

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

PEOPLE'S COMMITTEE OF HO CHI MINH CITY (PCHCMC)

MINISTRY OF PLANNING AND INVESTMENT (MPI)

THE SOCIALIST REPUBLIC OF VIET NAM

THE DETAILED DESIGN STUDY

ON

HO CHI MINH CITY WATER ENVIRONMENT IMPROVEMENT PROJECT

IN

THE SOCIALIST REPUBLIC OF VIET NAM

FINAL REPORT

DRAFT BIDDING DOCUMENTS

PACKAGE E :

WASTEWATER TREATMENT PLANT CONSTRUCTION

VOLUME 3 :

**DRAFT TENDER DRAWINGS (3/3)
[MECHANICAL AND ELECTRICAL]**

JUNE 2001

PACIFIC CONSULTANTS INTERNATIONAL

**LIST OF DRAWINGS ON PACKAGE E
WASTEWATER TREATMENT PLANT - MECHANICAL WORK**

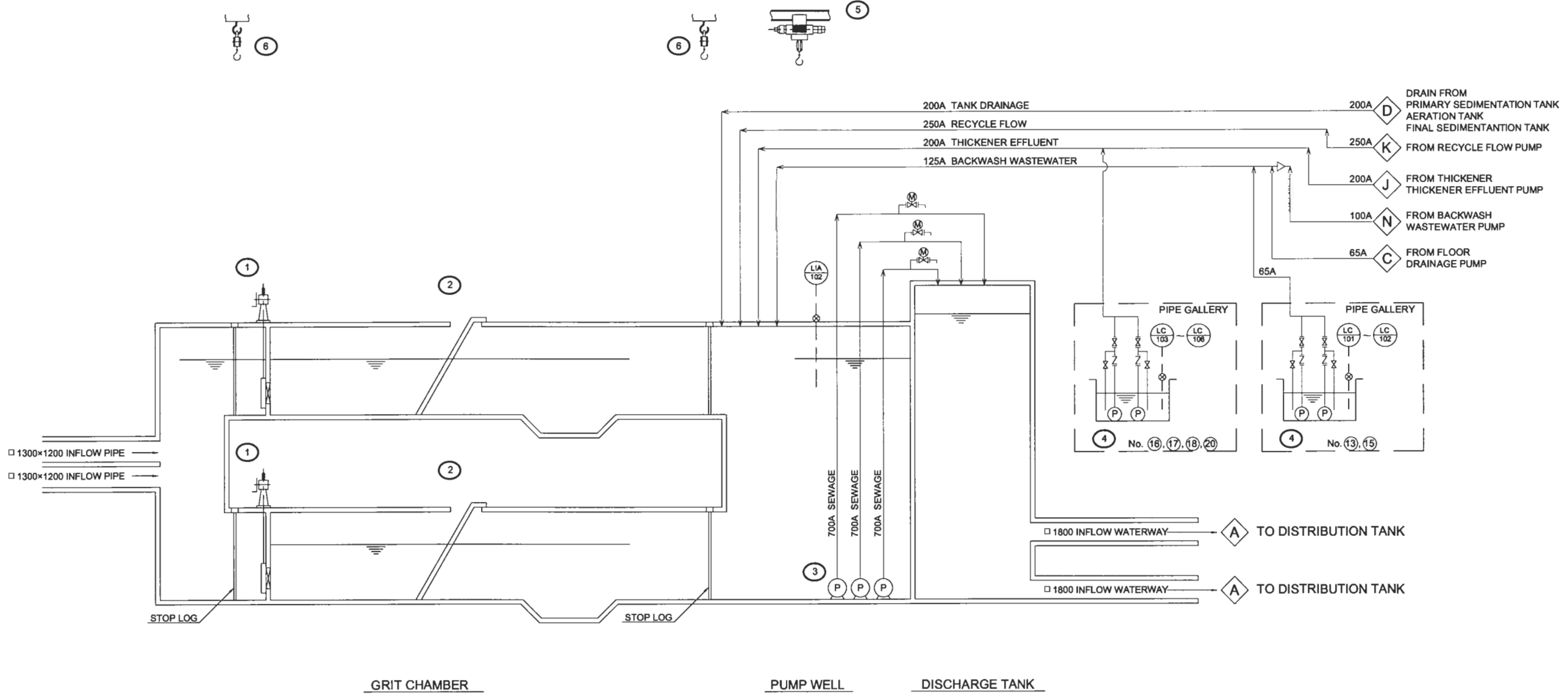
DRAWING NO.	TITLE	SCALE
PE-WWTP-401	FLOW SHEET (GRIT CHAMBER-LIFT PUMP FACILITY)	N.TS
PE-WWTP-402	FLOW SHEET (BLOWER FACILITY)	N.TS
PE-WWTP-403	FLOW SHEET (WATER TREATMENT FACILITY)	N.TS
PE-WWTP-404	FLOW SHEET (DISINFECTION-WATER SUPPLY FACILITY)	N.TS
PE-WWTP-405	FLOW SHEET (SLUDGE TREATMENT FACILITY)	N.TS
PE-WWTP-406	FLOW SHEET (COMPOST FACILITY)	N.TS
PE-WWTP-407	FLOW SHEET (SPLINKLING WATER FACILITY PLAN)	1/1000
PE-WWTP-411	GRIT CHAMBER-LIFT PUMP FACILITY PLAN	1/100
PE-WWTP-412	GRIT CHAMBER-LIFT PUMP FACILITY CROSS SECTION	1/100
PE-WWTP-415	BLOWER FACILITY PLAN (1/2)	1/100
PE-WWTP-416	BLOWER FACILITY PLAN (2/2)	1/100
PE-WWTP-417	BLOWER FACILITY CROSS SECTION	1/100
PE-WWTP-421	WATER TREATMENT FACILITY PLAN (1/20)	1/100
PE-WWTP-422	WATER TREATMENT FACILITY PLAN (2/20)	1/100
PE-WWTP-423	WATER TREATMENT FACILITY PLAN (3/20)	1/100
PE-WWTP-424	WATER TREATMENT FACILITY PLAN (4/20)	1/100
PE-WWTP-425	WATER TREATMENT FACILITY PLAN (5/20)	1/100
PE-WWTP-426	WATER TREATMENT FACILITY PLAN (6/20)	1/100
PE-WWTP-427	WATER TREATMENT FACILITY PLAN (7/20)	1/100
PE-WWTP-428	WATER TREATMENT FACILITY PLAN (8/20)	1/100
PE-WWTP-429	WATER TREATMENT FACILITY PLAN (9/20)	1/100
PE-WWTP-430	WATER TREATMENT FACILITY PLAN (10/20)	1/100
PE-WWTP-431	WATER TREATMENT FACILITY PLAN (11/20)	1/100
PE-WWTP-432	WATER TREATMENT FACILITY PLAN (12/20)	1/100
PE-WWTP-433	WATER TREATMENT FACILITY PLAN (13/20)	1/100
PE-WWTP-434	WATER TREATMENT FACILITY PLAN (14/20)	1/100
PE-WWTP-435	WATER TREATMENT FACILITY PLAN (15/20)	1/100
PE-WWTP-436	WATER TREATMENT FACILITY PLAN (16/20)	1/100
PE-WWTP-437	WATER TREATMENT FACILITY PLAN (17/20)	1/100
PE-WWTP-438	WATER TREATMENT FACILITY PLAN (18/20)	1/100
PE-WWTP-439	WATER TREATMENT FACILITY PLAN (19/20)	1/100
PE-WWTP-440	WATER TREATMENT FACILITY PLAN (20/20)	1/100
PE-WWTP-441	WATER TREATMENT FACILITY CROSS SECTION (1/4)	1/100

