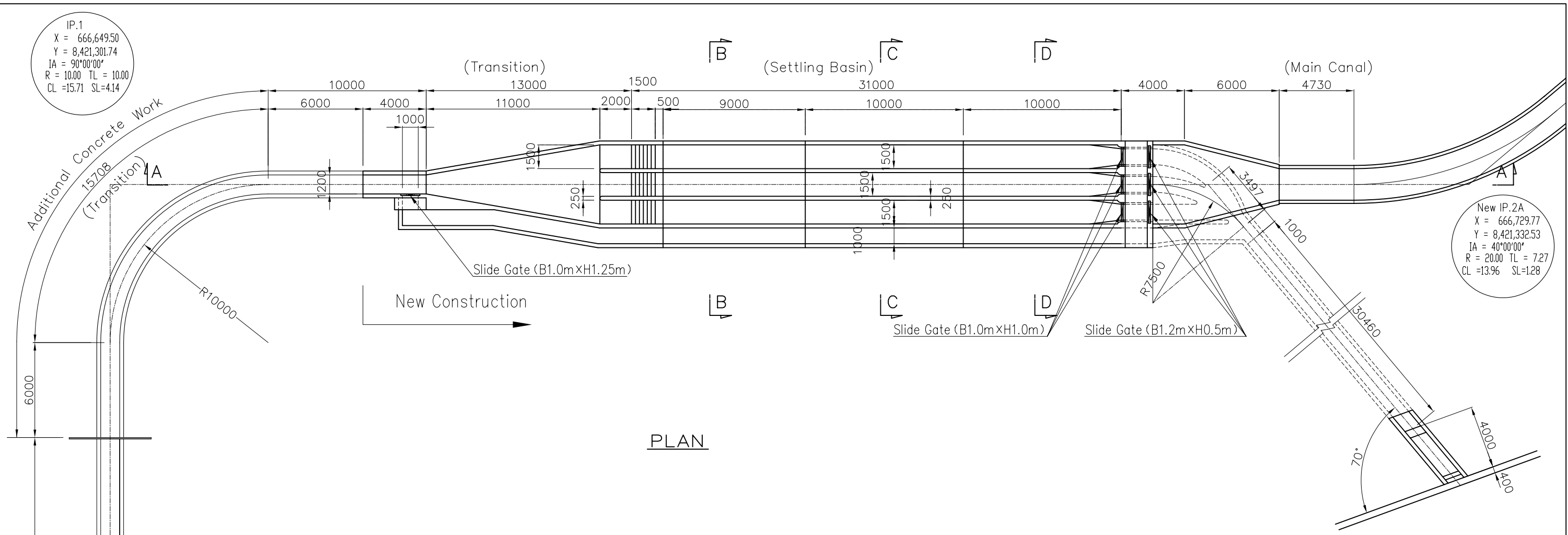
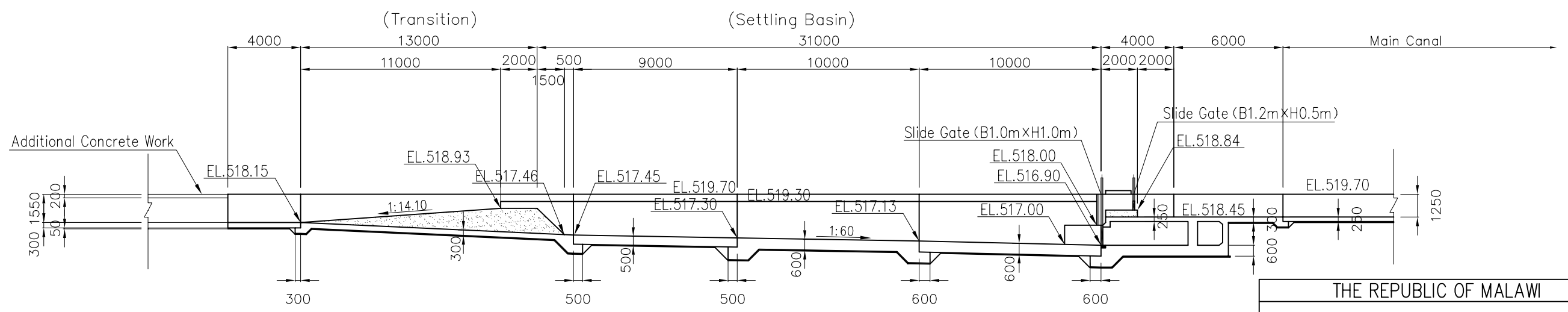


IP.1
 X = 666,649.50
 Y = 8,421,301.74
 IA = 90°00'00"
 R = 10.00 TL = 10.00
 CL = 15.71 SL = 4.14

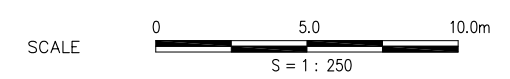
New IP.2A
 X = 666,729.77
 Y = 8,421,332.53
 IA = 40°00'00"
 R = 20.00 TL = 7.27
 CL = 13.96 SL = 1.28



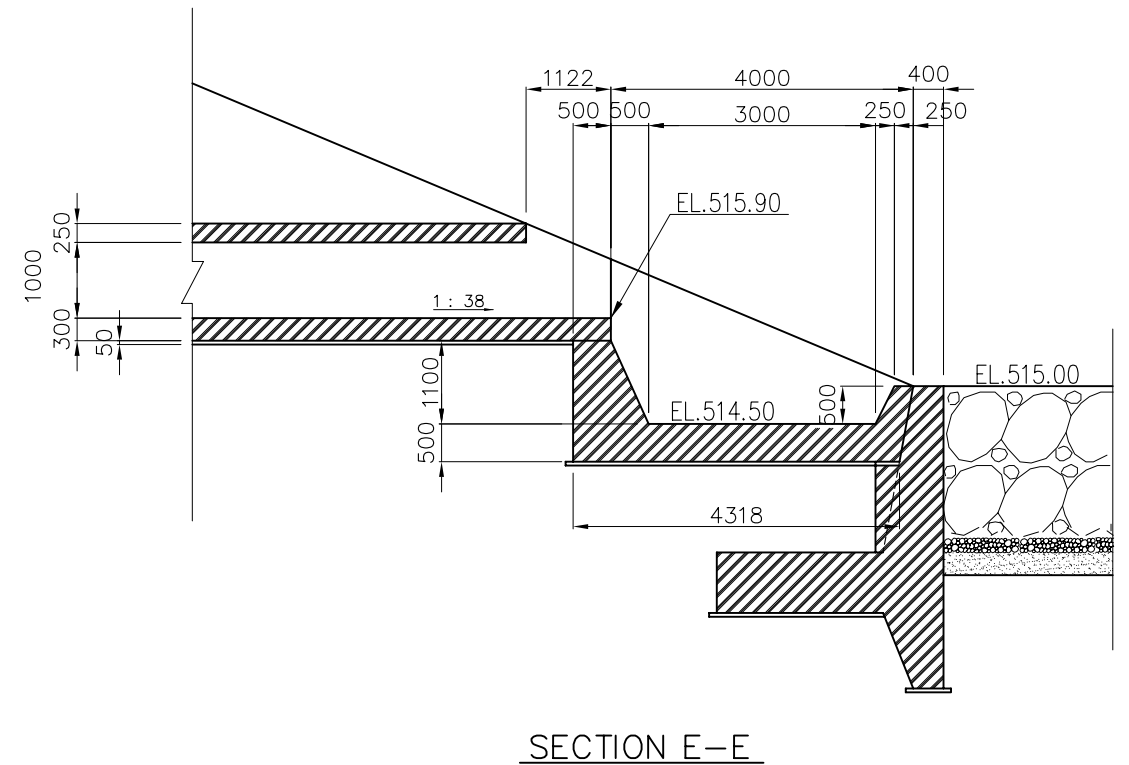
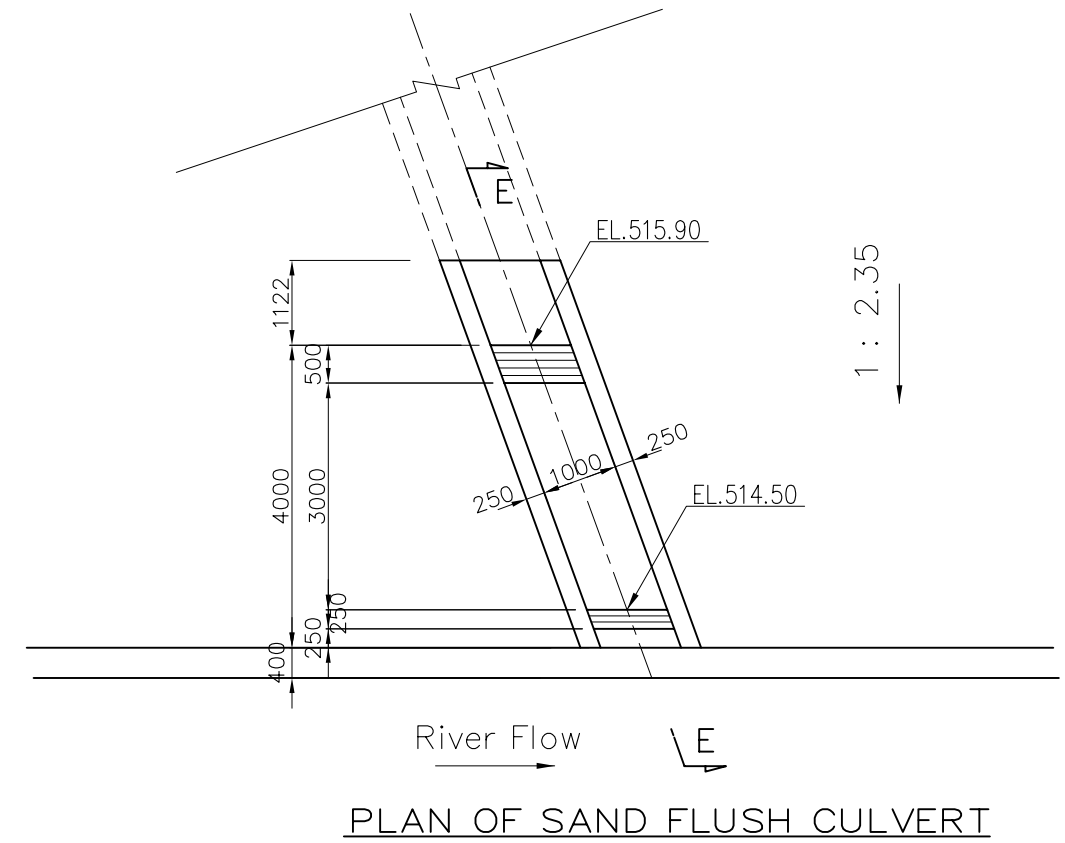
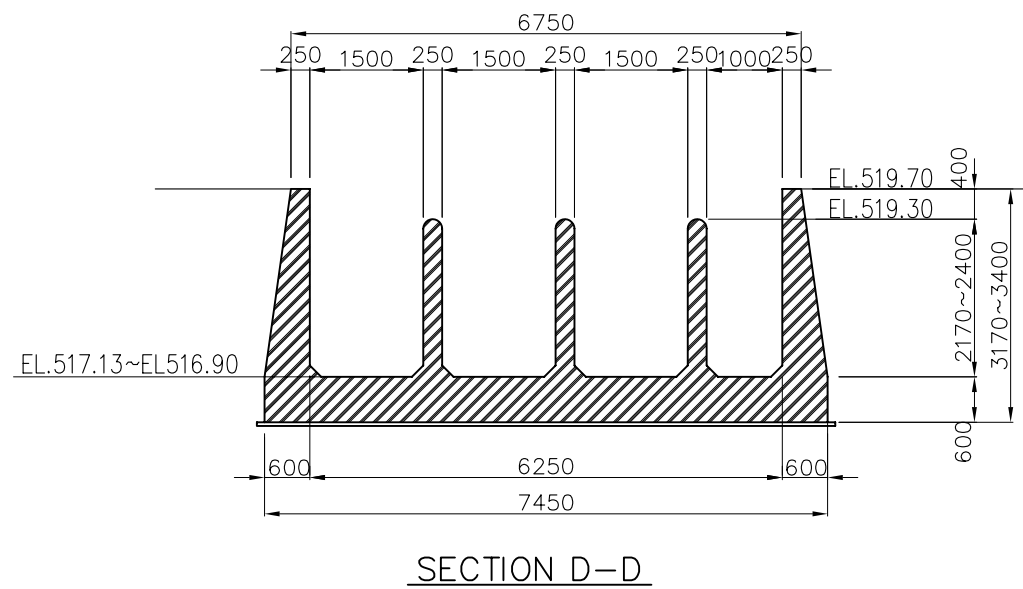
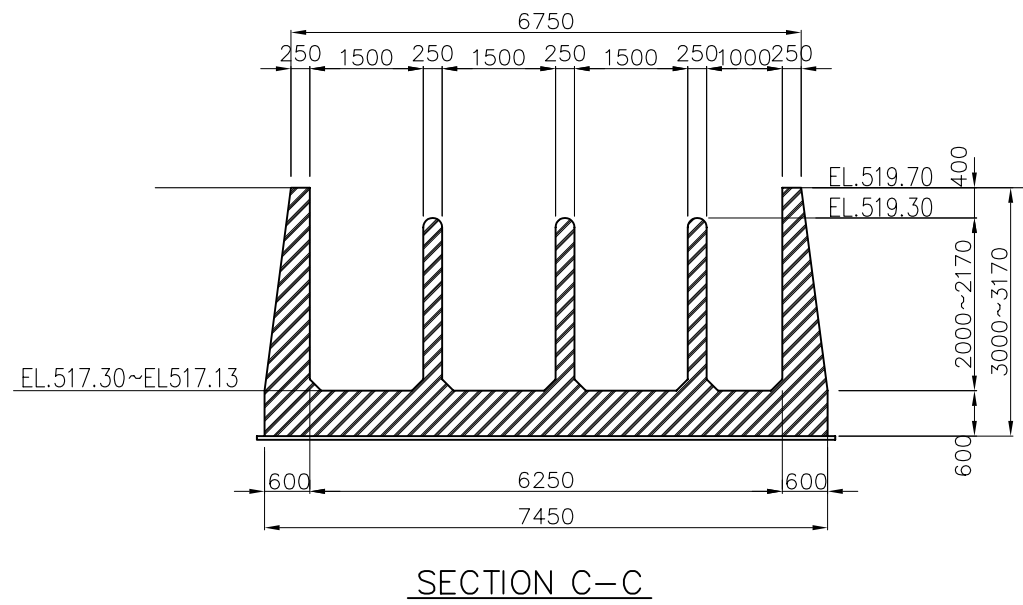
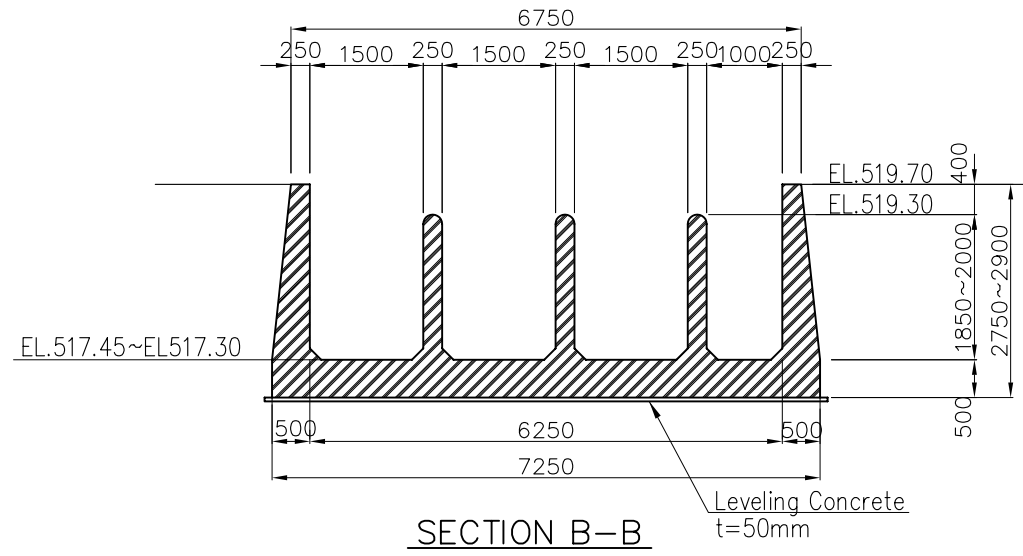
PLAN



