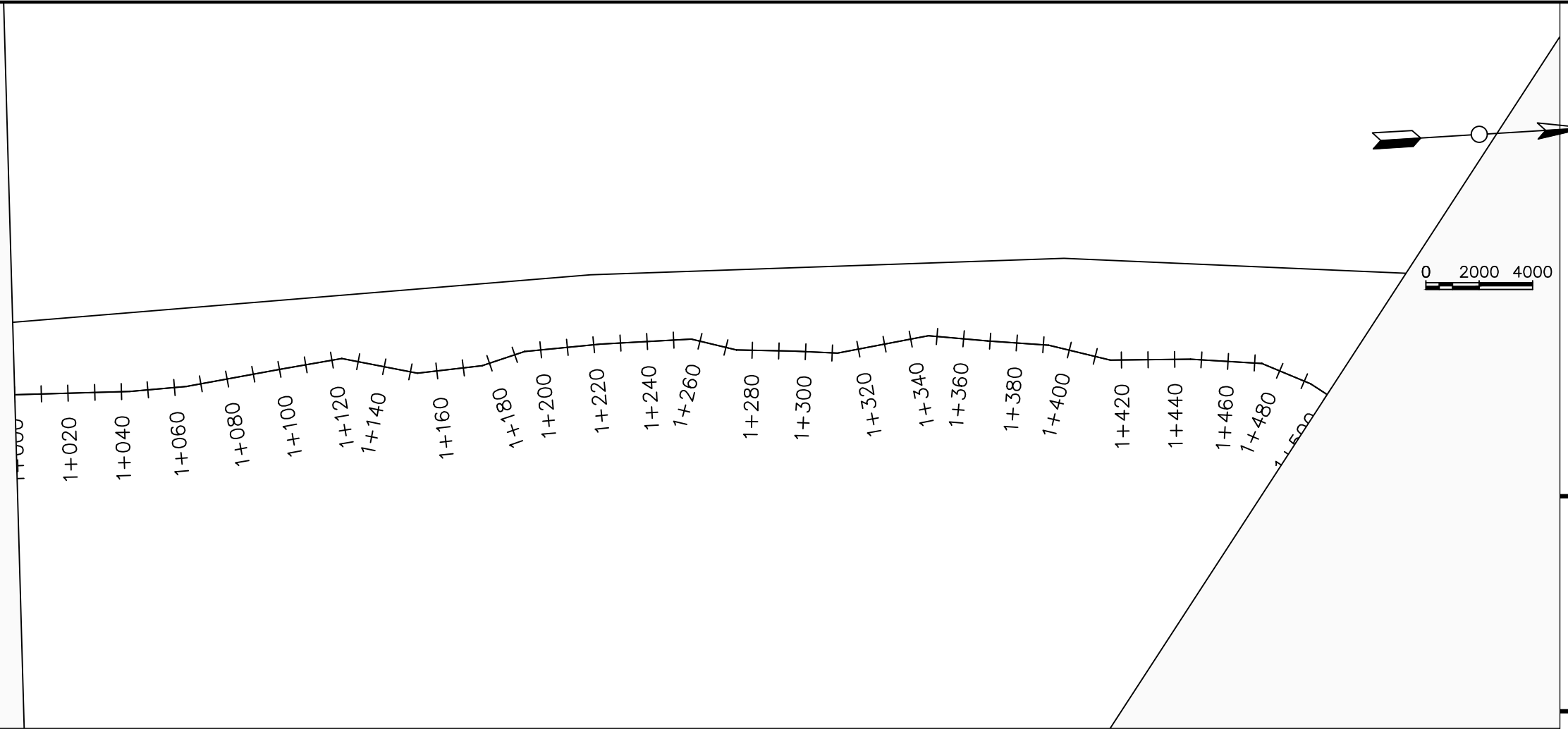
No	Date	Description

DRAWING TITLE : **RAW WATER MAIN**
0+500 - 1+000

Surveyed by:	R.K
Drawn by:	M.K
Designed by:	W.G.M
Checked by:	J.K.K
Date:	January 2023
DRG. No.:	NYA-RWM-001
Scale:	1:2000
Sheet No.:	2 of 13



Chainages (m)	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	0+940	0+960	0+980	1+000		
Ground Levels (masl)	1052.88	1052.73	1053.50	1055.75	1058.35	1058.53	1058.37	1057.40	1056.26	1053.88	1052.39	1051.87	1051.59	1051.68	1055.77	1052.90	1051.56	1050.47	1050.29	1050.13	1050.37	1049.99	1049.69	1049.57	1049.52	1049.49		
Invert Levels (masl)	1050.88	1051.50	1053.75	1053.75	1056.35	1056.35	1056.35	1054.26	1050.39	1049.68	1053.77	1052.90	1049.56	1048.13	1047.69	1047.49	1047.49	1047.49	1047.49	1047.49	1047.49	1047.49	1047.49	1047.49	1047.49	1047.49	1047.49	
Slope (%)	0.50%	1.56%	11.24%	0.00%	0.00%	0.00%	-5.24%	-9.67%	-1.18%	20.44%	-4.38%	-16.68%	-2.38%	-0.74%	-0.33%	0.41%												
Pipe Details	DN250PN10, STEEL																											



LEGEND

Plan

- Transmission Main
- Distribution Main
- Road
- Building
- Contours

Profile

- Ground Level
- Invert Level
- AV Air Valve
- WO Washout
- Node detail No.

CLIENT :

THE REPUBLIC OF UGANDA
MINISTRY OF WATER AND ENVIRONMENT

CO-FINANCED BY:

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CONSULTANT :

Alliance Consultants Ltd
In Association with

Infra-Consult Ltd

PROJECT :

ALA-ORA WATER SUPPLY AND SANITATION PROJECT

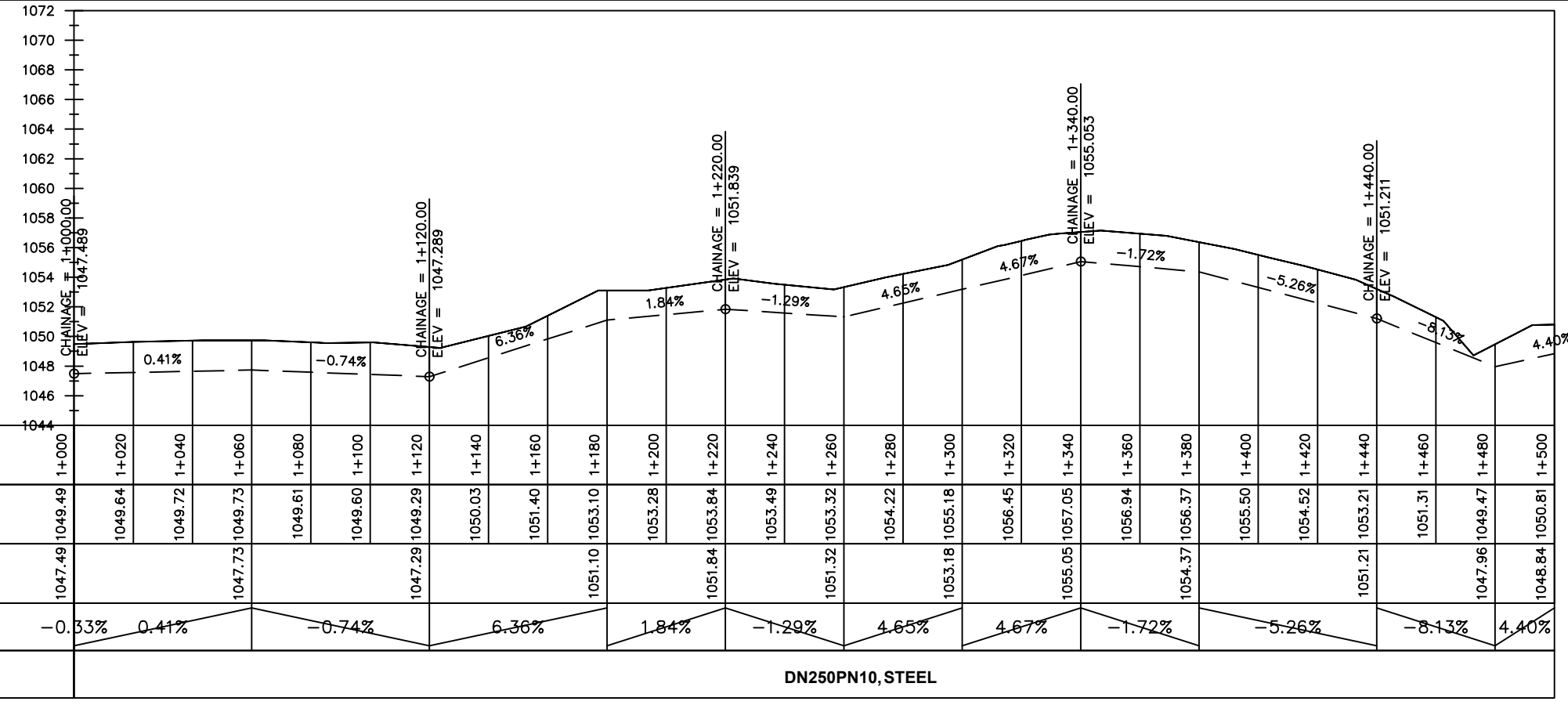
NYAGAK WATER SUPPLY AND SANITATION SYSTEM

REVISIONS :

No	Date	Description

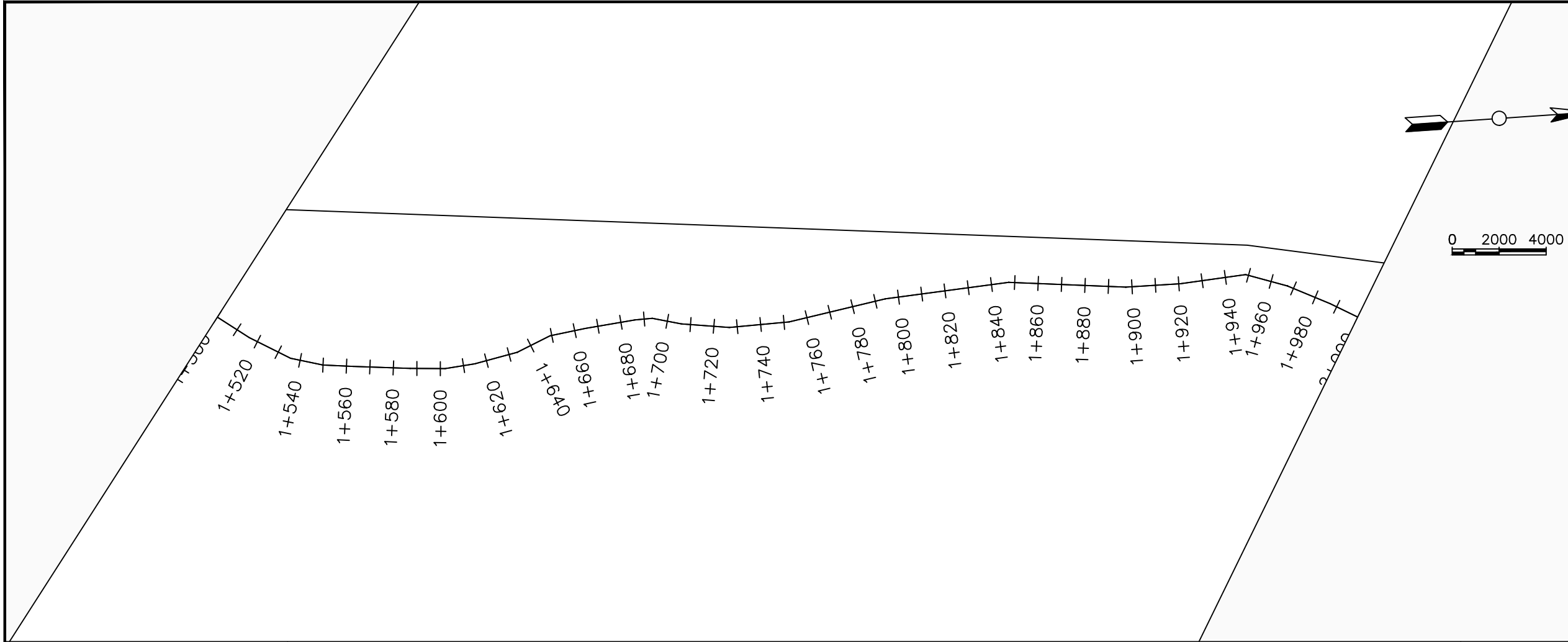
DRAWING TITLE : **RAW WATER MAIN**
1+000 - 1+500

Surveyed by:	R.K
Drawn by:	M.K
Designed by:	W.G.M
Checked by:	J.K.K
Date:	January 2023
DRG. No.:	NYA-RWM-001
Scale:	1:2000
Sheet No.:	3 of 13



Chainages (m)	Ground Levels (masl)	Invert Levels (masl)	Slope (%)
1+000	1049.49	1047.49	-0.33%
1+020	1049.64	1047.73	0.41%
1+040	1049.72	1047.73	-0.74%
1+060	1049.73	1047.73	6.36%
1+080	1049.61	1047.29	1.84%
1+100	1049.60	1051.10	-1.29%
1+120	1049.29	1051.84	4.65%
1+140	1050.03	1051.84	4.67%
1+160	1051.40	1051.32	-1.72%
1+180	1053.10	1051.32	-5.26%
1+200	1053.28	1051.32	-8.13%
1+220	1053.84	1051.32	4.40%
1+240	1053.49	1051.32	
1+260	1053.32	1051.32	
1+280	1054.22	1051.32	
1+300	1055.18	1051.32	
1+320	1056.45	1051.32	
1+340	1057.05	1051.32	
1+360	1056.94	1051.32	
1+380	1056.37	1051.32	
1+400	1055.50	1051.32	
1+420	1054.52	1051.32	
1+440	1053.21	1051.32	
1+460	1051.31	1051.32	
1+480	1049.47	1051.32	
1+500	1050.81	1051.32	

Pipe Details: **DN250PN10, STEEL**



LEGEND

Plan

- Transmission Main
- Distribution Main
- Road
- Building
- Contours

Profile

- Ground Level
- Invert Level
- AV Air Valve
- WO Washout
- Node detail No.

CLIENT :

THE REPUBLIC OF UGANDA
MINISTRY OF WATER AND ENVIRONMENT

CO-FINANCED BY:

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CONSULTANT :

Alliance Consultants Ltd
In Association with

Infra-Consult Ltd

PROJECT :

ALA-ORA WATER SUPPLY AND SANITATION PROJECT

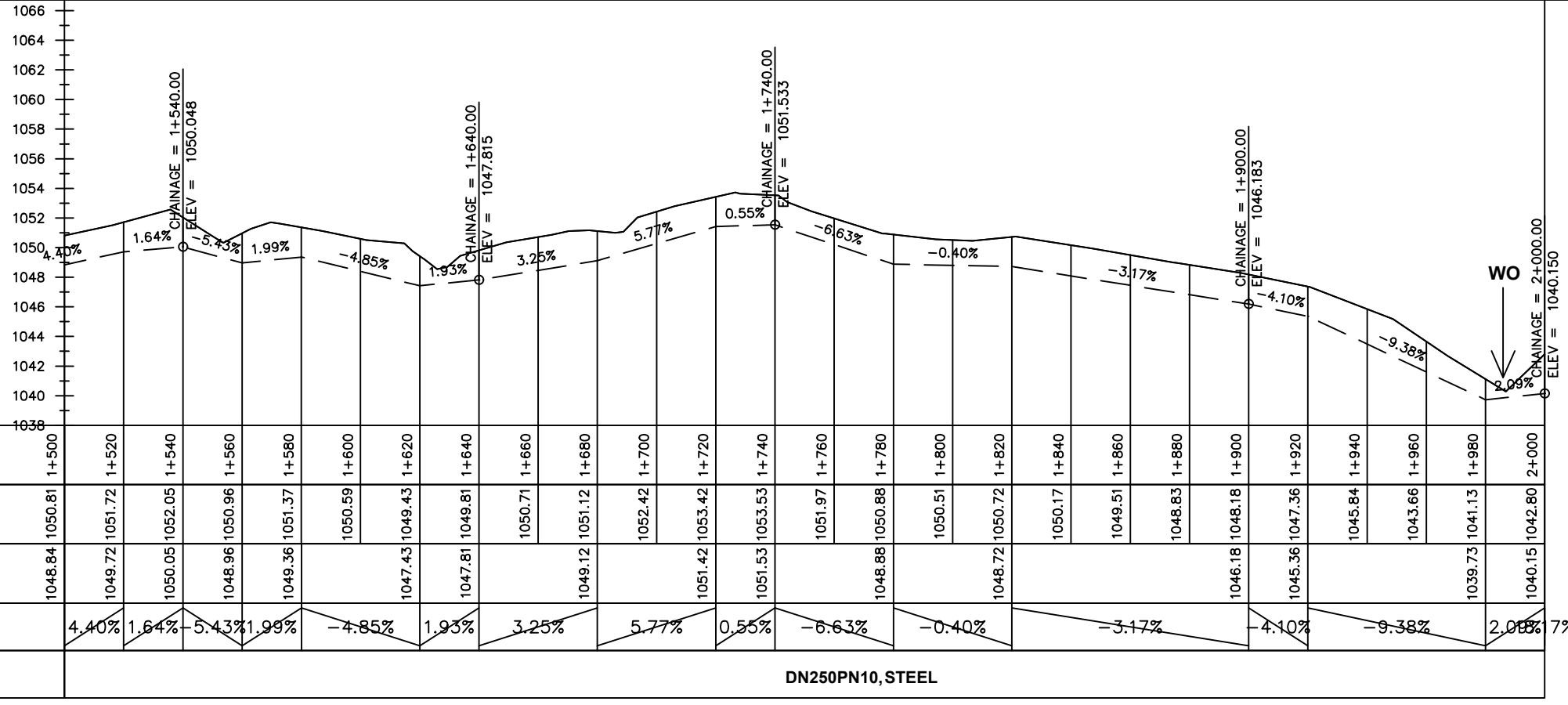
NYAGAK WATER SUPPLY AND SANITATION SYSTEM

REVISIONS :

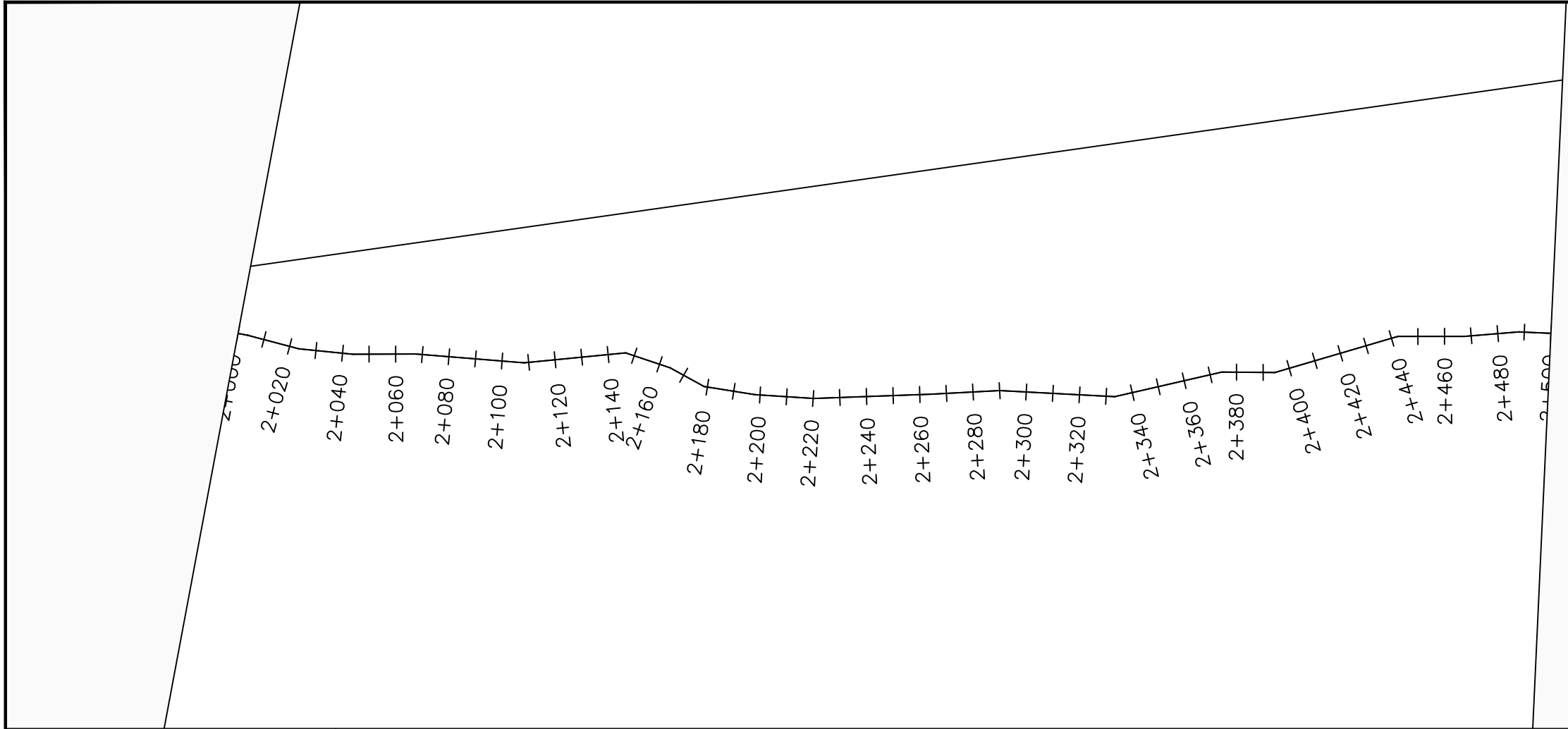
No	Date	Description

DRAWING TITLE : **RAW WATER MAIN**
1+500 - 2+000

Surveyed by:	R.K
Drawn by:	M.K
Designed by:	W.G.M
Checked by:	J.K.K
Date:	January 2023
DRG. No.:	NYA-RWM-001
Scale:	1:2000
Sheet No.:	4 of 13



Chainages (m)	1+500	1+520	1+540	1+560	1+580	1+600	1+620	1+640	1+660	1+680	1+700	1+720	1+740	1+760	1+780	1+800	1+820	1+840	1+860	1+880	1+900	1+920	1+940	1+960	1+980	2+000		
Ground Levels (masl)	1048.84	1049.72	1050.05	1048.96	1049.36	1050.59	1047.43	1047.81	1050.71	1049.12	1052.42	1051.42	1051.53	1051.97	1048.88	1050.51	1048.72	1050.17	1049.51	1048.83	1046.18	1045.36	1045.84	1043.66	1041.13	1040.15		
Invert Levels (masl)	1048.84	1049.72	1050.05	1048.96	1049.36	1049.43	1047.43	1047.81	1049.43	1049.12	1051.42	1051.42	1051.53	1051.53	1048.88	1048.88	1048.72	1048.72	1048.72	1048.72	1046.18	1045.36	1045.36	1045.36	1045.36	1039.73	1040.15	
Slope (%)		4.40%	1.64%	-5.43%	1.99%	-4.85%		1.93%	3.25%		5.77%		0.55%	-6.63%		-0.40%			-3.17%		-4.10%		-9.38%		2.09%	7%		
Pipe Details	DN250PN10, STEEL																											



LEGEND

Plan

- Transmission Main
- Distribution Main
- Road
- Building
- Contours

Profile

- Ground Level
- Invert Level
- AV Air Valve
- WO Washout
- Node detail No.

CLIENT :

THE REPUBLIC OF UGANDA
MINISTRY OF WATER AND ENVIRONMENT

CO-FINANCED BY:

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CONSULTANT :

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In Association with

Infra-Consult Ltd

PROJECT :

ALA-ORA WATER SUPPLY AND SANITATION PROJECT

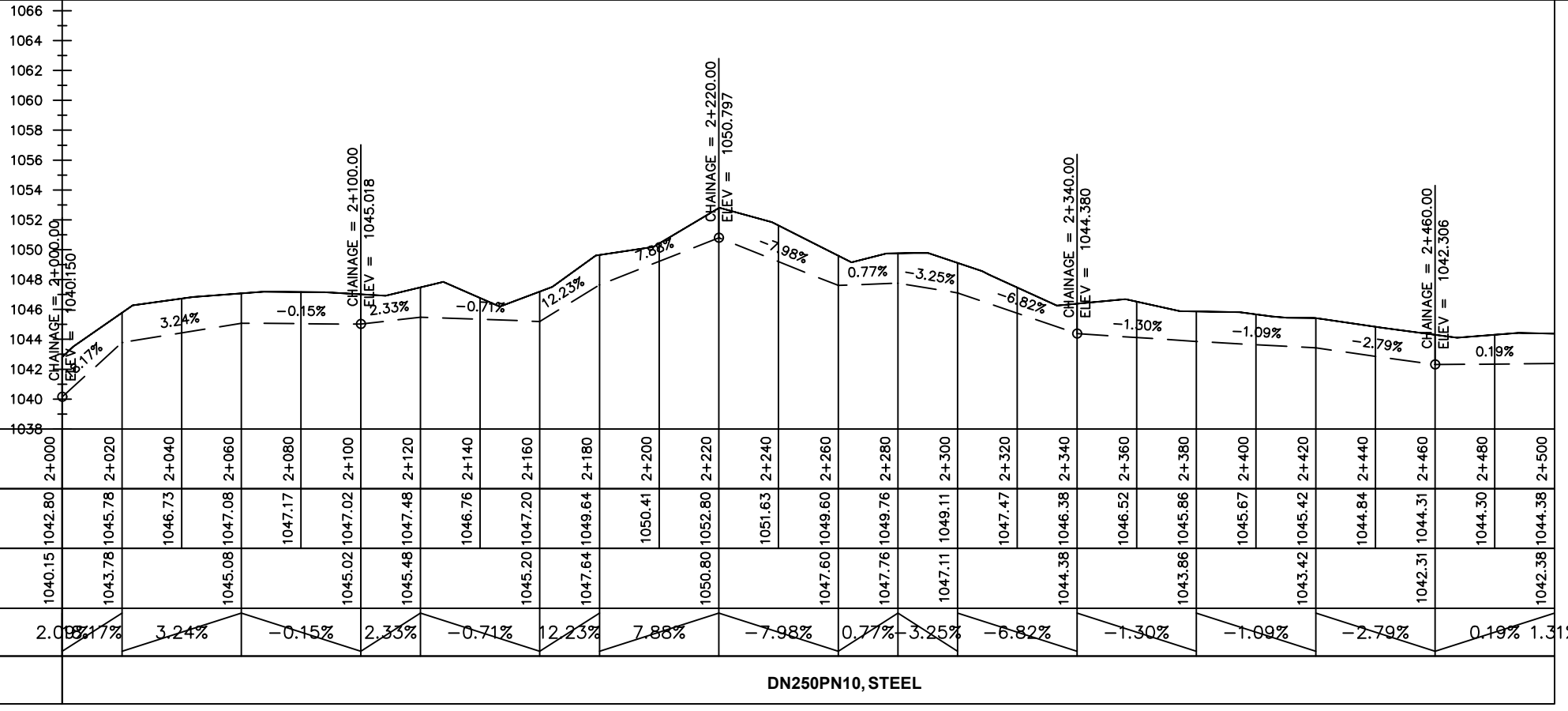
NYAGAK WATER SUPPLY AND SANITATION SYSTEM

REVISIONS :

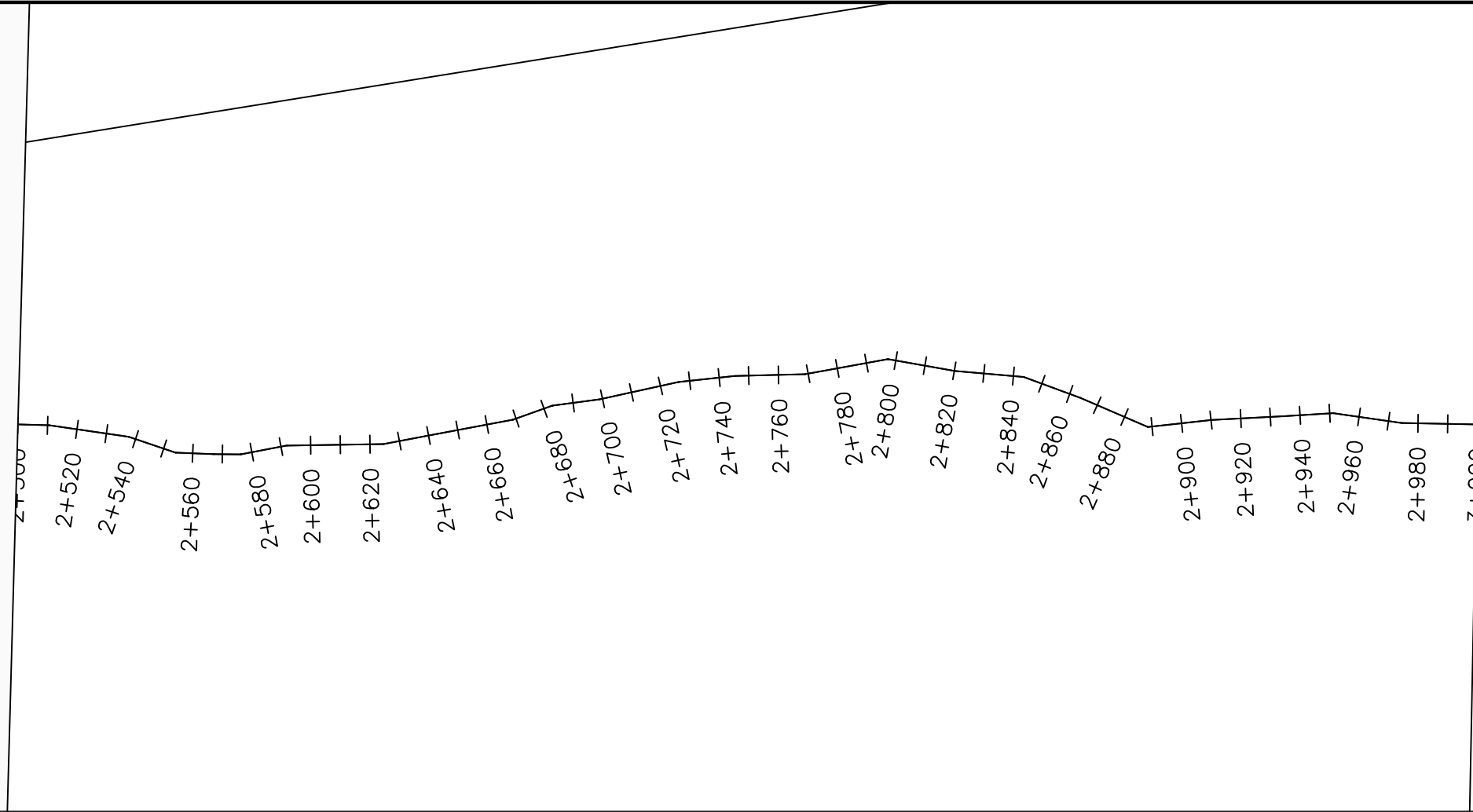
No	Date	Description

DRAWING TITLE : **RAW WATER MAIN**
2+000 - 2+500

Surveyed by:	R.K
Drawn by:	M.K
Designed by:	W.G.M
Checked by:	J.K.K
Date:	January 2023
DRG. No.:	NYA-RWM-001
Scale:	1:2000
Sheet No.:	5 of 13



Chainages (m)	2+000	2+020	2+040	2+060	2+080	2+100	2+120	2+140	2+160	2+180	2+200	2+220	2+240	2+260	2+280	2+300	2+320	2+340	2+360	2+380	2+400	2+420	2+440	2+460	2+480	2+500		
Ground Levels (masl)	1042.80	1045.78	1046.73	1047.08	1047.17	1047.02	1047.48	1046.76	1047.20	1049.64	1050.41	1052.80	1051.63	1049.60	1049.76	1049.11	1047.47	1046.38	1046.52	1045.86	1045.67	1045.42	1044.84	1044.31	1044.30	1044.38		
Invert Levels (masl)	1040.15	1043.78	1046.73	1045.08	1047.17	1045.02	1045.48	1046.76	1045.20	1047.64	1050.41	1050.80	1051.63	1049.60	1047.76	1047.11	1047.47	1044.38	1043.86	1043.42	1043.42	1043.42	1042.31	1042.31	1042.31	1042.38		
Slope (%)	2.08%	1.17%	3.24%	-0.15%	2.33%	-0.71%	12.23%	7.88%	-7.98%	0.77%	-3.25%	-6.82%	-1.30%	-1.09%	-2.79%	0.19%	1.31%											
Pipe Details	DN250PN10, STEEL																											



LEGEND

Plan

- Transmission Main
- Distribution Main
- Road
- Building
- Contours

Profile

- Ground Level
- Invert Level
- AV Air Valve
- WO Washout
- Node detail No.

CLIENT :

THE REPUBLIC OF UGANDA
MINISTRY OF WATER AND ENVIRONMENT

CO-FINANCED BY:

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CONSULTANT :

Alliance Consultants Ltd
In Association with

Infra-Consult Ltd

PROJECT :

ALA-ORA WATER SUPPLY AND SANITATION PROJECT

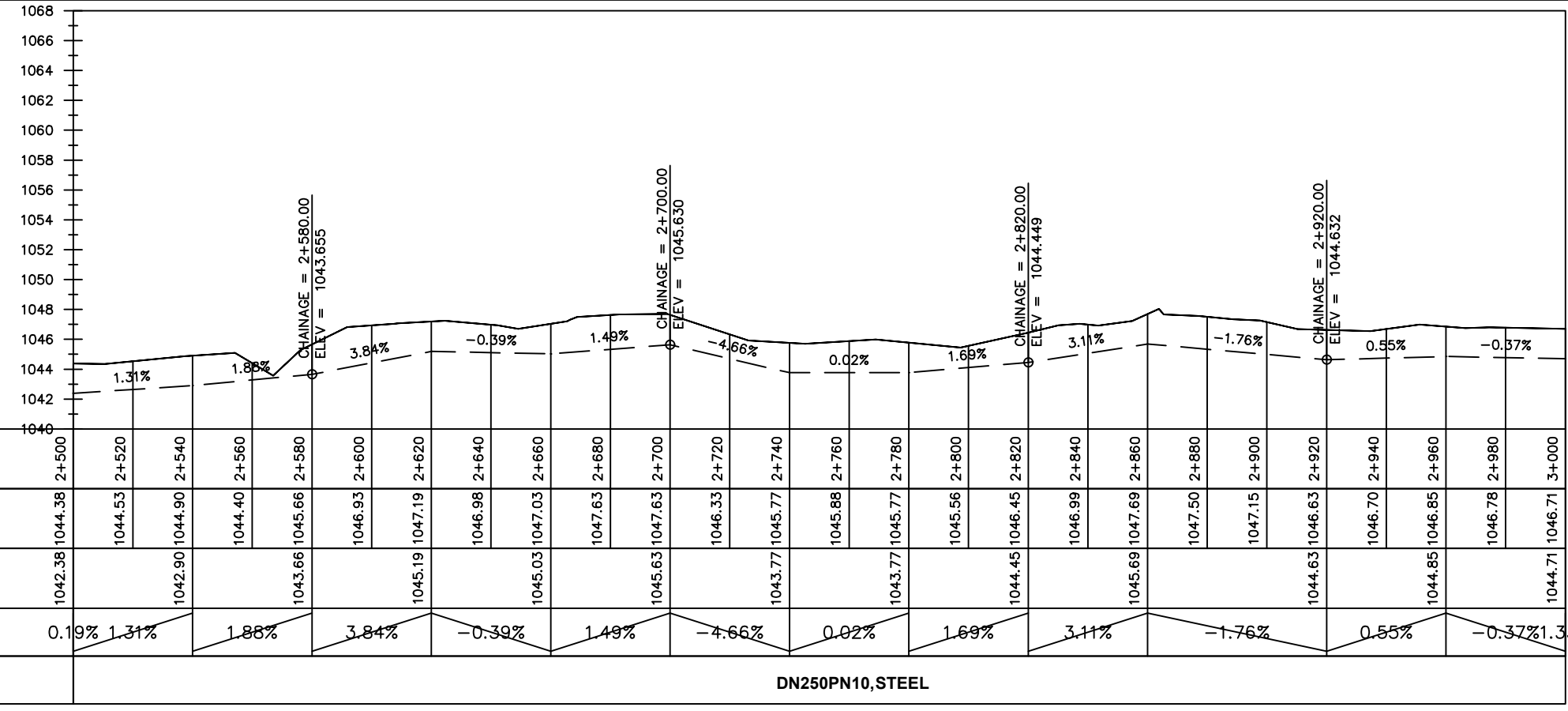
NYAGAK WATER SUPPLY AND SANITATION SYSTEM

REVISIONS :

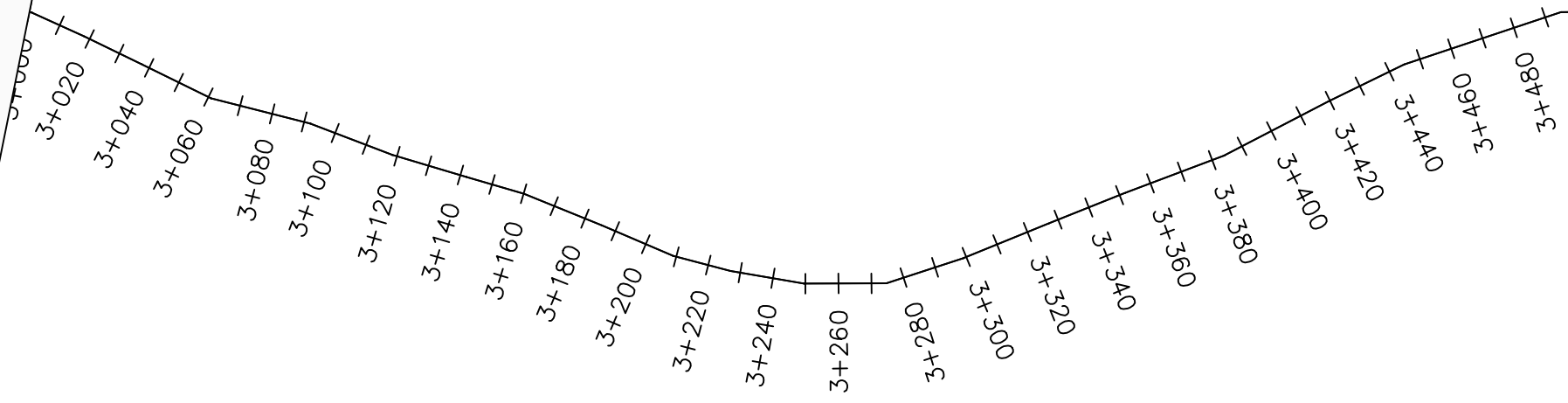
No	Date	Description

DRAWING TITLE : **RAW WATER MAIN**
2+500 - 3+000

Surveyed by:	R.K
Drawn by:	M.K
Designed by:	W.G.M
Checked by:	J.K.K
Date:	January 2023
DRG. No.:	NYA-RWM-001
Scale:	1:2000
Sheet No.:	6 of 13



Chainages (m)	2+500	2+520	2+540	2+560	2+580	2+600	2+620	2+640	2+660	2+680	2+700	2+720	2+740	2+760	2+780	2+800	2+820	2+840	2+860	2+880	2+900	2+920	2+940	2+960	2+980	3+000		
Ground Levels (masl)	1044.38	1044.53	1044.90	1044.40	1045.66	1046.93	1047.19	1046.98	1047.03	1047.63	1047.63	1046.33	1045.77	1045.88	1045.56	1045.56	1046.45	1046.99	1047.69	1047.50	1047.15	1046.63	1046.70	1046.85	1046.78	1046.71		
Invert Levels (masl)	1042.38		1042.90		1043.66		1045.19		1045.03		1045.63		1043.77		1043.77		1044.45		1045.69		1044.63		1044.85		1044.85	1044.71		
Slope (%)	0.19%	1.31%	1.88%	3.84%	-0.39%	1.49%	-4.66%	0.02%	1.69%	3.11%	-1.76%	0.55%	-0.37%	1.33%														
Pipe Details	DN250PN10, STEEL																											



LEGEND

Plan

- Transmission Main
- Distribution Main
- Road
- Building
- Contours

Profile

- Ground Level
- Invert Level
- AV Air Valve
- WO Washout
- Node detail No.

CLIENT :

THE REPUBLIC OF UGANDA
MINISTRY OF WATER AND ENVIRONMENT

CO-FINANCED BY:

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CONSULTANT :

Alliance Consultants Ltd
In Association with

Infra-Consult Ltd

PROJECT :

ALA-ORA WATER SUPPLY AND SANITATION PROJECT

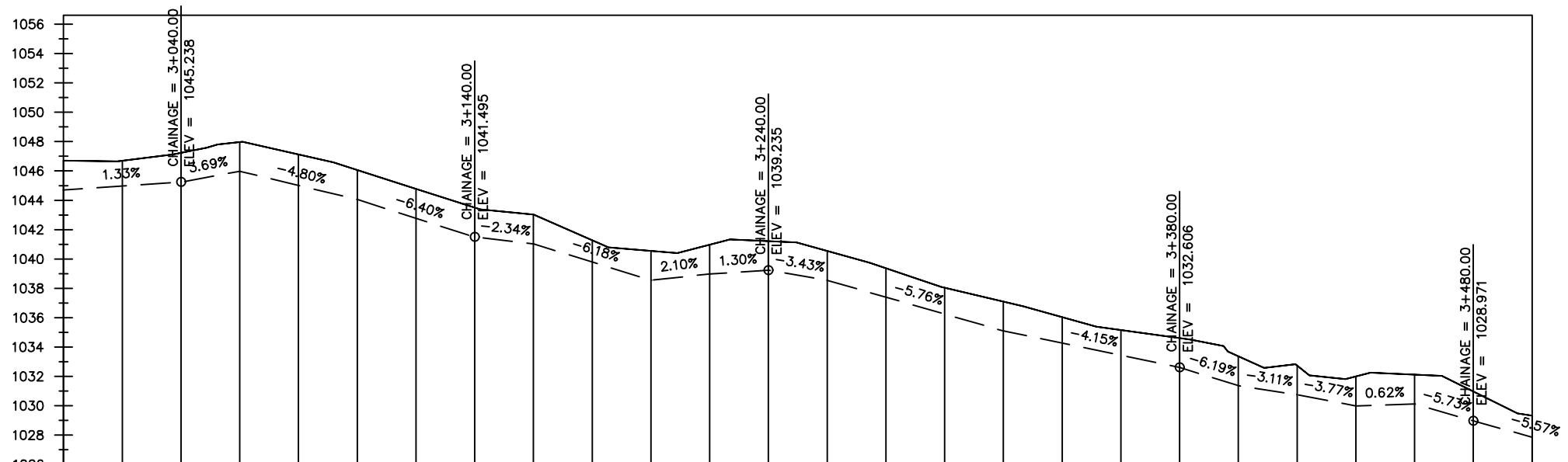
NYAGAK WATER SUPPLY AND SANITATION SYSTEM

REVISIONS :

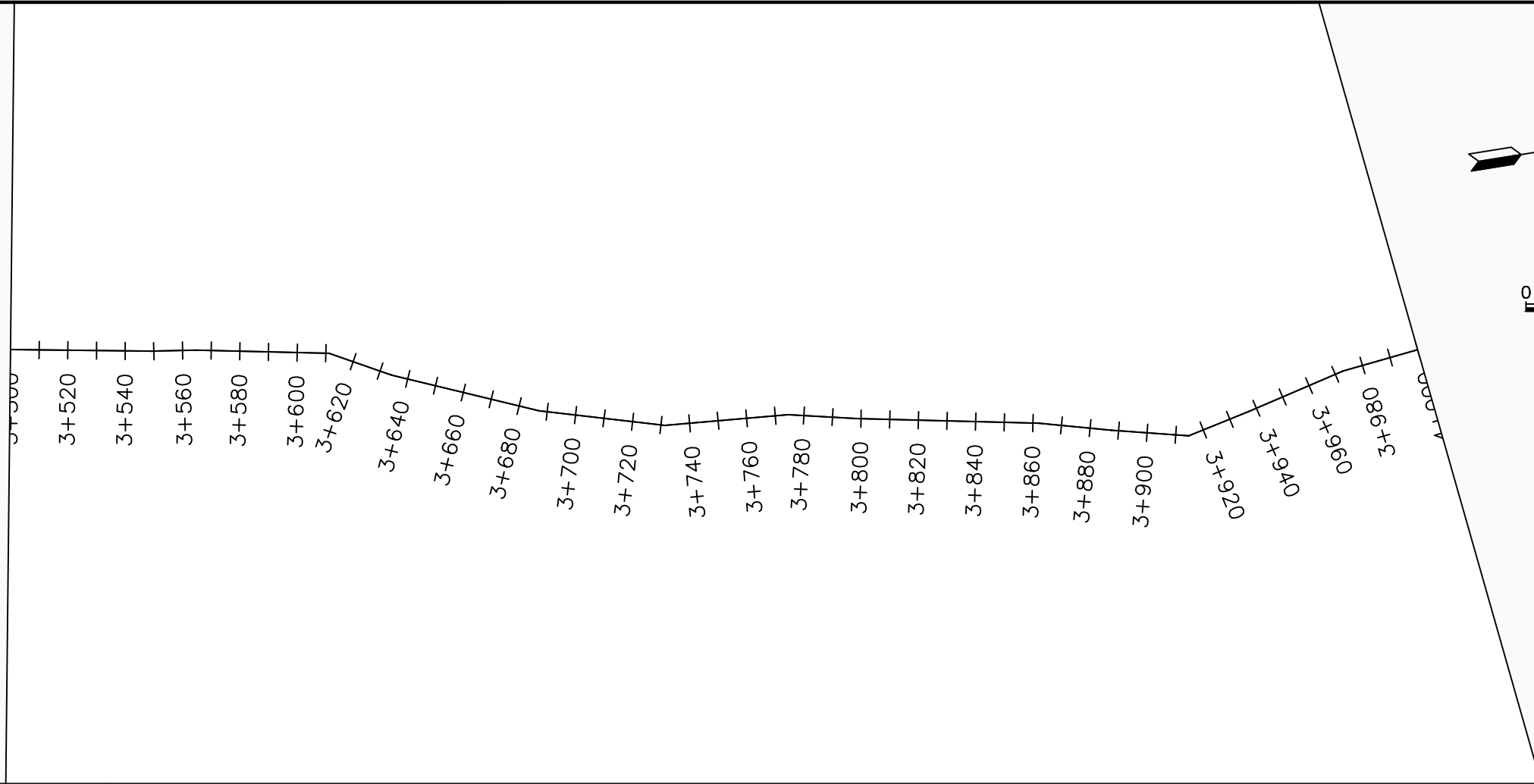
No	Date	Description

DRAWING TITLE : **RAW WATER MAIN**
3+000 - 3+500

Surveyed by:	R.K
Drawn by:	M.K
Designed by:	W.G.M
Checked by:	J.K.K
Date:	January 2023
DRG. No.:	NYA-RWM-001
Scale:	1:2000
Sheet No.:	7 of 13



Chainages (m)	Ground Levels (masl)	Invert Levels (masl)	Slope (%)	Pipe Details
3+000	1044.71	1044.71	-0.37%	DN250PN10, STEEL
3+020	1046.70	1045.24	1.33%	
3+040	1047.24	1045.98	3.69%	
3+060	1047.98	1044.05	-4.80%	
3+080	1047.12	1044.77	-6.40%	
3+100	1046.05	1041.50	-2.34%	
3+120	1044.77	1041.03	-6.18%	
3+140	1043.50	1038.55	2.10%	
3+160	1043.03	1038.98	1.30%	
3+180	1041.28	1039.24	-3.43%	
3+200	1040.55	1038.55	-5.76%	
3+220	1040.98	1035.10	-4.15%	
3+240	1041.22	1032.61	-6.19%	
3+260	1040.55	1031.37	-3.11%	
3+280	1039.37	1030.74	-3.77%	
3+300	1038.04	1029.99	0.62%	
3+320	1037.10	1030.12	-5.73%	
3+340	1036.03	1028.97	-5.57%	
3+360	1035.15	1027.86		
3+380	1034.61			
3+400	1033.37			
3+420	1032.74			
3+440	1031.99			
3+460	1032.12			
3+480	1030.97			
3+500	1029.33			



LEGEND

Plan

- Transmission Main
- Distribution Main
- Road
- Building
- Contours

Profile

- Ground Level
- Invert Level
- AV Air Valve
- WO Washout
- Node detail No.

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PROJECT :

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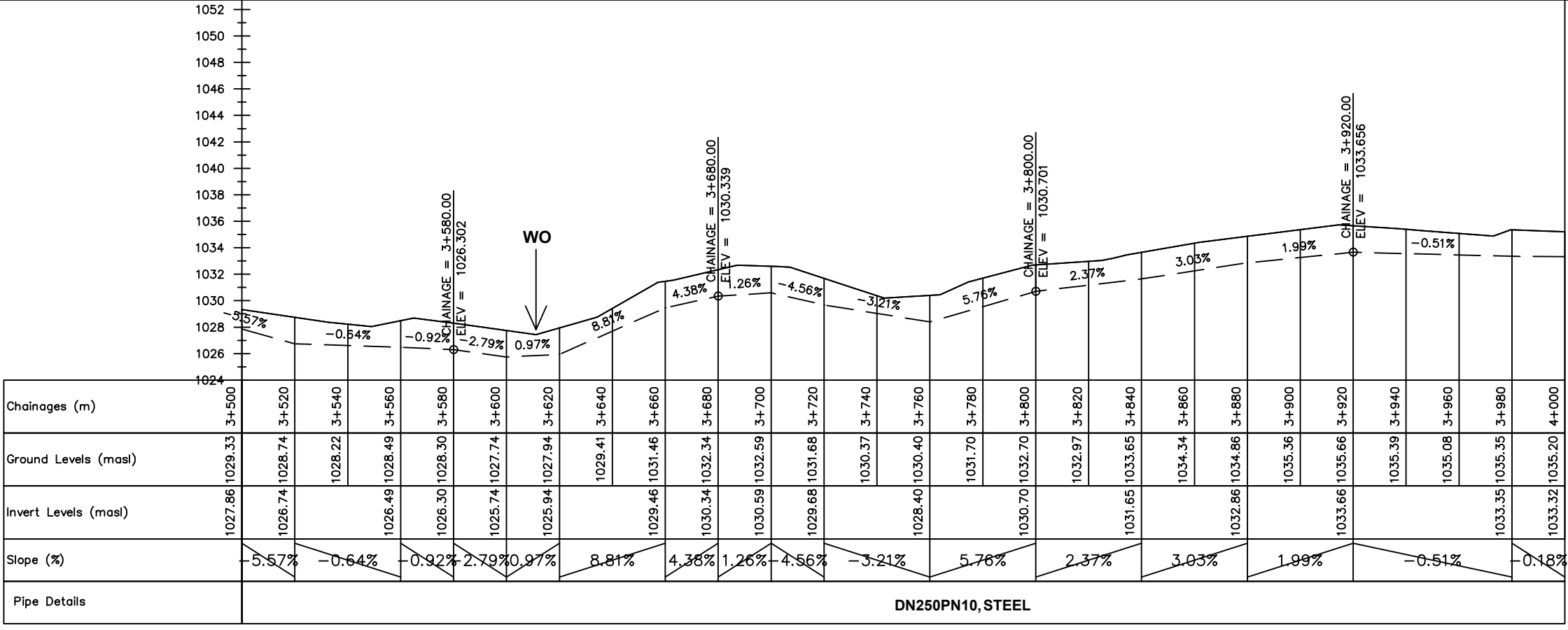
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REVISIONS :

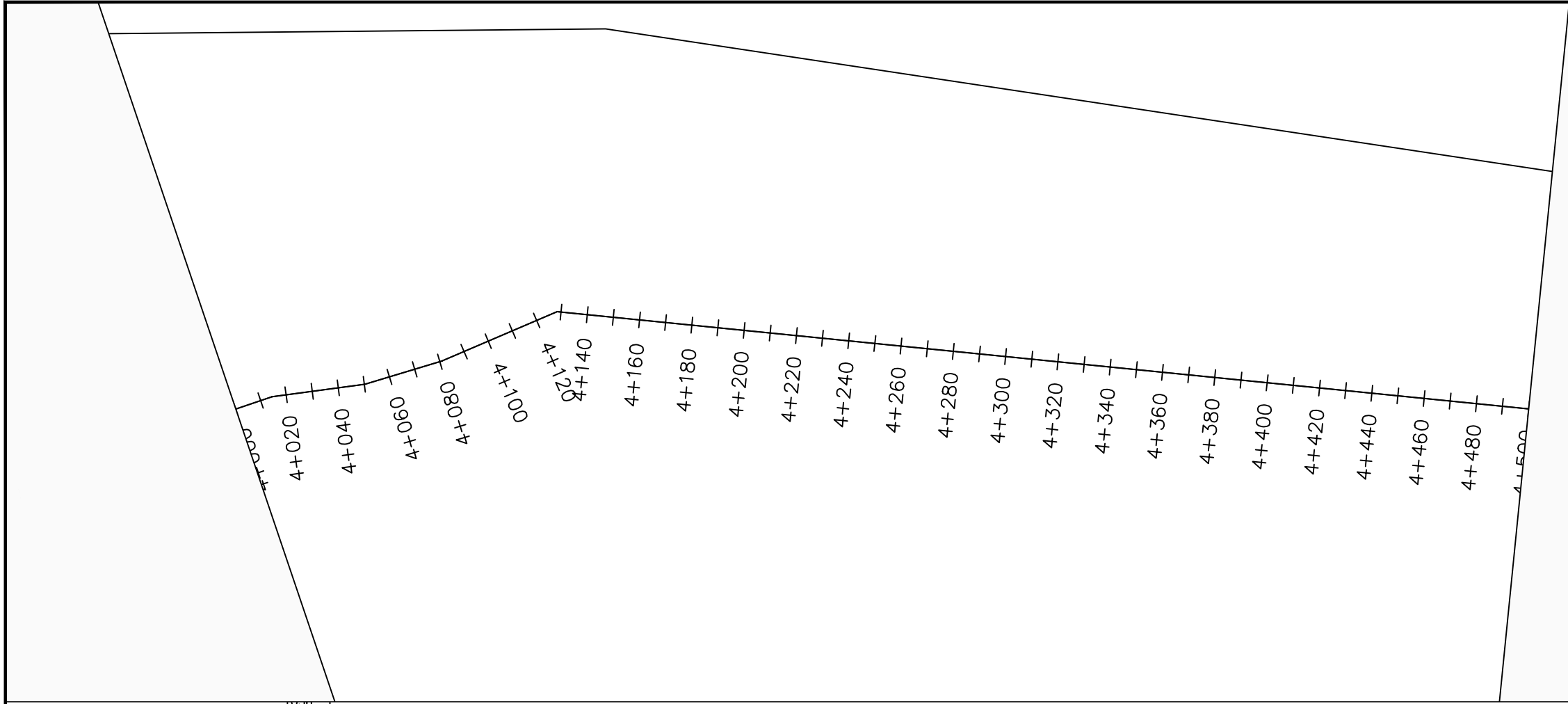
No	Date	Description

DRAWING TITLE : **RAW WATER MAIN**
3+500 - 4+000

Surveyed by:	R.K
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Designed by:	W.G.M
Checked by:	J.K.K
Date:	January 2023
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Scale:	1:2000
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DN250PN10, STEEL



LEGEND

Plan

- Transmission Main
- Distribution Main
- Road
- Building
- Contours

Profile

- Ground Level
- Invert Level
- AV Air Valve
- WO Washout
- Node detail No.

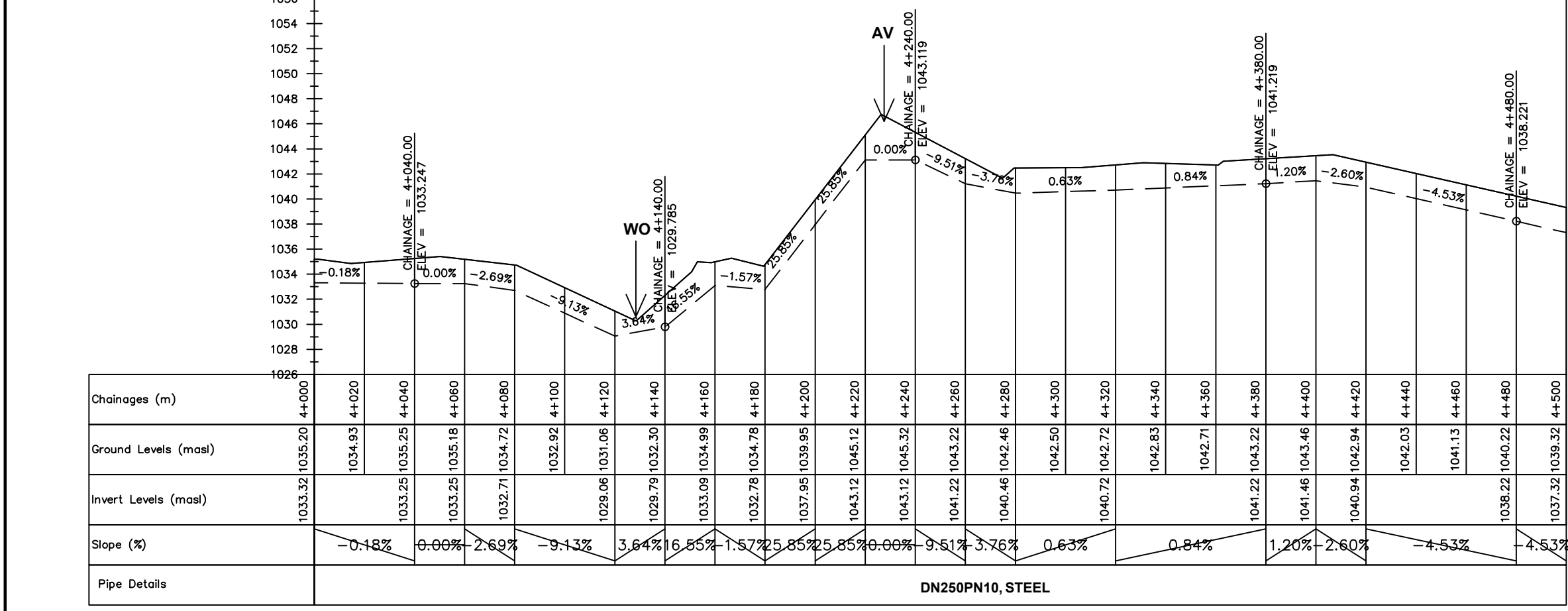
0 2000 4000

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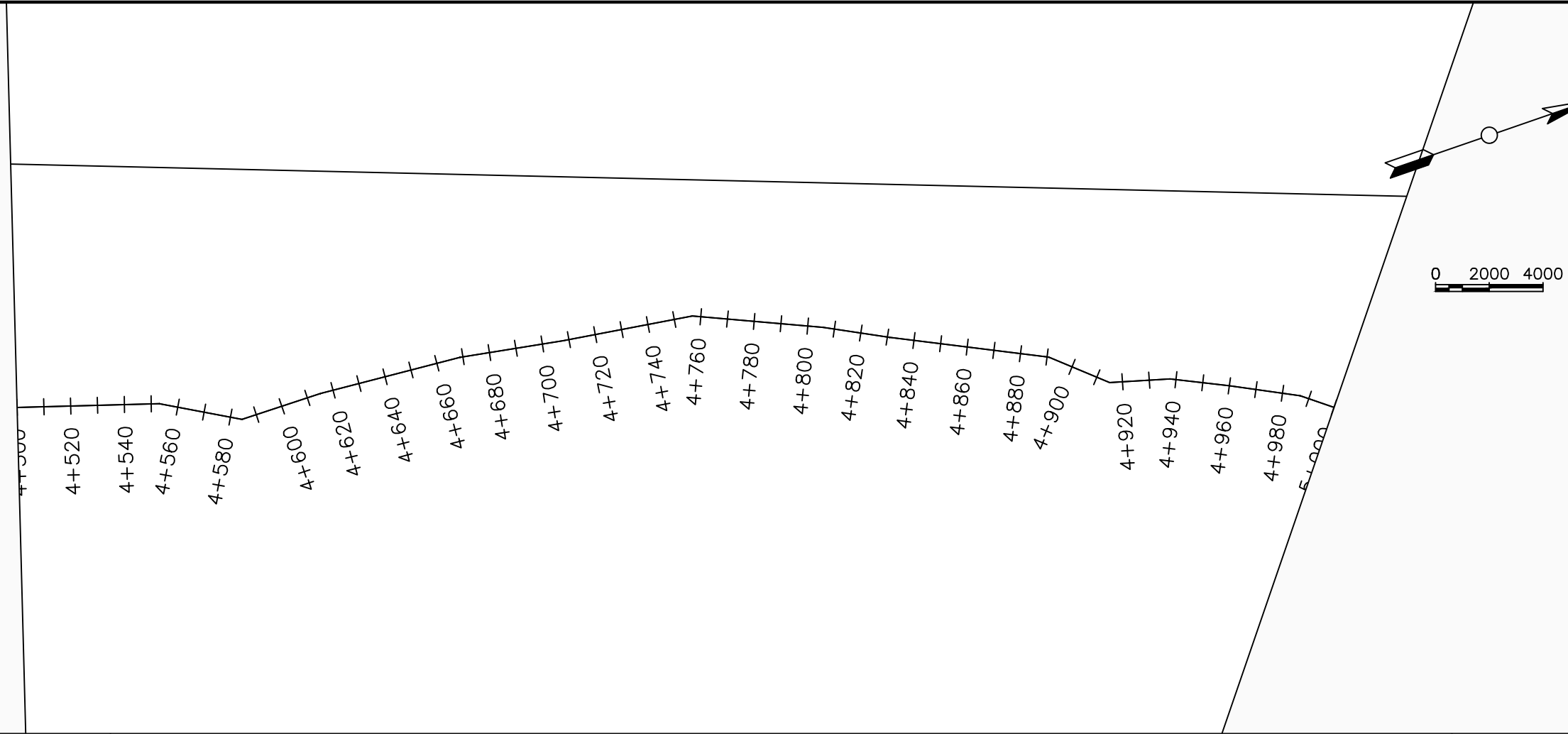
NYAGAK WATER SUPPLY AND SANITATION SYSTEM

REVISIONS :

No	Date	Description

DRAWING TITLE : **RAW WATER MAIN**
4+000 - 4+500

Surveyed by:	R.K
Drawn by:	M.K
Designed by:	W.G.M
Checked by:	J.K.K
Date:	January 2023
DRG. No.:	NYA-RWM-001
Scale:	1:2000
Sheet No.:	9 of 13



LEGEND

Plan

- Transmission Main
- Distribution Main
- Road
- Building
- Contours

Profile

- Ground Level
- Invert Level
- AV Air Valve
- WO Washout
- Node detail No.

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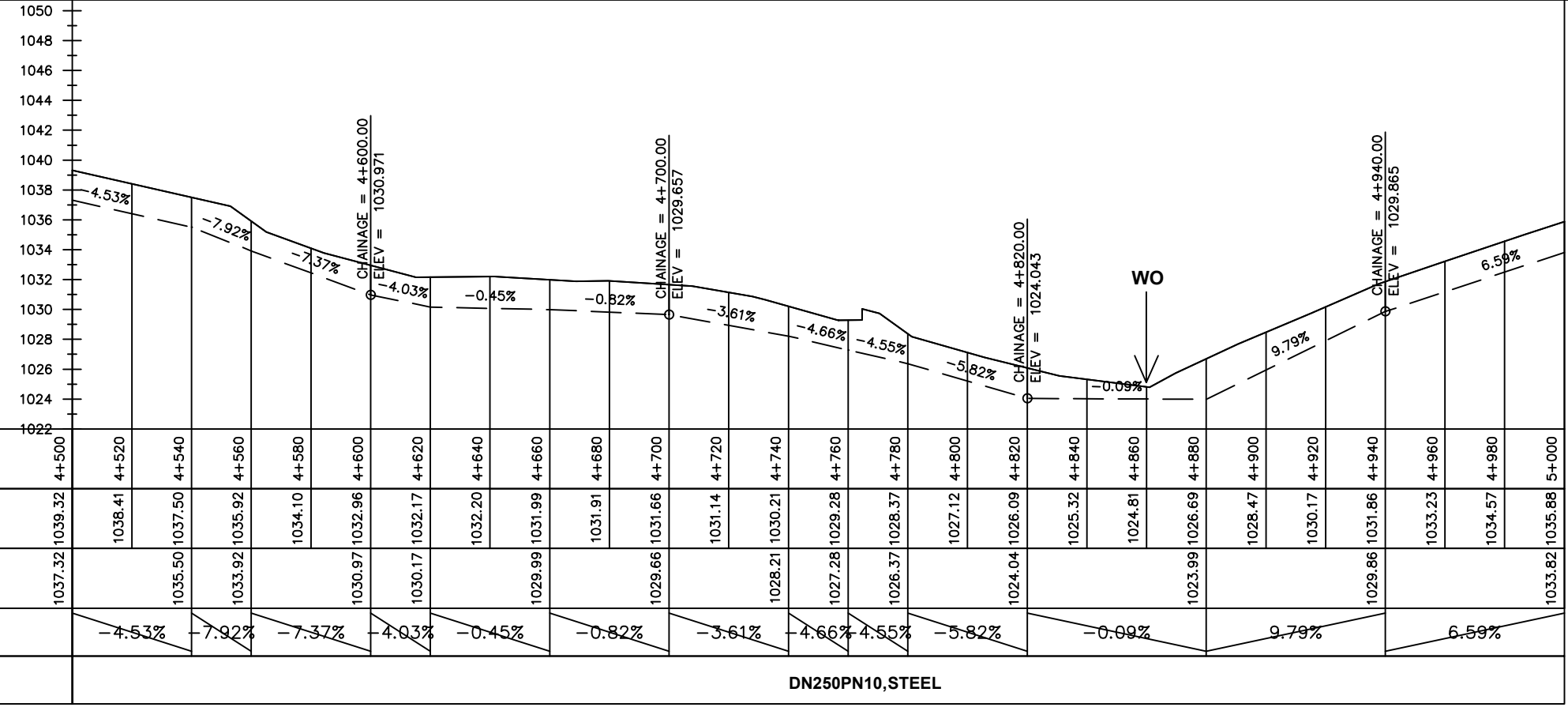
NYAGAK WATER SUPPLY AND SANITATION SYSTEM

REVISIONS :

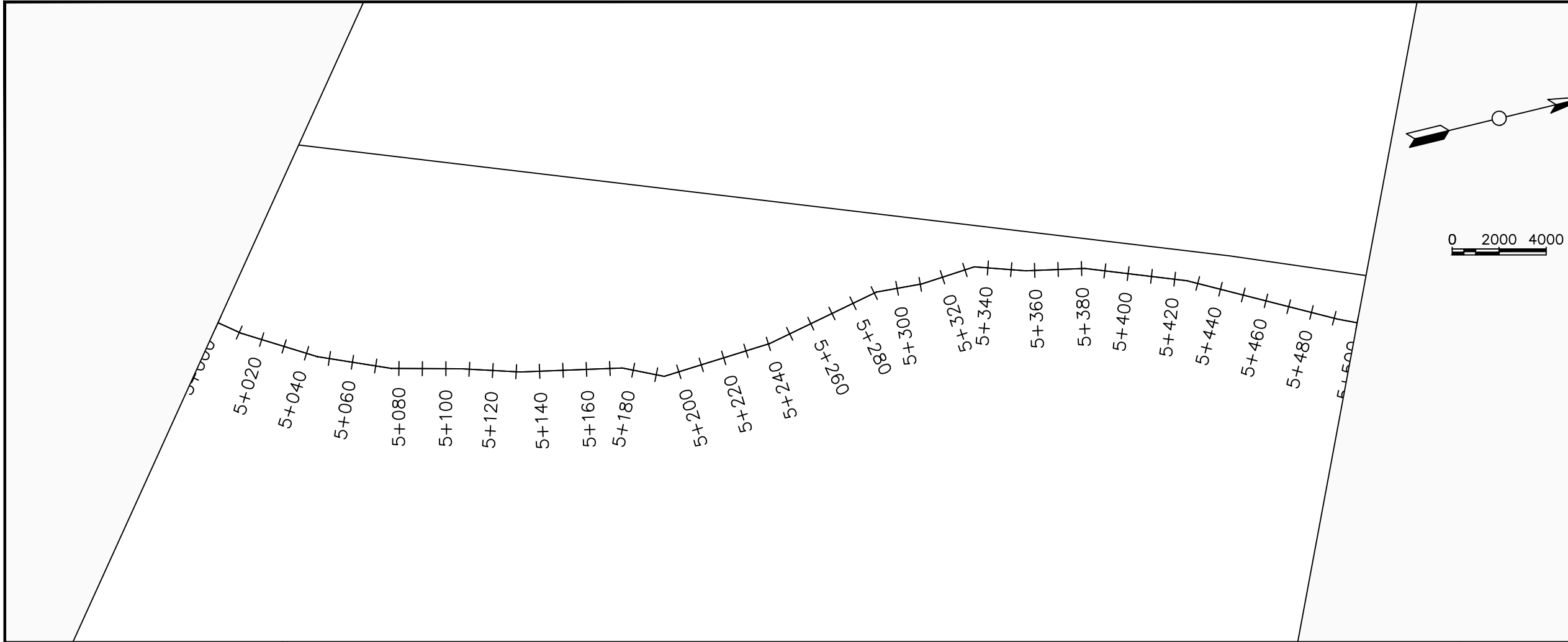
No	Date	Description

DRAWING TITLE : **RAW WATER MAIN**
4+500 - 5+000

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Designed by:	W.G.M
Checked by:	J.K.K
Date:	January 2023
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Scale:	1:2000
Sheet No.:	10 of 13



Chainages (m)	4+500	4+520	4+540	4+560	4+580	4+600	4+620	4+640	4+660	4+680	4+700	4+720	4+740	4+760	4+780	4+800	4+820	4+840	4+860	4+880	4+900	4+920	4+940	4+960	4+980	5+000	
Ground Levels (masl)	1037.32	1038.41	1037.50	1035.92	1034.10	1032.96	1032.17	1032.20	1031.99	1031.91	1031.66	1031.14	1030.21	1029.28	1028.37	1027.12	1026.09	1025.32	1024.81	1026.69	1028.47	1030.17	1031.86	1033.23	1034.57	1035.88	
Invert Levels (masl)	1037.32	1035.50	1033.92	1034.10	1030.97	1030.17	1029.99	1029.66	1028.21	1027.28	1026.37	1024.04	1023.99	1029.86	1033.82	1033.82	1033.82	1033.82	1033.82	1033.82	1033.82	1033.82	1033.82	1033.82	1033.82	1033.82	1033.82
Slope (%)	-	-4.53%	-7.92%	-7.37%	-4.03%	-0.45%	-0.82%	-3.61%	-4.66%	-4.55%	-5.82%	-0.09%	9.79%	6.59%	-	-	-	-	-	-	-	-	-	-	-	-	
Pipe Details	DN250PN10, STEEL																										



LEGEND


Plan

- Transmission Main
- Distribution Main
- Road
- Building
- Contours

Profile

- Ground Level
- Invert Level
- AV Air Valve
- WO Washout
- Node detail No.

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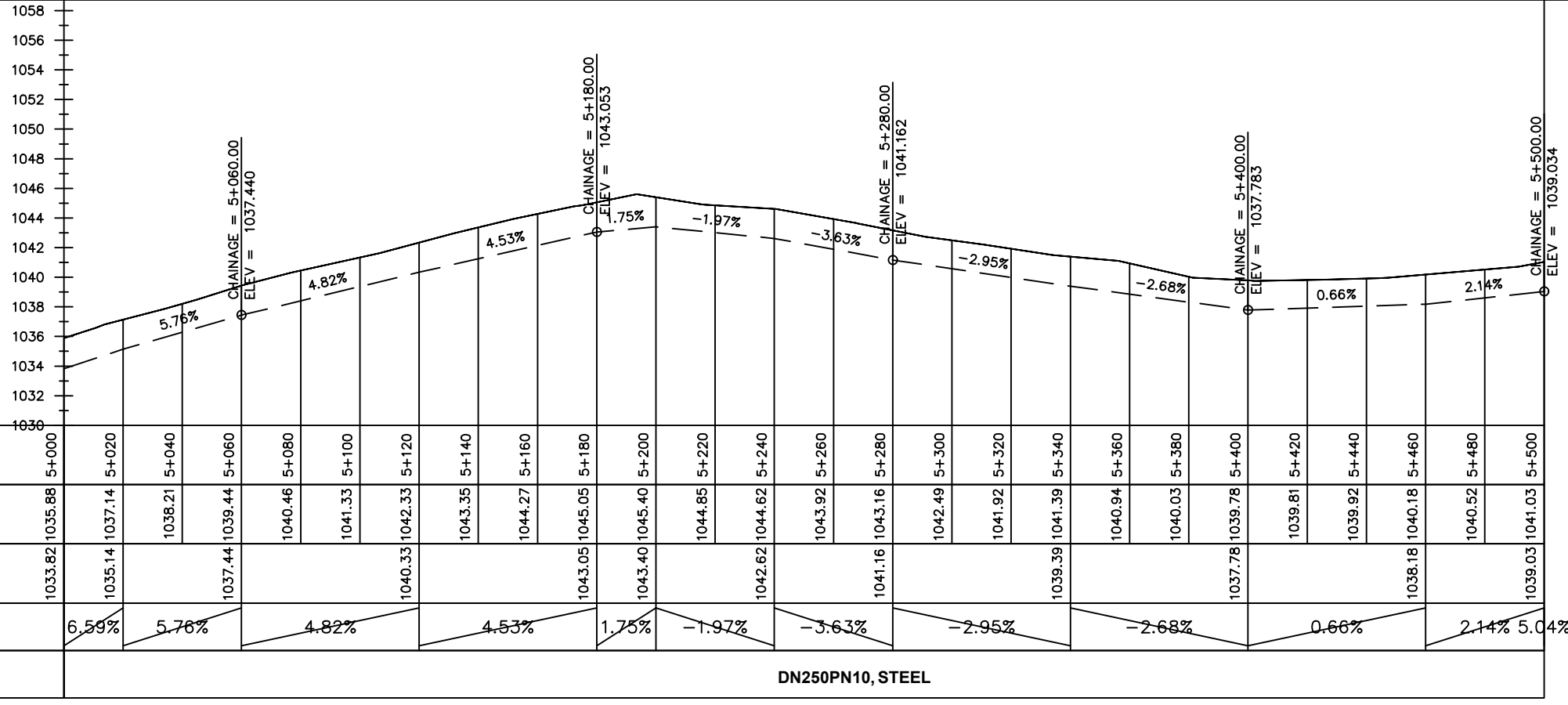
NYAGAK WATER SUPPLY AND SANITATION SYSTEM

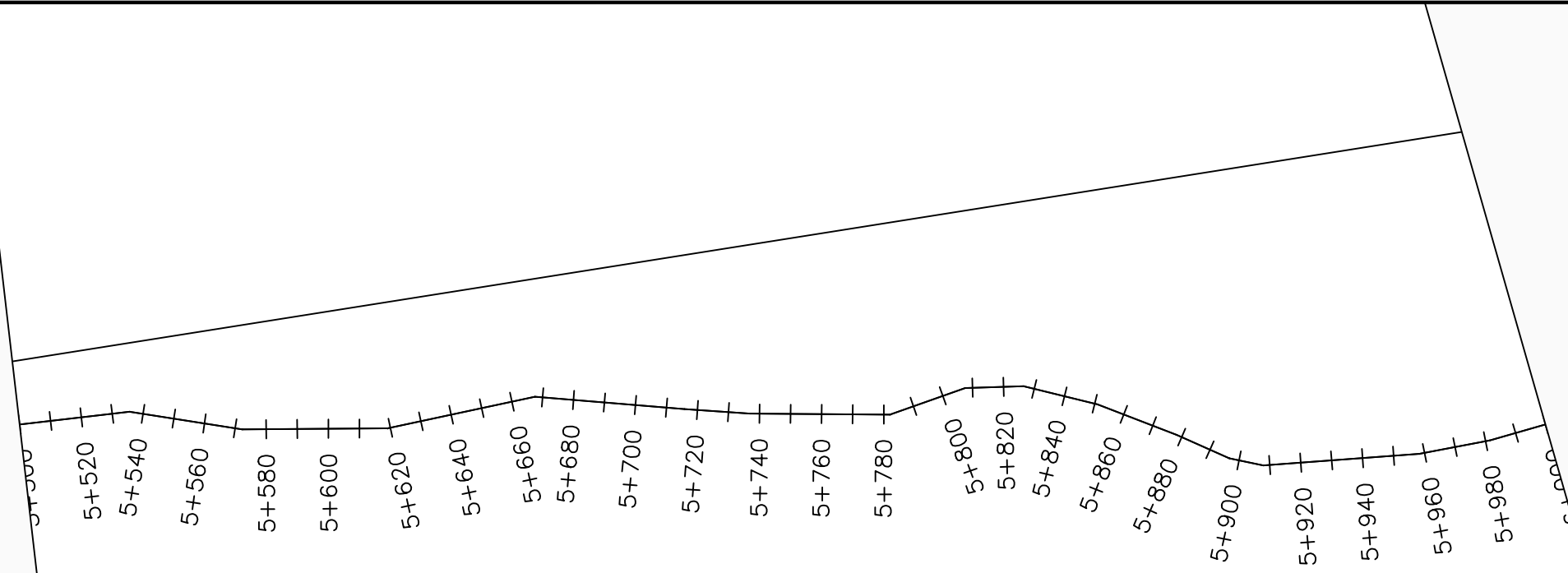
REVISIONS :

No	Date	Description

DRAWING TITLE : **RAW WATER MAIN**
5+000 - 5+500

Surveyed by:	R.K
Drawn by:	M.K
Designed by:	W.G.M
Checked by:	J.K.K
Date:	January 2023
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Scale:	1:2000
Sheet No.:	11 of 13





LEGEND

Plan

- Transmission Main
- Distribution Main
- Road
- Building
- Contours

Profile

- Ground Level
- Invert Level
- AV Air Valve
- WO Washout
- Node detail No.

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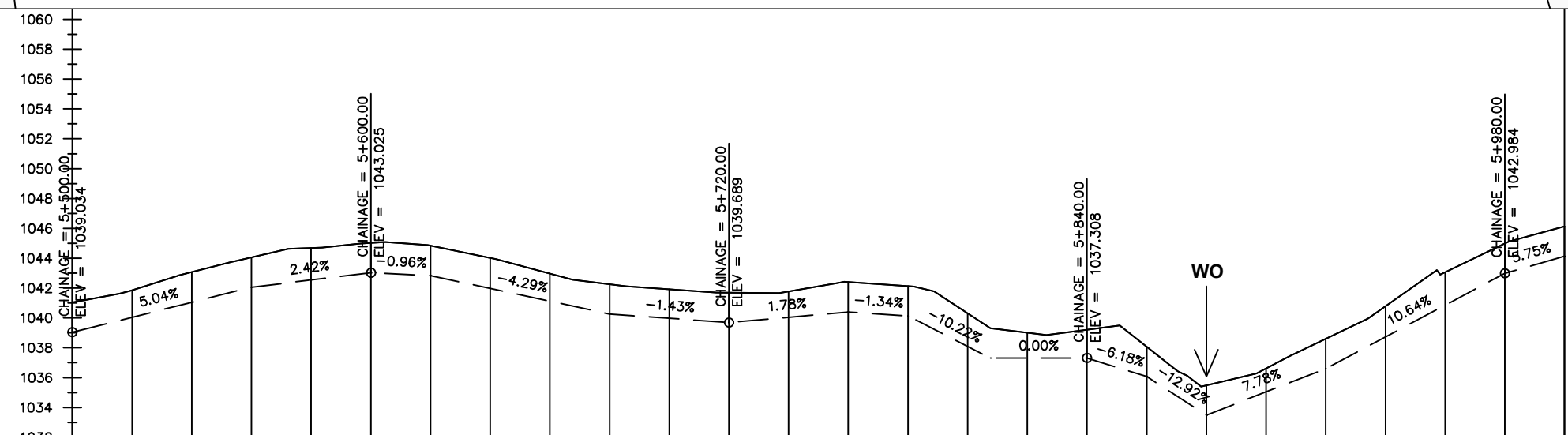
NYAGAK WATER SUPPLY AND SANITATION SYSTEM

REVISIONS :

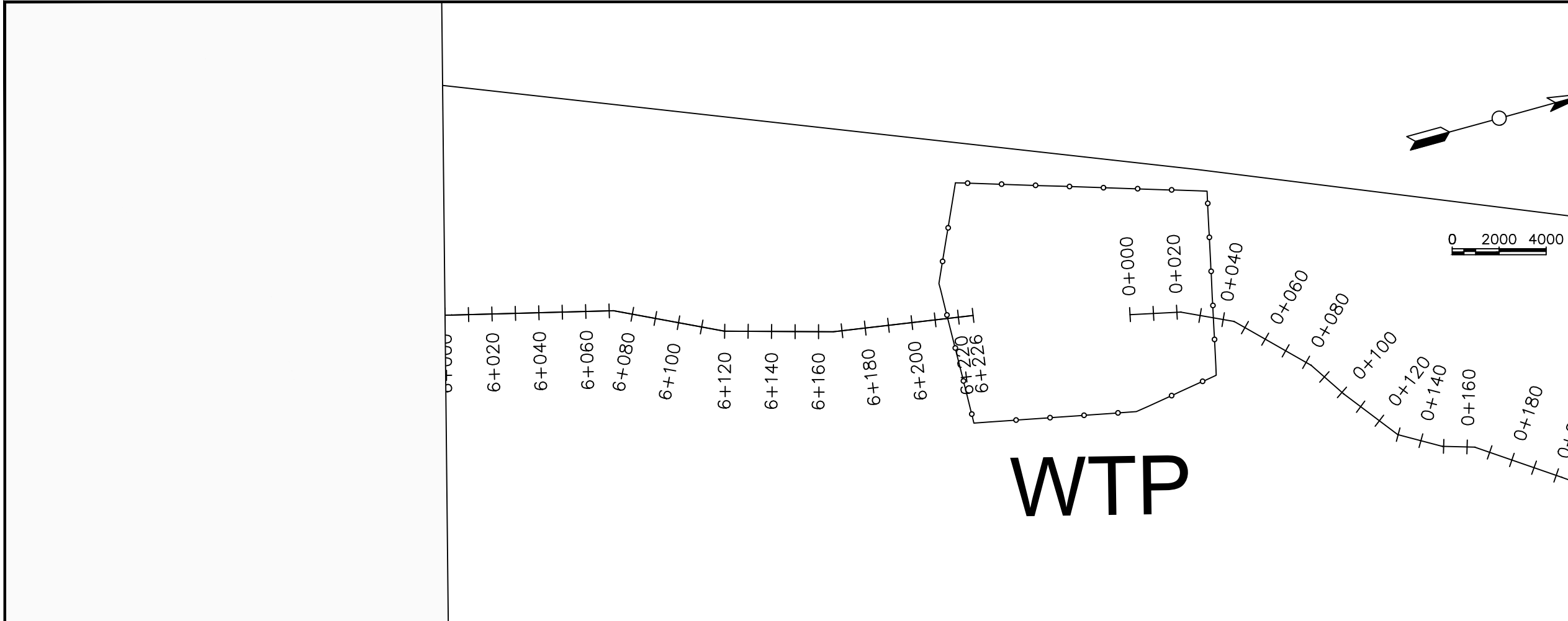
No	Date	Description

DRAWING TITLE : **RAW WATER MAIN**
5+500 - 6+000

Surveyed by:	R.K
Drawn by:	M.K
Designed by:	W.G.M
Checked by:	J.K.K
Date:	January 2023
DRG. No.:	NYA-RWM-001
Scale:	1:2000
Sheet No.:	12 of 13



Chainages (m)	5+500	5+520	5+540	5+560	5+580	5+600	5+620	5+640	5+660	5+680	5+700	5+720	5+740	5+760	5+780	5+800	5+820	5+840	5+860	5+880	5+900	5+920	5+940	5+960	5+980	6+000		
Ground Levels (masl)	1041.03	1041.85	1043.07	1044.06	1044.69	1045.02	1044.83	1044.02	1042.97	1042.26	1041.92	1041.69	1041.78	1042.40	1042.13	1040.31	1039.01	1039.21	1038.07	1035.49	1036.62	1038.60	1040.78	1043.06	1044.98	1046.13		
Invert Levels (masl)	1039.03			1042.06		1043.02	1042.83			1040.26		1039.69		1040.40	1040.13	1037.31		1037.31	1036.07	1033.49		1036.60		1042.98	1044.13			
Slope (%)	2.14%	5.04%		2.42%		-0.96%		-4.29%		-1.43%		1.78%		-1.34%	-10.22%	0.00%		-6.18%	-12.92%		7.78%		10.64%		5.75%	0.3%		
Pipe Details	DN250PN10, STEEL																											



LEGEND

Plan

- Transmission Main
- Distribution Main
- Road
- Building
- Contours

Profile

- Ground Level
- Invert Level
- AV Air Valve
- WO Washout
- Node detail No.

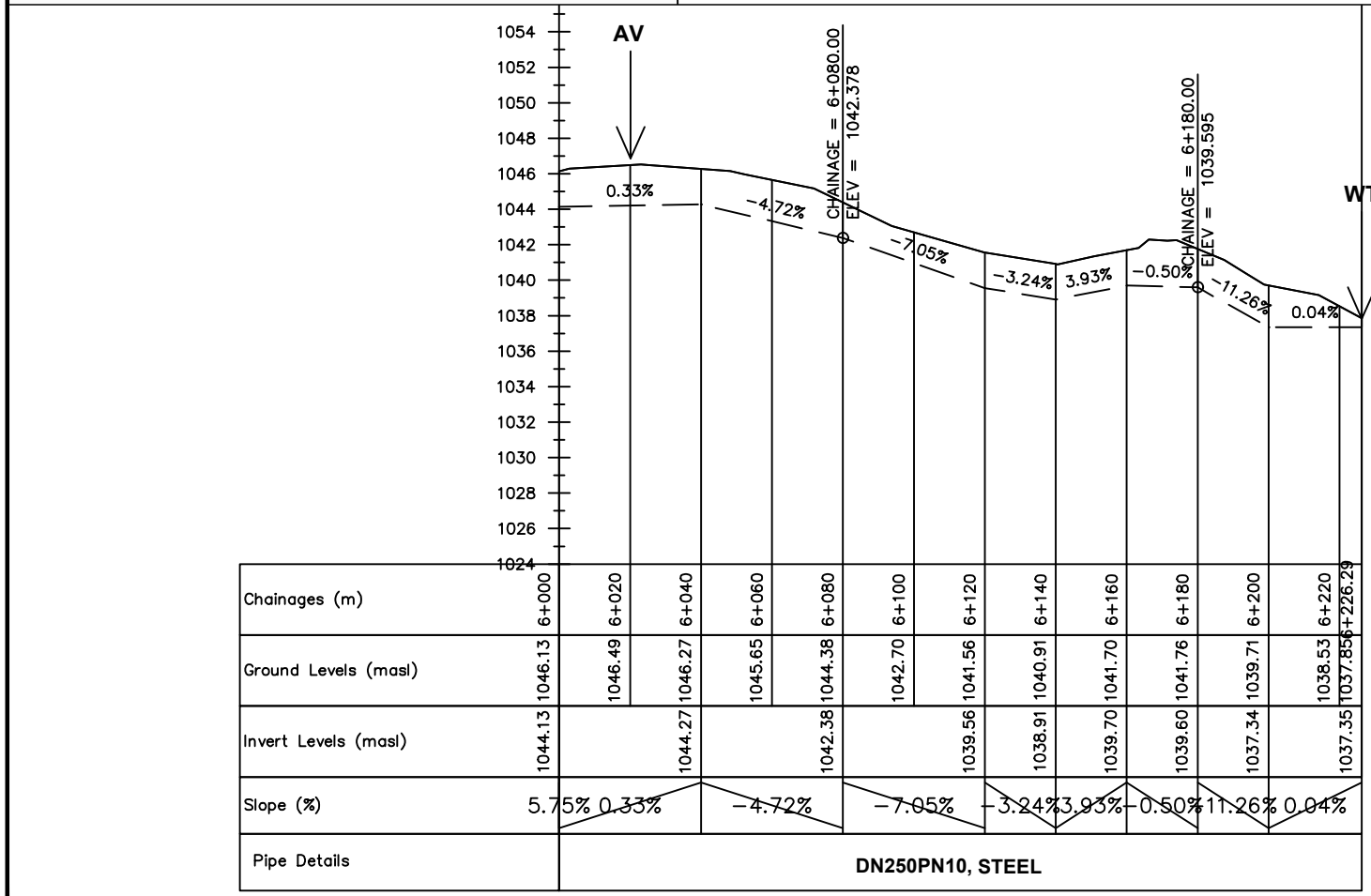
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CONSULTANT :

Alliance Consultants Ltd
In Association with

PROJECT :
ALA-ORA WATER SUPPLY AND SANITATION PROJECT

NYAGAK WATER SUPPLY AND SANITATION SYSTEM

REVISIONS :

No	Date	Description

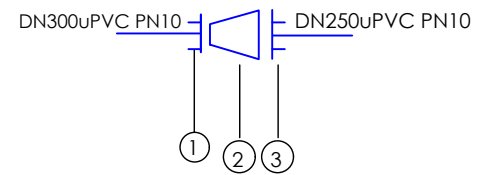
DRAWING TITLE : **RAW WATER MAIN**
6+000 - 6+226.29

Surveyed by: R.K
 Drawn by: M.K
 Designed by: W.G.M
 Checked by: J.K.K
 Date: January 2023
 DRG. No.: **NYA-RWM-001**
 Scale: 1:2000 Sheet No.: 13 of 13

Pipe Details	DN250PN10, STEEL									
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LEGEND

RAW WATER - WTP	DWG No. - CHAINAGE
1	NYA-RWM-001 - CH 0+500



SCHEDULE OF PIPEWORK & FITTINGS

ITEM	DESCRIPTION	SIZE	QTY.	PN
1	DI FLANGED ADAPTOR (MAXI TYPE OR SIMILAR)	300	1	10
2	FLANGED TAPER	300/250	1	10
3	DI FLANGED ADAPTOR (MAXI TYPE OR SIMILAR)	250	1	10

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NYAGAK WATER SUPPLY AND SANITATION SYSTEM

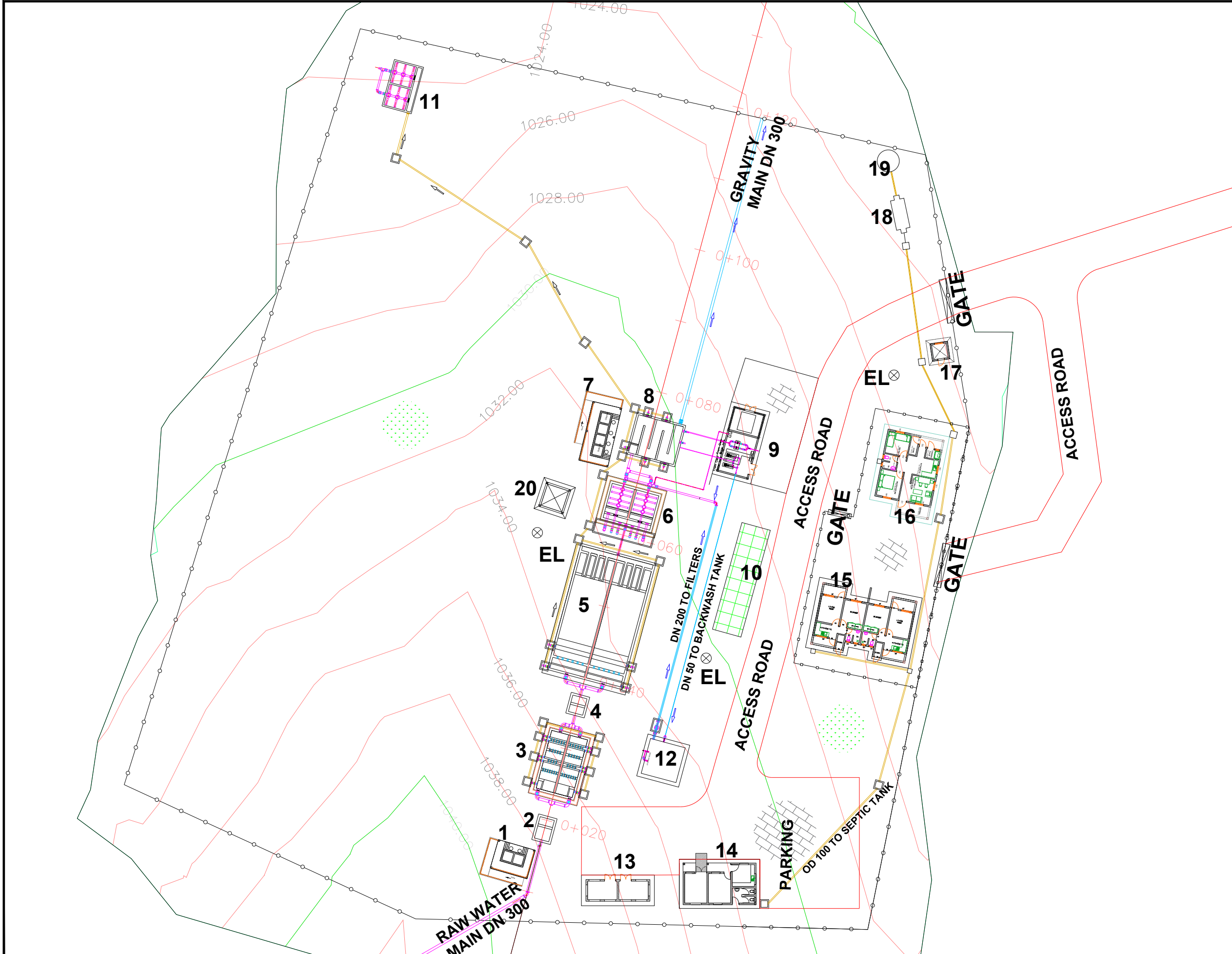
REVISIONS :

No	Date	Description

DRAWING TITLE :

RAW WATER MAIN NODES DETAILS

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Drawn by:	A.K
Designed by:	W.G.M
Checked by:	J.K.K
Date:	January 2023
DRG. No.:	NYA-RWM-ND-001
Scale:	1:5
Sheet No.:	1 of 1



LEGEND

- 1- ALUM DOSING HOUSE
- 2- INLET CHAMBER
- 3- FLOCCULATOR
- 4- DROP CHAMBER
- 5- SEDIMENTATION TANK
- 6- RAPID SAND FILTERS
- 7- CHLORINE DOSING HOUSE
- 8- CLEAR WATER TANK
- 9- PUMP HOUSE
- 10- SOLAR ARRAY
- 11- SLUDGE DRYING BEDS
- 12- BACK WASH TANK
- 13- CHEMICAL STORE
- 14- ADMINISTRATION BUILDING
- 15- ATTENDANTS' HOUSES
- 16- SUPERINTENDENT'S HOUSE
- 17- GUARD STATION
- 18- SEPTIC TANK
- 19- SOAK PIT
- 20- SAND STORAGE

EL- ELECTRIC LAMP

CLIENT :

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MINISTRY OF WATER AND ENVIRONMENT
 DIRECTORATE OF WATER DEVELOPMENT

CONSULTANT :

ALLIANCE CONSULTANTS LTD
 CONSULTING ENGINEERS

In Association with

Infra-Consult Ltd

P.O. BOX 33975 KAMPALA
 Email: allianceconsultantsltd@gmail.com

PROJECT :

CONSTRUCTION OF ALA-ORA WATER SUPPLY AND SANITATION SYSTEM

NYAGAK WATER SCHEME

REVISIONS :

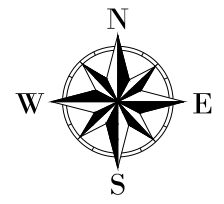
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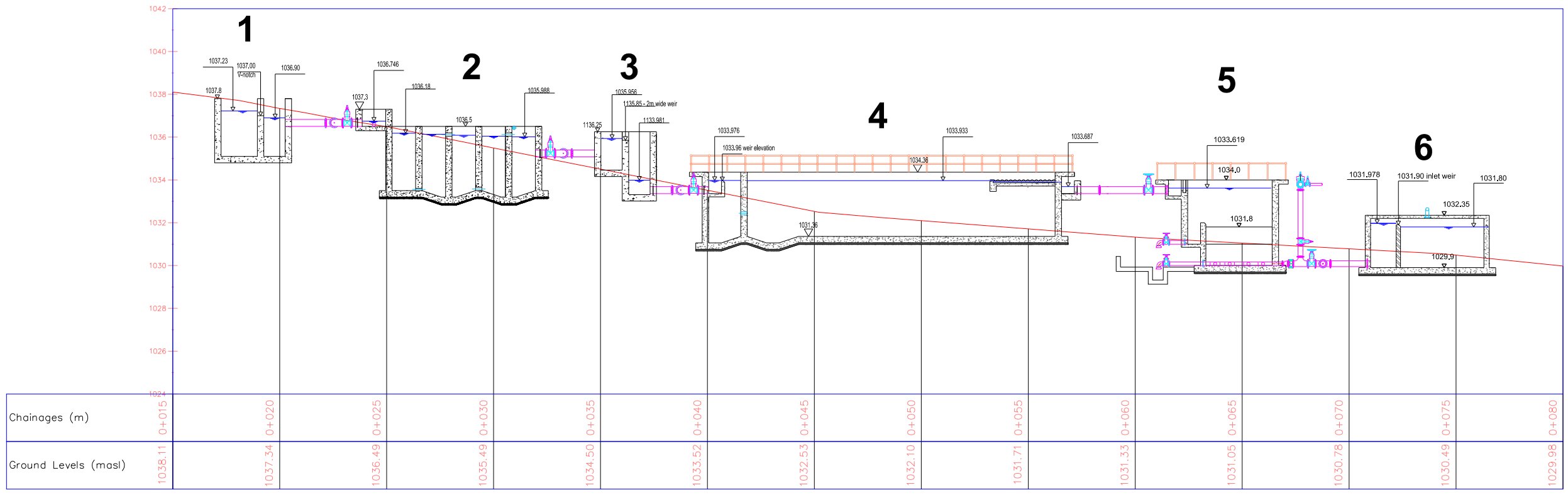
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 Drawn by: J.B
 Designed by: W.G.M
 Checked by: J.K.K
 Date: January 2023
 DRG. No.: **NYA/WTP-001A**
 Scale: 2:1 Sheet No.: 1 of 1

LEGEND

- 1- INLET CHAMBER
- 2- FLOCCULATOR
- 3- DROP / INTERMEDIATE CHAMBER
- 4- SEDIMENTATION TANK
- 5- RAPID SAND FILTERS
- 6- CLEAR WATER TANK



Hydraulic Profile



CLIENT :

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 DIRECTORATE OF WATER DEVELOPMENT

CONSULTANT :
 **ALLIANCE CONSULTANTS LTD**
 CONSULTING ENGINEERS
In Association with
 **Infra-Consult Ltd**
 P.O. BOX 33975 KAMPALA
 Email: allianceconsultantsltd@gmail.com

PROJECT :
CONSTRUCTION OF ALA-ORA WATER SUPPLY AND SANITATION SYSTEM

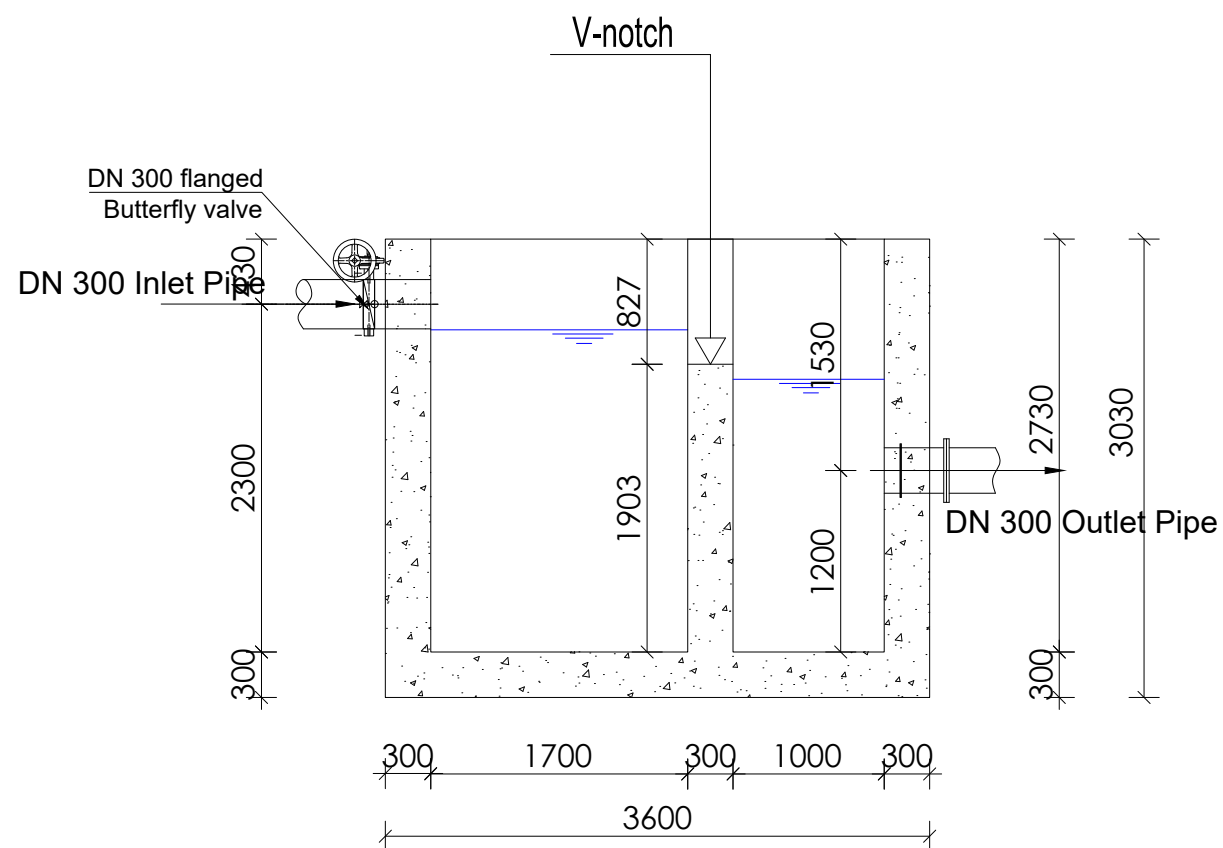
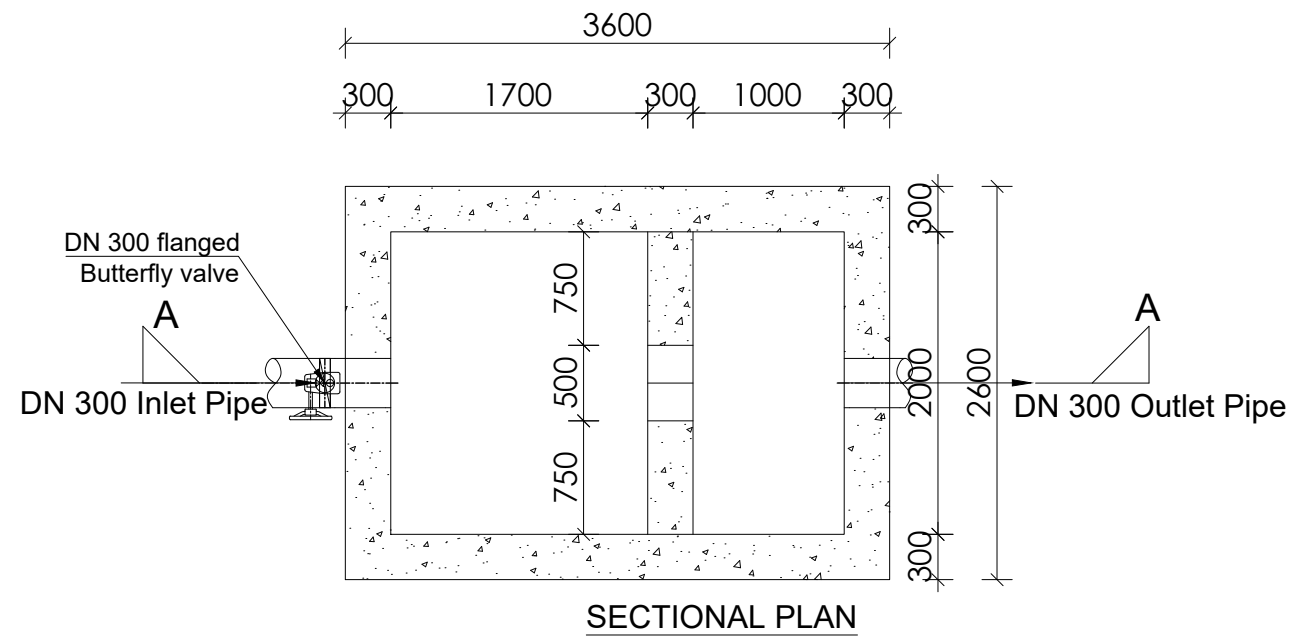
NYAGAK WATER SCHEME

REVISIONS :

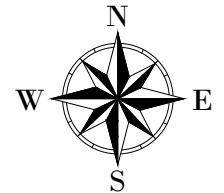
No	Date	Description

DRAWING TITLE : **TREATMENT PLANT HYDRAULIC PROFILE**

Surveyed by: R.K
 Drawn by: J.B
 Designed by: W.G.M
 Checked by: J.K.K
 Date: January 2023
 DRG. No.: **NYA/WTP-001B**
 Scale: 4.5:1 Sheet No.: 1 of 1



LEGEND



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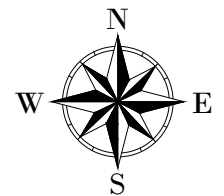
REVISIONS :

No	Date	Description

DRAWING TITLE : **INLET STRUCTURE**

Surveyed by:	R.K
Drawn by:	A.K
Designed by:	W.G.M
Checked by:	J.K.K
Date:	January 2023
DRG. No.:	NYA-WTP-002
Scale:	1:50
Sheet No.:	1 of 1

LEGEND



ROOF NOTES : pitch 37°

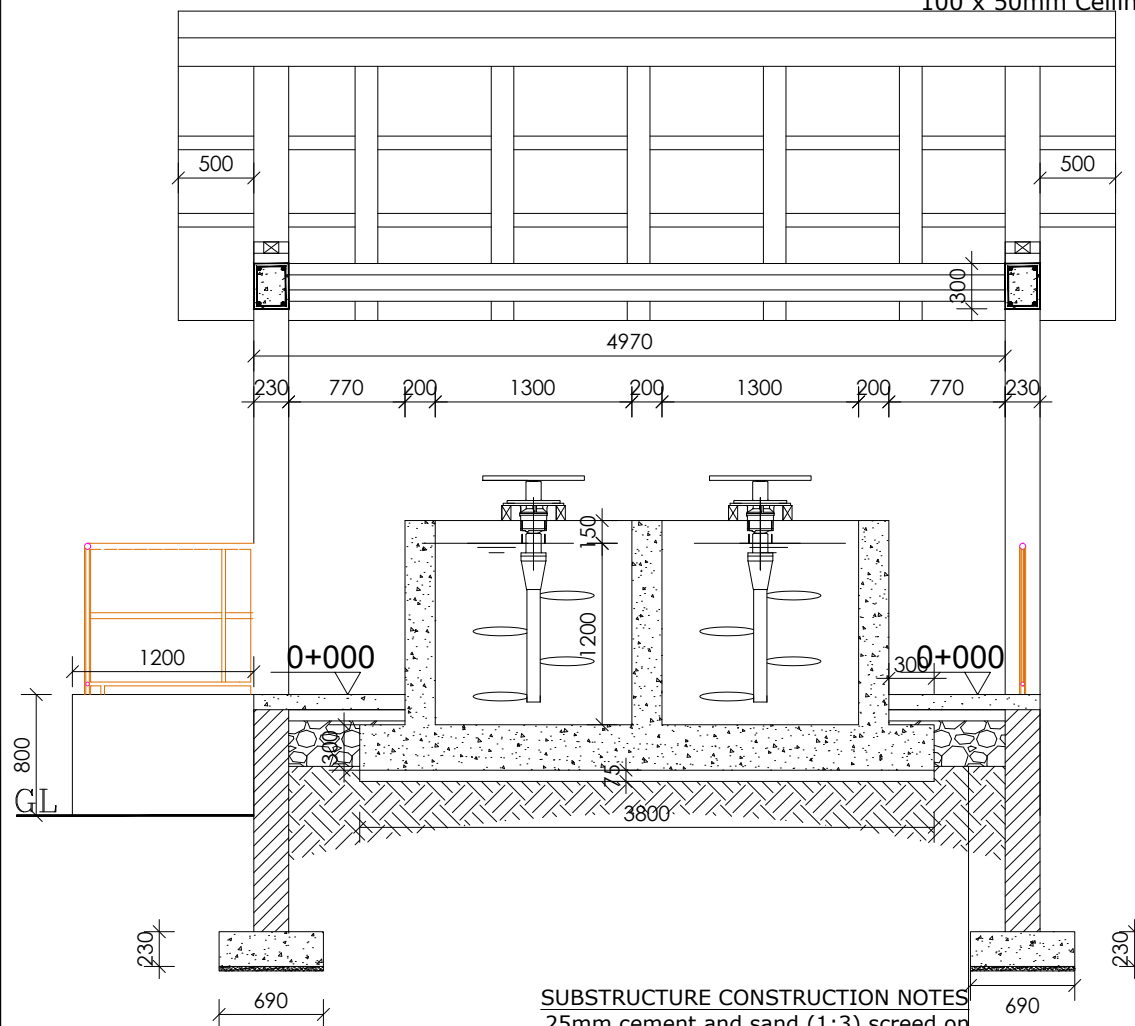
Fire clay ridge cap/Mangalore roofing tiles on
50 X 25 timber battens with
gauge 32 GI plane sheet

Pressure treated roofing soft wood timber

Double 100 x 50 mm timber rafters with
100x 50mm struts & ties in truss with
75 x 50 mm purlins on
150 x 50mm tie beam on
150 x 75 mm wall plate
250 mm plastic fascia boards

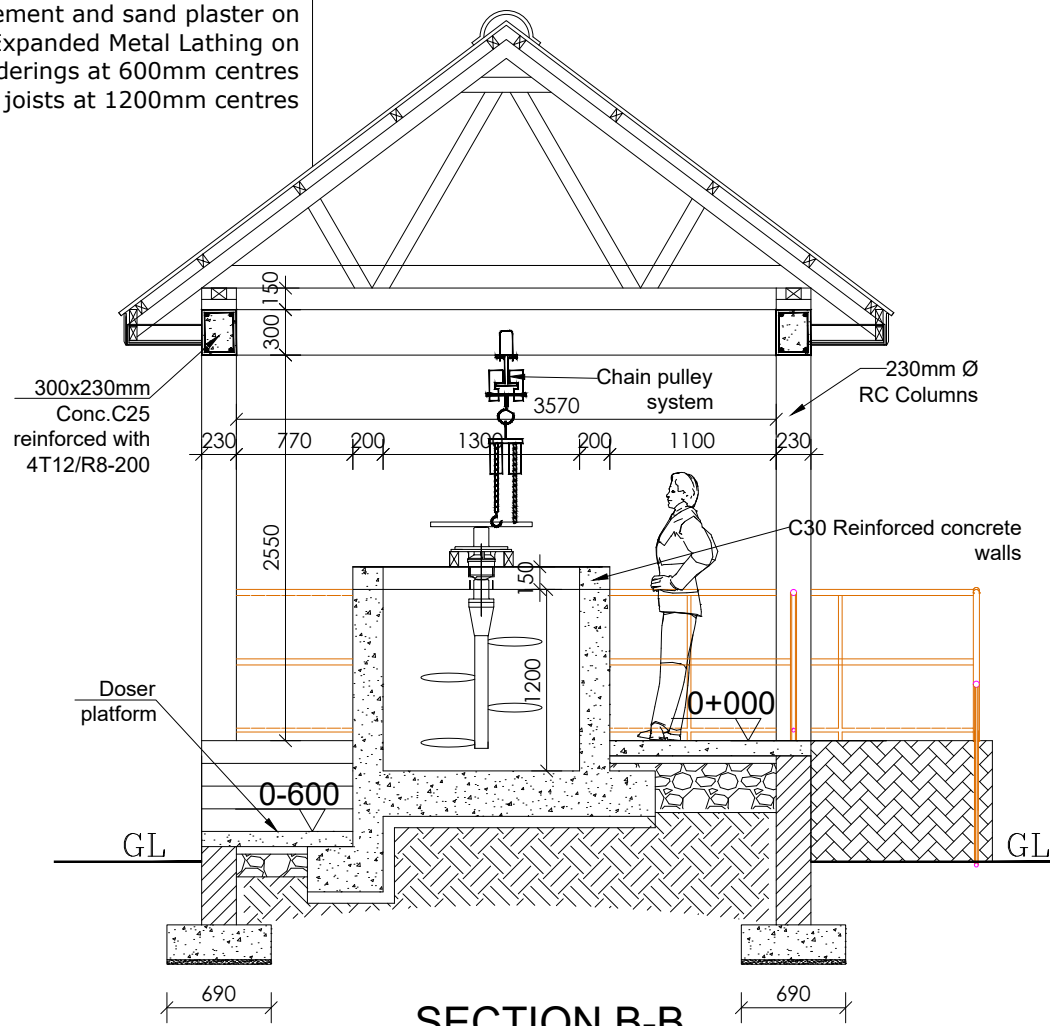
CEILING CONSTRUCTION NOTES:

20mm thick Cement and sand plaster on
Expanded Metal Lathing on
50 x 50mm Ceiling branderings at 600mm centres
100 x 50mm Ceiling joists at 1200mm centres



SECTION A-A

SUBSTRUCTURE CONSTRUCTION NOTES
25mm cement and sand (1:3) screed on
100mm C20 Reinforced cement concrete slab/
A142 BRC 300mm Hardcore stone bed blinded
with 50mm sand
on selected well compacted natural murrum
filling
690 x 230 mm C20 concrete strip footing for
columns



SECTION B-B


Note:
Mixing tank is made of C30 concrete

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**ALA-ORA WATER SUPPLY AND
SANITATION PROJECT**

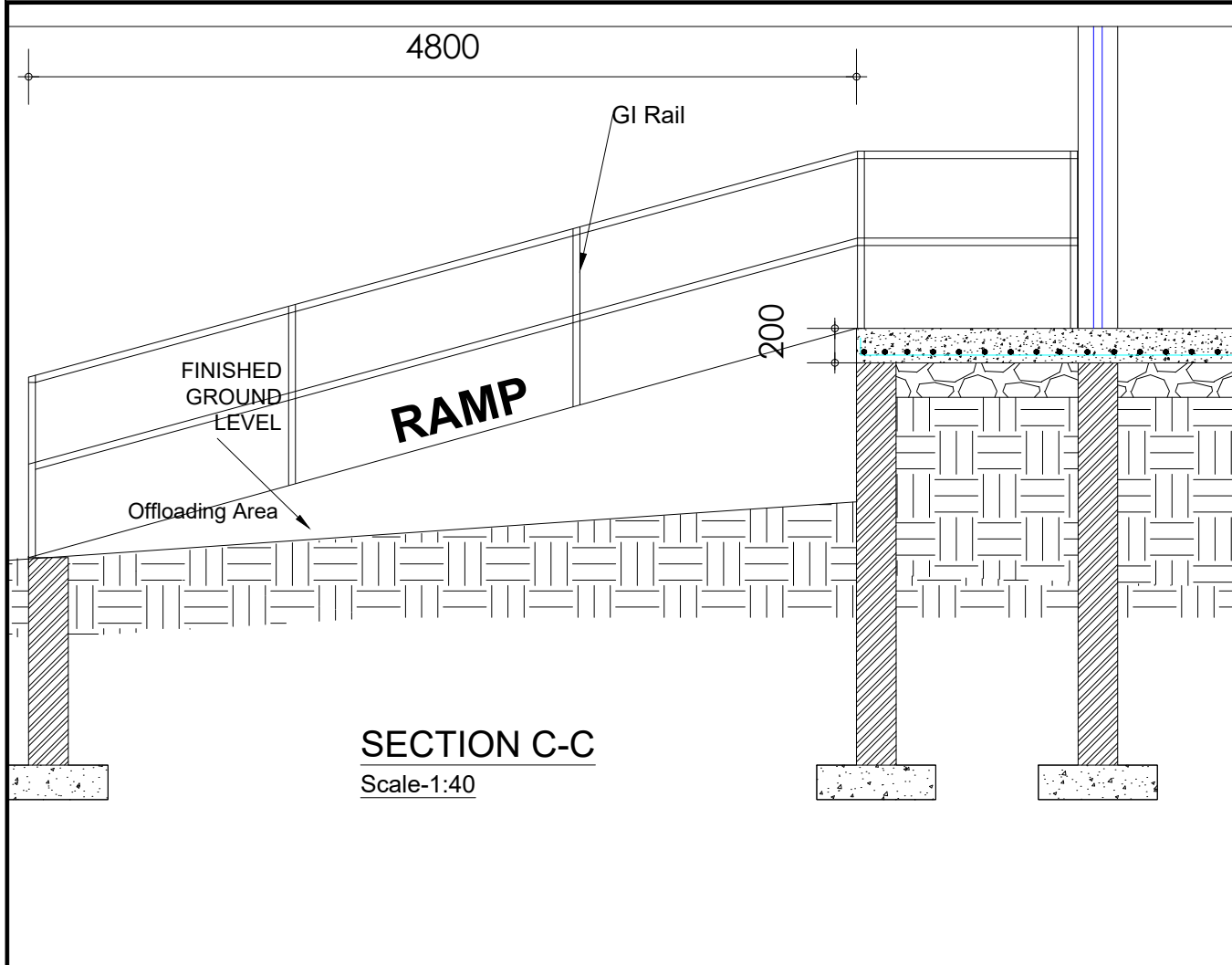
**NYAGAK WATER SUPPLY AND
SANITATION SYSTEM**

REVISIONS :

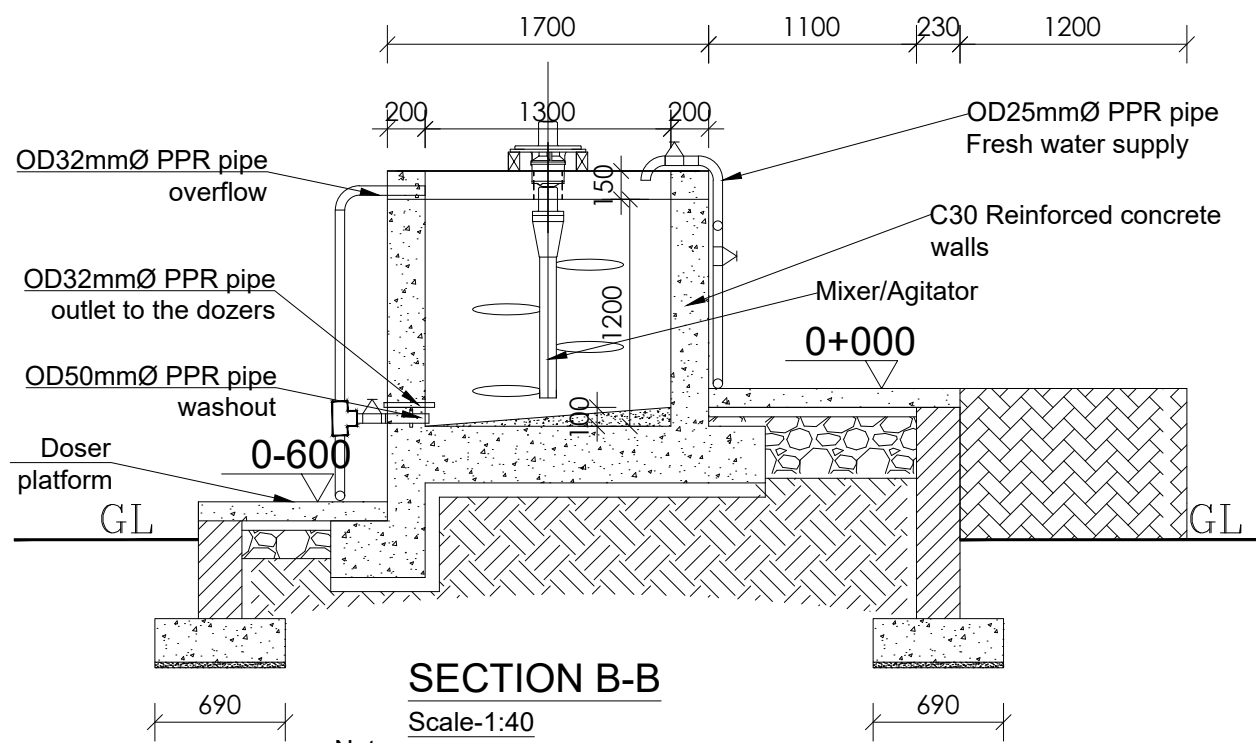
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DRAWING TITLE : **ALUM DOSING HOUSE
Sections**

Surveyed by:	R.K
Drawn by:	A.K
Designed by:	W.G.M
Checked by:	J.K.K
Date:	January 2023
DRG. No.:	NYA-WTP-003
Scale:	1:50
Sheet No.:	2 of 6

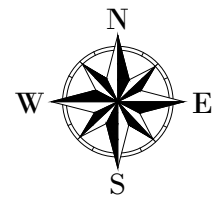


SECTION C-C
Scale-1:40



SECTION B-B
Scale-1:40
Note:
The overflow and washouts shall be drained into the sludge drying beds


LEGEND



CLIENT :

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MINISTRY OF WATER AND ENVIRONMENT
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CONSULTANT :

 Alliance Consultants Ltd
In Association with

 Infra-Consult Ltd

PROJECT :
ALA-ORA WATER SUPPLY AND SANITATION PROJECT

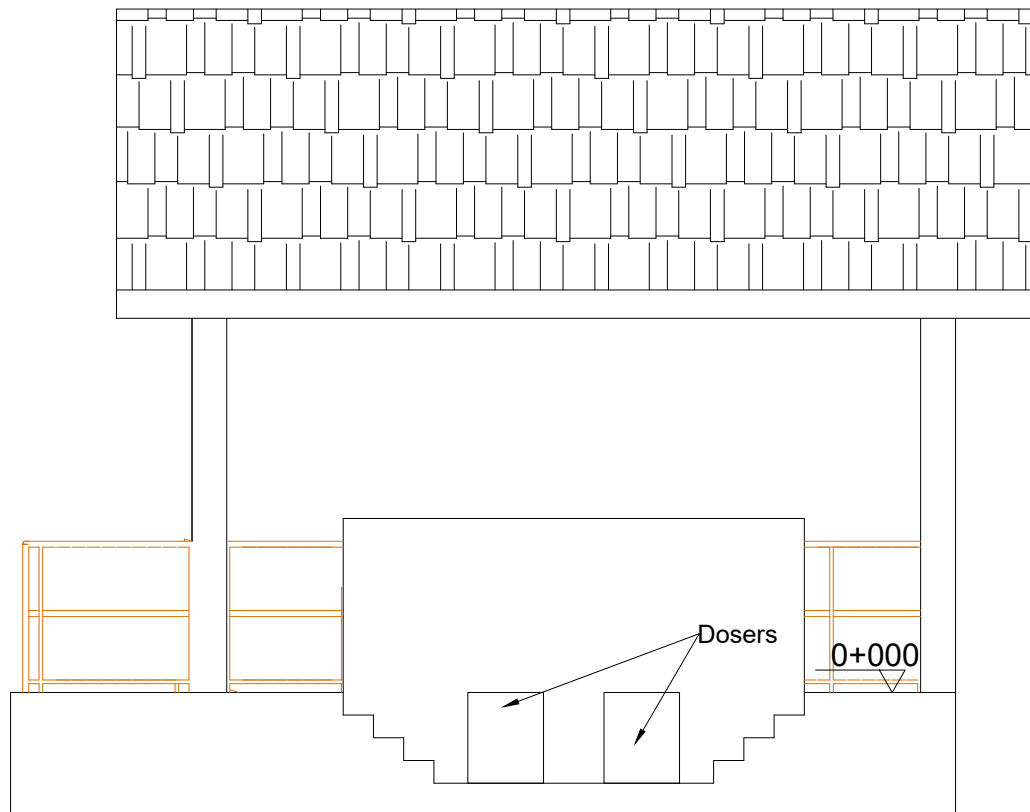
NYAGAK WATER SUPPLY AND SANITATION SYSTEM

REVISIONS :

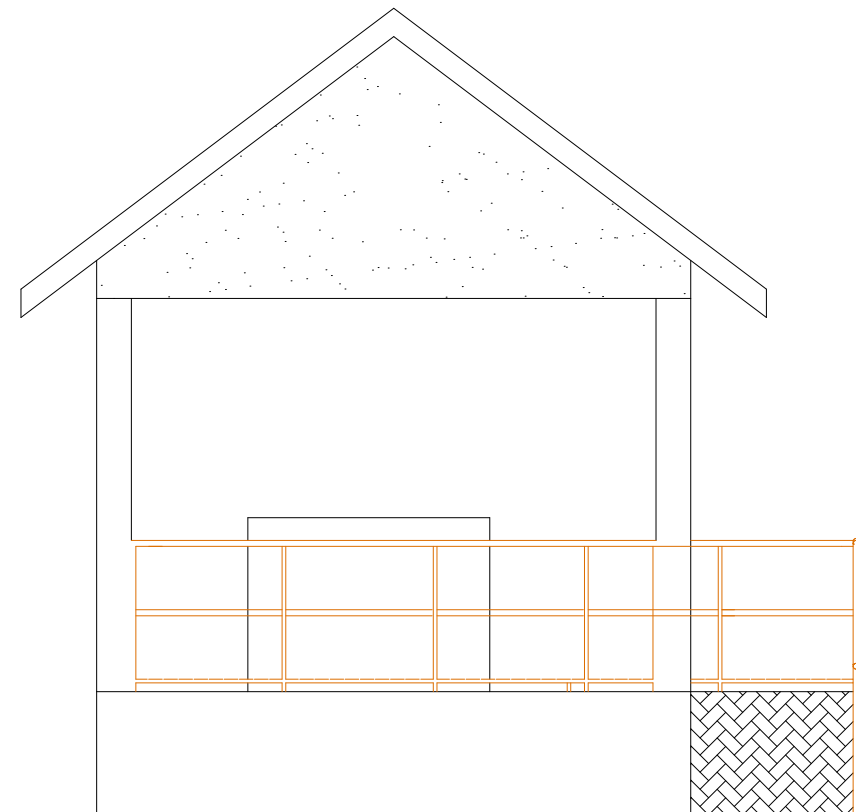
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Details

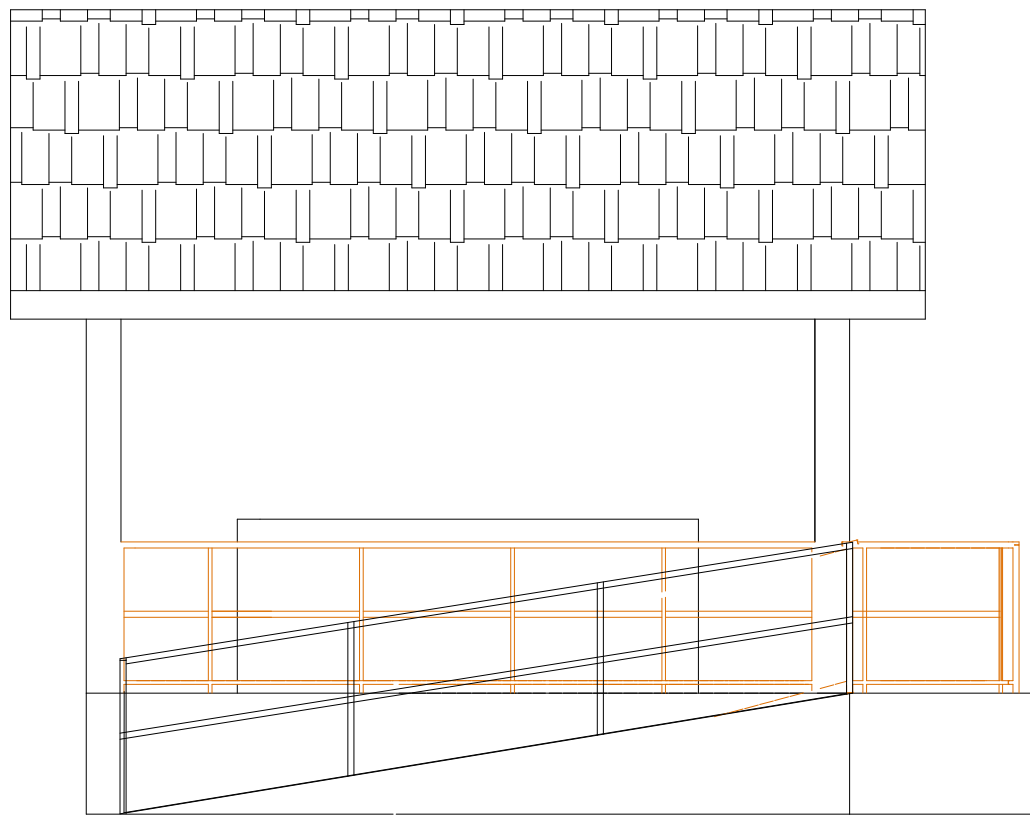
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 Drawn by: A.K
 Designed by: W.G.M
 Checked by: J.K.K
 Date: January 2023
 DRG. No.: **NYA-WTP-003**
 Scale: 1:40 Sheet No.: 3 of 6



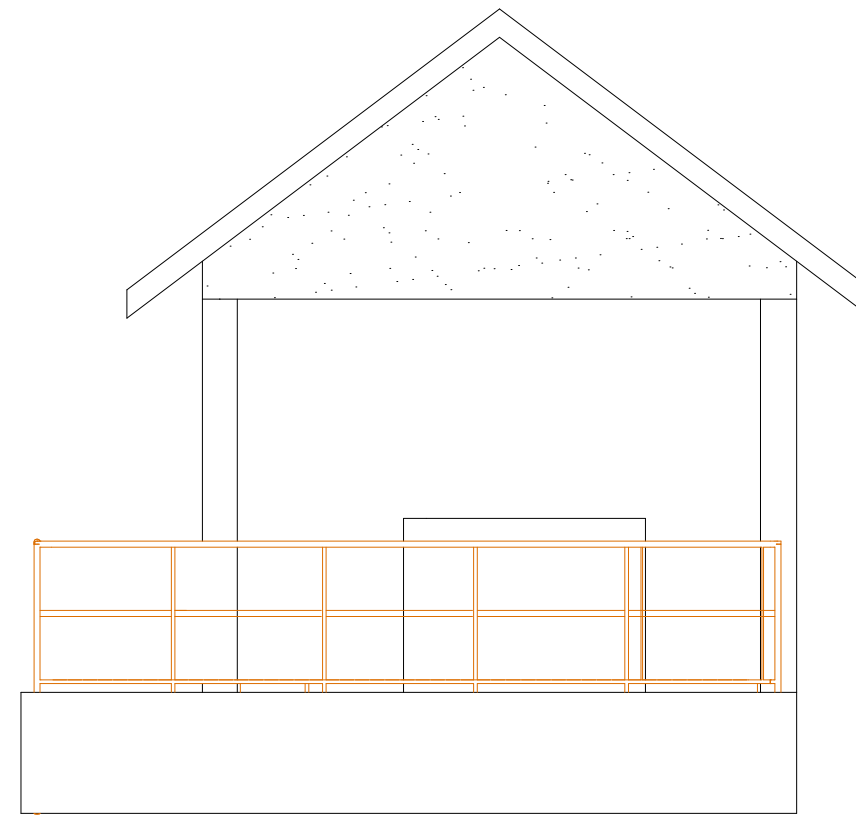
ELEVATION 1



ELEVATION 2

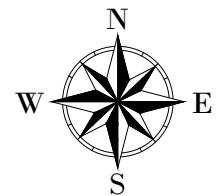


ELEVATION 3



ELEVATION 4

LEGEND



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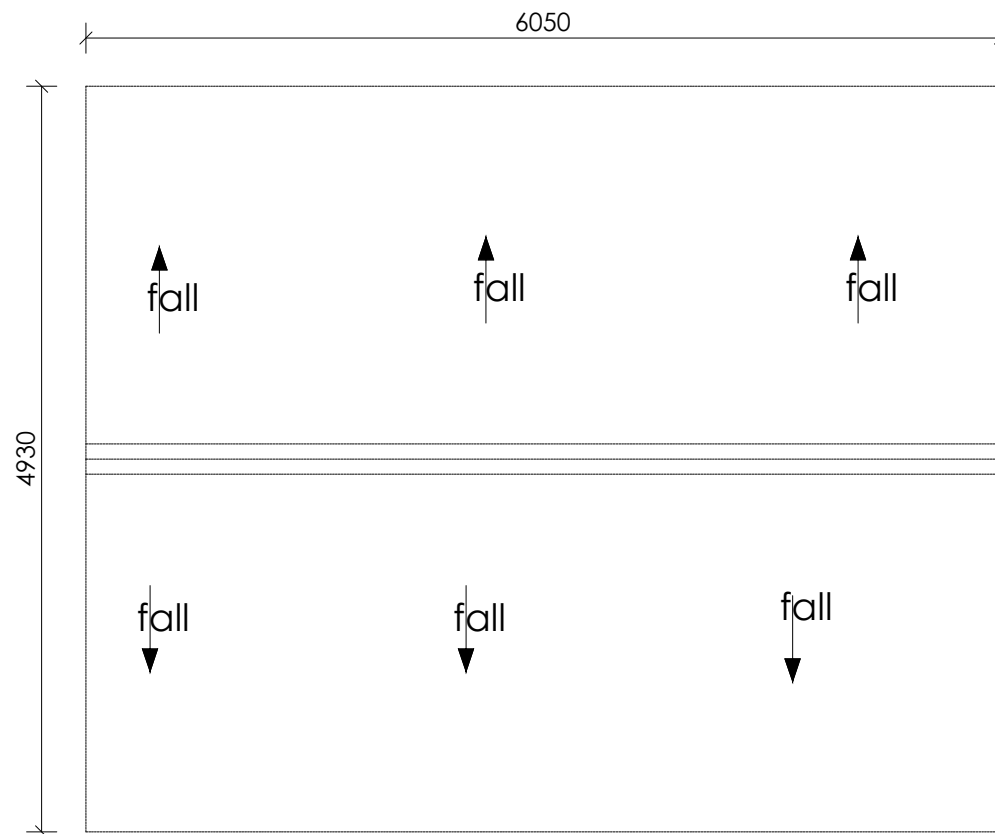
**NYAGAK WATER SUPPLY AND
 SANITATION SYSTEM**

REVISIONS :

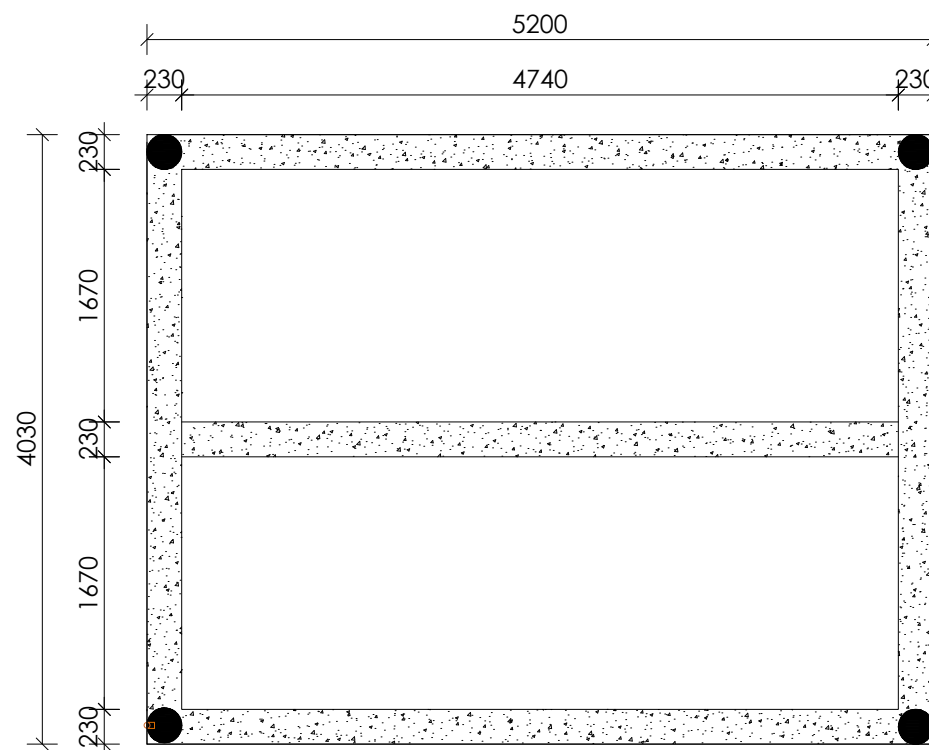
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DRAWING TITLE : **ALUM DOSING HOUSE
 Elevations**

Surveyed by:	R.K
Drawn by:	A.K
Designed by:	W.G.M
Checked by:	J.K.K
Date:	January 2023
DRG. No.:	NYA-WTP-003
Scale:	1:50
Sheet No.:	4 of 6

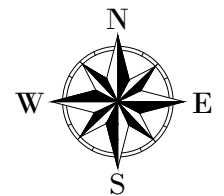


ROOF LAYOUT



ROOF BEAM

LEGEND



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PROJECT :

ALA-ORA WATER SUPPLY AND
SANITATION PROJECT

**NYAGAK WATER SUPPLY AND
SANITATION SYSTEM**

REVISIONS :

No	Date	Description

DRAWING TITLE : **ALUM DOSING HOUSE**
Roof Beam and Roof Layout

Surveyed by:

R.K

Drawn by:

A.K

Designed by:

W.G.M

Checked by:

J.K.K

Date:

January 2023

DRG. No.:

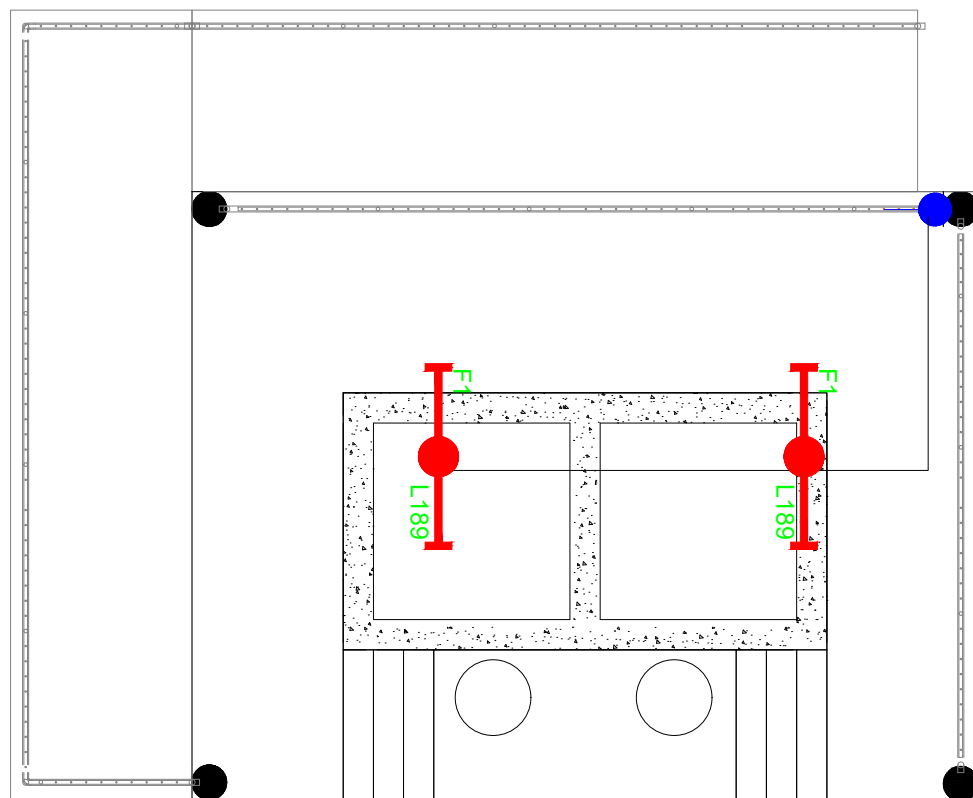
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Scale:

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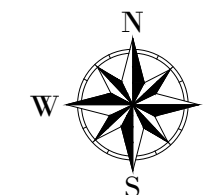
Sheet No.:

5 of 6



SYMBOL	DESCRIPTION
	1200mm 18W LED batten with a removable LED engine. IP20 As Thorn PopPack LED. or equal approved. (Light Type F1)
	Pendant lighting fitting comprising ceiling Rose 300mm 3x1.5mm ² flexible copper cable lamp holder and 6W LED Lamp
	Pendant lighting fitting comprising ceiling Rose 300mm 3x1.5mm ² flexible copper cable lamp holder and 6W LED Lamp
	Pendant lighting fitting comprising ceiling Rose 300mm 3x1.5mm ² flexible copper cable lamp holder and 6W LED Lamp
	wall mounted light
	Socket outlet on Wall
	Consumer's Unit
	One Gang 1way Switch
	Two Gang 1way Switch
	Three Gang 1way Switch

LEGEND



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NYAGAK WATER SUPPLY AND SANITATION SYSTEM

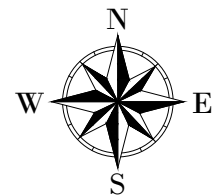
REVISIONS :

No	Date	Description

DRAWING TITLE : **ALUM DOSING HOUSE**
 Electrical Layout

Surveyed by:	
Drawn by:	P.K
Designed by:	P.K
Checked by:	S.C.D
Date:	January 2023
DRG. No.:	NYA-WTP-003
Scale:	1:50
Sheet No.:	6 of 6

LEGEND



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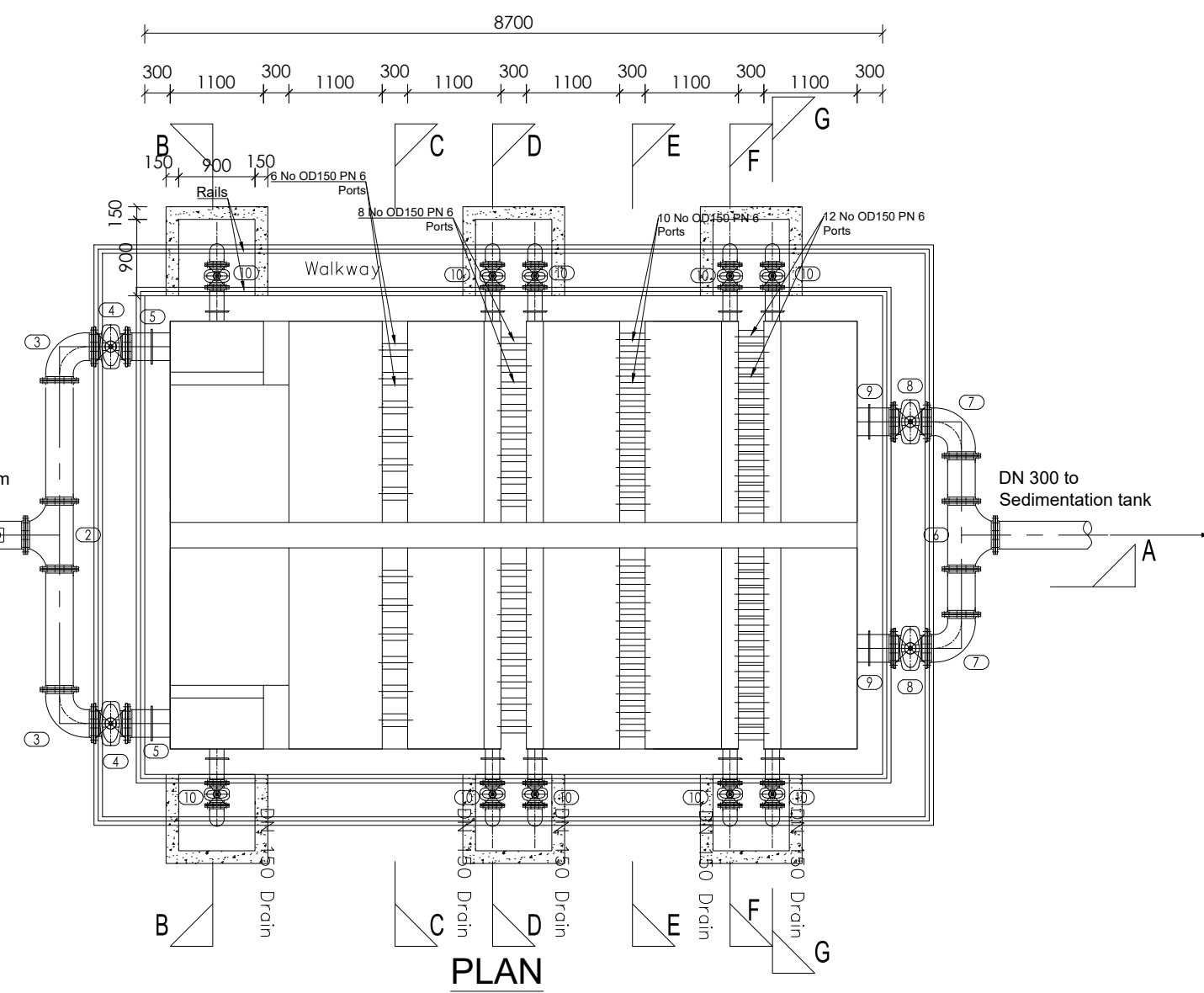
NYAGAK WATER SUPPLY AND SANITATION SYSTEM

REVISIONS :

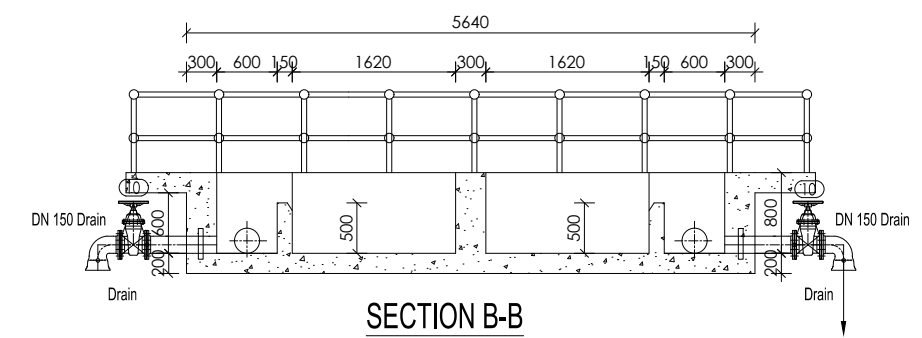
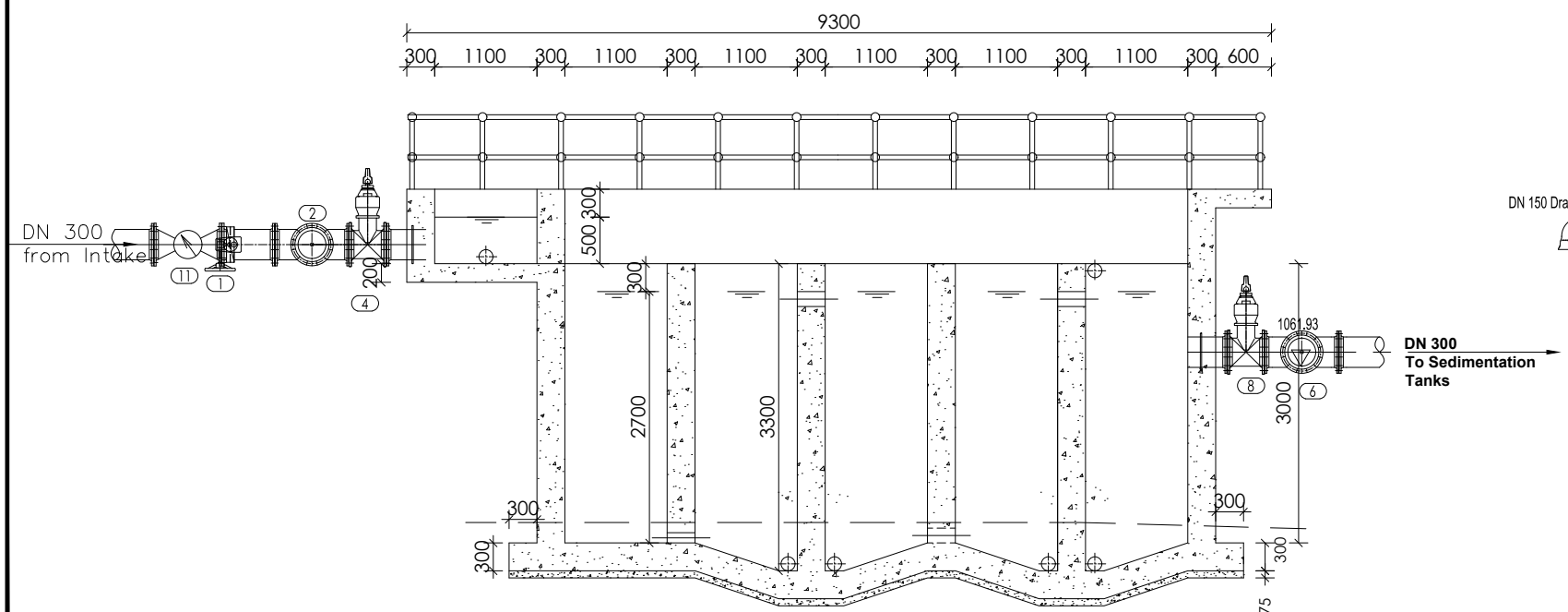
No	Date	Description

DRAWING TITLE : **FLOCCULATOR**
 Plan & Sections

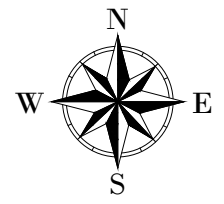
Surveyed by: R.K
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 Checked by: J.K.K
 Date: January 2023
 DRG. No.: **NYA-WTP-004**
 Scale: 1:75 Sheet No.: 1 of 2



PIPES AND FITTINGS SCHEDULE		
ITEM	No. OF	DESCRIPTION
DN300 INLET PIPE		
1	1	DN300 FLANGED BUTTERFLY VALVE
11	1	DN300 FLANGED INSTANTANEOUS FLOW METER
2	1	DN300 FLANGED EQUAL TEE
3	2	DN300 FLANGED 90° BEND
4	2	DN300 FLANGED GATE VALVE WITH SPINDLES
5	2	DN300 FLANGED SPIGOT WITH PUDDLE FLANGE LENGTH NOT EXCEEDING 1m
DN300 OUTLET PIPE		
6	1	DN300 FLANGED EQUAL TEE
7	2	DN300 FLANGED 90° BEND
8	2	DN300 FLANGED GATE VALVE
9	2	DN300 FLANGED SPIGOT WITH PUDDLE FLANGE LENGTH NOT EXCEEDING 1m
DN150 DRAIN		
10	10	DN150 FLANGED GATE VALVE WITH SPINDLES



LEGEND



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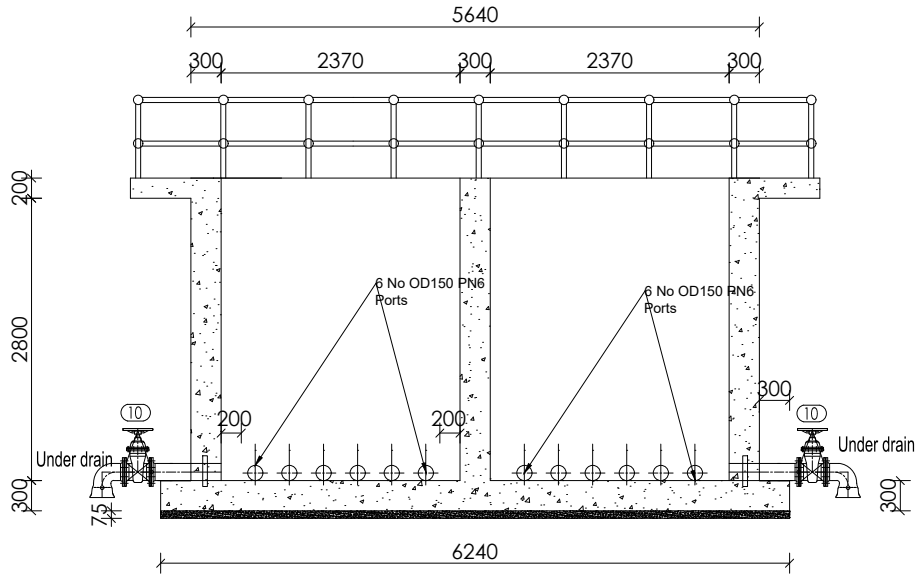
NYAGAK WATER SUPPLY AND SANITATION SYSTEM

REVISIONS :

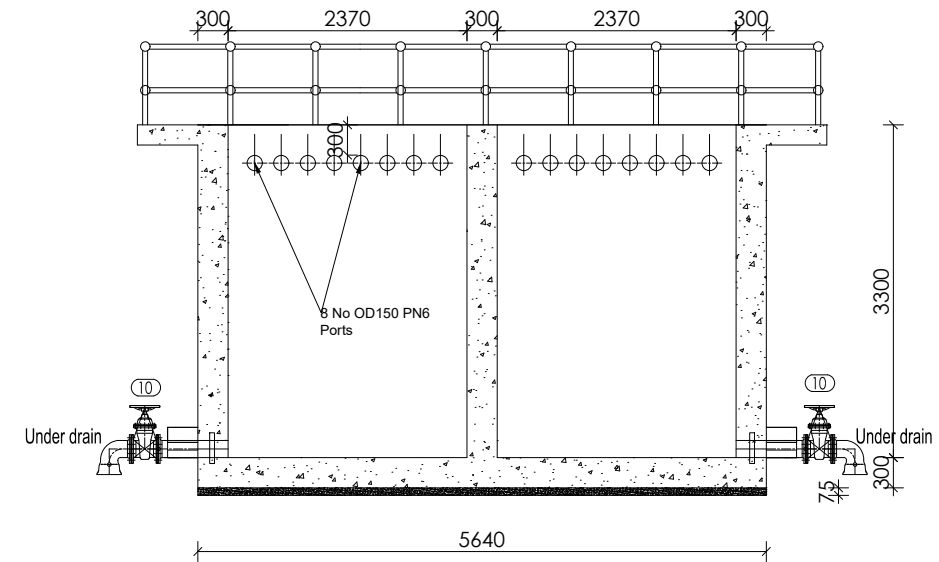
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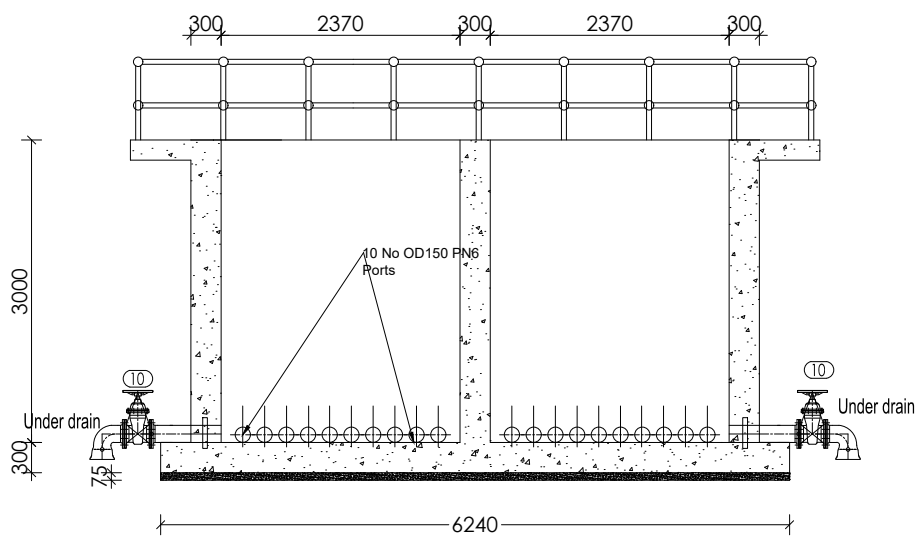
Surveyed by: R.K
 Drawn by: A.K
 Designed by: W.G.M
 Checked by: J.K.K
 Date: January 2023
 DRG. No.: **NYA-WTP-004**
 Scale: 1:75 Sheet No.: 2 of 2



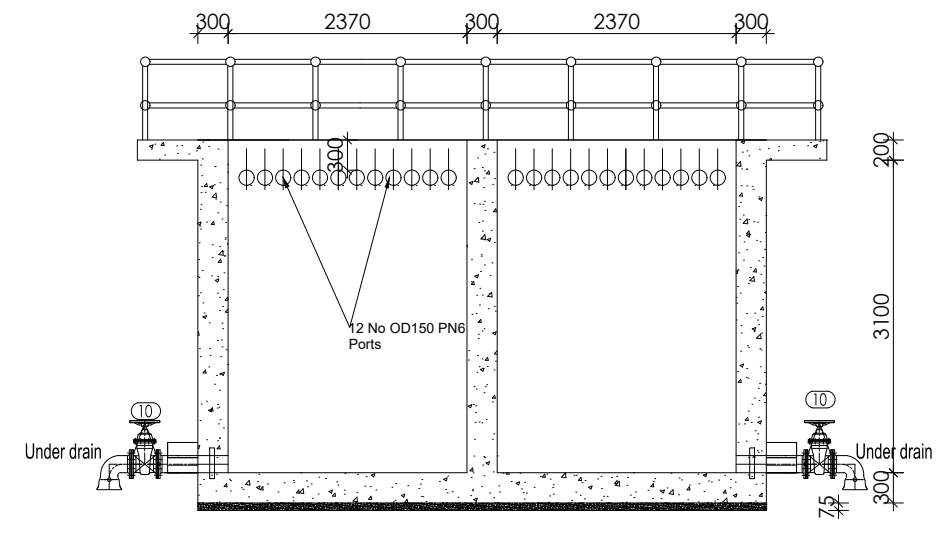
SECTION C-C



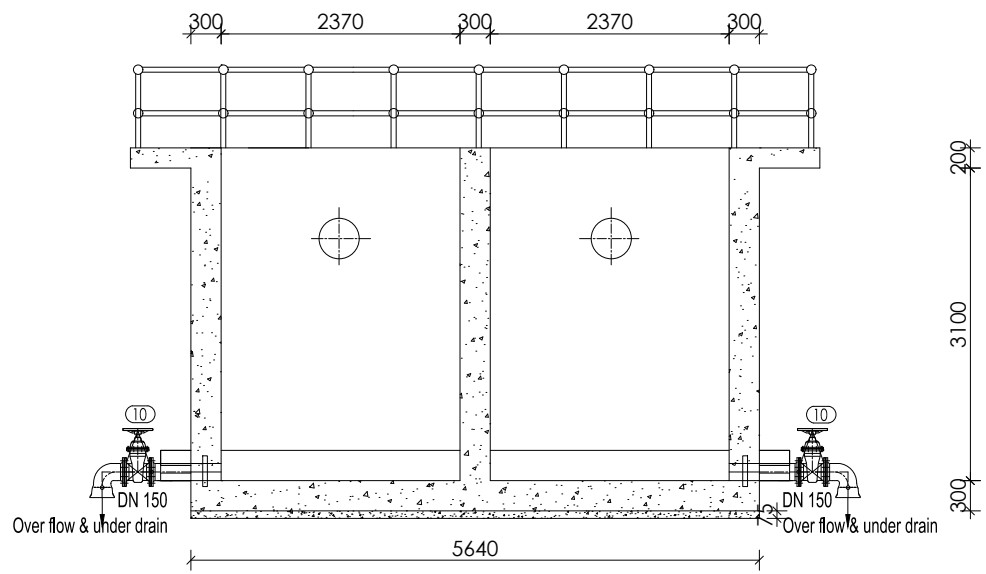
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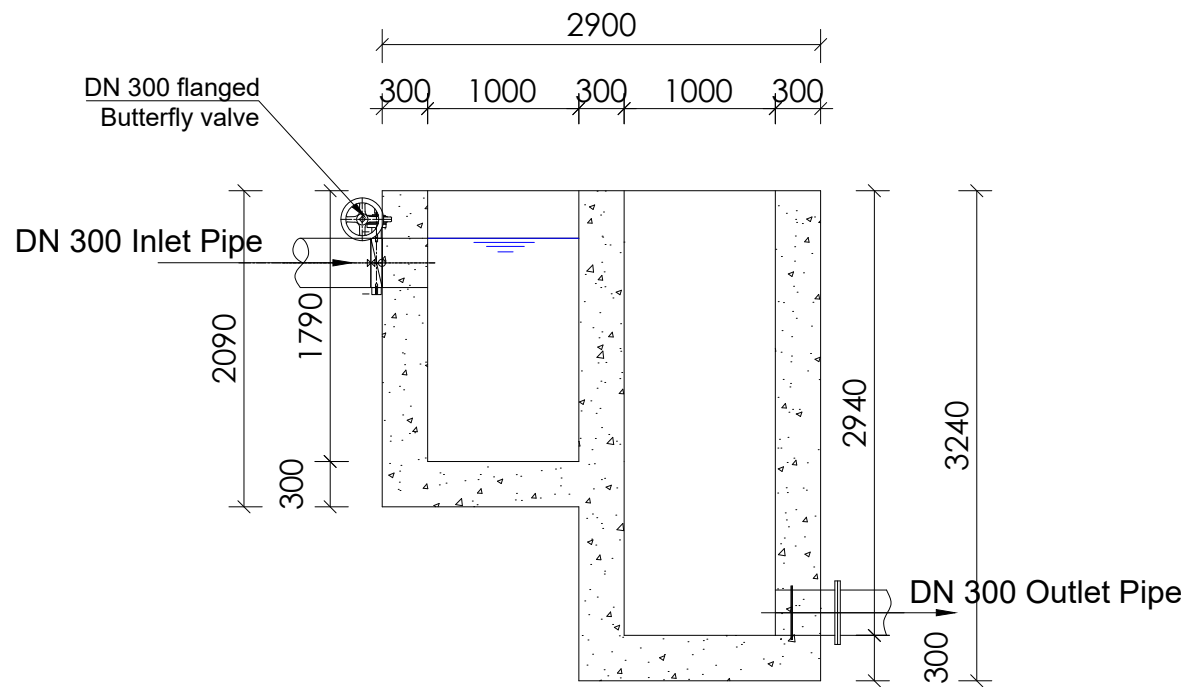
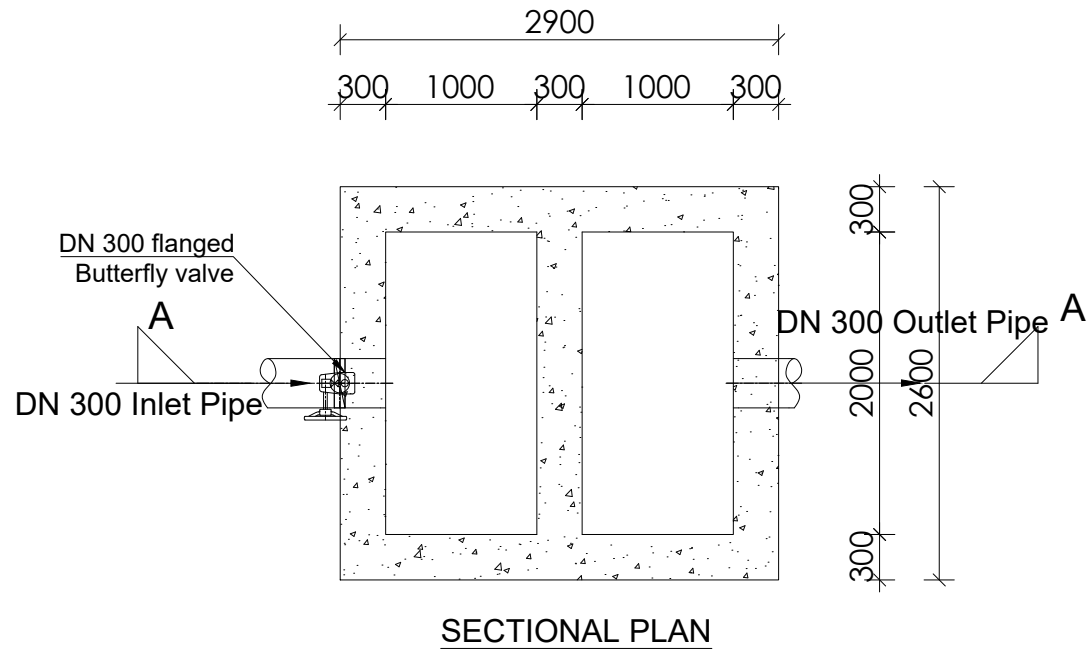
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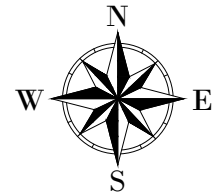
SECTION F-F



SECTION G-G



LEGEND



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PROJECT :
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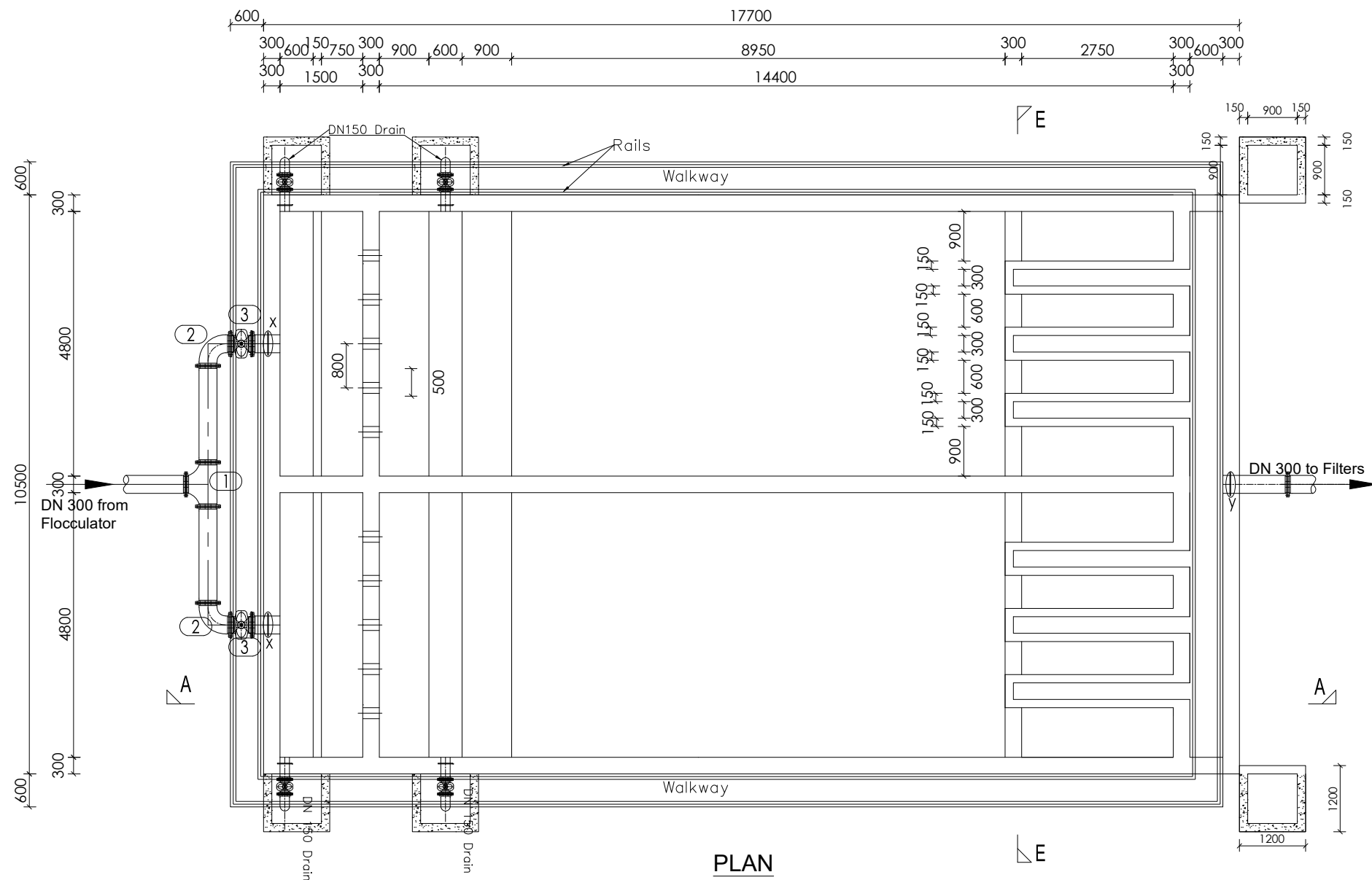
**NYAGAK WATER SUPPLY AND
 SANITATION SYSTEM**

REVISIONS :

No	Date	Description

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INTERMEDIATE CHAMBER

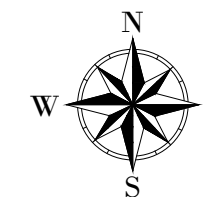
Surveyed by: R.K
 Drawn by: A.K
 Designed by: W.G.M
 Checked by: J.K.K
 Date: January 2023
 DRG. No.: **NYA-WTP-004B**
 Scale: 1:50 Sheet No.: 1 of 1



PLAN

PIPES AND FITTINGS SCHEDULE		
ITEM	No. OF	DESCRIPTION
(1)	1	DN300 FLANGED EQUAL TEE
(2)	2	DN300 FLANGED 90° BEND
(3)	2	DN300 FLANGED GATE VALVE
(x)	2	DN300 FLANGED SPIGOT WITH PUDDLE FLANGE LENGTH NOT EXCEEDING 1m
(y)	1	DN300 FLANGED SPIGOT WITH PUDDLE FLANGE LENGTH NOT EXCEEDING 1m



LEGEND



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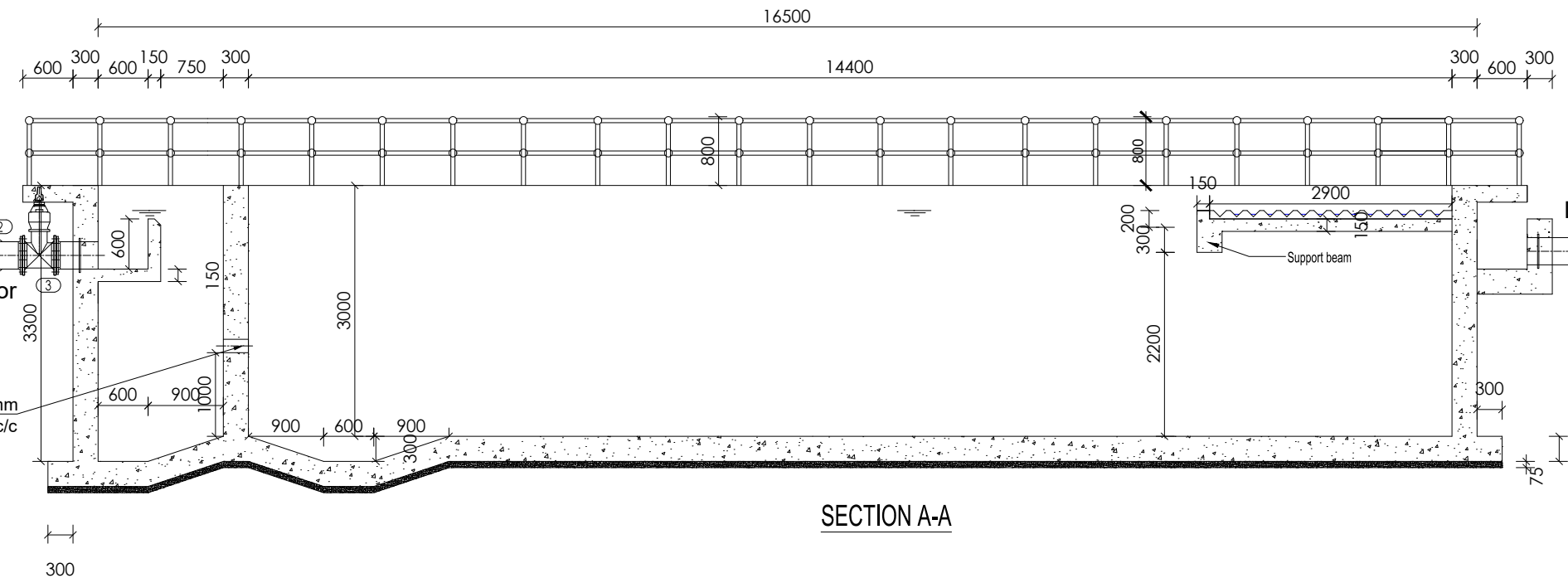
PROJECT :
ALA-ORA WATER SUPPLY AND SANITATION PROJECT
NYAGAK WATER SUPPLY AND SANITATION SYSTEM

REVISIONS :

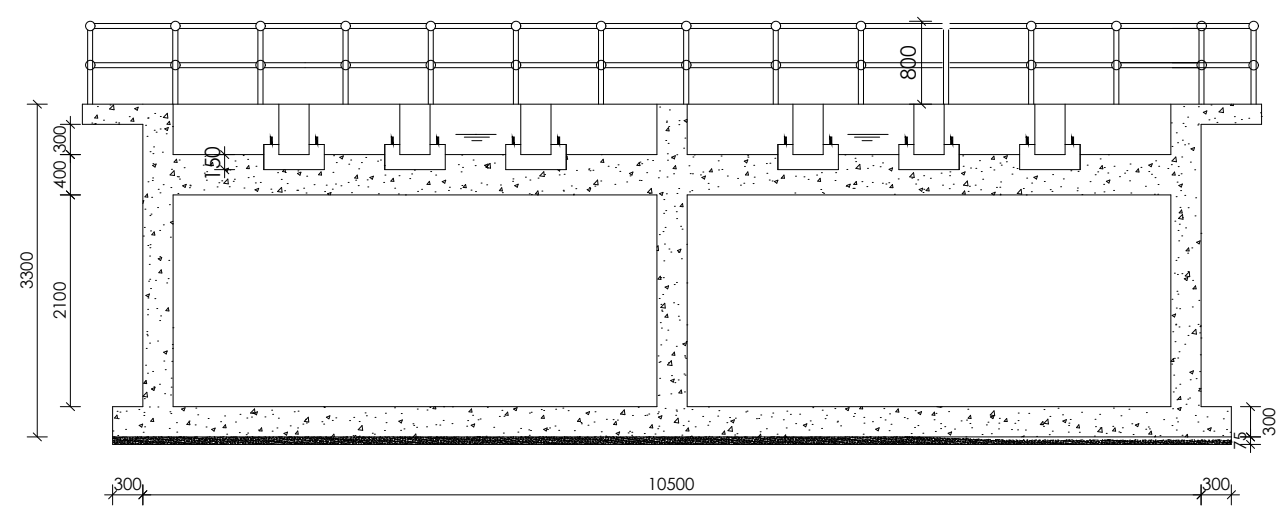
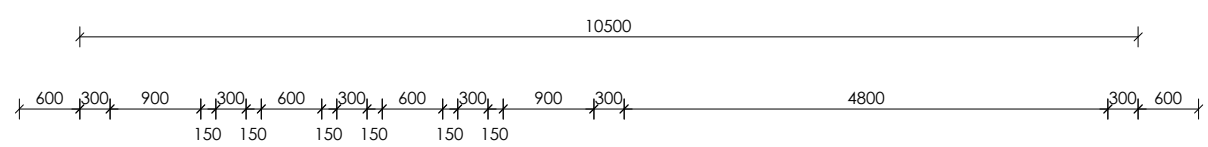
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DRAWING TITLE : **SEDIMENTATION TANK Plan**

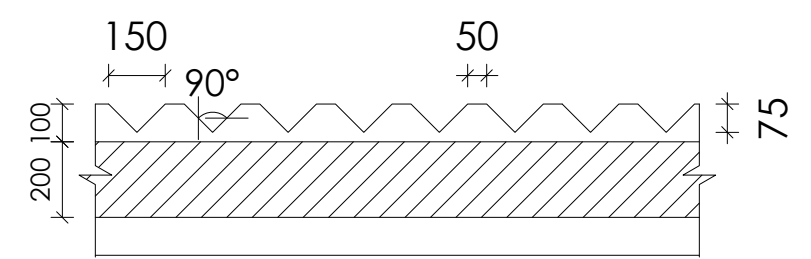
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 Drawn by: A.K
 Designed by: W.G.M
 Checked by: J.K.K
 Date: January 2023
 DRG. No.: **NYA-WTP-005**
 Scale: 1:100 Sheet No.: 1 of 2



SECTION A-A



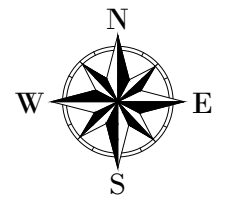
SECTION E-E



Steel Weir Plate Detail

Scale 1:20

LEGEND



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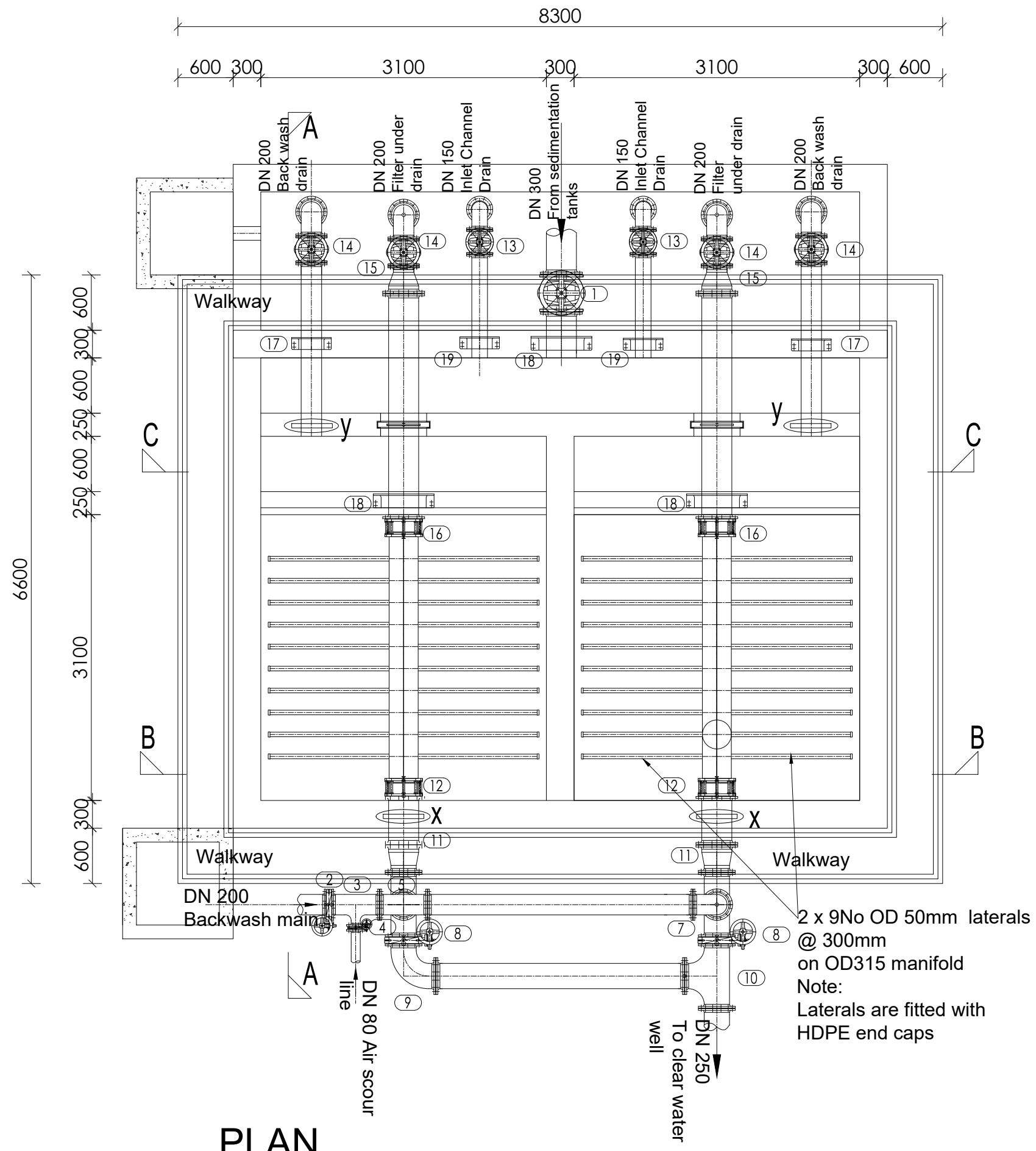
NYAGAK WATER SUPPLY AND SANITATION SYSTEM

REVISIONS :

No	Date	Description

DRAWING TITLE : **SEDIMENTATION TANK Sections**

Surveyed by:	R.K
Drawn by:	A.K
Designed by:	W.G.M
Checked by:	J.K.K
Date:	January 2023
DRG. No.:	NYA-WTP-005
Scale:	1:75
Sheet No.:	2 of 2

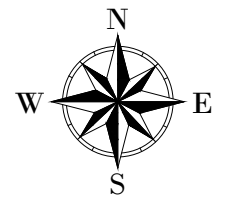


PLAN

PIPES AND FITTINGS SCHEDULE (FILTERS)		
ITEM	No. OF	DESCRIPTION
INLET		
(1)	1	DN300 FLANGED GATE VALVE
(2)	3	DN200 FLANGED BUTTERFLY VALVE
(3)	1	DN200 x 80 FLANGED TEE
(4)	1	DN80 FLANGED BUTTERFLY VALVE
(5)	1	DN200 FLANGED EQUAL TEE
(6)	2	DN250 x 200 FLANGED TEE
(7)	1	DN200 FLANGED 90° BEND
(20)	2	DN200 FLANGED GATE VALVE
OUTLET		
(8)	2	DN250 FLANGED BUTTERFLY VALVE
(9)	1	DN250 FLANGED 90° BEND
(10)	1	DN250 FLANGED EQUAL TEE
(11)	1	DN300 / 250 FLANGED TAPERS
(12)	1	DN300/OD315 COUPLING
(x)	2	DN300 FLANGED & PUDDLED PIPE
(y)	2	DN200 FLANGED & PUDDLED PIPE
DRAINS		
(13)	2	DN150 FLANGED GATE VALVE
(14)	4	DN200 FLANGED GATE VALVE
(15)	2	DN300/DN200 FLANGED FLAT REDUCER
(16)	1	DN300/OD315 COUPLING
(17)	2	DN200 FLANGED SPIGOT PIPE WITH PUDDLE FLANGE
(18)	3	DN350 FLANGED SPIGOT PIPE WITH PUDDLE FLANGE
(19)	2	DN150 FLANGED SPIGOT PIPE WITH PUDDLE FLANGE

2 x 9No OD 50mm laterals @ 300mm on OD315 manifold
 Note: Laterals are fitted with HDPE end caps

LEGEND



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NYAGAK WATER SUPPLY AND SANITATION SYSTEM

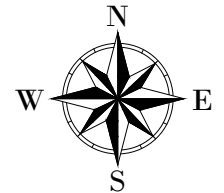
REVISIONS :

No	Date	Description

DRAWING TITLE : **RAPID SAND FILTERS Plan**

Surveyed by: R.K
 Drawn by: A.K
 Designed by: W.G.M
 Checked by: J.K.K
 Date: January 2023
 DRG. No.: **NYA-WTP-006**
 Scale: 1:50 Sheet No.: 1 of 3

LEGEND



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PROJECT :
ALA-ORA WATER SUPPLY AND SANITATION PROJECT

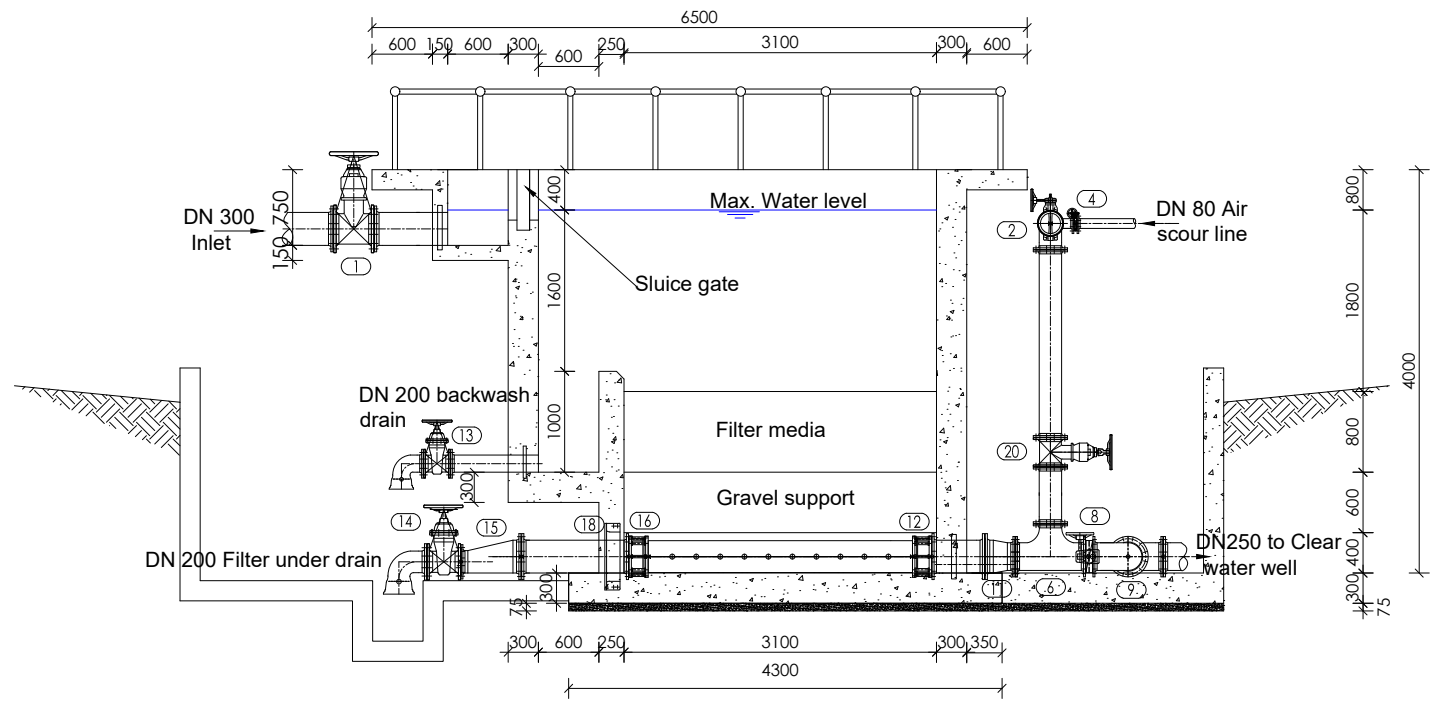
NYAGAK WATER SUPPLY AND SANITATION SYSTEM

REVISIONS :

No	Date	Description

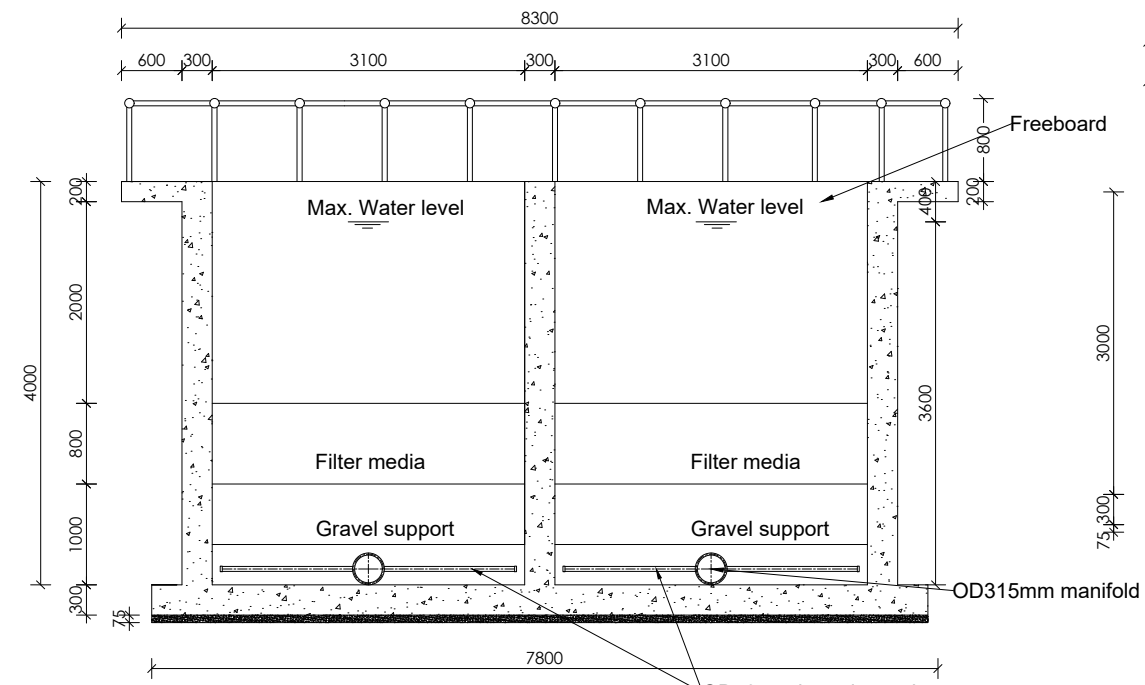
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Surveyed by:	R.K
Drawn by:	A.K
Designed by:	W.G.M
Checked by:	J.K.K
Date:	January 2023
DRG. No.:	NYA-WTP-006
Scale:	1:75
Sheet No.:	2 of 3

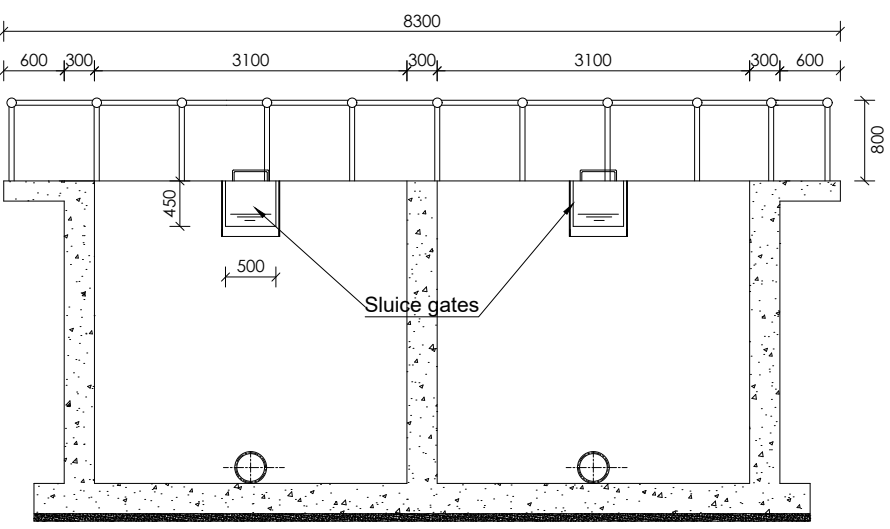


SECTION A-A

OVERFLOW AND DRAIN SECTION

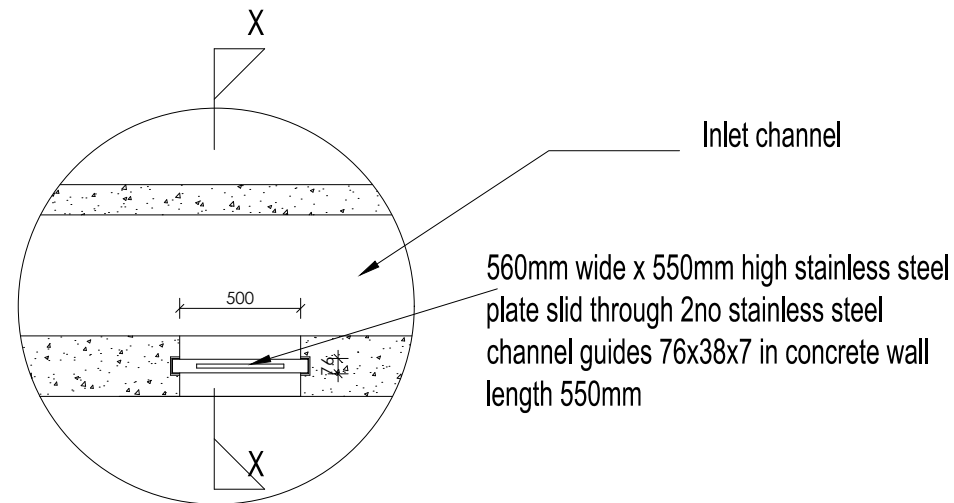
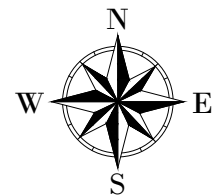


SECTION B-B



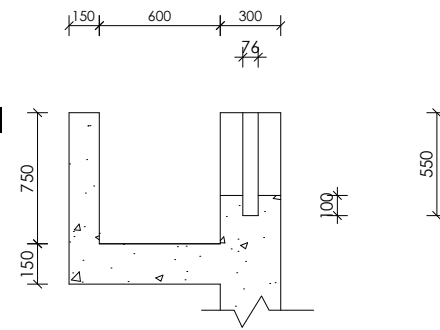
SECTION C-C

LEGEND



HAND STOCK FIXING
PLAN DETAILS

DETAIL a



SECTION X-X

FILTER MEDIA SUPPORT BED

LAYER	DEPTH mm	Coefficient of Uniformity	EFFECTIVE SIZE mm
TOP	200	2.5	3.0
MIDDLE	200	2.5	10.0
BOTTOM	200	2.5	25.0

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PROJECT :

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SANITATION PROJECT**

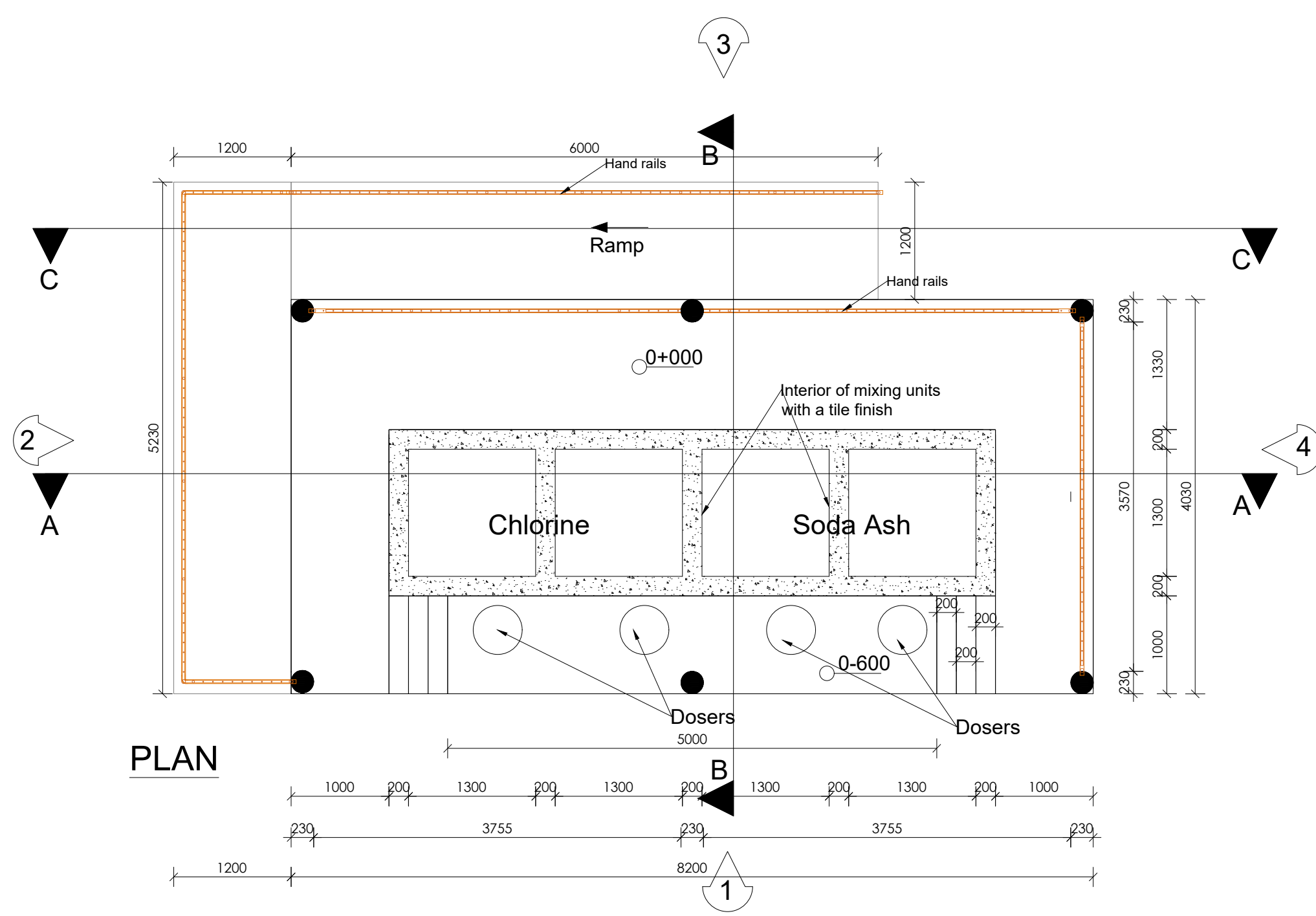
**NYAGAK WATER SUPPLY AND
SANITATION SYSTEM**

REVISIONS :

No	Date	Description

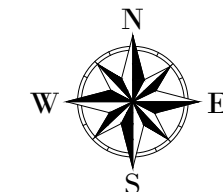
DRAWING TITLE : **RAPID SAND FILTERS
Details**


Surveyed by:	R.K
Drawn by:	A.K
Designed by:	W.G.M
Checked by:	J.K.K
Date:	January 2023
DRG. No.:	NYA-WTP-006
Scale:	1:75
Sheet No.:	3 of 3



PLAN

LEGEND



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ALA-ORA WATER SUPPLY AND SANITATION PROJECT

NYAGAK WATER SUPPLY AND SANITATION SYSTEM

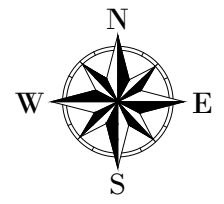
REVISIONS :

No	Date	Description

DRAWING TITLE : **CHLORINE & SODA ASH DOSING HOUSE Plan**

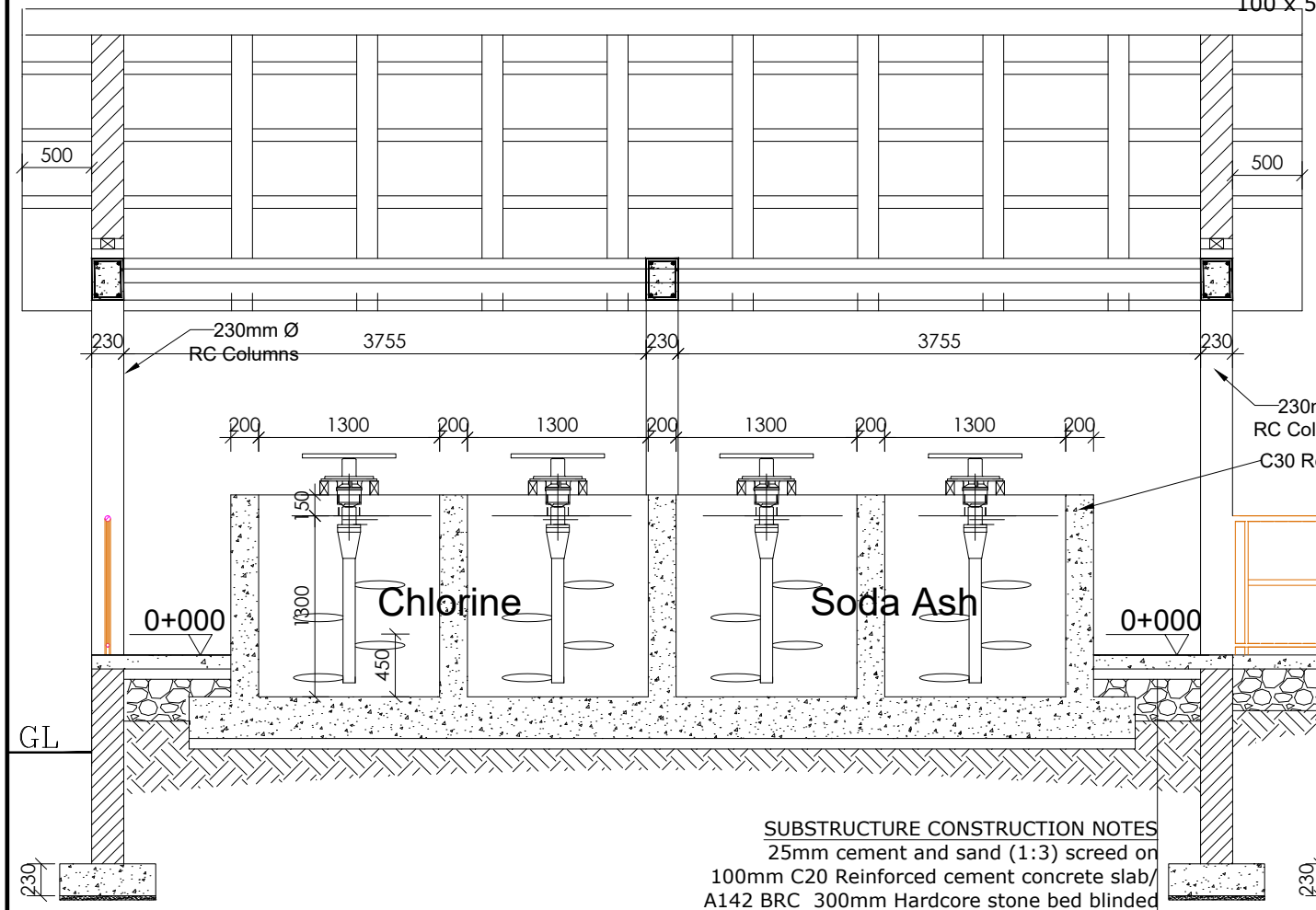
Surveyed by: R.K
 Drawn by: A.K
 Designed by: W.G.M
 Checked by: J.K.K
 Date: January 2023
 DRG. No.: **NYA-WTP-007**
 Scale: 1:50 Sheet No.: 1 of 6

LEGEND



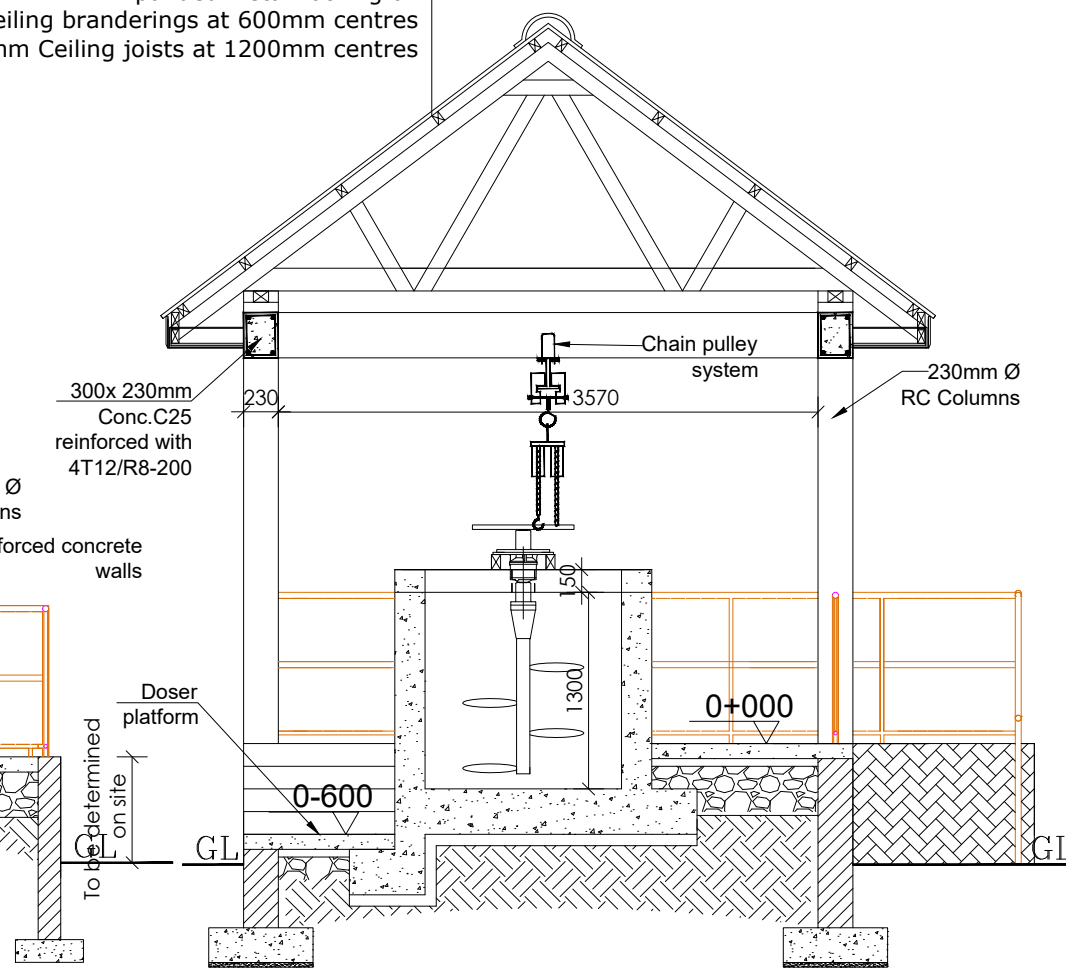
ROOF NOTES : pitch 37°
 Fire clay ridge cap/Mangalore roofing tiles on
 50 X 25 timber battens with
 gauge 32 GI plane sheet
Pressure treated roofing soft wood timber
 Double 100 x 50 mm timber rafters with
 100x 50mm struts & ties in truss with
 75 x 50 mm purlins on
 150 x 50mm tie beam on
 150 x 75 mm wall plate
 250 mm plastic fascia boards

CEILING CONSTRUCTION NOTES:
 20mm thick Cement and sand plaster on
 Expanded Metal Lathing on
 50 x 50mm Ceiling branderings at 600mm centres
 100 x 50mm Ceiling joists at 1200mm centres



SECTION A-A

SUBSTRUCTURE CONSTRUCTION NOTES
 25mm cement and sand (1:3) screed on
 100mm C20 Reinforced cement concrete slab/
 A142 BRC 300mm Hardcore stone bed blinded
 with 50mm sand
 on selected well compacted natural murrum
 filling
 690 x 230 mm C20 concrete strip footing for
 columns



SECTION B-B

CLIENT :

 THE REPUBLIC OF UGANDA
MINISTRY OF WATER AND ENVIRONMENT

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 IBRD • IDA | WORLD BANK GROUP

CONSULTANT :

