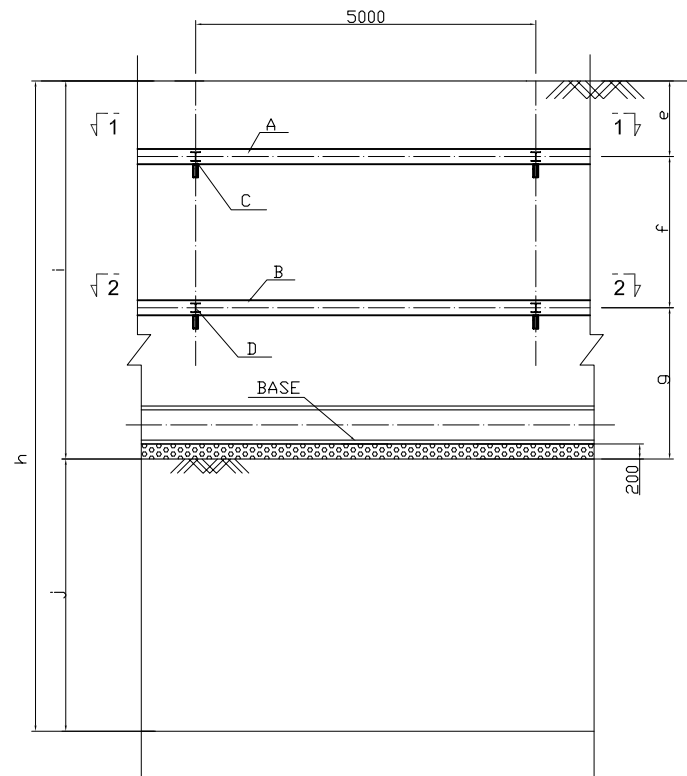
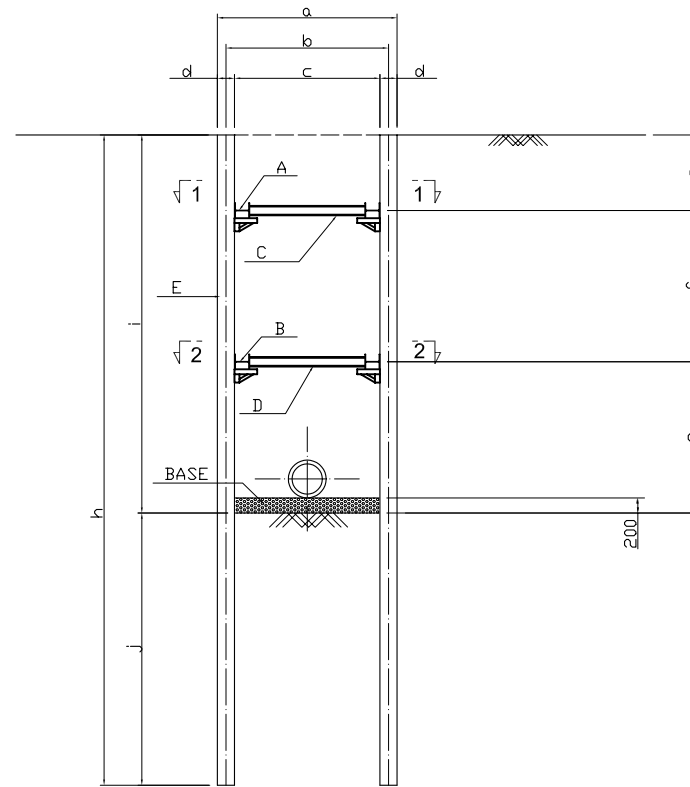


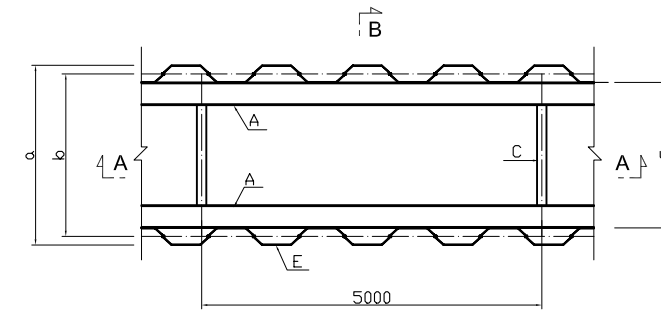
TYPE 1
Excavation Depth = 4,000~5,000



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				
	j	4,600 ~ 3,600				
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-150x150x7x10		H-175x175x7.5x11
Sheet pile	E	FSP - 2				

