

**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 D :**

**CONVEYANCE SEWER CONSTRUCTION  
EXISTING COMBINED SEWER IMPROVEMENT**

**VOLUME 3 :**

**DRAFT TENDER DRAWINGS**

**JUNE 2001**

**PACIFIC CONSULTANTS INTERNATIONAL**

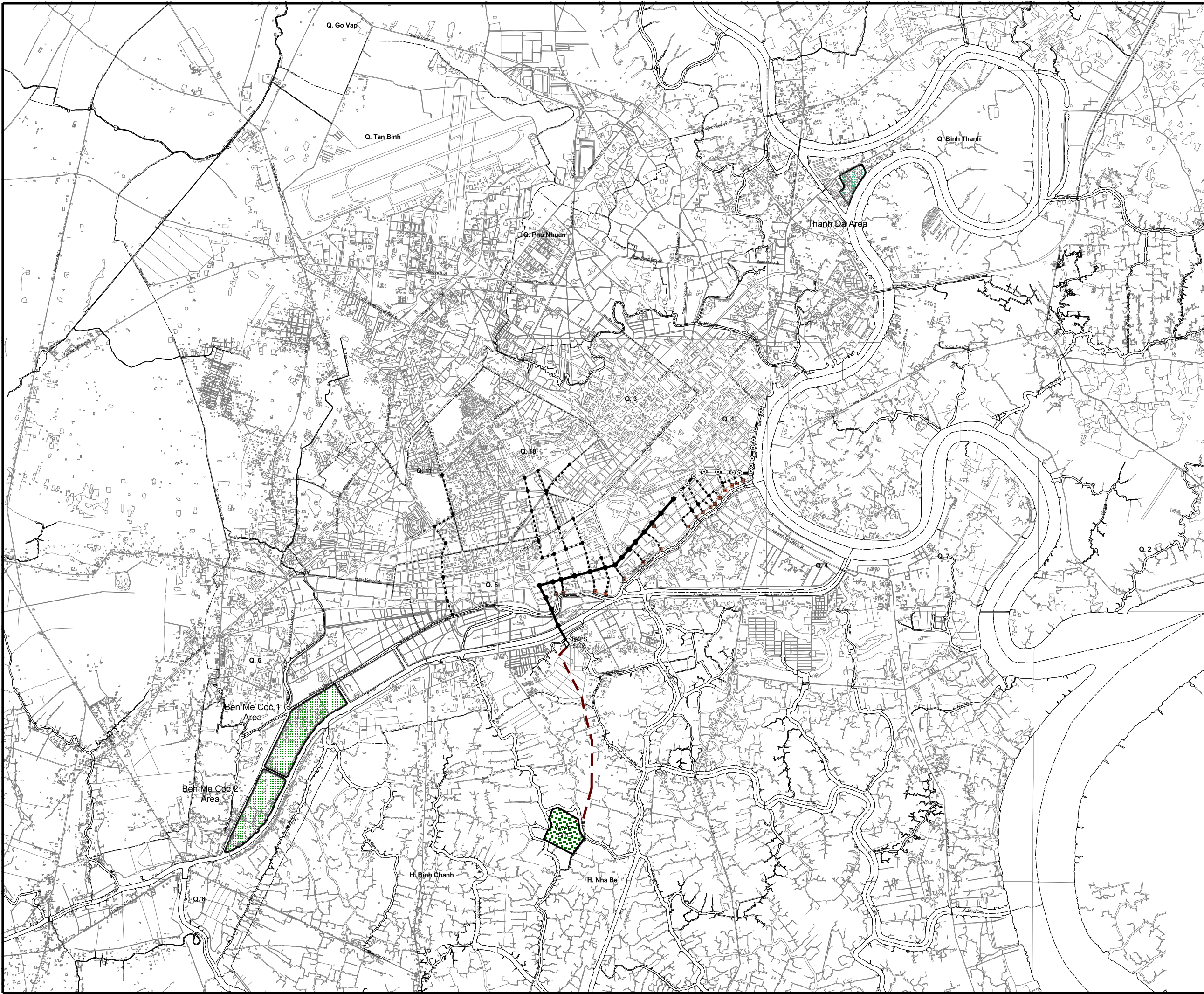
**LIST OF DRAWINGS ON PACKAGE D  
(CONVEYANCE SEWER CONSTRUCTION AND EXISTING COMBINED SEWER IMPROVEMENT)**

