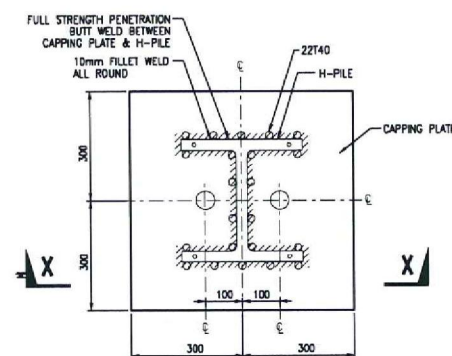
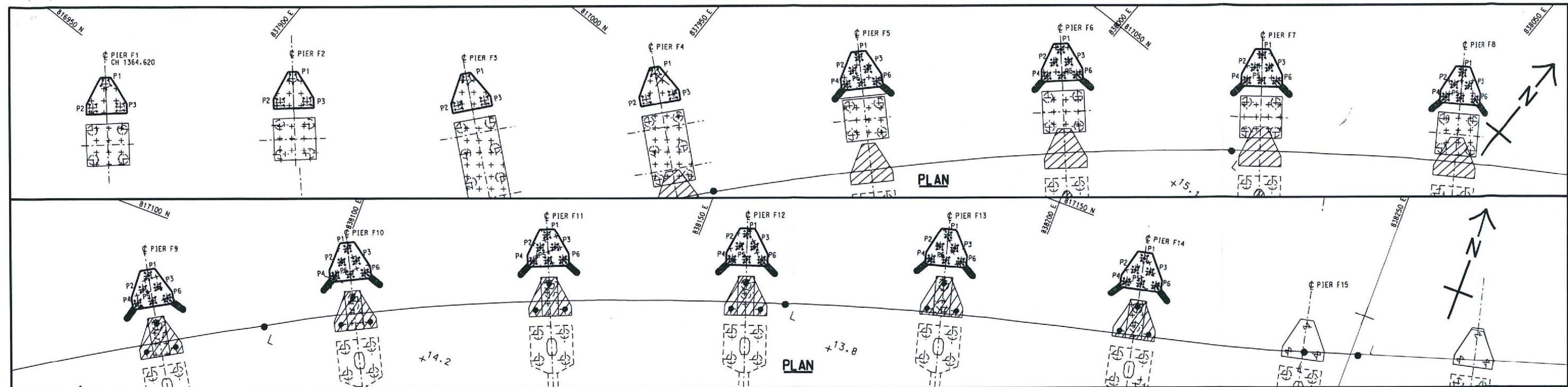
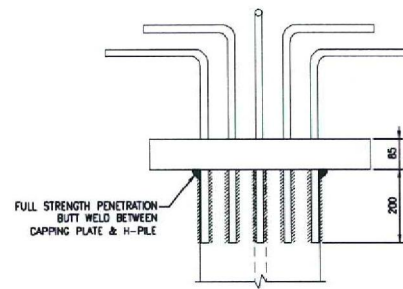


ANNEX K

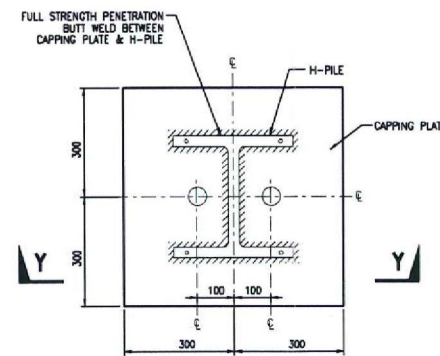
IEC Protection Structures



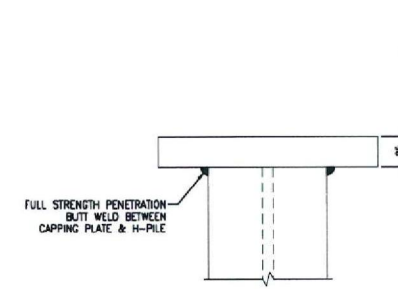
PLAN SECTION LOOKING DOWN
ABOVE CAPPING PLATE
(FOR TYPE B1 & B2)



