

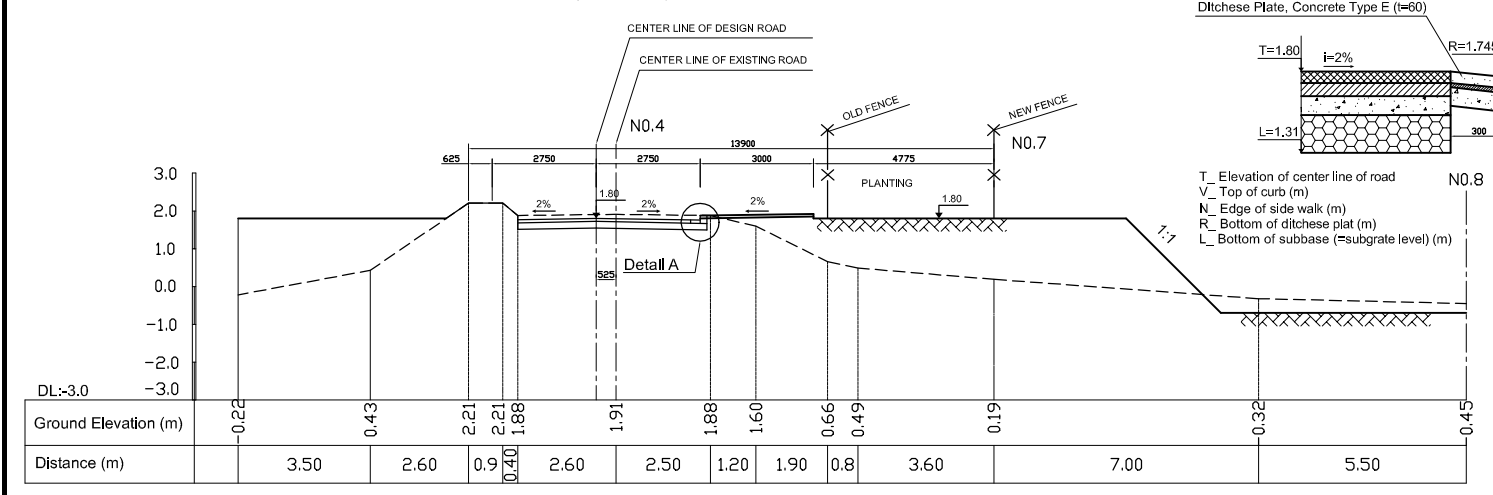
LANDSCAPE WORK LIST (PACKAGE B: BEN ME COC (1) PUMPING STATION)

LEGEND	WORK ITEM	UNIT	QUANTITY	SIZE / DIMENSION	REMARKS
MGP	MAIN GATE POSTS (2 POSTS IN 1 SET)	No.	1.00	565 x 450 x H 2500 STEEL REINFORCED CONCRETE	RAILWAY INCLUDED
SGD-2	SLIDING GATE DOOR (TYPE-2)	No.	1.00	H 2500 x W 500 x L 5650; STEEL 50 x 50 FRAMED DOOR WITH WHEELS ON BOTTOM	
GF-A	GRID FENCE (TYPE-A) (STEEL FENCE AND COLUMN)	m	76.27	H 2200 x 3000 SPAN STEEL BAR WITH BASE THIM H 2500 X W 335 x 220 CONC. COLUMN H 2500 X W 335 x 335 CONC. END COLUMN	REINFORCED CONC. COLUMN
NF-B	WIRE NET FENCE (TYPE-B) (STEEL WIRE NET AND COLUMN)	m	54.33	H 2500 x 3000 SPAN NET FENCE WH 200 x 200 X H 2200 CONC. COLUMN	BARBED WIERS ON FENCE TOP
CCP	CURB OF CONCRETE PAVING	m	70.31	200 x 250 x L CAST IN SITU CONCRETE	
CPV	CONCRETE PAVING	m <sup>2</sup>	180.76	150 THK CAST IN SITU CONCRETE	
WPV	MAINTENANCE WALK PAVING	m <sup>2</sup>	86.93	100 THK CAST IN SITU CONCRETE	
	PLANTING WORK				REFER TO PLANTING LIST

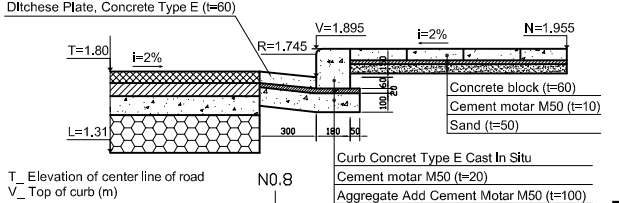
PLANT LIST: PACKAGE B DEVELOPMENT (BEN ME COC-(1) PUMPING STATION) PB-PDI-B(1)-252

LEGEND	PLANT CATEGORY	SPECIES (SCIENTIFIC NAME)	UNIT	QUANTITY	DIMENSION & SIZE AT DELIVERY TIME (m)	TREE SUPPORT	REMARKS	
					HEIGHT IN 1.2m Height	STEM DIA. DIA.	CROWN DIA. DIA.	
Lag-r	TREE	<i>Lagerstroemia speciosa</i>	No.	3.00	4.0	0.04		TRIPOD WITH POLE
Plu-r	TREE	<i>Plumeria rubra</i> (Red flower)	No.	1.00	3.0	0.04		TRIPOD WITH POLE
Iro-c	SHRUB	<i>Ixora coccinea</i> (=Ixora chinensis)	m <sup>2</sup>	2.00	0.4		0.25	GROUP PLANTING (10Nos/m <sup>2</sup> )
Bau-p	SHRUB	<i>Bauhinia purpurea</i>	No.	10.00	1.0	0.01		
Hib-r	SHRUB	<i>Hibiscus rosa-sinensis</i>	No.	13.00	0.6		0.40	
	GRASS SPRIGS	<i>Axonopus compressus</i> (Broad leafed grass)	m <sup>2</sup>	268.98				

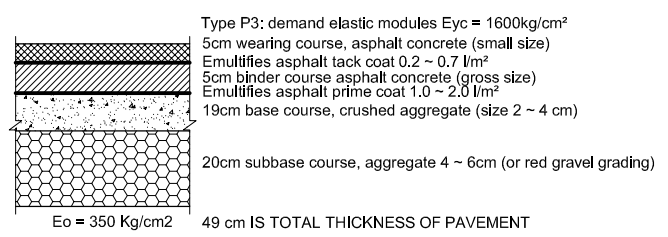
CROSS SECTION OF OUTSIDE ROAD OF BEN ME COC (1) PUMPING STATION S = 1 : 125



DETAIL A



TYPICAL OUTSIDE PAVEMENT SURFACE S = 1 : 50



NO.	DATE	DESCRIPTIONS	BY

REVISIONS

PROJECT MANAGEMENT UNIT FOR  
HO CHI MINH CITY  
WATER ENVIRONMENT IMPROVEMENT

THE DETAILED DESIGN STUDY ON HO CHI MINH CITY  
WATER ENVIRONMENT IMPROVEMENT PROJECT  
IN THE SOCIALIST REPUBLIC OF VIET NAM

PACKAGE B  
PUMP DRAINAGE IMPROVEMENT  
BEN ME COC (1) PUMPING STATION  
LANDSCAPE AND ROAD WORKS OF  
BEN ME COC (1) PUMPING STATION

SCALE = 1/10, 1/25, 1/200

JICA JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

PACIFIC CONSULTANTS INTERNATIONAL

DESIGNED: TOKUMASU TOSHIKI  
CHECKED: KONDO MASAMI

DATE: JUNE 2001 DWG. No. PB - PDI - BMC1 - 311



PLAN



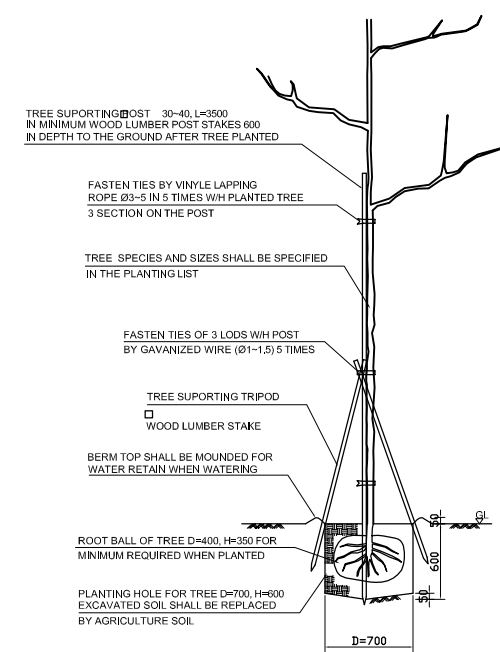
LANDSCAPE WORK LIST (PACKAGE B: BEN ME COC (1) CONTROL GATE)

