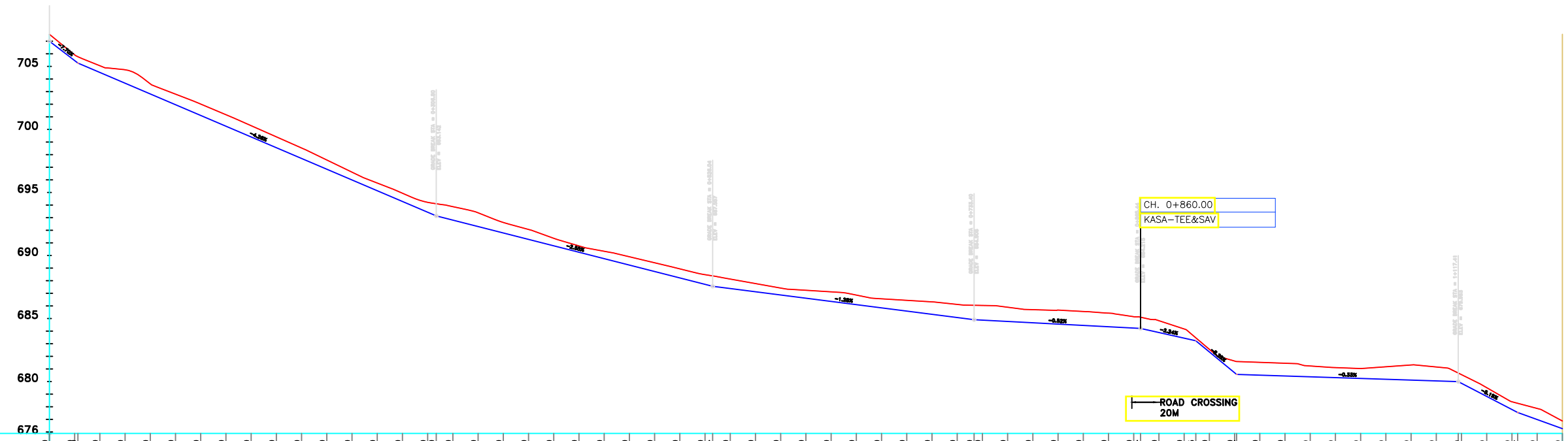
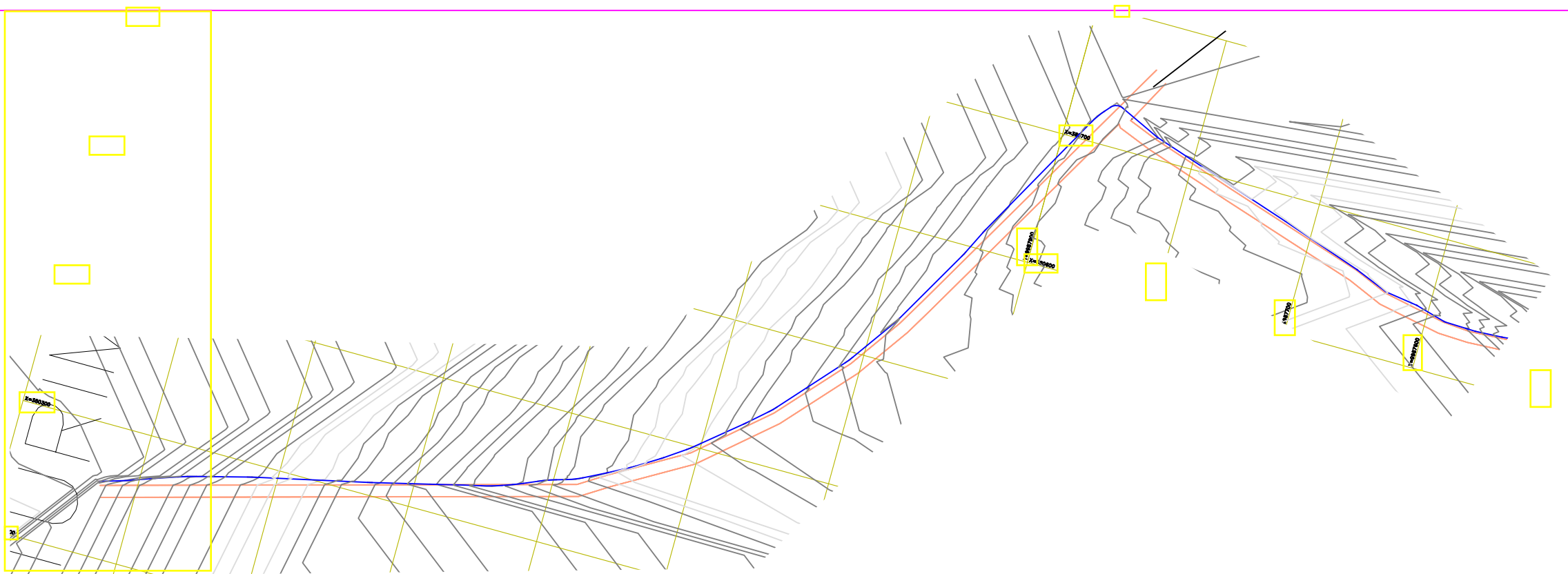


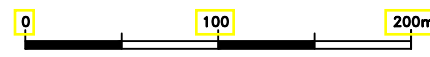
- NOTES:**
1. CONTOUR LEVELS ARE IN METERS AT TWO METER INTERVALS
 2. GRID VALUES ARE IN METERS AT 100 METER INTERVALS
 3. GEOLOGICAL CONDITIONS INDICATED ON DRAWING ARE FOR GENERAL GUIDANCE ONLY
 4. MINIMUM PIPELINE SLOPES TO BE 1:200
 5. DRAWING TO BE READ IN CONJUNCTION WITH STANDARD DRAWINGS

- LEGEND:**
- MURRAM ROAD
 - FENCE / HEDGE
 - CONTOURS
 - RIVER/STREAM
 - V.J. VIKING JOHNSON
 - GV GATE VALVE
 - SV-01 SECTIONAL VALVE & No.
 - WO-01 WASHOUT VALVE & No.
 - SAV-01 AIR VALVE & No.
 - WM WATER METER
 - PROPOSED MASONRY CHAMBER
 - PROPOSED VALVE BOX
 - PROPOSED WATER LINE



CHAINAGE (m)	EXISTING GROUND LEVEL (m)	INVERT LEVELS (m)	DEPTH OF INVERT (m)
0+000.00	707.55	707.00	0.55
0+020.00	705.94	705.46	0.48
0+040.00	705.05	704.52	0.53
0+060.00	704.73	703.67	1.06
0+080.00	703.61	702.81	0.80
0+100.00	702.80	701.96	0.84
0+120.00	702.01	701.11	0.90
0+140.00	701.17	700.25	0.91
0+160.00	700.30	699.40	0.89
0+180.00	699.41	698.55	0.86
0+200.00	698.53	697.70	0.83
0+220.00	697.58	696.84	0.73
0+240.00	696.61	695.99	0.62
0+260.00	695.75	695.14	0.61
0+280.00	694.94	694.28	0.65
0+300.00	694.22	693.43	0.78
0+320.00	693.60	692.58	0.96
0+340.00	693.00	691.73	1.07
0+360.00	692.42	691.00	1.08
0+380.00	691.86	690.38	0.83
0+400.00	691.32	690.76	0.79
0+420.00	690.76	690.15	0.59
0+440.00	690.33	689.54	0.50
0+460.00	689.90	688.93	0.59
0+480.00	689.42	688.32	0.66
0+500.00	688.84	687.71	0.68
0+520.00	688.22	687.10	0.72
0+540.00	687.56	686.48	0.77
0+560.00	686.86	685.86	0.82
0+580.00	686.13	685.25	0.75
0+600.00	685.40	684.64	0.65
0+620.00	684.77	684.03	0.55
0+640.00	684.15	683.42	0.63
0+660.00	683.54	682.81	0.76
0+680.00	682.93	682.20	0.76
0+700.00	682.32	681.59	0.72
0+720.00	681.72	680.98	0.85
0+740.00	681.12	680.37	0.89
0+760.00	680.52	679.76	1.04
0+780.00	679.92	679.15	1.14
0+800.00	679.32	678.54	1.17
0+820.00	678.72	677.93	1.13
0+840.00	678.12	677.32	1.04
0+860.00	677.52	676.71	1.11
0+880.00	676.92	676.10	1.10
0+900.00	676.32	675.49	1.08
0+920.00	675.72	674.88	0.90
0+940.00	675.12	674.27	0.84
0+960.00	674.52	673.66	0.73
0+980.00	673.92	673.05	0.23
1+000.00	673.32	672.44	0.21
1+020.00	672.72	671.83	0.89
1+040.00	672.12	671.22	1.02
1+060.00	671.52	670.61	1.01
1+080.00	670.92	670.00	0.86
1+100.00	670.32	669.39	0.80
1+120.00	669.72	668.78	0.79
1+140.00	669.12	668.17	0.99
1+160.00	668.52	667.56	1.20
1+180.00	667.92	666.95	1.11
1+200.00	667.32	666.34	0.68
1+220.00	666.72	665.73	0.69
1+240.00	666.12	665.12	0.61

