

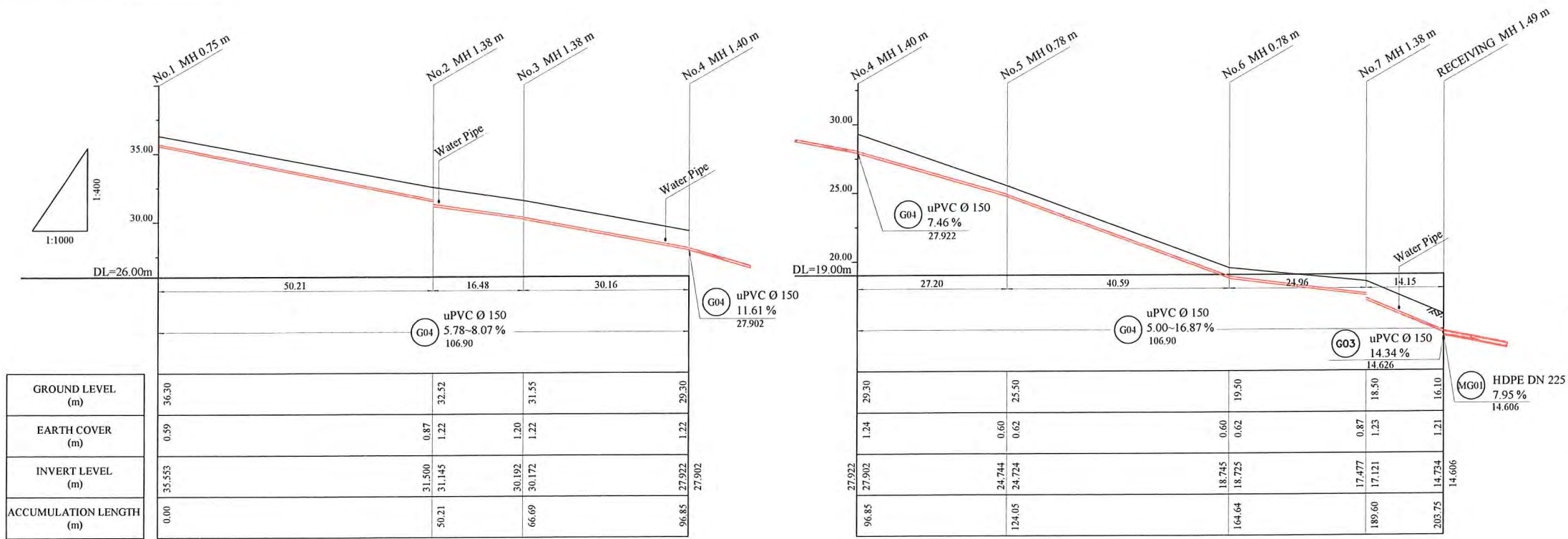
HDPE PIPE BENDING POINT COORDINATES

Corner Pt. No.	EASTING	NORTHING
BP44-Pt.01	107852.97	103543.57
BP44-Pt.02	107899.60	103562.21
BP44-Pt.03	107911.24	103573.86
BP44-Pt.04	107920.66	103602.52
BP44-Pt.05	107946.30	103611.59
BP44-Pt.06	107985.65	103601.61
BP44-Pt.07	108008.43	103591.38

PLAN VIEW
Scale : 1:1000

LEGEND

- PROPOSED SEWER
- NEW MANHOLE
- EXISTING MANHOLE TO BE MODIFIED
- POWER POLE WITH OVERHEAD POWER LINES
- POWER POLE WITH LIGHT
- ELECTRICITY TRANSMISSION TOWER
- ELECTRICITY PIT
- UNDER GROUND POWER CABLE
- TELECOM PIT
- TELECOM MARKER POST
- TELECOM LINE
- WATER VALVE BOX
- STOP VALVE
- WATER TAP
- FIRE HYDRANT
- WATER METER
- EXISTING SEWER PIPE
- TREE
- WATER LINE
- FENCE LINE WITH GATE
- BITUMEN SEALED ROAD

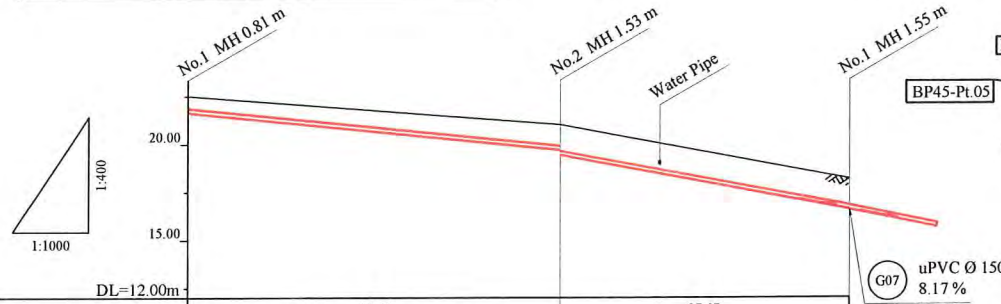
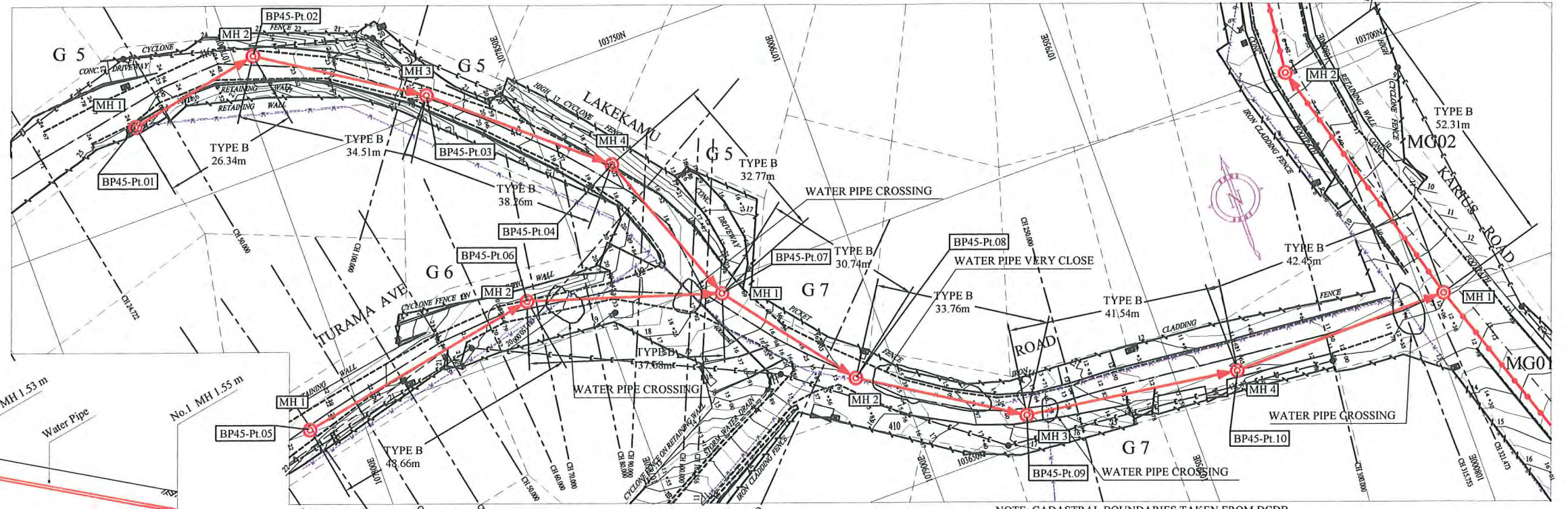