DRAWING NO.	TITLE	SCALE
PE-WWTP-442	WATER TREATMENT FACILITY CROSS SECTION (2/4)	1/100
PE-WWTP-443	WATER TREATMENT FACILITY CROSS SECTION (3/4)	1/100
PE-WWTP-444	WATER TREATMENT FACILITY CROSS SECTION (4/4)	1/100
PE-WWTP-451	DISINFECTION-WATER SUPPLY FACILITY PLAN (1/2)	1/100
PE-WWTP-452	DISINFECTION-WATER SUPPLY FACILITY PLAN (2/2)	1/100
PE-WWTP-453	DISINFECTION-WATER SUPPLY FACILITY CROSS SECTION (1/2)	1/100
PE-WWTP-454	DISINFECTION-WATER SUPPLY FACILITY CROSS SECTION (2/2)	1/100
PE-WWTP-461	GRAVITY THICKENING EQUIPMENT PLAN AND CROSS SECTION	1/100
PE-WWTP-462	SLUDGE TREATMENT FACILITY PLAN (1/6)	1/100
PE-WWTP-463	SLUDGE TREATMENT FACILITY PLAN (2/6)	1/100
PE-WWTP-464	SLUDGE TREATMENT FACILITY PLAN (3/6)	1/100
PE-WWTP-465	SLUDGE TREATMENT FACILITY PLAN (4/6)	1/100
PE-WWTP-466	SLUDGE TREATMENT FACILITY PLAN (5/6)	1/100
PE-WWTP-467	SLUDGE TREATMENT FACILITY PLAN (6/6)	1/100
PE-WWTP-468	SLUDGE TREATMENT FACILITY CROSS SECTION (1/4)	1/100
PE-WWTP-469	SLUDGE TREATMENT FACILITY CROSS SECTION (2/4)	1/100
PE-WWTP-470	SLUDGE TREATMENT FACILITY CROSS SECTION (3/4)	1/100
PE-WWTP-471	SLUDGE TREATMENT FACILITY CROSS SECTION (4/4)	1/100
PE-WWTP-475	COMPOST FACILITY GENERAL PLAN	1/300
PE-WWTP-476	COMPOST FACILITY PLAN AND CROSS SECTION (1/4)	1/200
PE-WWTP-477	COMPOST FACILITY PLAN AND CROSS SECTION (2/4)	1/200
PE-WWTP-478	COMPOST FACILITY PLAN AND CROSS SECTION (3/4)	1/200
PE-WWTP-479	COMPOST FACILITY PLAN AND CROSS SECTION (4/4)	1/100
PE-WWTP-480	COMPOST FACILITY FERMENTATION VESSEL PIPING (1/3)	1/200
PE-WWTP-481	COMPOST FACILITY FERMENTATION VESSEL PIPING (2/3)	1/100
PE-WWTP-482	COMPOST FACILITY FERMENTATION VESSEL PIPING (3/3)	1/10
PE-WWTP-483	COMPOST FACILITY DEODORIZATION PIPING (1/2)	1/200
PE-WWTP-484	COMPOST FACILITY DEODORIZATION PIPING (2/2)	1/100
PE-WWTP-485	COMPOST FACILITY TRACK SCALE PLAN AND CROSS SECTION	1/50
PE-WWTP-486	PIPE GALLERY PLAN AND CROSS SECTION (1/5)	1/100
PE-WWTP-487	PIPE GALLERY PLAN AND CROSS SECTION (2/5)	1/100
PE-WWTP-488	PIPE GALLERY PLAN AND CROSS SECTION (3/5)	1/100
PE-WWTP-489	PIPE GALLERY PLAN AND CROSS SECTION (4/5)	1/100
PE-WWTP-490	PIPE GALLERY PLAN AND CROSS SECTION (5/5)	1/100

