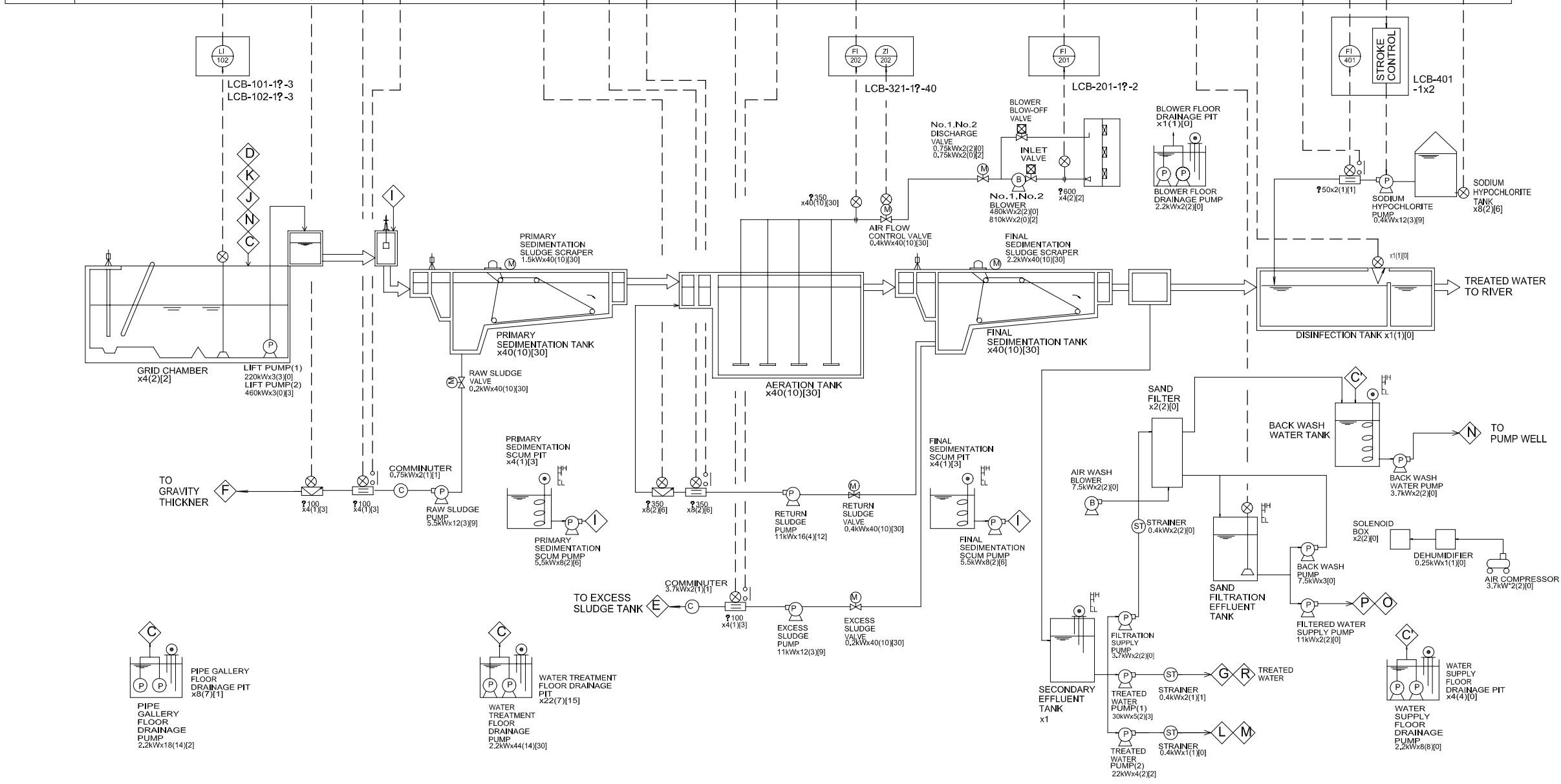


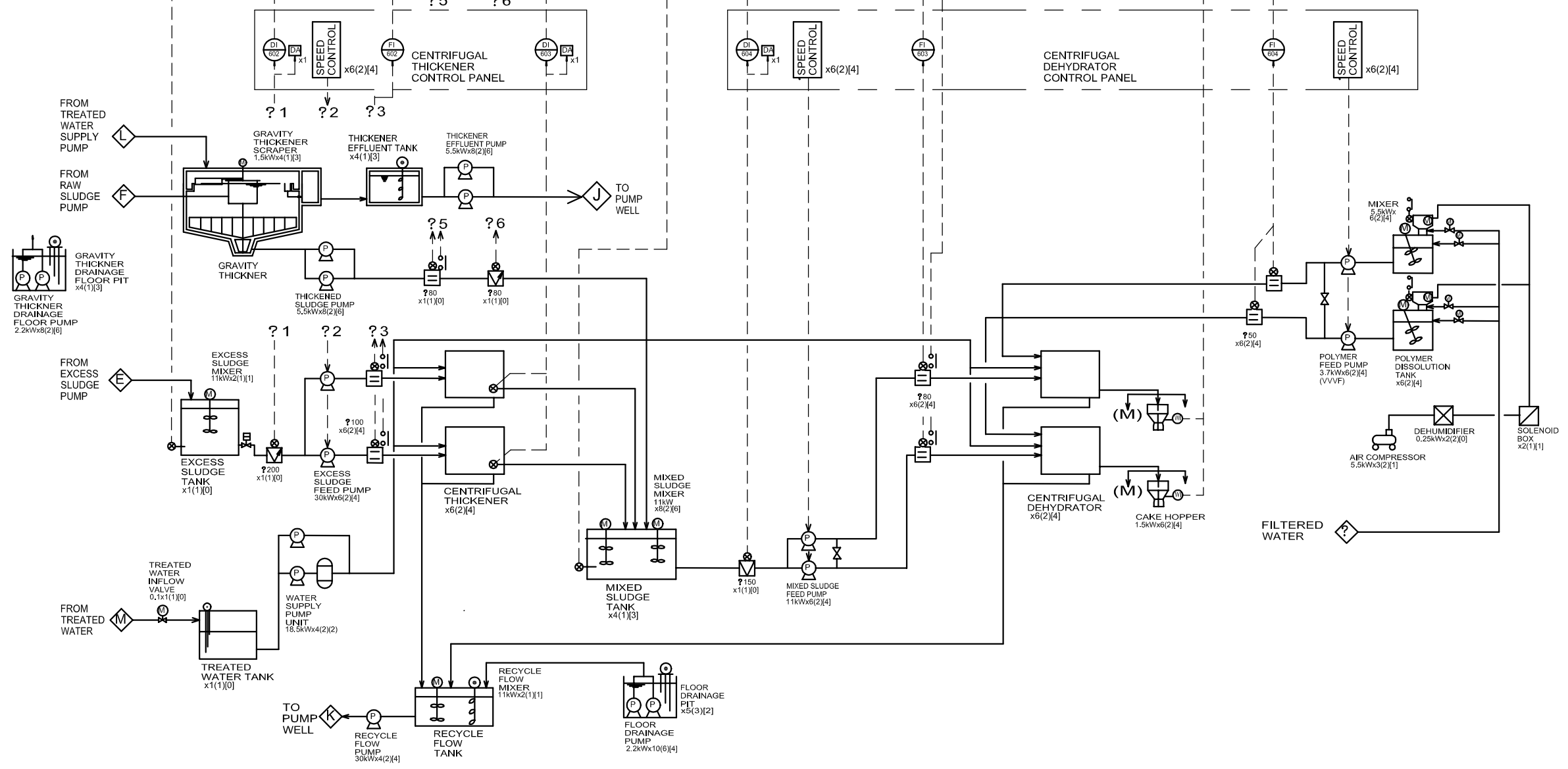
Measurement Item														
	Sewer Inlet Water Level	Lift Pump Well Water Level	Primary Sedimentation Raw Sludge Density	Primary Sedimentation Raw Sludge Flow	Return Sludge Density	Return Sludge Flow	Excess Sludge Flow	Aeration Tank Air Flow	Blower Suction Air Flow	Sand Filtration Effluent Tank Water Level	Treated Water Flow	Sodium Hypochlorite Flow	Sodium Hypochlorite Tank Level	
Qty	Phase-1	1	1	1	1	2	2	1	1	2	1	1	1	2
	Phase-2	0	0	3	3	6	6	3	3	0	0	1	6	
	Total	1	1	4	4	8	8	4	4	2	1	1	2	8
Main Control Room	Logger	?	?	?	?	?	?	?	?	?	?	?	?	
	CRT	?	?	?	?	?	?	?	?	?	?	?	?	