- NOTE: CADASTRAL BOUNDARIES TAKEN FROM DCDB
- LOCATION OF UNDERGROUND UTILITIES SHOWN ON THESE PLANS ARE APPROXIMATE ONLY. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING AND MAINTAINING ALL EXISTING UTILITIES IN OPERATION.
 - UNDERGROUND UTILITY SERVICES TO RESIDENTIAL, PUBLIC AND COMMERCIAL BUILDINGS OR OTHER FACILITIES HAVE NOT BEEN SHOWN BUT SHALL BE LOCATED AND PROTECTED IN A SIMILAR MANNER AS DESCRIBED ABOVE BY THE CONTRACTOR
 - INVERT MODIFICATION IS INCLUDED IN THE CONTRACT
INVERT LEVEL OF NEW PIPE ≥ EXISTING PIPE BOTTOM LEVEL +20mm
INVERT LEVEL OF NEW PIPE - EXISTING PIPE BOTTOM LEVEL ≥ +600mm
DROP PIPE IS REQUIRED
 - MINIMUM COVER IS 60cm FOR UNPAVED ROAD
90cm FOR ASPHALT/CONCRETE PAVED ROAD IF NOT DESCRIBED ON THE DRAWING
Type A - Soil/others
Type B - Asphalt(Road)
Type C - Walkway (Concrete)

PROJECT: PORT MORESBY SEWERAGE SYSTEM UPGRADING PROJECT (POMSSUP)		TITLE: Branch Sewer Pipe Plan and Profile (Gabutu_G4)	
CLIENT: INDEPENDENT PUBLIC BUSINESS CORPORATION PORT MORESBY SEWERAGE SYSTEM UPGRADING PROJECT PROJECT MANAGEMENT UNIT (PMU) JICA JAPAN INTERNATIONAL COOPERATION AGENCY	CONSULTANTS: NJS CONSULTANTS CO., LTD. - JAPAN	NOTES:	APPROVED by PMU: Project Director Lot G.Zauya
		REVISIONS:	CHECKED BY CONSULTANT: Project Manager T.Fuji
		DATE: 1. Dec 2011	SCALE: 1/1000
		DATE: 1. Dec 2011	DRAWING NO.: BP-44

LEGEND

- PROPOSED SEWER
- NEW MANHOLE
- EXISTING MANHOLE TO BE MODIFIED
- POWER POLE WITH OVERHEAD POWER LINES
- POWER POLE WITH LIGHT
- ELECTRICITY TRANSMISSION TOWER
- ELECTRICITY PIT
- UNDER GROUND POWER CABLE
- TELECOM PIT
- TELECOM MARKER POST
- TELECOM LINE
- WATER VALVE BOX
- STOP VALVE
- WATER TAP
- FIRE HYDRANT
- WATER METER
- EXISTING SEWER PIPE
- TREE
- WATER LINE
- FENCE LINE WITH GATE
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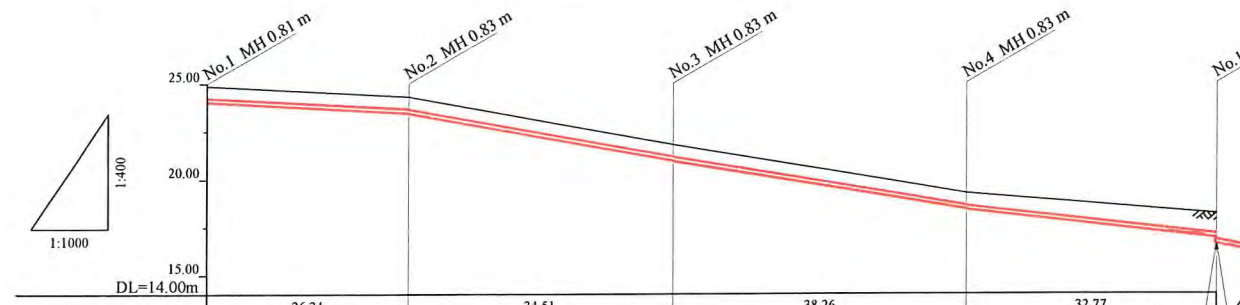
HDPE PIPE BENDING POINT COORDINATES

Corner Pt. No.	EASTING	NORTHING
BP45-Pl.01	107777.89	103767.06
BP45-Pl.02	107803.75	103772.05
BP45-Pl.03	107832.77	103753.38
BP45-Pl.04	107861.87	103728.54
BP45-Pl.05	107789.72	103700.56
BP45-Pl.06	107837.57	103709.42
BP45-Pl.07	107873.44	103697.89
BP45-Pl.07	107892.24	103673.57
BP45-Pl.07	107920.70	103655.41
BP45-Pl.07	107961.83	103649.53

