



GOAL UGANDA

CONSTRUCTION OF MUWAYO TOWN COUNCIL PIPED WATER SUPPLY SYSTEM IN BUGIRI DISTRICT

BOOK OF DRAWINGS

MAY 2023

CONSULTANTS:






WSS SERVICES (U) LIMITED
*Plot 17 Kakungulu Road,
Ministers' Village Ntinda Kampala
P.O. Box 27755 Kampala,*

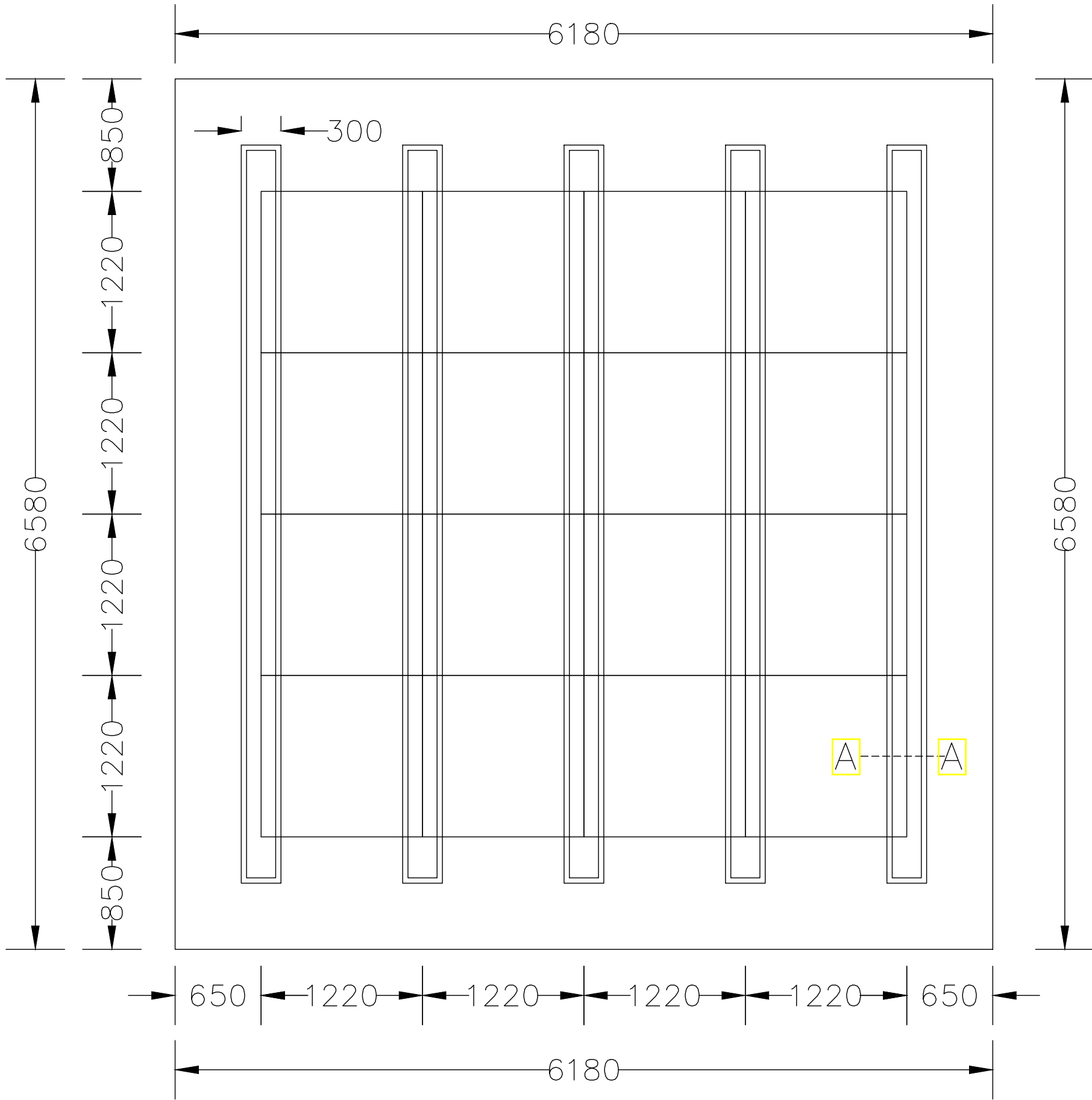
IN
ASSOCIATION
WITH



INDIGO ENGINEERING LTD

Plot No. 56 Bombo Road,
Kalmex Building
P.O. Box 37783
Kampala, Uganda;

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DRAWING TITLE	DRAWING NUMBER	1). All dimensions in millimetres unless ortherwise indicated 2). All levels in metres above sea level 3). Structural details are not included 4). All structural concrete is class 25/10mm aggregate 5). All mass concrete is class 15/10mm aggregate
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6.0 PUMP HOUSE AND GUARD HOUSE	GBUN4-5184/MWSS/6.0.0	CLIENT: <div><div>GOAL UGANDA Behind Grand Pearl Hotel Muyenga, P.O Box 33140, Uganda, Kampala</div></div>
7.0 BOREHOLE DETAILS	GBUN4-5184/MWSS/7.0.0	FINANCED BY:
8.0 LATRINE	GBUN4-5184/MWSS/8.0.0	PROJECT CONSTRUCTION OF MUWAYO TOWN COUNCI SOLAR POWERED PIPED WATER SUPPLY SYSTEMS IN BUGIRI DISTRICT
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12.0 TRENCHING DETAILS	GBUN4-5184/MWSS/12.0	
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15.0 MARK POST	GBUN4-5184/MWSS/15.0	SCALE ##### DRAWING No. GBUN4-5184/MWSS/i SURVEYED A.M DESIGNED D.B DRAWN F.S CHECKED E.T DATE MAY, 2023 APPROVED J.S
16.0 PUBLIC STAND POINT(PSPs)	GBUN4-5184/MWSS/16.0	



75 CUBIC RESERVOIR LAYOUT PLAN

NOTES

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WSS Services (U) Ltd & INDIGO ENGINEERING LTD



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DRAWING TITLE

MUWAYO PROJECT

RESERVOIR LAYOUT PLAN

SCALE

#####

DRAWING No.
GBUN4-5184/MWSS/4.1

SURVEYED

A.M

DESIGNED

D.B

DRAWN

F.S

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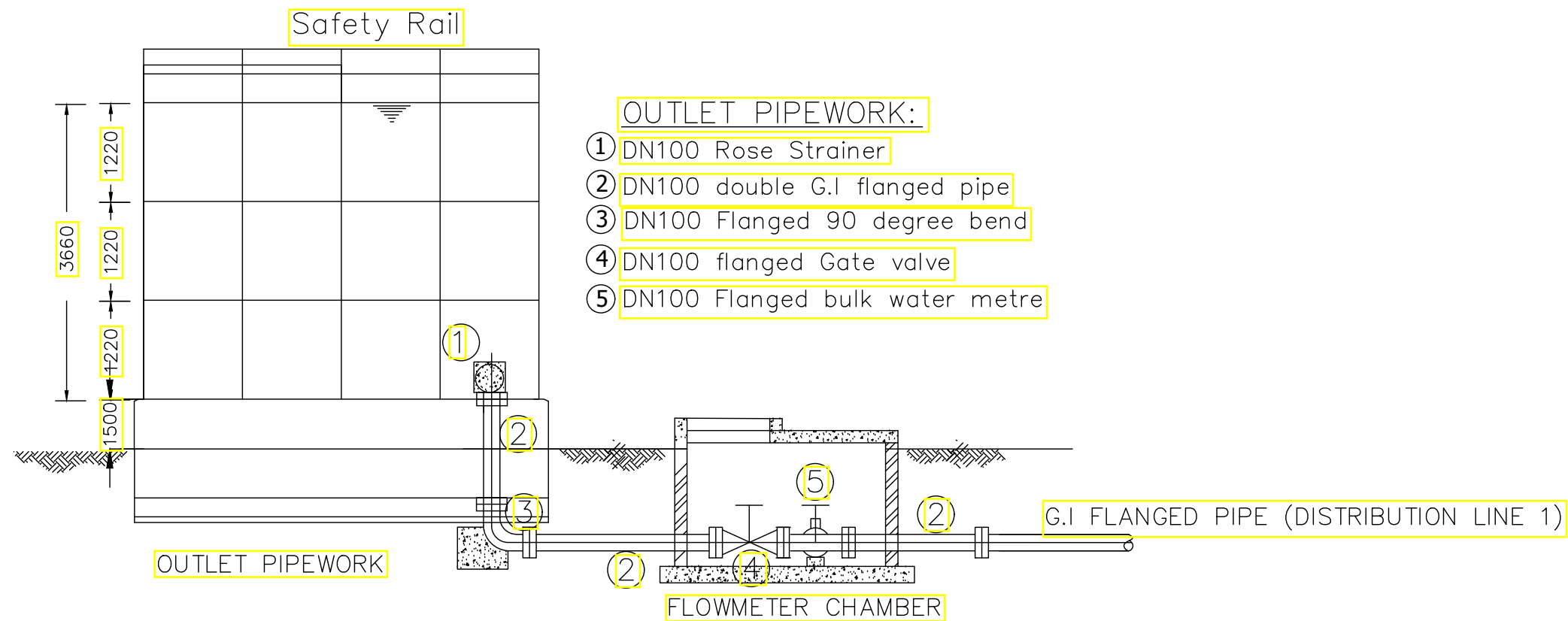
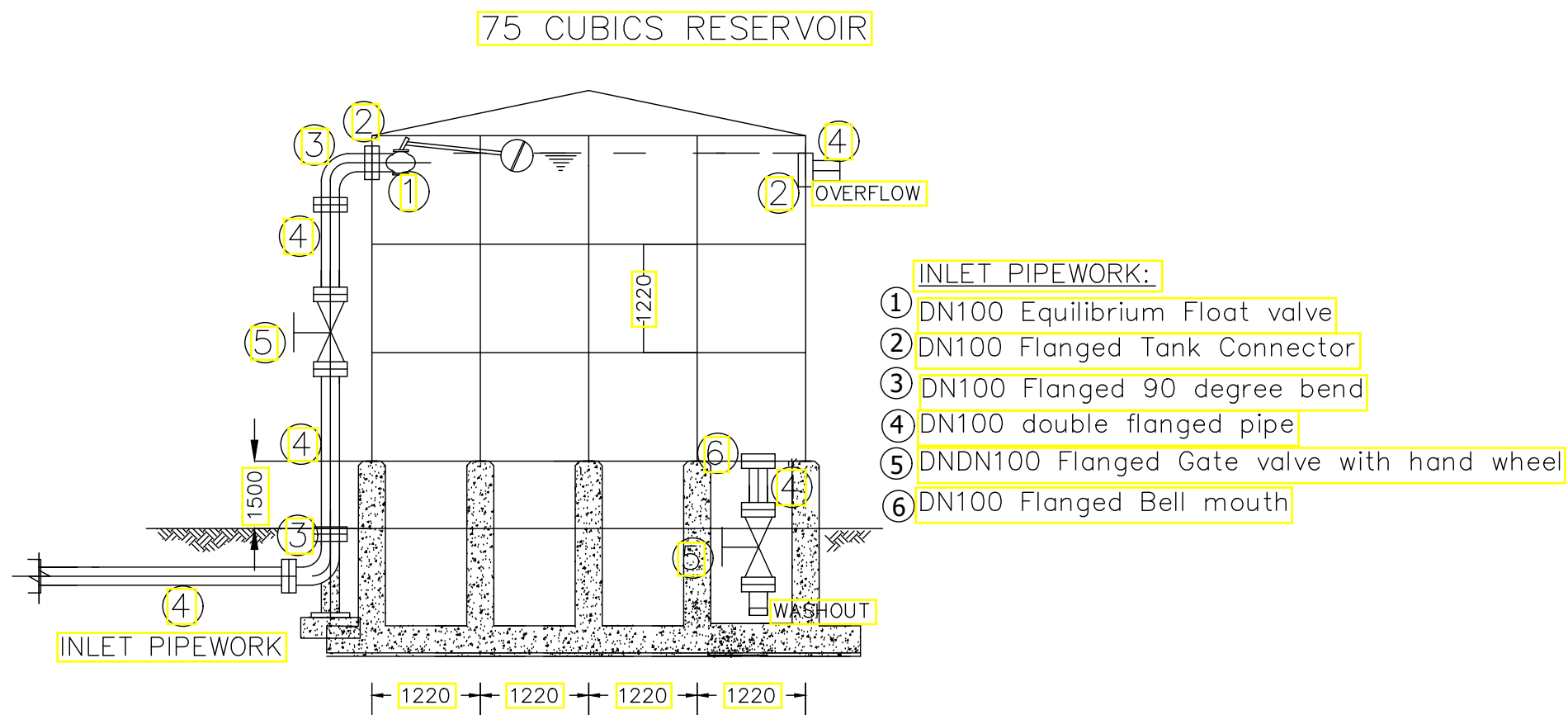
E.T

DATE

MAY, 2023

APPROVED

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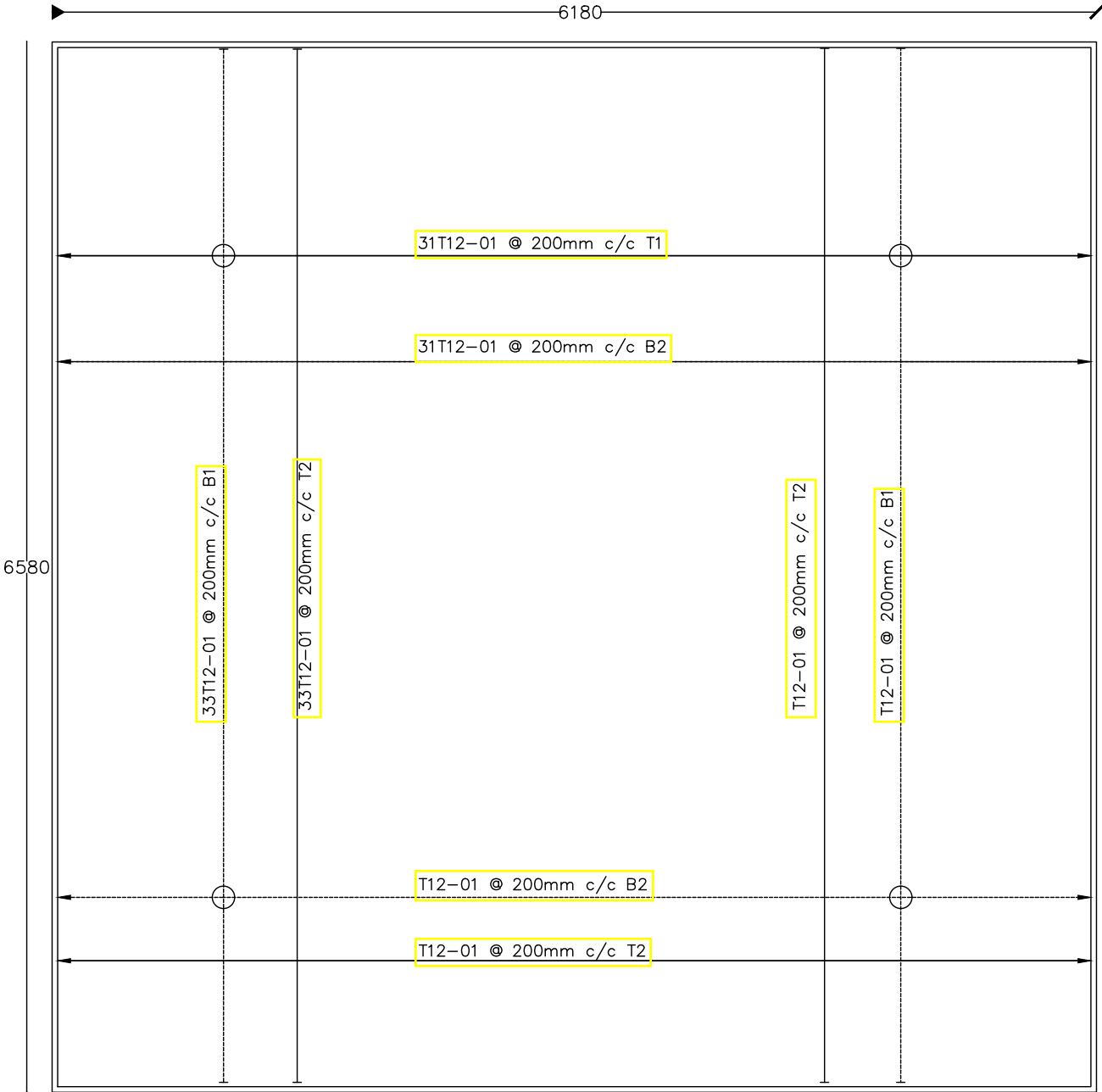


DRAWING TITLE

MUWAYO PROJECT

RESERVOIR ELEVATIONS

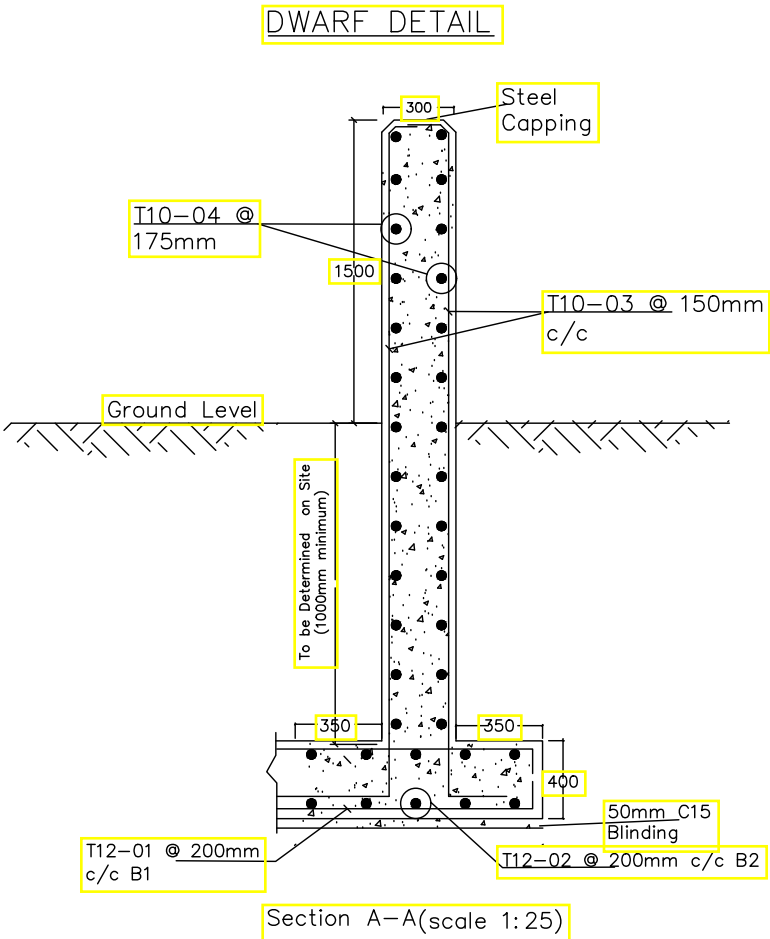
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DRAWN F.S	CHECKED E.T
DATE MAY, 2023	APPROVED J.S



SLAB REINFORCEMENT LAYOUT

NOTES

1. All dimensions are in millimetres unless otherwise stated
2. All levels are in metres unless otherwise stated
3. Blinding is mass concrete C15
4. Base slab and walls concrete are reinforced concrete C25.
5. Dwarf Walls to be constructed at each joint.
6. Depth to Foundation to be confirmed on site.
7. 4X4X3 Steel plates of 1220mm x1220mm to be used



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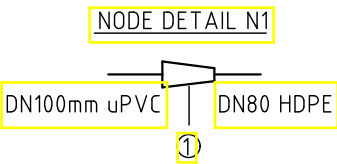


DRAWING TITLE

MUWAYO PROJECT

RESERVOIR FOUNDATION STRUCTURAL DETAILS

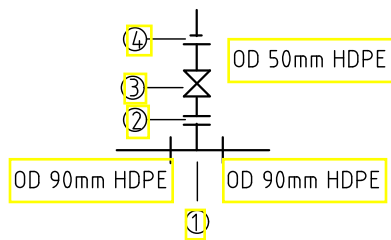
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SURVEYED	A.M	DESIGNED	D.B
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SCHEDULE OF PIPEWORK & FITTINGS

ITEM	DESCRIPTION	SIZE(DN)	QTY.	PN
1.	FLANGED TAPER	100/80	1	10

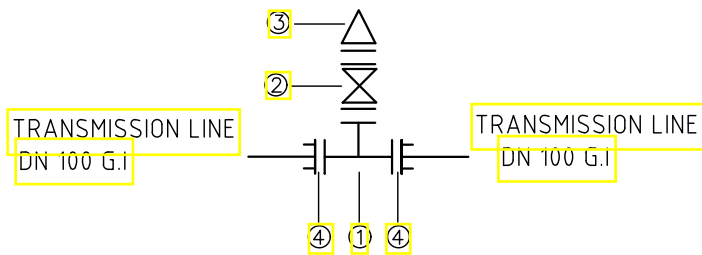
NODE DETAIL N2



SCHEDULE OF PIPEWORK & FITTINGS

ITEM	DESCRIPTION	SIZE(OD)	QTY.	PN
1.	FLANGED HDPE EQUAL TEE	90	1	10
2.	FLANGED ADAPTOR	90	1	10
3.	FLANGED GATE VALVE	90	1	10
4.	HDPE REDUCING BUSH	90/50	1	10

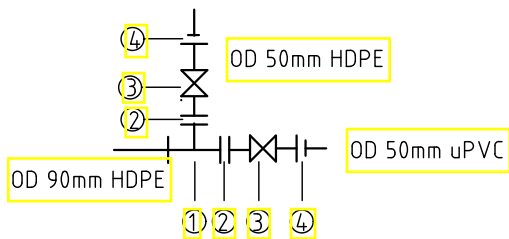
NODE X



SCHEDULE OF PIPEWORK & FITTINGS

ITEM	DESCRIPTION	SIZE(DN)	QTY.
1.	FLANGED REDUCING TEE	100/50	1
2.	FLANGED GATE VALVE	50	1
3.	FLANGED AIR RELEASE VALVE	50	1
4.	G.I. FLANGE	100	2

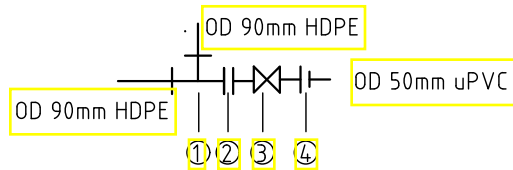
NODE DETAIL N3



SCHEDULE OF PIPEWORK & FITTINGS

ITEM	DESCRIPTION	SIZE(OD)	QTY.	PN
1.	FLANGED HDPE EQUAL TEE	90	1	10
2.	FLANGED ADAPTOR	90	2	10
3.	FLANGED GATE VALVE	90	1	10
4.	HDPE REDUCING BUSH	90/50	1	10

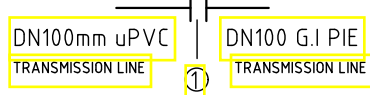
NODE DETAIL N4



SCHEDULE OF PIPEWORK & FITTINGS

ITEM	DESCRIPTION	SIZE(OD)	QTY.	PN
1.	FLANGED HDPE EQUAL TEE	90	1	10
2.	FLANGED ADAPTOR	90	1	10
3.	FLANGED GATE VALVE	90	1	10
4.	HDPE REDUCING BUSH	90/50	1	10

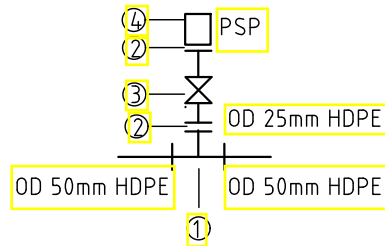
NODE DETAIL N5



SCHEDULE OF PIPEWORK & FITTINGS

ITEM	DESCRIPTION	SIZE(DN)	QTY.
1.	FLANGED STRAIGHT COUPLER	100/100	1

PSP CONNECTION DETAIL



SCHEDULE OF PIPEWORK & FITTINGS

ITEM	DESCRIPTION	SIZE(OD)	QTY.	PN
1.	FLANGED REDUCING TEE	50/25	1	10
2.	FLANGED ADAPTOR	25	2	10
3.	FLANGED GATE VALVE	25	1	10
4.	PSP YARD TAP	25	1	10

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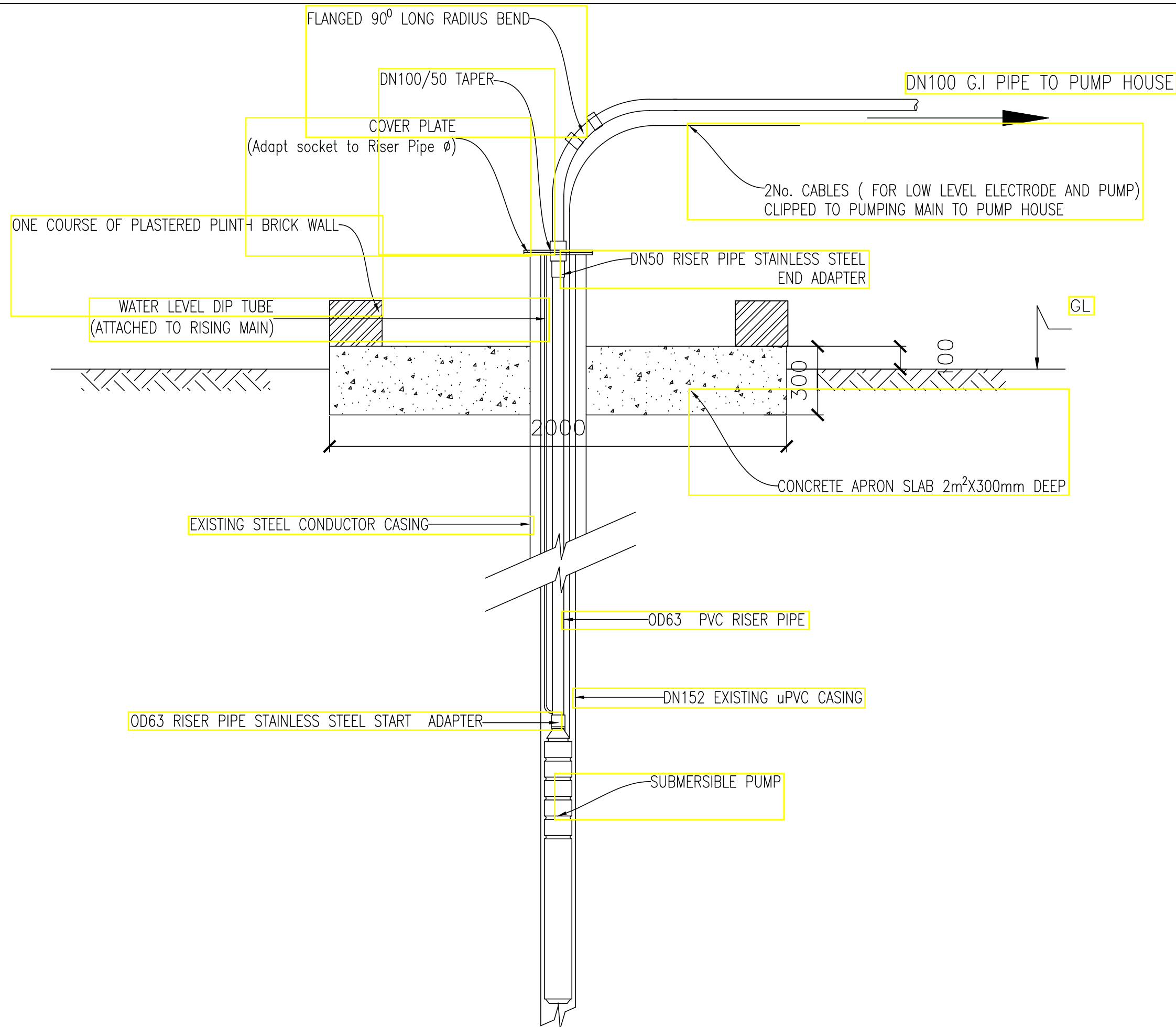


DETAILED ENGINEERING DESIGN

DRAWING TITLE

PIPE FITTING SCHEDULE

SCALE 1:2000	DRAWING No.
1:50	GBUN4-51 & 4/MWSS/
SURVEYED A.M	DESIGNED D.B
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DATE MAY, 2023	APPROVED J.S



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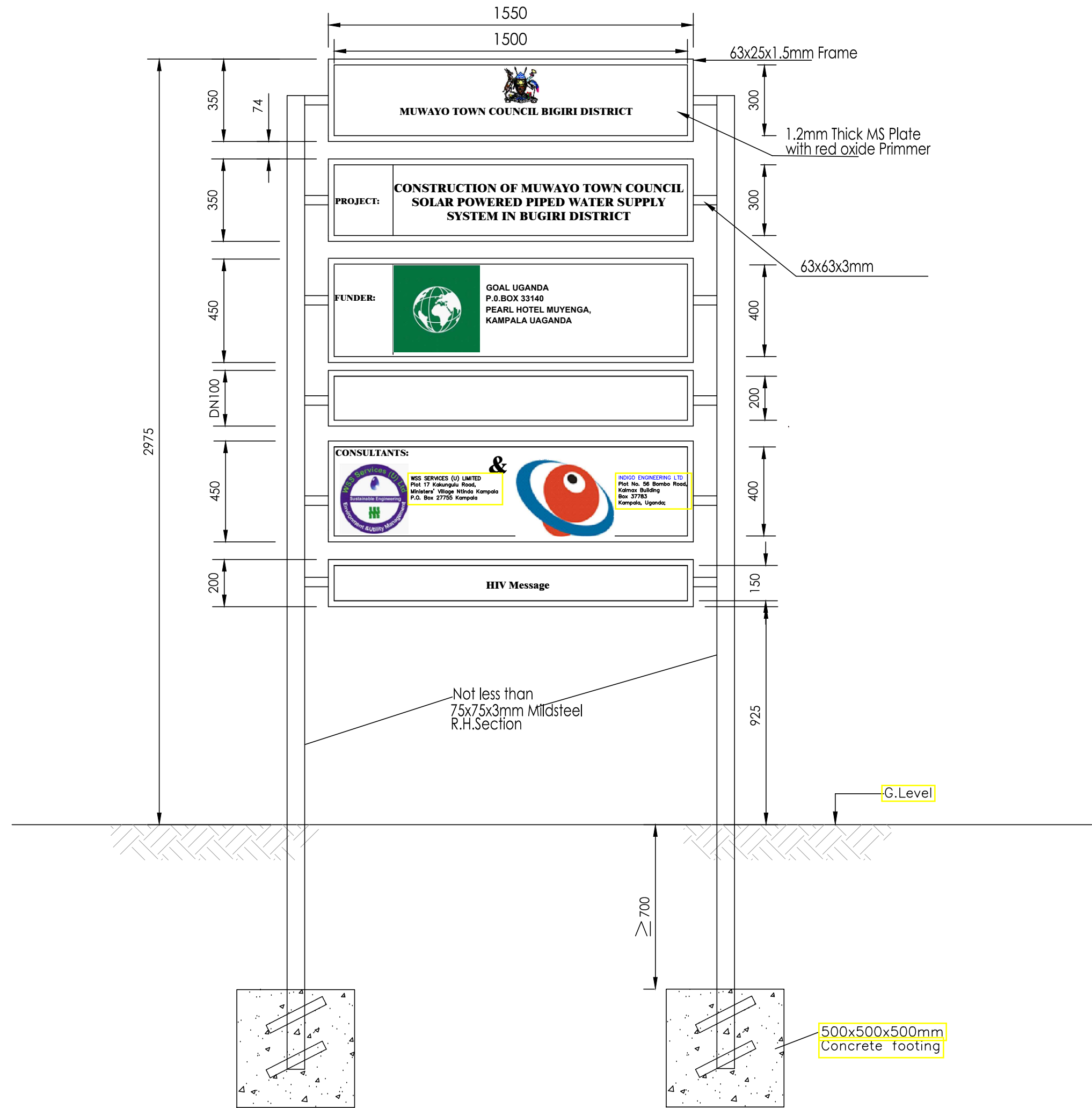


DRAWING TITLE

MUWAYO PROJECT

BOREHOLE INSTALLATION DETAILS.

SCALE	#####	DRAWING No.	GBUN4-5184/MWSS/15.0
SURVEYED	A.M	DESIGNED	D.B
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DATE	MAY, 2023	APPROVED	J.S



- ### NOTES
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DETAILED ENGINEERING DESIGN

DRAWING TITLE MUWAYO PROJECT
SIGN BOARD

SCALE #####	DRAWING No. GBUN4-5184/MWSS/10.0
SURVEYED 1:50	DESIGNED D.B
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MUWAYO PROJECT

FENCE

SCALE

#####

DRAWING No.

GBUN4-5184/MWSS/11.0

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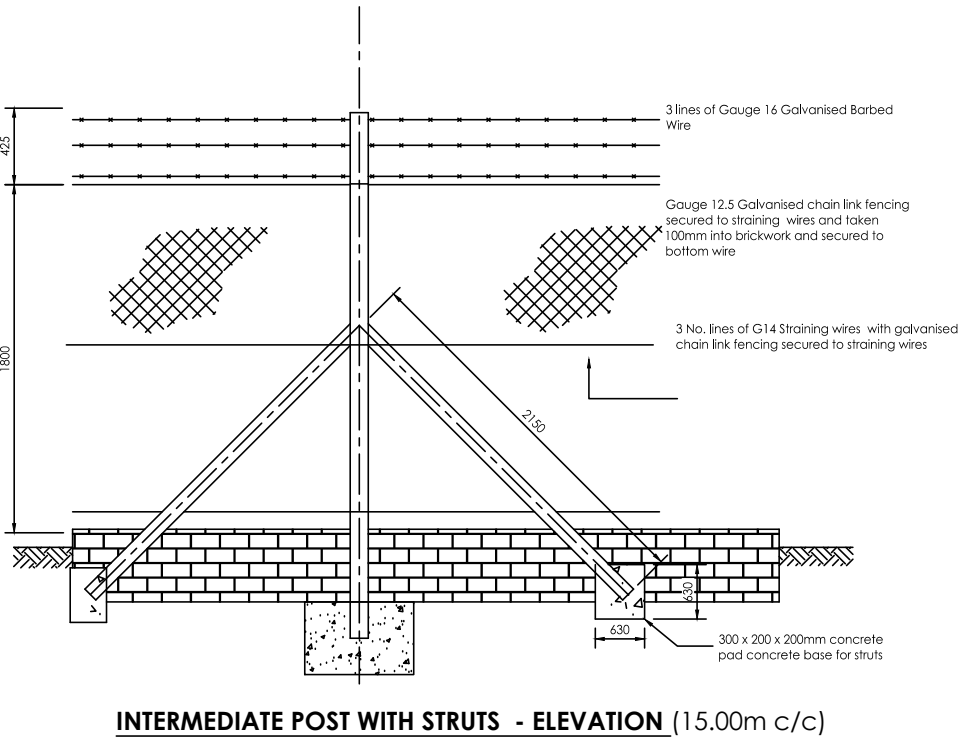
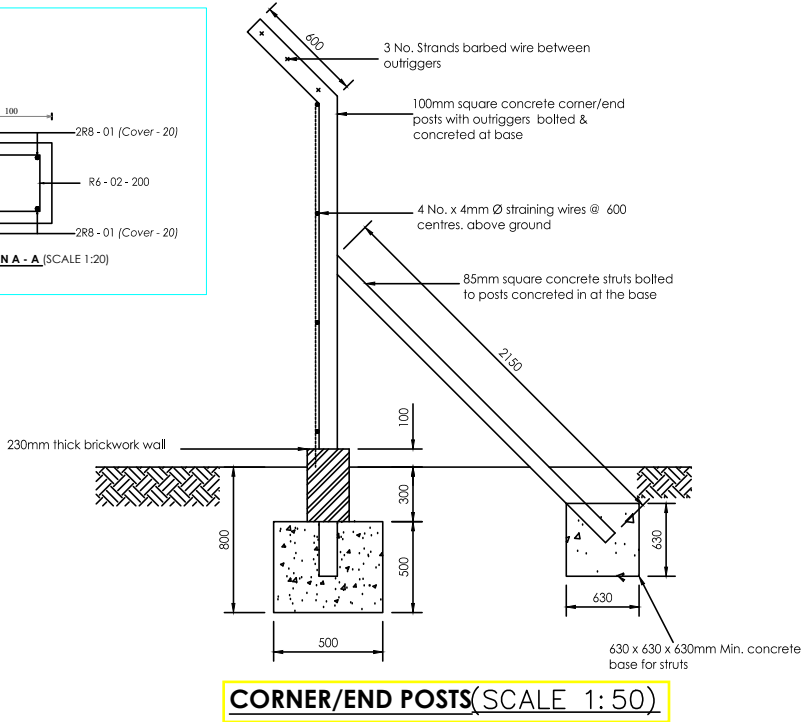
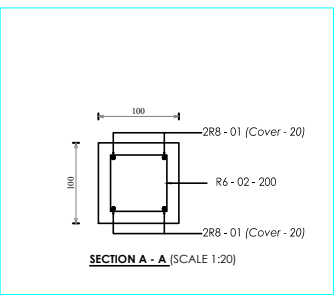
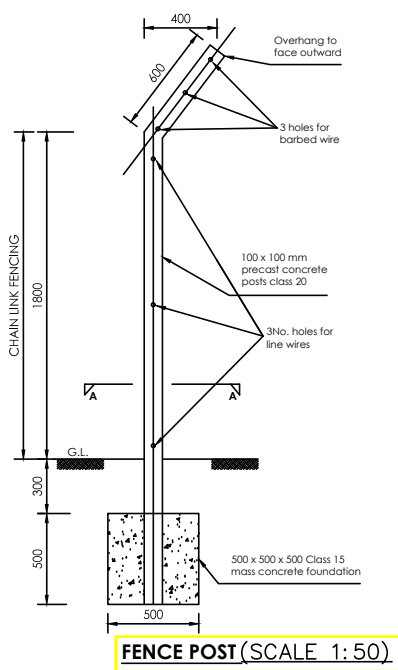
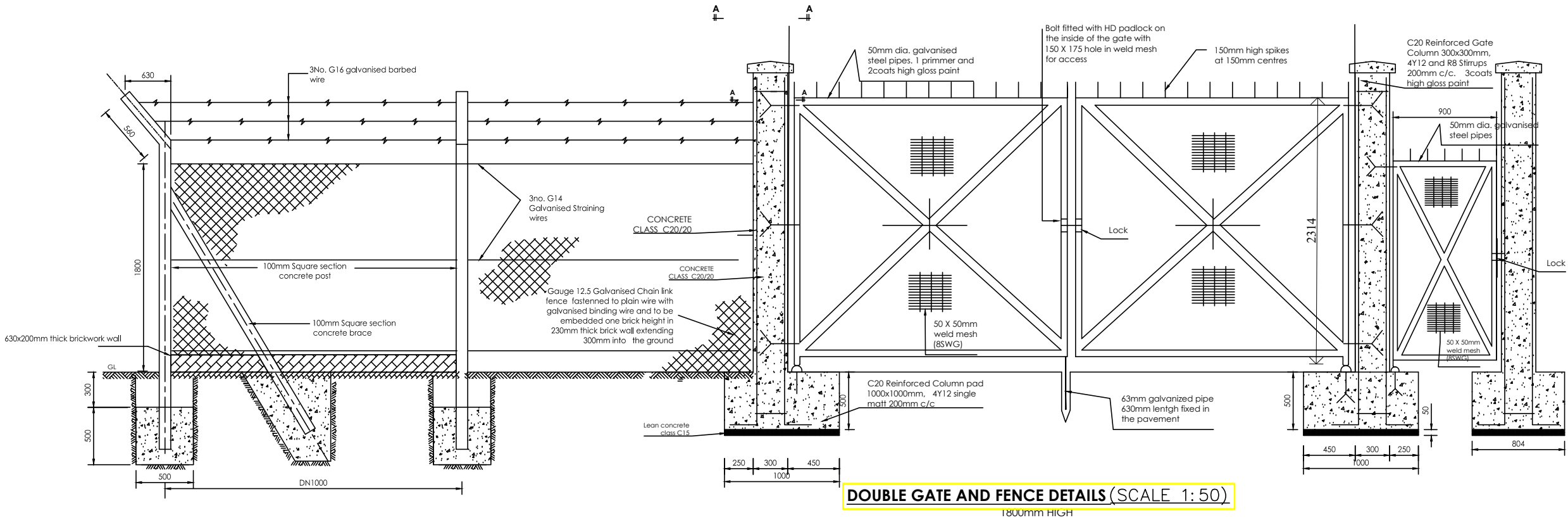
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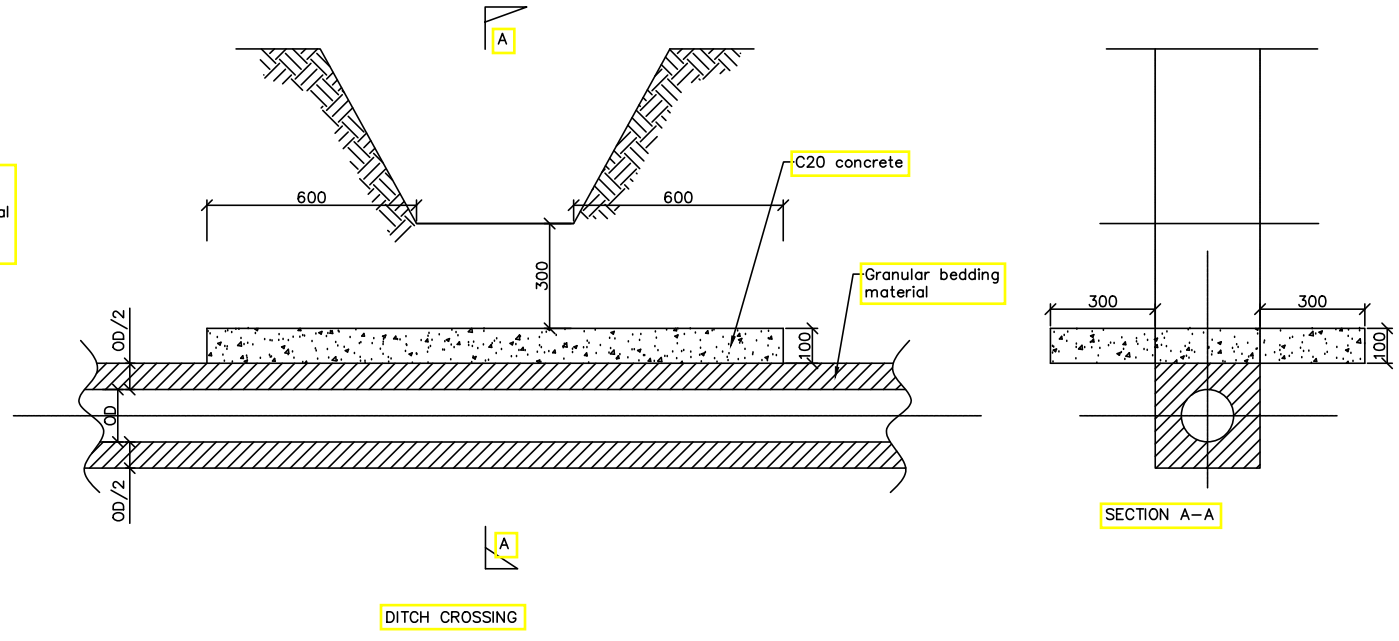
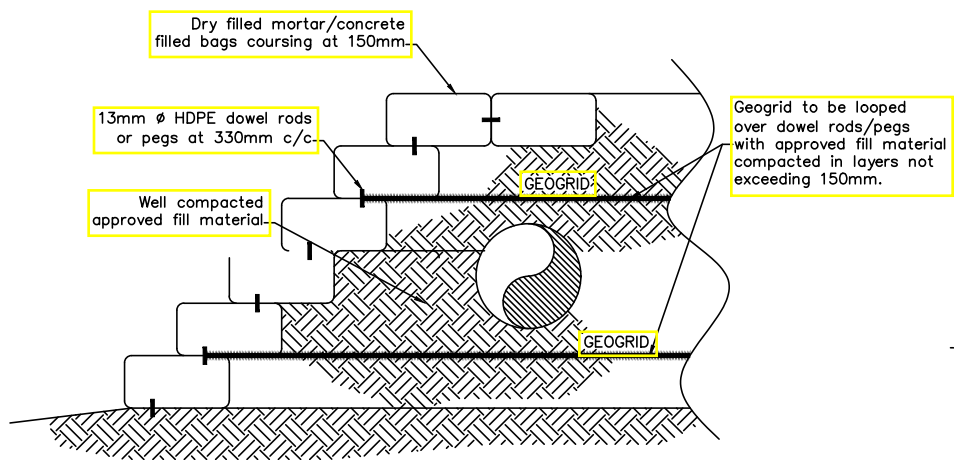
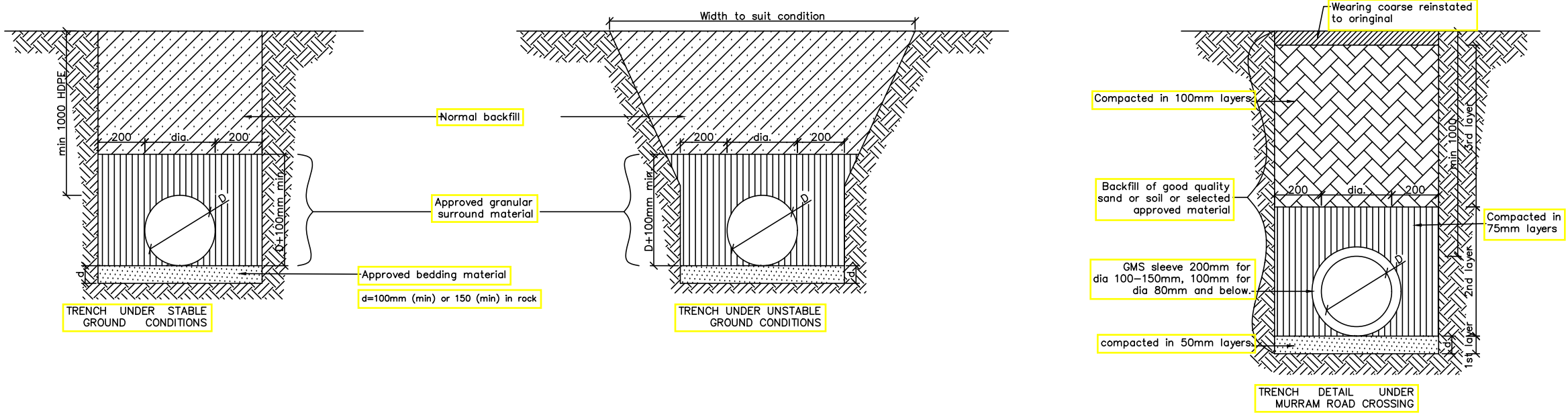
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TRENCH WIDTHS FOR HDPE PIPES								
OUTER DIAMETER D (mm)	75	100	125	150	200	225	DN100	300
WIDTH OF TRENCH B (m)	0.60	0.60	0.60	0.60	0.80	0.80	0.85	0.90