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

REVISIONS

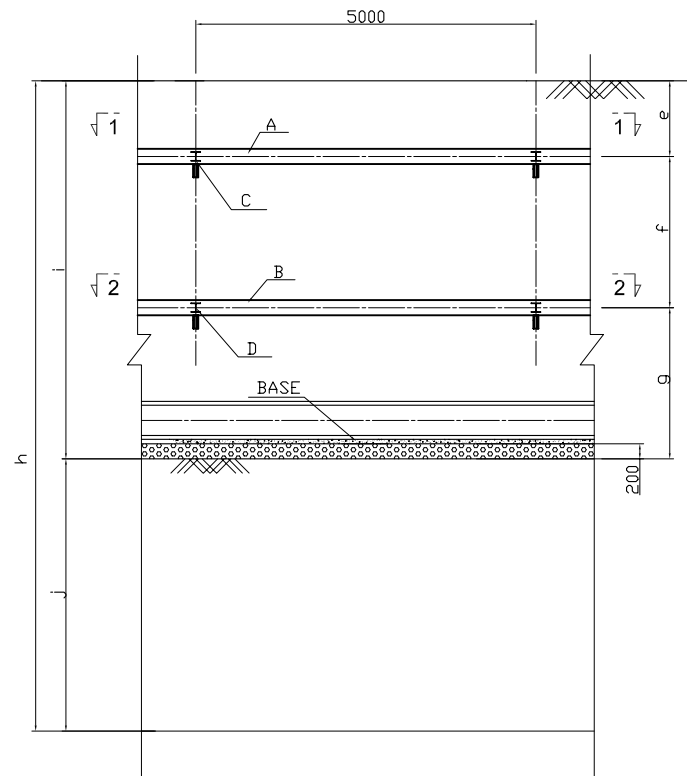
PROJECT MANAGEMENT UNIT FOR
HO CHI MINH CITY
WATER ENVIRONMENT IMPROVEMENT

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

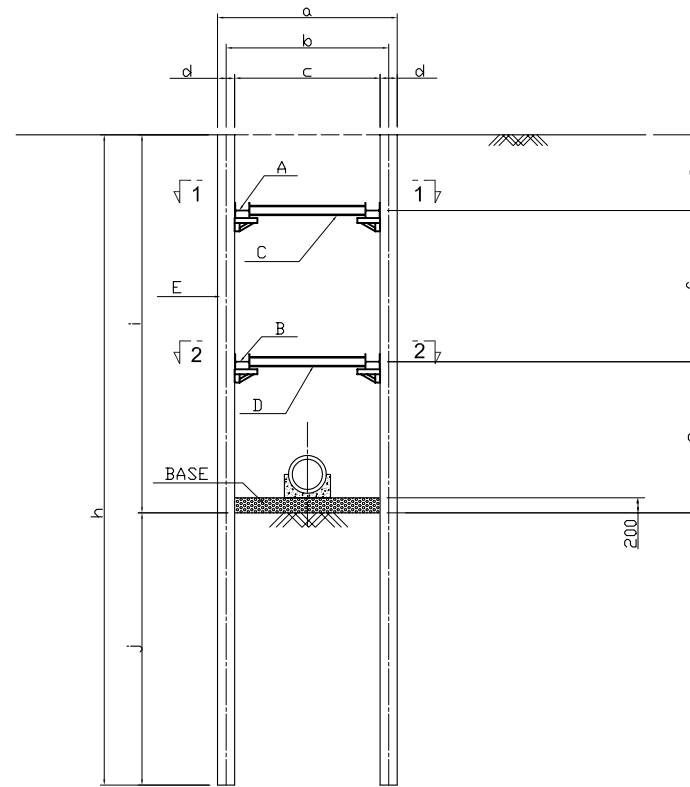
PACKAGE C
INTERCEPTOR SEWER CONSTRUCTION
TEMPORARY STRUCTURE OF TRENCH
FOR OPEN CUT METHOD (1)
(REFERENCE)
TYPE 1 (D = 4,000-5,000)

SCALE : 1/100	
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	
PACIFIC CONSULTANTS INTERNATIONAL	
DESIGNED SATO NOBUYUKI	CHECKED KONDO MASAMI
DATE : JUNE 2001	DWG. No. PC - ISC - 314