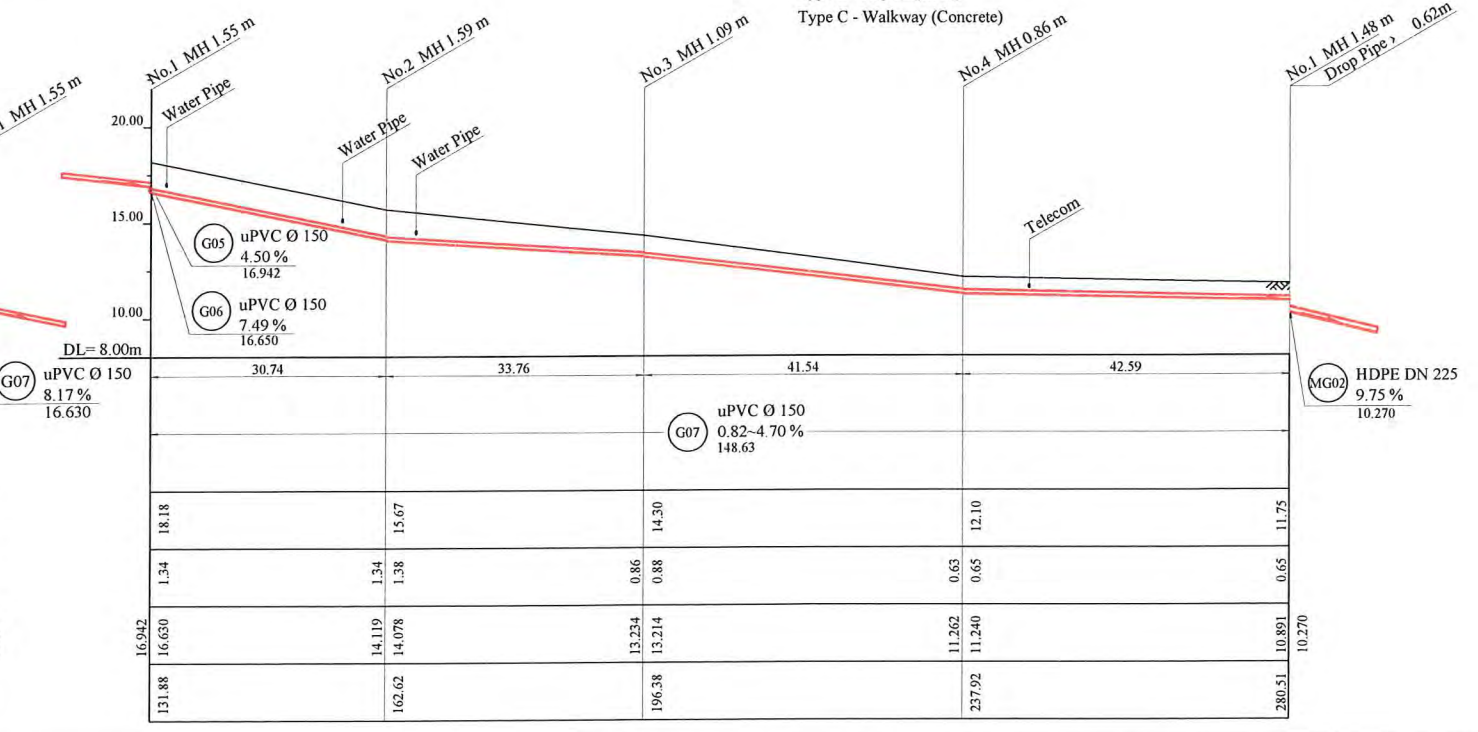
GROUND LEVEL (m)	22.50	21.00	18.18
EARTH COVER (m)	0.60	1.05	1.32
INVERT LEVEL (m)	21.690	19.744	16.650
ACCUMULATION LENGTH (m)	0.00	48.66	86.33

PLAN VIEW
Scale : 1:1000

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GROUND LEVEL (m)	24.87	24.30	21.80	19.25	18.18
EARTH COVER (m)	0.60	0.60	0.60	0.60	1.03
INVERT LEVEL (m)	24.059	23.490	20.990	18.437	16.942
ACCUMULATION LENGTH (m)	0.00	26.34	60.85	99.11	131.88



PROJECT: PORT MORESBY SEWERAGE SYSTEM UPGRADING PROJECT (POMSSUP)

CLIENT: INDEPENDENT PUBLIC BUSINESS CORPORATION
 PORT MORESBY SEWERAGE SYSTEM UPGRADING PROJECT
 PROJECT MANAGEMENT UNIT (PMU)
 JICA JAPAN INTERNATIONAL COOPERATION AGENCY

CONSULTANTS: NJS CONSULTANTS CO., LTD. - JAPAN

TITLE: Branch Sewer Pipe Plan and Profile (Gabutu_G5,G6,G7)

REV.	DATE	DESCRIPTION	APPROVED by PMU: Project Director Lot G.Zauya	DATE: 1. Dec 2011	SCALE: 1/1000