B = D + 0.6m (limited to a minimum of 0.6m)
NOTE: All trench widths - 0.60m

TABLE 1 : COMPACTION CHART				
% Mp	SOIL TYPE	COMPACTION METHOD		
		THICKNESS OF LAYER (mm)	No. OF PASSES	
90	A and B	300	1	
	C	300	2	
	D	150	2	

TABLE 2 : MATERIAL DESCRIPTION CHART		
SOIL TYPE	DESCRIPTION	GROUP SYMBOL
A	ANGULAR, CRUSHED ROCK NEGLECTABLE FINES	-
B	WELL GRADED GRAVEL - SAND MIXTURE FEW FINES	GW
C	FINE GRAVEL NO FINES	GP
D	GRAVEL - SAND MIX, UPTO 50% FINES	GF

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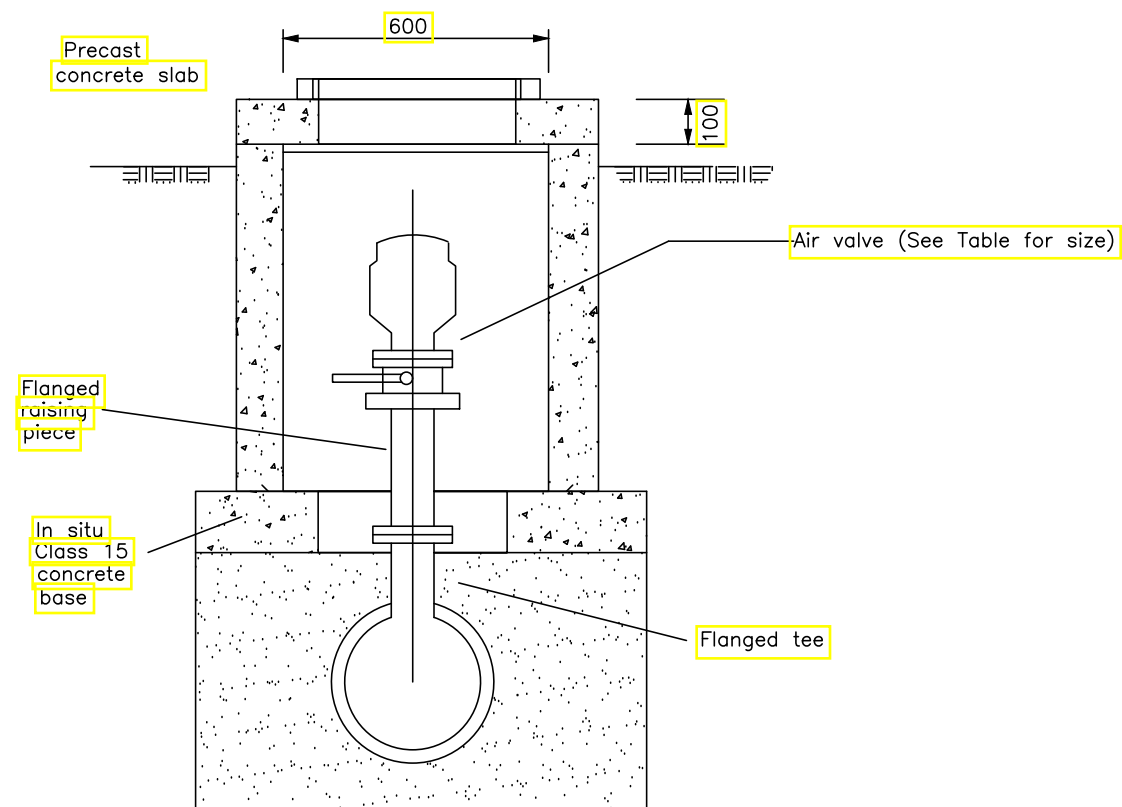
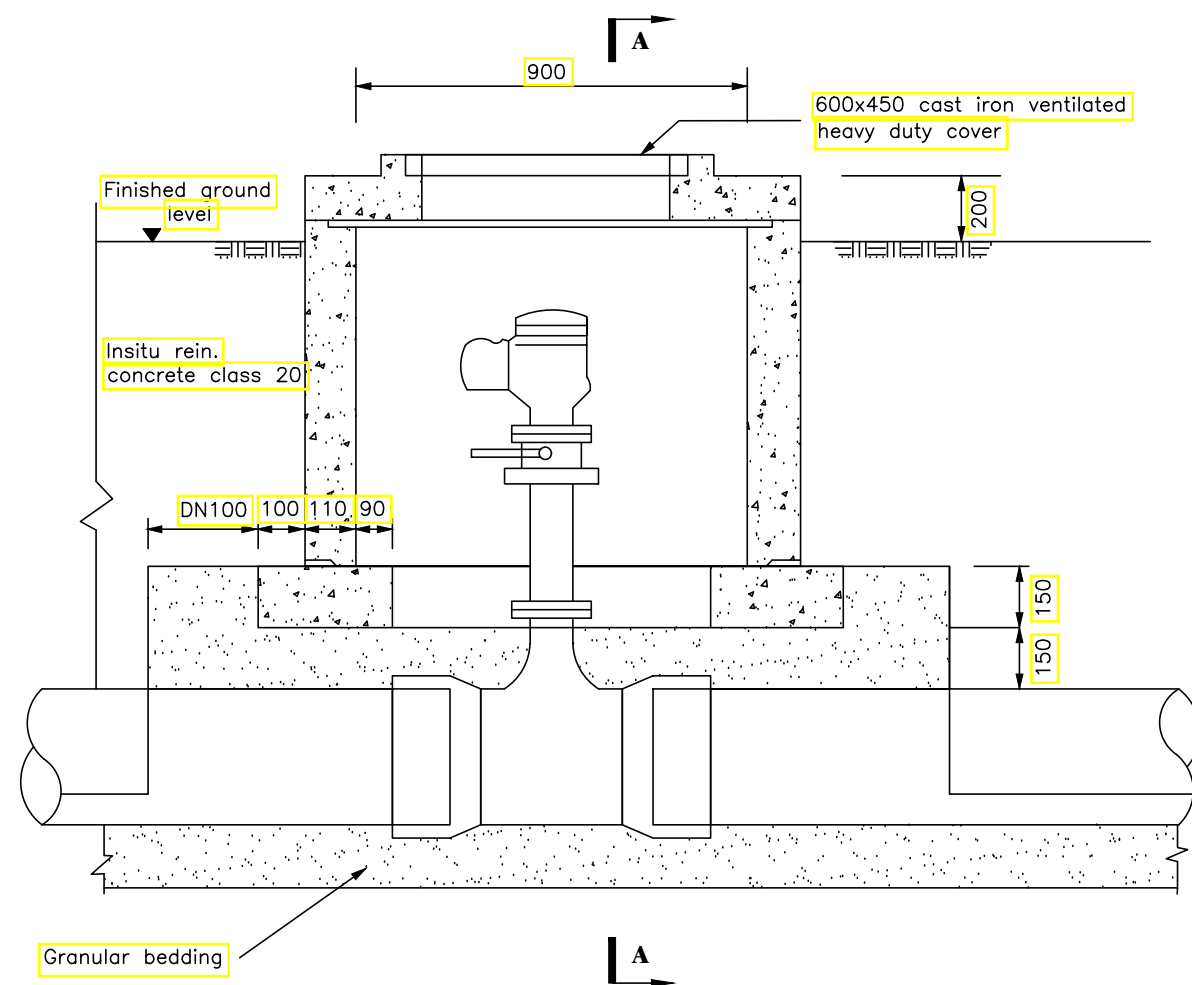
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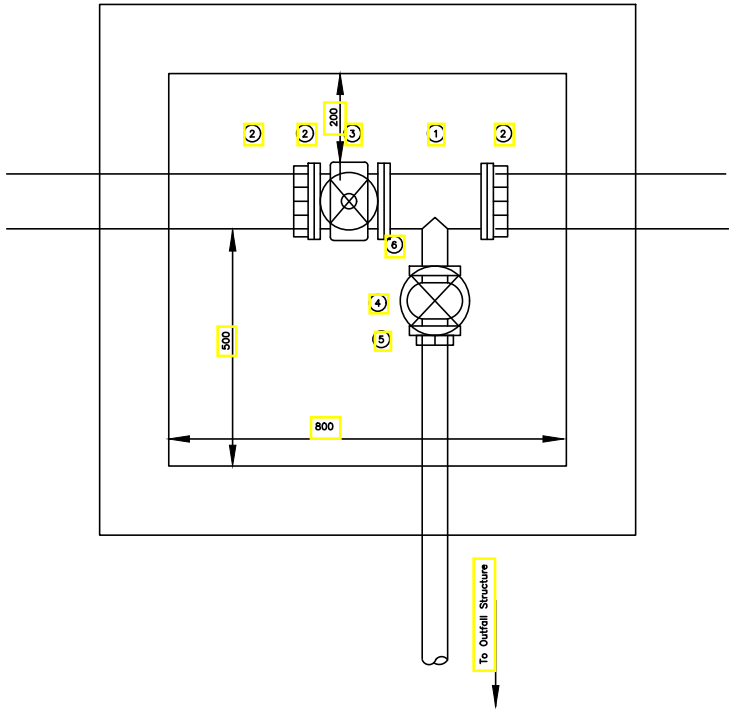
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DRAWING TITLE **MUWAYO PROJECT**
TRENCHING DETAILS

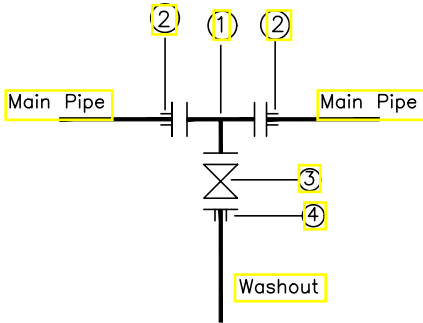
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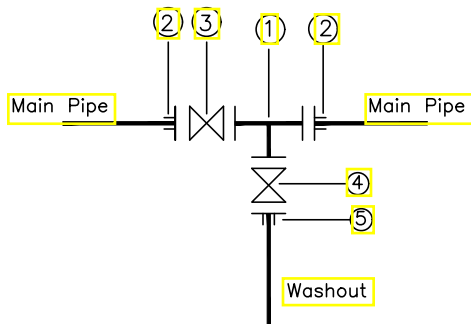


WO TYPE 1



- ① 1No Saddle clamp Tee OD A/B
② 2No PVC Adaptor, Maxi type or similar type OD A
③ 1No Brass Gate Valve OD A
④ 1No PVC Adaptor, OD B

WO TYPE 2



- ① 1No Saddle clamp Tee OD A/B
② 2No PVC Adaptor, OD A
③ 1No Brass Gate Valve OD A
④ 1No Brass Gate Valve OD B
⑤ 1No PVC MALE Adaptor OD B

NOTES

- 1 All dimensions are in millimetres
2 Chamber to have internal dimensions as indicated
3 Chamber Base to be reinforced concrete C20 150mm with drain hole
Reinforcement Y8 200mm C/C
4 Chamber Walls to be reinforced concrete C20 100mm thick
Reinforcement BRC Mesh A142
4 Chamber Cover slab to be reinforced concrete C20 100mm thick
Reinforcement Y10 200mm C/C with moveable cover 600x600 and frame

Pipe Diameter		Fittings Diameter	
Main Pipe	Washout	A	B
OD 50	OD 50	OD 63	OD 63
OD 63	OD 63	OD 50	OD 50
OD 160	OD 63	OD 80	OD 50
OD 110	OD 63	OD 100	OD 50
OD 160	OD 63	OD 150	OD 50
OD 218	OD 110	OD 200	OD 100
OD DN100	OD 110	OD DN100	OD 100

NOTE: Pressure ratings of Washouts and Fittings shall be similar to those of the main pipe on which the washout is to be installed

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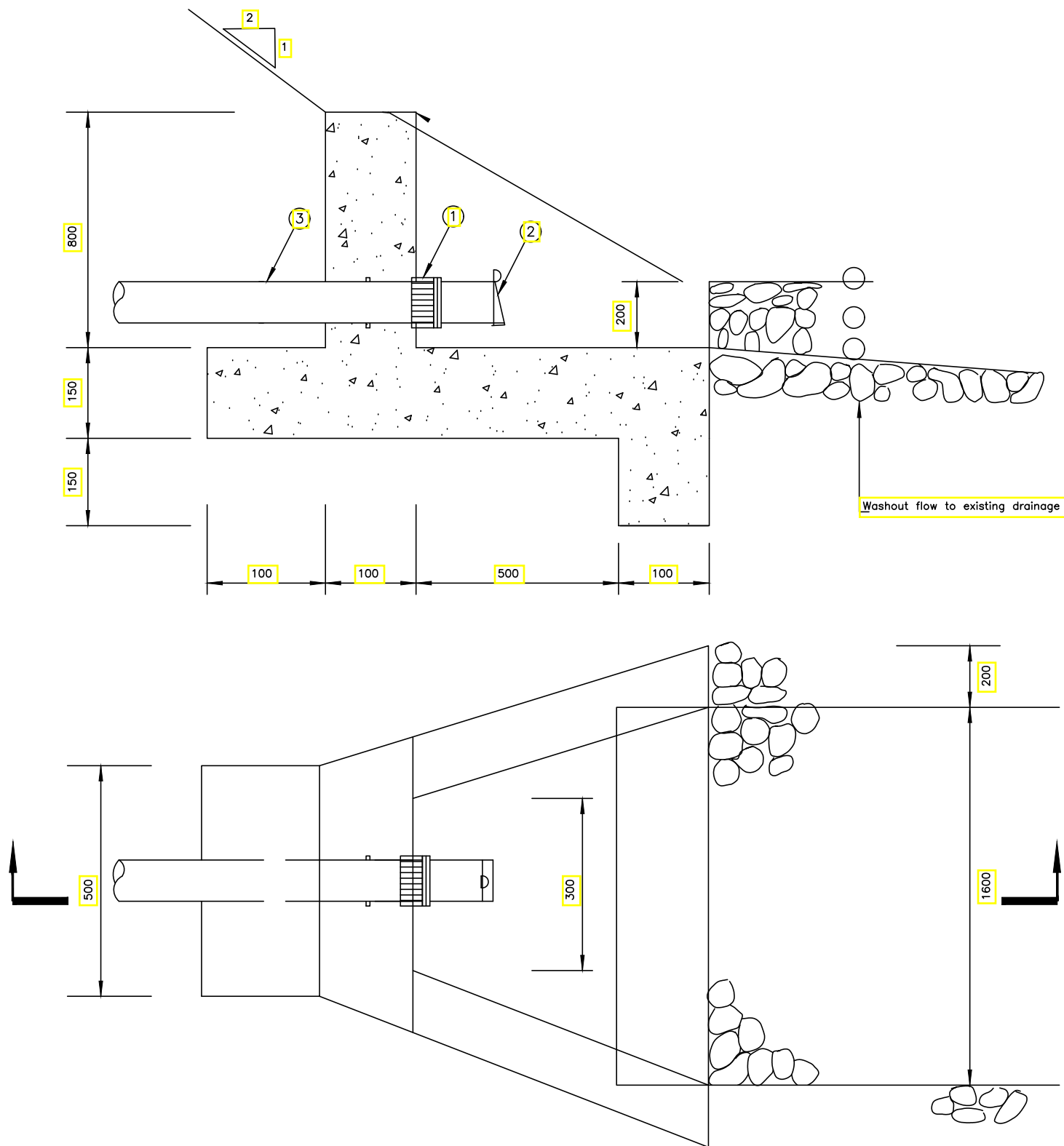
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DRAWING TITLE MUWAYO PROJECT

WASHOUT

SCALE #####	DRAWING No. GBUN4-5184/MWSS/14.1
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NOTES

Reinforcement to be one layer A142 mesh throughout

For Pipe fittings diameter and pressure ratings,
see relevant drawing No.

1 1No. PVC Adaptor

2 1No. PVC flap valve

3 1No. Washout pipe

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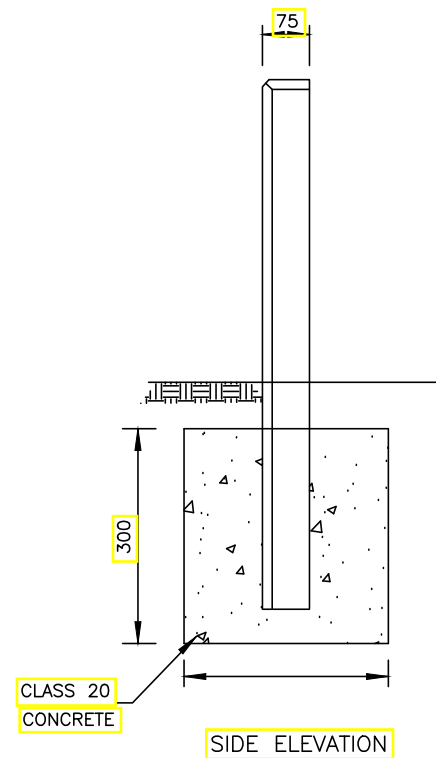
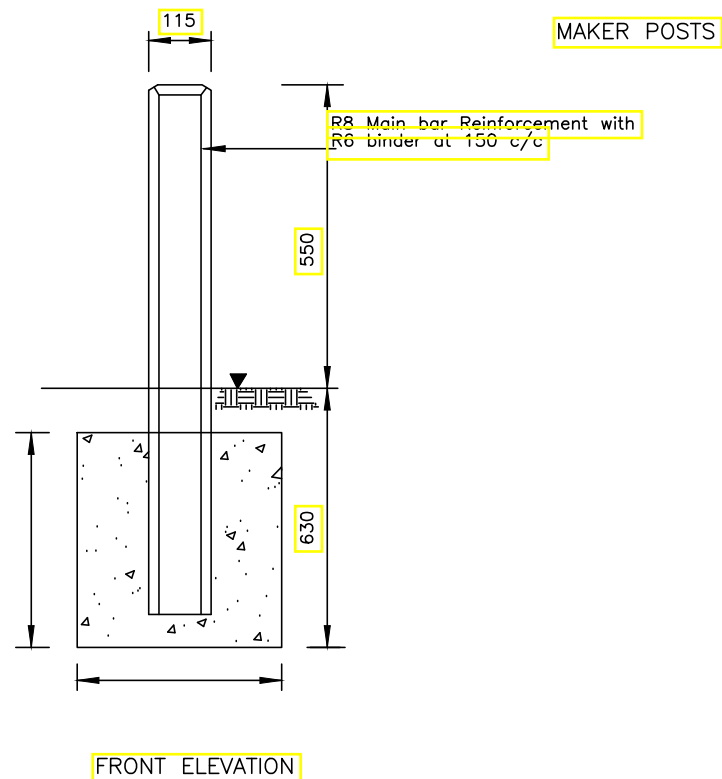
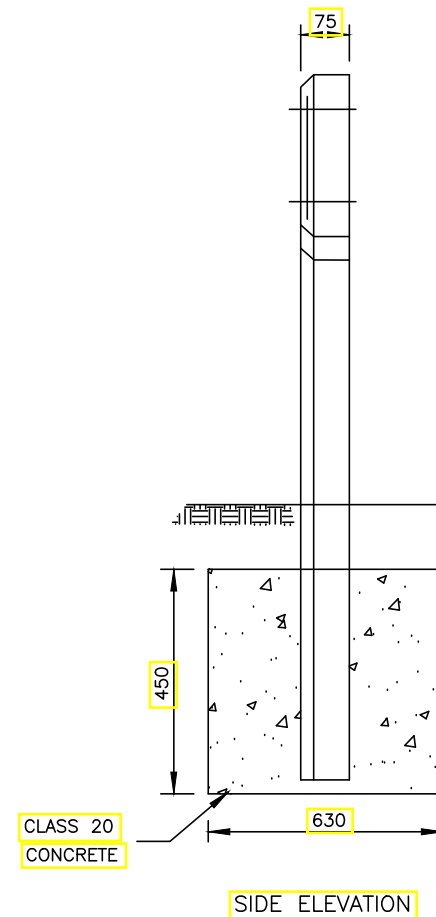
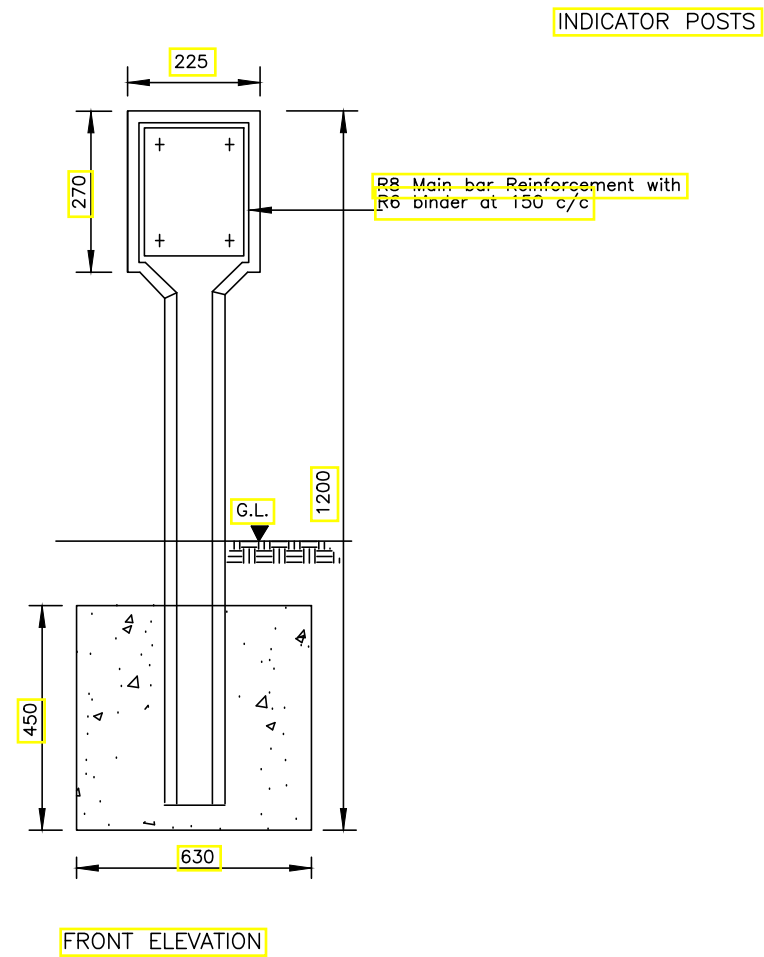
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WASHOUT FLOW

SCALE #####	DRAWING No. GBUN4-5184/MWSS/14.2
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In
Association
with



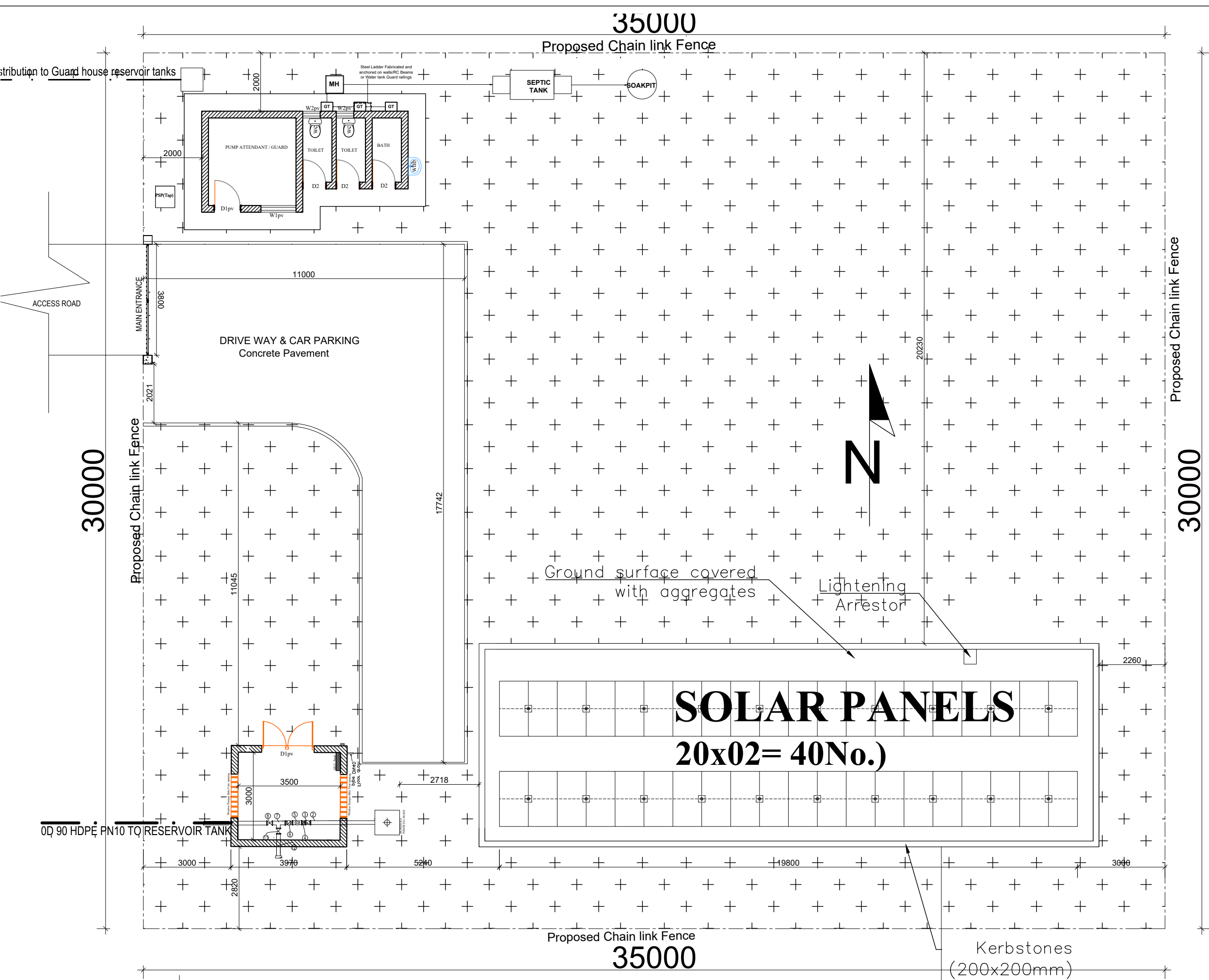
DRAWING TITLE

MUWAYO PROJECT

MARK POST

SCALE	#####	DRAWING No.	GBUN4-5184/MWSS/15.0
SURVEYED	A.M	DESIGNED	D.B
DRAWN	F.S	CHECKED	E.T
DATE	MAY, 2023	APPROVED	J.S

REVISION TO THE BOOK OF DRAWINGS
VOLUME-2



AMENDMENTS		
No	Date	Revision

- GENERAL NOTES:**
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 - PROVIDE G.I. 125 x 100 RAINWATER DOWN PIPES AND 125 x 100 G.I. BOX GUTTER WITH BRACKETS ETC. WHERE SHOWN.
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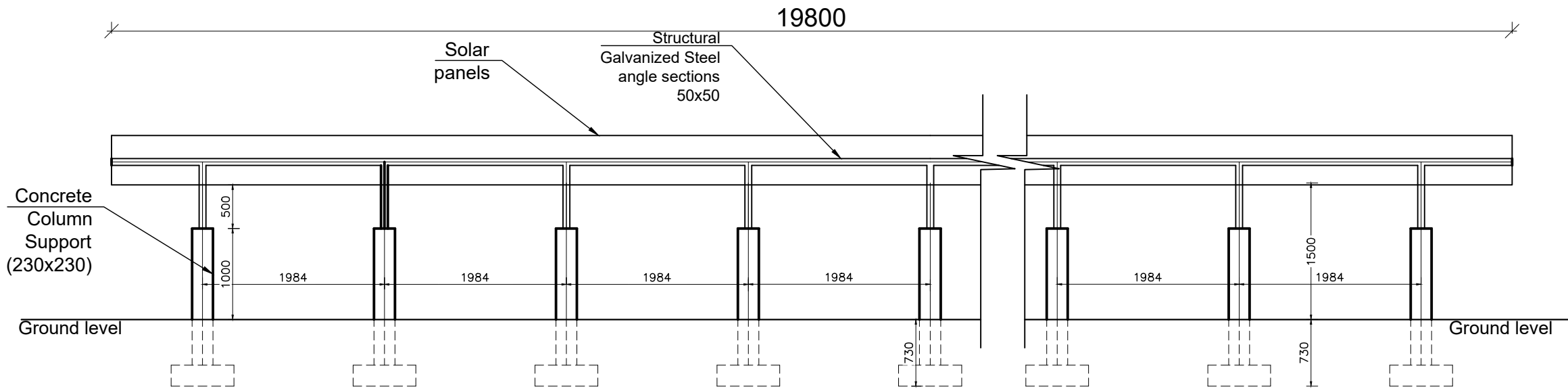
GOAL

GOAL-KAMPALA
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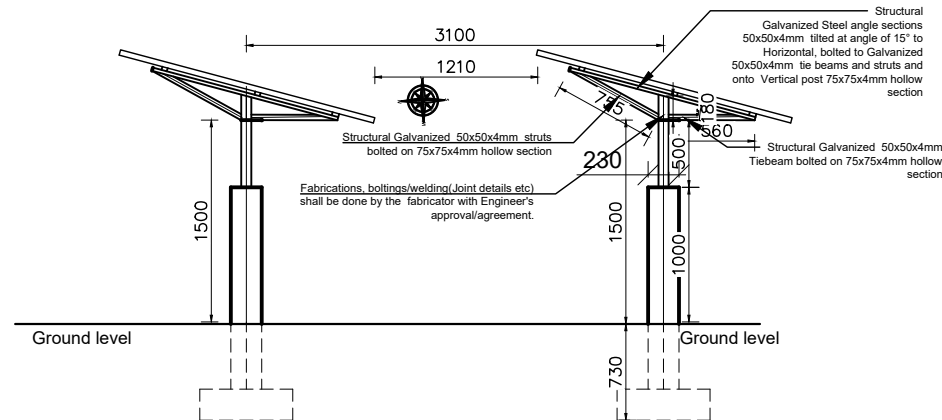
Project:
MUWAYO PWS

Drawing Title:
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Site Layout Layout

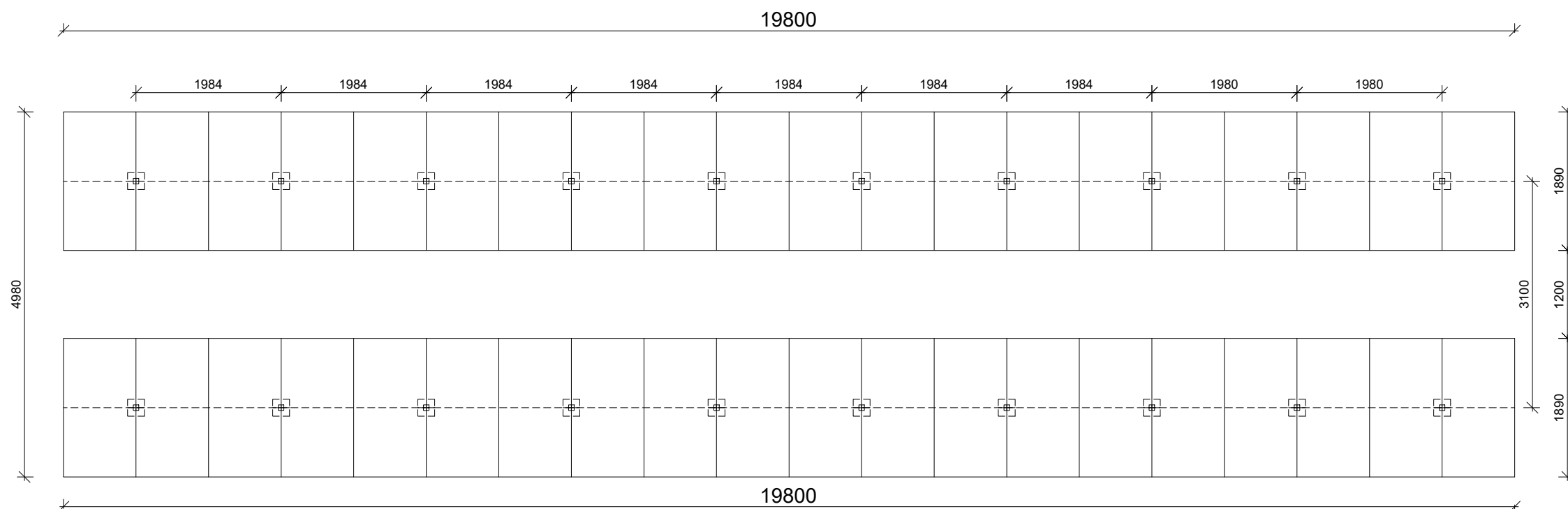
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Date: April /2025	Checked: Approved: JSK	Infrastructure Team
Drg No: Mwy SL[- -] 01		



SOLAR PV AND PUMP CONTROLS- Front View



SOLAR PV AND PUMP CONTROLS- Side View



SOLAR PV ARRAY PLAN

AMENDMENTS		
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Project: MUWAYO PWS

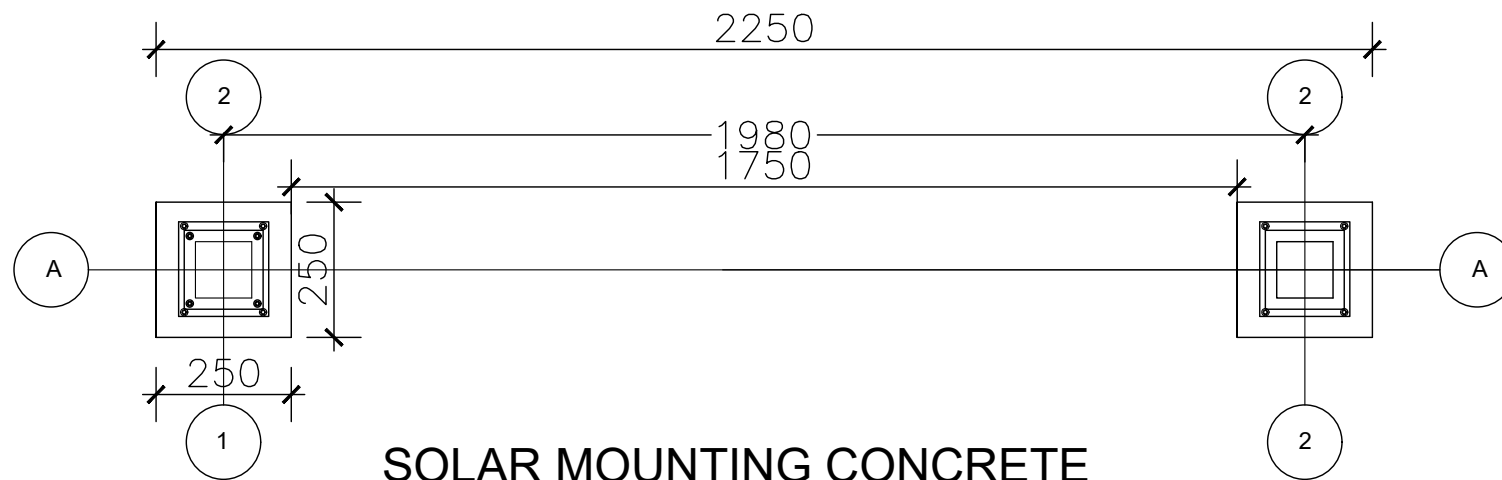
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PV ARRAY DRAWINGS

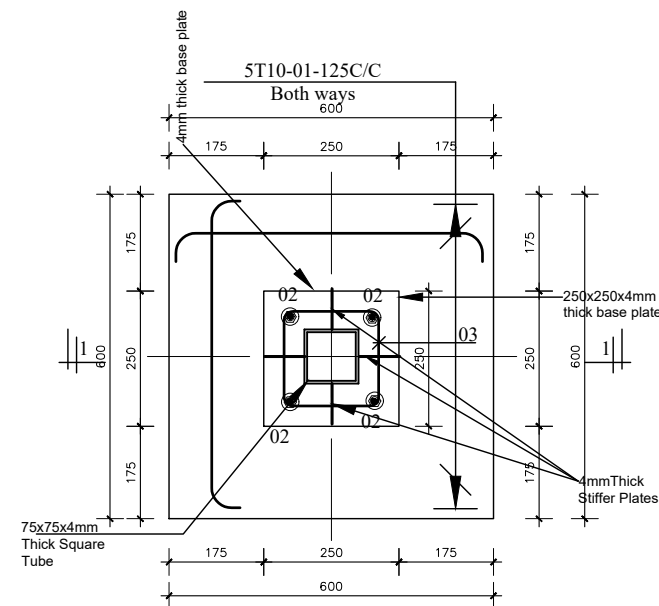
Elevation & Section

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Date:	Checked:	Infrastructure Team
April /2025	Approved:	JSK

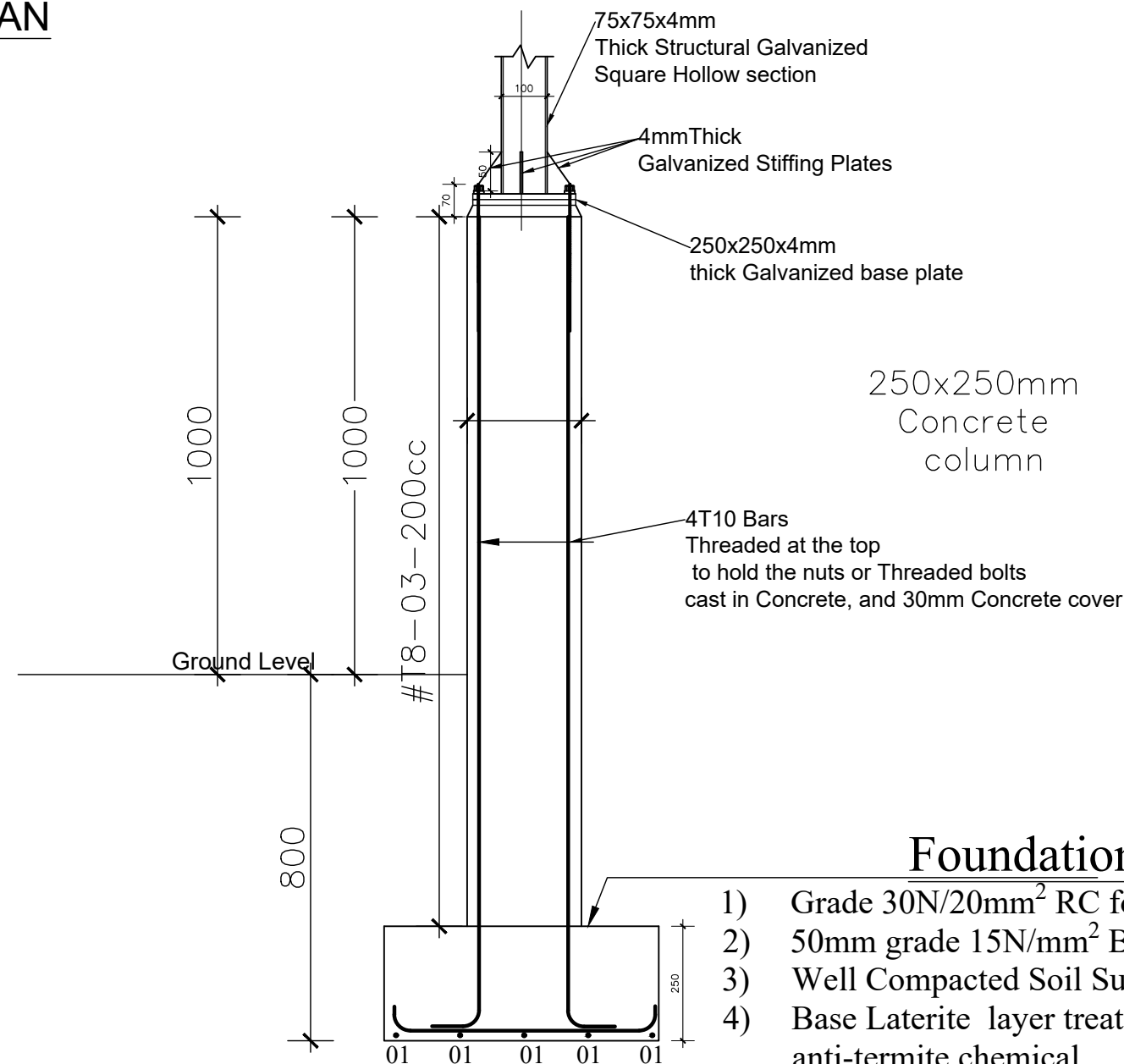
Drg No: Mwy PV[-] 02



**SOLAR MOUNTING CONCRETE
COLUMN PLAN**



**SOLAR RACK RC POST
FOOTING-30N0.**



**Section 1-1 SOLAR RACK
MOUNTING
RC CONCRETE COLUMN**

- Foundation notes**
- 1) Grade 30N/20mm² RC footing on
 - 2) 50mm grade 15N/mm² Blinding concrete on
 - 3) Well Compacted Soil Sub-grade
 - 4) Base Laterite layer treated with approved anti-termite chemical.