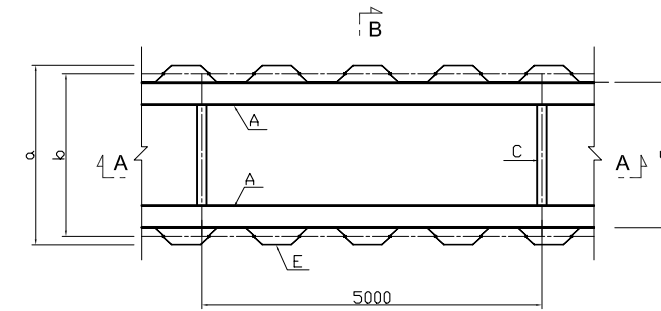
TYPE 2
Excavation Depth = 5,000~6,000



SECTION A-A



SECTION B-B

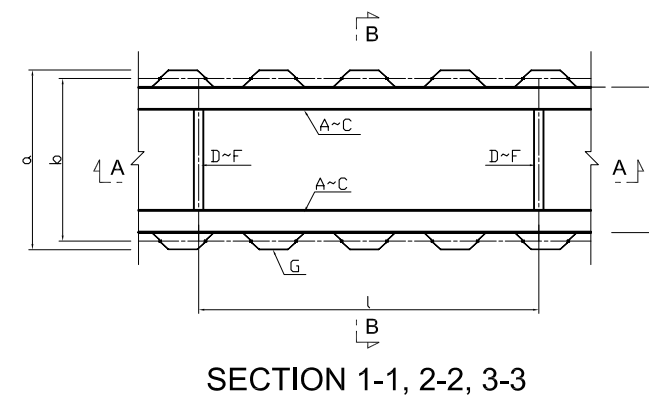
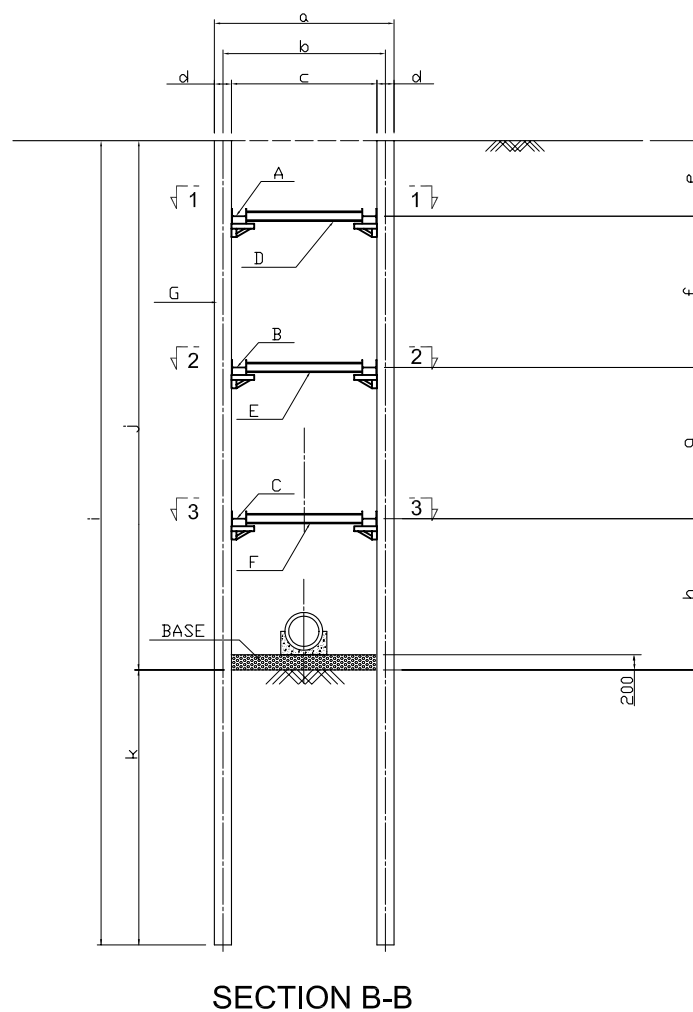
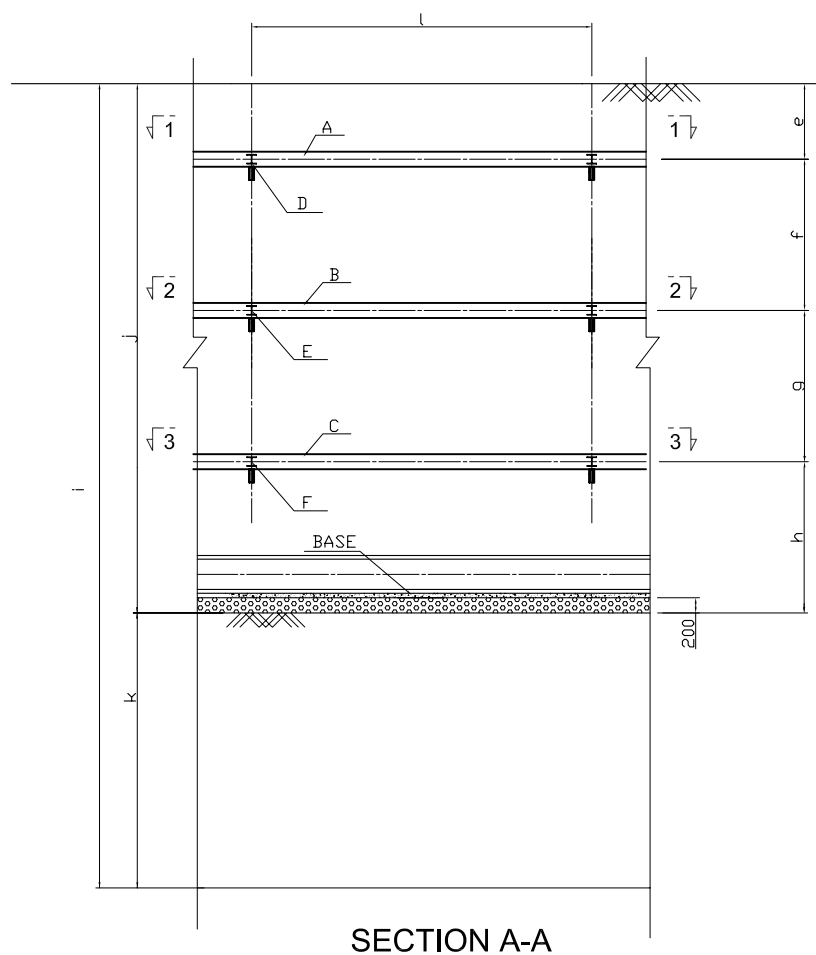


SECTION 1-1, 2-2

		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	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 C INTERCEPTOR SEWER CONSTRUCTION TEMPORARY STRUCTURE OF TRENCH FOR OPEN CUT METHOD (2) (REFERENCE) TYPE 2 (D = 5,000~6,000)				
SCALE : 1/100				
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)				
PACIFIC CONSULTANTS INTERNATIONAL				
DESIGNED SATO NOBUYUKI		CHECKED KONDO MASAMI		
DATE : JUNE 2001		DWG. No. PC - ISC - 315		