LEGEND	WORK ITEM	UNIT	QUANTITY	SIZE / DIMENSION	REMARKS
MGP	MAIN GATE POSTS (2 POSTS IN SET)	No.	1.00	965 x 450 x H 2500	
SGD-2	SLIDING GATE DOOR (TYPE-1)	No.	1.00	STEEL REINFORCED CONCRETE STEEL 50 x W 500 x L 5650	RAILWAY INCLUDED ON BOTTOM
GF-A	GRID FENCE (TYPE-A) (STEEL FENCE AND COLUMN)	m	16.23	H 2200 x 3000 SPAN STEEL BAR WITH BASE TRIM H 2500 x W 335 x 220 CONCRETE COLUMN H 2500 x W 335 x 335 CONCRETE END COLUMN	REINFORCED CONCRETE COLUMN
NF-B	WIRE NET FENCE (TYPE-B) (STEEL WIRE NET AND COLUMN)	m	75.0	H 2500 x 3000 SPAN NET FENCE WITH 200 x 200 x H 2200 CONCRETE COLUMN	BARBED WIERS ON FENCE TOP
CCP	CURB OF CONCRETE PAVING	m	20.0	200 x 250 x L CAST IN SITU CONCRETE	
CPV	CONCRETE PAVING	m <sup>2</sup>	290.0	150 THK CAST IN SITU CONCRETE	
	PLANTING WORK				REFER TO PLANTING LIST

PLANT LIST: PACKAGE B DEVELOPMENT (BEN ME COC-(1) PUMPING STATION) PB-PDI-BMC1-311

LEGEND	PLANT CATEGORY	SPECIES (SCIENTIFIC NAME)	UNIT	QUANTITY	DIMENSION & SIZE AT DELIVERY TIME (m)				TREE SUPPORT	REMARKS
					HEIGHT	STEM DIA. IN 1.2m Height	CROWN DIA.	ROOT BALL DIA.		
Lag-r	TREE	Lagerstroemia reginae (=Lagaestromaia speciosa)	No.	3.00	4.0	0.04			TRIPOD WITH POLE	
Plu-r	TREE	Plumeria rubra (Red flower)	No.	1	3.0					
Ixo-c	SHRUB	Ixora coccina (=Ixora chinensis)	m <sup>2</sup>	2.0					0.25	
Bau-p	SHRUB	Bauhinia purpurea	No.	5	1.0					
Hib-r	SHRUB	Hibiscus rosa-sinensis	No.	10	0.6				0.4	
	GRASS SPRINGS	Axonopus compressus (Broad leafed grass)	m <sup>2</sup>	95.0						

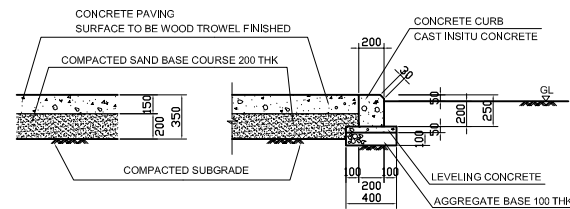
PLANTING WORK SECTION S = 1 : 30



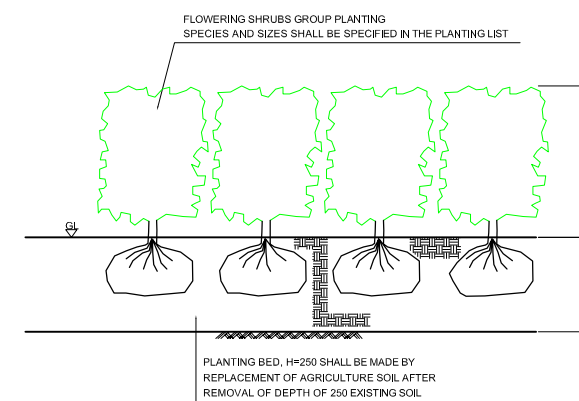
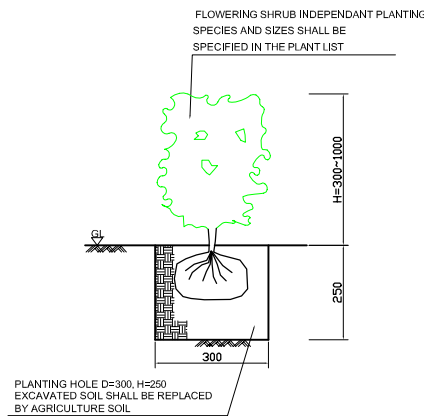
LEGEND

	Bank
	barbed wire
	Retaining wall
	Revetment
	Elevation (Mid Nail)
	Grass land
	Coconut tree
	Concrete facing
	Electric Pole
	High voltage

INSIDE CONCRETE PAVING FOR CONTROL GATE S = 1 : 30

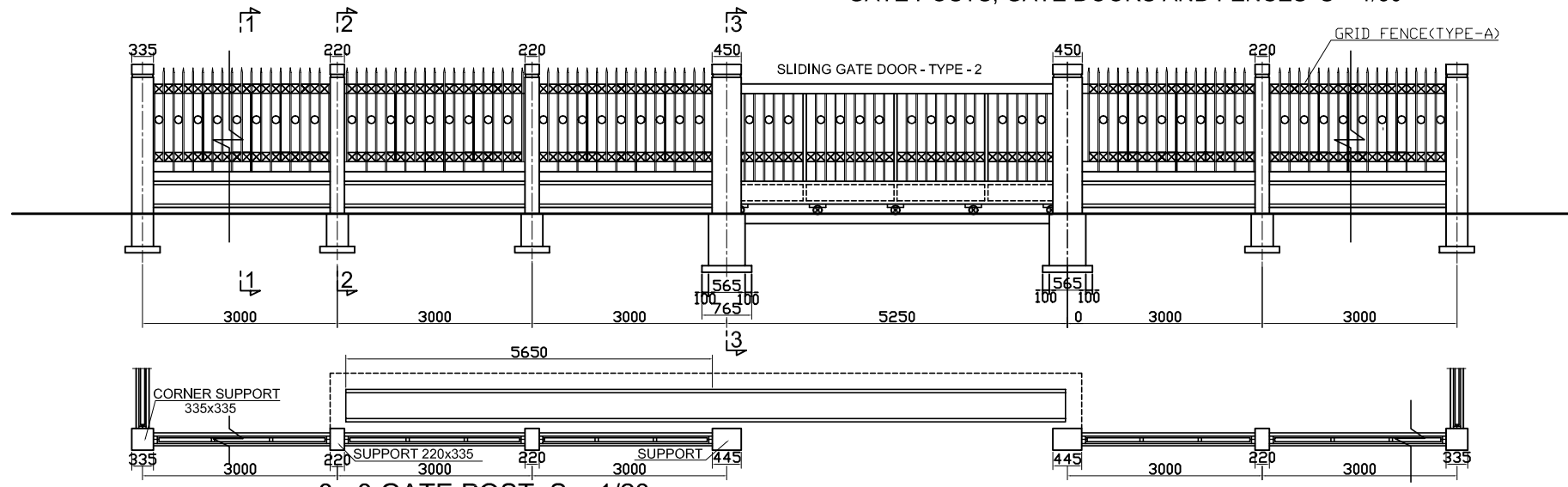


S = 1 : 10

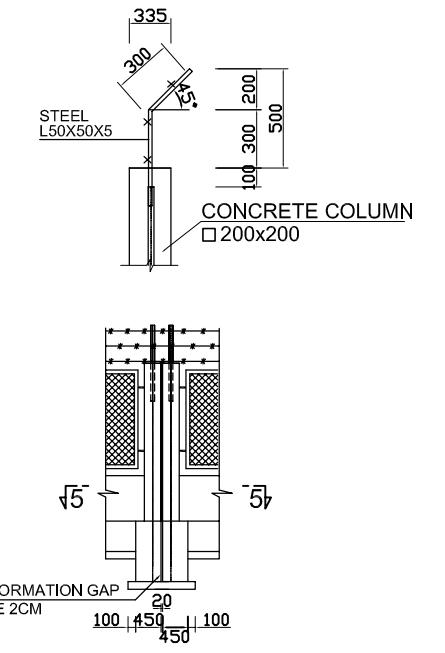
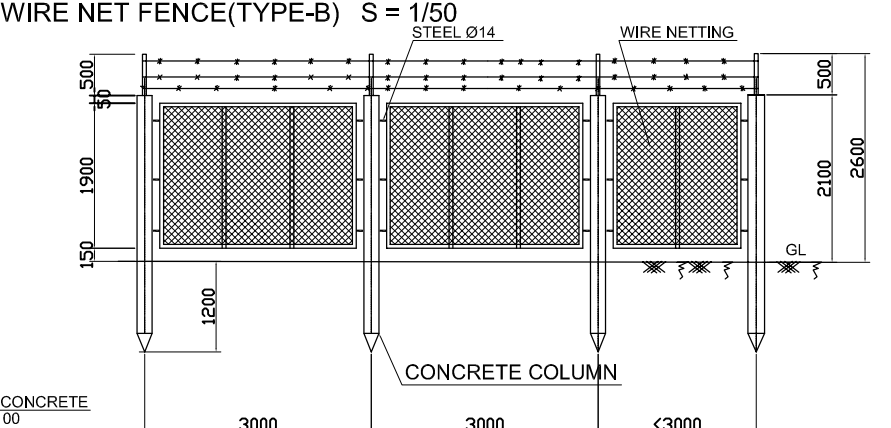
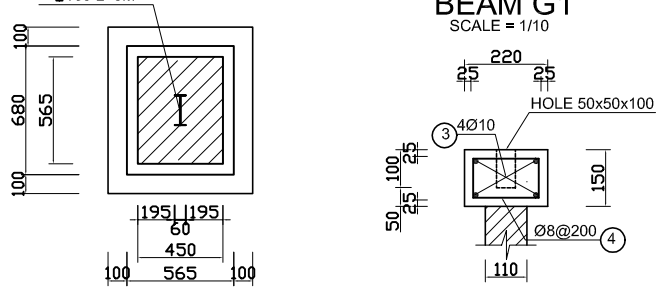
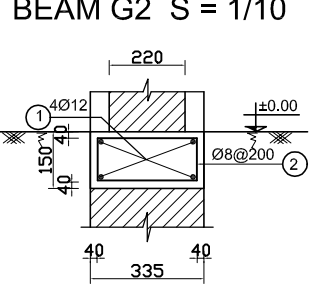
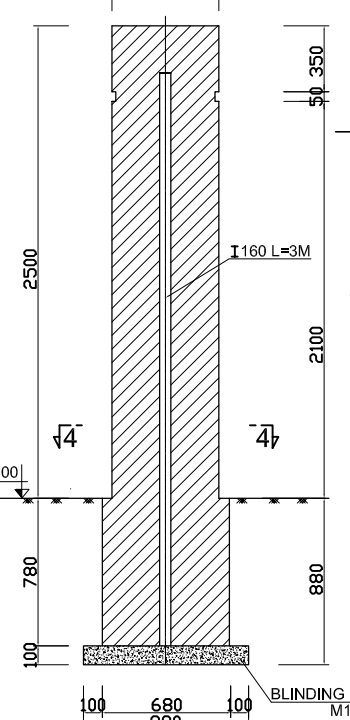
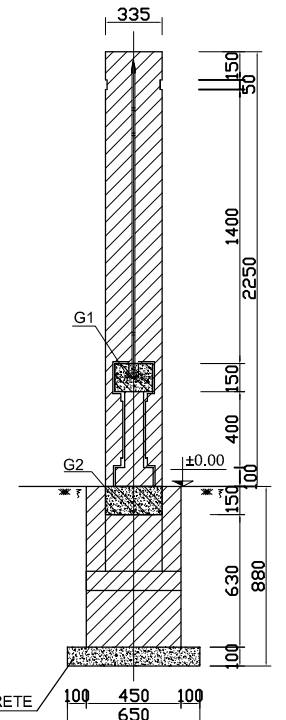
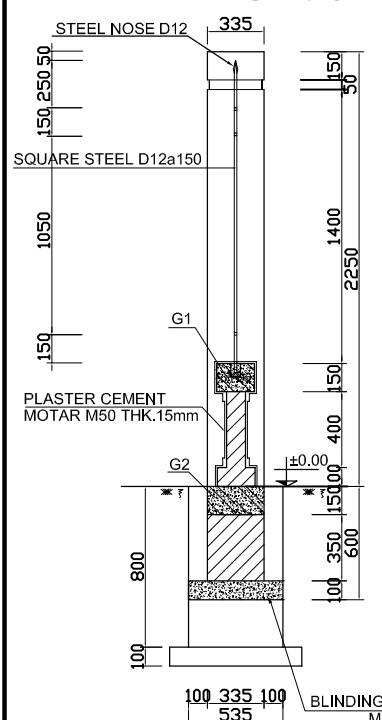