AMENDMENTS		
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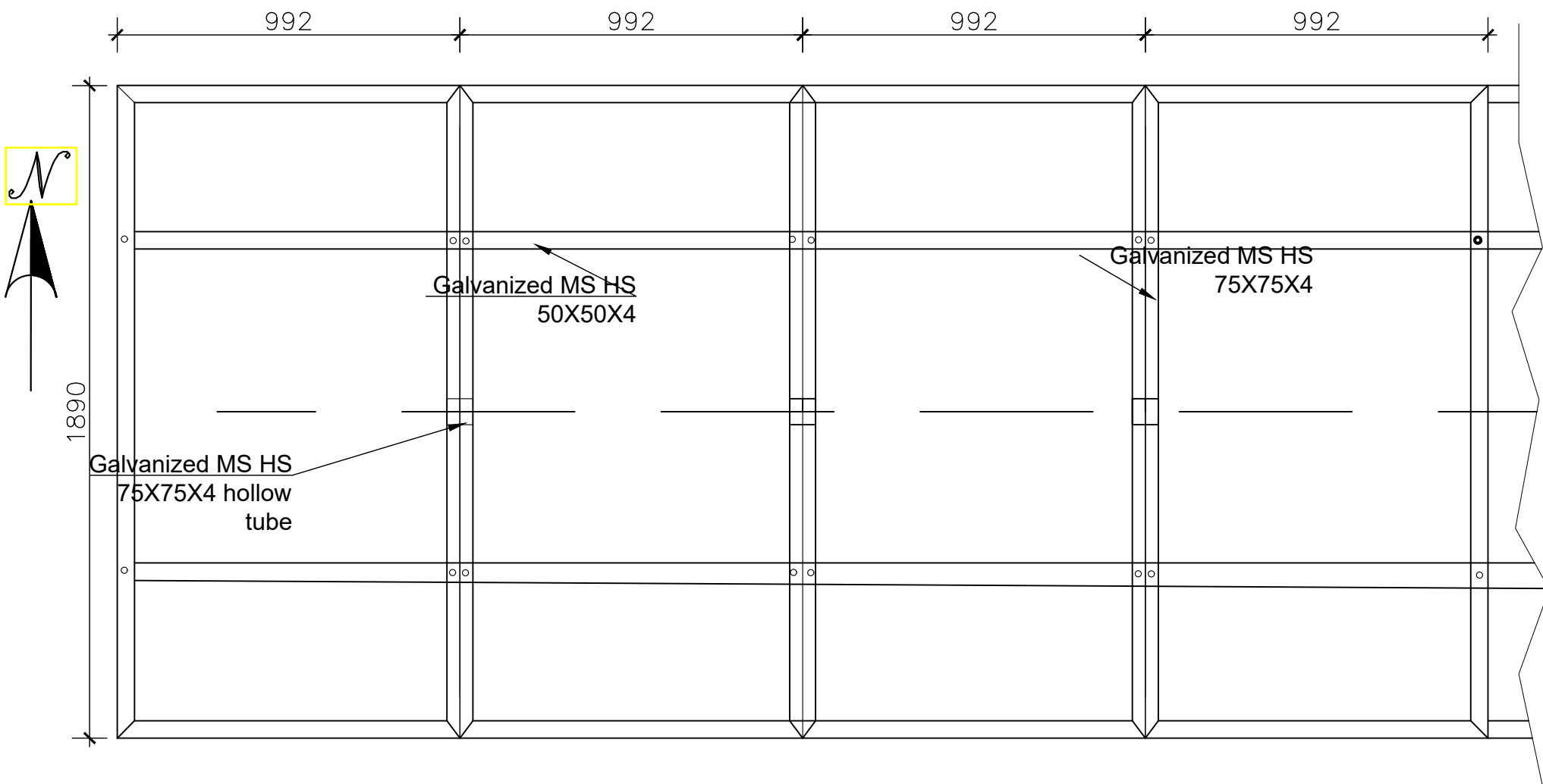
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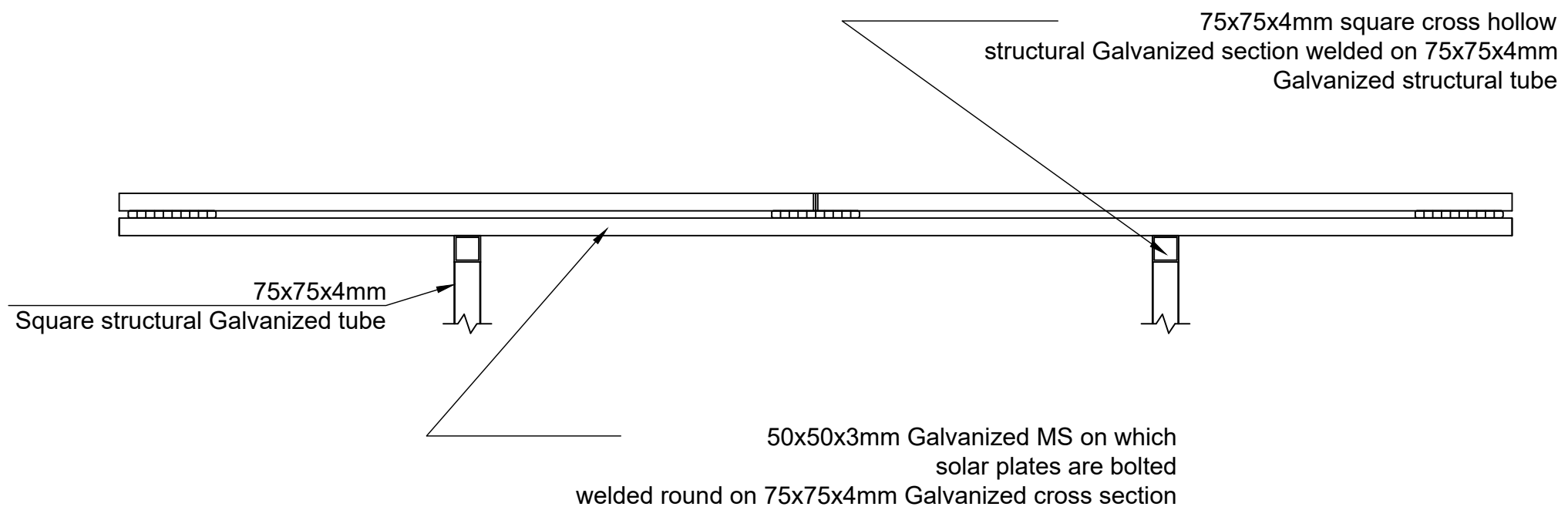
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Project:
MUWAYO PWS

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PV ARRAY DRAWINGS		
Footing Details		
Scale:	Designed:	
AS SHOWN	Drawn:	PLA
Date:	Checked:	Infrastructure Team
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Drg No:	Mwy PV[- -] 03	



Plan of Solar Mounting Structure



Elevation and Details

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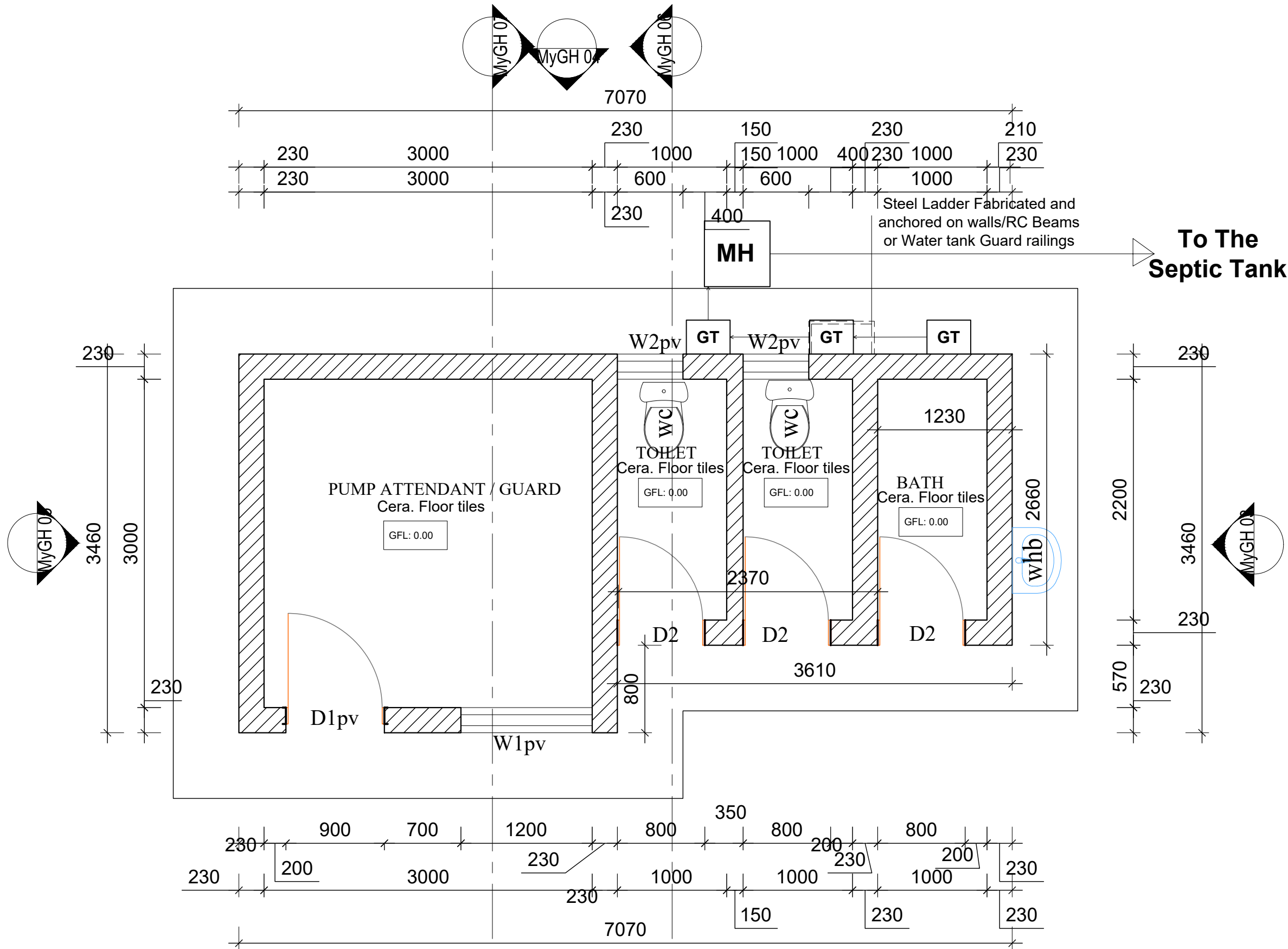
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PV ARRAY DRAWINGS		
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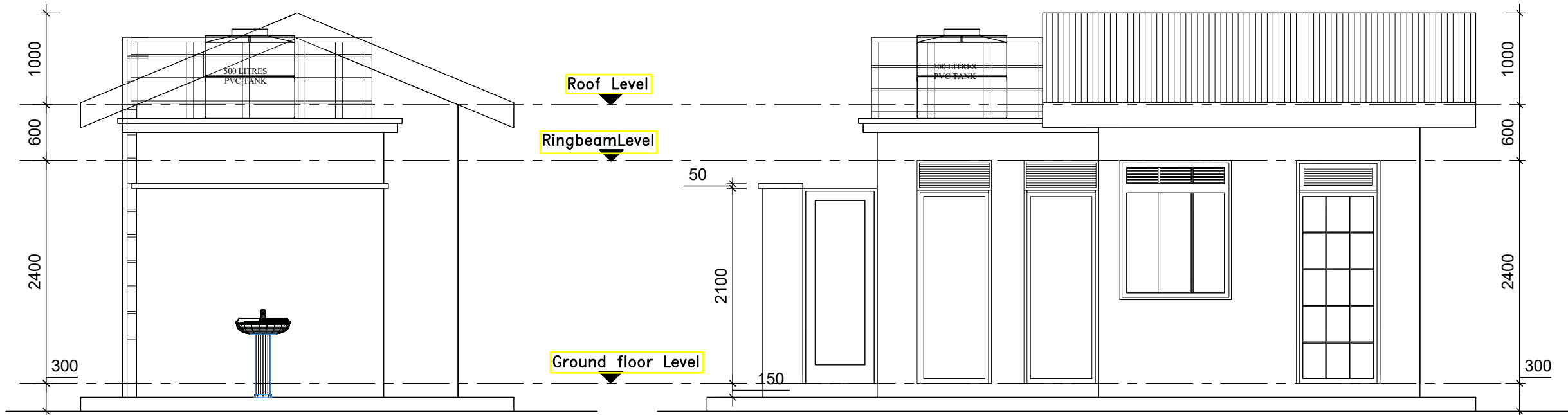
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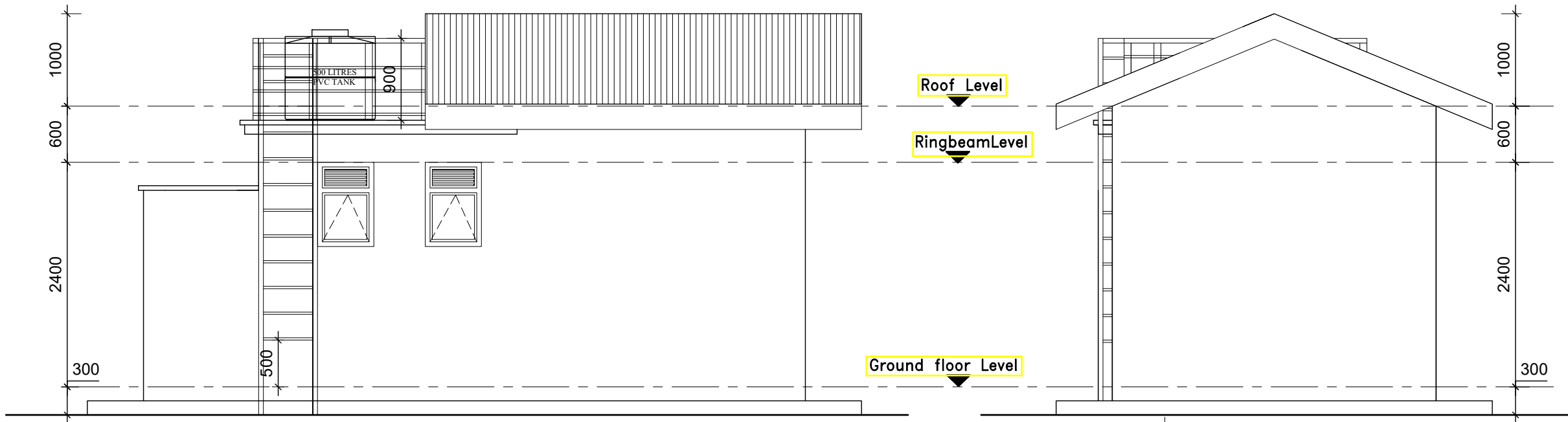
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GUARD HOUSE
Floor Plan

Scale: AS SHOWN	Designed: Drawn: PLA	
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ELEVATION -MyGH [- -]03
SCALE 1:100

ELEVATION -MyGH [- -]02
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ELEVATION -MyGH [- -]04
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ELEVATION -MyGH [- -]05
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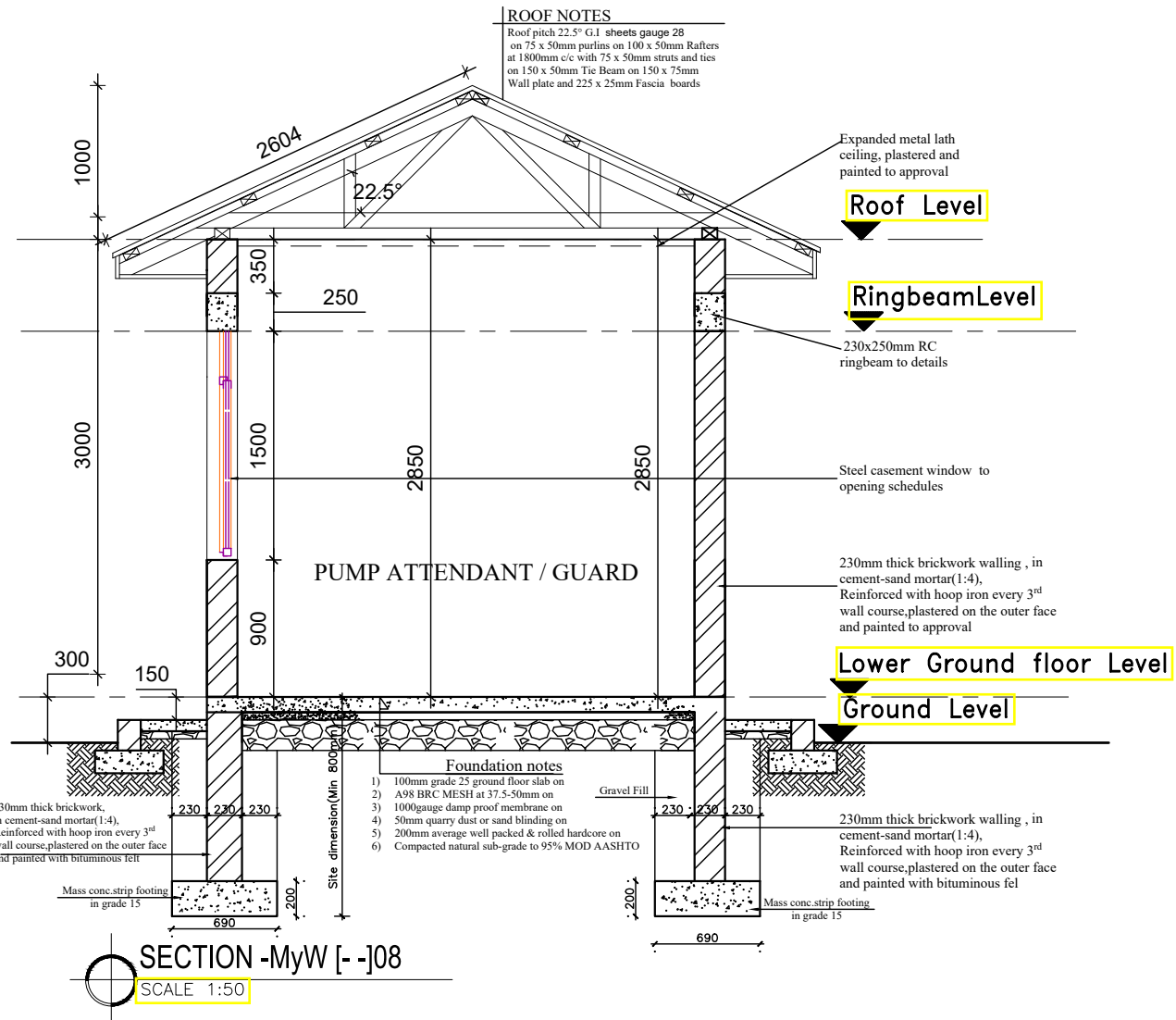
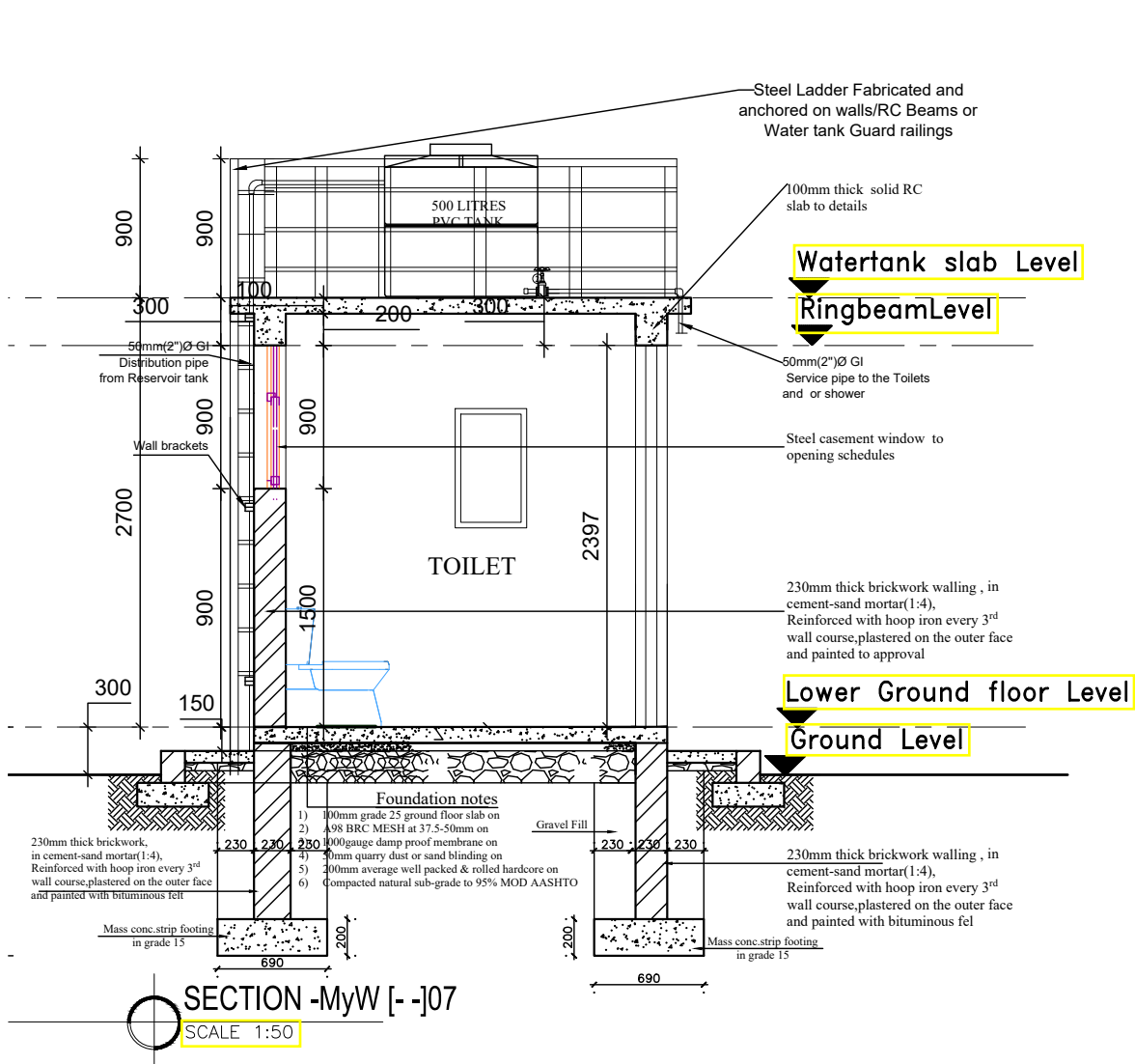
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Scale:	Designed:	
AS SHOWN	Drawn:	PLA
Date:	Checked:	Infrastructure Team
April /2025	Approved:	JSK
Drg No: My MyG[- -] 02-05		



OPENINGS SCHEDULE -MyGH [- -]10

SCALE 1:100

WINDOW SCHEDULES		
ELEVATION		
PLAN SYMBOL		
DESCRIPTION	W1pv Steel Sideswing window with 20x40x1.5mm SHS shutters with 20x3mm flat Section bindings on 125 x1.5mm W20 section (Window frame)	W2pv Steel tophung window with 20x40x1.5mm SHS shutters with 20x3mm flat Section bindings on 125 x1.5mm W20 section (Window frame)
LOCATION	Pump Guard room	Eco-san Latrines
QUANTITY	01No.	02 No.

DOOR SCHEDULES			
ELEVATION			
PLAN SYMBOL			
DESCRIPTION	Standard Single leaf steel casement door with a 32 x 4mm angle bar onto door frame bottom to work as tile stopper at exit door openings	Standard Single leaf Timber flush door with a 32 x 4mm Steel angle bar onto door frame bottom to work as tile stopper at exit door openings	Standard Single leaf steel casement door with a 32 x 4mm angle bar onto door frame bottom to work as tile stopper at exit door openings
LOCATION	Pump Guard room	Toilets	Bathroom
QUANTITY	01No.	02No.	01No.

AMENDMENTS		
No	Date	Revision

- GENERAL NOTES;**
1. ALL DIMENSIONS TO BE CHECKED ON SITE, WRITTEN DIMENSIONS TO BE FOLLOWED IN PREFERENCE TO SCALED DIMENSIONS.
 2. ALL WALLS LESS THAN 200MM THICK TO BE REINFORCED WITH HOOP IRON AT EVERY ALTERNATE COURSE.
 3. ALL REINFORCED CONCRETE WORK IS TO BE IN ACCORDANCE WITH STRUCTURAL ENGINEER'S DETAILS.
 4. ALL SANITARY WORK TO BE IN ACCORDANCE WITH M.O.H RULES AND REGULATIONS.
 5. WHERE DRAIN PASSES UNDER BUILDING OR DRIVEWAY AREA, PIPE TO BE OF CAST IRON OR ENCASED IN 150MM CONCRETE.
 6. ALL WASTE PIPES AND SOIL PIPES ARE TO BE IN DUCTS AND THE BENDS TO HAVE ALL CLEANING EYES ACCESSIBLE FROM OUTSIDE.
 7. ALL WINDOWS AND EXTERNAL GLAZED DOORS ON GROUND FLOOR TO HAVE BURGLAR PROOFING TO DETAILS.
 8. ALL INTERNAL PLASTER TO BE TWO COATS STEEL FLOAT FINISHED.
 9. ALL MANHOLES WITHIN BUILDING AREA, DRIVEWAY AND PARKING TO HAVE HEAVY DUTY AIR TIGHT COVERS AND DOUBLE SEALED.
 10. PROVIDE G.I. 125 x 100 RAINWATER DOWN PIPES AND 125 x 100 G.I.BOX GUTTER WITH BRACKETS ETC. WHERE SHOWN.
 11. ALL PAINTING TO BE 3 COATS.
 12. SPLASH APRON OF 600MM ALONG THE PERIMETER OF BUILDING.
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 22. DEPTH OF FOUNDATION TRENCHES TO BE A MINIMUM OF 750MM BELOW REDUCED GROUND LEVEL.
 23. ALL PIPES AND SERVICES TO BE AT A MINIMUM OF 450MM BELOW REDUCED GROUND LEVEL.

Client:

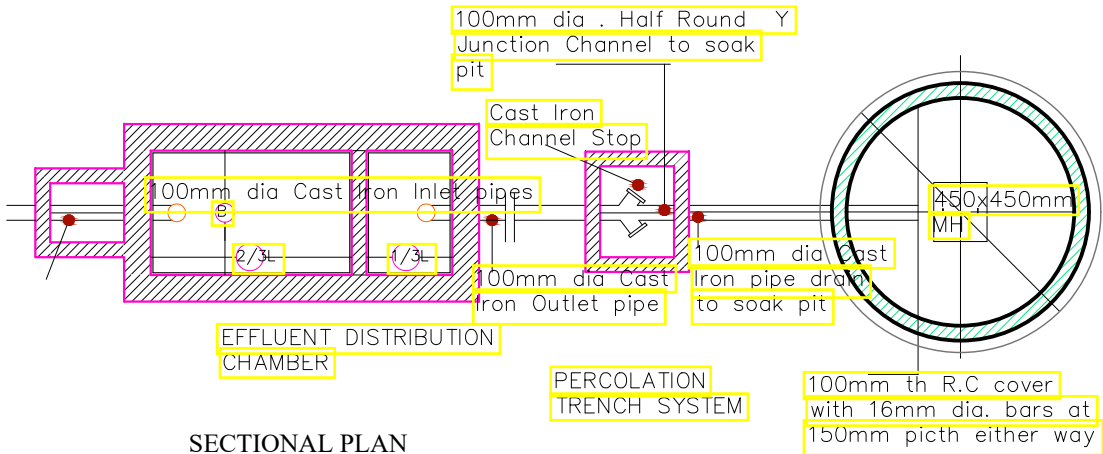


GOAL-KAMPALA
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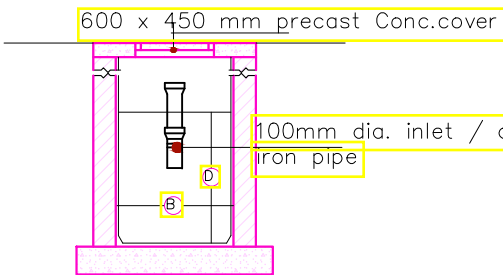
Project:
MUWAYO PWS

Drawing Title:
GUARD HOUSE
Sections and Openings

Scale: AS SHOWN	Designed: Drawn: PLA	
Date: April /2025	Checked: Approved: JSK	Infrastructure Team
Drg No: My MyG[- -] 02-05		



SECTIONAL PLAN
Scale 1:50

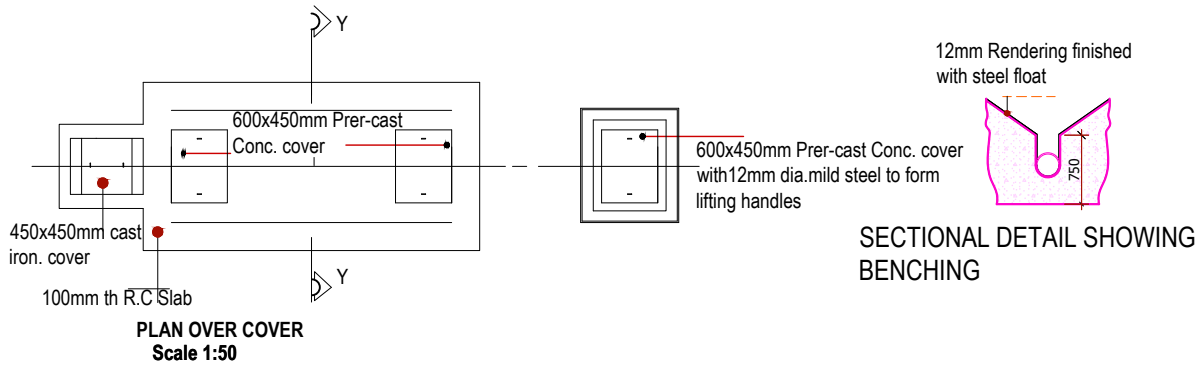


SECTION Y-Y
Scale 1:50

L[-] 11-SEPTIC TANK DETAILS
SCALE 1: 50

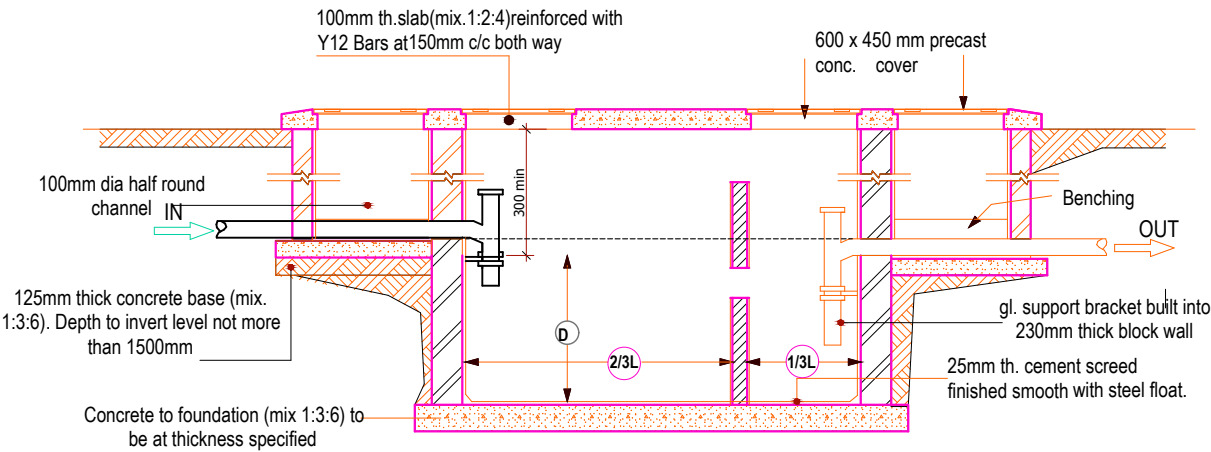
No. OF USERS	L(mm)	B(mm)	D(mm)	CAPACITY(LTRS)
6	1800	675	900	1112.5
10	2250	675	900	1417.5
15	2500	675	900	1561.5

SOAKPIT SYSTEM



PLAN OVER COVER
Scale 1:50

SECTIONAL DETAIL SHOWING
BENCHING



LONGITUDINAL SECTION

AMENDMENTS

No	Date	Revision

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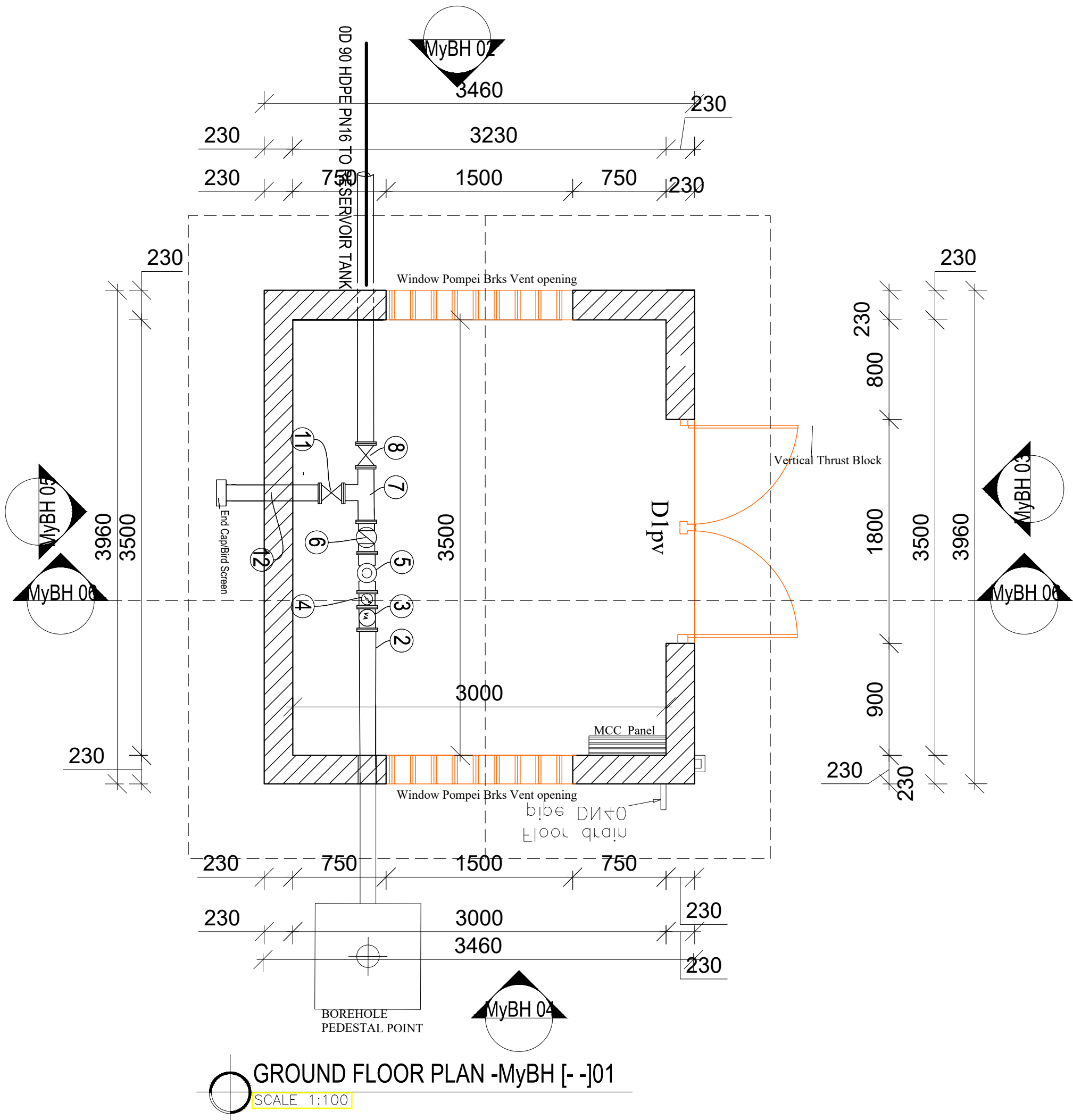
GOAL-KAMPALA

Procurement and Logistics Department
Plot 1 Lubbo close, Le Palm Building, Muyenga-Kampala
P.O Box 33140 Uganda, Kampala
Email: procurement@ug.goal

Project:
MUWAYO PWS

Drawing Title:
GUARD HOUSE
Septic Tank details

Scale:	Designed:	
AS SHOWN	Drawn:	PLA
Date: April /2025	Checked:	Infrastructure Team
	Approved:	JSK
Drg No:	MySp[- -]	