LONGITUDINAL SECTION



CLIENT: THE CHIEF EXECUTIVE OFFICER
TANA WATER WORKS
DEVELOPMENT AGENCY
P.O BOX 1292 - 10100,
NYERI, KENYA

ENGINEER: THE CHIEF EXECUTIVE OFFICER
TANA WATER WORKS
DEVELOPMENT AGENCY
P.O BOX 1292 - 10100,
NYERI, KENYA

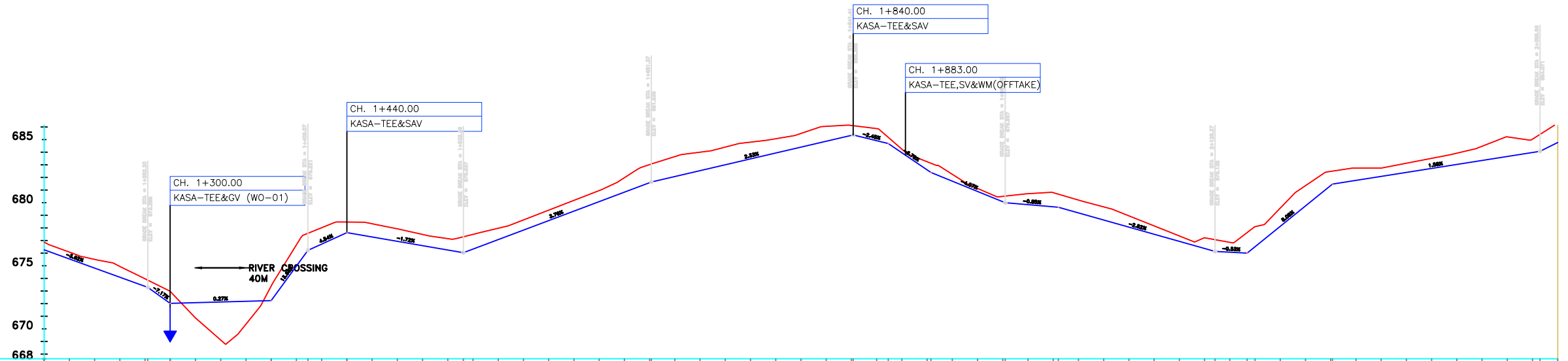
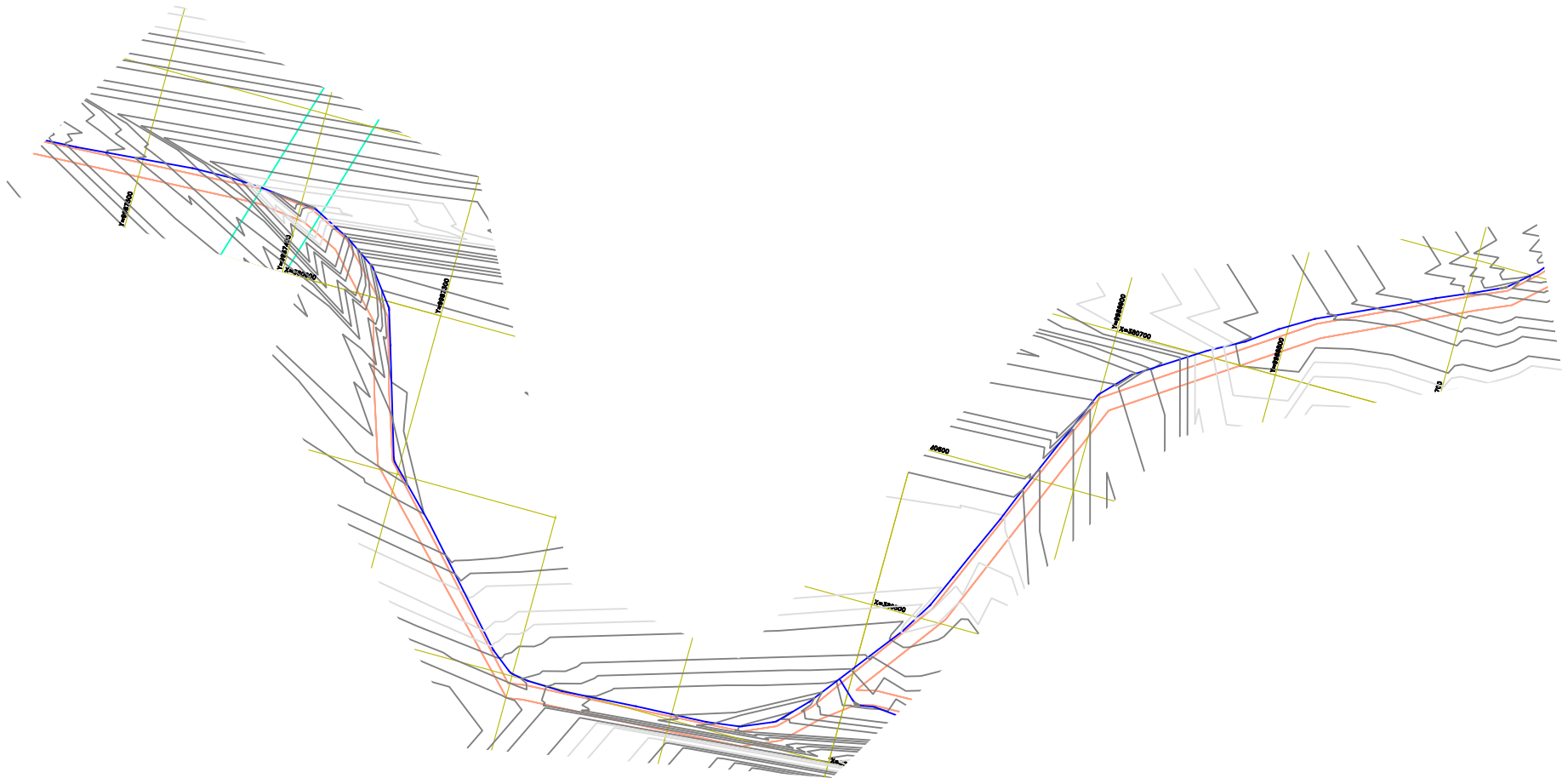
PROJECT TITLE:
**KIBUNG'A KAKIMIKI PIPELINE
RELOCATION PROJECT**

DRAWING TITLE:
**TURIMA TO SOKO MJINGA PLAN AND
PROFILE SECTION**
CH. 0+000.00 - 1+200.00
SHEET 1 OF 10

Designed by: A.M.M | Drawn by: A.M.M
Checked by: D.N.W | Approved by: D.N.W
Scale: H- 1:4000, V- 1:400 | Date: MAY 2022
DRG No. **KASA/01**

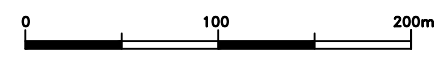
- NOTES:**
1. CONTOUR LEVELS ARE IN METERS AT TWO METER INTERVALS
 2. GRID VALUES ARE IN METERS AT 100 METER INTERVALS
 3. GEOLOGICAL CONDITIONS INDICATED ON DRAWING ARE FOR GENERAL GUIDANCE ONLY
 4. MINIMUM PIPELINE SLOPES TO BE 1:200
 5. DRAWING TO BE READ IN CONJUNCTION WITH STANDARD DRAWINGS

- LEGEND:**
- MURRAM ROAD
 - FENCE / HEDGE
 - CONTOURS
 - RIVER/STREAM
 - VIKING JOHNSON
 - GATE VALVE
 - SECTIONAL VALVE & No.
 - WASHOUT VALVE & No.
 - AIR VALVE & No.
 - WATER METER
 - PROPOSED MASONRY CHAMBER
 - PROPOSED VALVE BOX
 - PROPOSED WATER LINE



CHAINAGE (m)	EXISTING GROUND LEVEL (m)	INVERT LEVELS (m)	DEPTH OF INVERT (m)	FLOW PARAMETERS DATUM (m)	TYPE OF PIPE AND SIZE	GEOLOGICAL CONDITION
0.61	676.87	676.26	0.61			
0.54	676.08	675.54	0.54			
0.69	675.51	674.82	0.69			
0.86	674.95	674.09	0.86			
0.69	673.82	673.02	0.81			
0.88	672.98	672.02	0.96			
-1.21	670.86	670.08	-0.78			
-3.02	669.11	672.13	-3.02			
-1.81	670.37	672.19	-1.81			
-1.15	673.39	672.24	-1.15			
1.68	676.66	674.98	1.68			
1.35	677.57	677.22	0.35			
1.30	678.02	678.72	-0.72			
0.84	678.47	677.65	0.84			
1.05	678.33	677.28	1.05			
0.89	677.93	676.94	0.89			
0.89	677.48	676.59	0.89			
0.80	677.15	676.25	0.90			
1.26	676.04	677.30	-1.26			
1.16	677.49	676.32	1.16			
0.80	677.97	677.08	0.80			
0.80	678.65	677.85	0.80			
0.83	679.41	678.58	0.83			
0.85	680.18	679.33	0.85			
0.88	680.96	680.08	0.88			
1.14	681.98	680.85	1.14			
1.43	683.02	681.88	1.43			
1.58	683.65	682.07	1.58			
1.46	684.00	682.54	1.46			
1.40	684.41	683.00	1.40			
1.33	684.80	683.47	1.33			
1.13	685.07	683.94	1.13			
1.08	685.49	684.40	1.08			
1.18	686.05	684.97	1.18			
0.78	686.18	685.39	0.78			
0.96	685.87	684.91	0.96			
0.49	685.18	684.69	0.49			
0.28	684.24	683.96	0.28			
0.69	683.73	683.90	-0.17			
0.54	682.25	681.70	0.54			
0.24	681.13	680.89	0.24			
0.48	680.82	680.88	-0.06			
0.87	680.71	679.84	0.87			
1.02	680.21	679.87	1.02			
1.04	679.87	679.63	0.24			
0.80	679.96	679.06	0.90			
0.66	678.16	677.50	0.66			
0.43	677.36	677.36	0.00			
0.85	677.22	676.37	0.85			
0.93	677.07	676.14	0.93			
0.78	676.86	676.08	0.78			
1.83	676.83	676.00	0.83			
1.58	676.10	675.51	0.59			
1.44	675.57	675.13	0.44			
1.61	681.35	679.74	1.61			
1.43	682.48	681.39	1.43			
0.98	682.74	681.77	0.98			
0.86	682.74	682.08	0.66			
0.73	683.13	682.40	0.73			
0.80	683.51	682.71	0.80			
0.89	683.92	683.03	0.89			
1.13	684.47	683.35	1.13			
1.55	685.22	683.66	1.55			
1.06	685.03	683.98	1.06			
1.34	685.41	684.07	1.34			
1.54	686.31	684.77	1.54			

LONGITUDINAL SECTION



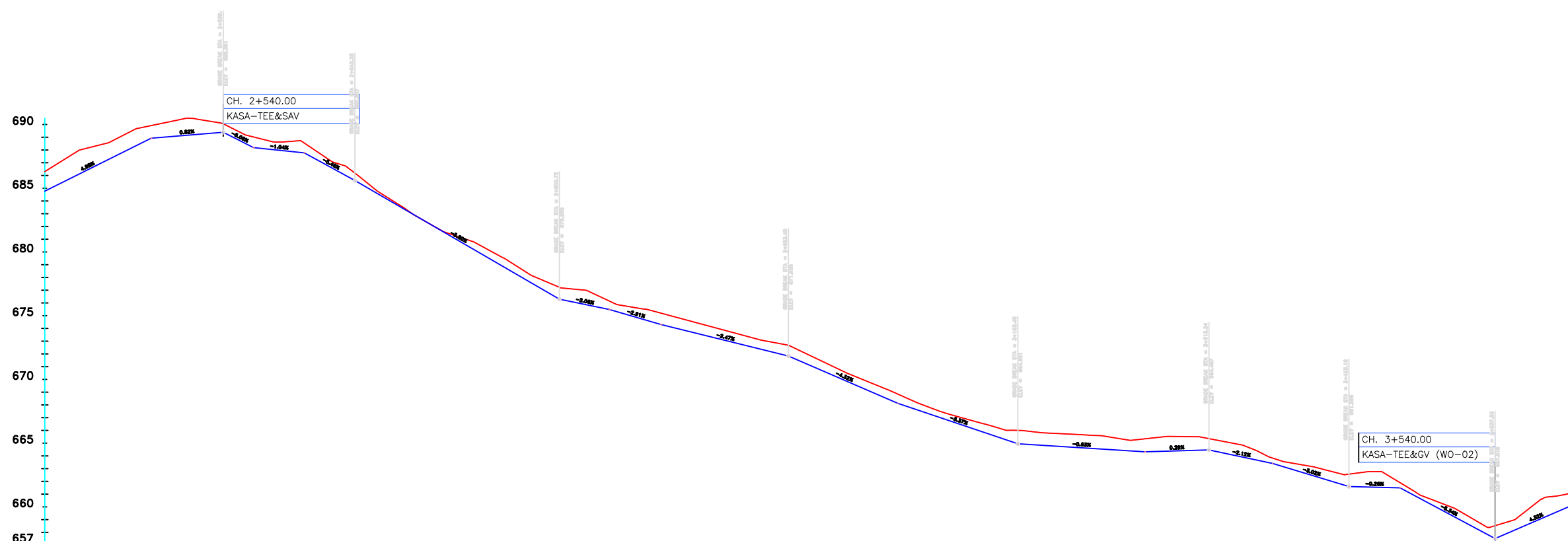
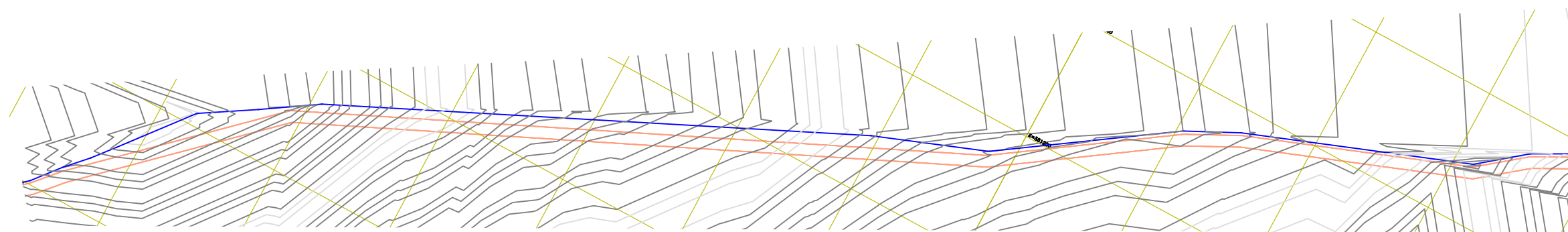
CLIENT: THE CHIEF EXECUTIVE OFFICER
TANA WATER WORKS
DEVELOPMENT AGENCY
P.O BOX 1292 - 10100,
NYERI, KENYA

