

**National Water Commission
Jamaica**

**The Preparatory Survey
for
Kingston Sewerage Development Project**

Appendix

February 2010

JAPAN INTERNATIONAL COOPERATION AGENCY

NIPPON KOEI CO., LTD

KRI INTERNATIONAL CORPORATION

LAC

CR(10)

10-001

APPENDIX A
DRAWINGS

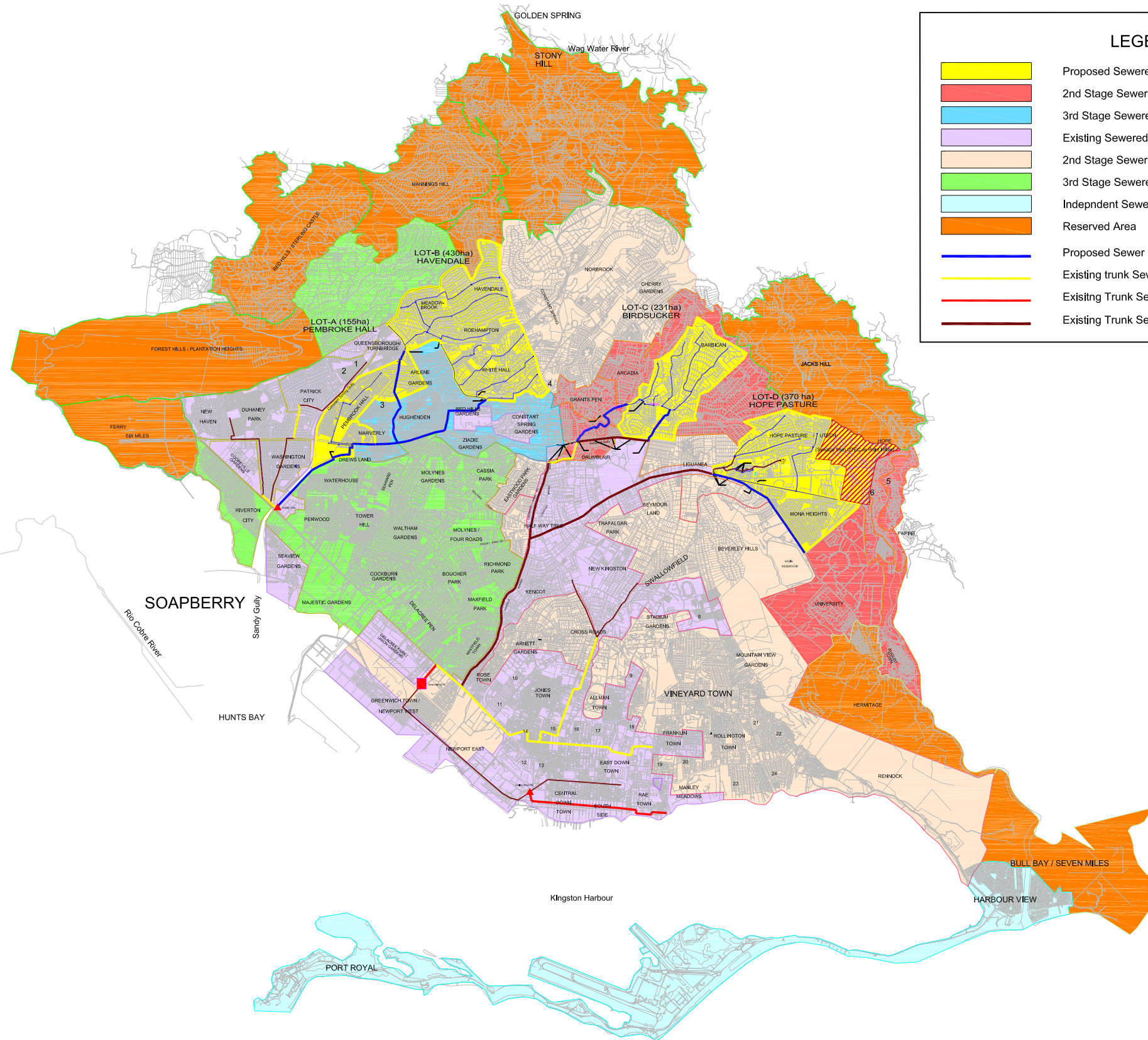
KSA SCHEME

LIST OF DRAWINGS (1/2)

NO.	DWG. NO.	TITLE	NO.	DWG. NO.	TITLE
1	GN.OSDP.01	PRELIMINARY DESIGN FOR KSA OVERALL SEWERAGE DEVELOPMENT PLAN	24	C.D2C.03	PRELIMINARY DESIGN FOR LOT-B TRUNK SEWER TB3, TB11 AND T 11-1 EST. 1k + 400 @ 1k + 703
2	GN.01	PRELIMINARY DESIGN FOR KSA GENERAL SEWERAGE LAYOUT PLAN	25	C.D2D.01	PRELIMINARY DESIGN FOR LOT-B TRUNK SEWER TB4, TB12 AND TB13-1 EST. 0k + 000 @ 0k + 700
3	GN.LA.01	PRELIMINARY DESIGN FOR KSA SEWERAGE DEVELOPMENT PLAN FOR LOT-A	26	C.D2D.02	PRELIMINARY DESIGN FOR LOT-B TRUNK SEWER TB4, TB12 AND TB13-1 EST. 0k + 700 @ 1k + 400
4	C.D1C.01	PRELIMINARY DESIGN FOR LOT-A TRUNK SEWER JNP3 AND TA4-1 EST. 0k + 000 @ 0k + 700	27	C.D2D.03	PRELIMINARY DESIGN FOR LOT-B TRUNK SEWER TB4, TB12 AND TB13-1 EST. 1k + 400 @ 1k + 726
5	C.D1C.02	PRELIMINARY DESIGN FOR LOT-A TRUNK SEWER JNP3 AND TA4-1 EST. 0k + 700 @ 1k + 400	28	C.D2E.01	PRELIMINARY DESIGN FOR LOT-B TRUNK SEWER TB5 EST. 0k + 000 @ 0k + 480
6	C.D1C.03	PRELIMINARY DESIGN FOR LOT-A TRUNK SEWER JNP3 AND TA4-1 EST. 1k + 400 @ 2k + 100	29	C.D2E.02	PRELIMINARY DESIGN FOR LOT-B TRUNK SEWER TB5 EST. 0k + 620 @ 0k + 700
7	C.D1C.04	PRELIMINARY DESIGN FOR LOT-A TRUNK SEWER JNP3 AND TA4-1 EST. 2k + 100 @ 2k + 800	30	C.D2F.01	PRELIMINARY DESIGN FOR LOT-B TRUNK SEWER TB6 EST. 0k + 000 @ 0k + 600
8	C.D1D.01	PRELIMINARY DESIGN TRUNK SEWER TA2, TA3 AND TA4, LOT-A EST. 0k + 000 @ 0k + 700	31	C.D2F.02	PRELIMINARY DESIGN FOR LOT-B TRUNK SEWER TB6 EST. 0k + 600 @ 1k + 180
9	C.D1D.02	PRELIMINARY DESIGN TRUNK SEWER TA2, TA3 AND TA4, LOT-A EST. 0k + 700 @ 1k + 400	32	C.D2F.03	PRELIMINARY DESIGN FOR LOT-B TRUNK SEWER TB6 EST. 1k + 180 @ 1k + 586
10	C.D1D.03	PRELIMINARY DESIGN TRUNK SEWER TA2, TA3 AND TA4, LOT-A EST. 1k + 400 @ 2k + 100	33	C.D2G.01	PRELIMINARY DESIGN FOR LOT-B TRUNK SEWER TB7 EST. 0k + 000 @ 0k + 700
11	C.D1B.01	PRELIMINARY DESIGN TRUNK SEWER TA5 AND TA6, LOT-A EST. 0k + 000 @ 0k + 440	34	C.D2G.02	PRELIMINARY DESIGN FOR LOT-B TRUNK SEWER TB7 EST. 0k + 700 @ 1k + 336
12	GN.LB.01	PRELIMINARY DESIGN FOR KSA SEWERAGE LAYOUT PLAN FOR LOT-B	35	C.P-S NOMB.01	PRELIMINARY DESIGN FOR LOT-B TRUNK SEWER TB7-1, TB7-2, TB9 AND TB10 EST. 0k + 000 @ 0k + 700
13	C.D1C.04	PRELIMINARY DESIGN FOR LOT-B TRUNK SEWER JNP3-B, TA1 AND TB13 EST. 2k + 100 @ 2k + 800	36	C.P-S NOMB.02	PRELIMINARY DESIGN FOR LOT-B TRUNK SEWER TB7-1, TB7-2, TB9 AND TB10 EST. 0k + 700 @ 1k + 400
14	C.D1C.05	PRELIMINARY DESIGN FOR LOT-B TRUNK SEWER JNP3-B, TA1 AND TB13 EST. 2k + 100 @ 3k + 500	37	C.P-S NOMB.03	PRELIMINARY DESIGN FOR LOT-B TRUNK SEWER TB7-1, TB7-2, TB9 AND TB10 EST. 1k + 400 @ 1k + 418
15	C.D1C.06	PRELIMINARY DESIGN FOR LOT-B TRUNK SEWER JNP3-B, TA1 AND TB13 EST. 3k + 500 @ 4k + 200	38	C.TD7.01	PRELIMINARY DESIGN FOR LOT-B TRUNK SEWER JNP3-C, JNP2 AND TB8 EST. 0k + 000 @ 0k + 700
16	C.D1C.07	PRELIMINARY DESIGN FOR LOT-B TRUNK SEWER JNP3-B, TA1 AND TB13 EST. 4k + 200 @ 4k + 900	39	C.TD7.02	PRELIMINARY DESIGN FOR LOT-B TRUNK SEWER JNP3-C, JNP2 AND TB8 EST. 0k + 700 @ 1k + 400
17	C.D1C.08	PRELIMINARY DESIGN FOR LOT-B TRUNK SEWER JNP3-B, TA1 AND TB13 EST. 4k + 900 @ 5k + 111	40	C.TD7.03	PRELIMINARY DESIGN FOR LOT-B TRUNK SEWER JNP3-C, JNP2 AND TB8 EST. 1k + 400 @ 2k + 100
18	CD2B.01	PRELIMINARY DESIGN FOR LOT-B TRUNK SEWER TB1, TB2 AND TB2-1 EST. 0k + 000 @ 0k + 700	41	C.TD7.04	PRELIMINARY DESIGN FOR LOT-B TRUNK SEWER JNP3-C, JNP2 AND TB8 EST. 2k + 100 @ 2k + 800
19	CD2B.02	PRELIMINARY DESIGN FOR LOT-B TRUNK SEWER TB1, TB2 AND TB2-1 EST. 0k + 700 @ 1k + 400	42	C.TD7.05	PRELIMINARY DESIGN FOR LOT-B TRUNK SEWER JNP3-C, JNP2 AND TB8 EST. 2k + 800 @ 3k + 183
20	CD2B.03	PRELIMINARY DESIGN FOR LOT-B TRUNK SEWER TB1, TB2 AND TB2-1 EST. 1k + 400 @ 2k + 100	43	GN.LC.01	PRELIMINARY DESIGN FOR KSA SEWERAGE LAYOUT PLAN FOR LOT-C
21	CD2B.04	PRELIMINARY DESIGN FOR LOT-B TRUNK SEWER TB1, TB2 AND TB2-1 EST. 2k + 100 @ 2k + 322	44	C.D3D.01	PRELIMINARY DESIGN FOR LOT-C TRUNK SEWER TC2 EST. 0k + 000 @ 0k + 700
22	C.D2C.01	PRELIMINARY DESIGN FOR LOT-B TRUNK SEWER TB3, TB11 AND T 11-1 EST. 0k + 000 @ 0k + 700	45	C.D3D.02	PRELIMINARY DESIGN FOR LOT-C TRUNK SEWER TC2 EST. 0k + 700 @ 1k + 363
23	C.D2C.02	PRELIMINARY DESIGN FOR LOT-B TRUNK SEWER TB3, TB11 AND T 11-1 EST. 0k + 700 @ 1k + 400	46	C.D3C.01	PRELIMINARY DESIGN FOR LOT-C TRUNK SEWER TC3 AND TC9 EST. 0k + 000 @ 0k + 700

LIST OF DRAWINGS (2/2)

NO.	DWG. NO.	TITLE	NO.	DWG. NO.	TITLE
47	C.D3C.02	PRELIMINARY DESIGN FOR LOT-C TRUNK SEWER TC3 AND TC9 EST. 0k + 700 @ 1k + 400	70	C.TB8.TD13.02	PRELIMINARY DESIGN FOR LOT-D TRUNK SEWER TD8 AND TD13 EST. 0k + 700 @ 1k + 400
48	C.D3C.03	PRELIMINARY DESIGN FOR LOT-C TRUNK SEWER TC3 AND TC9 EST. 1k + 400 @ 1k + 573	71	C.TB8.TD13.03	PRELIMINARY DESIGN FOR LOT-D TRUNK SEWER TD8 AND TD13 EST. 1k + 400 @ 1k + 892
49	C.D3E.01	PRELIMINARY DESIGN FOR LOT-C TRUNK SEWER TC1, TC11, TC10 AND TC14 EST. 0k + 000 @ 0k + 700	72	C.TD15.14.01	PRELIMINARY DESIGN FOR LOT-D TRUNK SEWER TD14, TD15 EST. 0k + 000 @ 0k + 700
50	C.D3E.02	PRELIMINARY DESIGN FOR LOT-C TRUNK SEWER TC1, TC11, TC10 AND TC14 EST. 0k + 700 @ 1k + 400	73	C.TD15.14.02	PRELIMINARY DESIGN FOR LOT-D TRUNK SEWER TD14, TD15 EST. 0k + 700 @ 1k + 332
51	C.D3E.03	PRELIMINARY DESIGN FOR LOT-C TRUNK SEWER TC1, TC11, TC10 AND TC14 EST. 1k + 400 @ 2k + 100	74	TSD-GEN	PRELIMINARY DESIGN TYPICAL SEWERAGE STRUCTURES MANHOLE, COVER AND BACKDROP
52	C.D3E.04	PRELIMINARY DESIGN FOR LOT-C TRUNK SEWER TC1, TC11, TC10 AND TC14 EST. 2k + 100 @ 2k + 288	75	TSS-GEN	PRELIMINARY DESIGN TYPICAL SEWERAGE STRUCTURES LATERAL, TRENCH
53	C.TC4.01	PRELIMINARY DESIGN FOR LOT-C TRUNK SEWER TC4 EST. 0k + 000 @ 0k + 700			
54	C.TC4.02	PRELIMINARY DESIGN FOR LOT-C TRUNK SEWER TC4 EST. 0k + 700 @ 0k + 775			
55	C.D3B.01	PRELIMINARY DESIGN FOR LOT-C TRUNK SEWER TC5 EST. 0k + 000 @ 0k + 490			
56	C.M25-C.01	PRELIMINARY DESIGN FOR LOT-C TRUNK SEWER TC6, TC7, AND M25-C EST. 0k + 000 @ 0k + 700			
57	C.M25-C.02	PRELIMINARY DESIGN FOR LOT-C TRUNK SEWER TC6, TC7, AND M25-C EST. 0k + 700 @ 1k + 400			
58	C.M25-C.03	PRELIMINARY DESIGN FOR LOT-C TRUNK SEWER TC6, TC7, AND M25-C EST. 1k + 400 @ 1k + 700			
59	GN.LD.01	PRELIMINARY DESIGN FOR KSA SEWERAGE LAYOUT PLAN FOR LOT-D			
60	C.D4A.01	PRELIMINARY DESIGN FOR LOT-D TRUNK SEWER TD1 EST. 0k + 000 @ 0k + 700			
61	C.D4A.02	PRELIMINARY DESIGN FOR LOT-D TRUNK SEWER TD1 EST. 0k + 700 @ 1k + 200			
62	C.D4B.01	PRELIMINARY DESIGN FOR LOT-D TRUNK SEWER TD2 EST. 0k + 000 @ 0k + 700			
63	C.D4B.02	PRELIMINARY DESIGN FOR LOT-D TRUNK SEWER TD2 EST. 0k + 700 @ 1k + 219			
64	C.TD5.01	PRELIMINARY DESIGN FOR LOT-D TRUNK SEWER TD5 EST. 0k + 000 @ 0k + 350			
65	C.TD6,9,10,11.01	PRELIMINARY DESIGN FOR LOT-D TRUNK SEWER TD6, TD9, TD10, TD11 AND TD12 EST. 0k + 000 @ 0k + 700			
66	C.TD6,9,10,11.02	PRELIMINARY DESIGN FOR LOT-D TRUNK SEWER TD6, TD9, TD10, TD11 AND TD12 EST. 0k + 700 @ 1k + 400			
67	C.TD6,9,10,11.03	PRELIMINARY DESIGN FOR LOT-D TRUNK SEWER TD6, TD9, TD10, TD11 AND TD12 EST. 1k + 400 @ 2k + 100			
68	C.TD6,9,10,11.04	PRELIMINARY DESIGN FOR LOT-D TRUNK SEWER TD6, TD9, TD10, TD11 AND TD12 EST. 2k + 100 @ 2k + 270			
69	C.TB8.TD13.01	PRELIMINARY DESIGN FOR LOT-D TRUNK SEWER TD8 AND TD13 EST. 0k + 000 @ 0k + 700			



LEGEND

	Proposed Sewered Area (2015)
	2nd Stage Sewered Area connected to Project Sewer (2020)
	3rd Stage Sewered Area connected to Project Sewer (2025)
	Existing Sewered Area
	2nd Stage Sewered Area (2020)
	3rd Stage Sewered Area (2025)
	Independent Sewerage Scheme Area
	Reserved Area
	Proposed Sewer Line (2015)
	Existing trunk Sewer to be improved by 2020
	Existing Trunk Sewer to be improved by 2030
	Existing Trunk Sewer



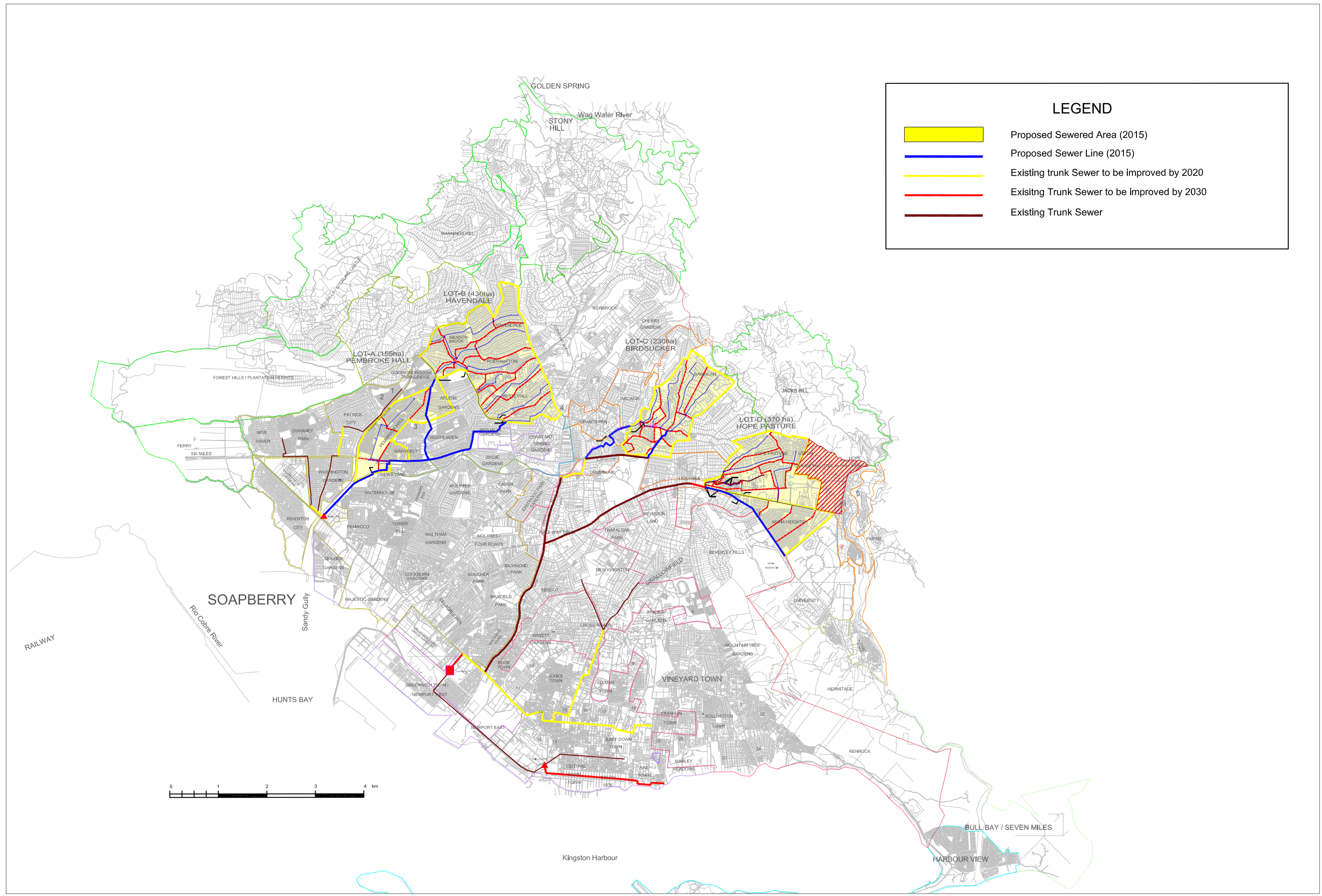
DESIGNED:	
DRAWN:	Eaton Wright
REVIEWED:	
ENGINEER:	
NO.	DATE
	ISSUED FOR

NIPPON KOEI
Challenging mind, Changing dynamics

SCALE	CONTRACT:
HOR:	
VERT:	LOAN ID:
	PROJECT:
	JA09Q1009/09-069

PREPARATORY SURVEY FOR KINGSTON SEWERAGE DEVELOPMENT PROJECT
PRELIMINARY DESIGN FOR KSA OVERALL SEWERAGE DEVELOPMENT PLAN

DATE:	
SHT:	1 OF 1
DWG:	GN.OSDP.01



NO.	DATE	ISSUED FOR

DESIGNED: _____
 DRAWN: Eaton Wright
 REVIEWED: _____
 ENGINEER: _____



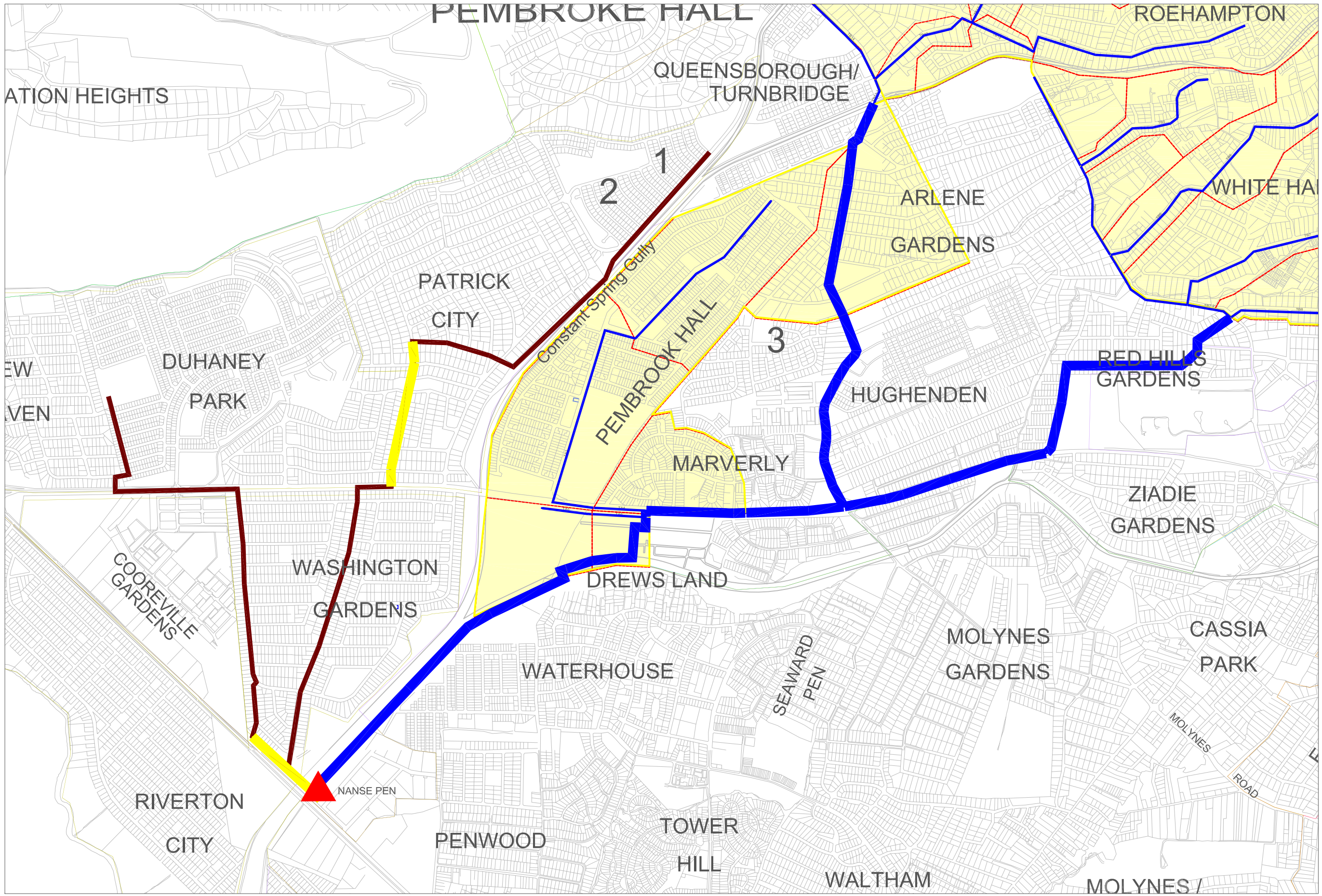
SCALE: _____
 HOR: _____
 VERT: _____
 CONTRACT: _____
 LOAN ID: _____
 PROJECT: JA09Q1009/09-069



PREPARATORY SURVEY FOR KINGSTON SEWERAGE DEVELOPMENT PROJECT
 PRELIMINARY DESIGN FOR KSA
 GENERAL SEWERAGE LAYOUT PLAN

DATE: _____
 SHT: 1 OF 1
 DWG: GN. 01

LOT - A
(PEMBORKE HALL)



NO.	DATE	ISSUED FOR

DESIGNED: _____
 DRAWN: Eaton Wright
 REVIEWED: _____
 ENGINEER: _____



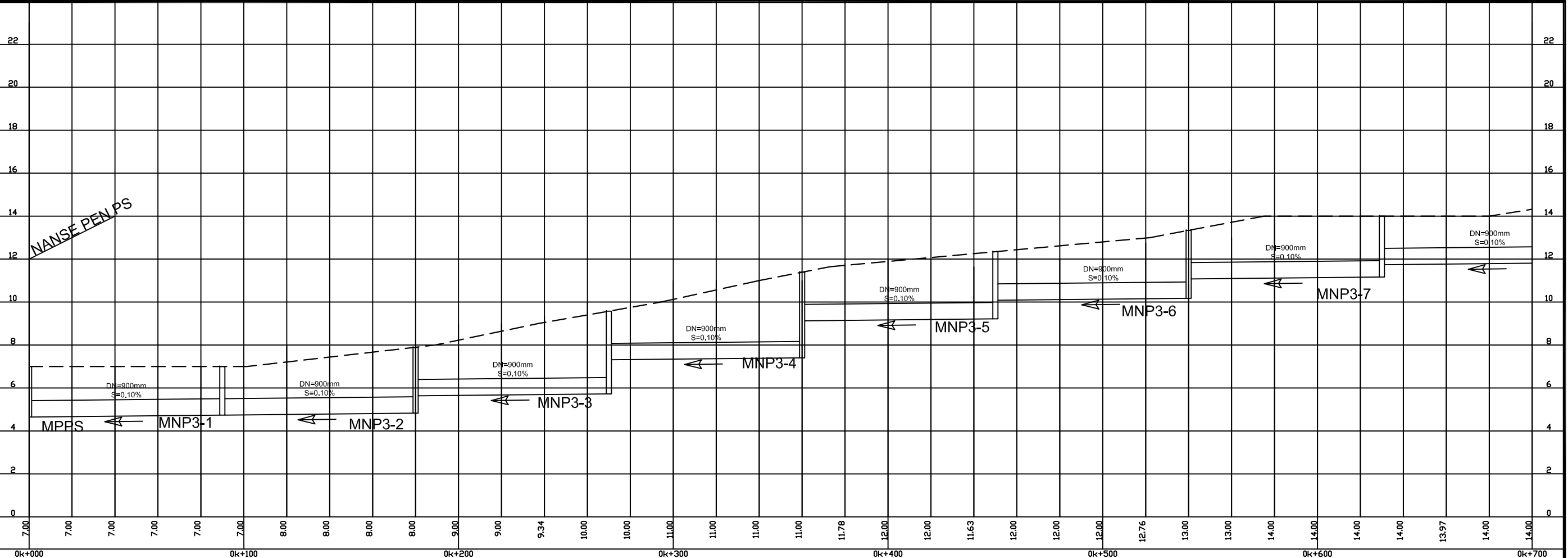
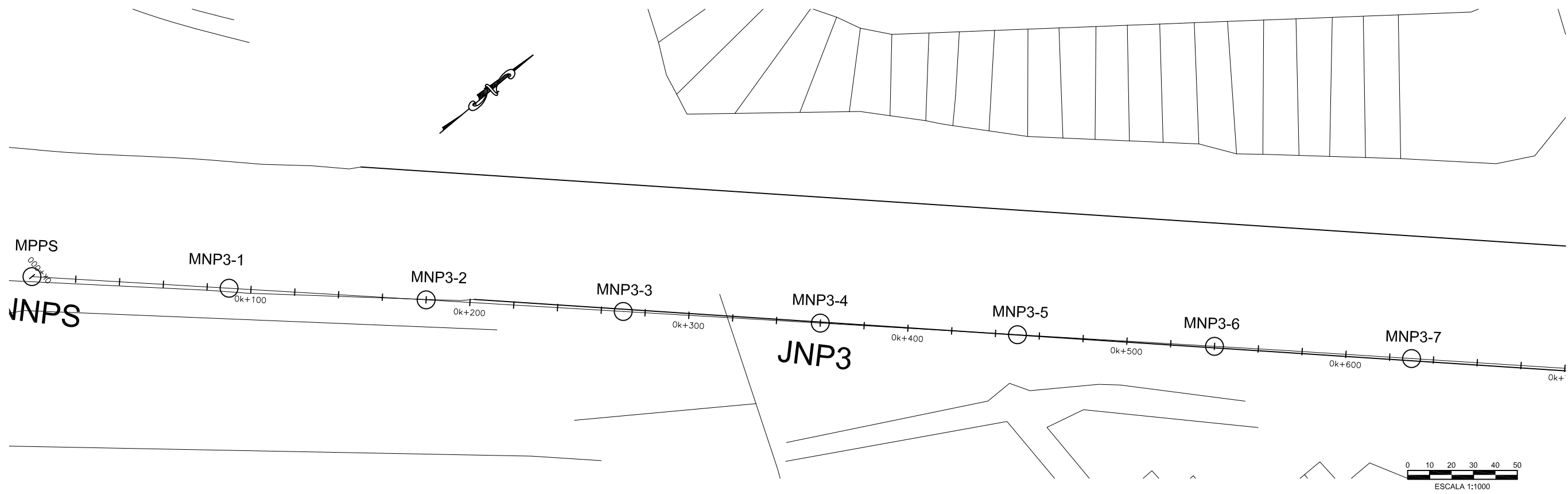
SCALE: _____
 HOR: _____
 VERT: _____