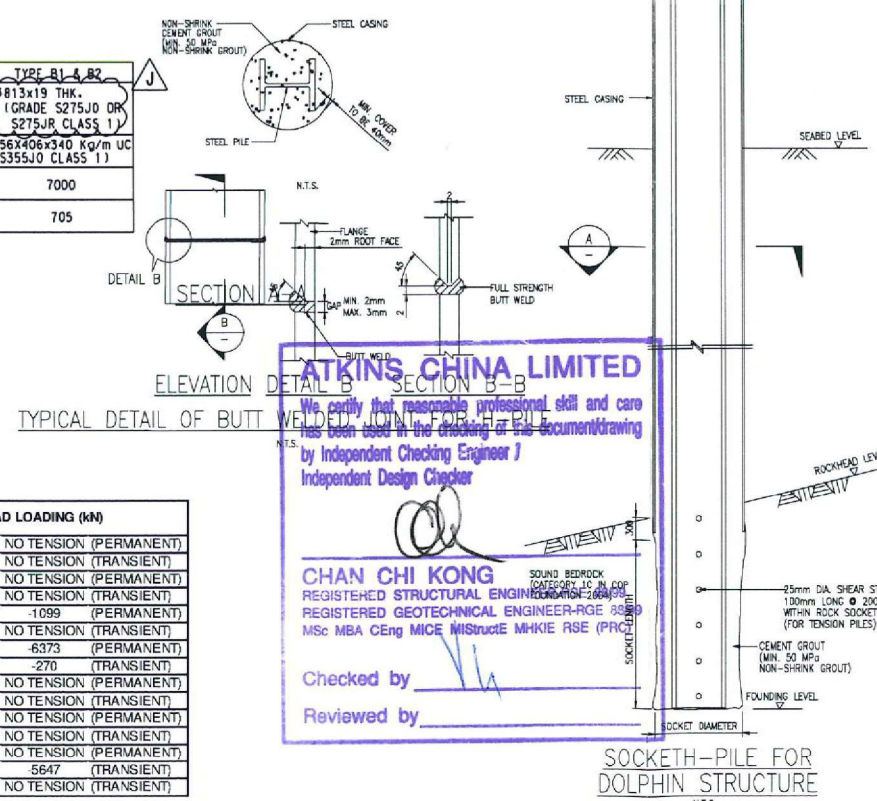
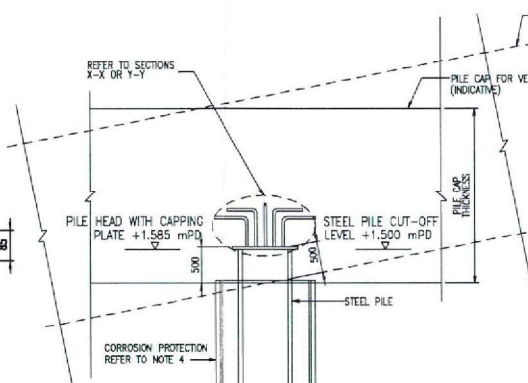
SECTION X-X



PLAN SECTION LOOKING DOWN
ABOVE CAPPING PLATE
(FOR TYPE A)



SECTION Y-Y



- NOTES:**
- FOR GENERAL NOTES REFER TO DRAWING NO. 610/AD/M02/001
 - ALL LEVELS GIVEN ARE IN METRES ABOVE PRINCIPAL DATUM.
 - THE COORDINATES FOR RAKING PILES ARE GIVEN AT THE BOTTOM OF PILE CAP.
 - THE CORROSION PROTECTION OF STEEL CASING REFER TO CONFORMING DRAWING NO. 60095653/1EC/3382C
 - THE TOLERANCE OF PILES REFER TO SECTION 8 OF GENERAL SPECIFICATION FOR CIVIL ENGINEERING WORKS, 2006 EDITION.