ENGINEER: THE CHIEF EXECUTIVE OFFICER
TANA WATER WORKS
DEVELOPMENT AGENCY
P.O BOX 1292 - 10100,
NYERI, KENYA

PROJECT TITLE:
**KIBUNG'A KAKIMIKI PIPELINE
RELOCATION PROJECT**

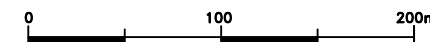
DRAWING TITLE:
**TURIMA TO SOKO MJINGA PLAN AND
PROFILE SECTION
CH. 1+200.00 - 2+400.00
SHEET 2 OF 10**

Designed by: A.M.M	Drawn by: A.M.M
Checked by: D.N.W	Approved by: D.N.W
Scale: H- 1:4000, V- 1:400	Date: MAY 2022
DRG No. KASA/02	REV



CHAINAGE (m)	EXISTING GROUND LEVEL (m)	INVERT LEVELS (m)	DEPTH OF INVERT (m)	FLOW PARAMETERS DATUM (m)	TYPE OF PIPE AND SIZE	GEOLOGICAL CONDITION
2+420.00	687.55	684.77	1.78			
2+440.00	688.32	685.77	1.55			
2+460.00	689.08	686.76	1.32			
2+480.00	689.84	687.76	1.08			
2+500.00	690.28	688.75	0.53			
2+511.73	690.50	689.05	0.45			
2+520.00	690.41	689.23	1.18			
2+540.00	690.06	689.39	0.67			
2+560.00	689.12	688.58	0.54			
2+580.00	688.62	688.02	0.61			
2+600.00	688.73	687.77	0.97			
2+620.00	687.44	686.88	0.56			
2+625.56	687.07	686.56	0.51			
2+640.00	686.44	685.79	0.65			
2+660.00	684.85	684.64	0.21			
2+680.00	683.58	683.48	0.10			
2+700.00	682.32	682.31	0.00			
2+720.00	681.35	681.15	0.19			
2+748.67	680.78	679.99	0.61			
2+760.00	679.53	678.83	0.70			
2+780.00	678.27	677.67	0.60			
2+800.00	677.39	676.51	0.88			
2+820.00	677.04	675.96	1.08			
2+840.00	676.29	675.38	0.91			
2+848.80	675.87	674.99	0.70			
2+860.00	675.68	674.61	0.88			
2+880.00	675.29	674.30	0.99			
2+900.00	674.75	673.90	0.86			
2+920.00	674.21	673.40	0.81			
2+940.00	673.68	672.91	0.77			
2+960.00	673.64	672.41	0.72			
2+980.00	672.75	671.88	0.87			
3+000.00	671.89	671.12	0.78			
3+020.00	670.94	670.25	0.69			
3+040.00	670.06	669.39	0.67			
3+060.00	669.28	668.52	0.72			
3+080.00	668.37	667.76	0.61			
3+100.00	667.58	667.09	0.49			
3+120.00	666.98	666.41	0.56			
3+140.00	666.43	665.74	0.69			
3+160.00	666.01	665.02	0.98			
3+166.73	665.99	664.85	0.89			
3+180.00	665.84	664.72	1.01			
3+200.00	665.73	664.59	1.03			
3+220.00	665.62	664.47	0.94			
3+240.00	665.41	664.34	0.87			
3+260.00	665.31	664.37	1.15			
3+280.00	665.19	664.43	1.08			
3+300.00	665.51	664.47	0.88			
3+320.00	665.23	664.35	0.80			
3+340.00	664.84	663.90	0.94			
3+360.00	663.94	663.48	0.46			
3+380.00	663.41	662.90	0.51			
3+400.00	663.02	662.30	0.73			
3+420.00	662.53	661.68	0.85			
3+440.00	662.76	661.55	1.21			
3+460.00	662.10	661.58	0.52			
3+480.00	660.89	660.60	0.29			
3+500.00	660.12	659.53	0.59			
3+506.27	659.88	659.47	0.61			
3+520.00	659.08	658.81	0.64			
3+540.00	658.59	658.47	1.04			
3+560.00	659.51	658.34	1.45			
3+580.00	660.79	660.20	1.10			

LONGITUDINAL SECTION



- NOTES:**
1. CONTOUR LEVELS ARE IN METERS AT TWO METER INTERVALS
 2. GRID VALUES ARE IN METERS AT 100 METER INTERVALS
 3. GEOLOGICAL CONDITIONS INDICATED ON DRAWING ARE FOR GENERAL GUIDANCE ONLY
 4. MINIMUM PIPELINE SLOPES TO BE 1:200
 5. DRAWING TO BE READ IN CONJUNCTION WITH STANDARD DRAWINGS

- LEGEND:**
- MURRAM ROAD
 - FENCE / HEDGE
 - 1480 CONTOURS
 - RIVER/STREAM
 - V.J. VIKING JOHNSON
 - GV GATE VALVE
 - SV-01 SECTIONAL VALVE & No.
 - WO-01 WASHOUT VALVE & No.
 - SAV-01 AIR VALVE & No.
 - WM WATER METER
 - PROPOSED MASONRY CHAMBER
 - PROPOSED VALVE BOX
 - PROPOSED WATER LINE

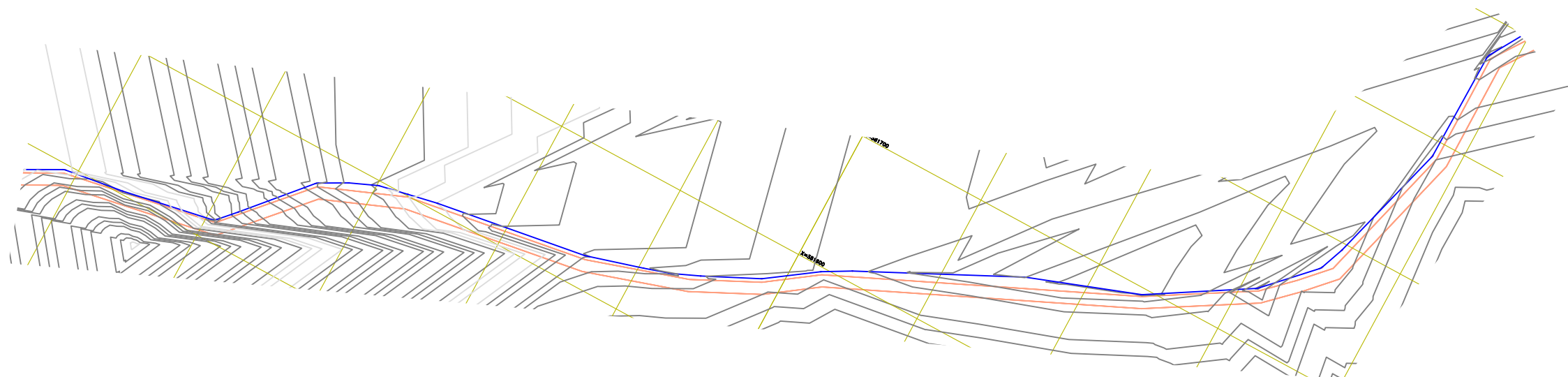
CLIENT: THE CHIEF EXECUTIVE OFFICER
TANA WATER WORKS DEVELOPMENT AGENCY
 P.O BOX 1292 - 10100,
 NYERI, KENYA

ENGINEER: THE CHIEF EXECUTIVE OFFICER
TANA WATER WORKS DEVELOPMENT AGENCY
 P.O BOX 1292 - 10100,
 NYERI, KENYA

PROJECT TITLE:
KIBUNG'A KAKIMIKI PIPELINE RELOCATION PROJECT

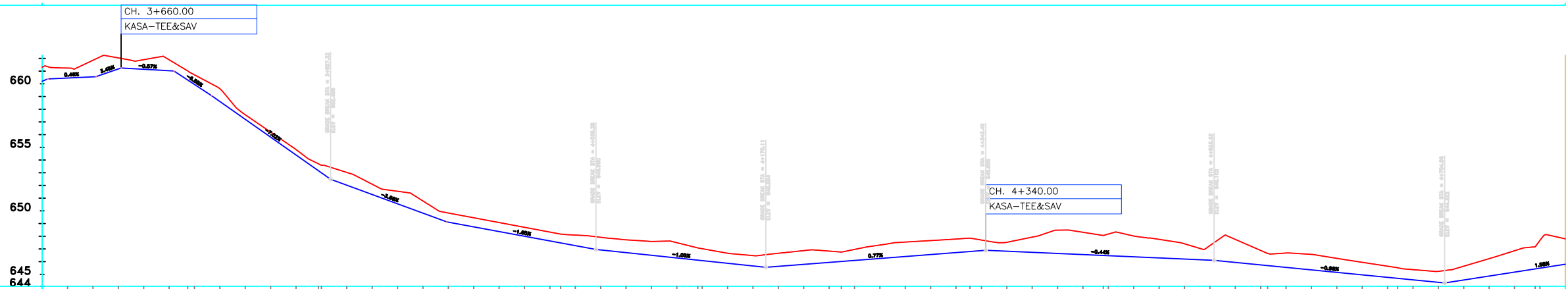
DRAWING TITLE:
TURIMA TO SOKO MJINGA PLAN AND PROFILE SECTION
CH. 2+400.00 - 3+600.00
SHEET 3 OF 10

Designed by: A.M.M	Drawn by: A.M.M
Checked by: D.N.W	Approved by: D.N.W
Scale: H- 1:4000, V- 1:400	Date: MAY 2022
DRG No. KASA/03	REV