REMARKS:
15kWx1(1)[0]
Phase-2
Phase-1
TOTAL


NO.	DATE	DESCRIPTIONS	BY	APRO.
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 E WASTEWATER TREATMENT PLANT				
INSTRUMENTATION FLOW DIAGRAM FOR WATER TREATMENT PLANT				
SCALE : N.T.S				
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)				
PACIFIC CONSULTANTS INTERNATIONAL				
DESIGNED KOMIYA NOBUO		CHECKED KONDO MASAMI		
DATE : JUNE 2001		DWG. No. PE - WWTP - 551		

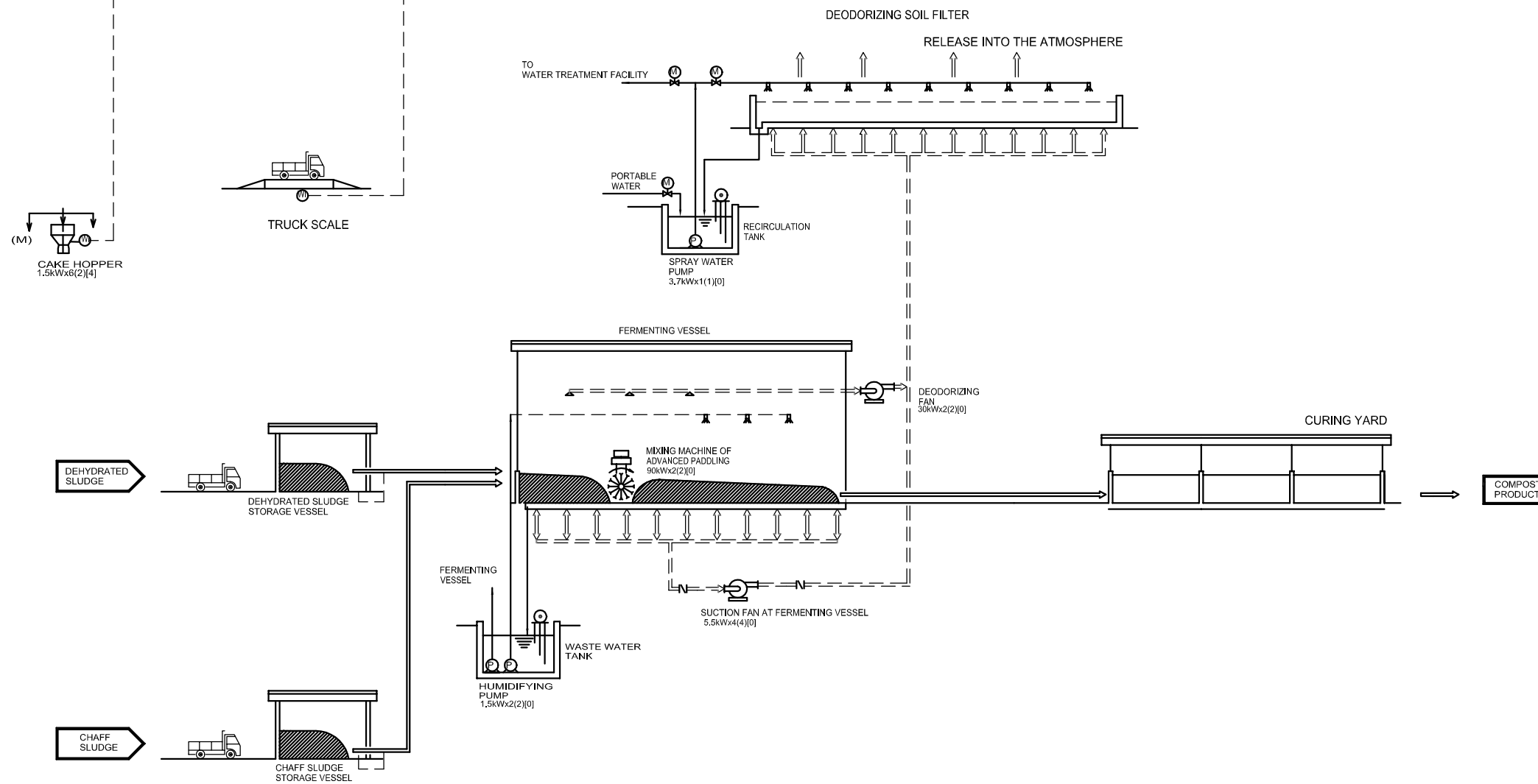
Measurement Item												
	Excess Sludge Tank Sludge Level	Excess Sludge Feed Density	Excess Sludge Feed Flow	Gravity Thickened Sludge Flow	Gravity Thickened Sludge Density	Centrifugal Thickened Sludge Density	Excess Thickened Sludge Tank Sludge Level	Mixed Sludge Density	Mixed Sludge Feed Flow		Cake Hopper Weight	Polymer Feed Flow
Qty	Phase-1	1	1	2	1	1	2	1	1	2	2	2
	Phase-2	0	0	4	0	0	4	0	0	4	4	4
	Total	1	1	6	1	1	6	1	1	6	6	6
Main Control Room	Logger	?	?	?	?	?	?	?	?	?	?	?
	CRT	?	?	?	?	?	?	?	?	?	?	?
Interface	⚡											
Main Control Room												
Chlorination Electric Room												
Dewatering Electric Room	LI 601 LA x3	DI 602	FI 602	FI 601	DI 601 DA x1	DI 603	LI 602 LA x2	DI 604	FI 603	FI 604	DI 604	FI 604
Compost Electric Room												



REMARKS:
 15kWx1(1)[0]
 Phase-2
 Phase-1
 TOTAL

NO.	DATE	DESCRIPTIONS	BY	APRO.
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 E WASTEWATER TREATMENT PLANT				
INSTRUMENTATION FLOW DIAGRAM FOR DEWATERING PLANT				
SCALE : N.T.S				
JICA JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)				
PACIFIC CONSULTANTS INTERNATIONAL				
DESIGNED KOMIYA NOBUO		CHECKED KONDO MASAMI		
DATE : JUNE 2001		DWG. No. PE - WWTP - 552		

Measurement Item		Cake Hopper Weight	Truck Scale Weight
Qty	Phase-1	2	1
	Phase-2	4	0
	Total	6	1
Main Control Room	Logger	0	
	CRT	0	
Interface			
Main Control Room			
Chlorination Electric Room			
Dewatering Electric Room			
Compost Electric Room			



REMARKS:
15kWx1(1)[0]
Phase-2
Phase-1
TOTAL

NO.	DATE	DESCRIPTIONS	BY	APRO.
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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 E
WASTEWATER TREATMENT PLANT

INSTRUMENTATION FLOW DIAGRAM
FOR
COMPOST PLANT

SCALE : N.T.S

JICA JAPAN INTERNATIONAL COOPERATION
AGENCY (JICA)

