OXFAM

Motorisation of Yelulu Water Supply System

REFERENCE NO:19/005/ARU-UG

ANNEX IX: Drawings

January 2019

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YLU DM -102	Distribution Main 1
YLU DM -103	Distribution Main 1
YLU DM -104	Distribution Main 1
YLU DM -105	Distribution Main 1
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SD 110	Flow Meter Pipework
SD 112A	Air Valve Pipework
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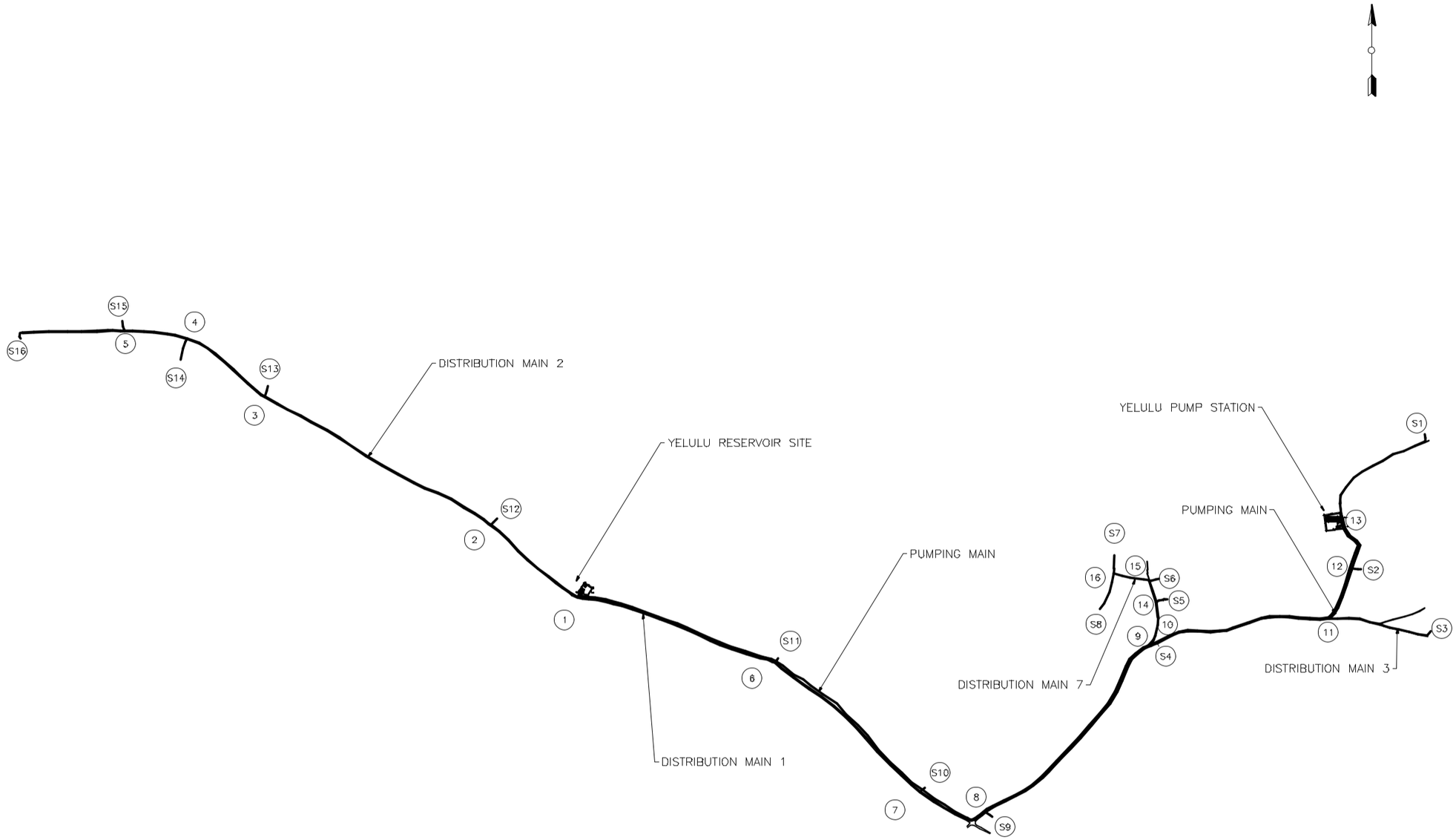
SD 118L	Anchor Blocks for Tees and Deas Ends



Notes:

(S1) - STANDPOST

(1) - NODE /NODE NUMBER

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A	.	.	----
REV:	DESCRIPTION:	BY:	DATE:

STATUS: DETAILED ENGINEERING DESIGN

CLIENT:

OXFAM

PROJECT:

MOTORISATION OF YELULU WATER SYSTEM

GERALD KOMAKECH
FLAT C7, ROVIS APARTMENTS, PLOT 49 NTINDA RD
P. O. BOX 22858 KAMPALA
+256772443616

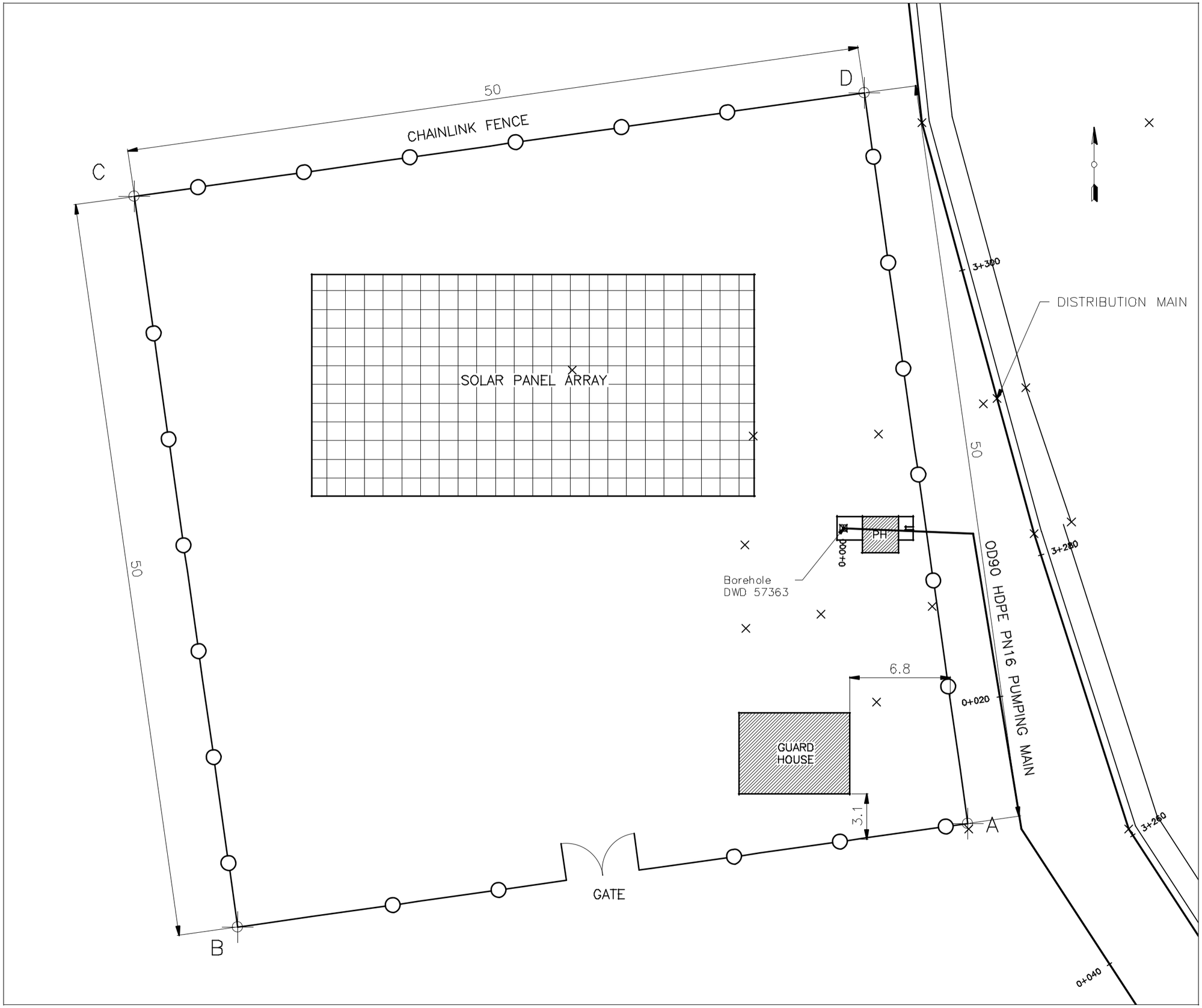
DRAWING TITLE:

GENERAL LAYOUT

SCALE:	DESIGNED BY:	DRAWN BY:	CHECKED BY:
	.	.	
APPROVED BY:	DATE:	SHEET No.:	
NTS	KKG	SM	ORD
PROJECT No.:	DRAWING No.:		REVISION:
KKG	JAN. '19	1of	1

Yelulu II WSS General Layout.dwg

19.03.2007



Notes:

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REV:	DESCRIPTION:	BY:	DATE:

STATUS:
DETAILED ENGINEERING DESIGN

CLIENT:

OXFAM

PROJECT:
MOTORISATION OF YELULU WATER SYSTEM

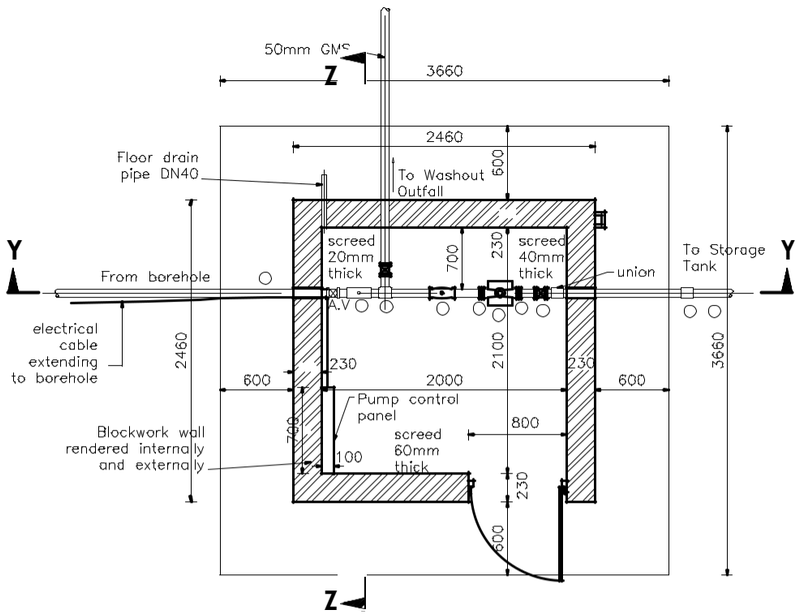
GERALD KOMAKECH
FLAT C7, ROVIS APARTMENTS, PLOT 49
NTINDA RD,
P. O. BOX 22858 KAMPALA
+256772443616

DRAWING TITLE:
PUMP STATION
SITE LAYOUT

SCALE:	DESIGNED BY:	DRAWN BY:	CHECKED BY:
1:250	KKG	SM	ORD
APPROVED BY:	DATE:	SHEET No.:	
KKG	JAN. '19	1of	2
PROJECT No.:	DRAWING No.:		REVISION:

Yelulu II WSS Tank and Pump Station.230119.dwg
19.03.2007

190101 YLU PS -100 ----



PLAN

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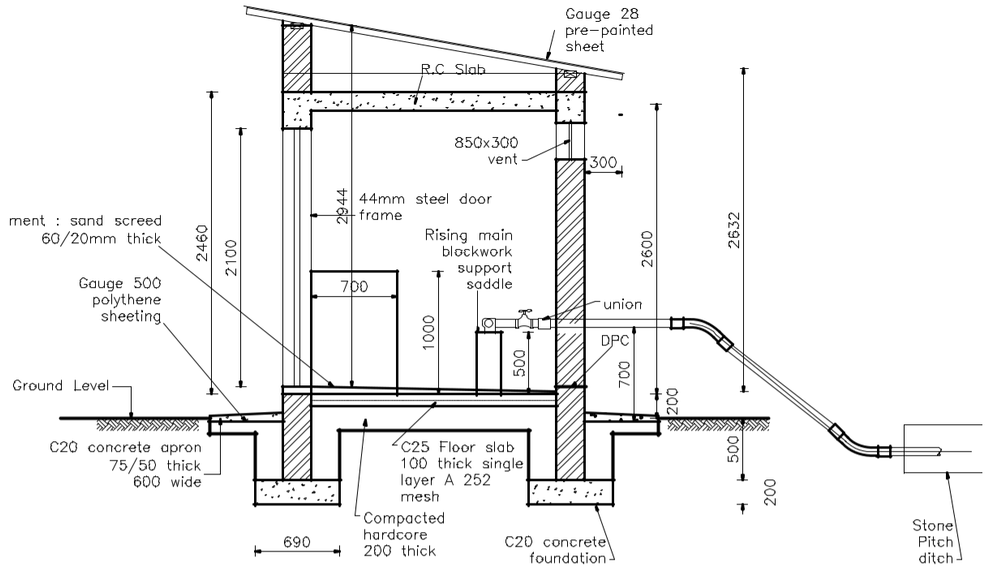

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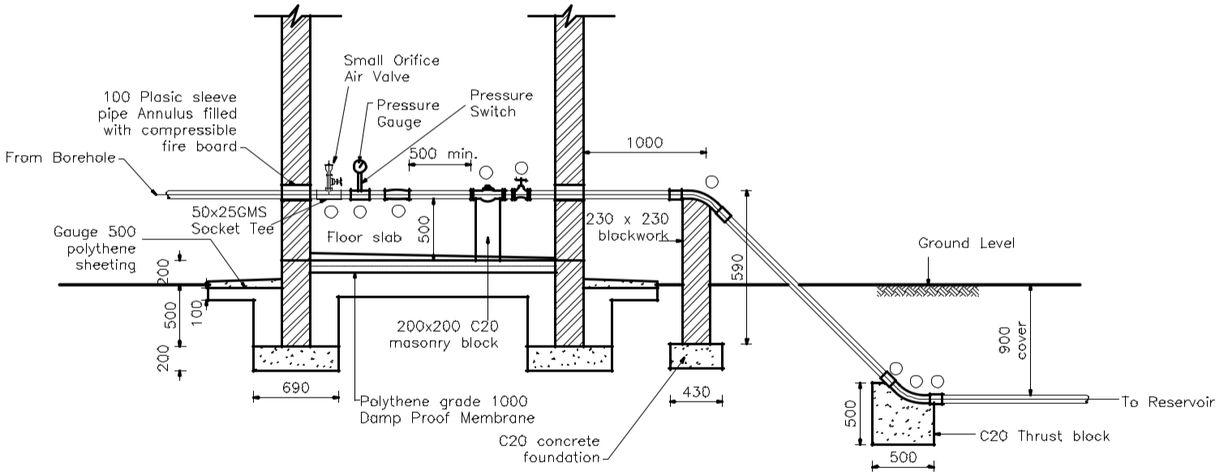

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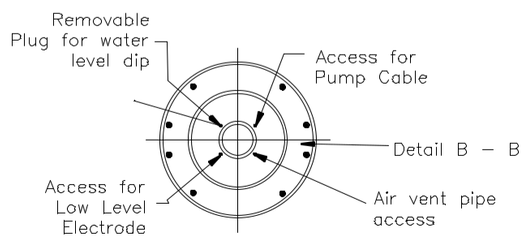

DETAIL AT A-A

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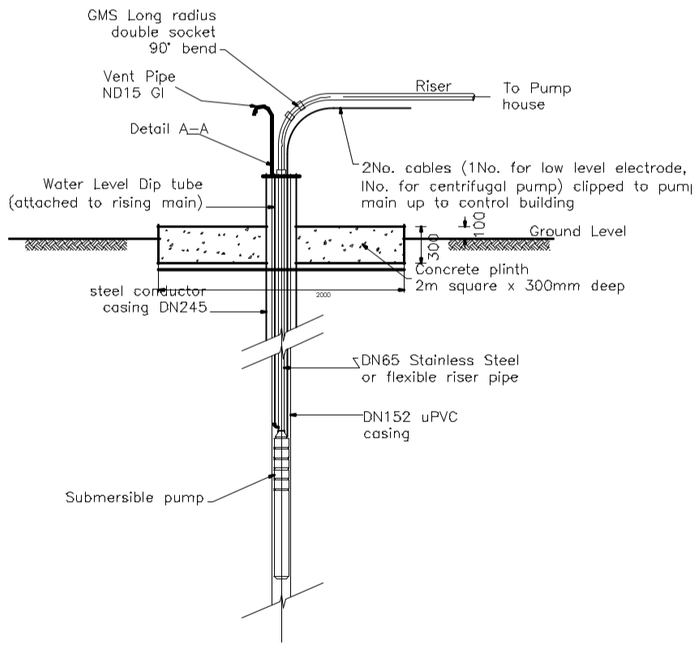

SECTION THROUGH RISER

1:40

Notes:

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A	.	.	---

STATUS: DETAILED ENGINEERING DESIGN

CLIENT:

OXFAM

PROJECT:

MOTORISATION OF YELULU WATER SYSTEM

GERALD KOMAKECH
FLAT C7, ROVIS APARTMENTS, PLOT 49 NTINDA RD.
P. O. BOX 22858 KAMPALA
+256772443616

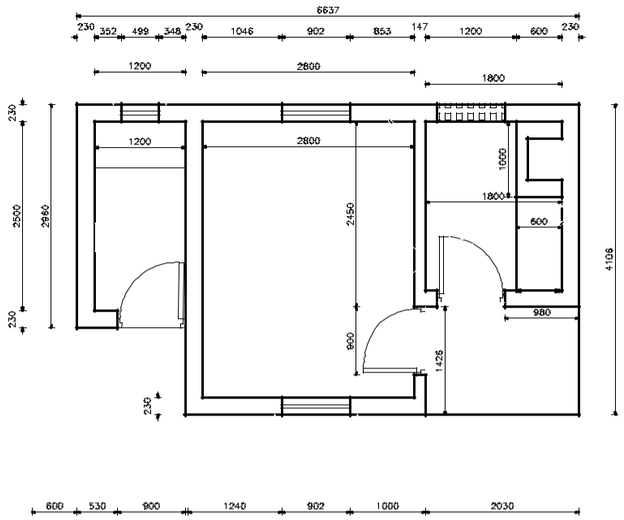
DRAWING TITLE:

PUMP STATION - PUMP HOUSE PLAN, SECTIONS AND DETAILS

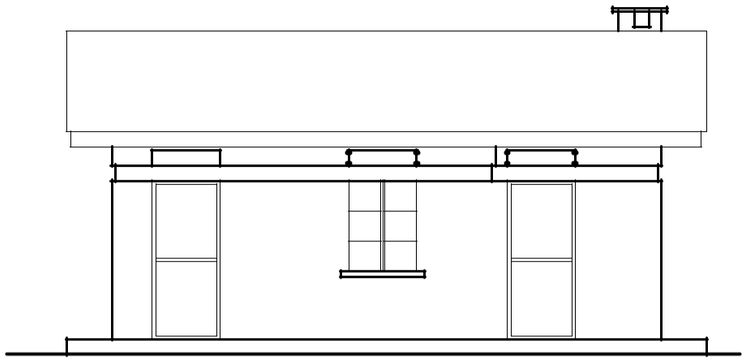
SCALE:	DESIGNED BY:	DRAWN BY:	CHECKED BY:
AS SHOWN	KKG	SM	ORD
APPROVED BY:	DATE:	SHEET No.:	
KKG	JAN. '19	2of	2
PROJECT No.:	DRAWING No.:	REVISION:	
190101	YLU PS -102	A	

Pump House 240119.dwg

19.03.2007



PLAN



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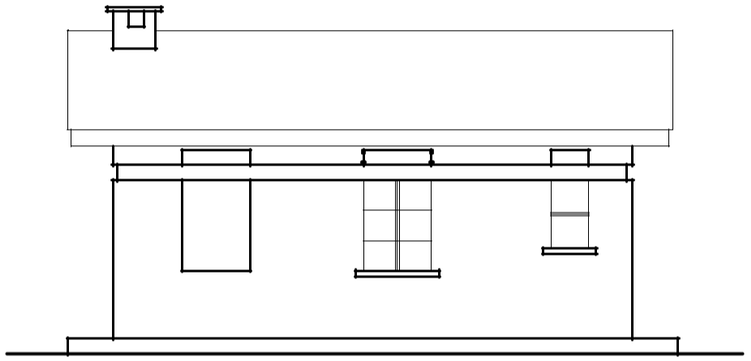

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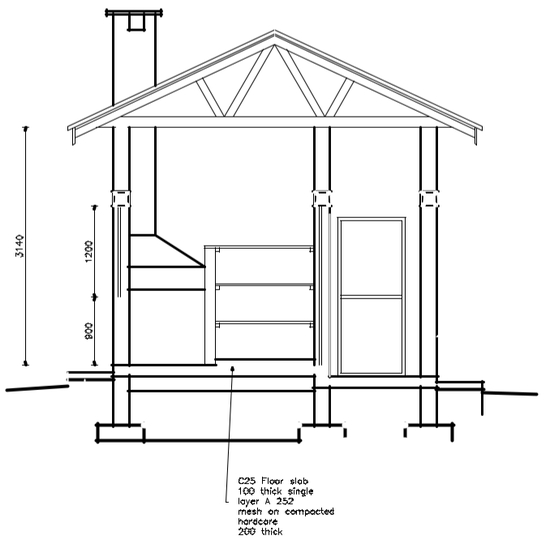
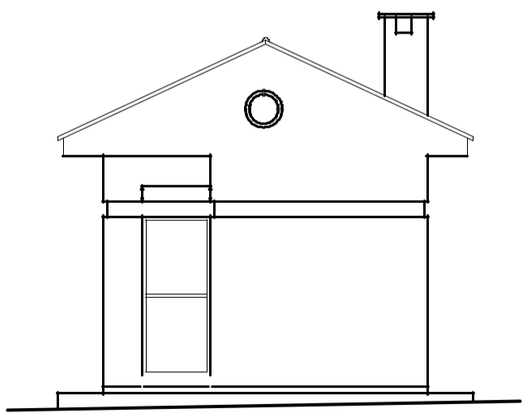
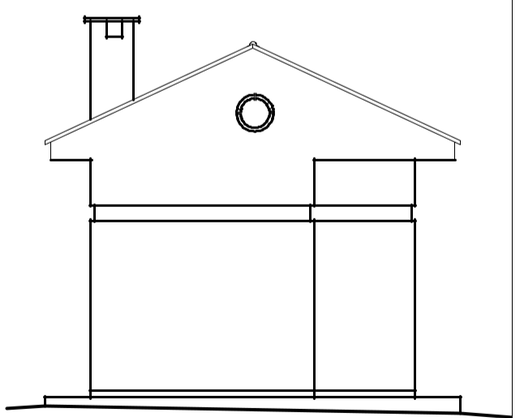


SECTION A - A





SIDE ELEVATIONS

Notes:

VALUE

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REV:	DESCRIPTION:	BY:	DATE:

STATUS: DETAILED ENGINEERING DESIGN

CLIENT:

OXFAM

PROJECT:

MOTORISATION OF YELULU WATER SYSTEM

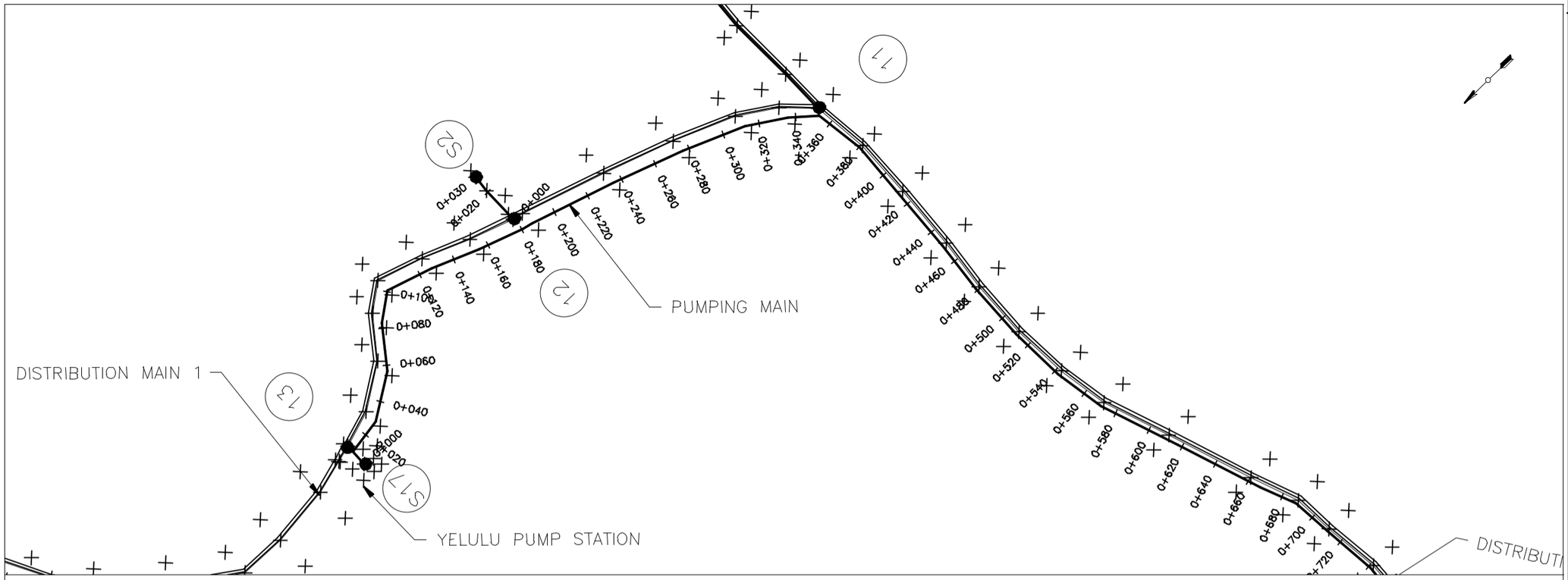
GERALD KOMAKECH
FLAT C7, ROVIS APARTMENTS, PLOT 49 NTINDA RD.
P. O. BOX 22858 KAMPALA
+256772443616

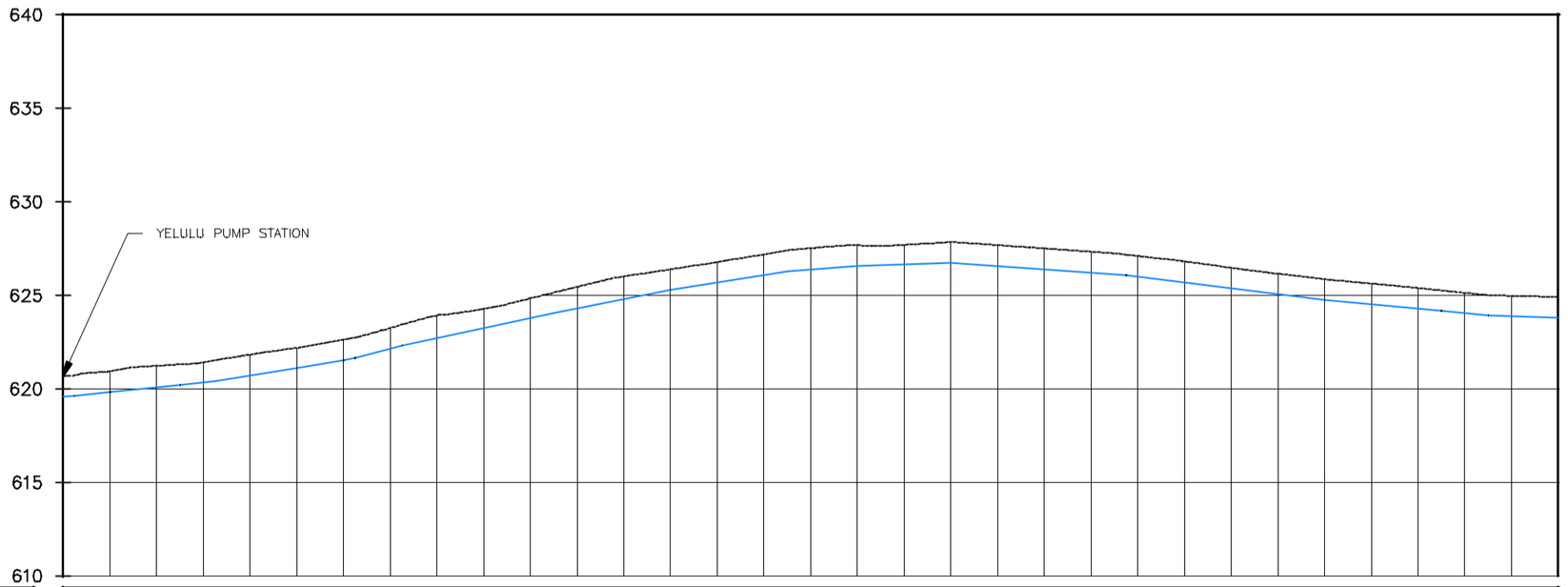
DRAWING TITLE: PUMP STATION - GATE HOUSE