 Alliance Consultants Ltd
 In Association with

 Infra-Consult Ltd

PROJECT :
**ALA-ORA WATER SUPPLY AND
 SANITATION PROJECT**

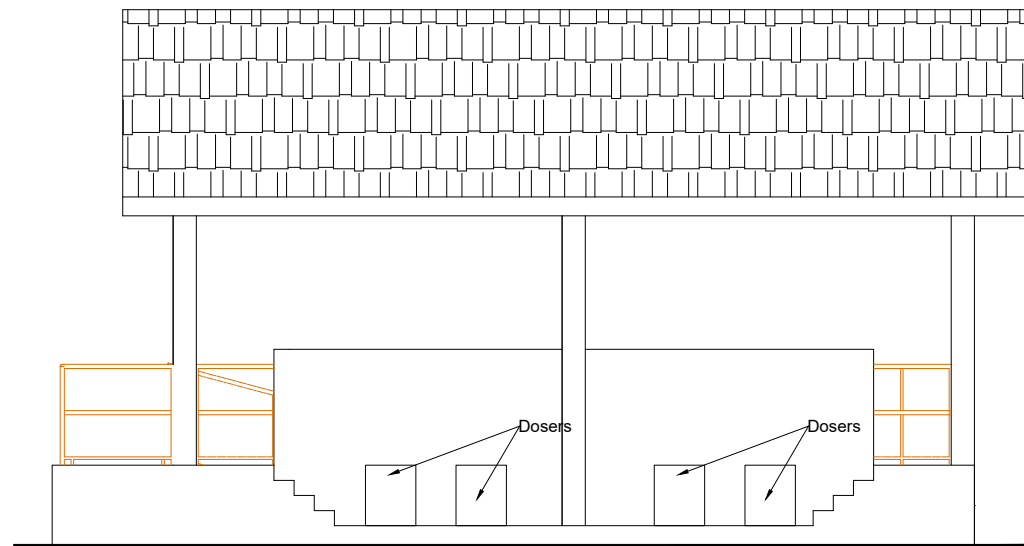
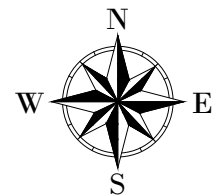
REVISIONS :

No	Date	Description

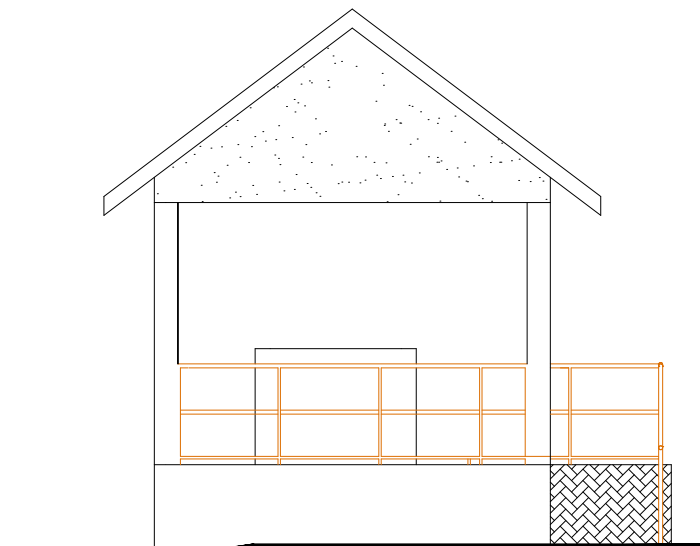
DRAWING TITLE : **CHLORINE & SODA ASH
 DOSING HOUSE
 Sections**

Surveyed by: R.K
 Drawn by: A.K
 Designed by: W.G.M
 Checked by: J.K.K
 Date: January 2023
 DRG. No.: **NYA-WTP-007**
 Scale: 1:50 Sheet No.: 2 of 6

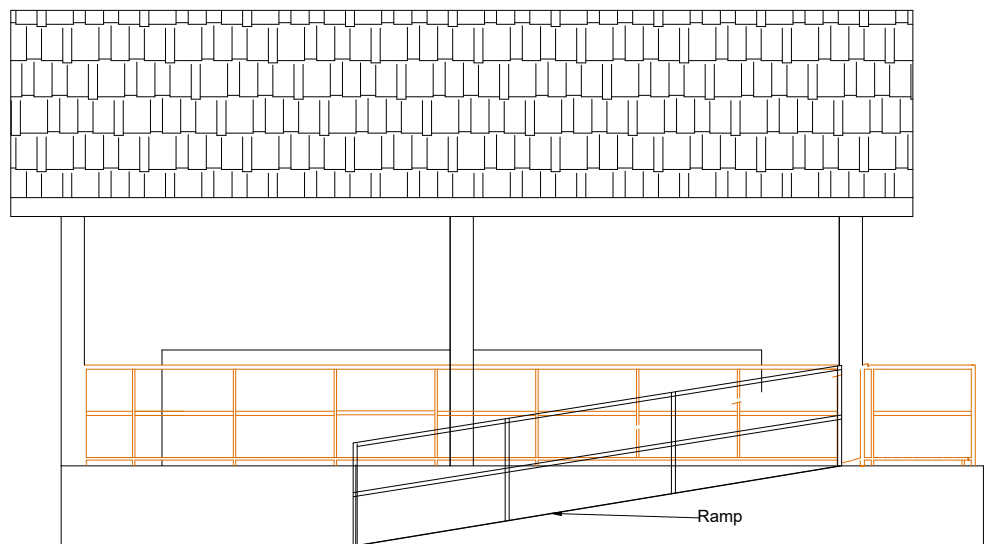
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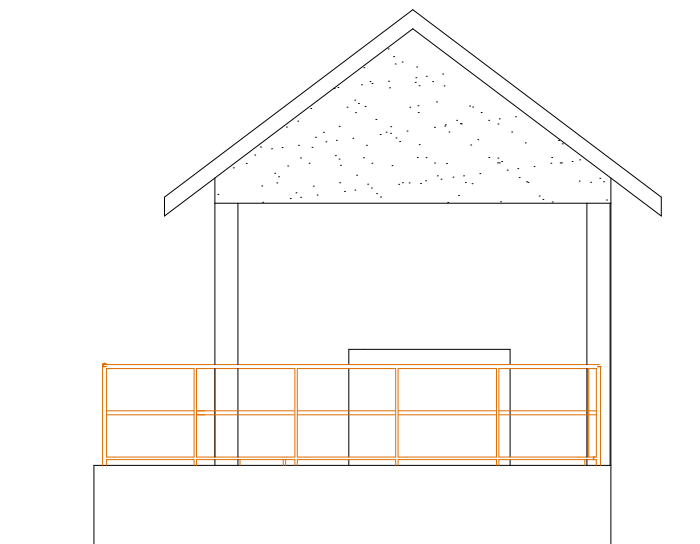
ELEVATION 3



ELEVATION 2



ELEVATION 1



ELEVATION 4

CLIENT :



THE REPUBLIC OF UGANDA
MINISTRY OF WATER AND ENVIRONMENT

CO-FINANCED BY:



CONSULTANT :



PROJECT :

ALA-ORA WATER SUPPLY AND
SANITATION PROJECT

**NYAGAK WATER SUPPLY AND
SANITATION SYSTEM**

REVISIONS :

No	Date	Description

DRAWING TITLE : **CHLORINE & SODA ASH
DOSING HOUSE**
Elevations

Surveyed by:

R.K

Drawn by:

A.K

Designed by:

W.G.M

Checked by:

J.K.K

Date:

January 2023

DRG. No.:

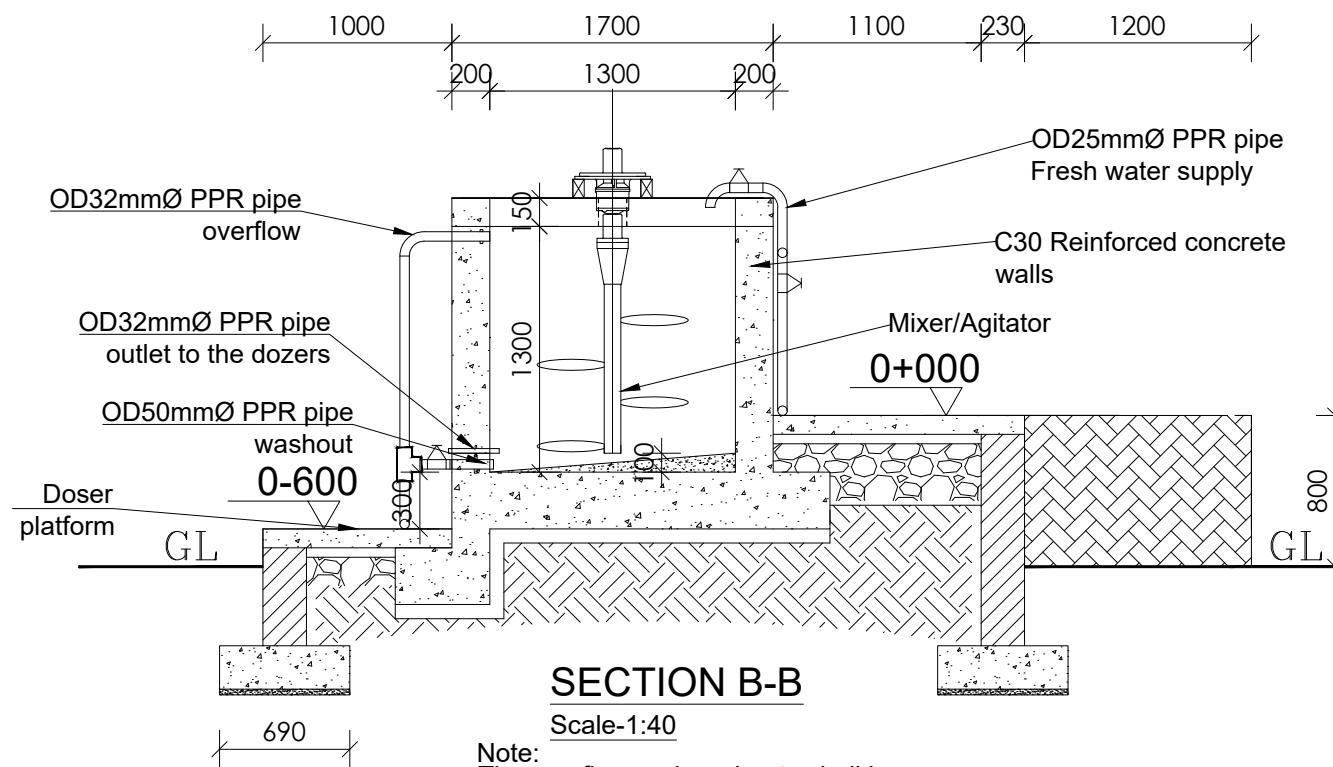
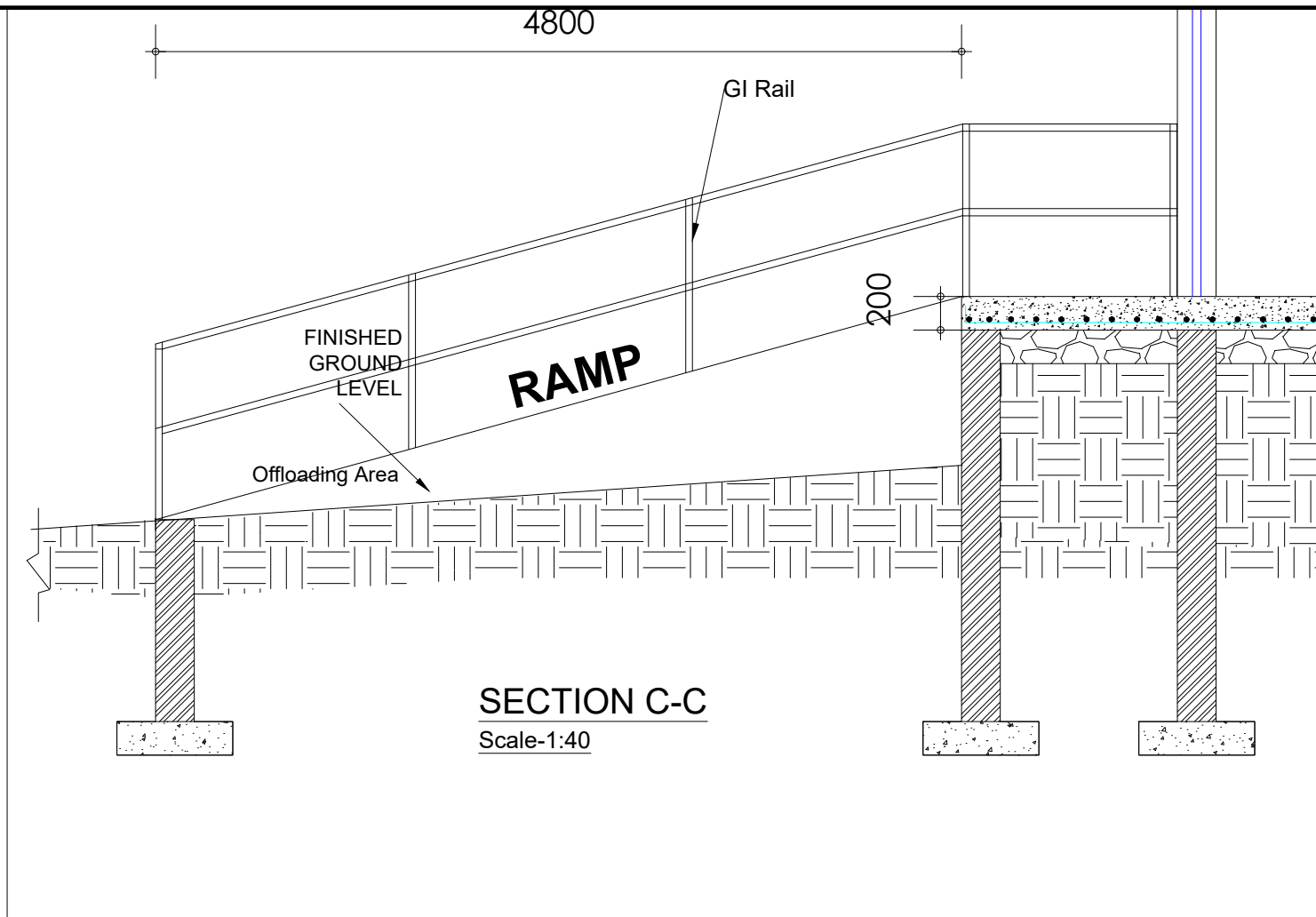
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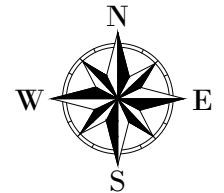
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Sheet No.:

3 of 6



LEGEND



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PROJECT :
ALA-ORA WATER SUPPLY AND SANITATION PROJECT

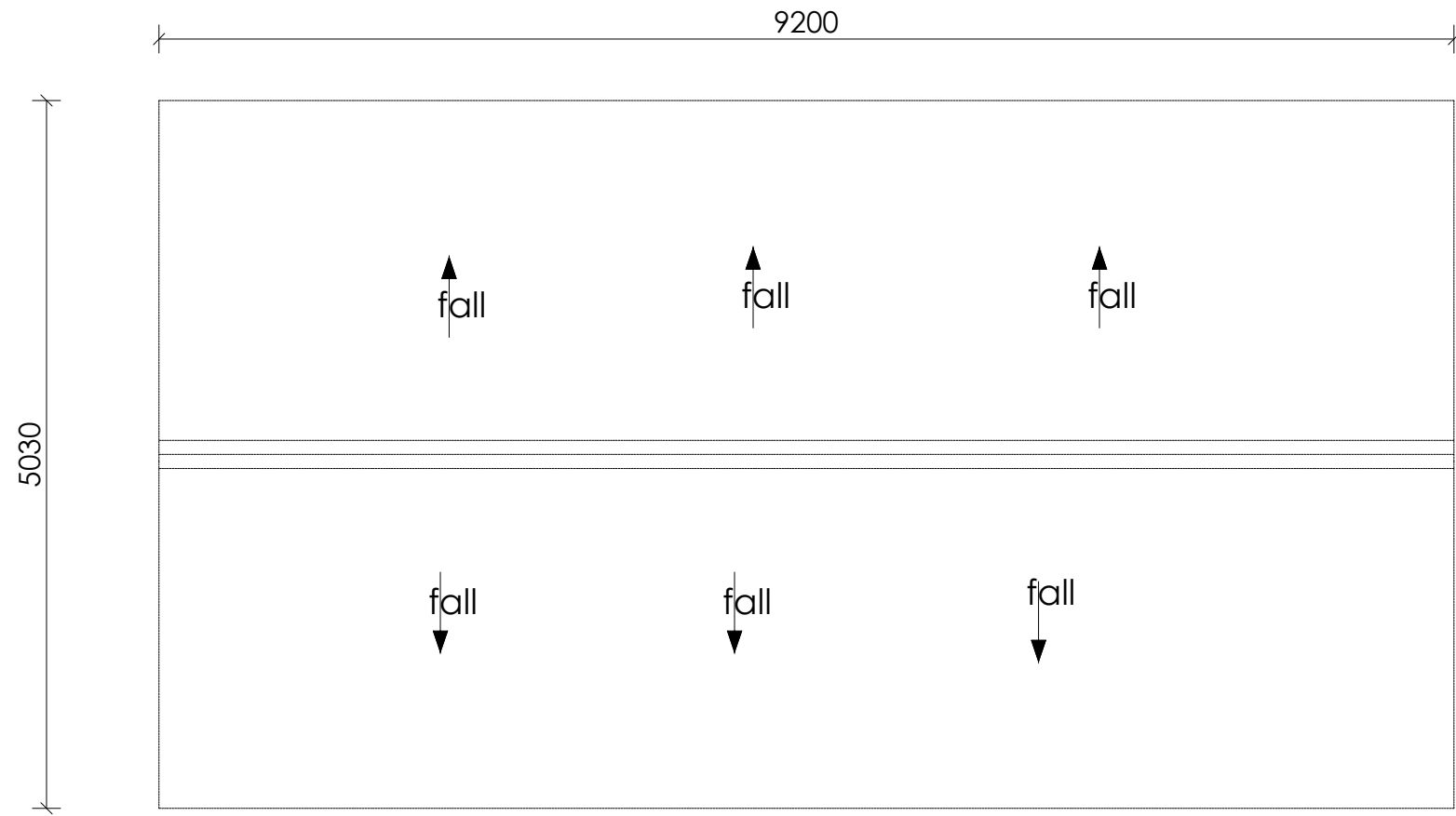
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REVISIONS :

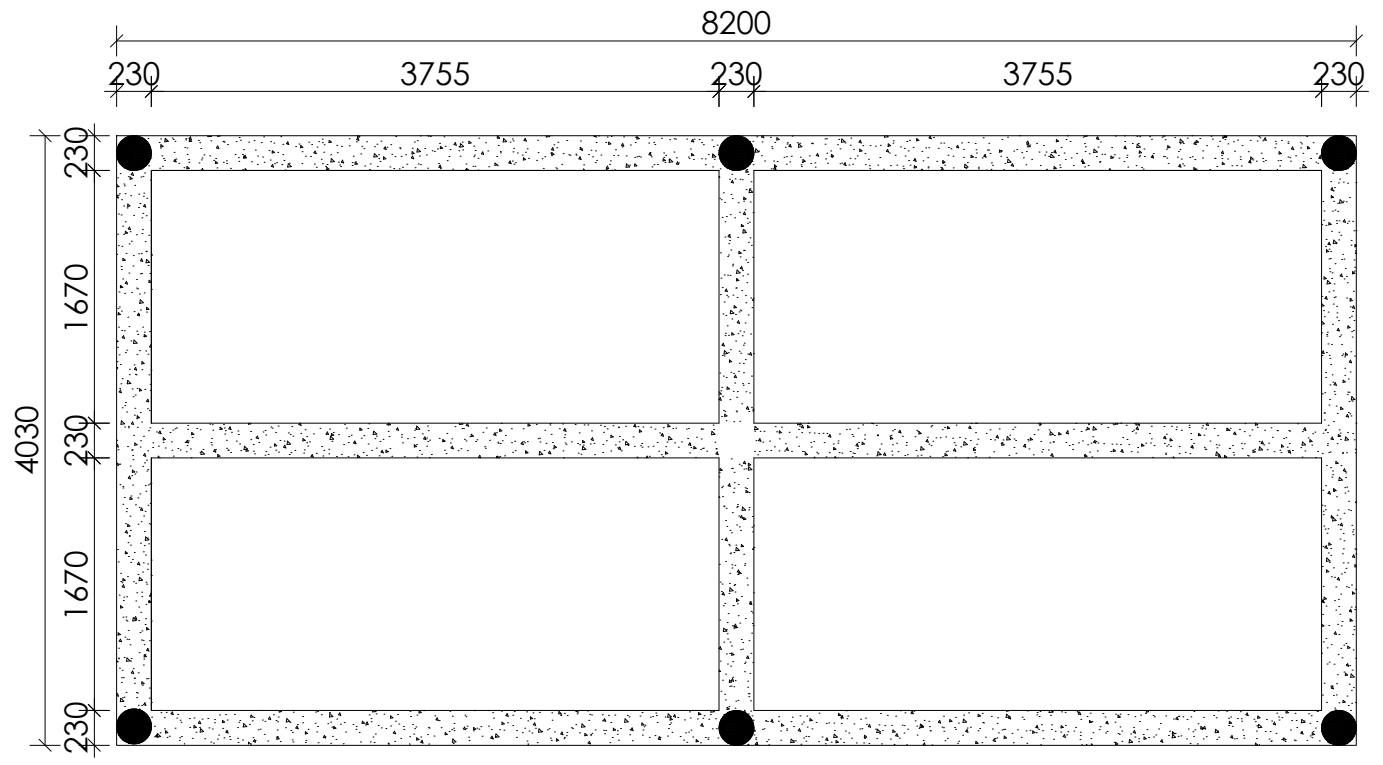
No	Date	Description

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 Details

Surveyed by:	R.K
Drawn by:	A.K
Designed by:	W.G.M
Checked by:	J.K.K
Date:	January 2023
DRG. No.:	NYA-WTP-007
Scale:	1:40
Sheet No.:	4 of 6

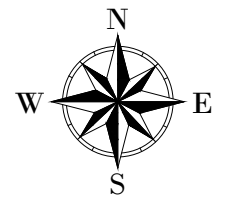


ROOF LAYOUT



ROOF BEAM

LEGEND



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PROJECT :
 ALA-ORA WATER SUPPLY AND
 SANITATION PROJECT

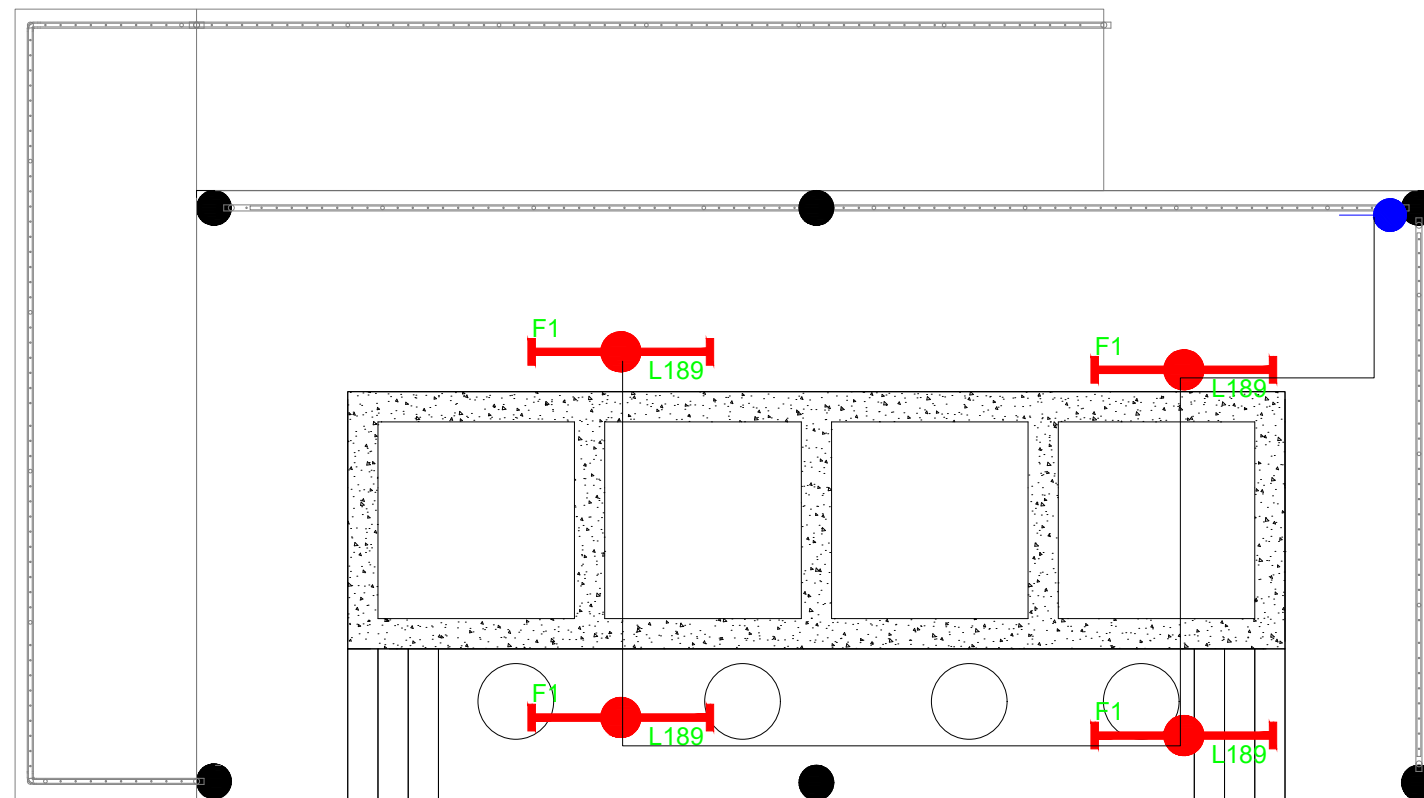
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 SANITATION SYSTEM**

REVISIONS :

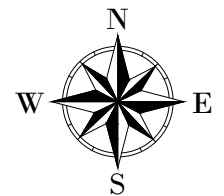
No	Date	Description

DRAWING TITLE : **CHLORINE & SODA ASH
 DOSING HOUSE**
 Roof & Roof Beam Layout

Surveyed by:	R.K
Drawn by:	A.K
Designed by:	W.G.M
Checked by:	J.K.K
Date:	January 2023
DRG. No.:	NYA-WTP-007
Scale:	1:50
Sheet No.:	5 of 6



LEGEND



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PROJECT :
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NYAGAK WATER SUPPLY AND SANITATION SYSTEM

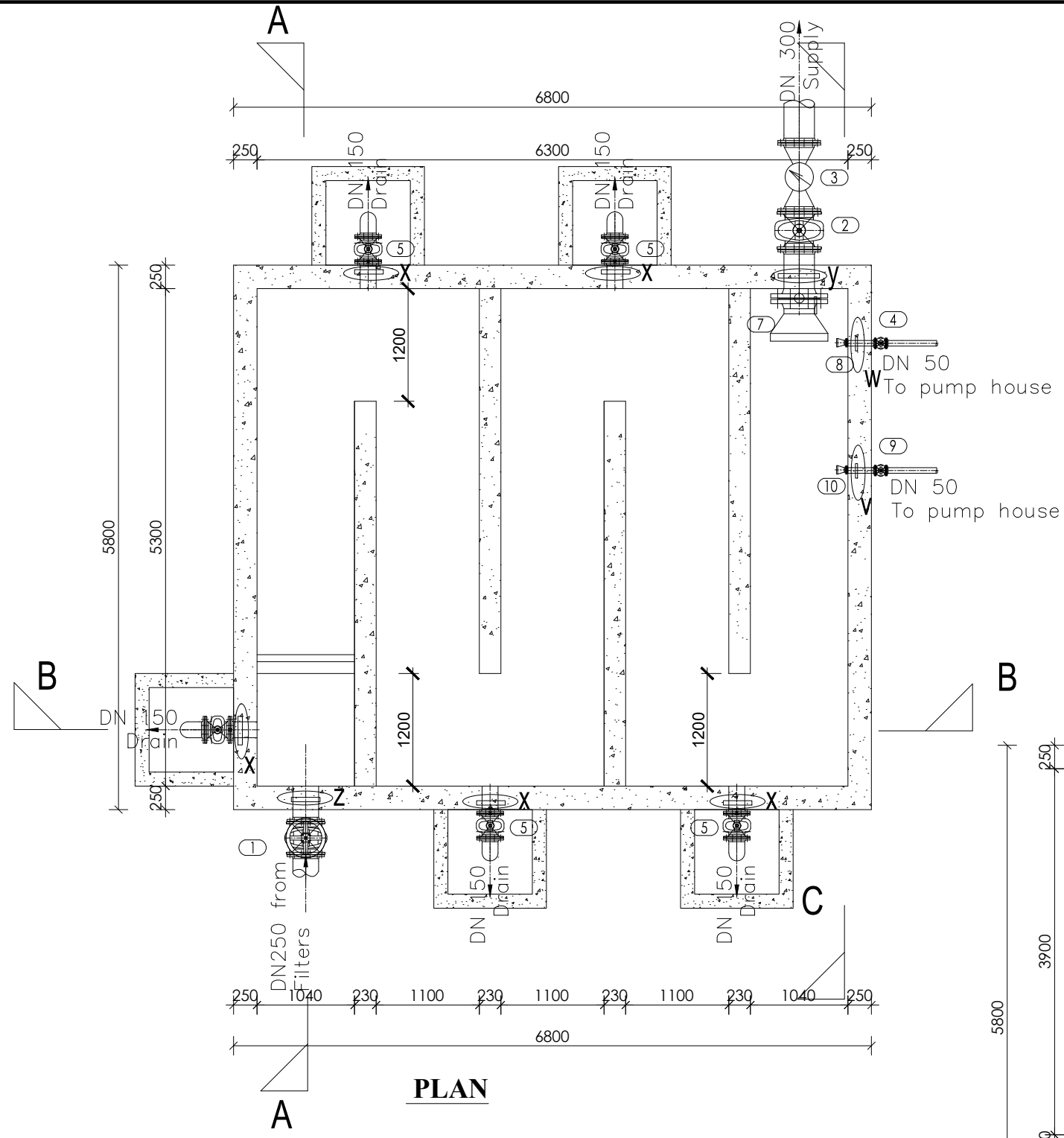
REVISIONS :

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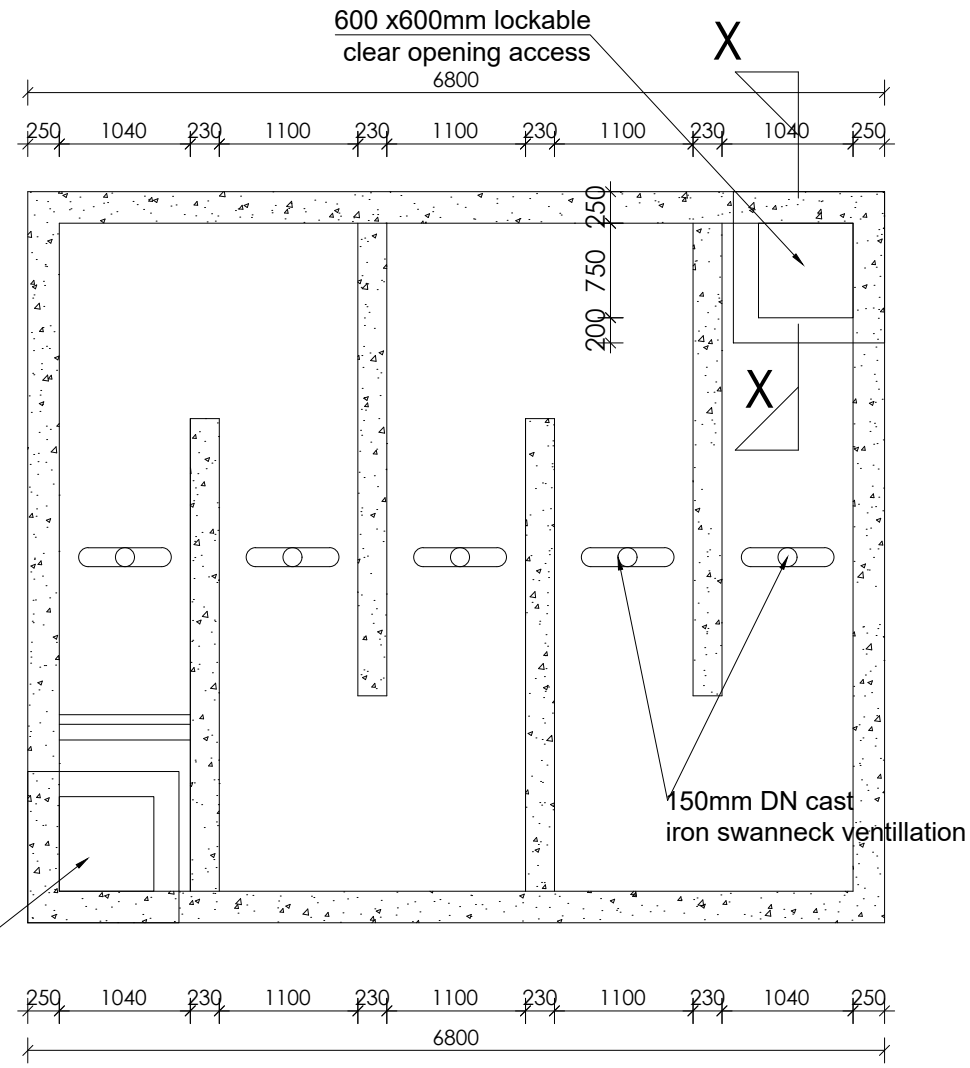
DRAWING TITLE : **CHLORINE & SODA ASH DOSING HOUSE**
 Electrical Layout

Surveyed by:	
Drawn by:	P.K
Designed by:	P.K
Checked by:	S.C.D
Date:	January 2023
DRG. No.:	NYA-WTP-007
Scale:	1:50
Sheet No.:	6 of 6

SYMBOL	DESCRIPTION
	1200mm 18W LED batten with a removable LED engine. IP20 As Thorn PopPack LED. or equal approved. (Light Type F1)
	Pendant lighting fitting comprising ceiling Rose 300mm 3x1.5mm ² flexible copper cable lamp holder and 6W LED Lamp
	Pendant lighting fitting comprising ceiling Rose 300mm 3x1.5mm ² flexible copper cable lamp holder and 6W LED Lamp
	Pendant lighting fitting comprising ceiling Rose 300mm 3x1.5mm ² flexible copper cable lamp holder and 6W LED Lamp
	wall mounted light
	Socket outlet on Wall
	Consumer's Unit
	One Gang 1way Switch
	Two Gang 1way Switch
	Three Gang 1way Switch

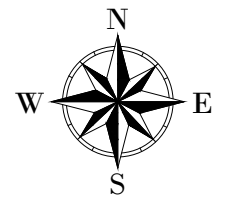


PLAN



ROOF PLAN

LEGEND



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PROJECT :
ALA-ORA WATER SUPPLY AND SANITATION PROJECT

NYAGAK WATER SUPPLY AND SANITATION SYSTEM

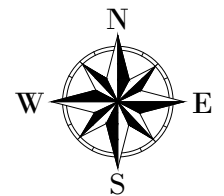
REVISIONS :

No	Date	Description

DRAWING TITLE : **CLEAR WATER TANK Plan**

Surveyed by:	R.K
Drawn by:	A.K
Designed by:	W.G.M
Checked by:	J.K.K
Date:	January 2023
DRG. No.:	NYA-WTP-008
Scale:	1:60
Sheet No.:	1 of 3

LEGEND



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CONSULTANT :

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In Association with

Infra-Consult Ltd

PROJECT :
ALA-ORA WATER SUPPLY AND SANITATION PROJECT

NYAGAK WATER SUPPLY AND SANITATION SYSTEM

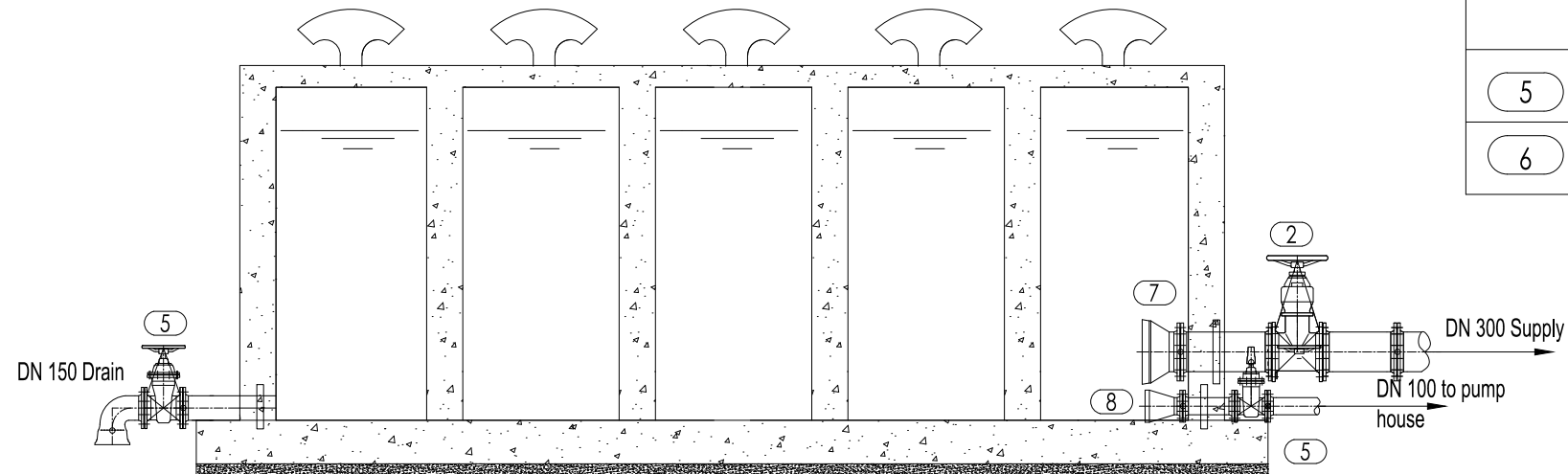
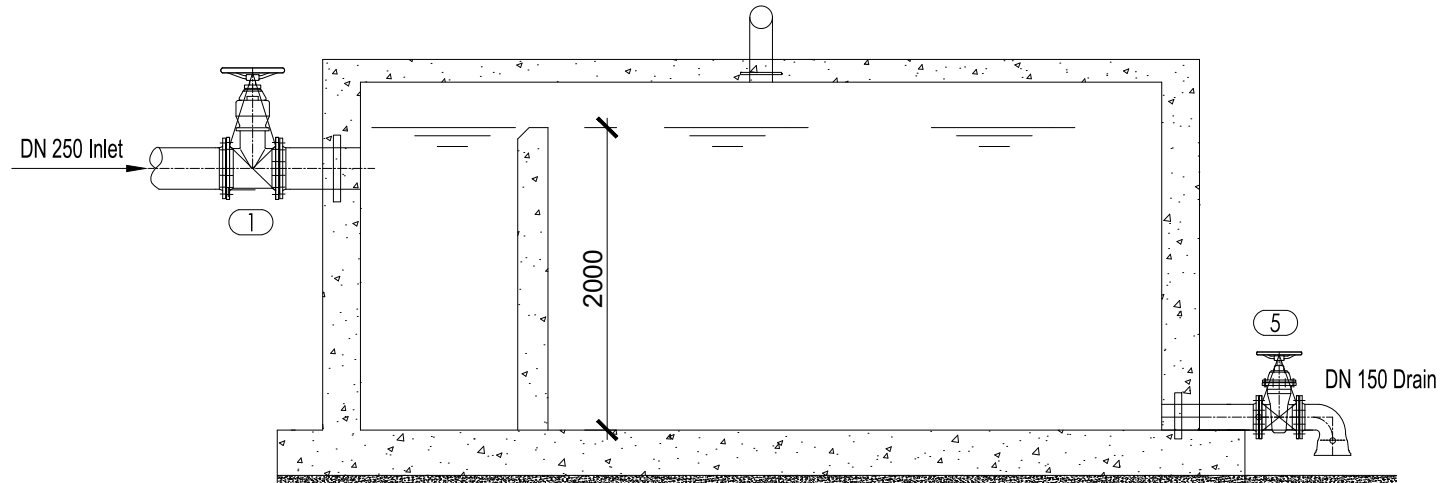
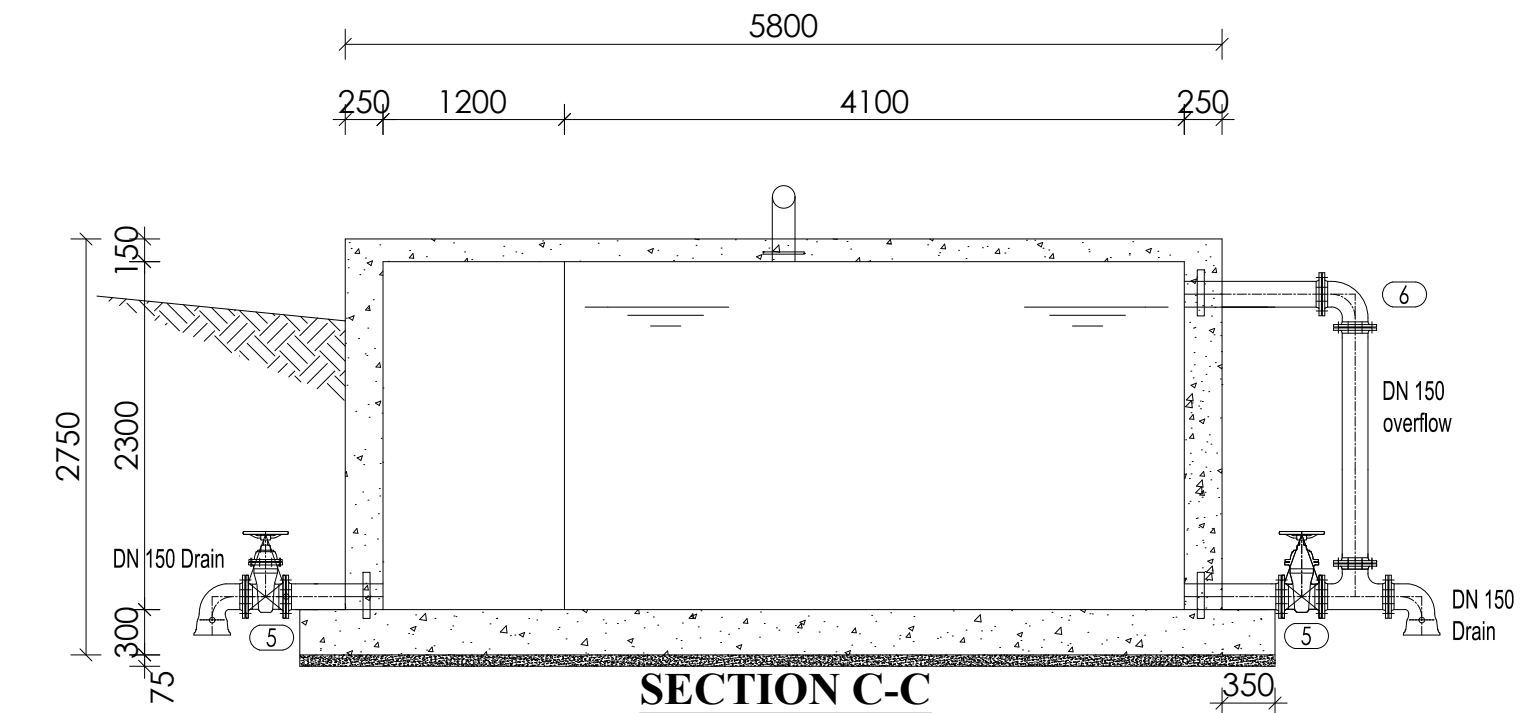
REVISIONS :

No	Date	Description

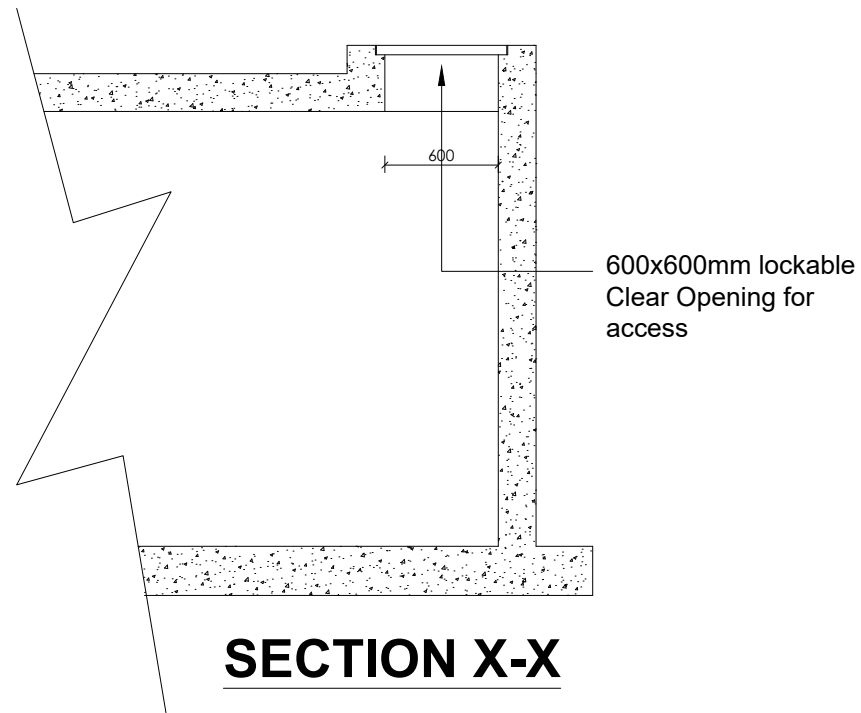
DRAWING TITLE : **CLEAR WATER TANK Sections**

Surveyed by: R.K
 Drawn by: A.K
 Designed by: W.G.M
 Checked by: J.K.K
 Date: January 2023
 DRG. No.: **NYA-WTP-008**
 Scale: 1:50 Sheet No.: 2 of 3

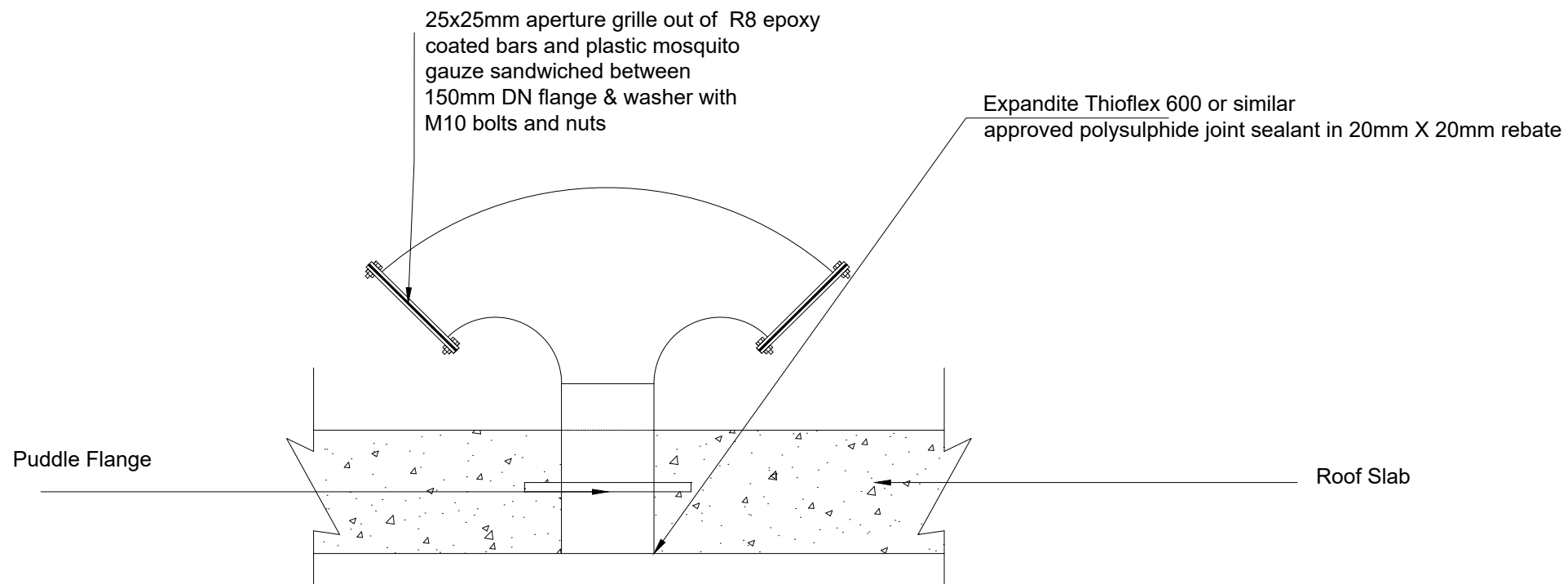
PIPES AND FITTINGS SCHEDULE		
ITEM	No. OF	DESCRIPTION
<u>INLET</u>		
(1)	1	DN250 FLANGED GATE VALVE
(Z)	1	DN250 FLANGED & PUDDLED PIPE
<u>OUTLET</u>		
(2)	1	DN300 FLANGED GATE VALVE
(3)	1	DN300 FLOW METER
(7)	1	DN300 FLANGED STRAINER
(4)	1	DN50 FLANGED GATE VALVE
(8)	1	DN50 FLANGED STRAINER
(9)	1	DN50 FLANGED GATE VALVE
(10)	1	DN50 FLANGED STRAINER
(Y)	1	DN300 FLANGED & PUDDLED PIPE
(W)	1	DN50 FLANGED & PUDDLED PIPE
(V)	1	DN50 FLANGED & PUDDLED PIPE
<u>DRAINS</u>		
(5)	1	DN150 FLANGED GATE VALVE
(6)	1	DN150 FLANGED 90° BEND



SECTION B-B



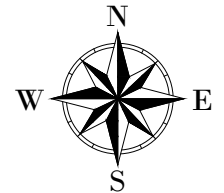
SECTION X-X



ROOF VENT DETAIL

NB. The entire assembly to corrosive resistant.

LEGEND



CLIENT :

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MINISTRY OF WATER AND ENVIRONMENT

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In Association with
 **Infra-Consult Ltd**

PROJECT :
ALA-ORA WATER SUPPLY AND SANITATION PROJECT

NYAGAK WATER SUPPLY AND SANITATION SYSTEM

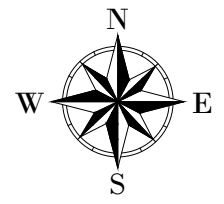
REVISIONS :

No	Date	Description

DRAWING TITLE : **CLEAR WATER TANK Details**

Surveyed by:	R.K
Drawn by:	A.K
Designed by:	W.G.M
Checked by:	J.K.K
Date:	January 2023
DRG. No.:	NYA-WTP-008
Scale:	N.T.S
Sheet No.:	3 of 3

LEGEND





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MINISTRY OF WATER AND ENVIRONMENT

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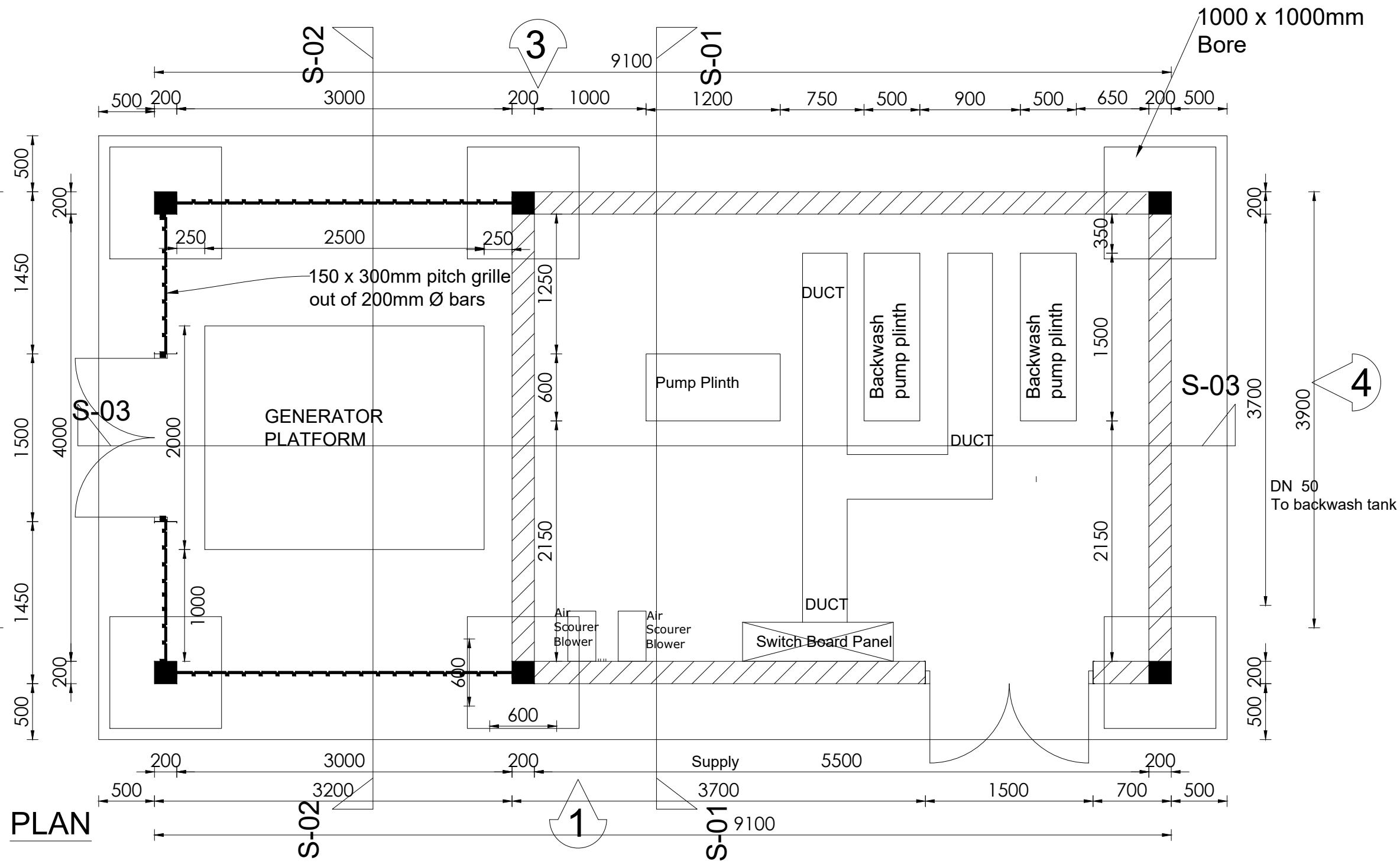
CONSULTANT :

 Alliance Consultants Ltd
 In Association with

 Infra-Consult Ltd

PROJECT :
ALA-ORA WATER SUPPLY AND SANITATION PROJECT

NYAGAK WATER SUPPLY AND SANITATION SYSTEM

DRAWING TITLE : **PUMP HOUSE Plan**

Surveyed by:	R.K
Drawn by:	A.K
Designed by:	W.G.M
Checked by:	J.K.K
Date:	January 2023
DRG. No.:	NYA-WTP-009
Scale:	1:40
Sheet No.:	1 of 11



PLAN

2

3

4

1

NOTES:

1. The shed floor shall be self draining
2. All the mild steel components shall be painted with primer coat and 2 coats of oil paint
3. The metal grille door shall have at least 4 No. padlock bolts. One each bolting onto the header/ floor, the other two bolting onto the grille leaves

ROOF NOTES : pitch 30°

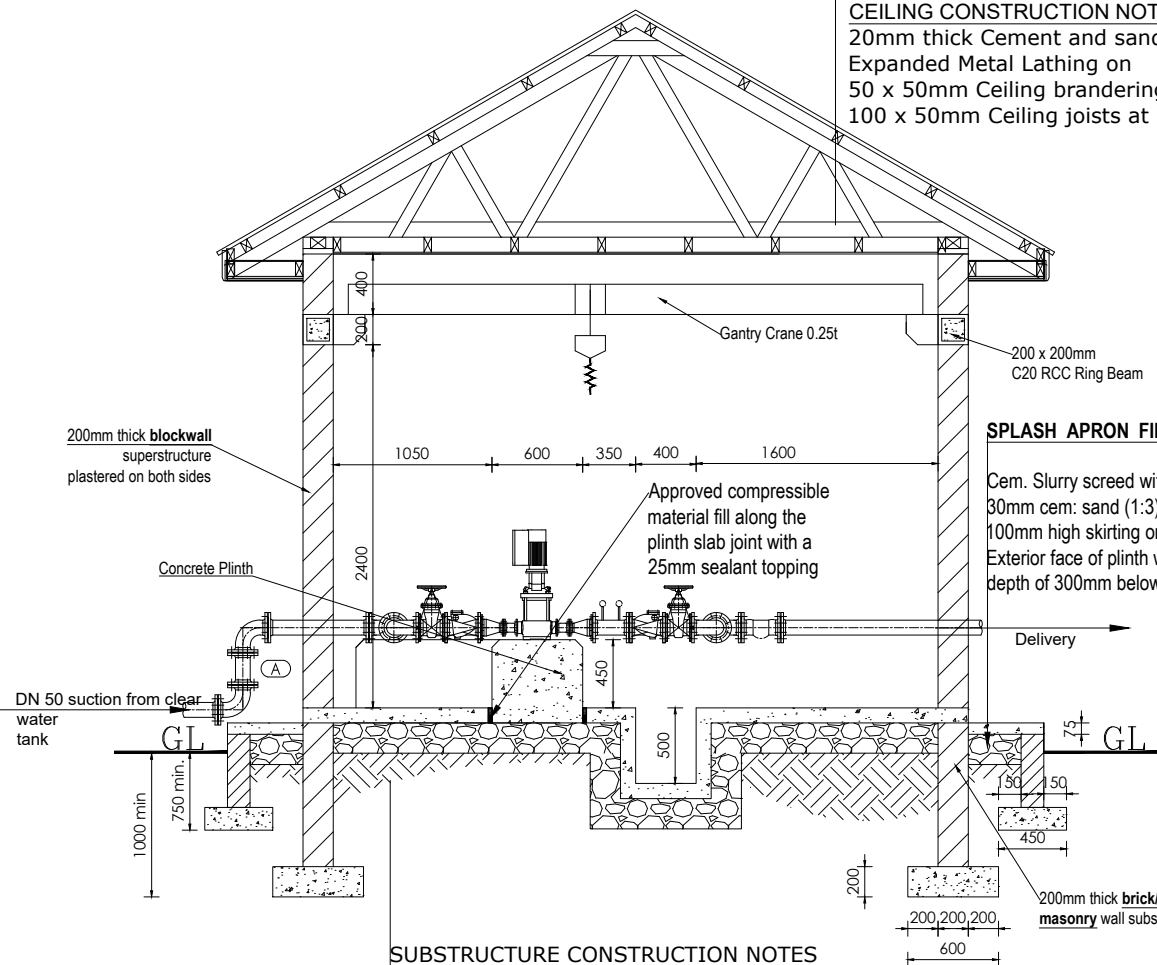
Fire clay ridge cap/Mangalore roofing tiles on 50 X 25 timber battens with gauge 32 GI plane sheet
Pressure treated roofing soft wood timber
 Double 100 x 50 mm timber rafters with 100x 50mm struts & ties in truss with 75 x 50 mm purlins on 150 x 50mm tie beam on 150 x 75 mm wall plate 250 mm plastic fascia boards

CEILING CONSTRUCTION NOTES:

20mm thick Cement and sand plaster on Expanded Metal Lathing on 50 x 50mm Ceiling branderings at 600mm centres 100 x 50mm Ceiling joists at 1200mm centres

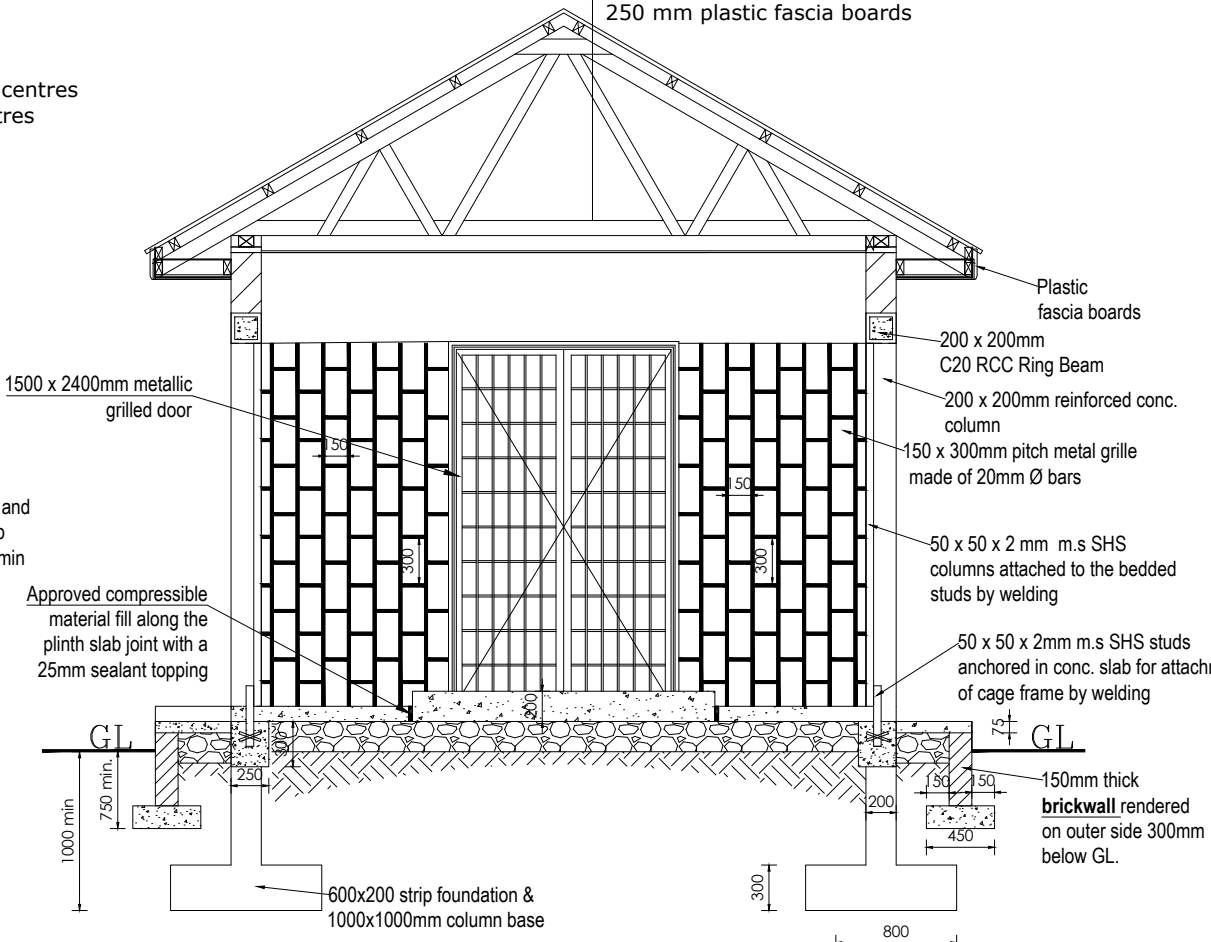
ROOF NOTES : pitch 30°

Fire clay ridge cap/Mangalore roofing tiles on 50 X 25 timber battens with gauge 32 GI plane sheet
Pressure treated roofing soft wood timber
 Double 100 x 50 mm timber rafters with 100x 50mm struts & ties in truss with 75 x 50 mm purlins on 150 x 50mm tie beam on 150 x 75 mm wall plate 250 mm plastic fascia boards



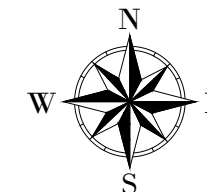
SUBSTRUCTURE CONSTRUCTION NOTES
 8mm thick ceramic floor tiles on 25mm cement and sand (1:3) screed on 100mm C15 Reinforced cement concrete slab/ A142 BRC 200mm Hardcore stone bed blinded with 50mm sand 150mm selected well compacted natural murrum filling 600 x 230 mm plain cement concrete C15 strip fdn.

SECTION S-01



SECTION S-02

LEGEND



CLIENT : 
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 Alliance Consultants Ltd
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PROJECT :
ALA-ORA WATER SUPPLY AND SANITATION PROJECT

NYAGAK WATER SUPPLY AND SANITATION SYSTEM

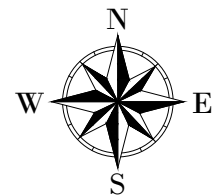
REVISIONS :

No	Date	Description

DRAWING TITLE : **PUMP HOUSE Sections**

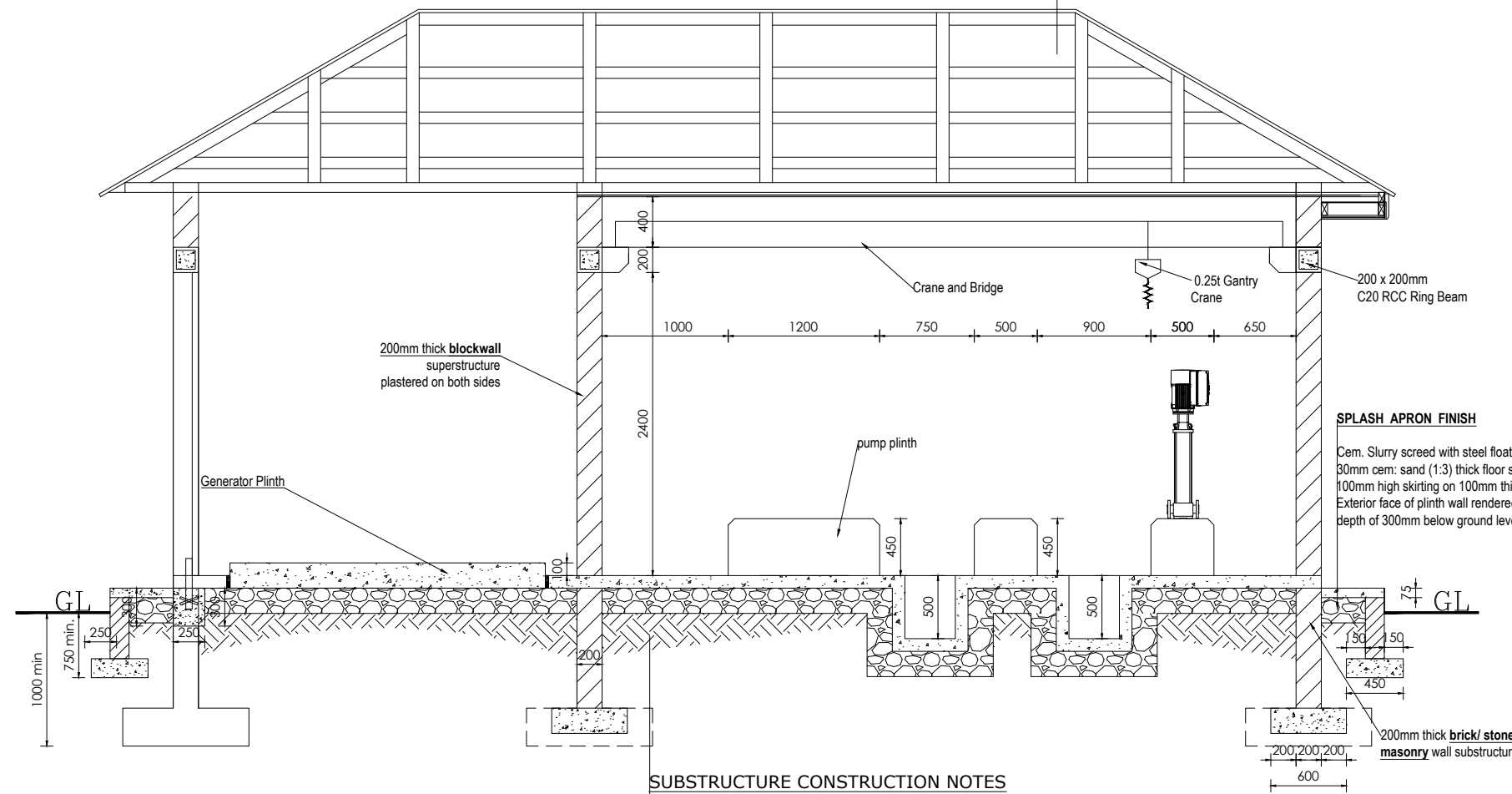
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Drawn by:	A.K
Designed by:	W.G.M
Checked by:	J.K.K
Date:	January 2023
DRG. No.:	NYA-WTP-009
Scale:	1:50
Sheet No.:	2 of 11

LEGEND



ROOF NOTES : pitch 30°
 Fire clay ridge cap/Mangalore roofing tiles on
 50 X 25 timber battens with
 gauge 32 GI plane sheet
Pressure treated roofing soft wood timber
 Double 100 x 50 mm timber rafters with
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 75 x 50 mm purlins on
 150 x 50mm tie beam on
 150 x 75 mm wall plate
 250 mm plastic fascia boards

CEILING CONSTRUCTION NOTES:
 20mm thick Cement and sand plaster on
 Expanded Metal Lathing on
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 100 x 50mm Ceiling joists at 1200mm centres



SUBSTRUCTURE CONSTRUCTION NOTES
 8mm thick ceramic floor tiles on
 25mm cement and sand (1:3) screed on
 100mm C15 Reinforced cement concrete slab/ A142 BRC
 200mm Hardcore stone bed blinded with 50mm sand
 150mm selected well compacted natural murram filling
 600 x 230 mm plain cement concrete C15 strip fdn.

SECTION S-03

CLIENT :



THE REPUBLIC OF UGANDA
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CONSULTANT :



PROJECT :

**ALA-ORA WATER SUPPLY AND
 SANITATION PROJECT**

**NYAGAK WATER SUPPLY AND
 SANITATION SYSTEM**

REVISIONS :

No	Date	Description

DRAWING TITLE :

**PUMP HOUSE
 Sections**

Surveyed by:

R.K

Drawn by:

A.K

Designed by:

W.G.M

Checked by:

J.K.K

Date:

January 2023

DRG. No.:

NYA-WTP-009

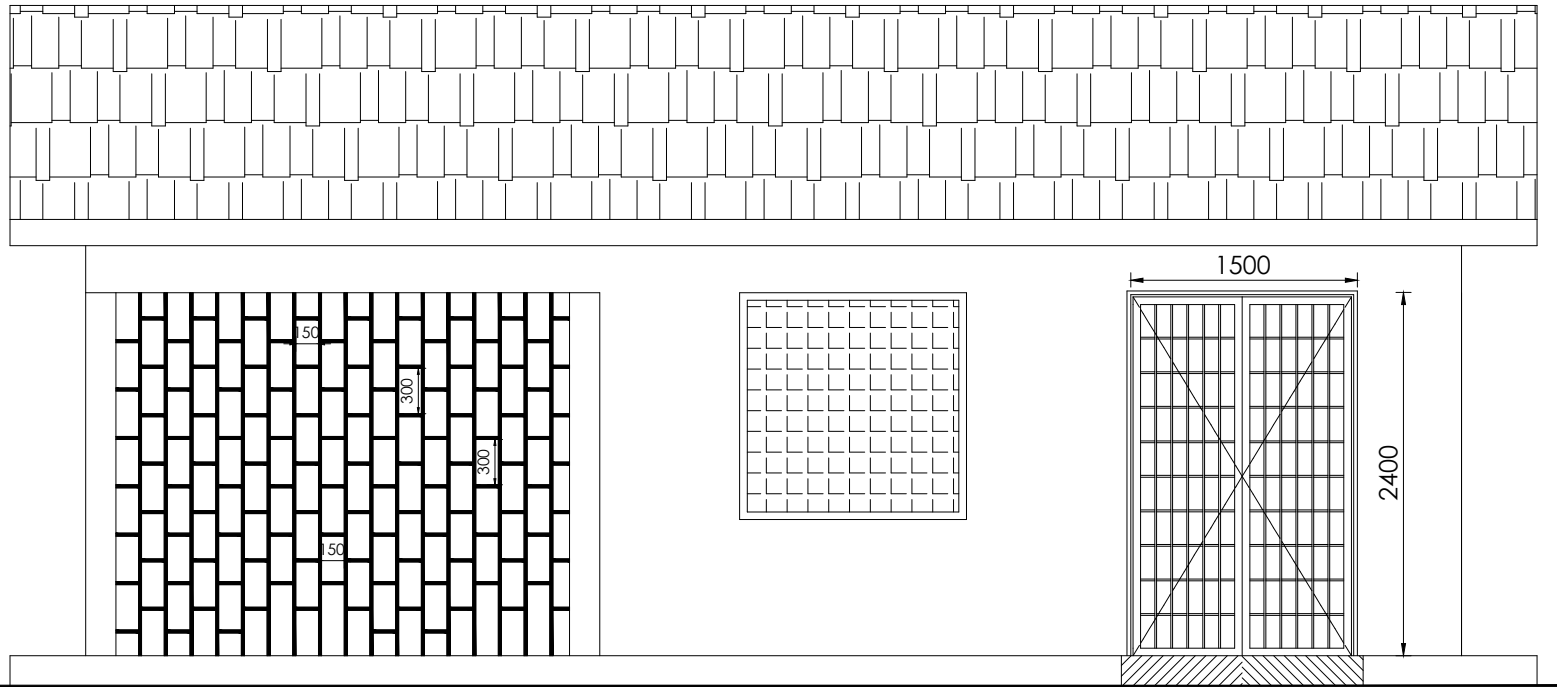
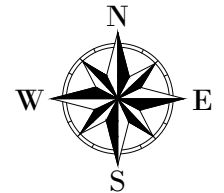
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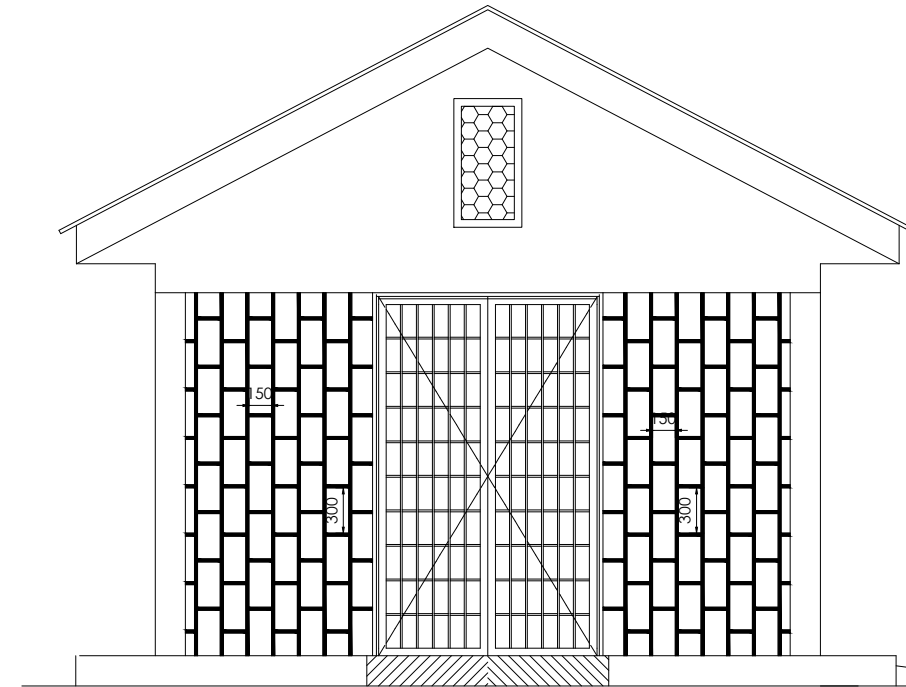
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3 of 11

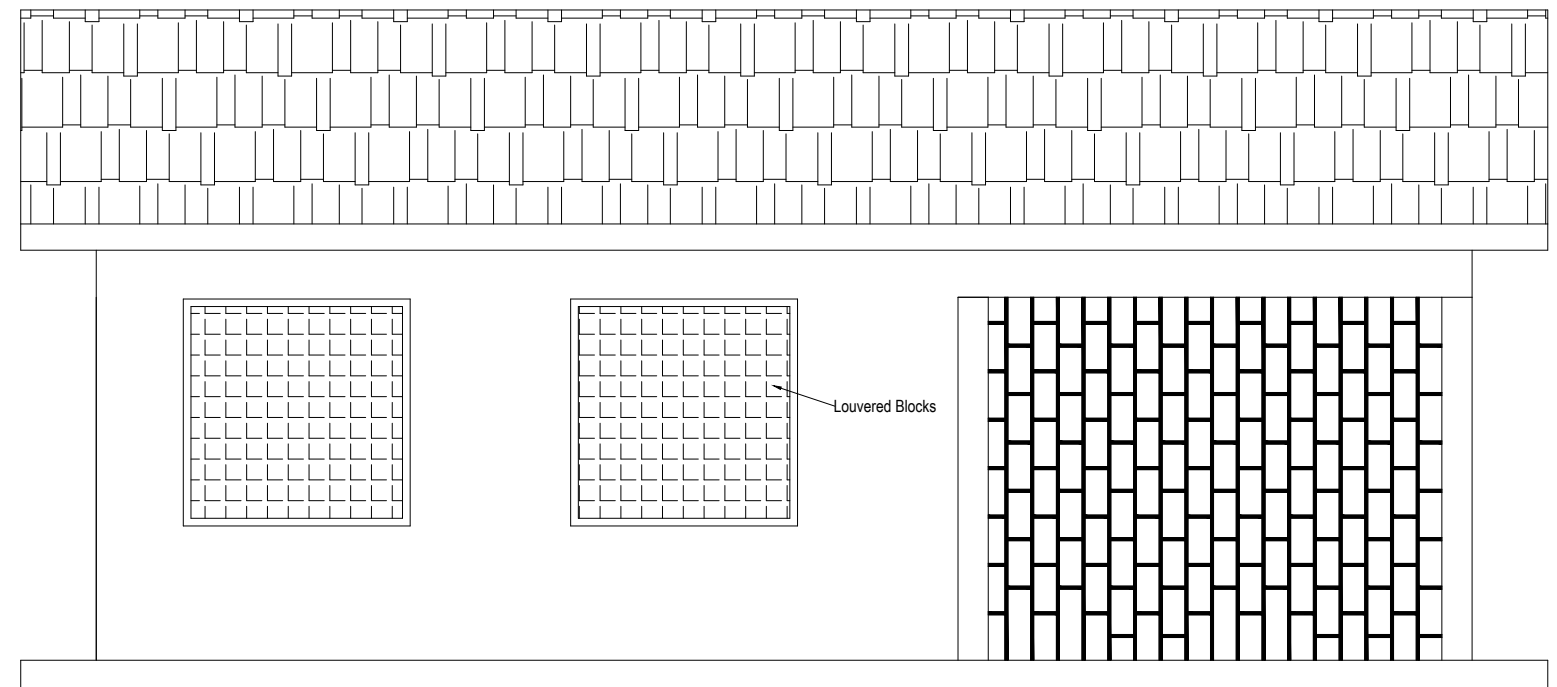
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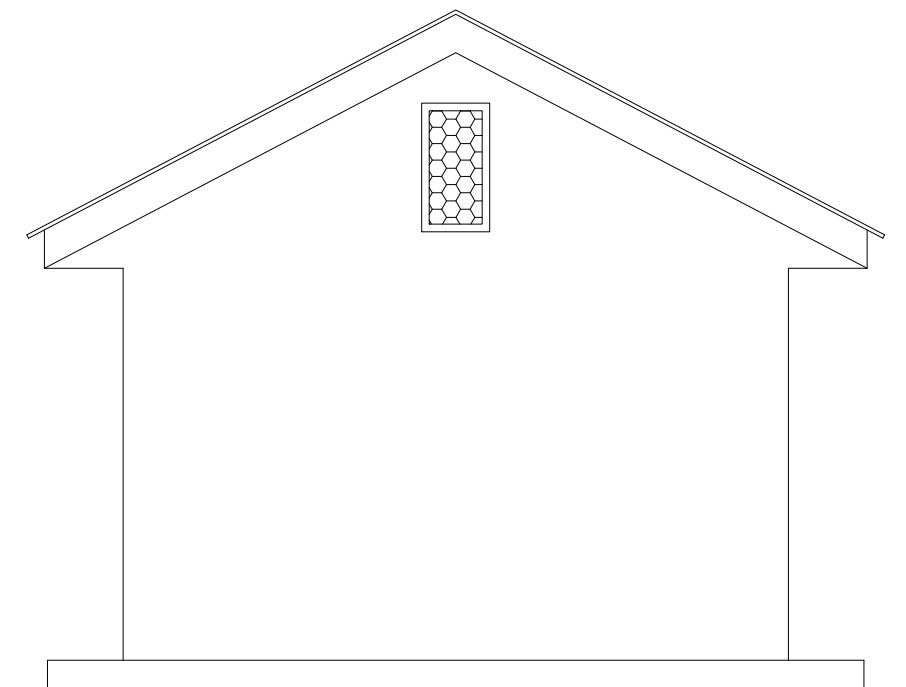
ELEVATION 1



ELEVATION 2



ELEVATION 3



ELEVATION 4

CLIENT : 
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 SANITATION PROJECT**

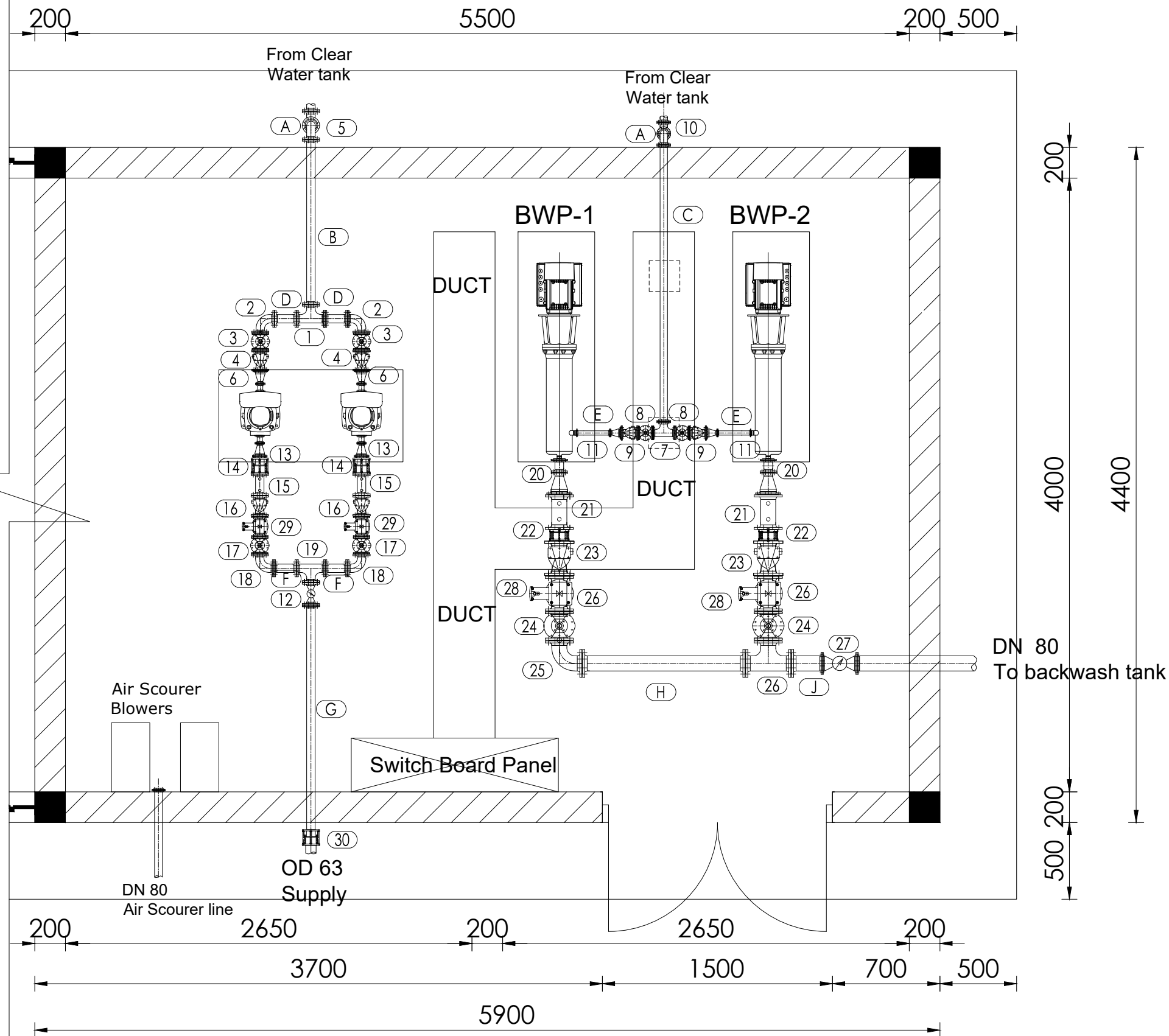
**NYAGAK WATER SUPPLY AND
 SANITATION SYSTEM**

REVISIONS :

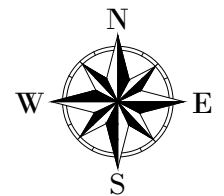
No	Date	Description

DRAWING TITLE : **PUMP HOUSE
 Elevations**

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Drawn by:	A.K
Designed by:	W.G.M
Checked by:	J.K.K
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Scale:	1:50
Sheet No.:	4 of 11



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PROJECT :
ALA-ORA WATER SUPPLY AND SANITATION PROJECT

NYAGAK WATER SUPPLY AND SANITATION SYSTEM

REVISIONS :

No	Date	Description

DRAWING TITLE : **PUMP HOUSE Pipe Schedule**

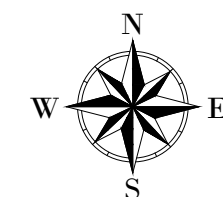
Surveyed by: R.K
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 Checked by: J.K.K
 Date: January 2023
 DRG. No.: **NYA-WTP-009**
 Scale: 1:30 Sheet No.: 5 of 11

PIPES AND FITTINGS SCHEDULE		
ITEM	No. OF	DESCRIPTION
		<u>DN50 SUCTIONS</u>
1	1	DN50 ALL EQUAL TEE
2	2	DN50 FLANGED 90° BEND
3	2	DN50 FLANGED GATE VALVE
4	2	D50 FLANGED NON-RETURN VALVE
5	2	D50 FLANGED 90° BEND
6	2	DN50/DN25 FLANGED REDUCER
		<u>DN50 SUNCTION</u>
7	1	D50 FLANGED EQUAL TEE
8	2	DN50 FLANGED GATE VALVE
9	2	DN50 FLANGED NON-RETURN VALVE
10	2	D50 FLANGED 90° BEND
11	2	DN50/DN25 FLANGED REDUCERS

PIPES AND FITTINGS SCHEDULE		
ITEM	No. OF	DESCRIPTION
		<u>DN50 DELIVERY TANK</u>
12	1	DN50 FLANGED BULK WATER METER
13	2	DN50/DN32 FLANGED REDUCER
14	2	DN50 DISMANTLING JOINT
15	2	DN50 FLANGED PRESSURE GAUGE
16	2	D50 FLANGED NON-RETURN VALVE
17	2	D50 FLANGED GATE VALVE
18	1	D50 FLANGED 90° BEND
19	2	D50 FLANGED ALL EQUAL TEE
29	2	D50 FLANGED AIR VALVE
30	1	D50/OD63 COUPLING
		<u>DN80 DELIVERY (Backwashtank)</u>
20	2	D80/DN32 FLANGED REDUCER
21	2	DN80 FLANGED PRESSURE GAUGE
22	2	DN80 DISMANTLING JOINT
23	2	DN80 FLANGED NON-RETURN VALVE
24	2	DN80 FLANGED GATE VALVE
25	1	D80 FLANGED 90° BEND
26	3	D80 FLANGED ALL EQUAL TEE
27	1	D80 FLANGED BULK WATER METER
28	2	D80 FLANGED AIR VALVE

PIPES AND FITTINGS SCHEDULE		
ITEM	No. OF	DESCRIPTION
		<u>DN50 PIPE SPECIALS</u>
A	2	DN 50 FLANGED PIPE LENGTH n.e 0.35m
B	1	DN 50 FLANGED PIPE LENGTH n.e 1.2m
C	1	DN 50 FLANGED PIPE LENGTH n.e 2m
D	2	DN 50 FLANGED PIPE LENGTH n.e 0.2m
E	2	DN 50 FLANGED PIPE LENGTH n.e 0.3m
F	2	DN 50 FLANGED PIPE LENGTH n.e 0.2m
G	1	DN 50 FLANGED PIPE LENGTH n.e 1.5m
		<u>DN80 PIPE SPECIALS</u>
H	1	DN 80 FLANGED PIPE LENGTH n.e 1.2m
J	2	DN 80 FLANGED PIPE LENGTH n.e 0.25m



LEGEND



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PROJECT :
ALA-ORA WATER SUPPLY AND SANITATION PROJECT

NYAGAK WATER SUPPLY AND SANITATION SYSTEM

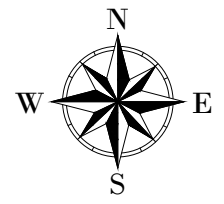
REVISIONS :

No	Date	Description

DRAWING TITLE : **PUMP HOUSE Pipe Schedule**

Surveyed by: R.K
 Drawn by: A.K
 Designed by: W.G.M
 Checked by: J.K.K
 Date: January 2023
 DRG. No.: **NYA-WTP-009**
 Scale: 1:50 Sheet No.: 6 of 11

LEGEND



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ALA-ORA WATER SUPPLY AND SANITATION PROJECT

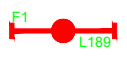















NYAGAK WATER SUPPLY AND SANITATION SYSTEM

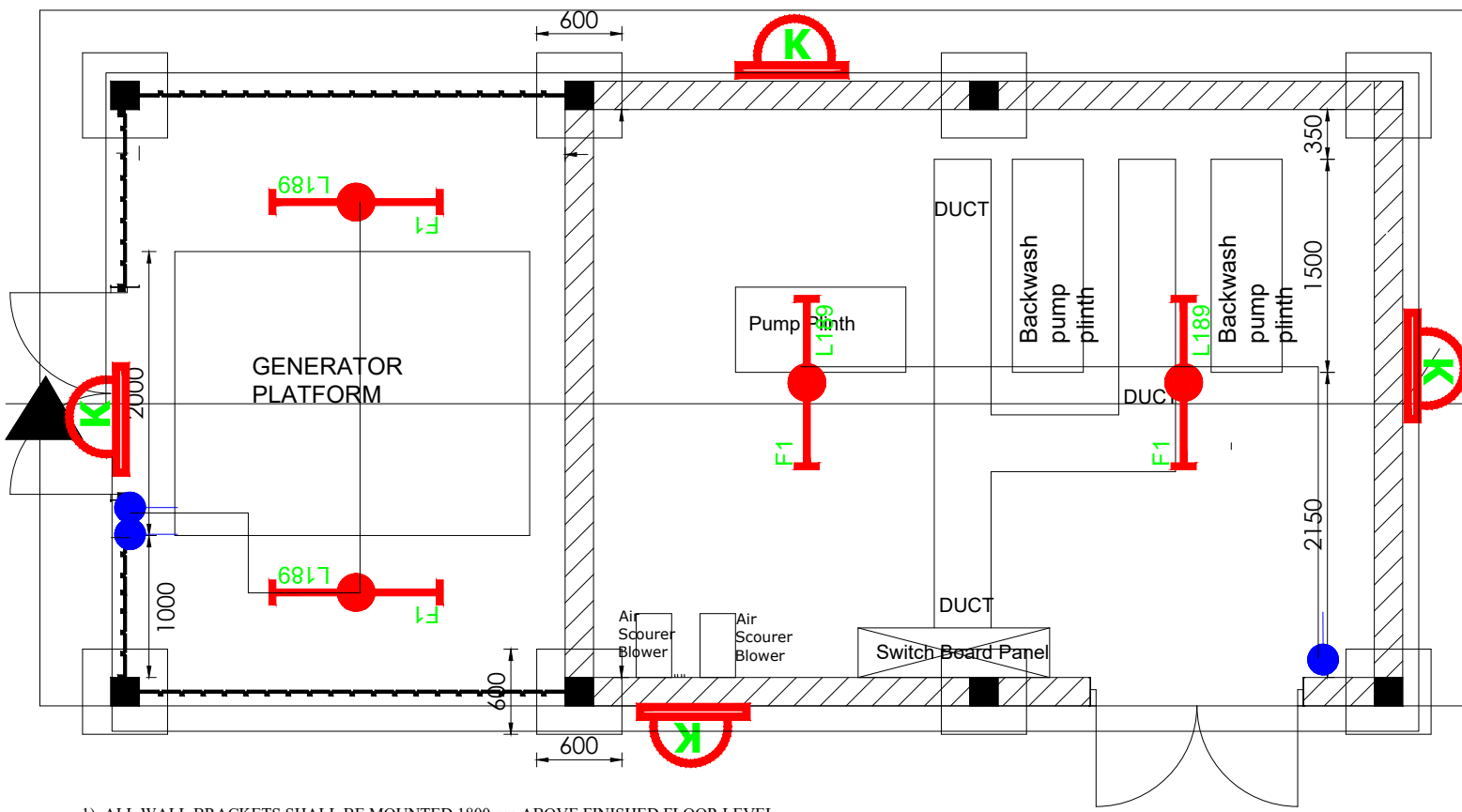
REVISIONS :

No	Date	Description

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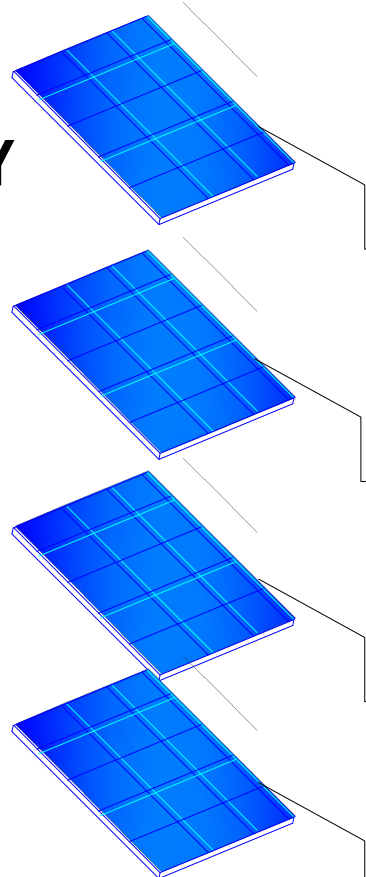
Surveyed by: R.K
 Drawn by: A.K
 Designed by: W.G.M
 Checked by: J.K.K
 Date: January 2023
 DRG. No.: **NYA-WTP-009**
 Scale: 1:50 Sheet No.: 7 of 11

SYMBOL	DESCRIPTION
	1200mm 18W LED batten with a removable LED engine. IP20 As Thorn PopPack LED. or equal approved. (Light Type F1)
	Pedant lighting fitting comprising ceiling Rose 300mm 3x1.5mm ² flexible copper cable lamp holder and 6W LED Lamp
	Pedant lighting fitting comprising ceiling Rose 300mm 3x1.5mm ² flexible copper cable lamp holder and 6W LED Lamp
	Pedant lighting fitting comprising ceiling Rose 300mm 3x1.5mm ² flexible copper cable lamp holder and 6W LED Lamp
	Decorative Bed side lamp complete with flexible spot light arm as LEDS-C4 BALI (05-3217-19-82 + PAN-157-BY) to client's approval.
	wall mounted light
	Socket outlet on Wall
	Consumer's Unit
	One Gang 2way Switch
	Two Gang 2way Switch
	Three Gang 2way Switch
	One Gang 1way Switch
	Two Gang 1way Switch
	Three Gang 1way Switch
	Intermediate Switch
	Photo - Cell



- 1). ALL WALL BRACKETS SHALL BE MOUNTED 1800mm ABOVE FINISHED FLOOR LEVEL
- 2). TELEPHONE, SOCKETS,T.V AND COMPUTER OUTLETS SHALL BE MOUNTED 300mm ABOVE FINISHED FLOOR LEVEL EXCEPT WHERE THEIR IS A WORKTOP.
- 3). WHERE THEIR IS A WORKTOP,TELEPHONE, SOCKETS,T.V AND COMPUTER OUTLETS SHALL BE MOUNTED 150mm ABOVE WORKTOPS.
- 4). CONSUMER UNITS SHALL BE 1800mm ABOVE FINISHED FLOOR LEVEL
- 5). ALL SWITCHES SHALL BE 1400mm ABOVE FINISHED FLOOR LEVEL
- 6). ALL OUTSIDE SOCKETS SHOULD BE WEATHER PROOF
- 7). ALL SHAVER SOCKETS SHOULD BE ON THE RIGHT HAND SIDE OF THE WASH HAND BASIN
- 8). ALL CABLES MUST BE STRANDED

SOLAR ARRAY



Hybrid Pump Controller

High Lift Pump-1

Hybrid Pump Controller

Backwash pumps

Hybrid Pump Controller

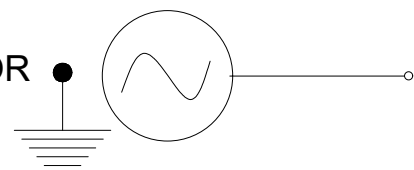
Air Blowers

INVERTER

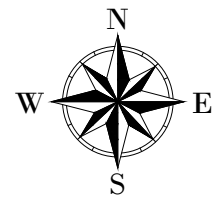
General Pumphouse Electricity

GENERATOR 1

GENERATOR EARTH



LEGEND



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REVISIONS :

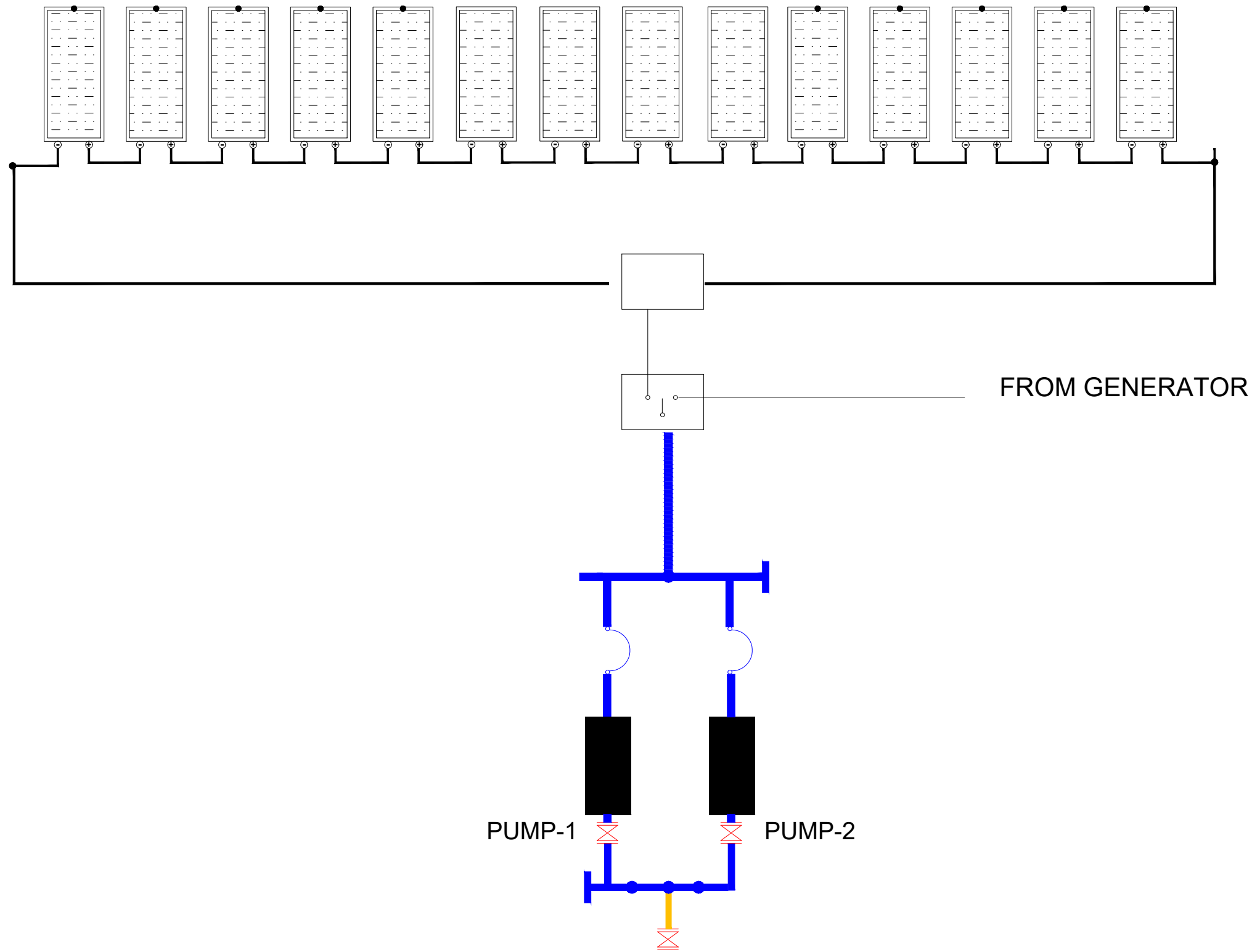
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 Solar Array Layout

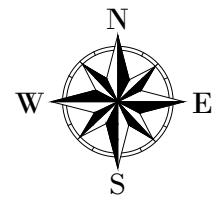
Surveyed by:	R.K
Drawn by:	P.K
Designed by:	P.K
Checked by:	S.C.D
Date:	January 2023
DRG. No.:	NYA-WTP-009
Scale:	1:500
Sheet No.:	8 of 11

BACKWASH PUMP

14x200Wp SOLAR PV ARRAY



LEGEND



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**NYAGAK WATER SUPPLY AND
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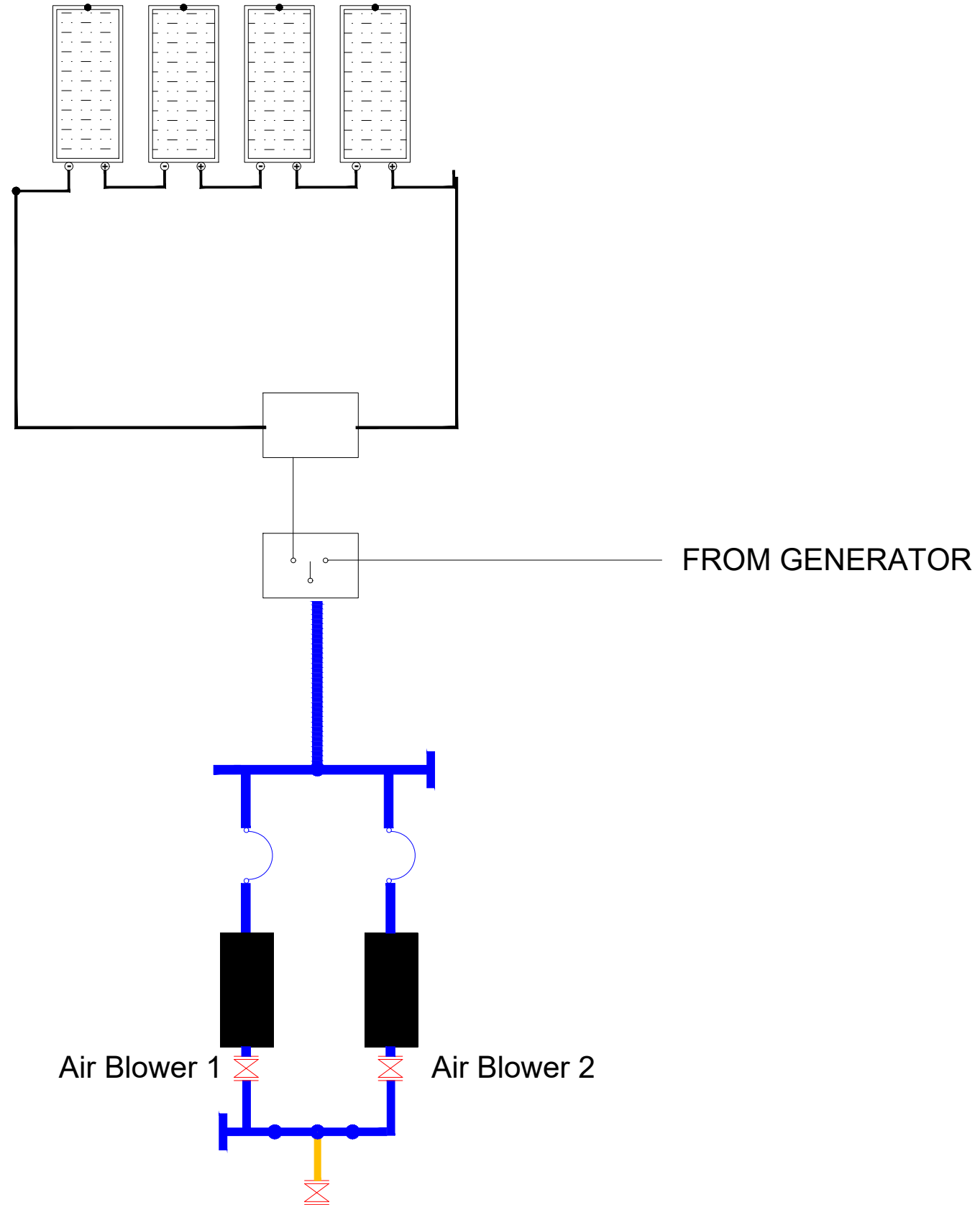
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DRAWING TITLE : **PUMP HOUSE**
 Solar Array Layout (Backwash pumps)

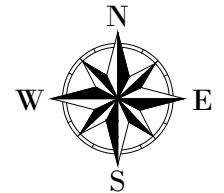
Surveyed by:	R.K
Drawn by:	P.K
Designed by:	P.K
Checked by:	S.C.D
Date:	January 2023
DRG. No.:	NYA-WTP-009
Scale:	1:300
Sheet No.:	9 of 11

AIR BLOWERS

4x200Wp SOLAR PV ARRAY



LEGEND



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PROJECT :

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**NYAGAK WATER SUPPLY AND
SANITATION SYSTEM**

REVISIONS :

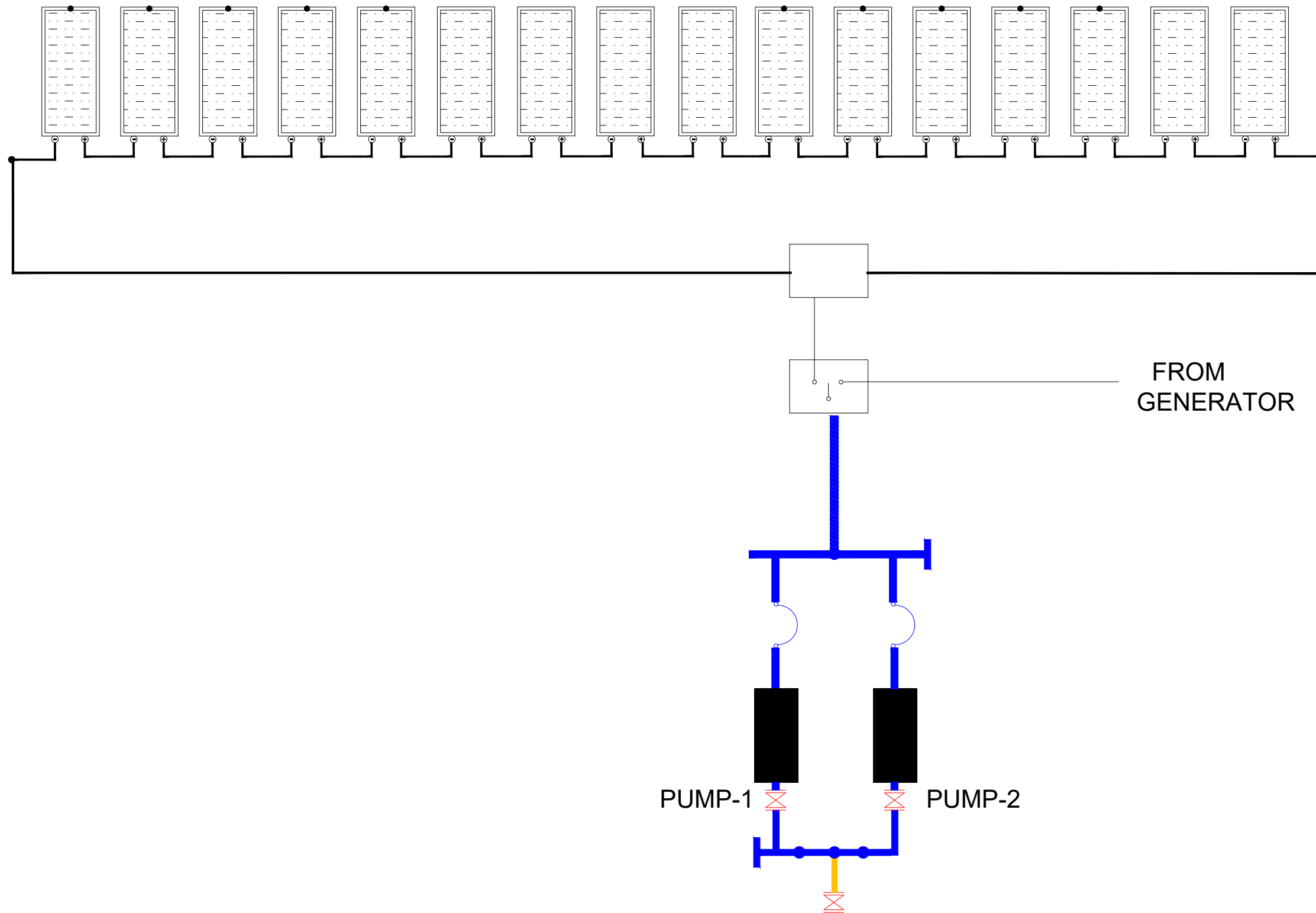
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DRAWING TITLE : **PUMP HOUSE**
Solar Array Layout (Air Blowers)

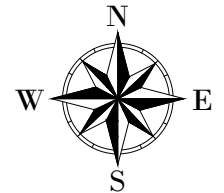
Surveyed by:	R.K
Drawn by:	P.K
Designed by:	P.K
Checked by:	S.C.D
Date:	January 2023
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Scale:	1:300
Sheet No.:	10 of 11

HIGH LIFT PUMP

16x200Wp SOLAR PV ARRAY



LEGEND



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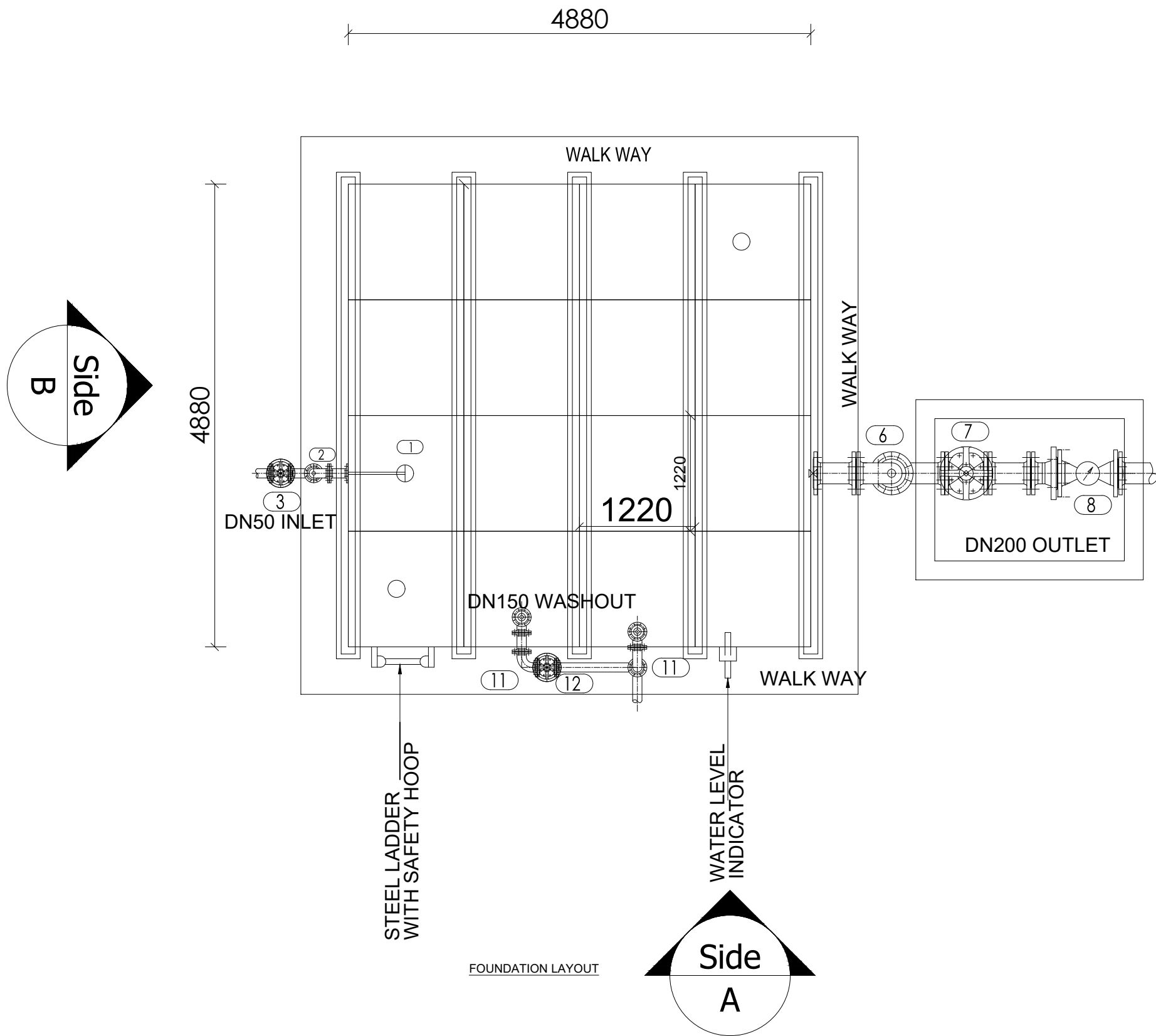
NYAGAK WATER SUPPLY AND SANITATION SYSTEM

REVISIONS :

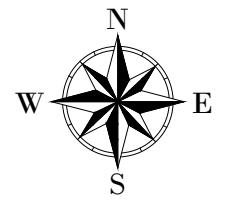
No	Date	Description

DRAWING TITLE : **PUMP HOUSE**
 Solar Array Layout (High Lift Pumps)

Surveyed by:	R.K
Drawn by:	P.K
Designed by:	P.K
Checked by:	S.C.D
Date:	January 2023
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LEGEND



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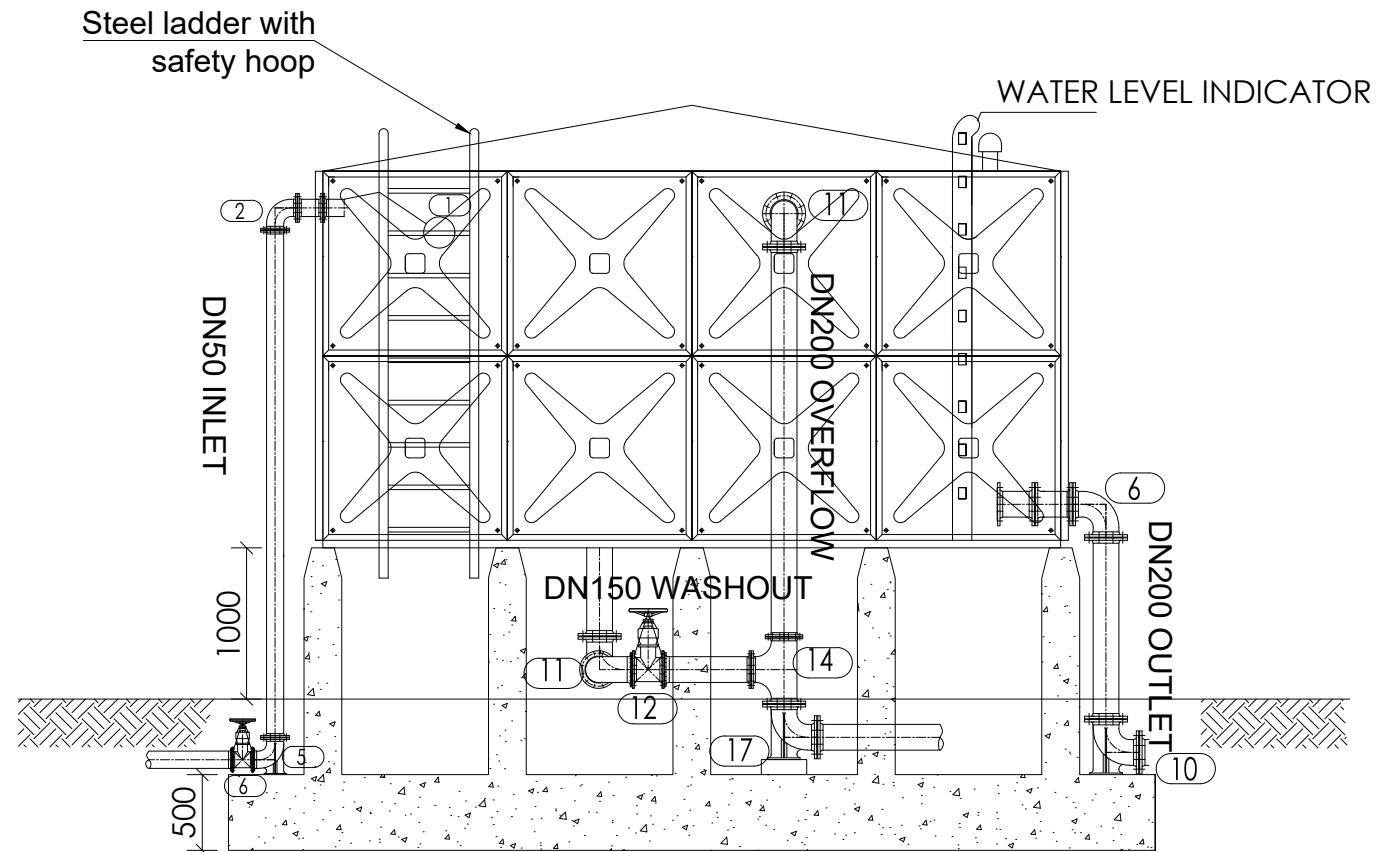
NYAGAK WATER SUPPLY AND SANITATION SYSTEM

REVISIONS :

No	Date	Description

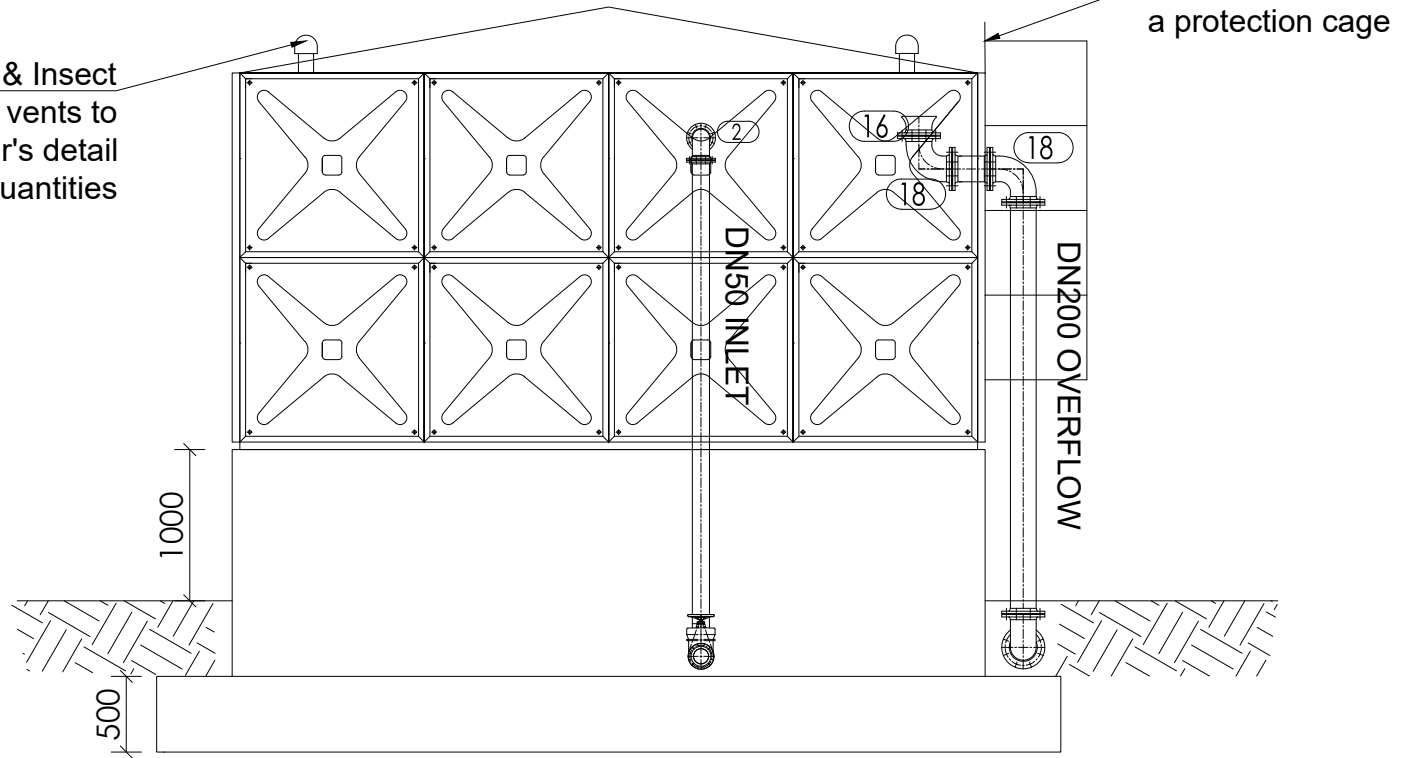
DRAWING TITLE : **BACKWASH TANK**
Plan

Surveyed by: R.K
 Drawn by: A.K
 Designed by: W.G.M
 Checked by: J.K.K
 Date: January 2023
 DRG. No.: **NYA-WTP-010**
 Scale: 1:50 Sheet No.: 1 of 2



ELEVATION A

Vermine & Insect proof vents to manufacturer's detail & quantities



ELEVATION B

PIPES AND FITTINGS SCHEDULE (INLET)

ITEM	No. OF	DESCRIPTION
①	1	DN50 FLOAT VALVE
②	1	DN50 FLANGED 90° BEND
③	1	DN50 FLANGED GATE VALVE
⑤	1	DN50 90° DUCKFOOT BEND

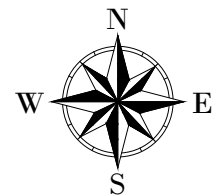
PIPES AND FITTINGS SCHEDULE (OUTLET)

⑥	1	DN200 FLANGED 90° BEND
⑦	1	DN200 FLANGED GATE VALVE
⑧	1	DN200 BULK WATER METER
⑩	1	DN200 90° DUCKFOOT BEND

PIPES AND FITTINGS SCHEDULE (WASHOUT & OVERFLOW)

⑪	2	DN150 FLANGED 90° BEND
⑫	1	DN150 FLANGED GATE VALVE
⑭	1	DN200/150 ALL FLANGED TEE
⑮	1	DN200 BELL MOUTH
⑰	1	DN200 90° DUCKFOOT BEND
⑱	2	DN200 90° BEND

LEGEND



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PROJECT :

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NYAGAK WATER SUPPLY AND SANITATION SYSTEM

REVISIONS :

No	Date	Description

DRAWING TITLE :

BACKWASH TANK
Elevations

Surveyed by:

R.K

Drawn by:

A.K

Designed by:

W.G.M

Checked by:

J.K.K

Date:

January 2023

DRG. No.:

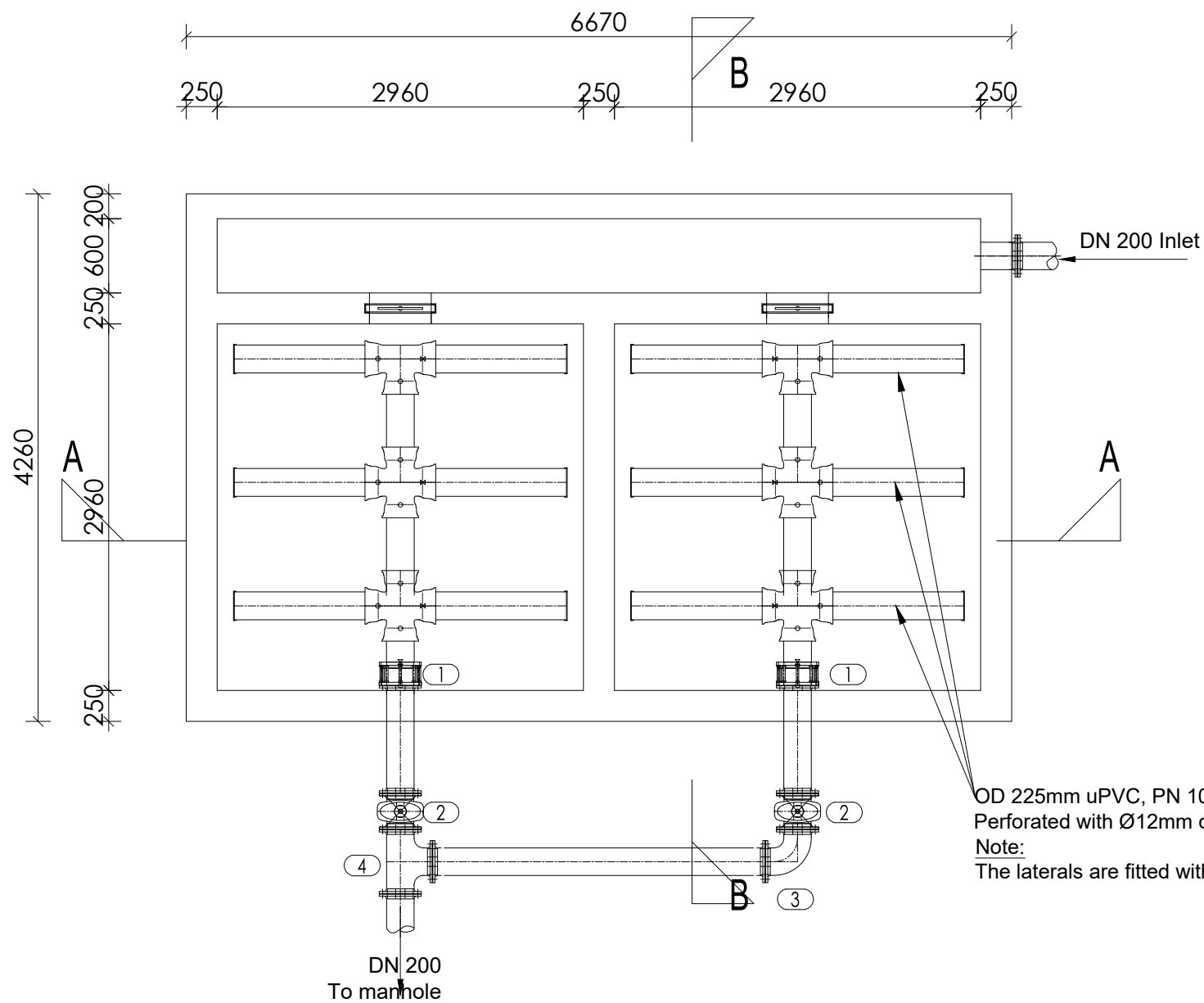
NYA-WTP-010

Scale:

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2 of 2

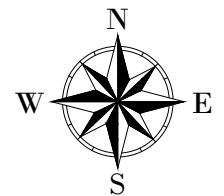


PLAN

OD 225mm uPVC, PN 10 pipes
 Perforated with Ø12mm orifices @ 150mm c/c
 Note:
 The laterals are fitted with End Caps

PIPES AND FITTINGS SCHEDULE		
ITEM	No. OF	DESCRIPTION
		OUTLET
1	2	DN 200 maxi type flange adaptors, PN 10
2	2	DN200 FLANGED GATE VALVE
3	1	DN200 FLANGED 90° BEND
4	1	D200 FLANGED EQUAL TEE

LEGEND



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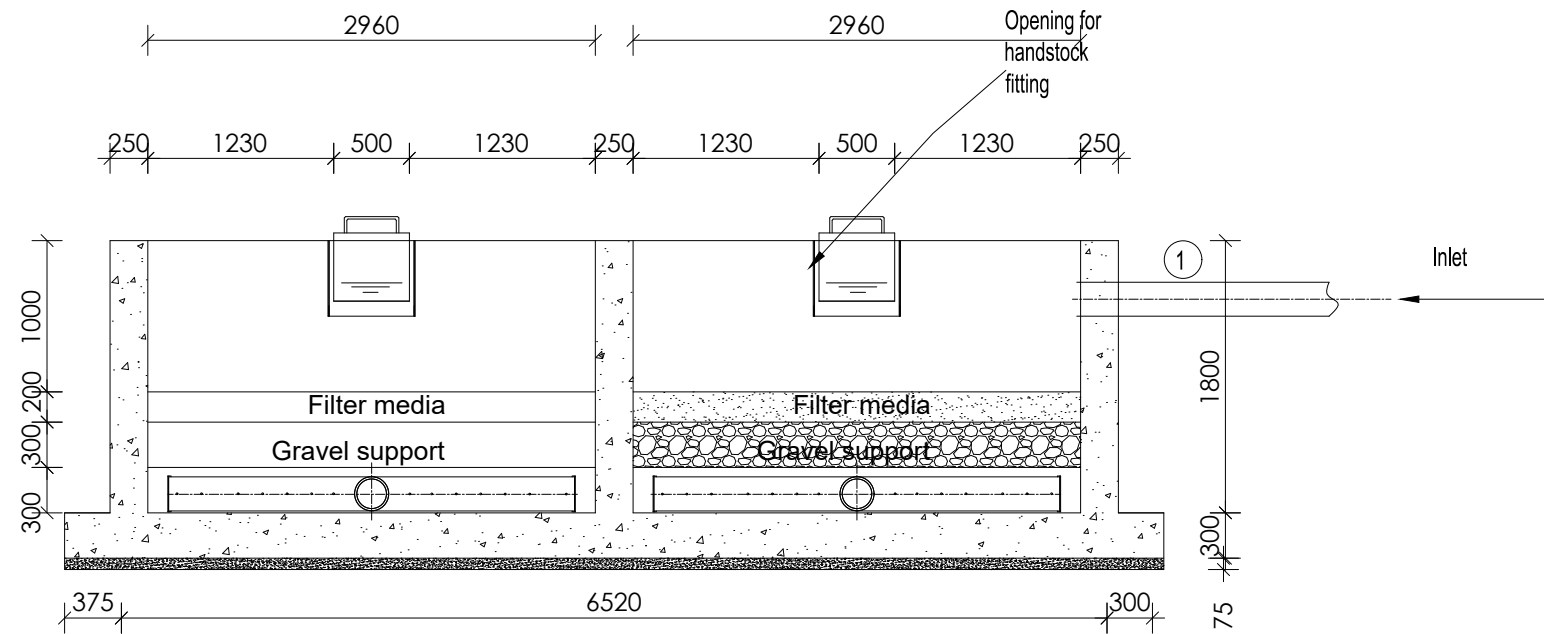
NYAGAK WATER SUPPLY AND SANITATION SYSTEM

REVISIONS :

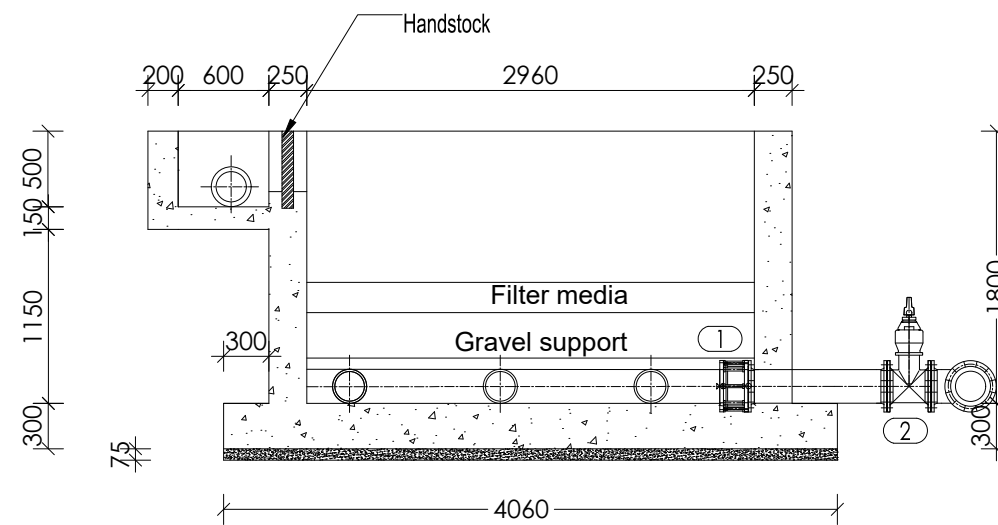
No	Date	Description

DRAWING TITLE : **SLUDGE DRYING BEDS**
 Plan

Surveyed by:	R.K
Drawn by:	A.K
Designed by:	W.G.M
Checked by:	J.K.K
Date:	January 2023
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Scale:	1:50
Sheet No.:	1 of 3

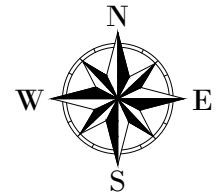


SECTION A-A



SECTION B-B

LEGEND



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REVISIONS :

No	Date	Description

DRAWING TITLE : **SLUDGE DRYING BEDS**
Sections

Surveyed by:

R.K

Drawn by:

A.K

Designed by:

W.G.M

Checked by:

J.K.K

Date:

January 2023

DRG. No.:

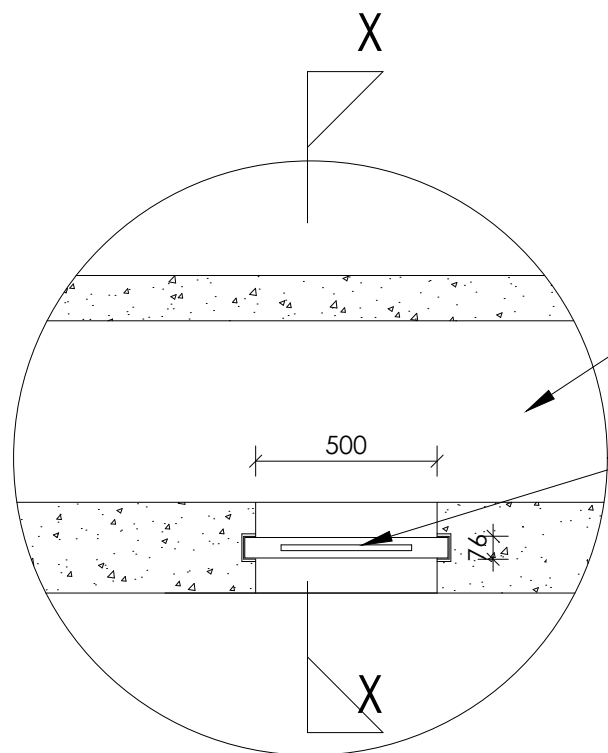
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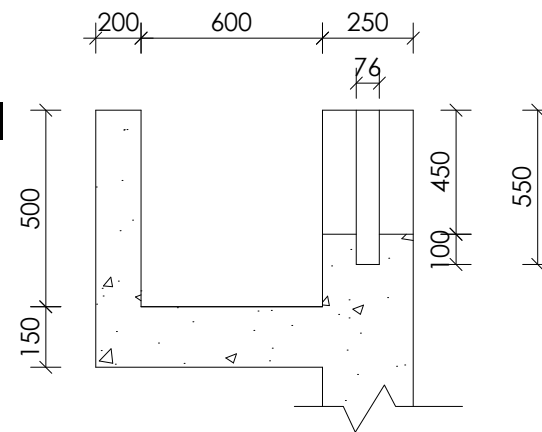
Sheet No.:

2 of 3



Inlet channel

560mm wide x 550mm high stainless steel plate slid through 2no stainless steel channel guides 76x38x7 in concrete wall length 550mm

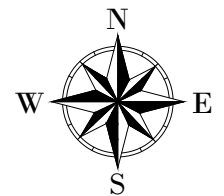


SECTION X-X

HAND STOCK FIXING
PLAN DETAILS

DETAIL a

LEGEND



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SANITATION SYSTEM**

REVISIONS :

No	Date	Description

DRAWING TITLE : **SLUDGE DRYING BEDS**

Details

Surveyed by:

R.K

Drawn by:

A.K

Designed by:

W.G.M

Checked by:

J.K.K

Date:

January 2023

DRG. No.:

NYA-WTP-011

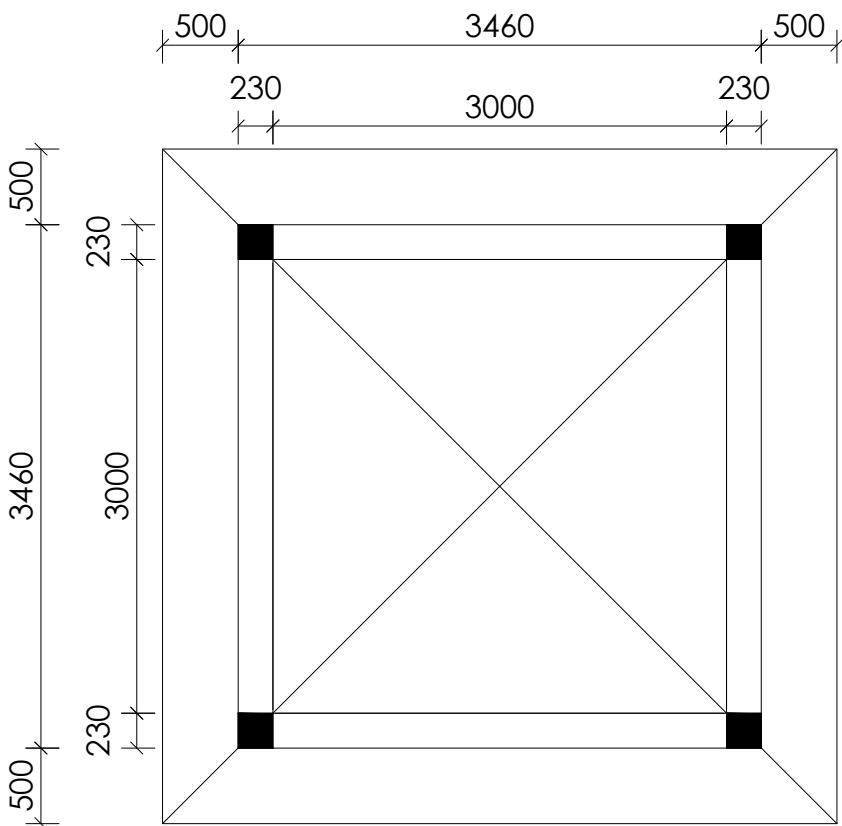
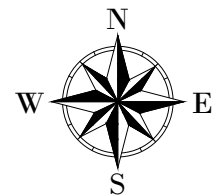
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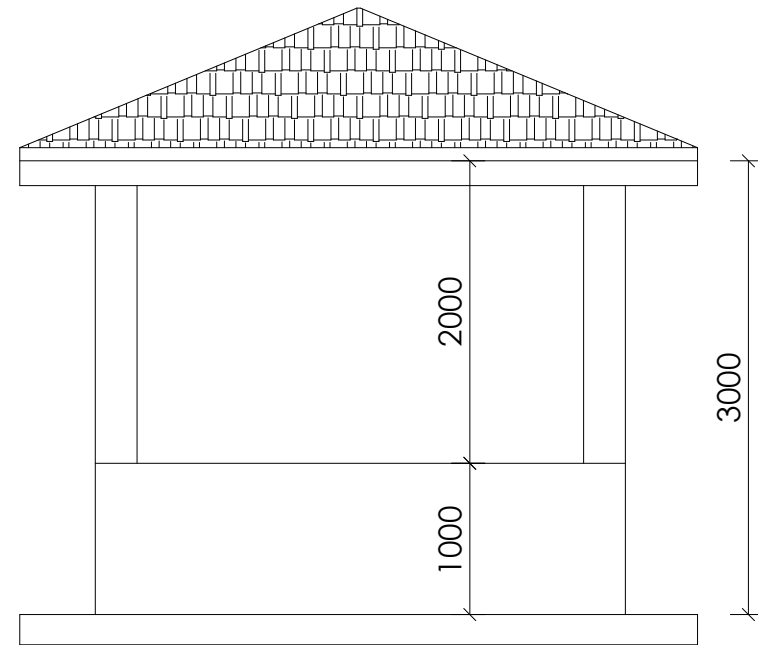
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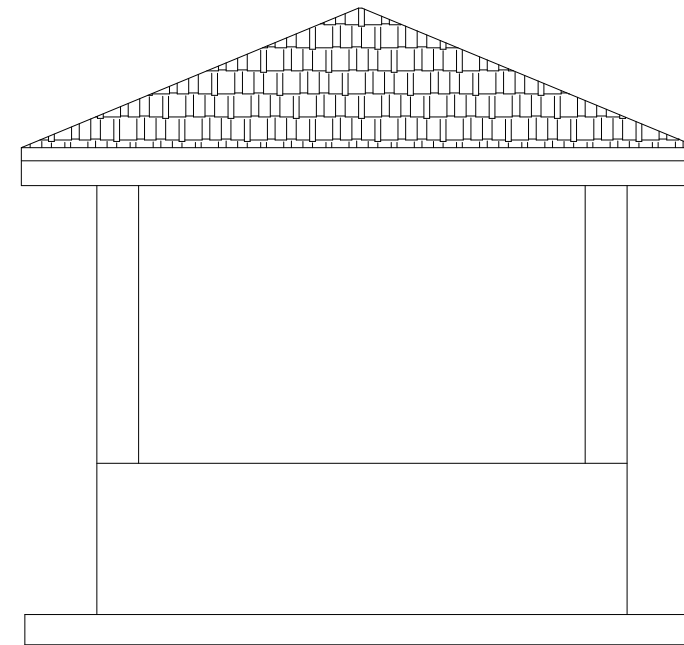
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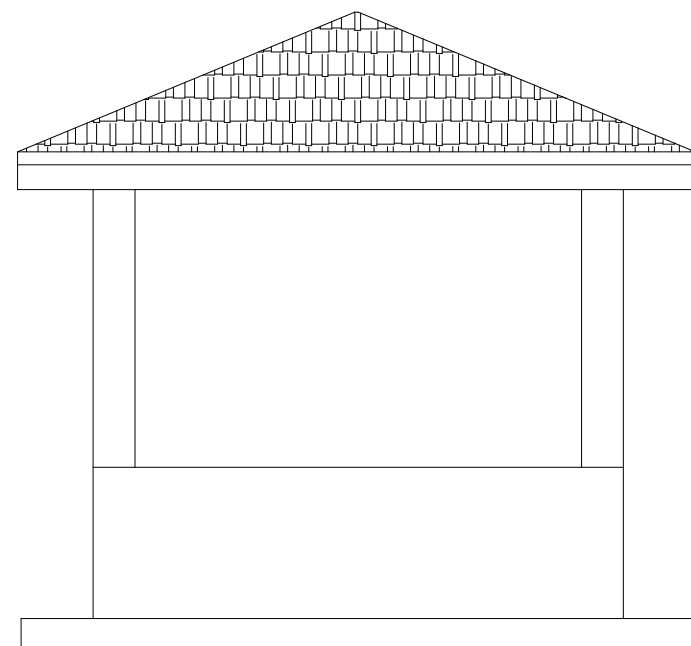
SECTION 4-4



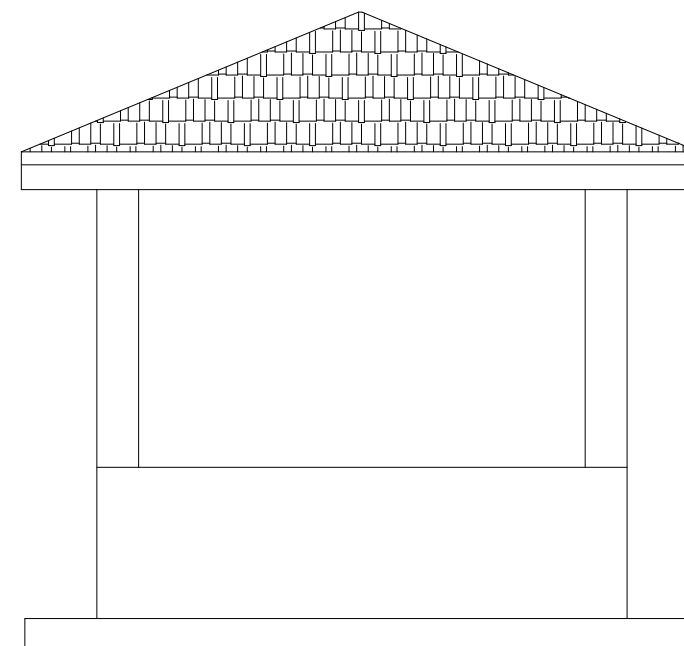
NORTH ELEVATION



EAST ELEVATION



SOUTH ELEVATION



WEST ELEVATION

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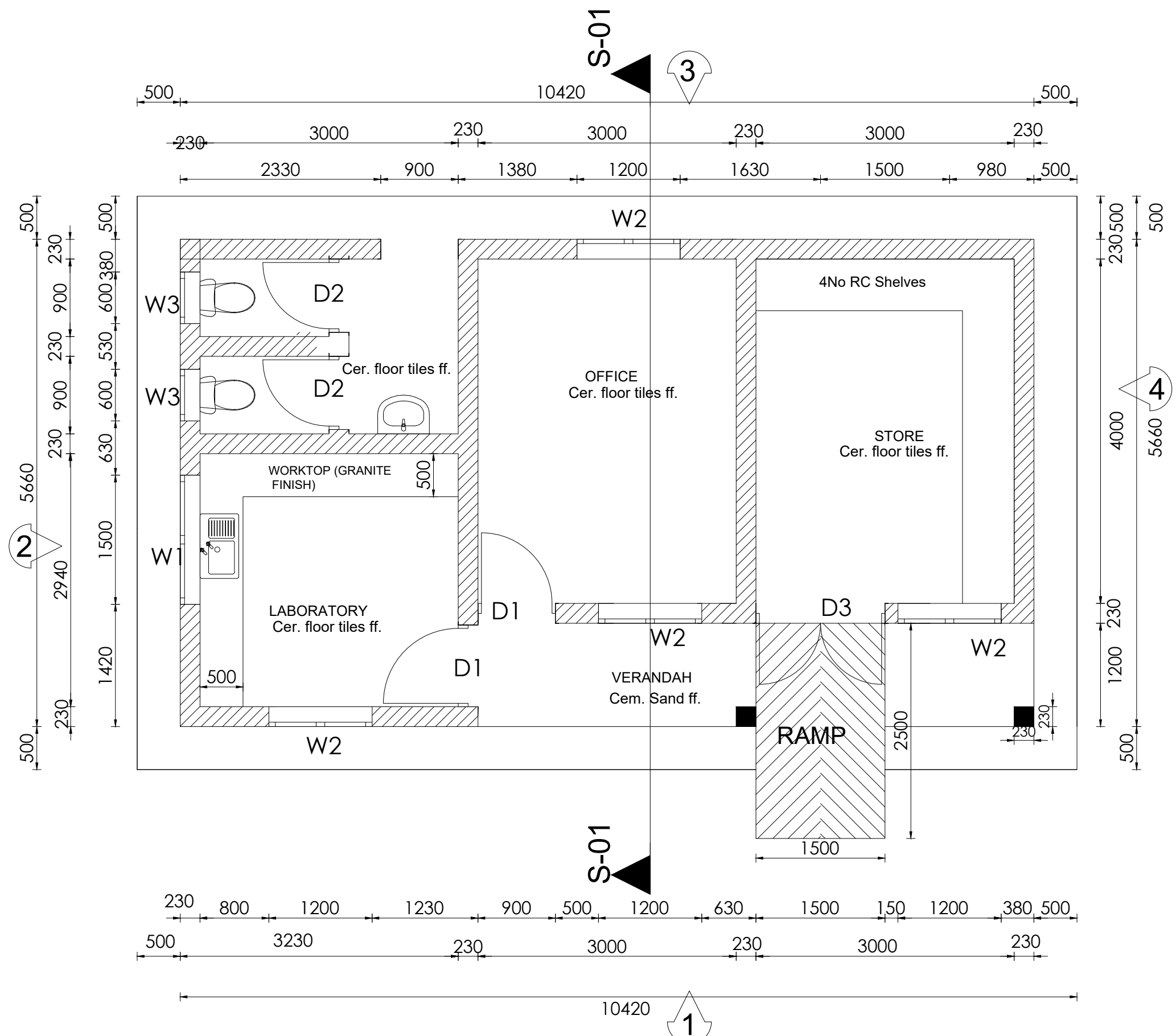
NYAGAK WATER SUPPLY AND SANITATION SYSTEM

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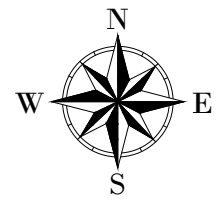
No	Date	Description

DRAWING TITLE : **SAND STORAGE**
 Plan & Elevation

Surveyed by:	R.K
Drawn by:	A.K
Designed by:	W.G.M
Checked by:	J.K.K
Date:	January 2023
DRG. No.:	NYA-WTP-012
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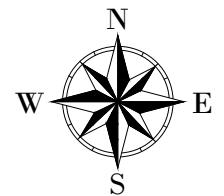
REVISIONS :

No	Date	Description

DRAWING TITLE : **ADMINISTRATION BLOCK Plan**

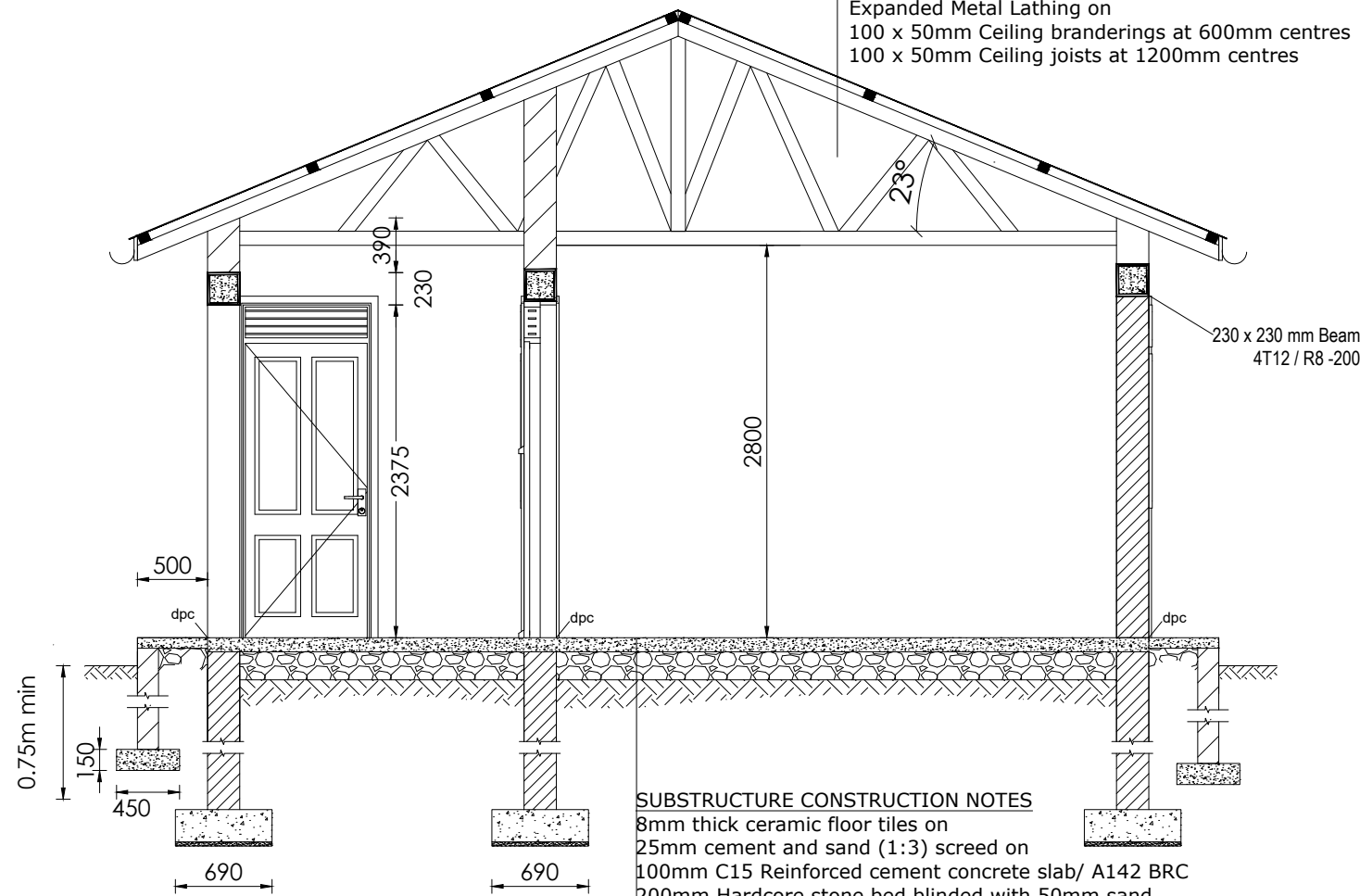
Surveyed by: R.K
 Drawn by: A.K
 Designed by: W.G.M
 Checked by: J.K.K
 Date: January 2023
 DRG. No.: **NYA-WTP-013**
 Scale: 1:50 Sheet No.: 1 of 5

LEGEND



ROOF NOTES : pitch 22.5°
 Fire clay ridge cap/Mangalore roofing tiles on
 50 X 25 timber battens with
 gauge 32 GI plane sheet
Pressure treated roofing soft wood timber
 Double 100 x 50 mm timber rafters with
 100x 50mm struts & ties in truss with
 75 x 50 mm purlins on
 150 x 50mm tie beam on
 150 x 75 mm wall plate
 250 mm plastic fascia boards

CEILING CONSTRUCTION NOTES:
 20mm thick Cement and sand plaster on
 Expanded Metal Lathing on
 100 x 50mm Ceiling branderings at 600mm centres
 100 x 50mm Ceiling joists at 1200mm centres



SUBSTRUCTURE CONSTRUCTION NOTES
 8mm thick ceramic floor tiles on
 25mm cement and sand (1:3) screed on
 100mm C15 Reinforced cement concrete slab/ A142 BRC
 200mm Hardcore stone bed blinded with 50mm sand
 150mm selected well compacted natural murrum filling
 690 x 230 mm plain cement concrete C15 strip fdn.

SECTION S-01

CLIENT :

 THE REPUBLIC OF UGANDA
MINISTRY OF WATER AND ENVIRONMENT

CO-FINANCED BY:

THE WORLD BANK
 IBRD • IDA | WORLD BANK GROUP

CONSULTANT :
 Alliance Consultants Ltd
In Association with
 **Infra-Consult Ltd**

PROJECT :
**ALA-ORA WATER SUPPLY AND
 SANITATION PROJECT**

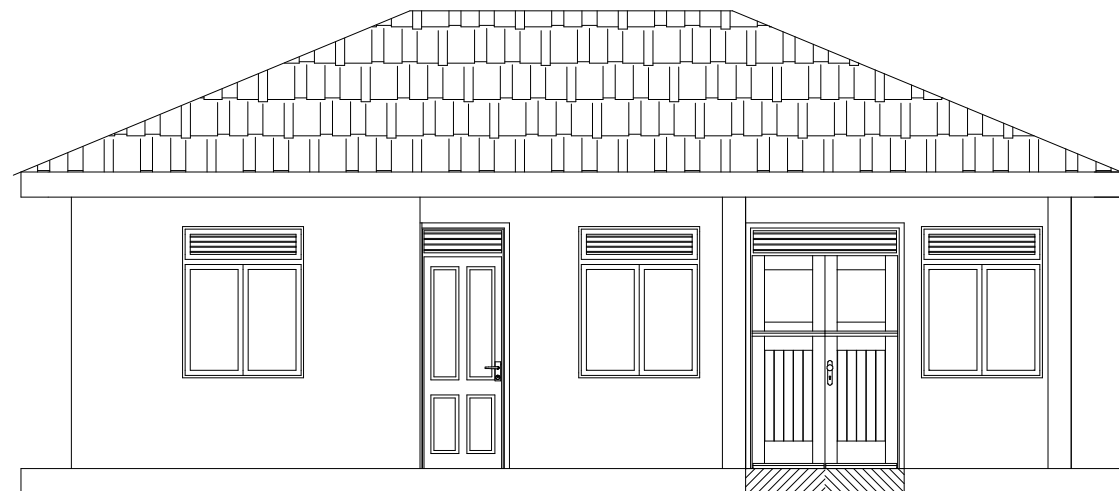
**NYAGAK WATER SUPPLY AND
 SANITATION SYSTEM**

REVISIONS :

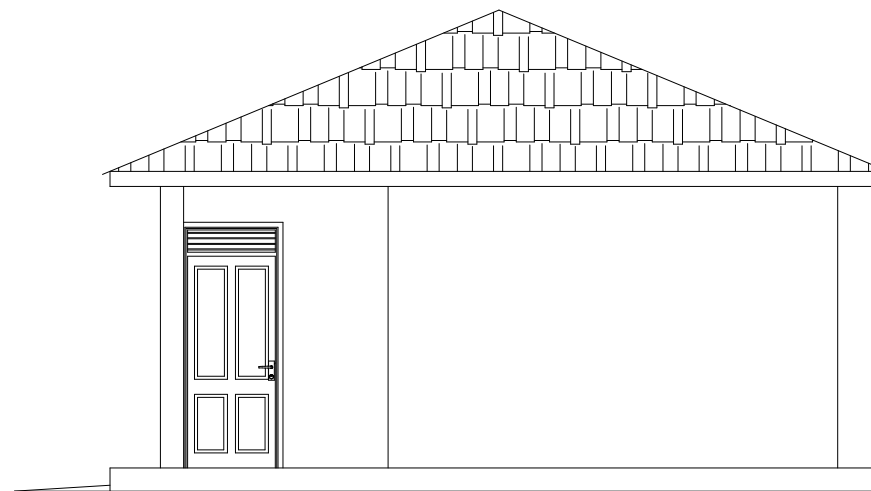
No	Date	Description

DRAWING TITLE : **ADMINISTRATION BLOCK
 Section**

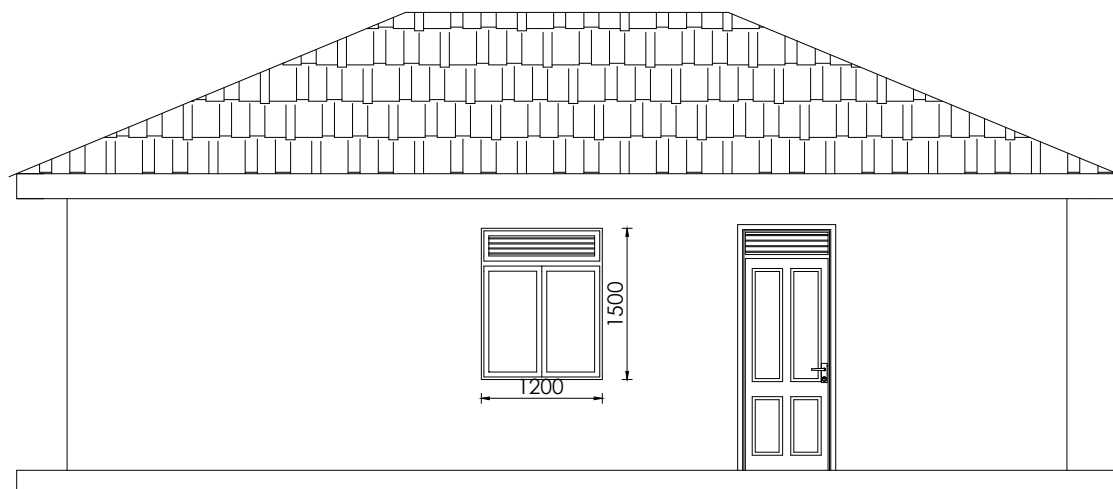
Surveyed by: R.K
 Drawn by: A.K
 Designed by: W.G.M
 Checked by: J.K.K
 Date: January 2023
 DRG. No.: **NYA-WTP-013**
 Scale: 1:50 Sheet No.: 2 of 5



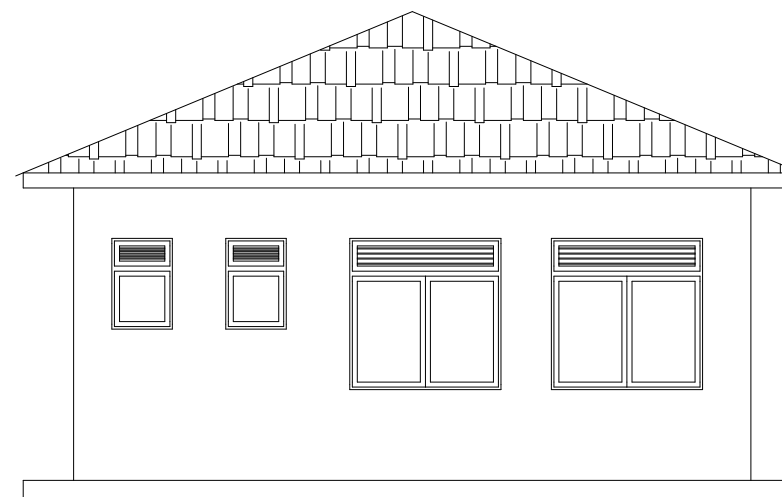
FRONT ELEVATION



SIDE ELEVATION 1

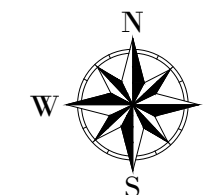


RARE ELEVATION



SIDE ELEVATION 2



LEGEND



CLIENT : 
 THE REPUBLIC OF UGANDA
MINISTRY OF WATER AND ENVIRONMENT

CO-FINANCED BY:

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CONSULTANT :  Alliance Consultants Ltd
 In Association with
 Infra-Consult Ltd

PROJECT :
ALA-ORA WATER SUPPLY AND SANITATION PROJECT

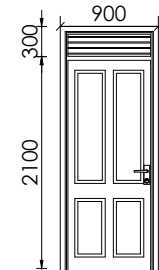
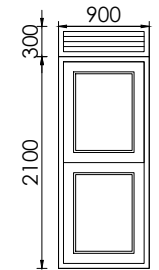
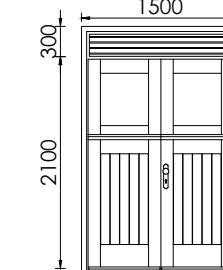
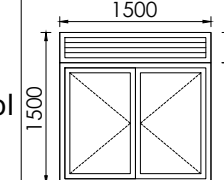
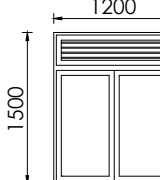
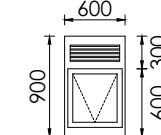
NYAGAK WATER SUPPLY AND SANITATION SYSTEM

REVISIONS :

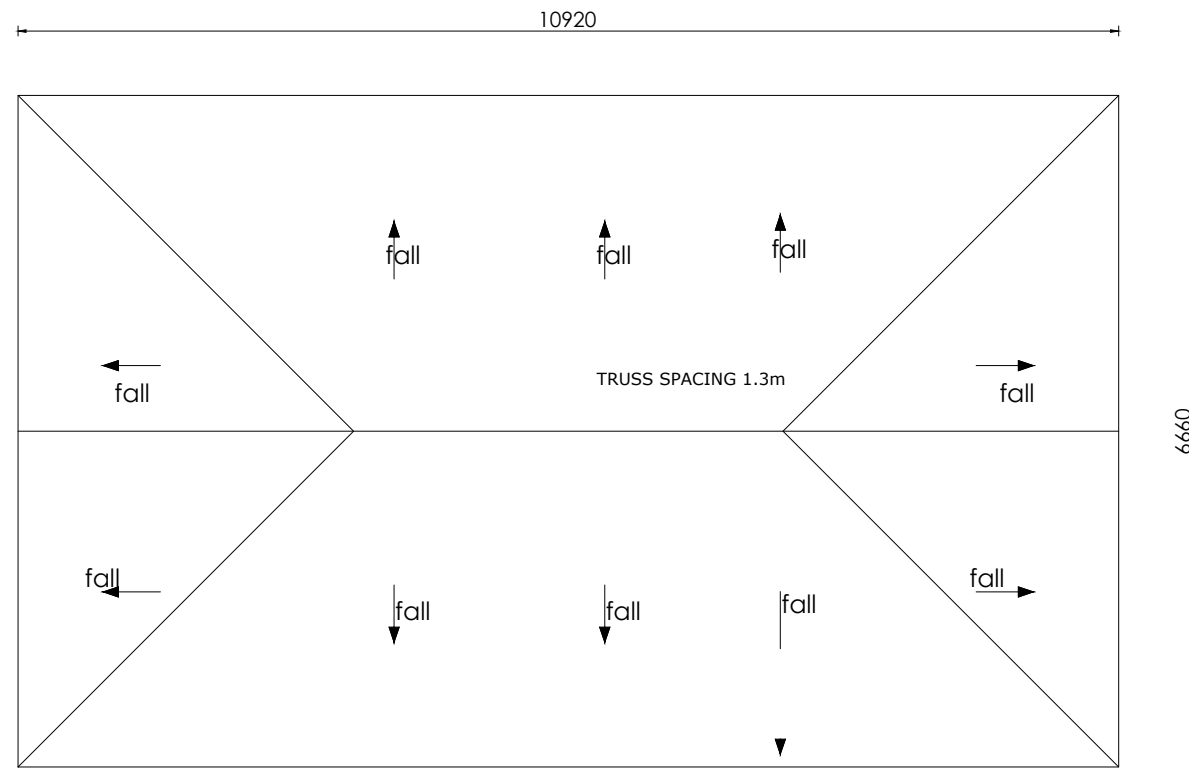
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DRAWING TITLE : **ADMINISTRATION BLOCK Elevations**

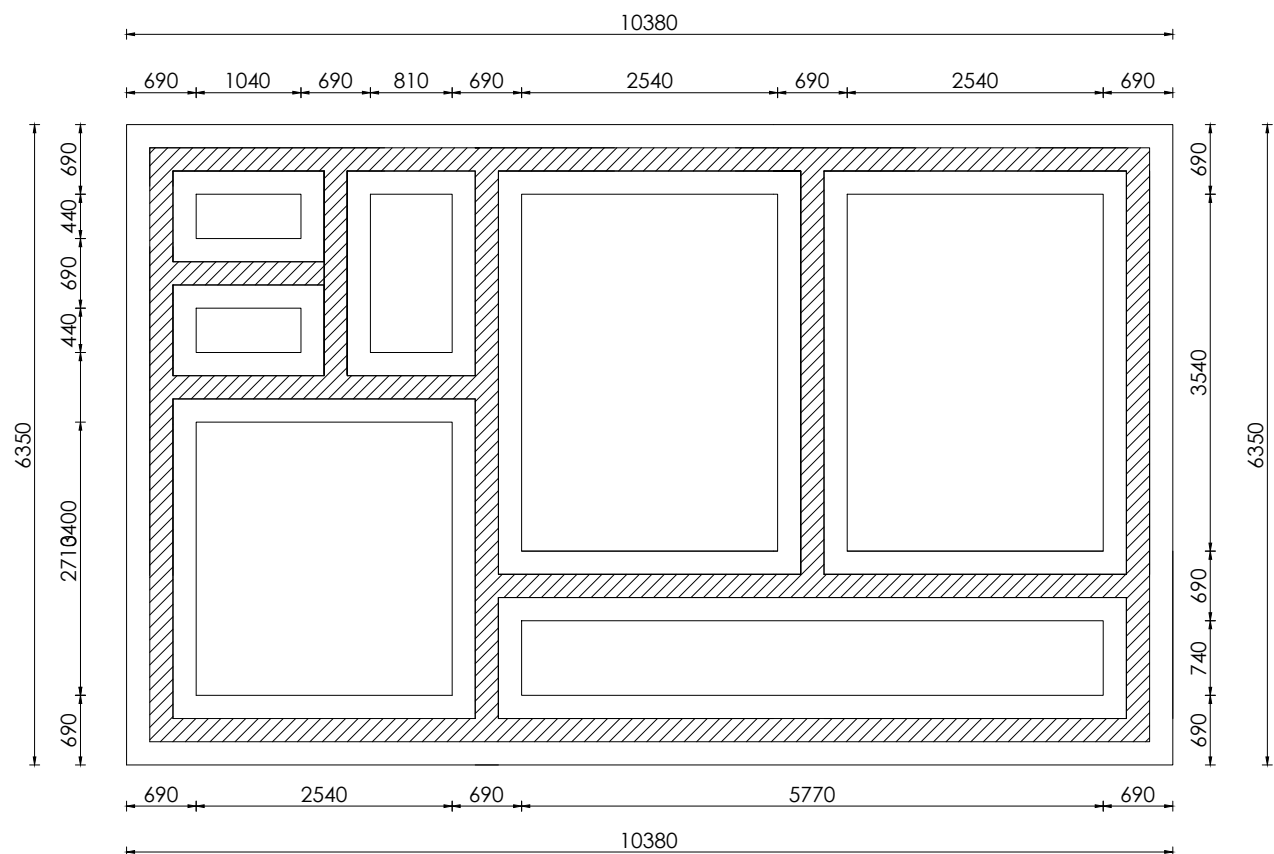
Surveyed by:	R.K
Drawn by:	A.K
Designed by:	W.G.M
Checked by:	J.K.K
Date:	January 2023
DRG. No.:	NYA-WTP-013
Scale:	1:75
Sheet No.:	3 of 5

DOOR SCHEDULE			WINDOW SCHEDULE				
Item	D1	D2	D3	Item	Window (W1)	Window (W2)	Window (W3)
Size	900 X 2400	800X 2400	1500 X 2400	Size	1500 X 1500	1200 X 1500	600 X 900
Number	2	2	1	Number	1	4	2
3D Symbol				3D Symbol			
Description	Single leaf wooden paneled door	Single leaf wooden paneled door	Double leaf metallic door	Description	Double sash glazed metallic casement	Double sash glazed metallic casement	Top Hung metallic casement

- NB.**
- Glass panes to be $\leq 0.2m^2$
 - Burglar proofing to be of a 25x3mm flat bar grille with 175x300mm pitch.
 - Permanent Vents are to be fitted with mosquito proofing nets i.e plastic net sandwiched with coffeetray mesh.
 - All metallic window & Door sections to be 3.0mm minimum thickness

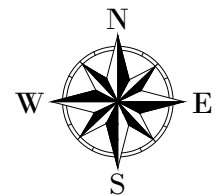


ROOF LAYOUT



FOUNDATION LAYOUT

LEGEND



CLIENT :



THE REPUBLIC OF UGANDA
MINISTRY OF WATER AND ENVIRONMENT

CO-FINANCED BY:



CONSULTANT :



PROJECT :

ALA-ORA WATER SUPPLY AND
SANITATION PROJECT

**NYAGAK WATER SUPPLY AND
SANITATION SYSTEM**

REVISIONS :

No	Date	Description

DRAWING TITLE : **ADMINISTRATION BLOCK**
Foundation and Roof Layout

Surveyed by:

R.K

Drawn by:

A.K

Designed by:

W.G.M

Checked by:

J.K.K

Date:

January 2023

DRG. No.:

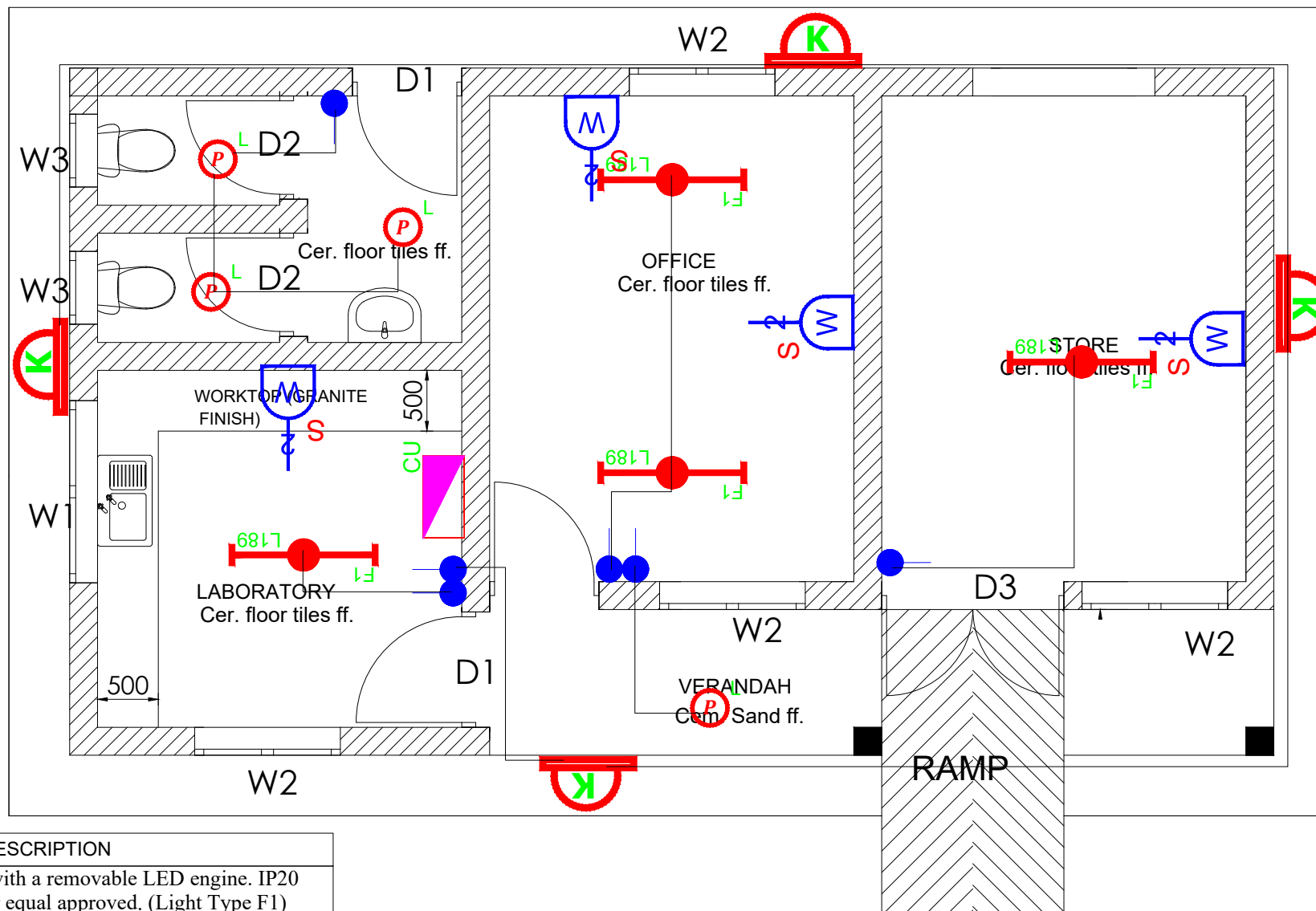
NYA-WTP-013

Scale:

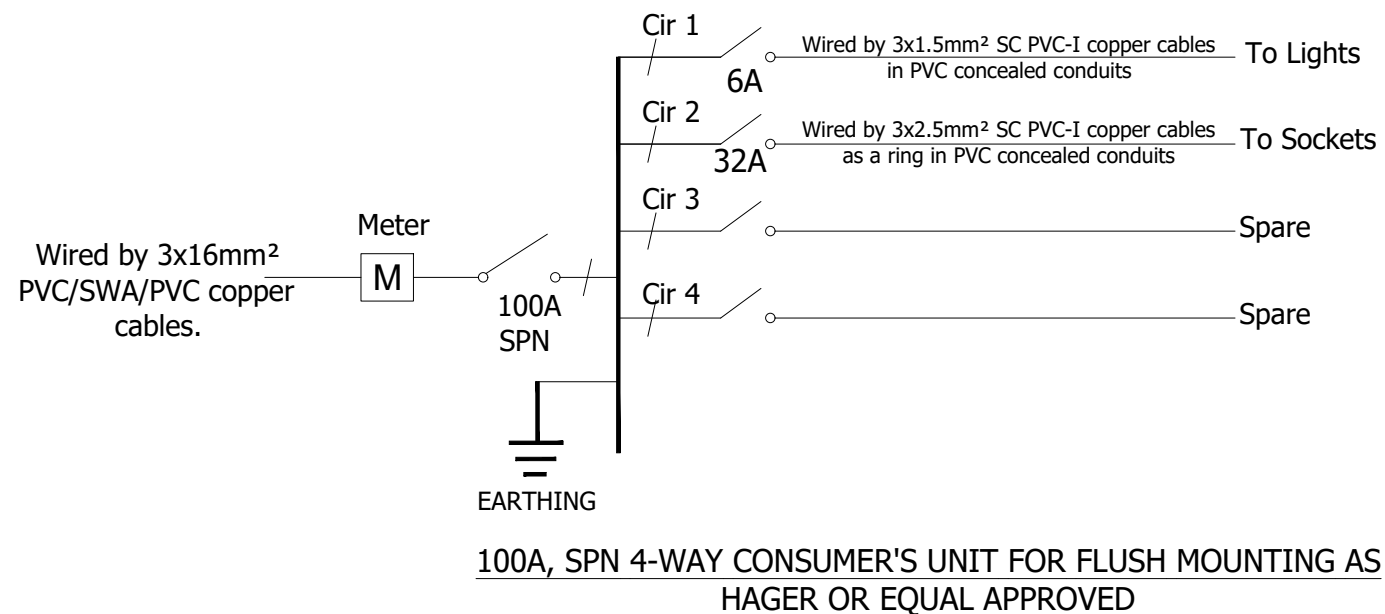
1:75

Sheet No.:

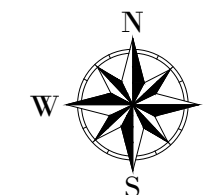
4 of 5



SYMBOL	DESCRIPTION
	1200mm 18W LED batten with a removable LED engine. IP20 As Thorn PopPack LED. or equal approved. (Light Type F1)
	Pedant lighting fitting comprising ceiling Rose 300mm 3x1.5mm ² flexible copper cable lamp holder and 6W LED Lamp
	Pedant lighting fitting comprising ceiling Rose 300mm 3x1.5mm ² flexible copper cable lamp holder and 6W LED Lamp
	Pedant lighting fitting comprising ceiling Rose 300mm 3x1.5mm ² flexible copper cable lamp holder and 6W LED Lamp
	wall mounted light
	Socket outlet on Wall
	Consumer's Unit
	One Gang 1way Switch
	Two Gang 1way Switch
	Three Gang 1way Switch



LEGEND



CLIENT :

 THE REPUBLIC OF UGANDA
MINISTRY OF WATER AND ENVIRONMENT

CO-FINANCED BY:

THE WORLD BANK
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CONSULTANT :

 Alliance Consultants Ltd
 In Association with

 Infra-Consult Ltd

PROJECT :
ALA-ORA WATER SUPPLY AND SANITATION PROJECT

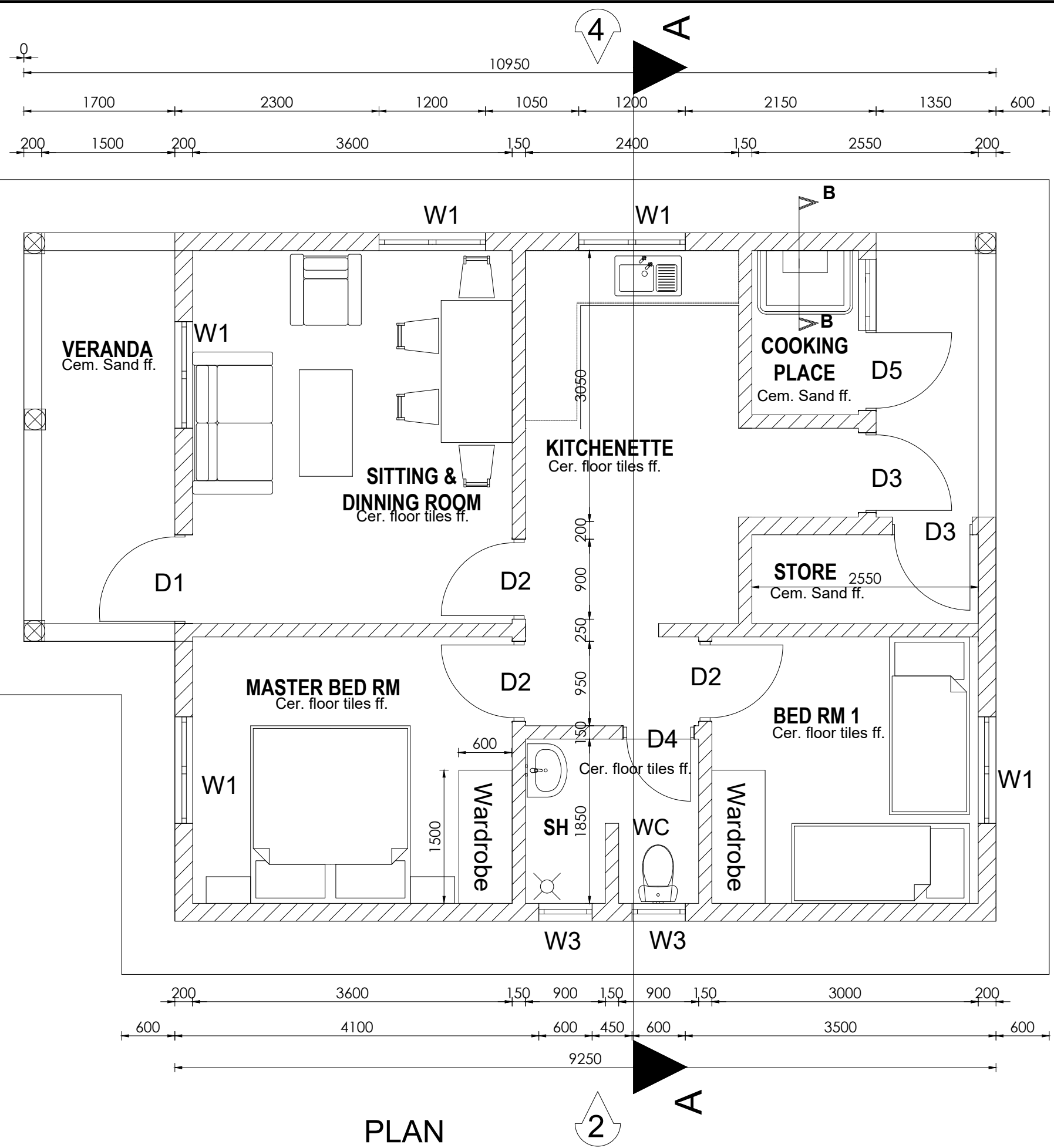
NYAGAK WATER SUPPLY AND SANITATION SYSTEM

REVISIONS :

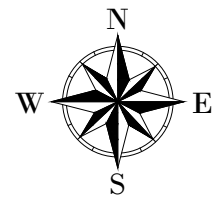
No	Date	Description

DRAWING TITLE : **ADMINISTRATION BLOCK**
 Electrical Layout

Surveyed by: _____
 Drawn by: P.K
 Designed by: P.K
 Checked by: S.C.D
 Date: January 2023
 DRG. No.: **NYA-WTP-013**
 Scale: 1:50 Sheet No.: 5 of 5



LEGEND



CLIENT :

 THE REPUBLIC OF UGANDA
MINISTRY OF WATER AND ENVIRONMENT

CO-FINANCED BY:


CONSULTANT :
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In Association with
 Infra-Consult Ltd

PROJECT :
ALA-ORA WATER SUPPLY AND SANITATION PROJECT

NYAGAK WATER SUPPLY AND SANITATION SYSTEM

REVISIONS :

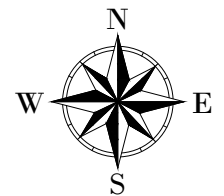
No	Date	Description

DRAWING TITLE : **SUPERINTENDENT'S HOUSE Plan**

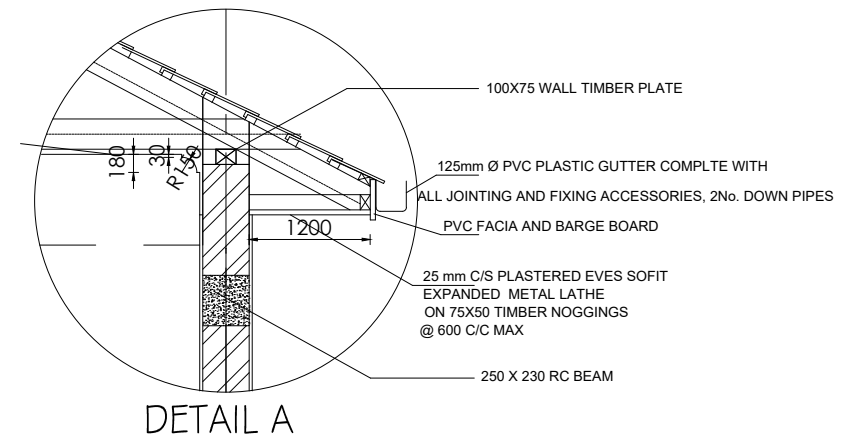
Surveyed by:	R.K
Drawn by:	A.K
Designed by:	W.G.M
Checked by:	J.K.K
Date:	January 2023
DRG. No.:	NYA-WTP-014
Scale:	1:50
Sheet No.:	1 of 5

PLAN

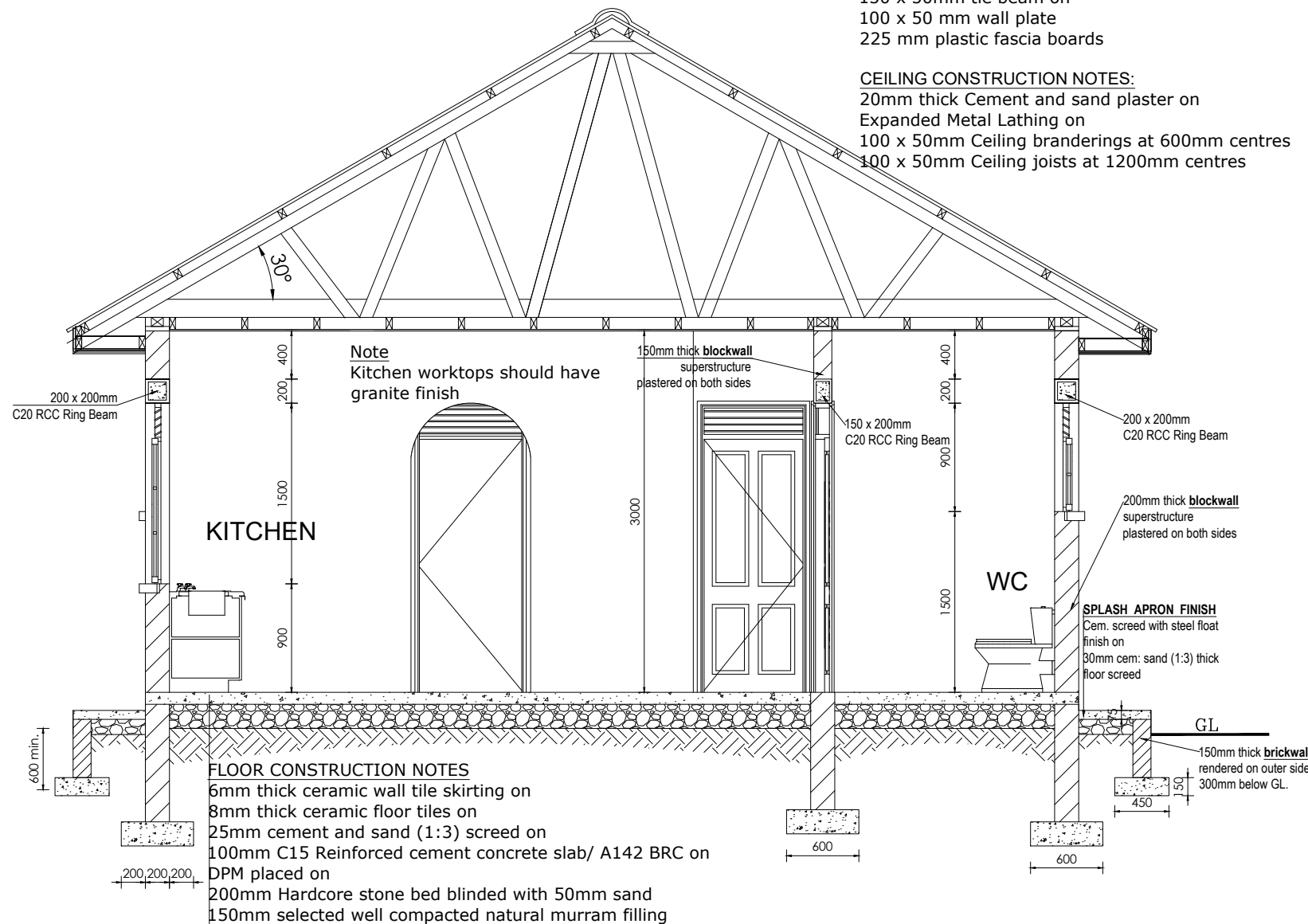
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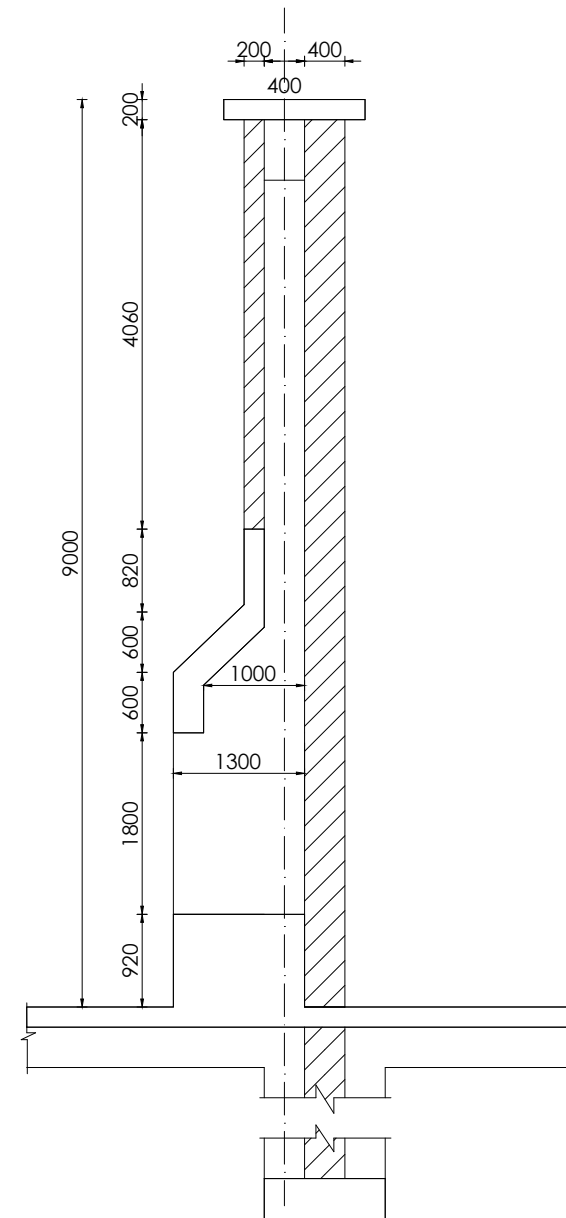
ROOF NOTES : pitch 30°
 175 X 25 ridge piece on Mangalore roofing tiles on 50 X 25 timber battens with polythene sheet gauge 1000 on chicken wire mesh placed on **Pressure treated roofing soft wood timber**
 100 x 50 mm timber rafters with 100x 50mm struts & ties in truss with 75 x 50 mm purlins on 150 x 50mm tie beam on 100 x 50 mm wall plate 225 mm plastic fascia boards



CEILING CONSTRUCTION NOTES:
 20mm thick Cement and sand plaster on Expanded Metal Lathing on 100 x 50mm Ceiling branderings at 600mm centres 100 x 50mm Ceiling joists at 1200mm centres



SECTION A-A



SECTION THROUGH COOKING PLACE B-B

CLIENT :

 THE REPUBLIC OF UGANDA
MINISTRY OF WATER AND ENVIRONMENT
 CO-FINANCED BY:

CONSULTANT :

 Alliance Consultants Ltd
 In Association with

 Infra-Consult Ltd

PROJECT :
ALA-ORA WATER SUPPLY AND SANITATION PROJECT

NYAGAK WATER SUPPLY AND SANITATION SYSTEM

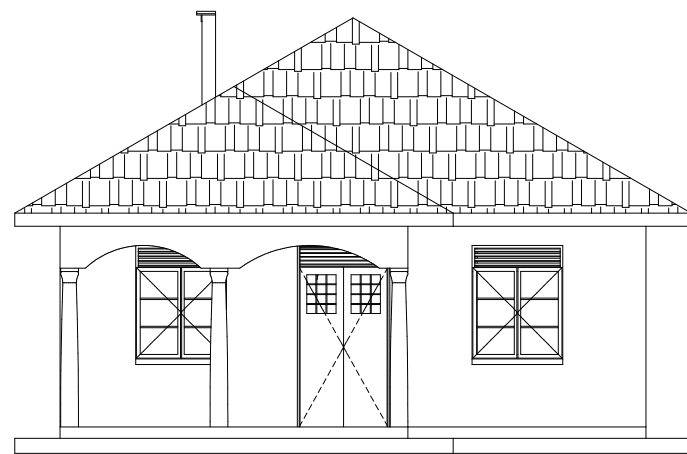
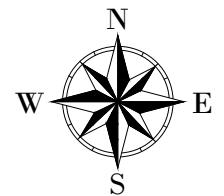
REVISIONS :

No	Date	Description

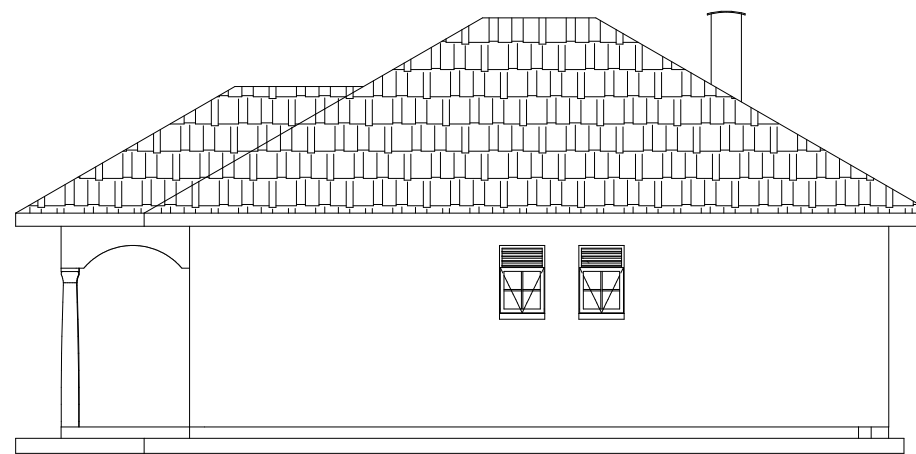
DRAWING TITLE : **SUPERINTENDENT'S HOUSE**
 Section and Details

Surveyed by: R.K
 Drawn by: A.K
 Designed by: W.G.M
 Checked by: J.K.K
 Date: January 2023
 DRG. No.: **NYA-WTP-014**
 Scale: 1:50 Sheet No.: 2 of 5

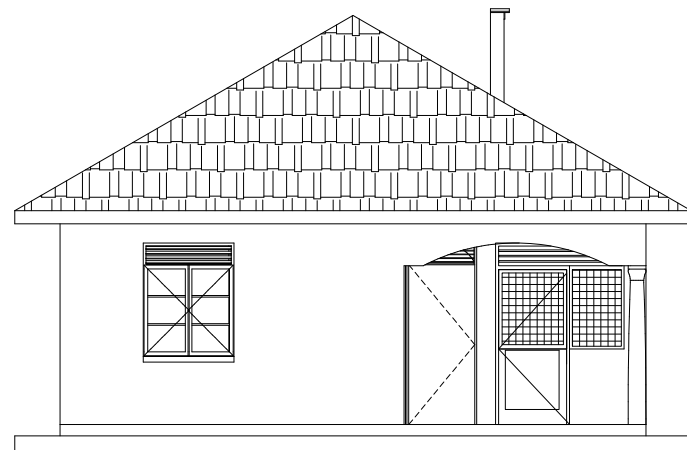
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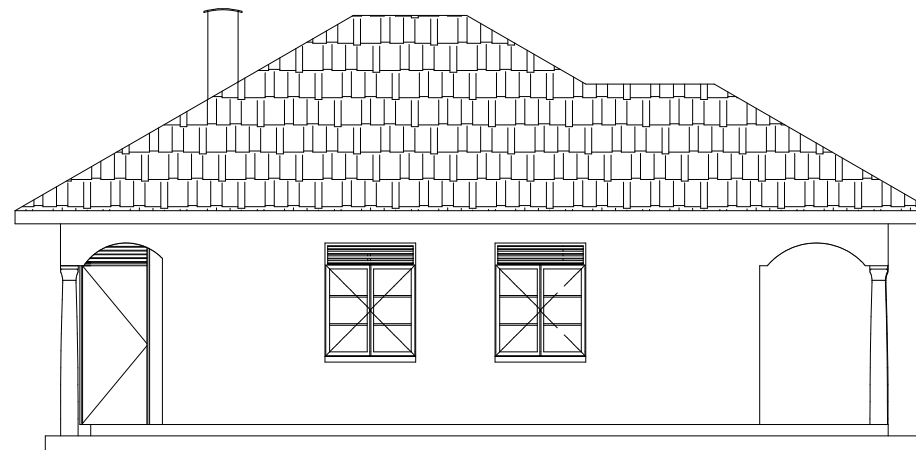
ELEVATION 1



ELEVATION 2



ELEVATION 3



ELEVATION 4

Door Schedule

Door Name	D1	D2	D3	D4	D5
Quantity	1	3	3	1	1
W x H Size	1000x2400	900x2400	900x2400	800x2400	900x2400
Elevation View					
	Single Leaf Metallic Casement Door	Single Leaf Wooden Paneled Door	Single Leaf Half Glazed/ Half Steel plate Door	Single Leaf Wooden Paneled Door	Single Leaf half steel plate door with metallic grill

Window Schedule

Window Name	W1	W2
Quantity	5	2
W x H Size	1200x1500	600x900
Elevation View		
	Double Sash Glazed Metallic Casement	Top Hung Metallic Casement

NB.

