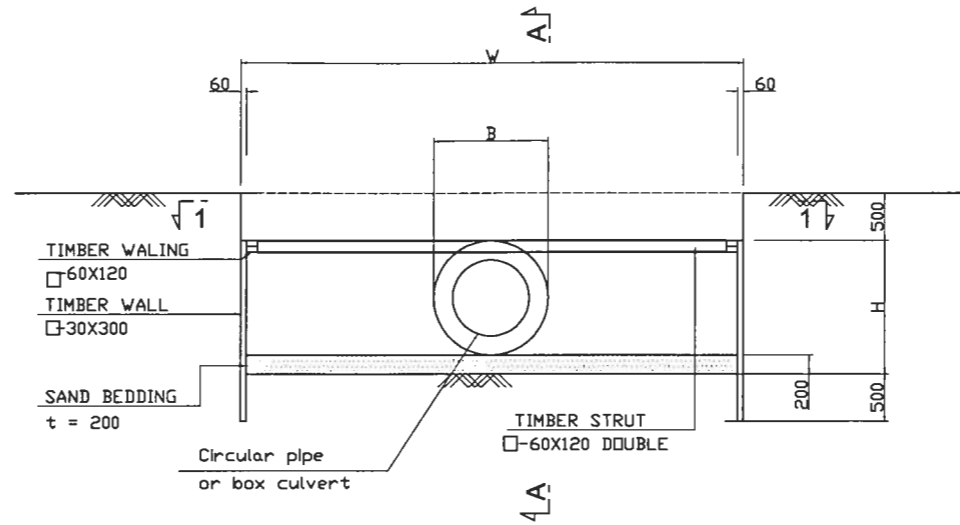
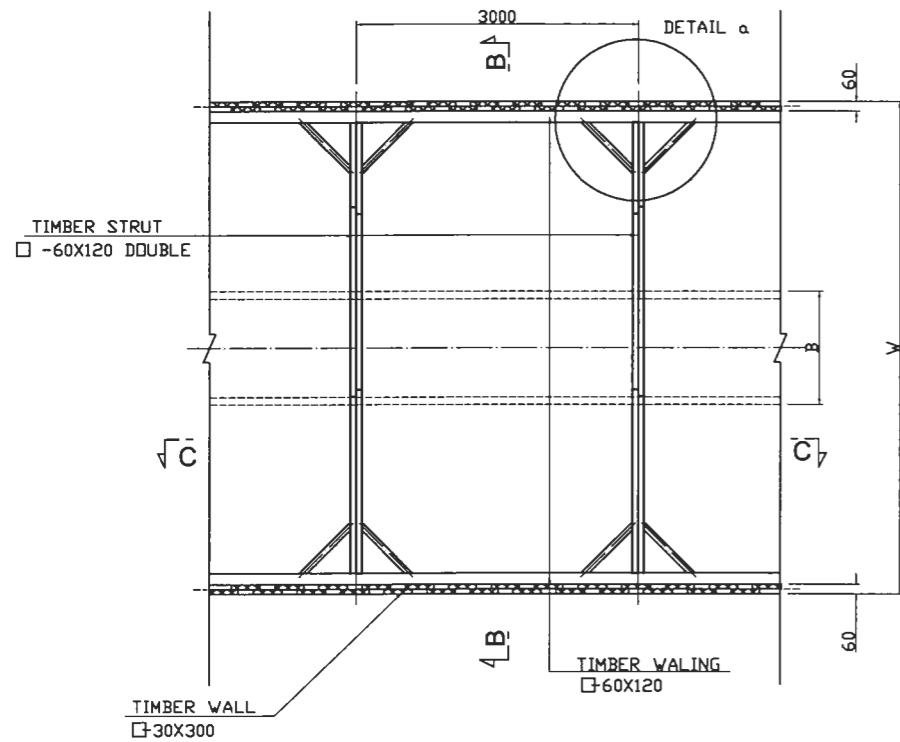


SECTION A-A

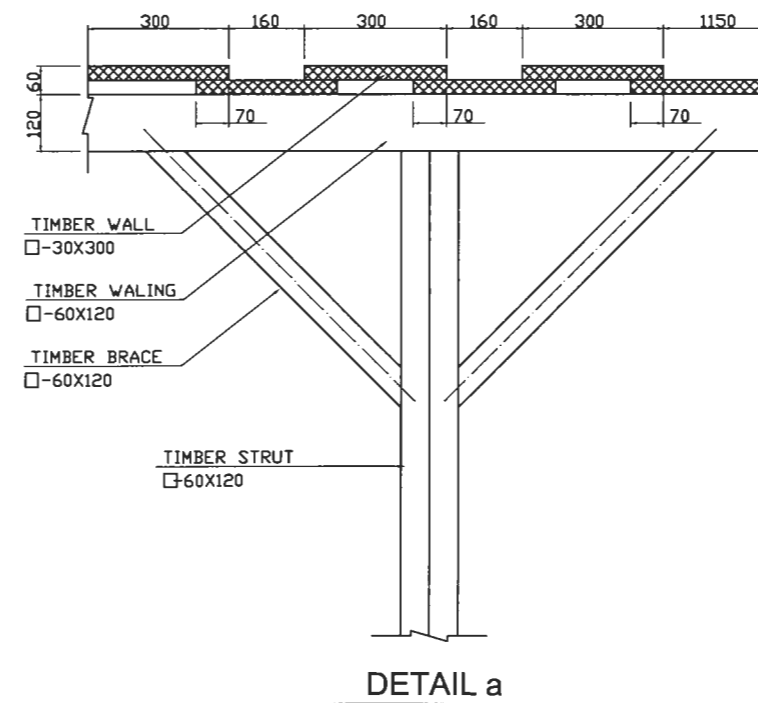


SECTION B-B

Size of sewer (mm)	B (mm)	W (mm)
φ400	500	1400
φ500	620	1400
φ600	760	1400
φ800	960	1400
φ1000	1180	1600
φ1200	1440	2000
φ1500	1740	2300
φ1800	2100	2600
φ2000	2300	2900
2000x2000	2400	3200
2500x2000	3000	3800



SECTION 1-1



DETAIL a

NO.	DATE	DESCRIPTIONS	BY	APRO.
A	04/JAN	DETAIL CHANGED		

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
EXISTING COMBINED SEWER IMPROVEMENT
TEMPORARY STRUCTURE
OF TIMBER WALL (REFERENCE)

SCALE : 1/100

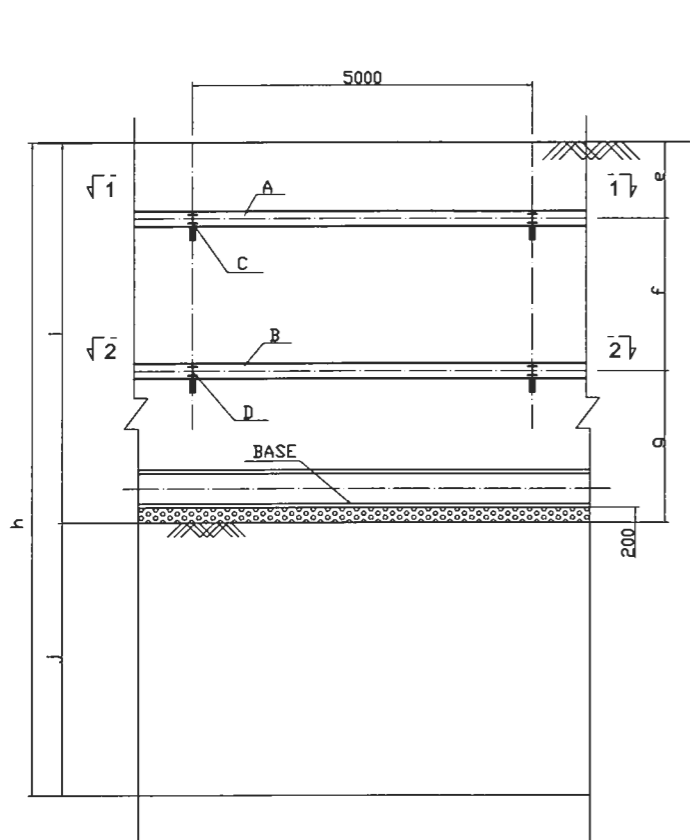
JICA JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

PACIFIC CONSULTANTS INTERNATIONAL

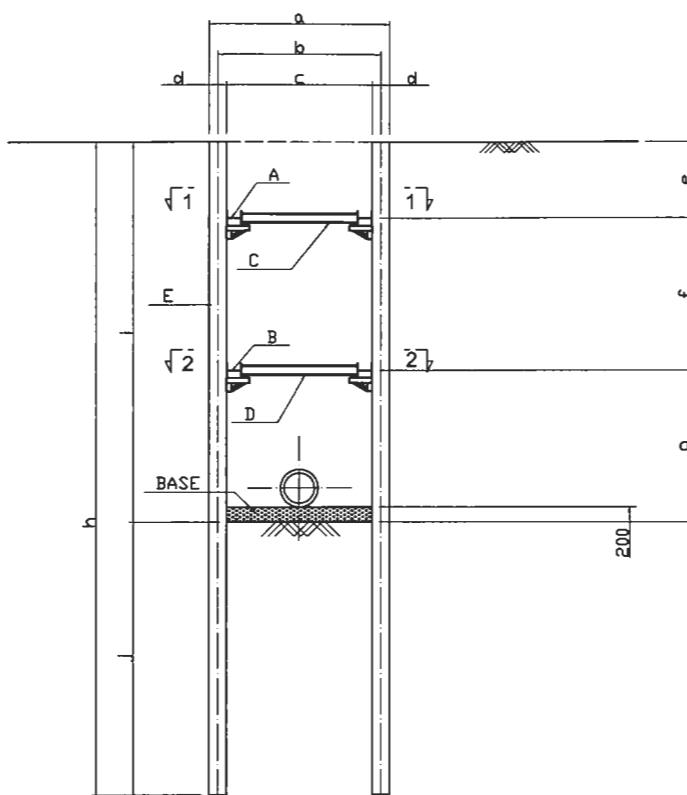
DESIGNED KATSUKI TAKAAKI	CHECKED KONDO MASAMI
-----------------------------	-------------------------