CONTRACT: _____
 LOAN ID: _____
 PROJECT: JA09Q1009/09-069



PREPARATORY SURVEY FOR KINGSTON SEWERAGE DEVELOPMENT PROJECT
 PRELIMINARY DESIGN FOR KSA
 SEWERAGE LAYOUT PLAN FOR LOT-A

DATE: _____
 SHT: 1 OF 1
 DWG: GN.LA.01



DESIGNED:	
DRAWN:	
REVIEWED:	
ENGINEER:	
NO.	DATE
	ISSUED FOR



SCALE
HOR: 1000
VERT: 100

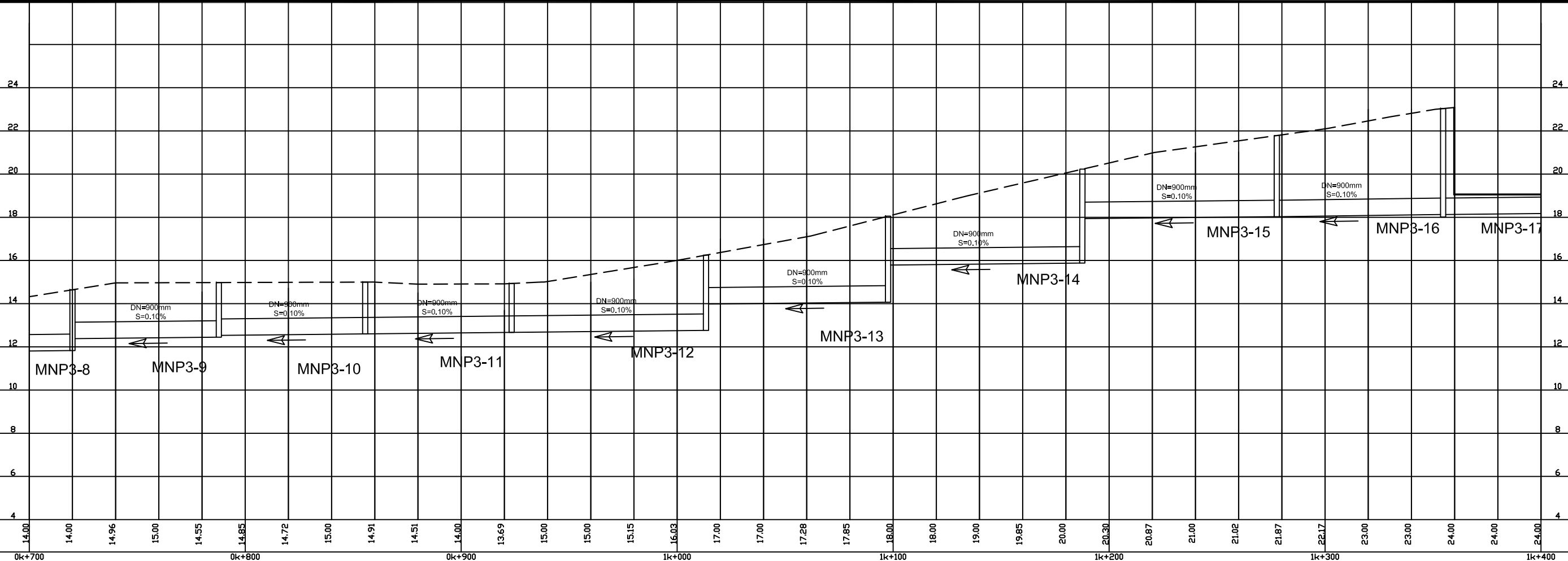
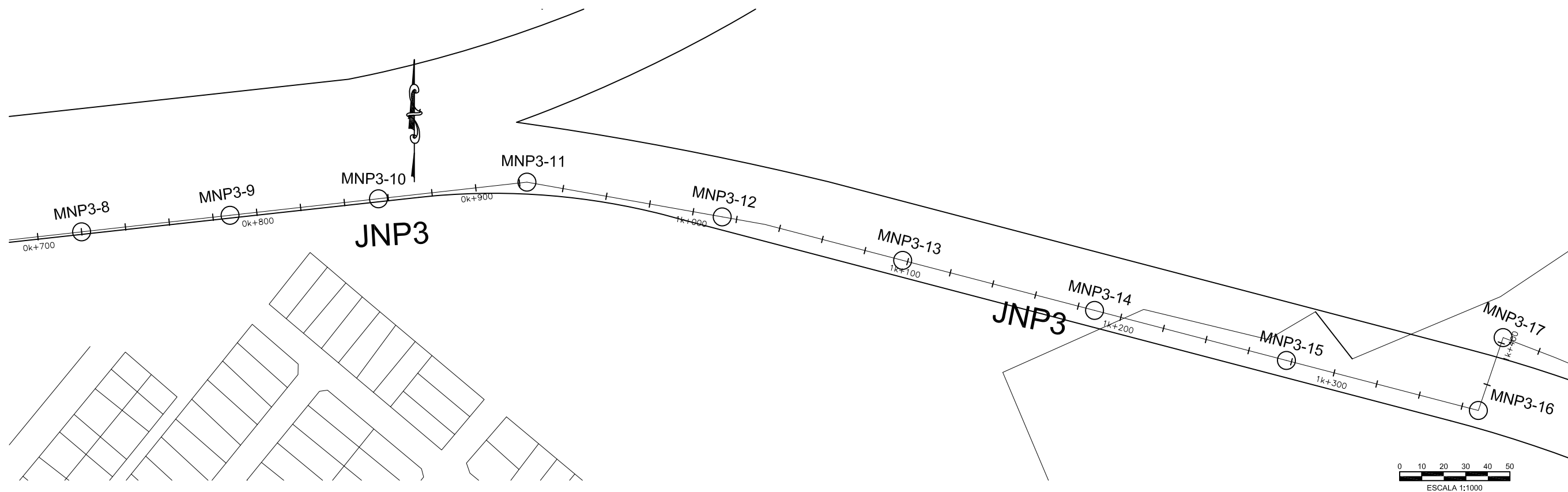
CONTRACT: _____
LOAN ID: _____
PROJECT: JA09Q1009/09-069



PREPARATORY SURVEY FOR
KINGSTON SEWERAGE DEVELOPMENT PROJECT

PRELIMINARY DESIGN FOR LOT-A
TRUNK SEWER JNP3 AND TA4-1
EST. 0k + 000 @ 0k + 700

DATE: _____
SHT: 1 OF 4
DWG: C.D1C.01



DESIGNED:	
DRAWN:	
REVIEWED:	
ENGINEER:	
NO.	DATE
	ISSUED FOR



SCALE
HOR: 1000
VERT: 100

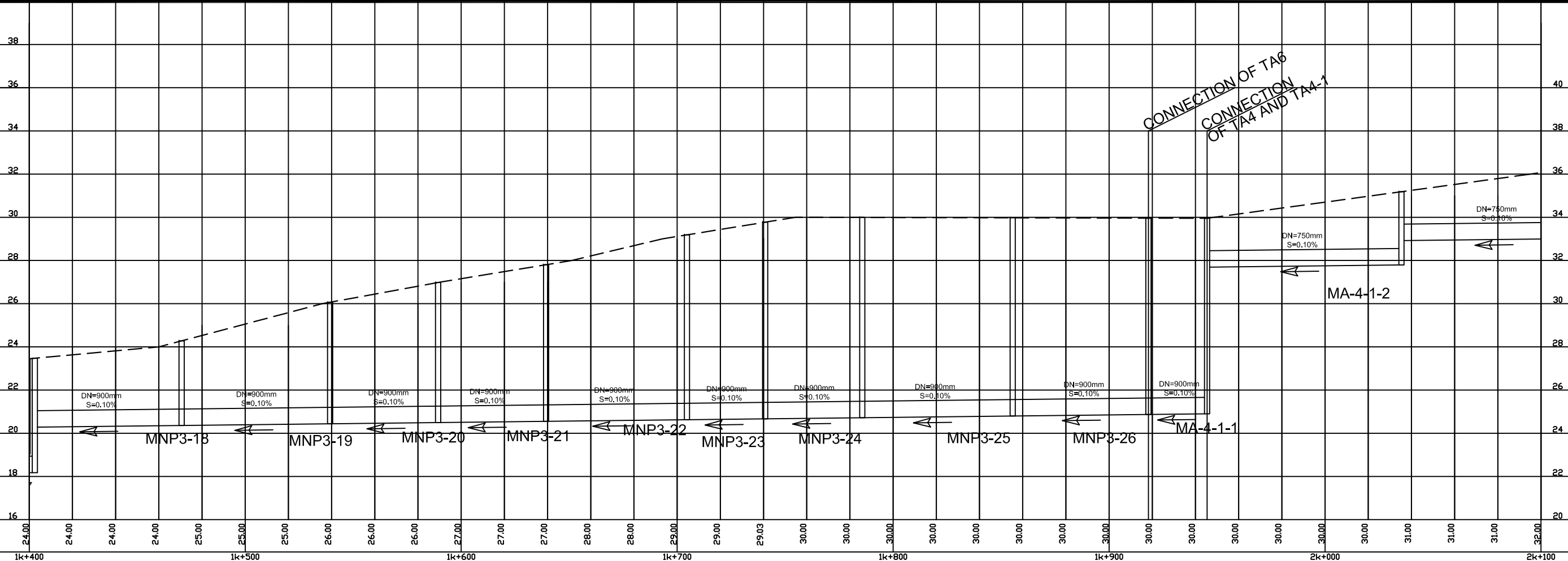
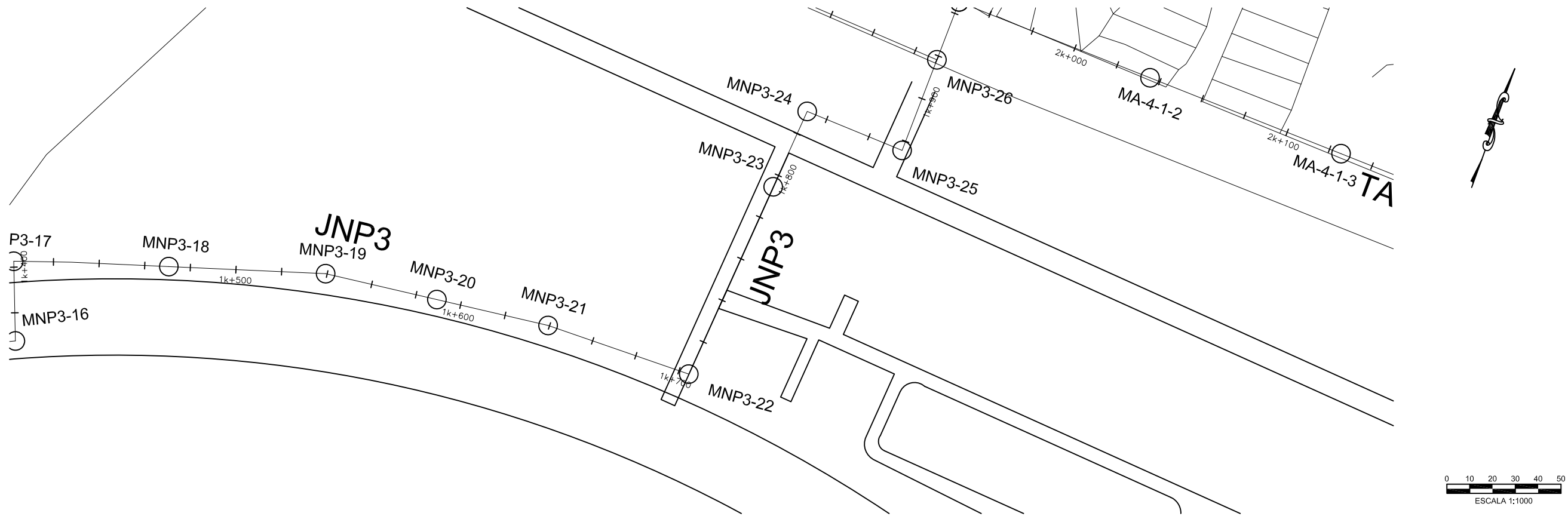
CONTRACT:
LOAN ID:
PROJECT: JA09Q1009/09-069



PREPARATORY SURVEY FOR
KINGSTON SEWERAGE DEVELOPMENT PROJECT

PRELIMINARY DESIGN FOR LOT-A
TRUNK SEWER JNP3 AND TA4-1
EST. 0k + 700 @ 1k + 400

DATE: _____
SHT: 2 OF 4
DWG: C.D1C.02

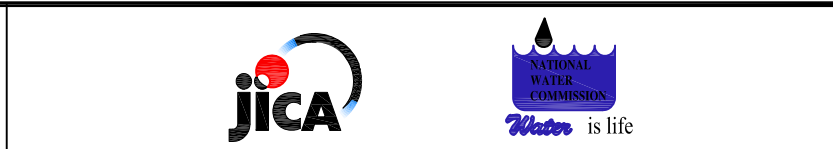


DESIGNED:	
DRAWN:	
REVIEWED:	
ENGINEER:	
NO.	DATE
	ISSUED FOR



SCALE
HOR: 1000
VERT: 100

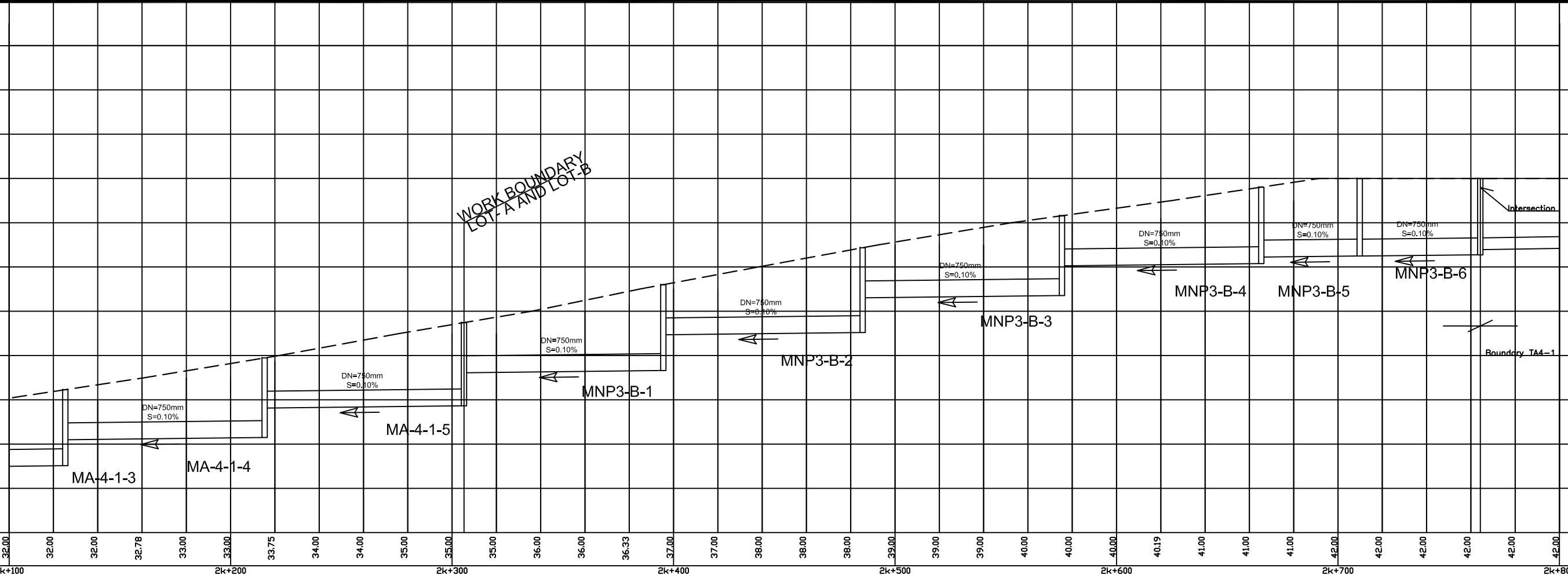
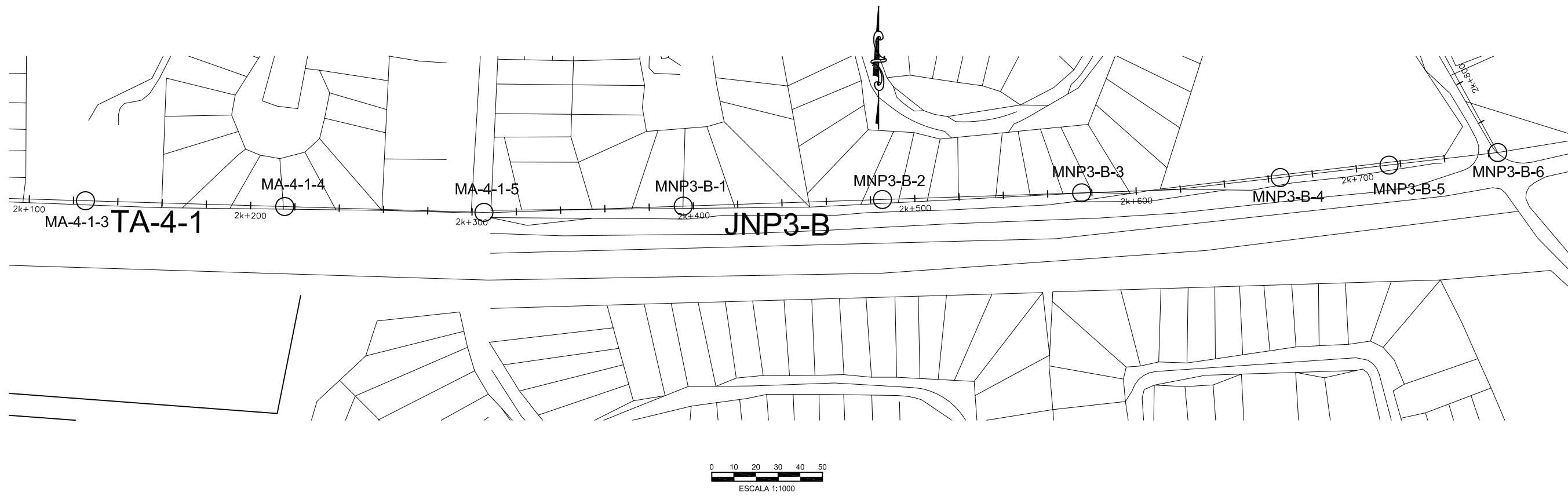
CONTRACT: _____
LOAN ID: _____
PROJECT: JA09Q1009/09-069



PREPARATORY SURVEY FOR KINGSTON SEWERAGE DEVELOPMENT PROJECT

PRELIMINARY DESIGN FOR LOT-A
TRUNK SEWER JNP3 AND TA4-1
EST. 1k + 400 @ 2k + 100

DATE: _____
SHT: 3 OF 4
DWG: C.D1C.03



DESIGNED:	
DRAWN:	
REVIEWED:	
ENGINEER:	
NO.	DATE
	ISSUED FOR



SCALE
HOR: 1000
VERT: 100

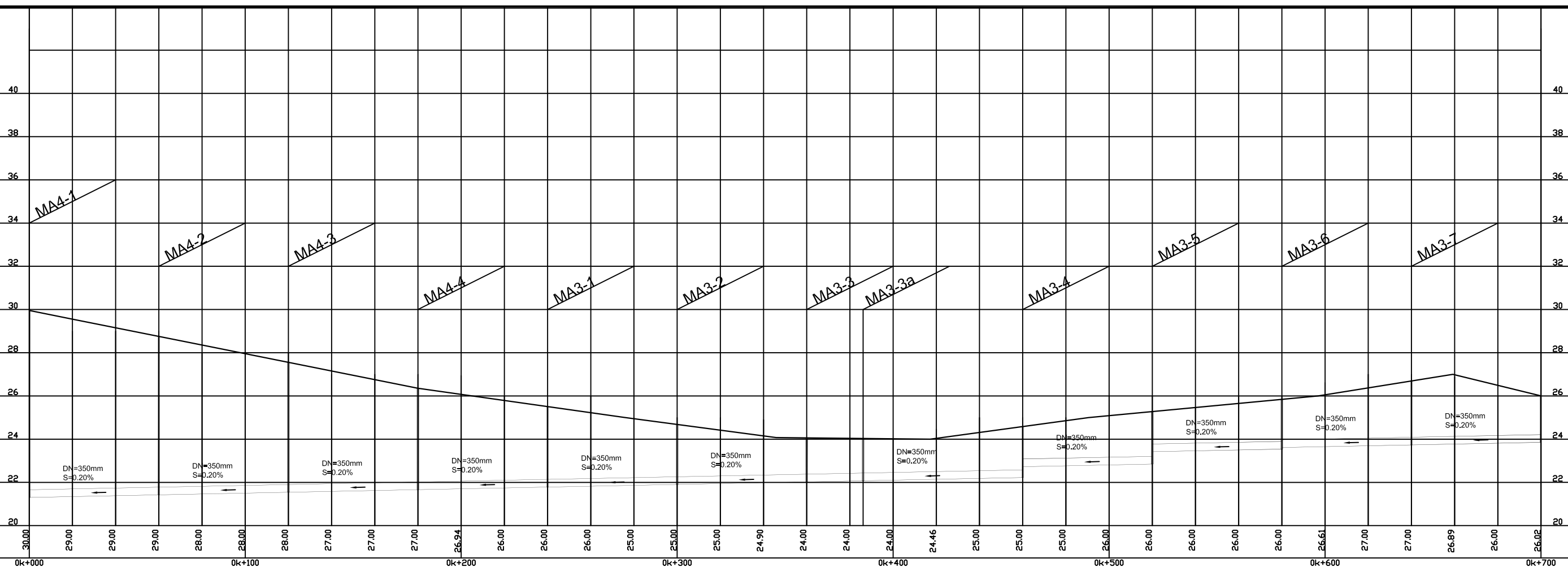
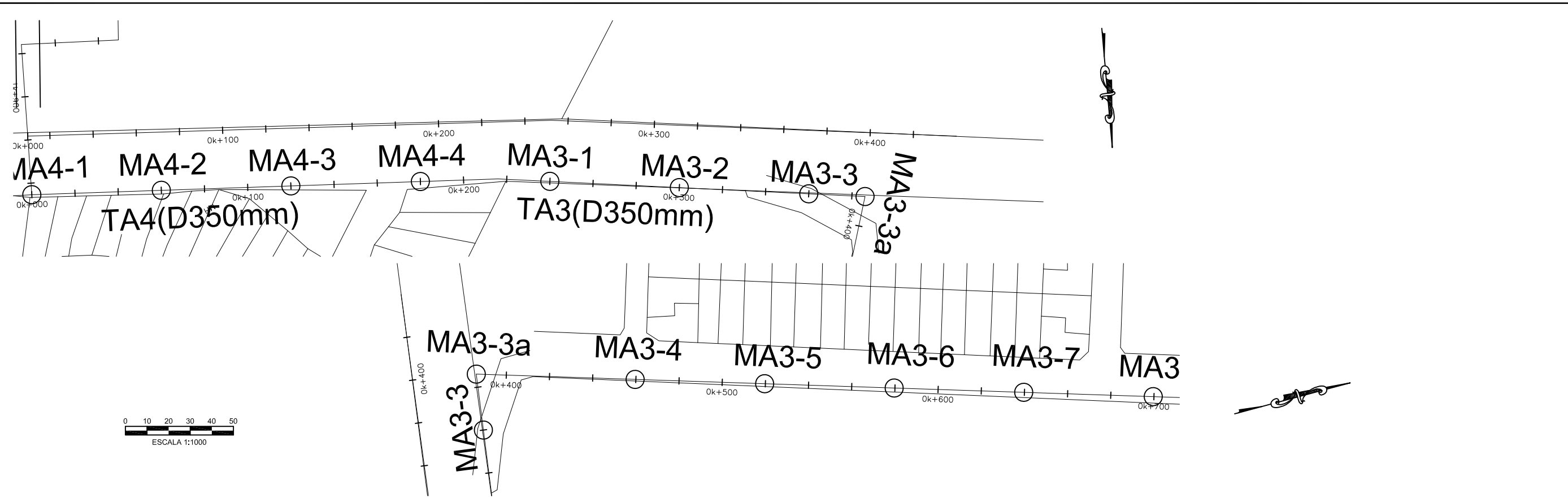
CONTRACT: _____
LOAN ID: _____
PROJECT: JA09Q1009/09-069



PREPARATORY SURVEY FOR KINGSTON SEWERAGE DEVELOPMENT PROJECT

PRELIMINARY DESIGN FOR LOT-A
TRUNK SEWER JNP3 AND TA4-1
EST. 2k + 100 @ 2k + 800

DATE: _____
SHT: 4 OF 4
DWG: C.D1C.04



DESIGNED:	
DRAWN:	
REVIEWED:	
ENGINEER:	
NO.	DATE
	ISSUED FOR



SCALE
HOR: 1000
VERT: 100

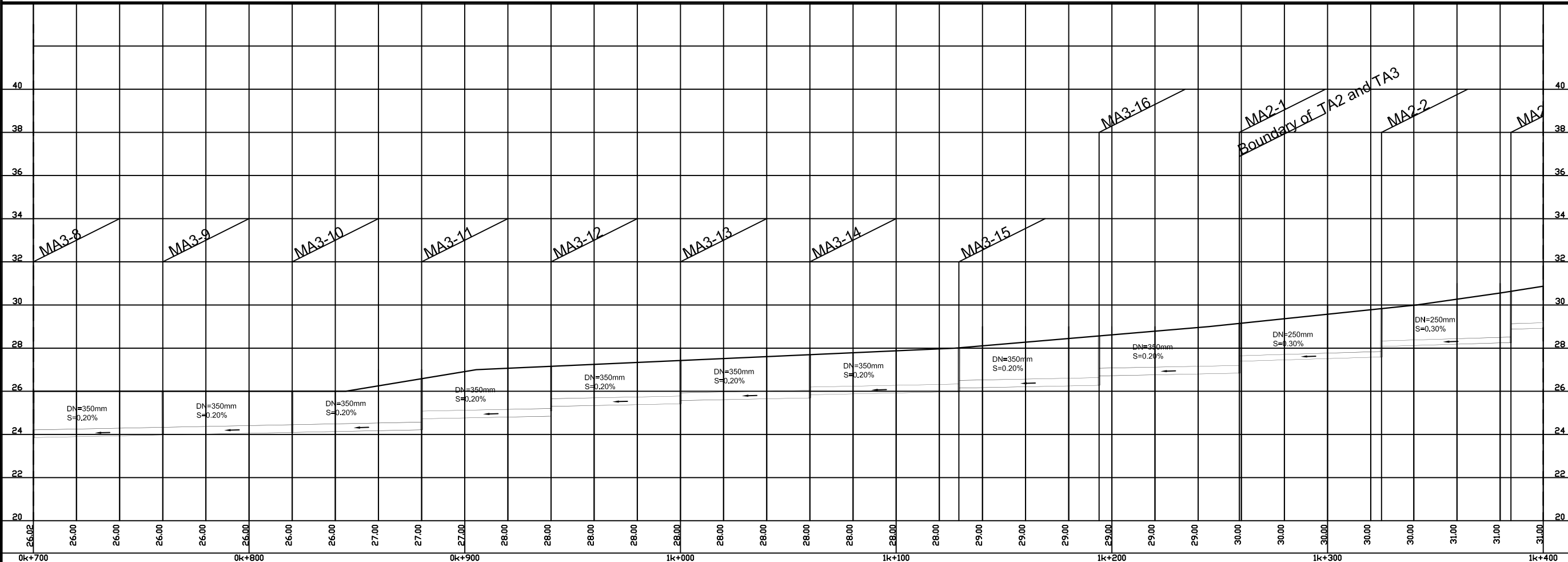
CONTRACT: _____
LOAN ID: _____
PROJECT: JA09Q1009/09-069