LIST OF DRAWING ON PAKAGE E
WASTEWATER TREATMENT PLANT - ELECTRICAL WORK

DRAWINGS No.	TITLE	SCALE	DRAWINGS No.	TITLE	SCALE
PE-WWTP-500	GENERAL LAYOUT FOR SCOPE OF ELECTRICAL EQUIPMENT	1/2000	PE-WWTP-534-01	WIRING & PIPING PLAN FOR WATER TREATMENT PLANT (1/8)	1/200
PE-WWTP-501-1	SINGLE LINE DIAGRAM FOR RECEIVING SYSTEM	N.T.S	PE-WWTP-534-02	WIRING & PIPING PLAN FOR WATER TREATMENT PLANT (2/8)	1/200
PE-WWTP-501-2	GENERAL LAYOUT FOR TRANSMISSION LINE	1/30.000	PE-WWTP-534-03	WIRING & PIPING PLAN FOR WATER TREATMENT PLANT (3/8)	1/200
PE-WWTP-502	KEY SINGLE LINE DIAGRAM FOR ELECTRICAL POWER SUPPLY SYSTEM FOR WASTEWATER TREATMENT PLANT	N.T.S	PE-WWTP-534-04	WIRING & PIPING PLAN FOR WATER TREATMENT PLANT (4/8)	1/200
PE-WWTP-503-01	SINGLE LINE DIAGRAM FOR 22KV MAIN SUBSTATION & MAIN ELECTRIC ROOM	N.T.S	PE-WWTP-534-05	WIRING & PIPING PLAN FOR WATER TREATMENT PLANT (5/8)	1/200
PE-WWTP-503-02	SINGLE LINE DIAGRAM FOR BLOWER BUILDING	N.T.S	PE-WWTP-534-06	WIRING & PIPING PLAN FOR WATER TREATMENT PLANT (6/8)	1/200
PE-WWTP-504	SINGLE LINE DIAGRAM FOR MAIN ELECTRIC ROOM MOTOR CONTROL CENTER	N.T.S	PE-WWTP-534-07	WIRING & PIPING PLAN FOR WATER TREATMENT PLANT (7/8)	1/200
PE-WWTP-505	OUTLINE DIMENSION OF SWITCHGEARS FOR MAIN ELECTRIC ROOM	1/20	PE-WWTP-534-08	WIRING & PIPING PLAN FOR WATER TREATMENT PLANT (8/8)	1/150
PE-WWTP-506	GENERAL ARRANGEMENT FOR 22KV MAIN SUBSTATION	1/40	PE-WWTP-535-01	WIRING & PIPING PLAN FOR CHLORINATION STORAGE BUILDING (1/4)	1/150
PE-WWTP-507	GENERAL ARRANGEMENT OF EQUIPMENT FOUNDATION FOR 22KV MAIN	1/50	PE-WWTP-535-02	WIRING & PIPING PLAN FOR CHLORINATION STORAGE BUILDING (2/4)	1/150
PE-WWTP-508	GENERAL ARRANGEMENT OF EARTHING SYSTEM FOR 22KV MAIN SUBSTATION	1/40	PE-WWTP-535-03	WIRING & PIPING PLAN FOR CHLORINATION STORAGE BUILDING (3/4)	1/125
PE-WWTP-509	GENERAL ARRANGEMENT FOR MAIN ELECTRIC ROOM	1/100	PE-WWTP-535-04	WIRING & PIPING PLAN FOR CHLORINATION STORAGE BUILDING (4/4)	1/100
PE-WWTP-510	GENERAL ARRANGEMENT FOR MAIN CONTROL ROOM	1/60	PE-WWTP-536-01	WIRING & PIPING PLAN FOR DEWATERING & CENTRIFUGAL THICKENER BUILDING (1/7)	1/125
PE-WWTP-511	SINGLE LINE DIAGRAM FOR LIFT PUMP ELECTRIC ROOM	N.T.S	PE-WWTP-536-02	WIRING & PIPING PLAN FOR DEWATERING & CENTRIFUGAL THICKENER BUILDING (2/7)	1/100
PE-WWTP-512	OUTLINE DIMENSION OF SWITCHGEARS FOR LIFT PUMP ELECTRIC ROOM	1/20	PE-WWTP-536-03	WIRING & PIPING PLAN FOR DEWATERING & CENTRIFUGAL THICKENER BUILDING (3/7)	1/100
PE-WWTP-513	GENERAL ARRANGEMENT FOR LIFT PUMP STATION ELECTRIC ROOM	1/100	PE-WWTP-536-04	WIRING & PIPING PLAN FOR DEWATERING & CENTRIFUGAL THICKENER BUILDING (4/7)	1/100
PE-WWTP-514-01	SINGLE LINE DIAGRAM FOR WASTEWATER TREATMENT ELECTRIC ROOM (1/4)	N.T.S	PE-WWTP-536-05	WIRING & PIPING PLAN FOR DEWATERING & CENTRIFUGAL THICKENER BUILDING (5/7)	1/100
PE-WWTP-514-02	SINGLE LINE DIAGRAM FOR WASTEWATER TREATMENT ELECTRIC ROOM (2/4)	N.T.S	PE-WWTP-536-06	WIRING & PIPING PLAN FOR DEWATERING & CENTRIFUGAL THICKENER BUILDING (6/7)	1/100
PE-WWTP-514-03	SINGLE LINE DIAGRAM FOR WASTEWATER TREATMENT ELECTRIC ROOM (3/4)	N.T.S	PE-WWTP-536-07	WIRING & PIPING PLAN FOR DEWATERING & CENTRIFUGAL THICKENER BUILDING (7/7)	1/150
PE-WWTP-514-04	SINGLE LINE DIAGRAM FOR WASTEWATER TREATMENT ELECTRIC ROOM (4/4)	N.T.S	PE-WWTP-537-01	WIRING & PIPING PLAN FOR BLOWER BUILDING (1/3)	1/100
PE-WWTP-515	OUTLINE DIMENSION OF SWITCHGEARS FOR WASTEWATER TREATMENT ELECTRIC ROOM	1/20	PE-WWTP-537-02	WIRING & PIPING PLAN FOR BLOWER BUILDING (2/3)	1/100
PE-WWTP-516	GENERAL ARRANGEMENT FOR WASTEWATER TREATMENT ELECTRIC ROOM	1/50	PE-WWTP-537-03	WIRING & PIPING PLAN FOR BLOWER BUILDING (3/3)	1/100
PE-WWTP-517-01	SINGLE LINE DIAGRAM FOR CHLORINATION ELECTRICAL ROOM (1/2)	N.T.S	PE-WWTP-538	WIRING & PIPING PLAN FOR MAIN OFFICE	1/200
PE-WWTP-517-02	SINGLE LINE DIAGRAM FOR CHLORINATION ELECTRICAL ROOM (2/2)	N.T.S	PE-WWTP-539	WIRING PLAN FOR OUT DOOR LIGHTING SYSTEM	1/1500
PE-WWTP-518	OUTLINE DIMENSION OF SWITCHGEARS FOR CHLORINATION ELECTRICAL ROOM	1/20	PE-WWTP-540-01	WIRING & PIPING PLAN FOR PIPE GALLERY LIGHTING SYSTEM (1/2)	1/750
PE-WWTP-519	GENERAL ARRANGEMENT FOR CHLORINATION ELECTRICAL ROOM	1/60	PE-WWTP-540-02	WIRING & PIPING PLAN FOR PIPE GALLERY LIGHTING SYSTEM (2/2)	1/750
PE-WWTP-520-01	SINGLE LINE DIAGRAM FOR DEWATERING ELECTRIC ROOM (1/4)	N.T.S	PE-WWTP-541	WIRING & PIPING PLAN FOR CABLE GALLERY VENTILATION SYSTEM	1/1000
PE-WWTP-520-02	SINGLE LINE DIAGRAM FOR DEWATERING ELECTRIC ROOM (2/4)	N.T.S	PE-WWTP-542	WIRING PLAN FOR COMMUNICATION SYSTEM	1/1500
PE-WWTP-520-03	SINGLE LINE DIAGRAM FOR DEWATERING ELECTRIC ROOM (3/4)	N.T.S	PE-WWTP-543	WIRING & PIPING PLAN FOR COMPOST PLANT	1/500
PE-WWTP-520-04	SINGLE LINE DIAGRAM FOR DEWATERING ELECTRIC ROOM (4/4)	N.T.S	PE-WWTP-551	INSTRUMENTATION FLOW DIAGRAM FOR WATER TREATMENT PLANT	N.T.S
PE-WWTP-521	OUTLINE DIMENSION OF SWITCHGEARS FOR DEWATERING ELECTRIC ROOM	1/20	PE-WWTP-552	INSTRUMENTATION FLOW DIAGRAM FOR DEWATERING PLANT	N.T.S
PE-WWTP-522	GENERAL ARRANGEMENT FOR DEWATERING ELECTRIC ROOM	1/100	PE-WWTP-553	INSTRUMENTATION FLOW DIAGRAM FOR COMPOST PLANT	N.T.S
PE-WWTP-523	SINGLE LINE DIAGRAM FOR COMPOST ELECTRIC ROOM	N.T.S	PE-WWTP-554	BLOCK DIAGRAM FOR DATA LOGGING SYSTEM	N.T.S
PE-WWTP-524	OUTLINE DIMENSION OF SWITCHGEARS FOR COMPOST ELECTRIC ROOM	1/20	PE-WWTP-555	OUTLINE DIMENSION OF SUPERVISORY PANELS FOR MAIN CONTROL ROOM	N.T.S
PE-WWTP-525	GENERAL ARRANGEMENT FOR COMPOST ELECTRIC ROOM	1/60	PE-WWTP-556	OUTLINE DIMENSION OF DATA LOGGER FOR MAIN CONTROL ROOM	1/10
PE-WWTP-526	OUTLINE DIMENSION OF LOCAL CONTROL PANELS	1/20	PE-WWTP-557	OUTLINE DIMENSION OF SUPERVISORY PANELS FOR CHLORINATION CONTROL ROOM	N.T.S
PE-WWTP-531	GENERAL WIRING PLAN	1/1500	PE-WWTP-558	OUTLINE DIMENSION OF SUPERVISORY PANELS FOR DEWATERING CONTROL ROOM	N.T.S
PE-WWTP-532	GENERAL WIRING PLAN FOR EARTHING SYSTEM	1/1500	PE-WWTP-559	OUTLINE DIMENSION OF SUPERVISORY PANELS FOR COMPOST CONTROL	N.T.S
PE-WWTP-533-01	WIRING & PIPING PLAN FOR LIFT PUMP PLANT (1/2)	1/100	PE-WWTP-560	OUTLINE DIMENSION FOR INSTRUMENTATION PANELS	1/10
PE-WWTP-533-02	WIRING & PIPING PLAN FOR LIFT PUMP PLANT (2/2)	1/100	PE-WWTP-561	OUTLINE DIMENSION FOR INTERFACE PANELS	1/20