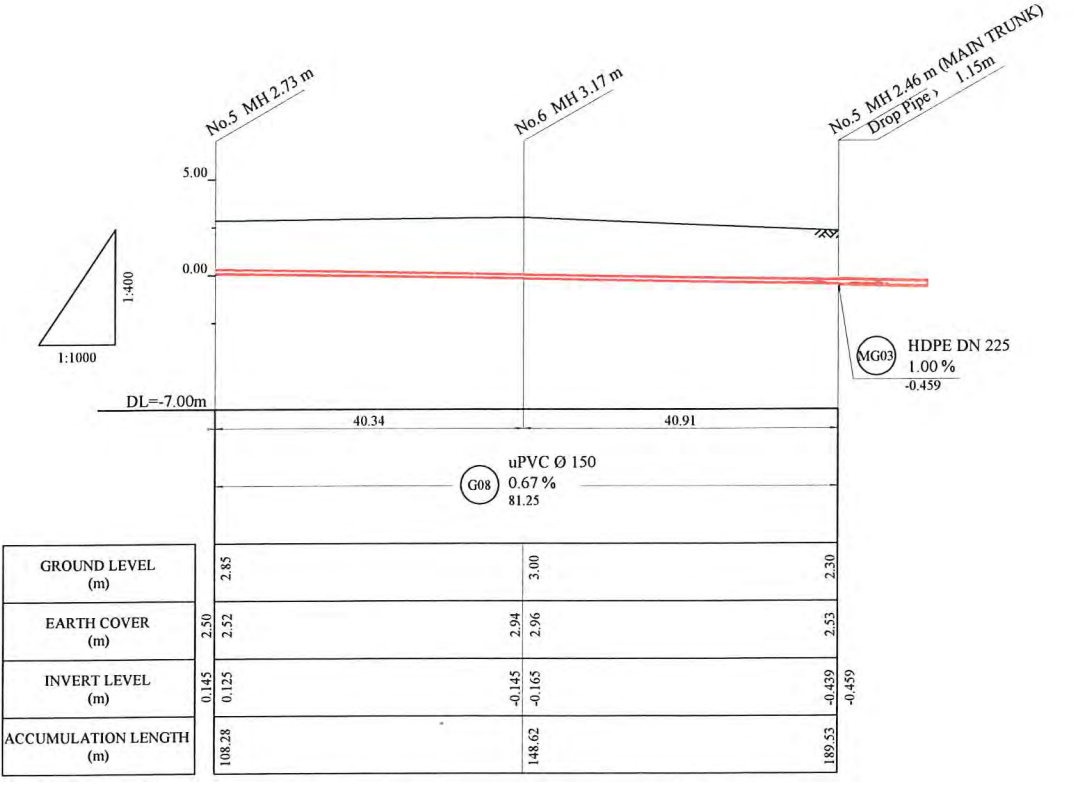
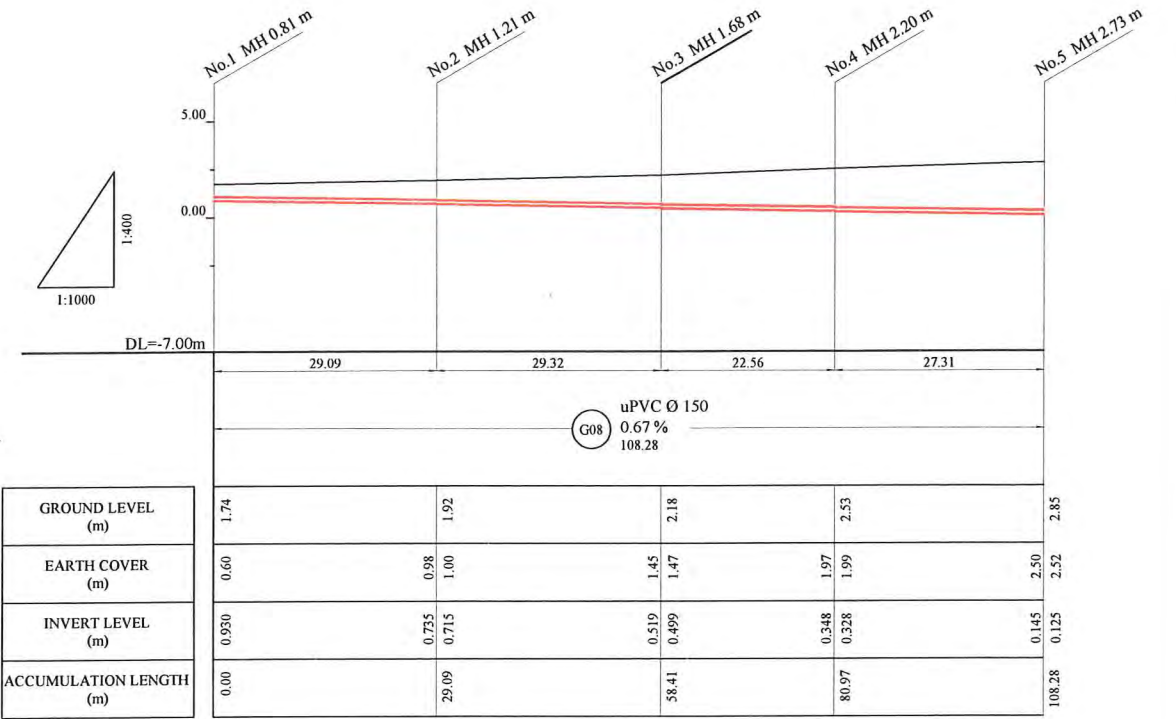
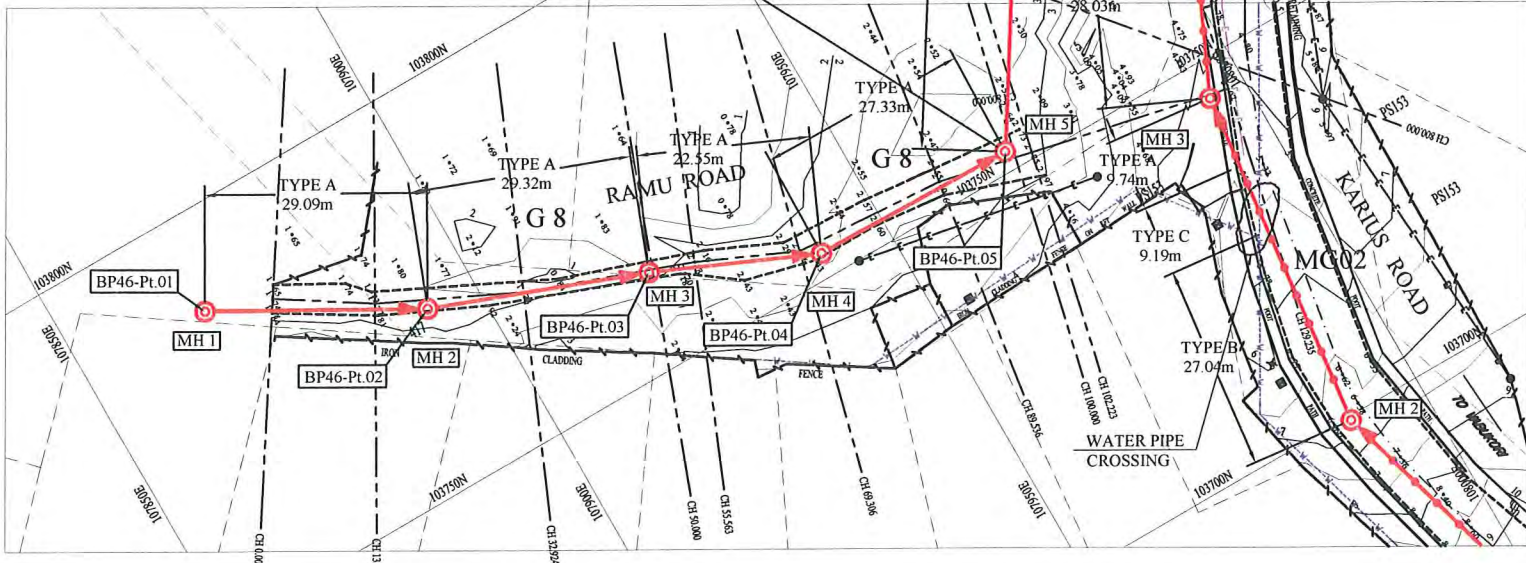
LEGEND

- PROPOSED SEWER
- NEW MANHOLE
- EXISTING MANHOLE TO BE MODIFIED
- POWER POLE WITH OVERHEAD POWER LINES
- POWER POLE WITH LIGHT
- ELECTRICITY TRANSMISSION TOWER
- ELECTRICITY PIT
- UNDER GROUND POWER CABLE
- TELECOM PIT
- TELECOM MARKER POST
- TELECOM LINE
- WATER VALVE BOX
- STOP VALVE
- FIRE HYDRANT
- WATER TAP
- WATER METER
- EXISTING SEWER PIPE
- TREE
- WATER LINE
- FENCE LINE WITH GATE
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 INVERT LEVEL OF NEW PIPE - EXISTING PIPE BOTTOM LEVEL \geq +600mm
 DROP PIPE IS REQUIRED
 - 4) MINIMUM COVER IS 60cm FOR UNPAVED ROAD
 90cm FOR ASPHALT/CONCRETE PAVED ROAD IF NOT DESCRIBED ON THE DRAWING
 Type A - Soil/others
 Type B - Asphalt(Road)
 Type C - Walkway (Concrete)

HDPE PIPE BENDING POINT COORDINATES

Corner Pt. No.	EASTING	NORTHING
BP46-Pt.01	107867.70	103787.25
BP46-Pt.02	107893.00	103772.90
BP46-Pt.03	107920.39	103762.42
BP46-Pt.04	107940.98	103753.22
BP46-Pt.05	107968.30	103752.63
BP46-Pt.06	107989.70	103786.81