PREPARATORY SURVEY FOR
KINGSTON SEWERAGE DEVELOPMENT PROJECT

PRELIMINARY DESIGN FOR LOT-A
TRUNK SEWER TA2, TA3 AND TA4
EST. 0k + 000 @ 0k + 700

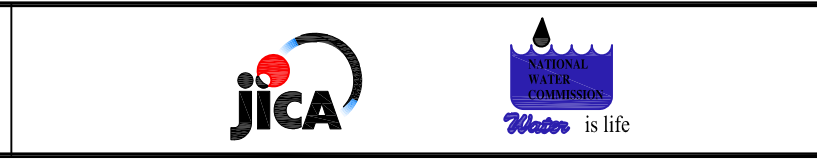
DATE: _____
SHT: 1 OF 3
DWG: C.D1D.01



DESIGNED:	
DRAWN:	
REVIEWED:	
ENGINEER:	
NO.	DATE
	ISSUED FOR

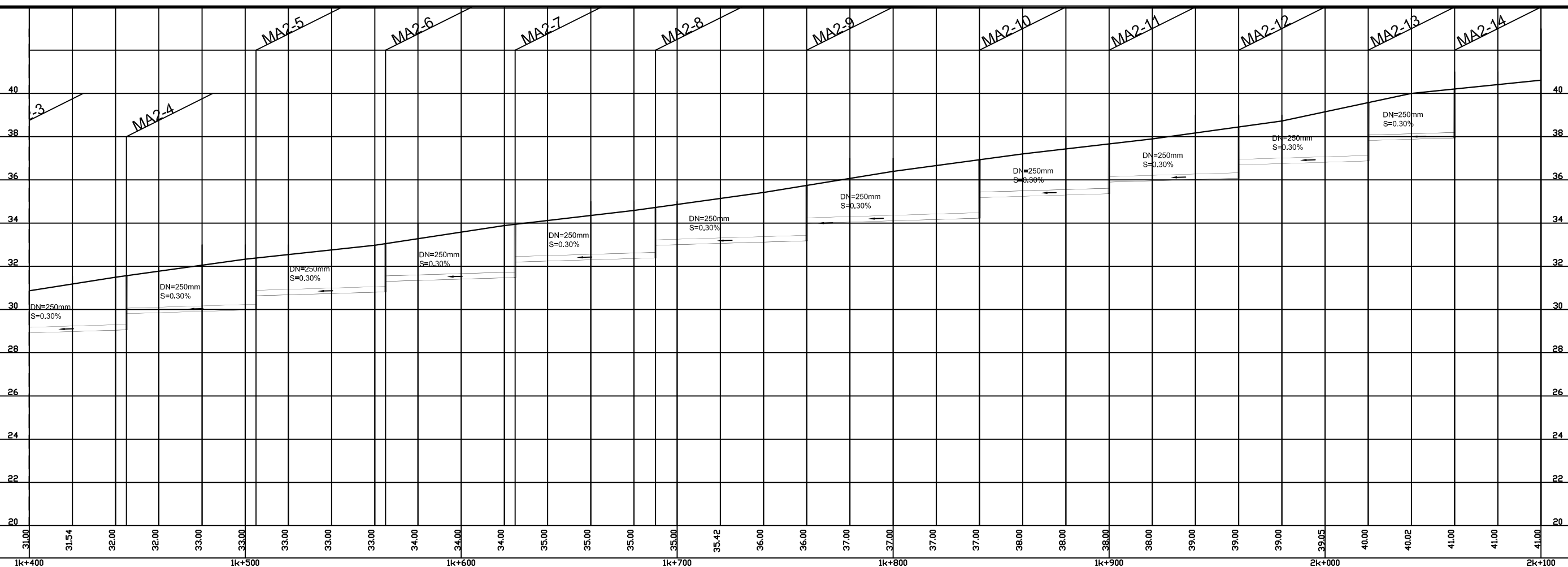
NIPPON KOEI
Challenging mind, Changing dynamics

SCALE: HOR: 1000, VERT: 100
CONTRACT: _____
LOAN ID: _____
PROJECT: JA09Q1009/09-069



PREPARATORY SURVEY FOR KINGSTON SEWERAGE DEVELOPMENT PROJECT
PRELIMINARY DESIGN FOR LOT-A
TRUNK SEWER TA2, TA3 AND TA4
EST. 0k + 700 @ 1k + 400

DATE: _____
SHT: 2 OF 3
DWG: C.D1D.02



DESIGNED:	
DRAWN:	
REVIEWED:	
ENGINEER:	
NO.	DATE
	ISSUED FOR



SCALE
HOR: 1000
VERT: 100

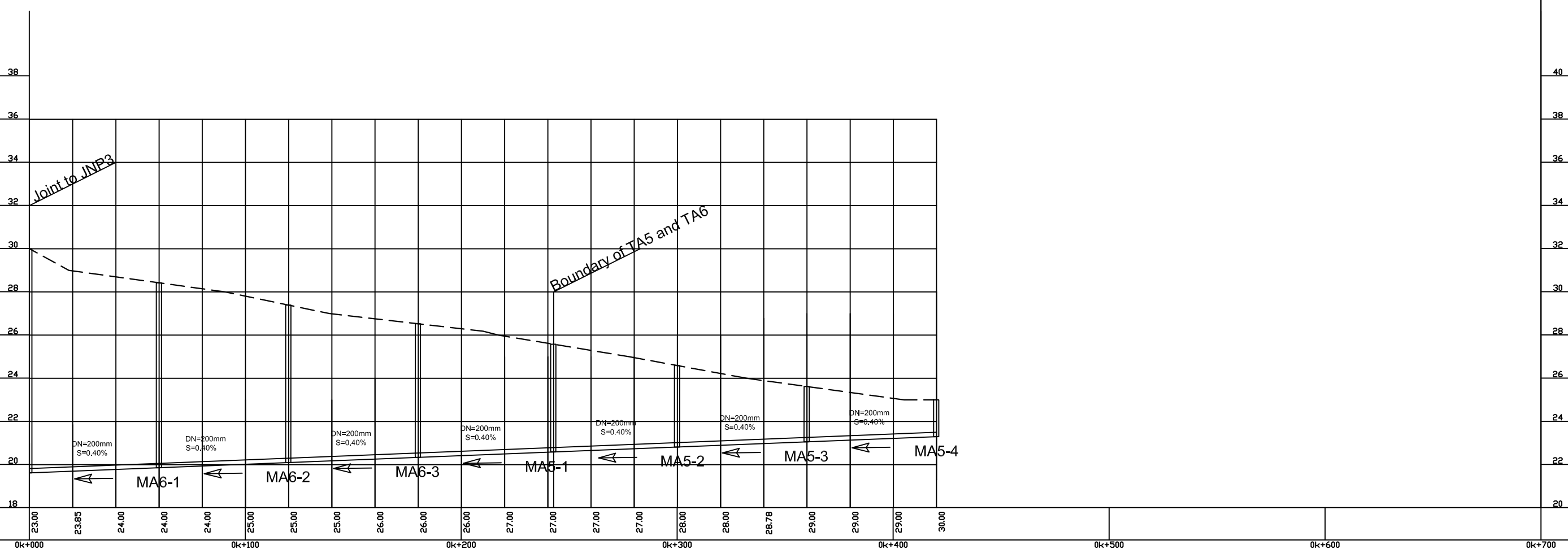
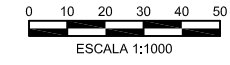
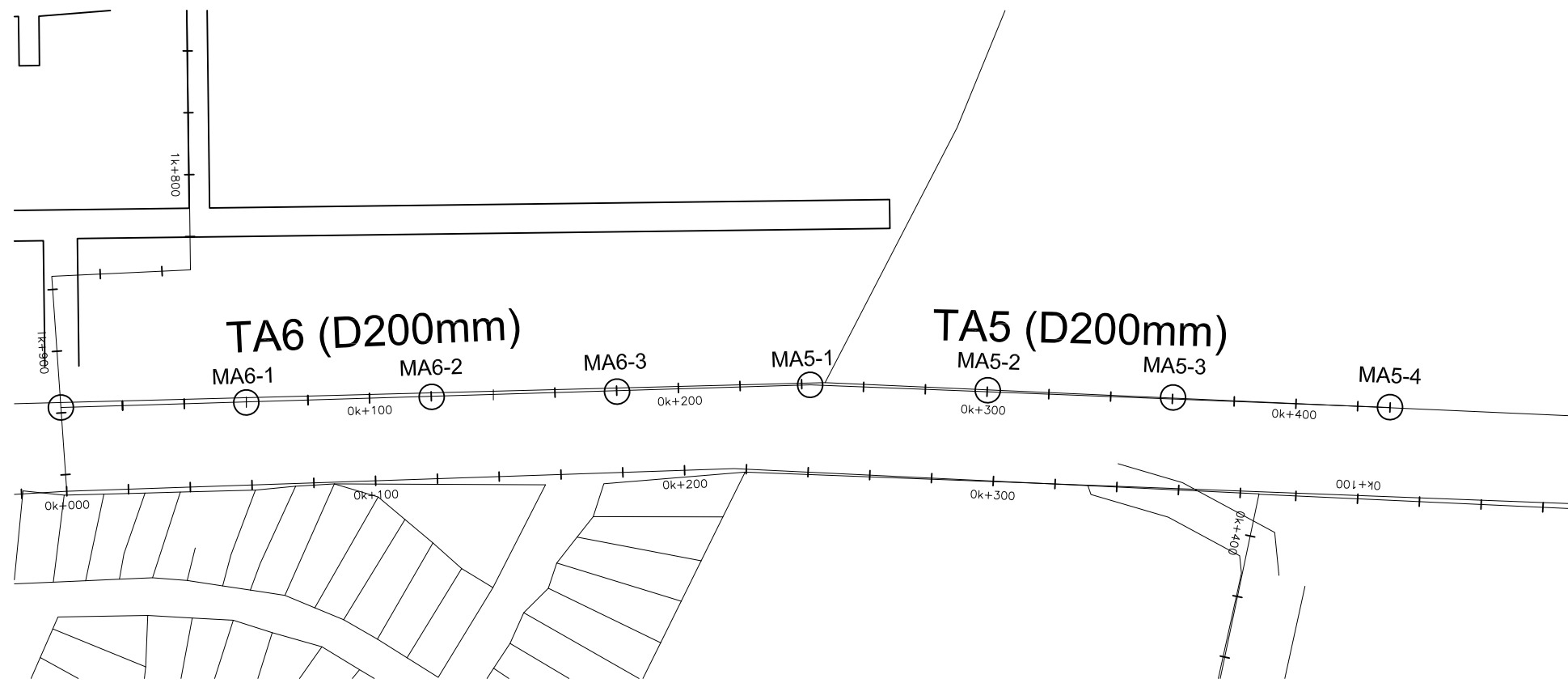
CONTRACT: _____
LOAN ID: _____
PROJECT: JA09Q1009/09-069



PREPARATORY SURVEY FOR
KINGSTON SEWERAGE DEVELOPMENT PROJECT

PRELIMINARY DESIGN FOR LOT-A
TRUNK SEWER TA2, TA3 AND TA4
EST. 1k + 400 @ 2k + 100

DATE: _____
SHT: 3 OF 3
DWG: C.D1D.03



NO.	DATE	ISSUED FOR

DESIGNED: _____
 DRAWN: _____
 REVIEWED: _____
 ENGINEER: _____



SCALE
HOR: _____
VERT: _____

CONTRACT: _____
 LOAN ID: _____
 PROJECT: JA09Q1009/09-069

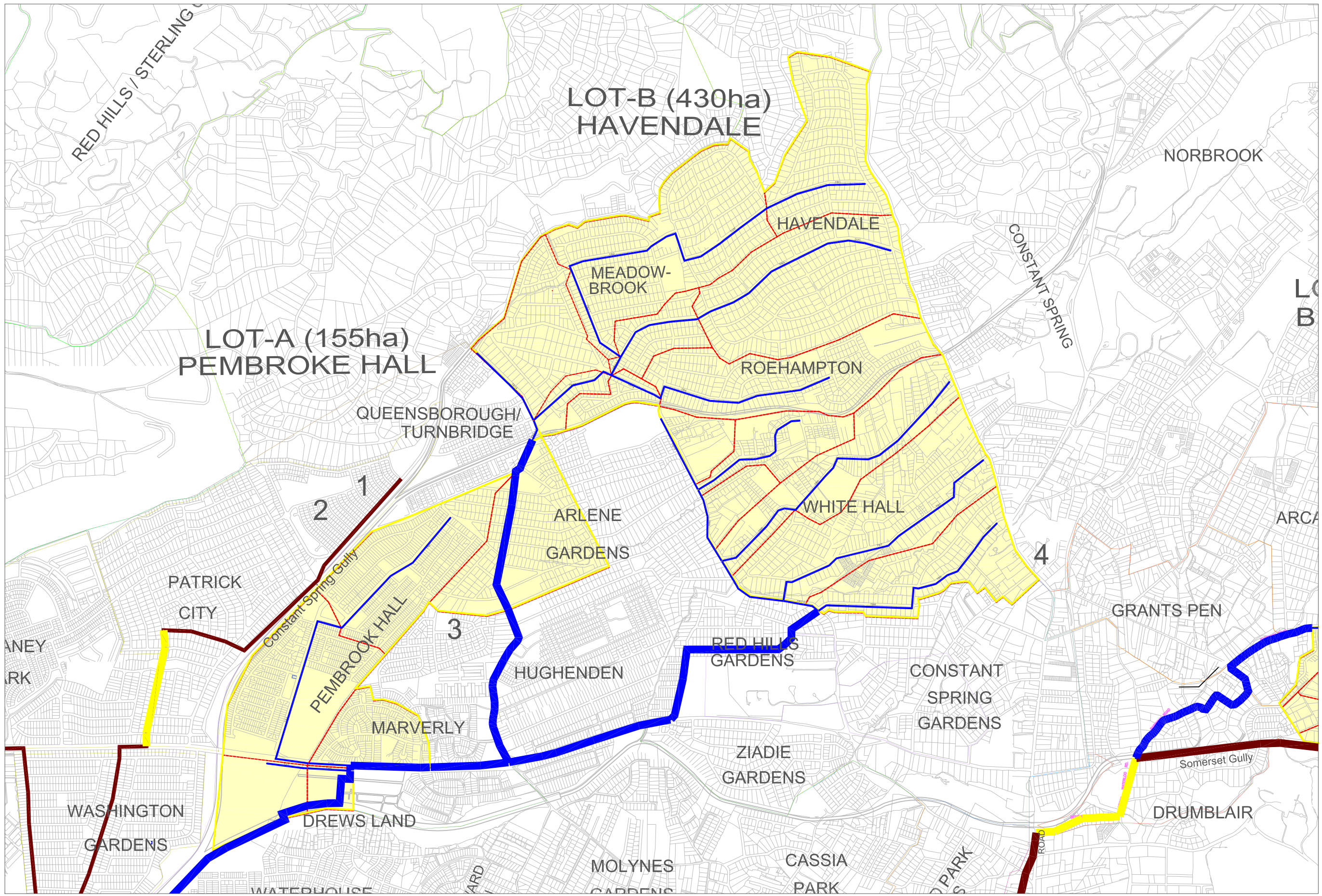


PREPARATORY SURVEY FOR
KINGSTON SEWERAGE DEVELOPMENT PROJECT

PRELIMINARY DESIGN FOR LOT-A
TRUNK SEWER TA5 AND TA6
EST. 0k + 000 @ 0k + 440

DATE: _____
 SHT: 1 OF 1
 DWG: C.D1B.01

LOT - B
(HAVENDALE)



NO.	DATE	ISSUED FOR

DESIGNED: _____
 DRAWN: Eaton Wright
 REVIEWED: _____
 ENGINEER: _____



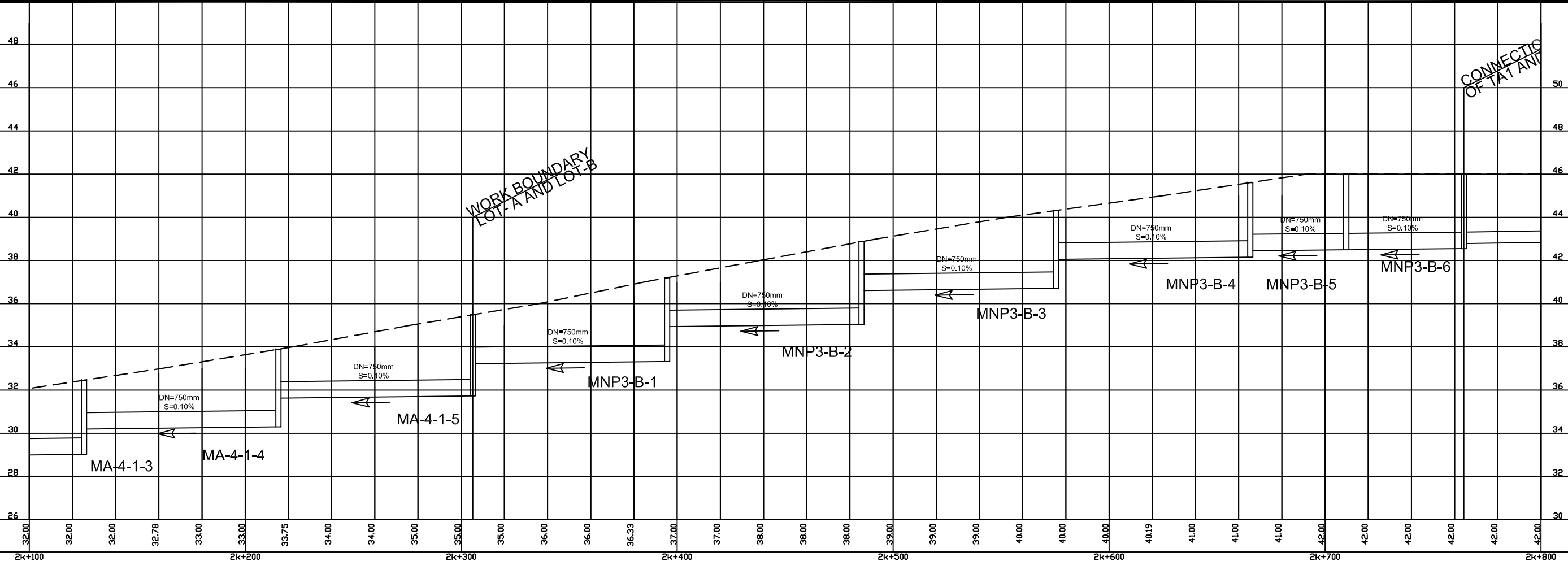
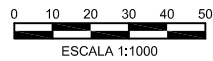
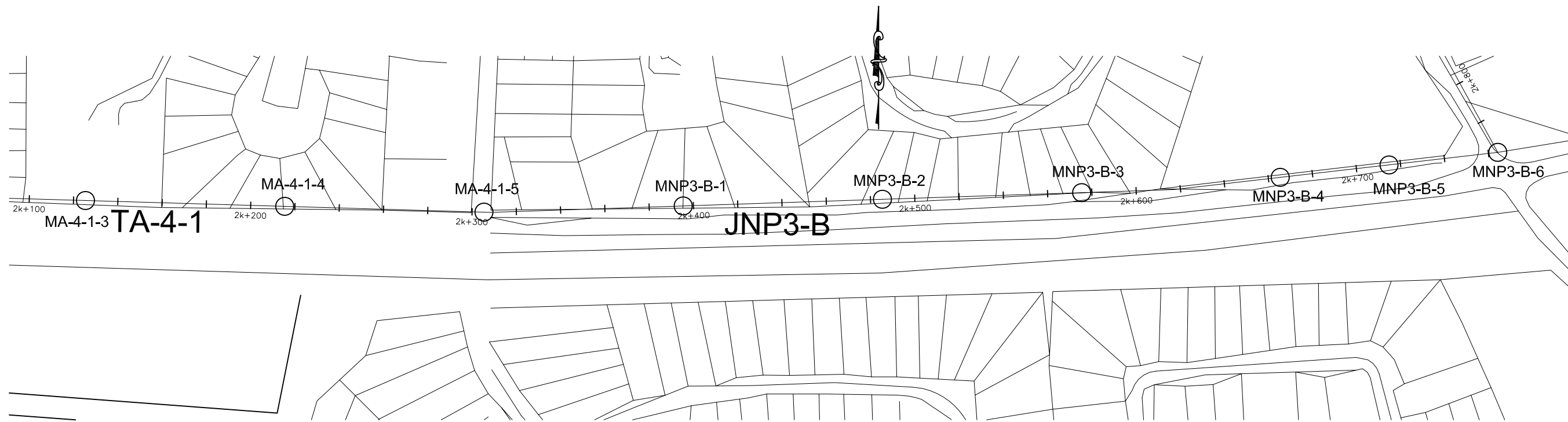
SCALE: _____
 HOR: _____
 VERT: _____

CONTRACT: _____
 LOAN ID: _____
 PROJECT: JA09Q1009/09-069



PREPARATORY SURVEY FOR KINGSTON SEWERAGE DEVELOPMENT PROJECT
 PRELIMINARY DESIGN FOR KSA
 SEWERAGE LAYOUT PLAN FOR LOT-B

DATE: _____
 SHT: 1 OF 1
 DWG: GN.LB.01



NO.	DATE	ISSUED FOR

DESIGNED:	
DRAWN:	
REVIEWED:	
ENGINEER:	

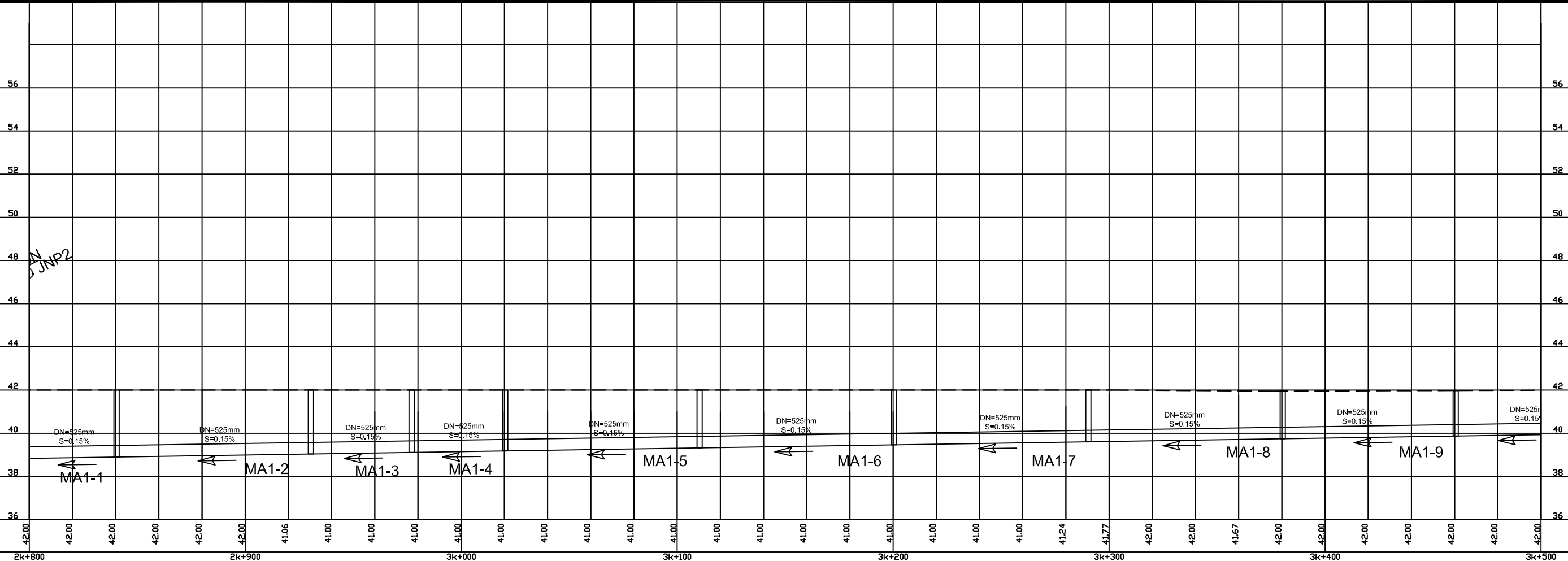


SCALE	CONTRACT:
HOR: 1000	
VERT: 100	LOAN ID:
	PROJECT: JA09Q1009/09-069



PREPARATORY SURVEY FOR KINGSTON SEWERAGE DEVELOPMENT PROJECT
 PRELIMINARY DESIGN FOR LOT-B
 TRUNK SEWER JNP3-B, TA1 AND TB13
 EST. 2k + 100 @ 2k + 800

DATE:	
SHT:	1 OF 5
DWG:	C.D1C.04



DESIGNED:	
DRAWN:	
REVIEWED:	
ENGINEER:	
NO.	DATE
	ISSUED FOR



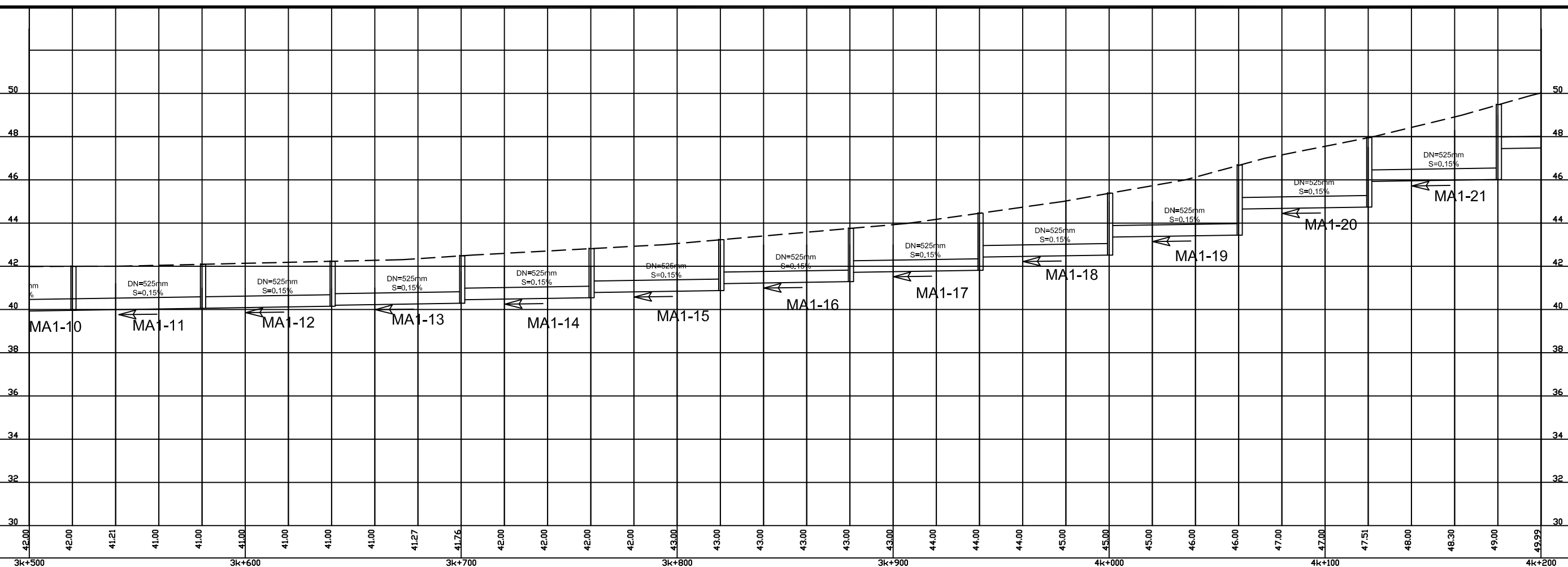
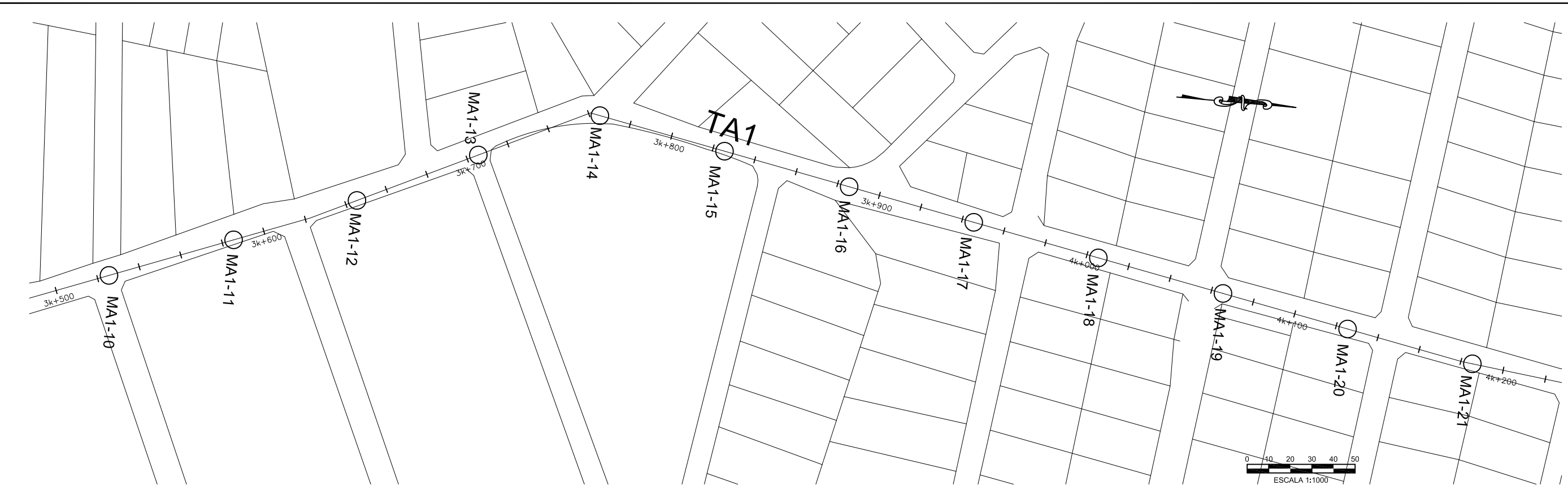
SCALE
HOR: 1000
VERT: 100

