

**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 B :  
PUMP DRAINAGE IMPROVEMENT**

**VOLUME 3 :  
DRAFT TENDER DRAWINGS**

**JUNE 2001**

**PACIFIC CONSULTANTS INTERNATIONAL**

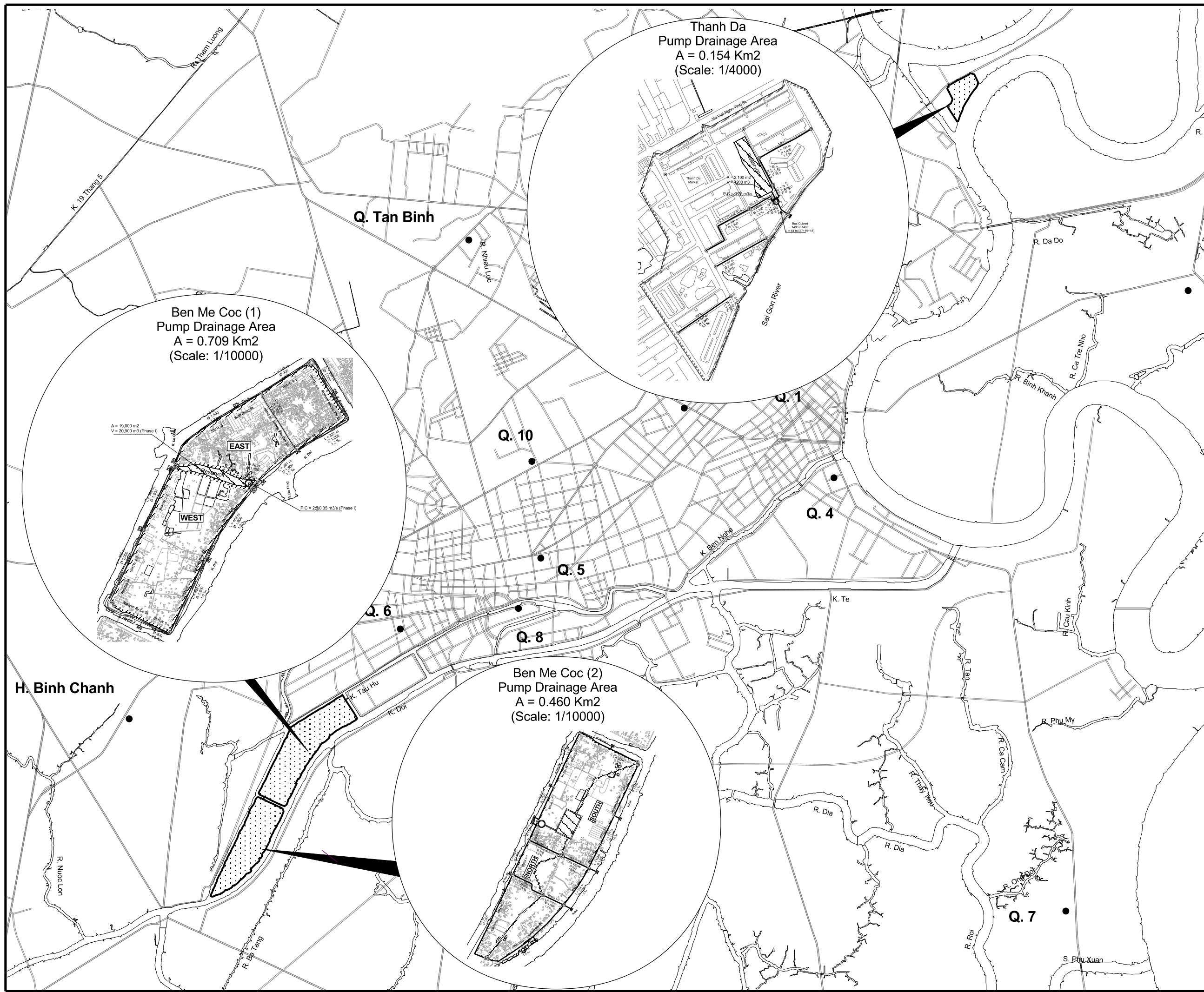
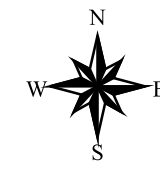
DRAWING NO.	TYTLE	SCALE
<b>GENERAL</b>		
PB-PDI-GI-101	LOCATION OF PACKAGE B PROJECT	1/25,000
PB-PDI-GI-102	TOPOGRAPHIC SURVEY DATA AND INFORMATION	1/25,000
PB-PDI-GI-103	GEOLOGICAL SURVEY DATA AND INFORMATION	1/30000
PB-PDI-GI-104	GEOLOGICAL PROFILE THANH DA, BEN ME COC (1) AND (2) PUMPING STATIONS	1/200, 1/500, 1/1000
PB-PDI-GI-105	GENERAL INFORMATION (1/2)	N.T.S.
PB-PDI-GI-106	GENERAL INFORMATION (2/2)	N.T.S.
<b>THANH DA PUMP DRAINAGE IMPROVEMENT AREA (CIVIL WORKS)</b>		
PB-PDI-TD-201	DIKE ALONG SAIGON RIVER	1/50, 1/100, 1/200
PB-PDI-TD-202	PLAN AND PROFILE OF SEWER AND ROAD (1) (TD. 2)	1/100, 1/500
PB-PDI-TD-203	PLAN AND PROFILE OF SEWER AND ROAD (2) (TD. 5)	1/100, 1/500
PB-PDI-TD-204	PLAN AND PROFILE OF SEWER AND ROAD (3) (TD. 4-1, TD.4-3, TD. 4-6)	1/100, 1/500
PB-PDI-TD-205	PLAN AND PROFILE OF SEWER LINE AND ROAD (4) (TD. 6-2, TD. 6-3, TD. 7)	1/100, 1/500
PB-PDI-TD-206	CROSS SECTION OF SEWR AND ROAD (1) (TD. 2: 0+00 - 0+147)	1/50, 1/100
PB-PDI-TD-207	CROSS SECTION OF SEWR AND ROAD (2) (TD. 5: 0+00 - 0+154.1)	1/50, 1/100
PB-PDI-TD-208	CROSS SECTION OF SEWR AND ROAD (3) (TD. 4-1, TD.4-3, TD. 4-6: 0+00 - 0+234.72)	1/50, 1/100
PB-PDI-TD-209	CROSS SECTION OF SEWR AND ROAD (4) (TD. 6-2, TD. 6-3, TD. 7: 0+00 - 0+245.98)	1/50, 1/100
PB-PDI-TD-210	TYPICAL PLAN AND SECTION OF MANHOLE (1)	1/40
PB-PDI-TD-211	TYPICAL PLAN AND SECTION OF MANHOLE (2)	1/40
PB-PDI-TD-212	TYPICAL BAR ARRANGEMENT OF MANHOLE (1)	1/40
PB-PDI-TD-213	TYPICAL BAR ARRANGEMENT OF MANHOLE (2)	1/40
PB-PDI-TD-214	TYPICAL PLAN, SECTION AND BAR ARRANGEMENT OF INLET PIT	1/10, 1/40
PB-PDI-TD-215	TYPICAL DETAILS OF MANHOLE COVERS (TYPE A AND C)	1/10
PB-PDI-TD-216	TYPICAL DETAILS OF INLET COVERS (TYPE D AND E)	1/5, 1/10