DATE : JUNE 2001 DWG. No. PD - ECSI - 297

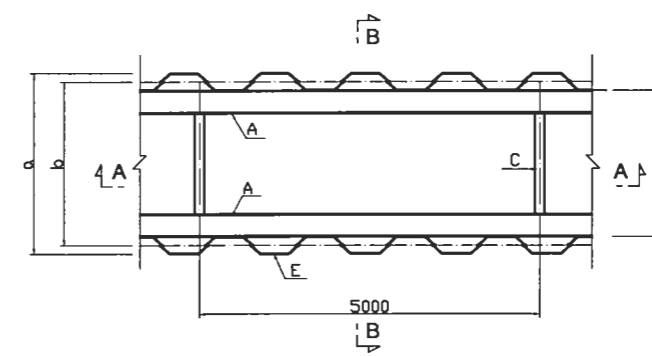
TYPE 1
Excavation Depth = 4,000~5,000



SECTION A-A



SECTION B-B



SECTION 1-1, 2-2

		W=2,000	W=2,200	W=2,600	W=2,950	W=3,500
Width	a	2,200	2,400	2,800	3,150	3,700
	b	2,000	2,200	2,600	2,950	3,500
	c	1,800	2,000	2,400	2,750	3,300
	d	200				
Depth	e	1,000				
	f	2,000				
	g	1,000 ~ 2,000				
	h	8,600				
	i	4,000 ~ 5,000				
Waling	A	H-300x300x10x15				
	B	H-300x300x10x15				
Strut	C	H-125x125x6.5x9	H-125x125x6.5x9	H-150x150x7x10		H-150x150x7x10
	D	H-125x125x6.5x9	H-150x150x7x10		H-175x175x7.5x11	
Sheet pile	E	FSP - 2				

NO.	DATE	DESCRIPTIONS	BY	APPRO.
A	04/JAN	DETAIL CHANGED		

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
EXISTING COMBINED SEWER IMPROVEMENT
TEMPORARY STRUCTURE
OF SHEET PILE (REFERENCE) (1)
TYPE 1 (H = 4,000-5,000)

SCALE : 1/100

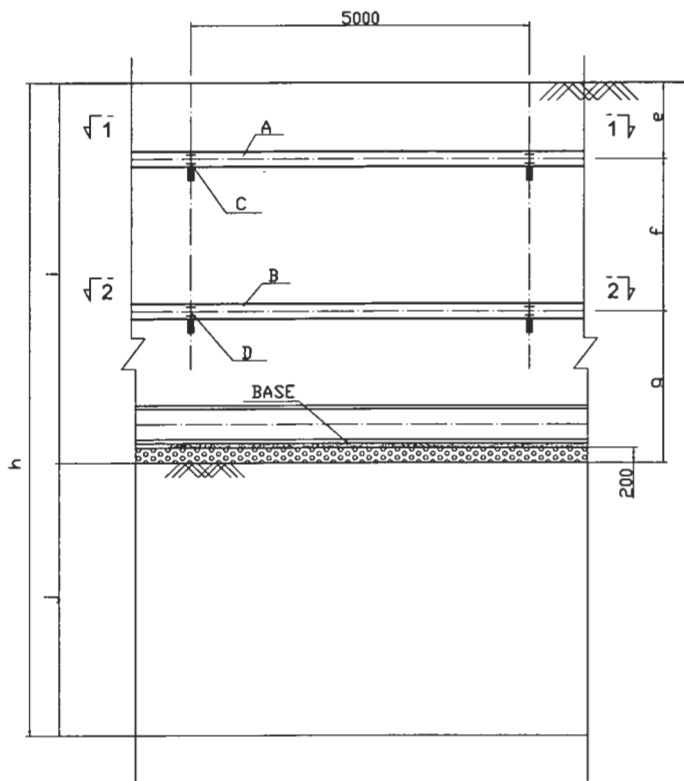
JICA JAPAN INTERNATIONAL COOPERATION
AGENCY (JICA)

PACIFIC CONSULTANTS INTERNATIONAL

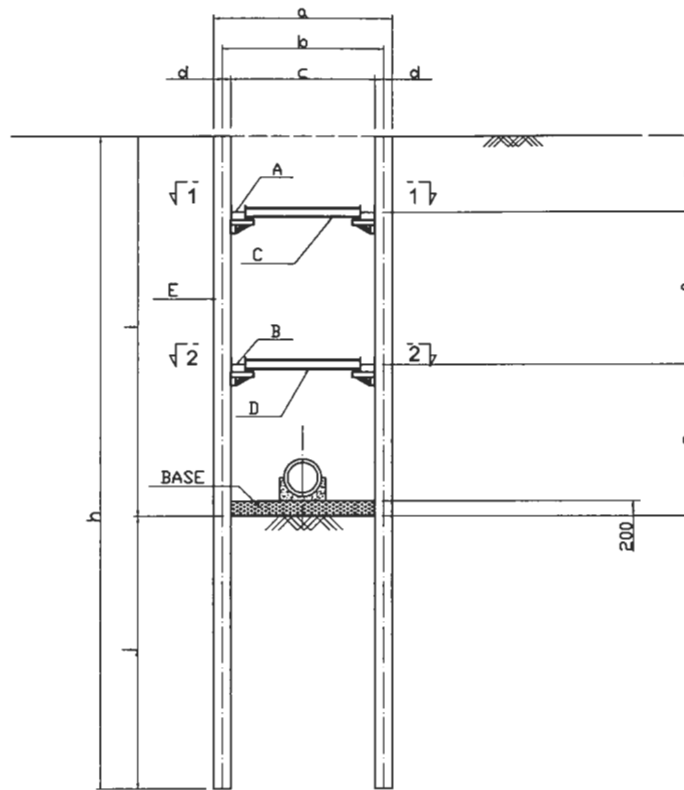
DESIGNED KATSUKI TAKAOKI	CHECKED KONDO MASAMI
-----------------------------	-------------------------

DATE : JUNE 2001 DWG. No. PD - ECSI - 298

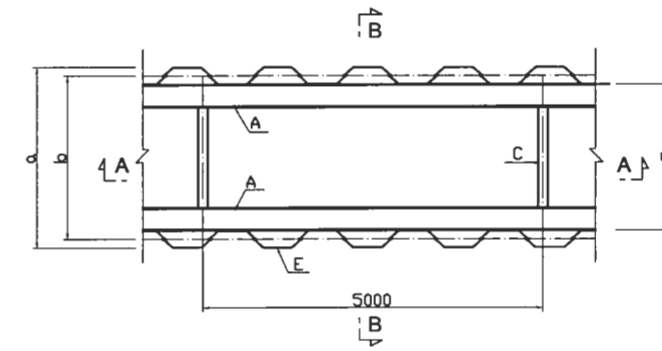
TYPE 2
Excavation Depth = 5,000~6,000



SECTION A-A



SECTION B-B



SECTION 1-1, 2-2

		W=2,000	W=2,300	W=2,700	W=3,100	W=3,600	W=3,900
Width	a	2,200	2,500	2,900	3,300	3,800	4,100
	b	2,000	2,300	2,700	3,100	3,600	3,900
	c	1,800	2,100	2,500	2,900	3,400	3,700
	d	200					
Depth	e	1,000					
	f	2,500					
	g	1,500 ~ 2,500					
	h	10,100					
	i	5,000 ~ 6,000					
	J	5,100 ~ 4,100					
Waling	A	H-300x300x10x15					
	B	H-350x350x12x19					
Strut	C	H-125x125x6.5x9	H-150x150x7x10			H-175x175x7.5x11	H-175x175x7.5x11
	D	H-150x150x7x10	H-175x175x7.5x11			H-175x175x7.5x11	H-200x200x8x12
Sheet pile	E	FSP - 2					

NO.	DATE	DESCRIPTIONS	BY	APPRO.
A	04/JAN	DETAIL CHANGED		

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
EXISTING COMBINED SEWER IMPROVEMENT

TEMPORARY STRUCTURE
OF SHEET PILE (REFERENCE) (2)
TYPE 2 (H = 5,000~6,000)

SCALE : 1/100

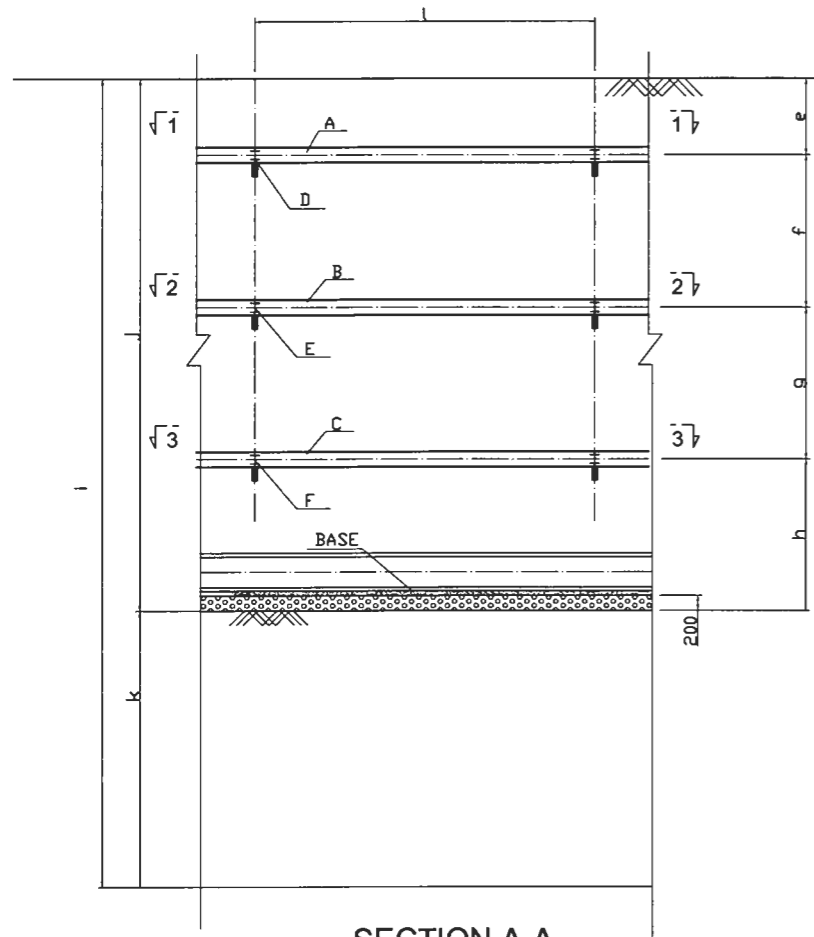
JICA JAPAN INTERNATIONAL COOPERATION
AGENCY (JICA)