CONTRACT:
LOAN ID:
PROJECT:
JA09Q1009/09-069



PREPARATORY SURVEY FOR
KINGSTON SEWERAGE DEVELOPMENT PROJECT
PRELIMINARY DESIGN FOR LOT-B
TRUNK SEWER JNP3-B, TA1 AND TB13
EST. 2k + 800 @ 3k + 500

DATE:
SHT: 2 OF 5
DWG: C.D1C.05

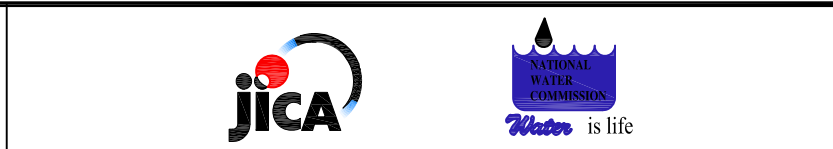


DESIGNED:	
DRAWN:	
REVIEWED:	
ENGINEER:	
NO.	DATE
	ISSUED FOR



SCALE
HOR: 1000
VERT: 100

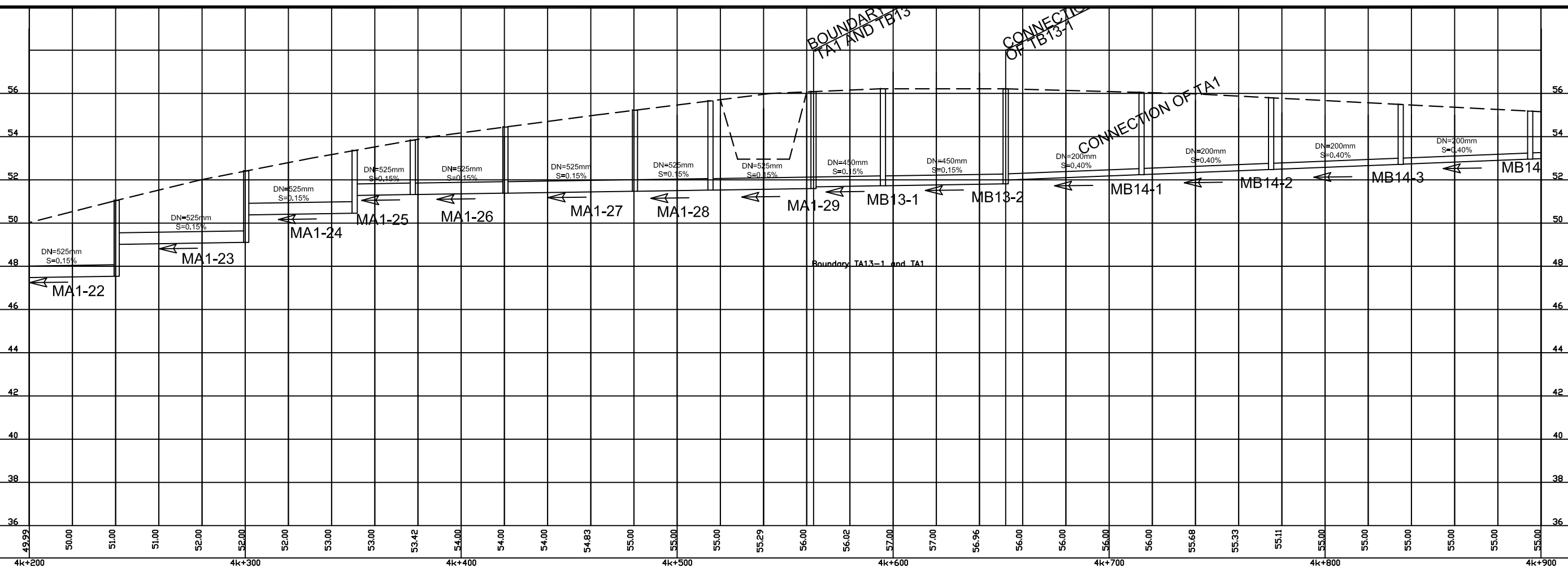
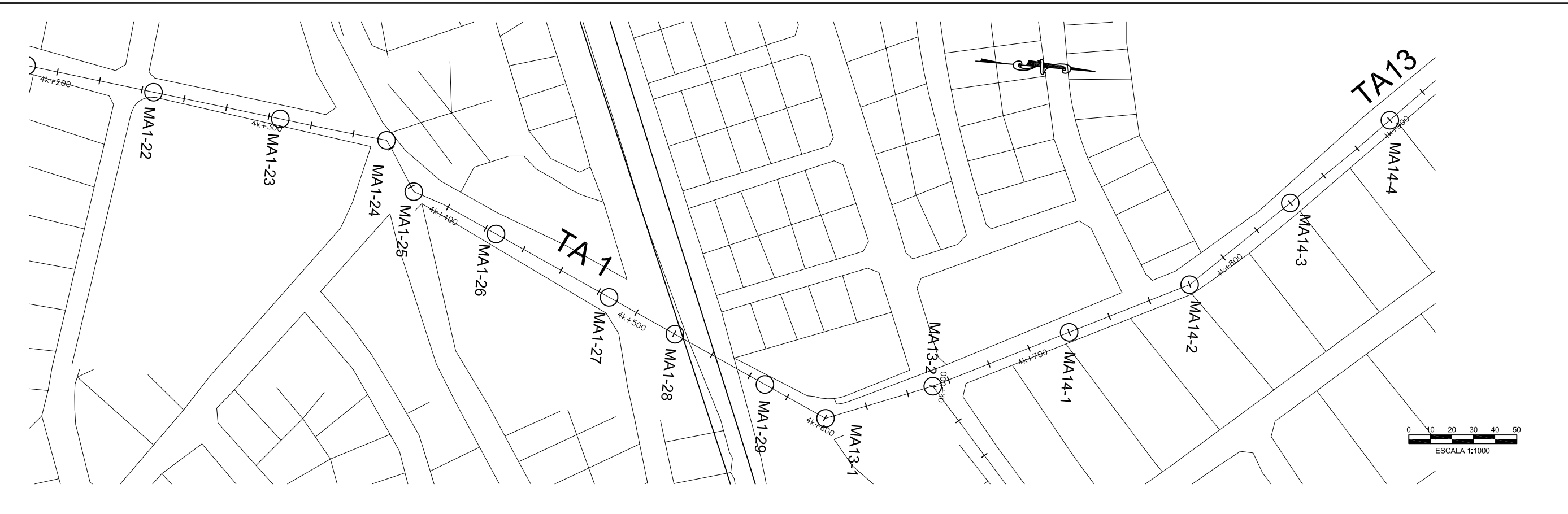
CONTRACT: _____
LOAN ID: _____
PROJECT: JA09Q1009/09-069



PREPARATORY SURVEY FOR
KINGSTON SEWERAGE DEVELOPMENT PROJECT

PRELIMINARY DESIGN FOR LOT-B
TRUNK SEWER JNP3-B, TA1 AND TB13
EST. 3k + 500 @ 4k + 200

DATE: _____
SHT: 3 OF 5
DWG: C.D1C.06



DESIGNED:	
DRAWN:	
REVIEWED:	
ENGINEER:	
NO.	DATE
	ISSUED FOR



SCALE
HOR: 1000
VERT: 100

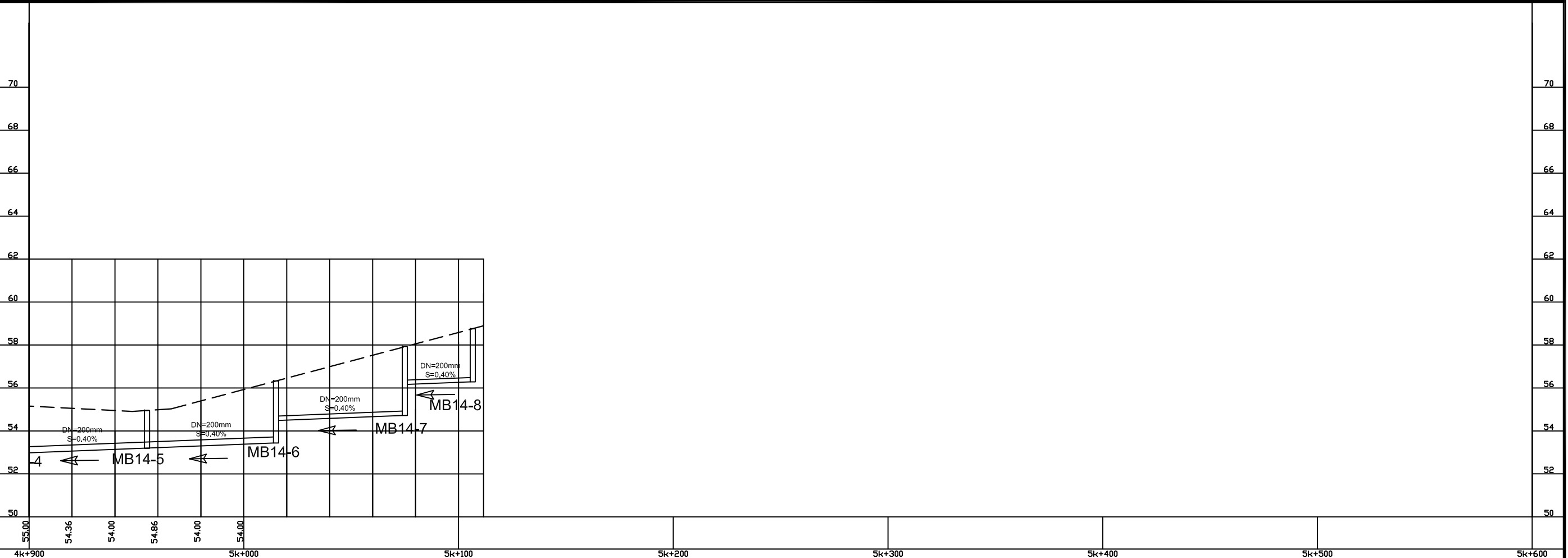
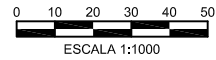
CONTRACT: _____
LOAN ID: _____
PROJECT: JA09Q1009/09-069



PREPARATORY SURVEY FOR
KINGSTON SEWERAGE DEVELOPMENT PROJECT

PRELIMINARY DESIGN FOR LOT-B
TRUNK SEWER JNP-3, TA1 AND TB13
EST. 4k + 200 @ 4k + 900

DATE: _____
SHT: 4 OF 5
DWG: C.D1C.07



DESIGNED:	_____	
DRAWN:	_____	
REVIEWED:	_____	
ENGINEER:	_____	
NO.	DATE	ISSUED FOR



SCALE
HOR:
1000

CONTRACT:

LOAN ID:

VERT:
100

PROJECT:
JA09Q1009/09-069



PREPARATORY SURVEY FOR
KINGSTON SEWERAGE DEVELOPMENT PROJECT

PRELIMINARY DESIGN FOR LOT-B

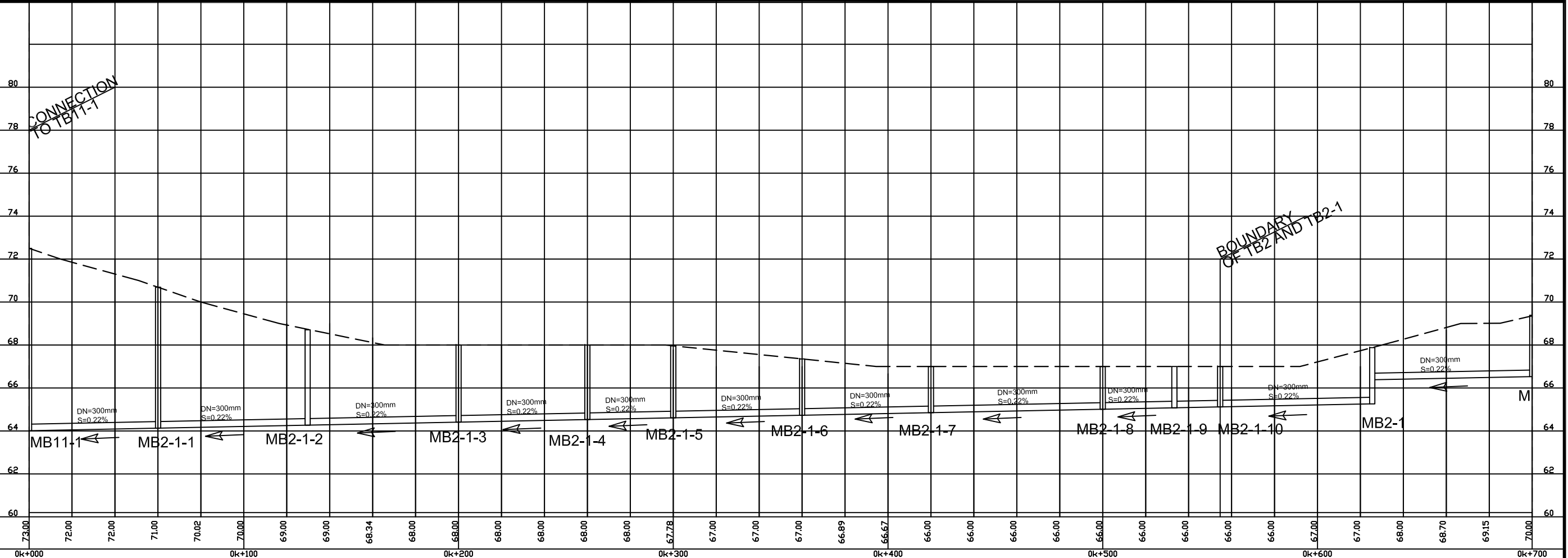
TRUNK SEWER JNP3-B, TA1 AND TB13

EST. 4k + 900 @ 5k + 111

DATE: _____

SHT: 5 OF 5

DWG: C.D1C.08



DESIGNED:	
DRAWN:	
REVIEWED:	
ENGINEER:	
NO.	DATE
	ISSUED FOR



SCALE
HOR: 1000
VERT: 100

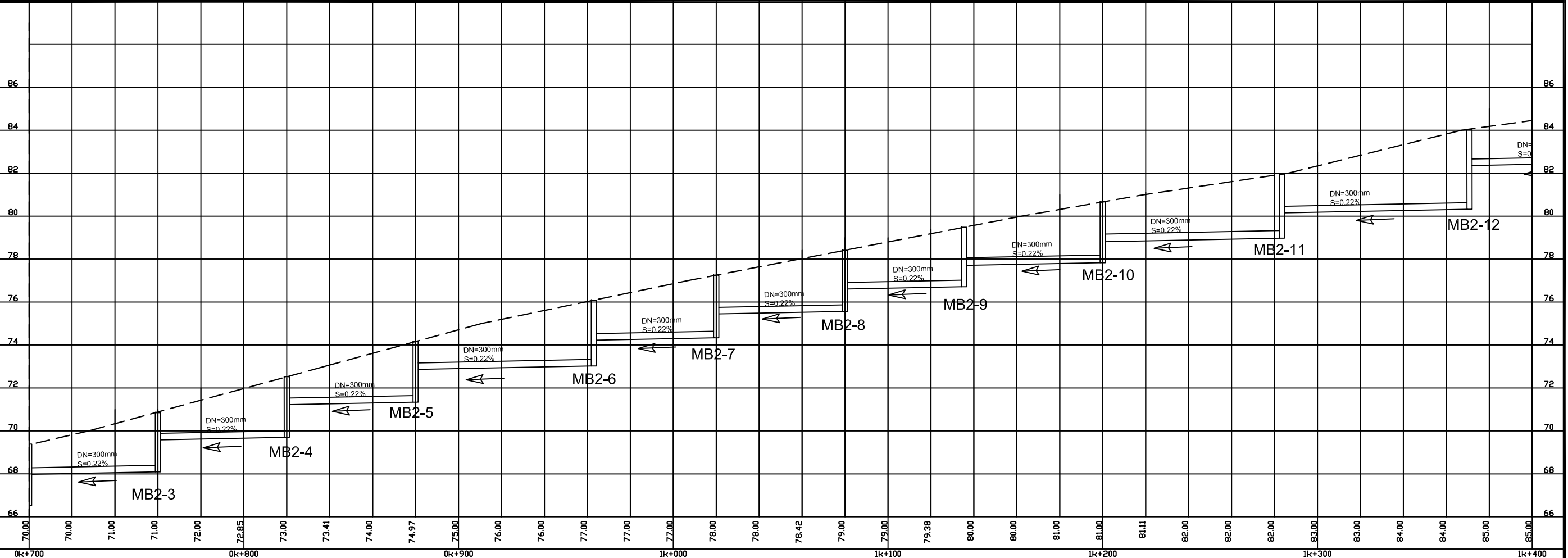
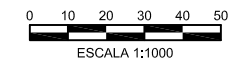
CONTRACT: _____
LOAN ID: _____
PROJECT: JA09Q1009/09-069



PREPARATORY SURVEY FOR
KINGSTON SEWERAGE DEVELOPMENT PROJECT

PRELIMINARY DESIGN FOR LOT-B
TRUNK SEWER TB1, TB2 AND TB2-1
EST. 0k + 000 @ 0k + 700

DATE: _____
SHT: 1 OF 4
DWG: C.D2B.01



DESIGNED:	
DRAWN:	
REVIEWED:	
ENGINEER:	
NO.	DATE
	ISSUED FOR



SCALE
HOR:
1000
VERT:
100

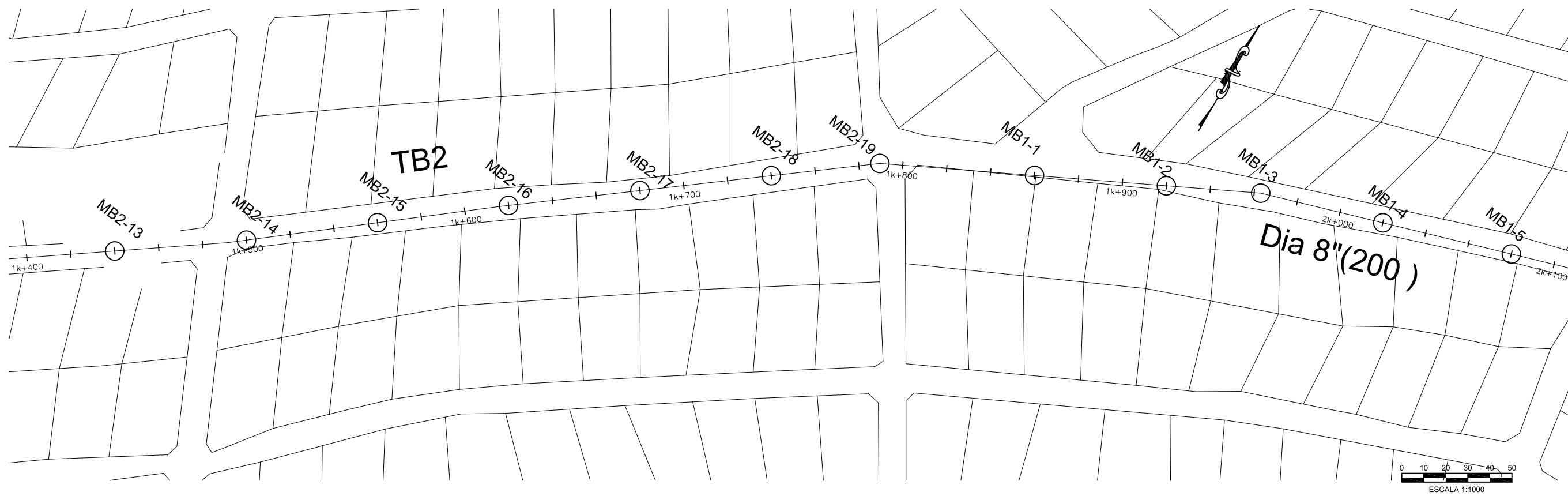
CONTRACT:
LOAN ID:
PROJECT:
JA09Q1009/09-069



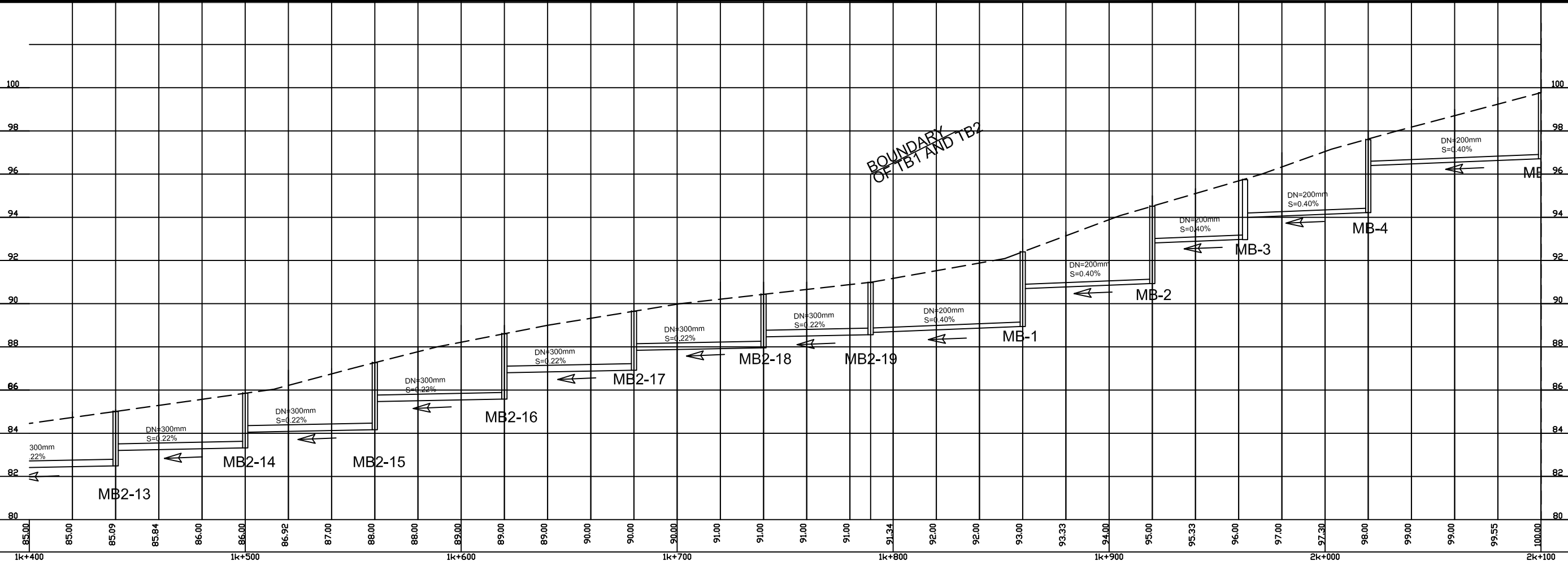
PREPARATORY SURVEY FOR
KINGSTON SEWERAGE DEVELOPMENT PROJECT

PRELIMINARY DESIGN FOR LOT-B
TRUNK SEWER TB1, TB2 AND TB2-1
EST. 0k + 700 @ 1k + 400

DATE: _____
SHT: 2 OF 4
DWG: C.D2B.02



0 10 20 30 40 50
ESCALA 1:1000



DESIGNED:	
DRAWN:	
REVIEWED:	
ENGINEER:	
NO.	DATE
	ISSUED FOR



SCALE
HOR: 1000
VERT: 100

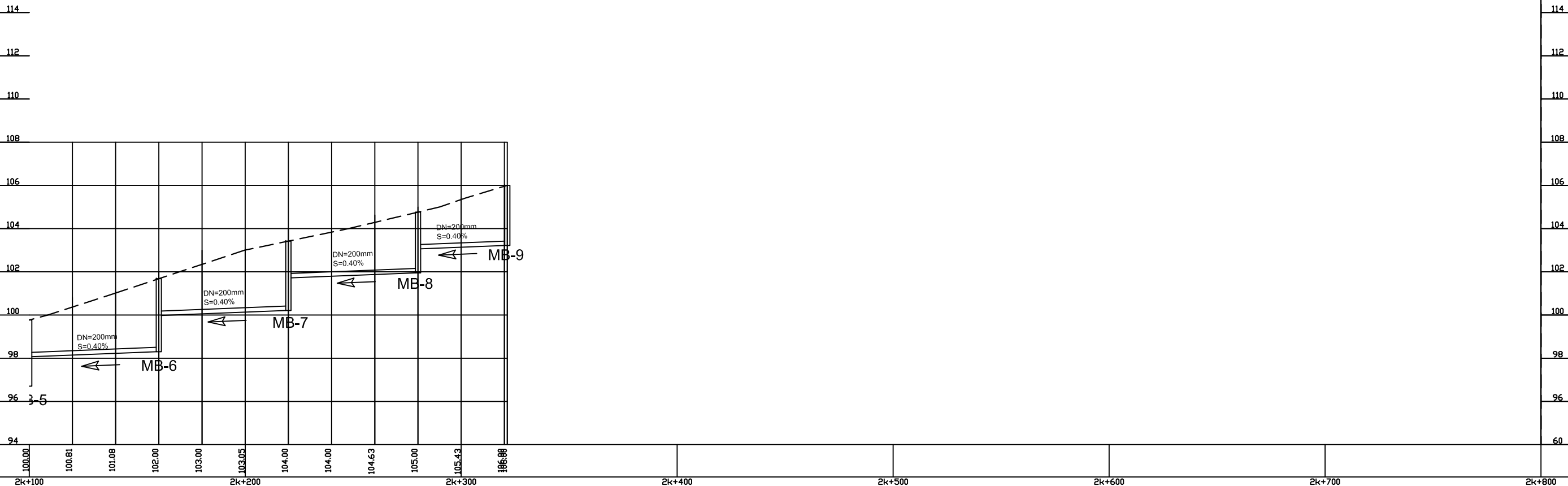
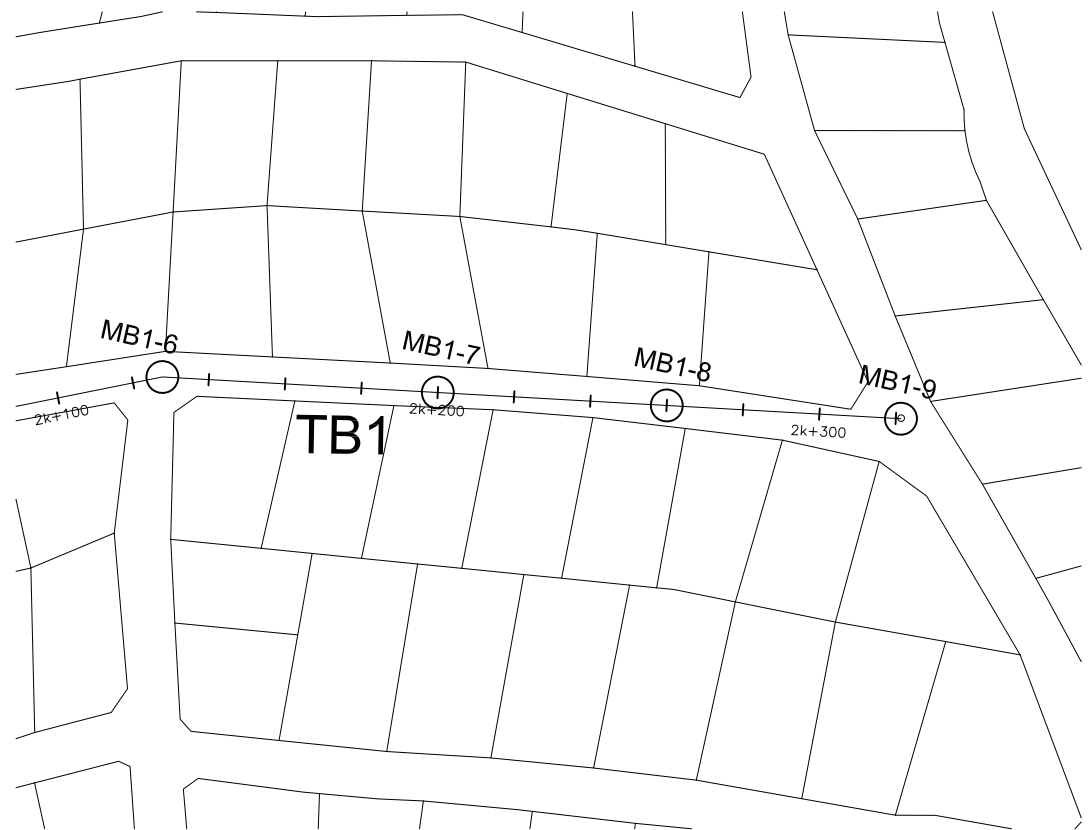
CONTRACT: _____
LOAN ID: _____
PROJECT: JA09Q1009/09-069