- Glass panes to be $\leq 0.2m^2$
- Burglar proofing to be of a 25x3mm flat bar grille with 175x300mm pitch.
- Permanent Vents are to be fitted with mosquito proofing nets i.e plastic net sandwiched with coffeetray mesh.
- All metallic window & Door sections to be 3.0mm minimum thickness

CLIENT :



THE REPUBLIC OF UGANDA
MINISTRY OF WATER AND ENVIRONMENT

CO-FINANCED BY:



CONSULTANT :



PROJECT :

ALA-ORA WATER SUPPLY AND SANITATION PROJECT

NYAGAK WATER SUPPLY AND SANITATION SYSTEM

REVISIONS :

No	Date	Description

DRAWING TITLE : **SUPERINTENDENT'S HOUSE Elevations**

Surveyed by:

R.K

Drawn by:

A.K

Designed by:

W.G.M

Checked by:

J.K.K

Date:

January 2023

DRG. No.:

NYA-WTP-014

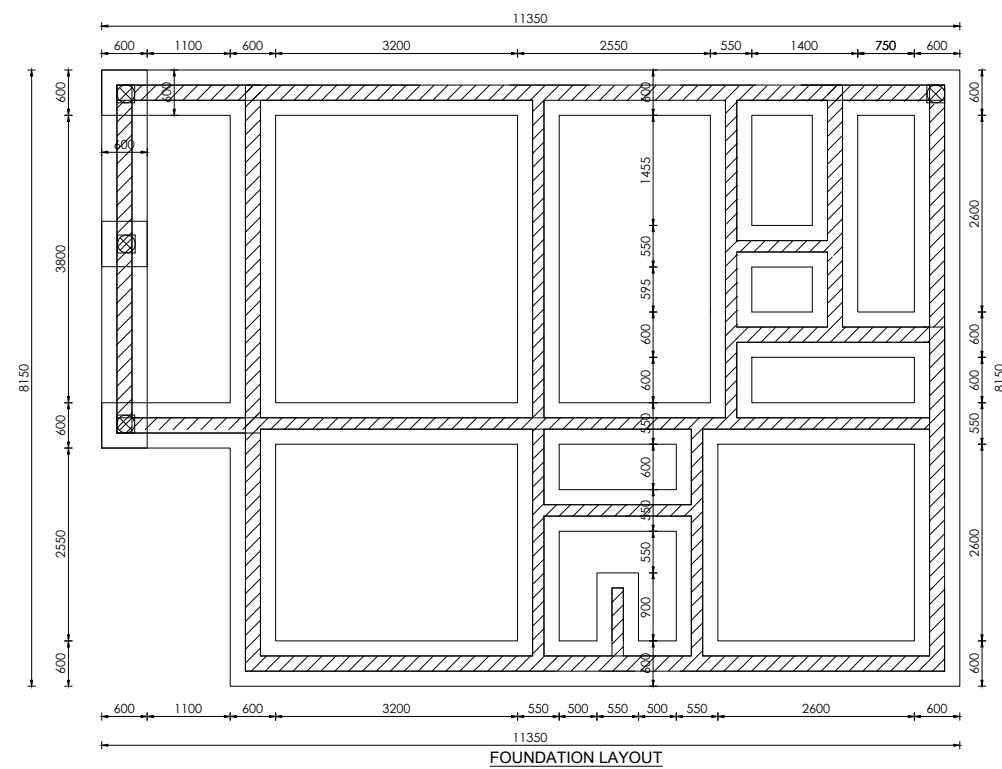
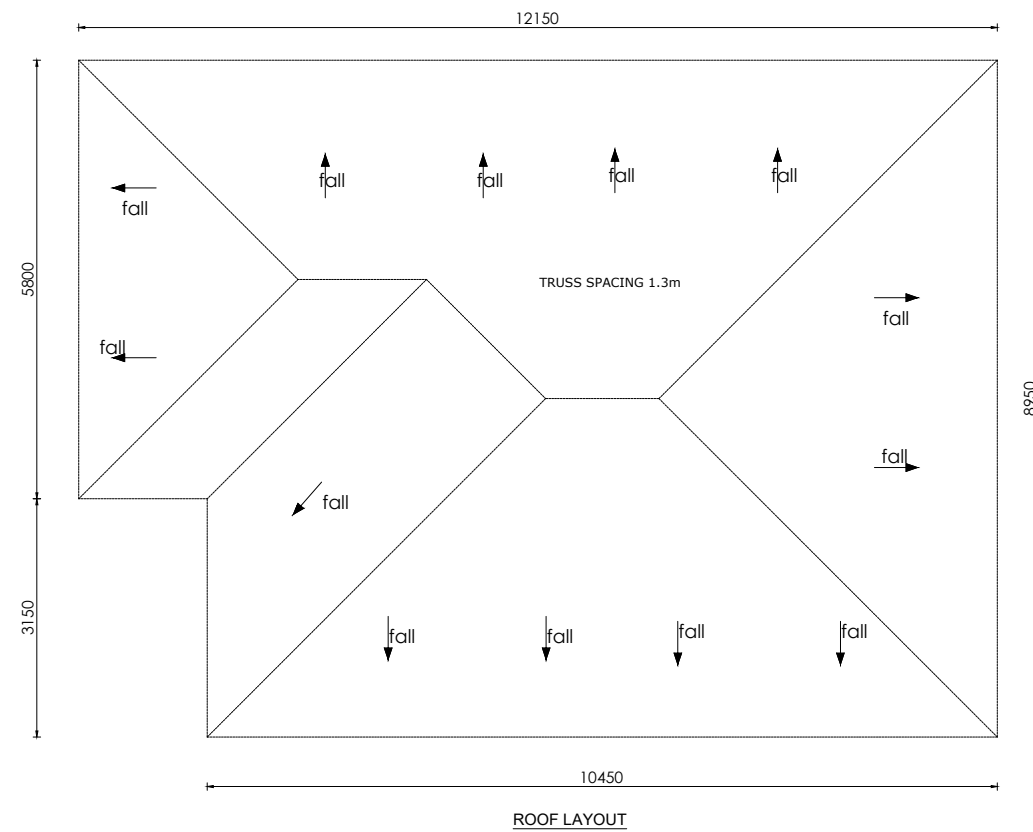
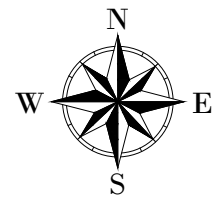
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1:100

Sheet No.:

3 of 5

LEGEND



CLIENT :



THE REPUBLIC OF UGANDA
MINISTRY OF WATER AND ENVIRONMENT

CO-FINANCED BY:



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CONSULTANT :



Alliance Consultants Ltd
In Association with



Infra-Consult Ltd

PROJECT :

ALA-ORA WATER SUPPLY AND SANITATION PROJECT

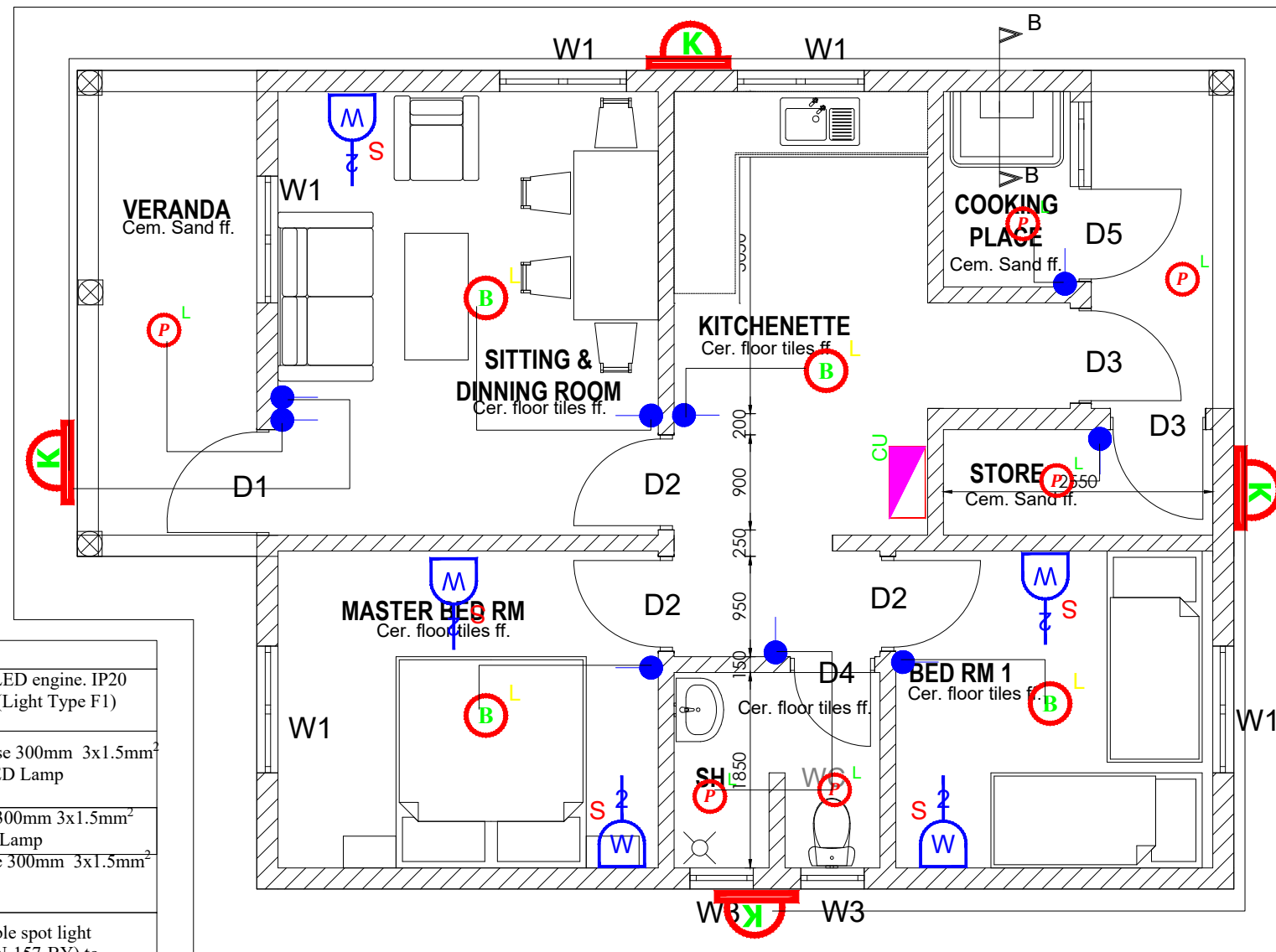
NYAGAK WATER SUPPLY AND SANITATION SYSTEM

REVISIONS :

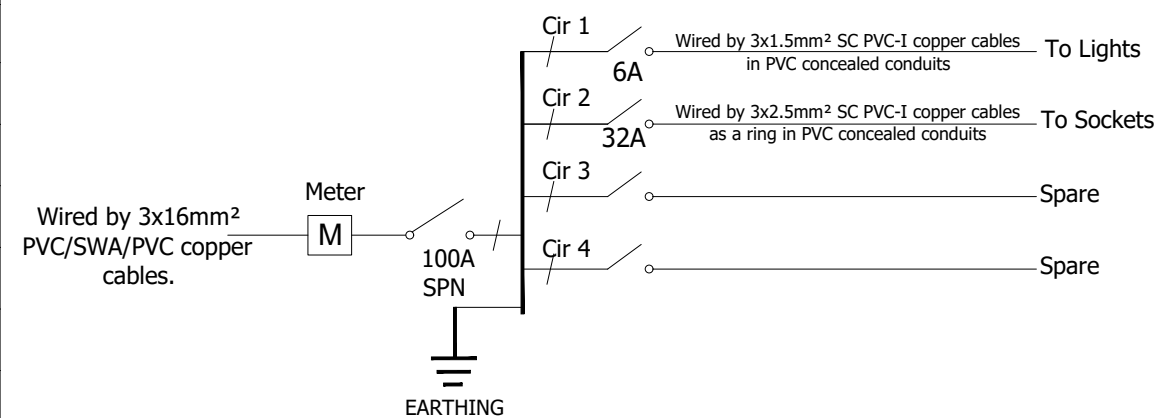
No	Date	Description

DRAWING TITLE : **SUPERINTENDENT'S HOUSE**
Foundation and Roof layout

Surveyed by:	R.K
Drawn by:	A.K
Designed by:	W.G.M
Checked by:	J.K.K
Date:	January 2023
DRG. No.:	NYA-WTP-014
Scale:	1:100
Sheet No.:	4 of 5

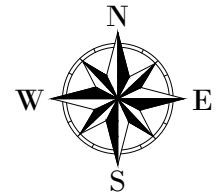


SYMBOL	DESCRIPTION
	1200mm 18W LED batten with a removable LED engine. IP20 As Thorn PopPack LED. or equal approved. (Light Type F1)
	Pedant lighting fitting comprising ceiling Rose 300mm 3x1.5mm ² flexible copper cable lamp holder and 6W LED Lamp
	Pedant lighting fitting comprising ceiling Rose 300mm 3x1.5mm ² flexible copper cable lamp holder and 6W LED Lamp
	Pedant lighting fitting comprising ceiling Rose 300mm 3x1.5mm ² flexible copper cable lamp holder and 6W LED Lamp
	Decorative Bed side lamp complete with flexible spot light arm as LEDES-C4 BALI (05-3217-19-82 + PAN-157-BY) to client's approval.
	wall mounted light
	Socket outlet on Wall
	Consumer's Unit
	One Gang 2way Switch
	Two Gang 2way Switch
	Three Gang 2way Switch
	One Gang 1way Switch
	Two Gang 1way Switch
	Three Gang 1way Switch
	Intermediate Switch
	Photo - Cell



100A, SPN 4-WAY CONSUMER'S UNIT FOR FLUSH MOUNTING AS HAGER OR EQUAL APPROVED

LEGEND



CLIENT :

 THE REPUBLIC OF UGANDA
MINISTRY OF WATER AND ENVIRONMENT
 CO-FINANCED BY:

CONSULTANT :

 Alliance Consultants Ltd
In Association with

 Infra-Consult Ltd

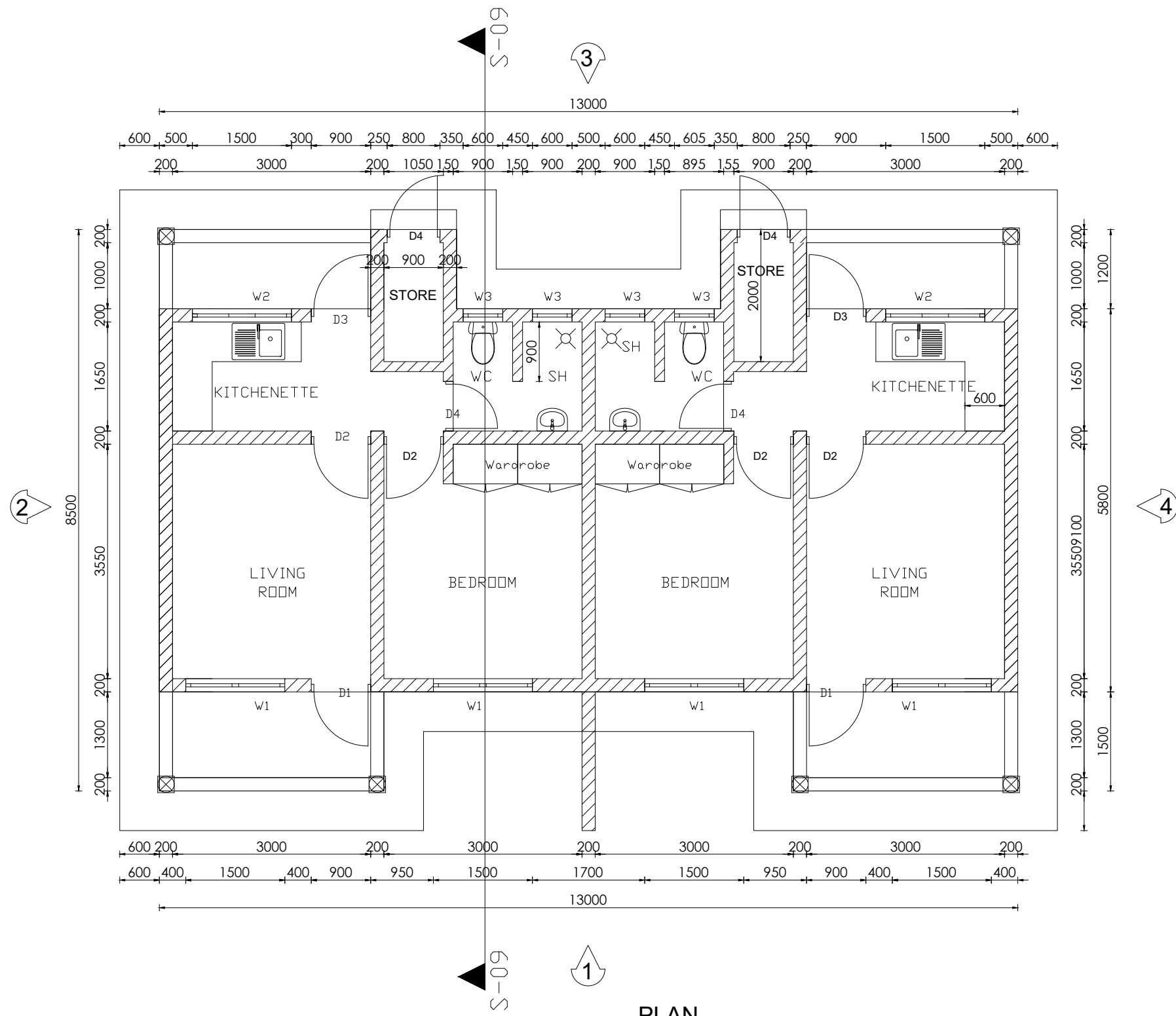
PROJECT :
ALA-ORA WATER SUPPLY AND SANITATION PROJECT
NYAGAK WATER SUPPLY AND SANITATION SYSTEM

REVISIONS :

No	Date	Description

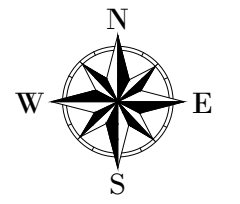
DRAWING TITLE : **SUPERINTENDENT'S HOUSE**
 Electrical layout

Surveyed by:	R.K
Drawn by:	P.K
Designed by:	P.K
Checked by:	S.C.D
Date:	January 2023
DRG. No.:	NYA-WTP-014
Scale:	1:60
Sheet No.:	5 of 5



PLAN

LEGEND



CLIENT :

 THE REPUBLIC OF UGANDA
MINISTRY OF WATER AND ENVIRONMENT
 CO-FINANCED BY:


CONSULTANT :
 Alliance Consultants Ltd
In Association with
 Infra-Consult Ltd

PROJECT :
ALA-ORA WATER SUPPLY AND SANITATION PROJECT

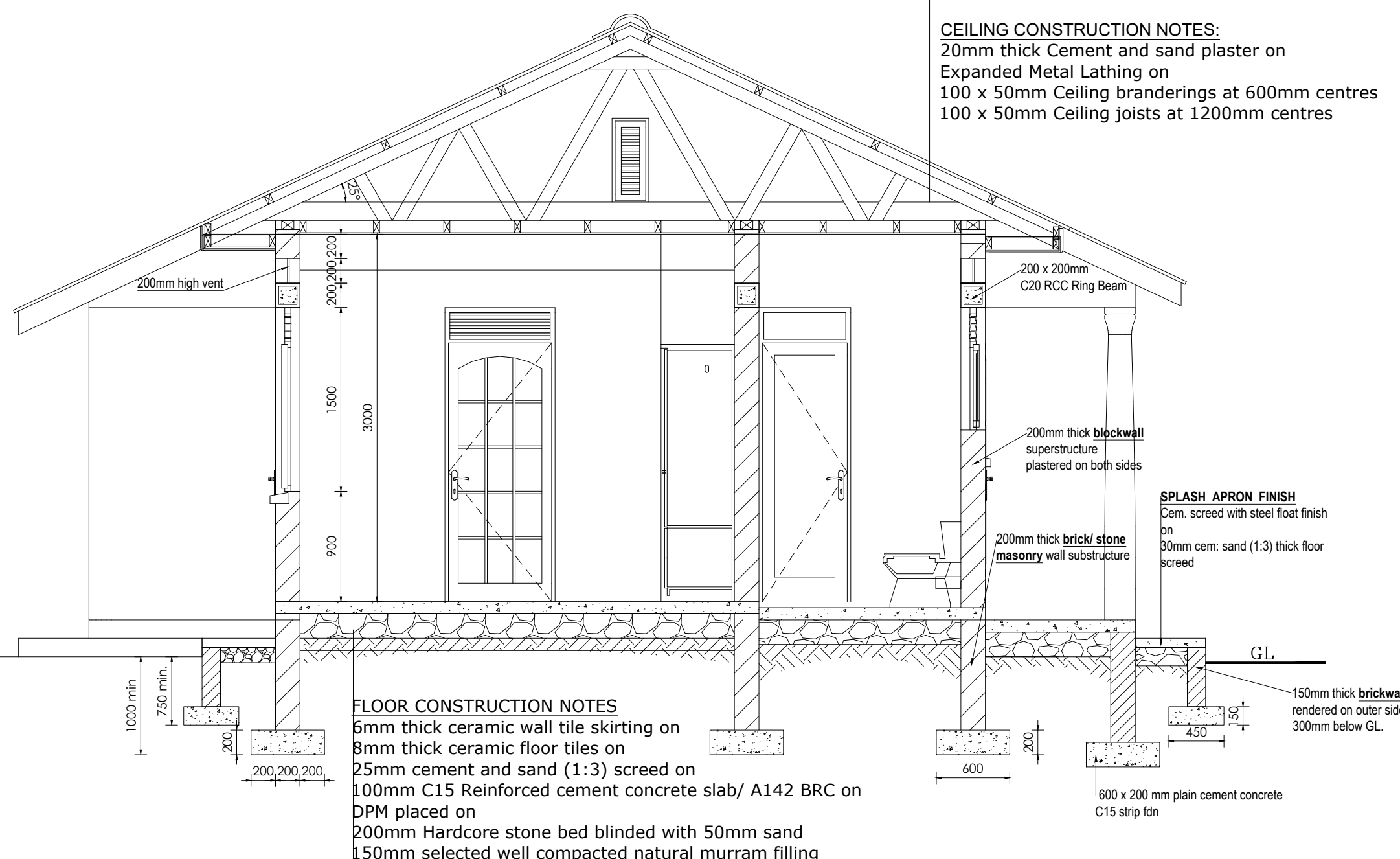
NYAGAK WATER SUPPLY AND SANITATION SYSTEM

REVISIONS :

No	Date	Description

DRAWING TITLE : **ATTENDANTS' HOUSES**
 Plan

Surveyed by: R.K
 Drawn by: A.K
 Designed by: W.G.M
 Checked by: J.K.K
 Date: January 2023
 DRG. No.: **NYA-WTP-015**
 Scale: 1:75 Sheet No.: 1 of 5



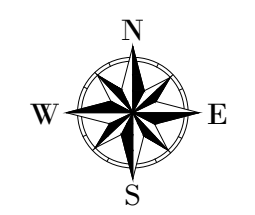
ROOF NOTES : pitch 25°
 Fire clay ridge cap/Mangalore roofing tiles on
 50 X 25 timber battens with
 gauge 32 GI plane sheet
Pressure treated roofing soft wood timber
 Double 100 x 50 mm timber rafters with
 100x 50mm struts & ties in truss with
 75 x 50 mm purlins on
 150 x 50mm tie beam on
 150 x 75 mm wall plate
 250 mm plastic fascia boards

CEILING CONSTRUCTION NOTES:
 20mm thick Cement and sand plaster on
 Expanded Metal Lathing on
 100 x 50mm Ceiling branderings at 600mm centres
 100 x 50mm Ceiling joists at 1200mm centres

FLOOR CONSTRUCTION NOTES
 6mm thick ceramic wall tile skirting on
 8mm thick ceramic floor tiles on
 25mm cement and sand (1:3) screed on
 100mm C15 Reinforced cement concrete slab/ A142 BRC on
 DPM placed on
 200mm Hardcore stone bed blinded with 50mm sand
 150mm selected well compacted natural murrum filling

SECTION S-09

LEGEND



CLIENT : 
 THE REPUBLIC OF UGANDA
MINISTRY OF WATER AND ENVIRONMENT

CO-FINANCED BY:

 THE WORLD BANK
 IBRD • IDA | WORLD BANK GROUP

CONSULTANT :
 Alliance Consultants Ltd
 In Association with
 Infra-Consult Ltd

PROJECT :
**ALA-ORA WATER SUPPLY AND
 SANITATION PROJECT**

**NYAGAK WATER SUPPLY AND
 SANITATION SYSTEM**

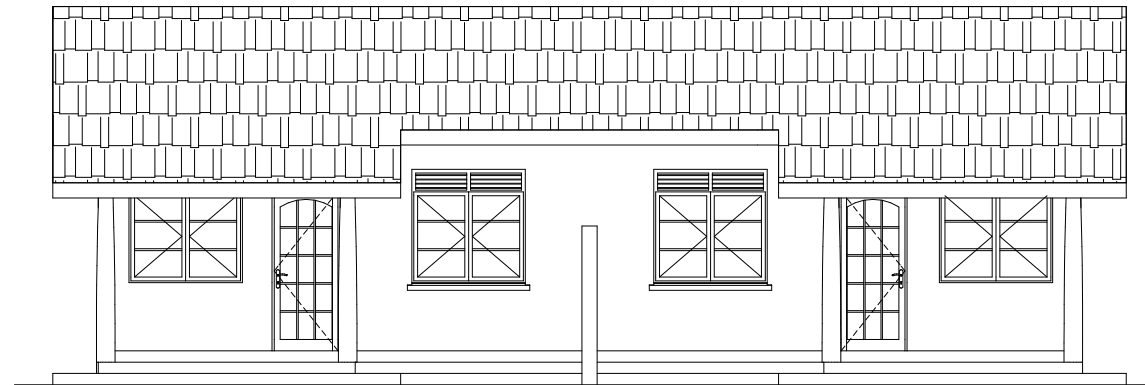
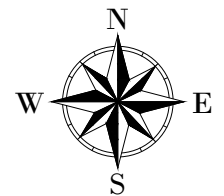
REVISIONS :

No	Date	Description

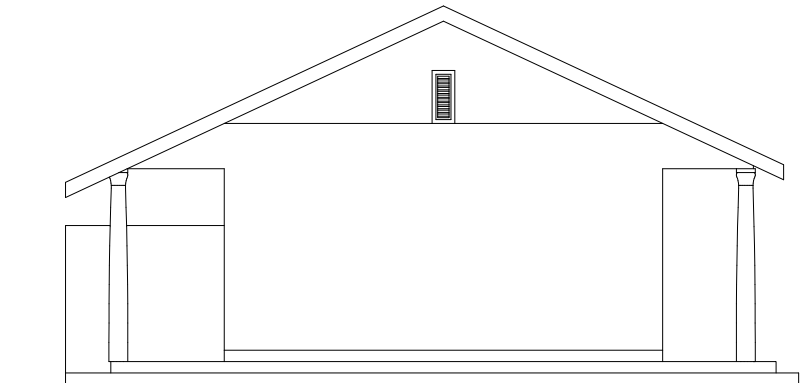
DRAWING TITLE : **ATTENDANTS' HOUSES**
 Section

Surveyed by:	R.K
Drawn by:	A.K
Designed by:	W.G.M
Checked by:	J.K.K
Date:	January 2023
DRG. No.:	NYA-WTP-015
Scale:	1:40
Sheet No.:	2 of 5

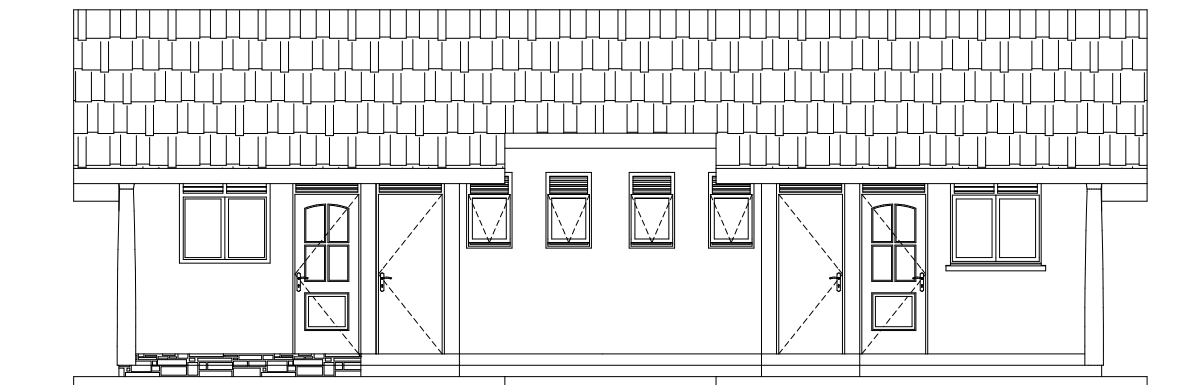
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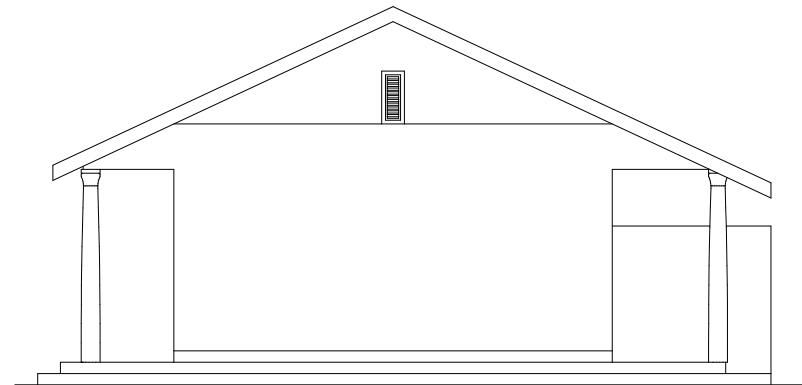
ELEVATION 1



ELEVATION 2



ELEVATION 3



ELEVATION 4

Door Schedule

Door Name	D1	D2	D3	D4
Quantity	2	4	2	2
W x H Size	1000x2400	900x2400	900x2400	800x2400
Elevation View				
	Single Leaf Metallic Casement Door	Single Leaf Wooden Paneled Door	Single Leaf Half Glazed/ Half Steel plate Door	Single Leaf Wooden Paneled Door

Window Schedule


Window Name	W1	W2
Quantity	6	4
W x H Size	1500x1500	600x900
Elevation View		
	Double Sash Glazed Metallic Casement	Top Hung Metallic Casement

NB.

- Glass panes to be $\leq 0.2m^2$
- Burglar proofing to be of a 25x3mm flat bar grille with 175x300mm pitch.
- Permanent Vents are to be fitted with mosquito proofing nets i.e plastic net sandwiched with coffeetray mesh.
- All window & Door sections to be 3.0mm minimum thickness

CLIENT : 
 THE REPUBLIC OF UGANDA
MINISTRY OF WATER AND ENVIRONMENT

CO-FINANCED BY:
 **THE WORLD BANK**
 IBRD • IDA | WORLD BANK GROUP

CONSULTANT :  Alliance Consultants Ltd
 In Association with
 **Infra-Consult Ltd**

PROJECT :
ALA-ORA WATER SUPPLY AND SANITATION PROJECT

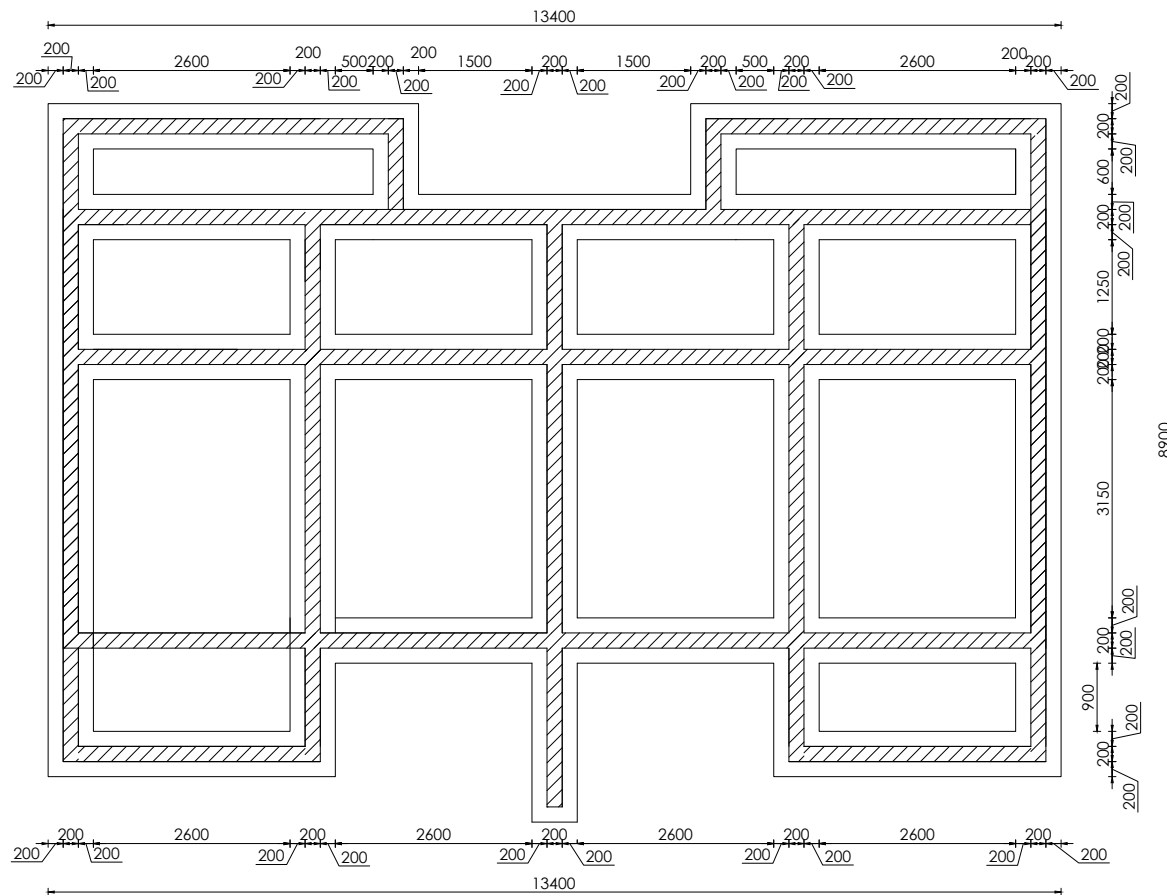
NYAGAK WATER SUPPLY AND SANITATION SYSTEM

REVISIONS :

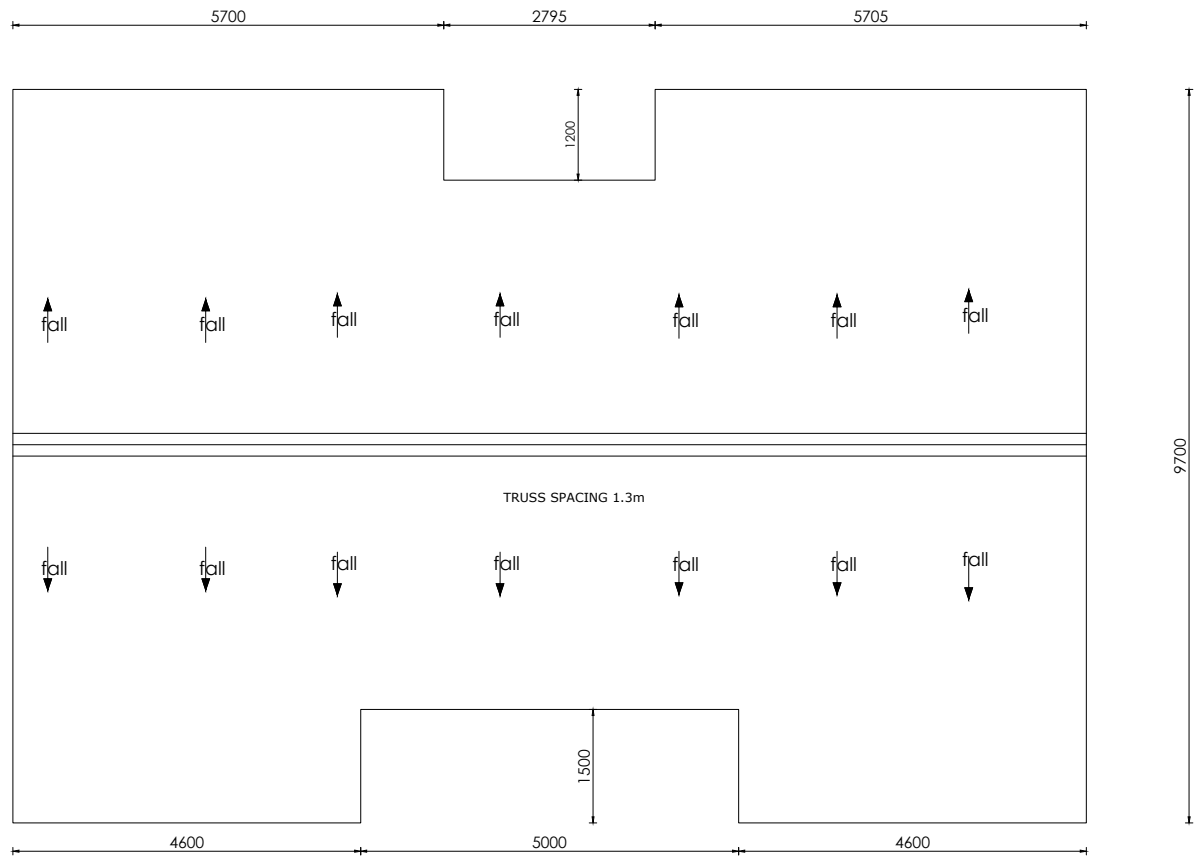
No	Date	Description

DRAWING TITLE : **ATTENDANTS' HOUSES Elevations**

Surveyed by:	R.K
Drawn by:	A.K
Designed by:	W.G.M
Checked by:	J.K.K
Date:	January 2023
DRG. No.:	NYA-WTP-015
Scale:	1:100
Sheet No.:	3 of 5

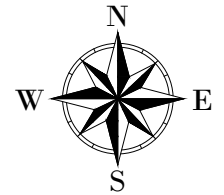


FOUNDATION LAYOUT



ROOF LAYOUT

LEGEND



CLIENT :

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MINISTRY OF WATER AND ENVIRONMENT

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CONSULTANT :
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 **Infra-Consult Ltd**

PROJECT :
ALA-ORA WATER SUPPLY AND SANITATION PROJECT

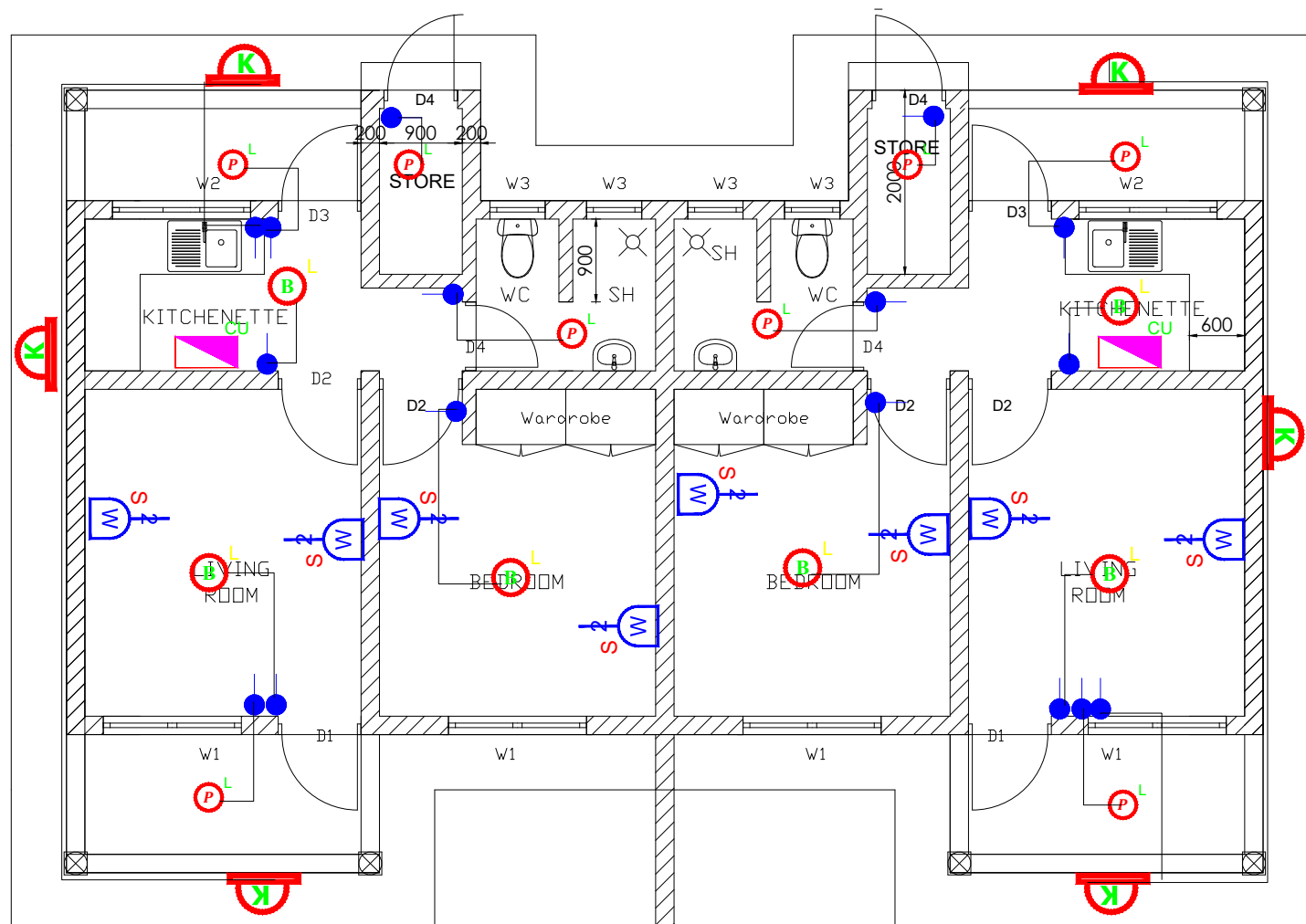
NYAGAK WATER SUPPLY AND SANITATION SYSTEM

REVISIONS :

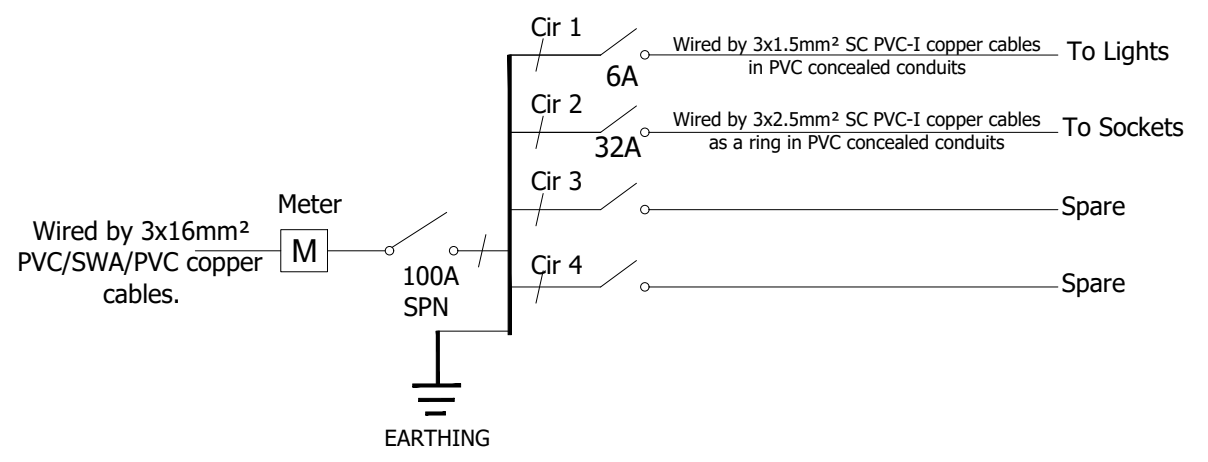
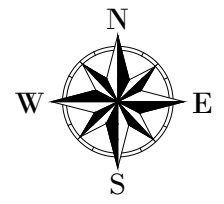
No	Date	Description

DRAWING TITLE : **ATTENDANTS' HOUSES**
 Foundation & Roof Layout

Surveyed by: R.K
 Drawn by: A.K
 Designed by: W.G.M
 Checked by: J.K.K
 Date: January 2023
 DRG. No.: **NYA-WTP-015**
 Scale: 1:100 Sheet No.: 4 of 5



SYMBOL	DESCRIPTION
	1200mm 18W LED batten with a removable LED engine. IP20 As Thorn PopPack LED. or equal approved. (Light Type F1)
	Pedant lighting fitting comprising ceiling Rose 300mm 3x1.5mm ² flexible copper cable lamp holder and 6W LED Lamp
	Pedant lighting fitting comprising ceiling Rose 300mm 3x1.5mm ² flexible copper cable lamp holder and 6W LED Lamp
	Pedant lighting fitting comprising ceiling Rose 300mm 3x1.5mm ² flexible copper cable lamp holder and 6W LED Lamp
	Decorative Bed side lamp complete with flexible spot light arm as LEDS-C4 BALI (05-3217-19-82 + PAN-157-BY) to client's approval.
	wall mounted light
	Socket outlet on Wall
	Consumer's Unit
	One Gang 2way Switch
	Two Gang 2way Switch
	Three Gang 2way Switch
	One Gang 1way Switch
	Two Gang 1way Switch
	Three Gang 1way Switch
	Intermediate Switch
	Photo - Cell



100A, SPN 4-WAY CONSUMER'S UNIT FOR FLUSH MOUNTING AS HAGER OR EQUAL APPROVED

LEGEND

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In Association with

Infra-Consult Ltd

PROJECT :

ALA-ORA WATER SUPPLY AND SANITATION PROJECT

NYAGAK WATER SUPPLY AND SANITATION SYSTEM

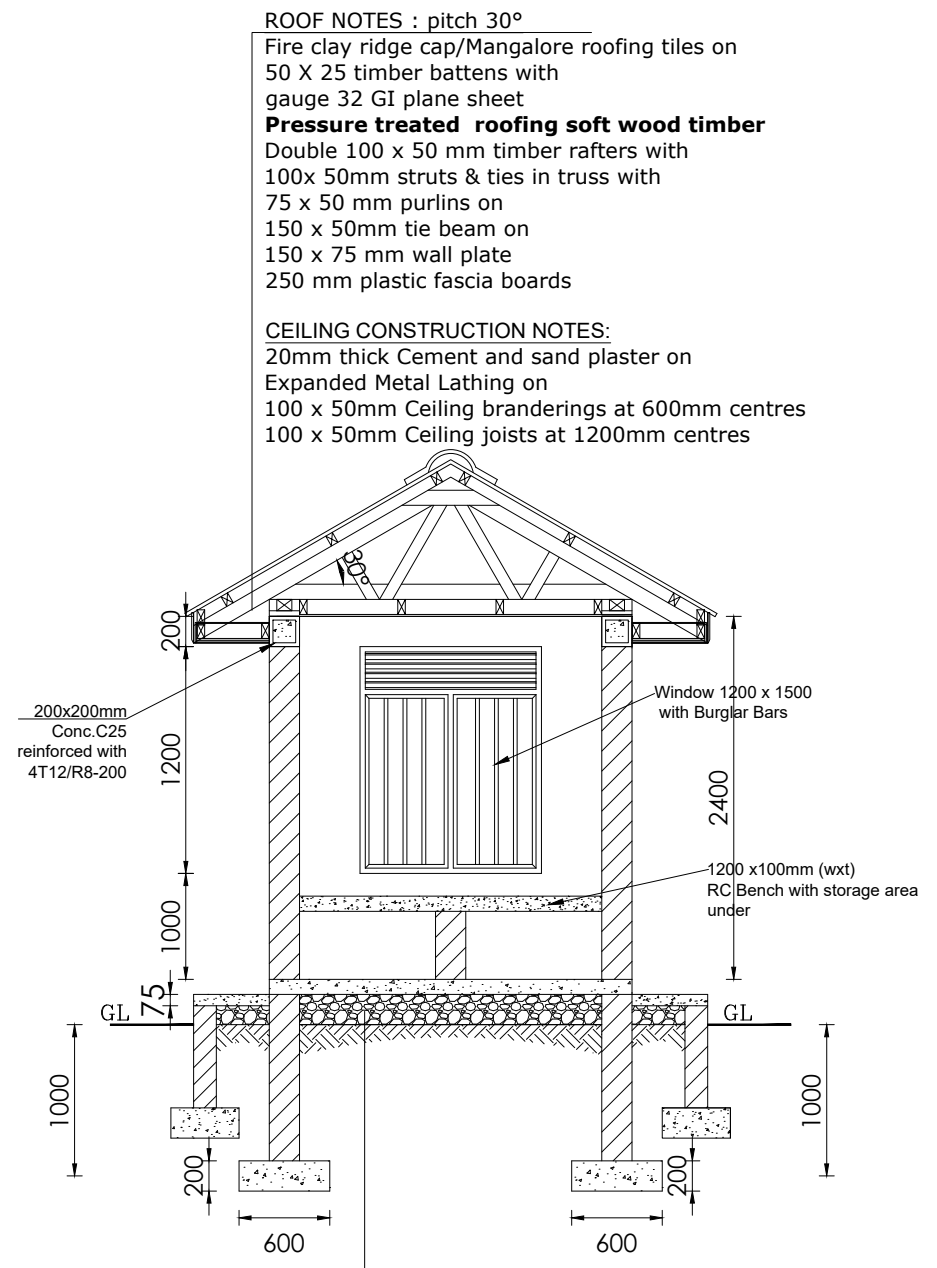
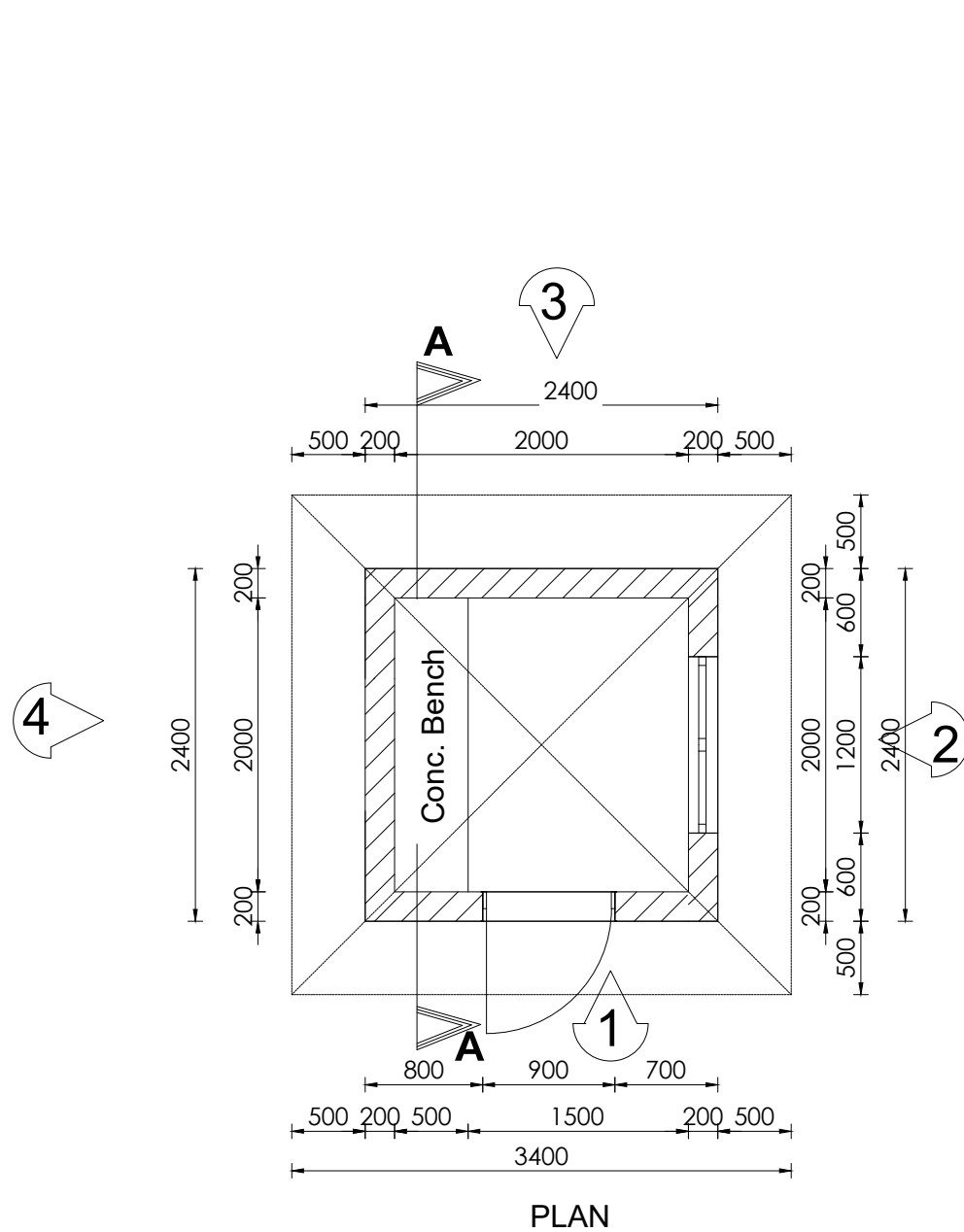
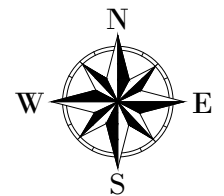
REVISIONS :

No	Date	Description

DRAWING TITLE : **ATTENDANTS' HOUSES**
Electrical Layout

Surveyed by:	
Drawn by:	P.K
Designed by:	P.K
Checked by:	S.C.D
Date:	January 2023
DRG. No.:	NYA-WTP-015
Scale:	1:75
Sheet No.:	5 of 5

LEGEND



ROOF NOTES : pitch 30°

Fire clay ridge cap/Mangalore roofing tiles on
 50 X 25 timber battens with
 gauge 32 GI plane sheet
Pressure treated roofing soft wood timber
 Double 100 x 50 mm timber rafters with
 100x 50mm struts & ties in truss with
 75 x 50 mm purlins on
 150 x 50mm tie beam on
 150 x 75 mm wall plate
 250 mm plastic fascia boards

CEILING CONSTRUCTION NOTES:


20mm thick Cement and sand plaster on
 Expanded Metal Lathing on
 100 x 50mm Ceiling branderings at 600mm centres
 100 x 50mm Ceiling joists at 1200mm centres

SUBSTRUCTURE CONSTRUCTION NOTES

8mm thick ceramic floor tiles on
 25mm cement and sand (1:3) screed on
 100mm C15 Reinforced cement concrete slab/ A142 BRC
 200mm Hardcore stone bed blinded with 50mm sand
 150mm selected well compacted natural murrum filling
 600 x 230 mm plain cement concrete C15 strip fdn.

CLIENT : 
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MINISTRY OF WATER AND ENVIRONMENT

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PROJECT :
**ALA-ORA WATER SUPPLY AND
 SANITATION PROJECT**

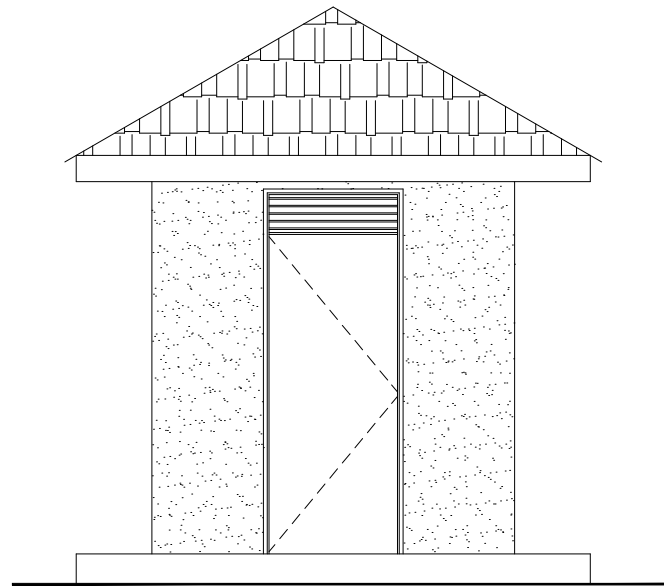
**NYAGAK WATER SUPPLY AND
 SANITATION SYSTEM**

REVISIONS :

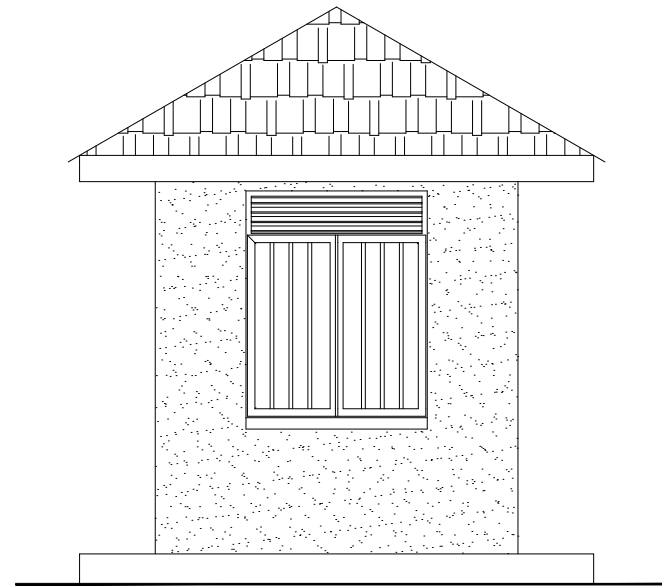
No	Date	Description

DRAWING TITLE : **GUARD POST
 Plan & Section**

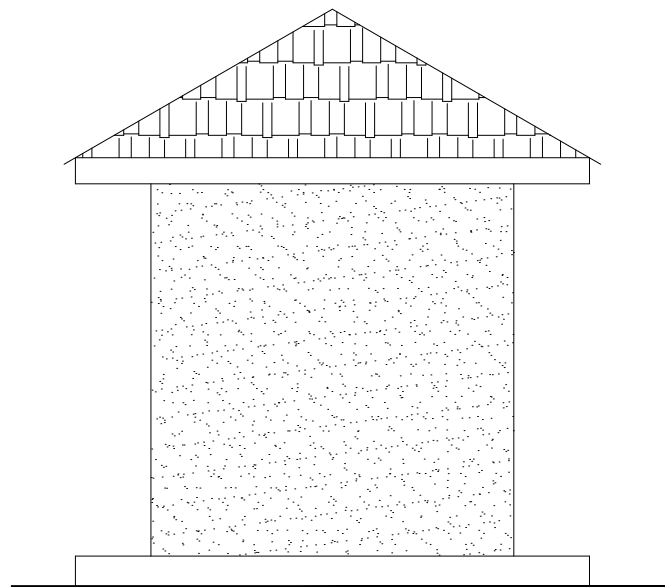
Surveyed by:	R.K
Drawn by:	A.K
Designed by:	W.G.M
Checked by:	J.K.K
Date:	January 2023
DRG. No.:	NYA-WTP-016
Scale:	1:50
Sheet No.:	1 of 3



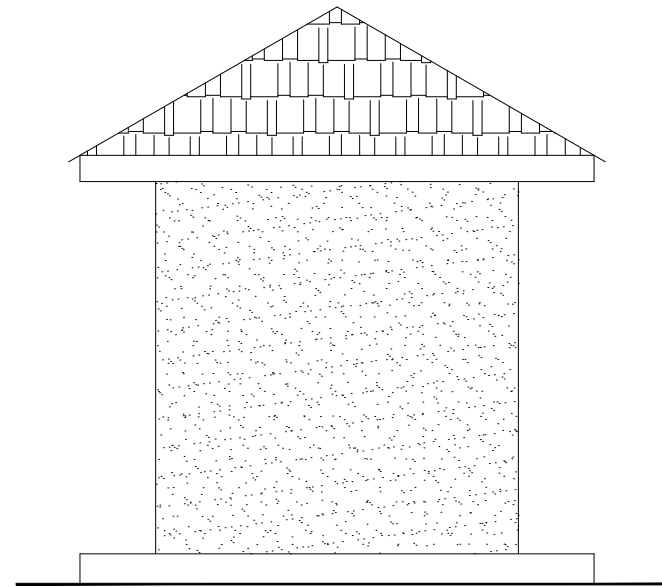
ELEVATION 1



ELEVATION 2

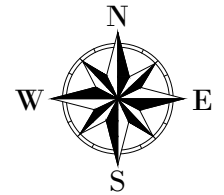


ELEVATION 3



ELEVATION 4

LEGEND



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CONSULTANT :
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PROJECT :
 ALA-ORA WATER SUPPLY AND
 SANITATION PROJECT

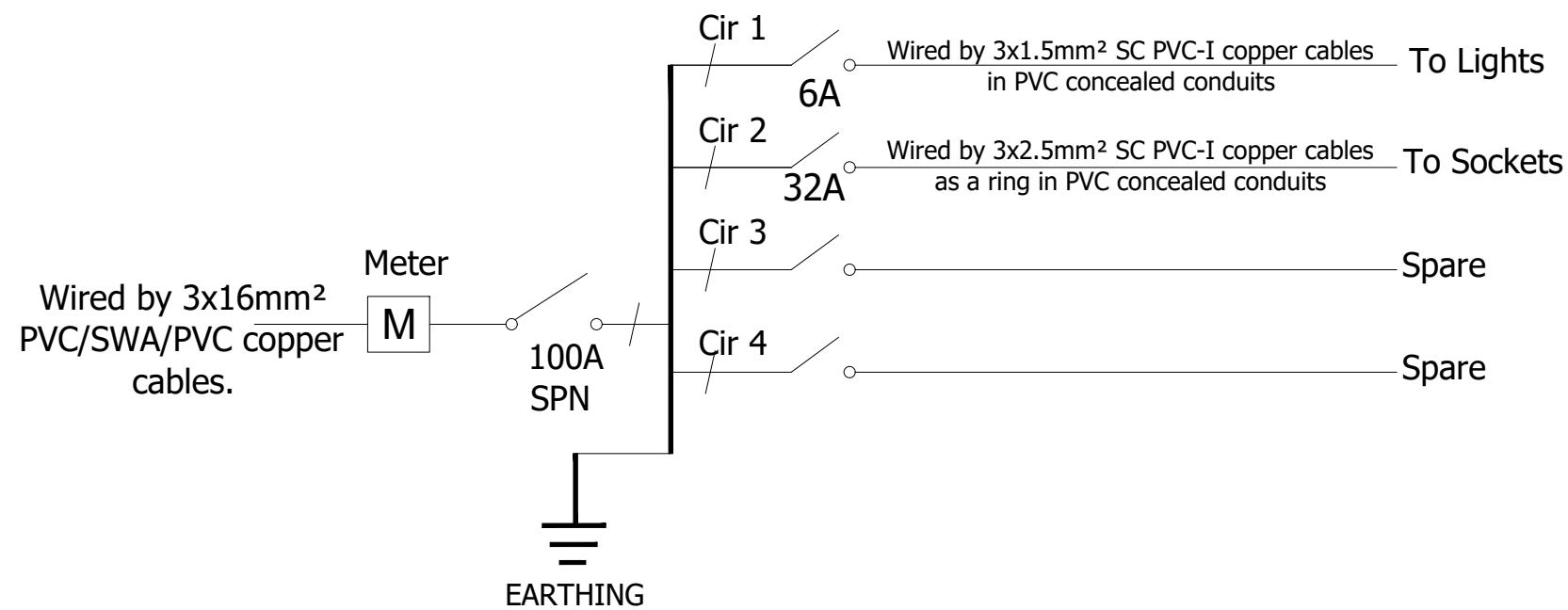
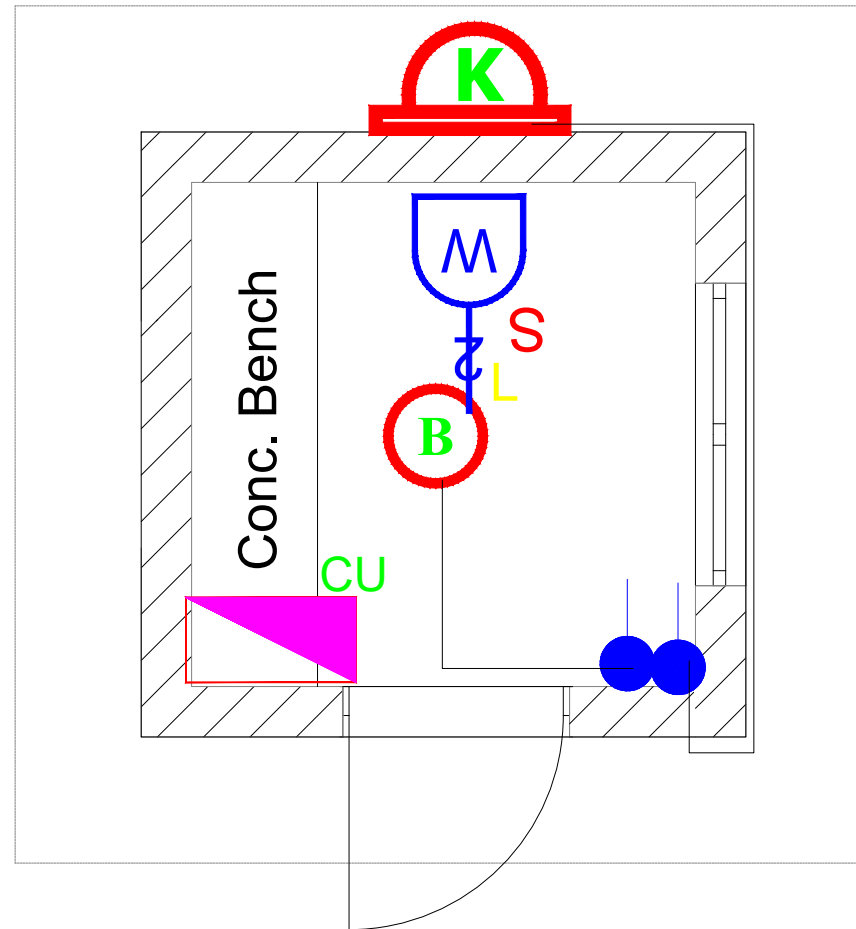
**NYAGAK WATER SUPPLY AND
 SANITATION SYSTEM**

REVISIONS :

No	Date	Description

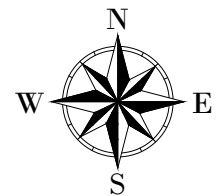
DRAWING TITLE : **GUARD POST**
 Elevation

Surveyed by: R.K
 Drawn by: A.K
 Designed by: W.G.M
 Checked by: J.K.K
 Date: January 2023
 DRG. No.: **NYA-WTP-016**
 Scale: 1:50 Sheet No.: 2 of 3



100A, SPN 4-WAY CONSUMER'S UNIT FOR FLUSH MOUNTING AS HAGER OR EQUAL APPROVED

LEGEND



CLIENT :

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CONSULTANT :

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In Association with

 Infra-Consult Ltd

PROJECT :
ALA-ORA WATER SUPPLY AND SANITATION PROJECT

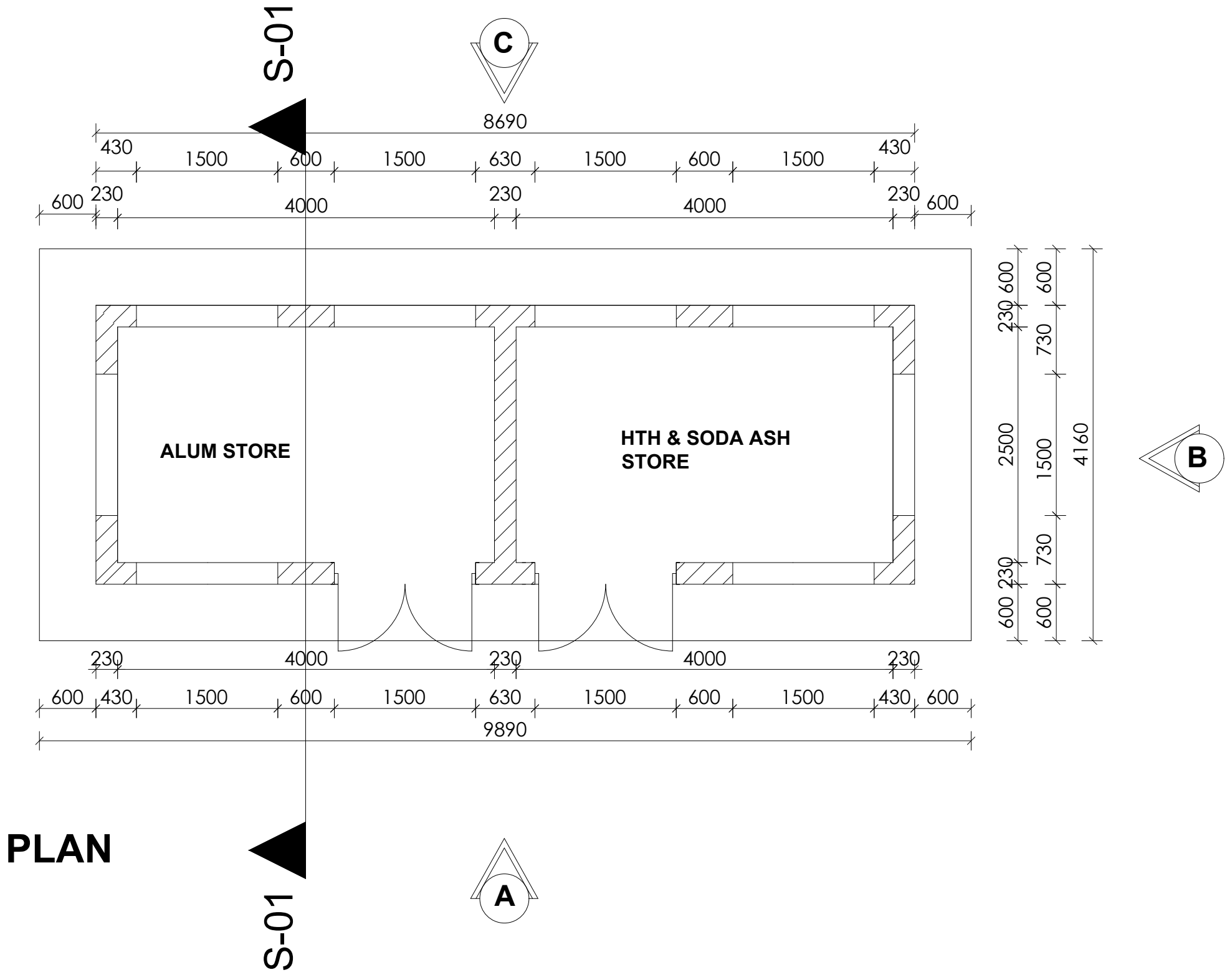
NYAGAK WATER SUPPLY AND SANITATION SYSTEM

REVISIONS :

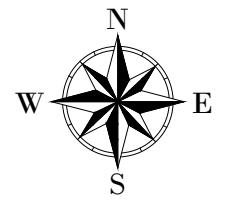
No	Date	Description

DRAWING TITLE : **GUARD POST**
 Electrical Layout

Surveyed by: _____
 Drawn by: P.K
 Designed by: P.K
 Checked by: S.C.D
 Date: January 2023
 DRG. No.: **NYA-WTP-016**
 Scale: 1:30 Sheet No.: 3 of 3



LEGEND



CLIENT :

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PROJECT :
ALA-ORA WATER SUPPLY AND SANITATION PROJECT

NYAGAK WATER SUPPLY AND SANITATION SYSTEM

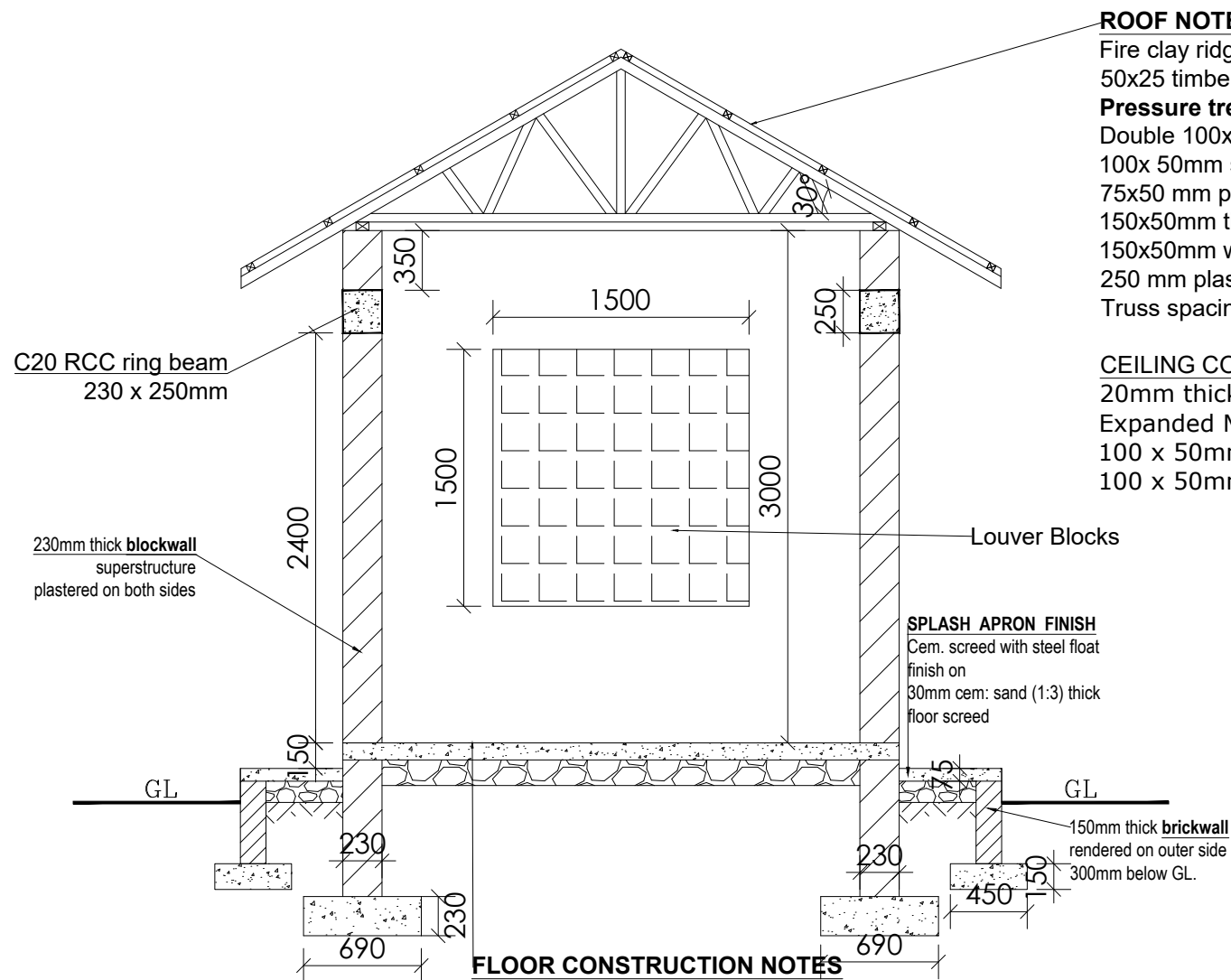
REVISIONS :

No	Date	Description

DRAWING TITLE : **CHEMICAL STORE Plan**

Surveyed by: R.K
 Drawn by: A.K
 Designed by: W.G.M
 Checked by: J.K.K
 Date: January 2023
 DRG. No.: **NYA-WTP-017**
 Scale: 1:50 Sheet No.: 1 of 4

SECTION -01



ROOF NOTES : pitch 30°

Fire clay ridge cap/Mangalore roofing tiles on 50x25 timber battens with
Pressure treated roofing soft wood timber
 Double 100x50 mm timber rafters with 100x 50mm struts & ties in truss with 75x50 mm purlins on 150x50mm tie beam on 150x50mm wall plate 250 mm plastic fascia boards
 Truss spacing @1.3m

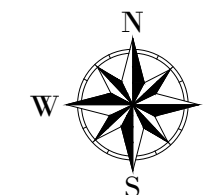
CEILING CONSTRUCTION NOTES:


20mm thick Cement and sand plaster on Expanded Metal Lathing on 100 x 50mm Ceiling branderings at 600mm centres 100 x 50mm Ceiling joists at 1200mm centres

FLOOR CONSTRUCTION NOTES

6mm thick ceramic wall tile skirting on 8mm thick ceramic floor tiles on 25mm cement and sand (1:3) screed on 100mm C15 Reinforced cement concrete slab/ A142 BRC on DPM placed on 150mm Hardcore stone bed blinded with 50mm sand 150mm selected well compacted natural murrum filling

LEGEND



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PROJECT :
ALA-ORA WATER SUPPLY AND SANITATION PROJECT

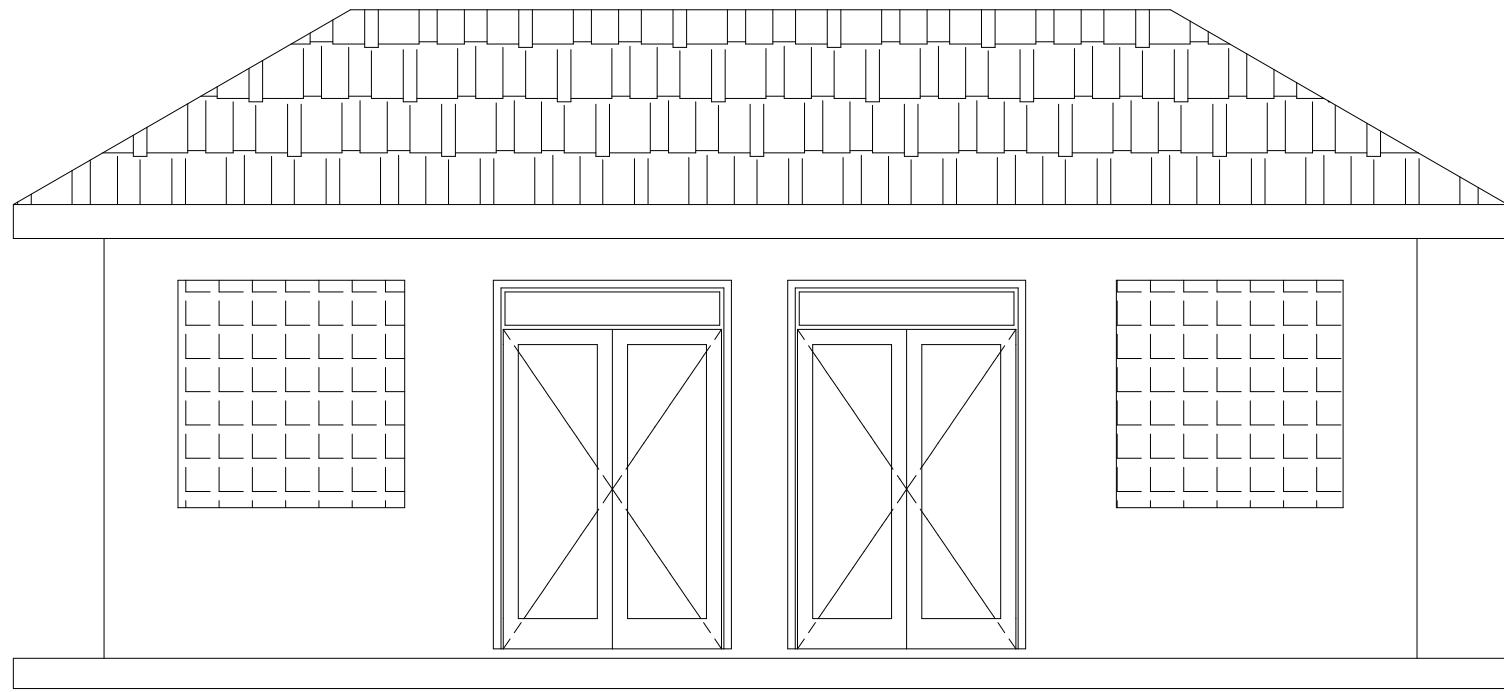
NYAGAK WATER SUPPLY AND SANITATION SYSTEM

REVISIONS :

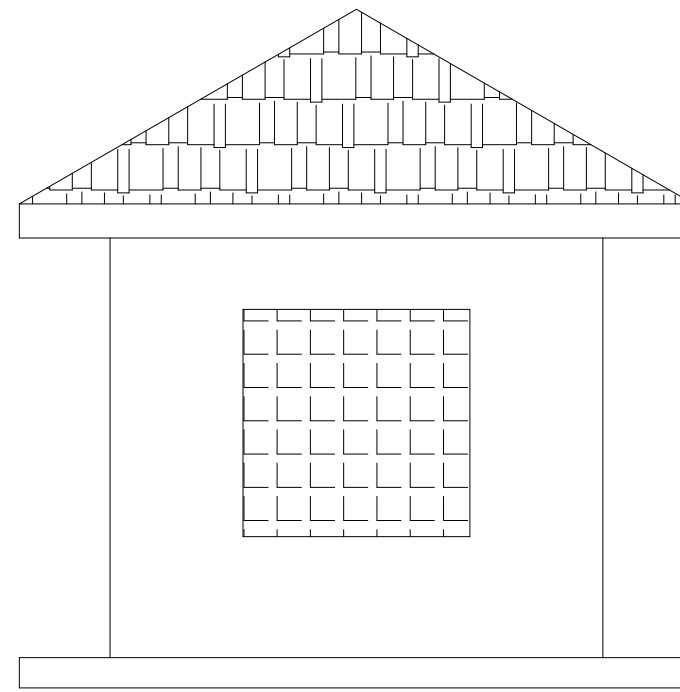
No	Date	Description

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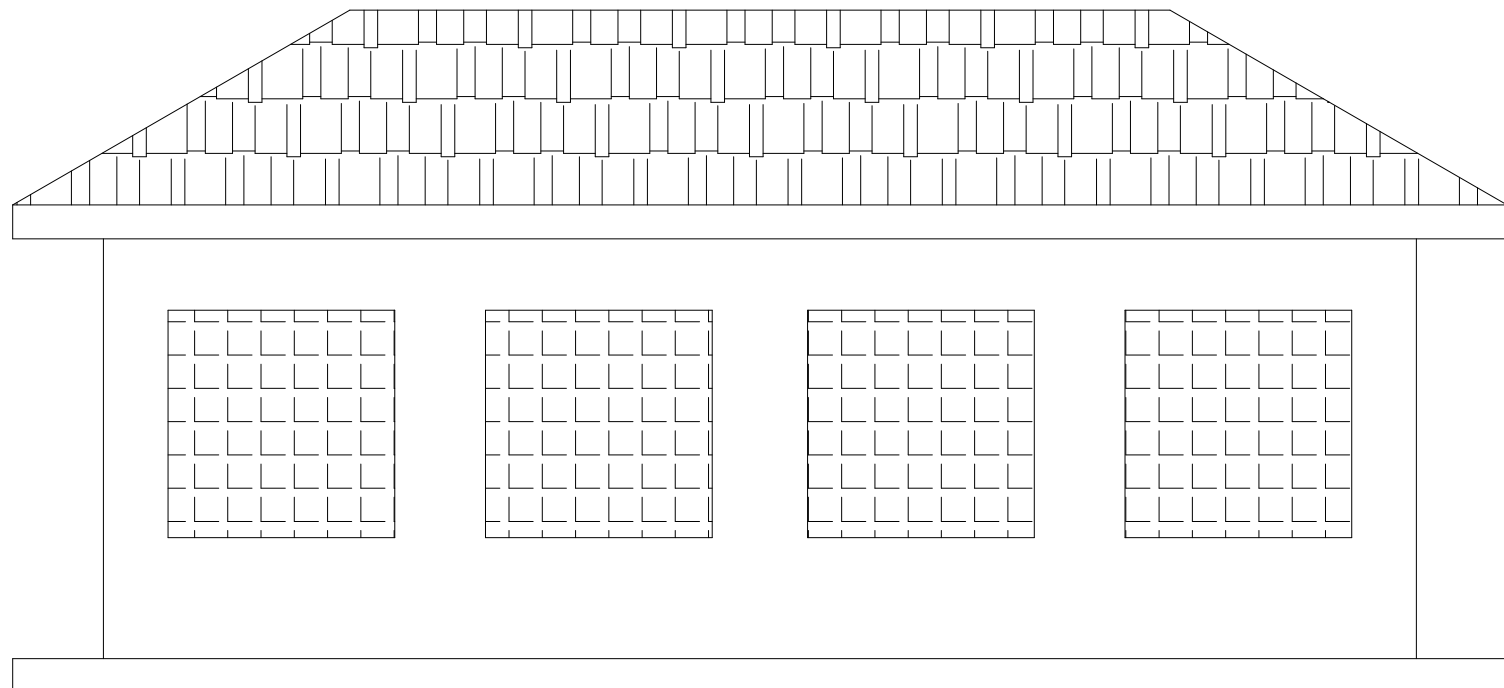
Surveyed by: R.K
 Drawn by: A.K
 Designed by: W.G.M
 Checked by: J.K.K
 Date: January 2023
 DRG. No.: **NYA-WTP-017**
 Scale: 1:40 Sheet No.: 2 of 4



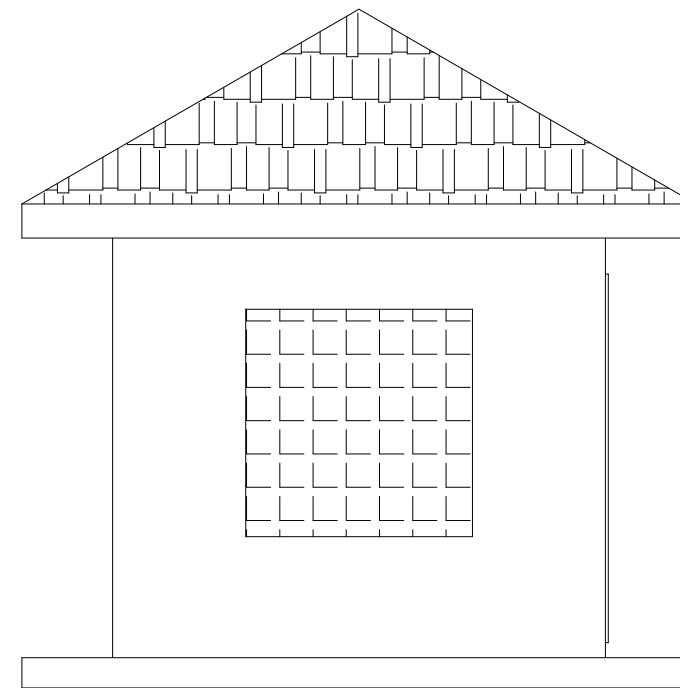
ELEVATION - A



ELEVATION - B

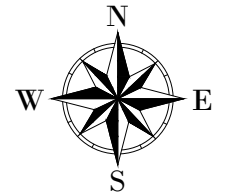


ELEVATION - C



ELEVATION - D

LEGEND



CLIENT :



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MINISTRY OF WATER AND ENVIRONMENT

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CONSULTANT :



PROJECT :

ALA-ORA WATER SUPPLY AND
SANITATION PROJECT

**NYAGAK WATER SUPPLY AND
SANITATION SYSTEM**

REVISIONS :

No	Date	Description

DRAWING TITLE :

**CHEMICAL STORE
Elevations**

Surveyed by:

R.K

Drawn by:

A.K

Designed by:

W.G.M

Checked by:

J.K.K

Date:

January 2023

DRG. No.:

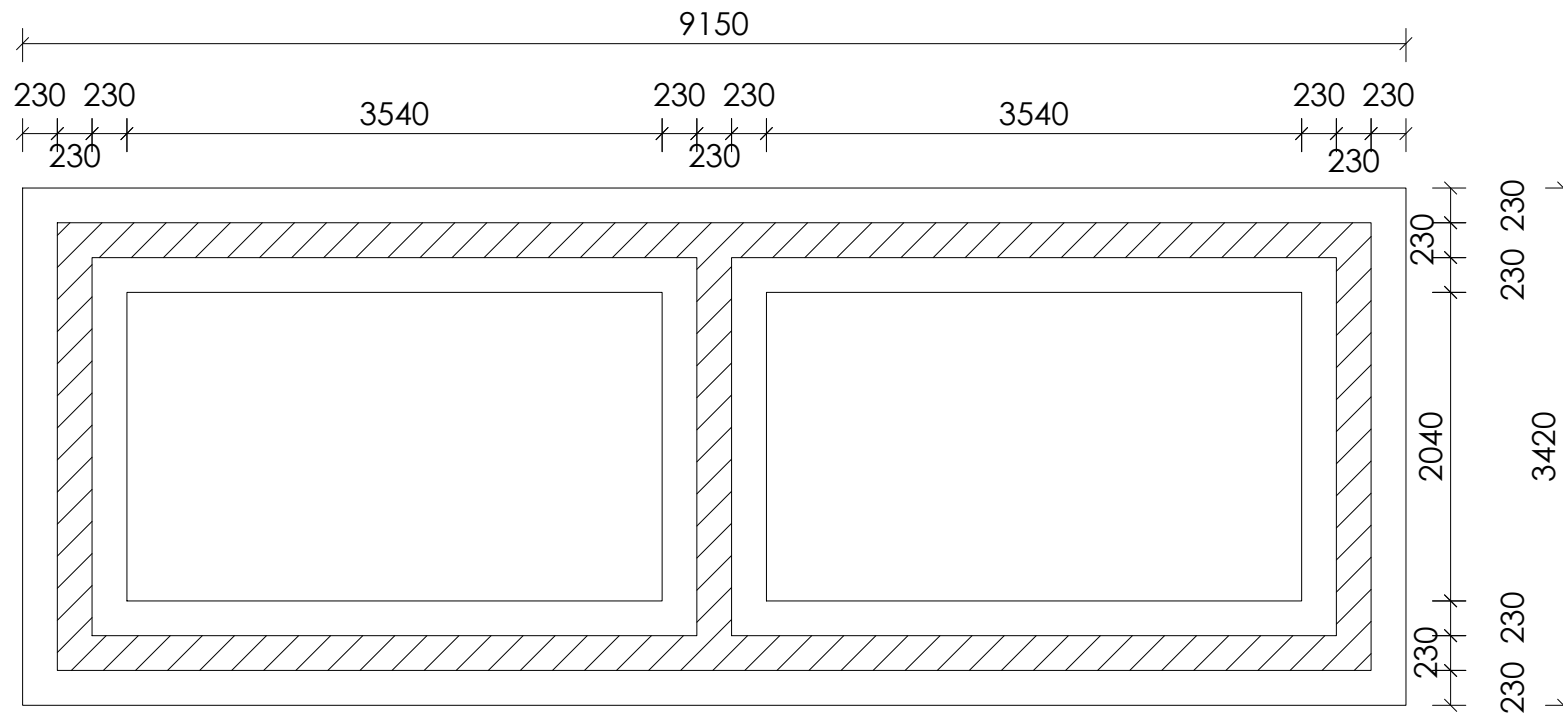
NYA-WTP-017

Scale:

1:50

Sheet No.:

3 of 4

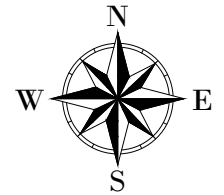


FOUNDATION LAYOUT



ROOF LAYOUT

LEGEND



CLIENT :

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CONSULTANT :
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PROJECT :
**ALA-ORA WATER SUPPLY AND
 SANITATION PROJECT**

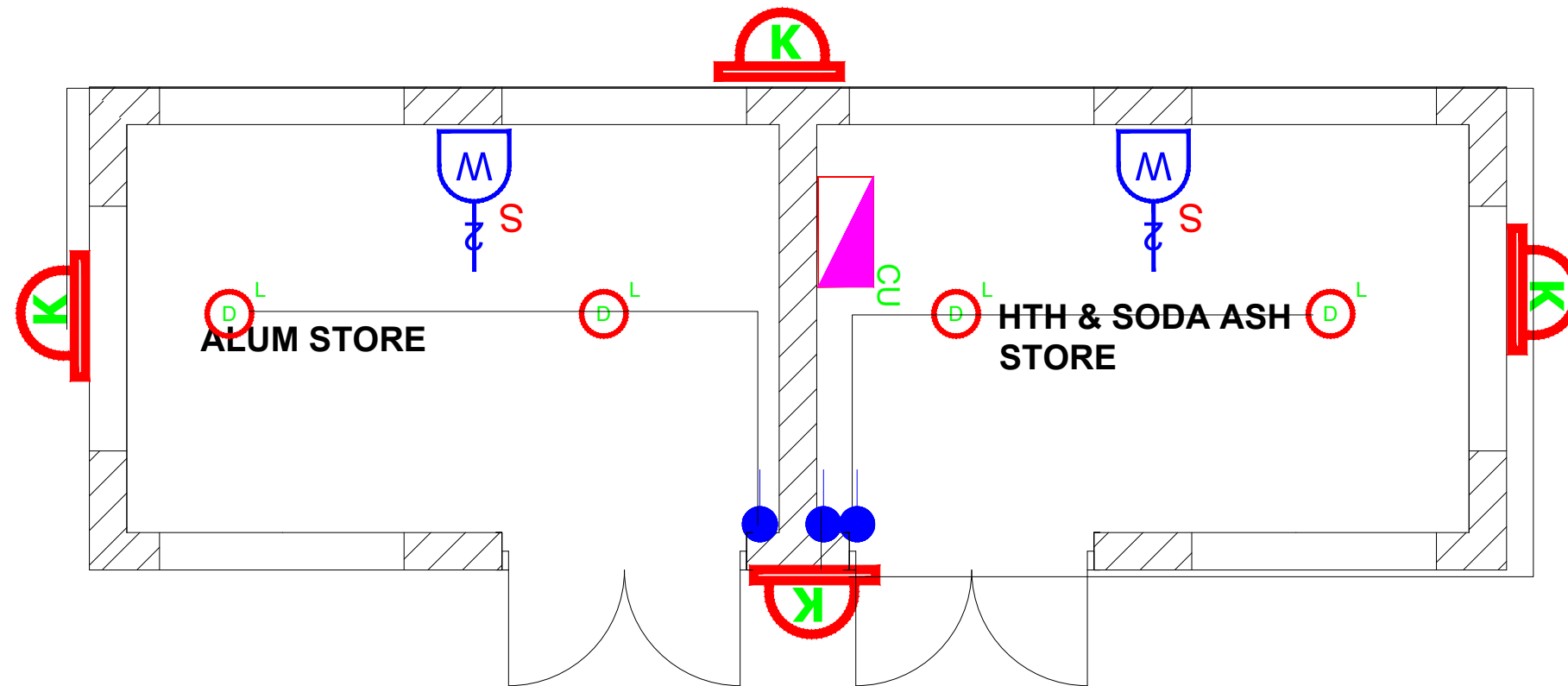
**NYAGAK WATER SUPPLY AND
 SANITATION SYSTEM**

REVISIONS :

No	Date	Description

DRAWING TITLE : **CHEMICAL STORE**
 Roof and Foundation Layout

Surveyed by: R.K
 Drawn by: A.K
 Designed by: W.G.M
 Checked by: J.K.K
 Date: January 2023
 DRG. No.: **NYA-WTP-017**
 Scale: 1:50 Sheet No.: 4 of 5



- 1). ALL WALL BRACKETS SHALL BE MOUNTED 1800mm ABOVE FINISHED FLOOR LEVEL
- 2). TELEPHONE, SOCKETS,T.V AND COMPUTER OUTLETS SHALL BE MOUNTED 300mm ABOVE FINISHED FLOOR LEVEL EXCEPT WHERE THEIR IS A WORKTOP.
- 3). WHERE THEIR IS A WORKTOP,TELEPHONE, SOCKETS,T.V AND COMPUTER OUTLETS SHALL BE MOUNTED 150mm ABOVE WORKTOPS.
- 4). CONSUMER UNITS SHALL BE 1800mm ABOVE FINISHED FLOOR LEVEL
- 5). ALL SWITCHES SHALL BE 1400mm ABOVE FINISHED FLOOR LEVEL
- 6). ALL OUTSIDE SOCKETS SHOULD BE WEATHER PROOF
- 7). ALL SHAVER SOCKETS SHOULD BE ON THE RIGHT HAND SIDE OF THE WASH HAND BASIN
- 8). ALL CABLES MUST BE STRANDED

SYMBOL	DESCRIPTION
	1200mm 18W LED batten with a removable LED engine, IP20 As Thorn PopPack LED. or equal approved. (Light Type F1)
	Pendant lighting fitting comprising ceiling Rose 300mm 3x1.5mm ² flexible copper cable lamp holder and 6W LED Lamp
	Pendant lighting fitting comprising ceiling Rose 300mm 3x1.5mm ² flexible copper cable lamp holder and 6WLED Lamp
	Pendant lighting fitting comprising ceiling Rose 300mm 3x1.5mm ² flexible copper cable lamp holder and 6W LED Lamp
	Decorative Bed side lamp complete with flexible spot light arm as LEDES-C4 BALI (05-3217-19-82 + PAN-157-BY) to client's approval.
	wall mounted light
	Socket outlet on Wall
	Consumer's Unit
	One Gang 2way Switch
	Two Gang 2way Switch
	Three Gang 2way Switch
	One Gang 1way Switch
	Two Gang 1way Switch
	Three Gang 1way Switch
	Intermediate Switch
	Photo - Cell

CLIENT :




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PROJECT :

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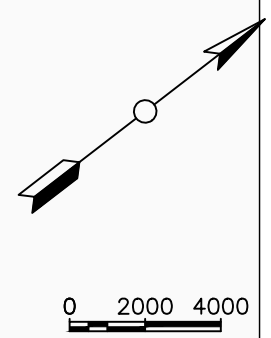
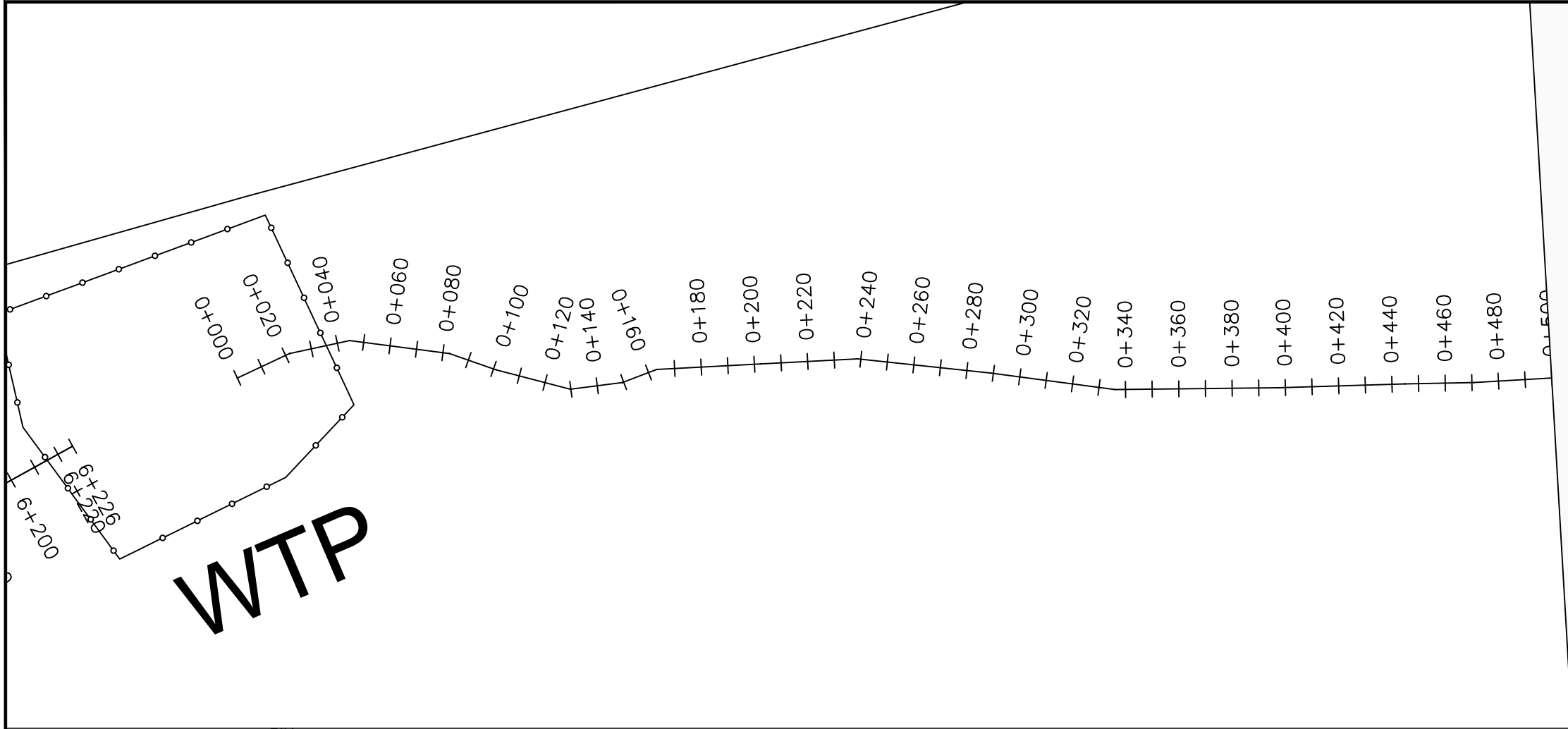
NYAGAK WATER SUPPLY AND SANITATION SYSTEM

REVISIONS :

No	Date	Description

DRAWING TITLE : **CHEMICAL STORE**
Electrical Layout

Surveyed by:	R.K
Drawn by:	A.K
Designed by:	W.G.M
Checked by:	J.K.K
Date:	January 2023
DRG. No.:	NYA-WTP-017
Scale:	1:40
Sheet No.:	5 of 5



LEGEND

Plan

- Transmission Main
- Distribution Main
- Road
- Building
- Contours

Profile

- Ground Level
- Invert Level
- AV Air Valve
- WO Washout
- Node detail No.

CLIENT :

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CONSULTANT :

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PROJECT :

ALA-ORA WATER SUPPLY AND SANITATION PROJECT

NYAGAK WATER SUPPLY AND SANITATION SYSTEM

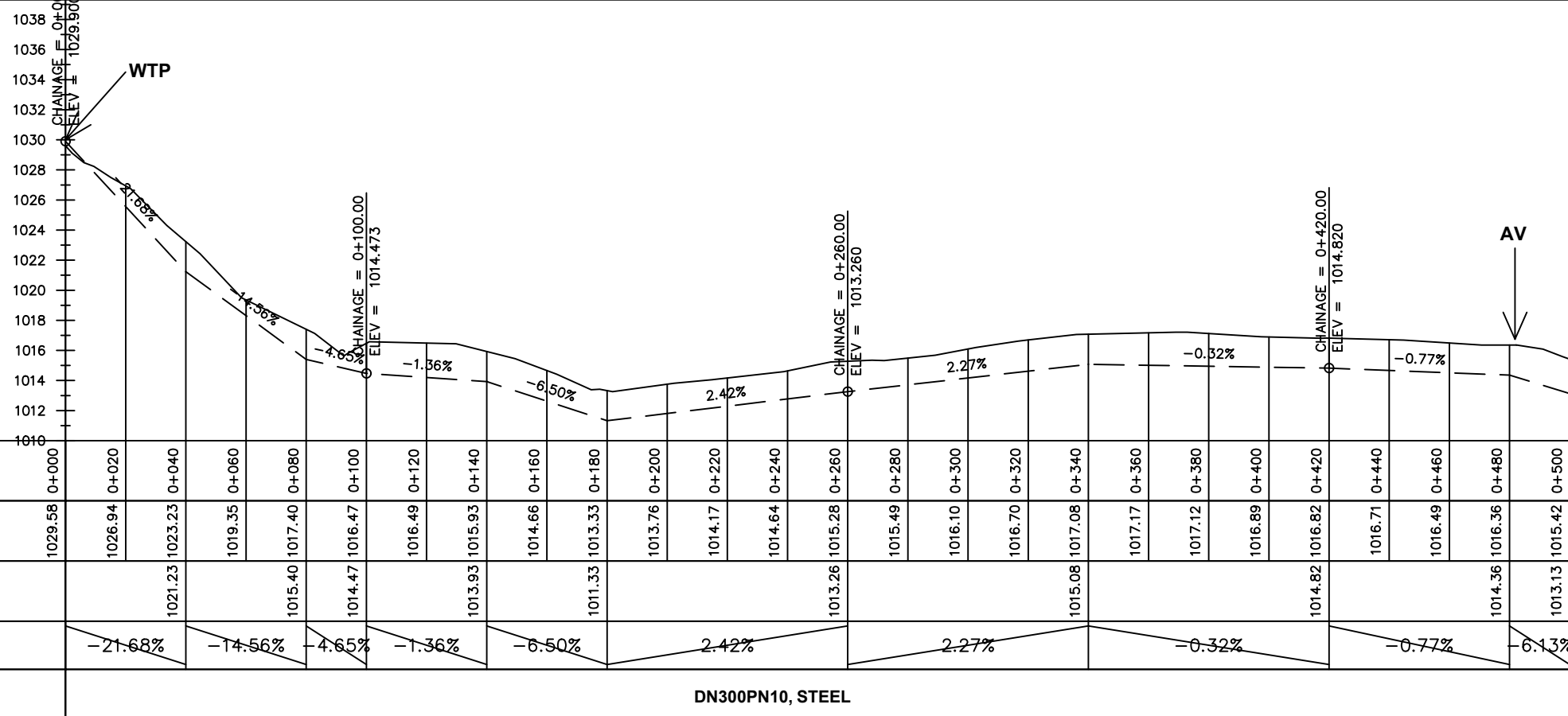
REVISIONS :

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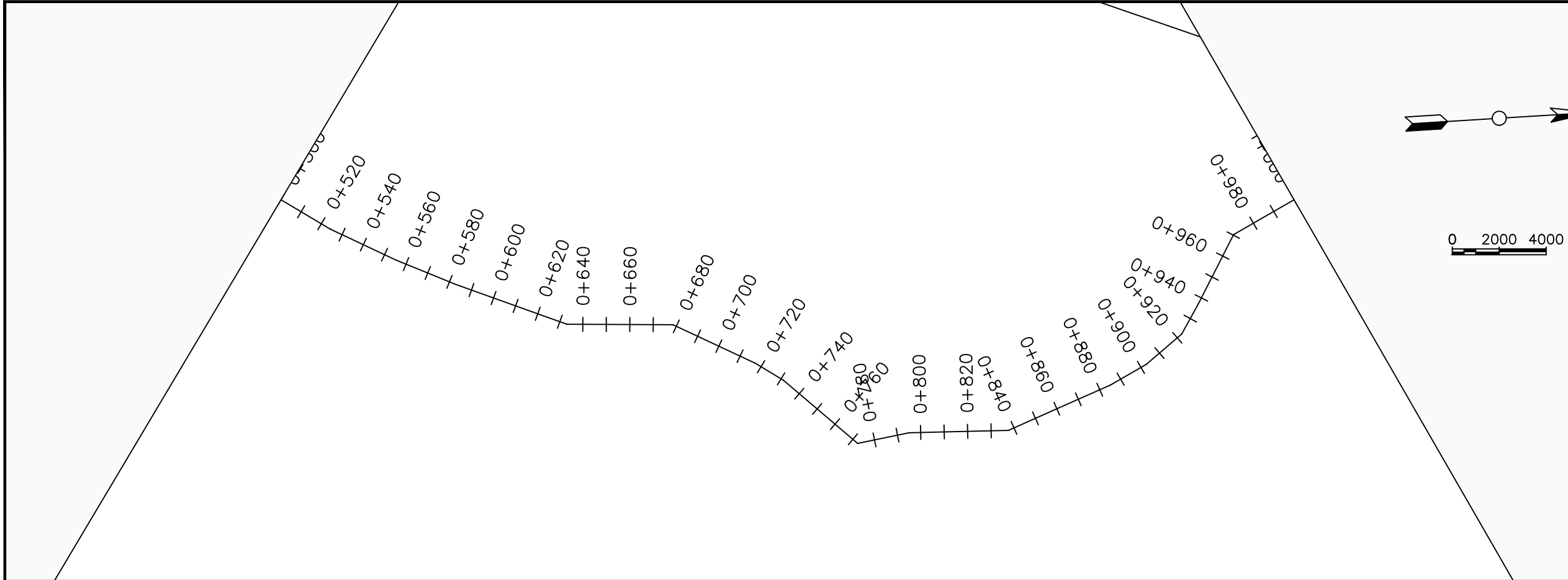
DRAWING TITLE :

TRANSMISSION MAIN 1 (WTP TO BARIBU TANK)
0+000 - 0+500

Surveyed by:	R.K
Drawn by:	M.K
Designed by:	W.G.M
Checked by:	J.K.K
Date:	January 2023
DRG. No.:	NYA-GTM-001
Scale:	1:2000
Sheet No.:	1 of 36



Chainages (m)	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		
Ground Levels (masl)	1029.58	1026.94	1023.23	1019.35	1017.40	1016.47	1016.49	1015.93	1014.66	1013.33	1013.76	1014.17	1014.64	1015.28	1015.49	1016.10	1016.70	1017.08	1017.17	1017.12	1016.89	1016.82	1016.71	1016.49	1016.36	1015.42		
Invert Levels (masl)			1021.23		1015.40	1014.47		1013.93		1011.33				1013.26					1015.08			1014.82			1014.36	1013.13		
Slope (%)		-21.68%		-14.56%		-4.65%	-1.36%		-6.50%		2.42%			2.27%							-0.32%			-0.77%		-6.13%		
Pipe Details	DN300PN10, STEEL																											



LEGEND

Plan

- Transmission Main
- Distribution Main
- Road
- Building
- Contours

Profile

- Ground Level
- Invert Level
- AV Air Valve
- WO Washout
- Node detail No.

CLIENT :

THE REPUBLIC OF UGANDA
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CONSULTANT :

Alliance Consultants Ltd
In Association with

Infra-Consult Ltd

PROJECT :

ALA-ORA WATER SUPPLY AND SANITATION PROJECT

NYAGAK WATER SUPPLY AND SANITATION SYSTEM

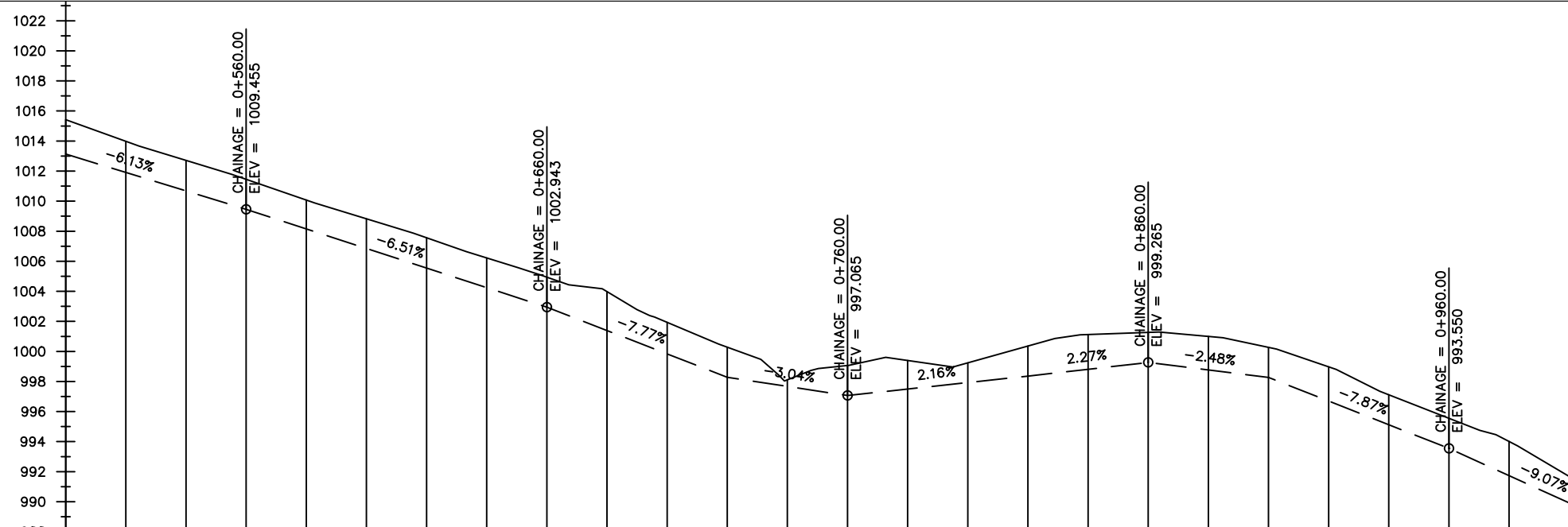
REVISIONS :

No	Date	Description

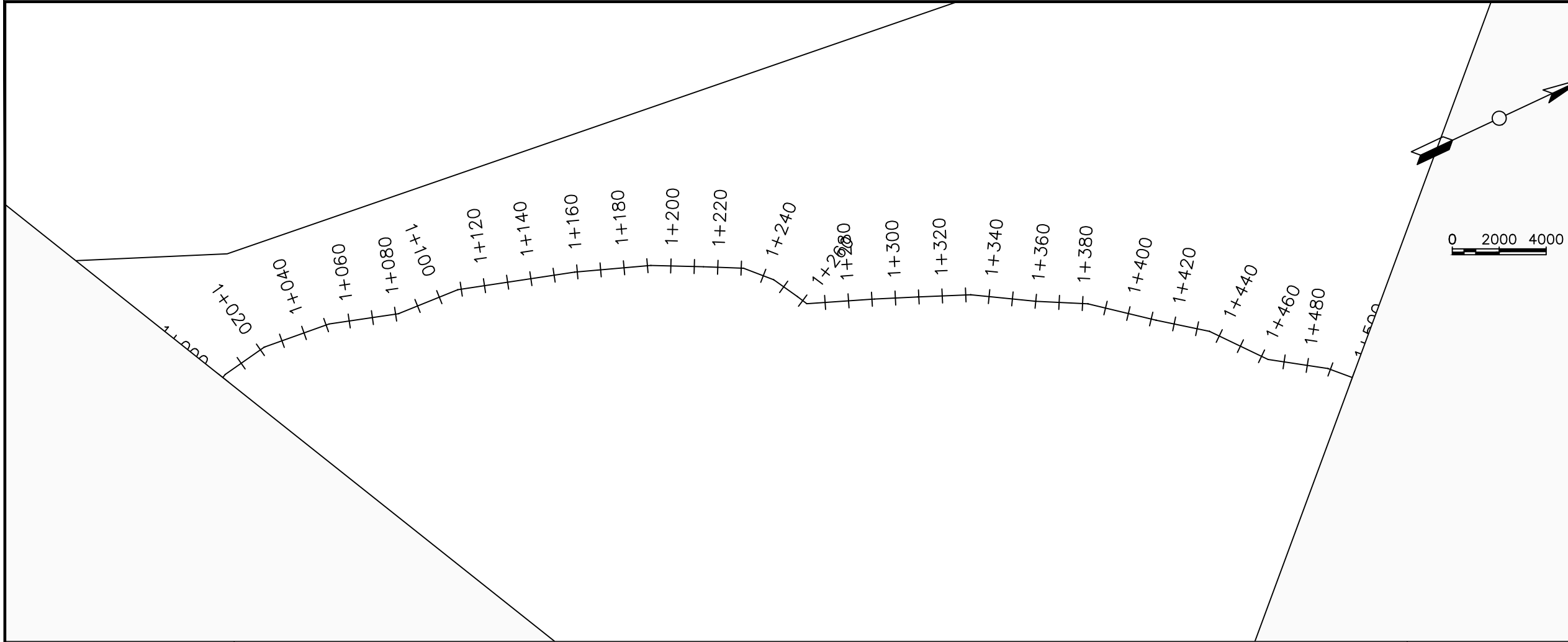
DRAWING TITLE :

TRANSMISSION MAIN 1 (WTP TO BARIBU TANK)
0+500 - 1+000

Surveyed by:	R.K
Drawn by:	M.K
Designed by:	W.G.M
Checked by:	J.K.K
Date:	January 2023
DRG. No.:	NYA-GTM-001
Scale:	1:2000
Sheet No.:	2 of 36



Chainages (m)	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	0+940	0+960	0+980	1+000		
Ground Levels (masl)	1015.42	1013.98	1012.71	1011.45	1010.07	1008.83	1007.56	1006.22	1004.94	1003.98	1001.94	1000.28	998.11	999.07	999.40	999.24	1000.36	1001.12	1001.27	1001.00	1000.27	998.98	997.12	995.55	994.01	991.68		
Invert Levels (masl)	1013.13			1009.45					1002.94			998.28		997.07			998.36		999.27		998.27			993.55		989.92		
Slope (%)		-6.13%			-6.51%					-7.77%		-3.04%		2.16%		2.27%		-2.48%		-7.87%					-9.07%			
Pipe Details	DN300PN10, STEEL																											



LEGEND

Plan

- Transmission Main
- Distribution Main
- Road
- Building
- Contours

Profile

- Ground Level
- Invert Level
- AV Air Valve
- WO Washout
- Node detail No.

CLIENT :

THE REPUBLIC OF UGANDA
MINISTRY OF WATER AND ENVIRONMENT

CO-FINANCED BY:

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IBRD • IDA | WORLD BANK GROUP

CONSULTANT :

Alliance Consultants Ltd
In Association with

Infra-Consult Ltd

PROJECT :

ALA-ORA WATER SUPPLY AND SANITATION PROJECT

NYAGAK WATER SUPPLY AND SANITATION SYSTEM

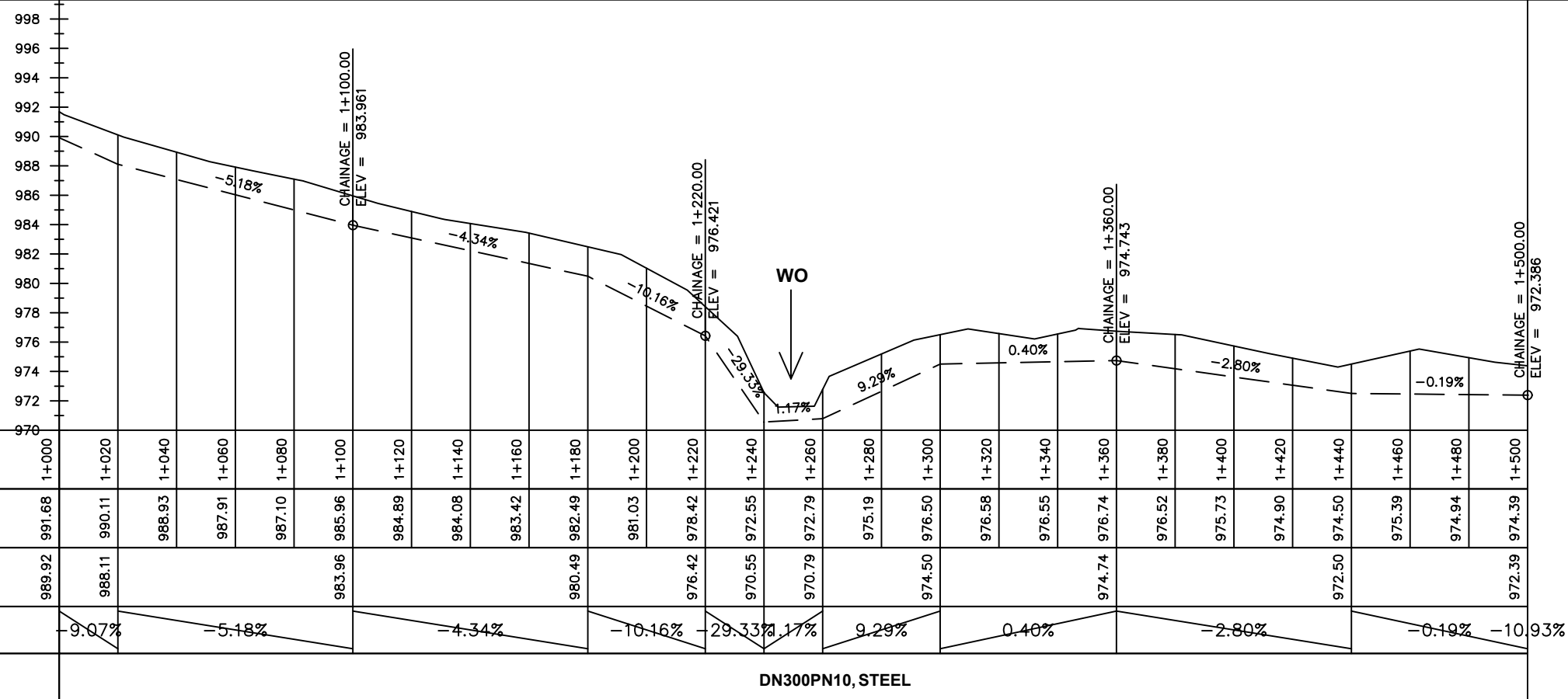
REVISIONS :

No	Date	Description

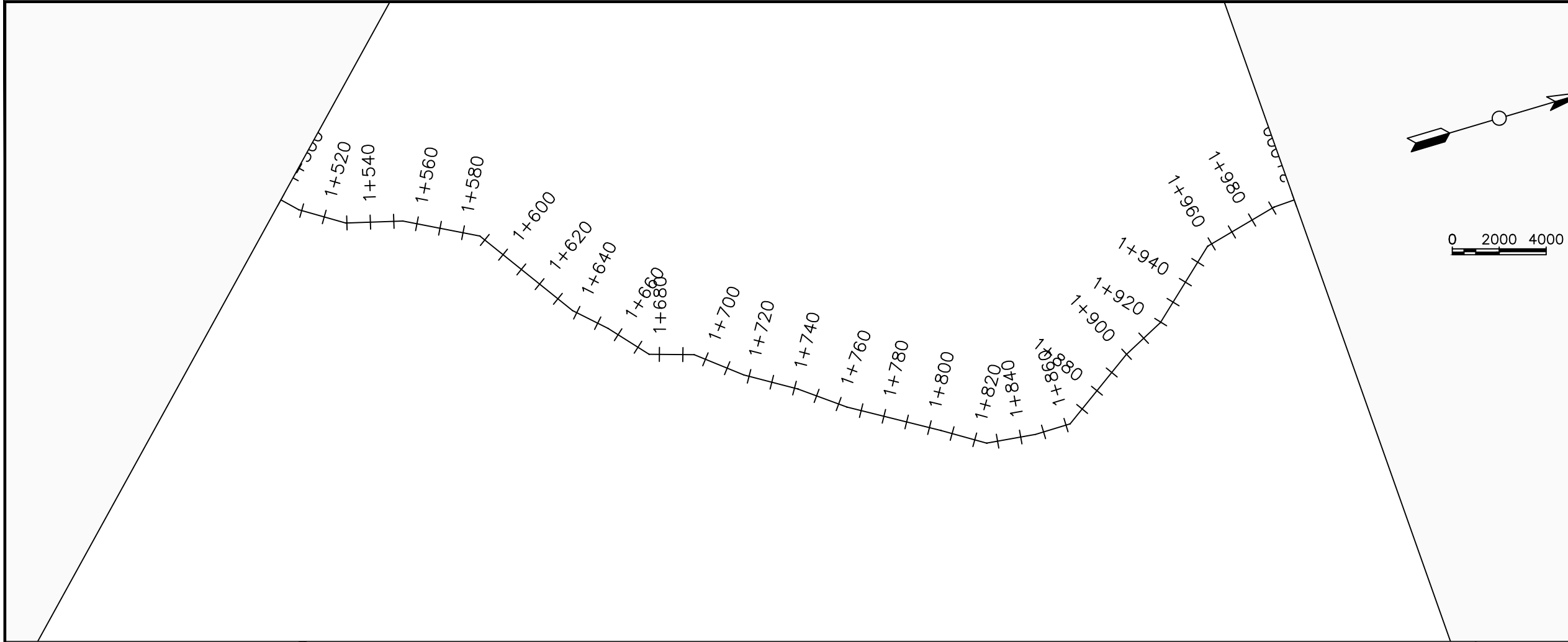
DRAWING TITLE :

TRANSMISSION MAIN 1 (WTP TO BARIBU TANK)
1+000 - 1+500

Surveyed by:	R.K
Drawn by:	M.K
Designed by:	W.G.M
Checked by:	J.K.K
Date:	January 2023
DRG. No.:	NYA-GTM-001
Scale:	1:2000
Sheet No.:	3 of 36



Chainages (m)	1+000	1+020	1+040	1+060	1+080	1+100	1+120	1+140	1+160	1+180	1+200	1+220	1+240	1+260	1+280	1+300	1+320	1+340	1+360	1+380	1+400	1+420	1+440	1+460	1+480	1+500		
Ground Levels (masl)	991.68	990.11	988.93	987.91	987.10	985.96	984.89	984.08	983.42	982.49	981.03	978.42	972.55	972.79	975.19	976.50	976.58	976.55	976.74	976.52	975.73	974.90	974.50	975.39	974.94	974.39		
Invert Levels (masl)	989.92	988.11				983.96				980.49		976.42	970.55	970.79		974.50			974.74				972.50			972.39		
Slope (%)		-9.07%		-5.18%				-4.34%			-10.16%		-29.33%	1.17%	9.29%		0.40%						-2.80%		-0.19%	-10.93%		
Pipe Details	DN300PN10, STEEL																											



LEGEND

Plan

- Transmission Main
- Distribution Main
- Road
- Building
- Contours

Profile

- Ground Level
- Invert Level
- AV Air Valve
- WO Washout
- Node detail No.

CLIENT :

THE REPUBLIC OF UGANDA
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PROJECT :

ALA-ORA WATER SUPPLY AND SANITATION PROJECT

NYAGAK WATER SUPPLY AND SANITATION SYSTEM

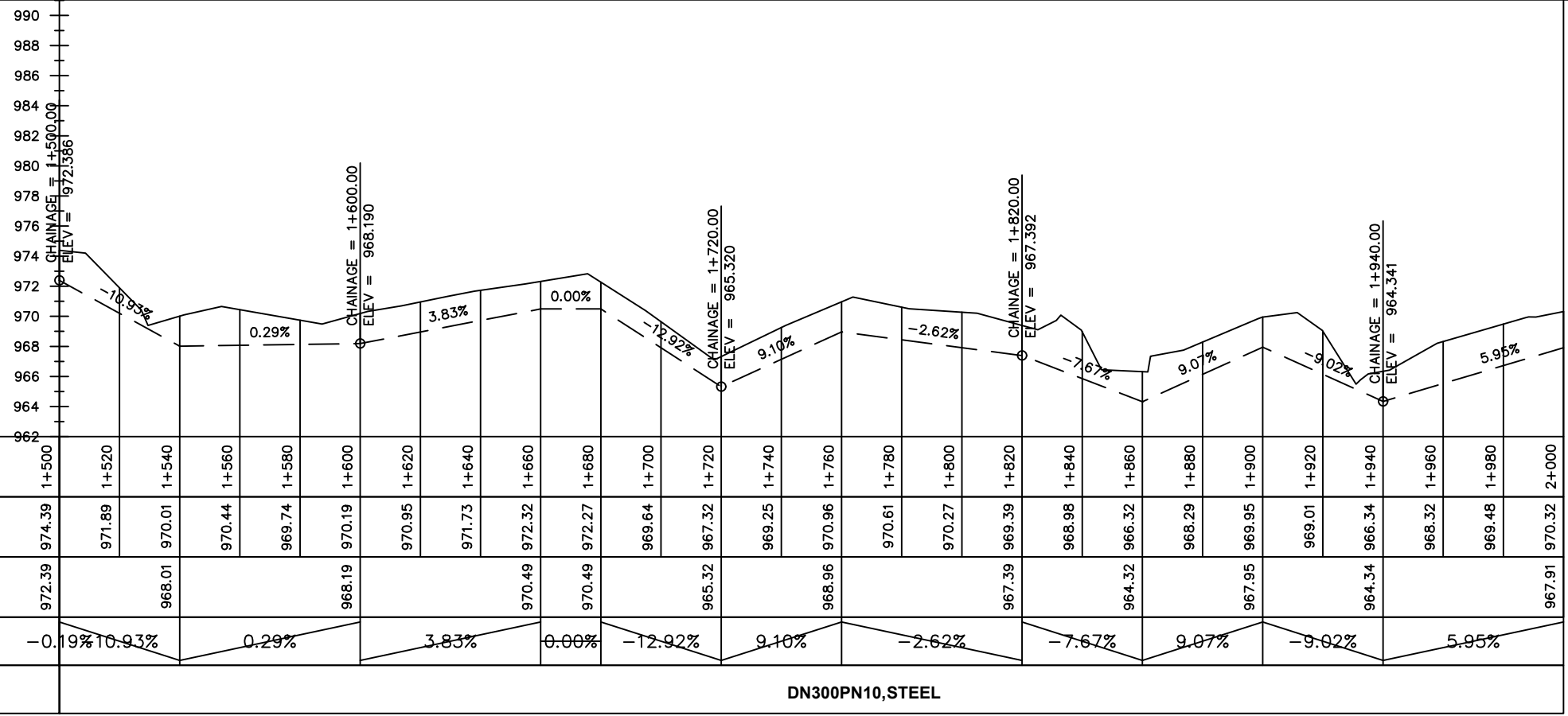
REVISIONS :

No	Date	Description

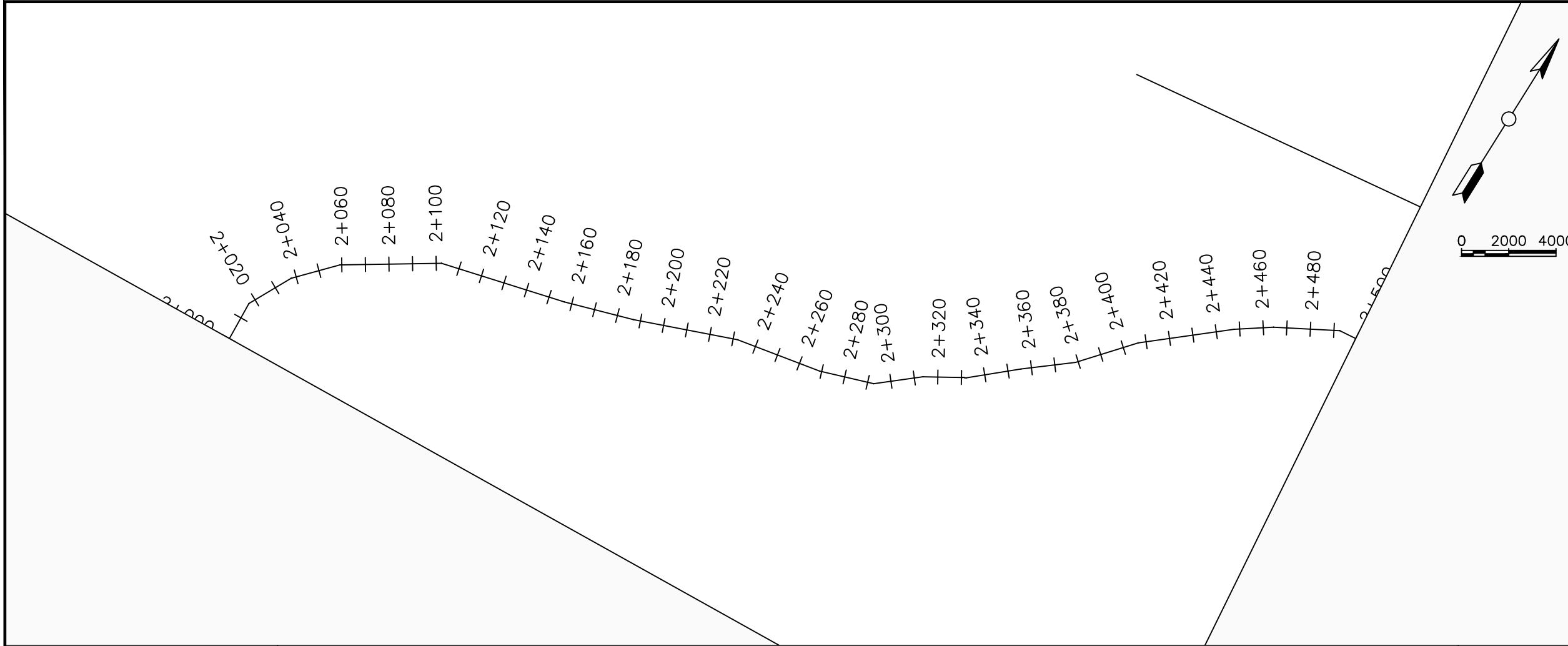
DRAWING TITLE :

TRANSMISSION MAIN 1 (WTP TO BARIBU TANK)
1+500 - 2+000

Surveyed by:	R.K
Drawn by:	M.K
Designed by:	W.G.M
Checked by:	J.K.K
Date:	January 2023
DRG. No.:	NYA-GTM-001
Scale:	1:2000
Sheet No.:	4 of 36



Chainages (m)	1+500	1+520	1+540	1+560	1+580	1+600	1+620	1+640	1+660	1+680	1+700	1+720	1+740	1+760	1+780	1+800	1+820	1+840	1+860	1+880	1+900	1+920	1+940	1+960	1+980	2+000		
Ground Levels (masl)	974.39	971.89	970.01	970.44	969.74	970.19	970.95	971.73	972.32	972.27	969.64	967.32	969.25	970.96	970.61	970.27	969.39	968.98	966.32	968.29	969.95	969.01	966.34	968.32	969.48	970.32		
Invert Levels (masl)	972.39		968.01		968.74	968.19			970.49	970.49		965.32		968.96			967.39		964.32		967.95		964.34			967.91		
Slope (%)	-0.19%	10.93%		0.29%				3.83%		0.00%		-12.92%		9.10%		-2.62%		-7.67%		9.07%		-9.02%			5.95%			
Pipe Details	DN300PN10, STEEL																											



LEGEND

Plan

- Transmission Main
- Distribution Main
- Road
- Building
- Contours

Profile

- Ground Level
- Invert Level
- AV Air Valve
- WO Washout
- Node detail No.

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PROJECT :

ALA-ORA WATER SUPPLY AND SANITATION PROJECT

NYAGAK WATER SUPPLY AND SANITATION SYSTEM

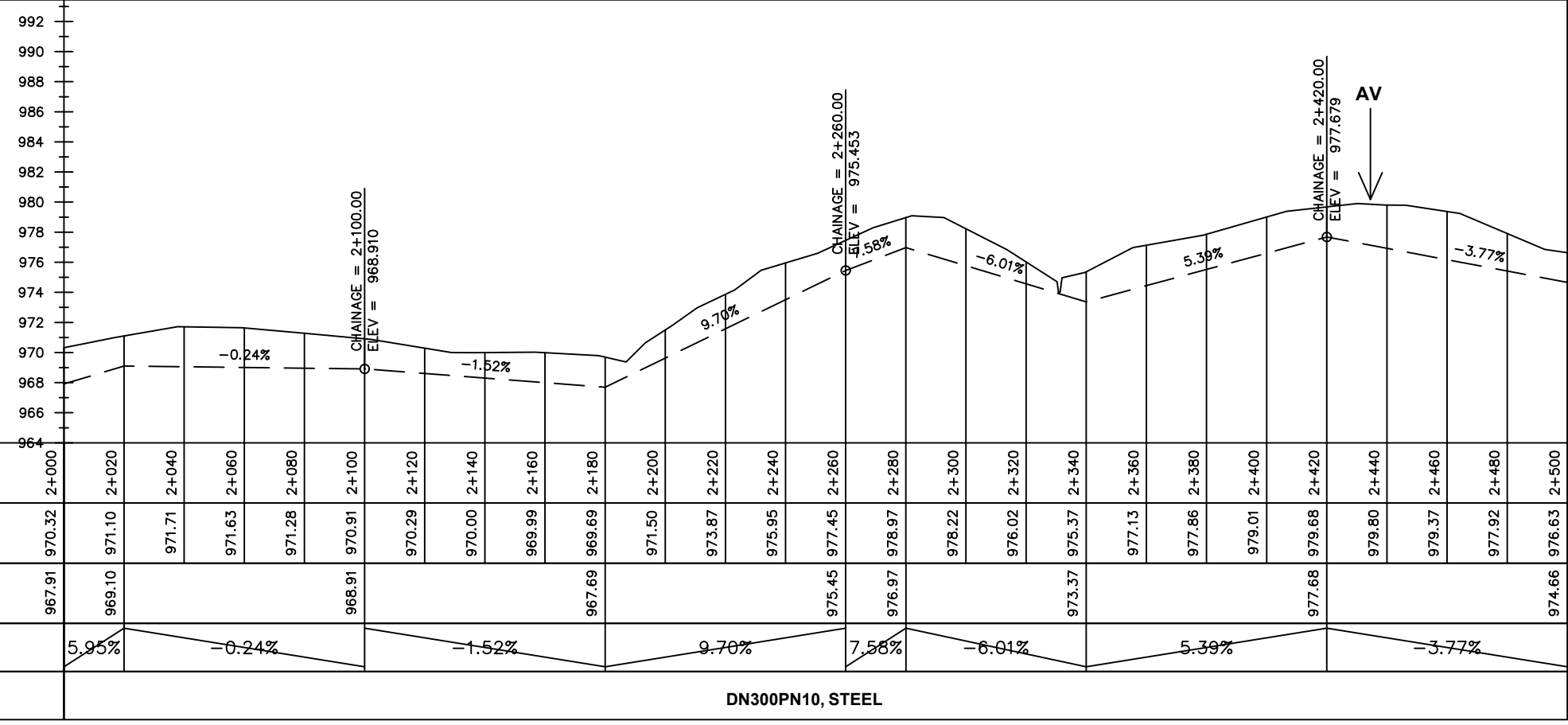
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No	Date	Description

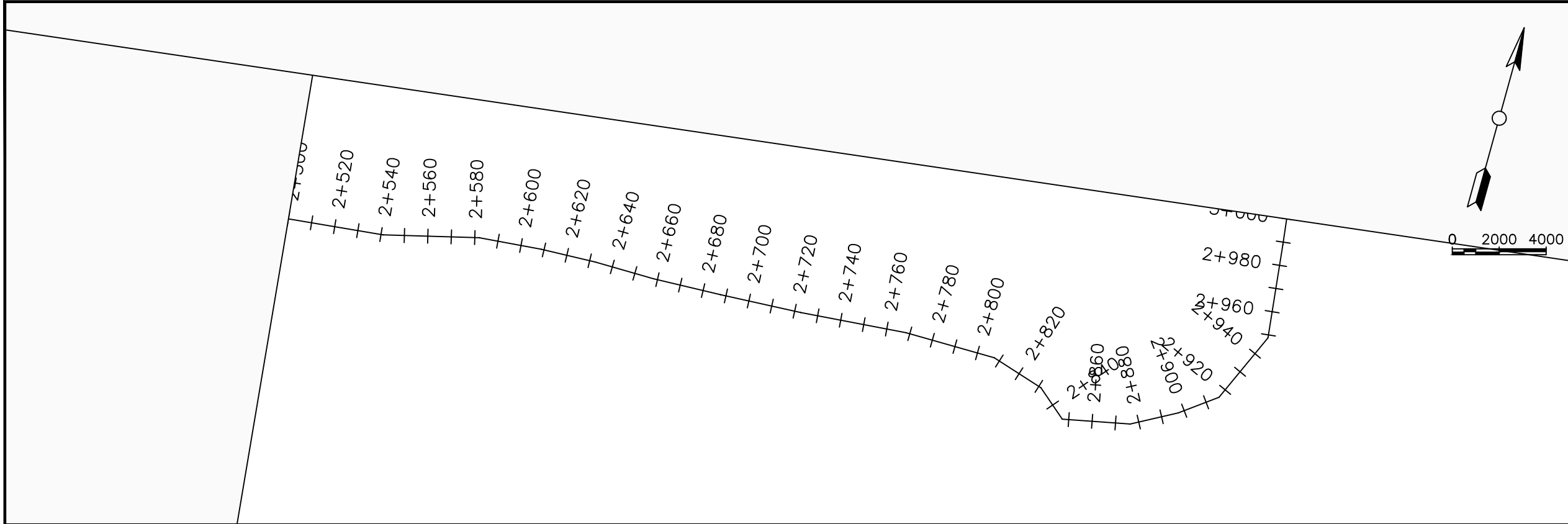
DRAWING TITLE :

TRANSMISSION MAIN 1 (WTP TO BARIBU TANK)
2+000 - 2+500

Surveyed by:	R.K
Drawn by:	M.K
Designed by:	W.G.M
Checked by:	J.K.K
Date:	January 2023
DRG. No.:	NYA-GTM-001
Scale:	1:2000
Sheet No.:	5 of 36



Chainages (m)	2+000	2+020	2+040	2+060	2+080	2+100	2+120	2+140	2+160	2+180	2+200	2+220	2+240	2+260	2+280	2+300	2+320	2+340	2+360	2+380	2+400	2+420	2+440	2+460	2+480	2+500		
Ground Levels (masl)	970.32	971.10	971.71	971.63	971.28	970.91	970.29	970.00	969.99	969.69	971.50	973.87	975.95	977.45	978.97	978.22	976.02	975.37	977.13	977.86	979.01	979.68	979.80	979.37	977.92	976.63		
Invert Levels (masl)	967.91	969.10				968.91				967.69				975.45	976.97			973.37				977.68				974.66		
Slope (%)		5.95%	-0.24%				-1.52%					9.70%		7.58%	-6.01%				5.39%						-3.77%			
Pipe Details	DN300PN10, STEEL																											



LEGEND

Plan

- Transmission Main
- Distribution Main
- Road
- Building
- Contours

Profile

- Ground Level
- Invert Level
- AV Air Valve
- WO Washout
- Node detail No.

CLIENT :

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PROJECT :
ALA-ORA WATER SUPPLY AND SANITATION PROJECT

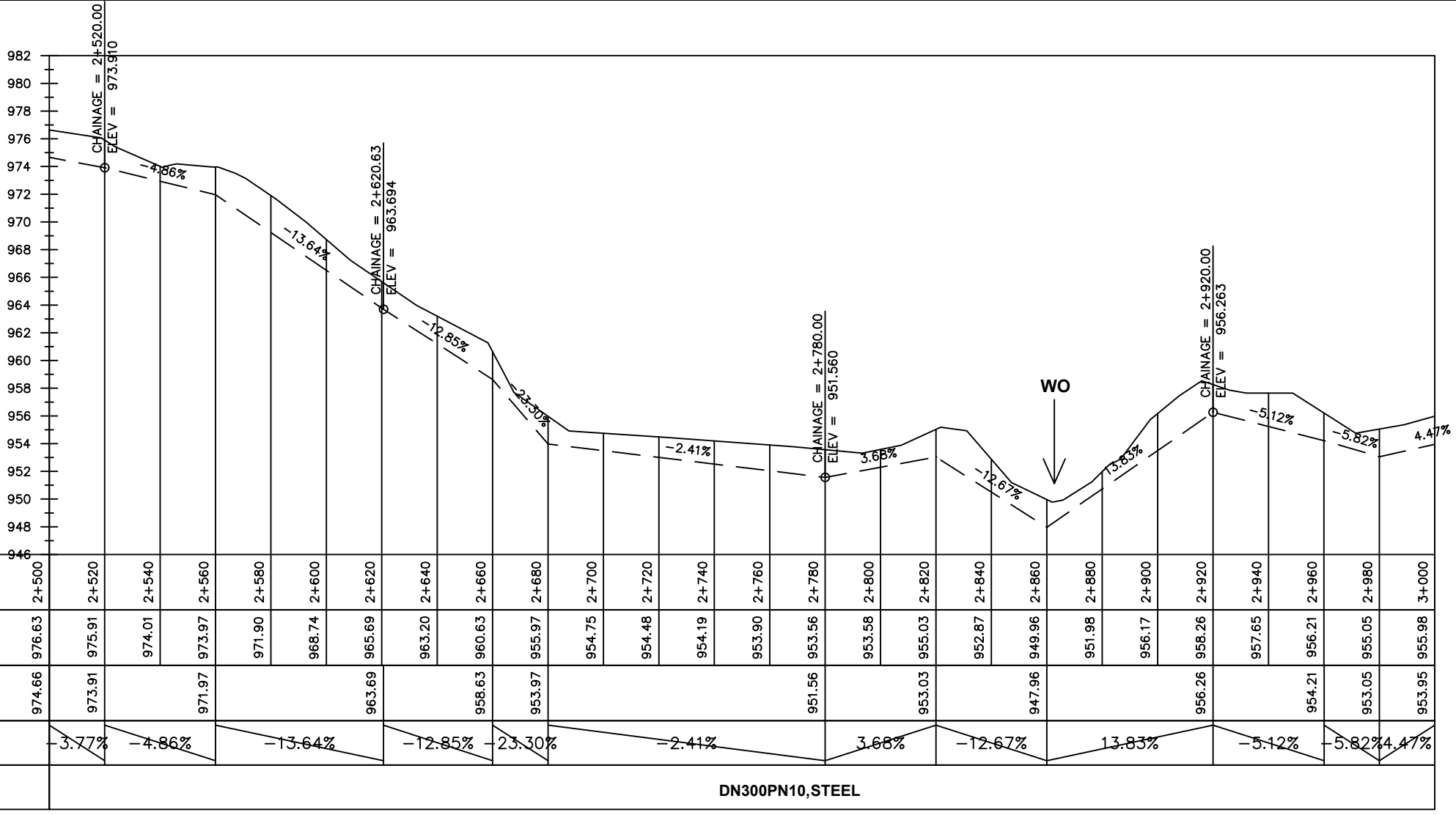
NYAGAK WATER SUPPLY AND SANITATION SYSTEM

REVISIONS :

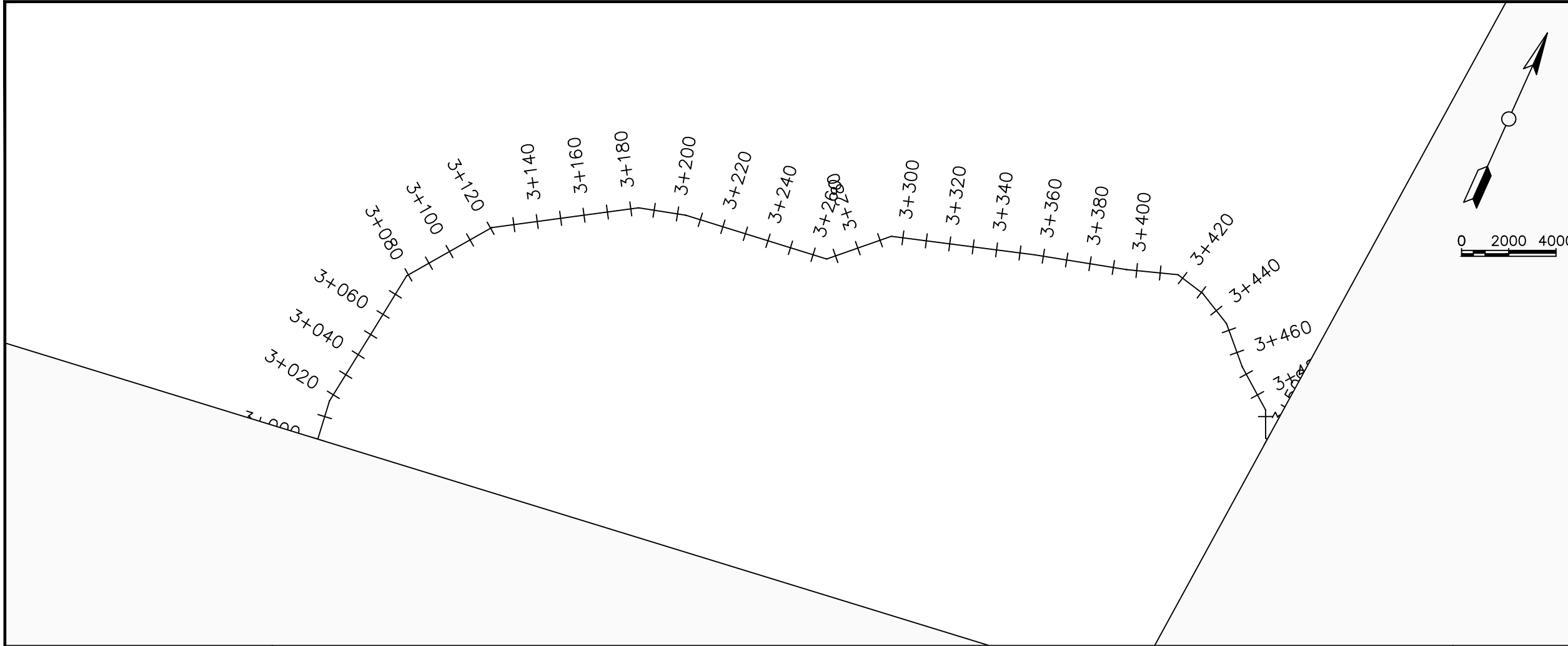
No	Date	Description

DRAWING TITLE :
TRANSMISSION MAIN 1 (WTP TO BARIBU TANK)
 2+500 - 3+000

Surveyed by:	R.K
Drawn by:	M.K
Designed by:	W.G.M
Checked by:	J.K.K
Date:	January 2023
DRG. No.:	NYA-GTM-001
Scale:	1:2000
Sheet No.:	6 of 36



Chainages (m)	2+500	2+520	2+540	2+560	2+580	2+600	2+620	2+640	2+660	2+680	2+700	2+720	2+740	2+760	2+780	2+800	2+820	2+840	2+860	2+880	2+900	2+920	2+940	2+960	2+980	3+000		
Ground Levels (masl)	976.63	975.91	974.01	973.97	971.90	968.74	965.69	963.20	960.63	955.97	954.75	954.48	954.19	953.90	953.56	953.58	955.03	952.87	949.96	951.98	956.17	958.26	957.65	956.21	955.05	955.98		
Invert Levels (masl)	974.66	973.91		971.97			963.69		958.63	953.97					951.56		953.03		947.96		956.26		954.21	953.05	953.95			
Slope (%)		-3.77%	-4.86%		-13.64%		-12.85%	-23.30%			-2.41%				3.68%		-12.67%		13.83%		-5.12%		-5.82%	4.47%				
Pipe Details	DN300PN10, STEEL																											



LEGEND

Plan

- Transmission Main
- Distribution Main
- Road
- Building
- Contours

Profile

- Ground Level
- Invert Level
- AV Air Valve
- WO Washout
- Node detail No.

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NYAGAK WATER SUPPLY AND SANITATION SYSTEM

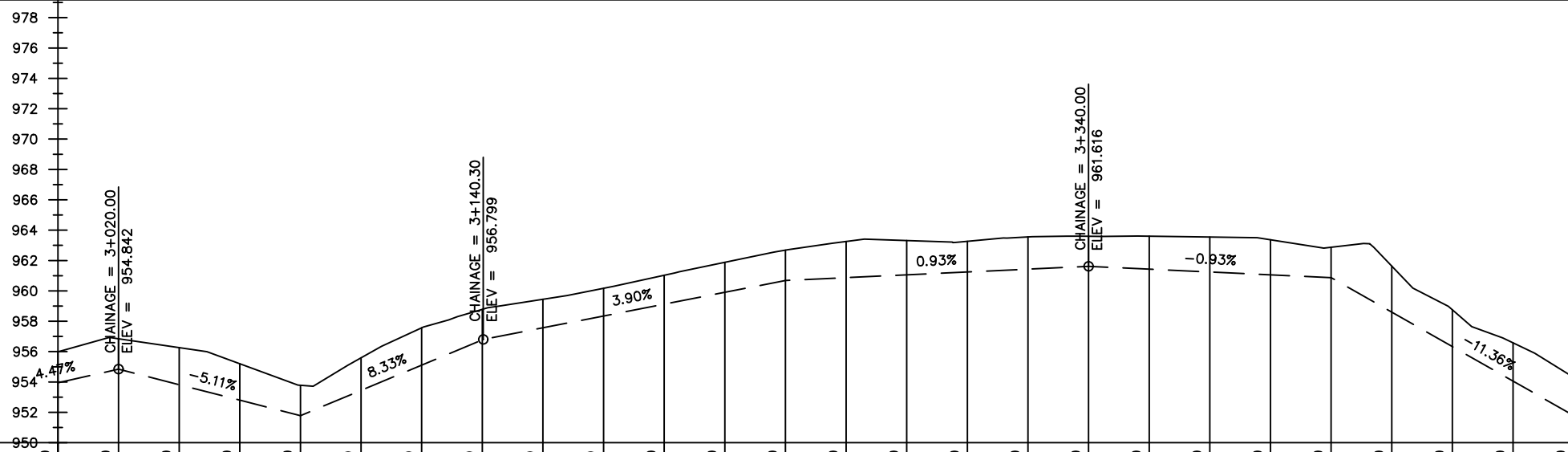
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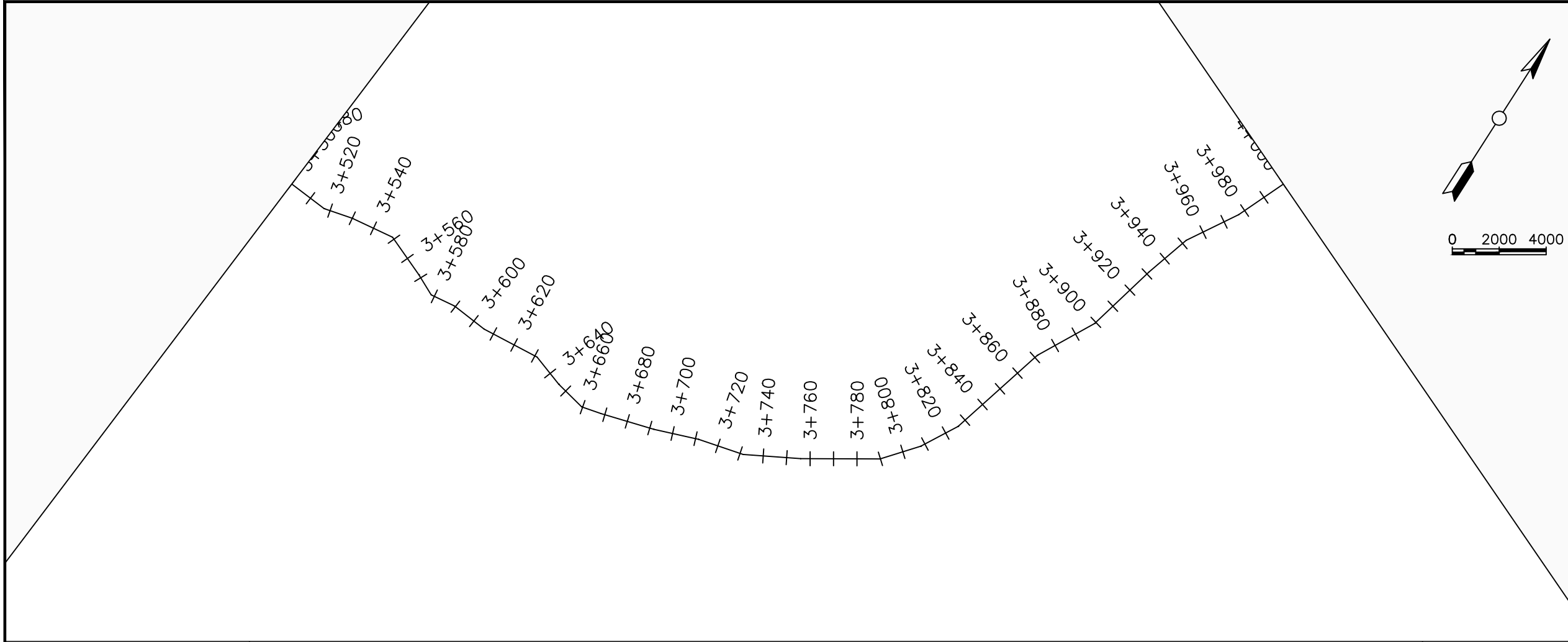
DRAWING TITLE :

TRANSMISSION MAIN 1 (WTP TO BARIBU TANK)
3+000 - 3+500

Surveyed by:	R.K
Drawn by:	M.K
Designed by:	W.G.M
Checked by:	J.K.K
Date:	January 2023
DRG. No.:	NYA-GTM-001
Scale:	1:2000
Sheet No.:	7 of 36



Chainages (m)	3+000	3+020	3+040	3+060	3+080	3+100	3+120	3+140	3+160	3+180	3+200	3+220	3+240	3+260	3+280	3+300	3+320	3+340	3+360	3+380	3+400	3+420	3+440	3+460	3+480	3+500		
Ground Levels (masl)	955.98	956.84	956.26	955.20	953.78	955.59	957.57	958.78	959.45	960.17	961.03	961.88	962.69	963.26	963.32	963.27	963.56	963.60	963.60	963.55	963.37	962.87	961.63	958.75	956.58	954.29		
Invert Levels (masl)	953.95	954.84			951.78			956.80					960.69					961.62				960.87				951.79		
Slope (%)		4.47%	-5.11%			8.33%				3.90%					0.93%				-0.93%						-11.36%			
Pipe Details	DN300PN10, STEEL																											



LEGEND

Plan

- Transmission Main
- Distribution Main
- Road
- Building
- Contours

Profile

- Ground Level
- Invert Level
- AV Air Valve
- WO Washout
- Node detail No.

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PROJECT :

ALA-ORA WATER SUPPLY AND SANITATION PROJECT

NYAGAK WATER SUPPLY AND SANITATION SYSTEM

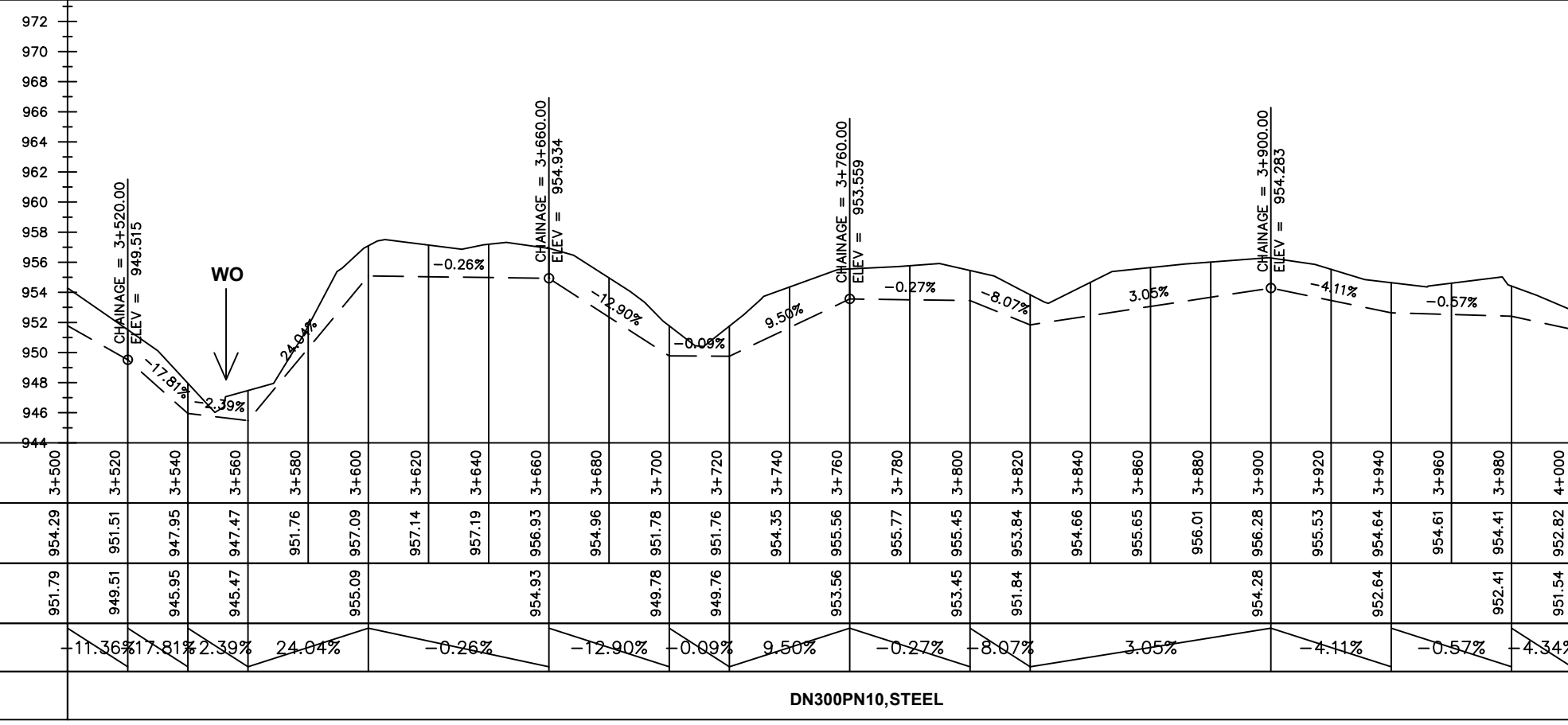
REVISIONS :

No	Date	Description

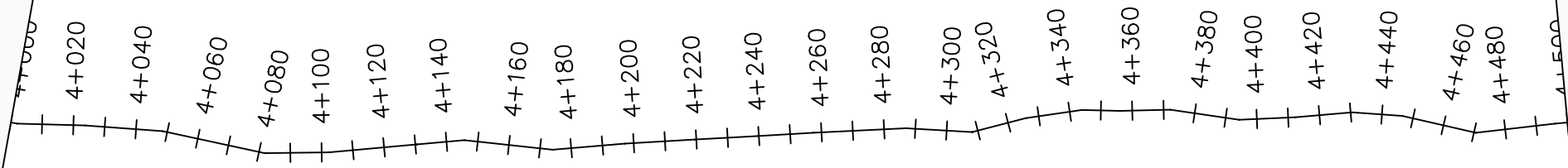
DRAWING TITLE :

TRANSMISSION MAIN 1 (WTP TO BARIBU TANK)
3+500 - 4+000

Surveyed by:	R.K
Drawn by:	M.K
Designed by:	W.G.M
Checked by:	J.K.K
Date:	January 2023
DRG. No.:	NYA-GTM-001
Scale:	1:2000
Sheet No.:	8 of 36



Chainages (m)	Ground Levels (masl)	Invert Levels (masl)	Slope (%)	Pipe Details
3+500	954.29	951.79	-11.36%	DN300PN10, STEEL
3+520	951.51	949.51	17.81%	
3+540	947.95	945.95	2.39%	
3+560	947.47	945.47	24.04%	
3+580	951.76	955.09	-0.26%	
3+600	957.09	957.14	-12.90%	
3+620	957.14	957.19	-0.09%	
3+640	957.19	954.96	9.50%	
3+660	956.93	954.93	-0.27%	
3+680	954.96	949.78	-8.07%	
3+700	951.78	949.76	3.05%	
3+720	951.76	953.56	-4.11%	
3+740	954.35	953.45	-0.57%	
3+760	955.56	951.84	-4.34%	
3+780	955.77	954.66		
3+800	955.45	955.65		
3+820	953.84	956.01		
3+840	954.66	956.28		
3+860	955.65	955.53		
3+880	956.01	954.64		
3+900	956.28	954.61		
3+920	955.53	954.41		
3+940	954.64	952.41		
3+960	954.61	951.54		
3+980	954.41			
4+000	952.82			



LEGEND

Plan

- Transmission Main
- Distribution Main
- Road
- Building
- Contours

Profile

- Ground Level
- Invert Level
- AV Air Valve
- WO Washout
- Node detail No.

CLIENT :

THE REPUBLIC OF UGANDA
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CONSULTANT :

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PROJECT :

ALA-ORA WATER SUPPLY AND SANITATION PROJECT

NYAGAK WATER SUPPLY AND SANITATION SYSTEM

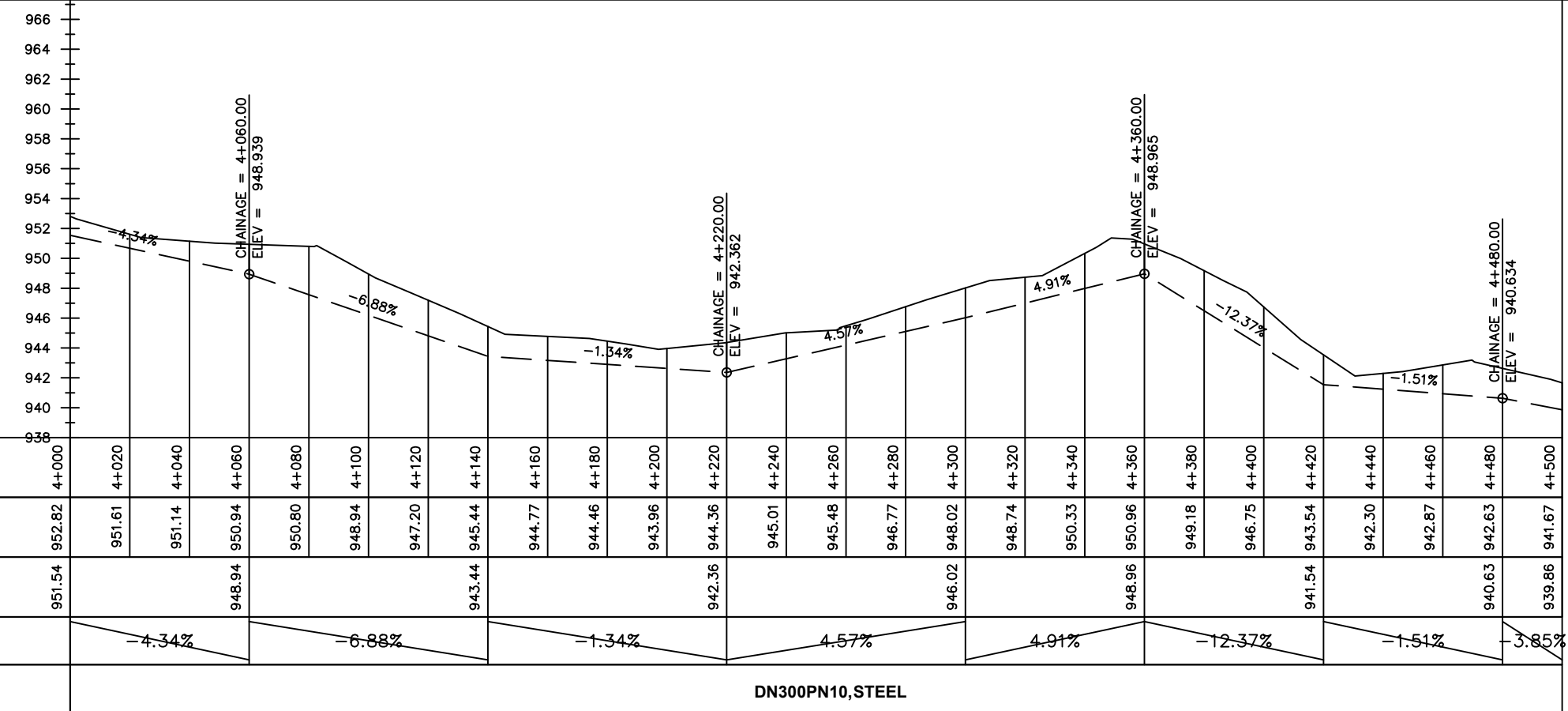
REVISIONS :

No	Date	Description

DRAWING TITLE :

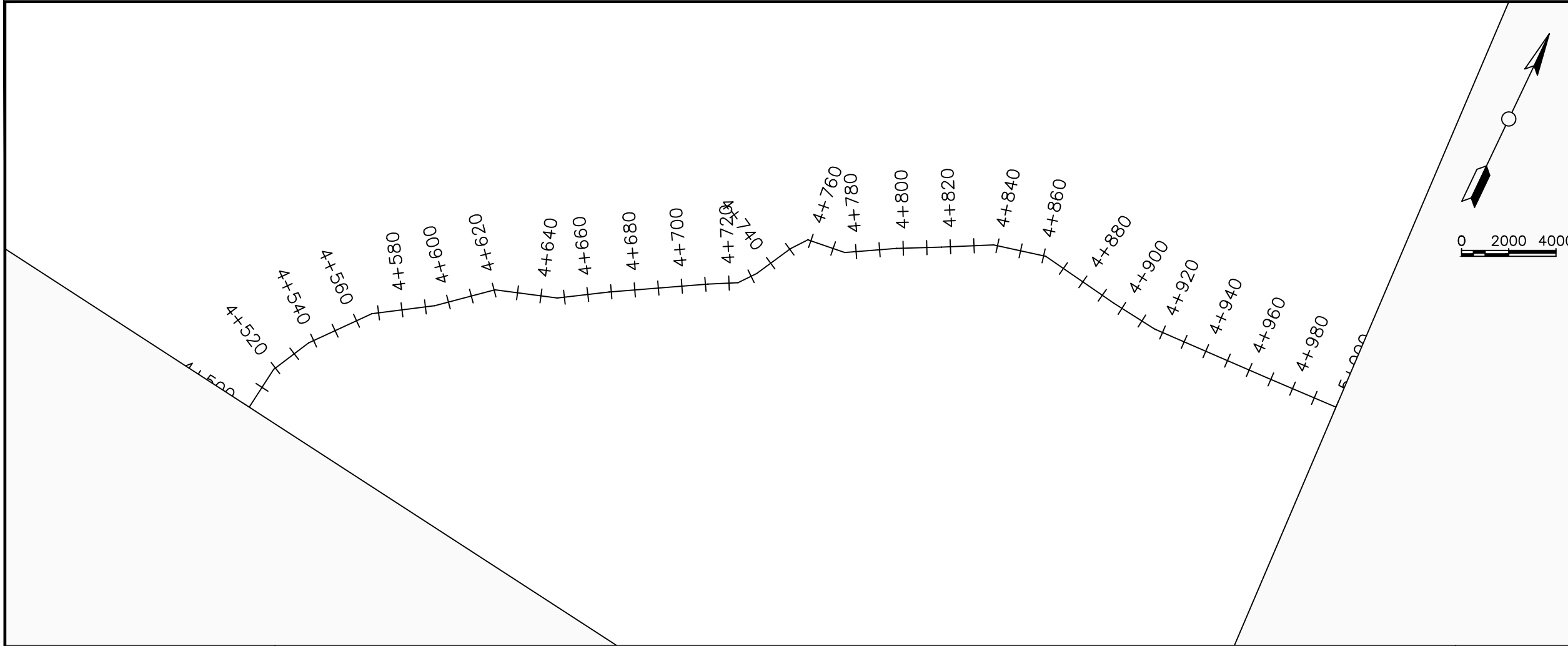
TRANSMISSION MAIN 1 (WTP TO BARIBU TANK)
4+000 - 4+500

Surveyed by:	R.K
Drawn by:	M.K
Designed by:	W.G.M
Checked by:	J.K.K
Date:	January 2023
DRG. No.:	NYA-GTM-001
Scale:	1:2000
Sheet No.:	9 of 36



Chainages (m)	Ground Levels (masl)	Invert Levels (masl)	Slope (%)
4+000	952.82	951.54	
4+020	951.61		-4.34%
4+040	951.14		
4+060	950.94	948.94	
4+080	950.80		-6.88%
4+100	948.94		
4+120	947.20		
4+140	945.44	943.44	
4+160	944.77		
4+180	944.46		-1.34%
4+200	943.96		
4+220	944.36	942.36	
4+240	945.01		4.57%
4+260	945.48		
4+280	946.77		
4+300	948.02	946.02	
4+320	948.74		4.91%
4+340	950.33		
4+360	950.96	948.96	
4+380	949.18		-12.37%
4+400	946.75		
4+420	943.54	941.54	
4+440	942.30		
4+460	942.87		-1.51%
4+480	942.63	940.63	
4+500	941.67	939.86	-3.85%

Pipe Details: DN300PN10, STEEL



LEGEND

Plan

- Transmission Main
- Distribution Main
- Road
- Building
- Contours

Profile

- Ground Level
- Invert Level
- AV Air Valve
- WO Washout
- Node detail No.

CLIENT :

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PROJECT :

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NYAGAK WATER SUPPLY AND SANITATION SYSTEM

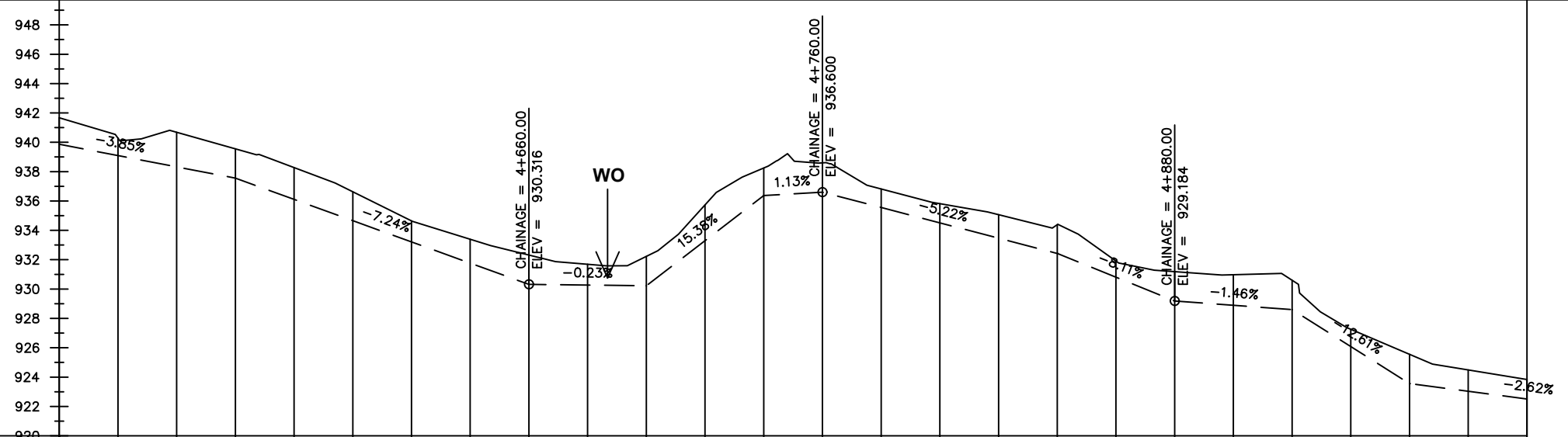
REVISIONS :

No	Date	Description

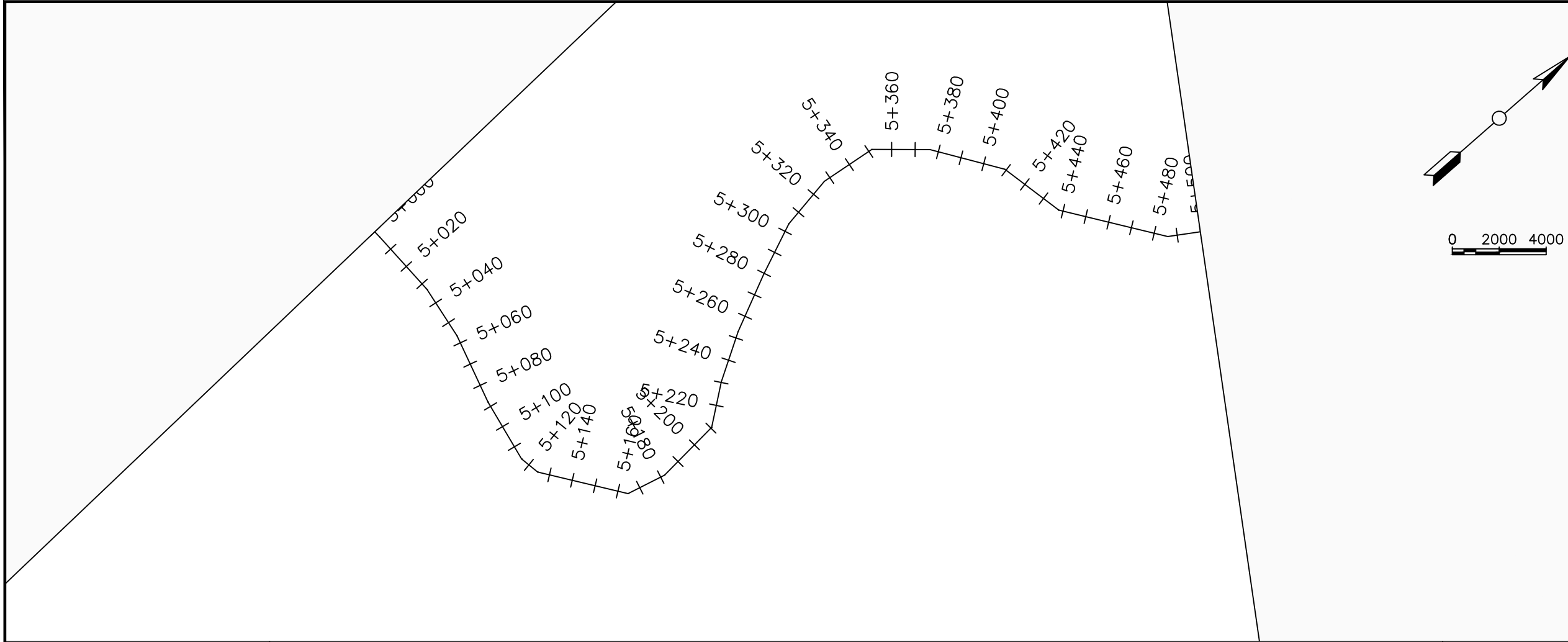
DRAWING TITLE :

TRANSMISSION MAIN 1 (WTP TO BARIBU TANK)
4+500 - 5+000

Surveyed by:	R.K
Drawn by:	M.K
Designed by:	W.G.M
Checked by:	J.K.K
Date:	January 2023
DRG. No.:	NYA-GTM-001
Scale:	1:2000
Sheet No.:	10 of 36



Chainages (m)	Ground Levels (masl)	Invert Levels (masl)	Slope (%)	Pipe Details
4+500	941.67	939.86		DN300PN10, STEEL
4+520	940.29		-3.85%	
4+540	940.68			
4+560	939.56	937.56		
4+580	936.28		-7.24%	
4+600	936.63			
4+620	934.64			
4+640	933.39			
4+660	932.32	930.32		
4+680	931.69		-0.23%	
4+700	932.22	930.22		
4+720	935.74		15.38%	
4+740	936.24	936.37		
4+760	936.60	936.60	1.13%	
4+780	936.82			
4+800	935.82		-5.22%	
4+820	935.07			
4+840	934.39	932.41		
4+860	931.91		-8.11%	
4+880	931.18	929.18		
4+900	930.98		-1.46%	
4+920	930.60	928.60		
4+940	927.26		-12.61%	
4+960	925.56	923.56		
4+980	924.49			
5+000	923.83	922.51	-2.62%	



LEGEND

Plan

- Transmission Main
- Distribution Main
- Road
- Building
- Contours

Profile

- Ground Level
- Invert Level
- AV Air Valve
- WO Washout
- Node detail No.

CLIENT :

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CONSULTANT :

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PROJECT :

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NYAGAK WATER SUPPLY AND SANITATION SYSTEM

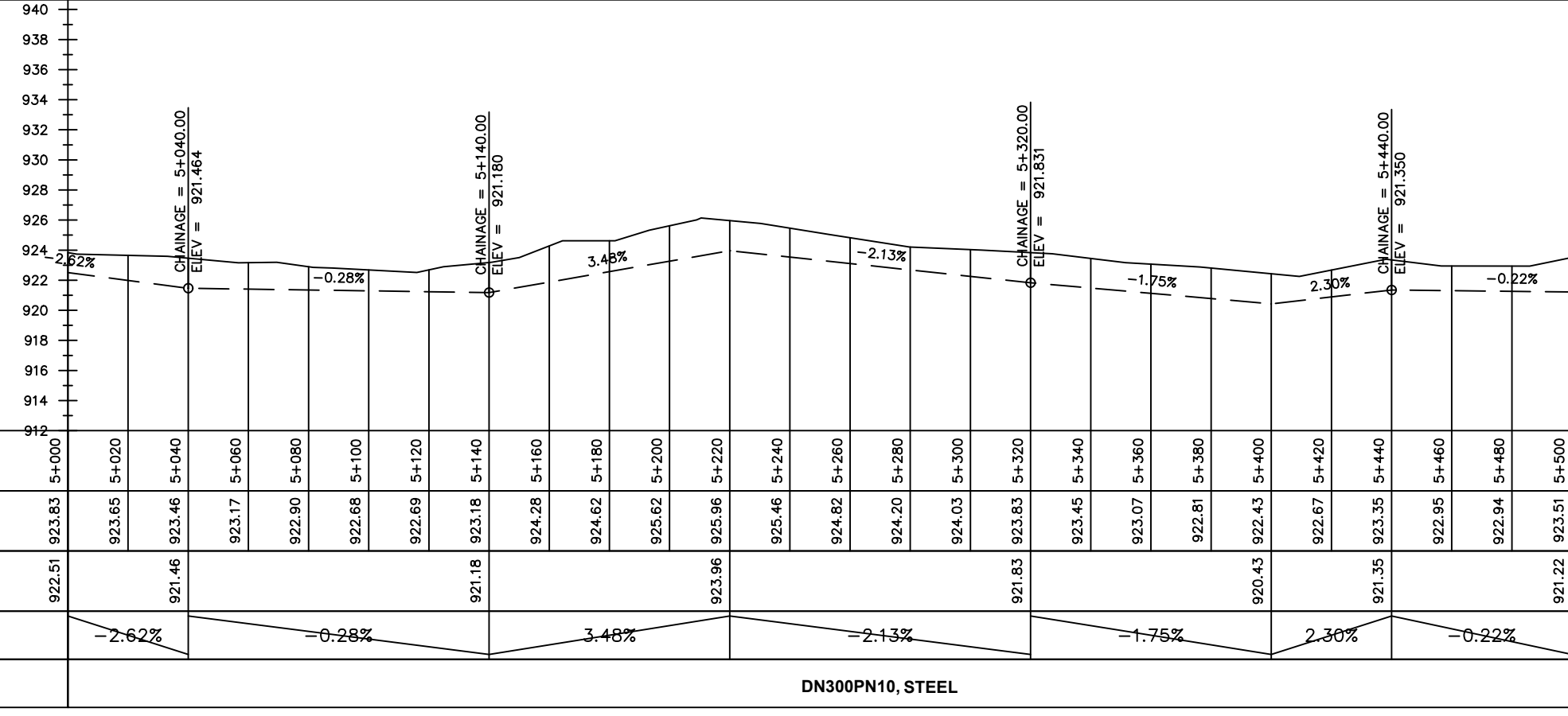
REVISIONS :

No	Date	Description

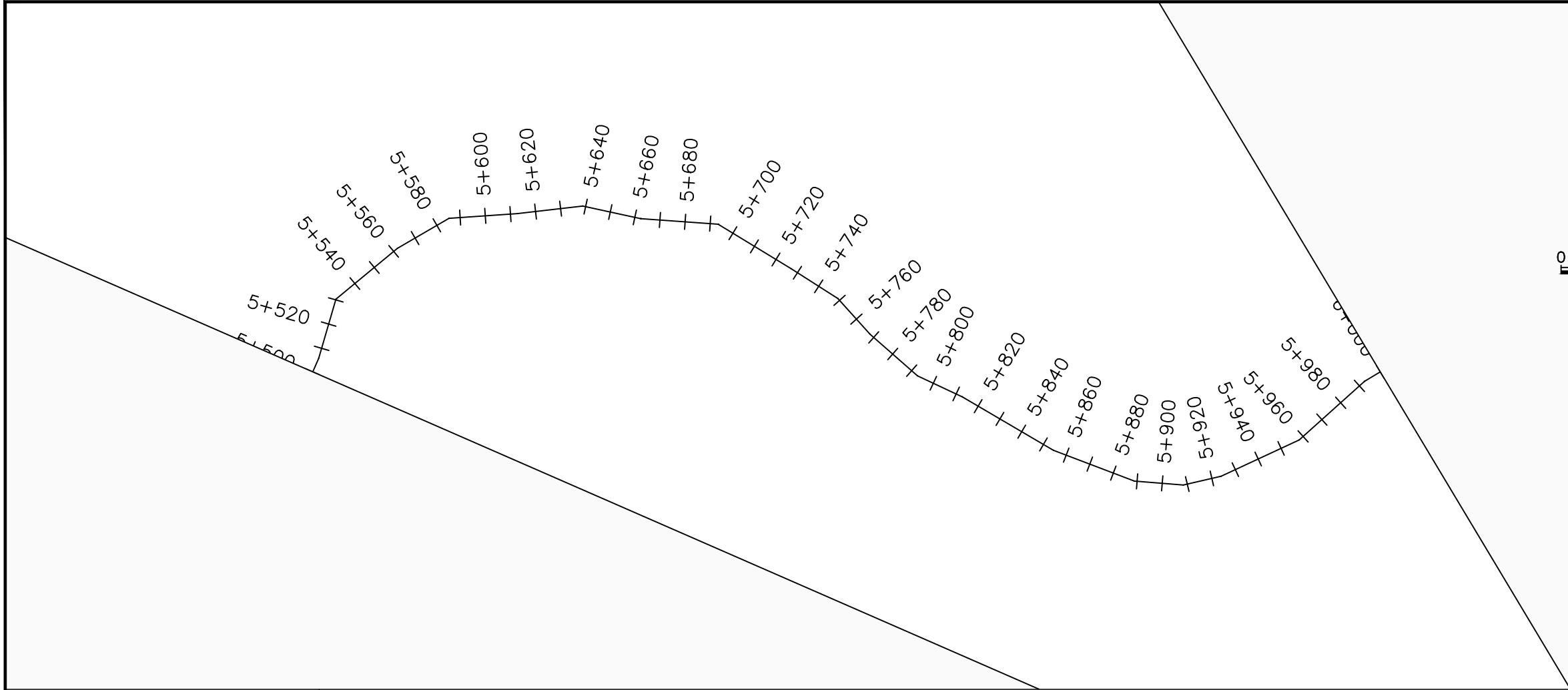
DRAWING TITLE :

TRANSMISSION MAIN 1 (WTP TO BARIBU TANK)
5+000 - 5+500

Surveyed by:	R.K
Drawn by:	M.K
Designed by:	W.G.M
Checked by:	J.K.K
Date:	January 2023
DRG. No.:	NYA-GTM-001
Scale:	1:2000
Sheet No.:	11 of 36



Chainages (m)	5+000	5+020	5+040	5+060	5+080	5+100	5+120	5+140	5+160	5+180	5+200	5+220	5+240	5+260	5+280	5+300	5+320	5+340	5+360	5+380	5+400	5+420	5+440	5+460	5+480	5+500		
Ground Levels (masl)	923.83	923.65	923.46	923.17	922.90	922.68	922.69	923.18	924.28	924.62	925.62	925.96	925.46	924.82	924.20	924.03	923.83	923.45	923.07	922.81	922.43	922.67	923.35	922.95	922.94	923.51		
Invert Levels (masl)	922.51	921.46	921.18	923.96	921.83	920.43	921.35	921.22																				
Slope (%)		-2.62%	-0.28%	3.48%	-2.13%	-1.75%	2.30%	-0.22%																				
Pipe Details	DN300PN10, STEEL																											



LEGEND

Plan

- Transmission Main
- Distribution Main
- Road
- Building
- Contours

Profile

- Ground Level
- Invert Level
- AV Air Valve
- WO Washout
- Node detail No.

CLIENT :

THE REPUBLIC OF UGANDA
MINISTRY OF WATER AND ENVIRONMENT

CO-FINANCED BY:

THE WORLD BANK
IBRD • IDA | WORLD BANK GROUP

CONSULTANT :

Alliance Consultants Ltd
In Association with

Infra-Consult Ltd

PROJECT :

ALA-ORA WATER SUPPLY AND SANITATION PROJECT

NYAGAK WATER SUPPLY AND SANITATION SYSTEM

REVISIONS :

No	Date	Description

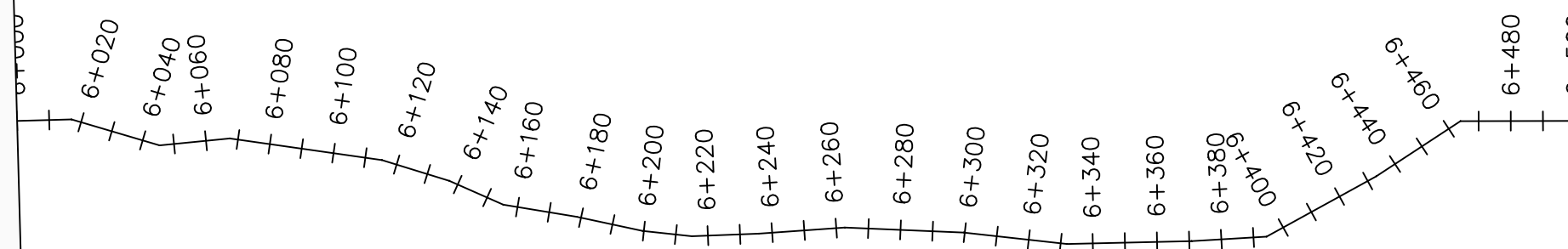
DRAWING TITLE :

TRANSMISSION MAIN 1 (WTP TO BARIBU TANK)
5+500 - 6+000

Surveyed by:	R.K
Drawn by:	M.K
Designed by:	W.G.M
Checked by:	J.K.K
Date:	January 2023
DRG. No.:	NYA-GTM-001
Scale:	1:2000
Sheet No.:	12 of 36



Chainages (m)	5+500	5+520	5+540	5+560	5+580	5+600	5+620	5+640	5+660	5+680	5+700	5+720	5+740	5+760	5+780	5+800	5+820	5+840	5+860	5+880	5+900	5+920	5+940	5+960	5+980	6+000		
Ground Levels (masl)	923.51	923.17	922.82	922.59	922.31	922.41	922.45	922.17	922.28	921.93	921.41	920.70	919.79	918.91	918.86	918.94	918.61	919.25	919.59	919.53	918.96	917.01	916.32	914.90	914.68	914.45		
Invert Levels (masl)	921.22	921.17						920.17		919.93				916.91					917.59		916.96		914.32			912.45		
Slope (%)		-0.22%			-0.84%				-0.60%			-3.77%				0.69%			-1.60%		-6.58%		-3.12%			-6.09%		
Pipe Details	DN300PN10, STEEL																											



LEGEND

Plan

- Transmission Main
- Distribution Main
- Road
- Building
- Contours

Profile

- Ground Level
- Invert Level
- AV Air Valve
- WO Washout
- Node detail No.

CLIENT :

THE REPUBLIC OF UGANDA
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CONSULTANT :

Alliance Consultants Ltd
In Association with

Infra-Consult Ltd

PROJECT :

ALA-ORA WATER SUPPLY AND SANITATION PROJECT

NYAGAK WATER SUPPLY AND SANITATION SYSTEM

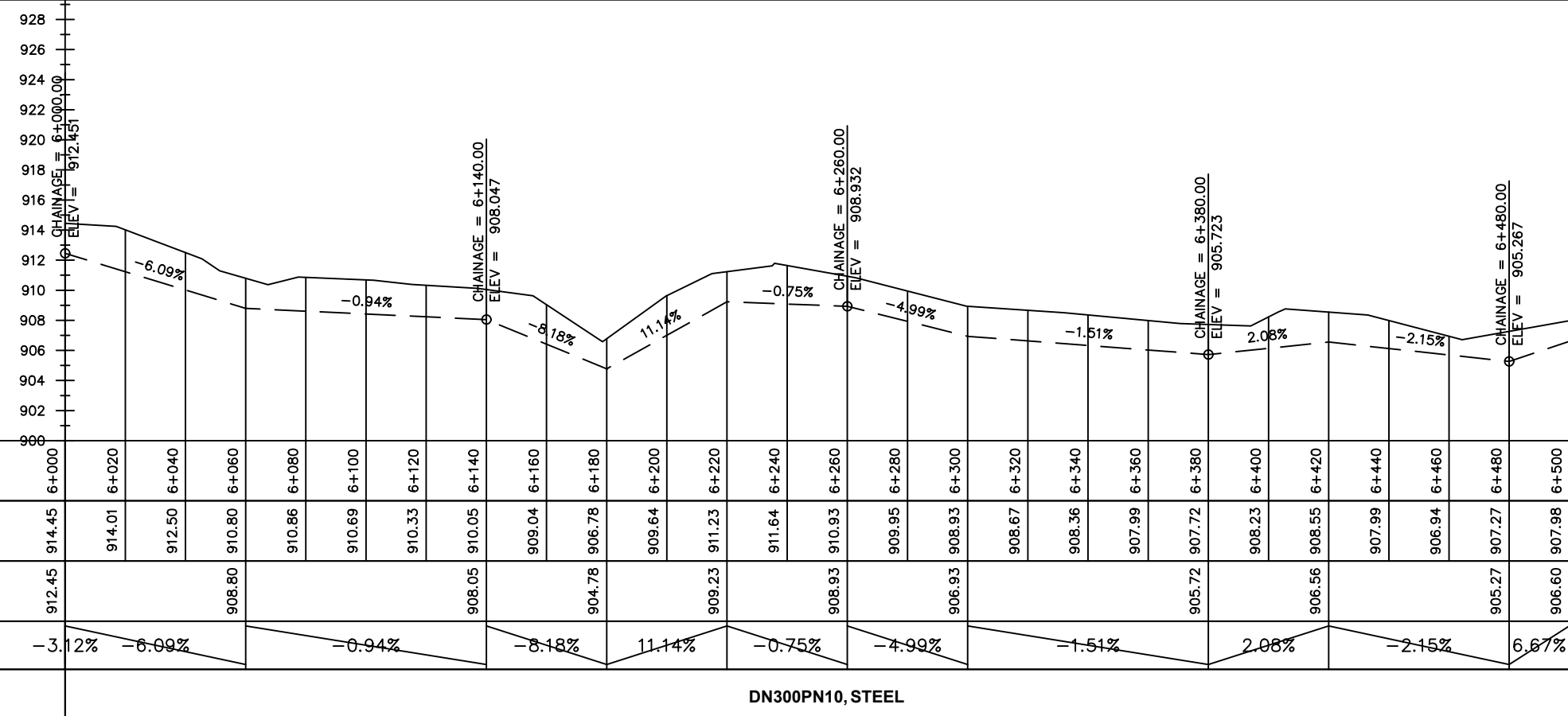
REVISIONS :

No	Date	Description

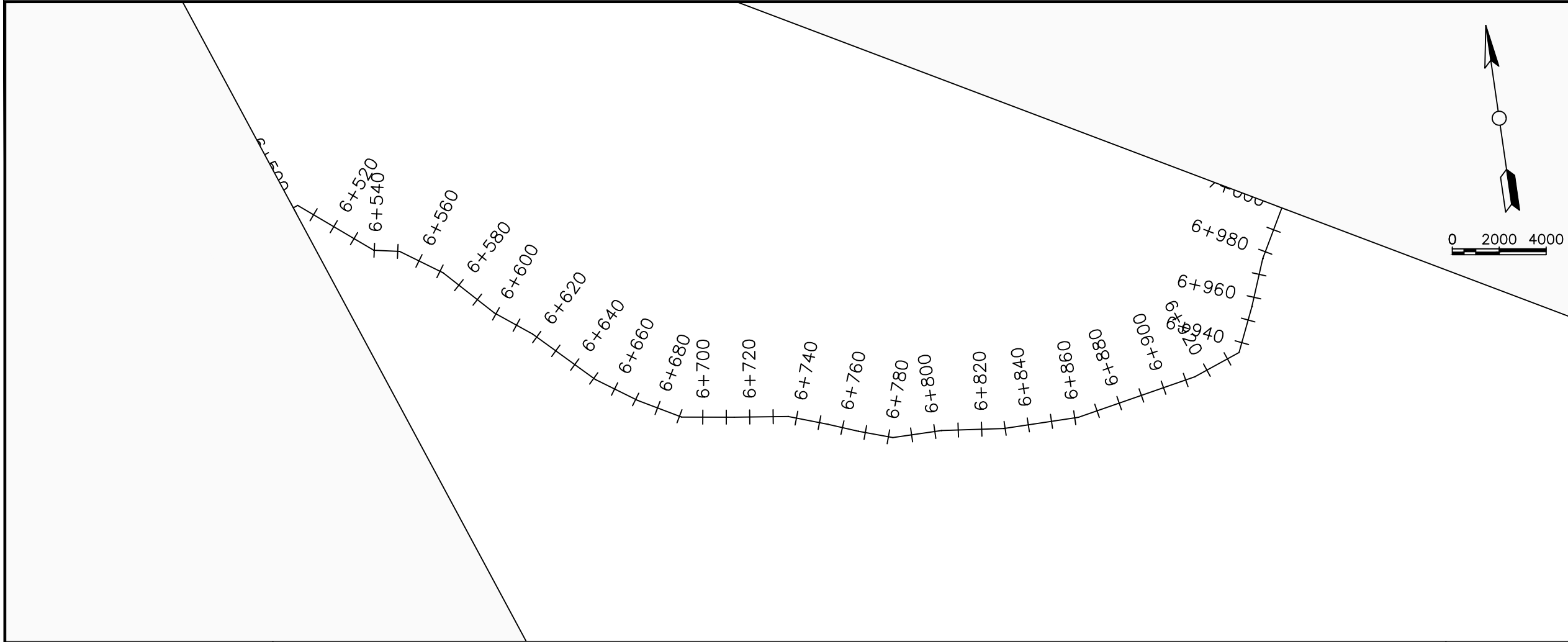
DRAWING TITLE :

TRANSMISSION MAIN 1 (WTP TO BARIBU TANK)
6+000 - 6+500

Surveyed by:	R.K
Drawn by:	M.K
Designed by:	W.G.M
Checked by:	J.K.K
Date:	January 2023
DRG. No.:	NYA-GTM-001
Scale:	1:2000
Sheet No.:	13 of 36



Chainages (m)	6+000	6+020	6+040	6+060	6+080	6+100	6+120	6+140	6+160	6+180	6+200	6+220	6+240	6+260	6+280	6+300	6+320	6+340	6+360	6+380	6+400	6+420	6+440	6+460	6+480	6+500		
Ground Levels (masl)	914.45	914.01	912.50	910.80	910.86	910.69	910.33	910.05	909.04	906.78	909.64	911.23	911.64	910.93	909.95	908.93	908.67	908.36	907.99	907.72	908.23	908.55	907.99	906.94	907.27	907.98		
Invert Levels (masl)	912.45			908.80				908.05		904.78		909.23		908.93		906.93				905.72		906.56			905.27	906.60		
Slope (%)	-3.12%	-6.09%		-0.94%		-0.94%		-8.18%		11.14%		-0.75%		-4.99%		-1.51%		2.08%		-2.15%				6.67%				
Pipe Details	DN300PN10, STEEL																											



LEGEND

Plan

- Transmission Main
- Distribution Main
- Road
- Building
- Contours

Profile

- Ground Level
- Invert Level
- AV Air Valve
- WO Washout
- Node detail No.

CLIENT :

THE REPUBLIC OF UGANDA
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PROJECT :

ALA-ORA WATER SUPPLY AND SANITATION PROJECT

NYAGAK WATER SUPPLY AND SANITATION SYSTEM

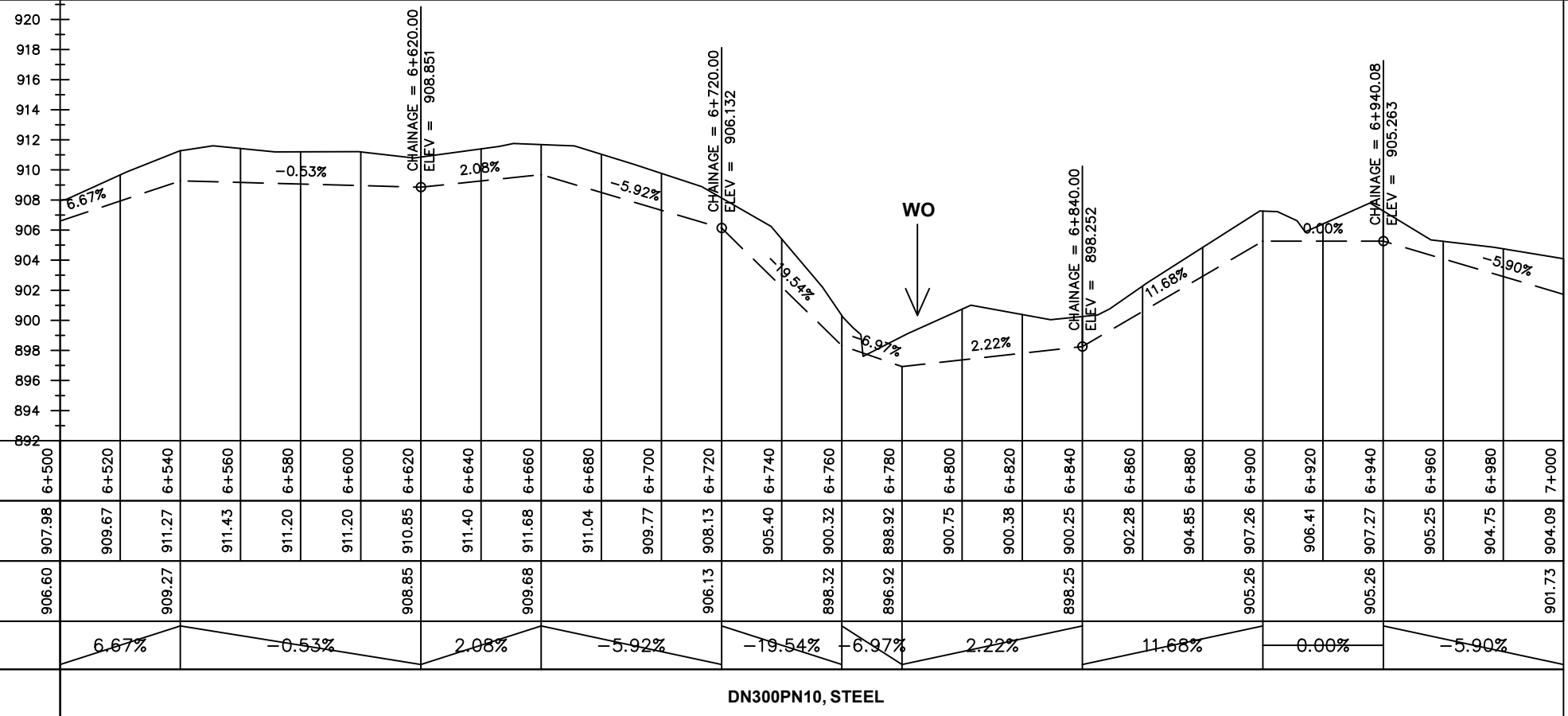
REVISIONS :

No	Date	Description

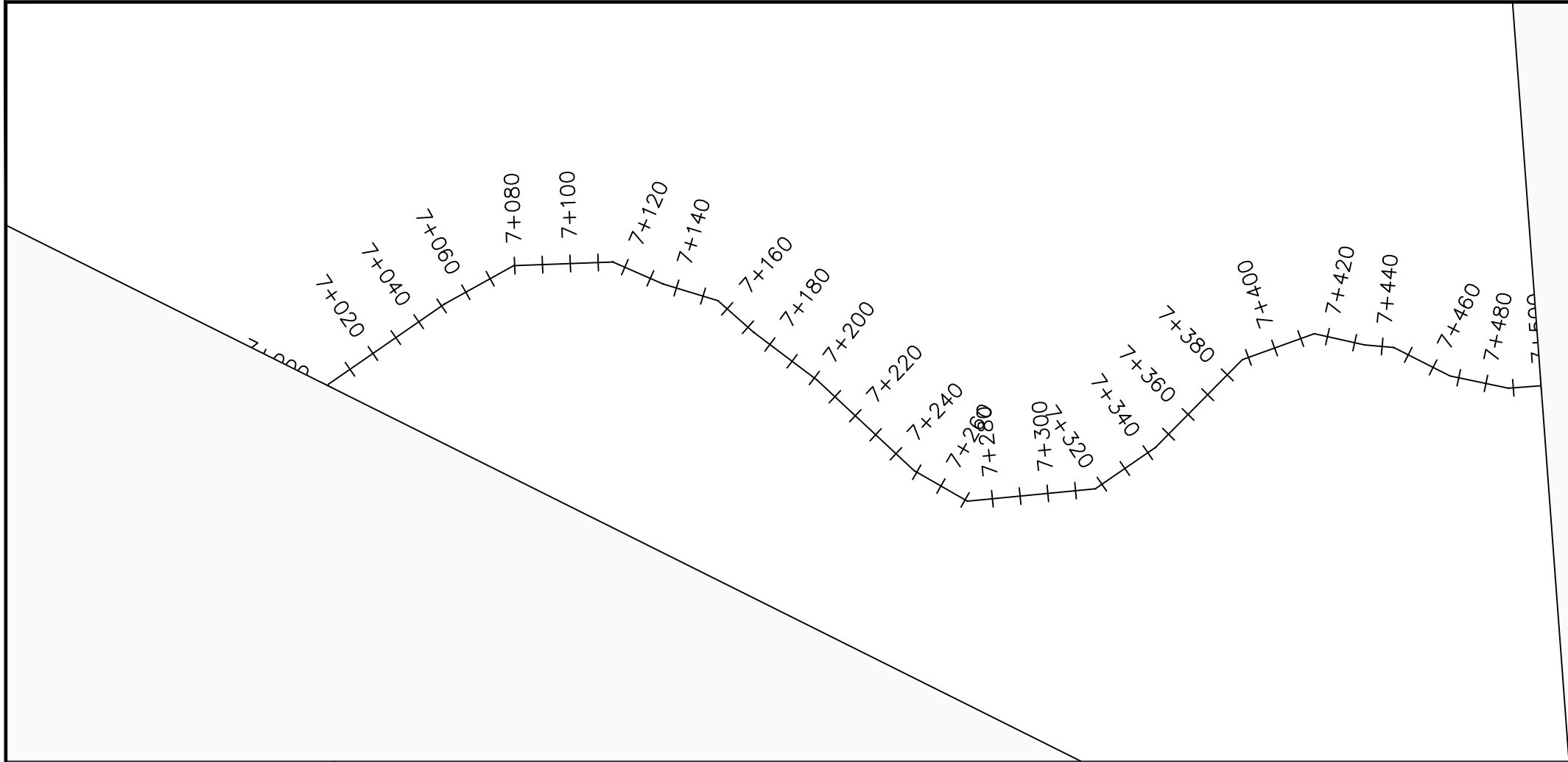
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TRANSMISSION MAIN 1 (WTP TO BARIBU TANK)
6+500 - 7+000

Surveyed by:	R.K
Drawn by:	M.K
Designed by:	W.G.M
Checked by:	J.K.K
Date:	January 2023
DRG. No.:	NYA-GTM-001
Scale:	1:2000
Sheet No.:	14 of 36



Chainages (m)	6+500	6+520	6+540	6+560	6+580	6+600	6+620	6+640	6+660	6+680	6+700	6+720	6+740	6+760	6+780	6+800	6+820	6+840	6+860	6+880	6+900	6+920	6+940	6+960	6+980	7+000		
Ground Levels (masl)	907.98	909.67	911.27	911.43	911.20	911.20	910.85	911.40	911.68	911.04	909.77	908.13	905.40	900.32	898.92	900.75	900.38	900.25	902.28	904.85	907.26	906.41	907.27	905.25	904.75	904.09		
Invert Levels (masl)	906.60		909.27				908.85		909.68			906.13		898.32	896.92			898.25			905.26		905.26			901.73		
Slope (%)		6.67%			-0.53%		2.08%			-5.92%		-19.54%	-6.97%	2.22%				11.68%			0.00%				-5.90%			
Pipe Details	DN300PN10, STEEL																											



LEGEND

Plan

- Transmission Main
- Distribution Main
- Road
- Building
- Contours

Profile

- Ground Level
- Invert Level
- AV Air Valve
- WO Washout
- Node detail No.

CLIENT :

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PROJECT :

ALA-ORA WATER SUPPLY AND SANITATION PROJECT

NYAGAK WATER SUPPLY AND SANITATION SYSTEM

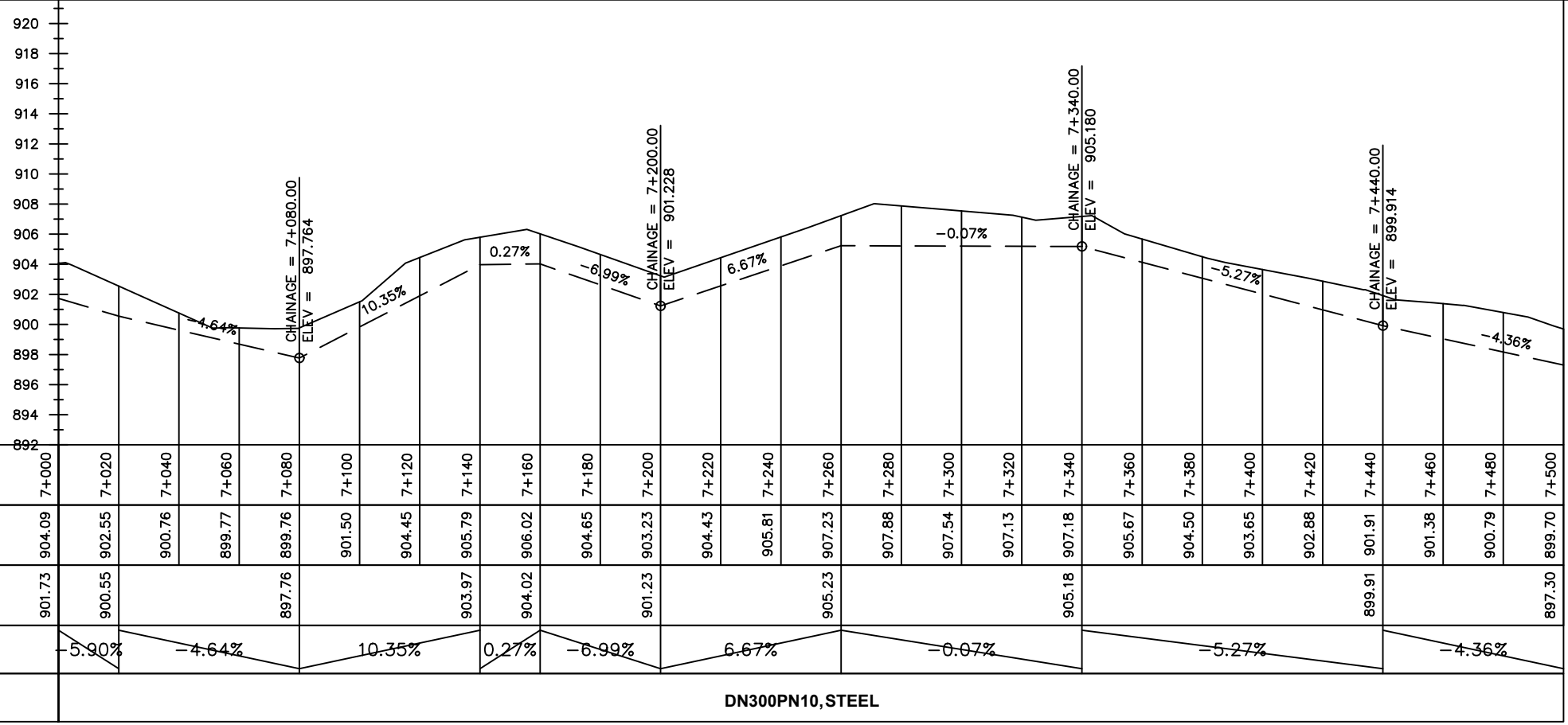
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No	Date	Description

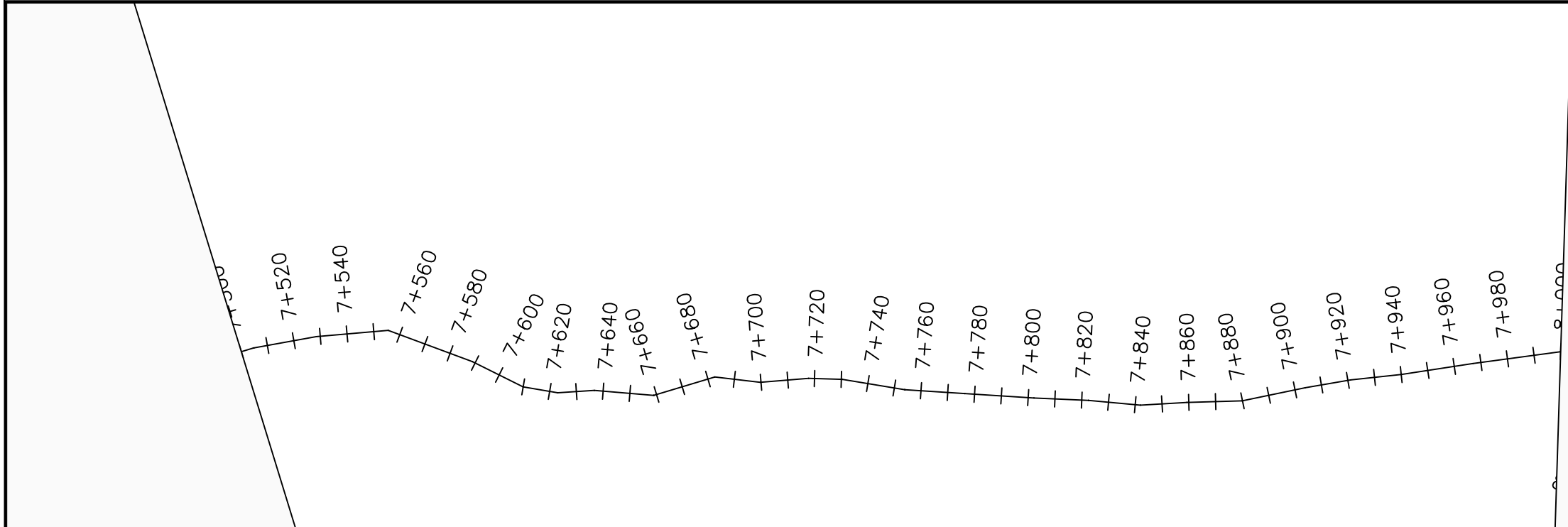
DRAWING TITLE :

TRANSMISSION MAIN 1 (WTP TO BARIBU TANK)
7+000 - 7+500

Surveyed by:	R.K
Drawn by:	M.K
Designed by:	W.G.M
Checked by:	J.K.K
Date:	January 2023
DRG. No.:	NYA-GTM-001
Scale:	1:2000
Sheet No.:	15 of 36



DN300PN10, STEEL



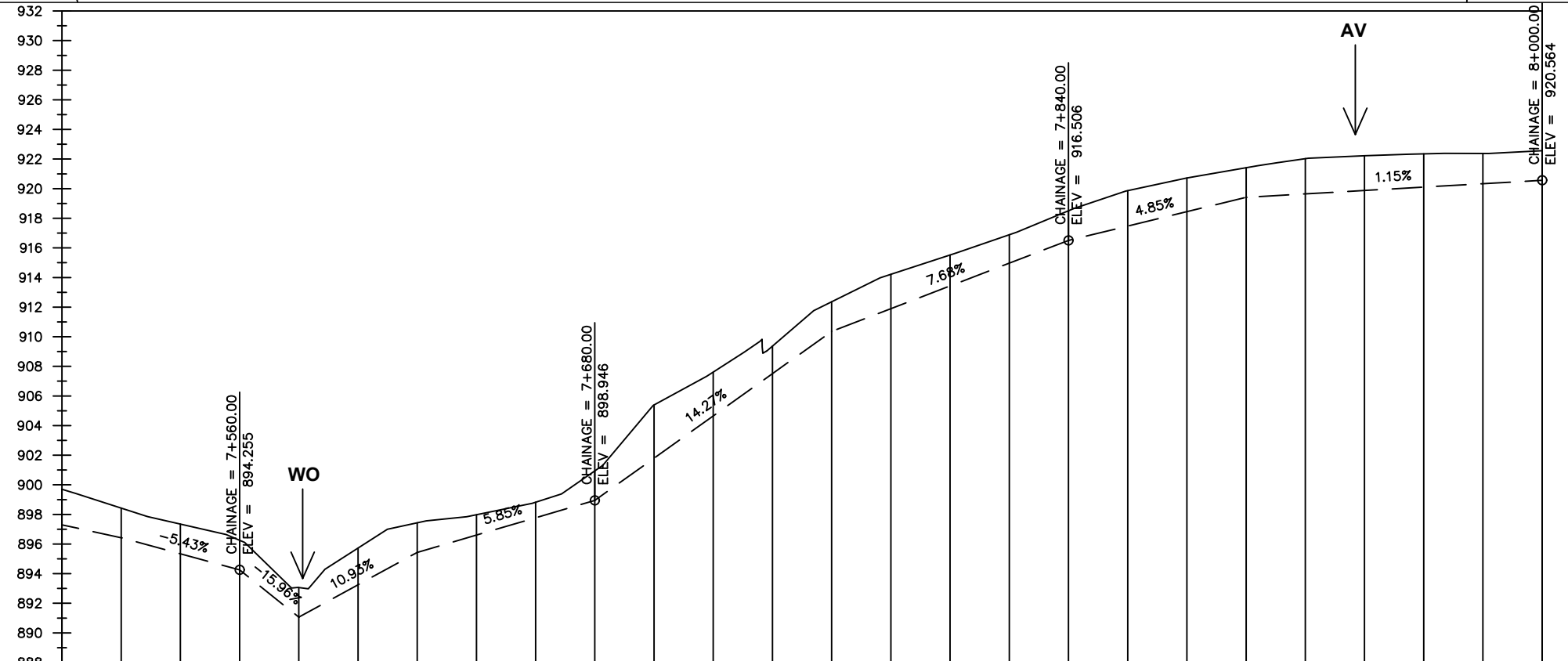
LEGEND

Plan

- Transmission Main
- Distribution Main
- Road
- Building
- Contours

Profile

- Ground Level
- Invert Level
- AV Air Valve
- WO Washout
- Node detail No.