MECHANICAL WORK



PIPE LINE WIRING	
—	WATER LINE
—	AIR LINE
—	CONCRETE CHANNEL
---	CABLING
VALVES	
⋈	SLUICE VALVE
∩	BUTTERFLY VALVE
∩	DIAPHRAGM VALVE
∩	CHECK VALVE
∩	AIR CONTROL VALVE
⊗	MOTOR OPERATED VALVE
⊗	SOLENOID VALVE
EQUIPMENT	
(P)	PUMP
(BR)	BLOWER
(ST)	STRAINER
(A)	
INSTRUMENTS	
(LIA)	MOUNED ON SUPERVISORY PANEL
(X)	TRANSMITTER
(I)	ORIFICE METER

NO.	DATE	DESCRIPTIONS	BY	APRO.

REVISIONS				

PROJECT MANAGEMENT UNIT FOR
WATER ENVIRONMENT IMPROVEMENT FOR
HO CHI MINH CITY

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

PACKAGE E
WASTEWATER TREATMENT PLANT
FLOW SHEET
(GRIT CHAMBER-LIFT PUMP FACILITY)

SCALE : NOT

JICA JAPAN INTERNATIONAL COOPERATION
AGENCY (JICA)

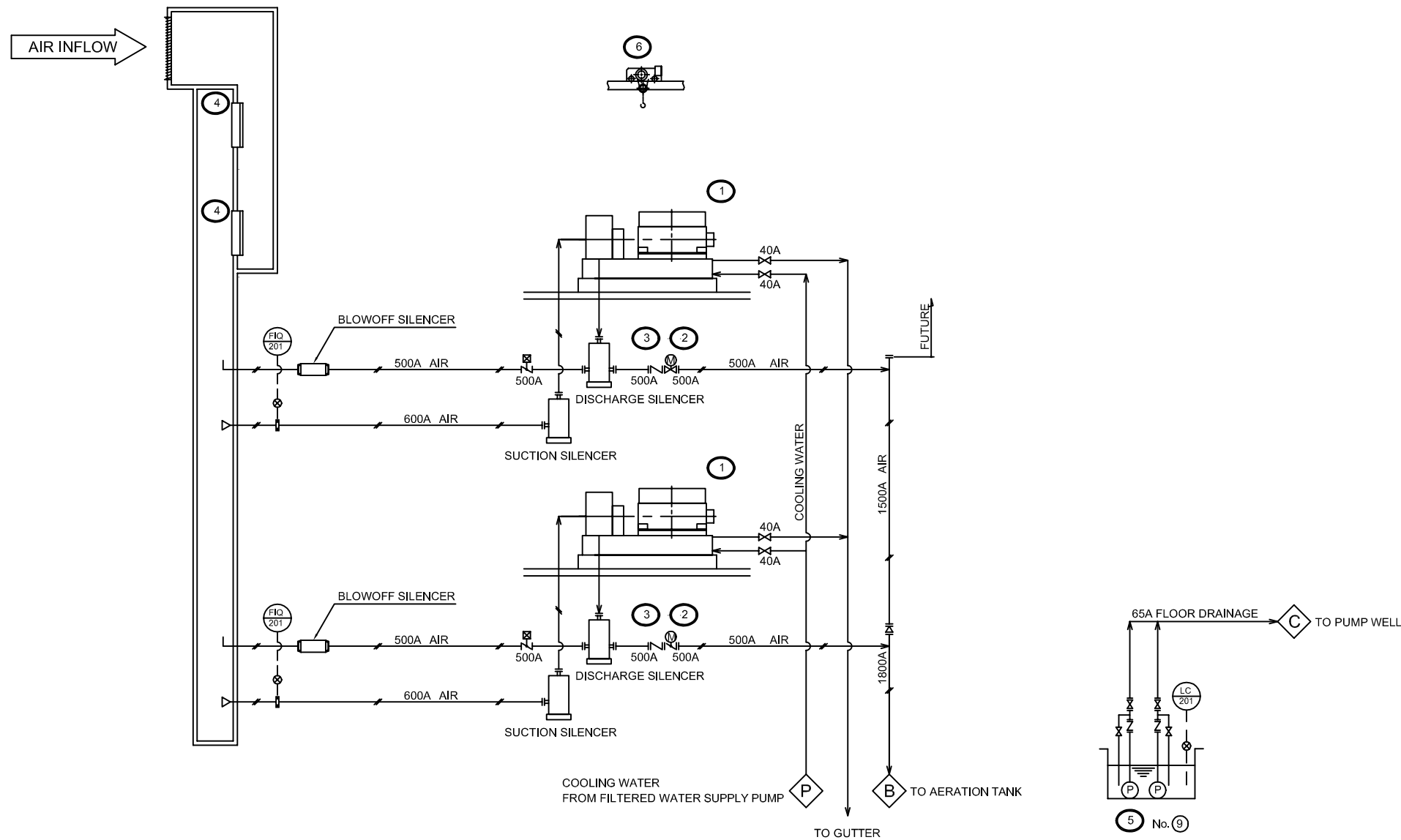
PACIFIC CONSULTANTS INTERNATIONAL

DESIGNED
KAWAZU SHINYA

CHECKED
KONDO MASAMI

DATE : JUNE 2001 DWG. No. PE - WWTP - 401

EQUIPMENT No	(1)	(2)	(3)	(4)	(5)	(6)
EQUIPMENT NAME	INFLOW GATE	COARSE SCREEN	LIFT PUMP (1)	FLOOR DRAINAGE PUMP	HOIST	CHAIN BLOCK
QUANTITY	2	2	3	12	1	1
REMARKS						



PIPE LINE/WIRING	
	WATER LINE
	AIR LINE
	CONCRETE CHANNEL
	CABLING
VALVES	
	SLUICE VALVE
	BUTTERFLY VALVE
	DIAPHRAGM VALVE
	CHECK VALVE
	AIR CONTROL VALVE
	MOTOR OPERATED VALVE
	SOLENOID VALVE
EQUIPMENT	
	PUMP
	BLOWER
	STRAINER
	AIR CONTROL VALVE
INSTRUMENTS	
	MOUNDED ON SUPERVISORY PANEL
	TRANSMITTER
	ORIFICE METER