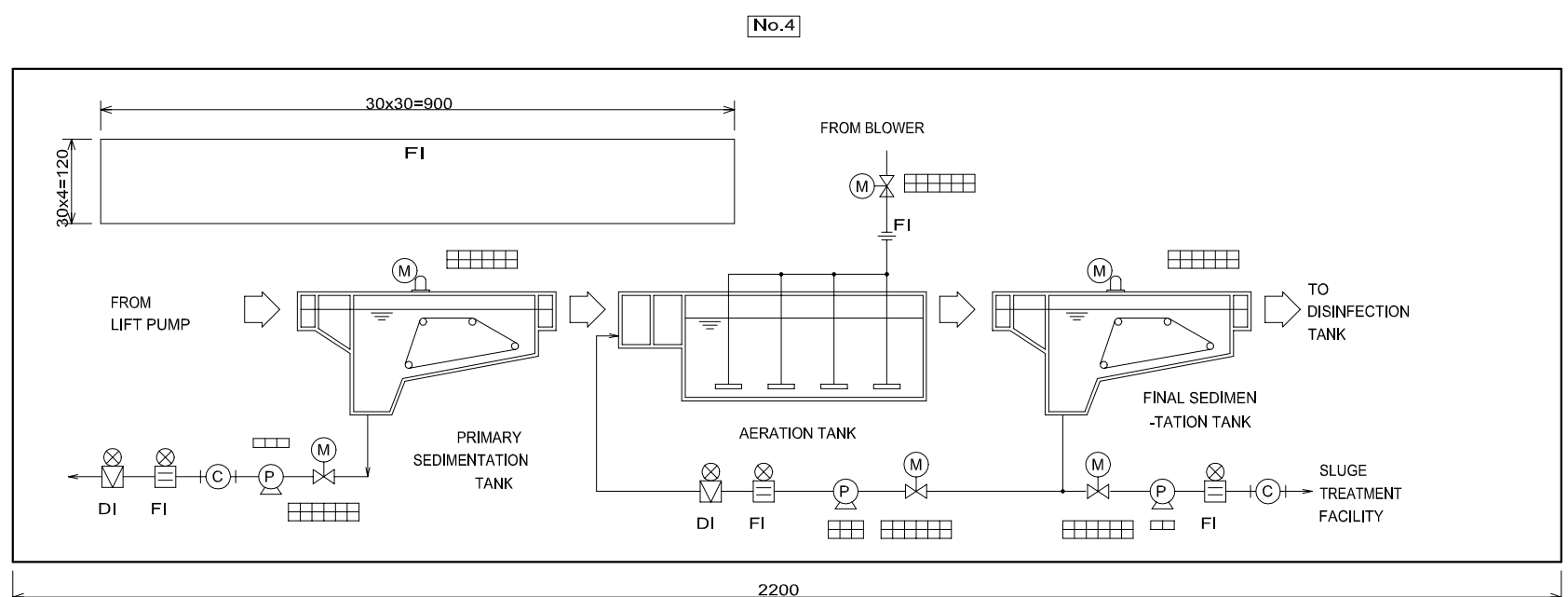
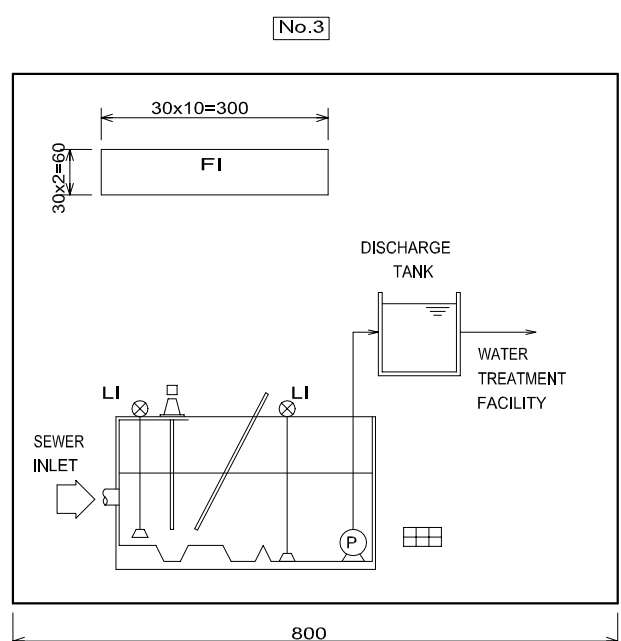
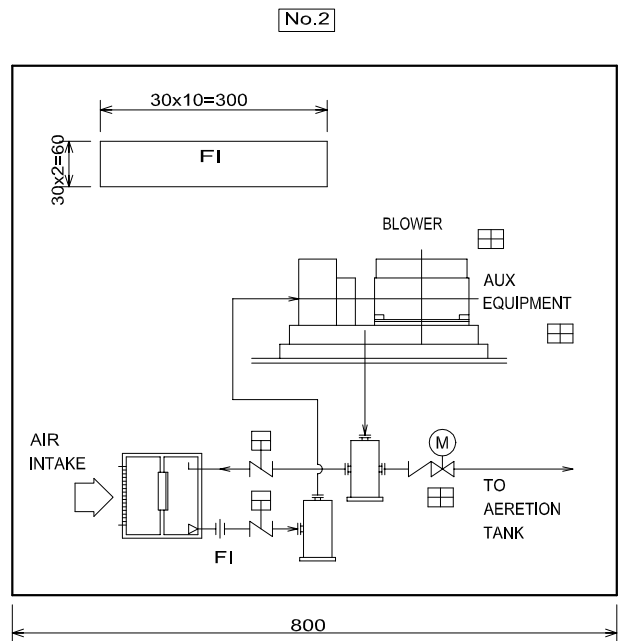
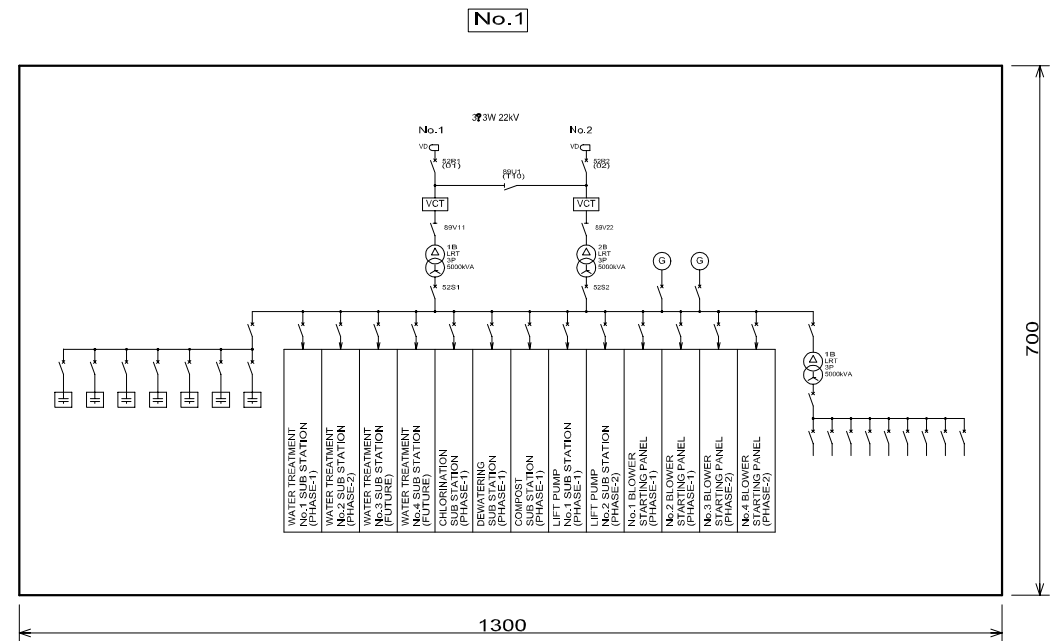
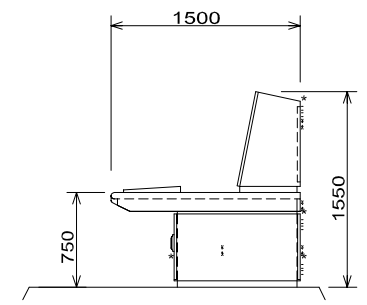
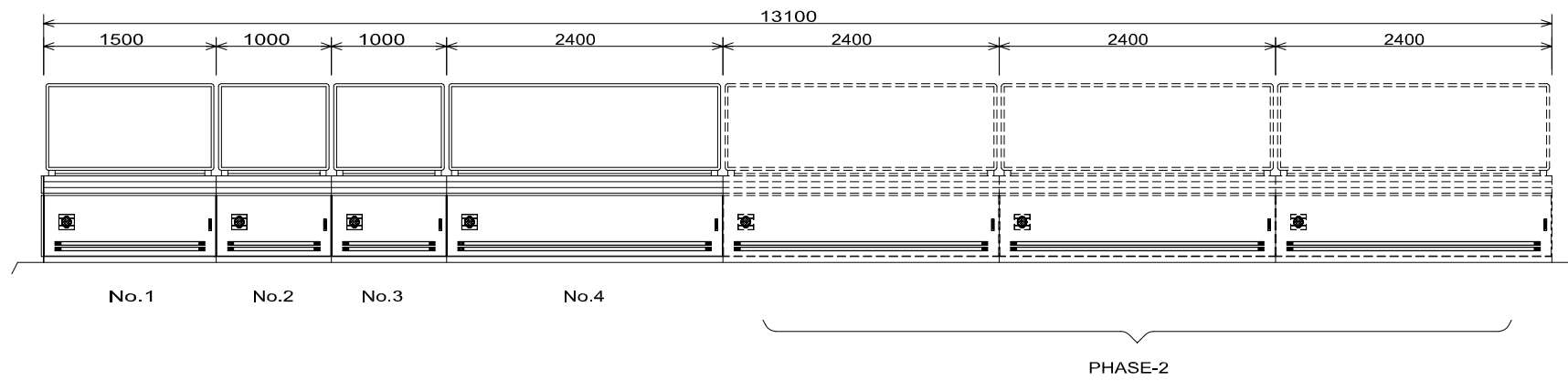
PACIFIC CONSULTANTS INTERNATIONAL

DESIGNED
KOMIYA NOBUO

CHECKED
KONDO MASAMI

DATE : JUNE 2001

DWG. No. PE - WWTP - 553



NO.	DATE	DESCRIPTIONS	BY	APRO.