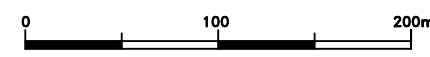
- NOTES:**
1. CONTOUR LEVELS ARE IN METERS AT TWO METER INTERVALS
 2. GRID VALUES ARE IN METERS AT 100 METER INTERVALS
 3. GEOLOGICAL CONDITIONS INDICATED ON DRAWING ARE FOR GENERAL GUIDANCE ONLY
 4. MINIMUM PIPELINE SLOPES TO BE 1:200
 5. DRAWING TO BE READ IN CONJUNCTION WITH STANDARD DRAWINGS

- LEGEND:**
- MURRAM ROAD
 - FENCE / HEDGE
 - CONTOURS
 - RIVER/STREAM
 - V.J. VIKING JOHNSON
 - GV GATE VALVE
 - SV-01 SECTIONAL VALVE & No.
 - WO-01 WASHOUT VALVE & No.
 - SAV-01 AIR VALVE & No.
 - WM WATER METER
 - PROPOSED MASONRY CHAMBER
 - PROPOSED VALVE BOX
 - PROPOSED WATER LINE



CHAINAGE (m)	EXISTING GROUND LEVEL (m)	INVERT LEVELS (m)	DEPTH OF INVERT (m)
3+620.00	661.24	660.46	0.78
3+640.00	661.85	660.58	1.27
3+660.00	662.04	661.42	1.62
3+680.00	661.90	661.14	0.76
3+700.00	661.89	661.03	0.86
3+720.00	661.02	659.95	1.07
3+740.00	659.61	659.08	0.53
3+760.00	657.56	657.20	0.36
3+780.00	656.20	655.80	0.40
3+800.00	654.83	654.40	0.43
3+820.00	652.74	652.99	0.59
3+840.00	653.02	652.49	0.94
3+860.00	652.10	652.02	1.01
3+880.00	651.54	651.29	0.81
3+900.00	650.78	650.55	0.99
3+920.00	649.83	649.82	0.96
3+940.00	648.45	648.13	0.72
3+960.00	648.08	648.74	0.71
3+980.00	648.70	648.37	0.70
4+000.00	648.33	648.00	0.70
4+020.00	648.17	647.63	0.70
4+040.00	648.09	647.26	0.83
4+060.00	647.92	647.26	1.00
4+080.00	647.72	646.98	1.01
4+100.00	647.59	646.71	1.09
4+120.00	647.49	646.50	1.09
4+140.00	647.09	646.29	1.20
4+160.00	646.66	646.08	0.94
4+180.00	646.66	645.87	0.79
4+200.00	646.48	645.66	0.82
4+220.00	646.76	645.55	0.99
4+240.00	646.96	645.63	1.03
4+260.00	647.31	645.79	1.08
4+280.00	647.54	645.94	0.89
4+300.00	647.66	646.76	0.87
4+320.00	647.78	646.09	1.06
4+340.00	647.85	646.25	1.14
4+360.00	647.70	646.40	1.10
4+380.00	647.53	646.56	1.07
4+400.00	648.48	646.71	0.93
4+420.00	648.31	646.65	1.83
4+440.00	648.31	646.56	1.75
4+460.00	648.09	646.47	1.70
4+480.00	648.02	646.38	1.64
4+500.00	647.76	646.29	1.46
4+520.00	647.40	646.21	1.20
4+540.00	647.27	646.12	1.15
4+560.00	647.75	645.94	1.81
4+580.00	646.88	645.74	1.14
4+600.00	646.66	645.55	1.13
4+620.00	646.57	645.35	1.22
4+640.00	646.26	645.15	1.10
4+660.00	645.95	644.96	0.99
4+680.00	645.64	644.76	0.88
4+700.00	645.52	644.57	0.81
4+720.00	645.24	644.37	0.87
4+740.00	645.64	644.56	1.09
4+760.00	646.24	644.87	1.37
4+780.00	646.86	645.18	1.68
4+800.00	647.17	645.49	2.18
4+820.00	647.60	645.79	2.00

LONGITUDINAL SECTION



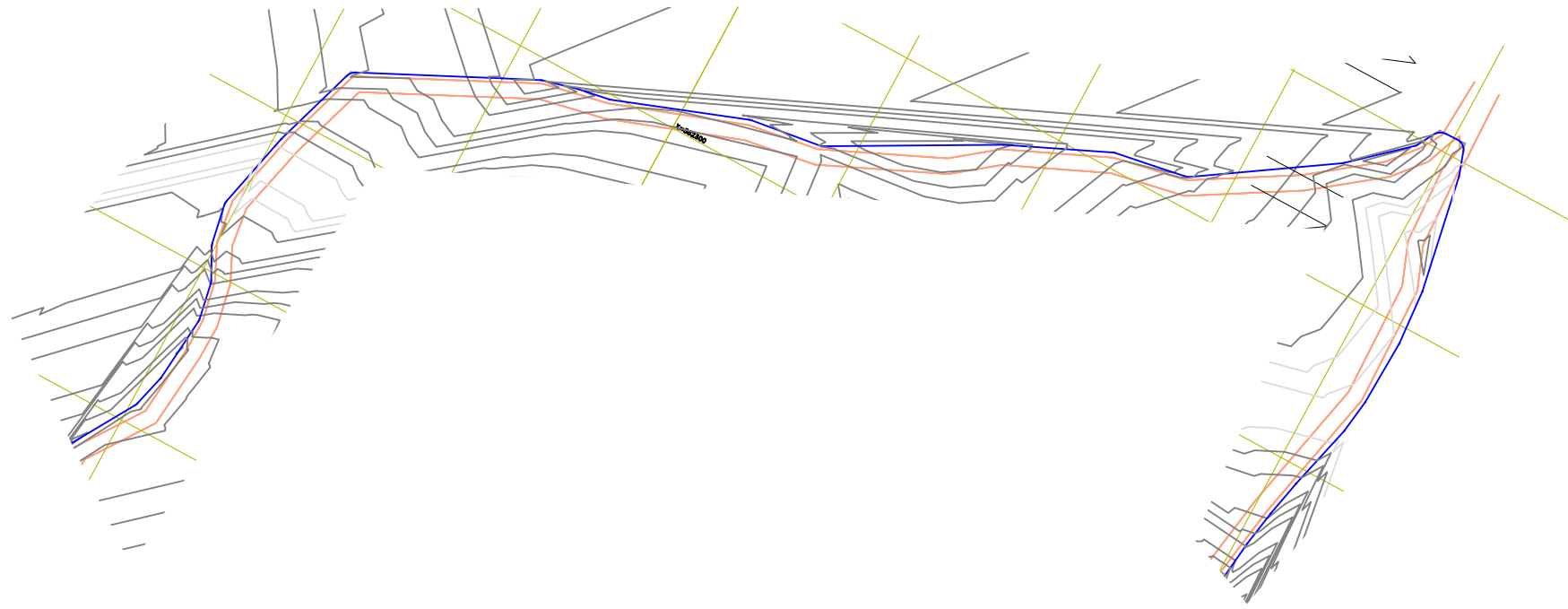
CLIENT: THE CHIEF EXECUTIVE OFFICER
TANA WATER WORKS
DEVELOPMENT AGENCY
P.O BOX 1292 - 10100,
NYERI, KENYA

ENGINEER: THE CHIEF EXECUTIVE OFFICER
TANA WATER WORKS
DEVELOPMENT AGENCY
P.O BOX 1292 - 10100,
NYERI, KENYA

PROJECT TITLE:
**KIBUNG'A KAKIMIKI PIPELINE
RELOCATION PROJECT**

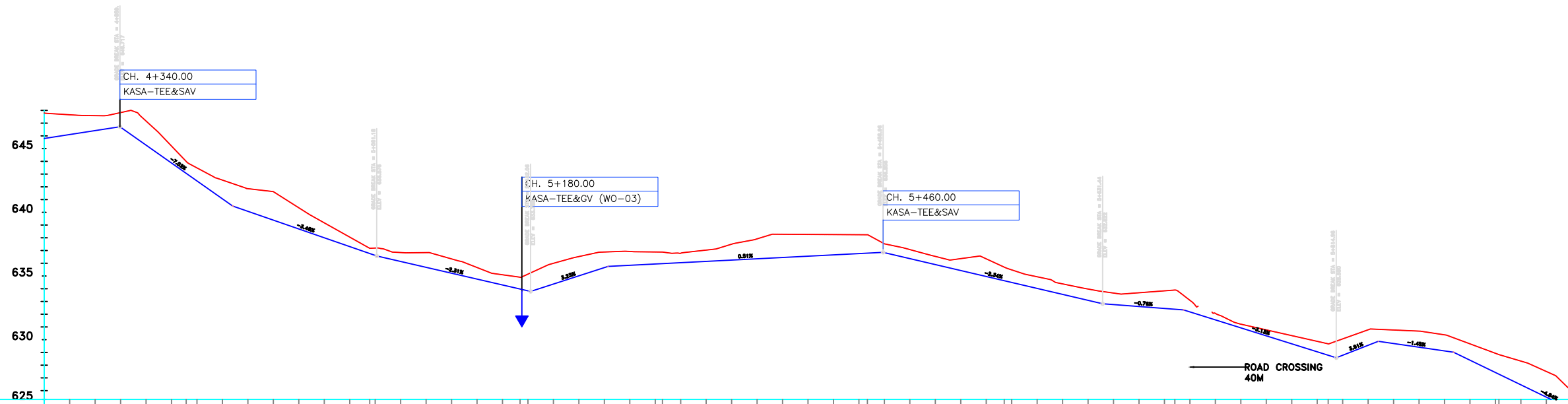
DRAWING TITLE:
**TURIMA TO SOKO MJINGA PLAN AND
PROFILE SECTION
CH. 3+600.00 - 4+800.00
SHEET 4 OF 10**

Designed by: A.M.M	Drawn by: A.M.M
Checked by: D.N.W	Approved by: D.N.W
Scale: H- 1:4000, V- 1:400	Date: MAY 2022
DRG No. KASA/04	REV



- NOTES:**
1. CONTOUR LEVELS ARE IN METERS AT TWO METER INTERVALS
 2. GRID VALUES ARE IN METERS AT 100 METER INTERVALS
 3. GEOLOGICAL CONDITIONS INDICATED ON DRAWING ARE FOR GENERAL GUIDANCE ONLY
 4. MINIMUM PIPELINE SLOPES TO BE 1:200
 5. DRAWING TO BE READ IN CONJUNCTION WITH STANDARD DRAWINGS

- LEGEND:**
- MURRAM ROAD
 - FENCE / HEDGE
 - 1:480 CONTOURS
 - RIVER/STREAM
 - V.J. VIKING JOHNSON
 - GV GATE VALVE
 - SV-01 SECTIONAL VALVE & No.
 - WO-01 WASHOUT VALVE & No.
 - SAV-01 AIR VALVE & No.
 - WM WATER METER
 - PROPOSED MASONRY CHAMBER
 - PROPOSED VALVE BOX
 - PROPOSED WATER LINE



