DRAWING LIST (1/4) (DRAINAGE WORKS; LOWER PASIG)

SHEET NO.	DRAWING NO.	NAME OF LOCATION	SHEET CONTENTS
1	LP-DR; DL-01		DRAINAGE LAYOUT PLAN (ARROCEROS, HOSPICIO & MALACAÑANG AREA)
2	LP-DR; DL-02		DRAINAGE LAYOUT PLAN (NAGTAHAN BRIDGE~ PANDACAN BRIDGE AREA)
3	LP-DR; DL-03		DRAINAGE LAYOUT PLAN (PUNTA, STA. ANA AREA)
4	LP-DR; SD-01		STANDARD DETAIL OF OUTLET
5	LP-DR; MD-01		TYPICAL MANHOLE DETAIL AND BAR SCHEDULE
6	LP-DR; JB-01		TYPICAL JUNCTION BOX DETAIL, BAR SCHEDULE & TYPICAL DETAIL OF U-DIT
7	LP-DR; MH-SC1		SCHEDULE OF MANHOLE STA. 2+392~STA. 3+072 LB
8	LP-DR; MH-SC2		SCHEDULE OF MANHOLE STA. 6+357 ~ STA. 6+510 RB
9	LP-DR; MH-SC3		SCHEDULE OF MANHOLE STA. 8+242 ~ STA. 9+947 RB
10	LP-DR; JB-SC1		SCHEDULE OF JUNCTION BOX STA. 2+392 ~ STA. 3+072 LB
11	LP-DR; JB-SC2		SCHEDULE OF JUNCTION BOX STA. 6+357 ~ STA. 6+510 RB
12	LP-DR; JB-SC3		SCHEDULE OF JUNCTION BOX STA. 8+242 ~ STA. 9+947 RB
13	LP-DL; DO-35.5/P		PLAN & PROFILE OF COLLECTOR PIPE (DL 35.5, LEFT BANK)
14	LP-DL; DO-35.5		DETAIL OF DRAINAGE OUTLET; (DL 35.5 & ML 35.5, LEFT BANK)
15	LP-DL; DO-37.3/P		PLAN & PROFILE OF COLLECTOR PIPE (DL 37.3, LEFT BANK)
16	LP-DL; DO-37.3		DETAIL OF DRAINAGE OUTLET; (DL 37.3 & ML 37.3, LEFT BANK)
17	LP-DL; DO-37.6/P		PLAN & PROFILE OF COLLECTOR PIPE (DL 37.6, LEFT BANK)
18	LP-DL; DO-37.6		DETAIL OF DRAINAGE OUTLET; (DL 37.6 & ML 37.6, LEFT BANK)
19	LP-DL; DO-37.11		DETAIL OF DRAINAGE OUTLET; (DL 37.11, ML 37.11, & COLLECTOR PIPE, RIGHT
20	LP-DL; DO-37.12/P		PLAN & PROFILE OF COLLECTOR PIPE (DL 37.12, LEFT BANK)
21	LP-DL; DO-37.12		DETAIL OF DRAINAGE OUTLET; (DL 37.12 & ML 37.12, LEFT BANK)
22	LP-DL; DO-37.22		DETAIL OF DRAINAGE OUTLET; (DL 37.22 & ML 37.22, LEFT BANK)
23	LP-DL; DO-40		DETAIL OF DRAINAGE OUTLET; (DL 40 & ML 40, LEFT BANK)
24	LP-DL; DO-41		DETAIL OF DRAINAGE OUTLET; (DL 41 & ML 41, LEFT BANK)
25	LP-DL; DO-41.1		DETAIL OF DRAINAGE OUTLET; (DL 41.1 & ML 41.1, LEFT BANK)
26	LP-DL; DO-42		DETAIL OF DRAINAGE OUTLET; (DL 42 & ML 42, LEFT BANK)
27	LP-DL; DO-46/P		PLAN & PROFILE OF COLLECTOR PIPE (DL 46, LEFT BANK)
28	LP-DL; DO-46		DETAIL OF DRAINAGE OUTLET; (DL 46 & ML 46, LEFT BANK)
29	LP-DL; DO-48		DETAIL OF DRAINAGE OUTLET; (DL 48 & ML 48, LEFT BANK)
30	LP-DL; DO-48.2		DETAIL OF DRAINAGE OUTLET; (DL 48.2 & ML 48.2, LEFT BANK)
31	LP-DL; DO-50		DETAIL OF DRAINAGE OUTLET; (DL 50 & ML 50, LEFT BANK)
32	LP-DL; DO-51		DETAIL OF DRAINAGE OUTLET; (DL 51 & ML 51, LEFT BANK)
33	LP-DL; DO-52		DETAIL OF DRAINAGE OUTLET; (DL 52 & ML 52, LEFT BANK)
34	LP-DL; DO-53		DETAIL OF DRAINAGE OUTLET; (DL 53 & ML 53, LEFT BANK)
35	LP-DL; DO-54		DETAIL OF DRAINAGE OUTLET; (DL 54 & ML 54, LEFT BANK)
36	LP-DL; DO-56		DETAIL OF DRAINAGE OUTLET; (DL 56 & ML 56, LEFT BANK)
37	LP-DL; DO-57		DETAIL OF DRAINAGE OUTLET; (DL 57 & ML 57 LEFT BANK)
38	LP-DL; DO-58		DETAIL OF DRAINAGE OUTLET; (DL 58 & ML 58, LEFT BANK)
39	LP-DL; DO-59		DETAIL OF DRAINAGE OUTLET; (DL 59 & ML 59, LEFT BANK)
40	LP-DL; DO-59.1		DETAIL OF DRAINAGE OUTLET; (DL 59.1 & ML 59.1, LEFT BANK)
41	LP-DL; DO-59.2		DETAIL OF DRAINAGE OUTLET; (DL 59.2 & ML 59.2, LEFT BANK)
42	LP-DL; DO-62A.6/P		PLAN & PROFILE OF COLLECTOR PIPE/ U-DITCH (DL 62A.6, LEFT BANK)

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DRAWING LIST (2/4) (DRAINAGE WORKS; LOWER PASIG)

SHEET NO.	DRAWING NO.	NAME OF LOCATION	SHEET CONTENTS
43	LP-DL; DO-62A.6		DETAIL OF DRAINAGE OUTLET; (DL 62A.6 & ML 62A.6, LEFT BANK)
44	LP-DL; DO-62A.10		DETAIL OF DRAINAGE OUTLET; (DL 62A.10 & ML 62A.10, LEFT BANK)
45	LP-DL; DO-62A.13		DETAIL OF DRAINAGE OUTLET; (DL 62A.13 & ML 62A.13, LEFT BANK)
46	LP-DL; DO-63		DETAIL OF DRAINAGE OUTLET; (DL 63 & ML 63, LEFT BANK)
47	LP-DL; DO-63.1		DETAIL OF DRAINAGE OUTLET; (DL 63.1 & ML 63.1, LEFT BANK)
48	LP-DL; DO-HSP4/P		PLAN & PROFILE OF U-DITCH (DL HSP4, LEFT BANK)
49	LP-DL; DO-HSP4		DETAIL OF DRAINAGE OUTLET; (DL HSP4 & ML HSP4, LEFT BANK)
50	LP-DR; DO-35.1		DETAIL OF DRAINAGE OUTLET; (DR 35.1 & MR 35.1, RIGHT BANK)
51	LP-DR; DO-36.3		DETAIL OF DRAINAGE OUTLET; (DR 36.3, MR 36.3, & COLLECTOR PIPE, RIGHT I
52	LP-DR; DO-36.9/P		PLAN & PROFILE OF COLLECTOR PIPE; (DR 36.9, RIGHT BANK)
53	LP-DR; DO-36.9		DETAIL OF DRAINAGE OUTLET; (DR 36.9, RIGHT BANK)
54	LP-DR; DO-36.15/P		PLAN & PROFILE OF COLLECTOR PIPE (DR 36.15, LEFT BANK)
55	LP-DR; DO-36.15		DETAIL OF DRAINAGE OUTLET; (DR 36.15, RIGHT BANK)
56	LP-DR; DO-36.20/P		PLAN & PROFILE OF COLLECTOR PIPE (DR 36.20, RIGHT BANK)
57	LP-DR; DO-36.20		DETAIL OF DRAINAGE OUTLET; (DR 36.20, RIGHT BANK)
58	LP-DR; DO-36.21		DETAIL OF DRAINAGE OUTLET; (DR 36.21, & COLLECTOR PIPE, RIGHT BANK)
59	LP-DR; DO-36.23		DETAIL OF DRAINAGE OUTLET; (DR 36.23, RIGHT BANK)
60	LP-DR; DO-36.24		DETAIL OF DRAINAGE OUTLET; (DR 36.24, RIGHT BANK)
61	LP-DR; DO-37.40		DETAIL OF DRAINAGE OUTLET; (DR 37.40, MR 37.40, & U-DITCH COLLECTOR, R
62	LP-DR; DO-40/P		PLAN & PROFILE OF COLLECTOR PIPE (DR 40, RIGHT BANK)
63	LP-DR; DO-40		DETAIL OF DRAINAGE OUTLET; (DR 40 & MR 40, RIGHT BANK)
64	LP-DR; DO-42		DETAIL OF DRAINAGE OUTLET; (DR 42 & MR 42, RIGHT BANK)
65	LP-DR; DO-43/P		PLAN & PROFILE OF COLLECTOR PIPE (DR 43, RIGHT BANK)
66	LP-DR; DO-43		DETAIL OF DRAINAGE OUTLET; (DR 43 & MR 43, RIGHT BANK)
67	LP-DR; DO-44		DETAIL OF DRAINAGE OUTLET; (DR 44, MR 44, & COLLECTOR PIPE, RIGHT BAN
68	LP-DR; DO-44.1		DETAIL OF DRAINAGE OUTLET; (DR 44.1 & MR 44.1, RIGHT BANK)
69	LP-DR; DO-44.2		DETAIL OF DRAINAGE OUTLET; (DR 44.2 & MR 44.2, RIGHT BANK)
70	LP-DR; DO-68		DETAIL OF DRAINAGE OUTLET; (DR 68 & MR 68, RIGHT BANK)
71	LP-DR; DO-69		DETAIL OF DRAINAGE OUTLET; (DR 69 & MR 69, RIGHT BANK)
72	LP-DR; DO-70		DETAIL OF DRAINAGE OUTLET; (DR 70 & MR 70, RIGHT BANK)
73	LP-DR; DO-70A		DETAIL OF DRAINAGE OUTLET; (DR 70A & MR 70A, RIGHT BANK)
74	LP-DR; DO-70A.2		DETAIL OF DRAINAGE OUTLET; (DR 70A.2 & MR 70A.2, RIGHT BANK)
75	LP-DR; DO-70C		DETAIL OF DRAINAGE OUTLET; (DR 70C & MR 70C, RIGHT BANK)
76	LP-DR; DO-71		DETAIL OF DRAINAGE OUTLET; (DR 71 & MR 71, RIGHT BANK)
77	LP-DR; DO-74A		DETAIL OF DRAINAGE OUTLET; (DR 74A & MR 74A, RIGHT BANK)
78	LP-DR; DO-74A.2		DETAIL OF DRAINAGE OUTLET; (DR 74A.2, MR 74A.2, & COLLECTOR PIPE, RIGH
79	LP-DR; DO-75/P		PLAN & PROFILE OF COLLECTOR PIPE (DR 75, RIGHT BANK)
80	LP-DR; DO-75		DETAIL OF DRAINAGE OUTLET; (DR 75 & MR 75, RIGHT BANK)
81	LP-DR; DO-76A/P		PLAN & PROFILE OF COLLECTOR PIPE (DR 76A, RIGHT BANK)
82	LP-DR; DO-76A		DETAIL OF DRAINAGE OUTLET; (DR 76A & MR 76A, RIGHT BANK)
83	LP-DR; DO-76A.2		DETAIL OF DRAINAGE OUTLET; (DR 76A.2 & MR 76A.2, RIGHT BANK)
84	LP-DR; DO-77A		DETAIL OF DRAINAGE OUTLET; (DR 77A & MR 77A, RIGHT BANK)

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DRAWING LIST (3/4) (DRAINAGE WORKS; LOWER PASIG)

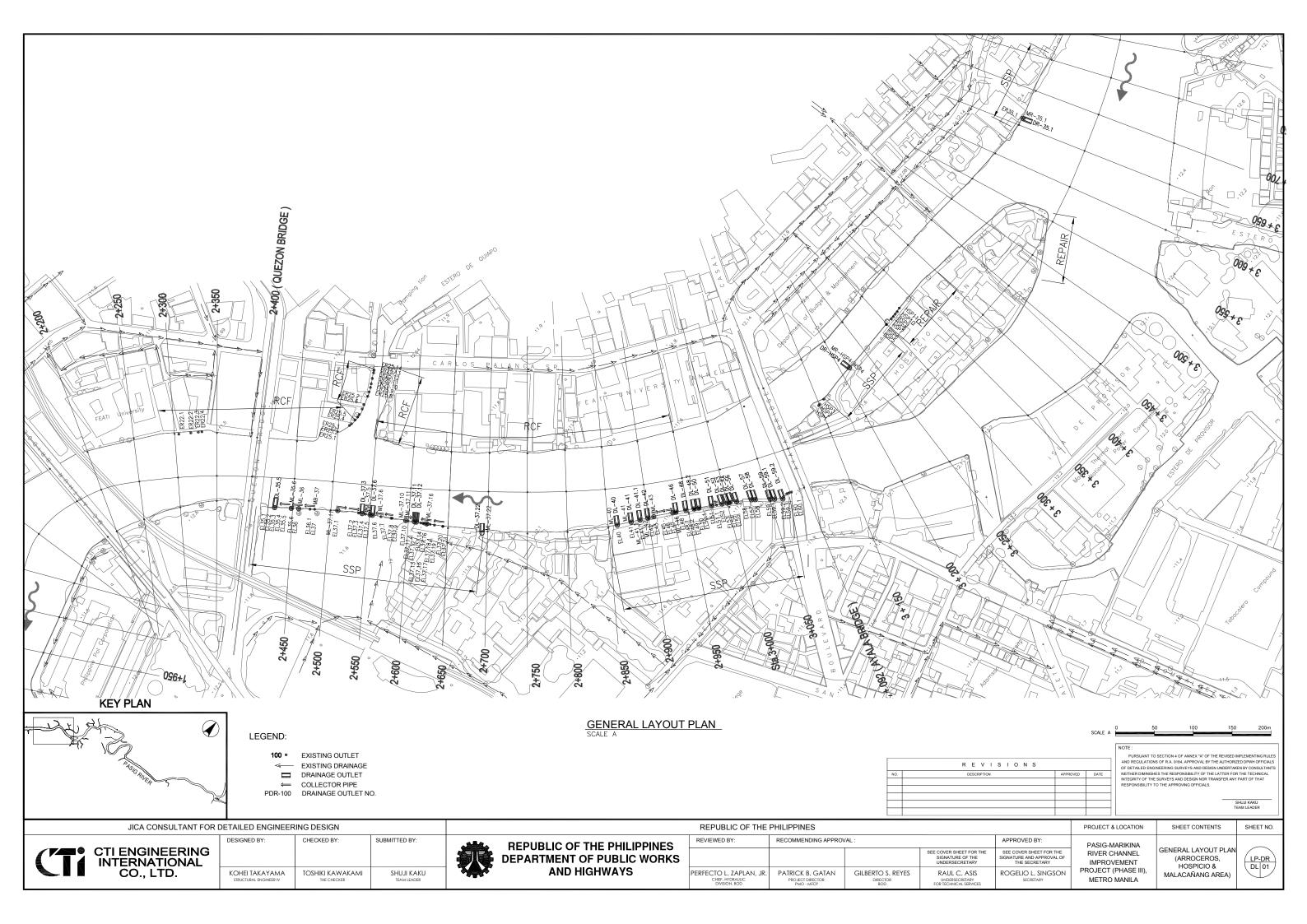
SHEET NO.	DRAWING NO.	NAME OF LOCATION	SHEET CONTENTS
85	LP-DR; DO-78/P		PLAN & PROFILE OF COLLECTOR PIPE (DR 78, RIGHT BANK)
86	LP-DR; DO-78		DETAIL OF DRAINAGE OUTLET; (DR 78 & MR 78, RIGHT BANK)
87	LP-DR; DO-79A/P		PLAN & PROFILE OF COLLECTOR PIPE (DR 79A, RIGHT BANK)
88	LP-DR; DO-79A		DETAIL OF DRAINAGE OUTLET; (DR 79A & MR 79A, RIGHT BANK)
89	LP-DR; DO-79A.5/P		PLAN & PROFILE OF COLLECTOR PIPE (DR 79A.5, RIGHT BANK)
90	LP-DR; DO-79A.5		DETAIL OF DRAINAGE OUTLET; (DR 79A.5 & MR 79A.5, RIGHT BANK)
91	LP-DR; DO-80/P		PLAN & PROFILE OF COLLECTOR PIPE (DR 80, RIGHT BANK)
92	LP-DR; DO-80		DETAIL OF DRAINAGE OUTLET; (DR 80 & MR 80, RIGHT BANK)
93	LP-DR; DO-81/P		PLAN & PROFILE OF COLLECTOR PIPE (DR 81, RIGHT BANK)
94	LP-DR; DO-81		DETAIL OF DRAINAGE OUTLET; (DR 81 & MR 81, RIGHT BANK)
95	LP-DR; DO-83.1/P		PLAN & PROFILE OF COLLECTOR PIPE (DR 83.1, RIGHT BANK)
96	LP-DR; DO-83.1		DETAIL OF DRAINAGE OUTLET; (DR 83.1 & MR 83.1, RIGHT BANK)
97	LP-DR; DO-83.4		DETAIL OF DRAINAGE OUTLET; (DR 83.4, MR 83.4, & COLLECTOR PIPE, RIGHT E
98	LP-DR; DO-83.5/P		PLAN & PROFILE OF COLLECTOR PIPE (DR 83.5, RIGHT BANK)
99	LP-DR; DO-83.5		DETAIL OF DRAINAGE OUTLET; (DR 83.5 & MR 83.5, RIGHT BANK)
100	LP-DR; DO-83.18/P		PLAN & PROFILE OF COLLECTOR PIPE (DR 83.18, RIGHT BANK)
101	LP-DR; DO-83.18		DETAIL OF DRAINAGE OUTLET; (DR 83.18 & MR 83.18, RIGHT BANK)
102	LP-DR; DO-83.21		DETAIL OF DRAINAGE OUTLET; (DR 83.21 & MR 83.21, RIGHT BANK)
103	LP-DR; DO-83.23		DETAIL OF DRAINAGE OUTLET; (DR 83.23 & MR 83.23, RIGHT BANK)
104	LP-DR; DO-83.27/P		PLAN & PROFILE OF COLLECTOR PIPE (DR 83.27, RIGHT BANK)
105	LP-DR; DO-83.27		DETAIL OF DRAINAGE OUTLET; (DR 83.27 & MR 83.27, RIGHT BANK)
106	LP-DR; DO-83.29/P		PLAN & PROFILE OF U-DITCH (DR 83.29, RIGHT BANK)
107	LP-DR; DO-83.29		DETAIL OF DRAINAGE OUTLET; (DR 83.29 & MR 83.29, RIGHT BANK)
108	LP-DR; DO-83.36		DETAIL OF DRAINAGE OUTLET; (DR 83.36, MR 83.36, & COLLECTOR PIPE, RIGH
109	LP-DR; DO-83.46/P		PLAN & PROFILE OF COLLECTOR PIPE (DR 83.46, RIGHT BANK)
110	LP-DR; DO-83.46		DETAIL OF DRAINAGE OUTLET; (DR 84.46 & MR 83.46, RIGHT BANK)
111	LP-DR; DO-85/P		PLAN & PROFILE OF COLLECTOR PIPE (DR 85, RIGHT BANK)
112	LP-DR; DO-85		DETAIL OF DRAINAGE OUTLET; (DR 85 & MR 85, RIGHT BANK)
113	LP-DR; DO-86/P		PLAN & PROFILE OF COLLECTOR PIPE (DR 86, RIGHT BANK)
114	LP-DR; DO-86		DETAIL OF DRAINAGE OUTLET; (DR 86 & MR 86, RIGHT BANK)
115	LP-DR; DO-90/P		PLAN & PROFILE OF COLLECTOR PIPE (DR 90, RIGHT BANK)
116	LP-DR; DO-90		DETAIL OF DRAINAGE OUTLET; (DR 90 & MR 90, RIGHT BANK)
117	LP-DR; DO-90.2		DETAIL OF DRAINAGE OUTLET; (DR 90.2 & MR 90.2, RIGHT BANK)
118	LP-DR; DO92A		DETAIL OF DRAINAGE OUTLET; (DR 92A, MR 92A, & COLLECTOR PIPE, RIGHT B
119	LP-DR; DO-92A.5		DETAIL OF DRAINAGE OUTLET; (DR 92A.5, MR 92A.5, & COLLECTOR PIPE, RIGH
120	LP-DR; DO-93/P		PLAN & PROFILE OF COLLECTOR PIPE (DR 93, RIGHT BANK)
121	LP-DR; DO-93		DETAIL OF DRAINAGE OUTLET; (DR 93 & MR 93, RIGHT BANK)
122	LP-DR; DO-95/P		PLAN & PROFILE OF COLLECTOR PIPE (DR 95, RIGHT BANK)
123	LP-DR; DO-95		DETAIL OF DRAINAGE OUTLET; (DR 95 & MR 95, RIGHT BANK)
124	LP-DR; DO-97/P		PLAN & PROFILE OF COLLECTOR PIPE (DR 97, RIGHT BANK)
125	LP-DR; DO-97	—	DETAIL OF DRAINAGE OUTLET; (DR 97 & MR 97, RIGHT BANK)

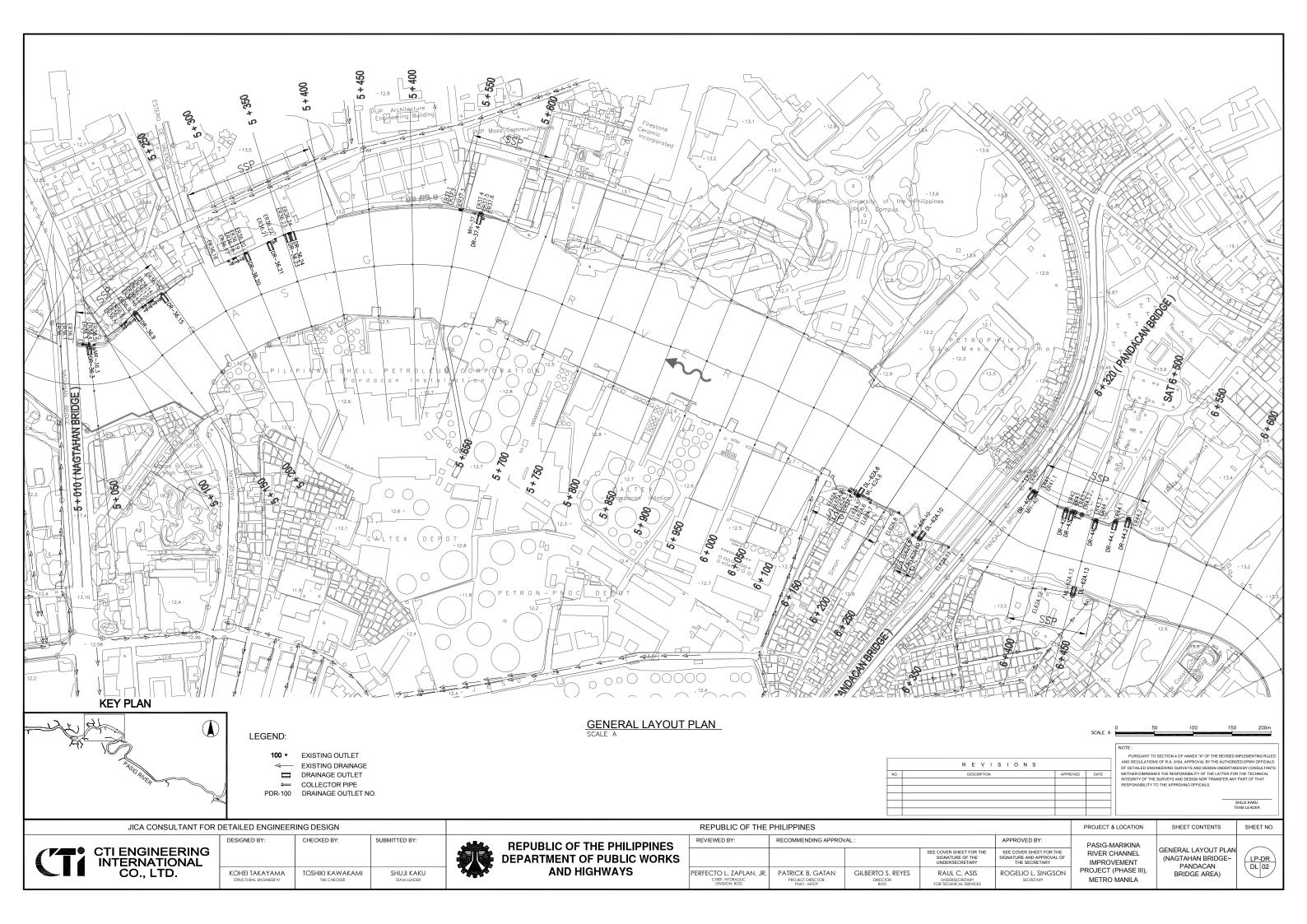
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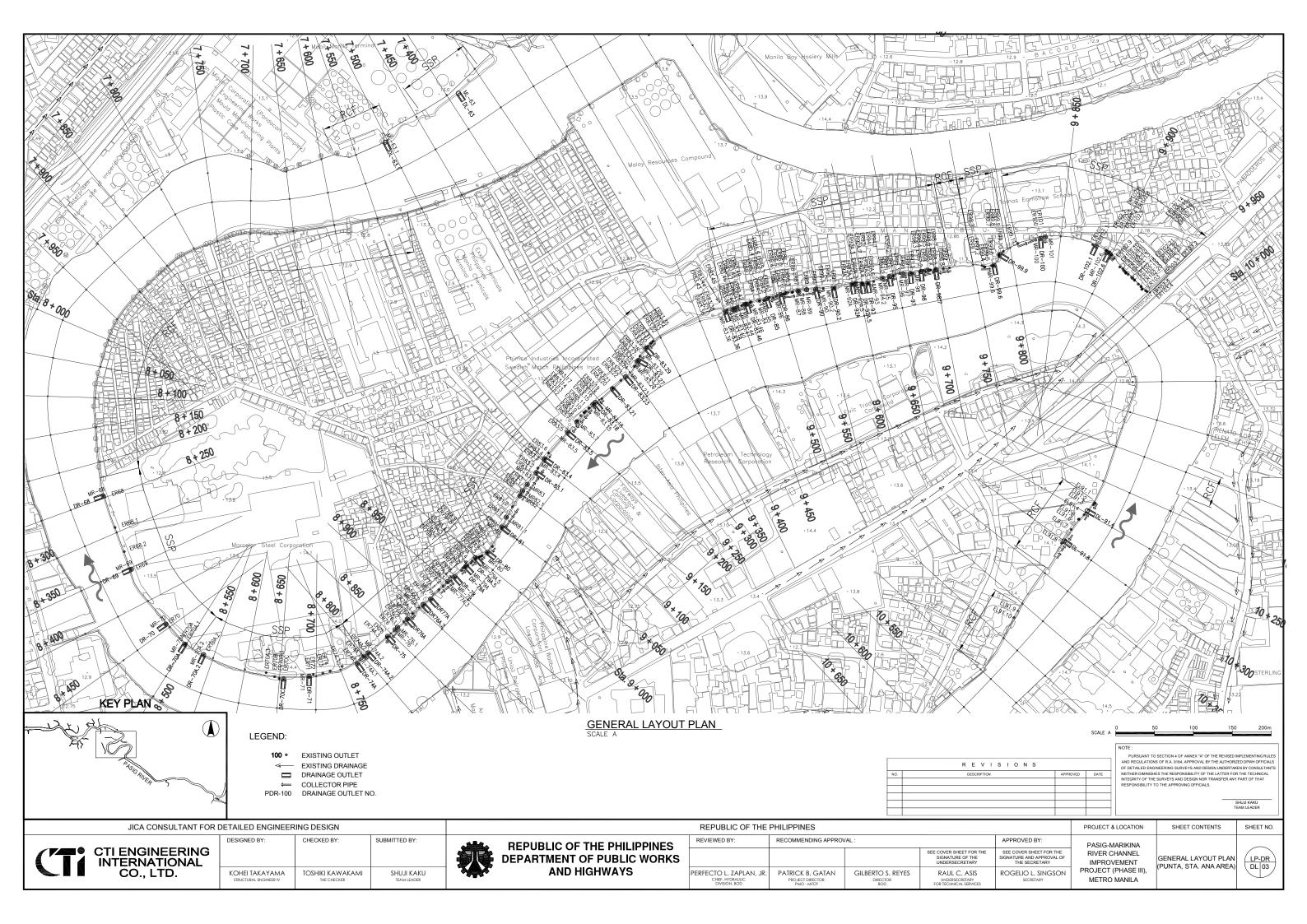
DRAWING LIST (4/4) (DRAINAGE WORKS; LOWER PASIG)

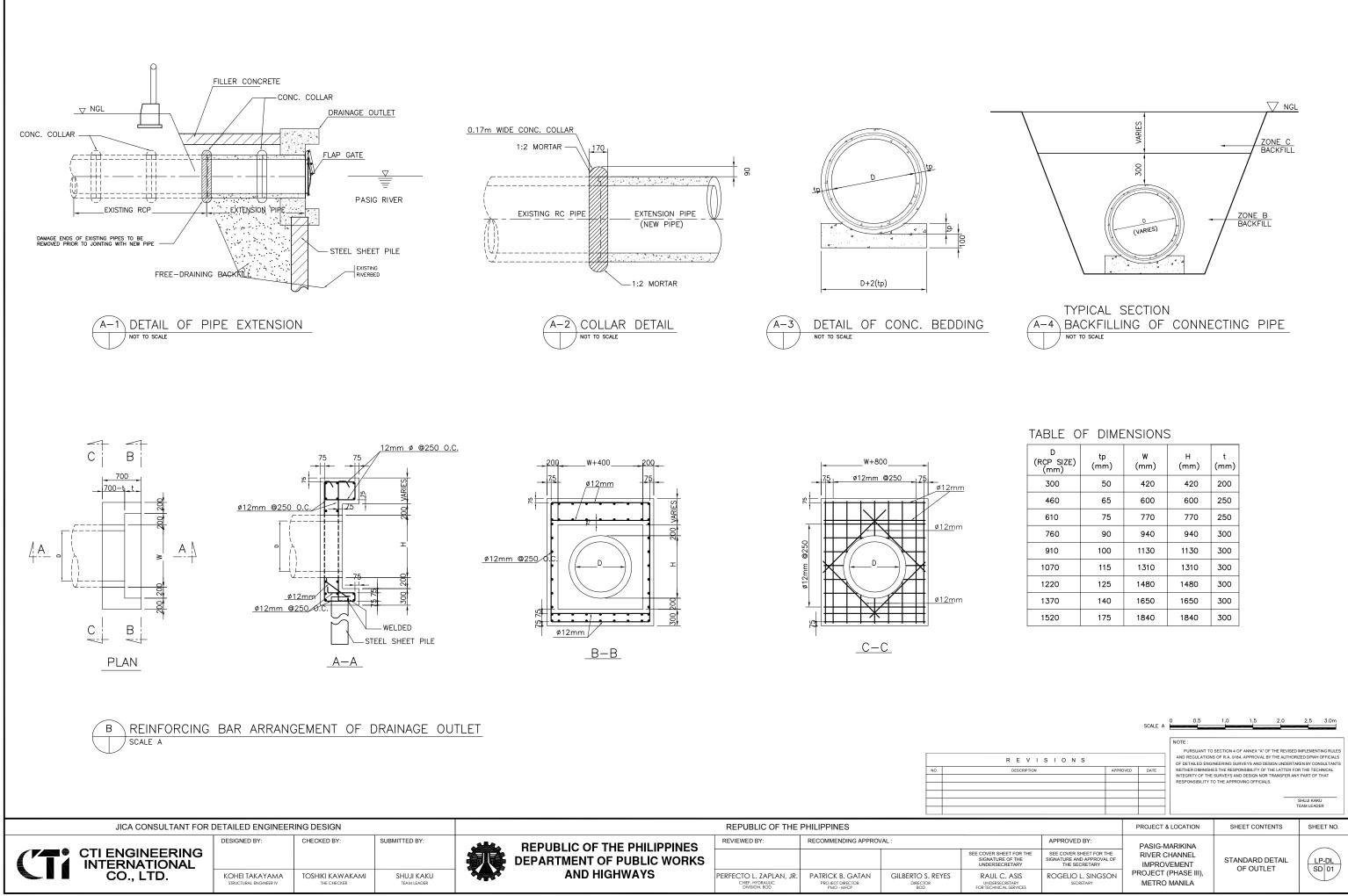
IEET NO.	DRAWING NO.	NAME OF LOCATION	SHEET CONTENTS
126	LP-DR; DO-98/P		PLAN & PROFILE OF COLLECTOR PIPE (DR 98, RIGHT BANK)
127	LP-DR; DO-98		DETAIL OF DRAINAGE OUTLET; (DR 98 & MR 98, RIGHT BANK)
128	LP-DR; DO-98.7/P		PLAN & PROFILE OF COLLECTOR PIPE (DR 98.7, RIGHT BANK)
129	LP-DR; DO-98.7		DETAIL OF DRAINAGE OUTLET; (DR 98.7 & MR 98.7, RIGHT BANK)
130	LP-DR; DO-99.1/P		PLAN & PROFILE OF COLLECTOR PIPE (DR 99.1, RIGHT BANK)
131	LP-DR; DO-99.1		DETAIL OF DRAINAGE OUTLET; (DR 99.1 & MR 99.1, RIGHT BANK)
132	LP-DR; DO-99.9		DETAIL OF DRAINAGE OUTLET; (DR 99.9, MR 99.9 & COLLECTOR PIPE, RIGHT B
133	LP-DR; DO-100/P		PLAN & PROFILE OF U-DITCH COLLECTOR (DR 100, RIGHT BANK)
134	LP-DR; DO-100		DETAIL OF DRAINAGE OUTLET; (DR 100 & MR 100, RIGHT BANK)
135	LP-DR; DO-102.1		DETAIL OF DRAINAGE OUTLET; (DR 102.1, MR 102.1, & COLLECTOR PIPE, RIGH
136	LP-DR; DO-102.6/P		PLAN & PROFILE OF COLLECTOR PIPE (DR 102.6, RIGHT BANK)
137	LP-DR; DO-102.6		DETAIL OF DRAINAGE OUTLET; (DR 102.6 & MR 102.6, RIGHT BANK)
	126 127 128 129 130 131 132 133 134 135 136	126 LP-DR; DO-98/P 127 LP-DR; DO-98 128 LP-DR; DO-98.7/P 129 LP-DR; DO-98.7 130 LP-DR; DO-99.1/P 131 LP-DR; DO-99.1 132 LP-DR; DO-99.9 133 LP-DR; DO-100/P 134 LP-DR; DO-100.1 135 LP-DR; DO-102.1 136 LP-DR; DO-102.6/P	126 LP-DR; DO-98/P 127 LP-DR; DO-98 128 LP-DR; DO-98.7/P 129 LP-DR; DO-98.7 130 LP-DR; DO-99.1/P 131 LP-DR; DO-99.1 132 LP-DR; DO-99.9 133 LP-DR; DO-100/P 134 LP-DR; DO-102.1 136 LP-DR; DO-102.6/P

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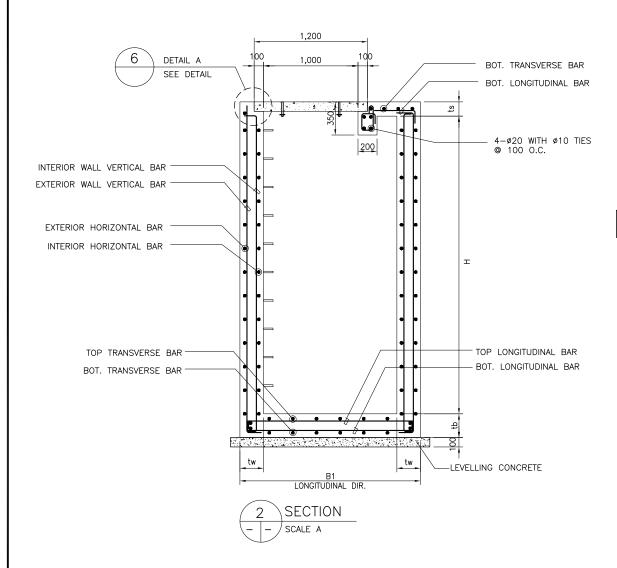


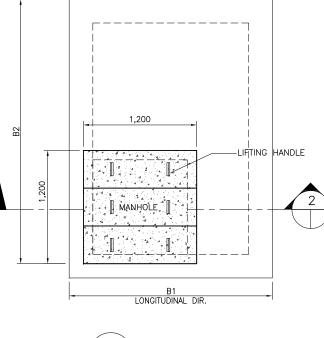




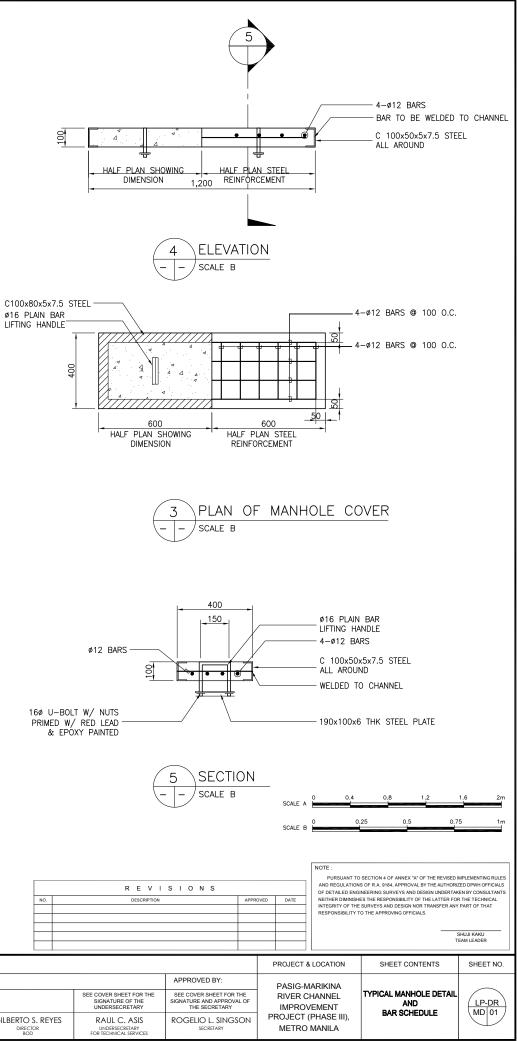


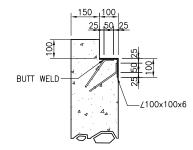
D (RCP SIZE) (mm)	tp (mm)	W (mm)	H (mm)	t (mm)
300	50	420	420	200
460	65	600	600	250
610	75	770	770	250
760	90	940	940	300
910	100	1130	1130	300
1070	115	1310	1310	300
1220	125	1480	1480	300
1370	140	1650	1650	300
1520	175	1840	1840	300









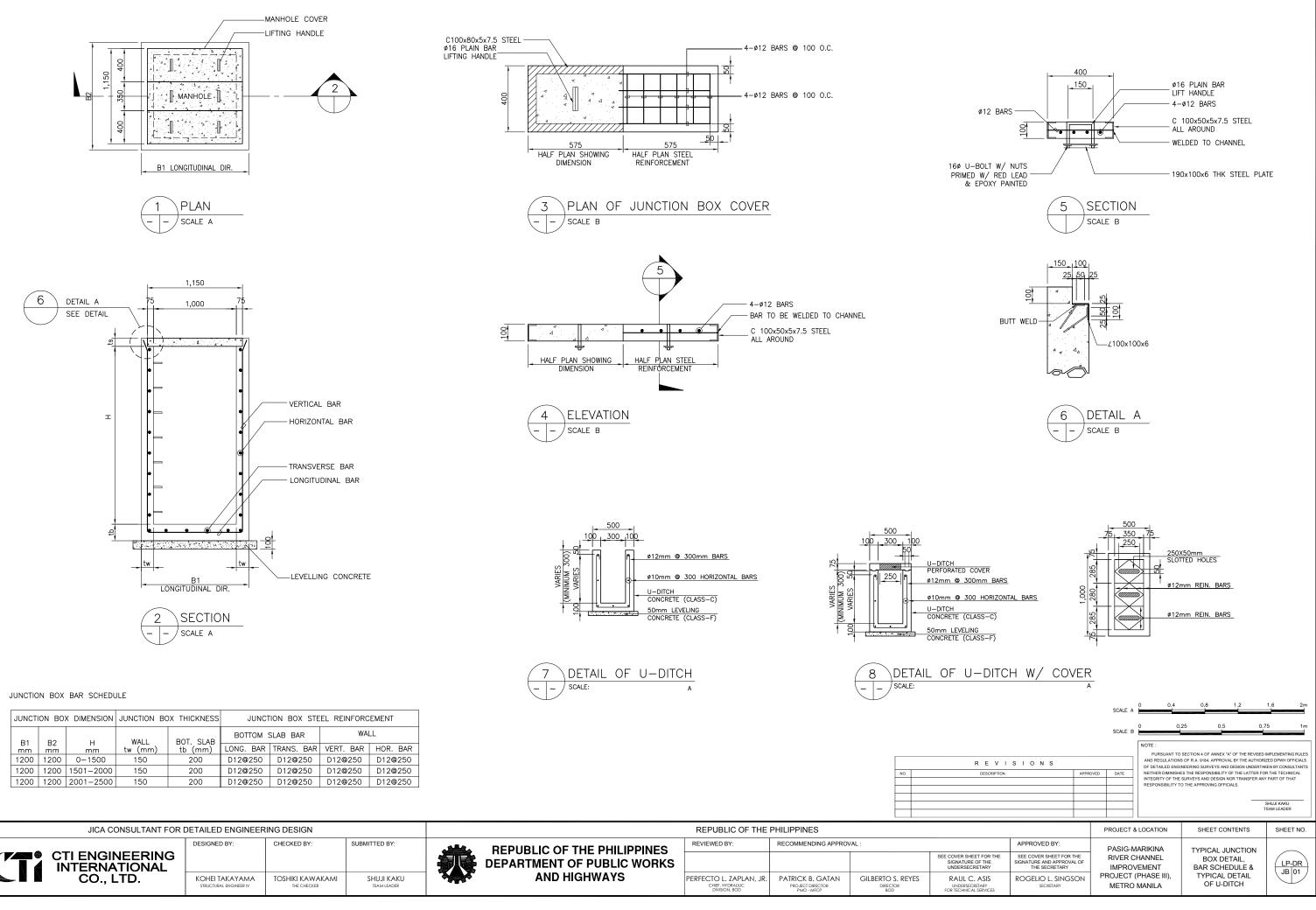




MANHOLE BAR SCHEDULE

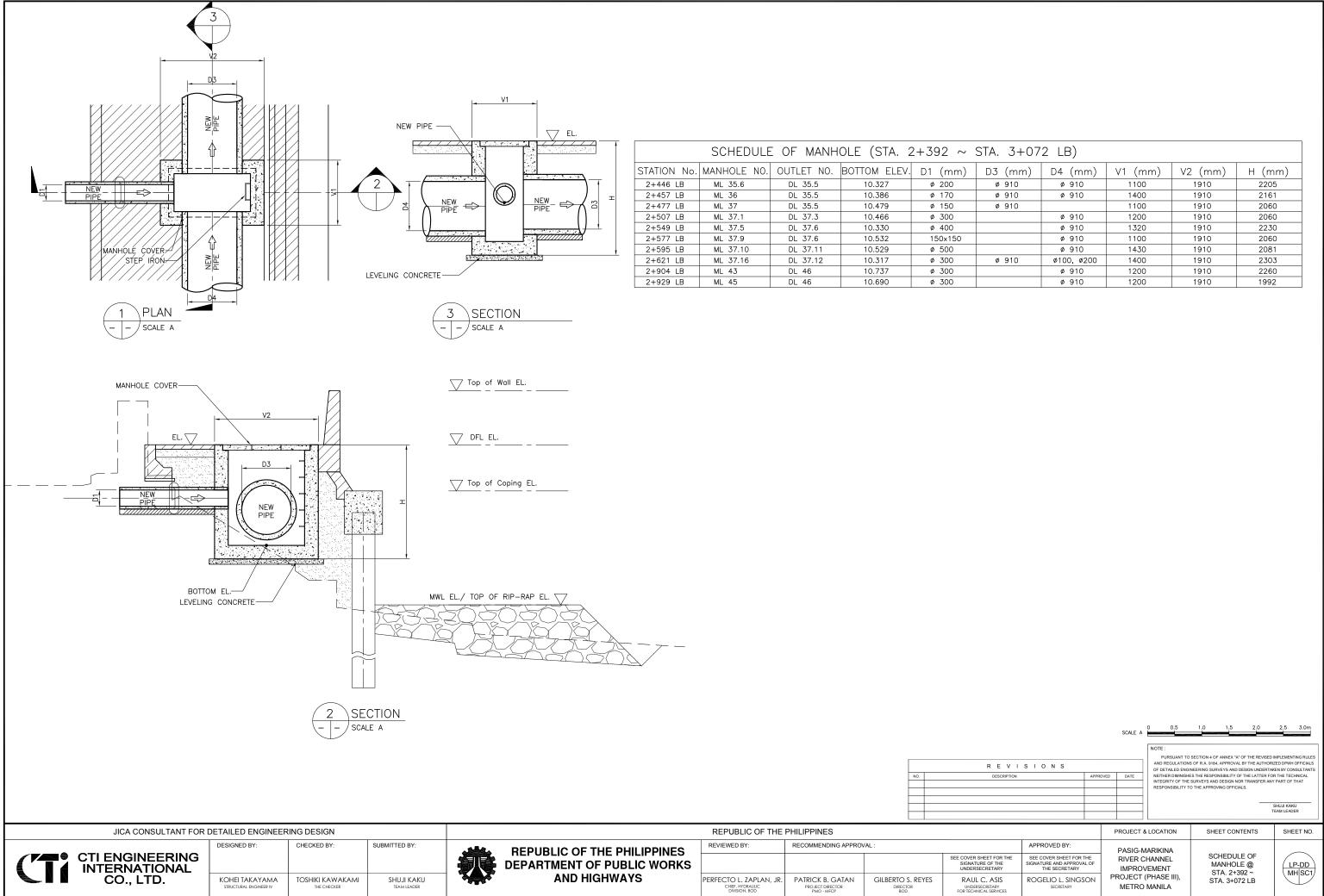
MANHOLE DIMENSION MANHOLE THICKN		ESS														
						TOP	SLAB		BOTTOM SLAB BAR				WALL			
B1	B2	н	TOP SLAB	BOT. SLAB	WALL	BOTTO	M BAR	TOP	BAR	BOTTO	M BAR	HOR.	BAR	VERTIC,	AL BAR	
mm	mm	mm	ts (mm)	tb (mm)	tw (mm)	LONG. BAR	TRANS. BAR	LONG. BAR	TRANS. BAR	LONG. BAR	TRANS. BAR	EXT. BAR	INT. BAR	EXT. BAR	INT. BAR	
2000	1200	2000-4000	150	250	250	D12@125	D12@125	D12@250	D12@250	D12@250	D12@250	D12@250	D12@250	D12@250	D12@250	
2000	2000	2000-4000	150	250	250	D12@125	D12@125	D12@250	D12@250	D12@250	D12@250	D12@250	D12@250	D12@250	D12@250	
2000	2800	2000-2500	150	250	250	D12@125	D12@125	D12@250	D12@250	D12@250	D12@250	D12@250	D12@250	D12@250	D12@250	
2000	2800	3000	150	250	250	D12@125	D12@125	D12@250	D12@250	D16@250	D16@250	D12@250	D12@250	D16@250	D12@250	
2100	2800	3500	150	300	250	D12@125	D12@125	D12@250	D12@250	D16@250	D16@250	D16@250	D12@250	D16@250	D12@250	
2100	2900	4000	150	300	300	D12@125	D12@125	D12@250	D12@250	D16@250	D16@250	D16@250	D12@250	D16@250	D12@250	
2500	1200	2000-2500	150	250	250	D12@250	D12@250	D12@250	D12@250	D12@250	D12@250	D12@250	D12@250	D12@250	D12@250	
2500	1200	2500-3500	150	250	250	D12@125	D12@125	D12@250	D12@250	D12@250	D12@250	D16@250	D16@250	D12@250	D12@250	
2600	1200	4000	150	300	300	D12@125	D12@125	D12@250	D12@250	D12@250	D12@250	D16@250	D16@250	D12@250	D12@250	
2100	4100	3000-3500	150	300	300	D12@125	D12@125	D12@250	D12@250	D20@250	D20@250	D16@250	D12@250	D20@250	D12@250	
2200	3900	4000-4200	150	350	350	D12@125	D12@125	D12@250	D12@250	D20@250	D20@250	D16@250	D12@250	D20@250	D12@250	

JICA CONSULTANT FOR	DETAILED ENGINEEF	RING DESIGN		REPUBLIC OF THE PHILIPPINES						
	DESIGNED BY:	CHECKED BY:	SUBMITTED BY:	REPUBLIC OF THE PHILIPPINES	REVIEWED BY:	RECOMMENDING APPROV	AL :			
				DEPARTMENT OF PUBLIC WORKS				SEE COVER SHEET FOR THE SIGNATURE OF THE UNDERSECRETARY		
CO., LTD.	KOHEI TAKAYAMA STRUCTURAL ENGINEER IV	TOSHIKI KAWAKAMI THE CHECKER	SHUJI KAKU TEAM LEADER	AND HIGHWAYS	PERFECTO L. ZAPLAN, JR. CHIEF, HYDRAULIC DIVISION, BOD	PATRICK B. GATAN PROJECT DIRECTOR PMO - MFCP	GILBERTO S. REYES	RAUL C. ASIS UNDERSECRETARY FOR TECHNICAL SERVICES		

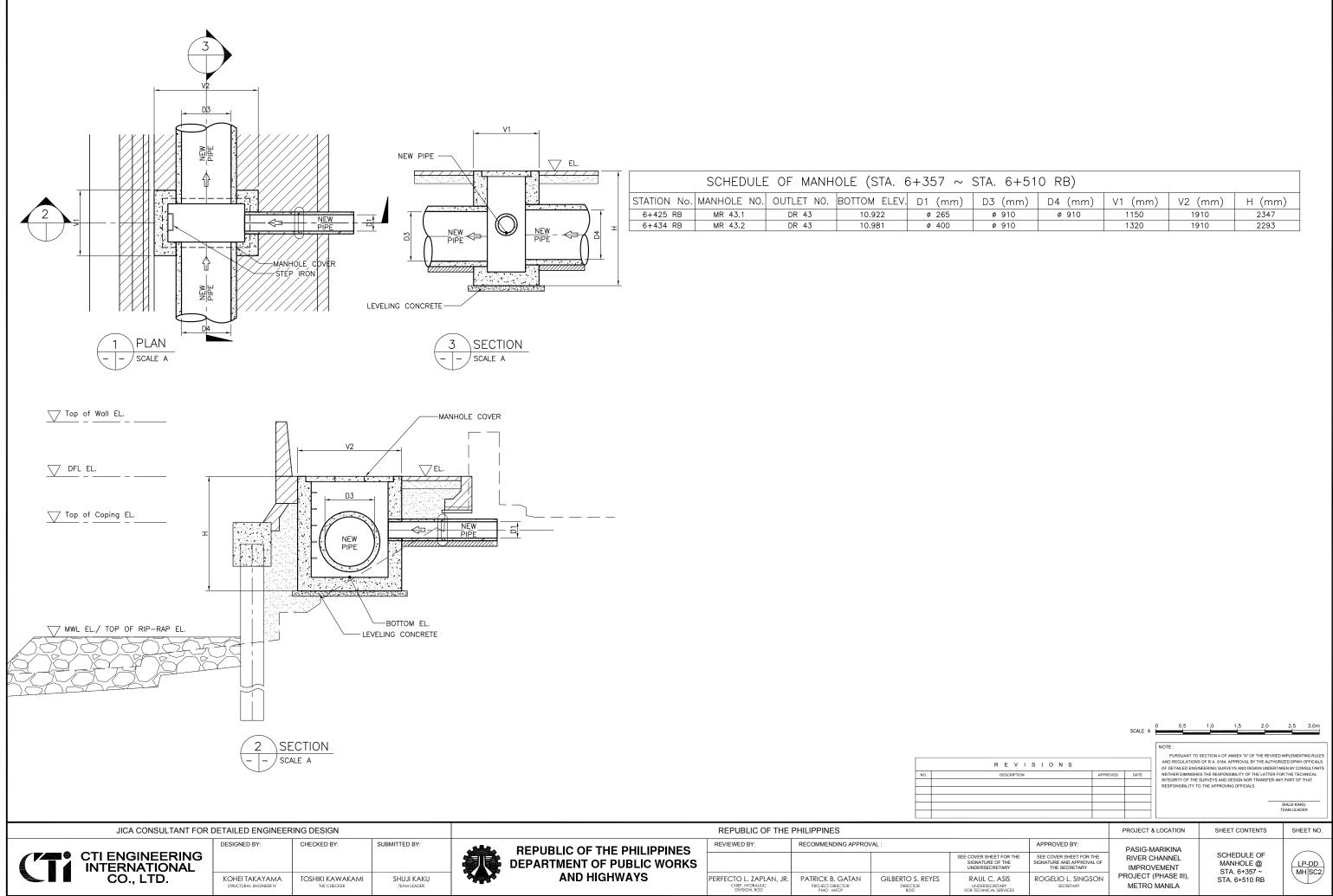


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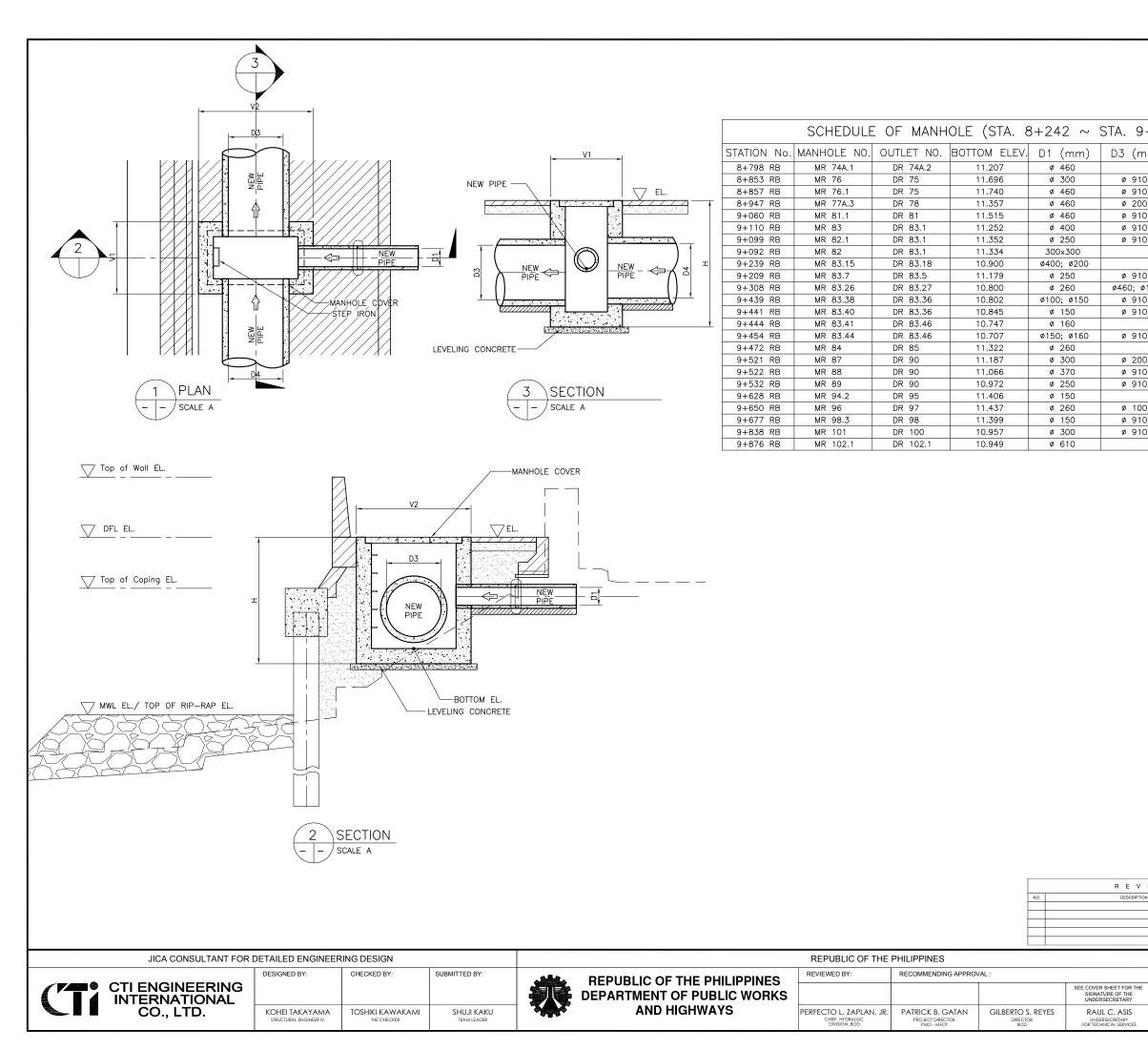
Г	JICA CONSULTANT FOR I	DETAILED ENGINEER	RING DESIGN			REPUBLIC OF THE	PHILIPPINES	
		DESIGNED BY:	CHECKED BY:	SUBMITTED BY:	REPUBLIC OF THE PHILIPPINES	REVIEWED BY:	RECOMMENDING APPROV	/AL :
					DEPARTMENT OF PUBLIC WORKS			
	CO., LTD.	KOHEI TAKAYAMA STRUCTURAL ENGINEER IV	TOSHIKI KAWAKAMI THE CHECKER	SHUJI KAKU TEAM LEADER	AND HIGHWAYS	PERFECTO L. ZAPLAN, JR. CHIEF, HYDRAULIC DIVISION, BOD	PATRICK B. GATAN PROJECT DIRECTOR PMO - MFCP	



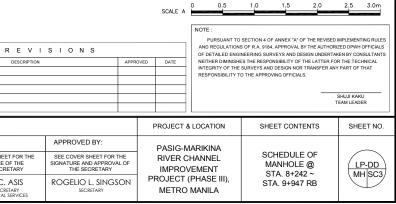
3+07	2 LB)			
nm)	D4 (mm)	V1 (mm)	V2 (mm)	H (mm)
0	ø 910	1100	1910	2205
0	ø 910	1400	1910	2161
0		1100	1910	2060
	ø 910	1200	1910	2060
	ø 910	1320	1910	2230
	ø 910	1100	1910	2060
	ø 910	1430	1910	2081
0	ø100, ø200	1400	1910	2303
	ø 910	1200	1910	2260
	ø 910	1200	1910	1992

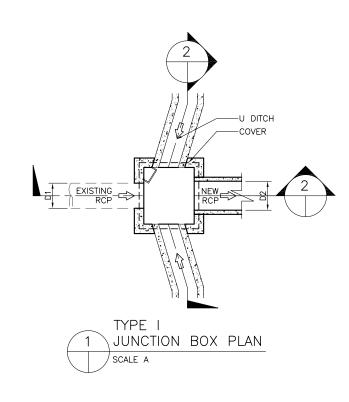


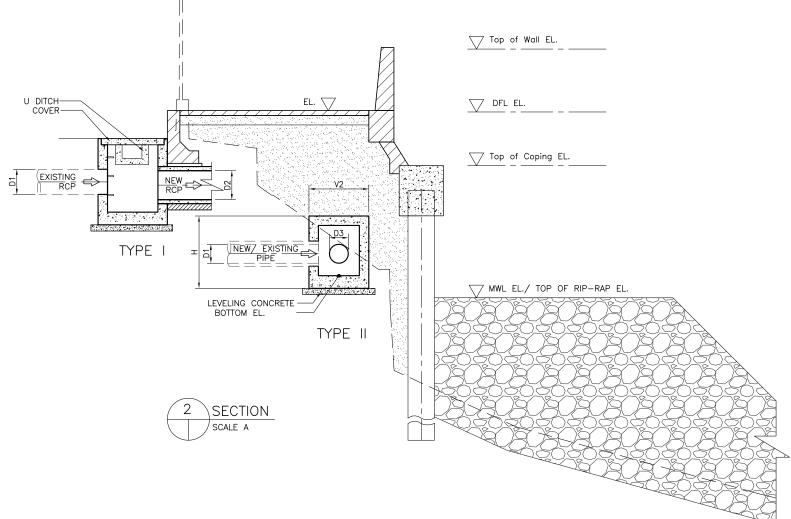
-51	0 RB)			
n)	D4 (mm)	V1 (mm)	V2 (mm)	H (mm)
	ø 910	1150	1910	2347
		1320	1910	2293

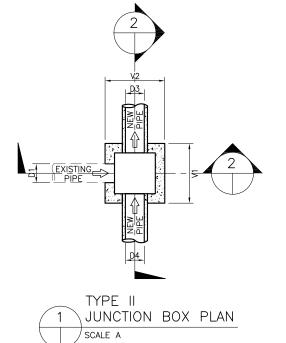


)+94	7 RB)			
nm)	D4 (mm)	V1 (mm)	V2 (mm)	H (mm)
	ø 910	1390	1910	2590
0	ø 910	1200	1910	2104
0		1390	1910	2060
0	ø 910	1390	1910	2429
0		1390	1910	1877
0	ø 910	1320	1910	2694
0	ø 910	1150	1910	2533
	ø 910	1200	1910	2481
	ø 910	1200	1910	2923
0	ø80; ø200	1200	1910	2643
ø100	ø 460	1100	1390	3027
0	ø 910	1100	1910	3034
0	ø 100	1100	1910	2991
	ø 910	1100	1910	3089
0	ø 910	1100	1910	3159
	ø 910	1150	1910	2515
0	ø 910	1200	1910	2653
0	ø 910	1300	1910	2836
0	ø 910	1390	1910	2899
	ø 910	1100	1910	2442
0	ø 910	1150	1910	2411
0	ø 100	1100	1910	2450
0		1200	1910	2897
	ø 910	1560	1910	2913



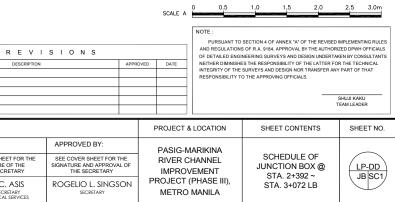


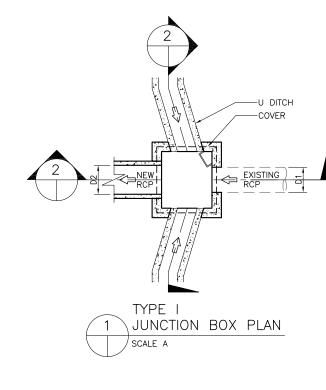


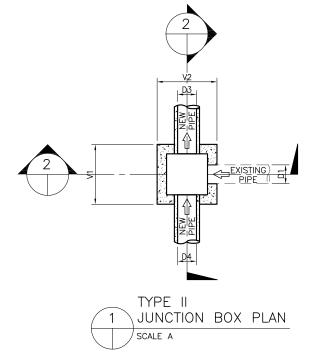


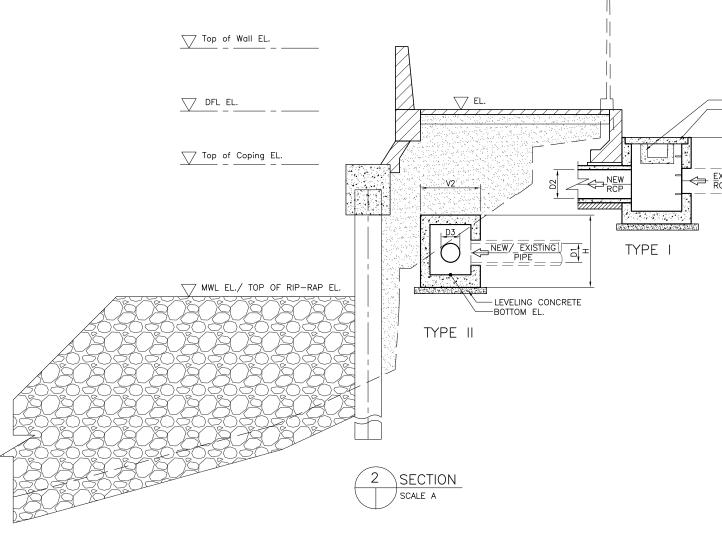
SCHEDULE	E OF JUNCT	FION BOX	(STA. 2+39	2 ~ STA.	3+072 LE	3)					
STATION No.	JUNCTION BOX NO.	TYPE	OUTLET	BOTTOM ELEV.	D1 (mm)	D2 (mm)	D3 (mm)	D4 (mm)	V1 (mm)	V2 (mm)	H (mm)
2+543 LB	JL 37.4	I	DL 37.3	11.211	ø 150	ø 150			900	900	900

JICA CONSULTANT FOR	DETAILED ENGINEER	ING DESIGN				REPUBLIC OF THE	PHILIPPINES				PRO
	DESIGNED BY:	CHECKED BY:	SUBMITTED BY:		REPUBLIC OF THE PHILIPPINES	REVIEWED BY:	RECOMMENDING APPRO	/AL :		APPROVED BY:	PA
					DEPARTMENT OF PUBLIC WORKS				SEE COVER SHEET FOR THE SIGNATURE OF THE UNDERSECRETARY	SEE COVER SHEET FOR THE SIGNATURE AND APPROVAL OF THE SECRETARY	RI/
CO., LTD.	KOHEI TAKAYAMA STRUCTURAL ENGINEER IV	TOSHIKI KAWAKAMI THE CHECKER	SHUJI KAKU TEAM LEADER	₩.	AND HIGHWAYS	PERFECTO L. ZAPLAN, JR. CHIEF, HYDRAULIC DIVISION, BOD	PATRICK B. GATAN PROJECT DIRECTOR PMO - MFCP	GILBERTO S. REYES	RAUL C. ASIS UNDERSECRETARY FOR TECHNICAL SERVICES	ROGELIO L. SINGSON SECRETARY	PROJ ME









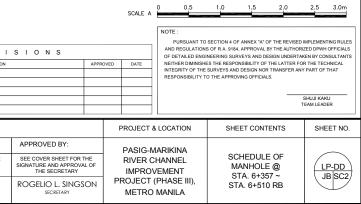
SCHEDUL	SCHEDULE OF JUNCTION BOX (STA. 6+357 ~ STA. 6+510 RB)										
STATION No.	JUNCTION BOX NO.	TYPE	OUTLET	BOTTOM ELEV.	D1 (mm)	D2 (mm)	D3 (mm)	D4 (mm)	V1 (mm)	V2 (mm)	H (mm)
6+439 RB	JR 41.1	Ш	DR 40	11.548	ø 230		ø 300		900	900	1100
6+453 RB	JR 43.3	Ш	DR 44	11.744	ø 192			ø 200	800	800	1050

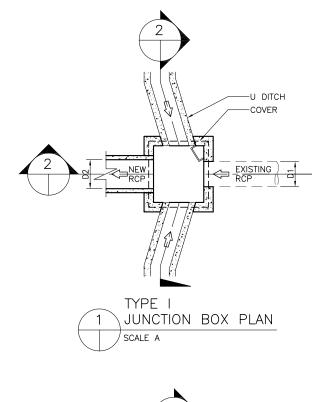
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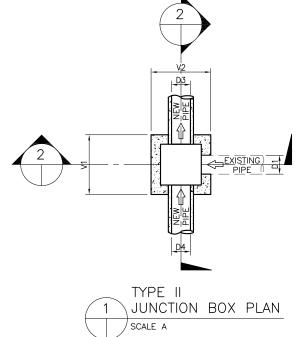
							<u> </u>			
JICA CONSULTANT FOR	DETAILED ENGINEE	RING DESIGN		REPUBLIC OF THE PHILIPPINES						
	DESIGNED BY:	CHECKED BY:	SUBMITTED BY:	 REPUBLIC OF THE PHILIPPINES	REVIEWED BY:	RECOMMENDING APPRO	VAL :			
				DEPARTMENT OF PUBLIC WORKS				SEE COVER SHEET FOR THE SIGNATURE OF THE UNDERSECRETARY		
CO., LTD.	KOHEI TAKAYAMA STRUCTURAL ENGINEER IV	TOSHIKI KAWAKAMI THE CHECKER	SHUJI KAKU TEAM LEADER	AND HIGHWAYS	PERFECTO L. ZAPLAN, JR. CHIEF, HYDRAULIC DIVISION, BOD	PATRICK B. GATAN PROJECT DIRECTOR PMO - MFCP	GILBERTO S. REYES	RAUL C. ASIS UNDERSECRETARY FOR TECHNICAL SERVICES		

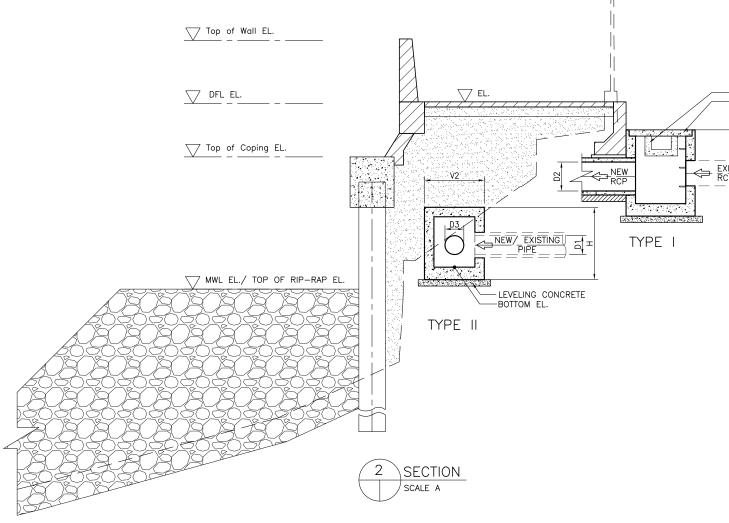










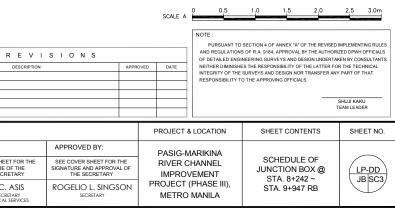


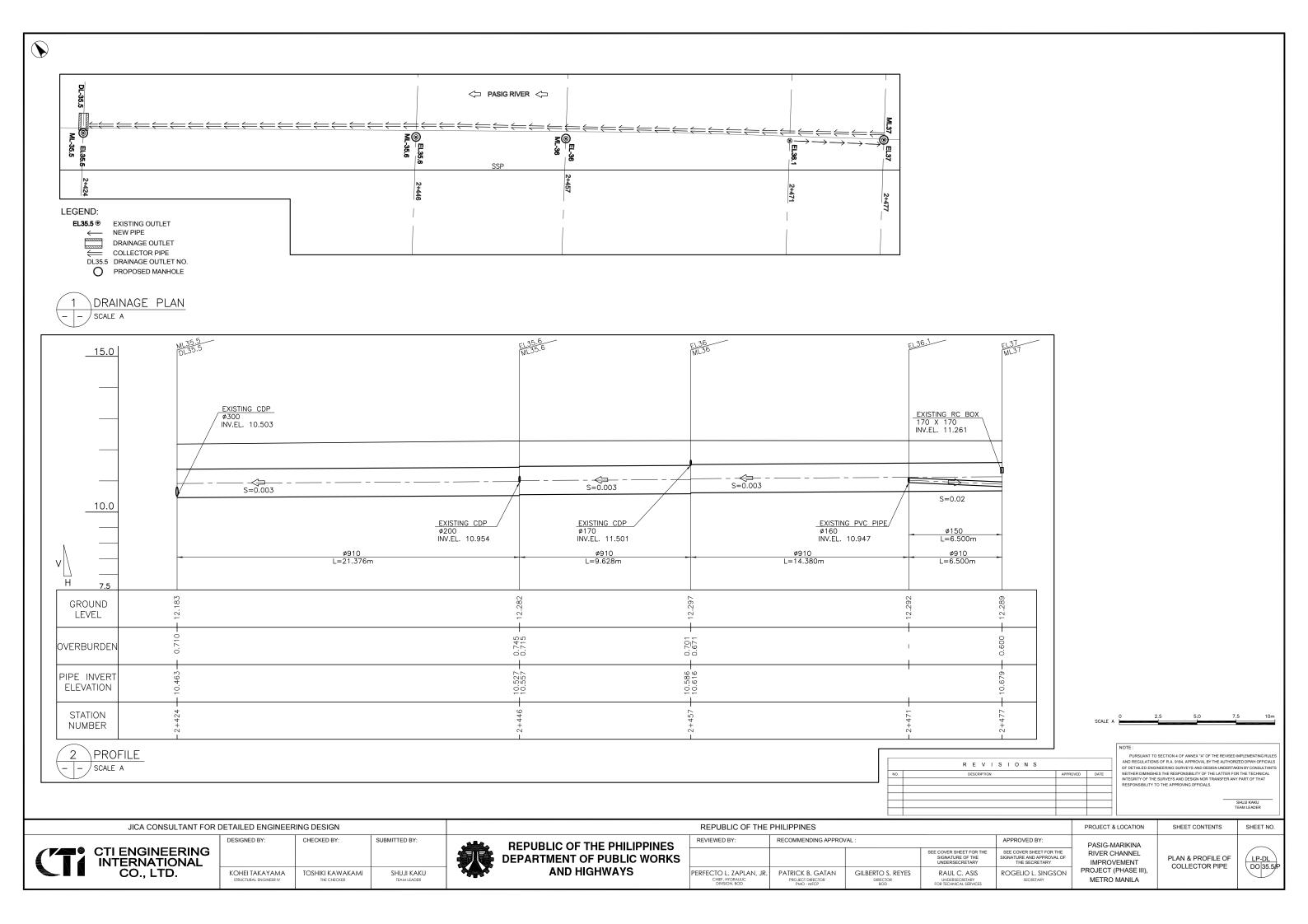
SCHEDULE	OF JUNC	TION BOX ((STA. 8+24	↓2 ~ STA.	9+947 RE	3)					
STATION No.	JUNCTION BOX NO.	TYPE	OUTLET	BOTTOM ELEV.	D1 (mm)	D2 (mm)	D3 (mm)	D4 (mm)	V1 (mm)	V2 (mm)	H (mm)
8+789RB	JR 74A.1	l	DR 74A.2	11.830	ø 460			ø 460	1200	1100	1552
8+857 RB	JR 76.1		DR 75	11.767	ø 200	ø 460			1200	1100	1472
8+947 RB	JR 77A.3		DR 78	11.770	ø 300	ø 460			1200	1100	1389
9+060 RB	JR 81.1	I	DR 81	11.515	230x250	ø 460			1200	1100	1877
9+302 RB	JR 83.24	=	DR 83.27	11.396	ø 320			ø 460	900	1190	1340
9+315 RB	JR 83.28	=	DR 83.27	12.141	ø 250		ø 300		900	950	1150
9+248 RB	JR 83.19	=	DR 83.18	10.949	ø 300		ø 300		950	950	1150