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 E
WASTEWATER TREATMENT PLANT

OUTLINE DIMENTION OF
SUPERVISORY PANELS
FOR MAIN CONTROL ROOM

SCALE : N.T.S

JICA JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

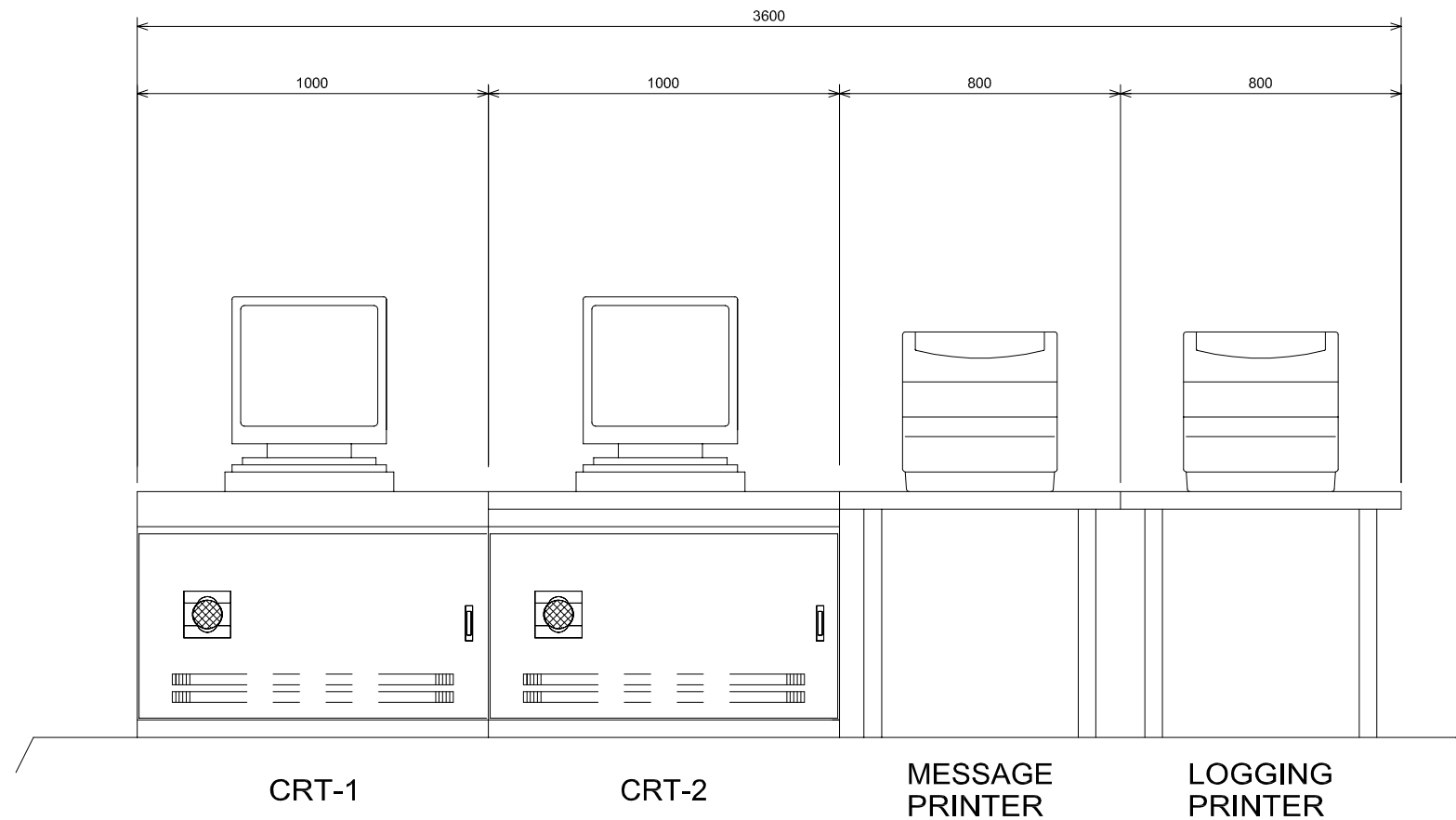
PACIFIC CONSULTANTS INTERNATIONAL

DESIGNED
KOMIYA NOBUO

CHECKED
KONDO MASAMI

DATE : JUNE 2001

DWG. No. PE - WWTP - 555



CRT-1

CRT-2

MESSAGE
PRINTER

LOGGING
PRINTER

FRONT VIEW

NO.	DATE	DESCRIPTIONS	BY	APRO.

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 E
WASTEWATER TREATMENT PLANT

OUTLINE DIMENTION OF
DATA LOGGER FOR
MAIN CONTROL ROOM

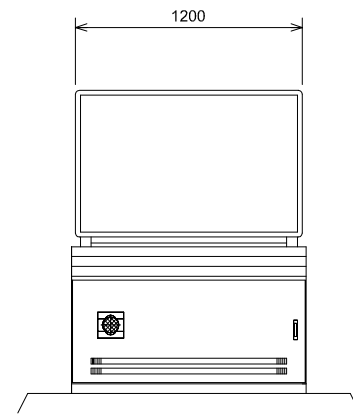
SCALE : 1/10

 JAPAN INTERNATIONAL COOPERATION
AGENCY (JICA)

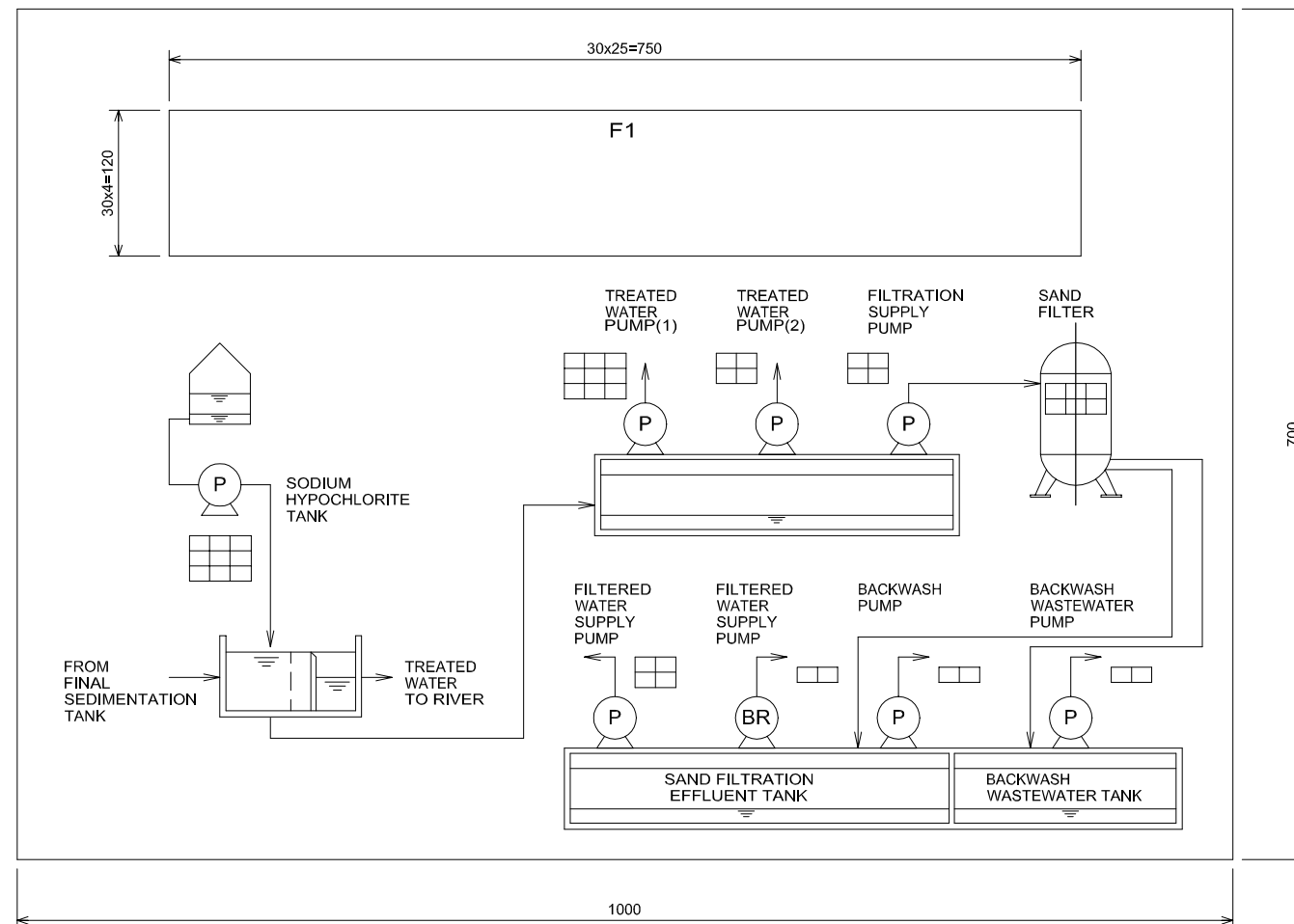
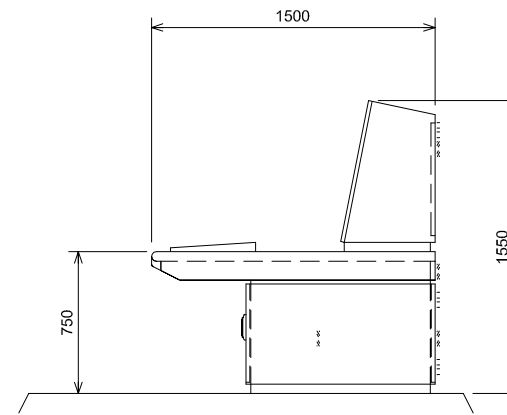
 PACIFIC CONSULTANTS INTERNATIONAL