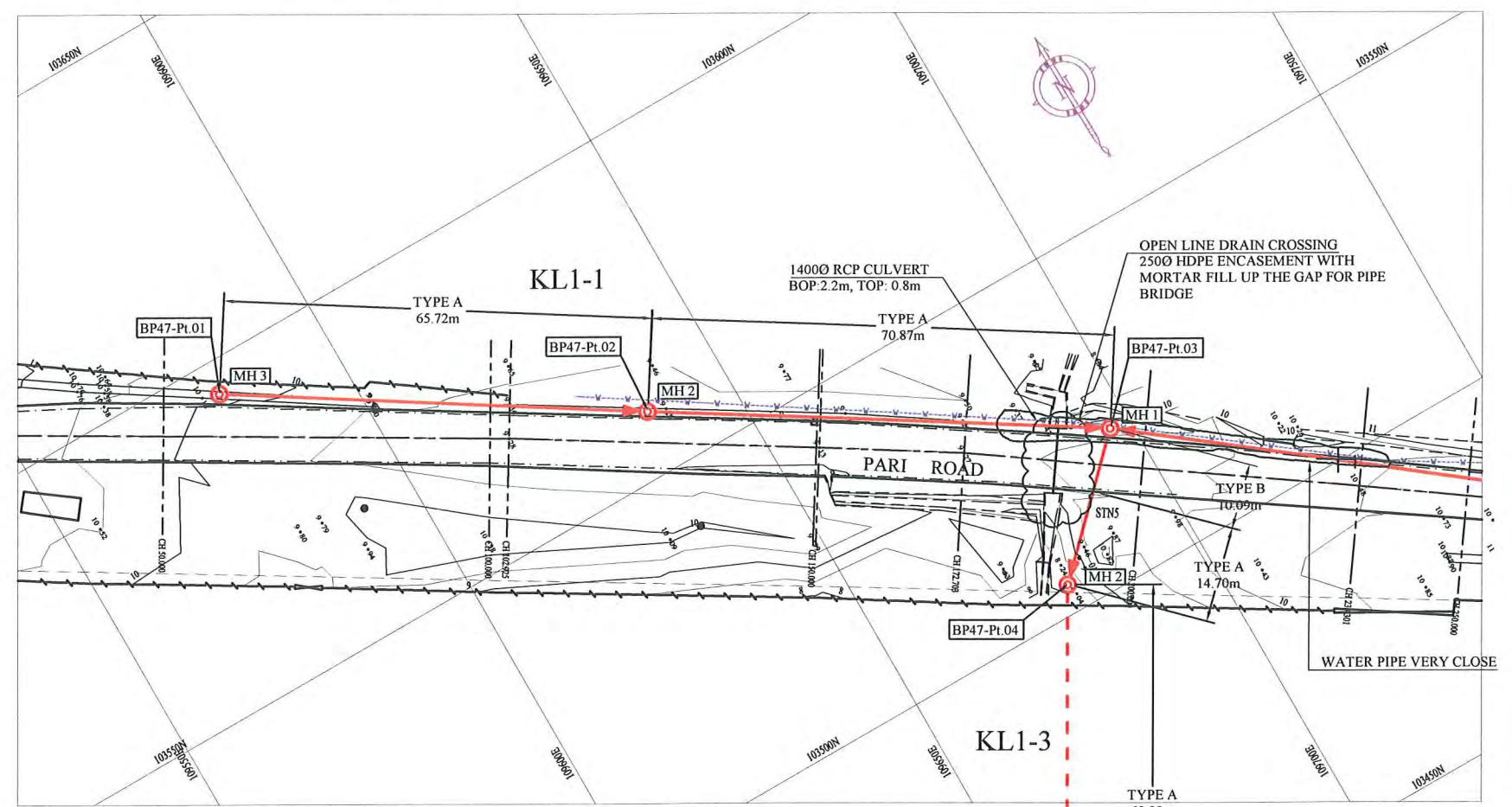


PROJECT: PORT MORESBY SEWERAGE SYSTEM UPGRADING PROJECT (POMSSUP)		TITLE: Branch Sewer Pipe Plan and Profile (Gabutu_G8)	
CLIENT: INDEPENDENT PUBLIC BUSINESS CORPORATION PORT MORESBY SEWERAGE SYSTEM UPGRADING PROJECT PROJECT MANAGEMENT UNIT (PMU) JAPAN INTERNATIONAL COOPERATION AGENCY	CONSULTANTS: NJS CONSULTANTS CO., LTD. - JAPAN	NOTES:	APPROVED BY PMU: Project Director Lot G.Zauya
		REVISIONS:	CHECKED BY CONSULTANT: Project Manager T.Fuji
		SCALE: 1/1000	
		DRAWING NO.: BP-46	

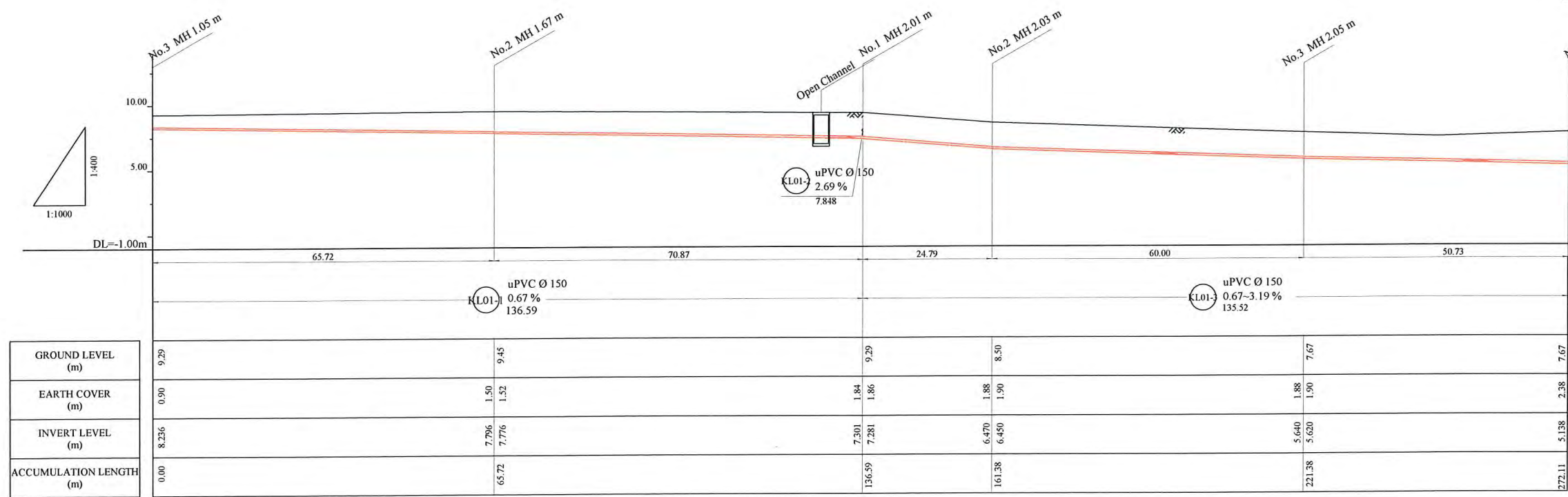
LEGEND

- PROPOSED SEWER
- NEW MANHOLE
- EXISTING MANHOLE TO BE MODIFIED
- POWER POLE WITH OVERHEAD POWER LINES
- POWER POLE WITH LIGHT
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 Type A - Soil/others
 Type B - Asphalt(Road)
 Type C - Walkway (Concrete)