CHAINAGE (m)	EXISTING GROUND LEVEL (m)	INVERT LEVELS (m)	DEPTH OF INVERT (m)	FLOW PARAMETERS DATUM (m)	TYPE OF PIPE AND SIZE	GEOLOGICAL CONDITION
2.00	645.79	645.79	2.00			
4+820.00	647.86	646.10	1.55			
4+840.00	647.59	646.41	1.17			
4+860.00	647.83	646.88	1.18			
4+880.00	647.17	645.27	1.89			
4+900.00	645.20	645.87	1.33			
4+911.52	644.00	642.46	1.02			
4+920.00	643.49	642.46	1.02			
4+940.00	642.53	641.06	1.47			
4+960.00	641.86	640.49	1.76			
4+980.00	641.82	639.39	2.24			
5+000.00	640.35	638.69	1.66			
5+020.00	639.17	638.00	1.17			
5+040.00	638.05	637.31	0.74			
5+060.00	637.17	636.88	0.88			
5+080.00	636.84	636.14	0.70			
5+100.00	636.84	635.68	1.16			
5+120.00	636.34	635.22	1.12			
5+140.00	635.87	634.76	0.81			
5+160.00	635.10	634.30	0.80			
5+173.79	634.91	634.91	0.00			
5+180.00	635.15	633.94	1.44			
5+200.00	636.00	634.37	1.63			
5+220.00	636.53	635.01	1.51			
5+240.00	636.88	635.98	1.44			
5+260.00	636.93	635.84	1.08			
5+280.00	636.89	635.94	0.94			
5+300.00	636.79	635.05	0.74			
5+320.00	637.03	636.15	0.88			
5+340.00	637.50	636.25	1.25			
5+360.00	637.92	636.35	1.56			
5+380.00	638.28	636.45	1.82			
5+400.00	638.26	636.56	1.71			
5+420.00	638.25	636.66	1.60			
5+440.00	638.24	636.76	1.48			
5+460.00	637.55	635.88	0.88			
5+480.00	637.07	636.36	0.71			
5+500.00	636.54	635.90	0.64			
5+520.00	636.56	635.43	0.94			
5+540.00	636.55	634.96	1.38			
5+554.16	635.69	635.69	0.00			
5+560.00	635.48	634.49	0.99			
5+580.00	634.94	634.03	0.91			
5+600.00	634.58	633.56	0.82			
5+620.00	633.98	633.09	0.88			
5+640.00	633.66	632.82	0.96			
5+660.00	633.68	632.76	0.90			
5+680.00	633.64	632.60	1.08			
5+700.00	633.64	632.45	1.38			
5+720.00	633.16	632.34	1.14			
5+740.00	632.46	631.55	0.51			
5+760.00	631.42	630.93	0.28			
5+780.00	630.77	630.30	0.47			
5+800.00	630.32	629.67	0.64			
5+808.62	629.87	629.05	0.82			
5+820.00	629.65	628.78	1.39			
5+840.00	629.78	628.56	1.22			
5+860.00	629.76	628.57	0.94			
5+880.00	629.76	628.70	1.06			
5+900.00	629.67	628.41	1.28			
5+920.00	629.57	628.12	1.26			
5+940.00	629.57	628.02	1.14			
5+960.00	629.57	628.39	1.28			
5+980.00	628.84	627.42	1.51			
6+000.00	628.32	626.46	1.86			
6+020.00	627.50	625.49	2.01			
6+040.00	624.52	624.52	1.42			

LONGITUDINAL SECTION



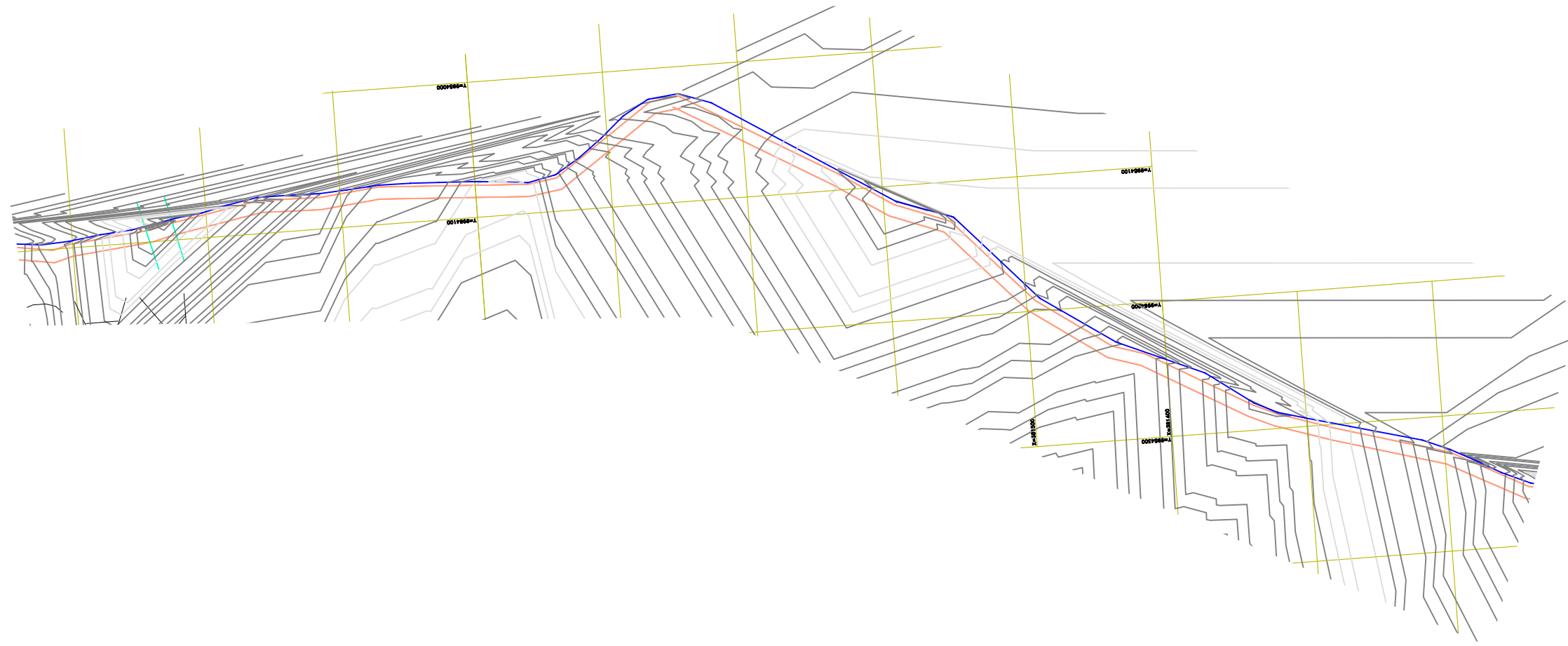
CLIENT: THE CHIEF EXECUTIVE OFFICER
TANA WATER WORKS
DEVELOPMENT AGENCY
P.O BOX 1292 - 10100,
NYERI, KENYA

ENGINEER: THE CHIEF EXECUTIVE OFFICER
TANA WATER WORKS
DEVELOPMENT AGENCY
P.O BOX 1292 - 10100,
NYERI, KENYA

PROJECT TITLE:
**KIBUNG'A KAKIMIKI PIPELINE
RELOCATION PROJECT**

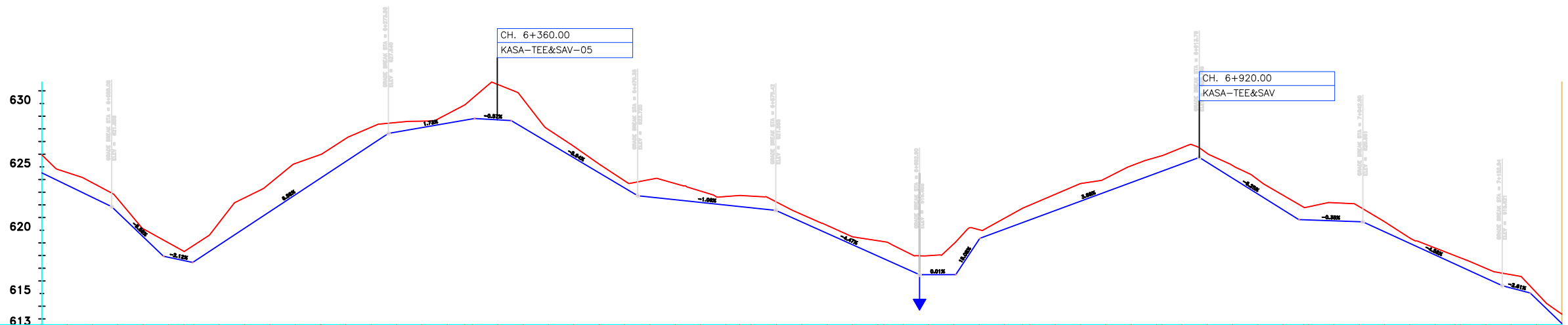
DRAWING TITLE:
**TURIMA TO SOKO MJINGA PLAN AND
PROFILE SECTION
CH. 4+800.00 - 6+000.00
SHEET 5 OF 10**

Designed by: A.M.M	Drawn by: A.M.M
Checked by: D.N.W	Approved by: D.N.W
Scale: H- 1:4000, V- 1:400	Date: MAY 2022
DRG No. KASA/05	REV



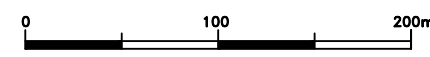
- NOTES:**
1. CONTOUR LEVELS ARE IN METERS AT TWO METER INTERVALS
 2. GRID VALUES ARE IN METERS AT 100 METER INTERVALS
 3. GEOLOGICAL CONDITIONS INDICATED ON DRAWING ARE FOR GENERAL GUIDANCE ONLY
 4. MINIMUM PIPELINE SLOPES TO BE 1:200
 5. DRAWING TO BE READ IN CONJUNCTION WITH STANDARD DRAWINGS

- LEGEND:**
- MURRAM ROAD
 - FENCE / HEDGE
 - 1:480 CONTOURS
 - RIVER/STREAM
 - V.J. VIKING JOHNSON
 - GV GATE VALVE
 - SV-01 SECTIONAL VALVE & No.
 - WO-01 WASHOUT VALVE & No.
 - SAV-01 AIR VALVE & No.
 - WM WATER METER
 - PROPOSED MASONRY CHAMBER
 - PROPOSED VALVE BOX
 - PROPOSED WATER LINE