DESIGNED KOMIYA NOBUO	CHECKED KONDO MASAMI
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DATE : JUNE 2001 DWG. No. PE - WWTP - 556



No.1



CHLORINATION AND WATER SUPPLY FACILITY

NO.	DATE	DESCRIPTIONS	BY	APRO.
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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 E
WASTEWATER TREATMENT PLANT

OUTLINE DIMENTION OF
SUPERVISORY PANELS
FOR CHLORINATION CONTROL ROOM

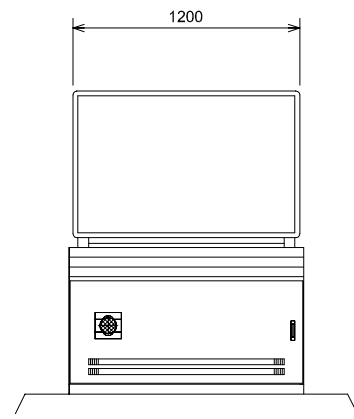
SCALE : N.T.S

JICA JAPAN INTERNATIONAL COOPERATION
AGENCY (JICA)

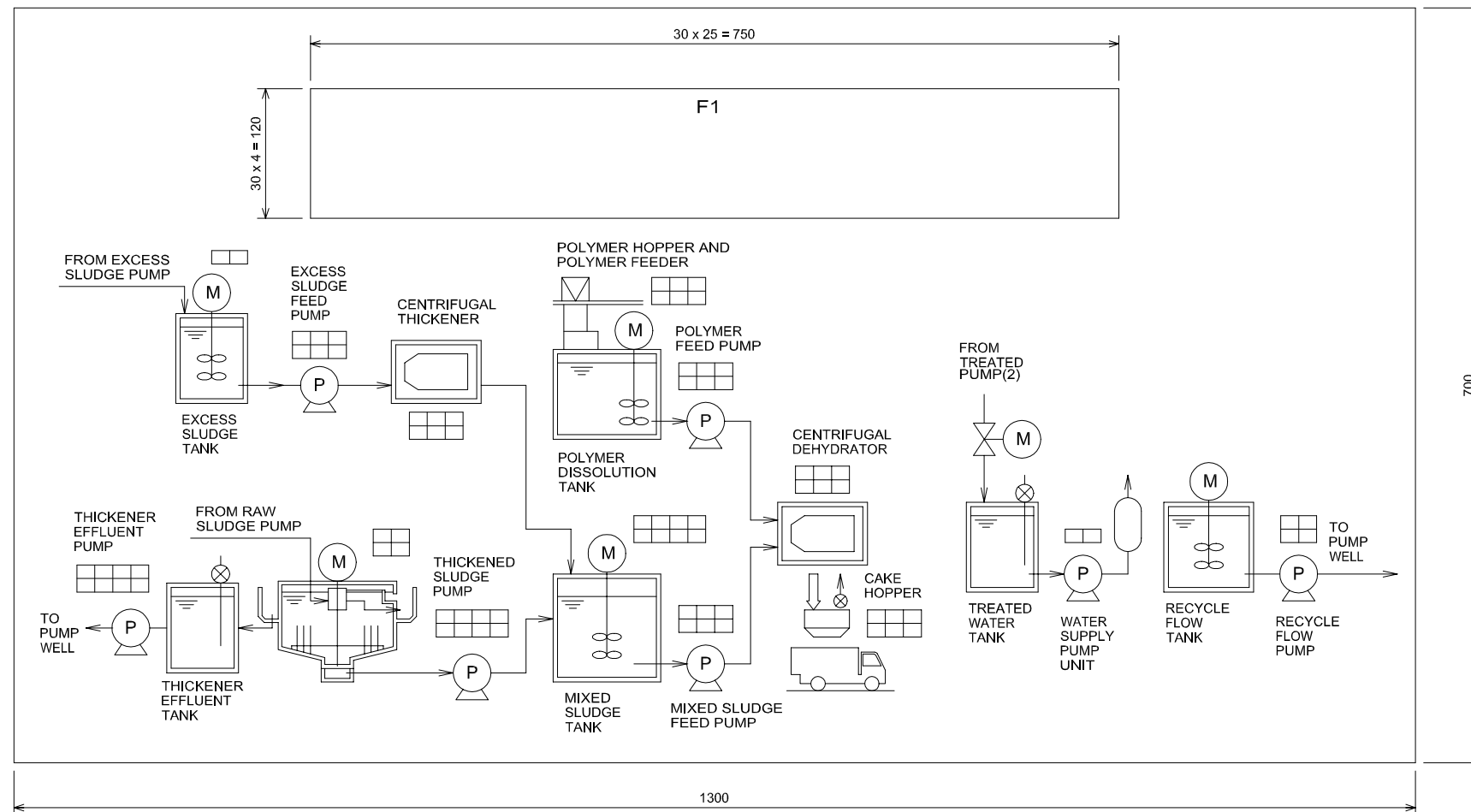
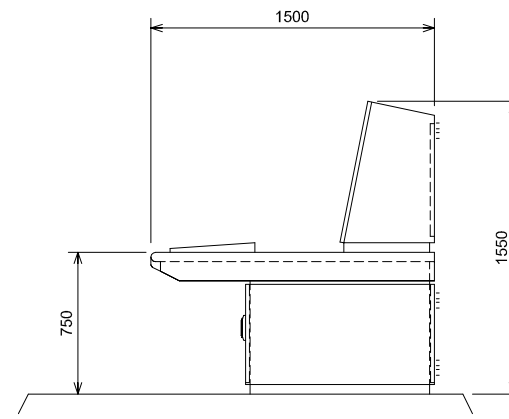
PACIFIC CONSULTANTS INTERNATIONAL

DESIGNED KOMIYA NOBUO	CHECKED KONDO MASAMI
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DATE : JUNE 2001 DWG. No. PE - WWTP - 557



No.1



DEWATERING & SLUDGE TREATMENT FACILITY

NO.	DATE	DESCRIPTIONS	BY	APRO.
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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 E
WASTEWATER TREATMENT PLANT