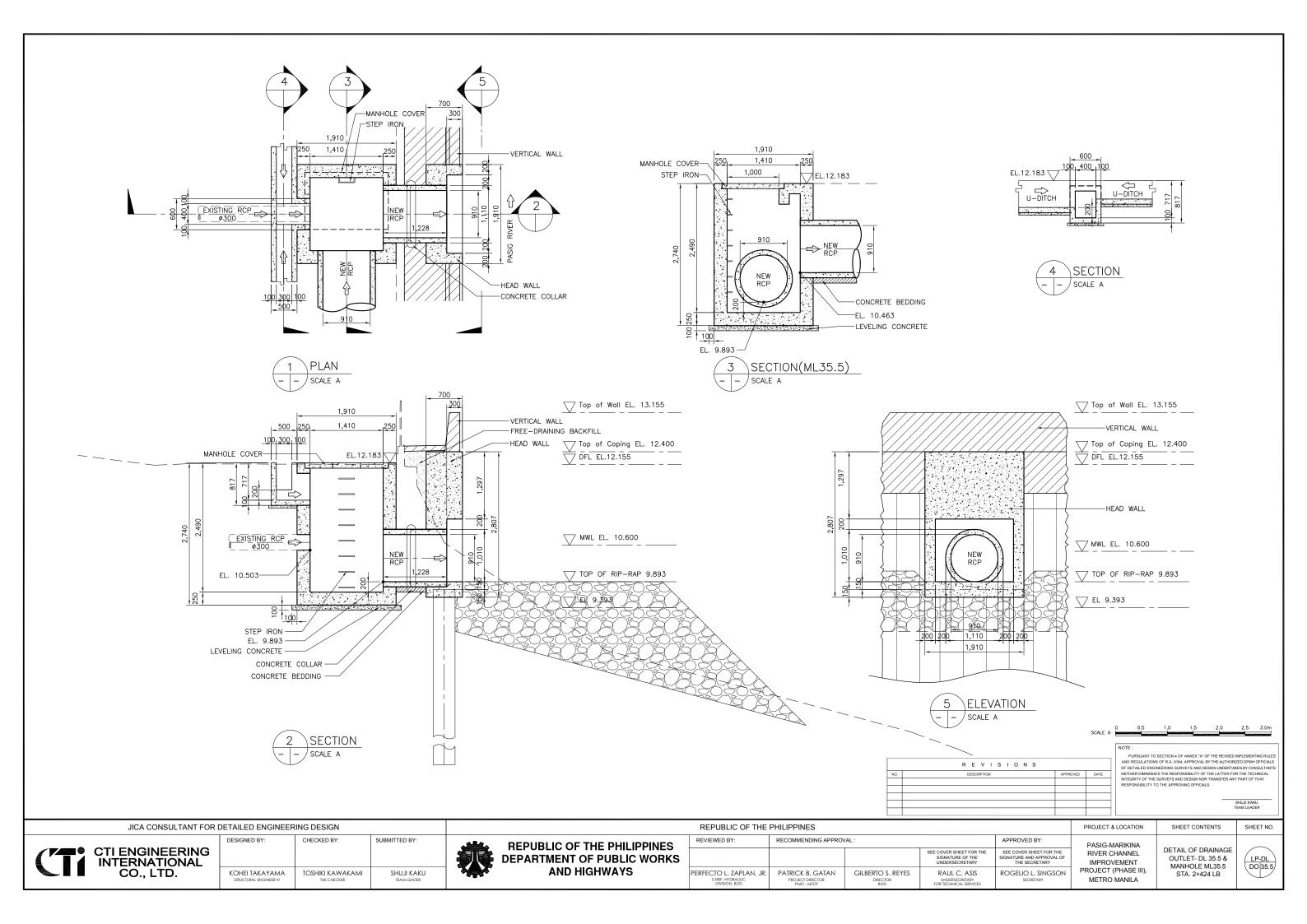
	JICA CONSULTANT FOR I	DETAILED ENGINEER	RING DESIGN			REPUBLIC OF THE	PHILIPPINES		
_		DESIGNED BY:	CHECKED BY:	SUBMITTED BY:	 REPUBLIC OF THE PHILIPPINES	REVIEWED BY:	RECOMMENDING APPROV	/AL :	
	CTI ENGINEERING INTERNATIONAL				DEPARTMENT OF PUBLIC WORKS				SEE COVER SHEET FOR THE SIGNATURE OF THE UNDERSECRETARY
	CO., LTD.	KOHEI TAKAYAMA STRUCTURAL ENGINEER IV	TOSHIKI KAWAKAMI THE CHECKER	SHUJI KAKU TEAM LEADER	AND HIGHWAYS	PERFECTO L. ZAPLAN, JR. CHIEF, HYDRAULIC DIVISION, BOD	PATRICK B. GATAN PROJECT DIRECTOR PMO - MFCP	GILBERTO S. REYES	RAUL C. ASIS UNDERSECRETARY FOR TECHNICAL SERVICES

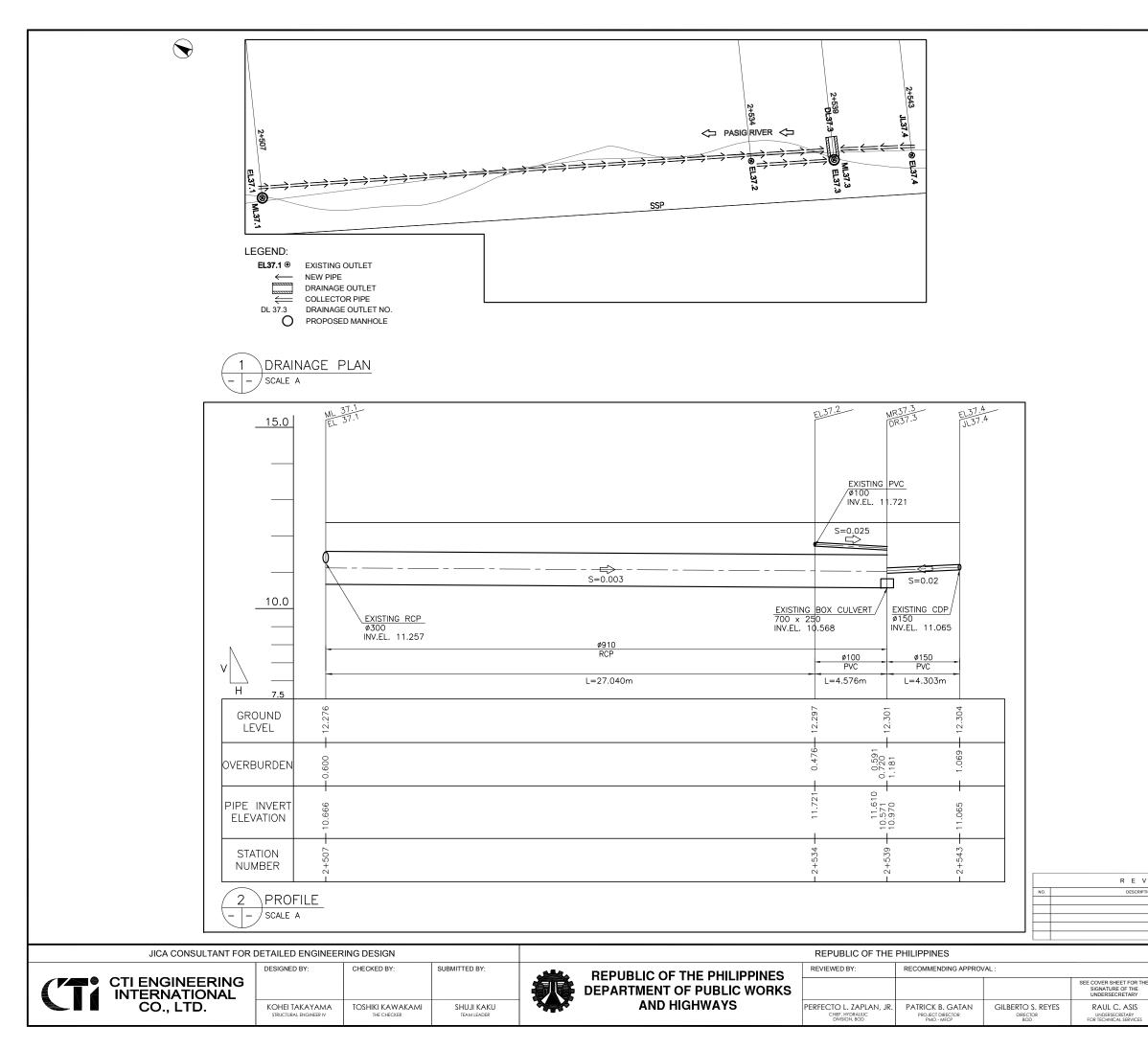
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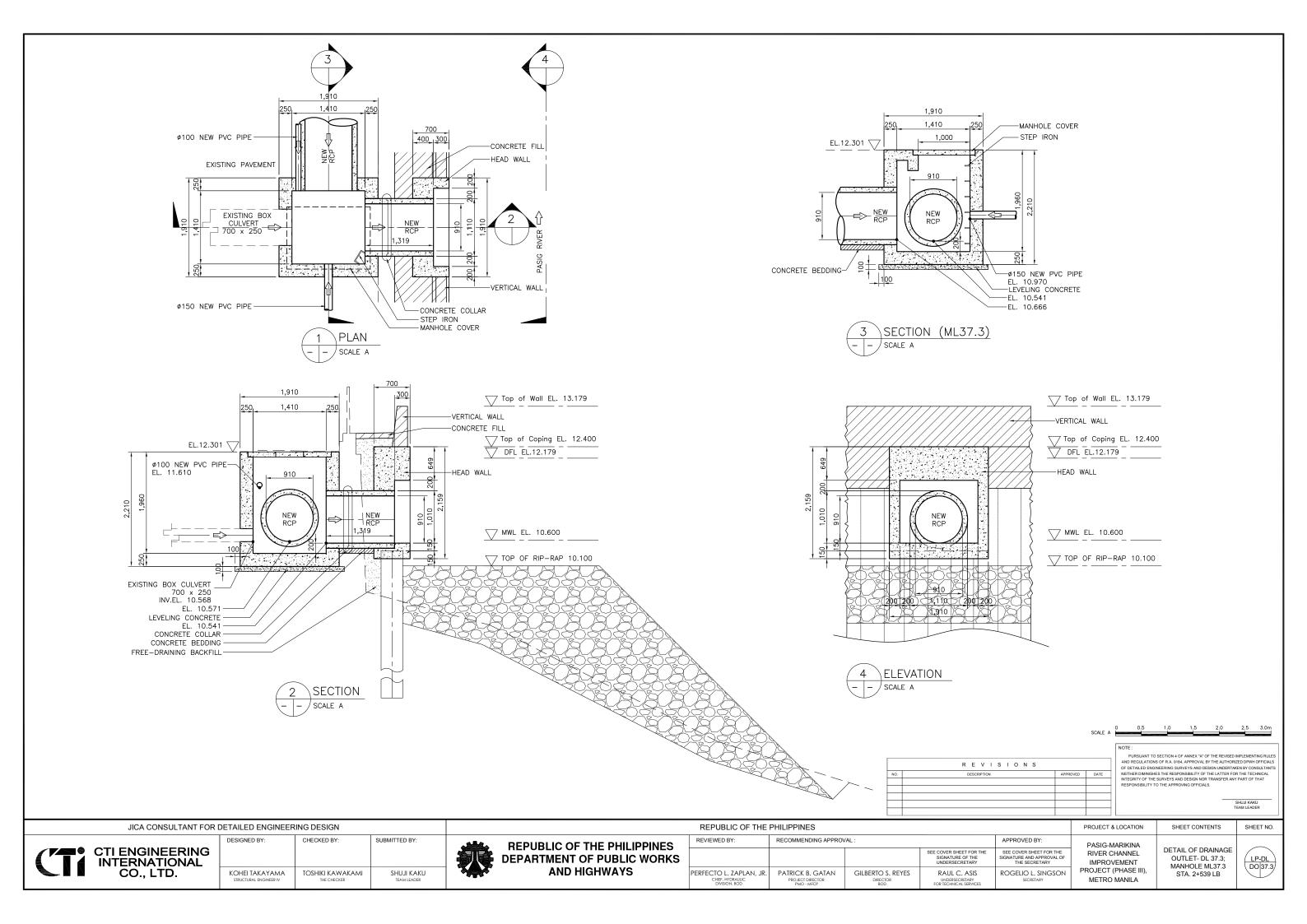


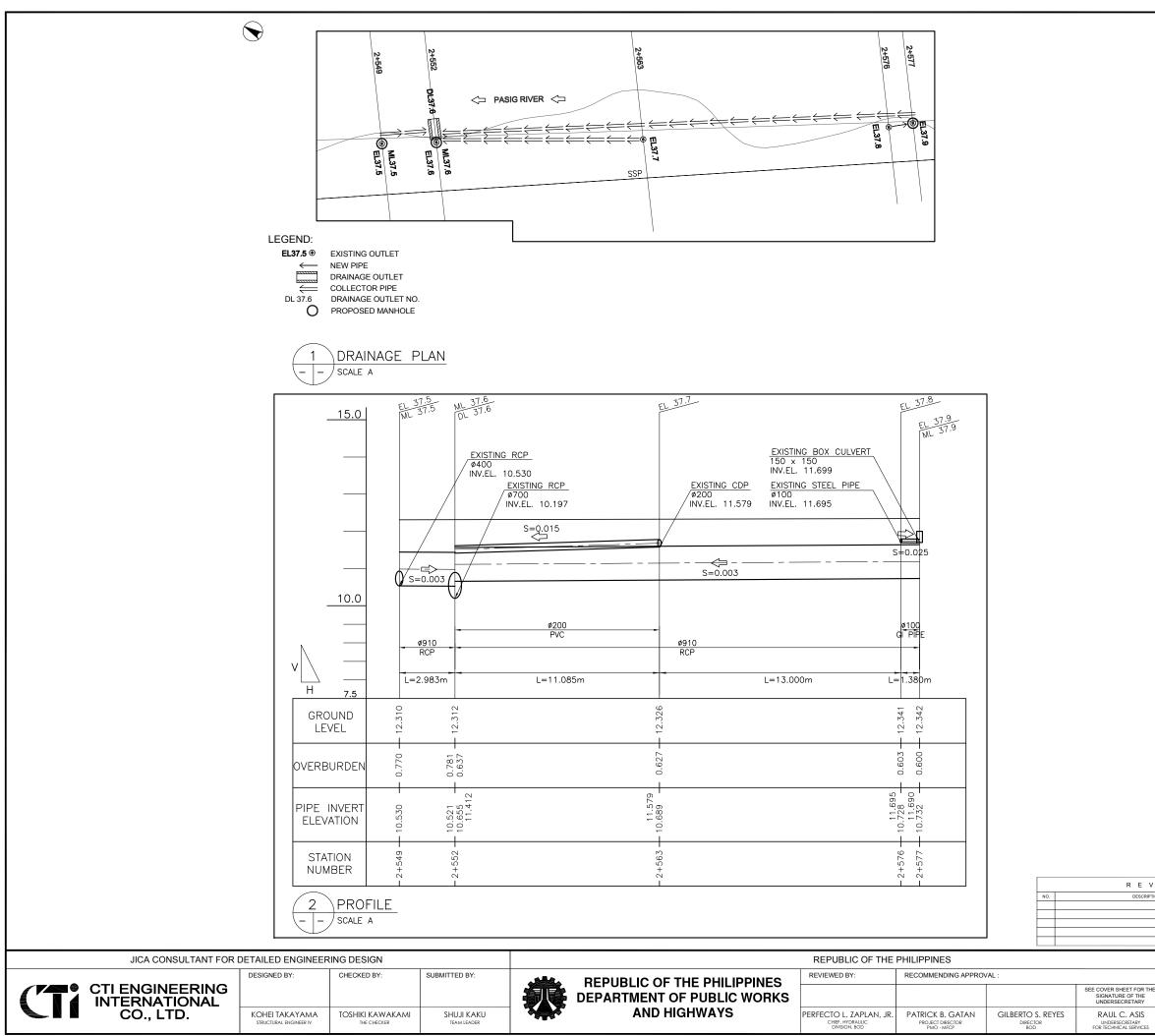




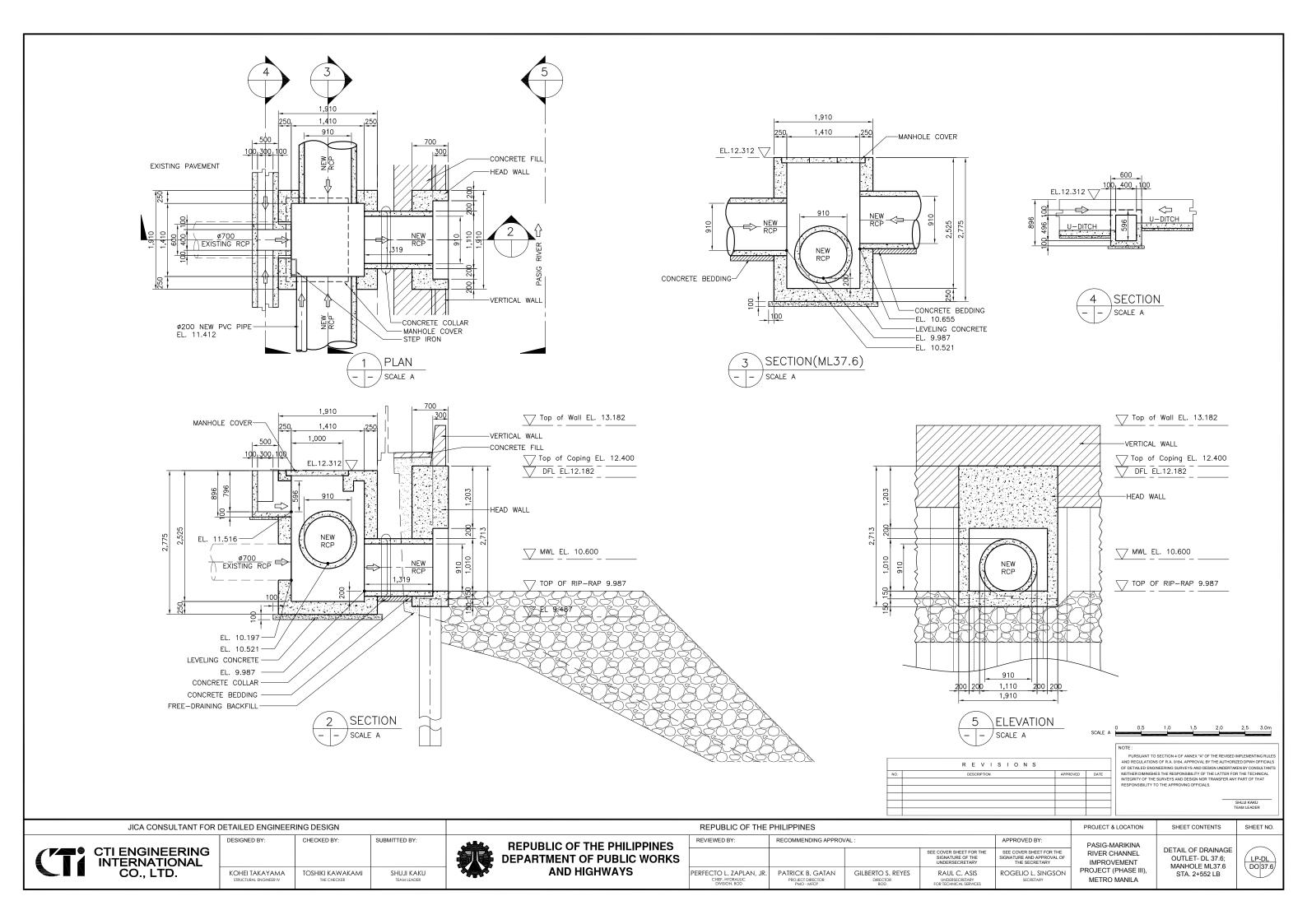


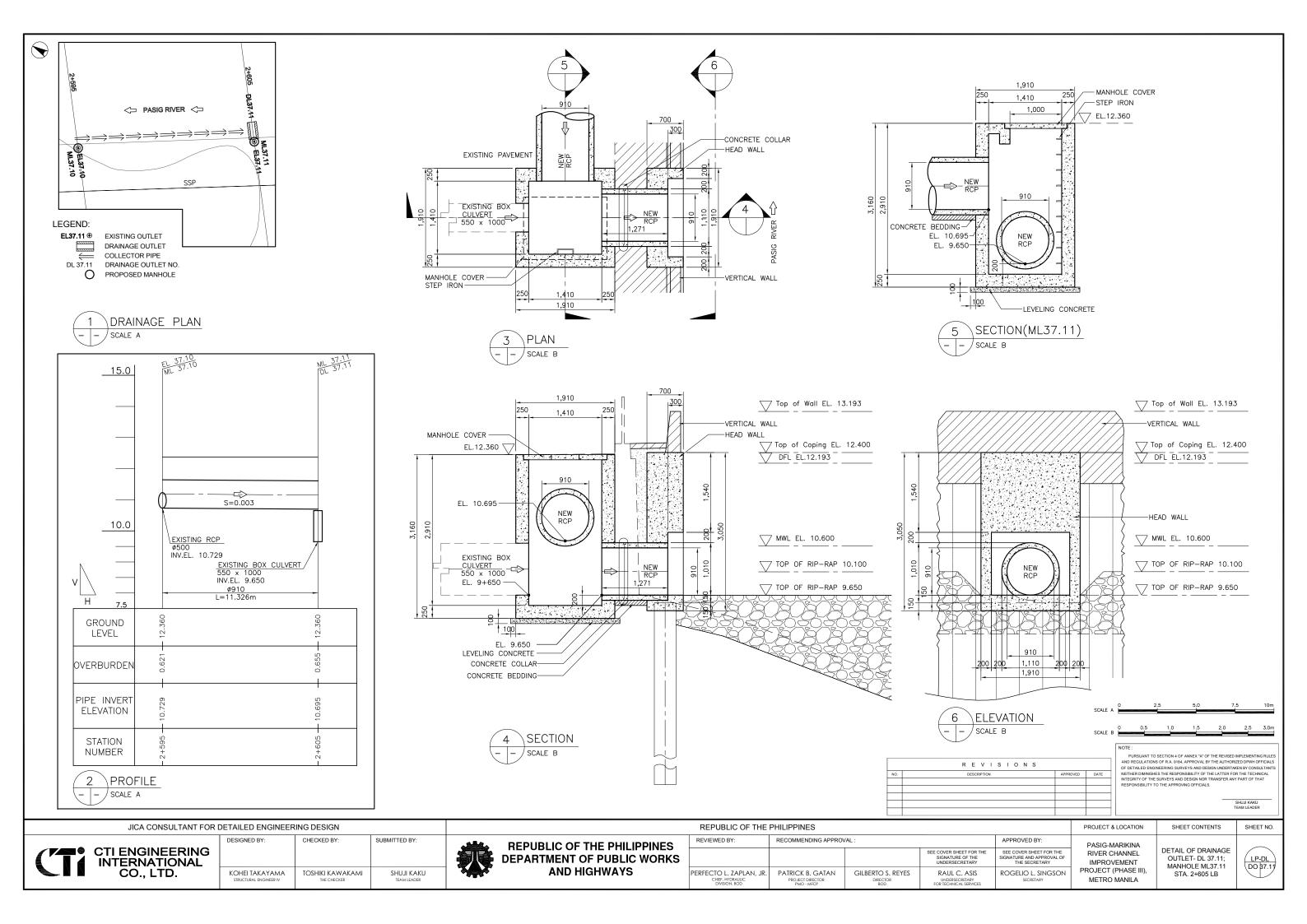
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I	S I O N S	APPRO	DVED	DATE	AND REGULATION OF DETAILED ENGI NEITHER DIMINISHE INTEGRITY OF THE	SECTION 4 OF ANNEX 'A' OF THE REVISE 5 OF F.A. 9154, APPROVAL BY THE AUTHO NEERING SURVEYS AND DESIGN UNDERT. 5 THE RESPONSIBILITY OF THE LATTER F SURVEYS AND DESIGN NOR TANASISER AI THE APPROVING OFFICIALS.	RIZED DPWH OFFICIALS AKEN BY CONSULTANTS OR THE TECHNICAL
			Р	ROJECT &	LOCATION	SHEET CONTENTS	SHEET NO.
	APPROVED BY: PASIG-M				ARIKINA		
	SEE COVER SHEET FOR T SIGNATURE AND APPROVA THE SECRETARY		1	RIVER CHANNEL IMPROVEMENT		PLAN & PROFILE OF	LP-DL
	ROGELIO L. SINGSON PROJECT (ROJECT (METRO		COLLECTOR PIPE	DO 37.3/P

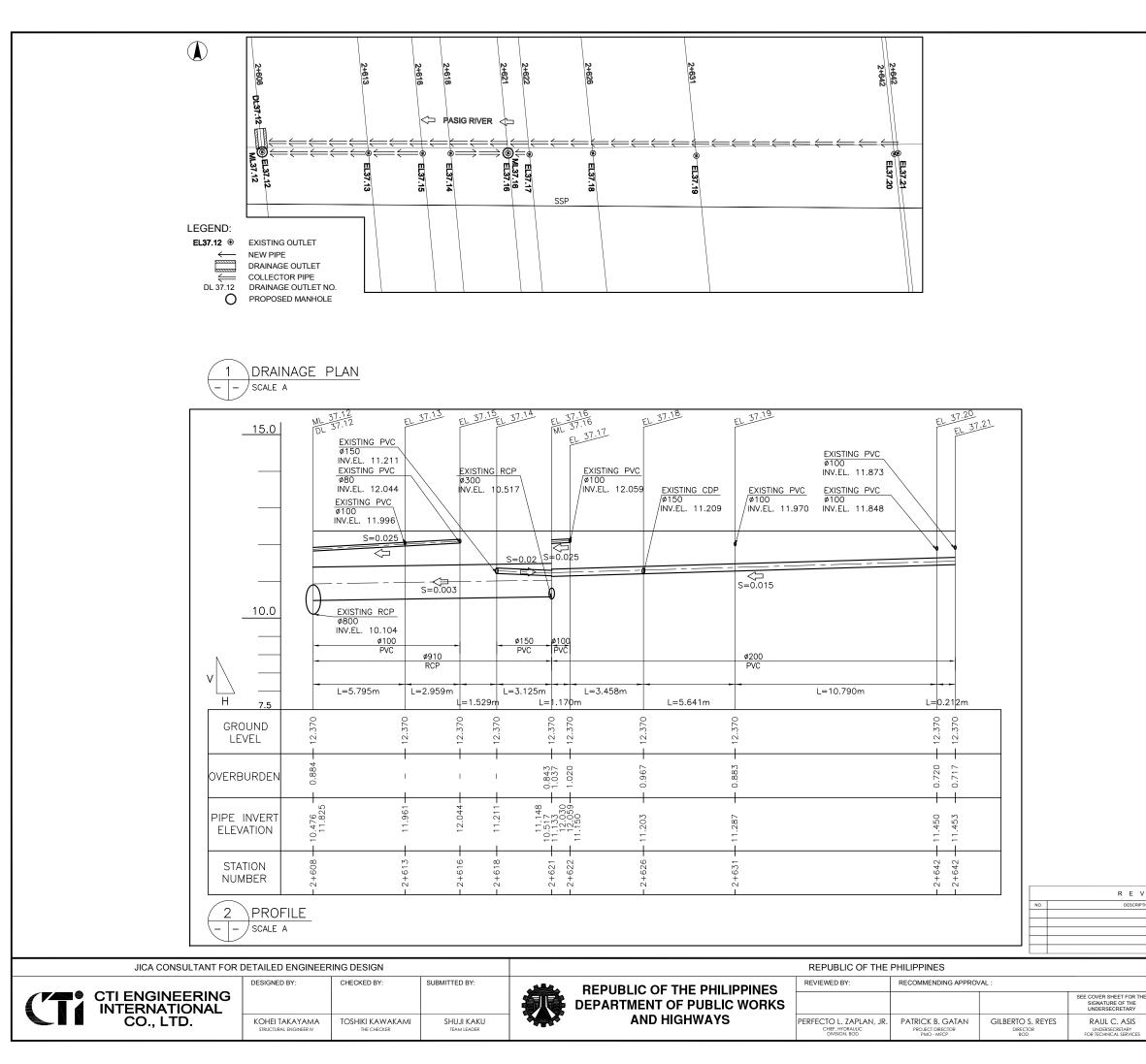




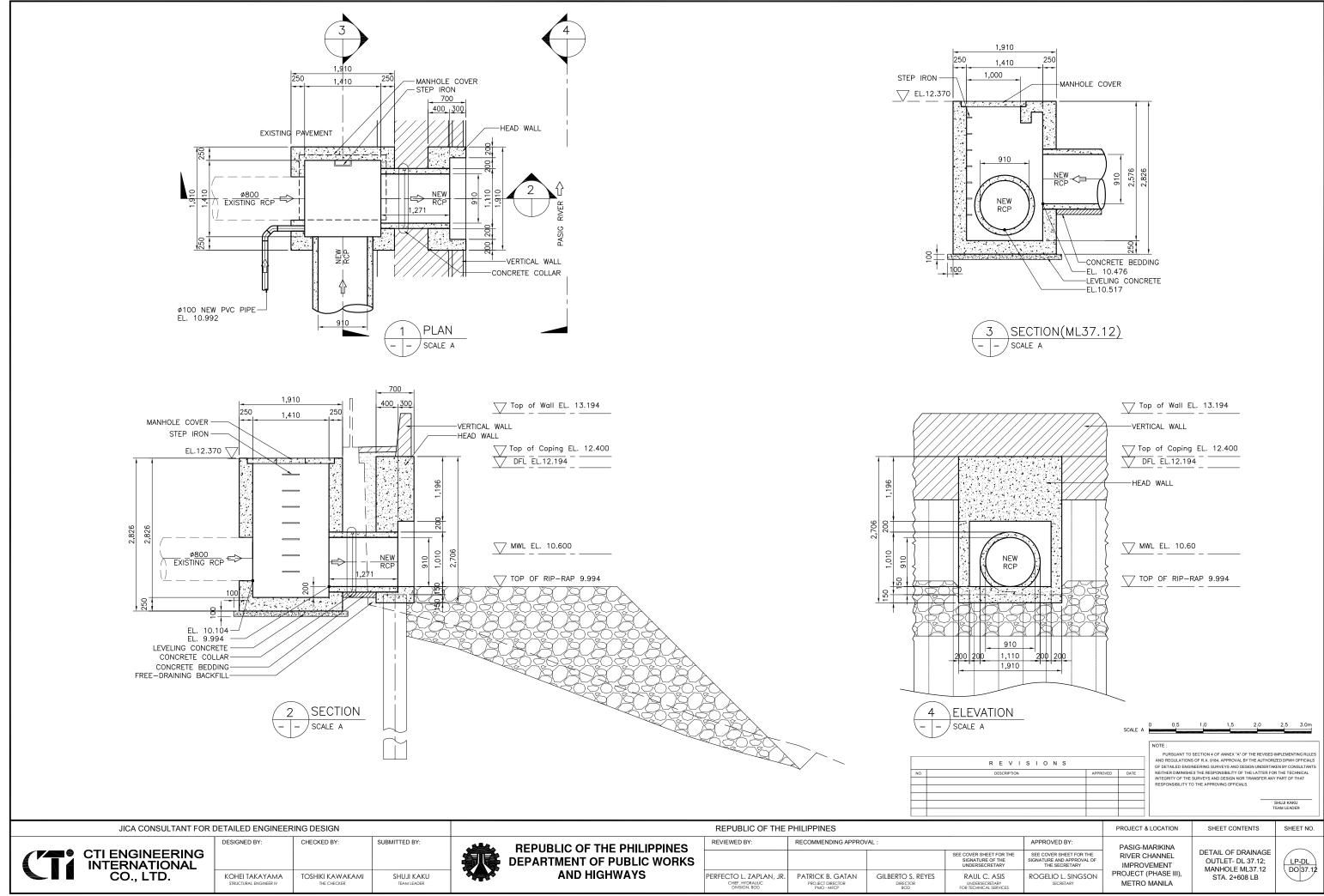
			SCALE A	0 2	.5 5.0 7	.5 10m
' I 10N	S I O N S	APPRI	DVED DATE	AND REGULATIONS OF DETAILED ENGINEITHER DIMINISHE INTEGRITY OF THE	SECTION 4 OF ANNEX 'A' OF THE REVISED OF R.A. 9184, APPROVAL BY THE AUTHOR VEERING SURVEYS AND DESIGN UNDERTY S THE RESPONSIBILITY OF THE LATTER F SURVEYS AND DESIGN NOR TRANSFER AN O THE APPROVING OFFICIALS.	IZED DPWH OFFICIALS KEN BY CONSULTANTS OR THE TECHNICAL
			PROJECT &	LOCATION	SHEET CONTENTS	SHEET NO.
E	APPROVED BY: SEE COVER SHEET FOR THE SIGNATURE AND APPROVAL OF THE SECRETARY ROGELIO L. SINGSON		SEE COVER SHEET FOR THE SIGNATURE AND APPROVAL OF THE SECRETARY DED LIFCT (I		PLAN & PROFILE OF COLLECTOR PIPE	LP-DL DO 37.6/P

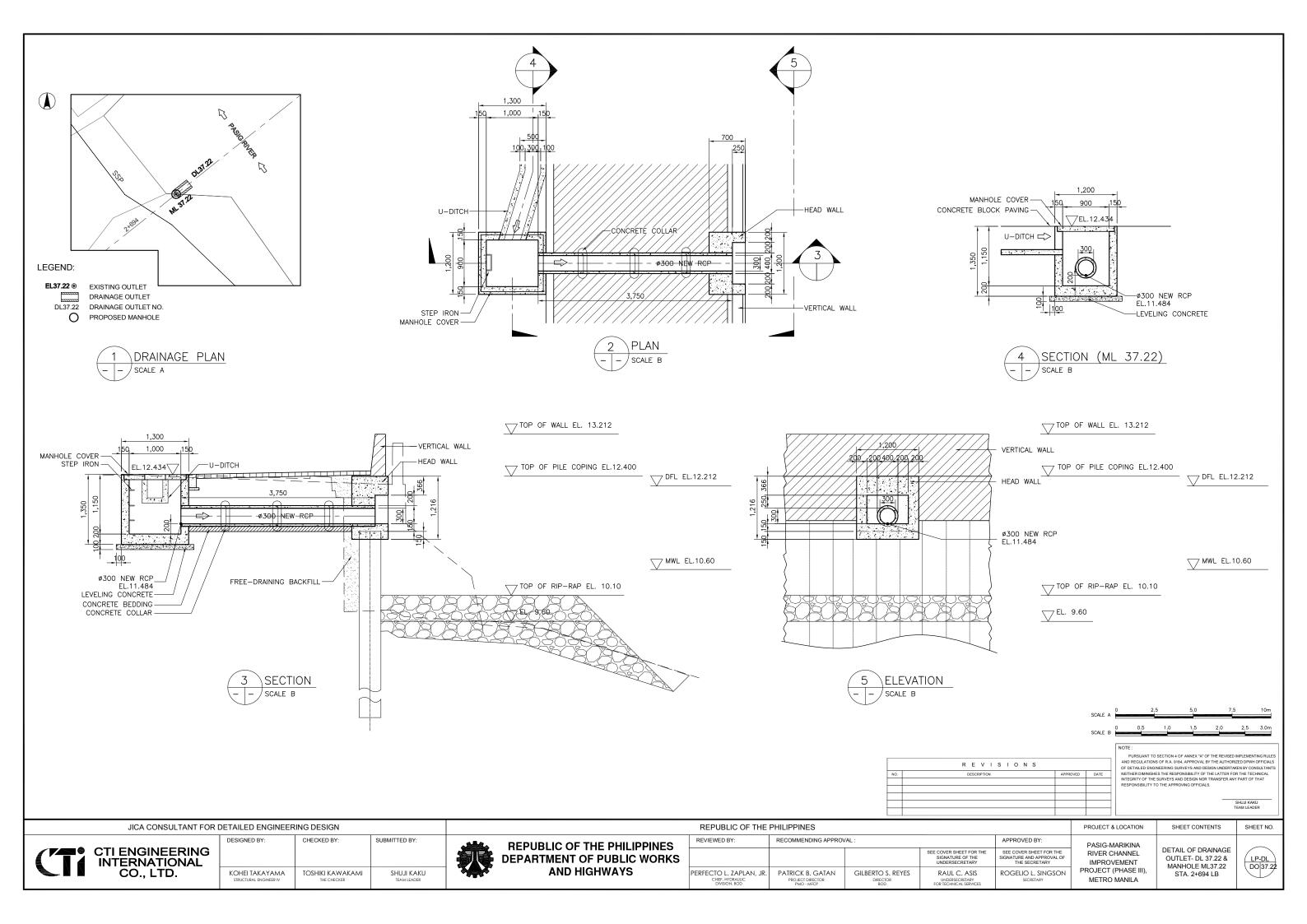


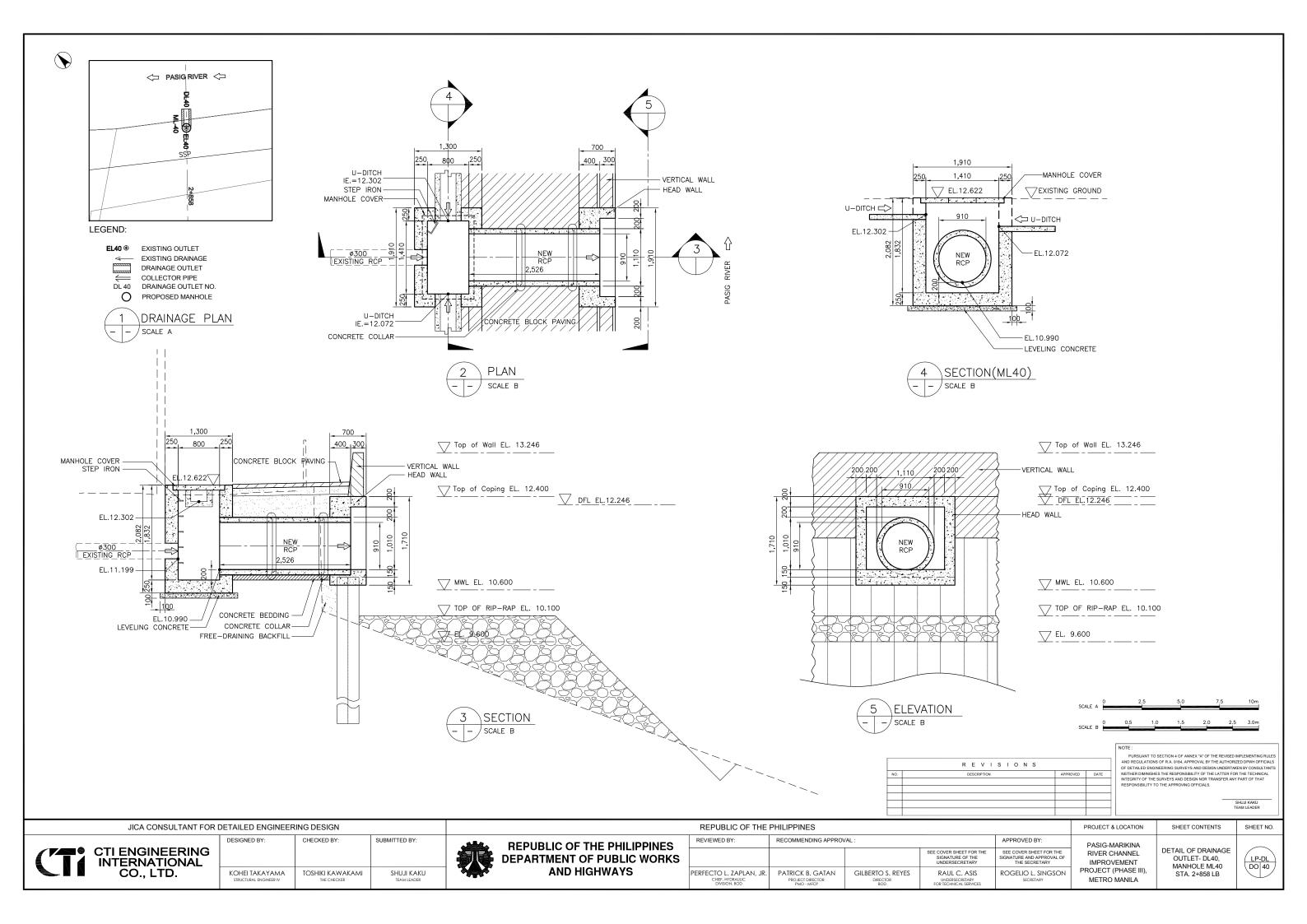


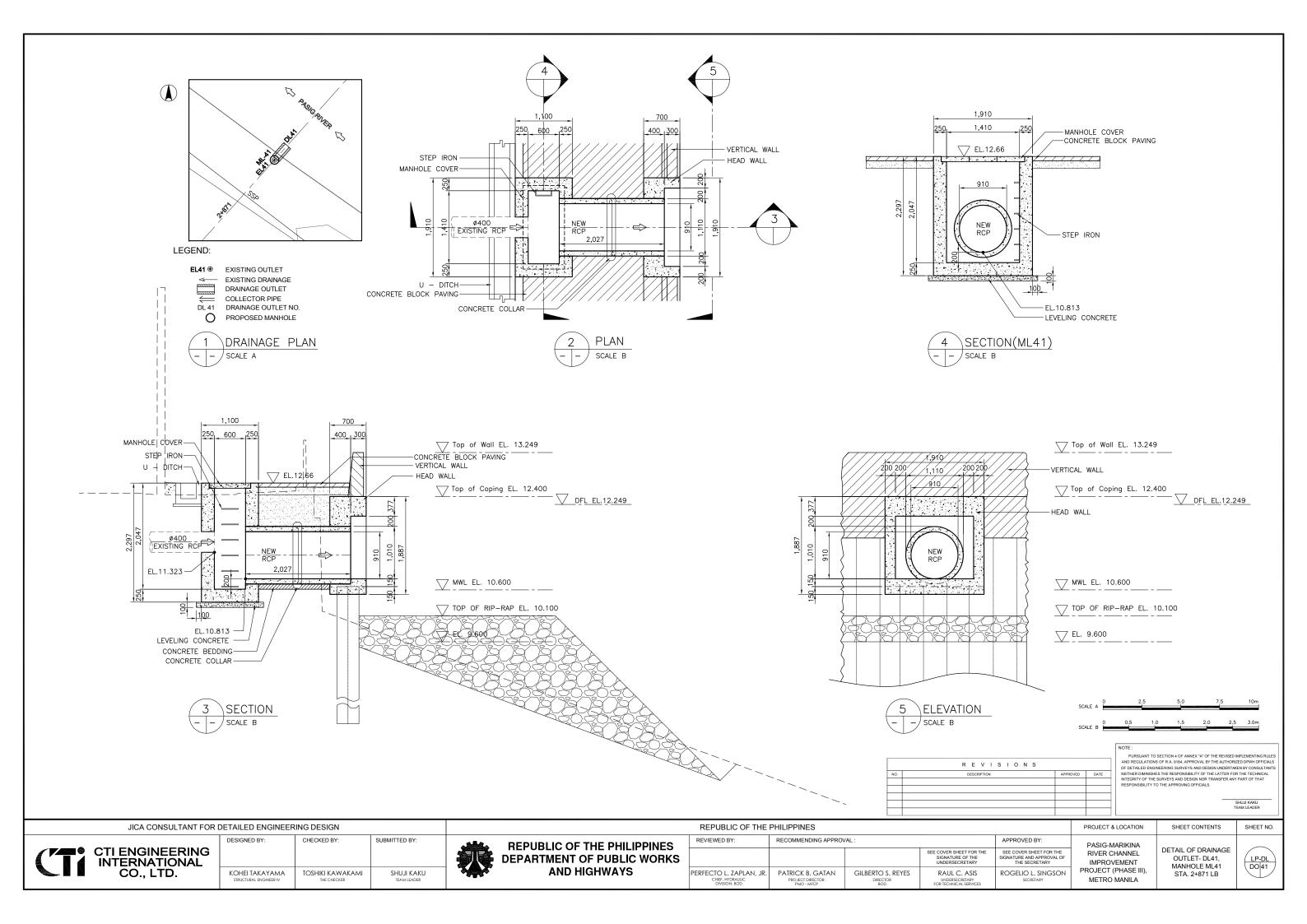


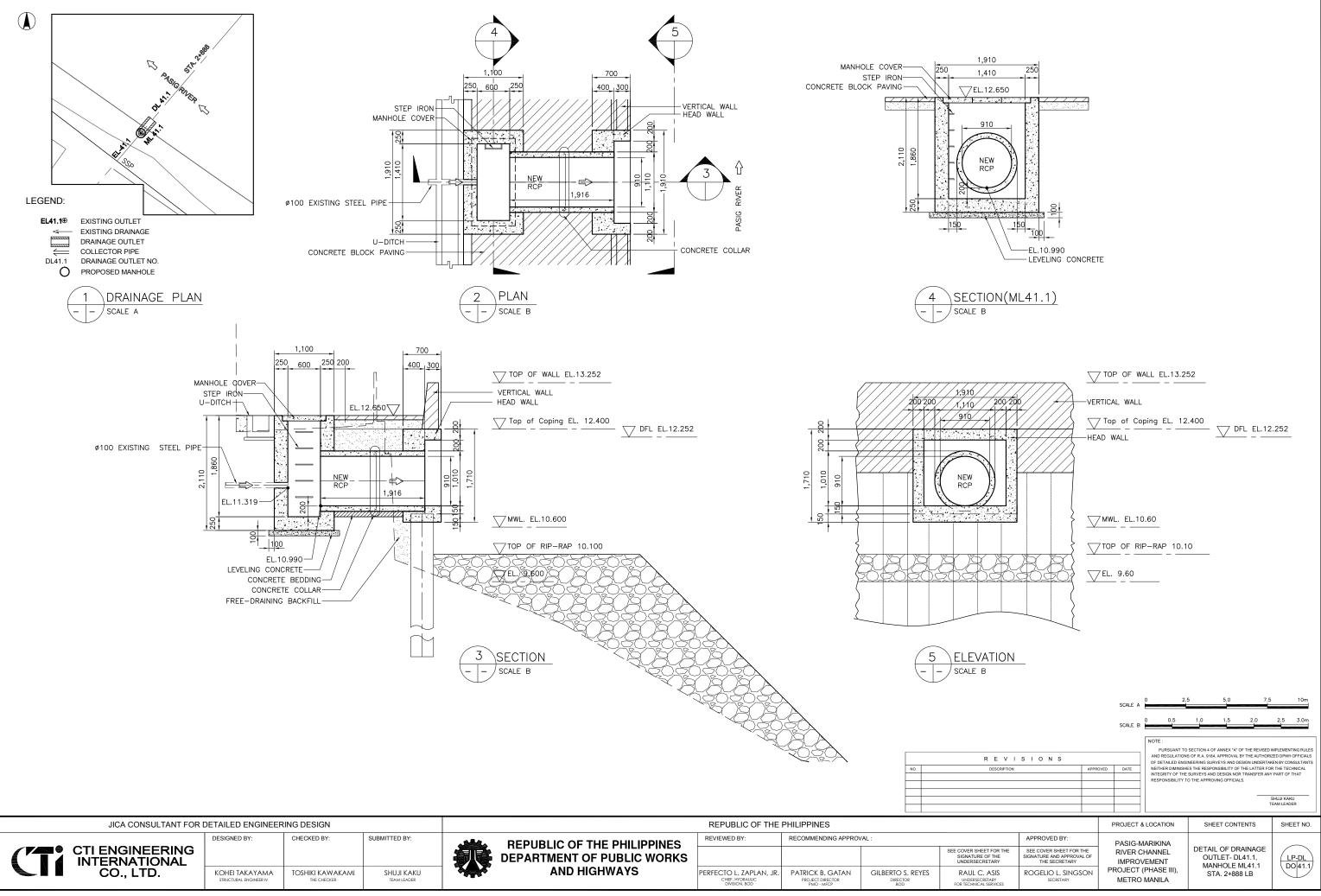
				SCALE A	0 2	.5 5.0	7.	5 10m
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			F	PROJECT &	LOCATION	SHEET CONTE	NTS	SHEET NO.
	APPROVED BY: SEE COVER SHEET FOR THE SIGNATURE AND APPROVAL OF INTER SECRETARY ROGELIO L. SINGSON SECRETARY		PI	PASIG-M RIVER CI IMPROV ROJECT (METRO	HANNEL 'EMENT PHASE III),	PLAN & PROF COLLECTOR		LP-DL DO 37.12/F

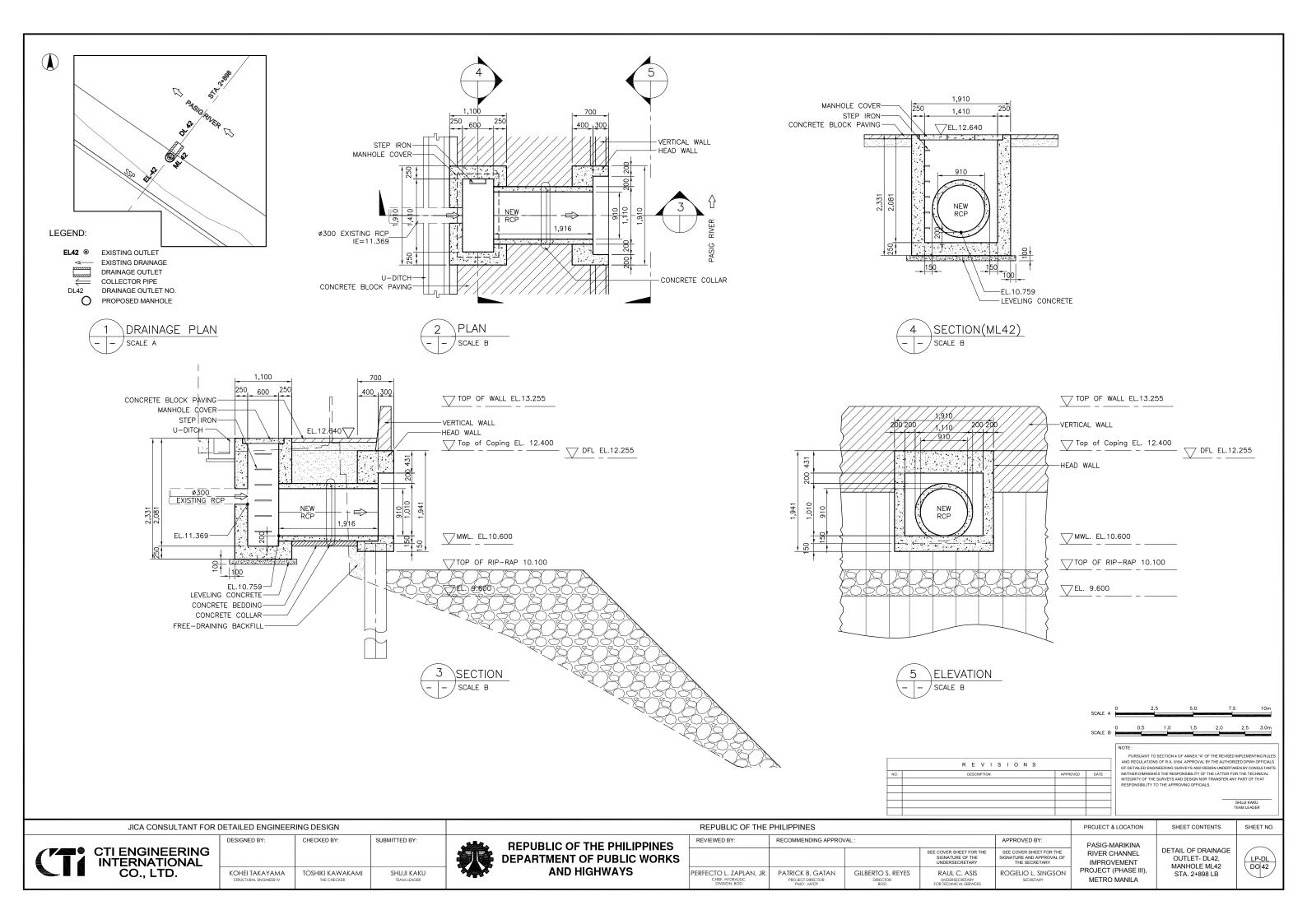












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		ML43		SSP	ML45	EL 46		
		GEND: EL 43 EXISTING O DRAINAGE O COLLECTOF DL 46 DRAINAGE O PROPOSED	OUTLET R PIPE OUTLET NO.					
		1 DRAINAG SCALE A	<u>ge plan</u>					
			EL 43 ML 43		EL 45 ML 45	EL 46 DL 46 EL 47 EL 47		
			EXISTING RC Ø300		EXISTING RCP Ø400	=0.003		
	v		INV.EL. 11.13		INV.EL. 10.916	ø910 3.145m L=1.264m		
		H 7.5 GROUND LEVEL	0 + 12.547		2			
	F		10.937 - 0.600		10.890 0.532 0.562	10.867		
		STATION NUMBER	- 2+904 -		- 2+929 11	- 2+932 - 10 - 2+933 5 - 10 - 2+933 5 - 10		
		2 PROFILE scale a					NO.	
JICA CONSULTANT FOR					REPUBLIC OF THE P			
CTI ENGINEERING INTERNATIONAL CO., LTD.	DESIGNED BY:	CHECKED BY:	SUBMITTED BY:	REPUBLIC OF THE PHILIPPINES	5	RECOMMENDING APPROVAL :		SEE COVER SHEE SIGNATURE C UNDERSECRE
INTERNATIONAL	КОНЕІ ТАКАУАМА	ΤΟ ΥΗΙΚΙ ΚΑΨΑΚΑΜΙ	I SHUJI KAKU	AND HIGHWAYS	PERFECTO L. ZAPLAN, JR. CHIEF. HYDRAULIC DIVISION, BOD	PATRICK B. GATAN G	ILBERTO S. REYES	RAUL C.

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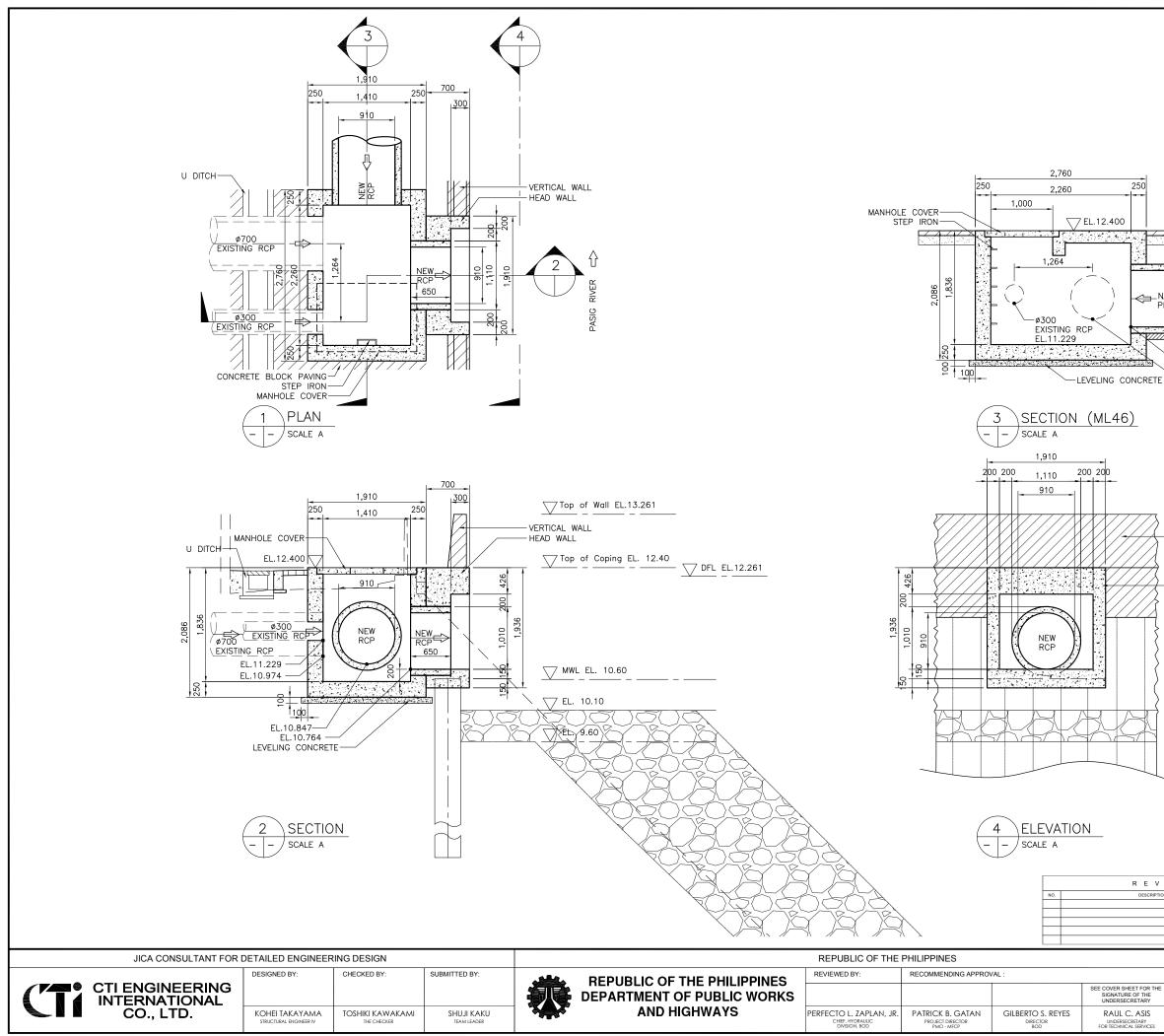
2+932 2+933

DL 46

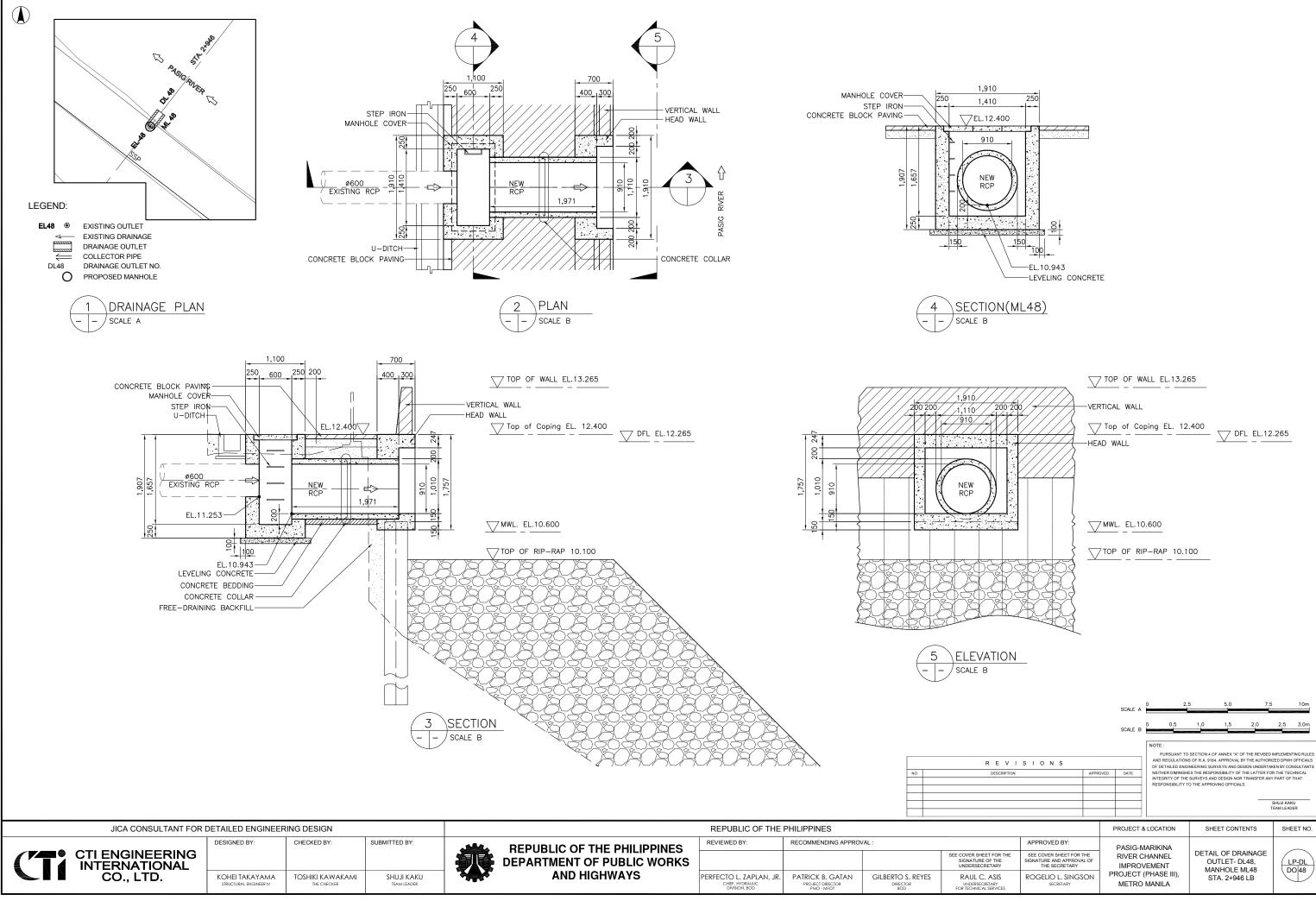
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2+904

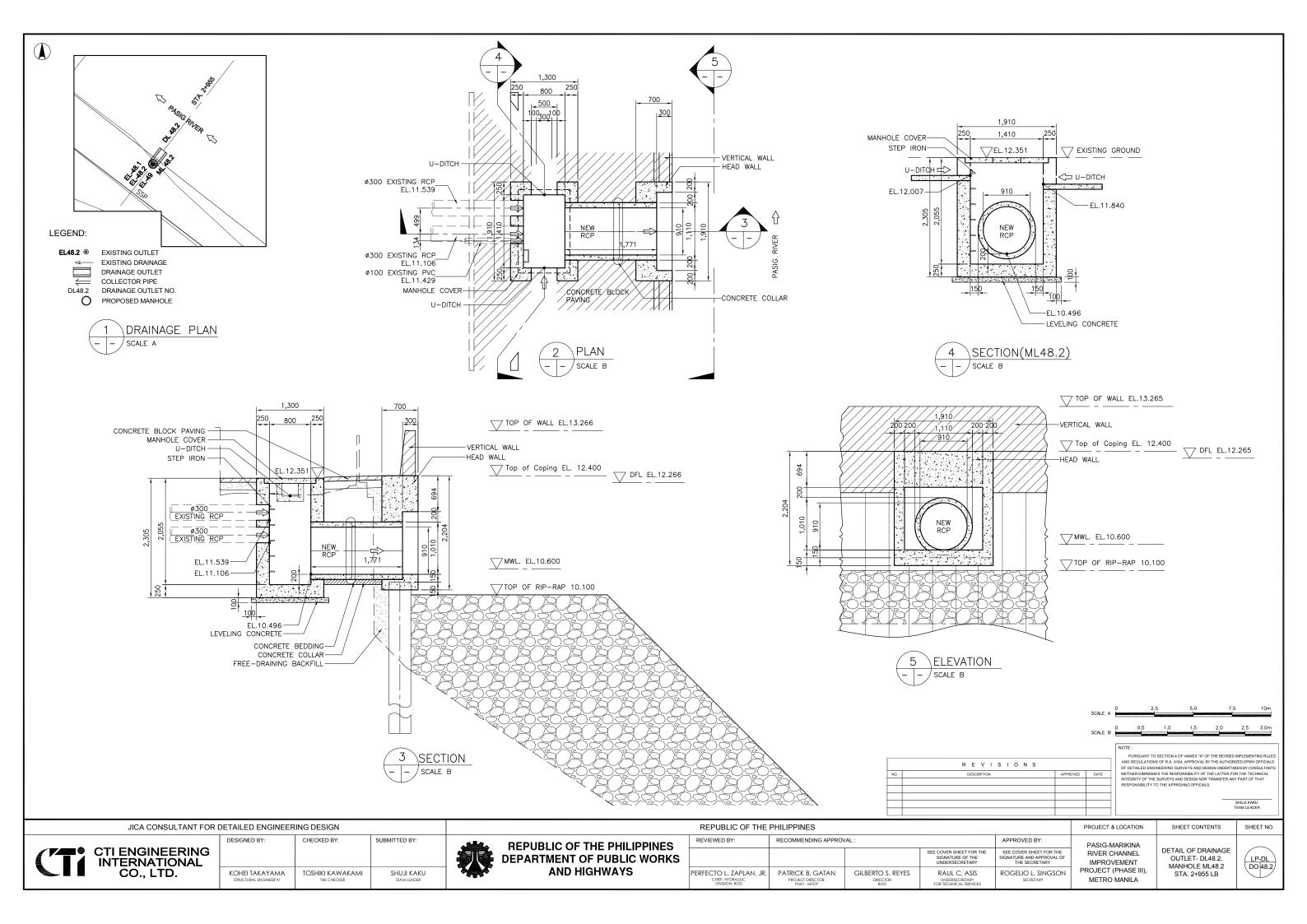
			SCALE A	0 2	2.5	5.0 7.	5 10m
' I 10N	SIONS	PPROVED	DATE	AND REGULATIONS OF DETAILED ENGINEITHER DIMINISHE	S OF R.A. 9184, A INEERING SURVE ES THE RESPONS SURVEYS AND D		ZED DPWH OFFICIALS KEN BY CONSULTANTS R THE TECHNICAL
		PI	ROJECT &	LOCATION	SHEE	T CONTENTS	SHEET NO.
	APPROVED BY:	F	PASIG-MARIKINA RIVER CHANNEL IMPROVEMENT PROJECT (PHASE III),				\square
E	SEE COVER SHEET FOR THE SIGNATURE AND APPROVAL O THE SECRETARY ROGELIO L. SINGSOT	F				& PROFILE OF ECTOR PIPE	LP-DL DO 46/P
	SECRETARY	N	METRO	,			

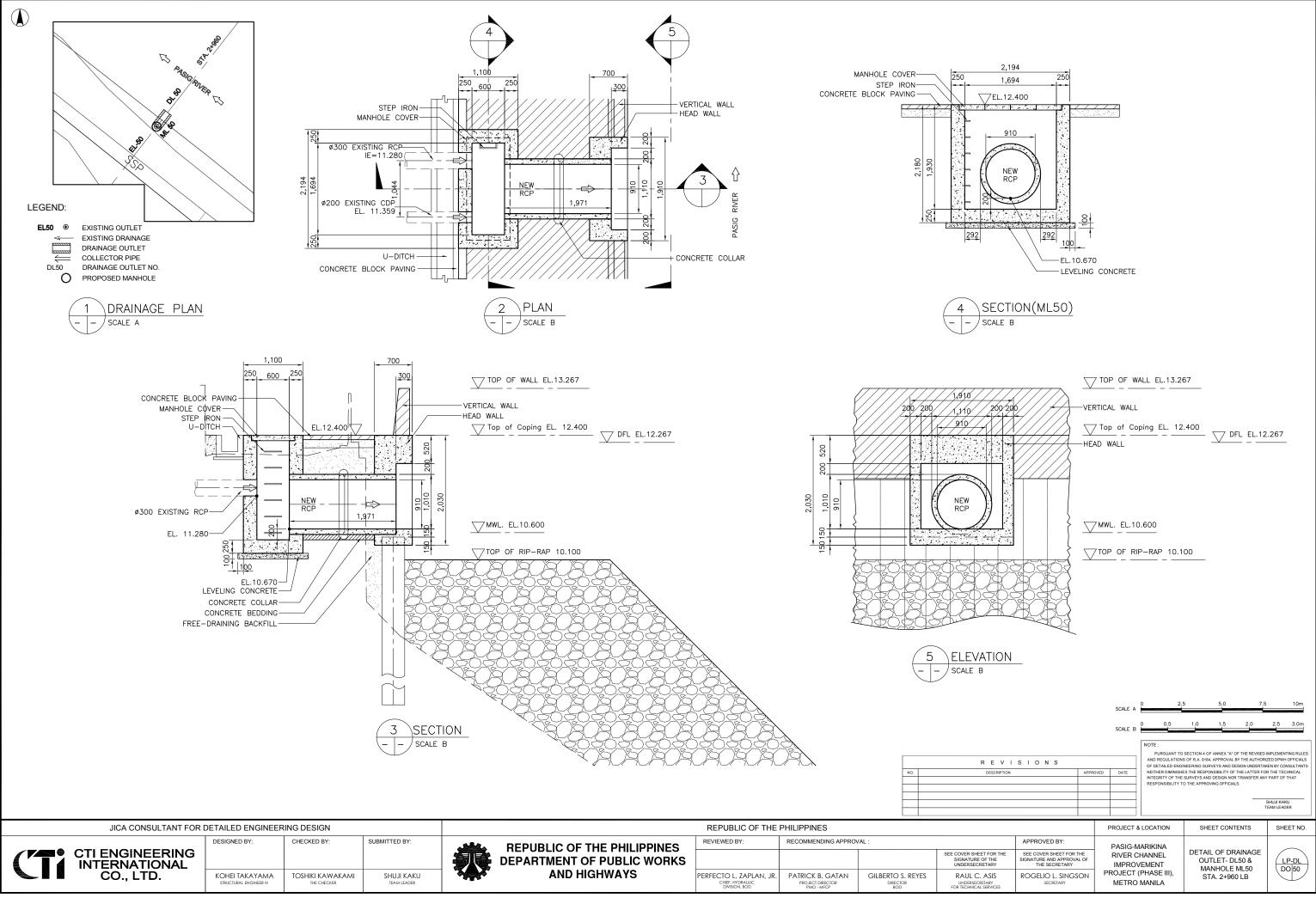


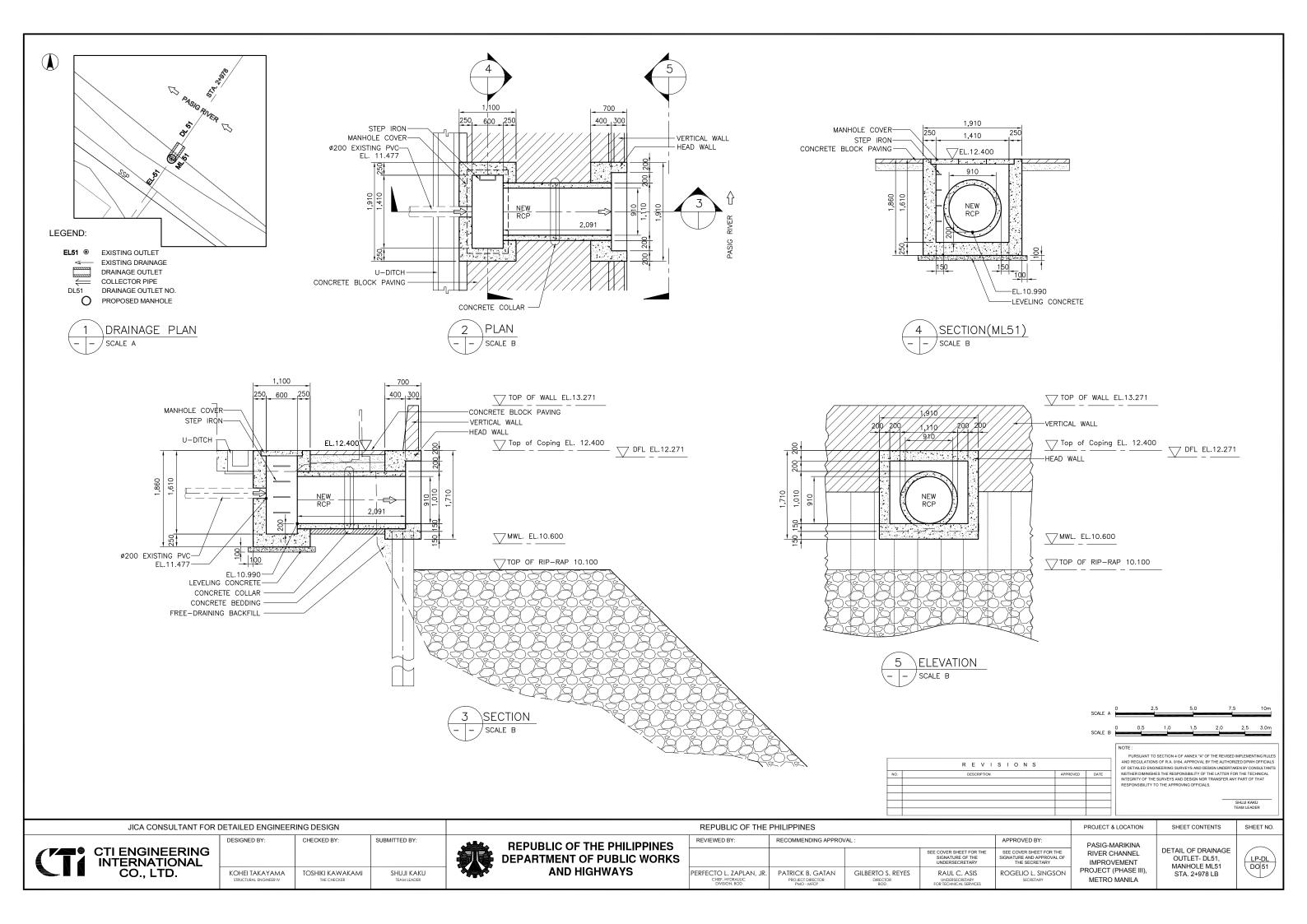
7	✓ Top of Wall EL. ✓ Top of Coping F ✓ Top of Coping F → HEAD WALL		DFL EL.	2.261		
7 - 7	✓ MWL EL. 10.60 ✓ EL. 10.10 ✓ EL. 9.60	 				
DN	SIONS	SCALE A	NOTE : PURSUANT TO AND REGULATIONS OF DETAILED ENGI NEITHER DIMINISHE INTEGRITY OF THE	1.0 1.5 SECTION 4 OF ANNEX 'A' OF THE OF R.A. 9184, APPROVAL BY THE VERING SURVEYS AND DESIGN VO SURVEYS AND DESIGN NOR TRAN D THE APPROVING OFFICIALS.	AUTHORIZI JNDERTAKE ATTER FOR SFER ANY I	ED DPWH OFFICIALS EN BY CONSULTANTS THE TECHNICAL
	APPROVED BY: SEE COVER SHEET FOR THE SIGNATURE AND APPROVAL OF THE SECRETARY ROGELIO L. SINGSON SECRETARY	PROJECT & PASIG-M/ RIVER CH IMPROV/ PROJECT (I METRO I	ARIKINA HANNEL EMENT PHASE III),	SHEET CONTENTS DETAIL OF DRAIN OUTLET- DL 46 MANHOLE ML4 STA. 2+932.5 L	AGE &	SHEET NO.