SCALE:	DESIGNED BY:	DRAWN BY:	CHECKED BY:
NTS	KKG	SM	ORD
APPROVED BY:	DATE:	SHEET No.:	
KKG	JAN. '19	1of 1	
PROJECT No.:	DRAWING No.:		REVISION:
190101	YLU PS -101		A

Guard House 240119.dwg

19.03.2007





Chainage (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	0+520	0+540	0+560	0+580	0+600	0+620	0+640
Pipe Details	OD90 HDPE TO PN16																																
Invert Level (m)	619.58	619.85	620.09	620.36	620.72	621.10	621.54	622.16	622.73	623.26	623.79	624.30	624.80	625.30	625.70	626.10	626.39	626.58	626.66	626.75	626.57	626.39	626.21	626.00	625.69	625.39	625.08	624.77	624.53	624.29	624.04	623.87	623.79
Ground Level (m)	620.68	620.95	621.24	621.43	621.84	622.20	622.64	623.26	623.94	624.29	624.84	625.46	626.01	626.40	626.78	627.19	627.53	627.68	627.70	627.85	627.69	627.52	627.34	627.11	626.82	626.48	626.16	625.87	625.63	625.39	625.14	624.98	624.91

Notes:

VALUE

0 50 100 Meters

REV:	DESCRIPTION:	BY:	DATE:
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STATUS: DETAILED ENGINEERING DESIGN

CLIENT:

OXFAM

PROJECT:

MOTORISATION OF YELULU WATER SYSTEM

GERALD KOMAKECH
FLAT C7, ROVIS APARTMENTS, PLOT 49
NTINDA RD.
P. O. BOX 22858 KAMPALA
+256772443616

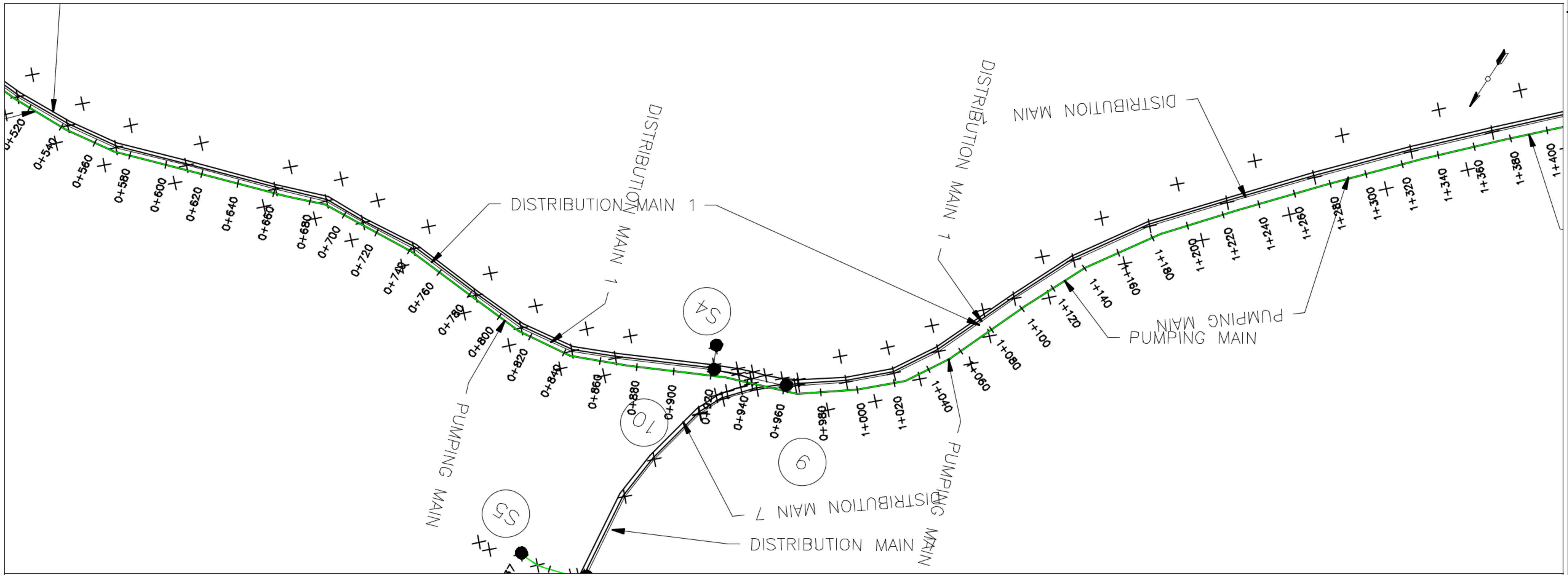
DRAWING TITLE:

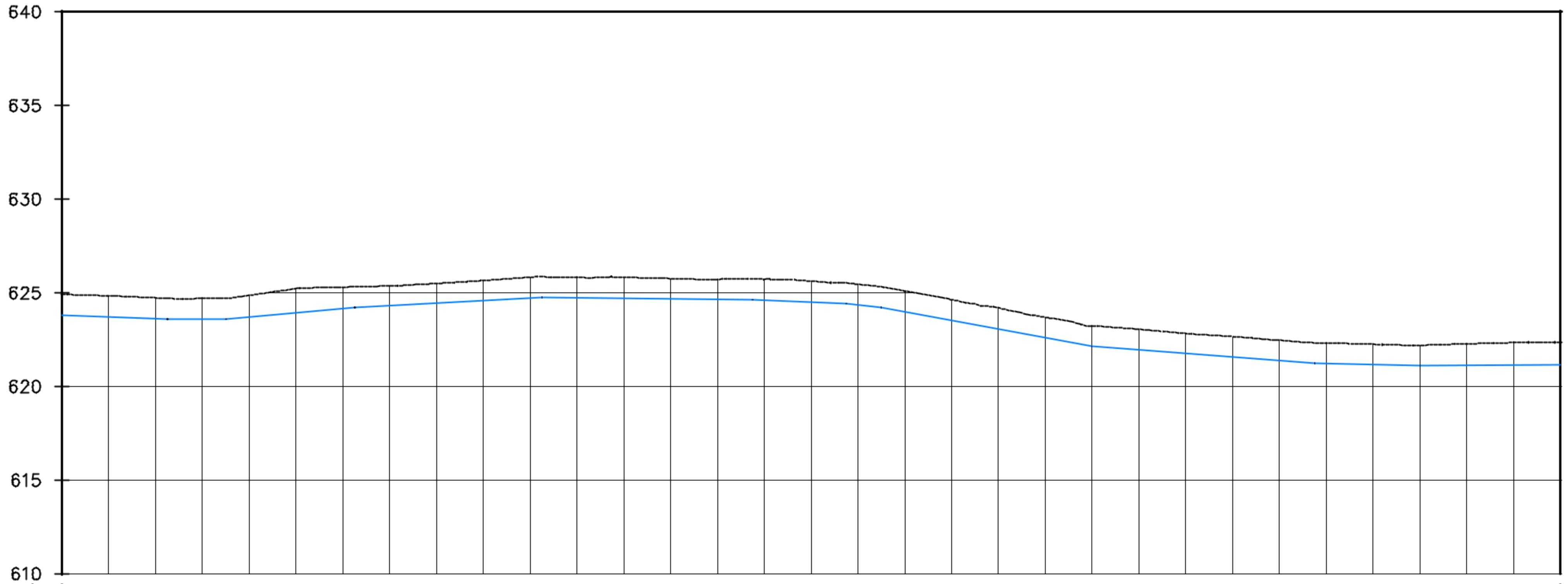
PUMPING MAIN
CH. 0+000 - CH. 0+640

SCALE:	DESIGNED BY:	DRAWN BY:	CHECKED BY:
V 1:250 H 1:2500	KKG	SM	ORD
APPROVED BY:	DATE:	SHEET No.:	
PROJECT No.:	DRAWING No.:		REVISION:
KKG	JAN. '19	1of	6

Yelulu II WSS.230119.dwg

03.2007





Chainage (m)	Ground Level (m)	Invert Level (m)
0+640	624.91	623.79
0+660	624.85	623.71
0+680	624.74	623.63
0+700	624.70	623.60
0+720	624.86	623.71
0+740	625.23	623.94
0+760	625.31	624.17
0+780	625.37	624.32
0+800	625.50	624.46
0+820	625.66	624.59
0+840	625.84	624.72
0+860	625.82	624.74
0+880	625.84	624.71
0+900	625.76	624.69
0+920	625.69	624.67
0+940	625.73	624.62
0+960	625.63	624.51
0+980	625.46	624.36
1+000	625.09	623.99
1+020	624.64	623.53
1+040	624.20	623.06
1+060	623.70	622.60
1+080	623.23	622.13
1+100	623.05	621.94
1+120	622.83	621.76
1+140	622.67	621.57
1+160	622.47	621.38
1+180	622.32	621.22
1+200	622.26	621.16
1+220	622.21	621.11
1+240	622.28	621.12
1+260	622.35	621.14
1+280	622.36	621.16

Pipe Details: OD90 HDPE TO PN16

Notes:

VALUE

0 50 100 Meters

REV:	DESCRIPTION:	BY:	DATE:
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STATUS: DETAILED ENGINEERING DESIGN

CLIENT: OXFAM

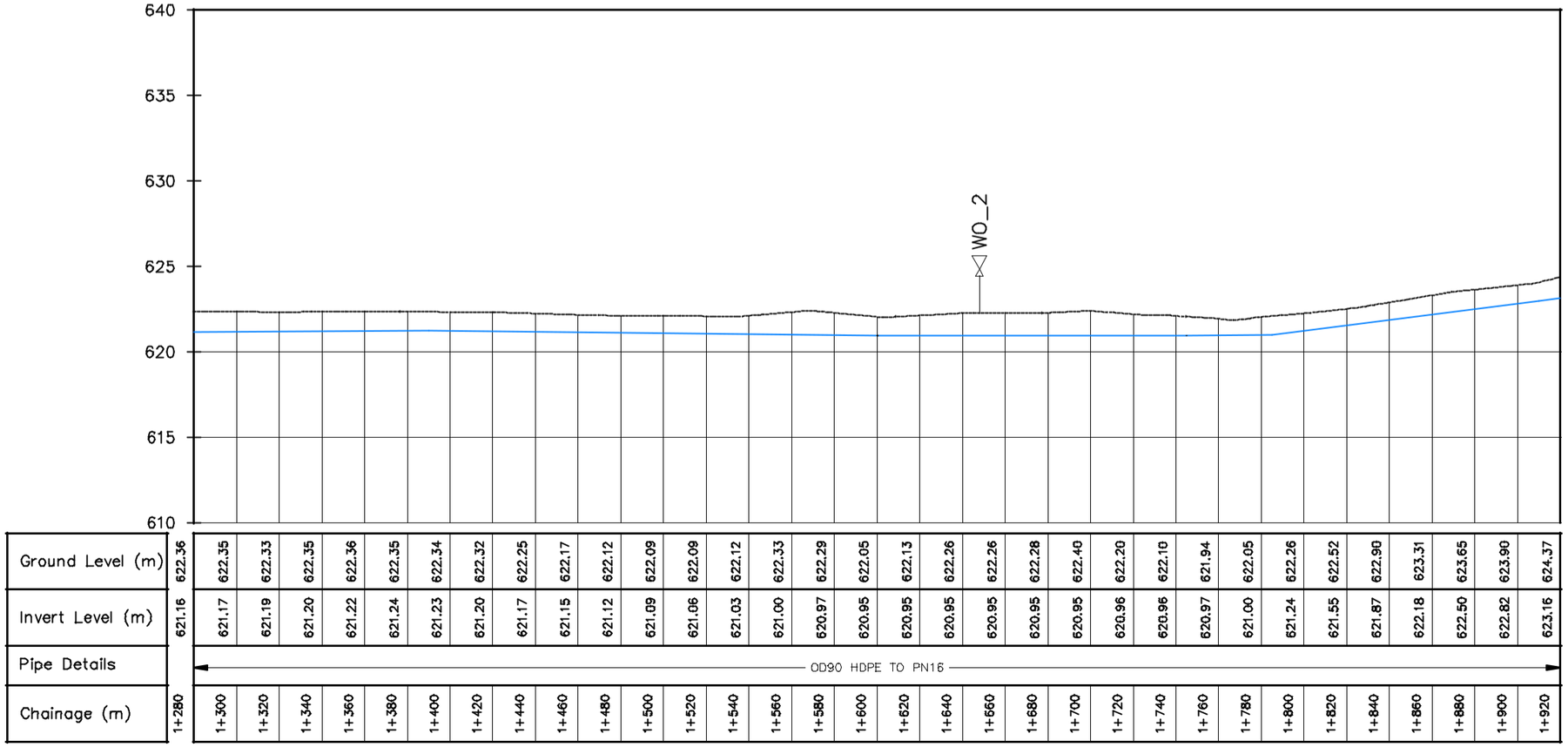
PROJECT: MOTORISATION OF YELULU WATER SYSTEM

GERALD KOMAKECH
FLAT C7, ROVIS APARTMENTS, PLOT 49
NTINDA RD.
P. O. BOX 22858 KAMPALA
+256772443616

DRAWING TITLE: PUMPING MAIN CH. 0+640 - CH. 1+280

SCALE:	DESIGNED BY:	DRAWN BY:	CHECKED BY:
V. 1:250; H. 1:2500	KKG	SM	ORD
APPROVED BY:	DATE:	SHEET No.:	
PROJECT No.:	DRAWING No.:		REVISION:
KKG	JAN. '19	2of	6

03.2007 Yelulu II WSS.230119.dwg



Notes:

VALUE

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STATUS: DETAILED ENGINEERING DESIGN

CLIENT:

OXFAM

PROJECT:

MOTORISATION OF YELULU WATER SYSTEM

GERALD KOMAKECH
FLAT C7, ROVIS APARTMENTS, PLOT 49 NTINDA RD.
P. O. BOX 22858 KAMPALA
+256772443616

DRAWING TITLE:

PUMPING MAIN
CH. 1+280 - CH. 1+920

SCALE:	DESIGNED BY:	DRAWN BY:	CHECKED BY:
V. 1:250 H. 1:2500	KKG	SM	GRD

APPROVED BY:	DATE:	SHEET No.:
KKG	JAN. '19	3of

PROJECT No.:	DRAWING No.:	REVISION:
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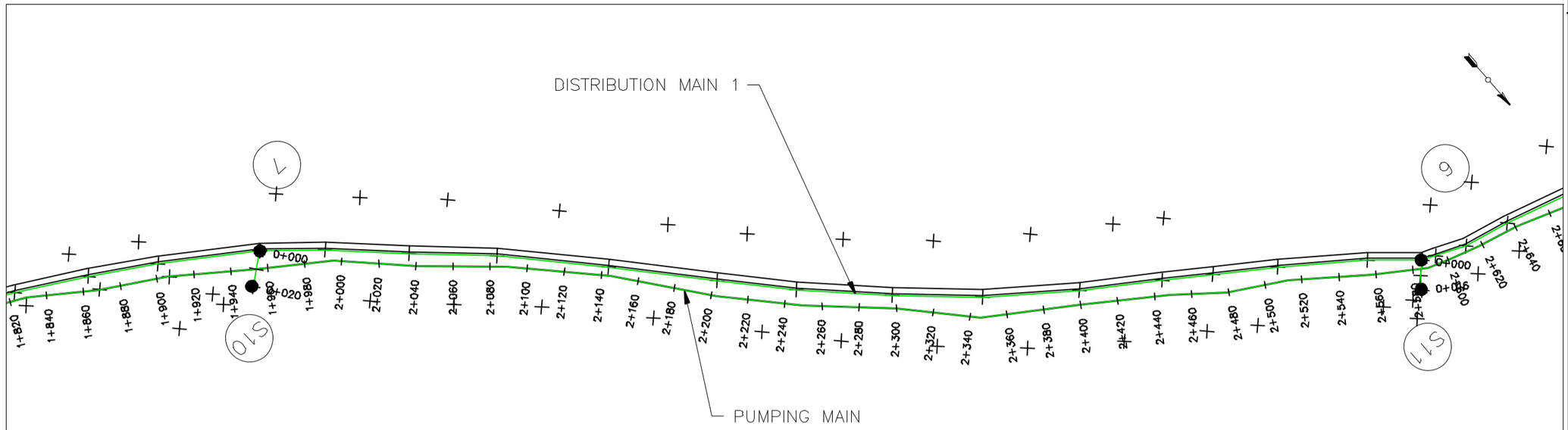
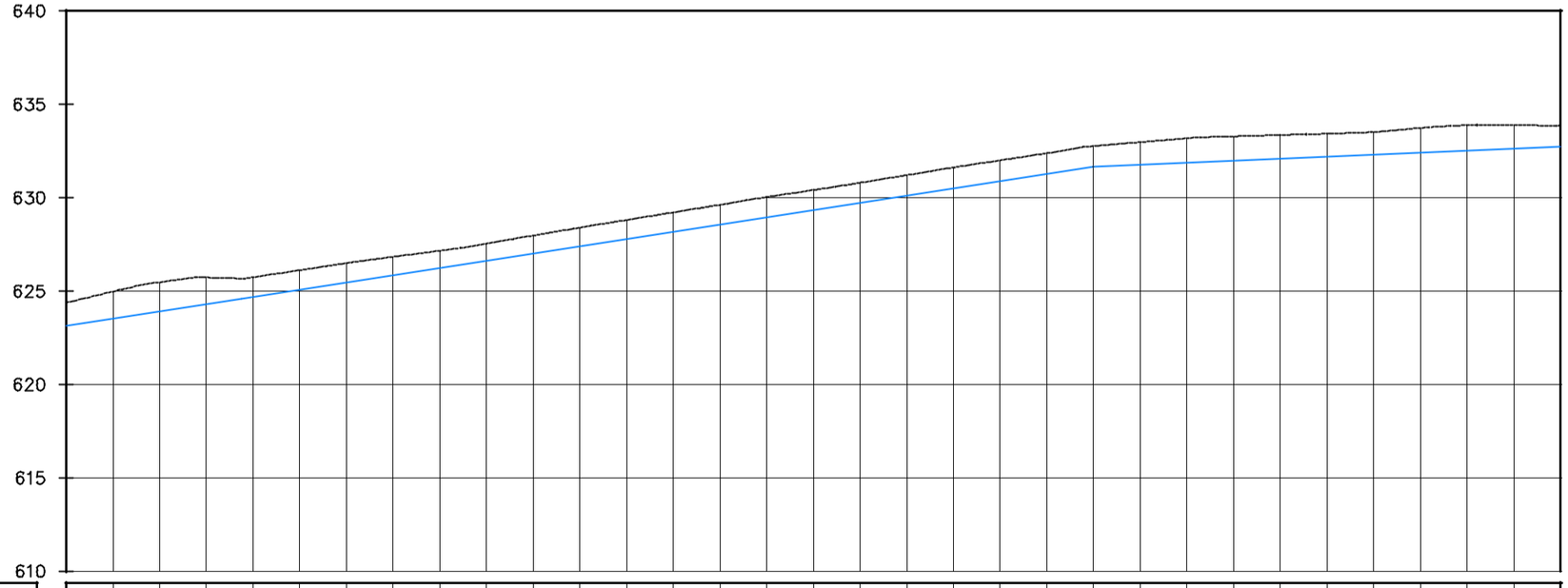
Yelulu II WSS.230119.dwg

03.2007





Chainage (m)	1+920	1+940	1+960	1+980	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	2+520	2+540	2+560
Pipe Details		OD90 HDPE TO PN16																															
Invert Level (m)	623.16	623.54	623.92	624.30	624.68	625.06	625.45	625.84	626.23	626.62	627.01	627.40	627.79	628.17	628.56	628.95	629.34	629.73	630.12	630.51	630.90	631.28	631.67	631.78	631.88	631.99	632.09	632.20	632.31	632.41	632.52	632.62	632.73
Ground Level (m)	624.37	624.98	625.48	625.73	625.74	626.12	626.50	626.84	627.17	627.55	627.98	628.40	628.81	629.22	629.63	630.04	630.41	630.80	631.21	631.62	632.00	632.39	632.77	632.98	633.18	633.29	633.36	633.43	633.51	633.74	633.88	633.88	633.88

Notes:

VALUE

0 50 100 Meters

REV:	DESCRIPTION:	BY:	DATE:
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STATUS: DETAILED ENGINEERING DESIGN

CLIENT:

OXFAM

PROJECT:

MOTORISATION OF YELULU WATER SYSTEM

GERALD KOMAKECH
FLAT C7, ROVIS APARTMENTS, PLOT 49
NTINDA RD.
P. O. BOX 22858 KAMPALA
+256772443616

DRAWING TITLE:

PUMPING MAIN
CH. 1+920 - CH. 2+580

SCALE:	DESIGNED BY:	DRAWN BY:	CHECKED BY:
V. 1:250 H. 1:2500	KKG	SM	GRD

APPROVED BY:	DATE:	SHEET No.:
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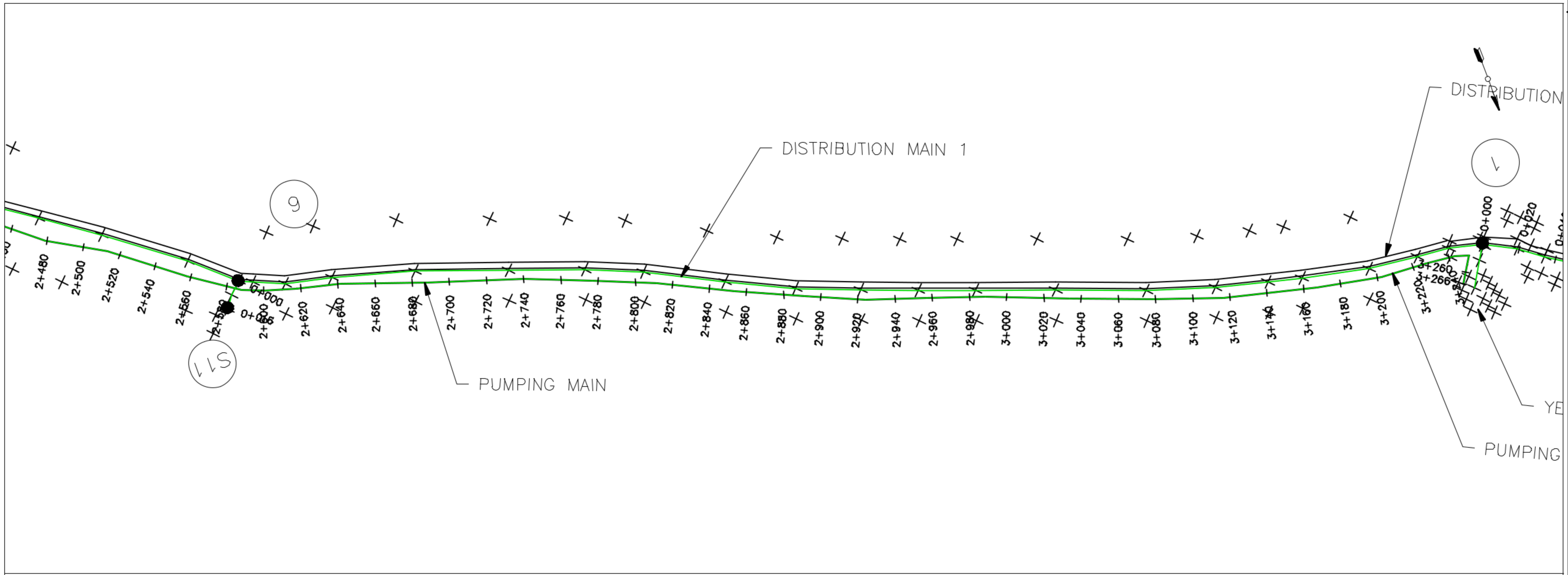
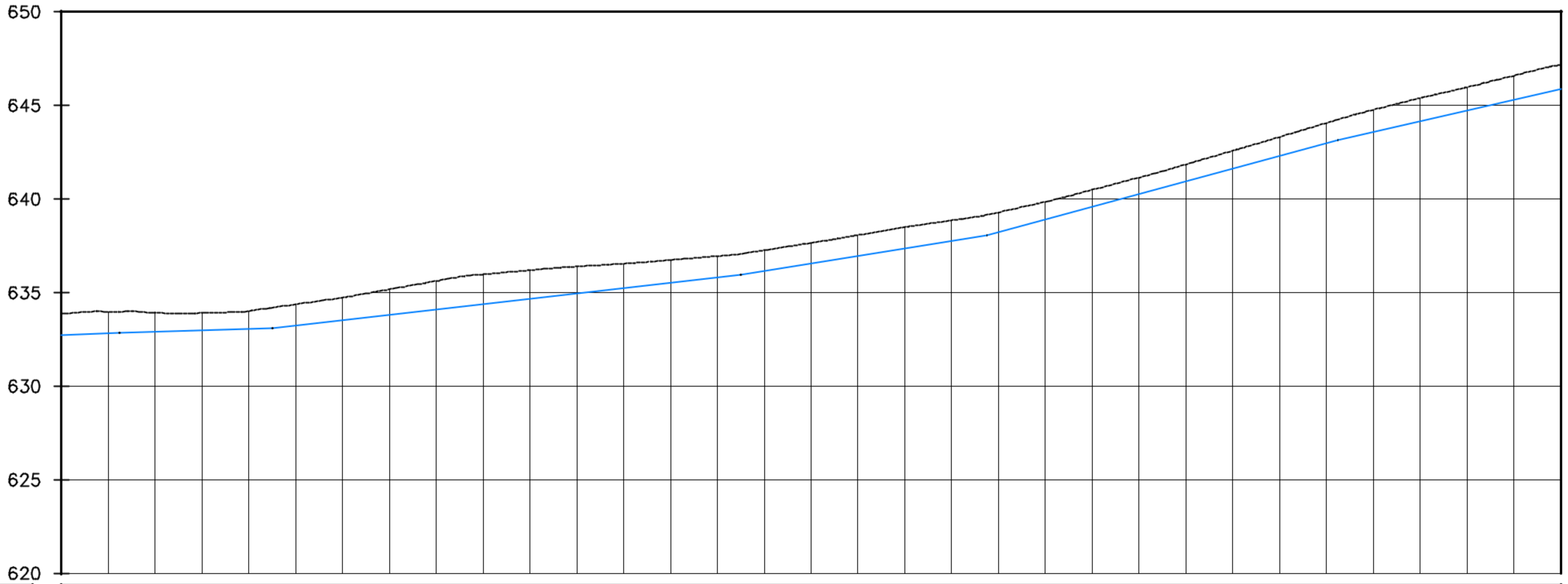
PROJECT No.:	DRAWING No.:	REVISION:
KKG	JAN. '19	6

Yelulu II WSS.230119.dwg 03.2007





Ground Level (m)	633.88	633.98	633.92	633.91	634.02	634.38	634.74	635.18	635.62	635.98	636.20	636.40	636.55	636.75	636.96	637.27	637.66	638.07	638.50	638.86	639.29	639.85	640.49	641.15	641.85	642.58	643.32	644.06	644.77	645.40	645.97	646.59	647.16
Invert Level (m)	632.73	632.83	632.91	632.99	633.06	633.24	633.53	633.82	634.11	634.39	634.68	634.97	635.25	635.54	635.83	636.17	636.57	636.96	637.36	637.76	638.22	638.90	639.58	640.26	640.94	641.62	642.30	642.98	643.58	644.16	644.73	645.31	645.89
Pipe Details		OD90 HDPE TO PN16																															
Chainage (m)	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	3+020	3+040	3+060	3+080	3+100	3+120	3+140	3+160	3+180	3+200

03.2007 Yelulu II WSS.230119.dwg

Notes:

VALUE

0 50 100 Meters

REV:	DESCRIPTION:	BY:	DATE:
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STATUS: DETAILED ENGINEERING DESIGN

CLIENT:

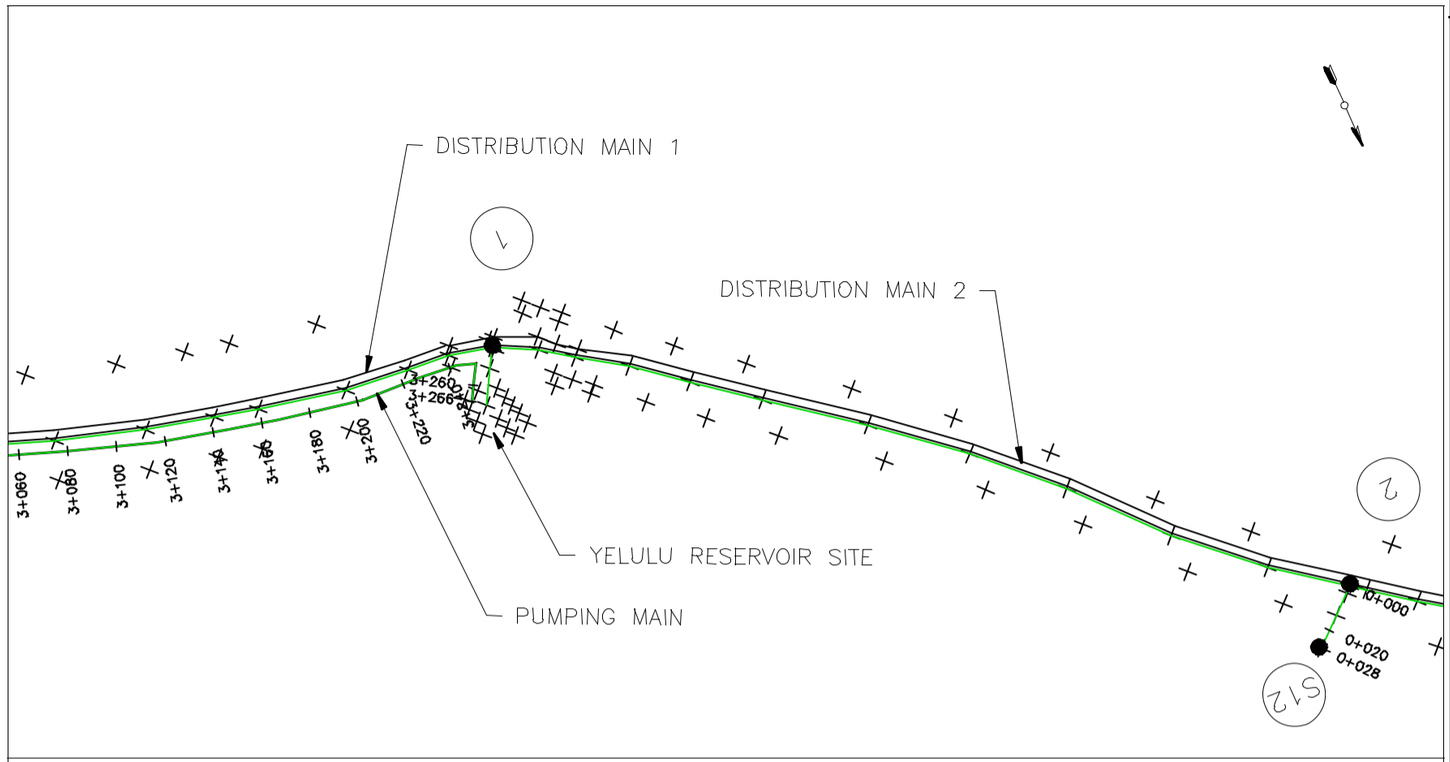
OXFAM

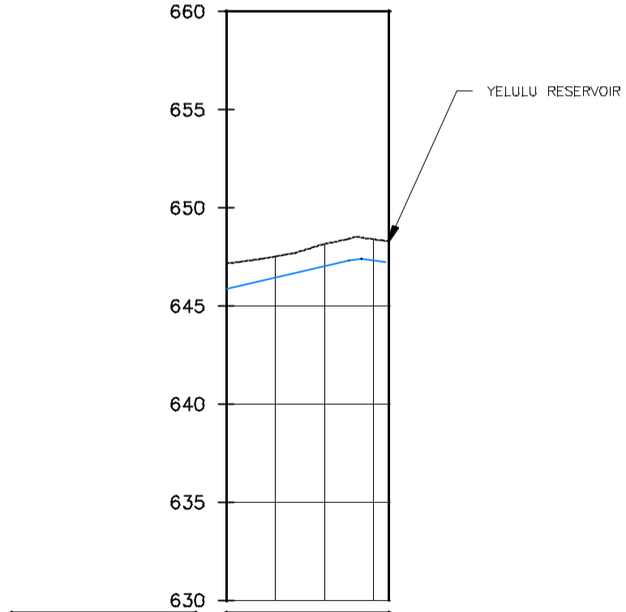
PROJECT: MOTORISATION OF YELULU WATER SYSTEM

GERALD KOMAKECH
FLAT C7, ROVIS APARTMENTS, PLOT 49 NTINDA RD.
P. O. BOX 22858 KAMPALA
+256772443616

DRAWING TITLE: PUMPING MAIN CH. 2+2560 CH. 3+200

SCALE:	DESIGNED BY:	DRAWN BY:	CHECKED BY:
V. 1:250; H. 1:2500	KKG	SM	OBD
APPROVED BY:	DATE:	SHEET No.:	
PROJECT No.:	DRAWING No.:		REVISION:
KKG	JAN. '19	5of	6





Ground Level (m)	647.16	647.52	648.16	648.39	648.30
Invert Level (m)	645.89	645.45	647.04	647.31	
Pipe Details		OD90 HDPE TO PN16			
Chainage (m)	3+200	3+220	3+240	3+260	3+266

Notes:

VALUE

0 50 100 Meters

V 1:250 H 1:2500

REV:	DESCRIPTION:	BY:	DATE:
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STATUS: DETAILED ENGINEERING DESIGN

CLIENT:

OXFAM

PROJECT:

MOTORISATION OF YELULU WATER SYSTEM

GERALD KOMAKECH
FLAT C7, ROVIS APARTMENTS, PLOT 49
NTINDA RD.
P. O. BOX 22858 KAMPALA
+256772443616

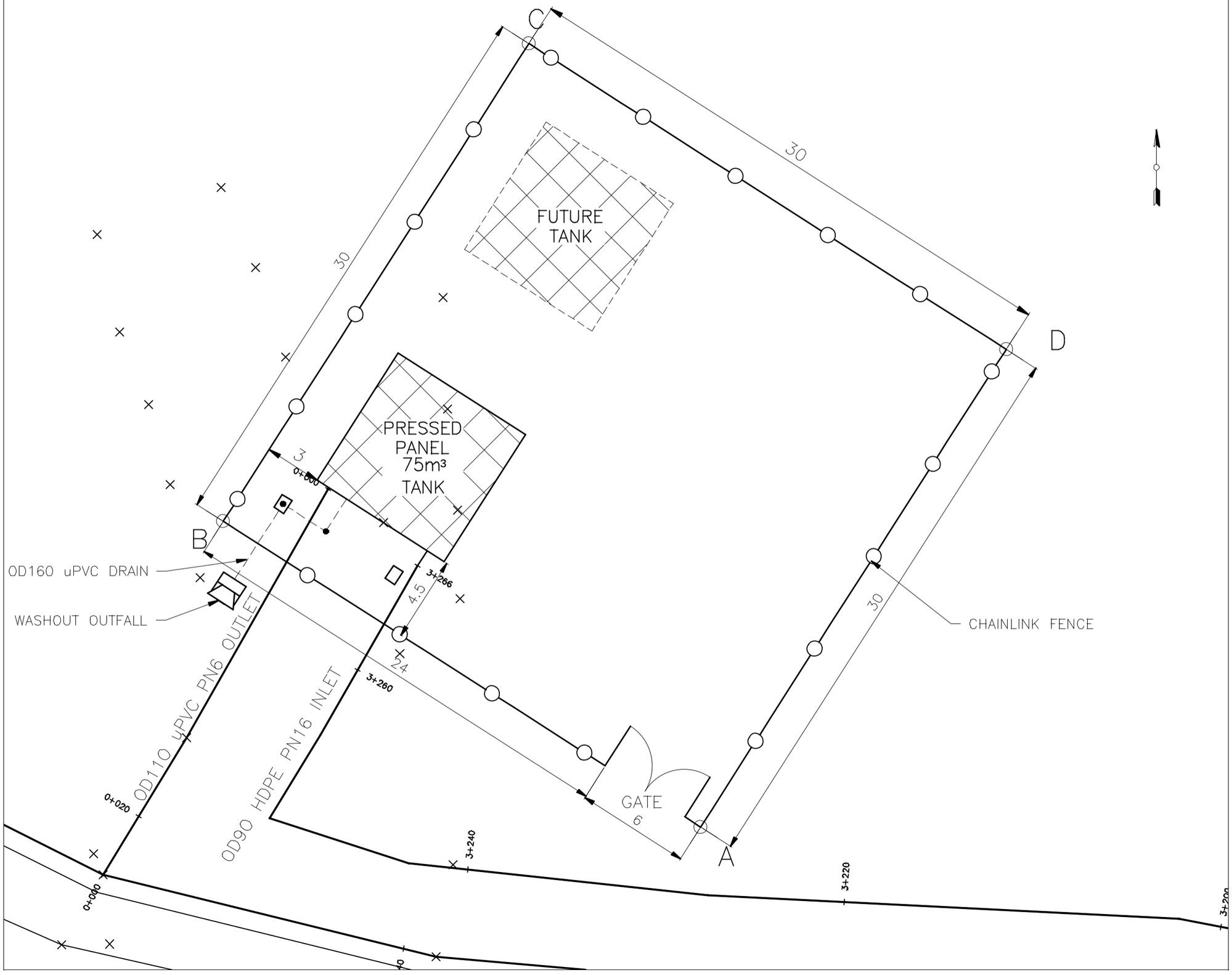
DRAWING TITLE:

PUMPING MAIN
CH. 3+200 - CH. 3+266

SCALE:	DESIGNED BY:	DRAWN BY:	CHECKED BY:
APPROVED BY:	DATE:	SHEET No.:	
PROJECT No.:	DRAWING No.:		REVISION:
KKG	JAN. '19	6of	6

Yelulu II WSS.230119.dwg

03.2007



Notes:

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STATUS: DETAILED ENGINEERING DESIGN

CLIENT:

OXFAM

PROJECT:

MOTORISATION OF YELULU WATER SYSTEM

GERALD KOMAKECH
FLAT C7, ROVIS APARTMENTS, PLOT 49 NTINDA RD.
P. O. BOX 22858 KAMPALA
+256772443616

DRAWING TITLE:

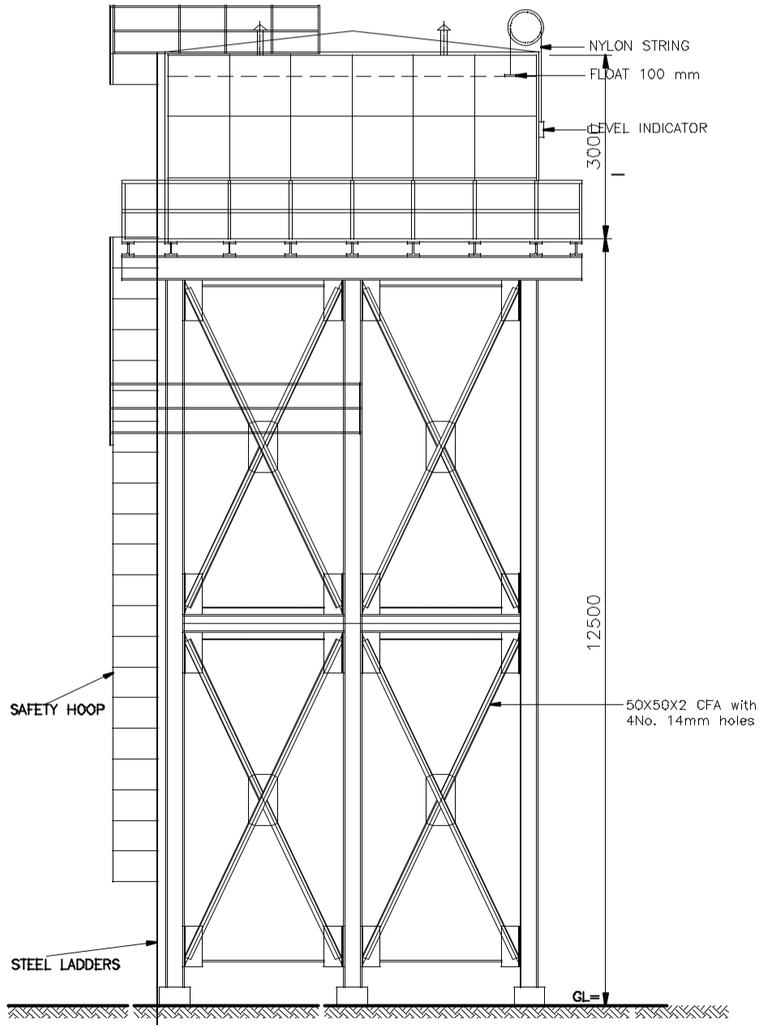
STORAGE TANK - SITE LAYOUT

SCALE:	DESIGNED BY:	DRAWN BY:	CHECKED BY:
1:200	KKG	SM	ORD
APPROVED BY:	DATE:	SHEET No.:	
KKG	JAN. '19	1of	3
PROJECT No.:	DRAWING No.:		REVISION:

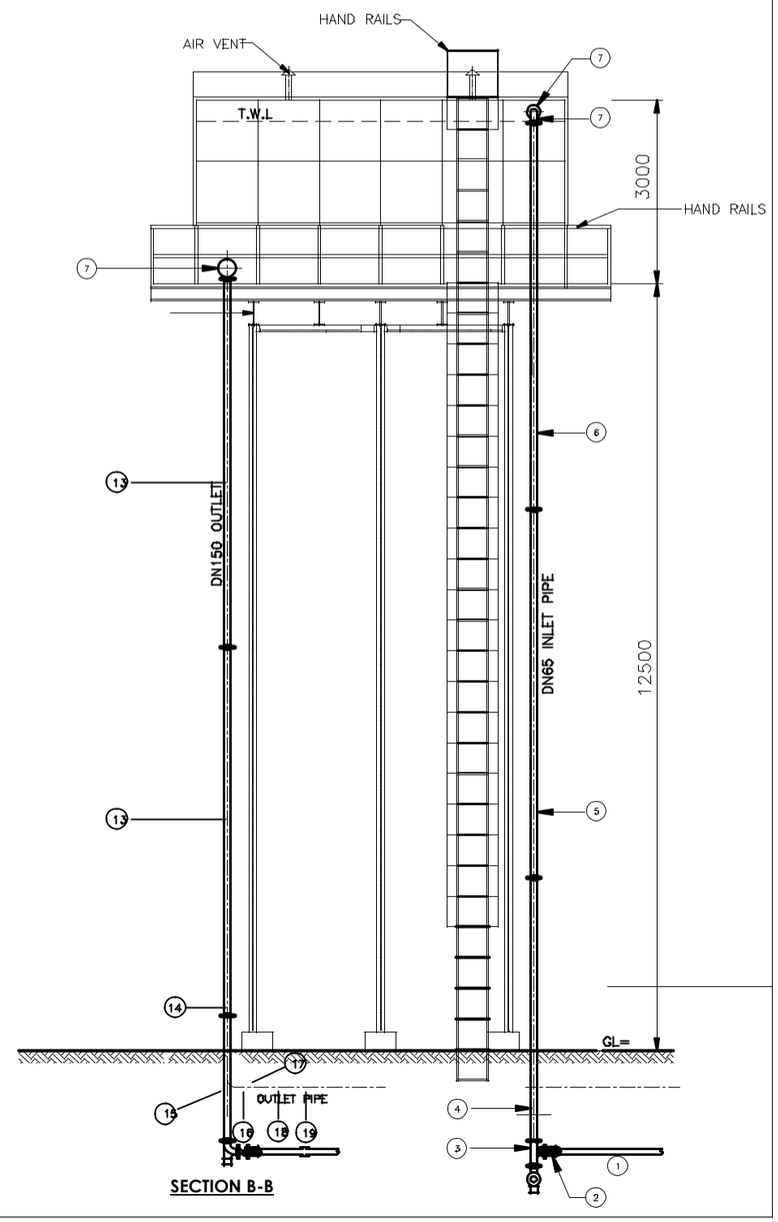
SITE LAYOUT

19.03.2007 Yelulu II WSS Tank and Pump Station.230119.dwg

190101 YLU TK -100 A



TYPICAL BRACING OF STANCHIONS
SCALE 1:100



SECTION B-B

Notes:

VALUE

REV:	DESCRIPTION:	BY:	DATE:
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STATUS:
DETAILED ENGINEERING DESIGN

CLIENT:
OXFAM

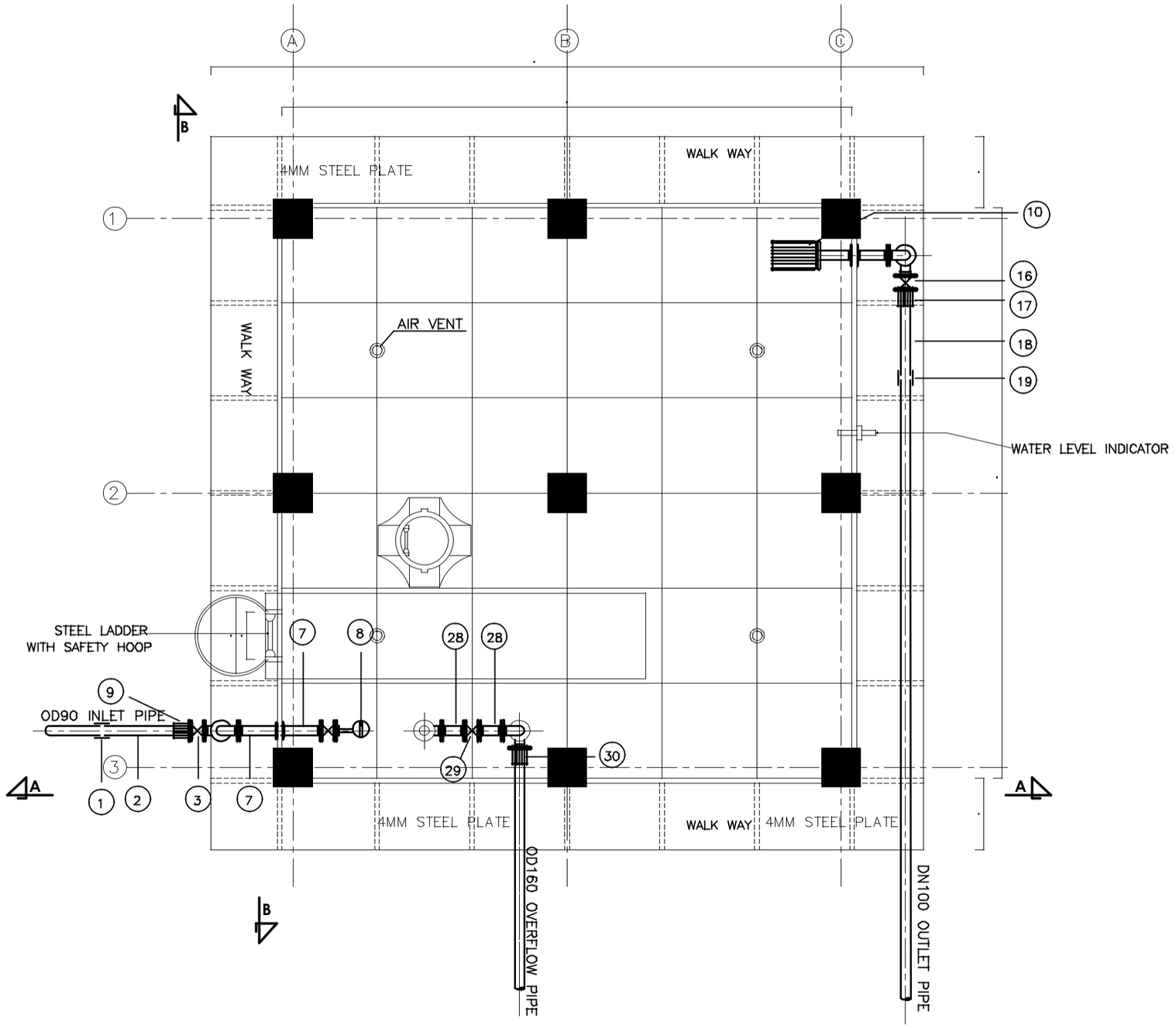
PROJECT:
MOTORISATION OF YELULU
WATER SYSTEM

GERALD KOMAKECH
FLAT C7, ROVIS APARTMENTS, PLOT 49 NTINDA RD.
P. O. BOX 22858 KAMPALA
+256772443616

DRAWING TITLE:
STORAGE TANK - ELEVATIONS

SCALE:	DESIGNED BY:	DRAWN BY:	CHECKED BY:
AS SHOWN	KKG	SM	ORD
APPROVED BY:	DATE:	SHEET No.:	
KKG	JAN. '19	2of	3
PROJECT No.:	DRAWING No.:		REVISION:
190101	YLU TK -101		A

Yelulu II WSS Tank.dwg
19.03.2007



PLAN VIEW

Notes:

VALUE

REV:	DESCRIPTION:	BY:	DATE:
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STATUS: DETAILED ENGINEERING DESIGN

CLIENT:

OXFAM

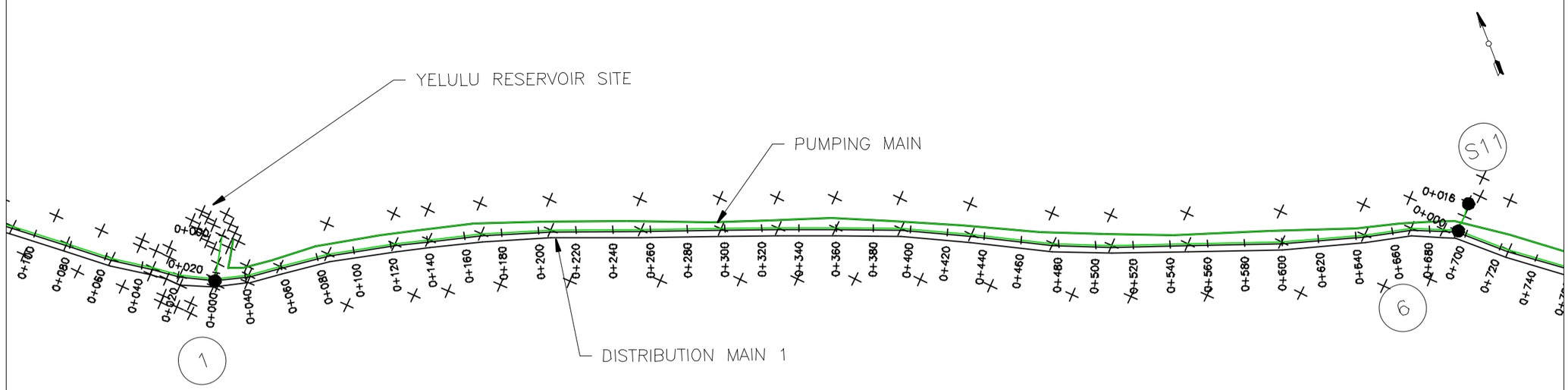
PROJECT:
MOTORISATION OF YELULU WATER SYSTEM

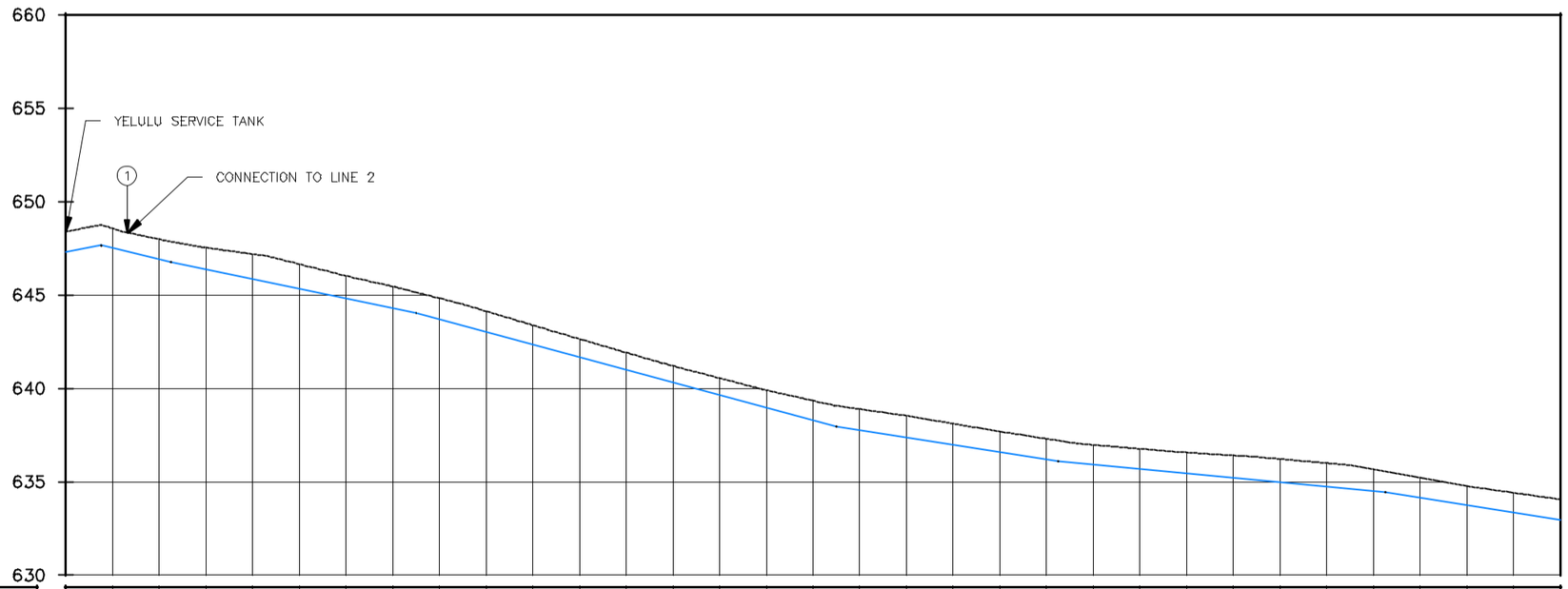
GERALD KOMAKECH
FLAT C7, ROVIS APARTMENTS, PLOT 49 NTINDA RD.
P. O. BOX 22858 KAMPALA
+256772443616

DRAWING TITLE:
STORAGE TANK - PLAN VIEW

SCALE:	DESIGNED BY:	DRAWN BY:	CHECKED BY:
AS SHOWN	KKG	SM	ORD
APPROVED BY:	DATE:	SHEET No.:	
KKG	JAN. '19	3of	3
PROJECT No.:	DRAWING No.:		REVISION:
190101	YLU TK -102		A

Yelulu II WSS Tank.dwg
19.03.2007





Chainage (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	0+520	0+540	0+560	0+580	0+600	0+620	0+640
Pipe Details		OD110 uPVC TO PN6																															
Invert Level (m)	647.28	647.50	646.90	646.37	645.85	645.33	644.81	644.30	643.70	643.03	642.35	641.68	641.00	640.33	639.66	638.98	638.31	637.77	637.38	636.99	636.59	636.20	635.93	635.69	635.45	635.22	634.98	634.75	634.51	634.15	633.76	633.36	632.97
Ground Level (m)	648.38	648.56	647.97	647.53	647.19	646.65	646.02	645.45	644.82	644.13	643.38	642.64	641.91	641.20	640.55	639.90	639.34	638.89	638.53	638.11	637.69	637.30	636.97	636.77	636.56	636.41	636.22	636.00	635.66	635.22	634.77	634.41	634.05

Notes:

VALUE

0 50 100 Meters

REV:	DESCRIPTION:	BY:	DATE:
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STATUS: DETAILED ENGINEERING DESIGN

CLIENT:

OXFAM

PROJECT:

MOTORISATION OF YELULU WATER SYSTEM

GERALD KOMAKECH
FLAT C7, ROVIS APARTMENTS, PLOT 49
NTINDA RD.
P. O. BOX 22858 KAMPALA
+256772443616

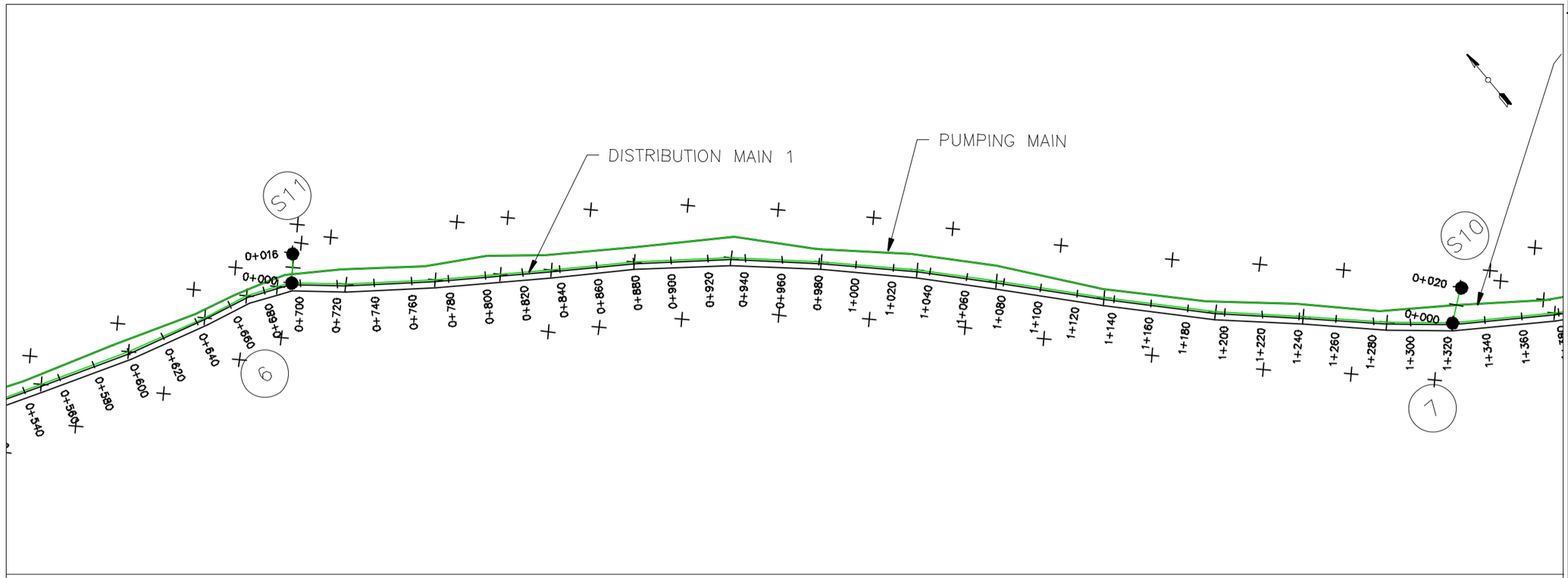
DRAWING TITLE:

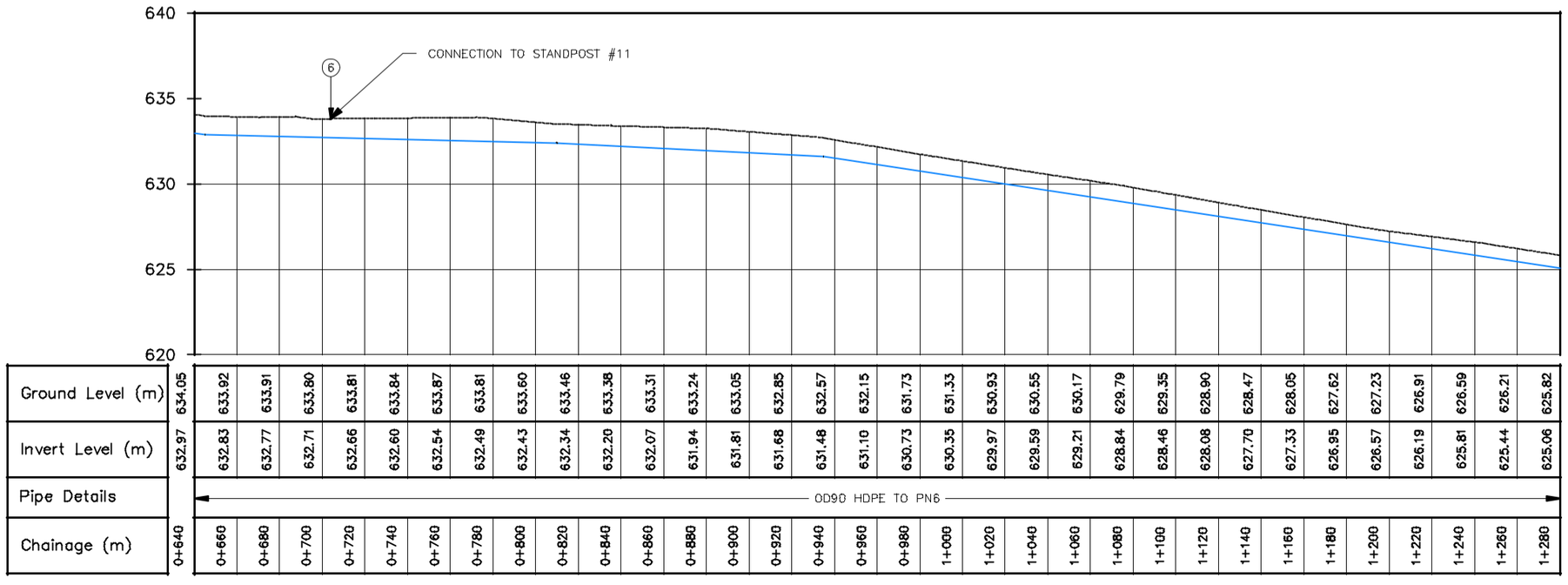
DISTRIBUTION MAIN 1
CH. 0+000 - CH 0+640

SCALE:	DESIGNED BY:	DRAWN BY:	CHECKED BY:
V. 1:250, H. 1:2500	KKG	SM	ORD
APPROVED BY:	DATE:	SHEET No.:	
PROJECT No.:	DRAWING No.:		REVISION:
KKG	JAN. '19	1of	6

Yelulu II WSS.230119.dwg

03.2007





Notes:

VALUE

0 50 100 Meters

REV:	DESCRIPTION:	BY:	DATE:
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STATUS: DETAILED ENGINEERING DESIGN

CLIENT: OXFAM

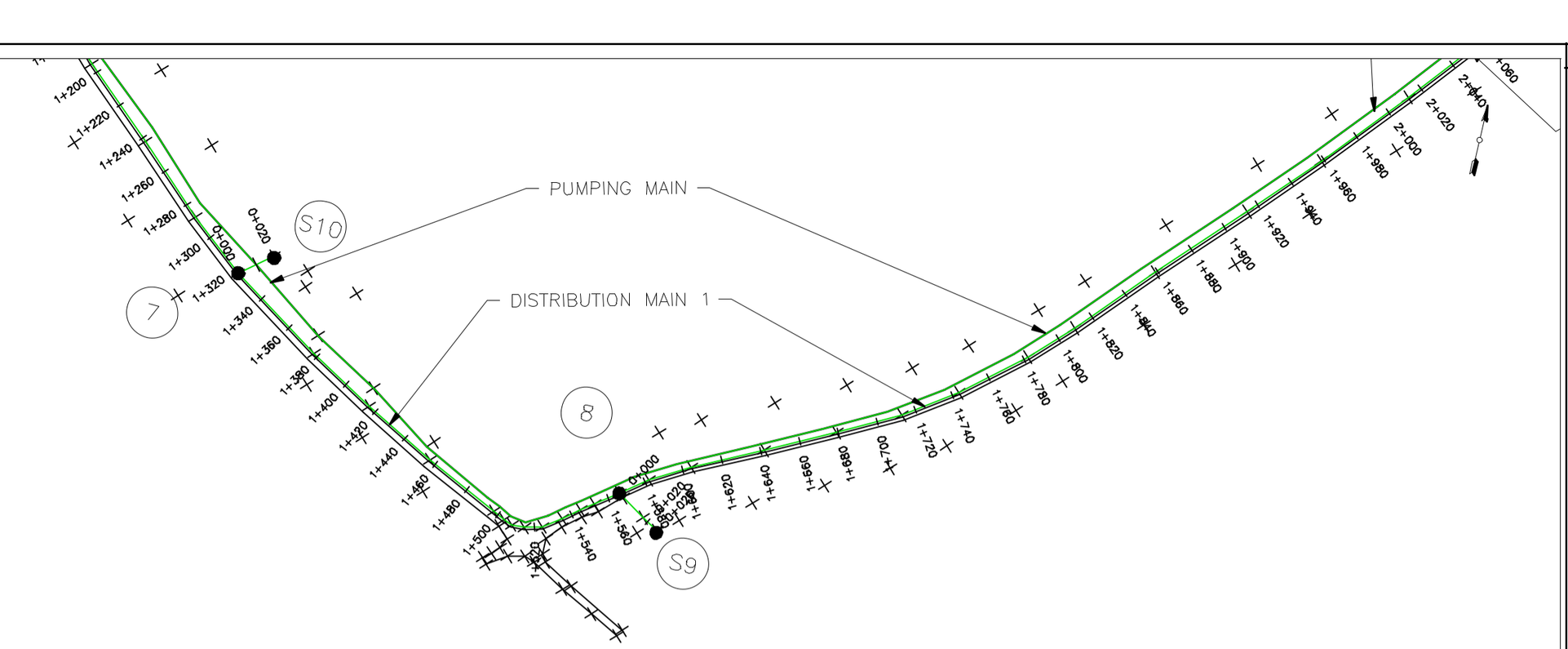
PROJECT: MOTORISATION OF YELULU WATER SYSTEM

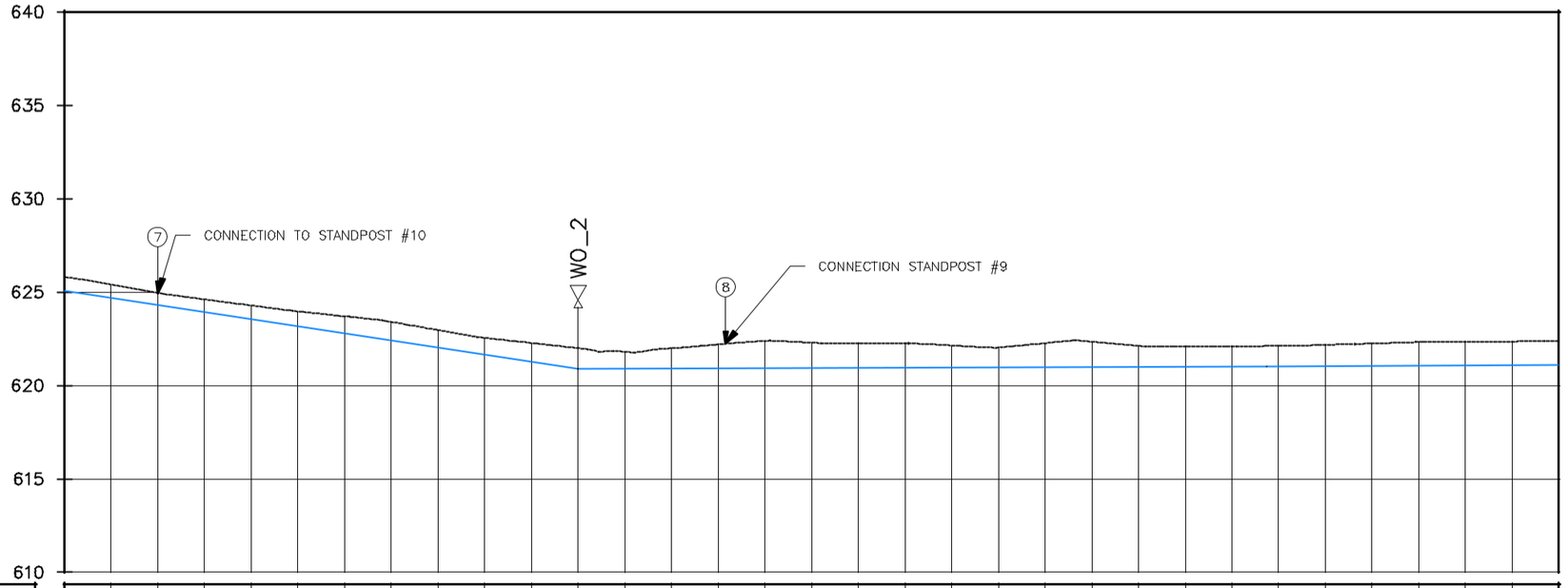
GERALD KOMAKECH
FLAT C7, ROVIS APARTMENTS, PLOT 49
NTINDA RD.
P. O. BOX 22858 KAMPALA
+256772443616

DRAWING TITLE: DISTRIBUTION MAIN 1 CH. 0+640 - CH. 1+280

SCALE:	DESIGNED BY:	DRAWN BY:	CHECKED BY:
V. 1:250 H. 1:2500	KKG	SM	GRD
APPROVED BY:	DATE:	SHEET No.:	
PROJECT No.: KKG	DRAWING No.: JAN. '19	2of	REVISION: 6

Yelulu II WSS.230119.dwg 03.2007





Chainage (m)	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+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
Pipe Details		OD90 HDPE TO PN6																															
Invert Level (m)	625.06	624.68	624.30	623.92	623.55	623.17	622.79	622.41	622.04	621.66	621.28	620.90	620.91	620.92	620.92	620.93	620.94	620.95	620.95	620.96	620.97	620.98	620.98	620.99	621.00	621.01	621.02	621.03	621.05	621.06	621.08	621.09	621.11
Ground Level (m)	625.82	625.39	624.95	624.61	624.28	623.96	623.70	623.41	622.96	622.55	622.28	622.00	621.80	622.00	622.20	622.39	622.29	622.26	622.26	622.14	622.03	622.27	622.34	622.12	622.09	622.09	622.12	622.17	622.25	622.32	622.34	622.35	622.36

Notes:

VALUE

0 50 100 Meters

REV:	DESCRIPTION:	BY:	DATE:
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STATUS: DETAILED ENGINEERING DESIGN

CLIENT:

OXFAM

PROJECT:

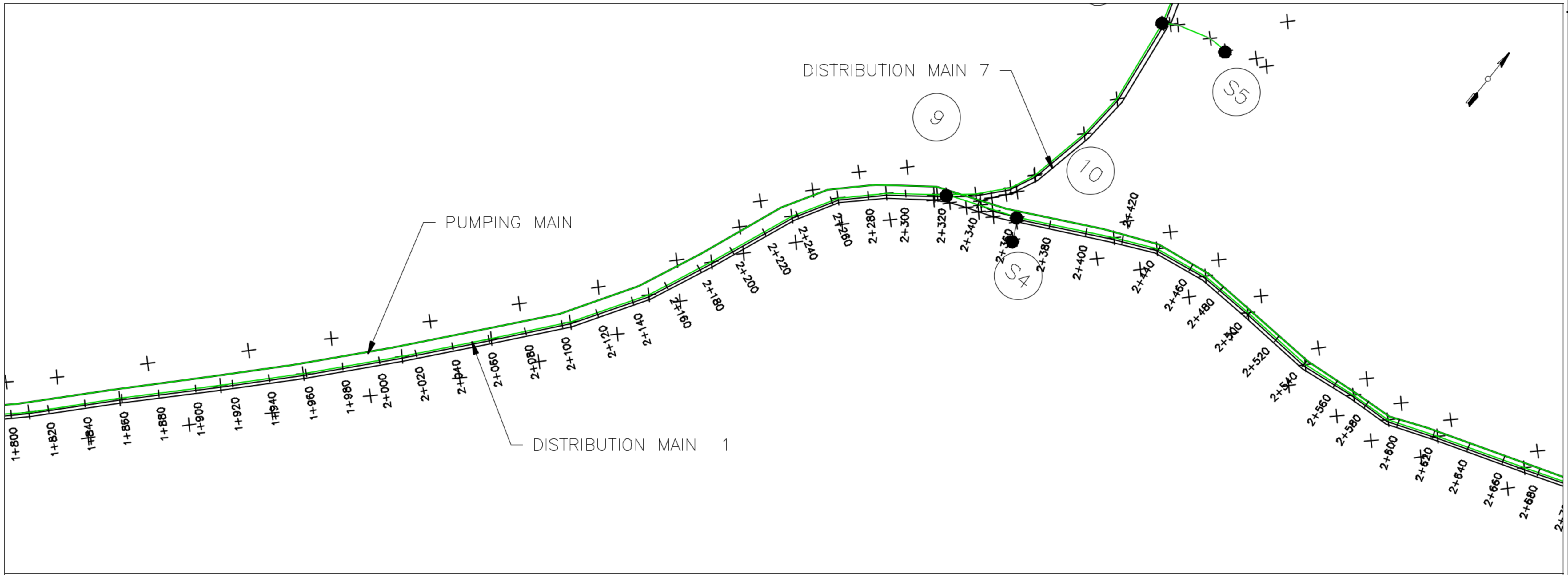
MOTORISATION OF YELULU WATER SYSTEM

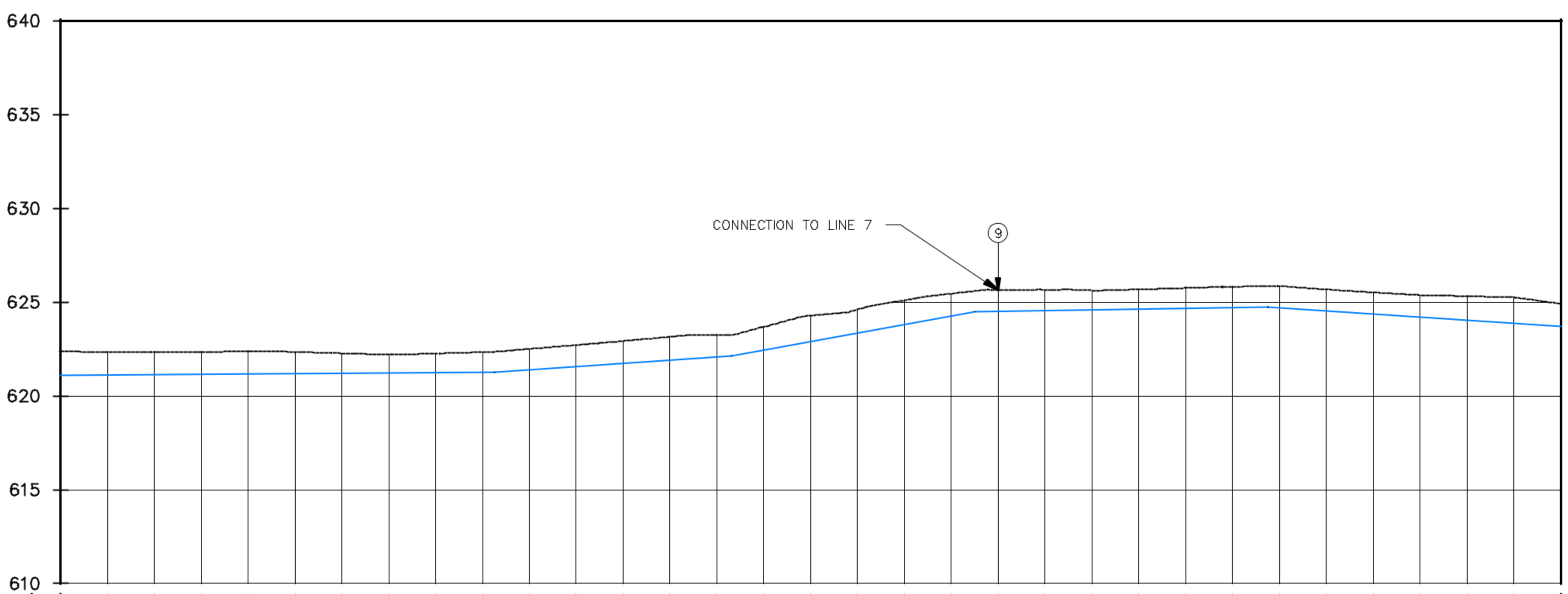
GERALD KOMAKECH
FLAT C7, ROVIS APARTMENTS, PLOT 49
NTINDA RD.
P. O. BOX 22858 KAMPALA
+256772443616

DRAWING TITLE: DISTRIBUTION MAIN 1 CH. 1+280 - CH. 1+920

SCALE:	DESIGNED BY:	DRAWN BY:	CHECKED BY:
V. 1:250; H. 1:2500	KKG	SM	GRD
APPROVED BY:	DATE:	SHEET No.:	
KKG	JAN. '19	3of	6
PROJECT No.:	DRAWING No.:		REVISION:

Yelulu II WSS.230119.dwg 03.2007





Ground Level (m)	622.36	622.35	622.34	622.35	622.36	622.34	622.27	622.20	622.26	622.33	622.51	622.71	622.93	623.15	623.23	623.68
Invert Level (m)	621.11	621.12	621.14	621.16	621.17	621.19	621.20	621.22	621.23	621.25	621.38	621.56	621.73	621.90	622.08	622.44
Pipe Details	OD90 HDPE TO PN6															
Chainage (m)	1+920	1+940	1+960	1+980	2+000	2+020	2+040	2+060	2+080	2+100	2+120	2+140	2+160	2+180	2+200	2+220

Ground Level (m)	624.28	624.61	625.10	625.45	625.64	625.65	625.62	625.68	625.75	625.82	625.85	625.68	625.52	625.38	625.32	625.25	624.90
Invert Level (m)	622.90	623.35	623.81	624.26	624.51	624.55	624.60	624.64	624.68	624.72	624.71	624.55	624.38	624.22	624.05	623.89	623.72
Pipe Details					OD75 HDPE TO PN6												
Chainage (m)	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	2+520	2+540	2+560

Notes:

VALUE

0 50 100 Meters

REV:	DESCRIPTION:	BY:	DATE:
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STATUS: DETAILED ENGINEERING DESIGN

CLIENT:

OXFAM

PROJECT: MOTORISATION OF YELULU WATER SYSTEM

GERALD KOMAKECH
FLAT C7, ROVIS APARTMENTS, PLOT 49 NTINDA RD.
P. O. BOX 22858 KAMPALA
+256772443616

DRAWING TITLE: DISTRIBUTION MAIN 1 CH. 1+920 - CH. 2+560

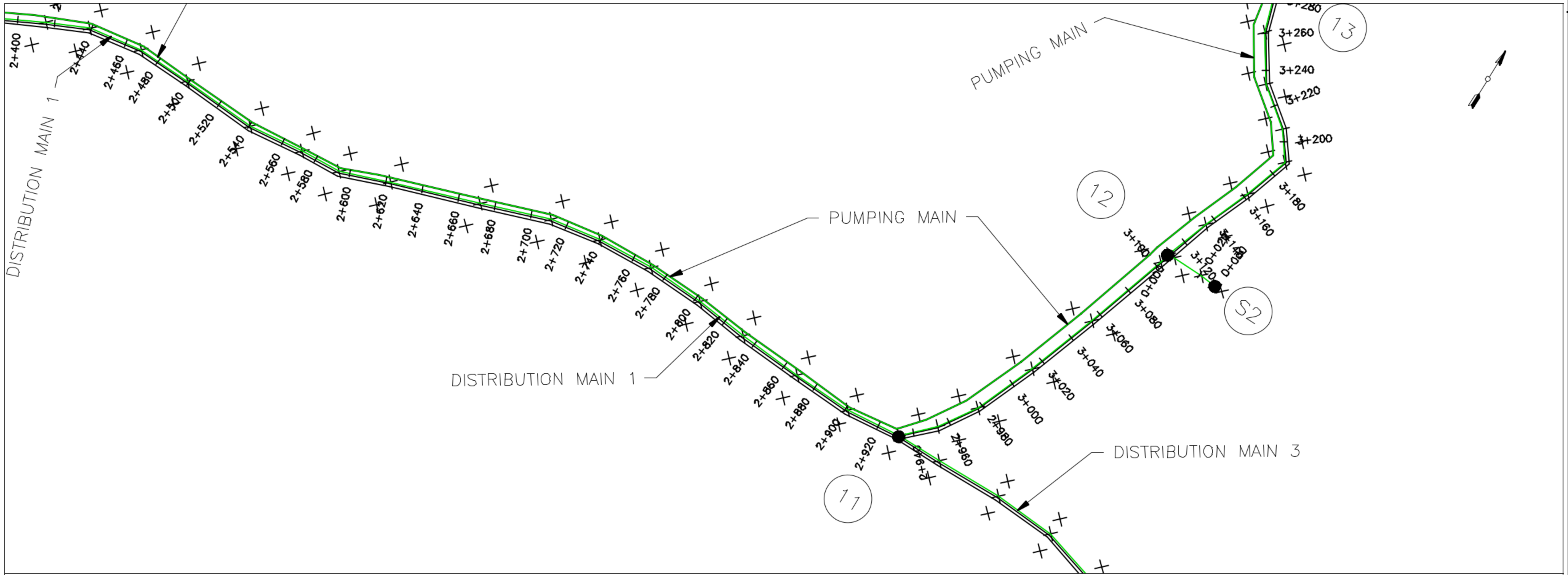
SCALE:	DESIGNED BY:	DRAWN BY:	CHECKED BY:
V. 1:250; H. 1:2500	KKG	SM	ORD

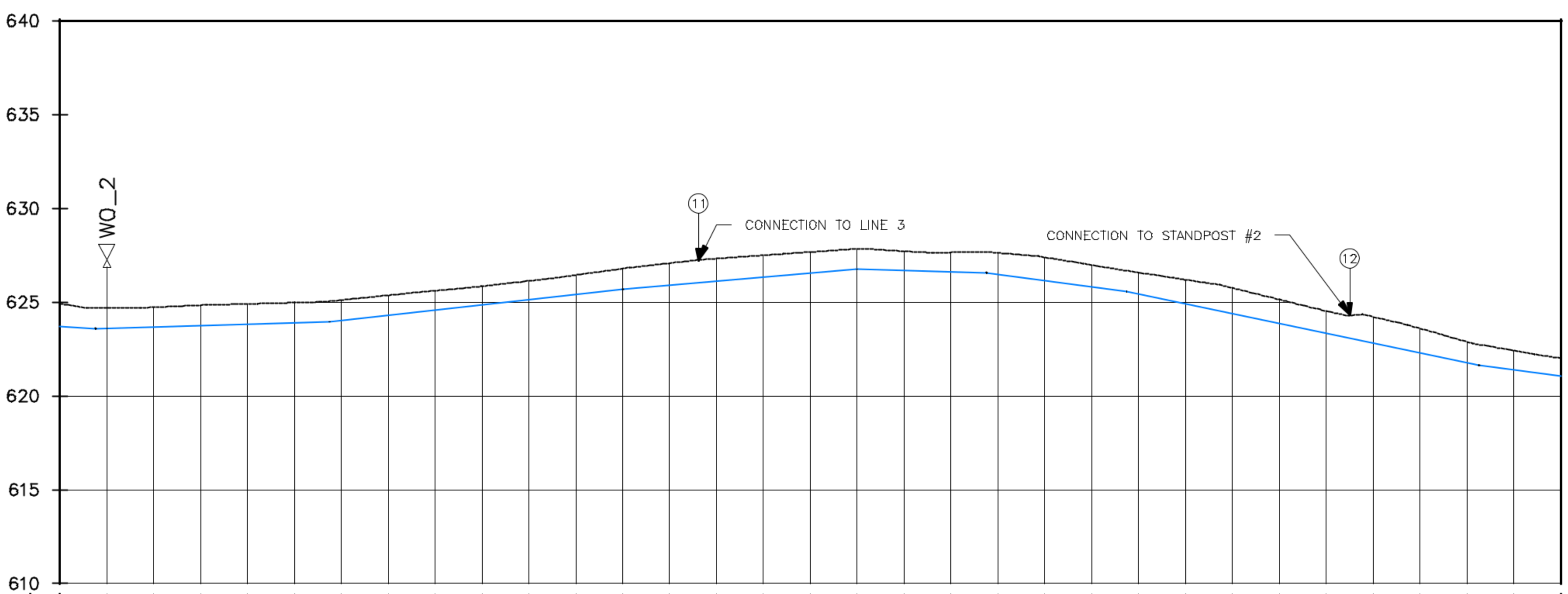
APPROVED BY:	DATE:	SHEET No.:	

PROJECT No.:	DRAWING No.:		REVISION:
KKG	JAN. '19	4of	6

Yelulu II WSS.230119.dwg 03.2007

190101 YLU DM -104 A





Chainage (m)	Ground Level (m)	Invert Level (m)	Pipe Details
2+560	624.90	623.72	OD75 HDPE TO PN6
2+580	624.70	623.62	
2+600	624.73	623.69	
2+620	624.84	623.76	
2+640	624.91	623.83	
2+660	624.97	623.90	
2+680	625.11	624.02	
2+700	625.37	624.30	
2+720	625.61	624.58	
2+740	625.84	624.85	
2+760	626.13	625.13	
2+780	626.44	625.41	
2+800	626.79	625.69	
2+820	627.08	625.90	
2+840	627.32	626.11	OD50 HDPE TO PN6
2+860	627.50	626.32	
2+880	627.67	626.53	
2+900	627.84	626.74	
2+920	627.72	626.68	
2+940	627.65	626.62	
2+960	627.62	626.49	
2+980	627.39	626.16	
3+000	626.98	625.82	
3+020	626.58	625.44	
3+040	626.20	624.92	
3+060	625.75	624.39	
3+080	625.14	623.87	
3+100	624.52	623.35	
3+120	624.22	622.82	
3+140	623.60	622.30	
3+160	622.89	621.77	
3+180	622.41	621.38	
3+200	622.02	621.04	

Notes:

VALUE

0 50 100 Meters

REV:	DESCRIPTION:	BY:	DATE:
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STATUS: DETAILED ENGINEERING DESIGN

CLIENT:

OXFAM

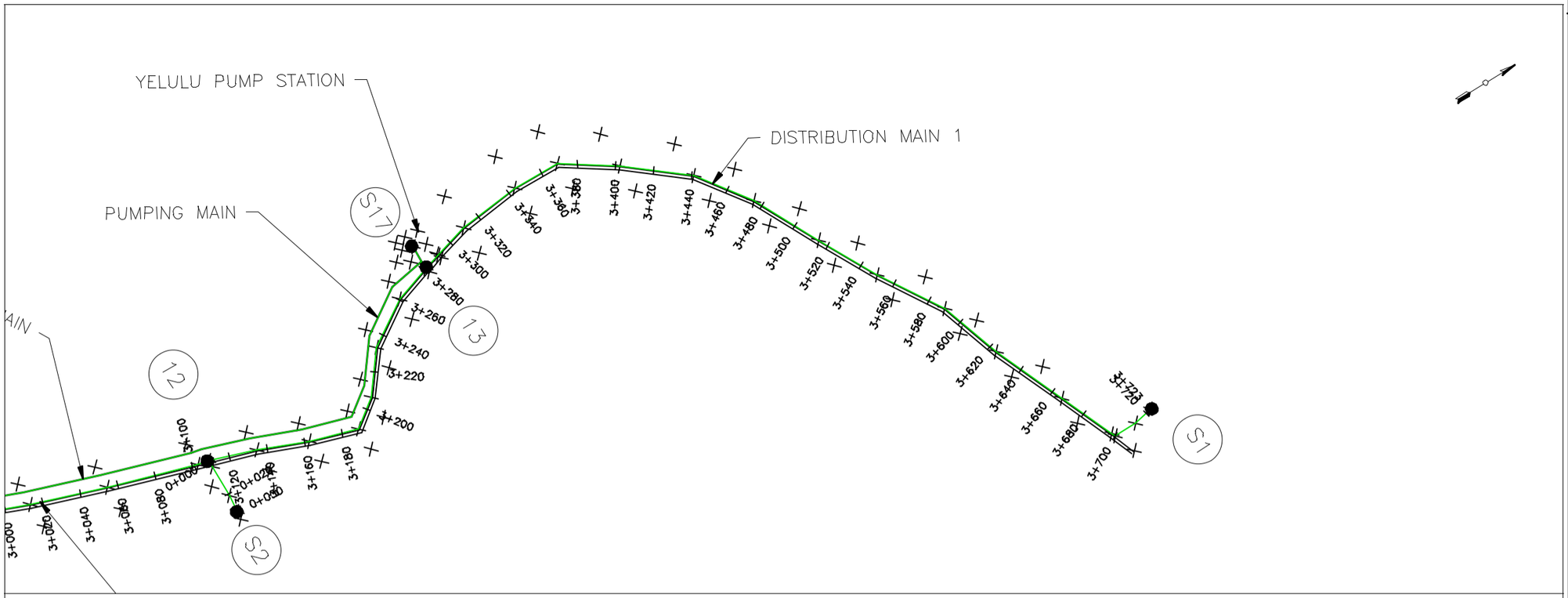
PROJECT: MOTORISATION OF YELULU WATER SYSTEM

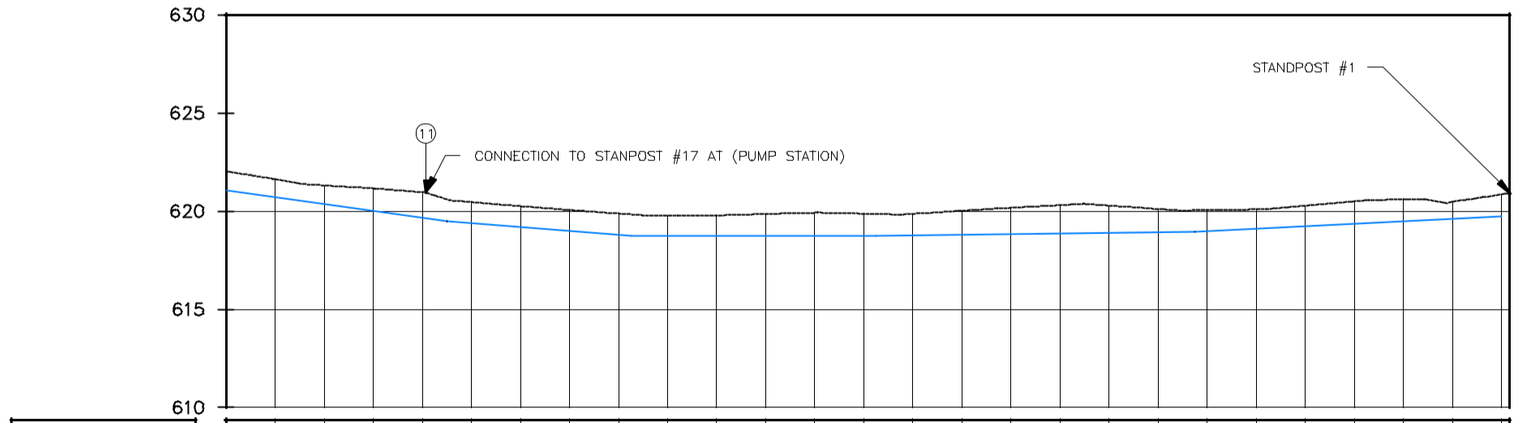
GERALD KOMAKECH
FLAT C7, ROVIS APARTMENTS, PLOT 49 NTINDA RD.
P. O. BOX 22858 KAMPALA
+256772443616

DRAWING TITLE: DISTRIBUTION MAIN 1 CH. 2+560 - CH. 3+200

SCALE:	DESIGNED BY:	DRAWN BY:	CHECKED BY:
V. 1:250; H. 1:2500	KKG	SM	ORD
APPROVED BY:	DATE:	SHEET No.:	
PROJECT No.:	DRAWING No.:		REVISION:
KKG	JAN. '19	5of	6

Yelulu II WSS.230119.dwg 03.2007





Chainage (m)	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	3+520	3+540	3+560	3+580	3+600	3+620	3+640	3+660	3+680	3+700	3+720	3+723
Pipe Details		OD50 HDPE TO PN6																										
Invert Level (m)	621.04	620.70	620.35	620.01	619.66	619.39	619.19	618.99	618.78	618.74	618.74	618.75	618.75	618.75	618.78	618.81	618.83	618.86	618.89	618.92	618.98	619.10	619.23	619.36	619.49	619.62	619.75	
Ground Level (m)	622.02	621.63	621.31	621.16	620.96	620.46	620.25	620.06	619.88	619.79	619.79	619.85	619.92	619.87	619.86	620.02	620.17	620.31	620.28	620.11	620.05	620.09	620.28	620.50	620.60	620.48	620.85	620.90

Notes:

VALUE

0 50 100 Meters

REV:	DESCRIPTION:	BY:	DATE:
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STATUS: DETAILED ENGINEERING DESIGN

CLIENT: OXFAM

PROJECT: MOTORISATION OF YELULU WATER SYSTEM

GERALD KOMAKECH
FLAT C7, ROVIS APARTMENTS, PLOT 49
NTINDA RD,
P. O. BOX 22858 KAMPALA
+256772443616

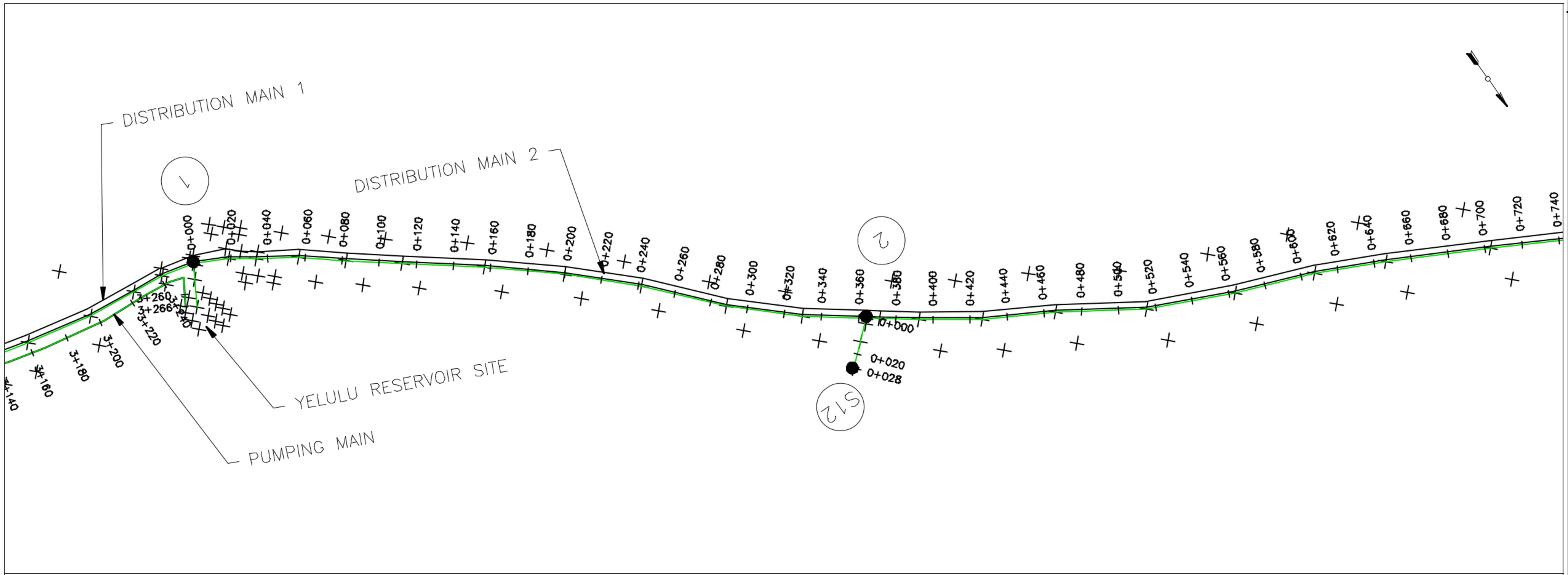
DRAWING TITLE: DISTRIBUTION MAIN 1 CH. 3+200 - CH. 3+723

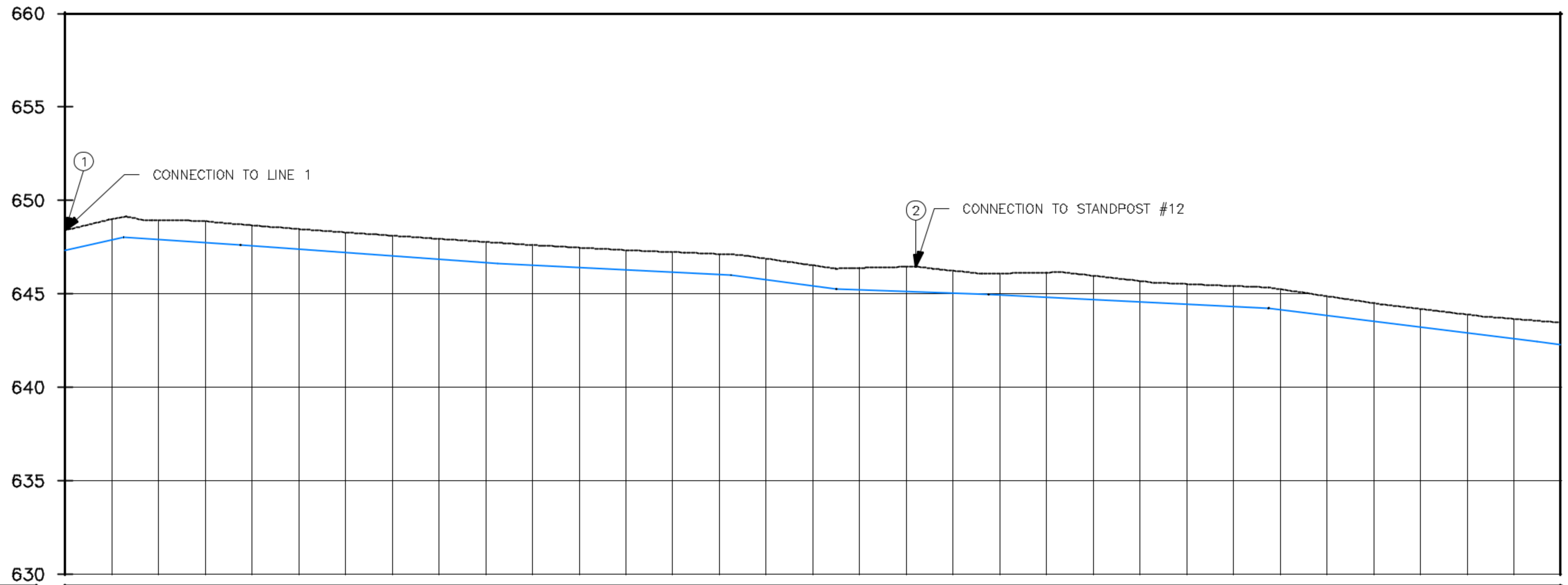
SCALE:	DESIGNED BY:	DRAWN BY:	CHECKED BY:
V. 1:250; H. 1:2500	KKG	SM	ORD
APPROVED BY:	DATE:	SHEET No.:	
PROJECT No.:	DRAWING No.:		REVISION:
KKG	JAN. '19	6of	6

Yelulu II WSS.230119.dwg

03.2007

190101 YLU DM -106 A





Chainage (m)	0+000	0+020	0+040	0+060	0+080	0+100	0+120	0+140	0+160	0+180	0+200
Ground Level (m)	648.42	649.00	648.94	648.88	648.66	648.47	648.29	648.12	647.94	647.78	647.61
Invert Level (m)	647.32	647.88	647.90	647.74	647.57	647.39	647.22	647.04	646.86	646.68	646.54
Pipe Details	OD75 HDPE TO PN6										

Chainage (m)	0+220	0+240	0+260	0+280	0+300	0+320	0+340	0+360	0+380	0+400	0+420
Ground Level (m)	647.48	647.34	647.24	647.13	646.89	646.53	646.39	646.46	646.24	646.10	646.15
Invert Level (m)	646.42	646.29	646.17	646.04	645.76	645.42	645.21	645.13	645.05	644.96	644.83

Chainage (m)	0+440	0+460	0+480	0+500	0+520	0+540	0+560	0+580	0+600	0+620	0+640
Ground Level (m)	645.97	645.69	645.53	645.42	645.25	644.88	644.51	644.20	643.90	643.66	643.46
Invert Level (m)	644.71	644.58	644.46	644.34	644.17	643.86	643.55	643.24	642.93	642.62	642.29

Notes:

VALUE

0 50 100 Meters

REV:	DESCRIPTION:	BY:	DATE:
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STATUS: DETAILED ENGINEERING DESIGN

CLIENT: OXFAM

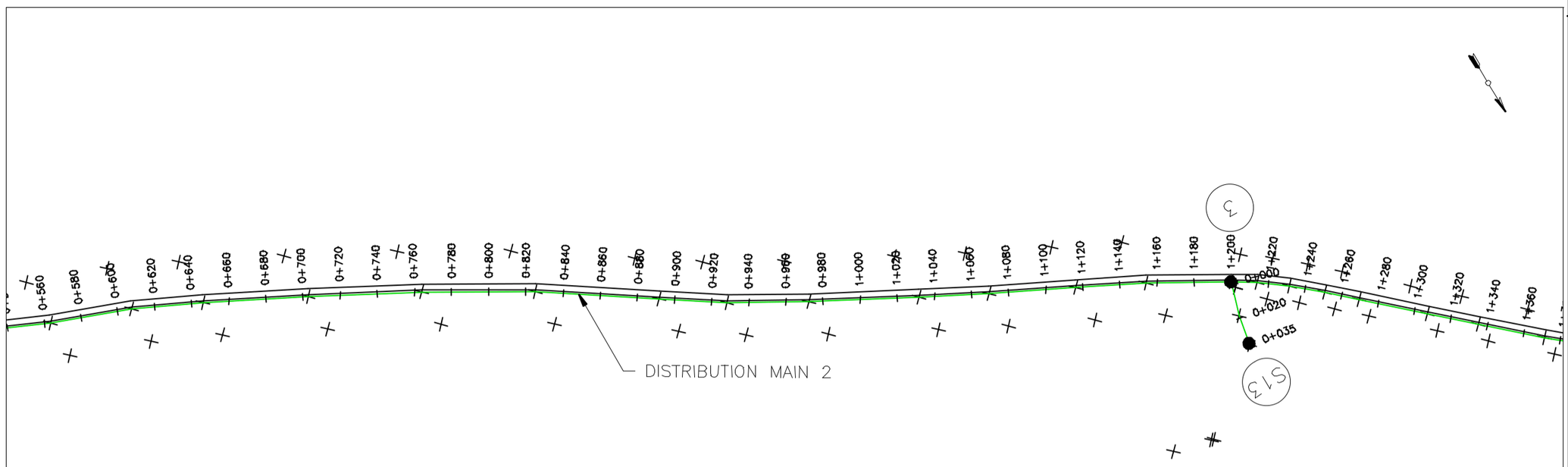
PROJECT: MOTORISATION OF YELULU WATER SYSTEM

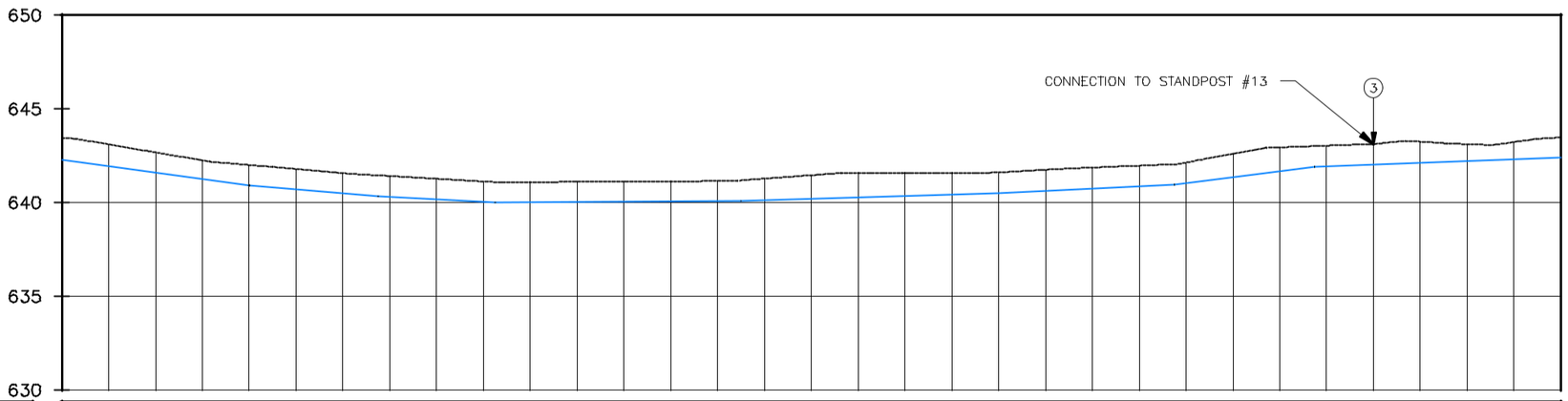
GERALD KOMAKECH
FLAT C7, ROVIS APARTMENTS, PLOT 49 NTINDA RD.
P. O. BOX 22858 KAMPALA
+256772443616

DRAWING TITLE: DISTRIBUTION MAIN 2 CH. 0+000 - CH. 0+640

SCALE:	DESIGNED BY:	DRAWN BY:	CHECKED BY:
APPROVED BY:	DATE: .	SHEET No.:	
V. 1:250; H. 1:2500	KKG	SM	QRD
PROJECT No.:	DRAWING No.:		REVISION:
KKG	JAN. '19	1of	4

03.2007 Yelulu II WSS.230119.dwg





Chainage (m)	Ground Level (m)	Invert Level (m)	Pipe Details
0+640	643.46	642.29	
0+660	643.11	641.94	OD75 HDPE TO PN6
0+680	642.68	641.60	
0+700	642.26	641.25	
0+720	642.01	640.91	
0+740	641.79	640.71	
0+760	641.58	640.51	
0+780	641.42	640.32	
0+800	641.28	640.18	
0+820	641.13	640.03	
0+840	641.10	640.01	
0+860	641.10	640.03	
0+880	641.11	640.05	
0+900	641.13	640.06	
0+920	641.16	640.08	
0+940	641.28	640.13	
0+960	641.47	640.21	
0+980	641.58	640.29	
1+000	641.57	640.36	
1+020	641.56	640.44	
1+040	641.62	640.52	
1+060	641.76	640.63	
1+080	641.88	640.75	
1+100	641.97	640.86	
1+120	642.14	641.03	
1+140	642.60	641.35	
1+160	642.95	641.68	
1+180	643.04	641.94	
1+200	643.13	642.03	OD50 HDPE TO PN6
1+220	643.25	642.12	
1+240	643.12	642.21	
1+260	643.23	642.30	
1+280	643.48	642.39	

Notes:

VALUE

0 50 100 Meters

REV:	DESCRIPTION:	BY:	DATE:
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STATUS: DETAILED ENGINEERING DESIGN

CLIENT: OXFAM

PROJECT: MOTORISATION OF YELULU WATER SYSTEM

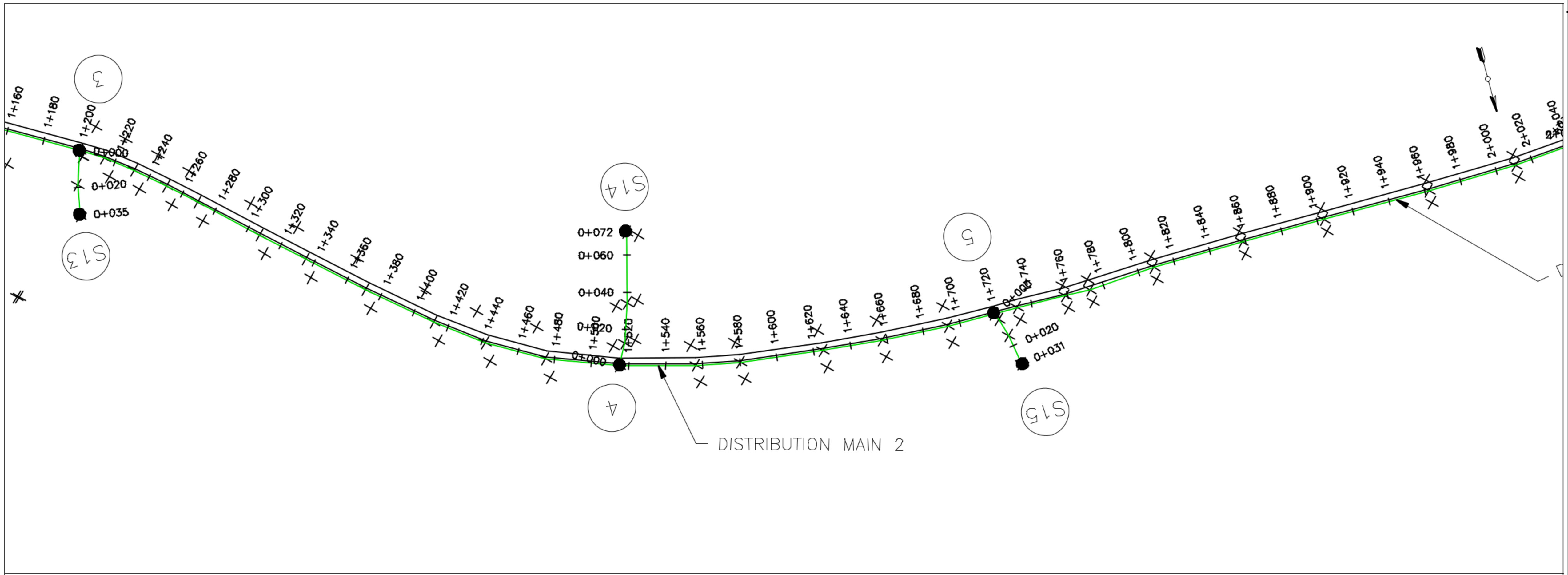
GERALD KOMAKECH
FLAT C7, ROVIS APARTMENTS, PLOT 49
NTINDA RD.
P. O. BOX 22858 KAMPALA
+256772443616

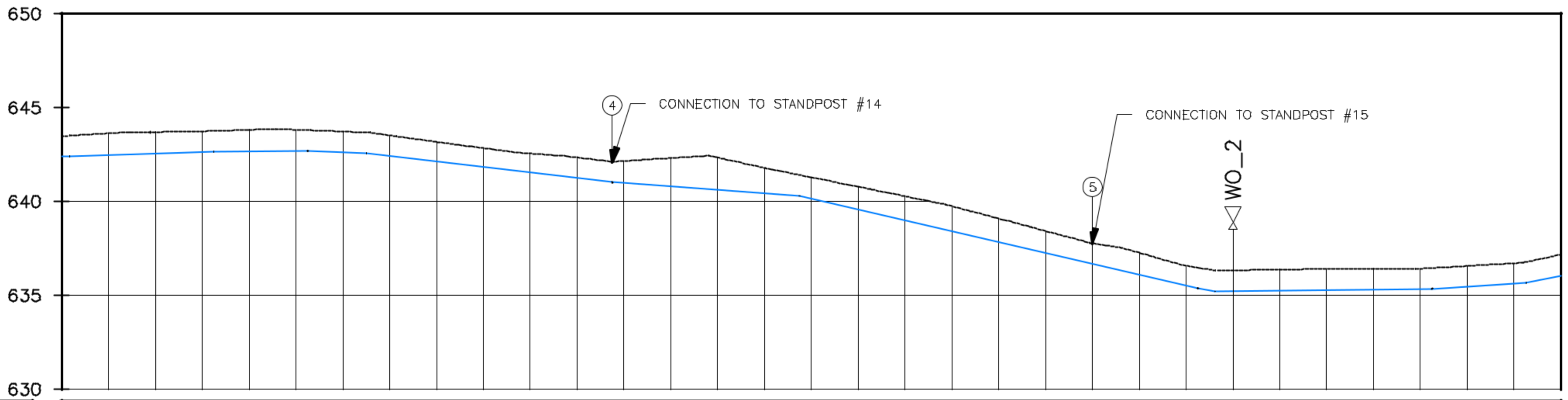
DRAWING TITLE: DISTRIBUTION MAIN 2
CH. 0+640 - CH. 1+280

SCALE:	DESIGNED BY:	DRAWN BY:	CHECKED BY:
V. 1:250 H. 1:2500	KKG	SM	ORD

APPROVED BY:	DATE:	SHEET No.:	
PROJECT No.:	DRAWING No.:		REVISION:
KKG	JAN. '19	2of	4

Yelulu II WSS.230119.dwg
03.2007





	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+600
Ground Level (m)	643.48	643.64	643.71	643.74	643.82	643.83	643.73	643.53	643.18	642.85	642.56	642.35	642.16	642.32	642.34	641.79	641.29
Invert Level (m)	642.39	642.48	642.56	642.64	642.68	642.70	642.63	642.43	642.14	641.84	641.54	641.25	640.98	640.80	640.63	640.45	640.17
Pipe Details	OD50 HDPE TO PN6																
Chainage (m)	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+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
Ground Level (m)	640.79	640.28	639.75	639.09	638.43	637.77	637.27	636.59	636.34	636.38	636.40	636.40	636.43	636.57	636.71	637.17
Invert Level (m)	639.59	639.01	638.43	637.85	637.27	636.69	636.11	635.53	635.24	635.27	635.30	635.33	635.35	635.48	635.64	636.03
Chainage (m)	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

Notes:

VALUE

0 50 100 Meters

REV:	DESCRIPTION:	BY:	DATE:
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STATUS: DETAILED ENGINEERING DESIGN

CLIENT: OXFAM

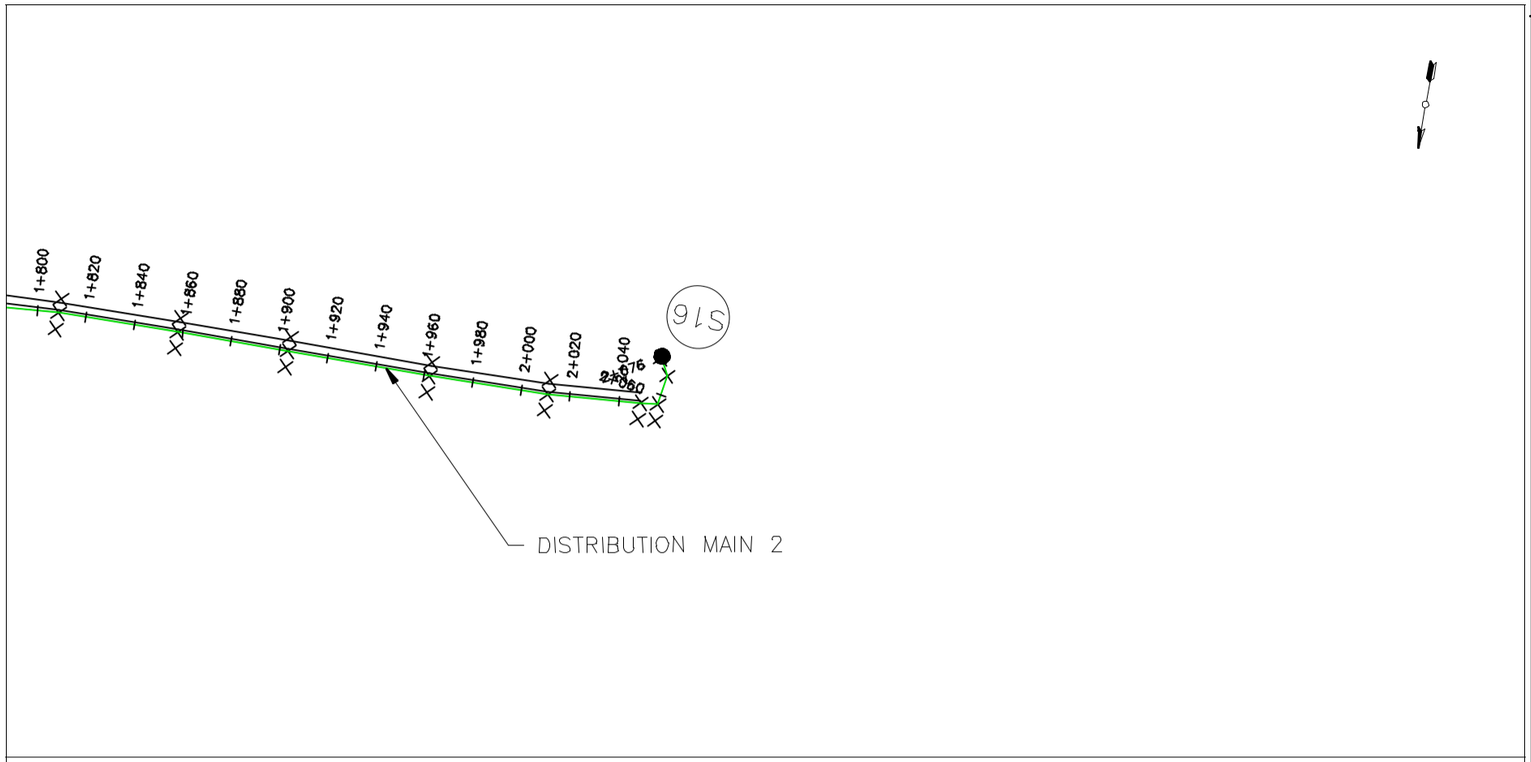
PROJECT: MOTORISATION OF YELULU WATER SYSTEM

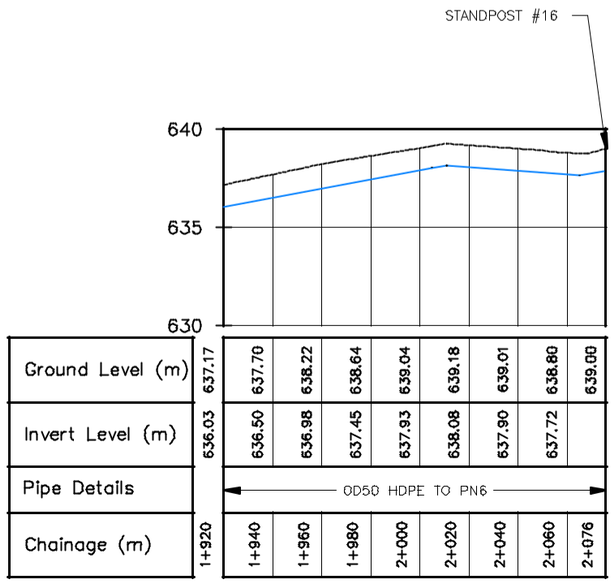
GERALD KOMAKECH
FLAT C7, ROVIS APARTMENTS, PLOT 49 NTINDA RD.
P. O. BOX 22858 KAMPALA
+256772443616

DRAWING TITLE: DISTRIBUTION MAIN 2 CH. 1+280 - CH. 1+920

SCALE:	DESIGNED BY:	DRAWN BY:	CHECKED BY:
V. 1:250; H. 1:2500	KKG	SM	ORD
APPROVED BY:	DATE:	SHEET No.:	
PROJECT No.:	DRAWING No.:		REVISION:
KKG	JAN. '19	3of	4

03.2007 Yelulu II WSS.230119.dwg





Ground Level (m)	637.17	637.70	638.22	638.64	639.04	639.18	639.01	638.80	639.00
Invert Level (m)	636.03	636.50	636.98	637.45	637.93	638.08	637.90	637.72	
Pipe Details		OD50 HDPE TO PN6							
Chainage (m)	1+920	1+940	1+960	1+980	2+000	2+020	2+040	2+060	2+076

Notes:

VALUE

0 50 100 Meters

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REV:	DESCRIPTION:	BY:	DATE:

STATUS:
DETAILED ENGINEERING DESIGN

CLIENT:

OXFAM

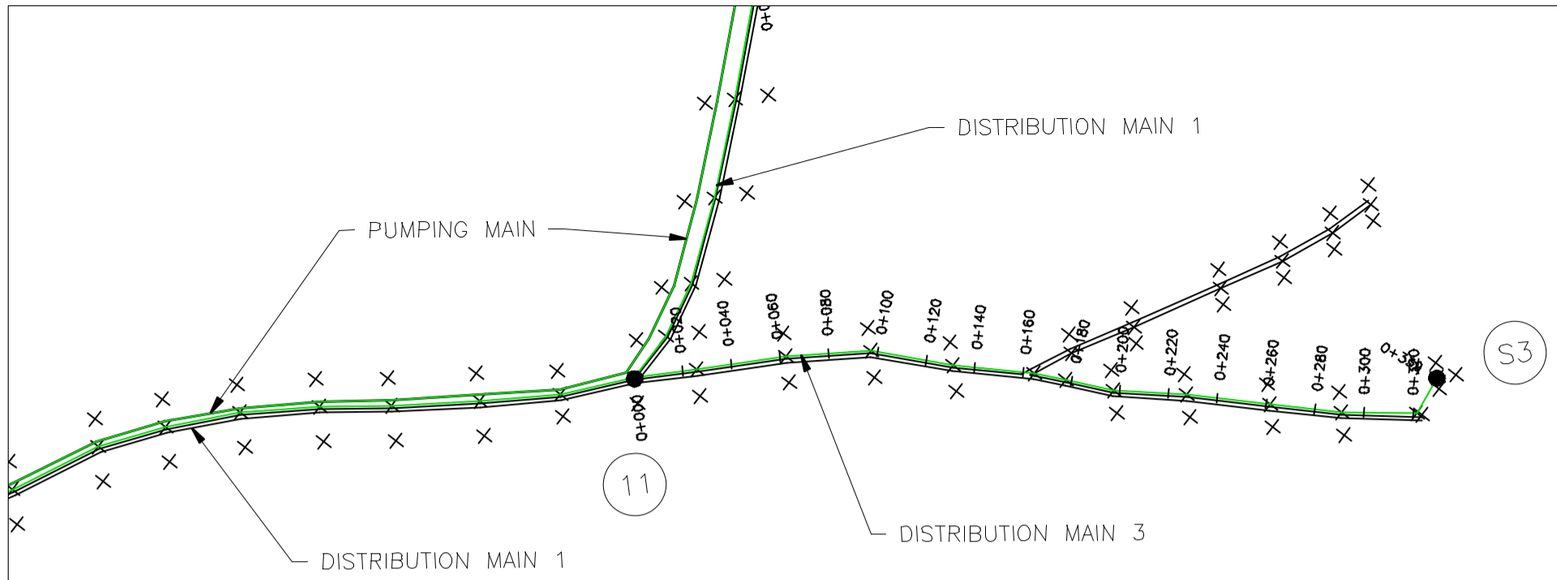
PROJECT:
MOTORISATION OF YELULU WATER SYSTEM

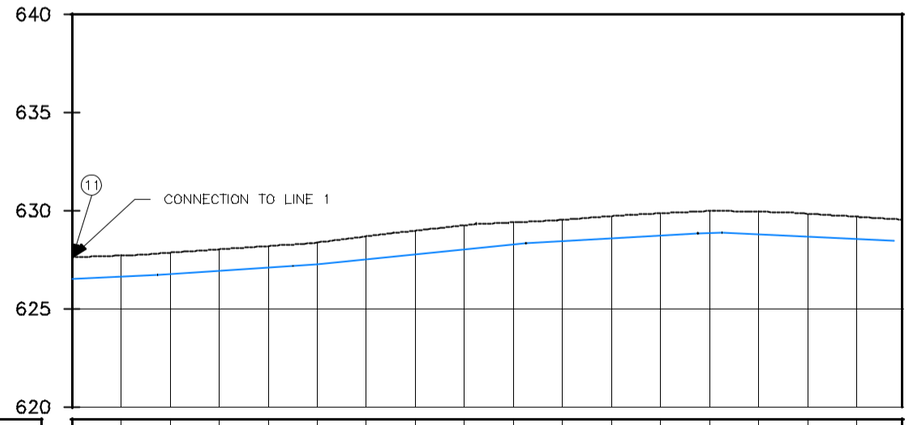
GERALD KOMAKECH
FLAT C7, ROVIS APARTMENTS, PLOT 49
NTINDA RD.
P. O. BOX 22858 KAMPALA
+256772443616

DRAWING TITLE:
DISTRIBUTION MAIN 2
CH. 1+920 - CH. 2+076

SCALE: V. 1:250 H. 1:2500	DESIGNED BY: KKG	DRAWN BY: SM	CHECKED BY: ORD
APPROVED BY:	DATE:	SHEET No.:	
PROJECT No.: KKG	DRAWING No.: JAN. '19	4of	REVISION: 4

Yelulu II WSS.230119.dwg
03.2007





Ground Level (m)	627.62	627.71	627.86	628.03	628.20	628.38	628.69	628.98	629.25	629.40	629.54	629.72	629.87	629.99	629.95	629.85	629.69	629.55
Invert Level (m)	626.52	626.64	626.76	626.93	627.09	627.28	627.53	627.78	628.02	628.27	628.45	628.60	628.74	628.87	628.80	628.68	628.56	
Pipe Details		OD32 HDPE TO PN6																
Chainage (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+339

Notes:

VALUE

0 50 100 Meters

REV:	DESCRIPTION:	BY:	DATE:
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STATUS: DETAILED ENGINEERING DESIGN

CLIENT:

OXFAM

PROJECT:

MOTORISATION OF YELULU WATER SYSTEM

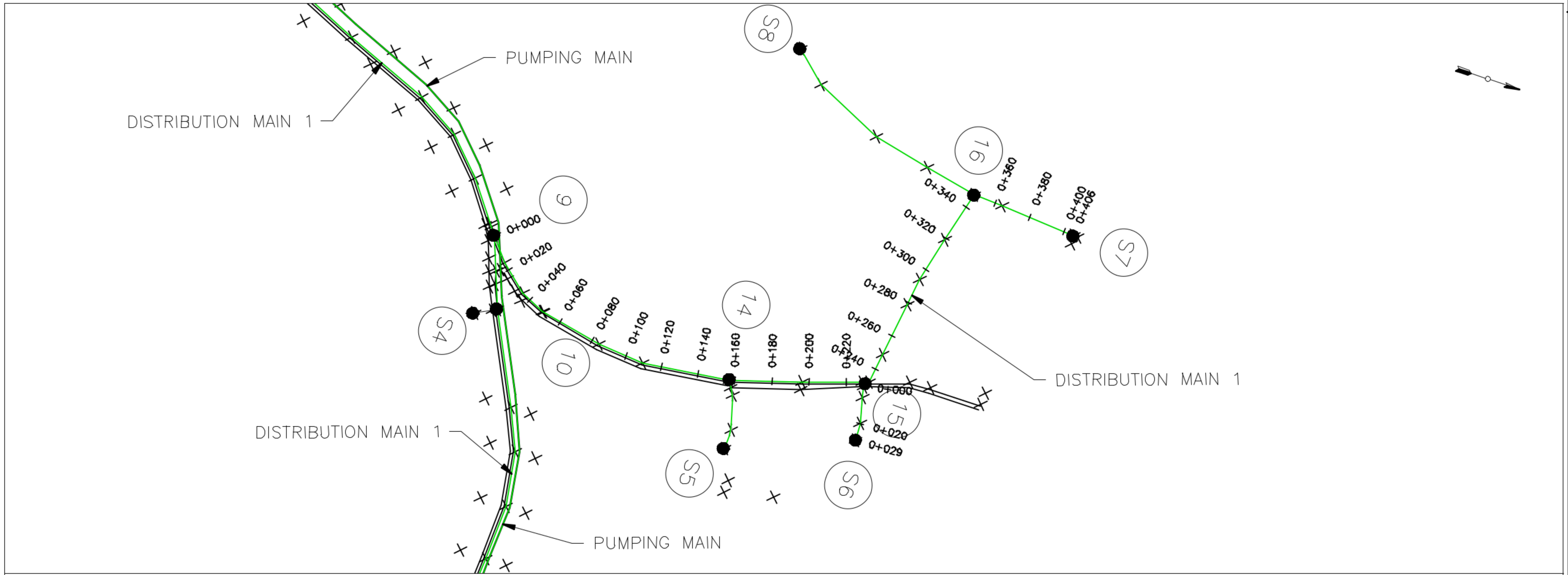
GERALD KOMAKECH
FLAT C7, ROVIS APARTMENTS, PLOT 49
NTINDA RD.
P. O. BOX 22858 KAMPALA
+256772443616

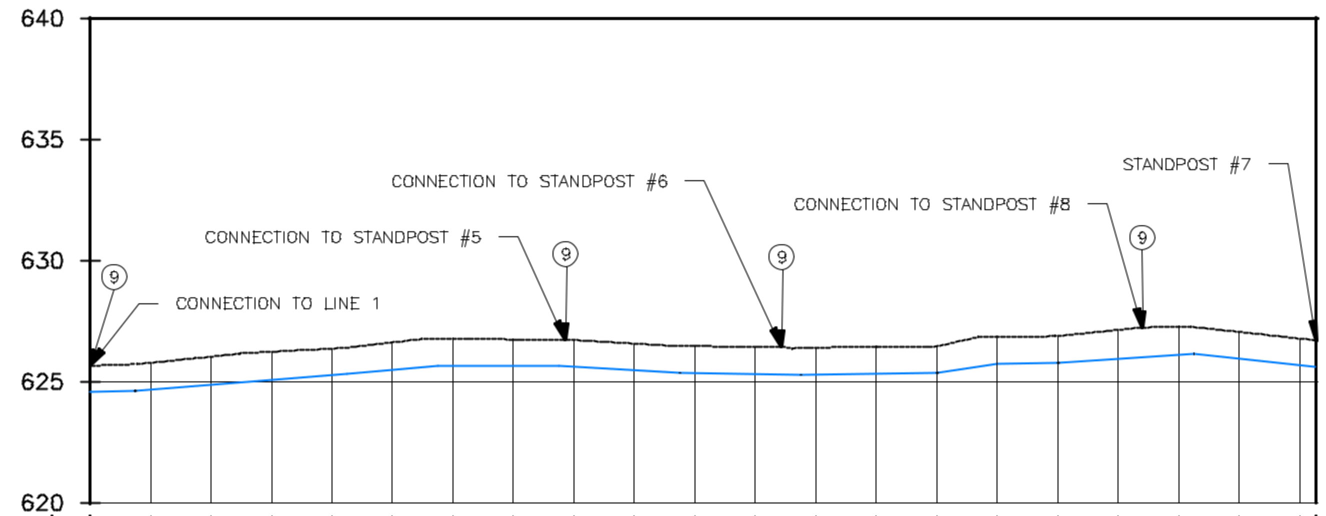
DRAWING TITLE:

DISTRIBUTION MAIN 3
CH. 0+000 - CH. 0+339

SCALE:	DESIGNED BY:	DRAWN BY:	CHECKED BY:
V. 1:250 H. 1:2500	KKG	SM	ORD
APPROVED BY:	DATE:	SHEET No.:	
PROJECT No.:	DRAWING No.:		REVISION:
KKG	JAN. '19	1of	1

Yelulu II WSS.230119.dwg
03.2007





Chainage (m)	Ground Level (m)	Invert Level (m)
0+000	625.66	624.56
0+020	625.78	624.67
0+040	626.03	624.87
0+060	626.24	625.06
0+080	626.37	625.26
0+100	626.62	625.48
0+120	626.76	625.66
0+140	626.75	625.65
0+160	626.72	625.61
0+180	626.58	625.47
0+200	626.46	625.36
0+220	626.45	625.32
0+240	626.40	625.29
0+260	626.42	625.32
0+280	626.45	625.35
0+300	626.85	625.75
0+320	626.89	625.79
0+340	627.14	625.95
0+360	627.26	626.11
0+380	627.05	625.95
0+400	626.78	625.68
0+406	626.71	

Pipe Details: OD40 HDPE TO PN6 (0+000 – 0+360); OD20 HDPE TO PN6 (0+360 – 0+406)

03.2007 Yelulu II WSS.230119.dwg

Notes:

VALUE

0 50 100 Meters

REV:	DESCRIPTION:	BY:	DATE:
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STATUS: DETAILED ENGINEERING DESIGN

CLIENT: OXFAM

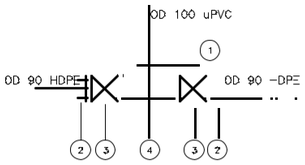
PROJECT: MOTORISATION OF YELULU WATER SYSTEM

GERALD KOMAKECH
FLAT C7, ROVIS APARTMENTS, PLOT 49 NTINDA RD.
P. O. BOX 22858 KAMPALA
+256772443616

DRAWING TITLE: DISTRIBUTION MAIN 7 CH. 0+000 - CH. 0+406

SCALE:	DESIGNED BY:	DRAWN BY:	CHECKED BY:
V. 1:250; H. 1:2500	KKG	SM	ORD
APPROVED BY:	DATE:	SHEET No.:	
PROJECT No.:	DRAWING No.:		REVISION:
KKG	JAN. '19	1of	1

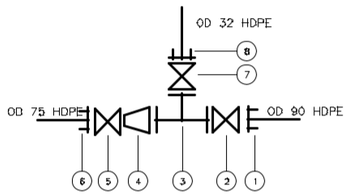
NODE 1



SCHEDULE OF PIPEWORK & FITTINGS

ITEM	DESCRIPTION	SIZE(DN)	QTY.	PN
1.	FLANGED ADAPTOR	100	01	10
2.	FLANGED ADAPTOR	80	02	10
3.	FLANGED GATE VALVE	80	02	10
4.	ALL FLANGED TEE	80/100/80	03	10

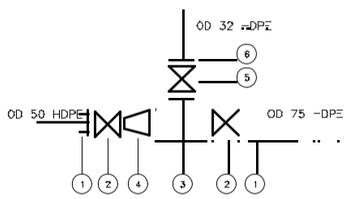
NODE 2



SCHEDULE OF PIPEWORK & FITTINGS

ITEM	DESCRIPTION	SIZE(DN)	QTY.	PN
1.	FLANGED ADAPTOR	65	1	10
2.	FLANGED GATE VALVE	65	1	10
3.	FLANGED TEE	65/50/25	1	10
4.	FLANGED TAPER	65/50	1	10
5.	FLANGED GATE VALVE	50	1	10
6.	FLANGED ADAPTOR	50	1	10
7.	FLANGED GATE VALVE	25	1	10
8.	FLANGED ADAPTOR	25	1	10

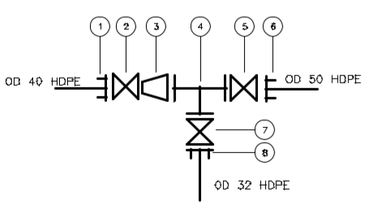
NODE 3



SCHEDULE OF PIPEWORK & FITTINGS

ITEM	DESCRIPTION	SIZE(DN)	QTY.	PN
1.	FLANGED ADAPTOR	40	02	10
2.	FLANGED GATE VALVE	40	02	10
3.	ALL FLANGED TEE	65/25/65	01	10
4.	FLANGED TAPER	65/40	01	10
5.	FLANGED GATE VALVE	25	01	10
6.	FLANGED ADAPTOR	25	01	10

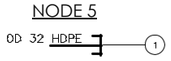
NODE 4



SCHEDULE OF PIPEWORK & FITTINGS

ITEM	DESCRIPTION	SIZE(DN)	QTY.	PN
1.	FLANGED ADAPTOR	35	1	10
2.	FLANGED GATE VALVE	35	1	10
3.	FLANGED TAPER	50/35	1	10
4.	ALL FLANGED TEE	50/35/50	1	10
5.	FLANGED GATE VALVE	50	1	10
6.	FLANGED ADAPTOR	50	1	10
7.	FLANGED GATE VALVE	25	1	10
8.	FLANGED ADAPTOR	25	1	10

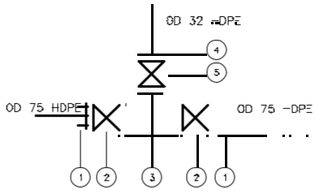
NODE 5



SCHEDULE OF PIPEWORK & FITTINGS

ITEM	DESCRIPTION	SIZE(DN)	QTY.	PN
1.	END CAP	25	01	10

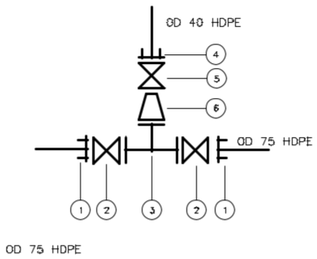
NODE 6,7 &8



SCHEDULE OF PIPEWORK & FITTINGS

ITEM	DESCRIPTION	DN	QTY.	PN
1.	FLANGED ADAPTOR	65	02	10
2.	FLANGED GATE VALVE	65	02	10
3.	ALL FLANGED TEE	65/25/65	01	10
4.	FLANGED ADAPTOR	25	01	10
5.	FLANGED GATE VALVE	25	01	10

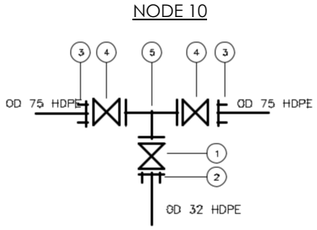
NODE 9



SCHEDULE OF PIPEWORK & FITTINGS

ITEM	DESCRIPTION	SIZE(DN)	QTY.	PN
1.	FLANGED ADAPTOR	65	02	10
2.	FLANGED GATE VALVE	65	02	10
3.	ALL FLANGED TEE	75/25/75	01	10
4.	FLANGED ADAPTOR	35	01	10
5.	FLANGED GATE VALVE	35	01	10
6.	FLANGED TAPER	35	01	10

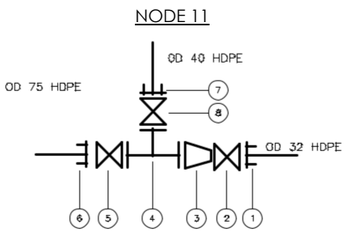
NODE 10



SCHEDULE OF PIPEWORK & FITTINGS

ITEM	DESCRIPTION	SIZE(DN)	QTY.	PN
1.	FLANGED GATE VALVE	25	01	10
2.	FLANGED ADAPTOR	25	01	10
3.	FLANGED ADAPTOR	65	02	10
4.	FLANGED GATE VALVE	65	02	10
5.	ALL FLANGED TEE	65/25/65	1	10

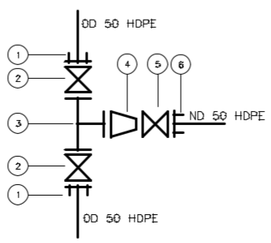
NODE 11



SCHEDULE OF PIPEWORK & FITTINGS

ITEM	DESCRIPTION	SIZE(DN)	QTY.	PN
1.	FLANGED ADAPTOR	25	1	10
2.	FLANGED GATE VALVE	25	1	10
3.	FLANGED TAPER	65/25	1	10
4.	ALL FLANGED TEE	65/50	1	10
5.	FLANGED GATE VALVE	65	1	10
6.	FLANGED ADAPTOR	65	1	10
7.	FLANGED ADAPTOR	35	1	10
8.	FLANGED GATE VALVE	35	1	10

NODE 12



SCHEDULE OF PIPEWORK & FITTINGS

ITEM	DESCRIPTION	SIZE(DN)	QTY.	PN
1.	FLANGED ADAPTOR	40	02	10
2.	FLANGED GATE VALVE	40	02	10
3.	ALL FLANGED TEE	40/25/40	01	10
4.	FLANGED TAPER	40/25	01	10
5.	FLANGED GATE VALVE	25	01	10
6.	FLANGED ADAPTOR	25	01	10

Notes:

VALUE

REV:	DESCRIPTION:	BY:	DATE:
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STATUS: DETAILED ENGINEERING DESIGN

CLIENT:

OXFAM

PROJECT: MOTORISATION OF YELULU WATER SYSTEM

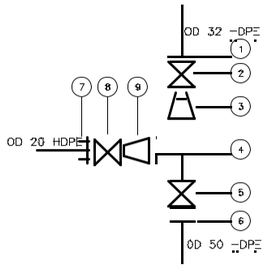
GERALD KOMAKECH
FLAT C7, ROVIS APARTMENTS, PLOT 49 NTINDA
RD. P. O. BOX 22858 KAMPALA +256772443616

DRAWING TITLE: NODE DETAILS - 1

SCALE:	DESIGNED BY:	DRAWN BY:	CHECKED BY:
NTS	KKG	SM	ORD
APPROVED BY:	DATE:	SHEET No.:	
KKG	JAN. '19	1of	2
PROJECT No.:	DRAWING No.:	REVISION:	
190101	YLU ND 100	A	

Yelulu II WSS Node Details.150219.dwg
19.03.2007

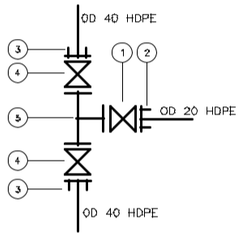
NODE 13



SCHEDULE OF PIPEWORK & FITTINGS

ITEM	DESCRIPTION	SIZE(DN)	QTY.	PN
1.	FLANGED ADAPTOR	25	1	10
2.	FLANGED GATE VALVE	25	1	10
3.	C FLANGED GATE VALVE	50	1	10
4.	FLANGED TAPER	40/25	1	10
5.	FLANGED GATE VALVE	40	1	10
6.	FLANGED ADAPTOR	40	1	10
7.	FLANGED ADAPTOR	15	1	10
8.	FLANGED GATE VALVE	15	1	10
9.	FLANGED TAPER	40/15	1	10

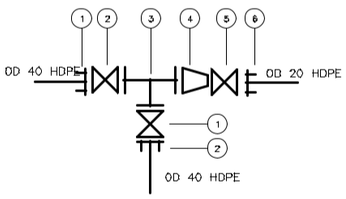
NODE 14



SCHEDULE OF PIPEWORK & FITTINGS

ITEM	DESCRIPTION	SIZE(DN)	QTY.	PN
1.	FLANGED GATE VALVE	15	01	10
2.	ADAPTOR	15	01	10
3.	FLANGED ADAPTOR	35	02	10
4.	FLANGED GATE VALVE	35	02	10
5.	FLANGED TEE	35/15/35	01	10

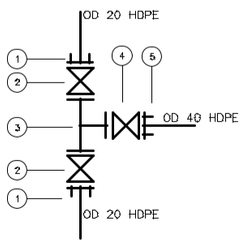
NODE 15



SCHEDULE OF PIPEWORK & FITTINGS

ITEM	DESCRIPTION	SIZE(DN)	QTY.	PN
1.	FLANGED ADAPTOR	35	02	10
2.	FLANGED GATE VALVE	35	02	10
3.	FLANGED TEE	35/15/35	02	10
4.	FLANGED TAPER	35/15	01	10
5.	FLANGED GATE VALVE	15	01	10
6.	FLANGED ADAPTOR	15	1	10

NODE TN16



SCHEDULE OF PIPEWORK & FITTINGS

ITEM	DESCRIPTION	SIZE(DN)	QTY.	PN
1.	ADAPTOR	15	02	10
2.	GATE VALVE	15	02	10
3.	TEE	15/35/15	01	10
4.	GATE VALVE	35	01	10
5.	ADAPTOR	35	01	10

Notes:

VALUE

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REV:	DESCRIPTION:	BY:	DATE:

STATUS: DETAILED ENGINEERING DESIGN

CLIENT:

OXFAM

PROJECT:

MOTORISATION OF YELULU WATER SYSTEM

GERALD KOMAKECH
FLAT C7, ROVIS APARTMENTS, PLOT 49 NTINDA RD.
P. O. BOX 22858 KAMPALA
+256772443616

DRAWING TITLE: NODE DETAILS - 2

SCALE:	DESIGNED BY:	DRAWN BY:	CHECKED BY:
NTS	KKG	SM	ORD
APPROVED BY:	DATE:	SHEET No.:	
KKG	JAN. '19	2of	2
PROJECT No.:	DRAWING No.:	REVISION:	
190101	YLU ND 101	A	

GENERAL NOTES FOR STANDARD DETAIL DRAWINGS

1) Unless flexibility is otherwise provided, where pipes enter or leave concrete structures, or anchor blocks, flexible joints are to be provided as shown in standard Detail Nr SD 137 .