PREPARATORY SURVEY FOR KINGSTON SEWERAGE DEVELOPMENT PROJECT

PRELIMINARY DESIGN FOR LOT-B
TRUNK SEWER TB1, TB2 AND TB2-1
EST. 1k + 400 @ 2k + 100

DATE: _____
SHT: 3 OF 4
DWG: C.D2B.03



NO.	DATE	ISSUED FOR

DESIGNED: _____
 DRAWN: _____
 REVIEWED: _____
 ENGINEER: _____



SCALE
 HOR: 1000
 VERT: 100

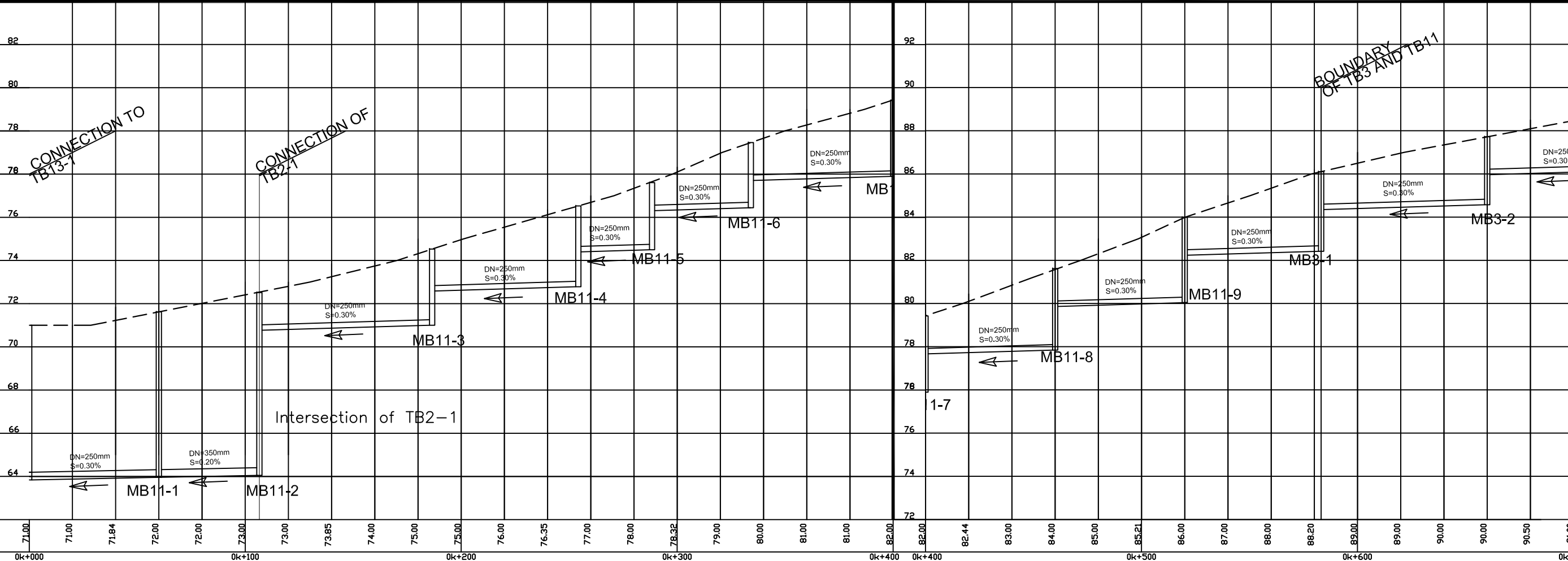
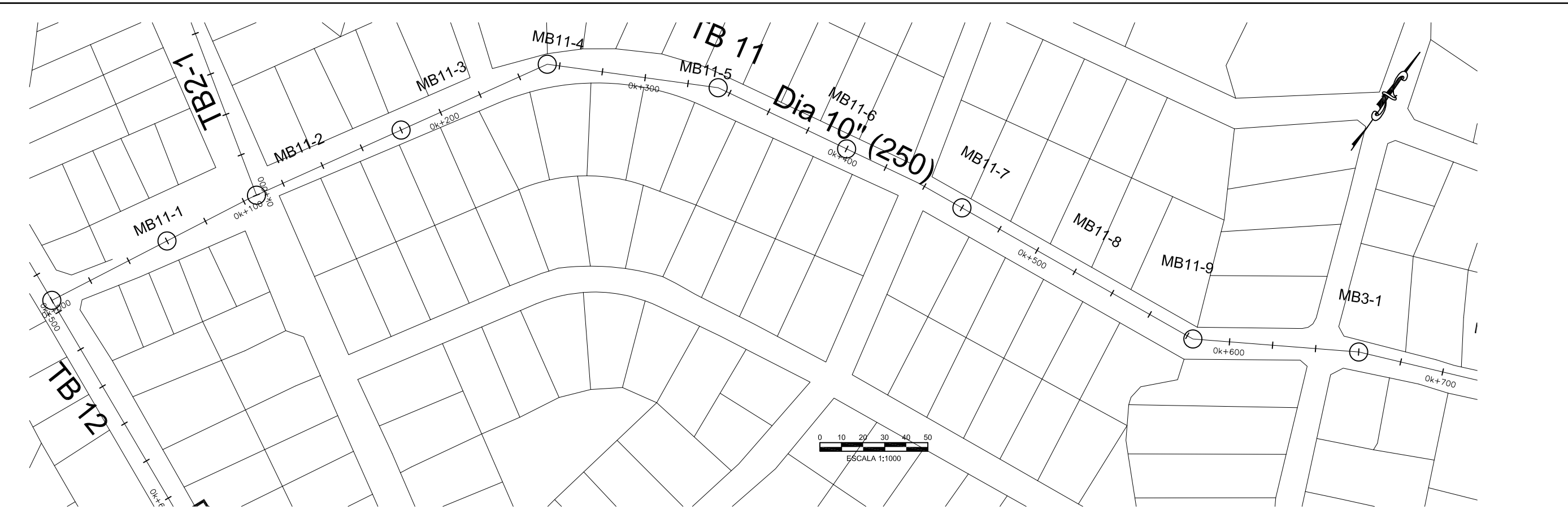
CONTRACT: _____
 LOAN ID: _____
 PROJECT: JA09Q1009/09-069



PREPARATORY SURVEY FOR
 KINGSTON SEWERAGE DEVELOPMENT PROJECT

PRELIMINARY DESIGN FOR LOT-B
 TRUNK SEWER TB1, TB2 AND TB2-1
 EST. 2k + 100 @ 2k + 322

DATE: _____
 SHT: 4 OF 4
 DWG: C.D2B.04



DESIGNED:	
DRAWN:	
REVIEWED:	
ENGINEER:	
NO.	DATE
	ISSUED FOR



SCALE
HOR: 1000
VERT: 100

CONTRACT: _____
LOAN ID: _____
PROJECT: JA09Q1009/09-069



PREPARATORY SURVEY FOR KINGSTON SEWERAGE DEVELOPMENT PROJECT

PRELIMINARY DESIGN FOR LOT-B

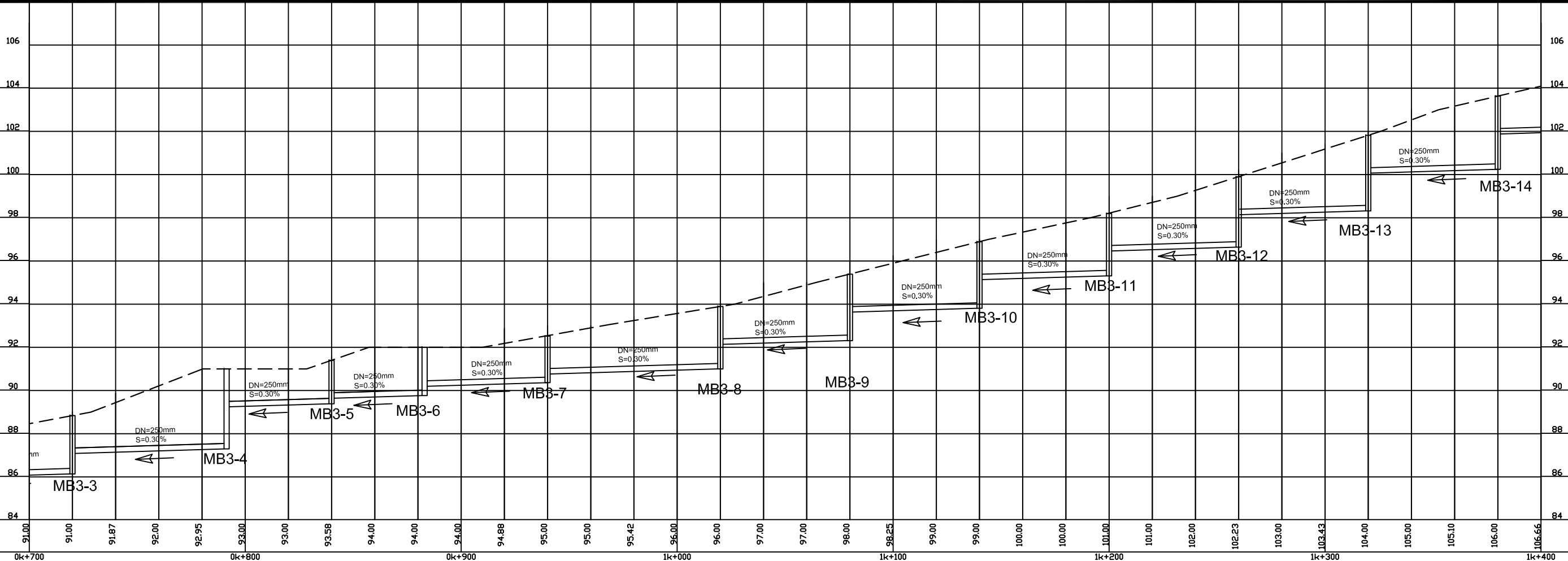
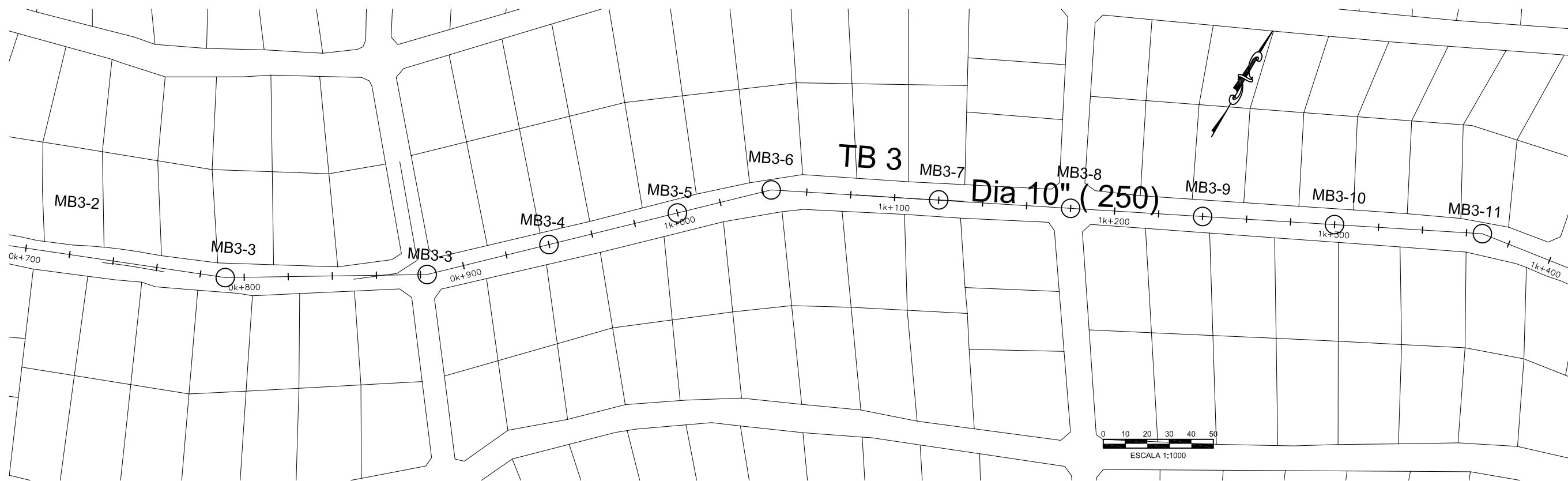
TRUNK SEWER TB3, TB11 AND TB11-1

EST. 0k + 000 @ 0k + 700

DATE: _____

SHT: 1 OF 3

DWG: C.D2C.01



DESIGNED:	
DRAWN:	
REVIEWED:	
ENGINEER:	
NO.	DATE
	ISSUED FOR



SCALE
HOR: 1000
VERT: 100

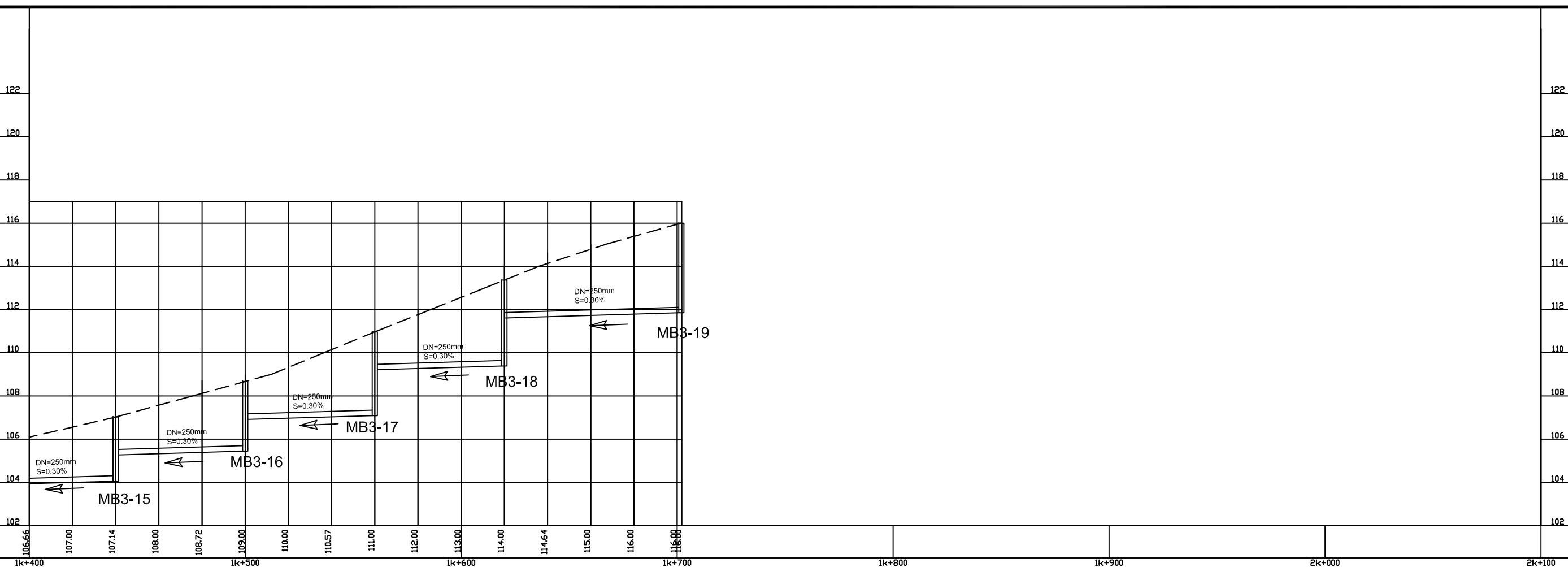
CONTRACT:
LOAN ID:
PROJECT:
JA09Q1009/09-069



PREPARATORY SURVEY FOR
KINGSTON SEWERAGE DEVELOPMENT PROJECT

PRELIMINARY DESIGN FOR LOT-B
TRUNK SEWER TB3, TB11 AND TB11-1
EST. 0k + 700 @ 1k + 400

DATE: _____
SHT: 2 OF 3
DWG: C.D2C.02



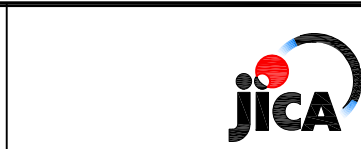
NO.	DATE	ISSUED FOR

DESIGNED: _____
 DRAWN: _____
 REVIEWED: _____
 ENGINEER: _____



SCALE
HOR: 1000
VERT: 100

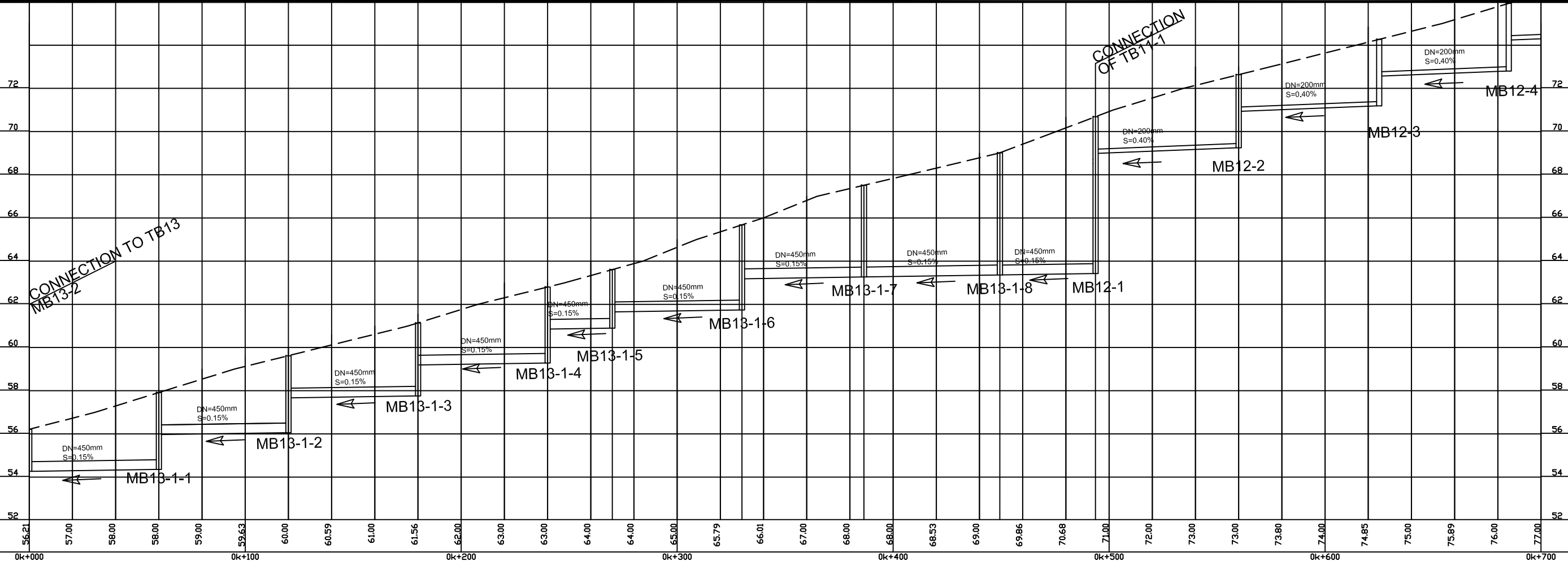
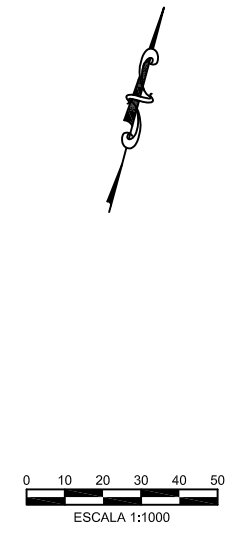
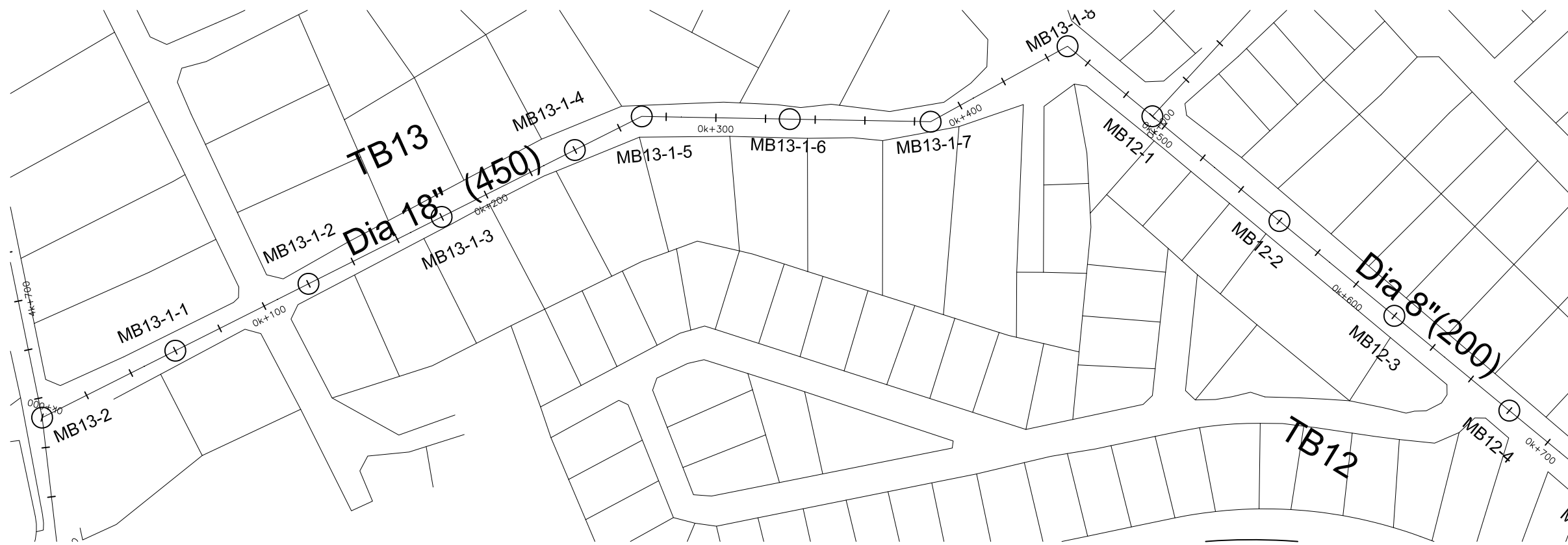
CONTRACT: _____
 LOAN ID: _____
 PROJECT: JA09Q1009/09-069



PREPARATORY SURVEY FOR
KINGSTON SEWERAGE DEVELOPMENT PROJECT

PRELIMINARY DESIGN FOR LOT-B
TRUNK SEWER TB3, TB11 AND TB11-1
EST. 1k + 400 @ 1k + 703

DATE: _____
 SHT: 3 OF 3
 DWG: C.D2C.03



DESIGNED:	
DRAWN:	
REVIEWED:	
ENGINEER:	
NO.	DATE
	ISSUED FOR



SCALE
HOR: 1000
VERT: 100

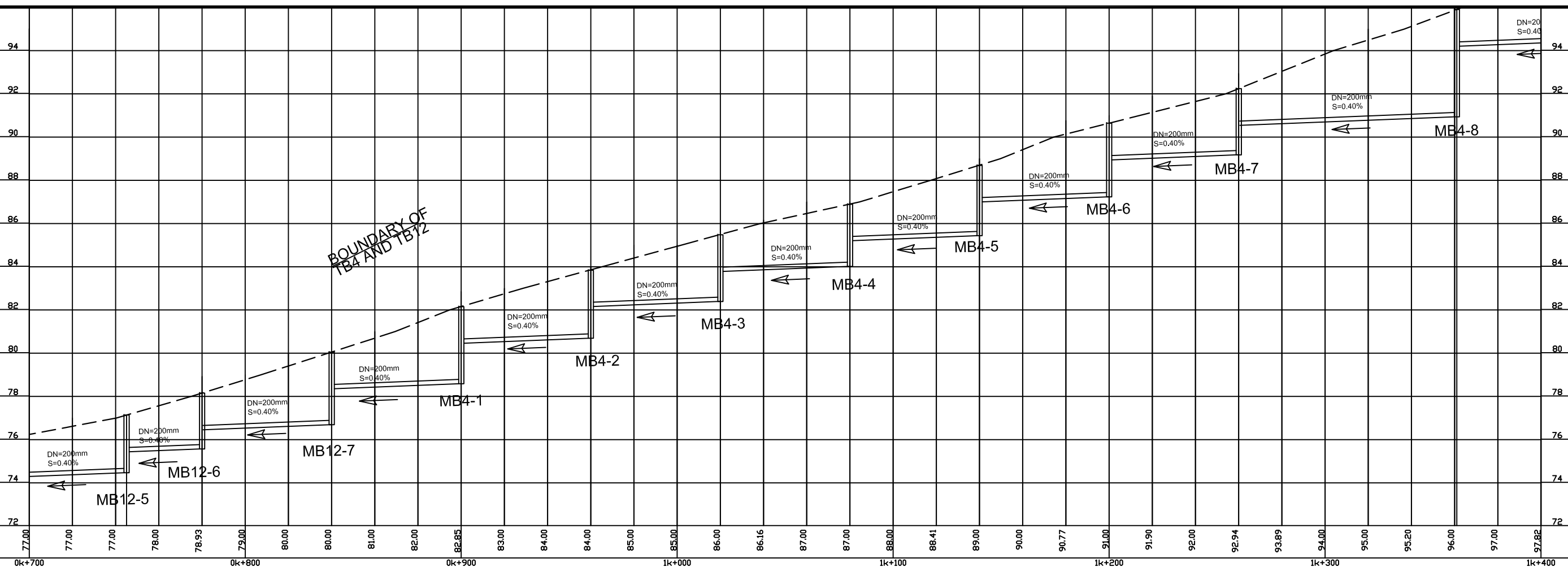
CONTRACT: _____
LOAN ID: _____
PROJECT: JA09Q1009/09-069