PACIFIC CONSULTANTS INTERNATIONAL

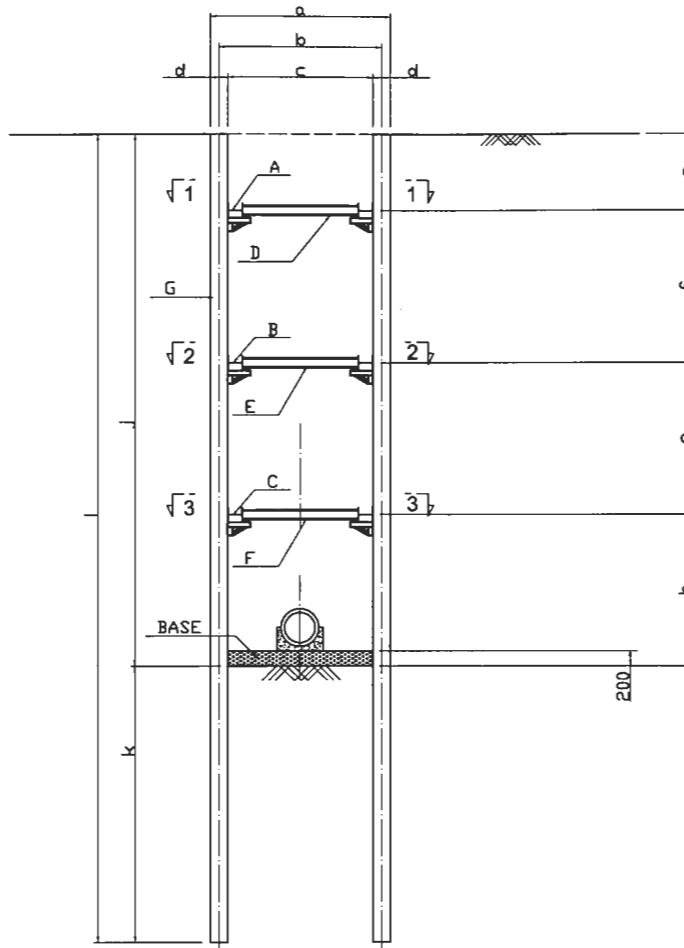
DESIGNED KATSUKI TAKAAKI	CHECKED KONDO MASAMI
-----------------------------	-------------------------

DATE : JUNE 2001 DWG. No. PD - ECSI - 299

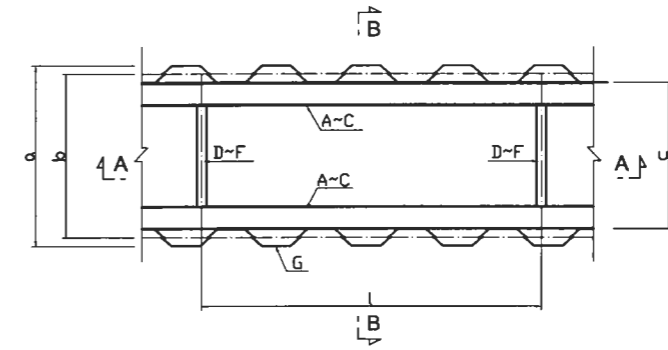
TYPE 3 and TYPE 4 Excavation Depth = 6,000~7,500



SECTION A-A



SECTION B-B

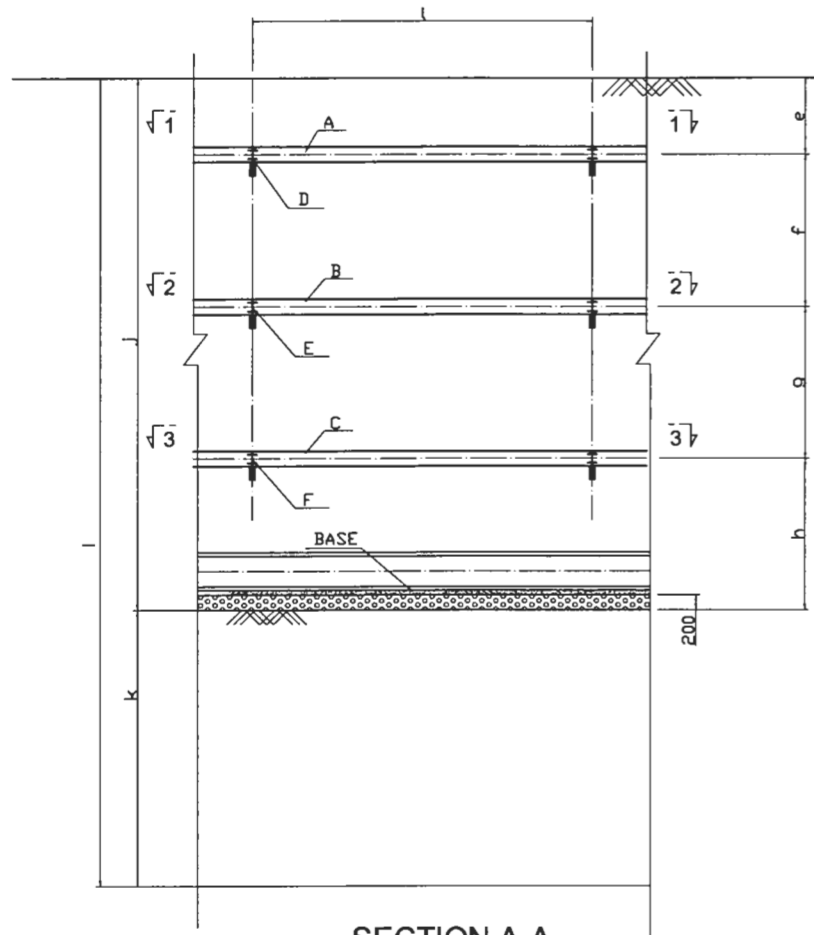


SECTION 1-1, 2-2, 3-3

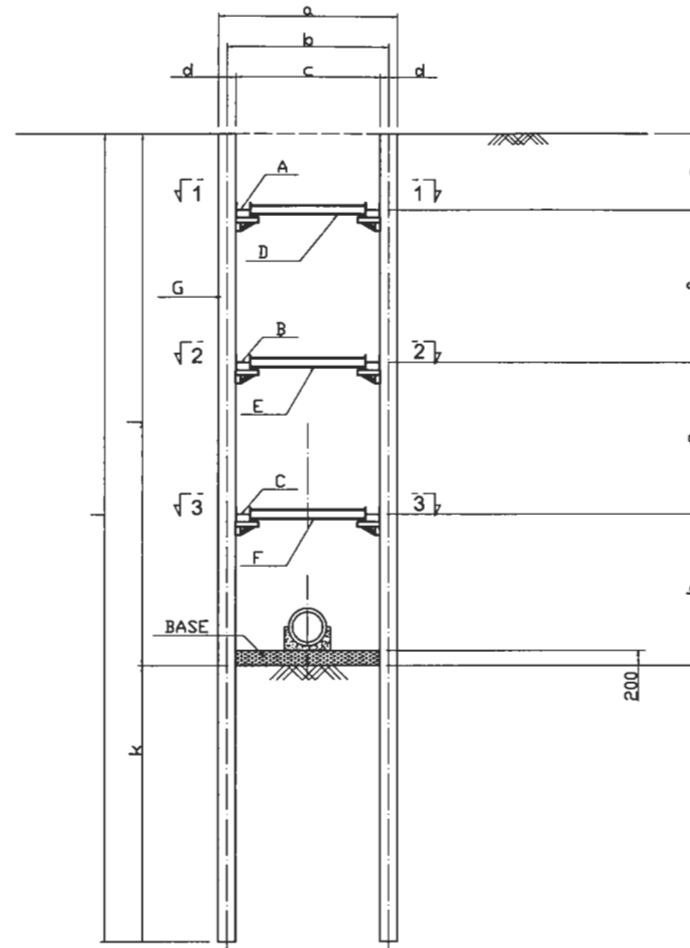
		EXCAVATION DEPTH = 6,000 ~ 6,500			EXCAVATION DEPTH = 6,500 ~ 7,500		
		W=3,500	W=3,600	W=3,900	W=3,500	W=3,600	W=3,900
Width	a	3,700	3,800	4,100	3,700	3,800	4,100
	b	3,500	3,600	3,900	3,500	3,600	3,900
	c	3,300	3,400	3,700	3,300	3,400	3,700
	d	200			200		
Depth	e	1,000			1,000		
	f	2,000			2,000		
	g	1,500			2,000		
	h	1,500 ~ 2,000			1,500 ~ 2,500		
	i	6,000 ~ 6,500			6,500 ~ 7,500		
	j	11,200			13,000		
	k	5,200 ~ 5,700			6,500 ~ 5,500		
	l	5,000			5,000		
Waling	A	H-300x300x10x15					
	B	H-300x300x10x15					
	C	H-350x350x12x19					
Strut	D	H-150x150x7x10	H-175x175x7.5x11	H-150x150x7x10	H-175x175x7.5x11		
	E	H-150x150x7x10	H-175x175x7.5x11	H-175x175x7.5x11	H-175x175x7.5x11		
	F	H-175x175x7.5x11	H-175x175x7.5x11	H-200x200x8x12	H-200x200x8x12		
Sheet pile	G	FSP - 2					