PB-PDI-TD-217	DIMENSION OF MANHOLE AND INLET PIT IN THANH DA AREA	N.T.S.
PB-PDI-TD-218	REPLACEMENT OF EXISTING FLAP GATE	1/20, 1/350
PB-PDI-TD-219	ROAD WORKS IN THANH DA AREA	1/10, 1/50
PB-PDI-TD-220	GENERAL LAYOUT OF THANH DA PUMPING STATION	1/200
PB-PDI-TD-221	PLAN AND PROFILE OF THANH DA PUMPING STATION	1/200
PB-PDI-TD-222	PLAN AND SECTION OF INLET, PUMP PIT AND DISCHARGE BASIN (1)	1/60
PB-PDI-TD-223	PLAN AND SECTION OF INLET, PUMP PIT AND DISCHARGE BASIN (2)	1/60
PB-PDI-TD-224	PLAN AND SECTION OF DISCHARGE BASIN AND SLUICE WAY	1/60
PB-PDI-TD-225	PLAN, SECTION AND BAR ARRANGEMENT OF INTAKE PIT AND BOX CULVERT	1/30, 1/50
PB-PDI-TD-226	BAR ARRANGEMENT OF INLET, PUMP PIT AND DISCHARGE BASIN (1)	1/50
PB-PDI-TD-227	BAR ARRANGEMENT OF INLET, PUMP PIT AND DISCHARGE BASIN (2)	1/50
PB-PDI-TD-228	BAR ARRANGEMENT OF SLUICE WAY	1/40, 1/50
PB-PDI-TD-229	LAYOUT OF THANH DA RETARDING POND AND TYPICAL SECTION OF REVETMENT	1/50, 1/200
PB-PDI-TD-230	CROSS SECTION OF THANH DA RETARDING POND	1/200
<b>(ARCHITECTURAL WORKS)</b>		
PB-PDI-TD-301	THANH DA O/M OFFICE - PLANS, SECTION AND ELEVATIONS	1/100
PB-PDI-TD-302	THANH DA O/MOFFICE - TOILET AND ROOF DETAILS	1/20, 1/50
PB-PDI-TD-303	PLAN AND DETAILS OF FOUNDATION, COLUMN AND GROUND BEAM	1/20, 1/100
PB-PDI-TD-304	PLAN AND DETAILS OF ROOF BEAMS AND COLUMNS	1/20, 1/100
PB-PDI-TD-305	DETAILS OF GROUND FLOOR SLAB AND LINTEL SCHEDULE	N.T.S.
PB-PDI-TD-306	DOOR AND WINDOW SCHEDULE, WINDOE DETAILS AND FINISH SCHEDULE	N.T.S.
PB-PDI-TD-307	PLAN AND SINGLE LINE DIAGRAM OF ELECTRICAL WORKS (LEIGHTING, VENTILATION AND LIGTENING)	1/100
PB-PDI-TD-308	PLAUMBING AND DRAINAGE PLAN, ISOMETRIC	1/50
PB-PDI-TD-309	TYPICAL PLUMBING, DRAINAGE AND SEPTIC TANK	N.T.S.
PB-PDI-TD-310	LANDSCAPE AND ROAD WORKS	1/10, 1/20, 1/30, 1/200
PB-PDI-TD-311	DETAILS OF GATE, GATE POST AND FENCE (TYPE A)	1/10, 1/20, 1/25, 1/50
<b>(MECHANICAL WORKS)</b>		
PB-PDI-TD-401	LAYOUT OF PUMP, BAR SCREEN AND GATE EQUIPMENT	1/60
PB-PDI-TD-402	LAYOUT OF GATE EQUIPMENT	1/60