GROUND FLOOR PLAN -MyBH [- -]01

SCALE 1:100

AMENDMENTS

No	Date	Revision

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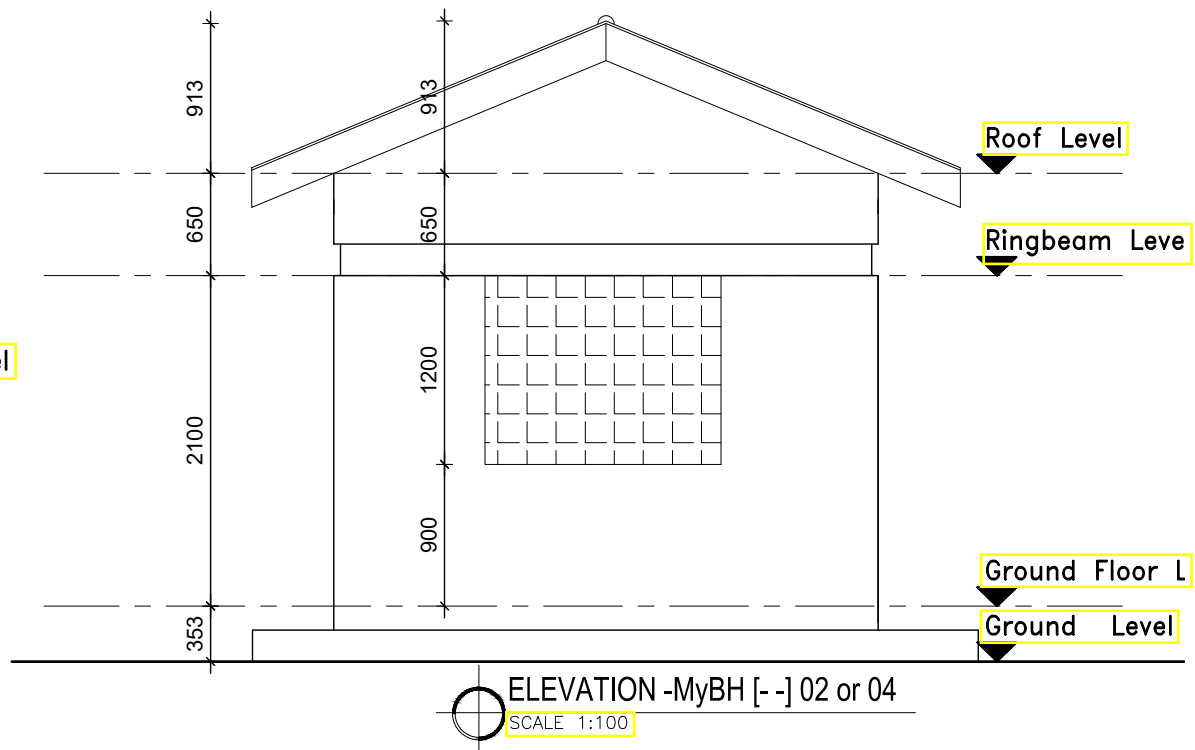
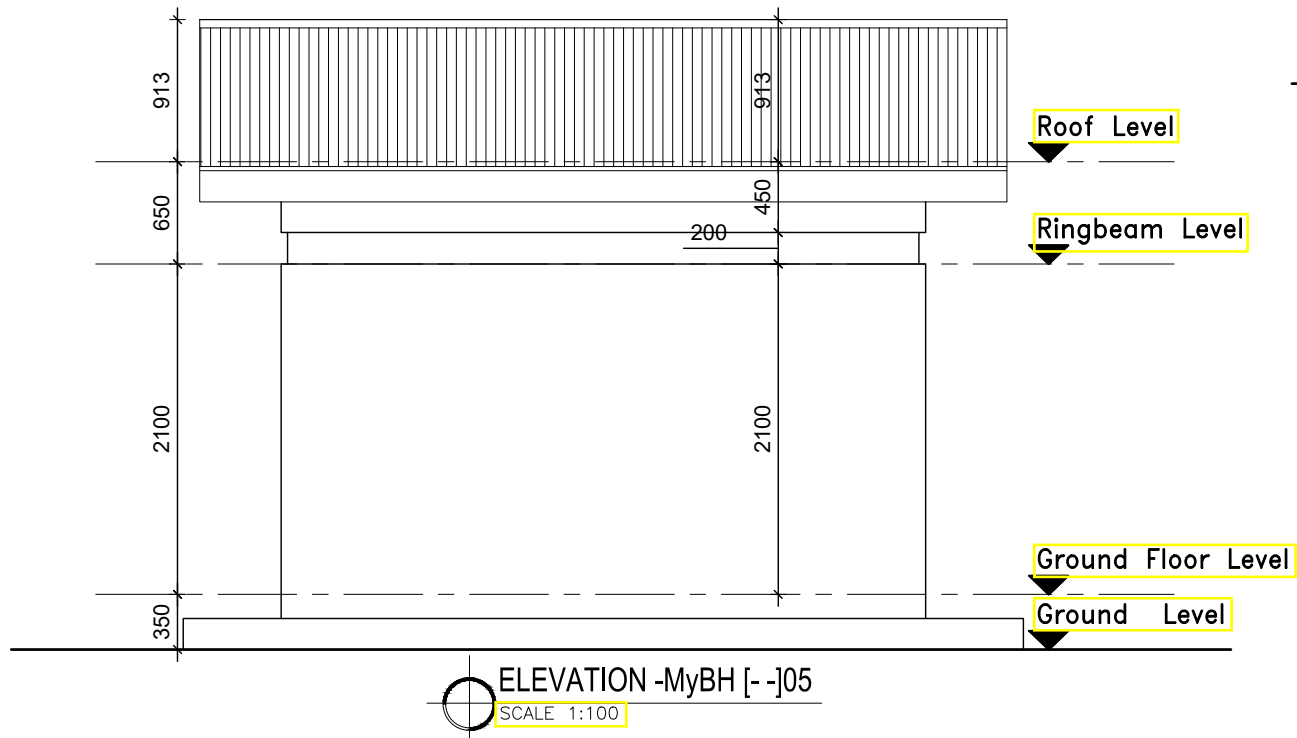
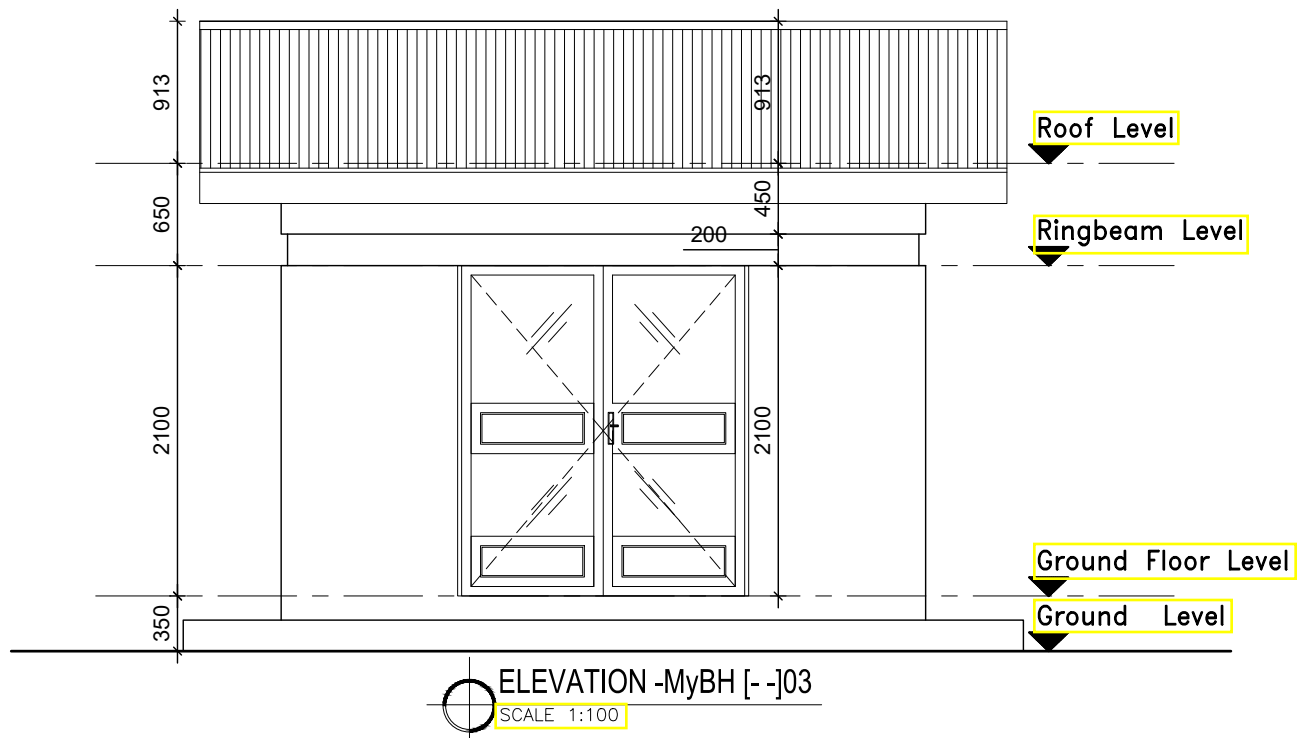
Project: MUWAYO PWS

Drawing Title: PUMP HOUSE

Ground Floor Plan

Scale:	Designed:	
AS SHOWN	Drawn:	PLA
Date:	Checked:	Infrastructure Team
April /2025	Approved:	JSK

Drg No: MyBH[- -] 01



AMENDMENTS		
No	Date	Revision

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Client:

GOAL

GOAL-KAMPALA
Procurement and Logistics Department
Plot 1 Lubbo close, Le Palm Building, Muyenga-Kampala
P.O Box 33140 Uganda, Kampala
Email: procurement@ug.goal

Project:
,MUWAYO PWS

Drawing Title:
PUMP HOUSE
Elevations

Scale:	Designed:	
AS SHOWN	Drawn:	PLA
Date:	Checked:	Infrastructure Team
April /2025	Approved:	JSK
Drg No: MyBH[- -] 020-05		


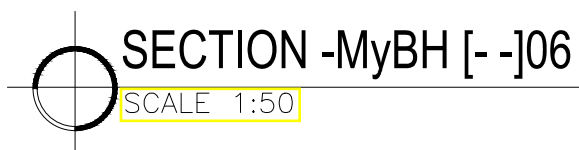


Diagram showing a typical cross-section of a ring beam. The beam has an outer square profile with a side length of 200 mm. Inside this, there is a smaller square profile with a side length of 230 mm. The labels indicate the top and bottom reinforcement bars (2T12-TOP and 2T12-BOTTOM) and the spacing between them (RS-@200cc (Links)).

Roof Level

RingbeamLevel

230mm thick brickwork
walling , plastered and
painted to approval

Ground Floor Level

Ground Level

OPENINGS SCHEDULE -BsW [- -]07
SCALE 1:100

AMENDMENTS		
No	Date	Revision

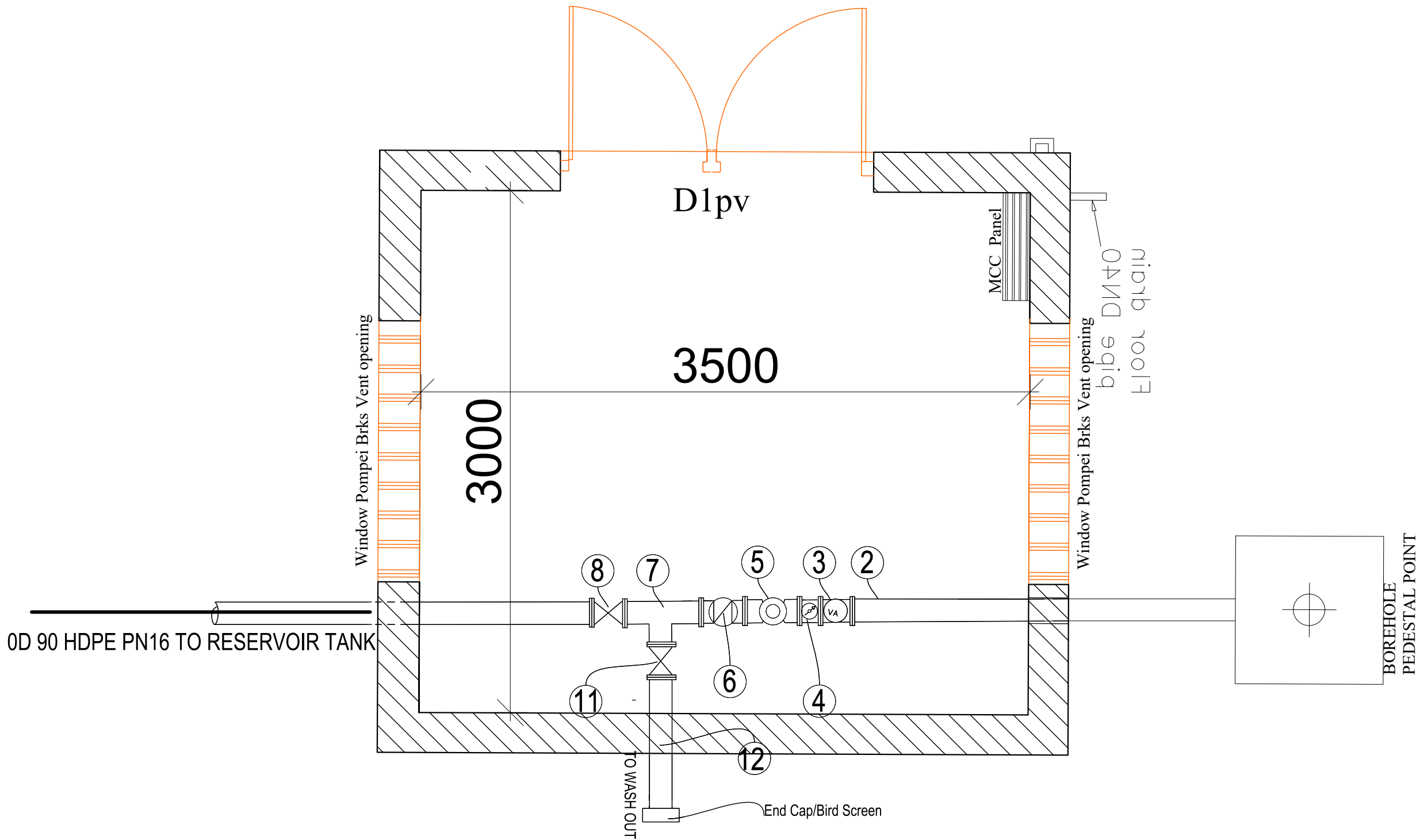
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GOAL

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Plot 1 Lubbock close, Le Palm Building, Muyenga-Kampala
P.O Box 33140 Uganda, Kampala
Email: procurement@ug.go.ug

Drawing Title:
PUMP HOUSE
Section

Scale:	Designed:	
AS SHOWN	Drawn:	PLA
Date:	Checked:	Infrastructure Team
April /2025	Approved:	JSK
Dwg No:	MvBHF- -1 06	



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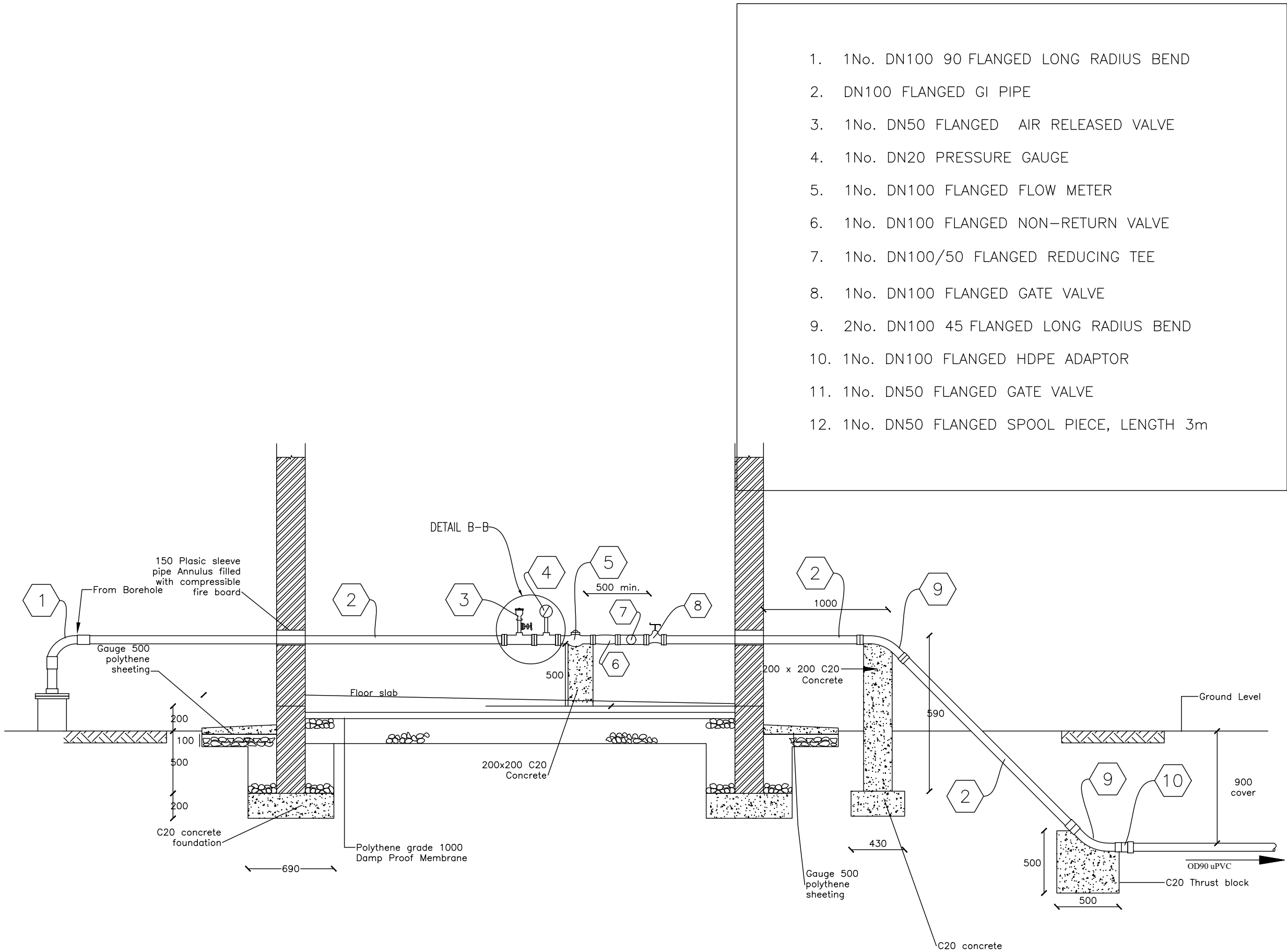
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Appurtenaces Layout

Scale:	Designed:	
AS SHOWN	Drawn:	PLA
Date: April /2025	Checked:	Infrastructure Team
	Approved:	JSK
Drg No:	MyBH[- -]	



AMENDMENTS

No	Date	Revision

GENERAL NOTES;

- ALL DIMENSIONS TO BE CHECKED ON SITE, WRITTEN DIMENSIONS TO BE FOLLOWED IN PREFERENCE TO SCALED DIMENSIONS.
- ALL WALLS LESS THAN 200MM THICK TO BE REINFORCED WITH HOOP IRON AT EVERY ALTERNATE COURSE.
- ALL REINFORCED CONCRETE WORK IS TO BE IN ACCORDANCE WITH STRUCTURAL ENGINEER'S DETAILS.
- ALL SANITARY WORK TO BE IN ACCORDANCE WITH M.O.H RULES AND REGULATIONS.
- WHERE DRAIN PASSES UNDER BUILDING OR DRIVEWAY AREA, PIPE TO BE OF CAST IRON OR ENCASED IN 150MM CONCRETE.
- ALL WASTE PIPES AND SOIL PIPES ARE TO BE IN DUCTS AND THE BENDS TO HAVE ALL CLEANING EYES ACCESSIBLE FROM OUTSIDE.
- ALL WINDOWS AND EXTERNAL GLAZED DOORS ON GROUND FLOOR TO HAVE BURGLAR PROOFING TO DETAILS.
- ALL INTERNAL PLASTER TO BE TWO COATS STEEL FLOAT FINISHED.
- ALL MANHOLES WITHIN BUILDING AREA, DRIVEWAY AND PARKING TO HAVE HEAVY DUTY AIR TIGHT COVERS AND DOUBLE SEALED.
- PROVIDE G.I. 125 x 100 RAINWATER DOWN PIPES AND 125 x 100 G.I. BOX GUTTER WITH BRACKETS ETC. WHERE SHOWN.
- ALL PAINTING TO BE 3 COATS.
- SPLASH APRON OF 600MM ALONG THE PERIMETER OF BUILDING.
- SAMPLES OF FITTINGS, MATERIALS ETC. TO BE PRODUCED & APPROVED BEFORE COMMENCING WORK.
- ALL WINDOWS TO HAVE P.C. CILLS, BUILT IN REINFORCED CONCRETE PELMET BOXES & TIMBER INTERNAL WINDOW CILLS & SKIRTINGS.
- FIRE FIGHTING EQUIPMENT TO BE PROVIDED AND INSTALLED BY BUILDING FIRE CONSULTANTS WHERE SHOWN ON PLAN.
- THE ENGINEER SHALL NOT ACCEPT ANY LIABILITY FOR WORKS WHICH HE HAS NOT BEEN EXPRESSLY INSTRUCTED TO SUPERVISE IN WRITING AND HAS ACCEPTED TO PROCEED IN WRITING, OR FOR ANY OMISSIONS OR DEVIATIONS FROM HIS DRAWINGS/TECHNICAL SPECIFICATIONS, NOR SHALL HE TAKE RESPONSIBILITY FOR WORKS HANDLED BY OTHER NOMINATED CONSULTANTS OR CONTRACTORS
- D.P.C DENOTES ONE LAYER OF BITUMINOUS FELT TO BE PROVIDED UNDER ALL WALLS AT LEAST 150MM ABOVE GROUND LEVEL.
- CONTRACTORS MUST VERIFY ALL DIMENSIONS AND LEVELS ON SITE BEFORE COMMENCEMENT OF WORKS, ANY DISCREPANCIES MUST BE REPORTED TO THE ENGINEER/CONSULTANT BEFORE ANY WORKS EXECUTION
- ALL LEVELS SHOWN AT FINISHED LEVELS UNLESS OTHERWISE STATED.
- ALL SURFACE BEDS TO BE CAST ON WELL-COMPACTED & WELL-CONSOLIDATED MURRUM OR SAND INFILL WHERE APPLICABLY STATED.
- ALL CONSTRUCTION WORKS TO COMPLY WITH THE LATEST B.S STANDARD CODES OF PRACTICE, LOCAL AUTHORITY BY-LAWS AND FIRE REGULATIONS.
- DEPTH OF FOUNDATION TRENCHES TO BE A MINIMUM OF 750MM BELOW REDUCED GROUND LEVEL.
- ALL PIPES AND SERVICES TO BE AT A MINIMUM OF 450MM BELOW REDUCED GROUND LEVEL.

Client:



GOAL-KAMPALA

Procurement and Logistics Department
Plot 1 Lubboke close, Le Palm Building, Muyenga-Kampala
P.O Box 33140 Uganda, Kampala
Email: procurement@ug.goal

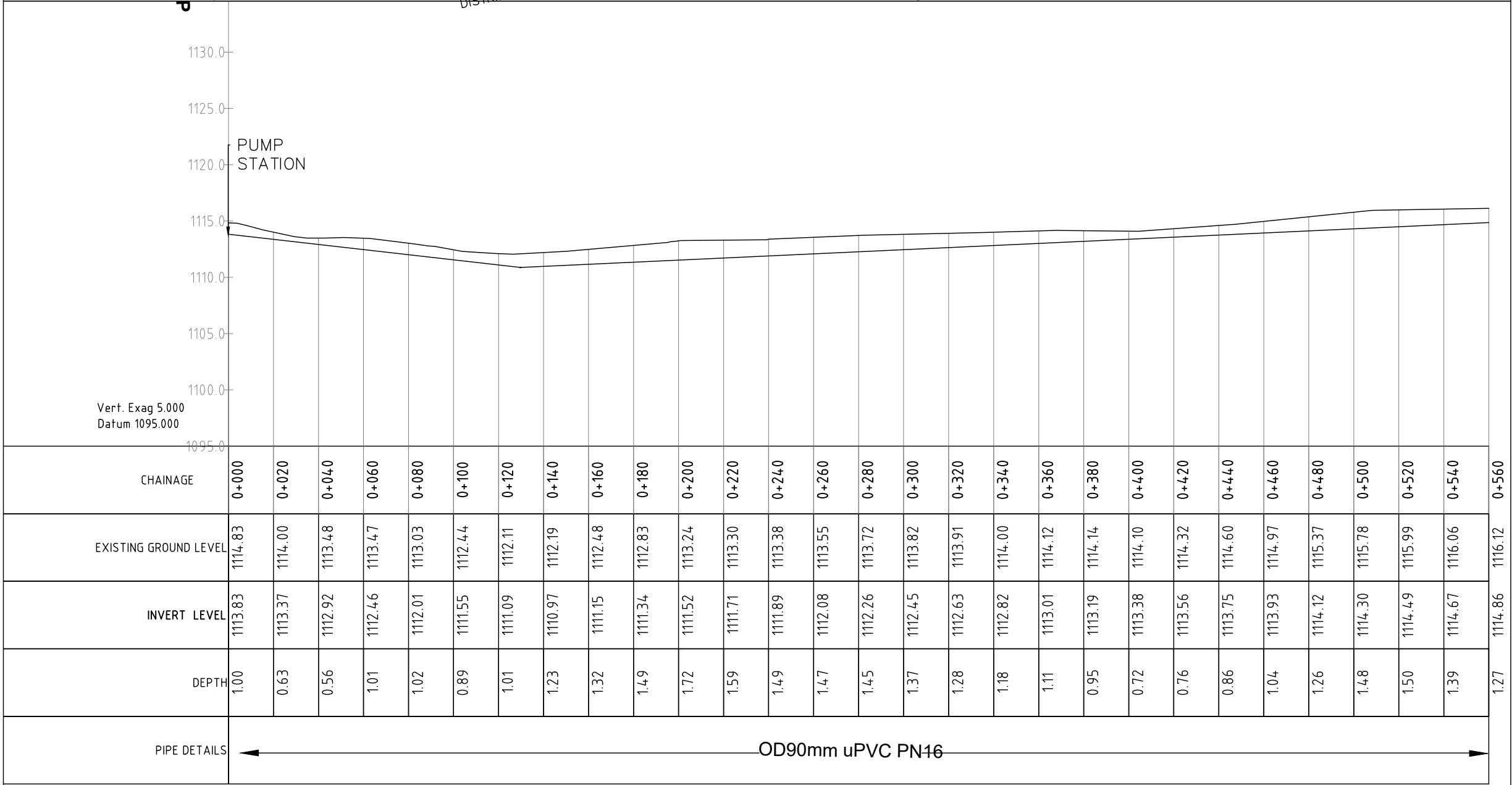
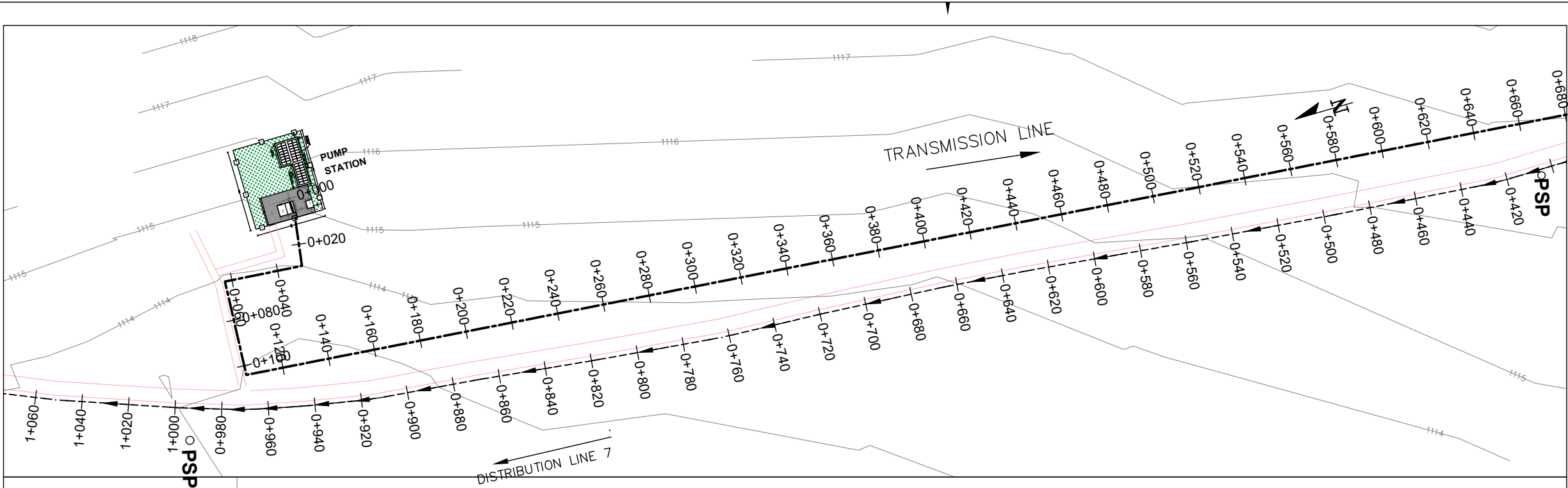
Project: MUWAYO PWS

Drawing Title:

PUMP HOUSE

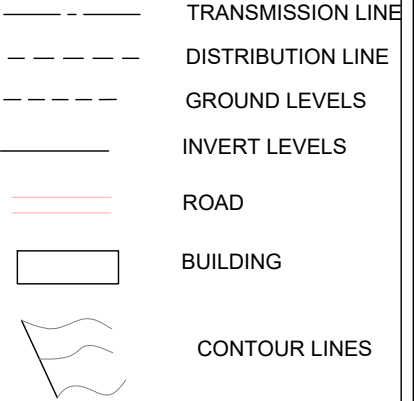
Appurtenances Section

Scale:	Designed:	
AS SHOWN	Drawn:	PLA
Date:	Checked:	Infrastructure Team
April /2025	Approved:	JSK
Org No:	MyBH[-]	



NOTES

- 1). All dimensions in millimetres unless ortherwise indicated
- 2). All levels in metres above sea level
- 3). Structural details are not included
- 4). All structural concrete is class 25/10mm aggregate
- 5). All mass concrete is class 15/10mm aggregate



CLIENT:

GOAL UGANDA
Behind Grand
Pearl Hotel Muyenga,
P.O Box 33140,
Uganda, Kampala

FINANCED BY:

PROJECT

**CONSTRUCTION OF MUWAYO TOWN COUNCI SOLAR POWERED
PIPED WATER SUPPLY SYSTEMS IN BUGIRI DISTRICT**

CONSULTANTS

WSS Services (U) Ltd & INDIGO ENGINEERING LTD

DRAWING TITLE

TRANSMISSION LINE
(0+000-0+560)

SCALE 1:FTS

DRAWING No.
GBUN4-5184/MWSS/3.1.

SURVEYED

DESIGNED

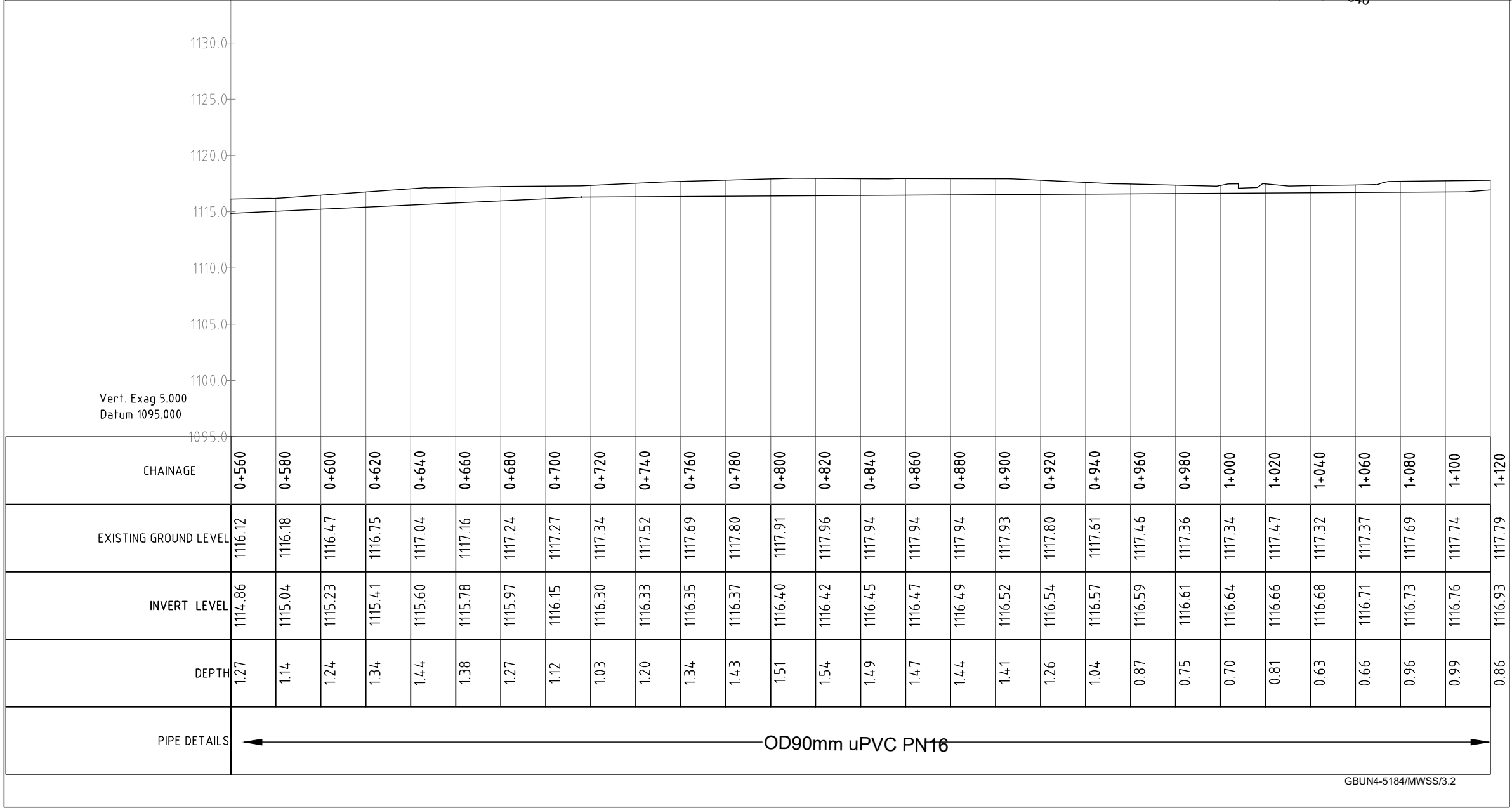
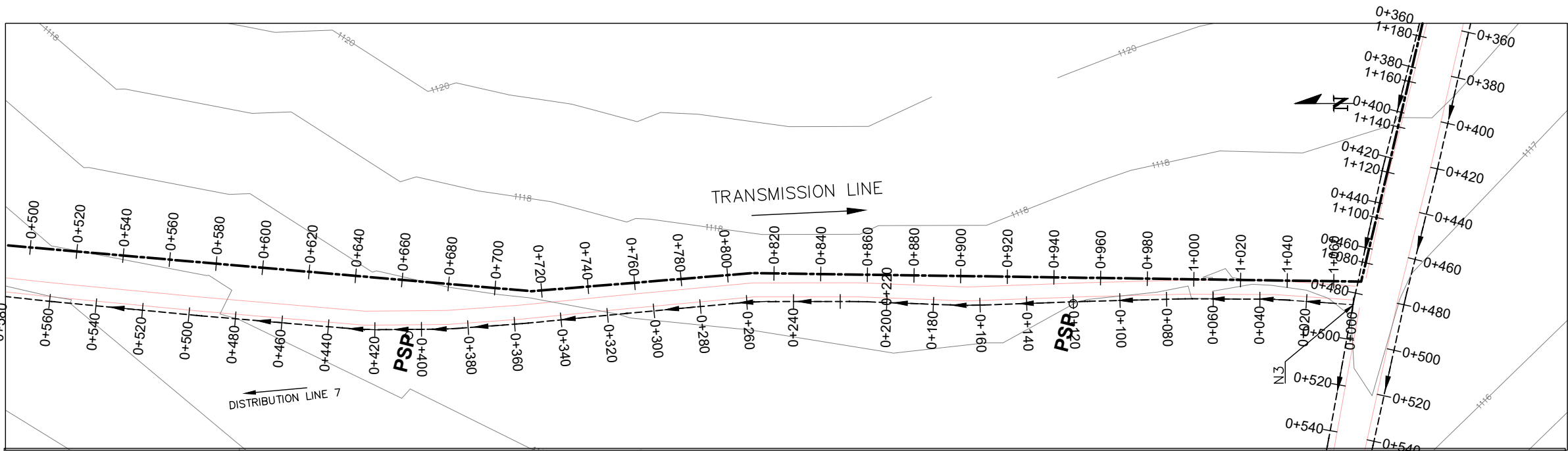
DRAWN

CHECKED

DATE

MAY. 2025

APPROVED



- ### NOTES
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- TRANSMISSION LINE
 - DISTRIBUTION LINE
 - GROUND LEVELS
 - INVERT LEVELS
 - ROAD
 - BUILDING
 - CONTOUR LINES

CLIENT:

GOAL UGANDA
Behind Grand
Pearl Hotel Muyenga,
P.O Box 33140,
Uganda, Kampala

FINANCED BY:

PROJECT

CONSTRUCTION OF MUWAYO TOWN COUNCI SOLAR POWERED
PIPED WATER SUPPLY SYSTEMS IN BUGIRI DISTRICT

CONSULTANTS

WSS Services (U) Ltd & INDIGO ENGINEERING LTD

DRAWING TITLE

TRANSMISSION LINE
(0+560-1+120)

SCALE 1:FTS

DRAWING No.
GBUN4-5184/MWSS/3.2

SURVEYED

DESIGNED

DRAWN

CHECKED

DATE

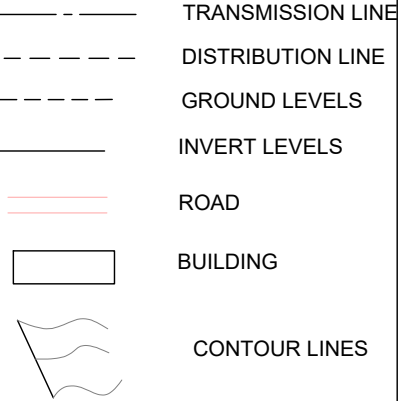
MAY. 2025

APPROVED

GBUN4-5184/MWSS/3.2

NOTES

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CLIENT:

GOAL UGANDA
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Pearl Hotel Muyenga,
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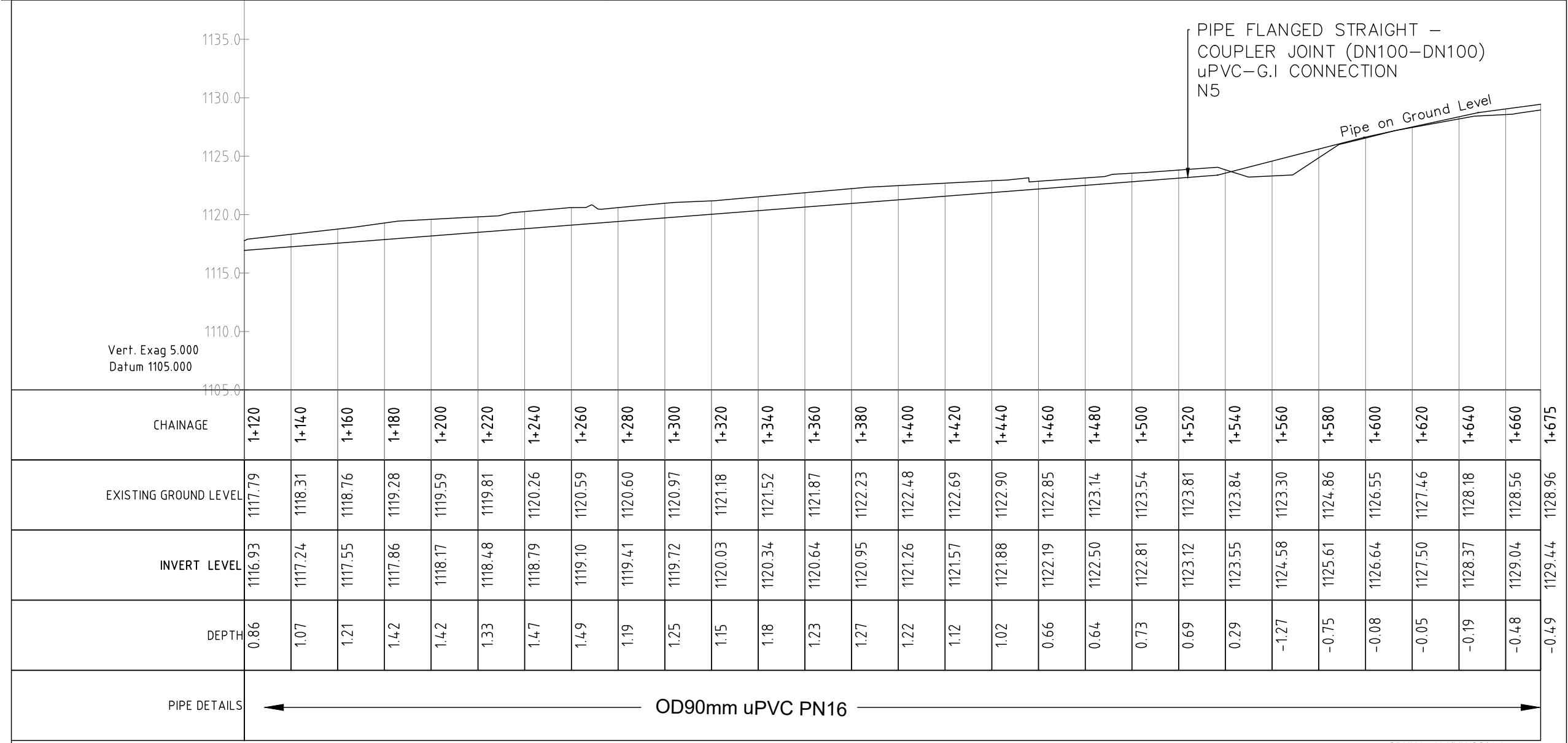
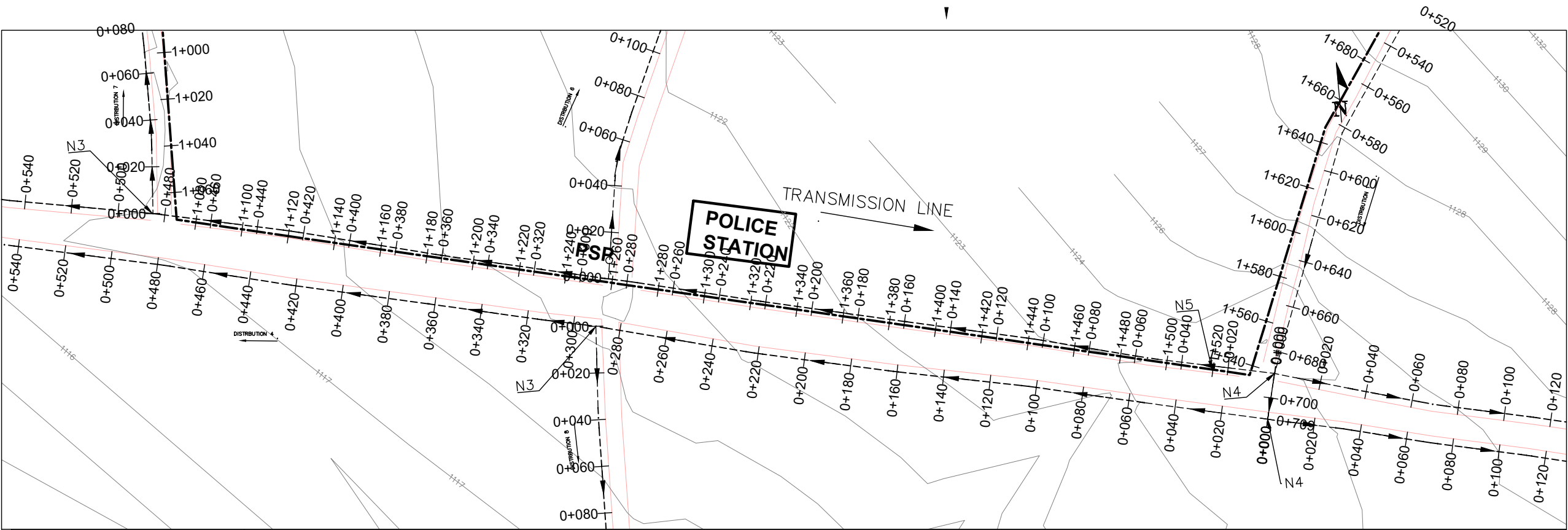
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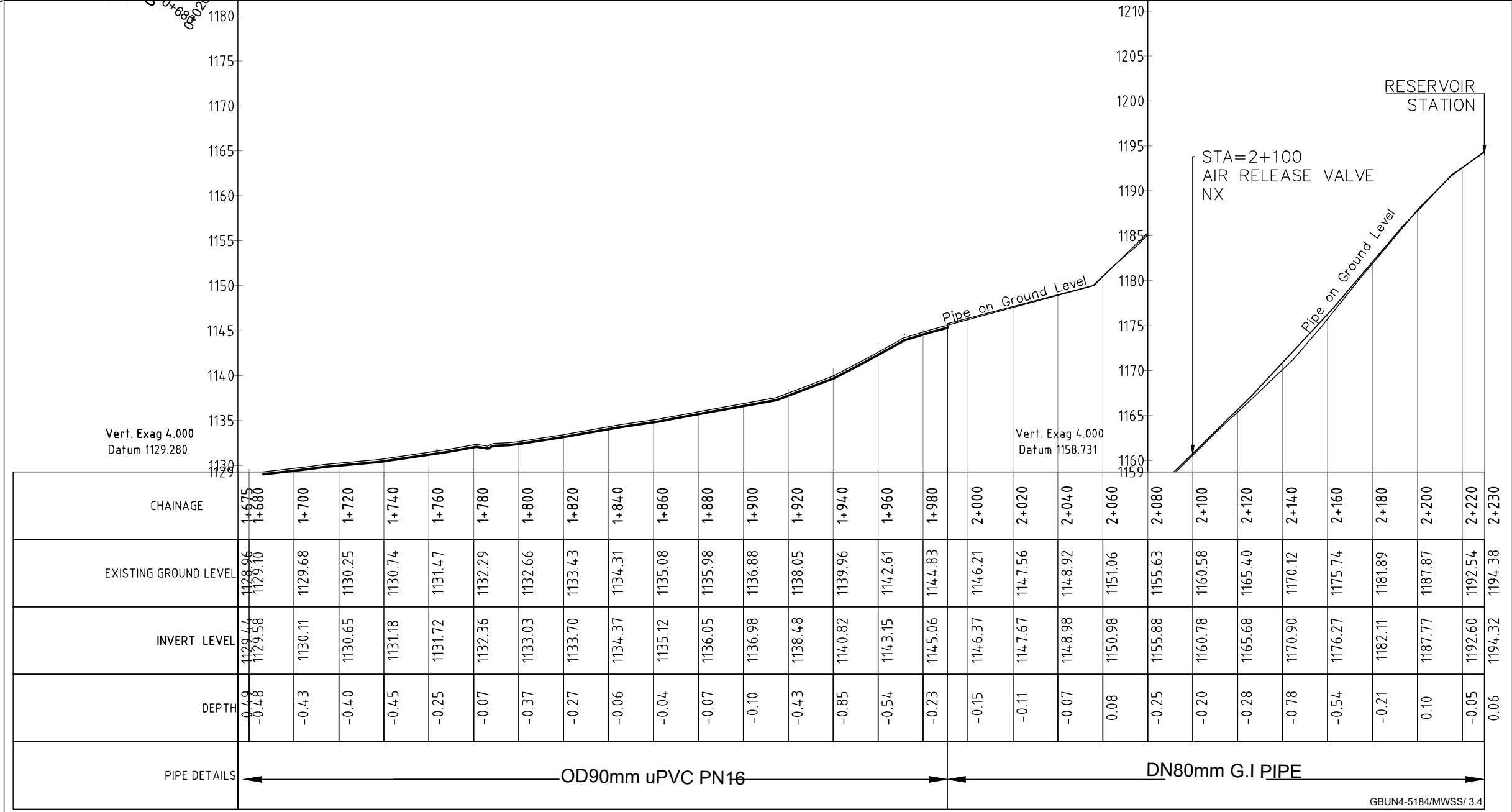
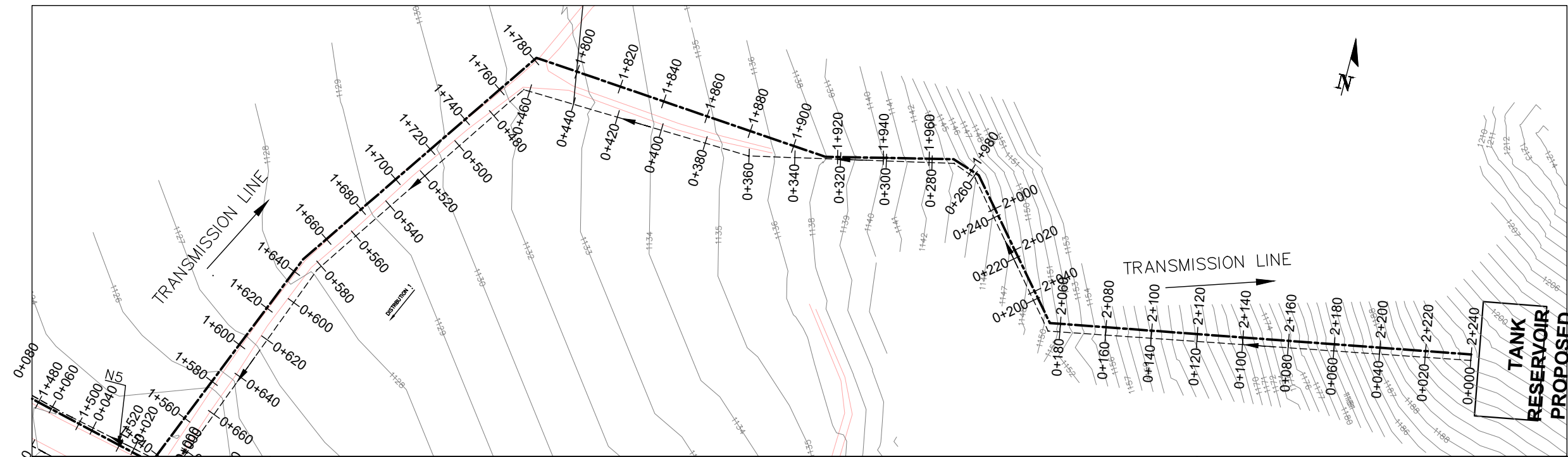
PROJECT
**CONSTRUCTION OF MUWAYO TOWN COUNCI SOLAR POWERED
PIPED WATER SUPPLY SYSTEMS IN BUGIRI DISTRICT**

CONSULTANTS
WSS Services (U) Ltd & INDIGO ENGINEERING LTD

DRAWING TITLE
TRANSMISSION LINE
1+120-1+675)

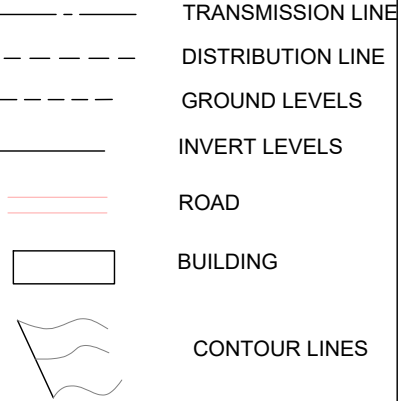
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DRAWING No.
GBUN4-5184/MWSS/3.3
SURVEYED
DESIGNED
DRAWN
CHECKED
DATE
MAY. 2025
APPROVED





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CLIENT:

GOAL UGANDA
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FINANCED BY:

PROJECT
**CONSTRUCTION OF MUWAYO TOWN COUNCI SOLAR POWERED
PIPED WATER SUPPLY SYSTEMS IN BUGIRI DISTRICT**

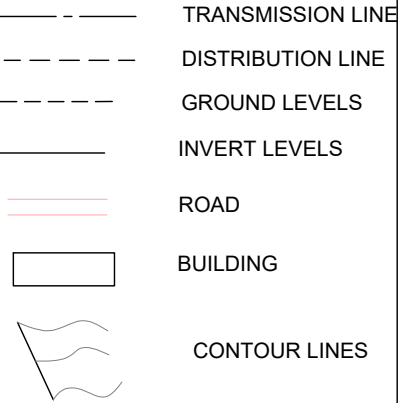
CONSULTANTS
WSS Services (U) Ltd & INDIGO ENGINEERING LTD

DRAWING TITLE
TRANSMISSION LINE
(1+120-1+675)

SCALE 1:FTS
DRAWING No.
GBUN4-5184/MWSS/3.4
SURVEYED
DESIGNED
DRAWN
CHECKED
DATE
MAY. 2025
APPROVED

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CLIENT:

GOAL UGANDA
Behind Grand Pearl Hotel Muyenga,
P.O Box 33140,
Uganda, Kampala

FINANCED BY:

PROJECT

CONSTRUCTION OF MUWAYO TOWN COUNCI SOLAR POWERED
PIPED WATER SUPPLY SYSTEMS IN BUGIRI DISTRICT

CONSULTANTS

WSS Services (U) Ltd & INDIGO ENGINEERING LTD

DRAWING TITLE

DISTRIBUTION LINE 1
(0+000–0+532)

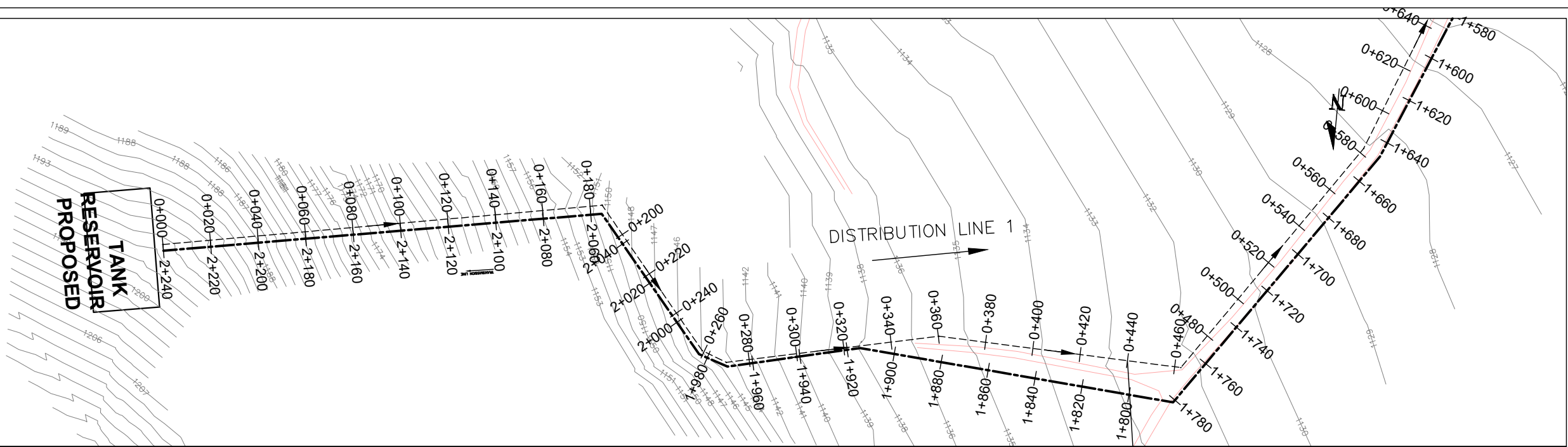
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SURVEYED DESIGNED

DRAWN CHECKED

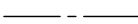
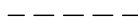
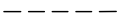


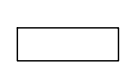

DATE MAY. 2025 APPROVED

DISTRIBUTION 1



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	TRANSMISSION LINE
	DISTRIBUTION LINE
	GROUND LEVELS
	INVERT LEVELS
	ROAD
	BUILDING
	CONTOUR LINES

CLIENT:

GOAL UGANDA
Behind Grand Pearl Hotel Muyenga,
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FINANCED BY:

PROJECT

CONSTRUCTION OF MUWAYO TOWN COUNCI SOLAR POWERED
PIPED WATER SUPPLY SYSTEMS IN BUGIRI DISTRICT

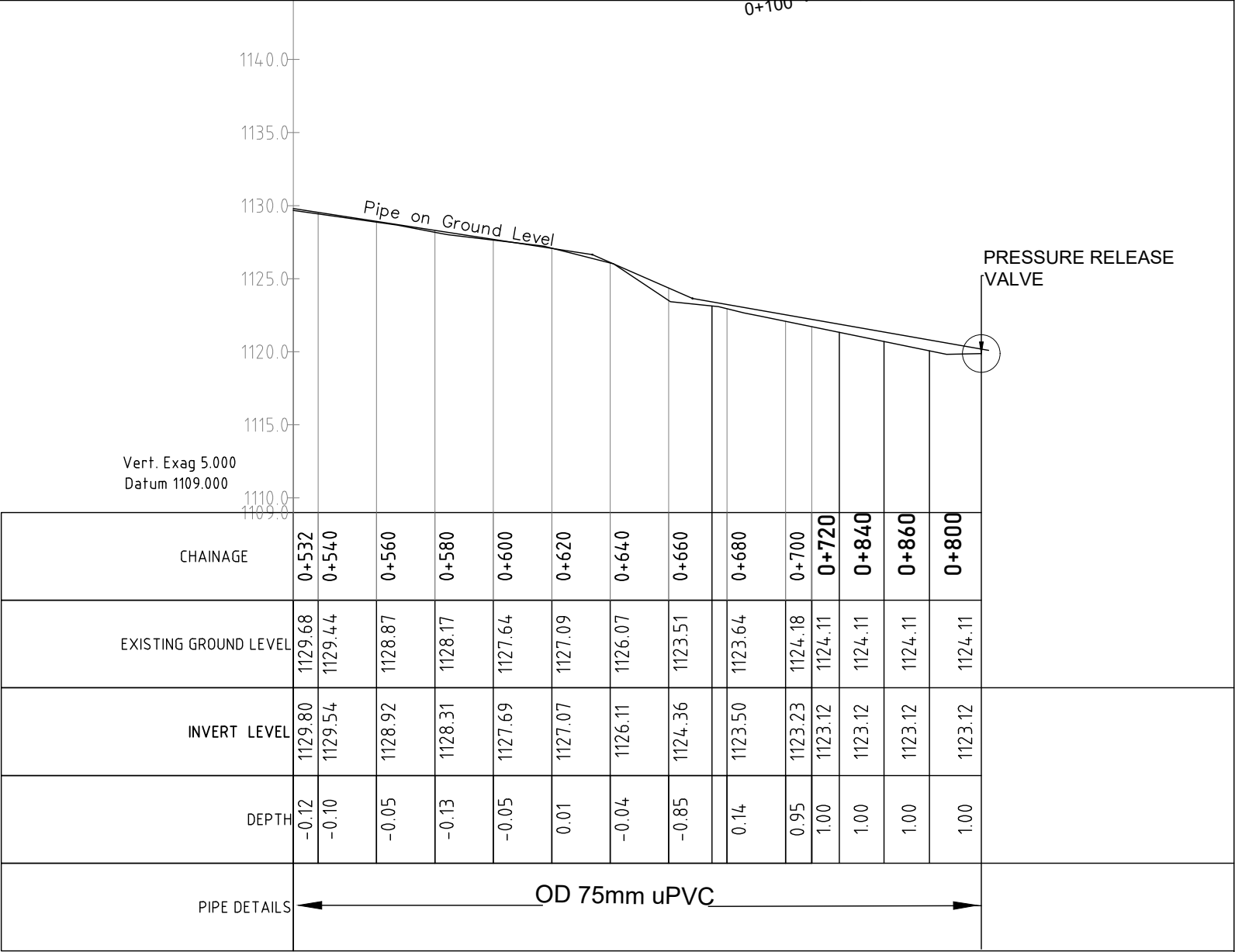
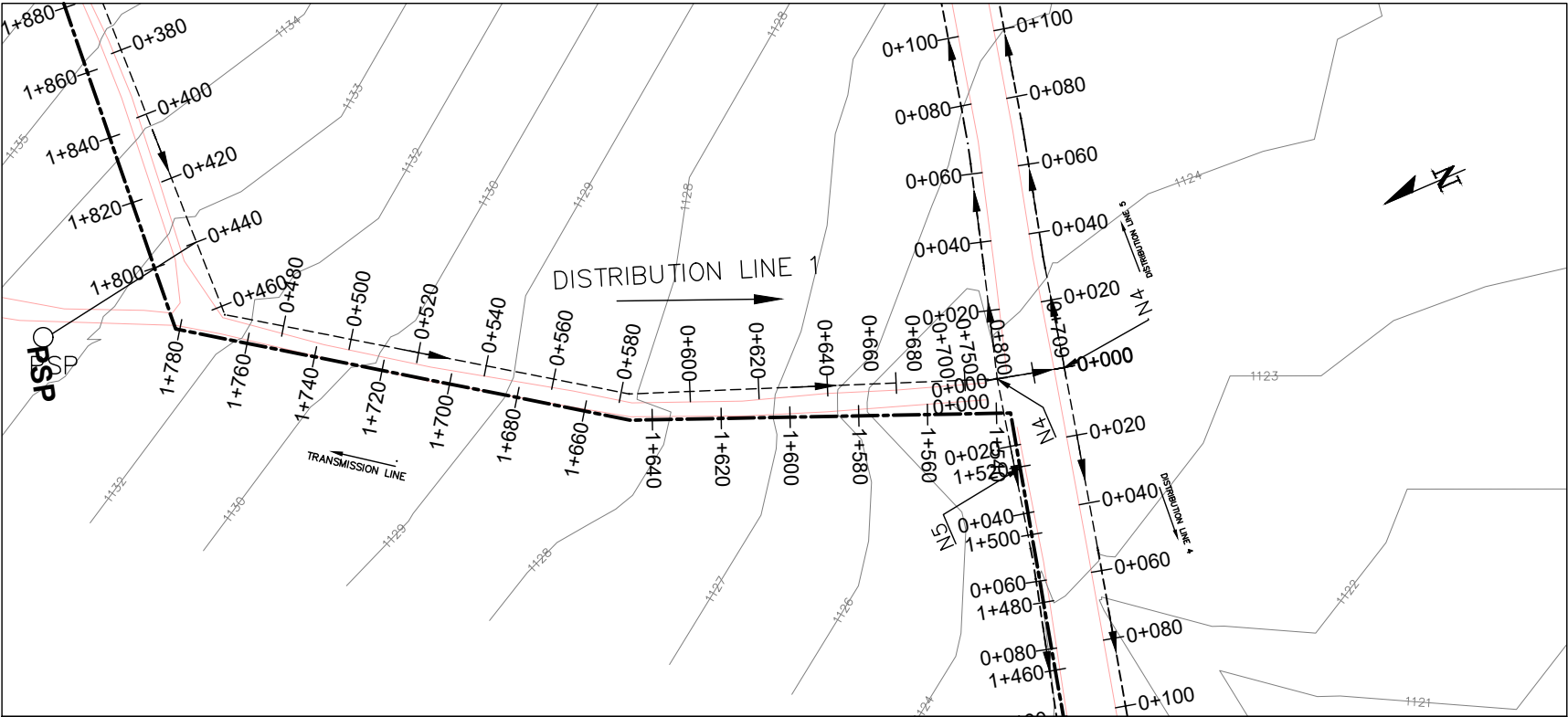
CONSULTANTS

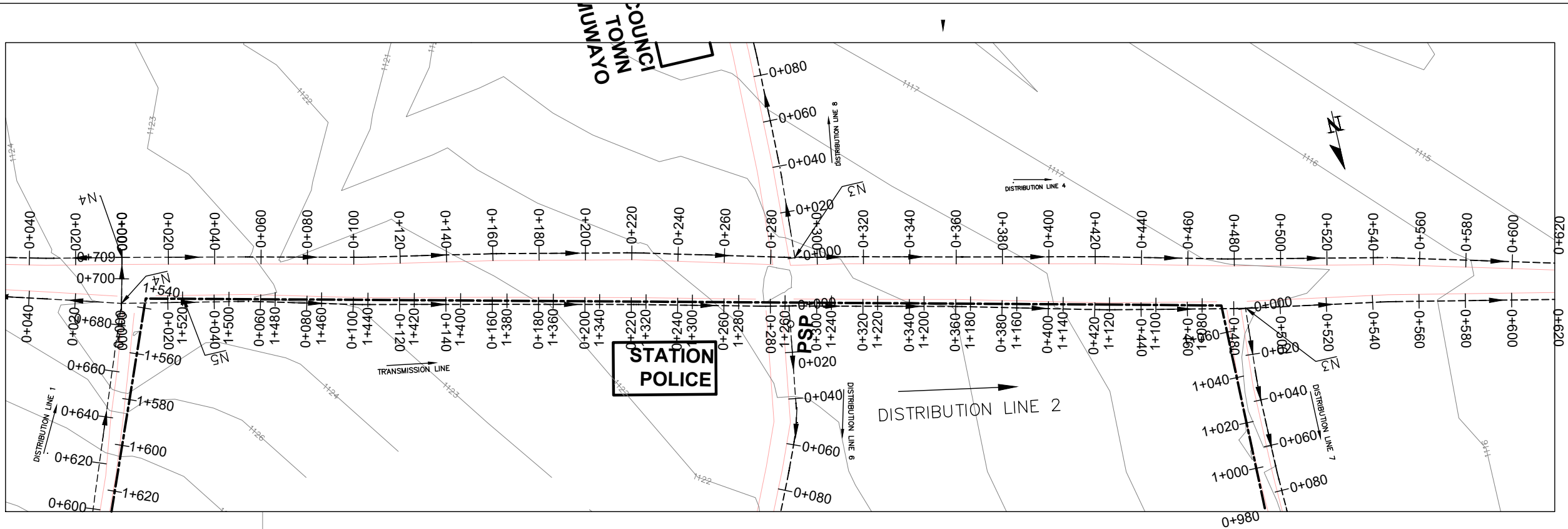
WSS Services (U) Ltd & INDIGO ENGINEERING LTD

DRAWING TITLE

DISTRIBUTION LINE 1
0+532-0+800

SCALE 1:FTS	DRAWING No. GBUN4-5184/MWSS/5.1.1
SURVEYED	DESIGNED
DRAWN	CHECKED
DATE	MAY. 2025
	APPROVED





PIPE TEE JOINT
(OD90mm-OD50mm)
50mm LINE VALVE
N4

Vert. Exag 5.000
Datum 1100.000

CHAINAGE	0+000	0+020	0+040	0+060	0+080	0+100	0+120	0+140	0+160	0+180	0+200	0+220	0+240	0+260	0+280	0+300	0+320	0+340	0+360	0+380	0+400	0+420	0+440	0+460	0+480	0+500	0+520	0+532
EXISTING GROUND LEVEL	1124.30	1123.88	1123.69	1123.50	1123.33	1123.16	1122.93	1122.69	1122.45	1122.08	1121.72	1121.36	1121.08	1120.75	1120.53	1120.31	1119.99	1119.78	1119.58	1119.07	1118.55	1118.03	1117.67	1117.64	1117.36	1117.05	1116.73	1116.55
INVERT LEVEL	1123.00	1122.81	1122.61	1122.42	1122.22	1122.03	1121.83	1121.64	1121.45	1121.16	1120.87	1120.58	1120.29	1120.00	1119.71	1119.42	1119.14	1118.85	1118.56	1118.16	1117.74	1117.32	1116.90	1116.53	1116.23	1115.94	1115.64	1115.47
DEPTH	1.30	1.07	1.07	1.08	1.11	1.13	1.10	1.05	1.00	0.93	0.85	0.78	0.79	0.75	0.81	0.89	0.85	0.94	1.02	0.91	0.81	0.71	0.77	1.11	1.12	1.11	1.09	1.08
PIPE DETAILS	← OD90mm HDPE PN10 →																											

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	TRANSMISSION LINE
	DISTRIBUTION LINE
	GROUND LEVELS
	INVERT LEVELS
	ROAD
	BUILDING
	CONTOUR LINES

CLIENT:

GOAL UGANDA
Behind Grand
Pearl Hotel Muyenga,
P.O Box 33140,
Uganda, Kampala

FINANCED BY:

PROJECT

CONSTRUCTION OF MUWAYO TOWN COUNCI SOLAR POWERED
PIPED WATER SUPPLY SYSTEMS IN BUGIRI DISTRICT

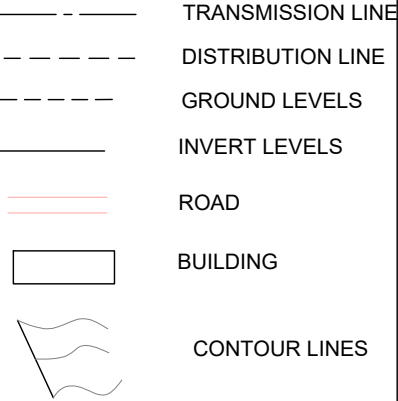
CONSULTANTS
WSS Services (U) Ltd & INDIGO ENGINEERING LTD

DRAWING TITLE
DISTRIBUTION LINE 2
0+0.000- 0+532

SCALE 1:FTS	DRAWING No. GBUN4-5184/MWSS/5.2.1
SURVEYED	DESIGNED
DRAWN	CHECKED
DATE	MAY. 2025
	APPROVED

NOTES

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CLIENT:

GOAL UGANDA
Behind Grand
Pearl Hotel Muyenga,
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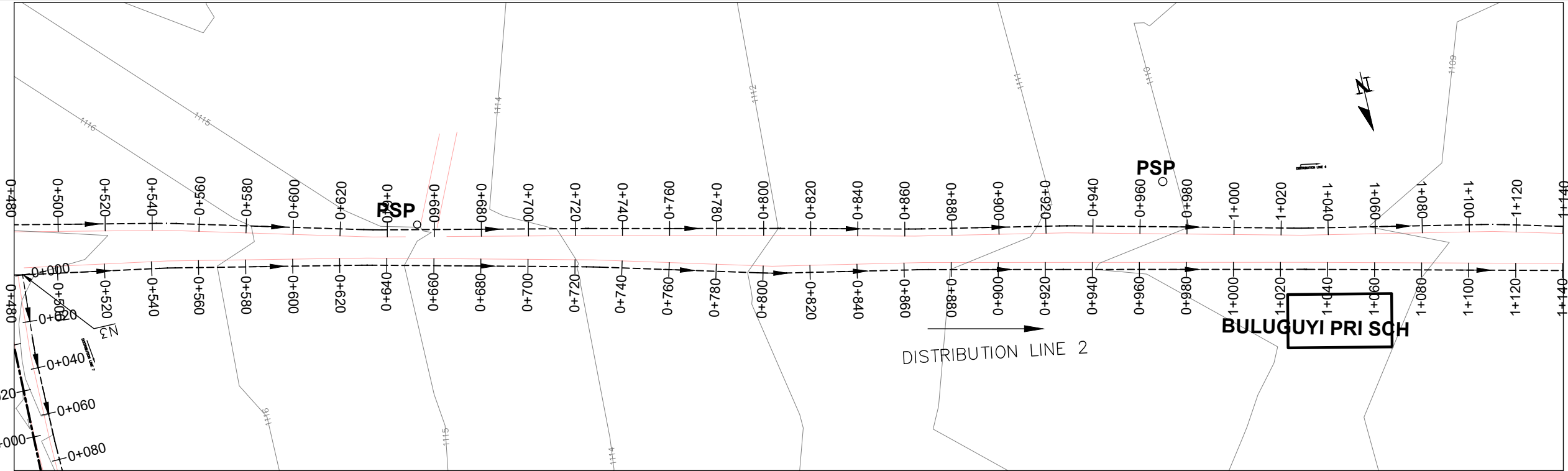
PROJECT

CONSTRUCTION OF MUWAYO TOWN COUNCI SOLAR POWERED
PIPED WATER SUPPLY SYSTEMS IN BUGIRI DISTRICT

CONSULTANTS
WSS Services (U) Ltd & INDIGO ENGINEERING LTD

DRAWING TITLE
DISTRIBUTION LINE 2
0+532-1+063

SCALE 1:FTS
DRAWING No.
GBUN4-5184/MWSS/5.2.2
SURVEYED
DESIGNED
DRAWN
CHECKED
DATE
MAY. 2025
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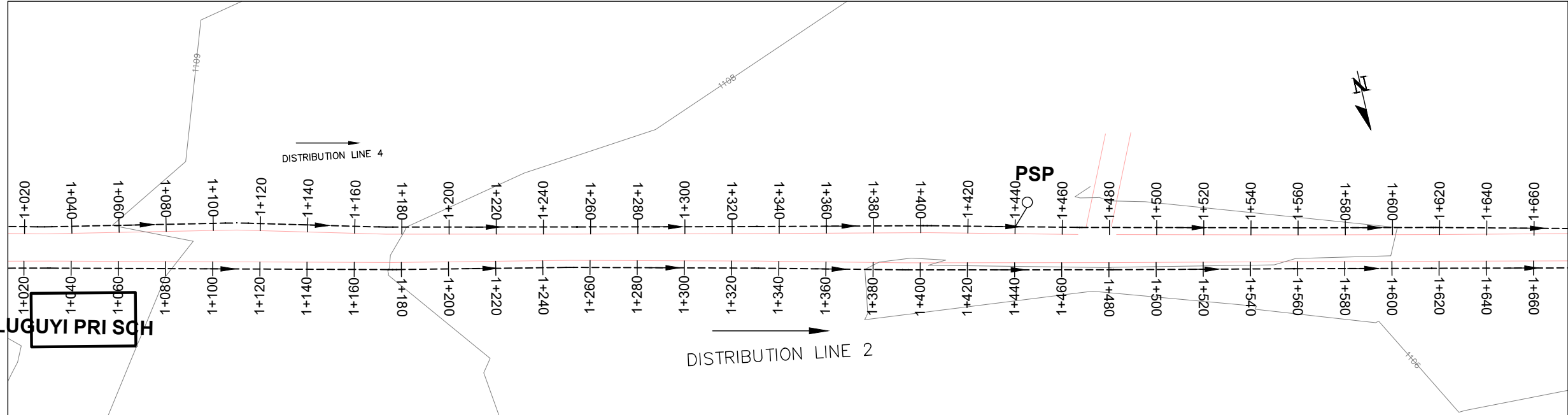
Vert. Exag 5.000
Datum 1090.000

CHAINAGE	0+532	0+540	0+550	0+560	0+580	0+600	0+620	0+640	0+660	0+680	0+700	0+720	0+740	0+750	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	1+020	1+040	1+063
EXISTING GROUND LEVEL	1116.55	1116.42	1116.42	1116.12	1115.82	1115.53	1115.23	1114.92	1114.59	1114.27	1113.94	1113.61	1113.28	1112.95	1112.62	1112.29	1112.03	1111.79	1111.54	1111.19	1110.77	1110.34	1110.02	1109.75	1109.49	1109.22	1108.96	1109.26	1108.34	1107.24
INVERT LEVEL	1115.47	1115.34	1115.34	1115.05	1114.75	1114.45	1114.16	1113.86	1113.57	1113.27	1112.95	1112.64	1112.32	1112.01	1111.69	1111.38	1111.06	1110.75	1110.43	1110.11	1109.80	1109.48	1109.17	1108.85	1108.54	1108.22	1108.07	1107.92	1107.73	1107.24
DEPTH	1.08	1.08	1.08	1.07	1.07	1.07	1.07	1.06	1.03	1.00	0.99	0.98	0.96	0.95	0.93	0.92	0.97	1.04	1.11	1.08	0.97	0.86	0.85	0.90	0.95	1.00	0.88	1.33	1.52	1.52
PIPE DETAILS	OD90mm HDPE PN10													OD50mm HDPE PN10																

DISTRIBUTION LINE 2
(0+532-1+063)

GBUN4-5184/MWSS/5.2.2

BULUGUYI PRI SCH



Vert. Exag 5.000
Datum 1085.000

CHAINAGE	1+063	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	1+520	1+540	1+560	1+580	1+595
EXISTING GROUND LEVEL	1109.29	1108.87	1108.35	1108.09	1107.91	1107.73	1107.57	1107.48	1107.40	1107.31	1107.21	1107.09	1106.96	1106.83	1106.69	1106.53	1106.37	1106.27	1106.29	1106.30	1106.32	1106.34	1106.33	1106.32	1106.31	1106.30	1106.28	1106.28
INVERT LEVEL	1107.75	1107.62	1107.47	1107.33	1107.18	1107.03	1106.88	1106.73	1106.58	1106.43	1106.28	1106.13	1105.98	1105.83	1105.68	1105.53	1105.49	1105.44	1105.40	1105.36	1105.31	1105.27	1105.23	1105.18	1105.14	1105.10	1105.05	1105.02
DEPTH	1.54	1.24	0.87	0.76	0.73	0.70	0.69	0.75	0.82	0.89	0.93	0.96	0.98	1.00	1.01	1.00	0.88	0.82	0.89	0.95	1.01	1.07	1.10	1.14	1.17	1.20	1.23	1.25
PIPE DETAILS	OD50mm HDPE PN10																											

GBUN4-5184/MWSS/5.2.3

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---	TRANSMISSION LINE
---	DISTRIBUTION LINE
---	GROUND LEVELS
---	INVERT LEVELS
---	ROAD
---	BUILDING
---	CONTOUR LINES

CLIENT:

GOAL UGANDA
Behind Grand
Pearl Hotel Muyenga,
P.O Box 33140,
Uganda, Kampala

FINANCED BY:

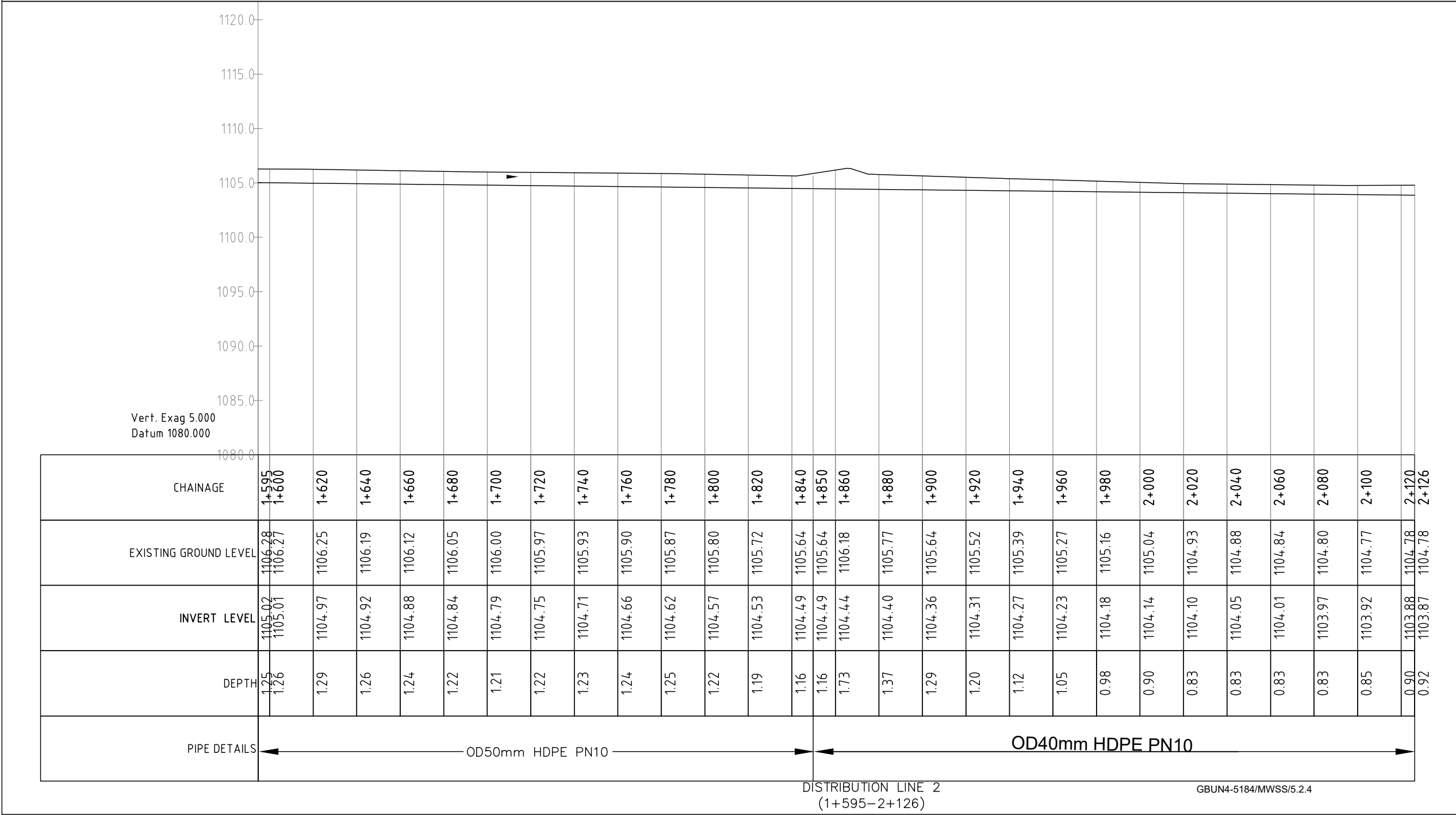
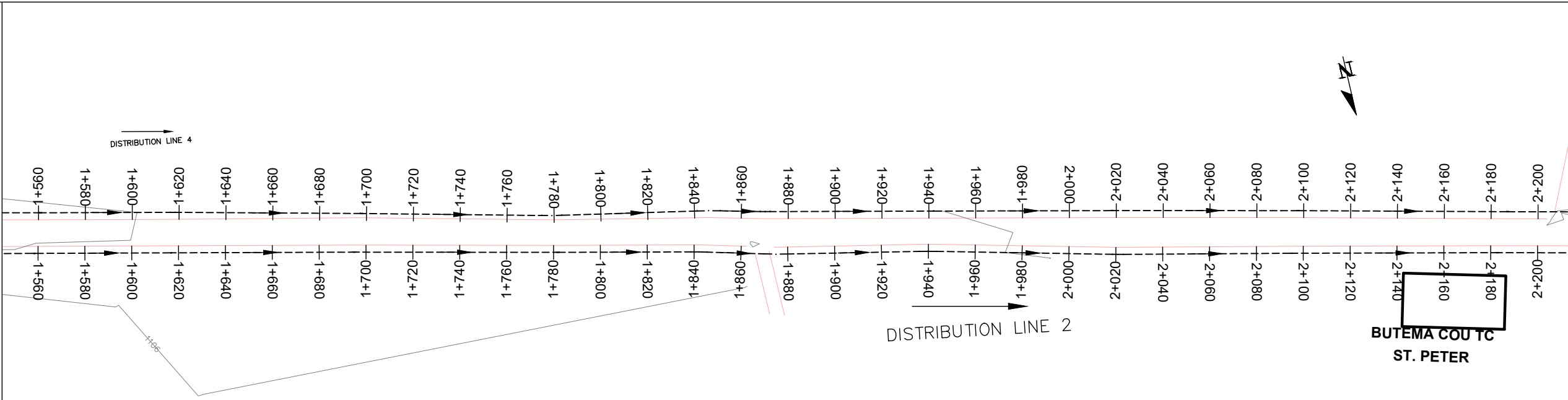
PROJECT

CONSTRUCTION OF MUWAYO TOWN COUNCI SOLAR POWERED
PIPED WATER SUPPLY SYSTEMS IN BUGIRI DISTRICT

CONSULTANTS
WSS Services (U) Ltd & INDIGO ENGINEERING LTD

DRAWING TITLE
DISTRIBUTION LINE 2
1+063-1+595

SCALE 1:FTS	DRAWING No. GBUN4-5184/MWSS/5.2.3
SURVEYED	DESIGNED
DRAWN	CHECKED
DATE	MAY. 2025
APPROVED	



- NOTES
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GROUND LEVELS

INVERT LEVELS

ROAD

BUILDING

CONTOUR LINES

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PROJECT

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CONSULTANTS

WSS Services (U) Ltd & INDIGO ENGINEERING LTD

DRAWING TITLE

DISTRIBUTION LINE 2
1+595-2+126

SCALE 1:FTS

DRAWING No.
GBUN4-5184/MWSS/5.2.4

SURVEYED

DESIGNED

DRAWN

CHECKED

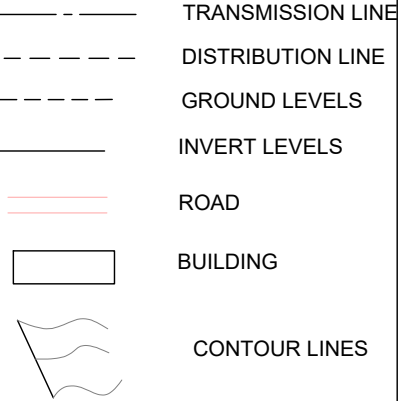
DATE

MAY. 2025

APPROVED

NOTES

- 1). All dimensions in millimetres unless ortherwise indicated
2). All levels in metres above sea level
3). Structural details are not included
4). All structural concrete is class 25/10mm aggregate
5). All mass concrete is class 15/10mm aggregate



CLIENT:

GOAL UGANDA
Behind Grand Pearl Hotel Muyenga,
P.O Box 33140,
Uganda, Kampala

FINANCED BY:

PROJECT

CONSTRUCTION OF MUWAYO TOWN COUNCI SOLAR POWERED
PIPED WATER SUPPLY SYSTEMS IN BUGIRI DISTRICT

CONSULTANTS

WSS Services (U) Ltd & INDIGO ENGINEERING LTD

DRAWING TITLE

DISTRIBUTION LINE 2
2+126-2+615

SCALE 1:FTS

DRAWING No.
GBUN4-5184/MWSS/5.2.5

SURVEYED

DESIGNED

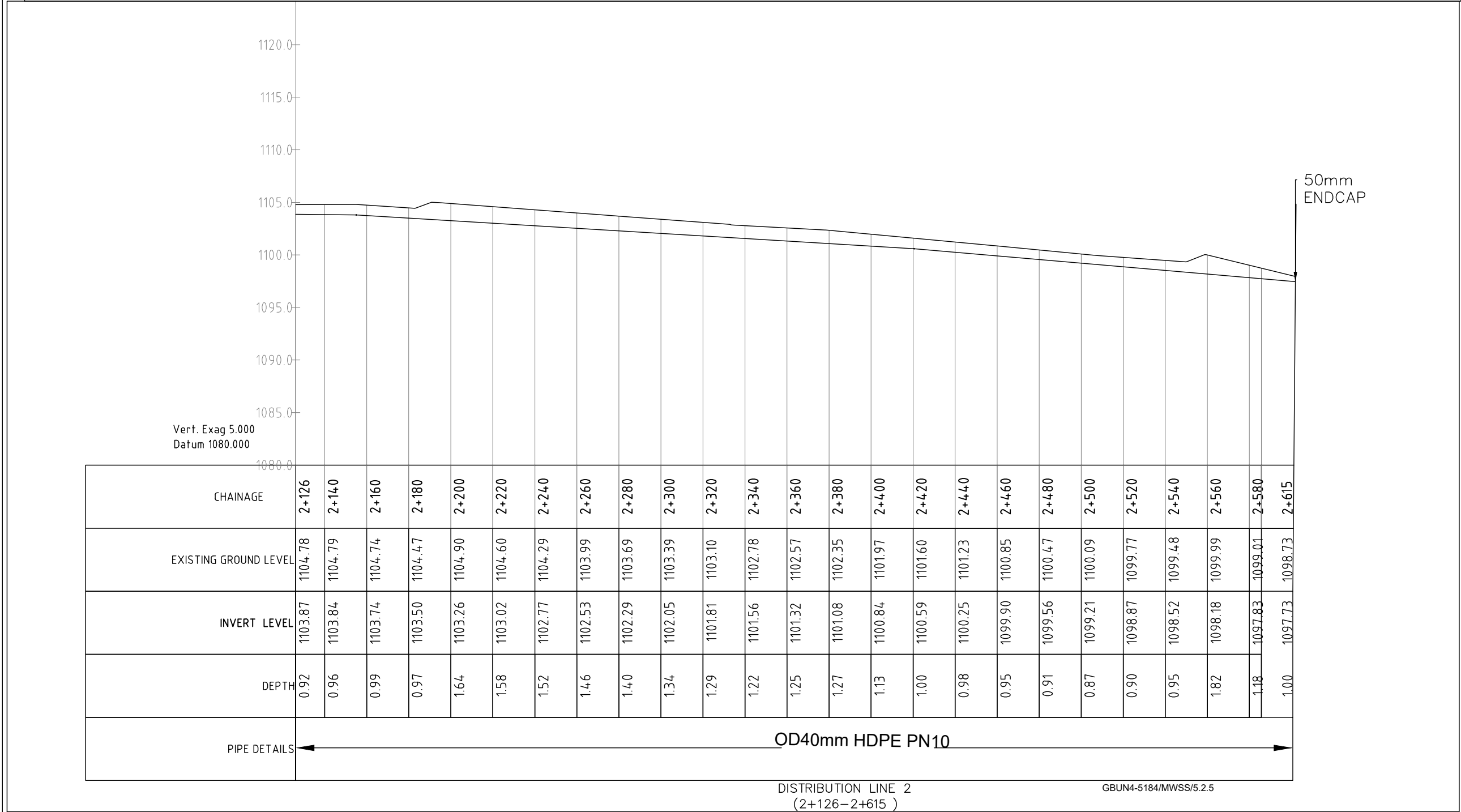
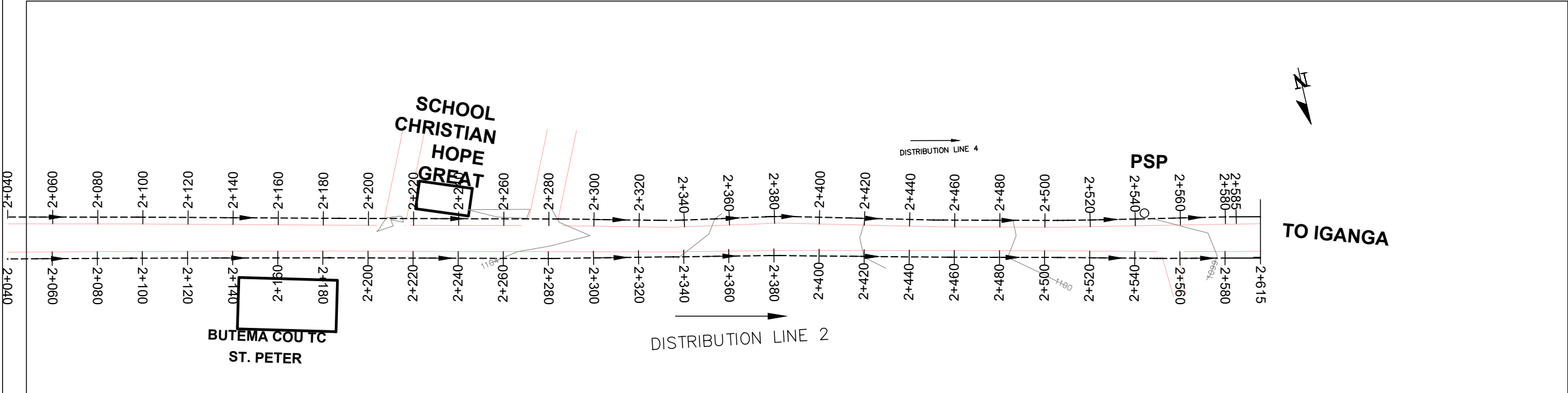
DRAWN

CHECKED

DATE

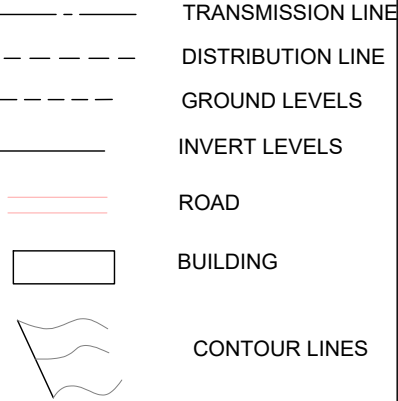
MAY. 2025

APPROVED



NOTES

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2). All levels in metres above sea level
3). Structural details are not included
4). All structural concrete is class 25/10mm aggregate
5). All mass concrete is class 15/10mm aggregate



CLIENT:

GOAL UGANDA
Behind Grand
Pearl Hotel Muyenga,
P.O Box 33140,
Uganda, Kampala

FINANCED BY:

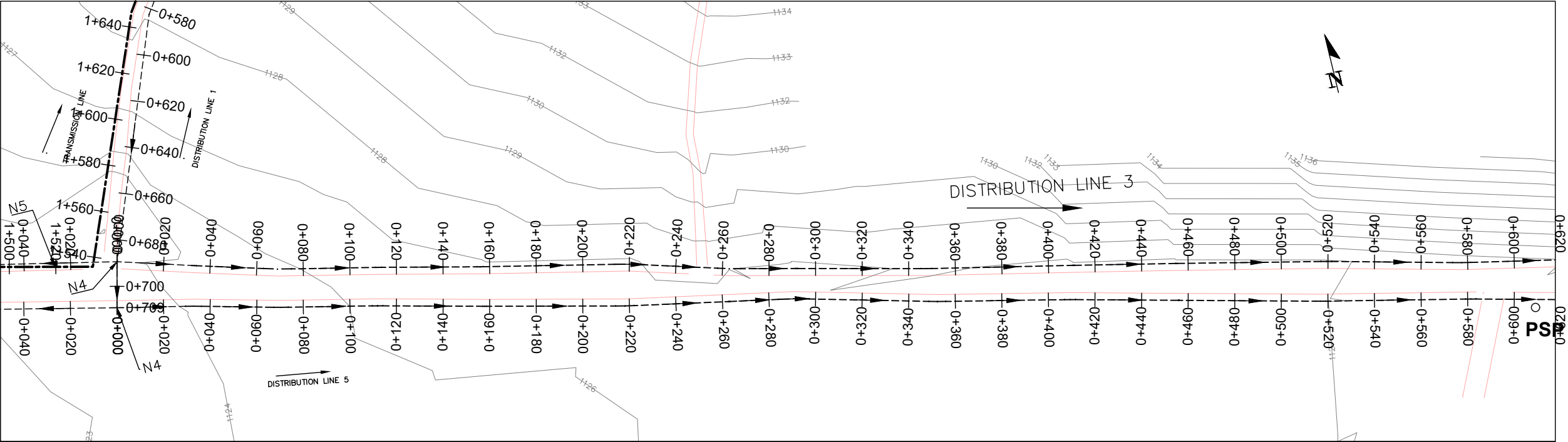
PROJECT

CONSTRUCTION OF MUWAYO TOWN COUNCI SOLAR POWERED
PIPED WATER SUPPLY SYSTEMS IN BUGIRI DISTRICT

CONSULTANTS
WSS Services (U) Ltd & INDIGO ENGINEERING LTD

DRAWING TITLE
DISTRIBUTION LINE 3
0+000 -0+532

SCALE 1:FTS DRAWING No.
GBUN4-5184/MWSS/5.3.1
SURVEYED DESIGNED
DRAWN CHECKED
DATE MAY. 2025 APPROVED



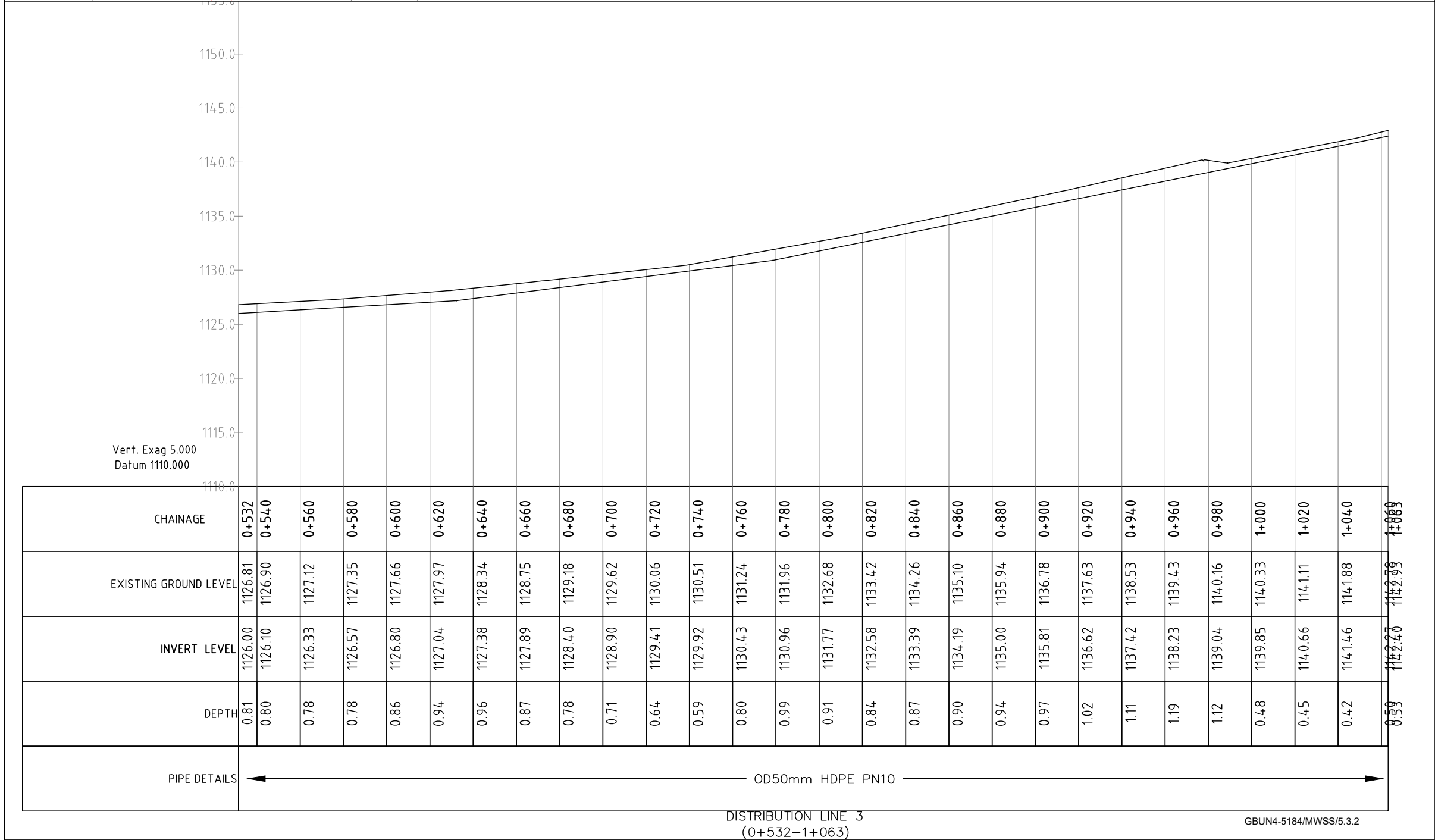
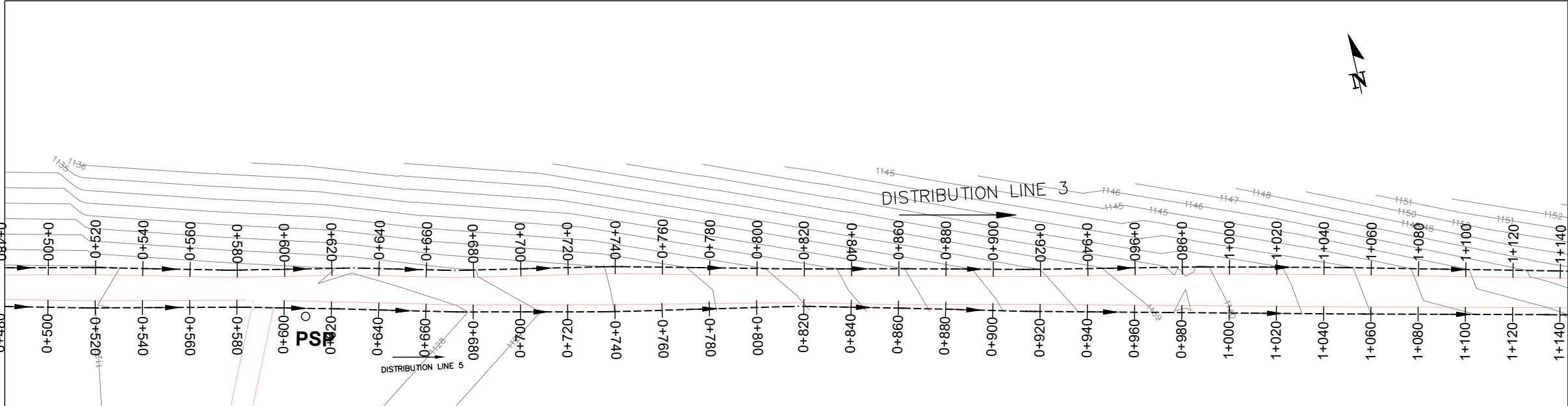
PIPE TEE JOINT
(OD90mm-OD50mm)
50mm LINE VALVE
N4

Vert. Exag 5.000
Datum 1105.000

CHAINAGE	0+000	0+020	0+040	0+060	0+080	0+100	0+120	0+140	0+160	0+180	0+200	0+220	0+240	0+260	0+280	0+300	0+320	0+340	0+360	0+380	0+400	0+420	0+440	0+460	0+480	0+500	0+520	0+532
EXISTING GROUND LEVEL	1124.30	1124.50	1124.79	1125.24	1125.62	1125.96	1126.25	1126.47	1126.64	1126.63	1126.62	1126.61	1127.23	1126.95	1126.67	1126.61	1126.72	1126.84	1126.83	1126.75	1126.66	1126.60	1126.55	1126.52	1126.58	1126.63	1126.69	1126.81
INVERT LEVEL	1123.30	1123.63	1123.96	1124.30	1124.59	1124.85	1125.11	1125.38	1125.64	1125.68	1125.72	1125.77	1125.73	1125.67	1125.60	1125.57	1125.57	1125.58	1125.59	1125.59	1125.60	1125.61	1125.61	1125.62	1125.62	1125.63	1125.87	1126.00
DEPTH	1.00	0.87	0.83	0.94	1.03	1.10	1.13	1.09	1.00	0.95	0.90	0.84	1.50	1.28	1.06	1.04	1.15	1.26	1.24	1.15	1.07	0.99	0.93	0.90	0.95	1.00	0.82	0.81
PIPE DETAILS	OD63mm HDPE PN10															OD50mm HDPE PN10												

DISTRIBUTION LINE 3
(0+000-0+532)

GBUN4-5184/MWSS/5.3.1



NOTES

1). All dimensions in millimetres unless ortherwise indicated

2). All levels in metres above sea level

3). Structural details are not included

4). All structural concrete is class 25/10mm aggregate

5). All mass concrete is class 15/10mm aggregate

TRANSMISSION LINE

DISTRIBUTION LINE

GROUND LEVELS

INVERT LEVELS

ROAD

BUILDING

CONTOUR LINES

CLIENT:

GOAL UGANDA
Behind Grand
Pearl Hotel Muyenga,
P.O Box 33140,
Uganda, Kampala

FINANCED BY:

PROJECT

CONSTRUCTION OF MUWAYO TOWN COUNCI SOLAR POWERED
PIPED WATER SUPPLY SYSTEMS IN BUGIRI DISTRICT

CONSULTANTS

WSS Services (U) Ltd & INDIGO ENGINEERING LTD

DRAWING TITLE

DISTRIBUTION LINE 3
0+532- 1+063

SCALE 1:FTS

DRAWING No.
GBUN4-5184/MWSS/5.3.2

SURVEYED

DESIGNED

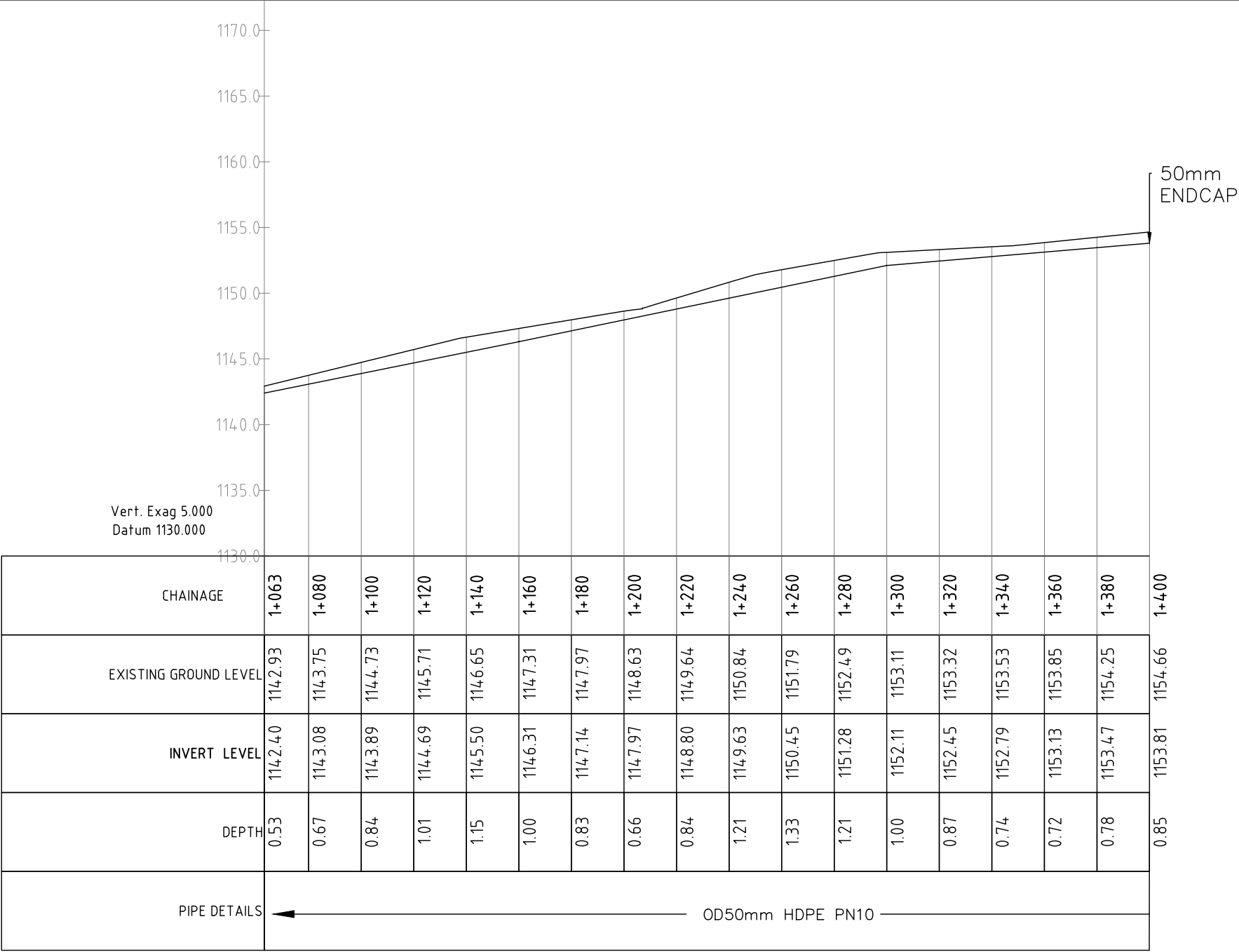
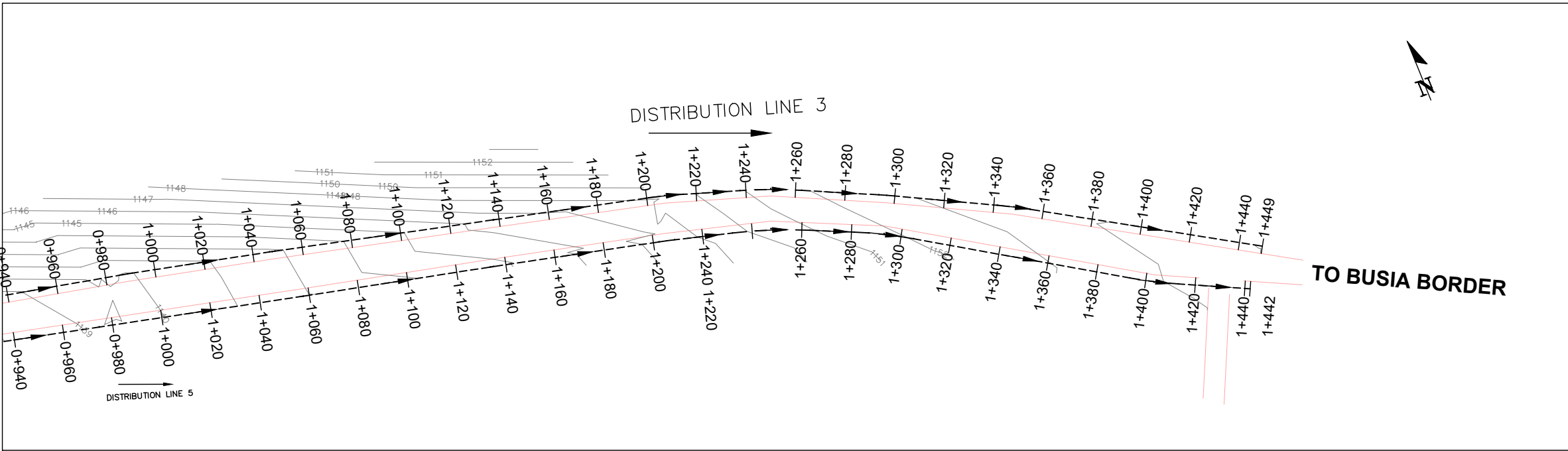
DRAWN

CHECKED

DATE

MAY. 2025

APPROVED



NOTES

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	TRANSMISSION LINE
	DISTRIBUTION LINE
	GROUND LEVELS
	INVERT LEVELS
	ROAD
	BUILDING
	CONTOUR LINES

CLIENT:

GOAL UGANDA
Behind Grand
Pearl Hotel Muyenga,
P.O Box 33140,
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FINANCED BY:

PROJECT

CONSTRUCTION OF MUWAYO TOWN COUNCI SOLAR POWERED
PIPED WATER SUPPLY SYSTEMS IN BUGIRI DISTRICT

CONSULTANTS

WSS Services (U) Ltd & INDIGO ENGINEERING LTD

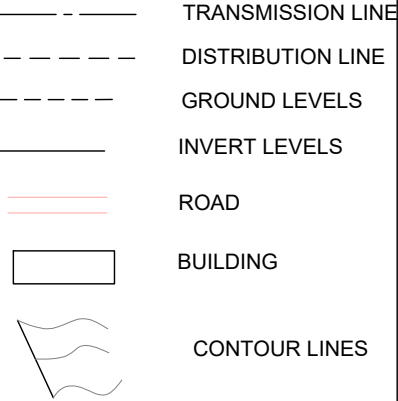
DRAWING TITLE

DISTRIBUTION LINE 3
1+063- 1+400

SCALE 1:FTS	DRAWING No. GBUN4-5184/MWSS/5.3.3
SURVEYED	DESIGNED
DRAWN	CHECKED
DATE	MAY. 2025
APPROVED	

NOTES

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CLIENT:

GOAL UGANDA
Behind Grand
Pearl Hotel Muyenga,
P.O Box 33140,
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FINANCED BY:

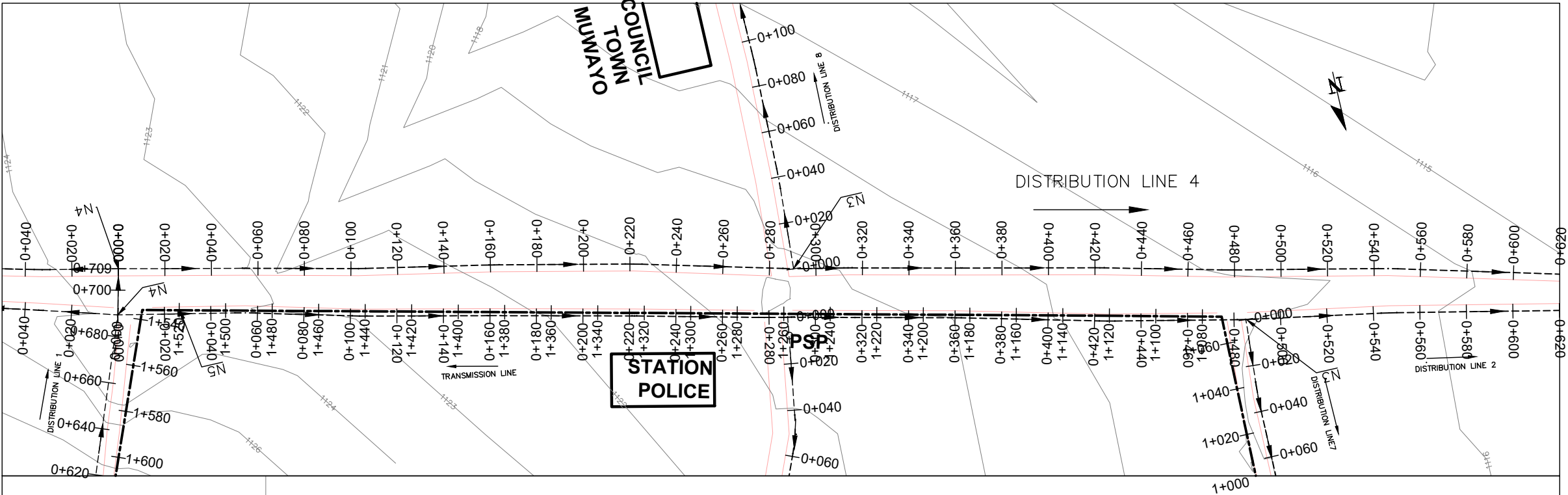
PROJECT

CONSTRUCTION OF MUWAYO TOWN COUNCI SOLAR POWERED
PIPED WATER SUPPLY SYSTEMS IN BUGIRI DISTRICT

CONSULTANTS
WSS Services (U) Ltd & INDIGO ENGINEERING LTD

DRAWING TITLE
DISTRIBUTION LINE 4
0+000- 0+532

SCALE 1:FTS DRAWING No.
GBUN4-5184/MWSS/5.4.1
SURVEYED DESIGNED
DRAWN CHECKED
DATE MAY. 2025 APPROVED



PIPE TEE JOINT
(OD90mm-OD50mm/OD63mm)
50mm LINE VALVE
N4

PIPE TEE JOINT
N3

Vert. Exag 5.000
Datum 1099.000

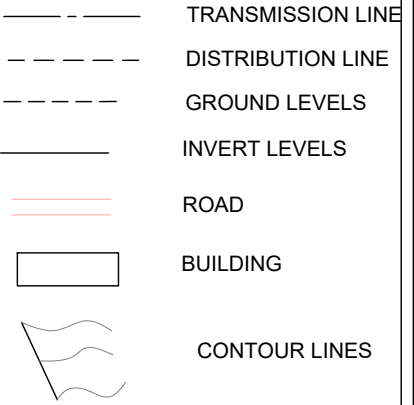
CHAINAGE	0+000	0+020	0+040	0+060	0+080	0+100	0+120	0+140	0+160	0+180	0+200	0+220	0+240	0+260	0+280	0+300	0+320	0+340	0+360	0+380	0+400	0+420	0+440	0+460	0+480	0+500	0+520	0+532
EXISTING GROUND LEVEL	1124.11	1123.81	1123.51	1122.76	1122.12	1122.57	1122.37	1122.04	1121.72	1121.46	1121.21	1120.96	1120.62	1120.27	1120.42	1119.73	1119.31	1119.08	1118.84	1118.53	1118.20	1117.88	1117.58	1117.29	1117.03	1116.94	1116.85	1116.80
INVERT LEVEL	1123.11	1122.81	1122.50	1122.19	1121.88	1121.58	1121.29	1120.99	1120.70	1120.41	1120.12	1119.82	1119.53	1119.24	1118.95	1118.66	1118.36	1118.07	1117.78	1117.49	1117.19	1116.90	1116.61	1116.32	1116.03	1115.75	1115.48	1115.33
DEPTH	1.00	1.01	1.01	0.56	0.23	0.99	1.09	1.05	1.02	1.05	1.09	1.14	1.09	1.03	1.48	1.07	0.95	1.00	1.06	1.04	1.01	0.98	0.97	0.97	1.00	1.18	1.37	1.47
PIPE DETAILS	OD63mm HDPE PN10																											

DISTRIBUTION LINE 4
(0+00-0+532)

GBUN4-5184/MWSS/5.4.1

NOTES

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5). All mass concrete is class 15/10mm aggregate



CLIENT:

GOAL UGANDA
Behind Grand
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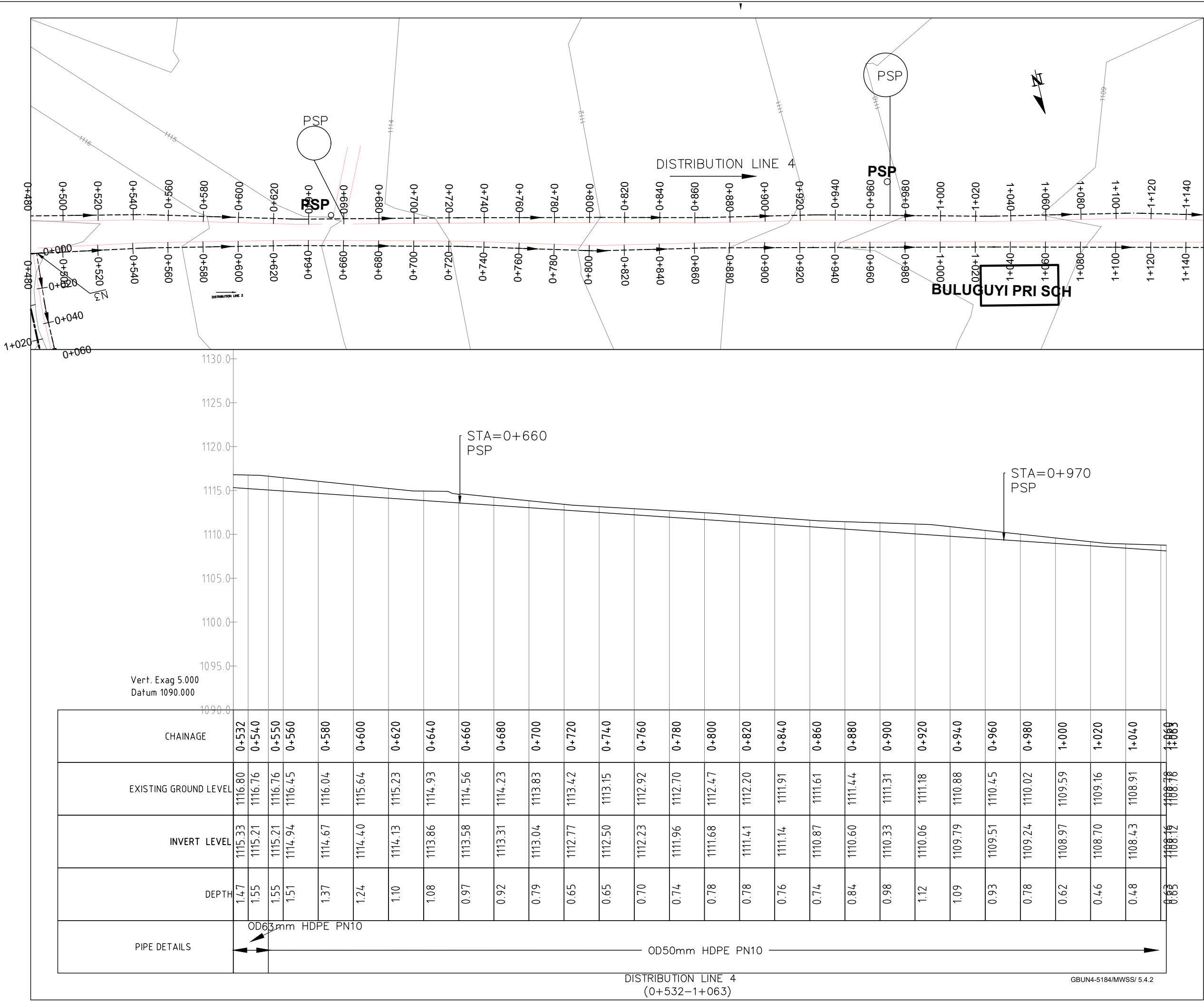
FINANCED BY:

PROJECT
**CONSTRUCTION OF MUWAYO TOWN COUNCI SOLAR POWERED
MPED WATER SUPPLY SYSTEMS IN BUGIRI DISTRICT**

CONSULTANTS
WSS Services (U) Ltd & INDIGO ENGINEERING LTD

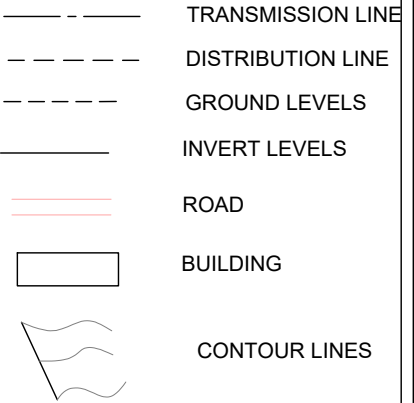
DRAWING TITLE
**DISTRIBUTION LINE 4
0+532- 1+063**

SCALE 1:FTS
DRAWING No.
GBUN4-5184/MWSS/5.4.2
SURVEYED
DESIGNED
DRAWN
CHECKED
DATE
MAY. 2025
APPROVED



NOTES

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CLIENT:

GOAL UGANDA
Behind Grand
Pearl Hotel Muyenga,
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Uganda, Kampala

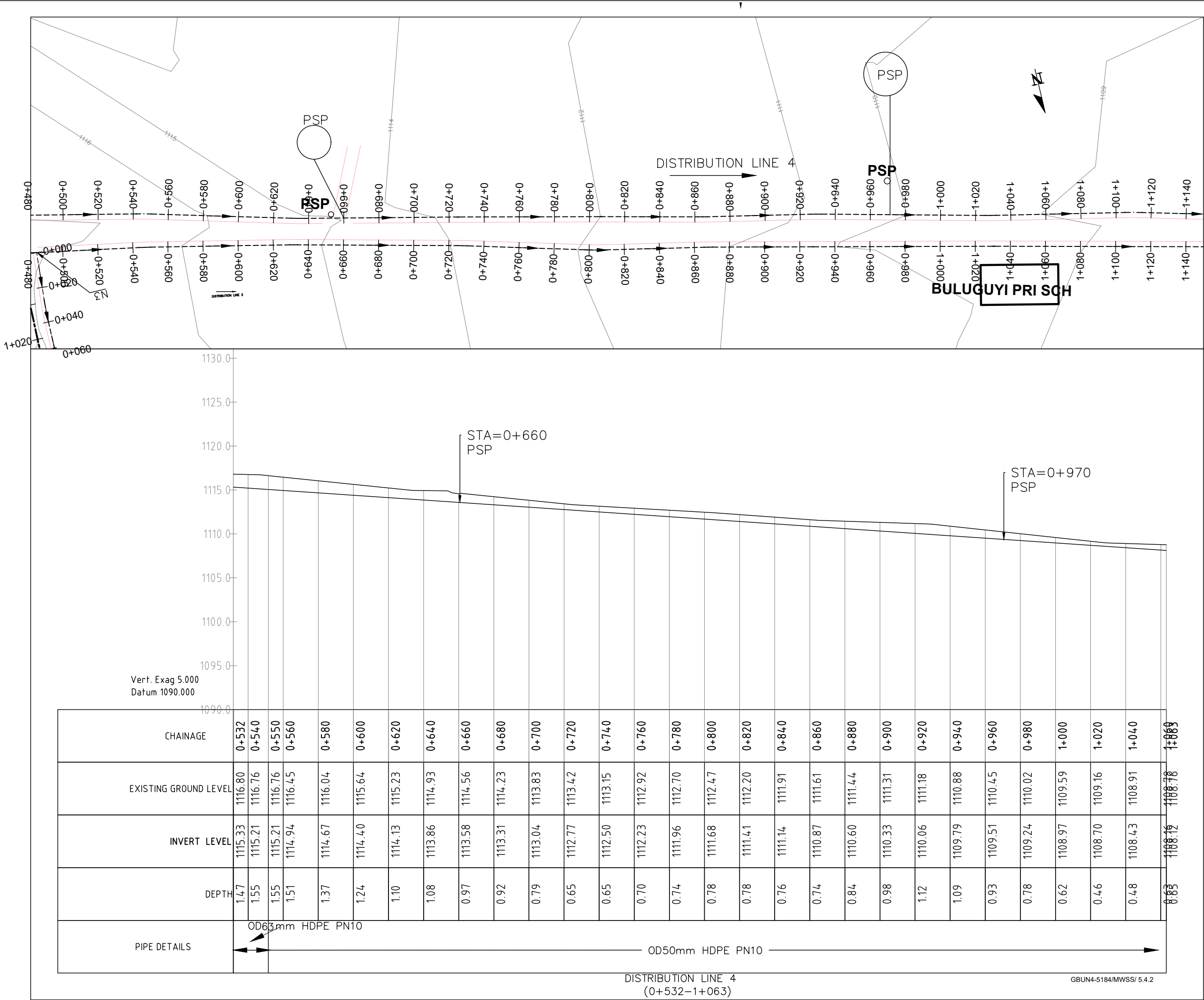
FINANCED BY:

PROJECT
**CONSTRUCTION OF MUWAYO TOWN COUNCI SOLAR POWERED
MPED WATER SUPPLY SYSTEMS IN BUGIRI DISTRICT**

CONSULTANTS
WSS Services (U) Ltd & INDIGO ENGINEERING LTD

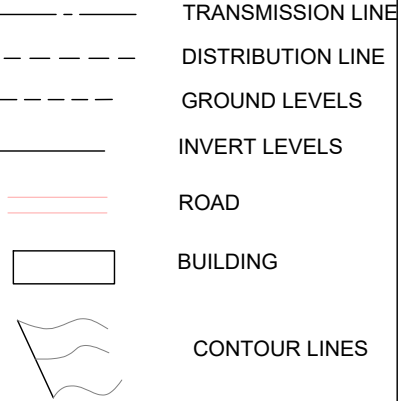
DRAWING TITLE
**DISTRIBUTION LINE 4
0+532- 1+063**

