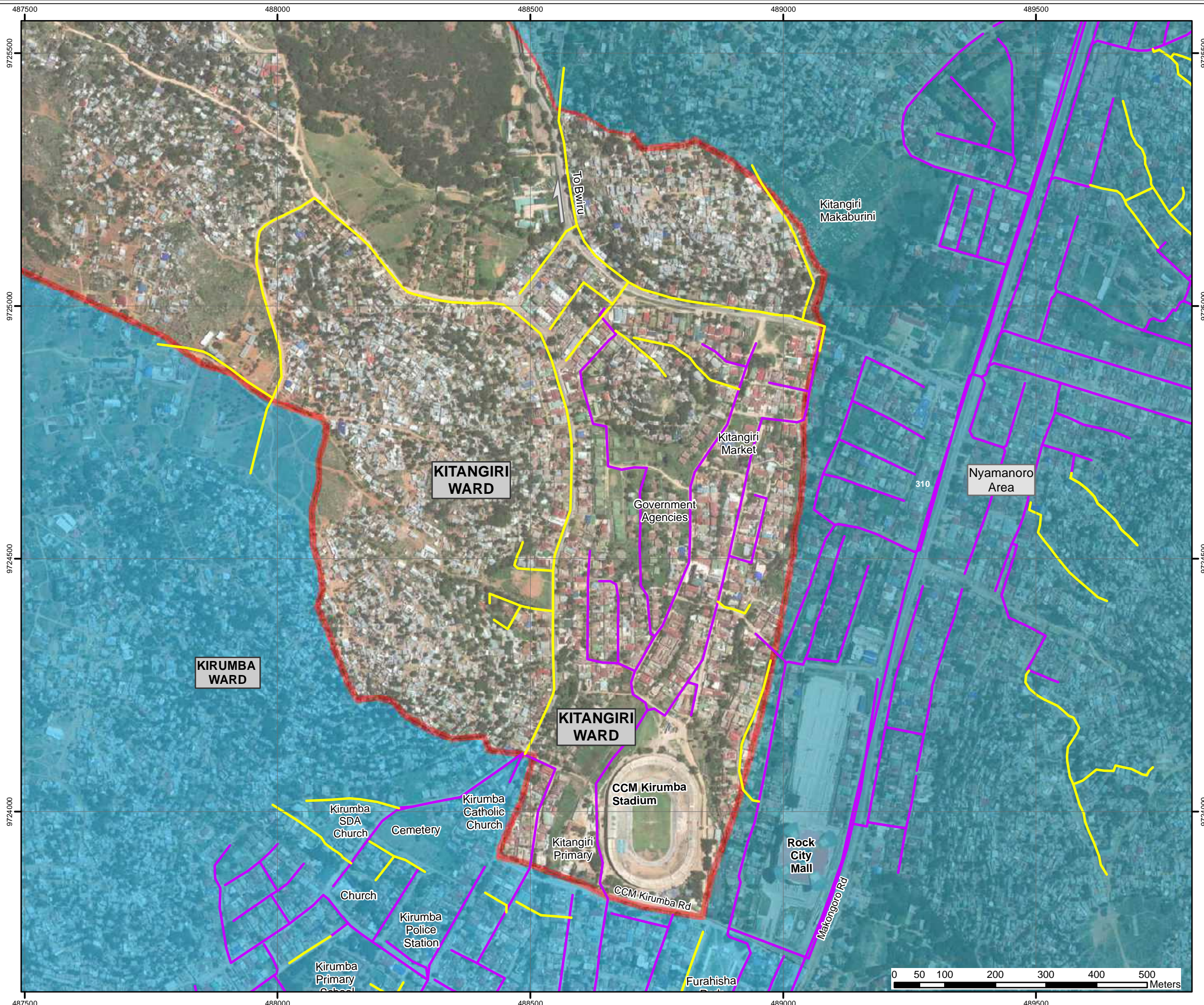


KITANGIRI



Layout Plan of Existing and Proposed Sewers Kitangiri Wards

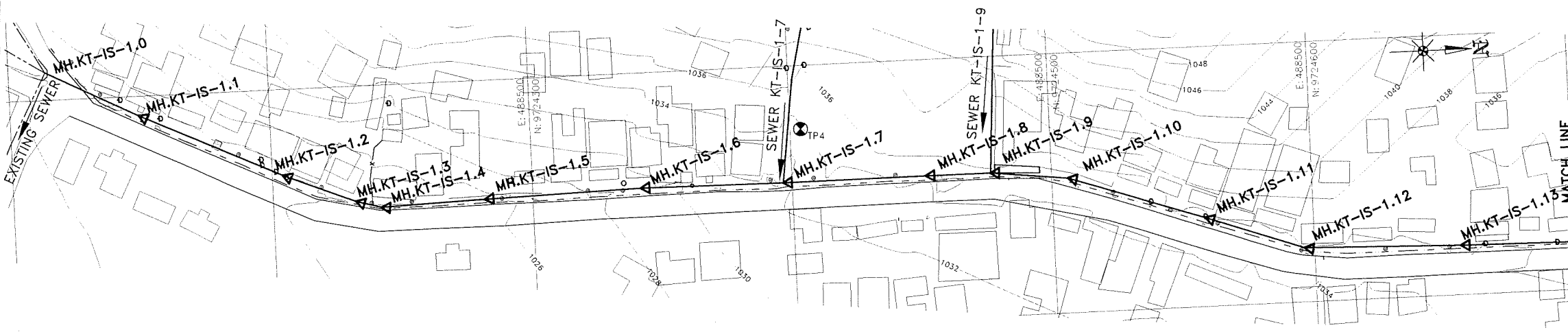


Legend

- Contours 2m Intervals
- Existing Sewers
- Proposed Sewers [For Design and Construction]
- Administrative (Ward Boundary)

REVISIONS		SIGN	DATE	APPROVED
		BY		
		CHECKED		
Client:		EAST AFRICAN COMMUNITY (EAC) LAKE VICTORIA BASIN COMMISSION (LVBC) P.O. BOX 1510 - 40100 KISUMU, KENYA TEL: +254 57 202 6344		
PROJECT IMPLEMENTATION CONSULTANTS (PIC): JOINT VENTURE		CES CONSULTING ENGINEERS SALZGITTER GmbH HAMBURGER STRASSE 227 38114 BRAUNSCHWEIG, GERMANY E-MAIL: info@ces.de TEL: +49 531 - 31704-0		
		AKUT PARTNER WATTSTRAÙE 10 13355 BERLIN, GERMANY TEL: +49 30 8145460 - 0 FAX: +49 30 8145460 - 19		
		MANGAT I.B PATEL (MIBP) LIMITED P.O BOX 48674.00100-GPO, NAIROBI, KENYA E-MAIL: mibp.nairobi@mibp.co.ke TEL: +254-2-2710500		
PROJECT NAME: LAKE VICTORIA BASIN INTEGRATED WATER RESOURCES MANAGEMENT PROGRAMME (LVB-IWRMP)				
CONTRACT TITLE: MWANZA SEWER CONNECTION UPGRADE				
INFILL SEWERS				
DRAWING TITLE: Layout Plan of Existing and Proposed Sewers Kitangiri Ward				
Designed by: V.K		Drawn by: G.O.N		
Checked by: NJN		Approved by: R.S.R		
Scale: A3-: AS SHOWN		Date: MARCH 2024		
DRG No.	M394(j)/MWZ/KT/01			REV

MANHOLE COORDINATES		
REF. No	NORTHING	EASTING
MH.KT-IS-1.0	9724114.155	488489.363
MH.KT-IS-1.1	9724149.801	488507.511
MH.KT-IS-1.2	9724204.104	488533.032
MH.KT-IS-1.3	9724231.899	488544.316
MH.KT-IS-1.4	9724241.531	488547.004
MH.KT-IS-1.5	9724281.476	488545.800
MH.KT-IS-1.6	9724341.509	488544.334
MH.KT-IS-1.7	9724396.495	488544.845
MH.KT-IS-1.8	9724451.492	488544.791
MH.KT-IS-1.9	9724476.489	488544.831
MH.KT-IS-1.10	9724506.301	488548.191
MH.KT-IS-1.11	9724558.390	488565.855
MH.KT-IS-1.12	9724596.107	488579.176
MH.KT-IS-1.13	9724656.083	488581.019



**SEWER KT-IS-1
PLAN**



DATUM (m)	1020																																		
GROUND LEVELS (m)	1022.38	1022.53	1023.02	1023.13	1023.68	1023.96	1024.10	1024.33	1024.03	1024.34	1025.05	1026.99	1028.07	1028.82	1030.46	1031.68	1031.23	1033.49	1034.41	1034.39	1034.62	1035.53	1033.91	1035.00	1035.07	1035.51	1035.62	1035.45	1035.61	1035.44	1035.67	1035.98	1036.24	1036.50	
TYPE OF PIPE AND SIZE	200mm DIA. S&S DWC HDPE PIPE (SN 4)																																		
TYPE OF BED AND SURROUND	TYPE 'BO'	TYPE 'C'	TYPE 'BO'	TYPE 'C'	TYPE 'BO'	TYPE 'C'	TYPE 'BO'										TYPE 'C'	TYPE 'BO'	TYPE 'C'	TYPE 'BO'															
INVERT LEVELS (m)	1020.22	1020.99	1021.34	1021.70	1022.05	1022.40	1022.75	1023.10	1023.28	1023.43	1023.74	1024.05	1025.27	1026.50	1027.72	1028.59	1029.46	1030.12	1031.27	1032.19	1032.65	1033.11	1033.80	1033.91	1033.93	1034.00	1034.08	1034.17	1034.26	1034.34	1034.51	1034.68	1034.85	1035.02	1035.19
GRADIENT	1:57				1:65				1:16				1:23				1:22				1:231				1:118										
DEPTH FROM GROUND LEVEL TO INVERT LEVEL (m)	2.16	1.36	1.19	1.32	1.08	1.28	1.21	1.00	1.05	0.59	0.59	1.00	1.72	1.58	1.10	1.86	2.21	1.12	2.22	2.22	1.74	1.51	1.72	1.00	1.07	1.08	1.43	1.45	1.19	1.27	0.93	0.99	1.13	1.22	1.31
DISTANCE IN KILOMETERS	0+000.00	0+020.00	0+040.00	0+060.00	0+080.00	0+100.00	0+120.00	0+130.00	0+140.00	0+160.00	0+180.00	0+200.00	0+220.00	0+240.00	0+260.00	0+280.00	0+295.00	0+300.00	0+320.00	0+340.00	0+350.00	0+360.00	0+375.00	0+400.00	0+405.00	0+420.00	0+440.00	0+460.00	0+480.00	0+500.00	0+520.00	0+540.00	0+560.00	0+580.00	0+600.00

**SEWER KT-IS-1
LONGITUDINAL SECTION**

NOTES:

- FOR GENERAL SEWER LAYOUT PLAN SEE DRG. No. M394(j)/MWZ/KT/01
- CONTOUR LEVELS ARE AT 2 METER INTERVALS
- GRID VALUES ARE AT 100 METER INTERVALS
- FOR BED AND SURROUND DETAILS REFER TO DRG. No. M394(j)/MWZ/SD/04

LEGEND - PLAN

EXISTING FEATURES:

- 1220 CONTOUR WITH ELEVATIONS
- SEWER
- DRAIN
- FENCE
- PAVED ROAD
- MURRAM / EARTH ROAD
- PERMANENT BUILDING
- TEMPORARY BUILDING
- POWER POLE
- GATE
- CULVERT
- TRIAL PIT

PROPOSED FEATURES:

- SEWER WITH MANHOLE

LEGEND - PROFILE

EXISTING FEATURES:

- GROUND LEVEL

PROPOSED FEATURES:

- GRAVITY SEWER WITH MANHOLE

REVISIONS				SIGN	DATE	APPROVED
		BY				
		CHECKED				

CLIENT:

**EAST AFRICAN COMMUNITY (EAC)
LAKE VICTORIA BASIN
COMMISSION (LVBC)**
P.O. BOX 1510 - 40100
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TEL: +254 57 202 6344

**PROJECT IMPLEMENTATION CONSULTANTS (PIC):
JOINT VENTURE**

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E-MAIL: mibp.nairobi@mibp.co.ke
TEL: +254-2-2710500

PROJECT NAME:
LAKE VICTORIA BASIN INTEGRATED
WATER RESOURCES MANAGEMENT
PROGRAMME (LVB-IWRMP)