2) 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.

3) Bases and thrust faces of anchor blocks are to be cast against undisturbed ground, or against blinding cast against undisturbed ground.

4) Pipework joints as shown for the water supply details are diagrammatic only.

5) The following notes apply to reinforced concrete chambers.

a) Concrete in walls and base and cover slab

Characteristic strength (N/mm²):	30
Maximum aggregate size (mm):	20
Cement type:	SR
Minimum cement content (kg/m³):	330
Maximum cement content (kg/m³):	400
Maximum free water/cement ratio:	0.47

b) Concrete in blinding

Characteristic strength (N/mm²):	15
Maximum aggregate size (mm):	40
Cement type:	SR
Minimum cement content (kg/m³):	230

c) Cover to reinforcement 40mm unless positioned centrally

Notes:

VALUE

REV:	DESCRIPTION:	BY:	DATE:
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STATUS: DETAILED ENGINEERING DESIGN

CLIENT:

OXFAM

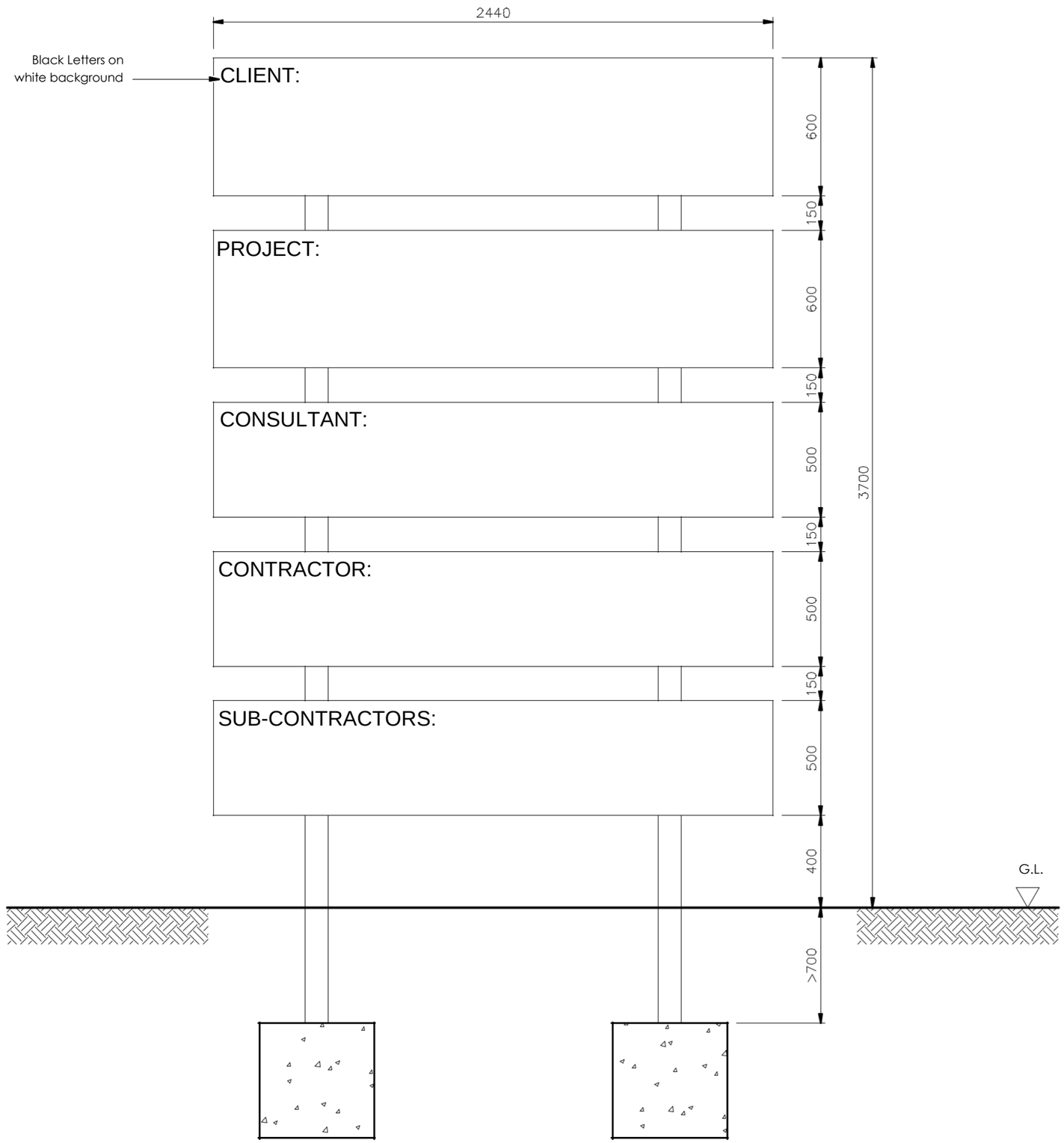
PROJECT:

MOTORISATION OF YELULU
WATER SYSTEM

GERALD KOMAKECH
FLAT C7, ROVIS APARTMENTS, PLOT 49
NTINDA RD.
P. O. BOX 22858 KAMPALA
+256772443616

DRAWING TITLE: GENERAL NOTES

SCALE:	DESIGNED BY:	DRAWN BY:	CHECKED BY:
NTS	KKG	SM	ORD
APPROVED BY:	DATE:	SHEET No.:	
NKG	JAN '18	1of1	
PROJECT No.:	DRAWING No.:		REVISION:
190101	SD 100		A



OXFAM

MOTORISATION OF YELULU
WATER SYSTEM
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GERALD KOMAKECH
FLAT C7, ROVIS APARTMENTS, PLOT 49 NTINDA RD.
P. O. BOX 22858 KAMPALA
+256772443616

Notes:

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REV:	DESCRIPTION:	BY:	DATE:

STATUS: DETAILED ENGINEERING DESIGN

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PROJECT:

DRAWING TITLE: CONTRACT SIGN BOARD
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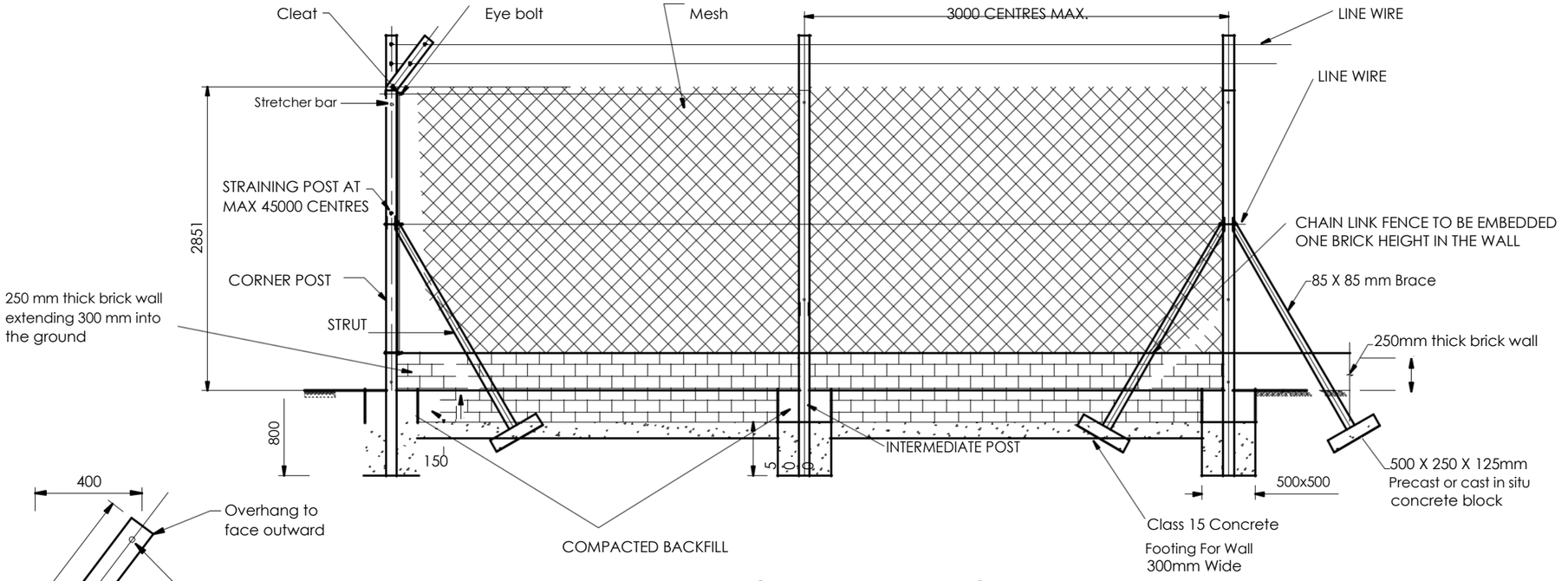
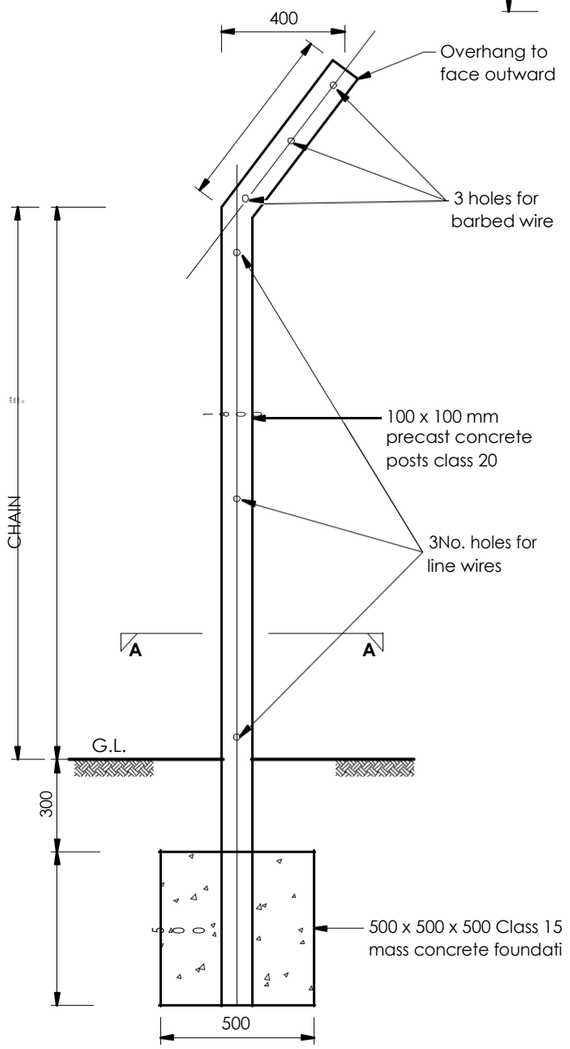
SCALE:	DESIGNED BY:	DRAWN BY:	CHECKED BY:
NTS	KKG	SM	ORD
APPROVED BY:	DATE:	SHEET No.:	
KKG	JAN. '19	1of	1
PROJECT No.:	DRAWING No.:		REVISION:
190101	SD-101		----



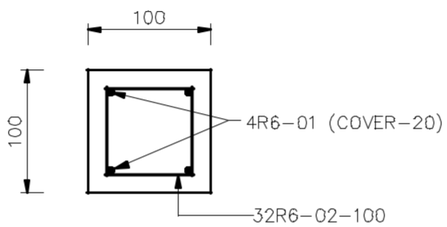
CHAINLINK FENCE

1:50



FENCE POST

1:20



SECTION A - A

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REV:	DESCRIPTION:	BY:	DATE:

STATUS: DETAILED ENGINEERING DESIGN

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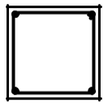
MOTORISATION OF YELULU
WATER SYSTEM

GERALD KOMAKECH
FLAT C7, ROVIS APARTMENTS, PLOT 49 NTINDA RD.
P. O. BOX 22858 KAMPALA
+256772443616

DRAWING TITLE: CHAINLINK FENCING

SCALE:	DESIGNED BY:	DRAWN BY:	CHECKED BY:
NTS	KKG	SM	ORD
APPROVED BY:	DATE:	SHEET No.:	
KKG	JAN. '19	1of	1
PROJECT No.:	DRAWING No.:		REVISION:
190101	SD-104		----



R16

R6–300

SECTION A - A

N.T.S

SECTION A

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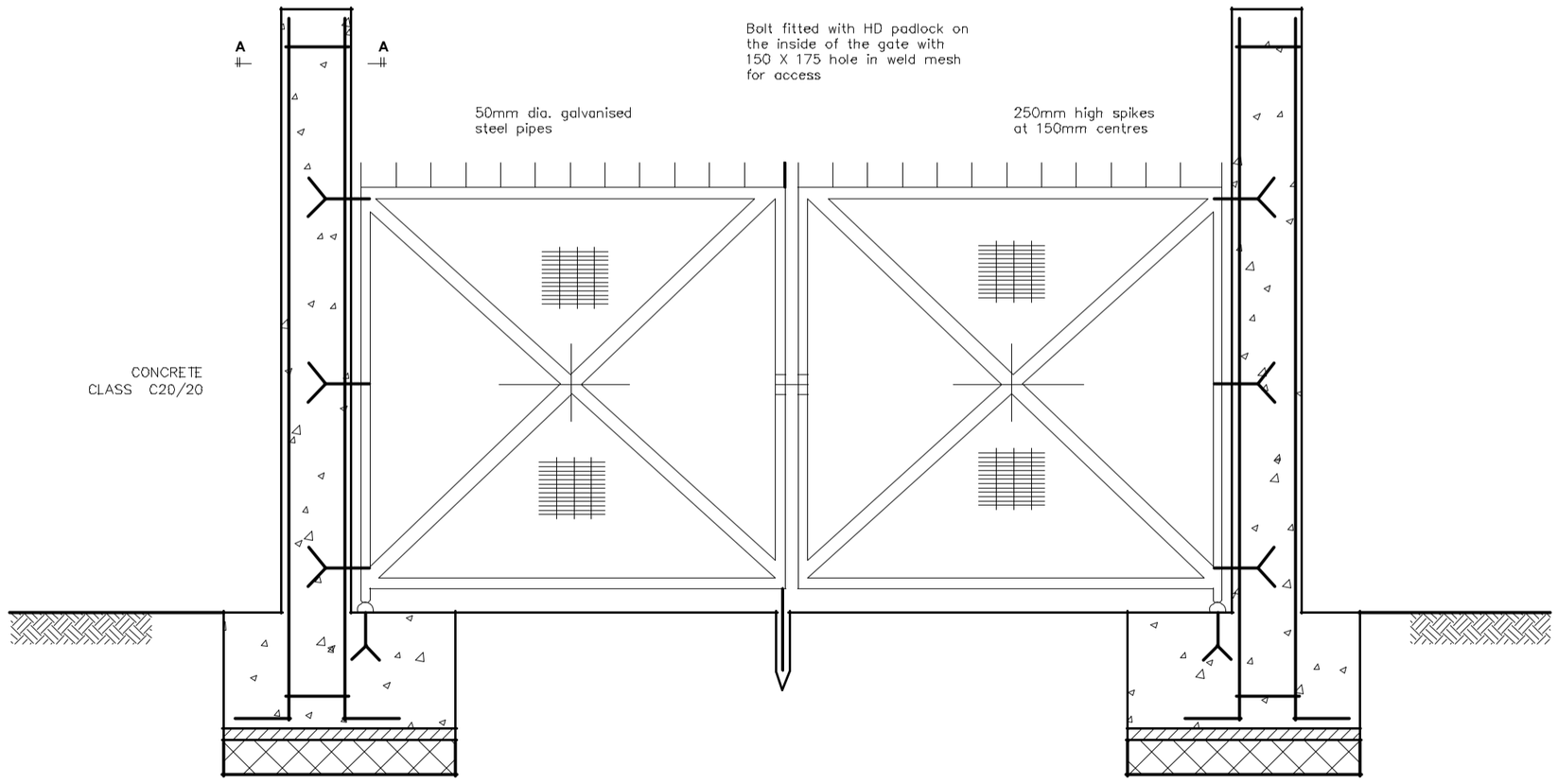

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STATUS: DETAILED ENGINEERING DESIGN

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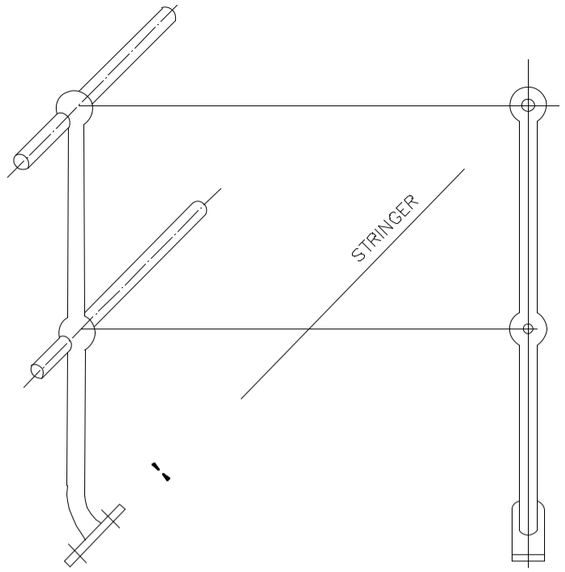
PROJECT:

MOTORISATION OF YELULU WATER SYSTEM

GERALD KOMAKECH
FLAT C7, ROVIS APARTMENTS, PLOT 49 NTINDA RD.
P. O. BOX 22858 KAMPALA
+256772443616

DRAWING TITLE: SD-105B DOUBLE GATE

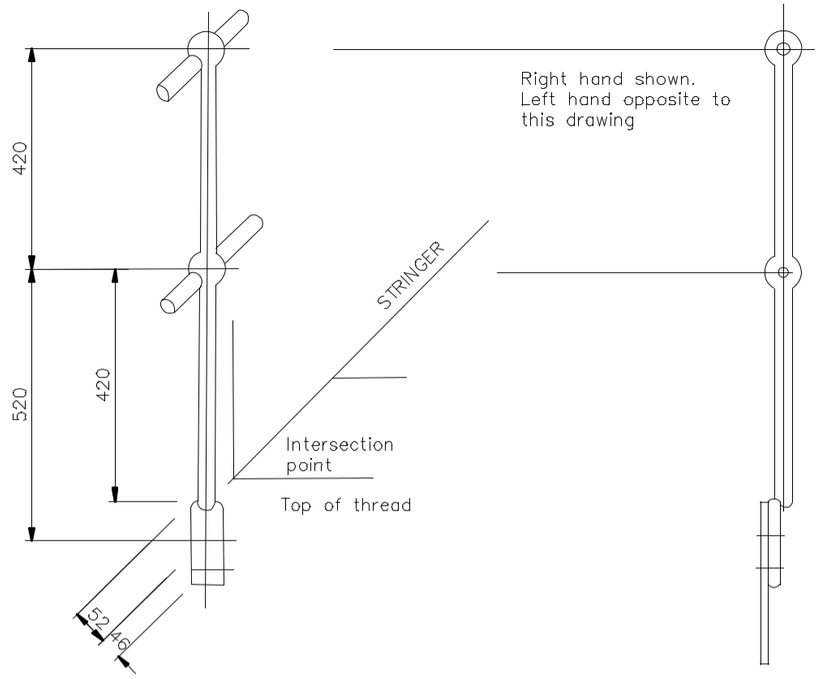
SCALE:	DESIGNED BY:	DRAWN BY:	CHECKED BY:
NTS	KKG	SM	ORD
APPROVED BY:	DATE:	SHEET No.:	
KKG	JAN. '19	1of	1
PROJECT No.:	DRAWING No.:		REVISION:
190101	----		----



TYPE 'A'

FOR USE ON STAIRCASE STRINGER

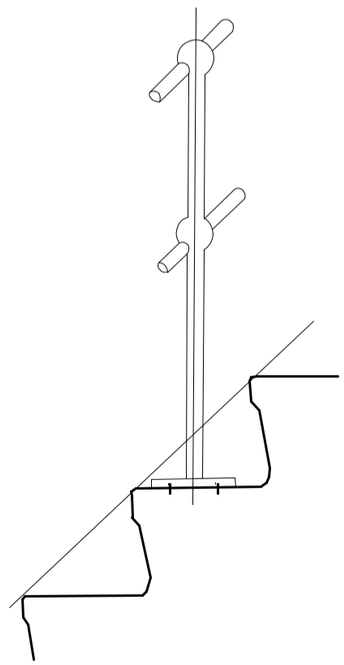
N.T.S.

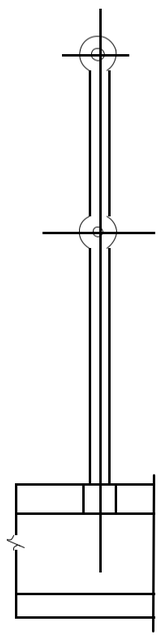


TYPE 'B'

FOR USE ON FLAT STAIRCASE STRINGER

N.T.S.





TYPE 'C'

FOR USE ON CONCRETE STAIR TREADS

N.T.S.

Notes:

1. All stanchions to be solid forged steel to BS 4380 or BS 24 PART 4.
2. Minimum diameter 32mm, minimum ball diameter, 60mm drilled 35mm for hand rails.
3. All fixing holes 18mm diameter for M16 bolts
4. Maximum spacing of verticals 1830mm

REV:	DESCRIPTION:	BY:	DATE:
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STATUS: DETAILED ENGINEERING DESIGN

CLIENT:

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PROJECT:

MOTORISATION OF YELULU
WATER SYSTEM

GERALD KOMAKECH
FLAT C7, ROVIS APARTMENTS, PLOT 49 NTINDA RD.
P. O. BOX 22858 KAMPALA
+256772443616

DRAWING TITLE:

SD 106A FORGED STEEL STANCHION

SCALE:	DESIGNED BY:	DRAWN BY:	CHECKED BY:
NTS	KKG	SM	ORD
APPROVED BY:	DATE:	SHEET No.:	
KKG	JAN. '19	1of 1	
PROJECT No.:	DRAWING No.:	REVISION:	
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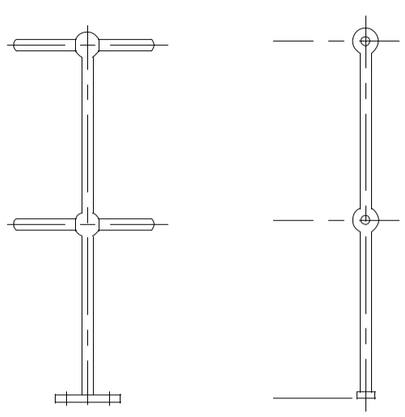
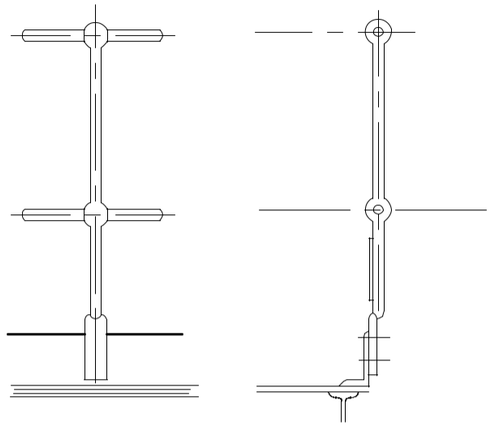


TYPE 'D'

FOR USE ON FLAT SURFACES

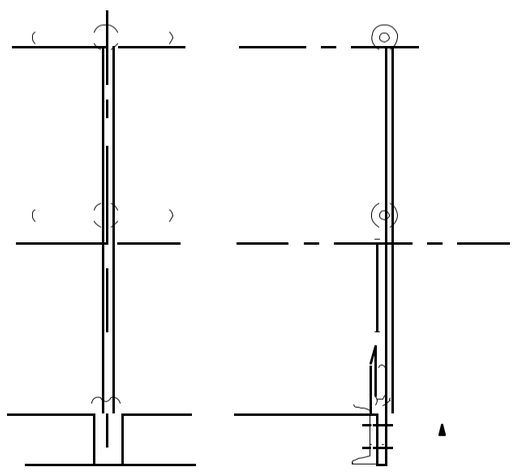
N.T.S.



TYPE 'E'

FOR USE ON KERB ANGLES

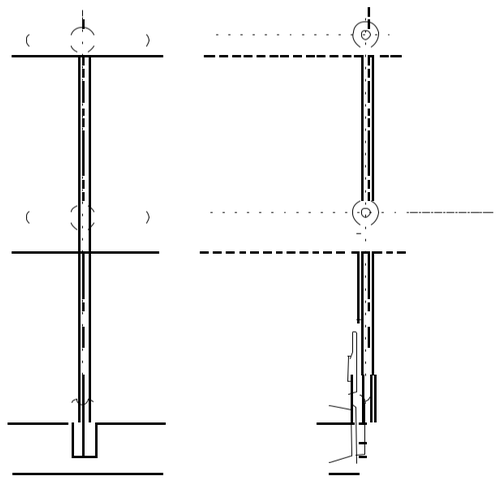
N.T.S.



TYPE 'F'

FOR USE ON PLATFORMS HAVING
10mm THICK CHEQUER PLATE DECKING

N.T.S.



TYPE 'H'

FOR USE ON PLATFORMS HAVING
20mm OPEN GRILLE DECKING

N.T.S.

Notes:

1. All stanchions to be solid forged steel to BS 4380 or BS 24 PART 4.
2. Minimum diameter 32mm, minimum ball diameter, 60mm drilled 35mm for hand rails.
3. All fixing holes 18mm diameter for M16 bolts
4. Maximum spacing of verticals 1830mm

REV:	DESCRIPTION:	BY:	DATE:
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STATUS: DETAILED ENGINEERING DESIGN

CLIENT:

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PROJECT:

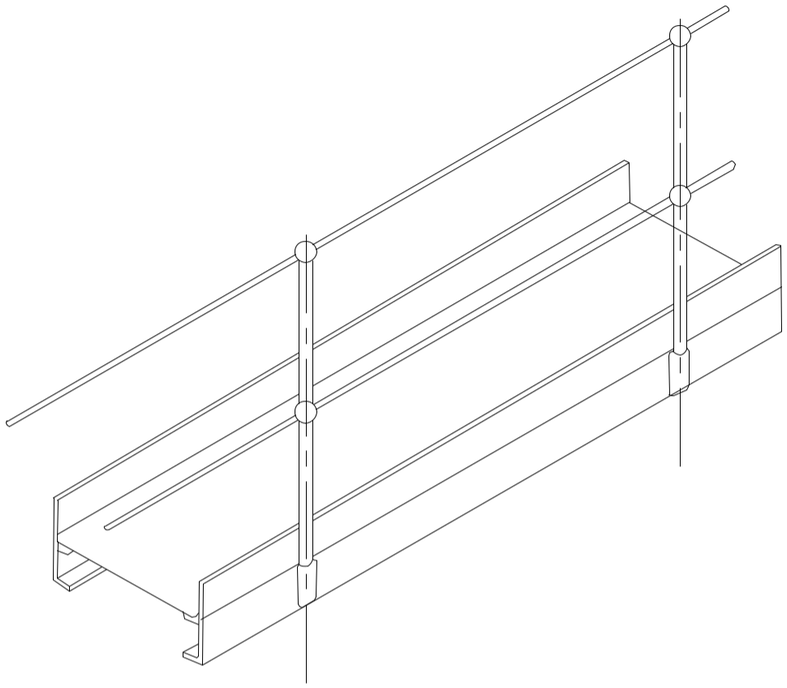
MOTORISATION OF YELULU
WATER SYSTEM

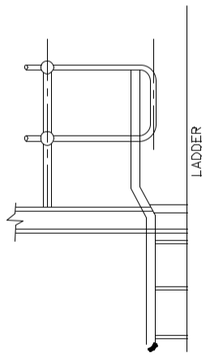
GERALD KOMAKECH
FLAT C7, ROVIS APARTMENTS, PLOT 49 NTINDA RD.
P. O. BOX 22858 KAMPALA
+256772443616

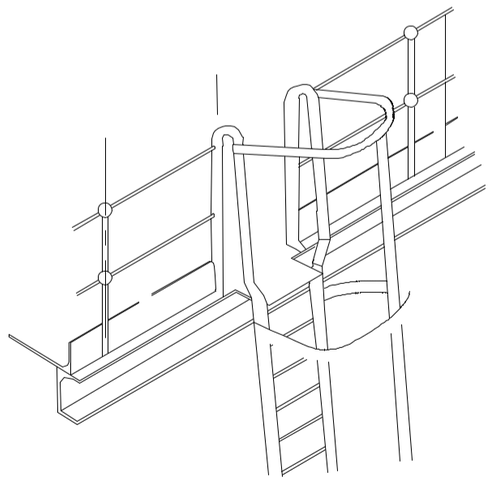
DRAWING TITLE:

FORGED STEEL STANCHION

SCALE:	DESIGNED BY:	DRAWN BY:	CHECKED BY:
NTS	KKG	SM	ORD
APPROVED BY:	DATE:	SHEET No.:	
KKG	JAN. '19	1of	1
PROJECT No.:	DRAWING No.:		REVISION:
190101	SD 106C		----







DETAIL OF RUNG WELDING

Notes:

1. Hand rail tubing 25mm nominal bore x 3.2mm minimum thickness to BS 1387 CLASS B for corrosive conditions, BS 1387 CLASS B or C galvanized stanchions to be as MES 1010 or 1011.