OUTLINE DIMENSION OF
SUPERVISORY PANELS FOR
DEWATERING CONTROL ROOM

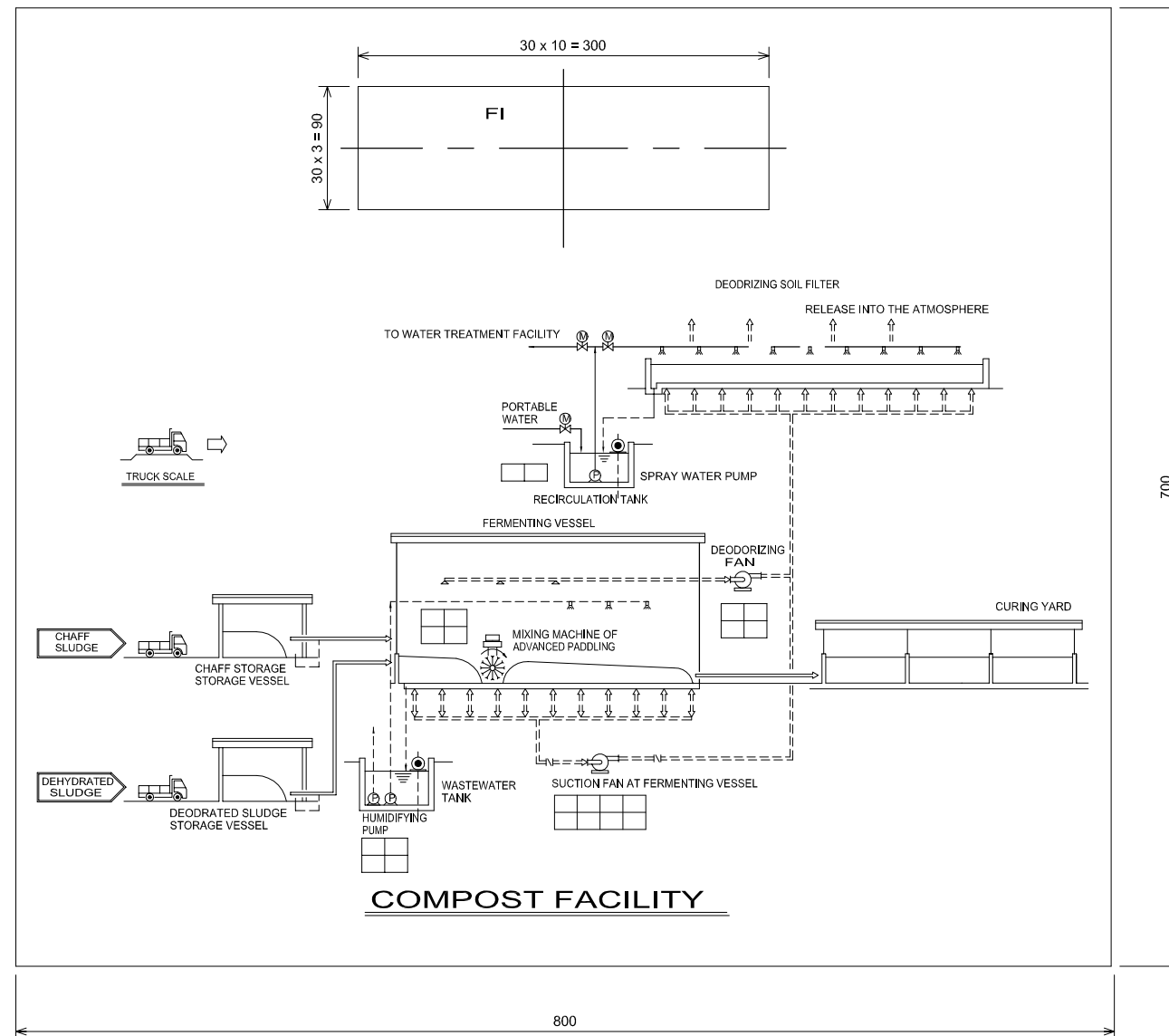
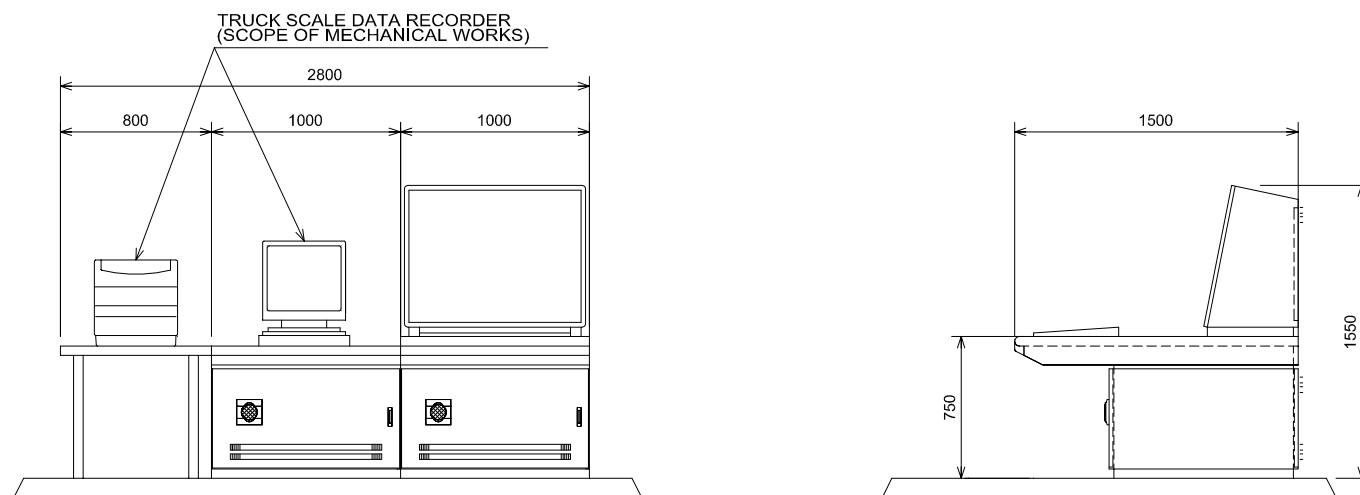
SCALE : N.T.S

JAPAN INTERNATIONAL COOPERATION
AGENCY (JICA)

PACIFIC CONSULTANTS INTERNATIONAL

DESIGNED KOMIYA NOBUO	CHECKED KONDO MASAMI
--------------------------	-------------------------

DATE : JUNE 2001 DWG. No. PE - WWTP - 558



NO.	DATE	DESCRIPTIONS	BY	APRO.

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 E
WASTEWATER TREATMENT PLANT

OUTLINE DIMENSION OF
SUPERVISORY PANELS FOR
COMPOST CONTROL ROOM

SCALE : N.T.S

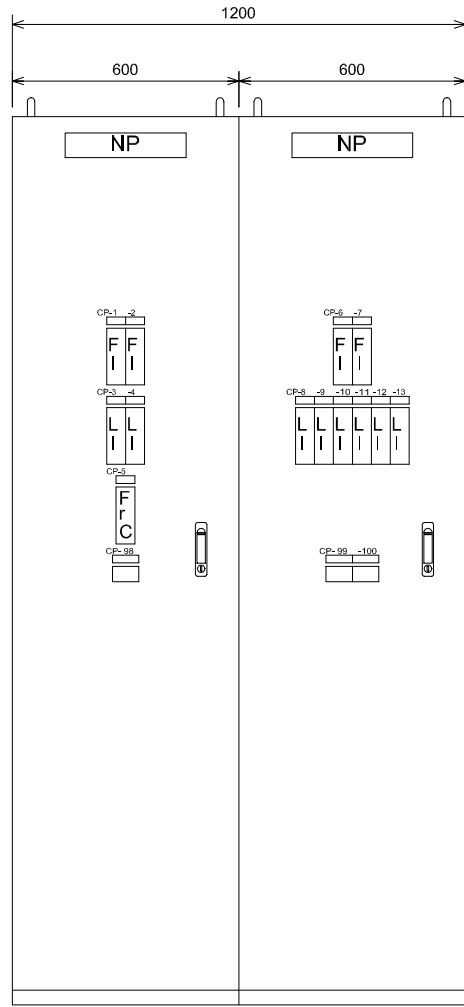
JICA JAPAN INTERNATIONAL COOPERATION
AGENCY (JICA)