PREPARATORY SURVEY FOR KINGSTON SEWERAGE DEVELOPMENT PROJECT

PRELIMINARY DESIGN FOR LOT-B
TRUNK SEWER TB4, TB12 AND TB13-1
EST. 0k + 000 @ 0k + 700

DATE: _____
SHT: 1 OF 3
DWG: C.D2D.01



DESIGNED:	
DRAWN:	
REVIEWED:	
ENGINEER:	
NO.	DATE
	ISSUED FOR



SCALE
HOR: 1000
VERT: 100

CONTRACT: _____
LOAN ID: _____
PROJECT: JA09Q1009/09-069



PREPARATORY SURVEY FOR KINGSTON SEWERAGE DEVELOPMENT PROJECT

PRELIMINARY DESIGN FOR LOT-B

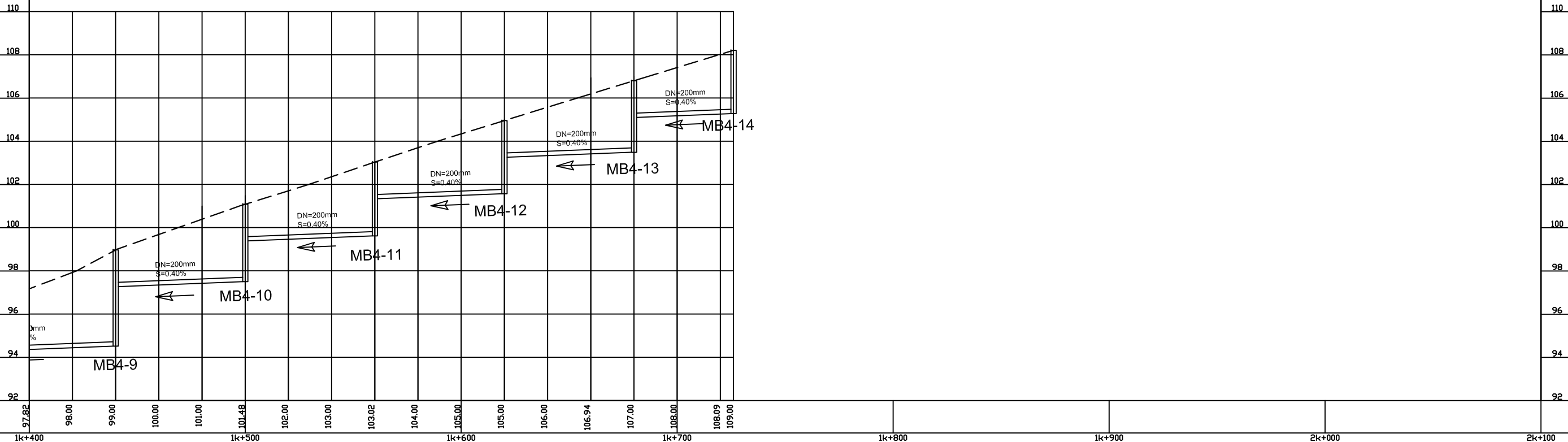
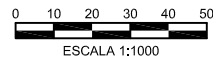
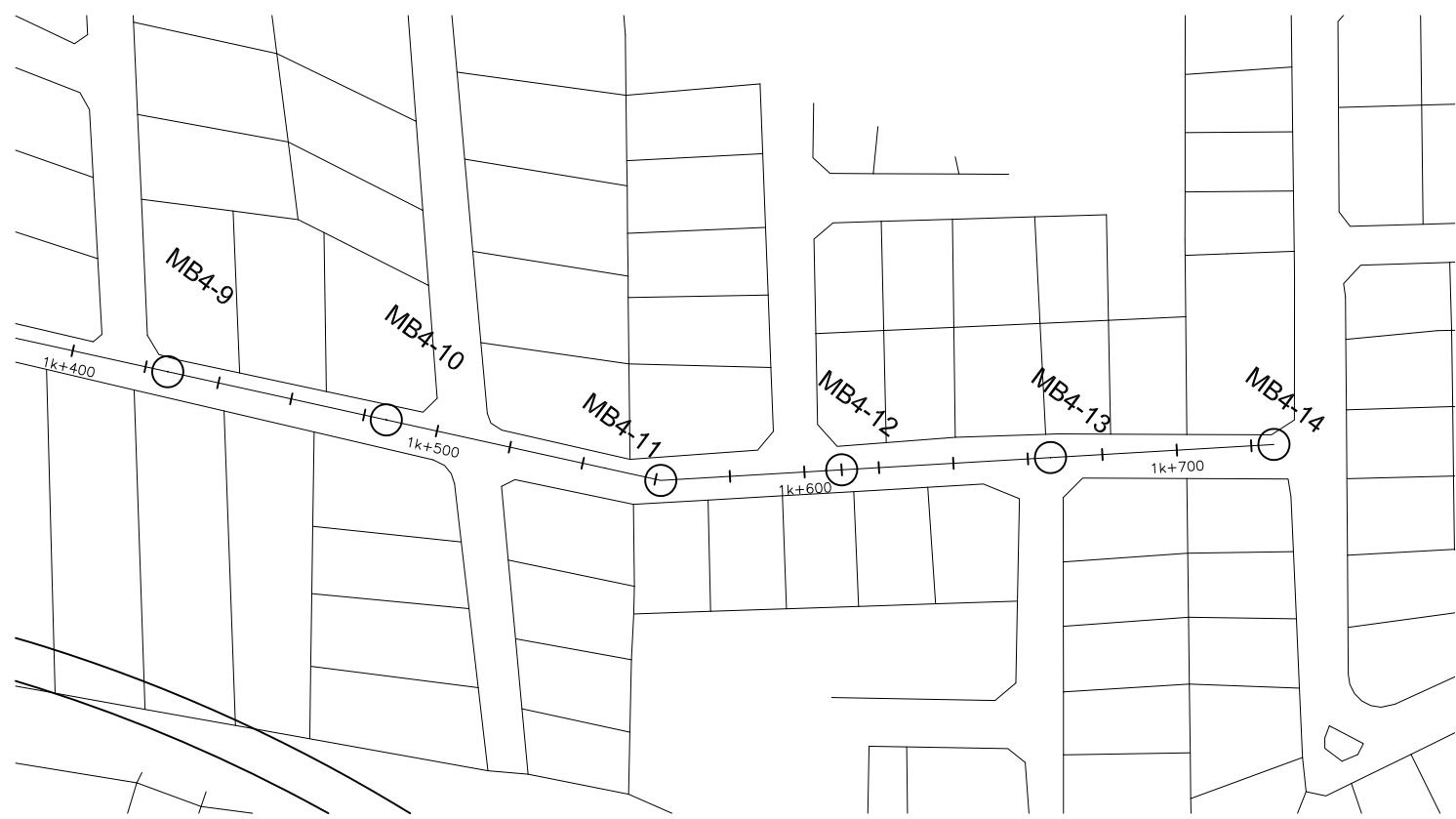
TRUNK SEWER TB4, TB12 AND TB13-1

EST. 0k + 700 @ 1k + 400

DATE: _____

SHT: 2 OF 3

DWG: C.D2D.02



NO.	DATE	ISSUED FOR

DESIGNED: _____
 DRAWN: _____
 REVIEWED: _____
 ENGINEER: _____



SCALE
 HOR: 1000
 VERT: 100

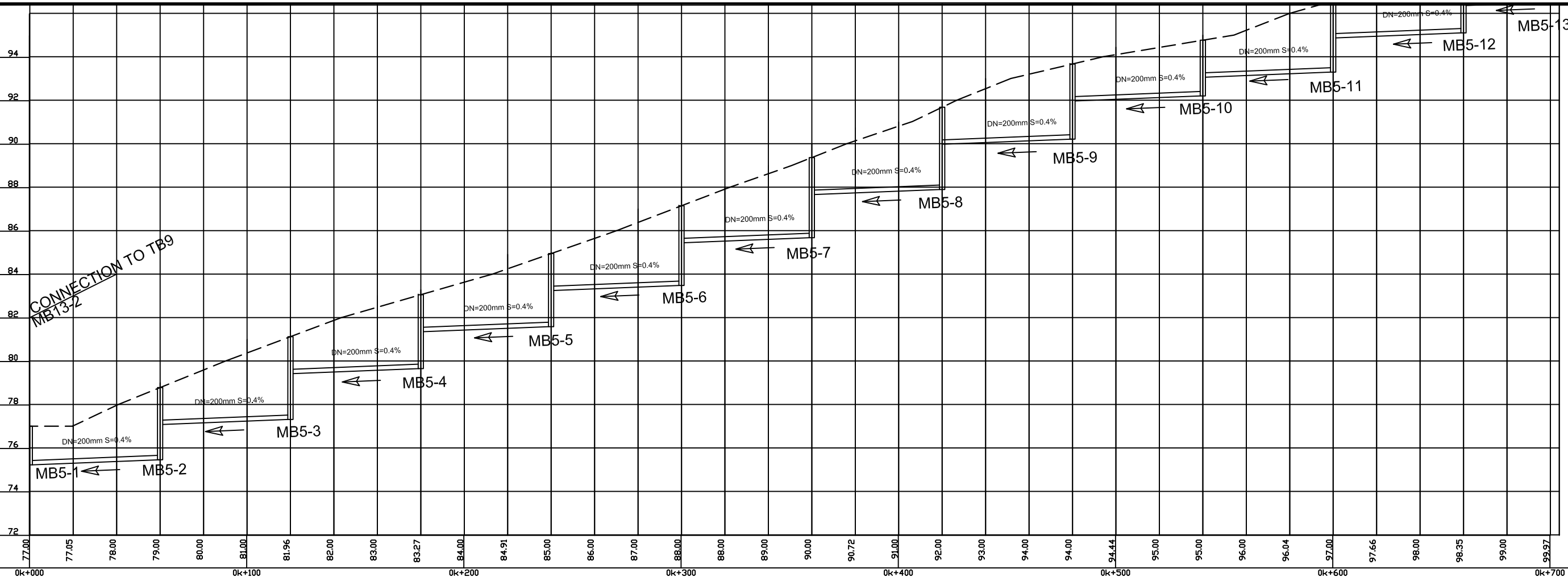
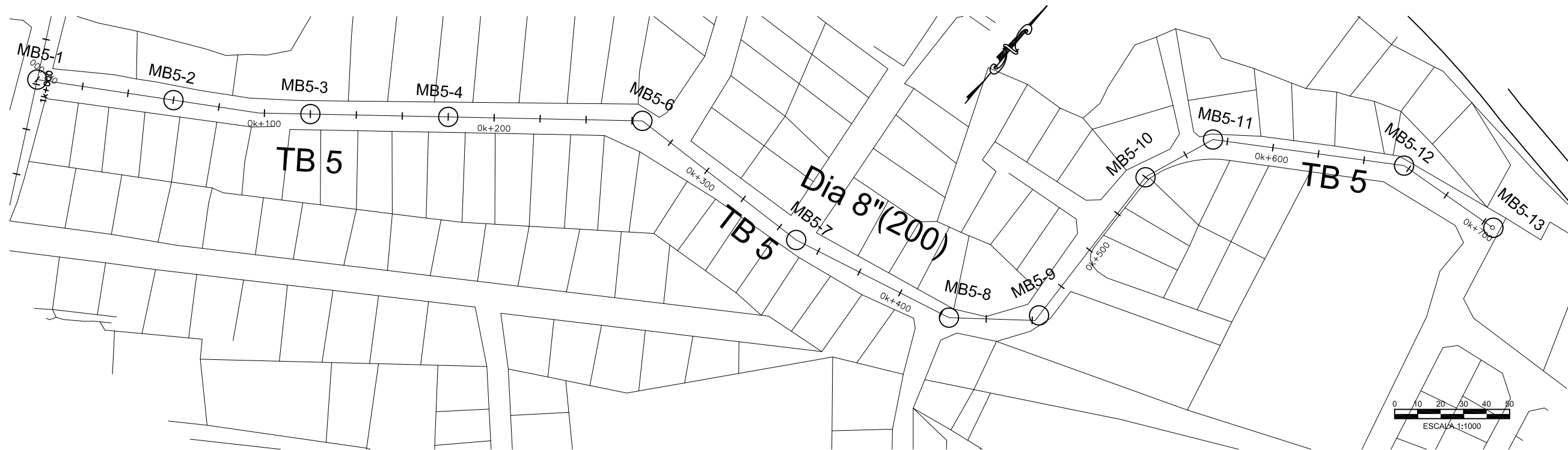
CONTRACT: _____
 LOAN ID: _____
 PROJECT: JA09Q1009/09-069



PREPARATORY SURVEY FOR
 KINGSTON SEWERAGE DEVELOPMENT PROJECT

PRELIMINARY DESIGN FOR LOT-B
 TRUNK SEWER TB4, TB12 AND TB13-1
 EST. 1k + 400 @ 1k + 726

DATE: _____
 SHT: 3 OF 3
 DWG: C.D2D.03

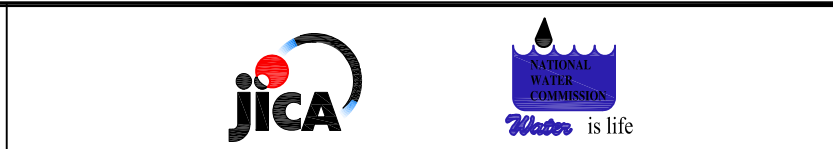


DESIGNED:	
DRAWN:	
REVIEWED:	
ENGINEER:	
NO.	DATE
	ISSUED FOR



SCALE
HOR: 1000
VERT: 100

CONTRACT: _____
LOAN ID: _____
PROJECT: JA09Q1009/09-069

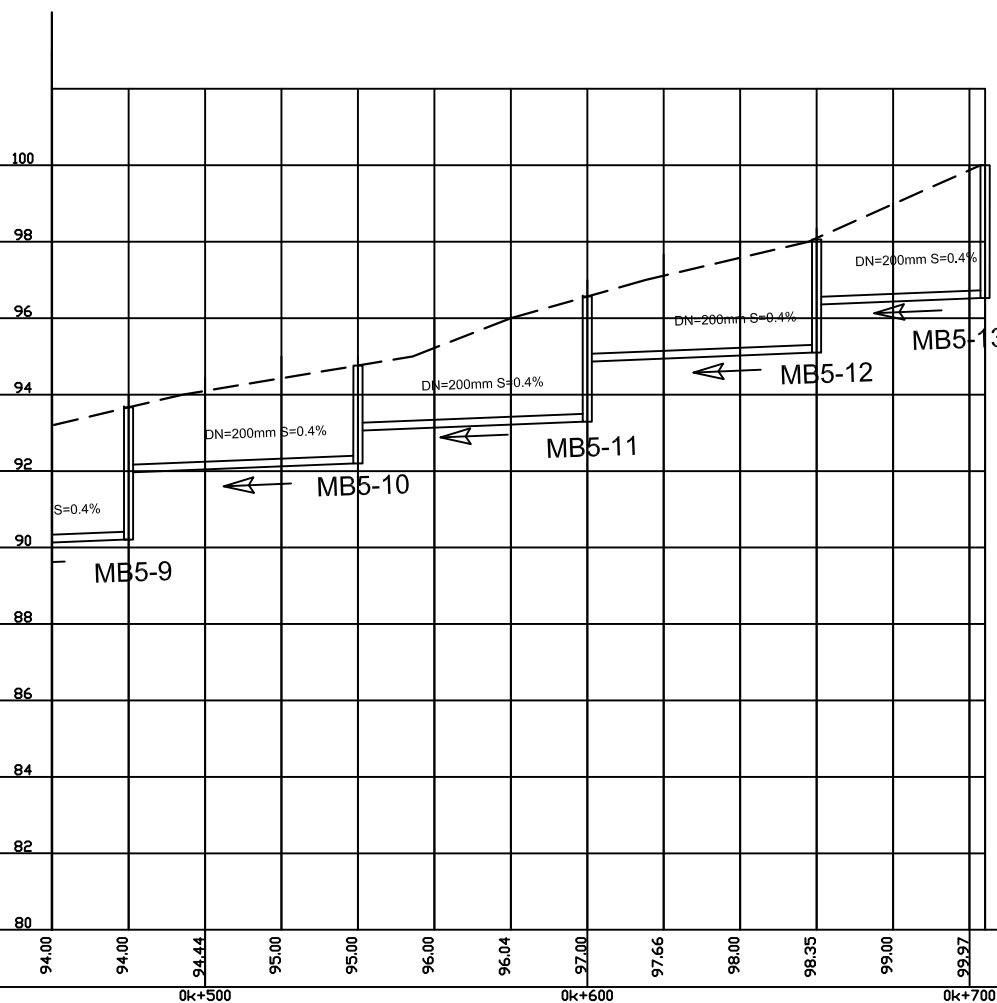
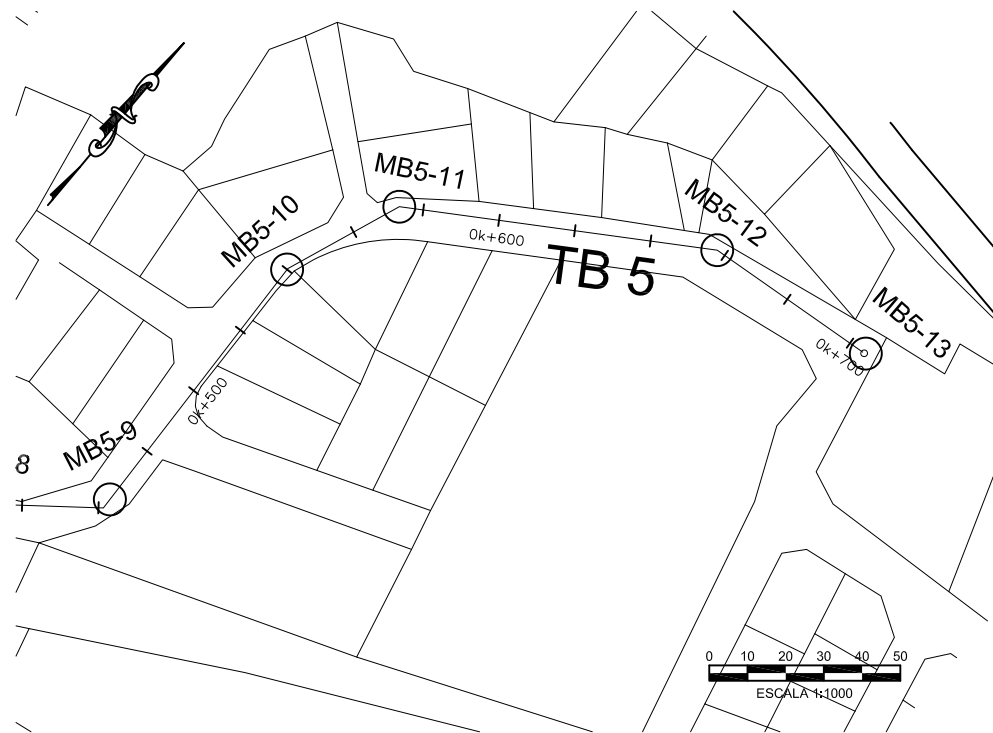


PREPARATORY SURVEY FOR
KINGSTON SEWERAGE DEVELOPMENT PROJECT

PRELIMINARY DESIGN FOR LOT-B

TRUNK SEWER TB5
EST. 0k + 000 @ 0k + 480

DATE: _____
SHT: 1 OF 2
DWG: C.D2E.01



DESIGNED:	_____	
DRAWN:	_____	
REVIEWED:	_____	
ENGINEER:	_____	
NO.	DATE	ISSUED FOR



SCALE
HOR: 1000
VERT: 100

CONTRACT: _____
LOAN ID: _____
PROJECT: JA09Q1009/09-069



PREPARATORY SURVEY FOR
KINGSTON SEWERAGE DEVELOPMENT PROJECT

PRELIMINARY DESIGN FOR LOT-B

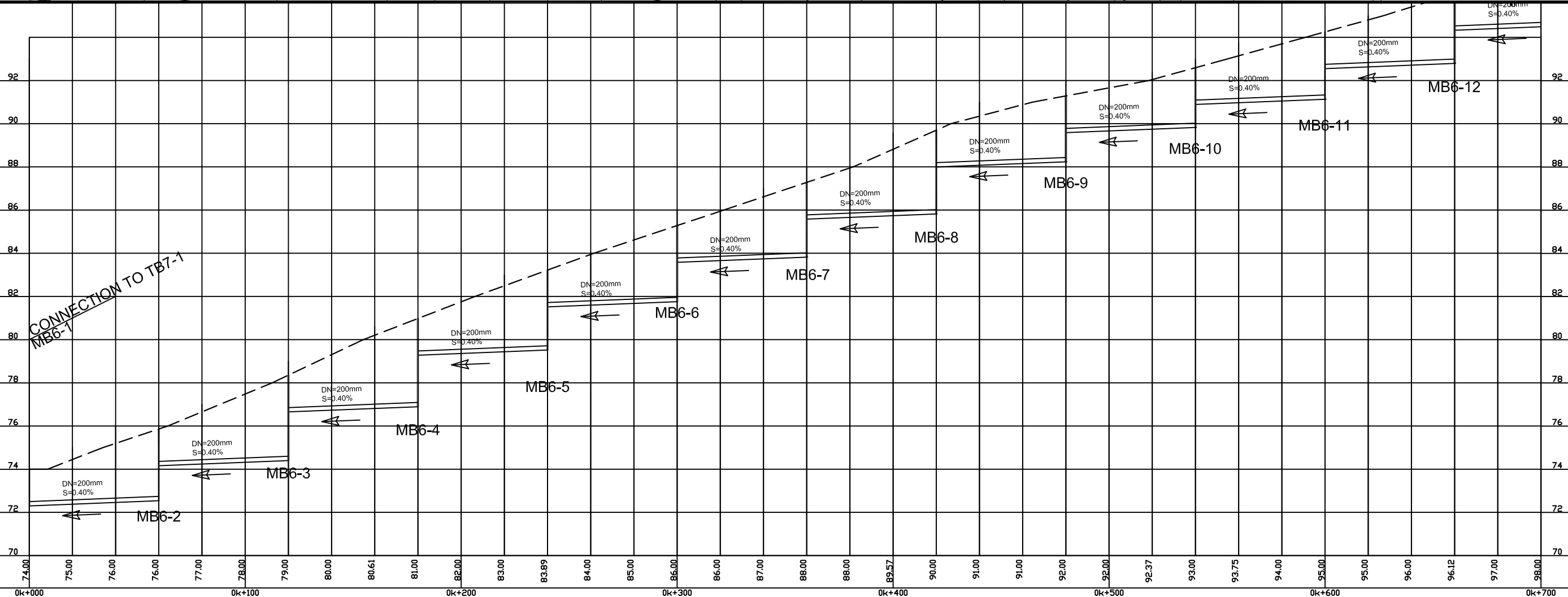
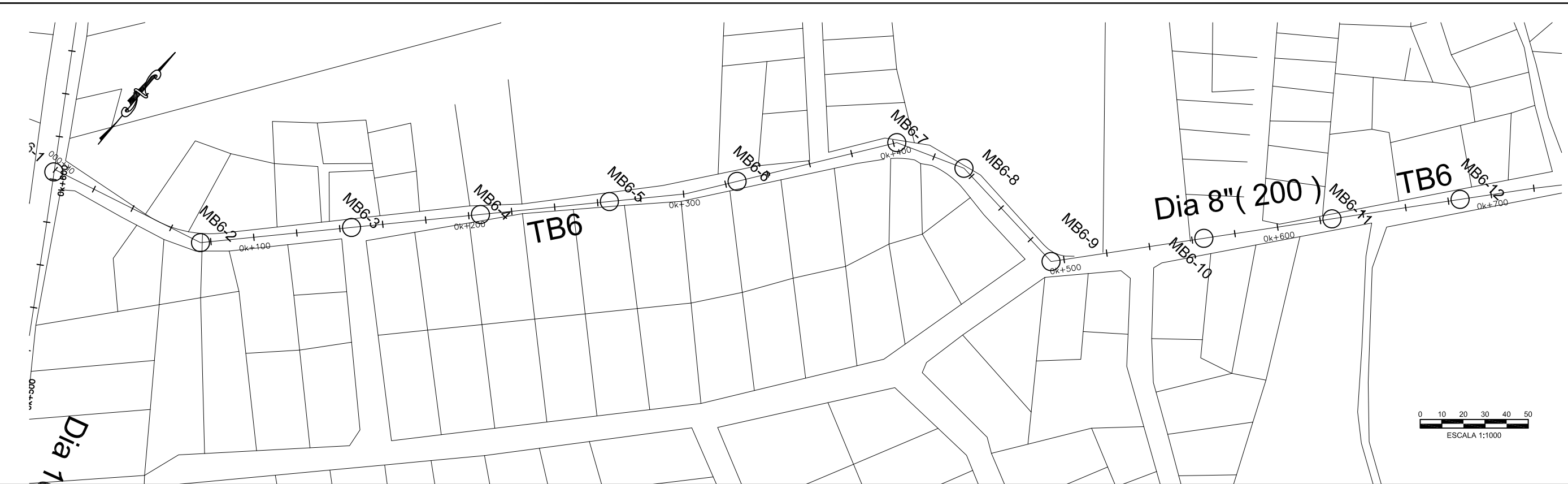
TRUNK SEWER TB5

EST. 0k + 620 @ 0k + 700

DATE: _____

SHT: 2 OF 2

DWG: C.D2E.02



DESIGNED:	
DRAWN:	
REVIEWED:	
ENGINEER:	
NO.	DATE
	ISSUED FOR



SCALE
HOR: 1000
VERT: 100

CONTRACT: _____
LOAN ID: _____
PROJECT: JA09Q1009/09-069



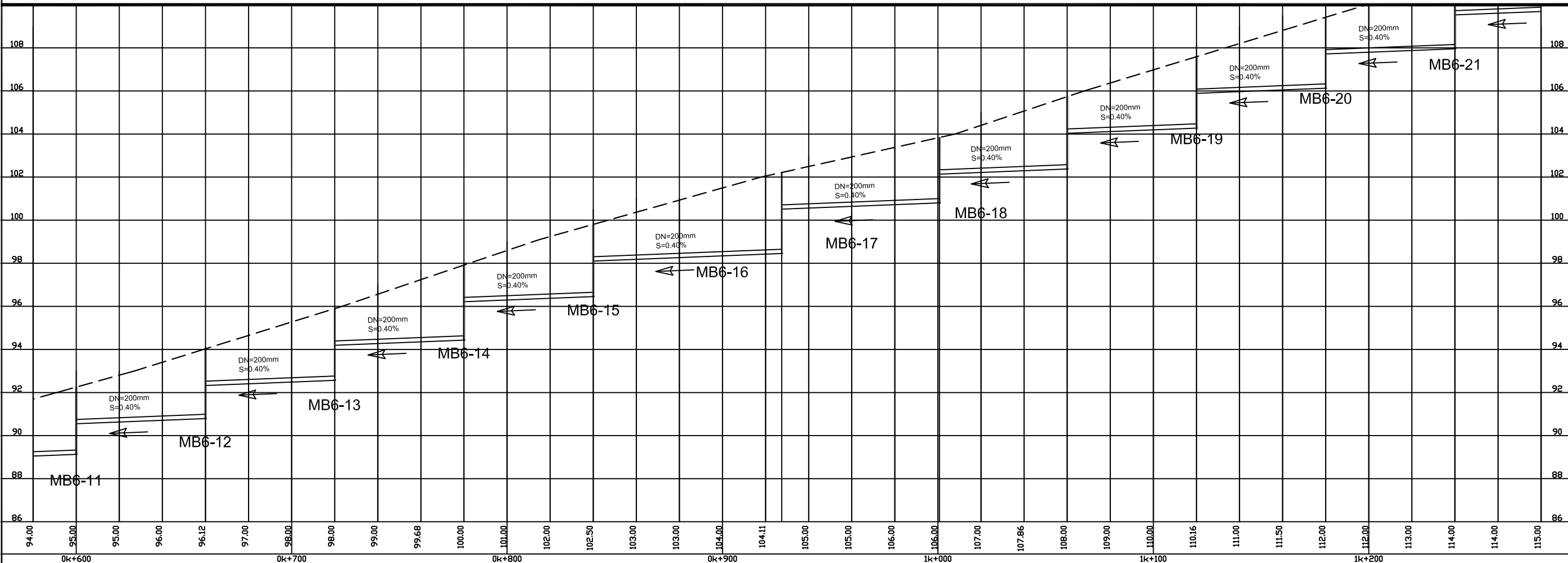
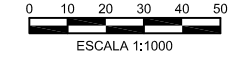
PREPARATORY SURVEY FOR
KINGSTON SEWERAGE DEVELOPMENT PROJECT

PRELIMINARY DESIGN FOR LOT-B

TRUNK SEWER TB6

EST. 0k + 000 @ 0k + 600

DATE: _____
SHT: 1 OF 3
DWG: C.D2F.01



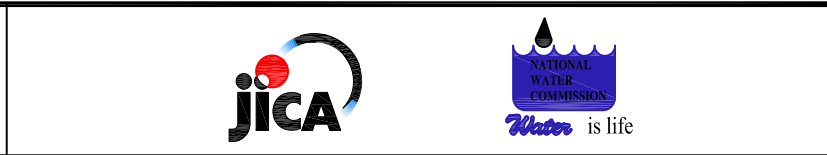
DESIGNED:	
DRAWN:	
REVIEWED:	
ENGINEER:	
NO.	DATE
	ISSUED FOR



SCALE
HOR:
1000

CONTRACT:
LOAN ID:
PROJECT:
JA09Q1009/09-069

VERT:
100



PREPARATORY SURVEY FOR
KINGSTON SEWERAGE DEVELOPMENT PROJECT

PRELIMINARY DESIGN FOR LOT-B

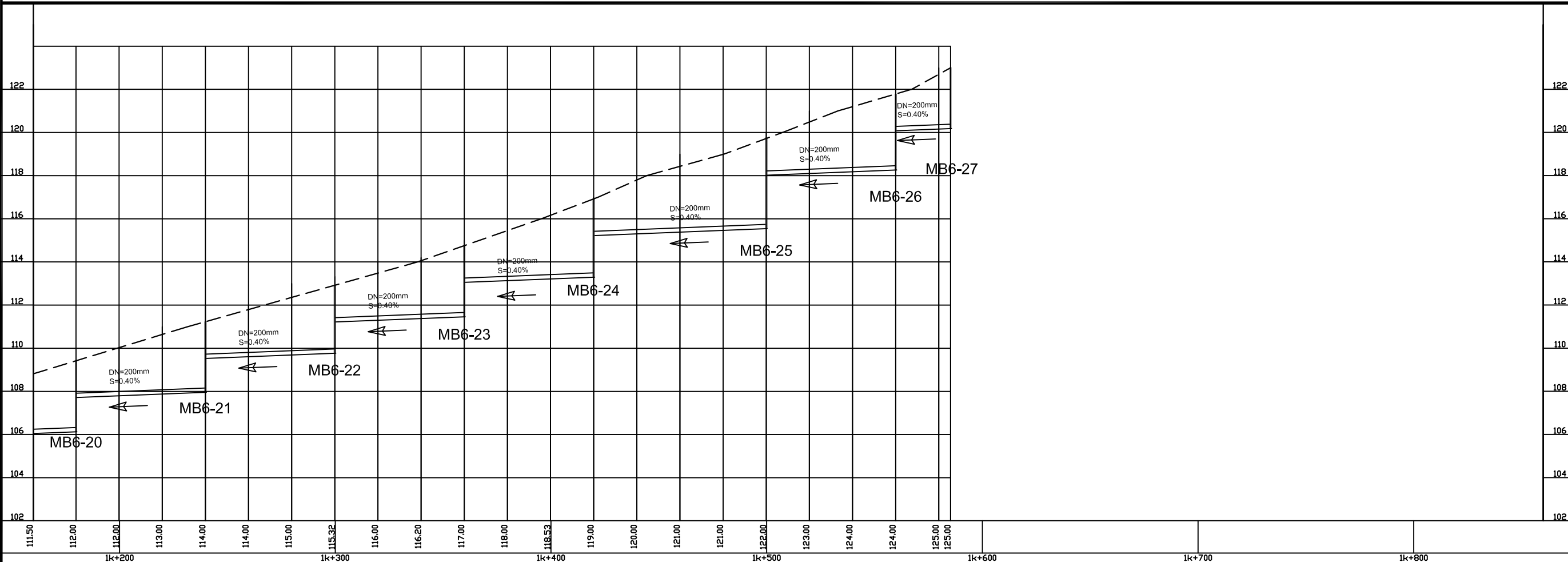
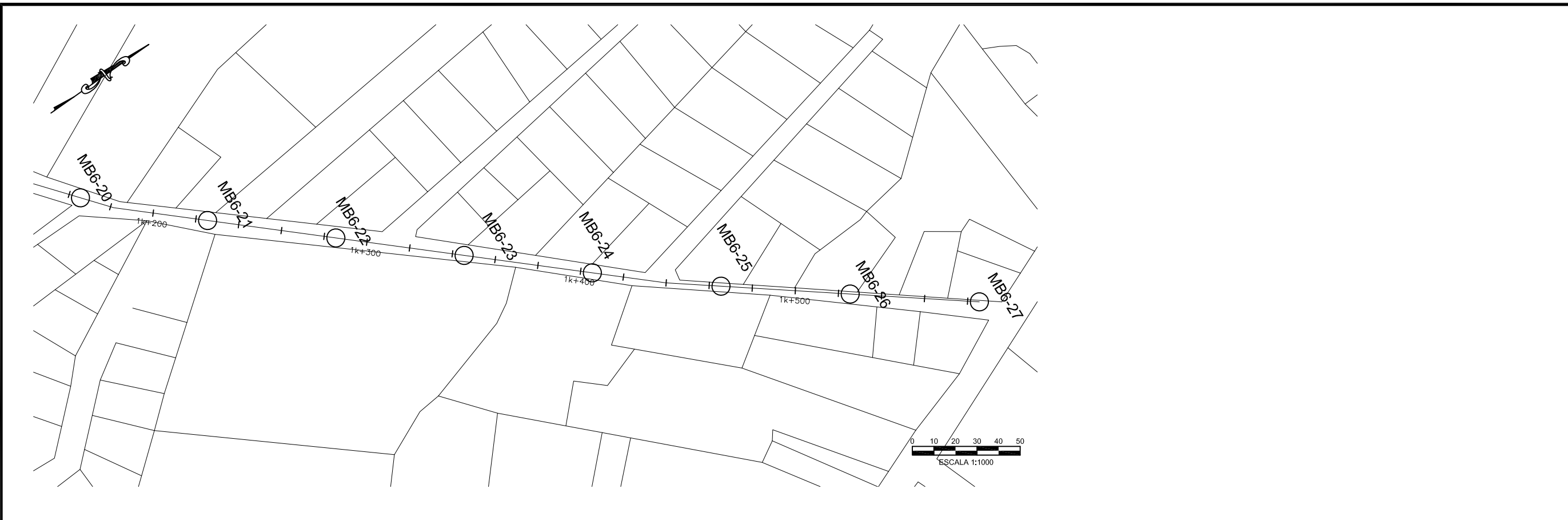
TRUNK SEWER TB6