PLAN VIEW
Scale : 1:1000



EXISTING MANHOLE IN PRIVATE AREA LOCATION SHALL BE CHECKED WITH LANDOWNER AND EDA RANU

HDPE PIPE BENDING POINT COORDINATES

Corner Pt. No.	EASTING	NORTHING
BP47-Pt.01	109581.53	Y=103594.99
BP47-Pt.02	109636.94	Y=103559.65
BP47-Pt.03	109696.91	Y=103521.89
BP47-Pt.04	109679.36	Y=103504.37
BP47-Pt.05	109649.35	Y=103452.41
BP47-Pt.06	109623.98	Y=103408.48

PROJECT: PORT MORESBY SEWERAGE SYSTEM UPGRADING PROJECT (POMSSUP)

CLIENT: INDEPENDENT PUBLIC BUSINESS CORPORATION
 PORT MORESBY SEWERAGE SYSTEM UPGRADING PROJECT
 PROJECT MANAGEMENT UNIT (PMU)

CONSULTANTS: NJS CONSULTANTS CO., LTD. - JAPAN

PROJECT LOGO: IPBC, jica

TITLE: Branch Sewer Pipe Plan and Profile (Kila kila_KL1-1, KL1-3)

NOTES:

REVISIONS		
REV.	DATE	DESCRIPTION

APPROVED by PMU: Project Director Lot G.Zauya

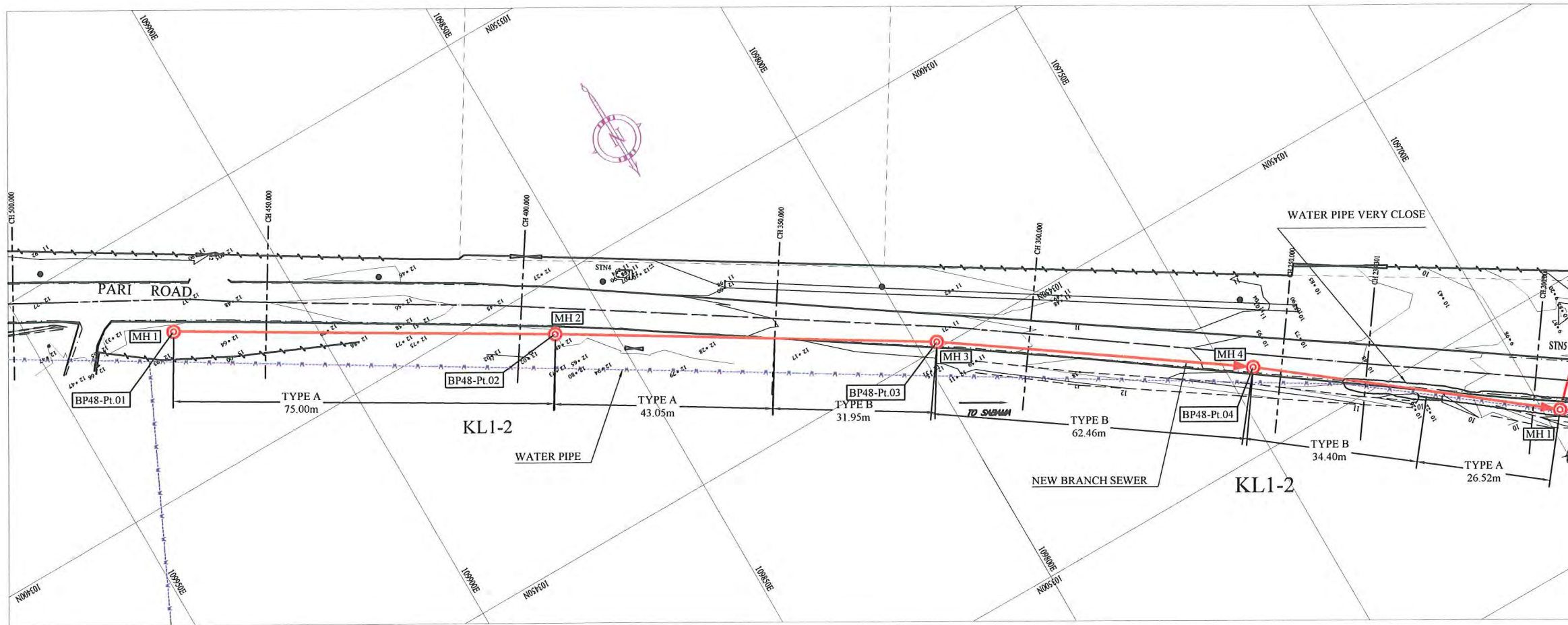
CHECKED by CONSULTANT: Project Manager T.Fuji