PACIFIC CONSULTANTS INTERNATIONAL

DESIGNED
KOMIYA NOBUO

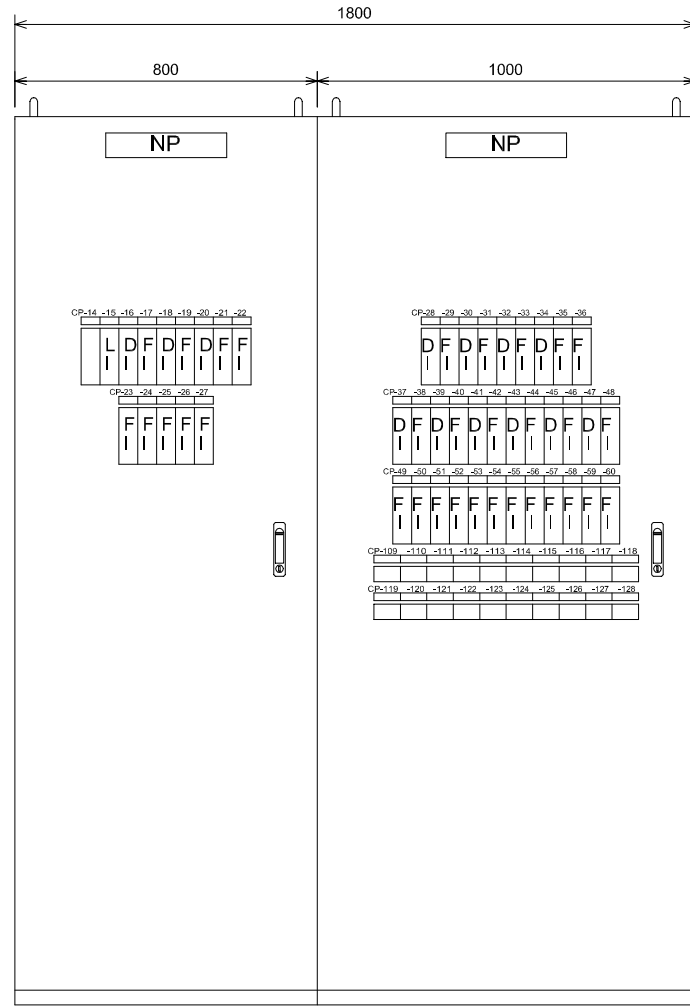
CHECKED
KONDO MASAMI

DATE : JUNE 2001 DWG. No. PE - WWTP - 559



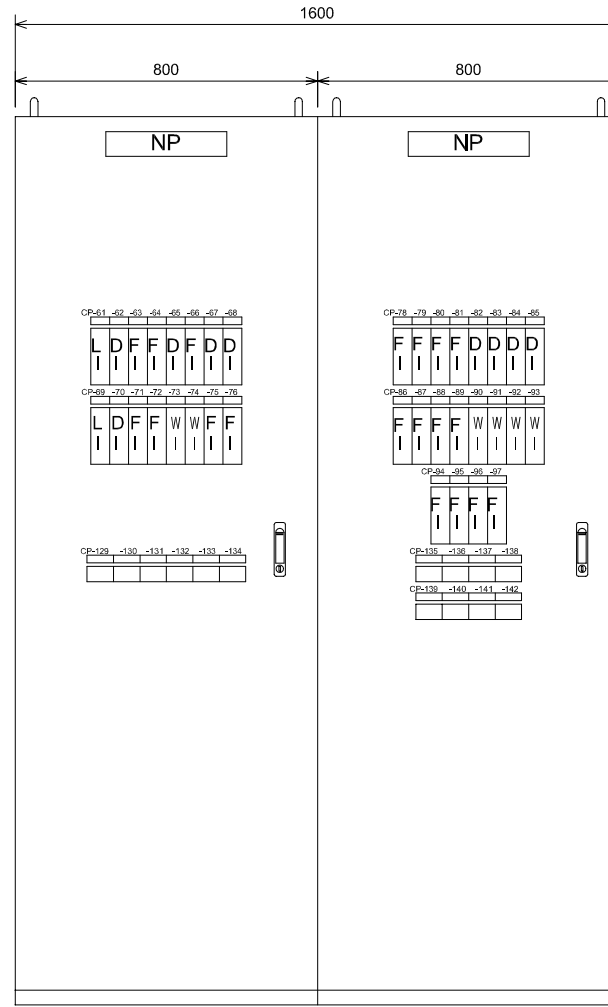
Phase-1 Phase-2

CHLORINATION ELECTRIC ROOM INSTRUMENTATION PANEL



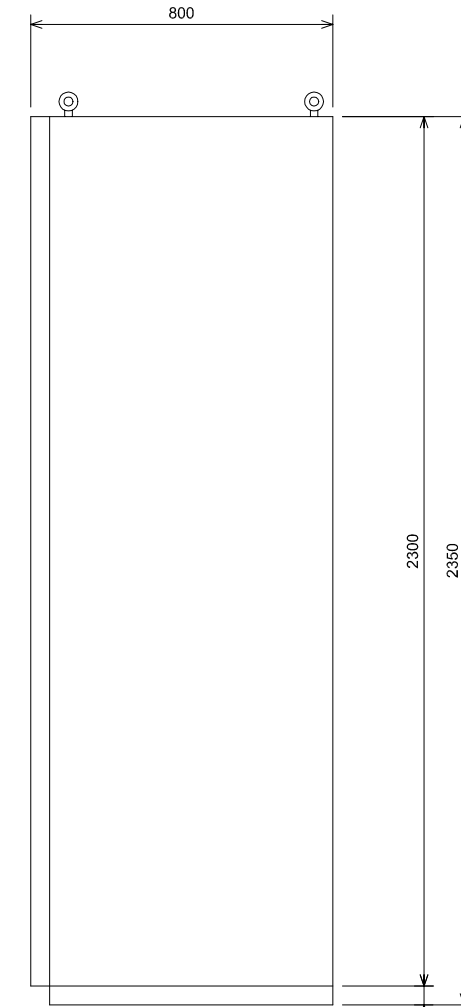
Phase-1 Phase-2

MAIN CONTROL ROOM INSTRUMENTATION PANEL



Phase-1 Phase-2

DEWATERING ELECTRIC ROOM INSTRUMENTATION PANEL



SIDE VIEW

No.	Description	No.	Description	No.	Description	No.	Description	No.	Description
CP-1	TREATED WATER FLOW	CP-31	RAW SLUDGE FLOW 3	CP-61	EXCESS SLUDGE TANK SLUDGE LEVEL	CP-91	CAKE HOPPER WEIGHT 4	CP-121	EXCESS SLUDGE FLOW 4
CP-2	SODIUM HYPOCHLORITE FLOW 1	CP-32	RAW SLUDGE DENSITY 4	CP-62	EXCESS SLUDGE FEED DENSITY	CP-92	CAKE HOPPER WEIGHT 5	CP-122	EXCESS SLUDGE TOTAL FLOW
CP-3	No.1 SODIUM HYPOCHLORITE TANK LEVEL	CP-33	RAW SLUDGE FLOW 4	CP-63	EXCESS SLUDGE FEED FLOW 1	CP-93	CAKE HOPPER WEIGHT 6	CP-123	AERATION TANK AIR FLOW 2
CP-4	No.2 SODIUM HYPOCHLORITE TANK LEVEL	CP-34	RAW SLUDGE TOTAL FLOW	CP-64	EXCESS SLUDGE FEED FLOW 2	CP-94	POLYMER FEED FLOW 3	CP-124	AERATION TANK AIR FLOW 3
CP-5	SODIUM HYPOCHLORITE FEED RATIO	CP-35	-	CP-65	GRAVITY THICKENED SLUDGE DENSITY	CP-95	POLYMER FEED FLOW 4	CP-125	AERATION TANK AIR FLOW 4
CP-6	SODIUM HYPOCHLORITE FLOW 2	CP-36	-	CP-66	GRAVITY THICKENED SLUDGE FLOW	CP-96	POLYMER FEED FLOW 5	CP-126	AERATION TANK TOTAL AIR FLOW
CP-7	SODIUM HYPOCHLORITE TOTAL FLOW	CP-37	RETURN SLUDGE DENSITY 3	CP-67	CENTRIFUGAL THICKENED SLUDGE DENSITY 1	CP-97	POLYMER FEED FLOW 6	CP-127	BLOWER SUCTION AIR FLOW 3
CP-8	No.3 SODIUM HYPOCHLORITE TANK LEVEL	CP-38	RETURN SLUDGE FLOW 3	CP-68	CENTRIFUGAL THICKENED SLUDGE DENSITY 2	CP-98	SODIUM HYPOCHLORITE FLOW 1	CP-128	BLOWER SUCTION AIR FLOW 4
CP-9	No.4 SODIUM HYPOCHLORITE TANK LEVEL	CP-39	RETURN SLUDGE DENSITY 4	CP-69	MIXED SLUDGE TANK LEVEL	CP-99	SODIUM HYPOCHLORITE FLOW 2	CP-129	EXCESS SLUDGE FEED FLOW 1
CP-10	No.5 SODIUM HYPOCHLORITE TANK LEVEL	CP-40	RETURN SLUDGE FLOW 4	CP-70	MIXED SLUDGE DENSITY	CP-100	SODIUM HYPOCHLORITE TOTAL FLOW	CP-130	EXCESS SLUDGE FEED FLOW 2
CP-11	No.6 SODIUM HYPOCHLORITE TANK LEVEL	CP-41	RETURN SLUDGE DENSITY 5	CP-71	MIXED SLUDGE FEED FLOW 1	CP-101	RAW SLUDGE FLOW 1	CP-131	GRAVITY THICKENED SLUDGE FLOW
CP-12	No.7 SODIUM HYPOCHLORITE TANK LEVEL	CP-42	RETURN SLUDGE FLOW 5	CP-72	MIXED SLUDGE FEED FLOW 2	CP-102	RETURN SLUDGE FLOW 1	CP-132	MIXED SLUDGE FEED FLOW 1
CP-13	No.8 SODIUM HYPOCHLORITE TANK LEVEL	CP-43	RETURN SLUDGE DENSITY 6	CP-73	CAKE HOPPER WEIGHT 1	CP-103	RETURN SLUDGE FLOW 2	CP-133	MIXED SLUDGE FEED FLOW 2
CP-14	-	CP-44	RETURN SLUDGE FLOW 6	CP-74	CAKE HOPPER WEIGHT 2	CP-104	RETURN SLUDGE TOTAL FLOW	CP-134	EXCESS SLUDGE FEED FLOW 3
CP-15	LIFT PUMP WELL WATER LEVEL	CP-45	RETURN SLUDGE DENSITY 7	CP-75	POLYMER FEED FLOW 1	CP-105	EXCESS SLUDGE FLOW 1	CP-135	EXCESS SLUDGE FEED FLOW 4
CP-16	RAW SLUDGE DENSITY 1	CP-46	RETURN SLUDGE FLOW 7	CP-76	POLYMER FEED FLOW 2	CP-106	AERATION TANK AIR FLOW 1	CP-136	EXCESS SLUDGE FEED FLOW 5
CP-17	RAW SLUDGE FLOW 1	CP-47	RETURN SLUDGE DENSITY 8	CP-77	-	CP-107	BLOWER SUCTION AIR FLOW 1	CP-137	EXCESS SLUDGE FEED FLOW 6
CP-18	RETURN SLUDGE DENSITY 1	CP-48	RETURN SLUDGE FLOW 8	CP-78	EXCESS SLUDGE FEED FLOW 3	CP-108	BLOWER SUCTION AIR FLOW 2	CP-138	MIXED SLUDGE FEED FLOW 3
CP-19	RETURN SLUDGE FLOW 1	CP-49	EXCESS SLUDGE FLOW 2	CP-79	EXCESS SLUDGE FEED FLOW 4	CP-109	RAW SLUDGE FLOW 2	CP-139	MIXED SLUDGE FEED FLOW 4
CP-20	RETURN SLUDGE DENSITY 2	CP-50	EXCESS SLUDGE FLOW 3	CP-80	EXCESS SLUDGE FEED FLOW 5	CP-110	RAW SLUDGE FLOW 3	CP-140	MIXED SLUDGE FEED FLOW 5
CP-21	RETURN SLUDGE FLOW 2	CP-51	EXCESS SLUDGE FLOW 4	CP-81	EXCESS SLUDGE FEED FLOW 6	CP-111	RAW SLUDGE FLOW 4	CP-141	MIXED SLUDGE FEED FLOW 6
CP-22	RETURN SLUDGE TOTAL FLOW	CP-52	EXCESS SLUDGE TOTAL FLOW	CP-82	CENTRIFUGAL THICKENED SLUDGE DENSITY 3	CP-112	RAW SLUDGE TOTAL FLOW		
CP-23	EXCESS SLUDGE FLOW 1	CP-53	AERATION TANK AIR FLOW 2	CP-83	CENTRIFUGAL THICKENED SLUDGE DENSITY 4	CP-113	EXCESS SLUDGE FLOW 3		
CP-24	AERATION TANK AIR FLOW 1	CP-54	AERATION TANK AIR FLOW 3	CP-84	CENTRIFUGAL THICKENED SLUDGE DENSITY 5	CP-114	EXCESS SLUDGE FLOW 4		
CP-25	BLOWER SUCTION AIR FLOW 1	CP-55	AERATION TANK AIR FLOW 4	CP-85	CENTRIFUGAL THICKENED SLUDGE DENSITY 6	CP-115	EXCESS SLUDGE FLOW 5		
CP-26	BLOWER SUCTION AIR FLOW 2	CP-56	AERATION TANK AIR TOTAL FLOW	CP-86	MIXED SLUDGE FEED FLOW 3	CP-116	EXCESS SLUDGE FLOW 6		
CP-27	SODIUM HYPOCHLORITE FLOW 1	CP-57	BLOWER SUCTION AIR FLOW 3	CP-87	MIXED SLUDGE FEED FLOW 4	CP-117	EXCESS SLUDGE FLOW 7		
CP-28	RAW SLUDGE DENSITY 2	CP-58	BLOWER SUCTION AIR FLOW 4	CP-88	MIXED SLUDGE FEED FLOW 5	CP-118	EXCESS SLUDGE FLOW 8		
CP-29	RAW SLUDGE FLOW 2	CP-59	SODIUM HYPOCHLORITE FLOW 2	CP-89	MIXED SLUDGE FEED FLOW 6	CP-119	EXCESS SLUDGE FLOW 2		
CP-30	RAW SLUDGE DENSITY 3	CP-60	SODIUM HYPOCHLORITE TOTAL FLOW	CP-90	CAKE HOPPER WEIGHT 3	CP-120	EXCESS SLUDGE FLOW 3		