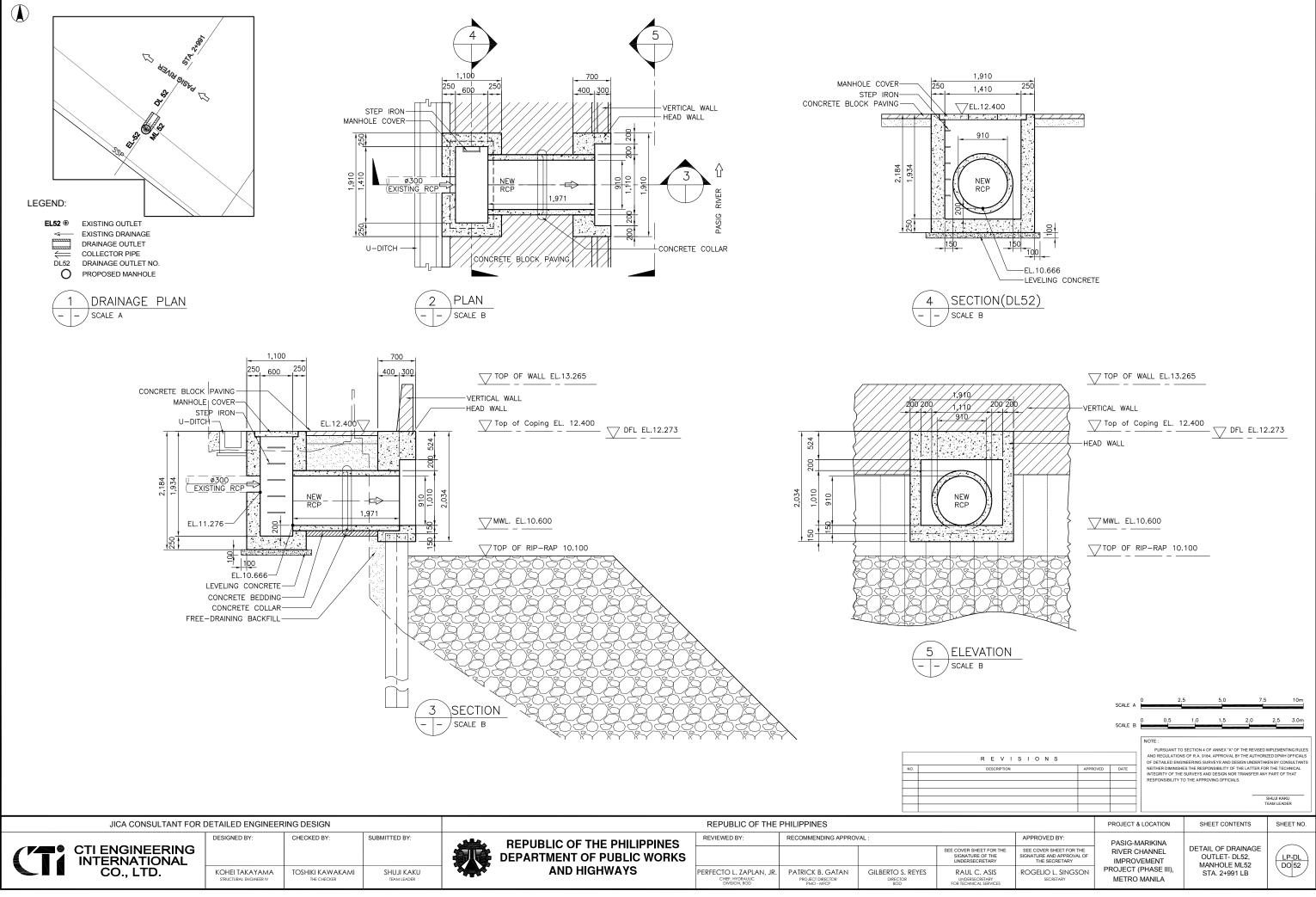


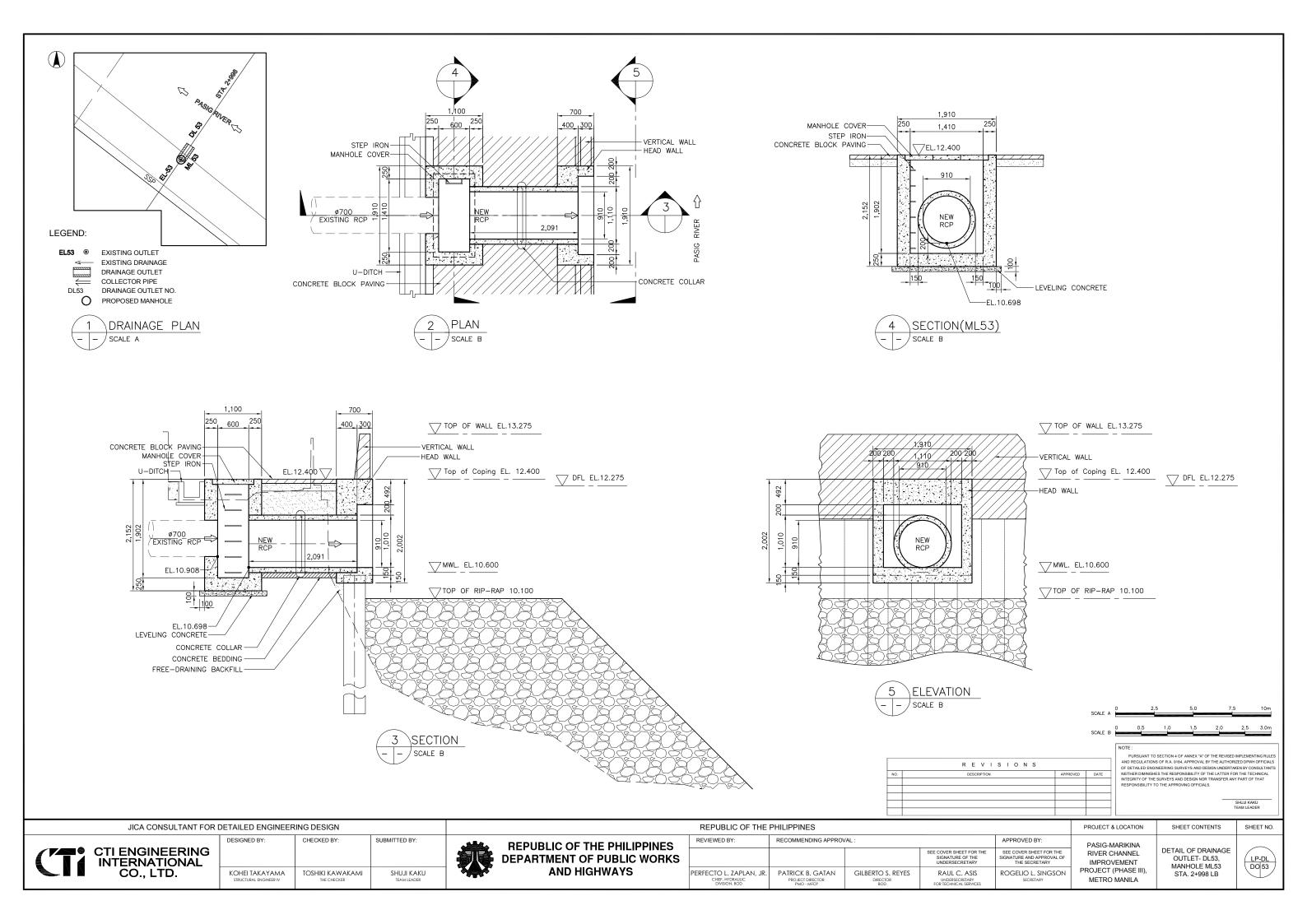
		PROJECT & LOCATION	SHEET CONTENTS	SHEET NO.
	APPROVED BY:	PASIG-MARIKINA)
E	SEE COVER SHEET FOR THE SIGNATURE AND APPROVAL OF THE SECRETARY	RIVER CHANNEL IMPROVEMENT	DETAIL OF DRAINAGE OUTLET- DL48, MANHOLE ML48	LP-DL DOI48
	ROGELIO L. SINGSON SECRETARY	PROJECT (PHASE III), METRO MANILA	STA. 2+946 LB	0046

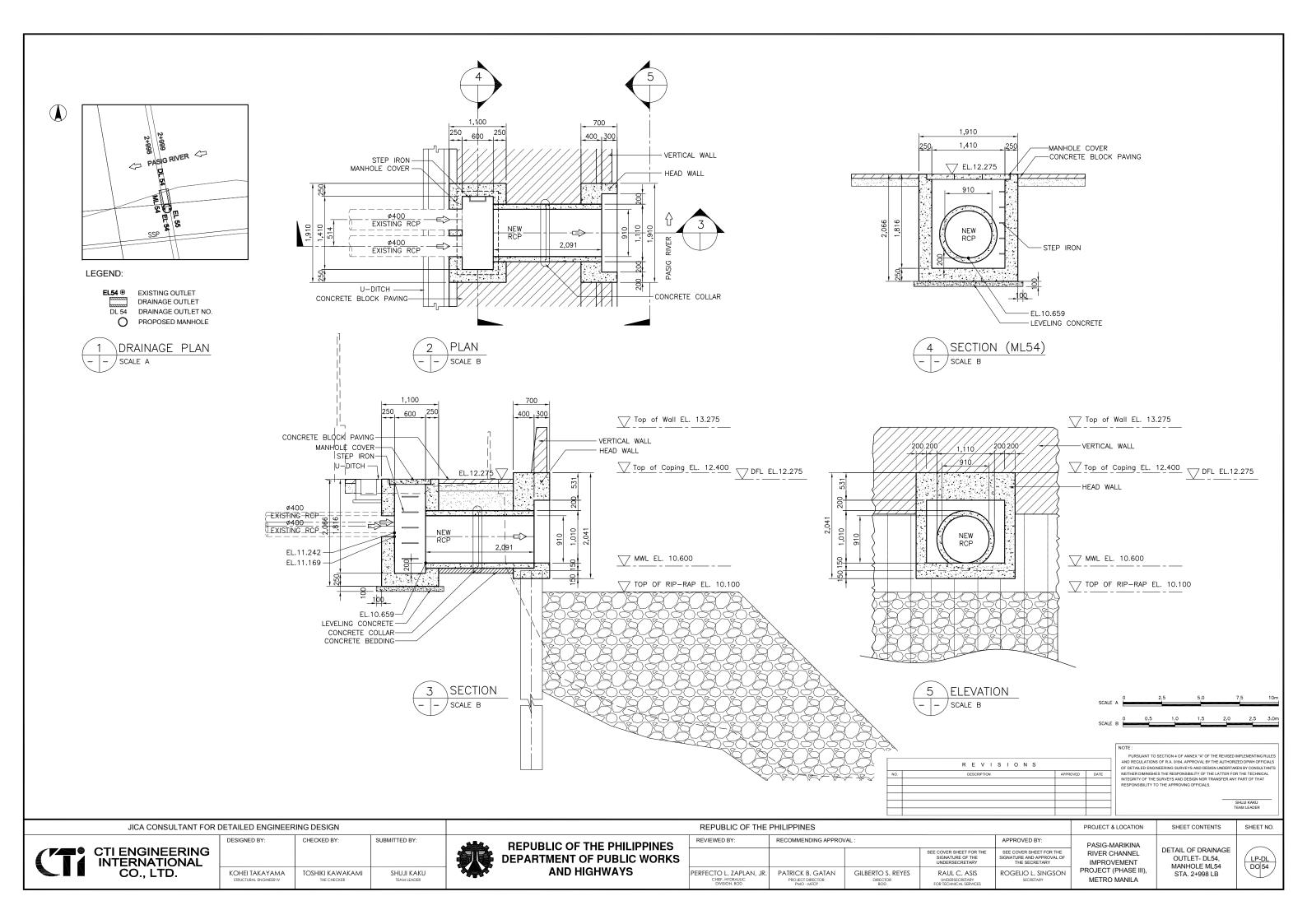


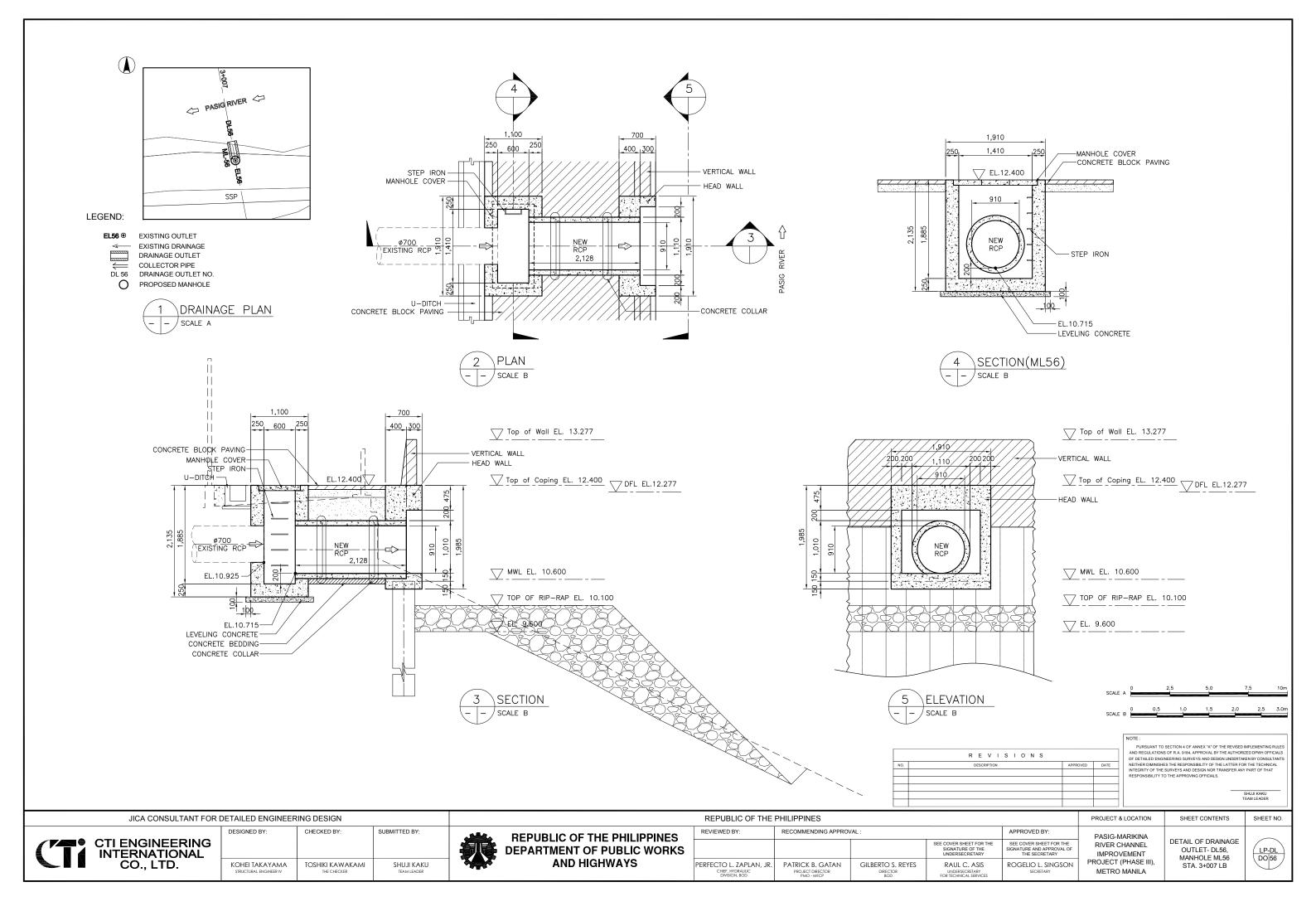


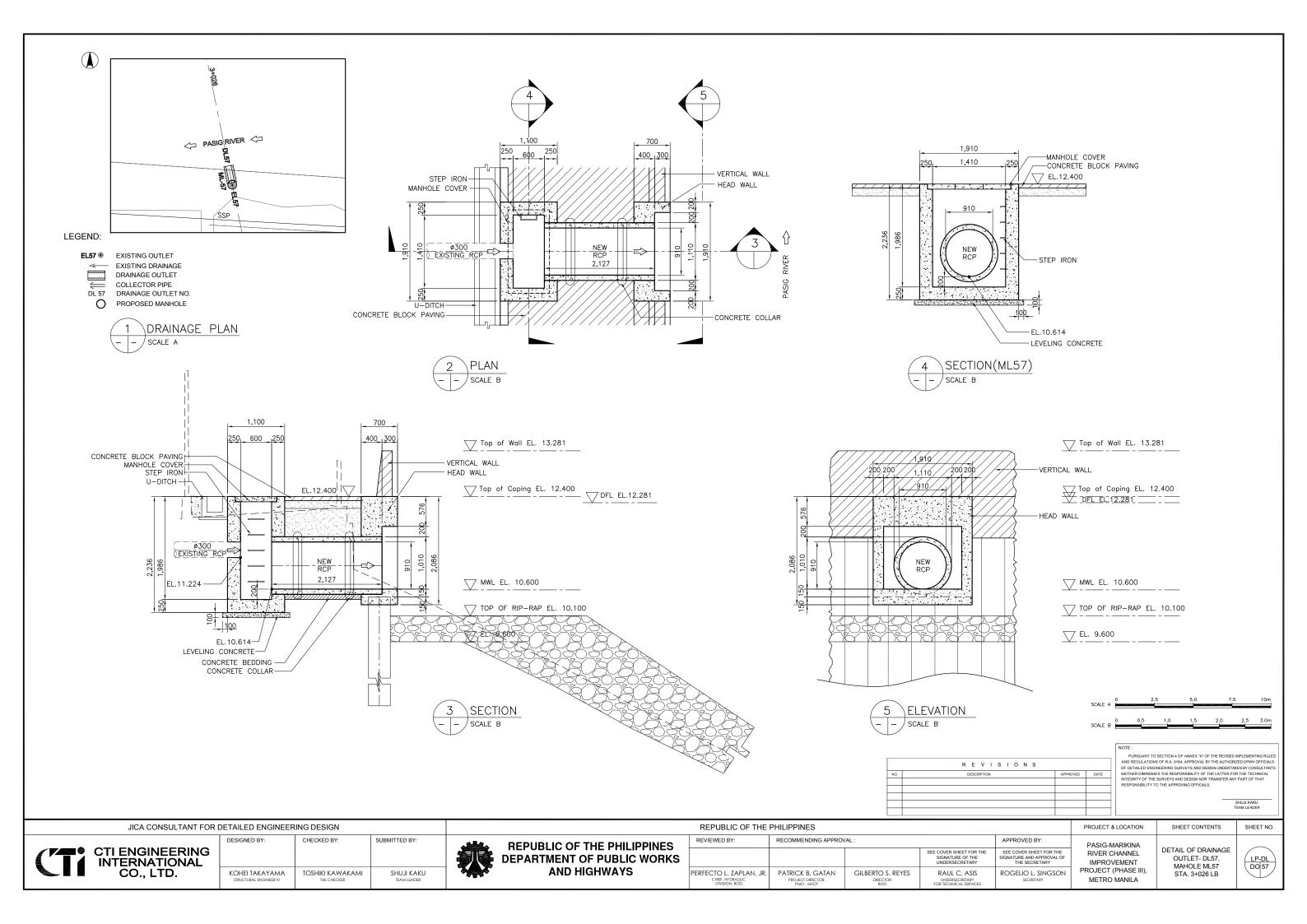


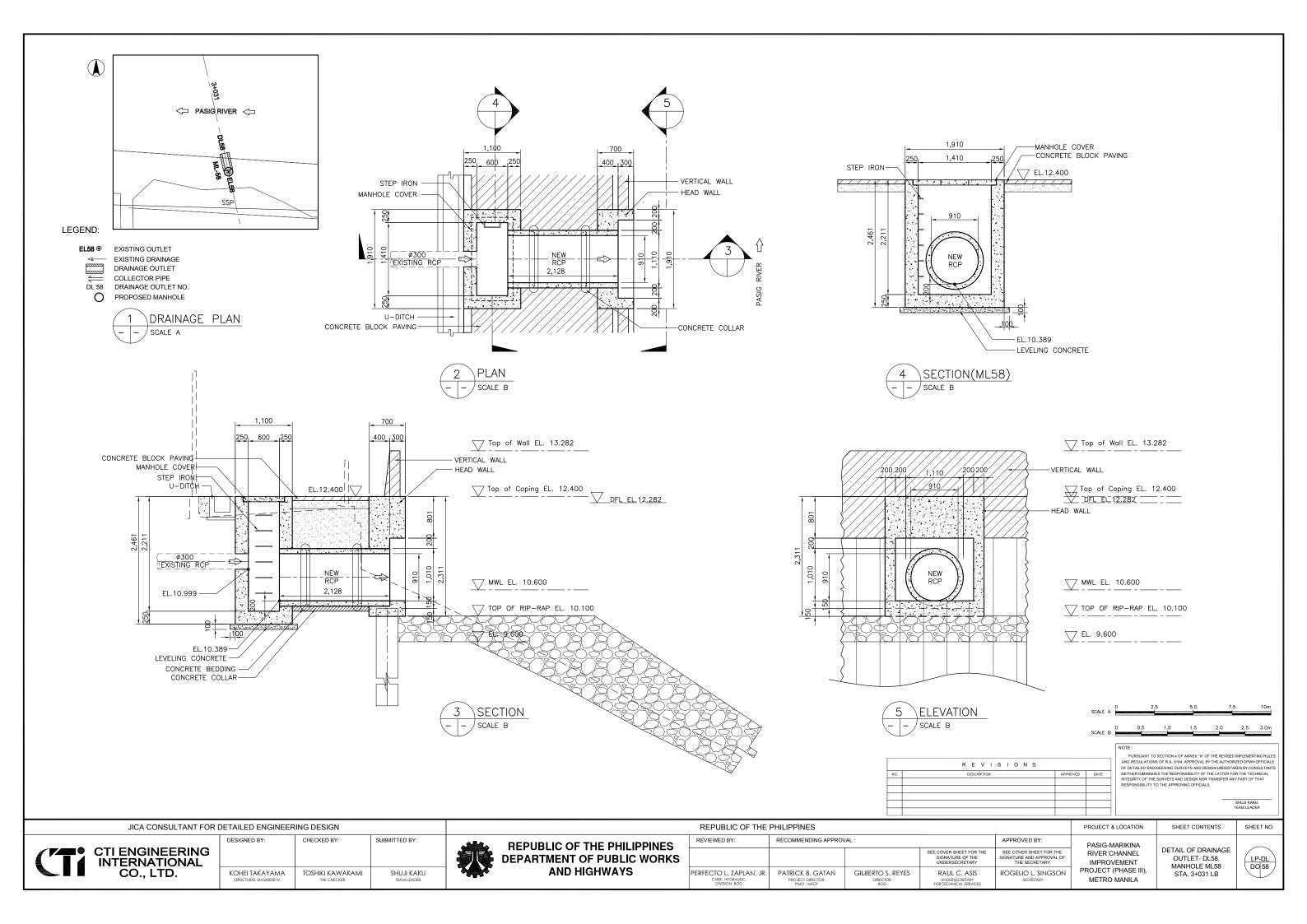


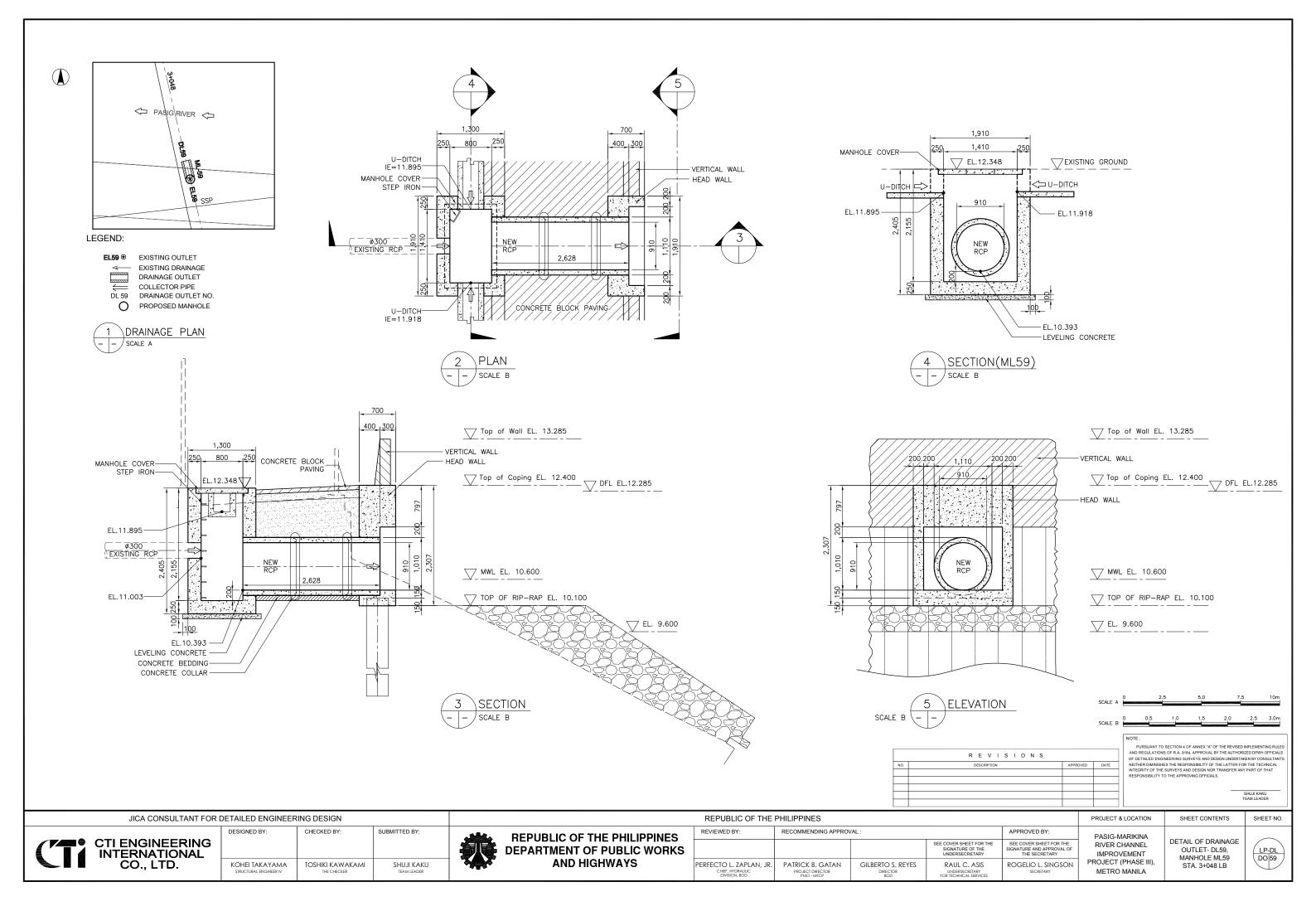


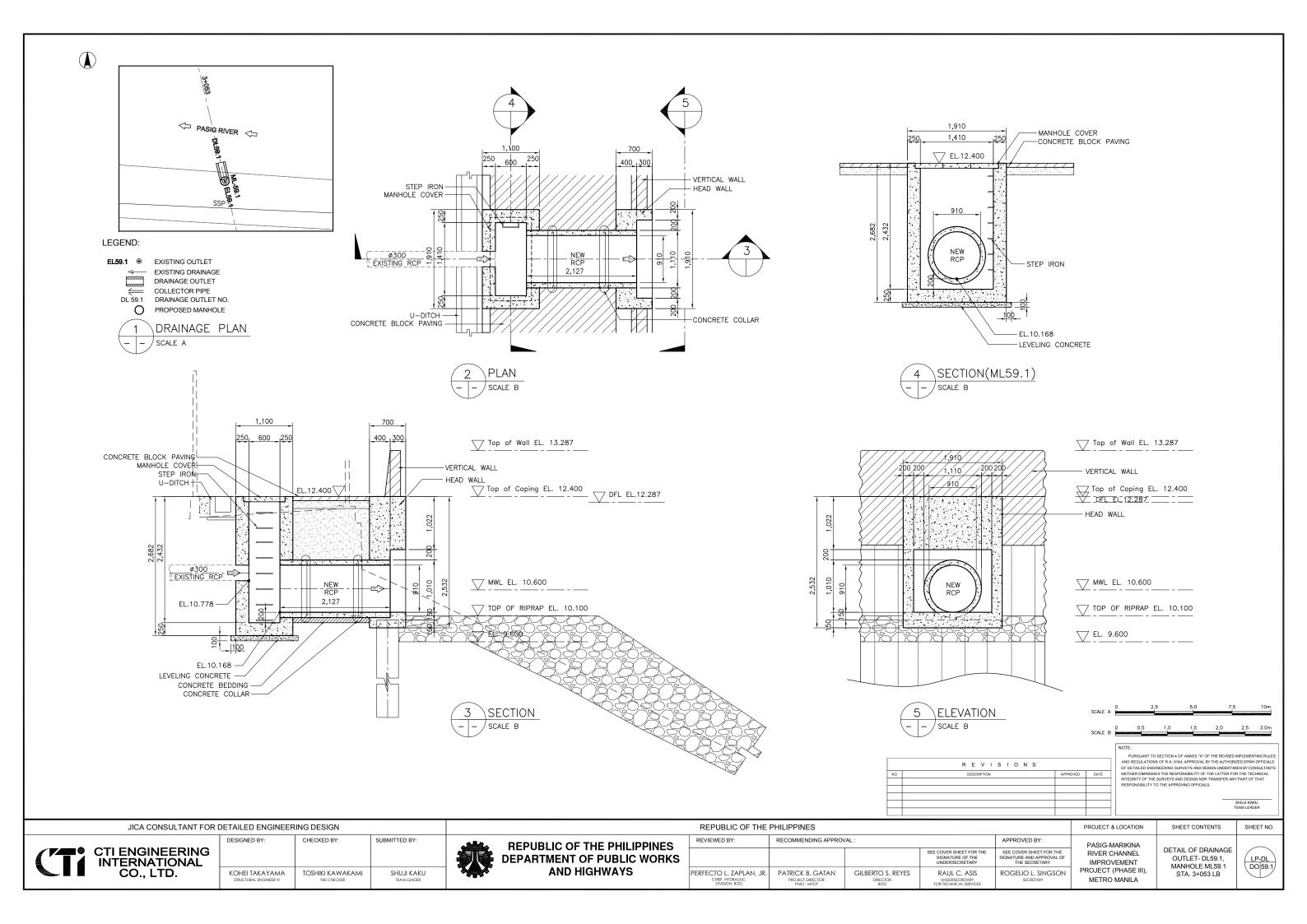


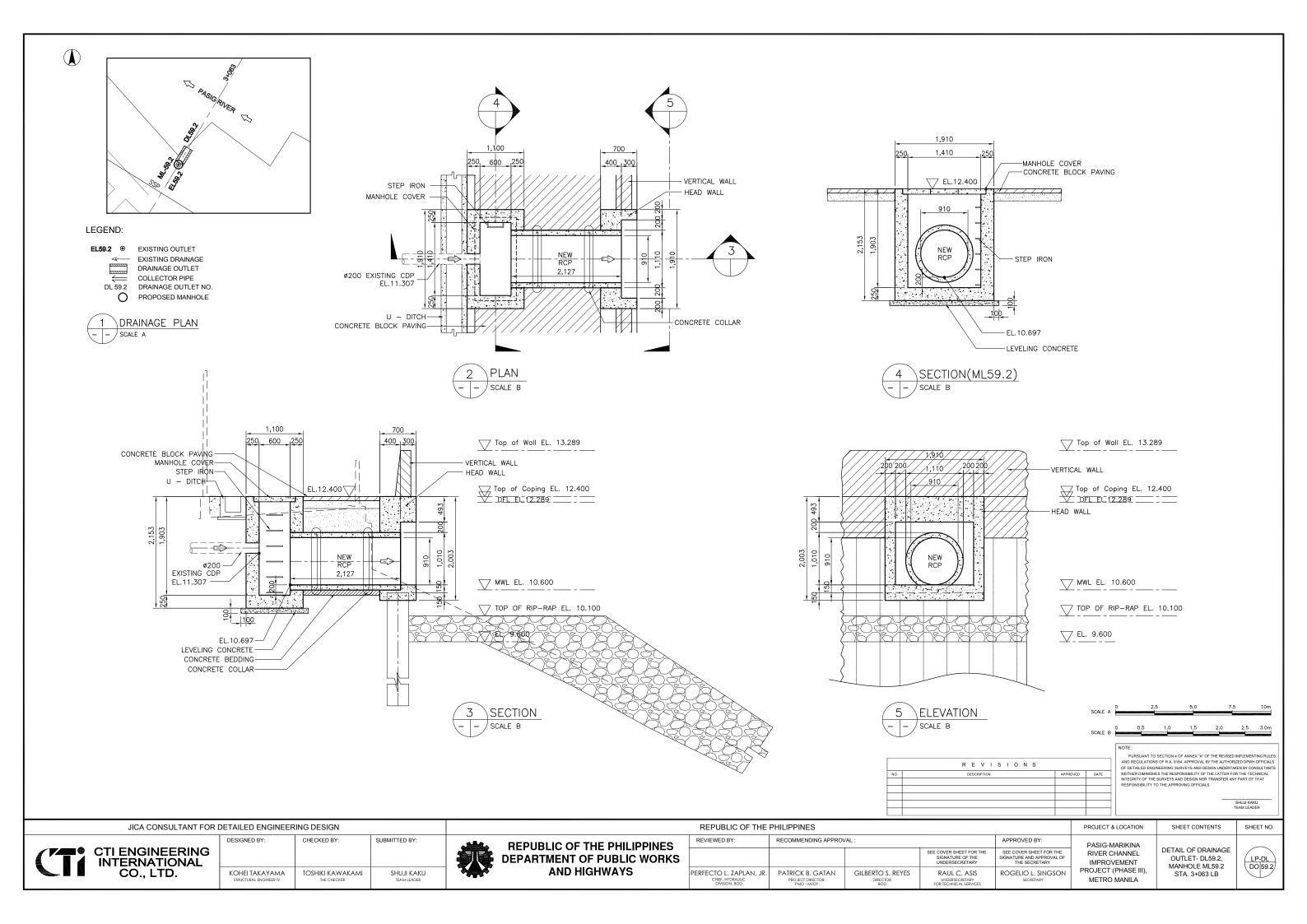


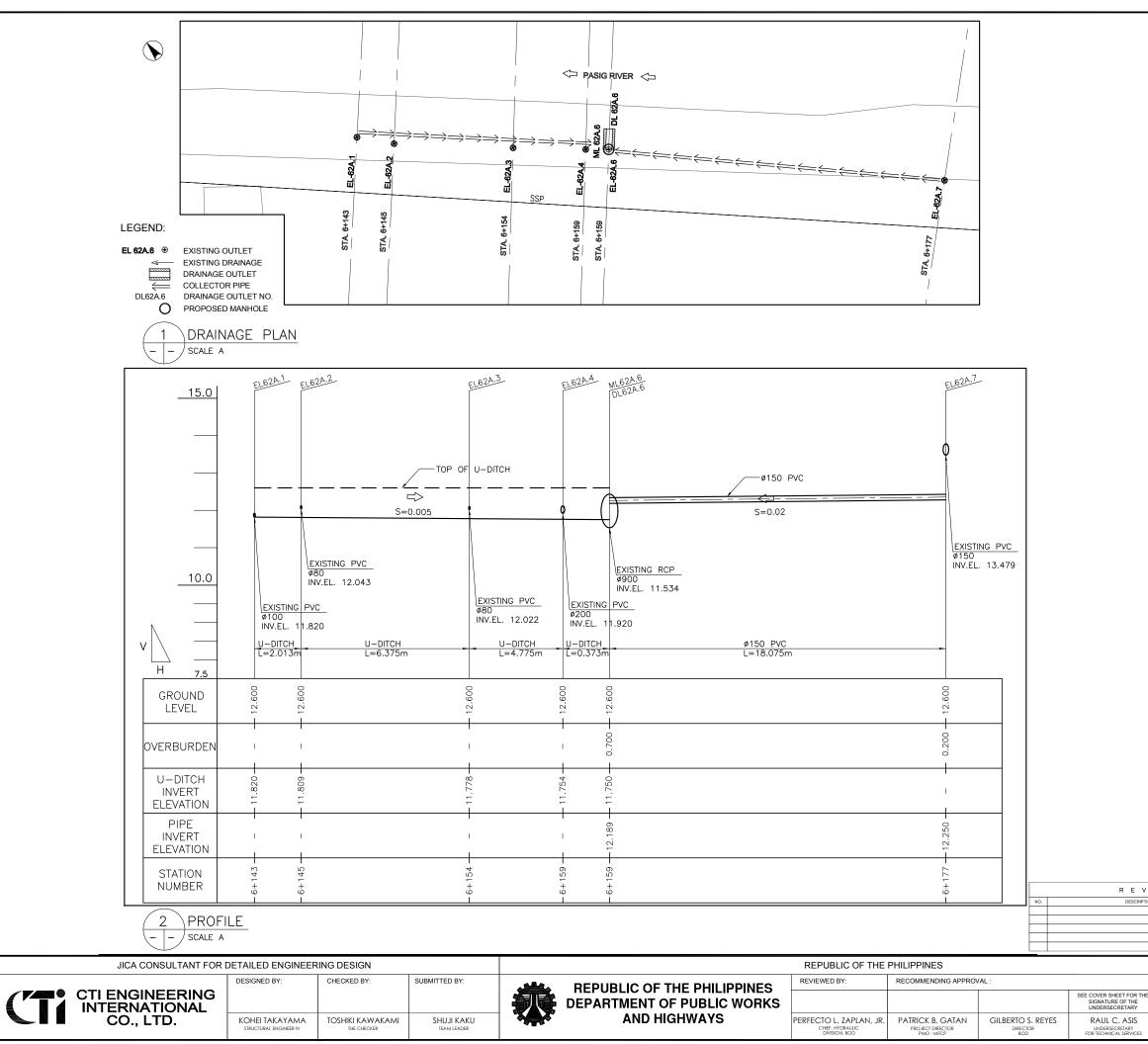




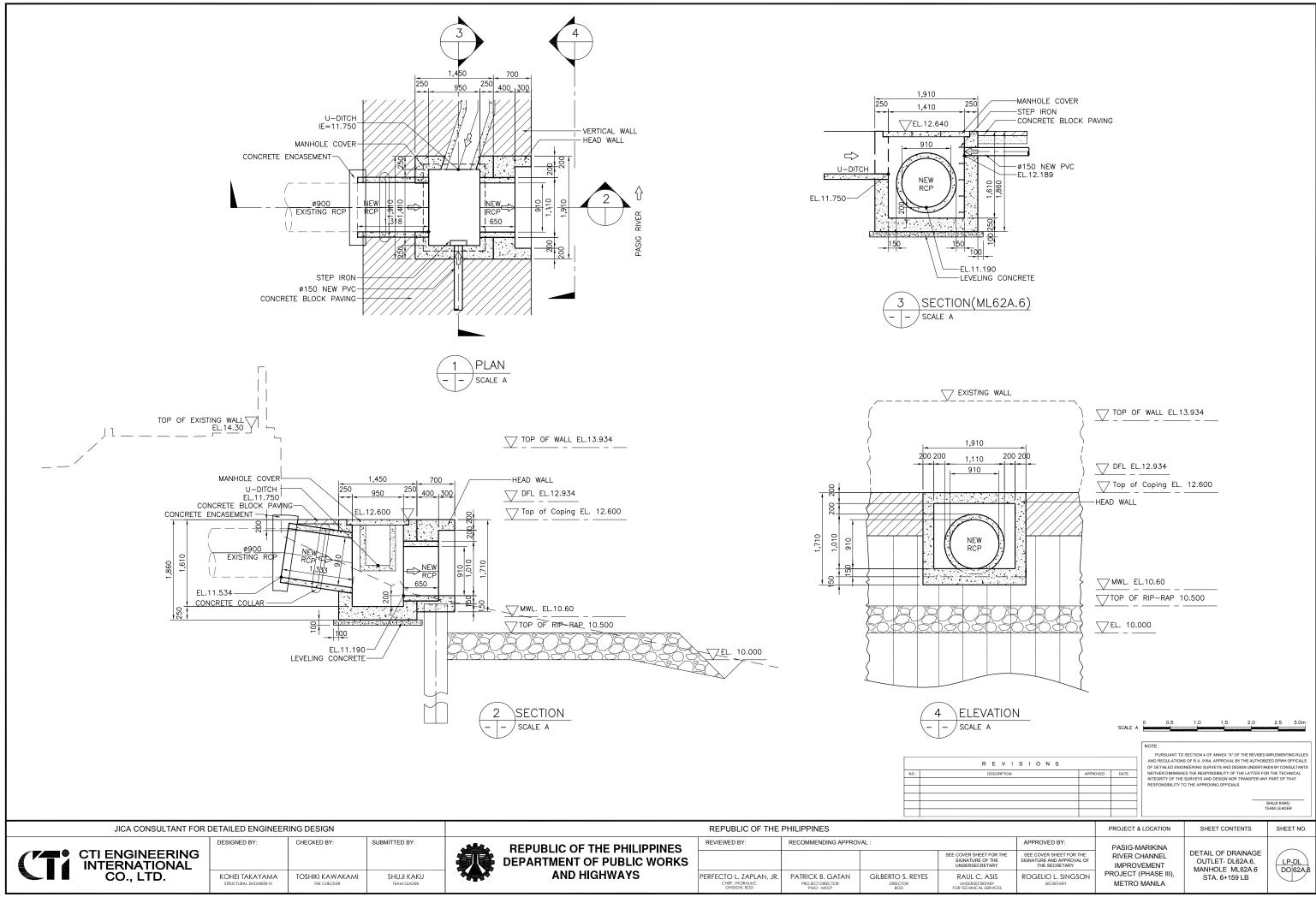


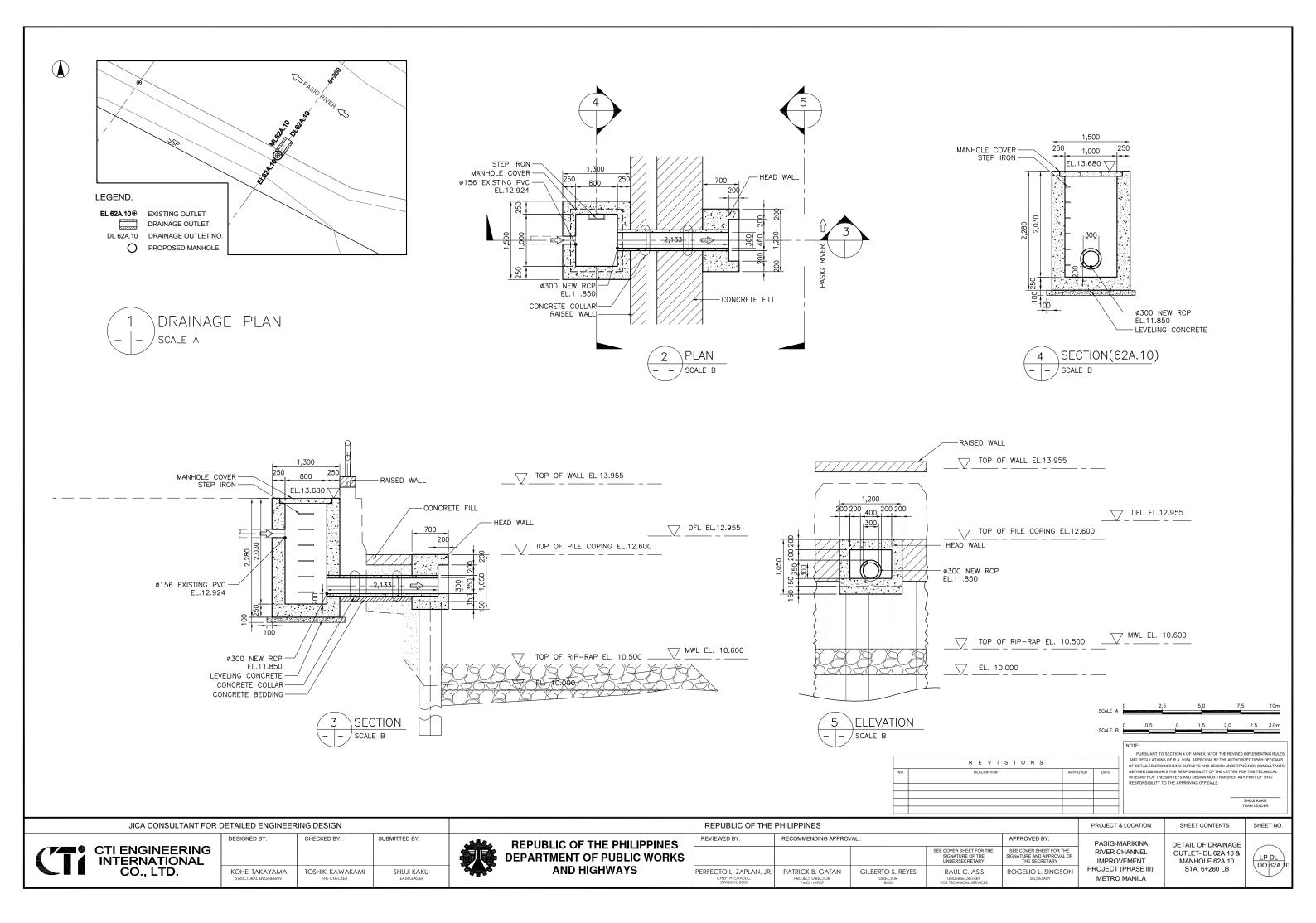


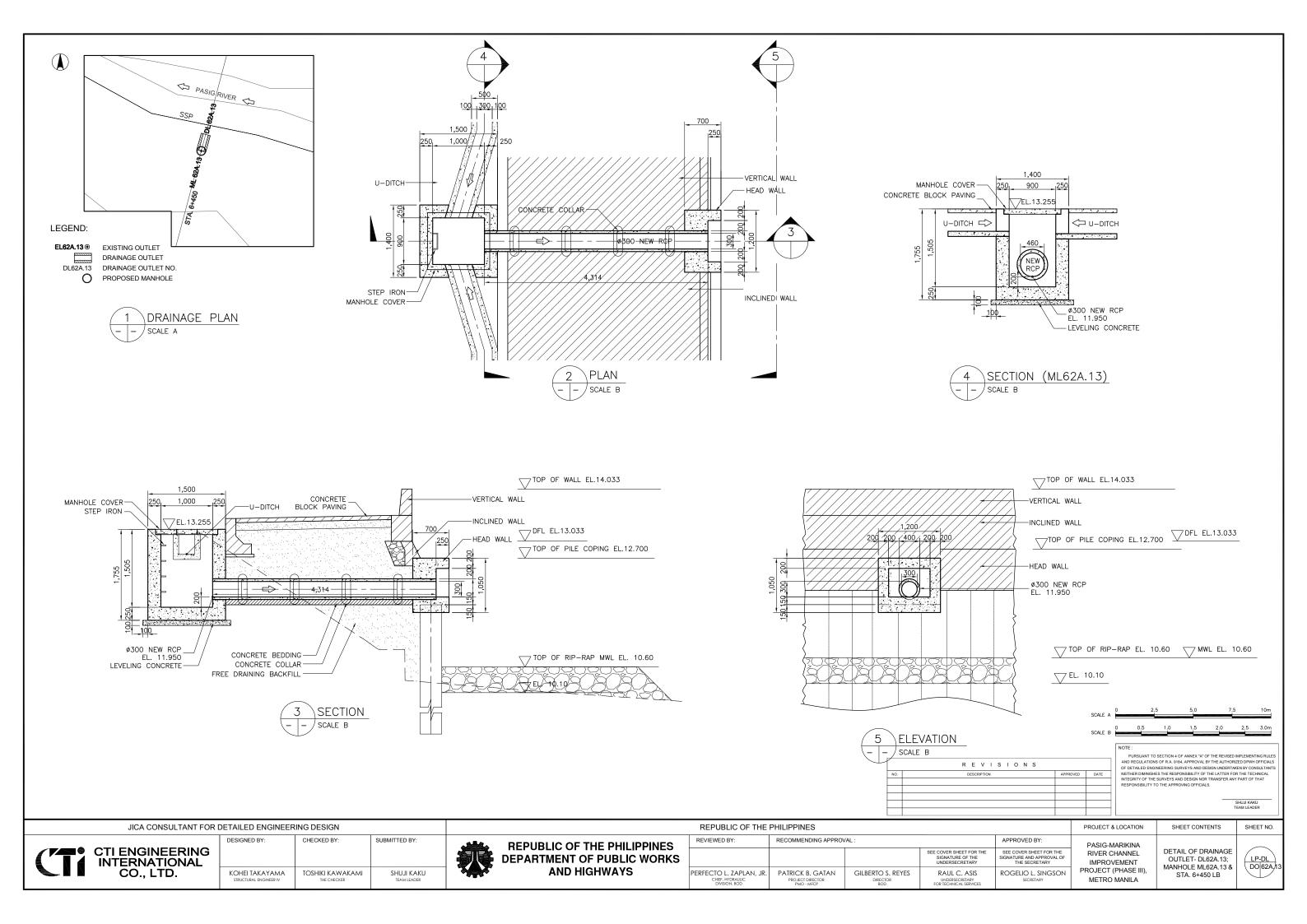


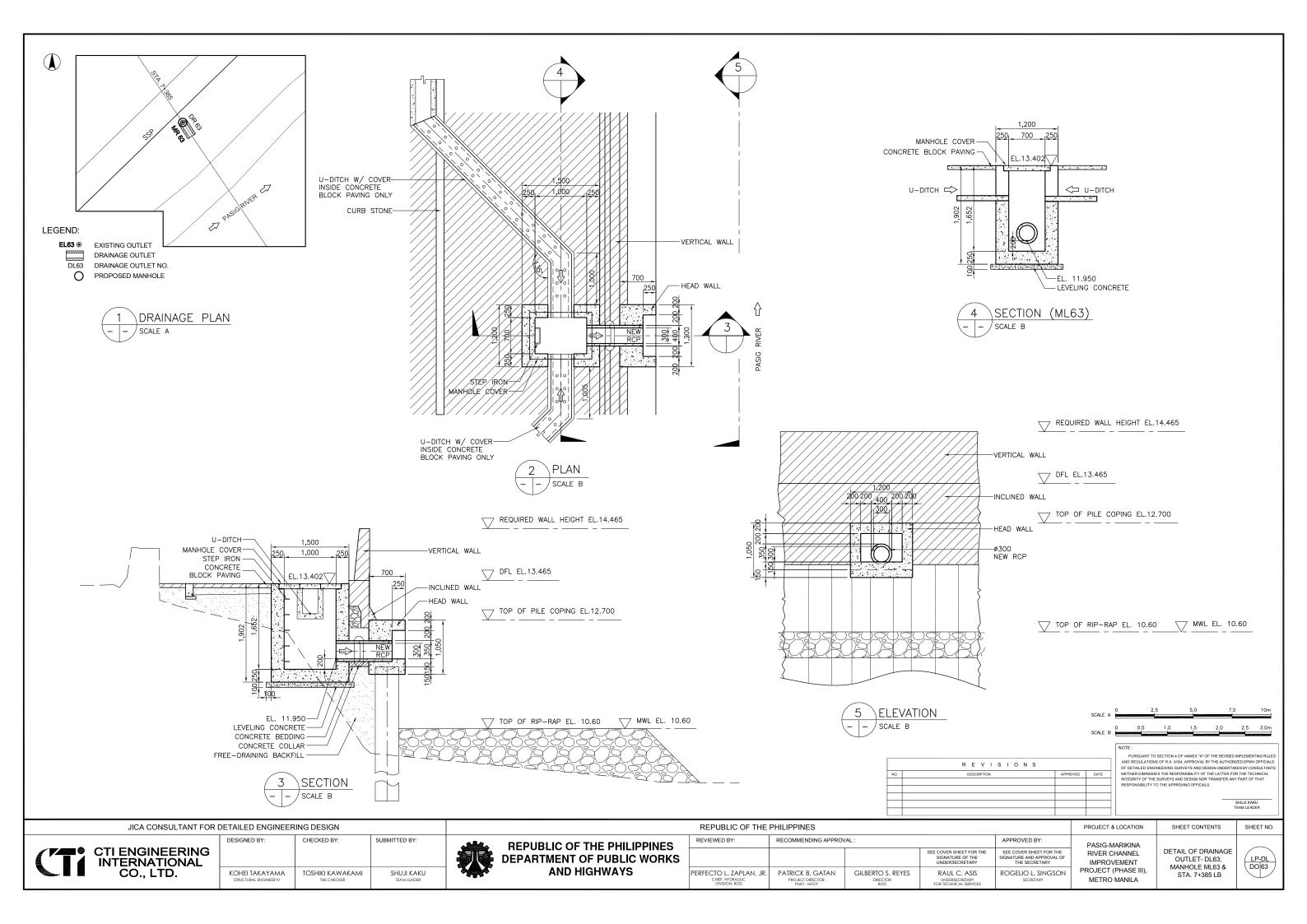


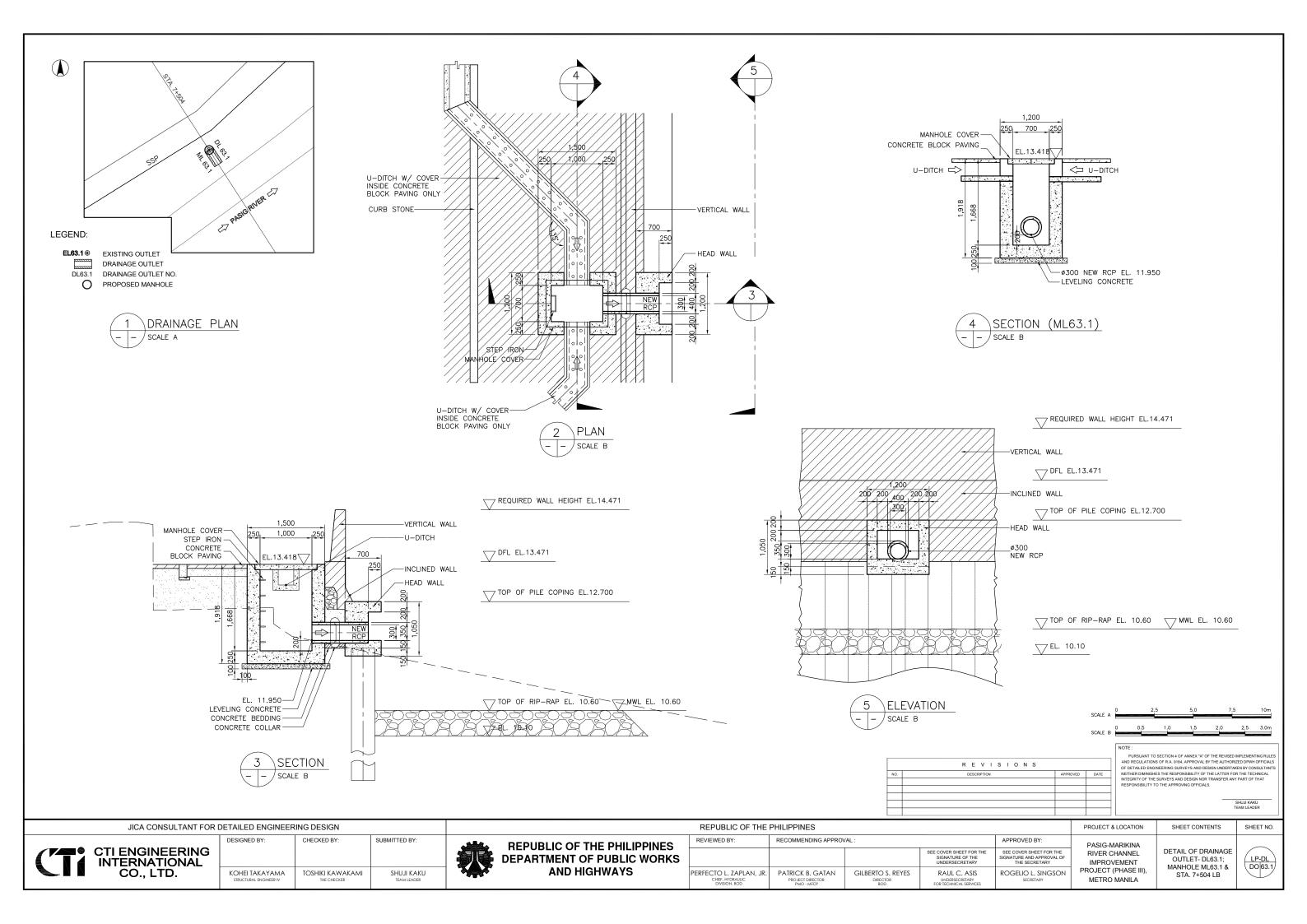
				SCALE A	0 2	.5 5.0	7.	5 10m
					NOTE :			
I	SIONS				AND REGULATIONS	SECTION 4 OF ANNEX "A OF R.A. 9184, APPROVA NEERING SURVEYS AND	AL BY THE AUTHORIZ	ZED DPWH OFFICIALS
ION		APPR	OVED	DATE	INTEGRITY OF THE	S THE RESPONSIBILITY (SURVEYS AND DESIGN N	IOR TRANSFER ANY	
					RESPONSIBILITY TO	D THE APPROVING OFFIC	IALS.	
								SHUJI KAKU EAM LEADER
			F	PROJECT &	LOCATION	SHEET COM	NTENTS	SHEET NO.
	APPROVED BY:			PASIG-M	ARIKINA			
E	SEE COVER SHEET FOR THE SIGNATURE AND APPROVAL OF THE SECRETARY			RIVER CI		PLAN & PR COLLECT		LP-DL DO 62A.6/P
	ROGELIO L. SINGSON SECRETARY			PROJECT (PHASE III), METRO MANILA		U-DITCH		

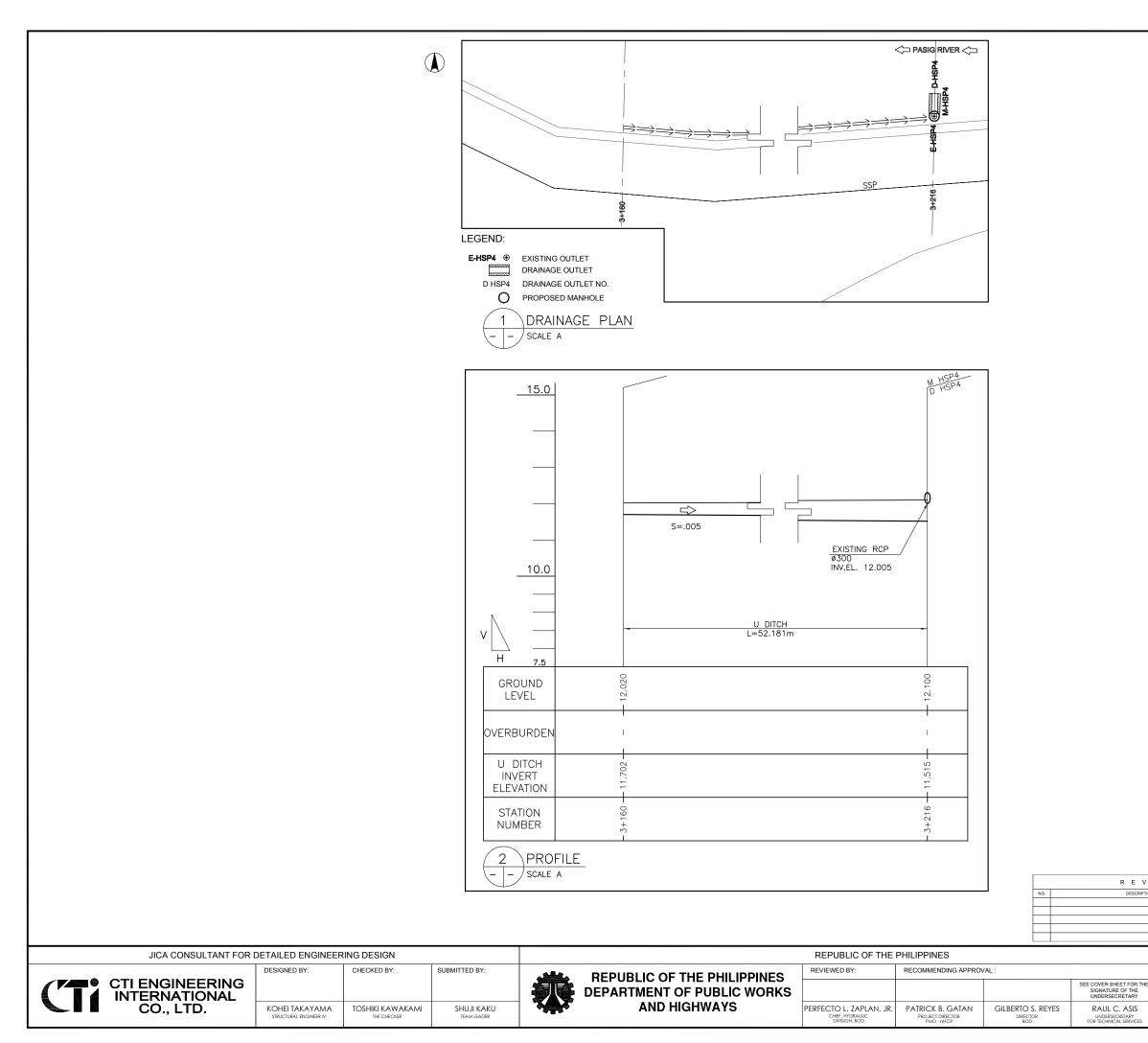




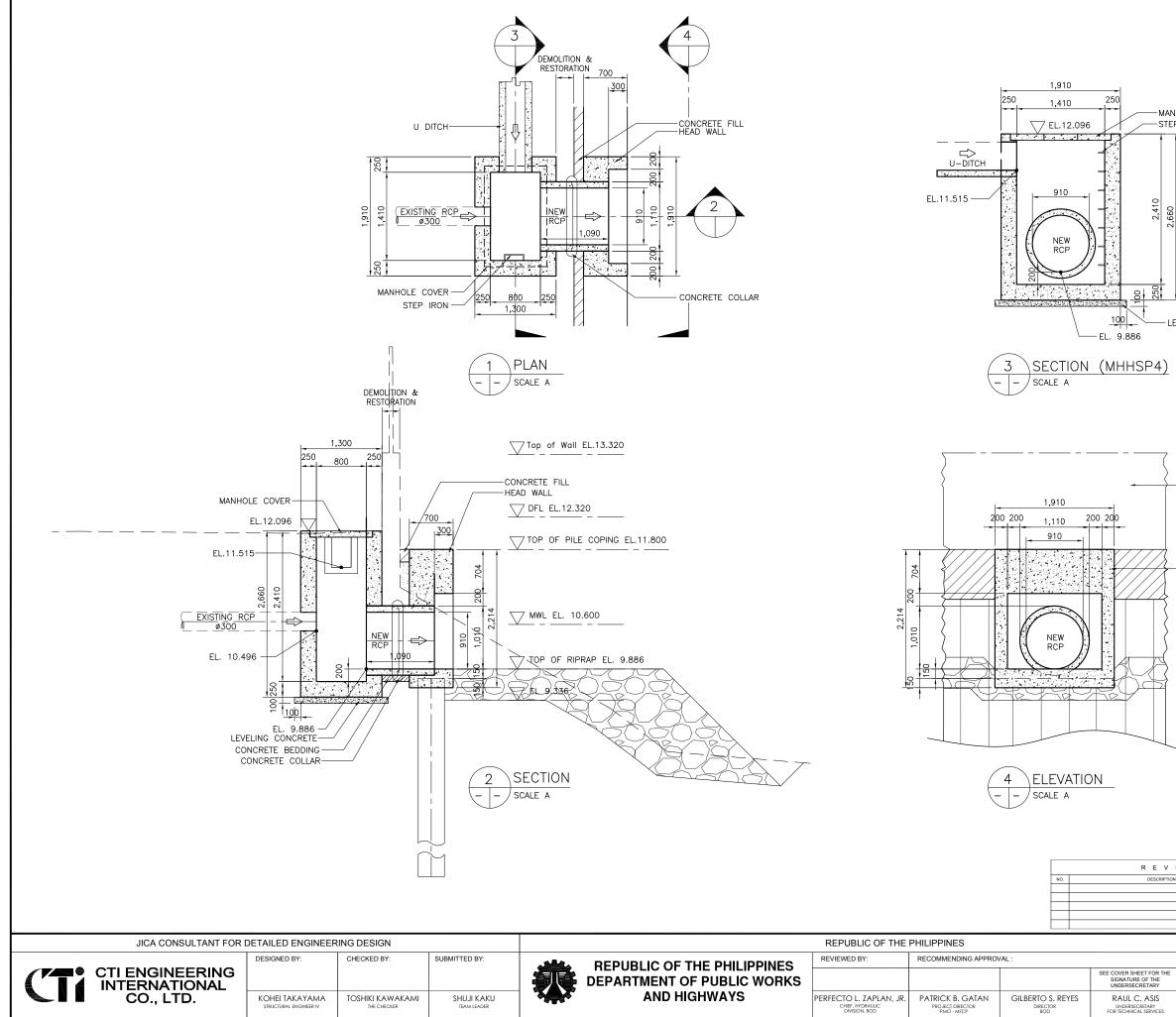






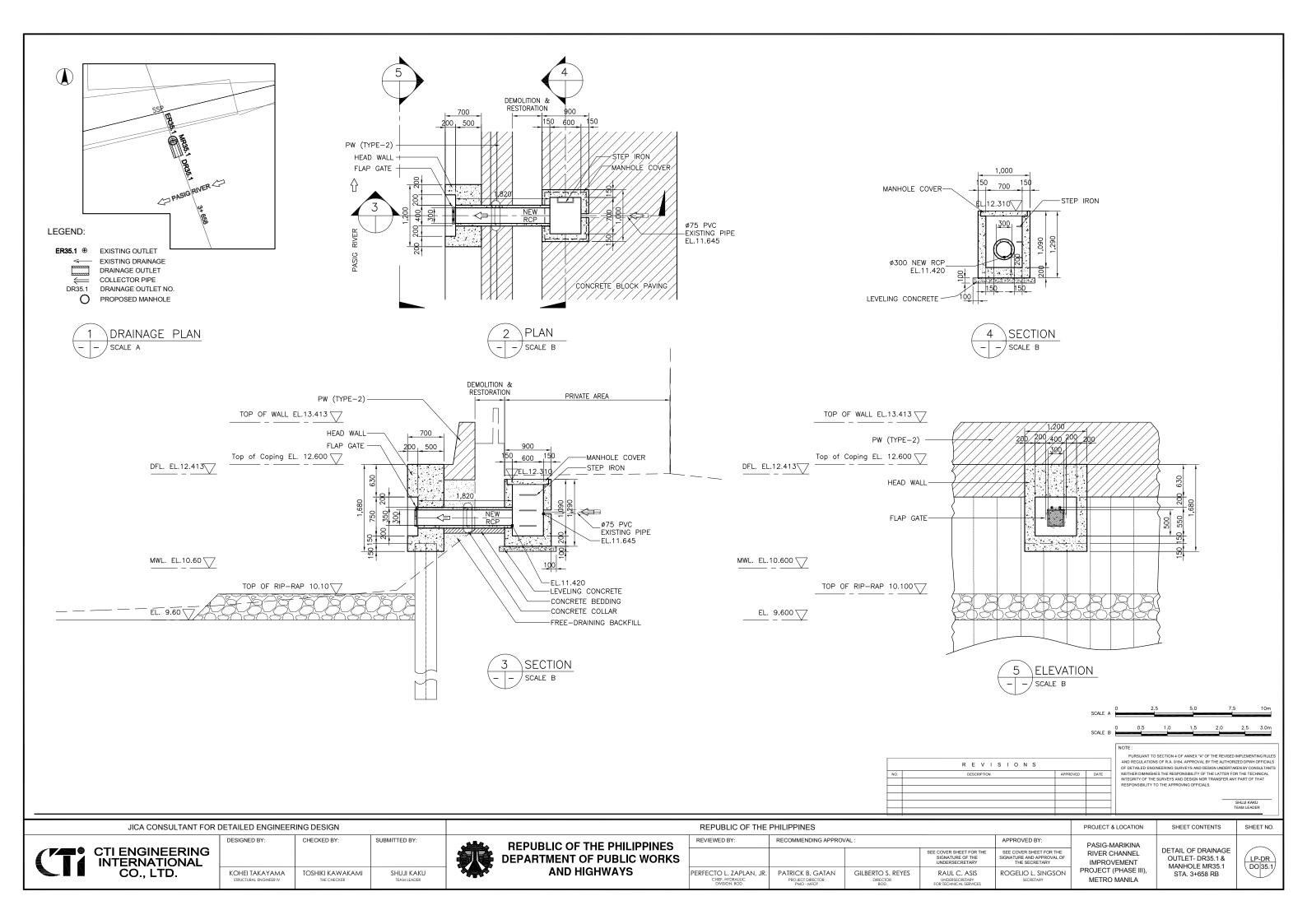


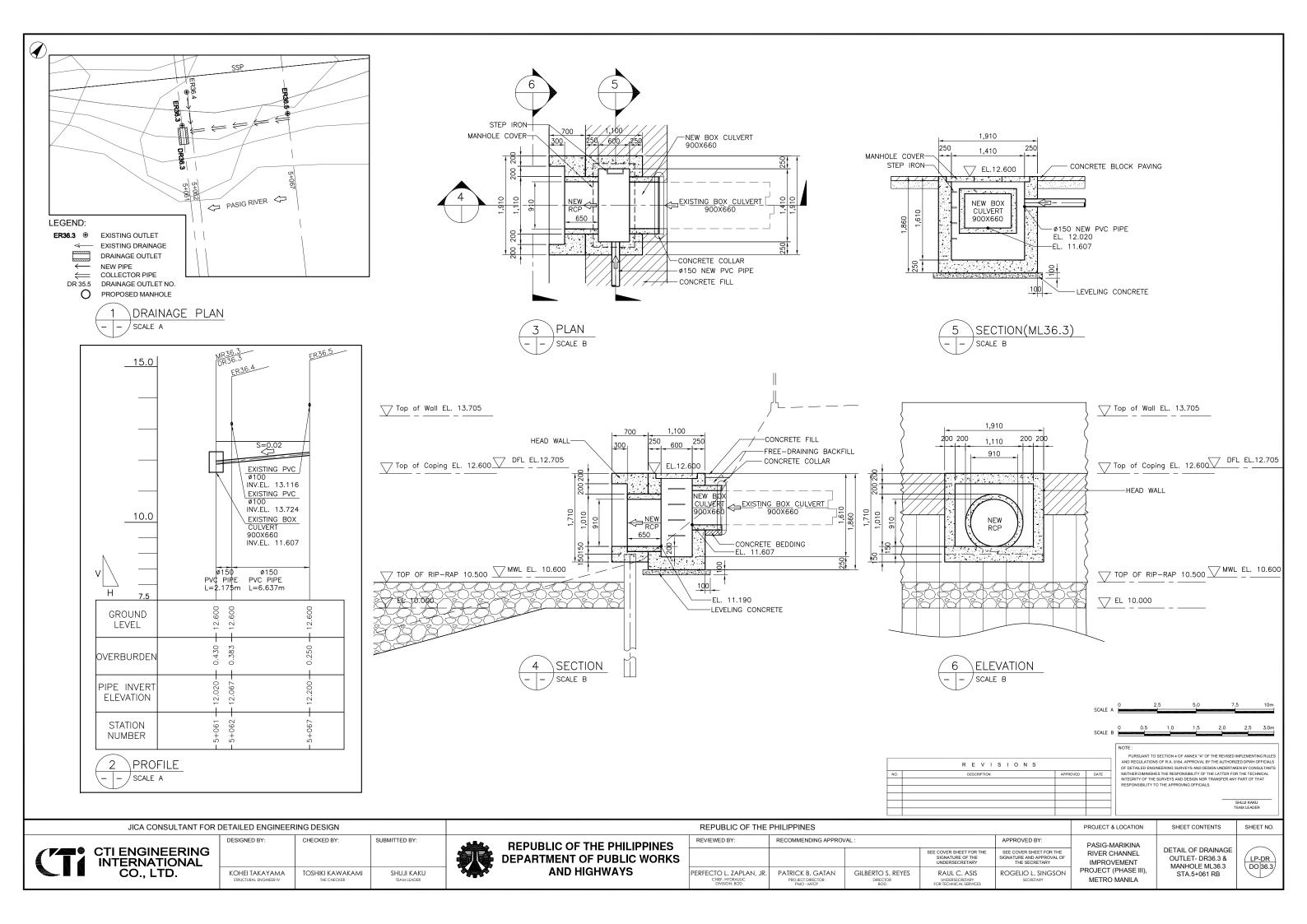
					0	2.5	5	5.0 7	7.5 10m	
				SCALE A	_		-			I -
					NOTE : PL		SECTION 4 OF A	NNEX "A" OF THE REVISI	ED IMPLEMENTING RUL	ES
I	SIONS							PPROVAL BY THE AUTH		
ON		APPR	OVED	DATE				BILITY OF THE LATTER		
							O THE APPROVIN			
										.
									SHUJI KAKU TEAM LEADER	
			F	PROJECT &	& LOCA1	TION	SHEE	T CONTENTS	SHEET NO).
	APPROVED BY:			PASIG-N	/ARIKI	NA			(
	SIGNATURE AND APPROVAL OF				HANN VEMEN			& PROFILE OF U-DITCH	LP-DL	
			PROJECT (PHASE III), METRO MANILA			0-011011		7		