CONTRACT TITLE:
MWANZA SEWER CONNECTION UPGRADE

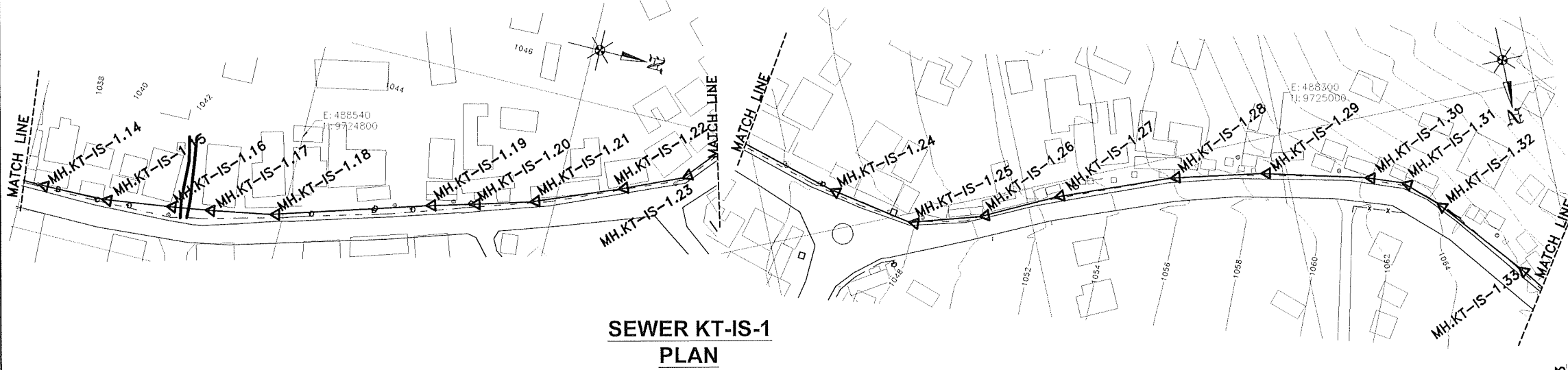
**INFILL SEWERS
KITANGIRI WARD**

DRAWING TITLE:
SEWER KT-IS-1
PLAN AND LONGITUDINAL SECTION

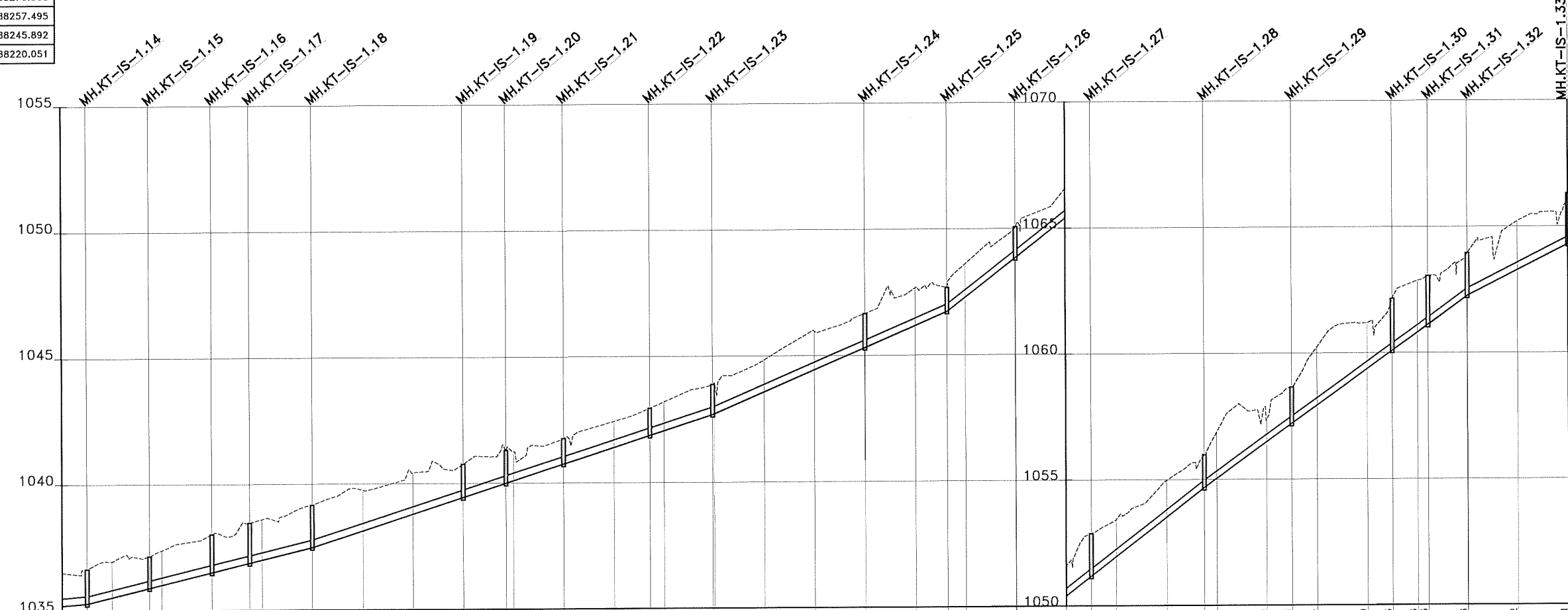
SHEET 1 OF 4

Designed by: C.N.M	Drawn by: C.N.M
Checked by: N.J.N	Approved by: R.S.R
Scale: A3- HOR: 1:2,000 VER: 1:200	Date: MARCH 2024
DRG No. M394(j)/MWZ/KT/02	REV

MANHOLE COORDINATES		
REF. No	NORTHING	EASTING
MH.KT-IS-1.14	9724706.063	488581.850
MH.KT-IS-1.15	9724731.069	488581.465
MH.KT-IS-1.16	9724755.843	488578.113
MH.KT-IS-1.17	9724770.676	488575.906
MH.KT-IS-1.18	9724795.288	488571.494
MH.KT-IS-1.19	9724852.596	488553.766
MH.KT-IS-1.20	9724869.049	488549.152
MH.KT-IS-1.21	9724891.030	488542.646
MH.KT-IS-1.22	9724922.832	488529.724
MH.KT-IS-1.23	9724945.686	488519.565
MH.KT-IS-1.24	9724984.743	488473.189
MH.KT-IS-1.25	9725003.283	488446.170
MH.KT-IS-1.26	9725006.790	488419.033
MH.KT-IS-1.27	9725005.532	488389.163
MH.KT-IS-1.28	9725007.561	488344.208
MH.KT-IS-1.29	9725013.103	488309.646
MH.KT-IS-1.30	9725022.918	488270.888
MH.KT-IS-1.31	9725027.789	488257.495
MH.KT-IS-1.32	9725038.382	488245.892
MH.KT-IS-1.33	9725068.987	488220.051



**SEWER KT-IS-1
PLAN**



DISTANCE IN KILOMETERS	0+600.00	0+609.99	0+620.00	0+635.00	0+640.00	0+660.00	0+675.00	0+680.00	0+700.00	0+720.00	0+740.00	0+760.00	0+777.08	0+780.00	0+800.00	0+820.00	0+834.33	0+840.00	0+859.34	0+860.00	0+880.00	0+900.00	0+920.00	0+940.00	0+952.74	0+960.00	0+980.00	1+000.00	1+010.00	1+020.00	1+040.00	1+055.00	1+060.00	1+080.00	1+090.00	1+100.00	1+120.00	1+130.00	1+140.00	1+144.23	1+160.00	1+180.00	1+200.00
GROUND LEVELS (m)	1036.50	1036.64	1036.94	1037.14	1037.38	1038.01	1038.46	1038.60	1039.16	1039.74	1040.43	1040.76	1041.30	1041.35	1041.76	1042.43	1042.95	1043.20	1043.88	1043.93	1044.84	1045.97	1046.66	1047.67	1047.68	1048.62	1050.07	1051.58	1052.87	1053.42	1054.97	1055.98	1056.87	1057.36	1058.65	1060.24	1061.20	1062.15	1062.86	1063.05	1063.96	1065.22	1066.31
INVERT LEVELS (m)	1035.19	1035.27	1035.52	1035.89	1036.01	1036.50	1036.86	1036.99	1037.48	1038.13	1038.78	1039.44	1039.89	1040.09	1040.74	1041.40	1041.86	1042.05	1042.68	1042.71	1043.58	1044.44	1045.31	1046.18	1046.73	1047.29	1048.86	1050.40	1051.18	1051.96	1053.51	1054.68	1055.04	1056.48	1057.21	1057.93	1059.37	1060.10	1060.82	1061.13	1062.26	1063.28	1064.29
GRADIENT	1:118		1:41			1:31					1:23					1:13					1:14					1:20																	
DEPTH FROM GROUND LEVEL TO INVERT LEVEL (m)	1.31	1.36	1.42	1.26	1.37	1.51	1.59	1.61	1.68	1.61	1.65	1.32	1.30	1.16	1.02	1.04	1.08	1.15	1.20	1.22	1.27	1.53	1.35	1.49	0.95	1.33	1.21	1.18	1.69	1.46	1.46	1.30	1.84	0.87	1.44	2.31	1.83	2.06	2.05	1.83	1.70	1.94	2.02
TYPE OF PIPE AND SIZE	200mm DIA. S&S DWC HDPE PIPE (SN 4)																																										
TYPE OF BED AND SURROUND	TYPE 'BO'										TYPE 'C'		TYPE 'BO'										TYPE 'C'		TYPE 'BO'					TYPE 'C'		TYPE 'BO'											

**SEWER KT-IS-1
LONGITUDINAL SECTION**

NOTES:

- FOR GENERAL SEWER LAYOUT PLAN SEE DRG. No. M394(j)/MWZ/KT/01
- CONTOUR LEVELS ARE AT 2 METER INTERVALS
- GRID VALUES ARE AT 100 METER INTERVALS
- FOR BED AND SURROUND DETAILS REFER TO DRG. No. M394(j)/MWZ/SD/04

LEGEND - PLAN

EXISTING FEATURES:

- 1220 CONTOUR WITH ELEVATIONS
- SEWER
- DRAIN
- FENCE
- PAVED ROAD
- MURRAM / EARTH ROAD
- PERMANENT BUILDING
- TEMPORARY BUILDING
- POWER POLE
- GATE
- CULVERT
- TP 9 TRIAL PIT

PROPOSED FEATURES:

- SEWER WITH MANHOLE

LEGEND - PROFILE

EXISTING FEATURES:

- GROUND LEVEL

PROPOSED FEATURES:

- GRAVITY SEWER WITH MANHOLE

REVISIONS			
NO.	BY	DATE	APPROVED

CLIENT:

**EAST AFRICAN COMMUNITY (EAC)
LAKE VICTORIA BASIN
COMMISSION (LVBC)**
P.O. BOX 1510 - 40100
KISUMU, KENYA
TEL: +254 57 202 6344

**PROJECT IMPLEMENTATION CONSULTANTS (PIC):
JOINT VENTURE**

**CES CONSULTING ENGINEERS
SALZGITTER GmbH**
HAMBURGER STRASSE 227
38114 BRAUNSCHWEIG, GERMANY
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MIBP CONSULTING ENGINEERS
MANGAT I.B PATEL (MIBP) LIMITED
P.O BOX 48674,00100-GPO,
NAIROBI, KENYA
E-MAIL: mibp.nairobi@mibp.co.ke
TEL: +254-2-2710500

PROJECT NAME:
**LAKE VICTORIA BASIN INTEGRATED
WATER RESOURCES MANAGEMENT
PROGRAMME (LVB-IWRMP)**

CONTRACT TITLE:
MWANZA SEWER CONNECTION UPGRADE

**INFILL SEWERS
KITANGIRI WARD**

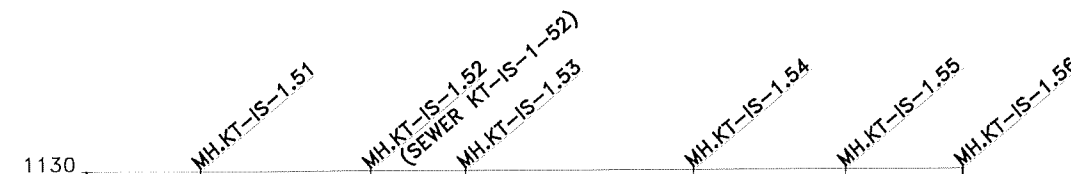
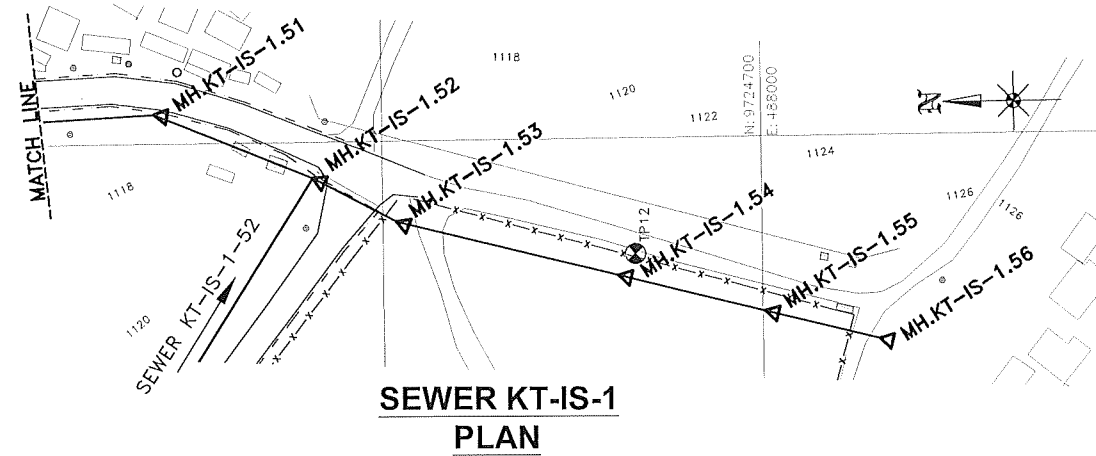
DRAWING TITLE:
**SEWER KT-IS-1
PLAN AND LONGITUDINAL SECTION**

SHEET 2 OF 4

Designed by: C.N.M	Drawn by: C.N.M
Checked by: N.J.N	Approved by: R.S.R
Scale: A3- HOR: 1:2,000 VER: 1:200	Date: MARCH 2024

DRG No. M394(j)/MWZ/KT/03

MANHOLE COORDINATES		
REF. No	NORTHING	EASTING
MH.KT-IS-1.51	9724859.855	488007.714
MH.KT-IS-1.52	9724818.286	487990.584
MH.KT-IS-1.53	9724796.277	487978.802
MH.KT-IS-1.54	9724738.064	487963.959
MH.KT-IS-1.55	9724699.304	487954.076
MH.KT-IS-1.56	9724669.290	487946.423



DATUM (m)	1110													
GROUND LEVELS (m)	1116.20	1116.91	1117.42	1117.96	1119.56	1119.93	1121.93	1122.72	1123.10	1124.74	1126.24	1127.80	1129.20	1129.62
TYPE OF PIPE AND SIZE	200mm DIA. S&S DWC HDPE PIPE (SN 4)													
TYPE OF BED AND SURROUND	TYPE 'BO'													
INVERT LEVELS (m)	1114.57	1115.72	1116.29	1116.80	1117.83	1118.59	1119.88	1120.90	1121.93	1122.95	1124.55	1125.15	1127.75	1128.62
GRADIENT	1:17		1:20						1:13					
DEPTH FROM GROUND LEVEL TO INVERT LEVEL (m)	1.64	1.19	1.12	1.16	1.74	1.33	2.06	1.82	1.17	1.79	1.69	1.65	1.45	1.00
DISTANCE IN KILOMETERS	1+800.00	1+820.00	1+830.00	1+840.00	1+860.00	1+874.96	1+900.00	1+920.00	1+940.00	1+960.00	1+980.00	2+000.00	2+020.00	2+030.88

**SEWER KT-IS-1
LONGITUDINAL SECTION**

NOTES:

- FOR GENERAL SEWER LAYOUT PLAN SEE DRG. No. M394(j)/MWZ/KT/01
- CONTOUR LEVELS ARE AT 2 METER INTERVALS
- GRID VALUES ARE AT 100 METER INTERVALS
- FOR BED AND SURROUND DETAILS REFER TO DRG. No. M394(j)/MWZ/SD/04

LEGEND - PLAN

EXISTING FEATURES:

- 1:220 CONTOUR WITH ELEVATIONS
- SEWER
- DRAIN
- FENCE
- PAVED ROAD
- MURRAM / EARTH ROAD
- PERMANENT BUILDING
- TEMPORARY BUILDING
- POWER POLE
- GATE
- CULVERT
- TP 9 TRIAL PIT

PROPOSED FEATURES:

- SEWER WITH MANHOLE

LEGEND - PROFILE

EXISTING FEATURES:

- GROUND LEVEL

PROPOSED FEATURES:

- GRAVITY SEWER WITH MANHOLE

REVISIONS				SIGN	DATE	APPROVED
				BY		
				CHECKED		

CLIENT:

EAST AFRICAN COMMUNITY (EAC)
LAKE VICTORIA BASIN
COMMISSION (LVBC)
P.O. BOX 1510 - 40100
KISUMU, KENYA
TEL: +254 57 202 6344

PROJECT IMPLEMENTATION CONSULTANTS (PIC):
JOINT VENTURE

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TEL: +254-2-2710500

PROJECT NAME:

LAKE VICTORIA BASIN INTEGRATED
WATER RESOURCES MANAGEMENT
PROGRAMME (LVB-IWRMP)