DRAWING NO.	TYTLE	SCALE
PB-PDI-TD-403	EQUIPMENT (1)	1/60
PB-PDI-TD-404	EQUIPMENT (2)	1/60
PB-PDI-TD-405	DETAILS OF BAR SCREEN, LIFTING DIVICE AND PUMP EQUIPMENT	N.T.S.
PB-PDI-TD-406	DETAILS OF SLUICE GATE	N.T.S.
PB-PDI-TD-407	DETAILS OF FLAP GATE	N.T.S.
PB-PDI-TD-408	DETAILS OF STOP LOG	N.T.S.
PB-PDI-TD-409	DETAILS OF OPENING COVER FOR DISCHARGE BASIN	1/20
<b>(ELECTRICAL WORKS)</b>		
PB-PDI-TD-501	GENERAL LAYOUT OF ELECTRICAL EQUIPMENT	1/100
PB-PDI-TD-502	CONNECTION DIAGRAM TO EXISTING TRANSMISSION LINE	1/12.5
PB-PDI-TD-503	SINGLE LINE DIAGRAM FOR RECEIVING SYSTEM	1/25
PB-PDI-TD-504	SINGLE LINE DIAGRAM FOR DISTRIBUTION SYSTEM	N.T.S.
PB-PDI-TD-505	LAYOUT OF ELECTRICAL EQUIPMENT AND EARTHING SYSTEM	1/25, 1/50
PB-PDI-TD-506		1/10, 1/20
PB-PDI-TD-507	WIRING AND PIPING PLAN	1/50
PB-PDI-TD-508	FENCE AND FOUNDATION OF SUBSTATION	1/5, 1/20, 1/25, 1/50
<b>BEN ME COC (1) PUMP DRAINAGE IMPROVEMENT AREA (CIVIL WORKS)</b>		
PB-PDI-BMC1-201		1/100, 1/500
PB-PDI-BMC1-202		1/100, 1/500
PB-PDI-BMC1-203		1/100, 1/500
PB-PDI-BMC1-204		1/100, 1/500
PB-PDI-BMC1-205		1/100, 1/500
PB-PDI-BMC1-206		1/100, 1/500
PB-PDI-BMC1-207		1/100, 1/500
PB-PDI-BMC1-208		1/100, 1/500
PB-PDI-BMC1-209		1/100, 1/500
PB-PDI-BMC1-210		1/100, 1/500
PB-PDI-BMC1-211		1/100, 1/500
PB-PDI-BMC1-212		1/100, 1/500
PB-PDI-BMC1-213		1/100, 1/500
PB-PDI-BMC1-214		1/100, 1/500
PB-PDI-BMC1-215		1/100, 1/500
PB-PDI-BMC1-216		1/100, 1/500
PB-PDI-BMC1-217		1/100, 1/500
PB-PDI-BMC1-218		1/100, 1/500
PB-PDI-BMC1-219		1/100
PB-PDI-BMC1-220		1/100
PB-PDI-BMC1-221		1/100
PB-PDI-BMC1-222		1/100
PB-PDI-BMC1-223		1/100
PB-PDI-BMC1-224		1/100
PB-PDI-BMC1-225		1/100
PB-PDI-BMC1-226		1/100
PB-PDI-BMC1-227		1/100
PB-PDI-BMC1-228		1/100
PB-PDI-BMC1-229		1/100
PB-PDI-BMC1-230		1/100
PB-PDI-BMC1-231		1/100
PB-PDI-BMC1-232		1/100
PB-PDI-BMC1-233		1/100
PB-PDI-BMC1-234		1/100
PB-PDI-BMC1-235		1/100
PB-PDI-BMC1-236		1/100
PB-PDI-BMC1-237		1/100
PB-PDI-BMC1-238		1/100