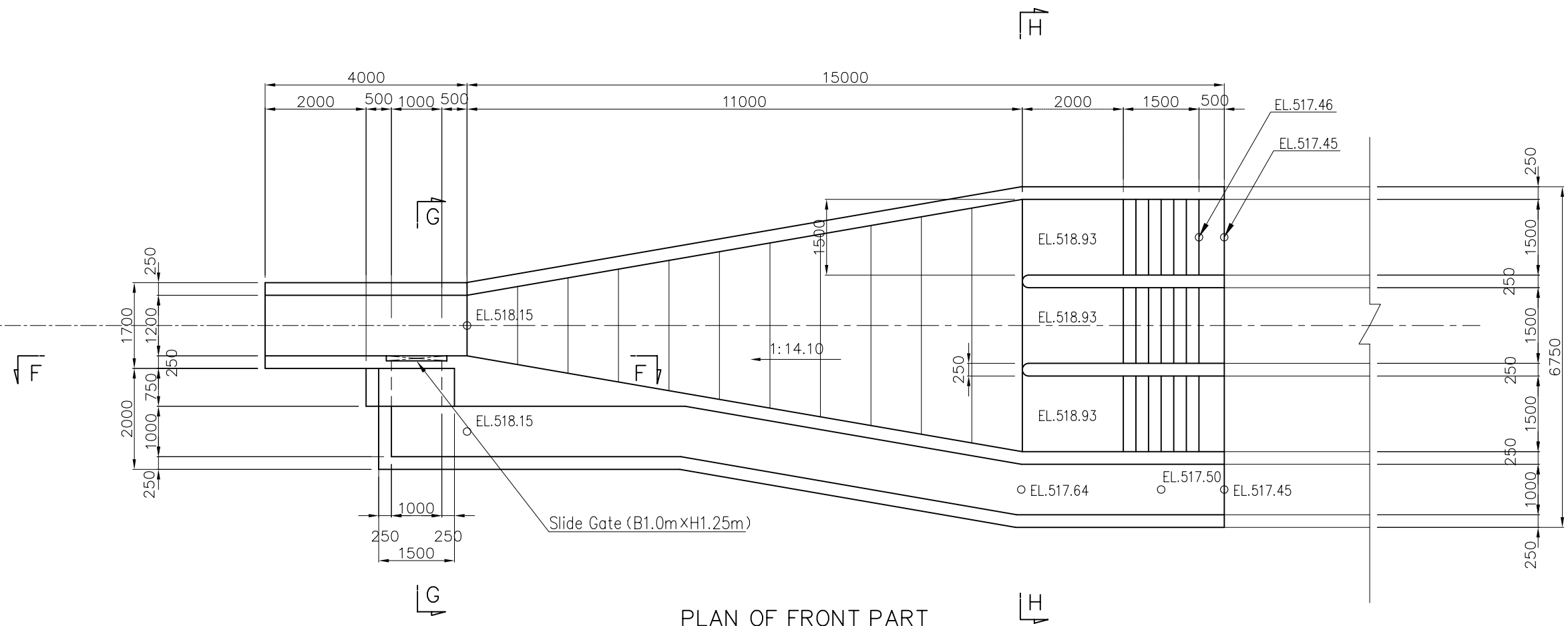
SECTION A-A



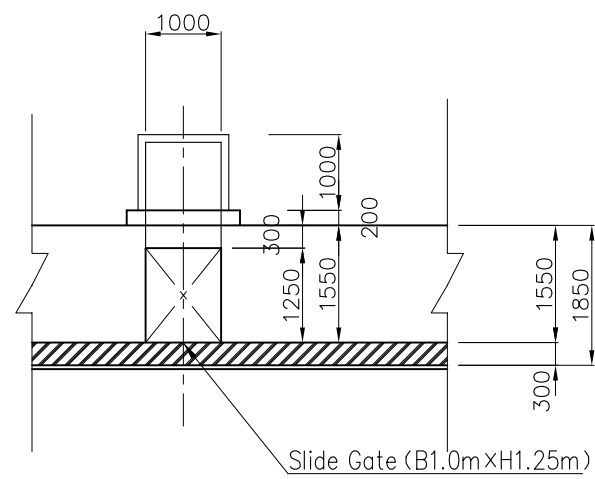
THE REPUBLIC OF MALAWI	
THE PROJECT FOR REHABILITATION OF BWANJE VALLEY IRRIGATION SYSTEM	
TITLE OF DRAWING 沈砂池 平面・縦断面図	
DRAWING NO.	SB-01
NIPPON KOEI CO., LTD.	



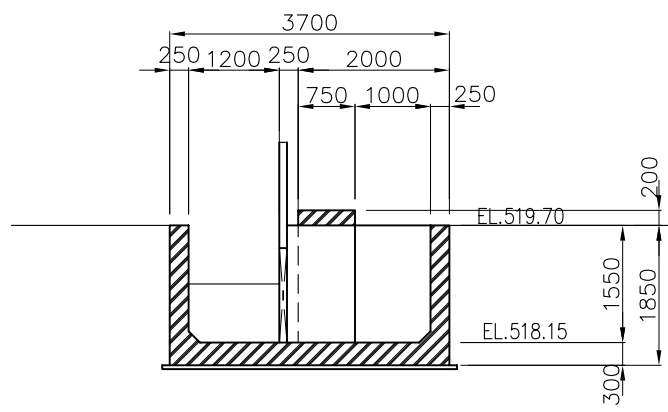
THE REPUBLIC OF MALAWI	
THE PROJECT FOR REHABILITATION OF BWANJE VALLEY IRRIGATION SYSTEM	
TITLE OF DRAWING 沈砂池 横断面 (1/3)	
DRAWING NO.	SB-02
NIPPON KOEI CO., LTD.	