NO.	DATE	DESCRIPTIONS	BY	APRO.
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REVISIONS

PROJECT MANAGEMENT UNIT FOR
WATER ENVIRONMENT IMPROVEMENT FOR
HO CHI MINH CITY

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

PACKAGE E
WASTEWATER TREATMENT PLANT
FLOW SHEET
(BLOWER FACILITY)

SCALE : NOT

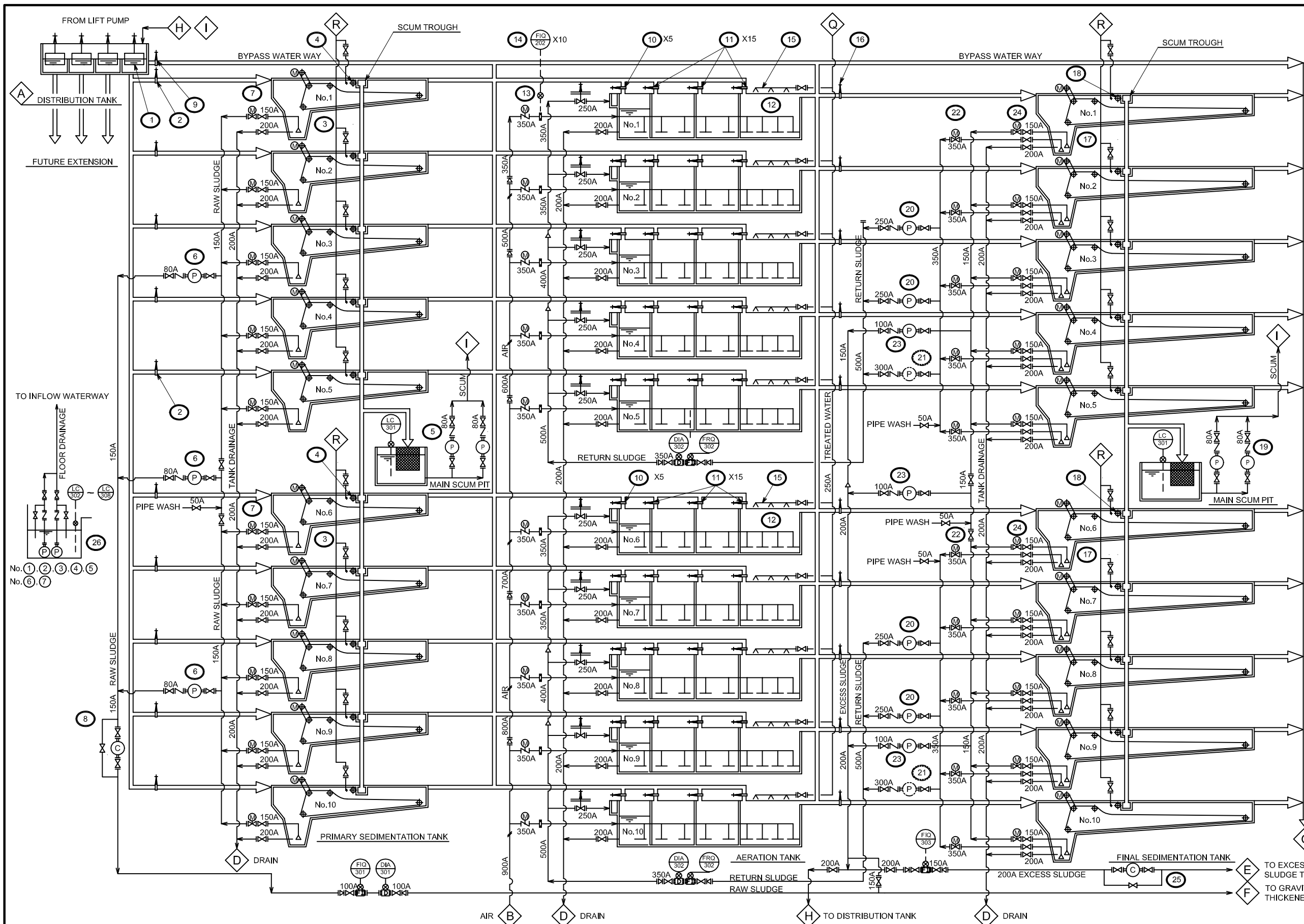
JAPAN INTERNATIONAL COOPERATION
AGENCY (JICA)

PACIFIC CONSULTANTS INTERNATIONAL

DESIGNED KAWAZU SHINYA	CHECKED KONDO MASAMI
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DATE : JUNE 2001 DWG. No. PE - WWTP - 402

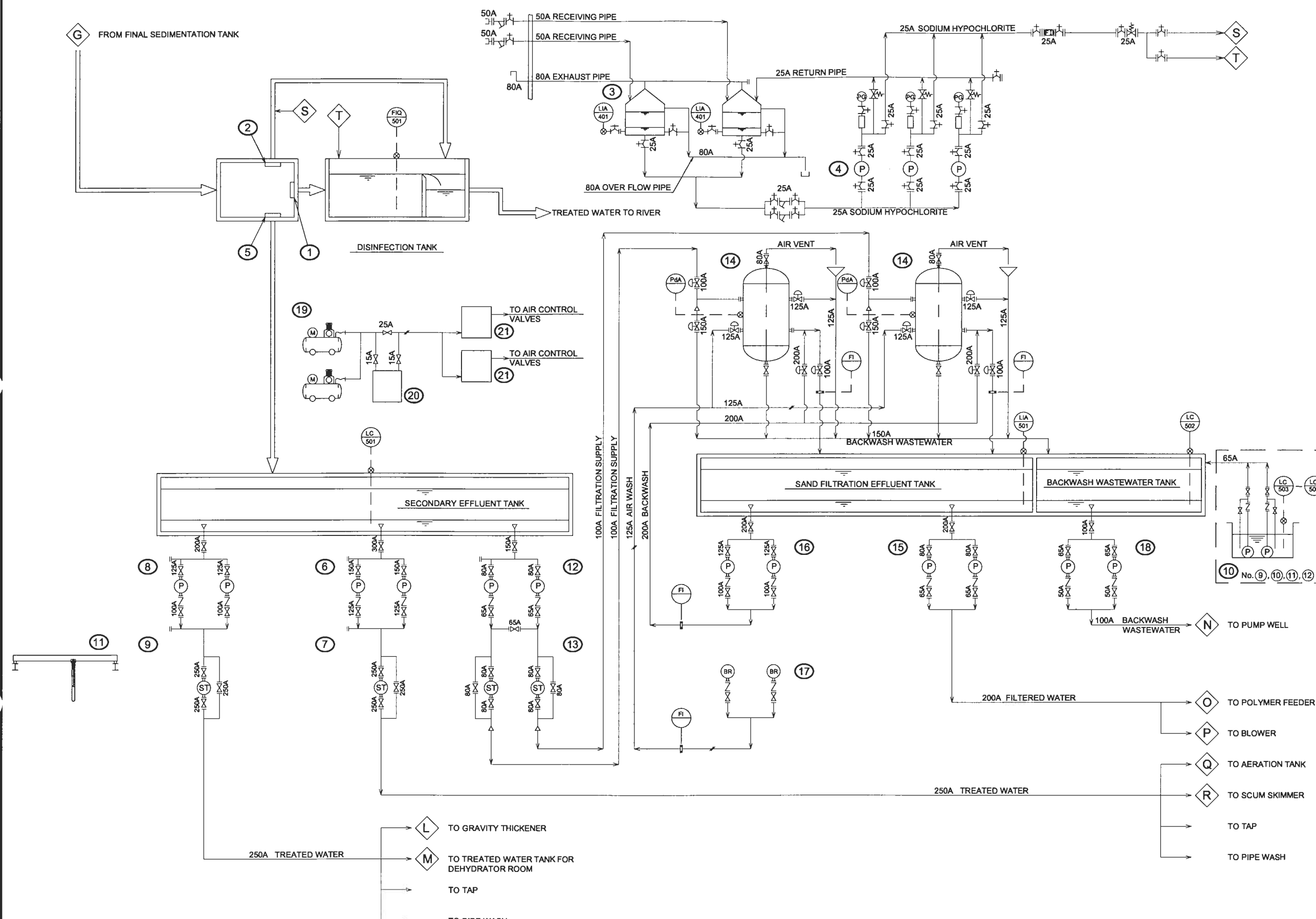
EQUIPMENT No	(1)	(2)	(3)	(4)	(5)	(6)
EQUIPMENT NAME	BLOWER (1)	DISCHARGE VALVE (1)	CHECK VALVE (1)	AIR FILTER	FLOOR DRAINAGE PUMP	CRANE
QUANTITY	2	2	2	2	2	1
REMARKS						