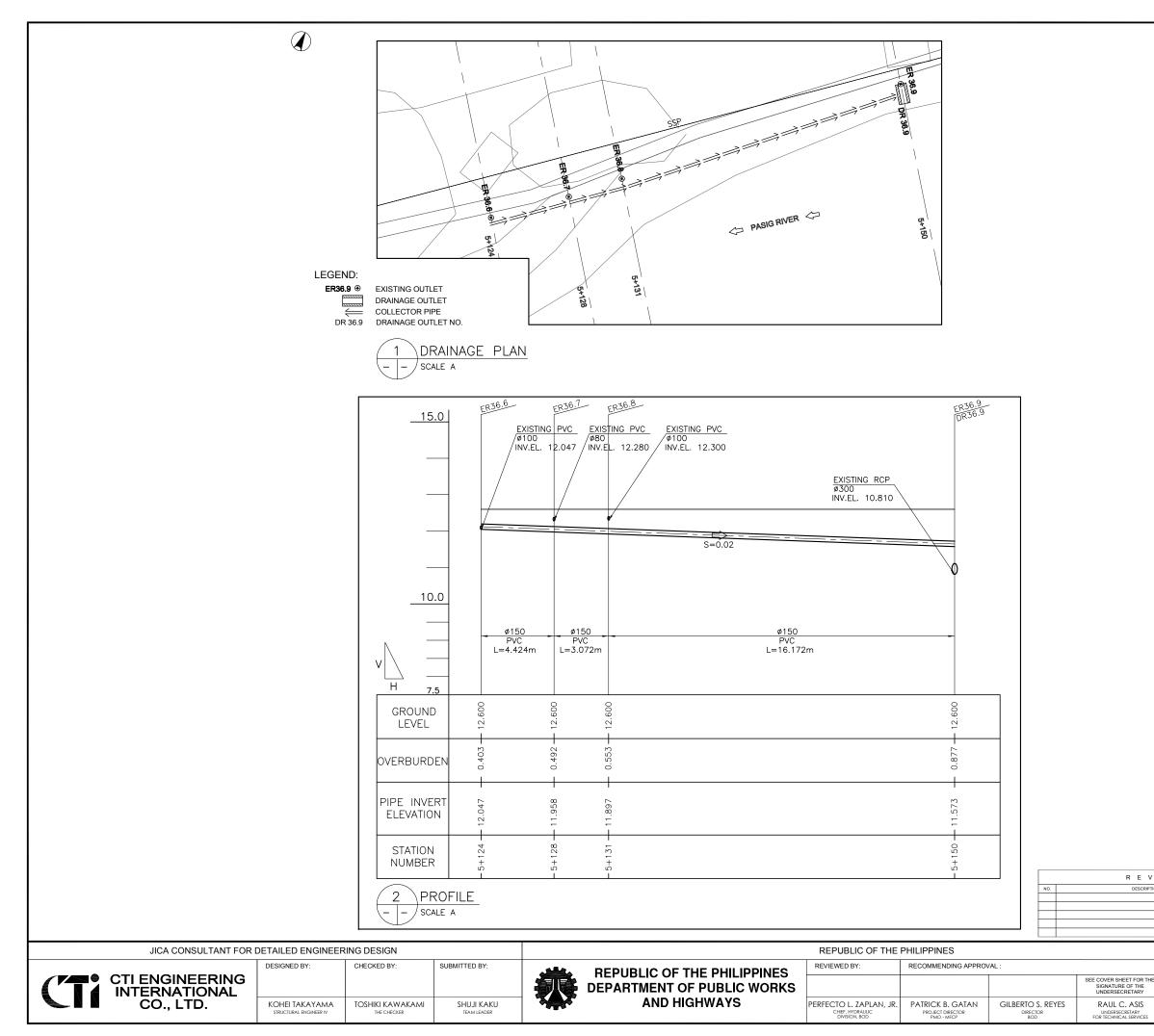


MANHOLE COVER							
2,660							
LEVELING CONCRETE							
SP4)							
Top of Wall EL.13.320							
EXISTING WALL							
DFL EL.12.320							
	800						
HEAD WALL							
→ MWL EL. 10.600							
TOP OF RIPRAP EL. 9.886							
EL 9.336							
SCALE A	<u>0</u>	0.5	1.0	1,5	2.0	2,5	3.0m
SUALE #	NOTE :		ECTION 4 OF 4	NNEX "A" OF	THE REVISED I		NG RULES

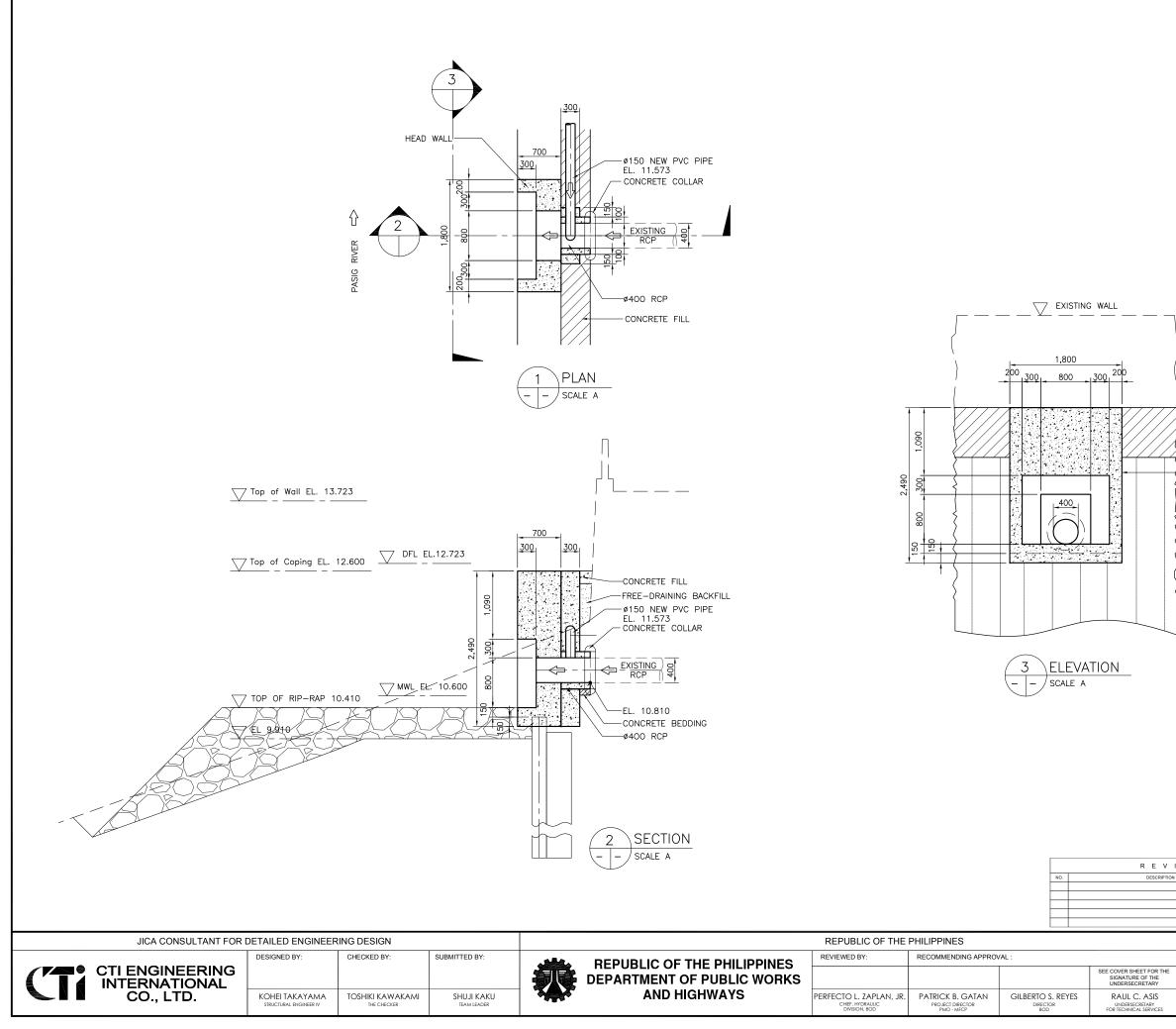
SIONS									
	APPR	OVED	DATE	NEITHER DIMINISHES THE RESPONSIBILITY OF THE LATTER FOR THE TECHNICAL					
						PARTOP THAT			
						SHUJI KAKU			
					1	EAM LEADER			
		F	ROJECT 8	LOCATION	SHEET CONTENTS	SHEET NO.			
APPROVED BY:			PASIG-M	ARIKINA					
					OUTLET- DL HSP4 &	LP-DL DOHSP4			
ROGELIO L. SINGSON SECRETARY			`		STA. 3+216 LB	DU HSP4			
	APPROVED BY: SEE COVER SHEET FOR SIGNATURE AND APPROV THE SECRETARY ROGELIO L. SINGS	APPROVED BY: SIGNATURE AND APPROVAL OF THE SECRETARY ROGELIO L. SINGSON	APPROVED BY: SEE COVER SHEET FOR THE SIGNATURE AND APPROVAL OF THE SECENTARY ROGELIO L. SINGSON	APPROVED DATE APPROVED DATE PROJECT & PROJECT & APPROVED BY: SIGNATURE AND APPROVAL OF THE SICRETARY ROGELIO L. SINGSON PROJECT (APPROVED DATE APPROVED DATE OF DETAILED ENGINEERED NOISELITY TE OF DETAILED ENGINEERED E	OF DETALED ENGINEERING SURVEYS AND DESIGN INDERTA OF DETALED ENGINEERING SURVEYS AND DESIGN INDERTA DETALED ENGINEERING SURVEYS AND DESIGN INDERTA NETERTIFY OF THE SURVEYS AND DESIGN INDERTA NETERTIFY OF THE SURVEYS AND DESIGN INDERTA NEEPONSIBILITY TO THE ATTER TO T T T T POSIECT & LOCATION SHEET CONTENTS POSIECT (PHASE III), POSIECT (PHASE III), STA, 3+216 LB			





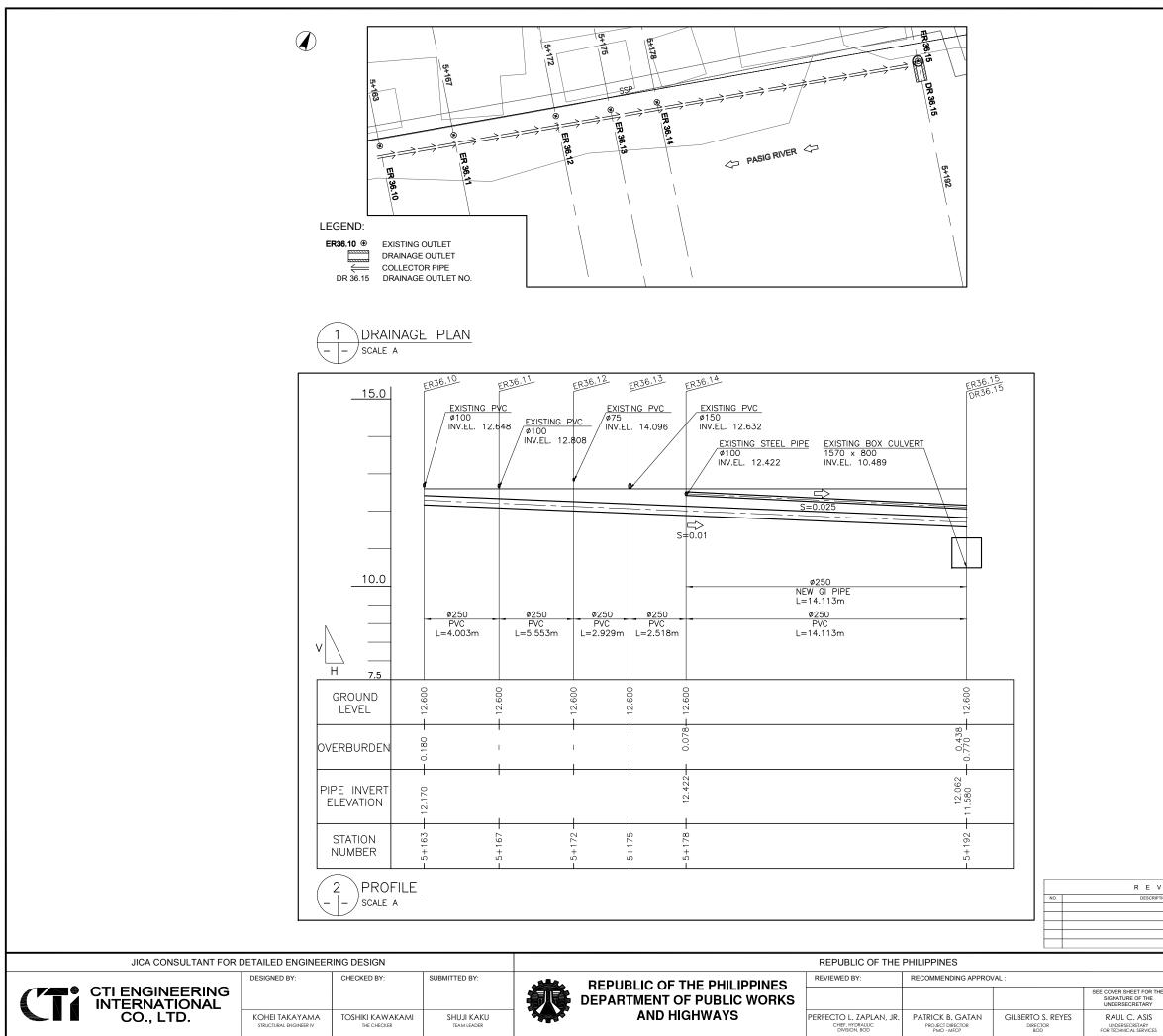


			SCALE A	0 2	5 5.0	7.5	5 10m
rion	SIONS	APPROVED	DATE	AND REGULATIONS OF DETAILED ENGIINE NEITHER DIMINISHE INTEGRITY OF THE	SECTION 4 OF ANNEX "A" OF OF R.A. 9184, APPROVAL BY VEERING SURVEYS AND DES THE RESPONSULTY OF T SURVEYS AND DESIGN NOR "I THE APPROVING OFFICIALS	THE AUTHORIZ IGN UNDERTAKI HE LATTER FOR TRANSFER ANY	ED DPWH OFFICIALS EN BY CONSULTANTS THE TECHNICAL
	-	1	PROJECT &	LOCATION	SHEET CONTE	INTS	SHEET NO.
E	SIGNATURE AND APPROVAL OF THE SECRETARY		PASIG-M RIVER CI IMPROV	HANNEL	PLAN & PROF COLLECTOR		LP-DR DO 36.9/P
	ROGELIO L. SINGSOI SECRETARY		METRO		= 111),		\bigvee

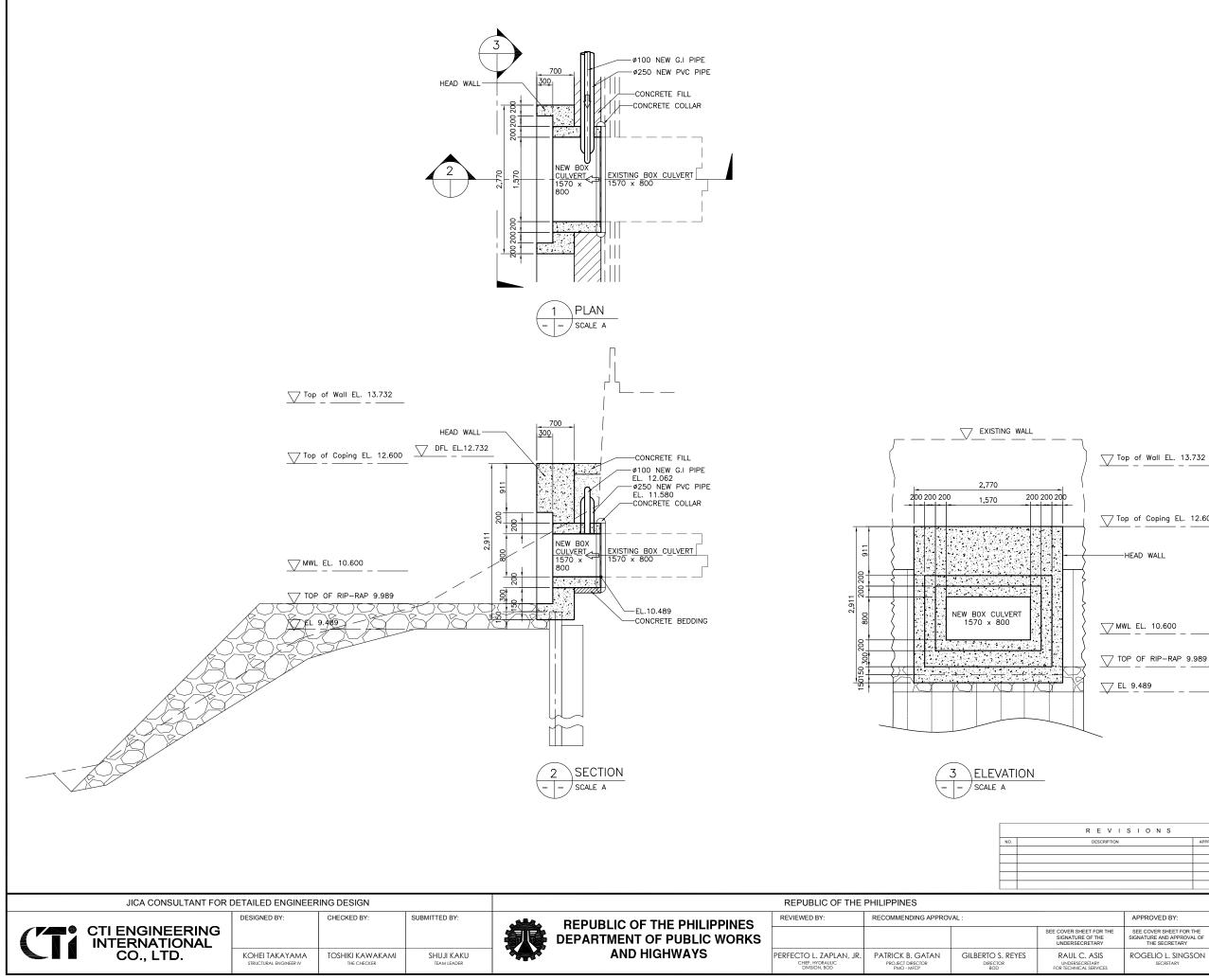


7	Top of W	all EL	. 13.723	-				
	Top of Ca	oping	EL. 12.600	DF	L EL.12.723			
	HEAD Y	WALL						
		RIP-R	AP 10.410 	<u> </u>	EL. 10.600			
_								
			SCALE A	0 0.5	1.0 1.5	2.0	2.5	3.0m
				NOTE :	SECTION 4 OF ANNEX "A" O			
	SIONS			AND REGULATIONS OF DETAILED ENGI	OF R.A. 9184, APPROVAL E NEERING SURVEYS AND DE	SY THE AUTHORIZ	ZED DPWH O EN BY CONS	SULTANTS
ON		APPROV	DATE	INTEGRITY OF THE	S THE RESPONSIBILITY OF SURVEYS AND DESIGN NOR THE APPROVING OFFICIAL	TRANSFER ANY	R THE TECHN PART OF TH	NICAL HAT
							SHUJI KAKU EAM LEADEF	
_			PROJECT &		SHEET CONT	ENTS	QUET	ET NO.
	APPROVED BY:		FROJECT &	LUCATION	SHEET CONT	LINIO	JHEE	
	SEE COVER SHEET FOR T SIGNATURE AND APPROVA THE SECRETARY ROGELIO L. SINGS SECRETARY	LOF	PASIG-M. RIVER CH IMPROV PROJECT (I METRO	HANNEL EMENT PHASE III),	DETAIL OF DF OUTLET- D STA. 5+15	R36.9		9-DR 036.9

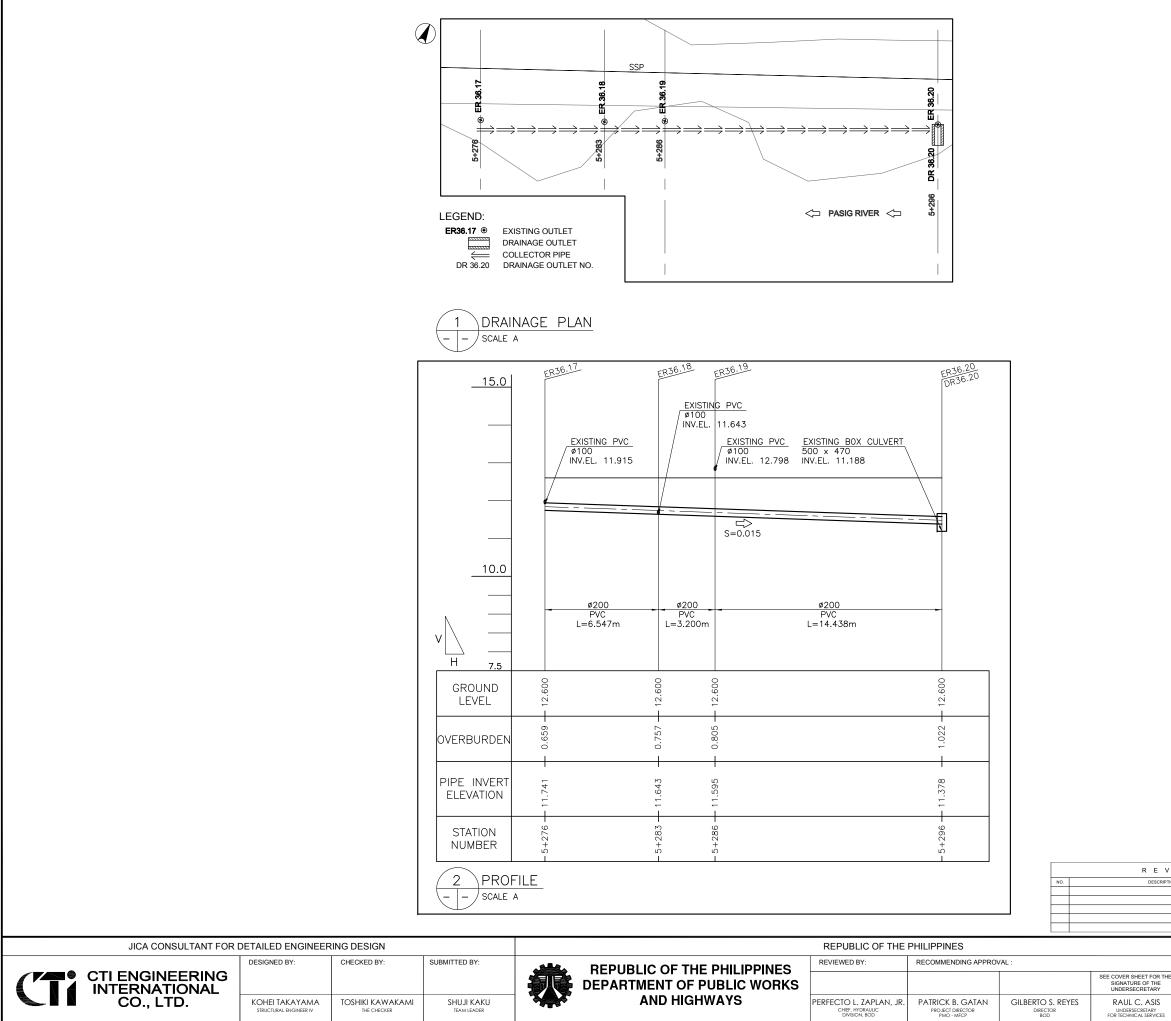
METRO MANILA



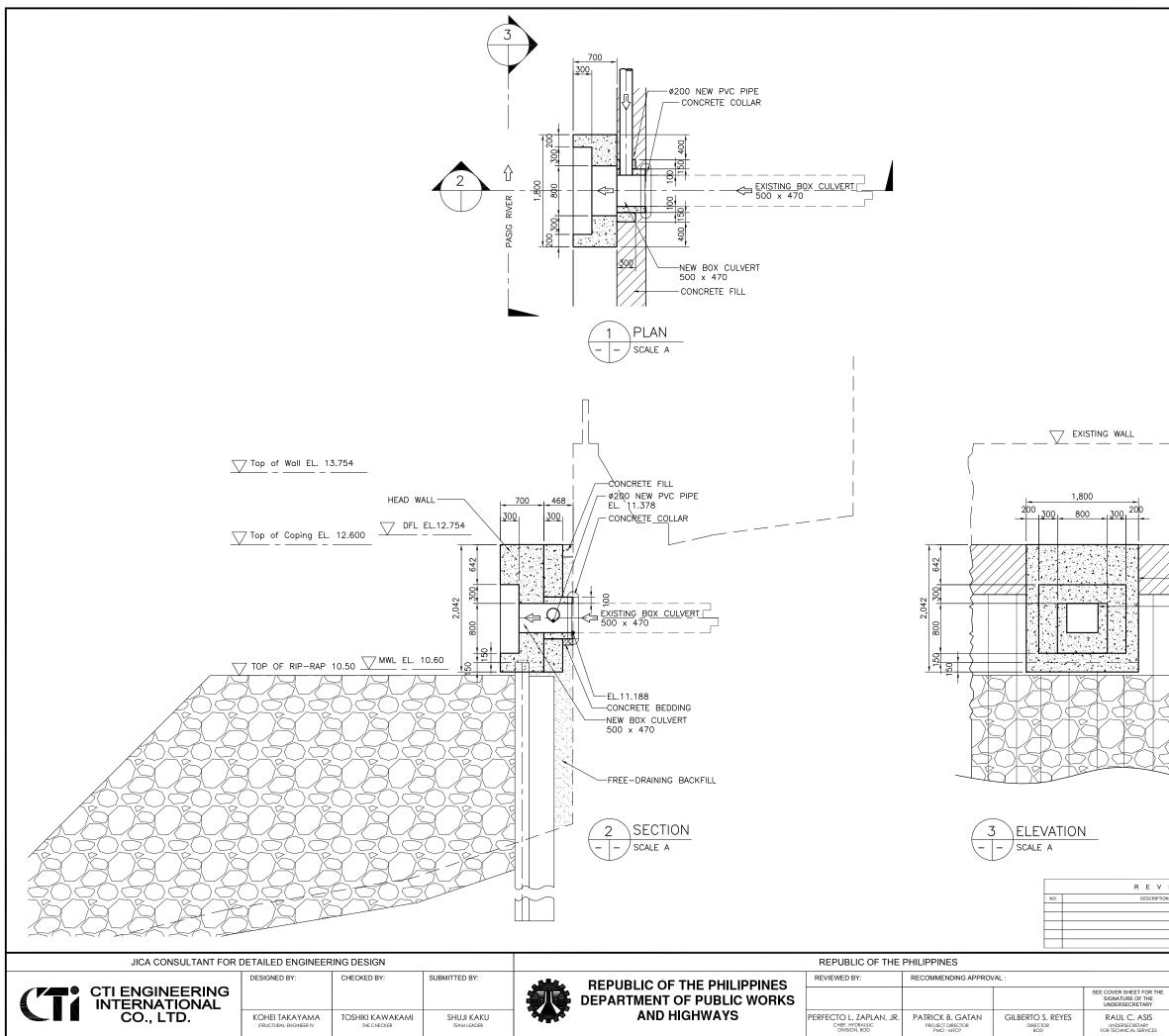
				SCALE A	0 2	.5 5.(0 7.5	5 10m
I	S I O N S	APPR	OVED	DATE	AND REGULATIONS OF DETAILED ENGIIN NEITHER DIMINISHE INTEGRITY OF THE	SECTION 4 OF ANNEX S OF R.A. 9184, APPROV NEERING SURVEYS AN S THE RESPONSIBILIT SURVEYS AND DESIGN D THE APPROVING OFF	VAL BY THE AUTHORIZ ID DESIGN UNDERTAK Y OF THE LATTER FOR NOR TRANSFER ANY ICIALS.	ZED DPWH OFFICIALS IEN BY CONSULTANTS R THE TECHNICAL
			F	PROJECT &	LOCATION	SHEET CO	ONTENTS	SHEET NO.
	APPROVED BY:			PASIG-M	ARIKINA			
	SEE COVER SHEET FOR T SIGNATURE AND APPROVA THE SECRETARY			RIVER CI				LP-DR DO 36.15/P
	ROGELIO L. SINGS SECRETARY	ION			. ,.	COLLECTOR PIPE		DU 36.15/P



DFL EL.12.732 Top of Coping EL. 12.600 -HEAD WALL ₩WL EL. 10.600 \bigtriangledown TOP OF RIP-RAP 9.989 2.5 3.0m 0.5 1.0 1.5 2.0 SCALE A PURSUANT TO SECTION 4 OF ANNEX "A" OF THE REVISED IMPLEMENTING RULES AND REQULATIONS OF R.A. 9184. APPROVAL BY THE AUTHORIZED DPWH OFFICIALS OF DFTALED ENGINEERING SUPPEYS AND DESKU NUBERTWEEN YEOCONSULTANTS NEITHER DIMINISHES THE RESPONSIBILITY OF THE LATTER FOR THE TECHNICAL INTEGRITY OF THE SURVEYS AND DESKIGN NOR TRANSFER ANY PART OF THAT RESPONSIBILITY OF THE APROVIDE OFFICIALS REVISIONS PPROVED DATE SHUJI KAKU TEAM LEADER SHEET NO. PROJECT & LOCATION SHEET CONTENTS APPROVED BY: PASIG-MARIKINA SEE COVER SHEET FOR THE SIGNATURE AND APPROVAL OF THE SECRETARY RIVER CHANNEL DETAIL OF DRAINAGE LP-DR DO 36.15 OUTLET- DR36.15 STA. 5+192 RB IMPROVEMENT PROJECT (PHASE III), ROGELIO L. SINGSON METRO MANILA

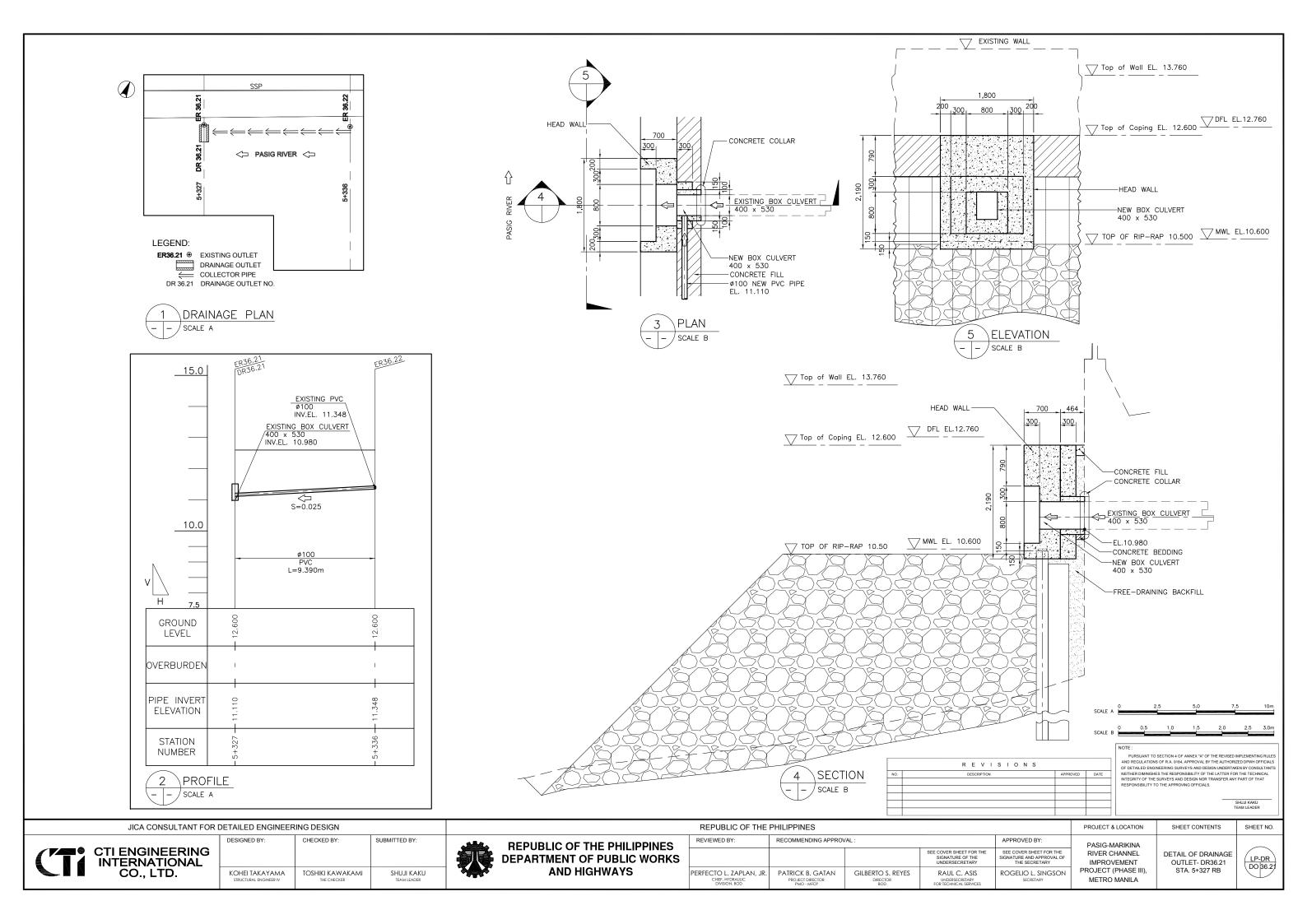


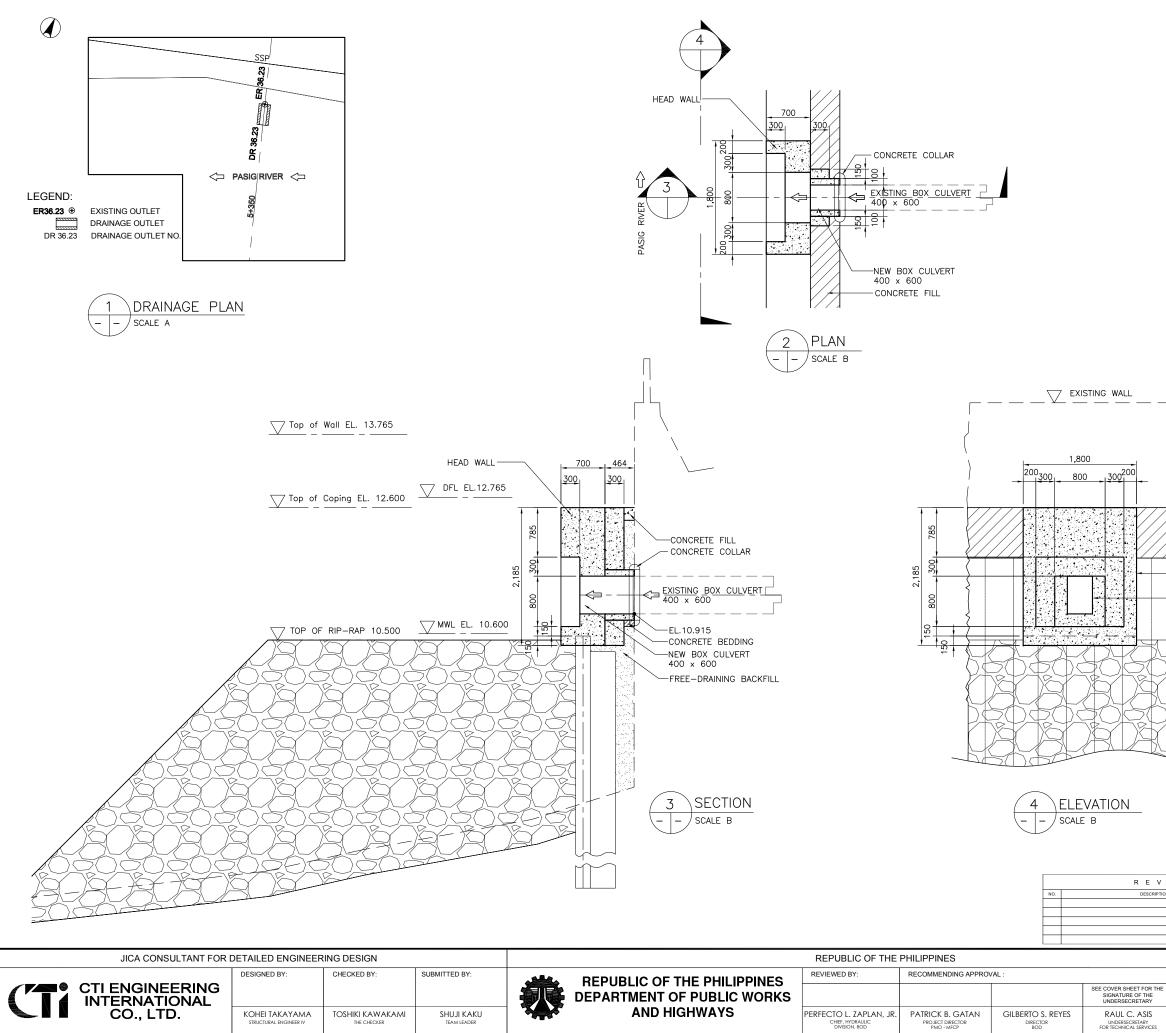
			SCALE	A	0 2	5	5.0	7.5	10m
1 10N	SIONS	APPRO	DVED DATE		AND REGULATION OF DETAILED ENGI NEITHER DIMINISHE	S OF R.A. 918 NEERING SUI ES THE RESPI SURVEYS AN	F ANNEX "A" OF THE REVIS 4, APPROVAL BY THE AUTH 742YS AND DESIGN UNDER 100 DESIGN NOR TRANSFER 100 DESIGN NOR TRANSFER 100 OFFICIALS.	ORIZE TAKE FOR ANY F	ED DPWH OFFICIALS IN BY CONSULTANTS THE TECHNICAL
			PROJECT	8	LOCATION	SH	EET CONTENTS		SHEET NO.
	APPROVED BY:		PASIG	-M.	ARIKINA				_
E	SEE COVER SHEET FOR TH SIGNATURE AND APPROVAL THE SECRETARY				HANNEL EMENT			:	LP-DR DO 36.20/P
	ROGELIO L. SINGS	ЛС			PHASE III), MANILA	COLLECTOR PIPE			00 30.20/F



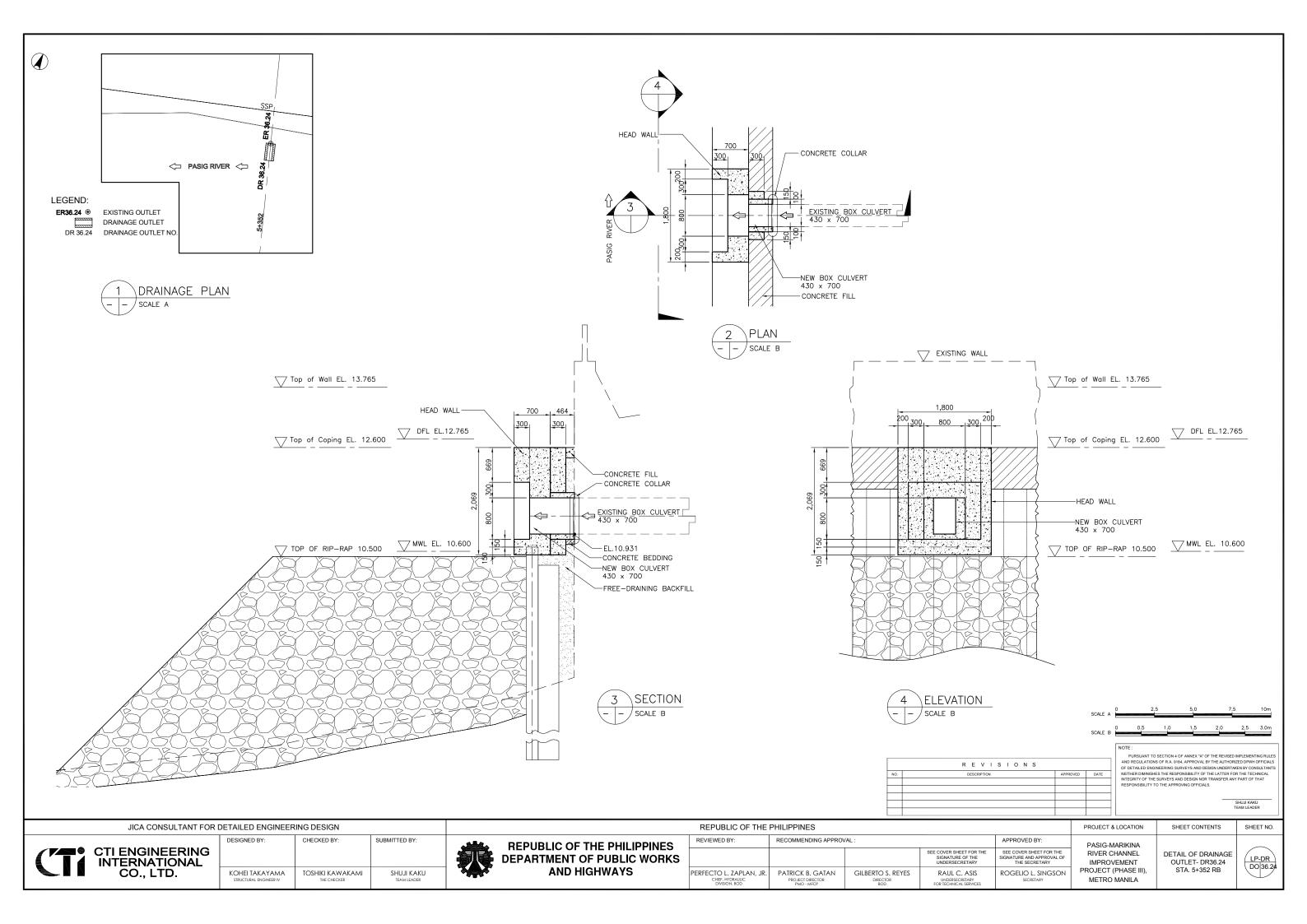
→	Wall EL. 13.754		
	Coping EL. 12.600	DFL_EL.12.754	
HEAD			
NEW 500 >	BOX CULVERT 470		
	RIP-RAP 10.50	<u>Wwl</u> <u>EL. 10.6</u>	50
	SCALE A 0 0.5	1.0 1.5 2.0	2.5 3.0m
ISIONS	PURSUANT TC AND REGULATION OF DETAILED ENG NEITHER DIMINISH INTEGRITY OF THE	SECTION 4 OF ANNEX 'A' OF THE REVISED S OF R. A 198, APPROVAL BY THE AUTHORS NEEMING SURVEYS AND DESIGN UNDERTAR S THE RESPONSIBILITY OF THE LATTER FO SURVEYS AND DESIGN NOR TRANSFER ANY O THE APPROVING OFFICIALS.	ZED DPWH OFFICIALS IEN BY CONSULTANTS R THE TECHNICAL
	PROJECT & LOCATION	SHEET CONTENTS	SHEET NO.
APPROVED BY: SEE COVER SHEET FOR THE SIGNATURE AND APPROVAL OF the SECRETARY ROGELIO L. SINGSON SECRETARY	PASIG-MARIKINA RIVER CHANNEL IMPROVEMENT PROJECT (PHASE III), METRO MANILA	DETAIL OF DRAINAGE OUTLET- DR36.20 STA. 5+296 RB	LP-DR DO 36.20

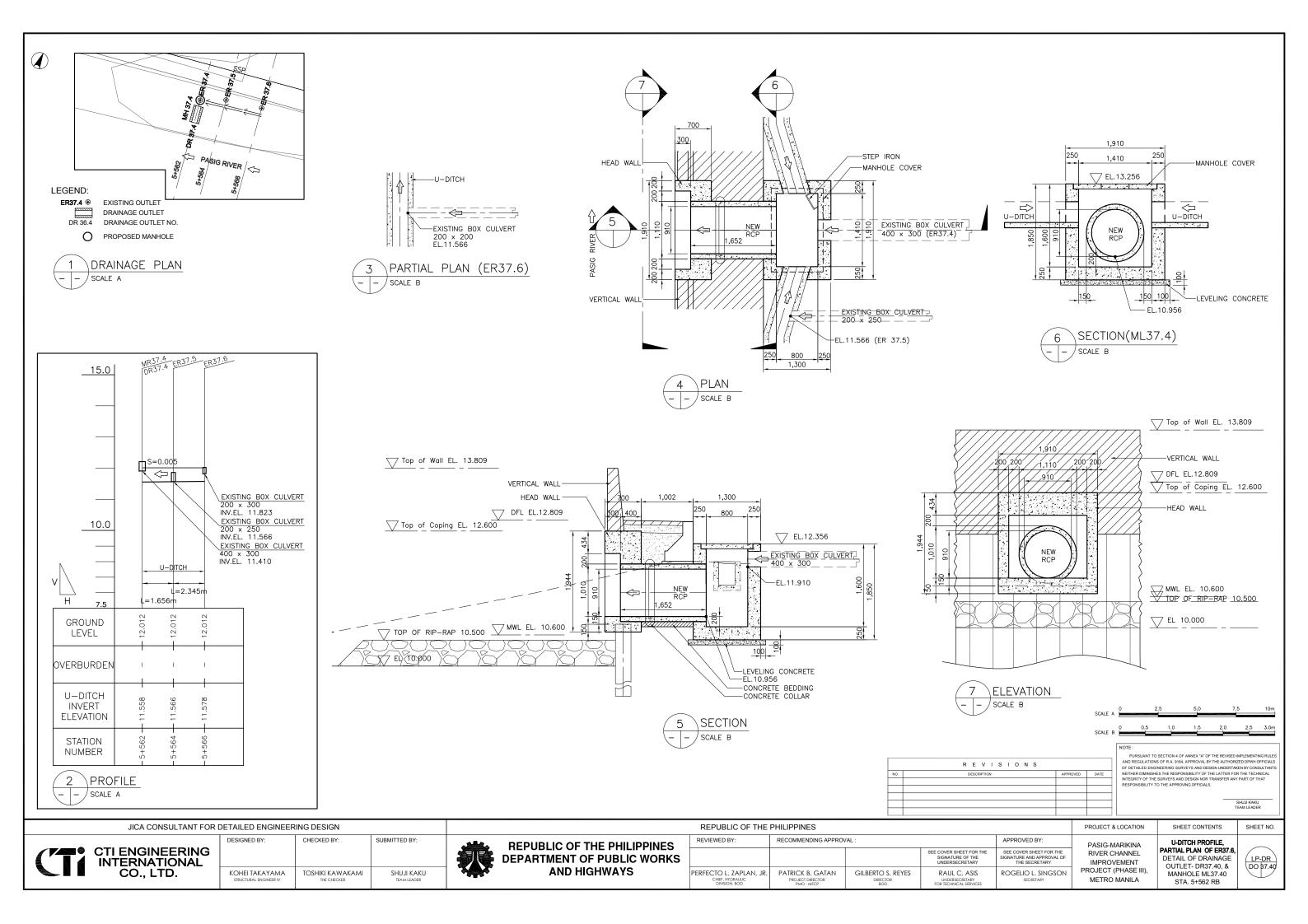
UNDERSECRETARY FOR TECHNICAL SERVICES

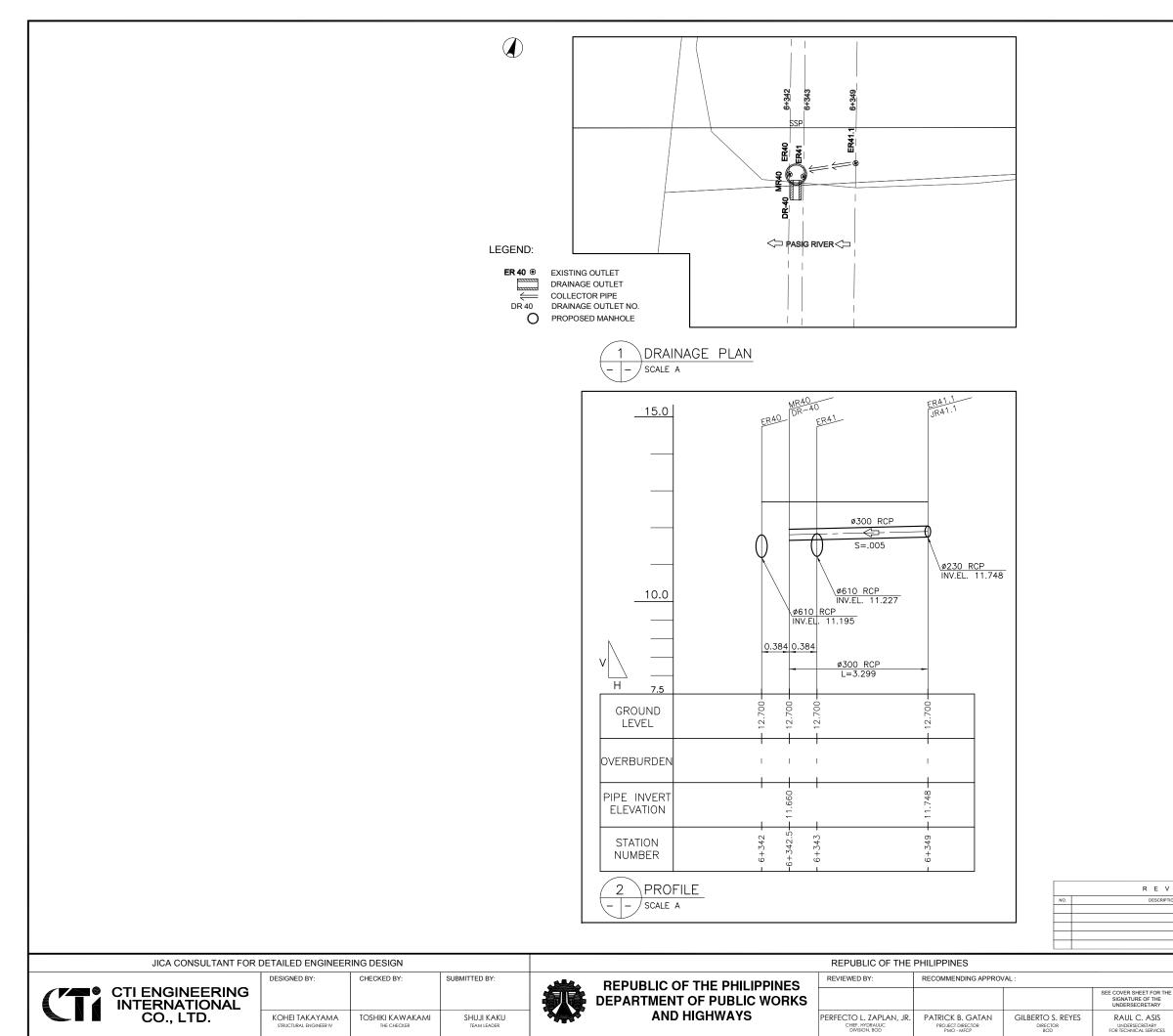




$ \begin{array}{c} \hline \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ $	'all EL. 13.765		
	oping EL. <u>12.600</u>	7 DFL EL.12.765	
400 x	OX CULVERT	⁷ MWL EL. 10.600	
	SCALE A 0 2.	5 5.0 7.5	10m 2.5 3.0m
	SCALE B		
ISIONS	PURSUANT TC AND REGULATION OF DETAILED ENG OVED DATE INTEGRITY OF THE INTEGRITY OF THE		ZED DPWH OFFICIALS KEN BY CONSULTANTS R THE TECHNICAL
	PROJECT & LOCATION	SHEET CONTENTS	SHEET NO.
APPROVED BY: SEE COVER SHEET FOR THE SIGNATURE AND APPROVAL OF THE SECRETARY ROGELIO L. SINGSON SECRETARY	PASIG-MARIKINA RIVER CHANNEL IMPROVEMENT PROJECT (PHASE III), METRO MANILA	DETAIL OF DRAINAGE OUTLET- DR36.23 STA. 5+350 RB	LP-DR DO 36.28



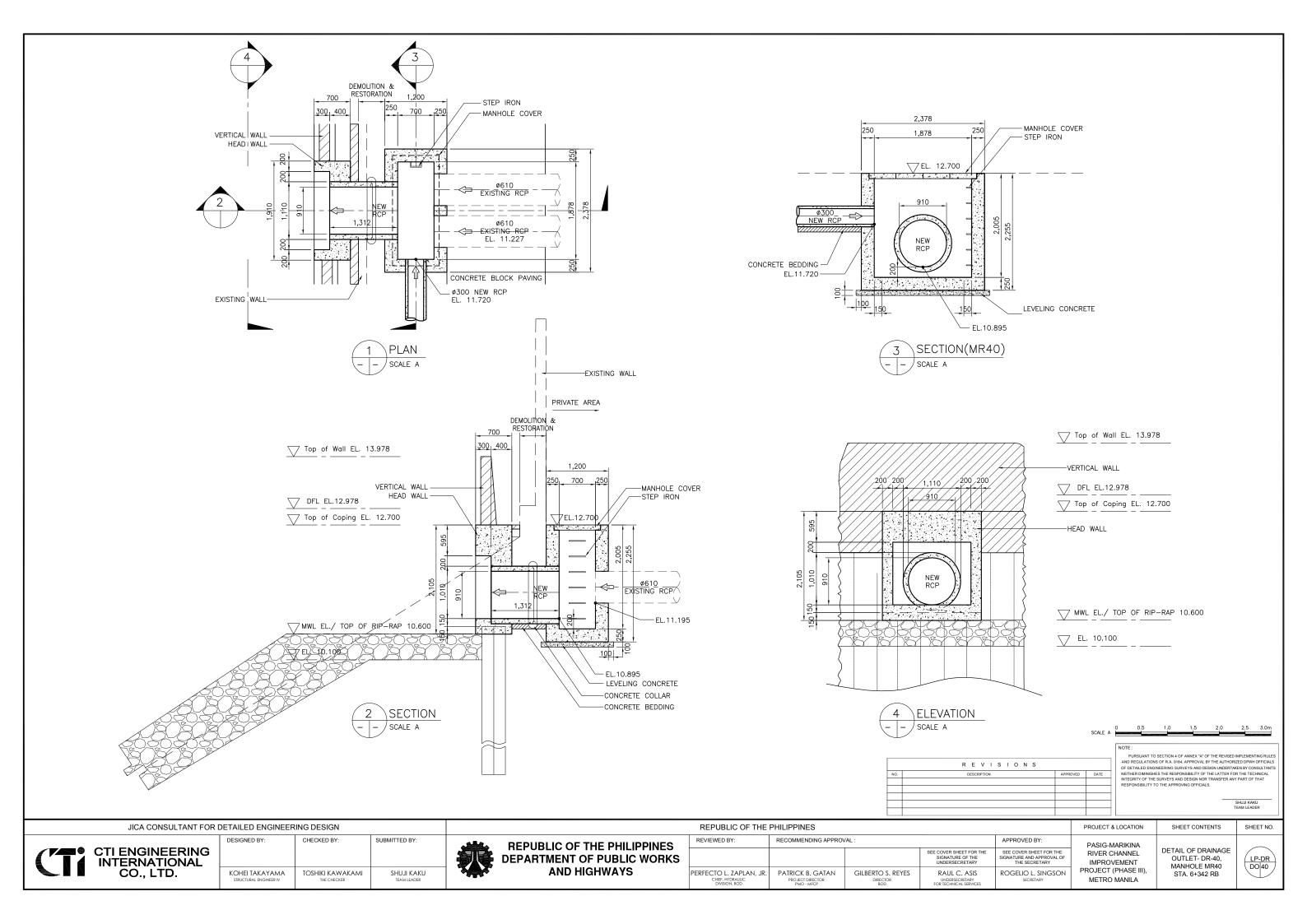


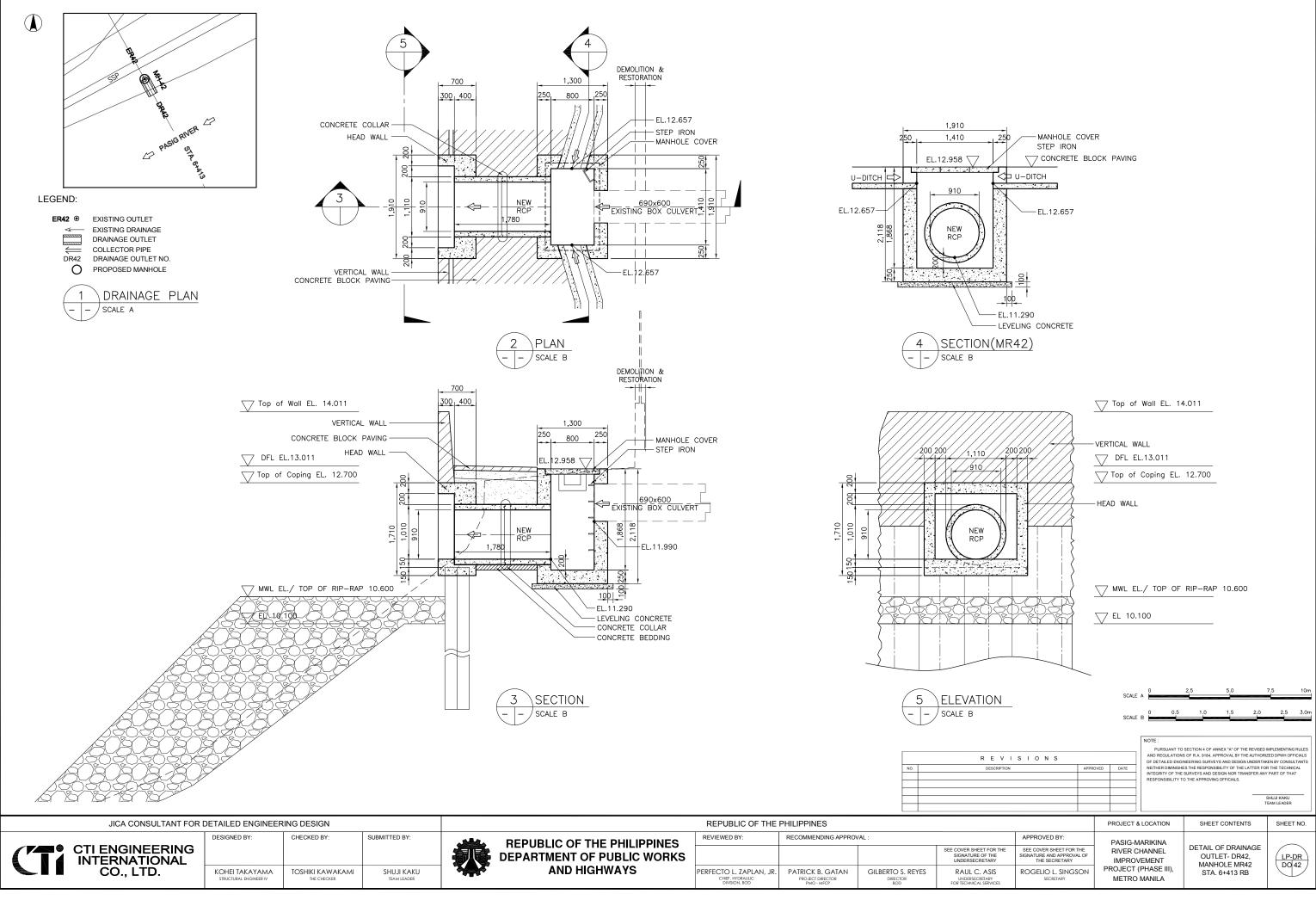


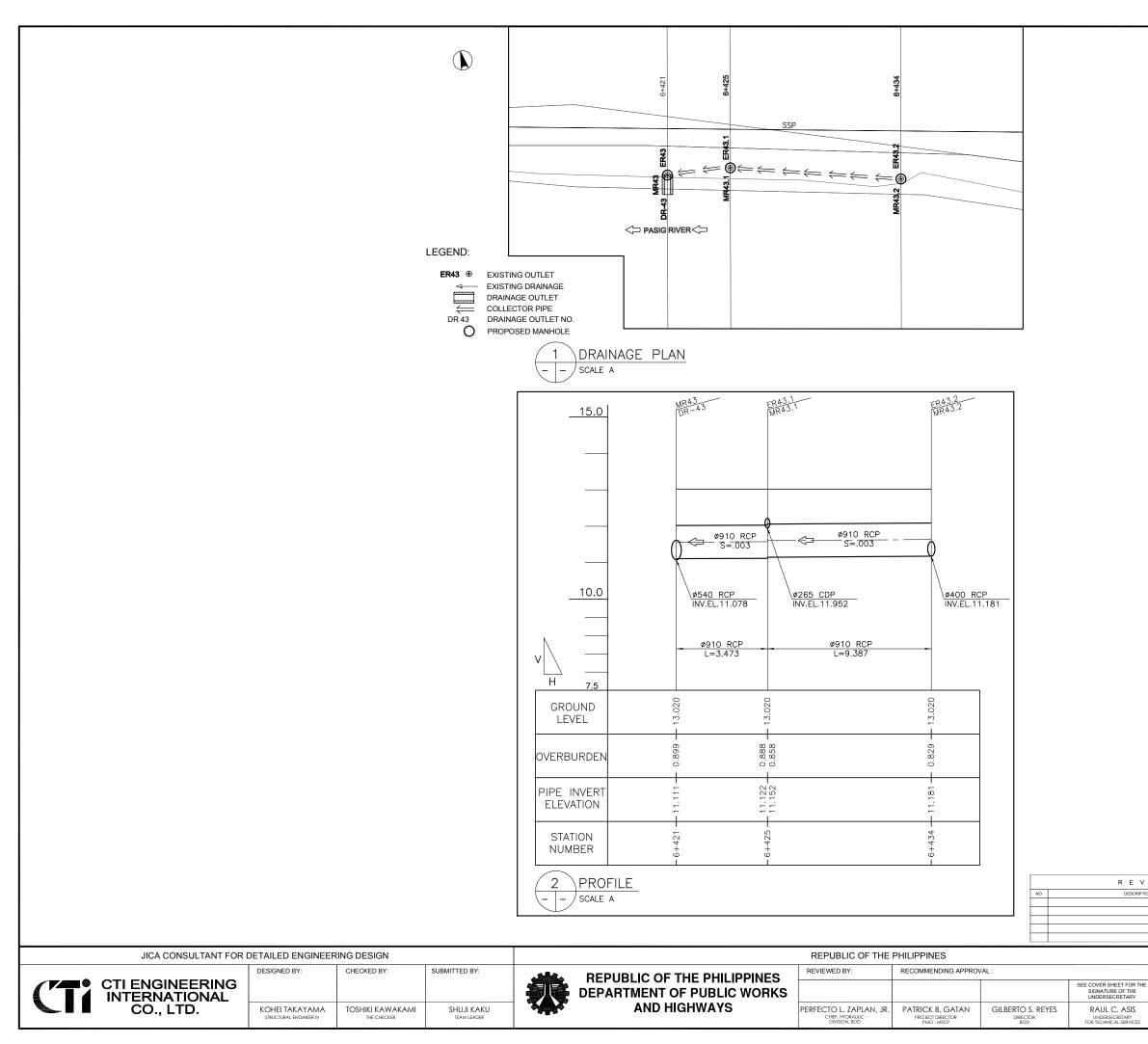
TOSHIKI KAWAKAMI THE CHECKER

			SCALE	A	2.5	5.0	7.5	10m
					NOTE : PURSUANT TO	SECTION 4 OF ANNEX	"A" OF THE REVISED I	MPI EMENTING RULES
Т	SIONS						VAL BY THE AUTHORIZ	
ON		APPR	DVED DATE				Y OF THE LATTER FOR	
						THE APPROVING OFF		PARTOP THAT
				-1				SHUJI KAKU
							т	EAM LEADER
			PROJEC	CT & L	OCATION	SHEET CO	ONTENTS	SHEET NO.
	APPROVED BY:		PASIC	3-MA	RIKINA			_
	SEE COVER SHEET FOR T SIGNATURE AND APPROVA THE SECRETARY				ANNEL		ROFILE OF	LP-DR DOI40/P
	ROGELIO L. SINGS	SON		`	'HASE III), 1ANILA	OOLLLO		