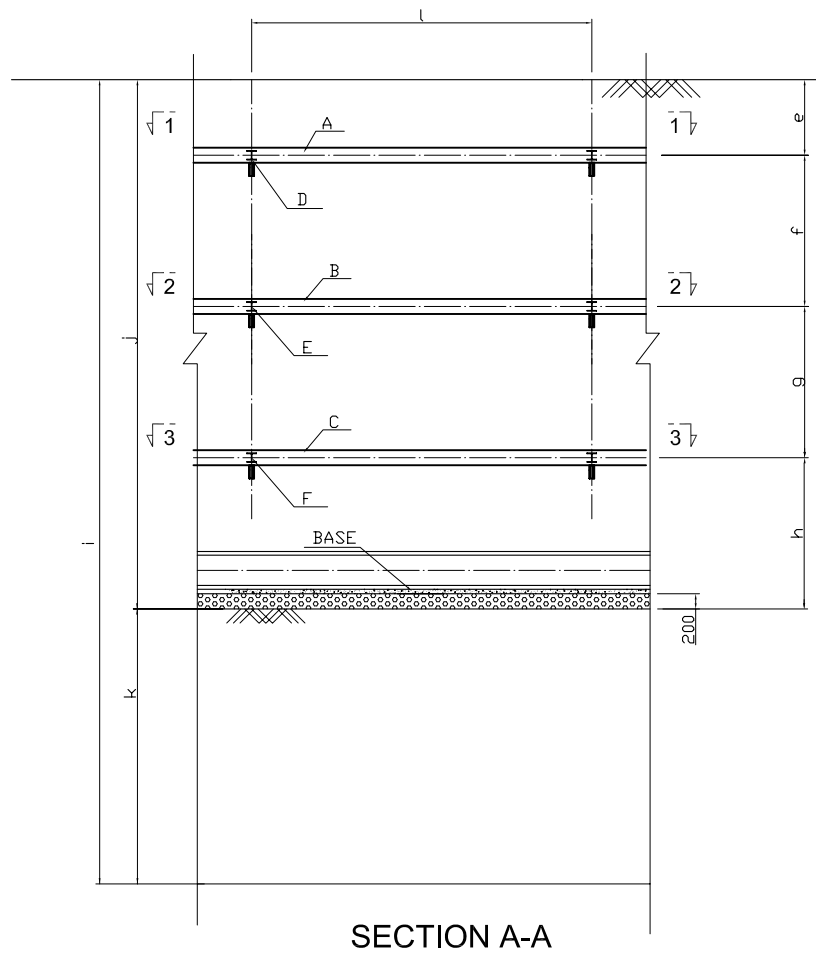
TYPE 3 and TYPE 4 Excavation Depth = 6,000~7,500



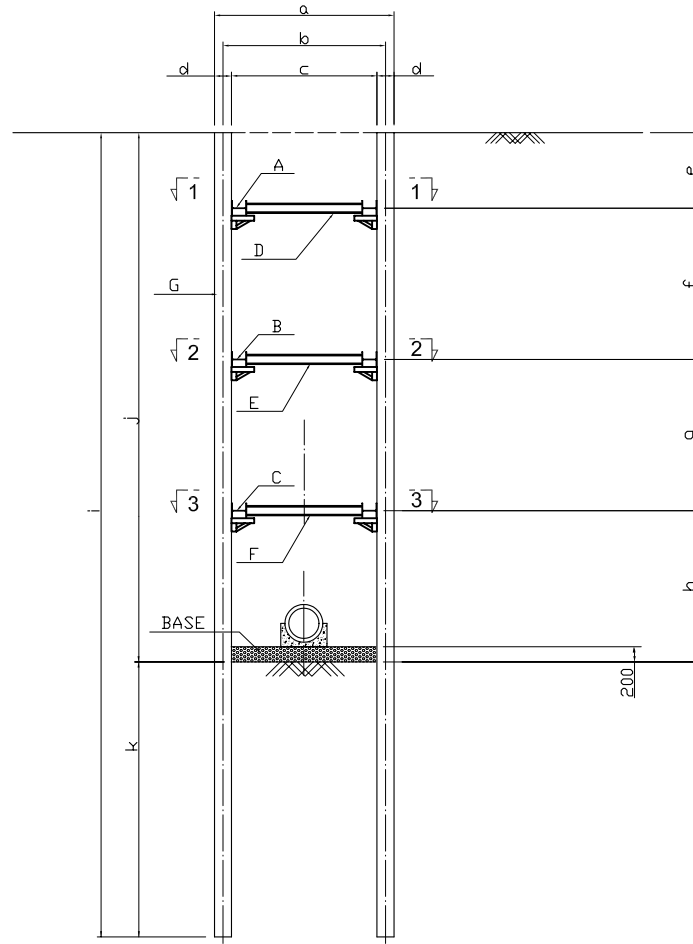
	EXCAVATION DEPTH = 6,000 ~ 6,500			EXCAVATION DEPTH = 6,500 ~ 7,500			
	W=3,500	W=3,600	W=3,900	W=3,500	W=3,600	W=3,900	
Width	a	3,700	3,800	4,100	3,700	3,800	4,100
	b	3,500	3,600	3,900	3,500	3,600	3,900
	c	3,300	3,400	3,700	3,300	3,400	3,700
	d	200		200			
Depth	e	1,000		1,000			
	f	2,000		2,000			
	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	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 C INTERCEPTOR SEWER CONSTRUCTION TEMPORARY STRUCTURE OF TRENCH FOR OPEN CUT METHOD (3) (REFERENCE) TYPE 3.4 (D = 6,500~7,500)				
SCALE : 1/100				
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)				
PACIFIC CONSULTANTS INTERNATIONAL				
DESIGNED SATO NOBUYUKI		CHECKED KONDO MASAMI		
DATE : JUNE 2001		DWG. No. PC - ISC - 316		