Chainages (m)	7+500	7+520	7+540	7+560	7+580	7+600	7+620	7+640	7+660	7+680	7+700	7+720	7+740	7+760	7+780	7+800	7+820	7+840	7+860	7+880	7+900	7+920	7+940	7+960	7+980	8+000		
Ground Levels (masl)	899.70	898.43	897.35	896.26	893.06	895.72	897.43	897.98	898.82	900.95	905.39	907.61	909.37	912.36	914.22	915.52	916.89	918.51	919.86	920.72	921.42	922.03	922.22	922.35	922.38	922.56		
Invert Levels (masl)	897.30	896.43		894.26	891.06		895.43			898.95				910.36				916.51			919.42					920.56		
Slope (%)		-4.36%	-5.43%	-15.96%	10.93%		5.85%				14.27%			7.68%				4.85%			1.15%					-0.40%		
Pipe Details	DN300PN10, STEEL																											

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Infra-Consult Ltd

PROJECT :

ALA-ORA WATER SUPPLY AND SANITATION PROJECT

NYAGAK WATER SUPPLY AND SANITATION SYSTEM

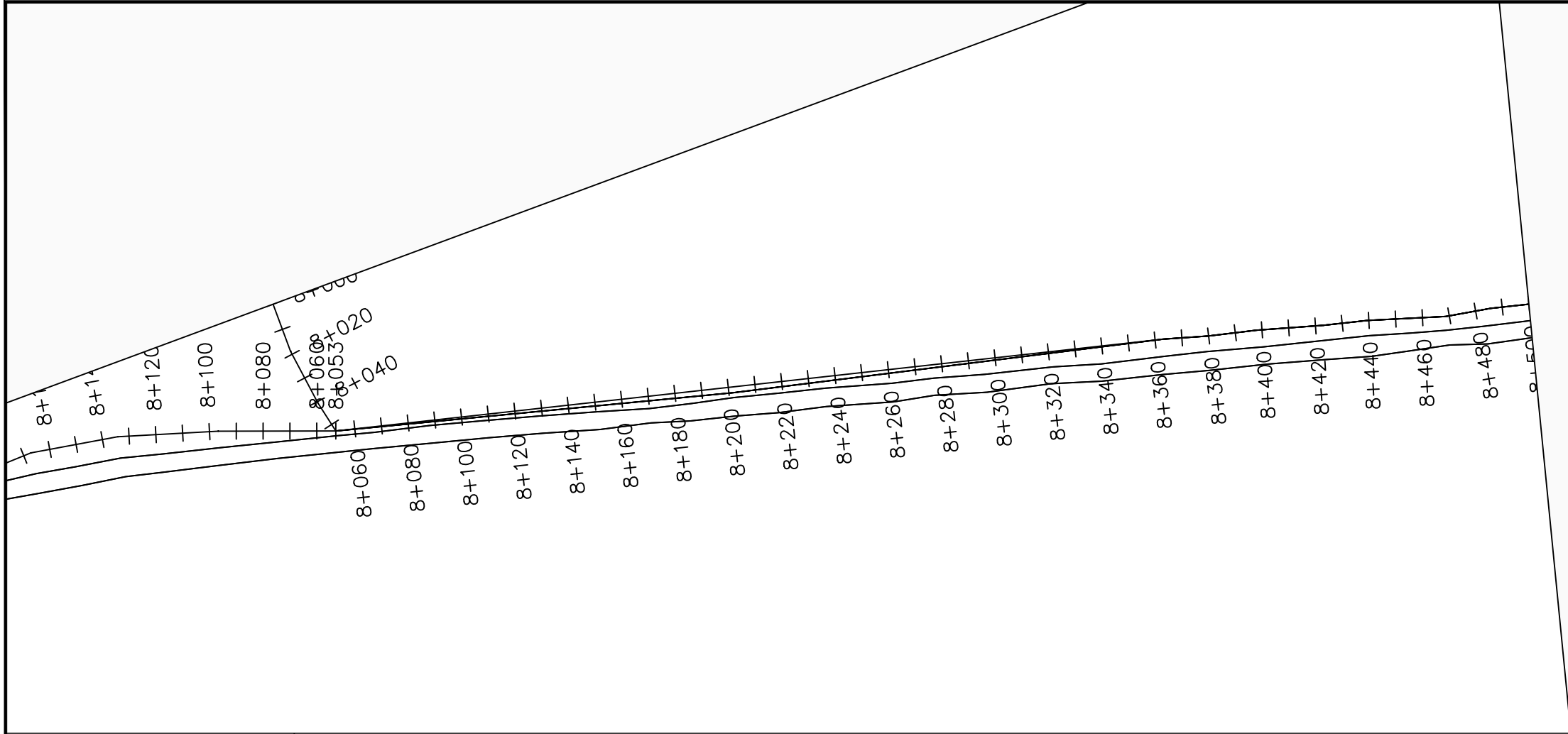
REVISIONS :

No	Date	Description

DRAWING TITLE :

TRANSMISSION MAIN 1 (WTP TO BARIBU TANK)
7+500 - 8+000

Surveyed by:	R.K
Drawn by:	M.K
Designed by:	W.G.M
Checked by:	J.K.K
Date:	January 2023
DRG. No.:	NYA-GTM-001
Scale:	1:2000
Sheet No.:	16 of 36



LEGEND

Plan

- Transmission Main
- Distribution Main
- Road
- Building
- Contours

Profile

- Ground Level
- Invert Level
- AV Air Valve
- WO Washout
- Node detail No.

CLIENT :

THE REPUBLIC OF UGANDA
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PROJECT :

ALA-ORA WATER SUPPLY AND SANITATION PROJECT

NYAGAK WATER SUPPLY AND SANITATION SYSTEM

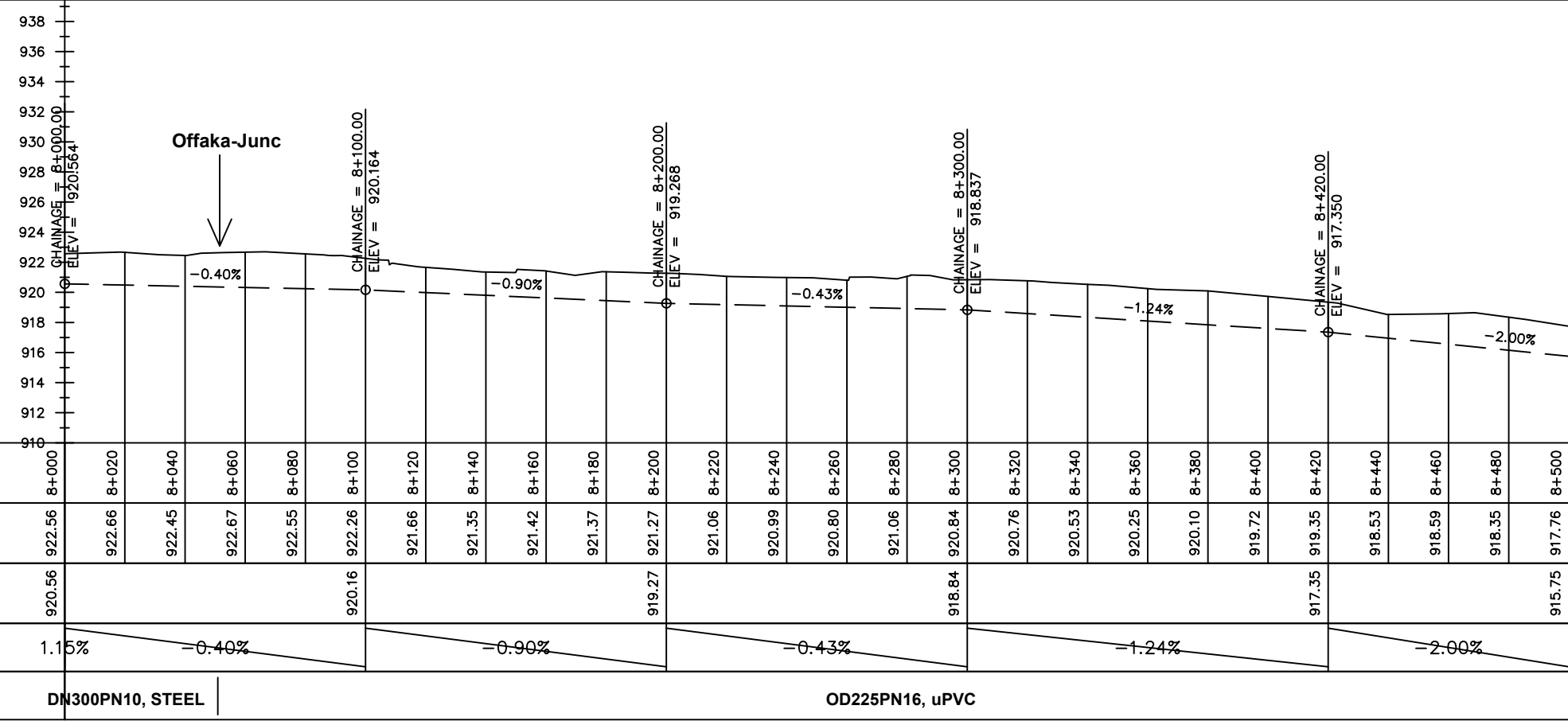
REVISIONS :

No	Date	Description

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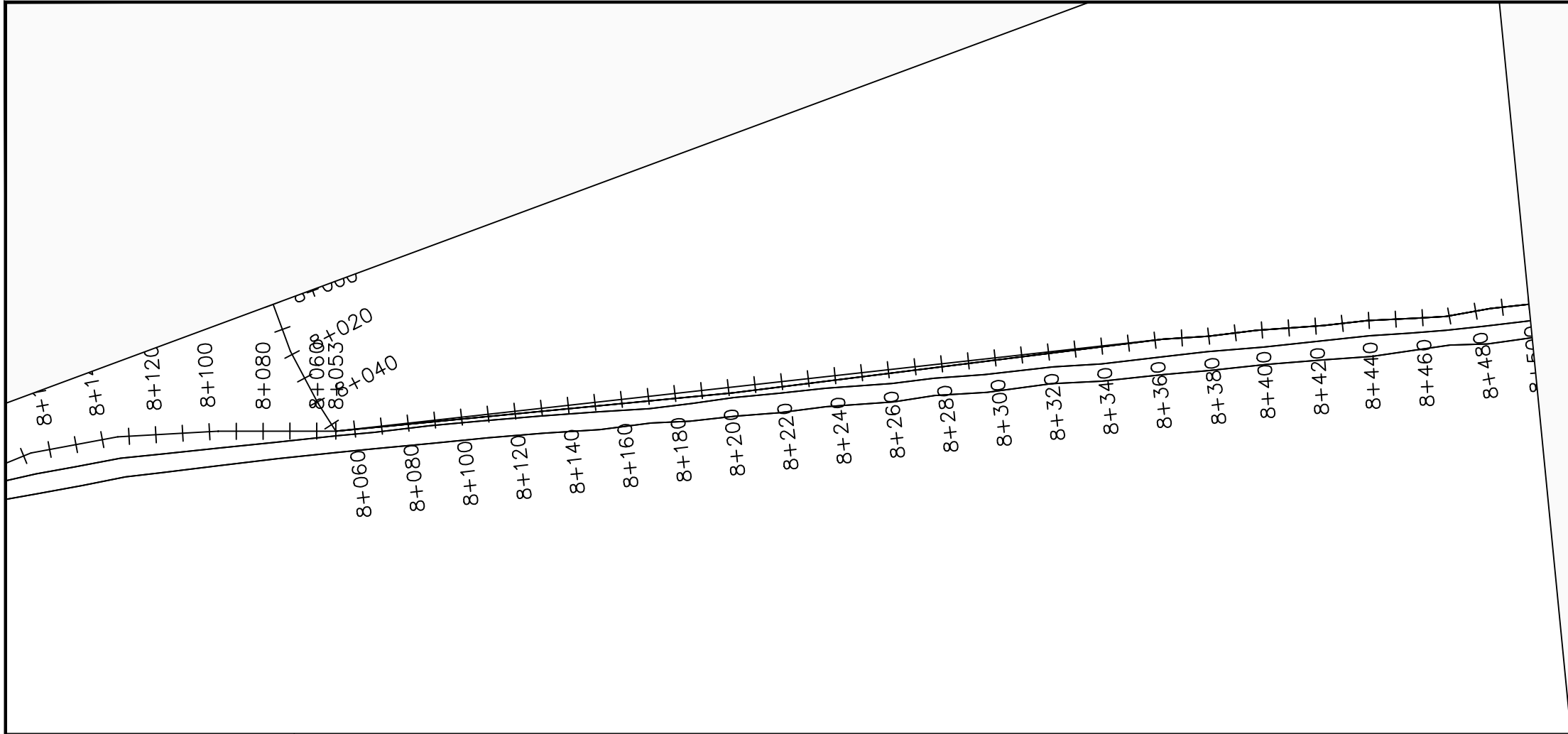
TRANSMISSION MAIN 1 (WTP TO BARIBU TANK)
8+000 - 8+500

Surveyed by:	R.K
Drawn by:	M.K
Designed by:	W.G.M
Checked by:	J.K.K
Date:	January 2023
DRG. No.:	NYA-GTM-001
Scale:	1:2000
Sheet No.:	17 of 36



Chainages (m)	8+000	8+020	8+040	8+060	8+080	8+100	8+120	8+140	8+160	8+180	8+200	8+220	8+240	8+260	8+280	8+300	8+320	8+340	8+360	8+380	8+400	8+420	8+440	8+460	8+480	8+500
Ground Levels (masl)	922.56	922.66	922.45	922.67	922.55	922.26	921.66	921.35	921.42	921.37	921.27	921.06	920.99	920.80	921.06	920.84	920.76	920.53	920.25	920.10	919.72	919.35	918.53	918.59	918.35	917.76
Invert Levels (masl)	920.56					920.16					919.27					918.84						917.35				915.75
Slope (%)	1.15%	-0.40%				-0.90%				-0.43%				-1.24%				-2.00%								
Pipe Details	DN300PN10, STEEL										OD225PN16, uPVC															

NDIRIBA SUPPLY AREA



LEGEND

Plan

- Transmission Main
- Distribution Main
- Road
- Building
- Contours

Profile

- Ground Level
- Invert Level
- AV Air Valve
- WO Washout
- Node detail No.

CLIENT :

THE REPUBLIC OF UGANDA
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PROJECT :

ALA-ORA WATER SUPPLY AND SANITATION PROJECT

NYAGAK WATER SUPPLY AND SANITATION SYSTEM

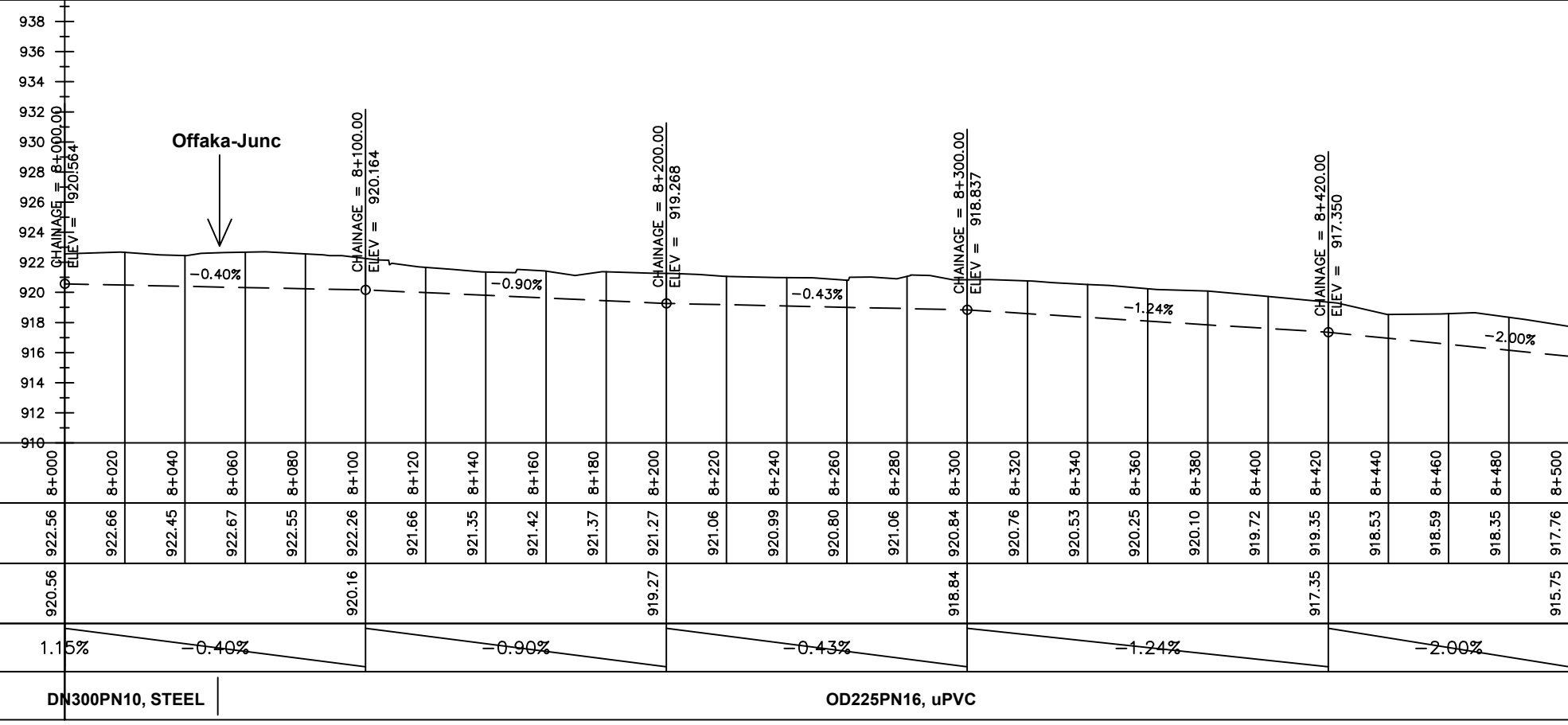
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No	Date	Description

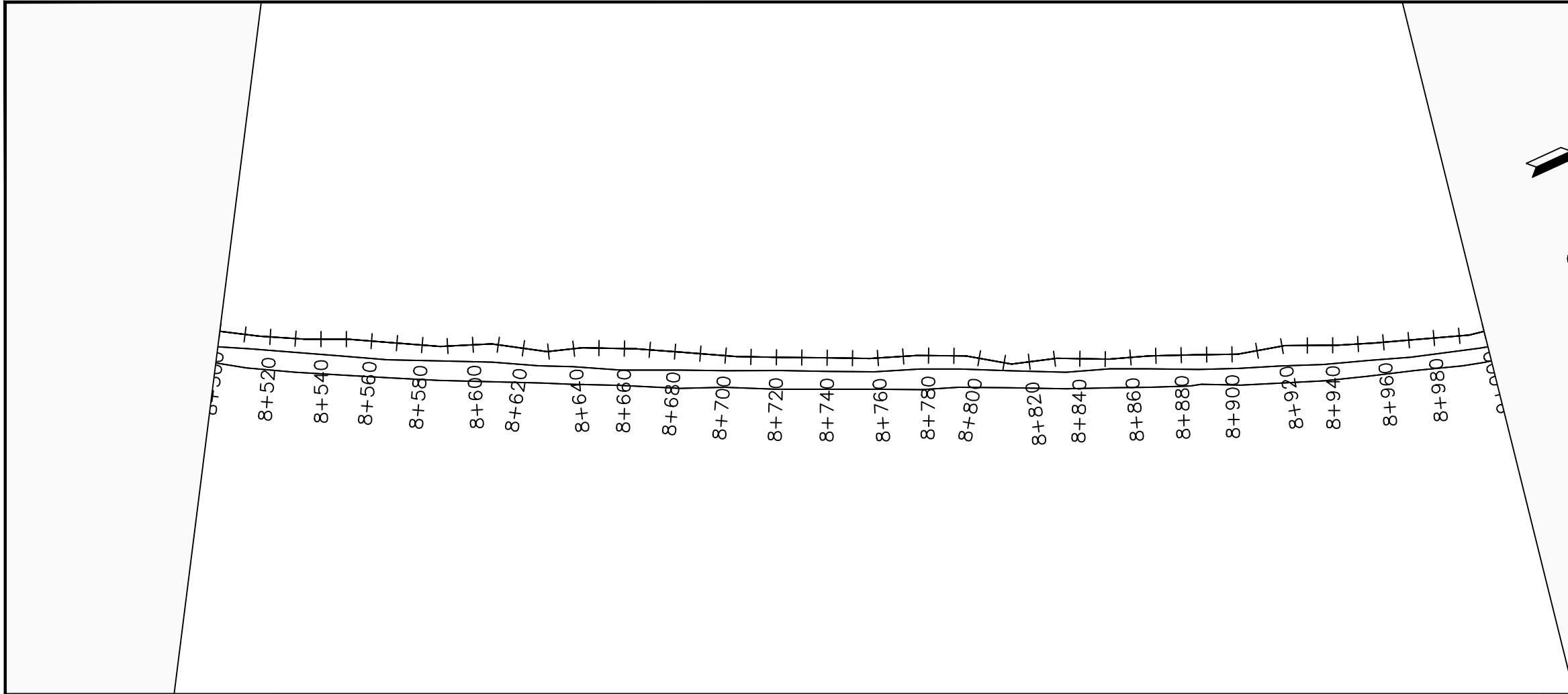
DRAWING TITLE :

TRANSMISSION MAIN 1 (WTP TO BARIBU TANK)
8+000 - 8+500

Surveyed by:	R.K
Drawn by:	M.K
Designed by:	W.G.M
Checked by:	J.K.K
Date:	January 2023
DRG. No.:	NYA-GTM-001
Scale:	1:2000
Sheet No.:	17 of 36



Chainages (m)	8+000	8+020	8+040	8+060	8+080	8+100	8+120	8+140	8+160	8+180	8+200	8+220	8+240	8+260	8+280	8+300	8+320	8+340	8+360	8+380	8+400	8+420	8+440	8+460	8+480	8+500
Ground Levels (masl)	922.56	922.66	922.45	922.67	922.55	922.26	921.66	921.35	921.42	921.37	921.27	921.06	920.99	920.80	921.06	920.84	920.76	920.53	920.25	920.10	919.72	919.35	918.53	918.59	918.35	917.76
Invert Levels (masl)	920.56					920.16					919.27					918.84						917.35				915.75
Slope (%)	1.15%	-0.40%				-0.90%					-0.43%					-1.24%				-2.00%						
Pipe Details	DN300PN10, STEEL										OD225PN16, uPVC															



LEGEND

Plan

- Transmission Main
- Distribution Main
- Road
- Building
- Contours

Profile

- Ground Level
- Invert Level
- AV Air Valve
- WO Washout
- Node detail No.

CLIENT :

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PROJECT :

ALA-ORA WATER SUPPLY AND SANITATION PROJECT

NYAGAK WATER SUPPLY AND SANITATION SYSTEM

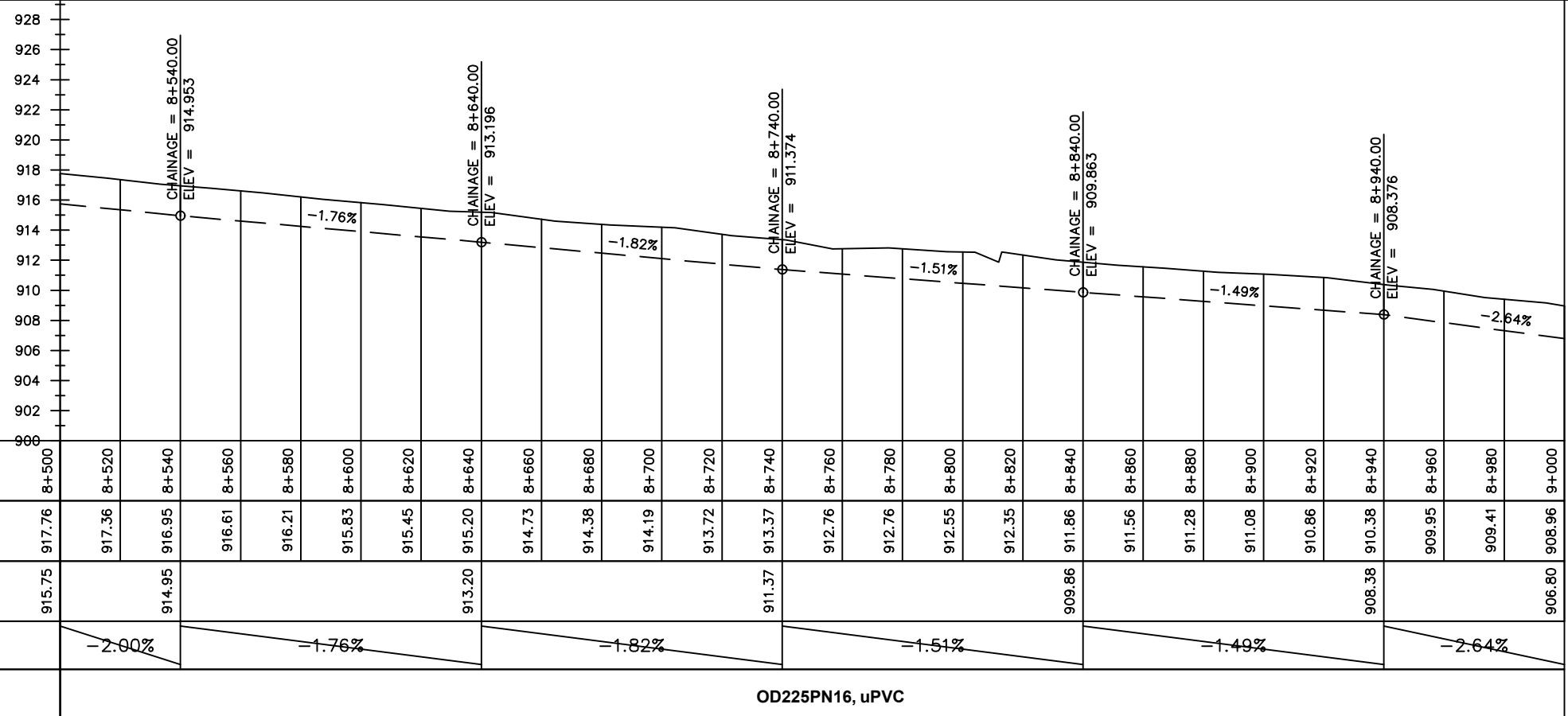
REVISIONS :

No	Date	Description

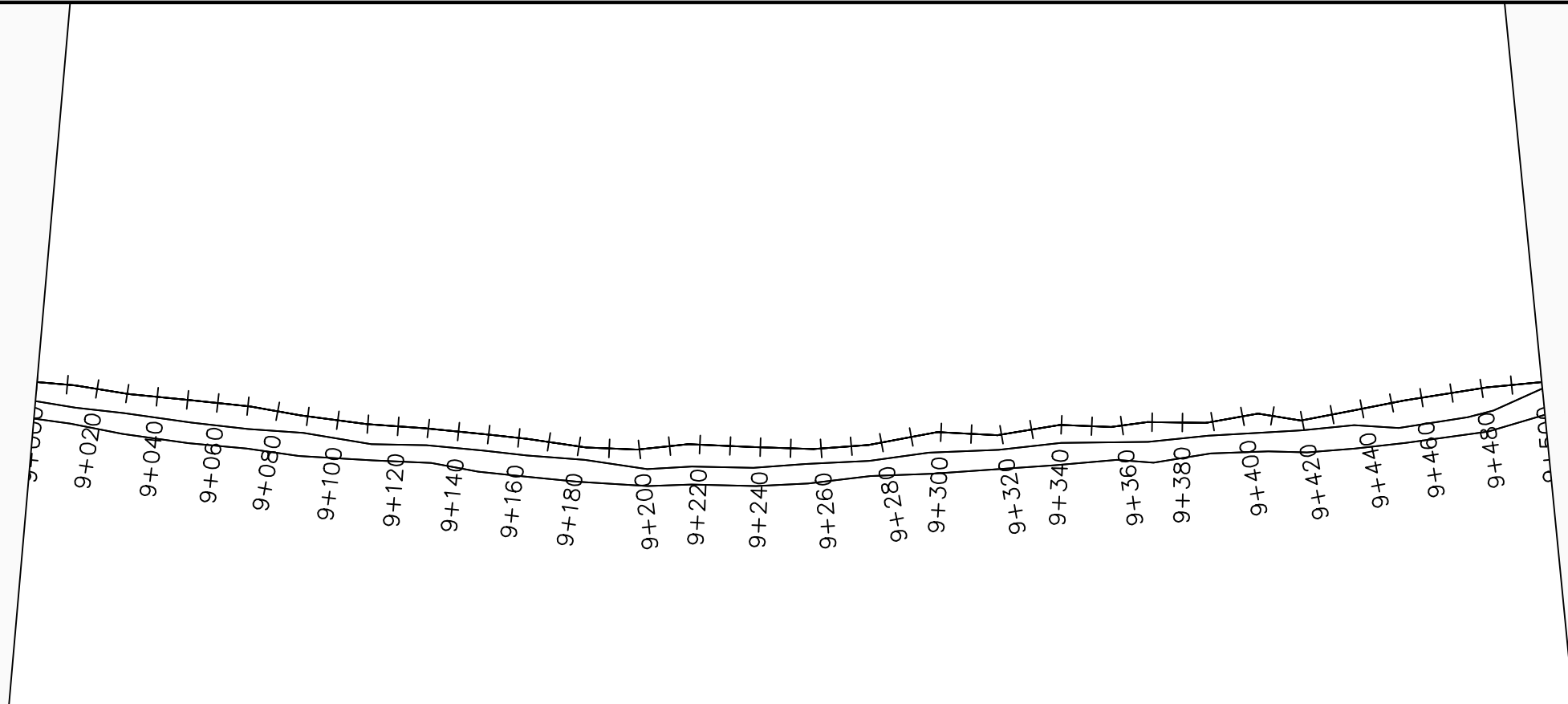
DRAWING TITLE :

TRANSMISSION MAIN 1 (OFFAKA-JUNC TO NDIRIBA-TANK)
8+500 - 9+000

Surveyed by:	R.K
Drawn by:	M.K
Designed by:	W.G.M
Checked by:	J.K.K
Date:	January 2023
DRG. No.:	NYA-GTM-001
Scale:	1:2000
Sheet No.:	18 of 36



Chainages (m)	8+500	8+520	8+540	8+560	8+580	8+600	8+620	8+640	8+660	8+680	8+700	8+720	8+740	8+760	8+780	8+800	8+820	8+840	8+860	8+880	8+900	8+920	8+940	8+960	8+980	9+000		
Ground Levels (masl)	917.76	917.36	916.95	916.61	916.21	915.83	915.45	915.20	914.73	914.38	914.19	913.72	913.37	912.76	912.76	912.55	912.35	911.86	911.56	911.28	911.08	910.86	910.38	909.95	909.41	908.96		
Invert Levels (masl)	915.75		914.95					913.20					911.37					909.86				908.38			906.80			
Slope (%)	-2.00%	-1.76%	-1.82%	-1.51%	-1.49%	-2.64%																						
Pipe Details	OD225PN16, uPVC																											



LEGEND

Plan

- Transmission Main
- Distribution Main
- Road
- Building
- Contours

Profile

- Ground Level
- Invert Level
- AV Air Valve
- WO Washout
- Node detail No.

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NYAGAK WATER SUPPLY AND SANITATION SYSTEM

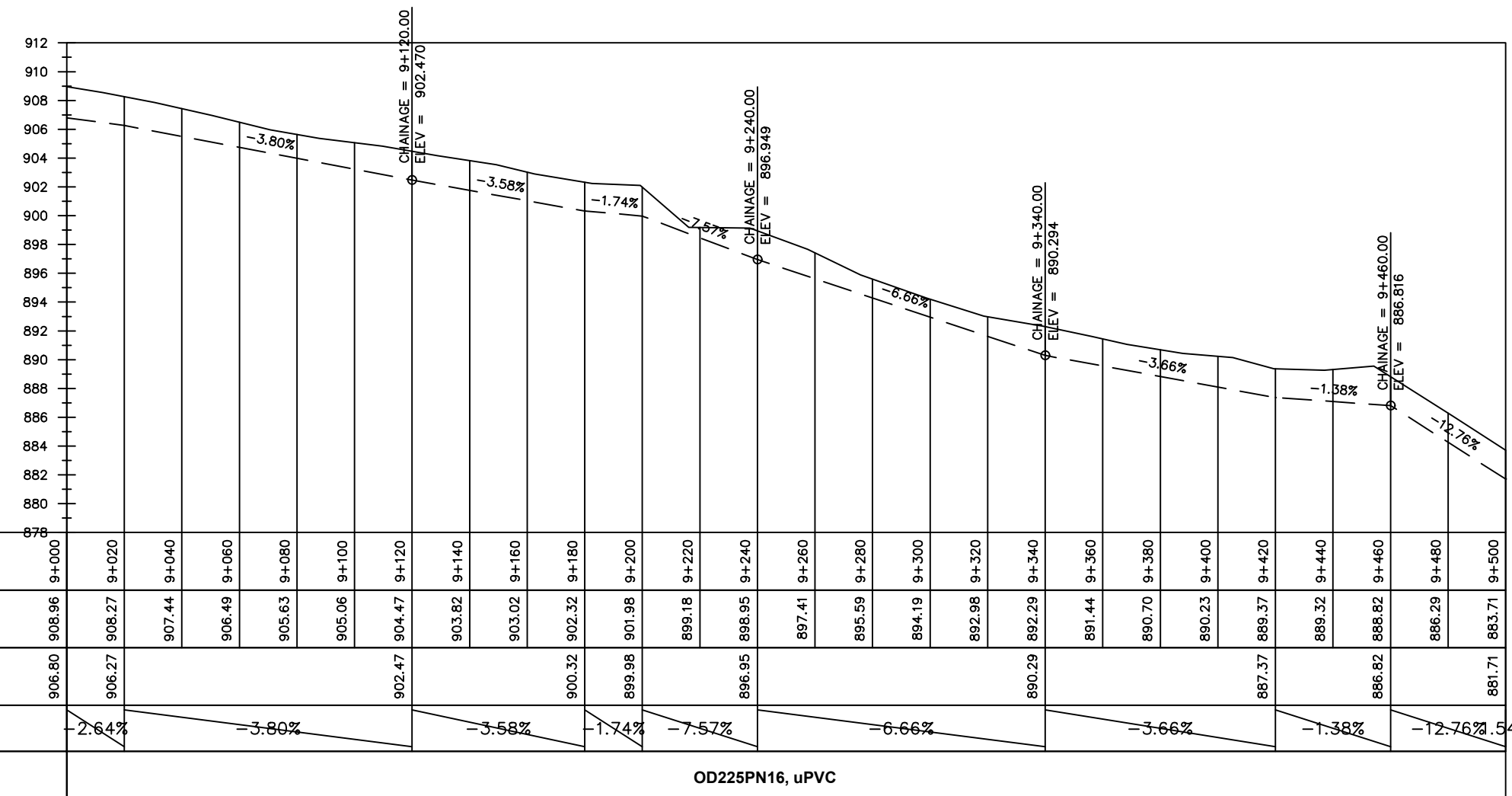
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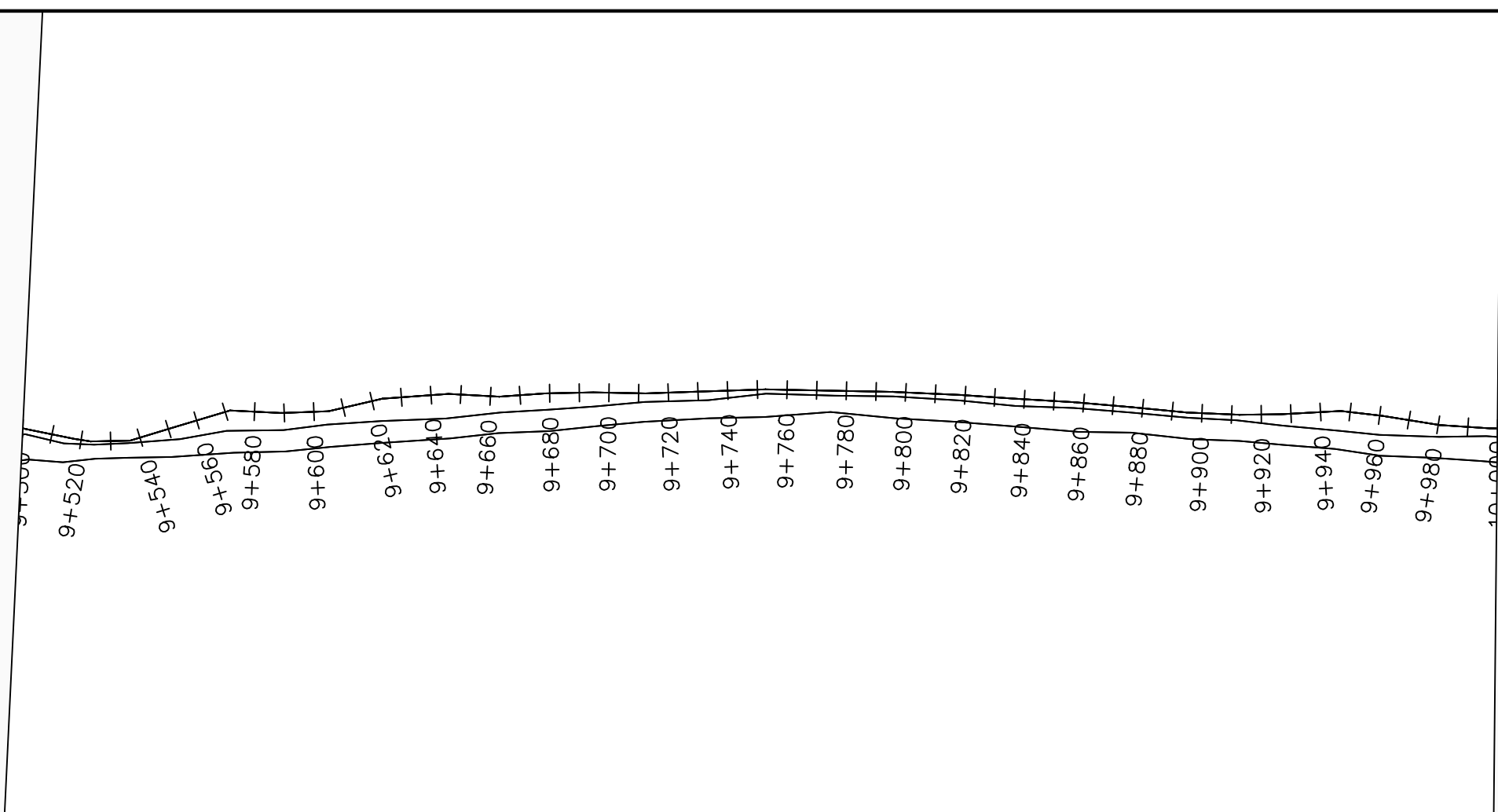
No	Date	Description

DRAWING TITLE :

TRANSMISSION MAIN 1 (OFFAKA-JUNC TO NDIRIBA-TANK)
9+000 - 9+500

Surveyed by:	R.K
Drawn by:	M.K
Designed by:	W.G.M
Checked by:	J.K.K
Date:	January 2023
DRG. No.:	NYA-GTM-001
Scale:	1:2000
Sheet No.:	19 of 36





LEGEND

Plan

- Transmission Main
- Distribution Main
- Road
- Building
- Contours

Profile

- Ground Level
- Invert Level
- AV Air Valve
- WO Washout
- Node detail No.

CLIENT :

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CONSULTANT :

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Infra-Consult Ltd

PROJECT :

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NYAGAK WATER SUPPLY AND SANITATION SYSTEM

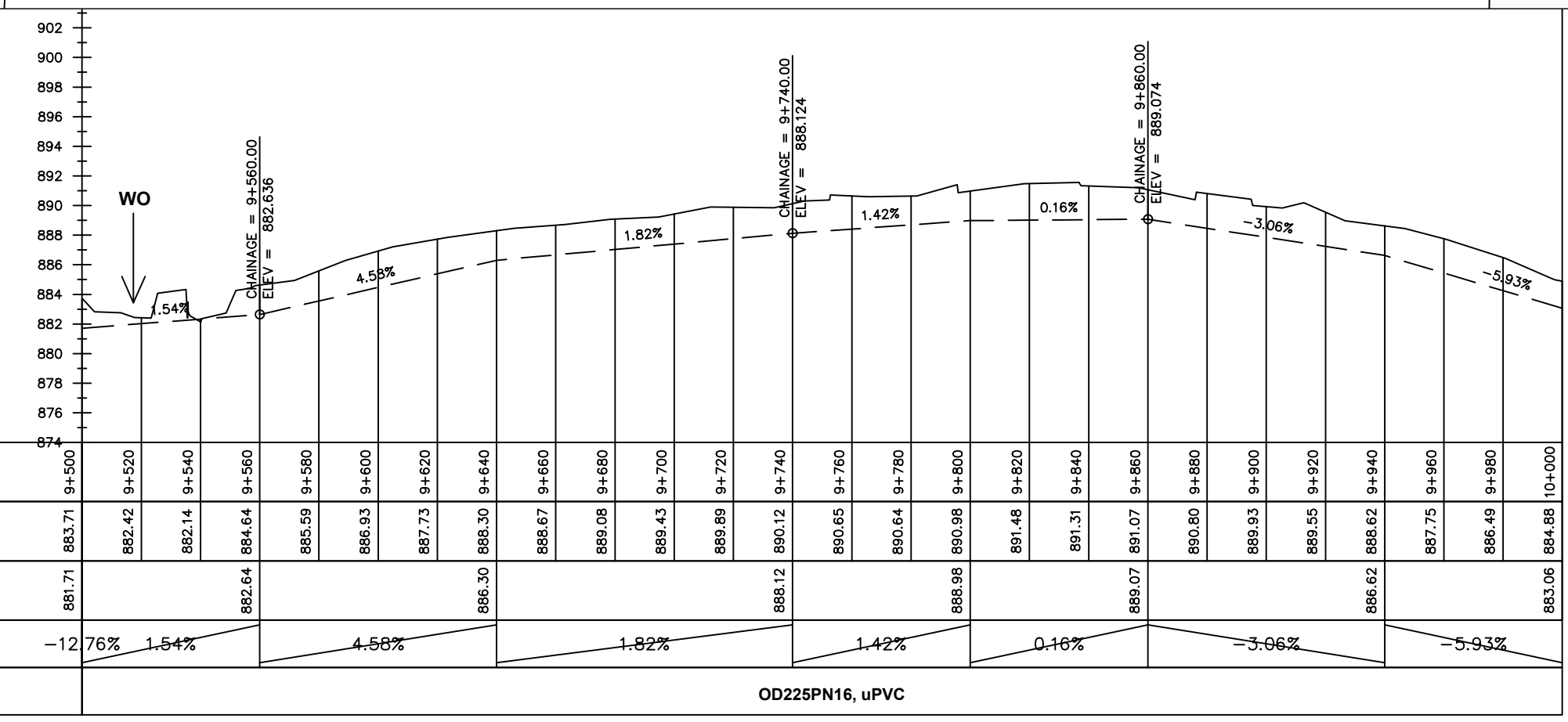
REVISIONS :

No	Date	Description

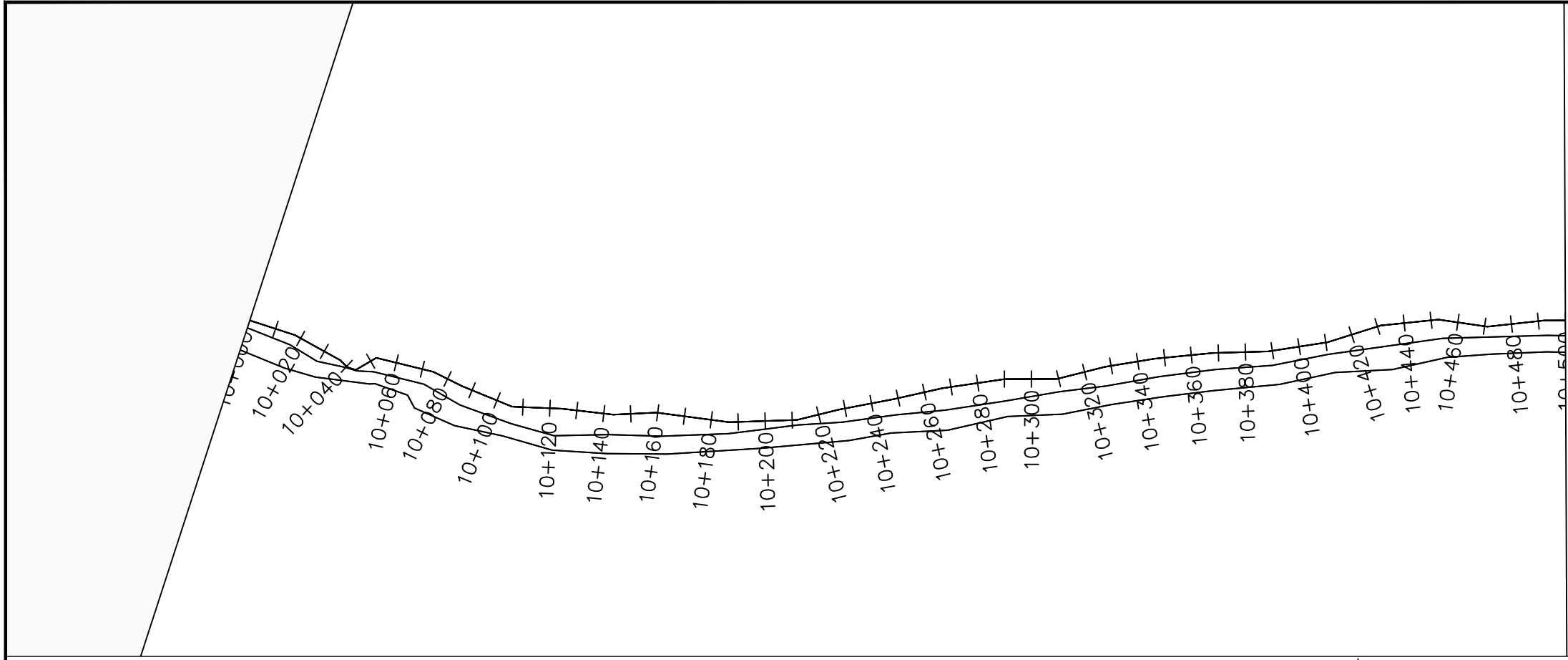
DRAWING TITLE :

TRANSMISSION MAIN 1 (OFFAKA-JUNC TO NDIRIBA-TANK)
9+500 - 10+000

Surveyed by:	R.K
Drawn by:	M.K
Designed by:	W.G.M
Checked by:	J.K.K
Date:	January 2023
DRG. No.:	NYA-GTM-001
Scale:	1:2000
Sheet No.:	20 of 36



Chainages (m)	9+500	9+520	9+540	9+560	9+580	9+600	9+620	9+640	9+660	9+680	9+700	9+720	9+740	9+760	9+780	9+800	9+820	9+840	9+860	9+880	9+900	9+920	9+940	9+960	9+980	10+000		
Ground Levels (masl)	883.71	882.42	882.14	884.64	885.59	886.93	887.73	888.30	888.67	889.08	889.43	889.89	890.12	890.65	890.64	890.98	891.48	891.31	891.07	890.80	889.93	889.55	888.62	887.75	886.49	884.88		
Invert Levels (masl)	881.71			882.64				886.30					888.12			888.98			889.07			886.62				883.06		
Slope (%)	-12.76%	1.54%		4.58%				1.82%				1.42%		0.16%		-3.06%			-5.93%									
Pipe Details	OD225PN16, uPVC																											



LEGEND

Plan

- Transmission Main
- Distribution Main
- Road
- Building
- Contours

Profile

- Ground Level
- Invert Level
- AV Air Valve
- WO Washout
- Node detail No.

CLIENT :

THE REPUBLIC OF UGANDA
MINISTRY OF WATER AND ENVIRONMENT

CO-FINANCED BY:

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CONSULTANT :

Alliance Consultants Ltd
In Association with

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PROJECT :

ALA-ORA WATER SUPPLY AND SANITATION PROJECT

NYAGAK WATER SUPPLY AND SANITATION SYSTEM

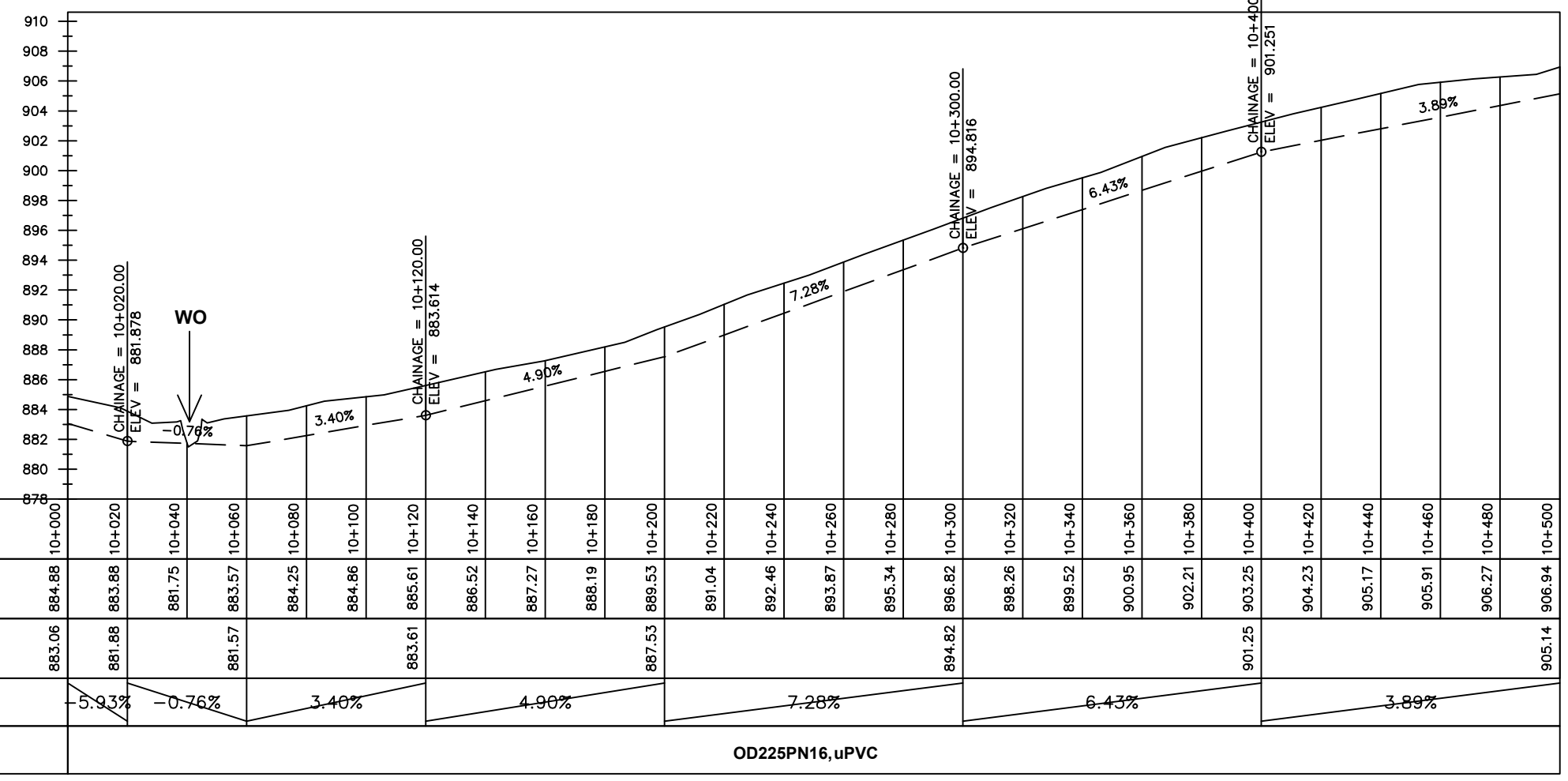
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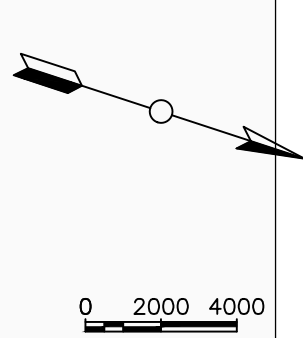
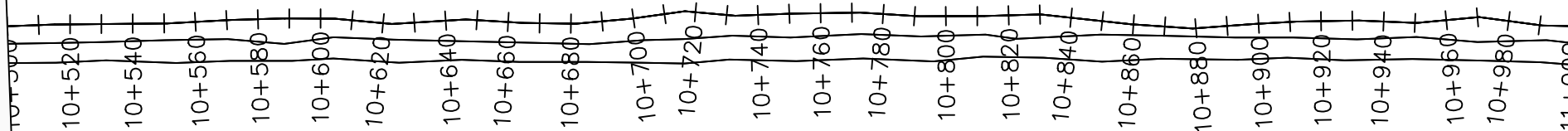
No	Date	Description

DRAWING TITLE :

TRANSMISSION MAIN 1 (OFFAKA-JUNC TO NDIRIBA-TANK)
10+000 - 10+500

Surveyed by:	R.K
Drawn by:	M.K
Designed by:	W.G.M
Checked by:	J.K.K
Date:	January 2023
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Scale:	1:2000
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LEGEND

Plan

- Transmission Main
- Distribution Main
- Road
- Building
- Contours

Profile

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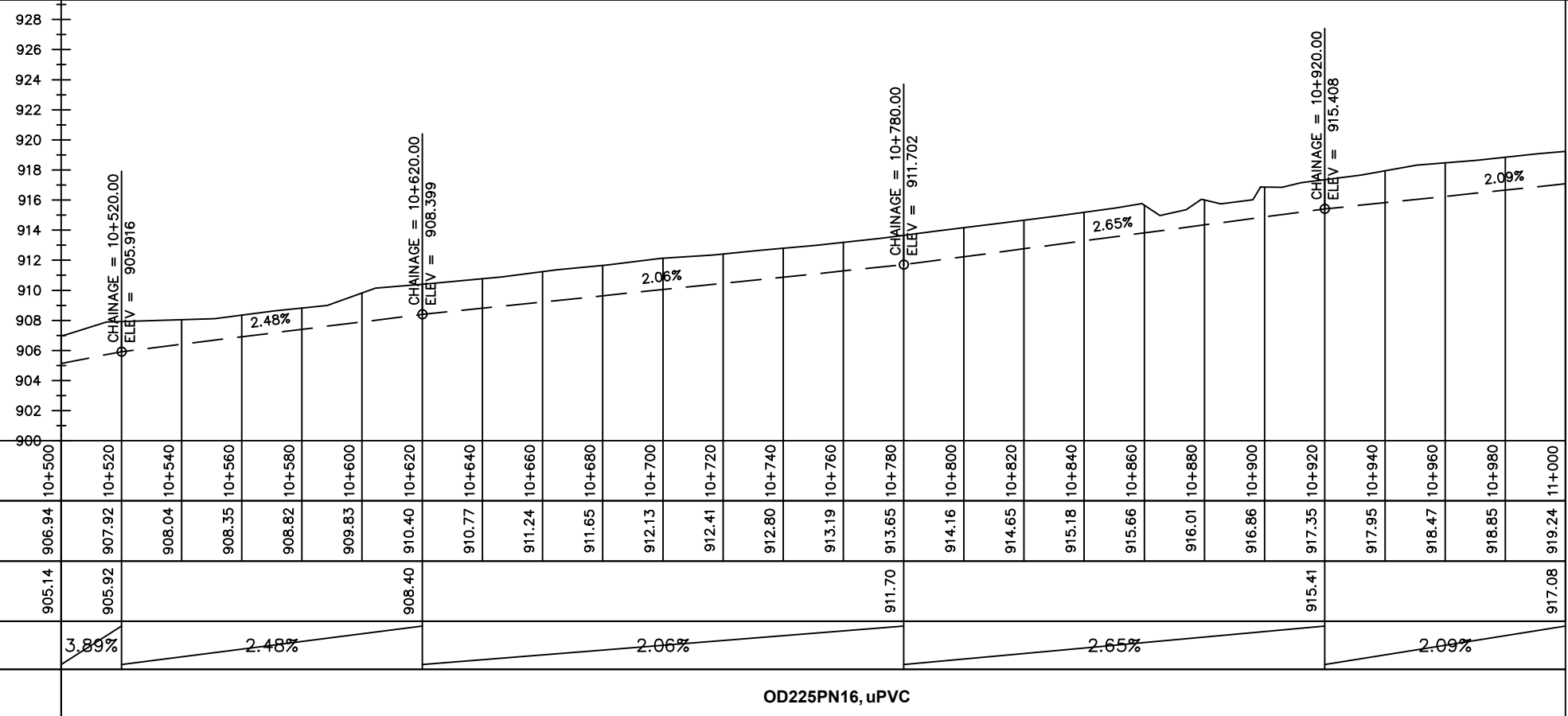
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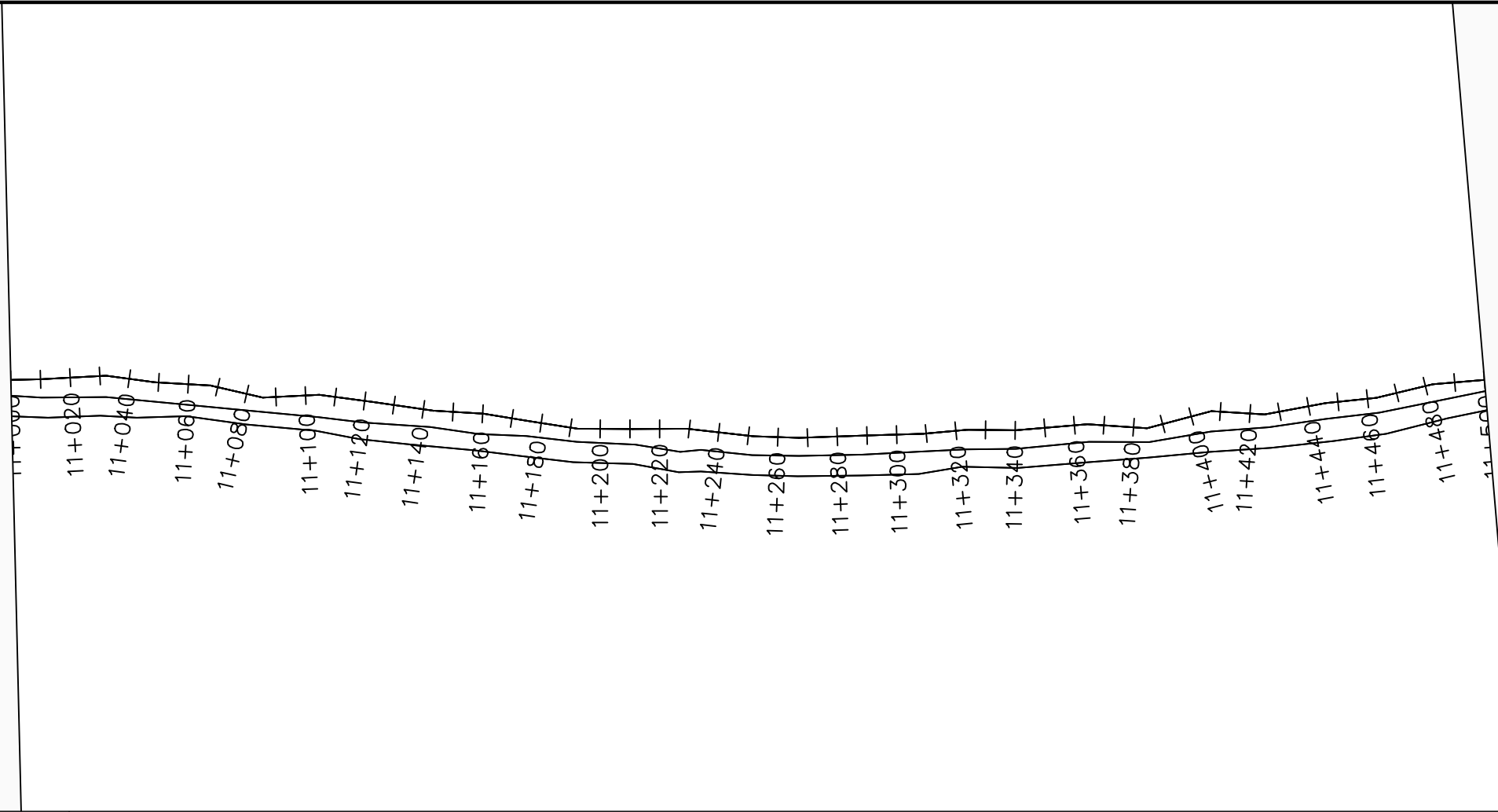
No	Date	Description

DRAWING TITLE :

TRANSMISSION MAIN 1 (OFFAKA-JUNC TO NDIRIBA-TANK)
10+500 - 11+000

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Drawn by:	M.K
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Plan

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- WO Washout
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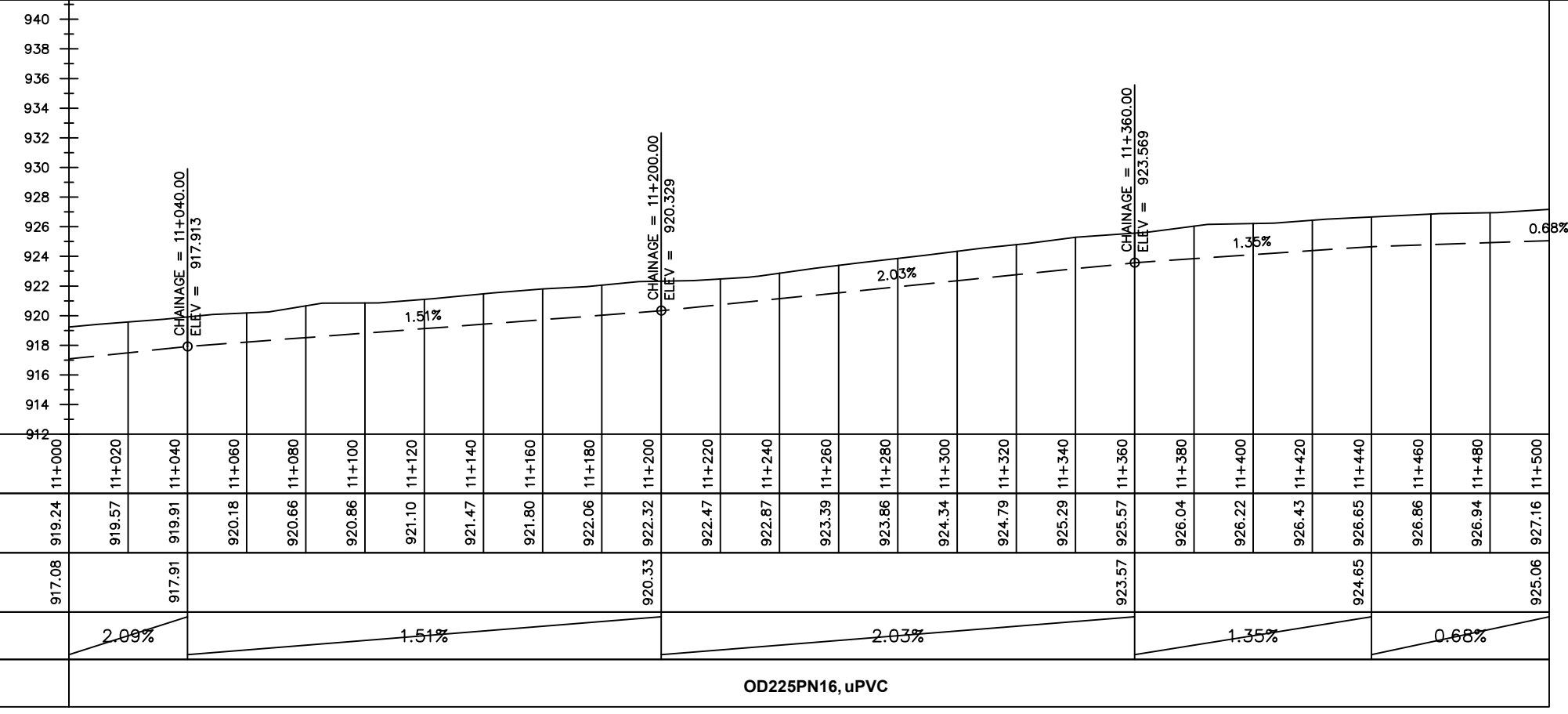
REVISIONS :

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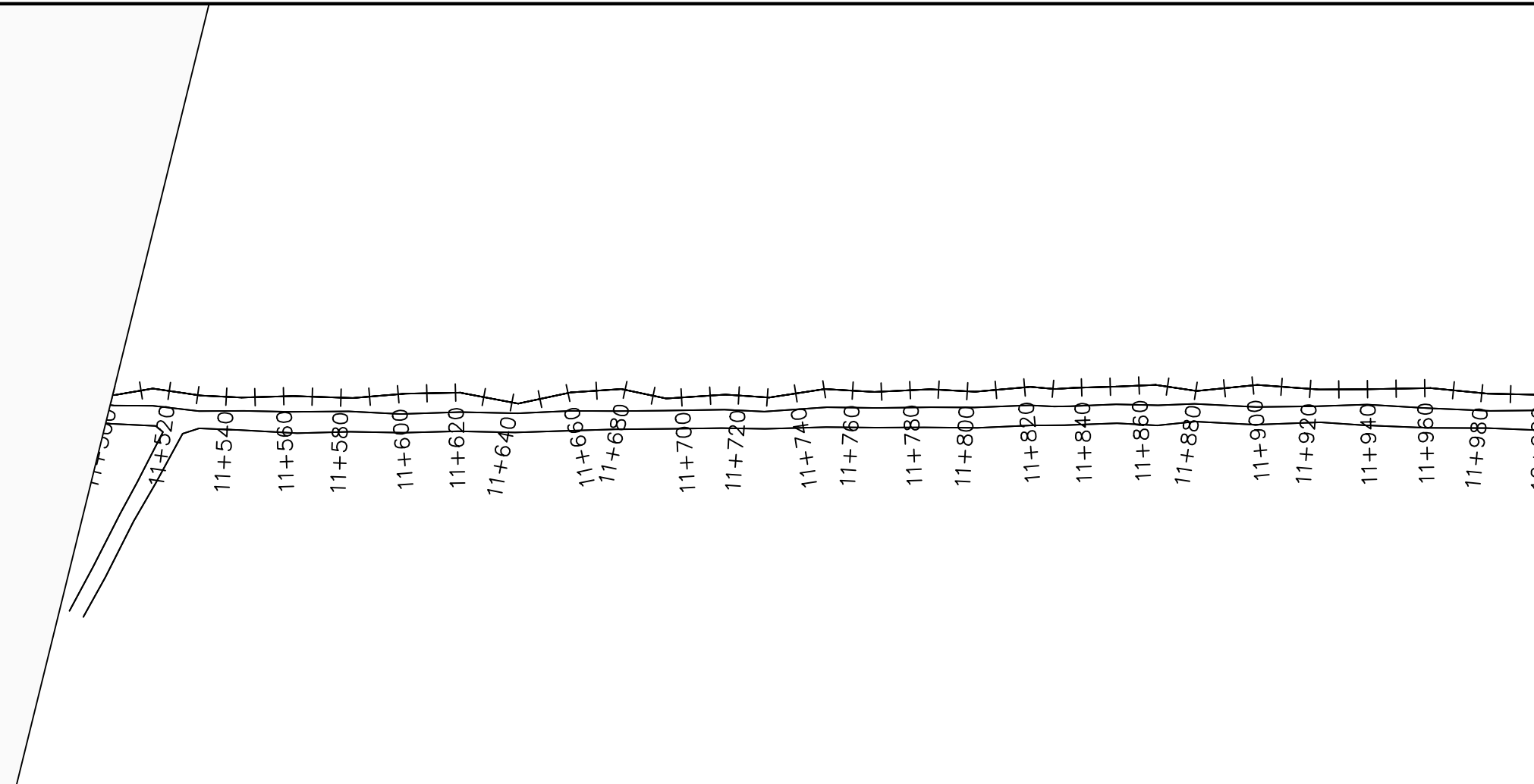
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TRANSMISSION MAIN 1 (OFFAKA-JUNC TO NDIRIBA-TANK)
11+000 - 11+500

Surveyed by:	R.K
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Scale:	1:2000
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Chainages (m)	Ground Levels (masl)	Invert Levels (masl)	Slope (%)	Pipe Details
11+000	919.24	917.08	2.09%	OD225PN16, uPVC
11+020	919.57			
11+040	919.91	917.91	1.51%	
11+060	920.18			
11+080	920.66			
11+100	920.86		2.03%	
11+120	921.10			
11+140	921.47		1.35%	
11+160	921.80			
11+180	922.06		0.68%	
11+200	922.32	920.33		
11+220	922.47			
11+240	922.87			
11+260	923.39			
11+280	923.86			
11+300	924.34			
11+320	924.79			
11+340	925.29			
11+360	925.57	923.57		
11+380	926.04			
11+400	926.22			
11+420	926.43			
11+440	926.65	924.65		
11+460	926.86			
11+480	926.94			
11+500	927.16	925.06		



LEGEND

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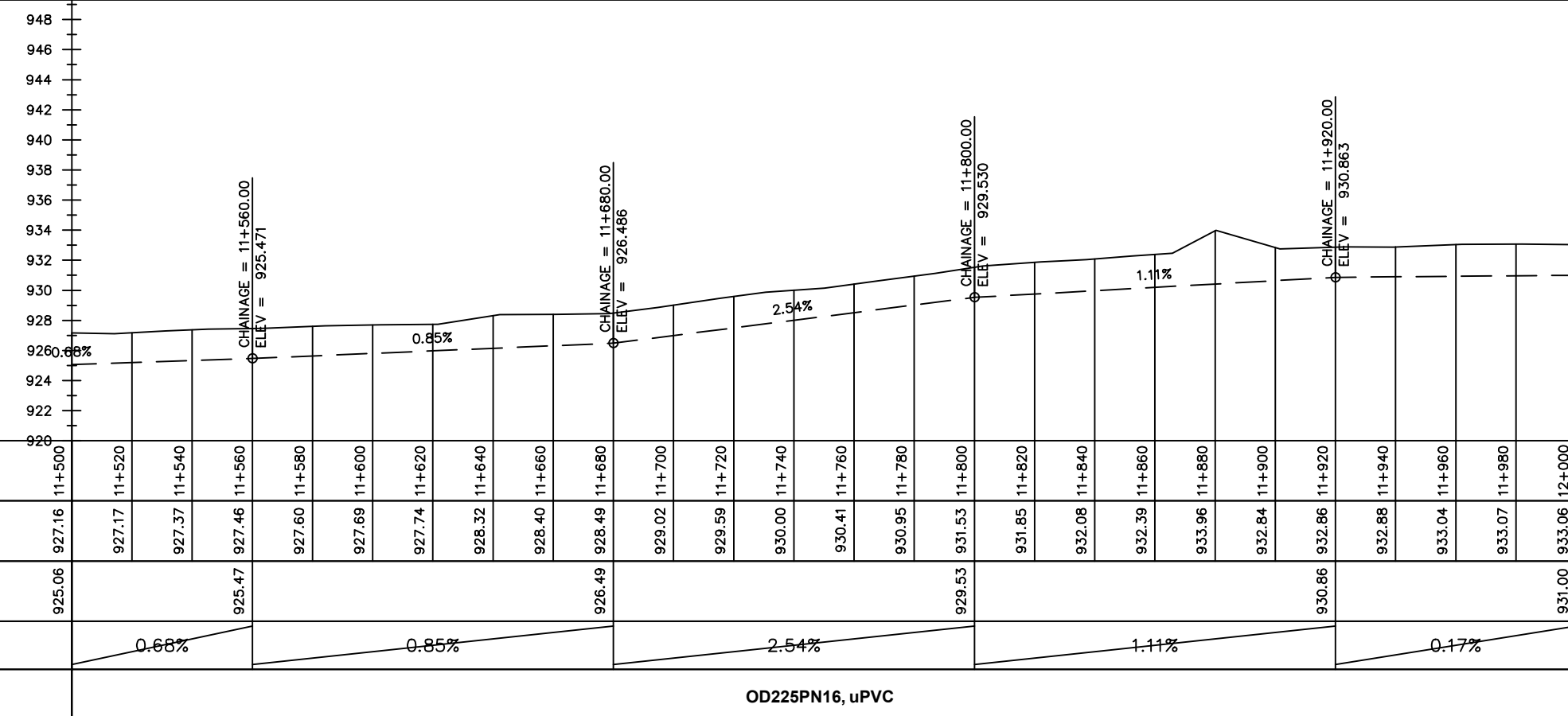
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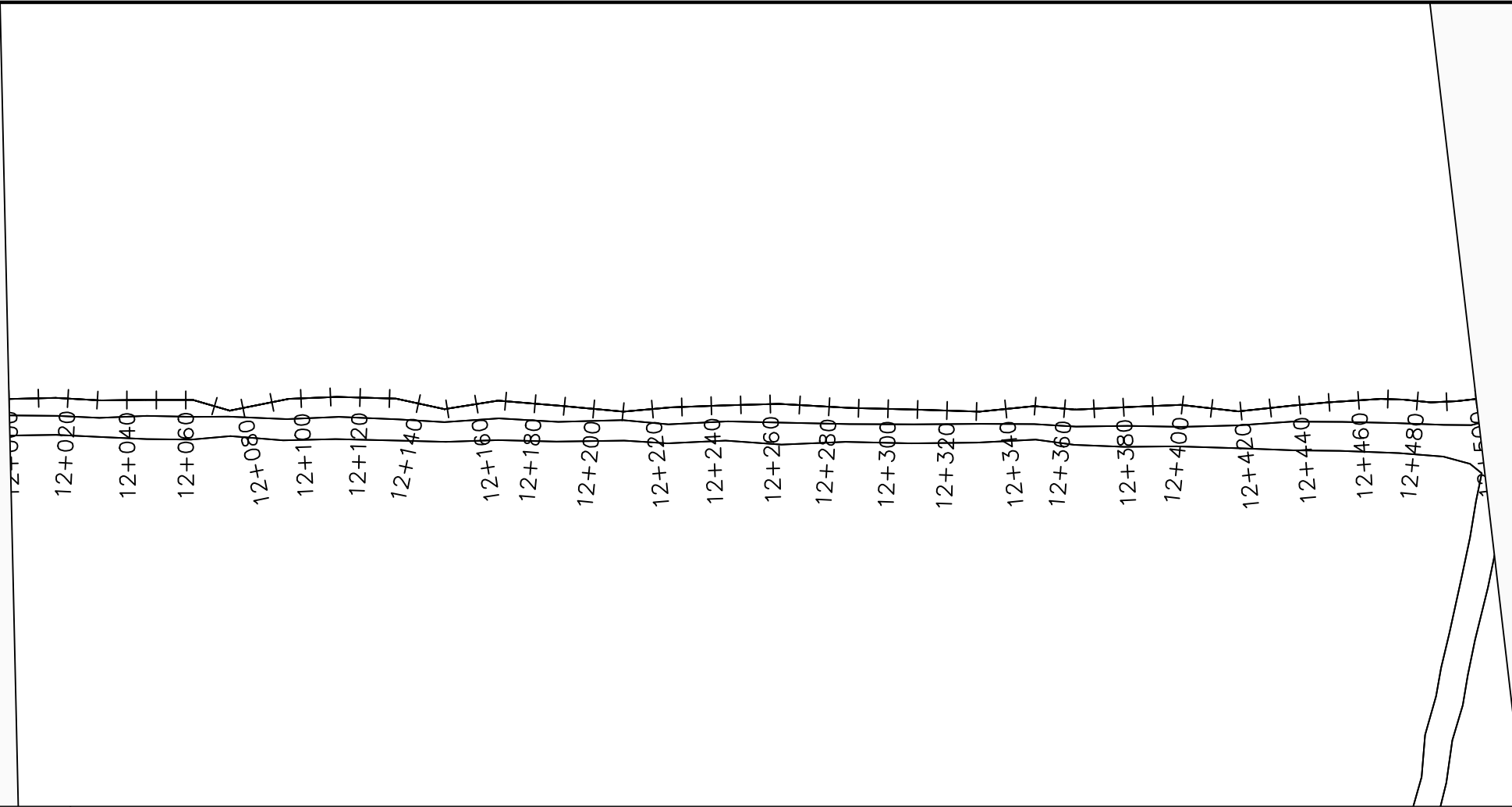
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TRANSMISSION MAIN 1 (OFFAKA-JUNC TO NDIRIBA-TANK)
11+500 - 12+000

Surveyed by:	R.K
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LEGEND

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- Invert Level
- AV Air Valve
- WO Washout
- Node detail No.

0 2000 4000

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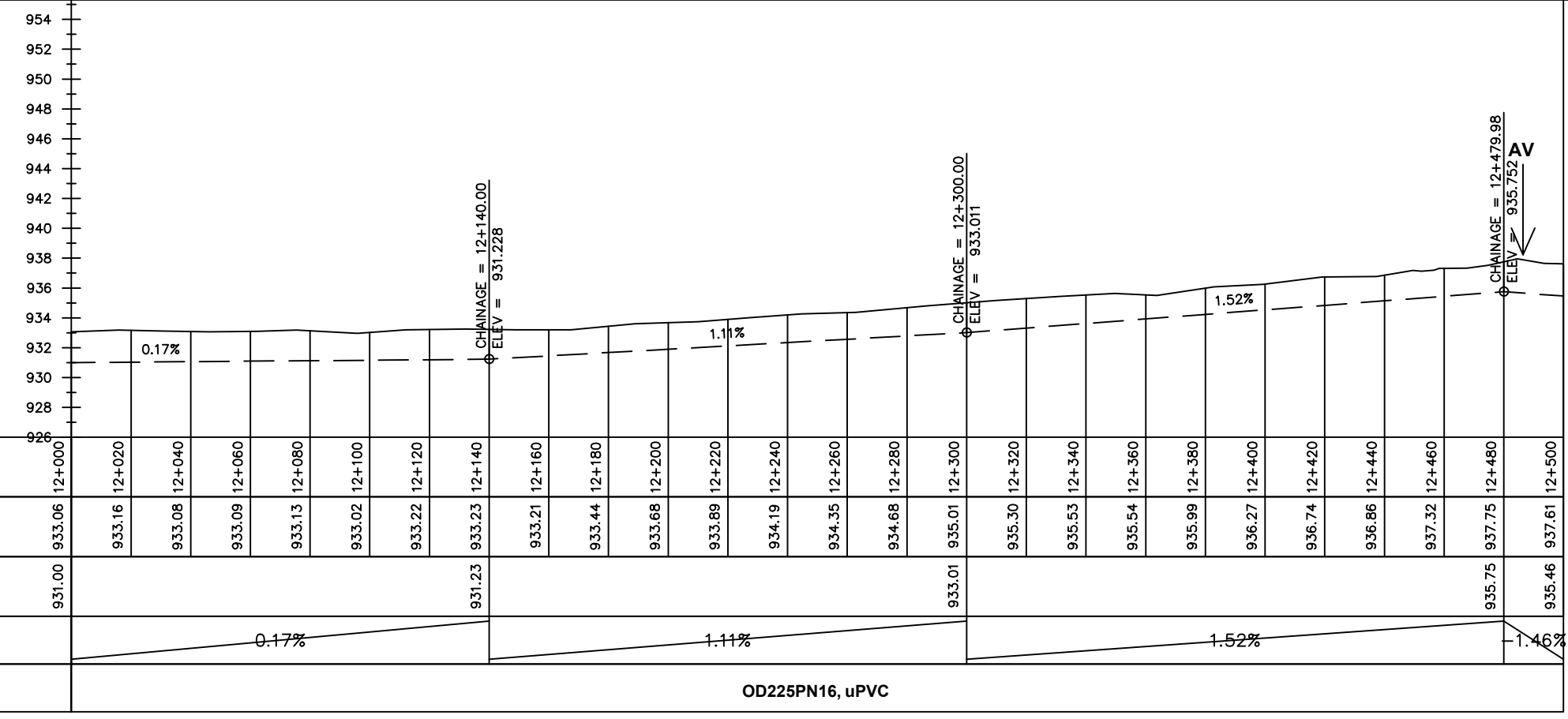
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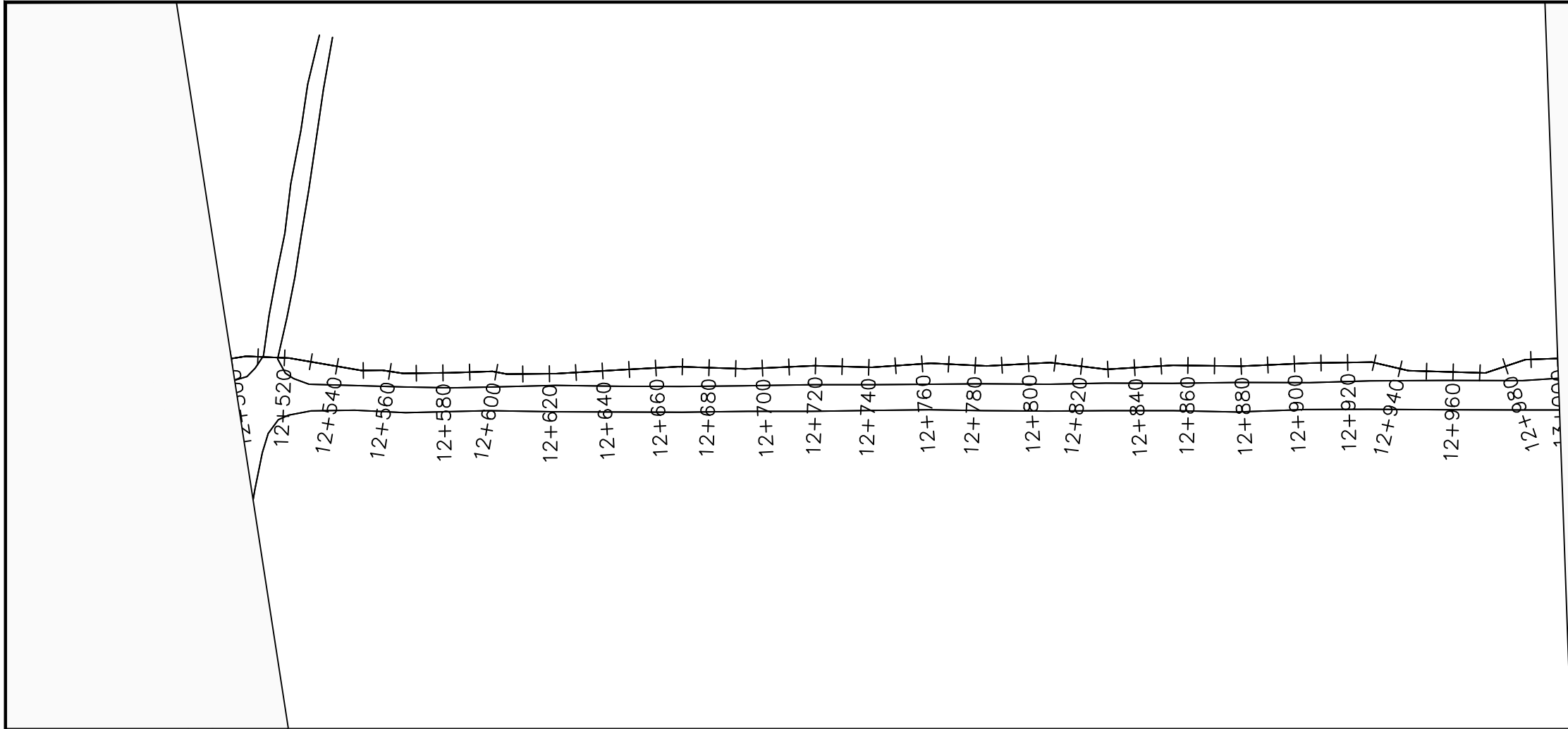
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DRAWING TITLE :

TRANSMISSION MAIN 1 (OFFAKA-JUNC TO NDIRIBA-TANK)
12+000 - 12+500

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LEGEND

Plan

- Transmission Main
- Distribution Main
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Profile

- Ground Level
- Invert Level
- AV Air Valve
- WO Washout
- Node detail No.

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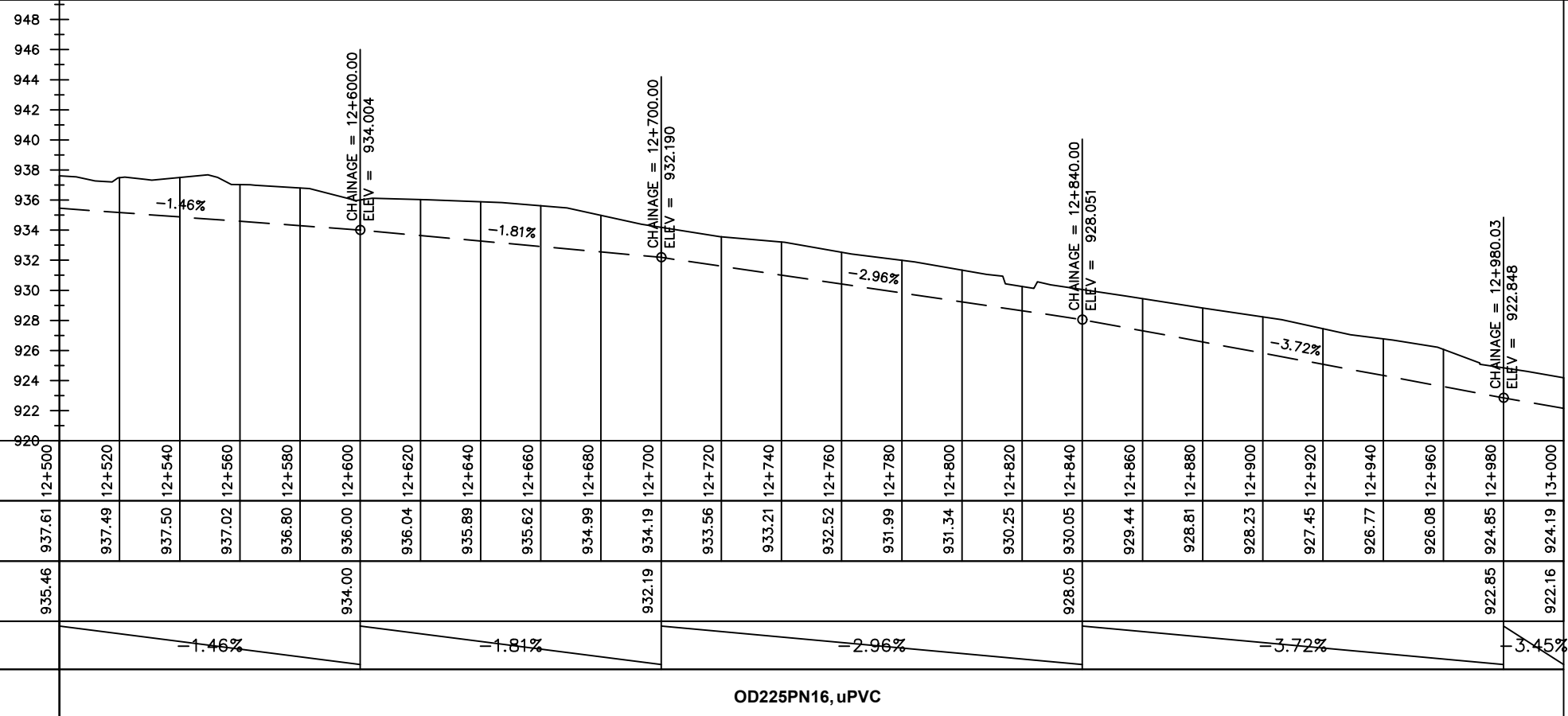
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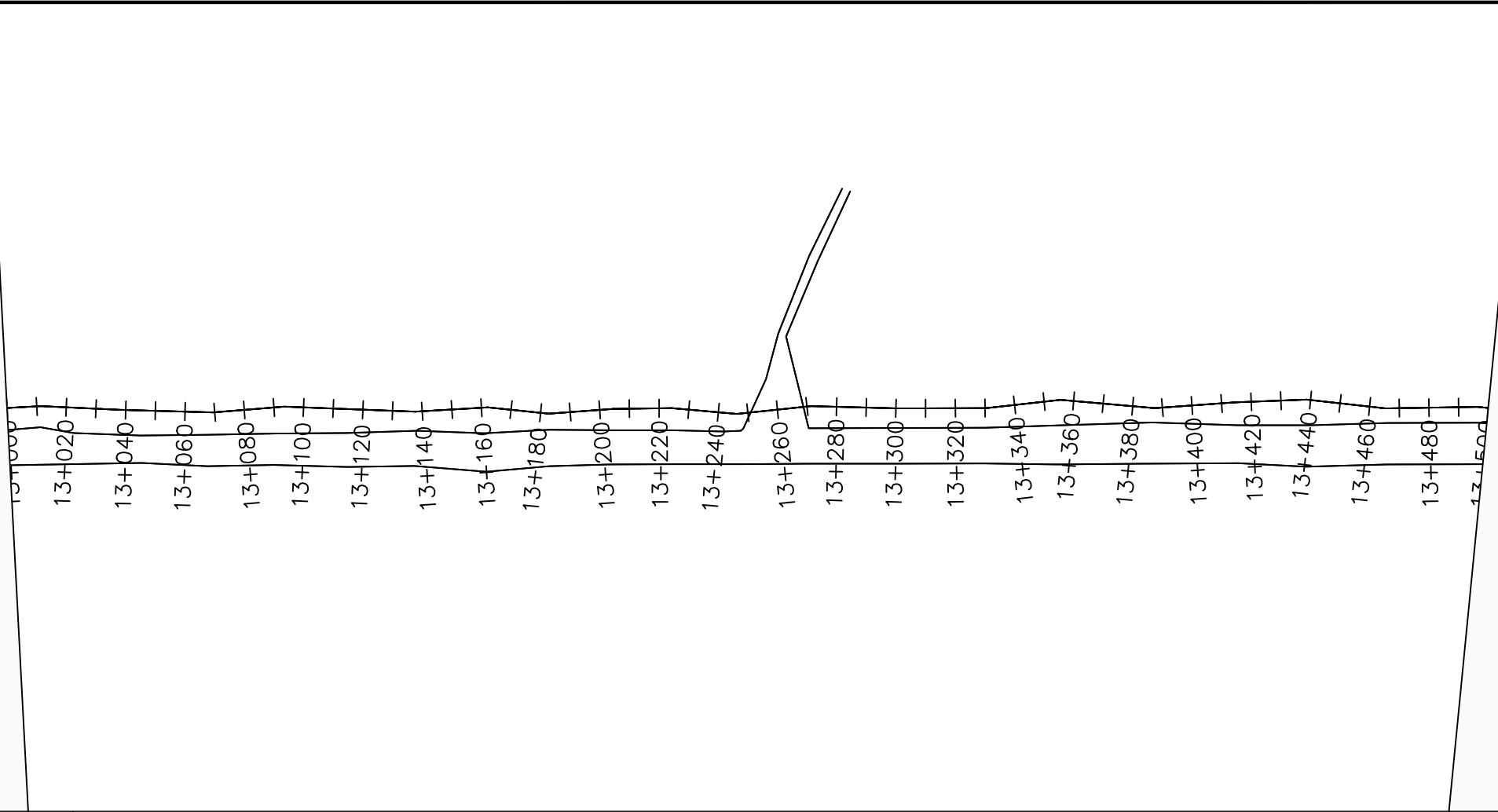
DRAWING TITLE :

TRANSMISSION MAIN 1 (OFFAKA-JUNC TO NDIRIBA-TANK)
13+000 - 12+500

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Chainages (m)	Ground Levels (masl)	Invert Levels (masl)	Slope (%)	Pipe Details
12+500	937.61	935.46	-1.46%	OD225PN16, uPVC
12+520	937.49			
12+540	937.50			
12+560	937.02			
12+580	936.80			
12+600	936.00	934.00	-1.81%	
12+620	936.04			
12+640	935.89			
12+660	935.62			
12+680	934.99			
12+700	934.19	932.19	-2.96%	
12+720	933.56			
12+740	933.21			
12+760	932.52			
12+780	931.99			
12+800	931.34			
12+820	930.25			
12+840	930.05	928.05	-3.72%	
12+860	929.44			
12+880	928.81			
12+900	928.23			
12+920	927.45			
12+940	926.77			
12+960	926.08			
12+980	924.85	922.85	-3.45%	
13+000	924.19	922.16		



LEGEND

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NYAGAK WATER SUPPLY AND SANITATION SYSTEM

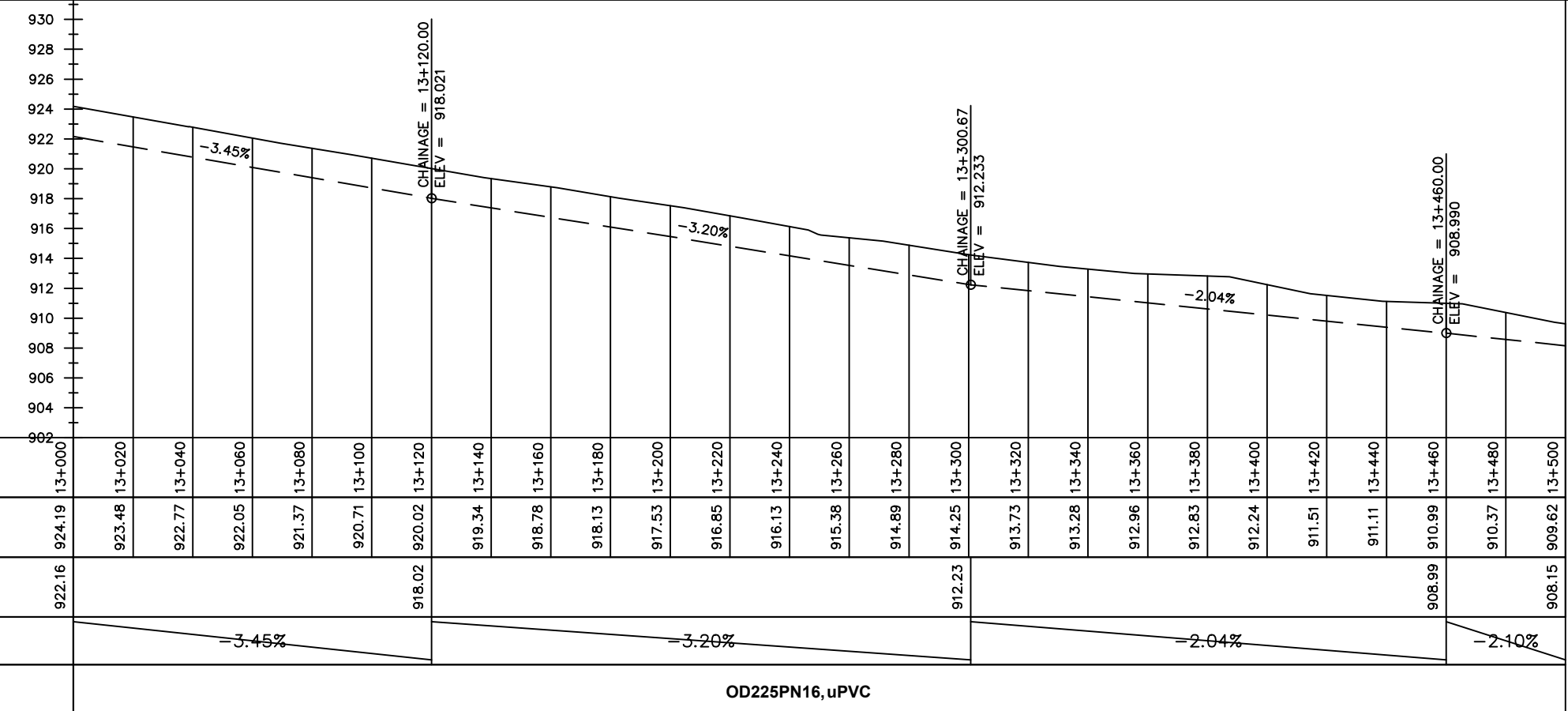
REVISIONS :

No	Date	Description

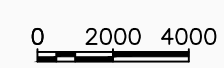
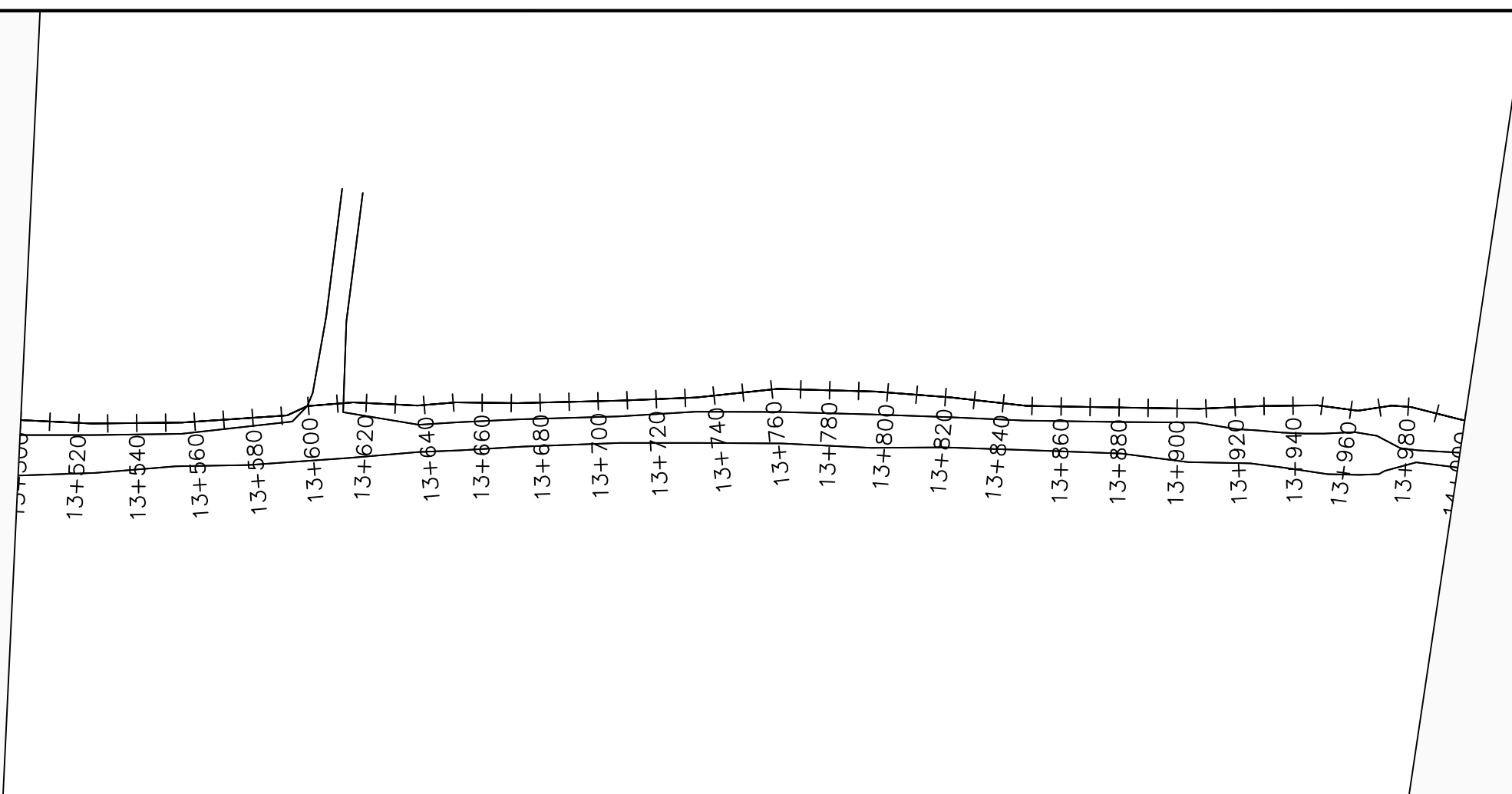
DRAWING TITLE :

TRANSMISSION MAIN 1 (OFFAKA-JUNC TO NDIRIBA-TANK)
13+000 - 13+500

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Date:	January 2023
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Scale:	1:2000
Sheet No.:	27 of 36



Chainages (m)	Ground Levels (masl)	Invert Levels (masl)	Slope (%)	Pipe Details
13+000	924.19	922.16	-3.45%	OD225PN16, uPVC
13+020	923.48			
13+040	922.77		-3.20%	OD225PN16, uPVC
13+060	922.05			
13+080	921.37		-2.04%	OD225PN16, uPVC
13+100	920.71			
13+120	920.02	918.02	-2.10%	OD225PN16, uPVC
13+140	919.34			
13+160	918.78			
13+180	918.13			
13+200	917.53			
13+220	916.85			
13+240	916.13			
13+260	915.38			
13+280	914.89			
13+300	914.25	912.23		
13+320	913.73			
13+340	913.28			
13+360	912.96			
13+380	912.83			
13+400	912.24			
13+420	911.51			
13+440	911.11			
13+460	910.99	908.99		
13+480	910.37			
13+500	909.62	908.15		



LEGEND

Plan

- Transmission Main
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Profile

- Ground Level
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NYAGAK WATER SUPPLY AND SANITATION SYSTEM

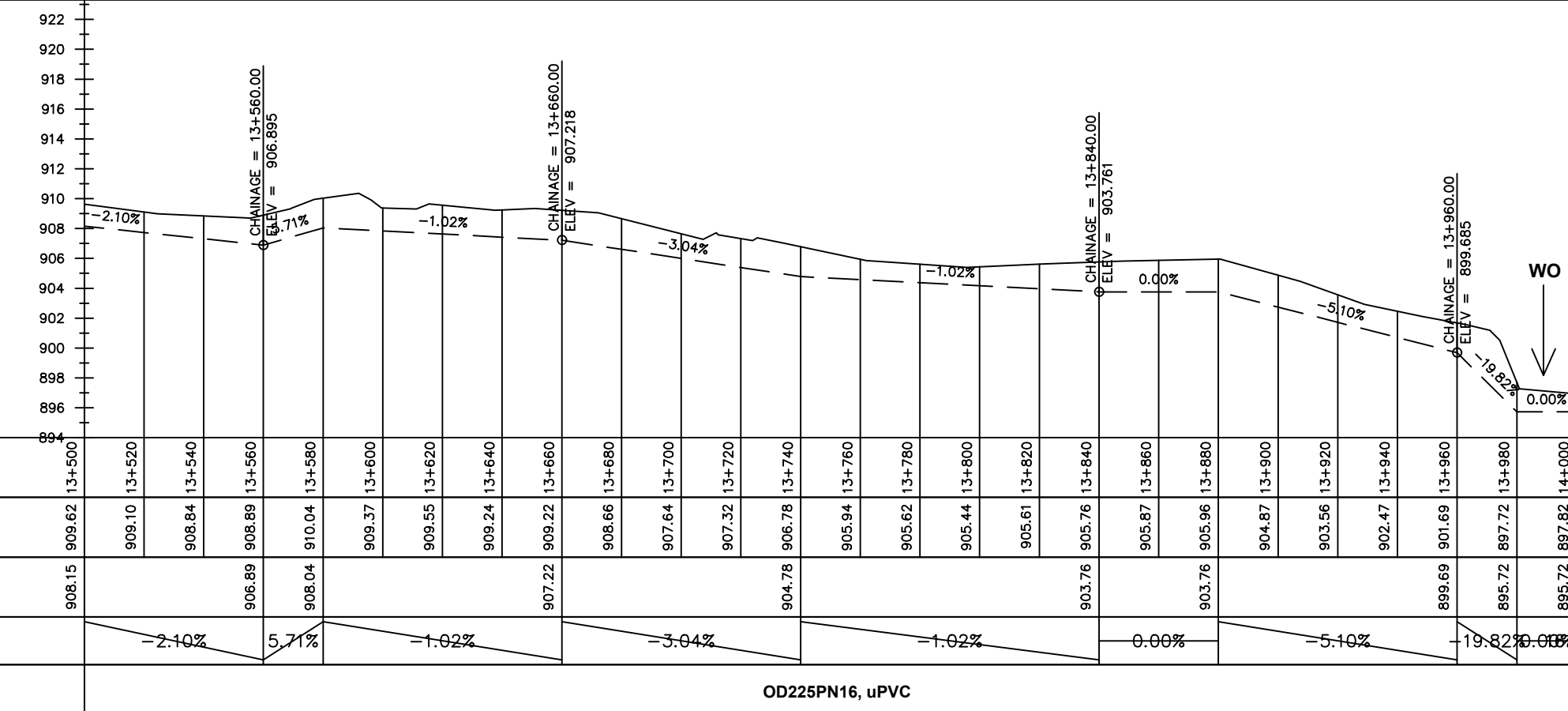
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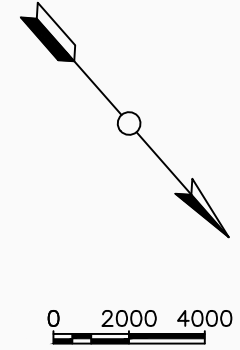
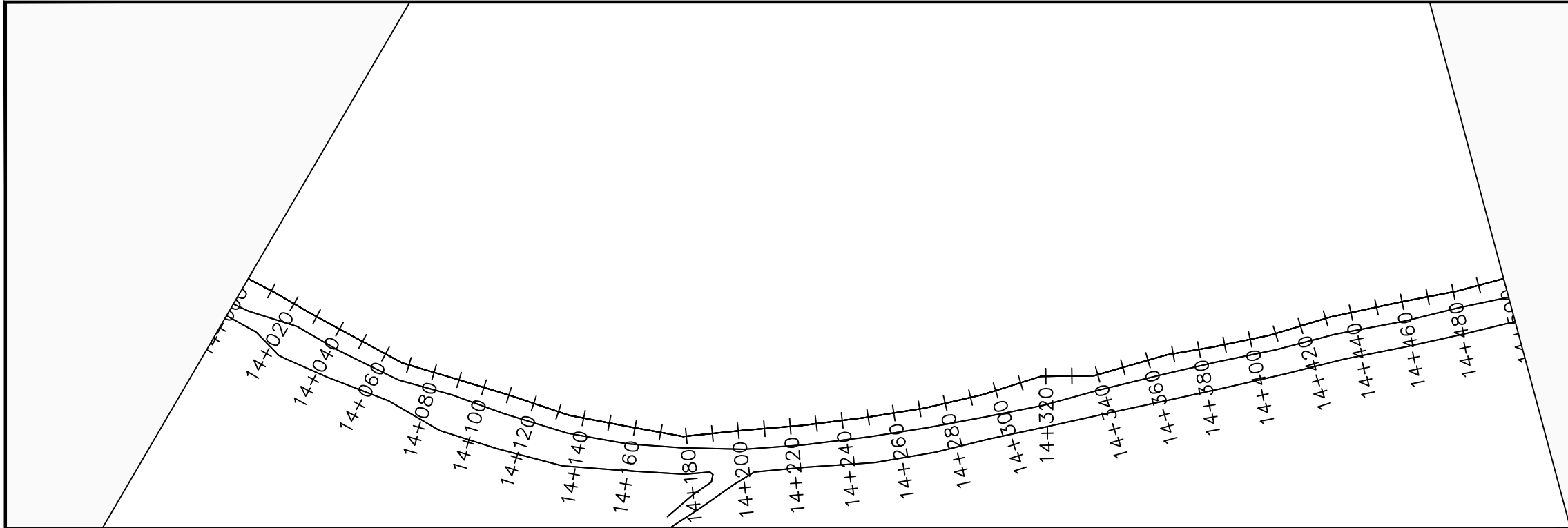
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TRANSMISSION MAIN 1 (OFFAKA-JUNC TO NDIRIBA-TANK)
13+500 - 14+000

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Date:	January 2023
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Chainages (m)	Ground Levels (masl)	Invert Levels (masl)	Slope (%)	Pipe Details
13+500	909.62	908.15		OD225PN16, uPVC
13+520	909.10		-2.10%	
13+540	908.84			
13+560	908.89	906.89	5.71%	
13+580	910.04	908.04		
13+600	909.37			
13+620	909.55		-1.02%	
13+640	909.24			
13+660	909.22	907.22		
13+680	908.66			
13+700	907.64		-3.04%	
13+720	907.32			
13+740	906.78	904.78		
13+760	905.94			
13+780	905.62			
13+800	905.44		-1.02%	
13+820	905.61			
13+840	905.76	903.76	0.00%	
13+860	905.87			
13+880	905.96	903.76		
13+900	904.87			
13+920	903.56		-5.10%	
13+940	902.47			
13+960	901.69	899.69		
13+980	897.72	895.72	-19.82%	
14+000	897.82	895.72	0.00%	



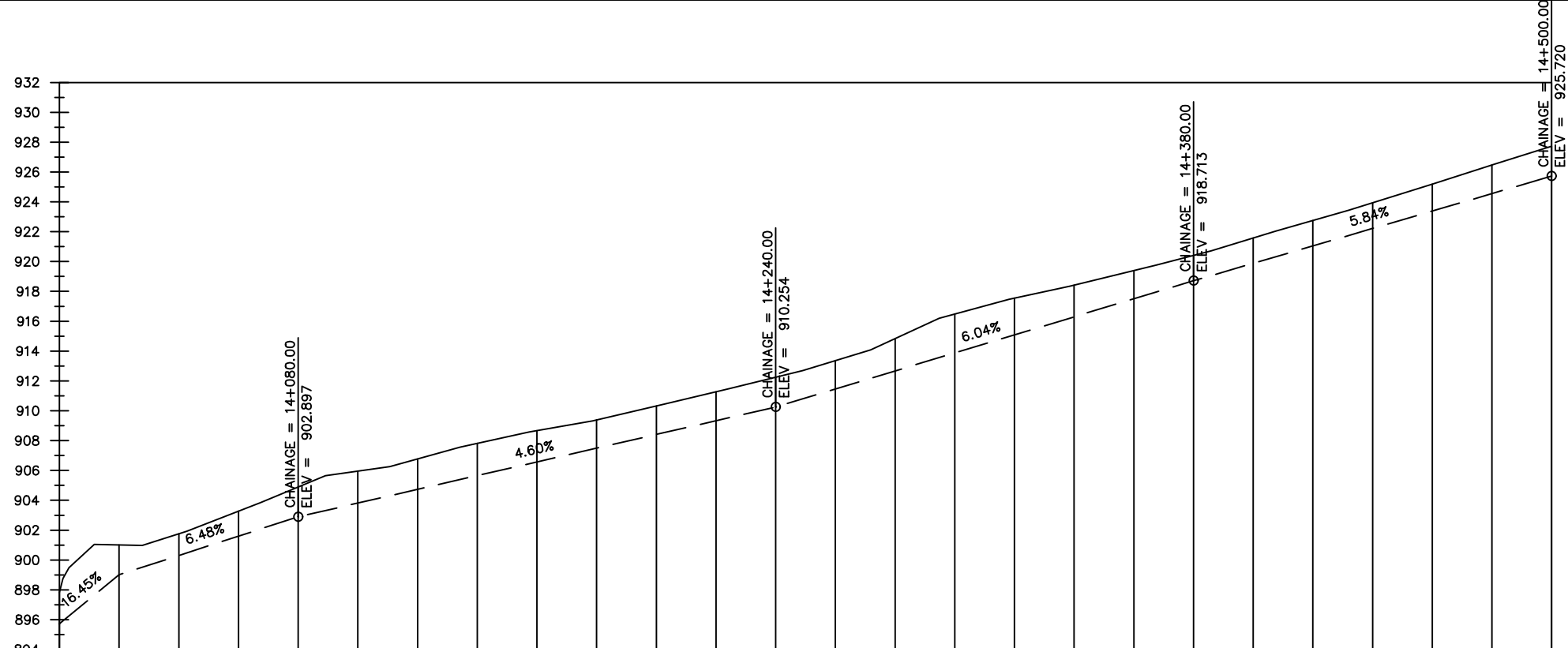
LEGEND

Plan

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- Node detail No.



Chainages (m)	14+000	14+020	14+040	14+060	14+080	14+100	14+120	14+140	14+160	14+180	14+200	14+220	14+240	14+260	14+280	14+300	14+320	14+340	14+360	14+380	14+400	14+420	14+440	14+460	14+480	14+500		
Ground Levels (masl)	897.82	901.01	901.75	903.27	904.90	905.96	906.77	907.82	908.67	909.38	910.33	911.28	912.25	913.36	914.84	916.48	917.55	918.41	919.39	920.41	921.58	922.75	923.94	925.19	926.47	927.72		
Invert Levels (masl)	895.72	899.01			902.90								910.25							918.71						925.72		
Slope (%)	0.00%	6.45%	6.48%				4.60%							6.04%							5.84%					5.35%		
Pipe Details	OD225PN16, uPVC																											

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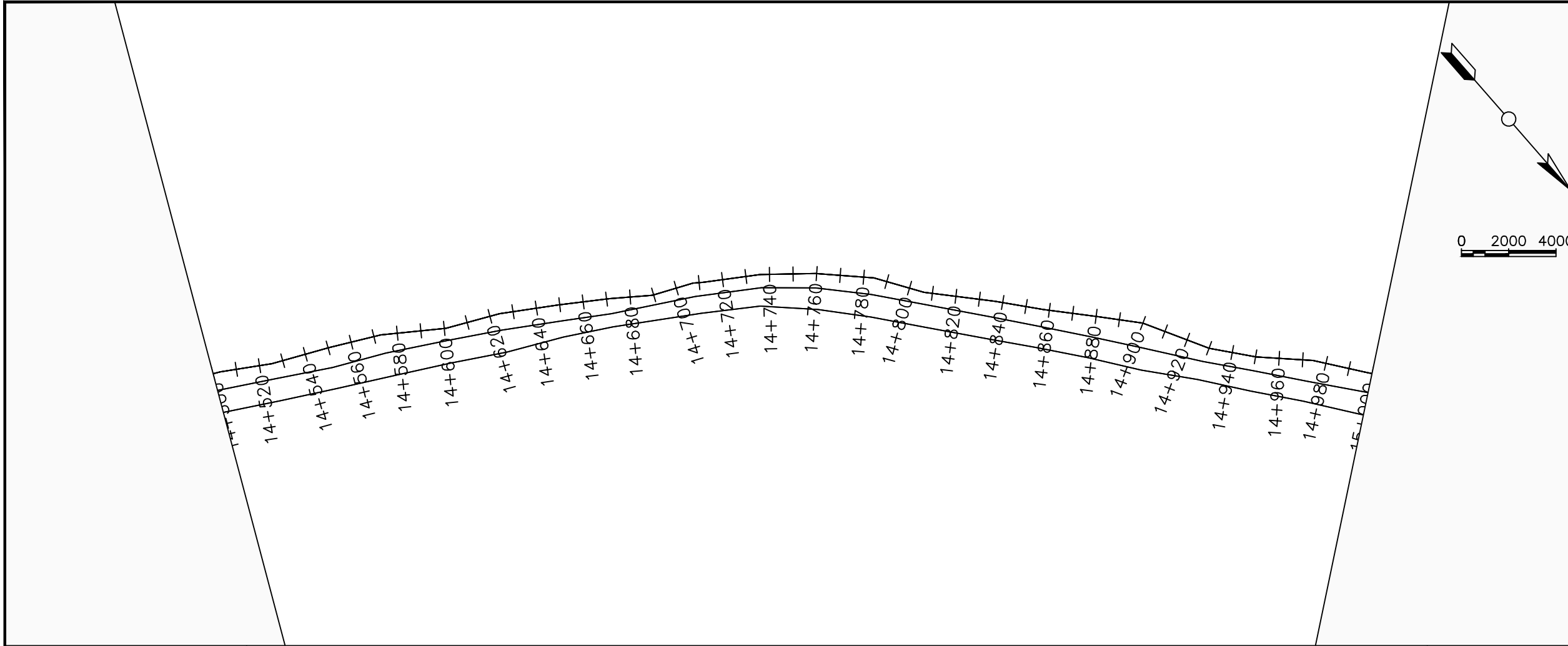
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DRAWING TITLE :

TRANSMISSION MAIN 1 (OFFAKA-JUNC TO NDIRIBA-TANK)
14+000 - 14+500

Surveyed by:	R.K
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LEGEND

Plan

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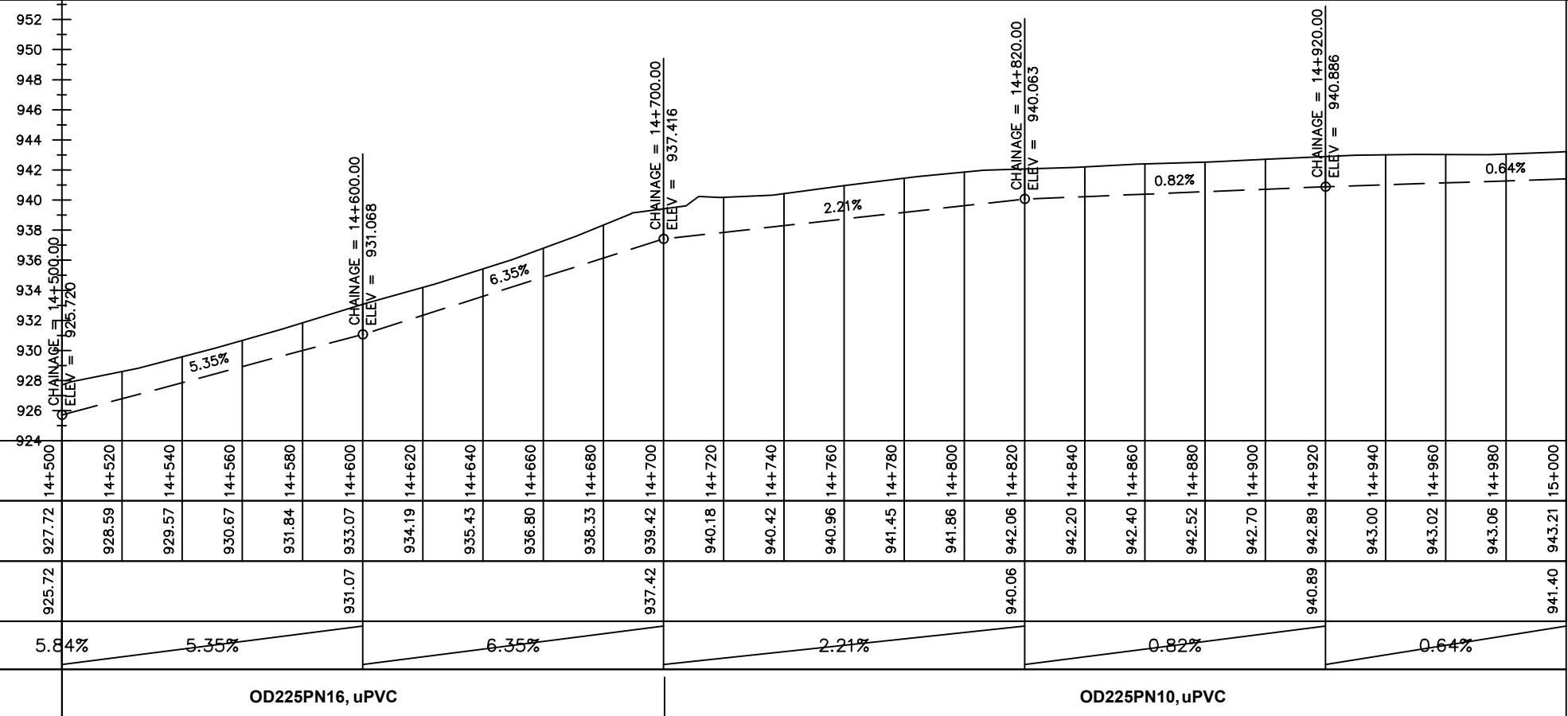
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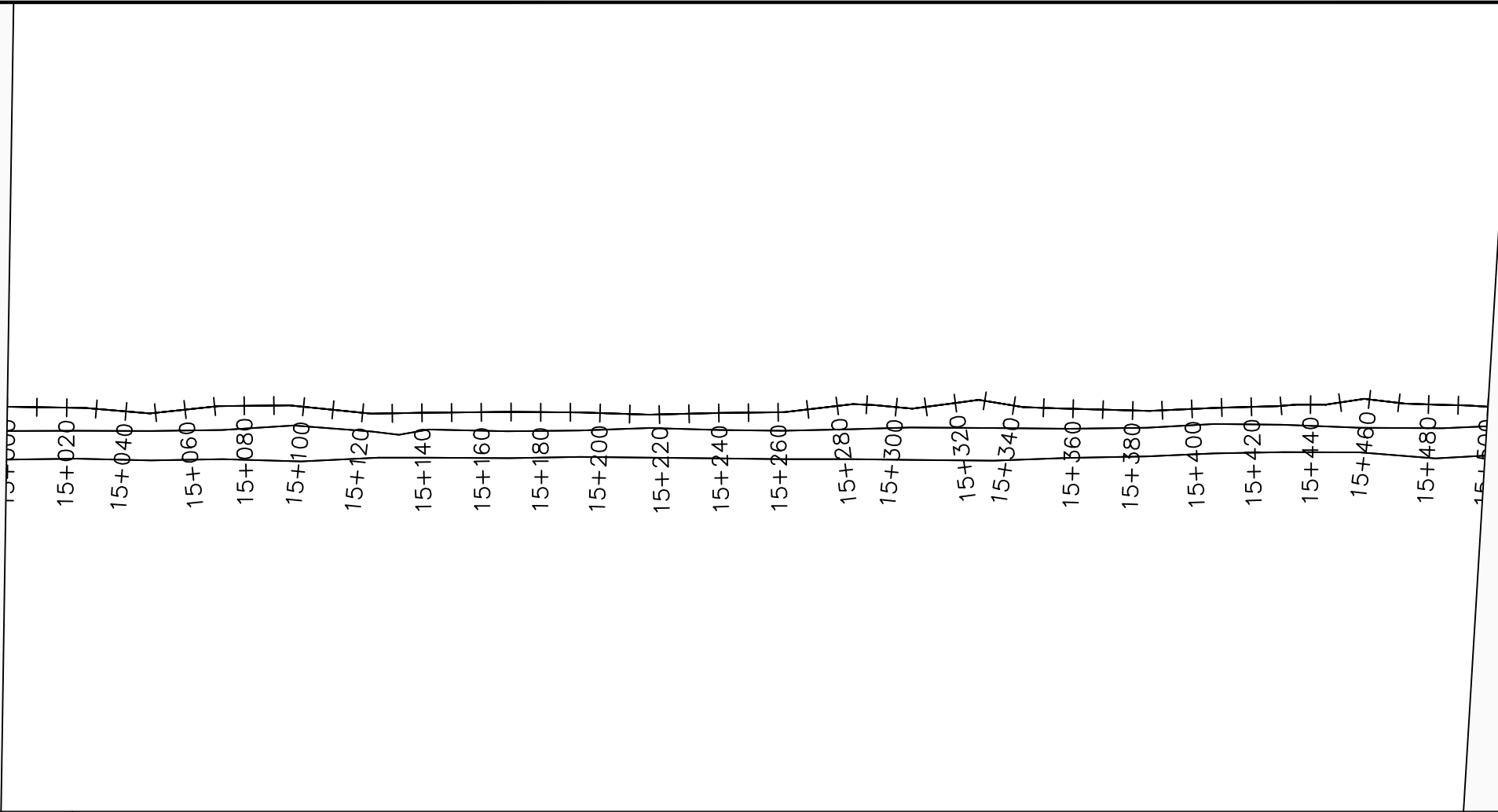
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DRAWING TITLE :
TRANSMISSION MAIN 1 (OFFAKA-JUNC TO NDIRIBA-TANK)
14+500 - 15+000

Surveyed by:	R.K
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Date:	January 2023
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LEGEND

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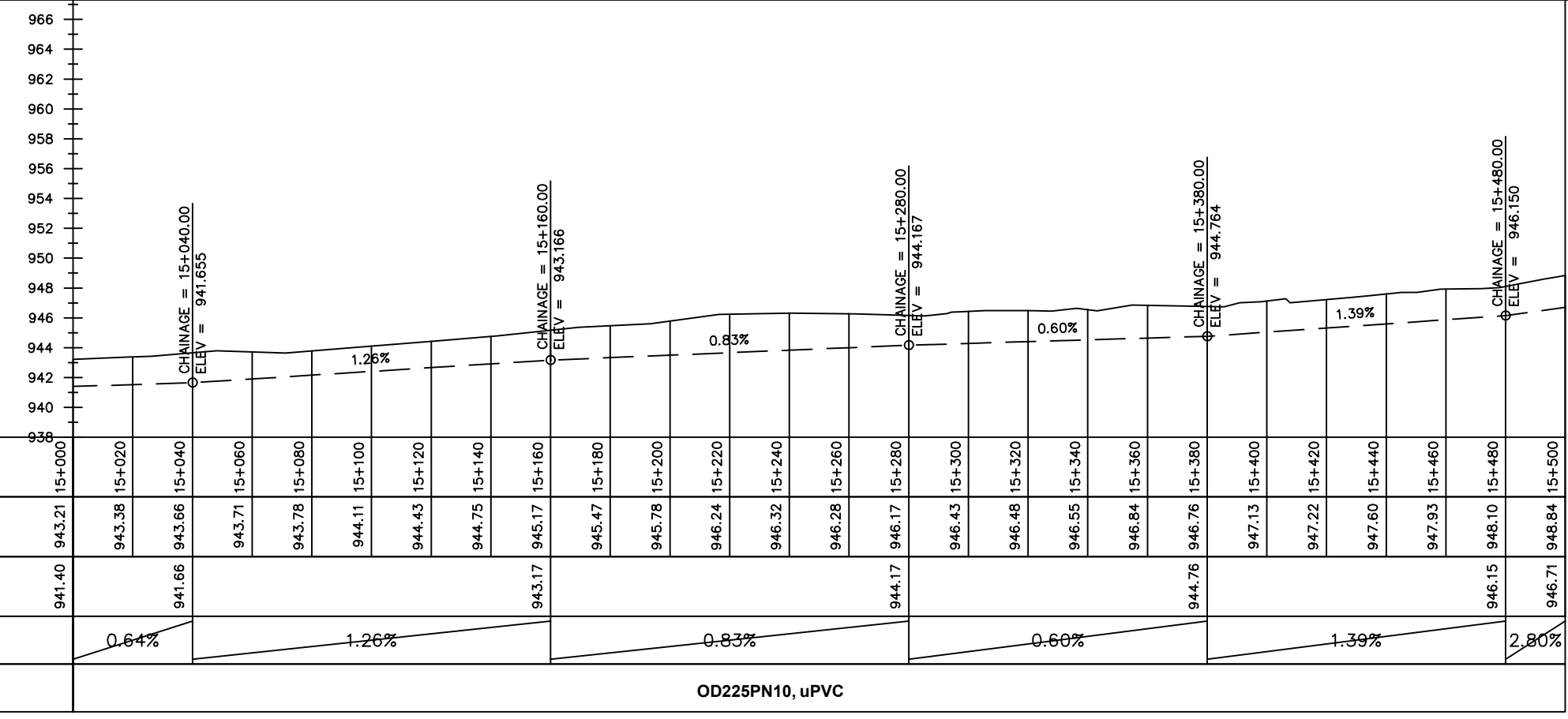
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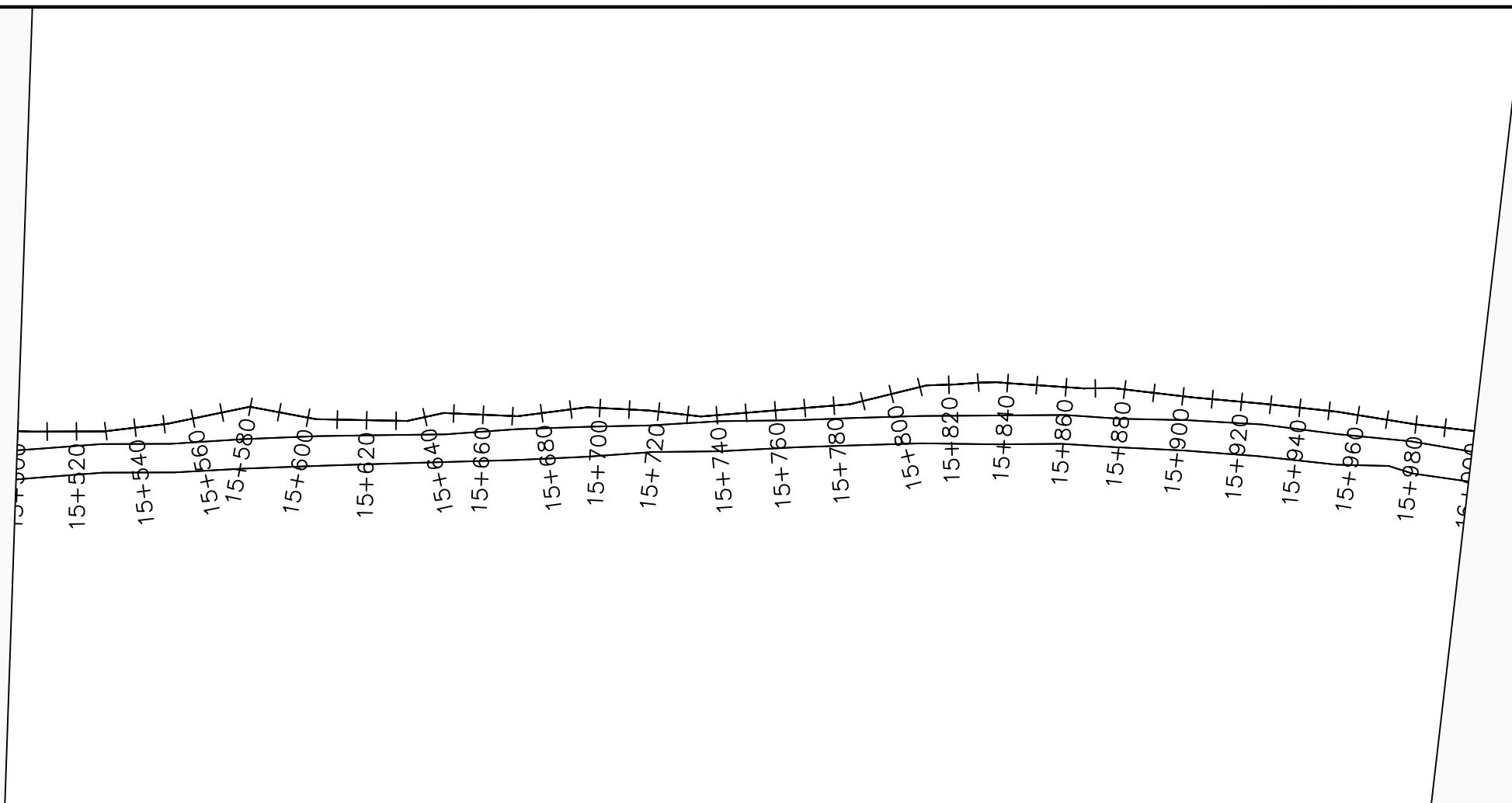
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TRANSMISSION MAIN 1 (OFFAKA-JUNC TO NDIRIBA-TANK)
14+500 - 15+000

Surveyed by:	R.K
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LEGEND

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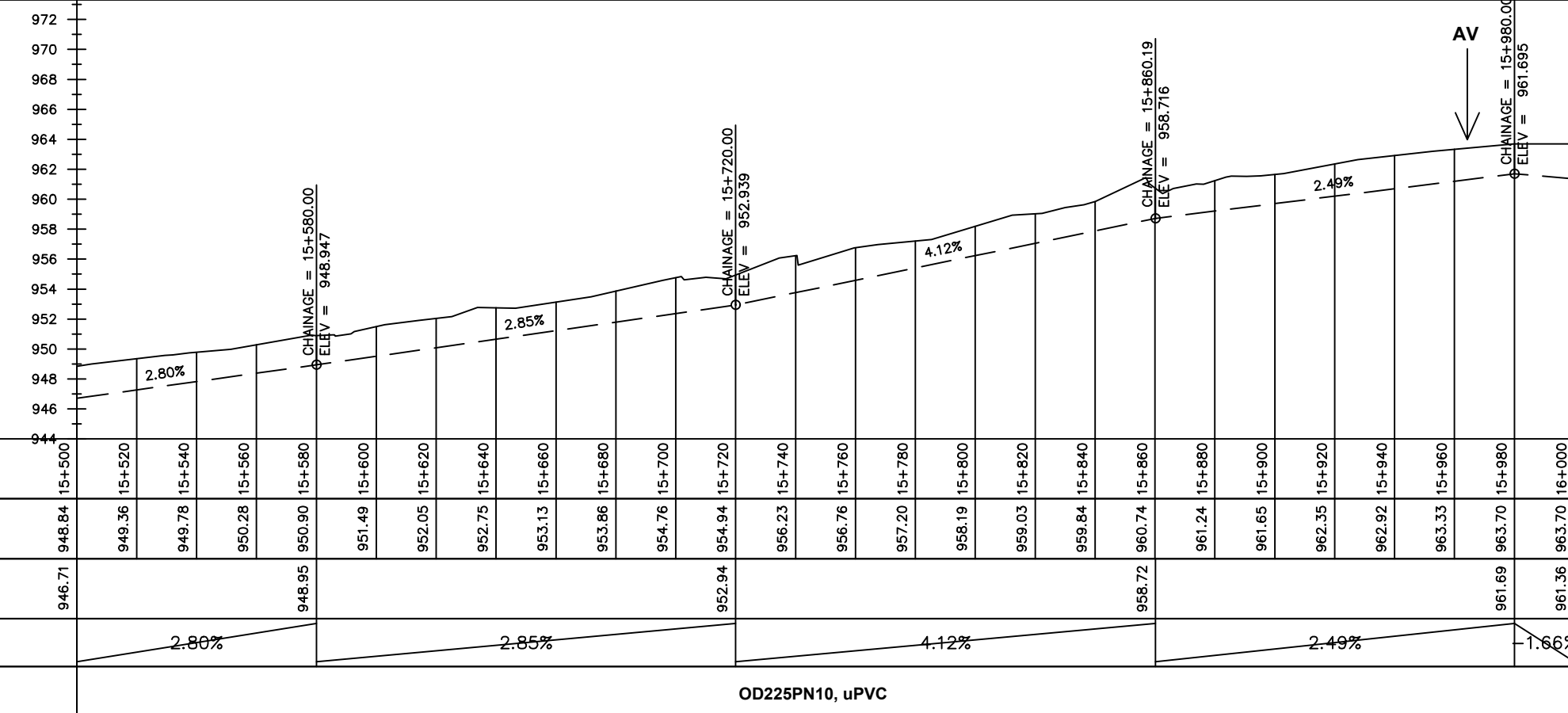
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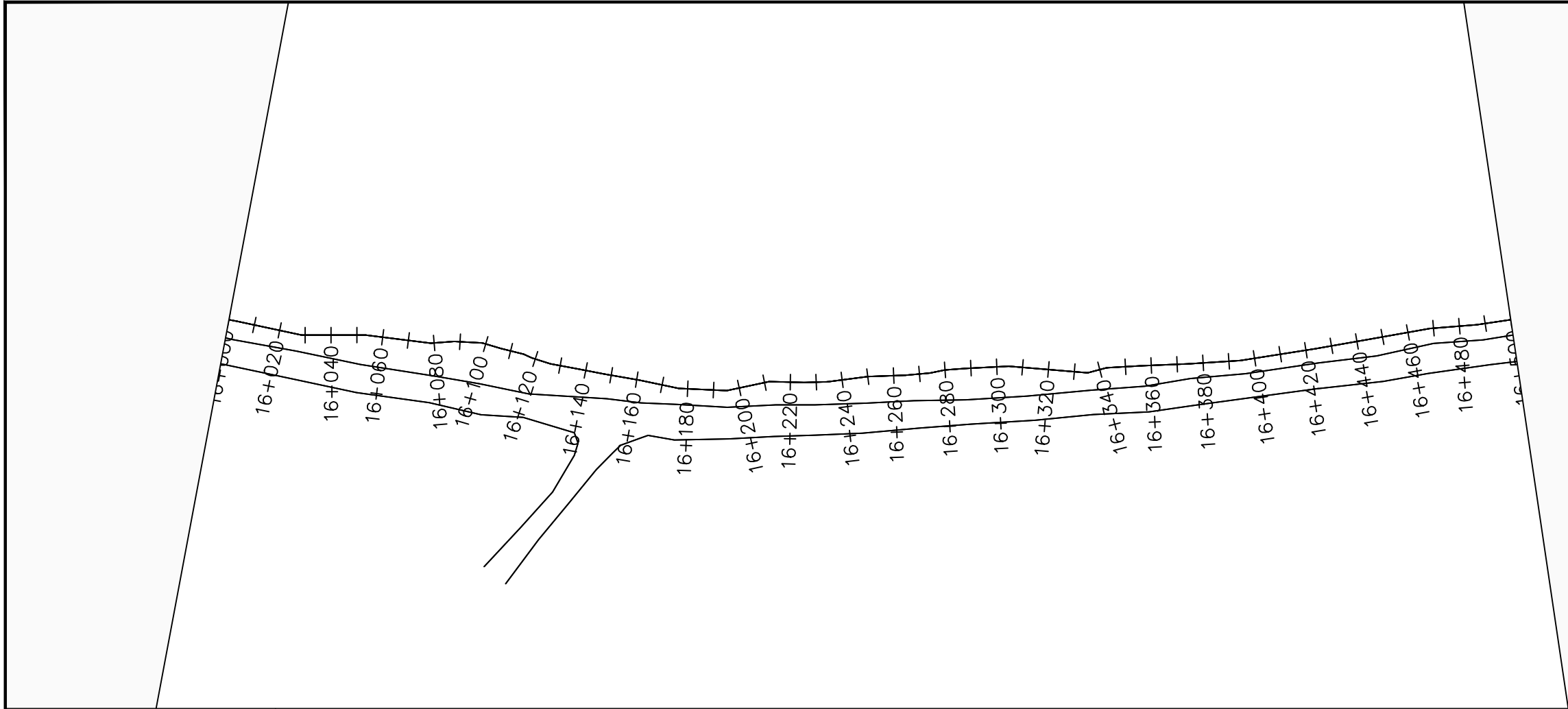
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TRANSMISSION MAIN 1 (OFFAKA-JUNC TO NDIRIBA-TANK)
15+500 - 16+000

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Chainages (m)	15+500	15+520	15+540	15+560	15+580	15+600	15+620	15+640	15+660	15+680	15+700	15+720	15+740	15+760	15+780	15+800	15+820	15+840	15+860	15+880	15+900	15+920	15+940	15+960	15+980	16+000		
Ground Levels (masl)	948.84	949.36	949.78	950.28	950.90	951.49	952.05	952.75	953.13	953.86	954.76	954.94	956.23	956.76	957.20	958.19	959.03	959.84	960.74	961.24	961.65	962.35	962.92	963.33	963.70	963.70		
Invert Levels (masl)	946.71				948.95							952.94							958.72						961.69	961.36		
Slope (%)		2.80%				2.85%							4.12%							2.49%					-1.66%			
Pipe Details	OD225PN10, uPVC																											



LEGEND

Plan

- Transmission Main
- Distribution Main
- Road
- Building
- Contours

Profile

- Ground Level
- Invert Level
- AV Air Valve
- WO Washout
- Node detail No.

CLIENT :

THE REPUBLIC OF UGANDA
MINISTRY OF WATER AND ENVIRONMENT

CO-FINANCED BY:

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IBRD • IDA | WORLD BANK GROUP

CONSULTANT :

Alliance Consultants Ltd
In Association with

Infra-Consult Ltd

PROJECT :

ALA-ORA WATER SUPPLY AND SANITATION PROJECT

NYAGAK WATER SUPPLY AND SANITATION SYSTEM

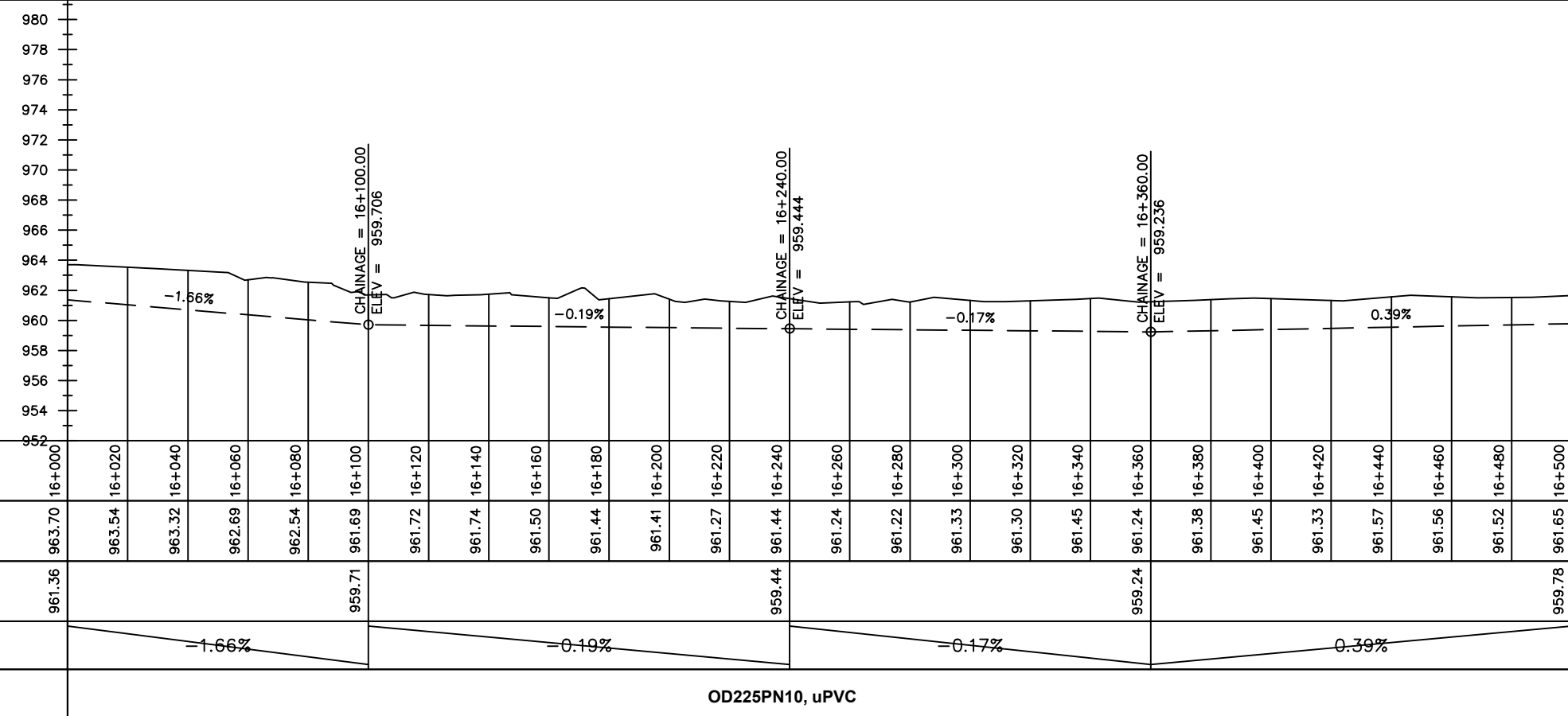
REVISIONS :

No	Date	Description

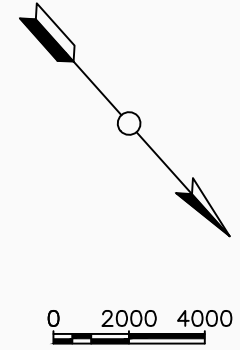
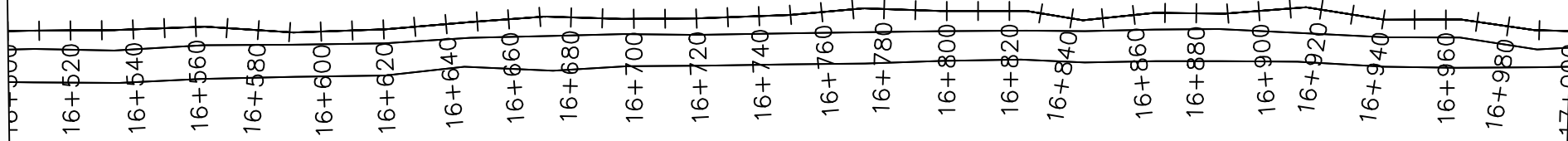
DRAWING TITLE :

TRANSMISSION MAIN 1 (OFFAKA-JUNC TO NDIRIBA-TANK)
16+000 - 16+500

Surveyed by:	R.K
Drawn by:	M.K
Designed by:	W.G.M
Checked by:	J.K.K
Date:	January 2023
DRG. No.:	NYA-GTM-001
Scale:	1:2000
Sheet No.:	33 of 36



Chainages (m)	16+000	16+020	16+040	16+060	16+080	16+100	16+120	16+140	16+160	16+180	16+200	16+220	16+240	16+260	16+280	16+300	16+320	16+340	16+360	16+380	16+400	16+420	16+440	16+460	16+480	16+500		
Ground Levels (masl)	963.70	963.54	963.32	962.69	962.54	961.69	961.72	961.74	961.50	961.44	961.41	961.27	961.44	961.24	961.22	961.33	961.30	961.45	961.24	961.38	961.45	961.33	961.57	961.56	961.52	961.65		
Invert Levels (masl)	961.36					959.71							959.44						959.24							959.78		
Slope (%)		-1.66%					-0.19%							-0.17%					0.39%									
Pipe Details	OD225PN10, uPVC																											



LEGEND

Plan

- Transmission Main
- Distribution Main
- Road
- Building
- Contours

Profile

- Ground Level
- Invert Level
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CLIENT :

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PROJECT :

ALA-ORA WATER SUPPLY AND SANITATION PROJECT

NYAGAK WATER SUPPLY AND SANITATION SYSTEM

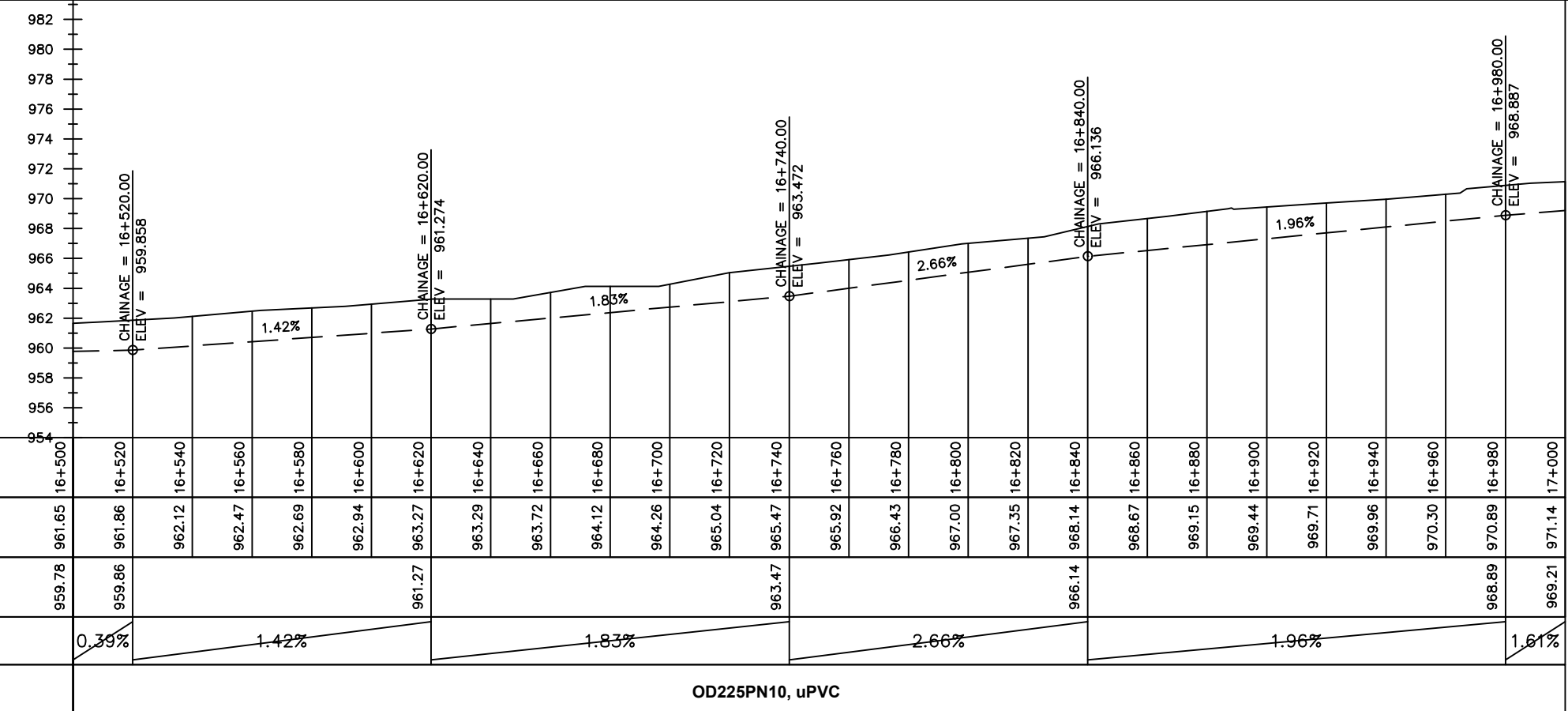
REVISIONS :

No	Date	Description

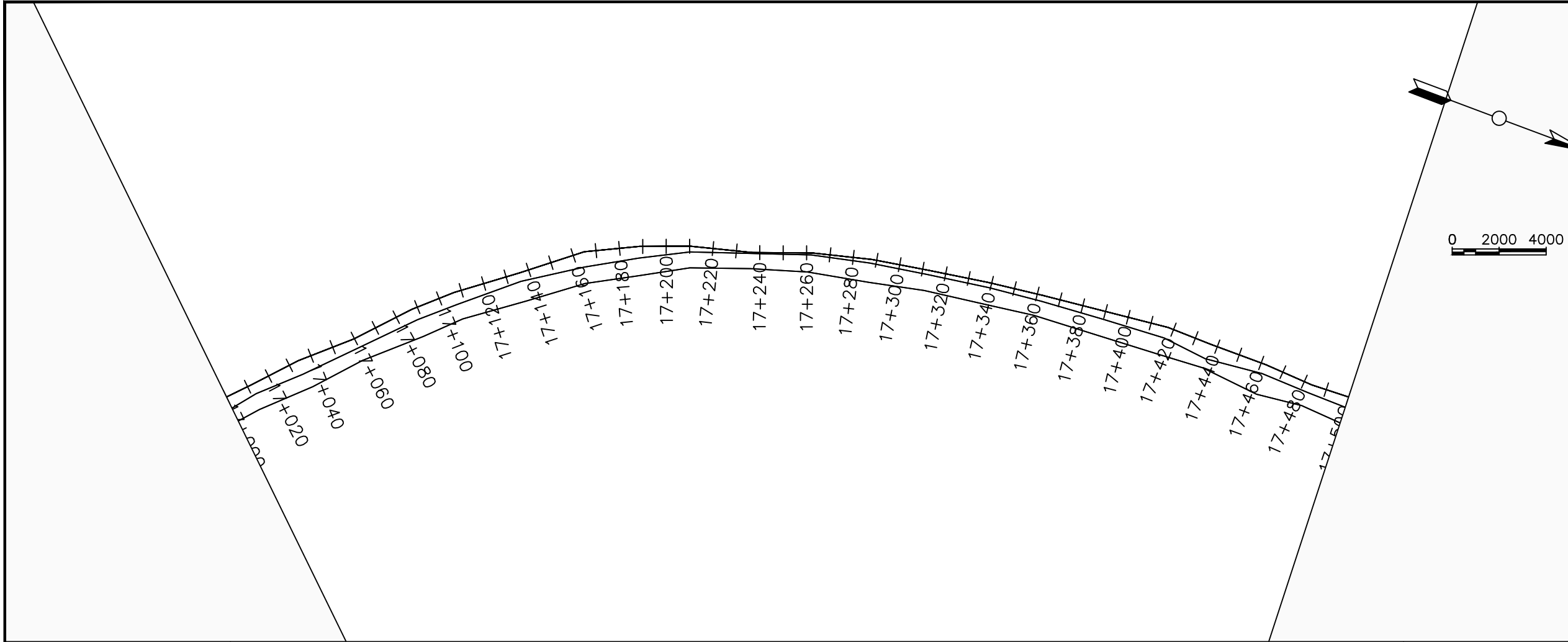
DRAWING TITLE :

TRANSMISSION MAIN 1 (OFFAKA-JUNC TO NDIRIBA-TANK)
16+500 - 17+000

Surveyed by:	R.K
Drawn by:	M.K
Designed by:	W.G.M
Checked by:	J.K.K
Date:	January 2023
DRG. No.:	NYA-GTM-001
Scale:	1:2000
Sheet No.:	34 of 36



Chainages (m)	Ground Levels (masl)	Invert Levels (masl)	Slope (%)	Pipe Details
16+500	961.65	959.78	0.39%	OD225PN10, uPVC
16+520	961.86	959.86		
16+540	962.12	961.27	1.42%	
16+560	962.47			
16+580	962.69	963.47	1.83%	
16+600	962.94			
16+620	963.27	963.47	2.66%	
16+640	963.29			
16+660	963.72	966.14	1.96%	
16+680	964.12			
16+700	964.26	968.89	1.61%	
16+720	965.04			
16+740	965.47	969.21		
16+760	965.92			
16+780	966.43			
16+800	967.00			
16+820	967.35			
16+840	968.14			
16+860	968.67			
16+880	969.15			
16+900	969.44			
16+920	969.71			
16+940	969.96			
16+960	970.30			
16+980	970.89			
17+000	971.14			



LEGEND

Plan

- Transmission Main
- Distribution Main
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Profile

- Ground Level
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CLIENT :

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NYAGAK WATER SUPPLY AND SANITATION SYSTEM

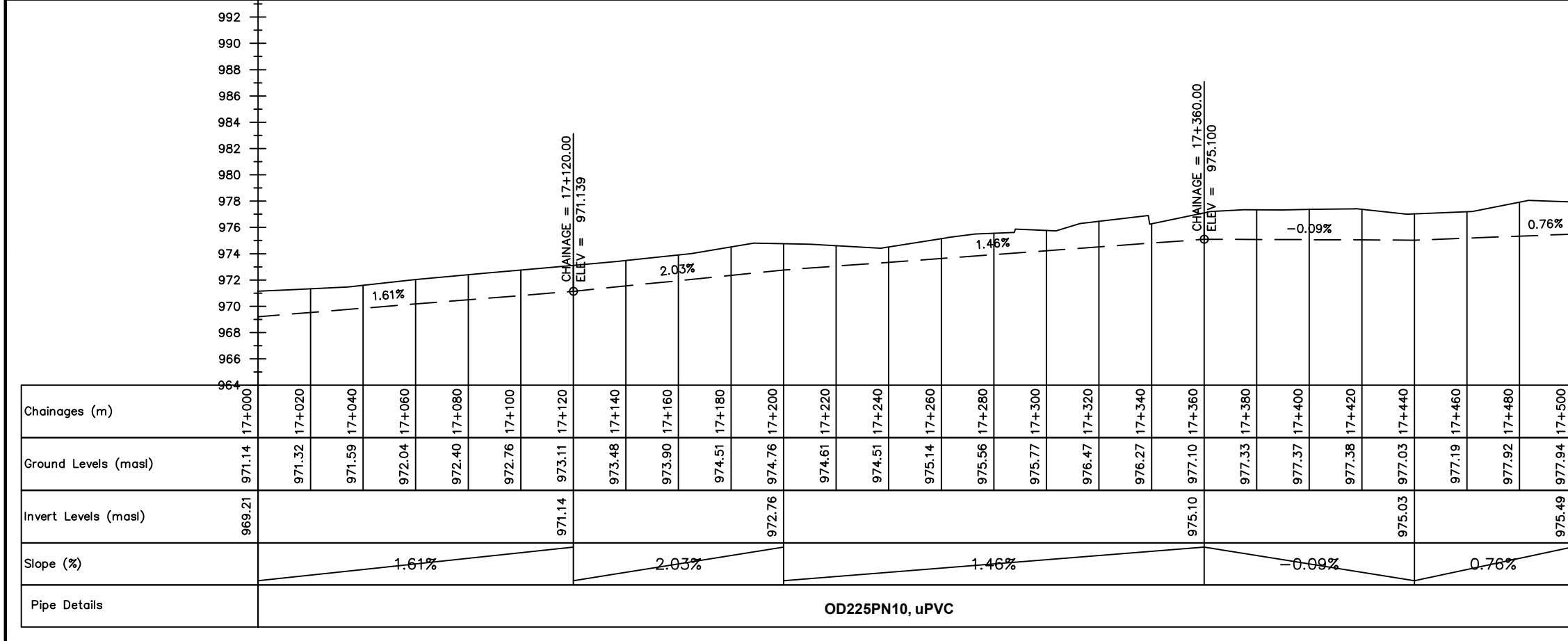
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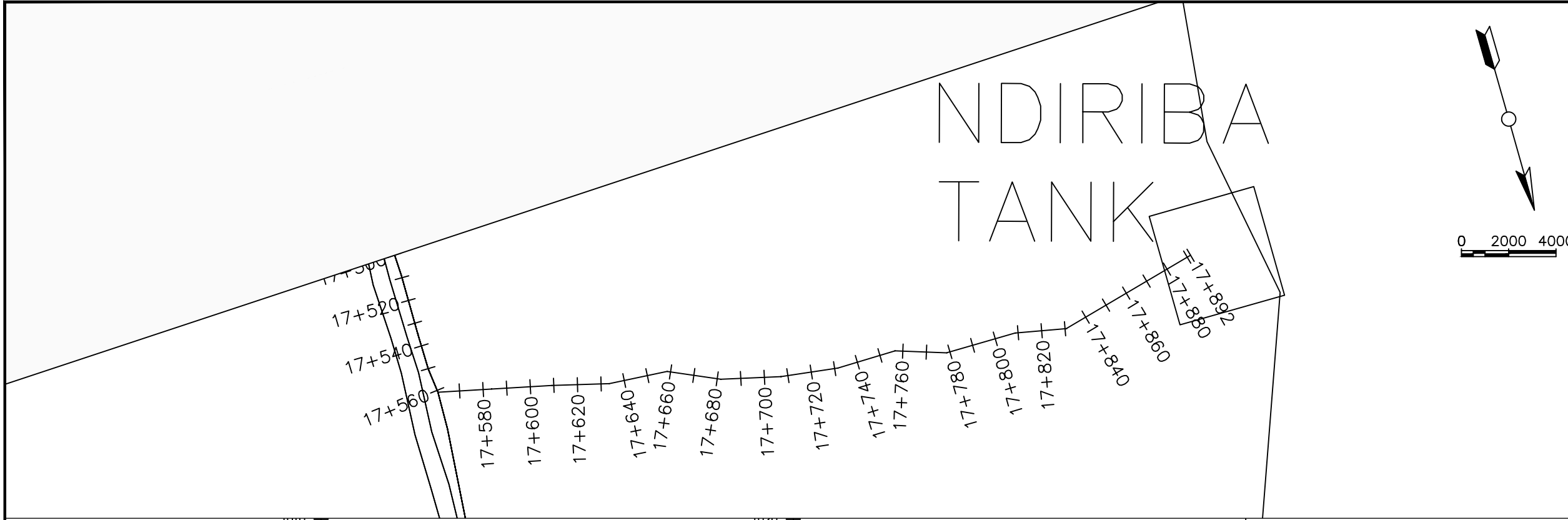
No	Date	Description

DRAWING TITLE :

TRANSMISSION MAIN 1 (OFFAKA-JUNC TO NDIRIBA-TANK)
17+000 - 17+500

Surveyed by:	R.K
Drawn by:	M.K
Designed by:	W.G.M
Checked by:	J.K.K
Date:	January 2023
DRG. No.:	NYA-GTM-001
Scale:	1:2000
Sheet No.:	35 of 36





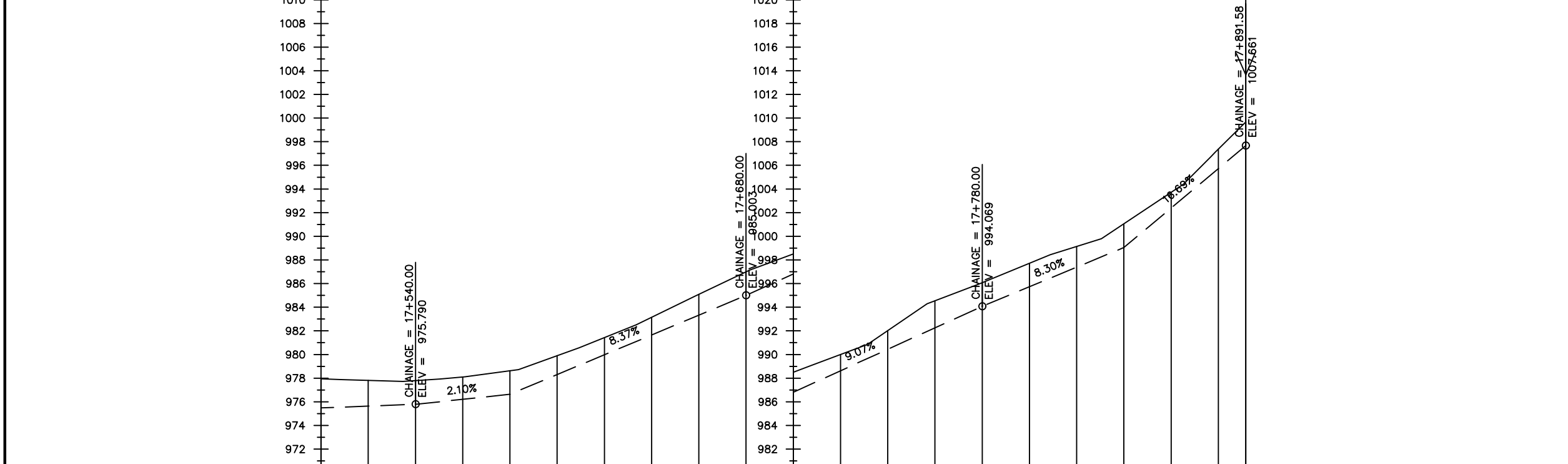
LEGEND

Plan

- Transmission Main
- Distribution Main
- Road
- Building
- Contours

Profile

- Ground Level
- Invert Level
- AV Air Valve
- WO Washout
- Node detail No.



Chainages (m)	17+500	17+520	17+540	17+560	17+580	17+600	17+620	17+640	17+660	17+680	17+700	17+720	17+740	17+760	17+780	17+800	17+820	17+840	17+860	17+880	17+891.58	
Ground Levels (masl)	977.94	977.81	977.79	978.09	978.63	979.91	981.43	983.15	985.09	987.00	988.51	990.00	992.02	994.54	996.07	997.71	999.13	1001.05	1003.71	1007.38	1009.66	
Invert Levels (masl)	975.49		975.79		976.63					985.00					994.07			999.05			1007.66	
Slope (%)		0.76%		2.10%				8.37%					9.07%				8.30%				16.69%	
Pipe Details	OD225PN10, uPVC																					

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ALA-ORA WATER SUPPLY AND SANITATION PROJECT

NYAGAK WATER SUPPLY AND SANITATION SYSTEM

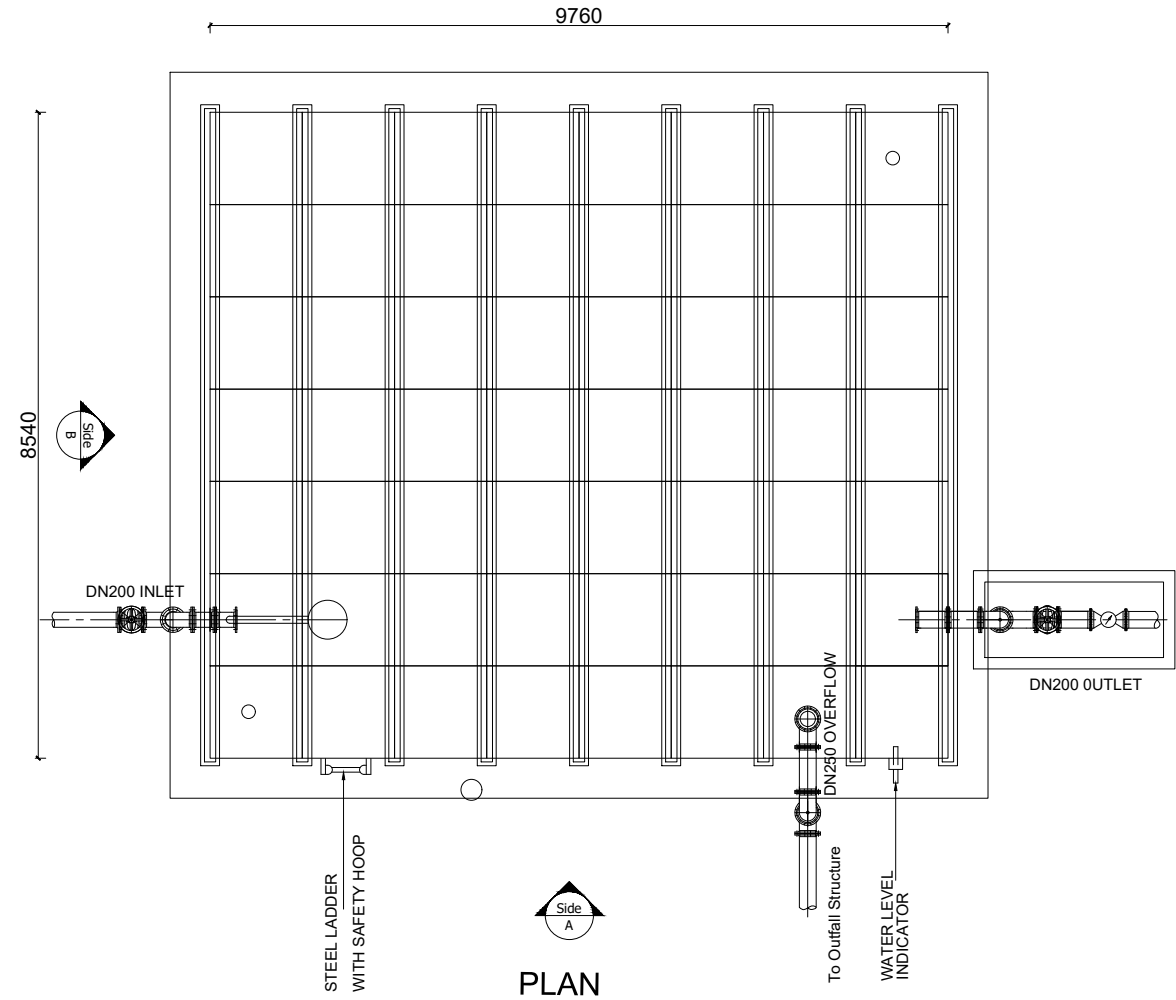
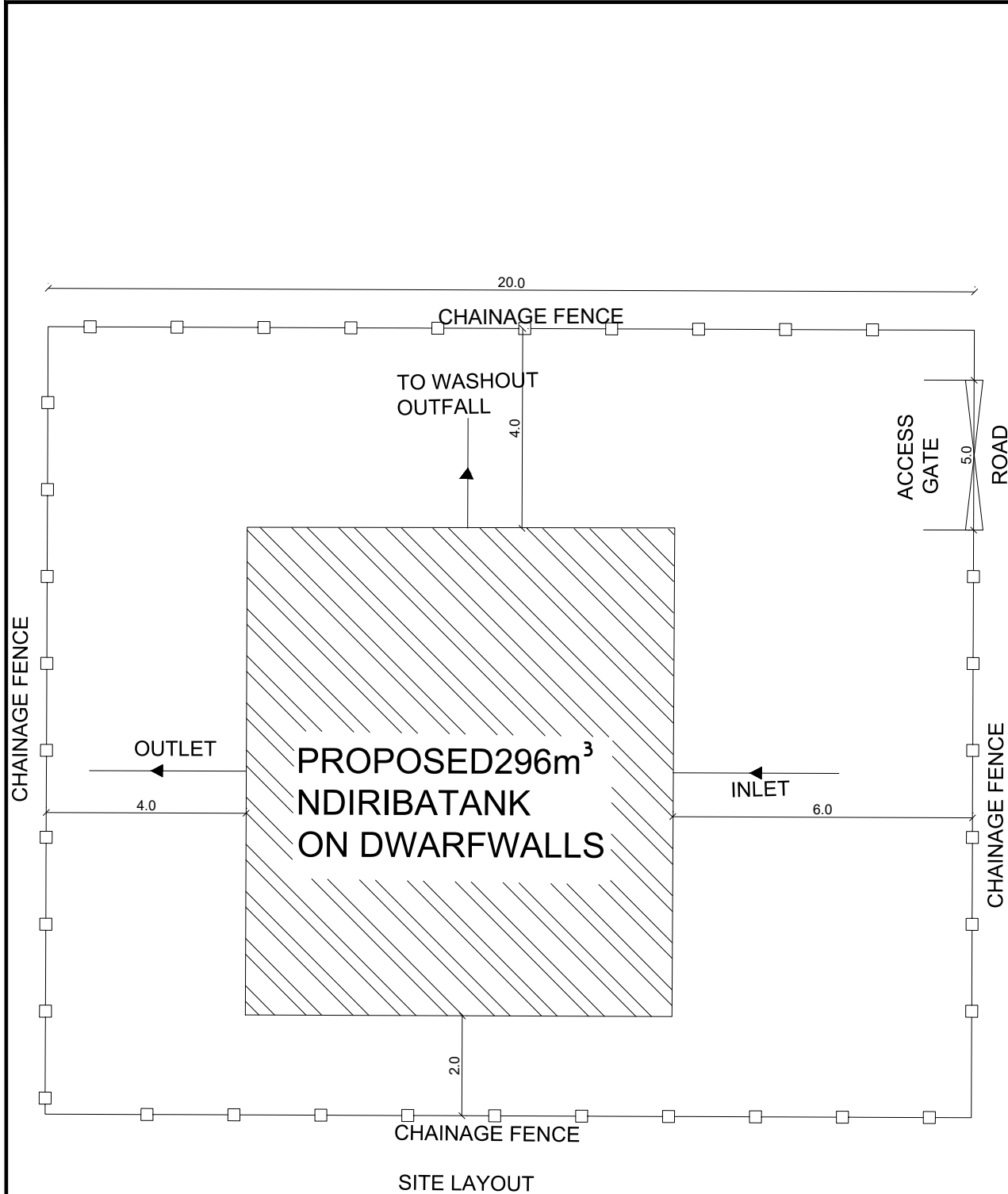
REVISIONS :

No	Date	Description

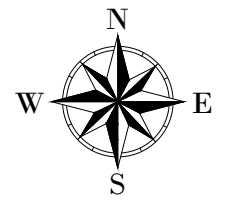
DRAWING TITLE :

TRANSMISSION MAIN 1 (OFFAKA-JUNC TO NDIRIBA-TANK)
17+500 - 17+891.58

Surveyed by:	R.K
Drawn by:	M.K
Designed by:	W.G.M
Checked by:	J.K.K
Date:	January 2023
DRG. No.:	NYA-GTM-001
Scale:	1:2000
Sheet No.:	36 of 36



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PROJECT :
ALA-ORA WATER SUPPLY AND SANITATION PROJECT

NYAGAK WATER SUPPLY AND SANITATION SYSTEM

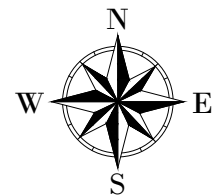
REVISIONS :

No	Date	Description

DRAWING TITLE :
NDIRIBA RESERVOIR TANK- 296m³
PLAN AND SITE LAYOUT

Surveyed by: R.K
 Drawn by: N.R
 Designed by: W.G.M
 Checked by: J.K.K
 Date: January 2023
 DRG. No.: **NYA_RES_NDI_001**
 Scale: 1:120
 1:100
 Sheet No.: 1 of 3

LEGEND



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CONSULTANT :



PROJECT :

ALA-ORA WATER SUPPLY AND
SANITATION PROJECT

**NYAGAK WATER SUPPLY AND
SANITATION SYSTEM**

REVISIONS :

No	Date	Description

DRAWING TITLE :

**NDIRIBA RESERVOIR TANK- 296m³
DWARF WALLS**

Surveyed by:

R.K

Drawn by:

N.R

Designed by:

W.G.M

Checked by:

J.K.K

Date:

January 2023

DRG. No.:

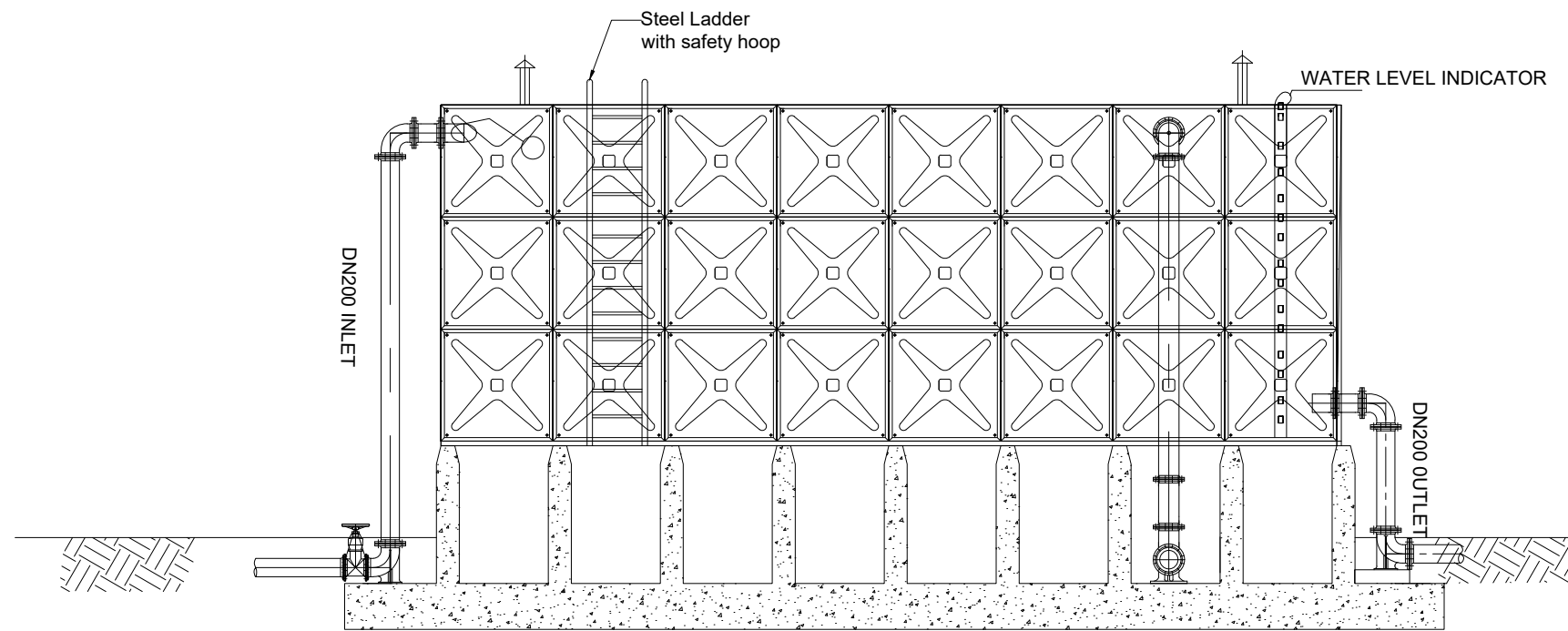
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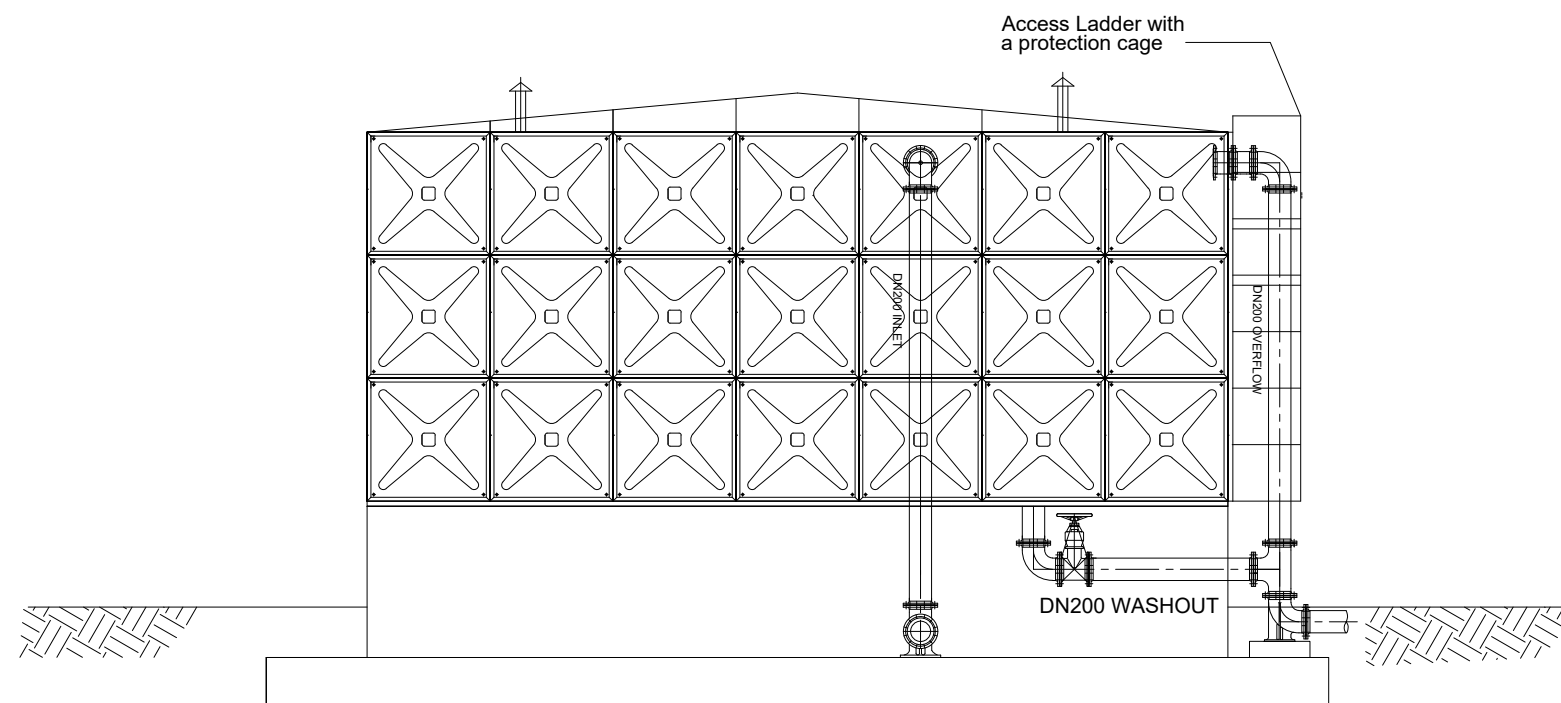
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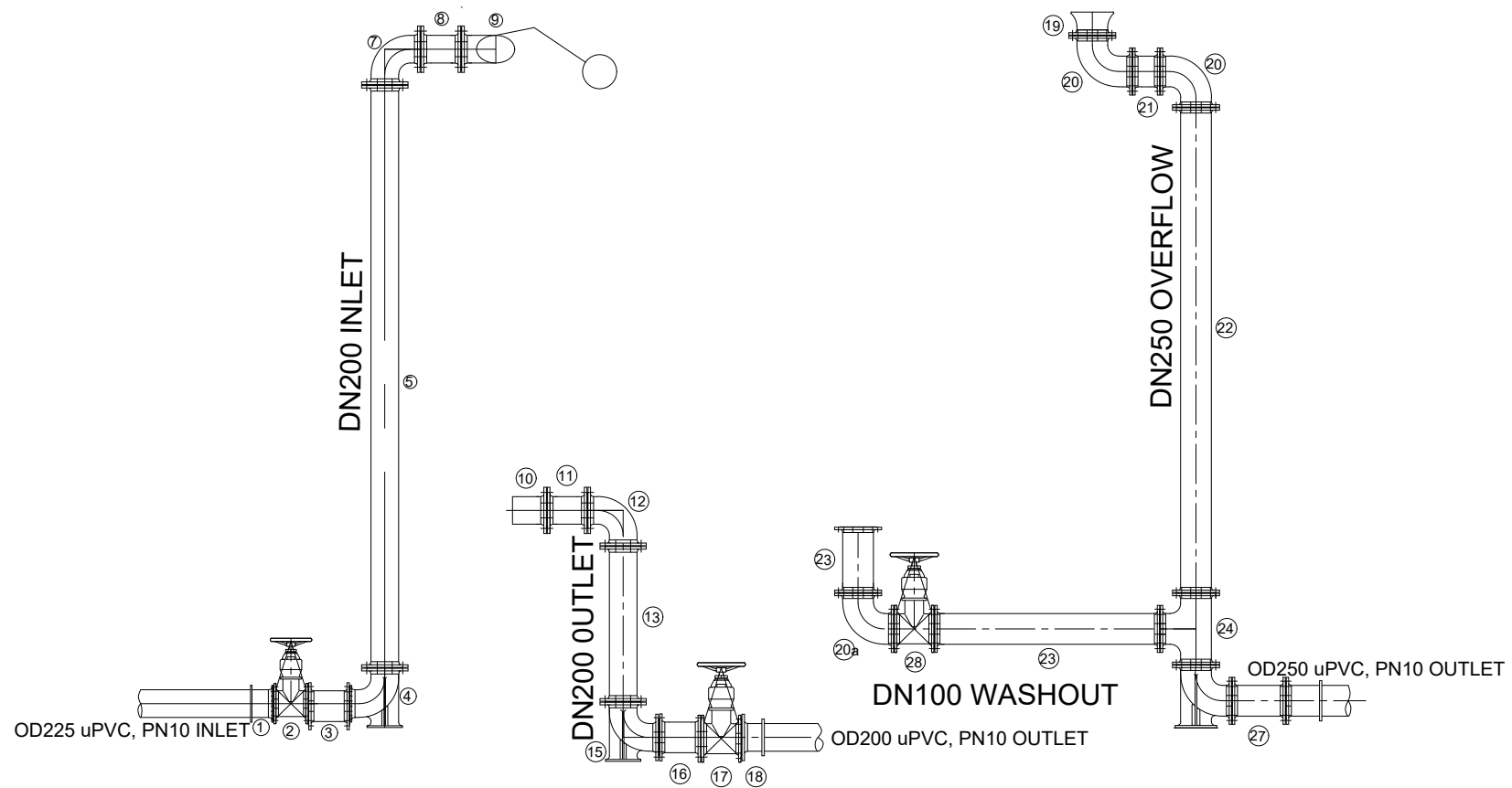
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ELEVATION A

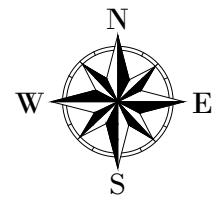


ELEVATION B



PIPE AND FITTINGS SCHEDULE					
Mark	Description	Material	DN	PN	Qty.
INLET					
1	Flanged Adapter	DI	200		0
2	Flanged Gate Valve	CI	200		1
3	Flanged Pipe Piece, Length - 0.3m	DI	200		1
4	90° Flanged Duckfoot Bend	DI	200		1
5	Flanged Pipe, Length - 6.0m	DI	200	16	0
6	Flanged Pipe, Length n.e - 6.0m	DI	200		1
7	90° Flanged Bend	DI	200		1
8	Flanged Pipe Piece, Length - 0.2m	DI	200		1
9	Flanged Float Valve	CI	200		1
OUTLET					
10	Flanged Strainer	SS	200		1
11	Flanged Pipe Piece, Length - 0.2m	DI	200		1
12	90° Flanged Bend	DI	200		1
13	Flanged Pipe, Length n.e - 3.0m	DI	200		1
14	Flanged Pipe, Length - 6.0m	DI	200	10	0
15	90° Flanged Duckfoot Bend	DI	200		1
16	Flanged Pipe Piece, Length - 0.3m	DI	200		1
17	Flanged Gate Valve	CI	200		1
18	Flanged Adapter	DI	200		1
WASHOUT & OVERFLOW					
19	Flanged Bellmouth	DI	250		1
20	90° Flanged Bend	DI	250		2
20a	90° Flanged Bend	DI	100		1
21	Flanged Pipe, Length n.e - 0.2m	DI	250		1
22	Flanged Pipe Piece, Length n.e - 3.0m	DI	250		1
23	Flanged Pipe Piece, Length n.e - 1.0m	DI	100	10	2
24	Flanged Tee	DI	250/100		1
25	Flanged Pipe Piece, Length n.e - 4.0m	DI	250		1
26	90° Flanged Duckfoot Bend	DI	250		1
27	Flanged Adapter	DI	250		1
28	Flanged Gate Valve	CI	100		1

LEGEND



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PROJECT :

ALA-ORA WATER SUPPLY AND SANITATION PROJECT

NYAGAK WATER SUPPLY AND SANITATION SYSTEM

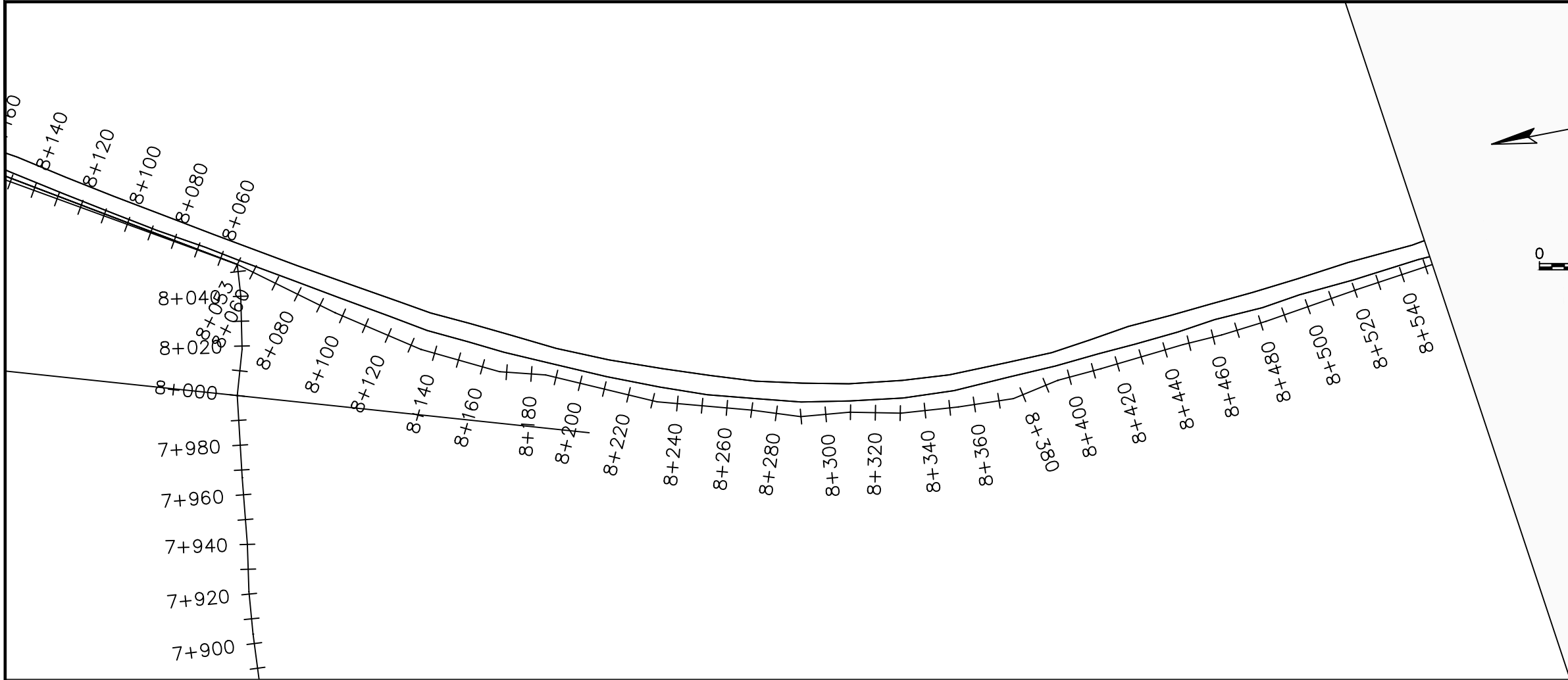
REVISIONS :

No	Date	Description

DRAWING TITLE :

NDIRIBA RESERVOIR TANK- 296m³
PIPE FITTINGS

Surveyed by:	R.K
Drawn by:	N.R
Designed by:	W.G.M
Checked by:	J.K.K
Date:	January 2023
DRG. No.:	NYA_RES_NDI_001
Scale:	1:50
Sheet No.:	3 of 3



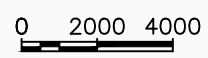
LEGEND

Plan

- Transmission Main
- Distribution Main
- Road
- Building
- Contours

Profile

- Ground Level
- Invert Level
- AV Air Valve
- WO Washout
- Node detail No.



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NYAGAK WATER SUPPLY AND SANITATION SYSTEM

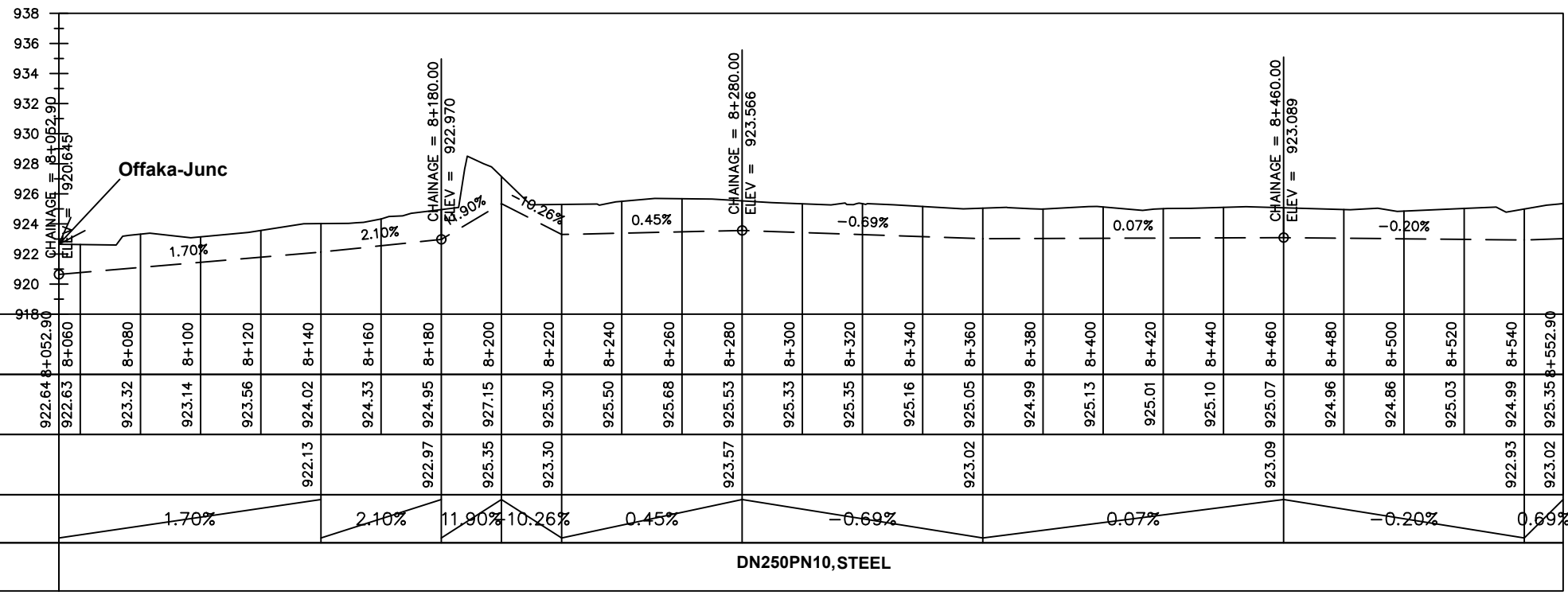
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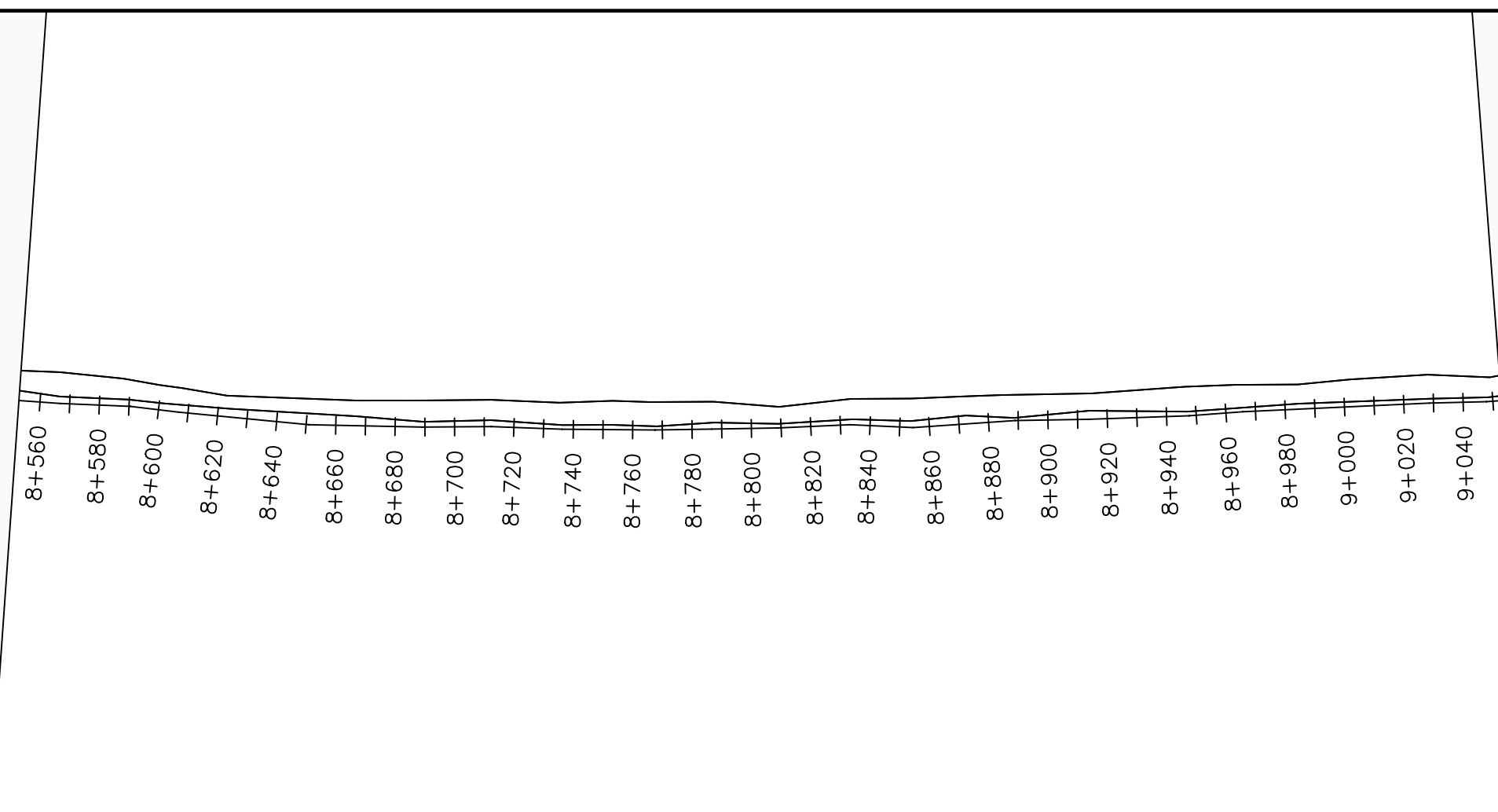
No	Date	Description

DRAWING TITLE :

TRANSMISSION MAIN 2 (WTP TO BARIBU TANK)
8+052.9 - 8+552.9

Surveyed by:	R.K
Drawn by:	M.K
Designed by:	W.G.M
Checked by:	J.K.K
Date:	January 2023
DRG. No.:	NYA-GTM-002
Scale:	1:2000
Sheet No.:	1 of 54





LEGEND

Plan

- Transmission Main
- Distribution Main
- Road
- Building
- Contours

Profile

- Ground Level
- Invert Level
- AV Air Valve
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CLIENT :

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PROJECT :

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NYAGAK WATER SUPPLY AND SANITATION SYSTEM

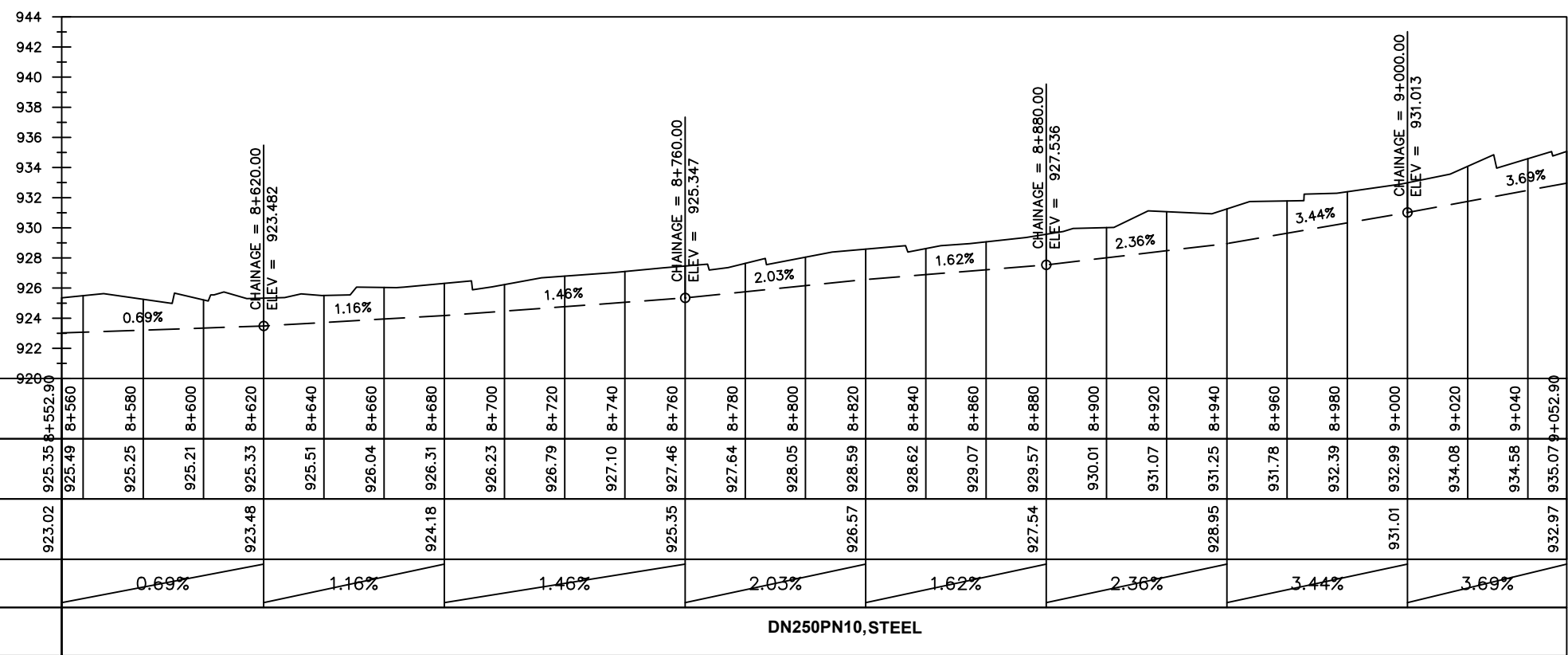
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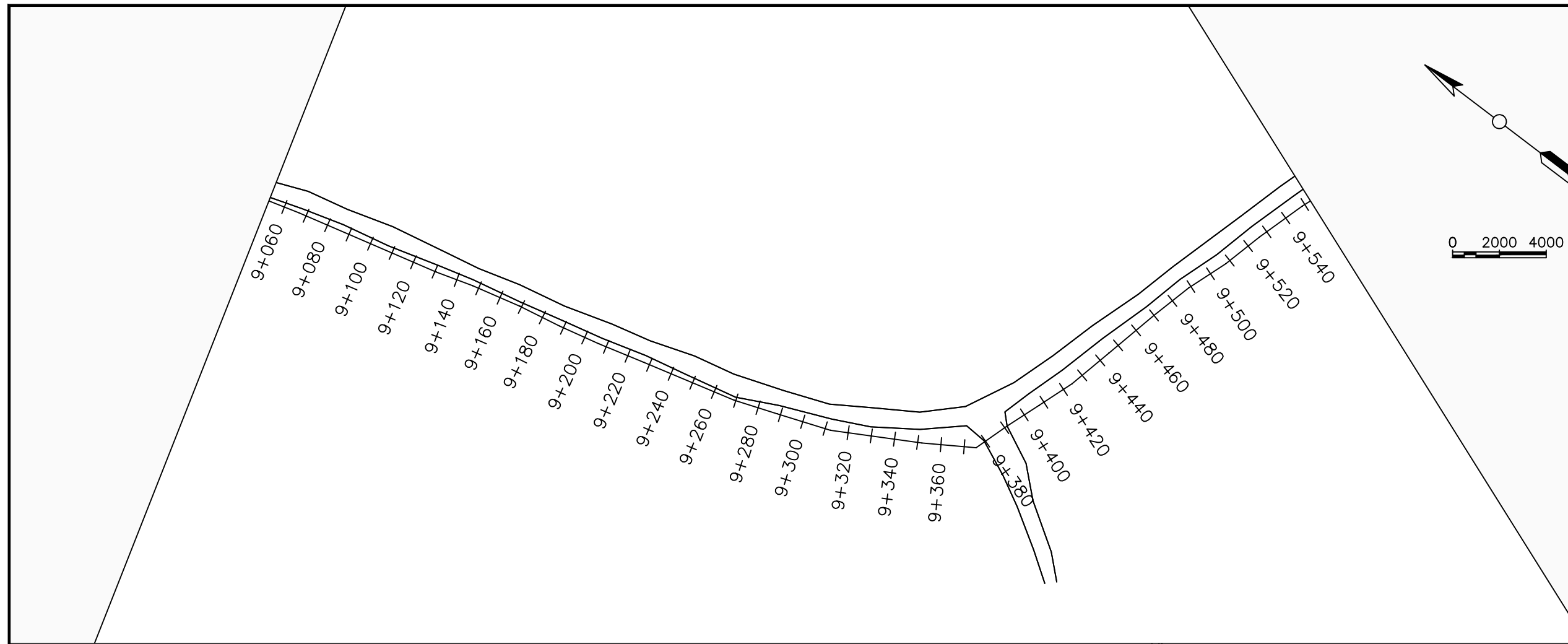
No	Date	Description

DRAWING TITLE :

TRANSMISSION MAIN 2 (WTP TO BARIBU TANK)
8+552.9 - 9+052.9

Surveyed by:	R.K
Drawn by:	M.K
Designed by:	W.G.M
Checked by:	J.K.K
Date:	January 2023
DRG. No.:	NYA-GTM-002
Scale:	1:2000
Sheet No.:	2 of 54





LEGEND

Plan

- Transmission Main
- Distribution Main
- Road
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Profile

- Ground Level
- Invert Level
- AV Air Valve
- WO Washout
- Node detail No.