NO.	DATE	DESCRIPTIONS	BY	APPRO.
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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 E
WASTEWATER TREATMENT PLANT

OUTLINE DIMENSION
FOR
INSTRUMENTATION PANELS

SCALE : 1/10

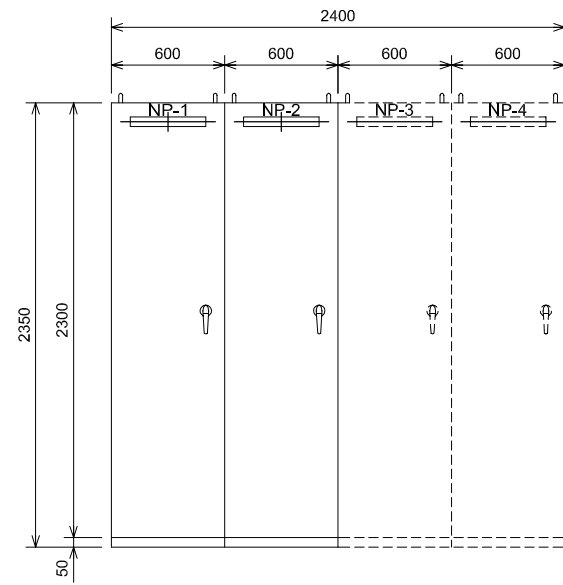
JICA JAPAN INTERNATIONAL COOPERATION
AGENCY (JICA)

PACIFIC CONSULTANTS INTERNATIONAL

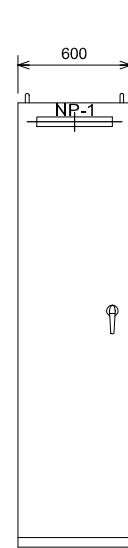
DESIGNED
KOMIYA NOBUO

CHECKED
KONDO MASAMI

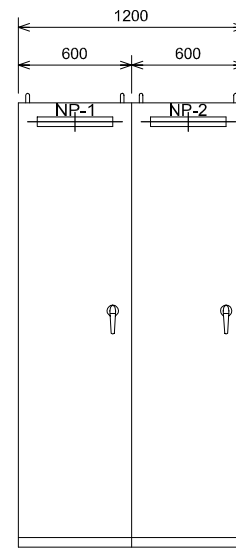
DATE : JUNE 2001 DWG. No. PE - WWTP - 560



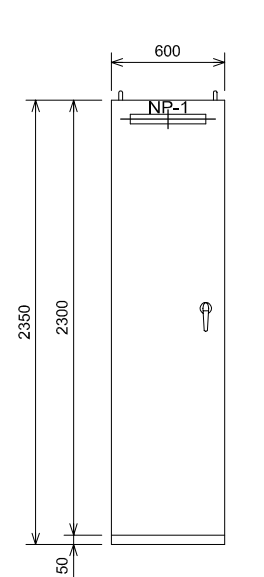
FRONT VIEW
MAIN
ELECTRIC ROOM



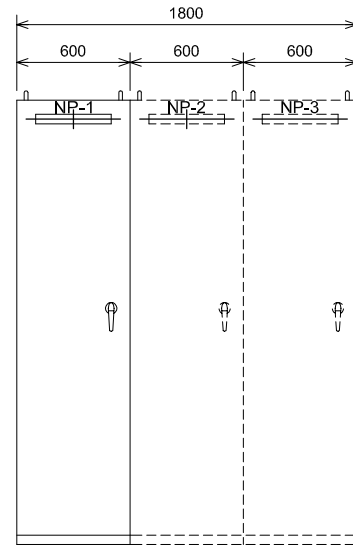
FRONT VIEW
LIFT PUMP
ELECTRIC ROOM



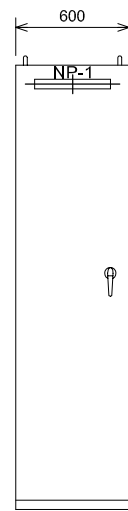
FRONT VIEW
WASTEWATER TREATMENT
ELECTRIC ROOM



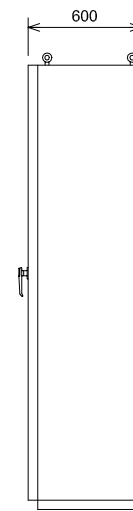
FRONT VIEW
CHLORINATION
ELECTRIC ROOM



FRONT VIEW
DEWATERING
ELECTRIC ROOM



FRONT VIEW
COMPOST
ELECTRIC ROOM



SIDE VIEW

NAME PLATE(NP)

No.	DESCRIPTION
NP-1	INTERFACE PANEL-1
NP-2	INTERFACE PANEL-2
NP-3	INTERFACE PANEL-3
NP-4	INTERFACE PANEL-4

NO.	DATE	DESCRIPTIONS	BY	APRO.

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 E
WASTEWATER TREATMENT PLANT

OUTLINE DIMENSION
FOR
INTERFACE PANELS

SCALE : 1/20

JICA JAPAN INTERNATIONAL COOPERATION
AGENCY (JICA)

PACIFIC CONSULTANTS INTERNATIONAL

DESIGNED KOMIYA NOBUO	CHECKED KONDO MASAMI
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DATE : JUNE 2001 DWG. No. PE - WWTP - 561