DRAWING NO.	TITLE	SCALE	DRAWING NO.	TITLE	SCALE
	<b>GENERAL</b>				
PD-CSC, ECSI-101	LOCATION OF CONVEYANCE SEWER AND EXISTING COMBINED SEWER IMPROVEMENT	1/25,000	PD-ECSI-214	PLAN AND PROFILE ECSI - LINE 4.1 (3)	1/100, 1/500
PD-CSC, ECSI-102	TOPOGRAPHIC SURVEY DATA AND INFORMATION	1/30,000	PD-ECSI-215	PLAN AND PROFILE ECSI - LINE 4.1 (4)	1/100, 1/500
PD-CSC, ECSI-103	GEOLOGICAL DATA AND INFORMATION	1/30,000	PD-ECSI-216	PLAN AND PROFILE ECSI - LINE 4.1 - 4.2 (5)	1/100, 1/500
PD-CSC, ECSI-104	GEOLOGICAL PROFILE FOR CONVEYANCE SEWER LINE	SH = 1/5,000, SV = 1/250	PD-ECSI-217	PLAN AND PROFILE ECSI - LINE 4.2 (6)	1/100, 1/500
PD-CSC, ECSI-105	GENERAL INFORMATION (1/2)		PD-ECSI-218	PLAN AND PROFILE ECSI - LINE 5.1 (1)	1/100, 1/500
PD-CSC, ECSI-106	GENERAL INFORMATION (2/2)		PD-ECSI-219	PLAN AND PROFILE ECSI - LINE 5.1 (2)	1/100, 1/500
	<b>CONVEYANCE SEWER CONSTRUCTION</b>		PD-ECSI-220	PLAN AND PROFILE ECSI - LINE 5.1 (3)	1/100, 1/500
PD-CSC-201	PLAN AND PROFILE OF CONVEYANCE SEWER AND O/M ROAD (1)	1/100, 1/500	PD-ECSI-221	PLAN AND PROFILE ECSI - LINE 5.1 (4)	1/100, 1/500
PD-CSC-202	PLAN AND PROFILE OF CONVEYANCE SEWER AND O/M ROAD (2)	1/100, 1/500	PD-ECSI-222	PLAN AND PROFILE ECSI - LINE 5.1 - 5.2 (5)	1/100, 1/500
PD-CSC-203	PLAN AND PROFILE OF CONVEYANCE SEWER AND O/M ROAD (3)	1/100, 1/500	PD-ECSI-223	PLAN AND PROFILE ECSI - LINE 5.2 - 5.3 (6)	1/100, 1/500
PD-CSC-204	PLAN AND PROFILE OF CONVEYANCE SEWER AND O/M ROAD (4)	1/100, 1/500	PD-ECSI-224	PLAN AND PROFILE ECSI - LINE 5.2 - 5.3 (7)	1/100, 1/500
PD-CSC-205	PLAN AND PROFILE OF CONVEYANCE SEWER AND O/M ROAD (5)	1/100, 1/500	PD-ECSI-225	PLAN AND PROFILE ECSI - LINE 5.3 (8)	1/100, 1/500
PD-CSC-206	PLAN AND PROFILE OF CONVEYANCE SEWER AND O/M ROAD (6)	1/100, 1/500	PD-ECSI-226	PLAN AND PROFILE ECSI - LINE 5.3 (9)	1/100, 1/500
PD-CSC-207	PLAN AND PROFILE OF CONVEYANCE SEWER AND O/M ROAD (7)	1/100, 1/500	PD-ECSI-227	PLAN AND PROFILE ECSI - LINE 6.1 (1)	1/100, 1/500
PD-CSC-208	PLAN AND PROFILE OF CONVEYANCE SEWER AND O/M ROAD (8)	1/100, 1/500	PD-ECSI-228	PLAN AND PROFILE ECSI - LINE 6.1 (2)	1/100, 1/500
PD-CSC-209	PLAN AND PROFILE OF CONVEYANCE SEWER AND O/M ROAD (9)	1/100, 1/500	PD-ECSI-229	PLAN AND PROFILE ECSI - LINE 6.1 - 6.2 (3)	1/100, 1/500
PD-CSC-210	PLAN AND PROFILE OF CONVEYANCE SEWER AND O/M ROAD (10)	1/100, 1/500	PD-ECSI-230	PLAN AND PROFILE ECSI - LINE 6.2 - 6.3 (4)	1/100, 1/500