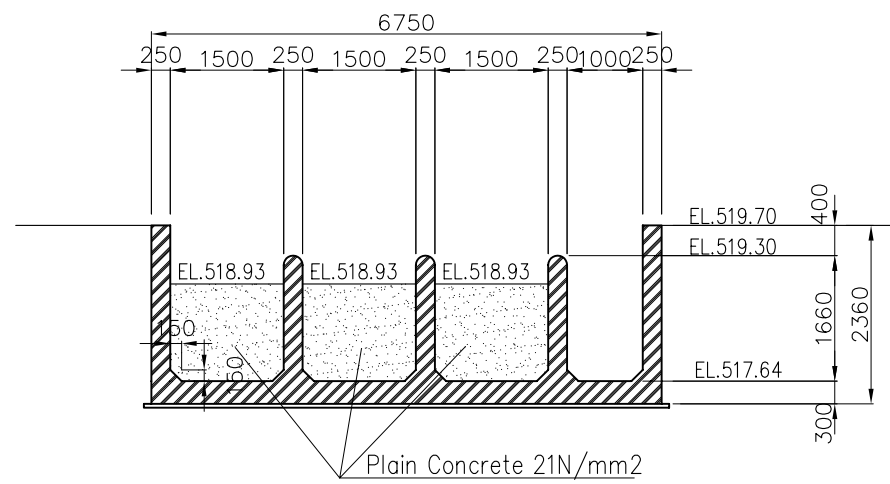
PLAN OF FRONT PART



SECTION F-F



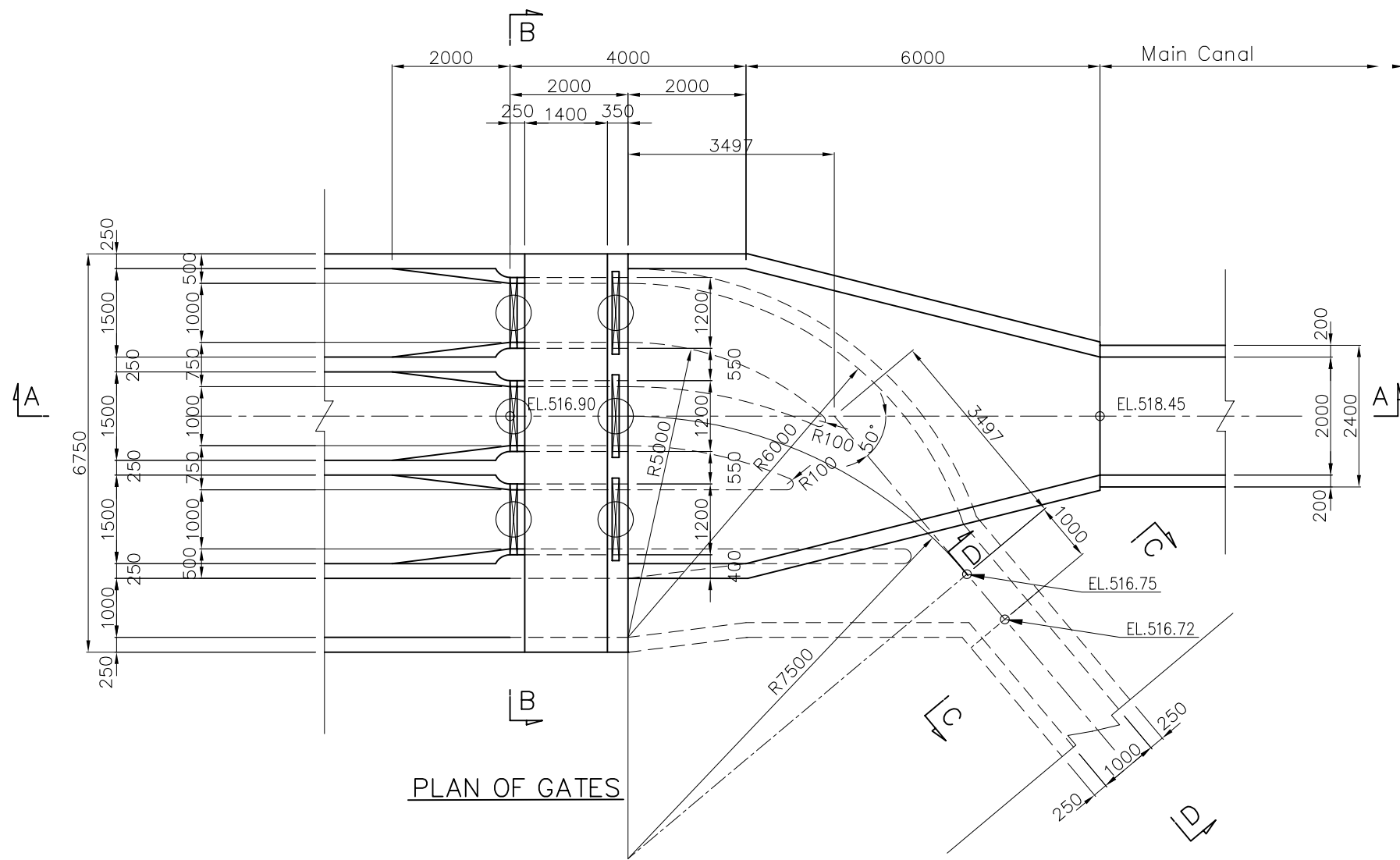
SECTION G-G



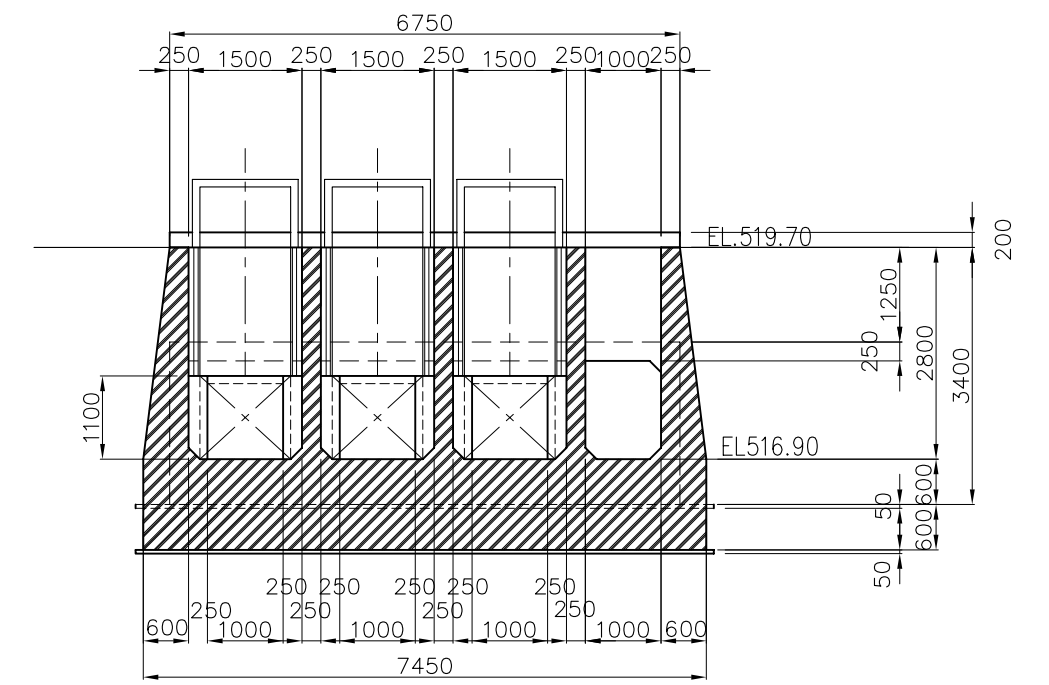
SECTION H-H



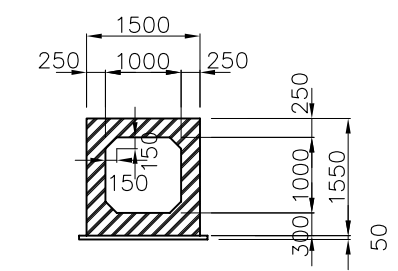
THE REPUBLIC OF MALAWI	
THE PROJECT FOR REHABILITATION OF BWANJE VALLEY IRRIGATION SYSTEM	
TITLE OF DRAWING 沈砂池 横断面 (2/3)	
DRAWING NO.	SB-03
NIPPON KOEI CO., LTD.	



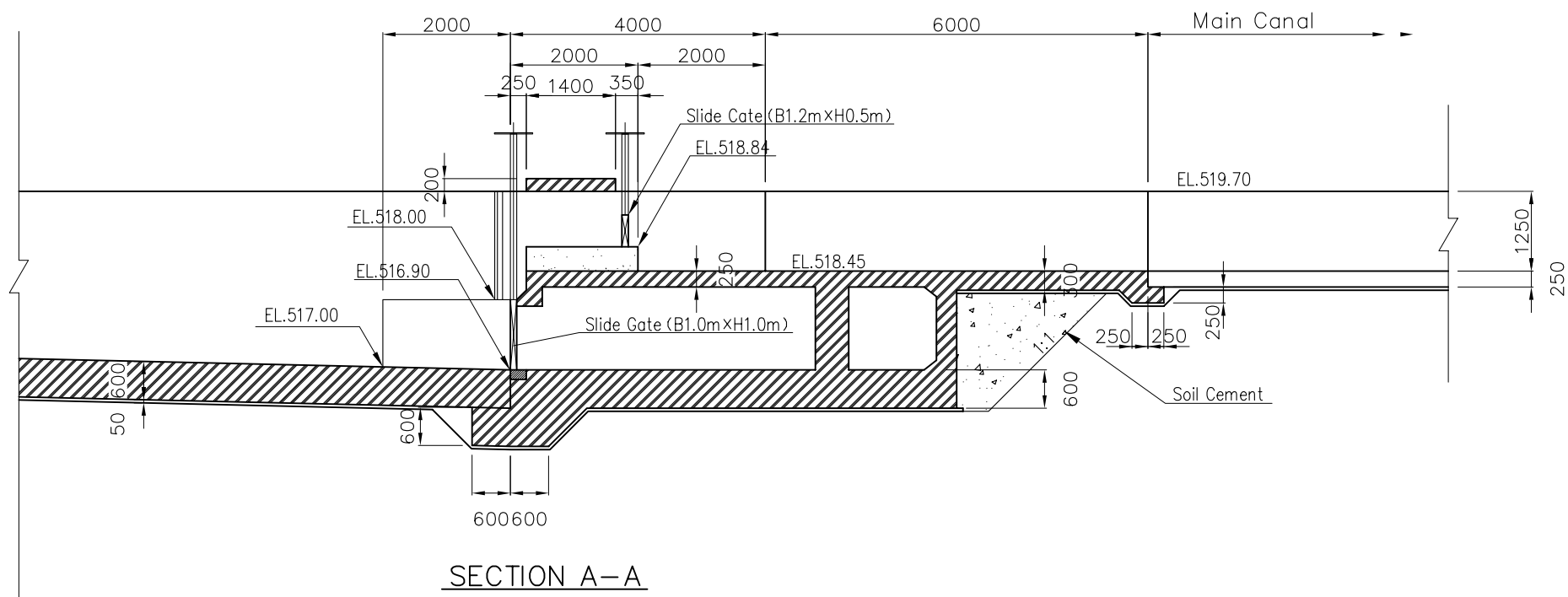
PLAN OF GATES



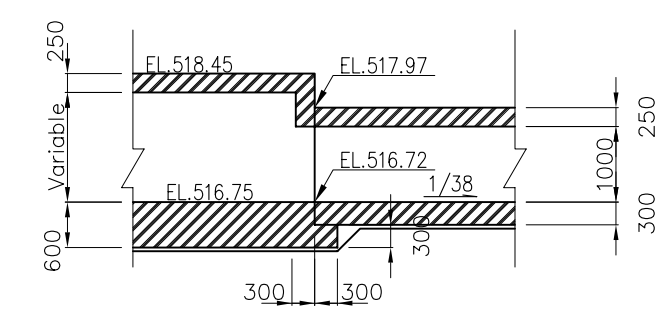
SECTION B-B



SECTION C-C



SECTION A-A

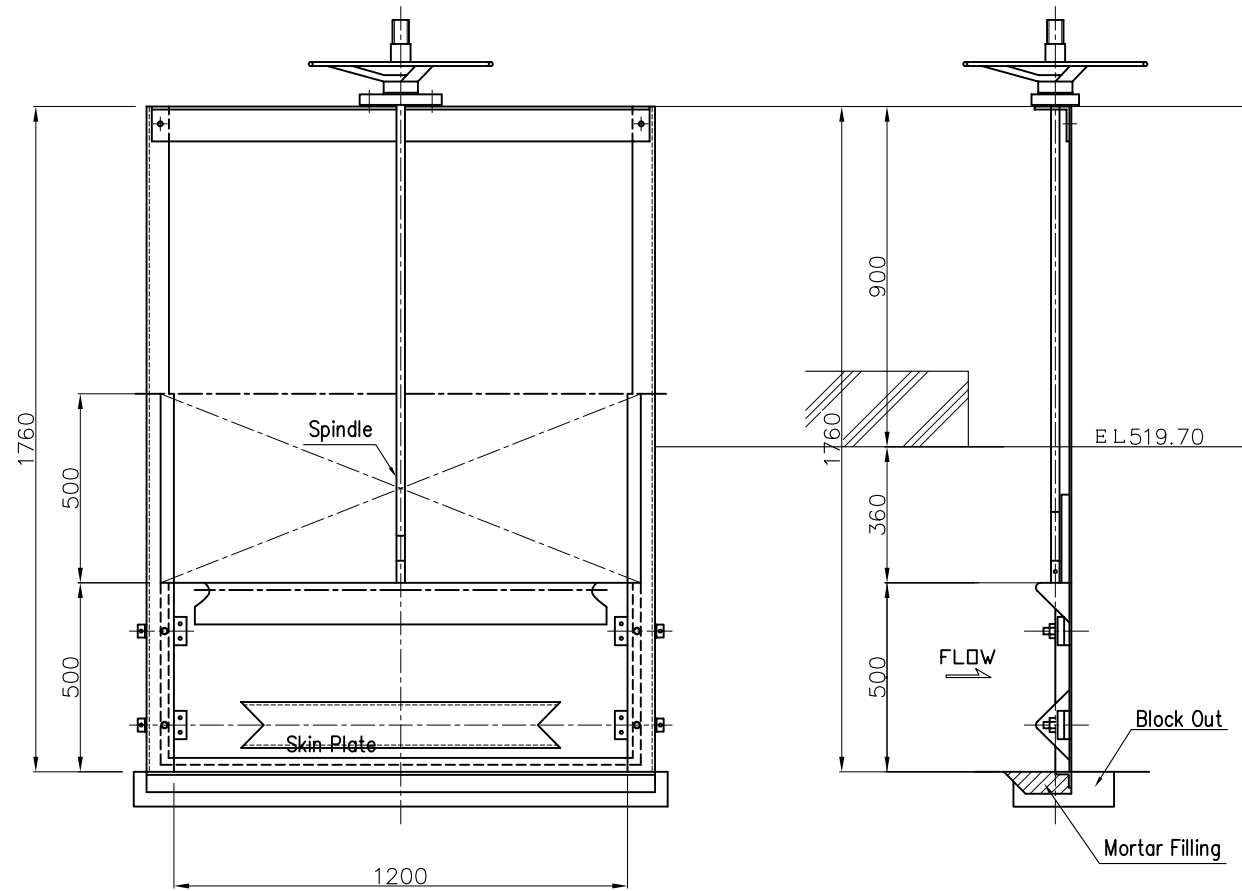


SECTION D-D



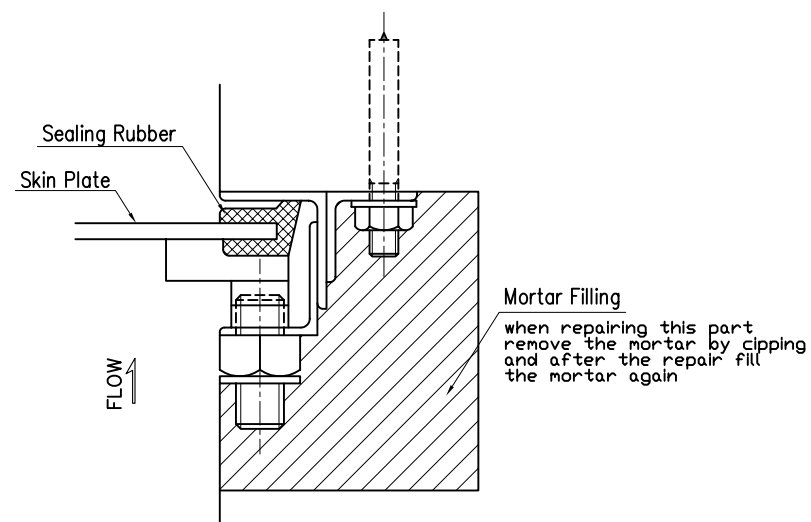
THE REPUBLIC OF MALAWI	
THE PROJECT FOR REHABILITATION OF BWANJE VALLEY IRRIGATION SYSTEM	
TITLE OF DRAWING 沈砂池 横断面图 (3/3)	
DRAWING NO.	SB-04
NIPPON KOEI CO., LTD.	