CONTRACT TITLE:

MWANZA SEWER CONNECTION UPGRADE

**INFILL SEWERS
KITANGIRI WARD**

DRAWING TITLE:

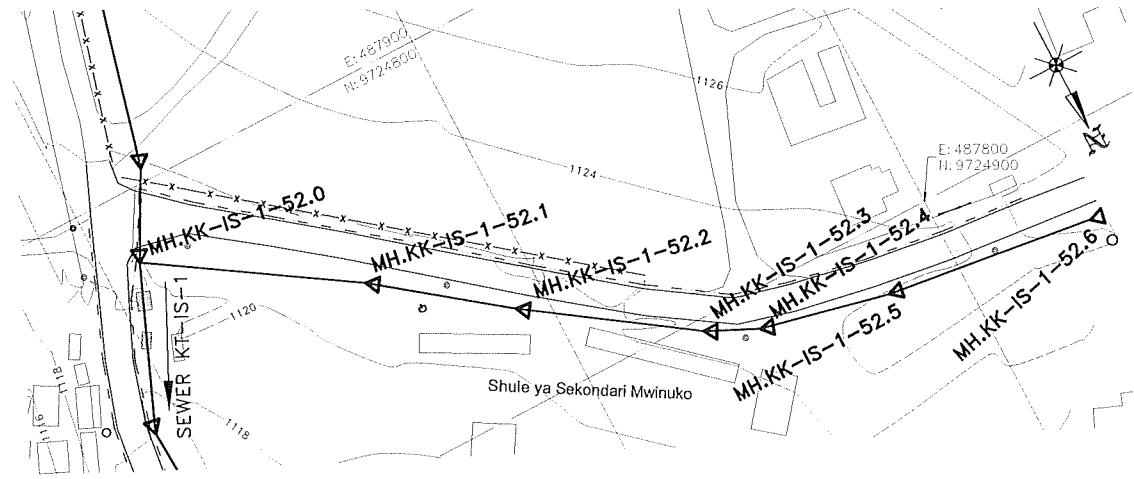
SEWER KT-IS-1
PLAN AND LONGITUDINAL SECTION

SHEET 4 OF 4

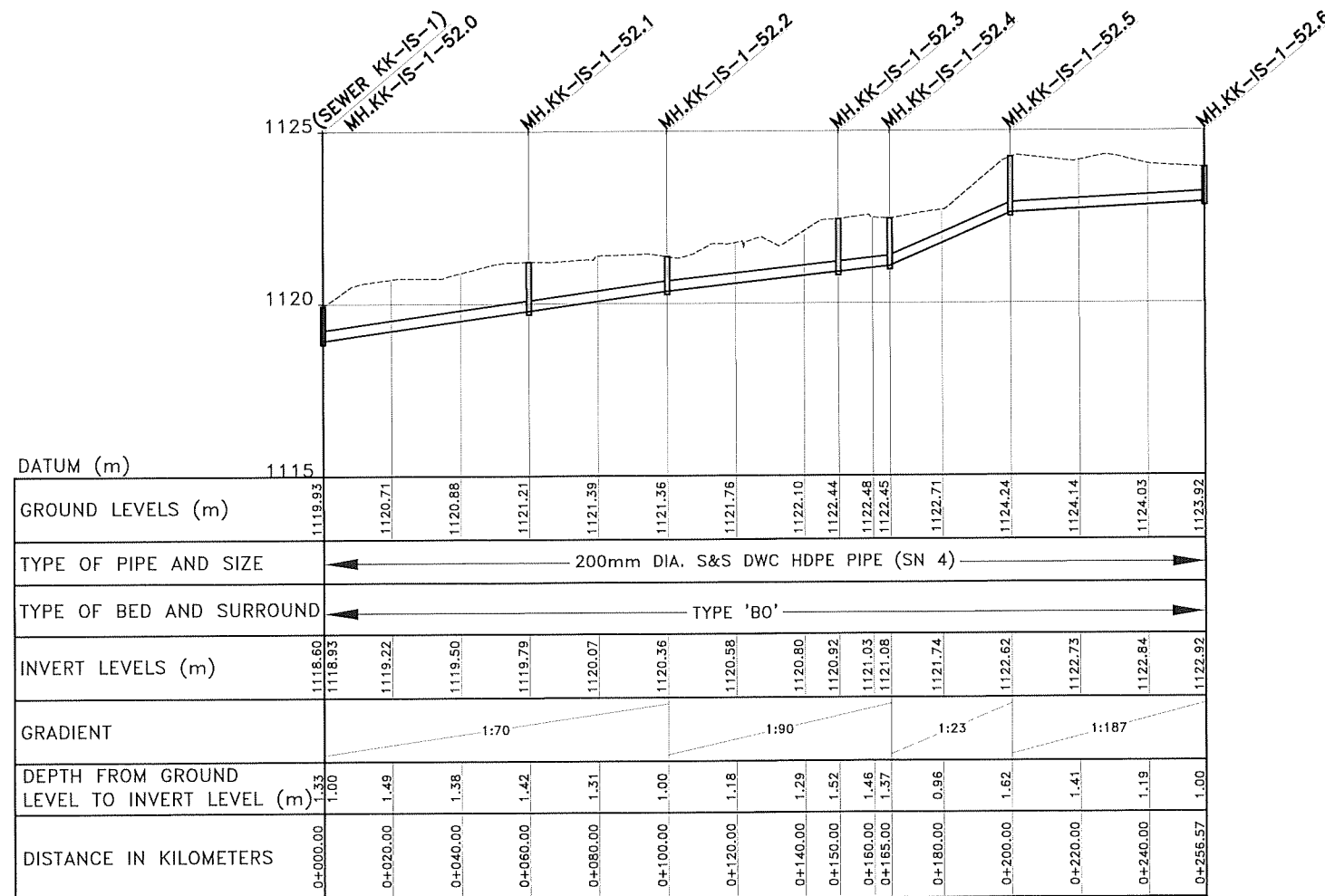
Designed by: C.N.M	Drawn by: C.N.M
Checked by: N.J.N	Approved by: R.S.R
Scale: A3- HOR: 1:2,000 VER: 1:200	Date: MARCH 2024

DRG No. M394(j)/MWZ/KT/05

MANHOLE COORDINATES		
REF. No	NORTHING	EASTING
MH.KT-IS-1-52.0	9724818.286	487990.584
MH.KT-IS-1-52.1	9724850.750	487940.126
MH.KT-IS-1-52.2	9724875.027	487908.336
MH.KT-IS-1-52.3	9724903.281	487867.083
MH.KT-IS-1-52.4	9724909.683	487853.523
MH.KT-IS-1-52.5	9724917.251	487819.364
MH.KT-IS-1-52.6	9724924.518	487763.245



**SEWER KT-IS-1-52
PLAN**



**SEWER KT-IS-1-52
LONGITUDINAL SECTION**

NOTES:

- FOR GENERAL SEWER LAYOUT PLAN SEE DRG. No. M394(j)/MWZ/KT/01
- CONTOUR LEVELS ARE AT 2 METER INTERVALS
- GRID VALUES ARE AT 100 METER INTERVALS
- FOR BED AND SURROUND DETAILS REFER TO DRG. No. M394(j)/MWZ/SD/04

LEGEND - PLAN

EXISTING FEATURES:

- CONTOUR WITH ELEVATIONS
- SEWER
- DRAIN
- FENCE
- PAVED ROAD
- MURRAM / EARTH ROAD
- PERMANENT BUILDING
- TEMPORARY BUILDING
- POWER POLE
- GATE
- CULVERT
- TRIAL PIT

PROPOSED FEATURES:

- SEWER WITH MANHOLE

LEGEND - PROFILE

EXISTING FEATURES:

- GROUND LEVEL

PROPOSED FEATURES:

- GRAVITY SEWER WITH MANHOLE

REVISIONS	SIGN	DATE	APPROVED
BY			
CHECKED			

CLIENT:

EAST AFRICAN COMMUNITY (EAC)
LAKE VICTORIA BASIN
COMMISSION (LVBC)
P.O. BOX 1510 - 40100
KISUMU, KENYA
TEL: +254 57 202 6344

PROJECT IMPLEMENTATION CONSULTANTS (PIC):
JOINT VENTURE

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CES CONSULTING ENGINEERS
SALZGITTER GmbH
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AKUT
AKUT PARTNER
WATTSTRASSE 10
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TEL: +49 30 8145460 - 0
FAX: +49 30 8145460 - 19

MIBP
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E-MAIL: mibp.nairobi@mibp.co.ke
TEL: +254-2-2710500

PROJECT NAME:

LAKE VICTORIA BASIN INTEGRATED
WATER RESOURCES MANAGEMENT
PROGRAMME (LVB-IWRMP)

CONTRACT TITLE:

MWANZA SEWER CONNECTION UPGRADE

**INFILL SEWERS
KITANGIRI WARD**

DRAWING TITLE:

SEWER KT-IS-1-52
PLAN AND LONGITUDINAL SECTION

SHEET 1 OF 1

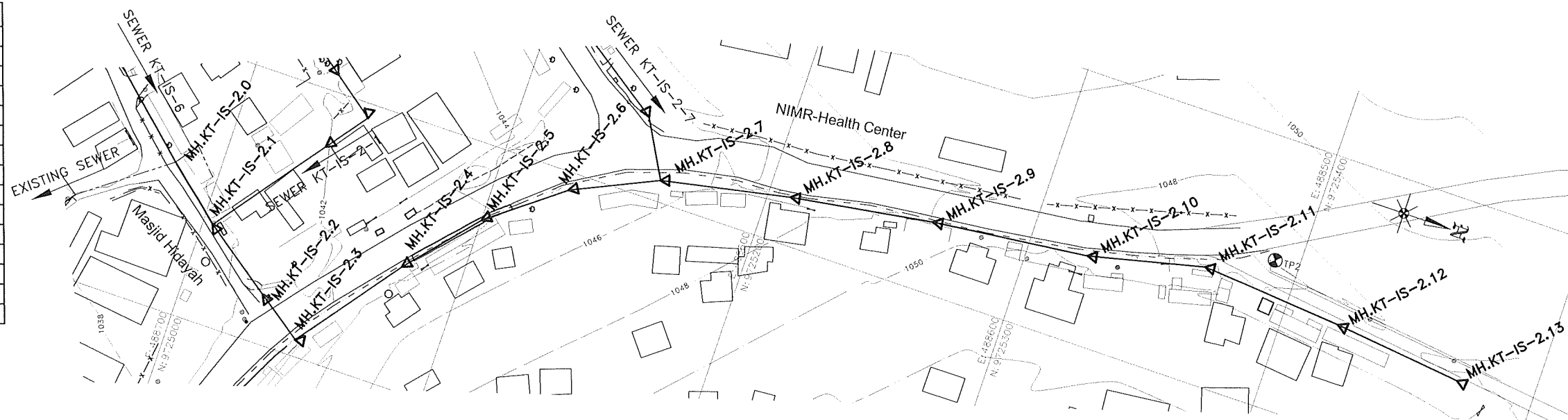
Designed by: C.N.M Drawn by: C.N.M

Checked by: N.J.N Approved by: R.S.R

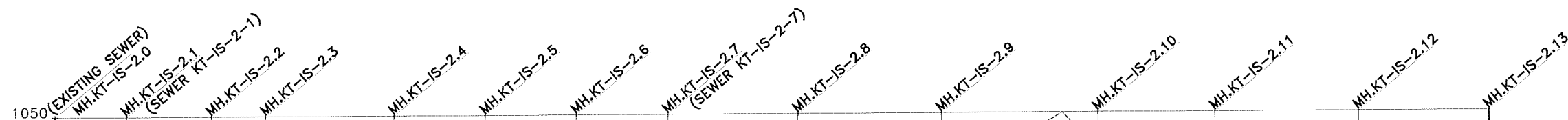
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VER: 1:200

DRG No. M394(j)/MWZ/KT/06

MANHOLE COORDINATES		
REF. No	NORTHING	EASTING
MH.KT-IS-2.0	9724983.127	488645.025
MH.KT-IS-2.1	9725003.944	488662.608
MH.KT-IS-2.2	9725030.603	488681.632
MH.KT-IS-2.3	9725047.635	488693.675
MH.KT-IS-2.4	9725077.302	488654.499
MH.KT-IS-2.5	9725100.228	488628.054
MH.KT-IS-2.6	9725127.800	488606.690
MH.KT-IS-2.7	9725159.682	488591.961
MH.KT-IS-2.8	9725208.680	488582.051
MH.KT-IS-2.9	9725263.023	488573.508
MH.KT-IS-2.10	9725322.671	488566.695
MH.KT-IS-2.11	9725366.399	488556.226
MH.KT-IS-2.12	9725421.219	488560.670
MH.KT-IS-2.13	9725470.921	488566.120



**SEWER KT-IS-2
PLAN**



DATUM (m)	1035																																			
GROUND LEVELS (m)	1038.70	1038.83	1038.93	1038.96	1039.29	1039.79	1040.30	1040.76	1041.22	1041.45	1041.68	1042.13	1042.25	1042.59	1043.05	1043.51	1043.85	1043.52	1044.54	1045.08	1045.22	1045.63	1046.18	1046.73	1046.81	1046.89	1046.97	1047.05	1047.13	1047.15	1047.21	1047.29	1047.37	1047.45	1047.53	1047.57
TYPE OF PIPE AND SIZE	200mm DIA. S&S DWC HDPE PIPE (SN 4)																																			
TYPE OF BED AND SURROUND	TYPE 'C'					TYPE 'BO'															TYPE 'C'															
INVERT LEVELS (m)	1038.70	1038.83	1038.93	1038.96	1039.29	1039.79	1040.30	1040.76	1041.22	1041.45	1041.68	1042.13	1042.25	1042.59	1043.05	1043.51	1043.85	1043.52	1044.54	1045.08	1045.22	1045.63	1046.18	1046.73	1046.81	1046.89	1046.97	1047.05	1047.13	1047.15	1047.21	1047.29	1047.37	1047.45	1047.53	1047.57
GRADIENT	1:200		1:39			1:44										1:36						1:250														
DEPTH FROM GROUND LEVEL TO INVERT LEVEL (m)	0.67	0.55	0.65	0.51	0.70	1.78	1.01	1.56	2.19	1.47	1.58	1.69	1.65	1.50	1.56	1.75	1.83	1.73	1.66	1.63	0.84	1.50	1.93	1.02	1.14	2.75	2.13	1.20	1.38	1.42	0.94	0.86	0.96	0.76	0.65	0.75
DISTANCE IN KILOMETERS	0+000.00	0+020.00	0+027.25	0+040.00	0+060.00	0+086.00	0+100.00	0+120.00	0+130.00	0+140.00	0+160.00	0+165.00	0+180.00	0+200.00	0+220.00	0+235.00	0+260.00	0+280.00	0+284.99	0+300.00	0+320.00	0+340.00	0+360.00	0+380.00	0+400.00	0+420.00	0+440.00	0+445.00	0+460.00	0+480.00	0+500.00	0+520.00	0+540.00	0+550.00		