DRAWING NO.	TYTLE	SCALE
PB-PDI-BMC1-239	CROSS SECTION OF SEWR, ROAD AND TEMPORARY DIKE (21) (BM1-W2: 0+300 - 0+450)	1/100
PB-PDI-BMC1-240	CROSS SECTION OF SEWR, ROAD AND TEMPORARY DIKE (22) (BM1-W2: 0+500 - 0+750)	1/100
PB-PDI-BMC1-241	CROSS SECTION OF SEWR, ROAD AND TEMPORARY DIKE (23) (BM1-W2: 0+800 - 0+861.77)	1/100
PB-PDI-BMC1-242	TYPICAL CROSS SECTION OF TEMPORARY DIKE	1/50
PB-PDI-BMC1-243	DETAILS OF TEMPORARY DIKE	1/20
PB-PDI-BMC1-244	TYPICAL PLAN AND SECTION OF SEWER OUTLET (TYPE 1)	1/50, 1/100
PB-PDI-BMC1-245	TYPICAL PLAN AND SECTION OF SEWER OUTLET (TYPE 2)	1/50, 1/100
PB-PDI-BMC1-246	TYPICAL BAR ARRANGEMENT OF SEWER OUTLET	1/50
PB-PDI-BMC1-247	TYPICAL PLAN AND SECTION OF MANHOLE (1)	1/40
PB-PDI-BMC1-248	TYPICAL PLAN AND SECTION OF MANHOLE (2)	1/40
PB-PDI-BMC1-249	TYPICAL PLAN, SECTION AND BAR ARRANGEMENT OF INLET PIT	1/10, 1/40
PB-PDI-BMC1-250	DIMENSION OF MANHOLES IN BEN ME COC (1) AREA (1)	N.T.S.
PB-PDI-BMC1-251	DIMENSION OF MANHOLES IN BEN ME COC (1) AREA (2)	N.T.S.
PB-PDI-BMC1-252	DIMENSION OF INLET PITS IN BEN ME COC (1) AREA (1)	N.T.S.
PB-PDI-BMC1-253	ROAD WORKS IN BEN ME COC (1) AREA	1/30, 1/50, 1/3,500
PB-PDI-BMC1-254	GENERAL LAYOUT OF BEN ME COC (1) PUMPING STATION	1/200
PB-PDI-BMC1-255	PLAN AND SECTION OF PUMP PIT, DISCHARGE BASIN AND SLUICE WAY (1)	1/100
PB-PDI-BMC1-256	PLAN AND SECTION OF PUMP PIT, DISCHARGE BASIN AND SLUICE WAY (2)	1/100
PB-PDI-BMC1-257	BAR ARRANGEMENT OF PUMP PIT AND DISCHARGE BASIN	1/50
PB-PDI-BMC1-258	BAR ARRANGEMENT OF SLUCE WAY AND OUTLET	1/50
PB-PDI-BMC1-259	GENERAL LAYOUT OF BEN ME COC (1) CONTRILE GATE	1/200
PB-PDI-BMC1-260	LAYOUT OF BEN ME COC (1) CONTROL GATE	1/00
PB-PDI-BMC1-261	PLAN AND SECTION OF CONTROL GATE (1)	1/50
PB-PDI-BMC1-262	PLAN AND SECTION OF CONTROL GATE (2)	1/50
PB-PDI-BMC1-263	BAR ARRANGEMENT OF CONTROLE GATE (1)	1/40
PB-PDI-BMC1-264	BAR ARRANGEMENT OF CONTROLE GATE (2)	1/40
PB-PDI-BMC1-265	PLAN OF RETARDING POND AND TYPICAL SECTION OF P/M PATH (1)	1/200