SLIDE GATE FOR CONTROL GATE (N=3) SCALE A



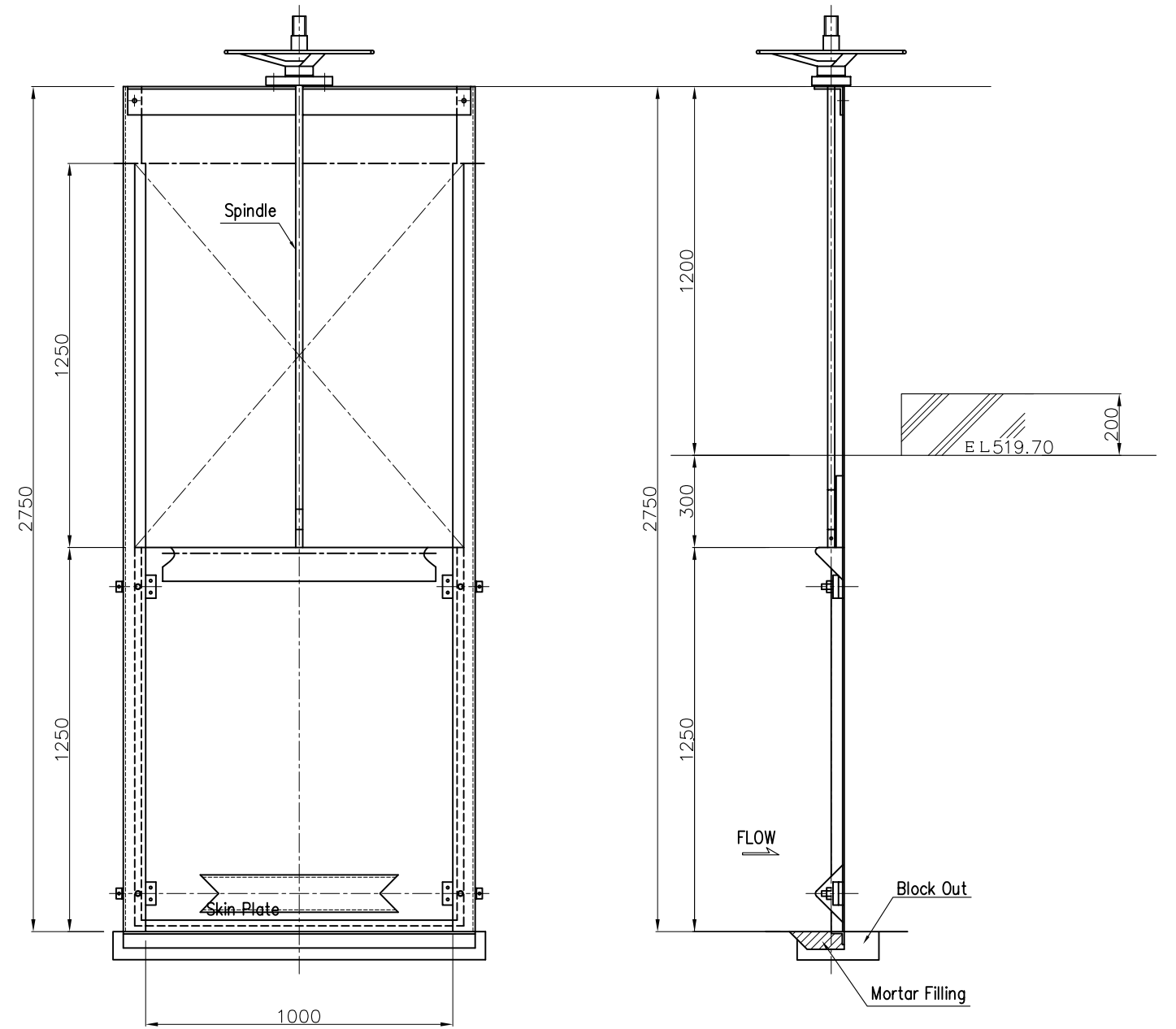
ELEVATION

SECTION



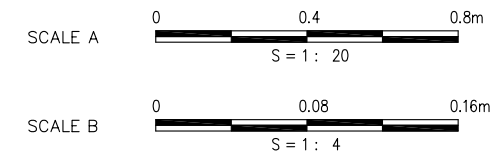
SEALING DETAIL SCALE B

SLIDE GATE FOR SPILLWAY SCALE A

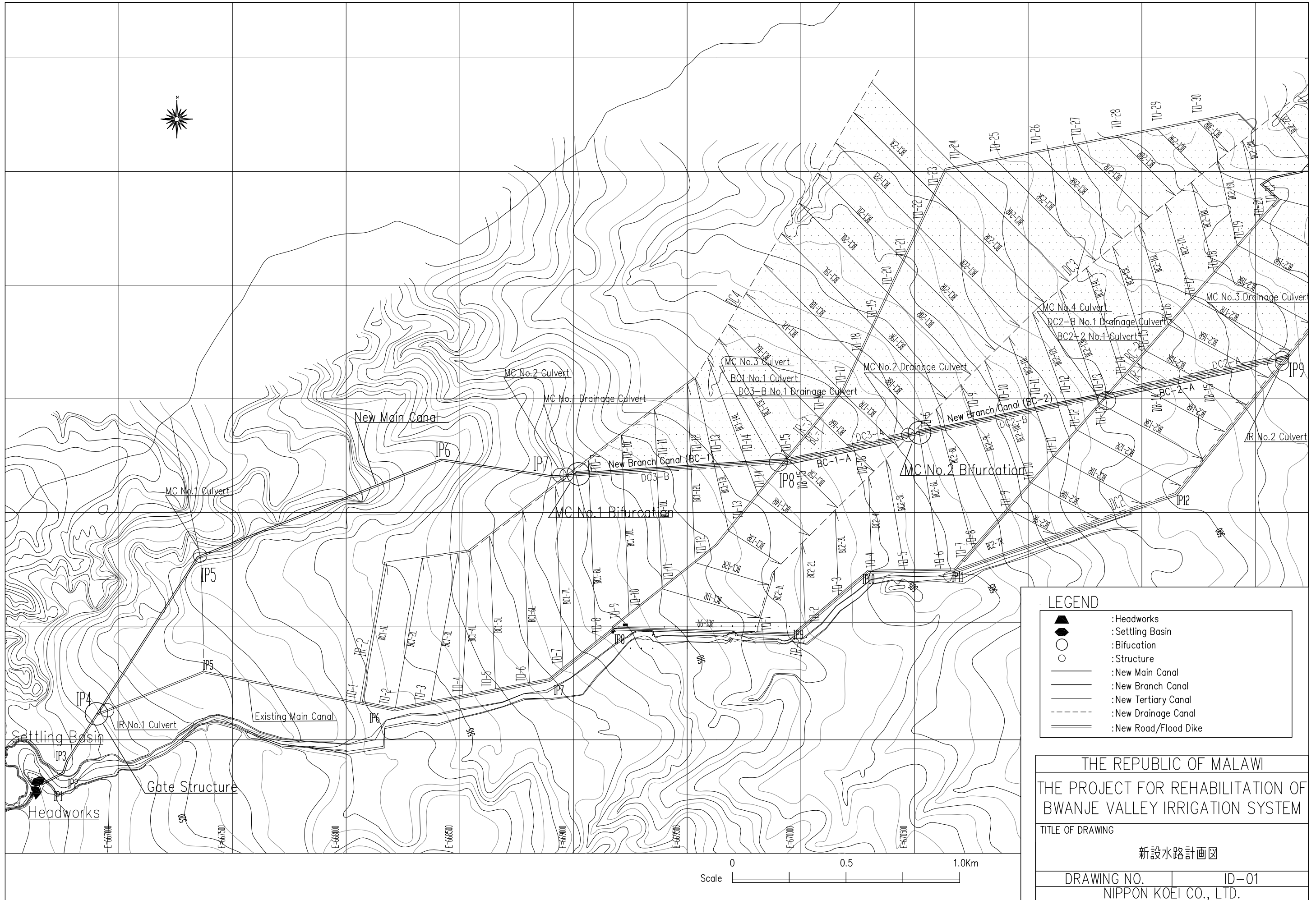


ELEVATION

SECTION



THE REPUBLIC OF MALAWI	
THE PROJECT FOR REHABILITATION OF BWANJE VALLEY IRRIGATION SYSTEM	
TITLE OF DRAWING	
沈砂池用ゲート (2/2)	
DRAWING NO.	SB-08
NIPPON KOEI CO., LTD.	

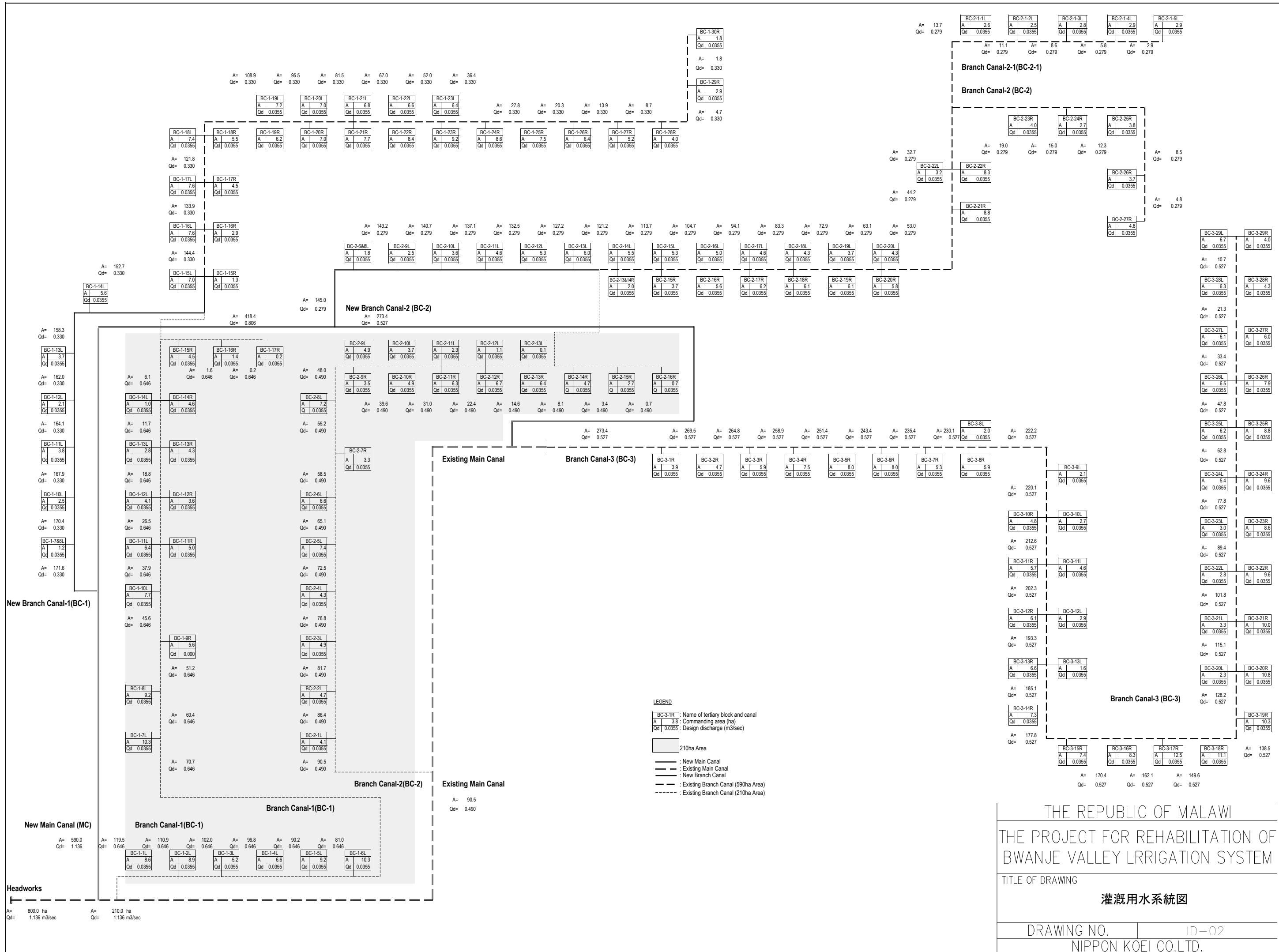


LEGEND

- : Headworks
- : Settling Basin
- : Bifurcation
- : Structure
- : New Main Canal
- : New Branch Canal
- : New Tertiary Canal
- : New Drainage Canal
- : New Road/Flood Dike

THE REPUBLIC OF MALAWI
 THE PROJECT FOR REHABILITATION OF
 BWANJE VALLEY IRRIGATION SYSTEM

TITLE OF DRAWING
 新設水路計画図
 DRAWING NO. ID-01
 NIPPON KOEI CO., LTD.