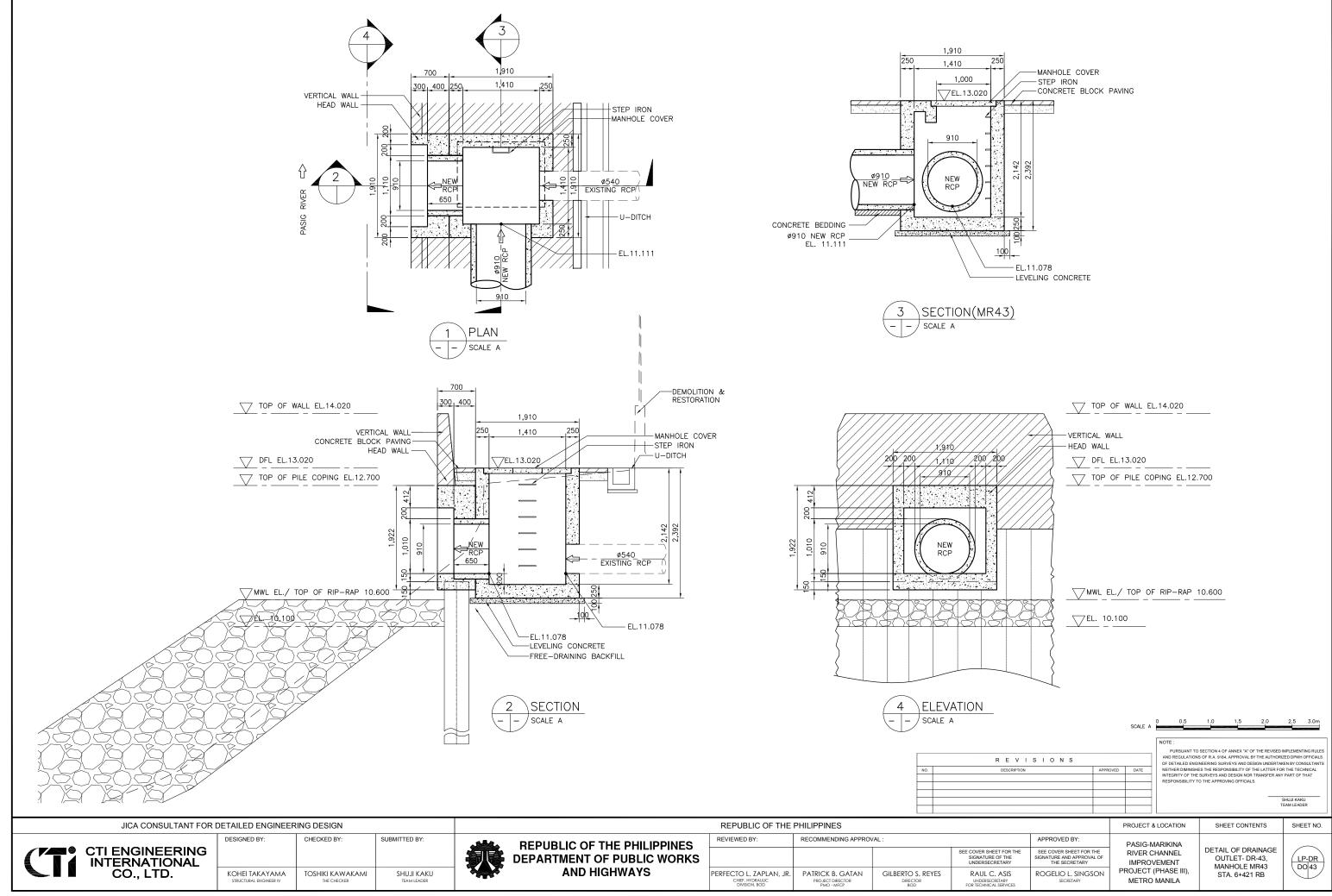
UNDERSECRETARY FOR TECHNICAL SERVICES

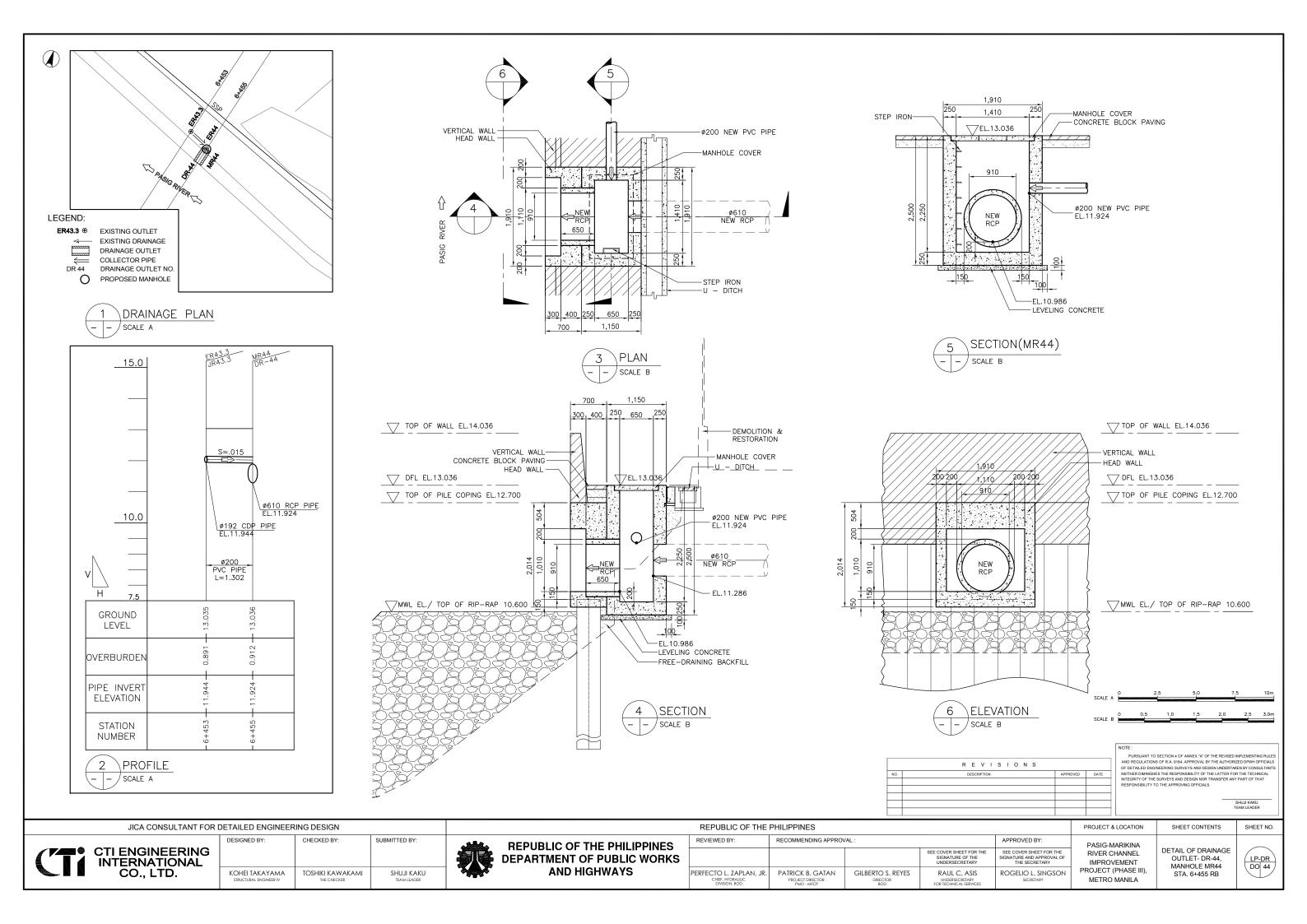


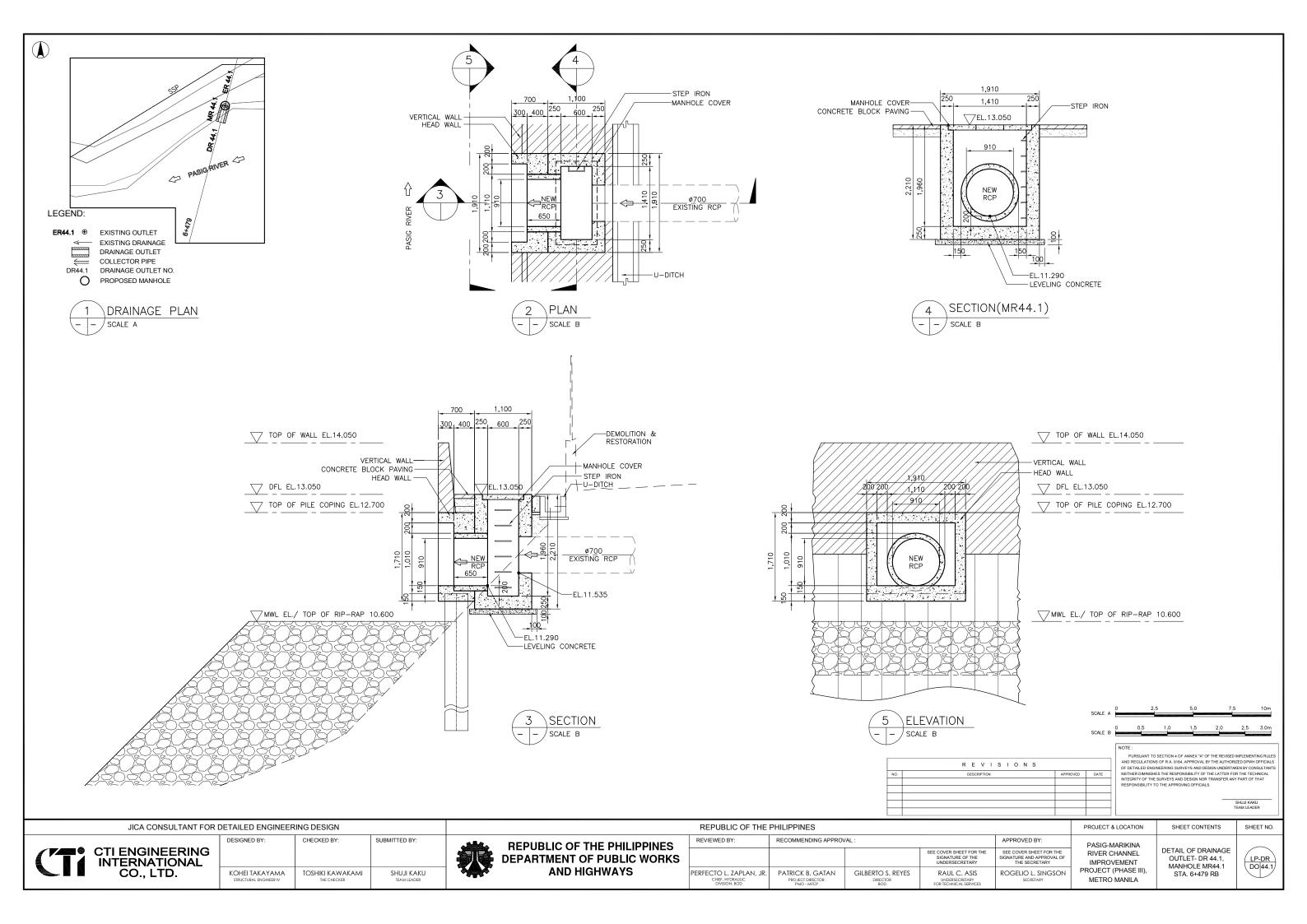


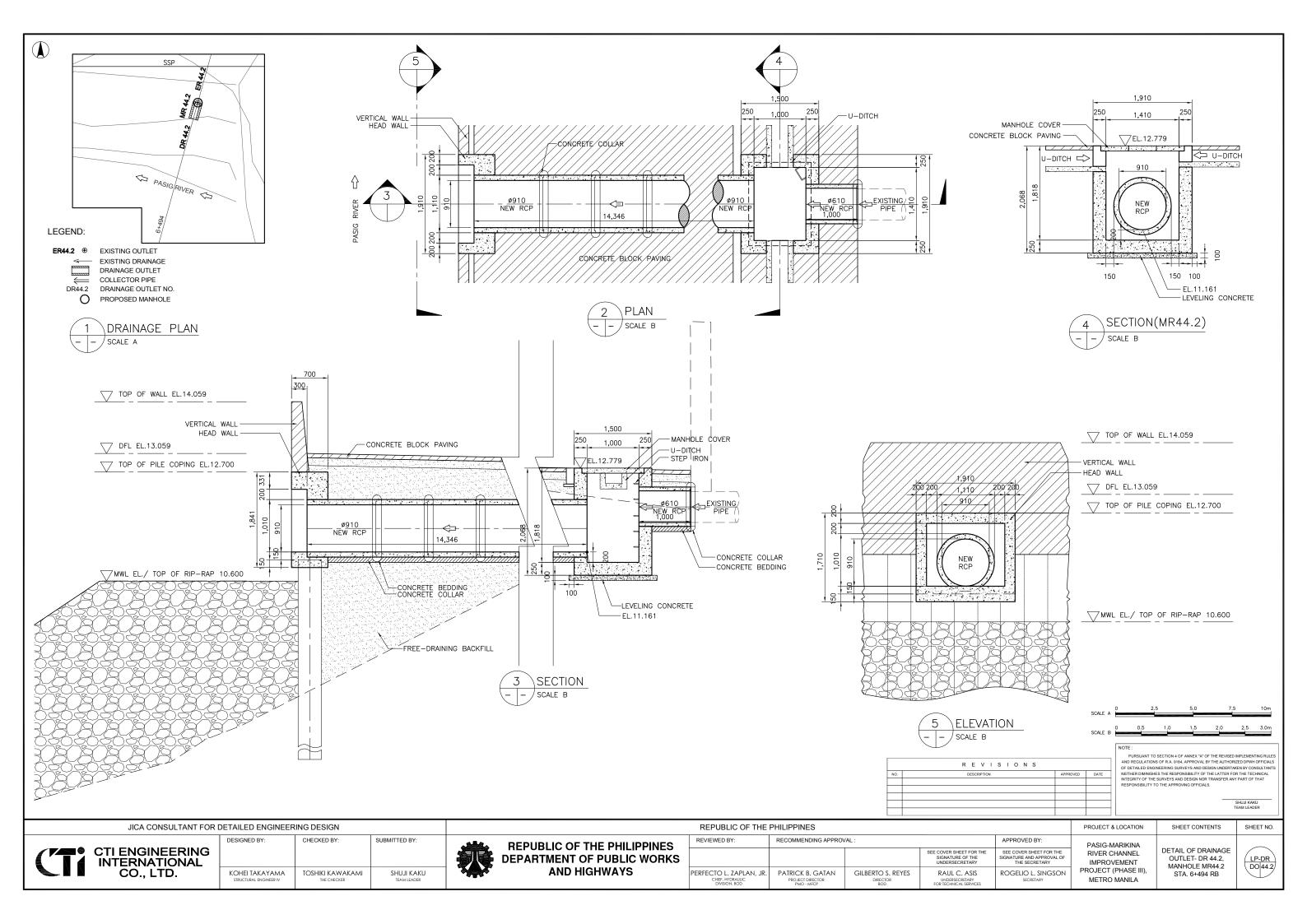


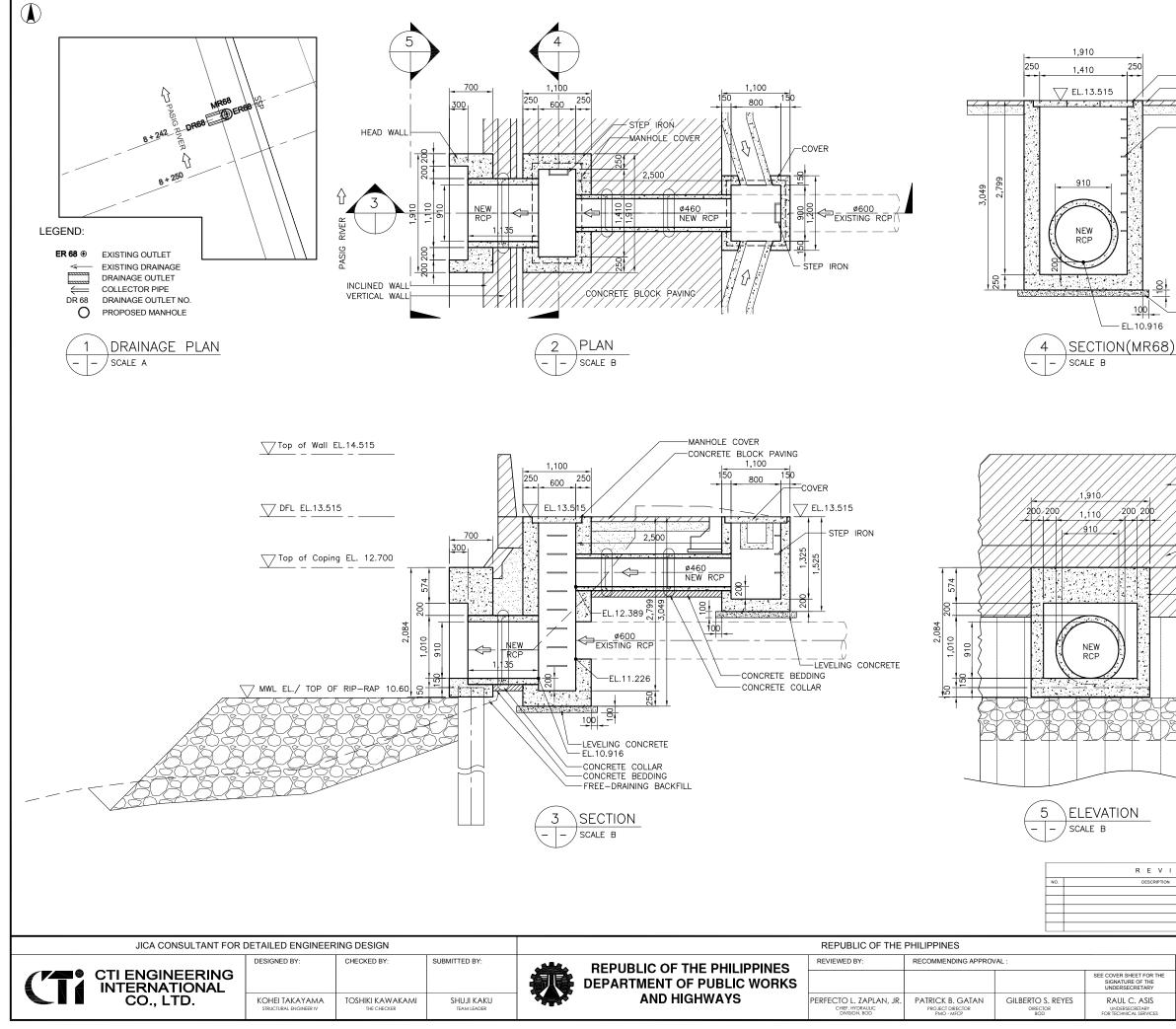
				SCALE A	0 2.	5 5.0	7.5	10m
					NOTE :			
I	SIONS	APPR	DVED	DATE	AND REGULATION OF DETAILED ENGI	SECTION 4 OF ANNEX "A" OF T S OF R.A. 9184, APPROVAL BY T NEERING SURVEYS AND DESIG S THE RESPONSIBILITY OF THE	HE AUTHORIZ N UNDERTAK	ED DPWH OFFICIALS
						SURVEYS AND DESIGN NOR TR D THE APPROVING OFFICIALS.	ANSFER ANY	PART OF THAT
								SHUJI KAKU EAM LEADER
			F	PROJECT &	& LOCATION	SHEET CONTEN	ITS	SHEET NO.
	APPROVED BY:			PASIG-N	IARIKINA			
-	SEE COVER SHEET FOR T SIGNATURE AND APPROVA THE SECRETARY			RIVER C	HANNEL /EMENT	PLAN & PROFIL		LP-DR DO 43/P
	ROGELIO L. SINGS SECRETARY	ON	PF		(PHASE III), MANILA	COLLECTOR PIPE		0043/P









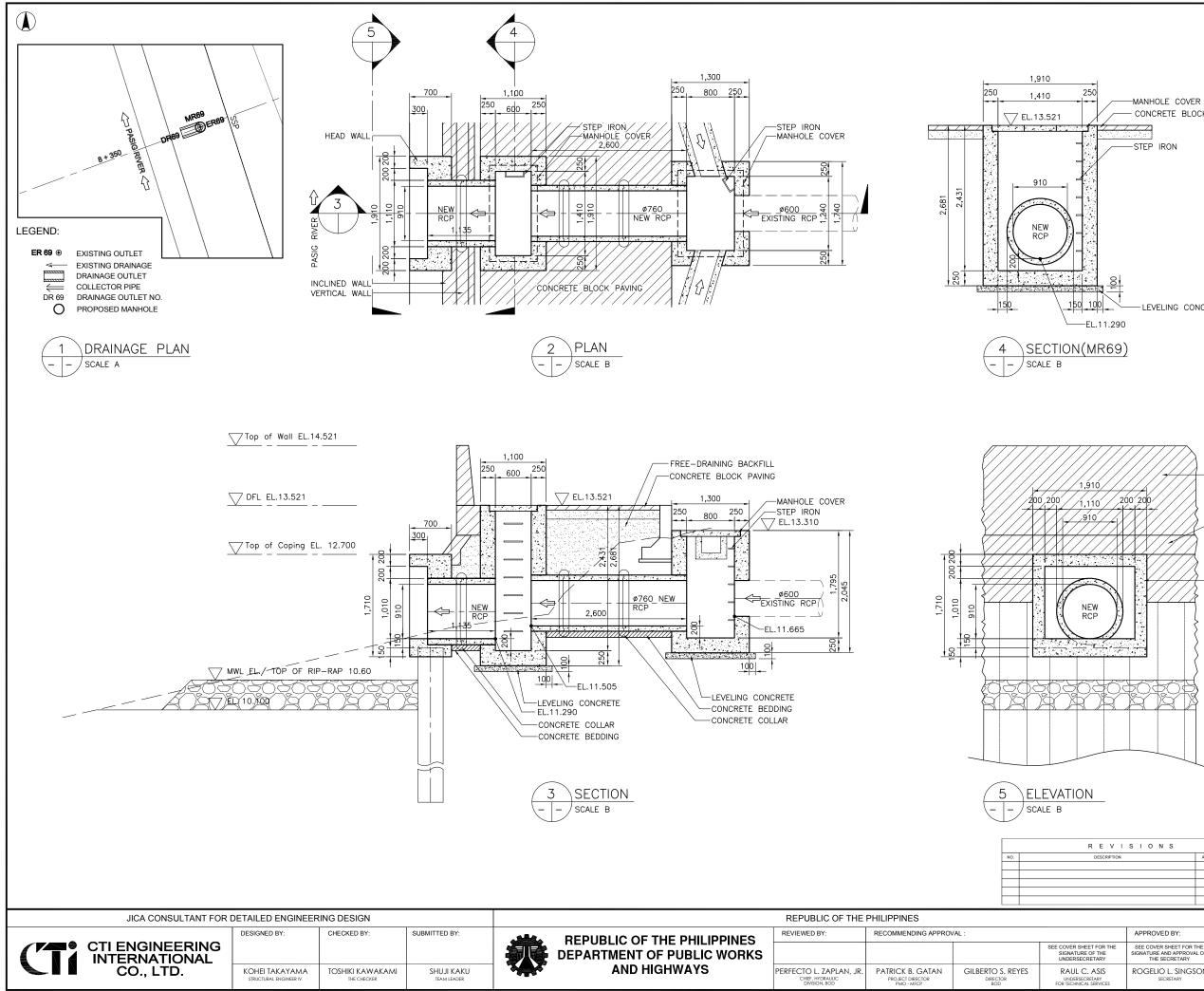


 PAVING

LEVELING CONCRETE

3)

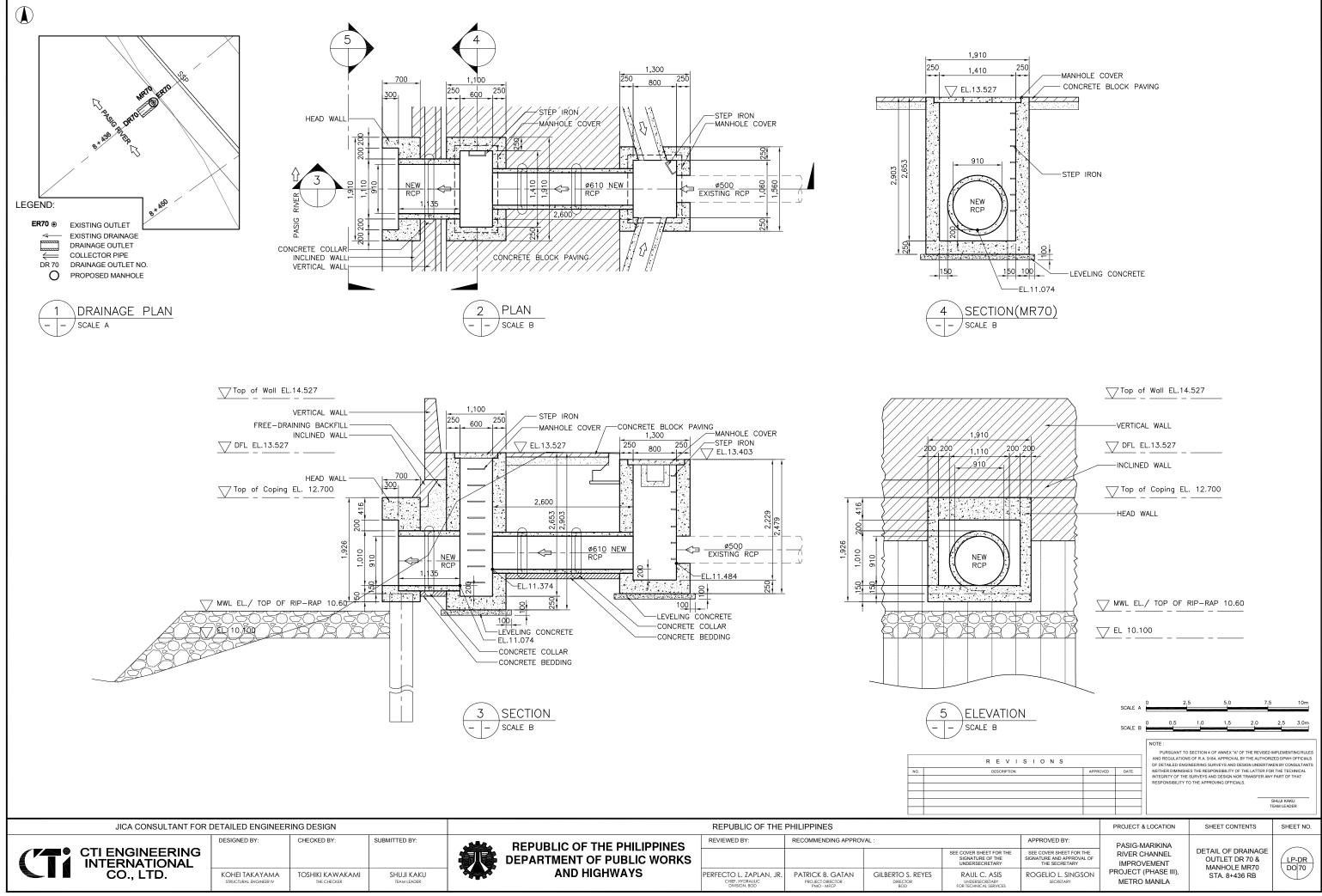
		7 Тор	of Wall EL	.14.515			
 			ICAL WALL				
	//\	-INCL	INED WALL				
	A s	7 Тор	of Coping	EL. 12.700			
 	\sum	-HEAD) WALL				
		MWL	EL./ TOP C	F RIP-RAP			
			SCALE A	0 2.	5 5.0	7.5	10m
			SCALE B	0 0.5	1.0 1.5	2.0	2.5 3.0m
I N	SIONS	APPRC	DATE	AND REGULATION OF DETAILED ENGI NEITHER DIMINISHE INTEGRITY OF THE	SECTION 4 OF ANNEX * S OF R.A. 9184, APPROV. NEERING SURVEYS AND S THE RESPONSIBILITY SURVEYS AND DESIGN N D THE APPROVING OFFIC	AL BY THE AUTHORI DESIGN UNDERTAN OF THE LATTER FO IOR TRANSFER ANY CIALS.	ZED DPWH OFFICIALS KEN BY CONSULTANTS R THE TECHNICAL
			PROJECT 8	LOCATION	SHEET CO	NTENTS	SHEET NO.
	APPROVED BY: SEE COVER SHEET FOR SIGNATURE AND APPROV THE SECRETARY ROGELIO L. SINGS SECRETARY	AL OF	PASIG-M RIVER C IMPROV PROJECT (METRO	HANNEL /EMENT [PHASE III),	DETAIL OF I OUTLET- MANHOL STA. 8+2	DR 68 & E MR68	LP-DR DO 68

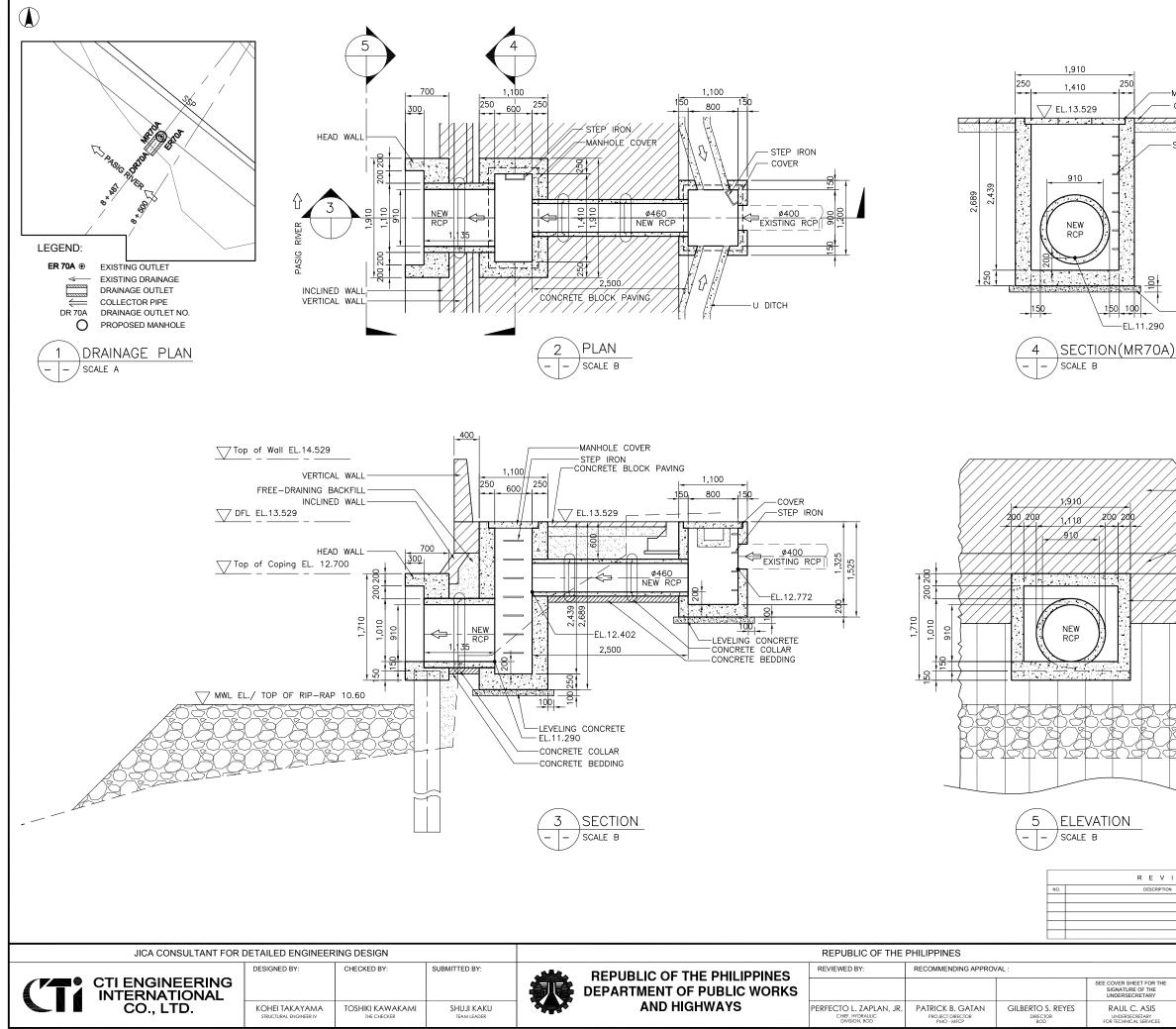


CONCRETE BLOCK PAVING	
LEVELING CONCRETE 1.290	
✓ Top of Wall EL.14.521 VERTICAL WALL 200 200 ✓ DFL EL.13.521 INCLINED WALL	
Top of Coping EL. 12.700 HEAD WALL	
SCALE A 0 2.5 5.0 7.	5

I	S I O N S	ROVED DATE	AND REGULATIONS OF DETAILED ENGI NEITHER DIMINISHE	SECTION 4 OF ANNEX "A" OF THE REVISED 3 OF R.A. 9184, APPROVAL BY THE AUTHORI NEERING SURVEYS AND DESIGN UNDERTAP 51 THE RESPONSIBILITY OF THE LATTER FO SURVEYS AND DESIGN NOR TRANSFER AND	ZED DPWH OFFICIALS (EN BY CONSULTANTS R THE TECHNICAL		
			RESPONSIBILITY TO THE APPROVING OFFICIALS. SHUI KARU TEAM LEADER				
		PROJECT &	LOCATION	SHEET CONTENTS	SHEET NO.		
	APPROVED BY:	PASIG-M	ARIKINA				
	SEE COVER SHEET FOR THE SIGNATURE AND APPROVAL OF THE SECRETARY	RIVER CI IMPROV		DETAIL OF DRAINAGE OUTLET DR 69 & MANHOLE MR69	LP-DR DO(69		
	ROGELIO L. SINGSON SECRETARY	PROJECT (METRO		STA. 8+350 RB	D009		

2.5 3.0m

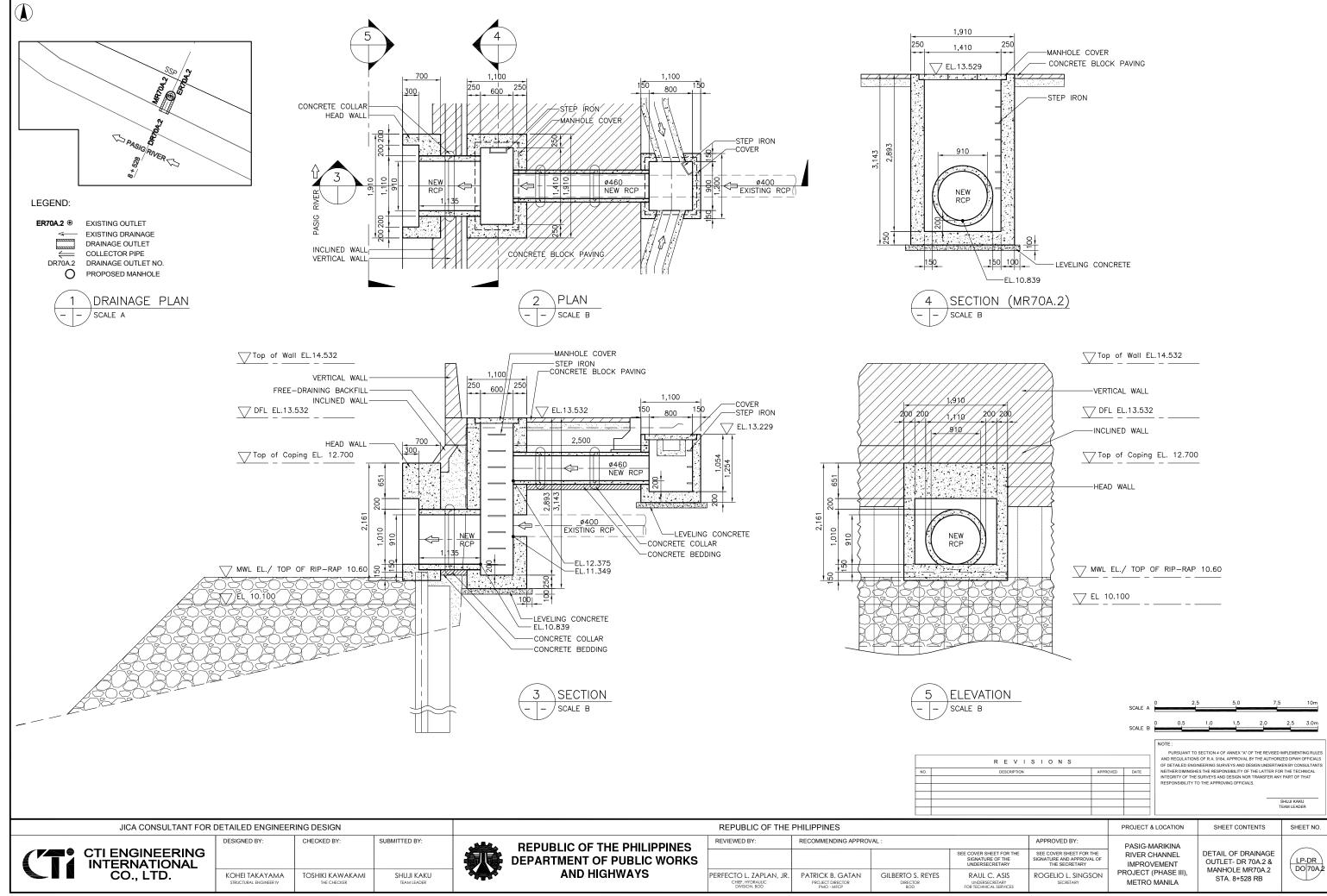




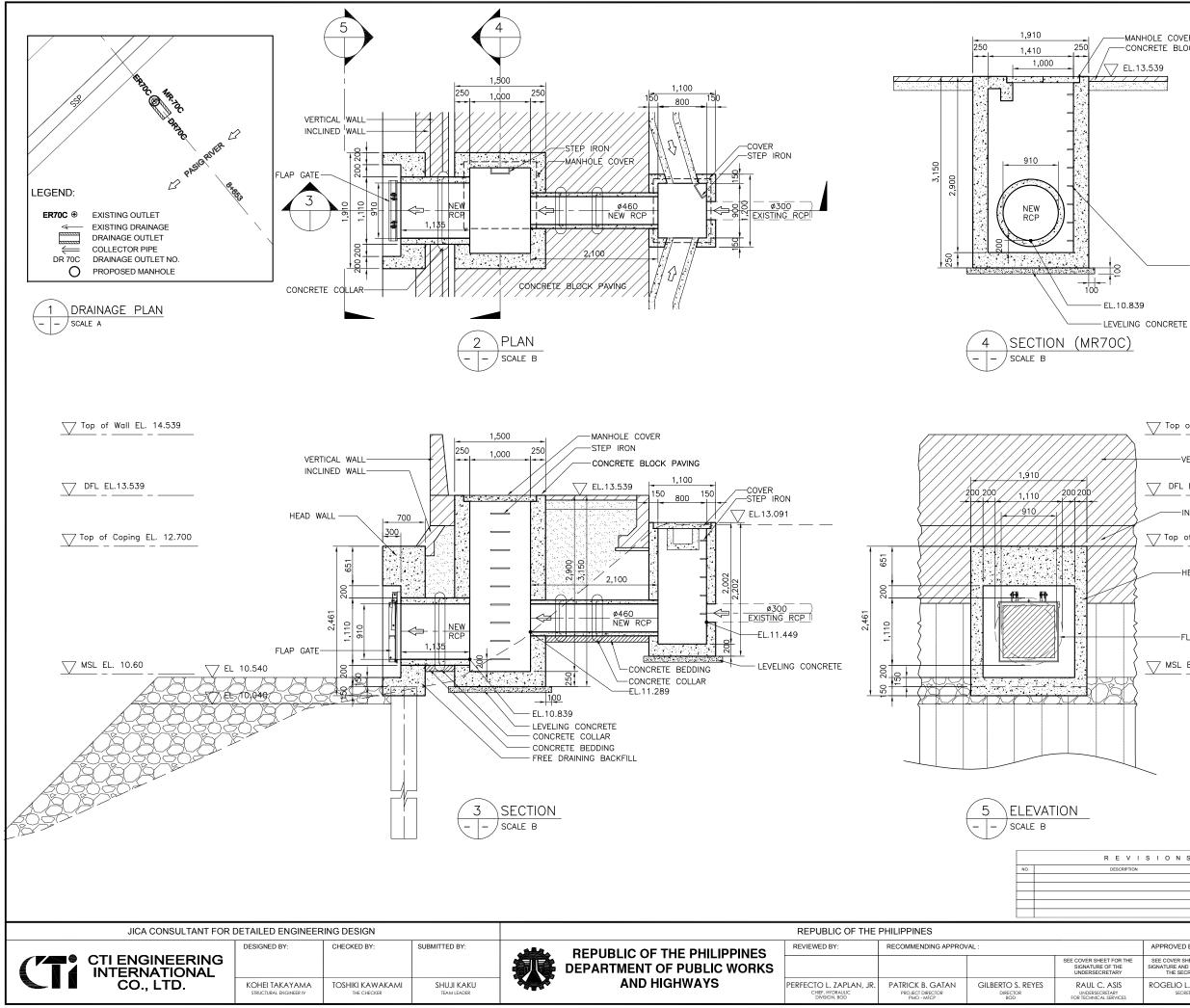
-MANHOLE COVER - CONCRETE BLOCK PAVING // -STEP IRON

- LEVELING CONCRETE

	Top of	Wall EL.14.5	29		
4	VERTICA	_ WALL			
		.13.529			
		WALL			
7		Coping EL.	12.700		
	HEAD W	ALL			
	<u>√ MWL</u> EL.,	/ TOP_OF_RI		_	
		SCALE A	0 2.5		
		SCALE B	0 0.5	1.0 1.5 2.0	2.5 3.0m
I ON	S I O N S	PROVED DATE	AND REGULATIONS OF DETAILED ENGI NEITHER DIMINISHE INTEGRITY OF THE	SECTION 4 OF ANNEX "A" OF THE REVISE S OF R.A. 9184, APPROVAL BY THE AUTHON NEERING SURVEYS AND DESIGN UNDERT IS THE RESPONSIBILITY OF THE LATTER F SURVEYS AND DESIGN NOR TRANSFER AP D THE APPROVING OFFICIALS.	RIZED DPWH OFFICIALS AKEN BY CONSULTANTS OR THE TECHNICAL
					TEAM LEADER
,		PROJECT 8	LOCATION	SHEET CONTENTS	SHEET NO.
	APPROVED BY: SEE COVER SHEET FOR THE SIGNATURE AND APPROVAL OF THE SECRETARY ROGELIO L. SINGSON SECRETARY	RIVER C IMPROV PROJECT	IARIKINA HANNEL /EMENT (PHASE III), MANILA	DETAIL OF DRAINAGE OUTLET- DR 70A, MANHOLE MR70A STA. 8+487 RB	LP-DR DO 70A



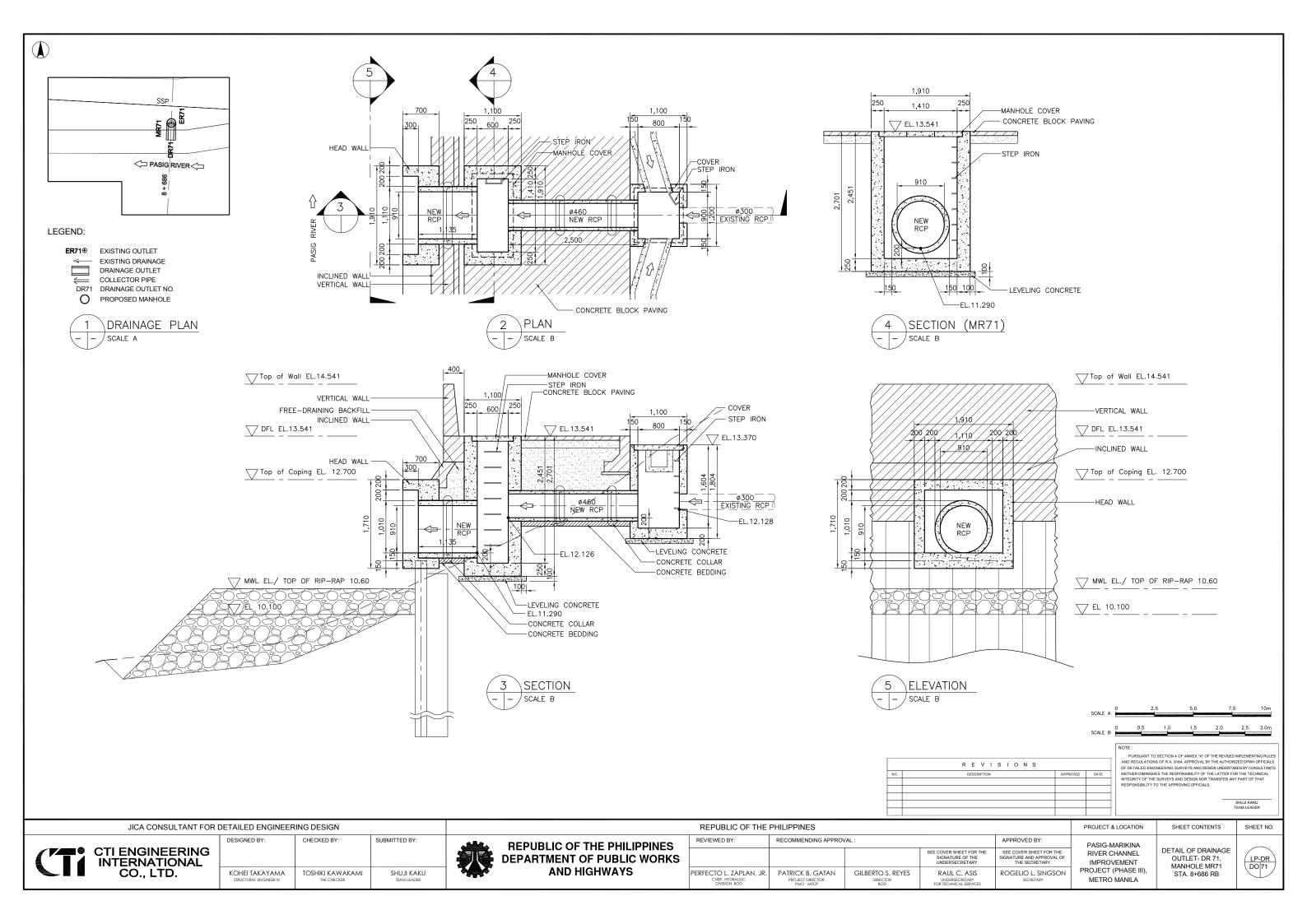
MANHOLE COVER	PAVING
STEP IRON	

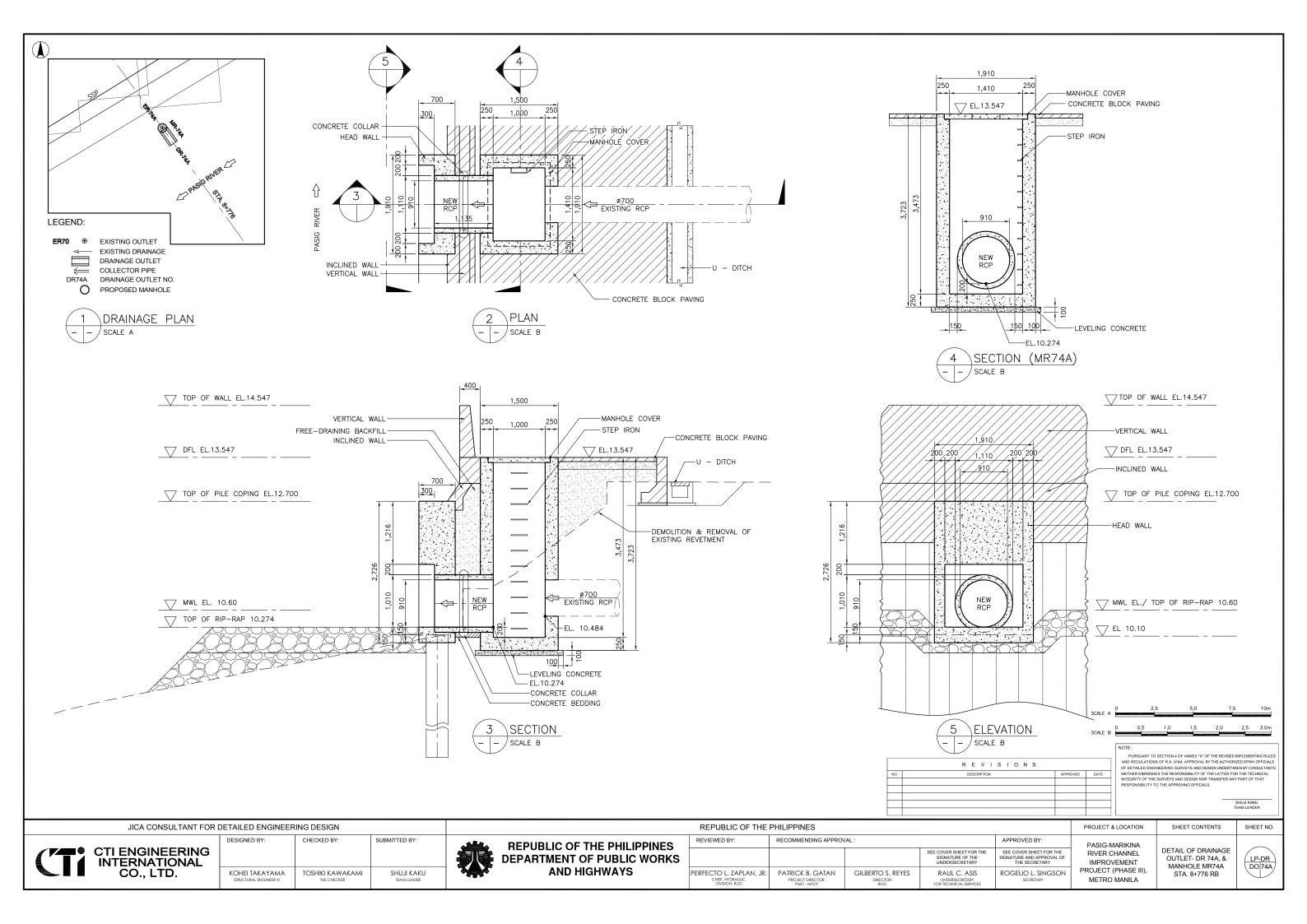


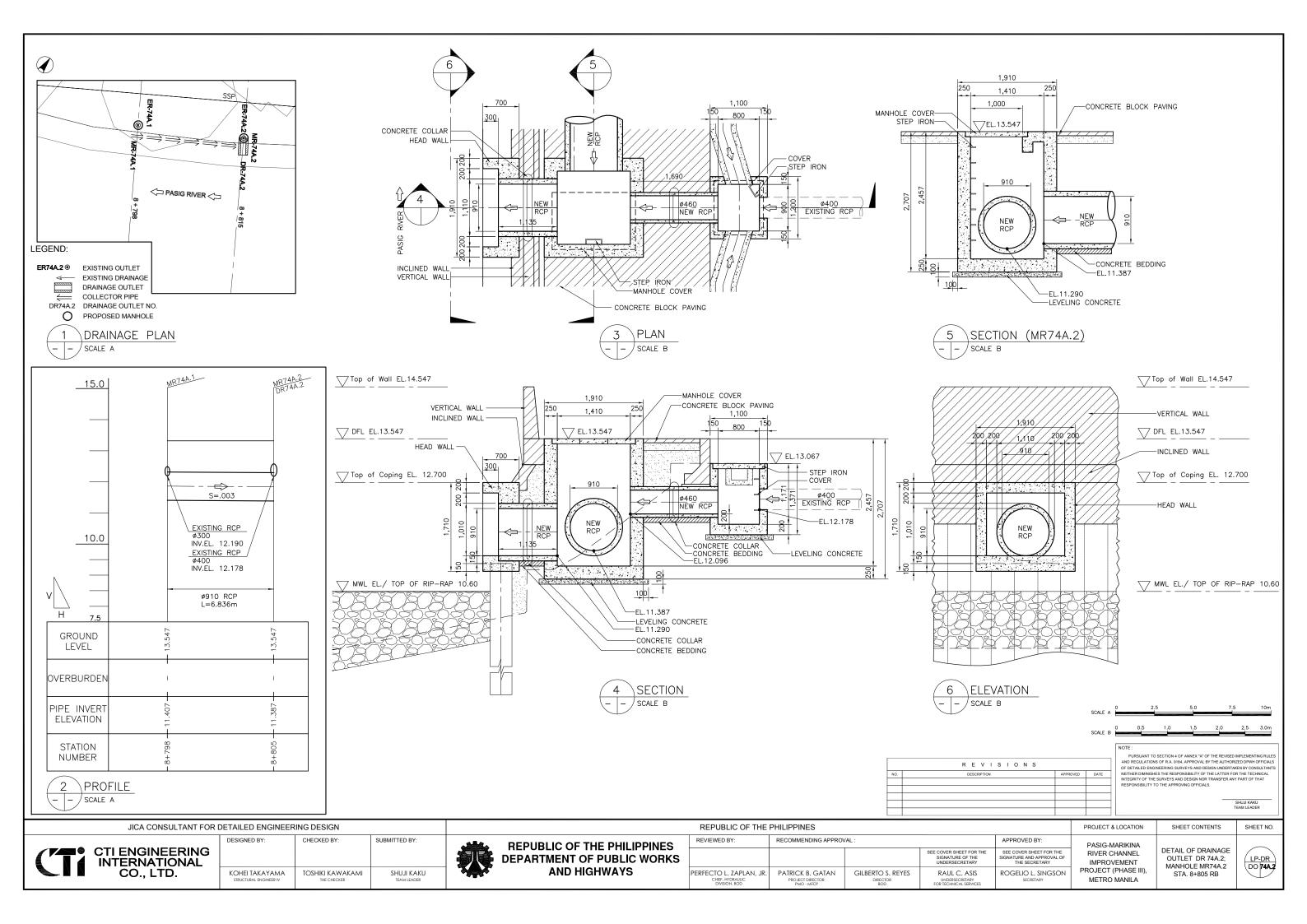
-MANHOLE COVER -CONCRETE BLOCK PAVING

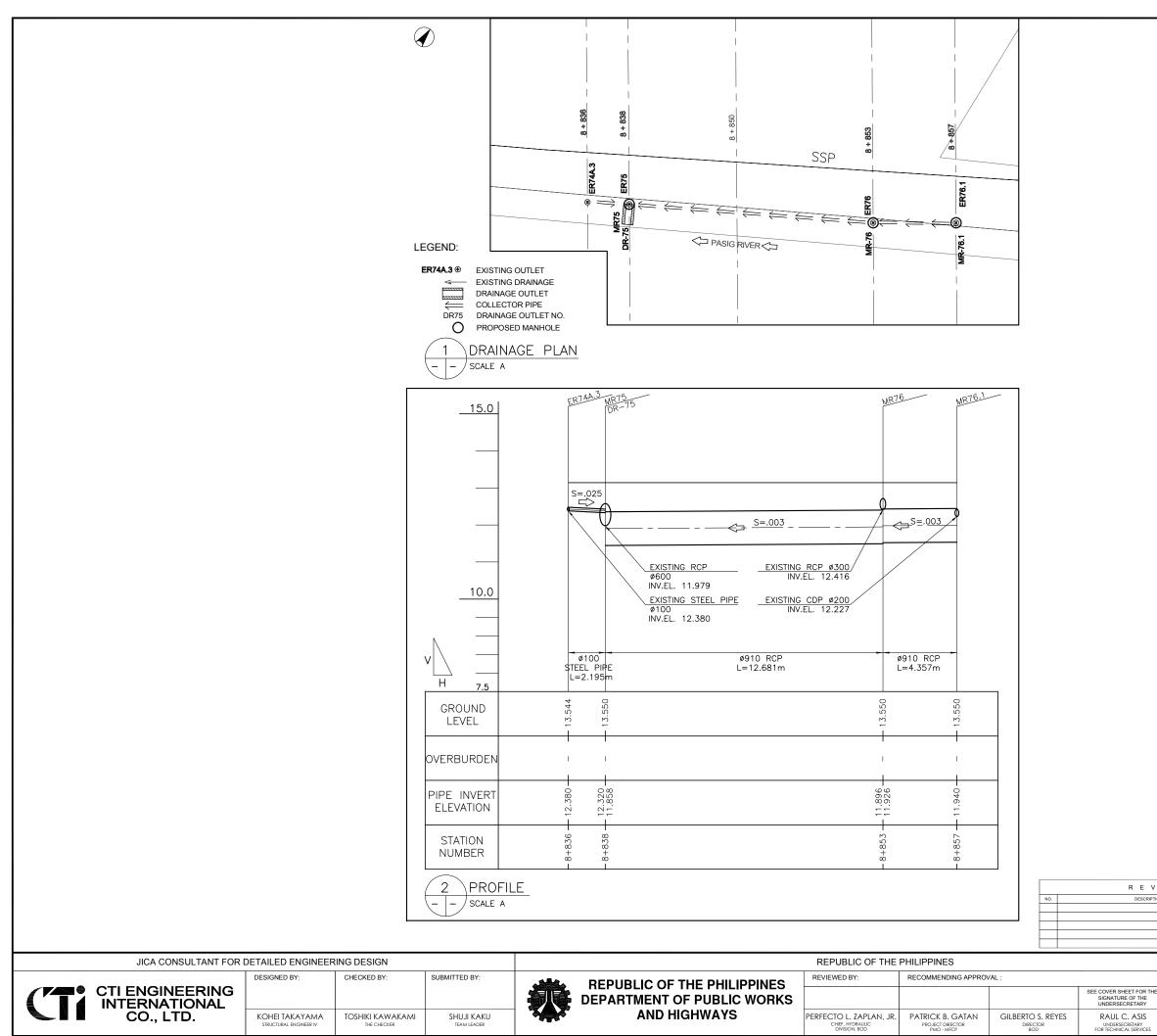
-STEP IRON

	─ Top of Wall EL.	14 539						
)								
}	VERTICAL WA	LL						
	DFL EL.13.539							
$\frac{1}{2}$	INCLINED WA	LL						
	Top of Coping E	L. 12.700						
	HEAD WALL							
$\left\{ \right\}$	FLAP GATE							
Ì	MSL EL. 10.60		<u> </u>	0.540				
Ì				0.040				
		00115	0 2	.5	5.0	7.5	5	10m
		SCALE A SCALE B	0 0.5	1.0	1.5	2.0	2.5	3.0m
I ON	S I O N S		NOTE : PURSUANT TO AND REGULATIONS OF DETAILED ENGI NEITHER DIMINISHE INTEGRITY OF THE RESPONSIBILITY TO	NEERING SURVE S THE RESPONS SURVEYS AND D	PPROVAL BY YS AND DESIGN BILITY OF TH ESIGN NOR TR	THE AUTHORIZ 3N UNDERTAK E LATTER FOF RANSFER ANY	ED DPWH O EN BY CONS THE TECH	FFICIALS JULTANTS NICAL HAT
		PROJECT &	LOCATION	SHEF	T CONTEI	NTS	SHEF	T NO.
	APPROVED BY: SEE COVER SHEET FOR THE SIGNATURE AND APPROVAL OF THE SECRETARY ROGELIO L. SINGSON SECRETARY	PASIG-M, RIVER CH IMPROV PROJECT (I METRO I	ARIKINA HANNEL EMENT PHASE III),	DETAIL OUT MANI	OF DRA LET- DR HOLE MF A. 8+653	IINAGE 70C; R70C	LP	-DR 70C

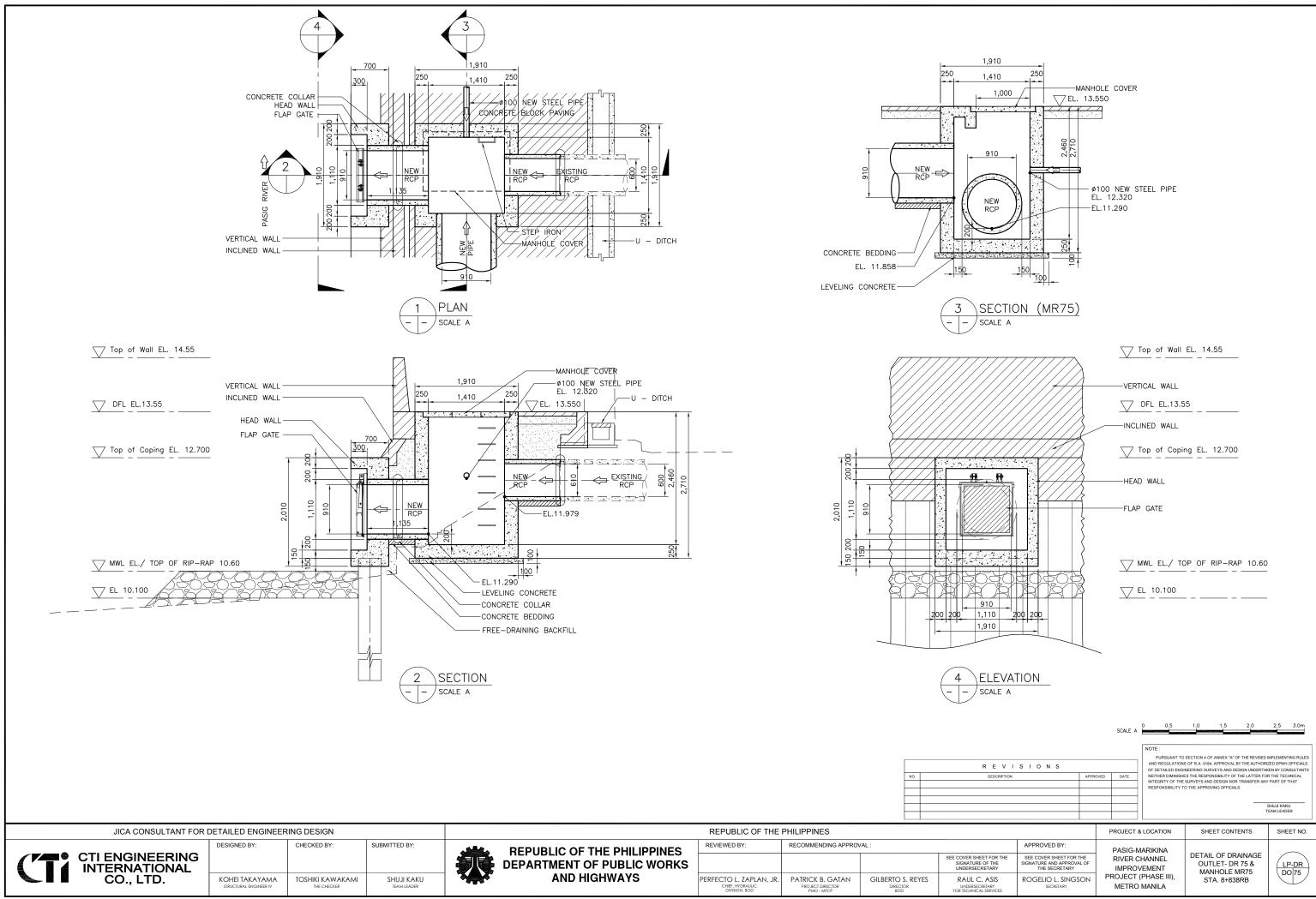




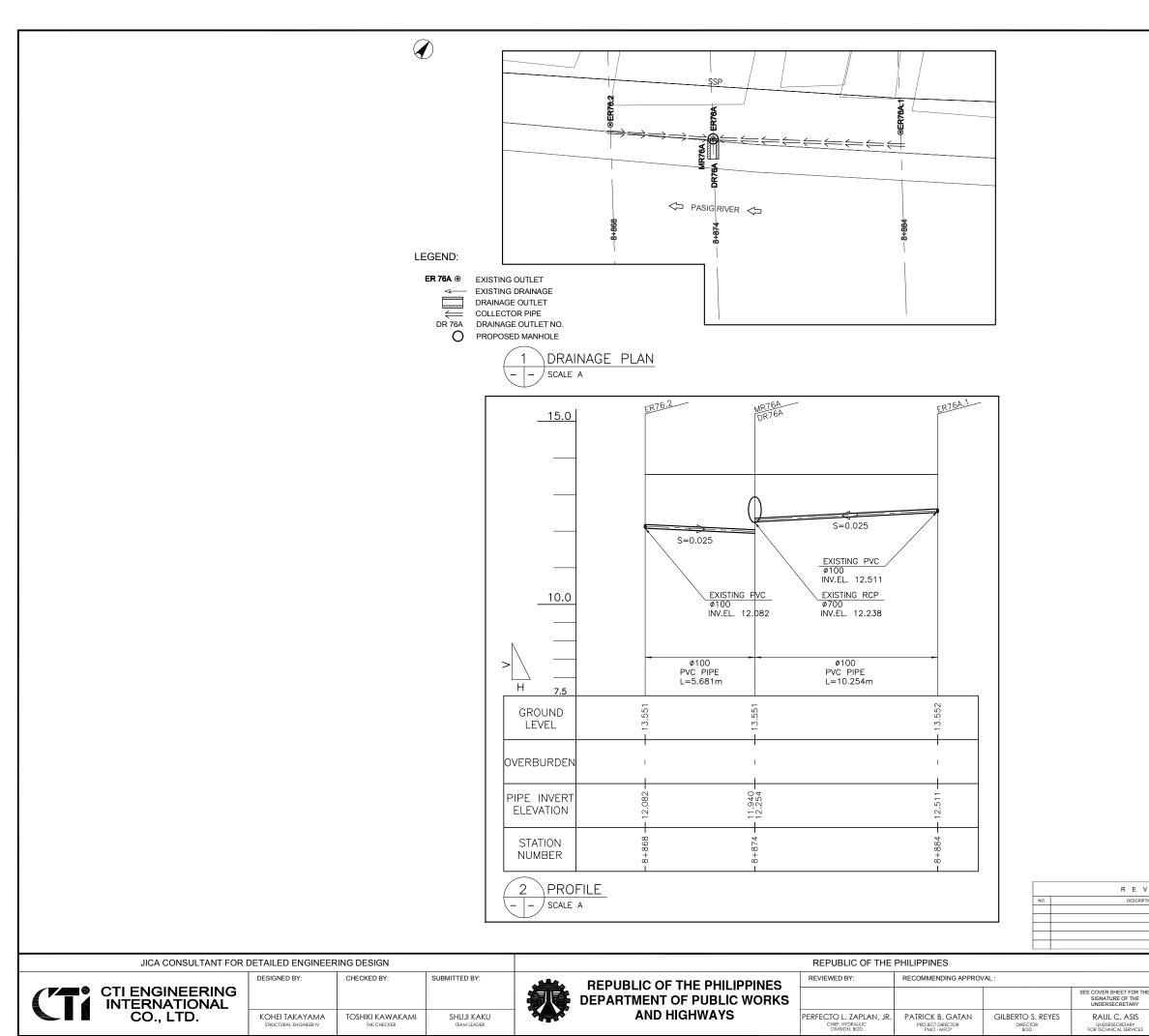




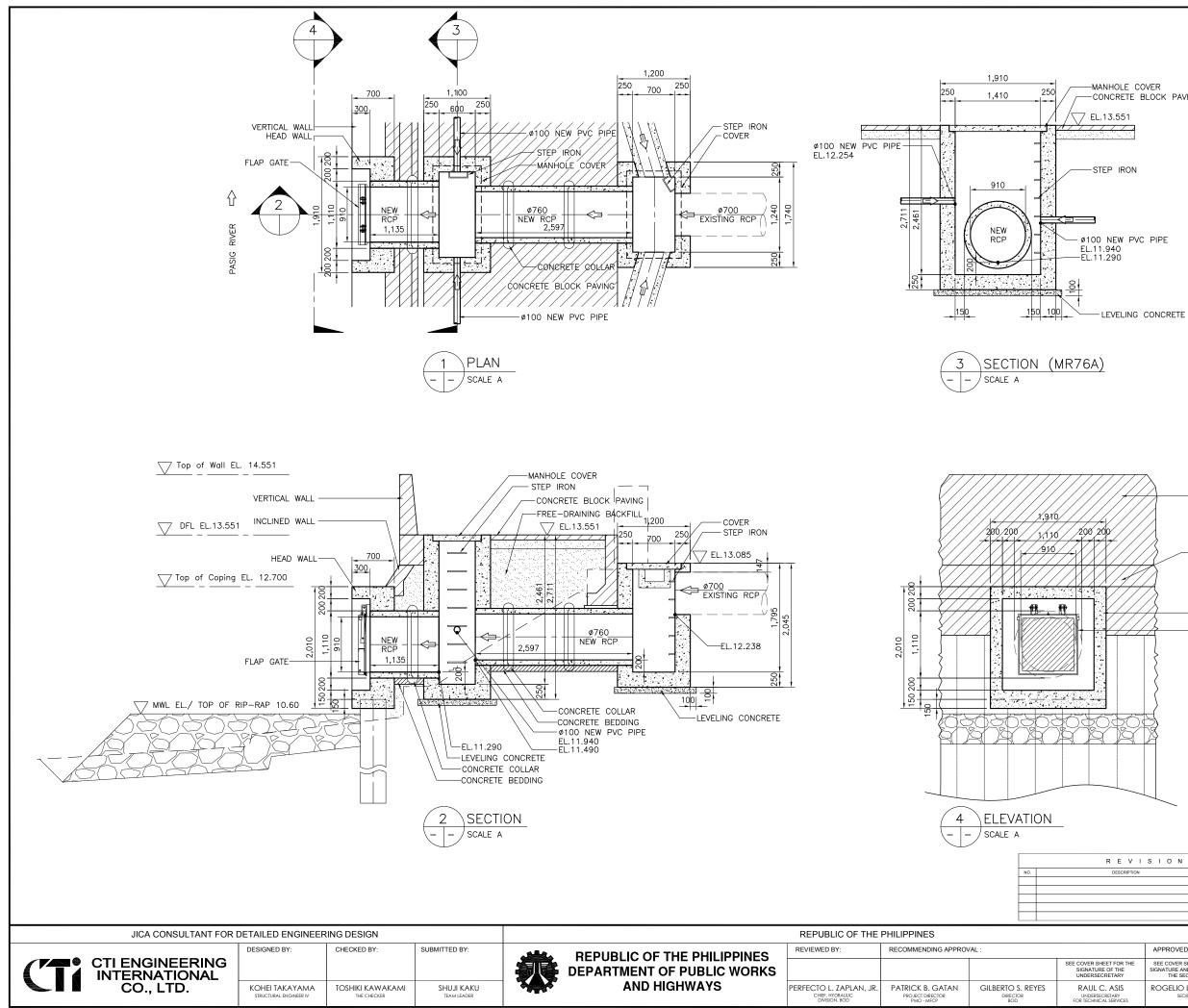
				SCALE A	0 2.	5 5.0 5	.5 10m
						SECTION 4 OF ANNEX "A" OF THE REVIS S OF R.A. 9184, APPROVAL BY THE AUTH	
ISIONS				DATE	NEITHER DIMINISHE INTEGRITY OF THE	NEERING SURVEYS AND DESIGN UNDER IS THE RESPONSIBILITY OF THE LATTER SURVEYS AND DESIGN NOR TRANSFER. D THE APPROVING OFFICIALS.	FOR THE TECHNICAL
			F	ROJECT 8	LOCATION	SHEET CONTENTS	SHEET NO.
	APPROVED BY: PASIG-M			PASIG-N	IARIKINA		
	SEE COVER SHEET FOR TH SIGNATURE AND APPROVAL THE SECRETARY			RIVER CHANNEL		PLAN & PROFILE OF COLLECTOR PIPE	LP-DR DO[75/P]
	ROGELIO L. SINGSC SECRETARY	NC	PF	ROJECT (METRO	PHASE III), MANILA	COLLECTOR FIFE	



		PROJECT & LOCATION	SHEET CONTENTS	SHEET NO.
	APPROVED BY:	PASIG-MARIKINA)
E	SEE COVER SHEET FOR THE SIGNATURE AND APPROVAL OF THE SECRETARY	RIVER CHANNEL IMPROVEMENT	DETAIL OF DRAINAGE OUTLET- DR 75 & MANHOLE MR75	LP-DR DO[75
	ROGELIO L. SINGSON SECRETARY	PROJECT (PHASE III), METRO MANILA	STA. 8+838RB	00/3

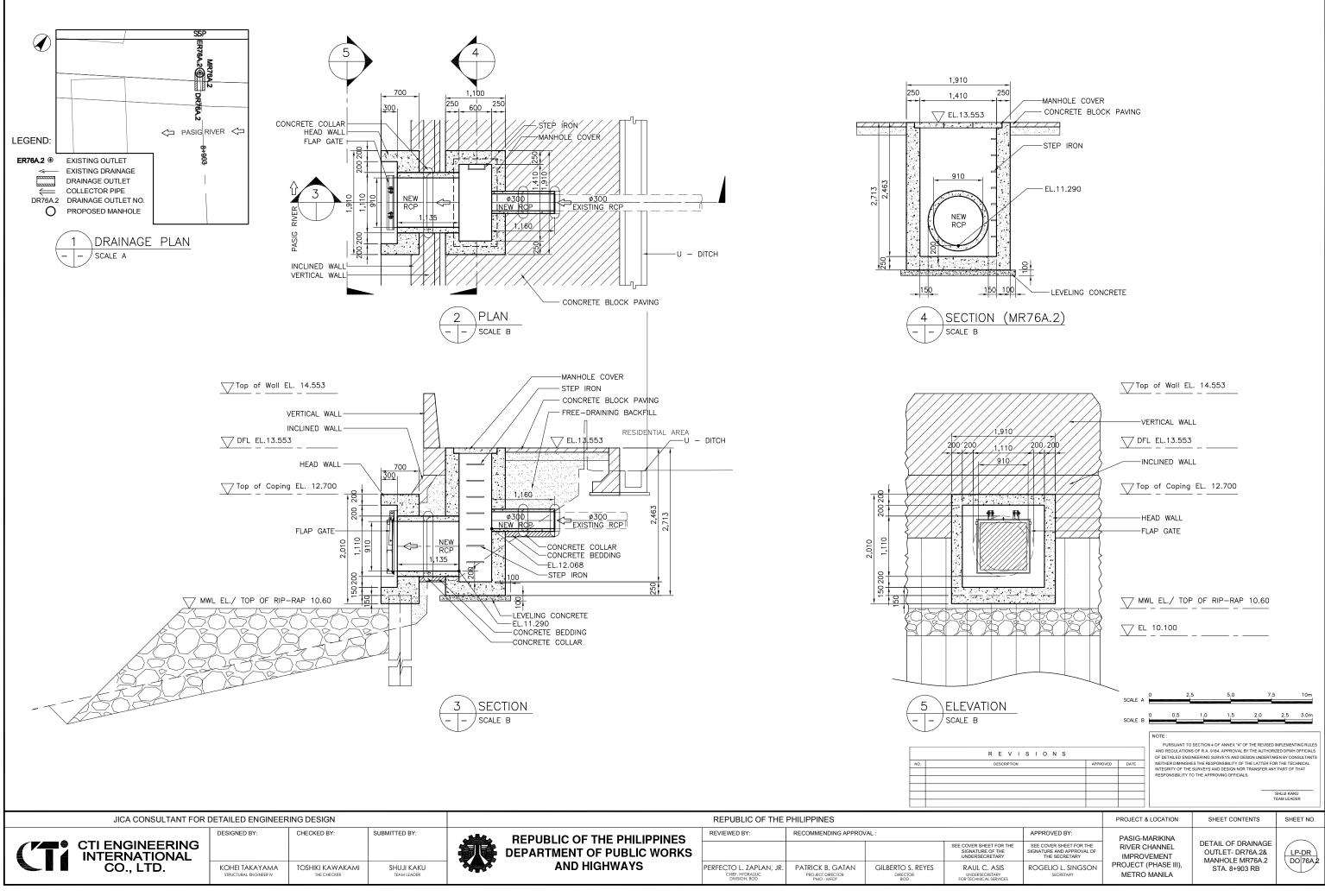


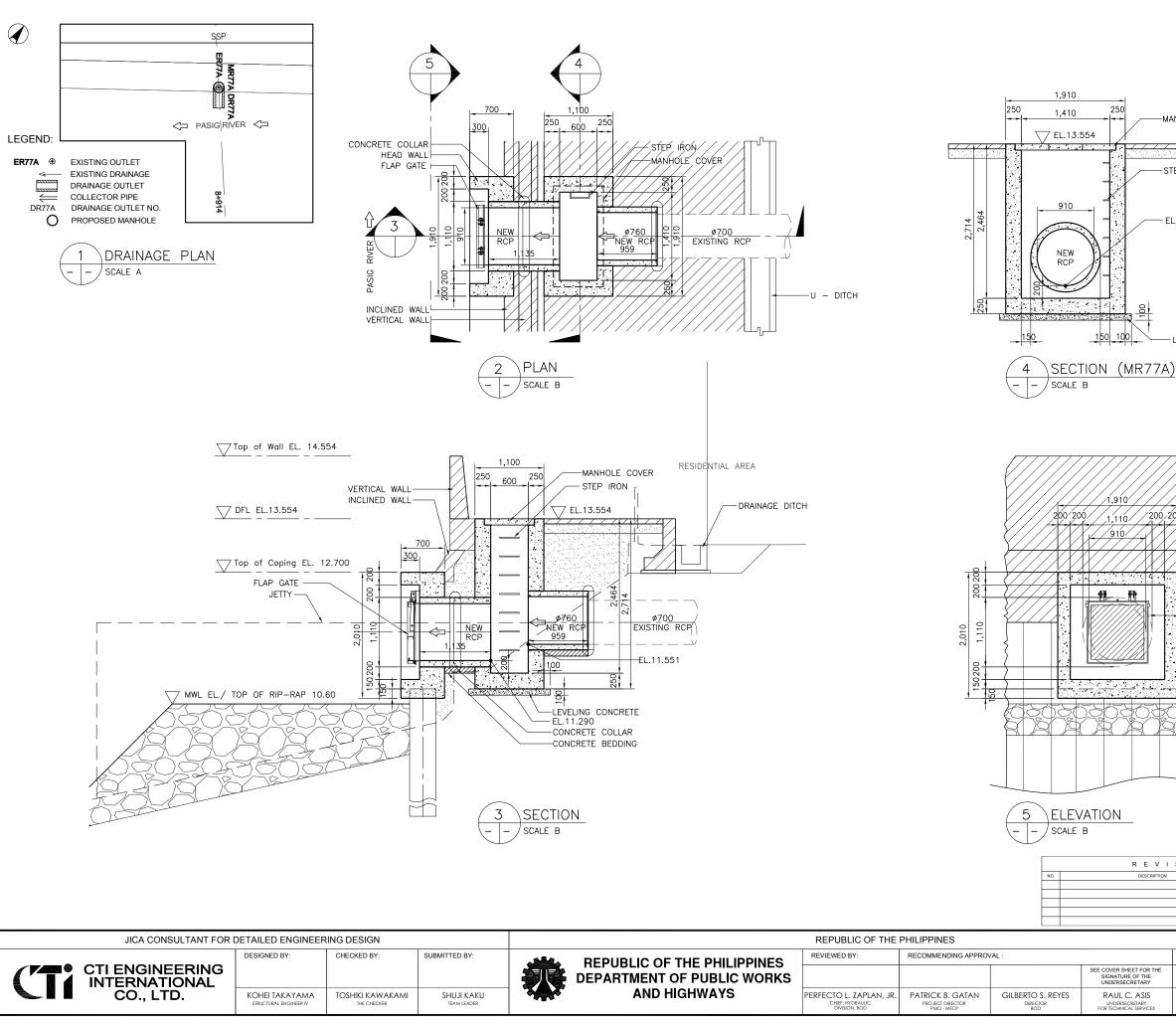
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			PRO	OJECT &	LOCATION	SHEET O	CONTENTS	SHEET NO.
	APPROVED BY:		P/	ASIG-M	ARIKINA			_
E	SEE COVER SHEET FOR T SIGNATURE AND APPROVA THE SECRETARY		RI	RIVER CHANNEL IMPROVEMENT PROJECT (PHASE III), METRO MANILA			PROFILE OF	LP-DR DOI76A/P
	ROGELIO L. SINGS SECRETARY	ON						DUTONP



-CONCRETE BLOCK PAVING

	of Wall EL.	14.551			
VERTICA	L WALL				
	EL.13.551				
INCLINE	D WALL				
	of Coping E	EL. 12.700			
HEAD W					
	EL./ TOP	OF RIP-RAP	10.60		
	SCALE A	0 0.5	1.0 1.5	2.0	2.5 3.0m
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	PROJECT &	LOCATION	SHEET CO	NTENTS	SHEET NO.
APPROVED BY: E SEE COVER SHEET FOR THE SIGNATURE AND APPROVAL OF HE SECRETARY ROGELIO L. SINGSON SECRETARY	SEE COVER SHEET FOR THE IGNATURE AND APPROVAL OF THE SECRETARY ROGELIO L. SINGSON PROJECT (DETAIL OF 1 OUTLET- MANHOLE STA. 8+1	DR76A; E MR76A	LP-DR DO 76A





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Top of Coping EL. 12.700												
	$ \ge $	/ TOP OF C	oping	g EL. 12 — — —								
		—HEAD W	ALL									
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	<u></u>	7 MWL EL.,	/ то			10.60						
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S B B	\sum	7 EL 10.10	00									
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			NO		SECTION 4 C	F ANNEX "A" (OF THE REVISED	IMPLEMEN	TING RULES			
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			- IN	TEGRITY OF THE SPONSIBILITY T	SURVEYS AN	D DESIGN NOF	R TRANSFER ANY	PART OF	THAT			
								SHUJI KAK EAM LEAD	IU ER			
		PROJECT	& LOC	CATION	SH	EET CONT	ENTS	SHE	ET NO.			
APPROVED BY:	THE	PASIG-			DETA	AL OF DE	RAINAGE		\frown			
SIGNATURE AND APPROVA THE SECRETARY	AL OF	RIVER IMPRO	OVEM	ENT	OL	TLET- D	R77A&		P-DR			
ROGELIO L. SINGS SECRETARY	ON	PROJECT	•		MANHOLE MR77A STA. 8+914 RB							
			0	NILA								