DATE: 1. Dec 2011

SCALE: 1/1000

DATE: 1. Dec 2011

DRAWING NO.: BP-47

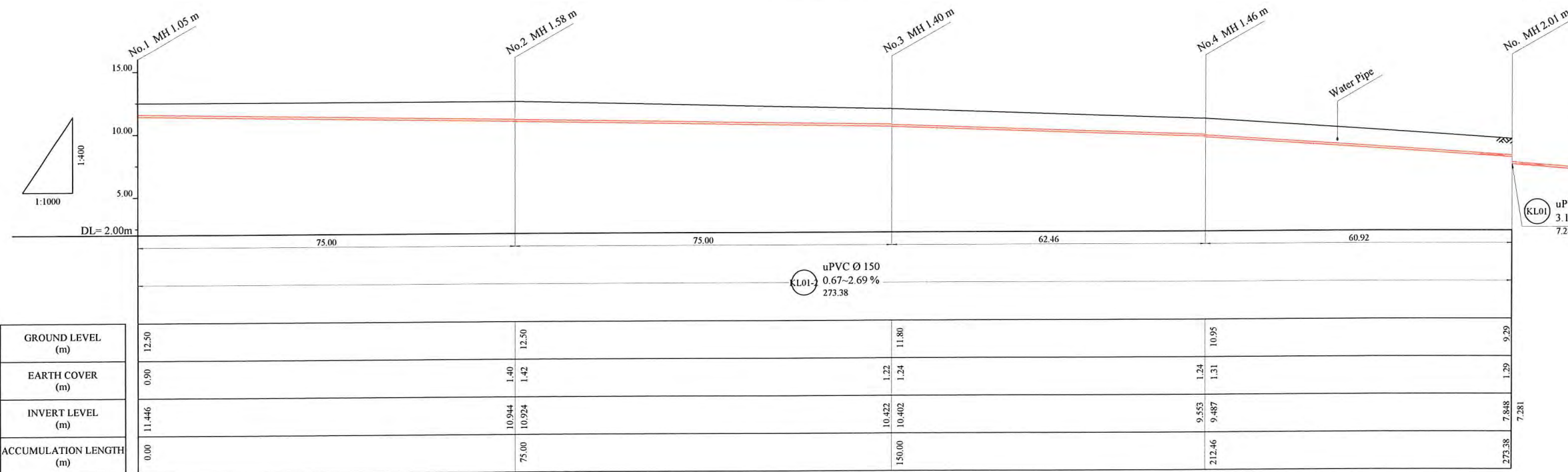


LEGEND

- PROPOSED SEWER
- NEW MANHOLE
- EXISTING MANHOLE TO BE MODIFIED
- POWER POLE WITH OVERHEAD POWER LINES
- POWER POLE WITH LIGHT
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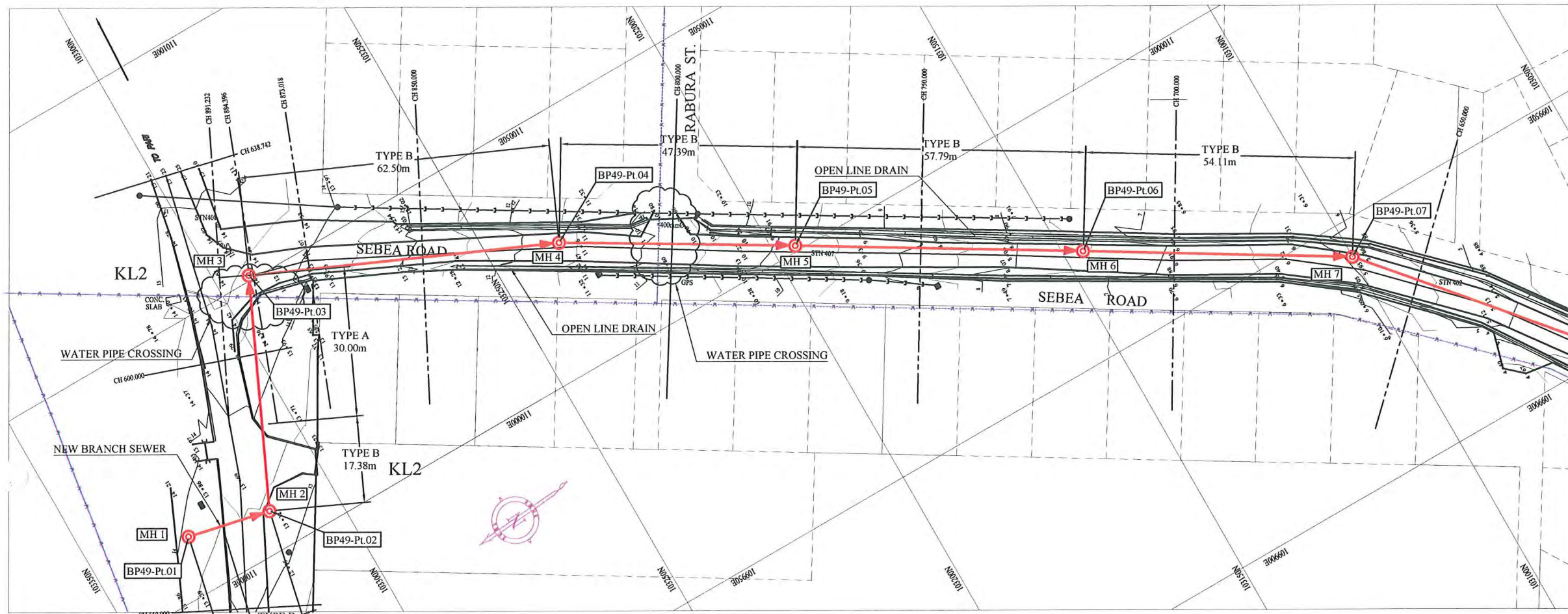
PLAN VIEW
Scale : 1:500



HDPE PIPE BENDING POINT COORDINATES

Corner Pt. No.	EASTING	NORTHING
BP48-Pt.01	109924.64	103371.26
BP48-Pt.02	109860.17	103409.59
BP48-Pt.03	109796.17	103448.70
BP48-Pt.04	109744.85	103484.31

PROJECT: PORT MORESBY SEWERAGE SYSTEM UPGRADING PROJECT (POMSSUP)		TITLE: Branch Sewer Pipe Plan and Profile (Kila kila_KL1-2)					
CLIENT: INDEPENDENT PUBLIC BUSINESS CORPORATION PORT MORESBY SEWERAGE SYSTEM UPGRADING PROJECT PROJECT MANAGEMENT UNIT (PMU) JAPAN INTERNATIONAL COOPERATION AGENCY	CONSULTANTS: NJS CONSULTANTS CO., LTD. - JAPAN	NOTES:	REVISIONS		APPROVED BY PMU:	DATE:	SCALE:
			REV.	DATE	DESCRIPTION	Project Director Lot G. Zauya	1, Dec 2011
				CHECKED by CONSULTANT Project Manager T. Fuji	DATE:	DRAWING NO.:	
					1, Dec 2011	BP-48	