PD-CSC-211	PLAN AND PROFILE OF CONVEYANCE SEWER AND O/M ROAD (11)	1/100, 1/500	PD-ECSI-231	PLAN AND PROFILE ECSI - LINE 6.3 (5)	1/100, 1/500
PD-CSC-212	PLAN AND PROFILE OF CONVEYANCE SEWER AND O/M ROAD (12)	1/100, 1/500	PD-ECSI-232	PLAN AND PROFILE ECSI - LINE 6.4 (6)	1/100, 1/500
PD-CSC-213	CROSS SECTION OF CONVEYANCE SEWER AND O/M ROAD (1)	1/100	PD-ECSI-233	PLAN AND PROFILE ECSI - LINE 6.4 (7)	1/100, 1/500
PD-CSC-214	CROSS SECTION OF CONVEYANCE SEWER AND O/M ROAD (2)	1/100	PD-ECSI-234	PLAN AND PROFILE ECSI - LINE 6.5 (8)	1/100, 1/500
PD-CSC-215	CROSS SECTION OF CONVEYANCE SEWER AND O/M ROAD (3)	1/100	PD-ECSI-235	PLAN AND PROFILE ECSI - LINE 6.5 - 6.6 (9)	1/100, 1/500
PD-CSC-216	CROSS SECTION OF CONVEYANCE SEWER AND O/M ROAD (4)	1/100	PD-ECSI-236	PLAN AND PROFILE ECSI - LINE 6.6 (10)	1/100, 1/500
PD-CSC-217	CROSS SECTION OF CONVEYANCE SEWER AND O/M ROAD (5)	1/100	PD-ECSI-237	CROSS SECTION OF ECSI - LINE 1 (1)	1/100
PD-CSC-218	CROSS SECTION OF CONVEYANCE SEWER AND O/M ROAD (6)	1/100	PD-ECSI-238	CROSS SECTION OF ECSI - LINE 1 (2)	1/100
PD-CSC-219	CROSS SECTION OF CONVEYANCE SEWER AND O/M ROAD (7)	1/100	PD-ECSI-239	CROSS SECTION OF ECSI - LINE 2 (1)	1/100
PD-CSC-220	CROSS SECTION OF CONVEYANCE SEWER AND O/M ROAD (8)	1/100	PD-ECSI-240	CROSS SECTION OF ECSI - LINE 2 (2)	1/100
PD-CSC-221	CROSS SECTION OF CONVEYANCE SEWER AND O/M ROAD (9)	1/100	PD-ECSI-241	CROSS SECTION OF ECSI - LINE 3 (1)	1/100
PD-CSC-222	CROSS SECTION OF CONVEYANCE SEWER AND O/M ROAD (10)	1/100	PD-ECSI-242	CROSS SECTION OF ECSI - LINE 3 (2)	1/100
PD-CSC-223	CROSS SECTION OF CONVEYANCE SEWER AND O/M ROAD (11)	1/100	PD-ECSI-243	CROSS SECTION OF ECSI - LINE 3 (3)	1/100
PD-CSC-224	CROSS SECTION OF CONVEYANCE SEWER AND O/M ROAD (12)	1/100	PD-ECSI-244	CROSS SECTION OF ECSI - LINE 3 (4)	1/100
PD-CSC-225	PLAN, PROFILE AND SECTION OF CONVEYANCE SEWER	1/25	PD-ECSI-245	CROSS SECTION OF ECSI - LINE 3 (5)	1/100
PD-CSC-226	PLAN AND SECTION OF MANHOLE FOR CONVEYANCE SEWER	1/25	PD-ECSI-246	CROSS SECTION OF ECSI - LINE 4 (1)	1/100
PD-CSC-227	BAR ARRANGEMENT OF CONVEYANCE SEWER AND MANHOLE	1/25	PD-ECSI-247	CROSS SECTION OF ECSI - LINE 4 (2)	1/100
PD-CSC-228	TYPICAL CROSS SECTION OF O/M ROAD	AS SHOWN	PD-ECSI-248	CROSS SECTION OF ECSI - LINE 4 (3)	1/100
PD-CSC-229	CROSS SECTION OF O/M ROAD	1/100	PD-ECSI-249	CROSS SECTION OF ECSI - LINE 4 (4)	1/100
PD-CSC-230	TEMPORARY STRUCTURE OF TIMBER WALL (REFERENCE)	AS SHOWN	PD-ECSI-250	CROSS SECTION OF ECSI - LINE 5 (1)	1/100