NO.	DATE	DESCRIPTIONS	BY
REVISIONS			
PROJECT MANAGEMENT UNIT FOR HO CHI MINH CITY WATER ENVIRONMENT IMPROVEMENT			
THE DETAILED DESIGN STUDY ON HO CHI MINH CITY WATER ENVIRONMENT IMPROVEMENT PROJECT IN THE SOCIALIST REPUBLIC OF VIET NAM			
PACKAGE B PUMP DRAINAGE IMPROVEMENT BEN ME COC (1) CONTROL GATE LANDSCAPE WORK OF BEN ME COC (1) CONTROL GATE			
SCALE = 1 : 200			
JAPAN INTERNATIONAL COOPERATION AGENCY ( JICA )		PACIFIC CONSULTANTS INTERNATIONAL	
DESIGNED TOKUMASU TOSHIKI	CHECKED KONDO MASAMI		
DATE : JUNE 2001	DWG. No. PB - PDI - BMC1 - 312		

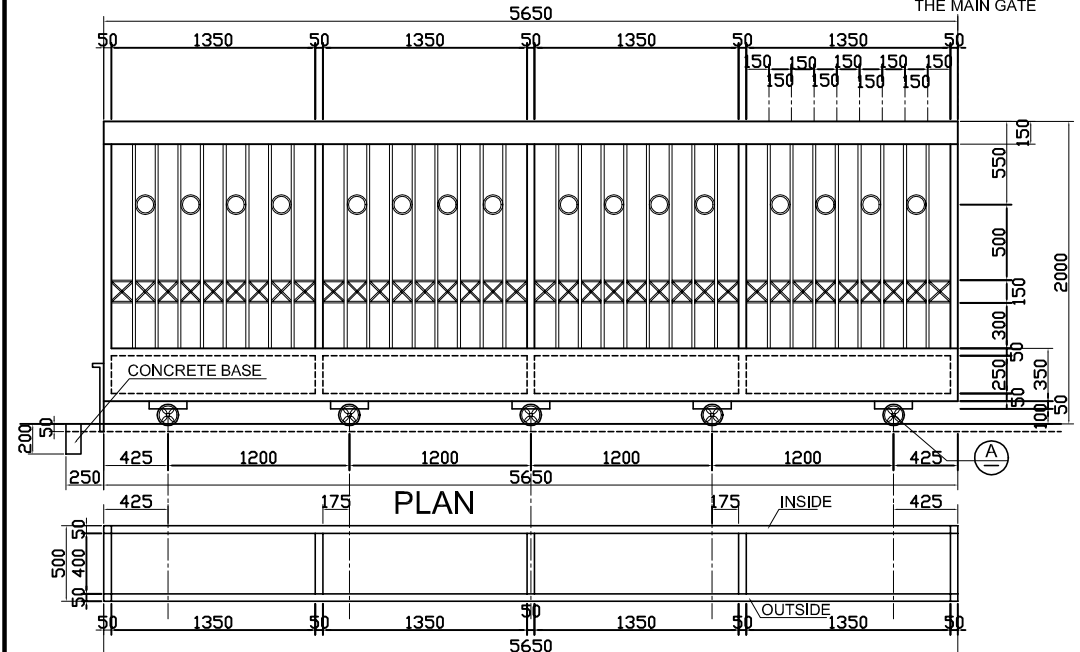
GATE POSTS, GATE DOORS AND FENCES S = 1/50



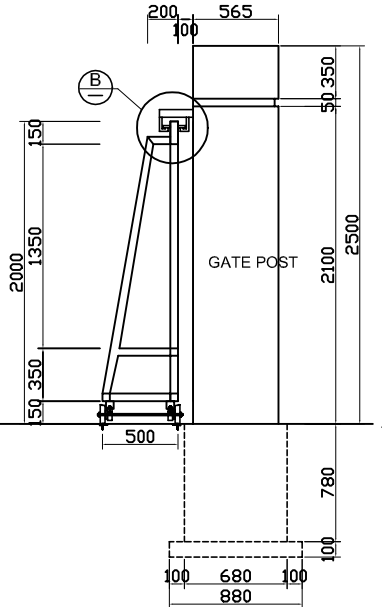
1 - 1 S = 1/20  
2 - 2 S = 1/20  
3 - 3 GATE POST S = 1/20  
4 - 4 S = 1/20



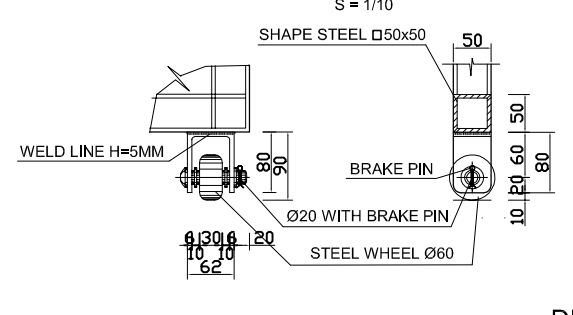
SLIDING GATE DOOR (TYPE - 2)  
FRONT ELEVATION S = 1/25