Headworks
 A= 800.0 ha
 Qd= 1.136 m³/sec

New Main Canal (MC)
 A= 590.0 ha
 Qd= 1.136 m³/sec

New Branch Canal-1 (BC-1)

New Branch Canal-2 (BC-2)

Existing Main Canal

Branch Canal-3 (BC-3)

Existing Main Canal

Branch Canal-3 (BC-3)

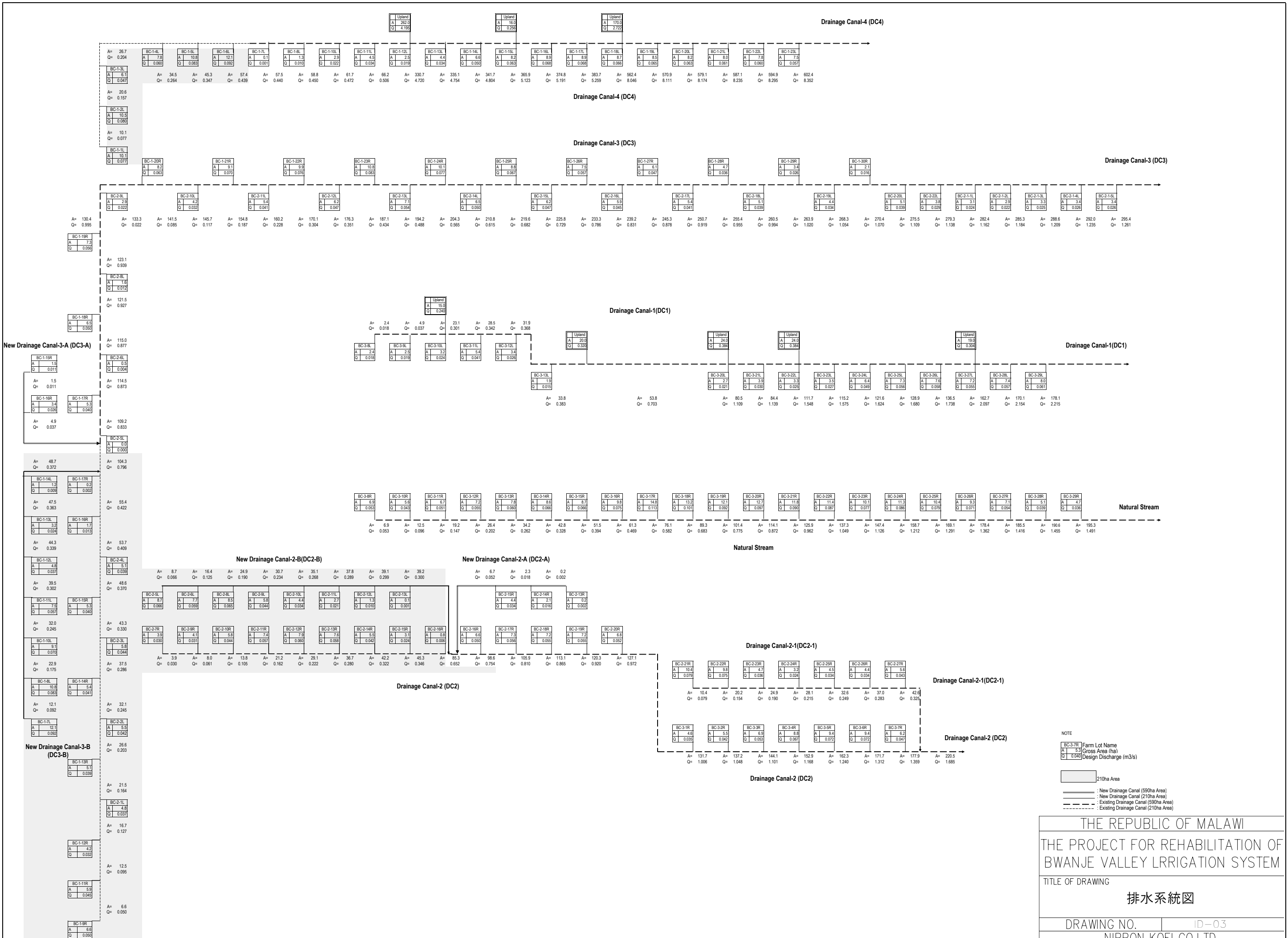
Branch Canal-2-1 (BC-2-1)

Branch Canal-2 (BC-2)

Branch Canal-2 (BC-2)

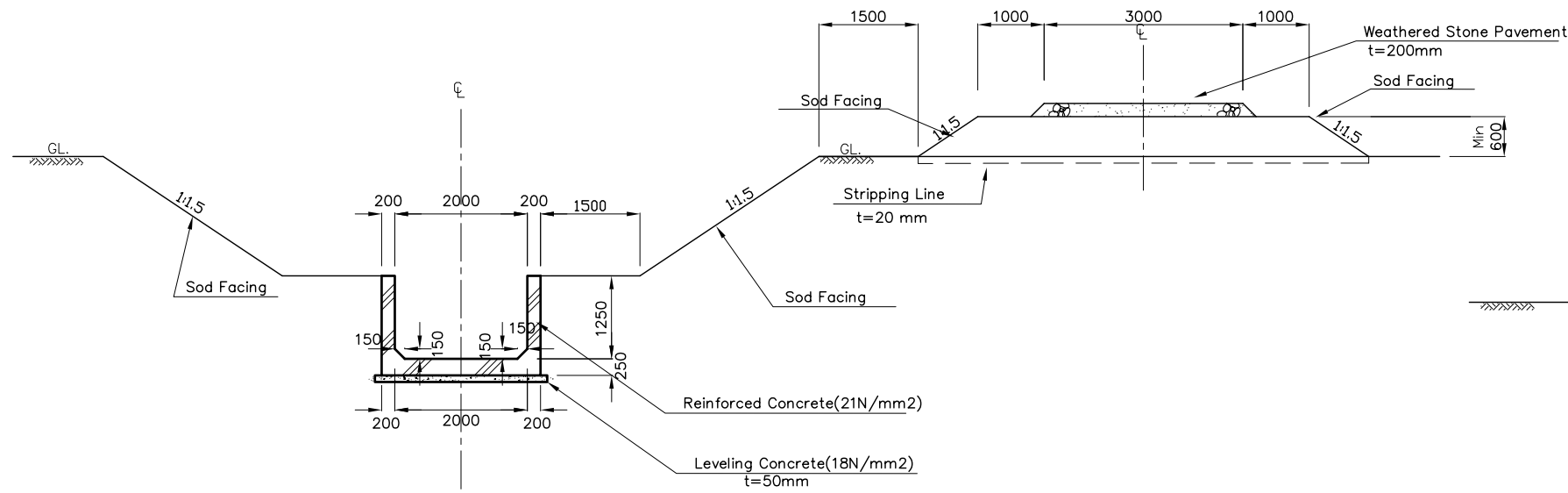
Branch Canal-1 (BC-1)

Branch Canal-1 (BC-1)



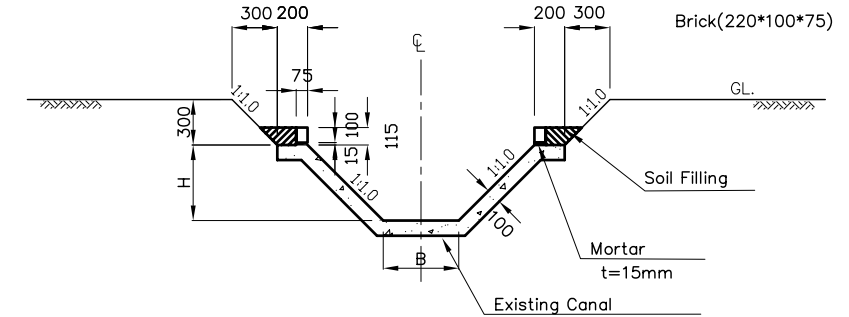
NOTE
 BC-3-7R Farm Lot Name
 A 5.3 Gross Area (ha)
 Q 0.050 Design Discharge (m³/s)

210ha Area
 — New Drainage Canal (500ha Area)
 — New Drainage Canal (210ha Area)
 - - - Existing Drainage Canal (500ha Area)
 - - - Existing Drainage Canal (210ha Area)



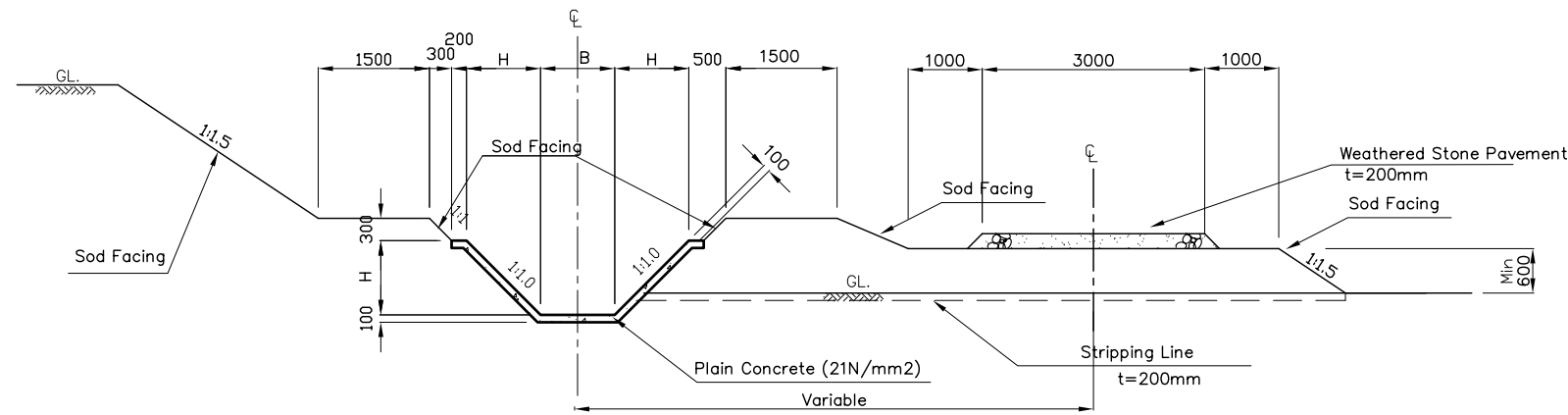
FLUME SECTION OF MAIN CANAL

SCALE A



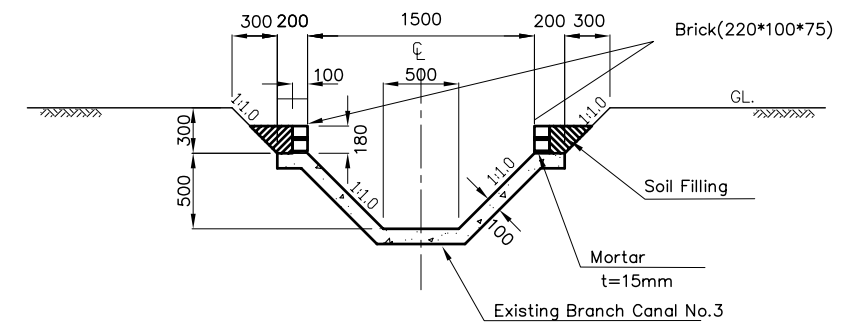
ADDITIONAL BRICK LINING (TYPE 1)