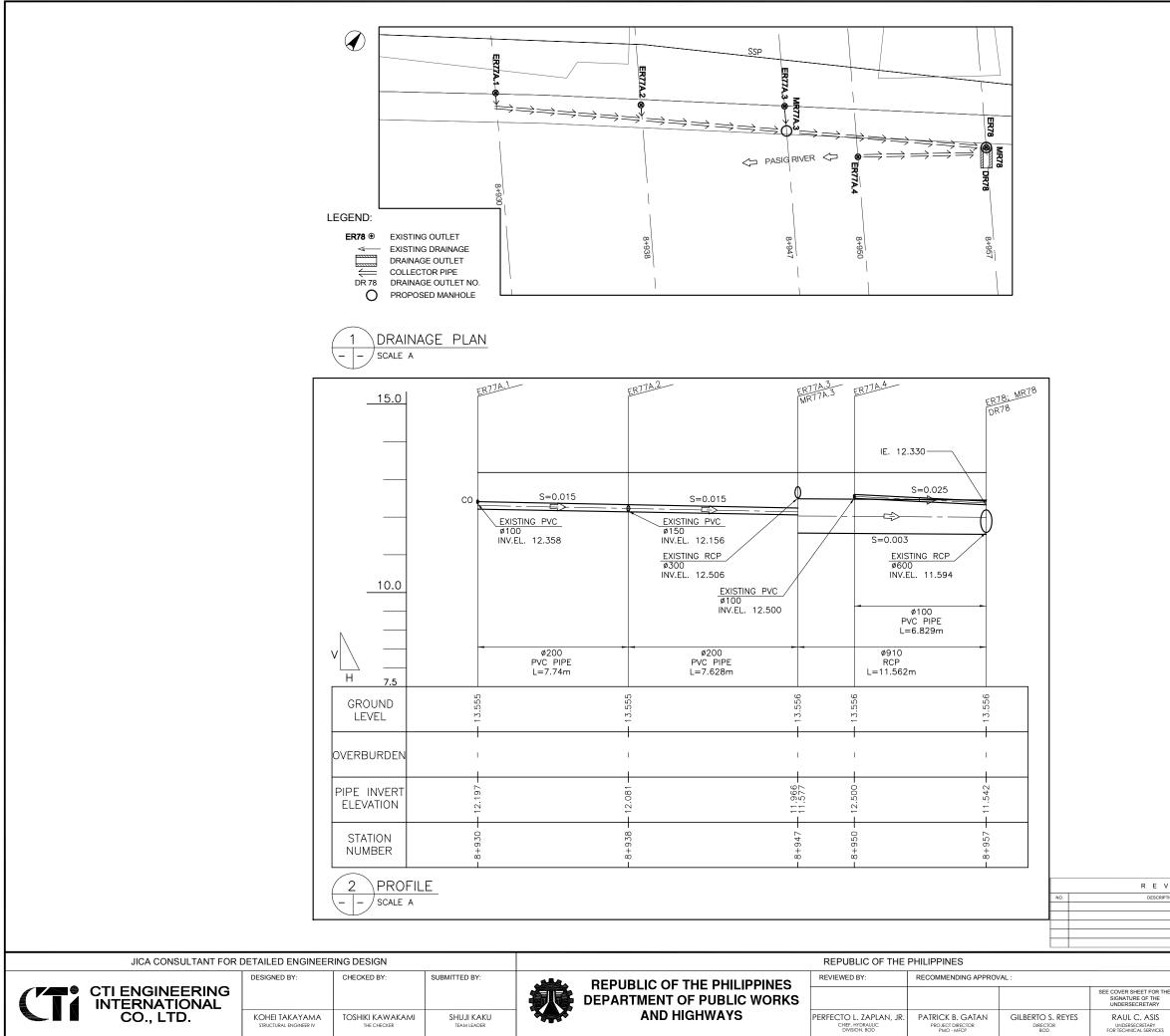
∑Top of Wall EL. 14.554

- LEVELING CONCRETE

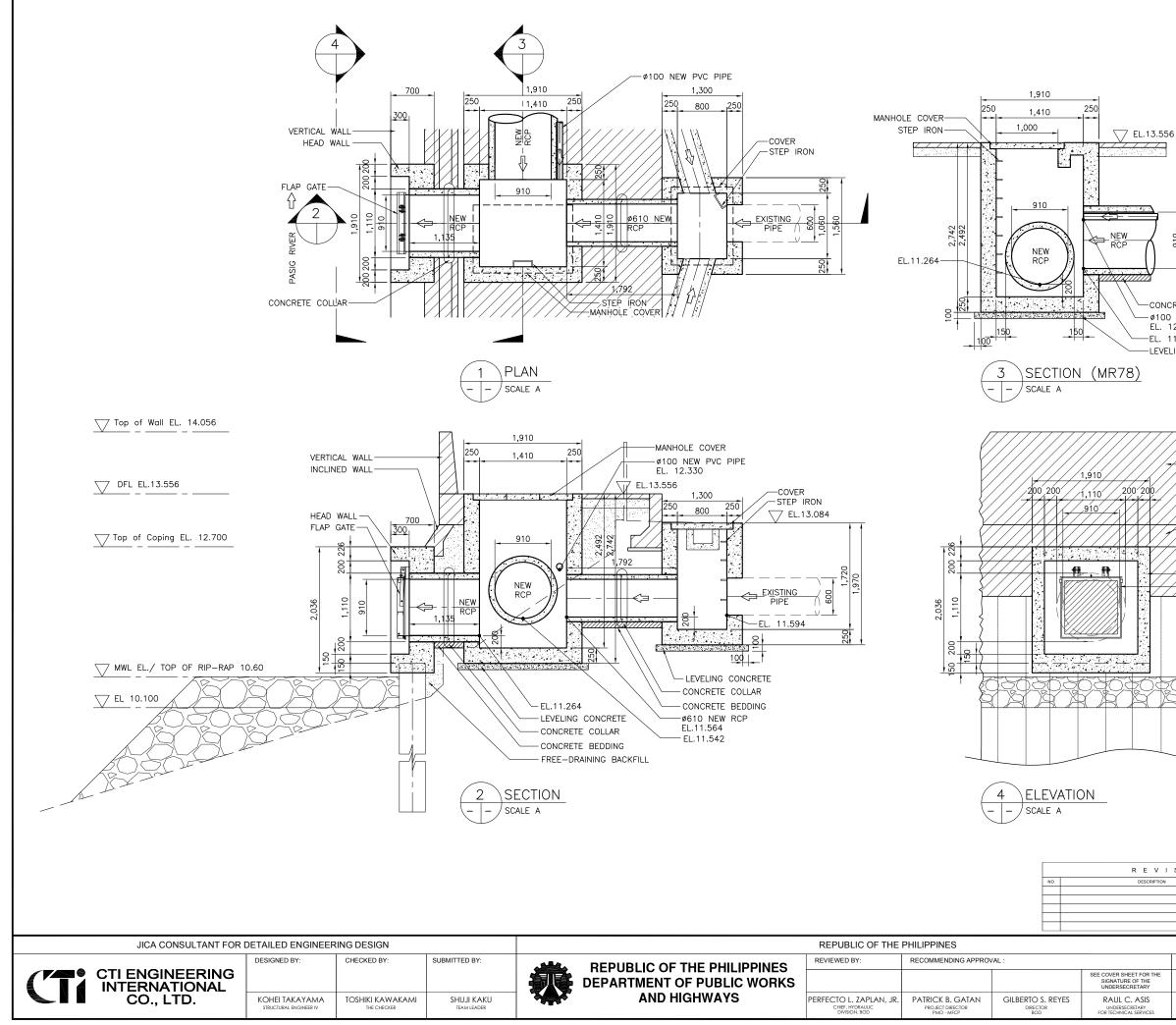
EL.11.290

-STEP IRON

-MANHOLE COVER

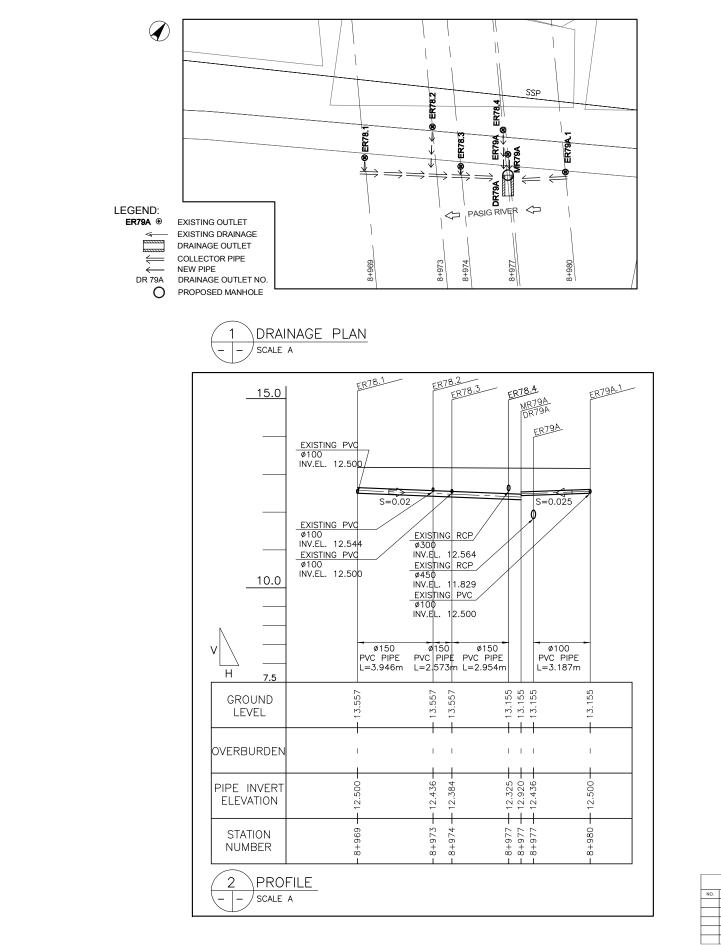


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ION					NETHER DMINSHES THE RESPONSIBILITY OF THE LATTER FOR THE TECHNICAL INTEGRITY OF THE SURVEYS AND DESIGN NOR TRANSFER ANY PART OF THAT RESPONSIBILITY TO THE APPROVING OFFICIALS.					PART OF THAT
			F	PROJECT 8	LOCATI	NC	SHE	ET CONTENTS		SHEET NO.
	APPROVED BY:			PASIG-N	IARIKIN	ARIKINA				_
E	SEE COVER SHEET FOR SIGNATURE AND APPROVA THE SECRETARY	THE RIVER C		HANNEL		PLAN & PROFILE OF		LP-DR DO[78/P]		
	ROGELIO L. SINGS SECRETARY	SON	PI		(PHASE III), MANILA		GOLLLOTOR FIFE		-	



-CONCRETE BEDDING -ø100 NEW PVC PIPE EL. 12.330 -EL. 11.542 -LEVELING CONCRETE

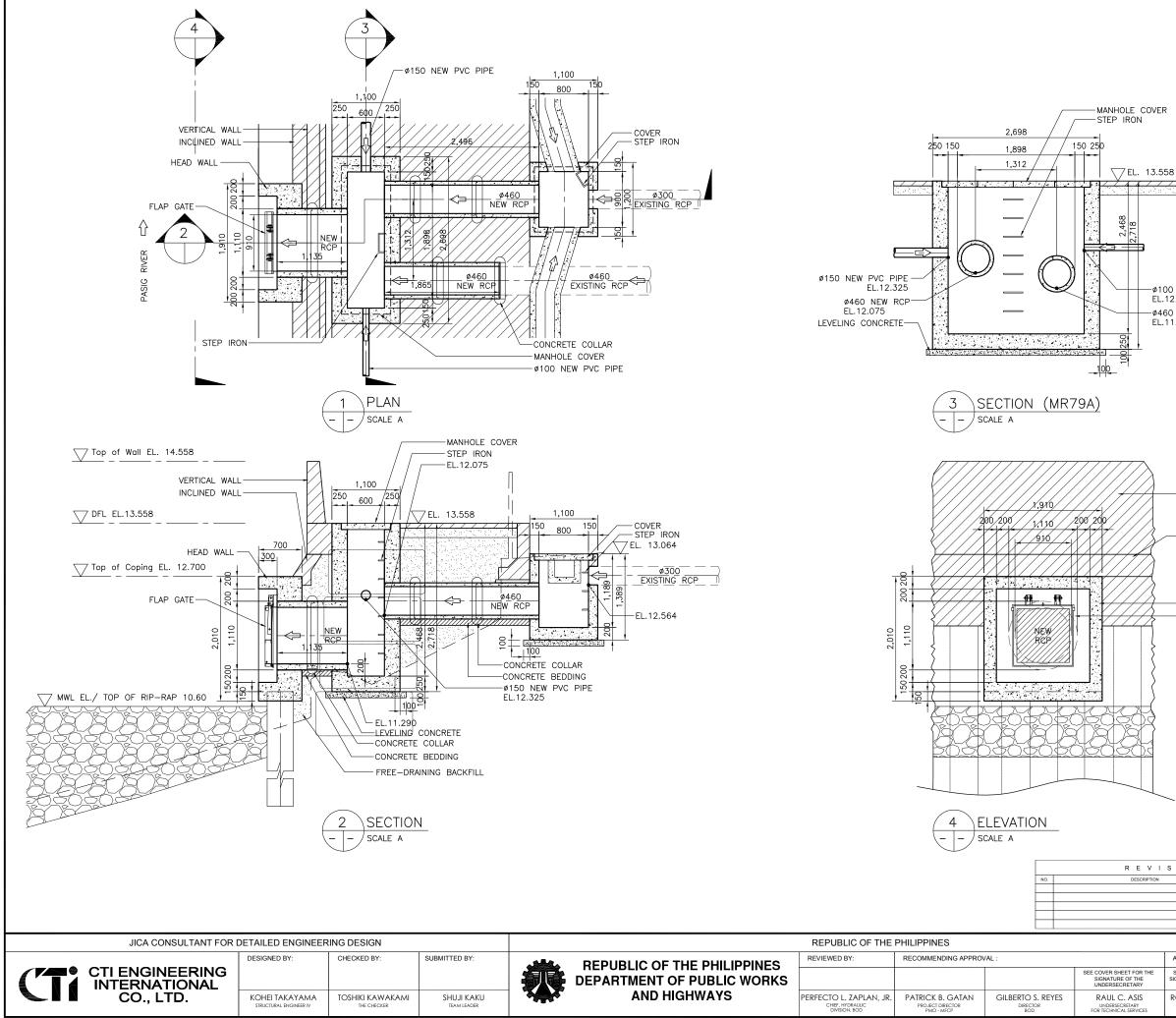
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	TTICAL WALL EL.13.556		
	Top of Coping EL. 12.7	700	
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	MWL EL./ TOP OF RIP- EL 10.100	-RAP 10.60 	
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	PROJECT & LOCATION	SHEET CONTENTS	SHEET NO.
APPROVED BY: SEE COVER SHEET FOR THE SIGNATURE AND APPROVAL OF THE SECRETARY ROGELIO L. SINGSON SECRETARY	PASIG-MARIKINA RIVER CHANNEL IMPROVEMENT PROJECT (PHASE III), METRO MANILA	DETAIL OF DRAINAGE OUTLET- DR78 & MANHOLE MR78 STA. 8+957 RB	LP-DR DO 78



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	DESCI	RIPT

JICA CONSULTANT FOR DETAILED ENGINEERING DESIGN				REPUBLIC OF THE PHILIPPINES					
	DESIGNED BY:	CHECKED BY:	SUBMITTED BY:	 REPUBLIC OF THE PHILIPPINES	REVIEWED BY:	RECOMMENDING APPROVAL :			
				DEPARTMENT OF PUBLIC WORKS				SEE COVER SHEET FOR THE SIGNATURE OF THE UNDERSECRETARY	
CO., LTD.	KOHEI TAKAYAMA STRUCTURAL ENGINEER IV	TOSHIKI KAWAKAMI THE CHECKER	SHUJI KAKU TEAM LEADER		PERFECTO L. ZAPLAN, JR. CHIEF, HYDRAULIC DIVISION, BOD	PATRICK B. GATAN PROJECT DIRECTOR PMO - MFCP	GILBERTO S. REYES	RAUL C. ASIS UNDERSECRETARY FOR TECHNICAL SERVICES	

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ION APPROVED DATE						INTEGRITY OF THE I	SURVEYS AND DE	SIGN NOR TRAN	SFER ANY	
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E	APPROVED BY: SEE COVER SHEET FOR T SIGNATURE AND APPROVA THE SECRETARY	LOF	OF IMPROVE ON PROJECT (F			ANNEL MENT		PROFILE		LP-DR DO 79A/P
	ROGELIO L. SINGS SECRETARY	ION				PROJECT (PHASE III), METRO MANILA				\bigvee

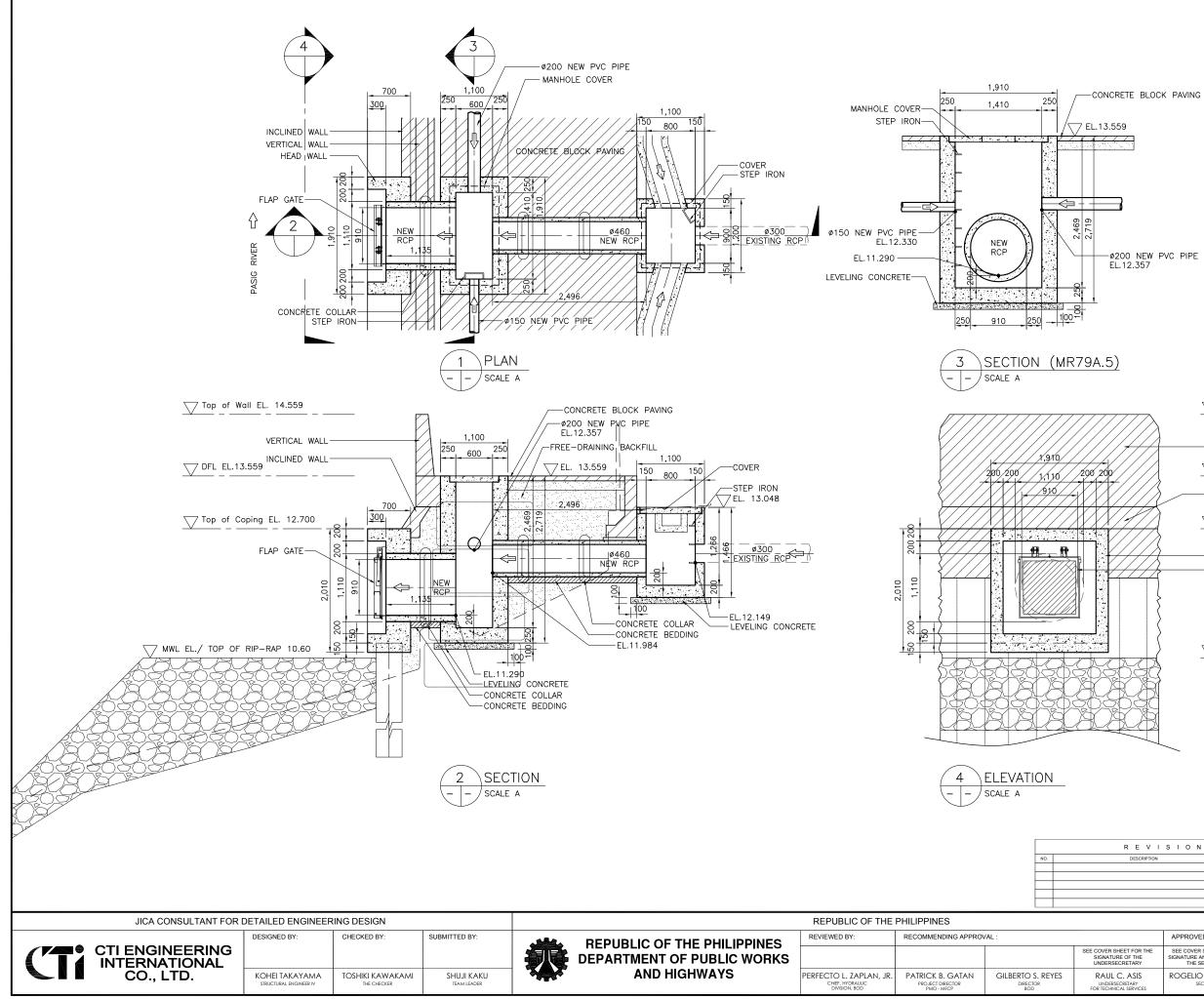


—ø100 NEW PVC PIPE EL.12.436 -ø460 NEW RCP EL.11.829

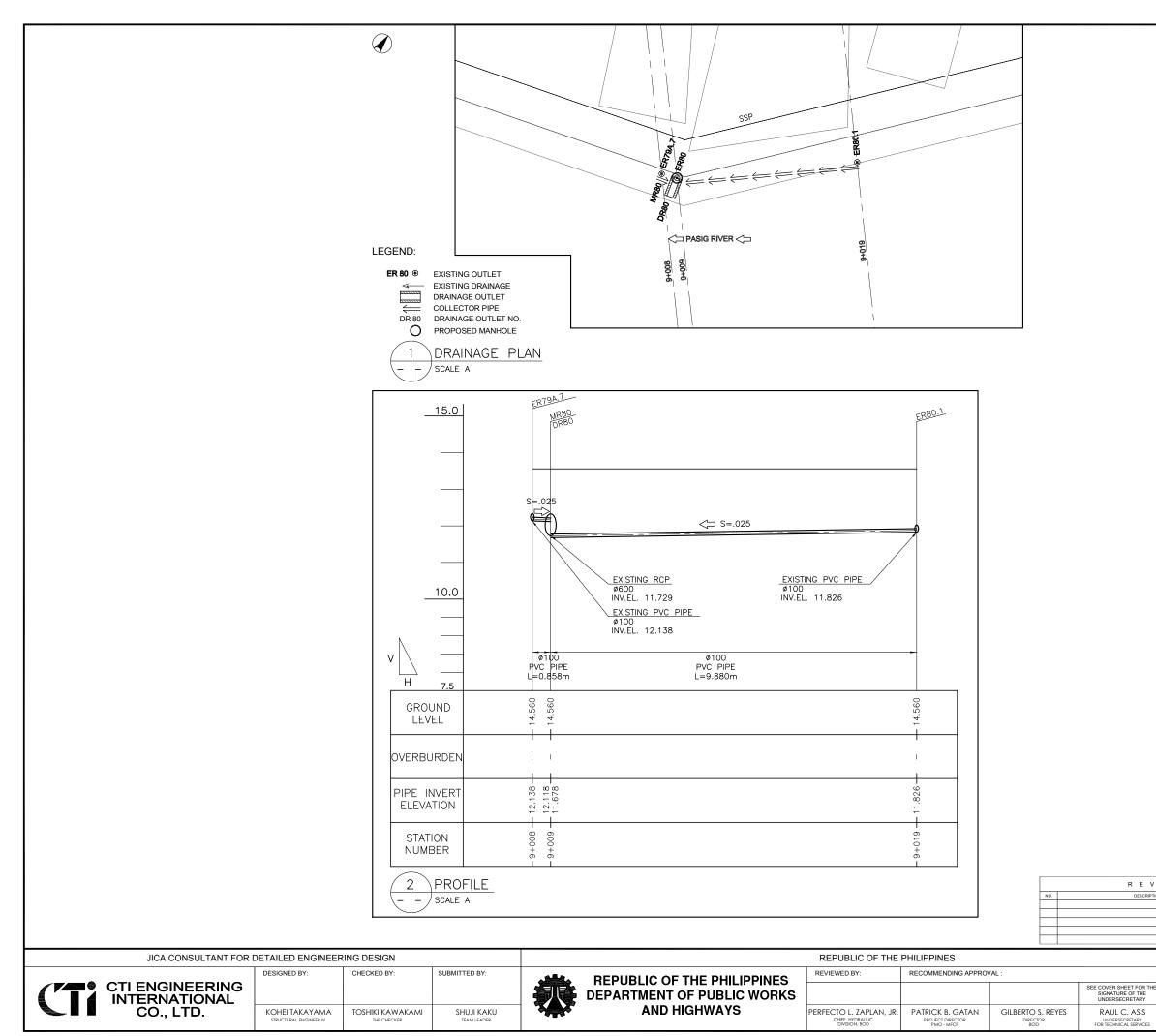
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→ → → → →	7 TOP OF RIP-RAP	10.60	
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APPROVED BY: SEE COVER SHEET FOR THE SIGNATURE AND APPROVAL OF THE SECRETARY ROGELIO L. SINGSON SECRETARY	PROJECT & LOCATION PASIG-MARIKINA RIVER CHANNEL IMPROVEMENT PROJECT (PHASE II METRO MANILA	DETAIL OF DRAINAG OUTLET- DR79A & MANHOL F MR79A	E LP-DR DO 79A

			DR 79A	EXISTING OUTLET / / / / / EXISTING DRAINAGE / / / / / DRAINAGE OUTLET / / / / / COLLECTOR PIPE / / / / / A5 DRAINAGE OUTLET NO. / / / /
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JICA CONSULTANT FOR D			PIPE ELE ST NU 2 -	SCALE A
CTI ENGINEERING INTERNATIONAL CO., LTD.	KOHELTAKAYAMA STRUCTURAL ENGINEER M	CHECKED BY: TOSHIKI KAWAKAMI THE CHECKER	SUBMITTED BY: SHUJI KAKU TEAMLEADER	REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS REVIEWED BY: RECOMMENDING APPROVAL : PERFECTO L. ZAPLAN, JR. PROJECTOR SEE COVER SHEET FOR THE SIGNATURE OF THE UNDERSECRETARY PERFECTO L. ZAPLAN, JR. PROJECTOR GILBERTO S. REYES DIRECTOR ROD RAUL C. ASIS UNDERSECRETARY FOOLUTION SOD

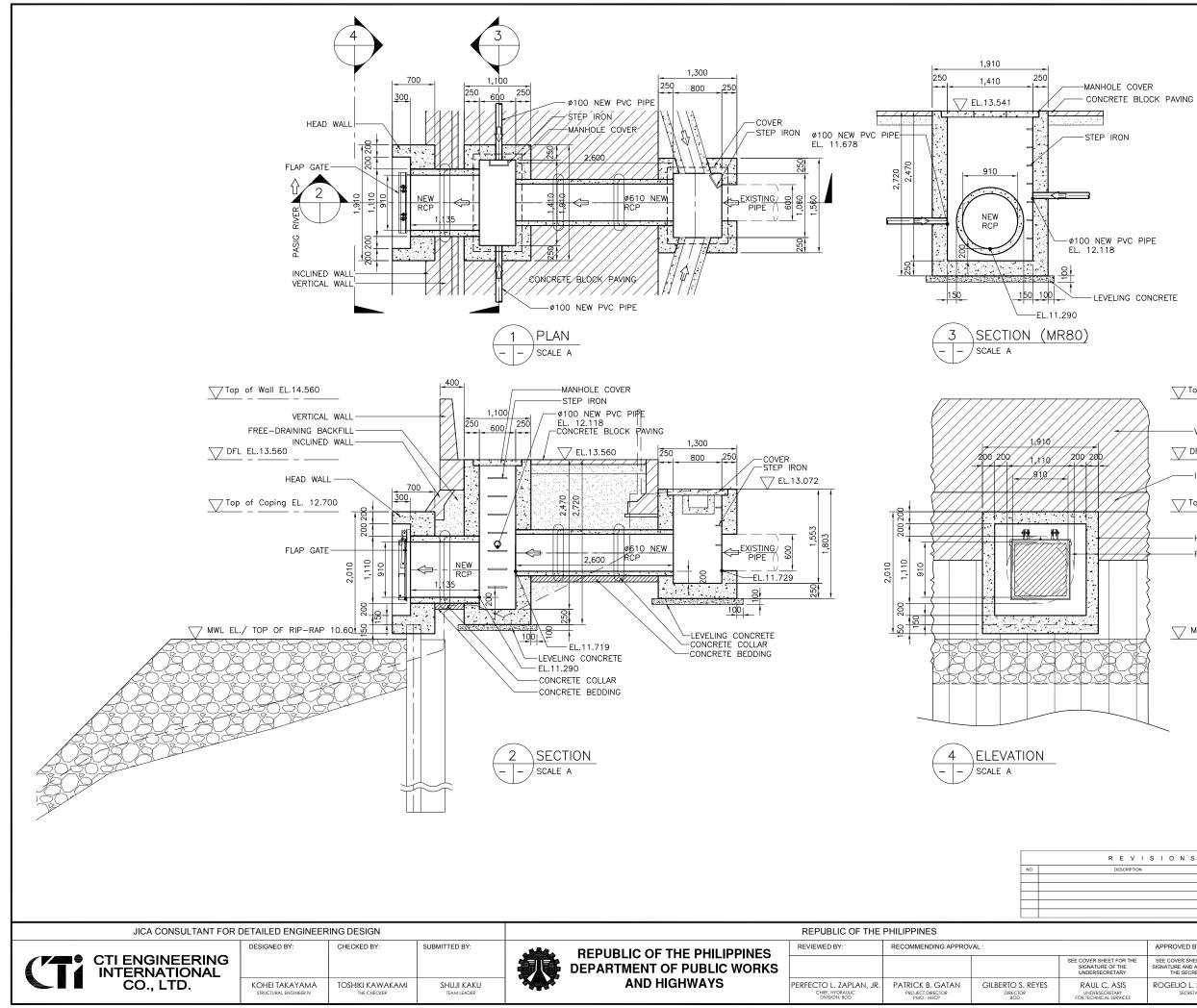
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			PROJECT 8	LOCATION	SHEET CONTENTS	SHEET NO.	
	APPROVED BY:		PASIG-N	IARIKINA			
R THE IE IY	SEE COVER SHEET FOR SIGNATURE AND APPROVA THE SECRETARY		RIVER C		PLAN & PROFILE OF	LP-DR DO 79A.5/P	
S ICES	ROGELIO L. SINGSON SECRETARY METRO			. ,.	<i></i>		



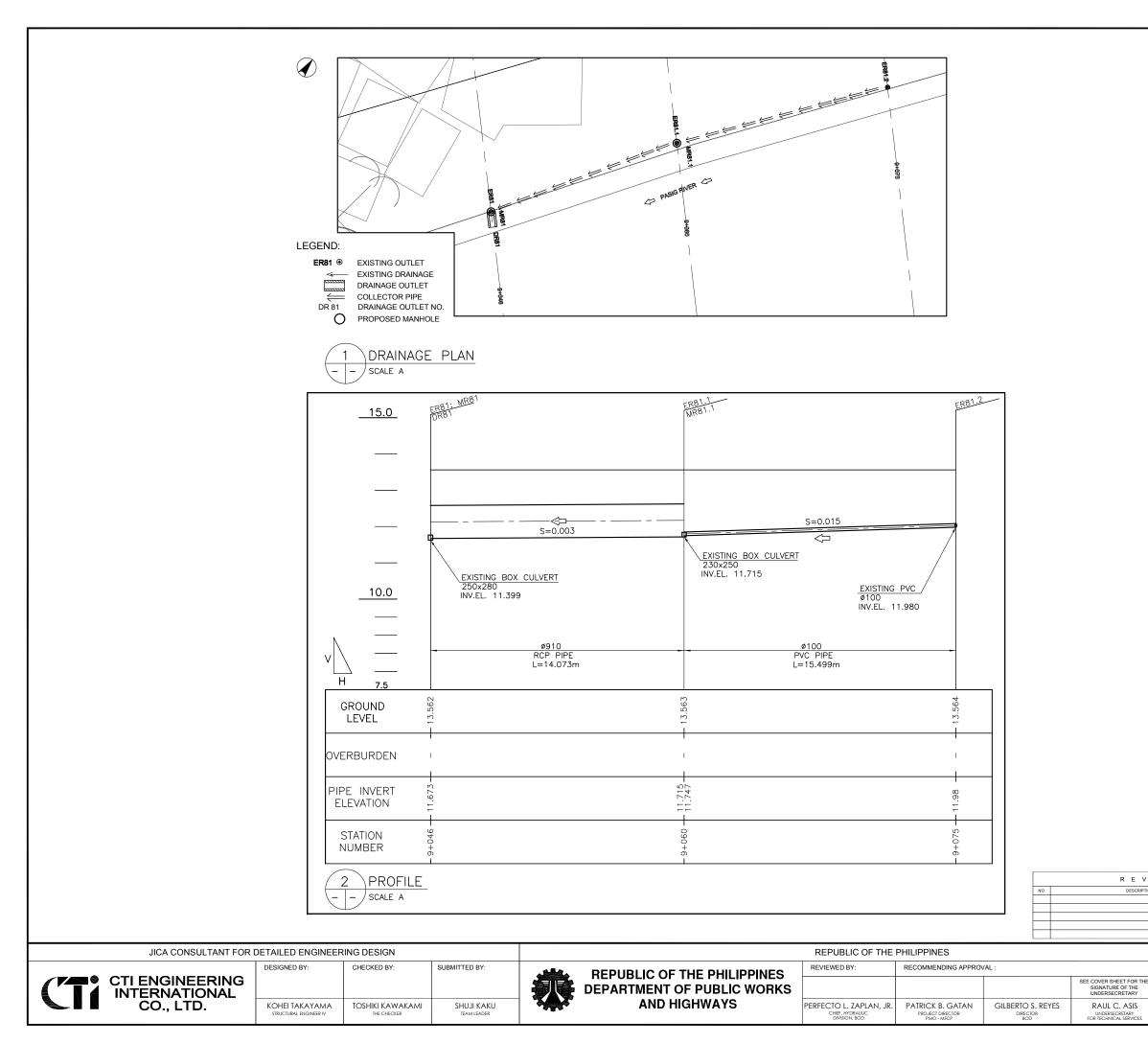
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			INTEGRITY OF THE RESPONSIBILITY TO	SURVEYS AND DESIGN NOR D THE APPROVING OFFICIALS	s. s	SHUJI KAKU EAM LEADER
		PROJECT &	LOCATION	SHEET CONTE	INTS	SHEET NO.
	APPROVED BY: SEE COVER SHEET FOR THE SIGNATURE AND APPROVAL OF THE SECRETARY ROGELIO L. SINGSON SECRETARY	PASIG-M RIVER C IMPROV PROJECT (METRO	HANNEL /EMENT PHASE III),	DETAIL OF DR/ OUTLET DR79 MANHOLE MR STA. 8+993	9A.5 & 79A.5	LP-DR DO 79A.5



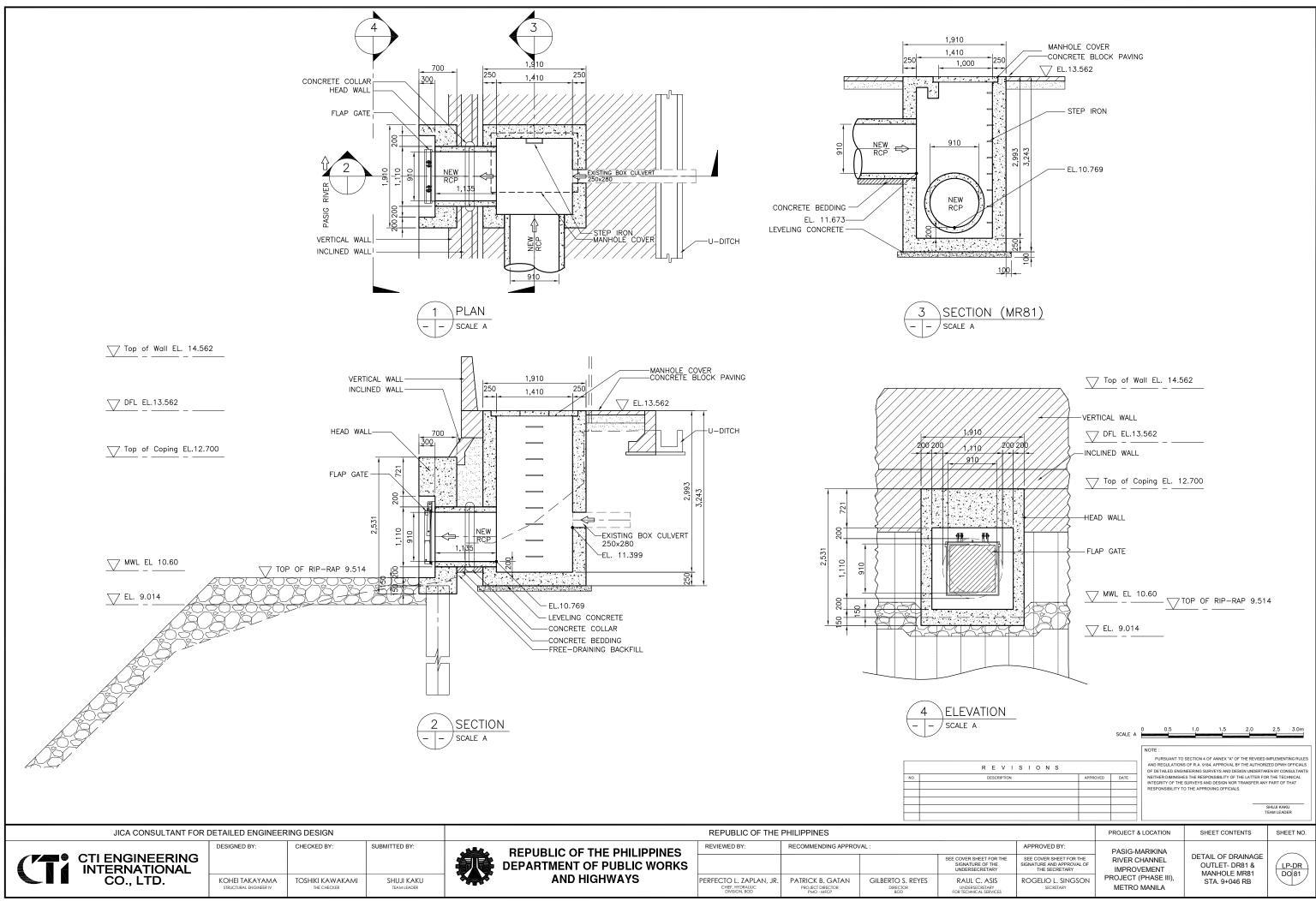
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	APPROVED BY:			PASIG-N	1ARIKINA				(
	SEE COVER SHEET FOR TH SIGNATURE AND APPROVAL THE SECRETARY				HANNEL /EMENT		PLAN & PROFILE O		LP-DR DOI80/P
	ROGELIO L. SINGSO SECRETARY	ИС	PF		(PHASE III), MANILA		COLLECTOR PIPE		



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			RESPONSIBILITY T	O THE APPROVING OFFICIALS.	
				T	SHUJI KAKU 'EAM LEADER
		PROJECT &	LOCATION	SHEET CONTENTS	SHEET NO.
	APPROVED BY:	PASIG-M		DETAIL OF DRAINAGE	
-	ROGELIO L. SINGSON	RIVER C IMPROV PROJECT (METRO	'EMENT PHASE III),	OUTLET DR80 & MANHOLE MR80 STA. 9+009 RB	LP-DR DO 80

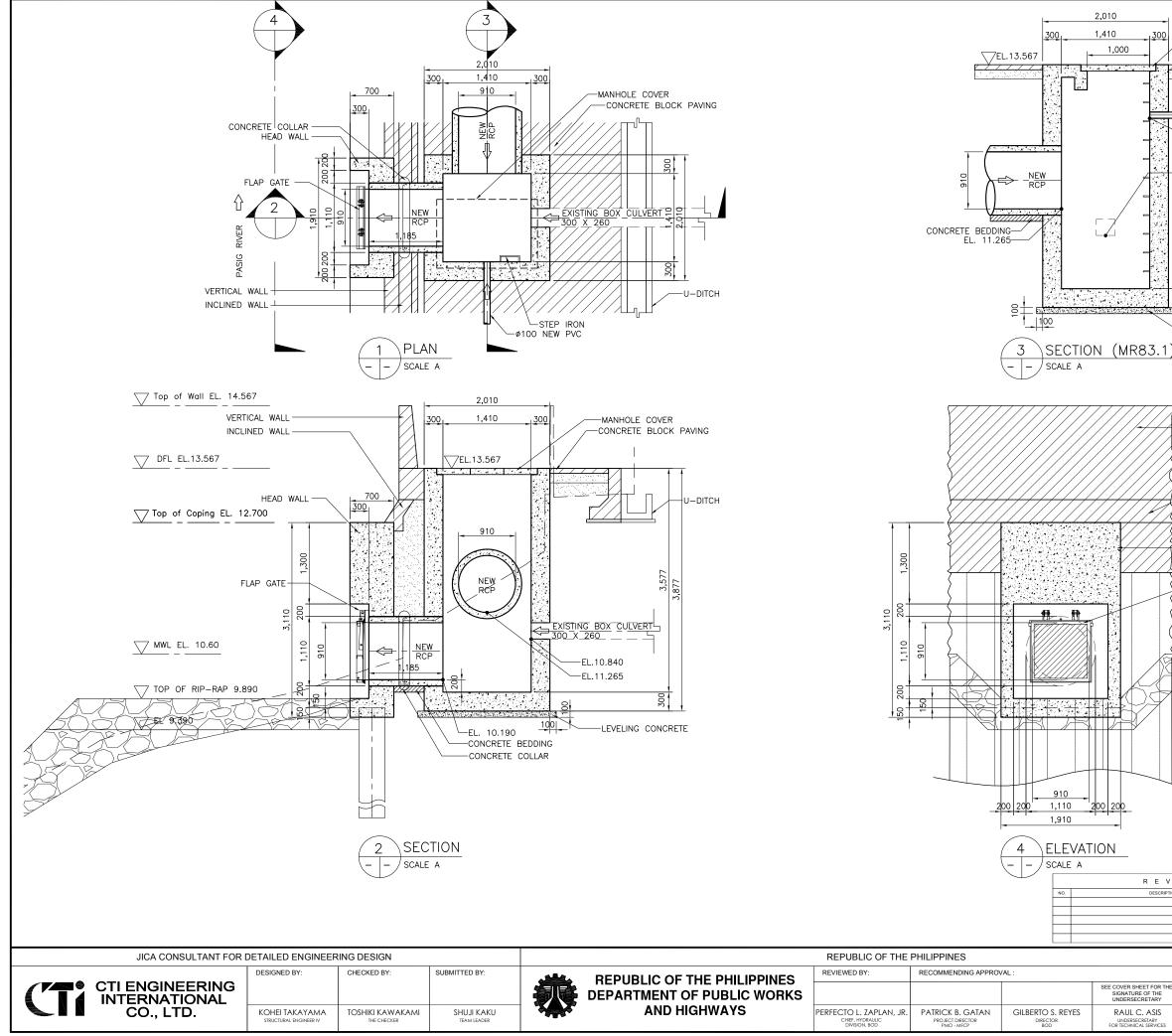


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			F	PROJECT &	LOCATION	SH	EET CONTENT	s	SHEET NO.	
	APPROVED BY:			PASIG-M	IARIKINA				(
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	ROGELIO L. SINGS SECRETARY	SON	PI	ROJECT (METRO	PHASE III), MANILA	GOLLEGTOR FIFL				

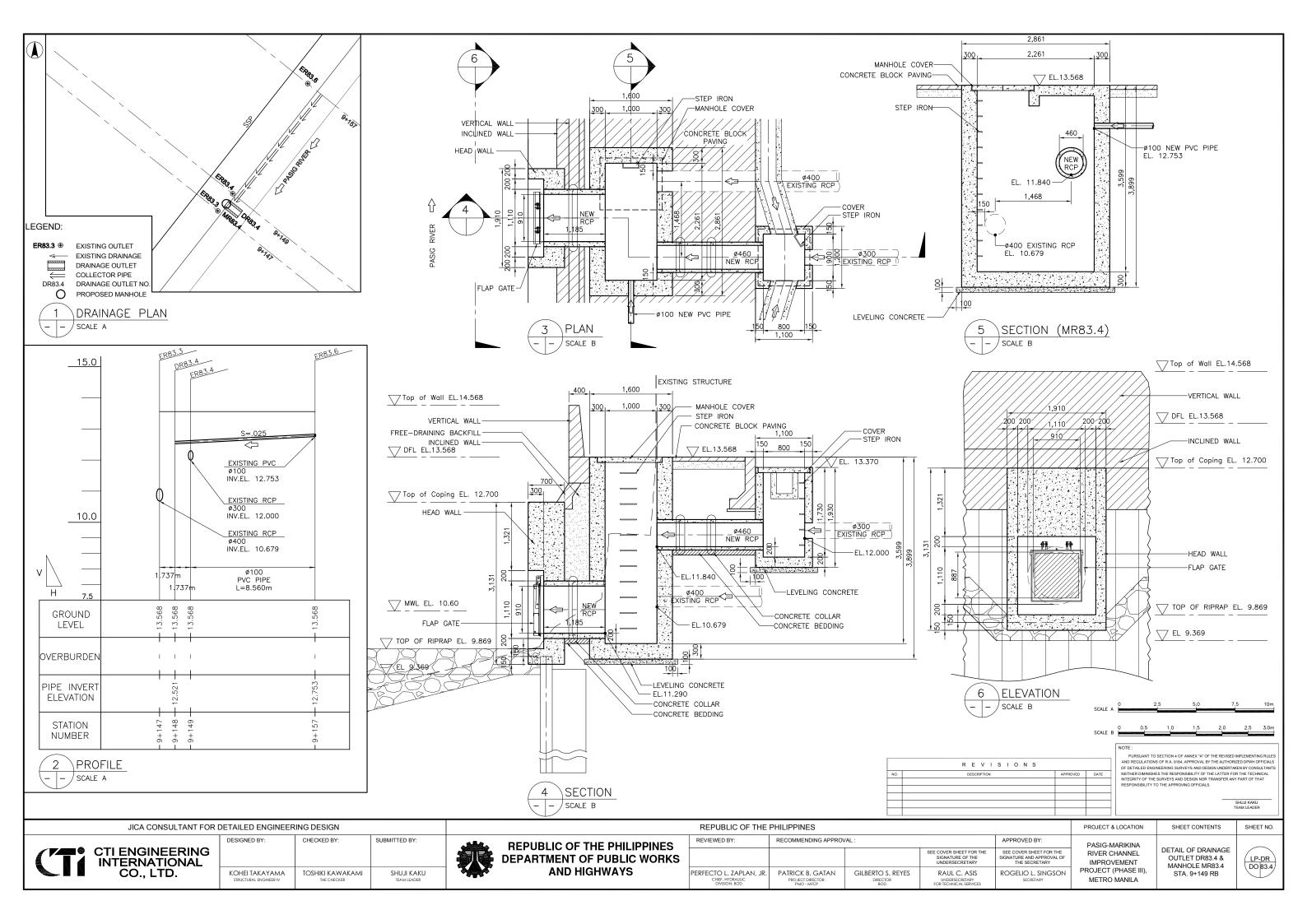


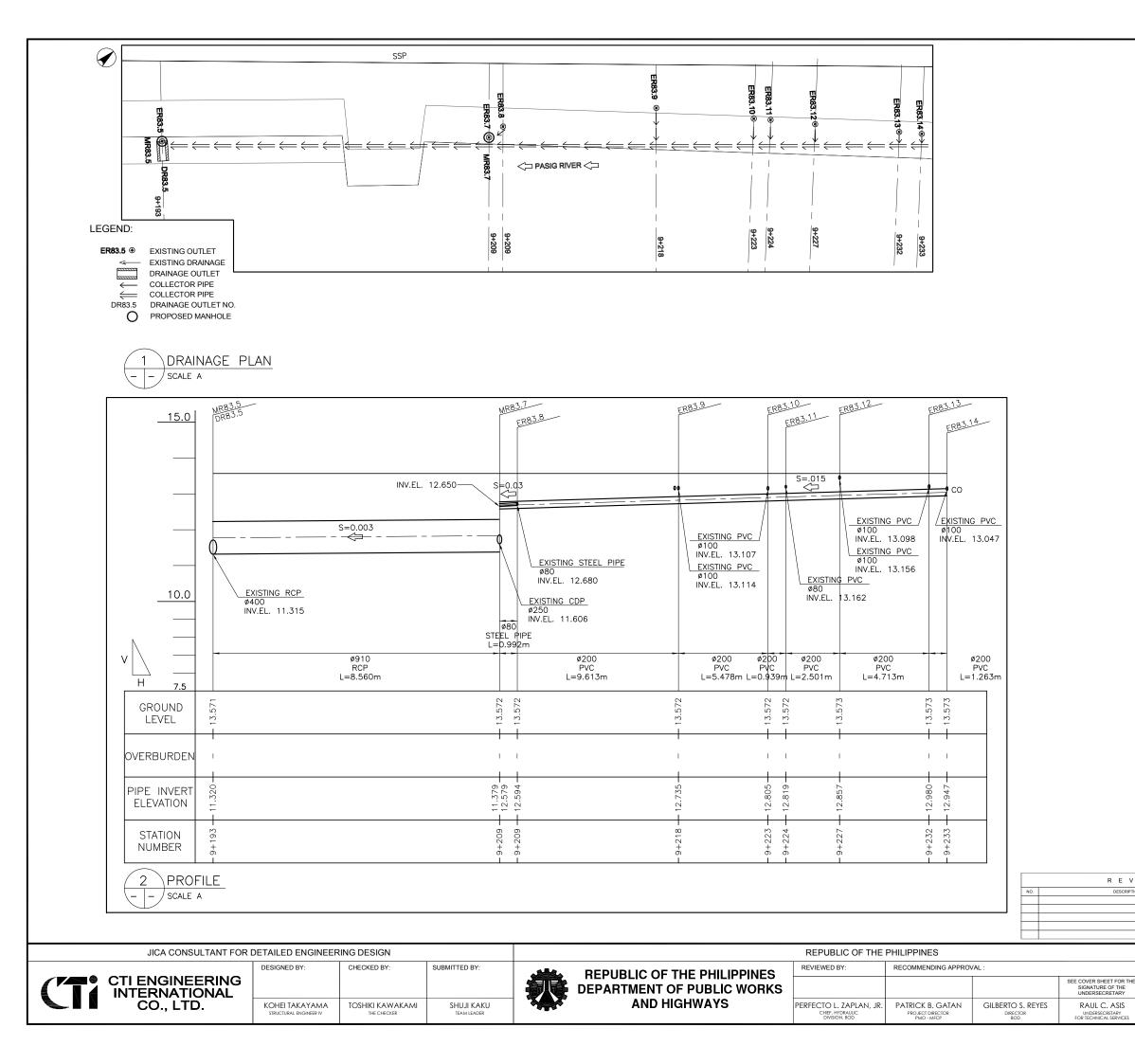
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						· · ·		NO.			OF DETAILED ENG PROVED DATE NEITHER DIMINISH	NEERING SURVEYS AND DESIGN UNDERTAI ES THE RESPONSIBILITY OF THE LATTER FO SURVEYS AND DESIGN NOR TRANSFER AN	KEN BY CONSULTANTS OR THE TECHNICAL
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	JICA CONSULTAN	NT FOR DETAILED ENGIN	NEERING DESIGN			REPUBLIC OF THE F	PHILIPPINES				PROJECT & LOCATION	SHEET CONTENTS	SHEET NO.
		DESIGNED BY:	CHECKED BY:	SUBMITTED BY:			RECOMMENDING APPROVAL :			APPROVED BY:	PASIG-MARIKINA		_
	ENGINEERI	NG			REPUBLIC OF THE PHI DEPARTMENT OF PUBL				SEE COVER SHEET FOR THE SIGNATURE OF THE	SEE COVER SHEET FOR THE SIGNATURE AND APPROVAL OF	RIVER CHANNEL	PLAN & PROFILE OF	LP-DR
									UNDERSECRETARY	THE SECRETARY			
								BERTO & REVES			IMPROVEMENT PROJECT (PHASE III),	COLLECTOR PIPE	DO 83.1/P
	ENGINEERI ERNATIONA CO., LTD.		MA TOSHIKI KAWAKAN M THE CHECKER	AI SHUJI KAKU TEAM LEADER	AND HIGHWAY	PERFECTO L. ZAPLAN, JR. CHIE, HYDRAULC DIVISION BOD	PATRICK B. GATAN GIL	LBERTO S. REYES	RAUL C. ASIS UNDERSECRETARY FOR TECHNICAL SERVICES	ROGELIO L. SINGSON SECRETARY		COLLECTOR PIPE	DO 83.1/P

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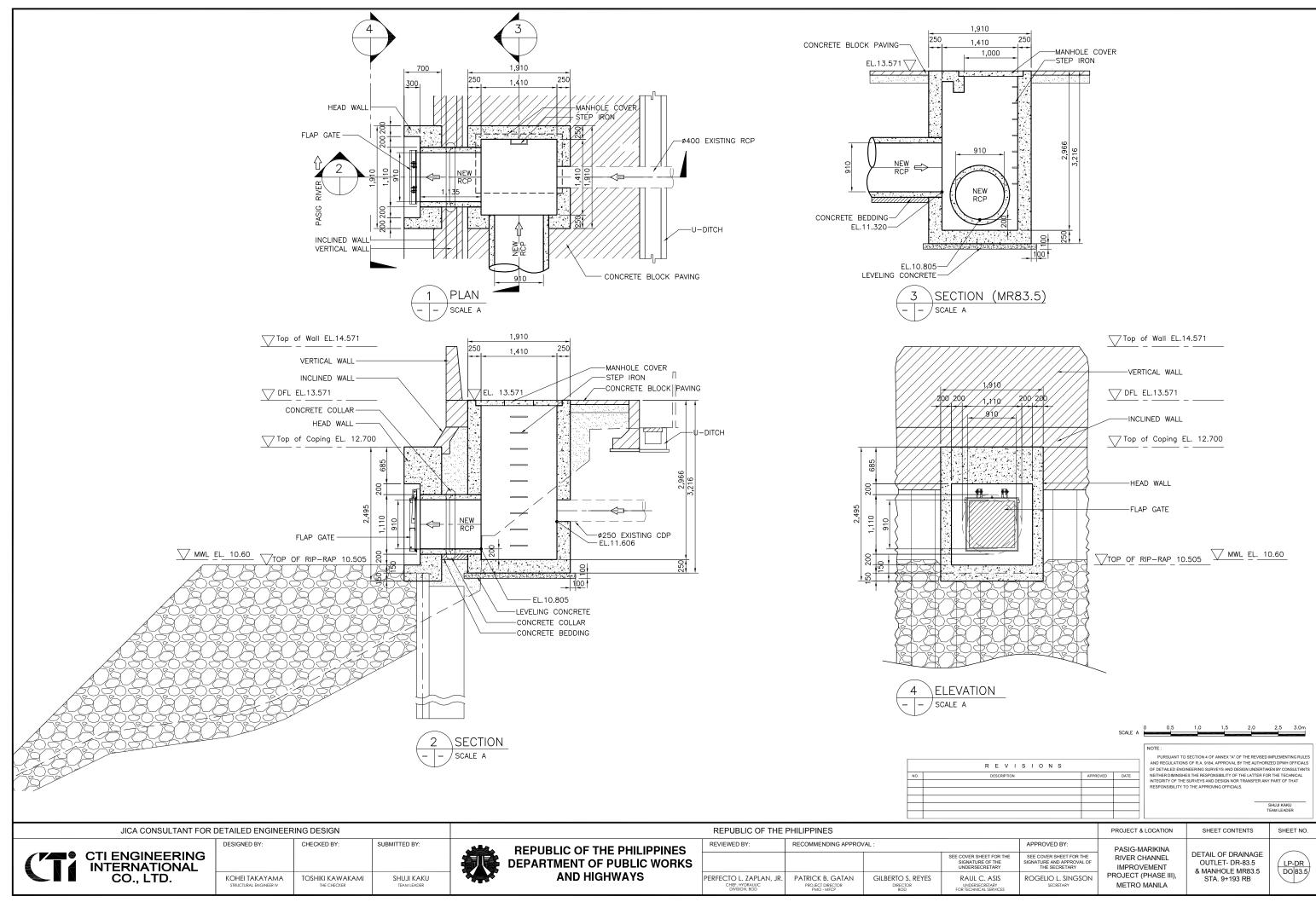


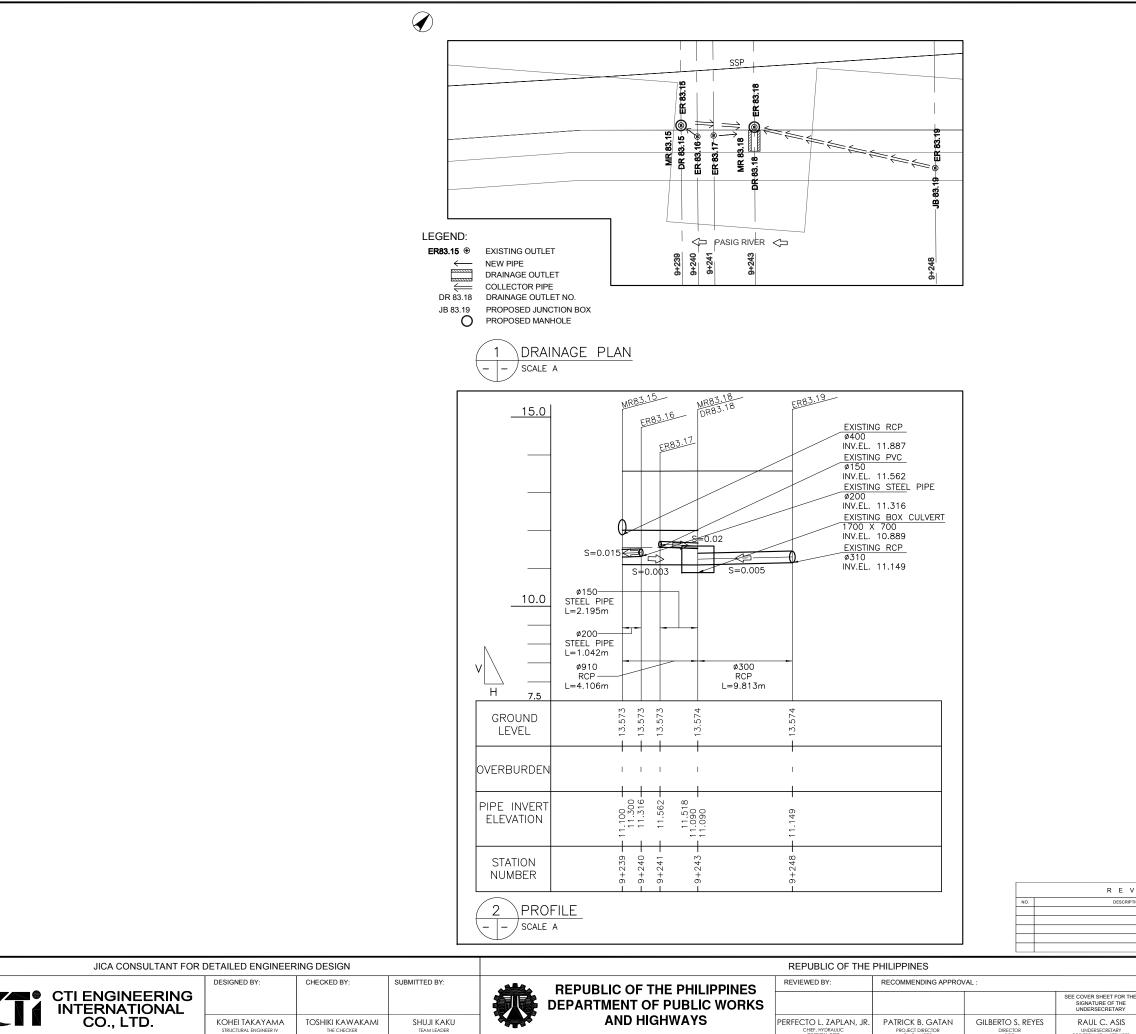
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I DN	S I O N S	DVED DATE	PURSUANT TO AND REGULATIONS OF DETAILED ENGII NEITHER DIMINISHE INTEGRITY OF THE	SECTION 4 OF ANNEX "A" OF 5 OF R.A. 9184, APPROVAL BY VEERING SURVEYS AND DES 53 THE RESPONSIBILITY OF TH SURVEYS AND DESIGN NOR T THE APPROVING OFFICIALS.	THE AUTHORIZ IGN UNDERTAK IE LATTER FOF RANSFER ANY	ED DPWH OFFICIALS EN BY CONSULTANTS THE TECHNICAL
		PROJECT &		SHEET CONTE	Т	SHEET NO.
	APPROVED BY: SEE COVER SHEET FOR THE SIGNATURE AND APPROVAL OF THE SECRETARY ROGELIO L. SINGSON SECRETARY	PROJECT & PASIG-M, RIVER CH IMPROV PROJECT (I METRO I	ARIKINA HANNEL EMENT PHASE III),	DETAIL OF DRA OUTLET- DRA MANHOLE MI STA. 9+129	AINAGE 33.1 & R83.1	LP-DR DO 83.1





			SCALE A		.5 5.0	7.5 10m
1 10N	SIONS	APPRI	DVED DATE	AND REGULATION OF DETAILED ENGI NEITHER DIMINISHE INTEGRITY OF THE	SECTION 4 OF ANNEX 'A' OF THE REVI S OF R.A. 9184, APPROVAL BY THE AUTI MEERING SURVEYS AND DESIGN UNDE S THE RESPONSIBILITY OF THE LATTER SURVEYS AND DESIGN NOR TRANSFER O THE APPROVING OFFICIALS.	IORIZED DPWH OFFICIALS RTAKEN BY CONSULTANTS R FOR THE TECHNICAL
			PROJECT 8	LOCATION	SHEET CONTENTS	SHEET NO.
	APPROVED BY:		PASIG-N	ARIKINA		
E	SEE COVER SHEET FOR T SIGNATURE AND APPROVA THE SECRETARY		RIVER C	HANNEL	PLAN & PROFILE OF	E LP-DR DOI83.5/P
	ROGELIO L. SINGS SECRETARY	ON	PROJECT (METRO		GOLLEGIOR FIFE	D083.3/P





	DESIGNED BY:	
CTI ENGINEERING INTERNATIONAL		
CO., LTD.	KOHEI TAKAYAMA STRUCTURAL ENGINEER IV	

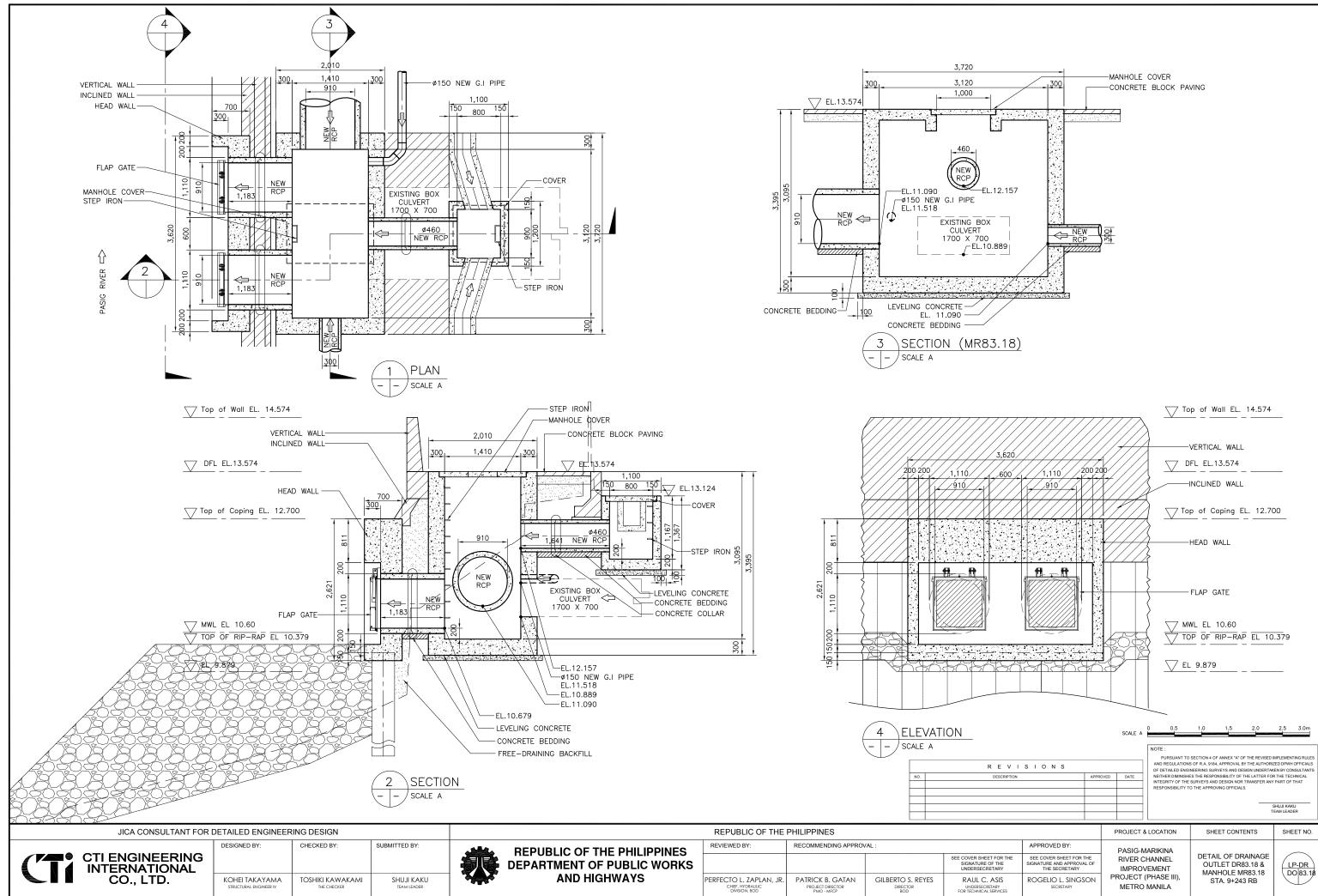
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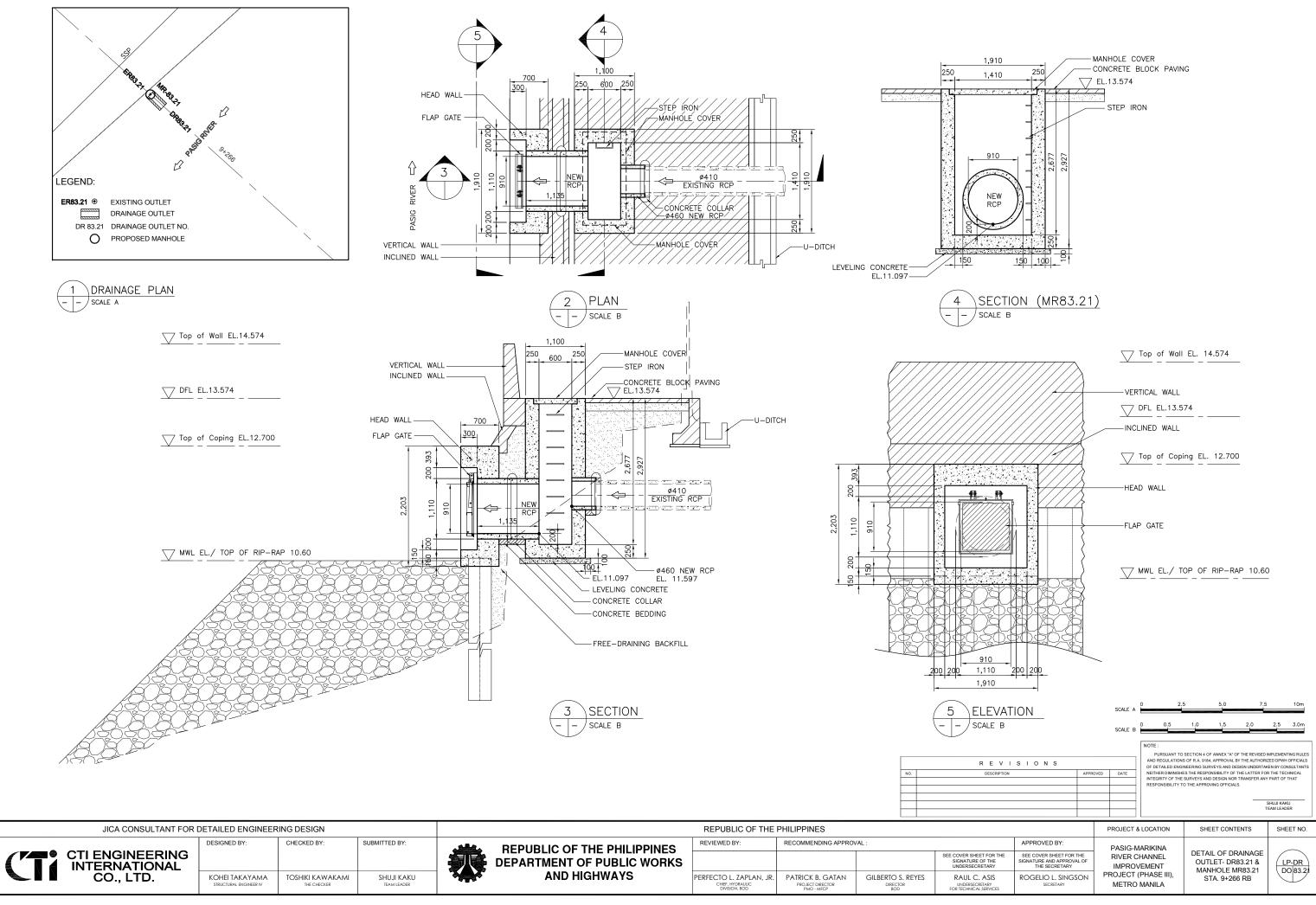
THE CHECKER

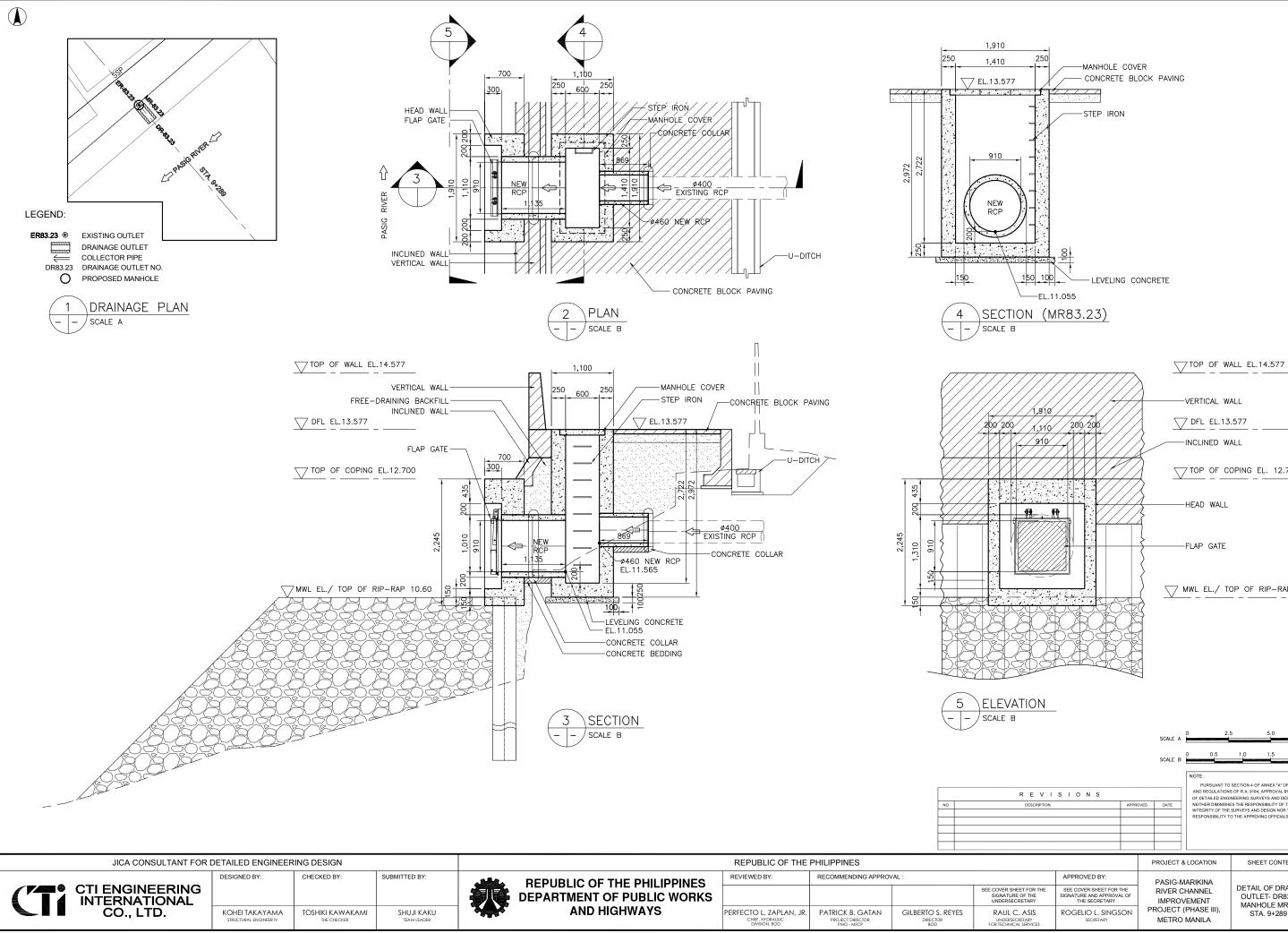
PUBLIC OF THE PHILIPPINES								
WED BY:	RECOMMENDING APPROV	/AL :						

SEE COVER SHEET FOR THE SIGNATURE OF THE UNDERSECRETARY PATRICK B. GATAN GILBERTO S. REYES RAUL C. ASIS PROJECT DIRECTOR PMO - MFCP DIRECTOR BOD UNDERSECRETARY FOR TECHNICAL SERVICES