**SEWER KT-IS-2
LONGITUDINAL SECTION**

NOTES:

- FOR GENERAL SEWER LAYOUT PLAN SEE DRG. No. M394(j)/MWZ/KT/01
- CONTOUR LEVELS ARE AT 2 METER INTERVALS
- GRID VALUES ARE AT 100 METER INTERVALS
- FOR BED AND SURROUND DETAILS REFER TO DRG. No. M394(j)/MWZ/SD/04

LEGEND - PLAN

EXISTING FEATURES:

- 1220 CONTOUR WITH ELEVATIONS
- SEWER
- DRAIN
- FENCE
- PAVED ROAD
- MURRAM / EARTH ROAD
- PERMANENT BUILDING
- TEMPORARY BUILDING
- POWER POLE
- GATE
- CULVERT
- TP 9 TRIAL PIT

PROPOSED FEATURES:

- SEWER WITH MANHOLE

LEGEND - PROFILE

EXISTING FEATURES:

- GROUND LEVEL

PROPOSED FEATURES:

- GRAVITY SEWER WITH MANHOLE

REVISIONS				SIGN	DATE	APPROVED

CLIENT:
 EAST AFRICAN COMMUNITY (EAC)
 LAKE VICTORIA BASIN COMMISSION (LVBC)
 P.O. BOX 1510 - 40100
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 NAIROBI, KENYA
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 TEL: +254-2-2710500

PROJECT NAME:
 LAKE VICTORIA BASIN INTEGRATED
 WATER RESOURCES MANAGEMENT
 PROGRAMME (LVB-IWRMP)

CONTRACT TITLE:
 MWANZA SEWER CONNECTION UPGRADE

**INFILL SEWERS
KITANGIRI WARD**

DRAWING TITLE:
 SEWER KT-IS-2
 PLAN AND LONGITUDINAL SECTION
 SHEET 1 OF 1

Designed by: C.N.M	Drawn by: C.N.M
Checked by: N.J.N	Approved by: R.S.R
Scale: A3- HOR: 1:2,000 VER: 1:200	Date: MARCH 2024

SEWER KT-IS-2-1

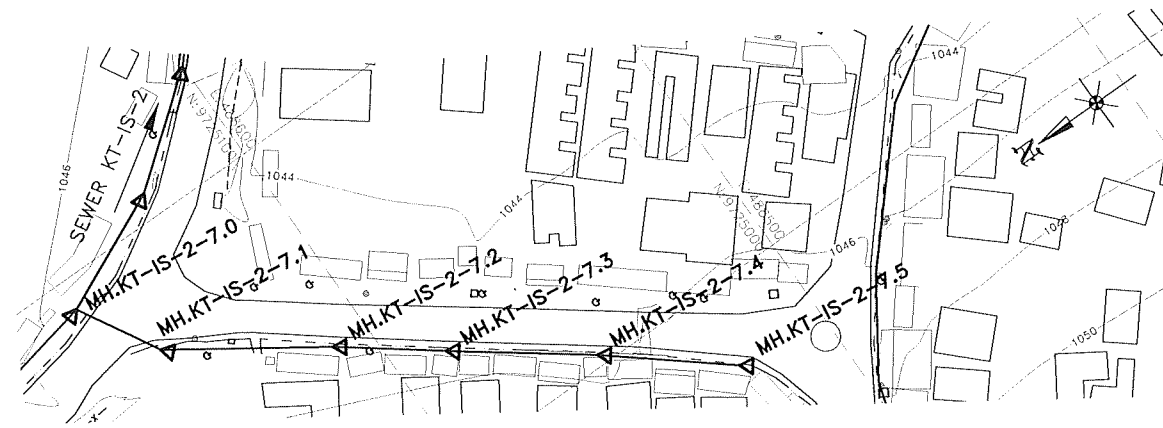
MANHOLE COORDINATES		
REF. No	NORTHING	EASTING
MH.KT-IS-2-1.0	9725003.944	488662.608
MH.KT-IS-2-1.1	9725035.105	488620.834
MH.KT-IS-2-1.2	9725046.778	488605.486
MH.KT-IS-2-1.3	9725030.797	488593.534
MH.KT-IS-2-1.4	9725010.387	488578.050
MH.KT-IS-2-1.5	9724958.850	488541.769



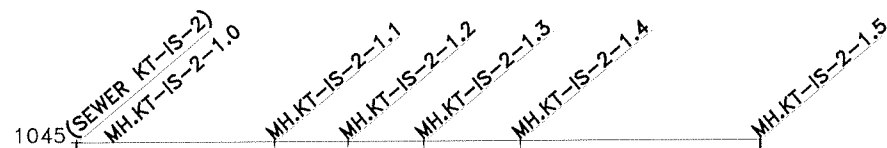
**SEWER KT-IS-2-1
PLAN**

SEWER KT-IS-2-7

MANHOLE COORDINATES		
REF. No	NORTHING	EASTING
MH.KT-IS-2-7.0	9725159.682	488591.961
MH.KT-IS-2-7.1	9725147.672	488570.526
MH.KT-IS-2-7.2	9725110.125	488544.955
MH.KT-IS-2-7.3	9725086.247	488526.792
MH.KT-IS-2-7.4	9725054.193	488502.871
MH.KT-IS-2-7.5	9725025.098	488479.062

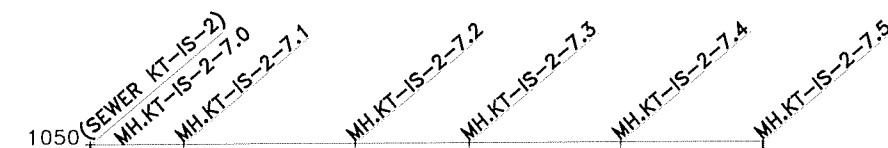


**SEWER KT-IS-2-7
PLAN**



DATUM (m)	1035														
GROUND LEVELS (m)	1039.47	1041.14	1041.43	1041.93	1042.15	1042.42	1042.24	1041.96	1042.37	1042.88	1042.64	1042.76			
TYPE OF PIPE AND SIZE	200mm DIA. S&S DWC HDPE (SN 4)														
TYPE OF BED AND SURROUND	TYPE 'C'		TYPE 'BO'												
INVERT LEVELS (m)	1038.83	1038.97	1039.49	1040.01	1040.32	1040.53	1040.82	1040.87	1040.94	1040.88	1041.08	1041.09	1041.21	1041.32	1041.43
GRADIENT	1:39					1:180									
DEPTH FROM GROUND LEVEL TO INVERT LEVEL (m)	0.54	0.50	1.65	1.42	1.61	1.62	1.60	1.37	1.02	1.39	1.78	1.69	1.08	1.33	1.33
DISTANCE IN KILOMETERS	0+000.00	0+020.00	0+040.00	0+052.12	0+060.00	0+071.40	0+080.00	0+091.35	0+100.00	0+116.97	0+120.00	0+140.00	0+160.00	0+180.00	0+180.00

**SEWER KT-IS-2-1
LONGITUDINAL SECTION**



DATUM (m)	1040												
GROUND LEVELS (m)	1045.68	1045.49	1045.36	1045.05	1045.25	1045.29	1045.39	1045.50	1045.64	1045.83	1046.42	1046.65	
TYPE OF PIPE AND SIZE	200mm DIA. S&S DWC HDPE (SN 4)												
TYPE OF BED AND SURROUND	TYPE 'BO'												
INVERT LEVELS (m)	1043.83	1043.84	1043.97	1044.00	1044.09	1044.22	1044.28	1044.34	1044.47	1044.64	1044.81	1044.88	1045.12
GRADIENT	1:160					1:118							
DEPTH FROM GROUND LEVEL TO INVERT LEVEL (m)	1.85	1.52	1.36	0.96	1.04	1.01	1.05	1.03	1.00	1.02	1.44	1.53	
DISTANCE IN KILOMETERS	0+000.00	0+020.00	0+024.57	0+040.00	0+060.00	0+070.00	0+080.00	0+100.00	0+120.00	0+140.00	0+160.00	0+177.58	

**SEWER KT-IS-2-7
LONGITUDINAL SECTION**

NOTES:

- FOR GENERAL SEWER LAYOUT PLAN SEE DRG. No. M394(J)/MWZ/KT/01
- CONTOUR LEVELS ARE AT 2 METER INTERVALS
- GRID VALUES ARE AT 100 METER INTERVALS
- FOR BED AND SURROUND DETAILS REFER TO DRG. No. M394(J)/MWZ/SD/04

LEGEND - PLAN

EXISTING FEATURES:

- 1220 CONTOUR WITH ELEVATIONS
- SEWER
- DRAIN
- FENCE
- PAVED ROAD
- MURRAM / EARTH ROAD
- PERMANENT BUILDING
- TEMPORARY BUILDING
- POWER POLE
- GATE
- CULVERT
- TP 9 TRIAL PIT

PROPOSED FEATURES:

- SEWER WITH MANHOLE

LEGEND - PROFILE

EXISTING FEATURES:

- GROUND LEVEL

PROPOSED FEATURES:

- GRAVITY SEWER WITH MANHOLE

REVISIONS				SIGN	DATE	APPROVED

CLIENT:

EAST AFRICAN COMMUNITY (EAC)
LAKE VICTORIA BASIN
COMMISSION (LVBC)
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TEL: +254 57 202 6344

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JOINT VENTURE

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WATTSTRASSE 10
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NAIROBI, KENYA
E-MAIL: mibp.nairobi@mibp.co.ke
TEL: +254-2-2710500

PROJECT NAME:

LAKE VICTORIA BASIN INTEGRATED
WATER RESOURCES MANAGEMENT
PROGRAMME (LVB-IWRMP)

CONTRACT TITLE:

MWANZA SEWER CONNECTION UPGRADE

**INFILL SEWERS
KITANGIRI WARD**

DRAWING TITLE:

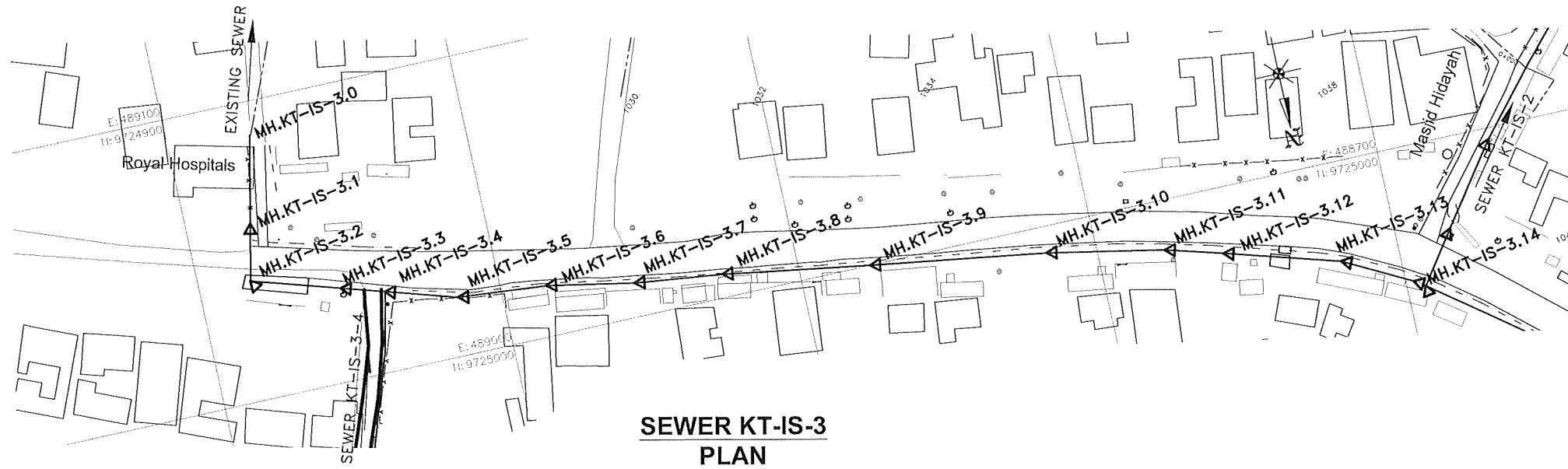
SEWER KT-IS-2-1 & KT-IS-2-7
PLAN AND LONGITUDINAL SECTION

SHEET 1 OF 1

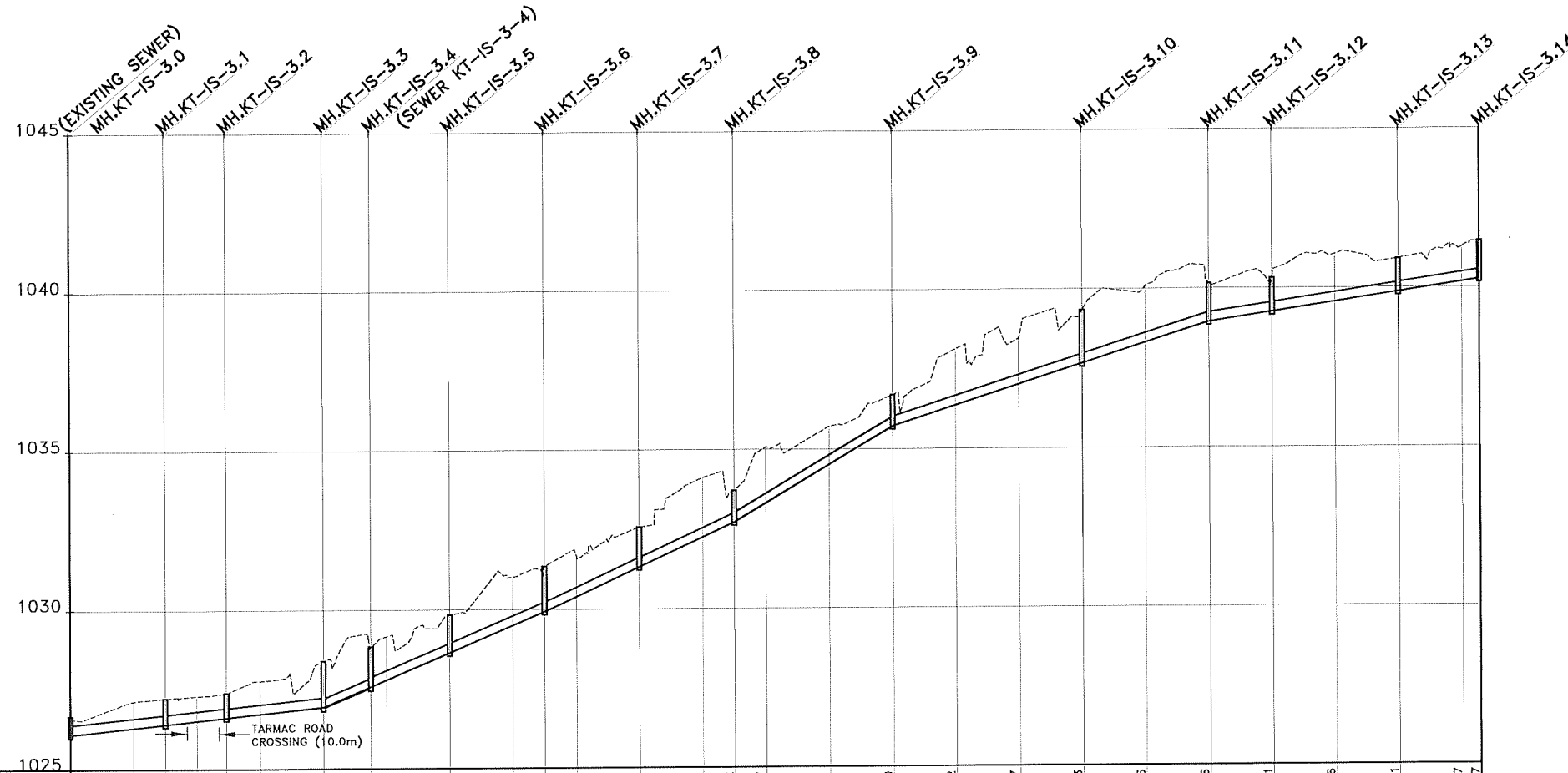
Designed by: C.N.M	Drawn by: C.N.M
Checked by: N.J.N	Approved by: R.S.R
Scale: A3- HOR: 1:2,000 VER: 1:200	Date: MARCH 2024