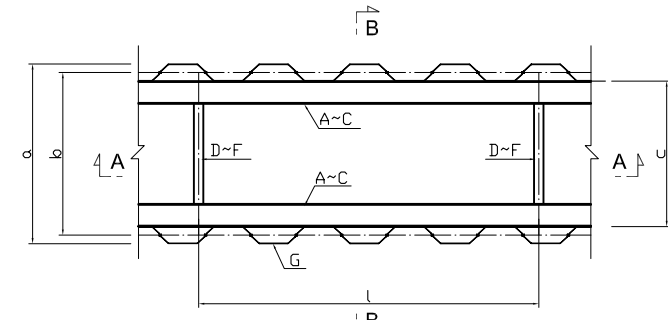
TYPE 5 ~ TYPE 8
Excavation Depth = 7,500~10,000



SECTION A-A



SECTION B-B



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

		EXCAVATION DEPTH	EXCAVATION DEPTH	EXCAVATION DEPTH	EXCAVATION DEPTH
		7,500 ~ 8,000	8,000 ~ 9,000	9,000 ~ 9,500	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	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 C
INTERCEPTOR SEWER CONSTRUCTION
TEMPORARY STRUCTURE OF TRENCH
FOR OPEN CUT METHOD (4)
(REFERENCE)
TYPE 5-8 (D = 7,500~10,000)

SCALE : 1/100

JICA JAPAN INTERNATIONAL COOPERATION
AGENCY (JICA)