EST. 0k + 600 @ 1k + 180

DATE: _____

SHT: 2 OF 3

DWG: C.D2F.02



DESIGNED:	
DRAWN:	
REVIEWED:	
ENGINEER:	
NO.	DATE
	ISSUED FOR

NIPPON KOEI
Challenging mind, Changing dynamics

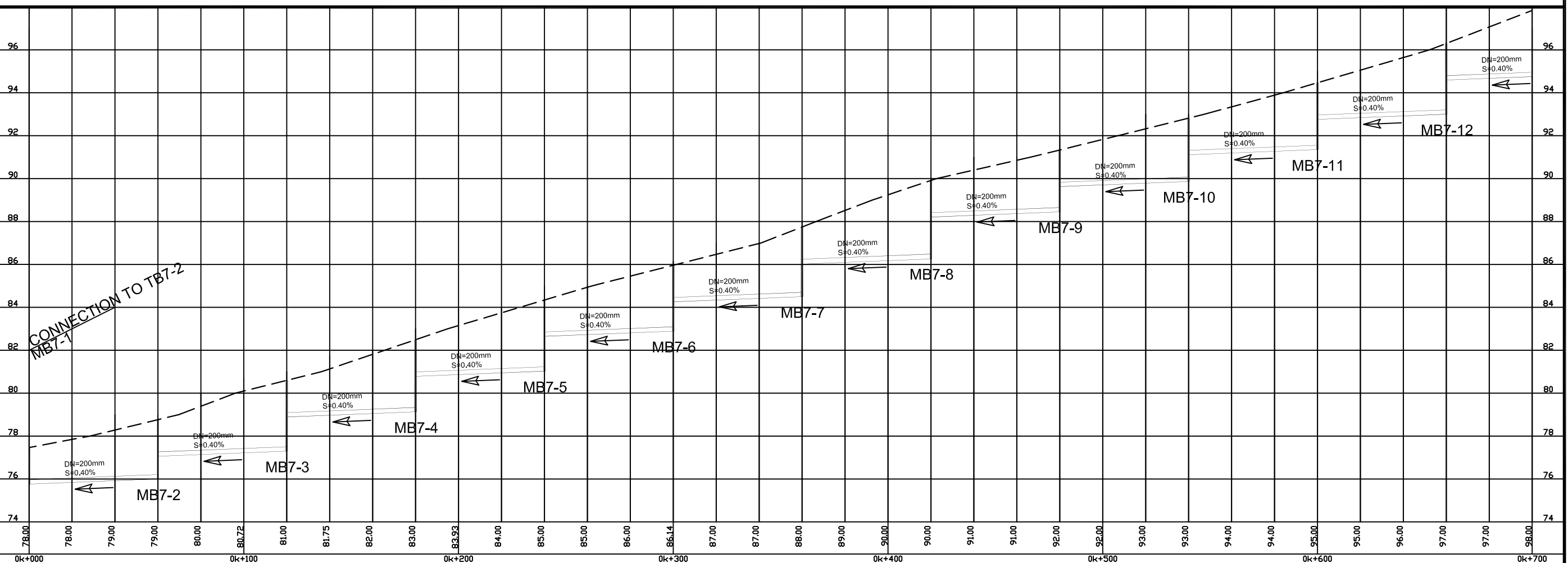
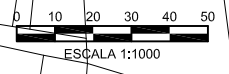
SCALE: 1000
HOR: 1000
VERT: 100

CONTRACT: _____
LOAN ID: _____
PROJECT: JA09Q1009/09-069



PREPARATORY SURVEY FOR KINGSTON SEWERAGE DEVELOPMENT PROJECT
PRELIMINARY DESIGN FOR LOT-B
TRUNK SEWER TB6
EST. 1k + 180 @ 1k + 586

DATE: _____
SHT: 3 OF 3
DWG: C.D2F.03



DESIGNED:	
DRAWN:	
REVIEWED:	
ENGINEER:	
NO.	DATE
	ISSUED FOR



SCALE
HOR: 1000
VERT: 100

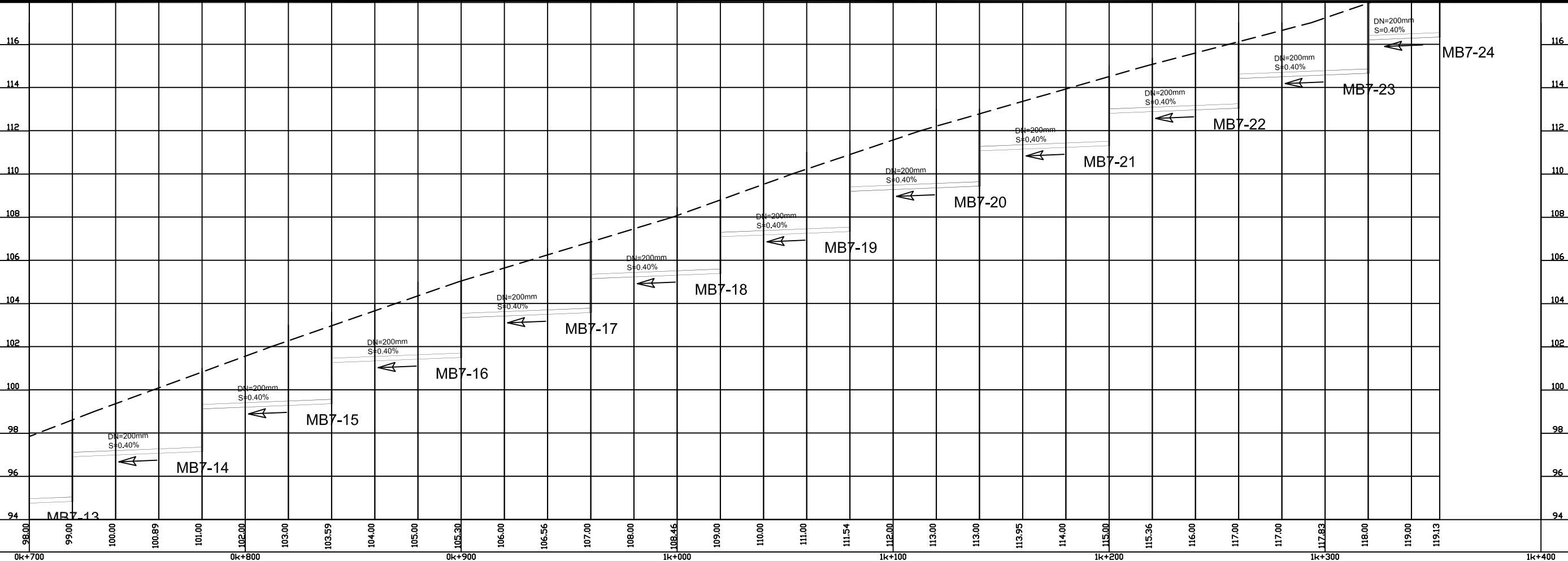
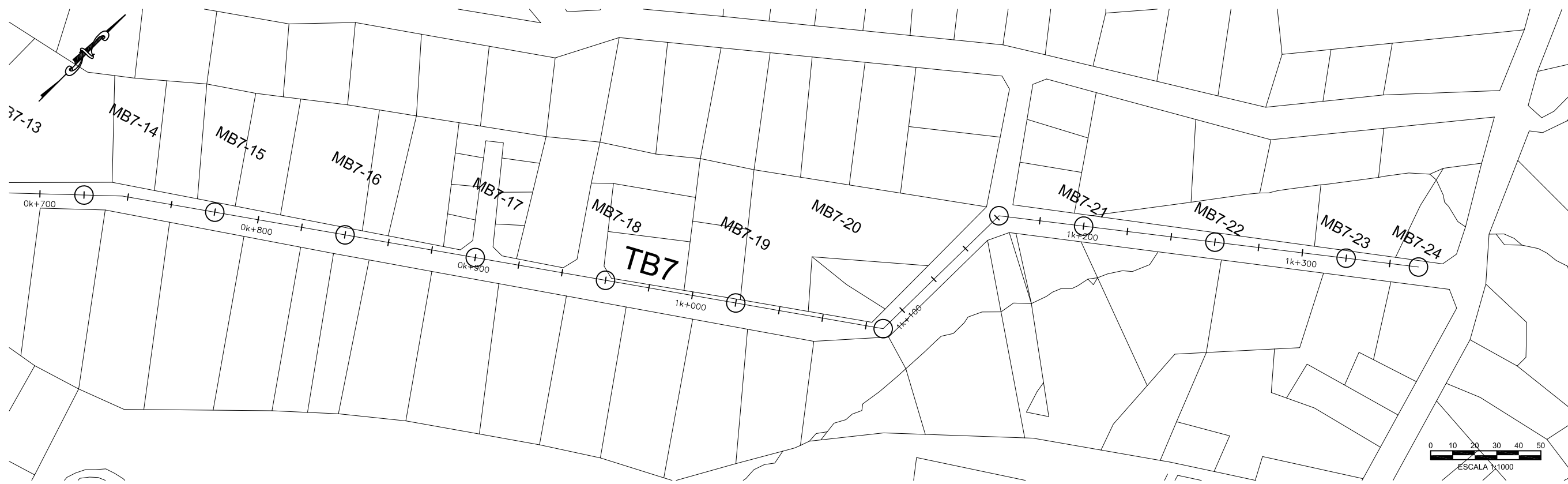
CONTRACT:
LOAN ID:
PROJECT: JA09Q1009/09-069



PREPARATORY SURVEY FOR
KINGSTON SEWERAGE DEVELOPMENT PROJECT

PRELIMINARY DESIGN FOR LOT-B
TRUNK SEWER TB7
EST. 0k + 000 @ 0k + 700

DATE: _____
SHT: 1 OF 2
DWG: C.D2G.01



DESIGNED:	
DRAWN:	
REVIEWED:	
ENGINEER:	
NO.	DATE
	ISSUED FOR



SCALE
HOR: 1000
VERT: 100

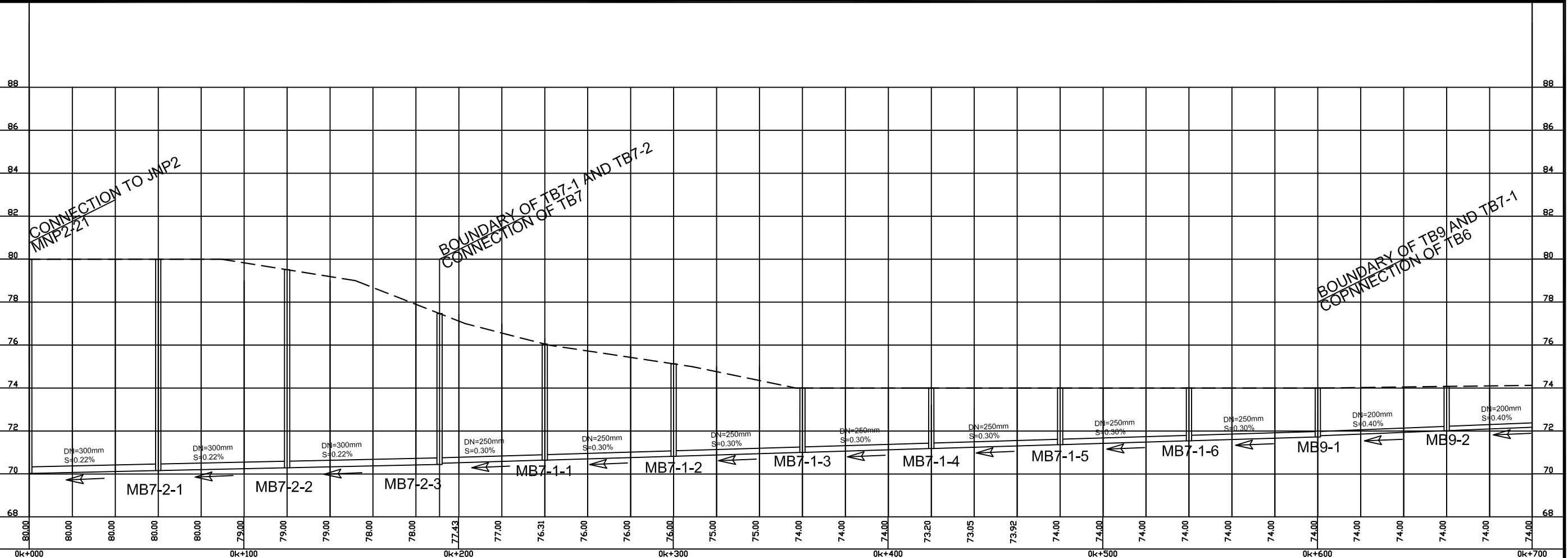
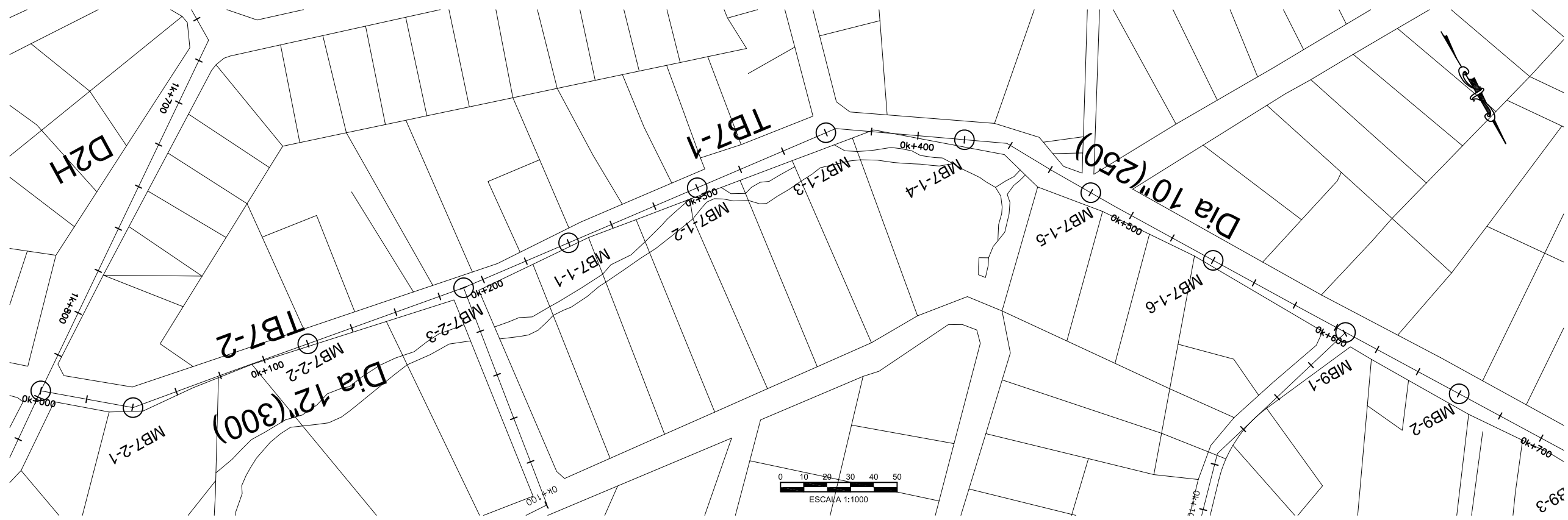
CONTRACT: _____
LOAN ID: _____
PROJECT: JA09Q1009/09-069



PREPARATORY SURVEY FOR
KINGSTON SEWERAGE DEVELOPMENT PROJECT

PRELIMINARY DESIGN FOR LOT-B
TRUNK SEWER TB7
EST. 0k + 700 @ 1k + 336

DATE: _____
SHT: 2 OF 2
DWG: C.D2G.02



DESIGNED:	
DRAWN:	
REVIEWED:	
ENGINEER:	
NO.	DATE
	ISSUED FOR



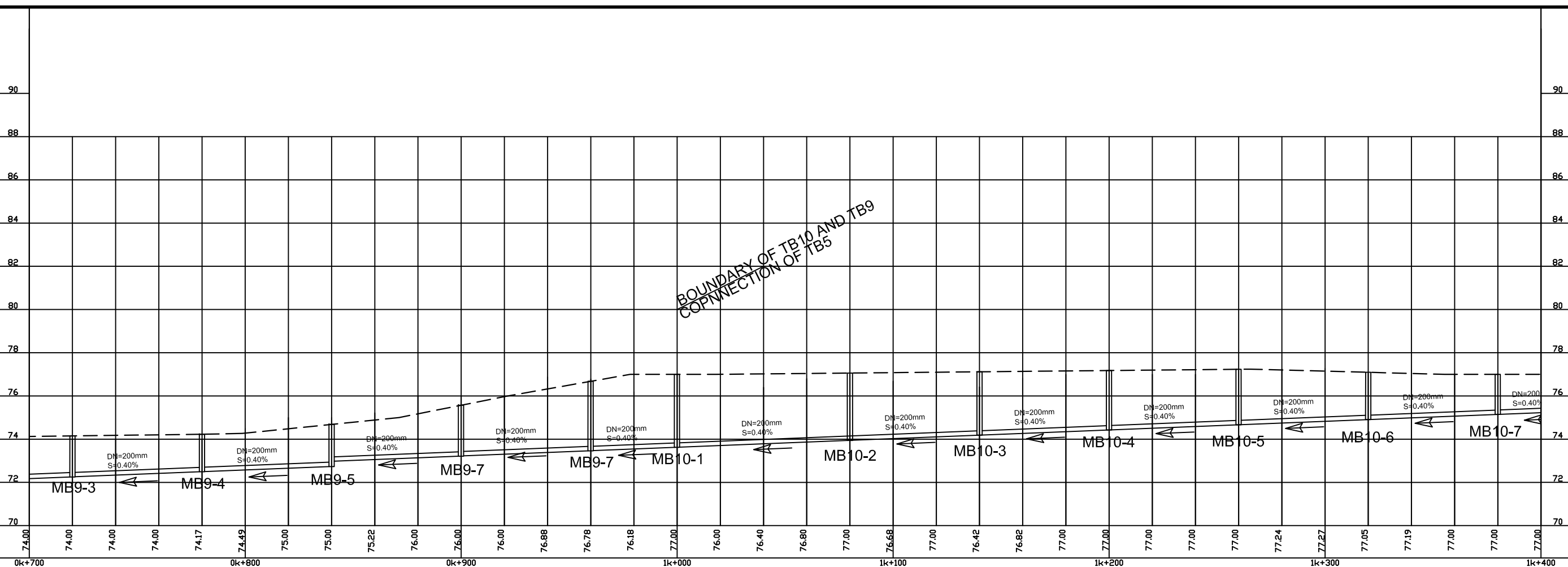
SCALE
HOR: 1000
VERT: 100

CONTRACT:
LOAN ID:
PROJECT:
JA09Q1009/09-069



PREPARATORY SURVEY FOR KINGSTON SEWERAGE DEVELOPMENT PROJECT
PRELIMINARY DESIGN FOR LOT-B
TRUNK SEWER TB7-1, TB7-2, TB9 AND TB10
EST. 0k + 000 @ 0k + 700

DATE: _____
SHT: 1 OF 3
DWG: C.P-S NOMB.01



DESIGNED:	
DRAWN:	
REVIEWED:	
ENGINEER:	
NO.	DATE
	ISSUED FOR



SCALE
HOR: 1000
VERT: 100

CONTRACT: _____
LOAN ID: _____
PROJECT: JA09Q1009/09-069



PREPARATORY SURVEY FOR KINGSTON SEWERAGE DEVELOPMENT PROJECT

PRELIMINARY DESIGN FOR LOT-B

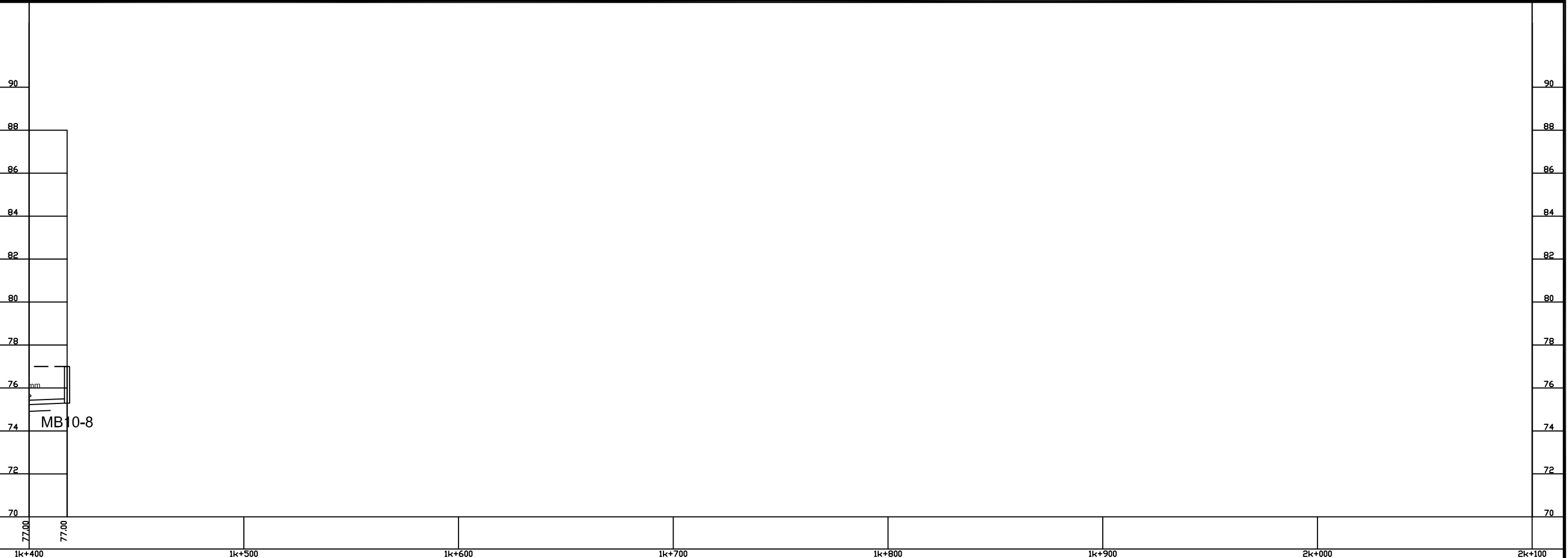
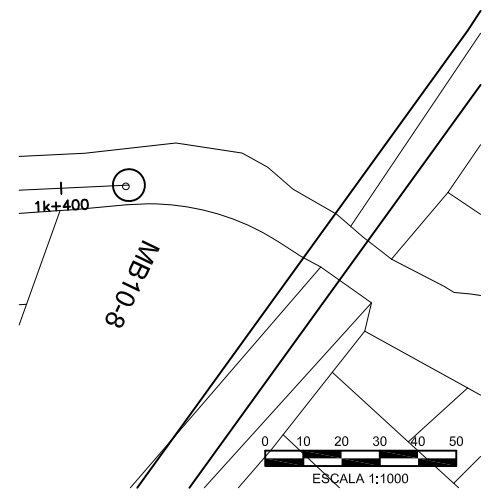
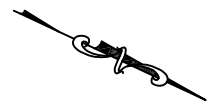
TRUNK SEWER TB7-1, TB7-2, TB9 AND TB10

EST. 0k + 700 @ 1k + 400

DATE: _____

SHT: 2 OF 3

DWG: C.P-S NOMB.02



NO.	DATE	ISSUED FOR

DESIGNED: _____
 DRAWN: _____
 REVIEWED: _____
 ENGINEER: _____



SCALE
 HOR: 1000
 VERT: 100

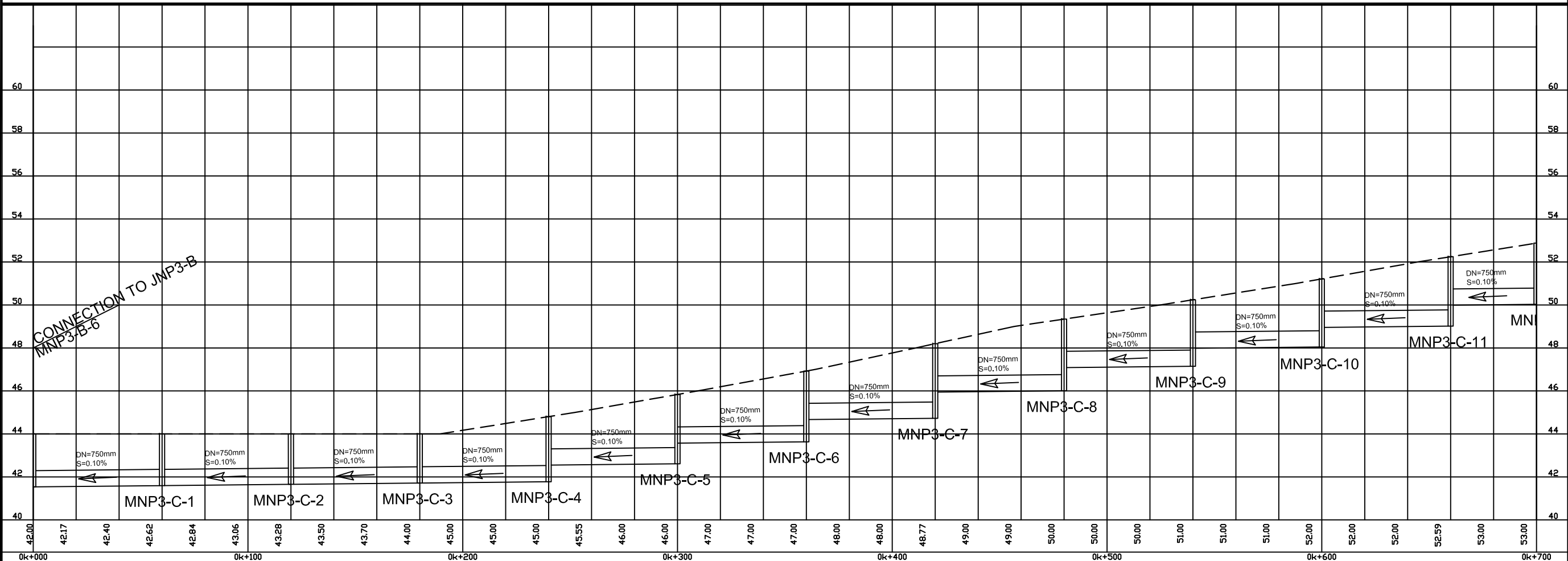
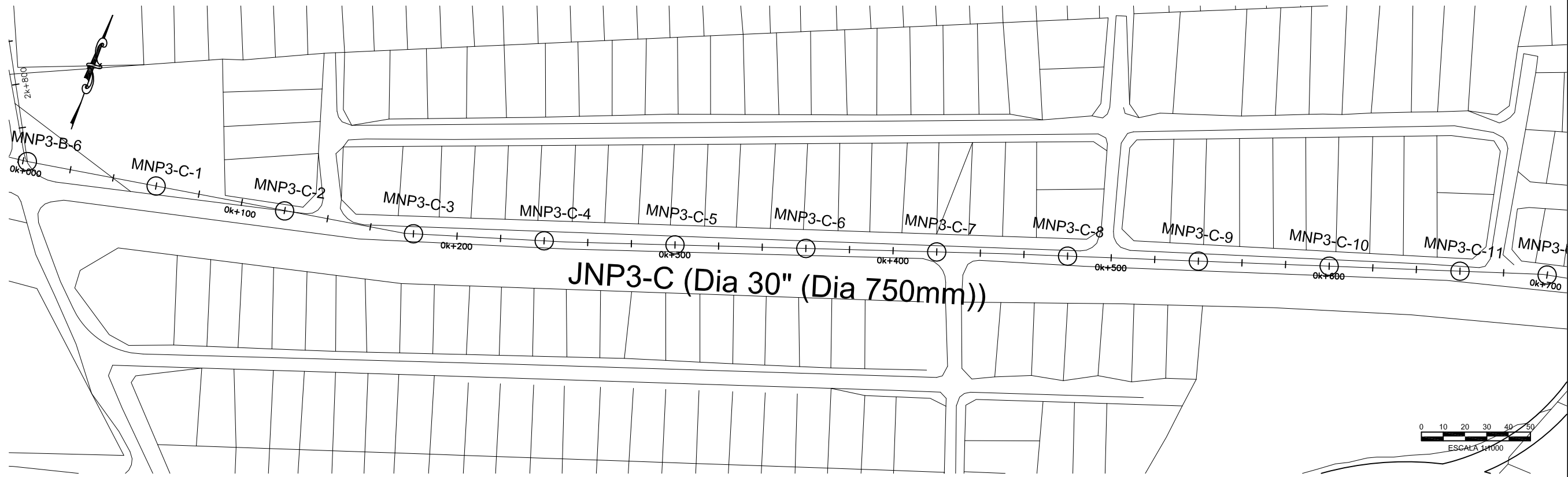
CONTRACT: _____
 LOAN ID: _____
 PROJECT: JA09Q1009/09-069