PD-CSC-231	TEMPORARY STRUCTURE OF SHEET PILE (REFERENCE)	AS SHOWN	PD-ECSI-251	CROSS SECTION OF ECSI - LINE 5 (2)	1/100
	<b>EXISTING COMBINED SEWER IMPROVEMENT</b>		PD-ECSI-252	CROSS SECTION OF ECSI - LINE 5 (3)	1/100
PD-ECSI-201	PLAN AND PROFILE ECSI - LINE 1 (1)	1/100, 1/500	PD-ECSI-253	CROSS SECTION OF ECSI - LINE 5 (4)	1/100
PD-ECSI-202	PLAN AND PROFILE ECSI - LINE 1 (2)	1/100, 1/500	PD-ECSI-254	CROSS SECTION OF ECSI - LINE 5 (5)	1/100
PD-ECSI-203	PLAN AND PROFILE ECSI - LINE 1 (3)	1/100, 1/500	PD-ECSI-255	CROSS SECTION OF ECSI - LINE 5 (6)	1/100
PD-ECSI-204	PLAN AND PROFILE ECSI - LINE 2 (1)	1/100, 1/500	PD-ECSI-256	CROSS SECTION OF ECSI - LINE 6 (1)	1/100
PD-ECSI-205	PLAN AND PROFILE ECSI - LINE 2 (2)	1/100, 1/500	PD-ECSI-257	CROSS SECTION OF ECSI - LINE 6 (2)	1/100
PD-ECSI-206	PLAN AND PROFILE ECSI - LINE 2 (3)	1/100, 1/500	PD-ECSI-258	CROSS SECTION OF ECSI - LINE 6 (3)	1/100
PD-ECSI-207	PLAN AND PROFILE ECSI - LINE 3 (1)	1/100, 1/500	PD-ECSI-259	CROSS SECTION OF ECSI - LINE 6 (4)	1/100
PD-ECSI-208	PLAN AND PROFILE ECSI - LINE 3 (2)	1/100, 1/500	PD-ECSI-260	CROSS SECTION OF ECSI - LINE 6 (5)	1/100
PD-ECSI-209	PLAN AND PROFILE ECSI - LINE 3 (3)	1/100, 1/500	PD-ECSI-261	CROSS SECTION OF ECSI - LINE 6 (6)	1/100
PD-ECSI-210	PLAN AND PROFILE ECSI - LINE 3 (4)	1/100, 1/500	PD-ECSI-262	CROSS SECTION OF ECSI - LINE 6 (7)	1/100
PD-ECSI-211	PLAN AND PROFILE ECSI - LINE 3 (5)	1/100, 1/500	PD-ECSI-263	PLAN, SECTION, AND BAR ARRANGEMENT OF BOX CULVERT	1/25, 1/40
PD-ECSI-212	PLAN AND PROFILE ECSI - LINE 4.1 (1)	1/100, 1/500	PD-ECSI-264	TYPICAL PLAN AND SECTION OF MANHOLE FOR PIPE (1)	1/40
PD-ECSI-213	PLAN AND PROFILE ECSI - LINE 4.1 (2)	1/100, 1/500	PD-ECSI-265	TYPICAL PLAN AND SECTION OF MANHOLE FOR PIPE (2)	1/40
			PD-ECSI-266	TYPICAL PLAN AND SECTION OF MANHOLE FOR BOX CULVERT (1)	1/40
			PD-ECSI-267	TYPICAL PLAN AND SECTION OF MANHOLE FOR BOX CULVERT (2)	1/40
			PD-ECSI-268	TYPICAL PLAN AND SECTION OF MANHOLE FOR BOX CULVERT (3)	1/40
			PD-ECSI-269	TYPICAL PLAN AND SECTION OF MANHOLE FOR BOX CULVERT (4)	1/40
			PD-ECSI-270	TYPICAL PLAN AND SECTION OF MANHOLE FOR BOX CULVERT (5)	1/40
			PD-ECSI-271	TYPICAL PLAN AND SECTION OF MANHOLE FOR BOX CULVERT (6)	1/40
			PD-ECSI-272	TYPICAL PLAN AND SECTION OF SPECIAL MANHOLE FOR BOX CULVERT (1)	1/40
			PD-ECSI-273	TYPICAL PLAN AND SECTION OF SPECIAL MANHOLE FOR BOX CULVERT (2)	1/40