SCALE 1:FTS
DRAWING No.
GBUN4-5184/MWSS/5.4.2
SURVEYED
DESIGNED
DRAWN
CHECKED
DATE
MAY. 2025
APPROVED



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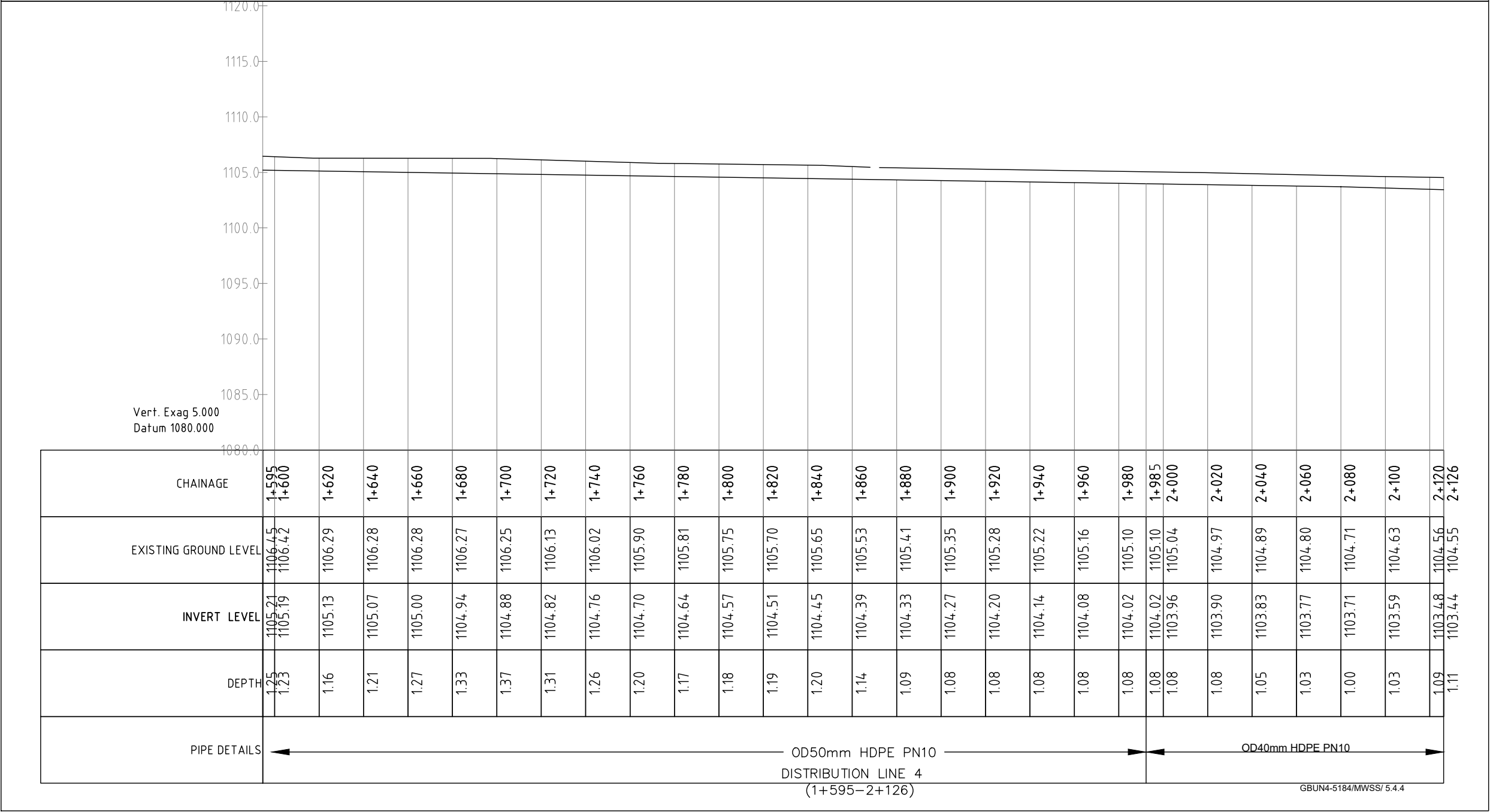
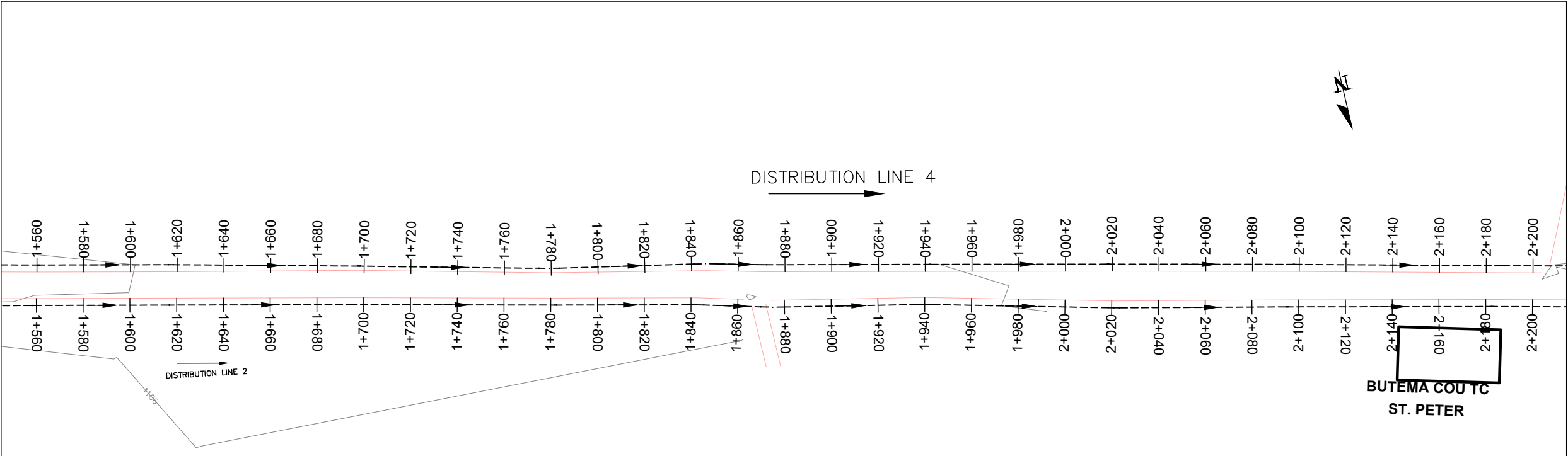
FINANCED BY:

PROJECT
**CONSTRUCTION OF MUWAYO TOWN COUNCI SOLAR POWERED
PIPED WATER SUPPLY SYSTEMS IN BUGIRI DISTRICT**

CONSULTANTS
WSS Services (U) Ltd & INDIGO ENGINEERING LTD

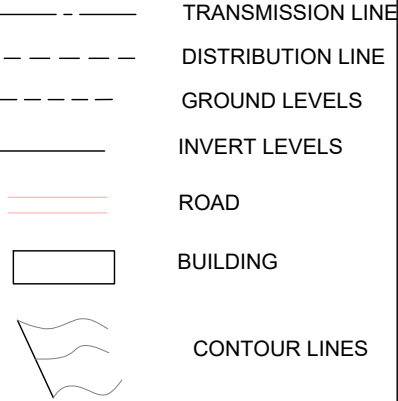
DRAWING TITLE
DISTRIBUTION LINE 4
1+595- 2+126

SCALE 1:FTS DRAWING No.
GBUN4-5184/MWSS/5.4.4
SURVEYED DESIGNED
DRAWN CHECKED
DATE MAY. 2025 APPROVED



NOTES

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CLIENT:

GOAL UGANDA
Behind Grand
Pearl Hotel Muyenga,
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Uganda, Kampala

FINANCED BY:

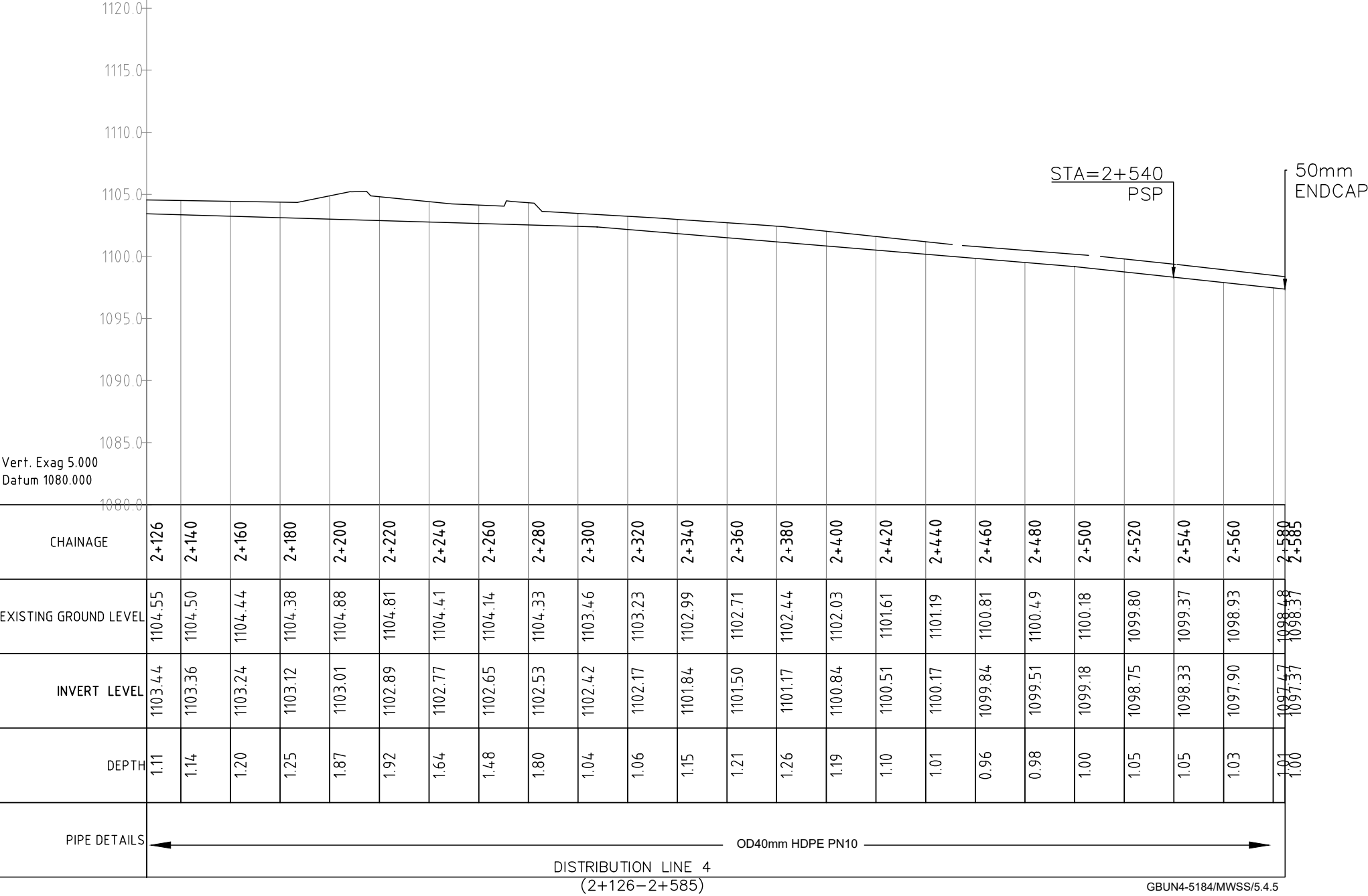
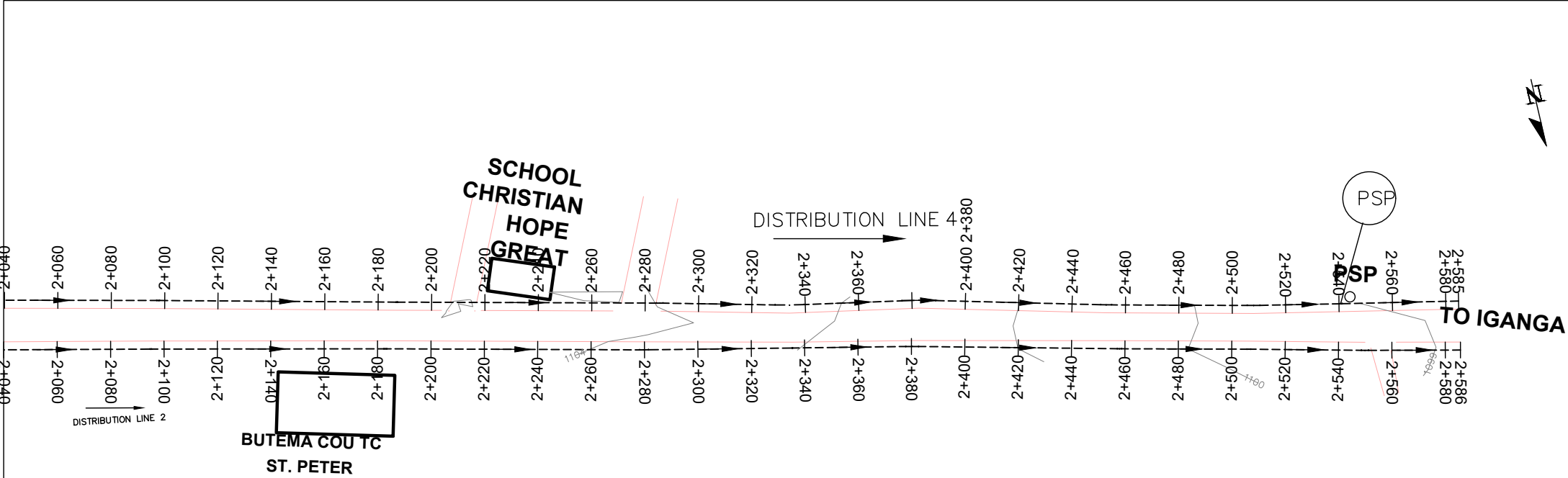
PROJECT

CONSTRUCTION OF MUWAYO TOWN COUNCI SOLAR POWERED
PIPED WATER SUPPLY SYSTEMS IN BUGIRI DISTRICT

CONSULTANTS
WSS Services (U) Ltd & INDIGO ENGINEERING LTD

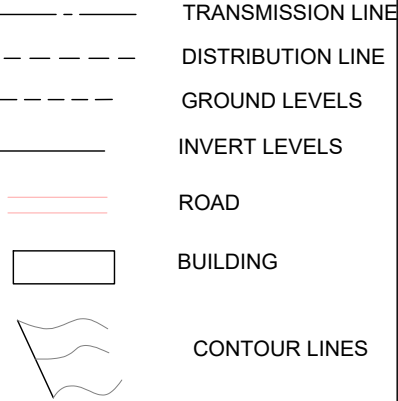
DRAWING TITLE
DISTRIBUTION LINE 4
2+126- 2+585

SCALE 1:FTS DRAWING No.
GBUN4-5184/MWSS/5.4.5
SURVEYED DESIGNED
DRAWN CHECKED
DATE MAY. 2025 APPROVED



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CLIENT:

GOAL UGANDA
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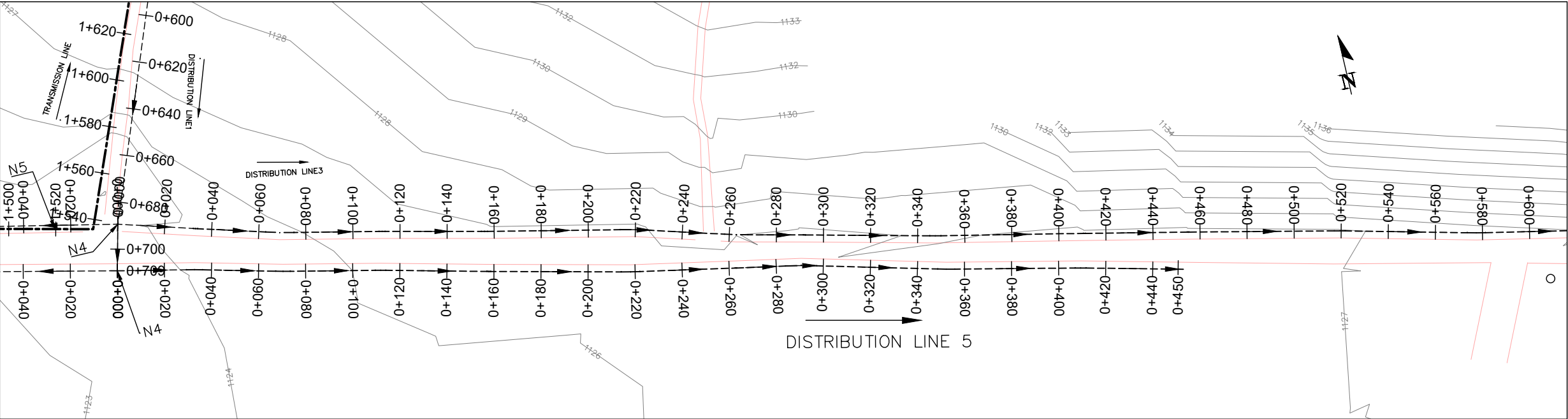
FINANCED BY:

PROJECT
**CONSTRUCTION OF MUWAYO TOWN COUNCI SOLAR POWERED
PIPED WATER SUPPLY SYSTEMS IN BUGIRI DISTRICT**

CONSULTANTS
WSS Services (U) Ltd & INDIGO ENGINEERING LTD

DRAWING TITLE
DISTRIBUTION LINE 5
2+126- 2+585

SCALE 1:FTS
DRAWING No.
GBUN4-5184/MWSS/5.5.1
SURVEYED
DESIGNED
DRAWN
CHECKED
DATE
MAY. 2025
APPROVED



PIPE TEE JOINT
(OD90mm-OD50mm)
50mm LINE VALVE
N4

Vert. Exag 5.000
Datum 1100.000

CHAINAGE	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+450
EXISTING GROUND LEVEL	1124.11	1124.33	1124.57	1124.86	1125.20	1125.60	1125.88	1125.99	1126.09	1126.06	1126.03	1126.02	1126.15	1126.28	1126.59	1126.73	1126.66	1126.58	1126.56	1126.62	1126.68	1126.70	1126.66	1126.64
INVERT LEVEL	1123.11	1123.37	1123.64	1123.90	1124.20	1124.58	1124.87	1124.93	1124.99	1125.05	1125.11	1125.17	1125.23	1125.29	1125.33	1125.36	1125.40	1125.43	1125.47	1125.50	1125.54	1125.57	1125.61	1125.65
DEPTH	1.00	0.95	0.93	0.96	1.01	1.02	1.01	1.06	1.10	1.01	0.92	0.85	0.92	0.99	1.26	1.37	1.26	1.15	1.09	1.12	1.15	1.12	1.06	0.99

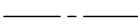
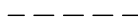
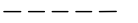




PIPE DETAILS
OD50mm HDPE PN10

DISTRIBUTION LINE 5
(0+000-0+450)

GBUN4-5184/MWSS/5.5.1

NOTES

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	TRANSMISSION LINE
	DISTRIBUTION LINE
	GROUND LEVELS
	INVERT LEVELS
	ROAD
	BUILDING
	CONTOUR LINES

CLIENT:

GOAL UGANDA
Behind Grand
Pearl Hotel Muyenga,
P.O Box 33140,
Uganda, Kampala

FINANCED BY:

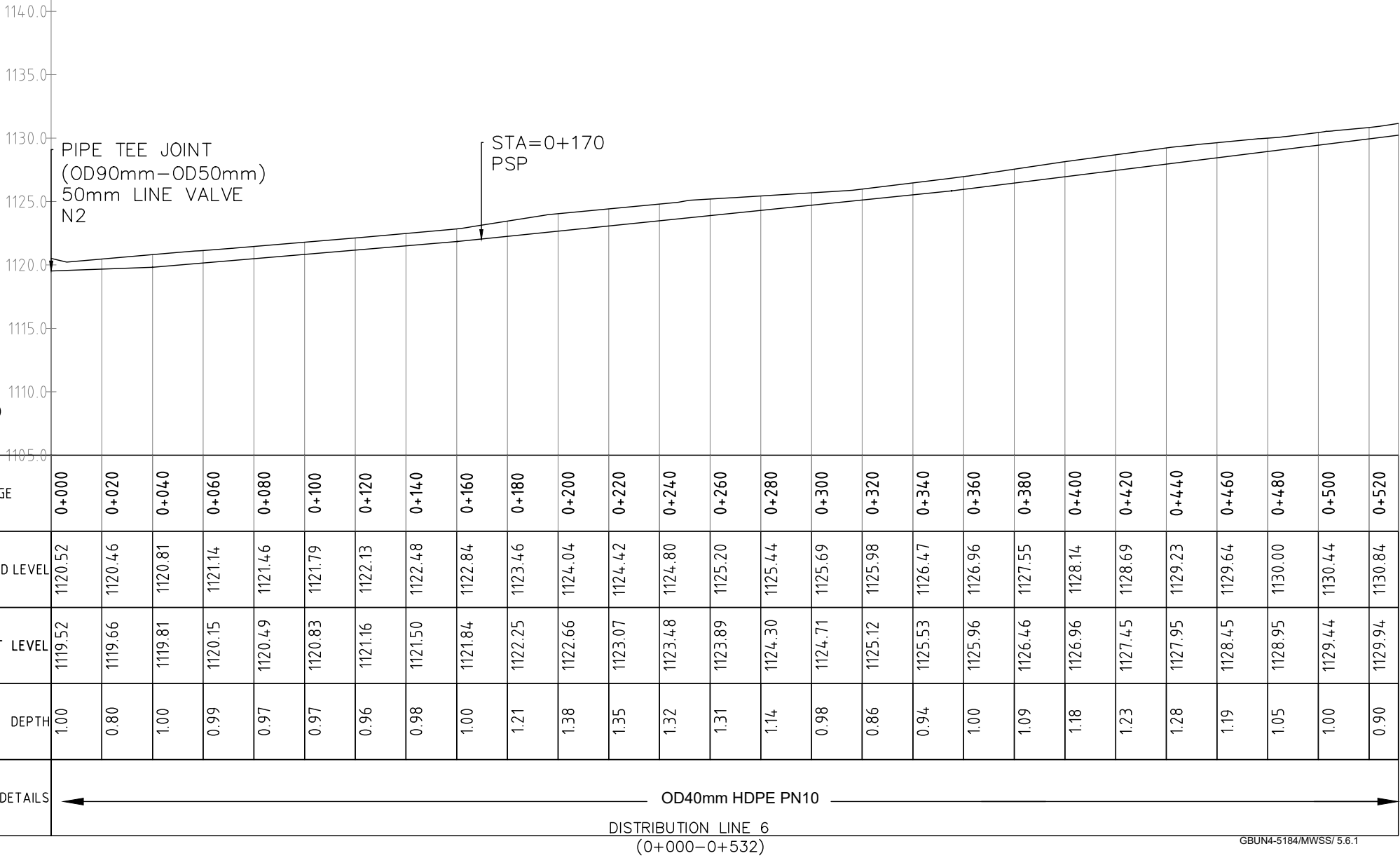
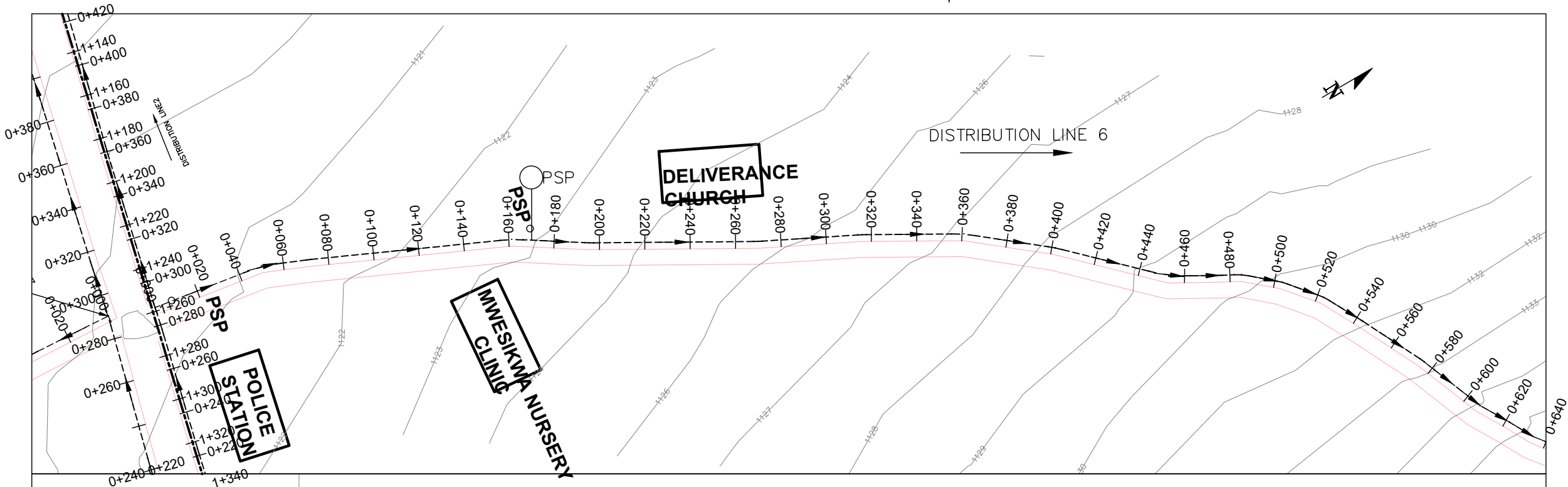
PROJECT

CONSTRUCTION OF MUWAYO TOWN COUNCI SOLAR POWERED
PIPED WATER SUPPLY SYSTEMS IN BUGIRI DISTRICT

CONSULTANTS
WSS Services (U) Ltd & INDIGO ENGINEERING LTD

DRAWING TITLE
DISTRIBUTION LINE 6
0+000- 0+532

SCALE 1:FTS	DRAWING No. GBUN4-5184/MWSS/5.6.1
SURVEYED	DESIGNED
DRAWN	CHECKED
DATE	MAY. 2025
	APPROVED



GBUN4-5184/MWSS/ 5.6.1

NOTES

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TRANSMISSION LINE

DISTRIBUTION LINE

GROUND LEVELS

INVERT LEVELS

ROAD

BUILDING

CONTOUR LINES

CLIENT:

GOAL UGANDA
Behind Grand
Pearl Hotel Muyenga,
P.O Box 33140,
Uganda, Kampala

FINANCED BY:

PROJECT

CONSTRUCTION OF MUWAYO TOWN COUNCI SOLAR POWERED
PIPED WATER SUPPLY SYSTEMS IN BUGIRI DISTRICT

CONSULTANTS

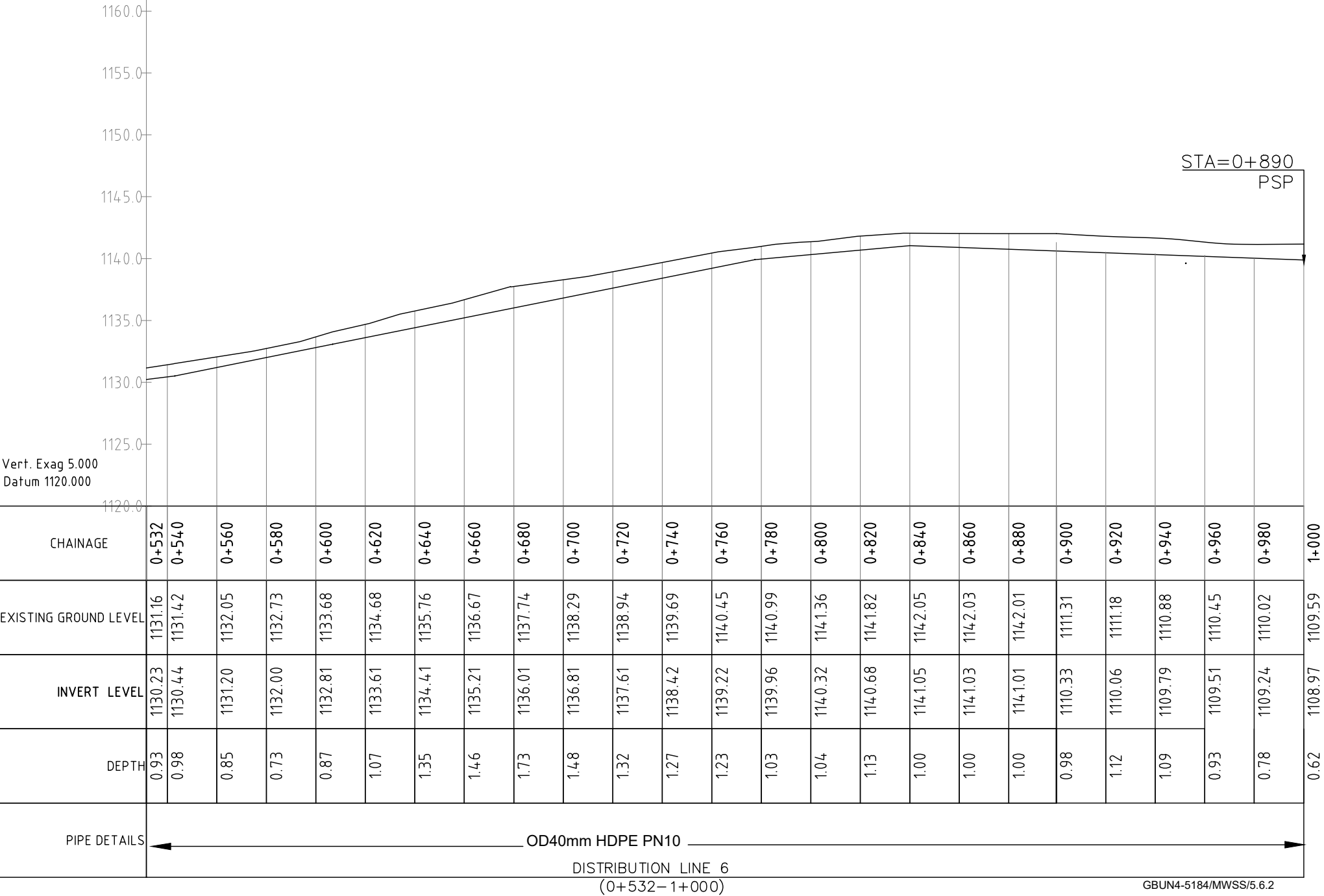
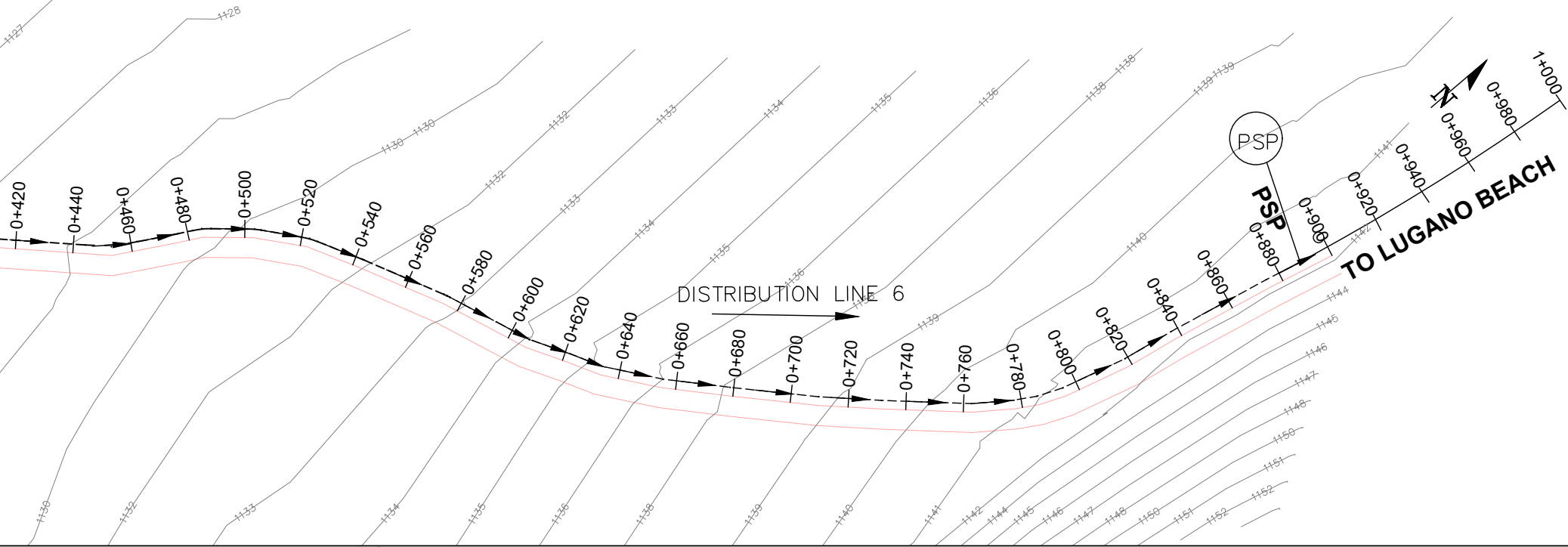
WSS Services (U) Ltd & INDIGO ENGINEERING LTD

DRAWING TITLE

DISTRIBUTION LINE 6

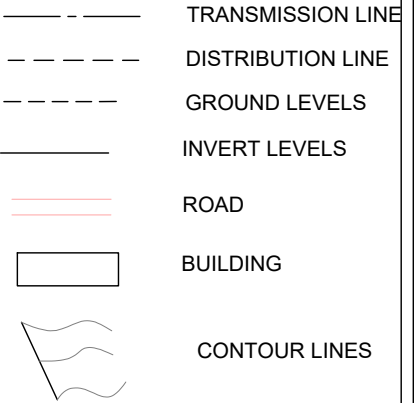
0+532- 1+000

SCALE 1:FTS	DRAWING No. GBUN4-5184/MWSS/5.6.2
SURVEYED	DESIGNED
DRAWN	CHECKED
DATE	MAY. 2025
	APPROVED



NOTES

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CLIENT:

GOAL UGANDA
Behind Grand
Pearl Hotel Muyenga,
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Uganda, Kampala

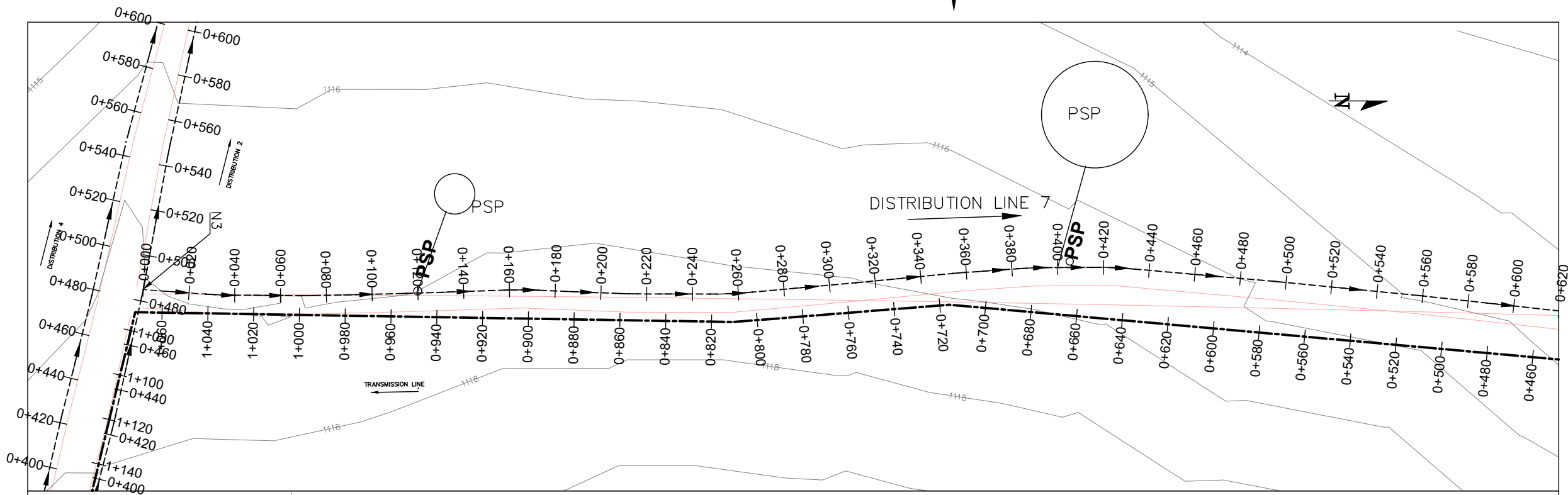
FINANCED BY:

PROJECT
**CONSTRUCTION OF MUWAYO TOWN COUNCI SOLAR POWERED
PIPED WATER SUPPLY SYSTEMS IN BUGIRI DISTRICT**

CONSULTANTS
WSS Services (U) Ltd & INDIGO ENGINEERING LTD

DRAWING TITLE
DISTRIBUTION LINE 7
0+000- 0+532

SCALE 1:FTS
DRAWING No.
GBUN4-5184/MWSS/5.7.1
SURVEYED
DESIGNED
DRAWN
CHECKED
DATE
MAY. 2025
APPROVED



1130.0
1125.0
1120.0
1115.0
1110.0
1105.0
1100.0
1095.0
Vert. Exag 5.000
Datum 1095.000

PIPE TEE JOINT
(OD90mm-OD50mm)
50mm LINE VALVE
N7

STA=0+120
PSP

STA=0+400
PSP

CHAINAGE	0+000	0+020	0+040	0+060	0+080	0+100	0+120	0+140	0+160	0+180	0+200	0+220	0+240	0+260	0+280	0+300	0+320	0+340	0+360	0+380	0+400	0+420	0+440	0+460	0+480	0+500	0+520	0+532
EXISTING GROUND LEVEL	1117.28	1117.09	1116.95	1116.90	1117.10	1117.14	1117.21	1117.32	1117.44	1117.50	1117.55	1117.52	1117.37	1117.32	1117.38	1117.29	1117.16	1116.97	1116.82	1116.81	1116.67	1116.42	1116.27	1116.13	1115.99	1115.80	1115.41	1115.18
INVERT LEVEL	1116.28	1116.14	1116.00	1115.97	1116.04	1116.12	1116.18	1116.21	1116.23	1116.26	1116.28	1116.31	1116.33	1116.36	1116.38	1116.24	1116.10	1115.96	1115.82	1115.68	1115.55	1115.41	1115.27	1115.05	1114.84	1114.62	1114.41	1114.19
DEPTH	1.00	0.95	0.95	0.94	1.05	1.02	1.03	1.12	1.21	1.25	1.27	1.21	1.04	0.96	1.00	1.05	1.05	1.01	1.00	1.12	1.12	1.01	1.00	1.08	1.15	1.18	1.00	1.00
PIPE DETAILS	OD50mm HDPE PN10 DISTRIBUTION LINE 7 (0+000-0+532)																											

GBUN4-5184/MWSS/5.7.1

NOTES

- 1). All dimensions in millimetres unless ortherwise indicated
2). All levels in metres above sea level
3). Structural details are not included
4). All structural concrete is class 25/10mm aggregate
5). All mass concrete is class 15/10mm aggregate

- TRANSMISSION LINE
- DISTRIBUTION LINE
- GROUND LEVELS
- INVERT LEVELS
- ROAD
- BUILDING
- CONTOUR LINES

CLIENT:

GOAL UGANDA
Behind Grand
Pearl Hotel Muyenga,
P.O Box 33140,
Uganda, Kampala

FINANCED BY:

PROJECT

CONSTRUCTION OF MUWAYO TOWN COUNCI SOLAR POWERED
PIPED WATER SUPPLY SYSTEMS IN BUGIRI DISTRICT

CONSULTANTS

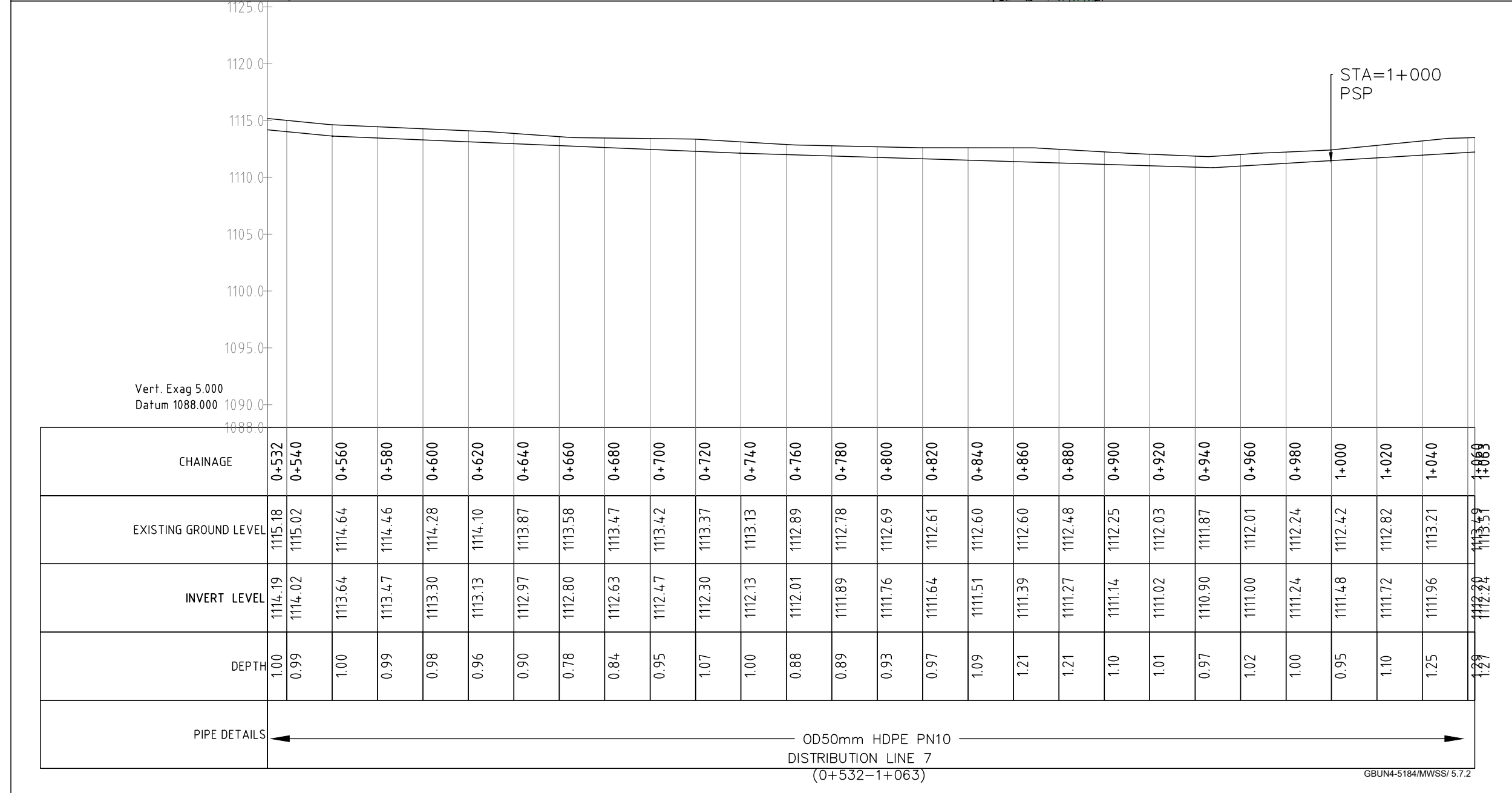
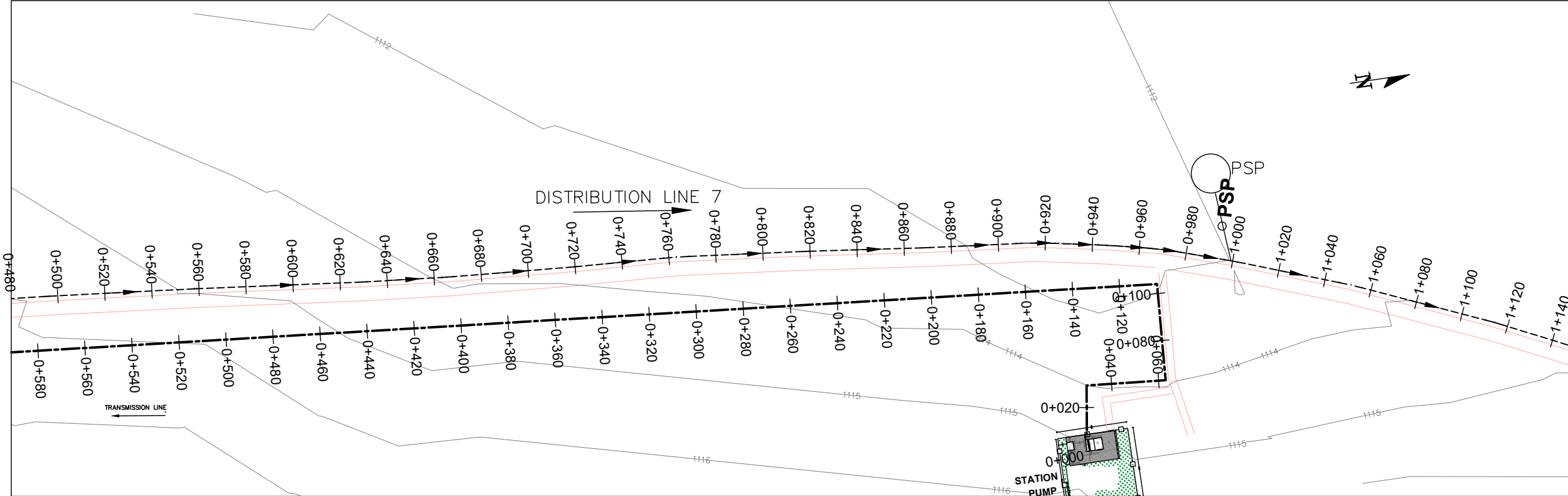
WSS Services (U) Ltd & INDIGO ENGINEERING LTD