DRG No. M394(J)/MWZ/KT/08

MANHOLE COORDINATES		
REF. No	NORTHING	EASTING
MH.KT-IS-3.0	9724911.437	489071.982
MH.KT-IS-3.1	9724940.779	489078.228
MH.KT-IS-3.2	9724959.668	489082.249
MH.KT-IS-3.3	9724968.609	489052.892
MH.KT-IS-3.4	9724973.066	489038.566
MH.KT-IS-3.5	9724980.263	489014.628
MH.KT-IS-3.6	9724982.865	488984.743
MH.KT-IS-3.7	9724988.547	488955.286
MH.KT-IS-3.8	9724992.124	488925.498
MH.KT-IS-3.9	9724999.969	488876.117
MH.KT-IS-3.10	9725008.968	488816.791
MH.KT-IS-3.11	9725016.632	488777.528
MH.KT-IS-3.12	9725022.067	488758.281
MH.KT-IS-3.13	9725033.352	488719.905
MH.KT-IS-3.14	9725045.273	488697.211



**SEWER KT-IS-3
PLAN**



DATUM (m)	1025																												
GROUND LEVELS (m)	1026.59	1027.14	1027.23	1027.30	1027.39	1027.77	1028.39	1028.81	1029.84	1031.02	1031.36	1031.68	1032.57	1034.11	1033.72	1035.07	1035.71	1036.70	1038.12	1038.47	1039.33	1040.06	1040.16	1040.31	1041.06	1040.91	1041.27	1041.47	
TYPE OF PIPE AND SIZE	200mm DIA. S&S DWC HDPE PIPE (SN 4)																												
TYPE OF BED AND SURROUND	TYPE 'C'										TYPE 'BO'																		
INVERT LEVELS (m)	1025.99	1026.09	1026.31	1026.41	1026.52	1026.62	1026.73	1026.95	1027.58	1028.65	1029.50	1029.93	1030.39	1031.32	1032.25	1032.71	1033.32	1034.52	1035.72	1036.37	1037.01	1037.66	1038.30	1038.95	1039.25	1039.56	1039.87	1040.17	1040.26
GRADIENT	1:94		1:23					1:22			1:17				1:31			1:65											
DEPTH FROM GROUND LEVEL TO INVERT LEVEL (m)	0.60	0.50	0.83	0.82	0.78	0.77	1.04	1.44	1.23	1.19	1.52	1.43	1.29	1.25	1.86	1.00	1.75	1.20	0.98	1.76	1.46	1.67	1.76	1.21	1.06	1.50	1.05	1.10	1.21
DISTANCE IN KILOMETERS	0+000.00	0+020.00	0+030.00	0+040.00	0+049.31	0+060.00	0+080.00	0+095.00	0+100.00	0+120.00	0+140.00	0+150.00	0+160.00	0+180.00	0+200.00	0+210.00	0+220.00	0+240.00	0+260.00	0+280.00	0+300.00	0+320.00	0+340.00	0+360.00	0+380.00	0+400.00	0+420.00	0+440.00	0+445.64

**SEWER KT-IS-3
LONGITUDINAL SECTION**

NOTES:

- FOR GENERAL SEWER LAYOUT PLAN SEE DRG. No. M394(j)/MWZ/KT/01
- CONTOUR LEVELS ARE AT 2 METER INTERVALS
- GRID VALUES ARE AT 100 METER INTERVALS
- FOR BED AND SURROUND DETAILS REFER TO DRG. No. M394(j)/MWZ/SD/04

LEGEND - PLAN

EXISTING FEATURES:

- 1:220 CONTOUR WITH ELEVATIONS
- SEWER
- DRAIN
- FENCE
- PAVED ROAD
- MURRAM / EARTH ROAD
- PERMANENT BUILDING
- TEMPORARY BUILDING
- POWER POLE
- GATE
- CULVERT
- TP 9 TRIAL PIT

PROPOSED FEATURES:

- SEWER WITH MANHOLE

LEGEND - PROFILE

EXISTING FEATURES:

- GROUND LEVEL

PROPOSED FEATURES:

- GRAVITY SEWER WITH MANHOLE

REVISIONS				SIGN	DATE	APPROVED

CLIENT:

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TEL: +254-2-2710500

PROJECT NAME:

LAKE VICTORIA BASIN INTEGRATED
WATER RESOURCES MANAGEMENT
PROGRAMME (LVB-IWRMP)

CONTRACT TITLE:

MWANZA SEWER CONNECTION UPGRADE

**INFILL SEWERS
KITANGIRI WARD**

DRAWING TITLE:

SEWER KT-IS-3
PLAN AND LONGITUDINAL SECTION

SHEET 1 OF 1

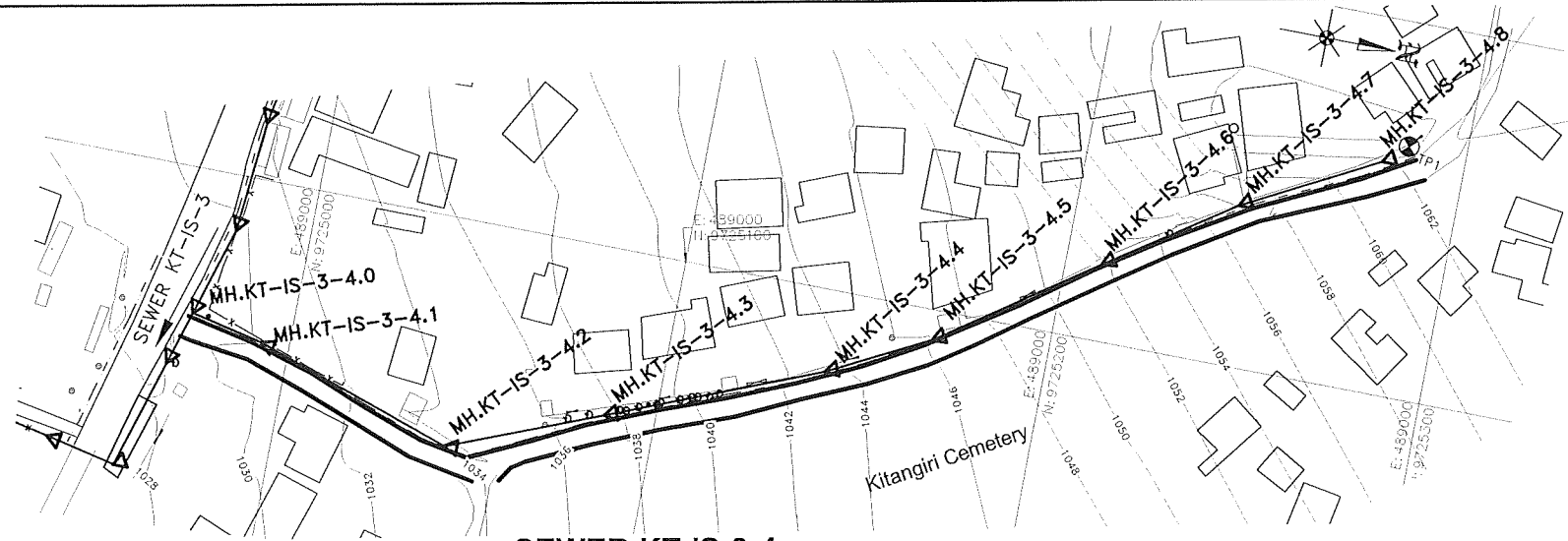
Designed by: C.N.M Drawn by: C.N.M

Checked by: N.J.N Approved by: R.S.R

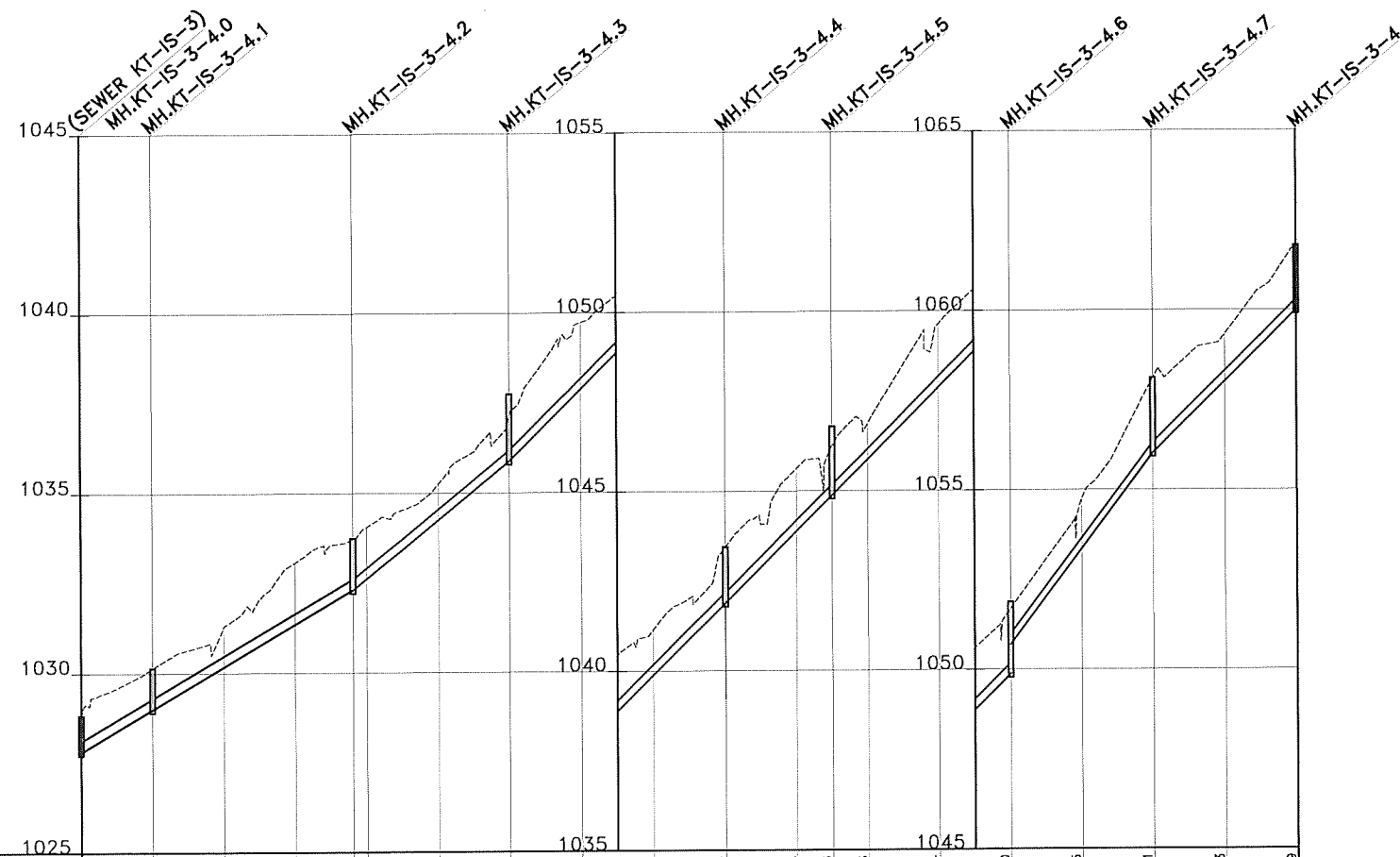
Scale: A3- HOR: 1:2,000 Date: MARCH 2024
VER: 1:200

DRG No. M394(j)/MWZ/KT/09

MANHOLE COORDINATES		
REF. No	NORTHING	EASTING
MH.KT-IS-3-4.0	9724972.979	489038.543
MH.KT-IS-3-4.1	9724992.519	489042.810
MH.KT-IS-3-4.2	9725045.744	489060.665
MH.KT-IS-3-4.3	9725086.475	489044.398
MH.KT-IS-3-4.4	9725142.032	489021.780
MH.KT-IS-3-4.5	9725168.685	489007.977
MH.KT-IS-3-4.6	9725209.754	488979.457
MH.KT-IS-3-4.7	9725242.877	488957.034
MH.KT-IS-3-4.8	9725278.155	488938.180



**SEWER KT-IS-3-4
PLAN**



DATUM (m)	1025	1035	1045	1055	1065	1075	1085	1095	1105	1115	1125	1135	1145	1155	1165	1175	1185	1195	1205				
GROUND LEVELS (m)	1028.81	1030.14	1031.27	1033.07	1033.74	1034.05	1035.26	1037.17	1039.73	1041.14	1043.45	1045.62	1046.26	1046.88	1049.64	1051.70	1054.75	1058.11	1059.33	1061.79			
TYPE OF PIPE AND SIZE	200mm DIA. S&S DWC HDPE PIPE (SN 4)																						
TYPE OF BED AND SURROUND	TYPE 'Bo'										TYPE 'C'	TYPE 'Bo'											
INVERT LEVELS (m)	1027.58	1027.81	1028.99	1030.17	1031.35	1032.30	1032.62	1034.25	1035.89	1037.89	1039.88	1041.88	1043.88	1044.88	1045.88	1047.88	1050.42	1050.70	1053.36	1056.02	1058.01	1060.00	
GRADIENT	1:17			1:12			1:10			1:8			1:10										
DEPTH FROM GROUND LEVEL TO INVERT LEVEL (m)	1.23	1.00	1.15	1.10	1.72	1.44	1.43	1.00	1.29	1.85	1.26	1.56	1.74	1.38	1.00	1.75	1.82	1.00	1.39	2.09	1.32	1.79	
DISTANCE IN KILOMETERS	0+000.00	0+020.00	0+040.00	0+060.00	0+076.14	0+080.00	0+100.00	0+120.00	0+140.00	0+160.00	0+180.00	0+200.00	0+210.00	0+220.00	0+240.00	0+260.00	0+280.00	0+300.00	0+320.00	0+340.00	0+340.00	0+340.00	0+340.00