NO.	DATE	DESCRIPTIONS	BY	APPRO.
A	04/JAN	DETAIL CHANGED		
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 EXISTING COMBINED SEWER IMPROVEMENT TEMPORARY STRUCTURE OF SHEET PILE (REFERENCE) (3) TYPE 3,4 (H = 6,500~7,500)				
SCALE : 1/100				
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)				
PACIFIC CONSULTANTS INTERNATIONAL				
DESIGNED KATSUKI TAKAAKI		CHECKED KONDO MASAMI		
DATE : JUNE 2001		DWG. No. PD - ECSI - 300		

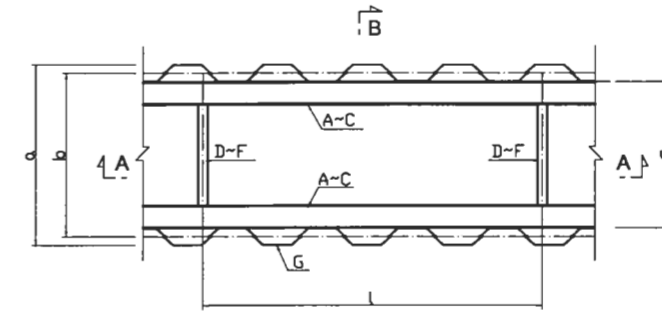
TYPE 5 ~ TYPE 8
Excavation Depth = 7,500~10,000



SECTION A-A



SECTION B-B



SECTION 1-1, 2-2, 3-3

		EXCAVATION DEPTH 7,500 ~ 8,000	EXCAVATION DEPTH 8,000 ~ 9,000	EXCAVATION DEPTH 9,000 ~ 9,500	EXCAVATION DEPTH 9,500 ~ 10,000
		W=3,500		W=3,500	
Width	a	3,750		3,840	
	b	3,500		3,500	
	c	3,250		3,160	
	d	250		340	
Depth	e	1,000	1,000	1,000	1,000
	f	2,500	2,500	3,000	3,000
	g	2,500	3,000	3,000	3,000
	h	1,500 ~ 2,000	1,500 ~ 2,500	2,000 ~ 2,500	2,500 ~ 3,000
	i	14,300	16,100	17,000	18,000
	j	7,500 ~ 8,000	8,000 ~ 9,000	9,000 ~ 9,500	9,500 ~ 10,000
	k	6,800 ~ 6,300	8,100 ~ 7,100	8,000 ~ 7,500	8,500 ~ 8,000
	l	5,000	5,000	5,000	4,500
Waling	A	H-300x300x10x15	H-300x300x10x15	H-350x350x12x19	H-300x300x10x15
	B	H-350x350x12x19	H-350x350x12x19	H-400x400x13x21	H-350x350x12x19
	C	H-350x350x12x19	H-400x400x13x21	H-400x400x13x21	H-400x400x13x21
Strut	D	H-175x175x7.5x11	H-175x175x7.5x11	H-175x175x7.5x11	H-175x175x7.5x11
	E	H-175x175x7.5x11	H-200x200x8x12	H-200x200x8x12	H-175x175x7.5x11
	F	H-200x200x8x12	H-200x200x8x12	H-200x200x8x12	H-200x200x8x12
Sheet pile	G	FSP - 3	FSP - 4	FSP - 4	FSP - 4

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
EXISTING COMBINED SEWER IMPROVEMENT

TEMPORARY STRUCTURE
OF SHEET PILE (REFERENCE) (4)
TYPE 5-8 (H = 7,500-10,000)

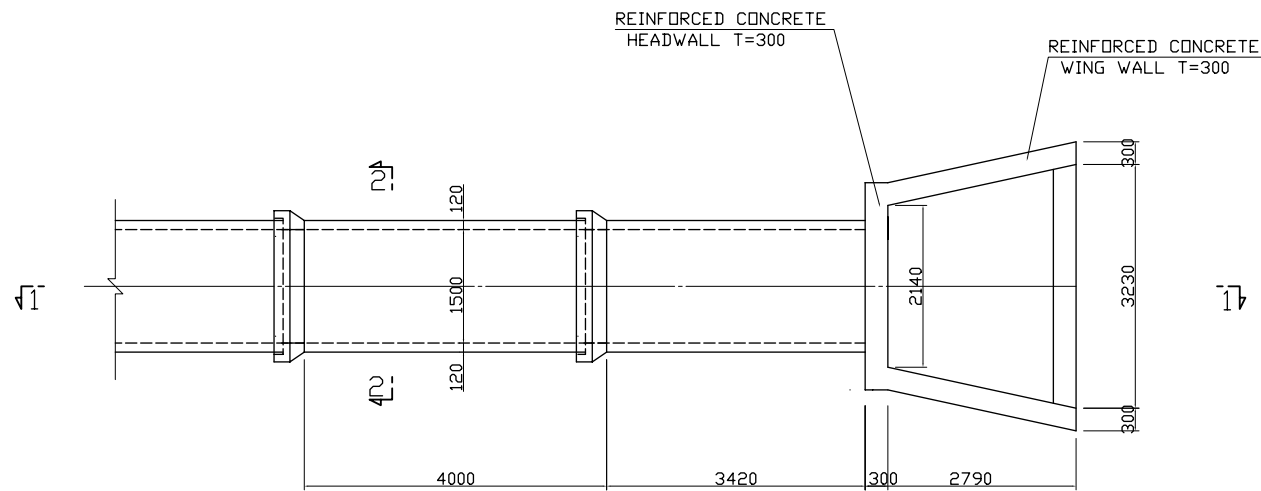
SCALE : 1/100

JICA JAPAN INTERNATIONAL COOPERATION
AGENCY (JICA)

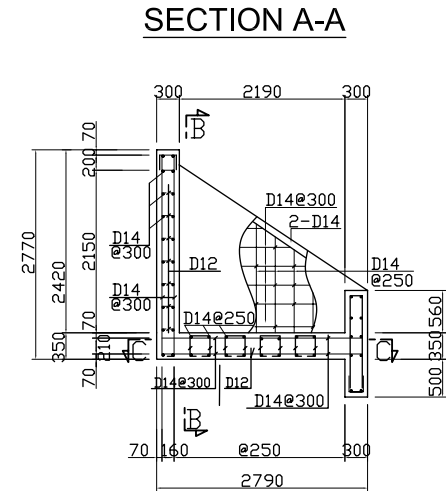
PACIFIC CONSULTANTS INTERNATIONAL

DESIGNED KATSUKI TAKAOKI	CHECKED KONDO MASAMI
-----------------------------	-------------------------

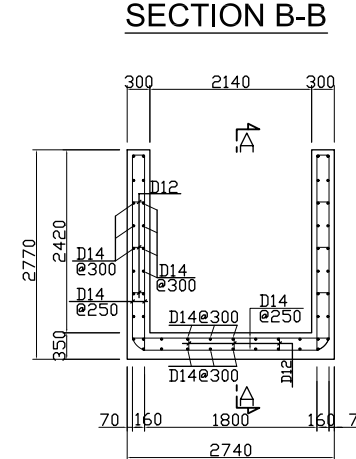
DATE : JUNE 2001 DWG. No. PD - ECSI - 301