PIPE LINE/WIRING	
	WATER LINE
	AIR LINE
	CONCRETE CHANNEL
	CABLING
VALVES	
	SLUICE VALVE
	BUTTERFLY VALVE
	DIAPHRAGM VALVE
	CHECK VALVE
	AIR CONTROL VALVE
	MOTOR OPERATED VALVE
	SOLENOID VALVE
EQUIPMENT	
	PUMP
	BLOWER
	STRAINER
	MOTOR
INSTRUMENTS	
	MOUNTED ON SUPERVISORY PANEL
	TRANSMITTER
	ORIFICE METER

EQUIPMENT No	(23)	(24)	(25)	(26)	(16)	(17)	(18)	(19)	(20)	(21)	(22)
EQUIPMENT NAME	EXCESS SLUDGE PUMP	EXCESS SLUDGE VALVE	COMMINUTER	FLOOR DRAINAGE PUMP	INFLOW GATE	SLUDGE SCRAPER	SCUM SKIMMER	SCUM PUMP	RETURN SLUDGE PUMP(25%)	RETURN SLUDGE PUMP(50%)	RETURN SLUDGE VALVE
QUANTITY	3	10	1	14	10	10	20	2	4	0	10
REMARKS						2TANK 1DRIVE					
EQUIPMENT No	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
EQUIPMENT NAME	DISTRIBUTION WEIR	INFLOW WEIR	SLUDGE SCRAPER	SCUM SKIMMER	SCUM PUMP	RAW SLUDGE PUMP	RAW SLUDGE VALVE	COMMINUTER	BYPASS GATE	INFLOW WEIR	STEP FEEDING WEIR
QUANTITY	4	10	10	20	2	3	10	1	1	10	30
REMARKS			2TANK 1DRIVE								

NO.	DATE	DESCRIPTIONS	BY	APRO.
REVISIONS				
PROJECT MANAGEMENT UNIT FOR WATER ENVIRONMENT IMPROVEMENT FOR HO CHI MINH CITY				
THE DETAILD DESIGN ON HO CHI MINH CITY WATER ENVIRONMENT IMPROVEMENT PROJECT IN THE SOCIALIST REPUBLIC OF VIET NAM				
PACKAGE E				
WASTEWATER TREATMENT PLANT				
FLOW SHEET				
(WATER TREATMENT FACILITY)				
SCALE : NOT				
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)				
PACIFIC CONSULTANTS INTERNATIONAL				
DESIGNED		CHECKED		
KAWAZU SHINYA		KONDO MASAMI		
DATE : JUNE 2001		DWG. No. PE - WWTP - 403		



PIPE LINE/WIRING	
—	WATER LINE
—	AIR LINE
—	CONCRETE CHANNEL
—	CABLING

VALVES	
⋈	SLUICE VALVE
∩	BUTTERFLY VALVE
∩	DIAPHRAGM VALVE
∩	CHECK VALVE
∩	AIR CONTROL VALVE
⊗	MOTOR OPERATED VALVE
⊗	SOLENOID VALVE

EQUIPMENT	
⊗	PUMP
⊗	BLOWER
⊗	STRAINER
⊗	MOTOR OPERATED VALVE

INSTRUMENTS	
⊗	MOUNED ON SUPERVISORY PANEL
⊗	TRANSMITTER
⊗	ORIFICE METER

NO.	DATE	DESCRIPTIONS	BY	APPRO.

PROJECT MANAGEMENT UNIT FOR WATER ENVIRONMENT IMPROVEMENT FOR HO CHI MINH CITY

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

PACKAGE E
WASTEWATER TREATMENT PLANT
FLOW SHEET
(DISINFECTATION-WATER SUPPLY FACILITY)

EQUIPMENT No	(19)	(20)	(21)						
EQUIPMENT NAME	AIR COMPRESSOR	DEHUMIDIFIER	SOLENOID VALVE BOX						
QUANTITY	2	1	2						
REMARKS									
EQUIPMENT No	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)
EQUIPMENT NAME	FLOOR DRAINAGE PUMP	MAINTENANCE CRANE	FILTRATION SUPPLY PUMP	FILTRATION SUPPLY STRAINER	SAND FILTER	FILTERED WATER SUPPLY PUMP	BACKWASH PUMP	AIR WASH BLOWER	BACKWASH WASTEWATER PUMP
QUANTITY	8	1	2	2	2	2	2	2	2
REMARKS									
EQUIPMENT No	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
EQUIPMENT NAME	INFLOW GATE	BYPASS GATE	SODIUM HYPOCHLORITE TANK	SODIUM HYPOCHLORITE PUMP	SECONDARY EFFLUENT GATE	TREATED WATER PUMP (1)	TREATED WATER STRAINER (1)	TREATED WATER PUMP (2)	TREATED WATER STRAINER (2)
QUANTITY	1	1	2	3	1	2	2	2	2
REMARKS									