**SEWER KT-IS-3-4
LONGITUDINAL SECTION**

NOTES:

- FOR GENERAL SEWER LAYOUT PLAN SEE DRG. No. M394(j)/MWZ/KT/01
- CONTOUR LEVELS ARE AT 2 METER INTERVALS
- GRID VALUES ARE AT 100 METER INTERVALS
- FOR BED AND SURROUND DETAILS REFER TO DRG. No. M394(j)/MWZ/SD/04

LEGEND - PLAN

EXISTING FEATURES:

- 1220 CONTOUR WITH ELEVATIONS
- SEWER
- DRAIN
- FENCE
- PAVED ROAD
- MURRAM / EARTH ROAD
- PERMANENT BUILDING
- TEMPORARY BUILDING
- POWER POLE
- GATE
- CULVERT
- TP 9 TRIAL PIT

PROPOSED FEATURES:

- SEWER WITH MANHOLE

LEGEND - PROFILE

EXISTING FEATURES:

- GROUND LEVEL

PROPOSED FEATURES:

- GRAVITY SEWER WITH MANHOLE

REVISIONS				SIGN	DATE	APPROVED

CLIENT:

**EAST AFRICAN COMMUNITY (EAC)
LAKE VICTORIA BASIN
COMMISSION (LVBC)**
P.O. BOX 1510 - 40100
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**PROJECT IMPLEMENTATION CONSULTANTS (PIC):
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MANGAT I.B. PATEL (MIBP) LIMITED
P.O. BOX 48674, 00100-GPO,
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E-MAIL: mibp.nairobi@mibp.co.ke
TEL: +254-2-2710500

PROJECT NAME:

**LAKE VICTORIA BASIN INTEGRATED
WATER RESOURCES MANAGEMENT
PROGRAMME (LVB-IWRMP)**

**CONTRACT TITLE:
MWANZA SEWER CONNECTION UPGRADE**

**INFILL SEWERS
KITANGIRI WARD**

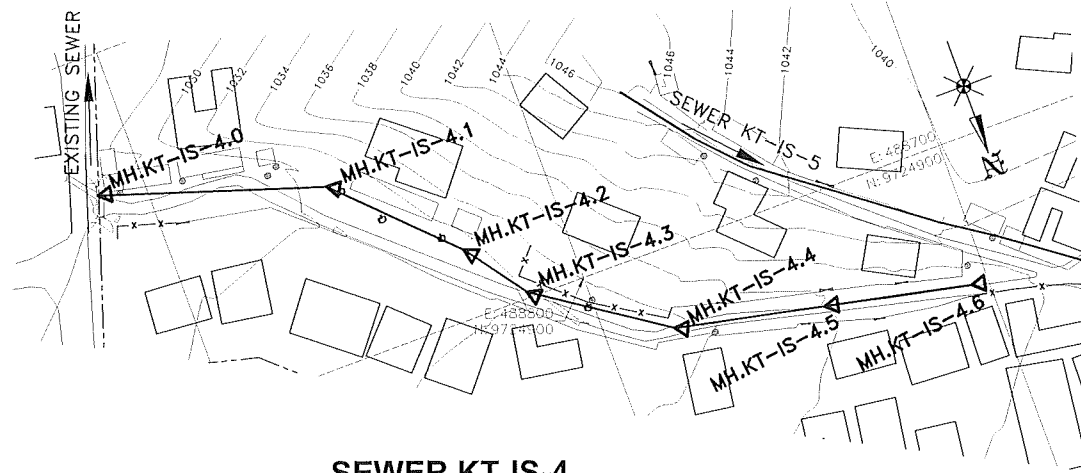
**DRAWING TITLE:
SEWER KT-IS-3-4
PLAN AND LONGITUDINAL SECTION**

SHEET 1 OF 1

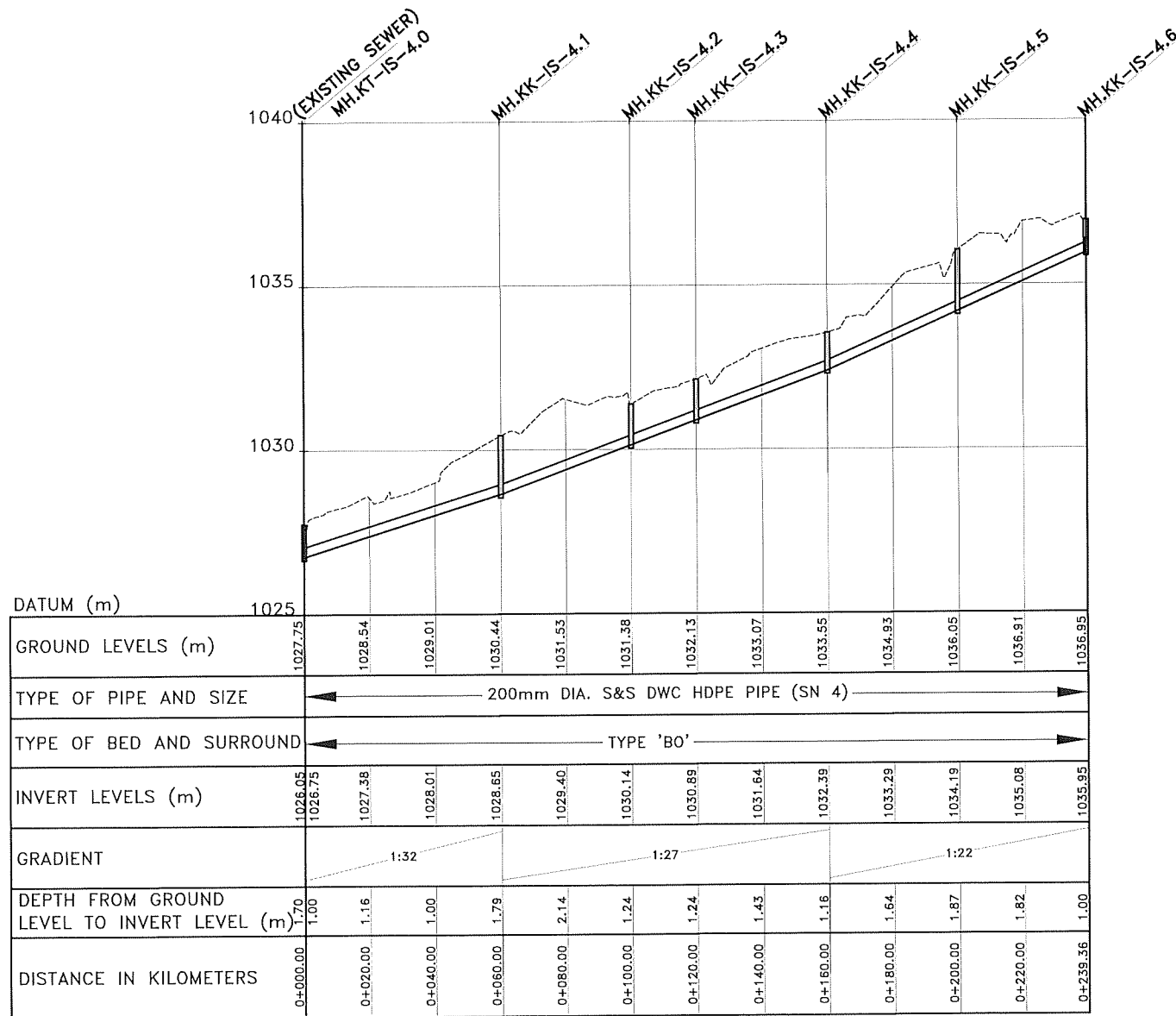
Designed by: C.N.M	Drawn by: C.N.M
Checked by: N.J.N	Approved by: R.S.R
Scale: A3- HOR: 1:2,000 VER: 1:200	Date: MARCH 2024

DRG No. **M394(j)/MWZ/KT/10** REV

MANHOLE COORDINATES		
REF. No	NORTHING	EASTING
MH.KT-IS-4.0	9724835.521	488912.416
MH.KT-IS-4.1	9724854.074	488855.359
MH.KT-IS-4.2	9724882.274	488827.001
MH.KT-IS-4.3	9724898.415	488815.194
MH.KT-IS-4.4	9724920.761	488782.033
MH.KT-IS-4.5	9724929.058	488742.879
MH.KT-IS-4.6	9724937.301	488704.395



**SEWER KT-IS-4
PLAN**



**SEWER KT-IS-4
LONGITUDINAL SECTION**

NOTES:

- FOR GENERAL SEWER LAYOUT PLAN SEE DRG. No. M394(j)/MWZ/KT/01
- CONTOUR LEVELS ARE AT 2 METER INTERVALS
- GRID VALUES ARE AT 100 METER INTERVALS
- FOR BED AND SURROUND DETAILS REFER TO DRG. No. M394(j)/MWZ/SD/04

LEGEND - PLAN

EXISTING FEATURES:

- 1:220 CONTOUR WITH ELEVATIONS
- SEWER
- DRAIN
- FENCE
- PAVED ROAD
- MURRAM / EARTH ROAD
- PERMANENT BUILDING
- TEMPORARY BUILDING
- POWER POLE
- GATE
- CULVERT
- TP 9 TRIAL PIT

PROPOSED FEATURES:

- SEWER WITH MANHOLE

LEGEND - PROFILE

EXISTING FEATURES:

- GROUND LEVEL

PROPOSED FEATURES:

- GRAVITY SEWER WITH MANHOLE

REVISIONS				SIGN	DATE	APPROVED

CLIENT:

**EAST AFRICAN COMMUNITY (EAC)
LAKE VICTORIA BASIN
COMMISSION (LVBC)**
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**PROJECT IMPLEMENTATION CONSULTANTS (PIC):
JOINT VENTURE**

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PROJECT NAME:

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WATER RESOURCES MANAGEMENT
PROGRAMME (LVB-IWRMP)**

CONTRACT TITLE:

MWANZA SEWER CONNECTION UPGRADE

**INFILL SEWERS
KITANGIRI WARD**

DRAWING TITLE:

**SEWER KT-IS-4
PLAN AND LONGITUDINAL SECTION**

SHEET 1 OF 1

Designed by: C.N.M	Drawn by: C.N.M
Checked by: N.J.N	Approved by: R.S.R
Scale: A3- HOR: 1:2,000 VER: 1:200	Date: MARCH 2024

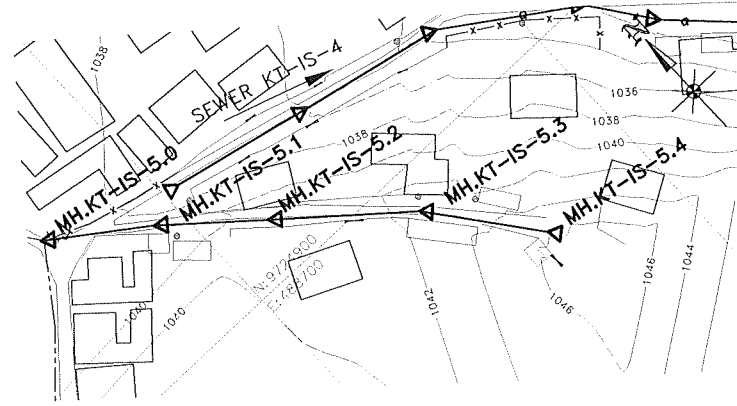
DRG No. **M394(j)/MWZ/KT/11** REV

SEWER KT-IS-5

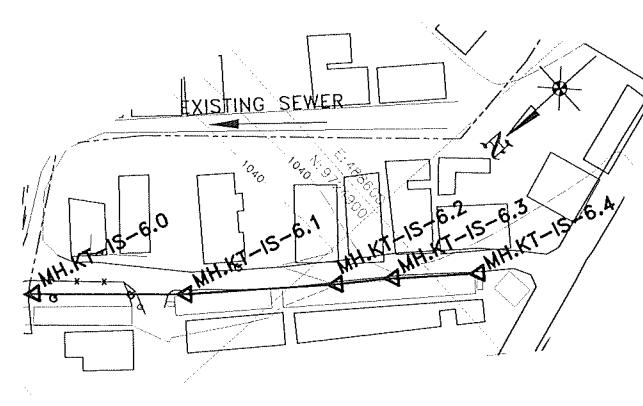
MANHOLE COORDINATES		
REF. No	NORTHING	EASTING
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MH.KT-IS-5.2	9724914.342	488715.664
MH.KT-IS-5.3	9724888.736	488746.393
MH.KT-IS-5.4	9724861.403	488767.529

SEWER KT-IS-5

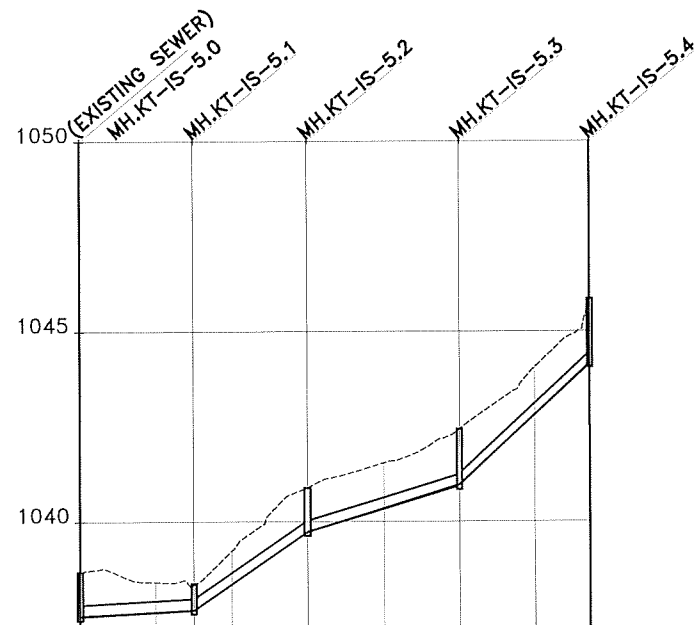
MANHOLE COORDINATES		
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MH.KT-IS-6.2	9724922.076	488593.389
MH.KT-IS-6.3	9724909.910	488584.620
MH.KT-IS-6.4	9724892.273	488570.491