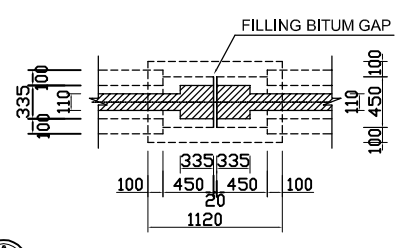
SIDE ELEVATION



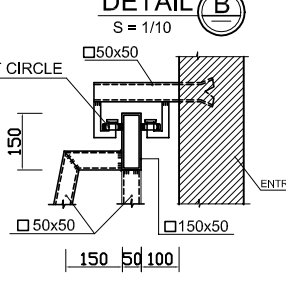
DETAILS OF WHEEL S = 1/10



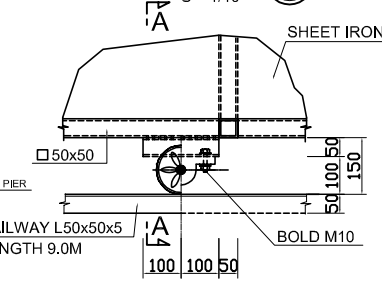
SECTION 5 - 5



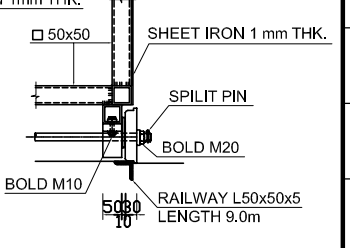
DETAIL A S = 1/10



DETAIL B S = 1/10



A - A



NO.	DATE	DESCRIPTIONS	BY	APPRO.
REVISIONS				

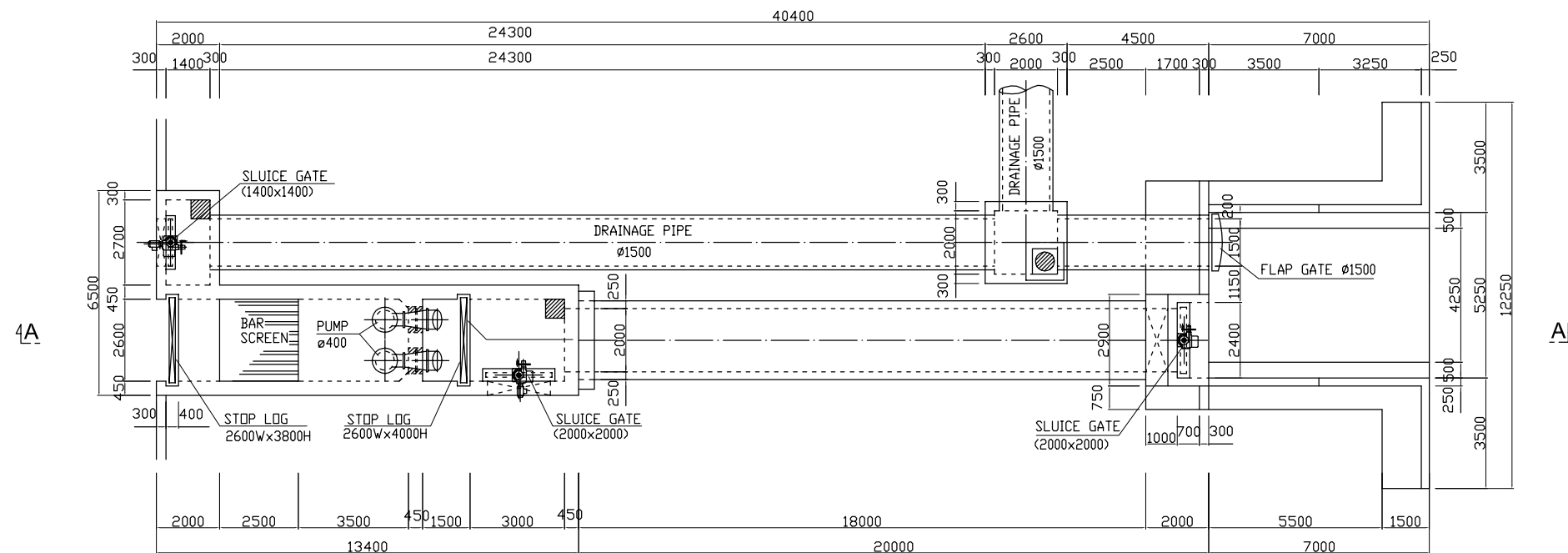
PROJECT MANAGEMENT UNIT FOR  
HO CHI MINH CITY  
WATER ENVIRONMENT IMPROVEMENT

THE DETAILED DESIGN STUDY ON HO CHI MINH CITY  
WATER ENVIRONMENT IMPROVEMENT PROJECT  
IN THE SOCIALIST REPUBLIC OF VIET NAM

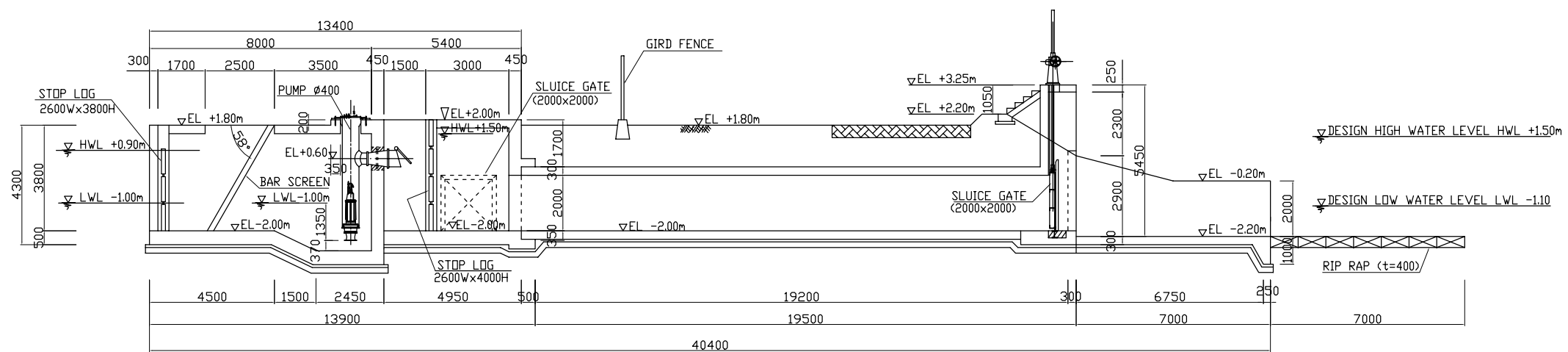
PACKAGE B  
PUMP DRAINAGE IMPROVEMENT  
BEN ME COC (1) PUMPING STATION  
DETAILS OF GATE, GATE POST  
AND FENCE (TYPE A & B)

SCALE : AS SHOWN  
JICA JAPAN INTERNATIONAL COOPERATION  
AGENCY ( JICA )  
PACIFIC CONSULTANTS INTERNATIONAL

DESIGNED: TOKUMASU TOSHIAKI  
CHECKED: KONDO MASAMI  
DATE: JUNE 2001  
DWG. No. PB - BDF- BMC1 - 313



PLAN



SECTION A - A

NO.	DATE	DESCRIPTIONS	BY	APRO.

REVISIONS

PROJECT MANAGEMENT UNIT FOR  
HO CHI MINH CITY  
WATER ENVIRONMENT IMPROVEMENT

THE DETAILED DESIGN STUDY ON HO CHI MINH CITY  
WATER ENVIRONMENT IMPROVEMENT PROJECT  
IN THE SOCIALIST REPUBLIC OF VIET NAM

PACKAGE B  
PUMP DRAINAGE IMPROVEMENT  
BEN ME COC (1) PUMPING STATION  
LAYOUT OF PUMP, BAR SCREEN  
AND GATE EQUIPMENT

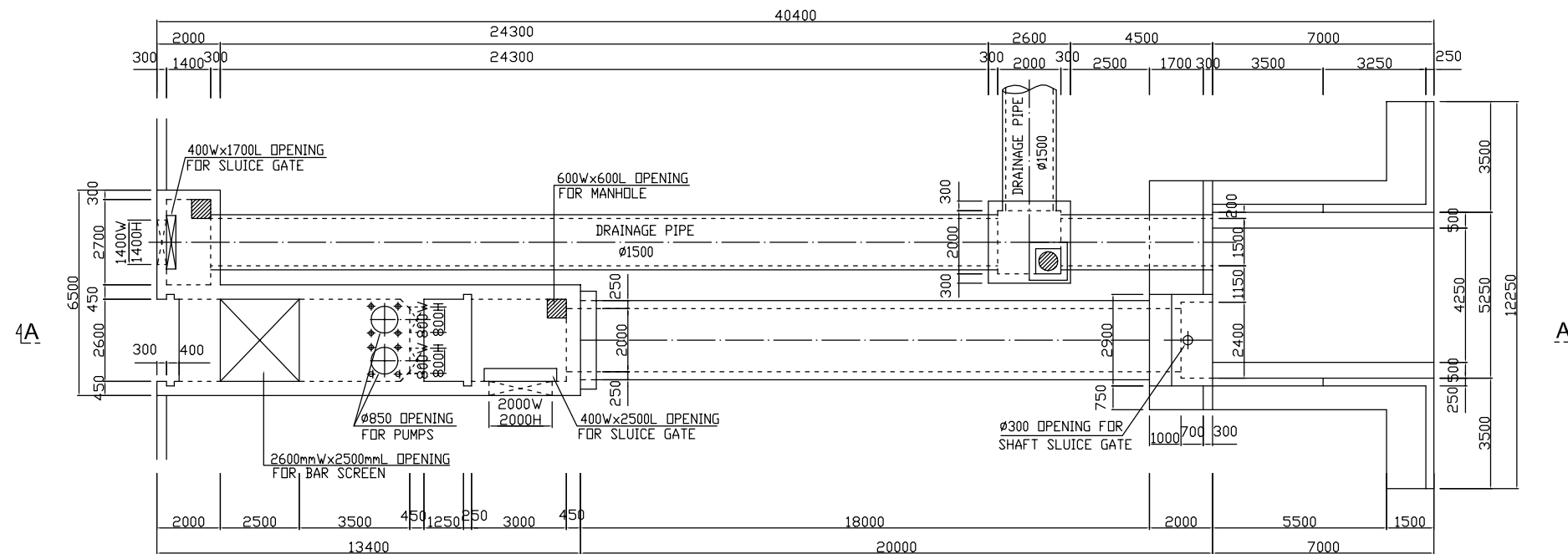
SCALE : 1 / 100

JICA JAPAN INTERNATIONAL COOPERATION  
AGENCY ( JICA )