CHAINAGE (m)	EXISTING GROUND LEVEL (m)	INVERT LEVELS (m)	DEPTH OF INVERT (m)
6+020.00	624.55	624.52	1.42
6+040.00	623.74	623.55	1.00
6+060.00	622.45	622.59	1.15
6+080.00	620.11	621.86	1.08
6+100.00	619.00	619.47	0.84
6+112.12	618.33	617.85	1.22
6+120.00	618.82	617.68	1.40
6+140.00	620.61	618.84	1.78
6+160.00	622.56	620.16	2.40
6+180.00	623.71	621.47	2.23
6+200.00	625.27	622.79	2.47
6+220.00	626.98	624.11	1.86
6+240.00	627.24	625.43	1.81
6+260.00	628.13	626.75	1.38
6+280.00	628.51	627.64	0.80
6+300.00	628.61	627.75	0.75
6+320.00	628.16	628.10	0.51
6+333.85	629.41	628.45	0.72
6+340.00	631.50	629.59	1.08
6+360.00	631.50	630.41	0.80
6+380.00	630.33	628.71	2.24
6+400.00	627.93	628.09	1.03
6+420.00	626.61	626.90	0.80
6+440.00	625.21	625.71	0.89
6+460.00	623.90	624.53	0.56
6+480.00	624.00	623.34	1.09
6+500.00	623.68	622.72	1.38
6+520.00	623.09	622.82	1.28
6+540.00	622.66	622.41	0.80
6+550.90	622.74	622.19	0.88
6+560.00	622.69	621.98	0.92
6+580.00	622.22	621.77	0.88
6+600.00	621.24	621.56	0.60
6+620.00	620.38	621.85	0.63
6+640.00	619.48	619.75	0.82
6+660.00	618.17	618.85	1.21
6+680.00	618.41	617.96	1.35
6+700.00	617.99	617.06	1.49
6+720.00	618.93	616.49	1.30
6+740.00	620.04	618.49	0.88
6+760.00	620.95	619.29	0.83
6+780.00	621.74	620.08	0.87
6+800.00	621.98	621.74	1.17
6+820.00	622.83	620.82	1.28
6+840.00	623.68	621.55	1.39
6+860.00	624.11	622.29	1.08
6+880.00	625.08	623.03	1.32
6+900.00	625.76	623.76	1.26
6+920.00	626.51	624.50	1.27
6+940.00	626.06	625.24	0.76
6+960.00	625.11	625.74	0.71
6+980.00	623.99	625.35	1.00
7+000.00	621.86	624.10	1.14
7+020.00	622.75	622.86	1.15
7+040.00	622.85	621.61	1.20
7+060.00	621.85	620.84	1.04
7+080.00	622.17	620.81	1.43
7+100.00	621.86	620.74	1.48
7+120.00	620.67	620.87	0.78
7+140.00	619.38	619.89	0.42
7+160.00	618.60	618.96	0.55
7+180.00	617.82	618.05	0.89
7+200.00	616.99	617.13	0.78
7+220.00	615.82	616.21	0.99
7+240.00	616.49	615.62	1.05
7+260.00	615.06	615.44	0.55
7+280.00	615.06	615.04	0.55
7+300.00	612.63	612.63	0.74

LONGITUDINAL SECTION



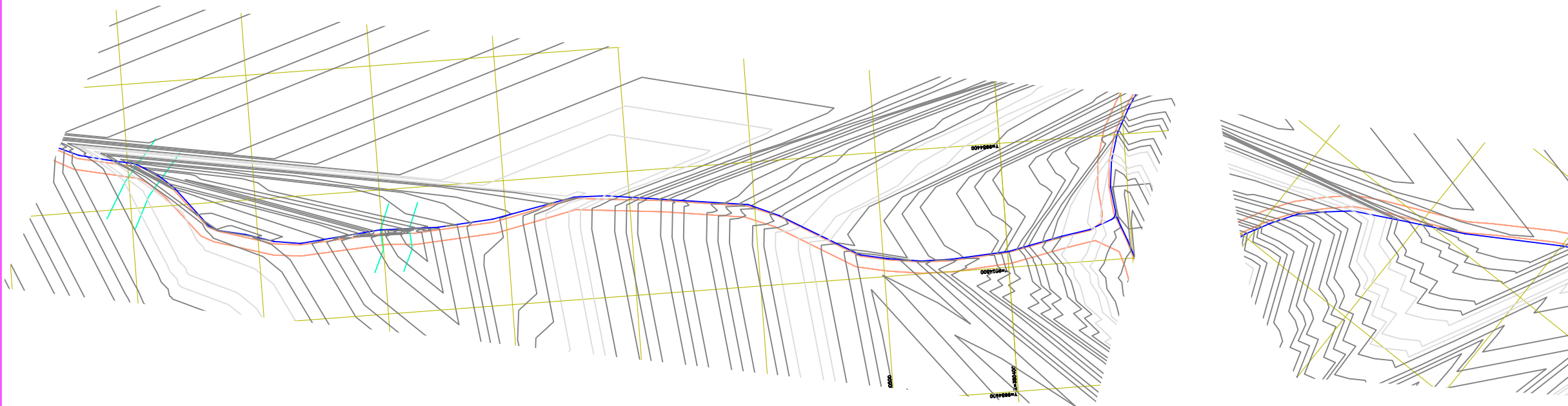
CLIENT: THE CHIEF EXECUTIVE OFFICER
TANA WATER WORKS
DEVELOPMENT AGENCY
P.O BOX 1292 - 10100,
NYERI, KENYA

ENGINEER: THE CHIEF EXECUTIVE OFFICER
TANA WATER WORKS
DEVELOPMENT AGENCY
P.O BOX 1292 - 10100,
NYERI, KENYA

PROJECT TITLE:
**KIBUNG'A KAKIMIKI PIPELINE
RELOCATION PROJECT**

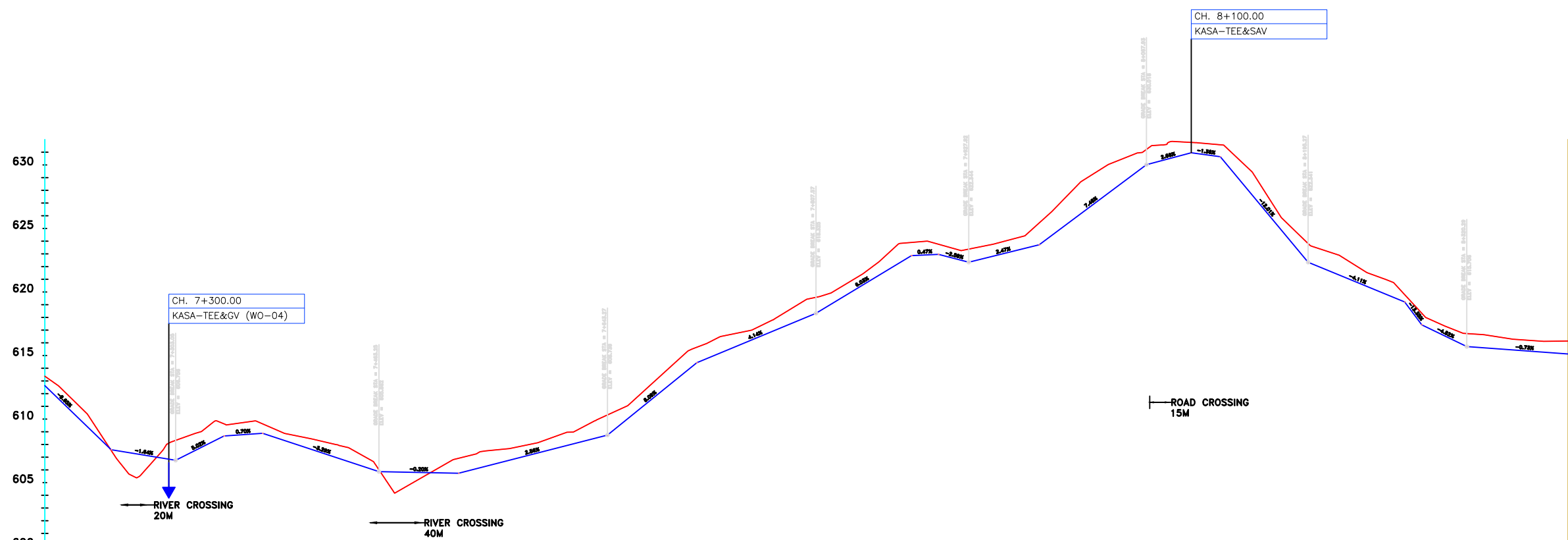
DRAWING TITLE:
**TURIMA TO SOKO MJINGA PLAN AND
PROFILE SECTION
CH. 6+000.00 - 7+200.00
SHEET 6 OF 10**

Designed by: A.M.M	Drawn by: A.M.M
Checked by: D.N.W	Approved by: D.N.W
Scale: H- 1:4000, V- 1:400	Date: MAY 2022
DRG No. KASA/06	REV



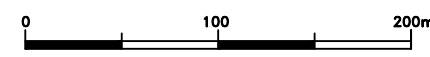
- NOTES:**
1. CONTOUR LEVELS ARE IN METERS AT TWO METER INTERVALS
 2. GRID VALUES ARE IN METERS AT 100 METER INTERVALS
 3. GEOLOGICAL CONDITIONS INDICATED ON DRAWING ARE FOR GENERAL GUIDANCE ONLY
 4. MINIMUM PIPELINE SLOPES TO BE 1:200
 5. DRAWING TO BE READ IN CONJUNCTION WITH STANDARD DRAWINGS

- LEGEND:**
- MURRAM ROAD
 - FENCE / HEDGE
 - CONTOURS
 - RIVER/STREAM
 - V.J. VIKING JOHNSON
 - GV GATE VALVE
 - SV-01 SECTIONAL VALVE & No.
 - WO-01 WASHOUT VALVE & No.
 - SAV-01 AIR VALVE & No.
 - WM WATER METER
 - PROPOSED MASONRY CHAMBER
 - PROPOSED VALVE BOX
 - PROPOSED WATER LINE



CHAINAGE (m)	EXISTING GROUND LEVEL (m)	INVERT LEVELS (m)	DEPTH OF INVERT (m)
0.74	612.63	612.63	0.74
1.01	610.70	611.72	1.01
0.63	606.77	609.41	0.63
-1.01	607.59	607.46	-1.01
-1.05	607.13	606.09	-1.05
1.41	608.21	608.21	1.41
1.31	608.82	608.82	1.31
0.88	609.87	609.87	0.88
0.88	609.80	609.78	0.88
0.74	606.88	606.88	0.74
0.65	606.60	609.26	0.65
0.70	607.94	608.65	0.70
0.83	607.29	608.21	0.83
0.77	607.99	607.99	0.77
1.08	606.63	607.71	1.08
0.83	606.82	606.49	0.83
-1.41	605.83	604.42	-1.41
-0.22	605.79	605.57	-0.22
0.96	605.75	606.71	0.96
1.18	605.74	607.26	1.18
1.17	606.10	607.26	1.17
1.01	606.61	607.62	1.01
0.84	607.12	607.96	0.84
0.82	607.63	608.55	0.82
1.02	608.14	609.17	1.02
1.56	608.74	610.17	1.56
1.03	610.09	611.02	1.03
1.23	611.71	612.94	1.23
1.43	613.33	614.75	1.43
1.22	614.43	615.89	1.22
1.20	614.70	615.89	1.20
1.13	615.53	616.65	1.13
0.78	616.35	617.15	0.78
1.01	617.18	618.19	1.01
1.40	618.01	619.41	1.40
1.26	618.33	619.86	1.26
0.88	619.08	619.86	0.88
0.88	620.28	621.16	0.88
1.14	621.49	622.63	1.14
1.48	622.88	623.81	1.48
0.88	622.88	623.87	0.88
0.76	622.55	623.31	0.76
1.03	622.34	623.64	1.03
0.97	622.64	623.62	0.97
0.86	623.14	624.10	0.86
1.50	623.92	625.13	1.50
2.06	624.95	627.01	2.06
2.47	626.44	628.91	2.47
2.18	627.93	630.12	2.18
1.48	629.43	630.91	1.48
1.20	630.02	631.57	1.20
1.23	630.34	631.57	1.23
0.82	630.82	631.79	0.82
0.81	630.73	631.84	0.81
1.53	626.98	630.50	1.53
1.50	626.58	628.08	1.50
1.12	624.18	625.29	1.12
1.57	622.34	623.54	1.57
1.55	621.33	622.88	1.55
1.12	620.50	621.63	1.12
1.16	619.68	620.85	1.16
0.58	619.22	618.85	0.58
0.77	618.68	617.45	0.77
1.02	615.72	616.73	1.02
0.98	615.56	616.44	0.98
0.84	615.42	616.26	0.84
0.85	615.27	616.12	0.85
1.02	615.12	615.12	1.02