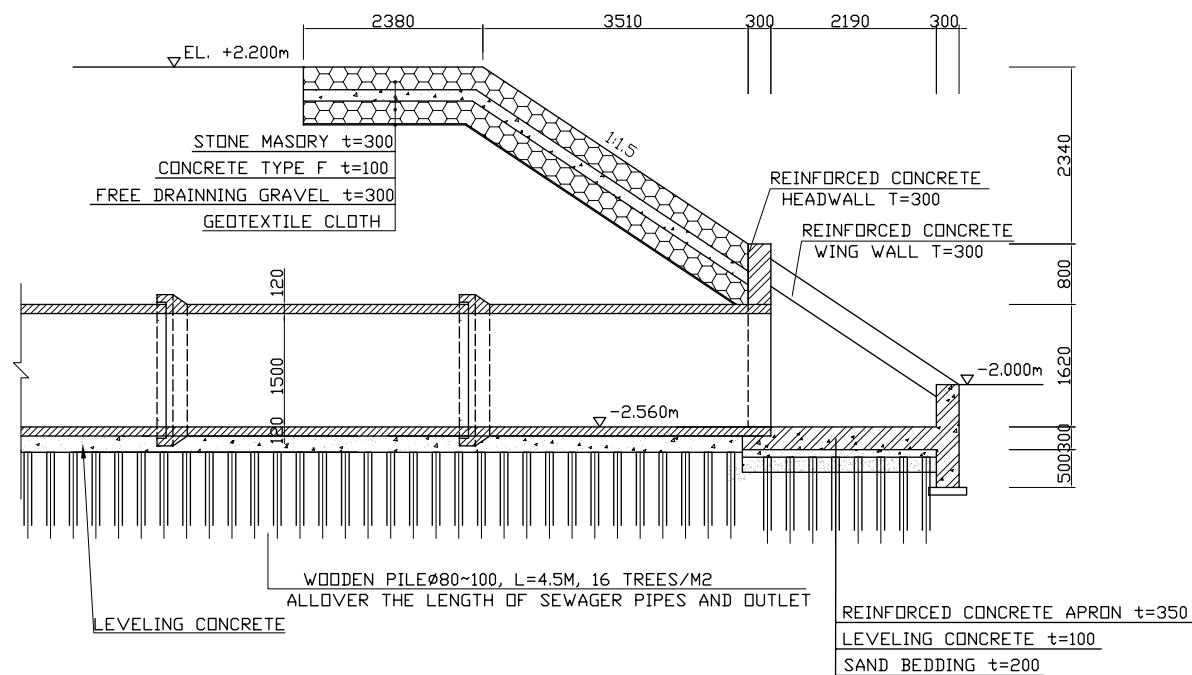
PLAN



SECTION A-A

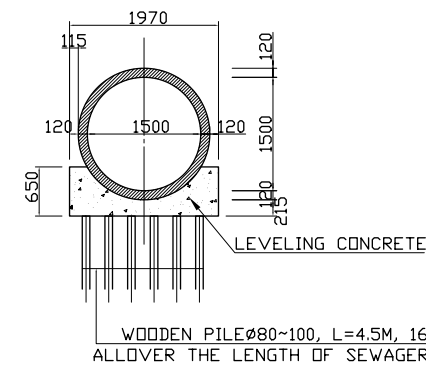


SECTION B-B



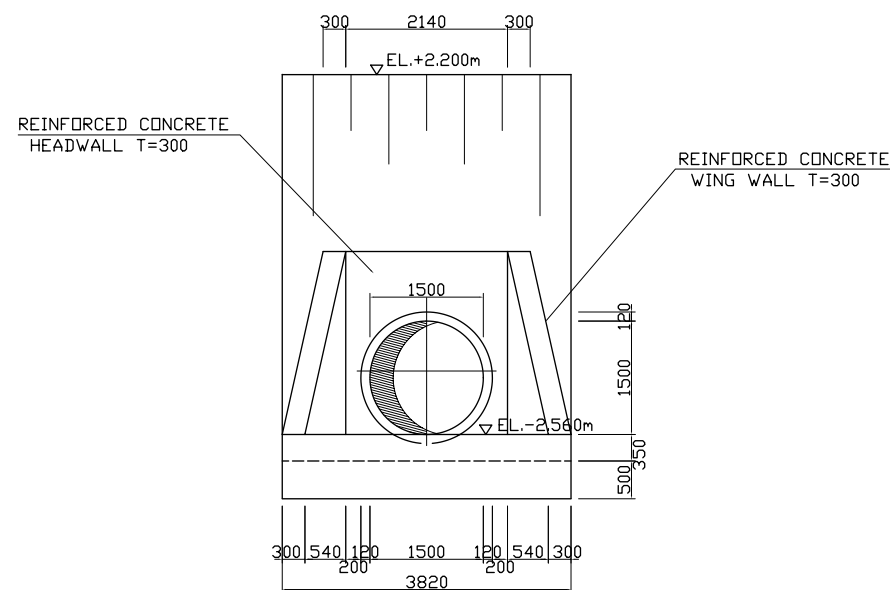
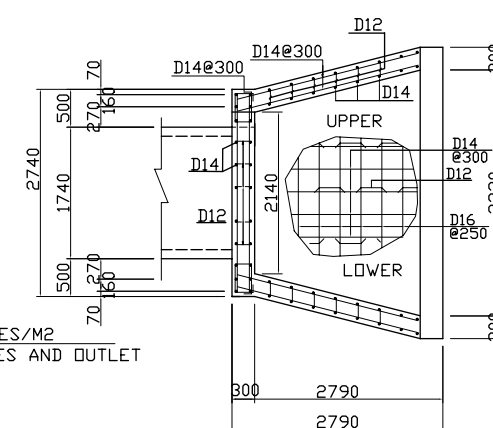
SECTION 1-1

SECTION 2-2



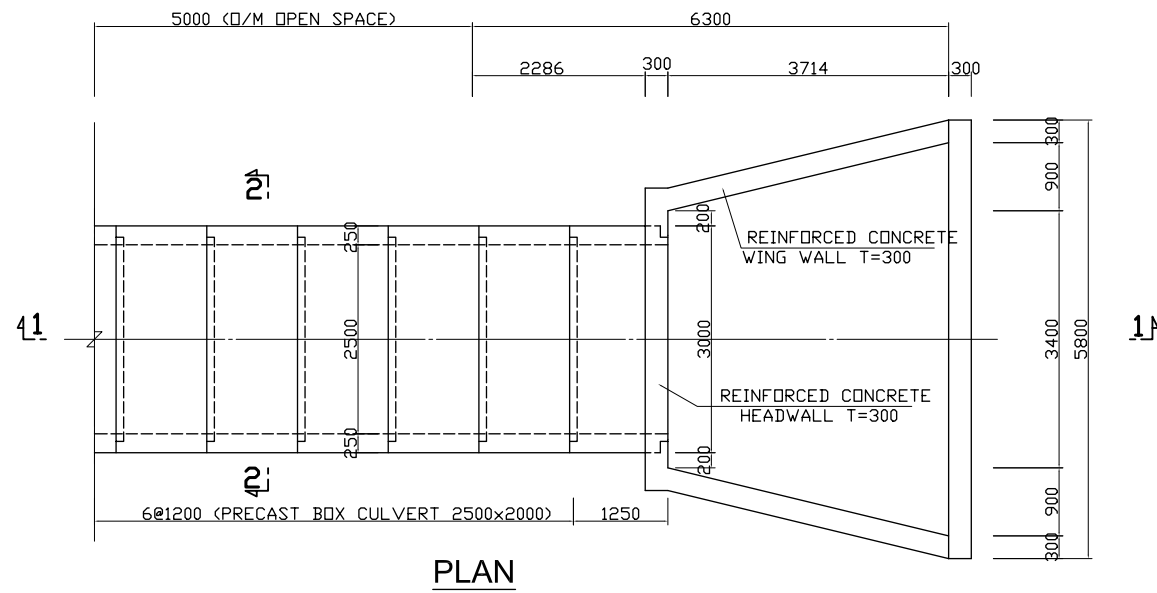
WOODEN PILE Ø80~100, L=4.5M, 16 TREES/M2
ALLOVER THE LENGTH OF SEWAGER PIPES AND OUTLET

SECTION C-C

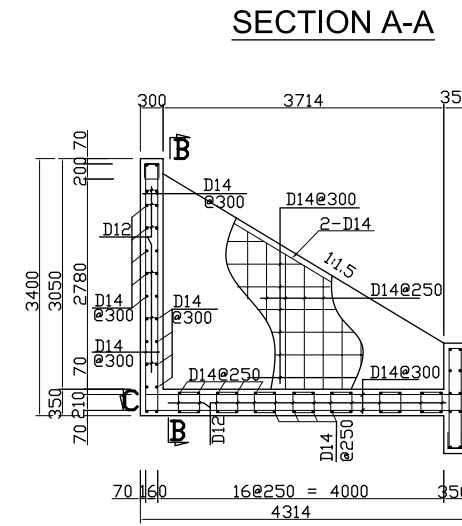


FRONT OF VIEW

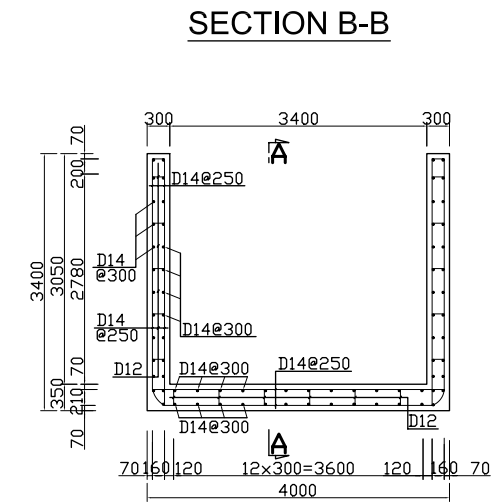
NO.	DATE	DESCRIPTIONS	BY	APRO.
REVISIONS				
PROJECT MANAGEMENT UNIT FOR HO CHI MINH CITY WATER ENVIRONMENT IMPROVEMENT				
THE DETAILED DESIGN STUDY ON HO CHI MINH CITY WATER ENVIRONMENT IMPROVEMENT PROJECT IN THE SOCIALIST REPUBLIC OF VIET NAM				
PACKAGE D EXISTING COMBINED SEWER IMPROVEMENT OUTLET OF SEWERS NGUYEN BIEU				
SCALE 1:50				
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)				
PACIFIC CONSULTANTS INTERNATIONAL				
DESIGNED KATSUKI TAKAAKI		CHECKED KONDO MASAMI		
DATE : JUNE 2001		DWG. No. PD - ECSI - 294		