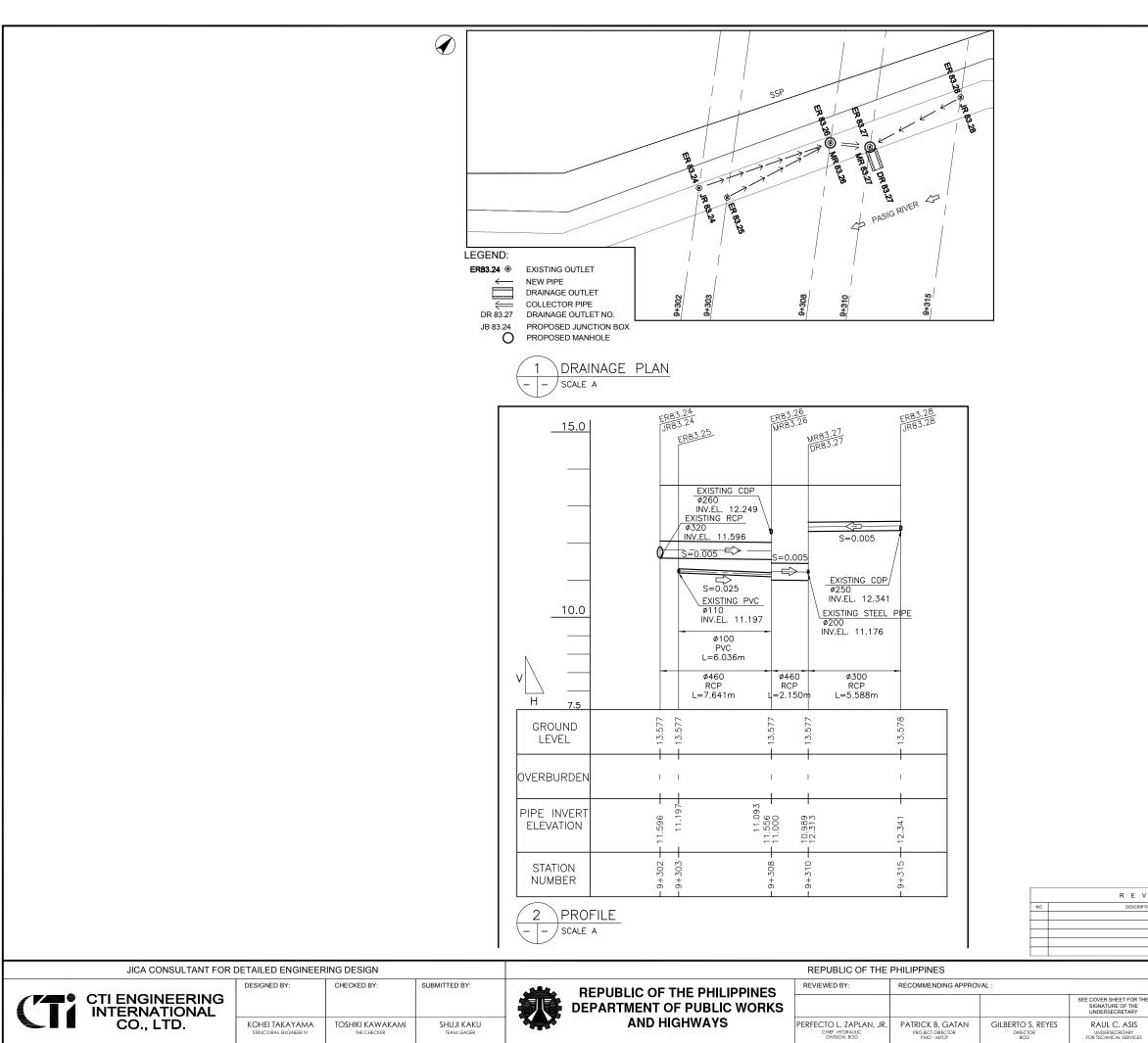
			SCALE A	NOTE : PURSUANT TO	5 5.0 7 SECTION 4 OF ANNEX "A" OF THE REVISED OF R.A. 9184. APPROVAL BY THE AUTHOR			
1 I	SIONS	APPRO	VED DATE	OF DEFALED EXGINEERING SURVEYS AND DESIGN UNDERTAKEN BY CONSULTANTS NEITHER DINIGHES THE RESONBILITY OF THE LATTER FOR THE TECHNICAL INTEGRITY OF THE SURVEYS AND DESIGN NOR TRANSFER ANY PART OF THAT RESPONSIBILITY TO THE APPROVING OFFICIALS.				
			PROJECT &	LOCATION	SHEET CONTENTS	SHEET NO.		
	APPROVED BY:		PASIG-M	ARIKINA				
E	SEE COVER SHEET FOR TH SIGNATURE AND APPROVAL THE SECRETARY		RIVER CI	'EMENT	PLAN & PROFILE OF COLLECTOR PIPE	LP-DR DO 83.18/P		
	ROGELIO L. SINGSC SECRETARY	Л	PROJECT (METRO	,				





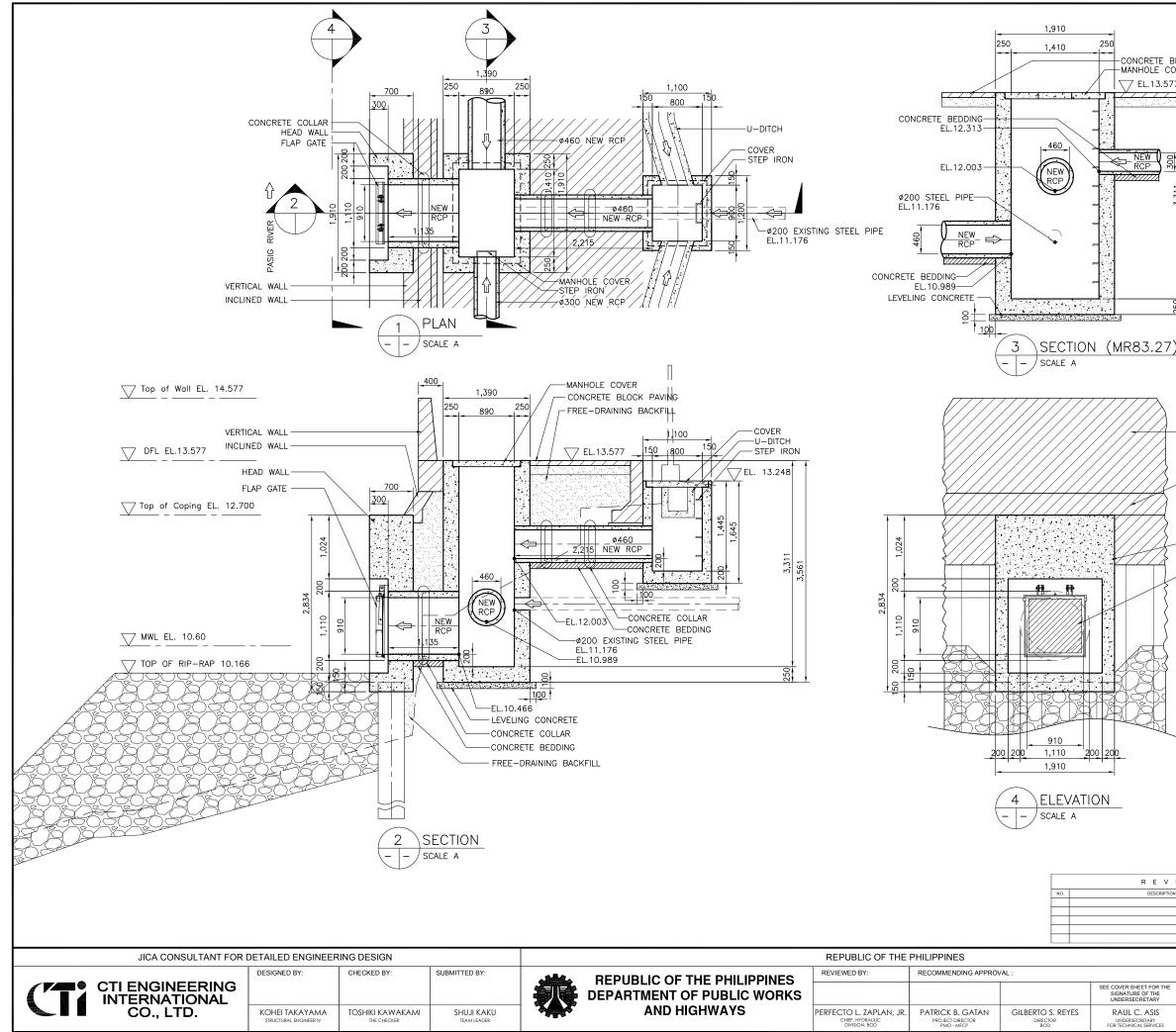


/			
VERTICAL W	ALL		
DFL EL.13	.577		
INCLINED W	ALL		
	DPING EL. 12.700		
HEAD WALL			
FLAP GATE			
	DP OF RIP-RAP 10.60) -	
SCALE A	5 5.0 7.5	5 10m	
SCALE B	1.0 1.5 2.0	2.5 3.0m	
AND REGULATION: OF DETAILED ENGI IVED DATE NEITHER DIMINISHI INTEGRITY OF THE	S OF R.A. 9184, APPROVAL BY THE AUTHOR NEERING SURVEYS AND DESIGN UNDERTA S THE RESPONSIBILITY OF THE LATTER FC SURVEYS AND DESIGN NOR TRANSFER AN O THE APPROVING OFFICIALS.	IZED DPWH OFFICIALS KEN BY CONSULTANTS I/R THE TECHNICAL	
PROJECT & LOCATION	SHEET CONTENTS	SHEET NO.	
PASIG-MARIKINA RIVER CHANNEL IMPROVEMENT	-MARIKINA CHANNEL DETAIL OF DRAINAGE		
	DFL EL.13 INCLINED W TOP OF COP OF HEAD WALL FLAP GATE WWL EL./ MWL EL./ NOTE: PURSUANT TO AN REGULATE DE RIGHT OF THE ROMINENT PROJECT & LOCATION PASIG-MARIKINA PROJECT & LOCATION PASIG-MARIKINA	FLAP GATE MWL EL./ TOP OF RIP-RAP 10.60 SCALE A 0 2.5 5.0 7.6 SCALE A 0 2.5 5.0 7.6 SCALE A 0 0.5 1.0 1.5 2.0 NOTE: PURSUANT TO SECTION 4 OF ANNEX 'A' OF THE REVISED AND REGULATIONS OF R.A. 1964, APPROVAL BY THE AUTHORY AND REGION DESIGN UNDERS AND RESIGN OF THE MATTER FOR NUTHER DIMINISHES THE RESPONSIBILITY OF THE AUTHORY AND RESIGN OF FLANTER FRANKES PROVING OFFICIALS. PROJECT & LOCATION SHEET CONTENTS PASIG-MARIKINA RIVER CHAINNEL IMPORVEMENT DETAIL OF DRAINAGE OUTLET- DR83.23 &	

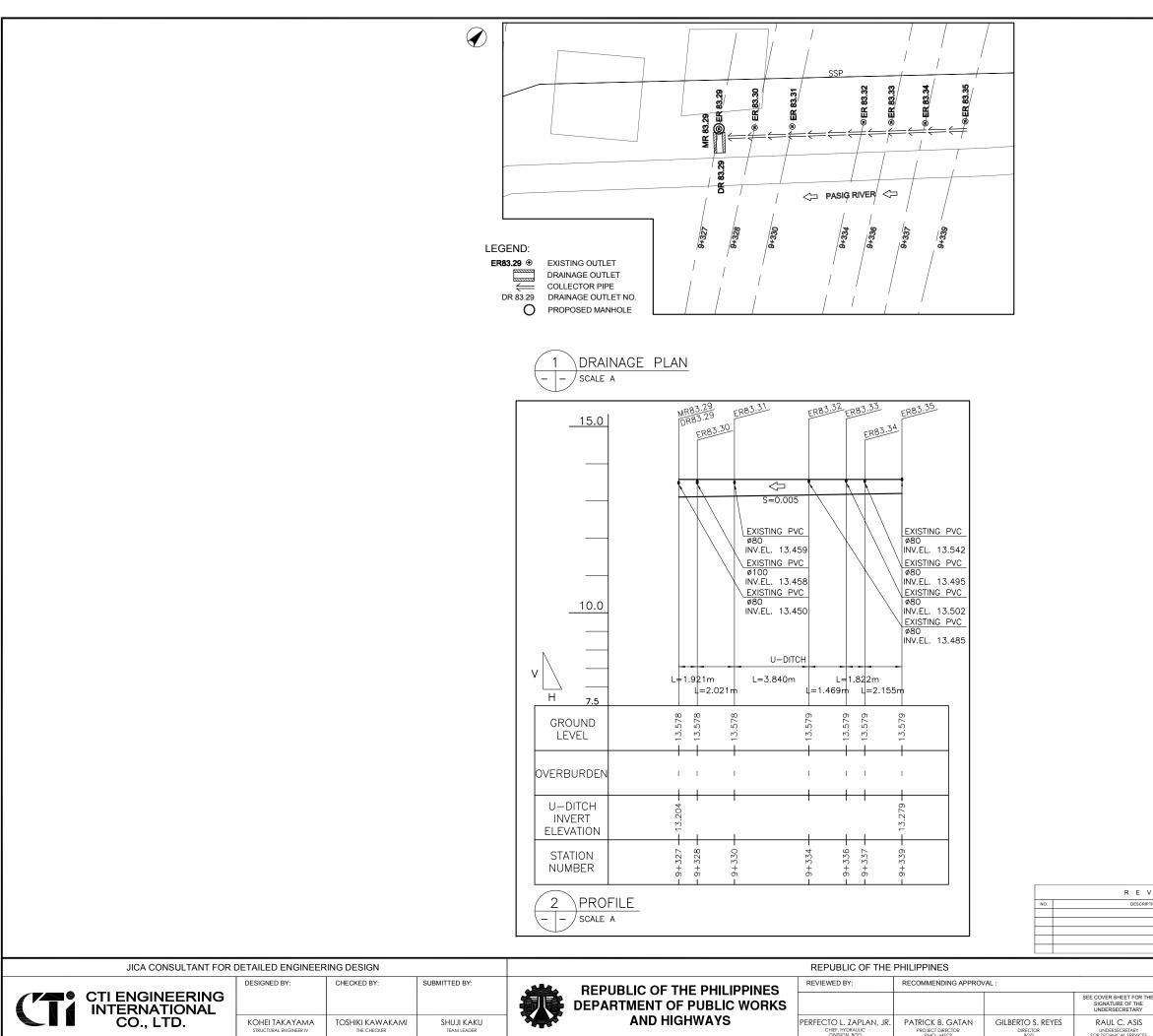


				SCALE A	0 2	.5 5.0	7.5	5 10m	
1	SIONS				AND REGULATIONS	SECTION 4 OF ANNEX "A" S OF R.A. 9184, APPROVAL	BY THE AUTHORIZ	ED DPWH OFFICIALS	
ION		APPROV	/ED	DATE	NEITHER DIMINENES THE RESPONSIBILITY OF THE LATTER FOR THE TECHNICAL INTEGRITY OF THE SURVEYS AND DESIGN NOR TRANSFER MY PART OF THAT RESPONSIBILITY TO THE APPROVING OFFICIALS.				
			Ρ	ROJECT &	LOCATION	SHEET CON	TENTS	SHEET NO.	
	APPROVED BY: PASI			PASIG-M	ARIKINA				
	SEE COVER SHEET FOR T SIGNATURE AND APPROVA THE SECRETARY			RIVER CHANNEL IMPROVEMENT		PLAN & PROFILE OF		LP-DR DO 83.27/P	
	ROGELIO L. SINGS SECRETARY	ON	•		PHASE III), MANILA	SSELLOIC	/// II'L	00 03.211F	

SCALE A 0 2.5 5.0 7.5 10n SCALE A 0 2.5 5.0 7.5 10n NOTE : PURSUANT TO SECTION 4 OF ANNEX 'A' OF THE REVISED IMPLEMENTING RULL AND REGULATIONS OF R.A. 9184. APPROVALE BY THE AUTORED PHYLOPERATE



BLOCK PAVING					
20VER 77					
.561 <u>3</u> .02					
3,3					
250					
7)					
─ Top of Wall EL.	14 577				
VERTICAL WAL	L				
	 L				
Top of Coping B	EL. 12.700				
HEAD WALL					
FLAP GATE					
	P_10.166				
	SCALE A	0 0.5	1.0 1.5	2.0	2.5 3.0m
		NOTE : PURSUANT TO	SECTION 4 OF ANNEX "A" S OF R.A. 9184, APPROVAL	OF THE REVISED	MPLEMENTING RULES
	OVED DATE	NEITHER DIMINISHE INTEGRITY OF THE	NEERING SURVEYS AND D ES THE RESPONSIBILITY O SURVEYS AND DESIGN NO O THE APPROVING OFFICIA	F THE LATTER FO R TRANSFER ANY	R THE TECHNICAL
				T	SHUJI KAKU EAM LEADER
APPROVED BY:			SHEET CON	TENTS	SHEET NO.
E SEE COVER SHEET FOR THE SIGNATURE AND APPROVAL OF THE SECRETARY	RIVER C	1ARIKINA HANNEL VEMENT (PHASE III),	DETAIL OF DE OUTLET- DR MANHOLE M	83.27 & 1R83.27	LP-DR DO 83.27
ROGELIO L. SINGSON SECRETARY		MANILA	STA. 9+31	0 RB	



KOHEI TAKAYAMA STRUCTURAL ENGINEER IV

SHUJI KAKU

TOSHIKI KAWAKAMI THE CHECKER

AND HIGHWAYS

PERFECTO L. ZAPLAN, JR. CHIEF, HYDRAULIC DIVISION, BOD

GILBERTO S. REYES

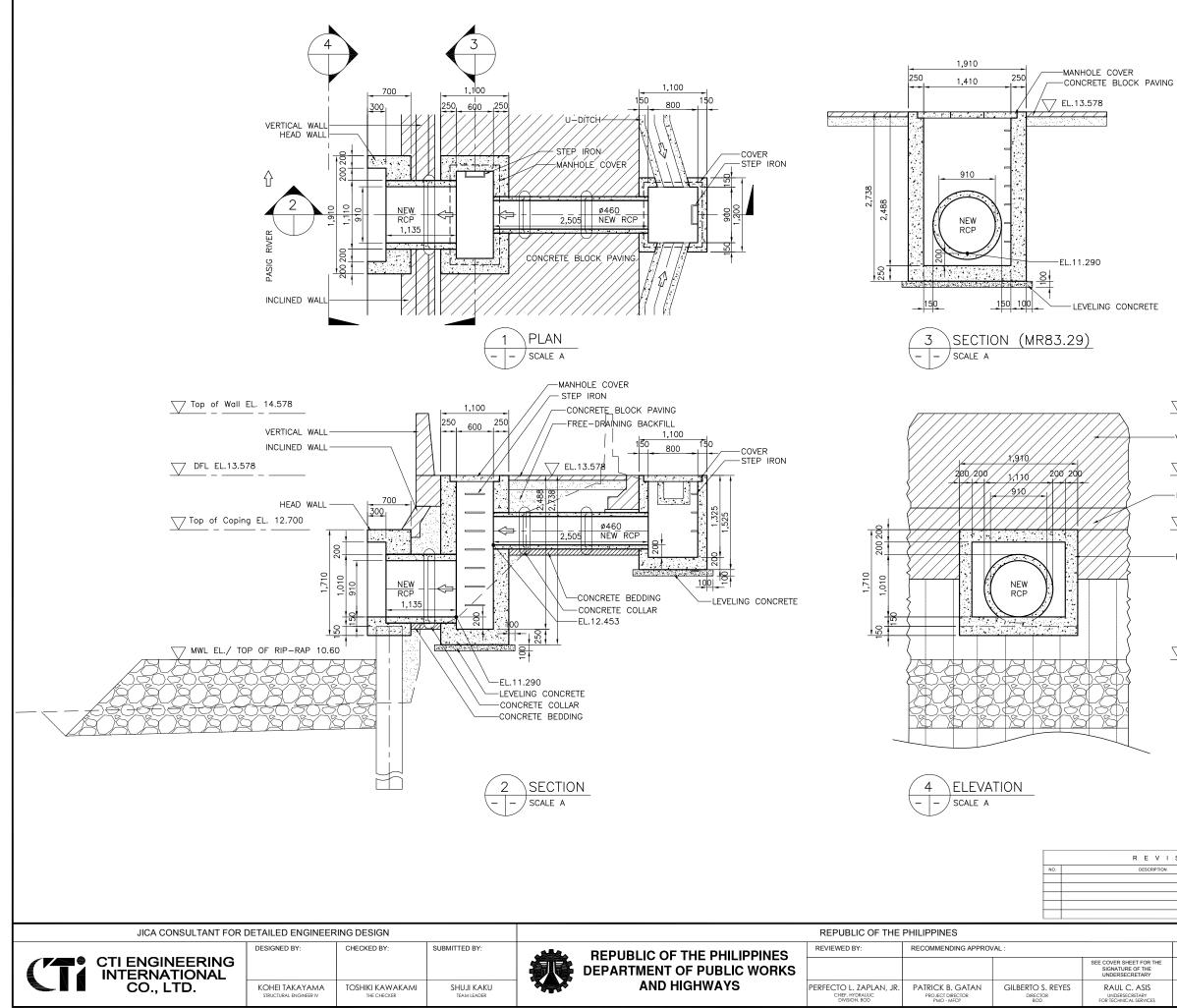
RAUL C. ASIS

UNDERSECRETARY FOR TECHNICAL SERVICES

PATRICK B. GATAN

PROJECT DIRECTOR PMO - MFCP

				SCALE A	Ĵ		2.5	5.0	7.	5 10m
					NOTE					
1	S I O N S				AND OF D	REGULATION	IS OF R.A. 9184 INEERING SUF	APPROVAL BY THE VEYS AND DESIGN	HE AUTHORIZ	MPLEMENTING RULES ZED DPWH OFFICIALS EN BY CONSULTANTS
ION		APPR	OVED	DATE				NSIBILITY OF THE DESIGN NOR TRA		
					RES	PONSIBILITY T	O THE APPRO	VING OFFICIALS.		
										SHUJI KAKU EAM LEADER
			F	PROJECT &	LOCA	TION	SHE	ET CONTEN	TS	SHEET NO.
	APPROVED BY:			PASIG-M	IARIK	INA				(
E	SEE COVER SHEET FOR T SIGNATURE AND APPROVA THE SECRETARY			RIVER CHANNEL		PLAN	PLAN & PROFILE OF U-DITCH		LP-DR DO 83,29/P	
	ROGELIO L. SINGS SECRETARY	ON	PF	ROJECT (METRO		<i>,</i> .		0-biron		00 03.29/F



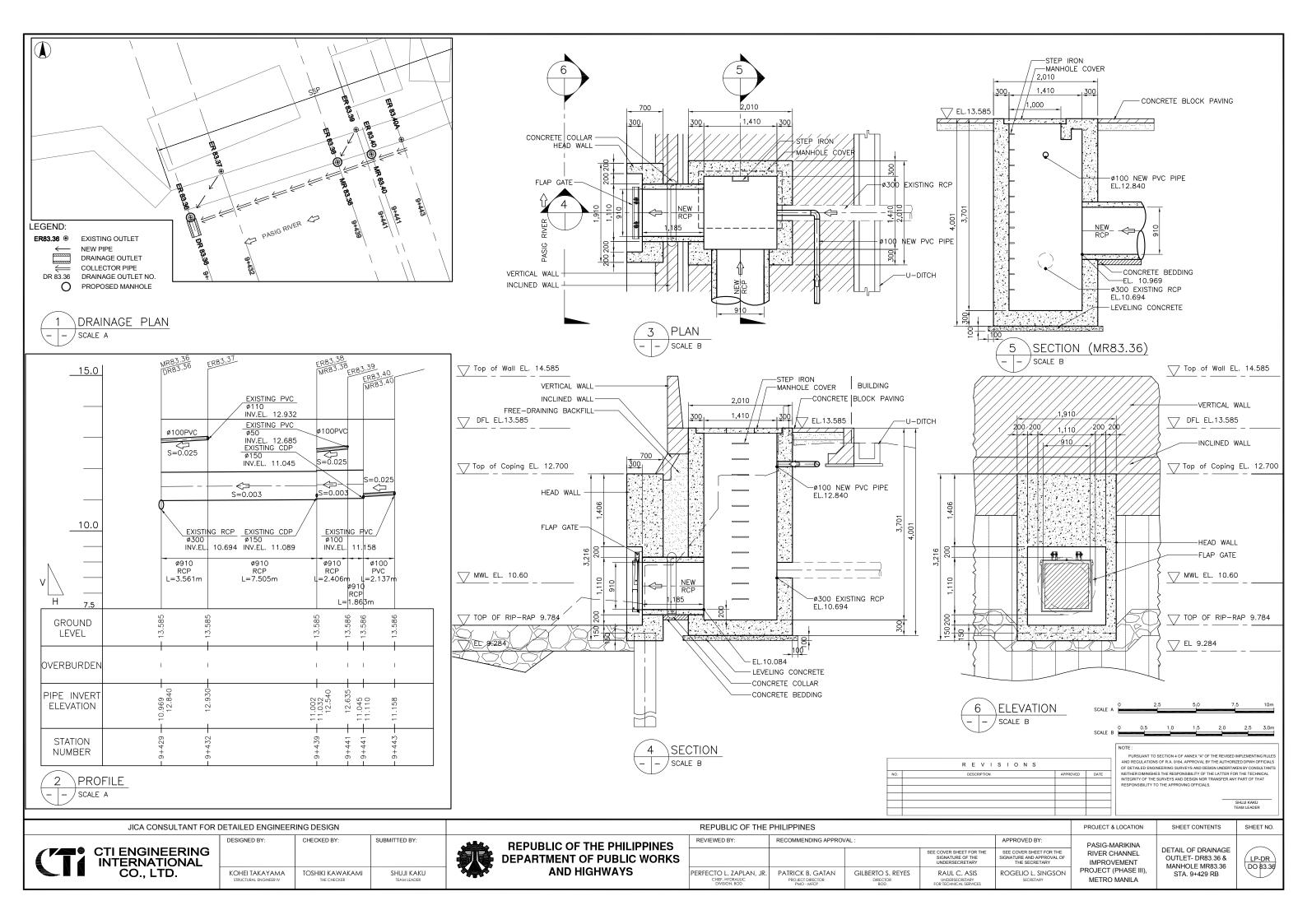
 \bigtriangledown Top of Wall EL. 14.578 -VERTICAL WALL DFL EL.13.578 -INCLINED WALL

Top of Coping EL. 12.700

-HEAD WALL

MWL EL./ TOP OF RIP-RAP 10.60

			SCA	LE A	0	0.5	1.0	1.5	2.0	2.5	3.0m
I N	SIONS	APPR	DVED DA	IE	ANE OF E NEI	PURSUANT TO DREGULATION DETAILED ENG THER DIMINISH EGRITY OF THE	IS OF R.A. 91 INEERING SU ES THE RESP SURVEYS A	84, APPROVAL JRVEYS AND D PONSIBILITY OF		ZED DPWH KEN BY CO R THE TEC	OFFICIALS NSULTANTS HINICAL THAT
			PROJ	ECT 8	& LOC	ATION	S⊦	IEET CONT	ENTS	SHE	ET NO.
	APPROVED BY:		PAS	IG-N	IARIK	INA					(
	SEE COVER SHEET FOR T SIGNATURE AND APPROVA THE SECRETARY		RIV	ER C	HANI	NEL	OU	TLET- DR			P-DR 0 83.29
ROGELIO L. SINGSON SECRETARY METRO					•	<i>,.</i>	MANHOLE MR83.29 STA. 9+327 RB				000.20



	← Ni Di ← CC DR 83.46 Di	SSP FR 83.45 FR 83.46 FR 83.41 FR 83.41 FR 83.41 FR 83.41 FR 83.42 FR 83.42 FR 83.42 FR 83.42 FR 83.42 FR 83.42 FR 83.44 FR 83.42 FR 83.44 FR 83.44 FR 83.44 FR 83.44 FR 83.44 FR 83.46 FR 83.46 F		
	1 DR SCAL	RAINAGE PLAN		
		0 EXISTING CDP EXISTING PVC EXISTING PVC EXISTING PVC 0 INV.EL. 10.947 INV.EL. 12.886 INV.EL. 11.136 INV.EL. 11.136 0 EXISTING PVC EXISTING CDP EXISTING * 0 INV.EL. 11.394 INV.EL. 11.136 INV.EL. 11.136 0 INV.EL. 11.394 INV.EL. 11.136 INV.EL. 11.136 0 INV.EL. 11.394 INV.EL. 11.136 INV.EL. 11.136 0 INV.EL. 11.394 INV.EL. 11.136 INV.EL 0 INV.EL. 11.136 INV.EL INV.EL 0 INV.EL. 11.394 INV.EL II.394 0 INV.EL II.394 INV.EL 0 INV.EL II.394 INV.EL 0 INV.EL II.394 INV.EL 0 INV.EL II.394 INV.EL 1 II.394 INV.EL II.364 0 II.397 II.397 II.364 1 II.1 II.1 II.1 1 II.1 II.1	2.230 S=0.02 ING RCP	R E V I DESCRIPTION
NSULTANT FOR DETAILED ENGINEERING DESIGN		RE		
	SUBMITTED BY:		IEWED BY: RECOMMENDING APPROVAL :	SEE COVER SHEET FOR THE SIGNATURE OF THE UNDERSECRETARY

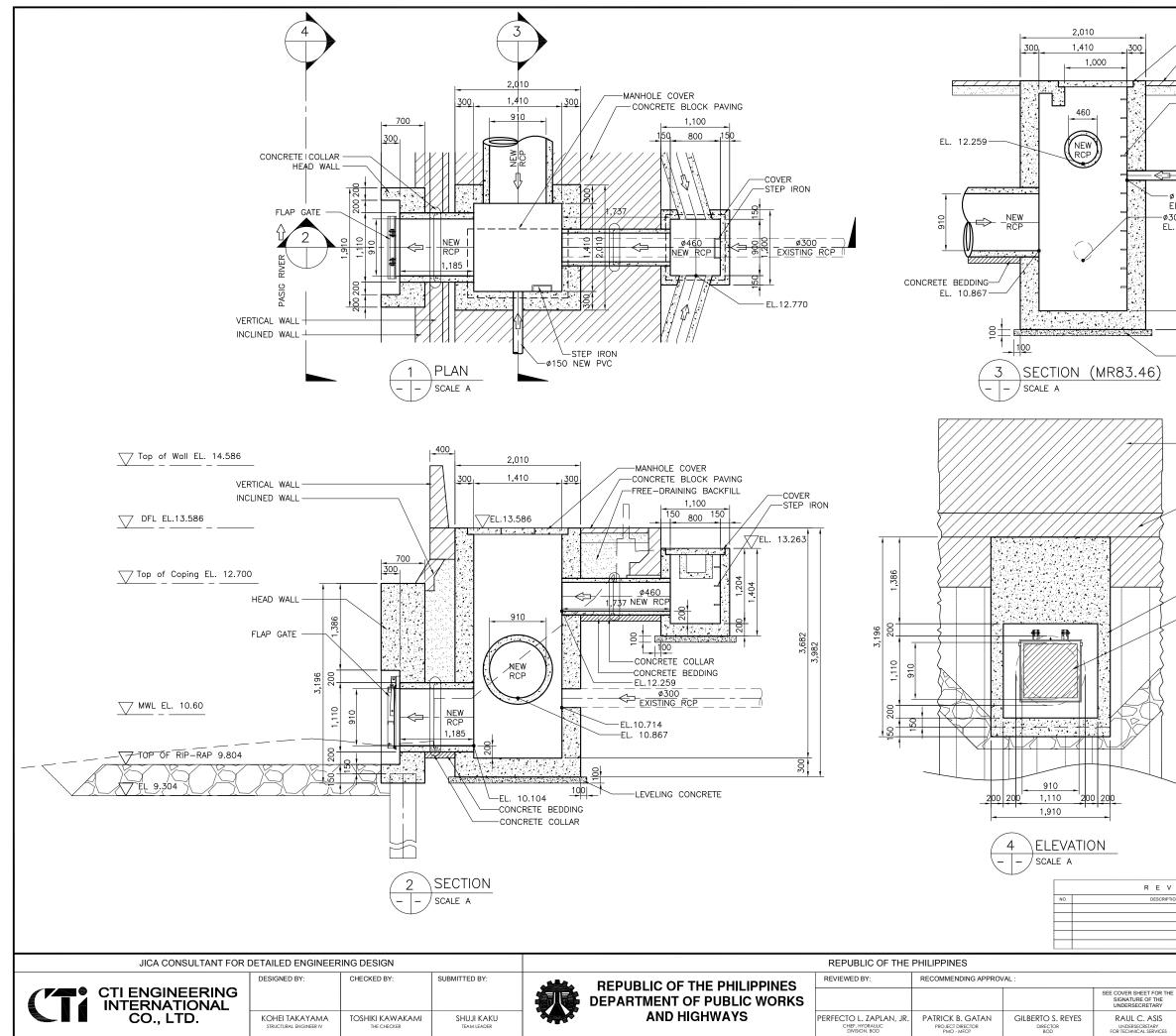
JICA CONSU CTI ENGINEERING INTERNATIONAL CO., LTD. KOHEI TAKAYAMA STRUCTURAL ENGINEER IV

SHUJI KAKU TEAM LEADER TOSHIKI KAWAKAMI THE CHECKER

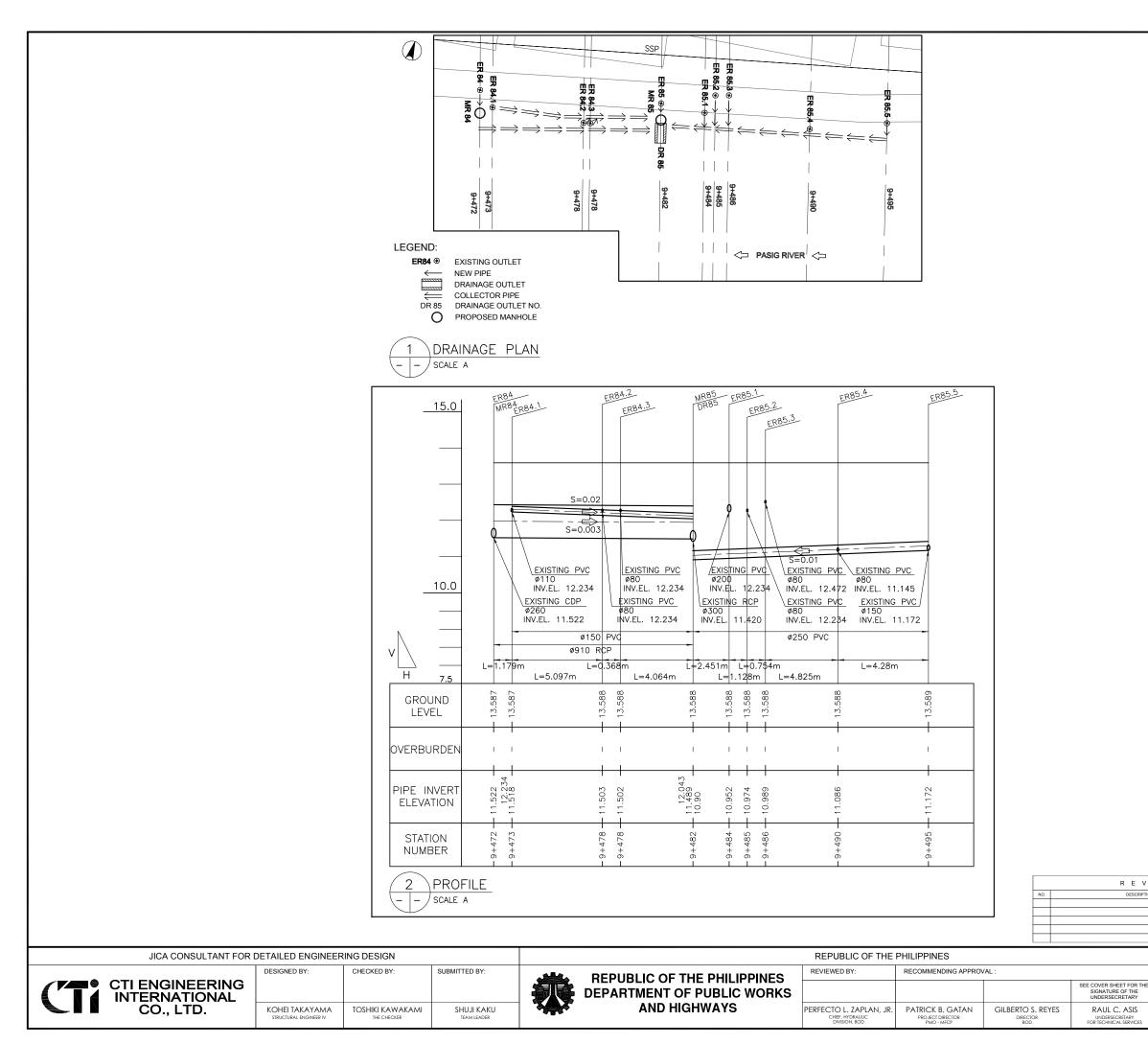
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS

UNDERSECRETARY PERFECTO L. ZAPLAN, JR. PATRICK B. GATAN CHIEF, HYDRAULC DIVISION, BOD PROJECT DIRECTOR PMO - MFCP GILBERTO S. REYES RAUL C. ASIS UNDERSECRETARY FOR TECHNICAL SERVICES

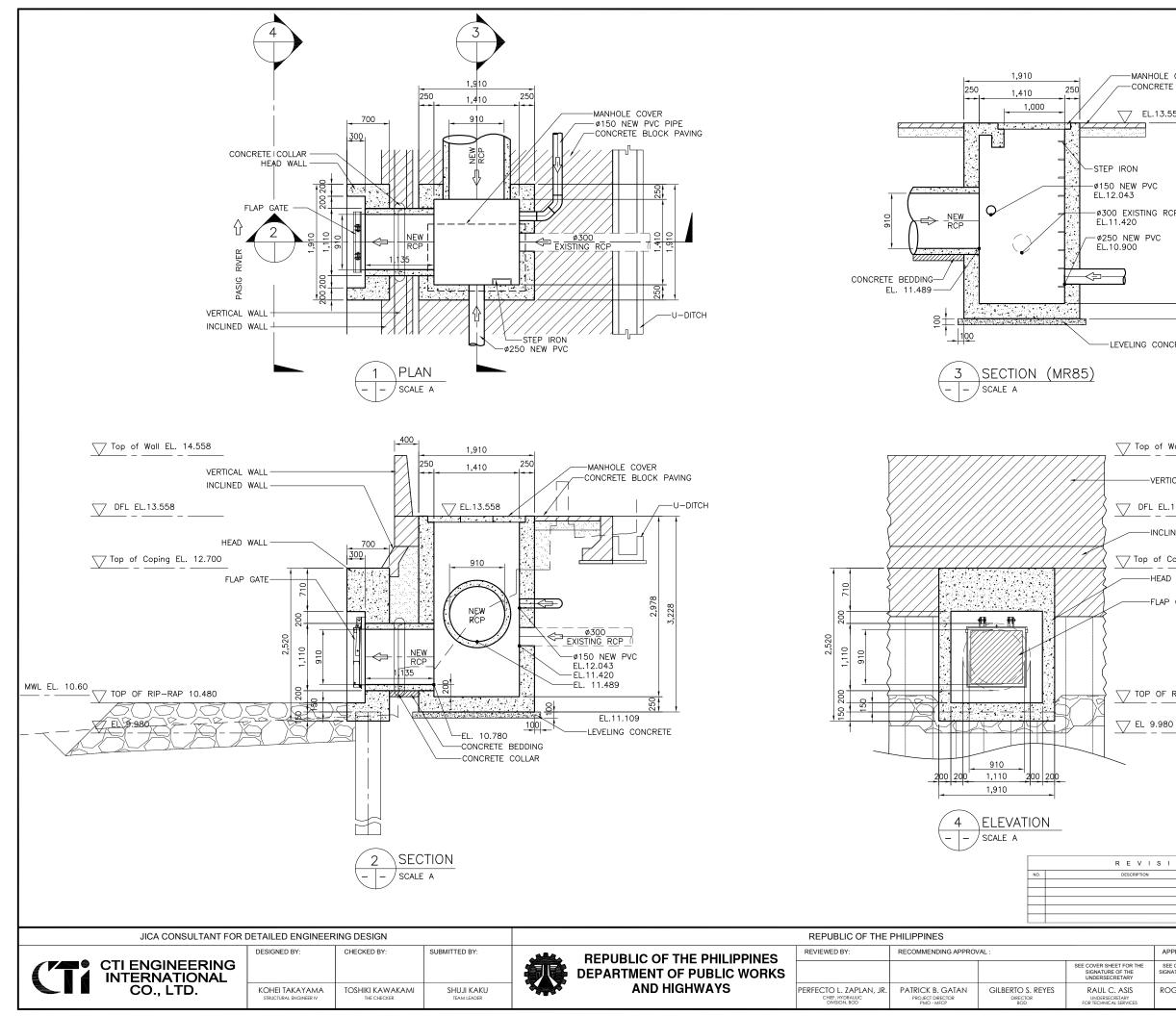
				SCALE A	o E	2	.5	5.0	7.5	10m	
' I	S I O N S	APPR		DATE		AND REGULATIONS OF DETAILED ENGI	S OF R.A. 9184, A NEERING SURVE	NNEX "A" OF THE REVIS PPROVAL BY THE AUTH YS AND DESIGN UNDER	ORIZED	DPWH OFFICIALS BY CONSULTANTS	
			OVED	DATE	TE NETHER DIMINISES THE RESPONSIBILITY OF THE LATTER FOR THE TECHNICAL INTEGRATIVO FTHE SUPPONSIBILITY OF THE AVERAGE ANY PART OF THAT RESPONSIBILITY TO THE APPROVING OFFICIALS. SHUJI KAKU TEAM LEADER						
			Р	ROJECT 8	& LO	DCATION	SHEE	T CONTENTS		SHEET NO.	
	APPROVED BY:			PASIG-N	1AF	RIKINA				_	
E	SEE COVER SHEET FOR THE SIGNATURE AND APPROVALOF THE SECRETARY ROGELIO L. SINGSON PROJECT			RIVER CHANNEL				:	LP-DR DO 83.46/P		
				(PHASE III), MANILA		COLLECTOR PIPE			00 63.40/P		



MANHOLE COVER				
✓ EL.13.586	OK TAVING			
	-			
-STEP IRON				
3150 NEW PVC 88 2				
150 NEW PVC 8 20 20 2L.11.995 からで 00 EXISTING RCP かう				
.10.714				
300	-			
-LEVELING CONCRETE				
	14 596			
Top of Wall EL.				
DFL EL.13.586				
INCLINED WALL				
✓ Top of Coping E	L. 12.700			
HEAD WALL				
FLAP GATE				
MWL EL. 10.60				
TOP OF RIP-RAF	9.804			
EL 9.304				
<u>_</u>				
		0 0.5	1,0 1,5 2,0	2,5 3.0m
	SCALE A	NOTE :		
ISIONS		AND REGULATIONS OF DETAILED ENGI	SECTION 4 OF ANNEX "A" OF THE REVISED S OF R.A. 9184, APPROVAL BY THE AUTHOR NEERING SURVEYS AND DESIGN UNDERTA	IZED DPWH OFFICIALS KEN BY CONSULTANTS
ON APPF	ROVED DATE	INTEGRITY OF THE	ES THE RESPONSIBILITY OF THE LATTER FO SURVEYS AND DESIGN NOR TRANSFER AN O THE APPROVING OFFICIALS.	R THE TECHNICAL Y PART OF THAT
				SHUJI KAKU FEAM LEADER
	PROJECT 8		SHEET CONTENTS	SHEET NO.
APPROVED BY: SEE COVER SHEET FOR THE			DETAIL OF DRAINAGE	
SIGNATURE AND APPROVAL OF THE SECRETARY	RIVER C IMPROV PROJECT (/EMENT	OUTLET- DR83.46 & MANHOLE MR83.46	LP-DR DO 83.46
ROGELIO L. SINGSON SECRETARY		MANILA	STA. 9+455 RB	



				SCALE A	0	2	.5	5.0	7.5	10m
1	SIONS					PURSUANT TO	OF R.A. 9184,	ANNEX "A" OF THE REV APPROVAL BY THE AUT EYS AND DESIGN UNDE	HORIZI	ED DPWH OFFICIALS
ION		APPR	OVED	DATE	NE	ITHER DIMINISHE	S THE RESPON	SIBILITY OF THE LATTE	R FOR	THE TECHNICAL
						SPONSIBILITY T		DESIGN NOR TRANSFEF NG OFFICIALS.	< AN Y I	PARTOFTHAT
								_		HUJI KAKU
									TE	AM LEADER
			F	PROJECT &	LOC	ATION	SHEE	ET CONTENTS		SHEET NO.
	APPROVED BY:			PASIG-M	ARI	KINA				
E	SEE COVER SHEET FOR T SIGNATURE AND APPROVA THE SECRETARY			RIVER CI				& PROFILE O		LP-DR DOI85/P
	ROGELIO L. SINGS SECRETARY	ON	PI	ROJECT (METRO		<i>,</i> .	COL			D0 85/F



NHOLE (COVER	
NCRETE	BLOCK	PAVING

L.13.558			
VC NG RCP PVC	2,978	3,228	
	250		

-LEVELING CONCRETE

Top of Wall EL. 14.558

-VERTICAL WALL

DFL EL.13.558

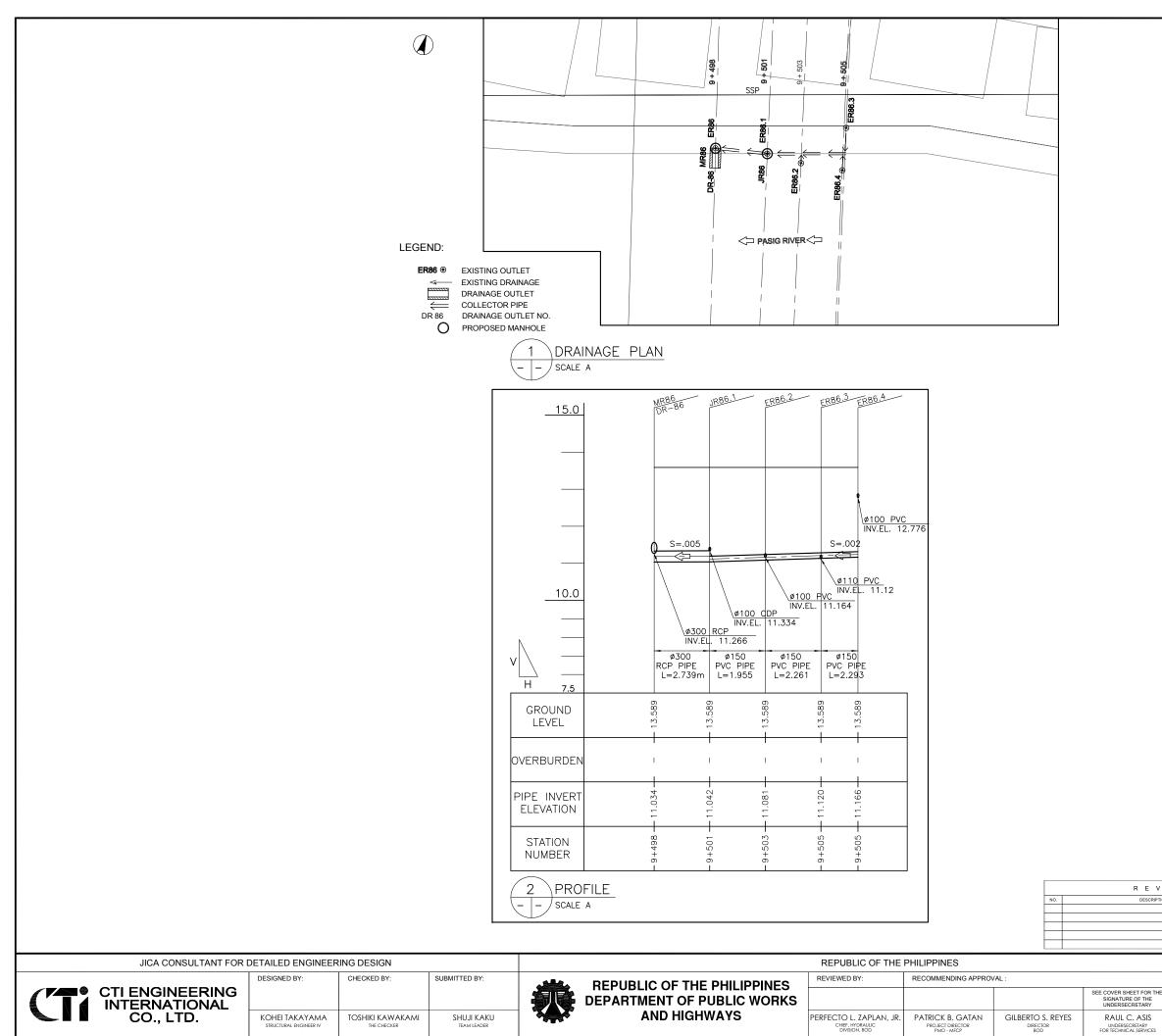
-INCLINED WALL

Top of Coping EL. 12.700

-HEAD WALL

-FLAP GATE

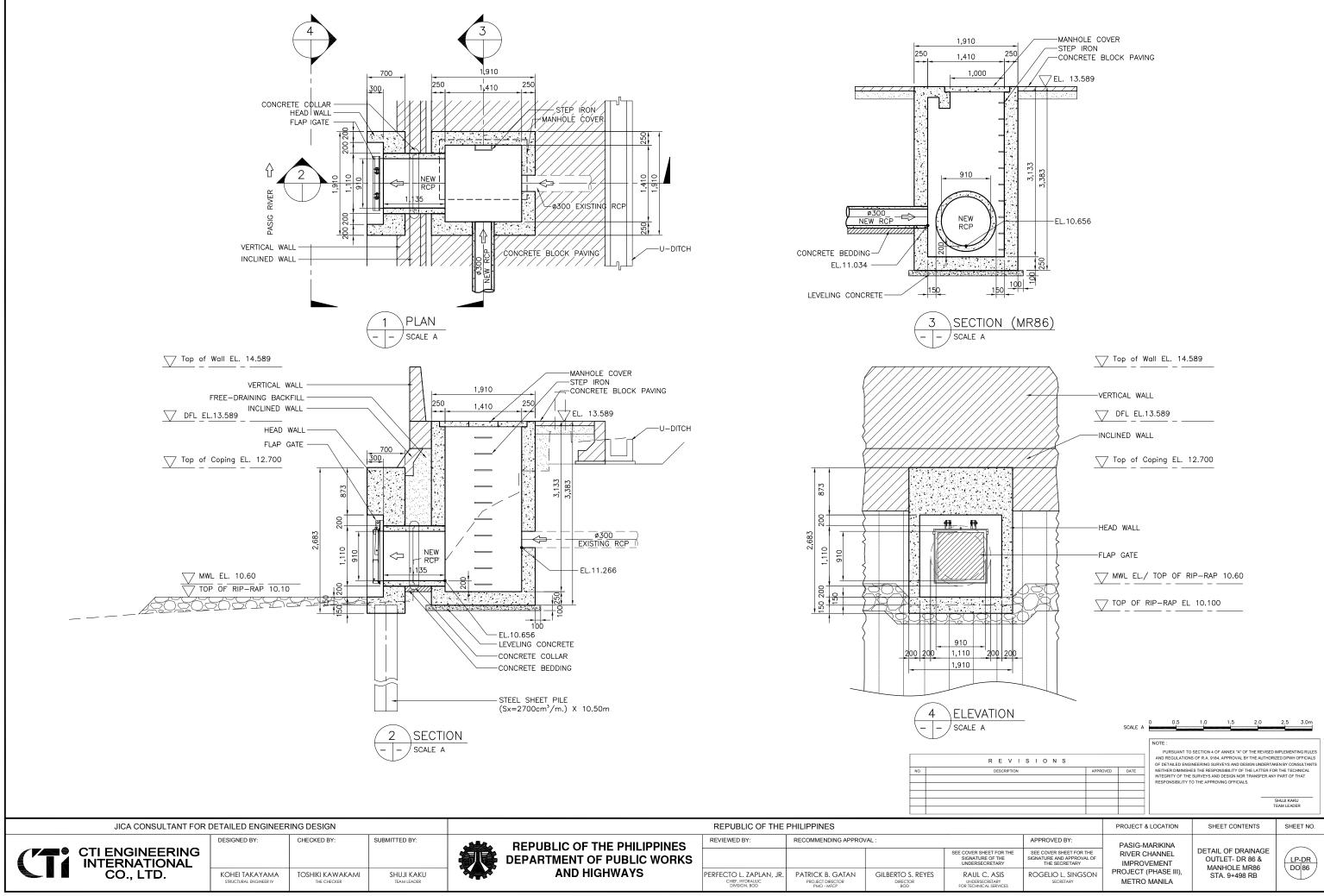
			SC/	ALE A	0.5	1.0	1.5	2.0	2.5	3.0m
I	S I O N S	APPRO	OVED DA		NOTE : PURSUANT TO AND REGULATIONS OF DETAILED ENGII NEITHER TURNINISHE INTEGRITY OF THE RESPONSIBILITY TO	S OF R.A. 9184, A NEERING SURVE S THE RESPONS	PPROVAL B SYS AND DES SIBILITY OF T SIBILITY OF T	Y THE AUTHORIZ SIGN UNDERTAK INE LATTER FOR TRANSFER ANY 3.	ZED DPWH EN BY COI R THE TEC	OFFICIALS NSULTANTS HNICAL THAT
			PROJ	ECT & L	OCATION	SHEE	T CONTE	ENTS	SHE	ET NO.
	APPROVED BY:		PAS	SIG-MA	RIKINA					
	SEE COVER SHEET FOR T SIGNATURE AND APPROVA THE SECRETARY		RIV		ANNEL	OUT	OF DR LET- DF IHOLE I			P-DR
	ROGELIO L. SINGSON SECRETARY METRO				,.		A. 9+482			

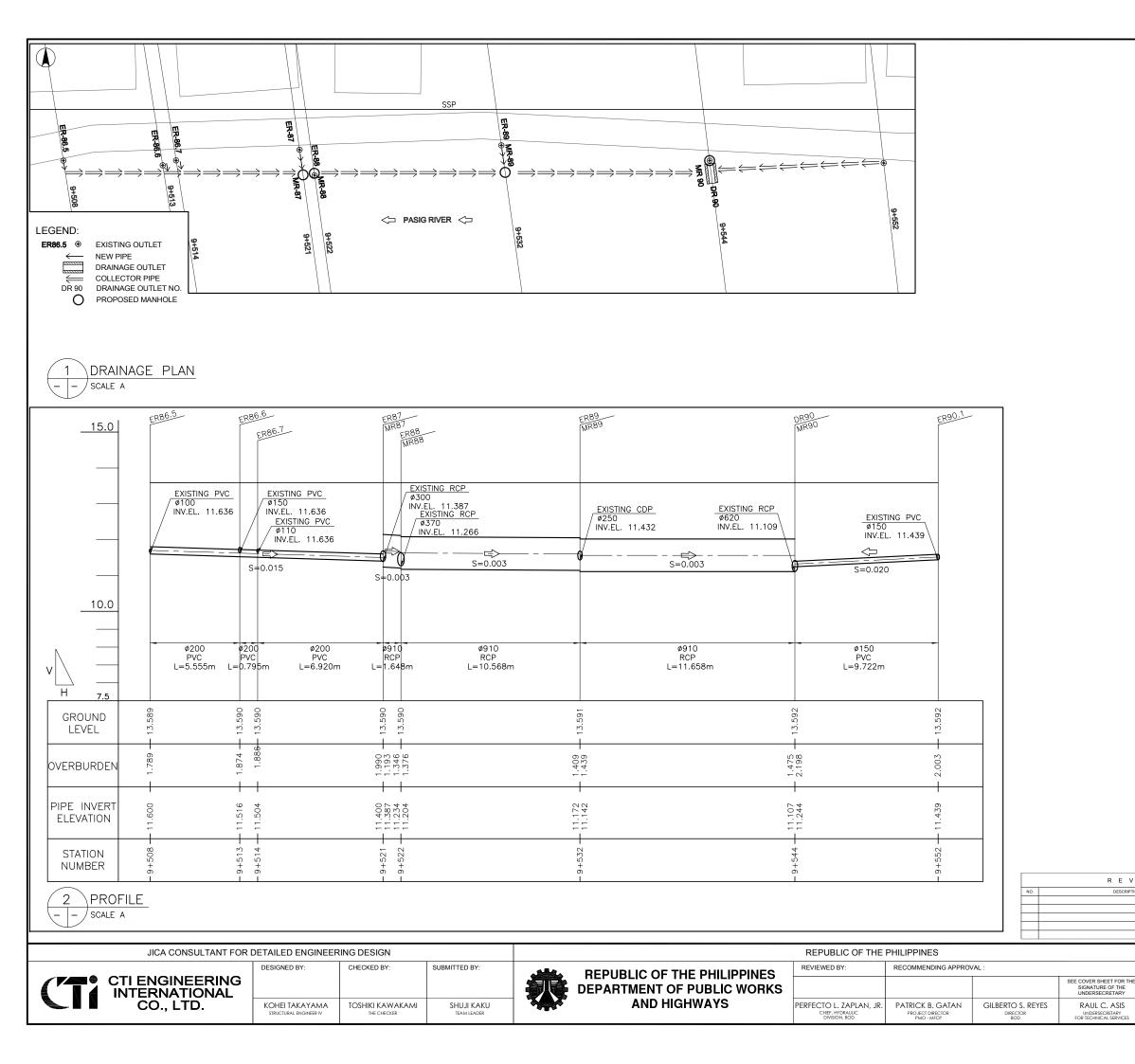


TOSHIKI KAWAKAMI THE CHECKER

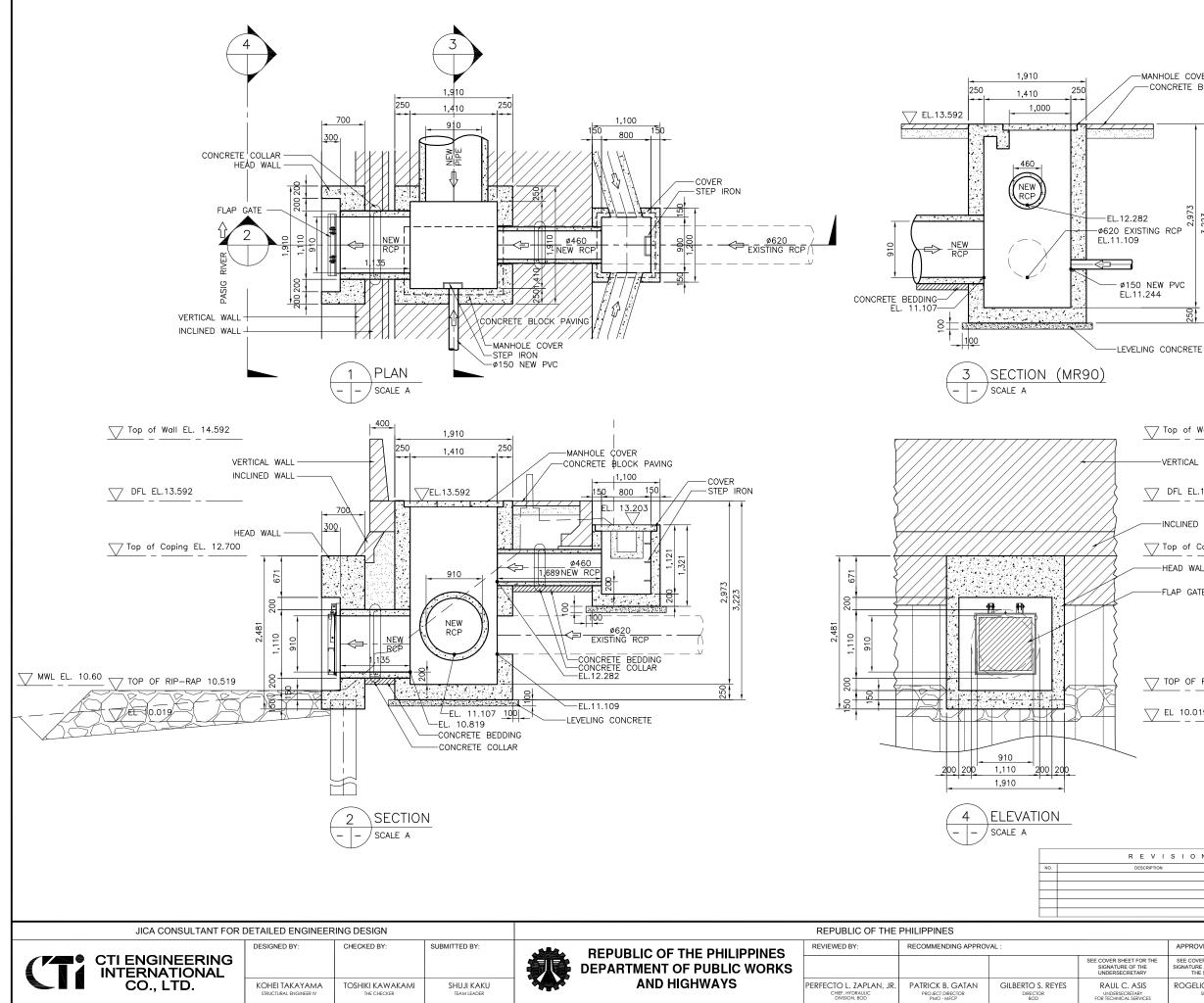
				SCALE A	0 2.	5 5.0	7.5	10m
					NOTE : PURSUANT TO	SECTION 4 OF ANNEX "A" OF THE F	REVISED IN	PLEMENTING RULES
Т	SIONS					S OF R.A. 9184, APPROVAL BY THE A NEERING SURVEYS AND DESIGN U		
ON		APPR	OVED	DATE		S THE RESPONSIBILITY OF THE LAT SURVEYS AND DESIGN NOR TRANS		
						D THE APPROVING OFFICIALS.	FER ANT I	PARTOF THAT
								HUJI KAKU
							TE	AM LEADER
			F	ROJECT 8	LOCATION	SHEET CONTENTS	;	SHEET NO.
	APPROVED BY:			PASIG-N	IARIKINA			-
	SEE COVER SHEET FOR 1 SIGNATURE AND APPROVA THE SECRETARY			RIVER C		PLAN & PROFILE COLLECTOR PIF		LP-DR DOI86/P

UNDERSECRETARY FOR TECHNICAL SERVICES





				SCALE A	0 2.	5 5.0	7.5	10m
I	SIONS	APPR	OVED	DATE	AND REGULATION OF DETAILED ENGI NEITHER DIMINISHE INTEGRITY OF THE	SECTION 4 OF ANNEX 7 3 OF R.A. 8184, APPROV/ NEERING SURVEYS AND 53 THE RESPONSIBILITY SURVEYS AND DESIGN N D THE APPROVING OFFIC	AL BY THE AUTHORIZ DESIGN UNDERTAK OF THE LATTER FOR NOR TRANSFER ANY CIALS.	ZED DPWH OFFICIALS ZEN BY CONSULTANTS R THE TECHNICAL
			F	PROJECT &	LOCATION	SHEET CO	NTENTS	SHEET NO.
	APPROVED BY:			PASIG-M	IARIKINA			_
	SEE COVER SHEET FOR SIGNATURE AND APPROVA THE SECRETARY			RIVER C	HANNEL	PLAN & PR COLLECT		LP-DR
	ROGELIO L. SINGS SECRETARY	SON	PI	ROJECT (METRO	(PHASE III), MANILA	COLLECT	OKFIPE	DO 90/P



RCP	2,973	3,223	
W PVC	:	,	
	250		

Top of Wall EL. 14.592

-VERTICAL WALL

✓ DFL EL.13.592

-INCLINED WALL

~~ Top of Coping EL. 12.700

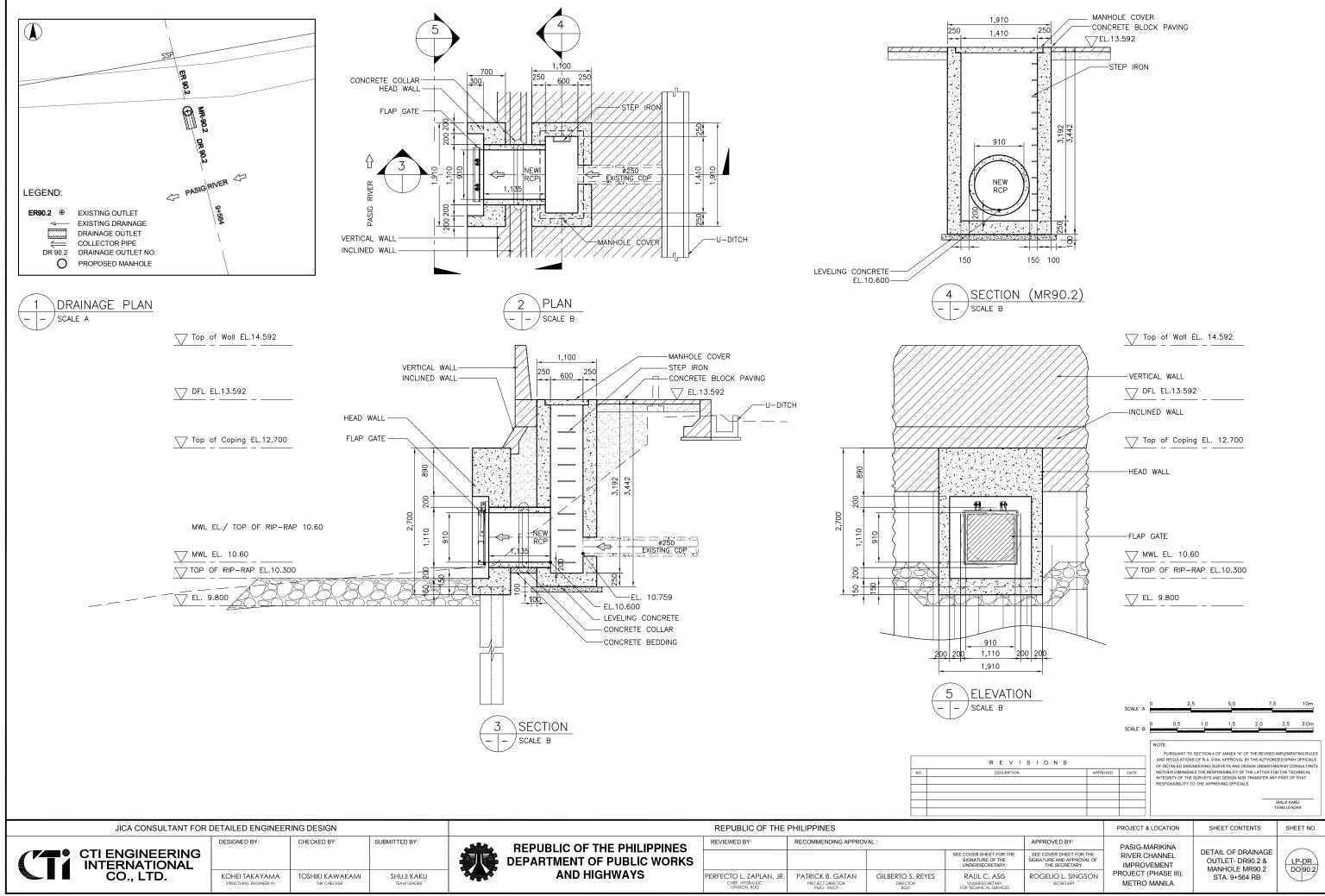
-HEAD WALL

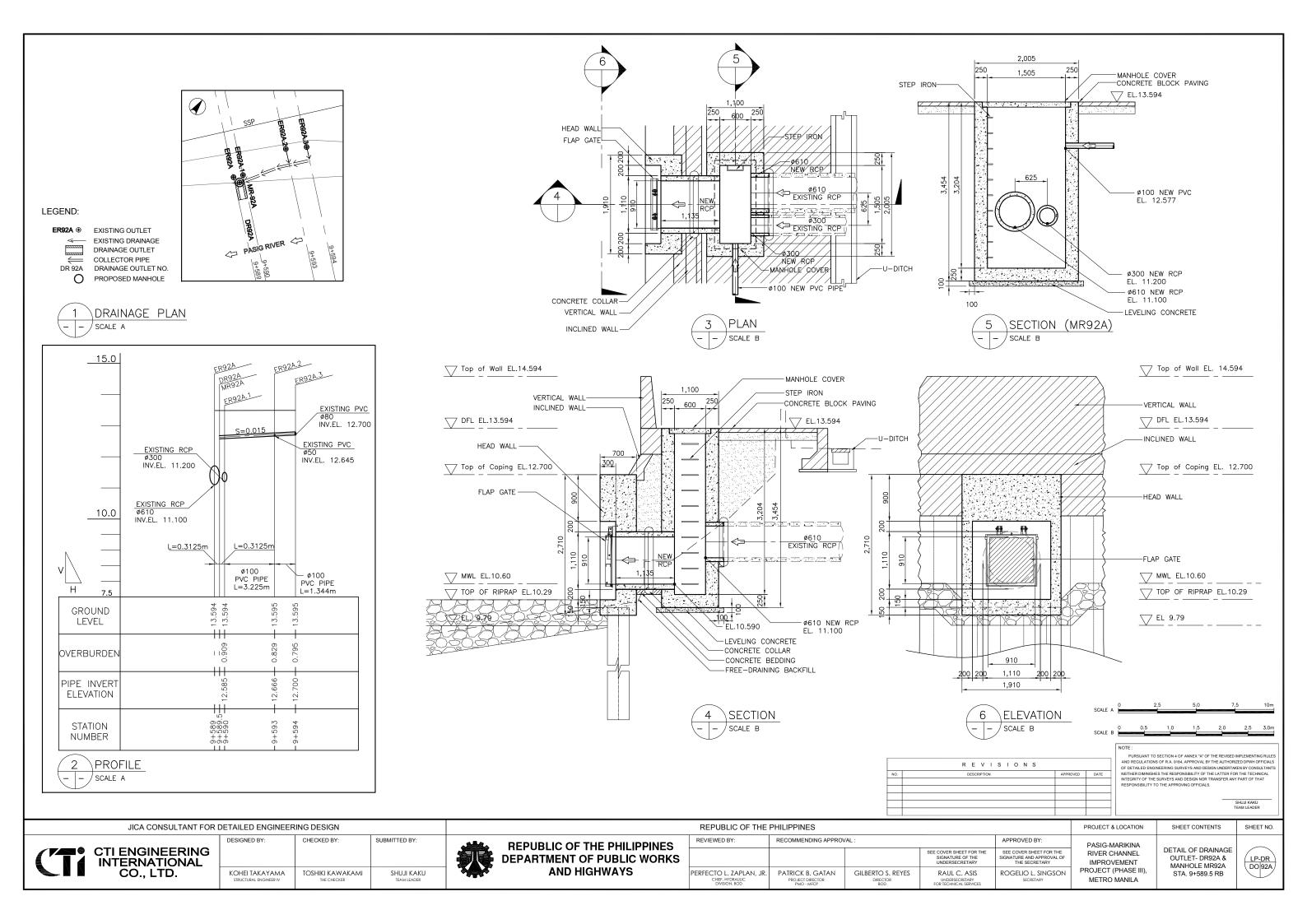
-FLAP GATE

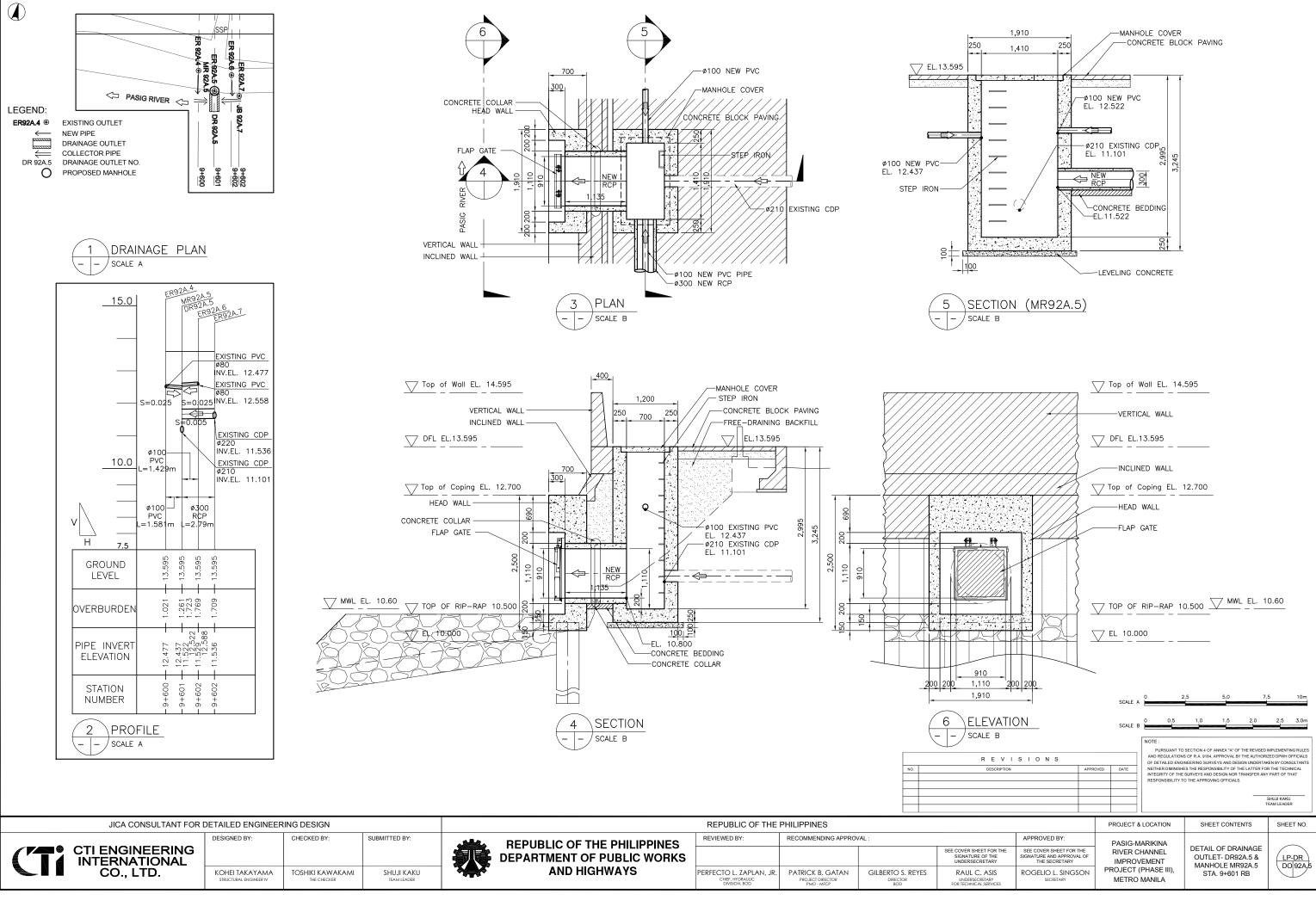
_____ TOP OF RIP-RAP 10.519_____ MWL_EL. 10.60