LONGITUDINAL SECTION



CLIENT: THE CHIEF EXECUTIVE OFFICER
TANA WATER WORKS
DEVELOPMENT AGENCY
P.O BOX 1292 - 10100,
NYERI, KENYA

ENGINEER: THE CHIEF EXECUTIVE OFFICER
TANA WATER WORKS
DEVELOPMENT AGENCY
P.O BOX 1292 - 10100,
NYERI, KENYA

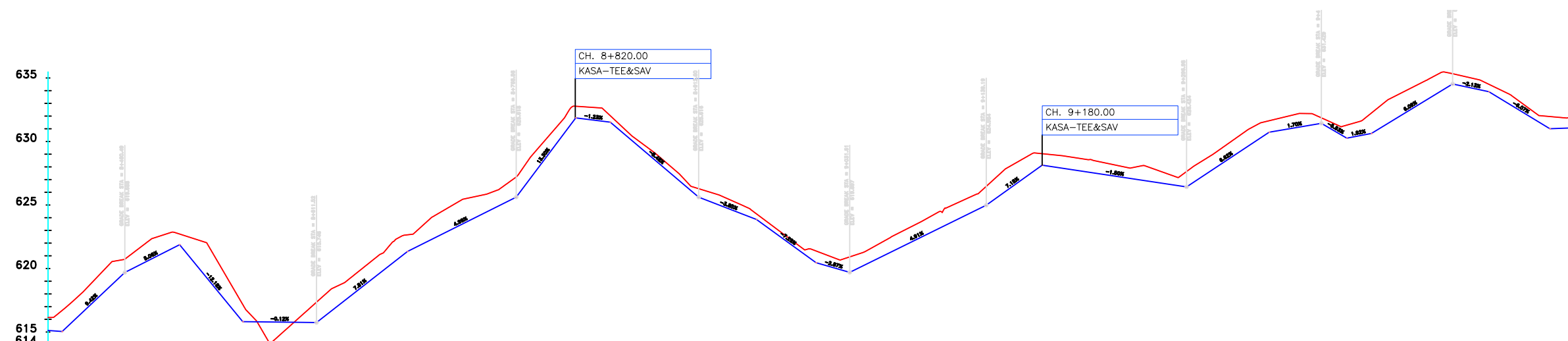
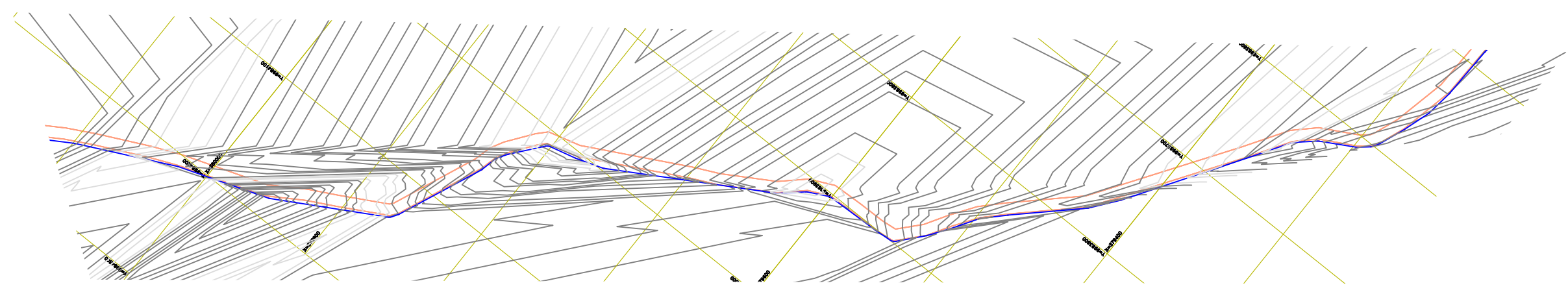
PROJECT TITLE:
**KIBUNG'A KAKIMIKI PIPELINE
RELOCATION PROJECT**

DRAWING TITLE:
**TURIMA TO SOKO MJINGA PLAN AND
PROFILE SECTION
CH. 7+200.00 - 8+400.00
SHEET 7 OF 10**

Designed by: A.M.M | Drawn by: A.M.M
Checked by: D.N.W | Approved by: D.N.W
Scale: H- 1:4000, V- 1:400 | Date: MAY 2022
DRG No. **KASA/07**

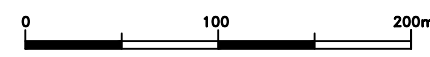
- NOTES:**
1. CONTOUR LEVELS ARE IN METERS AT TWO METER INTERVALS
 2. GRID VALUES ARE IN METERS AT 100 METER INTERVALS
 3. GEOLOGICAL CONDITIONS INDICATED ON DRAWING ARE FOR GENERAL GUIDANCE ONLY
 4. MINIMUM PIPELINE SLOPES TO BE 1:200
 5. DRAWING TO BE READ IN CONJUNCTION WITH STANDARD DRAWINGS

- LEGEND:**
- MURRAM ROAD
 - FENCE / HEDGE
 - 1480- CONTOURS
 - RIVER/STREAM
 - VIKING JOHNSON
 - GATE VALVE
 - SECTIONAL VALVE & No.
 - WASHOUT VALVE & No.
 - AIR VALVE & No.
 - WATER METER
 - PROPOSED MASONRY CHAMBER
 - PROPOSED VALVE BOX
 - PROPOSED WATER LINE



CHAINAGE (m)	EXISTING GROUND LEVEL (m)	INVERT LEVELS (m)	DEPTH OF INVERT (m)	FLOW PARAMETERS DATUM (m)	TYPE OF PIPE AND SIZE	GEOLOGICAL CONDITION
1.02	615.12	615.12	0.00			
1.66	615.04	615.88	0.84			
1.70	617.76	619.46	1.70			
1.08	619.68	620.71	1.03			
1.54	620.68	622.22	1.54			
1.64	621.89	622.83	1.19			
2.31	619.88	622.18	2.31			
2.01	617.45	619.48	2.01			
1.35	615.82	616.32	1.35			
0.51	615.81	616.32	0.51			
-1.25	615.78	614.53	-1.25			
0.56	615.76	616.32	0.56			
1.60	615.75	616.11	1.60			
1.70	616.41	618.89	1.70			
1.43	617.97	619.40	1.43			
1.46	619.53	620.99	1.46			
1.81	621.92	622.61	1.81			
1.64	622.18	623.83	1.64			
1.88	623.18	625.06	1.88			
1.56	624.18	625.74	1.56			
1.38	625.18	626.57	1.38			
1.59	625.62	627.10	1.59			
1.66	627.10	628.78	1.66			
1.31	629.76	631.07	1.31			
0.82	631.86	632.75	0.82			
0.51	631.86	632.30	0.51			
0.36	630.08	630.88	0.36			
0.56	628.38	628.94	0.56			
0.48	626.68	627.17	0.48			
0.67	625.62	626.06	0.67			
0.73	624.56	625.29	0.73			
0.44	623.98	624.16	0.44			
0.39	622.28	622.87	0.39			
0.71	620.52	621.54	0.71			
0.78	620.03	620.81	0.78			
1.22	619.70	621.19	1.22			
1.08	620.11	621.19	1.08			
1.14	621.09	622.24	1.14			
1.21	622.08	623.29	1.21			
1.30	623.06	624.38	1.30			
1.29	624.04	625.33	1.29			
1.68	626.08	626.54	1.68			
1.70	626.47	628.17	1.70			
1.17	627.90	629.07	1.17			
0.88	627.88	628.87	0.88			
0.99	627.58	628.88	0.99			
0.88	627.28	628.16	0.88			
1.07	626.98	628.05	1.07			
0.85	626.68	627.52	0.85			
1.23	626.42	627.86	1.23			
1.20	627.95	629.14	1.20			
1.28	629.27	630.55	1.28			
0.88	630.59	631.58	0.88			
1.03	631.03	632.07	1.03			
0.83	631.32	632.01	0.83			
0.78	630.45	631.20	0.78			
1.65	630.88	632.03	1.65			
1.82	631.69	633.23	1.82			
1.61	632.91	634.52	1.61			
1.35	634.12	635.47	1.35			
0.81	634.53	635.47	0.81			
0.79	634.24	635.03	0.79			
0.59	633.92	634.27	0.59			
0.69	632.41	633.11	0.69			
0.78	631.28	632.07	0.78			
0.84	631.07	631.99	0.84			

LONGITUDINAL SECTION



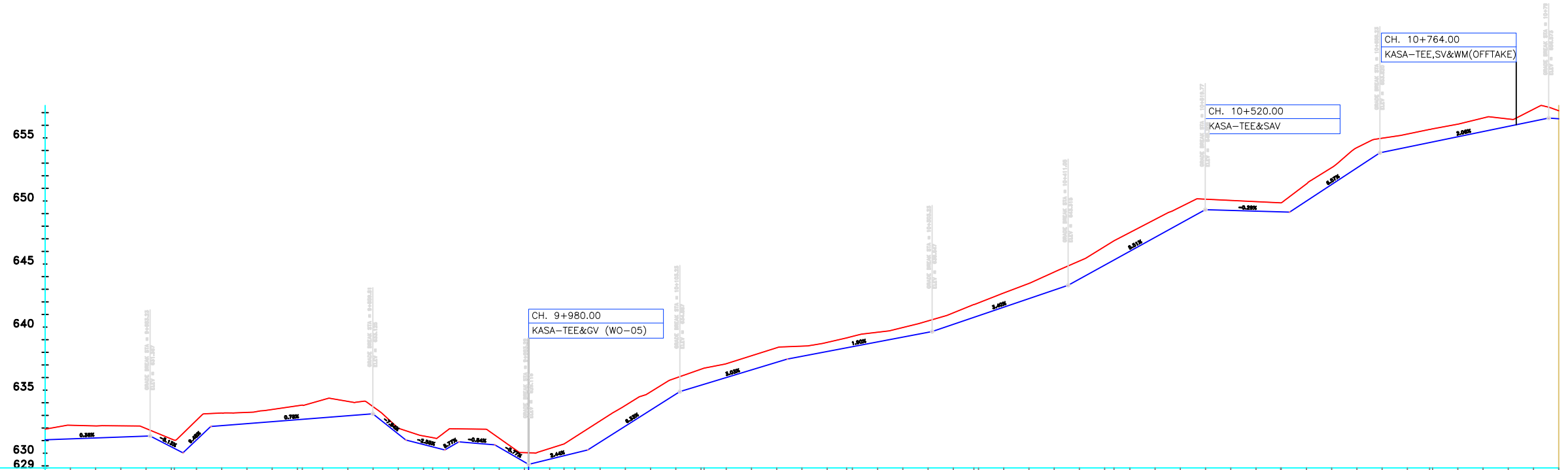
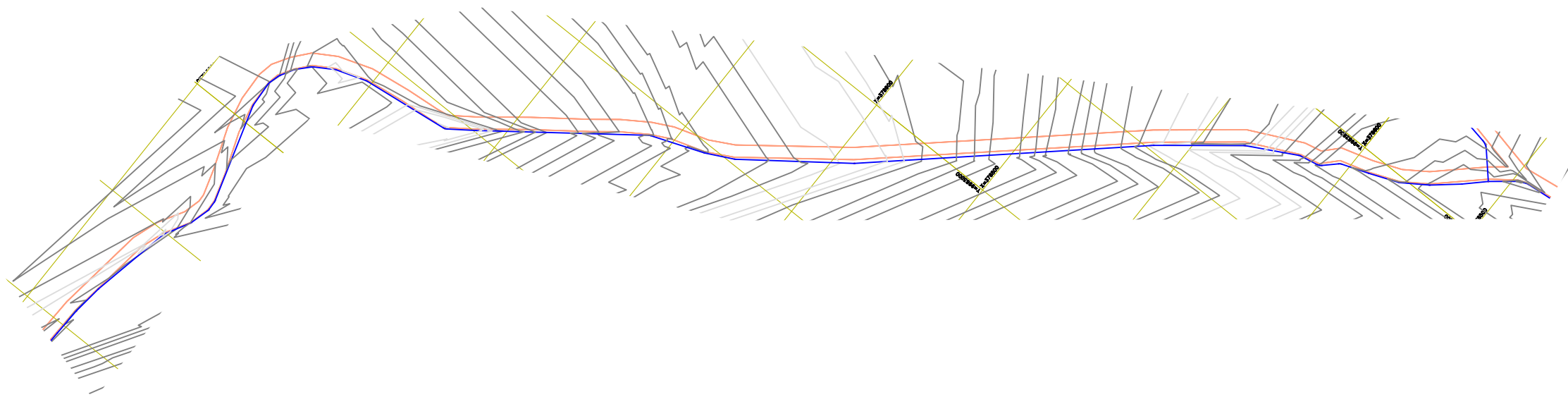
CLIENT: THE CHIEF EXECUTIVE OFFICER
TANA WATER WORKS
DEVELOPMENT AGENCY
P.O BOX 1292 - 10100,
NYERI, KENYA