PB-PDI-BMC1-266	PLAN OF RETARDING POND AND TYPICAL SECTION OF P/M PATH (2)	1/200
PB-PDI-BMC1-267	PLAN OF RETARDING POND AND TYPICAL SECTION OF P/M PATH (3)	1/200
PB-PDI-BMC1-268	PLAN OF RETARDING POND AND TYPICAL SECTION OF P/M PATH (4)	1/200
PB-PDI-BMC1-269	CROSS SECTION OF RETARDING POND (1)	1/200
PB-PDI-BMC1-270	CROSS SECTION OF RETARDING POND (2)	1/200
<b>(ARCHITECTURAL WORKS)</b>		
PB-PDI-BMC1-301	PLANS, SECTION AND ELEVATIONS OF BEN ME COC (1) O/M OFFICE AND GARD HOUSE	1/100
PB-PDI-BMC1-302	DETAILS OF FLOOR PLAN, SECTIONS AND ELEVATIONS	1/20, 1/50
PB-PDI-BMC1-303	PLAN AND DETAILS OF FOUNDATION, COLUMN AND GROUND BEAM FOR O/M OFFICE	1/20, 1/100
PB-PDI-BMC1-304	PLAN AND DETAILS OF ROOF BEAMS AND COLUMNS FOR O/M OFFICE	1/20, 1/100
PB-PDI-BMC1-305	PLAN AND DETAILS OF FOUNDATION, GROUND AND ROOF BEAMS, AND COLUMNS FOR GUARD HOUSE	1/20, 1/100
PB-PDI-BMC1-306	PLAN AND SINGLE LINE DIAGRAM OF ELECTRICAL WORKS (LEIGTING, VENTILATION AND LIGTENING) FOR O/M OFFICE AND GUARD HOUSE	1/100
PB-PDI-BMC1-307	PLAN AND SECTION OF ELECTRICAL WORKS (VENTILATION AND LIGTENING) FOR O/M OFFICE AND GUARD HOUSE	1/50
PB-PDI-BMC1-308	PLUNBING PLAN AND ISOMETRIC OF O/M OFFICE AND GUARD HOUSE	1/50, 1/100
PB-PDI-BMC1-309	DRAINAGE PLAN AND ISOMETRIC OF O/M OFFICE AND GUARD HOUSE	1/50, 1/100
PB-PDI-BMC1-310	TYPICAL SEPTIC TANK (1000 AND 3000 LITERS)	1/50
PB-PDI-BMC1-311	LANDSCAPE AND ROAD WORKS OF BEN ME COC (1) PUMPING STATION	1/10, 1/25, 1/200
PB-PDI-BMC1-312	LANDSCAPE WORK OF BEN ME COC (1) CONTROL GATE	1/10, 1/25, 1/200
PB-PDI-BMC1-313	DETAILS OF GATE, GATE POST AND FENCE (TYPE A & B)	1/10, 1/25, 1/50
<b>(MECHANICAL WORK)</b>		
PB-PDI-BMC1-401	LAYOUT OF PUMP, BAR SCREEN AND GATE EQUIPMENT	1/100
PB-PDI-BMC1-402	FOUNDATION, BLOCKOUT AND OPENING FOR INATALLATION OF MECHANICAL EQUIPMENT	1/100
PB-PDI-BMC1-403	DETAILS OF BAR SCREEN, LIFTING DIVICE AND PUMP EQUIPMENT	N.T.S.
PB-PDI-BMC1-404	DETAILES OF SLUICE GATE	N.T.S.
PB-PDI-BMC1-405	DETAILES OF FLAP GATE	N.T.S.
PB-PDI-BMC1-406	DETAILES OF STOP LOG	1/5