CLIENT :

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PROJECT :

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NYAGAK WATER SUPPLY AND SANITATION SYSTEM

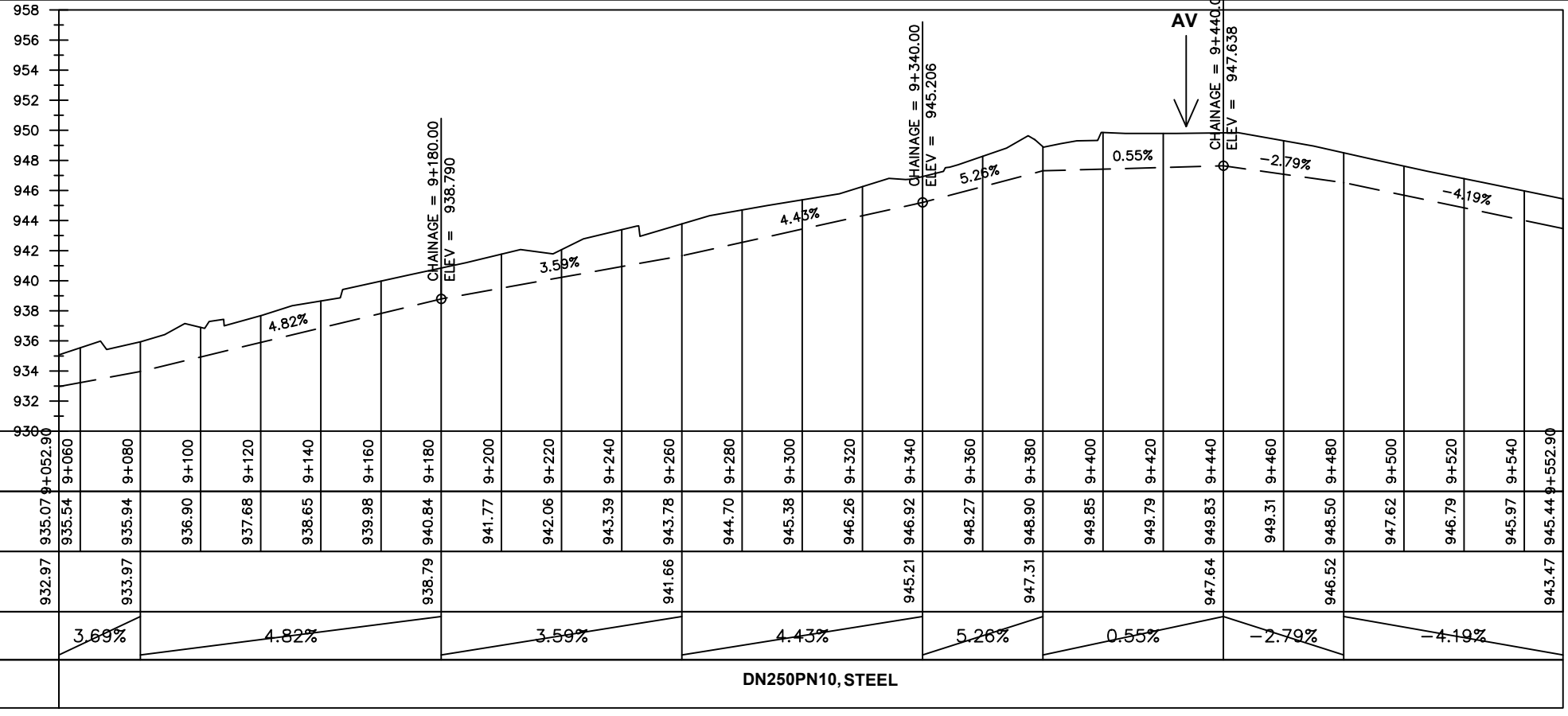
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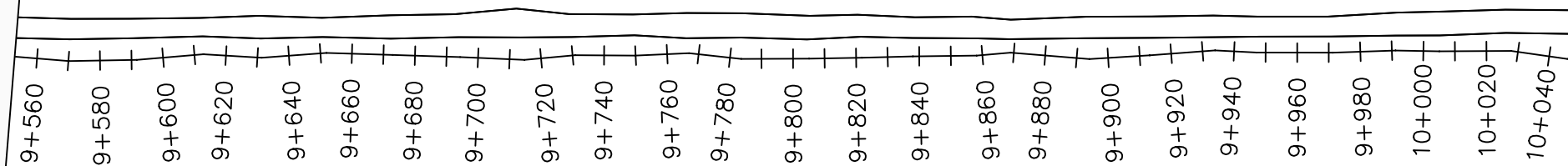
No	Date	Description

DRAWING TITLE :

TRANSMISSION MAIN 2 (WTP TO BARIBU TANK)
9+052.9 - 9+552.9

Surveyed by:	R.K
Drawn by:	M.K
Designed by:	W.G.M
Checked by:	J.K.K
Date:	January 2023
DRG. No.:	NYA-GTM-002
Scale:	1:2000
Sheet No.:	3 of 54





LEGEND

Plan

- Transmission Main
- Distribution Main
- Road
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- Contours

Profile

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CLIENT :

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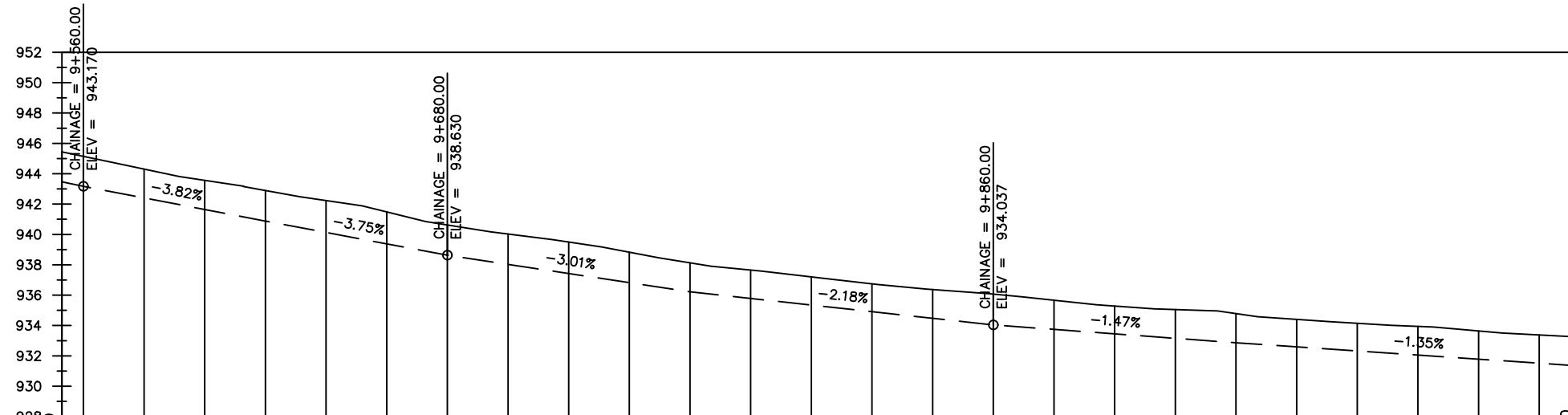
REVISIONS :

No	Date	Description

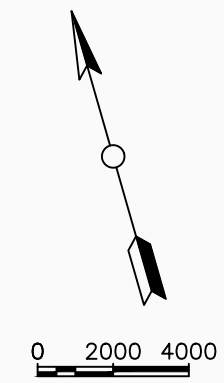
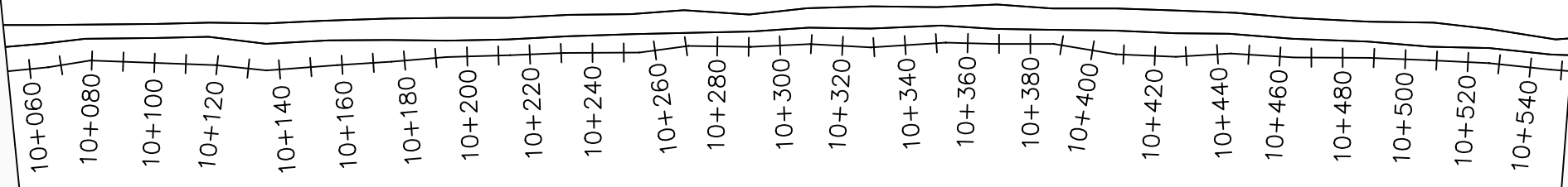
DRAWING TITLE :

TRANSMISSION MAIN 2 (WTP TO BARIBU TANK)
9+552.9 - 10+052.9

Surveyed by:	R.K
Drawn by:	M.K
Designed by:	W.G.M
Checked by:	J.K.K
Date:	January 2023
DRG. No.:	NYA-GTM-002
Scale:	1:2000
Sheet No.:	4 of 54



Chainages (m)	9+560	9+580	9+600	9+620	9+640	9+660	9+680	9+700	9+720	9+740	9+760	9+780	9+800	9+820	9+840	9+860	9+880	9+900	9+920	9+940	9+960	9+980	10+000	10+020	10+040	10+052.90		
Ground Levels (masl)	945.44	944.30	943.56	942.90	942.23	941.49	940.63	940.03	939.50	938.83	938.13	937.65	937.20	936.74	936.37	936.07	935.67	935.28	935.05	934.78	934.40	934.15	933.94	933.64	933.38	933.24		
Invert Levels (masl)	943.47	943.17	940.88	938.63	936.22	934.04	932.86	931.34																				
Slope (%)	-4.19%	-3.82%	-3.75%	-3.01%	-2.18%	-1.47%	-1.35%																					
Pipe Details	DN250PN10, STEEL																											



LEGEND

Plan

- Transmission Main
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- Ground Level
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- Node detail No.

CLIENT :

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ALA-ORA WATER SUPPLY AND SANITATION PROJECT

NYAGAK WATER SUPPLY AND SANITATION SYSTEM

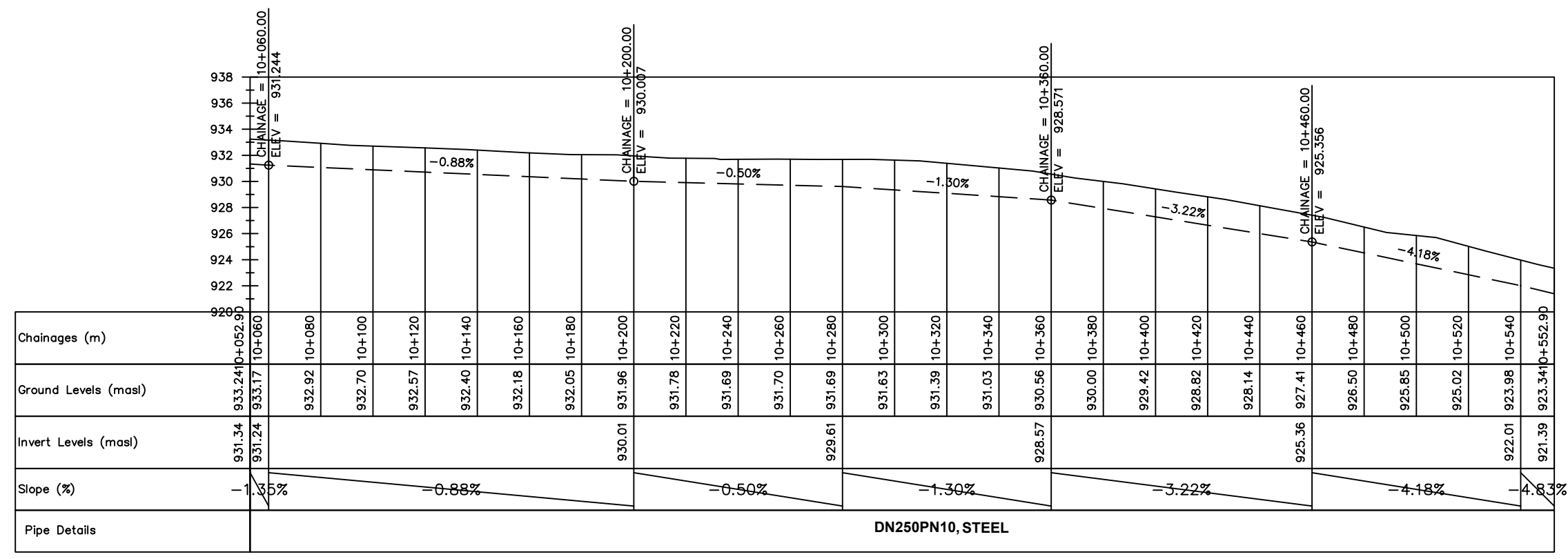
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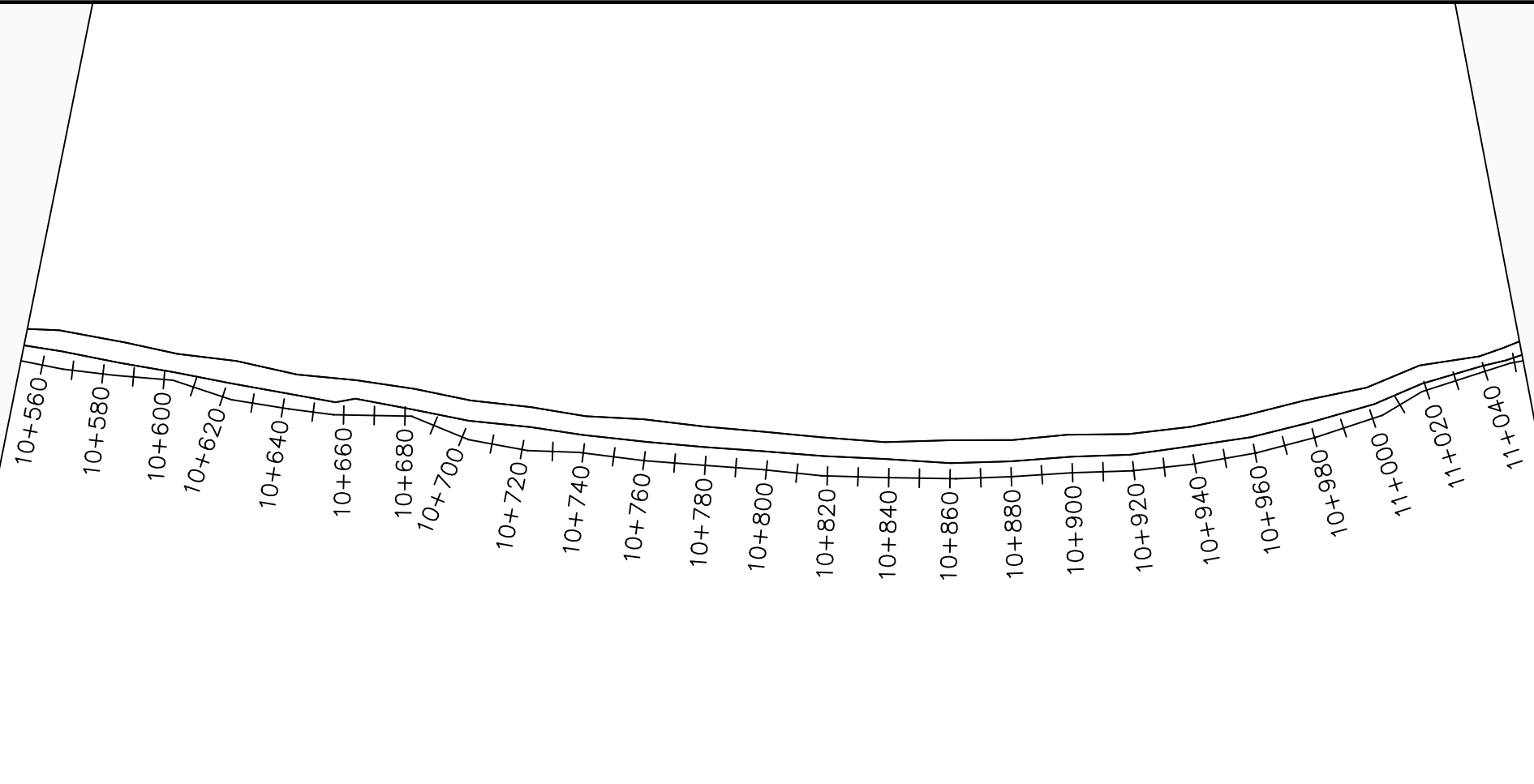
No	Date	Description

DRAWING TITLE :

TRANSMISSION MAIN 2 (WTP TO BARIBU TANK)
10+052.9 - 10+552.9

Surveyed by:	R.K
Drawn by:	M.K
Designed by:	W.G.M
Checked by:	J.K.K
Date:	January 2023
DRG. No.:	NYA-GTM-002
Scale:	1:2000
Sheet No.:	5 of 54





LEGEND

Plan

- Transmission Main
- Distribution Main
- Road
- Building
- Contours

Profile

- Ground Level
- Invert Level
- AV Air Valve
- WO Washout
- Node detail No.

CLIENT :

THE REPUBLIC OF UGANDA
MINISTRY OF WATER AND ENVIRONMENT

CO-FINANCED BY:

THE WORLD BANK
IBRD • IDA | WORLD BANK GROUP

CONSULTANT :

Alliance Consultants Ltd
In Association with

Infra-Consult Ltd

PROJECT :

ALA-ORA WATER SUPPLY AND SANITATION PROJECT

NYAGAK WATER SUPPLY AND SANITATION SYSTEM

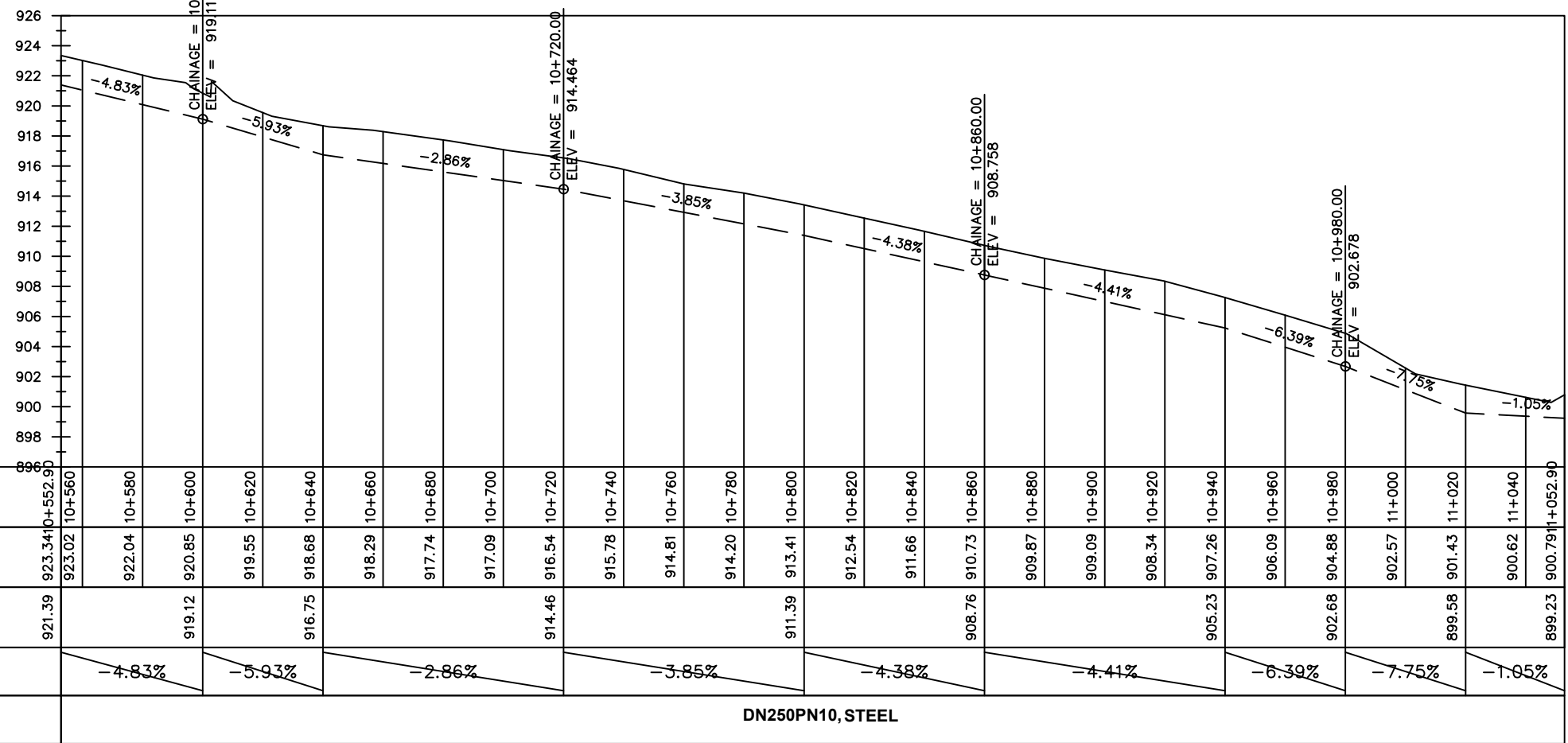
REVISIONS :

No	Date	Description

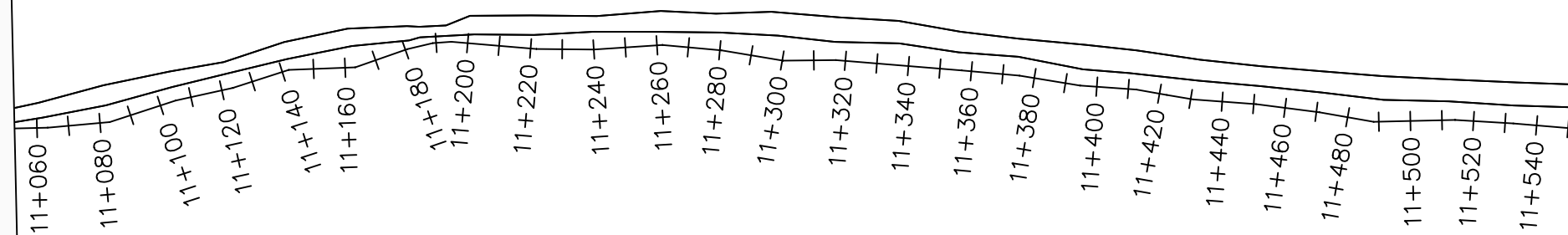
DRAWING TITLE :

TRANSMISSION MAIN 2 (WTP TO BARIBU TANK)
10+552.9 - 11+052.9

Surveyed by:	R.K
Drawn by:	M.K
Designed by:	W.G.M
Checked by:	J.K.K
Date:	January 2023
DRG. No.:	NYA-GTM-002
Scale:	1:2000
Sheet No.:	6 of 54



Chainages (m)	923.34 10+560	922.04 10+580	920.85 10+600	919.55 10+620	918.68 10+640	918.29 10+660	917.74 10+680	917.09 10+700	916.54 10+720	915.78 10+740	914.81 10+760	914.20 10+780	913.41 10+800	912.54 10+820	911.66 10+840	910.73 10+860	909.87 10+880	909.09 10+900	908.34 10+920	907.26 10+940	906.09 10+960	904.88 10+980	902.57 11+000	901.43 11+020	900.62 11+040	900.79 11+052.9		
Ground Levels (masl)	923.34	922.04	920.85	919.55	918.68	918.29	917.74	917.09	916.54	915.78	914.81	914.20	913.41	912.54	911.66	910.73	909.87	909.09	908.34	907.26	906.09	904.88	902.57	901.43	900.62	900.79		
Invert Levels (masl)	921.39		919.12		916.75				914.46				911.39			908.76				905.23		902.68		899.58		899.23		
Slope (%)		-4.83%	-5.93%		-2.86%				-3.85%			-4.38%			-4.41%				-6.39%		-7.75%			-1.05%				
Pipe Details	DN250PN10, STEEL																											



LEGEND

Plan

- Transmission Main
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- Road
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- Ground Level
- Invert Level
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CLIENT :

THE REPUBLIC OF UGANDA
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CO-FINANCED BY:

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CONSULTANT :

Alliance Consultants Ltd
In Association with

Infra-Consult Ltd

PROJECT :

ALA-ORA WATER SUPPLY AND SANITATION PROJECT

NYAGAK WATER SUPPLY AND SANITATION SYSTEM

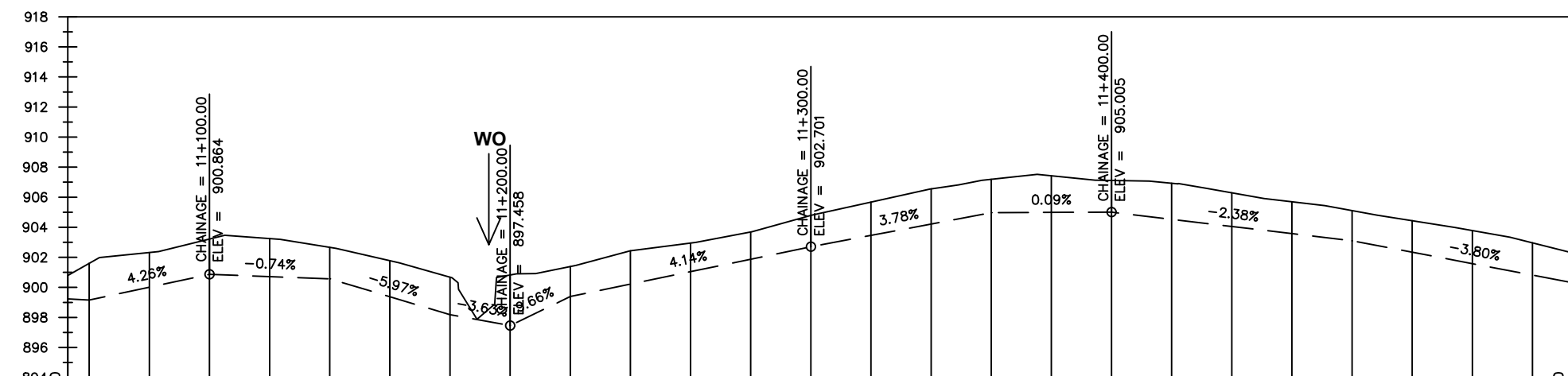
REVISIONS :

No	Date	Description

DRAWING TITLE :

TRANSMISSION MAIN 2 (WTP TO BARIBU TANK)
11+052.9 - 11+552.9

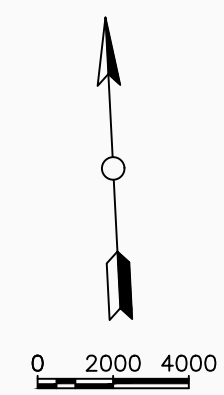
Surveyed by:	R.K
Drawn by:	M.K
Designed by:	W.G.M
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Date:	January 2023
DRG. No.:	NYA-GTM-002
Scale:	1:2000
Sheet No.:	7 of 54



Chainages (m)	11+060	11+080	11+100	11+120	11+140	11+160	11+180	11+200	11+220	11+240	11+260	11+280	11+300	11+320	11+340	11+360	11+380	11+400	11+420	11+440	11+460	11+480	11+500	11+520	11+540	11+552.90		
Ground Levels (masl)	900.79	902.32	903.21	903.25	902.66	901.77	900.68	900.83	901.39	902.43	902.95	903.69	904.79	905.67	906.55	907.19	907.42	907.11	906.93	906.29	905.69	905.11	904.44	903.78	902.96	902.33		
Invert Levels (masl)	899.23	899.16	900.86	900.57	900.57	898.18	897.46	899.39	902.70	904.97	905.00	903.10	900.33	899.16	900.86	900.57	900.57	900.86	900.57	900.57	900.86	900.57	900.57	900.86	900.57	900.33		
Slope (%)	-1.05%	4.26%	-0.74%	-5.97%	-3.63%	9.66%	4.14%	3.78%	0.09%	-2.38%	-3.80%																	
Pipe Details	DN250PN10, STEEL																											

TRAN 2 to Anyiribu Jn

11+560 11+580 11+600 11+620 11+640 11+660 11+680 11+700 11+720 11+740 11+760 11+780 11+800 11+820 11+840 11+860 11+880 11+900 11+920 11+940 11+960 11+980 12+000 12+020 12+040



LEGEND

Plan

- Transmission Main
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- WO Washout
- Node detail No.

CLIENT :

THE REPUBLIC OF UGANDA
MINISTRY OF WATER AND ENVIRONMENT

CO-FINANCED BY:

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CONSULTANT :

Alliance Consultants Ltd
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PROJECT :

ALA-ORA WATER SUPPLY AND SANITATION PROJECT

NYAGAK WATER SUPPLY AND SANITATION SYSTEM

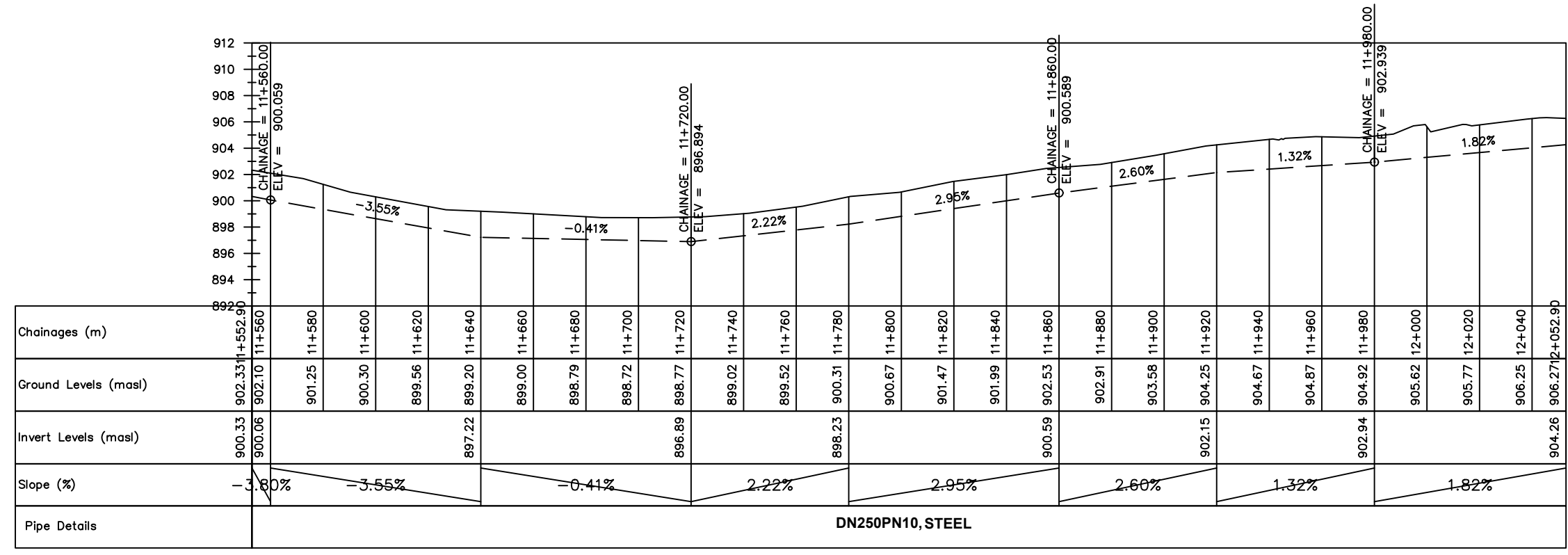
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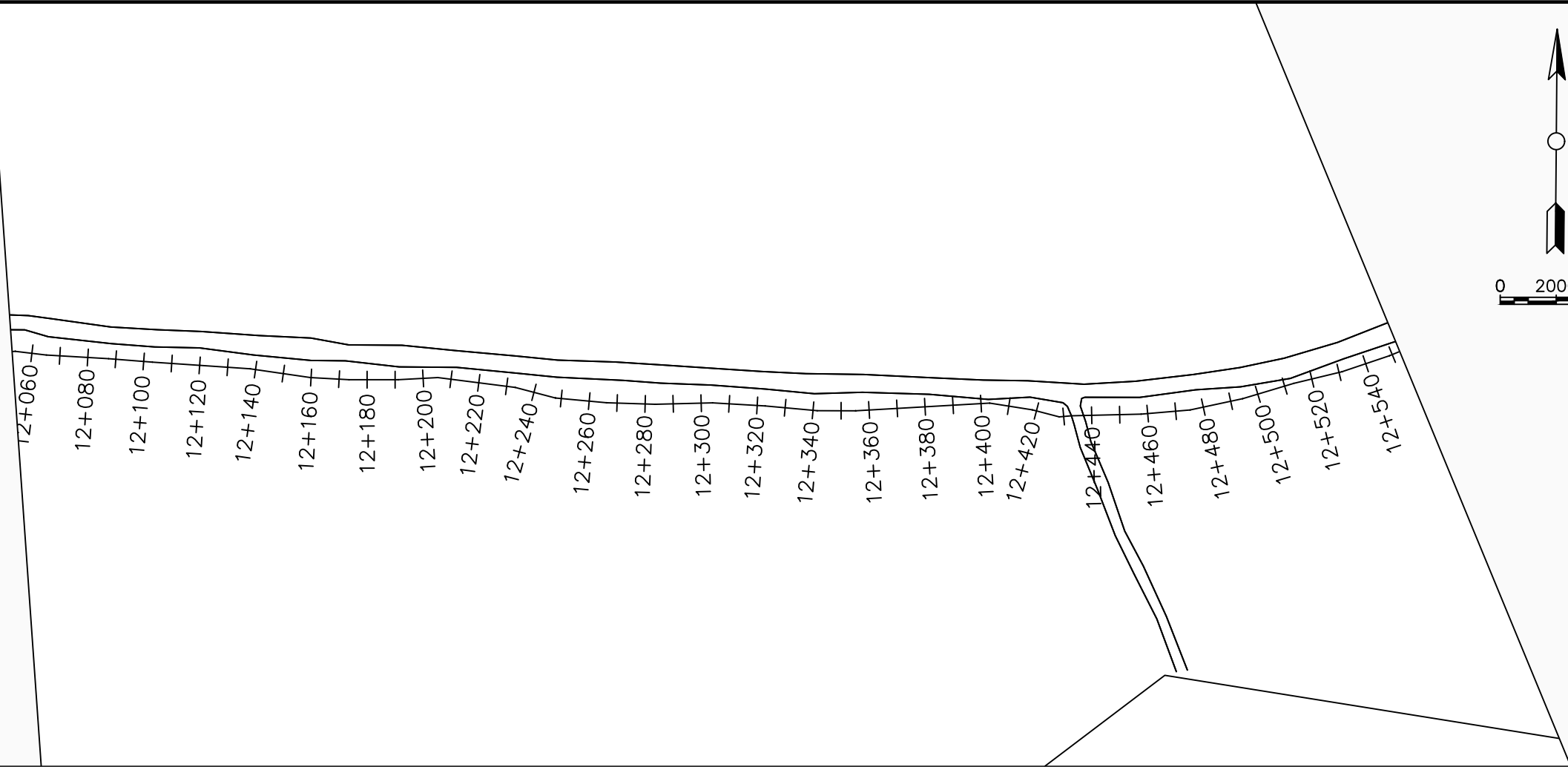
No	Date	Description

DRAWING TITLE :

TRANSMISSION MAIN 2 (WTP TO BARIBU TANK)
11+552.9 - 12+052.9

Surveyed by:	R.K
Drawn by:	M.K
Designed by:	W.G.M
Checked by:	J.K.K
Date:	January 2023
DRG. No.:	NYA-GTM-002
Scale:	1:2000
Sheet No.:	8 of 54





LEGEND

Plan

- Transmission Main
- Distribution Main
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Profile

- Ground Level
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- WO Washout
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CLIENT :

THE REPUBLIC OF UGANDA
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PROJECT :

ALA-ORA WATER SUPPLY AND SANITATION PROJECT

NYAGAK WATER SUPPLY AND SANITATION SYSTEM

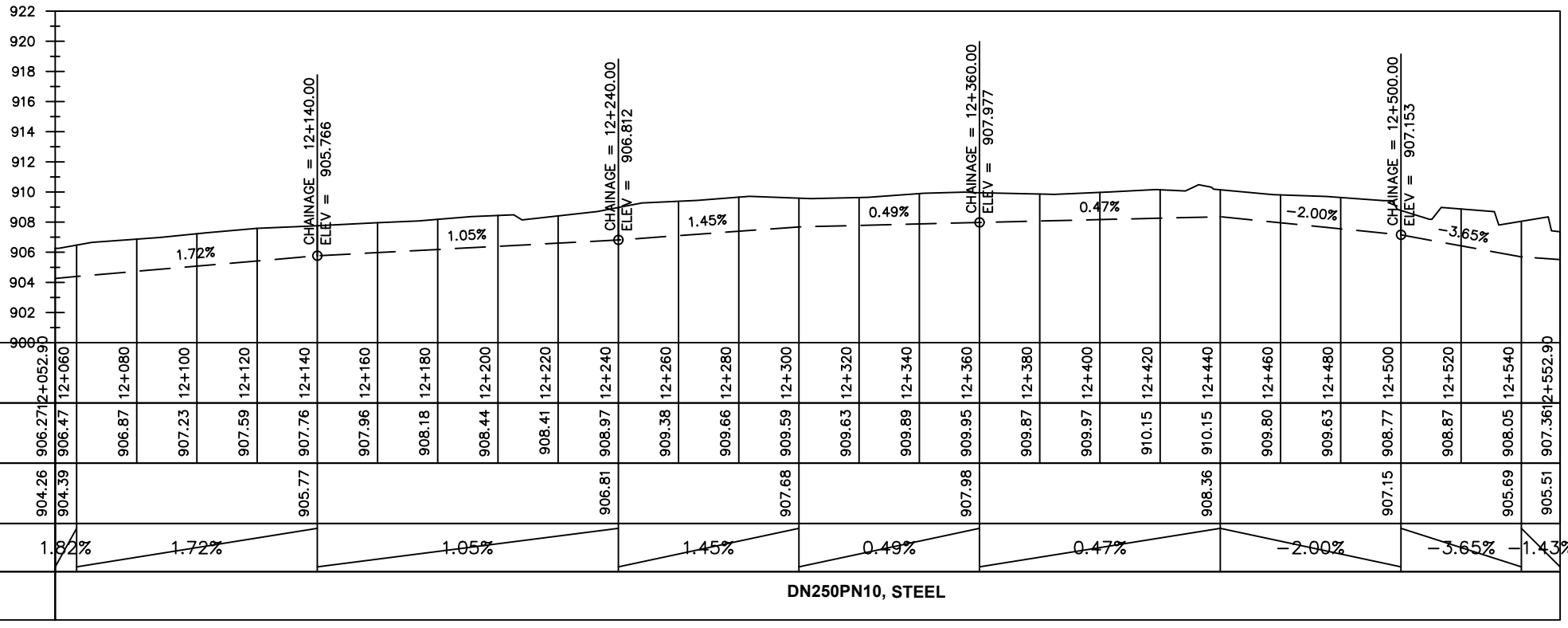
REVISIONS :

No	Date	Description

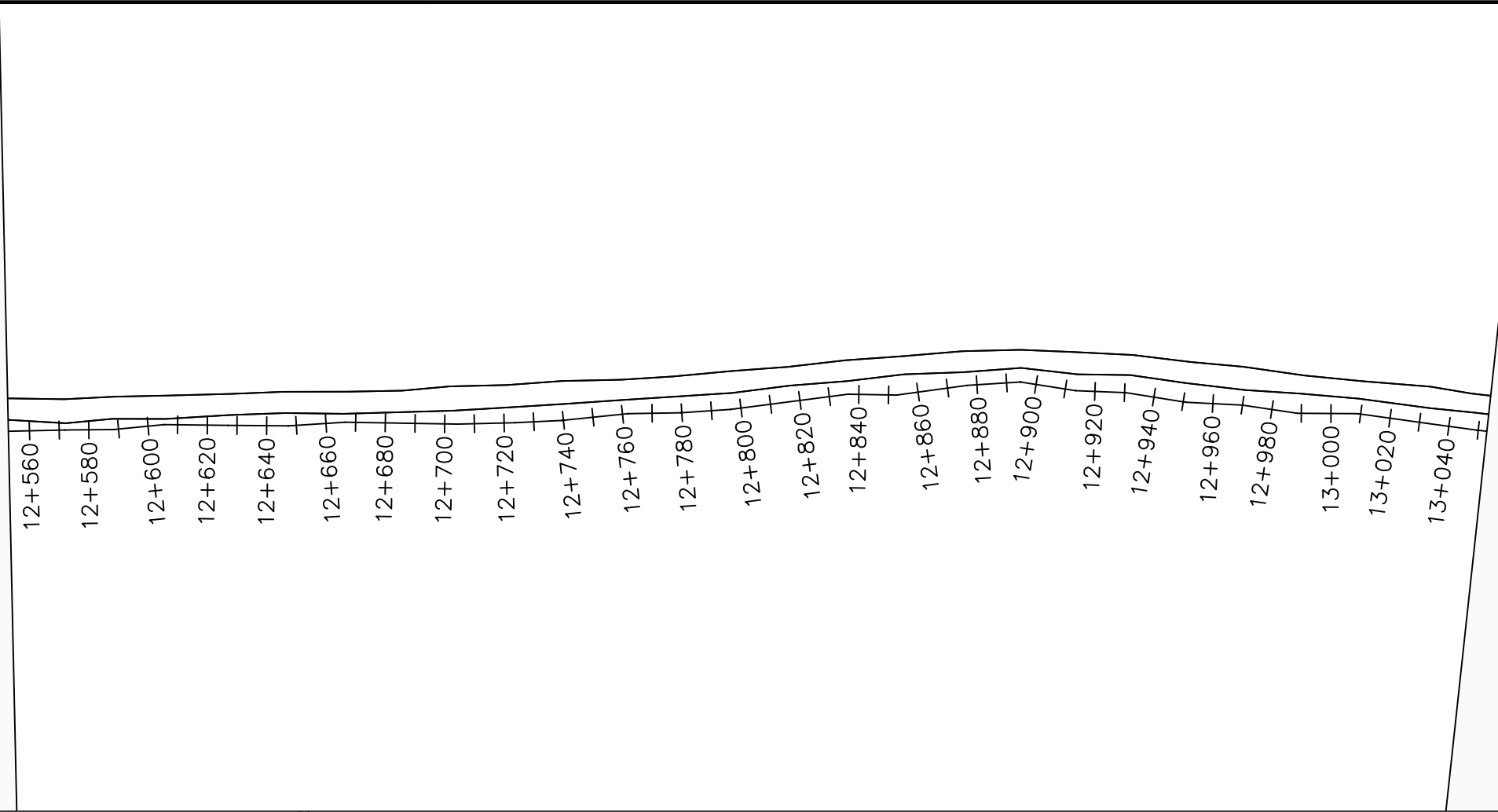
DRAWING TITLE :

TRANSMISSION MAIN 2 (WTP TO BARIBU TANK)
12+052.9 - 12+552.9

Surveyed by:	R.K
Drawn by:	M.K
Designed by:	W.G.M
Checked by:	J.K.K
Date:	January 2023
DRG. No.:	NYA-GTM-002
Scale:	1:2000
Sheet No.:	9 of 54



Chainages (m)	906.27 906.47 12+060	906.87 12+080	907.23 12+100	907.59 12+120	907.76 12+140	907.96 12+160	908.18 12+180	908.44 12+200	908.41 12+220	908.97 12+240	909.38 12+260	909.66 12+280	909.59 12+300	909.63 12+320	909.89 12+340	909.95 12+360	909.87 12+380	909.97 12+400	910.15 12+420	910.15 12+440	909.80 12+460	909.63 12+480	908.77 12+500	908.87 12+520	908.05 12+540	907.36 12+552.9		
Ground Levels (masl)	906.27	906.47	906.87	907.23	907.59	907.96	908.18	908.44	908.41	908.97	909.38	909.66	909.59	909.63	909.89	909.95	909.87	909.97	910.15	910.15	909.80	909.63	908.77	908.87	908.05	907.36		
Invert Levels (masl)	904.26	904.39	905.77	907.68	907.98	907.98	908.36	908.36	908.36	907.98	907.98	908.36	908.36	908.36	908.36	908.36	908.36	908.36	908.36	908.36	908.36	908.36	908.36	908.36	908.36	908.36	908.36	
Slope (%)	1.82%	1.72%	1.05%	1.45%	0.49%	0.47%	-2.00%	-3.65%	-1.43%																			
Pipe Details	DN250PN10, STEEL																											



LEGEND

Plan

- Transmission Main
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Profile

- Ground Level
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- Node detail No.

CLIENT :

THE REPUBLIC OF UGANDA
MINISTRY OF WATER AND ENVIRONMENT

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CONSULTANT :

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In Association with

Infra-Consult Ltd

PROJECT :

ALA-ORA WATER SUPPLY AND SANITATION PROJECT

NYAGAK WATER SUPPLY AND SANITATION SYSTEM

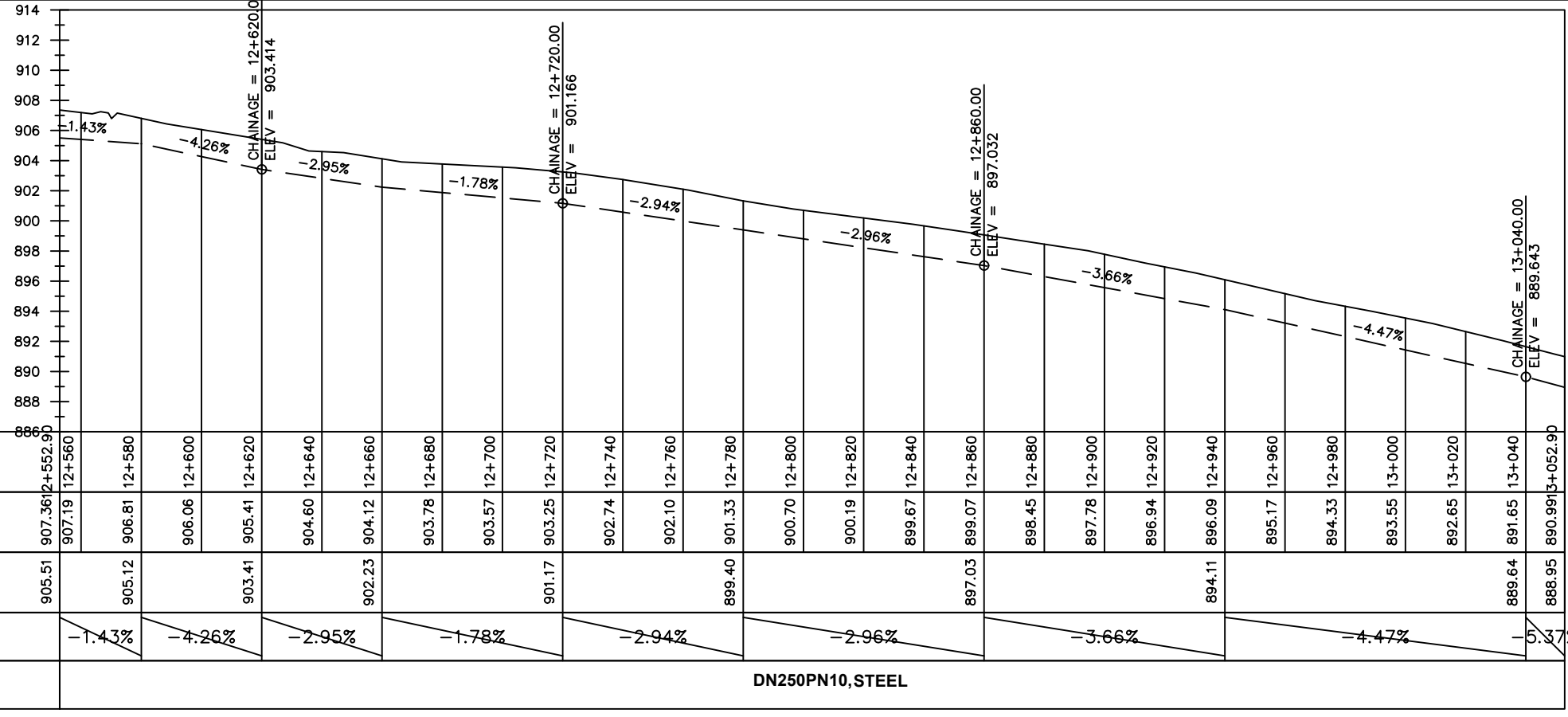
REVISIONS :

No	Date	Description

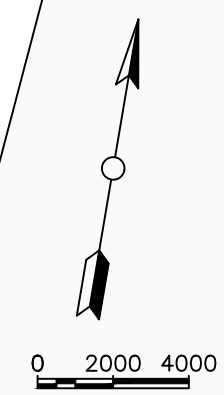
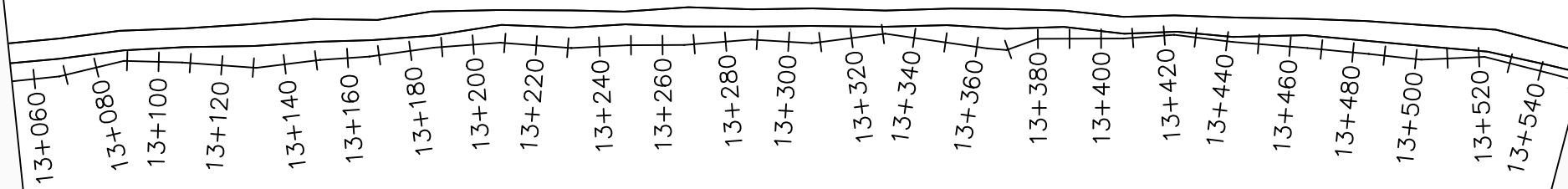
DRAWING TITLE :

TRANSMISSION MAIN 2 (WTP TO BARIBU TANK)
12+552.9 - 13+052.9

Surveyed by:	R.K
Drawn by:	M.K
Designed by:	W.G.M
Checked by:	J.K.K
Date:	January 2023
DRG. No.:	NYA-GTM-002
Scale:	1:2000
Sheet No.:	10 of 54



Chainages (m)	12+560	12+580	12+600	12+620	12+640	12+660	12+680	12+700	12+720	12+740	12+760	12+780	12+800	12+820	12+840	12+860	12+880	12+900	12+920	12+940	12+960	12+980	13+000	13+020	13+040	
Ground Levels (masl)	907.19	906.81	906.06	905.41	904.60	904.12	903.78	903.57	903.25	902.74	902.10	901.33	900.70	900.19	899.67	899.07	898.45	897.78	896.94	896.09	895.17	894.33	893.55	892.65	891.65	890.99
Invert Levels (masl)	905.51	905.12	903.41	902.23	901.17	899.40	897.03	894.11	889.64	888.95																
Slope (%)	-1.43%	-4.26%	-2.95%	-1.78%	-2.94%	-2.96%	-3.66%	-4.47%	-5.37%																	
Pipe Details	DN250PN10, STEEL																									



LEGEND

Plan

- Transmission Main
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- Ground Level
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CLIENT :

THE REPUBLIC OF UGANDA
MINISTRY OF WATER AND ENVIRONMENT

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Alliance Consultants Ltd
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Infra-Consult Ltd

PROJECT :

ALA-ORA WATER SUPPLY AND SANITATION PROJECT

NYAGAK WATER SUPPLY AND SANITATION SYSTEM

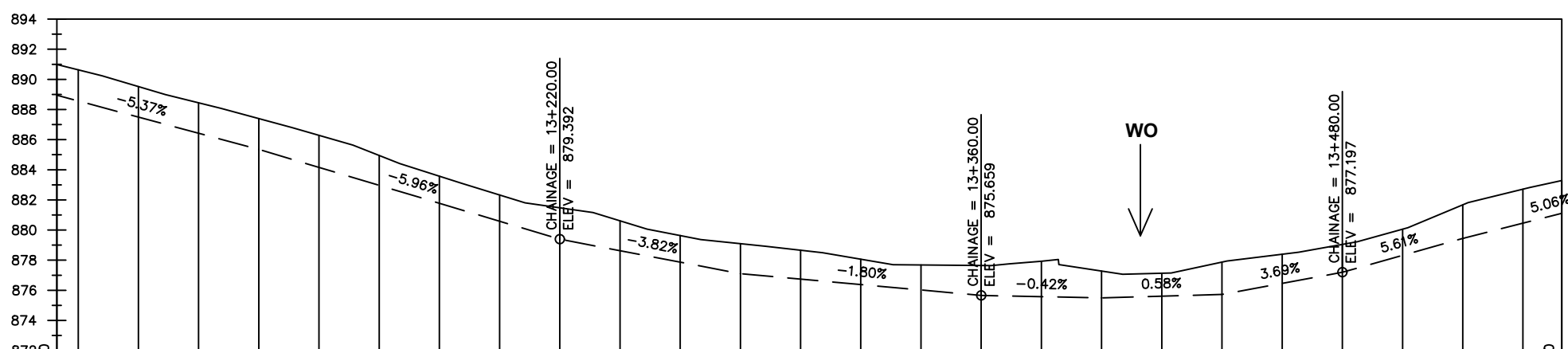
REVISIONS :

No	Date	Description

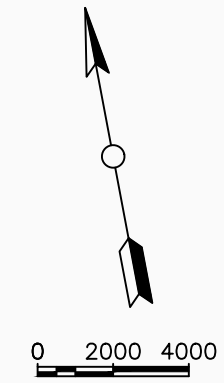
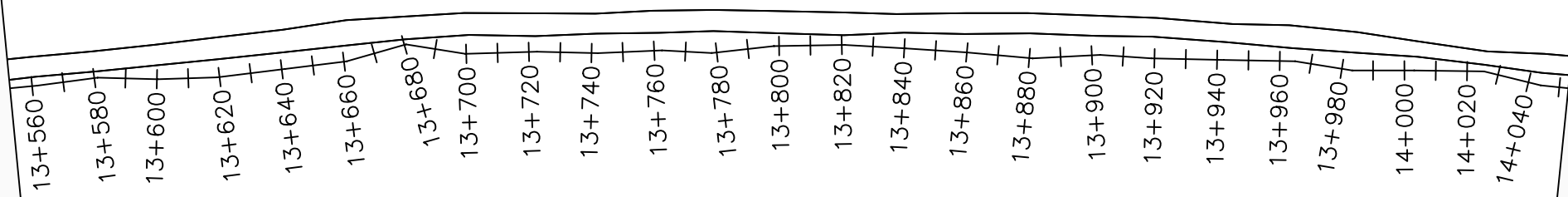
DRAWING TITLE :

TRANSMISSION MAIN 2 (WTP TO BARIBU TANK)
13+052.9 - 13+552.9

Surveyed by:	R.K
Drawn by:	M.K
Designed by:	W.G.M
Checked by:	J.K.K
Date:	January 2023
DRG. No.:	NYA-GTM-002
Scale:	1:2000
Sheet No.:	11 of 54



Chainages (m)	Ground Levels (masl)	Invert Levels (masl)	Slope (%)	Pipe Details
890.99 13+052.9	890.64 13+060	888.95	-5.37%	DN250PN10,STEEL
889.52 13+080	888.45 13+100	885.35	-5.96%	
887.40 13+120	886.28 13+140	879.39	-3.82%	
884.95 13+160	883.57 13+180	877.10	-1.80%	
882.33 13+200	881.48 13+220	875.66	-0.42%	
880.61 13+240	879.63 13+260	875.49	0.58%	
879.10 13+280	878.66 13+300	875.72	3.69%	
878.06 13+320	877.68 13+340	877.20	5.61%	
877.93 13+380	877.65 13+360	879.44	5.06%	
877.28 13+400	877.93 13+380	881.11		
877.13 13+420	877.65 13+360			
877.87 13+440	877.93 13+380			
878.39 13+460	877.65 13+360			
879.05 13+480	877.93 13+380			
880.05 13+500	877.65 13+360			
881.67 13+520	877.93 13+380			
882.71 13+540	877.65 13+360			
883.29 13+552.9	877.93 13+380			



LEGEND

Plan

- Transmission Main
- Distribution Main
- Road
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Profile

- Ground Level
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- AV Air Valve
- WO Washout
- Node detail No.

CLIENT :

THE REPUBLIC OF UGANDA
MINISTRY OF WATER AND ENVIRONMENT

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CONSULTANT :

Alliance Consultants Ltd
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PROJECT :

ALA-ORA WATER SUPPLY AND SANITATION PROJECT

NYAGAK WATER SUPPLY AND SANITATION SYSTEM

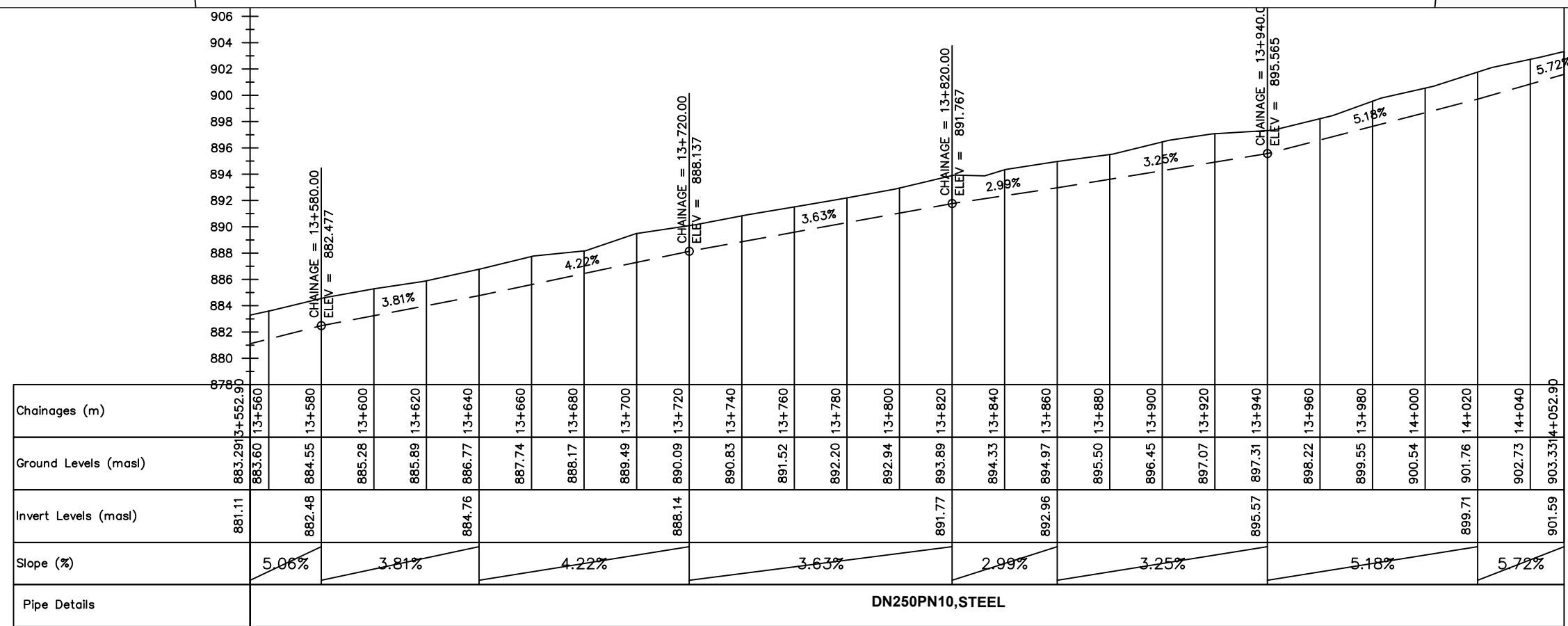
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No	Date	Description

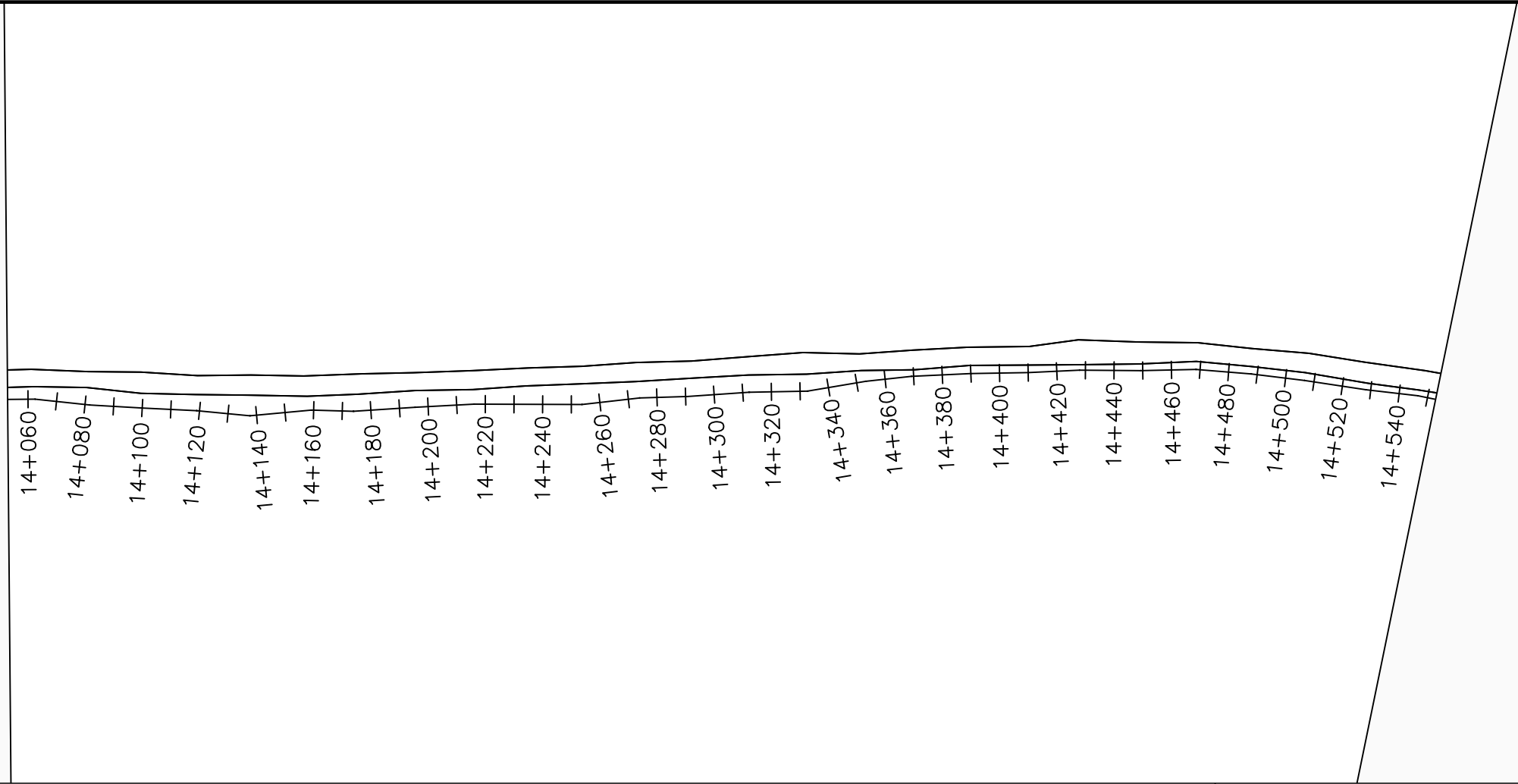
DRAWING TITLE :

TRANSMISSION MAIN 2 (WTP TO BARIBU TANK)
13+552.9 - 14+052.9

Surveyed by:	R.K
Drawn by:	M.K
Designed by:	W.G.M
Checked by:	J.K.K
Date:	January 2023
DRG. No.:	NYA-GTM-002
Scale:	1:2000
Sheet No.:	12 of 54



DN250PN10, STEEL



LEGEND

Plan

- Transmission Main
- Distribution Main
- Road
- Building
- Contours

Profile

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CLIENT :

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NYAGAK WATER SUPPLY AND SANITATION SYSTEM

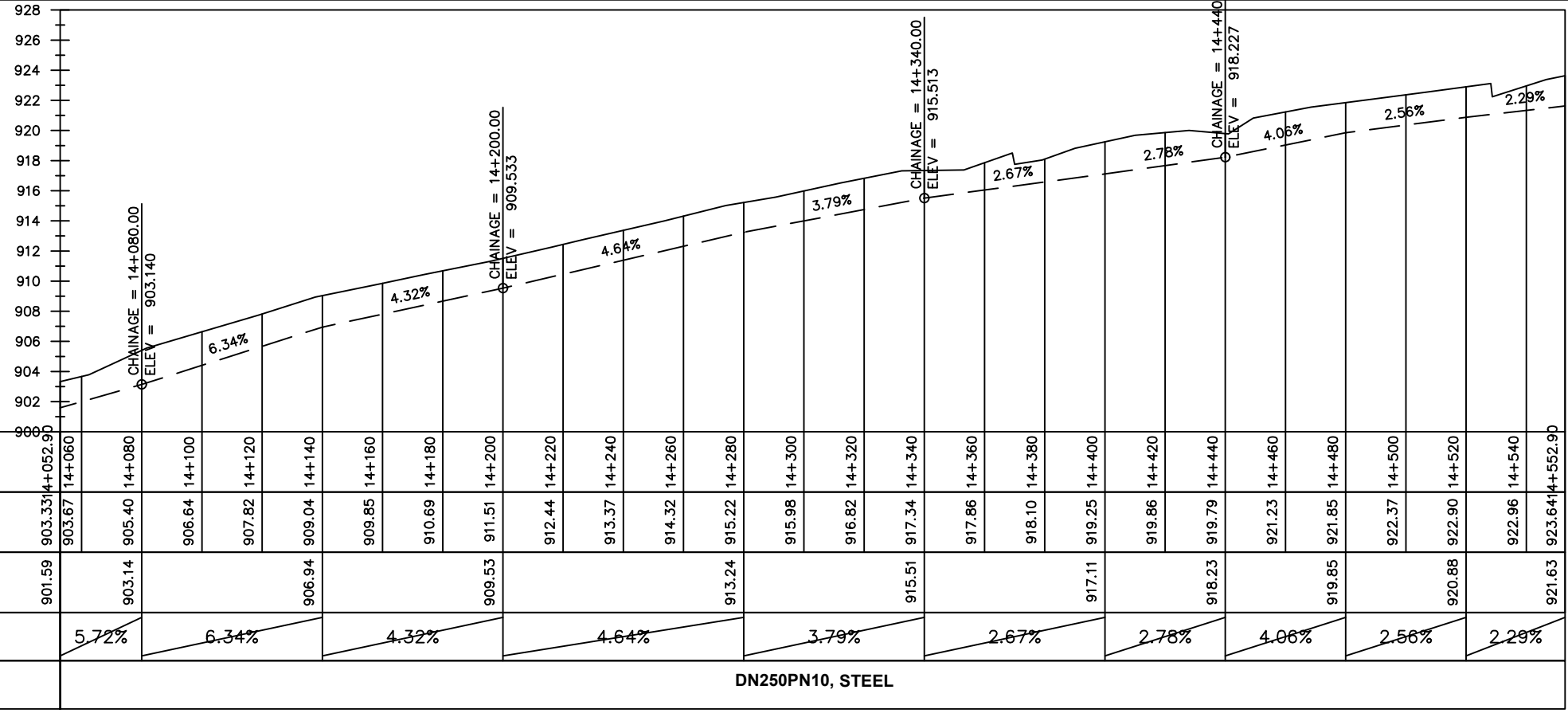
REVISIONS :

No	Date	Description

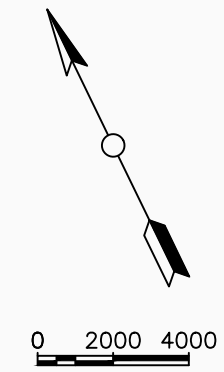
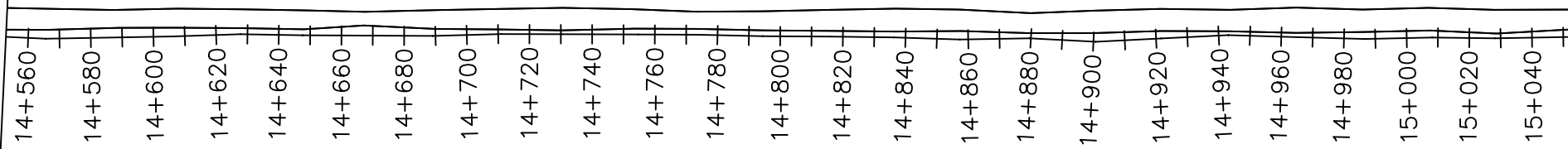
DRAWING TITLE :

TRANSMISSION MAIN 2 (WTP TO BARIBU TANK)
14+052.9 - 14+552.9

Surveyed by:	R.K
Drawn by:	M.K
Designed by:	W.G.M
Checked by:	J.K.K
Date:	January 2023
DRG. No.:	NYA-GTM-002
Scale:	1:2000
Sheet No.:	13 of 54



DN250PN10, STEEL



LEGEND

Plan

- Transmission Main
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CLIENT :

THE REPUBLIC OF UGANDA
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CO-FINANCED BY:

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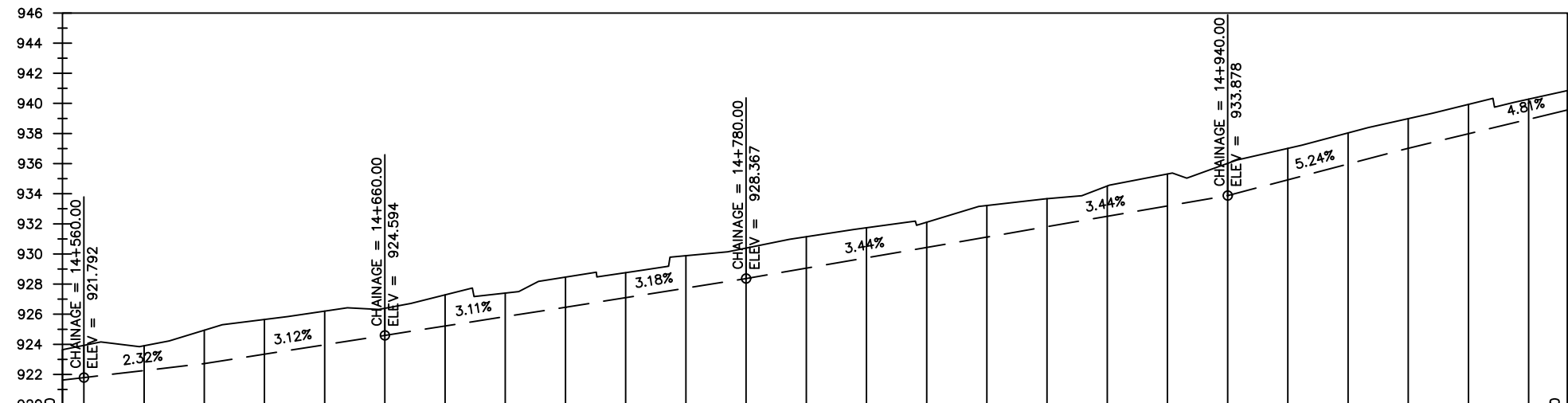
REVISIONS :

No	Date	Description

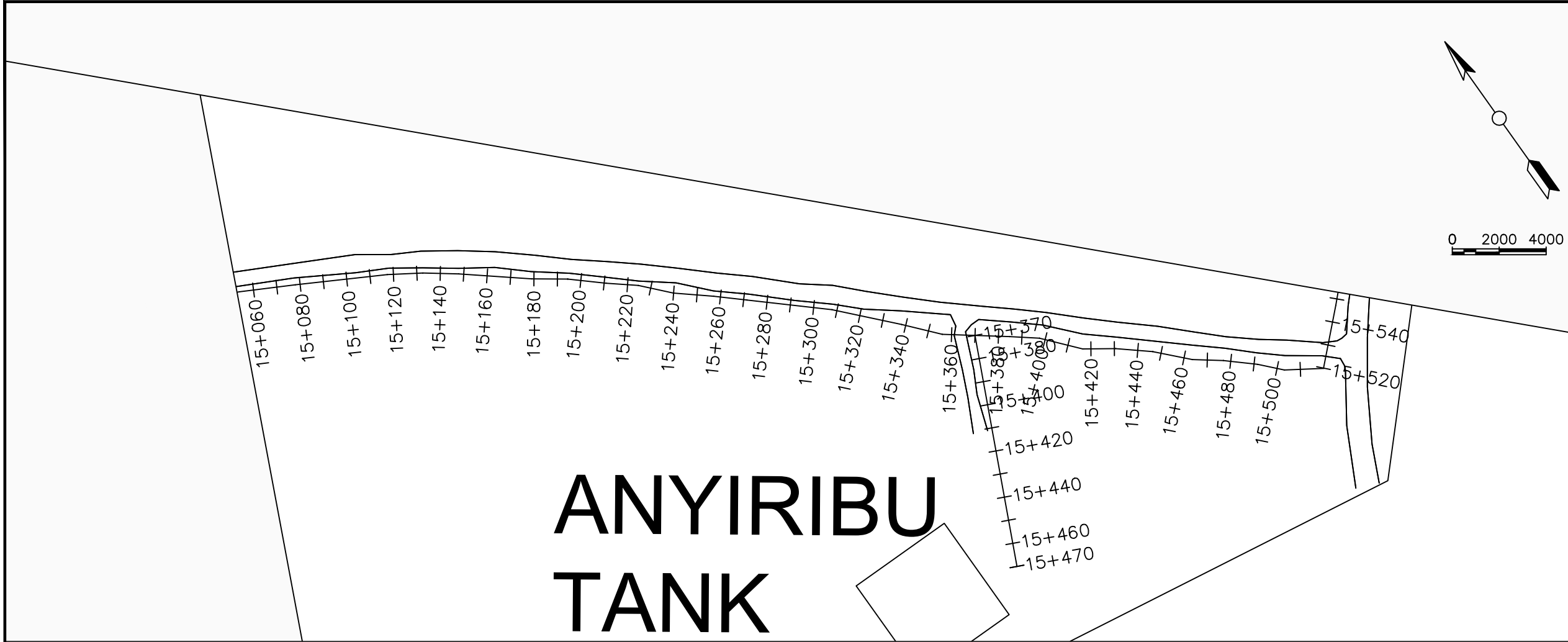
DRAWING TITLE :

TRANSMISSION MAIN 2 (WTP TO BARIBU TANK)
14+552.9 - 15+052.9

Surveyed by:	R.K
Drawn by:	M.K
Designed by:	W.G.M
Checked by:	J.K.K
Date:	January 2023
DRG. No.:	NYA-GTM-002
Scale:	1:2000
Sheet No.:	14 of 54



Chainages (m)	14+560	14+580	14+600	14+620	14+640	14+660	14+680	14+700	14+720	14+740	14+760	14+780	14+800	14+820	14+840	14+860	14+880	14+900	14+920	14+940	14+960	14+980	15+000	15+020	15+040			
Ground Levels (masl)	923.64	923.91	924.93	925.65	926.21	926.39	927.28	927.40	928.46	928.76	929.89	930.39	931.14	931.74	932.11	933.22	933.67	934.51	935.31	936.02	937.01	938.04	938.99	939.93	940.28	940.85		
Invert Levels (masl)	921.63	921.79	922.72	924.59	926.46	928.37	931.12	933.88	937.02	939.56																		
Slope (%)	2.29%	2.32%	3.12%	3.11%	3.18%	3.44%	3.44%	5.24%	4.81%																			
Pipe Details	DN250PN10,STEEL																											



ANYIRIBU TANK

LEGEND

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- Node detail No.

CLIENT :

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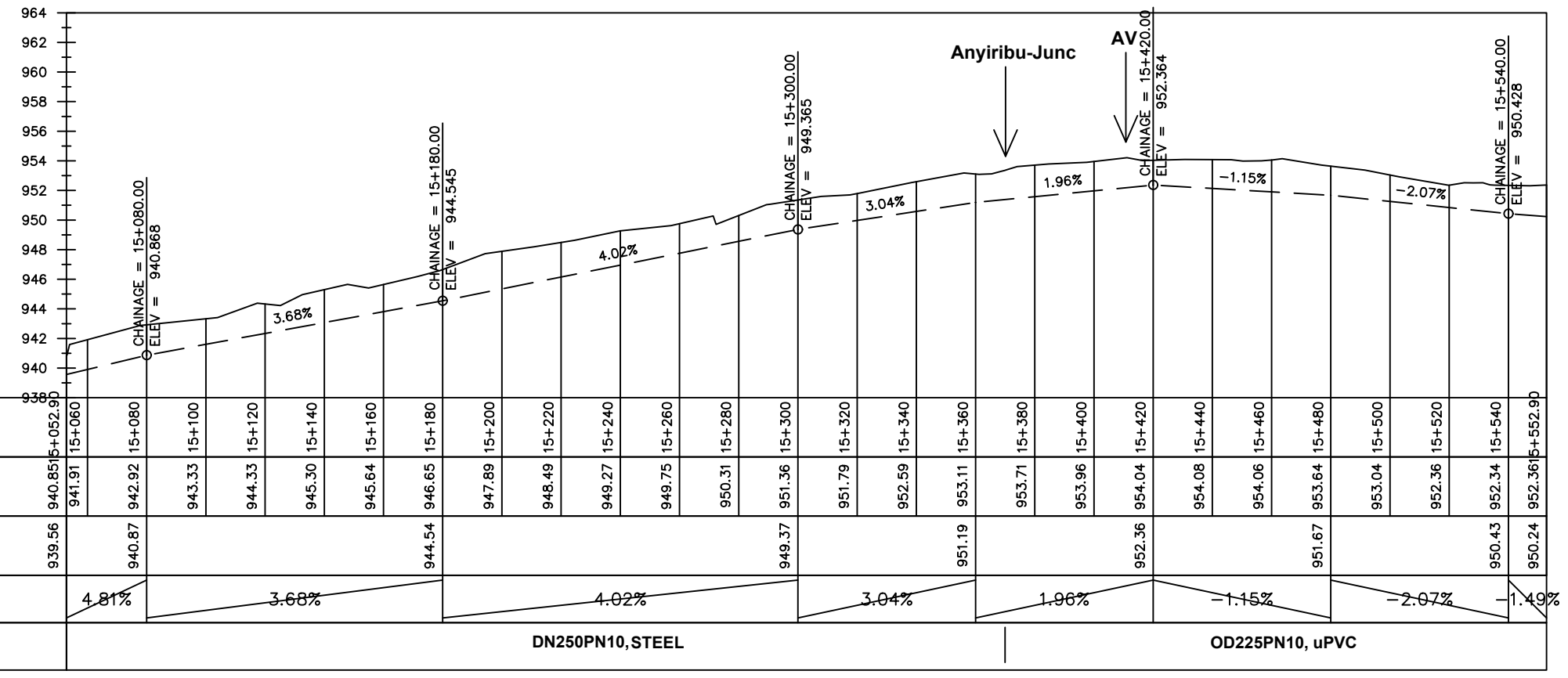
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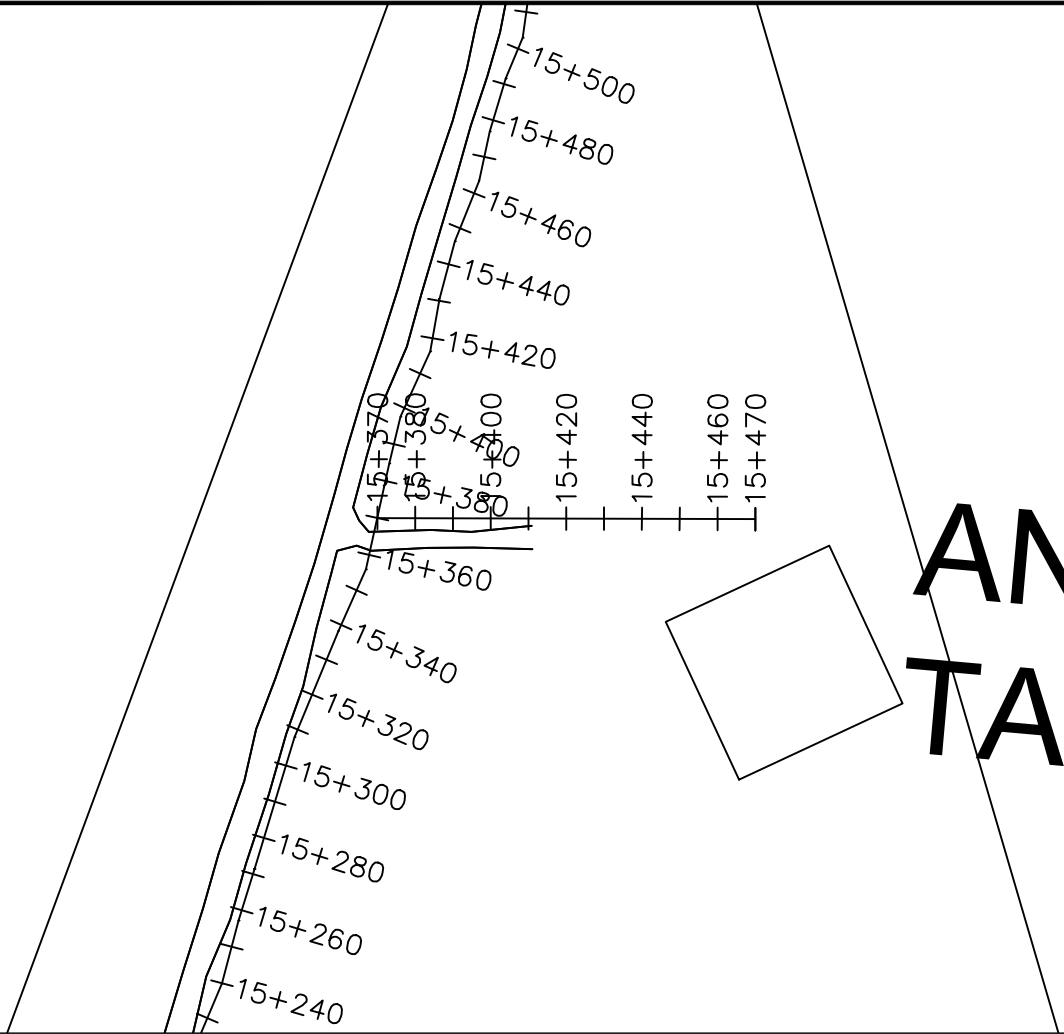
No	Date	Description

DRAWING TITLE :

TRANSMISSION MAIN 2 (WTP TO BARIBU TANK)
15+052.9 - 15+552.9

Surveyed by:	R.K
Drawn by:	M.K
Designed by:	W.G.M
Checked by:	J.K.K
Date:	January 2023
DRG. No.:	NYA-GTM-002
Scale:	1:2000
Sheet No.:	15 of 54





ANYIRIBU TANK

LEGEND

Plan

- Transmission Main
- Distribution Main
- Road
- Building
- Contours

Profile

- Ground Level
- Invert Level
- AV Air Valve
- WO Washout
- Node detail No.

CLIENT :

THE REPUBLIC OF UGANDA
MINISTRY OF WATER AND ENVIRONMENT

CO-FINANCED BY:

THE WORLD BANK
IBRD • IDA | WORLD BANK GROUP

CONSULTANT :

Alliance Consultants Ltd
In Association with

Infra-Consult Ltd

PROJECT :

ALA-ORA WATER SUPPLY AND SANITATION PROJECT

NYAGAK WATER SUPPLY AND SANITATION SYSTEM

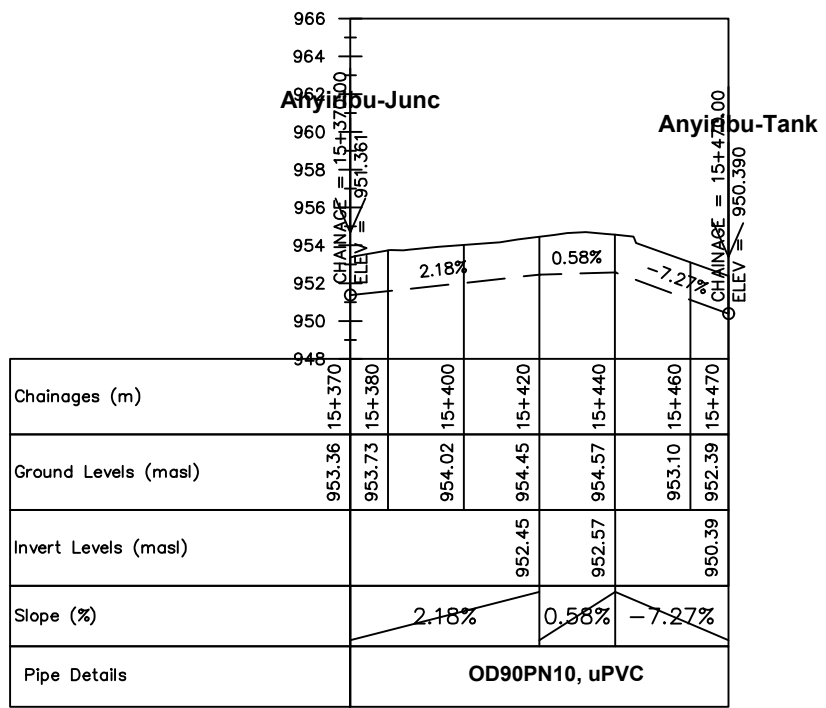
REVISIONS :

No	Date	Description

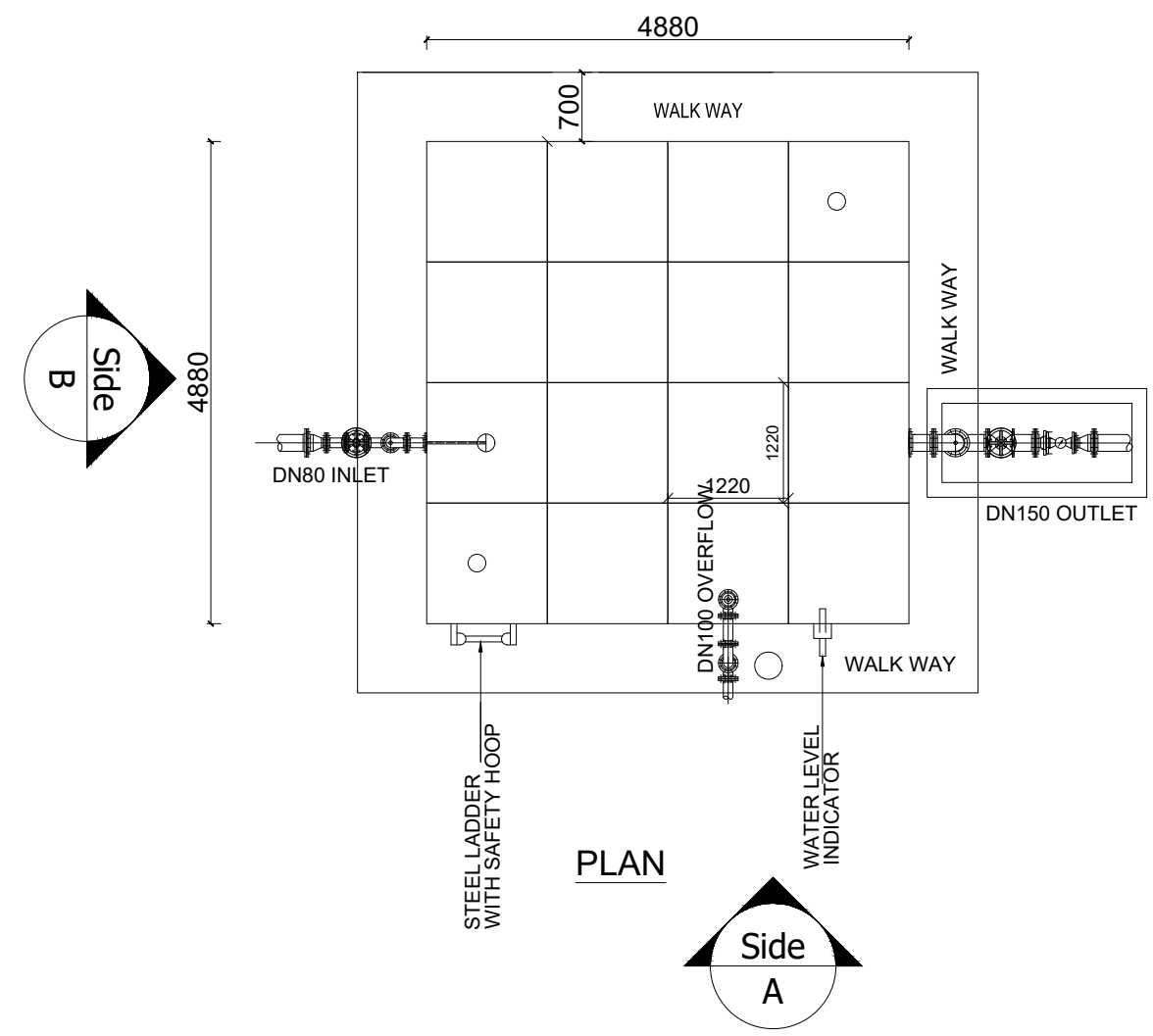
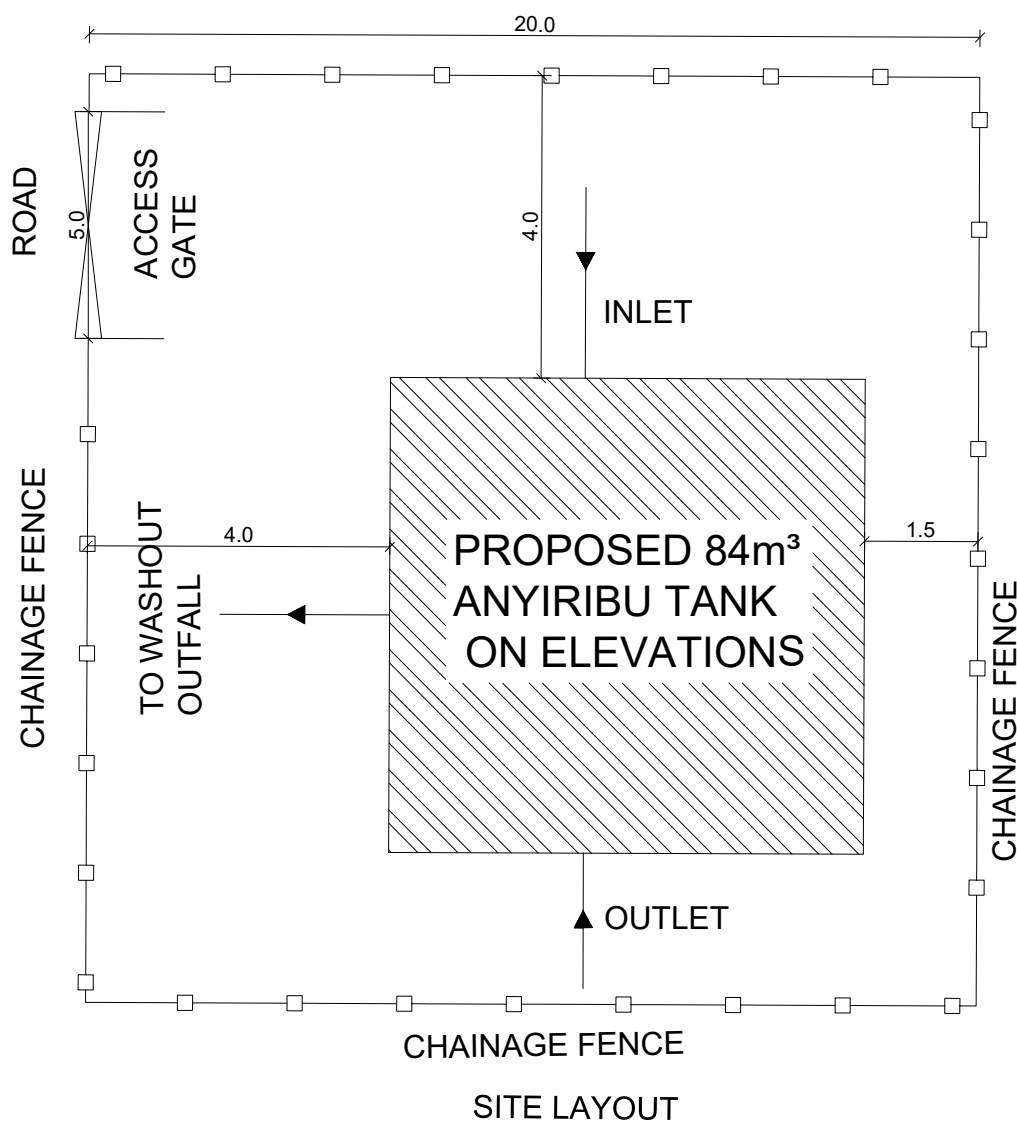
DRAWING TITLE :

TRANSMISSION MAIN 6 (TO ANYIRIBU TANK)
15+370 - 15+470

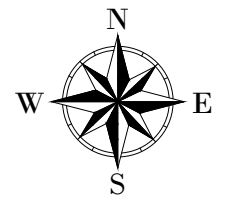
Surveyed by:	R.K
Drawn by:	M.K
Designed by:	W.G.M
Checked by:	J.K.K
Date:	Jan 2023
DRG. No.:	NYA-GTM-006
Scale:	1:2000
Sheet No.:	1 of 1



ANYIRIBU SUPPLY AREA



LEGEND



CLIENT :

 THE REPUBLIC OF UGANDA
MINISTRY OF WATER AND ENVIRONMENT

CO-FINANCED BY:
 **THE WORLD BANK**
 IBRD • IDA | WORLD BANK GROUP

CONSULTANT :
 Alliance Consultants Ltd
In Association with
 **Infra-Consult Ltd**

PROJECT :
ALA-ORA WATER SUPPLY AND SANITATION PROJECT

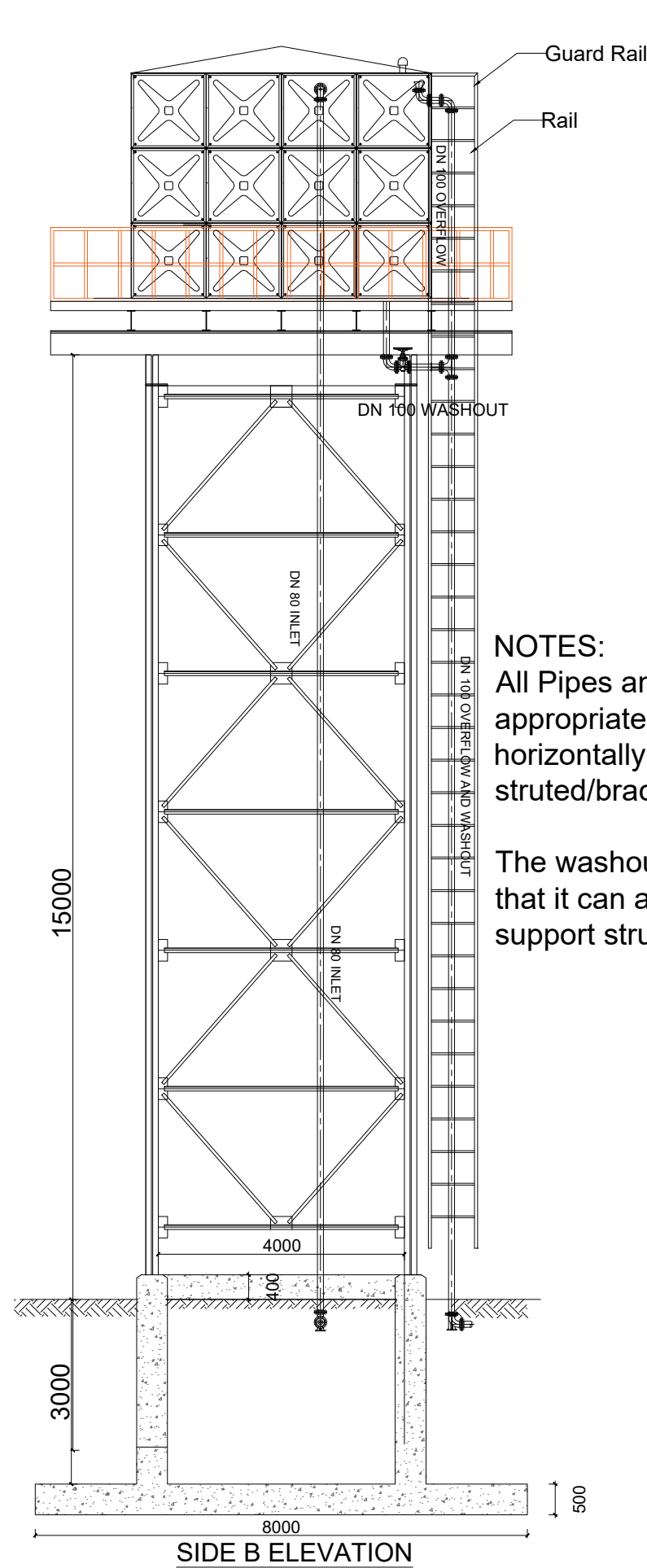
NYAGAK WATER SUPPLY AND SANITATION SYSTEM

REVISIONS :

No	Date	Description

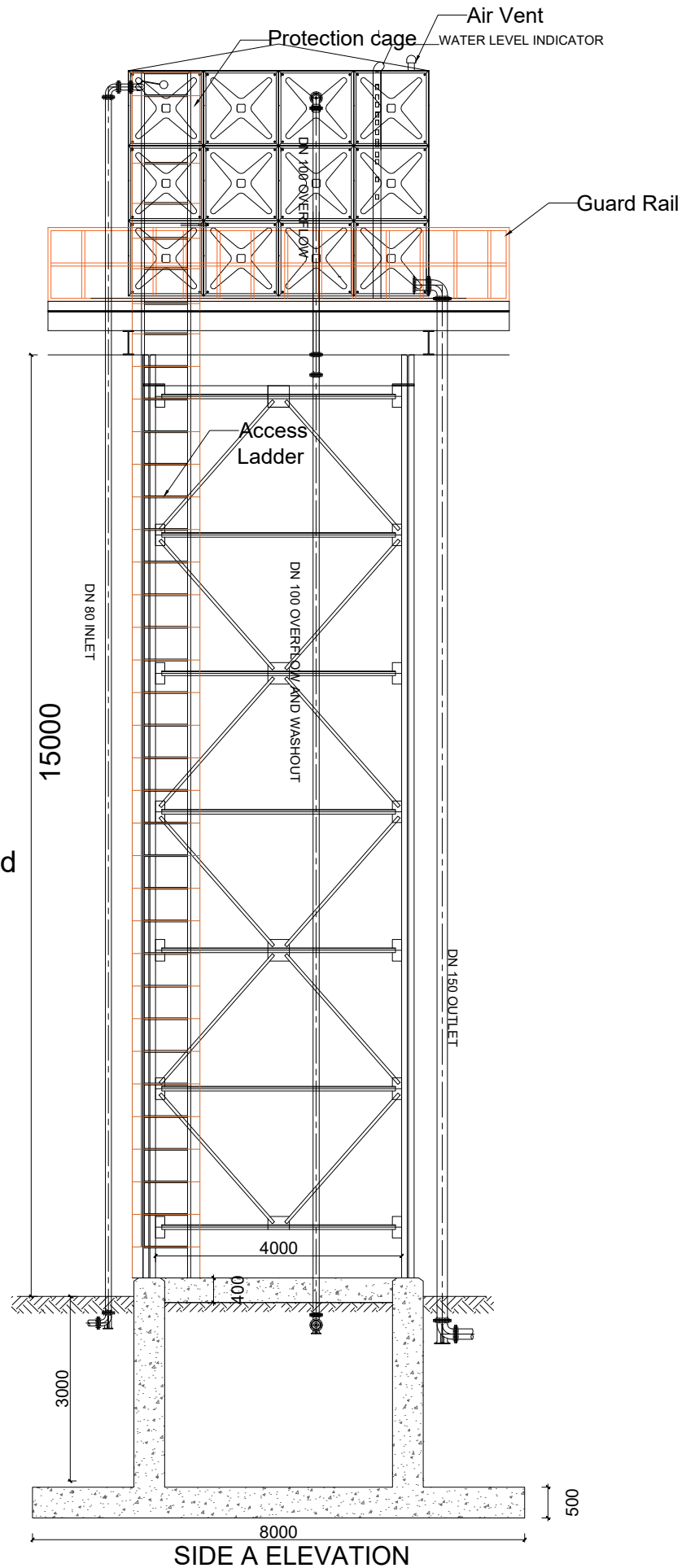
DRAWING TITLE :
ANYIRIBU RESERVOIR TANK- 84m³ PLAN AND SITE LAYOUT

Surveyed by:	R.K
Drawn by:	N.R
Designed by:	W.G.M
Checked by:	J.K.K
Date:	January 2023
DRG. No.:	NYA_RES_ANY_002
Scale:	1:75
Sheet No.:	1 of 3

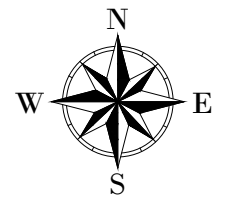


NOTES:
 All Pipes and fittings shall be appropriately aligned vertically or horizontally and strutted/braced to approval

The washout shall be so positioned that it can access using the tank support structure ladder



LEGEND



CLIENT :

 THE REPUBLIC OF UGANDA
MINISTRY OF WATER AND ENVIRONMENT

CO-FINANCED BY:

THE WORLD BANK
 IBRD • IDA | WORLD BANK GROUP

CONSULTANT :
 Alliance Consultants Ltd
In Association with
 **Infra-Consult Ltd**

PROJECT :
ALA-ORA WATER SUPPLY AND SANITATION PROJECT

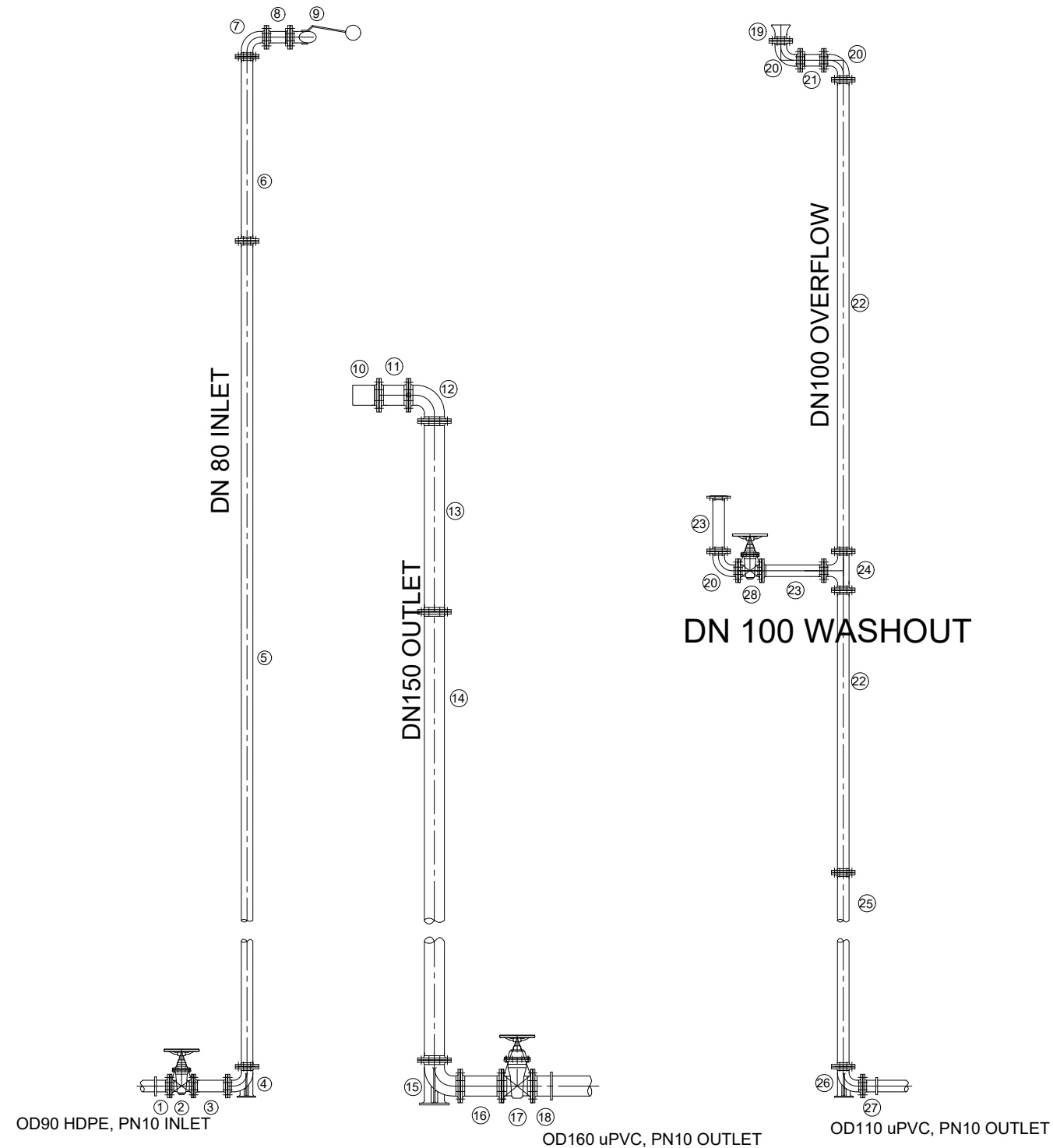
NYGAK WATER SUPPLY AND SANITATION SYSTEM

REVISIONS :

No	Date	Description

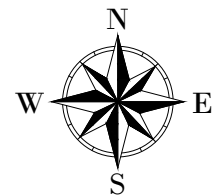
DRAWING TITLE :
ANYIRIBU RESERVOIR TANK- 84m³ ELEVATIONS

Surveyed by: R.K
 Drawn by: N.R
 Designed by: W.G.M
 Checked by: J.K.K
 Date: January 2023
 DRG. No.: **NYA_RES_ANY_002**
 Scale: 1:100 Sheet No.: 2 of 3



PIPE AND FITTINGS SCHEDULE					
Mark	Description	Material	DN	PN	Qty.
INLET					
1	Flanged Adapter	DI	80		1
2	Flanged Gate Valve	CI	80		1
3	Flanged Pipe Piece, Length - 0.3m	DI	80		1
4	90° Flanged Duckfoot Bend	DI	80		1
5	Flanged Pipe, Length - 6.0m	DI	80	10	3
6	Flanged Pipe, Length n.e - 2.0m	DI	80		1
7	90° Flanged Bend	DI	80		1
8	Flanged Pipe Piece, Length - 0.2m	DI	80		1
9	Flanged Float Valve	CI	80		1
OUTLET					
10	Flanged Strainer	SS	150		1
11	Flanged Pipe Piece, Length - 0.2m	DI	150		1
12	90° Flanged Bend	DI	150		1
13	Flanged Pipe, Length n.e - 5.0m	DI	150		1
14	Flanged Pipe, Length - 6.0m	DI	150	10	3
15	90° Flanged Duckfoot Bend	DI	150		1
16	Flanged Pipe Piece, Length - 0.3m	DI	150		1
17	Flanged Gate Valve	CI	150		1
18	Flanged Adapter	DI	150		1
WASHOUT & OVERFLOW					
19	Flanged Bellmouth	DI	100		1
20	90° Flanged Bend	DI	100		3
21	Flanged Pipe, Length n.e - 0.2m	DI	100		1
22	Flanged Pipe Piece, Length - 5.0m	DI	100		2
23	Flanged Pipe Piece, Length n.e - 1.0m	DI	100	10	2
24	Flanged Tee	DI	100		1
25	Flanged Pipe Piece, Length - 6.0m	DI	100		3
26	90° Flanged Duckfoot Bend	DI	100		1
27	Flanged Adapter	DI	100		1
28	Flanged Gate Valve	CI	100		1

LEGEND



CLIENT :

 THE REPUBLIC OF UGANDA
MINISTRY OF WATER AND ENVIRONMENT
 CO-FINANCED BY:

 THE WORLD BANK
 IBRD • IDA | WORLD BANK GROUP

CONSULTANT :

 Alliance Consultants Ltd
In Association with

 Infra-Consult Ltd

PROJECT :
 ALA-ORA WATER SUPPLY AND
 SANITATION PROJECT
**NYAGAK WATER SUPPLY AND
 SANITATION SYSTEM**

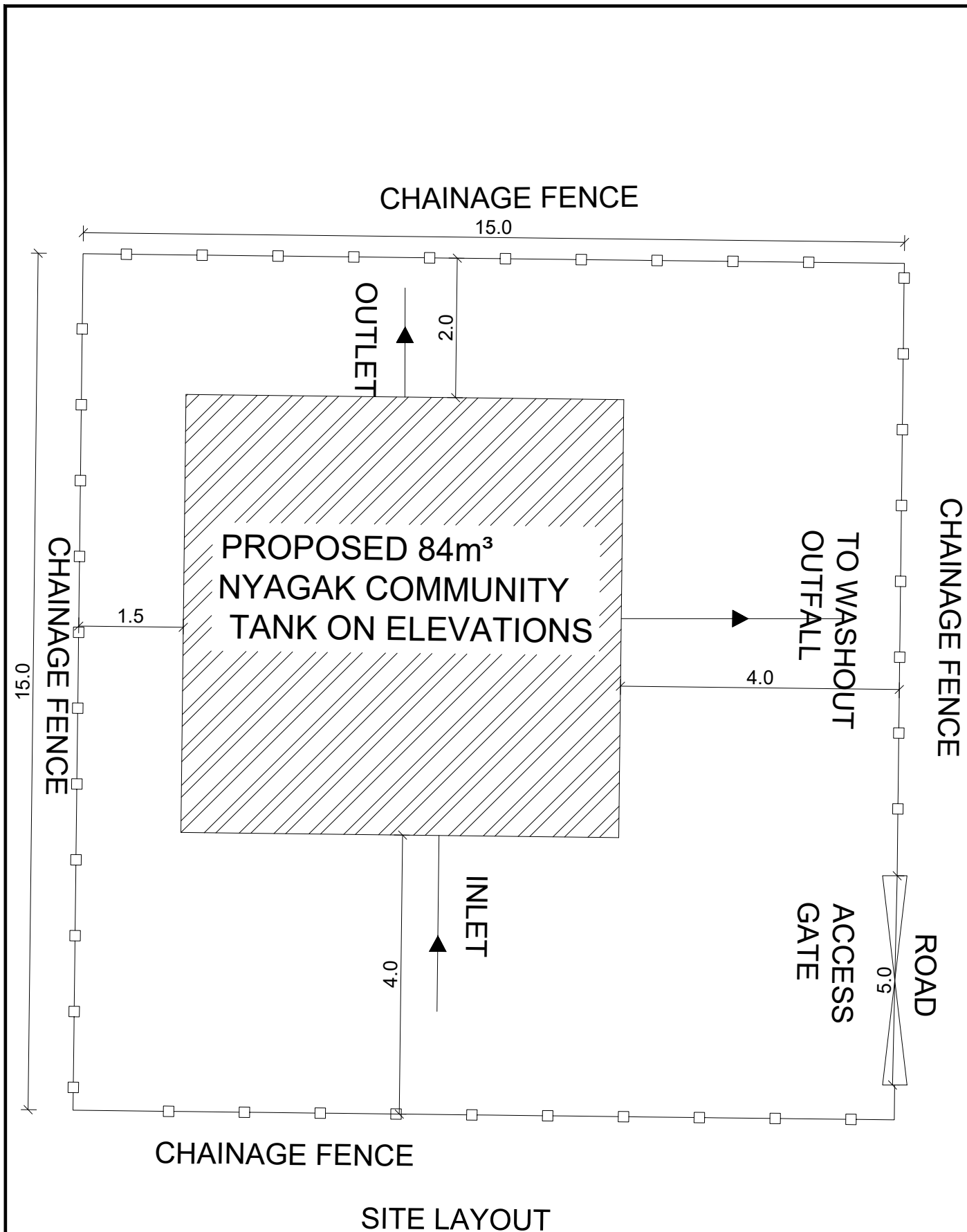
REVISIONS :

No	Date	Description

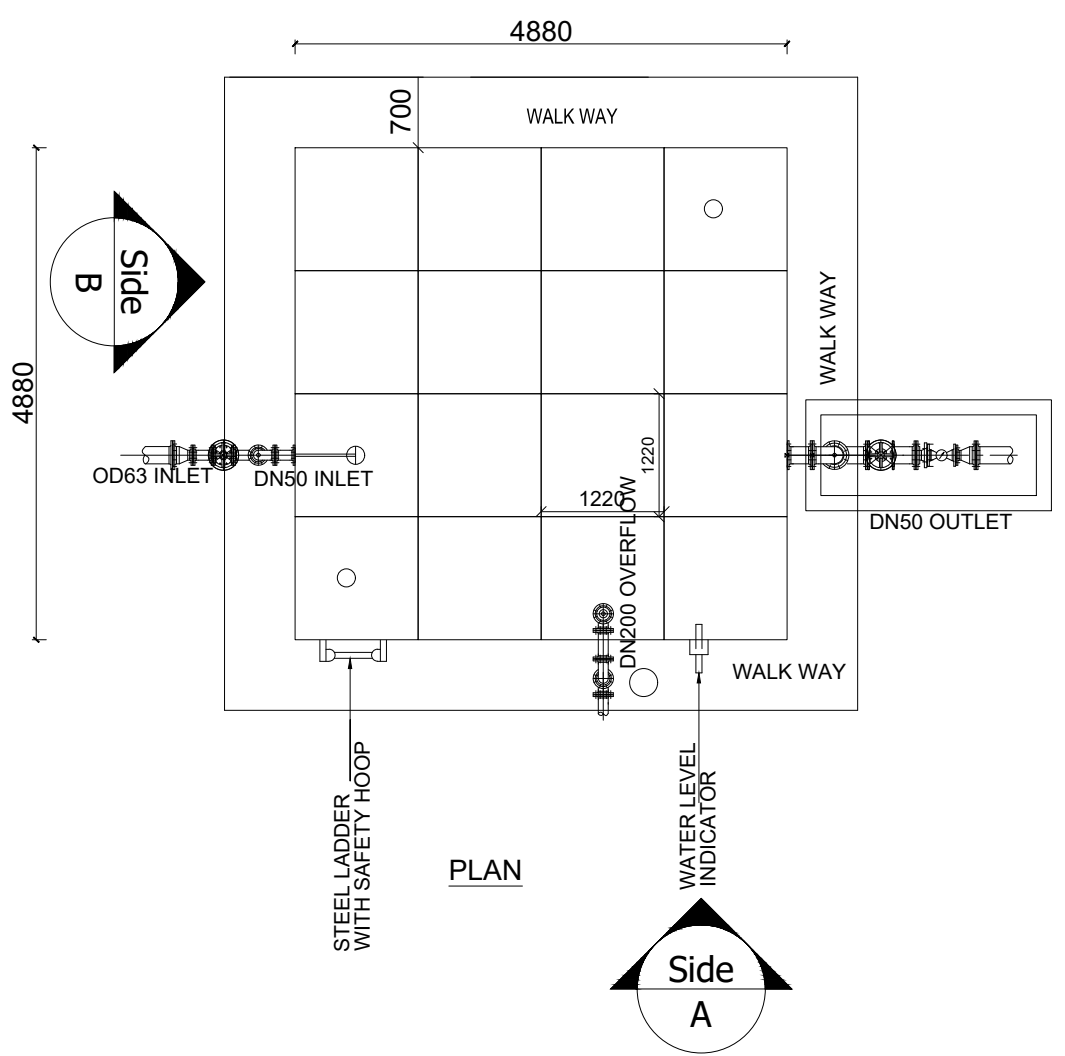
DRAWING TITLE :
**ANYIRIBU RESERVOIR TANK- 84m³
 PIPE FITTINGS**

Surveyed by:	R.K
Drawn by:	N.R
Designed by:	W.G.M
Checked by:	J.K.K
Date:	January 2023
DRG. No.:	NYA_RES_ANY_002
Scale: 1:50	Sheet No.: 3 of 3

NYAGAK COMMUNITY SUPPLY AREA

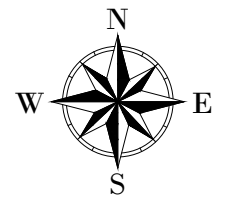


SITE LAYOUT



PLAN

LEGEND



CLIENT :

 THE REPUBLIC OF UGANDA
MINISTRY OF WATER AND ENVIRONMENT

CO-FINANCED BY:

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CONSULTANT :

 Alliance Consultants Ltd
In Association with

 Infra-Consult Ltd

PROJECT :
 ALA-ORA WATER SUPPLY AND
 SANITATION PROJECT

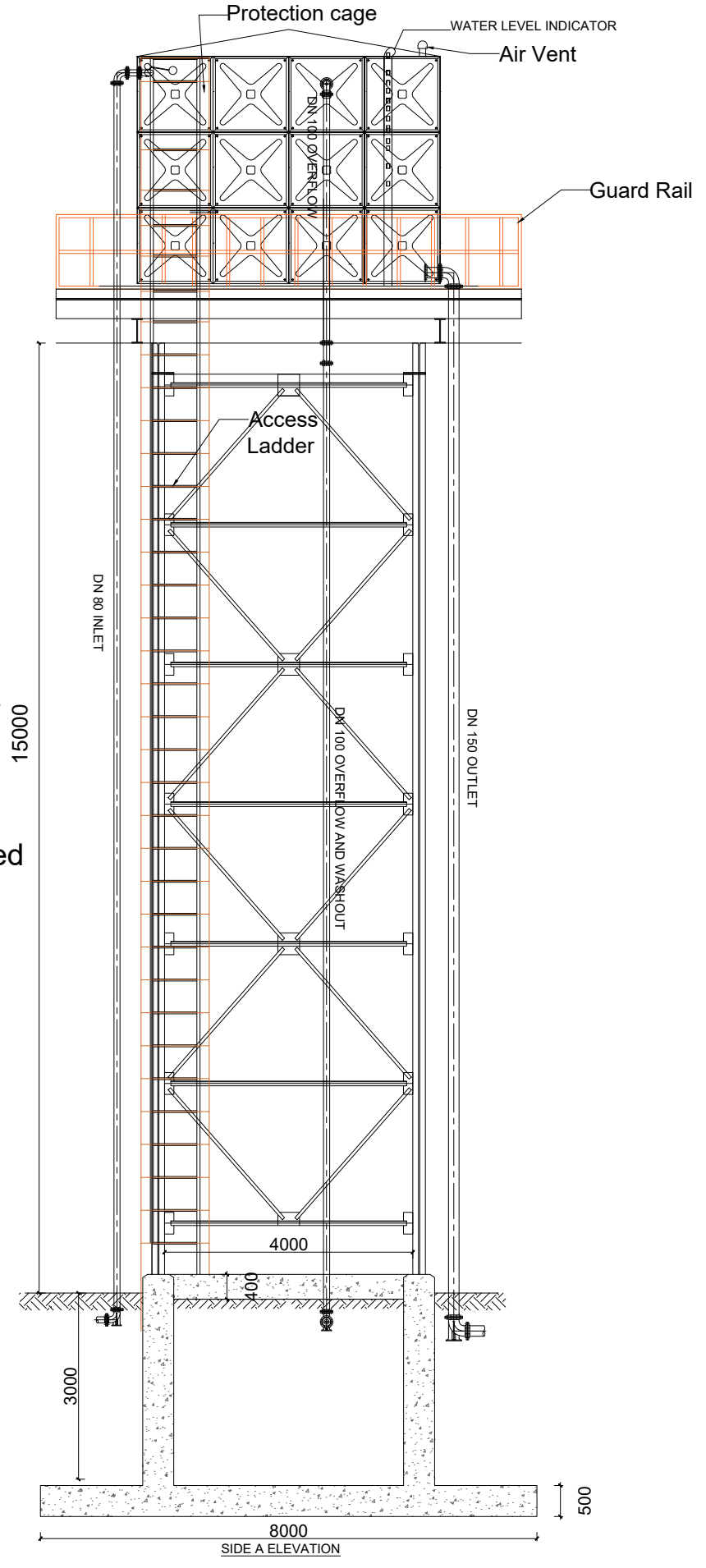
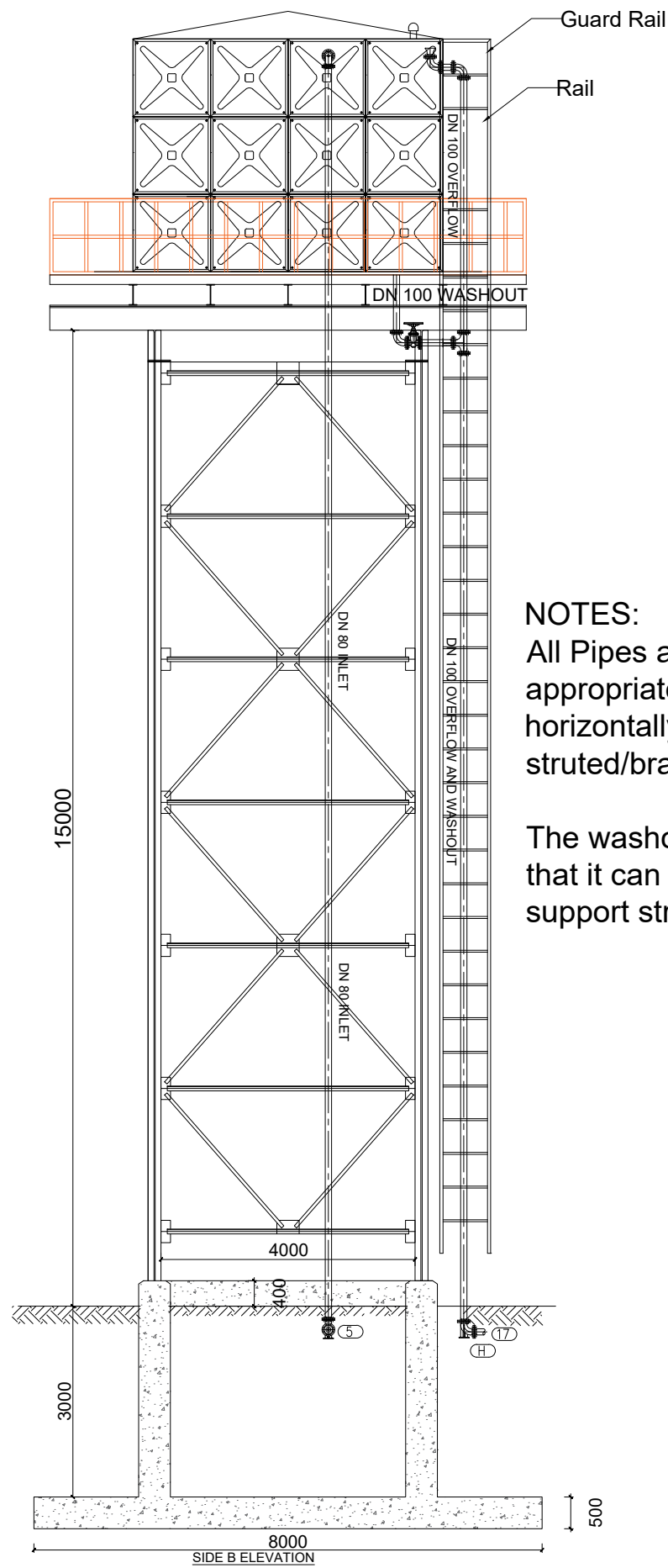
**NYAGAK WATER SUPPLY AND
 SANITATION SYSTEM**

REVISIONS :

No	Date	Description

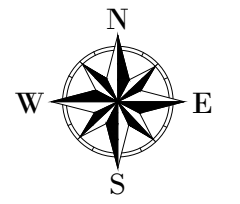
DRAWING TITLE :
**NYAGAK COMMUNITY RESERVOIR
 TANK- 84m³ PLAN AND SITE LAYOUT**

Surveyed by:	R.K
Drawn by:	N.R
Designed by:	W.G.M
Checked by:	J.K.K
Date:	January 2023
DRG. No.:	NYA_RES_NYA_008
Scale:	1:75
Sheet No.:	1 of 3



NOTES:
 All Pipes and fittings shall be appropriately aligned vertically or horizontally and strutted/braced to approval
 The washout shall be so positioned that it can access using the tank support structure ladder

LEGEND



CLIENT :

 THE REPUBLIC OF UGANDA
MINISTRY OF WATER AND ENVIRONMENT
 CO-FINANCED BY:

 THE WORLD BANK
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CONSULTANT :

 Alliance Consultants Ltd
 In Association with

 Infra-Consult Ltd

PROJECT :
 ALA-ORA WATER SUPPLY AND
 SANITATION PROJECT

**NYAGAK WATER SUPPLY AND
 SANITATION SYSTEM**

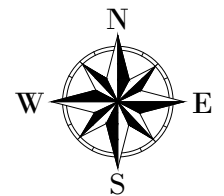
REVISIONS :

No	Date	Description

DRAWING TITLE :
**NYAGAK COMMUNITY RESERVOIR
 TANK- 84m³ ELEVATIONS**

Surveyed by: R.K
 Drawn by: N.R
 Designed by: W.G.M
 Checked by: J.K.K
 Date: January 2023
 DRG. No.: **NYA_RES_NYA_008**
 Scale: 1:100 Sheet No.: 2 of 3

LEGEND



CLIENT :

 THE REPUBLIC OF UGANDA
MINISTRY OF WATER AND ENVIRONMENT

CO-FINANCED BY:

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CONSULTANT :

Alliance Consultants Ltd
In Association with

Infra-Consult Ltd

PROJECT :
**ALA-ORA WATER SUPPLY AND
 SANITATION PROJECT**

**NYAGAK WATER SUPPLY AND
 SANITATION SYSTEM**

REVISIONS :

No	Date	Description

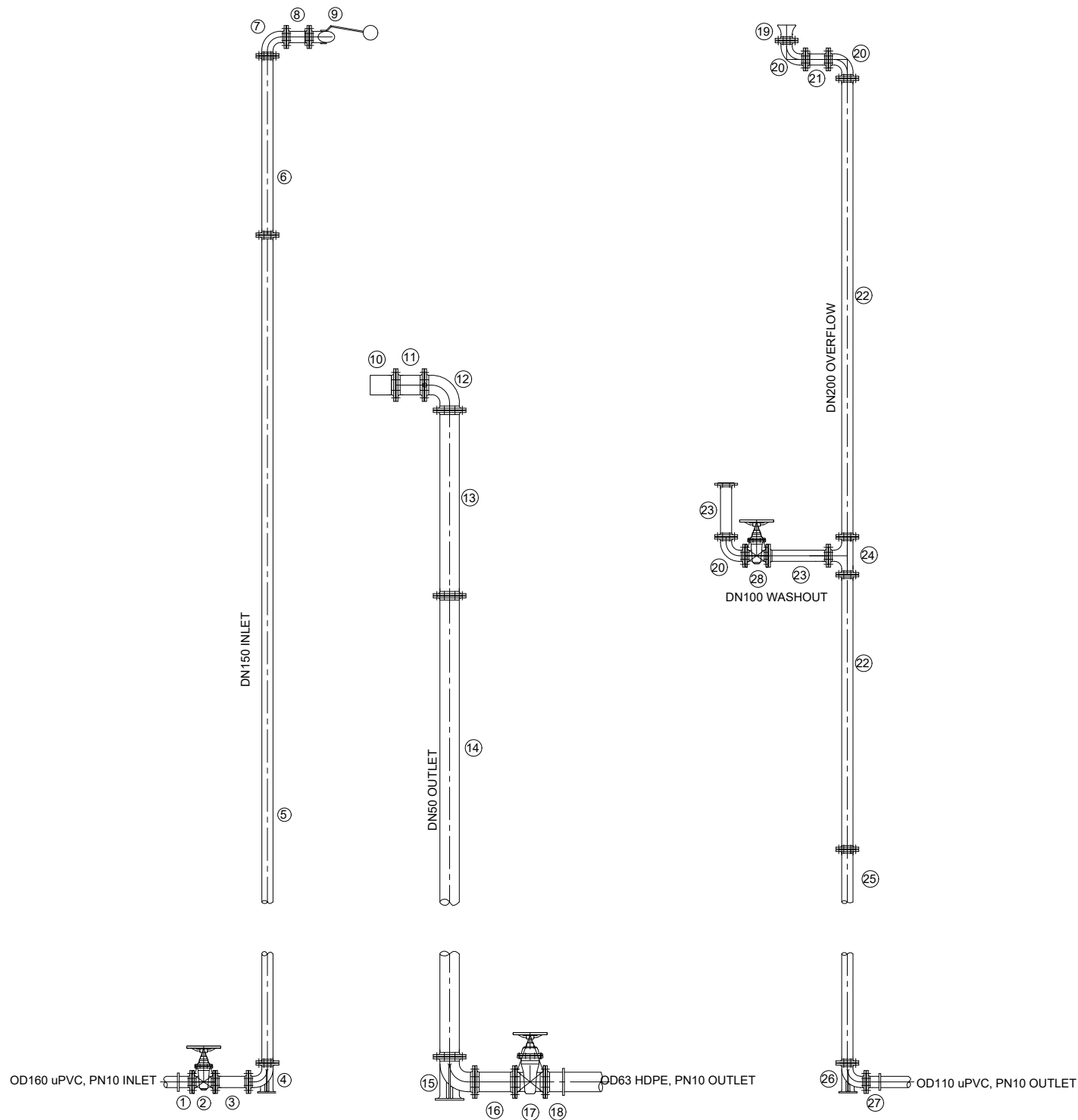
DRAWING TITLE :
**NYAGAK COMMUNITY RESERVOIR
 TANK - 84m³ PIPE FITTINGS**

Surveyed by: R.K
 Drawn by: N.R
 Designed by: W.G.M
 Checked by: J.K.K
 Date: January 2023

DRG. No.: **NYA_RES_NYA_008**

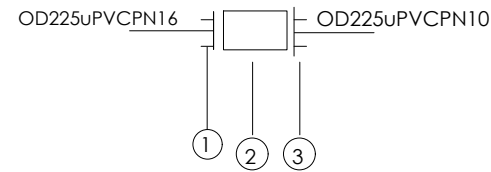
Scale: 1:50 Sheet No.: 3 of 3

Mark	Description	Material	DN	PN	Qty
INLET					
1	Flanged Adapter	DI	150		1
2	Flanged Gate Valve	CI	150		1
3	Flanged Pipe Piece, Length - 0.3m	DI	150		1
4	90° Flanged Duckfoot Bend	DI	150		1
5	Flanged Pipe, Length - 6.0m	DI	150	10	3
6	Flanged Pipe, Length n.e - 2.0m	DI	150		1
7	90° Flanged Bend	DI	150		1
8	Flanged Pipe Piece, Length - 0.2m	DI	150		1
9	Flanged Float Valve	CI	150		1
OUTLET					
10	Flanged Strainer	SS	50		1
11	Flanged Pipe Piece, Length - 0.2m	DI	50		1
12	90° Flanged Bend	DI	50		1
13	Flanged Pipe, Length n.e - 5.0m	DI	50		1
14	Flanged Pipe, Length - 6.0m	DI	50	10	3
15	90° Flanged Duckfoot Bend	DI	50		1
16	Flanged Pipe Piece, Length - 0.3m	DI	50		1
17	Flanged Gate Valve	CI	50		1
18	Flanged Adapter	DI	50		1
WASHOUT & OVERFLOW					
19	Flanged Bellmouth	DI	100		1
20	90° Flanged Bend	DI	100		3
21	Flanged Pipe, Length n.e - 0.2m	DI	100		1
22	Flanged Pipe Piece, Length - 5.0m	DI	100		2
23	Flanged Pipe Piece, Length n.e - 1.0m	DI	100	10	2
24	Flanged Tee	DI	100		1
25	Flanged Pipe Piece, Length - 6.0m	DI	100		3
26	90° Flanged Duckfoot Bend	DI	100		1
27	Flanged Adapter	DI	100		1
28	Flanged Gate Valve	CI	100		1



LEGEND

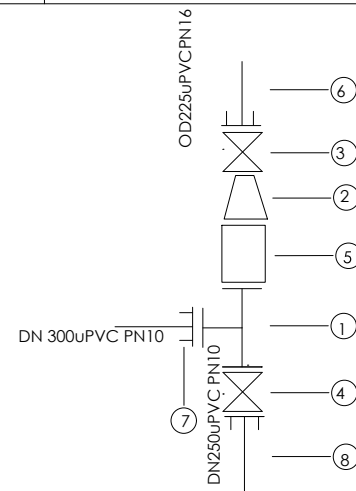
OFFAKA TEE - NDIRIBA	DWG No. - CHAINAGE
1	NYA-GTM-001 - CH 14+720



SCHEDULE OF PIPEWORK & FITTINGS

ITEM	DESCRIPTION	SIZE	QTY.	PN
1	DI FLANGED ADAPTOR (MAXI TYPE OR SIMILAR)	225	1	16
2	FLANGED COUPLER	225/225	1	16
3	DI FLANGED ADAPTOR (MAXI TYPE OR SIMILAR)	225	1	16

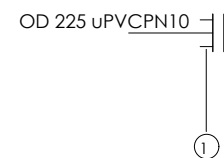
OFFAKA TEE	DWG No. - CHAINAGE	NODE No.
1	NYA-GTM-001 - CH 8+053	②



SCHEDULE OF PIPEWORK & FITTINGS

ITEM	DESCRIPTION	SIZE	QTY.	PN
1.	CI ALL FLANGED TEE	300/250	1	16
2.	DI FLANGED TAPER	300/225	1	16
3	CI FLANGED GATE VALVE	225	1	16
4	CI FLANGED GATE VALVE	250	1	16
5	FLANGED COUPLER	300/225	1	16
6	DI FLANGED ADAPTOR (MAXI TYPE OR SIMILAR)	225	1	16
7	DI FLANGED ADAPTOR (MAXI TYPE OR SIMILAR)	300	1	16
8	DI FLANGED ADAPTOR (MAXI TYPE OR SIMILAR)	250	1	16

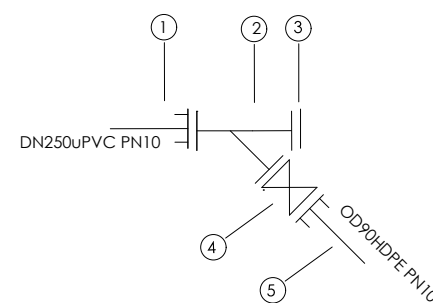
NDIRIBA TANK	DWG No. - CHAINAGE	NODE No.
1	NYA-GTM-001 - CH 17+892	③



SCHEDULE OF PIPEWORK & FITTINGS

ITEM	DESCRIPTION	SIZE	QTY.	PN
1.	DI END CAP	225	1	10

ANYIRIBU TEE	DWG No. - CHAINAGE	NODE No.
2	NYA-GTM-002 - CH 15+370	④



SCHEDULE OF PIPEWORK & FITTINGS

ITEM	DESCRIPTION	SIZE	QTY.	PN
1	DI FLANGED ADAPTOR (MAXI TYPE OR SIMILAR)	250	1	10
2	CI ALL FLANGED WYE	250/225	1	10
3	END CAP	250/225	1	10
4	CI FLANGED GATE VALVE	225	1	10
5	DI FLANGED ADAPTOR (MAXI TYPE OR SIMILAR)	75	1	10

CLIENT :



THE REPUBLIC OF UGANDA
MINISTRY OF WATER AND ENVIRONMENT

CO-FINANCED BY:



THE WORLD BANK
IBRD • IDA | WORLD BANK GROUP

CONSULTANT :



Alliance Consultants Ltd
In Association with
Infra-Consult Ltd

PROJECT :

ALA-ORA WATER SUPPLY AND SANITATION PROJECT

NYAGAK WATER SUPPLY AND SANITATION SYSTEM

REVISIONS :

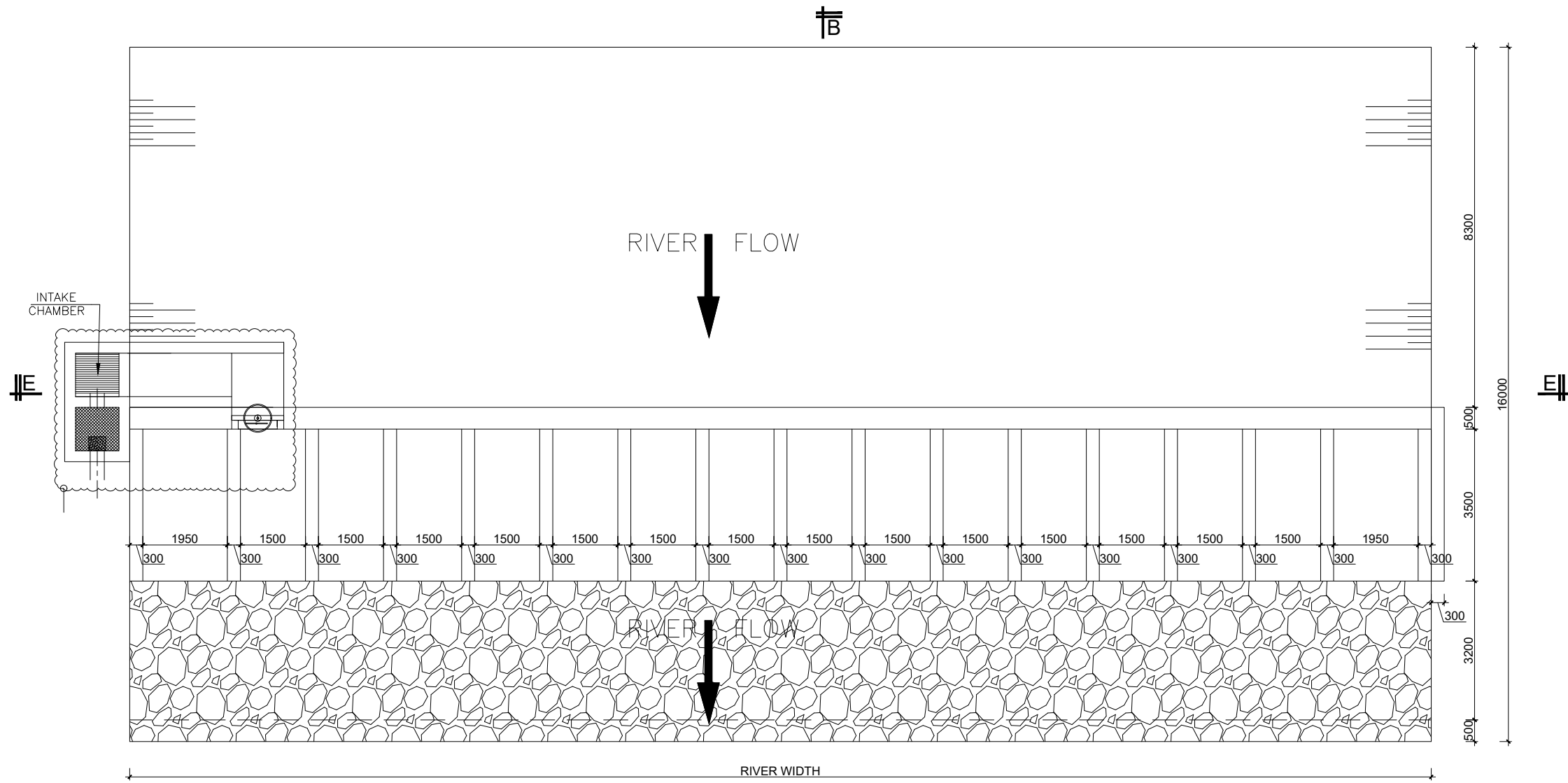
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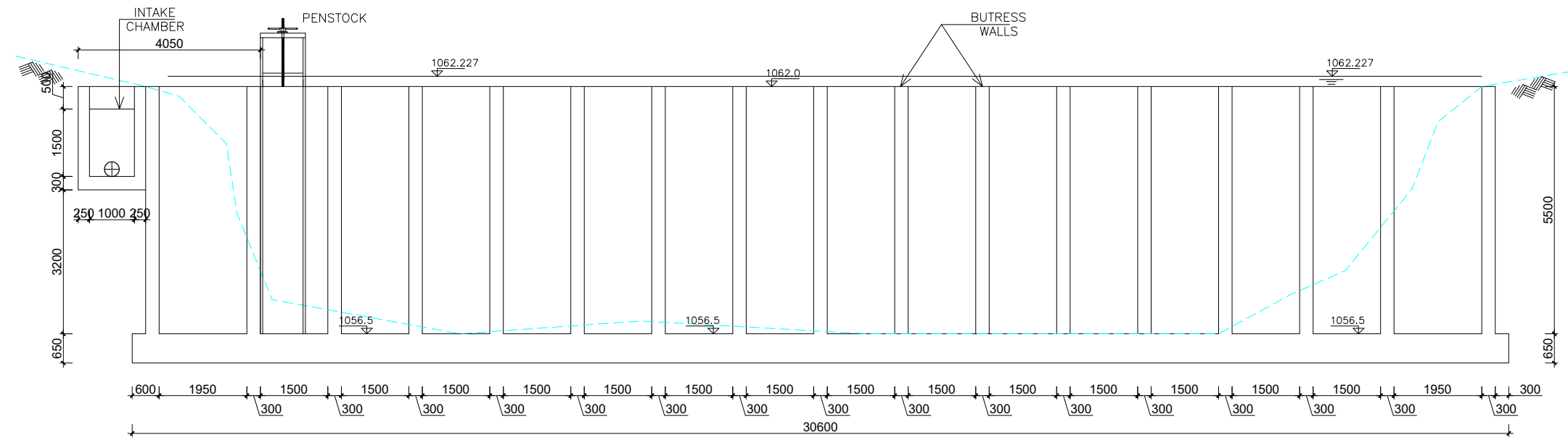
TRANSMISSION NODES DETAILS

Surveyed by:	R.K
Drawn by:	A.K
Designed by:	W.G.M
Checked by:	J.K.K
Date:	January 2023
DRG. No.:	NYA-ND-001
Scale:	1:5
Sheet No.:	1 of 1

STRUCTURAL DRAWINGS



FOUNDATION LAYOUT.
SCALE 1:75



SECTION E-E
SCALE 1:50

GENERAL NOTES

- This drawing shall be read in conjunction with all relevant drawings.
- Concrete mixes to BS8500
 - Mass concrete to have a minimum works cube strength of 15N/mm² and at 28 days with 20 mm maximum aggregate size
 - Reinforced concrete to have works cube strength of 30N/mm² cylinder strength of 30N/mm² with 20mm maximum aggregate size UNLESS OTHERWISE STATED
- Reinforcement
 - High tensile bars to be ribbed cold formed bars to B.S. 4461
 - Mild steel to be round bars to B.S. 4449
 - Mesh reinforcement to comply with requirement of B.S. 4483
- Minimum cover to all steel 50.
- THE QUALITY OF ALL MATERIALS AND WORKMANSHIP SHALL COMPLY WITH THE REQUIREMENTS OF THE MOST RECENT ISSUES OF RELEVANT EUROPEAN STANDARDS AND CODES OF PRACTICE.

ADDITIONAL NOTES

- All vertical walls to be cast at once
- Approved stopper water bar to be installed in all joints as directed by the Engineer.
- Contractor to use non recoverable ties for tying formwork
- Contractor to submit methodology for Construction before commencing work.
- All Pipes going through walls to have paddle flange
- Diameter of pipes to first be confirmed by M&E before concreting.
- All position of services i.e pipes passing through RC walls to be confirmed by M&E Before Casting

CLIENT:



THE REPUBLIC OF UGANDA
MINISTRY OF WATER AND ENVIRONMENT
DIRECTORATE OF WATER DEVELOPMENT

CONSULTANT:



ALLIANCE CONSULTANTS LTD
INSULATING ENGINEERS
In Association with
Infra-Consult Ltd

PROJECT:

ALA-ORA WATER SUPPLY AND SANITATION SYSTEM

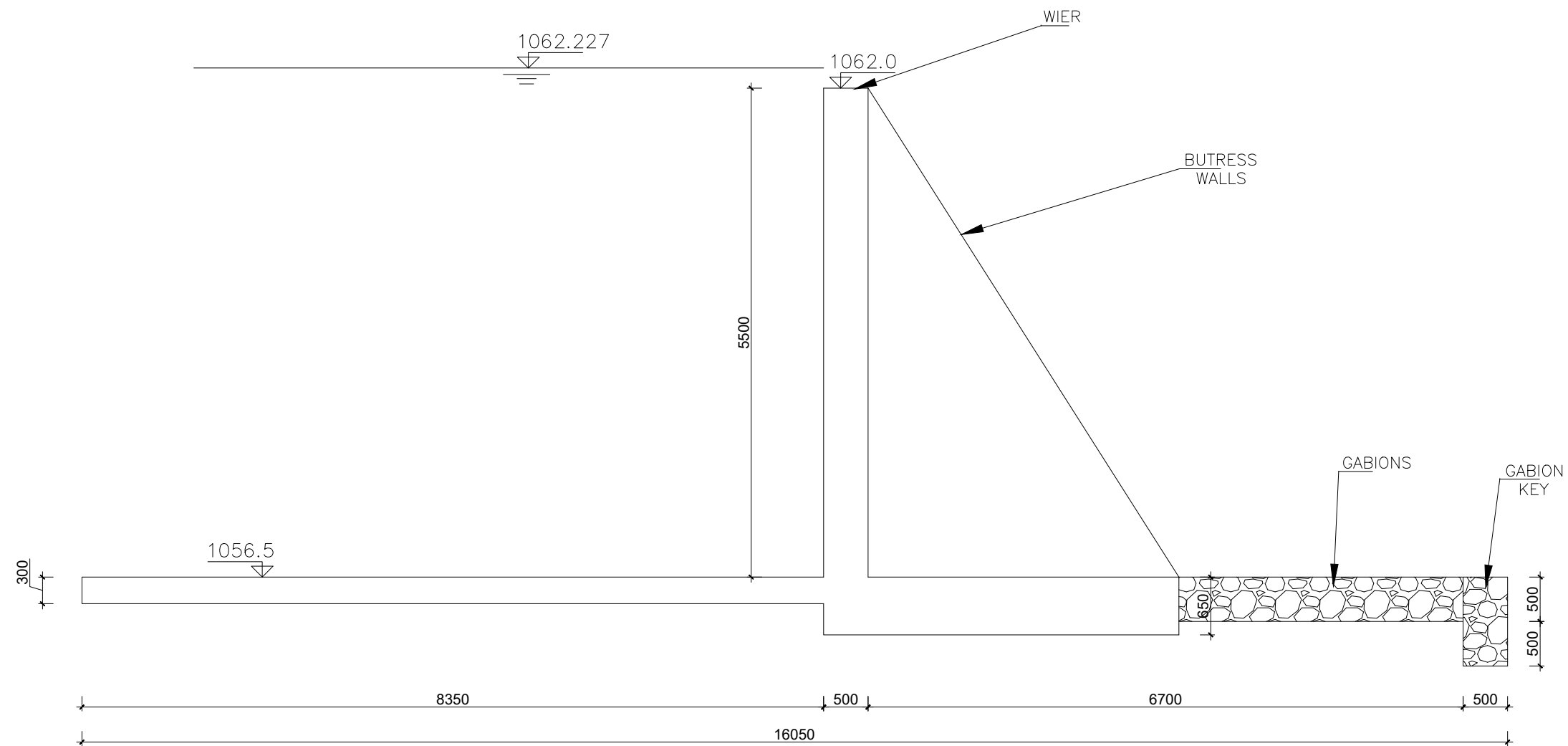
NYAGAK WATER SUPPLY AND SANITATION SCHEME

REVISIONS:

No	Date	Description

DRAWING TITLE: **INTAKE WEIR**

Surveyed by: R.K
 Drawn by: Luks
 Designed by: A.B
 Checked by: A.B
 Date: FEBRUARY 2023
 DRG. No.: AR/WSASS/NY/STR/002
 Scale: Sheet No.: 1 of 4



SECTION B-B
SCALE 1:30

GENERAL NOTES

1. This drawing shall be read in conjunction with all relevant drawings.
2. Concrete mixes to BS8500
 - a. Mass concrete to have a minimum works cube strength of 15N/mm² and at 28 days with 20 mm maximum aggregate size
 - b. Reinforced concrete to have works cube strength of 30N/mm² cylinder strength of 30N/mm² with 20mm maximum aggregate size UNLESS OTHERWISE STATED
3. Reinforcement
 - a. High tensile bars to be ribbed cold formed bars to B.S. 4461
 - b. Mild steel to be round bars to B.S. 4449
 - c. Mesh reinforcement to comply with requirement of B.S. 4483
4. Minimum cover to all steel 50.
5. THE QUALITY OF ALL MATERIALS AND WORKMANSHIP SHALL COMPLY WITH THE REQUIREMENTS OF THE MOST RECENT ISSUES OF RELEVANT EUROPEAN STANDARDS AND CODES OF PRACTICE.

ADDITIONAL NOTES

1. All vertical walls to be cast as once
2. Approved stopper water bar to be installed in all joints as directed by the Engineer.
3. Contractor to use non recoverable ties for tying formwork
4. Contractor to submit methodology for Construction before commencing work.
5. All Pipes going through walls to have paddle flange
6. Diameter of pipes to first be confirmed by M&E before concreting.
7. All position of services i.e pipes passing through RC walls to be confirmed by M&E Before Casting

CLIENT :



CONSULTANT :



PROJECT :

ALA-ORA WATER SUPPLY AND SANITATION SYSTEM

NYAGAK WATER SUPPLY AND SANITATION SCHEME

REVISIONS :

No	Date	Description

DRAWING TITLE :

INTAKE WEIR

Surveyed by: R.K

Drawn by: Luks

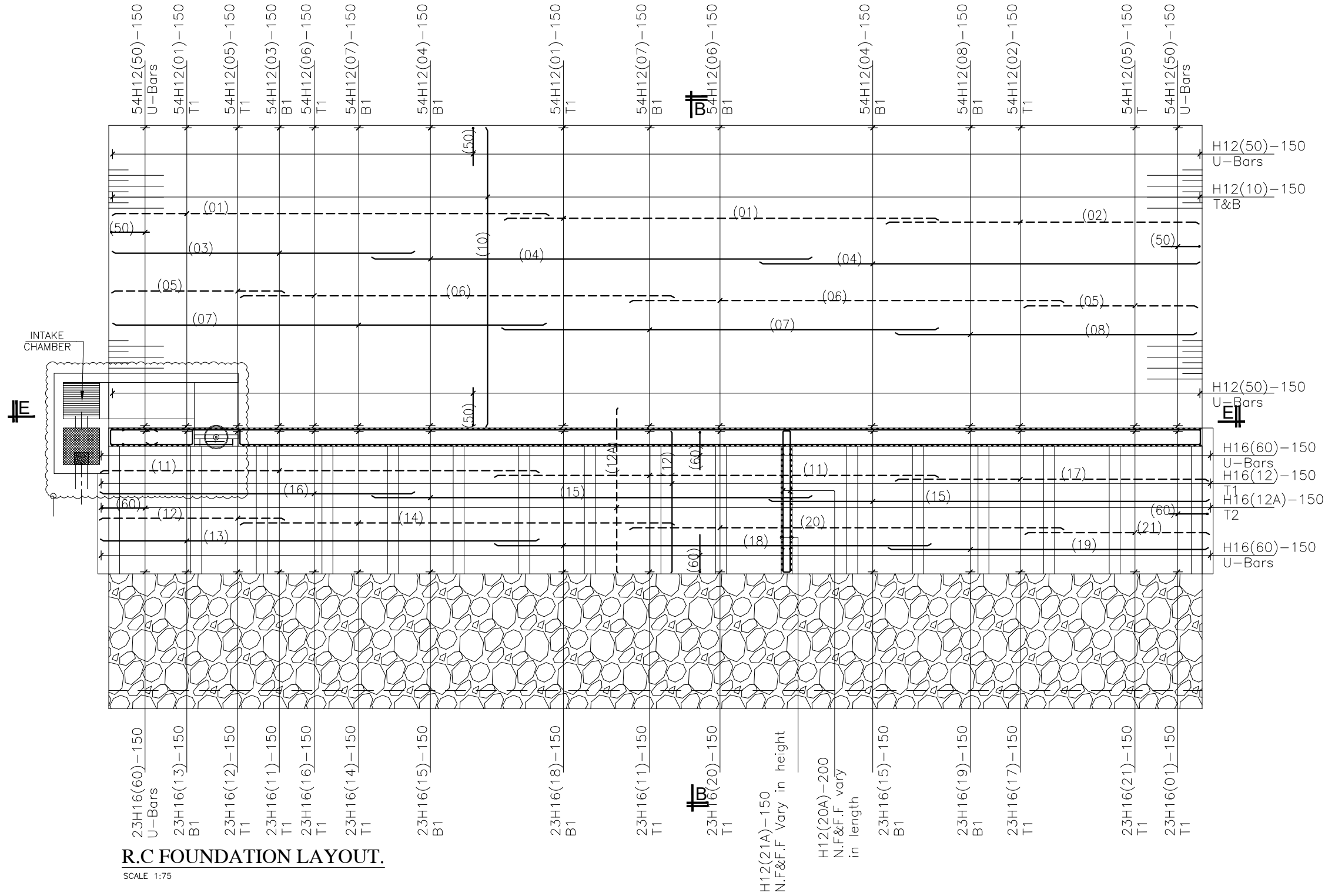
Designed by: A.B

Checked by: A.B

Date: FEBRUARY 2023

DRG. No.: AR/WSASS/NY/STR/002

Scale: Sheet No.: 2 of 4



R.C FOUNDATION LAYOUT.

SCALE 1:75

GENERAL NOTES

- This drawing shall be read in conjunction with all relevant drawings.
- Concrete mixes to BS8500
 - Mass concrete to have a minimum works cube strength of 15N/mm² and at 28 days with 20 mm maximum aggregate size
 - Reinforced concrete to have works cube strength of 30N/mm² cylinder strength of 30N/mm² with 20mm maximum aggregate size UNLESS OTHERWISE STATED
- Reinforcement
 - High tensile bars to be ribbed cold formed bars to B.S. 4461
 - Mild steel to be round bars to B.S. 4449
 - Mesh reinforcement to comply with requirement of B.S. 4483
- Minimum cover to all steel 50.
- THE QUALITY OF ALL MATERIALS AND WORKMANSHIP SHALL COMPLY WITH THE REQUIREMENTS OF THE MOST RECENT ISSUES OF RELEVANT EUROPEAN STANDARDS AND CODES OF PRACTICE.

ADDITIONAL NOTES

- All vertical walls to be cast at once
- Approved stopper water bar to be installed in all joints as directed by the Engineer.
- Contractor to use non recoverable ties for tying formwork
- Contractor to submit methodology for Construction before commencing work.
- All Pipes going through walls to have paddle flange
- Diameter of pipes to first be confirmed by M&E before concreting.
- All position of services i.e pipes passing through RC walls to be confirmed by M&E Before Casting

CLIENT :



CONSULTANT :



PROJECT :

ALA-ORA WATER SUPPLY AND SANITATION SYSTEM

NYAGAK WATER SUPPLY AND SANITATION SCHEME

REVISIONS :

No	Date	Description

DRAWING TITLE :

INTAKE WEIR

Surveyed by: R.K

Drawn by: Luks

Designed by: A.B

Checked by: A.B

Date: FEBRUARY 2023

DRG. No.: AR/WSASS/NY/STR/002

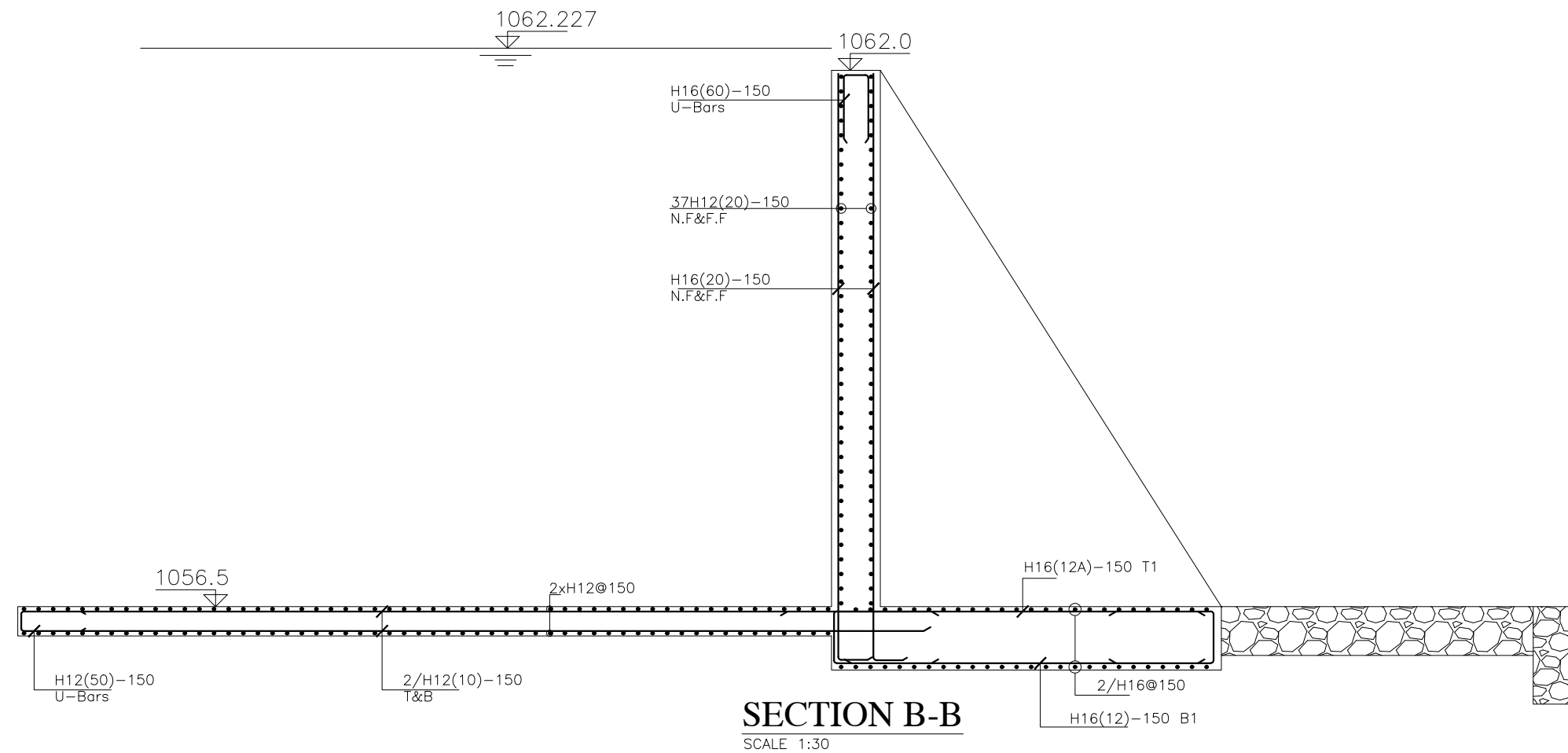
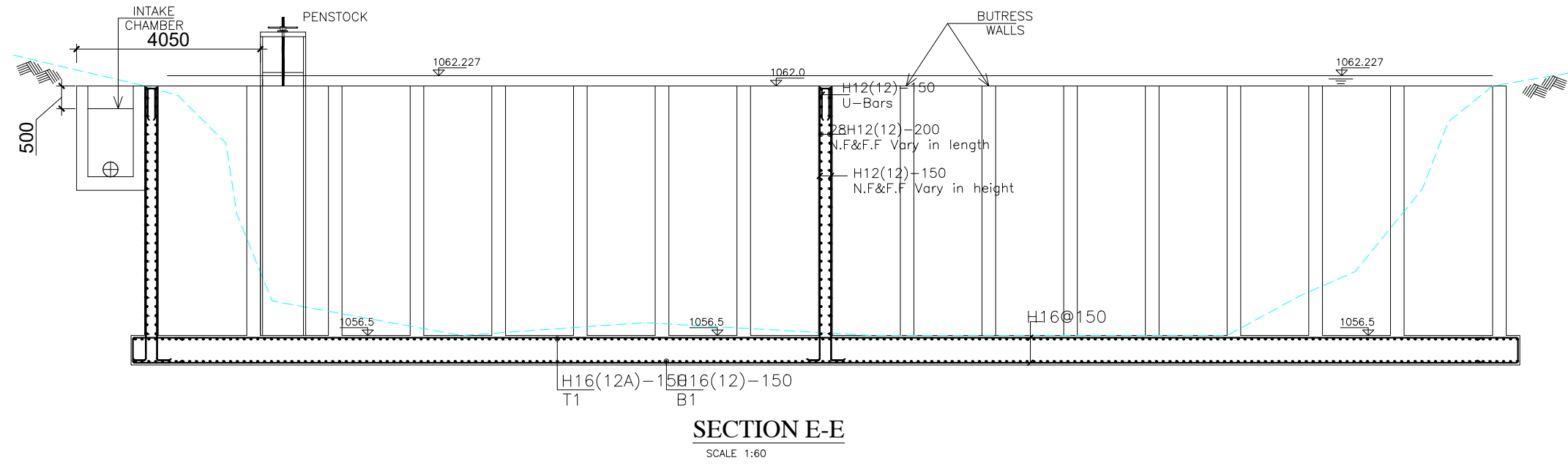
Scale: Sheet No.: 3 of 4

GENERAL NOTES

- This drawing shall be read in conjunction with all relevant drawings.
- Concrete mixes to BS8500
 - Mass concrete to have a minimum works cube strength of 15N/mm² and at 28 days with 20 mm maximum aggregate size
 - Reinforced concrete to have works cube strength of 30N/mm² cylinder strength of 30N/mm² with 20mm maximum aggregate size UNLESS OTHERWISE STATED
- Reinforcement
 - High tensile bars to be ribbed cold formed bars to B.S. 4461
 - Mild steel to be round bars to B.S. 4449
 - Mesh reinforcement to comply with requirement of B.S. 4483
- Minimum cover to all steel 50.
- THE QUALITY OF ALL MATERIALS AND WORKMANSHIP SHALL COMPLY WITH THE REQUIREMENTS OF THE MOST RECENT ISSUES OF RELEVANT EUROPEAN STANDARDS AND CODES OF PRACTICE.

ADDITIONAL NOTES

- All vertical walls to be cast at once
- Approved stopper water bar to be installed in all joints as directed by the Engineer.
- Contractor to use non recoverable ties for tying formwork
- Contractor to submit methodology for Construction before commencing work.
- All Pipes going through walls to have paddle flange
- Diameter of pipes to first be confirmed by M&E before concreting.
- All position of services i.e pipes passing through RC walls to be confirmed by M&E Before Casting



CLIENT:



THE REPUBLIC OF UGANDA
MINISTRY OF WATER AND ENVIRONMENT
 DIRECTORATE OF WATER DEVELOPMENT

CONSULTANT:



ALLIANCE CONSULTANTS LTD
 INSULTING ENGINEERS
In Association with
Infra-Consult Ltd

PROJECT:

ALA-ORA WATER SUPPLY AND SANITATION SYSTEM

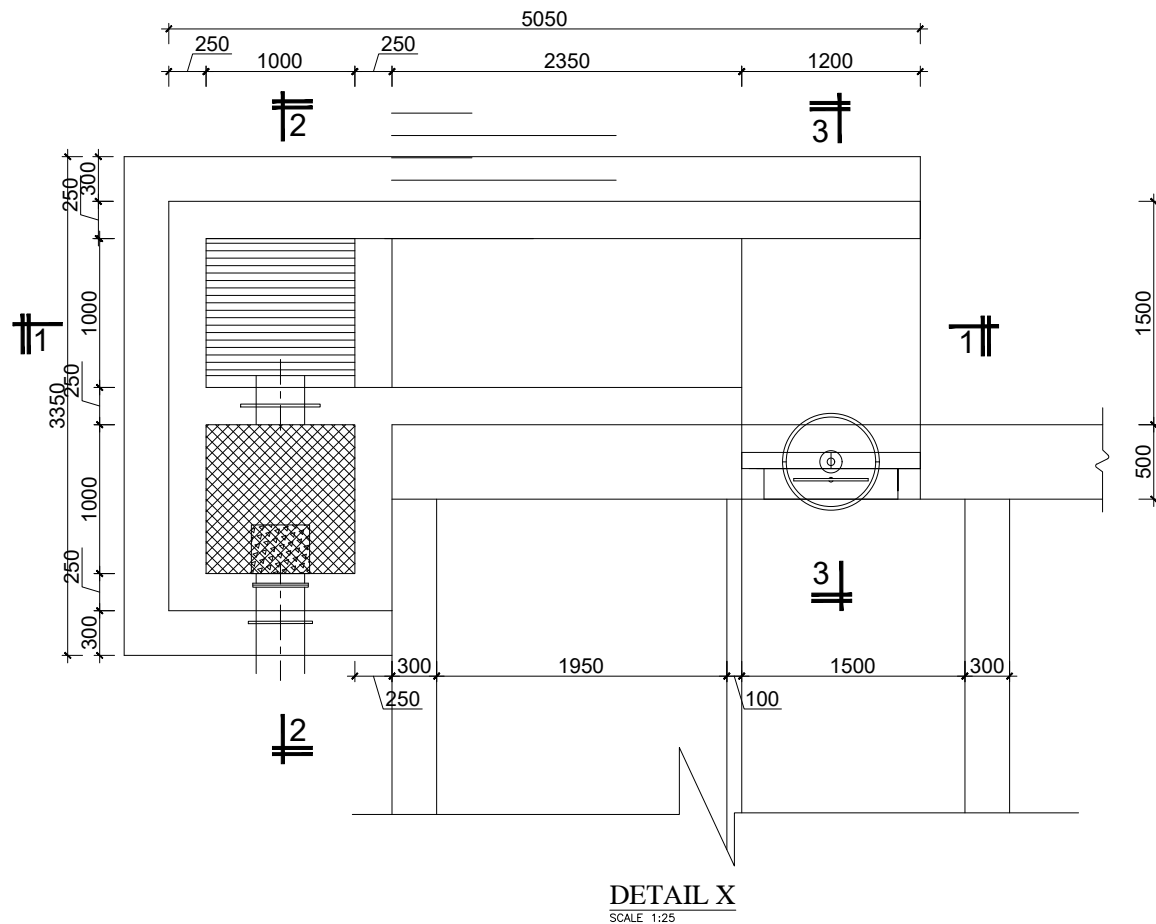
NYAGAK WATER SUPPLY AND SANITATION SCHEME

REVISIONS:

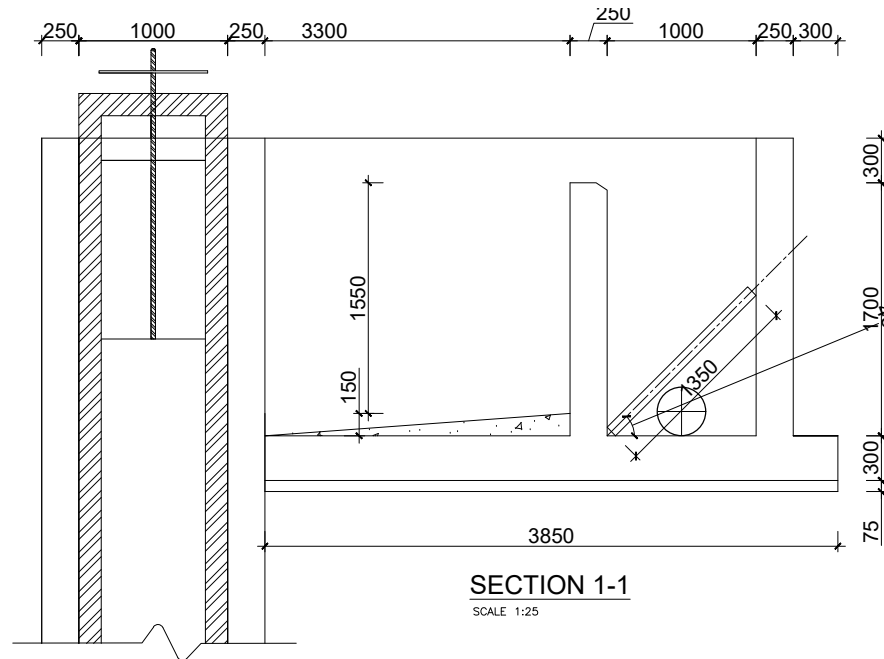
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DRAWING TITLE: **INTAKE WEIR**

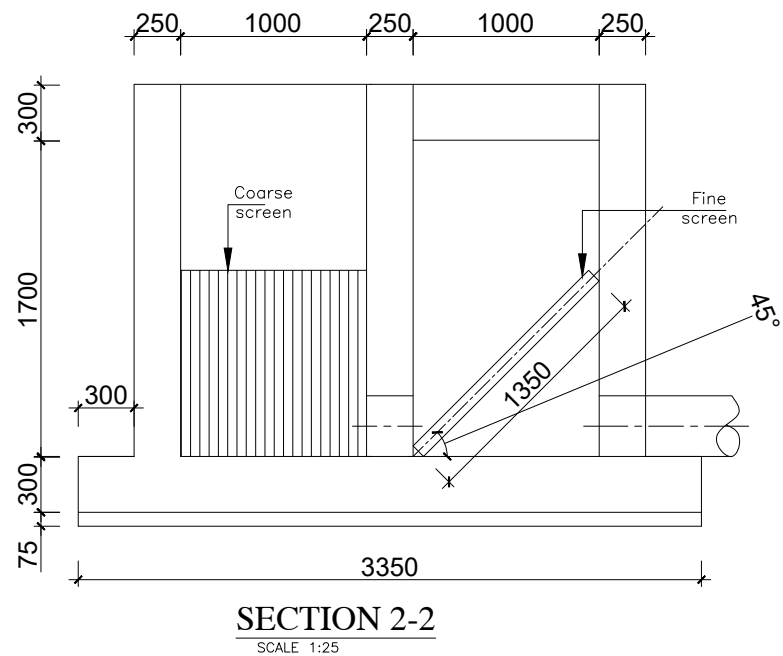
Surveyed by: R.K
 Drawn by: Luks
 Designed by: A.B
 Checked by: A.B
 Date: FEBRUARY 2023
 DRG. No.: AR/WSASS/NY/STR/002
 Scale: Sheet No.: 4 of 4



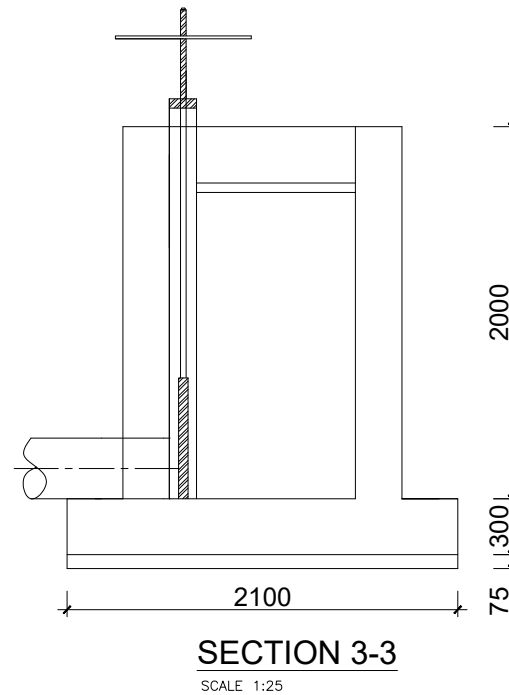
DETAIL X
SCALE 1:25



SECTION 1-1
SCALE 1:25



SECTION 2-2
SCALE 1:25



SECTION 3-3
SCALE 1:25

GENERAL NOTES

- This drawing shall be read in conjunction with all relevant drawings.
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CLIENT :



CONSULTANT :



PROJECT :

ALA-ORA WATER SUPPLY AND SANITATION SYSTEM

NYAGAK WATER SUPPLY AND SANITATION SCHEME

REVISIONS :

No	Date	Description

DRAWING TITLE :

INTAKE CHAMBER

Surveyed by: R.K

Drawn by: Luks

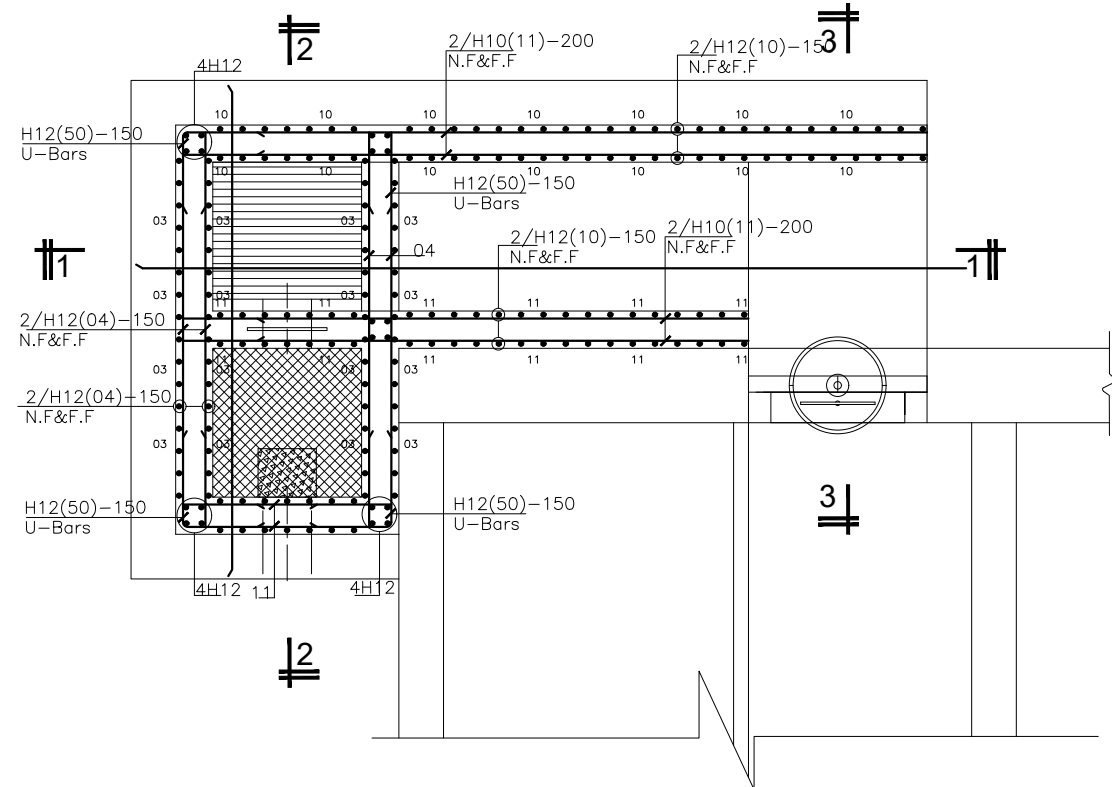
Designed by: A.B

Checked by: A.B

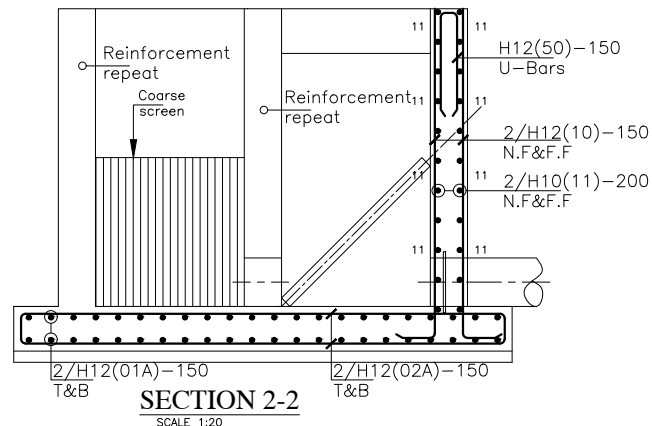
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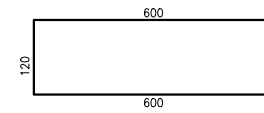
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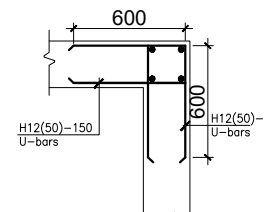
DETAIL X
SCALE 1:20



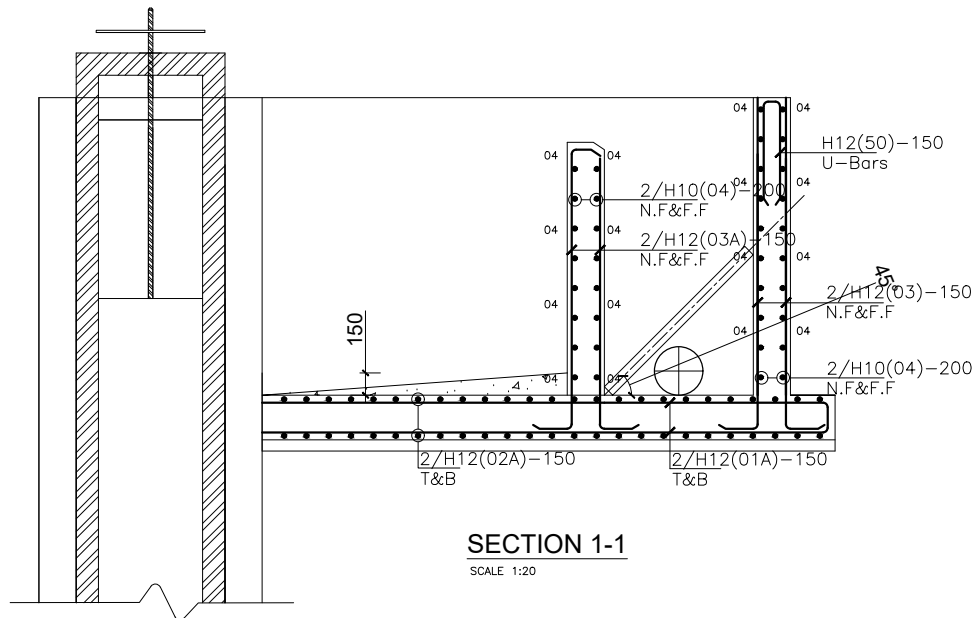
SECTION 2-2
SCALE 1:20



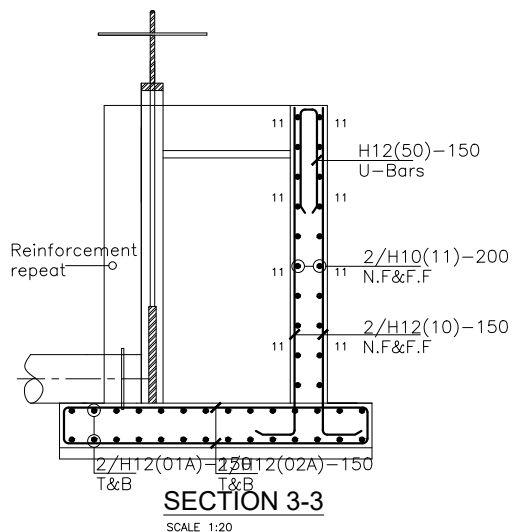
DETAIL OF BAR MARK 50
Scale 1:10



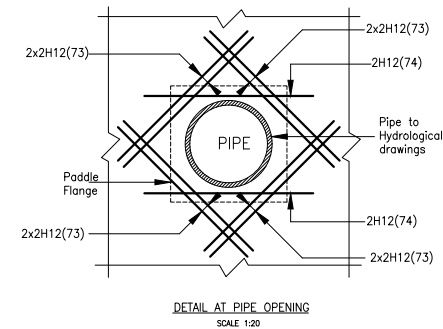
TYPICAL WALL END DETAIL
Scale 1:20



SECTION 1-1
SCALE 1:20



SECTION 3-3
SCALE 1:20



DETAIL AT PIPE OPENING
SCALE 1:20

GENERAL NOTES

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CLIENT :



CONSULTANT :



PROJECT :

ALA-ORA WATER SUPPLY AND SANITATION SYSTEM

NYAGAK WATER SUPPLY AND SANITATION SCHEME

REVISIONS :

No	Date	Description

DRAWING TITLE :

INTAKE CHAMBER

Surveyed by: R.K

Drawn by: Luks

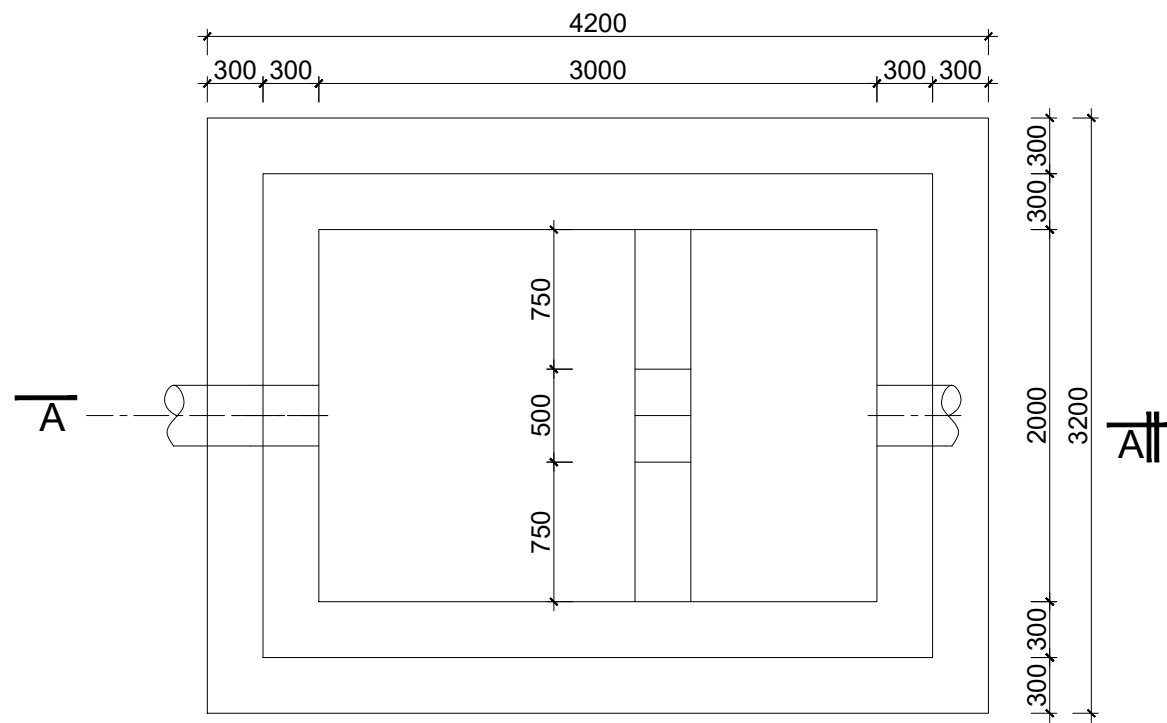
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Checked by: A.B

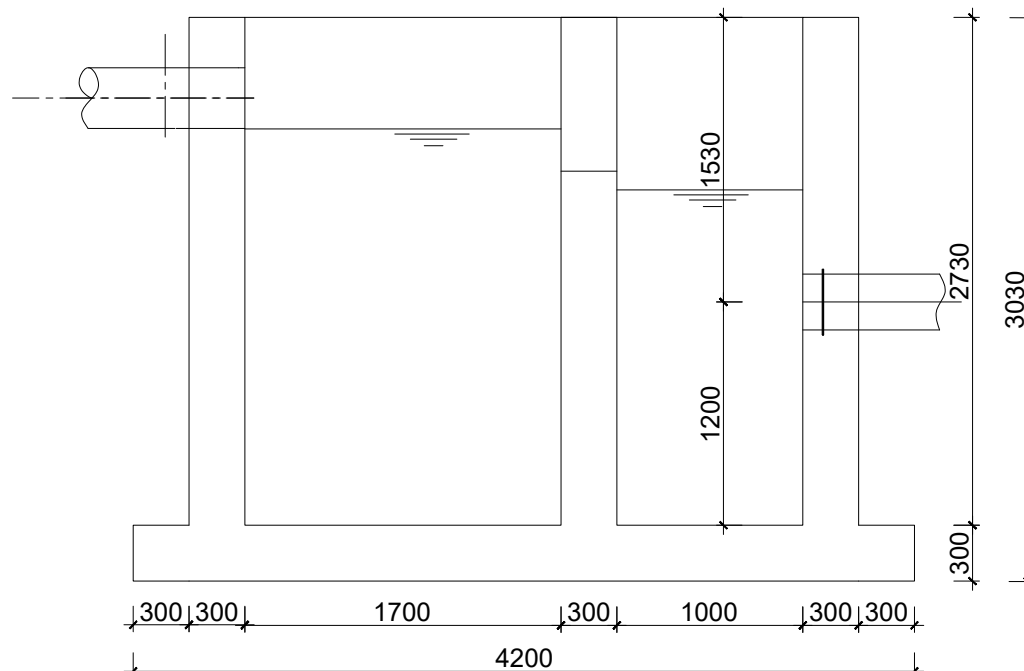
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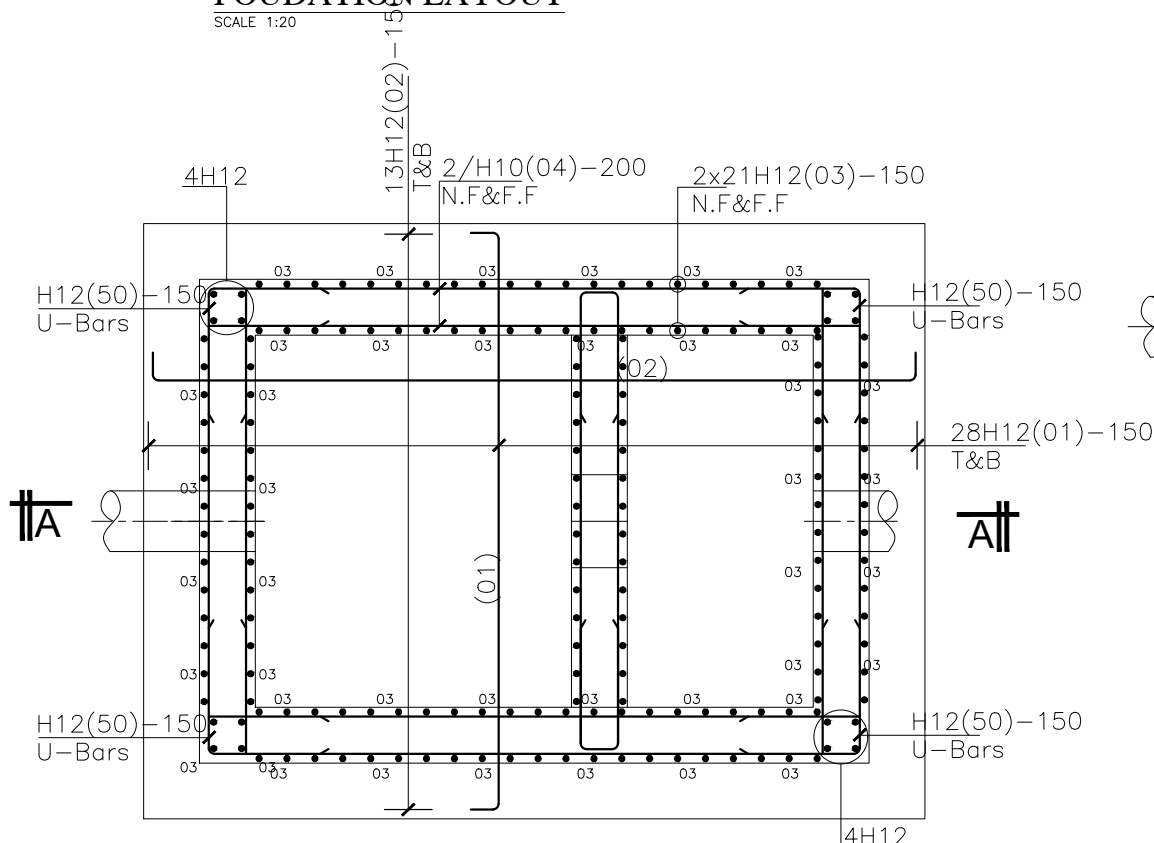
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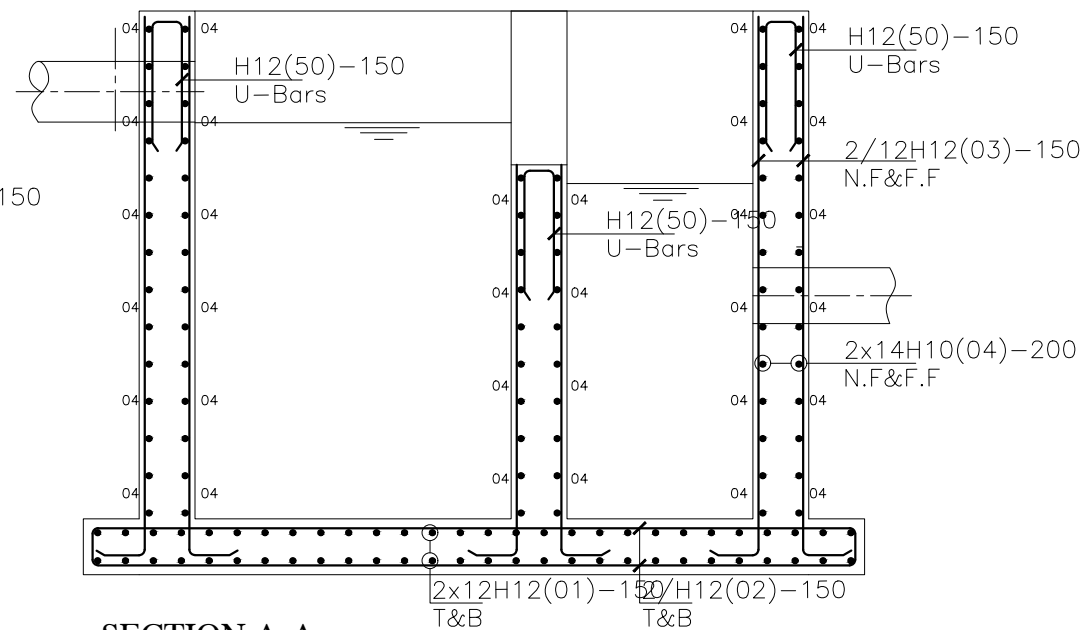
FOUDATION LAYOUT
SCALE 1:20



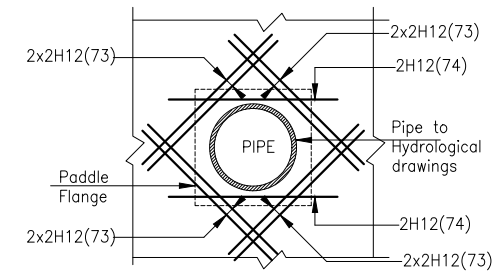
SECTION A-A
SCALE 1:20



FOUDATION LAYOUT
SCALE 1:20



SECTION A-A
SCALE 1:20



DETAIL AT PIPE OPENING
SCALE 1:20

GENERAL NOTES

- This drawing shall be read in conjunction with all relevant drawings.
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CLIENT :



CONSULTANT :



PROJECT :

ALA-ORA WATER SUPPLY AND SANITATION SYSTEM

NYAGAK WATER SUPPLY AND SANITATION SCHEME

REVISIONS :

No	Date	Description

DRAWING TITLE :

INLET STRUCTURE

Surveyed by: R.K

Drawn by: Luks

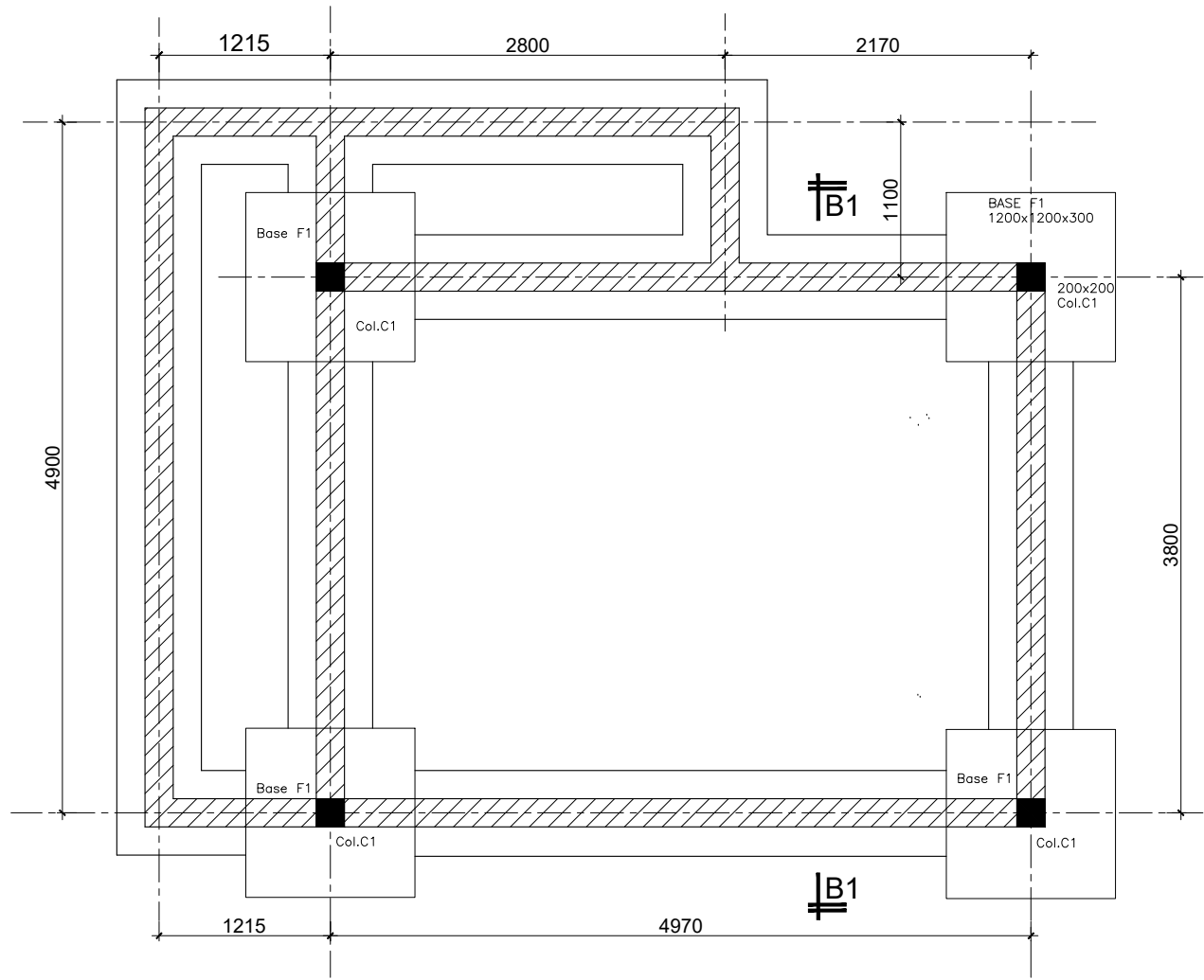
Designed by: A.B

Checked by: A.B

Date: FEBRUARY 2023

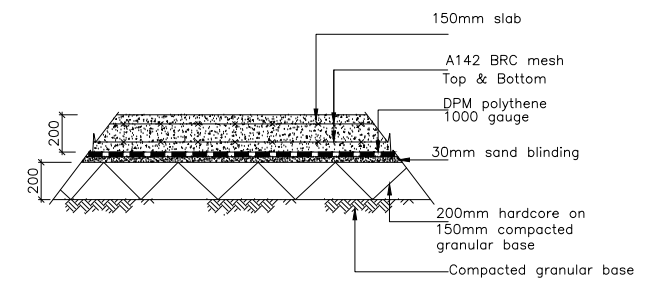
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Scale: Sheet No.: 1 of 1



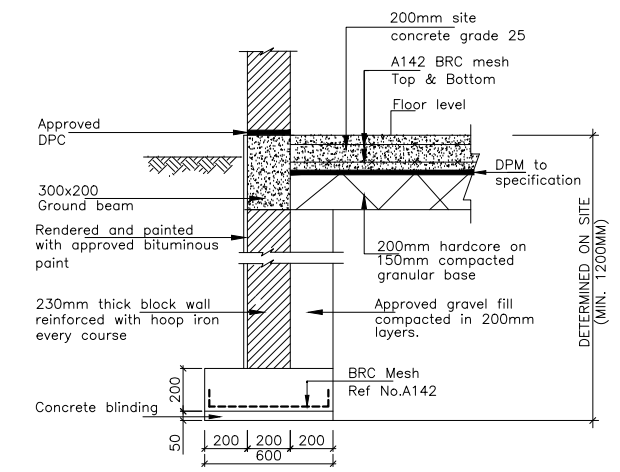
FOUNDATION LAYOUT

SCALE 1:25



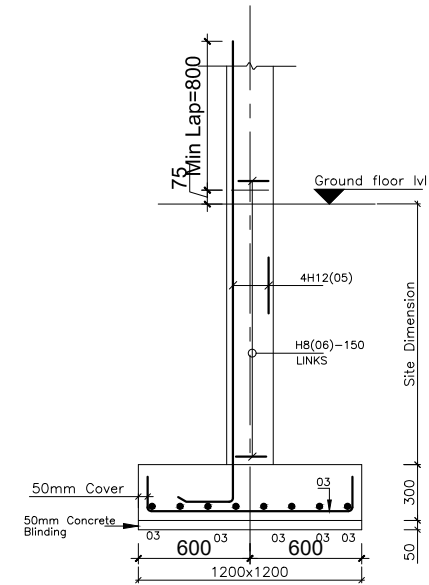
TYPICAL SECTION THROUGH THE GROUND SLAB

SCALE 1:20



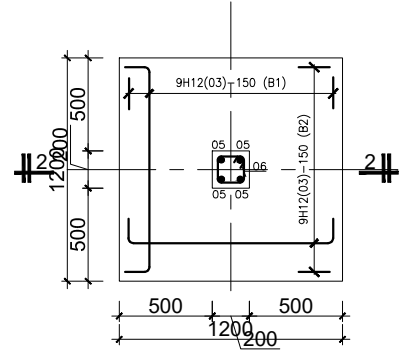
SECTION THROUGH WALL FOOTING

Scale 1:20



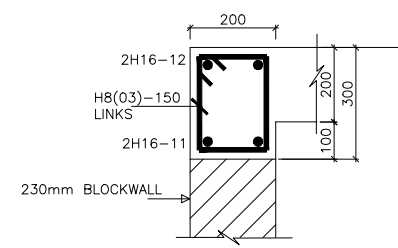
SECTION 2-2

SCALE 1:20



BASE TYPE F1 (6No.) [1200x1200]

SCALE 1:20



SECTION A-A THRU 300x200 GROUND BEAM - EXTERNAL

SCALE 1:10

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CLIENT:



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CONSULTANT:



ALLIANCE CONSULTANTS LTD
CONSULTING ENGINEERS
In Association with
Infra-Consult Ltd

P.O.BOX 33975 KAMPALA
Email: allianceconsultantsld@gmail.com

PROJECT:

ALA-ORA WATER SUPPLY AND SANITATION SYSTEM

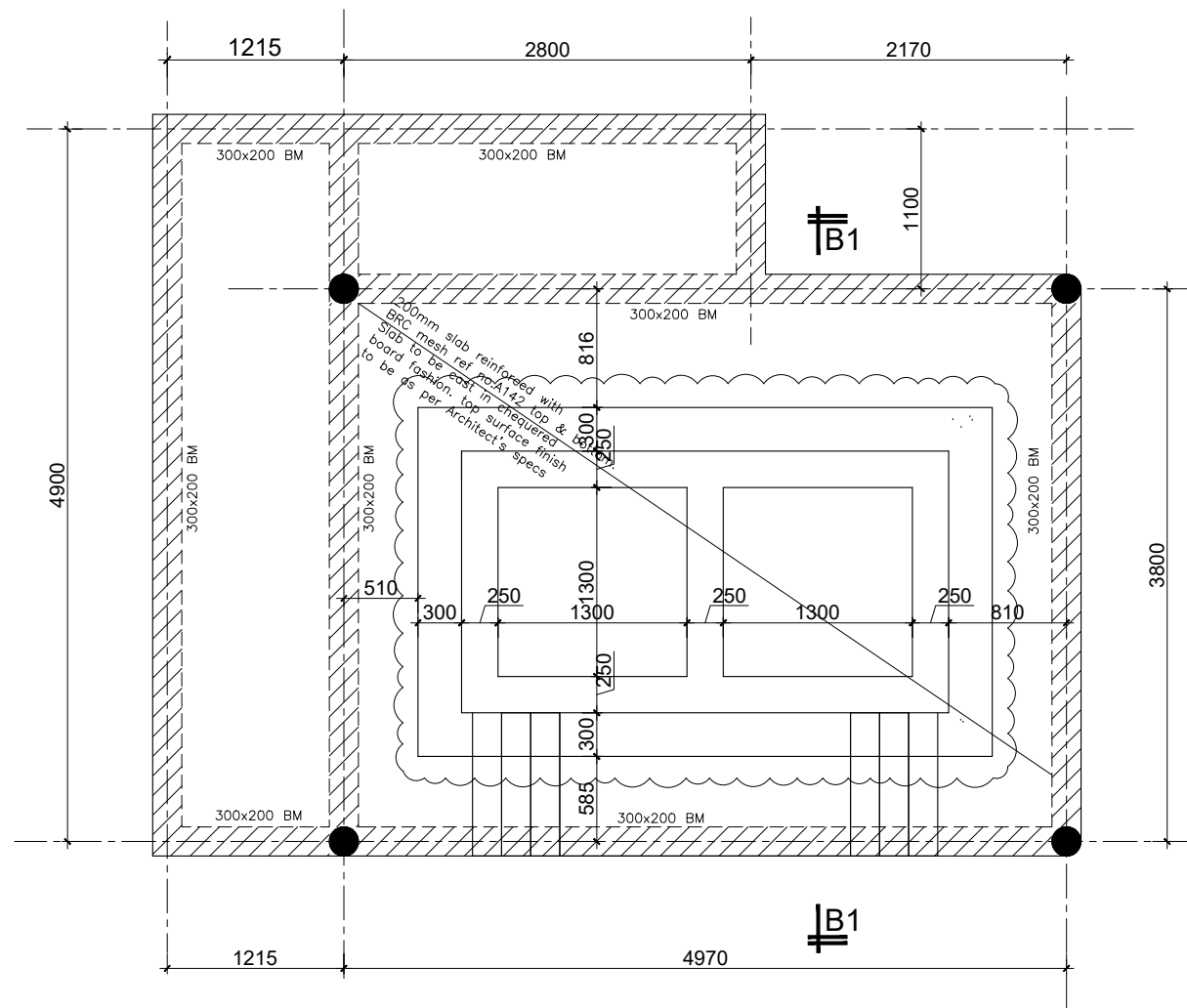
NYAGAK WATER SUPPLY AND SANITATION SCHEME

REVISIONS:

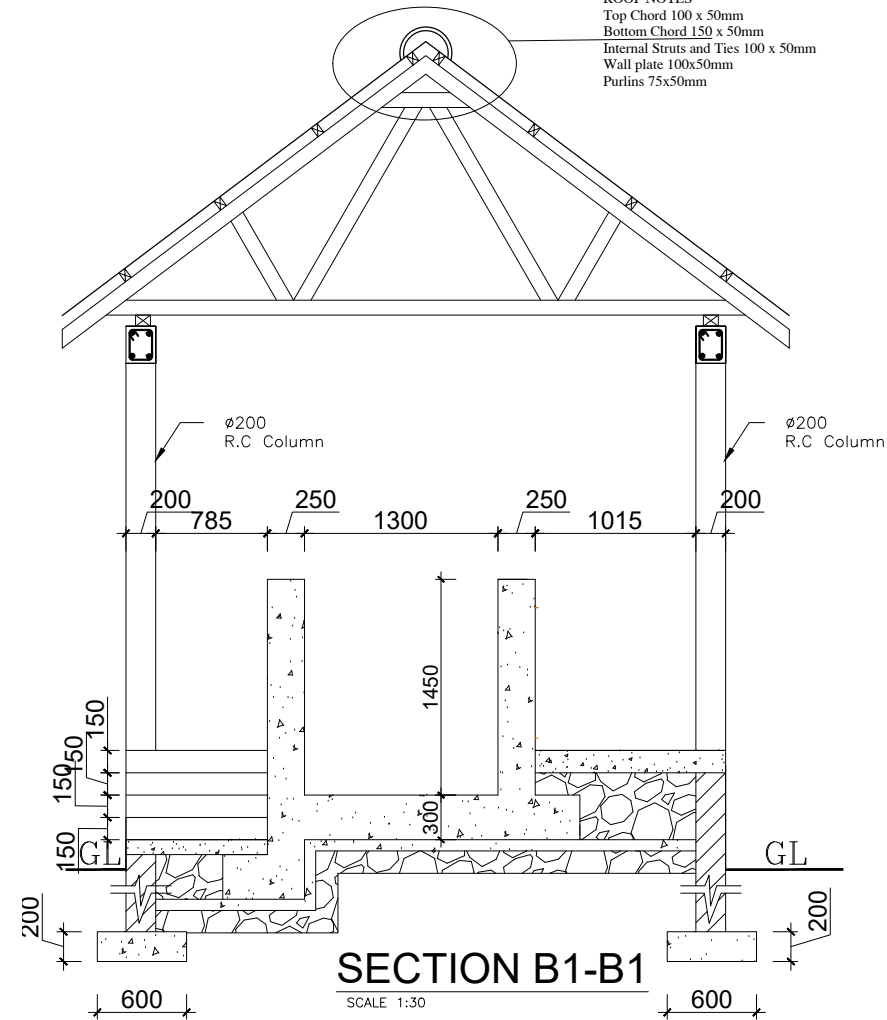
No	Date	Description

DRAWING TITLE: **ALUM DOSING AND MIXING PLATFORM**

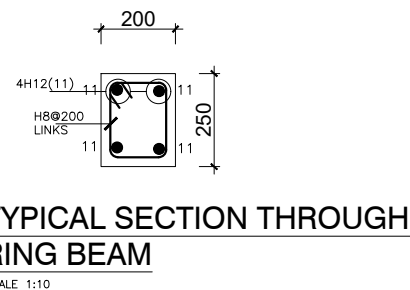
Surveyed by: R.K
 Drawn by: Luks
 Designed by: A.B
 Checked by: A.B
 Date: FEBRUARY 2023
 DRG. No.: AR/WSASS/NY/STR/004
 Scale: Sheet No.: 1 of 2



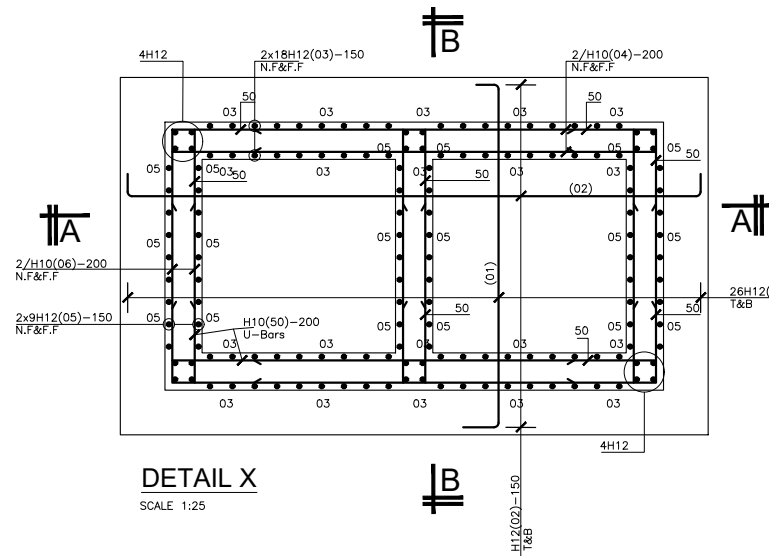
GROUND FLOOR LAYOUT
SCALE 1:25



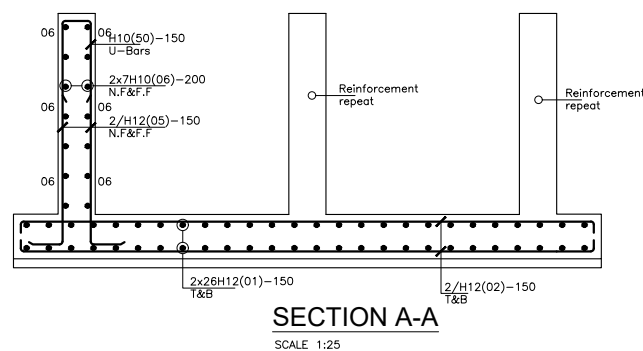
SECTION B1-B1
SCALE 1:30



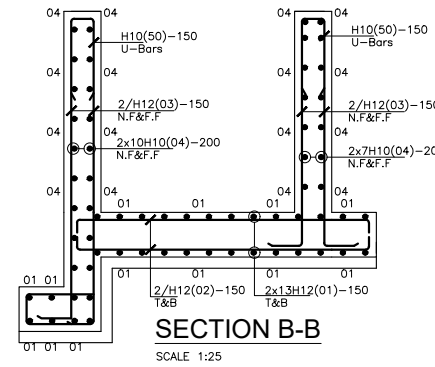
TYPICAL SECTION THROUGH RING BEAM
SCALE 1:10



DETAIL X
SCALE 1:25



SECTION A-A
SCALE 1:25



SECTION B-B
SCALE 1:25

ROOF NOTES
Top Chord 100 x 50mm
Bottom Chord 150 x 50mm
Internal Struts and Ties 100 x 50mm
Wall plate 100x50mm
Purlins 75x50mm

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DIRECTORATE OF WATER DEVELOPMENT

CONSULTANT :

ALLIANCE CONSULTANTS LTD
CONSULTING ENGINEERS

In Association with

Infra-Consult Ltd

P.O.BOX 33975 KAMPALA
Email: allianceconsultantsltd@gmail.com

PROJECT :

ALA-ORA WATER SUPPLY AND SANITATION SYSTEM

NYAGAK WATER SUPPLY AND SANITATION SCHEME

REVISIONS :

No	Date	Description

DRAWING TITLE : ALUM DOSING AND MIXING PLATFORM

Surveyed by: R.K

Drawn by: Luks

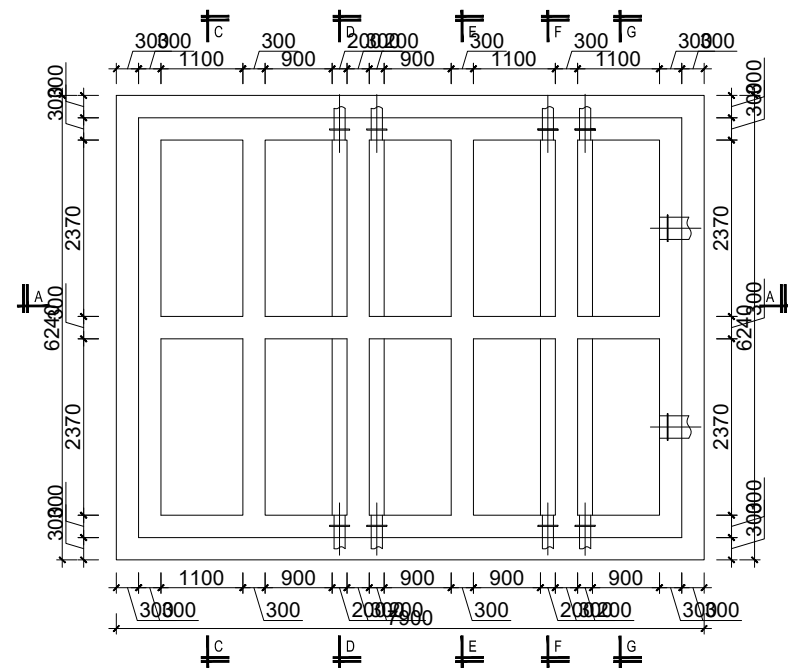
Designed by: A.B

Checked by: A.B

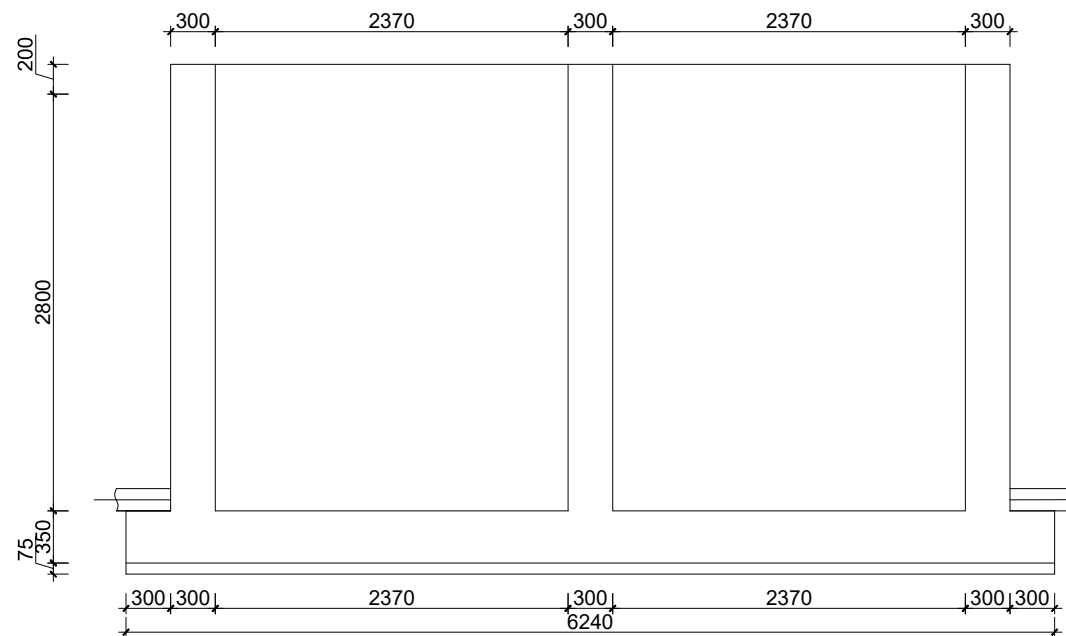
Date: FEBRUARY 2023

DRG. No.: AR/WSASS/NY/STR/004

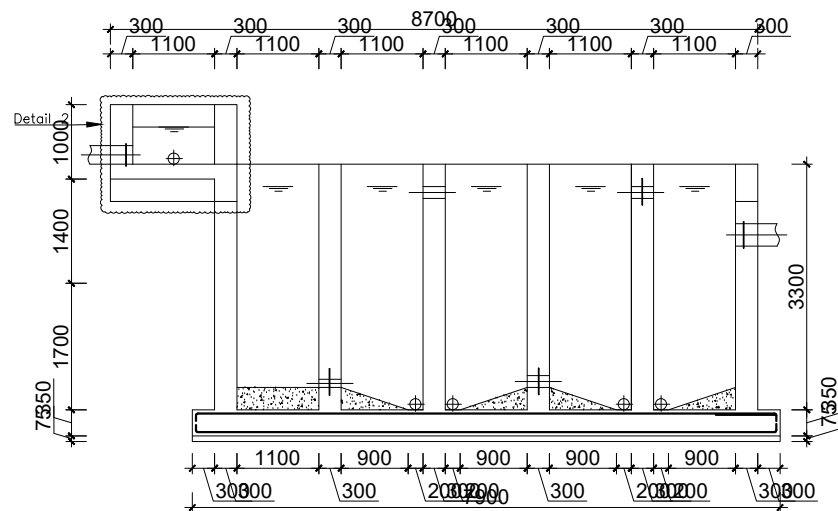
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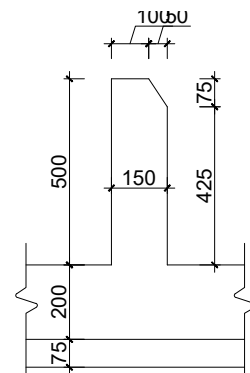
FOUNDATION LAYOUT.
SCALE 1:50



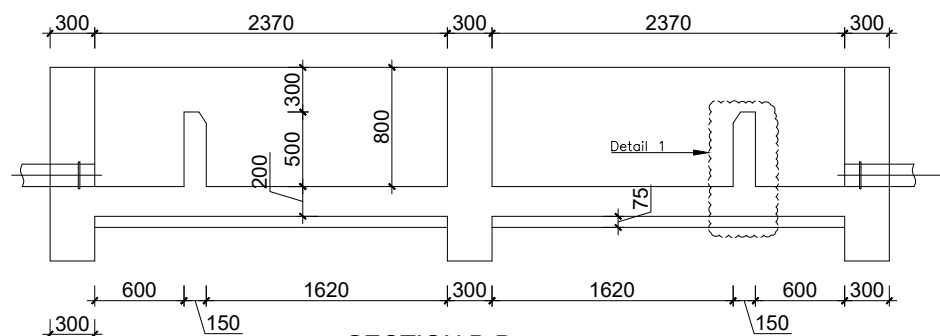
SECTION C-C
SCALE 1:25



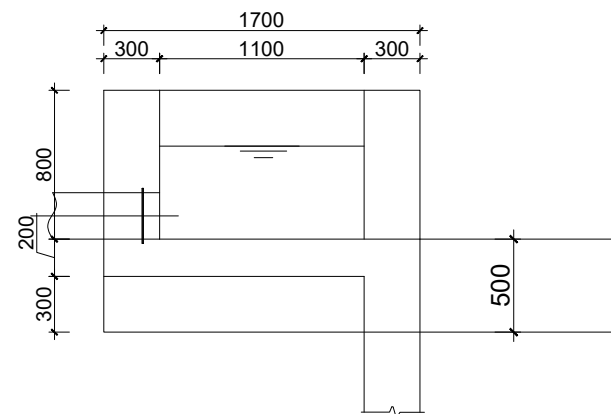
SECTION A-A
SCALE 1:50



Detail 1
SCALE 1:10



SECTION B-B



Detail 2
SCALE 1:20

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P.O.BOX 33975 KAMPALA
Email: allainceconsultantsltd@gmail.com

PROJECT :

ALA-ORA WATER SUPPLY AND SANITATION SYSTEM

NYAGAK WATER SUPPLY AND SANITATION SYSTEM

REVISIONS :

No	Date	Description

DRAWING TITLE : **FLOCCULATOR**

Surveyed by: R.K

Drawn by: Luks

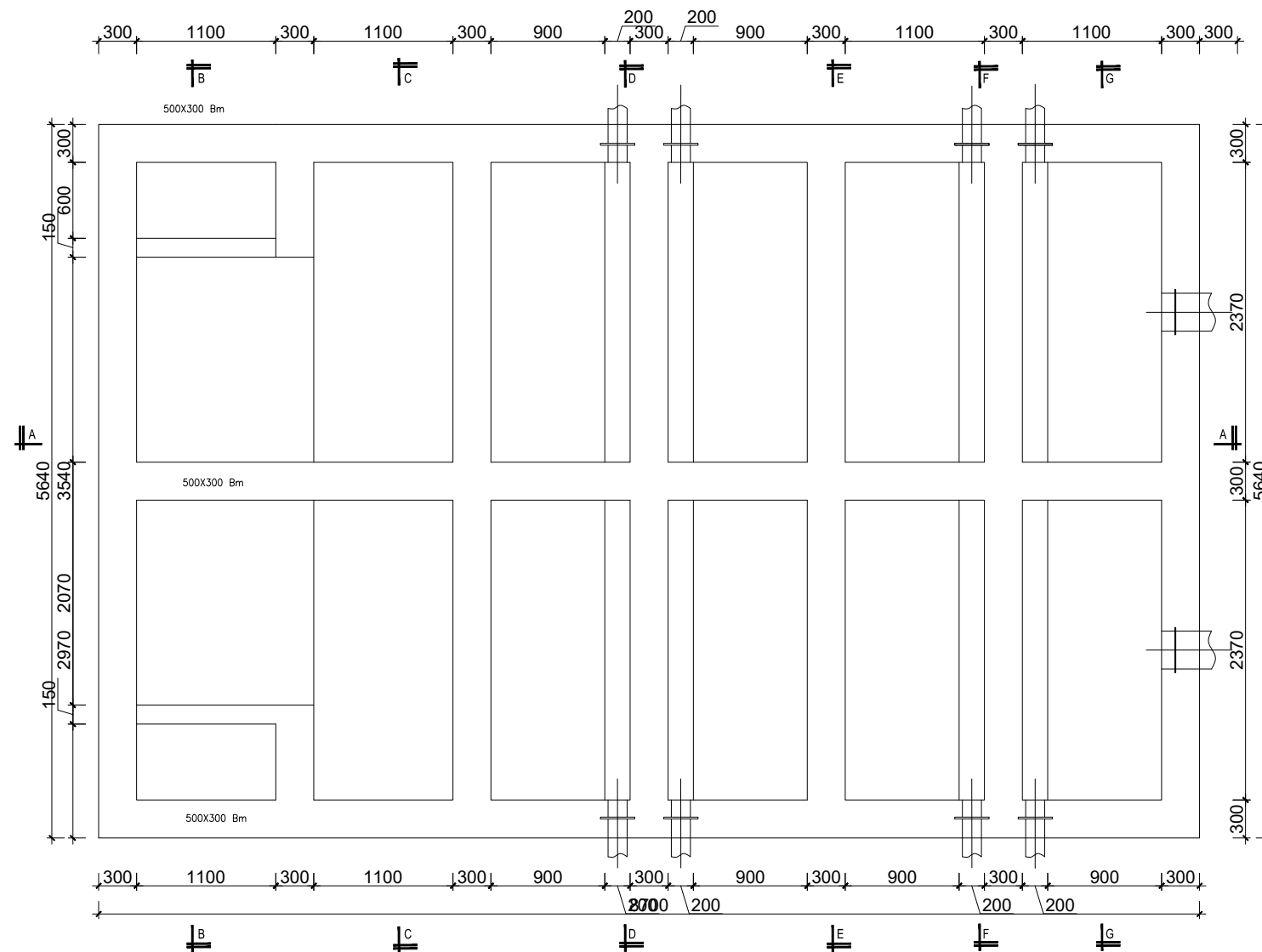
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Checked by: A.B

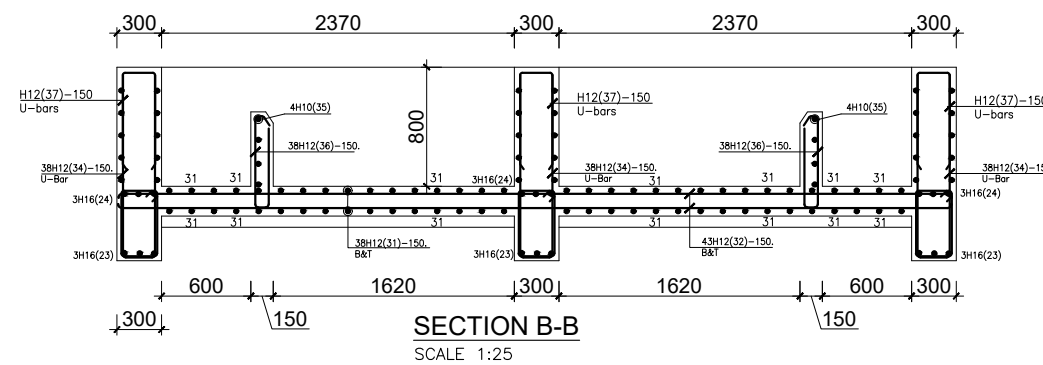
Date: **FEBRUARY 2023**

DRG. No.: **AR/WSASS/NY/STR/005**

Scale: Sheet No.: 1 of 4



TOP LAYOUT
SCALE 1:25



SECTION B-B
SCALE 1:25

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DIRECTORATE OF WATER DEVELOPMENT

CONSULTANT :



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Email: allainceconsultantsltd@gmail.com

PROJECT :

ALA-ORA WATER SUPPLY AND SANITATION SYSTEM

NYAGAK WATER SUPPLY AND SANITATION SYSTEM

REVISIONS :

No	Date	Description

DRAWING TITLE : **FLOCCULATOR**

Surveyed by: R.K

Drawn by: Luks

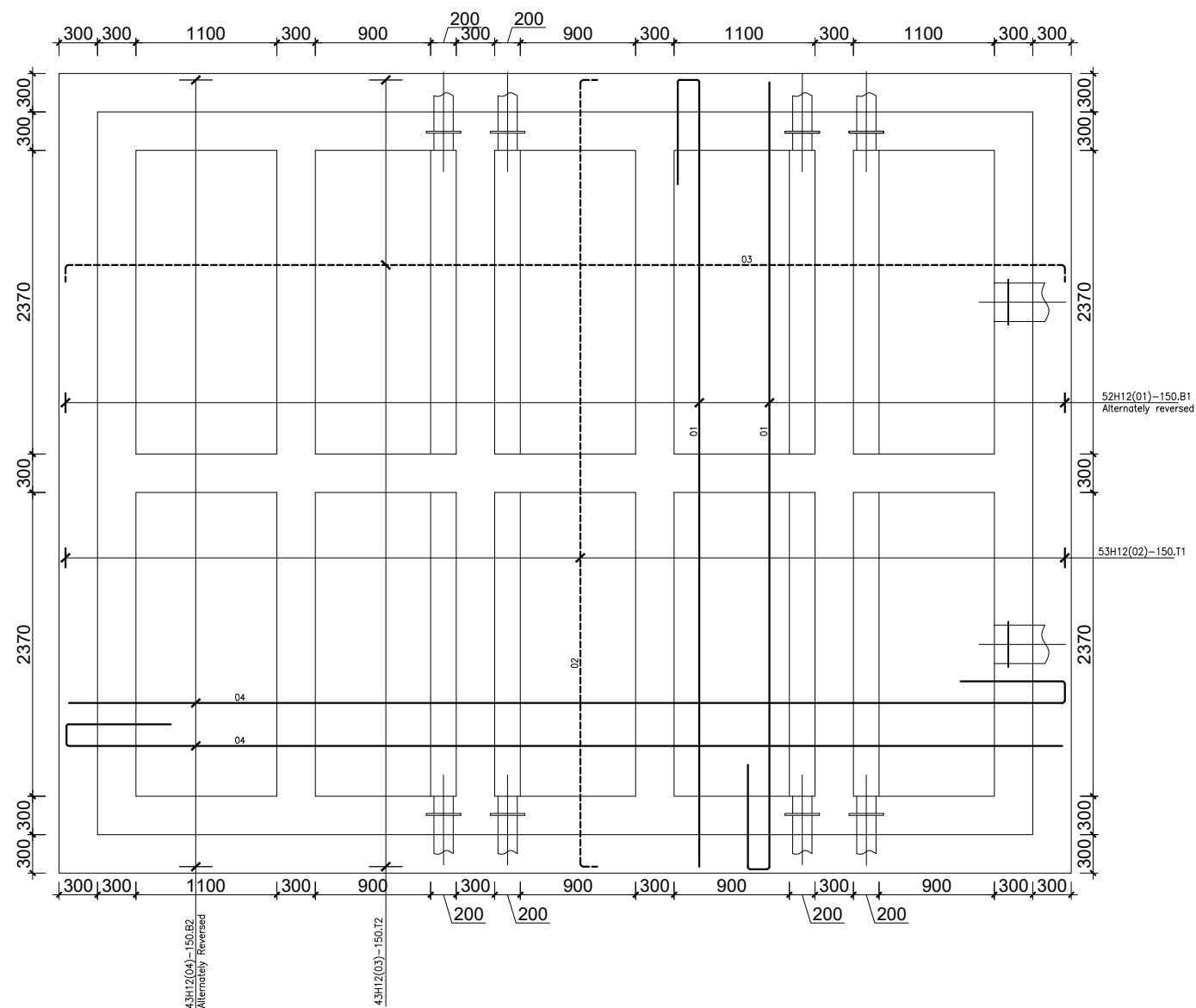
Designed by: A.B

Checked by: A.B

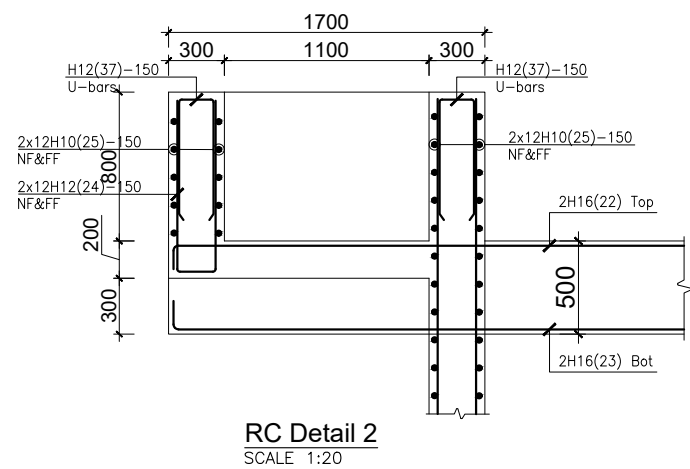
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DRG. No.: **AR/WSASS/NY/STR/005**

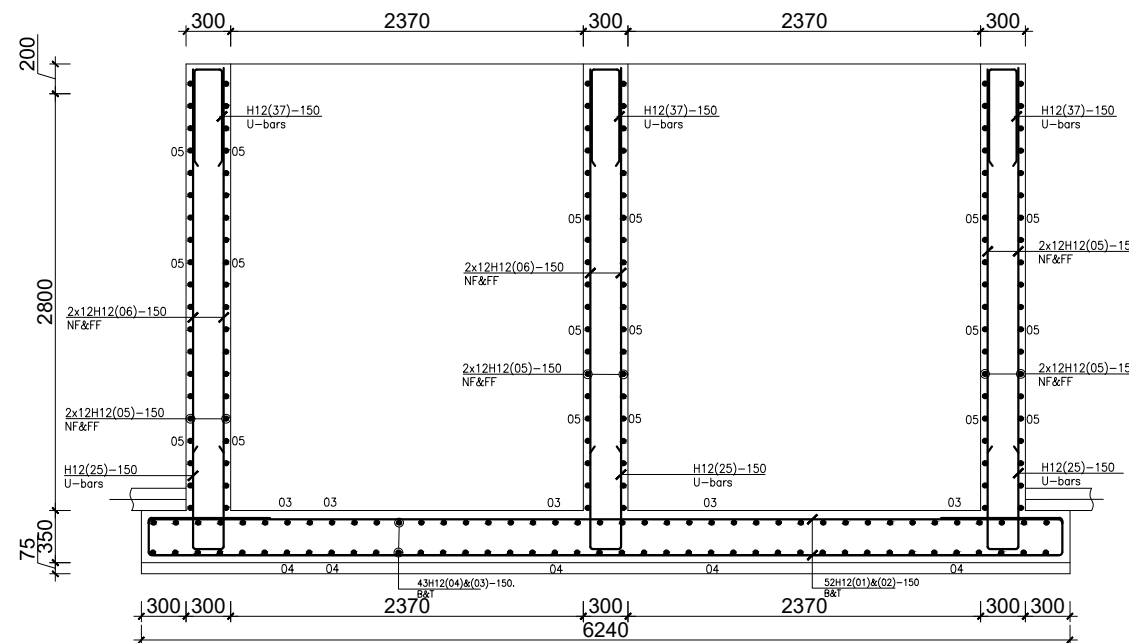
Scale: Sheet No.: 2 of 4



FOUNDATION LAYOUT.
SCALE 1:25



RC Detail 2
SCALE 1:20



SECTION C-C
SCALE 1:25

GENERAL NOTES

- This drawing shall be read in conjunction with all relevant drawings.
- Concrete mixes to BS8500
 - Mass concrete to have a minimum works cube strength of 15N/mm² and at 28 days with 20 mm maximum aggregate size
 - Reinforced concrete to have works cube strength of 30N/mm² cylinder strength of 30N/mm² with 20mm maximum aggregate size UNLESS OTHERWISE STATED
- Reinforcement
 - High tensile bars to be ribbed cold formed bars to B.S. 4461
 - Mild steel to be round bars to B.S. 4449
 - Mesh reinforcement to comply with requirement of B.S. 4483
- Minimum cover to all steel 50.
- THE QUALITY OF ALL MATERIALS AND WORKMANSHIP SHALL COMPLY WITH THE REQUIREMENTS OF THE MOST RECENT ISSUES OF RELEVANT EUROPEAN STANDARDS AND CODES OF PRACTICE.