PILING SCHEDULE

LOCATION	PILE NO.	TYPE	COORDINATES OF PILE CENTRE AT CAP BOTTOM	CUT OFF LEVEL (mPD)	TENTATIVE FOUNDING LEVEL (mPD) (FOR INFORMATION ONLY)
			EASTING (m)	NORTHING (m)	
PIER F1	P1	A	817884.155	816946.004	-31.68
	P2	A	817884.929	816942.435	-30.18
	P3	A	817888.050	816946.004	-30.18
PIER F2	P1	A	817905.720	816964.925	-31.68
	P2	A	817906.545	816960.855	-30.18
	P3	A	817909.666	816963.515	-30.18
PIER F3	P1	A	817926.991	816981.004	-34.78
	P2	A	817928.383	816977.102	-32.20
	P3	A	817931.057	816980.210	-32.20
PIER F4	P1	A	817948.976	816993.723	-34.78
	P2	A	817950.306	816995.799	-32.20
	P3	A	817953.029	816998.864	-32.20
PIER F5	P1	B1	817971.662	817021.079	-38.15
	P2	B1	817972.235	817018.902	-38.15
	P3	B1	817973.884	817020.485	-38.15
PIER F6	P1	B1	817974.407	817018.306	-38.15
	P2	B1	817976.005	817019.891	-38.15
	P3	B1	817995.135	817041.332	-38.15
PIER F7	P1	B1	817995.568	817038.122	-38.15
	P2	B1	817997.264	817040.600	-38.15
	P3	B1	817998.000	817036.913	-38.15
PIER F8	P1	B1	817997.697	817035.391	-38.15
	P2	B1	817999.393	817033.869	-38.15
	P3	B1	818019.888	817063.044	-38.15
PIER F9	P1	B1	818020.174	817057.811	-38.15
	P2	B1	818021.965	817055.174	-38.15
	P3	B1	818022.460	817055.578	-38.15
PIER F10	P1	B1	818022.250	817056.941	-38.15
	P2	B1	818024.041	817058.304	-38.15
	P3	B1	818045.586	817077.154	-38.15
PIER F11	P1	B1	818045.728	817074.908	-38.15
	P2	B1	818047.602	817076.175	-38.15
	P3	B1	818045.871	817072.661	-38.15
PIER F12	P1	B1	818047.745	817073.907	-38.15
	P2	B1	818049.618	817075.152	-38.15
	P3	B1	818072.621	817091.935	-34.55
PIER F13	P1	B2	818072.622	817089.684	-34.55
	P2	B2	818074.570	817090.809	-34.55
	P3	B2	818072.622	817087.433	-34.55
PIER F14	P1	B2	818074.571	817088.557	-34.55
	P2	B2	818076.519	817089.682	-34.55
	P3	B2	818079.786	817106.377	-34.55
PIER F15	P1	B2	818079.640	817104.131	-34.55
	P2	B2	818101.658	817105.126	-34.55
	P3	B2	818099.493	817101.884	-34.55
PIER F16	P1	B2	818101.511	817102.875	-34.55
	P2	B2	818103.529	817103.875	-34.55
	P3	B2	818128.369	817117.564	-32.85
PIER F17	P1	B2	818128.080	817115.331	-32.85
	P2	B2	818130.157	817116.196	-32.85
	P3	B2	818127.790	817113.099	-32.85
PIER F18	P1	B2	818129.867	817113.363	-32.85
	P2	B2	818131.945	817114.828	-32.85
	P3	B2	818131.036	817128.302	-32.85
PIER F19	P1	B2	818136.605	817126.093	-32.85
	P2	B2	818158.733	817126.823	-32.85
	P3	B2	818156.174	817123.883	-32.85
PIER F20	P1	B2	818158.302	817124.614	-32.85
	P2	B2	818160.405	817125.344	-32.85
	P3	B2	818185.867	817139.025	-37.15
PIER F21	P1	B2	818185.292	817136.848	-37.15
	P2	B2	818187.464	817137.437	-37.15
	P3	B2	818184.717	817134.671	-37.15
PIER F22	P1	B2	818186.888	817135.261	-37.15
	P2	B2	818189.060	817135.850	-37.15
	P3	B2	818214.575	817143.952	-37.15
PIER F23	P1	B2	818214.575	817144.441	-37.15
	P2	B2	818217.905	817141.804	-37.15
	P3	B2	818216.101	817142.293	-37.15
PIER F24	P1	B2	818218.297	817142.782	-37.15
	P2	B2	818218.297	817142.782	-37.15
	P3	B2	818218.297	817142.782	-37.15

PILE LOADING SCHEDULE

DOLPHIN	PILE NO.	PILE HEAD LOADING (kN)
TYPE A	1, 2 & 3	507 / NO TENSION (PERMANENT)
	4	32 / NO TENSION (TRANSIENT)
	5	5605 / NO TENSION (PERMANENT)
TYPE B1	1	97 / NO TENSION (TRANSIENT)
	2 & 3	3474 / -1099 (PERMANENT)
	4	160 / NO TENSION (TRANSIENT)
TYPE B2	1	32 / NO TENSION (PERMANENT)
	2 & 3	5367 / NO TENSION (TRANSIENT)
	4	97 / NO TENSION (PERMANENT)
TYPE B3	1	1643 / NO TENSION (TRANSIENT)
	2 & 3	160 / NO TENSION (PERMANENT)
	4	5647 / NO TENSION (TRANSIENT)
TYPE B4	1	32 / NO TENSION (PERMANENT)
	2 & 3	5367 / NO TENSION (TRANSIENT)
	4	97 / NO TENSION (PERMANENT)