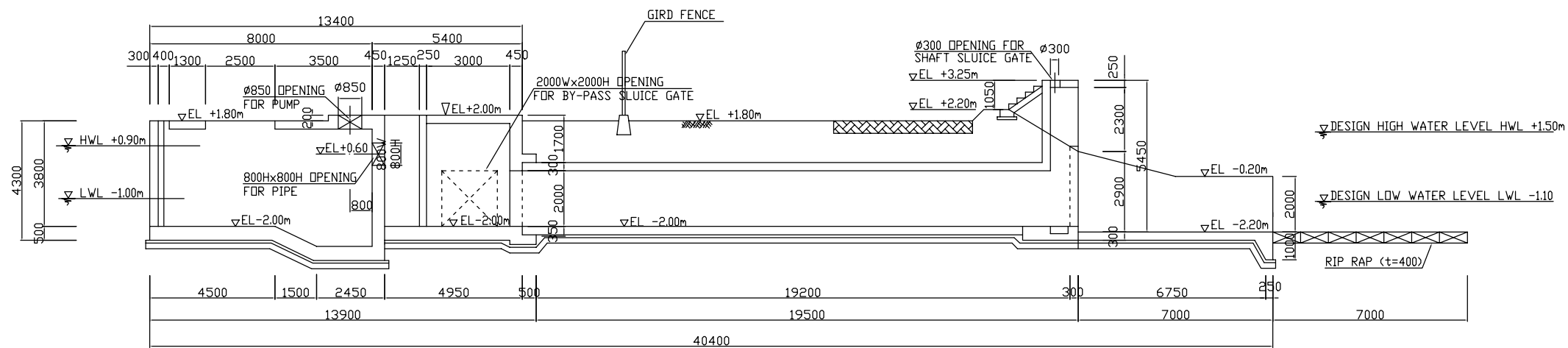
PACIFIC CONSULTANTS INTERNATIONAL

DESIGNED SUGIURA KENICHIRO CHECKED KONDO MASAMI

DATE : JUNE 2001 DWG. No. PB - PDI - BMC1 - 401

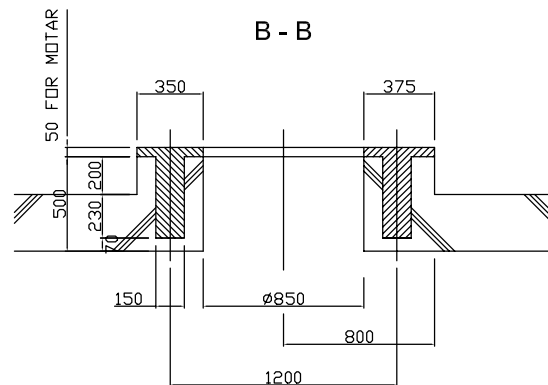
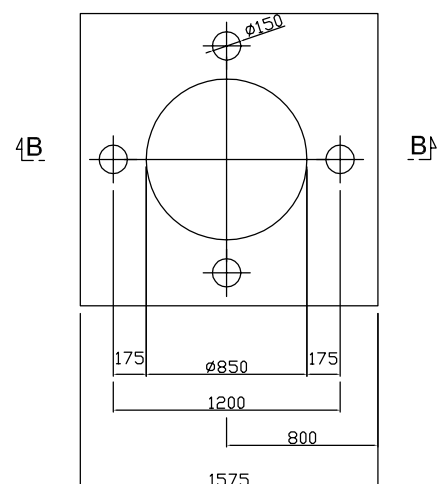


PLAN SCALE : 1/100



SECTION A - A SCALE : 1/100

TYPICAL FOUNDATION OF COLUMN PIPE SCALE : 1/20



NO.	DATE	DESCRIPTIONS	BY	APPRO.

REVISIONS

PROJECT MANAGEMENT UNIT FOR  
HO CHI MINH CITY  
WATER ENVIRONMENT IMPROVEMENT

THE DETAILED DESIGN STUDY ON HO CHI MINH CITY  
WATER ENVIRONMENT IMPROVEMENT PROJECT  
IN THE SOCIALIST REPUBLIC OF VIET NAM

PACKAGE B  
PUMP DRAINAGE IMPROVEMENT  
BEN ME COC (1) PUMPING STATION

FOUNDATION BLOCK OUT AND  
OPENING FOR INSTALLATION  
OF MECHANICAL EQUIPMENT

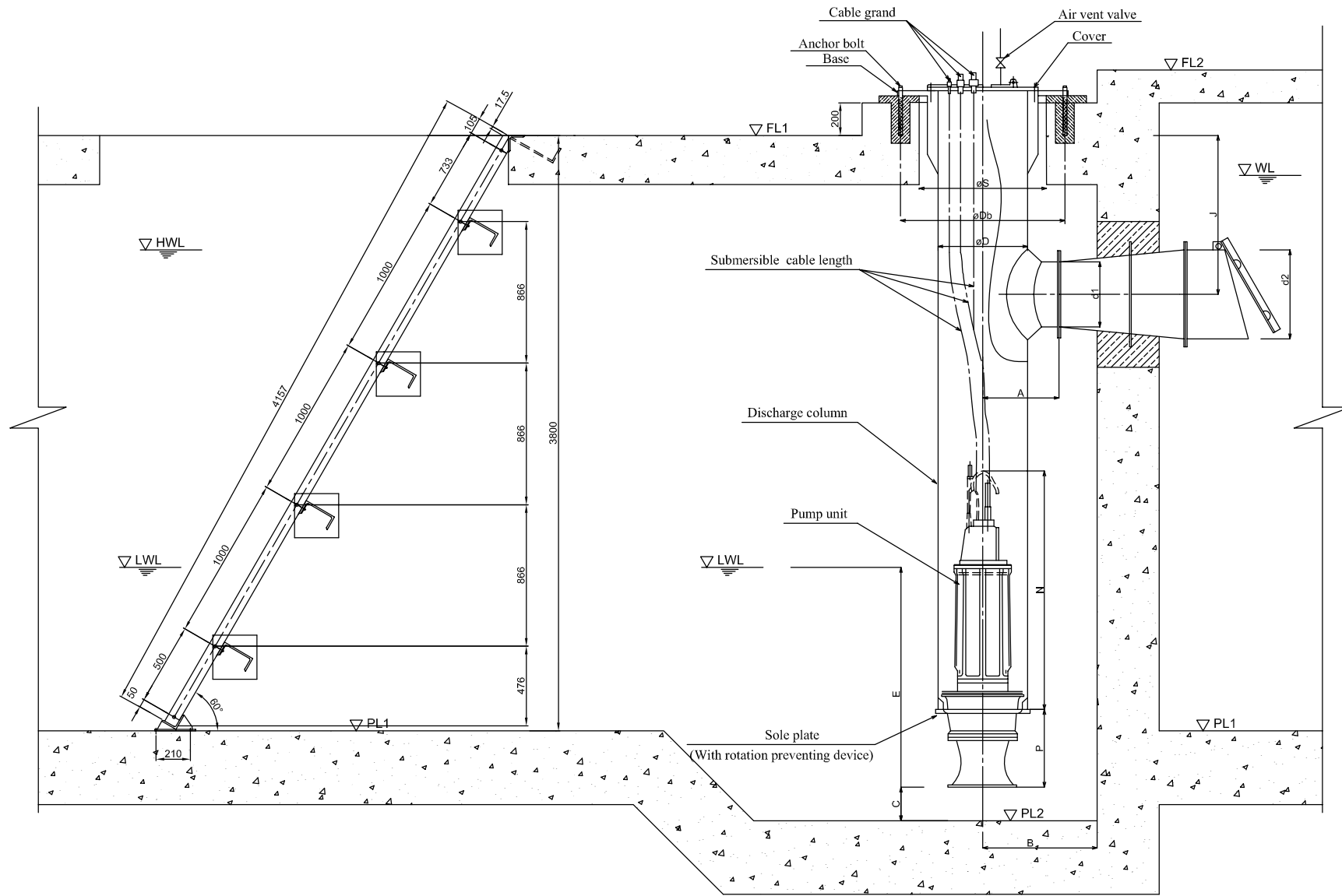
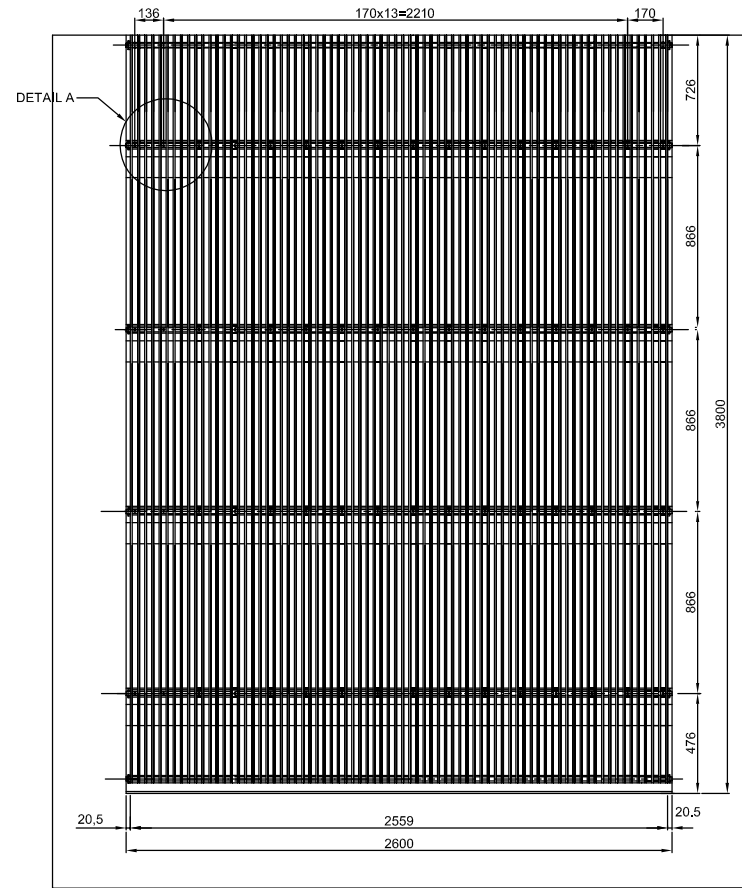
SCALE : 1 / 100, 1/20