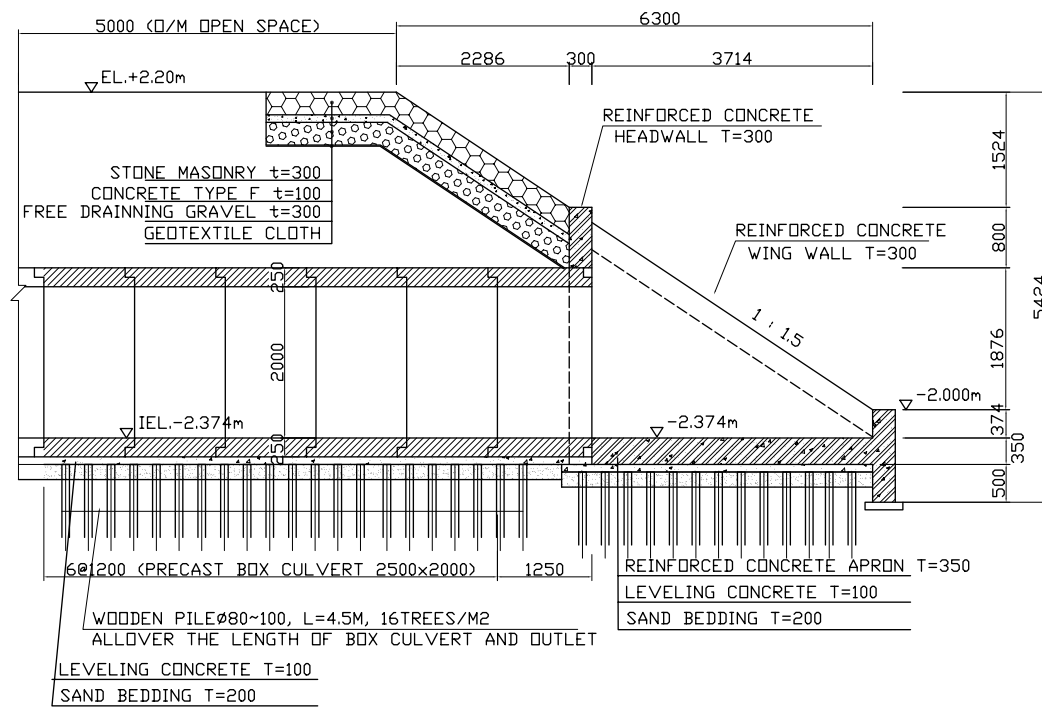
PLAN



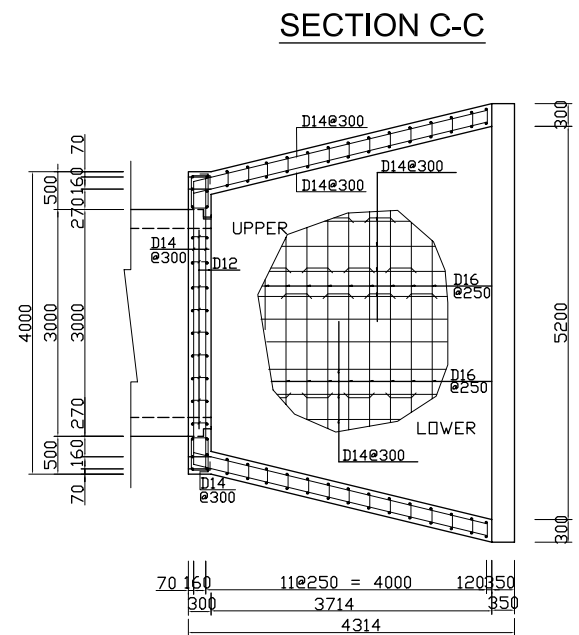
SECTION A-A



SECTION B-B

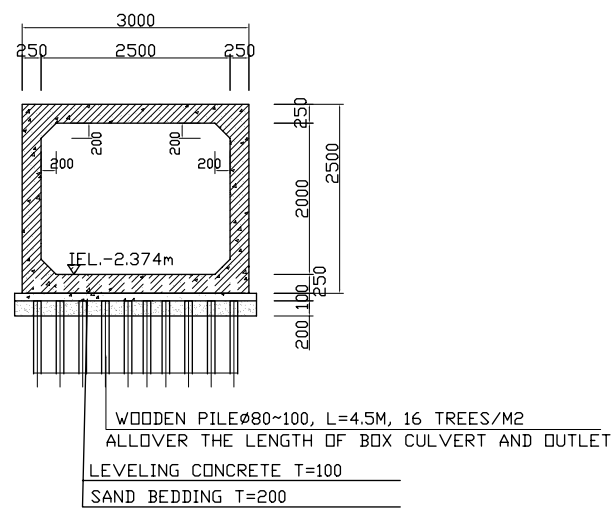
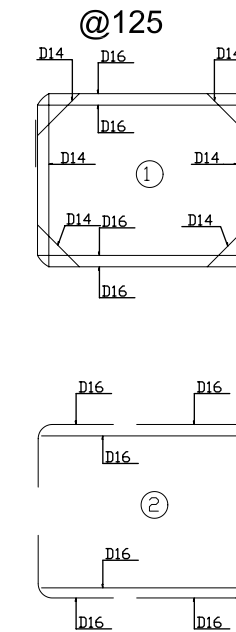


SECTION 1-1

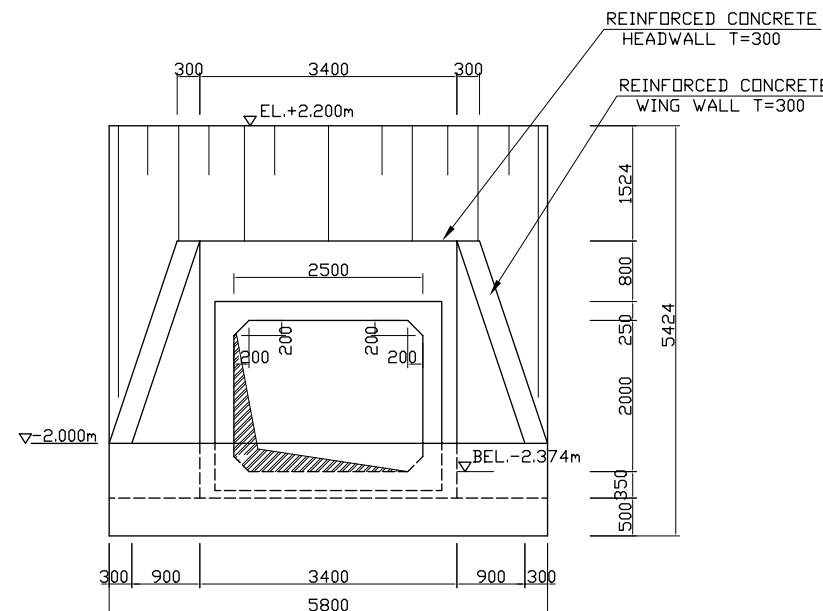


SECTION C-C

BAR SKERETON

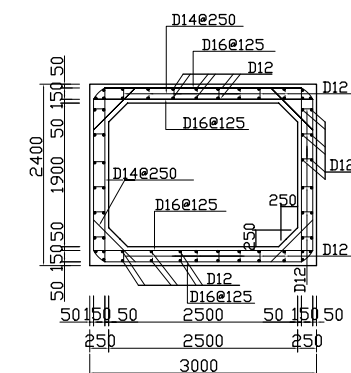


SECTION 2-2

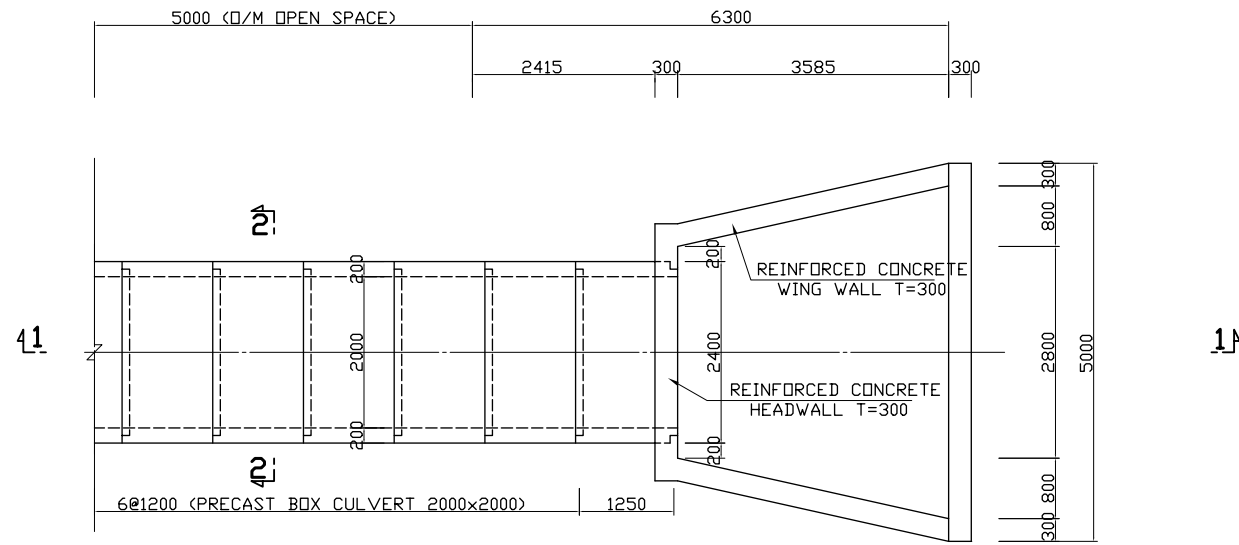


FRONT OF VIEW

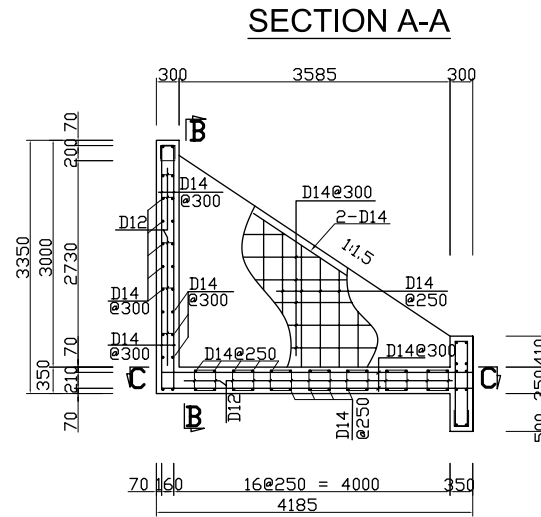
BOX CULVERT CROSS SECTION



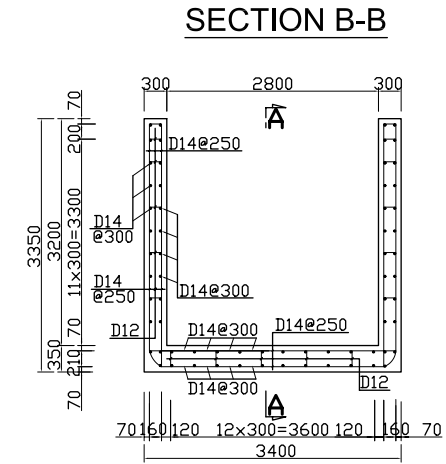
NO.	DATE	DESCRIPTIONS	BY	APRO.
REVISIONS				
PROJECT MANAGEMENT UNIT FOR HO CHI MINH CITY WATER ENVIRONMENT IMPROVEMENT				
THE DETAILED DESIGN STUDY ON HO CHI MINH CITY WATER ENVIRONMENT IMPROVEMENT PROJECT IN THE SOCIALIST REPUBLIC OF VIET NAM				
PACKAGE D EXISTING COMBINED SEWER IMPROVEMENT OUTLET OF SEWERS TH - L2 TRAN BINH TRONG				
SCALE : AS SHOWN				
JICA JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		PACIFIC CONSULTANTS INTERNATIONAL		
DESIGNED KATSUKI TAKAOKI		CHECKED KONDO MASAMI		
DATE : JUNE 2001		DWG. No. PD - ECSI - 295		