SCALE B



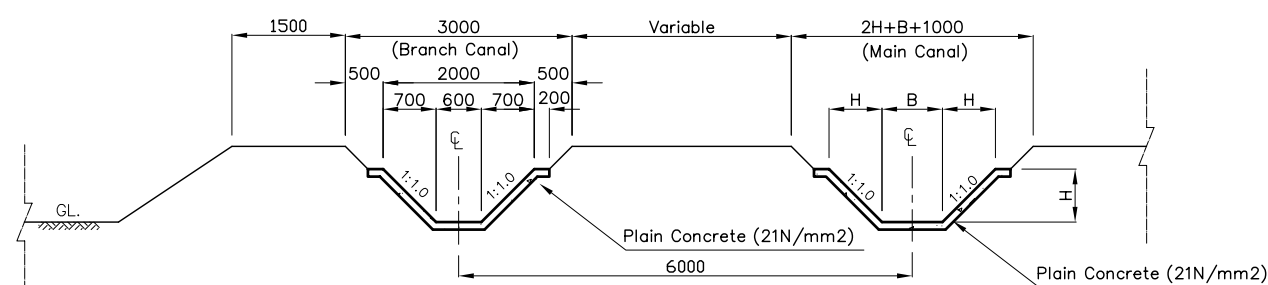
LINING CANAL SECTION

SCALE A



ADDITIONAL BRICK LINING (TYPE 2)

SCALE B

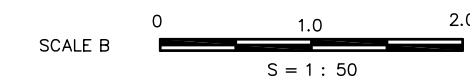
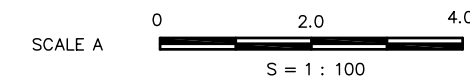


LINING CANAL SECTION OF MAIN CANAL AND BRANCH CANAL

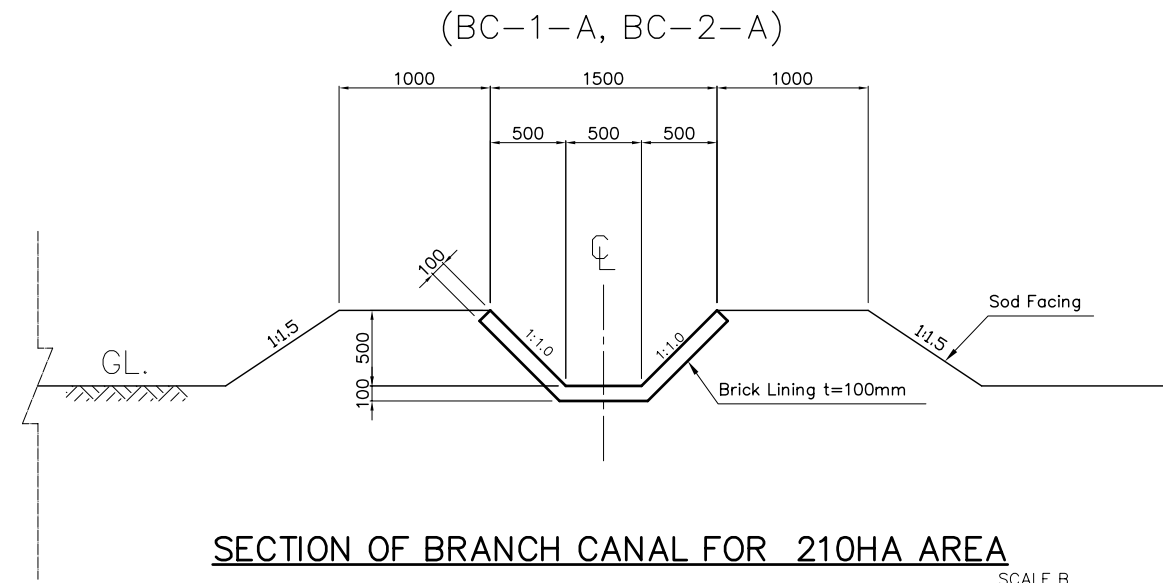
SCALE A

Type	Existing Canal	Station	Length(m)	B(mm)	H(mm)
Type 1	Main Canal	62+50 - 68+20	570	600	600
	Branch Canal No.1	22+70 - 48+54	2,584	500	500
	Branch Canal No.2	22+51 - 44+46	2,195	500	500
	Branch Canal No.3	0+00 - 30+60	3,060	600	600
Type 2	Branch Canal No.3	30+60 - 48+40	1,780	500	500

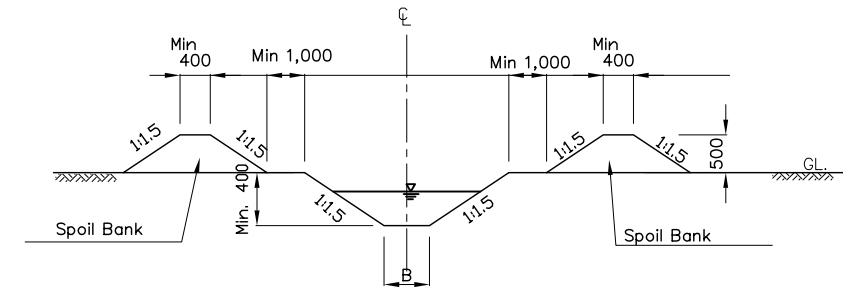
Canal Type	B(mm)	H(mm)	Applied Canal
A	1000	1000	Main Canal
B	800	700	Main Canal
C-1	600	700	BC-1, BC-2



THE REPUBLIC OF MALAWI	
THE PROJECT FOR REHABILITATION OF BWANJE VALLEY IRRIGATION SYSTEM	
TITLE OF DRAWING 灌溉用排水路・管理用道路 標準断面図 (1/2)	
DRAWING NO.	ID-04
NIPPON KOEI CO., LTD.	

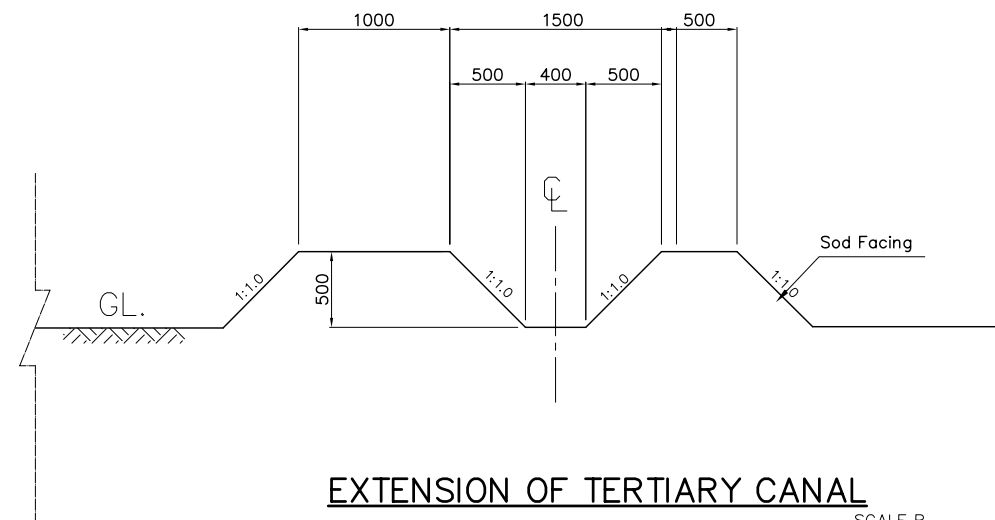


SCALE B



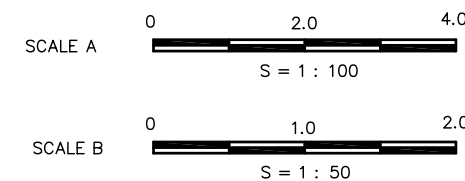
SCALE A

Name of Drainage Canal	Width B(mm)
DC-2-A	400
DC-3-A	400
DC-2-B	600
DC-3-B	600

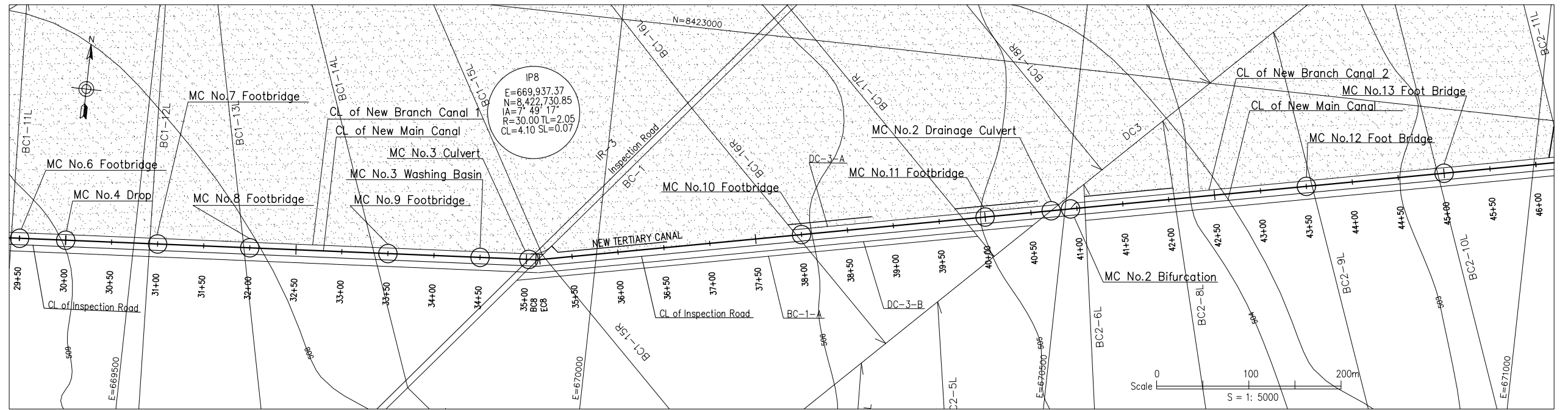


SCALE B

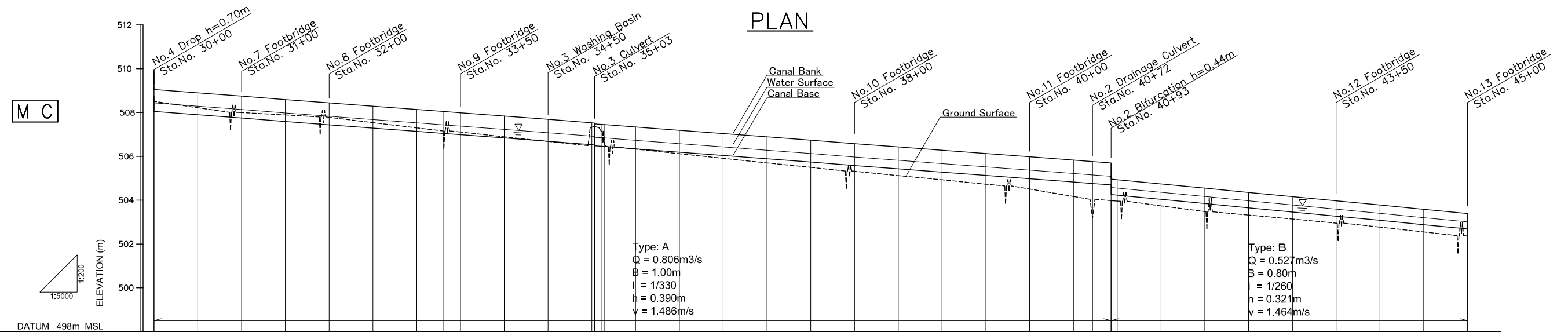
Name of Branch Canal	Name of Tertiary Canal	Length (m)
BC-1	BC-1-7L	54
	BC-1-15R	119
	BC-1-16R	91
	BC-1-17R	90
BC-2	BC-2-6L	96
	BC-2-14R	117
	BC-2-15R	117
	BC-2-16R	117



THE REPUBLIC OF MALAWI	
THE PROJECT FOR REHABILITATION OF BWANJE VALLEY IRRIGATION SYSTEM	
TITLE OF DRAWING 灌溉用排水路・管理用道路 標準断面図 (2/2)	
DRAWING NO.	ID-05
NIPPON KOEI CO., LTD.	