DRAWING NO.	TITLE	SCALE
PD-ECSI-274	TYPICAL PLAN AND SECTION OF SPECIAL MANHOLE FOR BOX CULVERT (3)	1/40
PD-ECSI-275	TYPICAL PLAN AND SECTION OF SPECIAL MANHOLE FOR BOX CULVERT (4)	1/40
PD-ECSI-276	TYPICAL PLAN AND SECTION OF SPECIAL MANHOLE FOR BOX CULVERT (5)	1/40
PD-ECSI-277	TYPICAL PLAN AND SECTION OF SPECIAL MANHOLE FOR BOX CULVERT (6)	1/40
PD-ECSI-278	TYPICAL BAR ARRANGEMENT OF MANHOLE (1)	
PD-ECSI-279	TYPICAL BAR ARRANGEMENT OF MANHOLE (2)	
PD-ECSI-280	BAR ARRANGEMENT OF MANHOLE FOR BOX CULVERT (1)	1/40
PD-ECSI-281	BAR ARRANGEMENT OF MANHOLE FOR BOX CULVERT (2)	1/40
PD-ECSI-282	BAR ARRANGEMENT OF MANHOLE FOR BOX CULVERT (3)	1/40
PD-ECSI-283	BAR ARRANGEMENT OF MANHOLE FOR BOX CULVERT (4)	1/40
PD-ECSI-284	BAR ARRANGEMENT OF MANHOLE FOR BOX CULVERT (5)	1/40
PD-ECSI-285	BAR ARRANGEMENT OF MANHOLE FOR BOX CULVERT (6)	1/40
PD-ECSI-286	BAR ARRANGEMENT OF SPECIAL MANHOLE FOR BOX CULVERT (1)	1/40
PD-ECSI-287	BAR ARRANGEMENT OF SPECIAL MANHOLE FOR BOX CULVERT (2)	1/40
PD-ECSI-288	BAR ARRANGEMENT OF SPECIAL MANHOLE FOR BOX CULVERT (3)	1/40
PD-ECSI-289	BAR ARRANGEMENT OF SPECIAL MANHOLE FOR BOX CULVERT (4)	1/40
PD-ECSI-290	BAR ARRANGEMENT OF SPECIAL MANHOLE FOR BOX CULVERT (5)	1/40
PD-ECSI-291	BAR ARRANGEMENT OF SPECIAL MANHOLE FOR BOX CULVERT (6)	1/40
PD-ECSI-292	TYPICAL PLAN, SECTION AND BAR ARRANGEMENT OF INLET PIT	AS SHOWN
PD-ECSI-293	LIST OF MANHOLE FOR PIPE	-
PD-ECSI-294	LIST OF MANHOLE FOR BOX CULVERT	-
PD-ECSI-295	MANHOLE COVER (TYPE A) AND INLET COVER (TYPE E)	1/40
PD-ECSI-296	TYPICAL SECTION OF PIPE BEDDING	AS SHOWN
PD-ECSI-297	TEMPORARY STRUCTURE OF OF TIMBER WALL (REFERENCE)	1/100
PD-ECSI-298	TEMPORARY STRUCTURE OF OF SHEET PILE (REFERENCE) (1)	1/100
PD-ECSI-299	TEMPORARY STRUCTURE OF OF SHEET PILE (REFERENCE) (2)	1/100
PD-ECSI-300	TEMPORARY STRUCTURE OF OF SHEET PILE (REFERENCE) (3)	1/100
PD-ECSI-301	TEMPORARY STRUCTURE OF OF SHEET PILE (REFERENCE) (4)	1/100
PD-ECSI-302	OUTLET OF SEWERS NGUYEN BIEU	1/50
PD-ECSI-303	OUTLET OF SEWERS TH - L2 TRAN BINH TRONG	1/50
PD-ECSI-304	OUTLET OF SEWERS HUYNH MAN DAT	1/50
PD-ECSI-305	OUTLET OF SEWERS TH - L21 MAC CUU	1/50
PD-ECSI-306	TYPICAL SECTION AND DETAILS OF REVETMENT TYPE A AND TYPE B	AS SHOWN