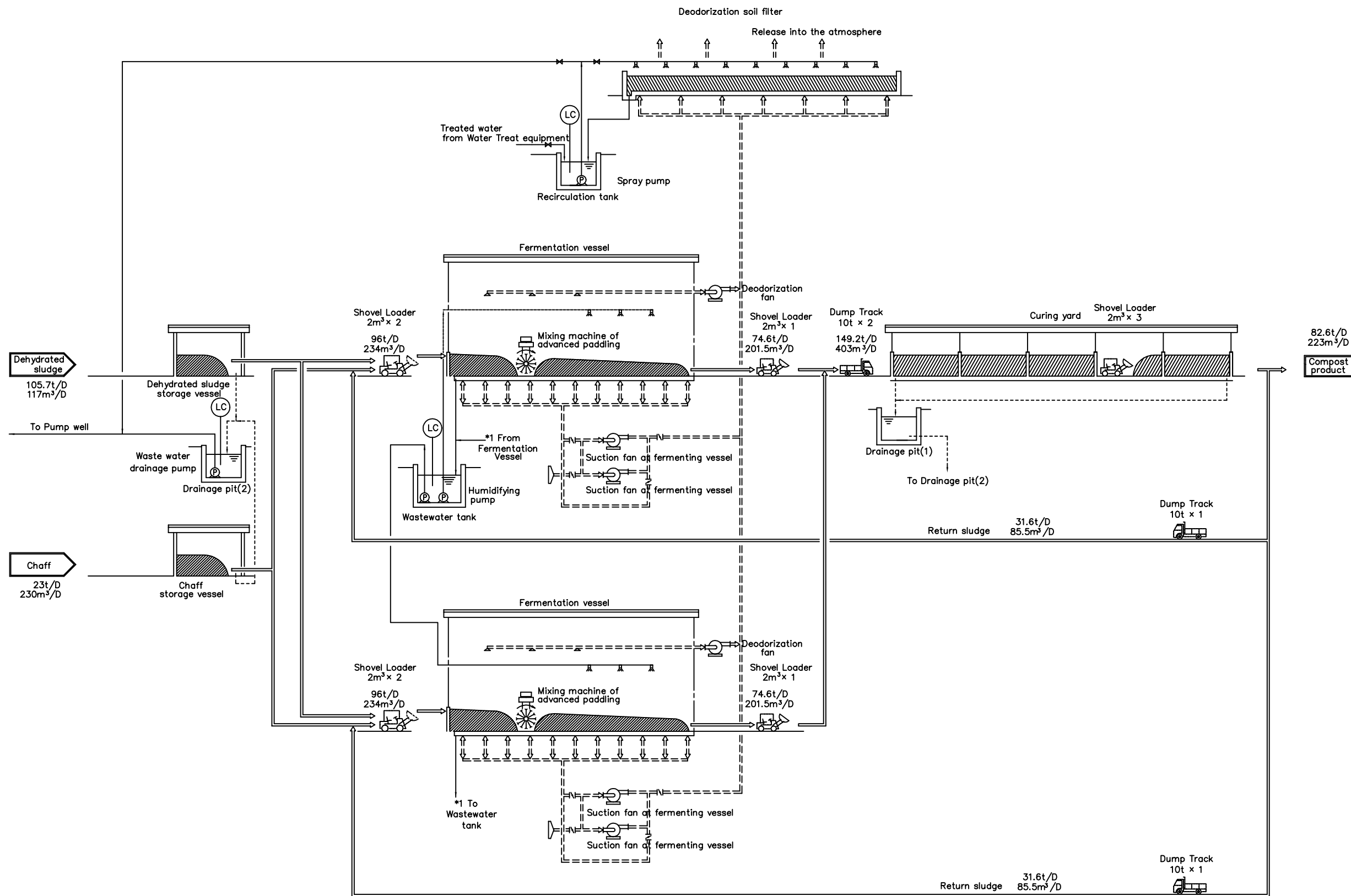
SCALE : NOT

JICA JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

PACIFIC CONSULTANTS INTERNATIONAL

DESIGNED KAWAZU SHINYA	CHECKED KONDO MASAMI
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DATE : JUNE 2001 DWG. No. PE - WWTP - 404



NO.	DATE	DESCRIPTIONS	BY	APRO.

REVISIONS

PROJECT MANAGEMENT UNIT FOR
WATER ENVIRONMENT IMPROVEMENT FOR
HO CHI MINH CITY

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

PACKAGE E
WASTEWATER TREATMENT PLANT
FLOW SHEET
(Compost Facility)

SCALE : NOT

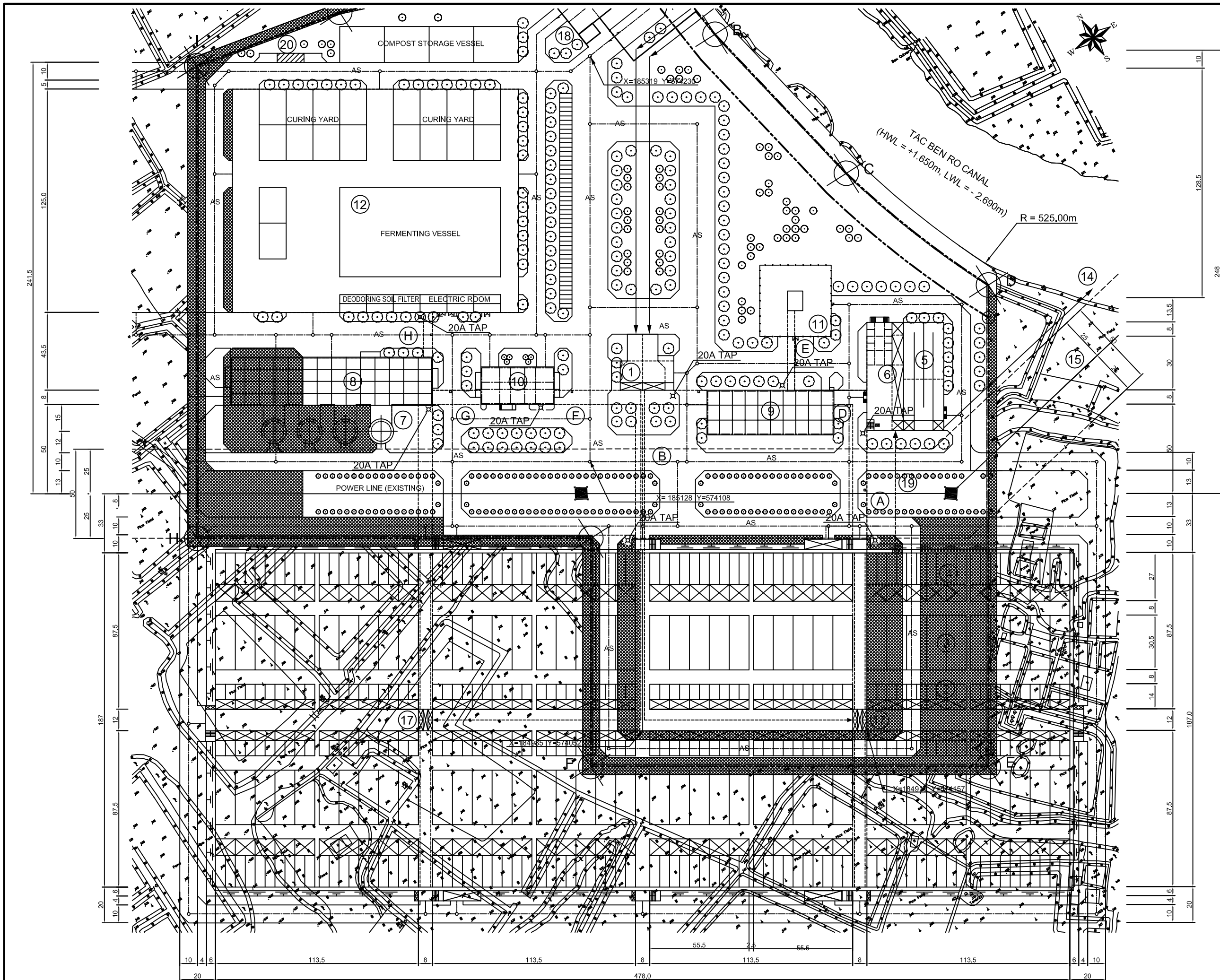
JICA JAPAN INTERNATIONAL COOPERATION
AGENCY (JICA)