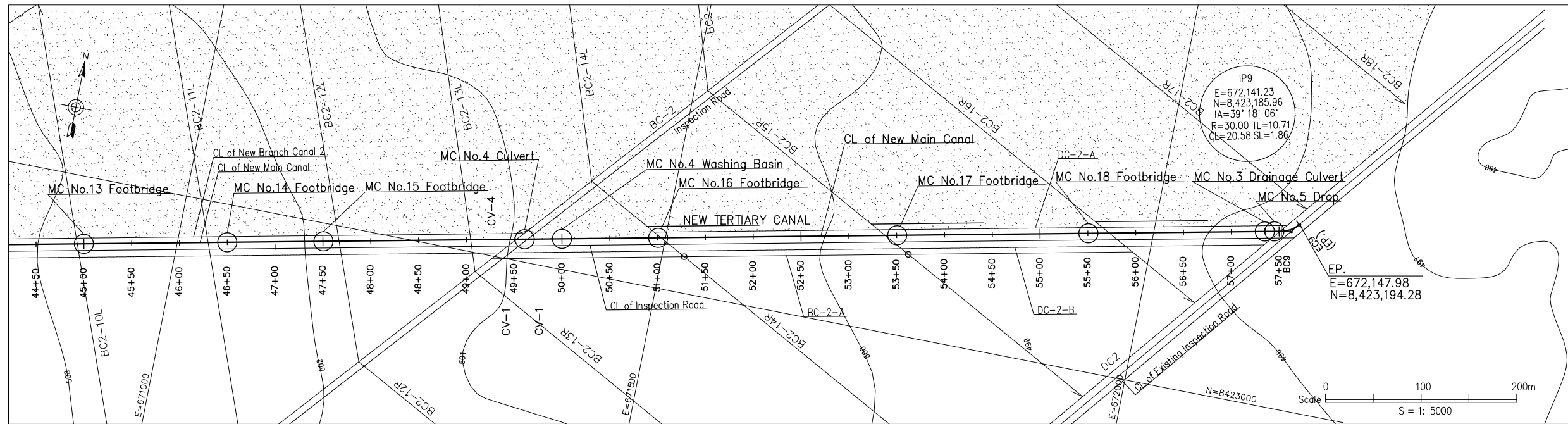
PLAN



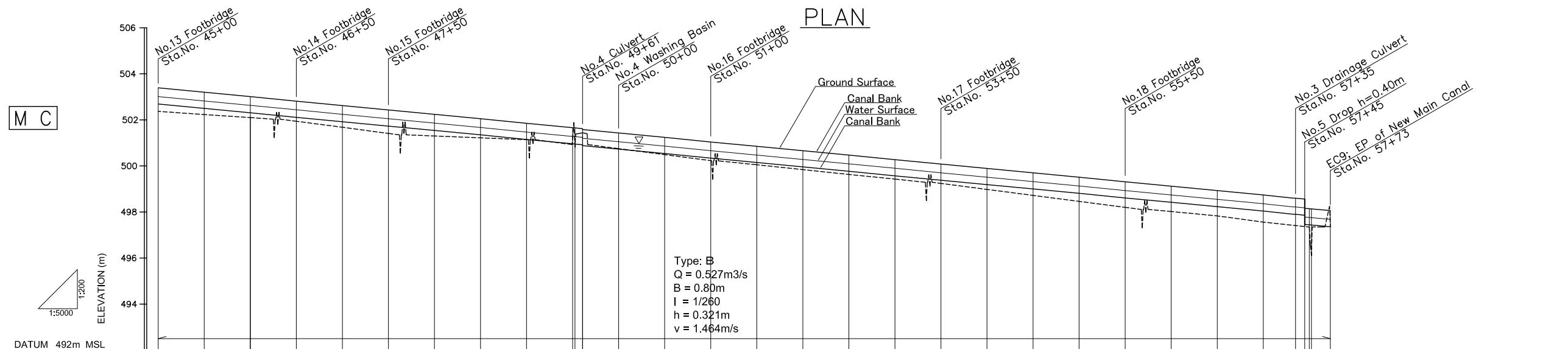
PROFILE

CANAL BANK ELEVATION	508.75	508.90	508.75	508.59	508.44	508.29	508.14	508.05	507.99	507.84	507.69	507.53	507.46	507.45	507.34	507.19	507.04	506.89	506.74	506.58	506.43	506.28	506.13	505.98	505.83	505.76	505.70	505.58	505.43	505.28	505.13	504.98	504.83	504.74	504.55	504.35	504.16	503.97	503.78	503.58	503.39					
WATER SURFACE ELEVATION	508.14	508.29	508.14	507.98	507.83	507.68	507.53	507.44	507.38	507.23	507.08	506.92	506.85	506.84	506.73	506.58	506.43	506.28	506.13	505.97	505.82	505.67	505.52	505.37	505.22	505.15	505.09	505.06	504.93	504.78	504.63	504.48	504.33	504.17	504.02	503.87	503.72	503.57	503.42	503.27	503.12	502.97	502.82	502.67	502.52	502.37
CANAL BASE ELEVATION	508.75	507.90	507.75	507.59	507.44	507.29	507.14	507.05	506.99	506.84	506.69	506.53	506.46	506.45	506.34	506.19	506.04	505.89	505.74	505.58	505.43	505.28	505.13	504.98	504.83	504.76	504.70	504.58	504.43	504.28	504.13	503.98	503.83	503.68	503.53	503.38	503.23	503.08	502.93	502.78	502.63	502.48	502.33	502.18	502.03	
GROUND SURFACE ELEVATION	508.51	508.22	508.00	507.89	507.78	507.54	507.30	507.16	507.11	506.89	506.68	506.33	506.16	506.14	506.03	505.88	505.73	505.58	505.43	505.28	505.12	504.93	504.73	504.51	504.31	504.17	503.98	503.88	503.73	503.58	503.43	503.28	503.13	502.98	502.83	502.68	502.53	502.38	502.23	502.08	501.93	501.78	501.63	501.48	501.33	
ACCUMULATED DISTANCE	0.00	305.00	3100.00	3150.00	3200.00	3250.00	3300.00	3330.09	3350.00	3400.00	3450.00	3500.00	3510.63	3514.67	3550.00	3600.00	3650.00	3700.00	3750.00	3800.00	3850.00	3900.00	3950.00	4000.00	4050.00	4071.78	4083.03	4100.00	4150.00	4200.00	4250.00	4300.00	4350.00	4400.00	4450.00	4500.00	4550.00	4600.00	4650.00	4700.00	4750.00	4800.00	4850.00	4900.00		
DISTANCE	0.00	50.00	50.00	50.00	50.00	50.00	50.00	30.09	19.91	50.00	50.00	50.00	3.13	4.04	35.33	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	21.78	21.25	6.80	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00			
STATION No.	30+00	30+50	31+00	31+50	32+00	32+50	33+00	33+30	33+50	34+00	34+50	35+00	35+03	35+08	35+50	36+00	36+50	37+00	37+50	38+00	38+50	39+00	39+50	40+00	40+50	40+72	40+83	41+00	41+50	42+00	42+50	43+00	43+50	44+00	44+50	45+00	45+50	46+00	46+50	47+00	47+50	48+00	48+50			

THE REPUBLIC OF MALAWI
 THE PROJECT FOR REHABILITATION OF
 BWANJE VALLEY IRRIGATION SYSTEM
 TITLE OF DRAWING
 幹線用水路 平面・縦断面 (3/4)
 DRAWING NO. ID-08
 NIPPON KOEI CO., LTD.