DRAWING NO.	TYTLE	SCALE
<b>(ELECTORICAL WORKS)</b>		
PB-PDI-BMC1-501	GENERAL LAYOUT OF ELECTRICAL EQUIPMENT	1/200
PB-PDI-BMC1-502	CONNECTION DIAGRAM TO EXISTING TRANSMISSION LINE	1/10
PB-PDI-BMC1-503	SINGLE LINE DIAGRAM FOR RECEIVING SYSTEM	1/25
PB-PDI-BMC1-504	SINGLE LINE DIAGRAM FOR DISTRIBUTION SYSTEM	N.T.S.
PB-PDI-BMC1-505		1/20, 1/100
PB-PDI-BMC1-506		1/50
PB-PDI-BMC1-507		1/10, 1/20
PB-PDI-BMC1-508	WIRING AND PIPING PLAN FOR PUMPING STATION	1/100
PB-PDI-BMC1-509	WIRING AND PIPING PLAN FOR CONTROL GATE	1/50
PB-PDI-BMC1-510	FENCE AND FOUNDATION OF SUBSTATION	1/10
<b>BEN ME COC (2) PUMP DRAINAGE IMPROVEMENT AREA</b>		
PB-PDI-BMC2-201		1/100, 1/500
PB-PDI-BMC2-202		1/100, 1/500
PB-PDI-BMC2-203		1/100, 1/500
PB-PDI-BMC2-204		1/100, 1/500
PB-PDI-BMC2-205		1/100, 1/500
PB-PDI-BMC2-206		1/100, 1/500
PB-PDI-BMC2-207		1/100, 1/500
PB-PDI-BMC2-208		1/100, 1/500
PB-PDI-BMC2-209		1/100, 1/500
PB-PDI-BMC2-210		1/100, 1/500
PB-PDI-BMC2-211		1/100, 1/500
PB-PDI-BMC2-212		1/100, 1/500
PB-PDI-BMC2-213		1/100, 1/500
PB-PDI-BMC2-214		1/100, 1/500
PB-PDI-BMC2-215		1/100, 1/500
PB-PDI-BMC2-216		1/100, 1/500
PB-PDI-BMC2-217		1/100, 1/500
PB-PDI-BMC2-218		1/100
PB-PDI-BMC2-219		1/100
PB-PDI-BMC2-220		1/100
PB-PDI-BMC2-221		1/100
PB-PDI-BMC2-222		1/100
PB-PDI-BMC2-223		1/100
PB-PDI-BMC2-224		1/100
PB-PDI-BMC2-225		1/100
PB-PDI-BMC2-226		1/100
PB-PDI-BMC2-227		1/100
PB-PDI-BMC2-228		1/100
PB-PDI-BMC2-229		1/100
PB-PDI-BMC2-230		1/100
PB-PDI-BMC2-231		1/100
PB-PDI-BMC2-232		1/100
PB-PDI-BMC2-233		1/100
PB-PDI-BMC2-234		1/100
PB-PDI-BMC2-235		1/100
PB-PDI-BMC2-236		1/100
PB-PDI-BMC2-237	TYPICAL CROSS SECTION AND DETAILS OF TEMPORARY DIKE	1/20, 1/50
PB-PDI-BMC2-238	TYPICAL PLAN AND SECTION OF SEWER OUTLET (1)	1/50, 1/100
PB-PDI-BMC2-239	TYPICAL PLAN AND SECTION OF SEWER OUTLET (2)	1/50, 1/100
PB-PDI-BMC2-240	TYPICAL PLAN AND SECTION OF MANHOLE (1)	1/40
PB-PDI-BMC2-241	TYPICAL PLAN AND SECTION OF MANHOLE (2)	1/40
PB-PDI-BMC2-242	TYPICAL PLAN, SECTION AND BAR ARRANGEMENT OF INLET PIT	1/10, 1/40
PB-PDI-BMC2-243	DIMENSION OF MANHOLES IN BEN ME COC (1) AREA (1)	N.T.S.
PB-PDI-BMC2-244	DIMENSION OF MANHOLES IN BEN ME COC (1) AREA (2)	N.T.S.
PB-PDI-BMC2-245	DIMENSION OF INLET PITS IN BEN ME COC (1) AREA (1)	N.T.S.
PB-PDI-BMC2-246	ROAD WORKS IN BEN ME COC (2) AREA	1/10, 1/50, 1/3,500