DRAWING NO.	TITLE	SCALE
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## **GENERAL**



- LEGEND**
- Manhole for Main Interceptor (Open Cut)
  - Manhole for Main Interceptor (Pipe Jacking)
  - Manhole for Combined Sewer Improvement
  - Conveyance Sewer
  - - - Secondary Interceptor
  - Main Interceptor (Open Cut)
  - Main Interceptor (Pipe Jacking)
  - - - Combined Sewer Improvement
  - District Boundary
  - ▭ Intermediate Pumping Station
  - ▨ Wastewater Treatment Plant Site


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 D  
CONVEYANCE SEWER CONSTRUCTION  
LOCATION OF CONVEYANCE SEWER  
AND EXISTING COMBINED SEWER  
IMPROVEMENT

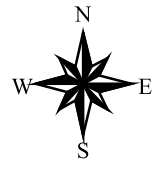
SCALE : 1 : 25000

**JICA** JAPAN INTERNATIONAL COOPERATION  
AGENCY ( JICA )

PACIFIC CONSULTANTS INTERNATIONAL

DESIGNED KATSUKI TAKAAKI	CHECKED KONDO MASAMI
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DATE : JUNE 2001      DWG. No. PD - CSC,ECSI - 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 D  
CONVEYANCE SEWER ROUTE

TOPOGRAPHIC SURVEY DATA  
AND INFORMATION

SCALE : 1 / 30000



DESIGNED KATSUKI TAKAAKI	CHECKED KONDO MASAMI
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