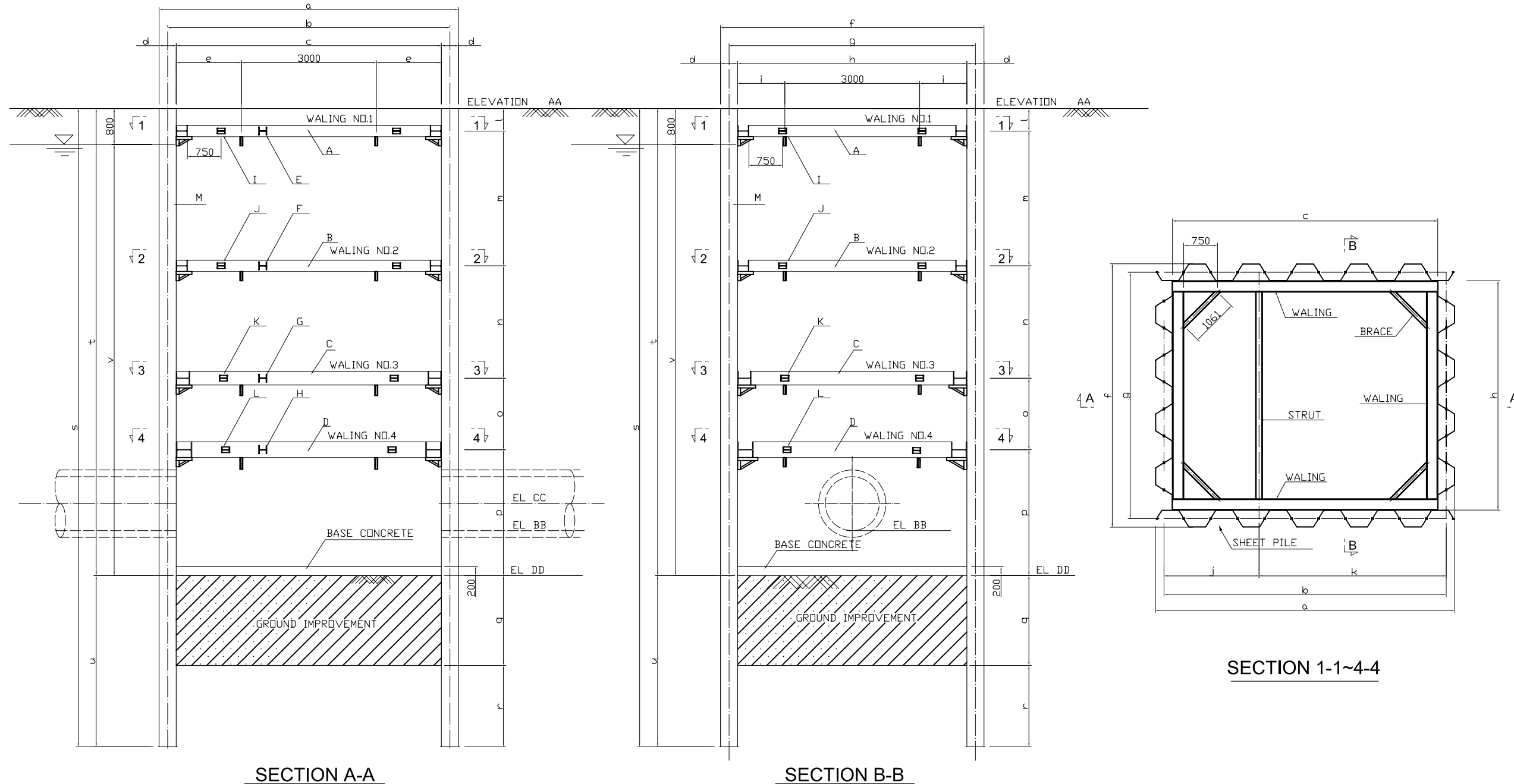
PACIFIC CONSULTANTS INTERNATIONAL

DESIGNED
SATO NOBUYUKI

CHECKED
KONDO MASAMI

DATE : JUNE 2001 DWG. No. PC - ISC - 317

SHAFT NO.1~NO.7



SECTION A-A

SECTION B-B

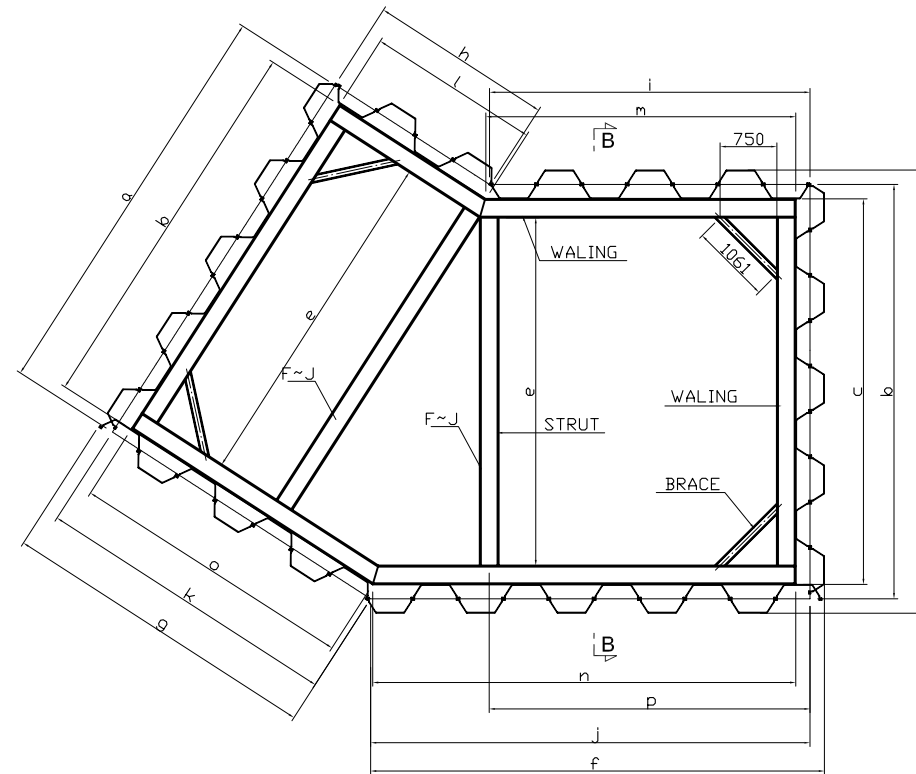
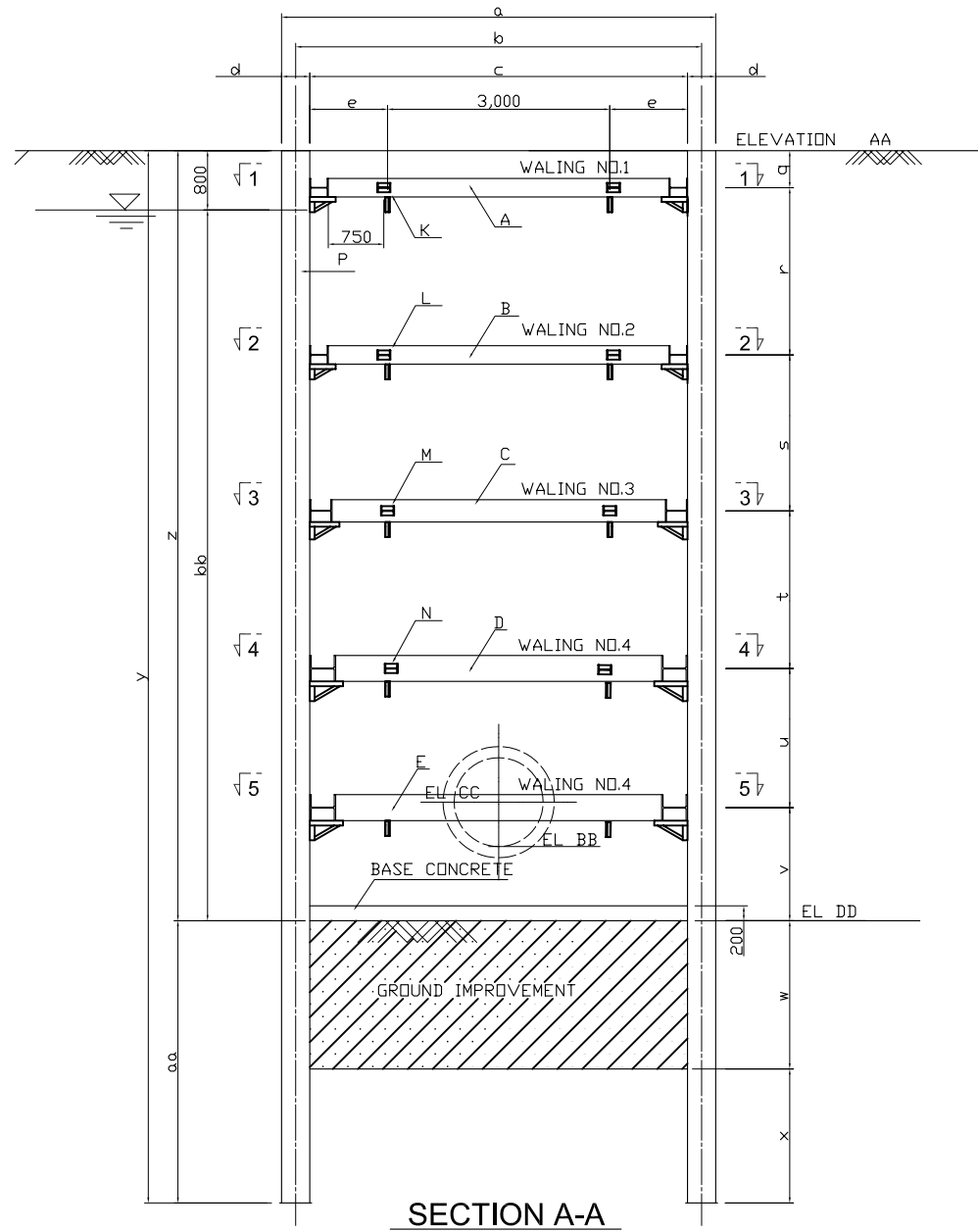
SECTION 1-1~4-4