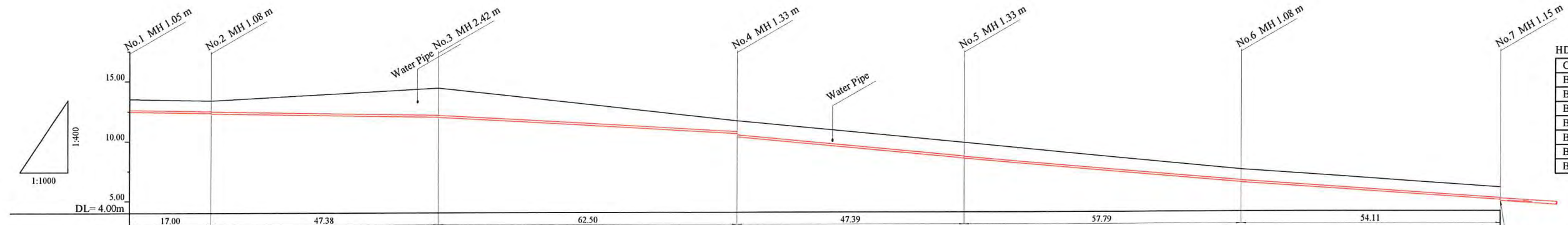
PLAN VIEW
Scale : 1:1000

LEGEND

- PROPOSED SEWER
- NEW MANHOLE
- EXISTING MANHOLE TO BE MODIFIED
- POWER POLE WITH OVERHEAD POWER LINES
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 INVERT LEVEL OF NEW PIPE - EXISTING PIPE BOTTOM LEVEL ≥ +600mm
 DROP PIPE IS REQUIRED
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 90cm FOR ASPHALT/CONCRETE PAVED ROAD IF NOT DESCRIBED ON THE DRAWING
 Type A - Soil/others
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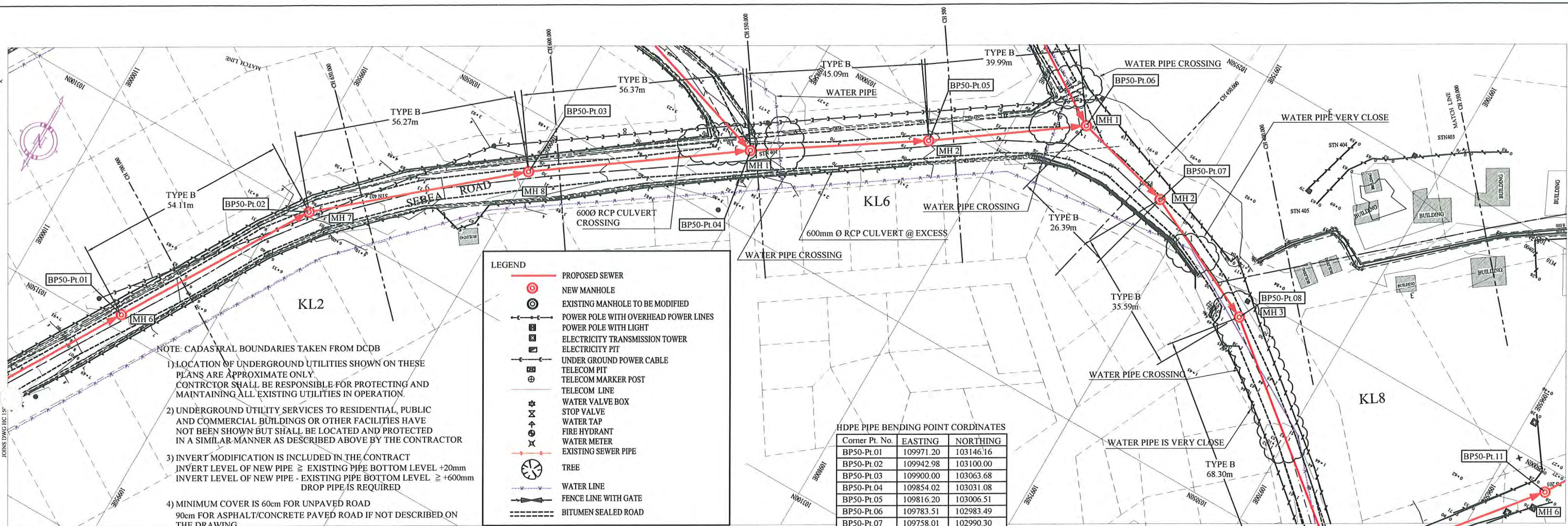


HDPE PIPE BENDING POINT CORDINATES

Corner Pt. No.	EASTING	NORTHING
BP49-Pt.01	110011.71	103329.91
BP49-Pt.02	110008.02	103313.31
BP49-Pt.03	110050.98	103293.32
BP49-Pt.04	110025.45	103236.28
BP49-Pt.05	110001.15	103195.59
BP49-Pt.06	109971.20	103146.16
BP49-Pt.07	109942.98	103100.00

	0.00	17.00	64.38	126.88	174.27	232.06	286.17
GROUND LEVEL (m)	13.50	13.38	14.39	11.62	9.80	7.50	5.97
EARTH COVER (m)	0.90	0.90	2.25	0.90	1.16	0.90	0.90
INVERT LEVEL (m)	12.446	12.325	11.988	10.566	8.487	6.444	4.914
ACCUMULATION LENGTH (m)	0.00	17.00	64.38	126.88	174.27	232.06	286.17

PROJECT: PORT MORESBY SEWERAGE SYSTEM UPGRADING PROJECT (POMSSUP)		TITLE: Branch Sewer Pipe Plan and Profile (Kila kila_KL2-1/2)													
CLIENT: INDEPENDENT PUBLIC BUSINESS CORPORATION PORT MORESBY SEWERAGE SYSTEM UPGRADING PROJECT PROJECT MANAGEMENT UNIT (PMU)	CONSULTANTS: NJS CONSULTANTS CO., LTD. - JAPAN	NOTES:	APPROVED BY PMU: Project Director Lot G.Zauya												
JAPAN INTERNATIONAL COOPERATION AGENCY			CHECKED BY CONSULTANT: Project Manager T.Fuji												
		REVISIONS	DATE: 1. Dec 2011												
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REV.	DATE	DESCRIPTION													
			DATE: 1. Dec 2011												
			DRAWING NO.: BP-49												

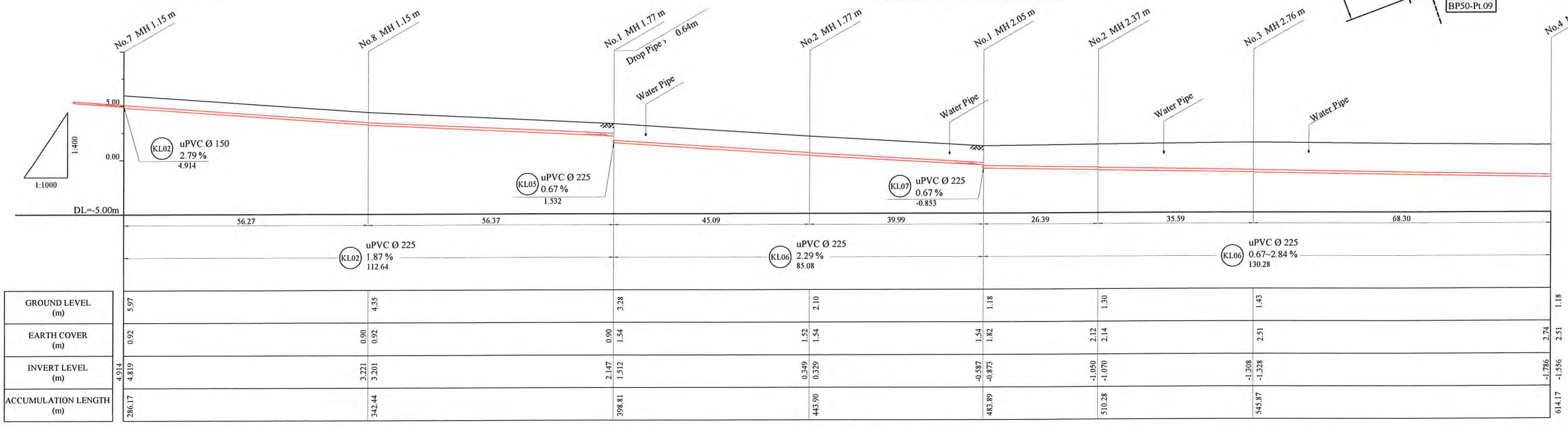


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Type A - Soil/others
 Type B - Asphalt(Road)
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PLAN VIEW
 Scale : 1:1000



PROJECT: PORT MORESBY SEWERAGE SYSTEM UPGRADING PROJECT (POMSSUP)

CLIENT: INDEPENDENT PUBLIC BUSINESS CORPORATION
 PORT MORESBY SEWERAGE SYSTEM UPGRADING PROJECT
 PROJECT MANAGEMENT UNIT (PMU)
 JICA JAPAN INTERNATIONAL COOPERATION AGENCY

CONSULTANTS: NJS CONSULTANTS CO., LTD. - JAPAN

TITLE: Branch Sewer Pipe Plan and Profile (Kila kila_KL2-2/2, KL6, KL8-1/2)

APPROVED by PMU:
 Project Director
 Lot G.Zauya

CHECKED BY CONSULTANT:
 Project Manager
 T.Fuji

DATE: 1. Dec 2011

SCALE: 1/1000

DRAWING NO.: BP-50