ENGINEER: THE CHIEF EXECUTIVE OFFICER
TANA WATER WORKS
DEVELOPMENT AGENCY
P.O BOX 1292 - 10100,
NYERI, KENYA

PROJECT TITLE:
**KIBUNG'A KAKIMIKI PIPELINE
RELOCATION PROJECT**

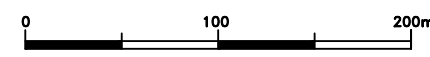
DRAWING TITLE:
**TURIMA TO SOKO MJINGA PLAN AND
PROFILE SECTION
CH. 8+400.00 - 9+600.00
SHEET 8 OF 10**

Designed by: A.M.M	Drawn by: A.M.M
Checked by: D.N.W	Approved by: D.N.W
Scale: H- 1:4000, V- 1:400	Date: MAY 2022
DRG No. KASA/08	REV



CHAINAGE (m)	9+620.00	9+640.00	9+660.00	9+680.00	9+700.00	9+720.00	9+740.00	9+760.00	9+780.00	9+800.00	9+820.00	9+840.00	9+860.00	9+880.00	9+900.00	10+000.00	10+011.37	10+020.00	10+040.00	10+060.00	10+080.00	10+100.00	10+120.00	10+140.00	10+160.00	10+180.00	10+200.00	10+220.00	10+240.00	10+260.00	10+280.00	10+300.00	10+320.00	10+340.00	10+360.00	10+380.00	10+400.00	10+420.00	10+440.00	10+457.45	10+460.00	10+480.00	10+500.00	10+520.00	10+540.00	10+560.00	10+580.00	10+600.00	10+620.00	10+640.00	10+660.00	10+680.00	10+700.00	10+720.00	10+740.00	10+760.00	10+780.00	10+800.00										
EXISTING GROUND LEVEL (m)	632.22	632.16	632.17	631.96	631.43	632.61	633.19	633.24	633.47	633.76	634.23	634.11	633.69	631.98	631.37	631.24	631.90	631.92	631.19	630.05	630.38	630.73	631.28	632.56	633.79	634.87	635.96	637.10	637.73	638.36	638.46	638.79	639.59	639.97	640.49	641.13	641.78	642.71	643.46	643.98	644.57	646.01	646.84	647.50	648.54	649.52	650.14	650.04	649.95	649.88	651.35	652.64	654.23	654.98	655.31	655.89	656.09	656.57	656.90	657.27	657.15							
INVERT LEVELS (m)	631.07	631.14	631.21	631.28	631.35	630.51	630.03	632.61	632.19	632.12	632.19	633.55	632.50	632.66	633.69	634.23	634.11	633.69	631.98	631.05	630.89	631.24	631.90	631.92	631.19	630.05	629.52	630.01	630.26	630.88	632.15	633.42	634.87	635.96	637.10	637.73	638.36	638.46	638.79	639.59	639.97	640.49	641.13	641.78	642.71	643.46	643.98	644.57	646.01	646.84	647.50	648.54	649.52	650.14	650.04	649.95	649.88	651.35	652.64	654.23	654.98	655.31	655.89	656.09	656.57	656.90	657.27	657.15
DEPTH OF INVERT (m)	0.84	1.08	0.85	0.89	0.90	0.63	1.54	1.56	1.03	1.00	0.89	0.97	1.10	1.41	1.14	1.14	0.58	0.45	0.74	0.68	1.48	1.03	1.11	0.77	0.74	0.85	1.27	1.87	1.68	1.64	1.45	1.28	1.27	1.10	1.12	1.15	0.98	0.80	0.72	0.81	0.77	0.78	0.91	1.02	1.13	1.20	1.42	1.47	1.23	1.36	1.34	1.61	1.12	1.04	1.04	1.00	1.07	0.95	0.86	0.84								
FLOW PARAMETERS																																																																				
DATUM (m)																																																																				
TYPE OF PIPE AND SIZE																																																																				
GEOLOGICAL CONDITION																																																																				

LONGITUDINAL SECTION



- NOTES:**
- CONTOUR LEVELS ARE IN METERS AT TWO METER INTERVALS
 - GRID VALUES ARE IN METERS AT 100 METER INTERVALS
 - GEOLOGICAL CONDITIONS INDICATED ON DRAWING ARE FOR GENERAL GUIDANCE ONLY
 - MINIMUM PIPELINE SLOPES TO BE 1:200
 - DRAWING TO BE READ IN CONJUNCTION WITH STANDARD DRAWINGS

- LEGEND:**
- MURRAM ROAD
 - FENCE / HEDGE
 - CONTOURS
 - RIVER/STREAM
 - V.J. VIKING JOHNSON
 - GV GATE VALVE
 - SV-01 SECTIONAL VALVE & No.
 - WO-01 WASHOUT VALVE & No.
 - SAV-01 AIR VALVE & No.
 - WM WATER METER
 - PROPOSED MASONRY CHAMBER
 - PROPOSED VALVE BOX
 - PROPOSED WATER LINE

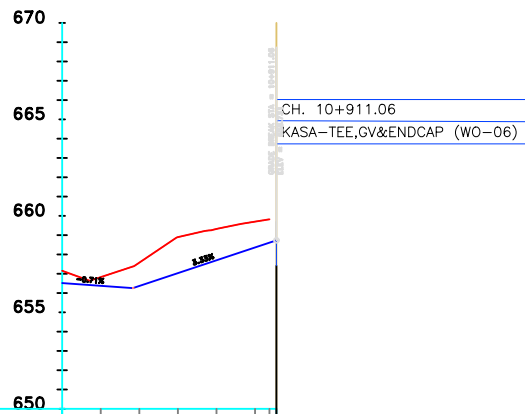
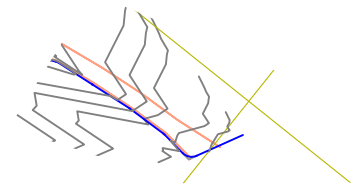
CLIENT: THE CHIEF EXECUTIVE OFFICER
TANA WATER WORKS DEVELOPMENT AGENCY
 P.O BOX 1292 - 10100,
 NYERI, KENYA

ENGINEER: THE CHIEF EXECUTIVE OFFICER
TANA WATER WORKS DEVELOPMENT AGENCY
 P.O BOX 1292 - 10100,
 NYERI, KENYA

PROJECT TITLE:
KIBUNG'A KAKIMIKI PIPELINE RELOCATION PROJECT

DRAWING TITLE:
TURIMA TO SOKO MJINGA PLAN AND PROFILE SECTION
CH. 9+600.00 - 10+800.00
SHEET 9 OF 10

Designed by: A.M.M	Drawn by: A.M.M
Checked by: D.N.W	Approved by: D.N.W
Scale: H- 1:4000, V- 1:400	Date: MAY 2022
DRG No. KASA/09	REV



CHAINAGE (m)		10+820.00	10+840.00	10+860.00	10+880.00	10+900.00	10+911.06
EXISTING GROUND LEVEL (m)		656.83	657.58	658.90	659.32	659.70	659.82
INVERT LEVELS (m)		656.52	656.37	656.29	657.03	657.70	658.36
DEPTH OF INVERT (m)		0.84	0.45	1.12	1.87	1.82	1.84
FLOW PARAMETERS DATUM (m)							
TYPE OF PIPE AND SIZE							
GEOLOGICAL CONDITION							

LONGITUDINAL SECTION

- NOTES:**
1. CONTOUR LEVELS ARE IN METERS AT TWO METER INTERVALS
 2. GRID VALUES ARE IN METERS AT 100 METER INTERVALS
 3. GEOLOGICAL CONDITIONS INDICATED ON DRAWING ARE FOR GENERAL GUIDANCE ONLY
 4. MINIMUM PIPELINE SLOPES TO BE 1:200
 5. DRAWING TO BE READ IN CONJUNCTION WITH STANDARD DRAWINGS

- LEGEND:**
- MURRAM ROAD
 - FENCE / HEDGE
 - CONTOURS
 - RIVER/STREAM
 - VIKING JOHNSON
 - GATE VALVE
 - SECTIONAL VALVE & No.
 - WASHOUT VALVE & No.
 - AIR VALVE & No.
 - WATER METER
 - PROPOSED MASONRY CHAMBER
 - PROPOSED VALVE BOX
 - PROPOSED WATER LINE

CLIENT: **THE CHIEF EXECUTIVE OFFICER
TANA WATER WORKS
DEVELOPMENT AGENCY**
P.O BOX 1292 - 10100,
NYERI, KENYA

ENGINEER: **THE CHIEF EXECUTIVE OFFICER
TANA WATER WORKS
DEVELOPMENT AGENCY**
P.O BOX 1292 - 10100,
NYERI, KENYA

PROJECT TITLE:
**KIBUNG'A KAKIMIKI PIPELINE
RELOCATION PROJECT**

DRAWING TITLE:
**TURIMA TO SOKO MJINGA PLAN AND
PROFILE SECTION**
CH. 10+800.00 - 10+911.06
SHEET 10 OF 10

Designed by: A.M.M	Drawn by: A.M.M
Checked by: D.N.W	Approved by: D.N.W
Scale: H- 1:4000, V- 1:400	Date: MAY 2022
DRG No. KASA/10	REV