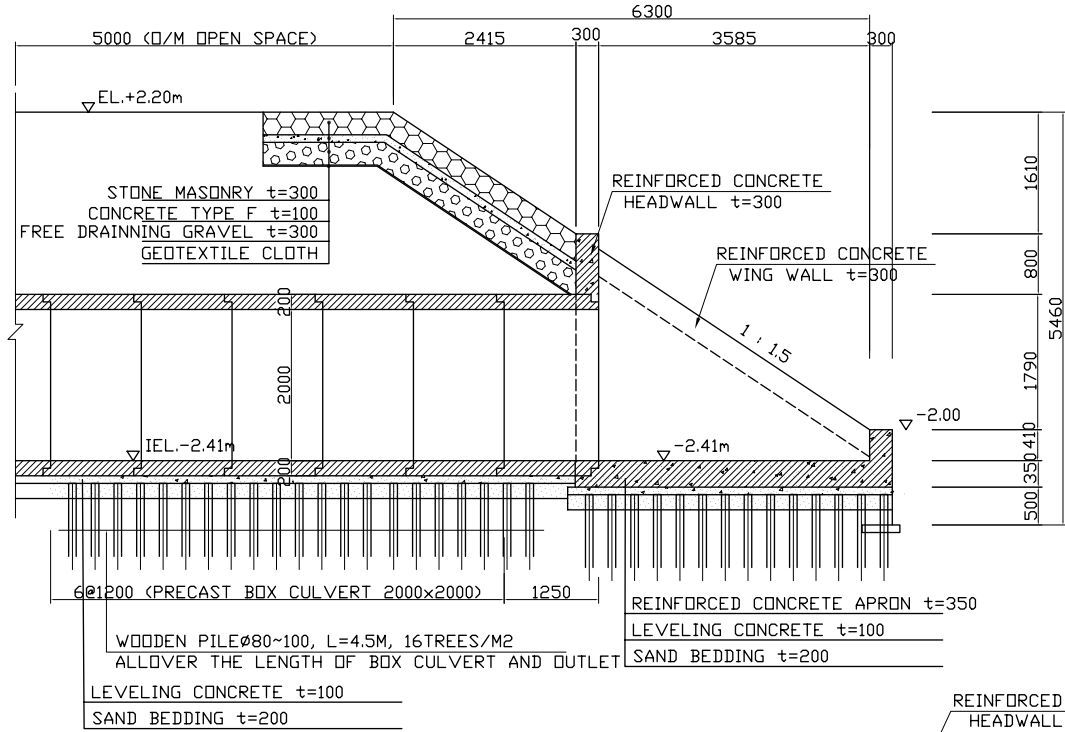
PLAN



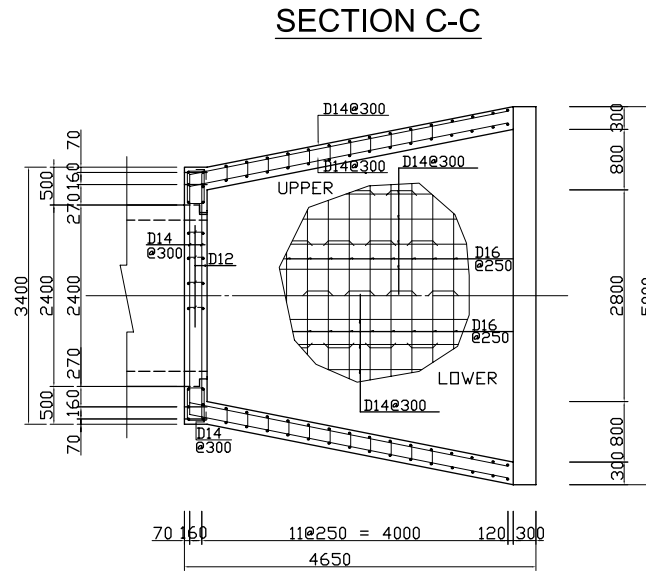
SECTION A-A



SECTION B-B

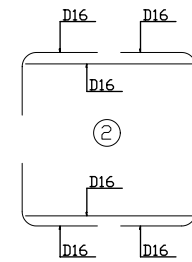
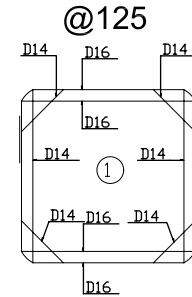


SECTION 1-1

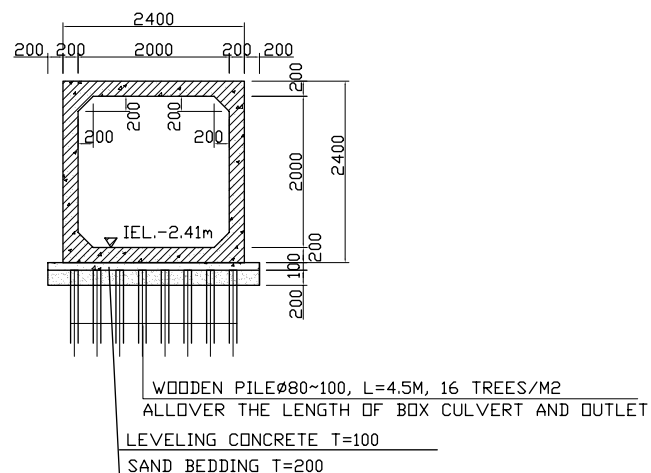
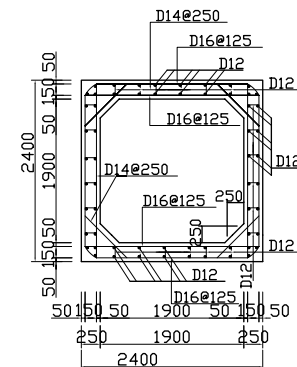


SECTION C-C

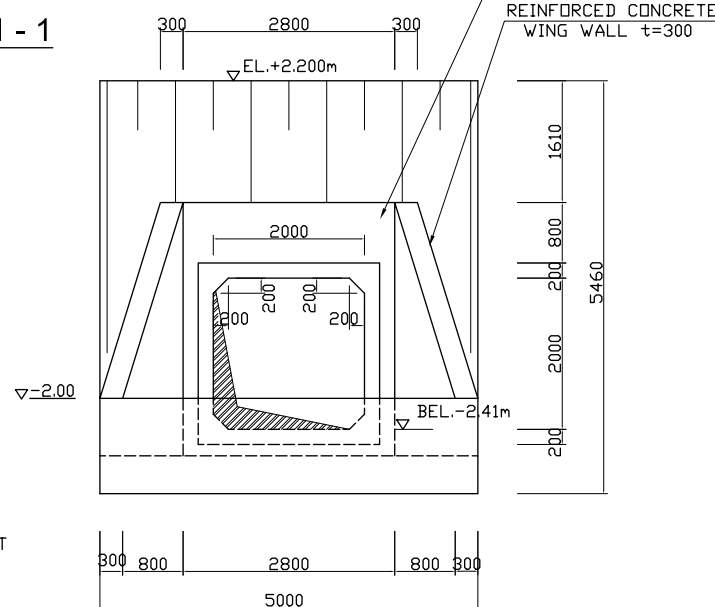
BAR SKERETON



BOX CULVERT CROSS SECTION



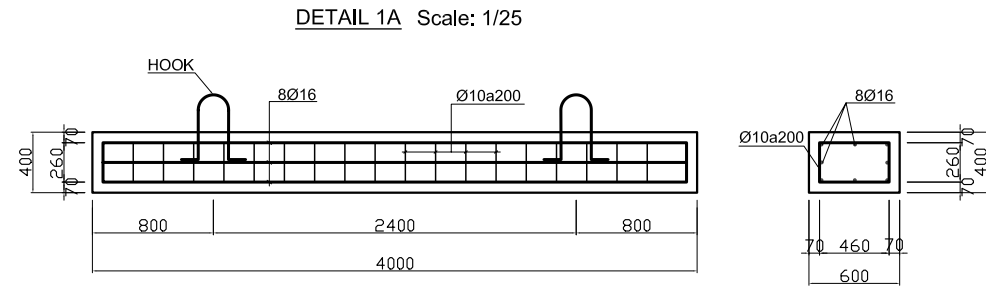
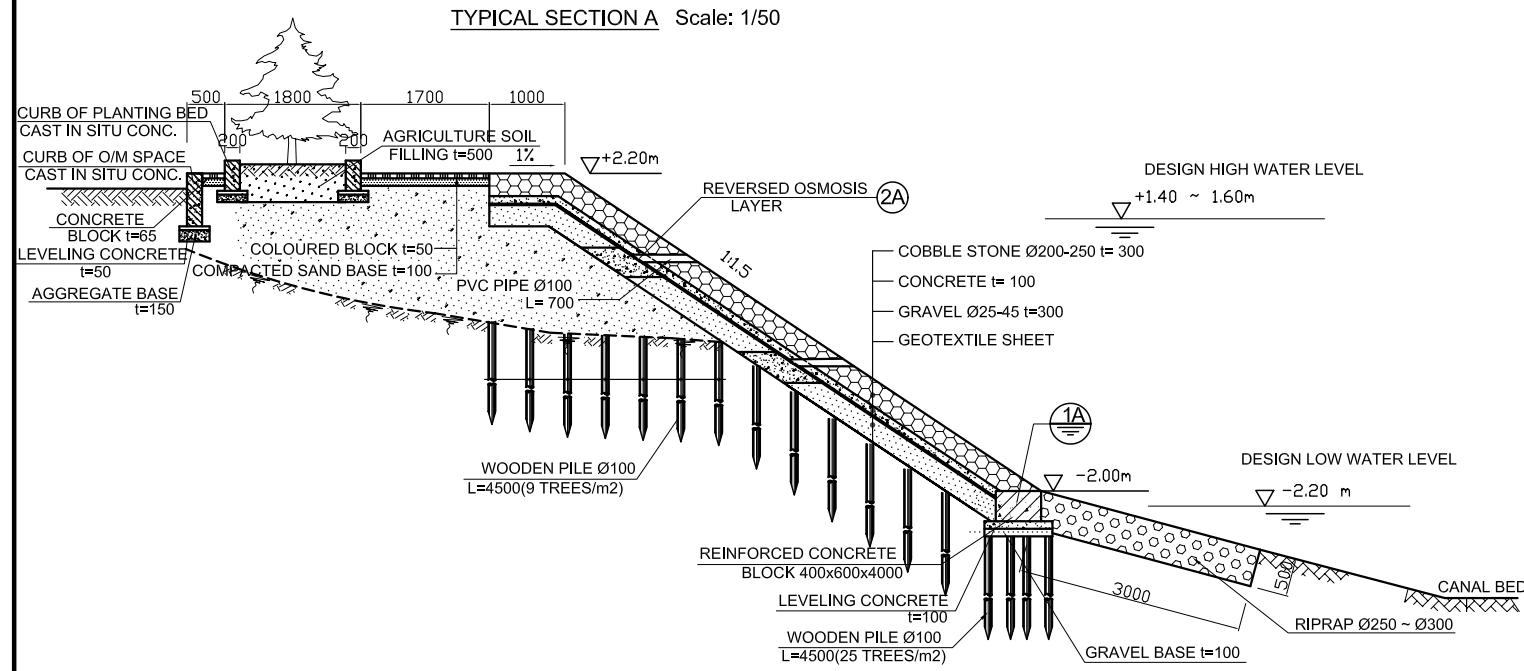
SECTION 2-2