PREPARATORY SURVEY FOR
 KINGSTON SEWERAGE DEVELOPMENT PROJECT

PRELIMINARY DESIGN FOR LOT-B
 TRUNK SEWER TB7-1, TB7-2, TB9 AND TB10
 EST. 1k + 400 @ 1k + 418

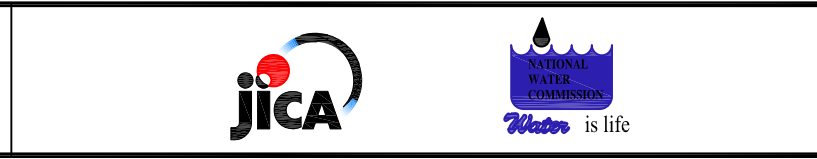
DATE: _____
 SHT: 3 OF 3
 DWG: C.P-S NOMB.03



DESIGNED:	
DRAWN:	
REVIEWED:	
ENGINEER:	
NO.	DATE
	ISSUED FOR

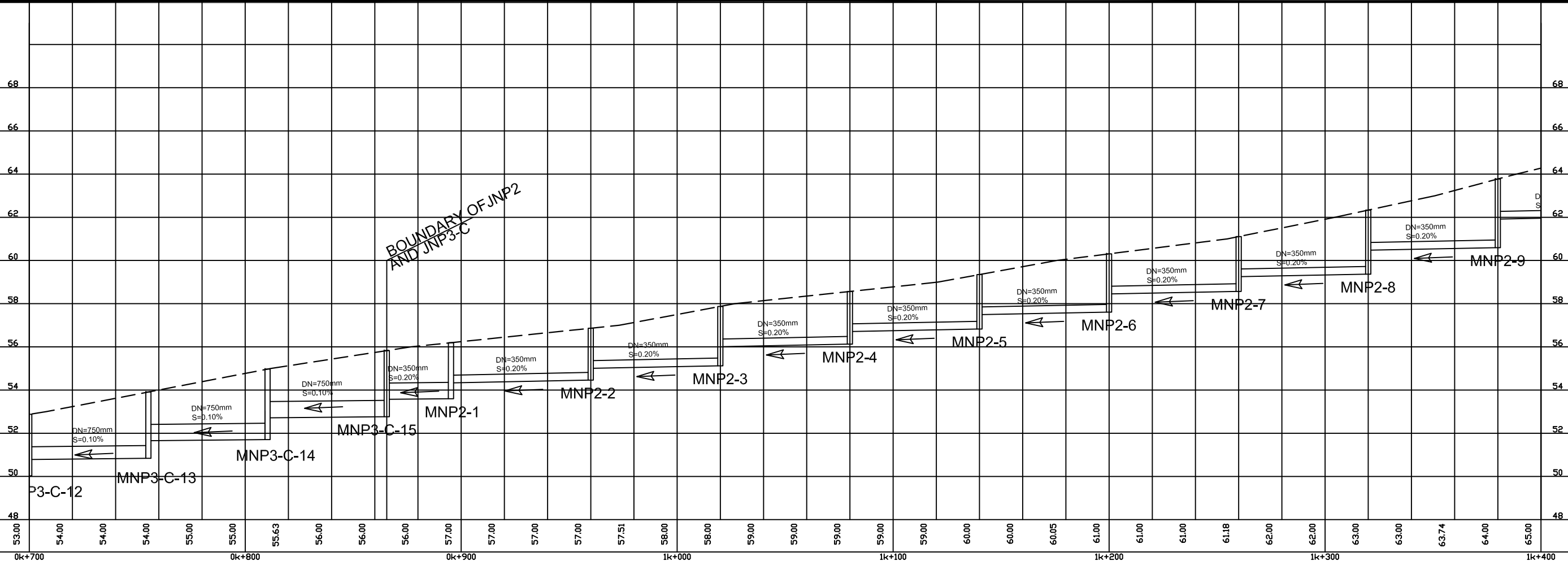
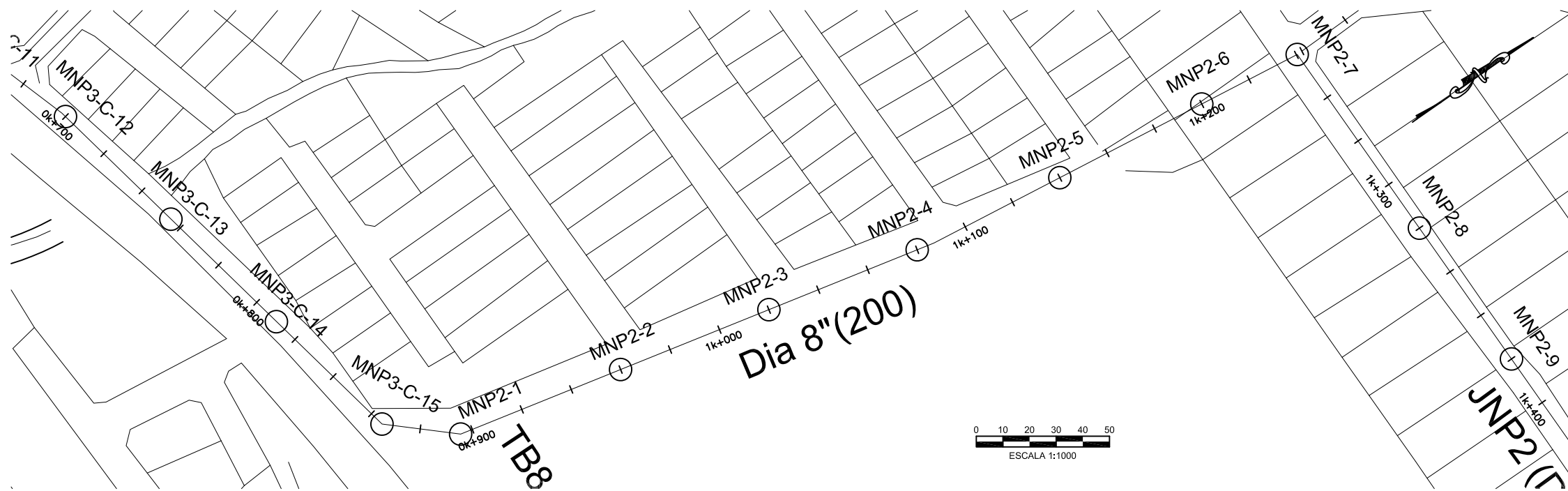
NIPPON KOEI
Challenging mind, Changing dynamics

SCALE: HOR: 1000, VERT: 100
CONTRACT: _____
LOAN ID: _____
PROJECT: JA09Q1009/09-069



PREPARATORY SURVEY FOR KINGSTON SEWERAGE DEVELOPMENT PROJECT
PRELIMINARY DESIGN FOR LOT-B
TRUNK SEWER JNP3-C, JNP2 AND TB8
EST. 0k + 000 @ 0k + 700

DATE: _____
SHT: 1 OF 5
DWG: C.TD7.01



DESIGNED:	
DRAWN:	
REVIEWED:	
ENGINEER:	
NO.	DATE
	ISSUED FOR



SCALE
HOR: 1000
VERT: 100

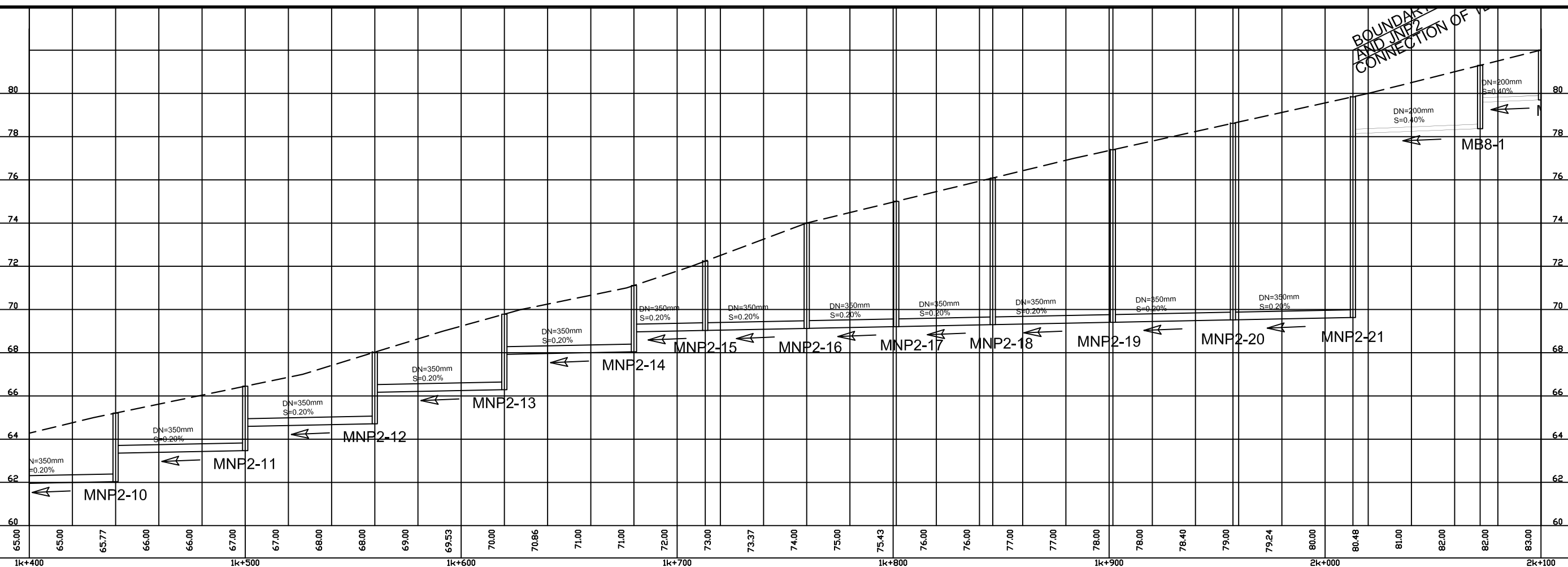
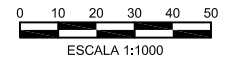
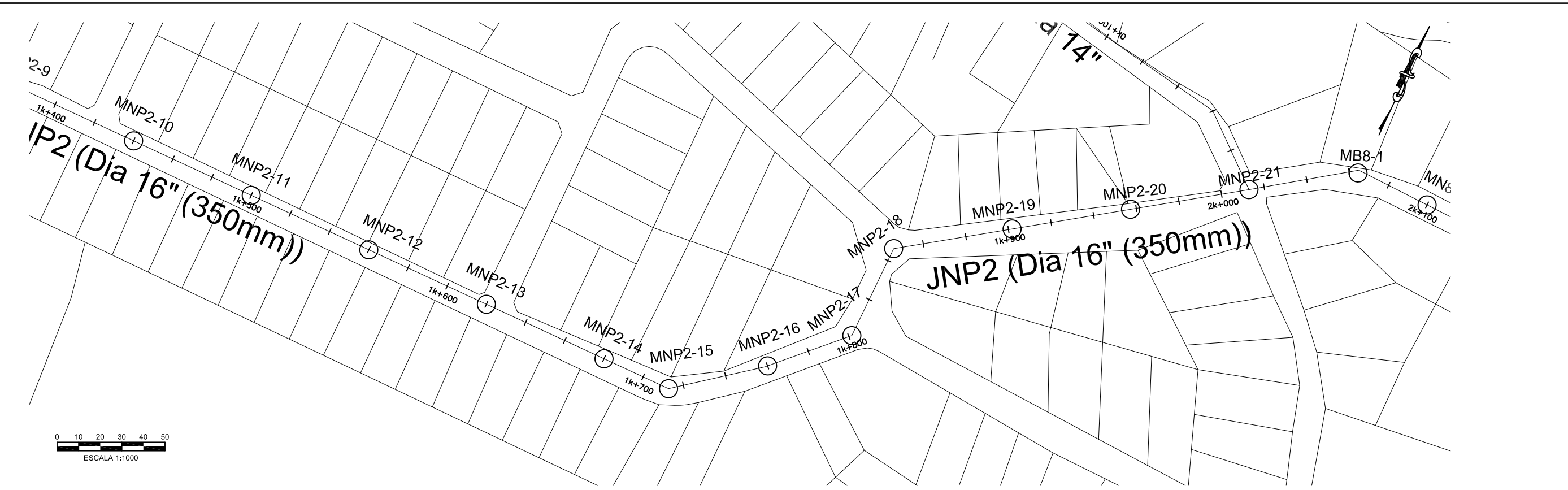
CONTRACT:
LOAN ID:
PROJECT:
JA09Q1009/09-069



PREPARATORY SURVEY FOR
KINGSTON SEWERAGE DEVELOPMENT PROJECT

PRELIMINARY DESIGN FOR LOT-B
TRUNK SEWER JNP3-C, JNP2 AND TB8
EST. 0k + 700 @ 1k + 400

DATE: _____
SHT: 2 OF 5
DWG: C.TD7.02



DESIGNED:	
DRAWN:	
REVIEWED:	
ENGINEER:	
NO.	DATE
	ISSUED FOR



SCALE
HOR: 1000
VERT: 100

CONTRACT: _____
LOAN ID: _____
PROJECT: JA09Q1009/09-069

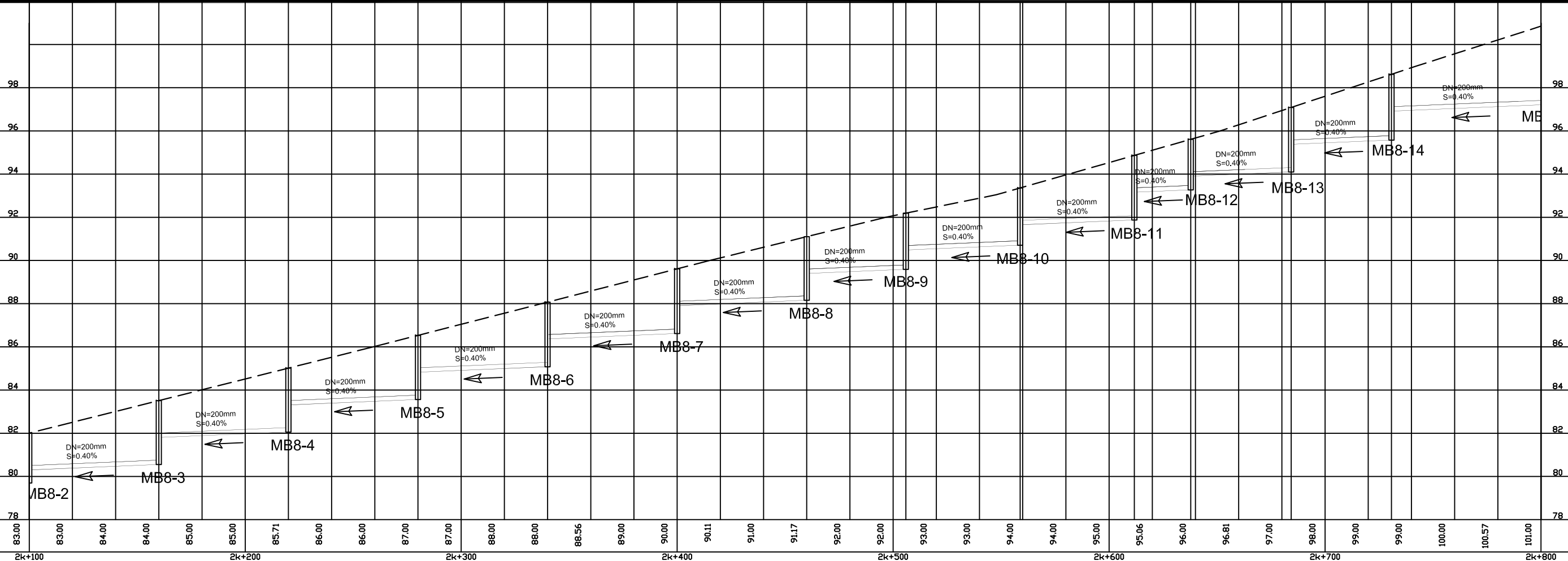
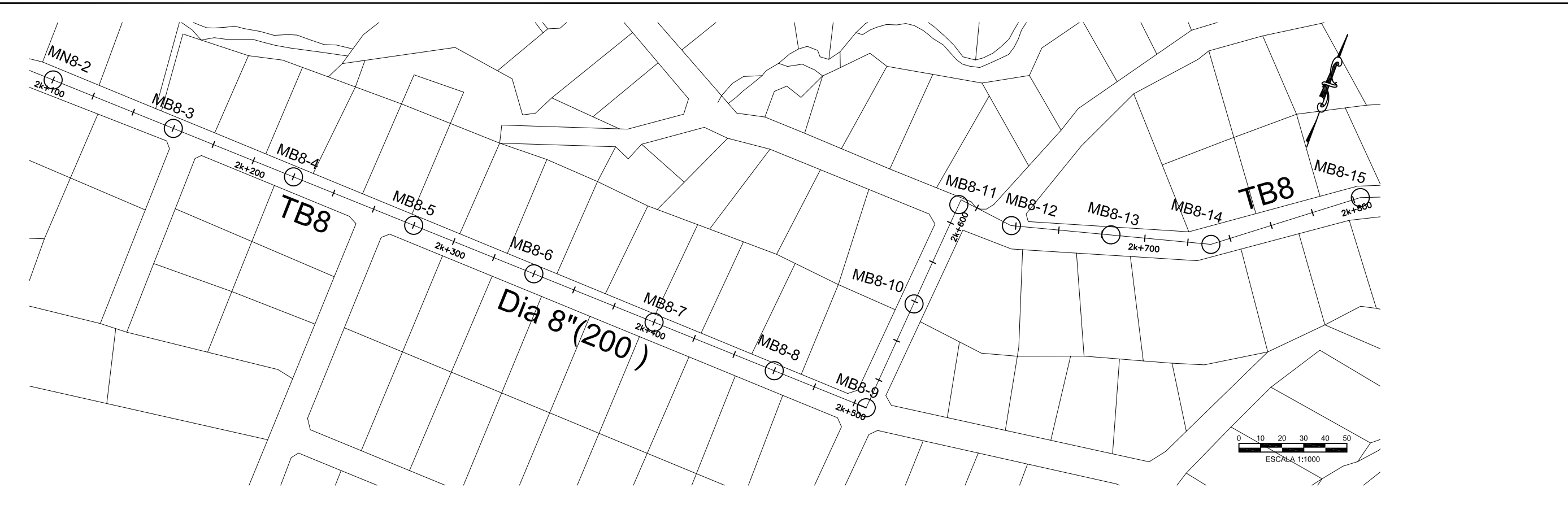


PREPARATORY SURVEY FOR KINGSTON SEWERAGE DEVELOPMENT PROJECT

PRELIMINARY DESIGN FOR LOT-B TRUNK SEWER JNP3-C, JNP2 AND TB8

EST. 1k + 400 @ 2k + 100

DATE: _____
SHT: 3 OF 5
DWG: C.TD7.03



DESIGNED:	
DRAWN:	
REVIEWED:	
ENGINEER:	
NO.	DATE
	ISSUED FOR



SCALE
HOR: 1000
VERT: 100

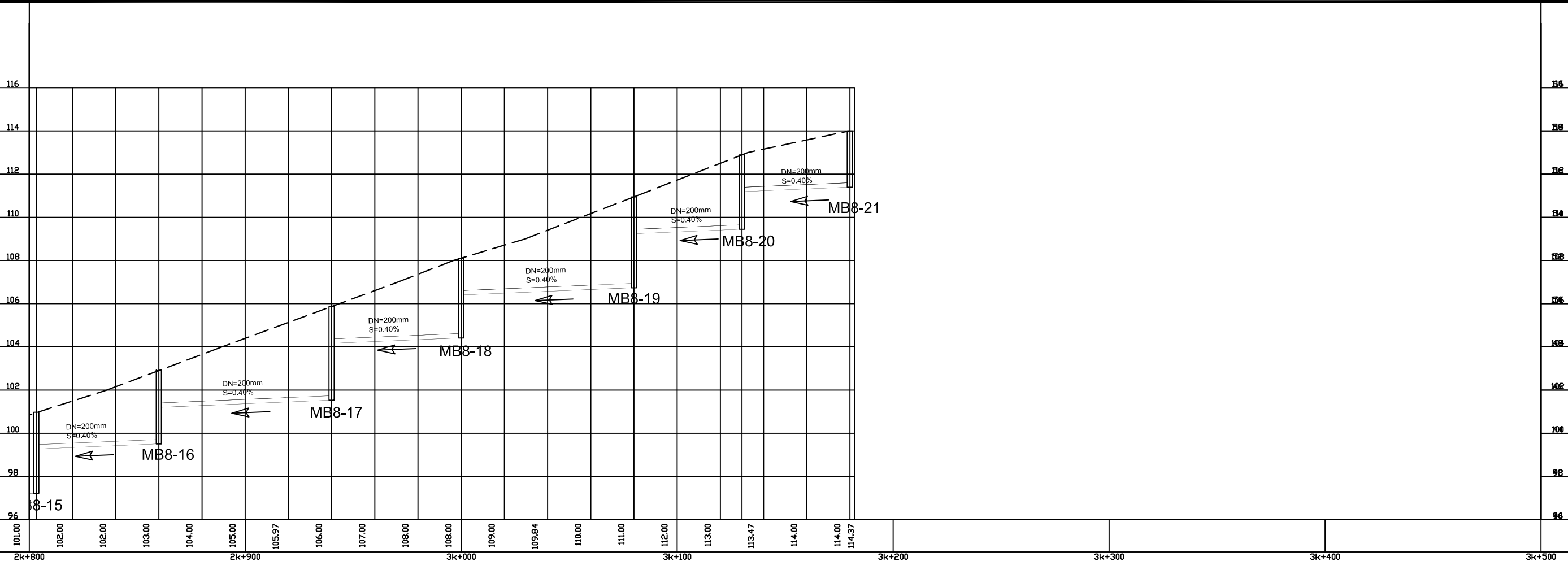
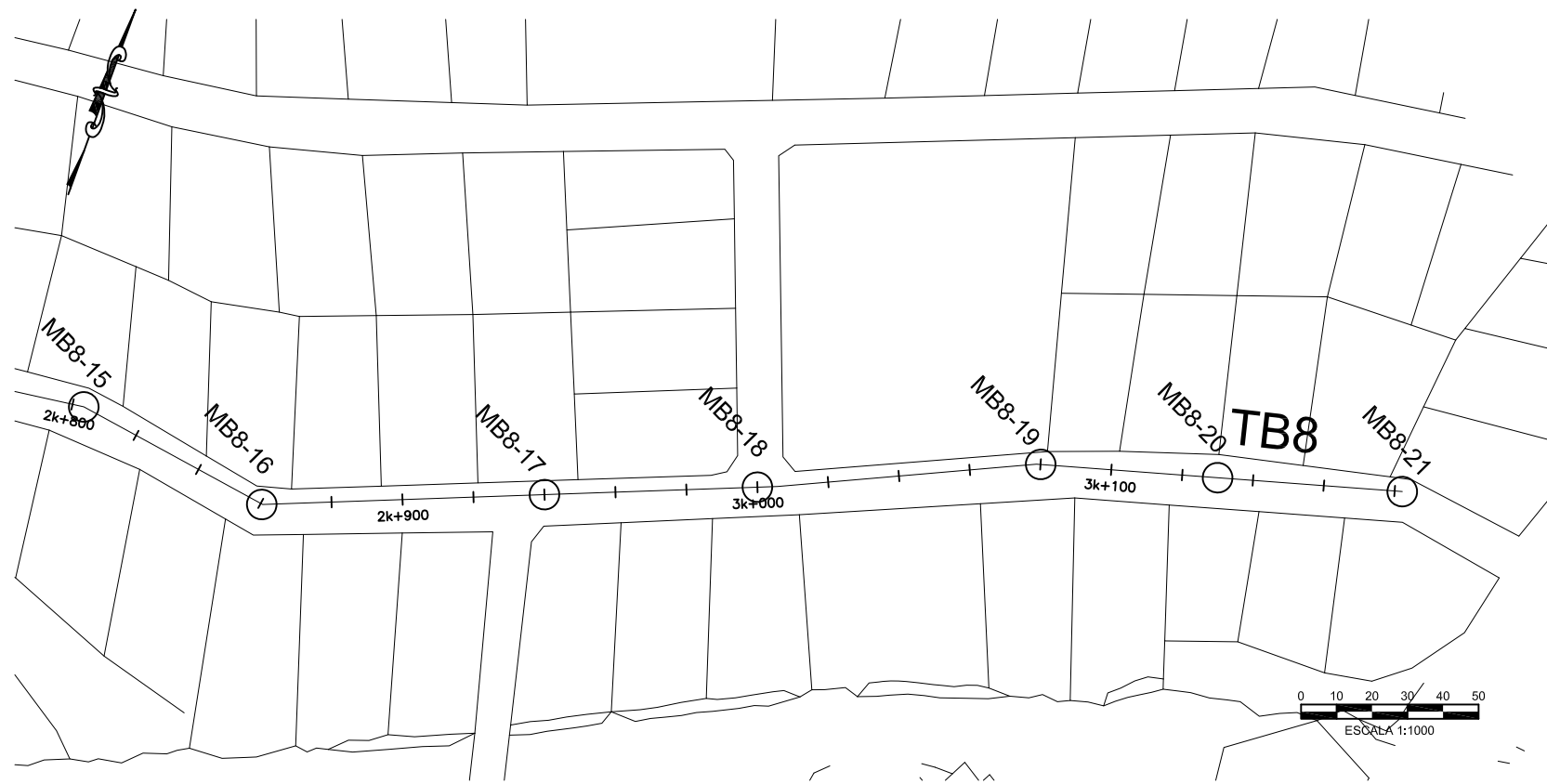
CONTRACT:
LOAN ID:
PROJECT:
JA09Q1009/09-069



PREPARATORY SURVEY FOR
KINGSTON SEWERAGE DEVELOPMENT PROJECT

PRELIMINARY DESIGN FOR LOT-B
TRUNK SEWER JNP3-C, JNP2 AND TB8
EST. 2k + 100 @ 2k + 800

DATE: _____
SHT: 4 OF 5
DWG: C.TD7.04



DESIGNED:	
DRAWN:	
REVIEWED:	
ENGINEER:	
NO.	DATE
	ISSUED FOR



SCALE
HOR: 1000
VERT: 100

CONTRACT:
LOAN ID:
PROJECT:
JA09Q1009/09-069



PREPARATORY SURVEY FOR
KINGSTON SEWERAGE DEVELOPMENT PROJECT

PRELIMINARY DESIGN FOR LOT-B
TRUNK SEWER JNP3-C, JNP2 AND TB8
EST. 2k + 800 @ 3k + 183

DATE: _____
SHT: 5 OF 5
DWG: C.TD7.05