ADDITIONAL NOTES

- All vertical walls to be cast at once
- Approved stopper water bar to be installed in all joints as directed by the Engineer.
- Contractor to use non recoverable ties for tying formwork
- Contractor to submit methodology for Construction before commencing work.
- All Pipes going through walls to have paddle flange
- Diameter of pipes to first be confirmed by M&E before concreting.
- All position of services i.e pipes passing through RC walls to be confirmed by M&E Before Casting

CLIENT :



THE REPUBLIC OF UGANDA
MINISTRY OF WATER AND ENVIRONMENT
DIRECTORATE OF WATER DEVELOPMENT

CONSULTANT :

ALLIANCE CONSULTANTS LTD
CONSULTING ENGINEERS
In Association with

Infra-Consult Ltd

P.O.BOX 33975 KAMPALA
Email: allianceconsultantsltd@gmail.com

PROJECT :

ALA-ORA WATER SUPPLY AND SANITATION SYSTEM

NYAGAK WATER SUPPLY AND SANITATION SYSTEM

REVISIONS :

No	Date	Description

DRAWING TITLE : **FLOCCULATOR**

Surveyed by: R.K

Drawn by: Luks

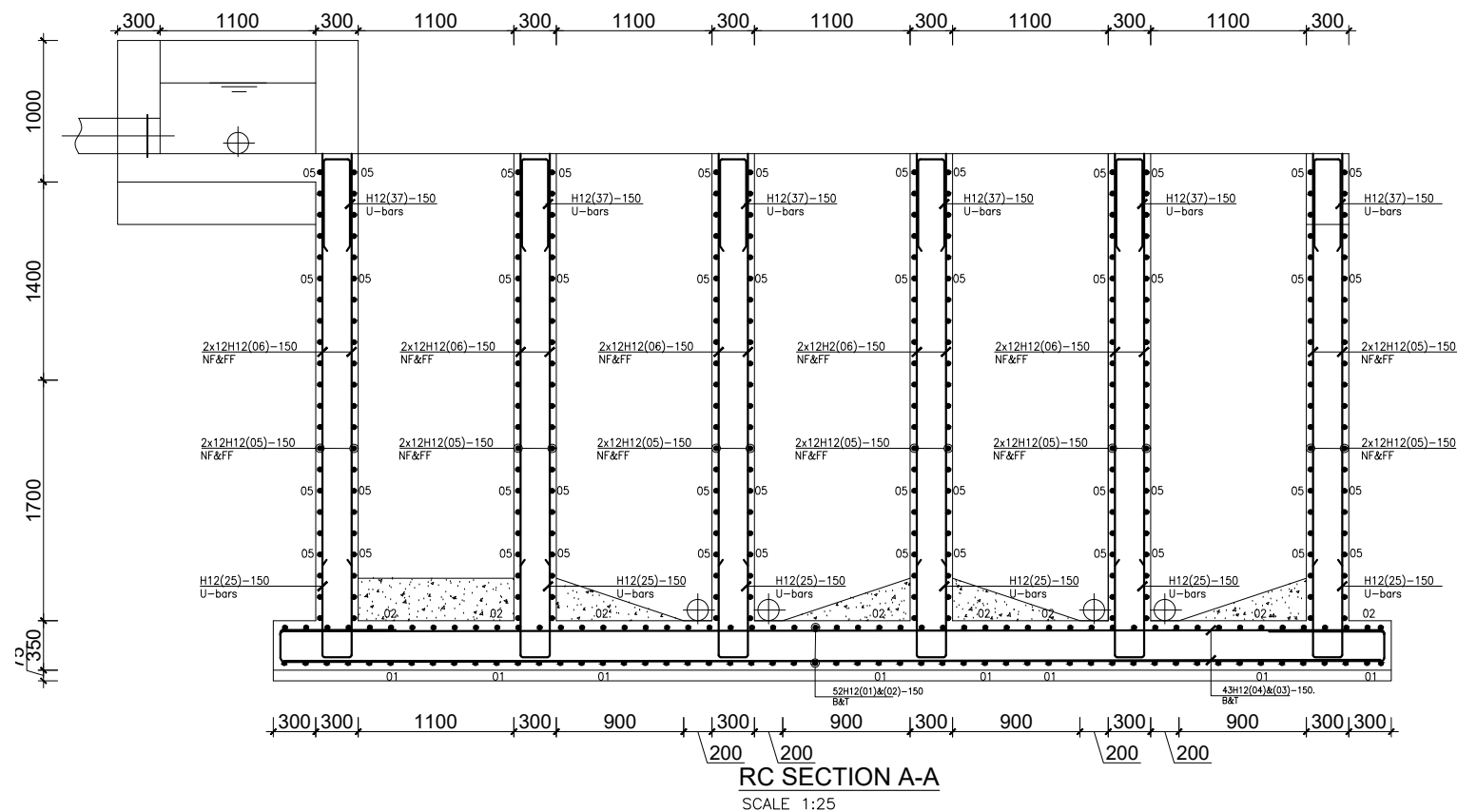
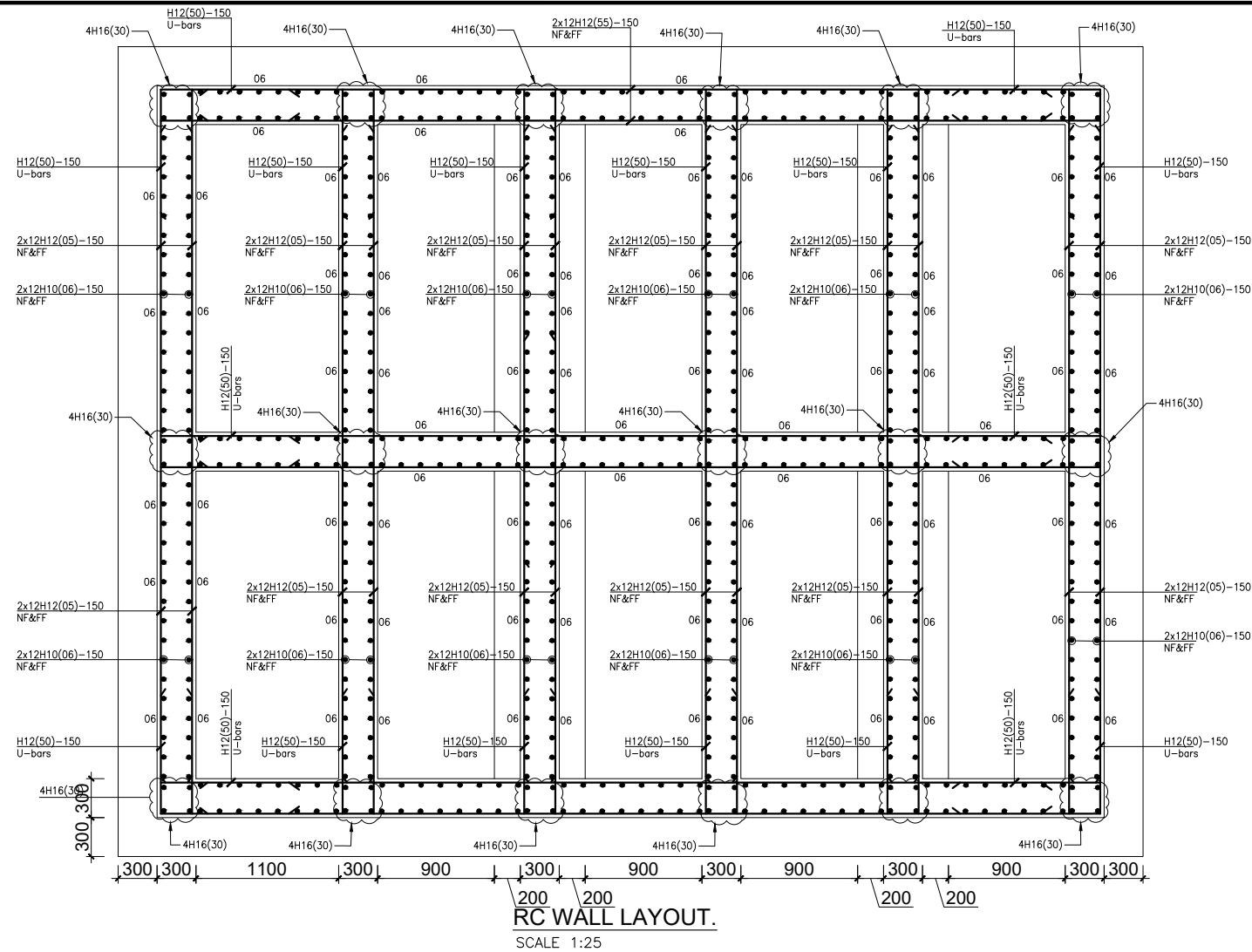
Designed by: A.B

Checked by: A.B

Date: **FEBRUARY 2023**

DRG. No.: **AR/WSASS/NY/STR/005**

Scale: Sheet No.: 3 of 4



GENERAL NOTES

1. This drawing shall be read in conjunction with all relevant drawings.
2. Concrete mixes to BS8500
 - a. Mass concrete to have a minimum works cube strength of 15N/mm² and at 28 days with 20 mm maximum aggregate size
 - b. Reinforced concrete to have works cube strength of 30N/mm² cylinder strength of 30N/mm² with 20mm maximum aggregate size UNLESS OTHERWISE STATED
3. Reinforcement
 - a. High tensile bars to be ribbed cold formed bars to B.S. 4461
 - b. Mild steel to be round bars to B.S. 4449
 - c. Mesh reinforcement to comply with requirement of B.S. 4483
4. Minimum cover to all steel 50.
5. THE QUALITY OF ALL MATERIALS AND WORKMANSHIP SHALL COMPLY WITH THE REQUIREMENTS OF THE MOST RECENT ISSUES OF RELEVANT EUROPEAN STANDARDS AND CODES OF PRACTICE.

ADDITIONAL NOTES

1. All vertical walls to be cast at once
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3. Contractor to use non recoverable ties for tying formwork
4. Contractor to submit methodology for construction before commencing work.
5. All Pipes going through walls to have paddle flange
6. Diameter of pipes to first be confirmed by M&E before concreting.
7. All position of services i.e pipes passing through RC walls to be confirmed by M&E Before Casting

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Email: allianceconsultantsltd@gmail.com

PROJECT :

ALA-ORA WATER SUPPLY AND SANITATION SYSTEM

NYAGAK WATER SUPPLY AND SANITATION SYSTEM

REVISIONS :

No	Date	Description

DRAWING TITLE : **FLOCCULATOR**

Surveyed by: R.K

Drawn by: Luks

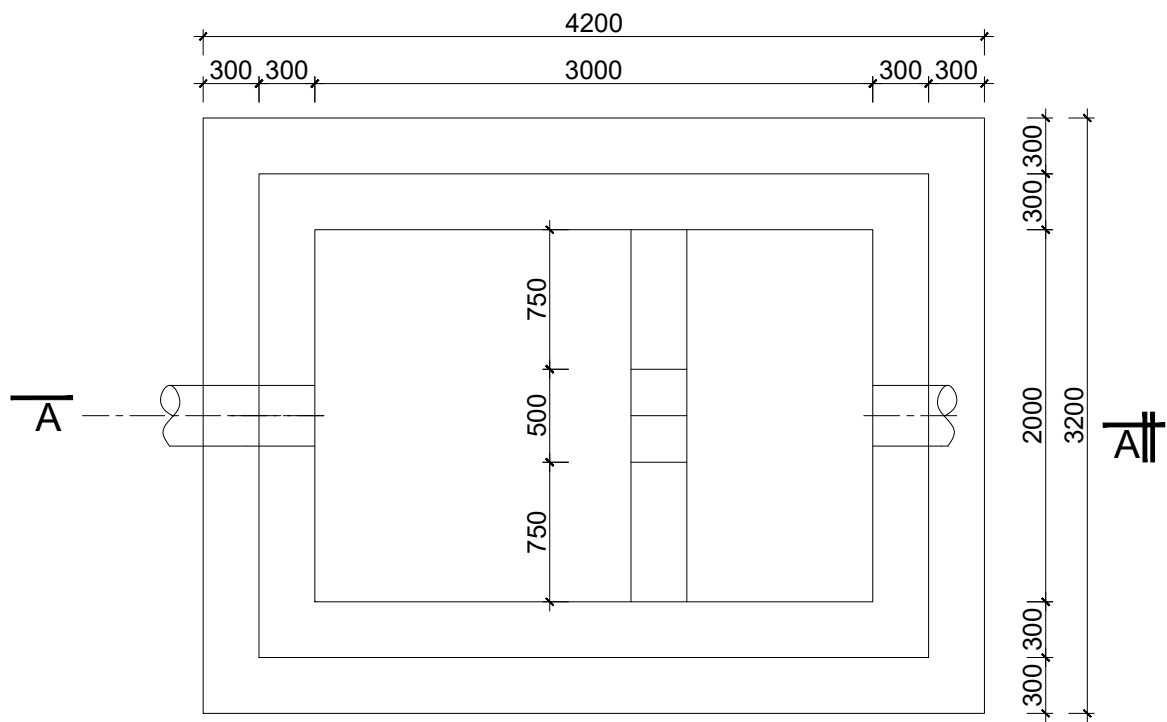
Designed by: A.B

Checked by: A.B

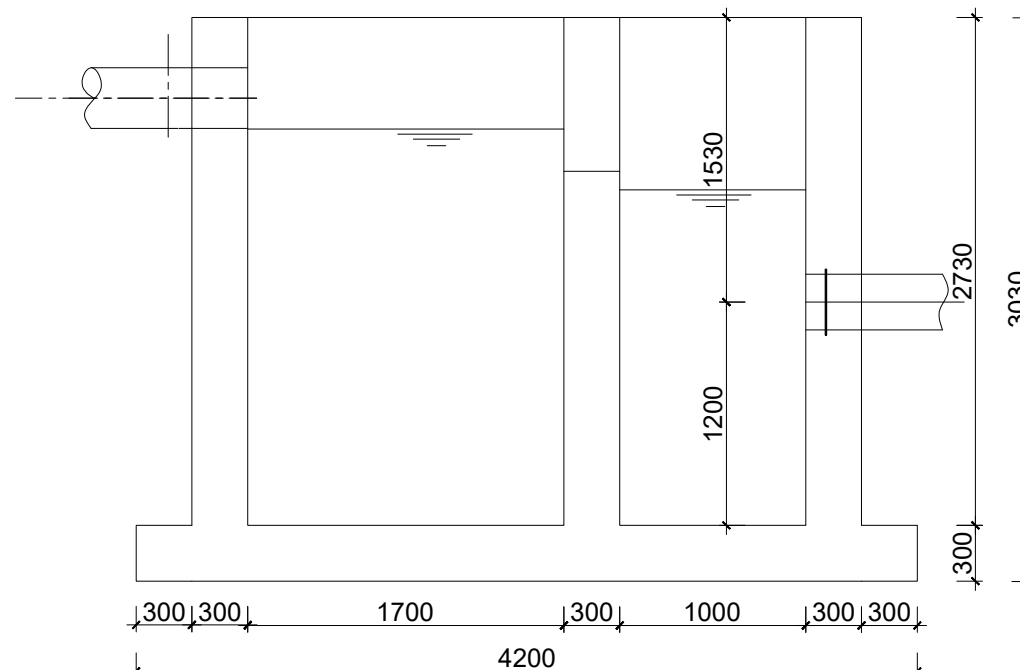
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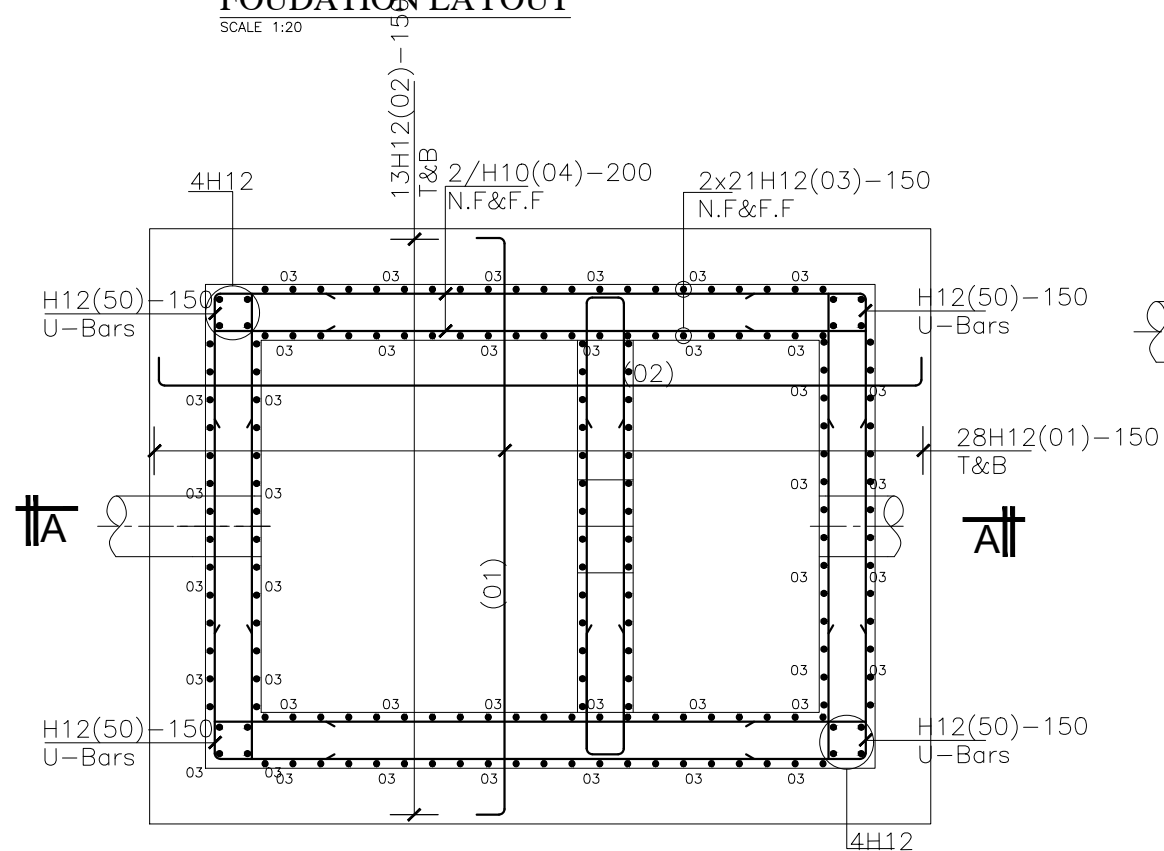
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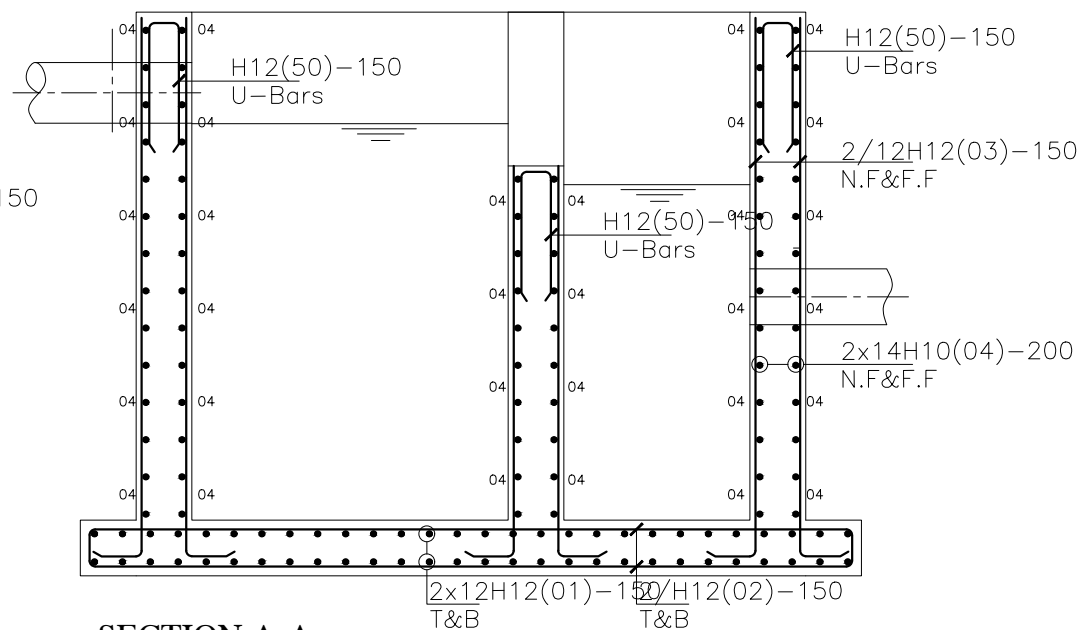
FOUDATION LAYOUT
SCALE 1:20



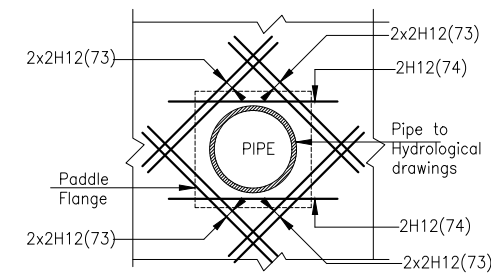
SECTION A-A
SCALE 1:20



FOUDATION LAYOUT
SCALE 1:20



SECTION A-A
SCALE 1:20



DETAIL AT PIPE OPENING
SCALE 1:20

GENERAL NOTES

- This drawing shall be read in conjunction with all relevant drawings.
- Concrete mixes to BS8500
 - Mass concrete to have a minimum works cube strength of 15N/mm² and at 28 days with 20 mm maximum aggregate size
 - Reinforced concrete to have works cube strength of 30N/mm² cylinder strength of 30N/mm² with 20mm maximum aggregate size UNLESS OTHERWISE STATED
- Reinforcement
 - High tensile bars to be ribbed cold formed bars to B.S. 4461
 - Mild steel to be round bars to B.S. 4449
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ADDITIONAL NOTES

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- Diameter of pipes to first be confirmed by M&E before concreting.
- All position of services i.e pipes passing through RC walls to be confirmed by M&E Before Casting

CLIENT :



CONSULTANT :



PROJECT :

ALA-ORA WATER SUPPLY AND SANITATION SYSTEM

NYAGAK WATER SUPPLY AND SANITATION SCHEME

REVISIONS :

No	Date	Description

DRAWING TITLE :

INLET STRUCTURE

Surveyed by: R.K

Drawn by: Luks

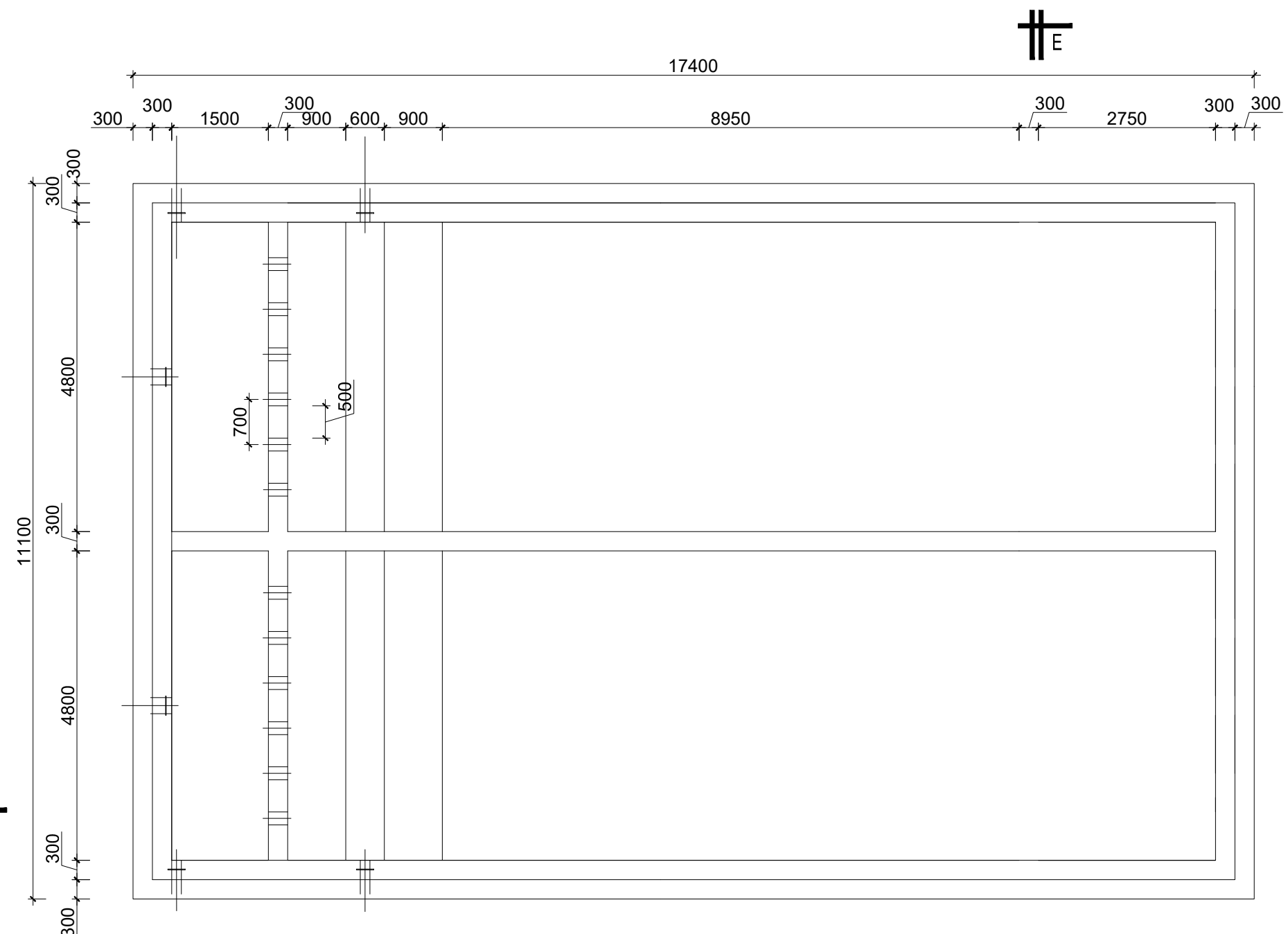
Designed by: A.B

Checked by: A.B

Date: FEBRUARY 2023

DRG. No.: AR/WSASS/NY/STR/006

Scale: Sheet No.: 1 of 1



FOUNDATION LAYOUT
SCALE 1:40

GENERAL NOTES

1. This drawing shall be read in conjunction with all relevant drawings.
2. Concrete mixes to BS8500
 - a. Mass concrete to have a minimum works cube strength of 15N/mm² and at 28 days with 20 mm maximum aggregate size
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3. Reinforcement
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 - c. Mesh reinforcement to comply with requirement of B.S. 4483
4. Minimum cover to all steel 50.
5. THE QUALITY OF ALL MATERIALS AND WORKMANSHIP SHALL COMPLY WITH THE REQUIREMENTS OF THE MOST RECENT ISSUES OF RELEVANT EUROPEAN STANDARDS AND CODES OF PRACTICE.

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5. All Pipes going through walls to have paddle flange
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7. All position of services i.e pipes passing through RC walls to be confirmed by M&E Before Casting

CLIENT :



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CONSULTANT :



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P.O.BOX 33975 KAMPALA
Email: allianceconsultantsltd@gmail.com

PROJECT :

ALA-ORA WATER SUPPLY AND SANITATION SYSTEM

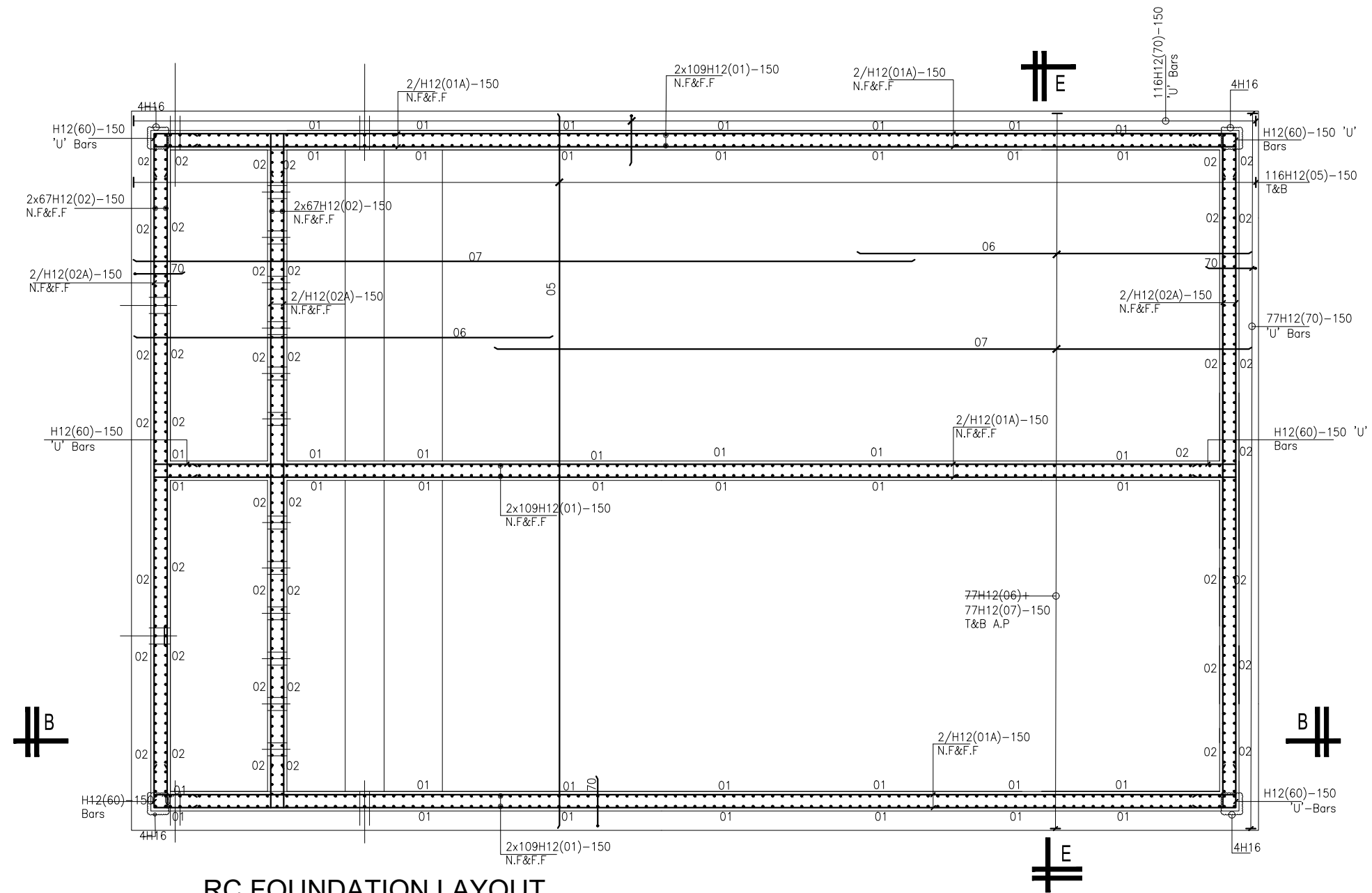
NYAGAK WATER SUPPLY AND SANITATION SYSTEM

REVISIONS :

No	Date	Description

DRAWING TITLE : **SEDIMENTATION TANK**

Surveyed by:	R.K
Drawn by:	Luks
Designed by:	A.B
Checked by:	A.B
Date:	FEBRUARY 2023
DRG. No.:	AR/WSASS/NY/STR/007
Scale:	Sheet No.: 1 of 5



RC FOUNDATION LAYOUT
SCALE 1:40

GENERAL NOTES

1. This drawing shall be read in conjunction with all relevant drawings.
2. Concrete mixes to BS8500
 - a. Mass concrete to have a minimum works cube strength of 15N/mm² and at 28 days with 20 mm maximum aggregate size
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ADDITIONAL NOTES

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7. All position of services i.e pipes passing through RC walls to be confirmed by M&E Before Casting

CLIENT :



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P.O.BOX 33975 KAMPALA
Email: allianceconsultantsltd@gmail.com

PROJECT :

ALA-ORA WATER SUPPLY AND SANITATION SYSTEM

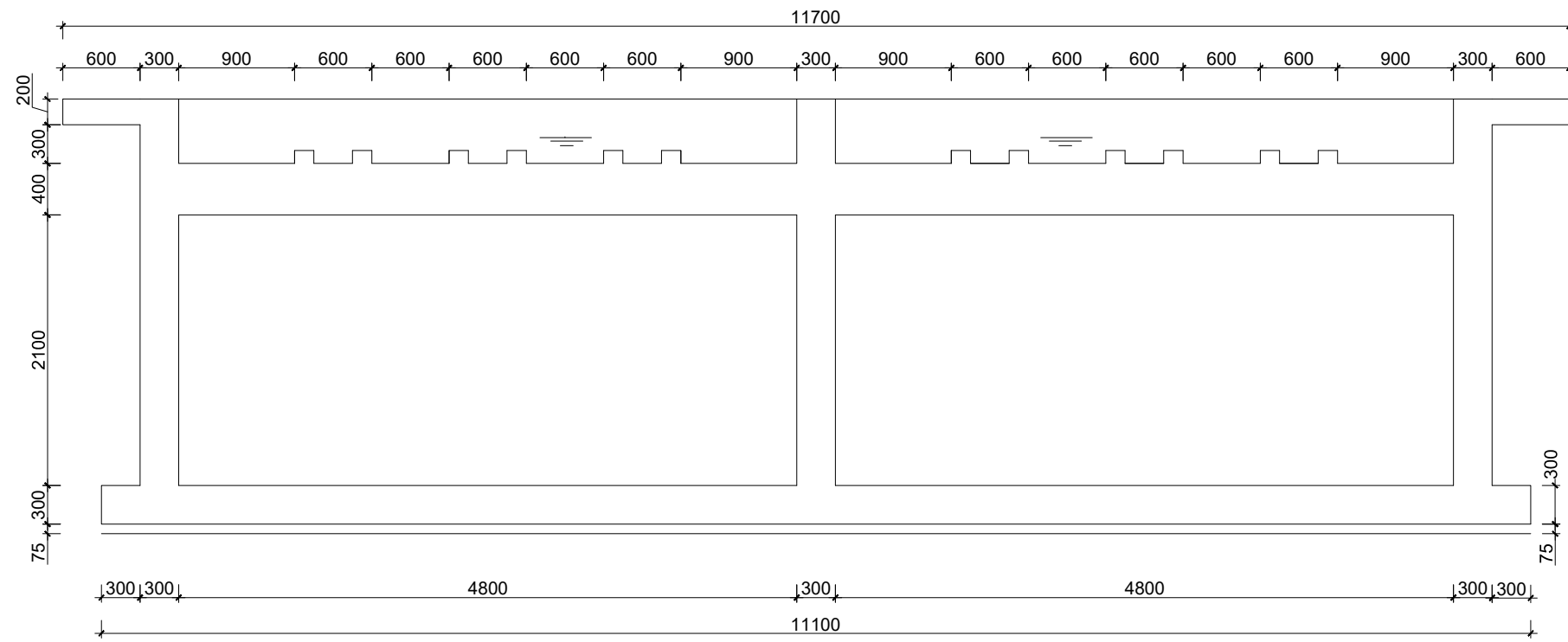
NYAGAK WATER SUPPLY AND SANITATION SYSTEM

REVISIONS :

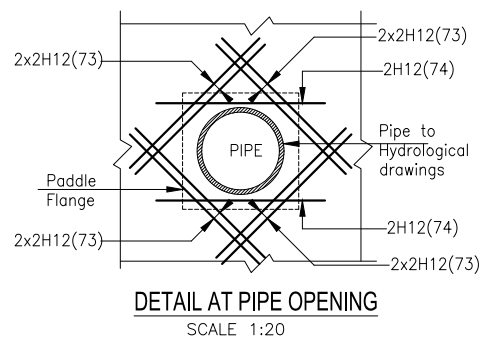
No	Date	Description

DRAWING TITLE : **SEDIMENTATION TANK**

Surveyed by:	R.K
Drawn by:	Luks
Designed by:	A.B
Checked by:	A.B
Date:	FEBRUARY 2023
DRG. No.:	AR/WSASS/NY/STR/007
Scale:	Sheet No.: 2 of 5



SECTION E-E
SCALE 1:25



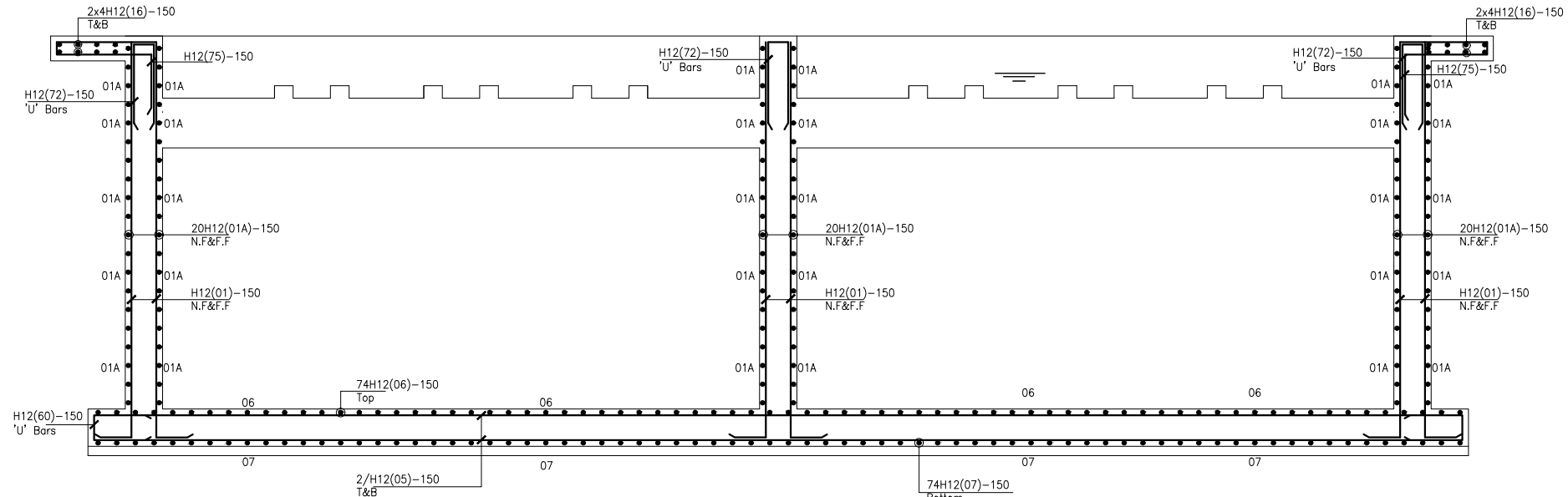
DETAIL AT PIPE OPENING
SCALE 1:20

GENERAL NOTES

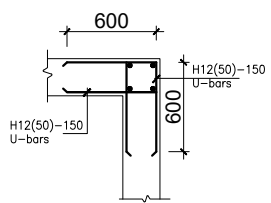
- This drawing shall be read in conjunction with all relevant drawings.
- Concrete mixes to BS8500
 - Mass concrete to have a minimum works cube strength of 15N/mm² and at 28 days with 20 mm maximum aggregate size
 - Reinforced concrete to have works cube strength of 30N/mm² cylinder strength of 30N/mm² with 20mm maximum aggregate size UNLESS OTHERWISE STATED
- Reinforcement
 - High tensile bars to be ribbed cold formed bars to B.S. 4461
 - Mild steel to be round bars to B.S. 4449
 - Mesh reinforcement to comply with requirement of B.S. 4483
- Minimum cover to all steel 50.
- THE QUALITY OF ALL MATERIALS AND WORKMANSHIP SHALL COMPLY WITH THE REQUIREMENTS OF THE MOST RECENT ISSUES OF RELEVANT EUROPEAN STANDARDS AND CODES OF PRACTICE.

ADDITIONAL NOTES

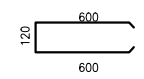
- All vertical walls to be cast at once
- Approved stopper water bar to be installed in all joints as directed by the Engineer.
- Contractor to use non recoverable ties for tying formwork
- Contractor to submit methodology for Construction before commencing work.
- All Pipes going through walls to have paddle flange
- Diameter of pipes to first be confirmed by M&E before concreting.
- All position of services i.e pipes passing through RC walls to be confirmed by M&E Before Casting



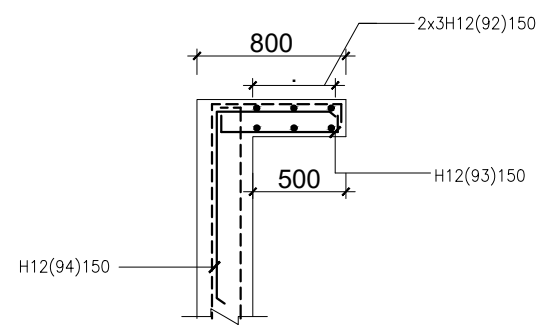
RC SECTION E-E
SCALE 1:25



TYPICAL WALL END DETAIL
Scale 1:25



DETAIL OF BAR MARK 50
Scale 1:25



WALKWAY DETAIL
SCALE 1:20

CLIENT :



THE REPUBLIC OF UGANDA
MINISTRY OF WATER AND ENVIRONMENT
DIRECTORATE OF WATER DEVELOPMENT

CONSULTANT :



ALLIANCE CONSULTANTS LTD
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Infra-Consult Ltd
P.O.BOX 33975 KAMPALA
Email: allianceconsultantsltd@gmail.com

PROJECT :

ALA-ORA WATER SUPPLY AND SANITATION SYSTEM

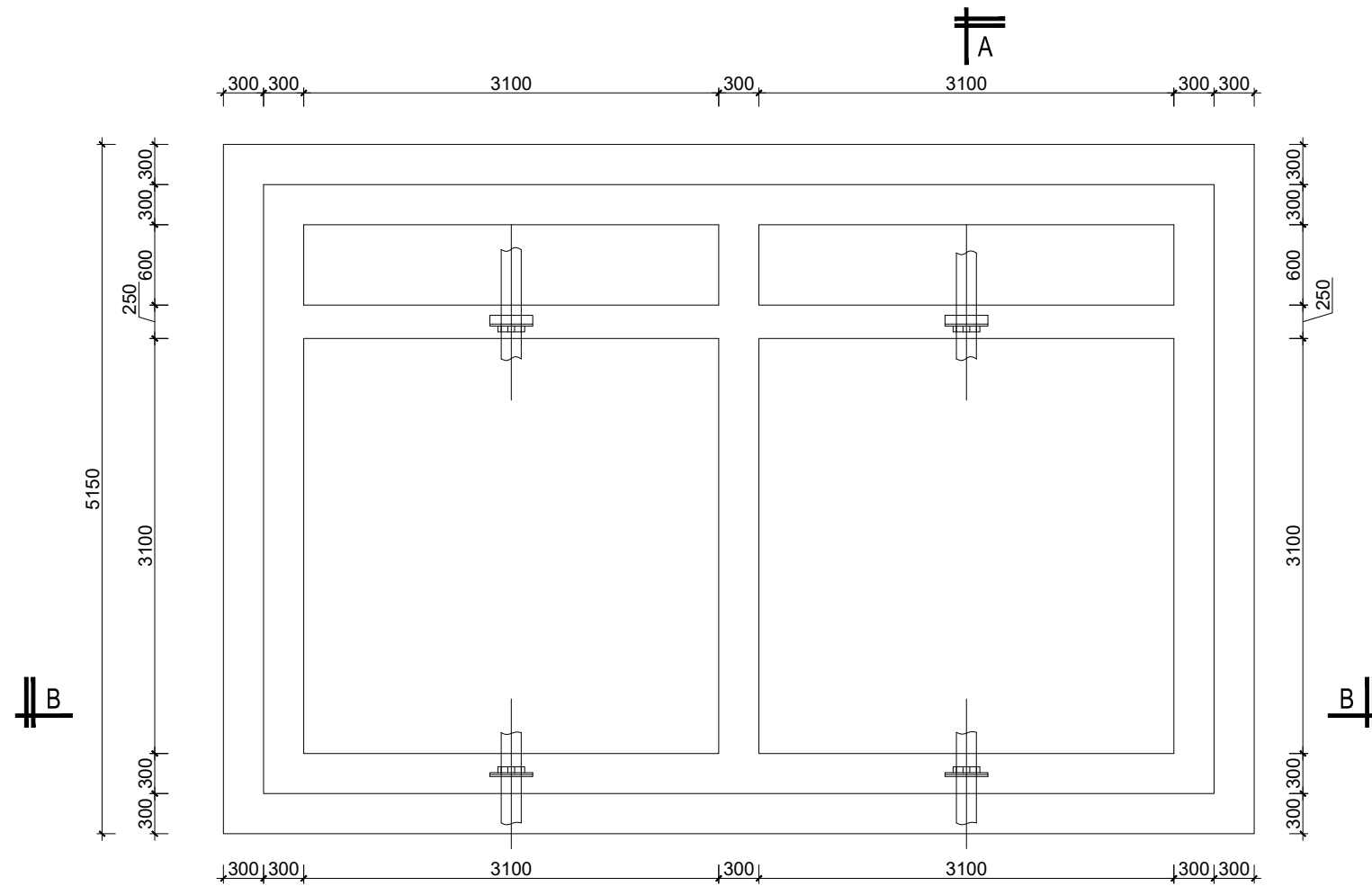
NYAGAK WATER SUPPLY AND SANITATION SYSTEM

REVISIONS :

No	Date	Description

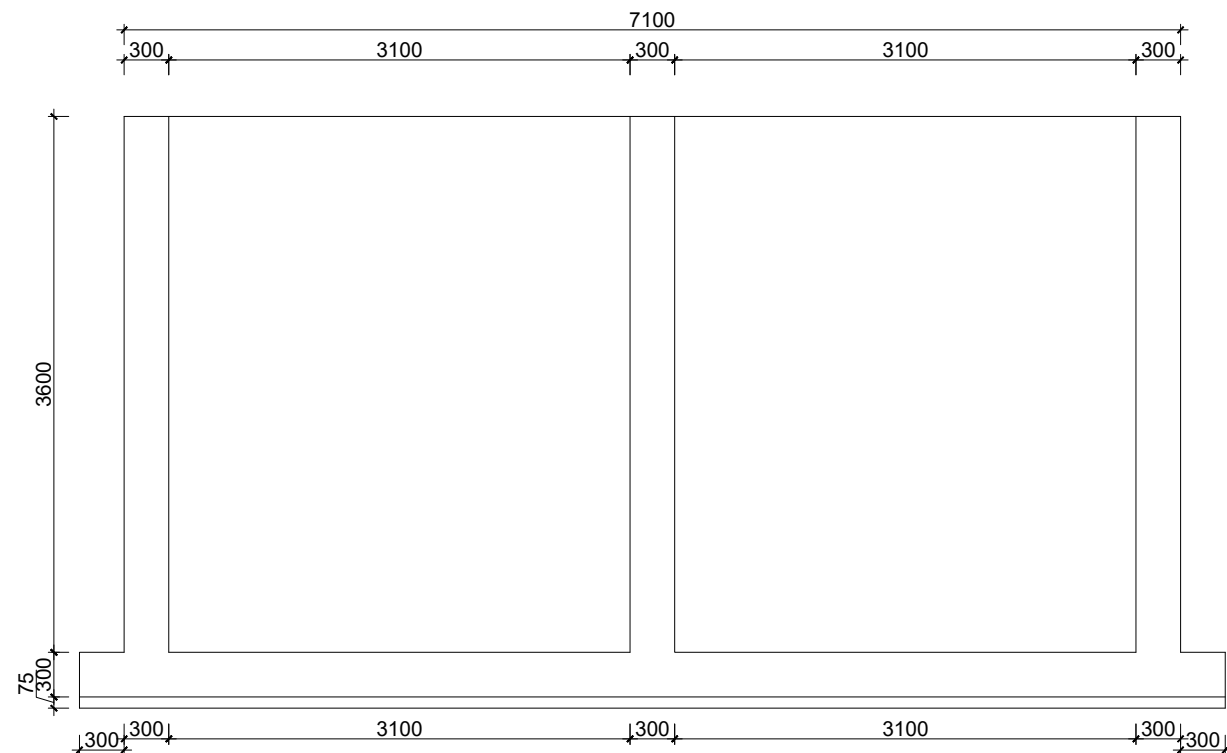
DRAWING TITLE : **SEDIMENTATION TANK**

Surveyed by:	R.K
Drawn by:	Luks
Designed by:	A.B
Checked by:	A.B
Date:	FEBRUARY 2023
DRG. No.:	AR/WSASS/NY/STR/007
Scale:	Sheet No.: 5 of 5



FOUNDATION LAYOUT.

SCALE 1:50



SECTION B-B
SCALE 1:25

GENERAL NOTES

- This drawing shall be read in conjunction with all relevant drawings.
- Concrete mixes to BS8500
 - Mass concrete to have a minimum works cube strength of 15N/mm² and at 28 days with 20 mm maximum aggregate size
 - Reinforced concrete to have works cube strength of 30N/mm² cylinder strength of 30N/mm² with 20mm maximum aggregate size UNLESS OTHERWISE STATED
- Reinforcement
 - High tensile bars to be ribbed cold formed bars to B.S. 4461
 - Mild steel to be round bars to B.S. 4449
 - Mesh reinforcement to comply with requirement of B.S. 4483
- Minimum cover to all steel 50.
- THE QUALITY OF ALL MATERIALS AND WORKMANSHIP SHALL COMPLY WITH THE REQUIREMENTS OF THE MOST RECENT ISSUES OF RELEVANT EUROPEAN STANDARDS AND CODES OF PRACTICE.

ADDITIONAL NOTES

- All vertical walls to be cast at once
- Approved stopper water bar to be installed in all joints as directed by the Engineer.
- Contractor to use non recoverable ties for tying formwork
- Contractor to submit methodology for Construction before commencing work.
- All Pipes going through walls to have paddle flange
- Diameter of pipes to first be confirmed by M&E before concreting.
- All position of services i.e pipes passing through RC walls to be confirmed by M&E Before Casting

CLIENT :



THE REPUBLIC OF UGANDA
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DIRECTORATE OF WATER DEVELOPMENT

CONSULTANT :

AL **ALLIANCE CONSULTANTS LTD**
CONSULTING ENGINEERS
In Association with

Infra-Consult Ltd

P.O.BOX 33975 KAMPALA
Email: allainceconsultantsltd@gmail.com

PROJECT :

ALA-ORA WATER SUPPLY AND SANITATION SYSTEM

NYAGAK WATER SUPPLY AND SANITATION SYSTEM

REVISIONS :

No	Date	Description

DRAWING TITLE : **FILTER**

Surveyed by: R.K

Drawn by: Luks

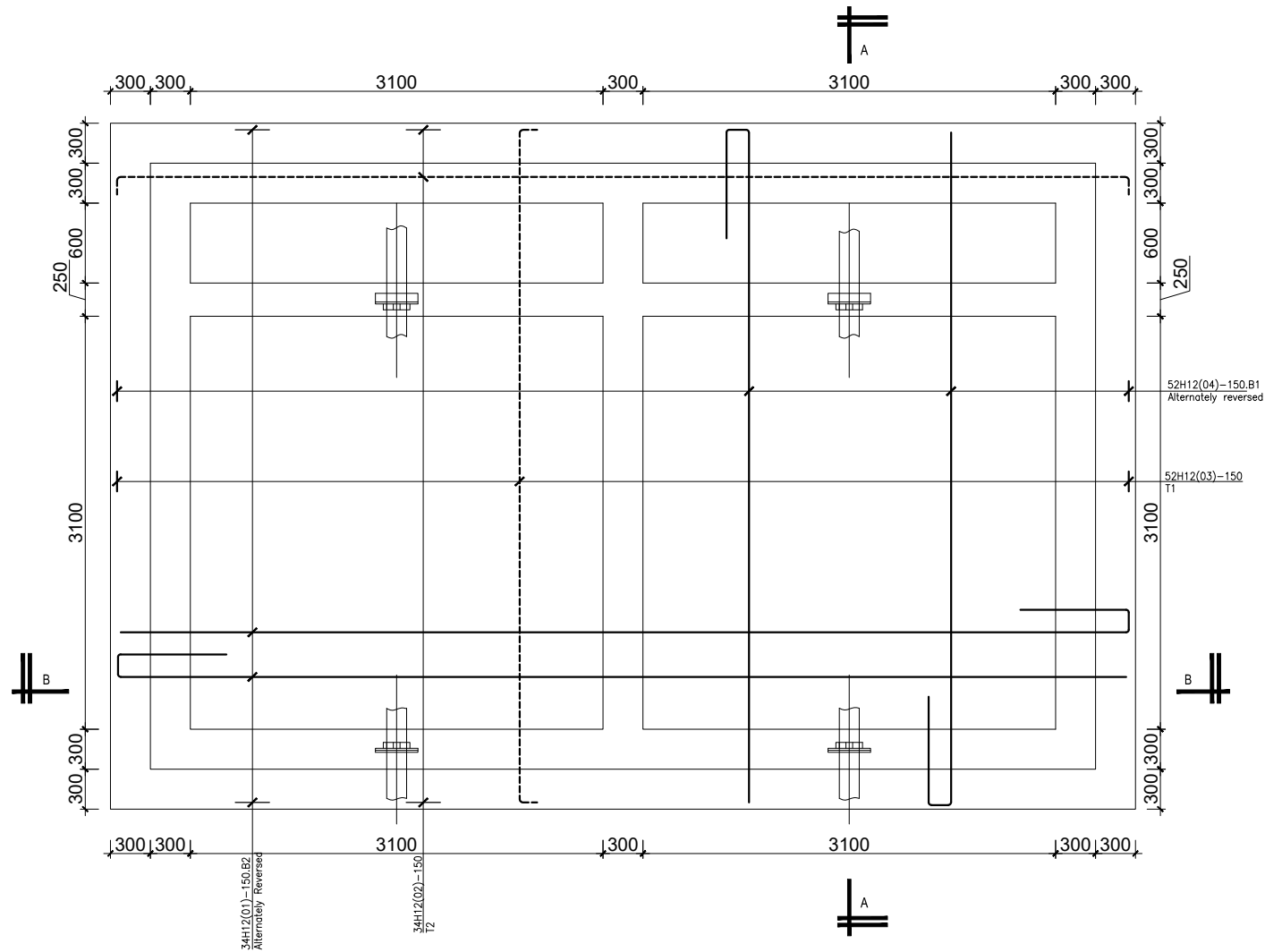
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Checked by: A.B

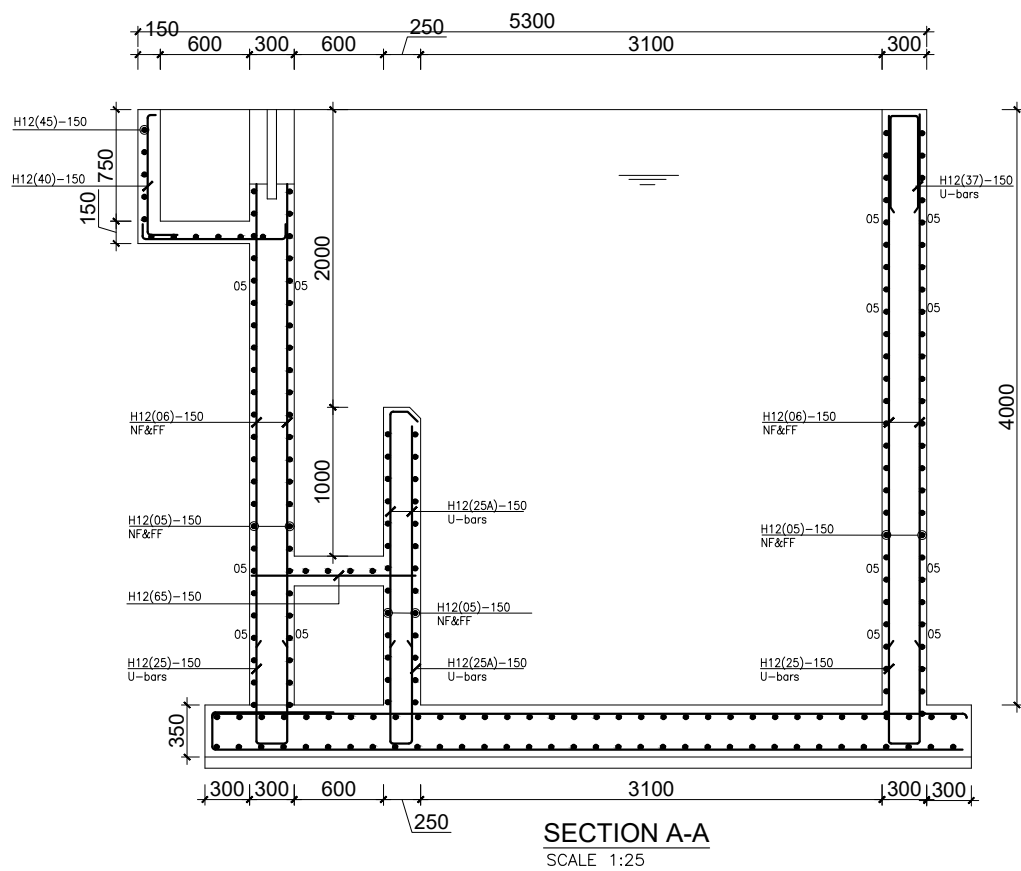
Date: **FEBRUARY 2023**

DRG. No.: **AR/WSASS/NY/STR/008**

Scale: Sheet No.: 1 of 4



RC FOUNDATION LAYOUT.
SCALE 1:25



SECTION A-A
SCALE 1:25

GENERAL NOTES

1. This drawing shall be read in conjunction with all relevant drawings.
2. Concrete mixes to BS8500
 - a. Mass concrete to have a minimum works cube strength of 15N/mm² and at 28 days with 20 mm maximum aggregate size
 - b. Reinforced concrete to have works cube strength of 30N/mm² cylinder strength of 30N/mm² with 20mm maximum aggregate size UNLESS OTHERWISE STATED
3. Reinforcement
 - a. High tensile bars to be ribbed cold formed bars to B.S. 4461
 - b. Mild steel to be round bars to B.S. 4449
 - c. Mesh reinforcement to comply with requirement of B.S. 4483
4. Minimum cover to all steel 50.
5. THE QUALITY OF ALL MATERIALS AND WORKMANSHIP SHALL COMPLY WITH THE REQUIREMENTS OF THE MOST RECENT ISSUES OF RELEVANT EUROPEAN STANDARDS AND CODES OF PRACTICE.

ADDITIONAL NOTES

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3. Contractor to use non recoverable ties for tying formwork
4. Contractor to submit methodology for Construction before commencing work.
5. All Pipes going through walls to have paddle flange
6. Diameter of pipes to first be confirmed by M&E before concreting.
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CLIENT :



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CONSULTANT :

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P.O.BOX 33975 KAMPALA
Email: allianceconsultantsltd@gmail.com

PROJECT :

ALA-ORA WATER SUPPLY AND SANITATION SYSTEM

NYAGAK WATER SUPPLY AND SANITATION SYSTEM

REVISIONS :

No	Date	Description

DRAWING TITLE : **FILTER**

Surveyed by: R.K

Drawn by: Luks

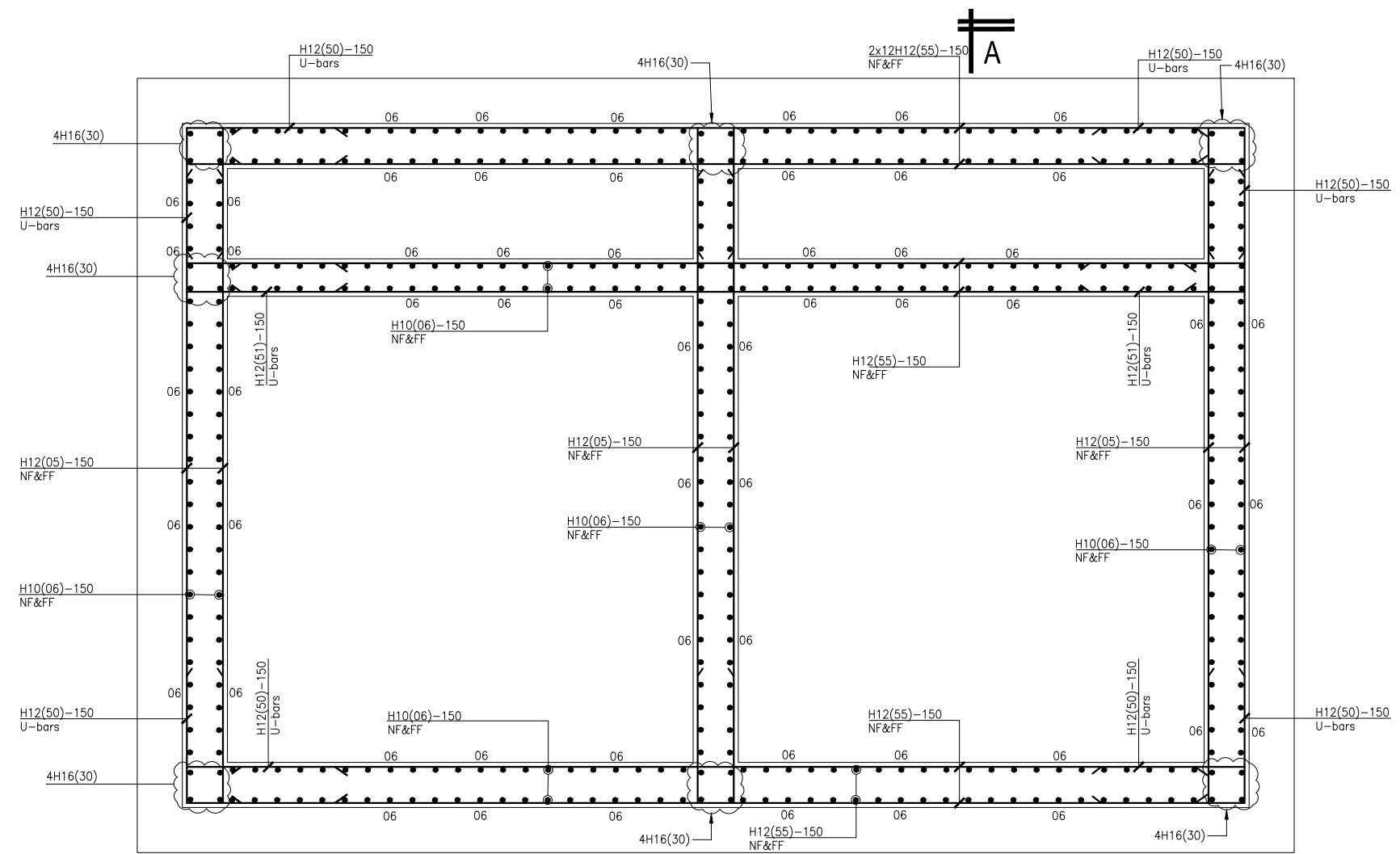
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Checked by: A.B

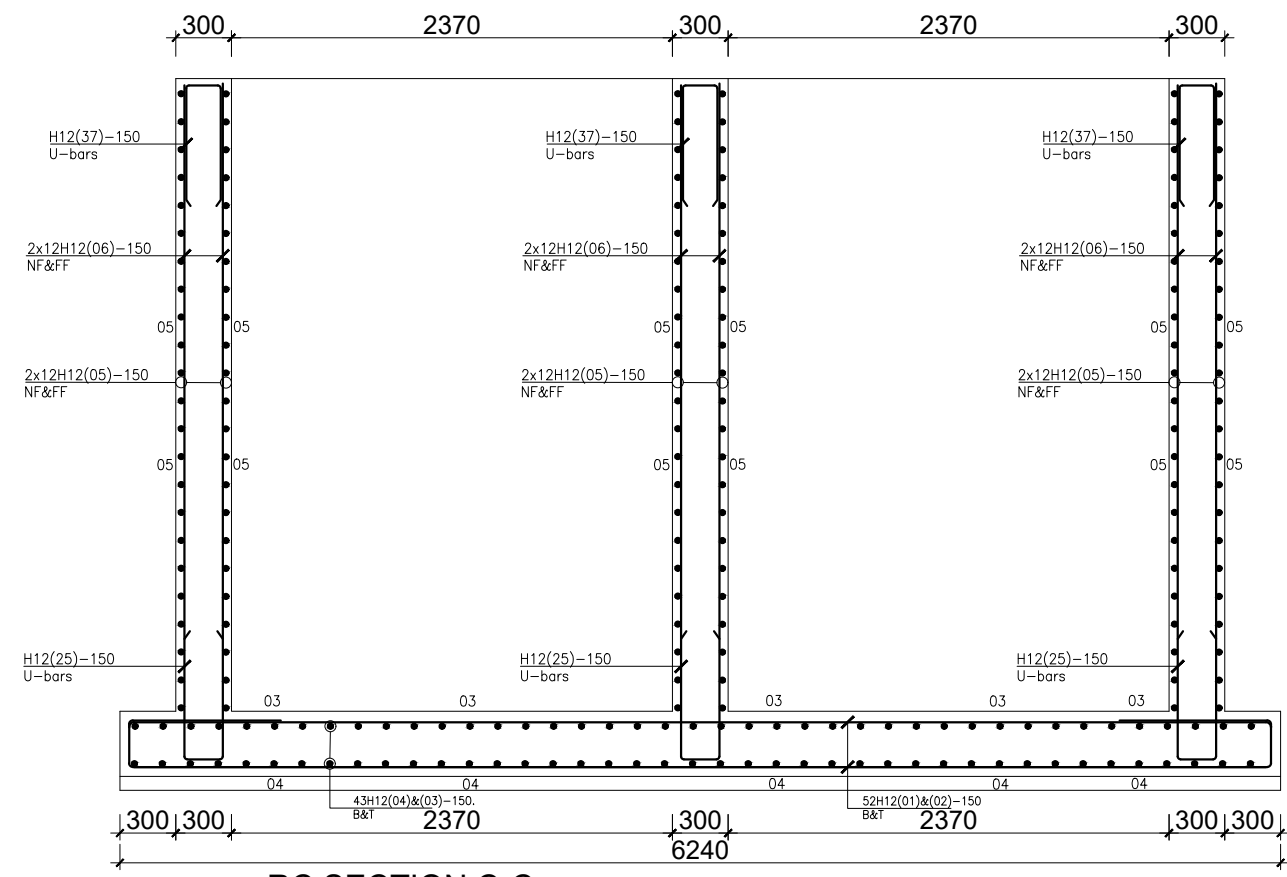
Date: FEBRUARY 2023

DRG. No.: AR/WSASS/NY/STR/008

Scale: Sheet No.: 3 of 4



RC WALL LAYOUT.
SCALE 1:20



RC SECTION C-C SCALE 1:20

GENERAL NOTES

- This drawing shall be read in conjunction with all relevant drawings.
- Concrete mixes to BS8500
 - Mass concrete to have a minimum works cube strength of 15N/mm² and at 28 days with 20 mm maximum aggregate size
 - Reinforced concrete to have works cube strength of 30N/mm² cylinder strength of 30N/mm² with 20mm maximum aggregate size UNLESS OTHERWISE STATED
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 - High tensile bars to be ribbed cold formed bars to B.S. 4461
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PROJECT :

ALA-ORA WATER SUPPLY AND SANITATION SYSTEM

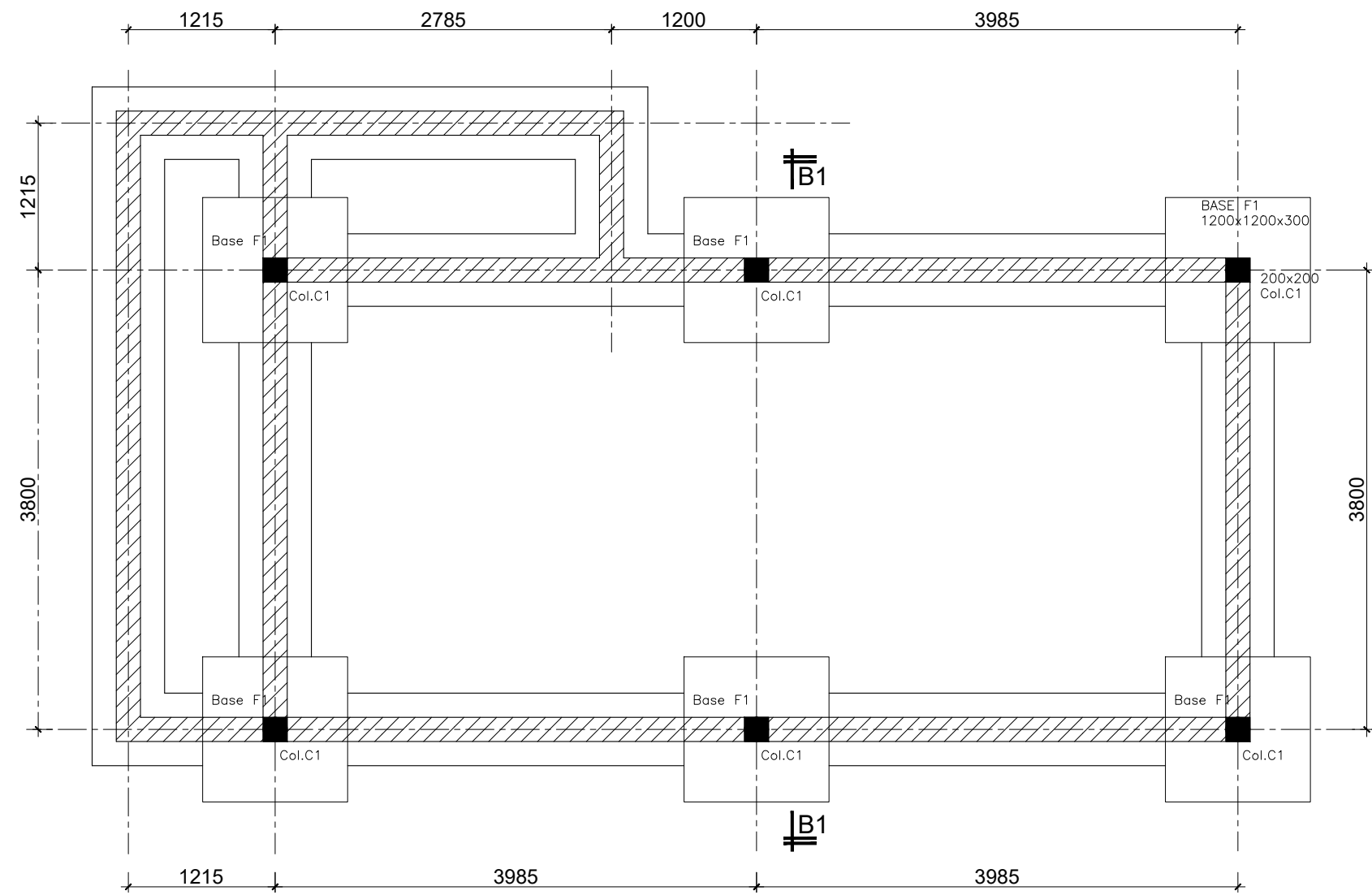
NYAGAK WATER SUPPLY AND SANITATION SYSTEM

REVISIONS :

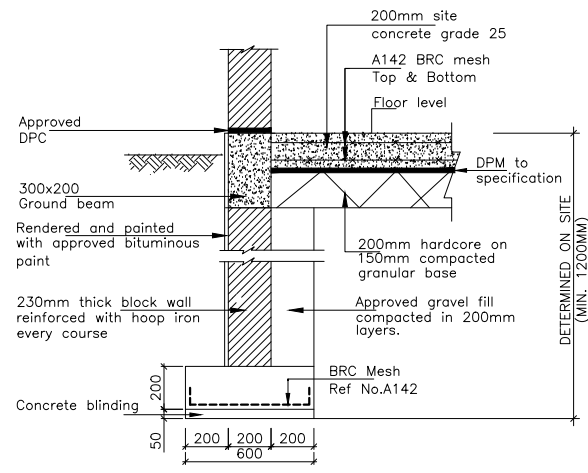
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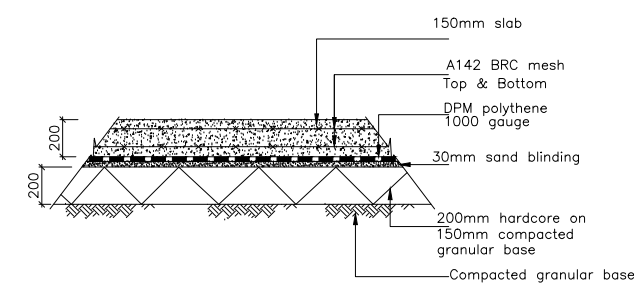
Surveyed by: R.K
 Drawn by: Luks
 Designed by: A.B
 Checked by: A.B
 Date: FEBRUARY 2023
 DRG. No.: AR/WSASS/NY/STR/008
 Scale: Sheet No.: 4 of 4



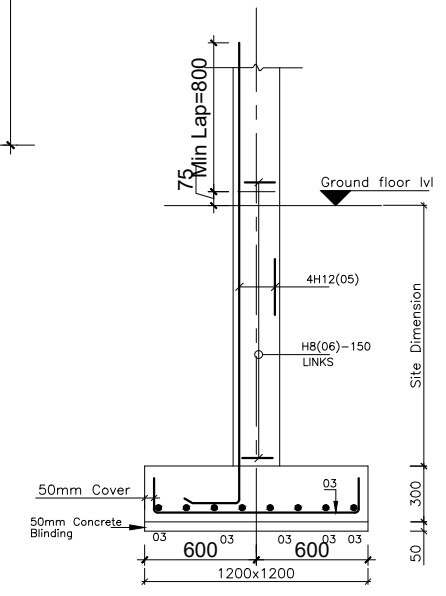
GROUND FLOOR LAYOUT
SCALE 1:25



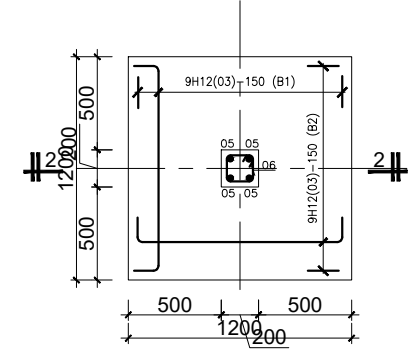
SECTION THROUGH WALL FOOTING
Scale 1:20



TYPICAL SECTION THROUGH THE GROUND SLAB
SCALE 1:20



SECTION 2-2
SCALE 1:20



BASE TYPE F1 (6No.) [1200x1200x400]
SCALE 1:20

GENERAL NOTES

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- All Pipes going through walls to have paddle flange
- Diameter of pipes to first be confirmed by M&E before concreting.
- All position of services i.e pipes passing through RC walls to be confirmed by M&E Before Casting

CLIENT :



THE REPUBLIC OF UGANDA
MINISTRY OF WATER AND ENVIRONMENT
DIRECTORATE OF WATER DEVELOPMENT

CONSULTANT :

ALLIANCE CONSULTANTS LTD
CONSULTING ENGINEERS
In Association with
Infra-Consult Ltd

P.O.BOX 33975 KAMPALA
Email: allianceconsultantsltd@gmail.com

PROJECT :

ALA-ORA WATER SUPPLY AND SANITATION SYSTEM

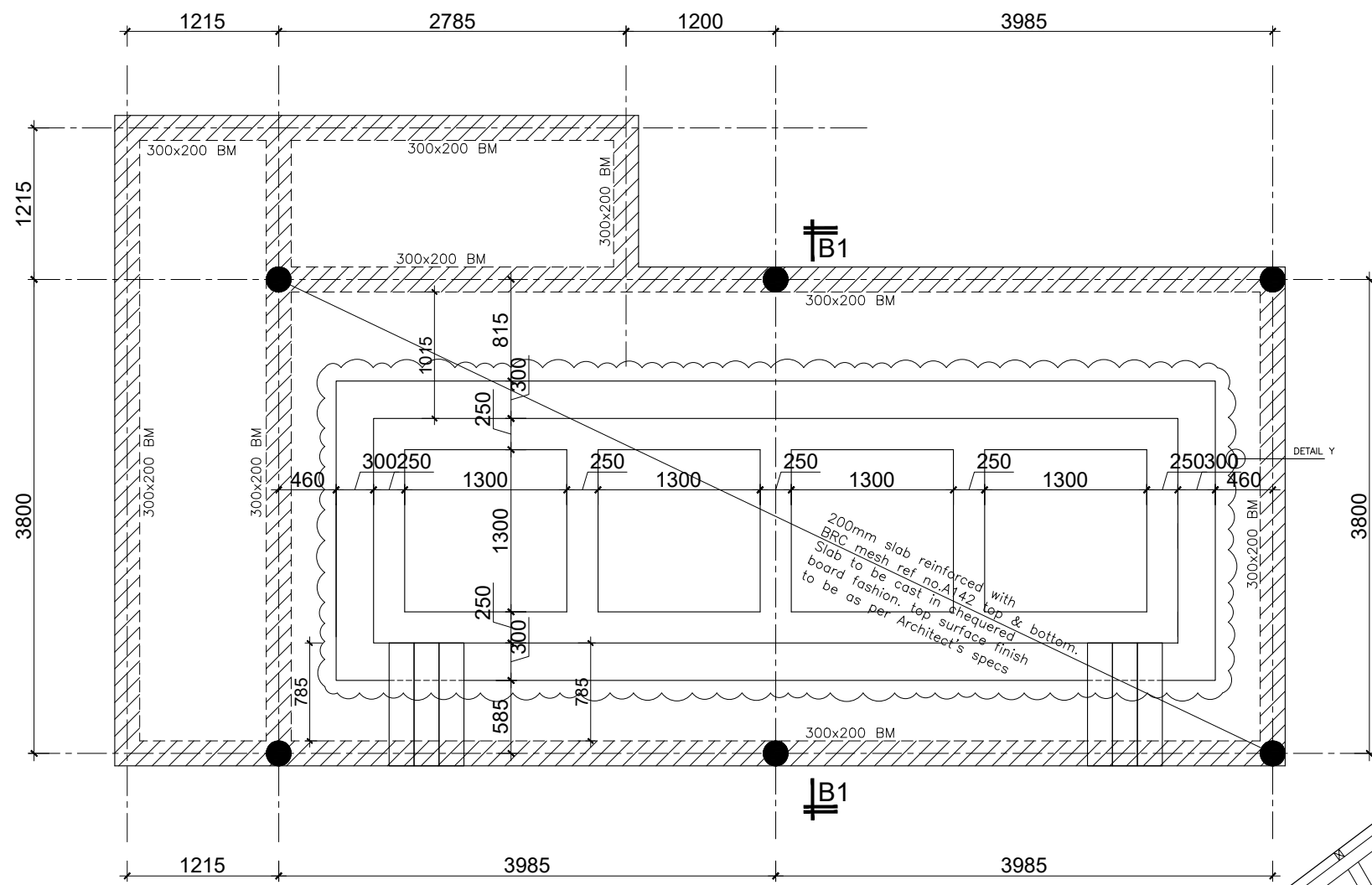
NYAGAK WATER SUPPLY AND SANITATION SCHEME

REVISIONS :

No	Date	Description

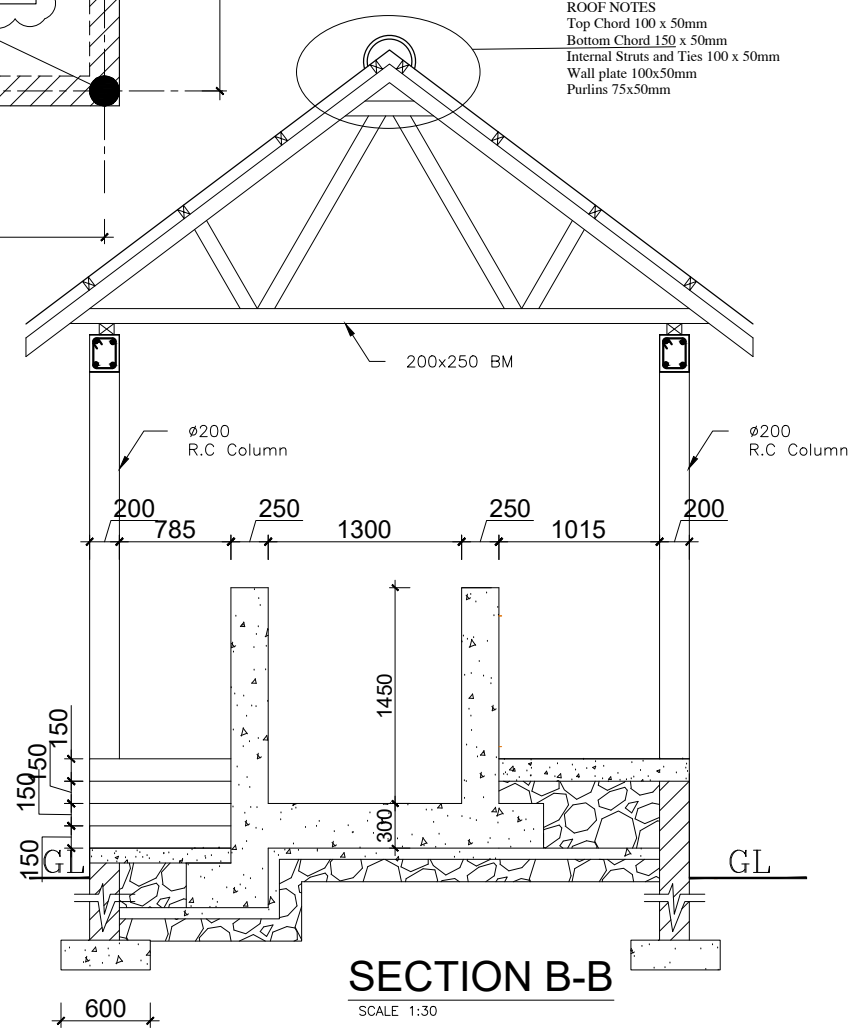
DRAWING TITLE : **CHLORINE DOSING AND MIXING PLATFORM**

Surveyed by:	R.K
Drawn by:	Luks
Designed by:	A.B
Checked by:	A.B
Date:	FEBRUARY 2023
DRG. No.:	AR/WSASS/NY/STR/009
Scale:	Sheet No.: 1 of 3

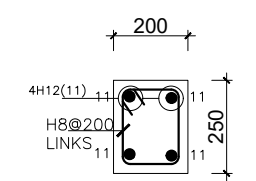


GROUND FLOOR LAYOUT
SCALE 1:25

ROOF NOTES
Top Chord 100 x 50mm
Bottom Chord 150 x 50mm
Internal Struts and Ties 100 x 50mm
Wall plate 100x50mm
Purlins 75x50mm



SECTION B-B
SCALE 1:30



TYPICAL SECTION THROUGH RING BEAM
SCALE 1:10

GENERAL NOTES

- This drawing shall be read in conjunction with all relevant drawings.
- Concrete mixes to BS8500
 - Mass concrete to have a minimum works cube strength of 15N/mm² and at 28 days with 20 mm maximum aggregate size
 - Reinforced concrete to have works cube strength of 30N/mm² cylinder strength of 30N/mm² with 20mm maximum aggregate size UNLESS OTHERWISE STATED
- Reinforcement
 - High tensile bars to be ribbed cold formed bars to B.S. 4461
 - Mild steel to be round bars to B.S. 4449
 - Mesh reinforcement to comply with requirement of B.S. 4483
- Minimum cover to all steel 50.
- THE QUALITY OF ALL MATERIALS AND WORKMANSHIP SHALL COMPLY WITH THE REQUIREMENTS OF THE MOST RECENT ISSUES OF RELEVANT EUROPEAN STANDARDS AND CODES OF PRACTICE.

ADDITIONAL NOTES

- All vertical walls to be cast at once
- Approved stopper water bar to be installed in all joints as directed by the Engineer.
- Contractor to use non recoverable ties for tying formwork
- Contractor to submit methodology for Construction before commencing work.
- All Pipes going through walls to have paddle flange
- Diameter of pipes to first be confirmed by M&E before concreting.
- All position of services i.e pipes passing through RC walls to be confirmed by M&E Before Casting

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PROJECT :

ALA-ORA WATER SUPPLY AND SANITATION SYSTEM

NYAGAK WATER SUPPLY AND SANITATION SCHEME

REVISIONS :

No	Date	Description

DRAWING TITLE : **CHLORINE DOSING AND MIXING PLATFORM**

Surveyed by: R.K

Drawn by: Luks

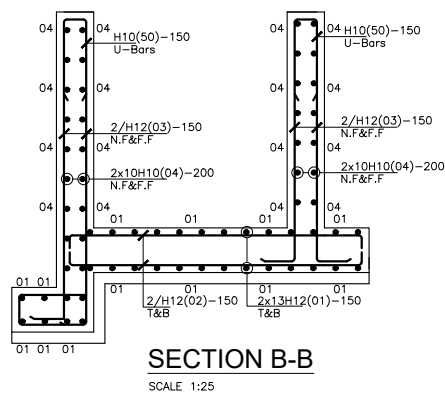
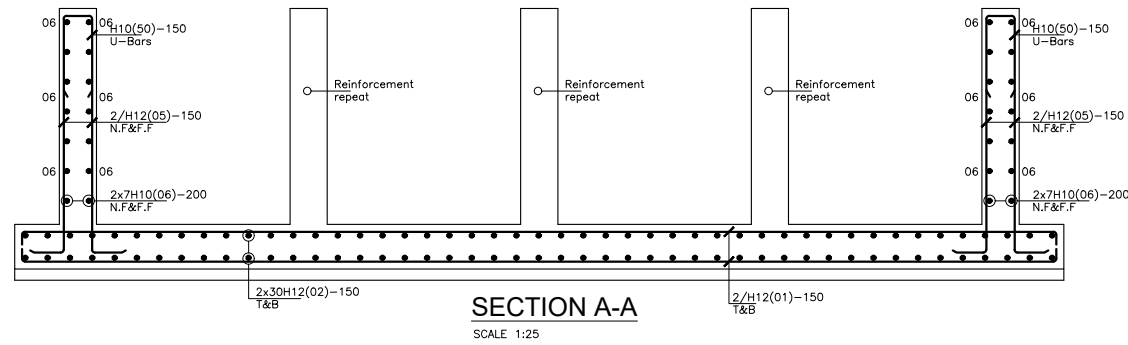
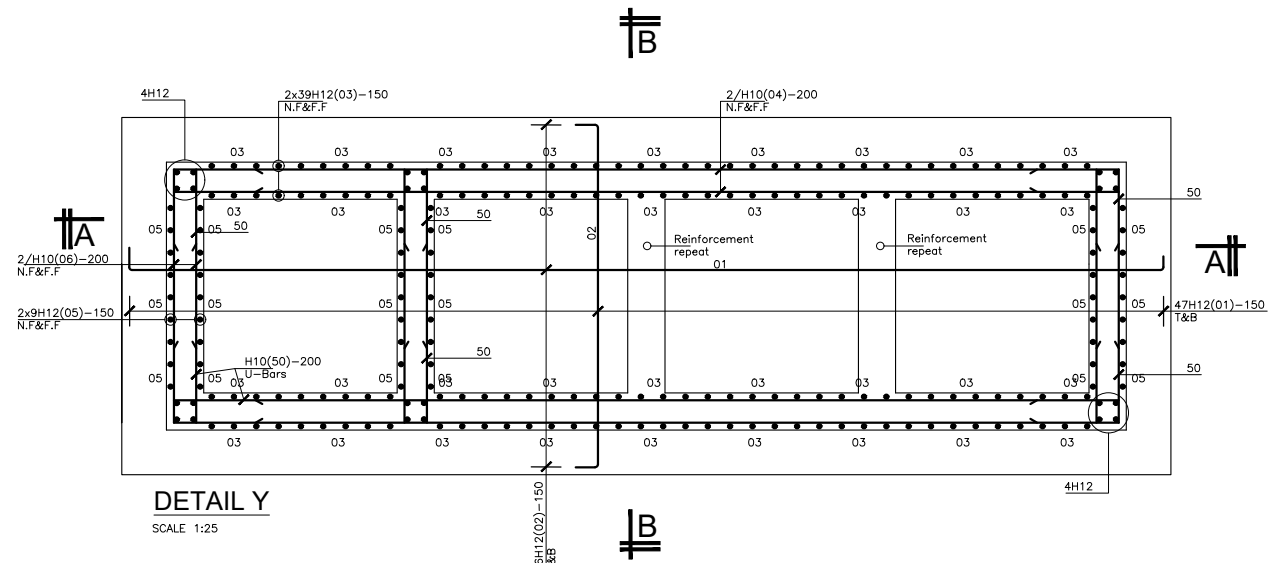
Designed by: A.B

Checked by: A.B

Date: FEBRUARY 2023

DRG. No.: AR/WSASS/NY/STR/009

Scale: Sheet No.: 2 of 3



GENERAL NOTES

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REVISIONS :

No	Date	Description

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Surveyed by: R.K

Drawn by: Luks

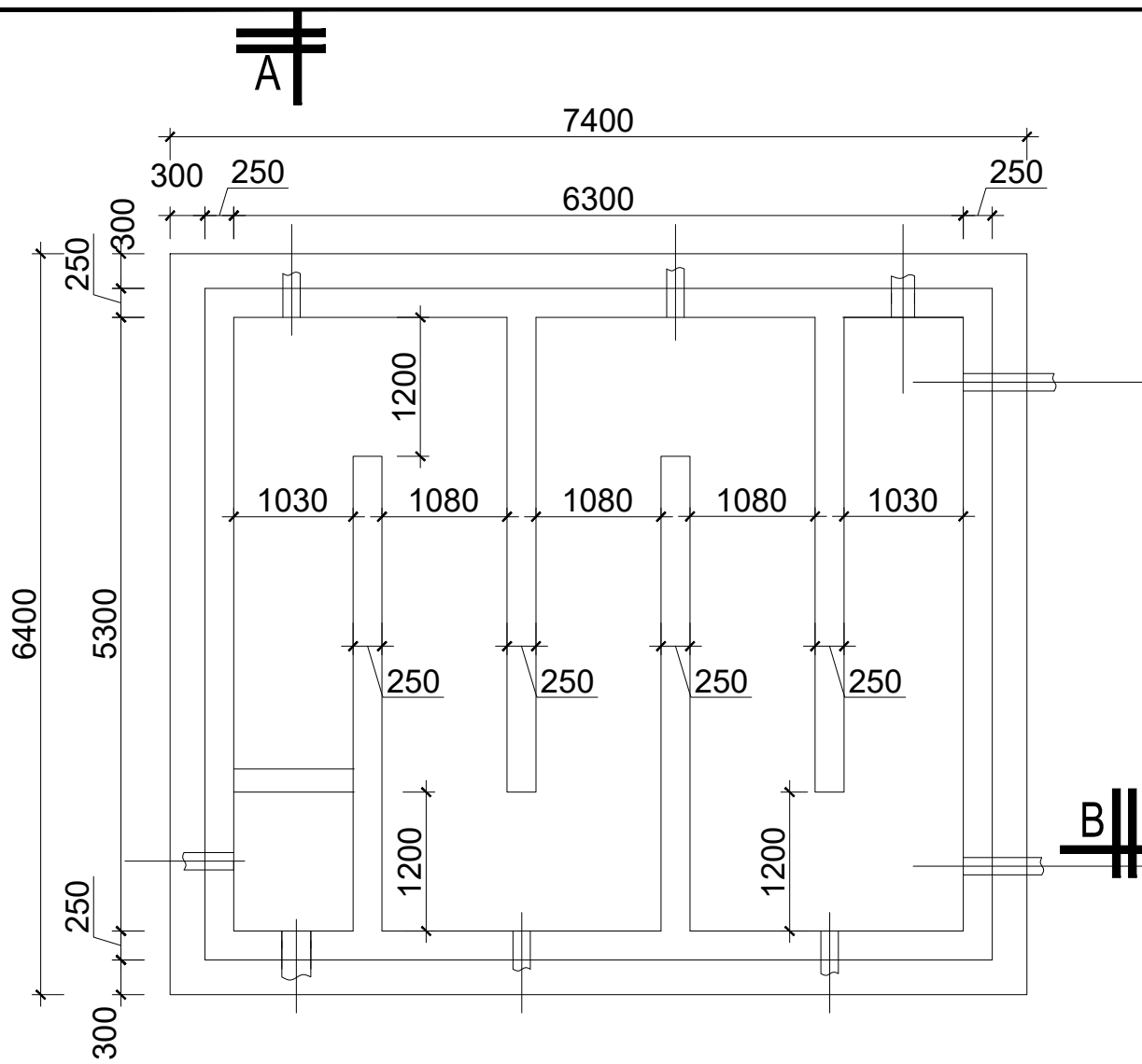
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Checked by: A.B

Date: FEBRUARY 2023

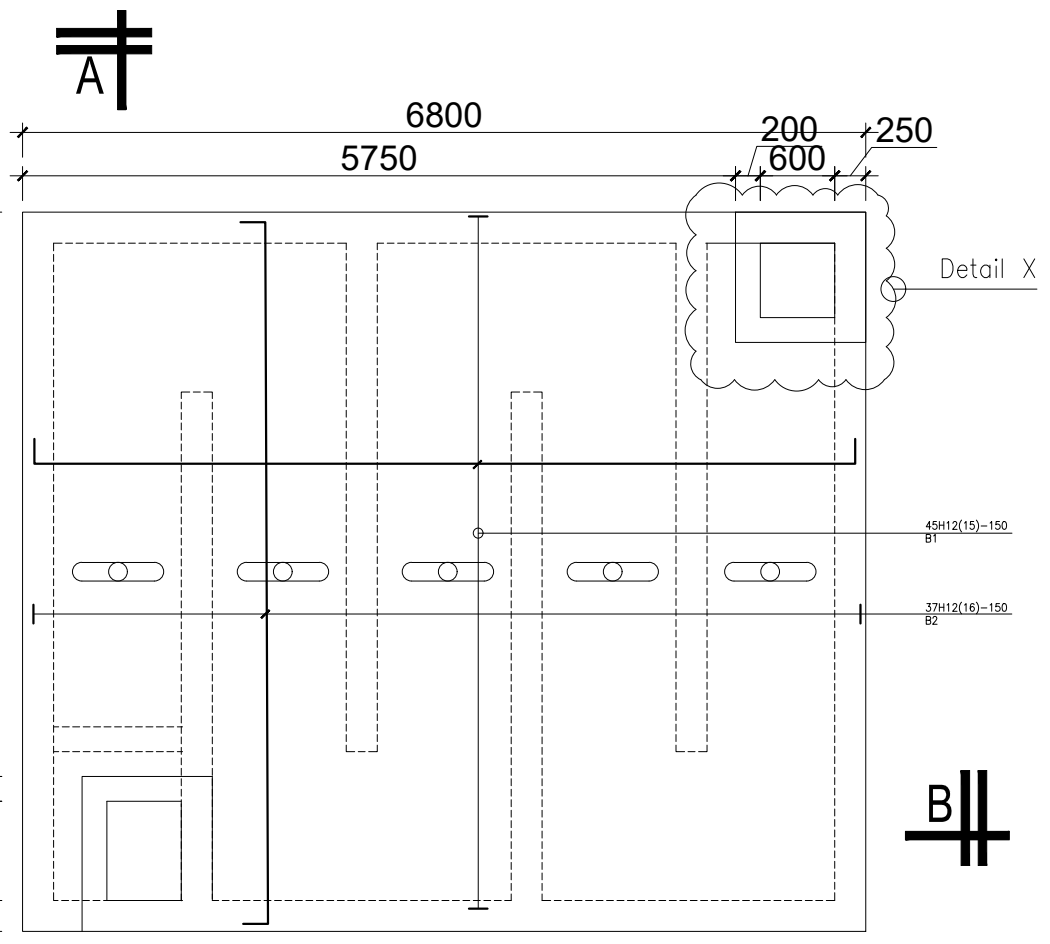
DRG. No.: AR/WSASS/NY/STR/009

Scale: Sheet No.: 3 of 3



FOUNDATION LAYOUT

SCALE 1:30



TOP DECK LAYOUT

SCALE 1:30

GENERAL NOTES

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PROJECT :

ALA-ORA WATER SUPPLY AND SANITATION SYSTEM

NYAGAK WATER SUPPLY AND SANITATION SYSTEM

REVISIONS :

No	Date	Description

DRAWING TITLE : **CLEAR WATER WELL**

Surveyed by: R.K

Drawn by: Luks

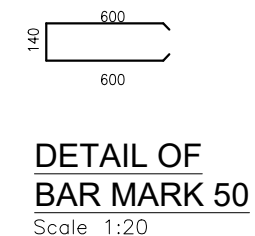
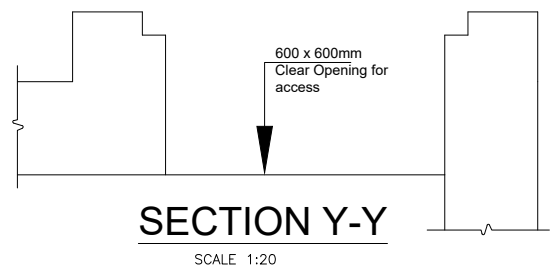
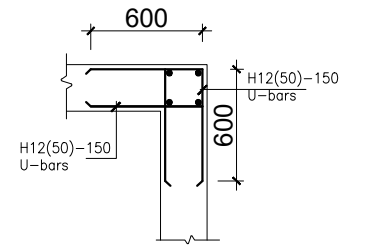
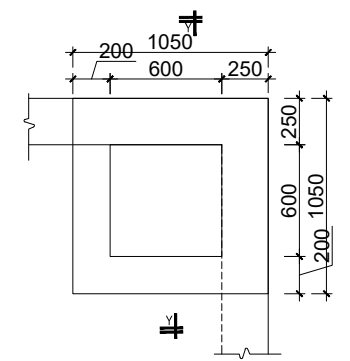
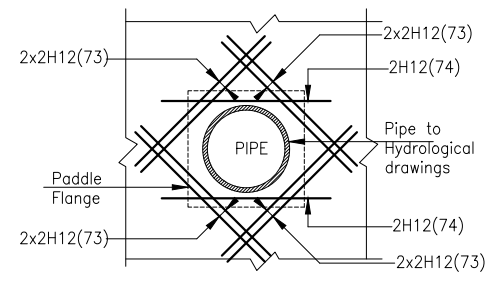
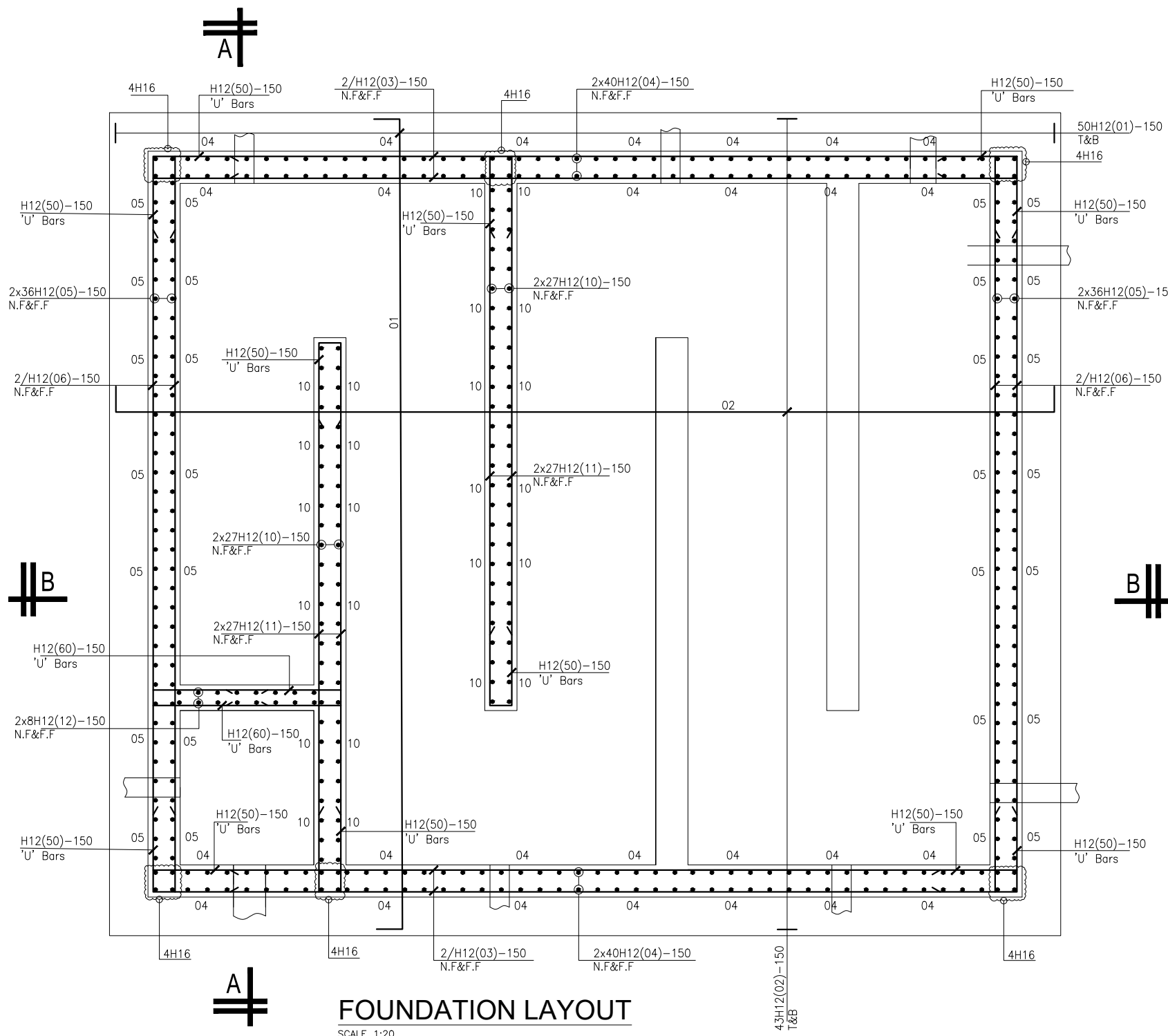
Designed by: A.B

Checked by: A.B

Date: FEBRUARY 2023

DRG. No.: AR/WSASS/NY/STR/010

Scale: Sheet No.: 1 of 4



GENERAL NOTES

- This drawing shall be read in conjunction with all relevant drawings.
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 - Mild steel to be round bars to B.S. 4449
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ADDITIONAL NOTES

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- All Pipes going through walls to have paddle flange
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- All position of services i.e pipes passing through RC walls to be confirmed by M&E Before Casting

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 P.O.BOX 33975 KAMPALA
 Email: allianceconsultantsltd@gmail.com

PROJECT : **ALA-ORA WATER SUPPLY AND SANITATION SYSTEM**

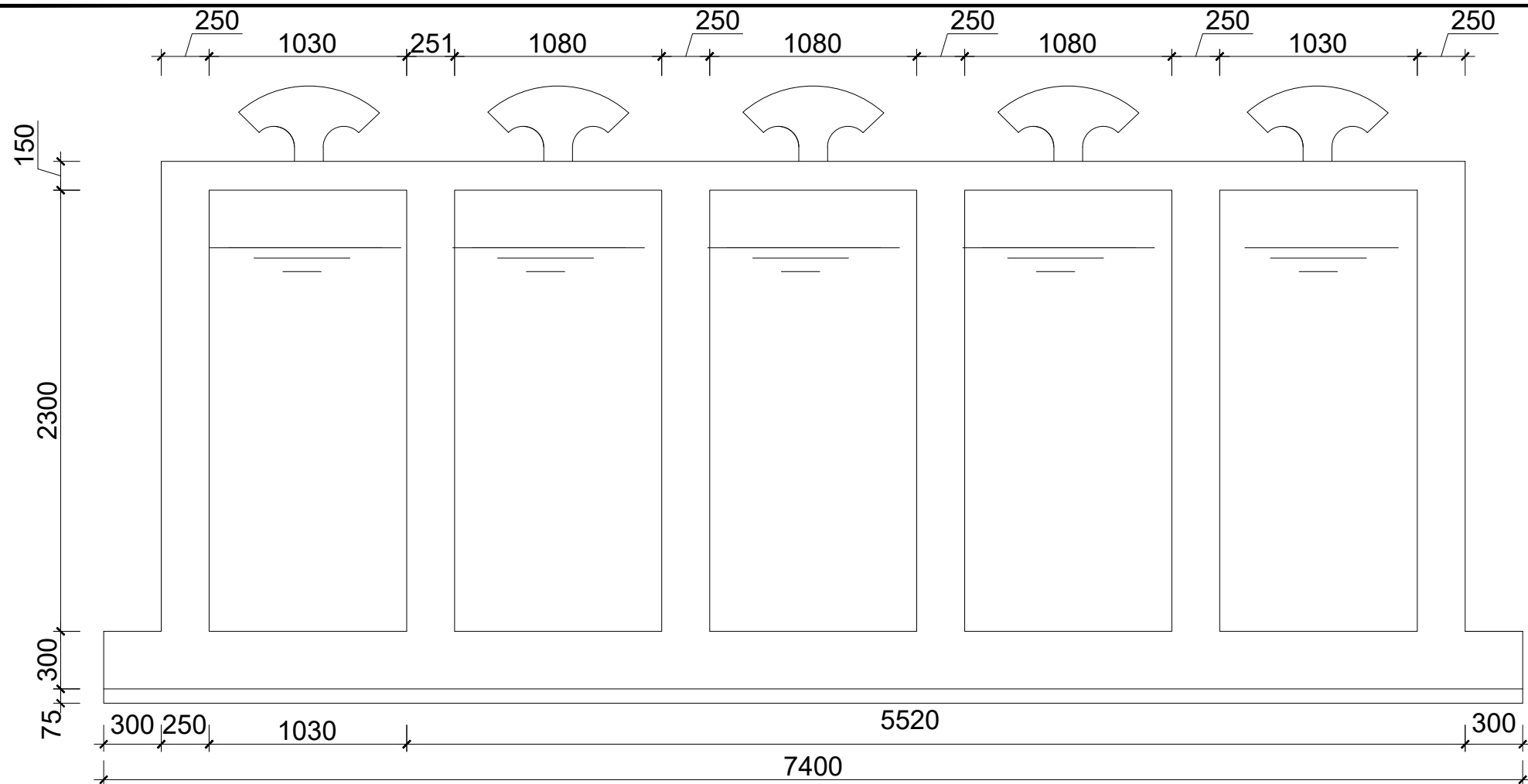
NYAGAK WATER SUPPLY AND SANITATION SYSTEM

REVISIONS :

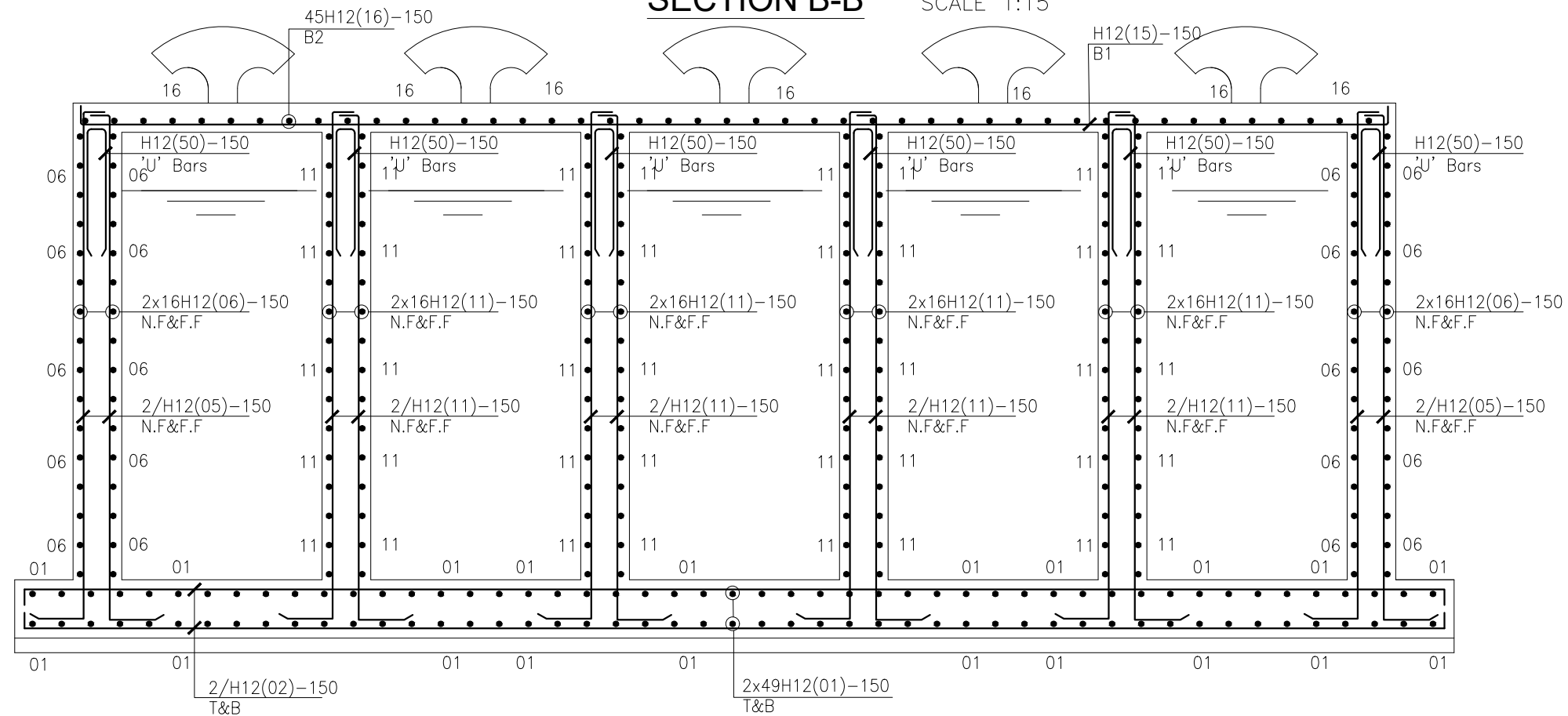
No	Date	Description

DRAWING TITLE : **CLEAR WATER WELL**

Surveyed by:	R.K
Drawn by:	Luks
Designed by:	A.B
Checked by:	A.B
Date:	FEBRUARY 2023
DRG. No.:	AR/WSASS/NY/STR/010
Scale:	Sheet No.: 2 of 4



SECTION B-B SCALE 1:15



RC SECTION B-B SCALE 1:15

GENERAL NOTES

- This drawing shall be read in conjunction with all relevant drawings.
- Concrete mixes to BS8500
 - Mass concrete to have a minimum works cube strength of 15N/mm² and at 28 days with 20 mm maximum aggregate size
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PROJECT :

ALA-ORA WATER SUPPLY AND SANITATION SYSTEM

NYAGAK WATER SUPPLY AND SANITATION SYSTEM

REVISIONS :

No	Date	Description

DRAWING TITLE : **CLEAR WATER WELL**

Surveyed by: R.K

Drawn by: Luks

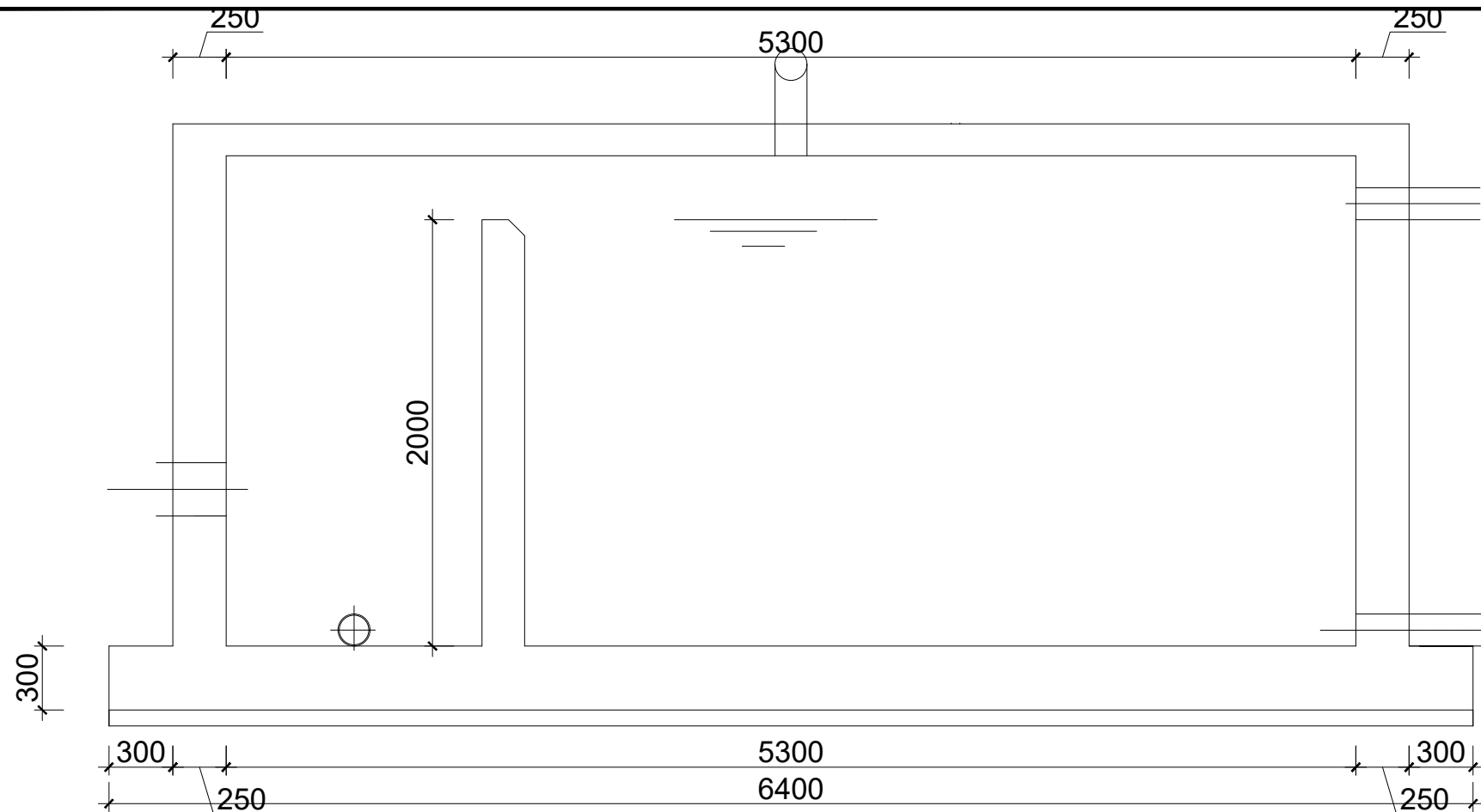
Designed by: A.B

Checked by: A.B

Date: **FEBRUARY 2023**

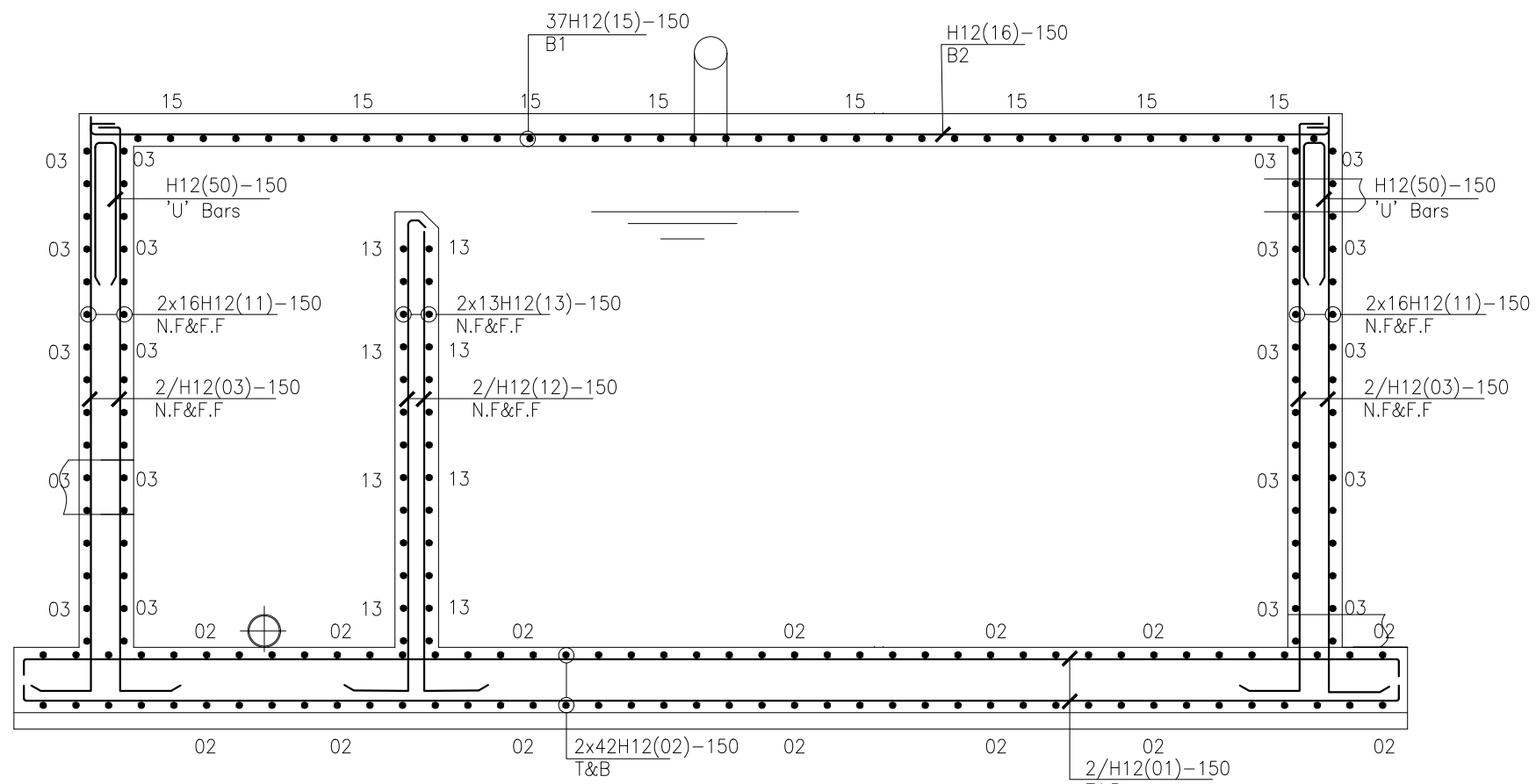
DRG. No.: **AR/WSASS/NY/STR/010**

Scale: Sheet No.: 3 of 4



SECTION A-A

SCALE 1:15



RC SECTION A-A

SCALE 1:15

GENERAL NOTES

1. This drawing shall be read in conjunction with all relevant drawings.
2. Concrete mixes to BS8500
 - a. Mass concrete to have a minimum works cube strength of 15N/mm² and at 28 days with 20 mm maximum aggregate size
 - b. Reinforced concrete to have works cube strength of 30N/mm² cylinder strength of 30N/mm² with 20mm maximum aggregate size UNLESS OTHERWISE STATED
3. Reinforcement
 - a. High tensile bars to be ribbed cold formed bars to B.S. 4461
 - b. Mild steel to be round bars to B.S. 4449
 - c. Mesh reinforcement to comply with requirement of B.S. 4483
4. Minimum cover to all steel 50.
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ADDITIONAL NOTES

1. All vertical walls to be cast at once
2. Approved stopper water bar to be installed in all joints as directed by the Engineer.
3. Contractor to use non recoverable ties for tying formwork
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REVISIONS :

No	Date	Description

DRAWING TITLE : **CLEAR WATER WELL**

Surveyed by: R.K

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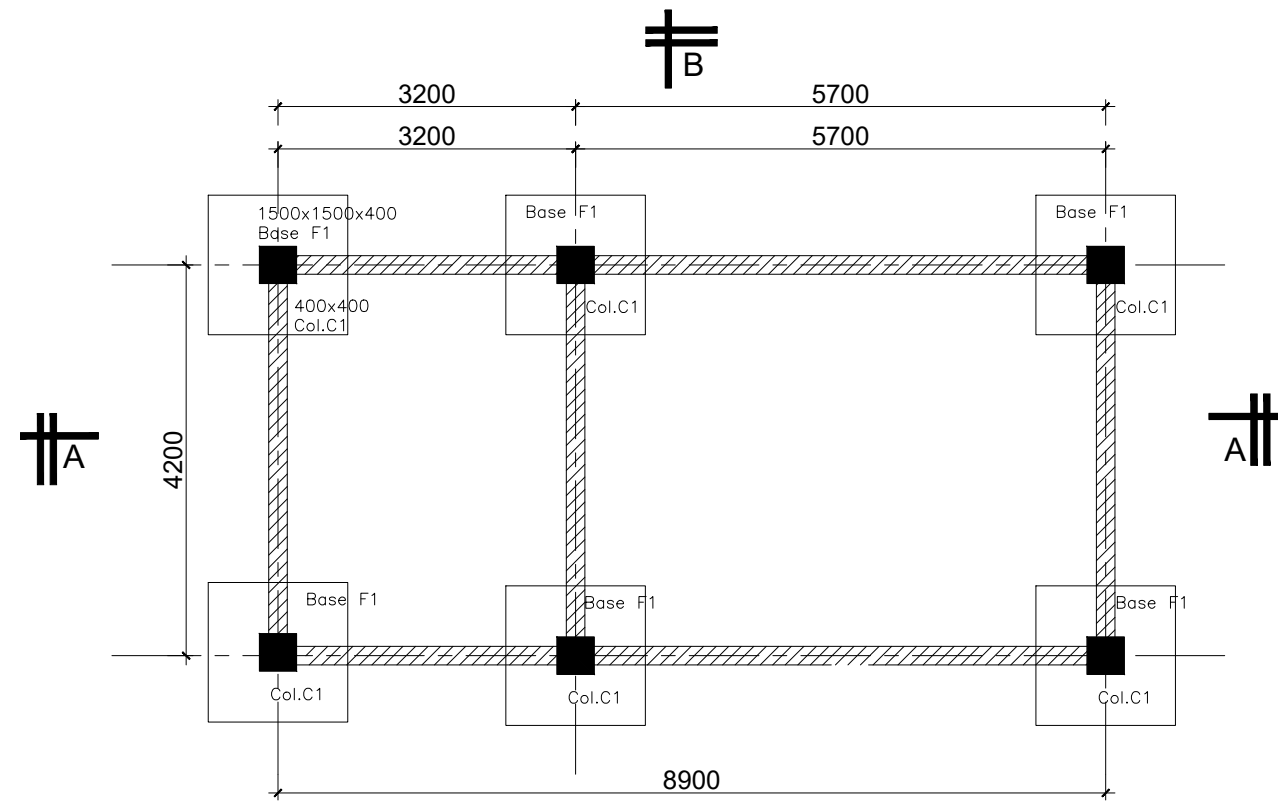
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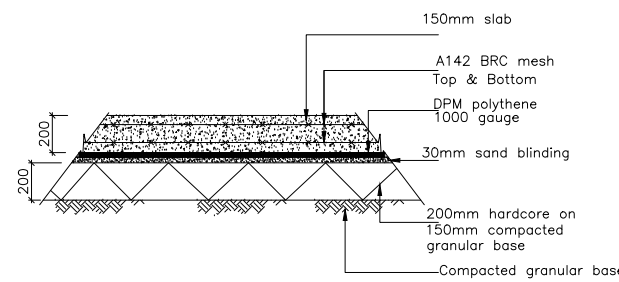
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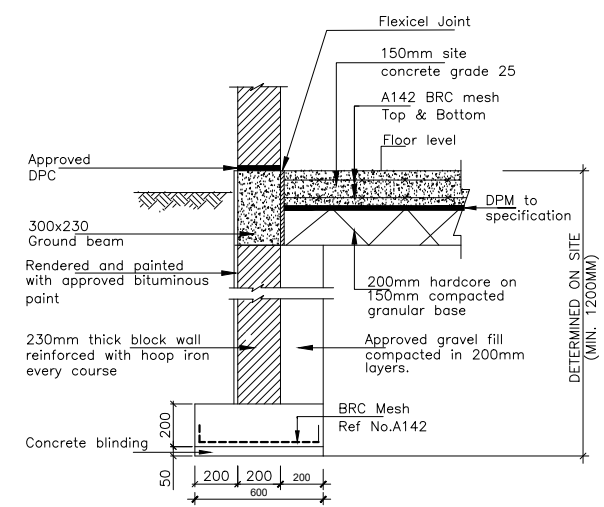
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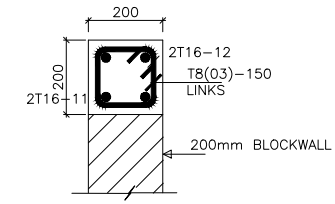
FOUNDATION LAYOUT
SCALE 1:50



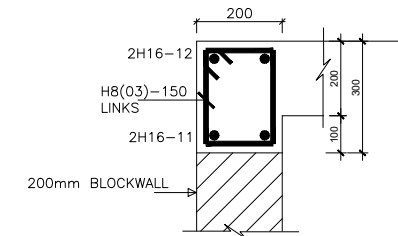
TYPICAL SECTION THROUGH THE GROUND SLAB
SCALE 1:20



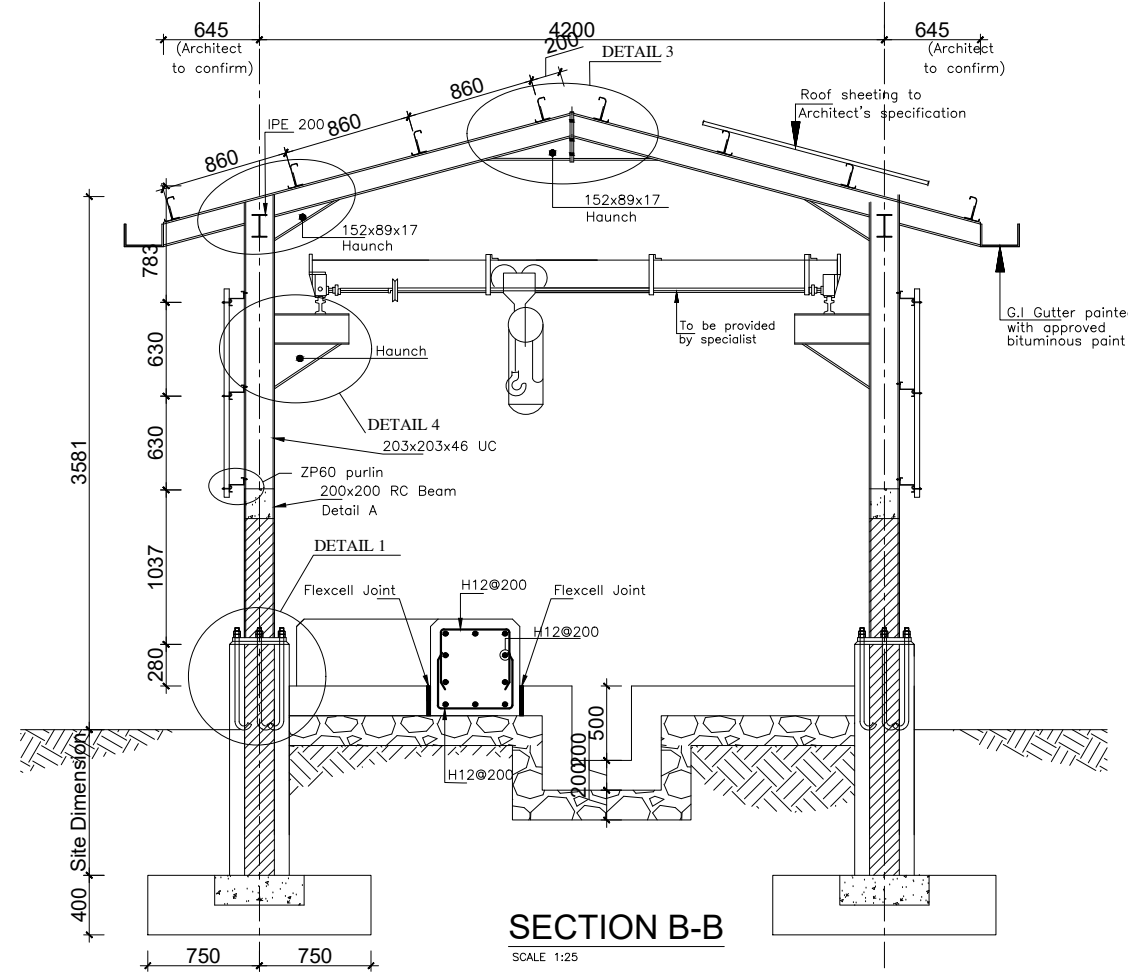
SECTION THROUGH WALL FOOTING
Scale 1:20



200x200 RC BEAM DETAIL A
SCALE 1:10



SECTION A-A THROUGH 300x200 GROUND BEAM - EXTERNAL
SCALE 1:10



SECTION B-B
SCALE 1:25

GENERAL NOTES

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PROJECT:

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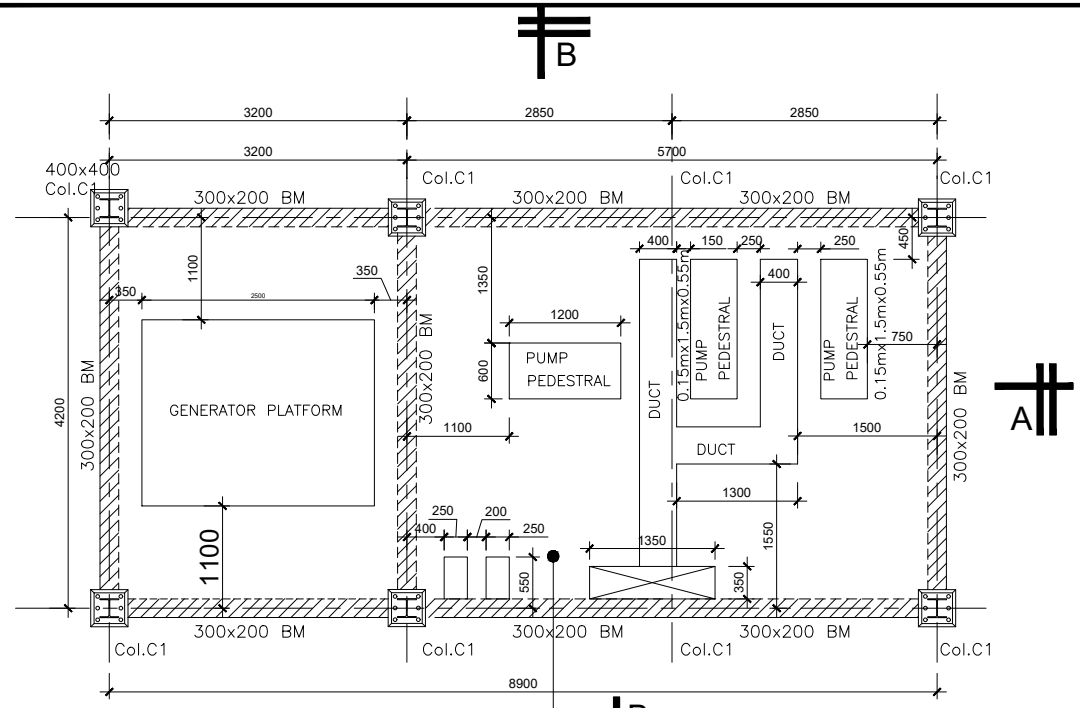
NYAGAK WATER SUPPLY AND SANITATION SCHEME

REVISIONS:

No	Date	Description

DRAWING TITLE: **PUMP HOUSE**

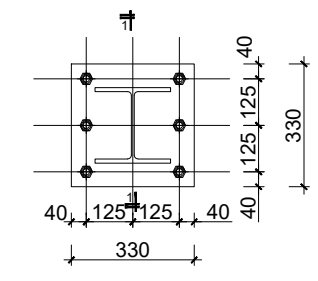
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Drawn by:	Luks
Designed by:	A.B
Checked by:	A.B
Date:	FEBRUARY 2023
DRG. No.:	AR/WSASS/NY/STR/011
Scale:	Sheet No.: 1 of 3



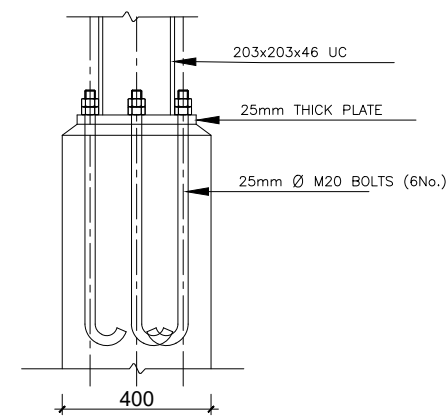
GROUND FLOOR LAYOUT
SCALE 1:50

200MM SLAB REINFORCED WITH BRC MESH REF NO.A142 TOP & BOTTOM. SLAB TO BE CAST IN CHEQUERED BOARD FASHION. TOP SURFACE FINISH TO BE AS PER ARCHITECT'S SPECS

SERVICES ENGINEER TO PROVIDE HIS SERVICES IN PLACE BEFORE CASTING OF THE FLOOR SLAB. NO CUTTING OF THE SLAB SHALL BE ALLOWED AT A LATER DATE



BASE PLATE FOR 206x206x46 UC
SCALE 1:10



SECTION 1-1
SCALE 1:10

GENERAL NOTES

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PROJECT :

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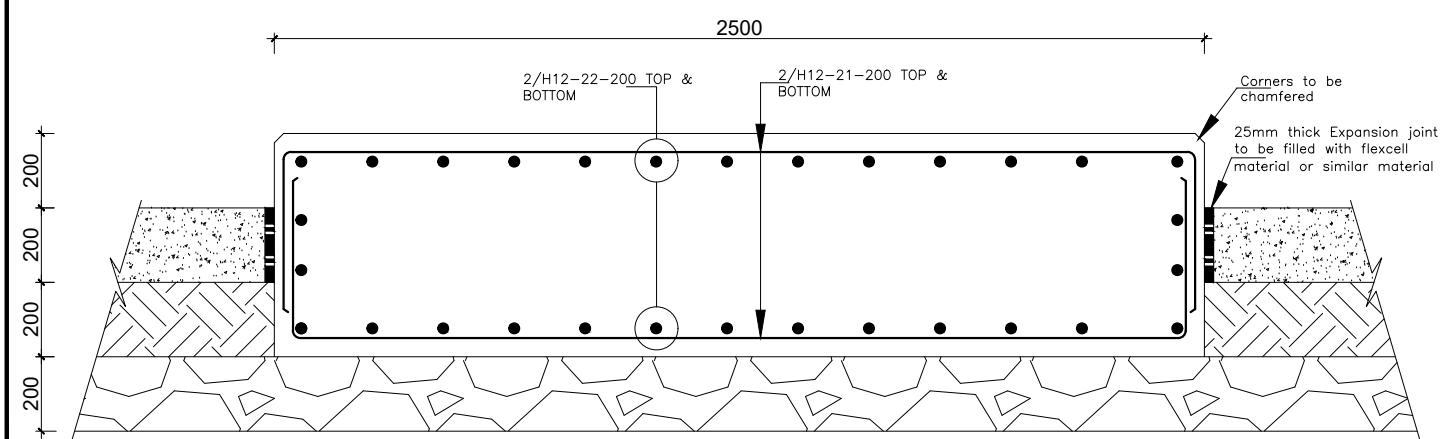
NYAGAK WATER SUPPLY AND SANITATION SCHEME

REVISIONS :

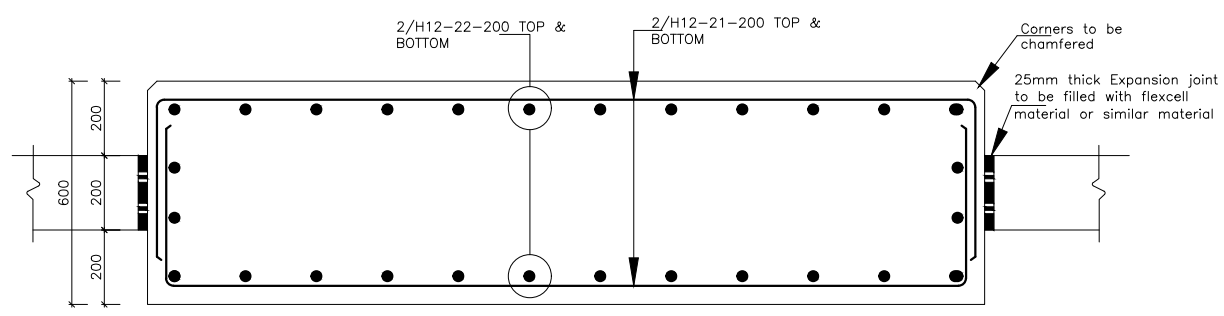
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DRAWING TITLE : **PUMP HOUSE**

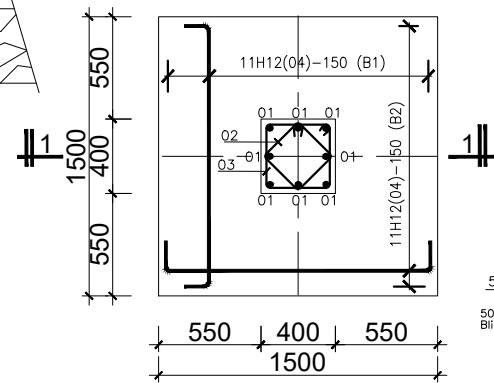
Surveyed by:	R.K
Drawn by:	Luks
Designed by:	A.B
Checked by:	A.B
Date:	FEBRUARY 2023
DRG. No.:	AR/WSASS/NY/STR/011
Scale:	Sheet No.: 2 of 3



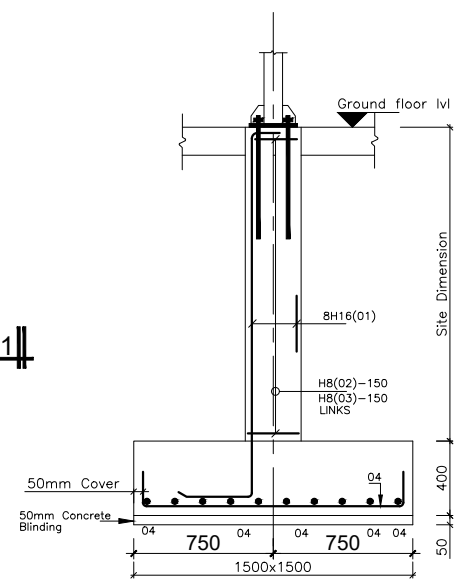
SECTION E-E THROUGH GENERATOR PLATFORM
SCALE 1:10



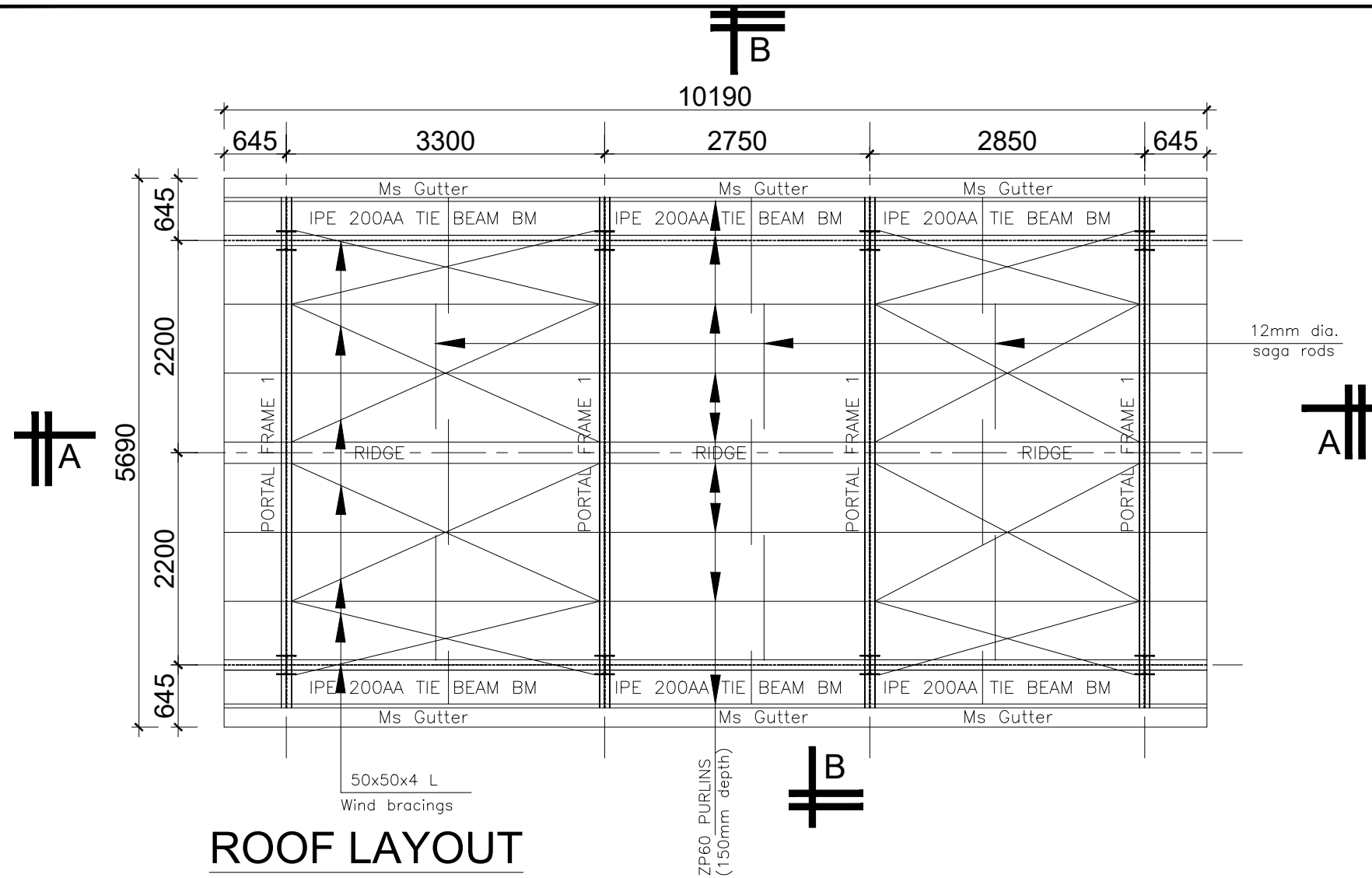
SECTION F-F-TYPICAL PLINTH DETAIL
Scale 1:10



BASE TYPE F1 (8No.) [1500x1500x400]
Scale 1:20

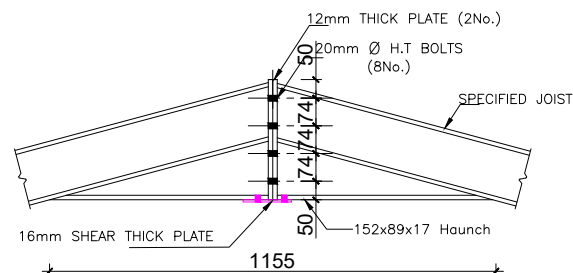


STUB COLUMN SECTION 1-1
SCALE 1:20

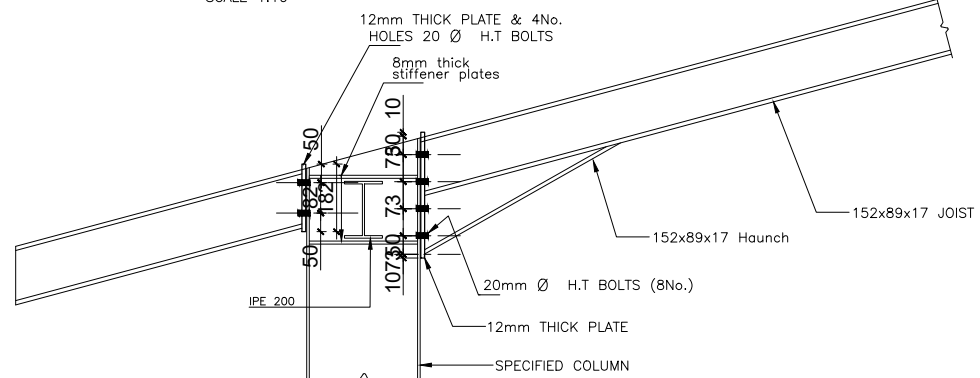


ROOF LAYOUT

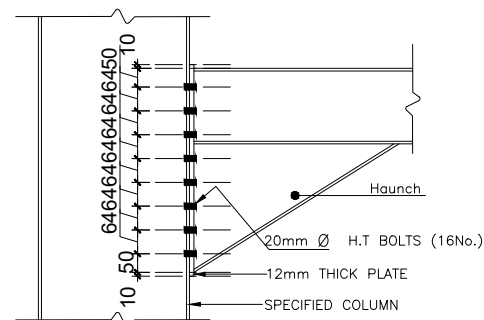
SCALE 1:50



DETAIL 3
SCALE 1:10



DETAIL 2
SCALE 1:10



DETAIL 4
SCALE 1:10

GENERAL NOTES

- This drawing shall be read in conjunction with all relevant drawings.
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 - Mass concrete to have a minimum works cube strength of 15N/mm² and at 28 days with 20 mm maximum aggregate size
 - Reinforced concrete to have works cube strength of 30N/mm² cylinder strength of 30N/mm² with 20mm maximum aggregate size UNLESS OTHERWISE STATED
- Reinforcement
 - High tensile bars to be ribbed cold formed bars to B.S. 4461
 - Mild steel to be round bars to B.S. 4449
 - Mesh reinforcement to comply with requirement of B.S. 4483
- Minimum cover to all steel 50.
- THE QUALITY OF ALL MATERIALS AND WORKMANSHIP SHALL COMPLY WITH THE REQUIREMENTS OF THE MOST RECENT ISSUES OF RELEVANT EUROPEAN STANDARDS AND CODES OF PRACTICE.

ADDITIONAL NOTES

- All vertical walls to be cast at once
- Approved stopper water bar to be installed in all joints as directed by the Engineer.
- Contractor to use non recoverable ties for tying formwork
- Contractor to submit methodology for Construction before commencing work.
- All Pipes going through walls to have paddle flange
- Diameter of pipes to first be confirmed by M&E before concreting.
- All position of services i.e pipes passing through RC walls to be confirmed by M&E Before Casting

CLIENT :



THE REPUBLIC OF UGANDA
MINISTRY OF WATER AND ENVIRONMENT
DIRECTORATE OF WATER DEVELOPMENT

CONSULTANT :

ALLIANCE CONSULTANTS LTD
CONSULTING ENGINEERS
In Association with

Infra-Consult Ltd

P.O.BOX 33975 KAMPALA
Email: allianceconsultantsld@gmail.com

PROJECT :

ALA-ORA WATER SUPPLY AND SANITATION SYSTEM

NYAGAK WATER SUPPLY AND SANITATION SCHEME

REVISIONS :

No	Date	Description

DRAWING TITLE :

PUMP HOUSE

Surveyed by: R.K

Drawn by: Luks

Designed by: A.B

Checked by: A.B

Date: FEBRUARY 2023

DRG. No.: AR/WSASS/NY/STR/011

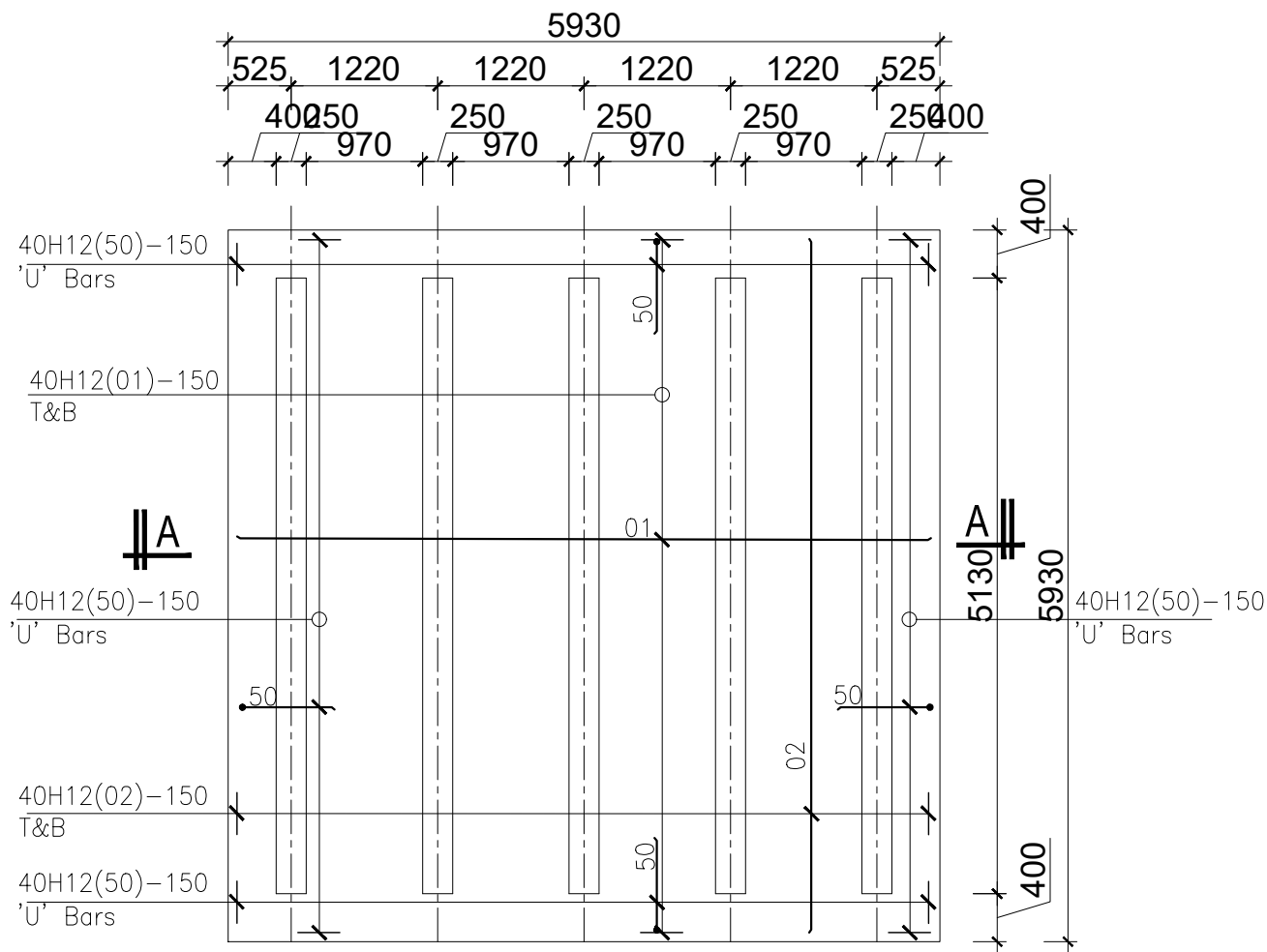
Scale: Sheet No.: 3 of 3

GENERAL NOTES

- This drawing shall be read in conjunction with all relevant drawings.
- Concrete mixes to BS8500
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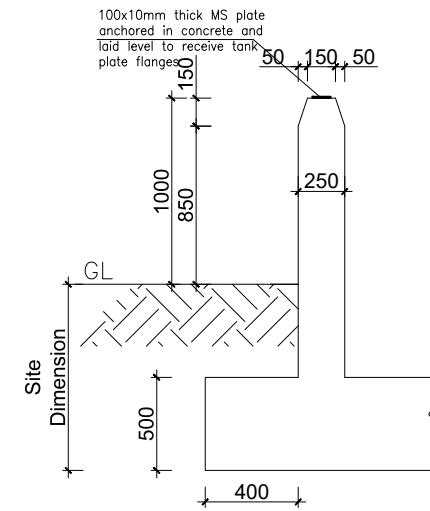
ADDITIONAL NOTES

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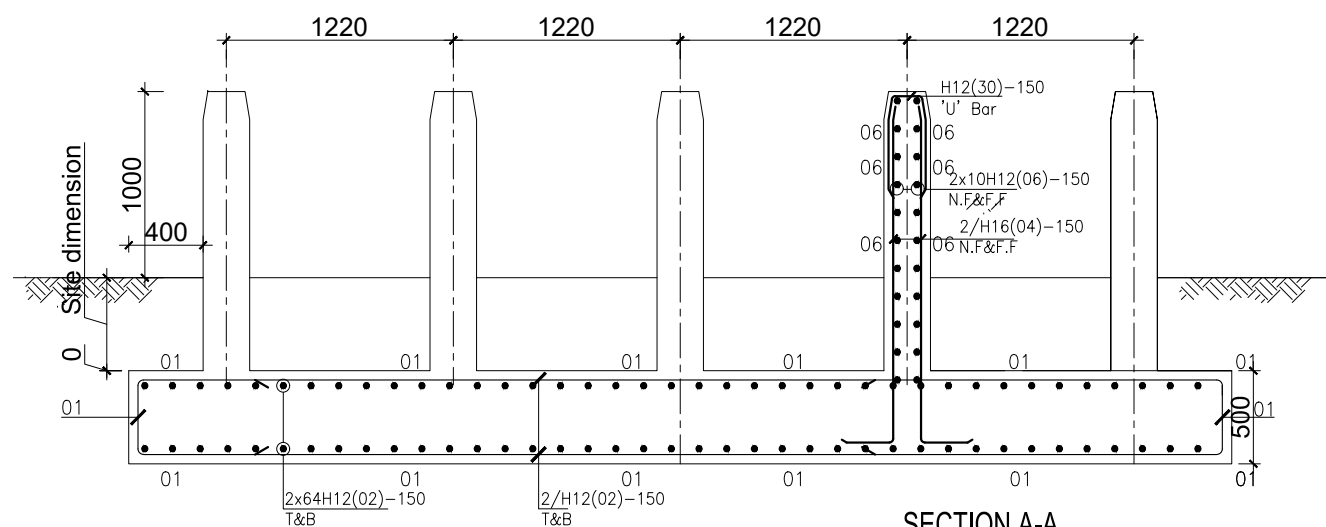
FOUNDATION LAYOUT

SCALE 1:30



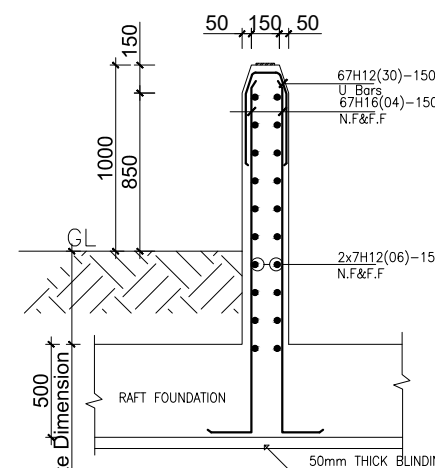
DWARF WALL DETAIL

SCALE 1:20



SECTION A-A

SCALE 1:20



DWARF WALL RC DETAIL

SCALE 1:20

CLIENT :



THE REPUBLIC OF UGANDA
MINISTRY OF WATER AND ENVIRONMENT
 DIRECTORATE OF WATER DEVELOPMENT

CONSULTANT :



ALLIANCE CONSULTANTS LTD
 CONSULTING ENGINEERS
In Association with

Infra-Consult Ltd
 P.O.BOX 33975 KAMPALA
 Email: allianceconsultantsltd@gmail.com

PROJECT :

ALA-ORA WATER SUPPLY AND SANITATION SYSTEM

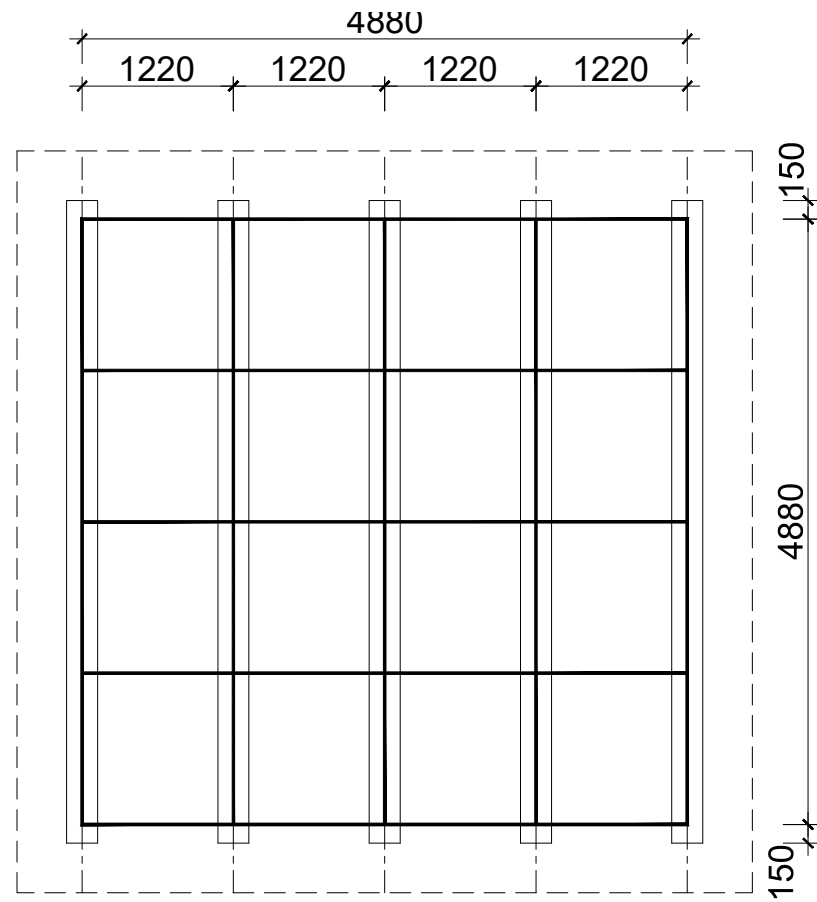
NYAGAK WATER SUPPLY AND SANITATION SYSTEM

REVISIONS :

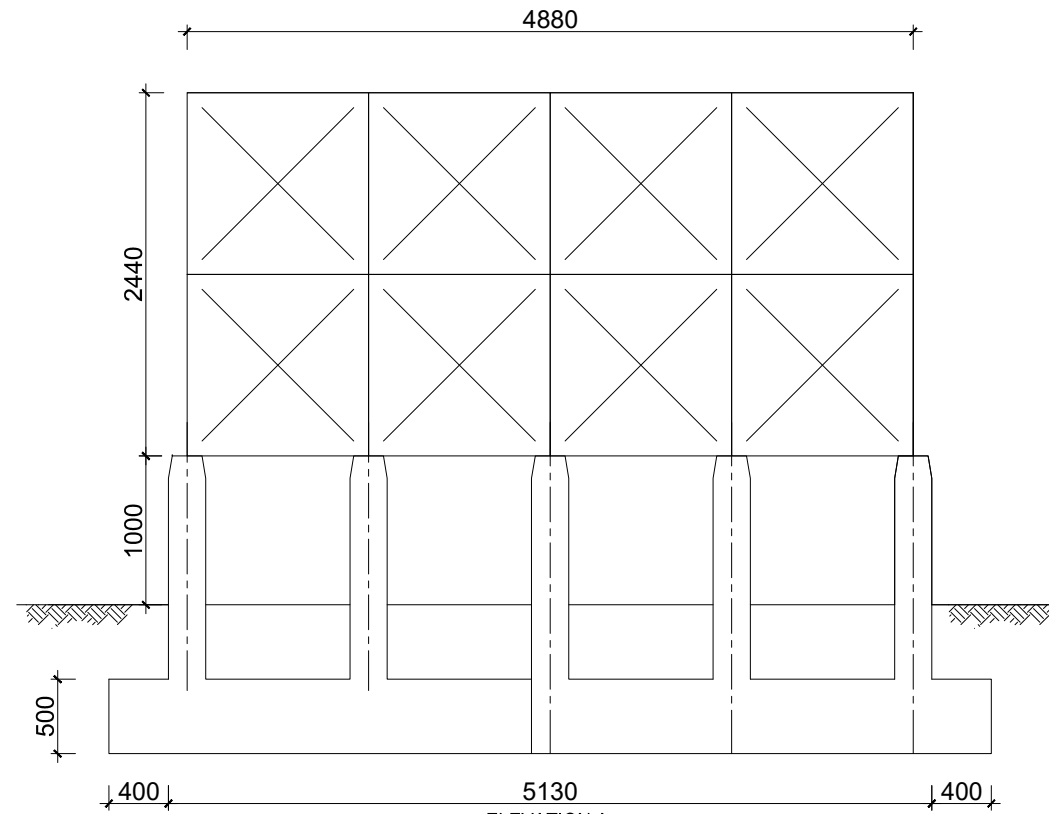
No	Date	Description

DRAWING TITLE : **BACKWASH 50m³ TANK**

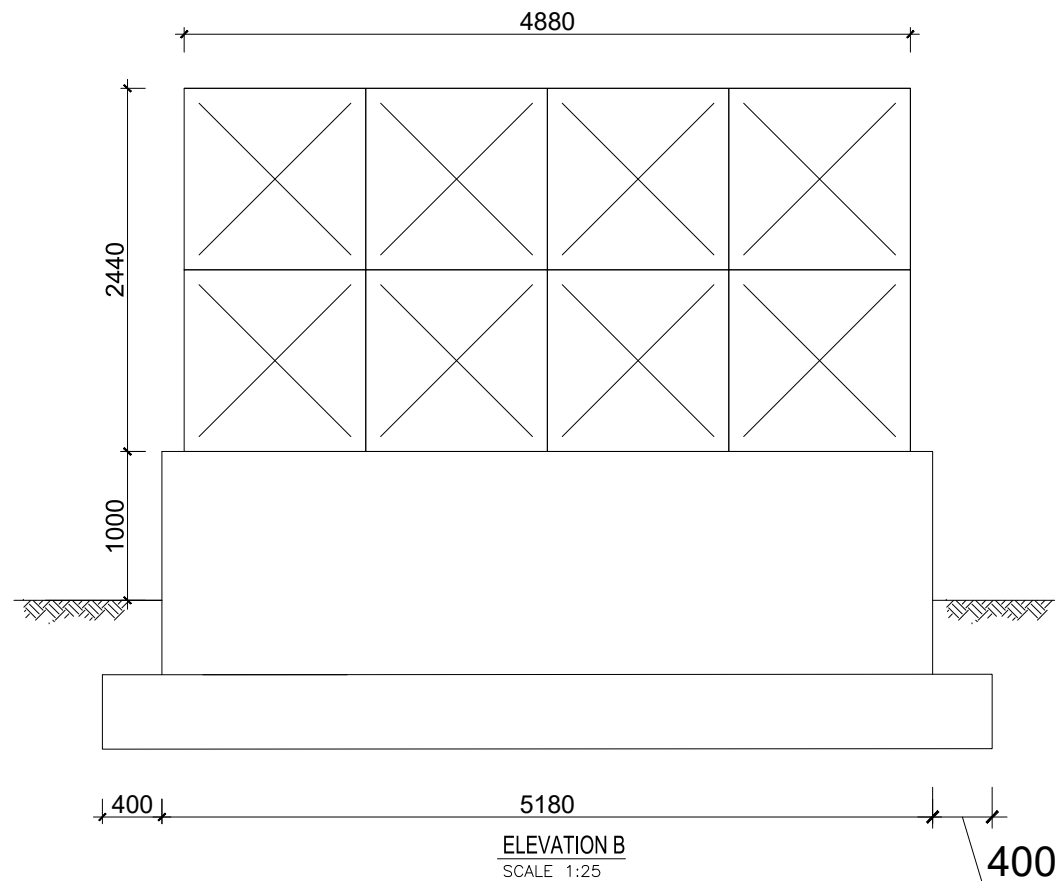
Surveyed by:	R.K
Drawn by:	Luks
Designed by:	A.B
Checked by:	A.B
Date:	FEBRUARY 2023
DRG. No.:	AR/WSASS/NY/STR/012
Scale:	Sheet No.: 1 of 2



ELEVATION A
TANK PLATFORM
SCALE 1:40



ELEVATION A
SCALE 1:25



ELEVATION B
SCALE 1:25

GENERAL NOTES

- This drawing shall be read in conjunction with all relevant drawings.
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 - Reinforced concrete to have works cube strength of 30N/mm² cylinder strength of 30N/mm² with 20mm maximum aggregate size UNLESS OTHERWISE STATED
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- All position of services i.e pipes passing through RC walls to be confirmed by M&E Before Casting

CLIENT :



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MINISTRY OF WATER AND ENVIRONMENT
DIRECTORATE OF WATER DEVELOPMENT

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CONSULTING ENGINEERS
In Association with
Infra-Consult Ltd
P.O.BOX 33975 KAMPALA
Email: allianceconsultantsltd@gmail.com

PROJECT :

ALA-ORA WATER SUPPLY AND SANITATION SYSTEM

NYAGAK WATER SUPPLY AND SANITATION SYSTEM

REVISIONS :

No	Date	Description

DRAWING TITLE :

**BACKWASH
50m³ TANK**

Surveyed by: R.K

Drawn by: Luks

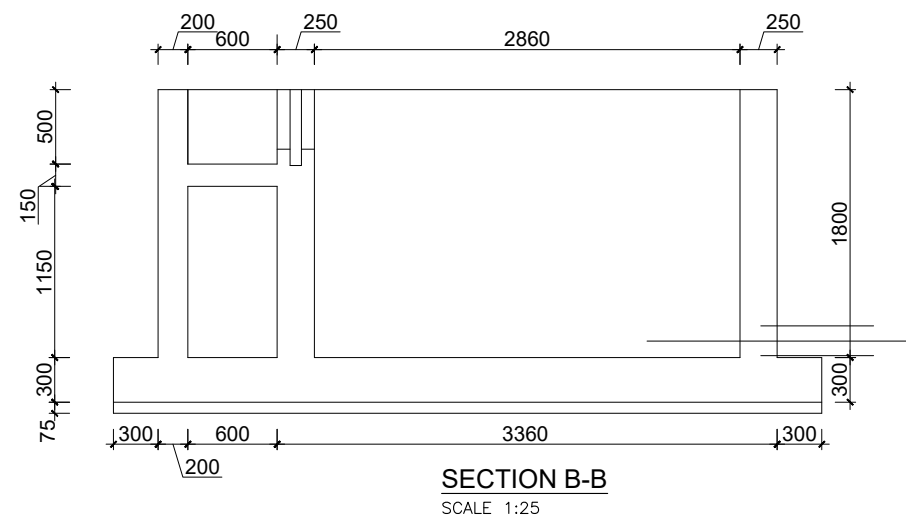
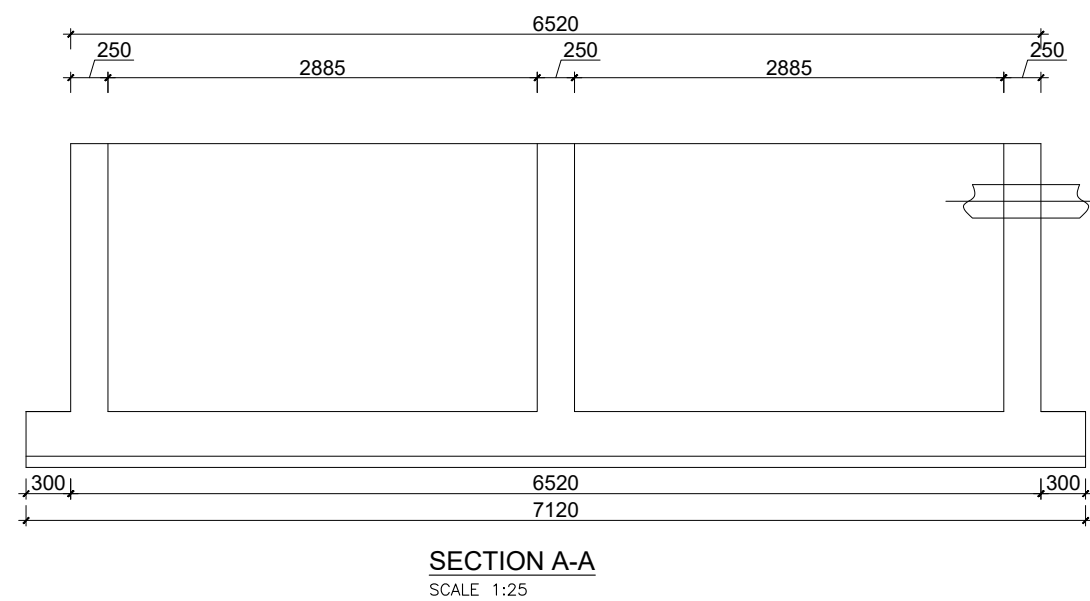
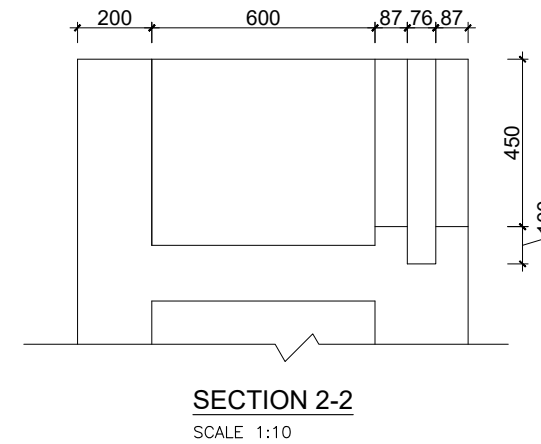
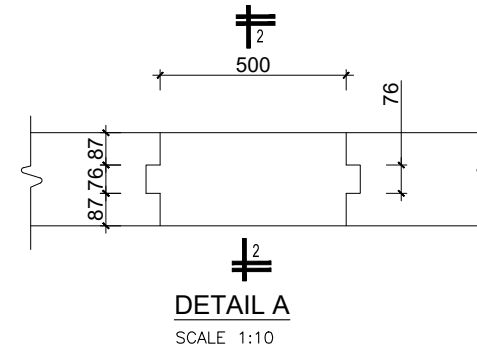
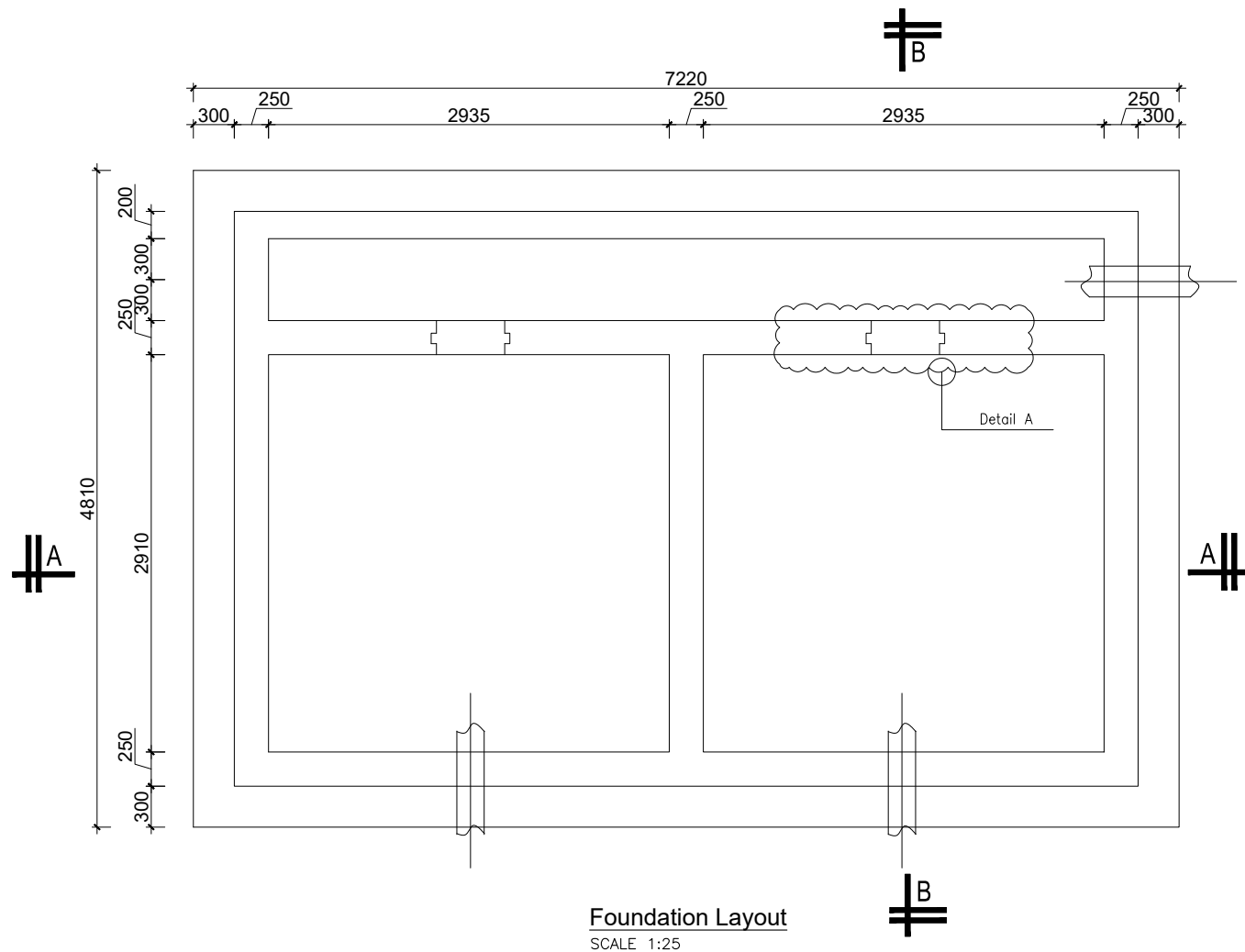
Designed by: A.B

Checked by: A.B

Date: FEBRUARY 2023

DRG. No.: AR/WSASS/NY/STR/012

Scale: Sheet No.: 2 of 2



GENERAL NOTES

1. This drawing shall be read in conjunction with all relevant drawings.
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 - a. Mass concrete to have a minimum works cube strength of 15N/mm² and at 28 days with 20 mm maximum aggregate size
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3. Reinforcement
 - a. High tensile bars to be ribbed cold formed bars to B.S. 4461
 - b. Mild steel to be round bars to B.S. 4449
 - c. Mesh reinforcement to comply with requirement of B.S. 4483
4. Minimum cover to all steel 50.
5. THE QUALITY OF ALL MATERIALS AND WORKMANSHIP SHALL COMPLY WITH THE REQUIREMENTS OF THE MOST RECENT ISSUES OF RELEVANT EUROPEAN STANDARDS AND CODES OF PRACTICE.