SHAFT NUMBER	SYMBOL	LENGTH											DEPTH											LEVEL				REMARK
		a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s	t	u	v	AA	BB	CC	DD	
SHAFT NO.1		6,640	6,270	5,900	370	1,450	5,840	5,470	5,100	1,050	2,110	4,160	500	3,000	2,500	1,599	2,800	2,000	1,801	14,200	10,399	3,801	9,599	+1,870	-7,529	-6,929	-8,529	
SHAFT NO.2		6,640	6,270	5,900	370	1,450	5,840	5,470	5,100	1,050	2,110	4,160	500	3,000	2,500	1,873	2,800	2,000	1,527	14,200	10,673	3,527	9,873	+1,800	-7,853	-7,253	-8,853	
SHAFT NO.3		7,640	7,280	6,900	370	1,950	5,840	5,470	5,100	1,050	3,110	4,160	500	3,000	2,500	2,367	2,800	2,000	1,033	14,200	11,167	3,033	10,367	+1,970	-8,197	-7,597	-9,197	
SHAFT NO.4		7,640	7,330	6,900	370	1,950	5,840	5,470	5,100	1,050	3,110	4,160	500	3,000	3,000	2,090	2,800	2,500	1,320	15,200	11,380	3,820	10,580	+1,960	-8,420	-7,820	-9,420	
SHAFT NO.5		6,640	6,270	5,900	370	1,450	5,840	5,470	5,100	1,050	2,110	4,160	500	3,000	3,000	2,342	2,800	2,500	1,058	15,200	11,642	3,558	10,842	+1,970	-8,672	-8,072	-9,672	
SHAFT NO.6		7,640	7,330	6,900	370	1,950	5,840	5,470	5,100	1,050	3,110	4,160	500	3,000	3,000	2,616	2,800	2,500	784	15,200	11,916	3,284	11,116	+2,050	-8,866	-8,266	-9,866	
SHAFT NO.7		6,640	6,270	5,900	370	1,450	5,840	5,470	5,100	1,050	2,110	4,160	500	3,000	3,000	2,802	2,800	2,500	598	15,200	12,102	3,098	11,302	+2,020	-9,082	-8,482	-10,082	