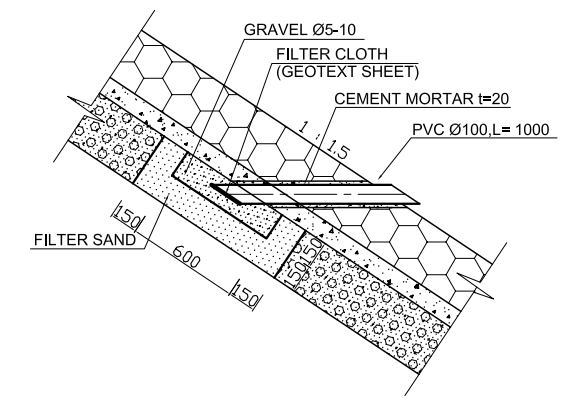
FRONT OF VIEW

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 D EXISTING COMBINED SEWER IMPROVEMENT				
OUTLET OF SEWERS HUYNH MAN DAT				
SCALE : AS SHOWN				
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)		PACIFIC CONSULTANTS INTERNATIONAL		
DESIGNED KATSUKI TAKAAKI	CHECKED KONDO MASAMI			
DATE : JUNE 2001	DWG. No. PD - ECSI - 296			

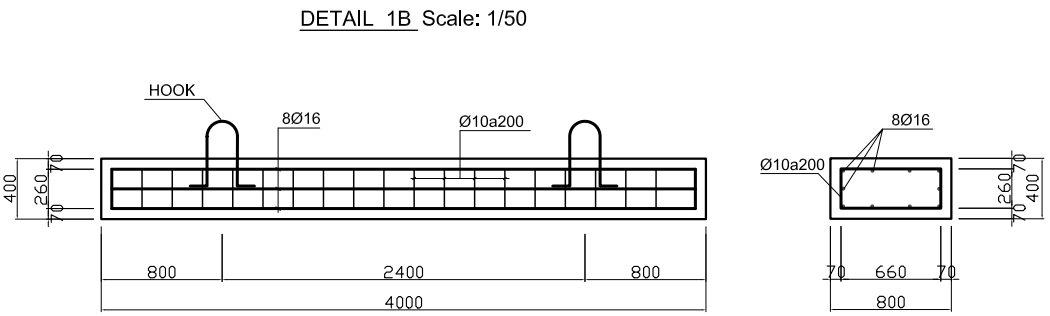
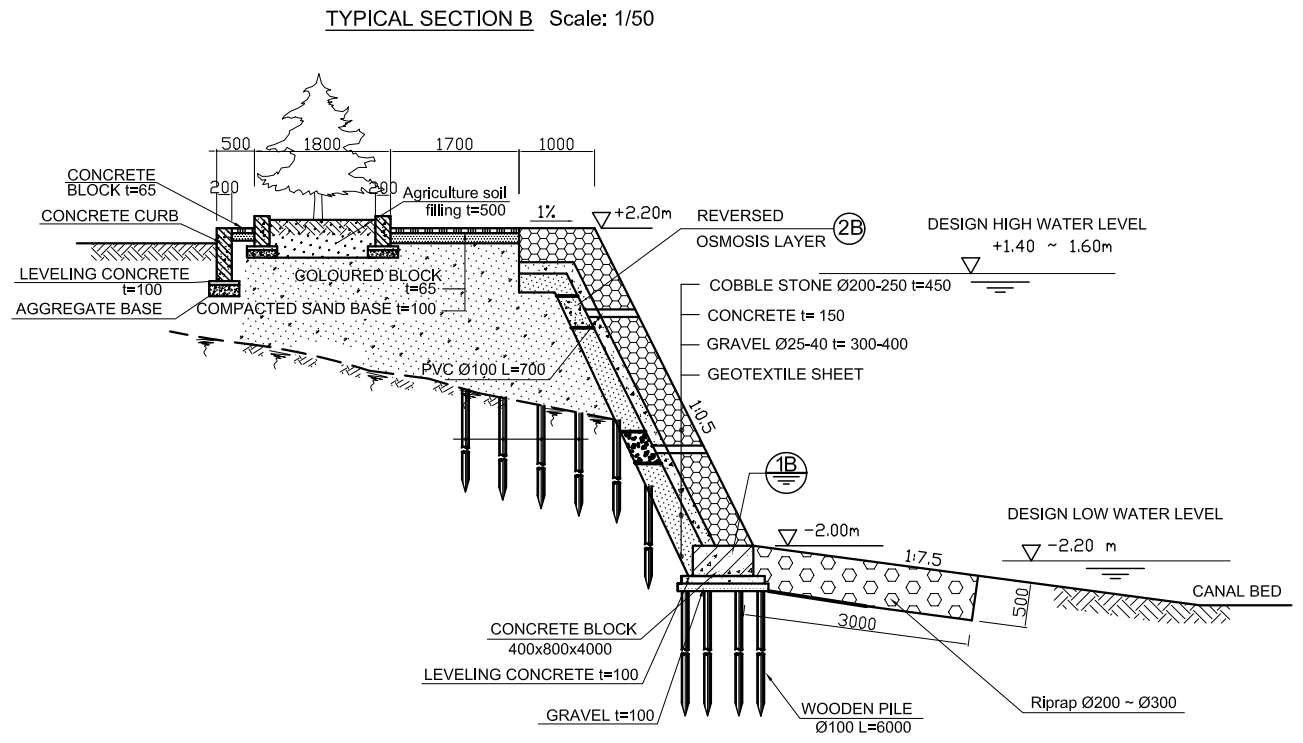
TYPE A



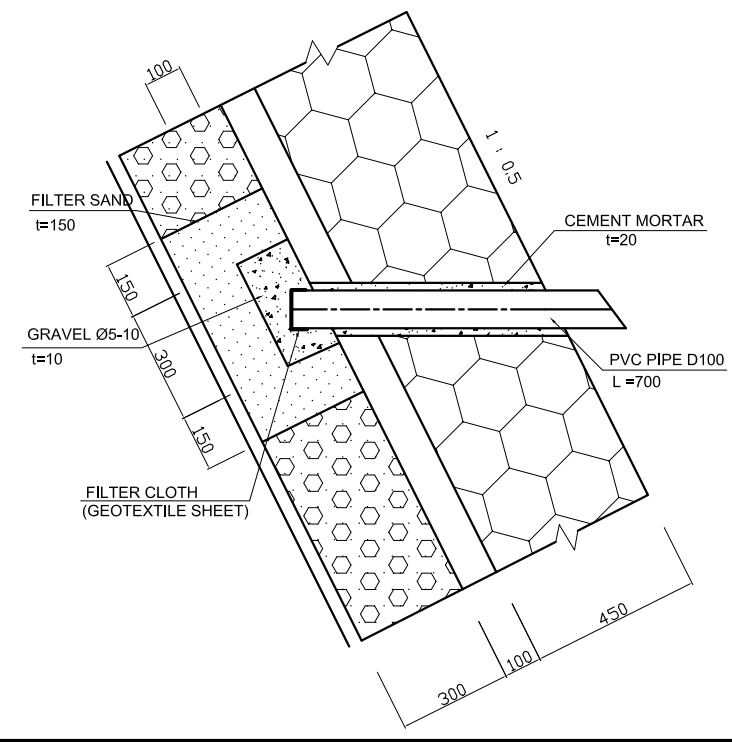
DETAIL 2A Scale: 1/20



TYPE B



DETAIL 2B Scale: 1/10



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 D EXISTING COMBINED SEWER IMPROVEMENT TYPICAL SECTION AND DETAILS OF REVTMENT TYPE A AND TYPE B				
SCALE : AS SHOWN				
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)				
PACIFIC CONSULTANTS INTERNATIONAL				
DESIGNED KATSUKI TAKAAKI	CHECKED KONDO MASAMI			
DATE : JUNE 2001	DWG. No. PD - ECSI - 298			