JICA JAPAN INTERNATIONAL COOPERATION  
AGENCY ( JICA )

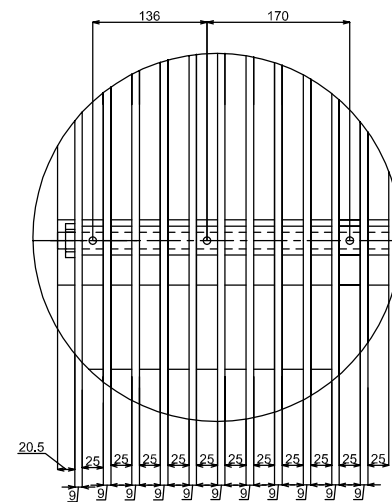
PACIFIC CONSULTANTS INTERNATIONAL

DESIGNED SUGIURA KENICHIRO  
CHECKED KONDO MASAMI

DATE : JUNE 2001 DWG. No. PB - PDI - BMC1 - 402



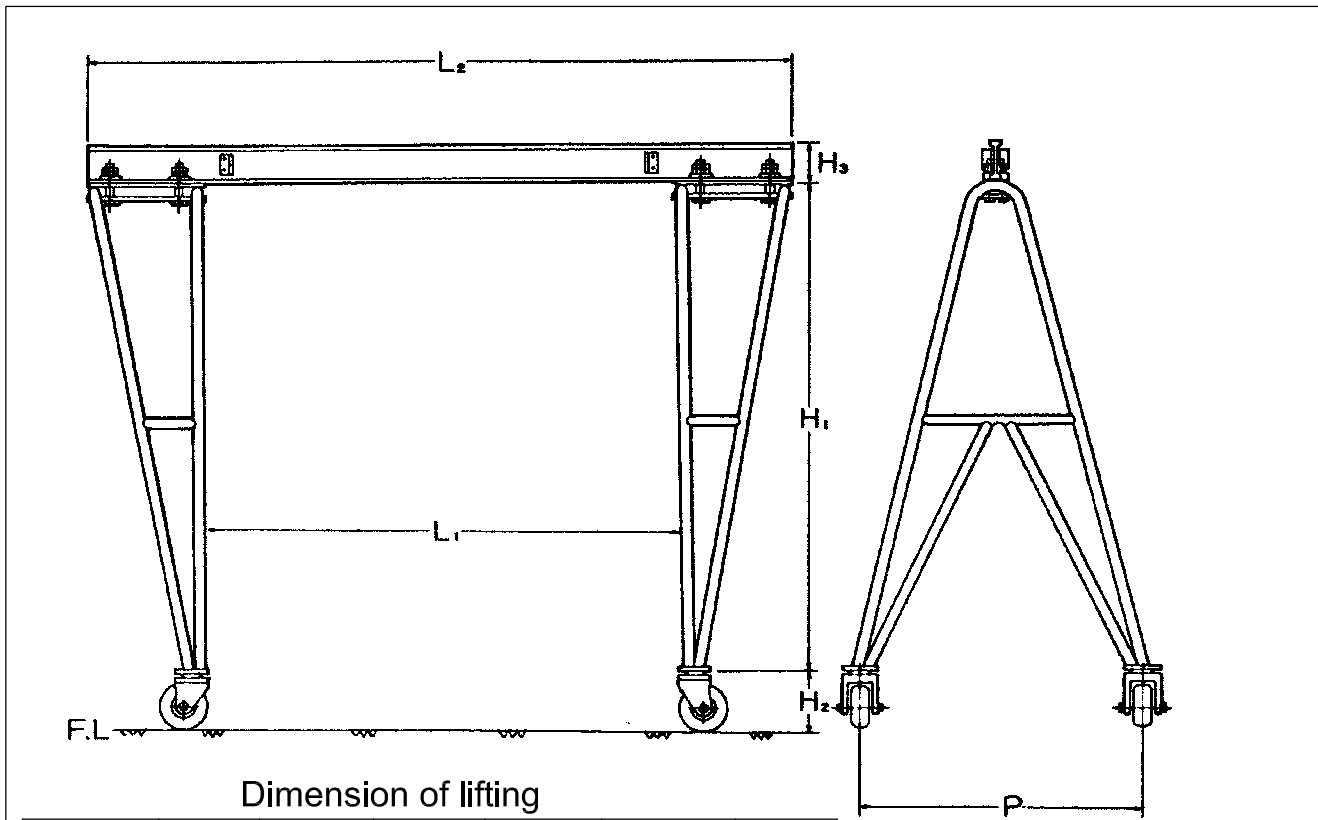
TYPICAL OUTLINE PUMP AND BAR SCREEN



DETAIL A

PS	Dia(mm)	Suction		Discharge WL(m)	PL1(m)	PL2(m)	FL1(m)	A(m)	B(m)	C(m)
		HWL(m)	LWL(m)							
BCM(1)	400	0.9	-1.0	1.5	-2.00	-2.72	1.80	0.55	0.80	0.37

PS	Dia(mm)	D(m)	E(m)	J(m)	N(m)	P(m)	S(m)	Db(m)	d1(m)	d2(m)
BCM(1)	400	0.6	1.35	1.4	1.6	0.345	0.85	1.2	0.4	0.6



Dimension of lifting

Hoist(ton)	P(m)	L1(m)	L2(m)	H1(m)	H2(m)	H3(m)
01	1.50	3.50	4.20	2.50	0.275	0.20

Pump Lifting Device

NO.	DATE	DESCRIPTIONS	BY	APRO.

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HO CHI MINH CITY  
WATER ENVIRONMENT IMPROVEMENT

THE DETAILED DESIGN STUDY ON HO CHI MINH CITY  
WATER ENVIRONMENT IMPROVEMENT PROJECT  
IN THE SOCIALIST REPUBLIC OF VIET NAM

PACKAGE B  
PUMP DRAINAGE IMPROVEMENT  
BEN ME COC (1) PUMPING STATION  
DETAILS OF BAR SCREEN,  
LIFTING DEVICE AND  
PUMP EQUIPMENT

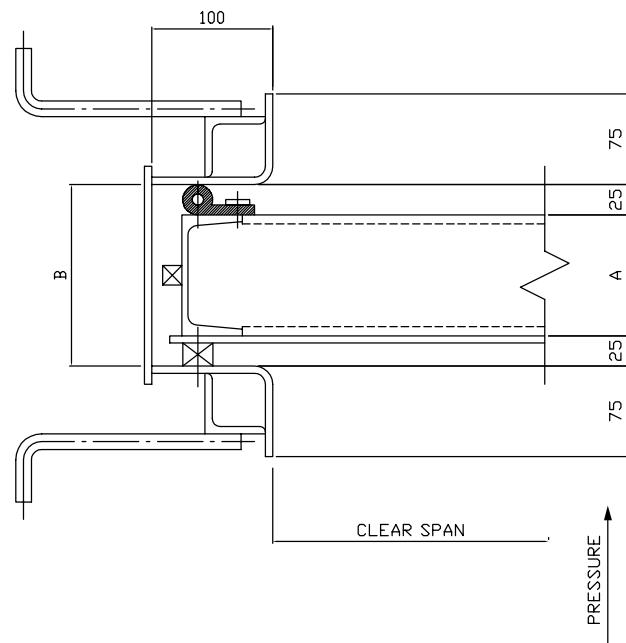
SCALE :

JICA JAPAN INTERNATIONAL COOPERATION  
AGENCY ( JICA )

PACIFIC CONSULTANTS INTERNATIONAL

DESIGNED SUGIURA KENICHIRO  
CHECKED KONDO MASAMI

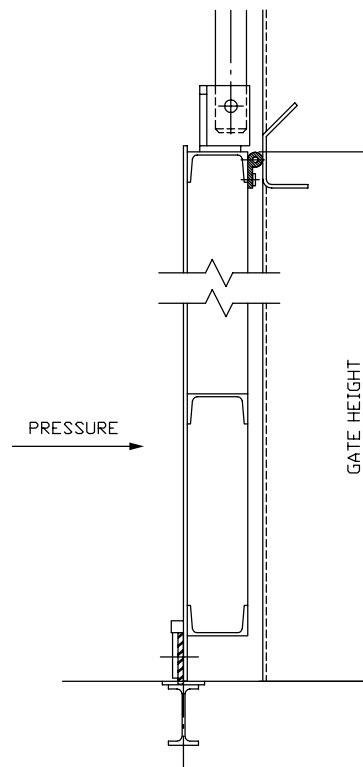
DATE : JUNE 2001 DWG. No. PB - PDI - BMC1 - 403