ADDITIONAL NOTES

1. All vertical walls to be cast at once
2. Approved stopper water bar to be installed in all joints as directed by the Engineer.
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5. All Pipes going through walls to have paddle flange
6. Diameter of pipes to first be confirmed by M&E before concreting.
7. All position of services i.e pipes passing through RC walls to be confirmed by M&E Before Casting

CLIENT :



THE REPUBLIC OF UGANDA
MINISTRY OF WATER AND ENVIRONMENT
DIRECTORATE OF WATER DEVELOPMENT

CONSULTANT :

ALLIANCE CONSULTANTS LTD
CONSULTING ENGINEERS
In Association with
Infra-Consult Ltd
P.O.BOX 33975 KAMPALA
Email: allianceconsultantsltd@gmail.com

PROJECT :

ALA-ORA WATER SUPPLY AND SANITATION SYSTEM

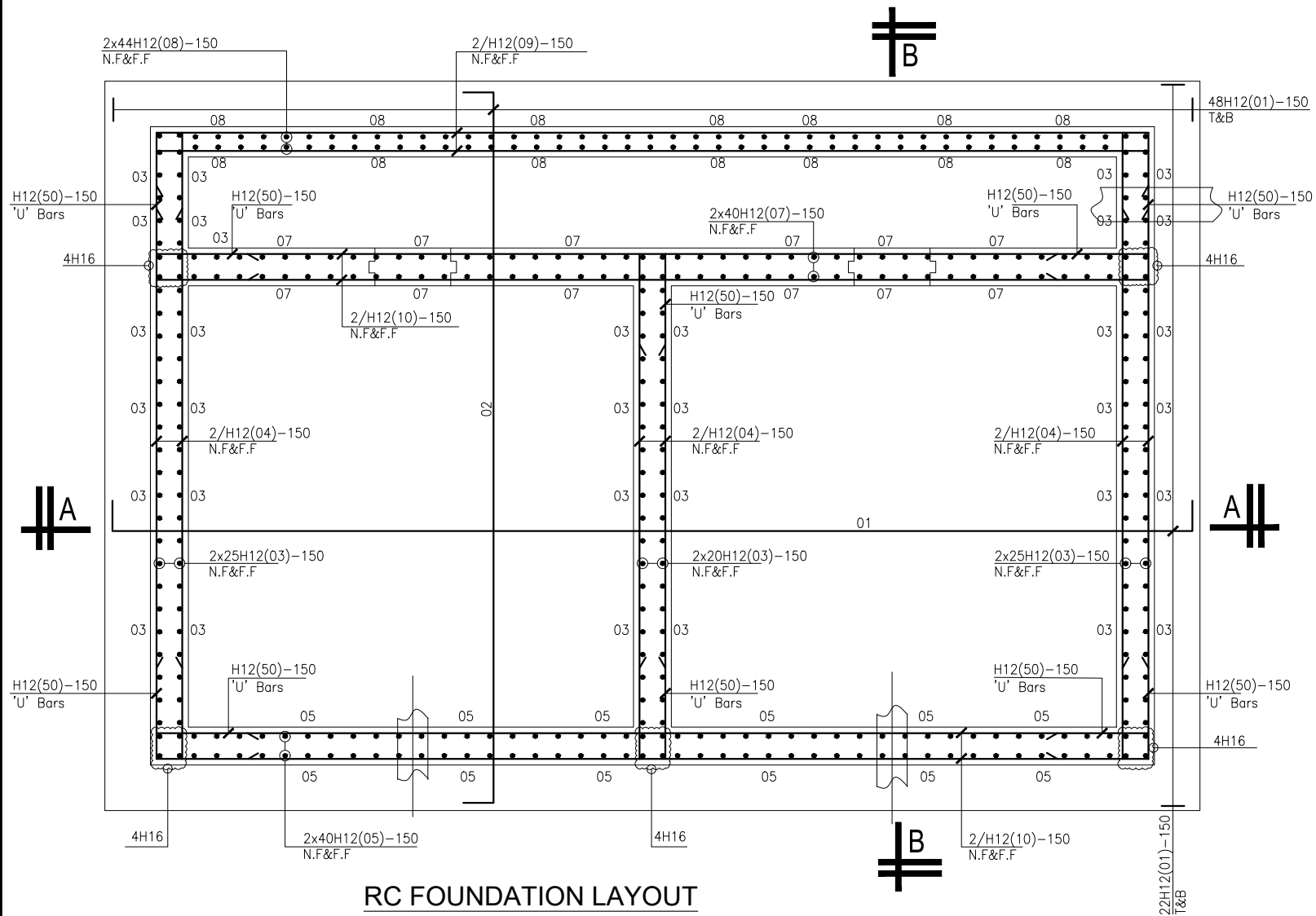
NYAGAK WATER SUPPLY AND SANITATION SYSTEM

REVISIONS :

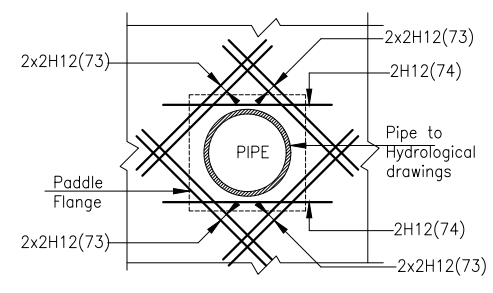
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DRAWING TITLE : **SLUDGE DRYING BEDS**

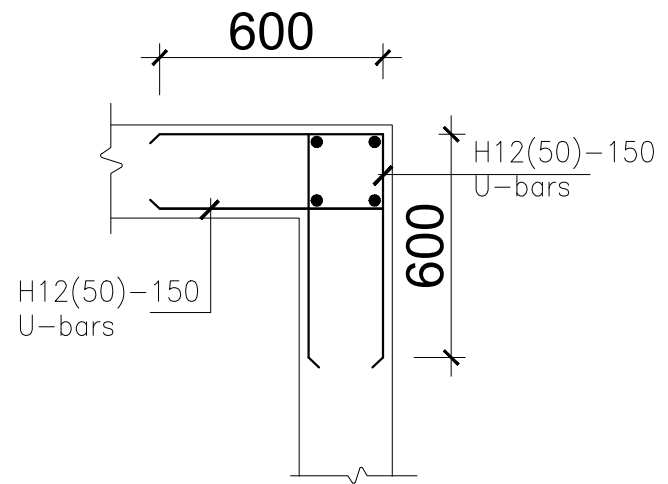
Surveyed by:	R.K
Drawn by:	Luks
Designed by:	A.B
Checked by:	A.B
Date:	FEBRUARY 2023
DRG. No.:	AR/WSASS/NY/STR/013
Scale:	Sheet No.: 1 of 3



RC FOUNDATION LAYOUT
SCALE 1:20

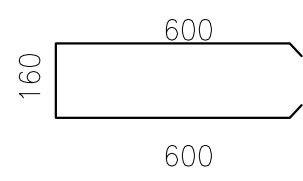


DETAIL AT PIPE OPENING
SCALE 1:20



TYPICAL WALL END DETAIL FOR WALL

Scale 1:25



DETAIL OF BAR MARK 50

Scale 1:25

GENERAL NOTES

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CLIENT :



THE REPUBLIC OF UGANDA
MINISTRY OF WATER AND ENVIRONMENT
DIRECTORATE OF WATER DEVELOPMENT

CONSULTANT :



ALLIANCE CONSULTANTS LTD
CONSULTING ENGINEERS
In Association with
Infra-Consult Ltd

P.O.BOX 33975 KAMPALA
Email: allianceconsultantsltd@gmail.com

PROJECT :

ALA-ORA WATER SUPPLY AND SANITATION SYSTEM

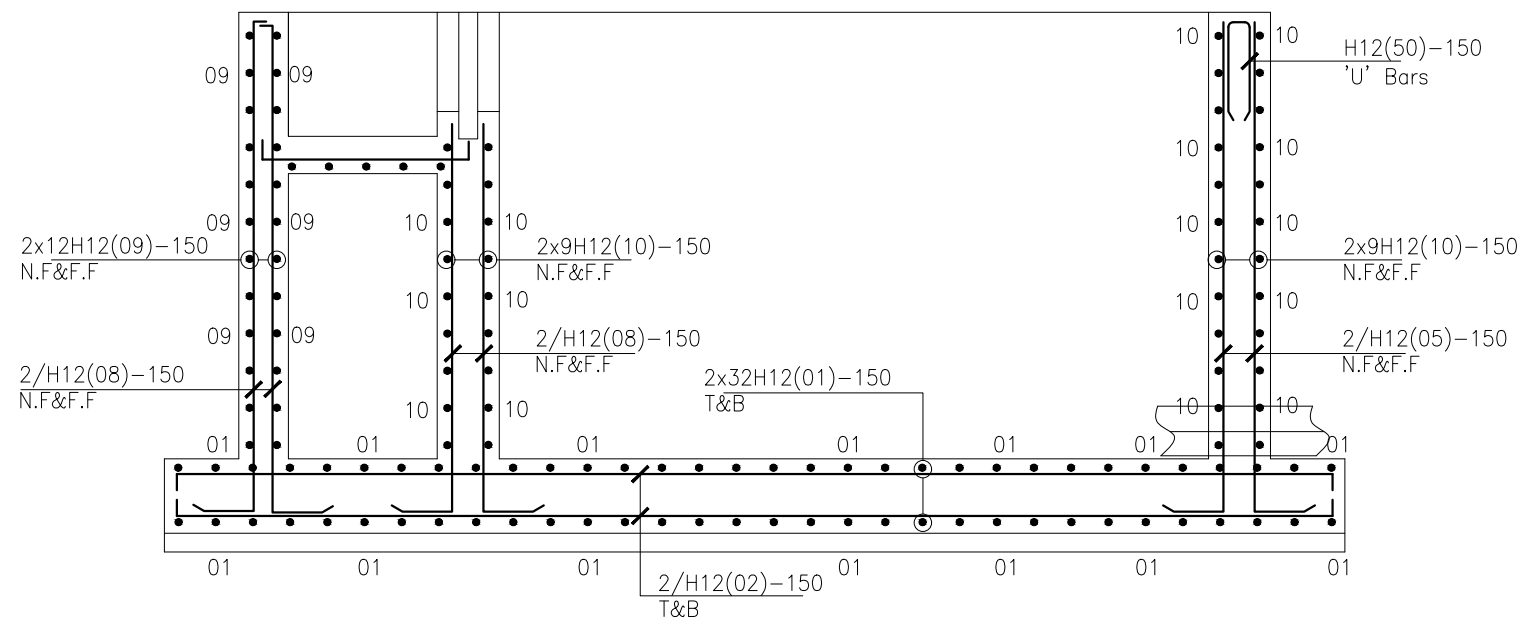
NYAGAK WATER SUPPLY AND SANITATION SYSTEM

REVISIONS :

No	Date	Description

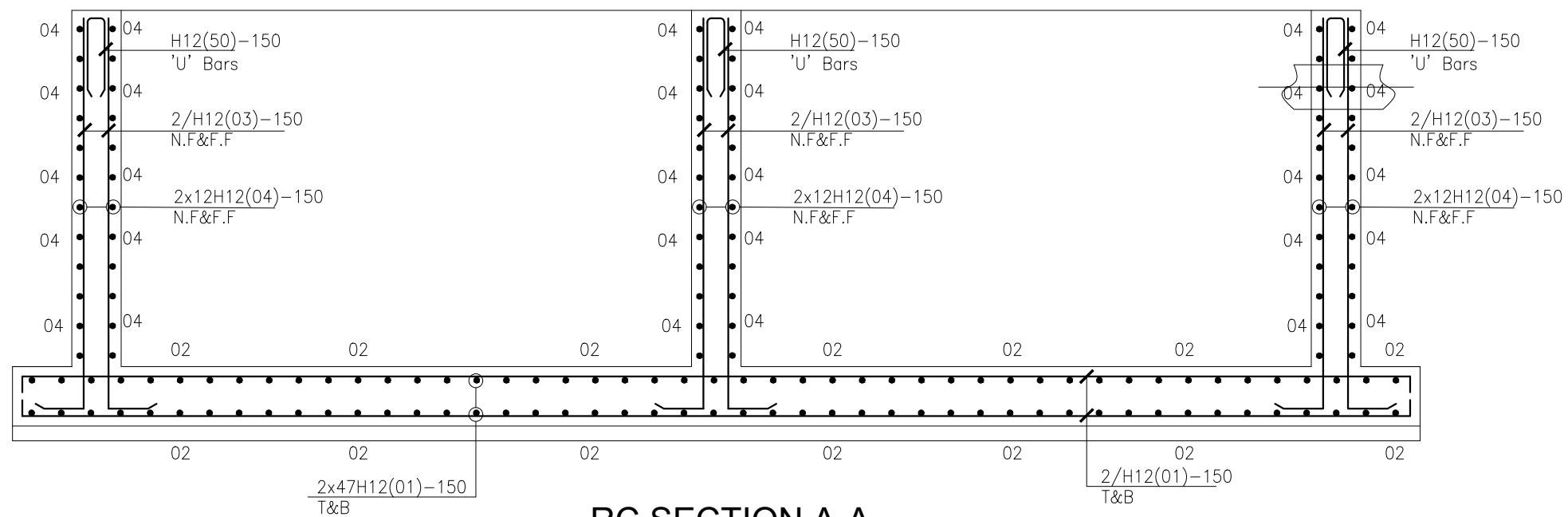
DRAWING TITLE : **SLUDGE DRYING BEDS**

Surveyed by:	R.K
Drawn by:	Luks
Designed by:	A.B
Checked by:	A.B
Date:	FEBRUARY 2023
DRG. No.:	AR/WSASS/NY/STR/013
Scale:	Sheet No.: 2 of 3



RC SECTION B-B

SCALE 1:15



RC SECTION A-A

SCALE 1:15

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PROJECT :

ALA-ORA WATER SUPPLY AND SANITATION SYSTEM

NYAGAK WATER SUPPLY AND SANITATION SYSTEM

REVISIONS :

No	Date	Description

DRAWING TITLE : **SLUDGE DRYING BEDS**

Surveyed by: R.K

Drawn by: Luks

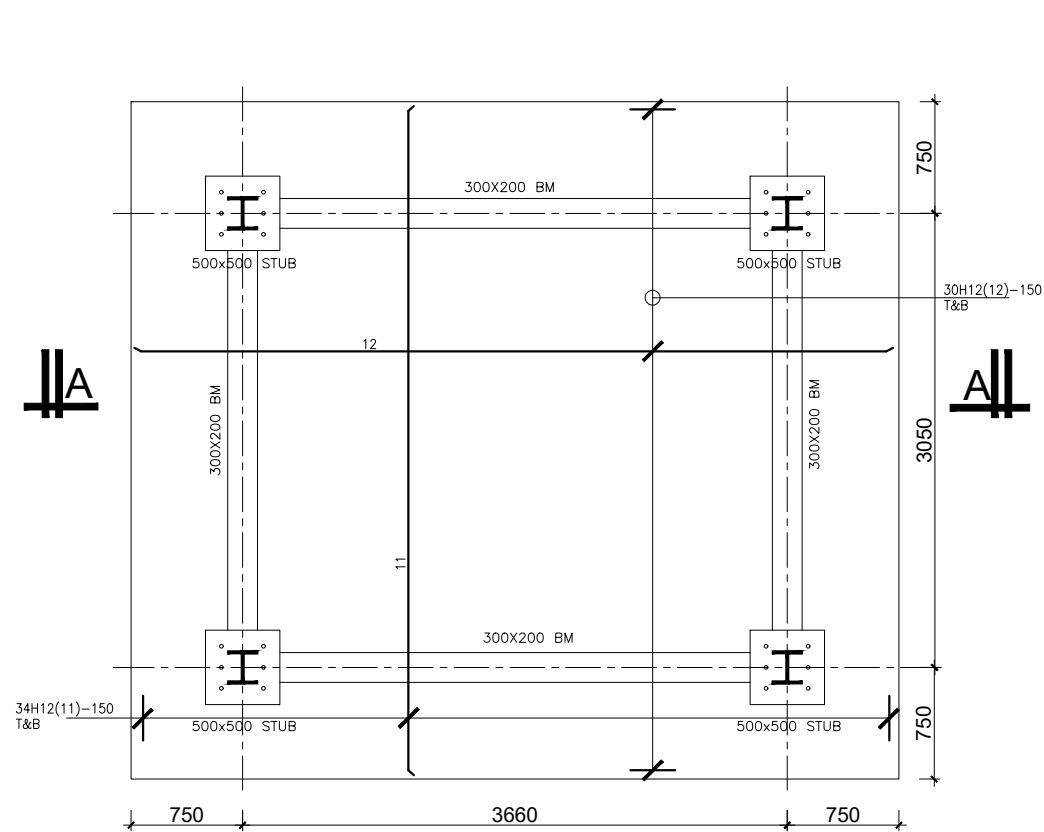
Designed by: A.B

Checked by: A.B

Date: FEBRUARY 2023

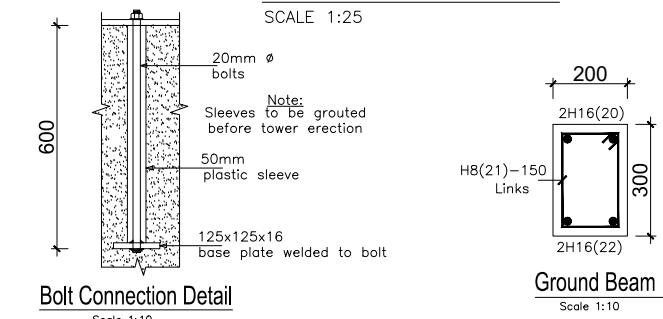
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Scale: Sheet No.: 3 of 3



FOUNDATION LAYOUT

SCALE 1:25

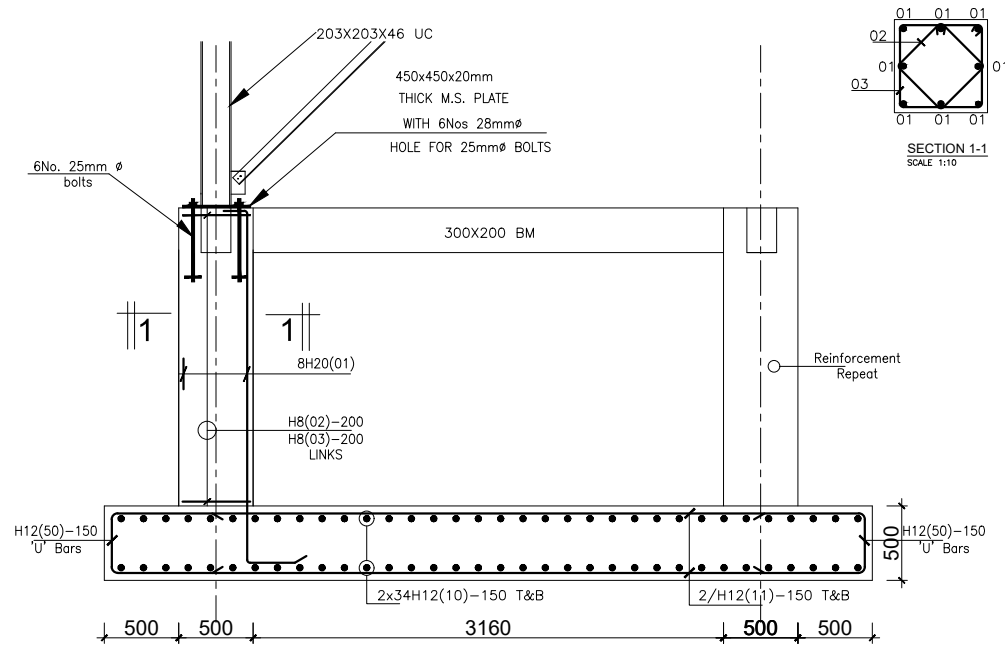


Bolt Connection Detail

Scale 1:10

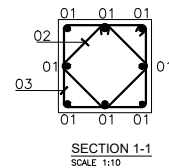
Ground Beam

Scale 1:10



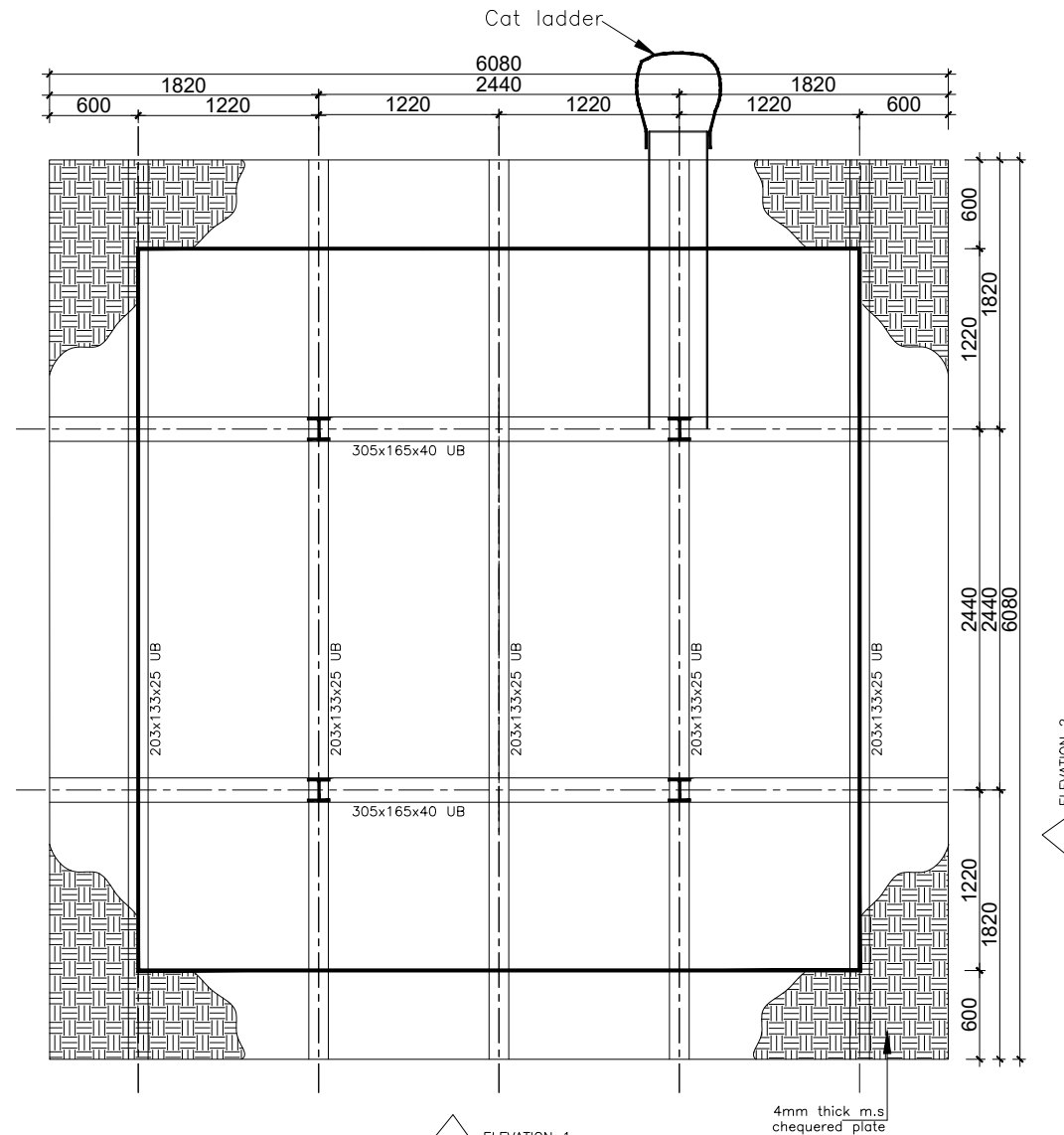
SECTION A - A

Scale 1:25



SECTION 1-1

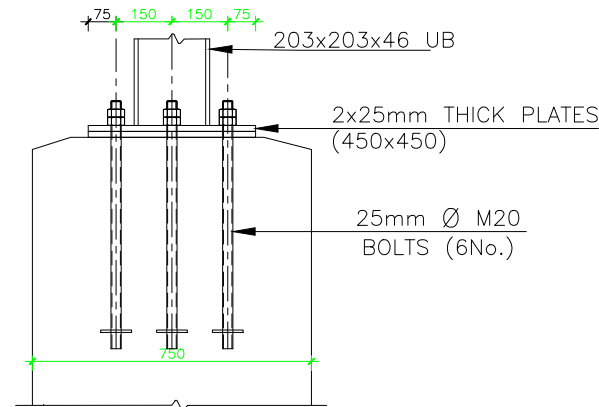
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ELEVATION 1

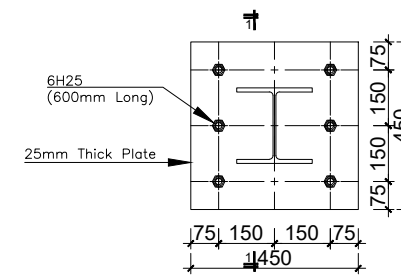
TANK PLATFORM

SCALE 1:25



SECTION 1-1

SCALE 1:10



BASE PLATE FOR 203x203x46 UC

SCALE 1:10

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CLIENT :



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MINISTRY OF WATER AND ENVIRONMENT
DIRECTORATE OF WATER DEVELOPMENT

CONSULTANT :

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P.O.BOX 33975 KAMPALA
Email: allianceconsultantsLtd@gmail.com

PROJECT :

ALA-ORA WATER SUPPLY AND SANITATION SYSTEM

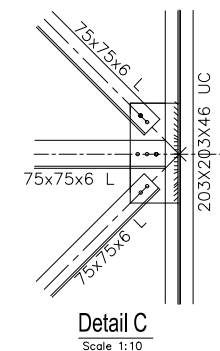
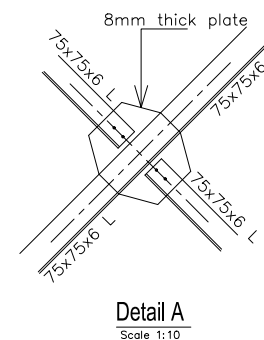
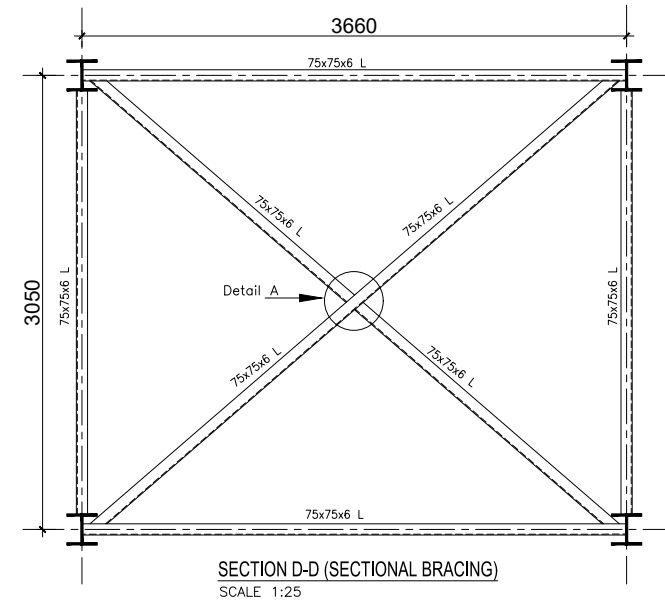
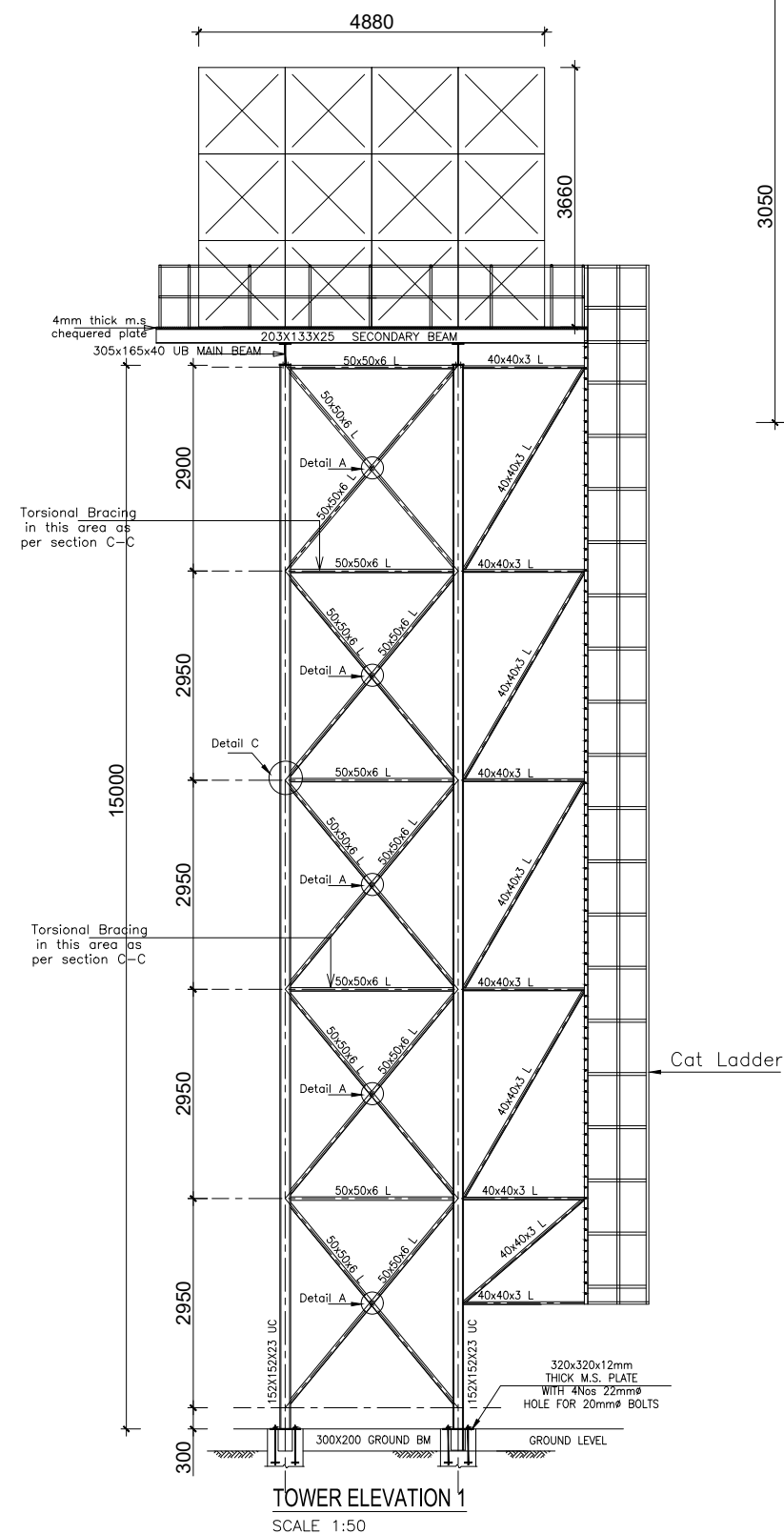
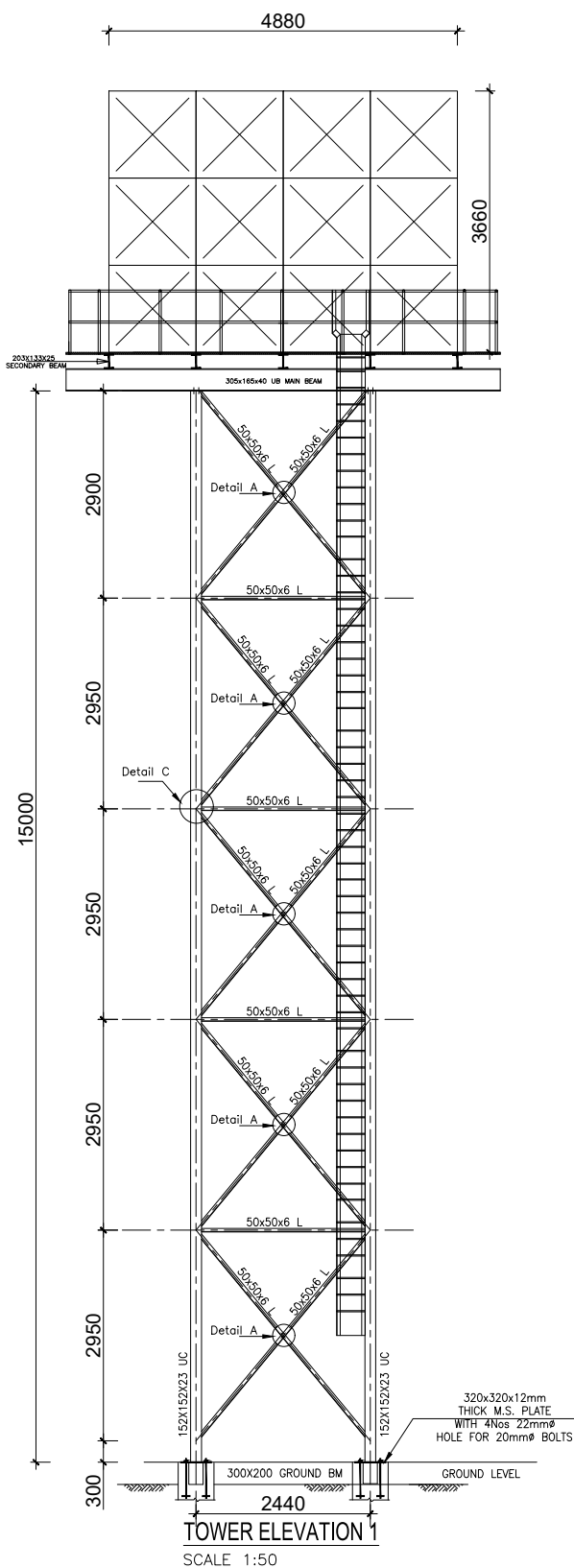
NYAGAK WATER SUPPLY AND SANITATION SYSTEM

REVISIONS :

No	Date	Description

DRAWING TITLE : **OGOKO , ANYIRIBU & NYAGAK INTAKE COMMUNITY 84m³ Tank**

Surveyed by:	R.K
Drawn by:	Luks
Designed by:	A.B
Checked by:	A.B
Date:	FEBRUARY 2023
DRG. No.:	AR/WSASS/NY/STR/017
Scale:	Sheet No.: 1 of 2




GENERAL NOTES

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CLIENT :

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 DIRECTORATE OF WATER DEVELOPMENT

CONSULTANT :
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 CONSULTING ENGINEERS
In Association with

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 Email: allianceconsultantsltd@gmail.com

PROJECT :
ALA-ORA WATER SUPPLY AND SANITATION SYSTEM

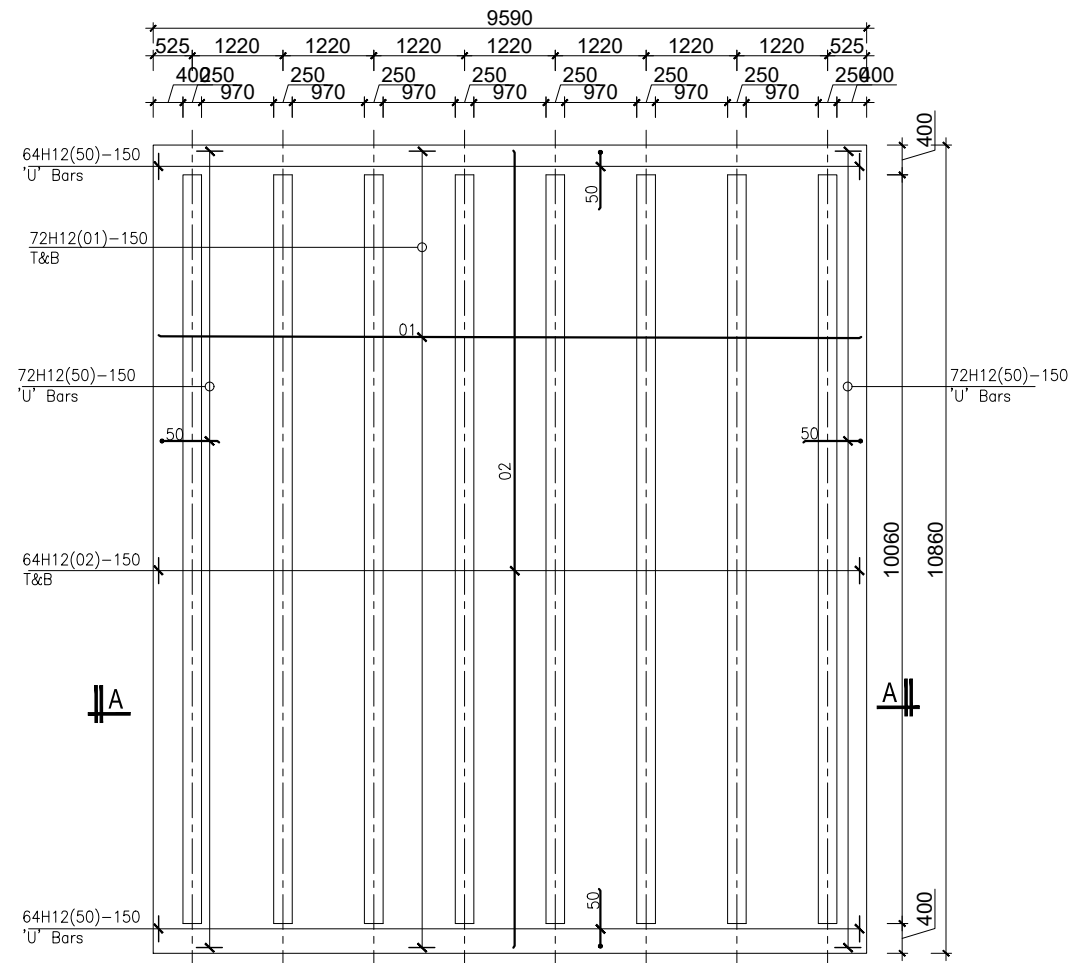
NYAGAK WATER SUPPLY AND SANITATION SYSTEM

REVISIONS :

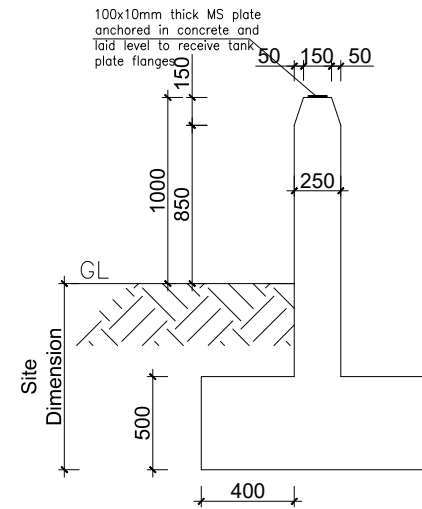
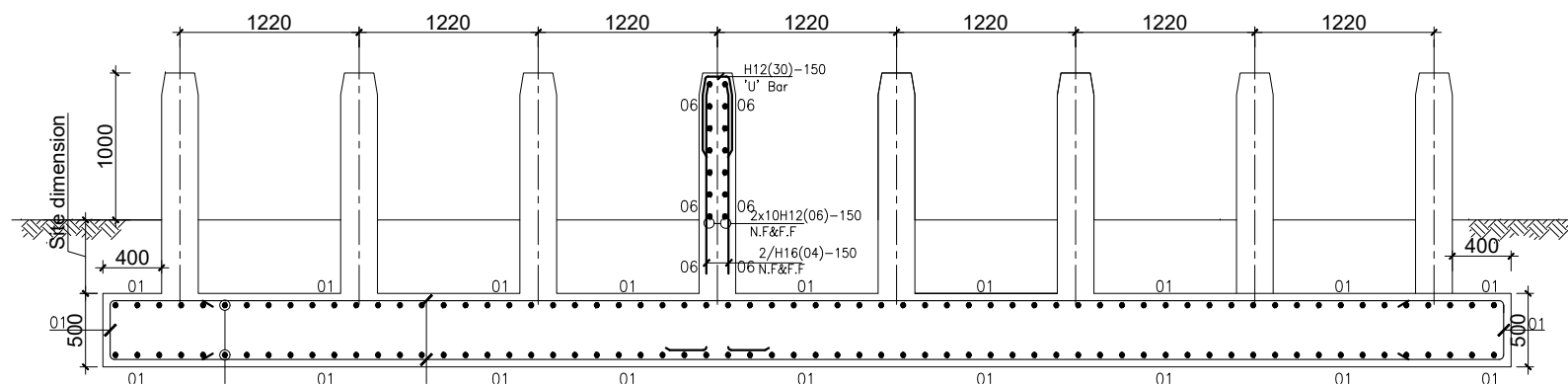
No	Date	Description

DRAWING TITLE : **OGOKO , ANYIRIBU & NYAGAK INTAKE COMMUNITY 84m³ Tank**

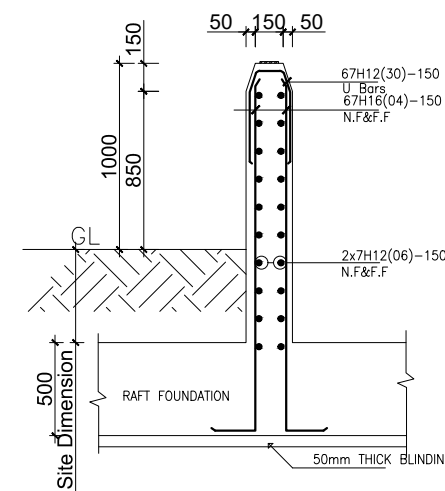
Surveyed by: R.K
 Drawn by: Luks
 Designed by: A.B
 Checked by: A.B
 Date: FEBRUARY 2023
 DRG. No.: AR/WSASS/NY/STR/017
 Scale: Sheet No.: 2 of 2



FOUNDATION LAYOUT
SCALE 1:50



DWARF WALL DETAIL
SCALE 1:20



DWARF WALL RC DETAIL
SCALE 1:20

GENERAL NOTES

- This drawing shall be read in conjunction with all relevant drawings.
- Concrete mixes to BS8500
 - Mass concrete to have a minimum works cube strength of 15N/mm² and at 28 days with 20 mm maximum aggregate size
 - Reinforced concrete to have works cube strength of 30N/mm² cylinder strength of 30N/mm² with 20mm maximum aggregate size UNLESS OTHERWISE STATED
- Reinforcement
 - High tensile bars to be ribbed cold formed bars to B.S. 4461
 - Mild steel to be round bars to B.S. 4449
 - Mesh reinforcement to comply with requirement of B.S. 4483
- Minimum cover to all steel 50.
- THE QUALITY OF ALL MATERIALS AND WORKMANSHIP SHALL COMPLY WITH THE REQUIREMENTS OF THE MOST RECENT ISSUES OF RELEVANT EUROPEAN STANDARDS AND CODES OF PRACTICE.

ADDITIONAL NOTES

- All vertical walls to be cast at once
- Approved stopper water bar to be installed in all joints as directed by the Engineer.
- Contractor to use non recoverable ties for tying formwork
- Contractor to submit methodology for Construction before commencing work.
- All Pipes going through walls to have paddle flange
- Diameter of pipes to first be confirmed by M&E before concreting.
- All position of services i.e pipes passing through RC walls to be confirmed by M&E Before Casting

CLIENT :



THE REPUBLIC OF UGANDA
MINISTRY OF WATER AND ENVIRONMENT
DIRECTORATE OF WATER DEVELOPMENT

CONSULTANT :

ALLIANCE CONSULTANTS LTD
CONSULTING ENGINEERS
In Association with
Infra-Consult Ltd
P.O.BOX 33975 KAMPALA
Email: allianceconsultantsLtd@gmail.com

PROJECT :

ALA-ORA WATER SUPPLY AND SANITATION SYSTEM

NYAGAK WATER SUPPLY AND SANITATION SYSTEM

REVISIONS :

No	Date	Description

DRAWING TITLE :

NDIRIBA
296m³ Tank

Surveyed by: R.K

Drawn by: Luks

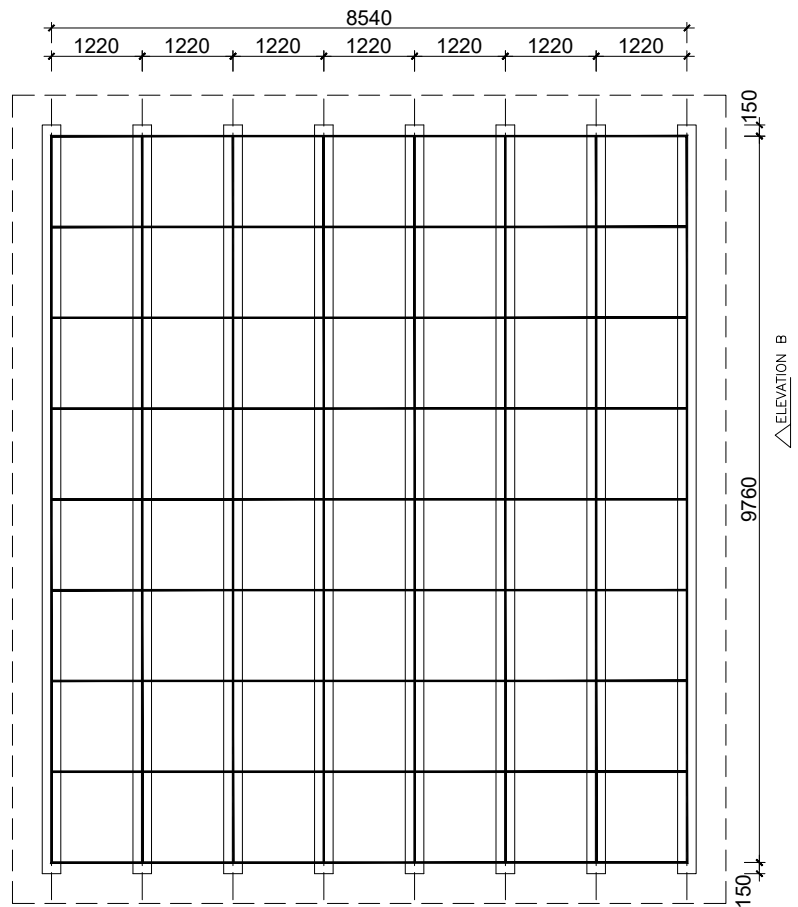
Designed by: A.B

Checked by: A.B

Date: FEBRUARY 2023

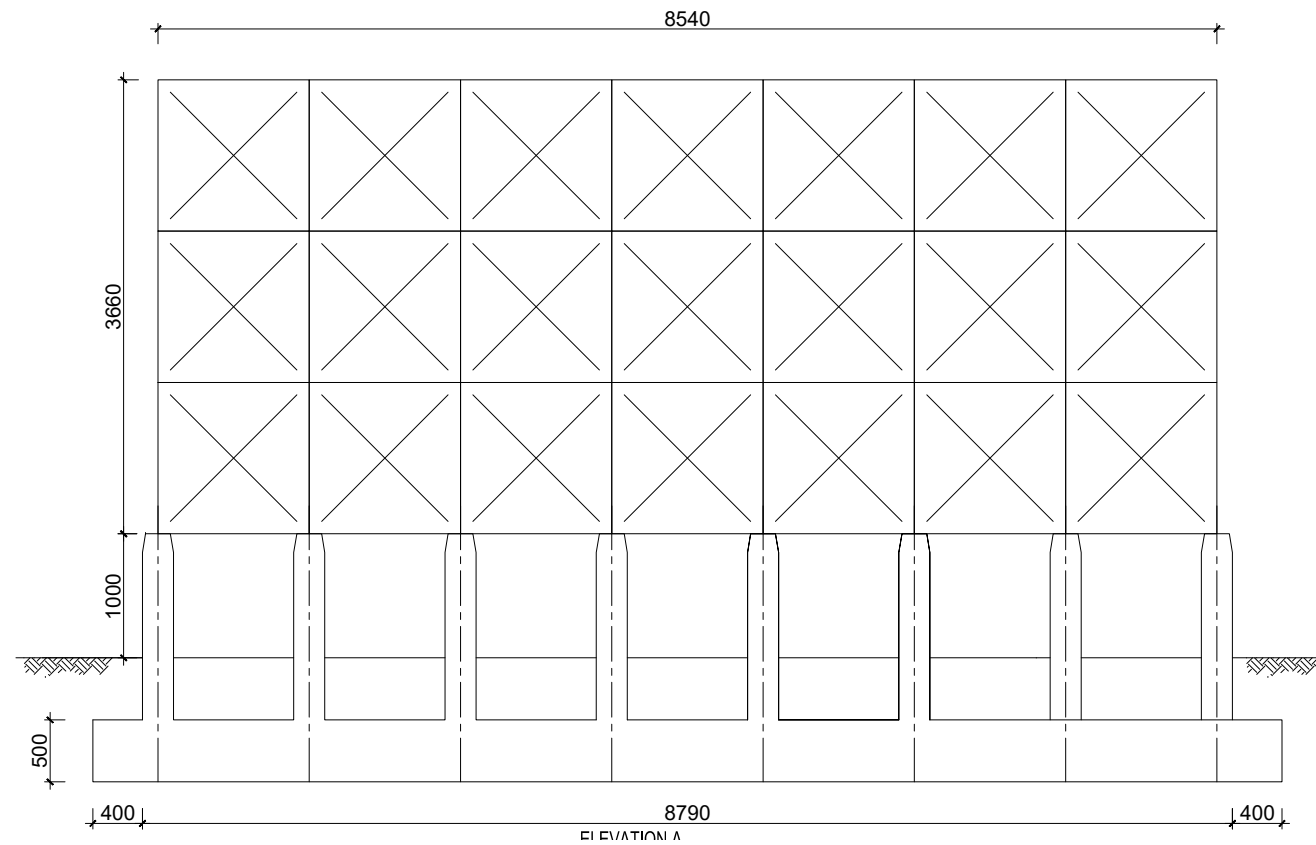
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Scale: Sheet No.: 1 of 2

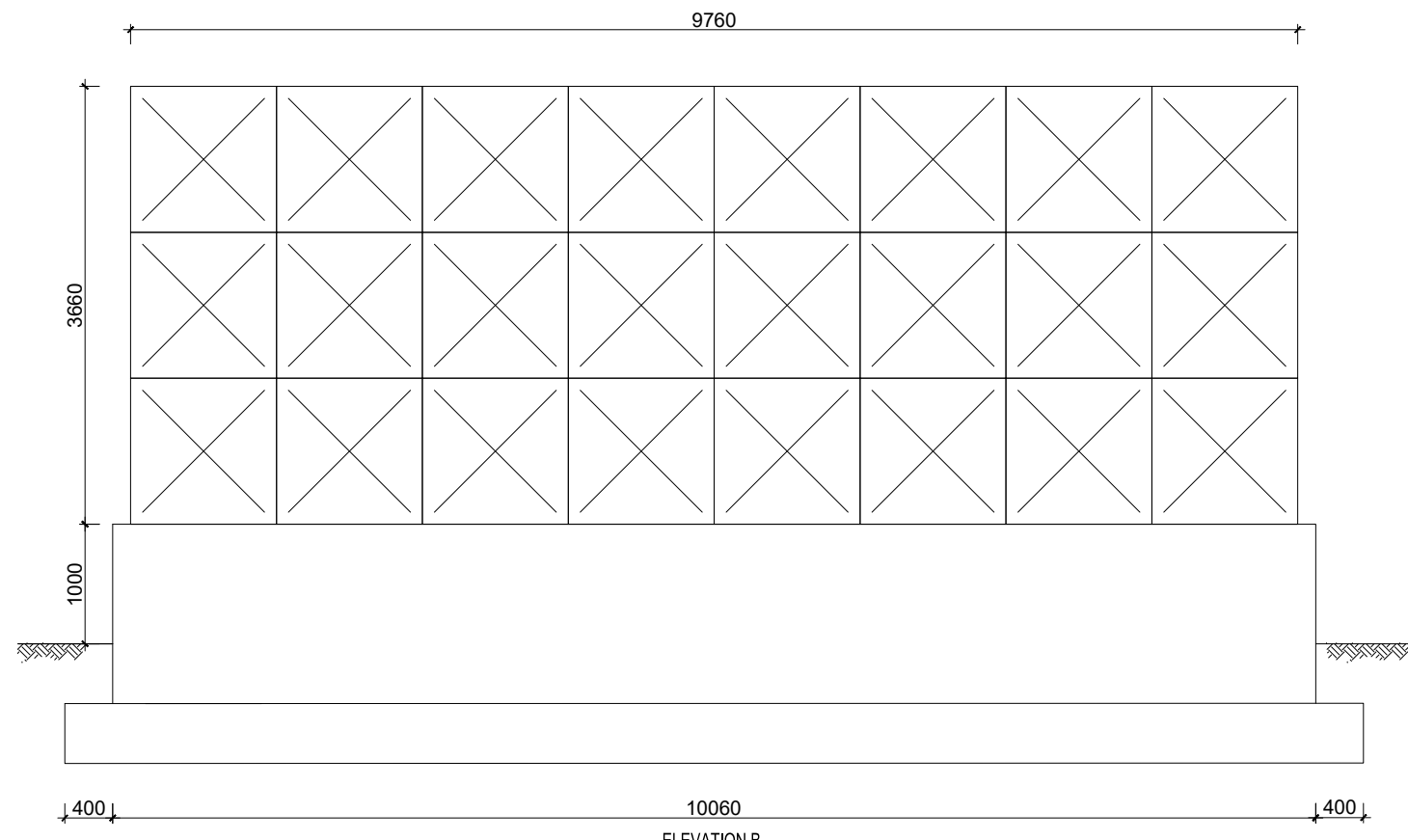


ELEVATION A
TANK PLATFORM
SCALE 1:50

ELEVATION A
SCALE 1:30



ELEVATION A



ELEVATION B

GENERAL NOTES

- This drawing shall be read in conjunction with all relevant drawings.
- Concrete mixes to BS8500
 - Mass concrete to have a minimum works cube strength of 15N/mm² and at 28 days with 20 mm maximum aggregate size
 - Reinforced concrete to have works cube strength of 30N/mm² cylinder strength of 30N/mm² with 20mm maximum aggregate size UNLESS OTHERWISE STATED
- Reinforcement
 - High tensile bars to be ribbed cold formed bars to B.S. 4461
 - Mild steel to be round bars to B.S. 4449
 - Mesh reinforcement to comply with requirement of B.S. 4483
- Minimum cover to all steel 50.
- THE QUALITY OF ALL MATERIALS AND WORKMANSHIP SHALL COMPLY WITH THE REQUIREMENTS OF THE MOST RECENT ISSUES OF RELEVANT EUROPEAN STANDARDS AND CODES OF PRACTICE.

ADDITIONAL NOTES

- All vertical walls to be cast at once
- Approved stopper water bar to be installed in all joints as directed by the Engineer.
- Contractor to use non recoverable ties for tying formwork
- Contractor to submit methodology for Construction before commencing work.
- All Pipes going through walls to have paddle flange
- Diameter of pipes to first be confirmed by M&E before concreting.
- All position of services i.e pipes passing through RC walls to be confirmed by M&E Before Casting

CLIENT :



THE REPUBLIC OF UGANDA
MINISTRY OF WATER AND ENVIRONMENT
DIRECTORATE OF WATER DEVELOPMENT

CONSULTANT :

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P.O.BOX 33975 KAMPALA
Email: allianceconsultantsltd@gmail.com

PROJECT :

ALA-ORA WATER SUPPLY AND SANITATION SYSTEM

NYAGAK WATER SUPPLY AND SANITATION SYSTEM

REVISIONS :

No	Date	Description

DRAWING TITLE :

NDIRIBA
296m³ Tank

Surveyed by: R.K

Drawn by: Luks

Designed by: A.B

Checked by: A.B

Date: FEBRUARY 2023

DRG. No.: AR/WSASS/NY/STR/019

Scale: Sheet No.: 2 of 2

GENERAL NOTES FOR STANDARD DETAIL DRAWINGS

- Unless flexibility is otherwise provided, where pipes enter or leave concrete structures, or anchor blocks, flexible joints are to be provided as shown.
- Anchor block designs are based on the following ground conditions.
 - Dry soil density: 1800 kg/m³
 - Submerged soil density: 1090 kg/m³
 - Angle of internal friction: 30°
 - Passive resistance factor: 3
 - Where considerably better ground conditions, such as rock, are encountered, the dimensions of anchor blocks may be reduced. Supporting calculations for any reduced size anchor blocks must be submitted to the Project Manager 48 hours before construction of the particular anchor block commences and may be concreted only after his approval.
- Bases and thrust faces of anchor blocks are to be cast against undisturbed ground, or against blinding cast against undisturbed ground.
- Pipe work joints as shown for the water supply details are diagrammatic only.
- The following notes apply to reinforced concrete chambers.
 - Concrete in walls and base and cover slab 2
 - Characteristic strength (N/mm²): 30
 - Maximum aggregate size (mm): 20
 - Cement type: SR 3
 - Minimum cement content (kg/m³): 330
 - Maximum cement content (kg/m³): 400
 - Maximum free water/cement ratio: 0.47
 - Concrete in blinding 2
 - Characteristic strength (N/mm²): 10.30
 - Maximum aggregate size (mm): 40
 - Cement type: SR 3
 - Minimum cement content (kg/m³): 230
 - Cover to reinforcement 40mm unless positioned centrally
 - Minimum reinforcement lap 300 mm
 - For details of step irons see Standard Detail Ala-ora-SD-009
 - Corners of rectangular openings to have T8 bars 500 mm long set diagonally
- All dimensions are in millimeters unless shown otherwise.
- Do not scale dimensions from standard Detail drawings.

- References
All engineering Drawings shall be read in conjunction with Specifications. Any discrepancies should be reported to the Supervising Engineer.
- Dimensions
All dimensions are in millimeters (unless stated otherwise)
- Foundations
Foundations have been designed on bearing pressure of 200 KN/m² foundation depth to be determined by engineer prior to placing minimum foundation depth to be 1000mm below floor concrete. Level or 600 mm below Splash Apron level whichever is critical maximum allowable fill below ground slab = 500 mm
- Block work
All Load bearing block walls to be constructed from solid block characteristic compression strength complying of 5.0 N/mm² Min. with BS 5620 Part1 1978 Structural use of Unreinforced Masonry Mortar to conform to mortar designation (iii) of Table 1 BS 5620 Part1
- Concrete

PROPOSED USE	GRADE	PERMITTED TYPE AGGREGATES		MAX. SIZE AGGREGATES	WORKABILITY
		COARSE	FINE		
Reinforced conc. (including ground bearing slab)	C 25	BS 882	BS 882	20mm	Medium (75)
Concrete containing no embedded metal	C 15	BS 882	BS 882	40mm	Medium (75)
Blinding Concrete	C 7.5	BS 882	BS 882	20mm	Medium (75)
Concrete in minor elements e.g lintels	C 25	BS 882	BS 882	10mm	Medium (75)

COVER

LOCATION	COVER
To Mesh in ground slab	30mm
Columns (cover to links)	25mm
Slabs (cover to main bars)	25mm
Foundations	50mm
Top and bottom slides	75mm

- Joints
Movement joints to be at a maximum 9.0m centres. Joint positions as indicated on drg. Joint in slab to be carried through walls to underside of ring beam
- Wall ties
Provide masonry anchors every 2 courses using galvanised. Mild steel debond ties to BS 1243 . 1978
- Reinforcement
Reinforcement to be in accordance with consulting engineer's specification.
R - - - - - Denotes round mild steel bars
T - - - - - Denotes high yield bond strength bars.

NOTES

- All dimensions in mm unless otherwise stated
- Where it is stated " Site Dimension " the measurement is to be determined on site.

LEGEND

CLIENT :



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CONSULTANT :



Alliance Consultants Ltd
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PROJECT :

ALA-ORA WATER SUPPLY AND SANITATION PROJECT

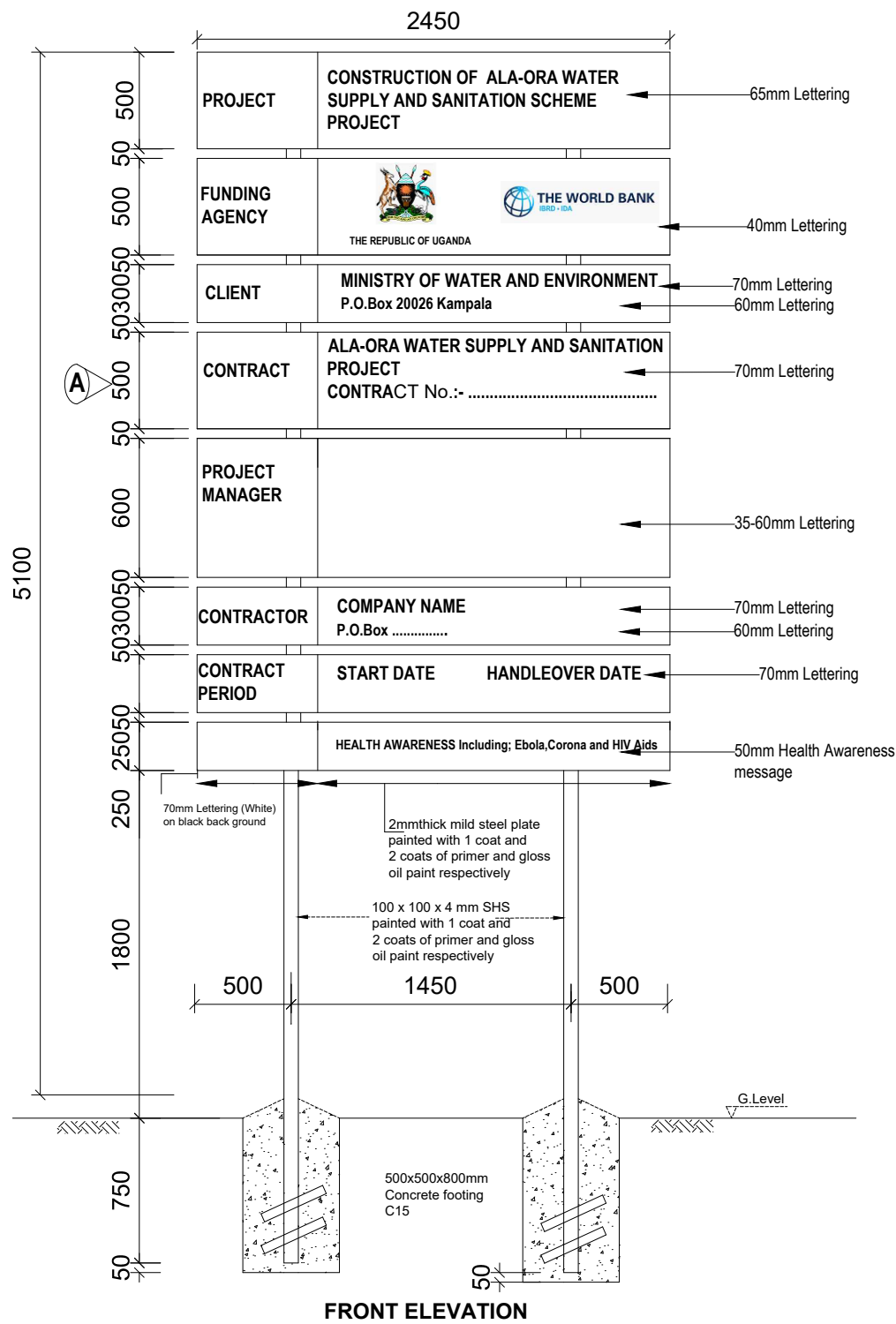
NYAGAK WATER SUPPLY AND SANITATION SYSTEM

REVISIONS :

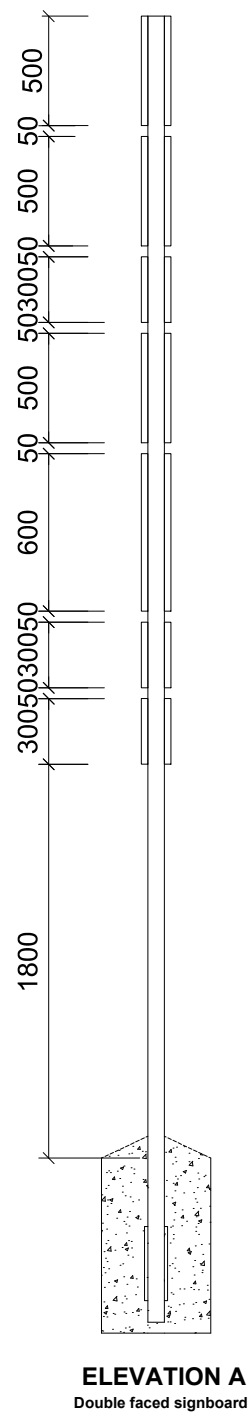
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General Notes

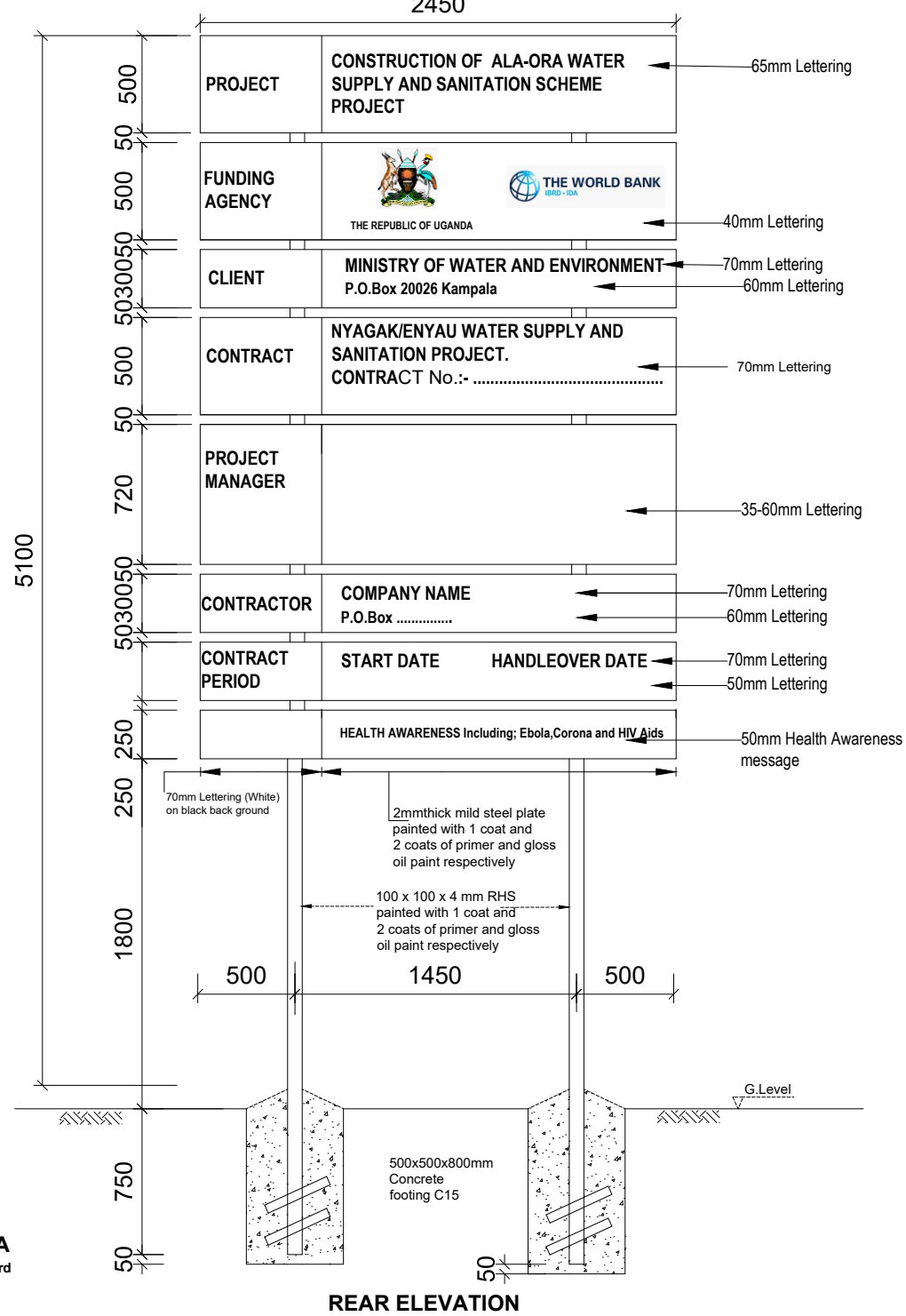
Surveyed by:	R.K
Drawn by:	N.R
Designed by:	W.G.M
Checked by:	J.K.K
Date:	January 2023
DRG. No.:	ALA-ORA-SD-000
Scale:	1:120
Sheet No.:	1 of 1



FRONT ELEVATION



ELEVATION A
Double faced signboard



REAR ELEVATION

NOTES

- Project Signboards are to be double faced
- The Plates to be printed white and Words to be in black include all Logos.

LEGEND

CLIENT :



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ALA-ORA WATER SUPPLY AND SANITATION PROJECT

NYAGAK WATER SUPPLY AND SANITATION SYSTEM

REVISIONS :

No	Date	Description

DRAWING TITLE : **STANDARD DRAWINGS Sign Board**

Surveyed by:	R.K
Drawn by:	N.R
Designed by:	W.G.M
Checked by:	J.K.K
Date:	January 2023
DRG. No.:	ALA-ORA-SD-001
Scale:	1:120
Sheet No.:	1 of 1

LEGEND

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PROJECT :
 ALA-ORA WATER SUPPLY AND
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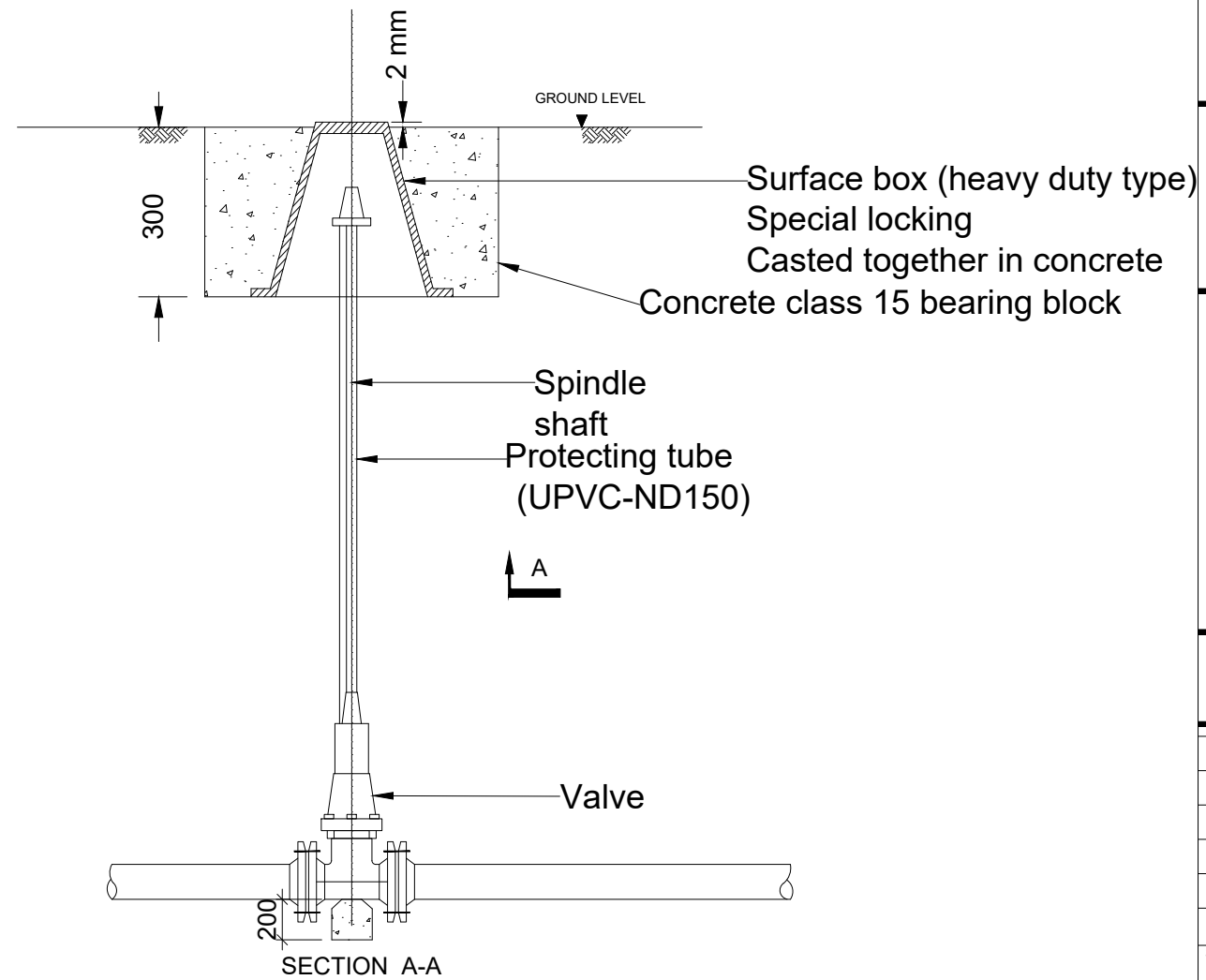
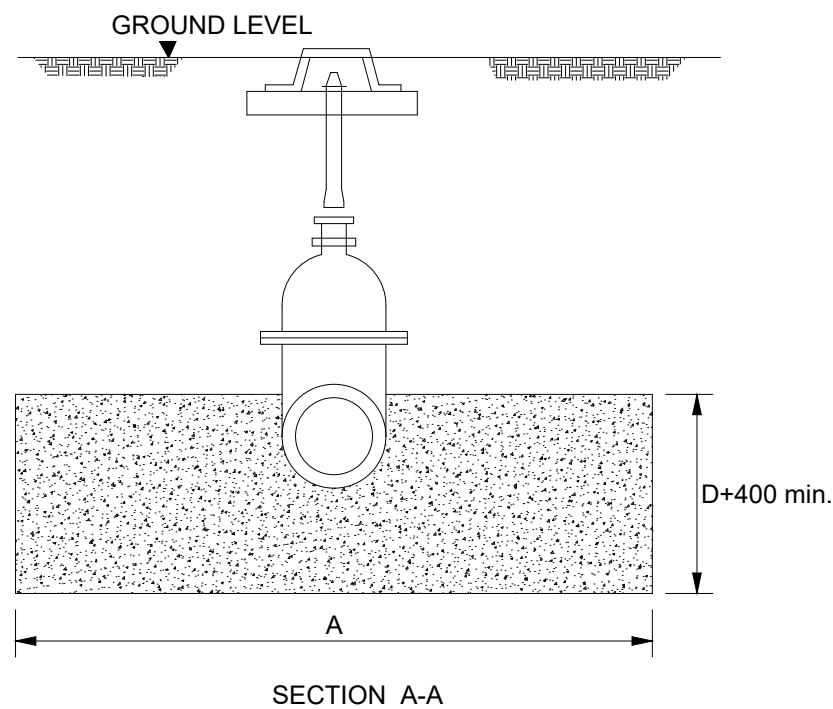
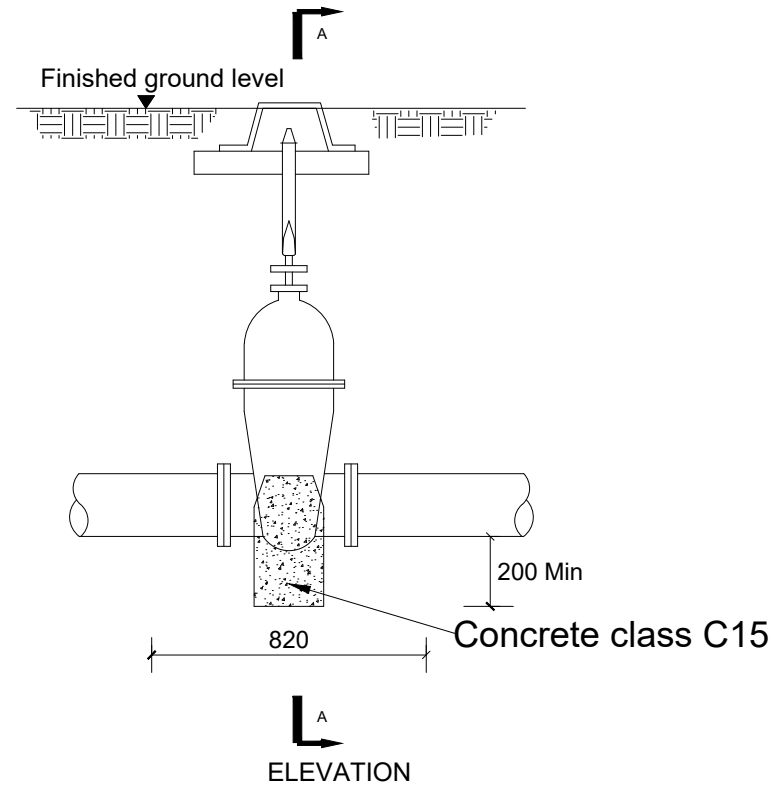
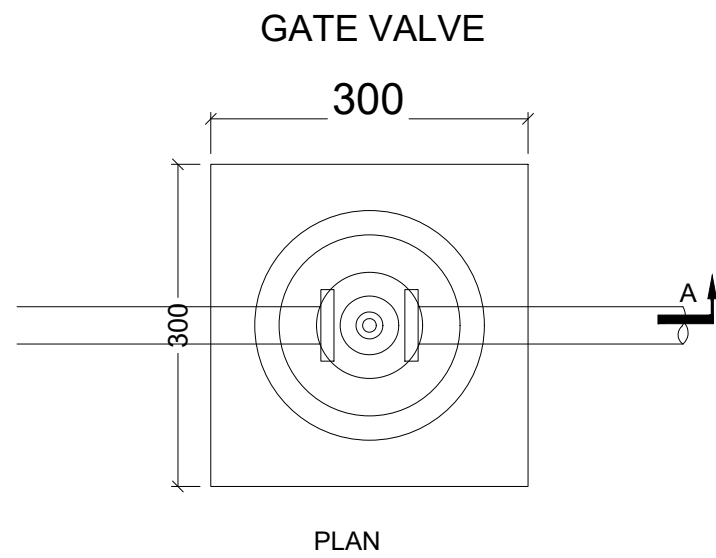
**NYAGAK WATER SUPPLY AND
 SANITATION SYSTEM**

REVISIONS :

No	Date	Description

DRAWING TITLE : **STANDARD DRAWINGS**
Gate Valve and Surface Box

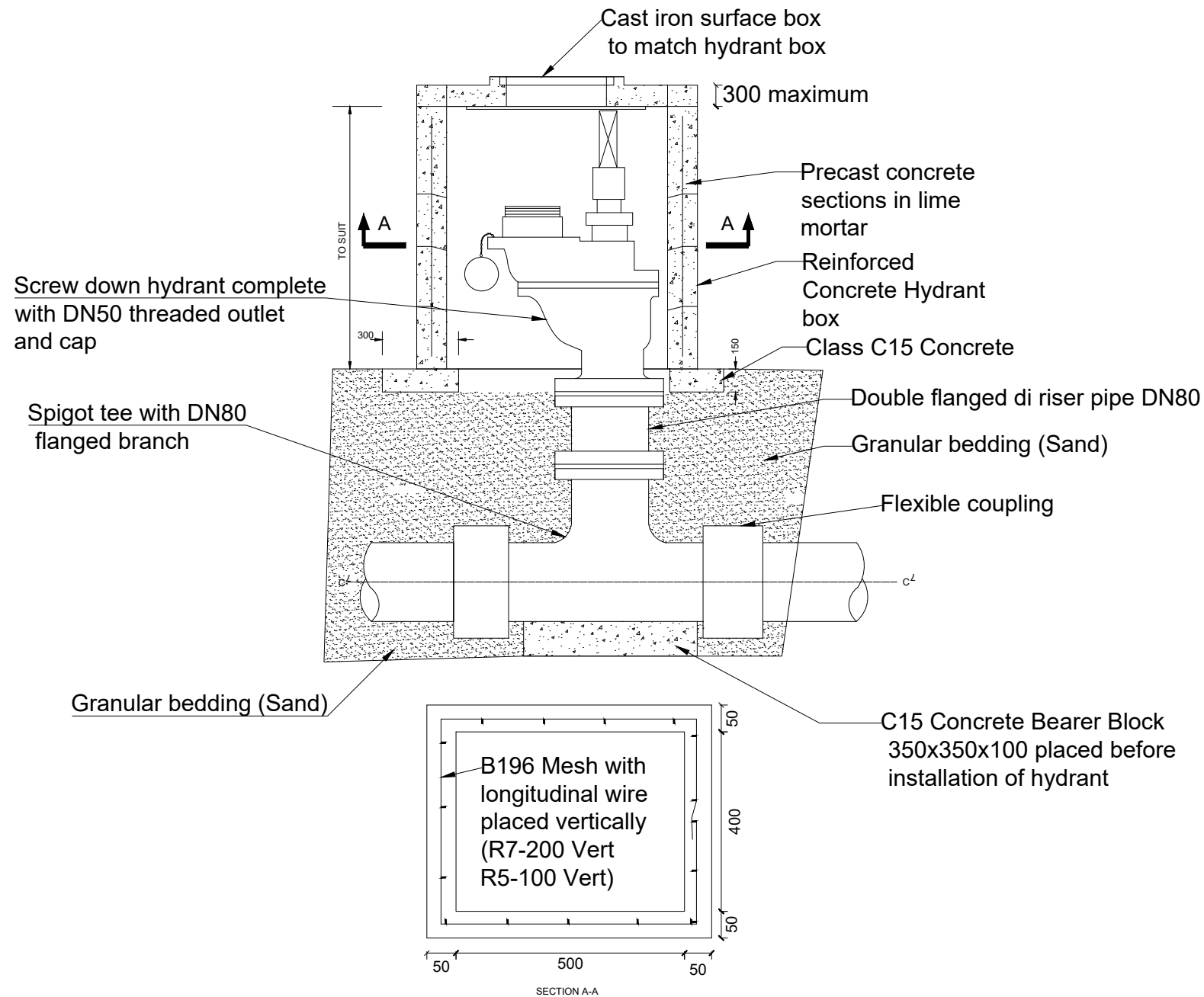
Surveyed by: R.K
 Drawn by: N.R
 Designed by: W.G.M
 Checked by: J.K.K
 Date: January 2023
 DRG. No.: **ALA-ORA-SD-002**
 Scale: 1:120 Sheet No.: 1 of 1



FIRE HYDRANT DETAILS

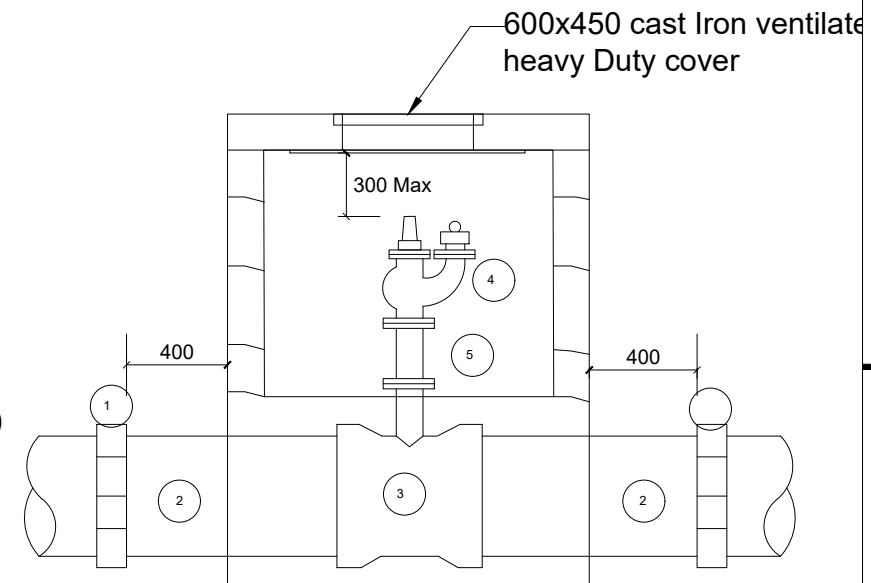
LEGEND

FIRE HYDRANT-CHAMBER



NOTE
Alternative to Precast concrete Chamber Section is 150/200mm thick C25 Layer of A393 Mesh to all members

FIRE HYDRANT-PIPEWORK



SCHEDULE

ITEM DESCRIPTION

- 1 Flexible adaptor if required
- 2 Make-up pipe
- 3 Socket tee flanged branch 80 dia.
- 4 Flanged pipe 80 dia. As required
- 5 Screwdown hydrant

NOTES

1. Flanged pipework to be ductile iron
2. Make up pipes to be ductile iron or UPVC

CLIENT :

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CONSULTANT :

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PROJECT :
 ALA-ORA WATER SUPPLY AND
 SANITATION PROJECT

**NYAGAK WATER SUPPLY AND
 SANITATION SYSTEM**

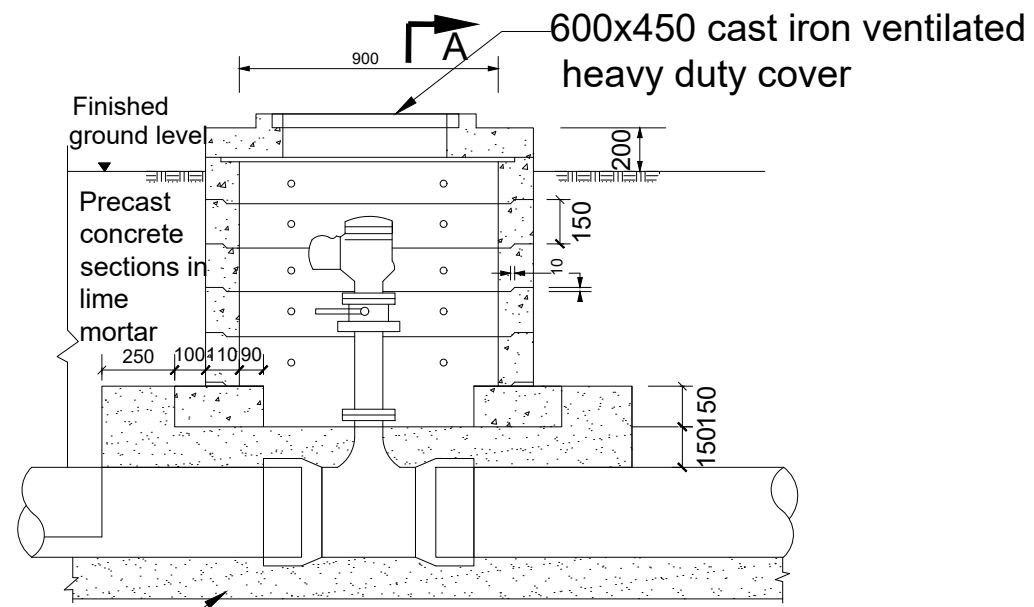
REVISIONS :		
No	Date	Description

DRAWING TITLE : **STANDARD DRAWINGS**
Fire Hydrant Chamber and Pipework

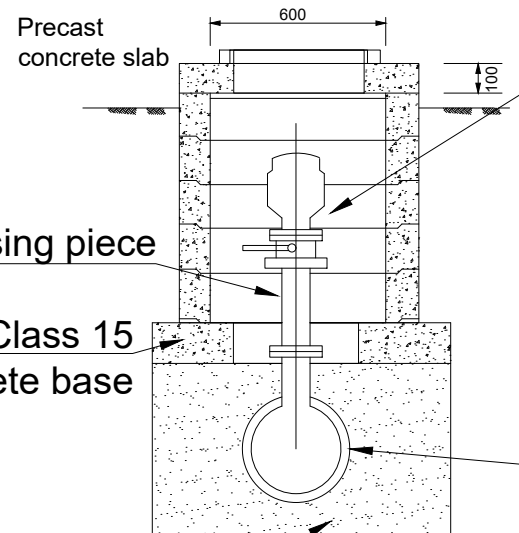
Surveyed by:	R.K
Drawn by:	N.R
Designed by:	W.G.M
Checked by:	J.K.K
Date:	January 2023
DRG. No.:	ALA-ORA-SD-003
Scale:	1:120
Sheet No.:	1 of 1

AIR VALVE DETAILS

AIR VALVE CHAMBER



Granular bedding (Sand)



Flanged raising piece

In situ Class 15 concrete base

Granular bedding (Sand)

Air valve
(See Table for size)

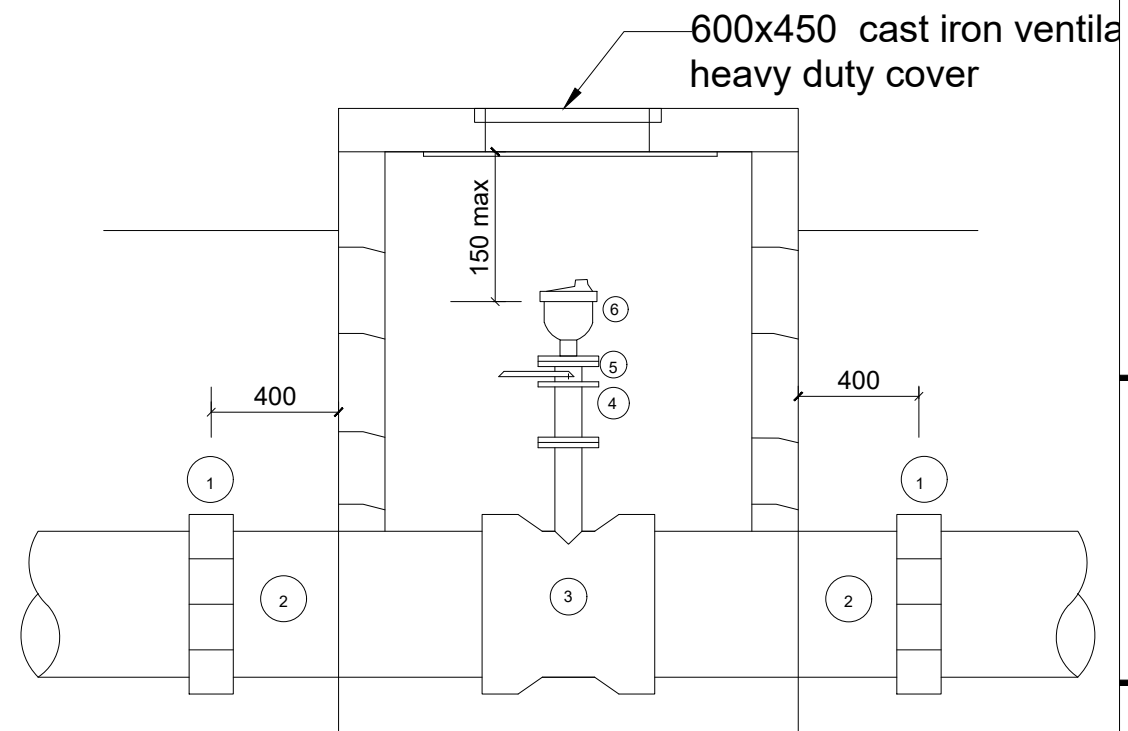
Main dia.	Air valve inlet dia.
100-300	50
350-500	80

Flanged tee

Note:

Alternative to Precast Concrete Chamber Sections is 150/200mm thick C25/Single layer of A393 Mesh to all Members

AIR VALVE PIPEWORK



Note:

1. All Dimensions are in Millimeters
2. Flanged Pipework to be Ductile Iron
3. Make up Pipes to be Ductile Iron
4. Chamber to be 1200x900 Internal Dimensions
5. See General Notes

SCHEDULE

ITEM DESCRIPTION

1. Flexible adaptor if required
2. Make-up pipe
3. Socket tee flanged branch 80/50 dia as required
4. Flanged pipe 80/50 dia as required
5. Isolating valve main 100-300 Dia valve 50 Dia
6. Air valve main 350-600 Dia valve 80Dia

LEGEND

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CONSULTANT :



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PROJECT :

ALA-ORA WATER SUPPLY AND SANITATION PROJECT

NYAGAK WATER SUPPLY AND SANITATION SYSTEM

REVISIONS :

No	Date	Description

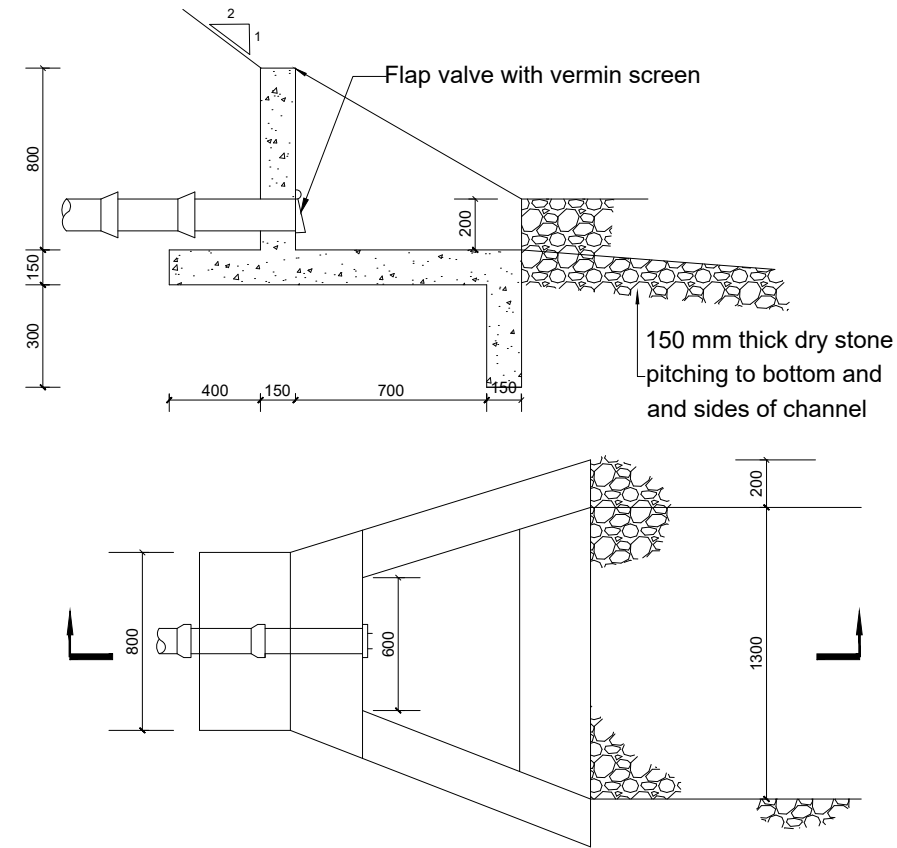
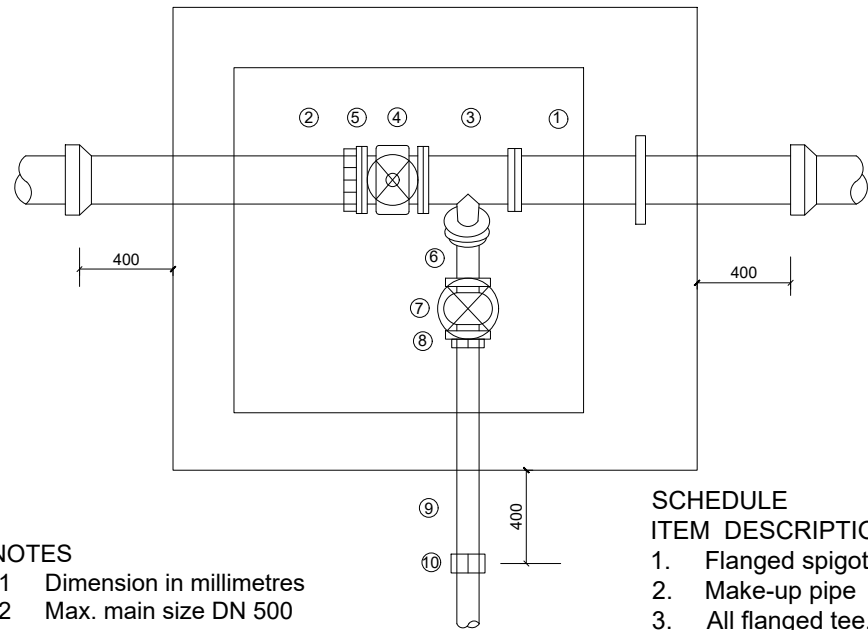
DRAWING TITLE : **STANDARD DRAWINGS**
Air Valve Chamber and Pipework

Surveyed by:	R.K
Drawn by:	N.R
Designed by:	W.G.M
Checked by:	J.K.K
Date:	January 2023
DRG. No.:	ALA-ORA-SD-004
Scale:	1:120
Sheet No.:	1 of 1

WASHOUT CHAMBER

OUTFALL STRUCTURE

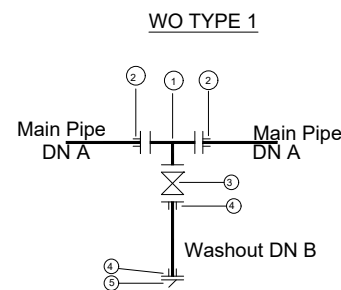
LEGEND



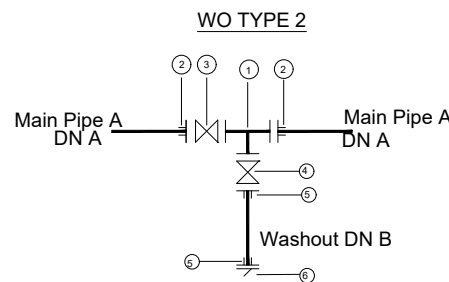
- NOTES**
- 1 Dimension in millimetres
 - 2 Max. main size DN 500
 - 3 Pipework within chamber to be ductile iron
 - 4 For details of chamber see standard detail drawing SD135

- SCHEDULE ITEM DESCRIPTION**
1. Flanged spigot pipe 1200 long with thrust flange
 2. Make-up pipe
 3. All flanged tee, branch DN 80
 4. Flanged in-line gate valve
 5. Flange adaptor
 6. Flanged 45o bend DN 80
 7. Flanged gate valve DN 80
 8. Flanged adaptor DN 80
 9. Spigot pipe DN 80
 10. Flexible adaptor if required

WASHOUT DETAILS TYPE 1 & 2



- 1 No CI Flanged Tee DN A/B
- 2 No DI Flange Adaptor, Maxi type or similar type DN A
- 3 No CI Flanged Gate Valve DN A
- 4 No DI Flange Adaptor, Maxi type or similar DN B
- 5 1 No. D1 Flanged Flap Valve DN B



- 1 No CI Flanged Tee DN A/B
- 2 No DI Flange Adaptor, Maxi type or similar type DN A
- 3 No CI Flanged Gate Valve DN A
- 4 No DI Flanged Gate Valve DN B
- 5 2 No DI Flange Adaptor, Maxi type or similar DN B
- 6 1 No D1 Flanged Flap Valve DN B

Pipe Diameter		Fittings Diameter	
Main Pipe	Washout	A	B
OD 63	OD 63	DN 50	OD 50
OD 90	OD 63	DN 80	OD 50
OD 110	OD 63	DN 100	OD 50
OD 160	OD 63	DN 150	OD 50
OD 208	OD 110	DN 200	OD 100
OD 250	OD 110	DN 250	OD 100
OD 300	OD 110	DN 300	OD 100

- NOTES:**
1. Pressure ratings of Washouts and Fittings shall be similar to those of main pipe on which the washout is to be installed
 2. All Pipe Fittings within the Chamber are to be Ductile Iron

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NYAGAK WATER SUPPLY AND SANITATION SYSTEM

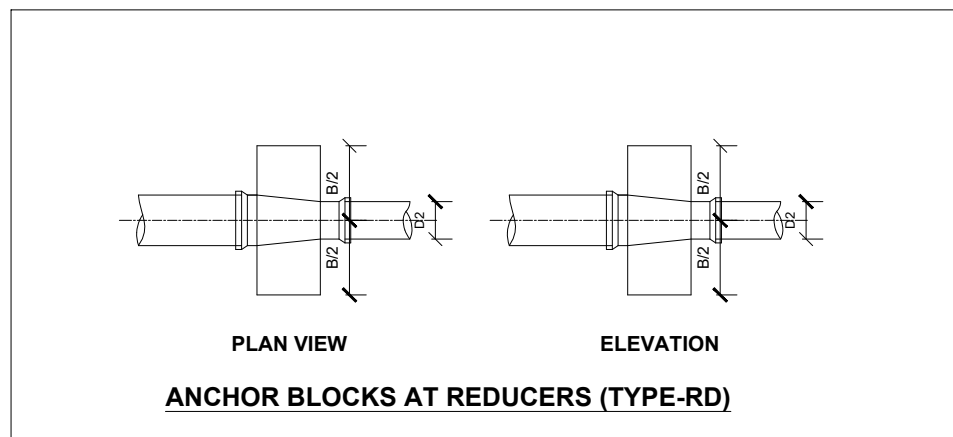
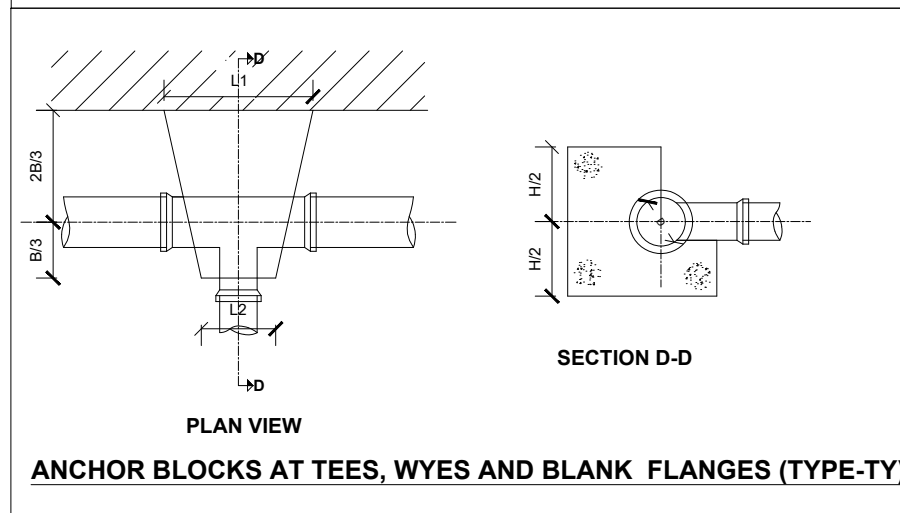
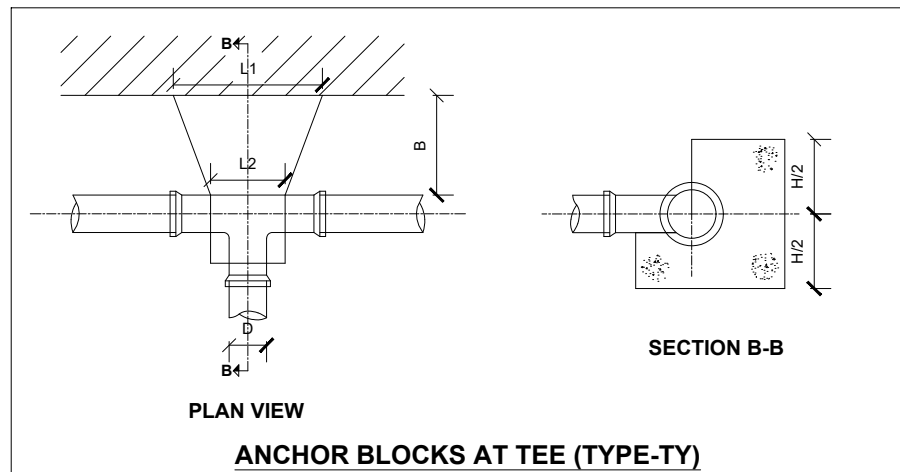
REVISIONS :

No	Date	Description

DRAWING TITLE : **STANDARD DRAWINGS**
Washout Chamber and Outfall Structure

Surveyed by: R.K
 Drawn by: N.R
 Designed by: W.G.M
 Checked by: J.K.K
 Date: January 2023
 DRG. No.: **ALA-ORA-SD-005**
 Scale: 1:120 Sheet No.: 1 of 1

LEGEND



TEES (TYPE-TY)					
BRANCH SIZE	TEST PRESSURE	L1 m	L2 m	B m	H m
50	250	0.40	0.20	0.40	0.30
	225	0.40	0.20	0.40	0.30
	180	0.40	0.20	0.40	0.30
	135	0.40	0.20	0.40	0.30
	90	0.40	0.20	0.40	0.30

TEES (TYPE-TY)					
BRANCH SIZE	TEST PRESSURE	L1 m	L2 m	B m	H m
80	250	0.50	0.25	0.50	0.40
	225	0.50	0.25	0.50	0.40
	180	0.50	0.25	0.50	0.40
	135	0.50	0.25	0.50	0.40
	90	0.50	0.25	0.50	0.40

TEES (TYPE-TY)					
BRANCH SIZE	TEST PRESSURE	L1 m	L2 m	B m	H m
100	250	0.60	0.30	0.60	0.50
	225	0.60	0.30	0.60	0.50
	180	0.60	0.30	0.60	0.50
	135	0.60	0.30	0.60	0.50
	90	0.60	0.30	0.60	0.50

REDUCERS (TYPE-RD)					
NOMINAL DIAMETER	TEST PRESSURE	L m	B m	H m	
100/80	250	0.35	0.50	0.55	
	225	0.35	0.50	0.50	
	180	0.35	0.50	0.45	
	135	0.35	0.50	0.40	
	90	0.35	0.50	0.40	


REDUCERS (TYPE-RD)					
NOMINAL DIAMETER	TEST PRESSURE	L m	B m	H m	
150/80	250	0.40	0.70	0.45	
	225	0.40	0.70	0.45	
	180	0.40	0.65	0.40	
	135	0.40	0.60	0.40	
	90	0.40	0.60	0.40	

REDUCERS (TYPE-RD)					
NOMINAL DIAMETER	TEST PRESSURE	L m	B m	H m	
100/150	250	0.40	0.75	0.55	
	225	0.40	0.70	0.55	
	180	0.40	0.60	0.50	
	135	0.40	0.60	0.45	
	90	0.40	0.60	0.40	

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PROJECT :
ALA-ORA WATER SUPPLY AND SANITATION PROJECT

NYAGAK WATER SUPPLY AND SANITATION SYSTEM

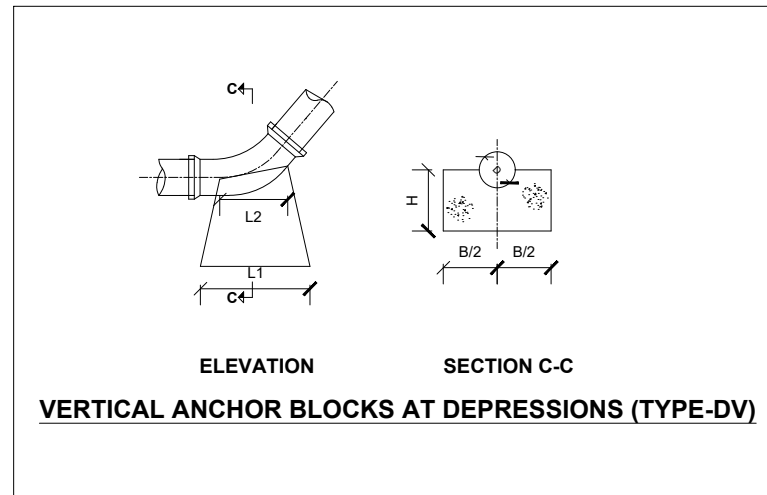
REVISIONS :

No	Date	Description

DRAWING TITLE :
STANDARD DRAWINGS
 Anchor Block Details

Surveyed by: R.K
 Drawn by: N.R
 Designed by: W.G.M
 Checked by: J.K.K
 Date: January 2023
 DRG. No.: **ALA-ORA-SD-006**
 Scale: 1:120 Sheet No.: 1 of 3

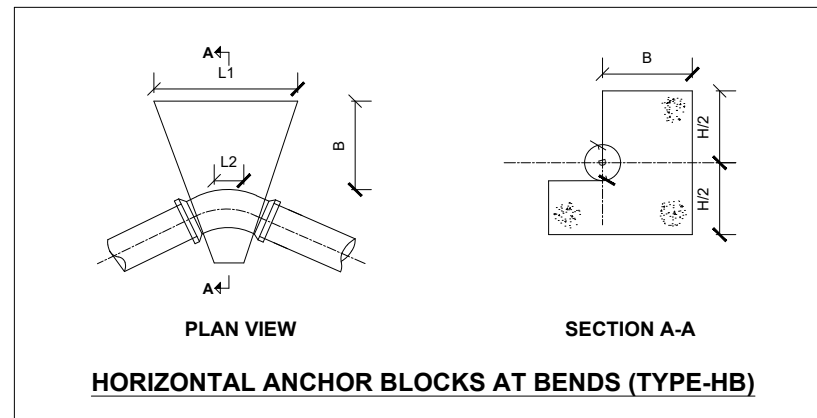
LEGEND



VERTICAL BENDS - DEPRESSIONS (TYPE-DV)													
NOMINAL DIAMETER	TEST PRESSURE	45° BEND				22½° BEND				11¼° BEND			
mm	m	L1 m	L2 m	B m	H m	L1 m	L2 m	B m	H m	L1 m	L2 m	B m	H m
80	250	0.40	0.16	0.30	0.50	0.40	0.16	0.30	0.50	0.40	0.16	0.20	0.50
	225	0.40	0.16	0.27	0.50	0.40	0.16	0.30	0.50	0.40	0.16	0.20	0.50
	180	0.40	0.16	0.30	0.50	0.40	0.16	0.30	0.50	0.40	0.16	0.20	0.50
	135	0.40	0.16	0.30	0.50	0.40	0.16	0.30	0.50	0.40	0.16	0.20	0.50
	90	0.40	0.16	0.30	0.50	0.40	0.16	0.30	0.50	0.40	0.16	0.20	0.50

NOMINAL DIAMETER	TEST PRESSURE	45° BEND				22½° BEND				11¼° BEND			
mm	m	L1 m	L2 m	B m	H m	L1 m	L2 m	B m	H m	L1 m	L2 m	B m	H m
100	250	0.40	0.20	0.30	0.50	0.40	0.20	0.30	0.50	0.40	0.20	0.20	0.50
	225	0.40	0.20	0.30	0.50	0.40	0.20	0.30	0.50	0.40	0.20	0.20	0.50
	180	0.40	0.20	0.30	0.50	0.40	0.20	0.30	0.50	0.40	0.20	0.20	0.50
	135	0.40	0.20	0.30	0.50	0.40	0.20	0.30	0.50	0.40	0.20	0.20	0.50
	90	0.40	0.20	0.30	0.50	0.40	0.20	0.30	0.50	0.40	0.20	0.20	0.50

NOMINAL DIAMETER	TEST PRESSURE	45° BEND				22½° BEND				11¼° BEND			
mm	m	L1 m	L2 m	B m	H m	L1 m	L2 m	B m	H m	L1 m	L2 m	B m	H m
150	250	0.80	0.30	0.40	0.55	0.70	0.30	0.30	0.55	0.50	0.30	0.30	0.55
	225	0.70	0.30	0.40	0.55	0.60	0.30	0.30	0.55	0.50	0.30	0.30	0.55
	180	0.70	0.30	0.40	0.55	0.50	0.30	0.30	0.55	0.50	0.30	0.30	0.55
	135	0.70	0.30	0.40	0.55	0.50	0.30	0.30	0.55	0.40	0.30	0.30	0.55
	90	0.70	0.30	0.40	0.55	0.40	0.30	0.30	0.55	0.40	0.30	0.30	0.55



HORIZONTAL BENDS (TYPE-HB)																	
NOMINAL DIAMETER	TEST PRESSURE	90° BEND				45° BEND				22½° BEND				11¼° BEND			
mm	m	L1 m	L2 m	B m	H m	L1 m	L2 m	B m	H m	L1 m	L2 m	B m	H m	L1 m	L2 m	B m	H m
80	250	1.00	0.24	0.35	0.50	0.60	0.24	0.30	0.40	0.50	0.24	0.20	0.20	0.40	0.24	0.20	0.20
	225	0.60	0.24	0.35	0.40	0.50	0.24	0.25	0.30	0.40	0.24	0.20	0.20	0.30	0.24	0.20	0.20
	180	0.60	0.24	0.35	0.30	0.50	0.24	0.23	0.25	0.40	0.24	0.20	0.20	0.30	0.24	0.20	0.20
	135	0.60	0.24	0.35	0.30	0.50	0.24	0.20	0.20	0.40	0.24	0.20	0.20	0.30	0.24	0.20	0.20
	90	0.60	0.24	0.35	0.20	0.50	0.24	0.20	0.20	0.40	0.24	0.20	0.20	0.30	0.24	0.20	0.20

NOMINAL DIAMETER	TEST PRESSURE	90° BEND				45° BEND				22½° BEND				11¼° BEND			
mm	m	L1 m	L2 m	B m	H m	L1 m	L2 m	B m	H m	L1 m	L2 m	B m	H m	L1 m	L2 m	B m	H m
150	250	1.20	0.45	0.80	0.80	0.80	0.45	0.80	0.80	0.80	0.45	0.70	0.70	0.60	0.45	0.60	0.60
	225	1.20	0.45	0.80	0.80	0.80	0.45	0.80	0.80	0.80	0.45	0.70	0.70	0.60	0.45	0.60	0.60
	180	1.00	0.45	0.80	0.80	0.80	0.45	0.80	0.80	0.80	0.45	0.70	0.70	0.60	0.45	0.60	0.60
	135	1.00	0.45	0.60	0.60	0.80	0.45	0.80	0.80	0.60	0.45	0.70	0.70	0.60	0.45	0.60	0.60
	90	1.00	0.45	0.60	0.60	0.60	0.45	0.80	0.80	0.60	0.45	0.70	0.70	0.60	0.45	0.60	0.60

NOMINAL DIAMETER	TEST PRESSURE	90° BEND				45° BEND				22½° BEND				11¼° BEND			
mm	m	L1 m	L2 m	B m	H m	L1 m	L2 m	B m	H m	L1 m	L2 m	B m	H m	L1 m	L2 m	B m	H m
100	250	1.00	0.30	0.35	0.50	0.80	0.30	0.80	0.80	0.80	0.30	0.60	0.60	0.60	0.30	0.60	0.60
	225	0.90	0.30	0.30	0.40	0.60	0.30	0.80	0.80	0.80	0.30	0.60	0.60	0.60	0.30	0.60	0.60
	180	0.60	0.30	0.25	0.30	0.60	0.30	0.80	0.80	0.80	0.30	0.60	0.60	0.60	0.30	0.60	0.60
	135	0.60	0.30	0.25	0.30	0.60	0.30	0.80	0.80	0.60	0.30	0.60	0.60	0.60	0.30	0.60	0.60
	90	0.60	0.30	0.20	0.20	0.60	0.30	0.80	0.80	0.60	0.30	0.60	0.60	0.60	0.30	0.60	0.60

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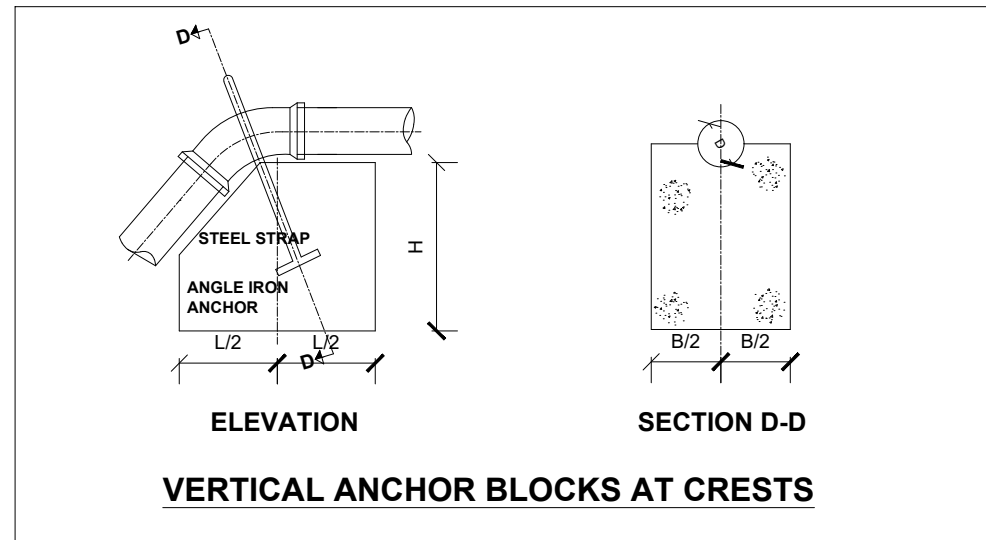
NYAGAK WATER SUPPLY AND SANITATION SYSTEM

REVISIONS :

No	Date	Description

DRAWING TITLE : **STANDARD DRAWINGS**
Anchor Block Details

Surveyed by: R.K
Drawn by: N.R
Designed by: W.G.M
Checked by: J.K.K
Date: January 2023
DRG. No.: **ALA-ORA-SD-006**
Scale: 1:120 Sheet No.: 2 of 3



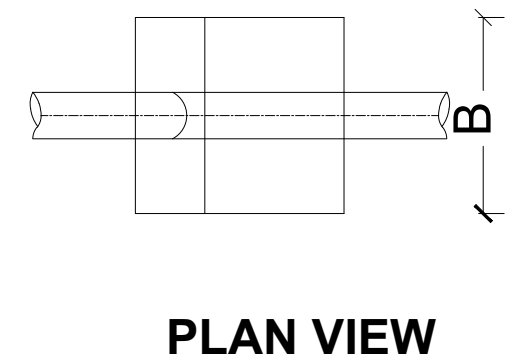
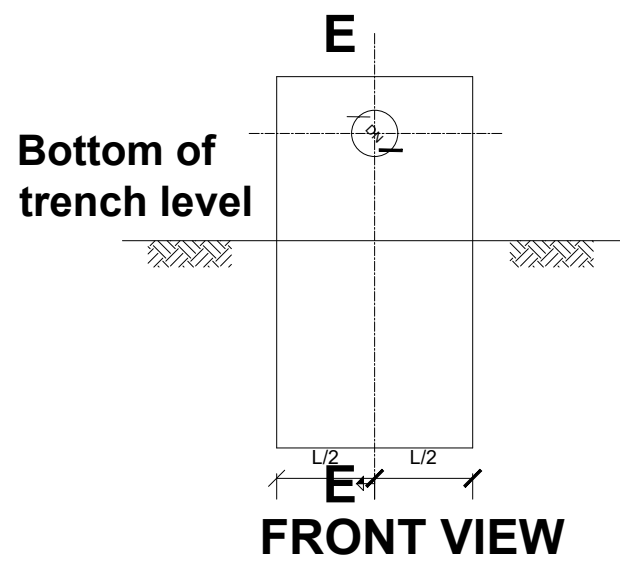
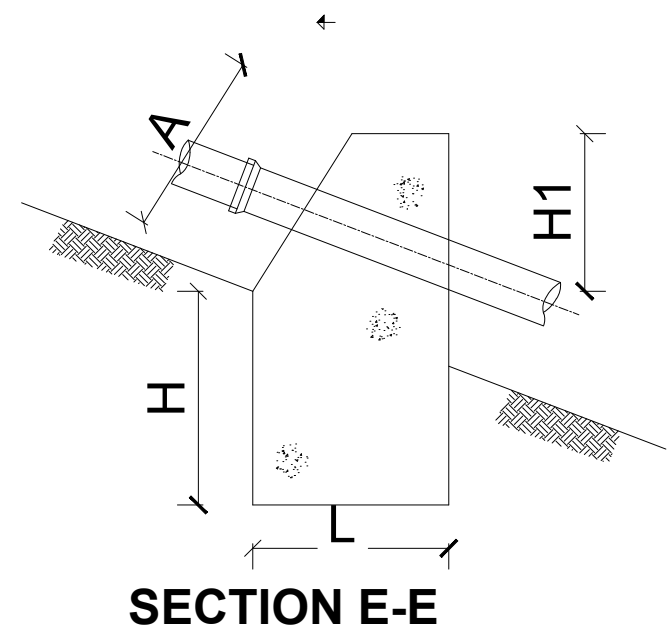
NOMINAL DIAMETER	TEST PRESSURE	45° BEND			22½° BEND			11¼° BEND		
		L m	B m	H m	L m	B m	H m	L m	B m	H m
150	250	1.70	1.10	0.80	1.30	0.90	0.80	1.00	0.70	0.60
	225	1.50	1.10	0.80	1.20	0.80	0.80	1.00	0.70	0.60
	180	1.50	1.10	0.70	1.10	0.80	0.80	1.00	0.70	0.60
	135	1.40	0.90	0.70	1.00	0.70	0.80	1.00	0.70	0.60
	90	1.20	0.80	0.60	0.90	0.70	0.80	1.00	0.70	0.60

NOMINAL DIAMETER	TEST PRESSURE	45° BEND			22½° BEND			11¼° BEND		
		L m	B m	H m	L m	B m	H m	L m	B m	H m
100	250	1.40	0.70	0.80	1.20	0.70	0.80	1.20	0.70	0.80
	225	1.20	0.70	0.80	1.20	0.70	0.80	1.20	0.70	0.80
	180	1.20	0.70	0.80	1.20	0.70	0.80	1.20	0.70	0.80
	135	1.20	0.70	0.80	1.20	0.70	0.80	1.20	0.70	0.80
	90	1.20	0.70	0.80	1.20	0.70	0.80	1.20	0.70	0.80

VERTICAL BENDS (TYPE-CV)

NOMINAL DIAMETER	TEST PRESSURE	45° BEND			22½° BEND			11¼° BEND		
		L m	B m	H m	L m	B m	H m	L m	B m	H m
80	250	1.40	0.70	0.80	1.20	0.70	0.80	1.20	0.70	0.80
	225	1.20	0.70	0.80	1.20	0.70	0.80	1.20	0.70	0.80
	180	1.20	0.70	0.80	1.20	0.70	0.80	1.20	0.70	0.80
	135	1.20	0.70	0.80	1.20	0.70	0.80	1.20	0.70	0.80
	90	1.20	0.70	0.80	1.20	0.70	0.80	1.20	0.70	0.80

- NOTES:**
- Anchor blocks to be constructed from unreinforced concrete class 20.
 - Concrete to be casted and undisturbed soil, where disturbed soil around the anchor blocks either to be removed and filled with concrete before pressure testing, or soil to be compacted to not less than 95% max. dry density before the mass is pressure tested.
 - 11¼° bends to be used for bends >=6° and <=16°
 - Anchor blocks to be cast to leave all pipe joints free.
 - Shuttered surfaces to be suitable to receive backfill or further concrete framework suitable to precast loss of ground fibrated.
 - The p.v.c bends shall be covered with three layers of polythene sheeting before concreting.



ANCHOR BLOCKS ON GRADIENTS (TYPE-GD)

LEGEND

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NYAGAK WATER SUPPLY AND SANITATION SYSTEM

REVISIONS :

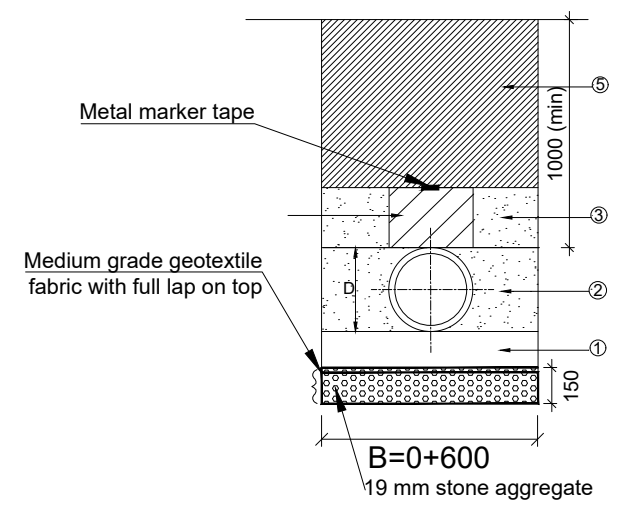
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Anchor Block Details

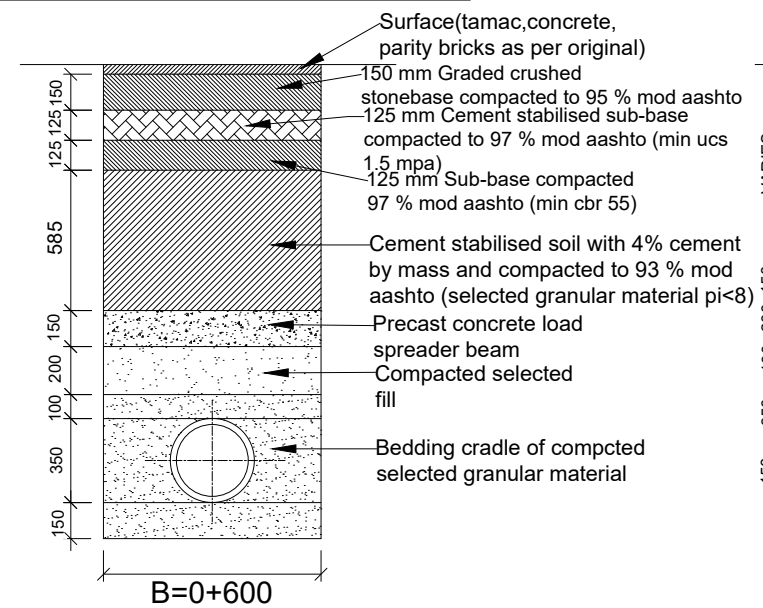
Surveyed by:	R.K
Drawn by:	N.R
Designed by:	W.G.M
Checked by:	J.K.K
Date:	January 2023
DRG. No.:	ALA-ORA-SD-006
Scale:	1:120
Sheet No.:	3 of 3

TRENCHING AND BACKFILLING DETAILS

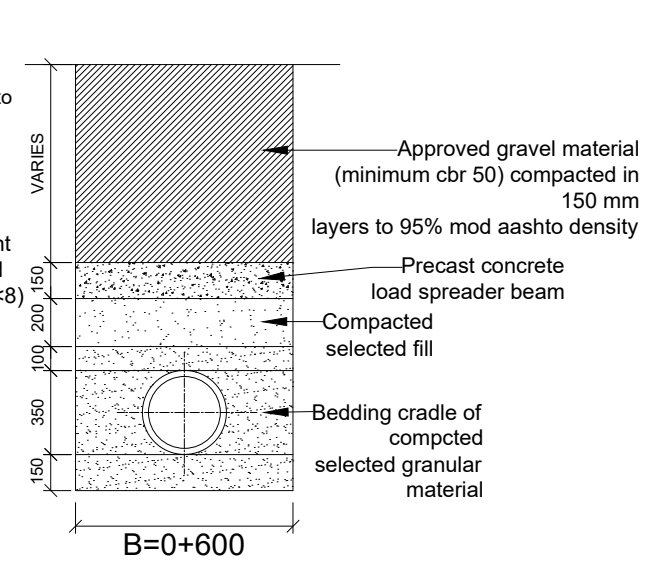
TYPICAL TRENCH EXCAVATION AND BACKFILLING FOR PE/uPVC/GRP PIPES



PIPE PROTECTION AT SURFACED ROAD CROSSING



PIPE PROTECTION AT UNSURFACED ROAD CROSSING



NOTES:

1. Minimum and normal trench width are defined as normal pipe diameter plus 600 mm.
2. The backfill around the pipe from the trench bottom to the crown of the pipe shall be carried out in layers whose depth shall not exceed 75 mm nor half the nominal pipe diameter whichever is the lesser.
3. The bedding required is selected by the engineer according to :
 - (i) Depth of cover
 - (ii) Diameter of pipe
 - (iii) Type of vehicle loading
 - (iv) Type of soil
4. The embedment specifies the degree of compaction required in order to fulfill design requirements.
5. In general, the method of attaining the required compaction will be ascertained as follows :
 - (i) The engineer's representative will identify, classify and agree the soil type of embedment material available from the trench.
 - (ii) The site soil type will be compared with those on the material description chart [see table 1]
 - (iii) The compaction method required is then selected from the compaction chart for the appropriate soil type and class of embedment [see table 2]
6. not all soils are given in table 1. it should be noted that :
 - (i) Fined grained soils with high plasticity may not be used as backfill

- (ii) Fined grained soils with low plasticity may be condemned for use as backfill if the contractor has difficulty in attaining the required compaction.
7. Where site material is condemned, imported material shall be used. this shall be a well graded soil from fines upto 20 mm gravel or as approved by the engineer's representative.
8. Where some doubt exists as to the compactibility of the soil as defined above, recourse shall be made to the modified proctor density test. the site and laboratory tests shall be carried out to tests 14 b and 12 respectively to ssrn 601 the contractor shall include in his rates for backfilling with available soil.
9. If stones or rock are present, imported bedding material of min. 150 mm thick shall be required as approved by the engineer's representative. at designated road crossings the bedding shall have a minimum thickness of 150 mm.
10. The backfill shall be placed in layers as defined above, each layer shall be rammed with a small vibratory rammer. the required number of passes of the rammer is given in table 2. in any event 90% mpd shall be achieved. only when there is 300 mm cover over the pipe may heavier compacting equipment
11. Be used. the remainder of the backfill shall be suitably compacted in keeping with the reinstatement of the ground to be carried out. this shall be agreed upon with the engineer's representative.
12. Ferrous pipes shall be wrapped in polyethylene sleeving as corrosion protection when and as directed by the engineer's representative. soil tests shall be carried out in advance of pipe laying to ascertain requirements.
13. All dimensions are in millimetres unless stated otherwise.

LEGEND

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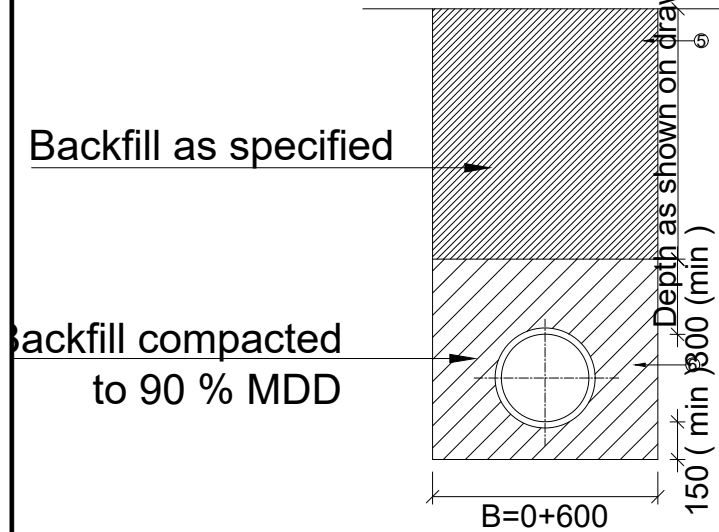
REVISIONS :

No	Date	Description

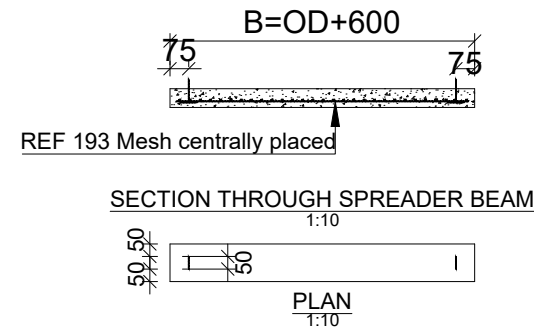
DRAWING TITLE : **STANDARD DRAWINGS**
Trenching, Road Crossing and Backfilling Details

Surveyed by:	R.K
Drawn by:	N.R
Designed by:	W.G.M
Checked by:	J.K.K
Date:	January 2023
DRG. No.:	ALA-ORA-SD-007
Scale:	1:120
Sheet No.:	1 of 2

TYPICAL TRENCH EXCAVATION AND BACKFILLING FOR FERROUS PIPES



PRECAST CONCRETE LOAD SPREADER BEAM



NOTE

1. Where required by local authorities, a concrete pipe or culvert must be used instead of a concrete spreader beam.
2. Horizontal directional drilling must be undertaken where specified to the engineer's approval.

TABLE 1 : MATERIAL DESCRIPTION CHART

SOIL TYPE	DESCRIPTION	GROUP SYMBOL
A	Angular, crushed rock negligible fines	-
B	Well graded gravel-sand mixtures few fines	GW
C	Fine Gravel, No fines	GP
D	Gravel-Sand Mix, upto 15% Fines	GF

TABLE 2 : COMPACTION CHART

% MPD	SOIL TYPE	COMPACTION METHOD	
		Thickness of Layer (mm)	No. of Passes
90	A AND B	150	1
	C	150	2
	D	75	2

LEGEND

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PROJECT :
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NYAGAK WATER SUPPLY AND SANITATION SYSTEM

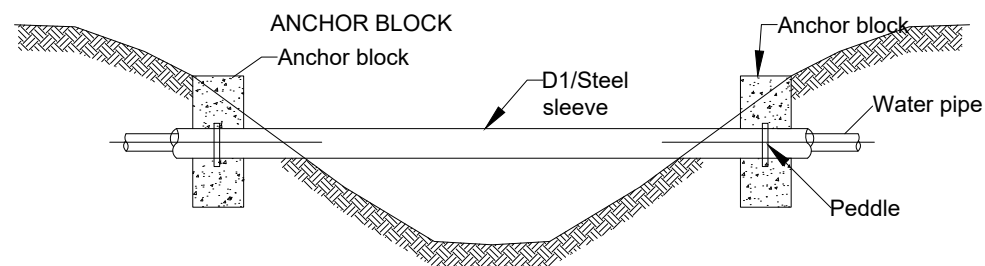
REVISIONS :

No	Date	Description

DRAWING TITLE : **STANDARD DRAWINGS**
Trenching, Road Crossing and Backfilling Details

Surveyed by:	R.K
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Designed by:	W.G.M
Checked by:	J.K.K
Date:	January 2023
DRG. No.:	ALA-ORA-SD-007
Scale:	1:120
Sheet No.:	2 of 2

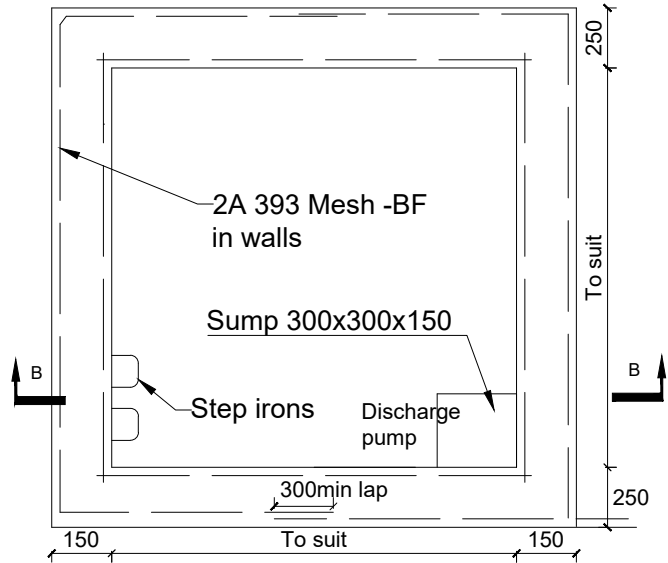
PIPE SLEEVING DETAILS



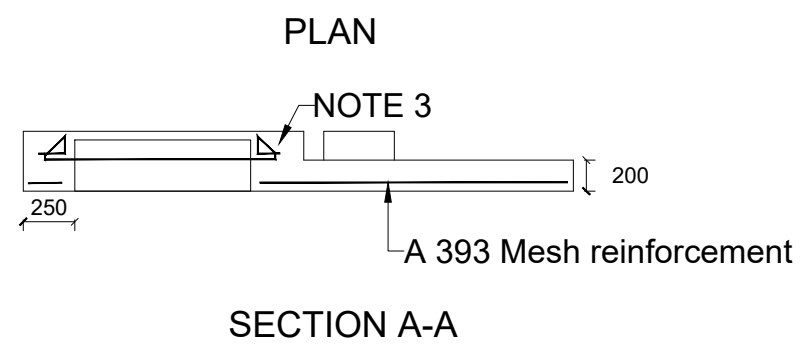
LEGEND :

D pipe outside diameter approved

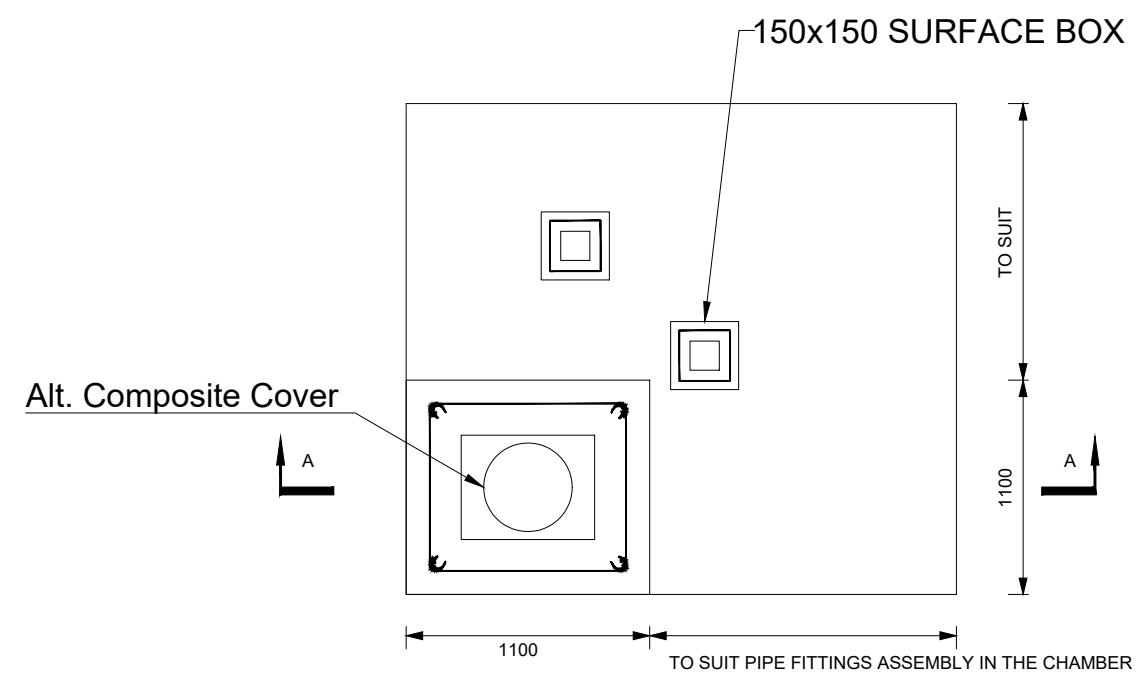
1. Granular bedding material (10 - 20 mm size) compacted in 50 mm layers to a thickness of 100 mm or as directed by the engineer's representative.
2. Approved granular bedding material compacted in layers as per note 2. careful tamping on either the pipe should be maintained to ensure equal pressure on both sides of the bedding.
3. Approved granular bedding material compacted in shallow layers to a maximum of 150 mm thick a,b,c and 75 mm thick type d.
4. As in above, but excessive tamping to be avoided.
5. Normal backfill material properly rammed in layers. not exceeding 150 mm thick.
6. Approved granular backfill material compacted to 90 % mpd in layers as per note 2.



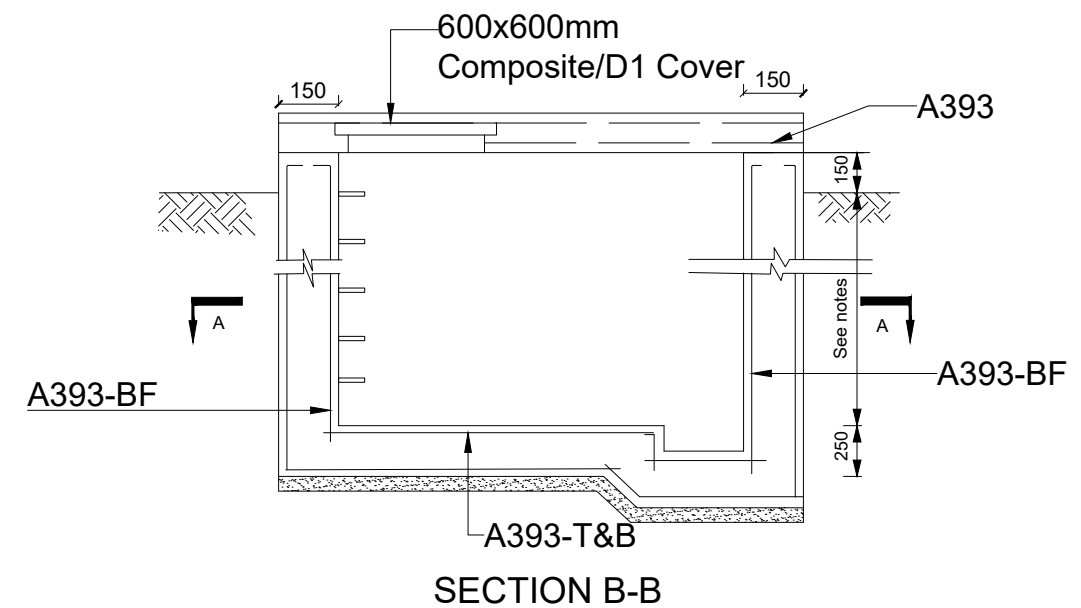
SECTIONAL PLAN A-A



SECTION A-A



ROOF SLAB



SECTION B-B

NOTES

1. Floor of chamber to be 250 below pipe IL.
2. For details of cover slab see General notes.

LEGEND

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**NYAGAK WATER SUPPLY AND
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REVISIONS :

No	Date	Description

DRAWING TITLE : **STANDARD DRAWINGS**
Reinforcement Details for Washout/Gate Valve Chamber and Roof Slab Details

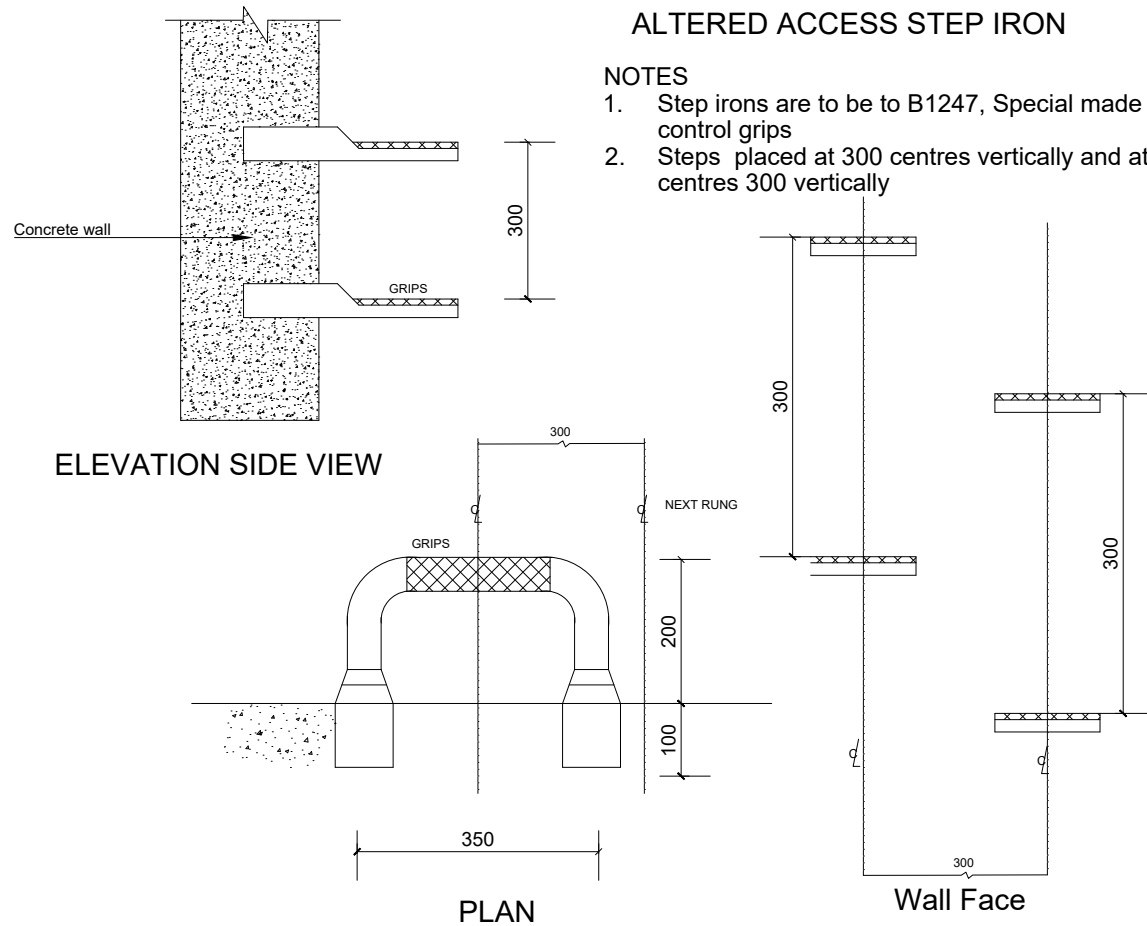
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Date:	January 2023
DRG. No.:	ALA-ORA-SD-008
Scale:	1:120
Sheet No.:	1 of 1

LEGEND

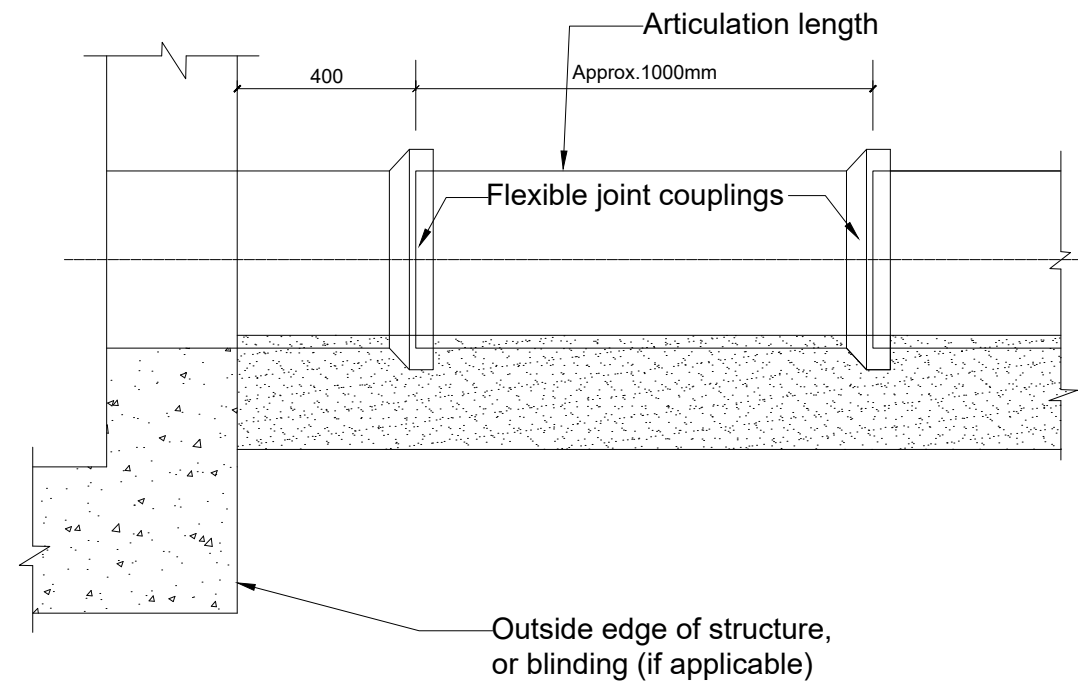
ALTERED ACCESS STEP IRON

NOTES

1. Step irons are to be to B1247, Special made with slid control grips
2. Steps placed at 300 centres vertically and at alternate centres 300 vertically



FLEXIBLE PIPE JOINT DETAILS FOR PIPES ENTERING OR LEAVING CONCRETE STRUCTURES



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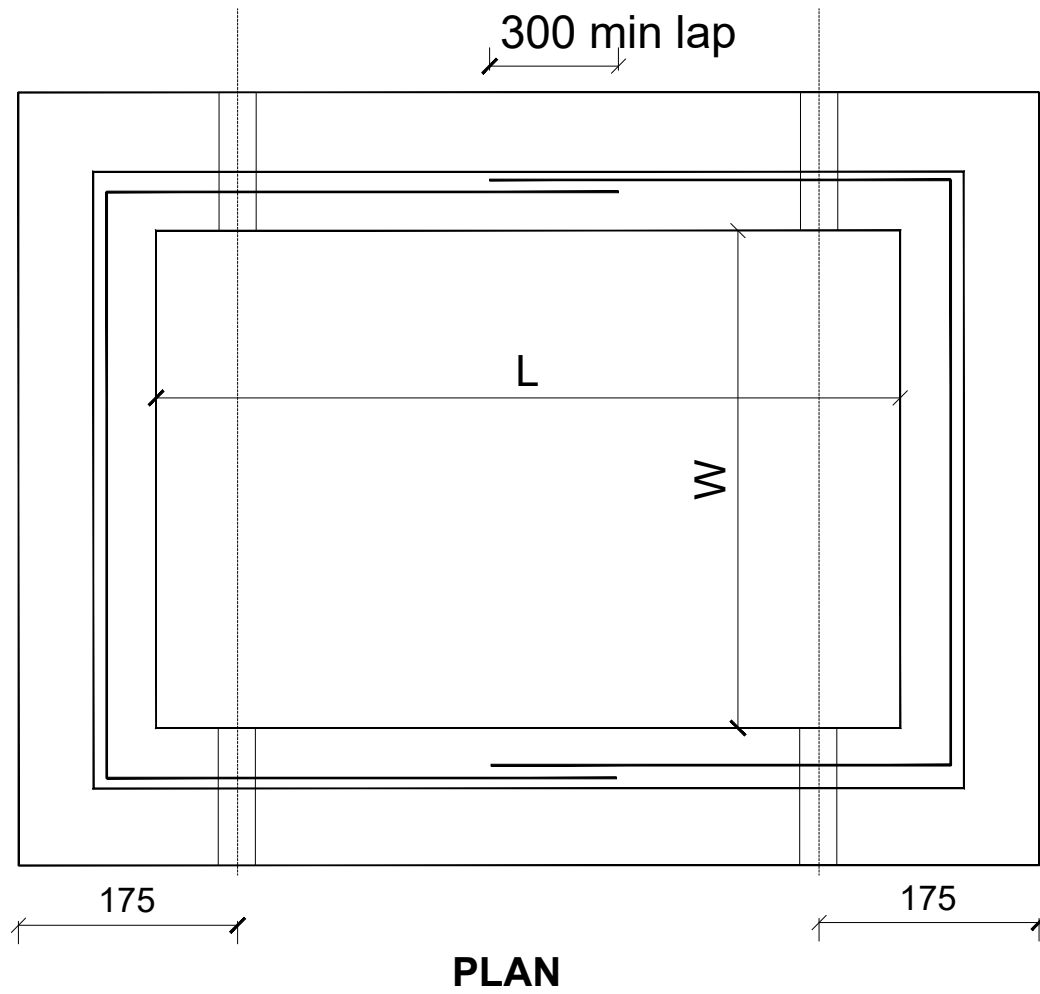
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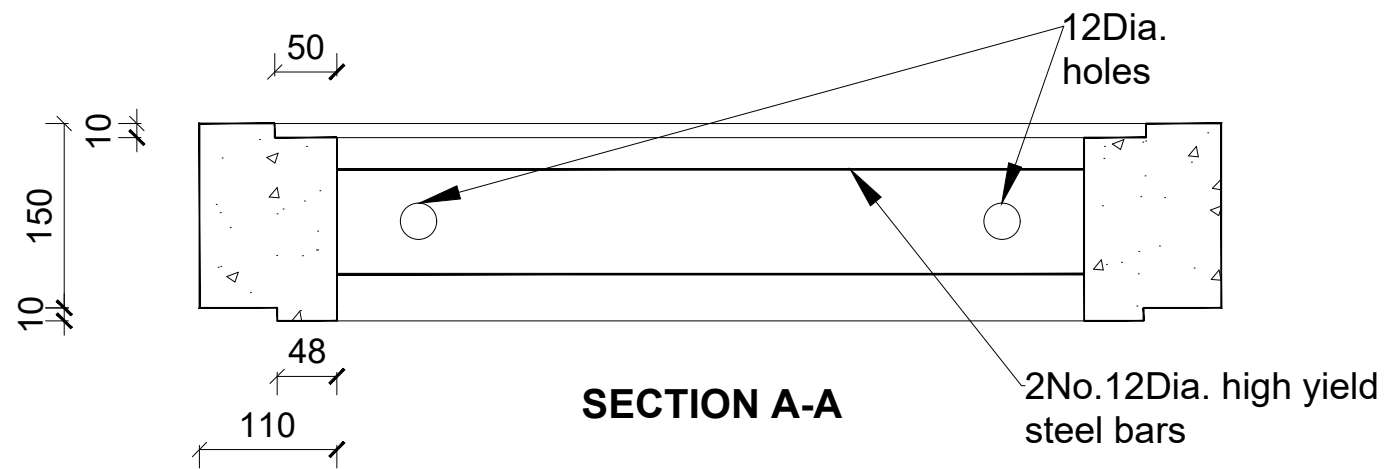
DRAWING TITLE : **STANDARD DRAWINGS**
Step Iron and Flexible Pipe Joint Details

Surveyed by: R.K
 Drawn by: N.R
 Designed by: W.G.M
 Checked by: J.K.K
 Date: January 2023
 DRG. No.: **ALA-ORA-SD-009**
 Scale: 1:120 Sheet No.: 1 of 1


LEGEND



TYPE	L	W
A	430	200
B	600	450
C	750	600
D	900	600
E	1200	600
F	1200	900



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REVISIONS :

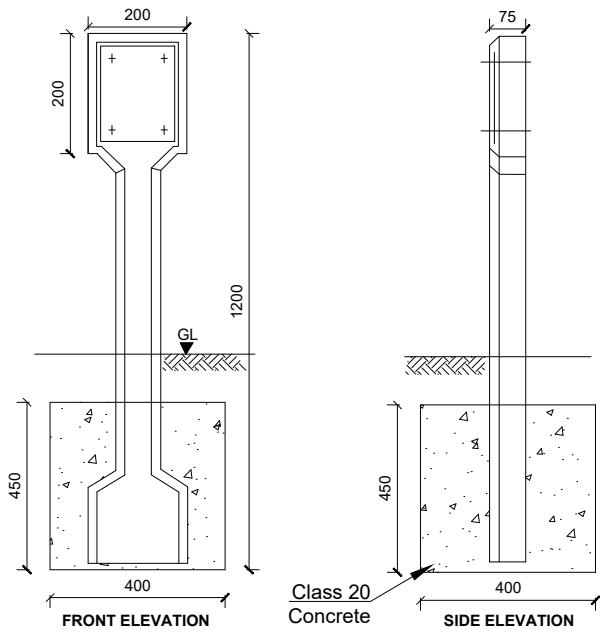
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DRAWING TITLE : **STANDARD DRAWINGS**
Precast Chamber Cover slab and Section

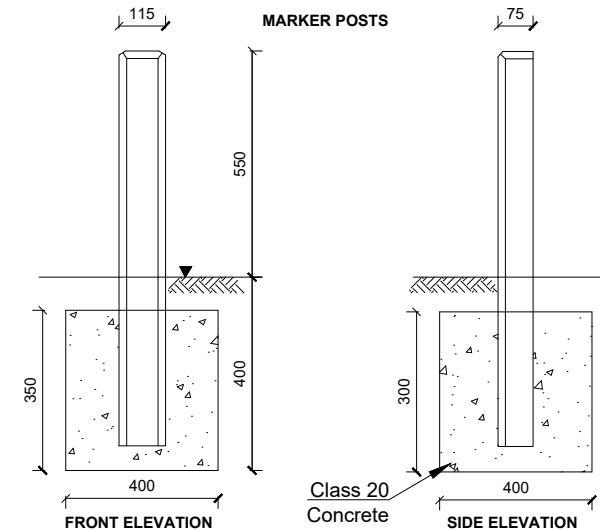
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Designed by:	W.G.M
Checked by:	J.K.K
Date:	January 2023
DRG. No.:	ALA-ORA-SD-010
Scale:	1:120
Sheet No.:	1 of 1

LEGEND

INDICATOR POSTS

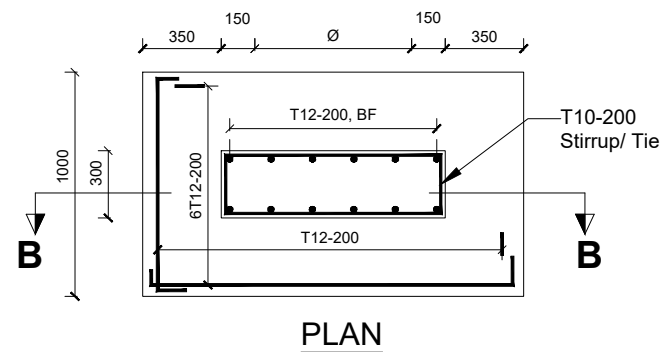


MARKER POSTS



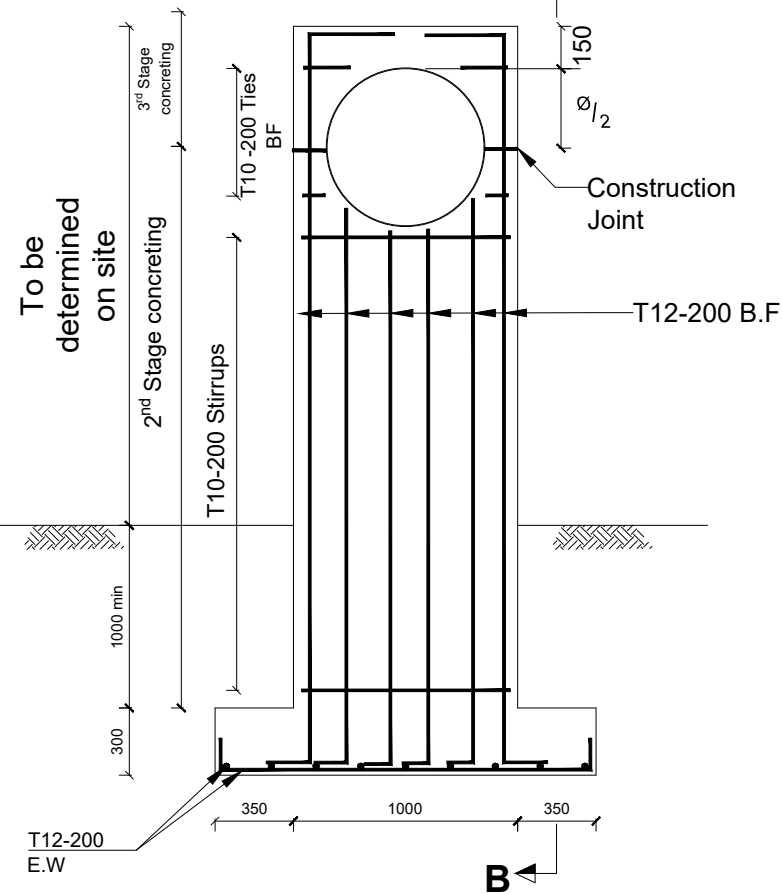
STANDARD PIPE SUPPORT ABOVE GROUND

Alternative 1 - In situ



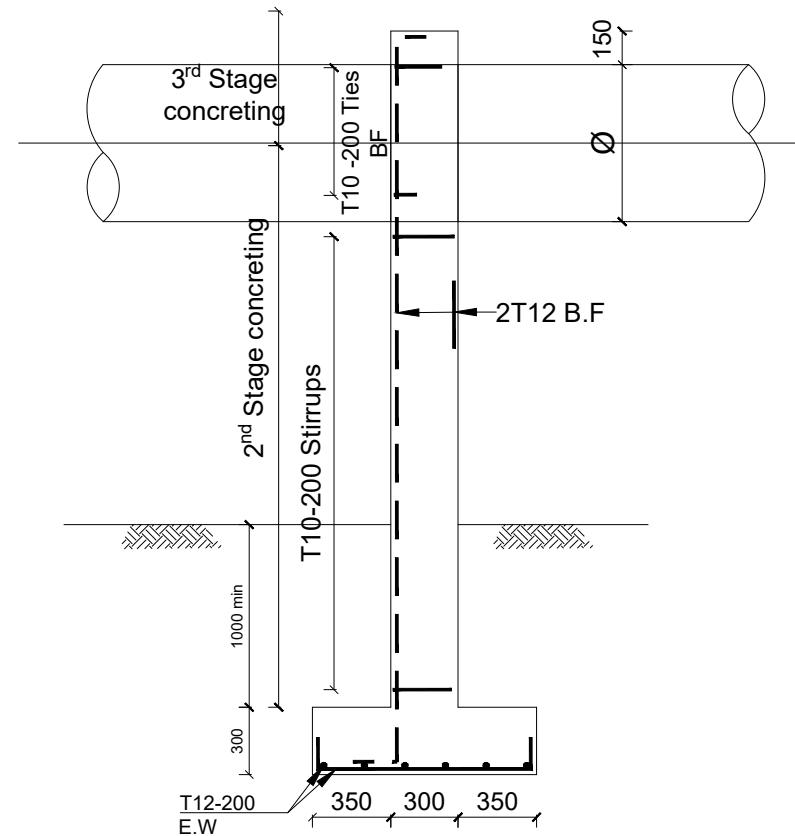
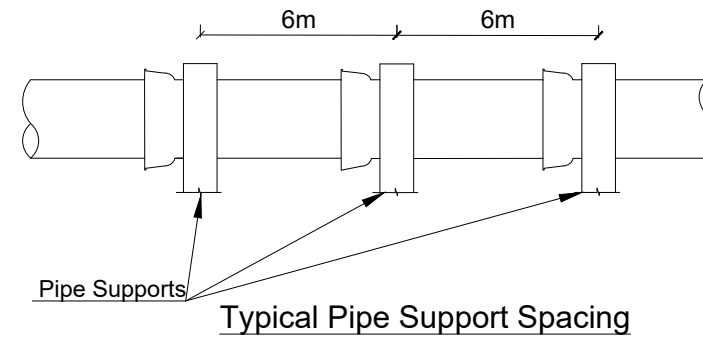
PLAN

OD+300
OD



SECTION A-A
1:25

Note:
All Pipe Surfaces in contact with Concrete are to be rapped in 2 layers of Guage 1000 Polythene Sheeting



SECTIONAL ELEVATION B-B
1:25

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PROJECT :
ALA-ORA WATER SUPPLY AND SANITATION PROJECT

NYAGAK WATER SUPPLY AND SANITATION SYSTEM

REVISIONS :

No	Date	Description

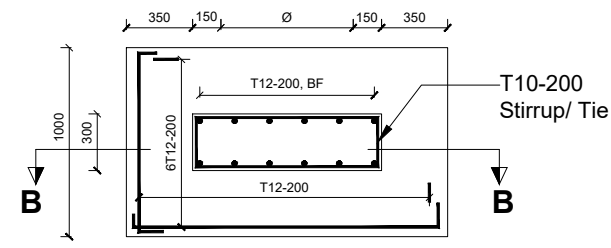
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Marker Post and Pipe Support Details

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Scale:	1:120
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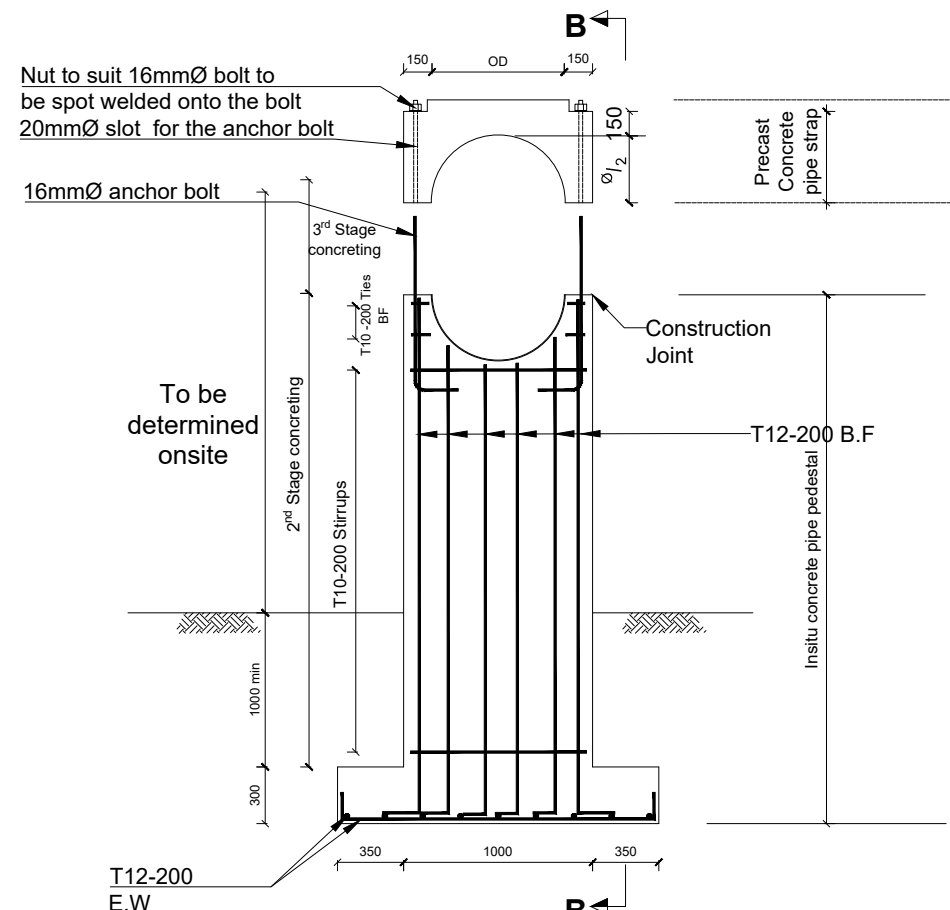
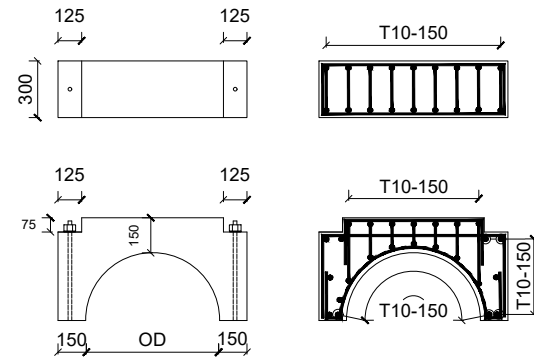
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STANDARD PIPE SUPPORT ABOVE GROUND

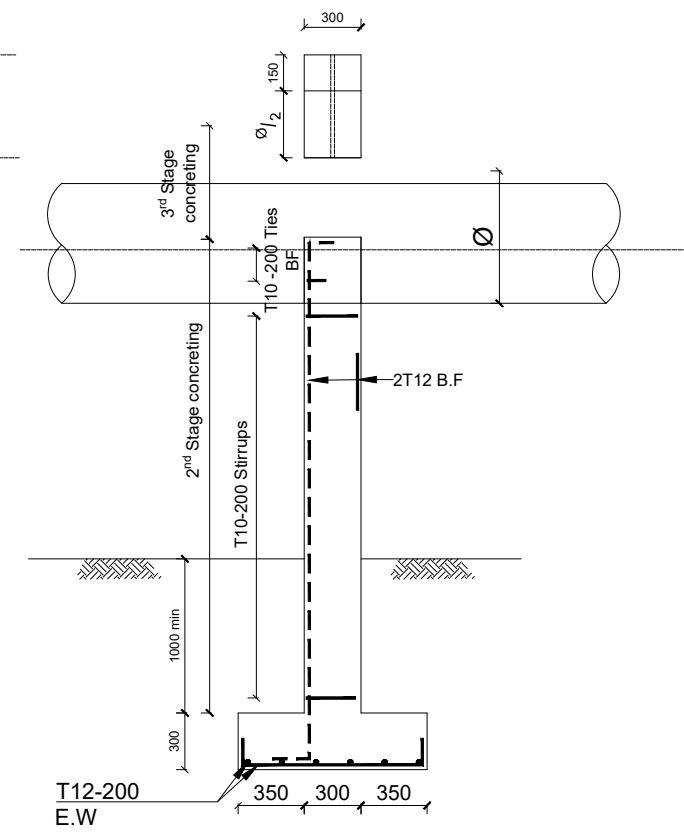
Alternative 2 - Insitu with a precast concrete strap



PLAN



SECTION A-A
1:25




SECTIONAL ELEVATION B-B
1:25

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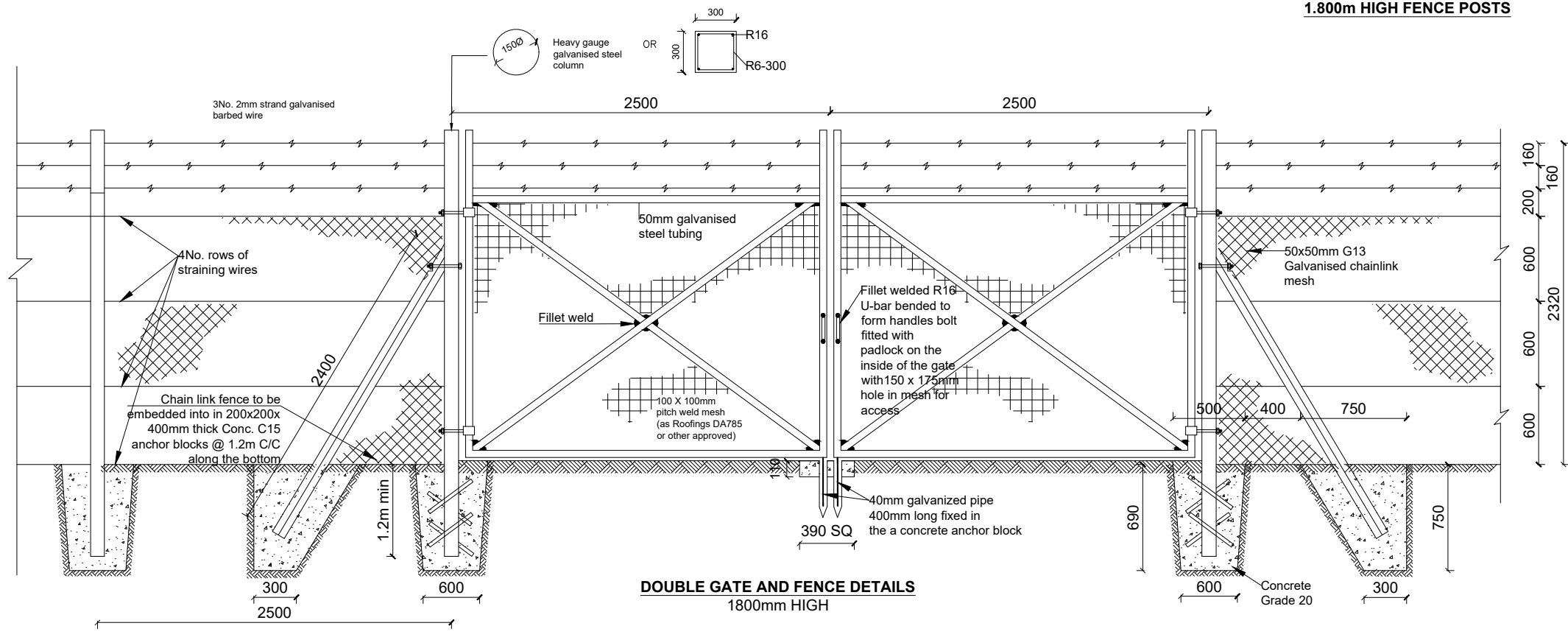
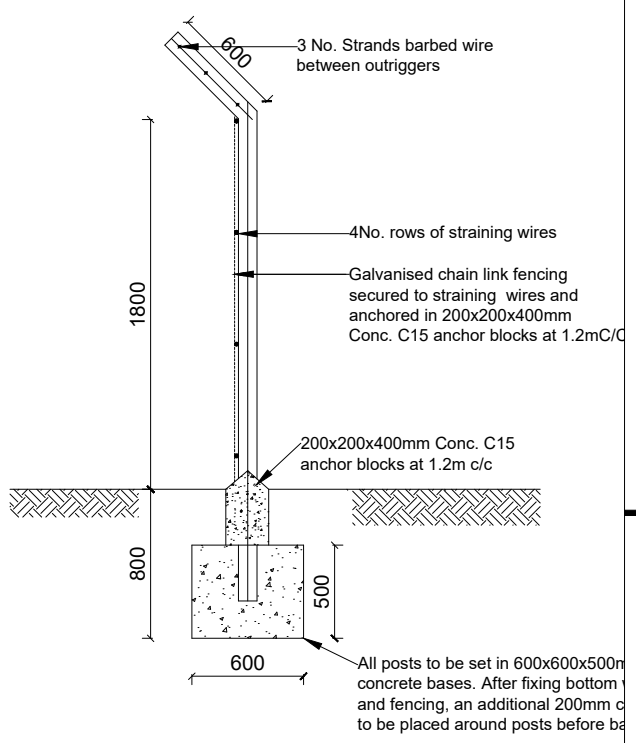
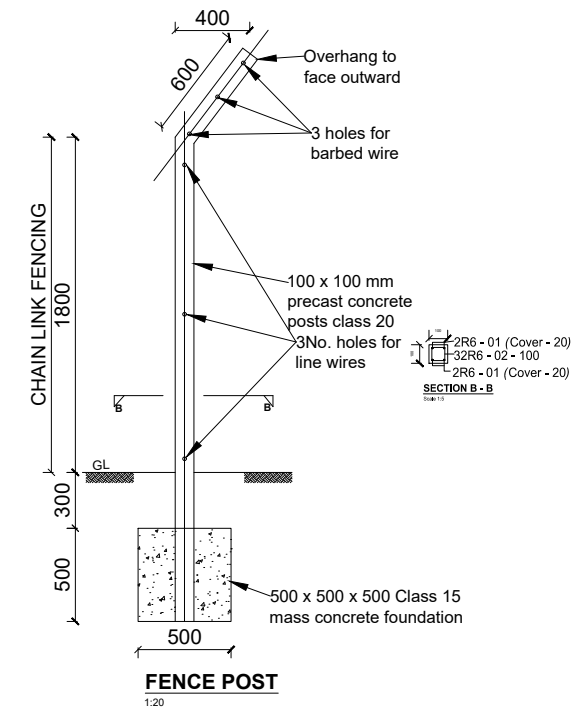
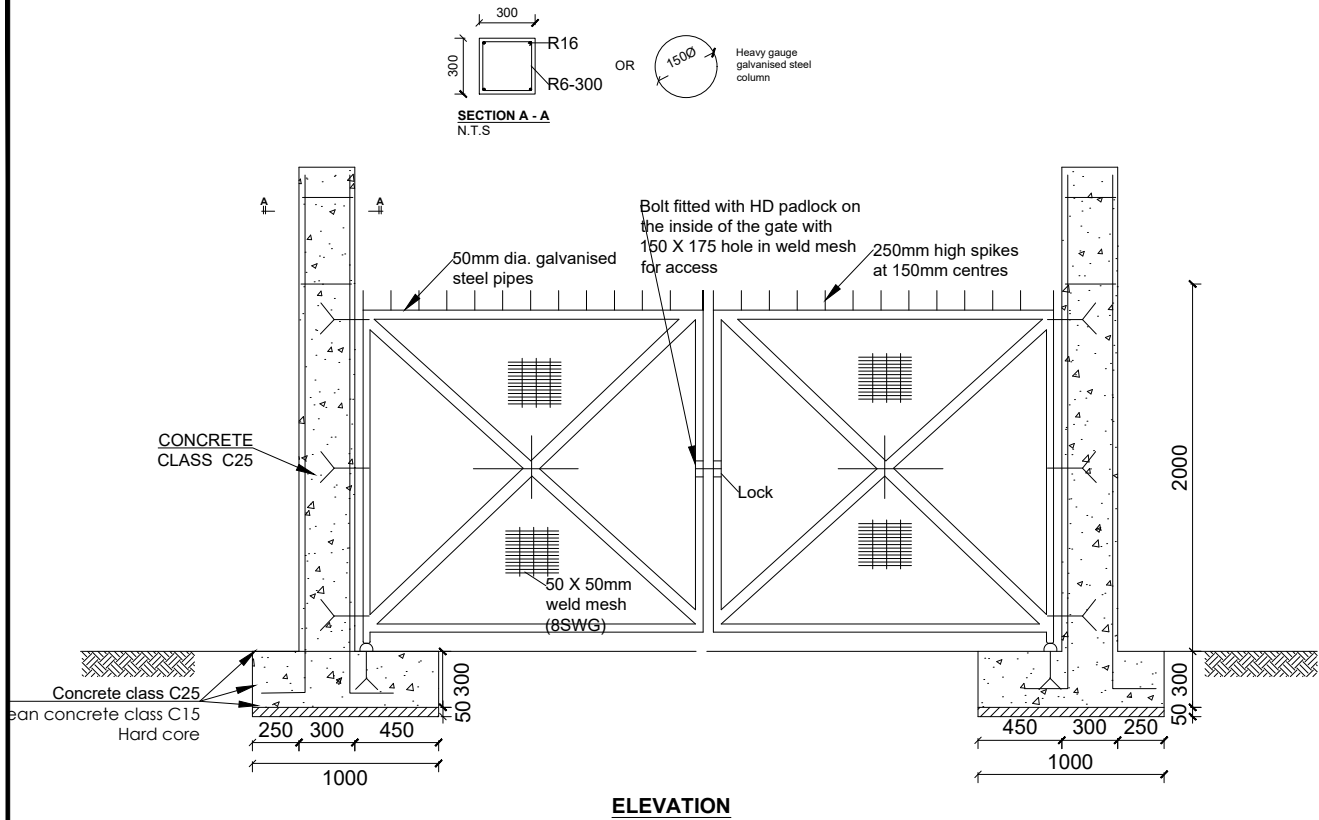
REVISIONS :

No	Date	Description

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Marker Post and Pipe Support Details

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Sheet No.:	2 of 2

FENCE DETAILS



LEGEND

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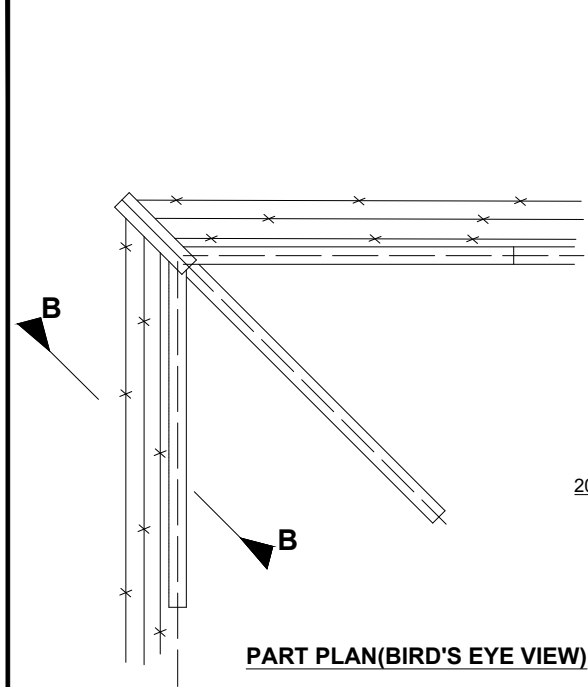
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Fence details

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Date:	January 2023
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Scale:	1:120
Sheet No.:	1 of 2

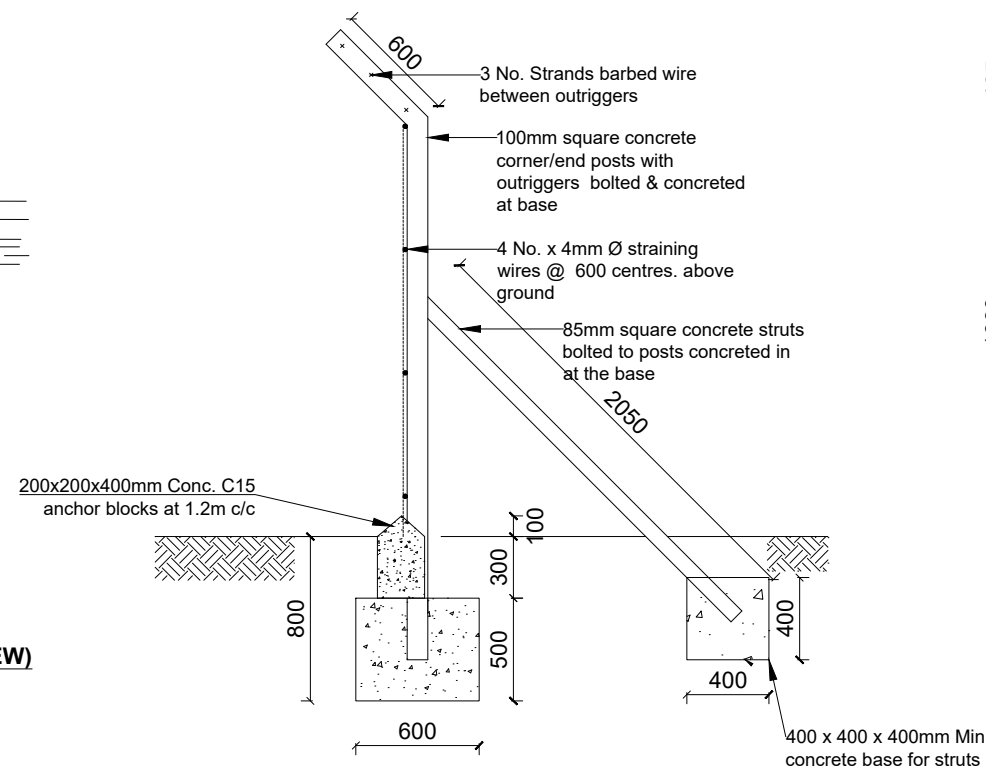
FENCE DETAILS

LEGEND

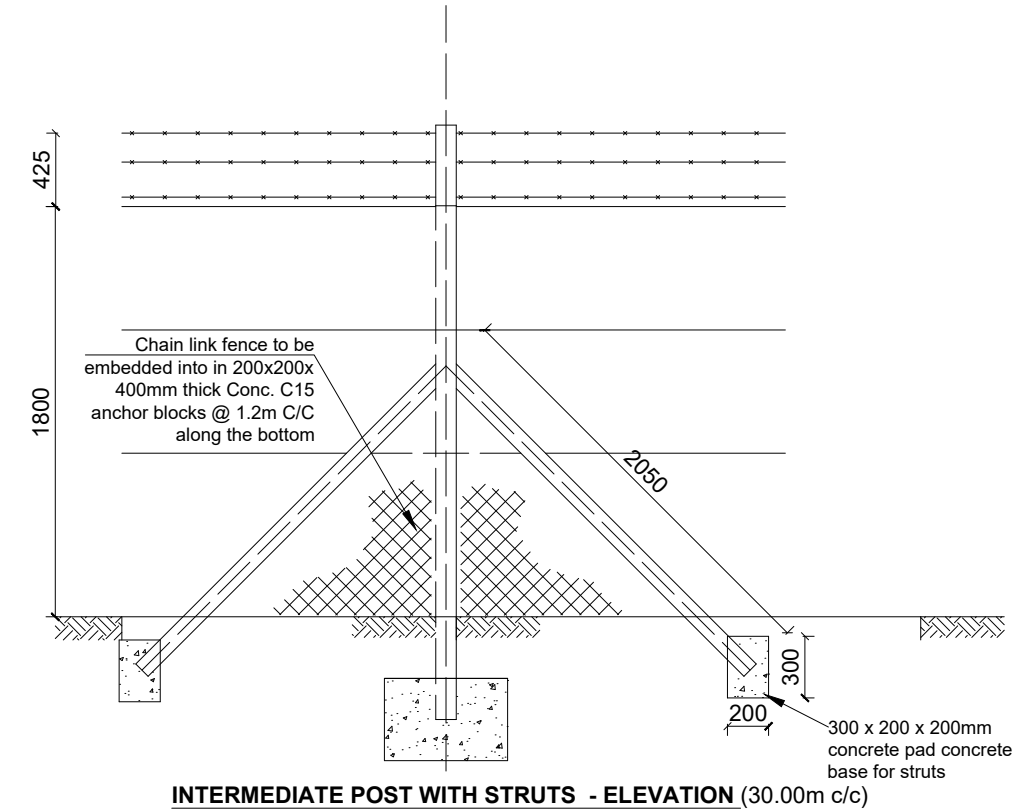


PART PLAN (BIRD'S EYE VIEW)

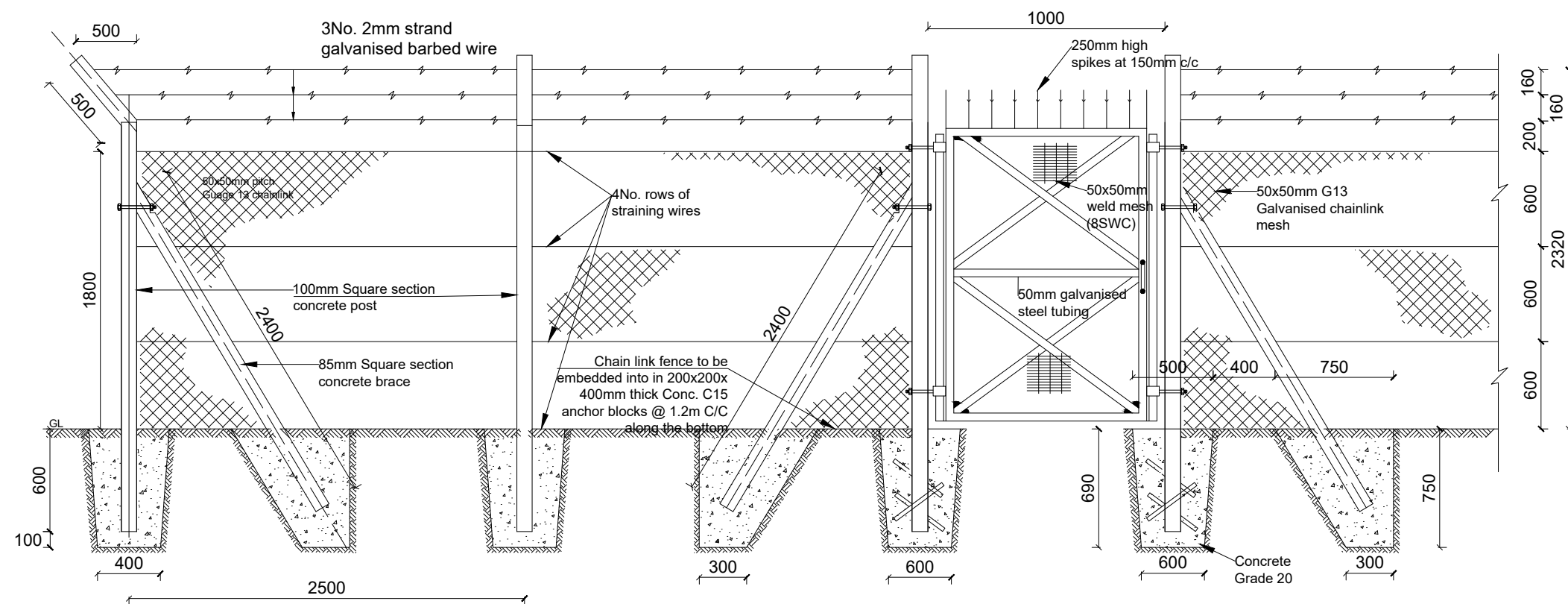
CORNER POSTS



CORNER/END POSTS SECTION B-B



INTERMEDIATE POST WITH STRUTS - ELEVATION (30.00m c/c)



SMALL GATE AND FENCE DETAILS


- NOTE:
1. Pedestrian Gate specification similar to the Vehicular gate in all aspects except width.

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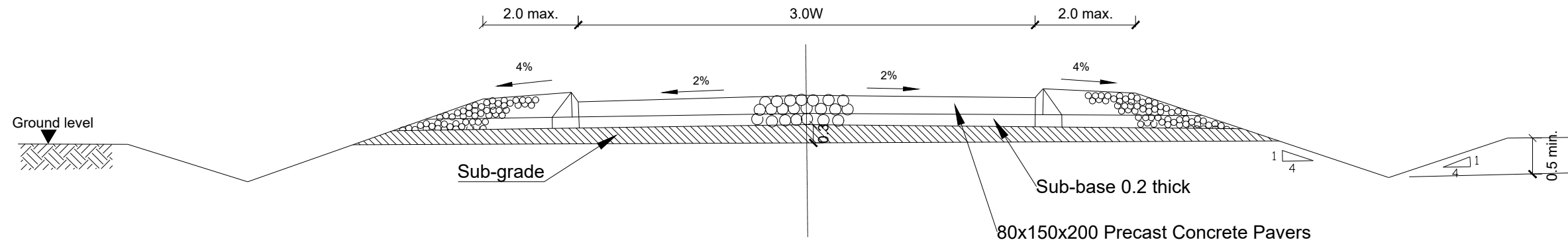
REVISIONS :

No	Date	Description

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Fence Details

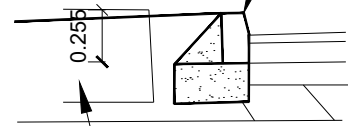
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Scale:	1:120
Sheet No.:	2 of 2

ROAD WORKS

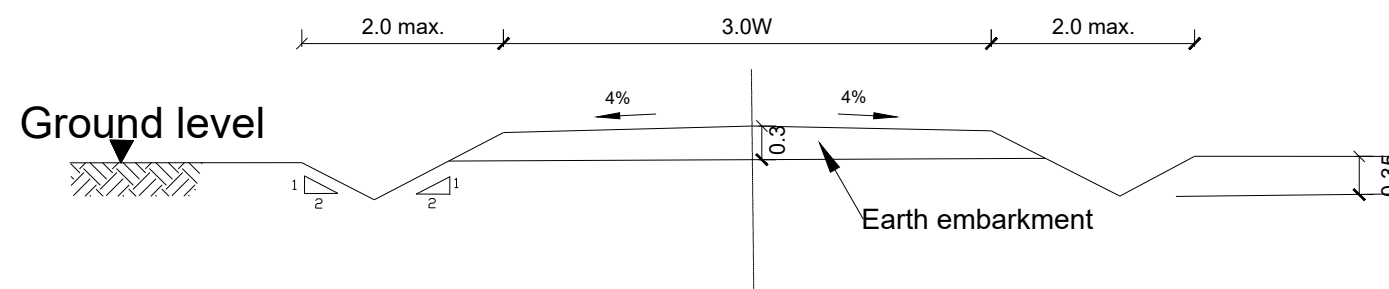
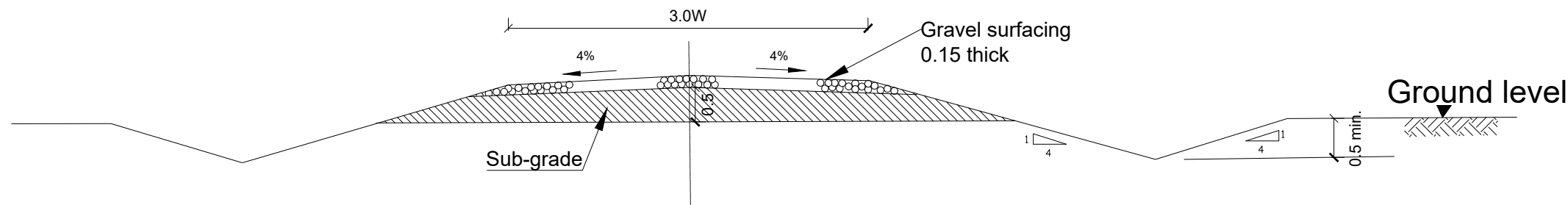


SURFACE ROAD

0.205x0.125 (nominal) half-batter precast concrete kerb

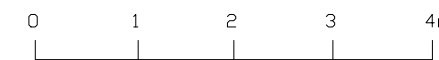


0.2 Minimum varies to suit sub-base thickness



FARM ACCESS ROAD

ROAD WORKS DETAILS



LEGEND

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NYAGAK WATER SUPPLY AND SANITATION SYSTEM

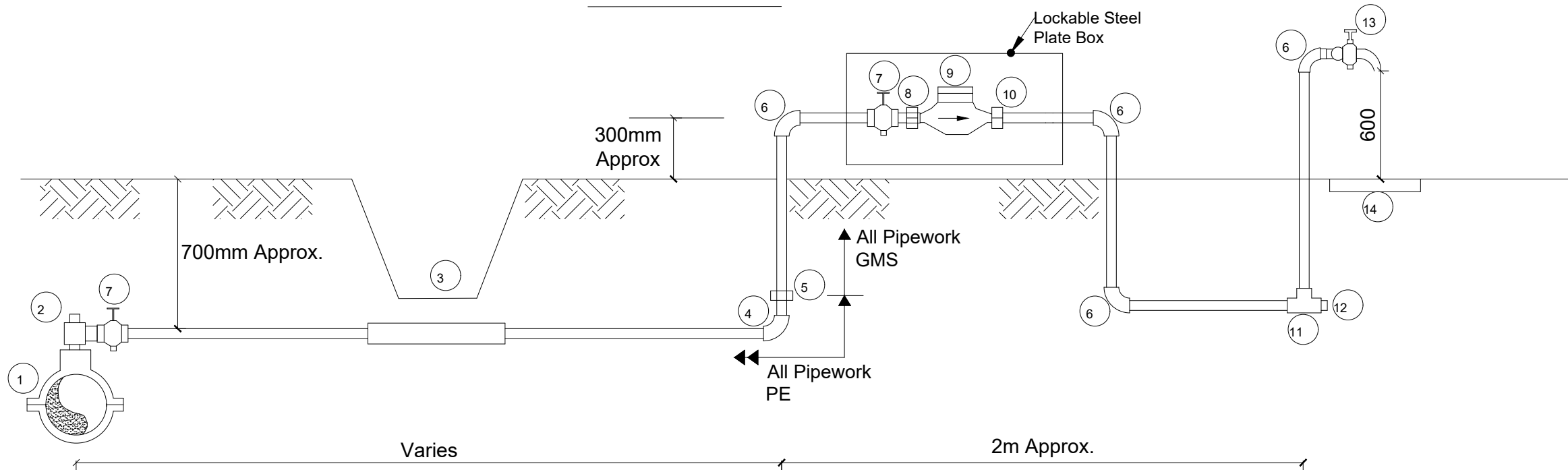
REVISIONS :

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DRAWING TITLE : **STANDARD DRAWINGS**
Road Works

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Scale:	1:120
Sheet No.:	1 of 1

YARD TAP



SCHEDULE OF FITTINGS

ITEM NO.	DESCRIPTION	NO. REQUIRED PER CONNECTION
1.	PVC Saddle Clamp	1
2.	PE Outlet type swivel ferule	1
3.	1m Length GMS sleeve	1 (optional)
4.	PE Elbow	1
5.	PE/GMS Adaptor	4
6.	GMS Elbow	3
7.	Stop cock	1
8.	Male threaded connector	1
9.	Water meter	1
10.	Adjusting coupling	1
11.	GMS equal tee	1
12.	Plug	1
13.	Tap	3
14.	600x600x50mm RC precast reinforced	1
15.	with a G10 (3.0mm Ø x 60 x 60mm pitch) steel fabric Purpose made Lockable Meter protection casing made of 3mm Ms plate Complete including Painting and a 50mm Padlock	

NOTES:

- GMS pipe ends to be screwed with tapered threads to ISO R7 and to be supplied with sealing PTFE tape
- GMS pipe fittings to be malleable cast iron to BS 143 and BS 1256 with female threaded ends
- The adjusting coupling shall be made of bronze or brass with a threaded female connection at the outlet end. It shall incorporate sufficient adjustment to permit removal at the meter
- All PE connections shall be of the push fit type
- Diameter of pipe varies
- The Meter Protection shall be robust and be able to enclose the Meter and Stop clocks.

LEGEND

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NYAGAK WATER SUPPLY AND SANITATION SYSTEM

REVISIONS :		
No	Date	Description

DRAWING TITLE : **STANDARD DRAWINGS**
Tape Yard

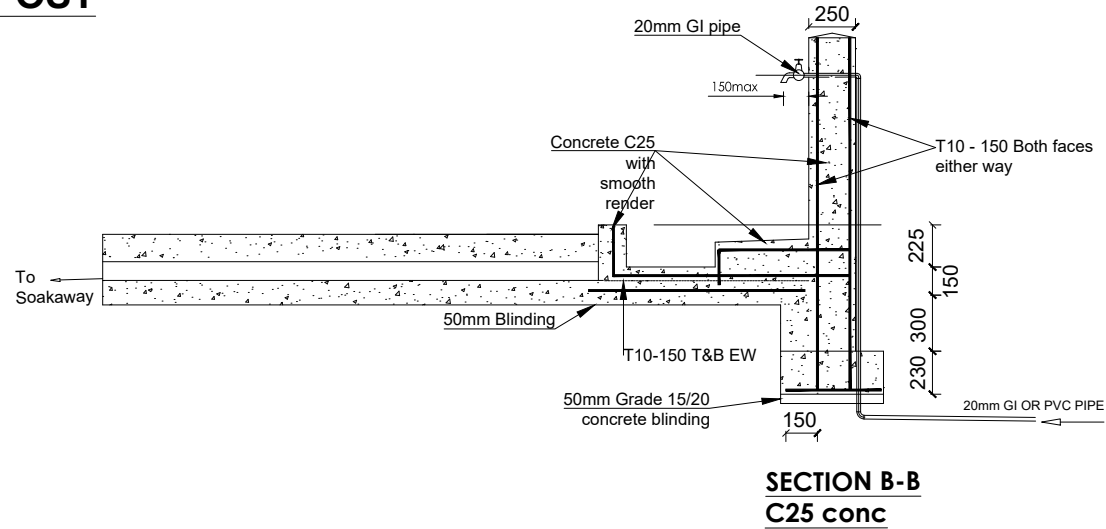
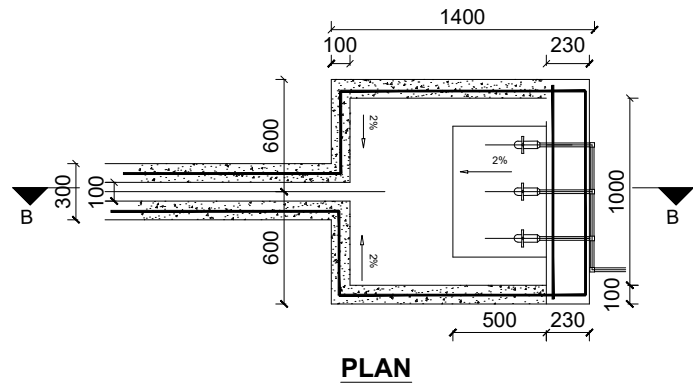
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 Designed by: W.G.M
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Date: January 2023

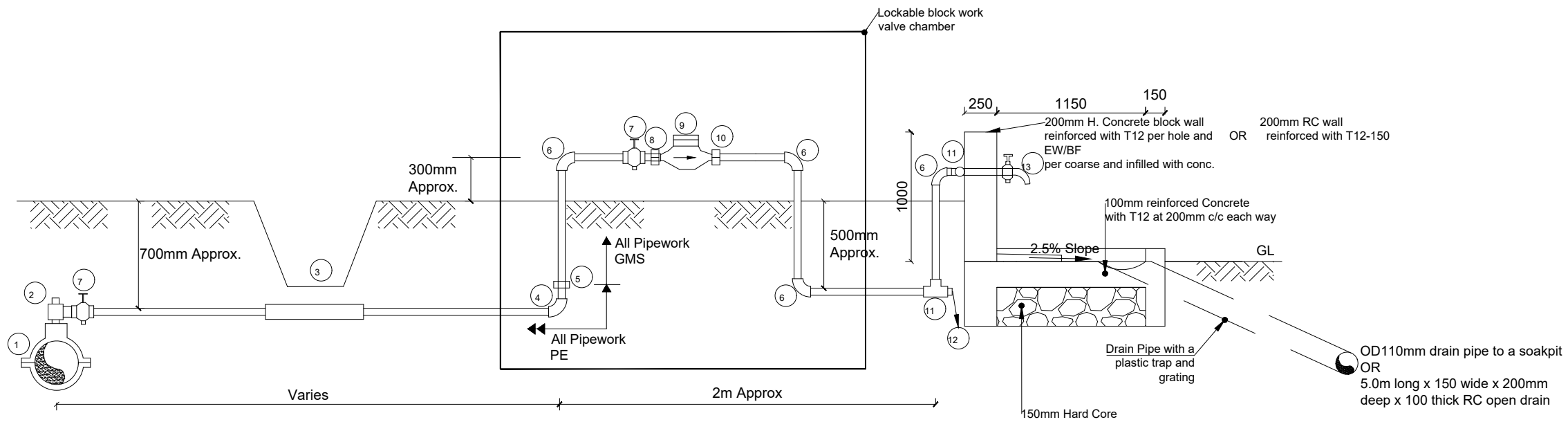
DRG. No.: **ALA-ORA-SD-014**

Scale: 1:120 Sheet No.: 1 of 1

STAND POST



LEGEND



SCHEDULE OF FITTINGS

ITEM NO.	DESCRIPTION	NO. REQUIRED PER CONNECTION
1.	PVC Saddle Clamp	1
2.	PE Outlet type swivel ferule	1
3.	1m Length GMS sleeve	1 (optional)
4.	PE Elbow	1
5.	PE/GMS Adaptor	1
6.	GMS Elbow	6
7.	Stop cock	3
8.	Male threaded connector	1
9.	Water meter	1
10.	Adjusting coupling	1
11.	GMS equal tee	3
12.	Plug	1
13.	Tap	3

NOTES:

- GMS pipe ends to be screwed with tapered threads to ISO R7 and to be supplied with sealing PTFE tape
- GMS pipe fittings to be malleable cast iron to BS 143 and BS 1256 with female threaded ends
- The adjusting coupling shall be made of bronze or brass with a threaded female connection at the outlet end. It shall incorporate sufficient adjustment to permit removal at the meter
- All PE connections shall be of the push fit type
- Diameter of pipe varies
- The Meter Protection shall be robust and be able to enclose the Meter and Stop clocks.

NOTE:

Soak pit to be 2.0m Ø by 2.0m deep with hardcore fill of 300mm min size covered with 2 layers of gauge 1000 polythene sheet

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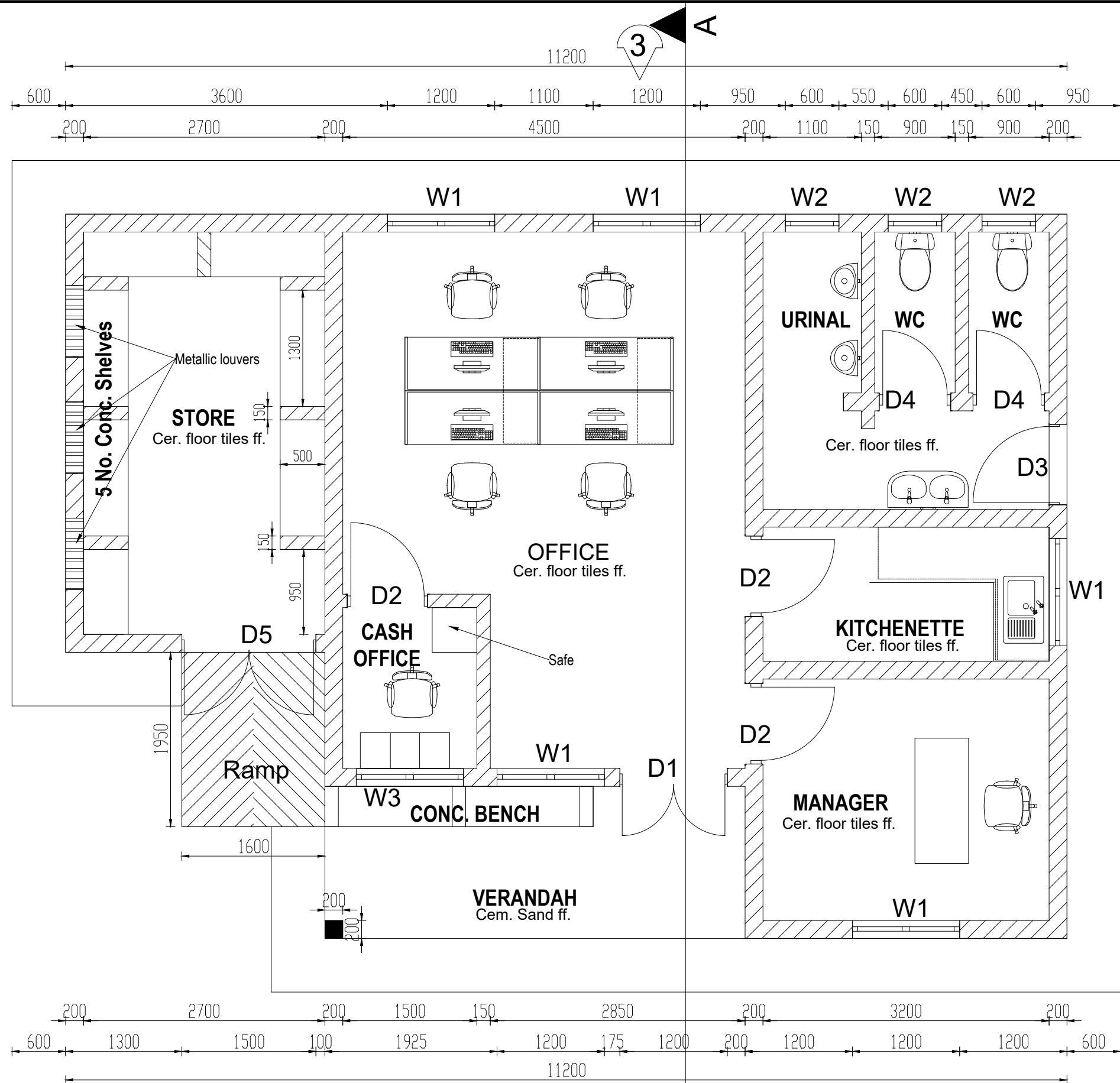
NYAGAK WATER SUPPLY AND SANITATION SYSTEM

REVISIONS :

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Stand Post

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PLAN

LEGEND

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NYAGAK WATER SUPPLY AND SANITATION SYSTEM

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Water Office

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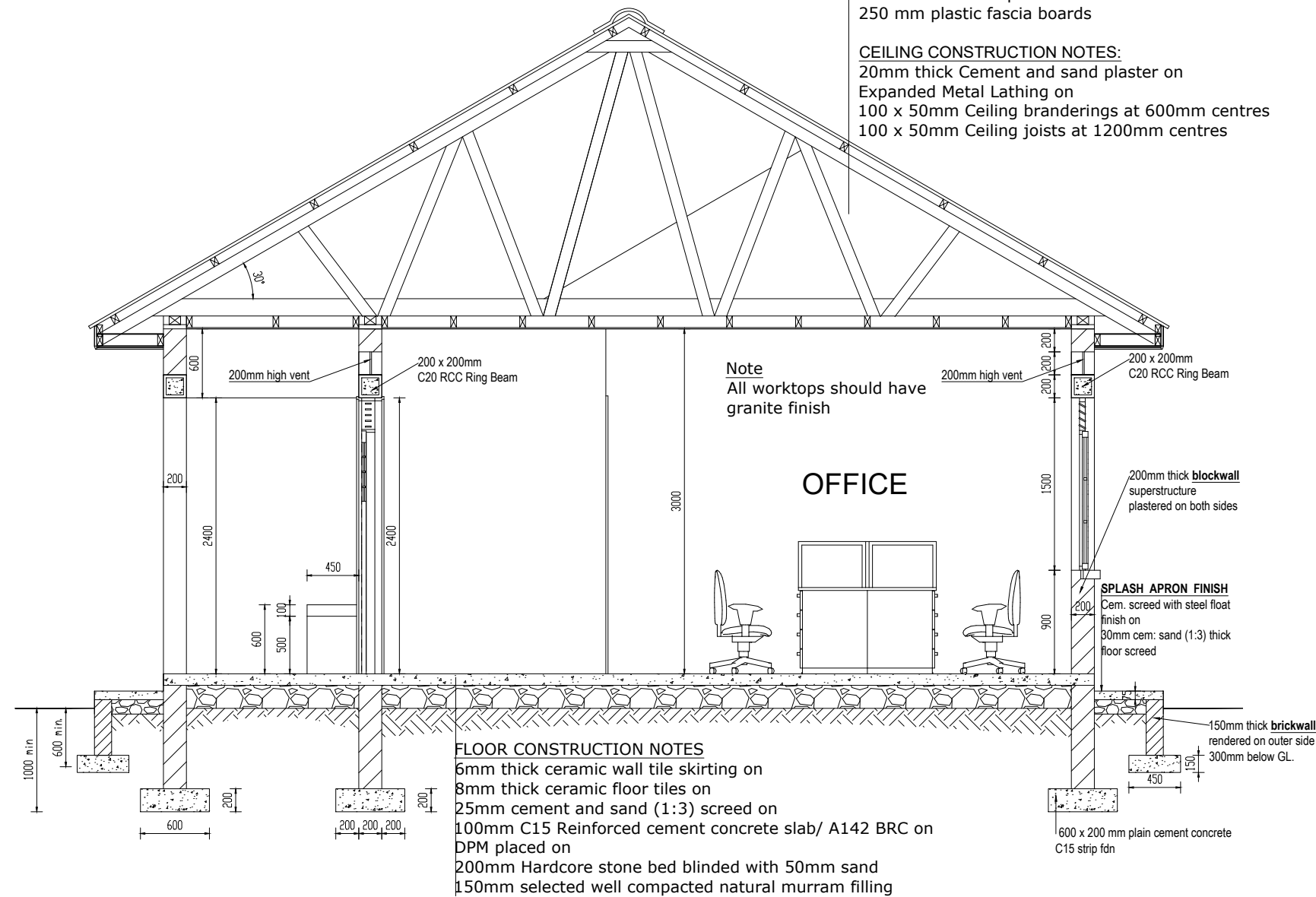
LEGEND

ROOF NOTES : pitch 25°

Fire clay ridge cap/Mangalore roofing tiles on
 50 X 25 timber battens with
 gauge 32 GI plane sheet
 Pressure treated roofing soft wood timber
 Double 100 x 50 mm timber rafters with
 100x 50mm struts & ties in truss with
 75 x 50 mm purlins on
 150 x 50mm tie beam on
 150 x 75 mm wall plate
 250 mm plastic fascia boards

CEILING CONSTRUCTION NOTES:

20mm thick Cement and sand plaster on
 Expanded Metal Lathing on
 100 x 50mm Ceiling branderings at 600mm centres
 100 x 50mm Ceiling joists at 1200mm centres



Note
 All worktops should have
 granite finish

OFFICE

FLOOR CONSTRUCTION NOTES

6mm thick ceramic wall tile skirting on
 8mm thick ceramic floor tiles on
 25mm cement and sand (1:3) screed on
 100mm C15 Reinforced cement concrete slab/ A142 BRC on
 DPM placed on
 200mm Hardcore stone bed blinded with 50mm sand
 150mm selected well compacted natural murrum filling

SECTION A-A

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 Water Office**

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Designed by:

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Date:

January 2023

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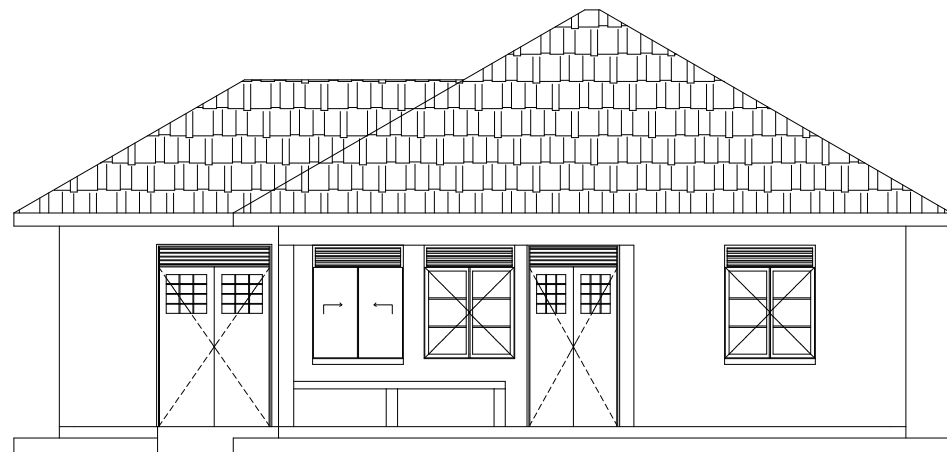
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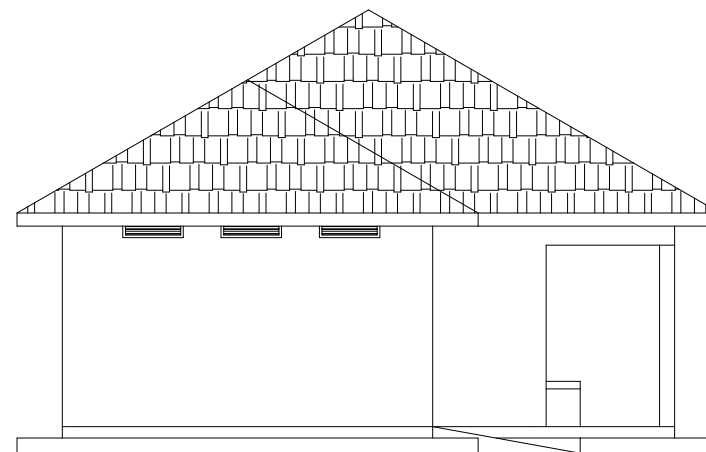
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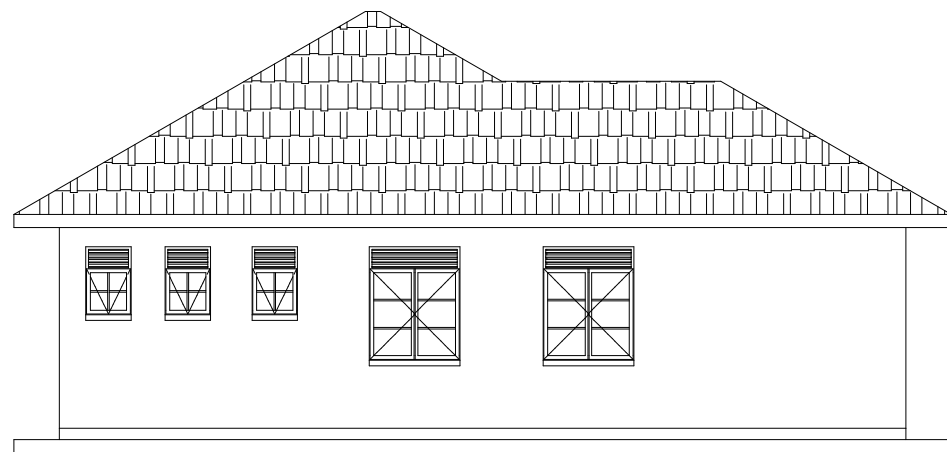
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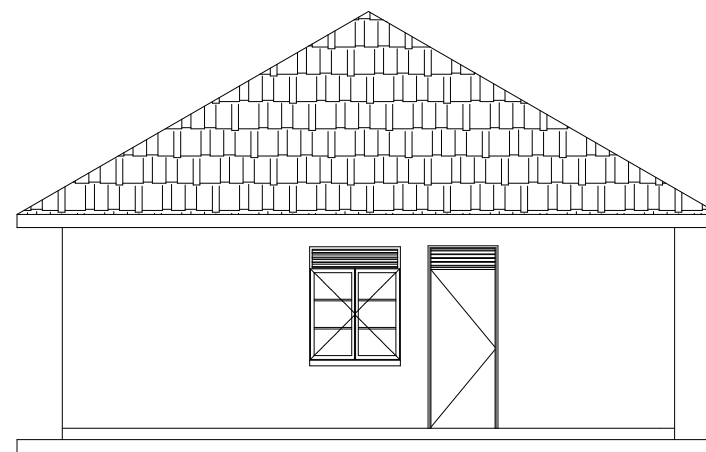
ELEVATION 1



ELEVATION 2



ELEVATION 3



ELEVATION 4

Door Schedule

Door Name	D1	D2	D3	D4	D5
Quantity	2	3	1	2	1
W x H Size	1200x2400	900x2400	900x2400	800x2400	1500x2400
Elevation View					
	Double Leaf Metallic Casement Door	Single Leaf Wooden Paneled Door	Single Leaf Half Glazed/ Half Steel plate Door	Single Leaf Wooden Paneled Door	Double Leaf Metallic Casement Door

Window Schedule

Window Name	W1	W2	W3
Quantity	5	3	1
W x H Size	1200x1500	600x900	1200 X 1500
Elevation View			
	Double Sash Glazed Metallic Casement	Top Hung Metallic Casement	Metallic Double sash sliding
NB.	<ul style="list-style-type: none"> Glass panes to be $\leq 0.2m^2$ Burglar proofing to be of a 25x3mm flat bar grille with 175x300mm pitch. Permanent Vents are to be fitted with mosquito proofing nets i.e plastic net sandwiched with coffeetray mesh. All metallic window & Door sections to be 3.0mm minimum thickness 		

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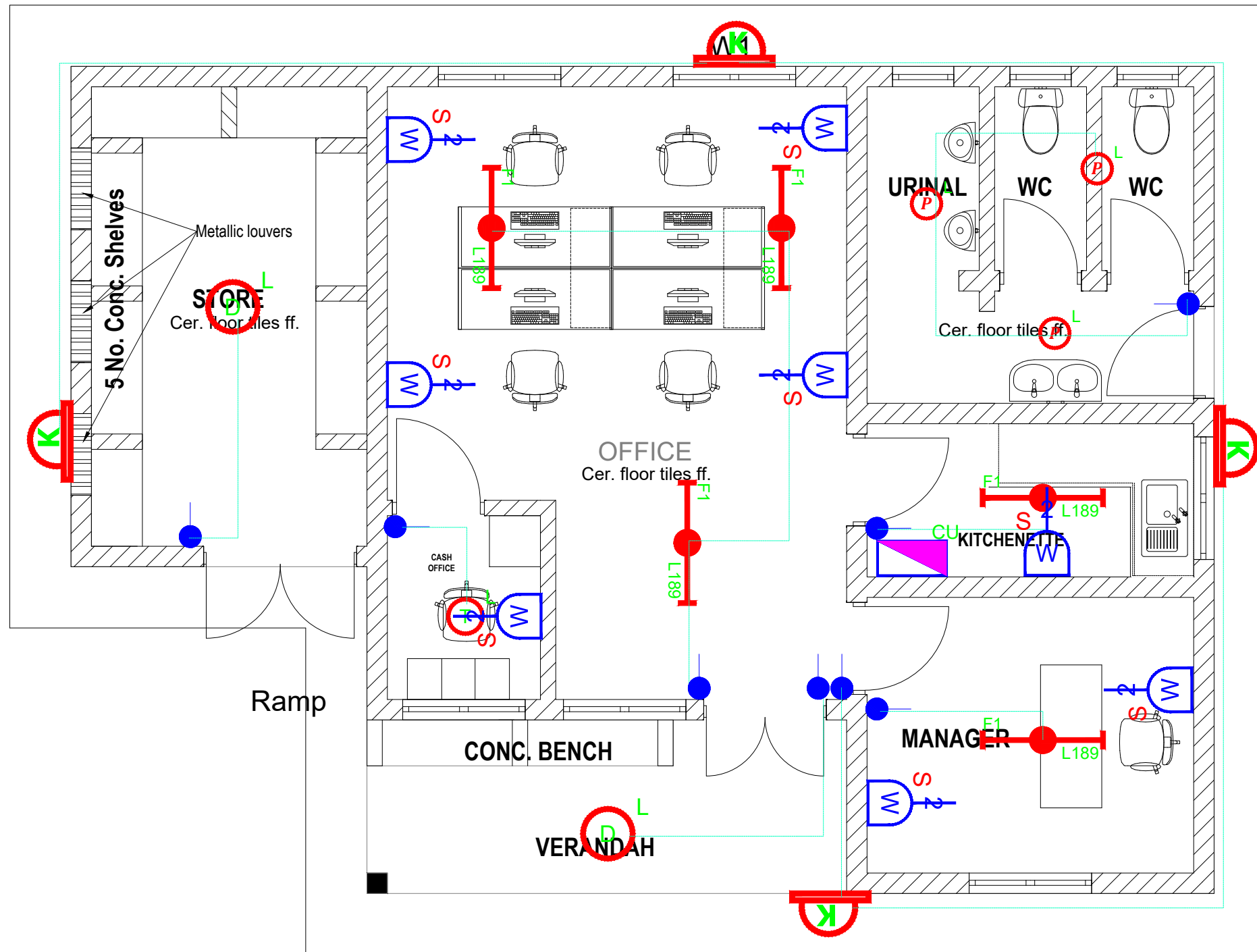
NYAGAK WATER SUPPLY AND SANITATION SYSTEM

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 Water Office

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Scale:	1:100
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- 1). ALL WALL BRACKETS SHALL BE MOUNTED 1800mm ABOVE FINISHED FLOOR LEVEL
- 2). TELEPHONE, SOCKETS, T.V AND COMPUTER OUTLETS SHALL BE MOUNTED 300mm ABOVE FINISHED FLOOR LEVEL EXCEPT WHERE THEIR IS A WORKTOP.
- 3). WHERE THEIR IS A WORKTOP, TELEPHONE, SOCKETS, T.V AND COMPUTER OUTLETS SHALL BE MOUNTED 150mm ABOVE WORKTOPS.
- 4). CONSUMER UNITS SHALL BE 1800mm ABOVE FINISHED FLOOR LEVEL
- 5). ALL SWITCHES SHALL BE 1400mm ABOVE FINISHED FLOOR LEVEL
- 6). ALL OUTSIDE SOCKETS SHOULD BE WEATHER PROOF
- 7). ALL SHAVER SOCKETS SHOULD BE ON THE RIGHT HAND SIDE OF THE WASH HAND BASIN
- 8). ALL CABLES MUST BE STRANDED

SYMBOL	DESCRIPTION
	1200mm 18W LED batten with a removable LED engine, IP20 As Thorn PopPack LED. or equal approved. (Light Type F1)
	Pendant lighting fitting comprising ceiling Rose 300mm 3x1.5mm ² flexible copper cable lamp holder and 6W LED Lamp
	Pendant lighting fitting comprising ceiling Rose 300mm 3x1.5mm ² flexible copper cable lamp holder and 6W LED Lamp
	Decorative Bed side lamp complete with flexible spot light arm as LEDS-C4 BALI (05-3217-19-82 + PAN-157-BY) to client's approval.
	wall mounted light
	Socket outlet on Wall
	Consumer's Unit
	One Gang 2way Switch
	Two Gang 2way Switch
	Three Gang 2way Switch
	One Gang 1way Switch
	Two Gang 1way Switch
	Three Gang 1way Switch
	Intermediate Switch
	Photo - Cell

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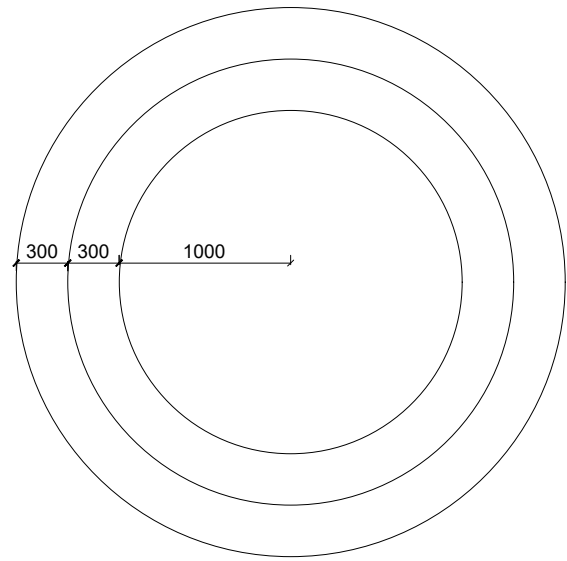
NYAGAK WATER SUPPLY AND SANITATION SYSTEM

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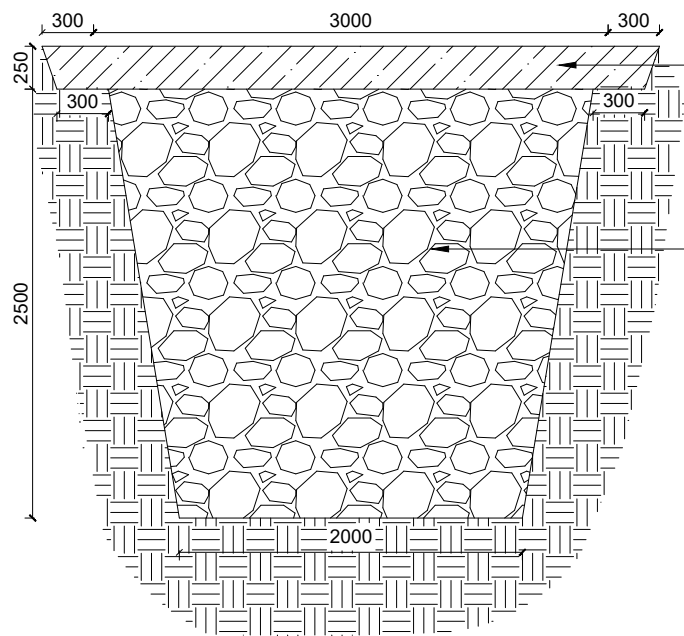
No	Date	Description

DRAWING TITLE : **STANDARD DRAWINGS**
Water Office Type 1- Foundation and Roof layout

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Sheet No.:	5 of 5



Soak Pit Plan

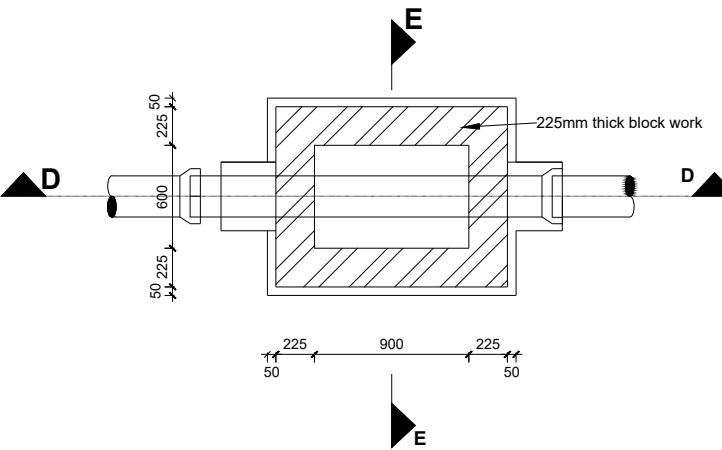
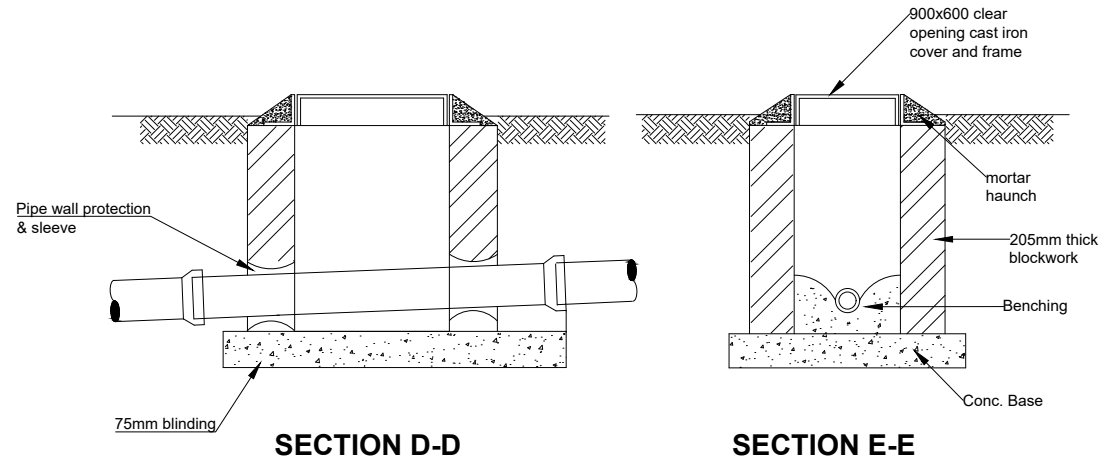


SECTION A - A

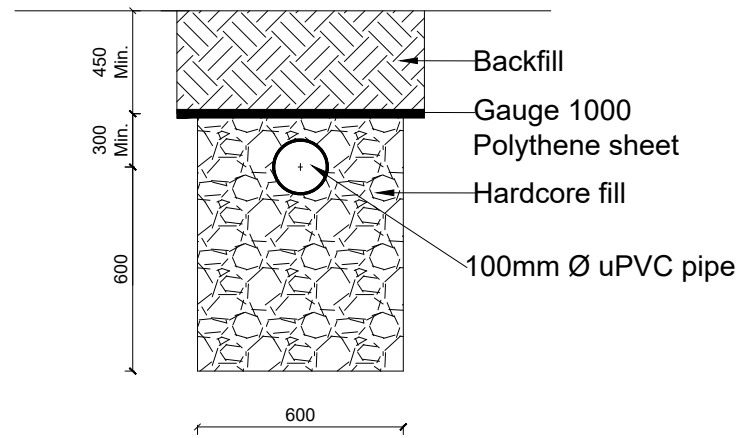
Note:
Detail for areas with sandy or red soils,
for clay or black-cotton soils appropriate
solutions to be determined on site.