2. All joints in pipe forming top rail should be made at stanchion points to avoid possible hand injury

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PROJECT:

MOTORISATION OF YELULU

WATER SYSTEM

.

GERALD KOMAKECH
FLAT C7, ROVIS APARTMENTS, PLOT 49 NTINDA RD.
P. O. BOX 22858 KAMPALA
+256772443616

DRAWING TITLE:

SD 106D HANDRAIL ARRANGEMENT

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SCALE:	DESIGNED BY:	DRAWN BY:	CHECKED BY:
NTS	KKG	SM	ORD
APPROVED BY:	DATE:	SHEET No.:	
KKG	JAN. '19	1of 1	
PROJECT No.:	DRAWING No.:		REVISION:
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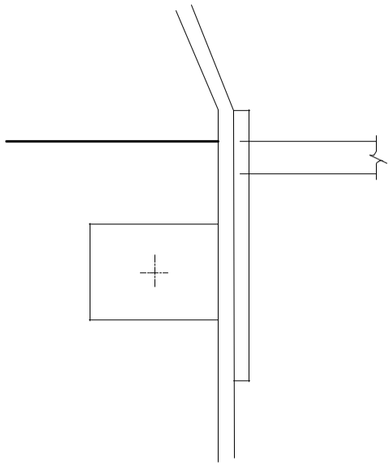
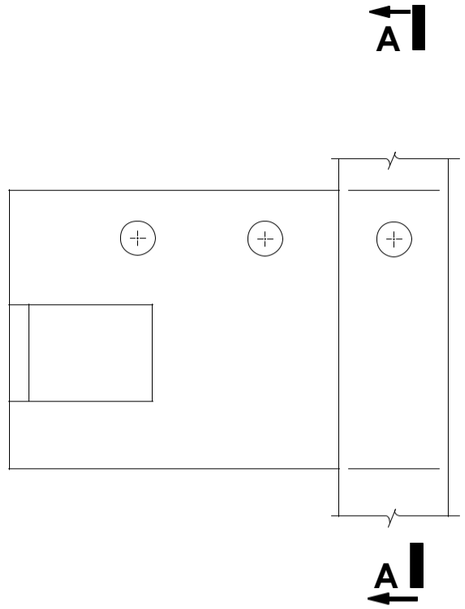


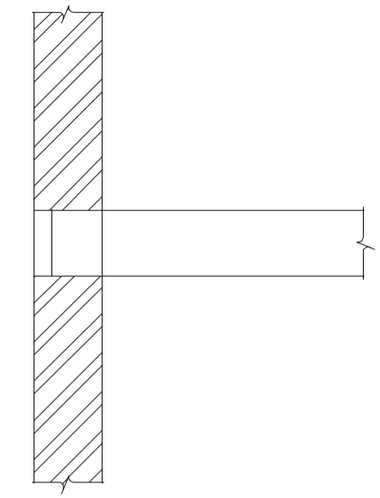
SECTION A - A

N.T.S.



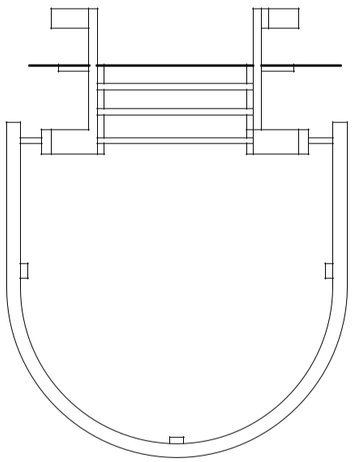
DETAIL 'X' AT PLATFORM LEVEL

N.T.S.



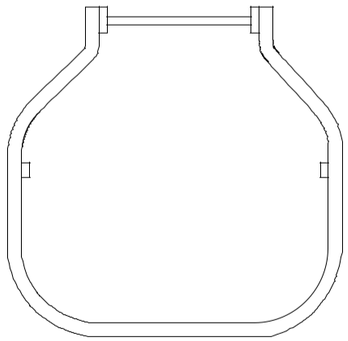
RUNG CONNECTION

N.T.S.



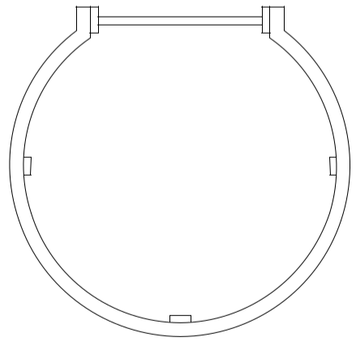
SEMI-CIRCULAR HOOP

N.T.S.



RECTANGULAR HOOP

N.T.S.



CIRCULAR HOOP

N.T.S.

Notes:

1. All welds to be 8 mm fillet welds.
2. Hoops and vertical cage members to be 50 x 10 flat welded together or fixed with 12mm diameter bolts and nuts.
3. Holding down bolts to be 20mm diameter.

REV:	DISCRIPTION:	BY:	DATE:
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STATUS: DETAILED ENGINEERING DESIGN

CLIENT:

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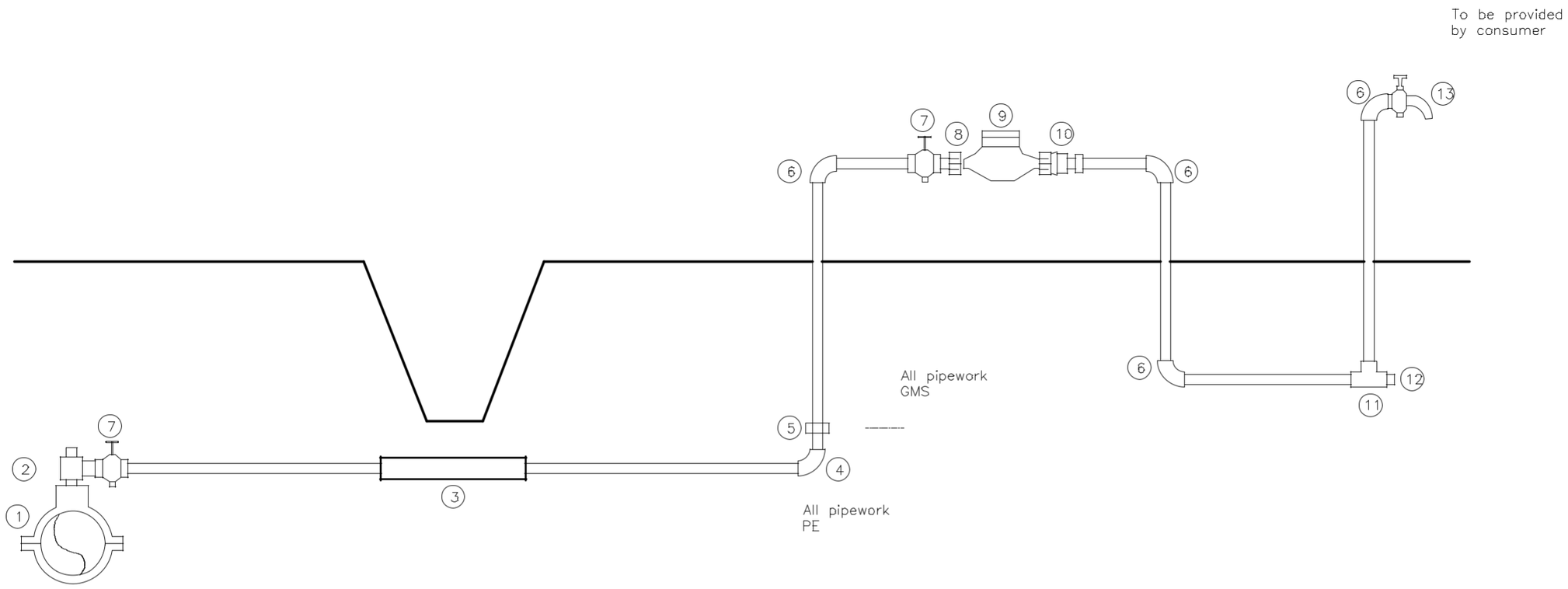
PROJECT:

MOTORISATION OF YELULU
WATER SYSTEM

GERALD KOMAKECH
FLAT C7, ROVIS APARTMENTS, PLOT 49 NTINDA RD.
P. O. BOX 22858 KAMPALA
+256772443616

DRAWING TITLE:
MILD STEEL LADDER ACCESS DETAILS

SCALE:	DESIGNED BY:	DRAWN BY:	CHECKED BY:
NTS	KKG	SM	ORD
APPROVED BY:	DATE:	SHEET No.:	
KKG	JAN. '19	1of	1
PROJECT No.:	DRAWING No.:		REVISION:
190101	SD 107H		----



SCHEDULE OF PIPE FITTINGS

ITEM NUMBER	DESCRIPTION	No. REQUIRED PER CONNECTION
1	PVC SADDLE CLAMP	1
2	P.E. OUTLET TYPE SWIVEL FERRULE	1
3	1.00m LONG GMS SLEEVE	1
4	PE ELBOW	1
5	PE/GMS ADAPTE	1
6	GMS ELBOW	4
7	STOP TAP	2
8	MALE THREADED CONNECTOR	1
9	WATER METER	1
10	ADJUSTING COUPLING	1
11	GMS EQUAL TEE	1
12	PLUG	1
13	TAP	1

Notes:

1. Galvanised Mild Steel(GMS) pipe ends to be screwed with tapered threads to ISO R7 and to be supplied with sealing PTFE tape.
2. GMS pipe fittings to be malleable cast iron to BS 143 and BS 1256 with female threaded ends.
3. 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 of the meter.
4. All PE connections shall be of the push fit type
5. The diameter of pipe varies.

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STATUS: DETAILED ENGINEERING DESIGN

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PROJECT:
MOTORISATION OF YELULU
WATER SYSTEM
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GERALD KOMAKECH
FLAT C7, ROVIS APARTMENTS, PLOT 49 NTINDA RD. P. O. BOX 22858 KAMPALA +256772443616

DRAWING TITLE:
METERED SERVICE CONNECTION PIPEWORK
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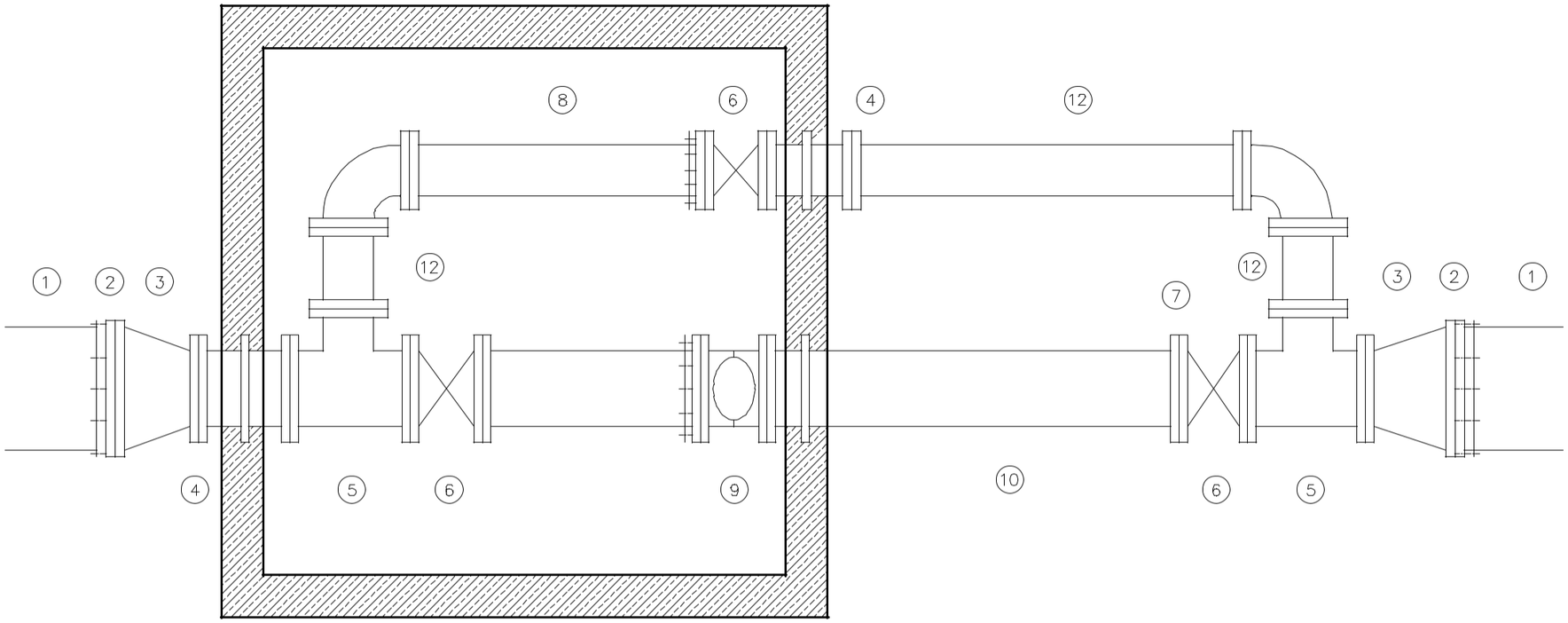
SCALE:	DESIGNED BY:	DRAWN BY:	CHECKED BY:
NTS	KKG	SM	ORD
APPROVED BY:	DATE:	SHEET No.:	
KKG	JAN. '19	1of1	
PROJECT No.:	DRAWING No.:		REVISION:
190101	SD 108		A



MAIN SIZE (mm DIAMETER)	FLOW METER SIZE (mm DIAMETER)
100	80
150	100
200	150
250	200
300	250
350	300
400	350
450	400
500	450

Notes:

1. All dimensions in millimetres.
2. For details of reinforced concrete chamber see SD 132.
3. Length of each item of pipework shall be specified by the Project Manager.
4. See General Notes

LABELLED ITEMS

1. Distribution main
2. Flange adaptor (Viking Johnson 'maxi' or similar approved)
3. Flanged taper
4. All flanged piece with central thrust flange
5. All flanged equal tee
6. Flange gate valve
7. Flanged adaptor
8. Flanged spigot pipe
9. Water meter
10. Flanged spigot with thrust flange 500mm from flanged end
11. Flanged 90° bend
12. Double flanged pipe

REV:	DESCRIPTION:	BY:	DATE:
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STATUS: DETAILED ENGINEERING DESIGN

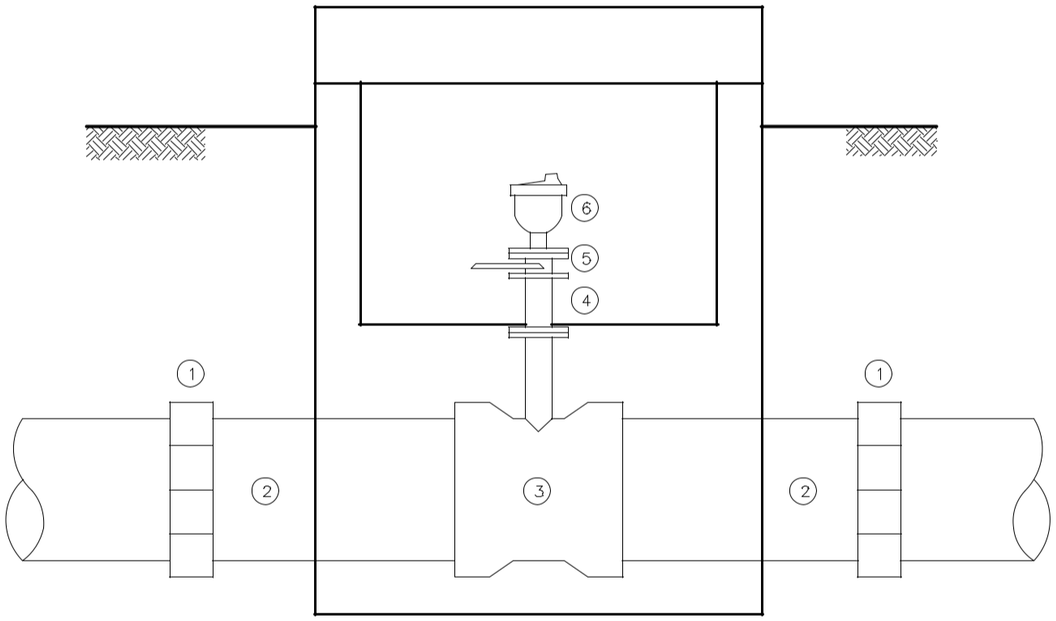
CLIENT: OXFAM

PROJECT: MOTORISATION OF YELULU WATER SYSTEM

GERALD KOMAKECH
FLAT C7, ROVIS APARTMENTS, PLOT 49
NTINDA RD.
P. O. BOX 22858 KAMPALA
+256772443616

DRAWING TITLE: FLOW METER PIPEWORK

SCALE:	DESIGNED BY:	DRAWN BY:	CHECKED BY:
NTS	KKG	SM	ORD
APPROVED BY:	DATE:	SHEET No.:	
PROJECT No.:	DRAWING No.:	REVISIONS	
190101	SD 110	----	



PIPE 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 100–300dia valve 50mm diameter
6	Air valve	main 350–600dia valve 80mm diameter

Notes:

1 All dimensions are in millimetres
2 Flanged pipework to be ductile iron
3 Make up pipes to be ductile iron
4 Chamber to be 1200x900 internal dimensions
5. For details see standard drawing SD 112D
6. See General Notes

REV:	DESCRIPTION:	BY:	DATE:
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CLIENT:

OXFAM

PROJECT:

MOTORISATION OF YELULU
WATER SYSTEM

GERALD KOMAKECH
FLAT C7, ROVIS APARTMENTS, PLOT 49
NTINDA RD.
P. O. BOX 22858 KAMPALA
+256772443616

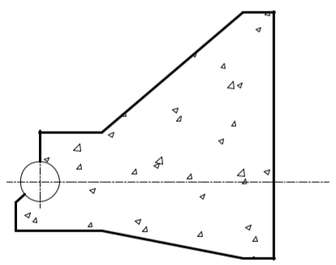
DRAWING TITLE:

SD 112A AIR VALVE PIPEWORK

SCALE:	DESIGNED BY:	DRAWN BY:	CHECKED BY:
NTS	KKG	SM	ORD
APPROVED BY:	DATE:	SHEET No.:	
PROJECT No.:	DRAWING No.:	TOT	REVISION:
190101			

Ground Condition	DRY								
Test Pressure (bar)	18					24			
Pipe Diameter (mm) \ Bend		11¼°	22½°	45°	90°	11¼°	22½°	45°	90°
100–150	H	SEE SD 118C			1350	SEE SD 118C			1350
	A				300				300
	B				2000				1600
200–300	H			1500	1500			1500	1500
	A			350	500			350	500
	B			1930	3560			3520	4750
350–400	H			1600	1600			1600	1800
	A			550	850			550	850
	B			2950	5440			3920	5700
450–500	H		1650	1650	1650		1650	1650	1900
	A		400	650	1050		400	650	1050
	B		1760	346	6400		2350	4800	6450

Ground Condition	SUBMERGED								
Test Pressure (bar)	18					24			
Pipe Diameter (mm) \ Bend		11¼°	22½°	45°	90°	11¼°	22½°	45°	90°
100–150	H	SEE SD 118D			1350	SEE SD 118D			1350
	A				300				300
	B				2000				2650
200–300	H			1500	1500		1500	1500	1500
	A			350	500		250	350	500
	B			3200	5900		2150	4250	7850
350–400	H		1600	1600	1800		1600	1600	2000
	A		350	550	850		350	550	850
	B		2500	4850	7100		3300	6500	7650
450–500	H		1650	1650	2000	1650	1650	1650	2200
	A		400	650	1050	250	400	650	1050
	B		2900	5700	7200	1950	3900	7600	7900



SECTION X - X

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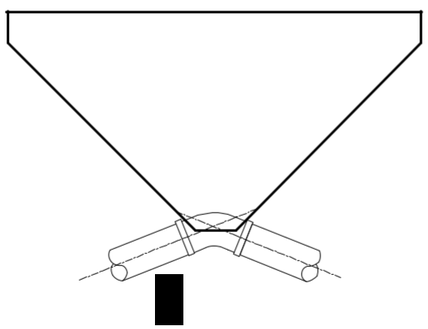
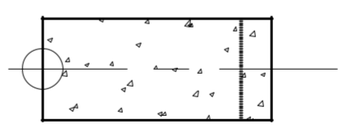


PLAN

N.T.S.

Ground Condition	DRY								
Test Pressure (bar)	18					24			
Pipe Diameter (mm) \ Bend		11¼°	22½°	45°	90°	11¼°	22½°	45°	90°
80	H	480	480	480	480	480	480	480	480
	A	150	200	200	250	150	200	200	250
	B	200	300	450	800	200	300	600	1100
100 – 150	H	550	550	550	550	550	550	550	
	A	200	200	300	300	200	200	250	
	B	300	950	1100	2050	400	1250	1500	
200–300	H	700	700			700	700		
	A	200	250			200	200		
	B	750	1500			1000	2000		
350–400	H	800	800			800	800		
	A	250	250			250	350		
	B	1100	3000			1450	2900		
450–500	H	900	SEE SD118 G			900	SEE SD118G		
	A	300				300			
	B	3000				4050			

Ground Condition	SUBMERGED								
Test Pressure (bar)	18					24			
Pipe Diameter (mm) \ Bend		11¼°	22½°	45°	90°	11¼°	22½°	45°	90°
80	H	480	480	480	480	480	480	480	480
	A	150	200	200	250	150	200	200	250
	B	250	400	700	1350	250	500	950	1750
100 – 150	H	D	D	D		D	D	D	
	A	200	200	250		200	200	250	
	B	450	950	1850		600	1250	9000	
200–300	H	D	D			D			
	A	200	250			200			
	B	1250	2520			1650			
350–400	H	D	SEE SD118 I			D	SEE SD118 I		
	A	250				250			
	B	1800				2480			
450–500	H	900							
	A	300							
	B	5000							



SECTION X - X

N.T.S.

Notes:

1. All dimensions are in millimetres unless indicated otherwise.
2. Figured dimensions to be taken in preference to scaling of drawings.
3. The Contractor is to check all dimensions before any works commence.
4. Report any discrepancy to the Engineer at the earliest.
5. This drawing is to be read in conjunction with all relevant General arrangement drawings.
6. Concrete is to be Class 30/20 unless stated otherwise.
7. Minimum trench width for uPVC pipes = OD + 300 (to a minimum width of 600).
8. The minimum trench width for ductile iron pipes =OD+600
9. For General Notes, see Standard Drawing No. SD 100. - OD = Outside Diameter of pipe

REV:	DESCRIPTION:	BY:	DATE:
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STATUS: DETAILED ENGINEERING DESIGN

CLIENT:

OXFAM

PROJECT:

MOTORISATION OF YELULU
WATER SYSTEM

GERALD KOMAKECH
FLAT C7, ROVIS APARTMENTS, PLOT 49 NTINDA RD.
P. O. BOX 22858 KAMPALA
+256772443616

DRAWING TITLE:

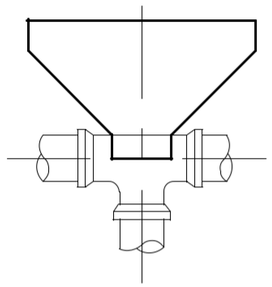
ANCHOR BLOCKS FOR BENDS

SCALE:	DESIGNED BY:	DRAWN BY:	CHECKED BY:
NTS	KKG	SM	ORD
APPROVED BY:	DATE:	SHEET No.:	
KKG	JAN. '19	1of 1	
PROJECT No.:	DRAWING No.:	REVISION:	
190101	SD118I	----	

GROUND CONDITION			DRY					
TEST PRESSURE (Bar)			12	15	18	24	30	36
PIPE DIAMETER (mm)	80	H	SEE SD 118E					
		A						
		B						
	100–150	H						1500
		A						350
		B						1100
	200–300	H		1450	1500	1650	1650	1650
		A		450	450	450	450	450
		B		2200	2450	2800	3100	3700
	350–400	H	1600	1750	1750	1750	1750	1750
		A	600	600	600	600	600	600
		B	2550	2700	3250	4300	5000	6000
	450–500	H	1750	1800	1800	1800	1800	1800
		A	750	750	750	750	750	750
		B	2700	3150	3800	5050	6100	7300

GROUND CONDITION			SUBMERGED					
TEST PRESSURE (Bar)			12	15	18	24	30	36
PIPE DIAMETER (mm)	80	H	480	480	480	480		
		A	250	250	250	250		
		B	700	800	1000	1300		
	100–150	H	550	550	550	550		
		A	300	300	300	300		
		B	1600	2000	2400	3200		
	200–300	H	1650	1650	1500	1650		
		A	450	450	450	450		
		B	2350	2900	3450	4650		
	350–400	H	1750	1750	1750	1750		
		A	600	600	600	600		
		B	3550	4450	5300	7900		
	450–500	H	1800	1800	1800	1800		
		A	750	750	750	750		
		B	4200	5250	6300	8400		

GROUND CONDITION			DRY					
TEST PRESSURE (Bar)			12	15	18	24	30	36
PIPE DIAMETER (mm)	80	H	480	480	480	480	480	480
		A	250	250	250	250	250	250
		B	400	500	600	800	950	1150
	100–150	H	550	550	550	550	550	
		A	300	300	300	300	300	
		B	1000	1200	1500	2000	2500	
	200–300	H	550					
		A	300					
		B	1000					
	350–400	H	SEE SD 118K					
		A						
		B						
	450–500	H						
		A						
		B						



PLAN

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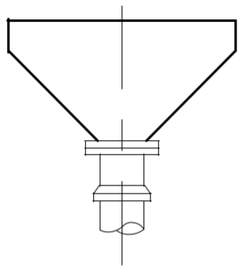

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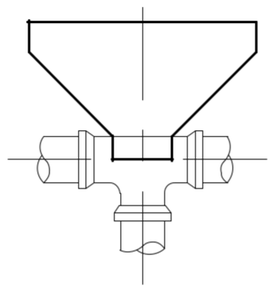

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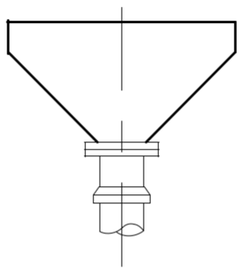

PLAN

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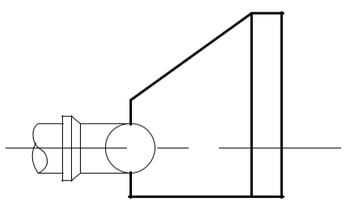
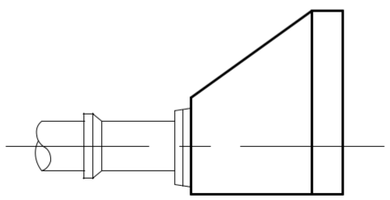


SECTION X - X

N.T.S.



SECTION X - X

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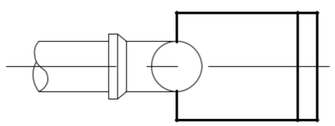
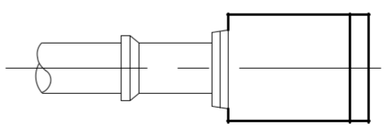


SECTION X - X

N.T.S.



SECTION X - X

N.T.S.

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8. The minimum trench width for ductile iron pipes =OD+600
9. For General Notes, see Standard Drawing No. SD 100.
- OD = Outside Diameter of pipe

REV:	DESCRIPTION:	BY:	DATE:
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STATUS: DETAILED ENGINEERING DESIGN

CLIENT:

OXFAM

PROJECT:

MOTORISATION OF YELULU

GERALD KOMAKECH
FLAT C7, ROVIS APARTMENTS, PLOT 49 NTINDA RD.
P. O. BOX 22858 KAMPALA
+256772443616

DRAWING TITLE:
ANCHOR BLOCKS FOR TEES AND DEAS ENDS

SCALE:	DESIGNED BY:	DRAWN BY:	CHECKED BY:
NTS	KKG	SM	ORD
APPROVED BY:	DATE:	SHEET No.:	
KKG	JAN. '19	1of	1
PROJECT No.:	DRAWING No.:		REVISION:
190101	SD 118L		----