MATERIAL NUMBER	SYMBOL	SHAFT NO.1	SHAFT NO.2	SHAFT NO.3	SHAFT NO.4	SHAFT NO.5	SHAFT NO.6	SHAFT NO.7	REMARK
		WALING	A H-250 X 250 X 9 X 14	H-250 X 250 X 9 X 14	H-250 X 250 X 9 X 14	H-250 X 250 X 9 X 14	H-200 X 200 X 8 X 12	H-250 X 250 X 9 X 14	
	B H-250 X 250 X 9 X 14	H-250 X 250 X 9 X 14	H-250 X 250 X 9 X 14	H-300 X 300 X 10 X 15	H-250 X 250 X 9 X 14	H-300 X 300 X 10 X 15	H-250 X 250 X 9 X 14		
	C H-300 X 300 X 10 X 15	H-300 X 300 X 10 X 15	H-300 X 300 X 10 X 15	H-300 X 300 X 10 X 15	H-300 X 300 X 10 X 15	H-300 X 300 X 10 X 15	H-300 X 300 X 10 X 15		
	D H-350 X 350 X 12 X 19	H-350 X 350 X 12 X 19	H-350 X 350 X 12 X 19	H-350 X 350 X 12 X 19	H-350 X 350 X 12 X 19	H-350 X 350 X 12 X 19	H-350 X 350 X 12 X 19		
STRUT	E H-150 X 150 X 7 X 10	H-150 X 150 X 7 X 10	H-200 X 200 X 8 X 12	H-150 X 150 X 7 X 10	H-150 X 150 X 7 X 10	H-150 X 150 X 7 X 10	H-150 X 150 X 7 X 10		
	F H-200 X 200 X 8 X 12	H-200 X 200 X 8 X 12	H-200 X 200 X 8 X 12	H-200 X 200 X 8 X 12	H-200 X 200 X 8 X 12	H-200 X 200 X 8 X 12	H-200 X 200 X 8 X 12		
	G H-200 X 200 X 8 X 12	H-200 X 200 X 8 X 12	H-200 X 200 X 8 X 12	H-250 X 250 X 9 X 14	H-250 X 250 X 9 X 14	H-250 X 250 X 9 X 14	H-250 X 250 X 9 X 14		
	H H-250 X 250 X 9 X 14	H-250 X 250 X 9 X 14	H-250 X 250 X 9 X 14	H-250 X 250 X 9 X 14	H-250 X 250 X 9 X 14	H-250 X 250 X 9 X 14	H-250 X 250 X 9 X 14		
BRACE	I H-100 X 100 X 6 X 8	H-100 X 100 X 6 X 8	H-100 X 100 X 6 X 8	H-100 X 100 X 6 X 8	H-100 X 100 X 6 X 8	H-100 X 100 X 6 X 8	H-100 X 100 X 6 X 8		
	J H-100 X 100 X 6 X 8	H-100 X 100 X 6 X 8	H-100 X 100 X 6 X 8	H-100 X 100 X 6 X 8	H-100 X 100 X 6 X 8	H-100 X 100 X 6 X 8	H-100 X 100 X 6 X 8		
	K H-100 X 100 X 6 X 8	H-100 X 100 X 6 X 8	H-125 X 125 X 6.5 X 9	H-125 X 125 X 6.5 X 9	H-125 X 125 X 6.5 X 9	H-125 X 125 X 6.5 X 9	H-125 X 125 X 6.5 X 9		
	L H-125 X 125 X 6.5 X 9	H-125 X 125 X 6.5 X 9	H-150 X 150 X 7 X 10	H-150 X 150 X 7 X 10	H-150 X 150 X 7 X 10	H-150 X 150 X 7 X 10	H-150 X 150 X 7 X 10		
SHEET PILE	M FSP-4	FSP-4	FSP-4	FSP-4	FSP-4	FSP-4	FSP-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 C INTERCEPTOR SEWER CONSTRUCTION TEMPORARY STRUCTURE OF SHAFT FOR PIPE JACKING METHOD (1) (REFERENCE) (SHAFT No.1~7)									
SCALE : 1/100									
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)									
PACIFIC CONSULTANTS INTERNATIONAL									
DESIGNED SATO NOBUYUKI					CHECKED KONDO MASAMI				
DATE : JUNE 2001					DWG. No. PC - ISC - 318				

SHAFT NO.8



SECTION 1-1~5-5

SYMBOL	LENGTH																DEPTH												LEVEL				REMARK
	a	b	c	d	e	f	g	h	i	j	k	l	m	n	o	p	q	r	s	t	u	v	w	x	y	z	aa	bb	AA	BB	CC	DD	
SHAFT NO.8	5,900	5,500	5,100	400	4,300	6,143	4,343	2,440	4,240	5,943	4,143	2,300	4,100	5,623	3,823	4,275	1,000	3,000	3,000	2,500	1,398	1,398	2,500	1,805	16,600	12,295	4,305	11,125	+1,980	-9,315	-8,715	-10,315	

SYMBOL	SHAFT NO.8	REMARK
WALING	A H - 250 X 250 X 9 X 14	
	B H - 300 X 300 X 10 X 15	
	C H - 300 X 300 X 10 X 15	
	D H - 400 X 400 X 13 X 21	
	E H - 350 X 350 X 12 X 19	
STRUT	F H - 200 X 200 X 8 X 12	
	G H - 250 X 250 X 9 X 14	
	H H - 250 X 250 X 9 X 14	
	I H - 300 X 300 X 10 X 15	
BRACE	J H - 250 X 250 X 9 X 14	
	K H - 100 X 100 X 6 X 8	
	L H - 125 X 125 X 6.5 X 9	
	M H - 125 X 125 X 6.5 X 9	
SHEET PILE	N H - 200 X 200 X 8 X 12	
	O FSP - 5	

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 C
INTERCEPTOR SEWER CONSTRUCTION
TEMPORARY STRUCTURE OF SHAFT
FOR PIPE JACKING METHOD (2)
(REFERENCE)
(SHAFT No.8)

SCALE : 1/100

JICA JAPAN INTERNATIONAL COOPERATION
AGENCY (JICA)

PACIFIC CONSULTANTS INTERNATIONAL

DESIGNED SATO NOBUYUKI
CHECKED KONDO MASAMI

DATE : JUNE 2001 DWG. No. PC - ISC - 319