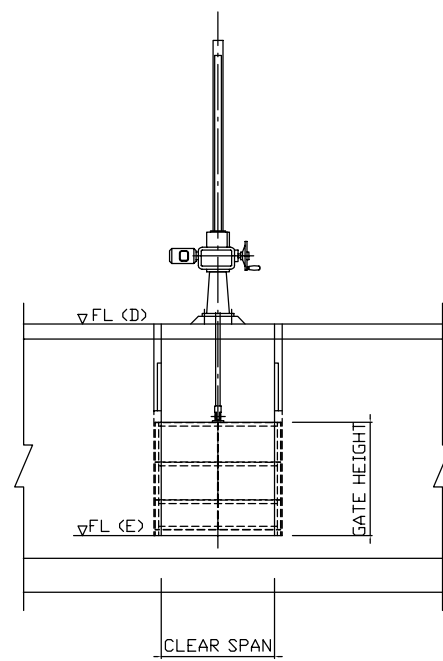
DETAIL OF SIDE

2. BEN ME CDC (1) PUMPING STATION

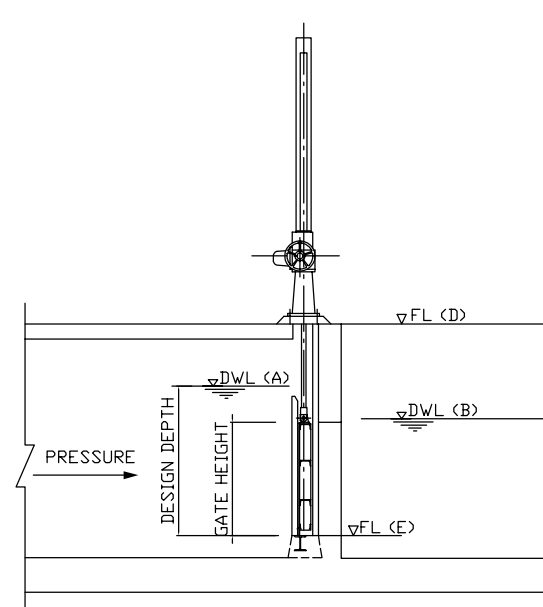
SPECIFICATION	BY-PASS GATE	BY-PASS GATE	OUTLET GATE
TYPE	STEEL, SLUICE GATE	STEEL, SLUICE GATE	STEEL, SLUICE GATE
CLEAR SPAN x HEIGHT	1400mmW x 1400mmH	2000mmW x 2000mmH	2000mmW x 2000mmH
Q'TY	1	1	1
DESIGN DEPTH	2.90m	2.90m	3.50m
WATERTIGHT	4-SIDE, RUBBER SEALED	4-SIDE, RUBBER SEALED	4-SIDE, RUBBER SEALED
PRINCIPAL MATERIAL	GATE - JIS SS400	GATE - JIS SS400	GATE - JIS SS400
OPERATION	ELECTRICAL	ELECTRICAL	MANUAL
LEVEL			
DWL (A)	+0.90	+0.90	+1.50
DWL (B)	-1.10	-1.10	-1.00
FL (D)	+1.80	+2.00	+3.25
FL (E)	-2.00	-2.00	-2.00
DIMENSION			
(A)	125mm	150mm	150mm
(B)	175mm	200mm	200mm



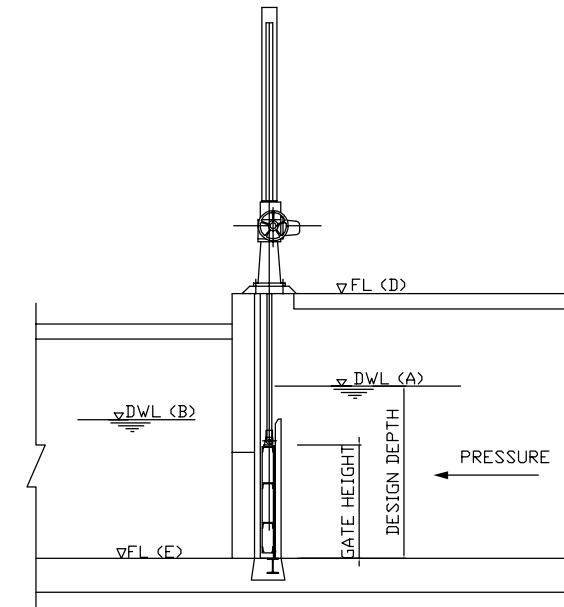
DETAIL OF UPPER & LOWER



FRONT VIEW



SECTION VIEW  
INLET GATE



SECTION VIEW  
OUTLET GATE


NO.	DATE	DESCRIPTIONS	BY	APRO.
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REVISIONS

PROJECT MANAGEMENT UNIT FOR  
HO CHI MINH CITY  
WATER ENVIRONMENT IMPROVEMENT

THE DETAILED DESIGN STUDY ON HO CHI MINH CITY  
WATER ENVIRONMENT IMPROVEMENT PROJECT  
IN THE SOCIALIST REPUBLIC OF VIET NAM

PACKAGE B  
PUMP DRAINAGE IMPROVEMENT  
BEN ME COC (1) PUMPING STATION  
DETAILS OF SLUICE GATE

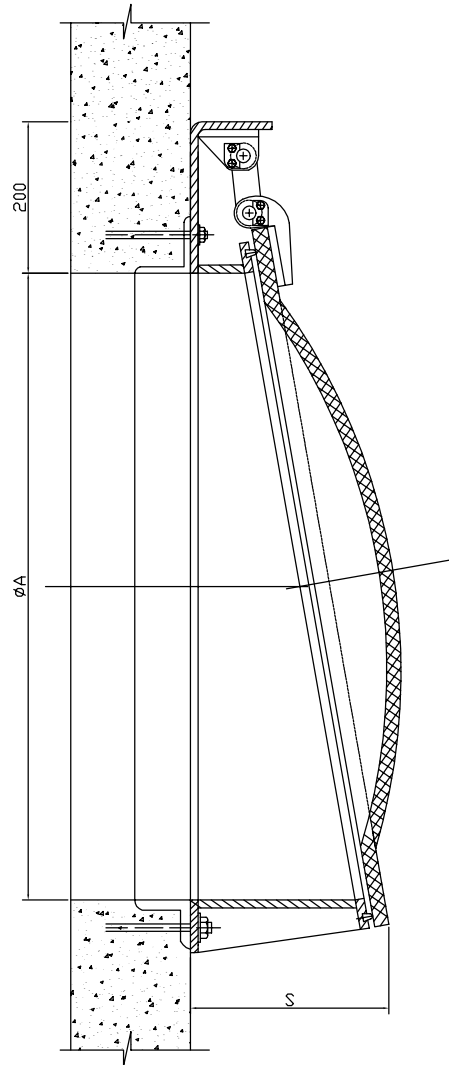
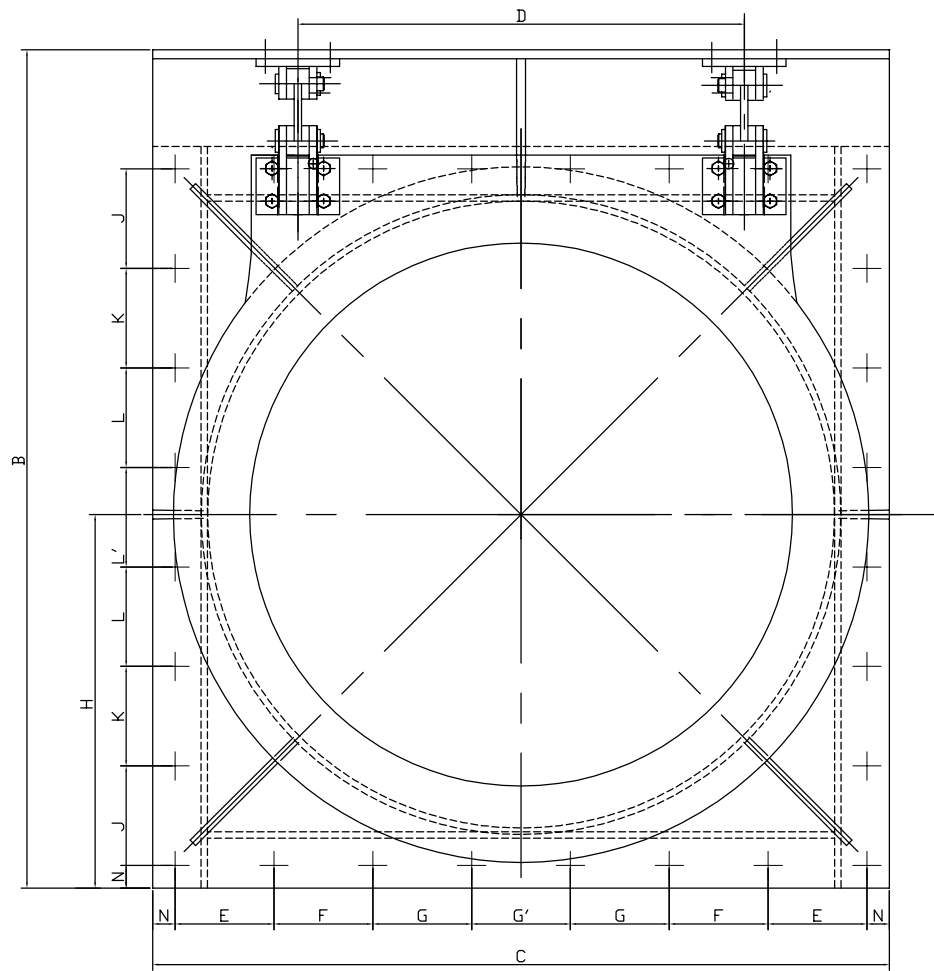
SCALE : AS SHOWN

JICA JAPAN INTERNATIONAL COOPERATION  
AGENCY ( JICA )

PACIFIC CONSULTANTS INTERNATIONAL

DESIGNED SUGIURA KENICHIRO	CHECKED KONDO MASAMI
-------------------------------	-------------------------

DATE : JUNE 2001 DWG. No. PB - PDI - BMC1 - 404



A	B	C	D	E	F	G	G'	H	J	K	L	L'	N	P	Q	S
1500	1840	1700	1000	233	233	233	232	850	233	233	233	232	35	28	20	290

SPECIFICATION	BEN ME COC (1) PUMPING STATION
TYPE	COMPOSITE, FABRICATED, ROUND SHAPE SWING TYPE GATE
DIAMETRE	1500mm
Q'TY	1
DESIGN DEPTH (H)	2.50m
GATE CENTRE LEVEL	-1.25m

NO.	DATE	DESCRIPTIONS	BY	APRO.