Backfill with soil, on filter membrane or Polythene sheet

Loose hardcore fill



**SHALLOW MANHOLE
(DEPTH < 1000mm)**



Percolation Trench Detail

LEGEND

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CONSULTANT :
 Alliance Consultants Ltd
In Association with
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PROJECT :
**ALA-ORA WATER SUPPLY AND
 SANITATION PROJECT**

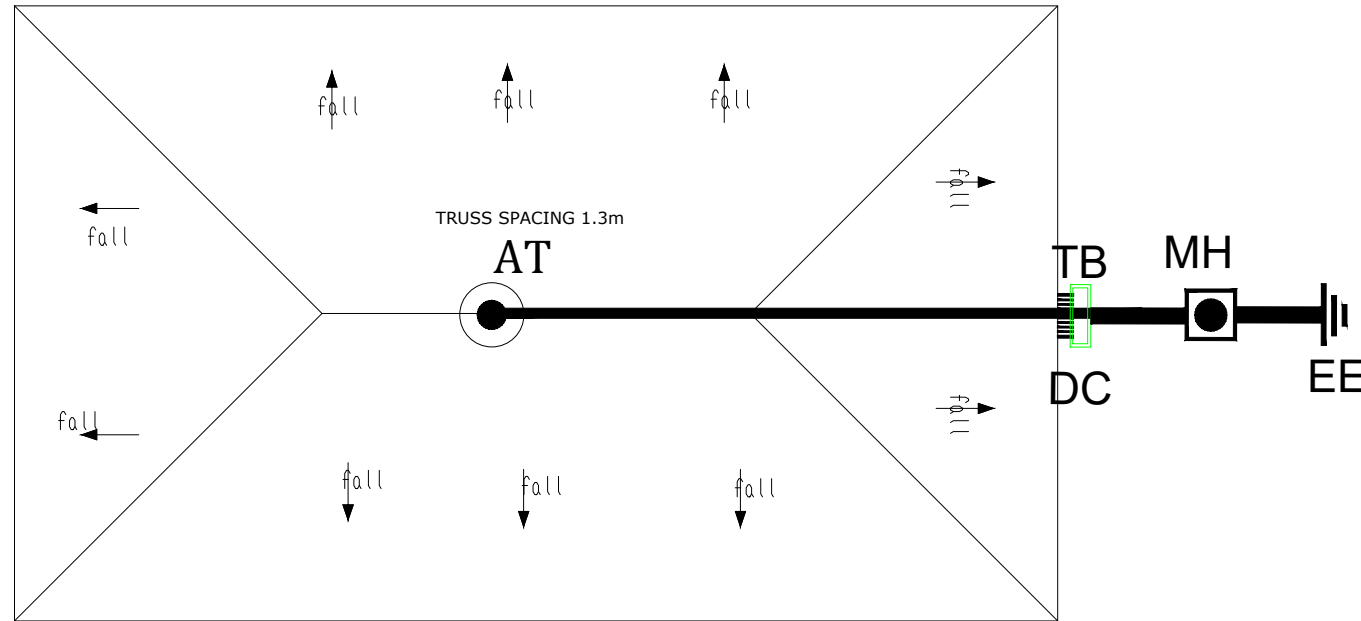
**NYAGAK WATER SUPPLY AND
 SANITATION SYSTEM**

REVISIONS :

No	Date	Description

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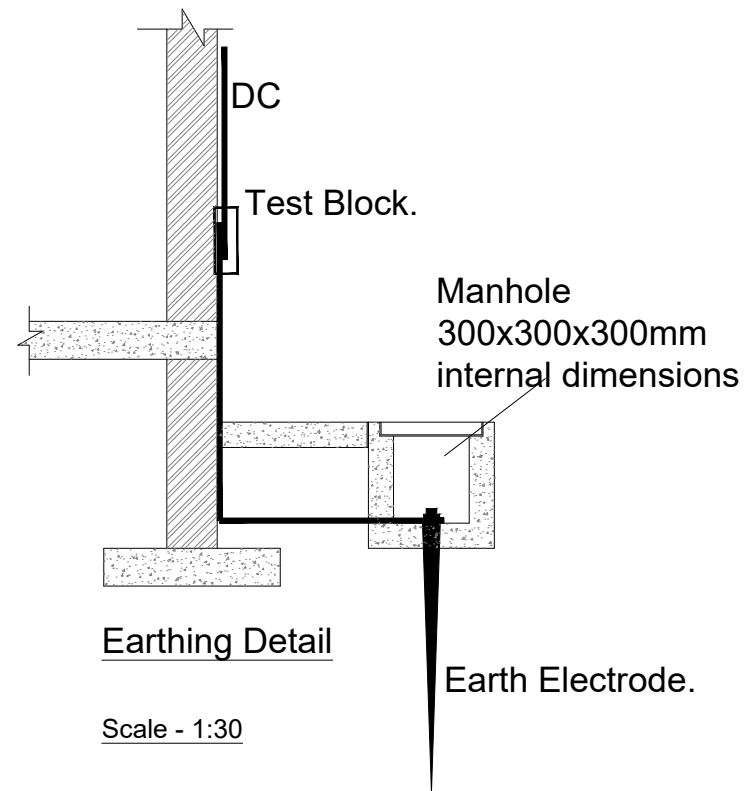
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Designed by:	W.G.M
Checked by:	J.K.K
Date:	January 2023
DRG. No.:	ALA-ORA-SD-018
Scale:	1:120
Sheet No.:	1 of 1



- LEGEND**
- AT AIR TERMINAL
 - ▭ TB TEST CLAMP
 - ⊙ MH INSPECTION MANHOLE
 - ≡ EE EARTH ELECTRODE
 - HC HORIZONTAL CONDUCTOR
 - DC DOWN CONDUCTOR

NOTE

Air Terminal to be placed at the highest and center point of the roof



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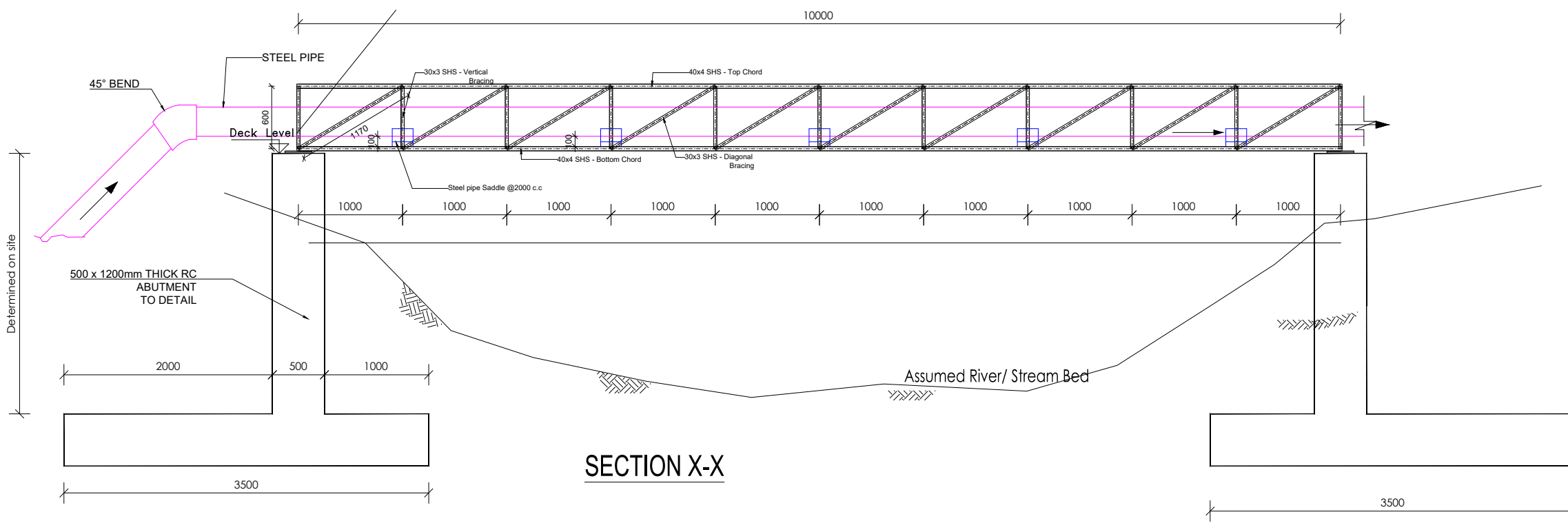
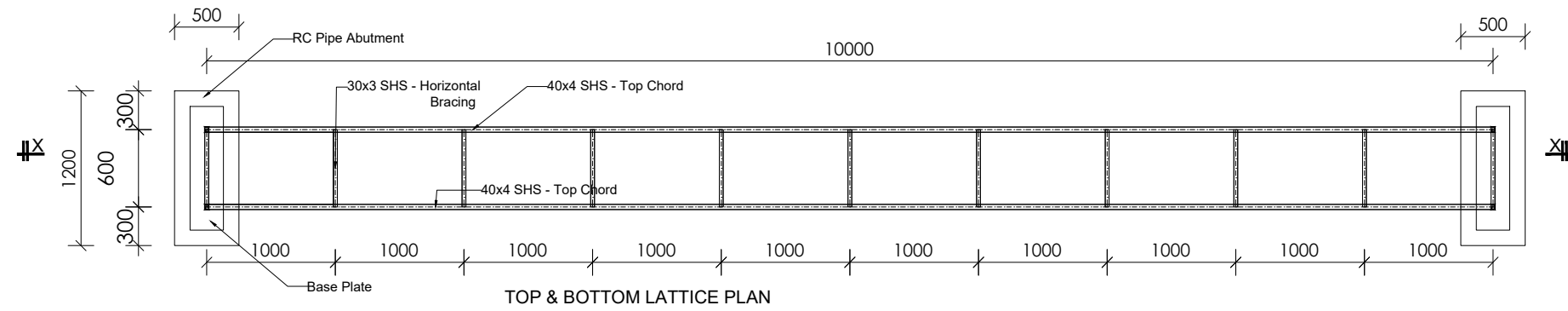
NYAGAK WATER SUPPLY AND SANITATION SYSTEM

REVISIONS :

No	Date	Description

DRAWING TITLE : **STANDARD DRAWINGS**
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Surveyed by:	R.K
Drawn by:	N.R
Designed by:	W.G.M
Checked by:	J.K.K
Date:	January 2023
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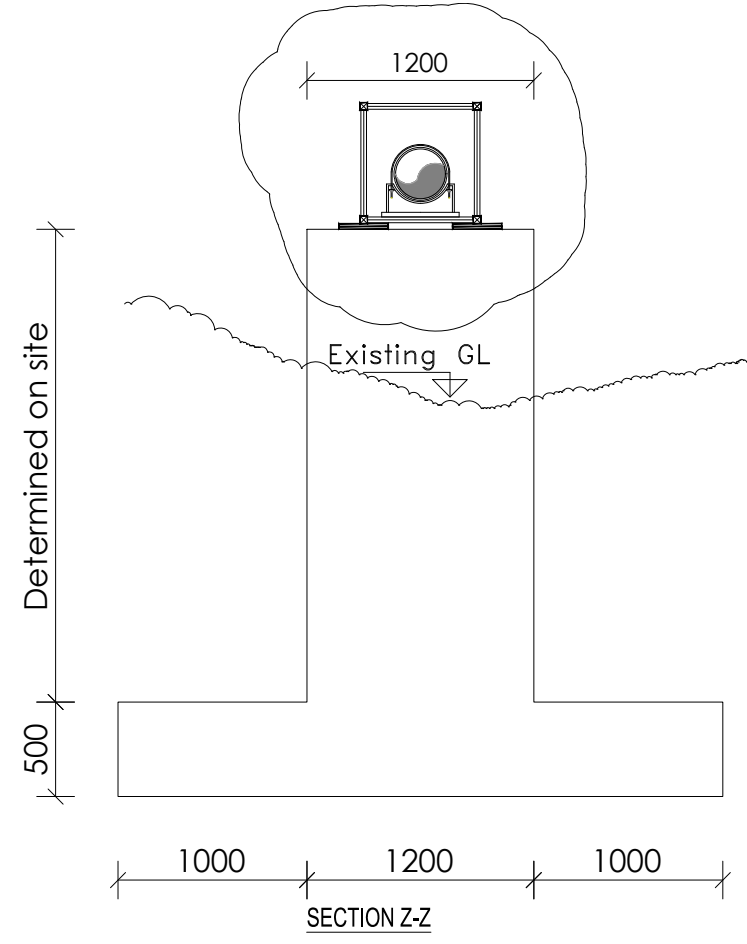
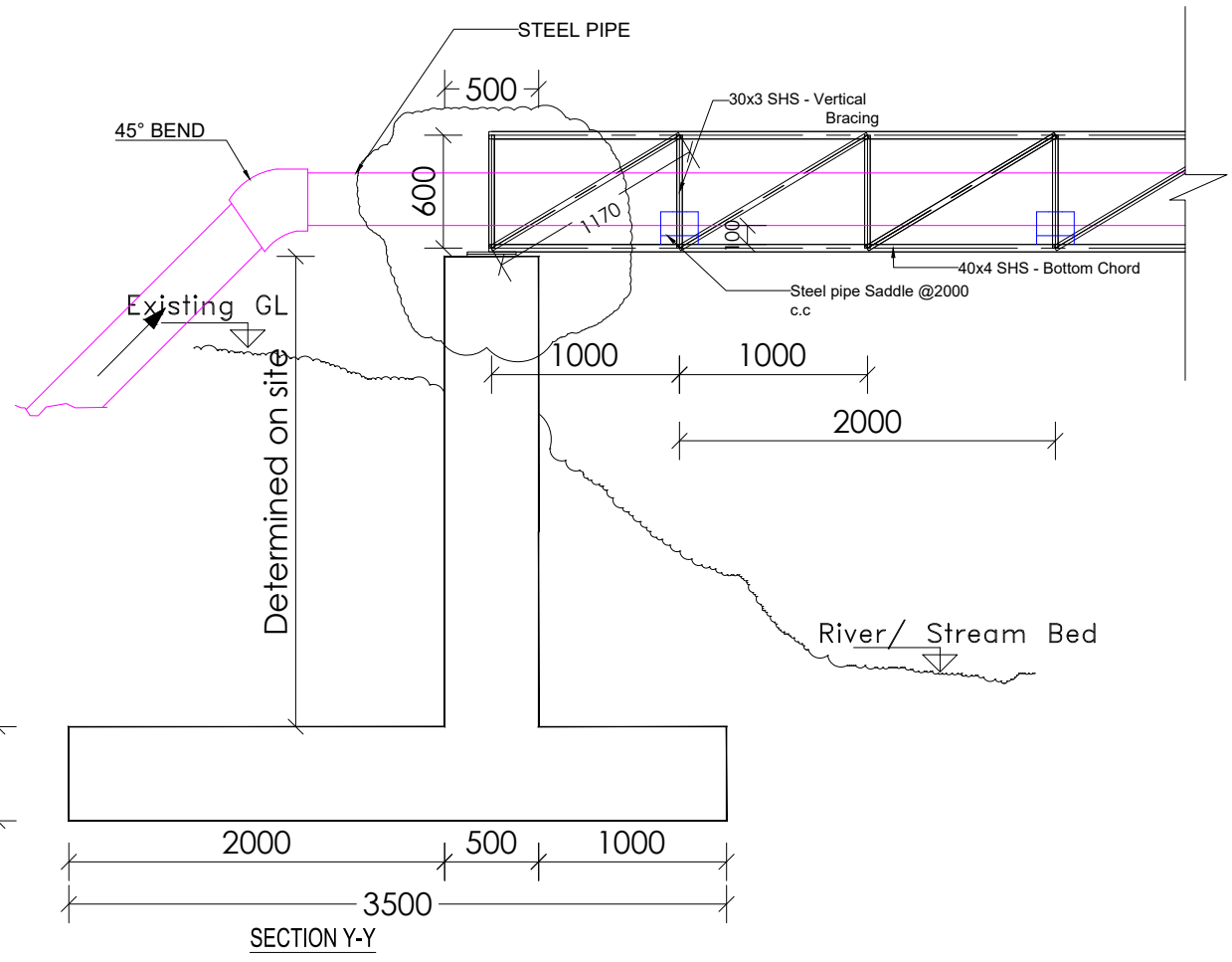
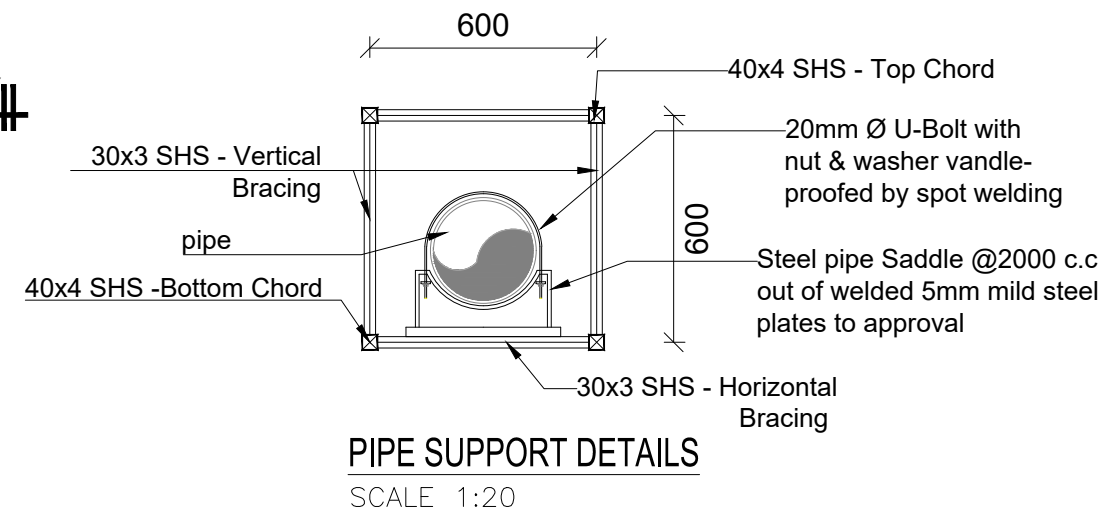
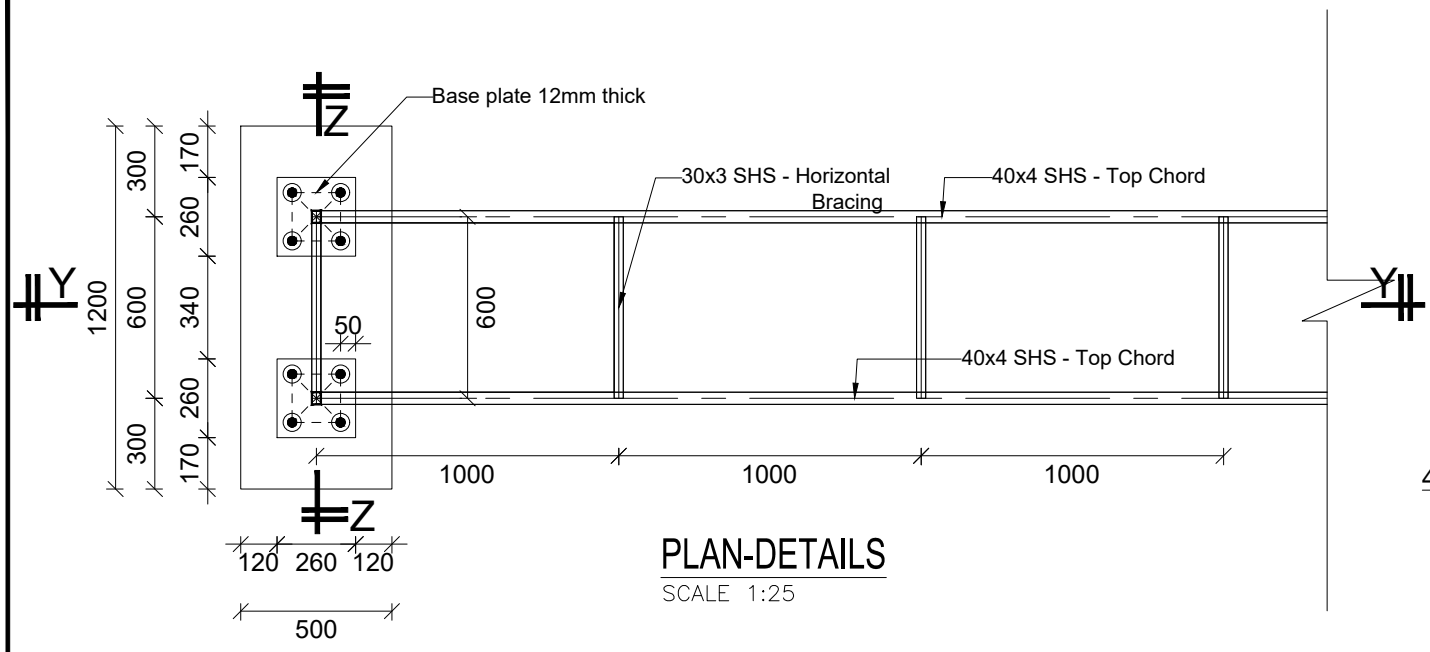
STANDARD DRAWINGS

REVISIONS :

No	Date	Description

DRAWING TITLE : **PIPE BRIDGES-10m**
Plan and Elevation

Surveyed by:	R.K
Drawn by:	A.K
Designed by:	B.A
Checked by:	J.K.K
Date:	March 2023
DRG. No.:	ALA-ORA-SD-020
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STANDARD DRAWINGS

REVISIONS :

No	Date	Description

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Drawn by: A.K

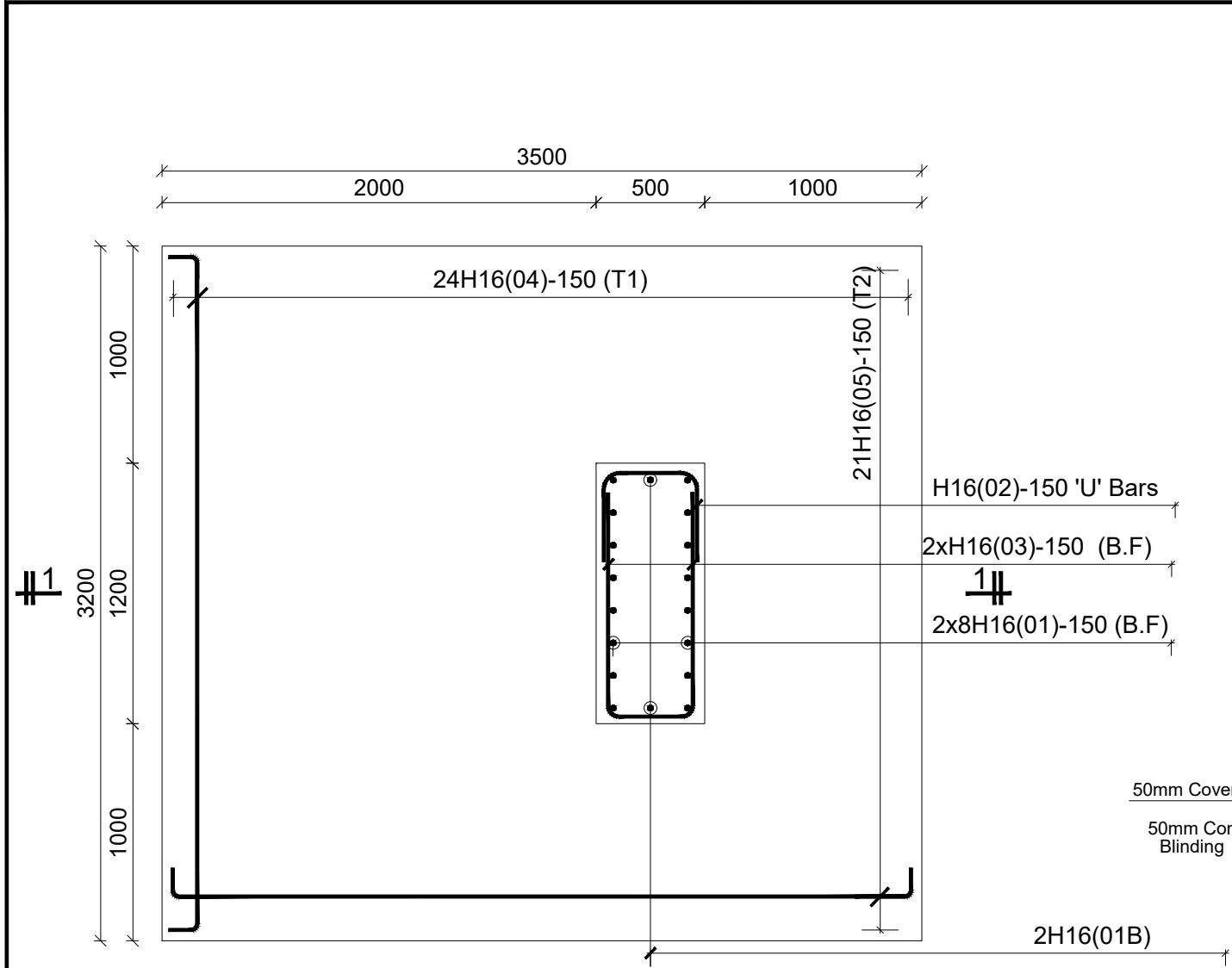
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Checked by: J.K.K

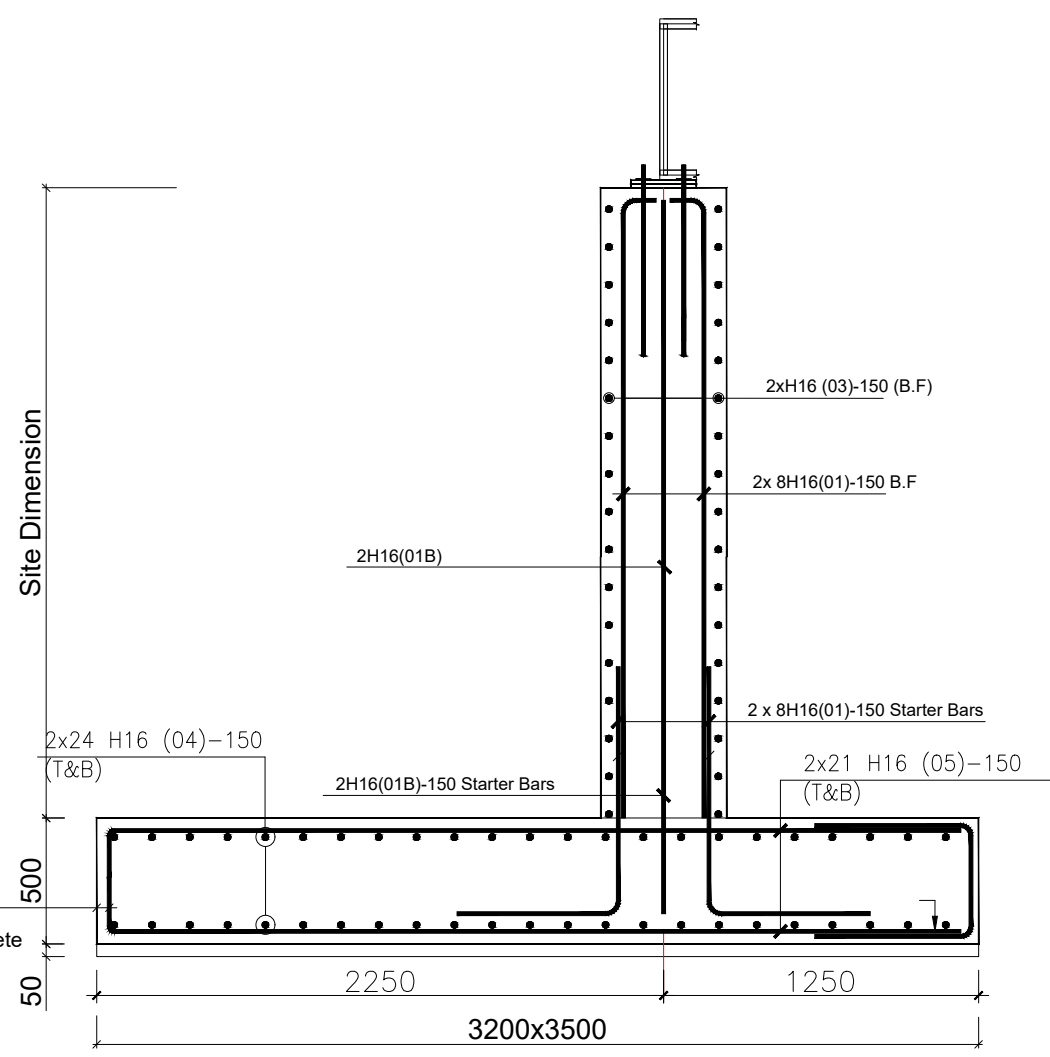
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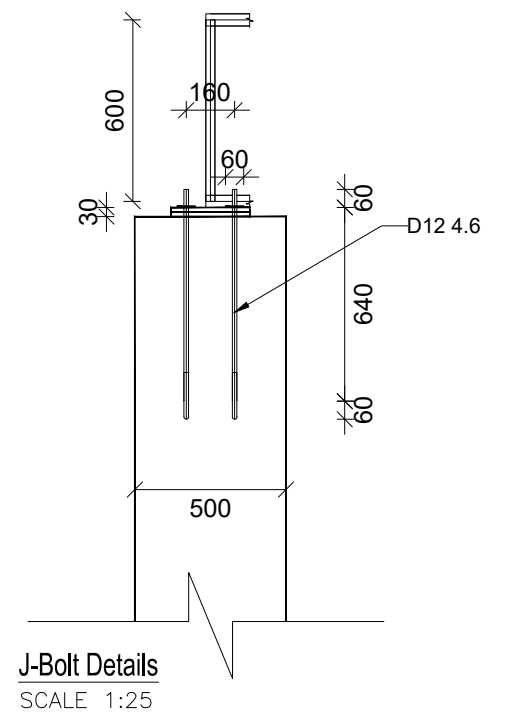
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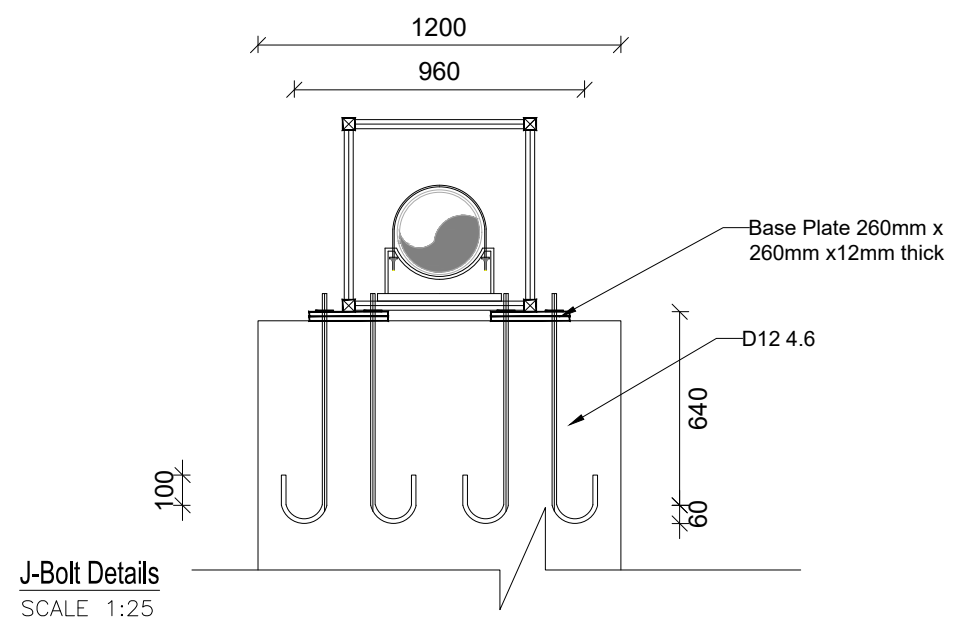
RC PIPE BRIDGE ABUTMENT (2No.) [3500X3200x500]



RC PIPE BRIDGE ABUTMENT SECTION 1-1



J-Bolt Details
SCALE 1:25



J-Bolt Details
SCALE 1:25

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STANDARD DRAWINGS

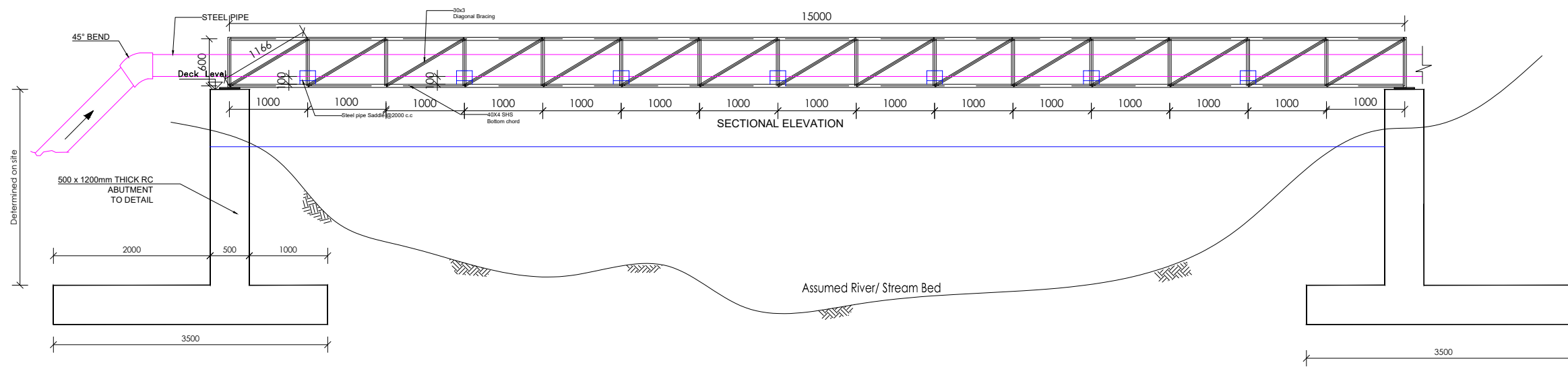
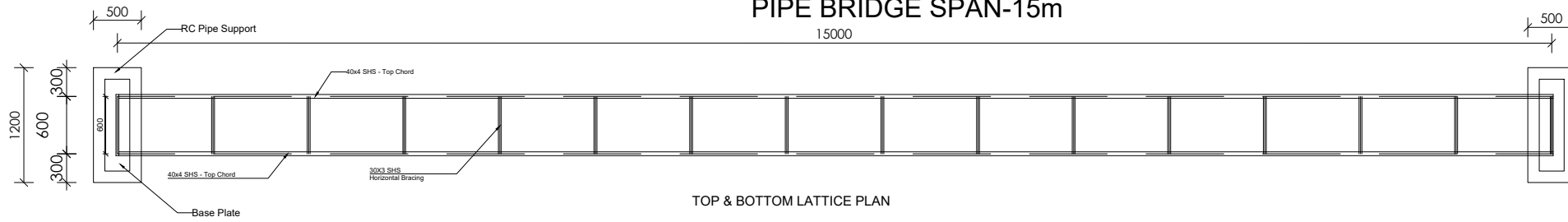
REVISIONS :

No	Date	Description

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Surveyed by:	R.K
Drawn by:	A.K
Designed by:	B.A
Checked by:	J.K.K
Date:	March 2023
DRG. No.:	ALA-ORA-SD-020
Scale:	1:30
Sheet No.:	3 of 3

PIPE BRIDGE SPAN-15m



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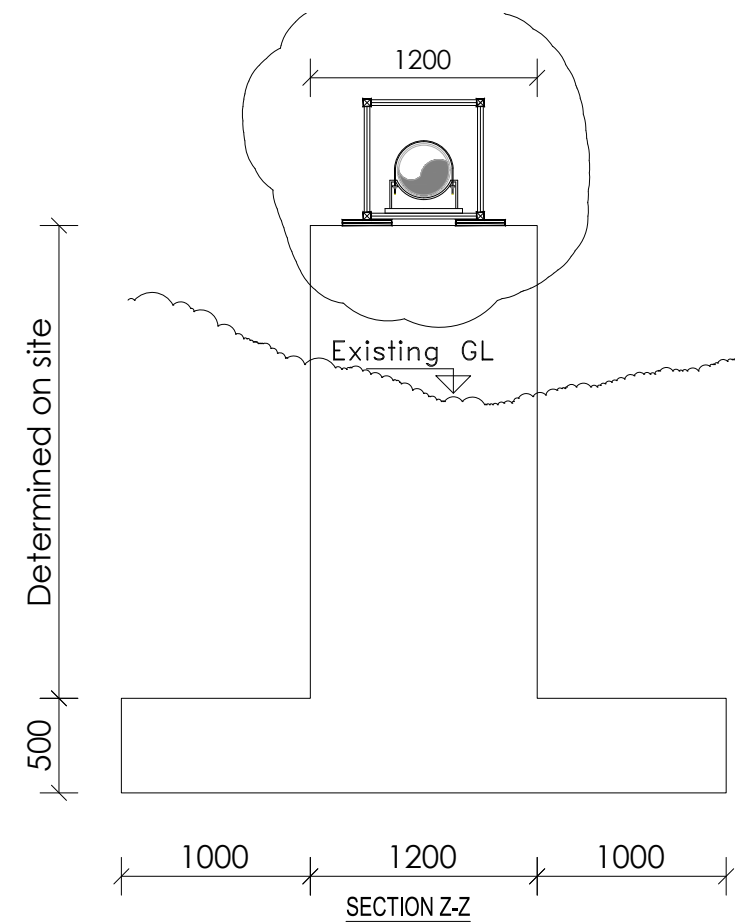
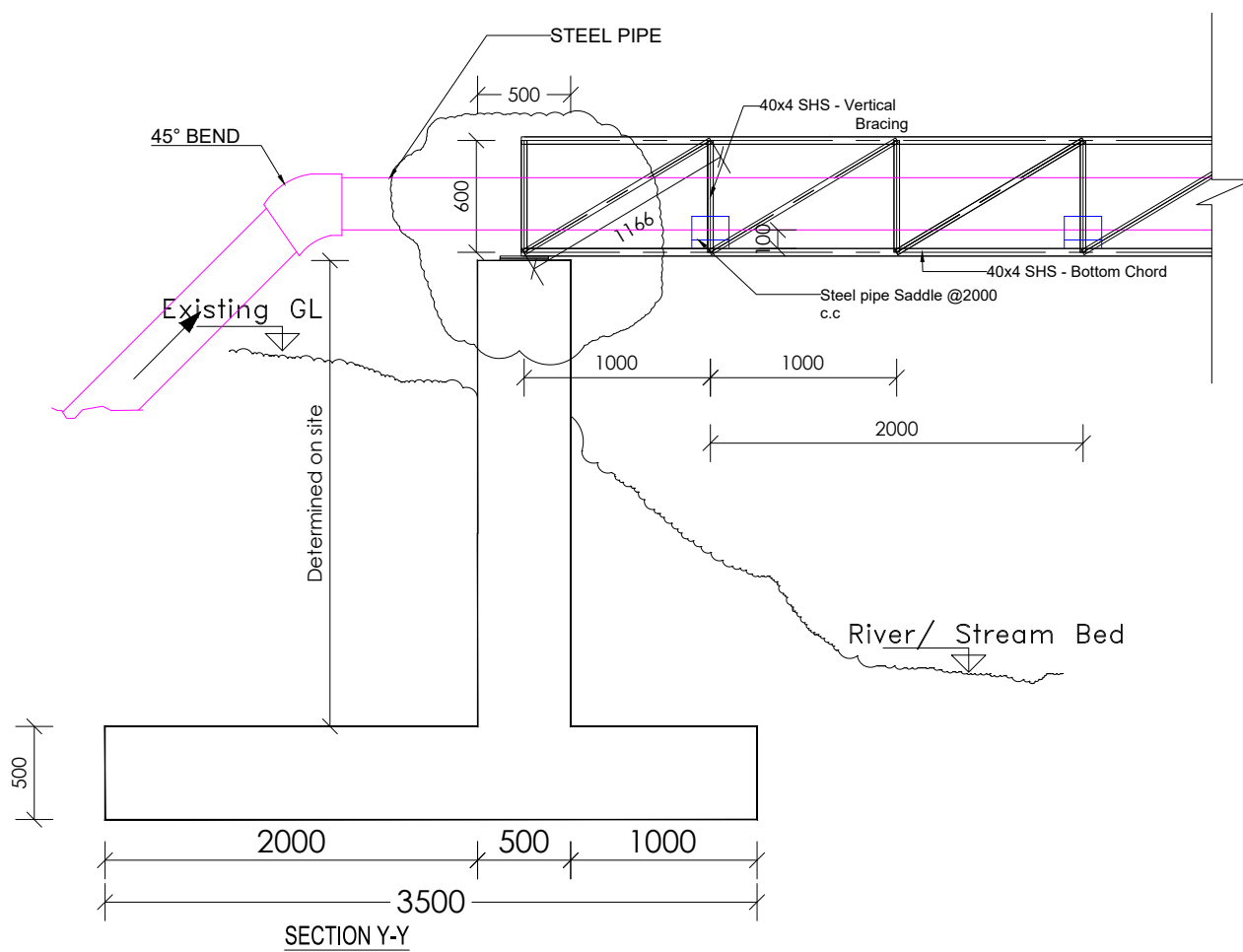
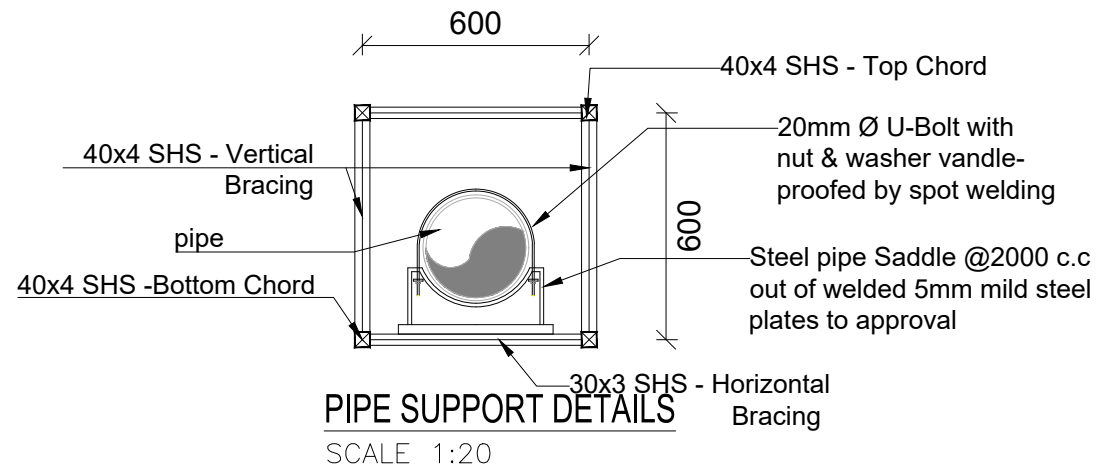
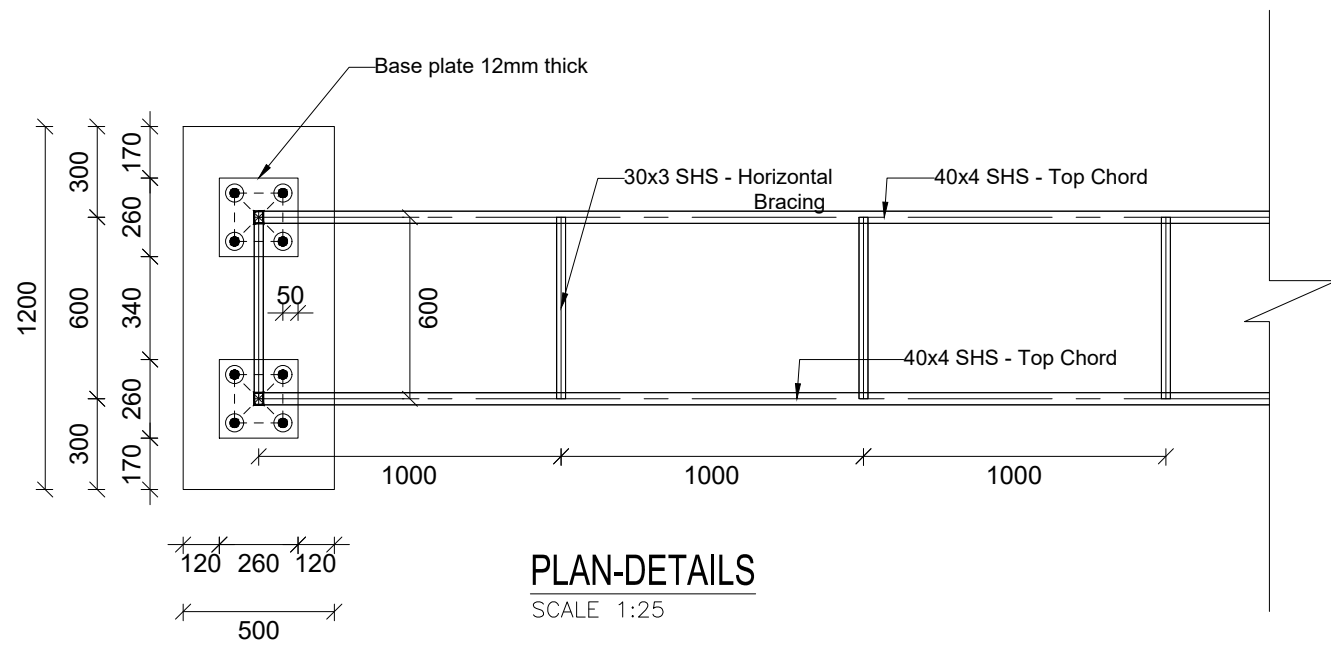
STANDARD DRAWINGS


REVISIONS :

No	Date	Description

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Plan and Elevation

Surveyed by:	R.K
Drawn by:	A.K
Designed by:	B.A
Checked by:	J.K.K
Date:	March 2023
DRG. No.:	ALA-ORA-SD-021
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Sheet No.:	1 of 3



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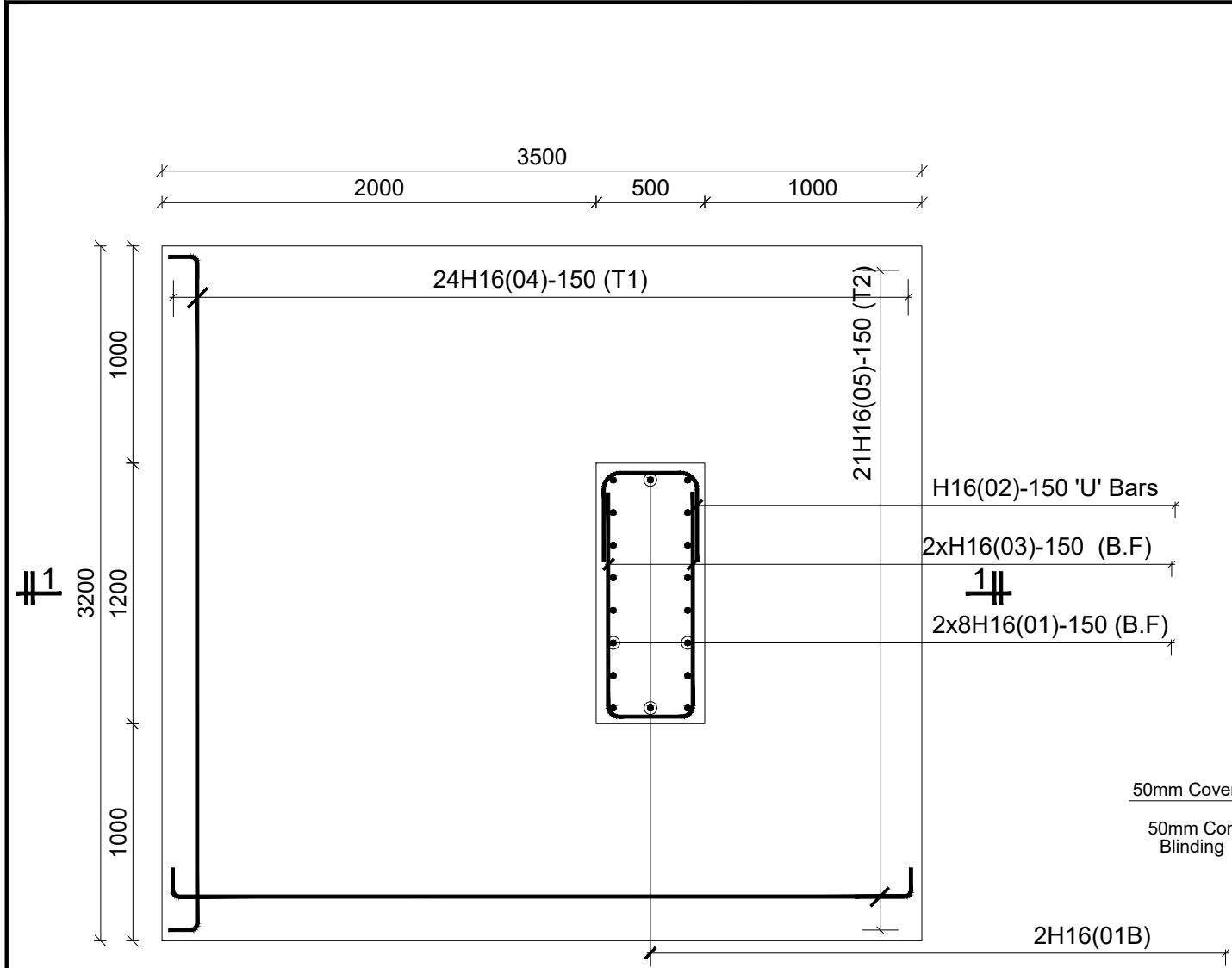
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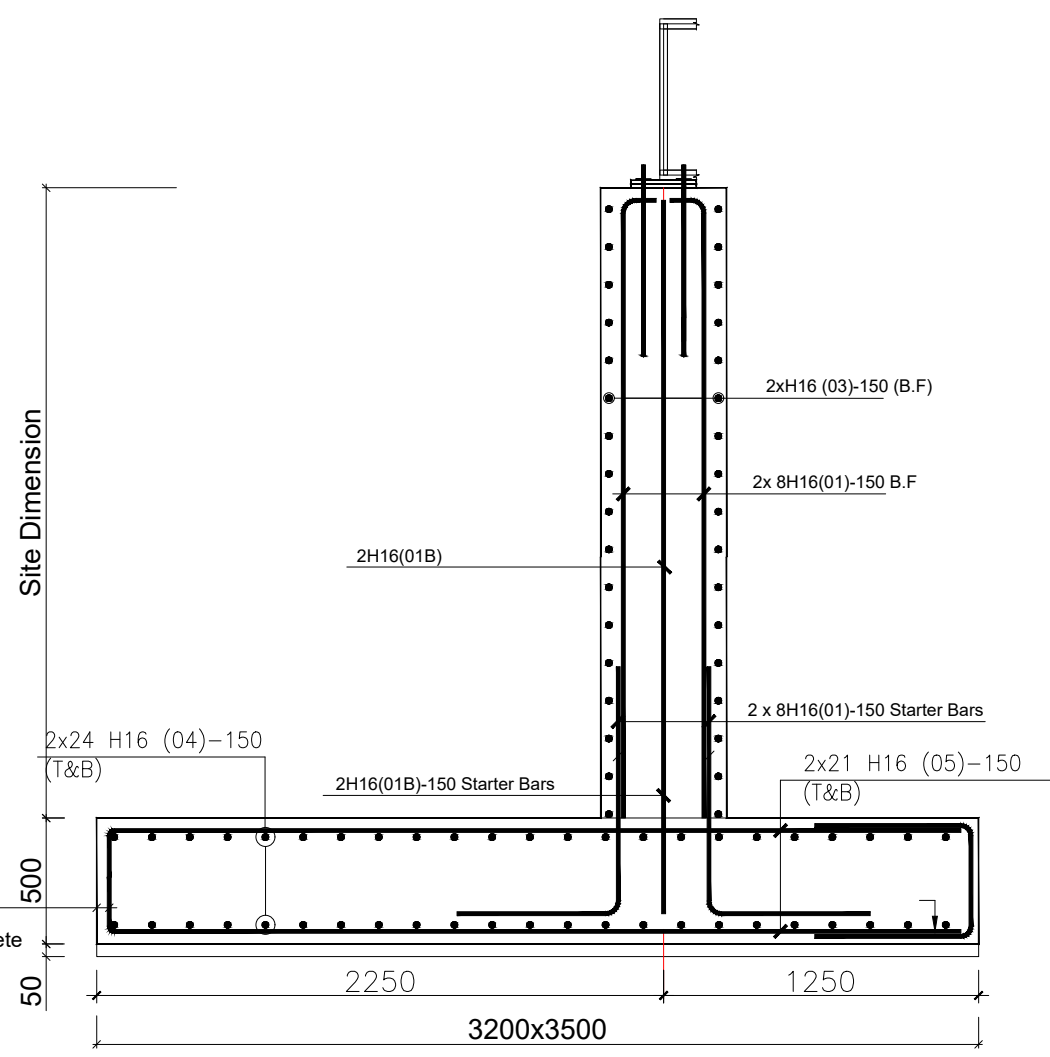
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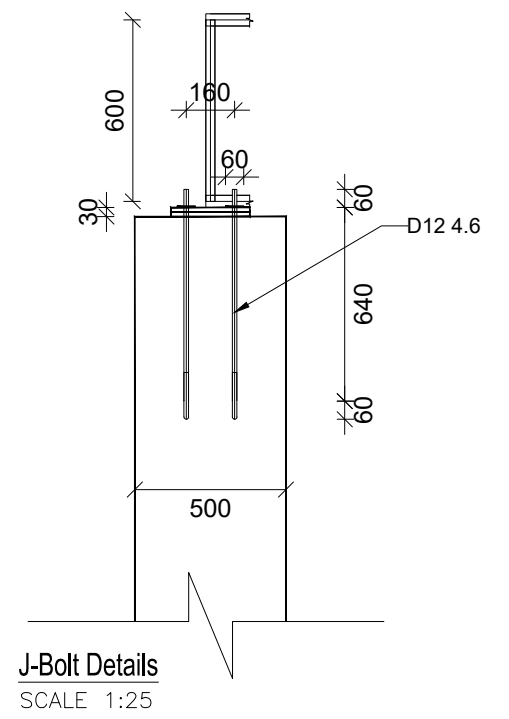
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 Drawn by: A.K
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 Checked by: J.K.K
 Date: March 2023
 DRG. No.: **ALA-ORA-SD-021**
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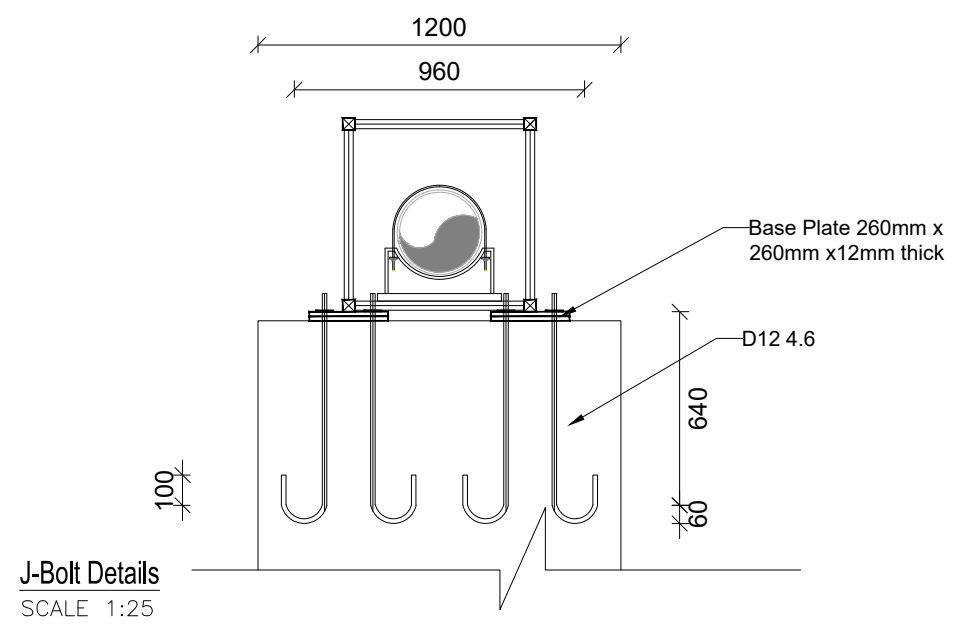
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RC PIPE BRIDGE ABUTMENT SECTION 1-1



J-Bolt Details
SCALE 1:25



J-Bolt Details
SCALE 1:25

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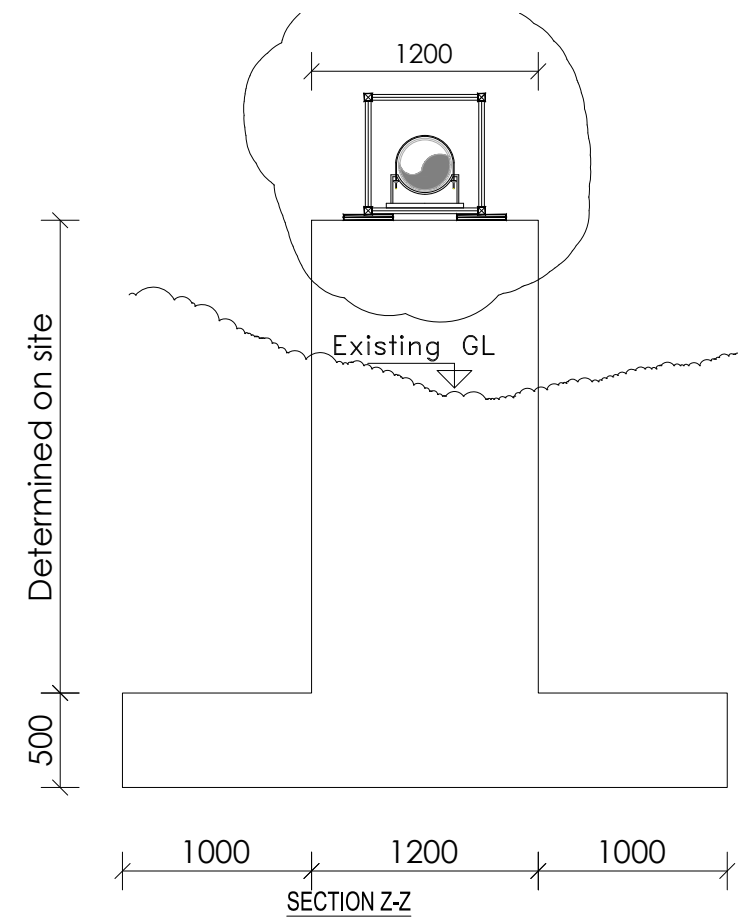
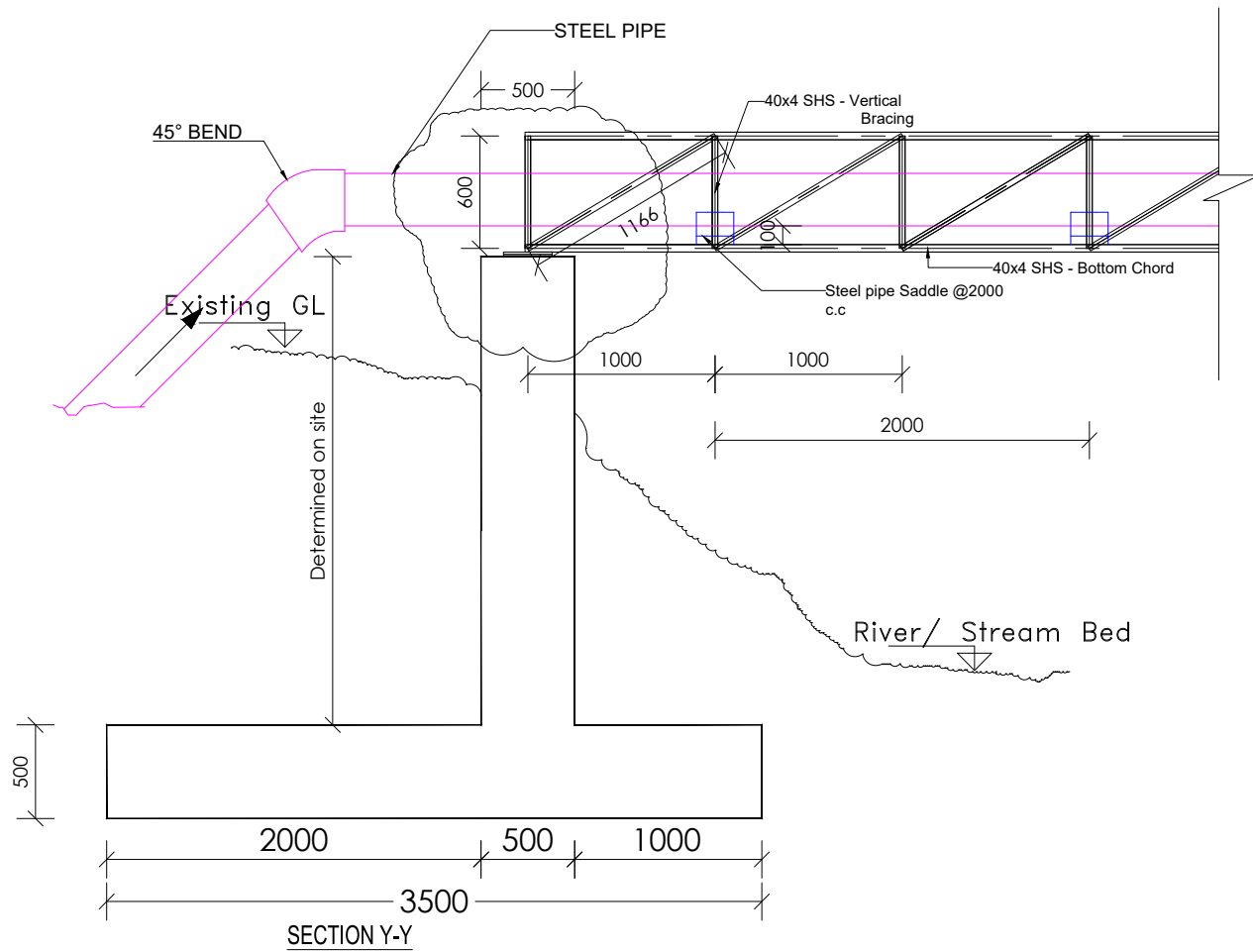
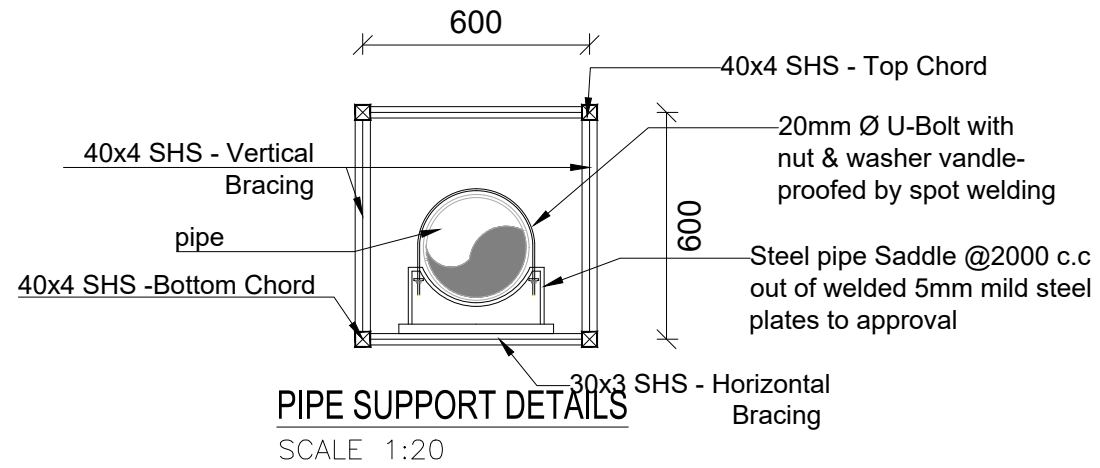
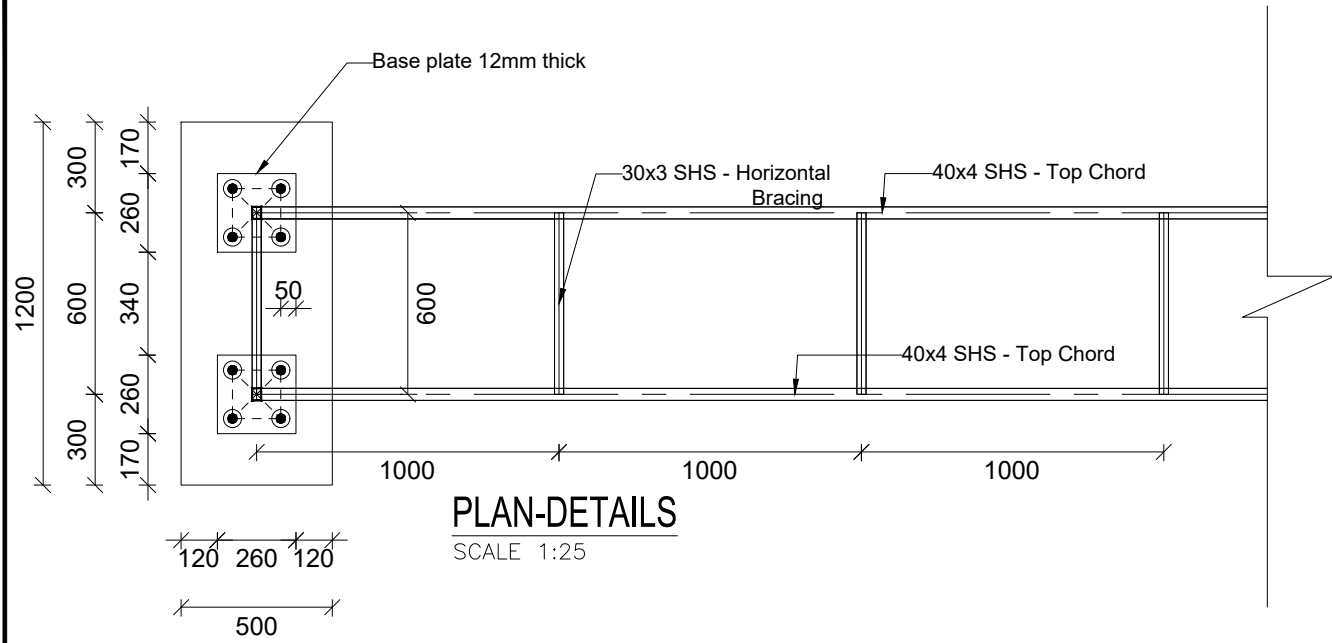
STANDARD DRAWINGS

REVISIONS :

No	Date	Description

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Surveyed by:	R.K
Drawn by:	A.K
Designed by:	B.A
Checked by:	J.K.K
Date:	March 2023
DRG. No.:	ALA-ORA-SD-021
Scale:	1:30
Sheet No.:	3 of 3



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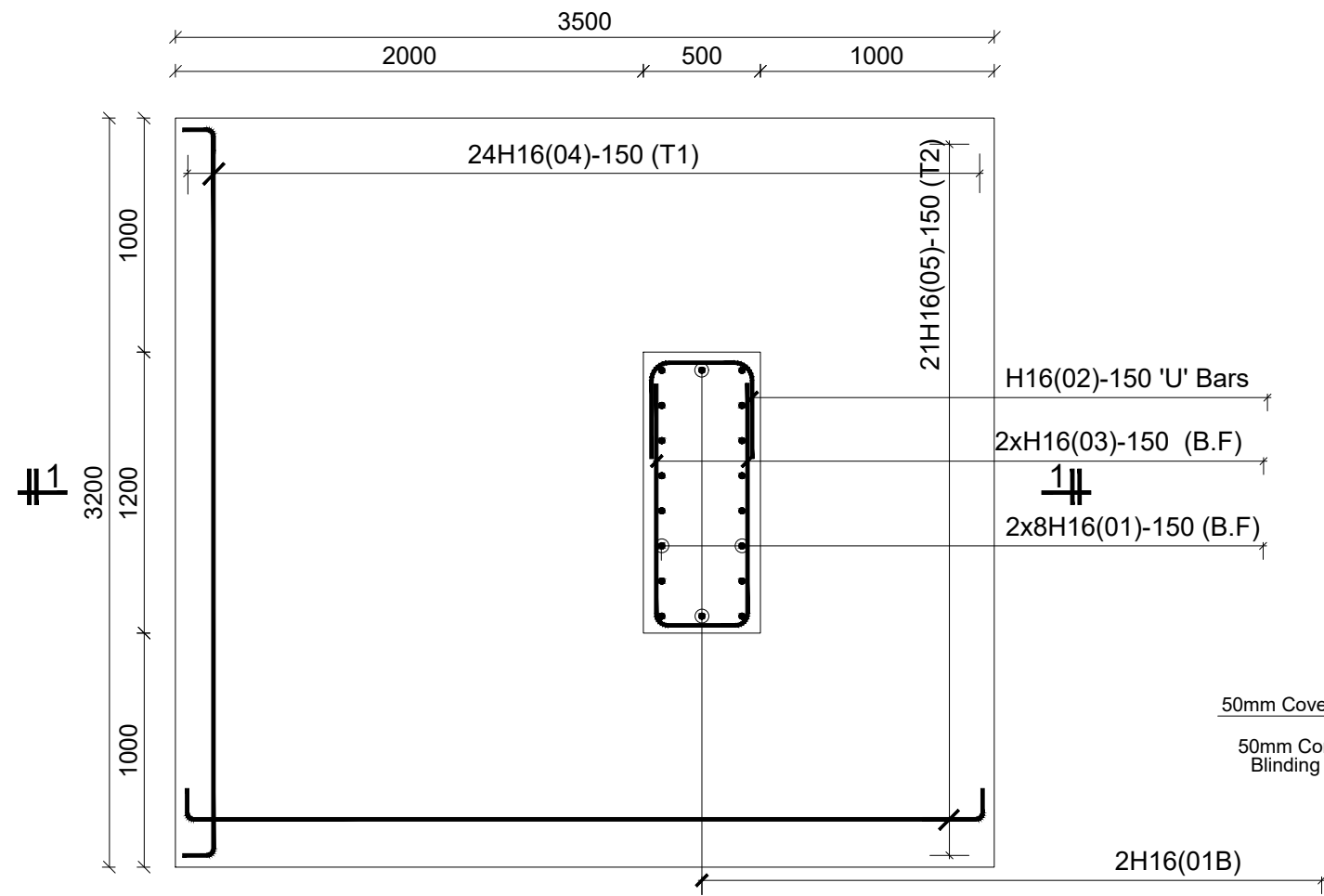
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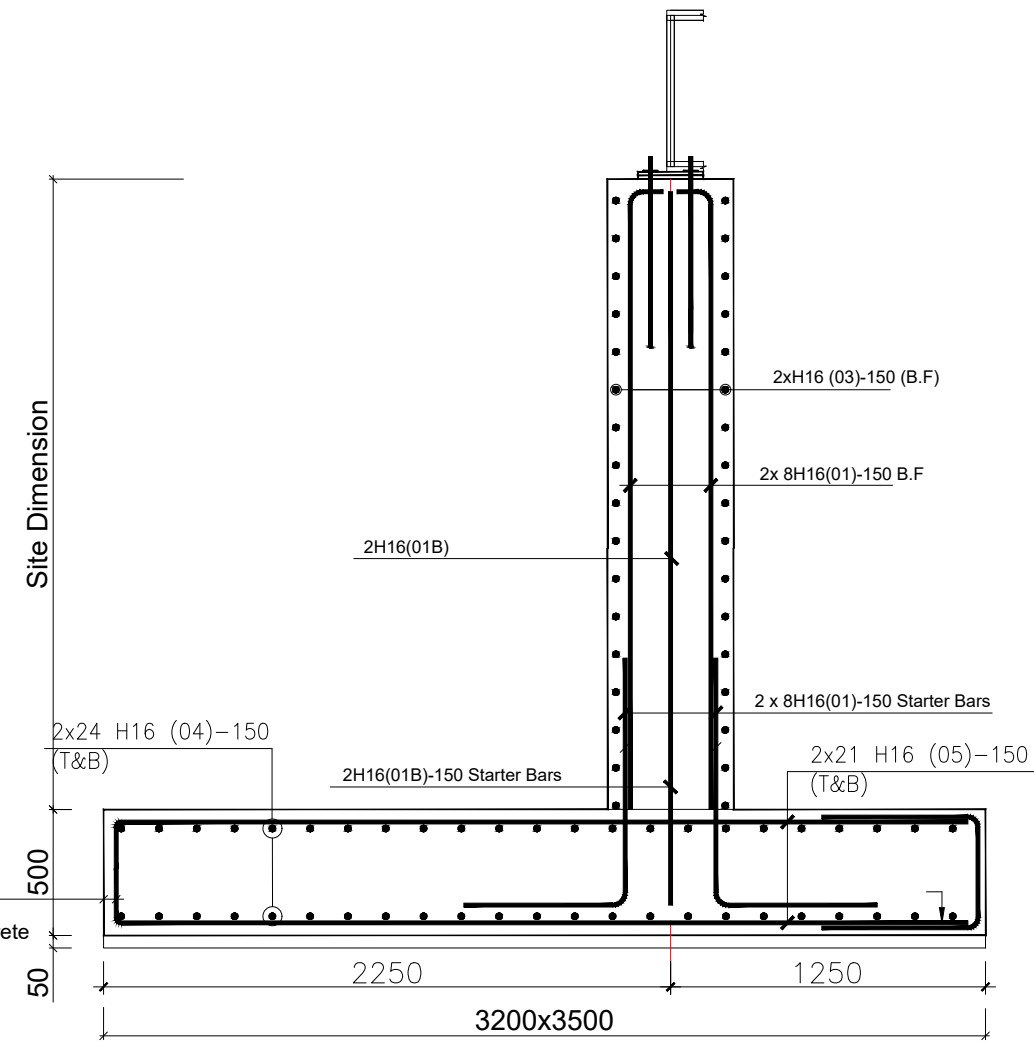
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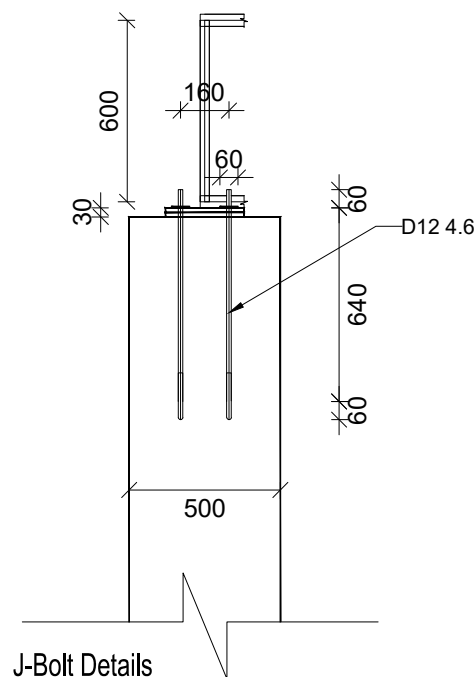
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Date:	March 2023
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Sheet No.:	2 of 3



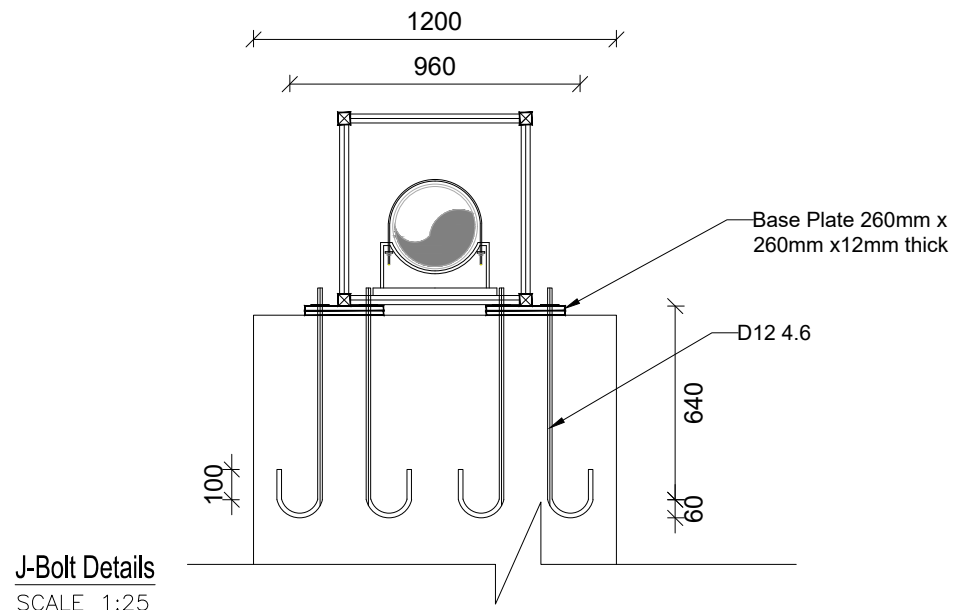
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RC PIPE BRIDGE ABUTMENT SECTION 1-1



J-Bolt Details
SCALE 1:25



J-Bolt Details
SCALE 1:25

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STANDARD DRAWINGS

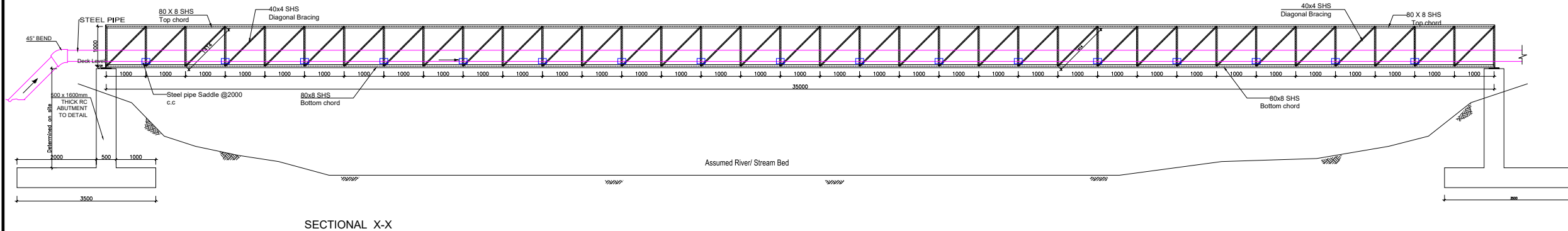
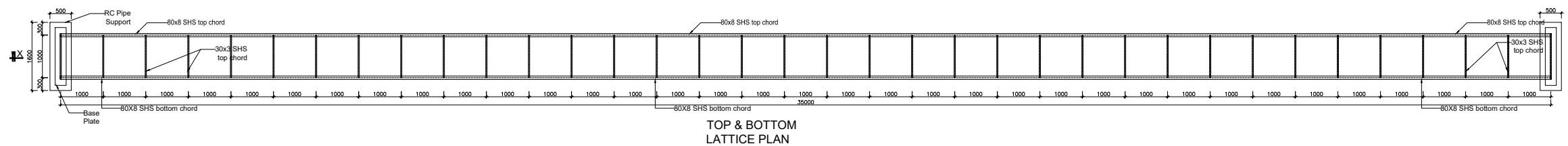
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 Reinforcement Details

Surveyed by:	R.K
Drawn by:	A.K
Designed by:	B.A
Checked by:	J.K.K
Date:	March 2023
DRG. No.:	ALA-ORA-SD-022
Scale:	1:30
Sheet No.:	3 of 3

PIPE BRIDGE SPAN-35m



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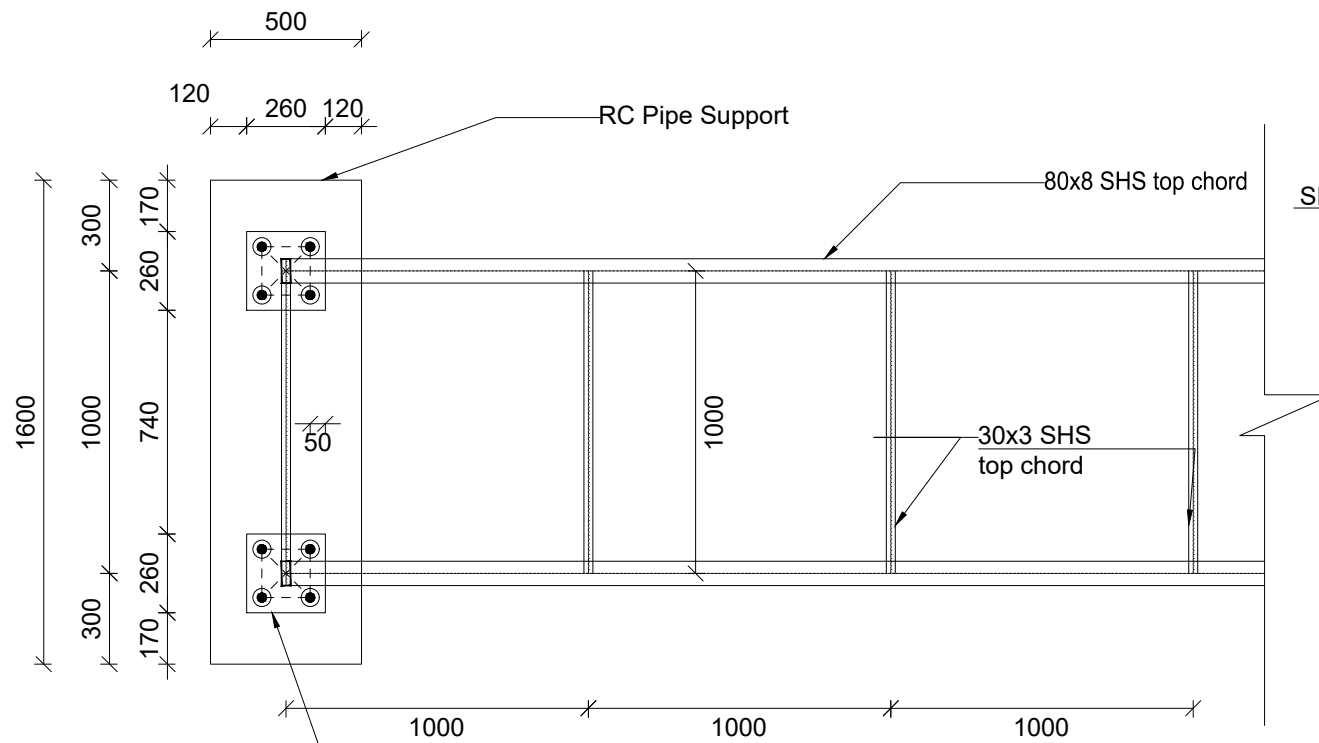
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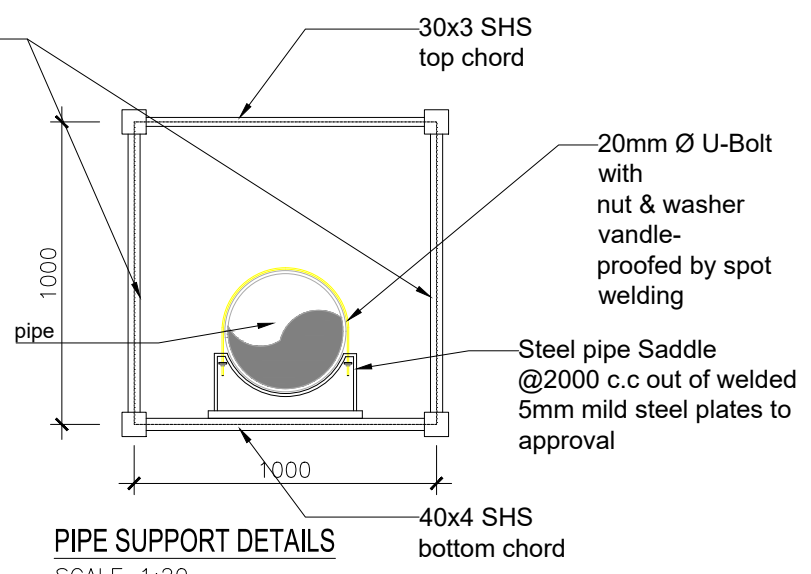
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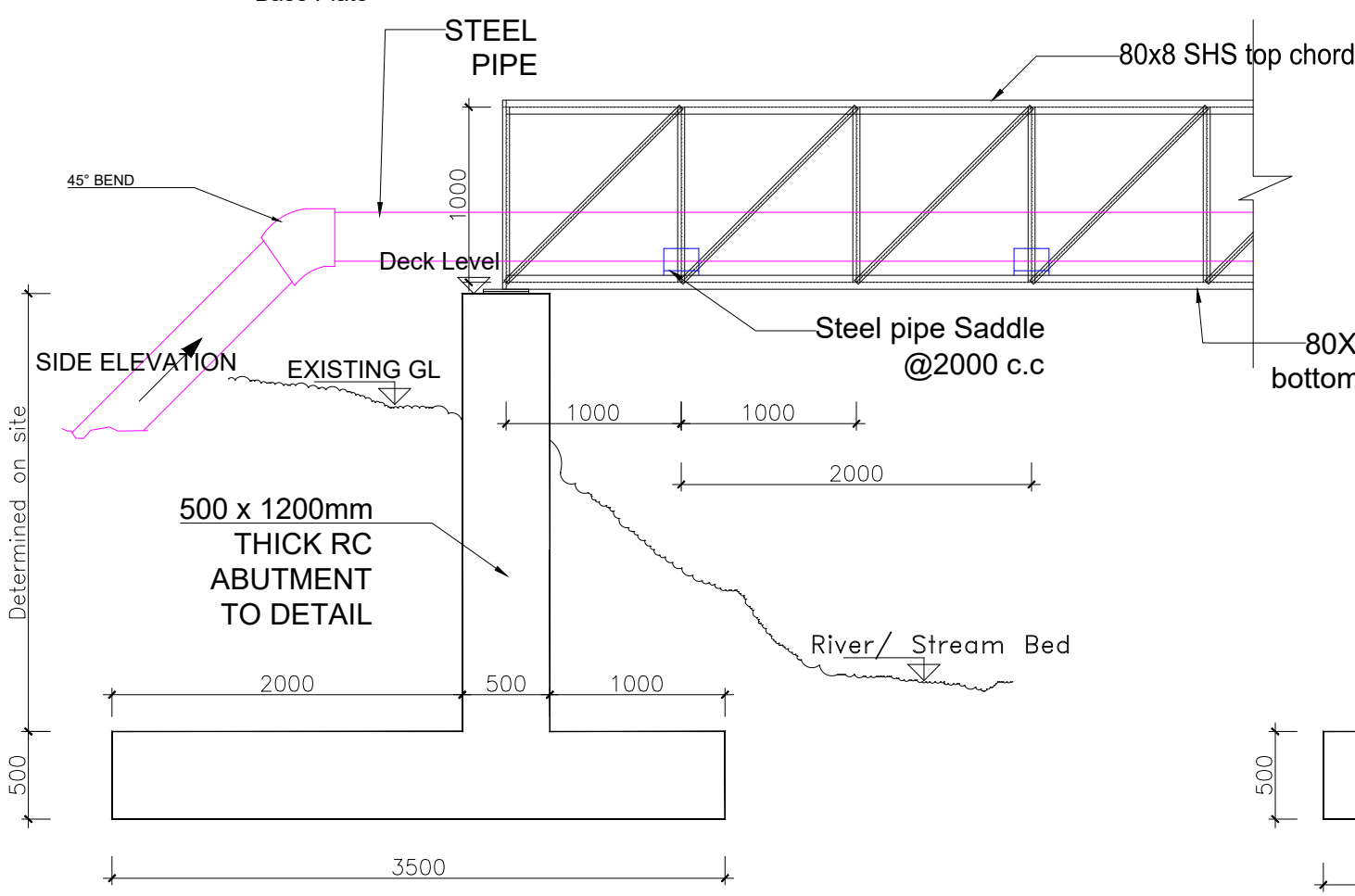
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 Date: March 2023
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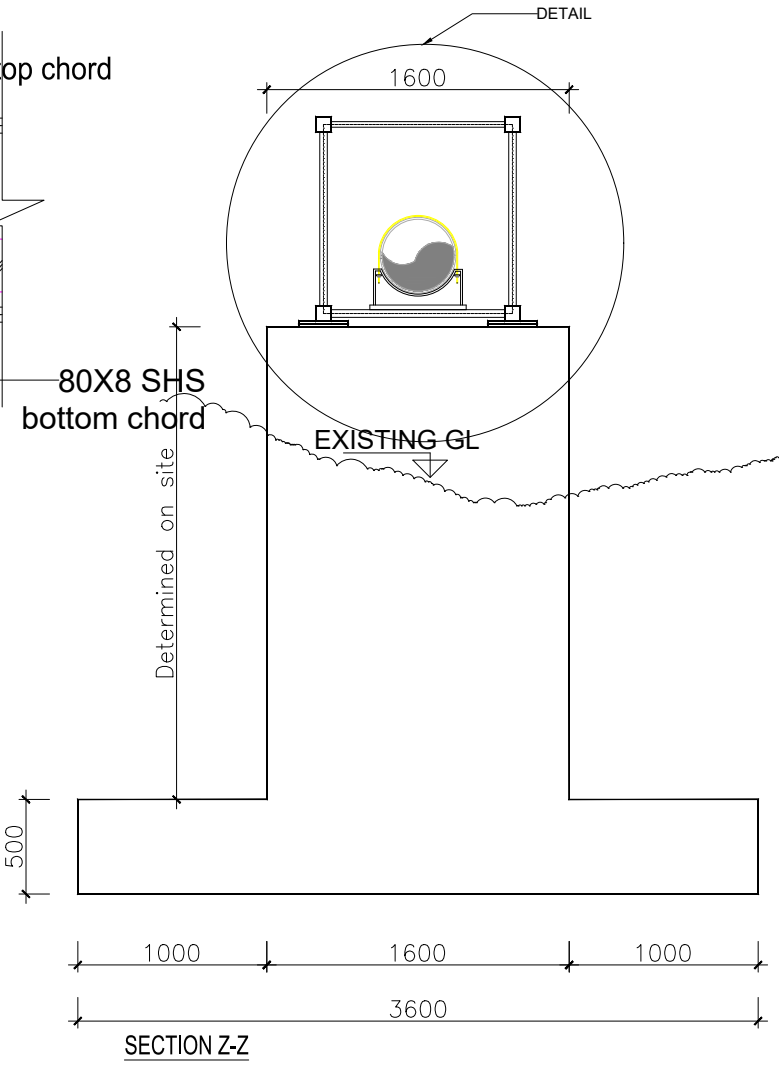
PLAN-DETAILS
SCALE 1:25



PIPE SUPPORT DETAILS
SCALE 1:20



SECTION Y-Y



SECTION Z-Z

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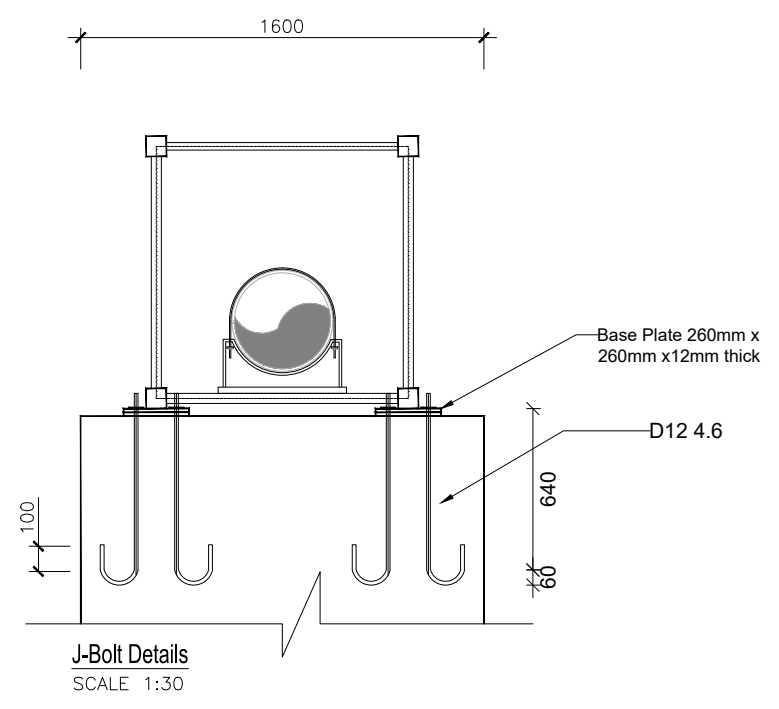
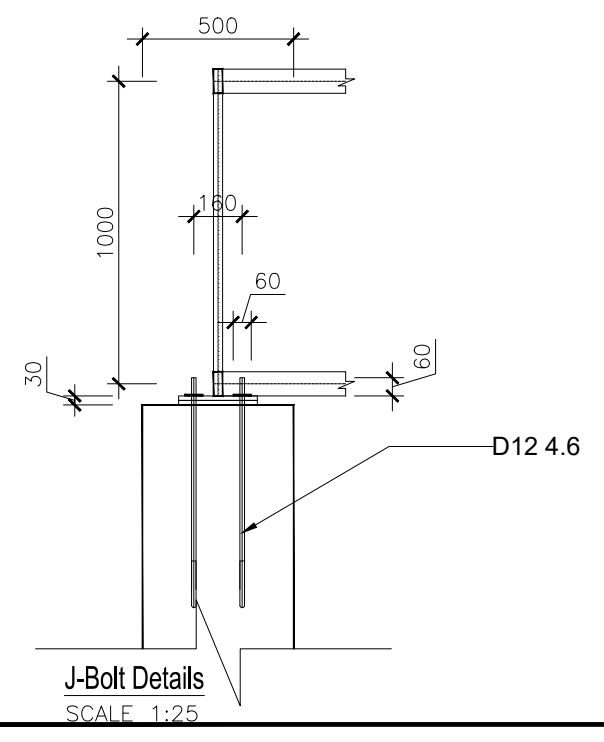
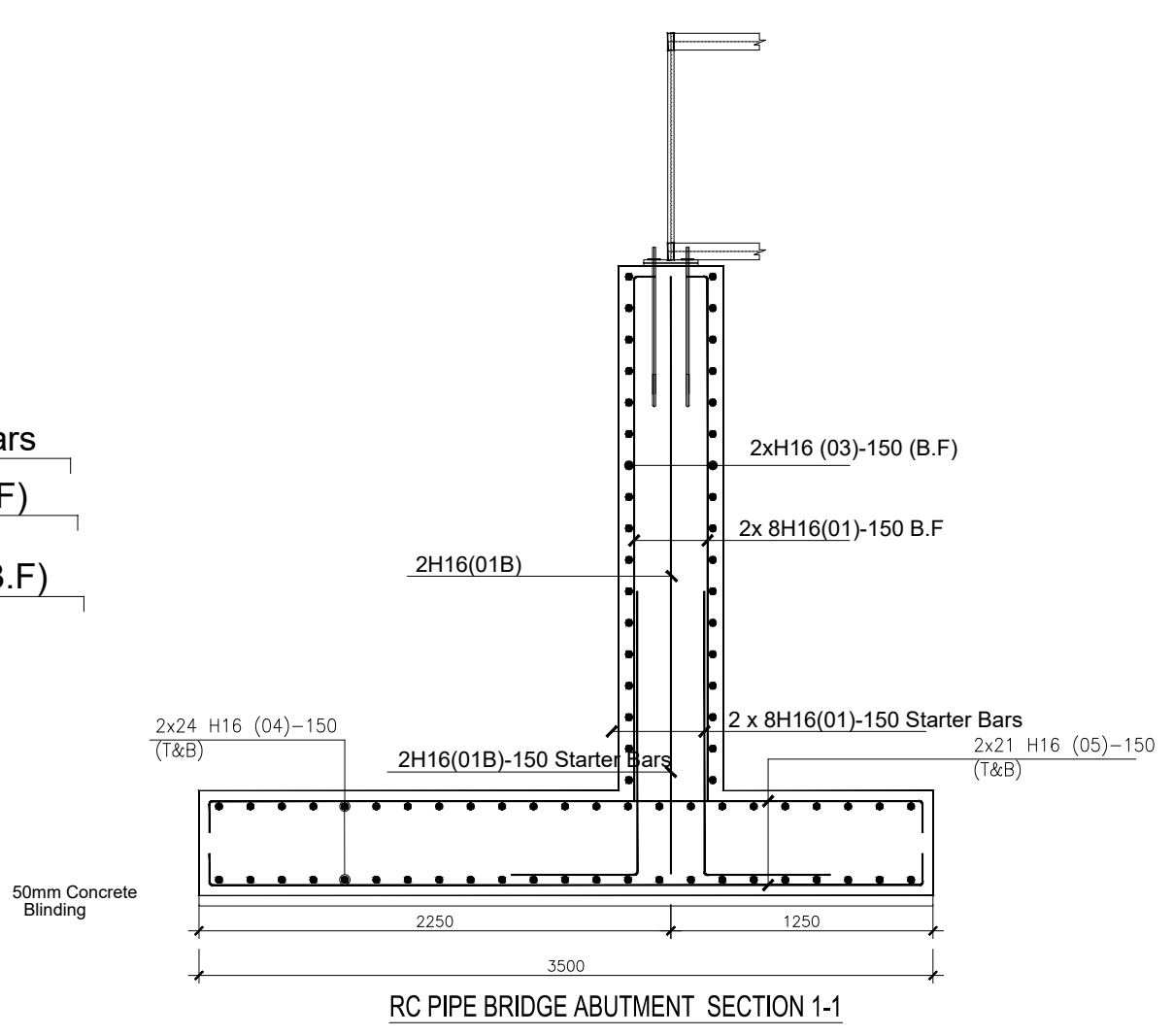
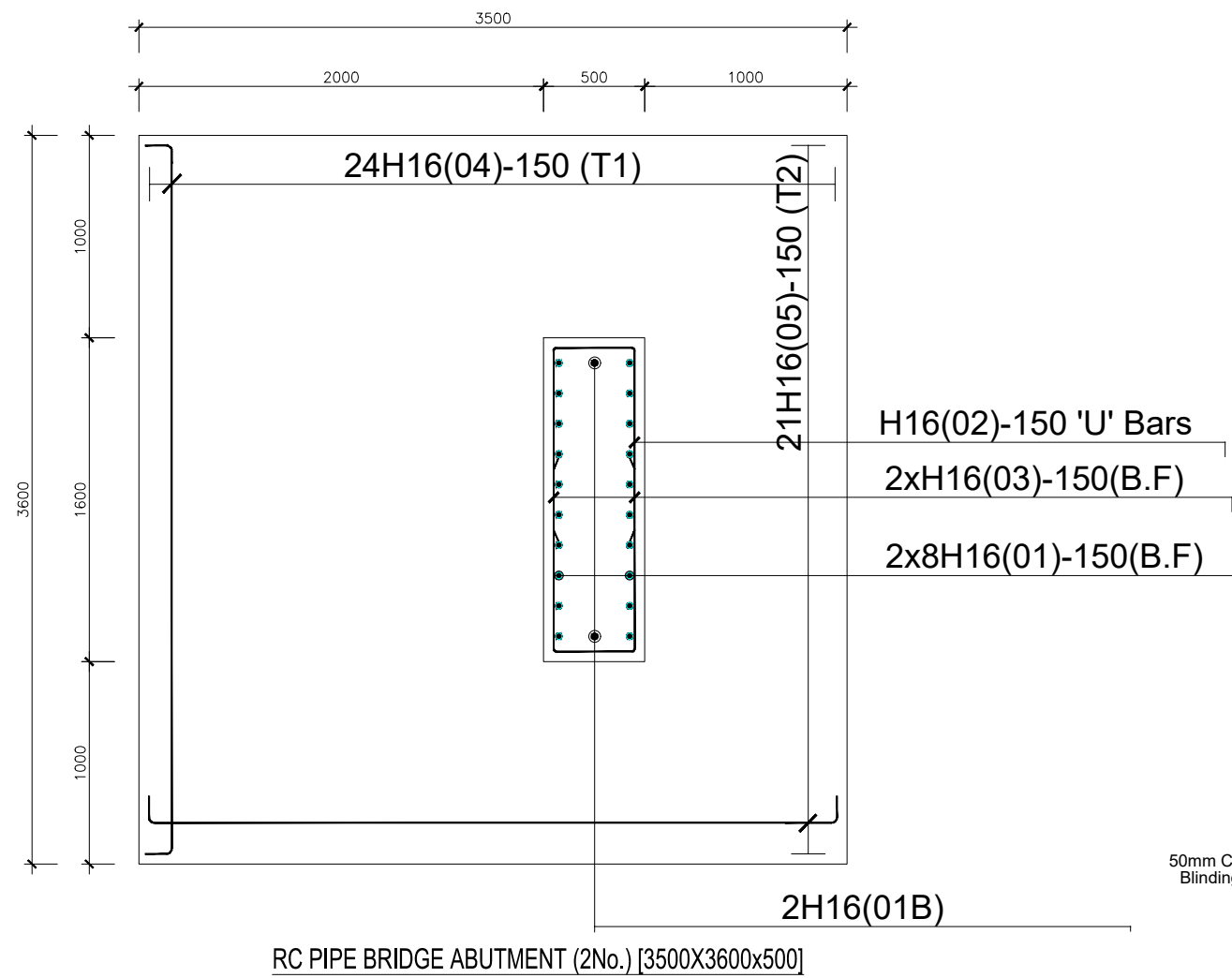
STANDARD DRAWINGS

REVISIONS :

No	Date	Description

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Surveyed by:	R.K
Drawn by:	A.K
Designed by:	B.A
Checked by:	J.K.K
Date:	March 2023
DRG. No.:	ALA-ORA-SD-023
Scale:	1:40
Sheet No.:	2 of 3



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STANDARD DRAWINGS

REVISIONS :

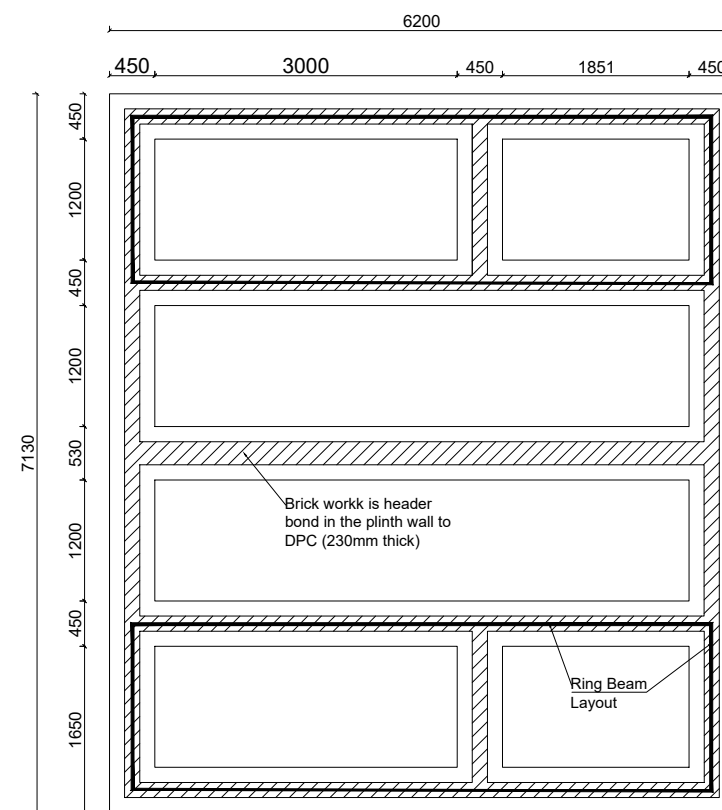
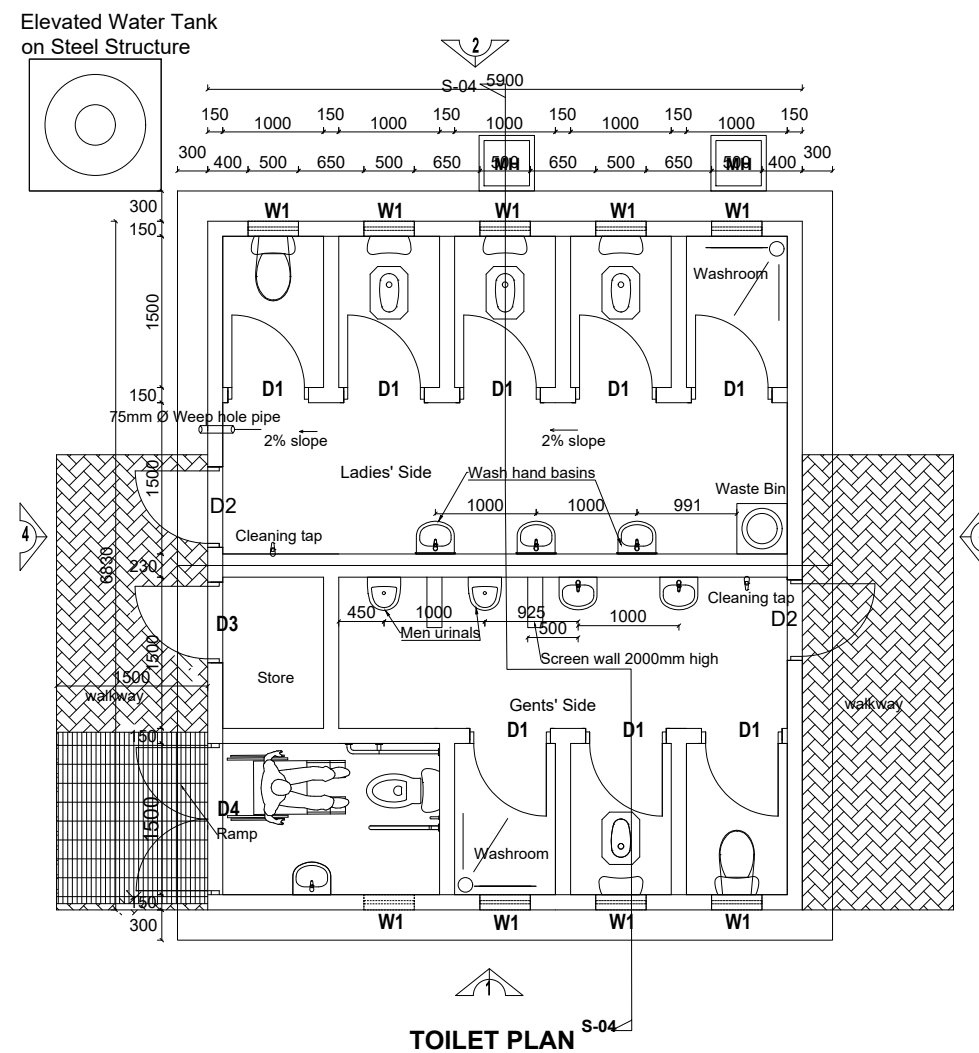
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 Reinforcement Details

Surveyed by: R.K
 Drawn by: A.K
 Designed by: B.A
 Checked by: J.K.K
 Date: March 2023
 DRG. No.: **ALA-ORA-SD-023**
 Scale: 1:35 Sheet No.: 3 of 3

LEGEND

EIGHT STANCE WITH DISABLED UNIT, STORE AND A BATHROOM WATERBORNE TOILET FULLY ROOFED



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NYAGAK WATER SUPPLY AND SANITATION SYSTEM

REVISIONS :

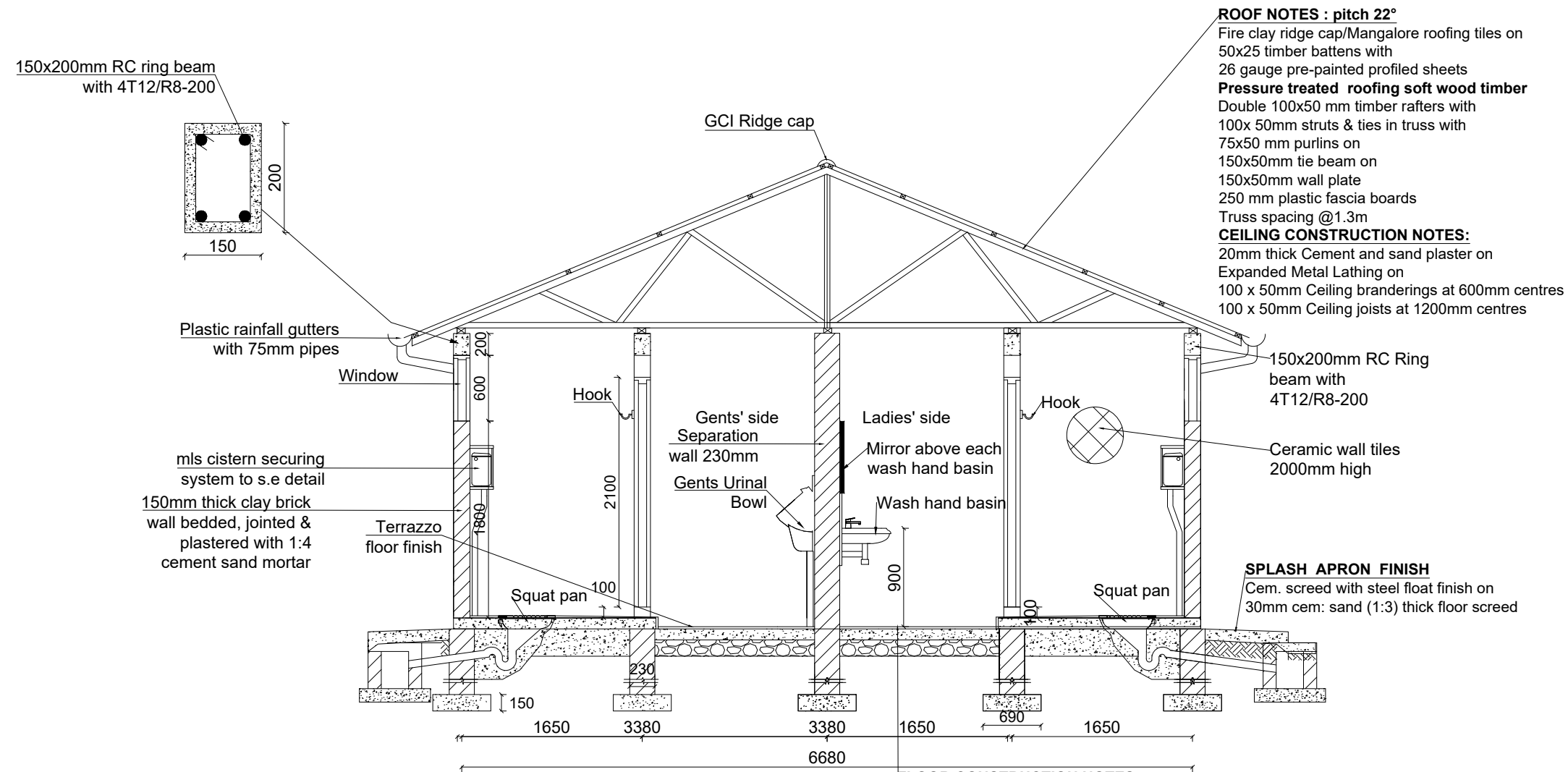
No	Date	Description

DRAWING TITLE : **SANITATION FACILITIES**
Public Toilets - Plan and Foundation Layout

Surveyed by:	R.K
Drawn by:	M.K
Designed by:	W.G.M
Checked by:	J.K.K
Date:	January 2023
DRG. No.:	ALA-ORA- SAN-001
Scale:	1:75
Sheet No.:	1 of 6

LEGEND

EIGHT STANCE WITH DISABLED UNIT, STORE AND A BATHROOM WATERBORNE TOILET FULLY ROOFED



ROOF NOTES : pitch 22°
 Fire clay ridge cap/Mangalore roofing tiles on
 50x25 timber battens with
 26 gauge pre-painted profiled sheets
Pressure treated roofing soft wood timber
 Double 100x50 mm timber rafters with
 100x 50mm struts & ties in truss with
 75x50 mm purlins on
 150x50mm tie beam on
 150x50mm wall plate
 250 mm plastic fascia boards
 Truss spacing @1.3m
CEILING CONSTRUCTION NOTES:
 20mm thick Cement and sand plaster on
 Expanded Metal Lathing on
 100 x 50mm Ceiling branderings at 600mm centres
 100 x 50mm Ceiling joists at 1200mm centres

FLOOR CONSTRUCTION NOTES
 6mm thick ceramic wall tile skirting on
 8mm thick ceramic floor tiles on
 25mm cement and sand (1:3) screed on
 100mm C15 Reinforced cement concrete slab/ A142 BRC
 on DPM placed on
 150mm Hardcore stone bed blinded with 50mm sand
 150mm selected well compacted natural murrum filling

SECTION S-04

Notes:
 200/230mm thick substructure and
 150mm thick super structure walling

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PROJECT :

**ALA-ORA WATER SUPPLY AND
 SANITATION PROJECT**

**NYAGAK WATER SUPPLY AND
 SANITATION SYSTEM**

REVISIONS :

No	Date	Description

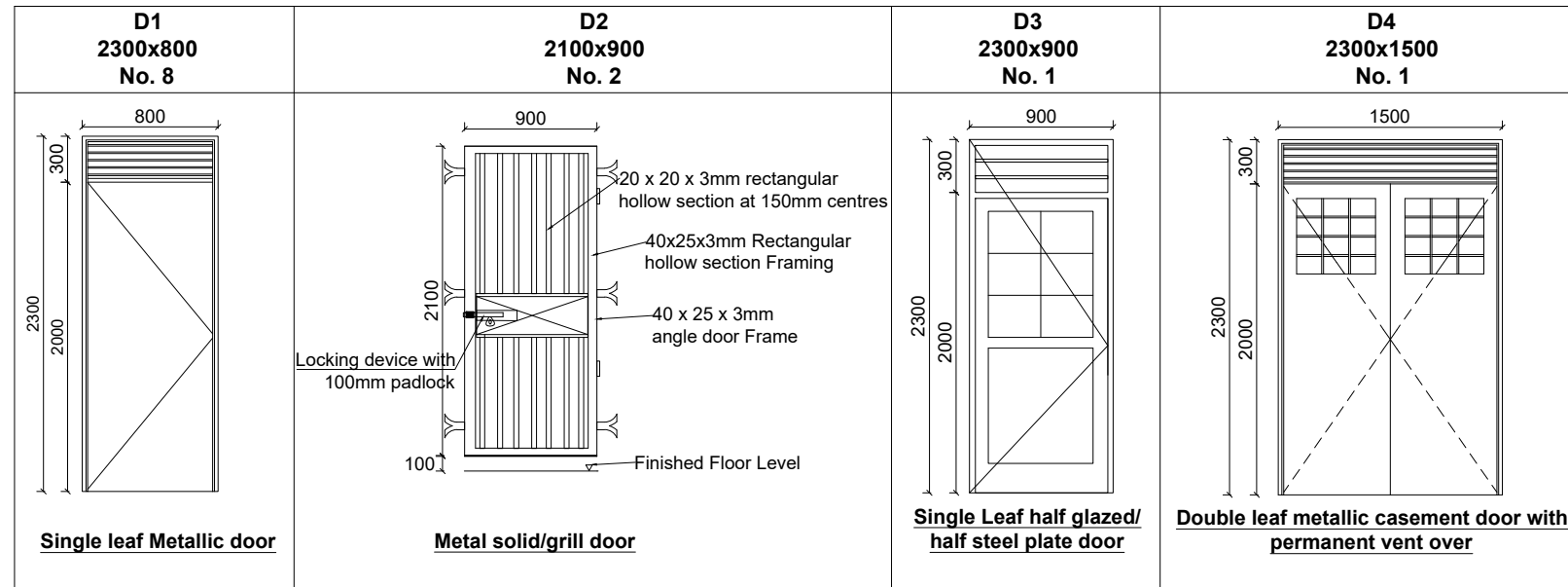
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SANITATION FACILITIES
 Public Toilets - Section

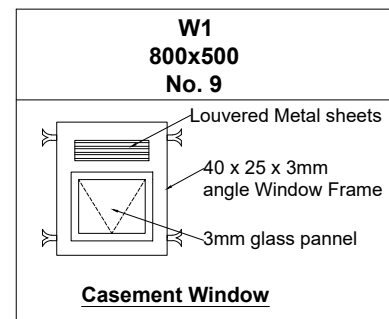
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Date:	January 2023
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Scale:	1:50
Sheet No.:	2 of 6

LEGEND

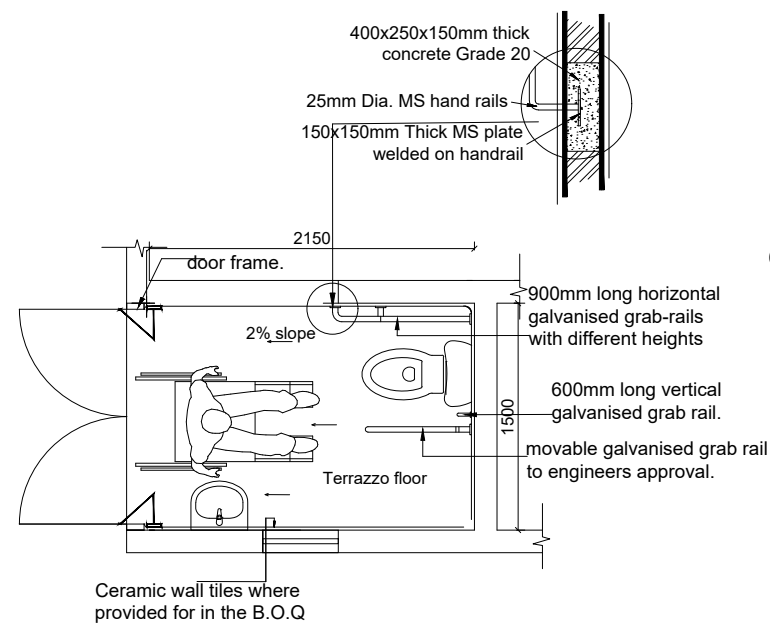
DOOR SCHEDULE



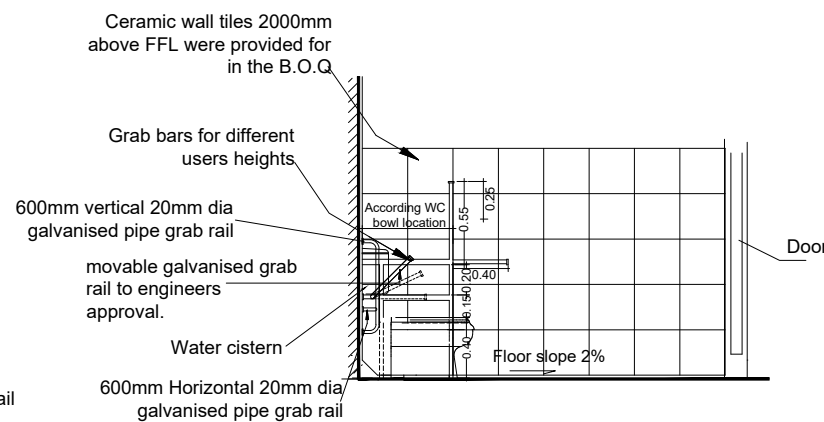
WINDOW SCHEDULE



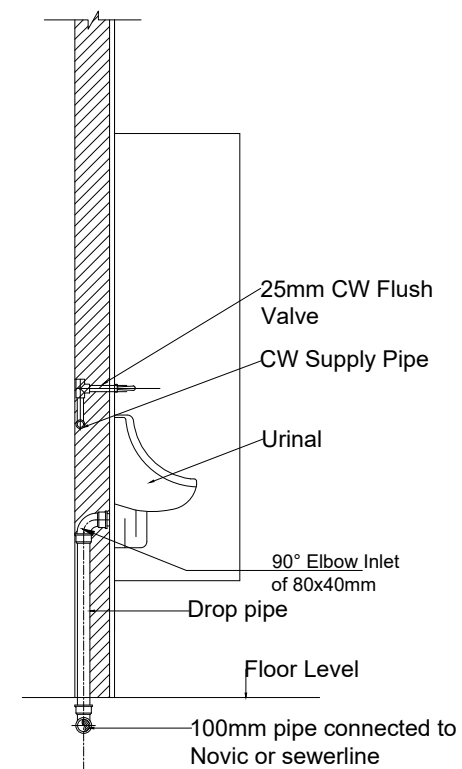
PLAN-DISABLED UNIT



SECTION-DISABLED UNIT



WALL MOUNTED URINAL



CLIENT :

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MINISTRY OF WATER AND ENVIRONMENT

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PROJECT :

**ALA-ORA WATER SUPPLY AND
SANITATION PROJECT**

**NYAGAK WATER SUPPLY AND
SANITATION SYSTEM**

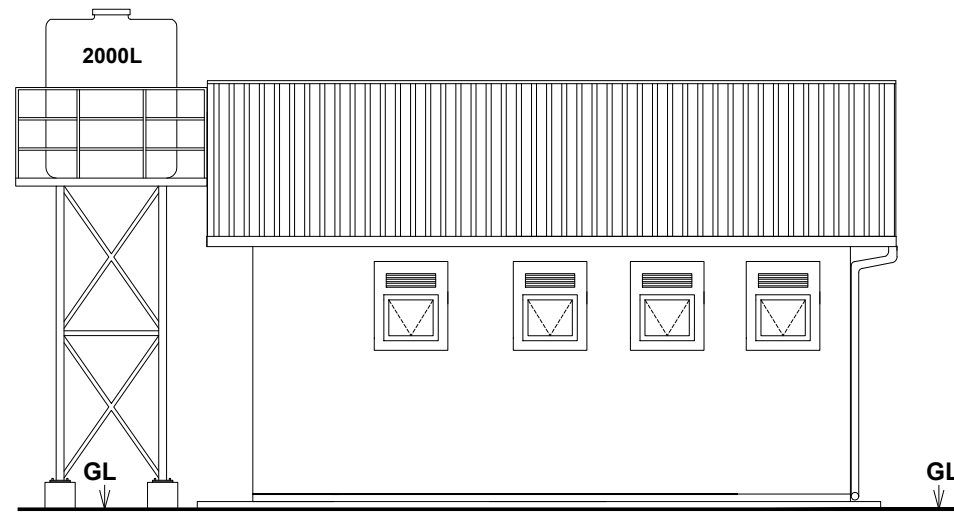
REVISIONS :

No	Date	Description

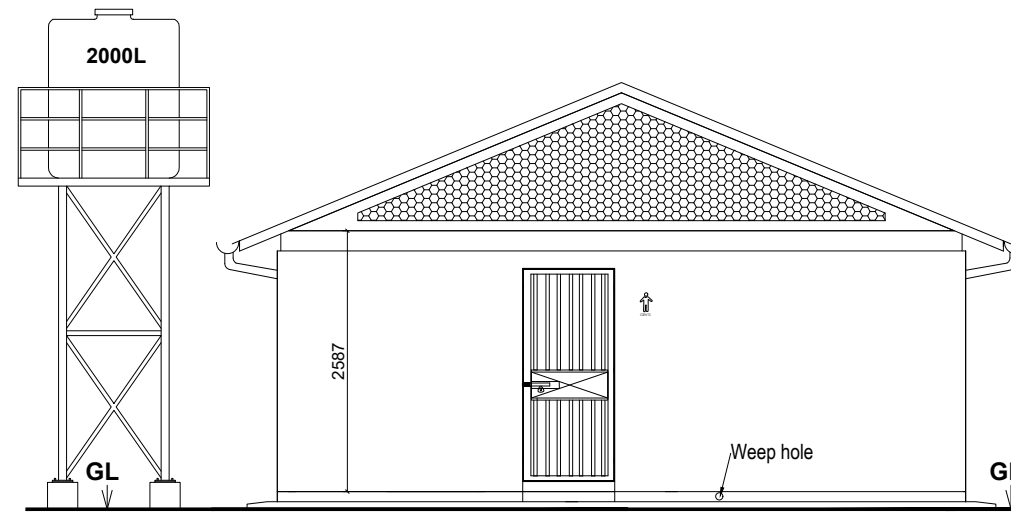
DRAWING TITLE : **SANITATION FACILITIES**
 Public Toilets - Door and Window Schedule, Disabled Unit Details & Urinal Detail

Surveyed by:	R.K
Drawn by:	M.K
Designed by:	W.G.M
Checked by:	J.K.K
Date:	January 2023
DRG. No.:	ALA-ORA- SAN-001
Scale:	1:50
Sheet No.:	3 of 6

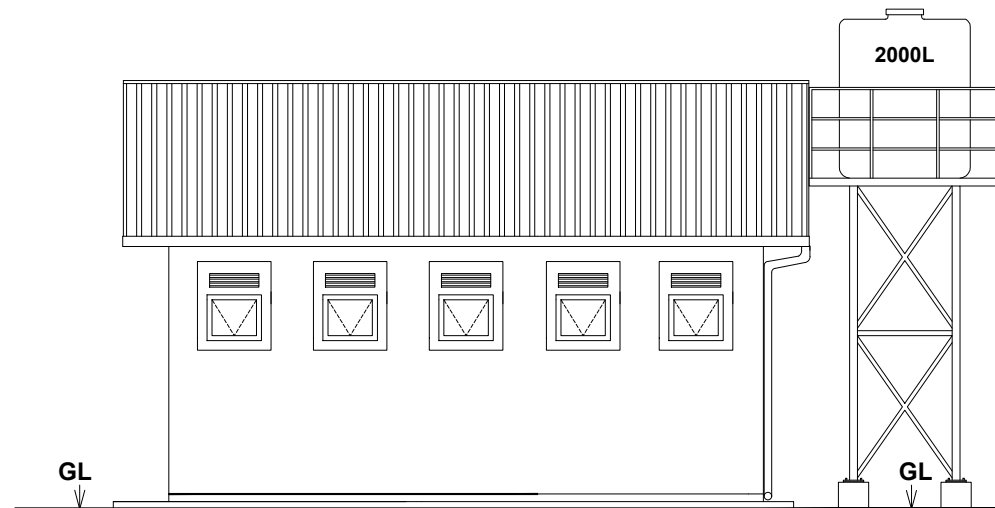
EIGHT STANCE WITH DISABLED UNIT, STORE AND A BATHROOM WATERBORNE TOILET FULLY ROOFED



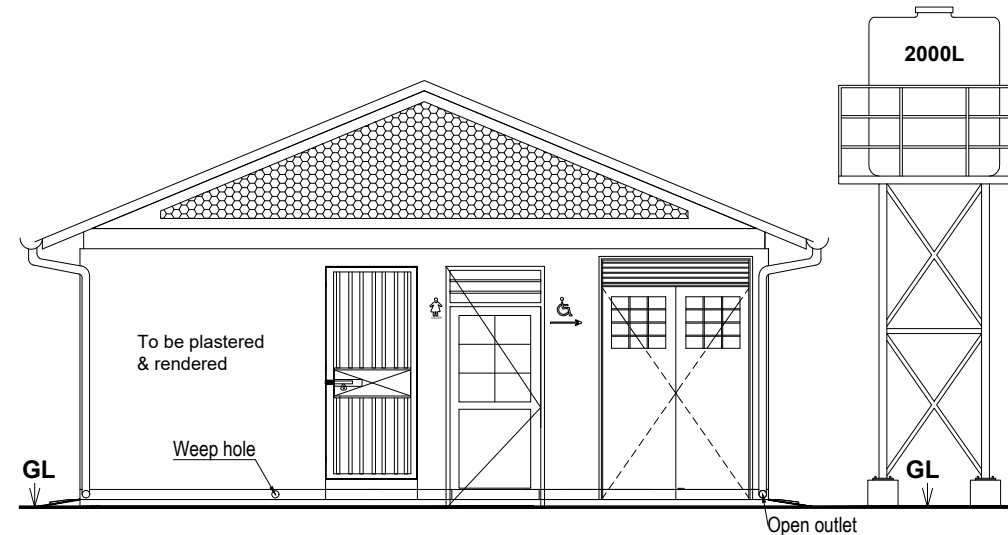
ELEVATION 1



ELEVATION 3



ELEVATION 2



ELEVATION 4

LEGEND

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 SANITATION PROJECT**

**NYAGAK WATER SUPPLY AND
 SANITATION SYSTEM**

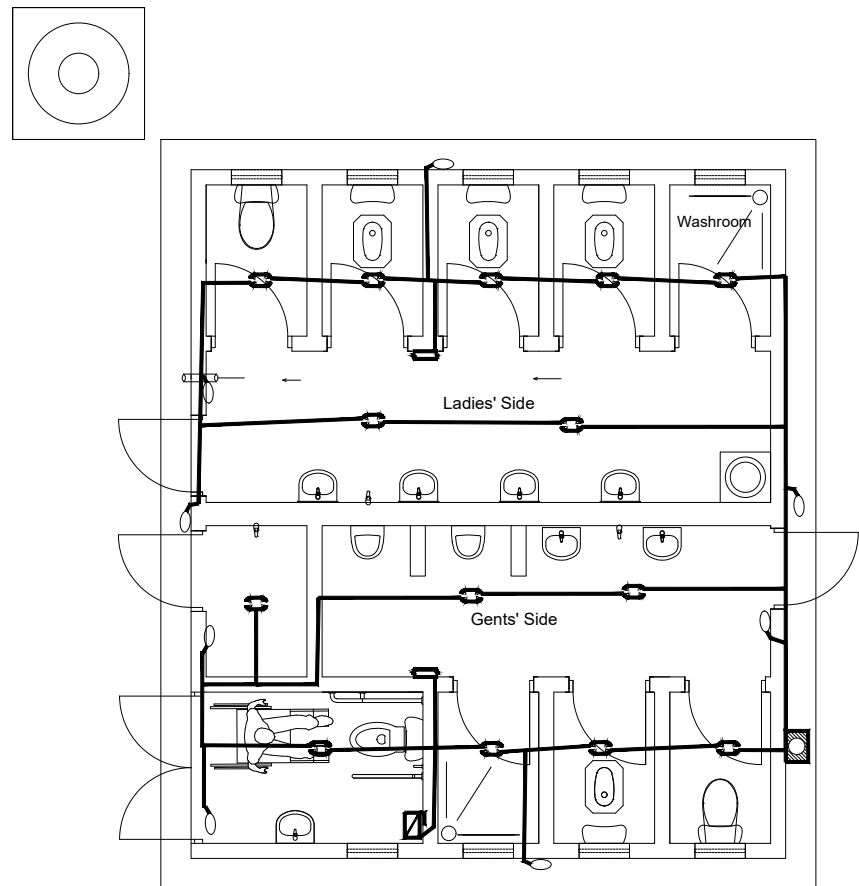
REVISIONS :

No	Date	Description

DRAWING TITLE :
SANITATION FACILITIES
 Public Toilets - Elevations

Surveyed by:	R.K
Drawn by:	M.K
Designed by:	W.G.M
Checked by:	J.K.K
Date:	January 2023
DRG. No.:	ALA-ORA- SAN-001
Scale:	1:75
Sheet No.:	4 of 6

EIGHT STANCE WITH DISABLED UNIT, STORE AND A BATHROOM WATERBORNE TOILET FULLY ROOFED

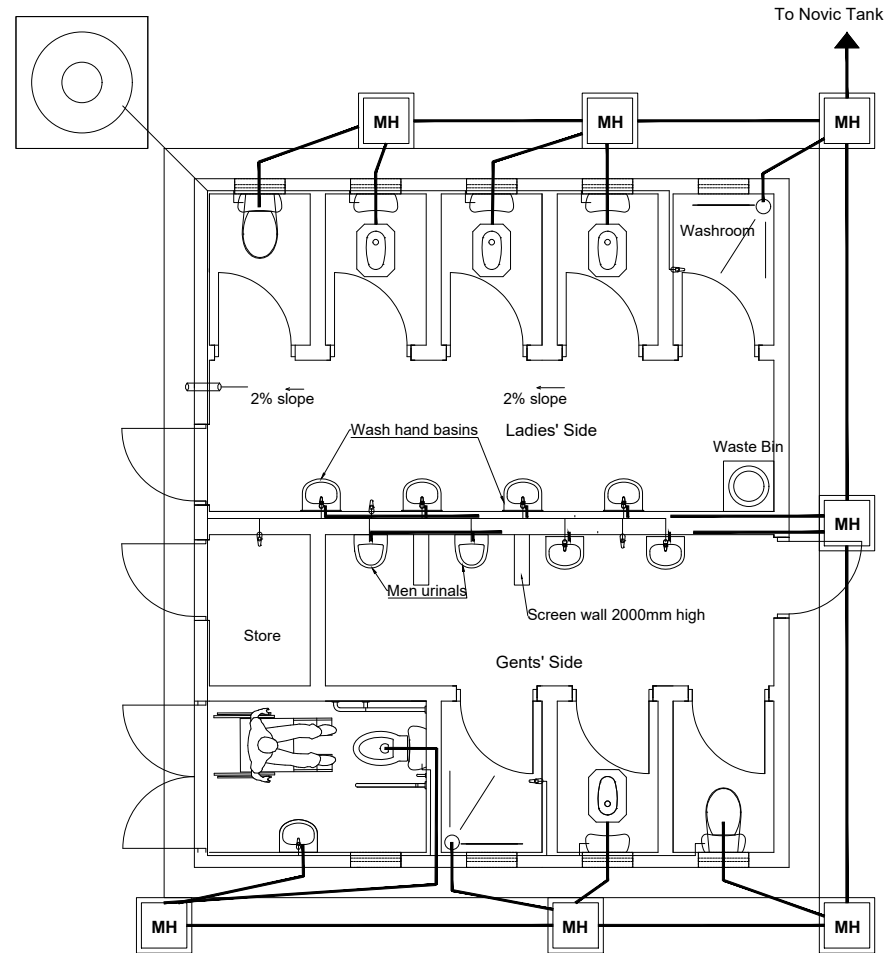


ELECTRICAL LAYOUT

NOTE :-
 Electrical installation limited to
 - Conducting
 - MK boxes and
 - Blanks

LEGEND

- Meter Reader Box
- Main Switch
- One-gang / Three-ways flush wall switch
- Bulk head fitting (Security Lamp)
- Ceiling out let lamp
- Electric Conductor



PLUMBING LAYOUT

LEGEND

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PROJECT :
ALA-ORA WATER SUPPLY AND SANITATION PROJECT

NYAGAK WATER SUPPLY AND SANITATION SYSTEM

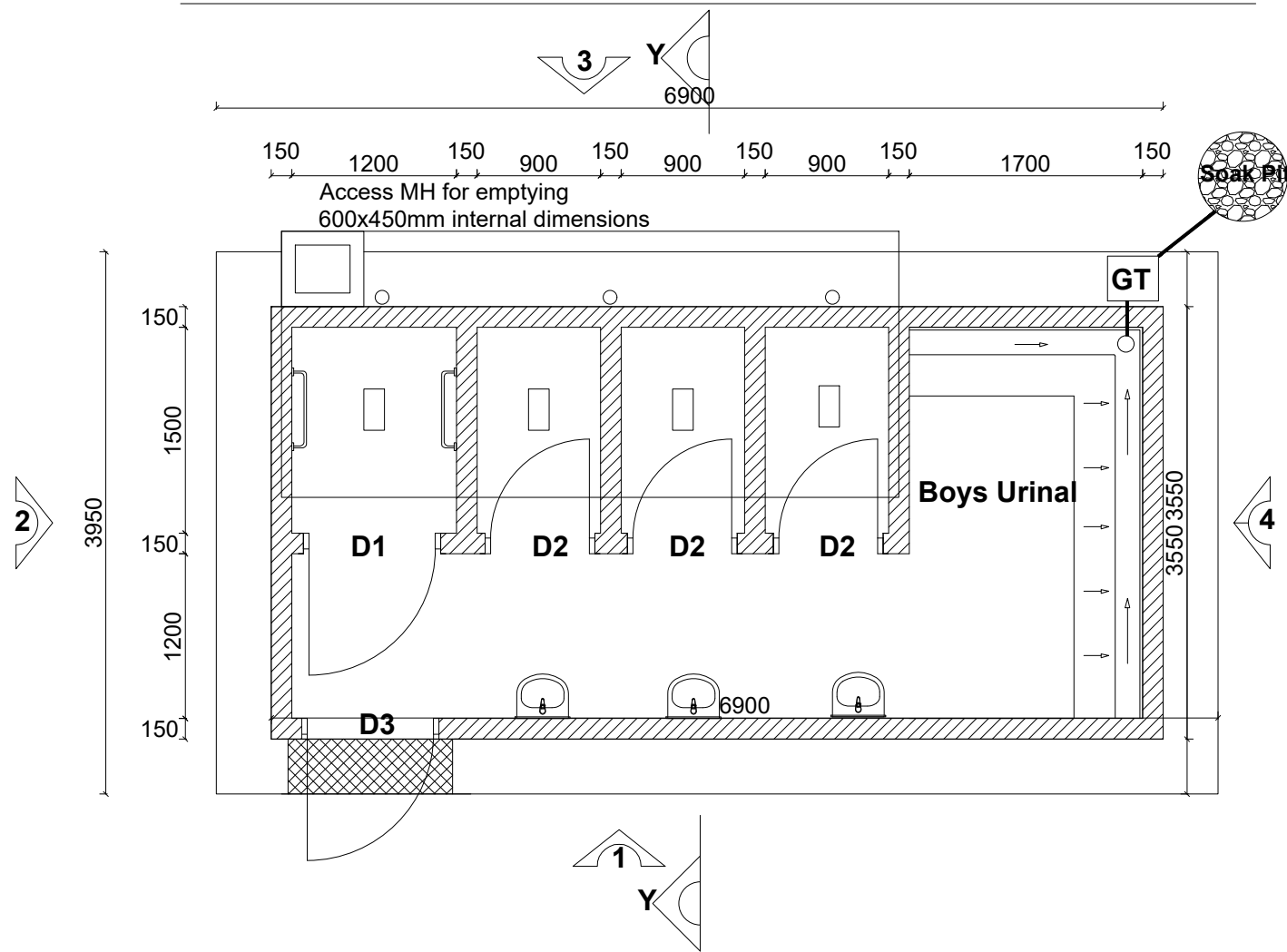
REVISIONS :

No	Date	Description

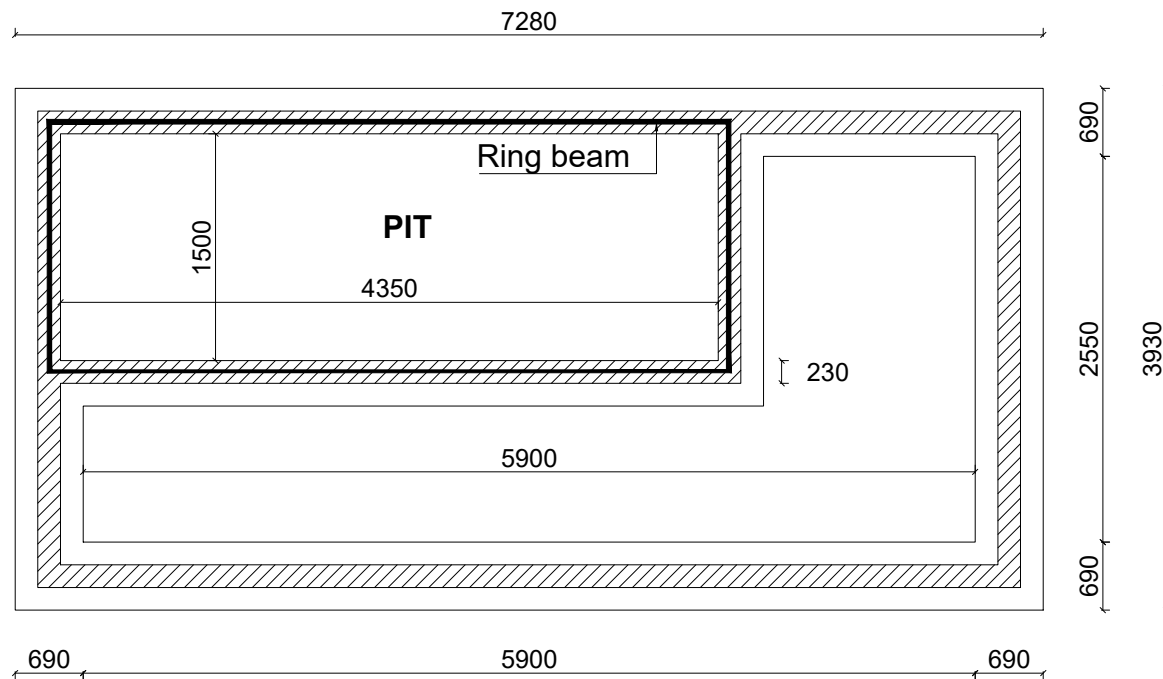
DRAWING TITLE : **SANITATION FACILITIES**
 Public Toilets - Electrical & Plumbing Layouts

Surveyed by: R.K
 Drawn by: M.K
 Designed by: W.G.M
 Checked by: J.K.K
 Date: January 2023
 DRG. No.: ALA-ORA- SAN-001
 Scale: 1:75 Sheet No.: 6 of 6

FOUR STANCE VIP LATRINE INCLUDING A DISABLED UNIT AND URINAL



GENTS VIP PLAN



FOUNDATION LAYOUT

Note:
200/230mm thick sub-structure and 150mm thick super structure walling

LEGEND

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PROJECT :
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 SANITATION PROJECT

**NYAGAK WATER SUPPLY AND
 SANITATION SYSTEM**

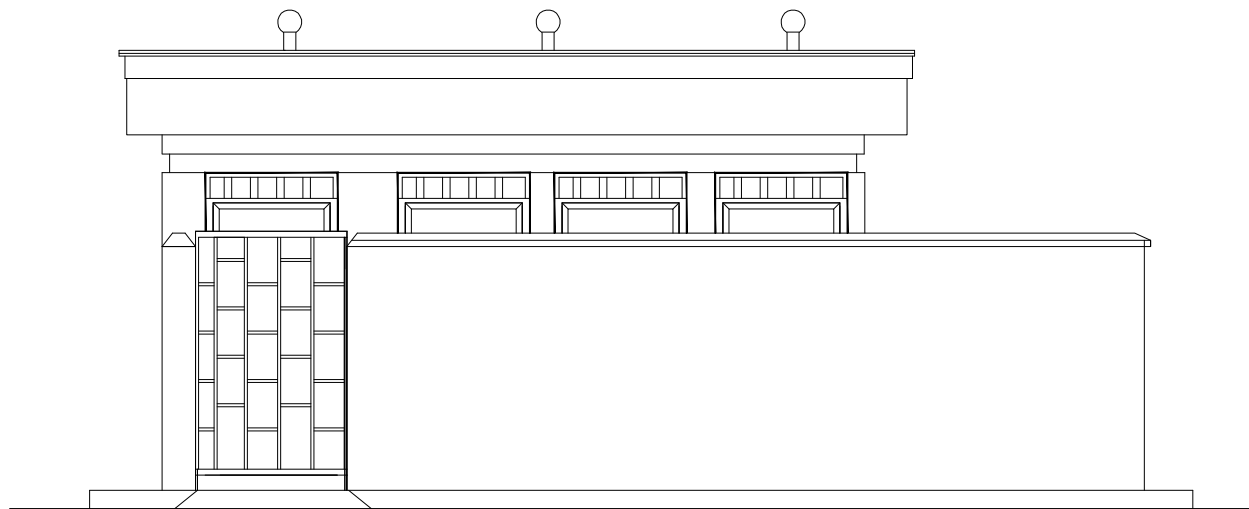
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No	Date	Description

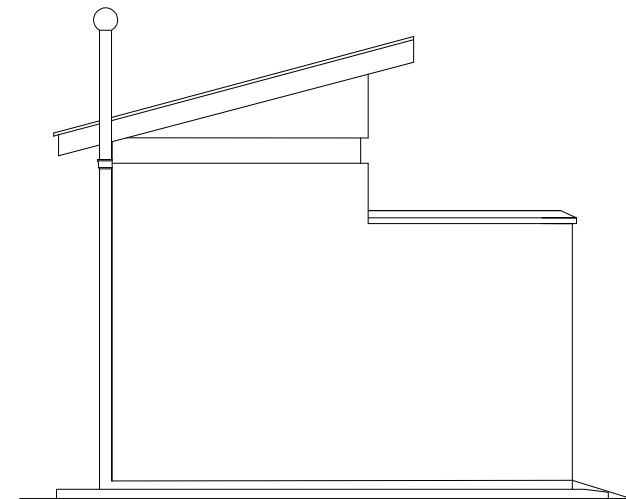
DRAWING TITLE : **SANITATION FACILITIES**
 VIP Latrine Gents - Plan and Foundation Layout

Surveyed by: R.K
 Drawn by: M.K
 Designed by: W.G.M
 Checked by: J.K.K
 Date: January 2023
 DRG. No.: ALA-ORA- SAN-002
 Scale: 1:50 Sheet No.: 1 of 3

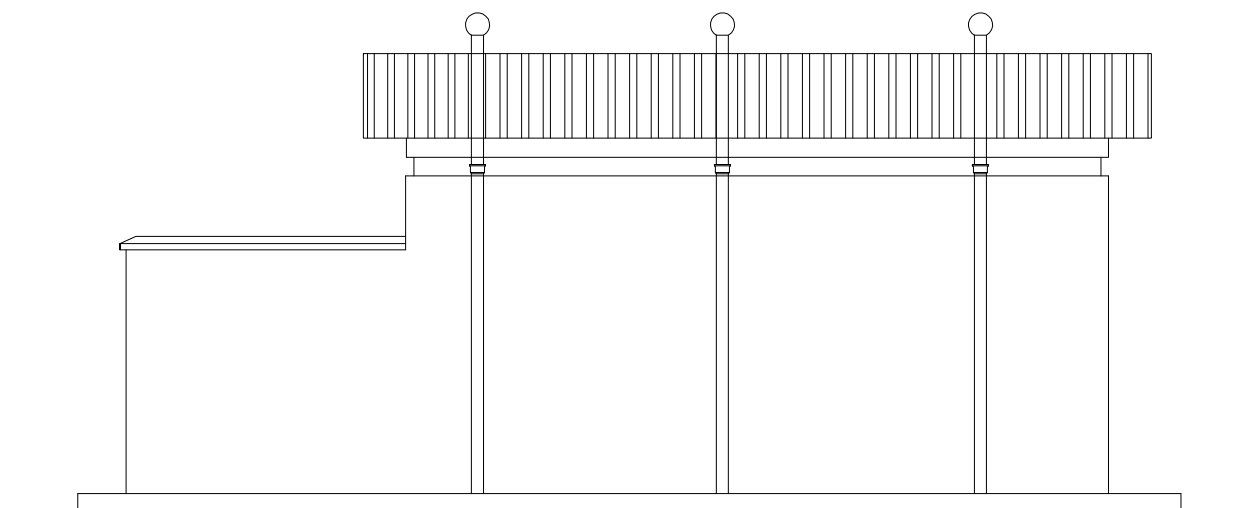
FOUR STANCE VIP LATRINE INCLUDING A DISABLED UNIT AND URINAL



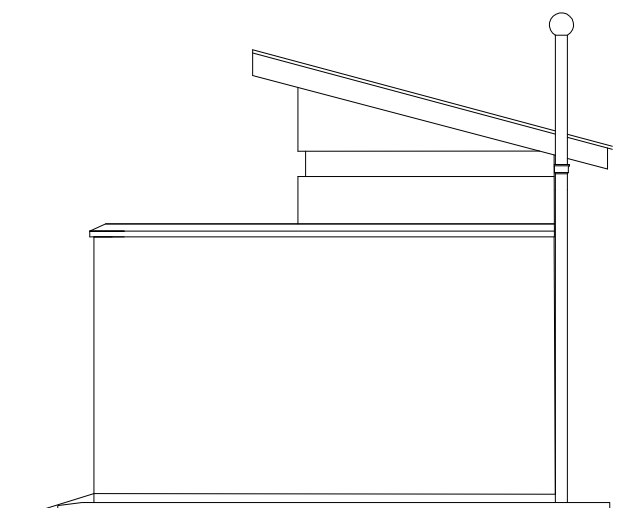
ELEVATION 1



ELEVATION 2



ELEVATION 3



ELEVATION 4

LEGEND

CLIENT : 
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PROJECT :
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 SANITATION PROJECT

**NYAGAK WATER SUPPLY AND
 SANITATION SYSTEM**

REVISIONS :

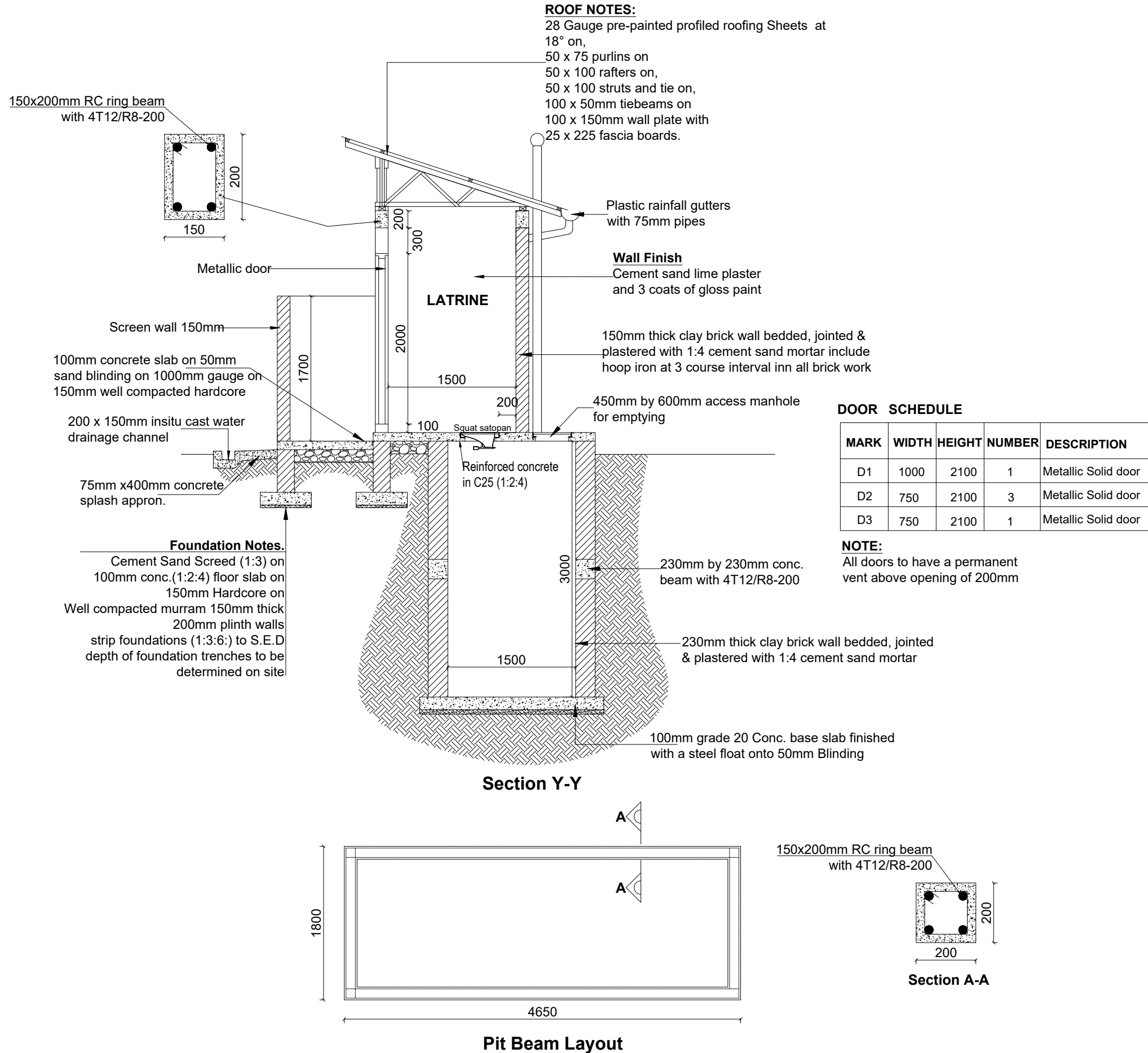
No	Date	Description


DRAWING TITLE : **SANITATION FACILITIES**
 VIP Latrine Gents - Elevations


Surveyed by:	R.K
Drawn by:	M.K
Designed by:	W.G.M
Checked by:	J.K.K
Date:	January 2023
DRG. No.:	ALA-ORA- SAN-002
Scale:	1:50
Sheet No.:	2 of 3

FOUR STANCE VIP LATRINE INCLUDING A DISABLED UNIT AND URINAL


LEGEND



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PROJECT :
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 SANITATION PROJECT**

**NYAGAK WATER SUPPLY AND
 SANITATION SYSTEM**

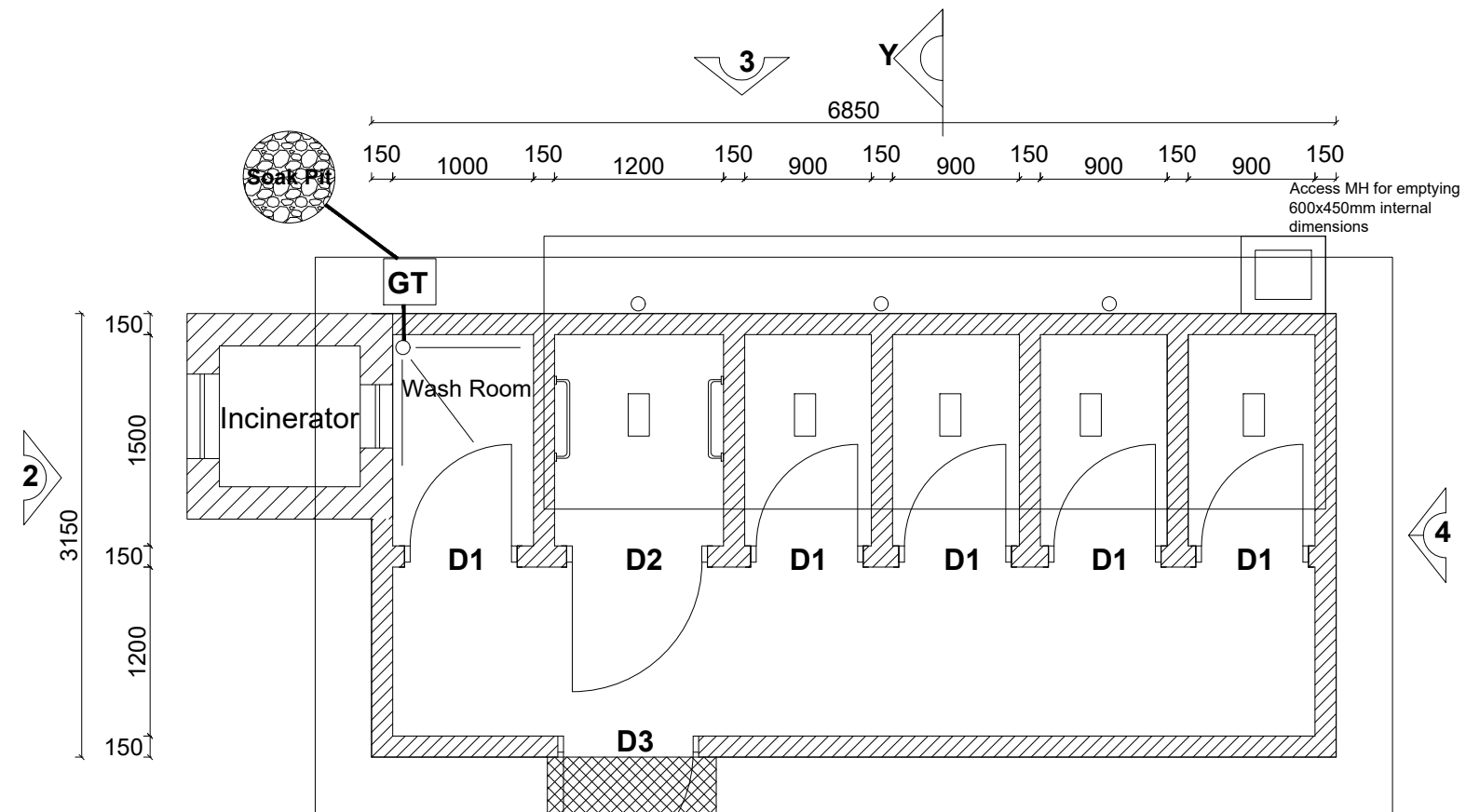
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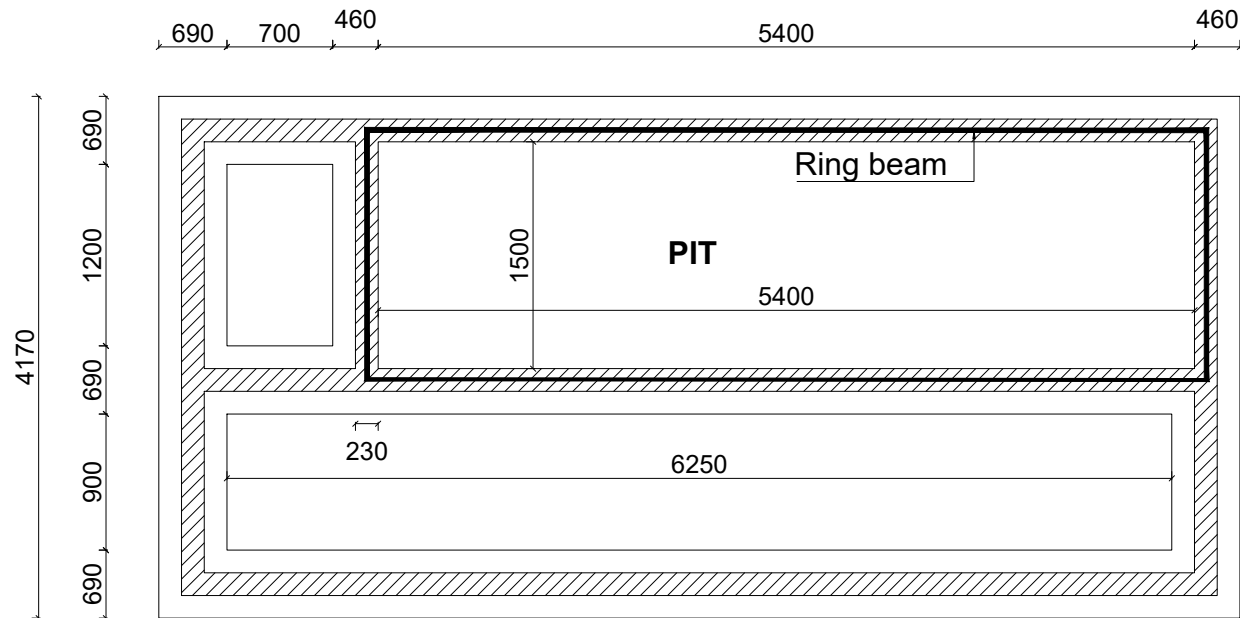
DRAWING TITLE :
SANITATION FACILITIES
 VIP Latrine Gents - Section & Door and Window Schedule

Surveyed by: R.K
 Drawn by: M.K
 Designed by: W.G.M
 Checked by: J.K.K
 Date: January 2023
 DRG. No.: ALA-ORA- SAN-002
 Scale: 1:50 Sheet No.: 3 of 3

FIVE STANCE VIP LATRINE INCLUDING A DISABLED UNIT AND INCINERATOR



LADIES VIP PLAN



FOUNDATION LAYOUT

LEGEND

CLIENT :

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PROJECT :
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 SANITATION PROJECT**

**NYAGAK WATER SUPPLY AND
 SANITATION SYSTEM**

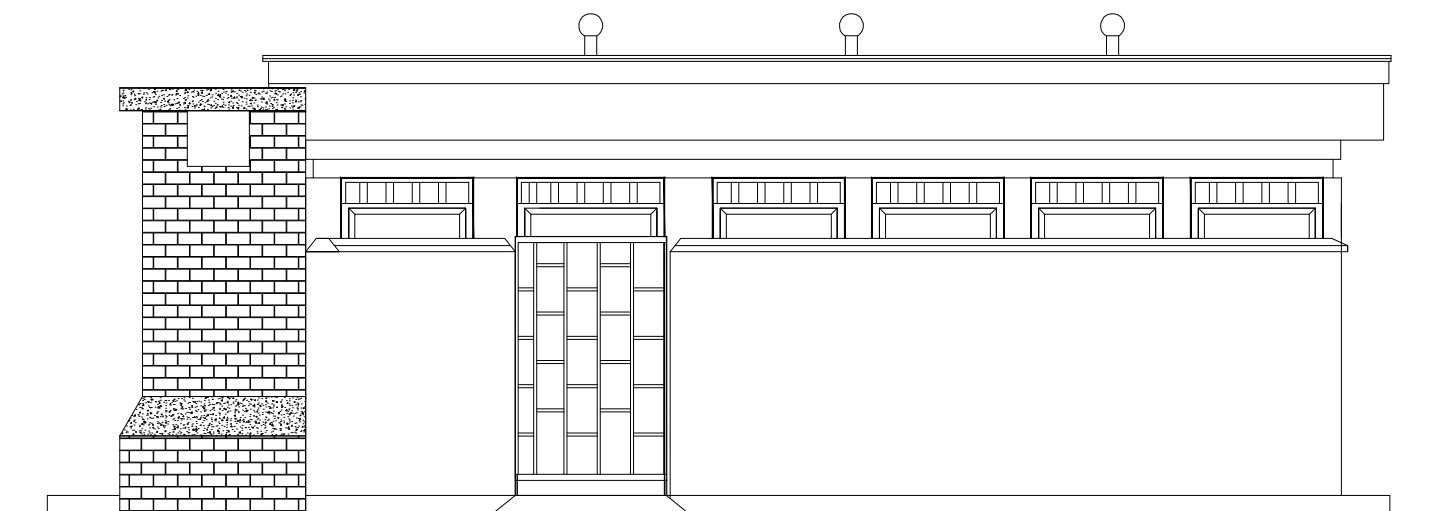
REVISIONS :

No	Date	Description

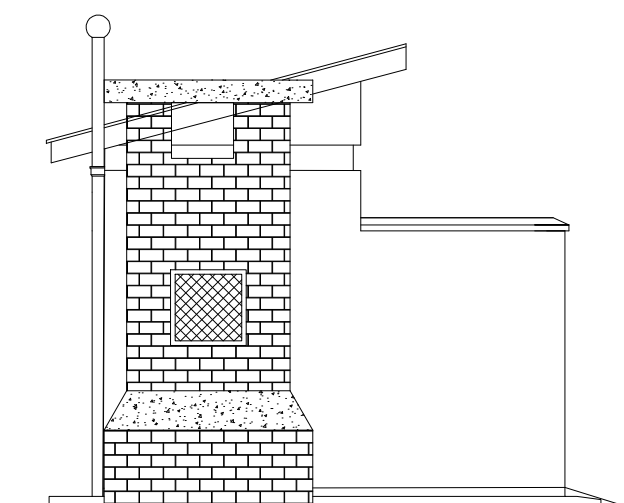
DRAWING TITLE : **SANITATION FACILITIES**
 VIP Latrine Ladies - Plan and Foundation Layout

Surveyed by: R.K
 Drawn by: M.K
 Designed by: W.G.M
 Checked by: J.K.K
 Date: January 2023
 DRG. No.: ALA-ORA- SAN-003
 Scale: 1:50 Sheet No.: 1 of 3

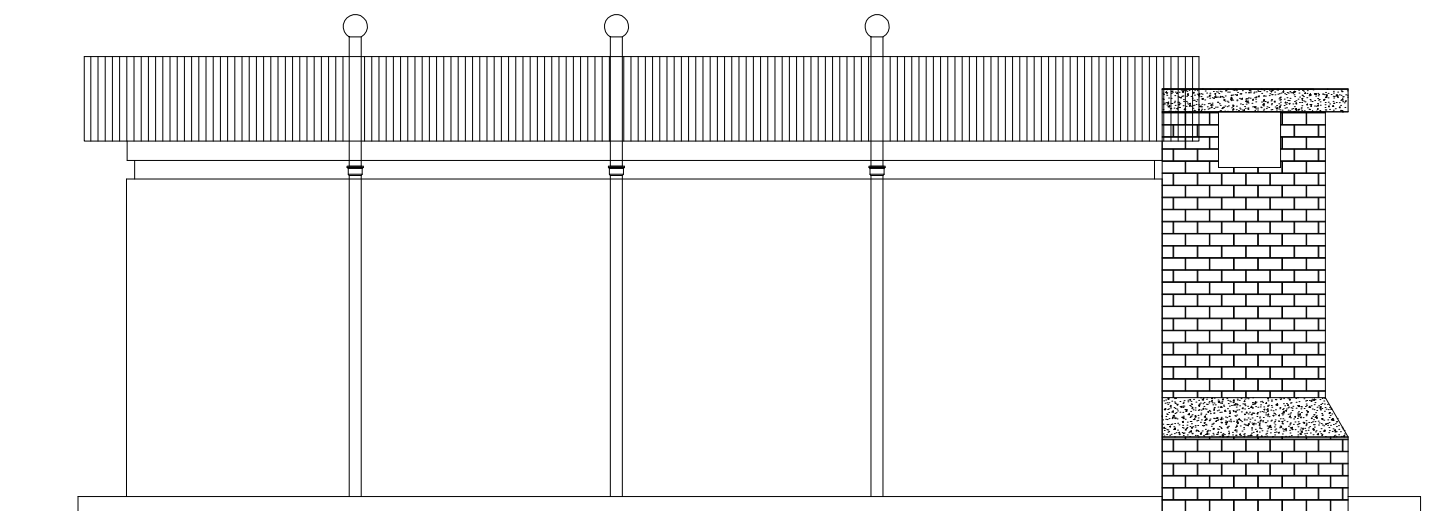
FIVE STANCE VIP LATRINE INCLUDING A DISABLED UNIT AND INCINERATOR



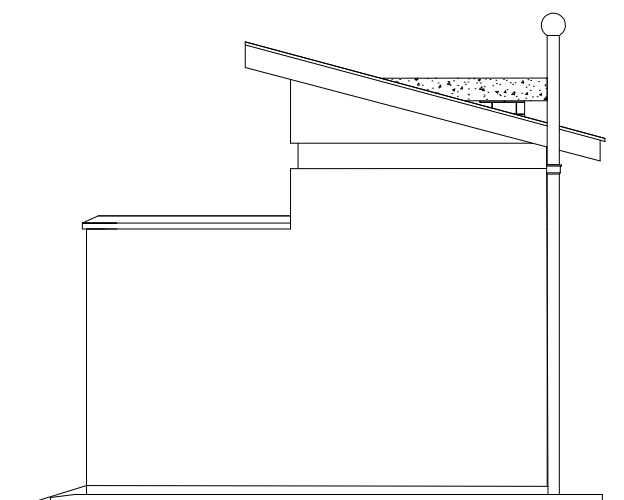
ELEVATION 1



ELEVATION 2



ELEVATION 3



ELEVATION 4

LEGEND

CLIENT :



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PROJECT :

**ALA-ORA WATER SUPPLY AND
SANITATION PROJECT**

**NYAGAK WATER SUPPLY AND
SANITATION SYSTEM**

REVISIONS :

No	Date	Description

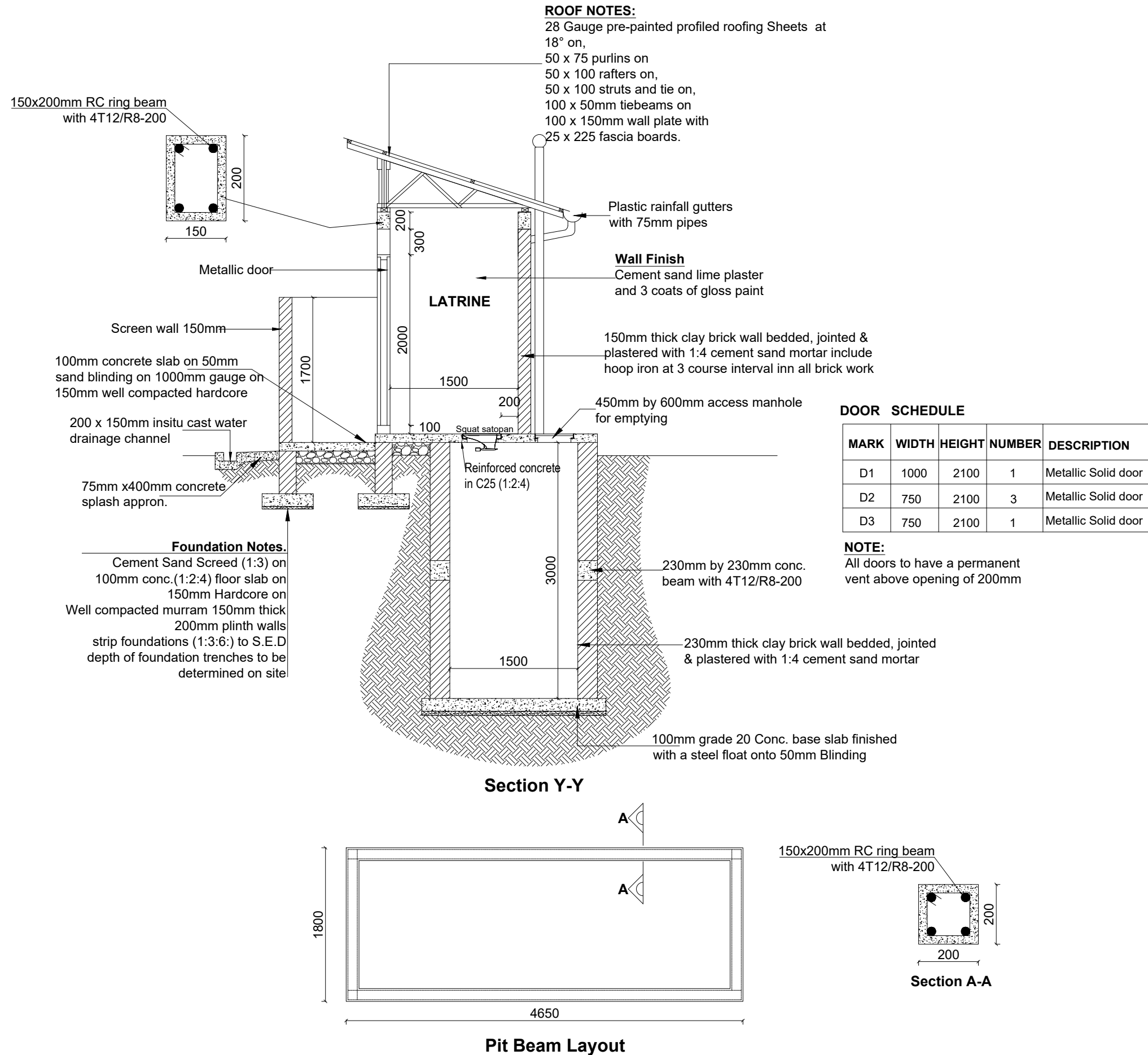
DRAWING TITLE :



SANITATION FACILITIES
VIP Latrine Ladies - Elevations

Surveyed by:	R.K
Drawn by:	M.K
Designed by:	W.G.M
Checked by:	J.K.K
Date:	January 2023
DRG. No.:	ALA-ORA- SAN-003
Scale:	1:50
Sheet No.:	2 of 3

FIVE STANCE VIP LATRINE INCLUDING A DISABLED UNIT AND INCINERATOR

LEGEND



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PROJECT :
ALA-ORA WATER SUPPLY AND SANITATION PROJECT

NYAGAK WATER SUPPLY AND SANITATION SYSTEM

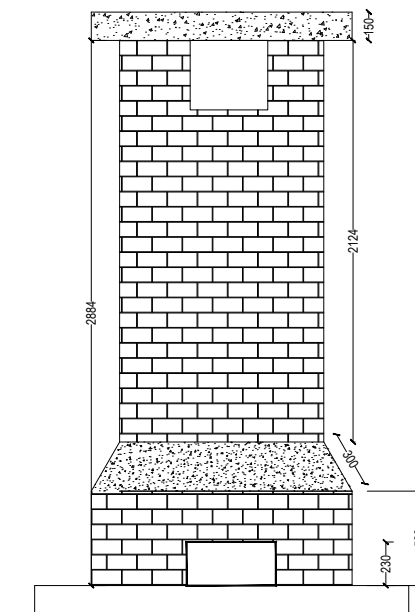
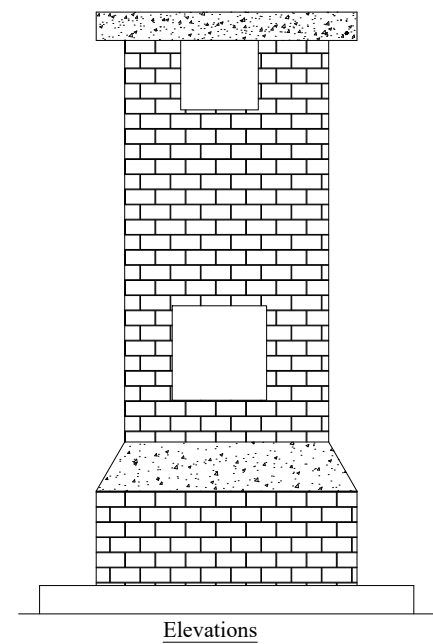
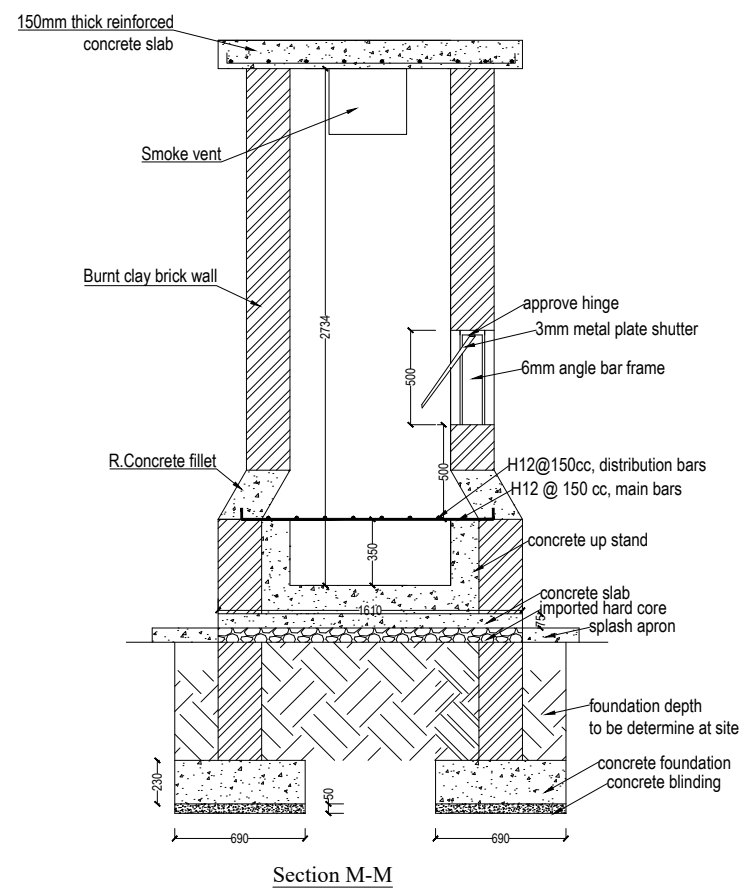
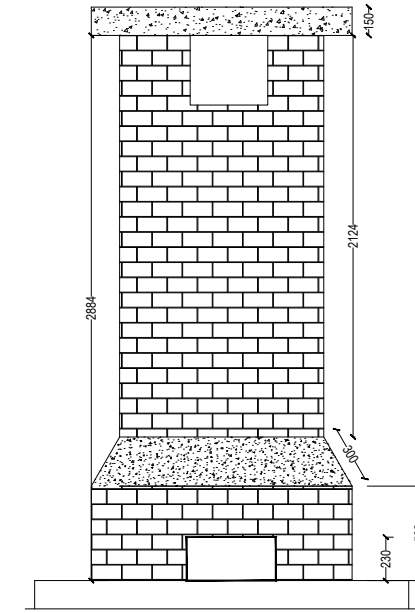
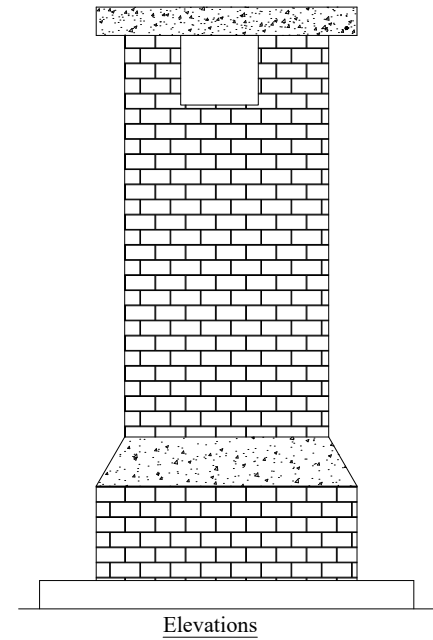
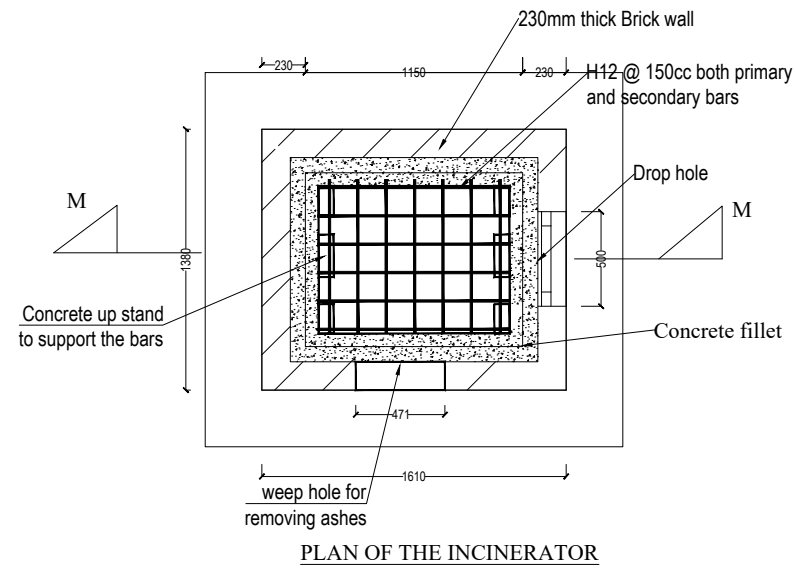
REVISIONS :

No	Date	Description

DRAWING TITLE : **SANITATION FACILITIES**
 VIP Latrine Ladies - Section & Door and Window Schedule

Surveyed by: R.K
 Drawn by: M.K
 Designed by: W.G.M
 Checked by: J.K.K
 Date: January 2023
 DRG. No.: ALA-ORA- SAN-003
 Scale: 1:50 Sheet No.: 3 of 3

INCINERATOR DETAILS



LEGEND

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PROJECT :
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NYAGAK WATER SUPPLY AND SANITATION SYSTEM

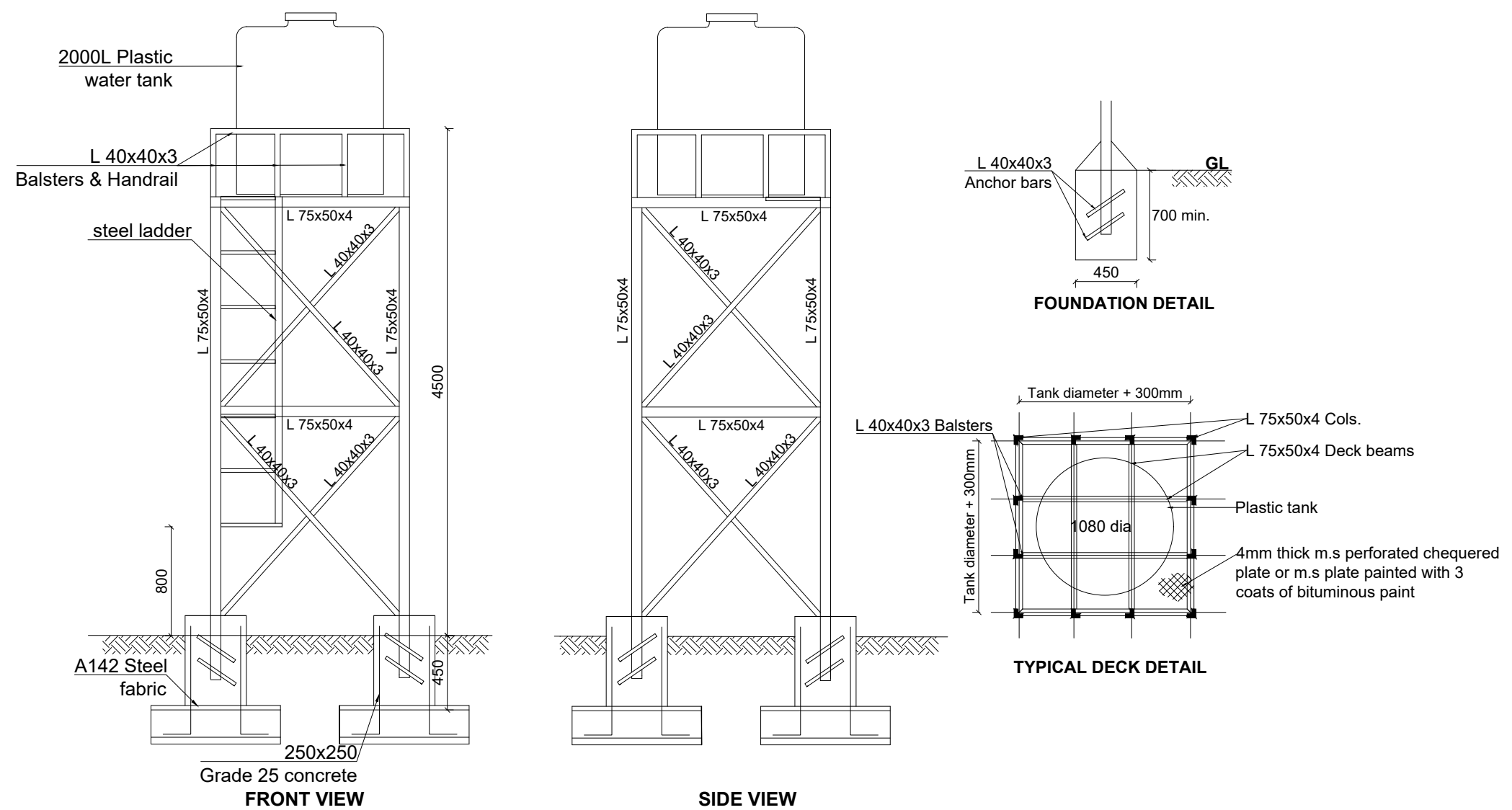
REVISIONS :

No	Date	Description

DRAWING TITLE : **SANITATION FACILITIES**
 Incinerator

Surveyed by:	R.K
Drawn by:	M.K
Designed by:	W.G.M
Checked by:	J.K.K
Date:	January 2023
DRG. No.:	ALA-ORA- SAN-004
Scale:	1:40
Sheet No.:	1 of 1

WATER TANK SUPPORTING STRUCTURE



LEGEND

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PROJECT :

**ALA-ORA WATER SUPPLY AND
SANITATION PROJECT**

**NYAGAK WATER SUPPLY AND
SANITATION SYSTEM**

REVISIONS :

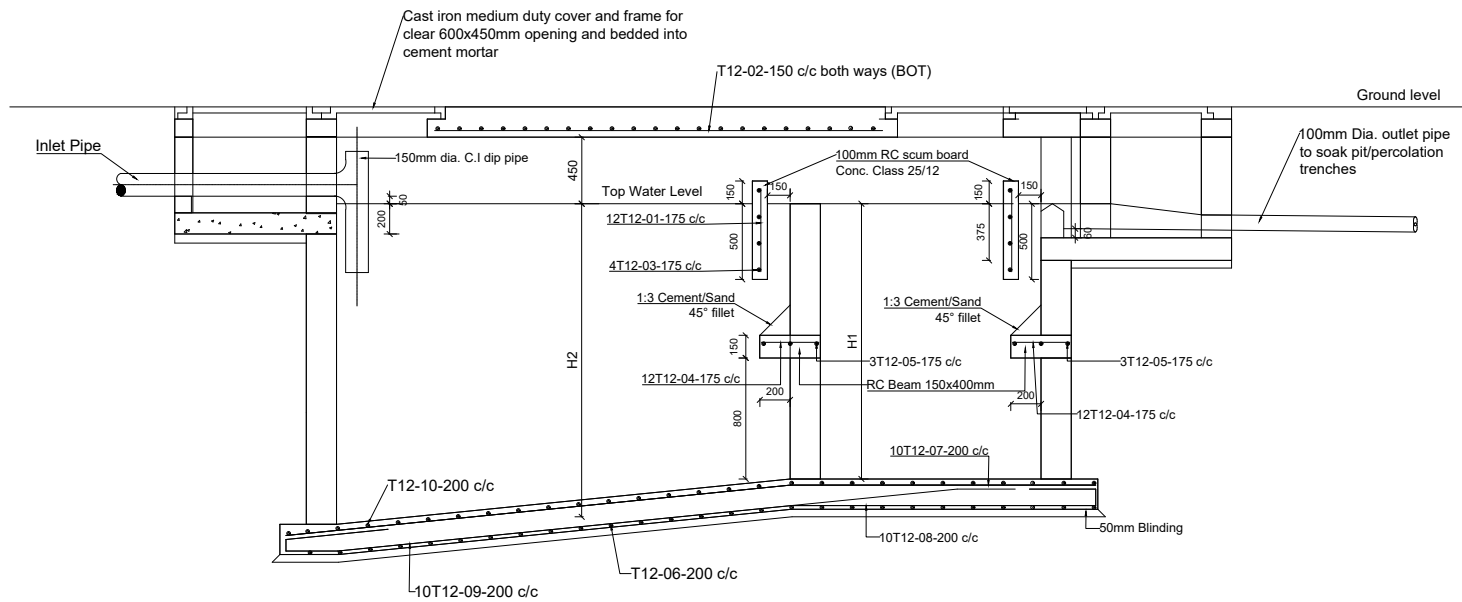
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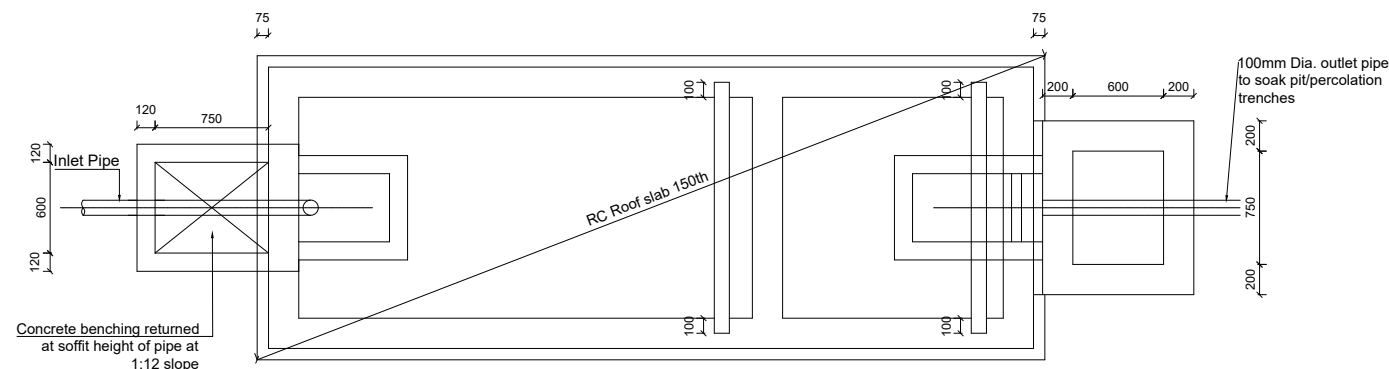
SANITATION FACILITIES
Public Toilets - Elevated Tank Details

Surveyed by:	R.K
Drawn by:	M.K
Designed by:	W.G.M
Checked by:	J.K.K
Date:	January 2023
DRG. No.:	ALA-ORA- SAN-005
Scale:	1:40
Sheet No.:	5 of 6

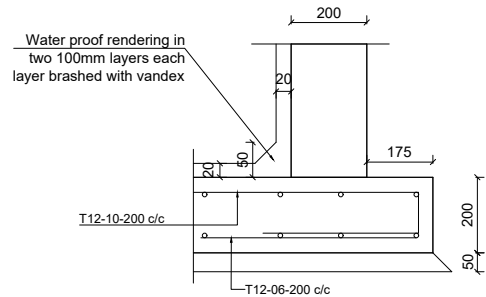
NoviC TANK



SECTION A-A

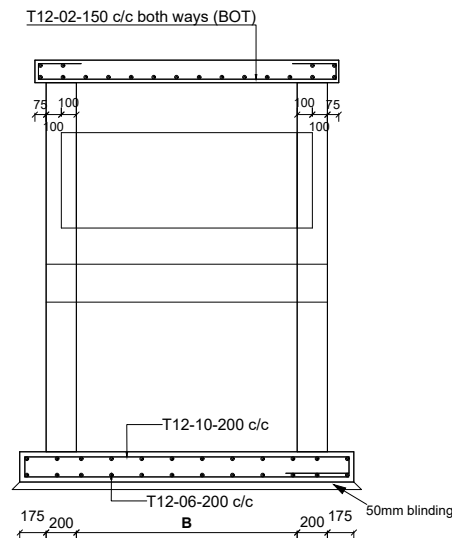
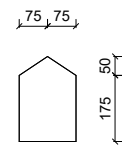


ROOF SLAB PLAN

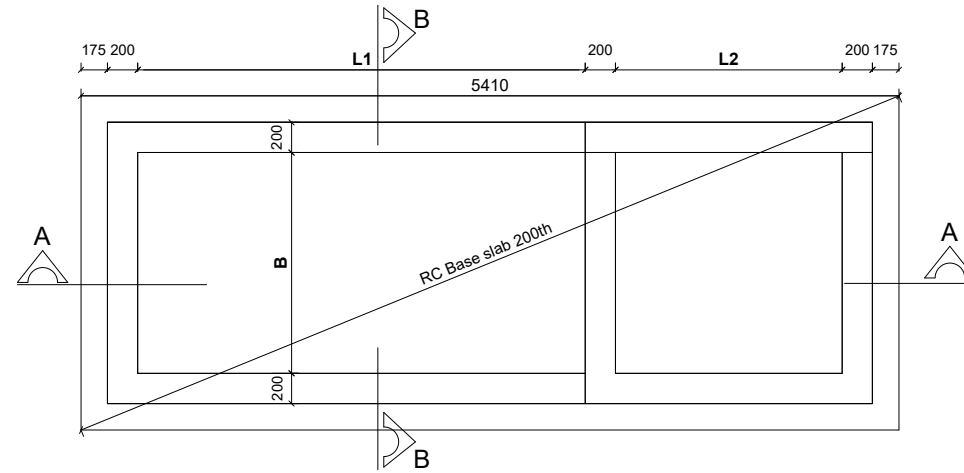


INTERNAL WATER PROOF TO WALLS AND SLABS

CONC. WEIR BLOCK DETAIL



SECTION B-B



NoviC TANK DIMENSIONS

INTERNAL DIMENSIONS (mm)					CAPACITY	NO. OF USERS
L1	L2	H1	H2	B	Cu. M	
1540	760	1600	1750	760	3.2	10
1900	900	1800	2000	900	4.5	20
2000	1000	1800	2000	1100	5.9	30
2400	1100	1800	2000	1150	7.24	40
2500	1200	1800	2000	1300	8.6	50
2000	1300	1800	2000	1400	10	60
2000	1400	1800	2000	1450	11.3	70
3000	1500	1800	2000	1560	12.7	80
3200	1600	1800	2000	1600	14	90
3300	1700	1800	2000	1700	15.4	100
4000	2000	1800	2000	2090	24	150
4500	2000	1800	2000	2650	34.3	200

LEGEND

CLIENT :



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MINISTRY OF WATER AND ENVIRONMENT

CO-FINANCED BY:



CONSULTANT :



PROJECT :

ALA-ORA WATER SUPPLY AND SANITATION PROJECT

NYAGAK WATER SUPPLY AND SANITATION SYSTEM

REVISIONS :

No	Date	Description

DRAWING TITLE :

SANITATION FACILITIES
NoviC Tank

Surveyed by:

R.K

Drawn by:

M.K

Designed by:

W.G.M

Checked by:

J.K.K

Date:

January 2023

DRG. No.:

ALA-ORA- SAN-006

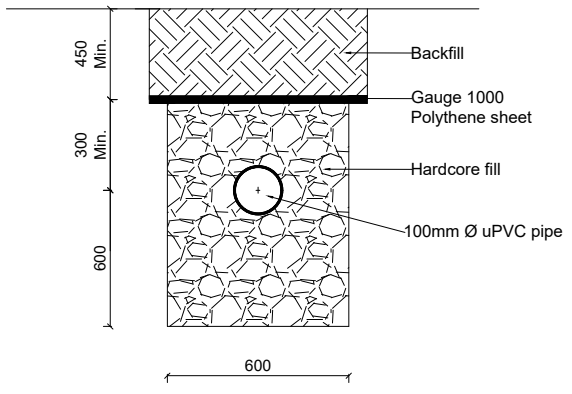
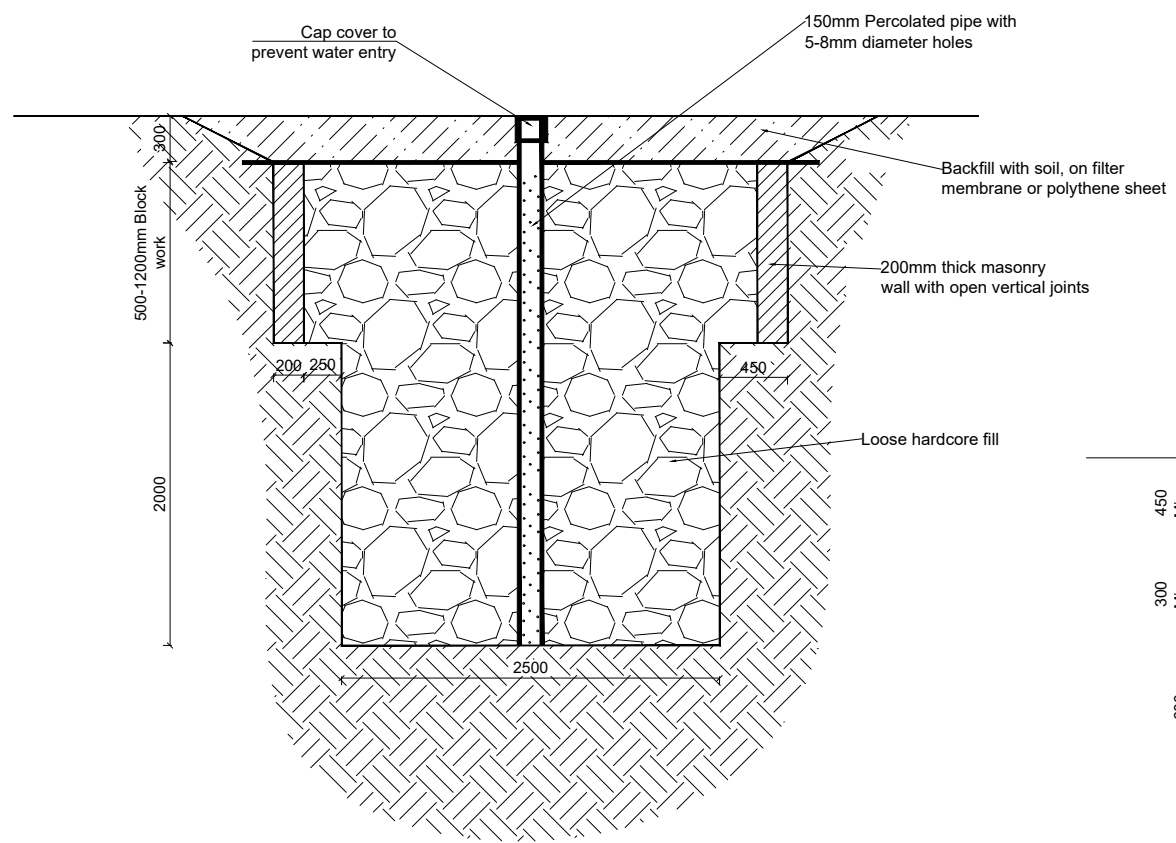
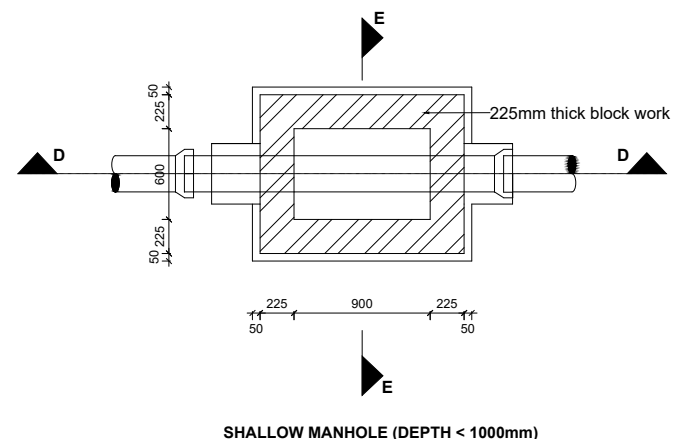
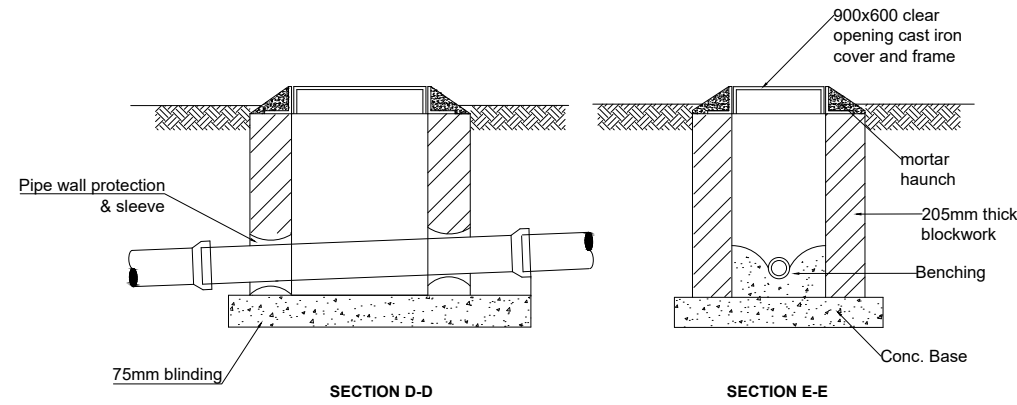
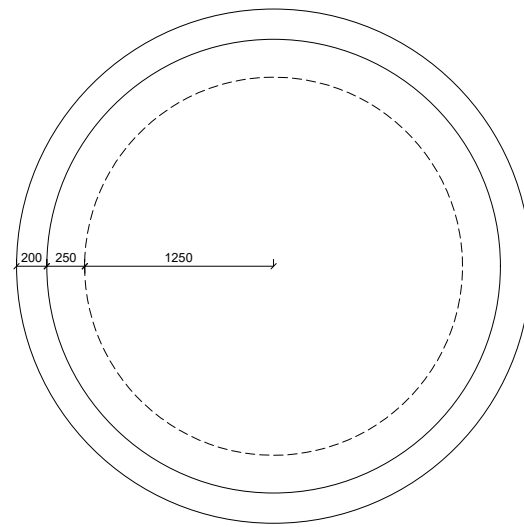
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Sheet No.:

1 of 1

SOAK AWAY PIT AND MANHOLE DETAILS



Note:
Detail for areas with sandy or red soils,
for clay or black-cotton soils appropriate
solutions to be determined on site.

LEGEND

CLIENT :



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CONSULTANT :



Alliance Consultants Ltd
In Association with



Infra-Consult Ltd

PROJECT :

ALA-ORA WATER SUPPLY AND
SANITATION PROJECT

**NYAGAK WATER SUPPLY AND
SANITATION SYSTEM**

REVISIONS :

No	Date	Description

DRAWING TITLE: **SANITATION FACILITIES**
Manhole and Soak away Pit

Surveyed by:	R.K
Drawn by:	M.K
Designed by:	W.G.M
Checked by:	J.K.K
Date:	January 2023
DRG. No.:	ALA-ORA- SAN-007
Scale:	1:50
Sheet No.:	1 of 1