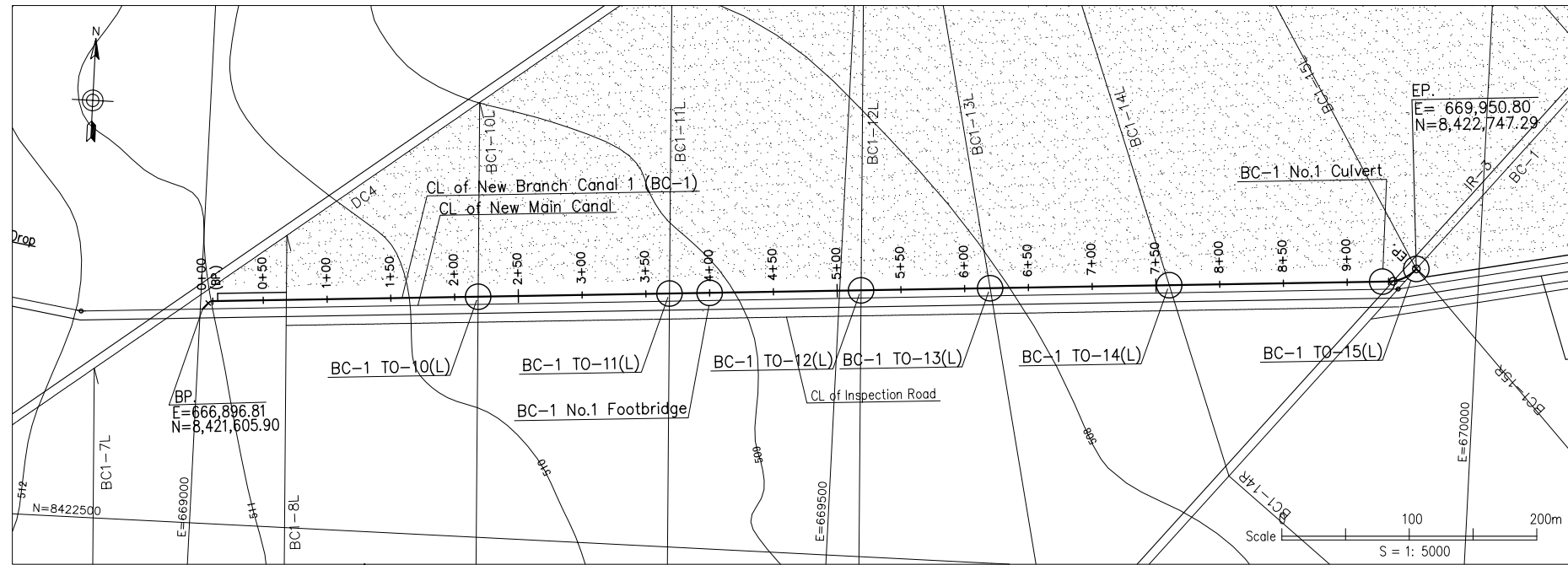
PLAN



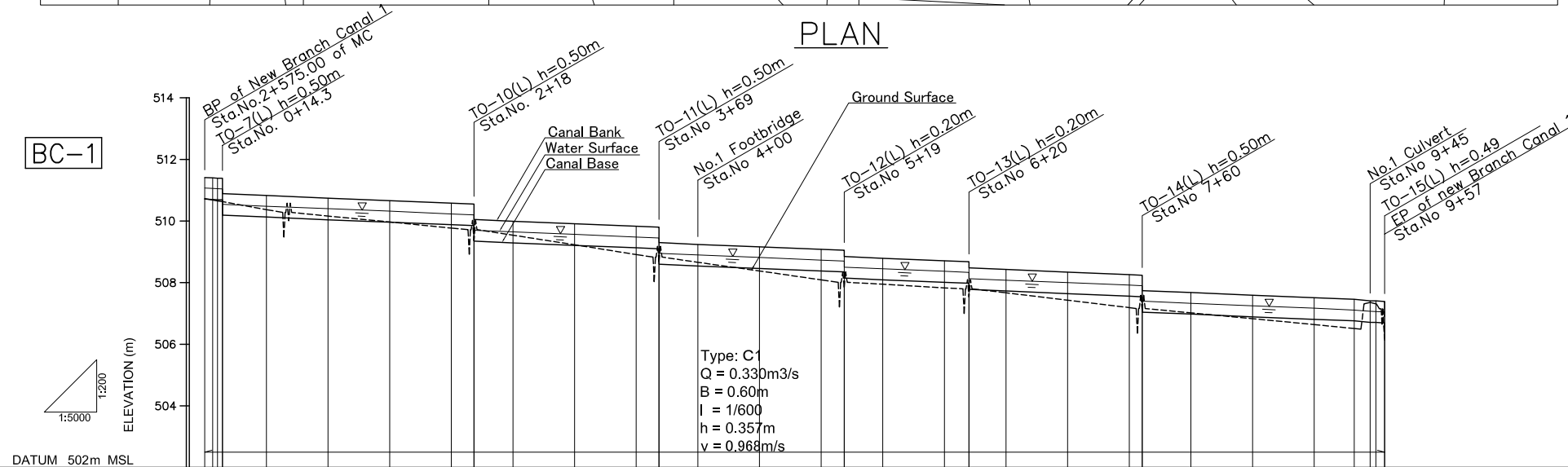
PROFILE

STATION No.	DISTANCE	ACCUMULATED DISTANCE	GROUND SURFACE ELEVATION	CANAL BASE ELEVATION	WATER SURFACE ELEVATION	CANAL BANK ELEVATION
45+00	50.00	4,500.00	502.37	502.69	503.01	503.39
45+50	50.00	4,550.00	502.23	502.50	502.82	503.20
46+00	50.00	4,600.00	502.10	502.31	502.63	503.01
46+50	50.00	4,650.00	501.94	502.11	502.44	502.81
47+00	50.00	4,700.00	501.68	501.92	502.24	502.62
47+50	50.00	4,750.00	501.41	501.73	502.05	502.43
48+00	50.00	4,800.00	501.30	501.54	501.86	502.24
48+50	50.00	4,850.00	501.22	501.35	501.67	502.05
49+00	50.00	4,900.00	501.14	501.15	501.47	501.85
49+50	50.00	4,950.00	500.87	500.86	501.28	501.66
49+50	8.00	4,958.00	500.86	500.85	501.27	501.65
49+50	0.00	4,966.00	501.44	500.85	501.17	501.55
50+00	39.14	5,000.00	500.75	500.73	501.05	501.43
50+50	50.00	5,050.00	500.49	500.54	500.86	501.24
51+00	50.00	5,100.00	500.23	500.34	500.66	501.04
51+50	50.00	5,150.00	500.05	500.15	500.47	500.85
52+00	50.00	5,200.00	499.84	499.96	500.28	500.66
52+50	50.00	5,250.00	499.63	499.77	500.09	500.47
53+00	50.00	5,300.00	499.43	499.57	499.90	500.27
53+50	50.00	5,350.00	499.24	499.38	499.70	500.08
54+00	50.00	5,400.00	498.98	499.19	499.51	499.89
54+50	50.00	5,450.00	498.72	499.00	499.32	499.70
55+00	50.00	5,500.00	498.46	498.81	499.13	499.51
55+50	50.00	5,550.00	498.20	498.61	498.93	499.31
56+00	50.00	5,600.00	498.02	498.42	498.74	499.12
56+50	50.00	5,650.00	497.83	498.23	498.55	498.93
57+00	50.00	5,700.00	497.56	498.04	498.36	498.74
57+35	35.00	5,735.00	497.41	497.90	498.22	498.60
57+65	10.00	5,745.00	497.37	497.86	498.16	498.56
57+65	0.00	5,753.00	497.00	497.44	497.78	498.16
57+65	0.00	5,753.00	497.00	497.44	497.78	498.14
(E.C. of EP)	20.58	5,772.84	497.35	497.36	497.68	498.06

THE REPUBLIC OF MALAWI
 THE PROJECT FOR REHABILITATION OF
 BWANJE VALLEY IRRIGATION SYSTEM
 TITLE OF DRAWING
 幹線用水路 平面・縦断面 (4/4)
 DRAWING NO. ID-09
 NIPPON KOEI CO., LTD.



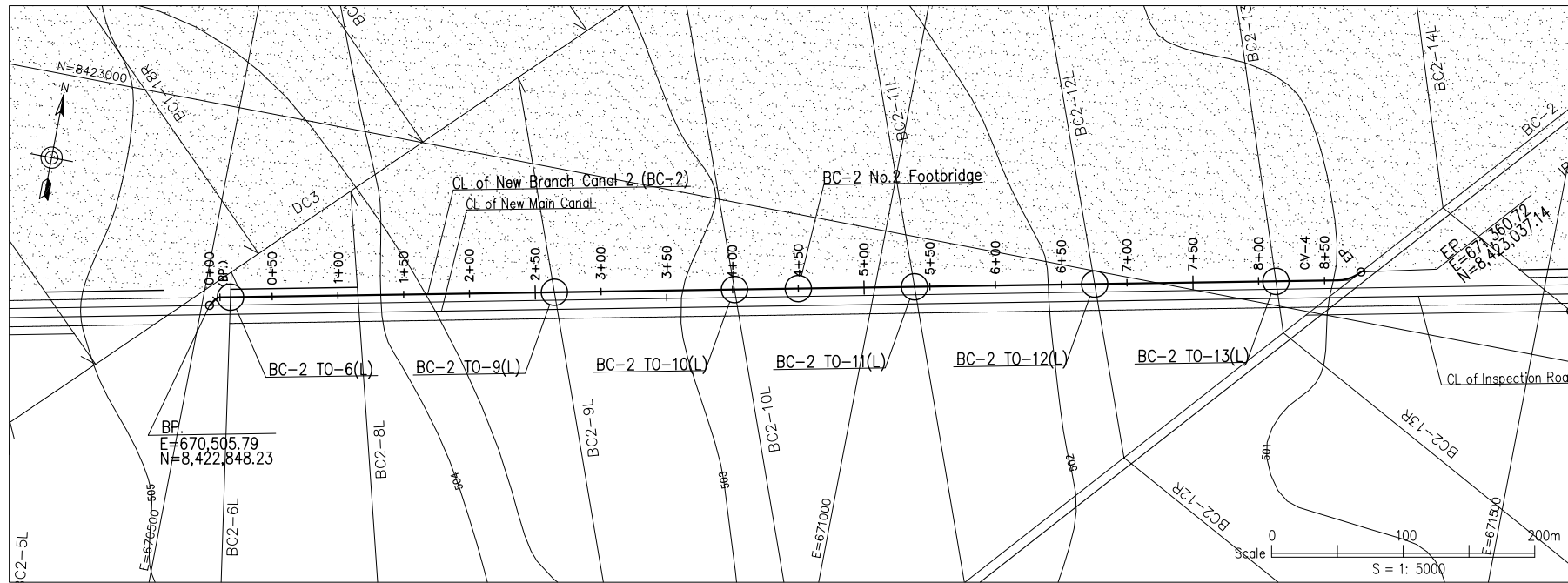
PLAN



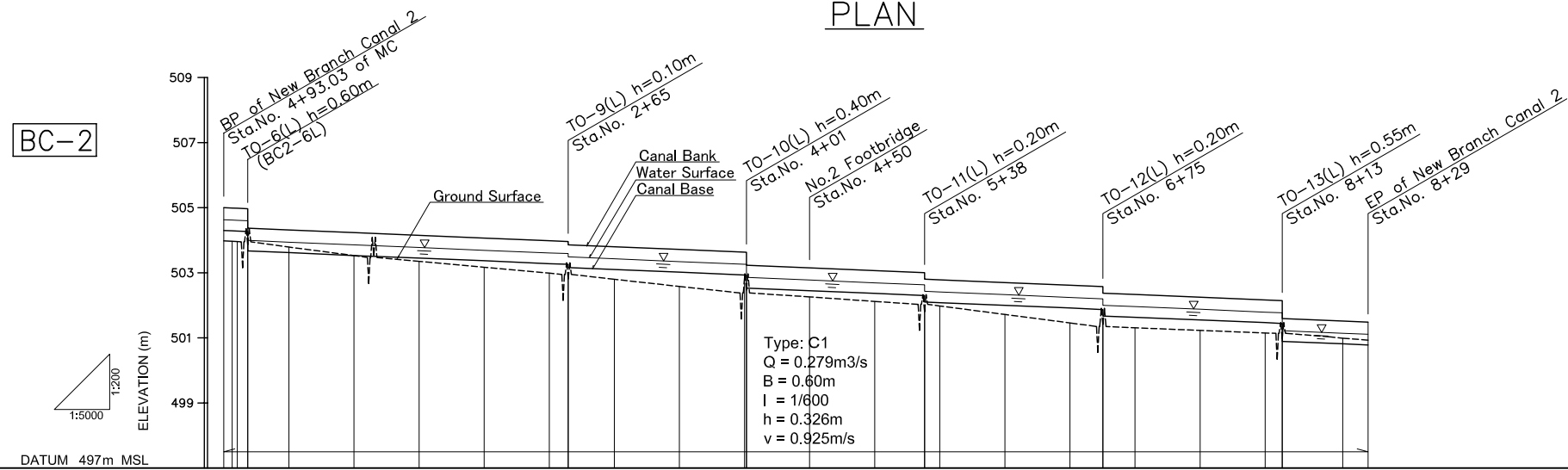
CANAL BANK ELEVATION	511.40	511.39	510.83	510.74	510.66	510.58	510.55	509.99	509.91	509.83	509.80	508.71	508.68	508.43	508.34	508.26	507.74	507.68	507.51	507.46	507.41	506.90	
WATER SURFACE ELEVATION	511.06	511.06	510.48	510.40	510.32	510.23	510.20	509.65	509.57	509.48	509.45	508.73	508.70	508.43	508.00	507.92	507.40	507.33	507.17	507.11	507.07	506.56	
CANAL BASE ELEVATION	510.70	510.69	510.13	510.04	509.96	509.88	509.85	509.29	509.21	509.13	509.10	508.38	508.35	508.08	507.64	507.56	507.04	506.98	506.81	506.76	506.71	506.20	
GROUND SURFACE ELEVATION	510.79	510.69	510.37	510.16	509.97	509.77	509.36	509.54	509.23	509.13	508.68	508.09	507.85	507.73	507.43	507.19	507.09	507.02	506.64	506.51	506.42	505.90	
ACCUMULATED DISTANCE	0.00	10.37	50.00	100.00	150.00	200.00	218.44	250.00	300.00	350.00	368.51	400.00	450.00	500.00	518.75	550.00	600.00	650.00	700.00	750.00	760.48	800.00	
DISTANCE	0.00	3.93	35.70	50.00	50.00	18.44	0.00	50.00	50.00	50.00	18.75	0.00	50.00	50.00	19.96	0.00	50.00	50.00	50.00	12.88	10.48	4.52	
STATION No.	0+00	0+14	0+50	1+00	1+50	2+00	2+18	2+50	3+00	3+50	3+69	4+00	4+50	5+00	5+19	5+50	6+00	6+20	6+50	7+00	7+50	7+60	8+00

PROFILE

THE REPUBLIC OF MALAWI	
THE PROJECT FOR REHABILITATION OF BWANJE VALLEY IRRIGATION SYSTEM	
TITLE OF DRAWING	
支線水路 NO.1 平面・縦断面	
DRAWING NO.	ID-10
NIPPON KOEI CO., LTD.	



PLAN



STATION No.	DISTANCE	ACCUMULATED DISTANCE	GROUND SURFACE ELEVATION	CANAL BASE ELEVATION	WATER SURFACE ELEVATION	CANAL BANK ELEVATION
0+00	0.00	0.00	503.98	504.30	504.63	505.00
0+18	7.99	7.99	503.97	504.28	504.62	504.98
0+36	15.98	15.98	503.96	504.27	504.61	504.97
0+54	23.97	23.97	503.86	504.27	504.60	504.97
0+72	31.96	31.96	503.86	503.67	504.60	504.97
1+00	50.00	50.00	503.79	503.62	503.94	504.32
1+50	50.00	100.00	503.53	503.53	503.86	504.23
2+00	50.00	150.00	503.35	503.45	503.78	504.15
2+50	50.00	200.00	503.17	503.37	503.69	504.07
2+65	14.57	214.57	502.99	503.28	503.61	503.98
3+00	35.43	250.00	502.81	503.26	503.59	503.96
3+50	50.00	300.00	502.81	503.16	503.49	503.86
4+00	50.00	350.00	502.80	503.10	503.43	503.80
4+17	17.00	367.00	502.58	503.02	503.34	503.72
4+50	48.53	400.00	502.47	502.93	503.26	503.63
5+00	50.00	450.00	502.47	502.93	503.26	503.63
5+38	38.00	488.00	502.45	502.91	503.24	503.61
5+50	50.00	500.00	502.26	502.72	503.05	503.42
6+00	50.00	550.00	502.12	502.58	502.91	503.28
6+50	50.00	600.00	501.92	502.37	502.69	503.07
6+75	25.29	625.29	501.46	502.24	502.57	502.94
7+00	24.71	650.00	501.41	501.92	502.24	502.62
7+50	50.00	700.00	501.41	501.87	502.20	502.57
8+00	50.00	750.00	501.31	501.67	502.00	502.37
8+13	13.08	763.08	501.63	501.63	501.96	502.33
8+29	46.52	799.60	501.23	501.55	501.88	502.25
8+50	50.00	800.00	501.15	501.47	501.79	502.17
BC.2	19.48	813.08	501.44	501.44	501.77	502.14
EC.2	19.48	832.56	500.97	500.89	501.22	501.59
			500.99	500.82	501.14	501.52
			500.93	500.78	501.11	501.48

PROFILE

THE REPUBLIC OF MALAWI	
THE PROJECT FOR REHABILITATION OF BWANJE VALLEY IRRIGATION SYSTEM	
TITLE OF DRAWING	
支線用水路 NO.2 平面・縦断面図	
DRAWING NO.	ID-11
NIPPON KOEI CO., LTD.	