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PROJECT MANAGEMENT UNIT FOR  
HO CHI MINH CITY  
WATER ENVIRONMENT IMPROVEMENT

THE DETAILED DESIGN STUDY ON HO CHI MINH CITY  
WATER ENVIRONMENT IMPROVEMENT PROJECT  
IN THE SOCIALIST REPUBLIC OF VIET NAM

PACKAGE B  
PUMP DRAINAGE IMPROVEMENT  
BEN ME COC (1) PUMPING STATION  
DETAIL OF FLAP GATE

SCALE : AS SHOWN

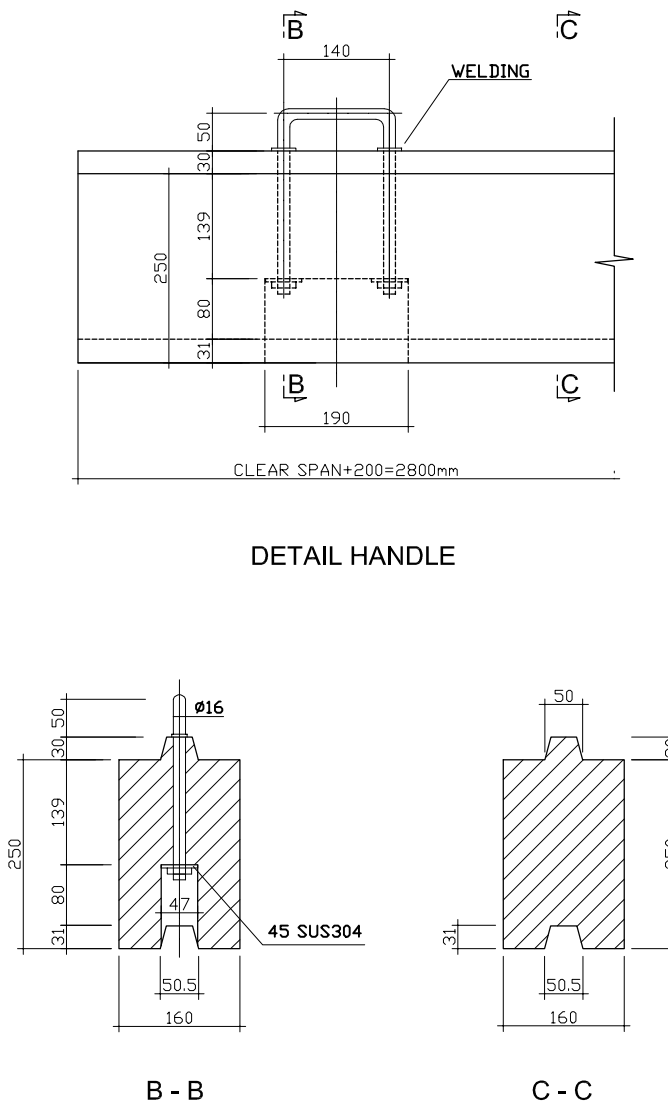
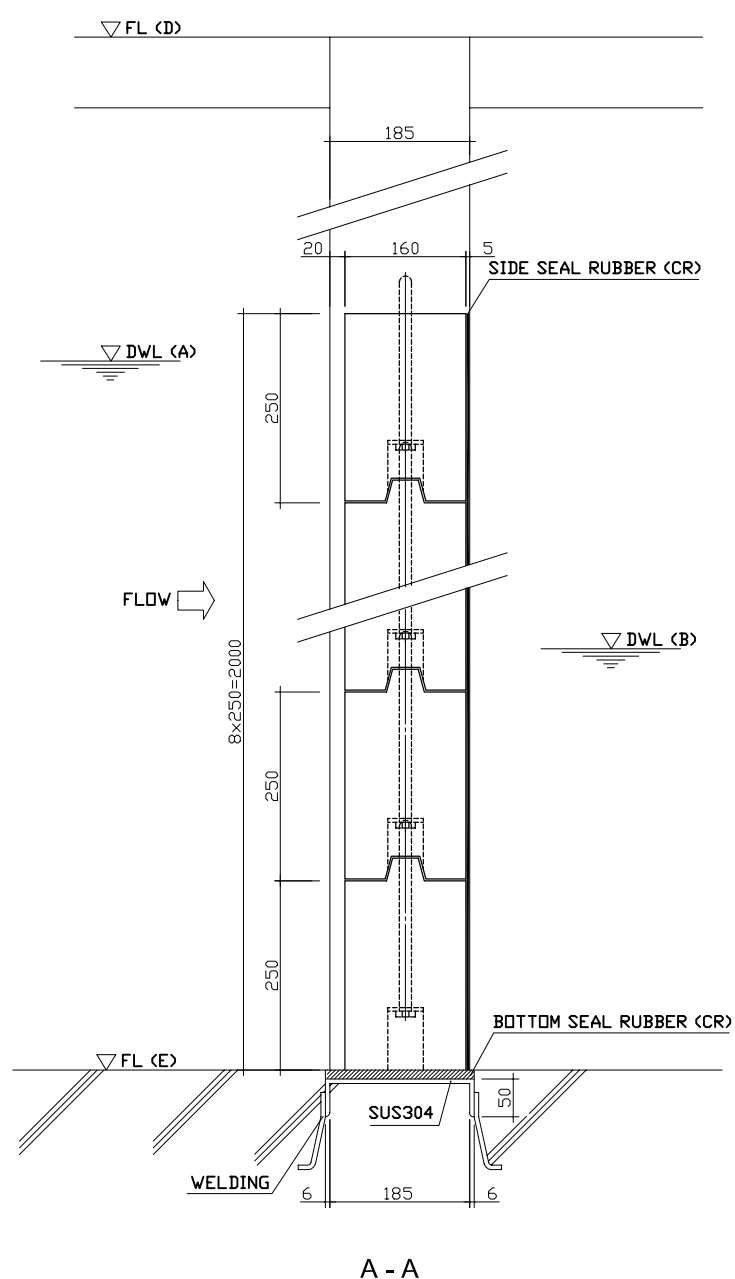
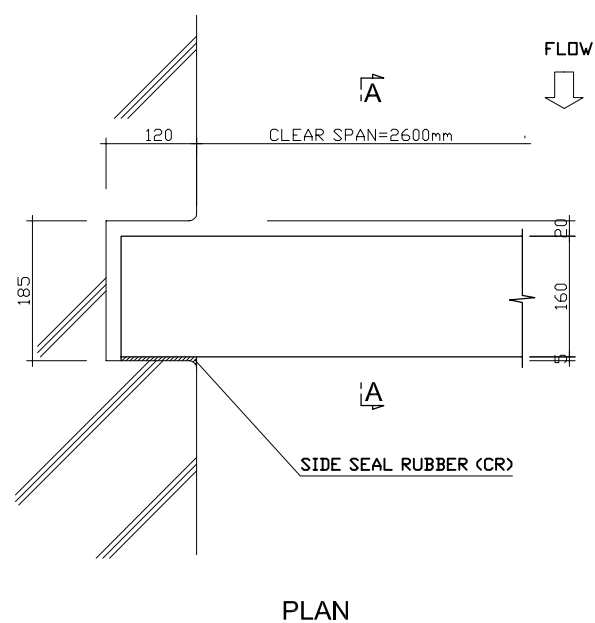
 JAPAN INTERNATIONAL COOPERATION AGENCY ( JICA )

 PACIFIC CONSULTANTS INTERNATIONAL

DESIGNED SUGIURA KENICHIRO	CHECKED KONDO MASAMI
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DATE : JUNE 2001      DWG. No. PB - PDI - BMC1 - 405





SPECIFICATION	INLET STOP LOG	DISCHARGE STOP LOG
TYPE	WOODEN, FABRICATE	WOODEN, FABRICATE
CLEAR SPAN x HEIGHT	2600mmW x 3800mmH	2600mmW x 4000mmH
Q'TY - GUIDE FRAME	1sets	1sets
- GATE LEAF	1set (8 pcs/set)	1set (8 pcs/set)
DESIGN DEPTH (H)	2.00m	2.00m
WATERTIGHT	3-SIDE, RUBBER SEALED	3-SIDE, RUBBER SEALED
PRINCIPAL MATERIAL	GATE - WOODEN	GATE - WOODEN
OPERATION	BY HAND	BY HAND
LEVEL		
DWL (A)	+0.90	+0.90
DWL (B)	-1.00	-1.00
FL (D)	+1.80	+2.00
FL (E)	-2.00	-2.00

NO.	DATE	DESCRIPTIONS	BY	APPRO.

REVISIONS

PROJECT MANAGEMENT UNIT FOR  
HO CHI MINH CITY  
WATER ENVIRONMENT IMPROVEMENT

THE DETAILED DESIGN ON HO CHI MINH CITY  
WATER ENVIRONMENT IMPROVEMENT PROJECT  
IN THE SOCIALIST REPUBLIC OF VIET NAM

PACKAGE B  
PUMP DRAINAGE IMPROVEMENT  
BEN ME COC (1) PUMPING STATION  
LAYOUT OF STOP LOG

SCALE : 1 / 5

JICA JAPAN INTERNATIONAL COOPERATION AGENCY ( JICA )

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