DRAWING TITLE

DISTRIBUTION LINE 7

0+532- 1+063

SCALE 1:FTS	DRAWING No. GBUN4-5184/MWSS/ 5.7.2
SURVEYED	DESIGNED
DRAWN	CHECKED
DATE	MAY. 2025
	APPROVED



NOTES

- 1). All dimensions in millimetres unless ortherwise indicated
2). All levels in metres above sea level
3). Structural details are not included
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5). All mass concrete is class 15/10mm aggregate

- TRANSMISSION LINE
- DISTRIBUTION LINE
- GROUND LEVELS
- INVERT LEVELS
- ROAD
- BUILDING
- CONTOUR LINES

CLIENT:

GOAL UGANDA
Behind Grand
Pearl Hotel Muyenga,
P.O Box 33140,
Uganda, Kampala

FINANCED BY:

PROJECT

CONSTRUCTION OF MUWAYO TOWN COUNCI SOLAR POWERED
PIPED WATER SUPPLY SYSTEMS IN BUGIRI DISTRICT

CONSULTANTS
WSS Services (U) Ltd & INDIGO ENGINEERING LTD

DRAWING TITLE
DISTRIBUTION LINE 7
1+063 - 1+503

SCALE 1:FTS

DRAWING No.
GBUN4-5184/MWSS/5.7.3

SURVEYED

DESIGNED

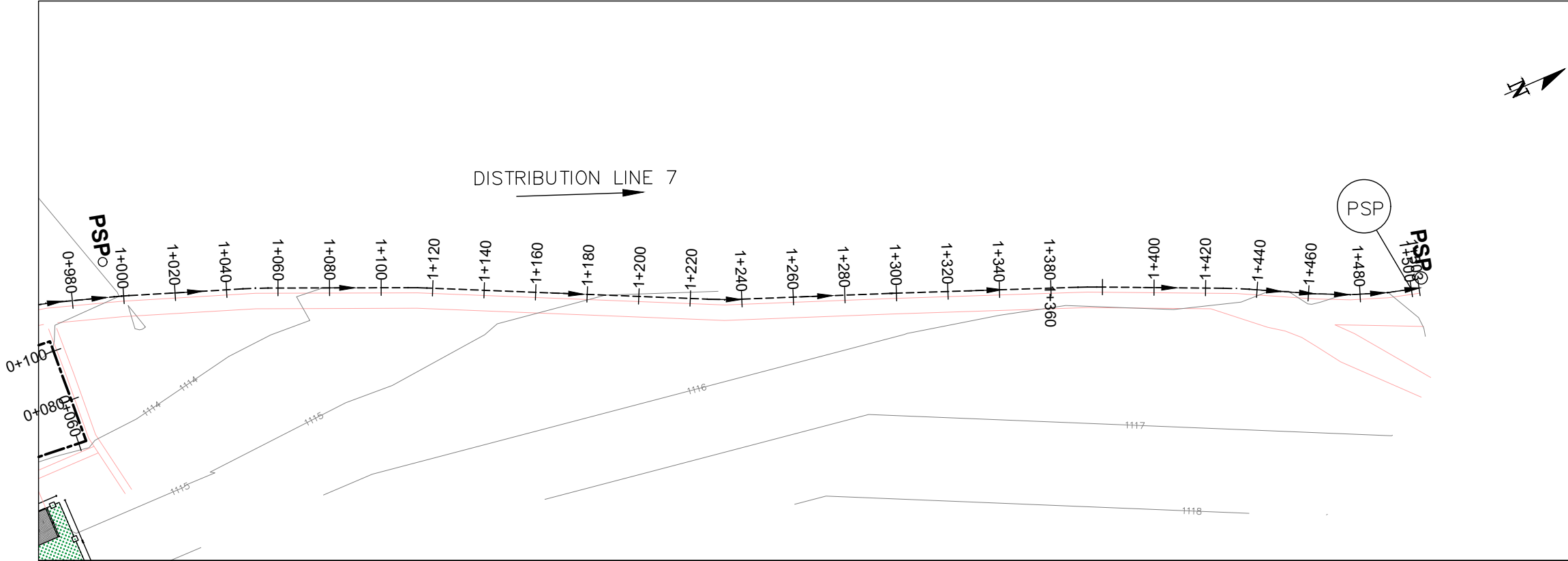
DRAWN

CHECKED

DATE

MAY. 2025

APPROVED



Vert. Exag 5.000
Datum 1096.000

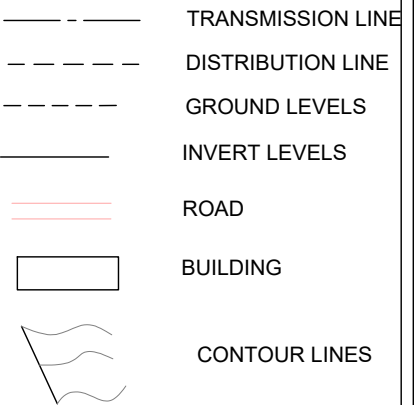
CHAINAGE	1+063	1+080	1+100	1+120	1+140	1+160	1+180	1+200	1+220	1+240	1+260	1+280	1+300	1+320	1+340	1+360	1+380	1+400	1+420	1+440	1+460	1+480	1+500
EXISTING GROUND LEVEL	1113.51	1113.62	1113.74	1113.91	1114.18	1114.44	1114.71	1114.97	1115.24	1115.41	1115.39	1115.37	1115.37	1115.47	1115.57	1115.67	1115.75	1115.80	1115.85	1115.95	1115.93	1116.02	1115.49
INVERT LEVEL	1112.24	1112.44	1112.68	1112.93	1113.18	1113.44	1113.69	1113.94	1114.19	1114.41	1114.46	1114.51	1114.56	1114.61	1114.66	1114.71	1114.76	1114.81	1114.85	1114.91	1114.96	1115.01	1114.55
DEPTH	1.27	1.17	1.06	0.98	0.99	1.01	1.02	1.03	1.04	0.99	0.93	0.86	0.81	0.86	0.91	0.96	1.00	1.00	1.00	1.05	0.97	1.01	1.00
PIPE DETAILS	OD50mm HDPE PN10																						

DISTRIBUTION LINE 7
(1+063–1+503)

GBUN4-5184/MWSS/5.7.3

NOTES

- 1). All dimensions in millimetres unless otherwise indicated
- 2). All levels in metres above sea level
- 3). Structural details are not included
- 4). All structural concrete is class 25/10mm aggregate
- 5). All mass concrete is class 15/10mm aggregate



CLIENT:

GOAL UGANDA
Behind Grand
Pearl Hotel Muyenga,
P.O Box 33140,
Uganda, Kampala

FINANCED BY:

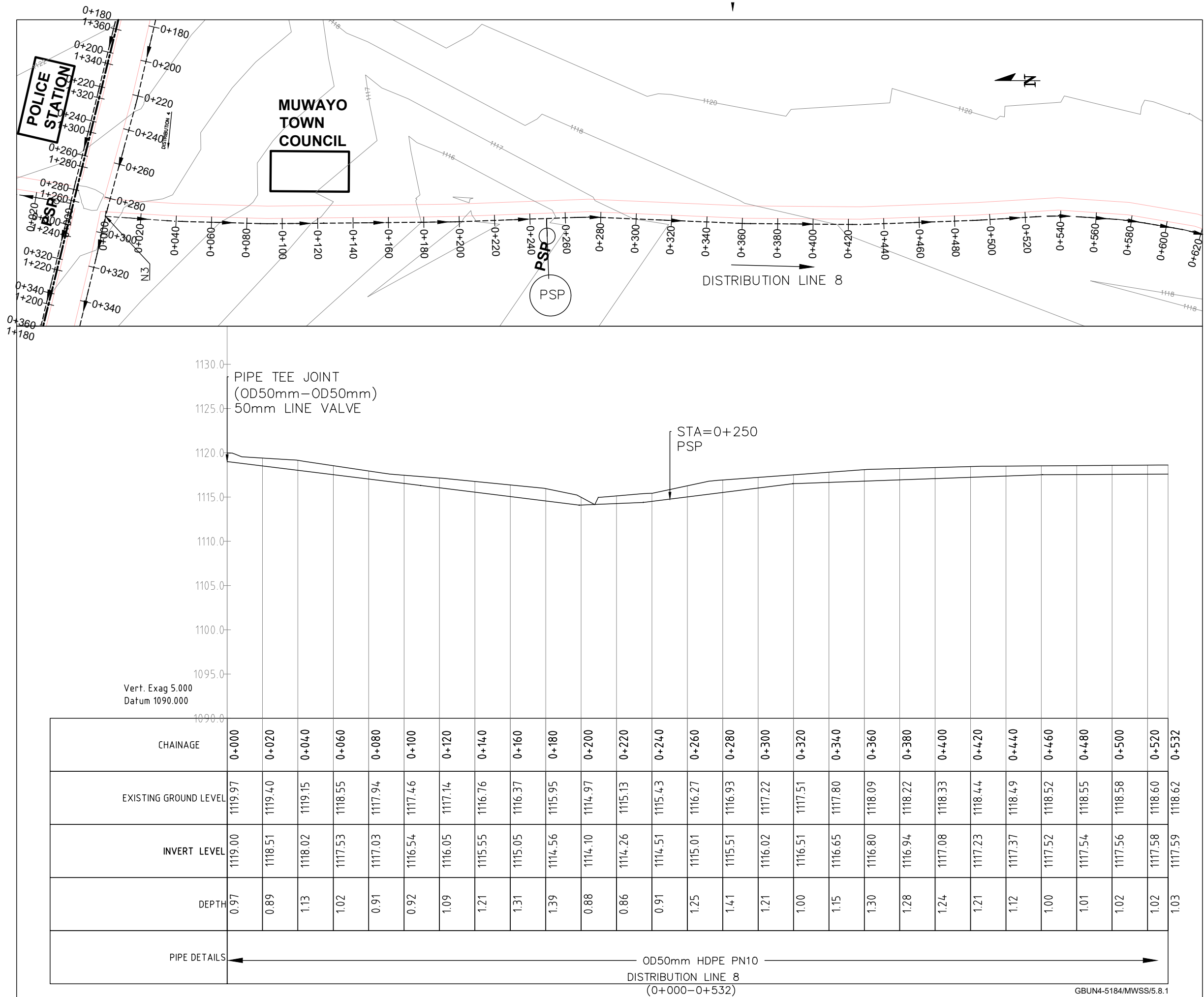
PROJECT

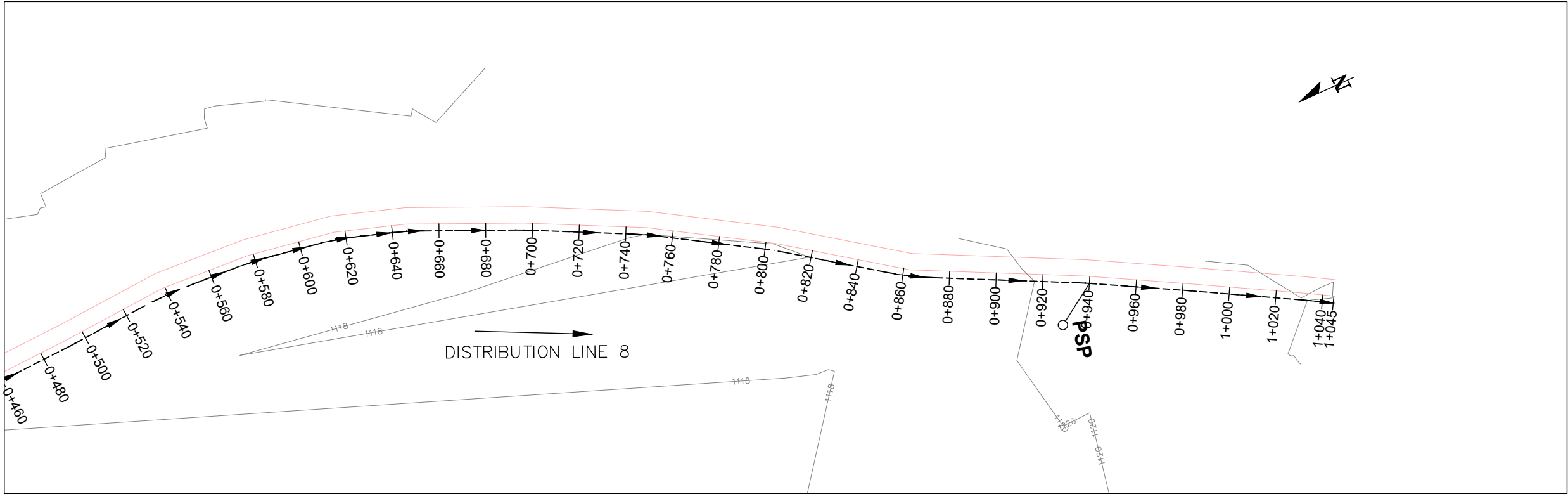
CONSTRUCTION OF MUWAYO TOWN COUNCIL SOLAR POWERED PIPED WATER SUPPLY SYSTEMS IN BUGIRI DISTRICT

CONSULTANTS
WSS Services (U) Ltd & INDIGO ENGINEERING LTD

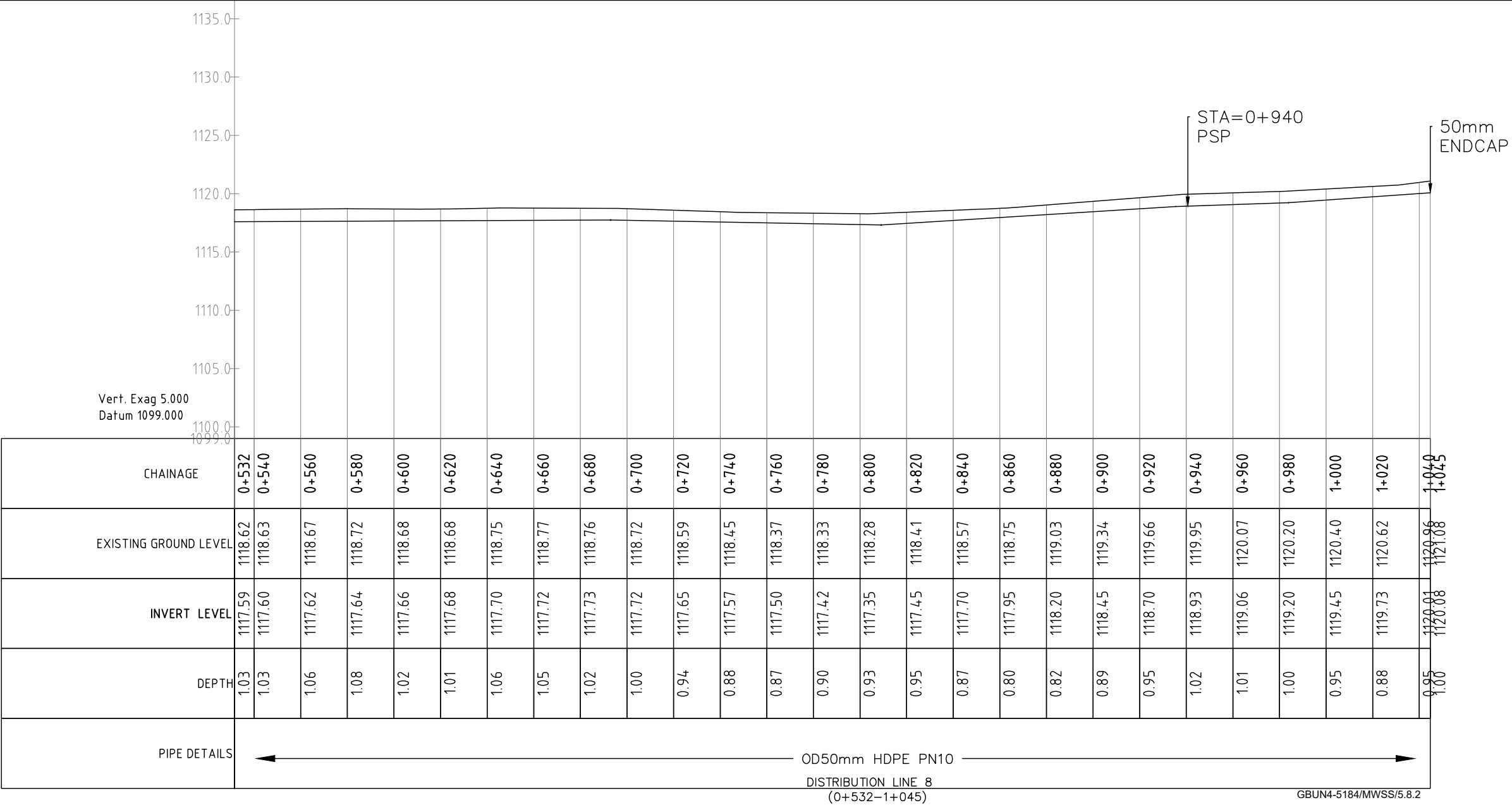
DRAWING TITLE
DISTRIBUTION LINE 8
0+000 - 0+532

SCALE 1:FTS	DRAWING No. GBUN4-5184/MWSS/5.8.1
SURVEYED	DESIGNED
DRAWN	CHECKED
DATE MAY. 2025	APPROVED





Vert. Exag 5.000
Datum 1099.000



- ### NOTES
- 1). All dimensions in millimetres unless ortherwise indicated
 - 2). All levels in metres above sea level
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 - 4). All structural concrete is class 25/10mm aggregate
 - 5). All mass concrete is class 15/10mm aggregate
- TRANSMISSION LINE
 - DISTRIBUTION LINE
 - GROUND LEVELS
 - INVERT LEVELS
 - ROAD
 - BUILDING
 - CONTOUR LINES

CLIENT:
GOAL UGANDA
Behind Grand
Pearl Hotel Muyenga,
P.O Box 33140,
Uganda, Kampala

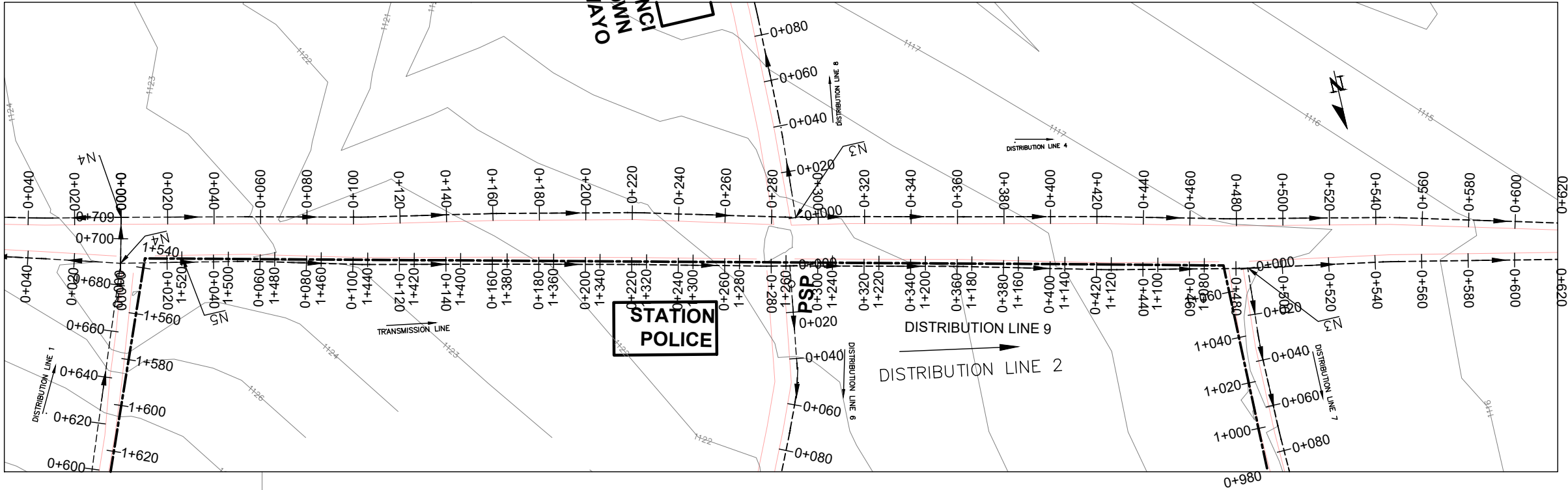
FINANCED BY:

PROJECT
CONSTRUCTION OF MUWAYYO TOWN COUNCI SOLAR POWERED
PIPED WATER SUPPLY SYSTEMS IN BUGIRI DISTRICT

CONSULTANTS
WSS Services (U) Ltd & INDIGO ENGINEERING LTD

DRAWING TITLE
DISTRIBUTION LINE 8
0+532 - 1+045

SCALE 1:FTS
DRAWING No.
GBUN4-5184/MWSS/5.8.2
SURVEYED
DESIGNED
DRAWN
CHECKED
DATE
MAY. 2025
APPROVED



PIPE TEE JOINT
(OD90mm-OD50mm)
50mm LINE VALVE
N4

Vert. Exag 5.000
Datum 1100.000

CHAINAGE	0+000	0+020	0+040	0+060	0+080	0+100	0+120	0+140	0+160	0+180	0+200	0+220	0+240	0+260	0+280	0+300	0+320	0+340	0+360	0+380	0+400	0+420	0+440	0+460	0+480	0+500	0+520	0+540	0+550	0+560
EXISTING GROUND LEVEL	1124.30	1123.88	1123.69	1123.50	1123.33	1123.16	1122.93	1122.69	1122.45	1122.08	1121.72	1121.36	1121.08	1120.75	1120.53	1120.31	1119.99	1119.78	1119.58	1119.07	1118.55	1118.03	1117.67	1117.64	1117.36	1117.05	1116.73	1116.42	1116.42	1116.12
INVERT LEVEL	1123.00	1122.81	1122.61	1122.42	1122.22	1122.03	1121.83	1121.64	1121.45	1121.16	1120.87	1120.58	1120.29	1120.00	1119.71	1119.42	1119.14	1118.85	1118.56	1118.16	1117.74	1117.32	1116.90	1116.53	1116.23	1115.94	1115.64	1115.34	1115.34	1115.05
DEPTH	1.30	1.07	1.07	1.08	1.11	1.13	1.10	1.05	1.00	0.93	0.85	0.78	0.79	0.75	0.81	0.89	0.85	0.94	1.02	0.91	0.81	0.71	0.77	1.11	1.12	1.11	1.09	1.08	1.08	1.07
PIPE DETAILS	OD40mm HDPE PN10																													

GBUN4-5184/MWSS/5.9.1

NOTES

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	TRANSMISSION LINE
	DISTRIBUTION LINE
	GROUND LEVELS
	INVERT LEVELS
	ROAD
	BUILDING
	CONTOUR LINES

CLIENT:

GOAL UGANDA
Behind Grand
Pearl Hotel Muyenga,
P.O Box 33140,
Uganda, Kampala

FINANCED BY:

PROJECT

CONSTRUCTION OF MUWAYO TOWN COUNCI SOLAR POWERED
PIPED WATER SUPPLY SYSTEMS IN BUGIRI DISTRICT

CONSULTANTS

WSS Services (U) Ltd & INDIGO ENGINEERING LTD

DRAWING TITLE

DISTRIBUTION LINE 9

0+000 -0+550

SCALE 1:FTS

DRAWING No.
GBUN4-5184/MWSS/5.9.1

SURVEYED

DESIGNED

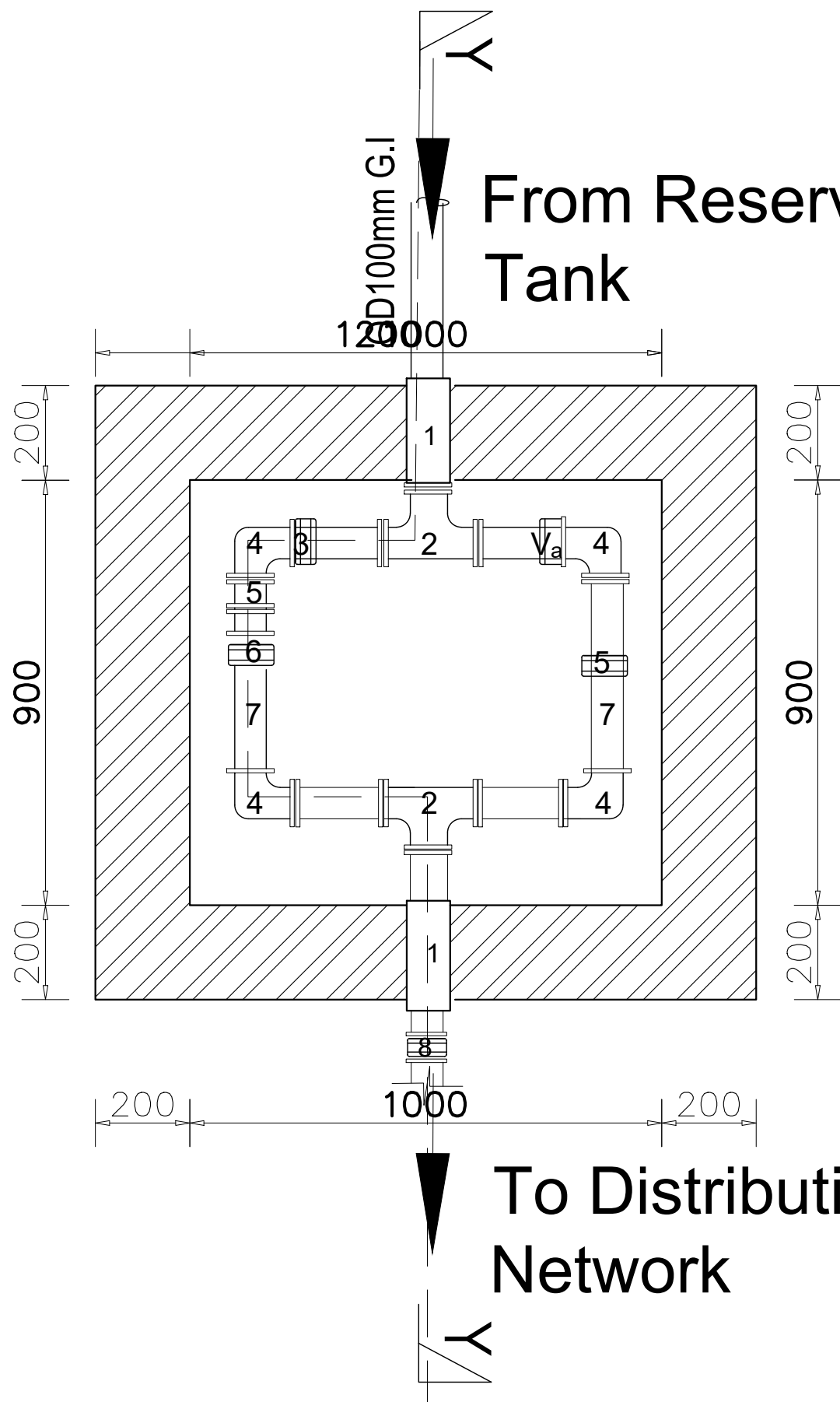
DRAWN

CHECKED

DATE

MAY. 2025

APPROVED



LEGEND

- 1- PVC Sleeve OD110mm
- 2-Flanged Tee - ND75mm
- 3-Flanged Gate Valve A- ND75mm
- 4-90 deg GMS Flanged ND75mm
- 5-Flanged Strainer
- 6-Flanged PRV- ND75mm
- 7-G.I Pipe ND75mm
- 8-Outlet Isolation Valve

NOTES

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---	TRANSMISSION LINE
---	DISTRIBUTION LINE
---	GROUND LEVELS
---	INVERT LEVELS
---	ROAD
---	BUILDING
---	CONTOUR LINES

CLIENT:

GOAL UGANDA
Behind Grand
Pearl Hotel Muyenga,
P.O Box 33140,
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FINANCED BY:

PROJECT

CONSTRUCTION OF MUWAYO TOWN COUNCI SOLAR POWERED
PIPED WATER SUPPLY SYSTEMS IN BUGIRI DISTRICT

CONSULTANTS

WSS Services (U) Ltd & INDIGO ENGINEERING LTD

DRAWING TITLE

PRV MANHOLE
Details-Floor Plan

SCALE 1:FTS	DRAWING No. MY-.Prv.01
SURVEYED	DESIGNED
DRAWN	CHECKED
DATE	MAY. 2025 APPROVED

NOTES

- 1). All dimensions in millimetres unless ortherwise indicated
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	TRANSMISSION LINE
	DISTRIBUTION LINE
	GROUND LEVELS
	INVERT LEVELS
	ROAD
	BUILDING
	CONTOUR LINES

CLIENT:

GOAL UGANDA
Behind Grand
Pearl Hotel Muyenga,
P.O Box 33140,
Uganda, Kampala

FINANCED BY:

PROJECT

CONSTRUCTION OF MUWAYO TOWN COUNCI SOLAR POWERED
PIPED WATER SUPPLY SYSTEMS IN BUGIRI DISTRICT

CONSULTANTS

WSS Services (U) Ltd & INDIGO ENGINEERING LTD

DRAWING TITLE

PRV MANHOLE
Details-Section

SCALE 1:FTS

DRAWING No.
MY-.Prv.02

SURVEYED

DESIGNED

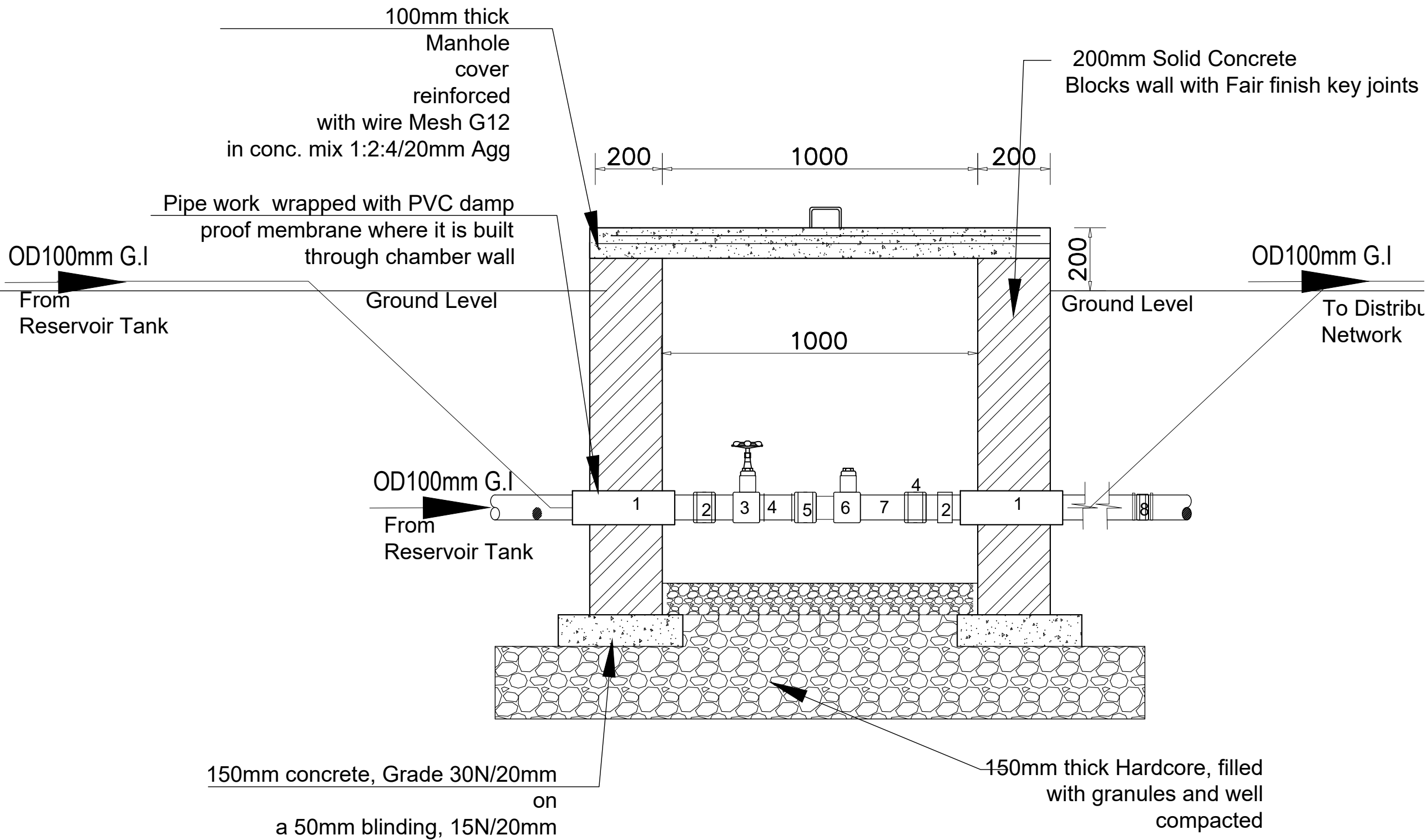
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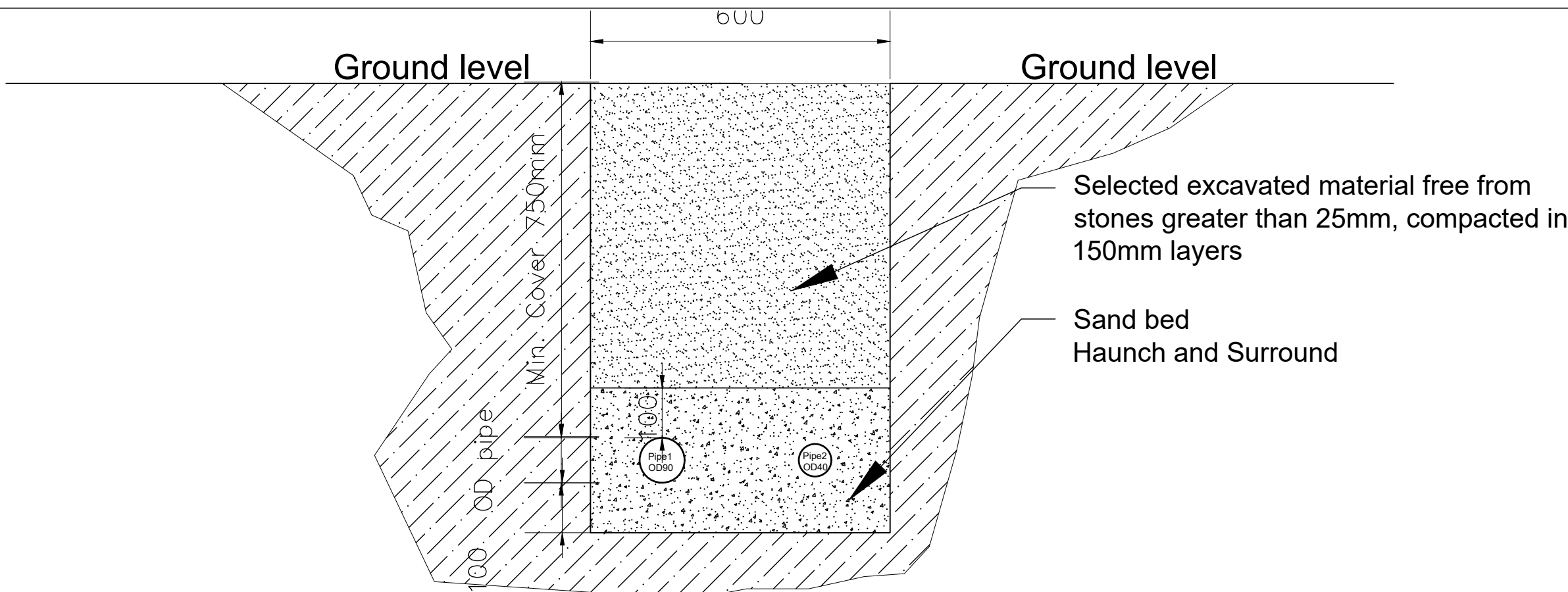
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DATE

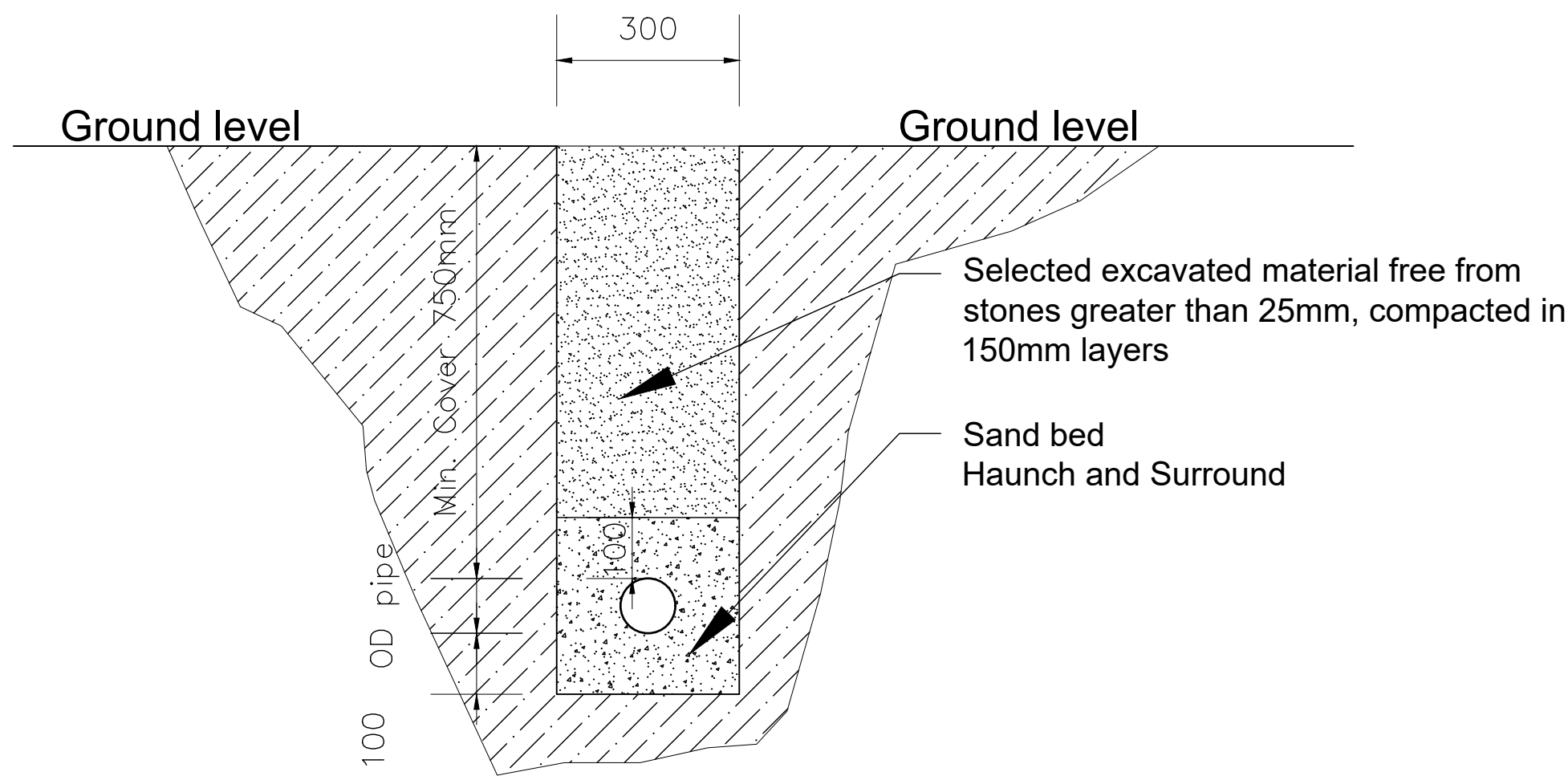
MAY. 2025

APPROVED





TWIN PIPE BEDDING DETAIL-B



SINGLE PIPE BEDDING DETAIL-A

NOTES

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TRANSMISSION LINE
DISTRIBUTION LINE
GROUND LEVELS
INVERT LEVELS
ROAD
BUILDING
CONTOUR LINES

CLIENT:

GOAL UGANDA
Behind Grand
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CONSTRUCTION OF MUWAYO TOWN COUNCI SOLAR POWERED
PIPED WATER SUPPLY SYSTEMS IN BUGIRI DISTRICT

CONSULTANTS

WSS Services (U) Ltd & INDIGO ENGINEERING LTD

DRAWING TITLE

PIPE BEDDING Details-

SCALE 1:FTS	DRAWING No. MY-.Ppd.01
SURVEYED	DESIGNED
DRAWN	CHECKED
DATE	MAY. 2025
	APPROVED