PACIFIC CONSULTANTS INTERNATIONAL

DESIGNED
KAWAZU SHINYA

CHECKED
KONDO MASAMI

DATE : JUNE 2001 DWG. No. PE - WWTP - 406

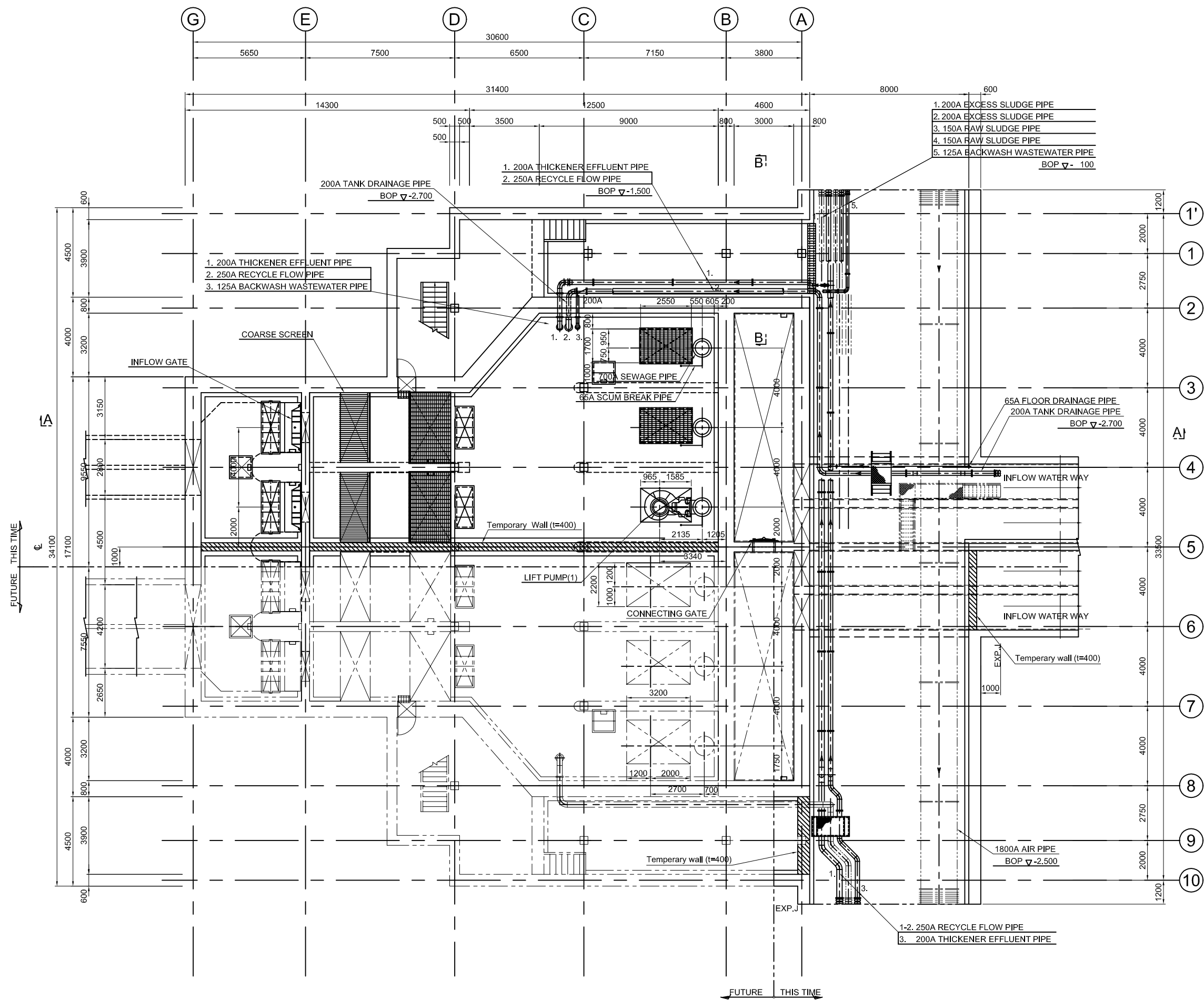


LEGEND

- ① LIFT PUMPING STATION
- ② PRIMARY SEDIMENTATION TANK
- ③ AERATION TANK
- ④ FINAL SEDIMENTATION TANK
- ⑤ DISINFECTION
- ⑥ CHLORINATION STORAGE BUILDING
- ⑦ GRAVITY THICKENER
- ⑧ DEWATERING & CENTRIFUGAL THICKENER BUILDING
- ⑨ BLOWER BUILDING
- ⑩ MAIN BUILDING
- ⑪ MAIN SUBSTATION
- ⑫ COMPOST PLANT FACILITY
- ⑬ INLET PIPE
- ⑭ EFFLUENT PIPE
- ⑮ POWER LINE (EXISTING)
- ⑯ TOWER OF TRANSMISSION LINE
- ⑰ DISTRIBUTION TANK
- ⑱ GUARD ROOM
- ⑲ CONNECTION PIPE
- ⑳ TRUCK SCALE

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 E WASTEWATER TREATMENT PLANT FLOW SHEET (SPRINKLING WATER FACILITY PLAN)				
SCALE = 1 : 1000				
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)				
PACIFIC CONSULTANTS INTERNATIONAL				
DESIGNED KAWAZU SHINYA		CHECKED KONDO MASAMI		
DATE : JUNE 2001		DWG. No. PE - WWTP - 407		

SPRINKLING WATER FACILITY PLAN



B1 FLOOR PLAN

NO.	DATE	DESCRIPTIONS	BY	APRO.
REVISIONS				
PROJECT MANAGEMENT UNIT FOR WATER ENVIRONMENT IMPROVEMENT FOR HO CHI MINH CITY				
THE DETAILD DESIGN ON HO CHI MINH CITY WATER ENVIRONMENT IMPROVEMENT PROJECT IN THE SOCIALIST REPUBLIC OF VIET NAM				
PACKAGE E WASTEWATER TREATMENT PLANT GRIT CHAMBER-LIFT PUMP FACILITY PLAN				
SCALE : 1:100				
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)				
PACIFIC CONSULTANTS INTERNATIONAL				
DESIGNED		CHECKED		
DATE :		DWG. No. PE -WWTP - 411		