**SEWER KT-IS-5
PLAN**

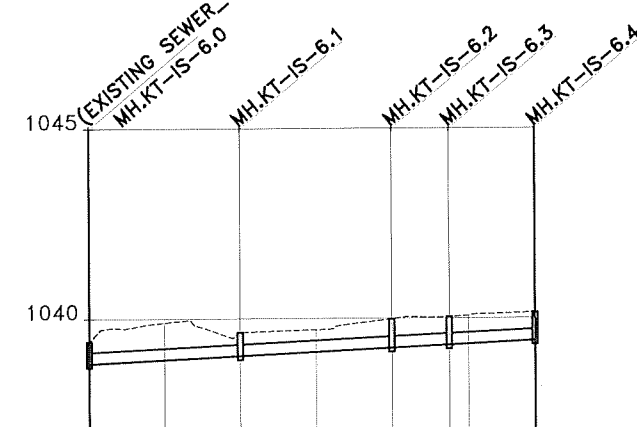


**SEWER KT-IS-6
PLAN**



DATUM (m)	1035								
GROUND LEVELS (m)	1038.68	1038.41	1038.33	1039.23	1040.89	1041.54	1042.43	1044.05	1045.85
TYPE OF PIPE AND SIZE	200mm DIA. S&S DWC HDPE PIPE (SN 4)								
TYPE OF BED AND SURROUND	TYPE 'C'			TYPE 'BO'					
INVERT LEVELS (m)	1037.52	1037.62	1037.67	1038.36	1039.73	1040.35	1040.96	1042.80	1044.14
GRADIENT	1:200		1:15		1:32		1:11		
DEPTH FROM GROUND LEVEL TO INVERT LEVEL (m)	1.16	0.79	0.66	0.87	1.16	1.20	1.46	1.25	1.71
DISTANCE IN KILOMETERS	0+000.00	0+020.00	0+030.00	0+040.00	0+060.00	0+080.00	0+100.00	0+120.00	0+134.55

**SEWER KT-IS-5
LONGITUDINAL SECTION**



DATUM (m)	1035								
GROUND LEVELS (m)	1039.37	1039.90	1039.64	1039.71	1039.88	1040.03	1040.06	1040.15	
TYPE OF PIPE AND SIZE	200mm DIA. S&S DWC HDPE PIPE (SN 4)								
TYPE OF BED AND SURROUND	TYPE 'C'								
INVERT LEVELS (m)	1038.70	1038.82	1038.92	1039.02	1039.12	1039.22	1039.30	1039.32	1039.41
GRADIENT	1:200								
DEPTH FROM GROUND LEVEL TO INVERT LEVEL (m)	0.67	0.85	0.98	0.62	0.58	0.76	0.73	0.74	0.74
DISTANCE IN KILOMETERS	0+000.00	0+020.00	0+040.00	0+060.00	0+080.00	0+095.00	0+100.00	0+117.80	

**SEWER KT-IS-6
LONGITUDINAL SECTION**

NOTES:

- FOR GENERAL SEWER LAYOUT PLAN SEE DRG. No. M394(j)/MWZ/KT/01
- CONTOUR LEVELS ARE AT 2 METER INTERVALS
- GRID VALUES ARE AT 100 METER INTERVALS
- FOR BED AND SURROUND DETAILS REFER TO DRG. No. M394(j)/MWZ/SD/04

LEGEND - PLAN

EXISTING FEATURES:

- 1220 CONTOUR WITH ELEVATIONS
- SEWER
- DRAIN
- FENCE
- PAVED ROAD
- MURRAM / EARTH ROAD
- PERMANENT BUILDING
- TEMPORARY BUILDING
- POWER POLE
- GATE
- CULVERT
- TP 9 TRIAL PIT

PROPOSED FEATURES:

- SEWER WITH MANHOLE

LEGEND - PROFILE

EXISTING FEATURES:

- GROUND LEVEL

PROPOSED FEATURES:

- GRAVITY SEWER WITH MANHOLE

REVISIONS				SIGN	DATE	APPROVED
				BY		
				CHECKED		

CLIENT:

**EAST AFRICAN COMMUNITY (EAC)
LAKE VICTORIA BASIN
COMMISSION (LVBC)**
P.O. BOX 1510 - 40100
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TEL: +254 57 202 6344

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PROJECT NAME:

**LAKE VICTORIA BASIN INTEGRATED
WATER RESOURCES MANAGEMENT
PROGRAMME (LVB-IWRMP)**

**CONTRACT TITLE:
MWANZA SEWER CONNECTION UPGRADE**

**INFILL SEWERS
KITANGIRI WARD**

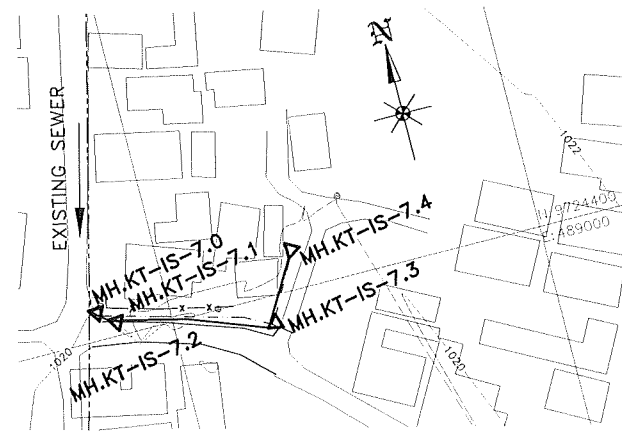
**DRAWING TITLE:
SEWER KT-IS-5 & KT-IS-6
PLAN AND LONGITUDINAL SECTION**

SHEET 1 OF 1

Designed by: C.N.M	Drawn by: C.N.M
Checked by: N.J.N	Approved by: R.S.R
Scale: A3- HOR: 1:2,000 VER: 1:200	Date: MARCH 2024
DRG No. M394(j)/MWZ/KT/12	REV

SEWER KT-IS-7

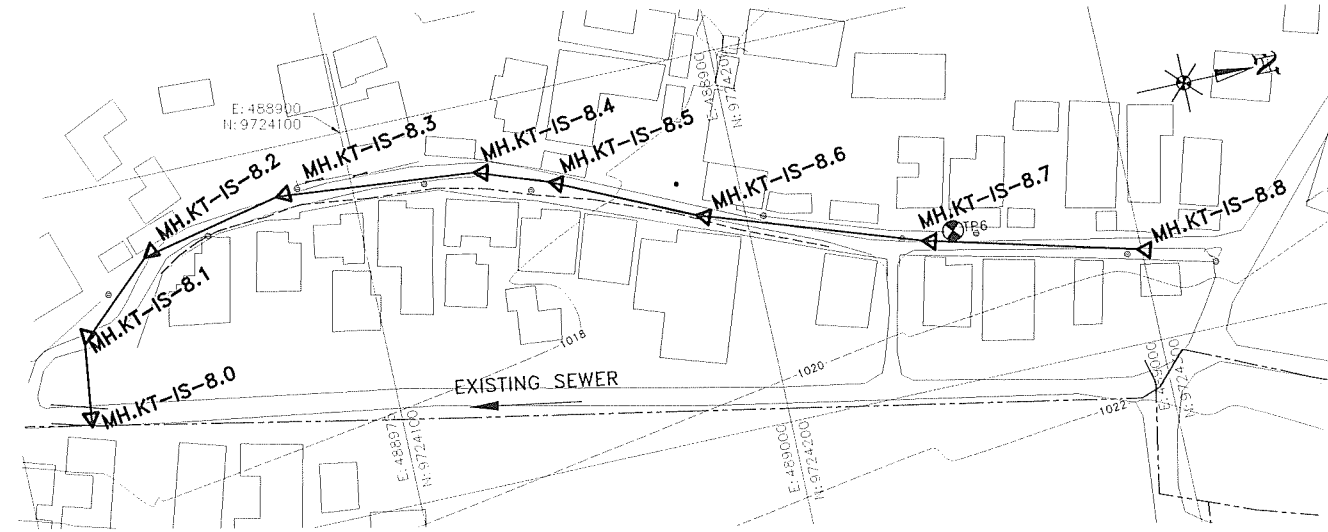
MANHOLE COORDINATES		
REF. No	NORTHING	EASTING
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MH.KT-IS-7.2	9724399.681	488903.882
MH.KT-IS-7.3	9724392.122	488924.244
MH.KT-IS-7.4	9724408.722	488934.060



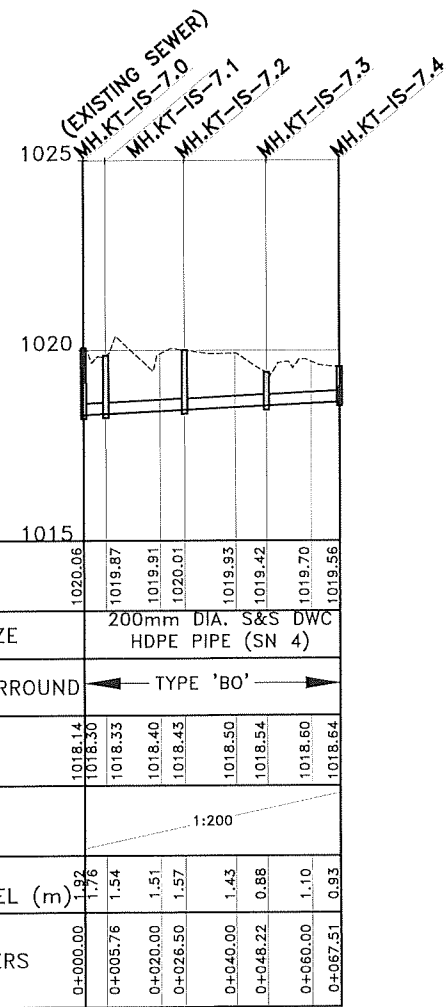
**SEWER KT-IS-7
PLAN**

SEWER KT-IS-8

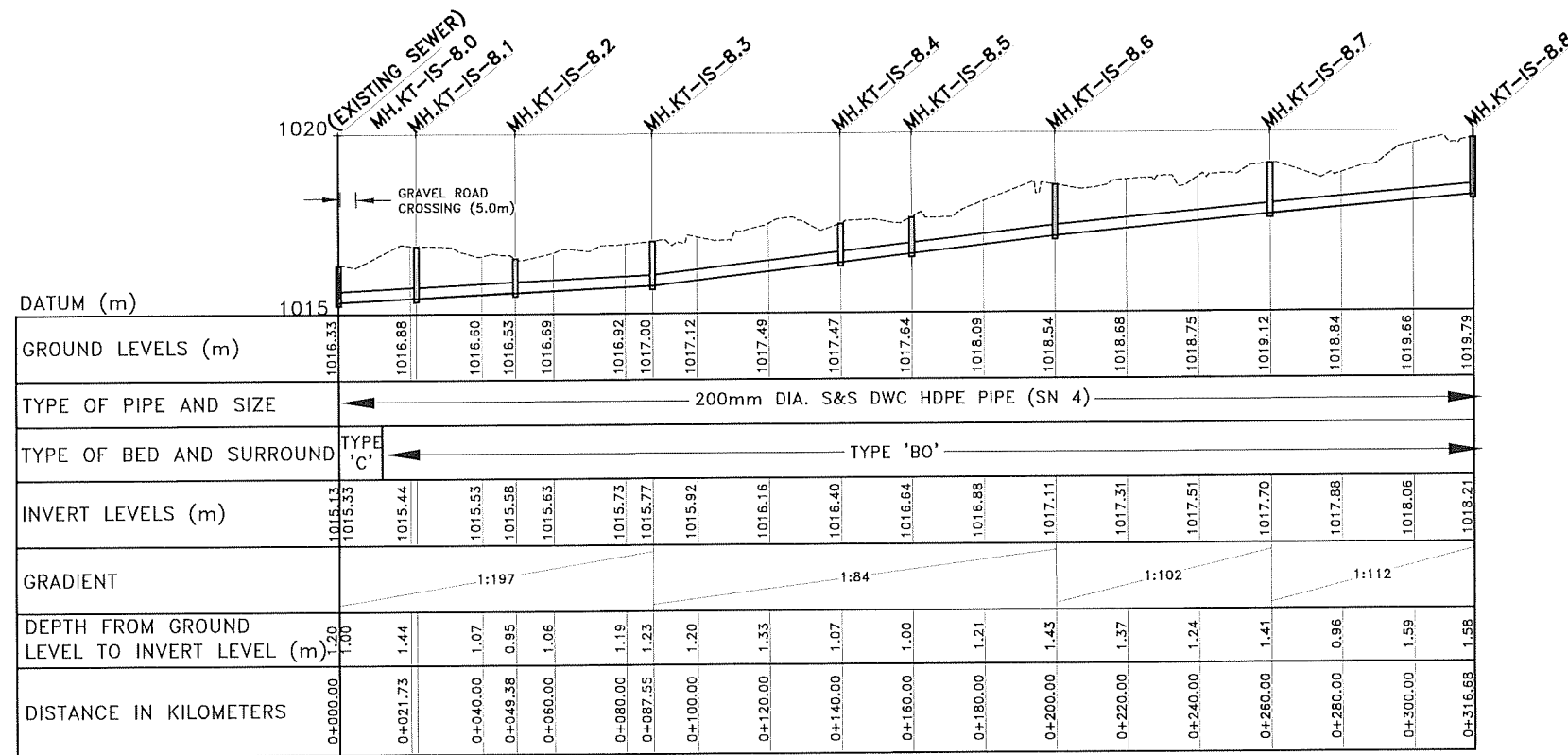
MANHOLE COORDINATES		
REF. No	NORTHING	EASTING
MH.KT-IS-8.0	9724019.700	488961.192
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MH.KT-IS-8.2	9724042.879	488920.943
MH.KT-IS-8.3	9724080.203	488912.957
MH.KT-IS-8.4	9724130.078	488917.126
MH.KT-IS-8.5	9724149.018	488923.641
MH.KT-IS-8.6	9724185.090	488940.848
MH.KT-IS-8.7	9724241.795	488960.335
MH.KT-IS-8.8	9724299.079	488975.399



**SEWER KT-IS-8
PLAN**



**SEWER KT-IS-7
LONGITUDINAL SECTION**



**SEWER KT-IS-8
LONGITUDINAL SECTION**

NOTES:

- FOR GENERAL SEWER LAYOUT PLAN SEE DRG. No. M394(J)/MWZ/KT/01
- CONTOUR LEVELS ARE AT 2 METER INTERVALS
- GRID VALUES ARE AT 100 METER INTERVALS
- FOR BED AND SURROUND DETAILS REFER TO DRG. No. M394(J)/MWZ/SD/04

LEGEND - PLAN

EXISTING FEATURES:

- 1:220 CONTOUR WITH ELEVATIONS
- SEWER
- DRAIN
- FENCE
- PAVED ROAD
- MURRAM / EARTH ROAD
- PERMANENT BUILDING
- TEMPORARY BUILDING
- POWER POLE
- GATE
- CULVERT
- TP 9 TRIAL PIT

PROPOSED FEATURES:

- SEWER WITH MANHOLE

LEGEND - PROFILE

EXISTING FEATURES:

- GROUND LEVEL

PROPOSED FEATURES:

- GRAVITY SEWER WITH MANHOLE

REVISIONS				SIGN	DATE	APPROVED

CLIENT:

**EAST AFRICAN COMMUNITY (EAC)
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**PROJECT IMPLEMENTATION CONSULTANTS (PIC):
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PROJECT NAME:

**LAKE VICTORIA BASIN INTEGRATED
WATER RESOURCES MANAGEMENT
PROGRAMME (LVB-IWRMP)**

**CONTRACT TITLE:
MWANZA SEWER CONNECTION UPGRADE**

**INFILL SEWERS
KITANGIRI WARD**

**DRAWING TITLE:
SEWER KT-IS-7 & KT-IS-8
PLAN AND LONGITUDINAL SECTION**

SHEET 1 OF 1

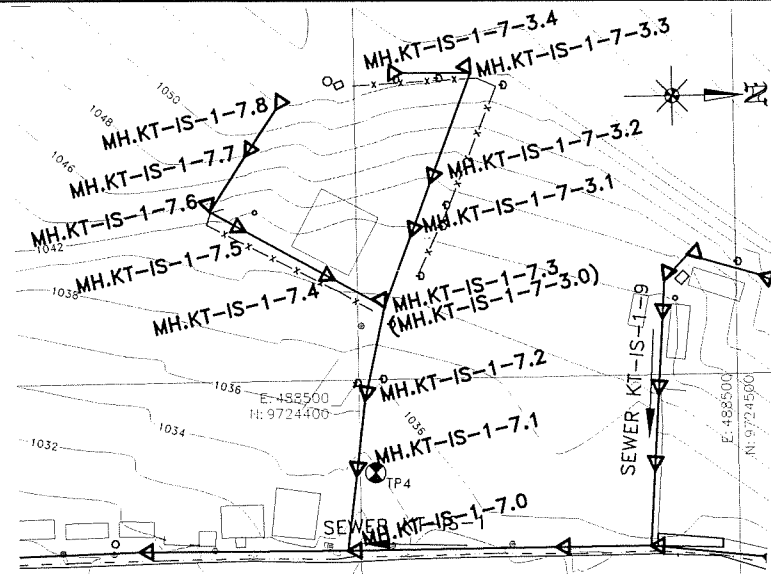
Designed by: C.N.M	Drawn by: C.N.M
Checked by: N.J.N	Approved by: R.S.R
Scale: A3- HOR: 1:2,000 VER: 1:200	Date: MARCH 2024
DRG No. M394(J)/MWZ/KT/13	

SEWER KT-IS-1-7

MANHOLE COORDINATES		
REF. No	NORTHING	EASTING
MH.KT-IS-1-7.0	9724396.495	488544.845
MH.KT-IS-1-7.1	9724399.022	488525.005
MH.KT-IS-1-7.2	9724401.549	488505.166
MH.KT-IS-1-7.3	9724407.070	488480.920
MH.KT-IS-1-7.4	9724393.922	488473.499
MH.KT-IS-1-7.5	9724370.578	488460.323
MH.KT-IS-1-7.6	9724361.272	488455.071
MH.KT-IS-1-7.7	9724370.998	488440.470
MH.KT-IS-1-7.8	9724379.423	488428.102

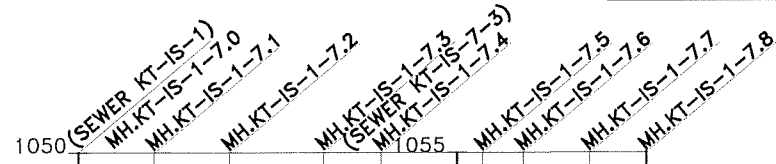
SEWER KT-IS-1-7-3

MANHOLE COORDINATES		
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MH.KT-IS-1-7-3.1	9724414.278	488462.264
MH.KT-IS-1-7-3.2	9724419.692	488448.275
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MH.KT-IS-1-7-3.4	9724412.406	488419.313



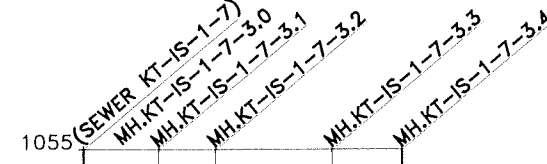
SEWER KT-IS-1-7 & KT-IS-1-7-3

PLAN



DATUM (m)	1030	1035	1040	1045	1050	1055
GROUND LEVELS (m)	1031.23	1033.33	1036.13	1039.00	1040.80	1041.20
TYPE OF PIPE AND SIZE	OD 110mm DIA HDPE PIPE (PN 6) WITH BUTT FUSION JOINTING					
TYPE OF BED AND SURROUND	TYPE 'D'					
INVERT LEVELS (m)	1030.30	1031.08	1033.18	1035.98	1038.80	1040.42
GRADIENT		1:10	1:7	1:7	1:38	1:4
DEPTH FROM GROUND LEVEL TO INVERT LEVEL (m)	0.93	0.15	0.15	0.20	0.15	0.15
DISTANCE IN KILOMETERS	0+000.00	0+020.00	0+040.00	0+060.00	0+080.00	0+100.00

SEWER KT-IS-1-7 LONGITUDINAL SECTION



DATUM (m)	1035	1040	1045	1050	1055
GROUND LEVELS (m)	1039.64	1041.85	1043.68	1045.07	1050.80
TYPE OF PIPE AND SIZE	OD 110mm DIA HDPE PIPE (PN 6) BUTT FUSION JOINTING				
TYPE OF BED AND SURROUND	TYPE 'D'				
INVERT LEVELS (m)	1039.49	1039.52	1041.63	1043.21	1044.64
GRADIENT		1:9		1:3	1:41
DEPTH FROM GROUND LEVEL TO INVERT LEVEL (m)	0.15	0.23	0.47	0.43	0.43
DISTANCE IN KILOMETERS	0+000.00	0+020.00	0+035.00	0+040.00	0+060.00

SEWER KT-IS-1-7-3 LONGITUDINAL SECTION

NOTES:

- FOR GENERAL SEWER LAYOUT PLAN SEE DRG. No. M394(J)/MZ/IG/01
- CONTOUR LEVELS ARE AT 2 METER INTERVALS
- GRID VALUES ARE AT 100 METER INTERVALS
- FOR BED AND SURROUND DETAILS REFER TO DRG. No. M394(J)/MZ/SD/04
- SIMPLIFIED SEWER TO BE DONE TOGETHER WITH 1.2m WIDE STEPPED FOOTPATH

LEGEND - PLAN

EXISTING FEATURES:

- 1220 CONTOUR WITH ELEVATIONS
- SEWER
- DRAIN
- FENCE
- PAVED ROAD
- MURRAM / EARTH ROAD
- PERMANENT BUILDING
- TEMPORARY BUILDING
- POWER POLE
- GATE
- CULVERT
- TP 9 TRIAL PIT

PROPOSED FEATURES:

- SEWER WITH MANHOLE

LEGEND - PROFILE

EXISTING FEATURES:

- GROUND LEVEL

PROPOSED FEATURES:

- GRAVITY SEWER WITH MANHOLE

REVISIONS	SIGN	DATE	APPROVED

CLIENT:

EAST AFRICAN COMMUNITY (EAC)
LAKE VICTORIA BASIN COMMISSION (LVB/C)
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PROJECT NAME:

LAKE VICTORIA BASIN INTEGRATED WATER RESOURCES MANAGEMENT PROGRAMME (LVB-IWRMP)

CONTRACT TITLE:

MWANZA SEWER CONNECTION UPGRADE

INFILL SEWERS KITANGIRI WARD

DRAWING TITLE:

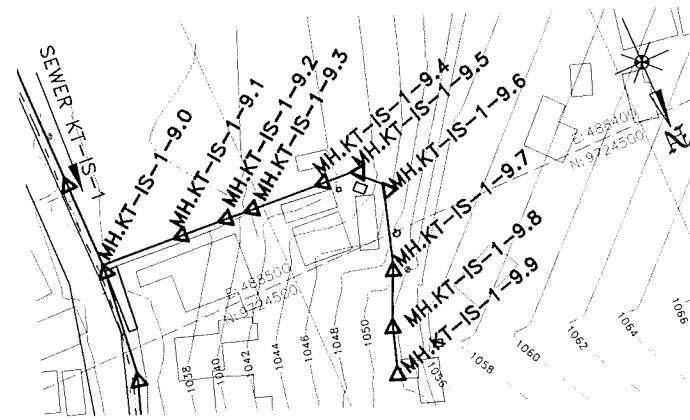
SEWER KT-IS-1-7 & KT-IS-1-7-3 PLAN AND LONGITUDINAL SECTIONS

SHEET 1 OF 1

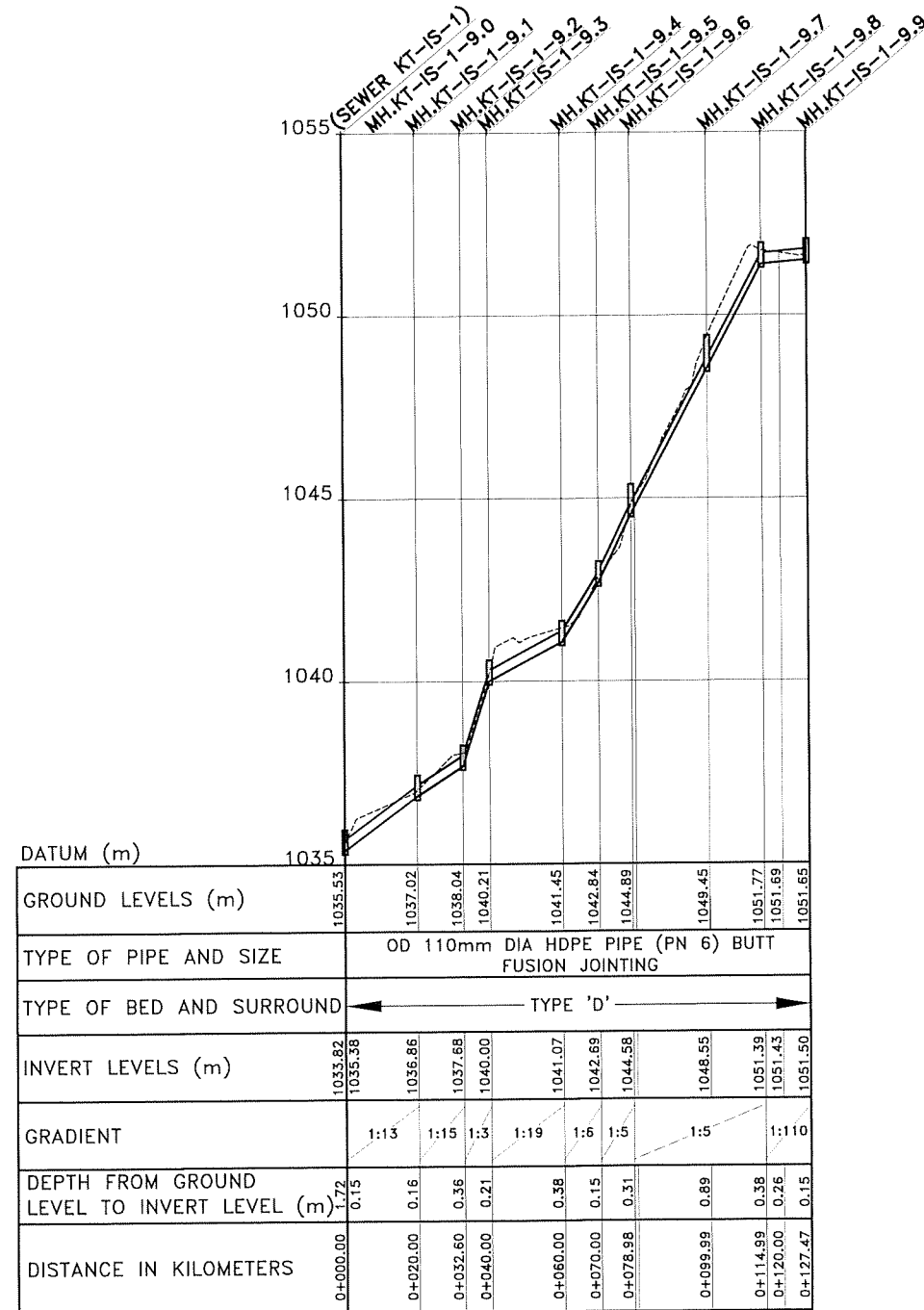
Designed by: C.N.M	Drawn by: C.N.M
Checked by: N.J.N	Approved by: R.S.R
Scale: A3- HOR: 1:2,000 VER: 1:200	Date: MARCH 2024

DRG No. M394(J)/MWZ/KT/14

MANHOLE COORDINATES		
REF. No	NORTHING	EASTING
MH.KT-IS-1-9.0	9724476.489	488544.831
MH.KT-IS-1-9.1	9724477.783	488524.873
MH.KT-IS-1-9.2	9724478.583	488512.293
MH.KT-IS-1-9.3	9724479.084	488504.915
MH.KT-IS-1-9.4	9724480.386	488484.958
MH.KT-IS-1-9.5	9724481.037	488474.979
MH.KT-IS-1-9.6	9724487.229	488468.473
MH.KT-IS-1-9.7	9724507.326	488474.588
MH.KT-IS-1-9.8	9724520.968	488480.834
MH.KT-IS-1-9.9	9724532.835	488484.683



**SEWER KT-IS-1-9
PLAN**



**SEWER KT-IS-1-9
LONGITUDINAL SECTION**

NOTES:

- FOR GENERAL SEWER LAYOUT PLAN SEE DRG. No. M394(J)/MWZ/KT/01
- CONTOUR LEVELS ARE AT 2 METER INTERVALS
- GRID VALUES ARE AT 100 METER INTERVALS
- FOR BED AND SURROUND DETAILS REFER TO DRG. No. M394(J)/MWZ/SD/04
- SIMPLIFIED SEWER TO BE DONE TOGETHER WITH 1.2m WIDE STEPPED FOOTPATH

LEGEND - PLAN

EXISTING FEATURES:

- 1220 CONTOUR WITH ELEVATIONS
- SEWER
- DRAIN
- FENCE
- PAVED ROAD
- MURRAM / EARTH ROAD
- PERMANENT BUILDING
- TEMPORARY BUILDING
- POWER POLE
- GATE
- CULVERT
- TRIAL PIT

PROPOSED FEATURES:

- SEWER WITH MANHOLE

LEGEND - PROFILE

EXISTING FEATURES:

- GROUND LEVEL

PROPOSED FEATURES:

- GRAVITY SEWER WITH MANHOLE

REVISIONS				SIGN	DATE	APPROVED
BY	CHECKED					

CLIENT:

EAST AFRICAN COMMUNITY (EAC)
LAKE VICTORIA BASIN COMMISSION (LVBC)
P.O. BOX 1510 - 40100
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PROJECT NAME:

LAKE VICTORIA BASIN INTEGRATED
WATER RESOURCES MANAGEMENT
PROGRAMME (LVB-IWRMP)

CONTRACT TITLE:

MWANZA SEWER CONNECTION UPGRADE

INFILL SEWERS
KITANGIRI WARD

DRAWING TITLE:

SEWER KT-IS-1-9
PLAN AND LONGITUDINAL SECTION

SHEET 1 OF 1

Designed by: C.N.M	Drawn by: C.N.M
Checked by: N.J.N	Approved by: R.S.R
Scale: A3- HOR: 1:2,000 VER: 1:200	Date: MARCH 2024
DRG No. M394(J)/MWZ/KT/15	REV