## **GENERAL**



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 B  
 PUMPING DRAINAGE IMPROVEMENT

LOCATION OF PACKAGE B PROJECT

SCALE : 1 : 25000



DESIGNED  
 TOKUMASU TOSHIKI

CHECKED  
 KONDO MASAMI

DATE : JUNE 2001      DWG. No. PB - PDI - GI - 101



BENCH MARK DATA				
NO	EL.	X	Y	REMARKS
204K	2.440			Mui Nai
208K	1.905			Mui Nai
210K	2.342			Mui Nai
217-2k	2.231	1189343.056	573745.643	Mui Nai
276-3k	1.805	1189288.364	573477.709	Mui Nai
429K	1.955			Mui Nai
523K	1.863			Mui Nai
BM(Mc1)	1.593			Mui Nai
LC 1	4.651			Mui Nai
LC 2	2.197			Mui Nai
LC 3	1.466			Mui Nai

LEGEND

- Bench Mark and Number of Bench Mark
- District Boundary
- Ward Boundary


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

TOPOGRAPHIC SURVEY DATA  
AND INFORMATION

SCALE : 1 : 30000

JAPAN INTERNATIONAL COOPERATION AGENCY ( JICA )

PACIFIC CONSULTANTS INTERNATIONAL

DESIGNED TOKUMASU TOSHIAKI	CHECKED KONDO MASAMI
-------------------------------	-------------------------

DATE : JUNE 2001      DWG. No. PB - PDI - GI - 102