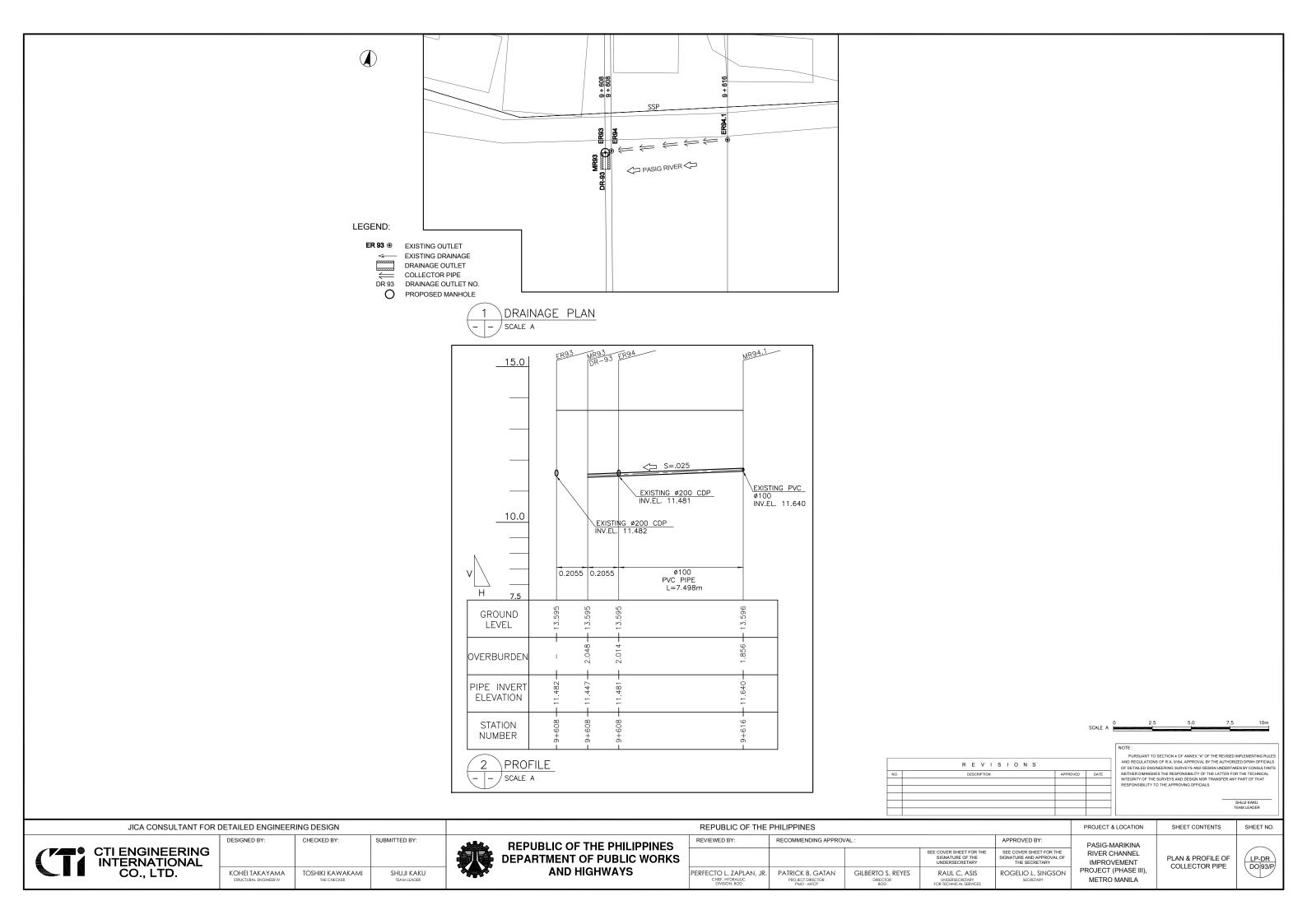
V EL 10.019

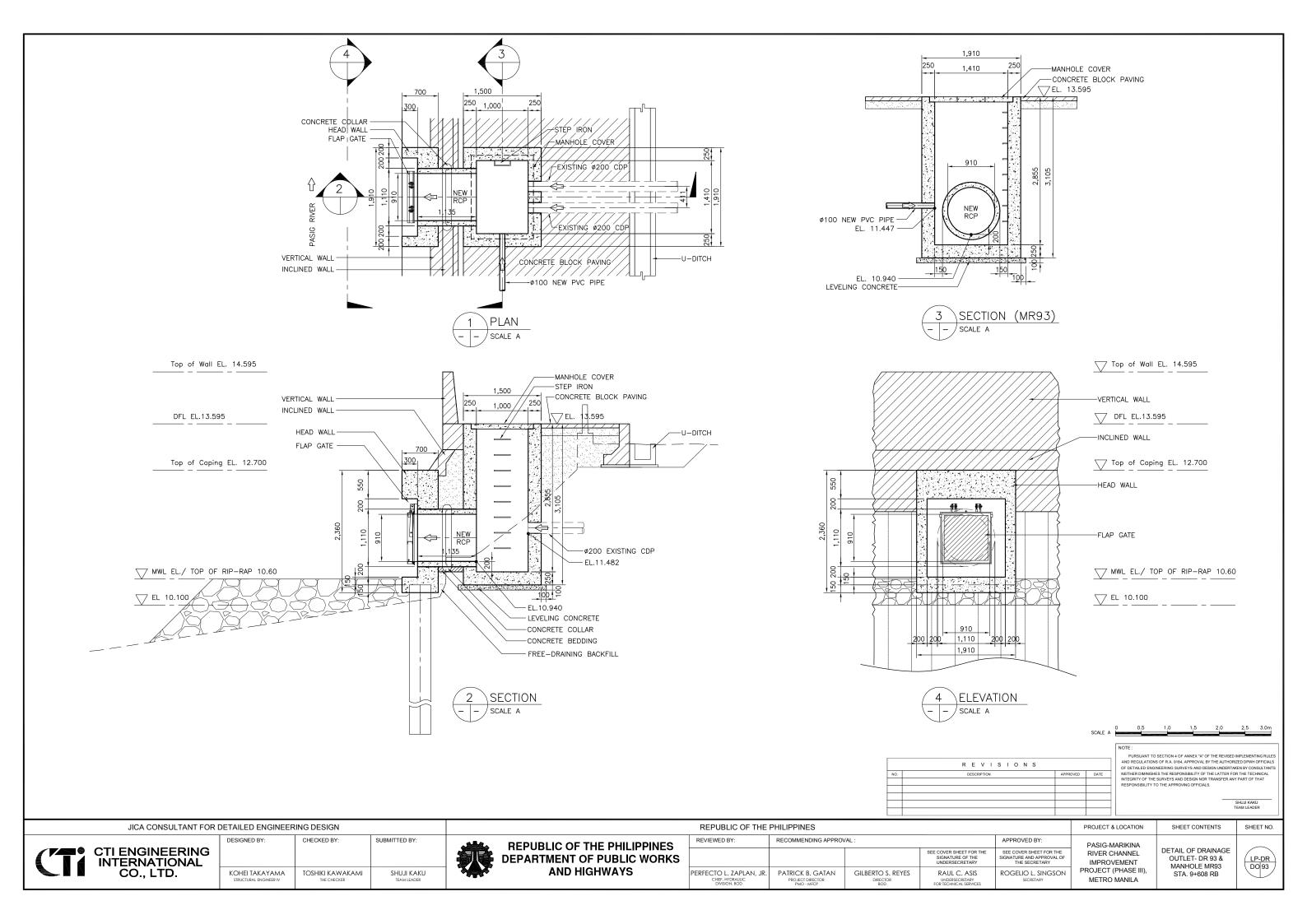
			SCALE A	0 0.5	1.0	1.5	2.0	2.5	3.0m
I N	SIONS	APPR	DVED DATE	NOTE : PURSUANT TO AND REGULATION OF DETAILED ENG NETHER DIMINISH INTEGRITY OF THE RESPONSIBILITY T	NEERING SURVE ES THE RESPONS SURVEYS AND DI	PPROVAL BY YS AND DES IBILITY OF TH ESIGN NOR T	THE AUTHORI IGN UNDERTAK HE LATTER FOI RANSFER ANY	ZED DPWH EN BY CON R THE TECH	OFFICIALS ISULTANTS HNICAL ITHAT
			PROJECT &	& LOCATION	SHEE	T CONTE	NTS	SHE	ET NO.
	APPROVED BY:		PASIG-N	IARIKINA					
	SEE COVER SHEET FOR T SIGNATURE AND APPROVA THE SECRETARY			RIVER CHANNEL IMPROVEMENT		DETAIL OF DRAINAGE OUTLET- DR90 & MANHOLE MR90	90 &		D-DR
	ROGELIO L. SINGS SECRETARY	ION		(PHASE III), MANILA	STA. 9+544 RB				90

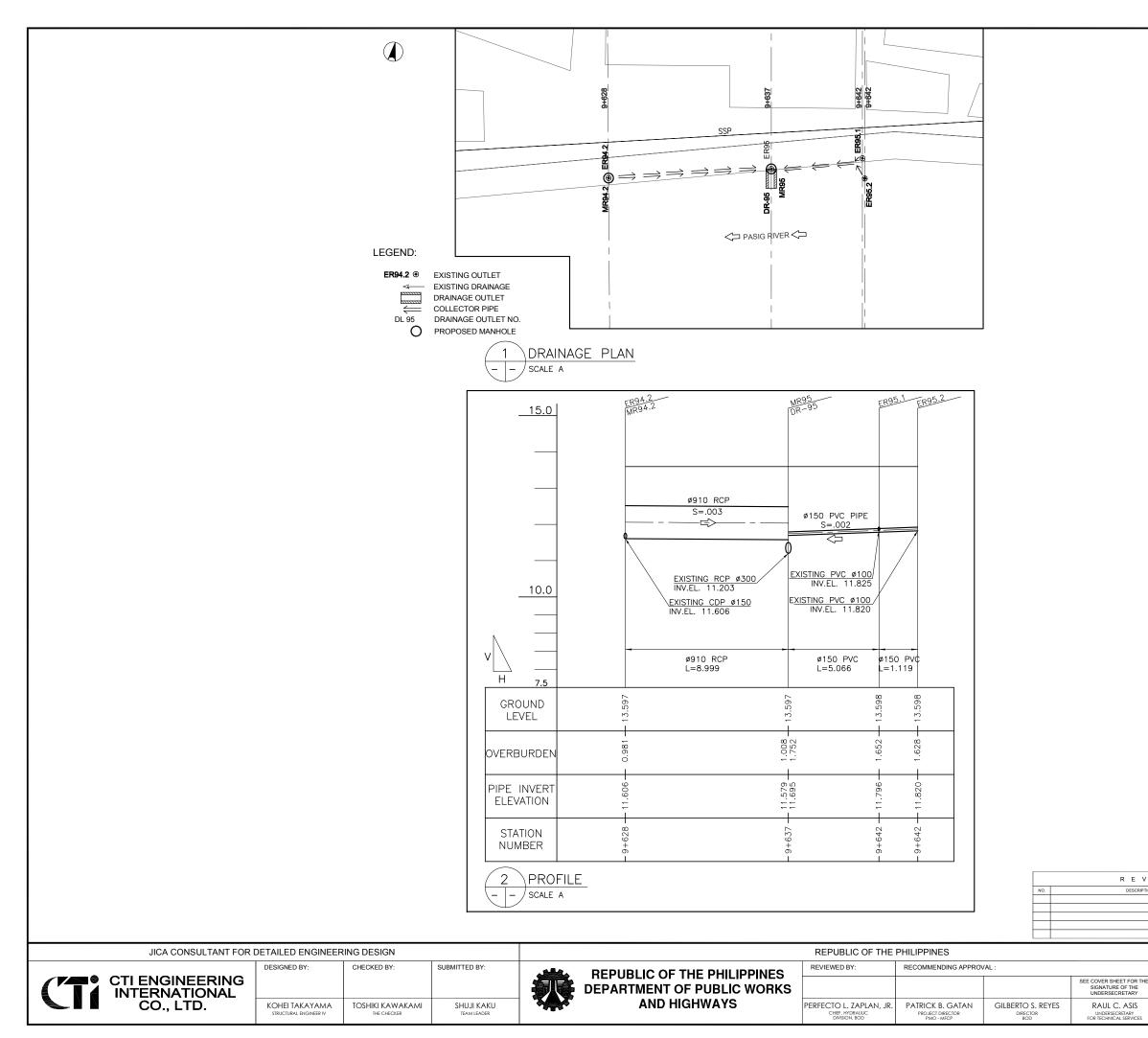




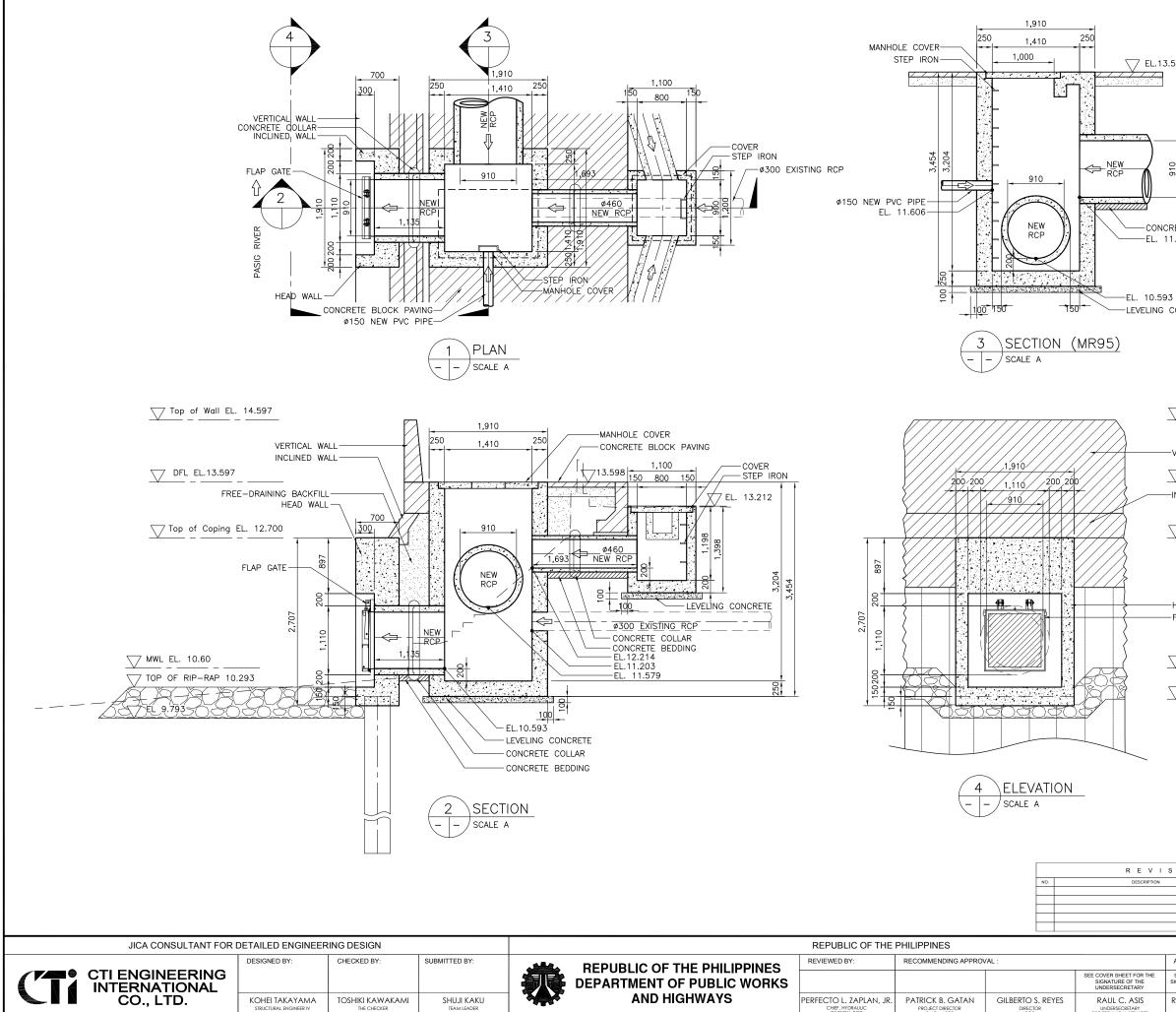








			SCALE	A	0 2	5	5.0	7.5	i 10m
I	SIONS	APPR	DVED DATE		AND REGULATION OF DETAILED ENGINEITHER DIMINISH	S OF R.A. 9184, AI NEERING SURVE S THE RESPONS SURVEYS AND DE	PPROVAL BY THE AU YS AND DESIGN UNE IBILITY OF THE LATT ESIGN NOR TRANSFI	JTHORIZ DERTAK ER FOF ER ANY	
			PROJECT	8	LOCATION	SHEE	T CONTENTS		SHEET NO.
	APPROVED BY:		PASIG-	-M	ARIKINA				_
1	SEE COVER SHEET FOR THE SIGNATURE AND APPROVAL OF THE SECRETARY		RIVER	RIVER CHANNEL			PLAN & PROFILE OF		LP-DR
	ROGELIO L. SINGS SECRETARY	ELIO L. SINGSON PROJEC			PHASE III), MANILA	COLL			DO 95/P



KOHEI TAKAYAMA STRUCTURAL ENGINEER IV

TOSHIKI KAWAKAMI THE CHECKER

SHUJI KAKU

PERFECTO L. ZAPLAN, JR. CHIEF, HYDRAULIC DIVISION, BOD

GILBERTO S. REYES

RAUL C. ASIS

UNDERSECRETARY FOR TECHNICAL SERVICES

PATRICK B. GATAN

PROJECT DIRECTOR PMO - MFCP

. 1	3.597	

910	

-CONCRETE BEDDING -EL. 11.579

-LEVELING CONCRETE

 \bigtriangledown Top of Wall EL. 14.597

-VERTICAL WALL

DFL EL.13.597

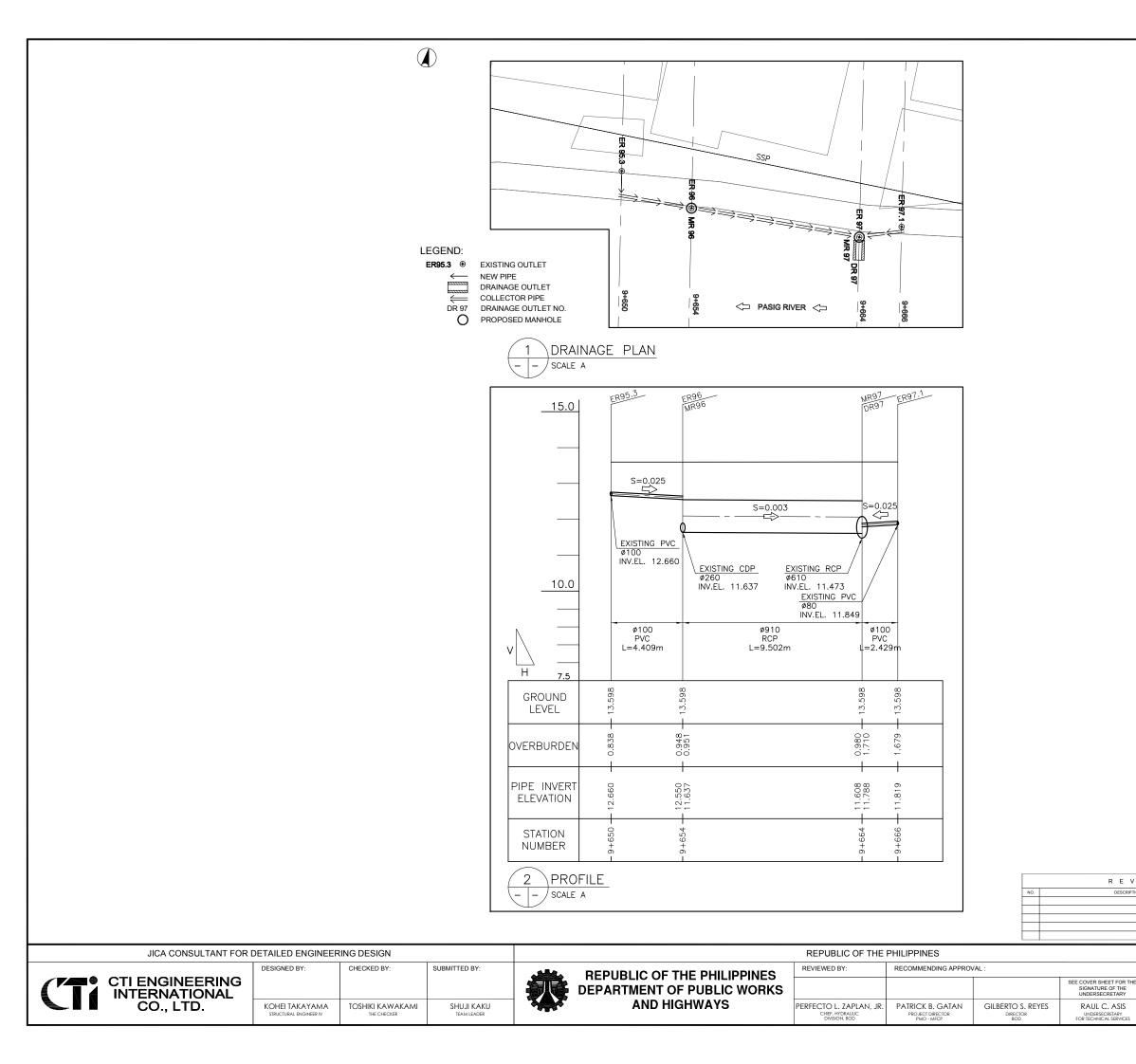
-INCLINED WALL

 \bigtriangledown Top of Coping EL. 12.700

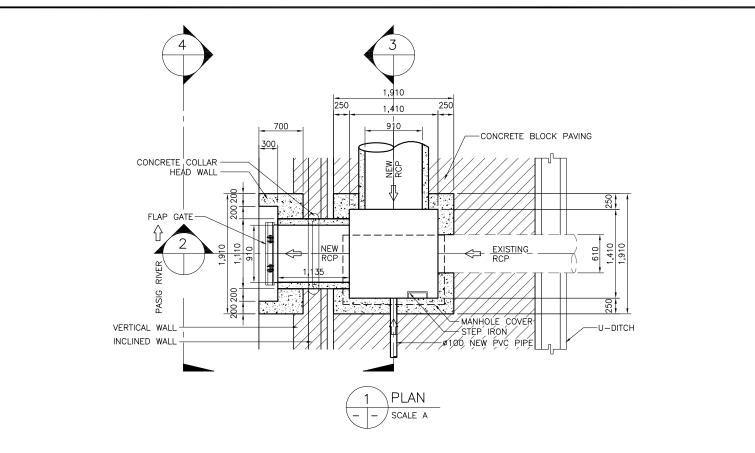
-HEAD WALL -FLAP GATE

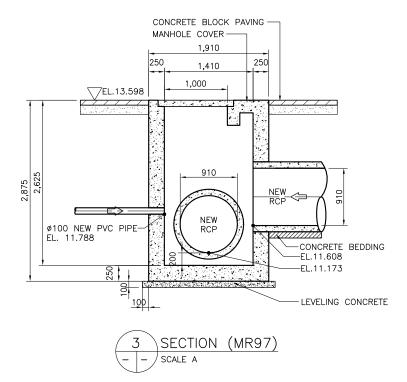
MWL EL./ TOP OF RIP-RAP 10.60

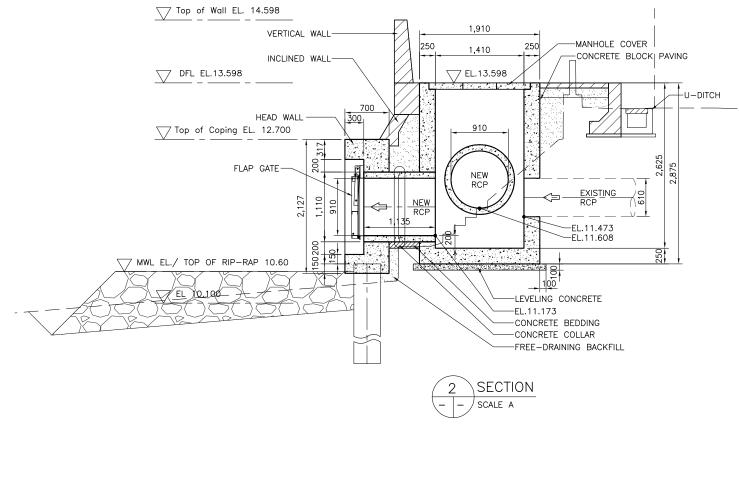
			SCALE A	0	0.5	1.0	1.5	2.0	2.5	3.0m
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			PROJECT	& LOC	ATION	SH	IEET CONT	ENTS	SHE	EET NO.
	APPROVED BY:		PASIG-N	/ARIK	KINA					_
	SEE COVER SHEET FOR T SIGNATURE AND APPROVA THE SECRETARY		RIVER C	RIVER CHANNEL IMPROVEMENT		OL	DETAIL OF DRAINAGE OUTLET DR-95 & MANHOLE MR95		P-DR	
	ROGELIO L. SINGS SECRETARY	ON	PROJECT METRO	•	<i>,.</i>	STA. 9+637 RB				090

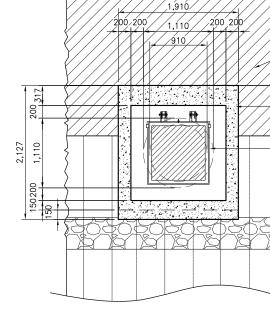


				SCALE A	0	2	.5	5.0	7.5	10m
	S I O N S				NOTE : PURSUANT TO SECTION 4 OF ANNEX "A" OF THE REVISED IMPLEMENTING RUU AND REGULATIONS OF R.4. 9184, APPROVAL BY THE AUTHORIZED DPWH OFFICIAL					
ION APPROVED DATE				DATE				EYS AND DESIGN UNDE SIBILITY OF THE LATTE		
						ESPONSIBILITY TO		ESIGN NOR TRANSFER	R ANY F	PART OF THAT
						ESF ON SIBILITY IN	THE AFFROM	G OFFICIALS.		
								_	S	HUJI KAKU
									TE	AM LEADER
			F	PROJECT &	LO	CATION	SHEE	T CONTENTS		SHEET NO.
	APPROVED BY:			PASIG-M	AR	IKINA				_
E	SEE COVER SHEET FOR THE SIGNATURE AND APPROVAL OF THE SECRETARY			RIVER CH			PLAN & PROFILE OF COLLECTOR PIPE			LP-DR DO 97/P
	ROGELIO L. SINGS SECRETARY	ON	PROJECT		CT (PHASE III), RO MANILA					DOISTIF







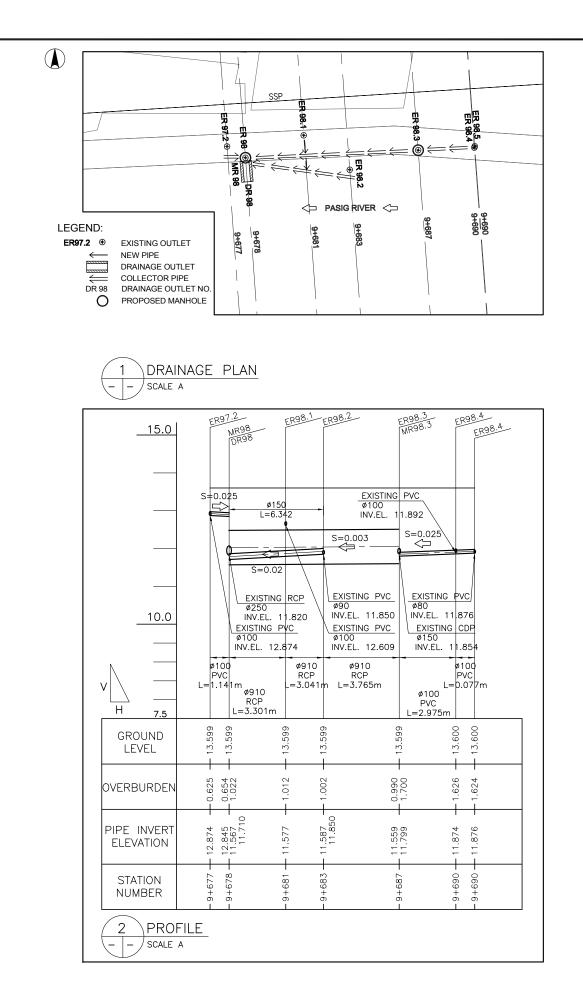






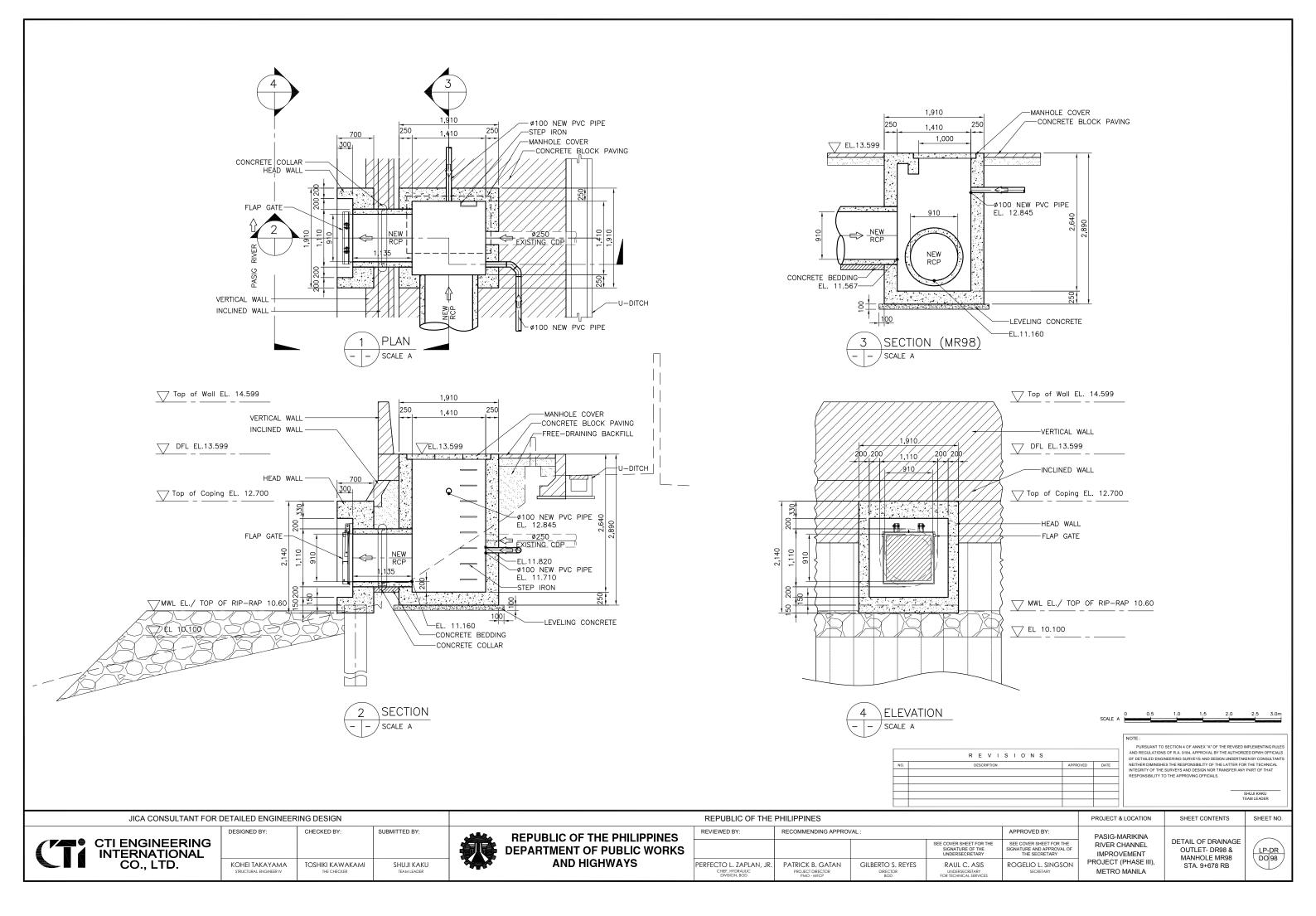
JICA CONSULTANT FOR	DETAILED ENGINEE	RING DESIGN		REPUBLIC OF THE PHILIPPINES					
	DESIGNED BY:	CHECKED BY:	SUBMITTED BY:		AL :				
				DEPARTMENT OF PUBLIC WORKS	SEE COVER SHEET FOR THE SIGNATURE OF THE UNDERSECRETARY				
CO., LTD.	KOHEI TAKAYAMA STRUCTURAL ENGINEER IV	TOSHIKI KAWAKAMI THE CHECKER	SHUJI KAKU TEAM LEADER	AND HIGHWAYS PERFECTO L. ZAPLAN, JR. PATRICK B. GATAN CHIEF HYDRAULIC CHIEF HYDRAULIC PROJECT DIRECTOR	GILBERTO S. REYES RAUL C. ASIS DIRECTOR BOD FOR TECHNICAL SERVICES				

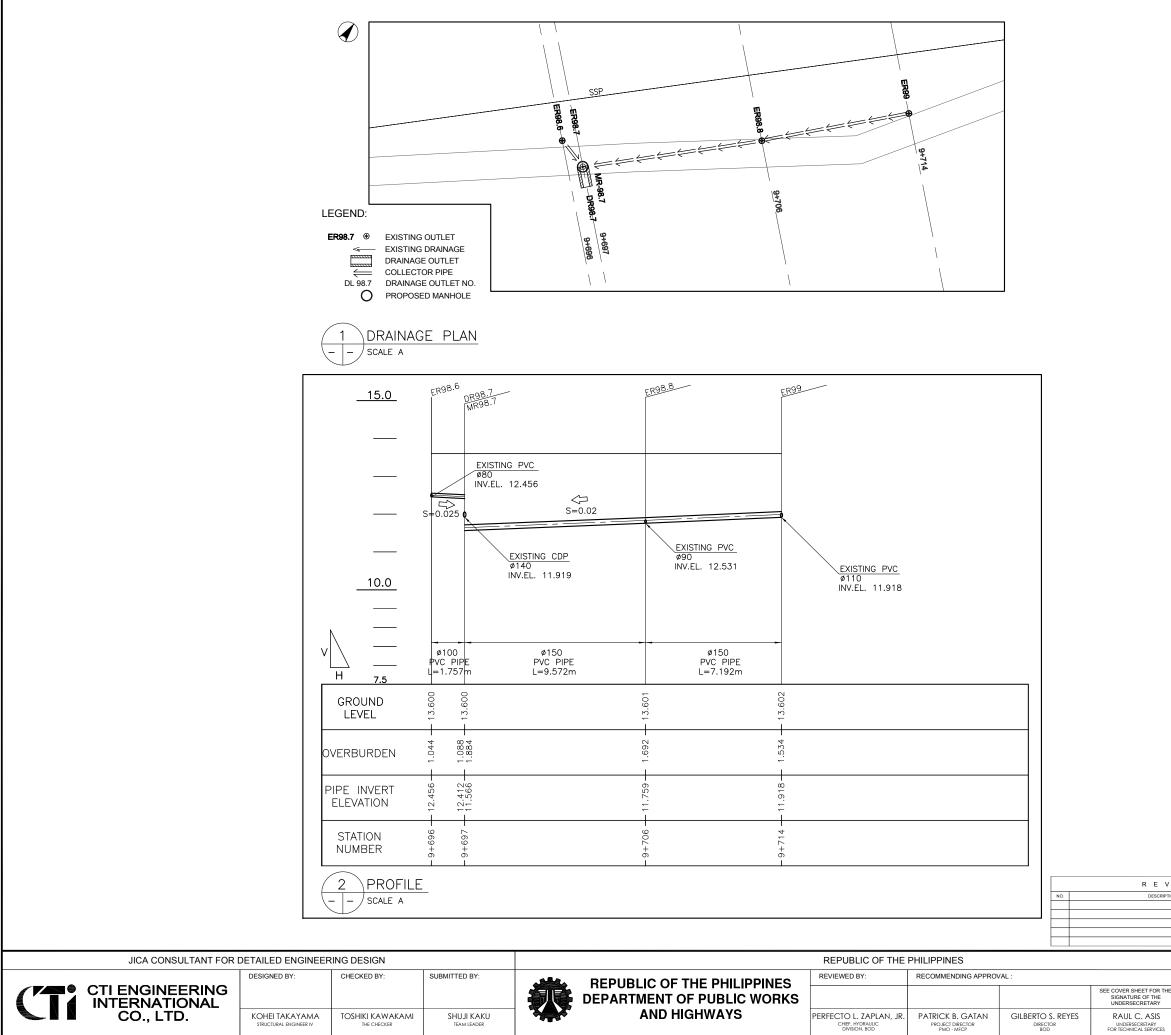
	∑ Top a	of Wall EL. 14.5	598		
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4	VERT	TICAL WALL			
		EL.13.598			
	INCL	.INED WALL			
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4		of Coping EL. 1 	2.700		
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		SCALE A	0 0.5	1.0 1.5 2.0	2.5 3.0m
			NOTE :		
			PURSUANT TO	SECTION 4 OF ANNEX "A" OF THE REVISED I S OF R.A. 9184, APPROVAL BY THE AUTHORI	MPLEMENTING RULES
	SIONS	APPROVED DATE	OF DETAILED ENGI	NEERING SURVEYS AND DESIGN UNDERTAK	EN BY CONSULTANTS
		AFFROVED DATE	INTEGRITY OF THE	SURVEYS AND DESIGN NOR TRANSFER ANY THE APPROVING OFFICIALS.	
				T	SHUJI KAKU EAM LEADER
		PROJECT &	LOCATION	SHEET CONTENTS	SHEET NO.
	APPROVED BY:	PASIG-M	ARIKINA		\sim
	SEE COVER SHEET FOR TH SIGNATURE AND APPROVAL THE SECRETARY	IE RIVER CH IMPROV		DETAIL OF DRAINAGE OUTLET- DR 97 &	LP-DR
	ROGELIO L. SINGSC		PHASE III),	MANHOLE MR97 STA. 9+664 RB	DO 97



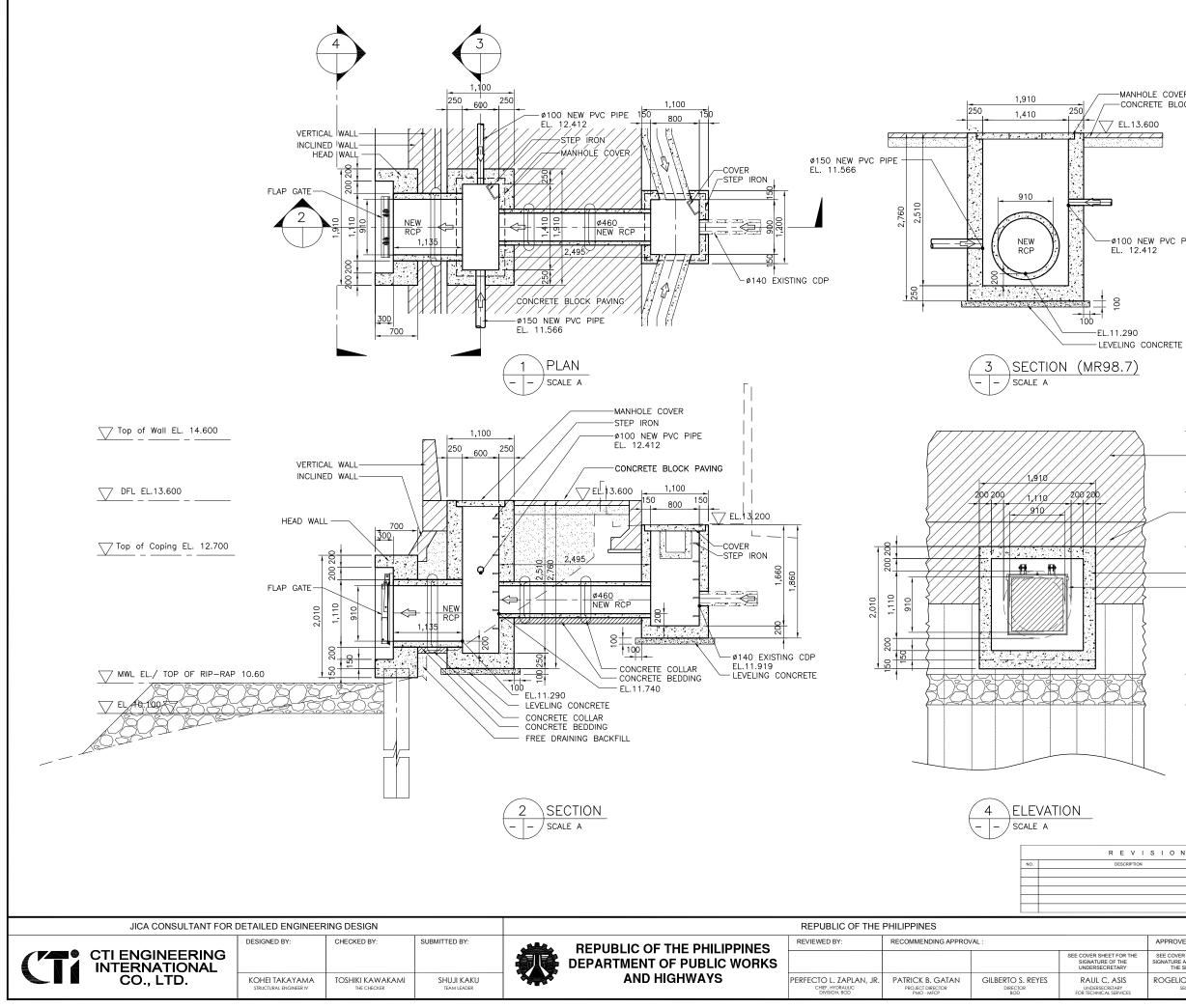
JICA CONSULTANT FOR DETAILED ENGINEERING DESIGN					REPUBLIC OF THE PHILIPPINES					
		DESIGNED BY:	CHECKED BY:	SUBMITTED BY:	REPUBLIC OF THE PHILIPPINES	REVIEWED BY:	RECOMMENDING APPROV	/AL :		
	CTI ENGINEERING INTERNATIONAL CO., LTD.				DEPARTMENT OF PUBLIC WORKS				SEE COVER SHEET FOR THE SIGNATURE OF THE UNDERSECRETARY	
		KOHEI TAKAYAMA STRUCTURAL ENGINEER IV	TOSHIKI KAWAKAMI THE CHECKER	SHUJI KAKU TEAM LEADER		PERFECTO L. ZAPLAN, JR. CHIEF, HYDRAULIC DIVISION, BOD	PATRICK B. GATAN PROJECT DIRECTOR PMO - MFCP	GILBERTO S. REYES	RAUL C. ASIS UNDERSECRETARY FOR TECHNICAL SERVICES	

				SCALE A	0 2.	5 5.0 7.	5 10m
ISIONS ON APPROVED DATE					AND REGULATIONS OF DETAILED ENGIIN NEITHER DIMINISHE INTEGRITY OF THE	SECTION 4 OF ANNEX "A" OF THE REVISED S OF R.A. 3194, APPROVAL BY THE AUTHOR REFINIC SURVEYS AND DESIXN UNDERTY. S THE RESPONSIBILITY OF THE LATTER F IS STREES OF AN A STATE OF A STATE OF A SURVEYS AND DESIXN NOR TRANSFER AN O THE APPROVING OFFICIALS.	RIZED DPWH OFFICIALS AKEN BY CONSULTANTS OR THE TECHNICAL
			F	ROJECT &	LOCATION	SHEET CONTENTS	SHEET NO.
E	APPROVED BY: SEE COVER SHEET FOR T SIGNATURE AND APPROVA THE SECRETARY ROGELIO L. SINGS SECRETARY	AL OF		PASIG-MARIKINA RIVER CHANNEL IMPROVEMENT ROJECT (PHASE III), METRO MANII A		PLAN & PROFILE OF COLLECTOR PIPE	LP-DR DO 98/P



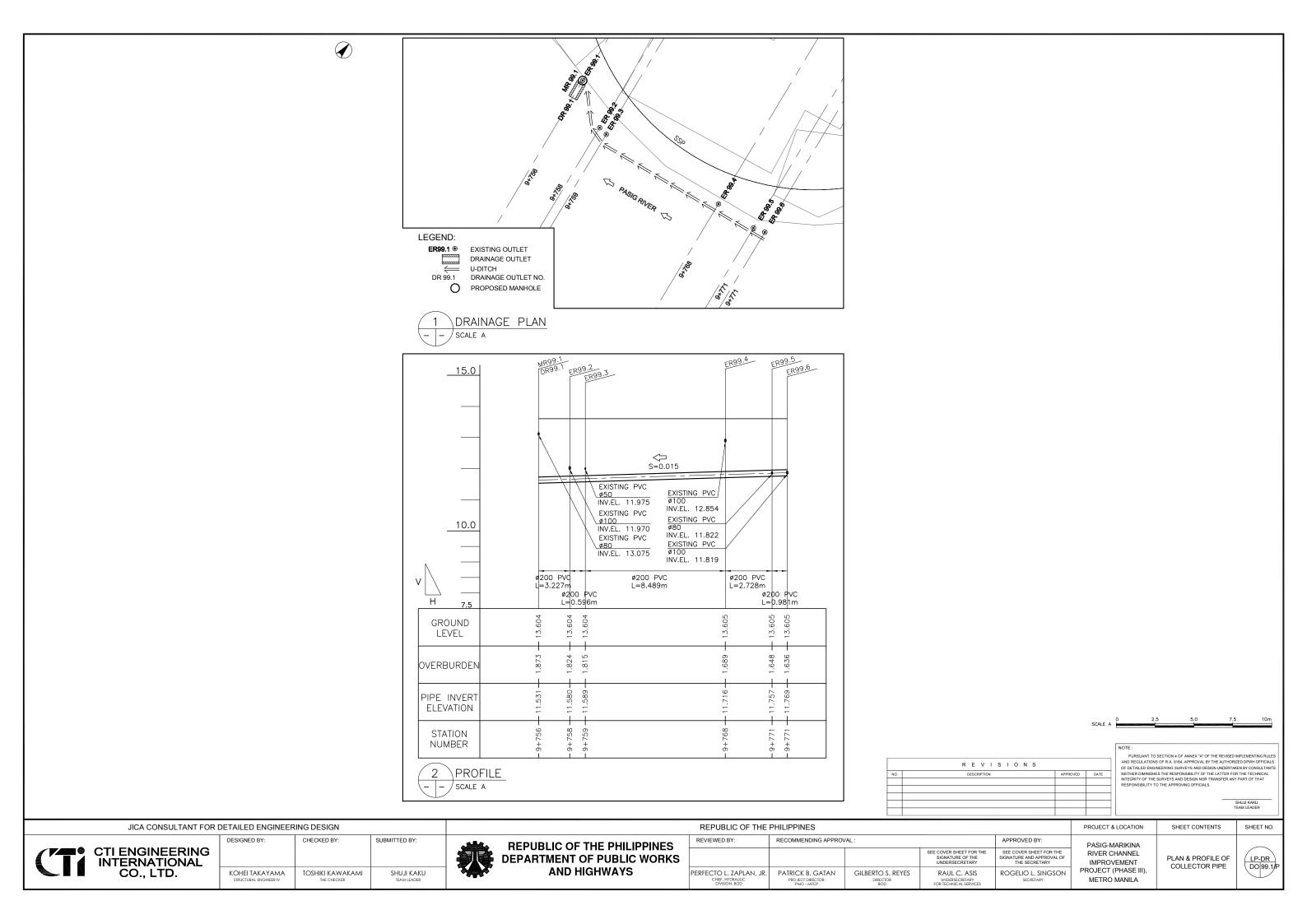


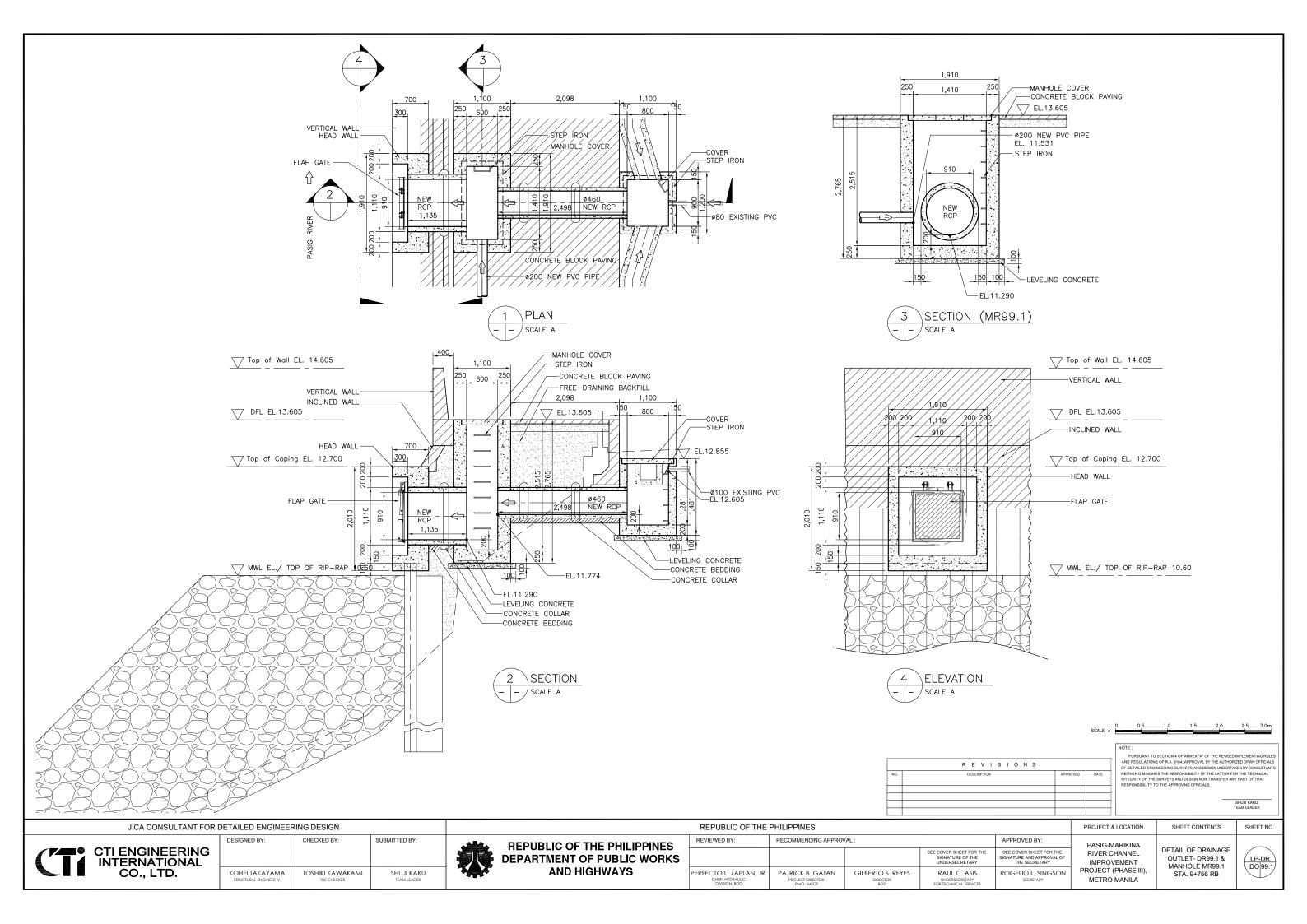
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		1	PROJECT &	LOCATION	SHEET CONTENTS	SHEET NO.
	APPROVED BY:		PASIG-M	ARIKINA		
E	SEE COVER SHEET FOR THE SIGNATURE AND APPROVAL O THE SECRETARY		RIVER CH	EMENT	PLAN & PROFILE OF COLLECTOR PIPE	LP-DR DOI98.7/P
	ROGELIO L. SINGSON SECRETARY	ן P	ROJECT (METRO	PHASE III), MANILA	JULLUTUR FIFE	

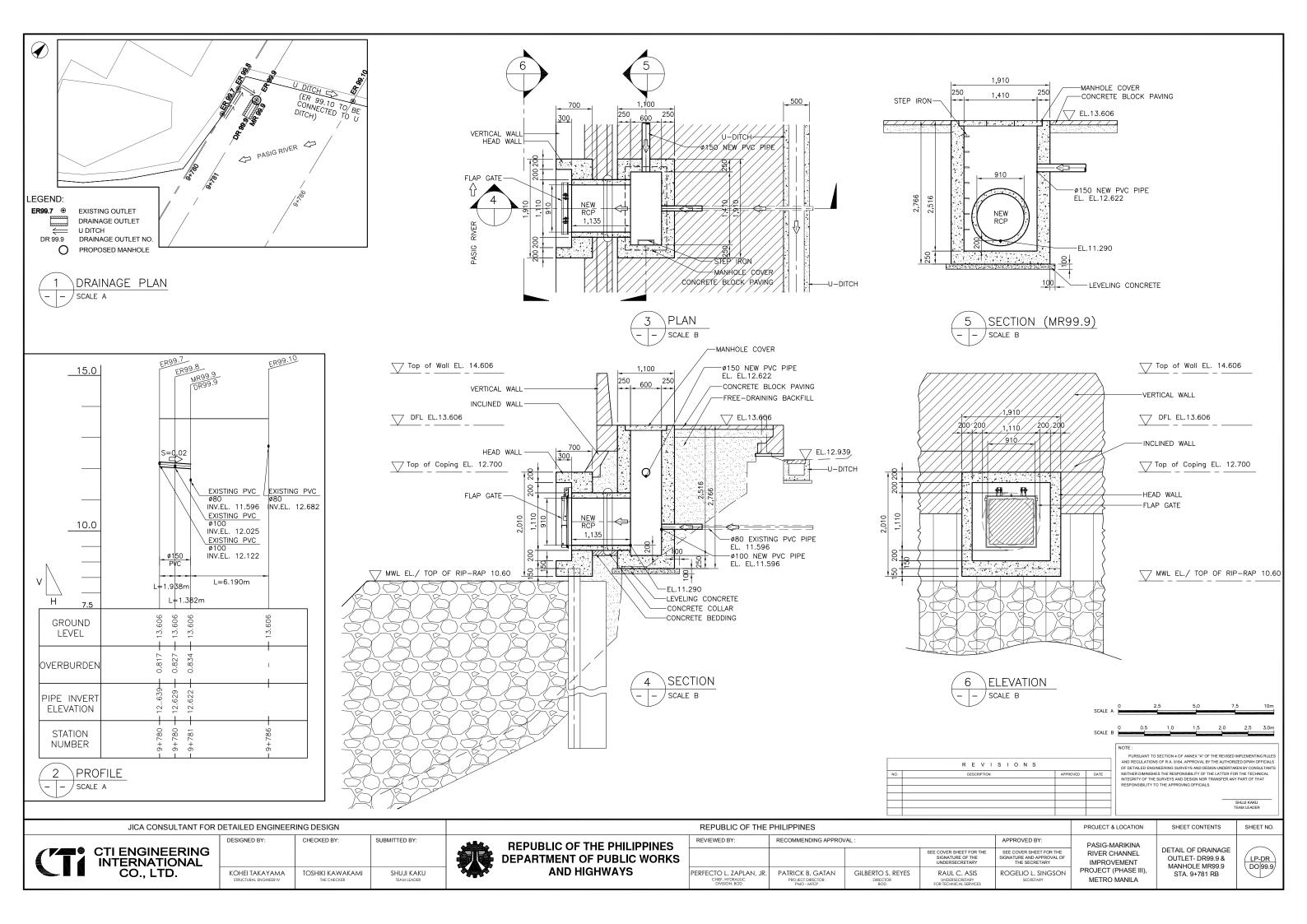


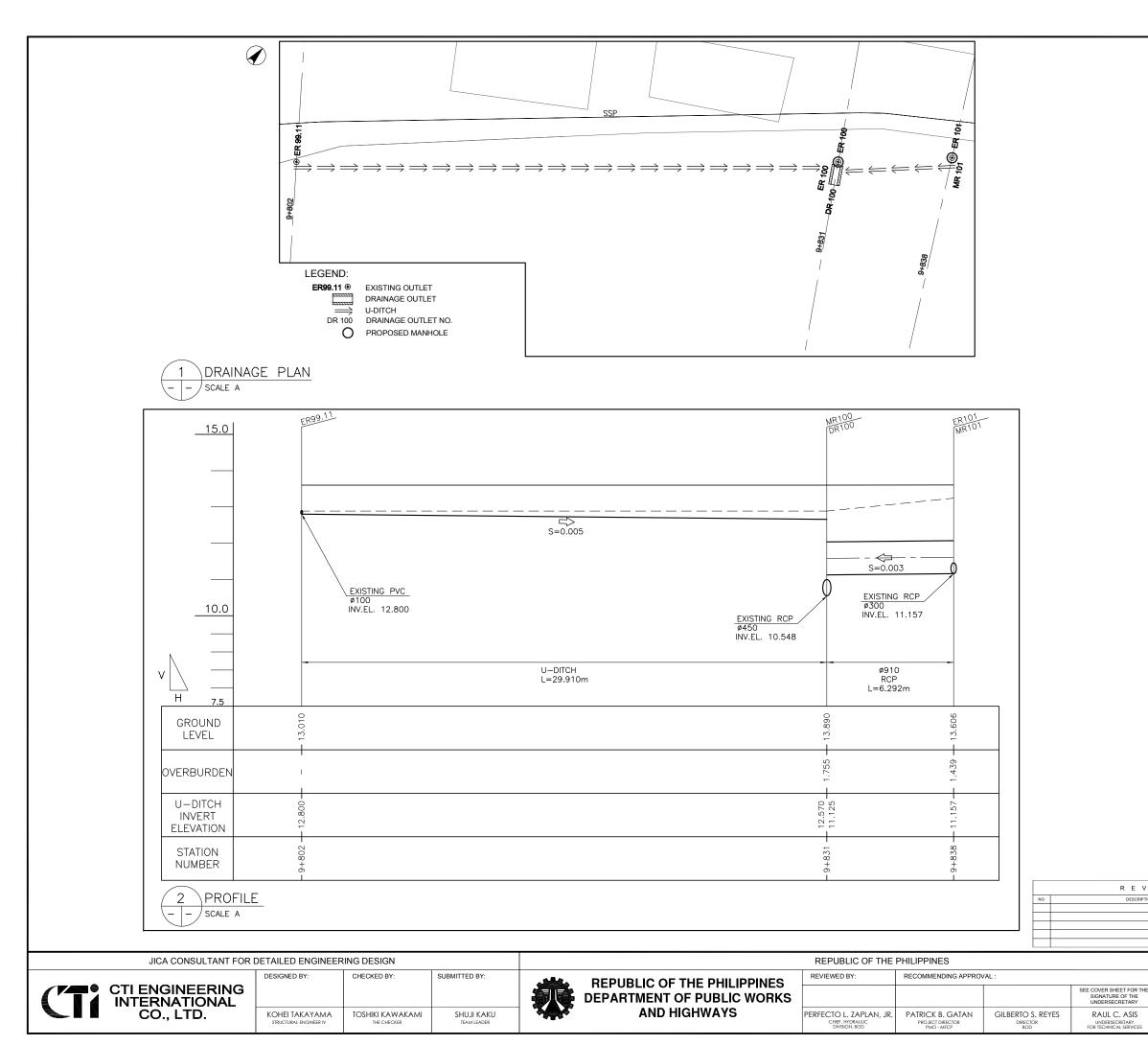
-ø100 NEW PVC PIPE EL. 12.412

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ION	APPR	OVED DATE	INTEGRITY OF THE	ES THE RESPONSIBILITY OF THE LATTER FO SURVEYS AND DESIGN NOR TRANSFER AN D THE APPROVING OFFICIALS.							
					SHUJI KAKU TEAM LEADER						
		PROJECT &	LOCATION	SHEET CONTENTS	SHEET NO.						
	APPROVED BY:										
	SEE COVER SHEET FOR THE SIGNATURE AND APPROVAL OF	PASIG-M RIVER C									
	THE SECRETARY	IMPROV PROJECT (OUTLET- DR98.7 & MANHOLE MR98.7	DO 98.7						
	ROGELIO L. SINGSON SECRETARY	METRO	,	STA. 9+697 RB							

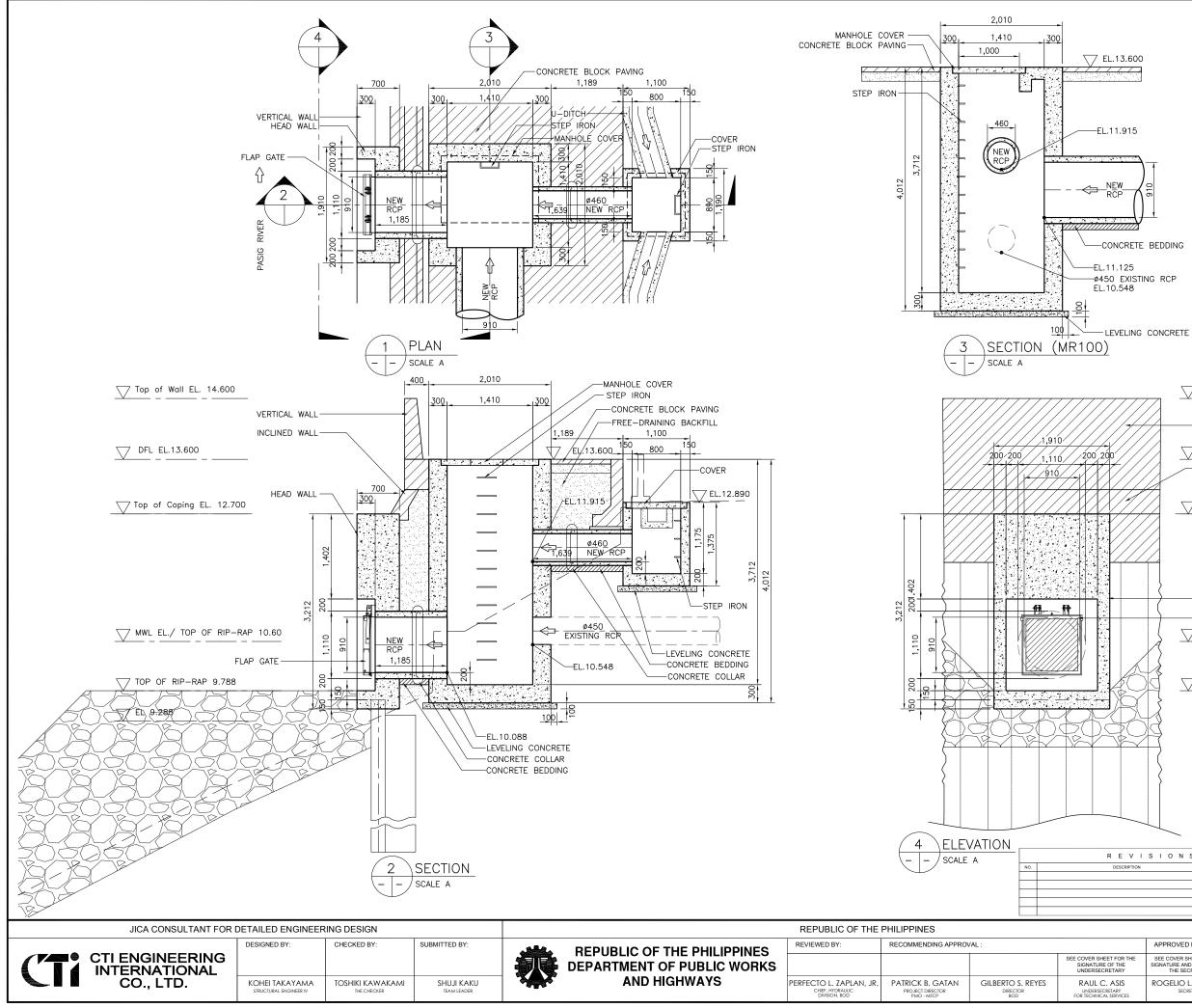




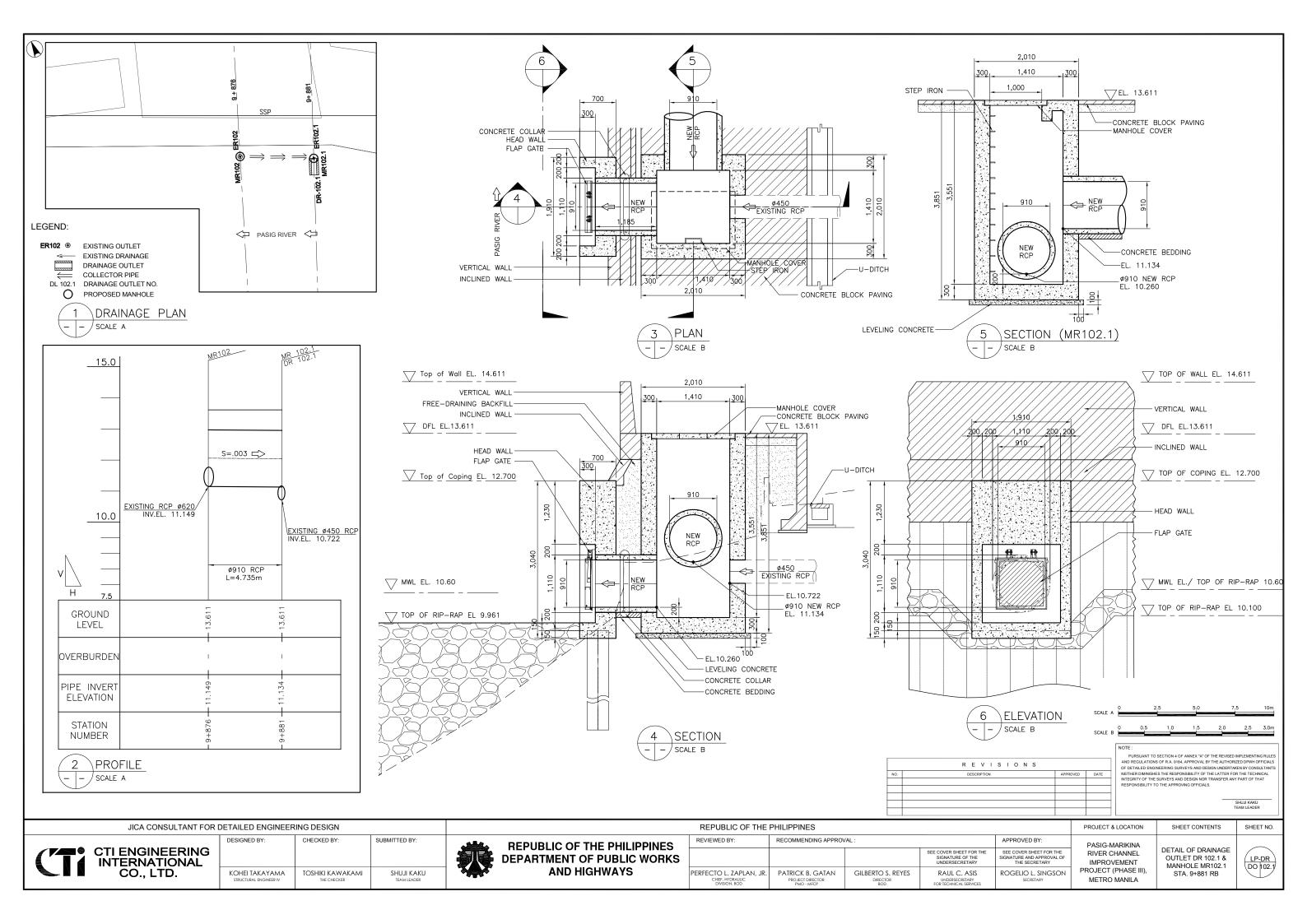


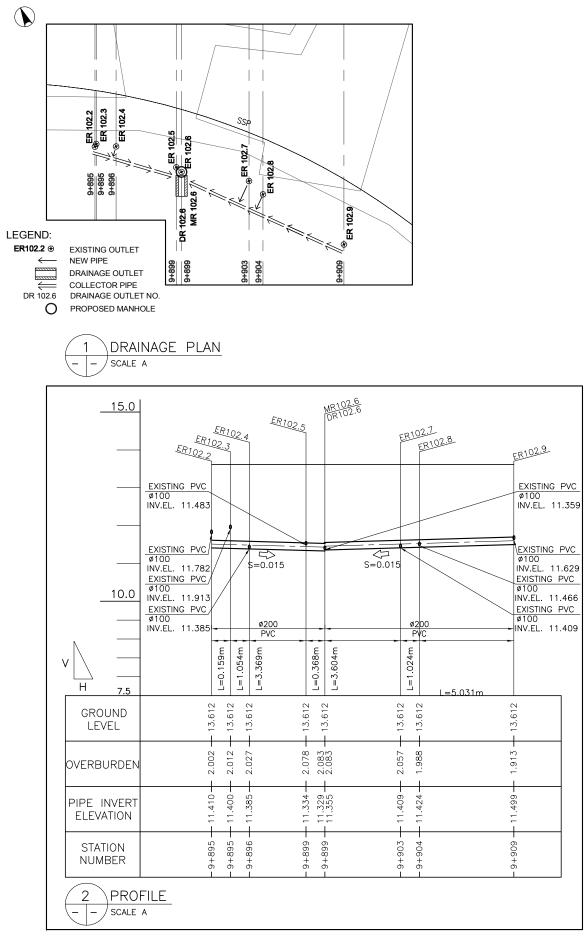


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				1	NOTE :							
ISIONS					PURSUANT TO SECTION 4 OF ANNEX "A" OF THE REVISED IMPLEMENTING RULES AND REGULATIONS OF R.A. 9184, APPROVAL BY THE AUTHORIZED DPWH OFFICIALS OF DETAILED ENGINEERING SURVEYS AND DESIGN UNDERTAKEN BY CONSULTANTS							
ION	APPR	OVED	DATE		NETHER DIMINSHES THE RESPONSIBILITY OF THE LATTER FOR THE TECHNICAL INTEGRITY OF THE SURVEYS AND DESIGN NOR TRANSFER ANY PART OF THAT RESPONSIBILITY TO THE APPROVING OFFICIALS.							
					SHUJI KAKU TEAM LEADER							
		F	PROJECT	& L	& LOCATION SHEET CONTENTS			SHEET NO.				
APPROVED BY:	APPROVED BY: PASIG-						(
SEE COVER SHEET FI SIGNATURE AND APPR THE SECRETAR	OVAL OF		RIVER O				PROFILE OF CTOR PIPE/	LP-DR DO 100/P				
ROGELIO L. SIN SECRETARY	GSON	PROJECT (METRO			,.	U-[DITCH					



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	SHUJI KAKU												
	TEAM LEADER												
		PROJECT & LOCATION	SHEE	ET CONTENTS	SHEET NO.								
+	APPROVED BY: SEE COVER SHEET FOR THE	PASIG-MARIKINA RIVER CHANNEL		OF DRAINAGE	\frown								
	SIGNATURE AND APPROVAL OF THE SECRETARY	IMPROVEMENT	MAN	OUTLET- DR100 & (MANHOLE MR100									
	ROGELIO L. SINGSON PROJECT (PHASE III), SECRETARY METRO MANILA STA. 9+831 RB												





JICA CONSULTANT FOR				
	DESIGNED BY:	CHECKED BY:	SUBMITTED BY:	REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS
CO., LTD.	KOHEI TAKAYAMA STRUCTURAL ENGINEER IV	TOSHIKI KAWAKAMI THE CHECKER	SHUJI KAKU TEAM LEADER	AND HIGHWAYS

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03 -	- 60							SCALE #	0 2	.5	5.0 7.	.5 10m	
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		1	REVI	S I O N S AND REGULATIONS OF R.A. 9184, APPROVAL BY THE AUTHORIZED DPWH OFFICIALS OF DETAILED ENGINEERING SURVEYS AND DESIGN UNDERTAKEN BY CONSULTANTS									
NO. DESC						PTION APPROVED DATE			NEITHER DIMINISHES THE RESPONSIBILITY OF THE LATTER FOR THE TECHNICAL INTEGRITY OF THE SURVEYS AND DESIGN NOR TRANSFER ANY PART OF THAT				
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REPUBLIC OF THE	PHILIPPINES					PROJECT &	LOCATION	SHEET	CONTENTS	SHEET NO.			
REVIEWED BY:	RECOMMENDING APPROV			APPROVED BY:		PASIG-N	IARIKINA						
					SEE COVER SHEET FOR THE SIGNATURE OF THE UNDERSECRETARY	SEE COVER SHEET FOR T SIGNATURE AND APPROVA THE SECRETARY		RIVER CHANNEL IMPROVEMENT COLLECTOR PIE				LP-DR	
ERFECTO L. ZAPLAN, JR. CHIEF, HYDRAULIC DIVISION, BOD	PATRICK B. GATAN PROJECT DIRECTOR PMO - MFCP	GILBE	ERTO S	S. REYES	RAUL C. ASIS UNDERSECRETARY FOR TECHNICAL SERVICES	ROGELIO L. SINGS SECRETARY	ION	PROJECT METRO	(PHASE III), MANILA	COLLE	GIURFIFE	DO 102.6/P	