NOTES: + DENOTES COMPRESSION
- DENOTES TENSION

CONTRACTOR
俊和-中國中鐵-中興大橋局聯營
CHUN WO - CRGL - MBEC JOINT VENTURE

DESIGN CONSULTANT
MEINHARDT
Meinhardt Infrastructure and Environment Limited
邁基基礎工程顧問有限公司

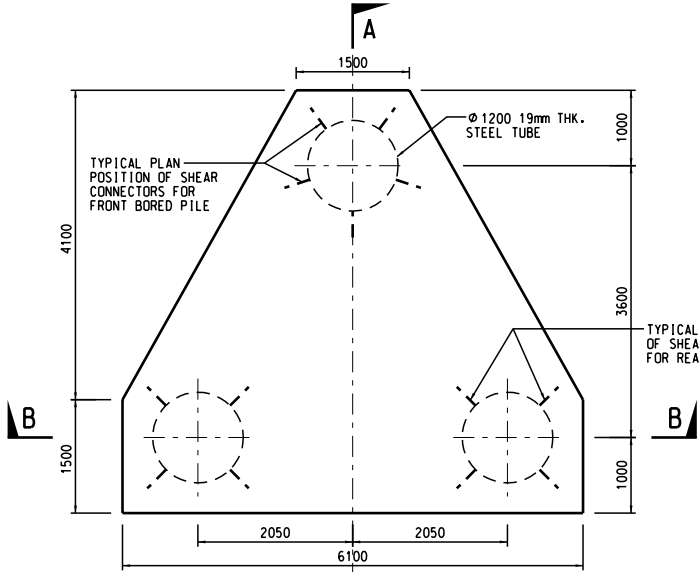
CONTRACT
CONTRACT NO. HK/2009/19
CENTRAL - WAN CHAI BYPASS TUNNEL
(NORTH POINT SECTION) AND
ISLAND EASTERN CORRIDOR LINK

DRG. TITLE
DOLPHIN STRUCTURE -
ALTERNATIVE DESIGN FOR
SOCKET H-PILE
ARRANGEMENT & DETAILS

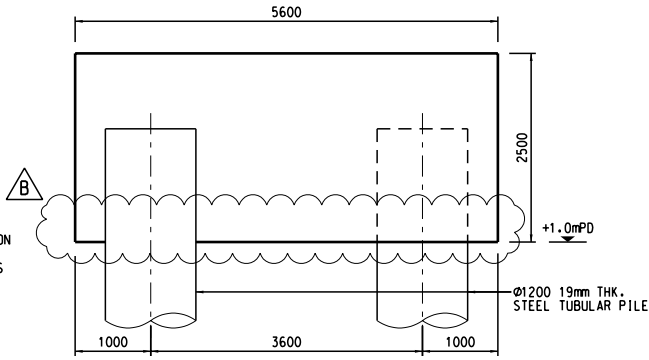
DRG. NO. 610/AD/M02/002

DESIGNED BY HENRY KO
CHECKED BY SAM LEE
SCALE 1 : 1000 (A1)
APPROVED BY KW LEE
STATUS FOR APPROVAL
DATE 610_AD_M02_0021.dgn
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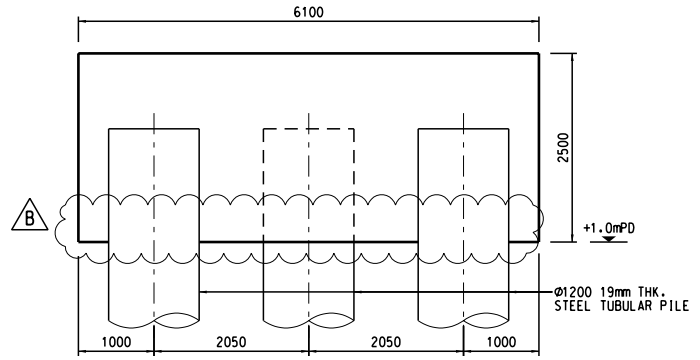
- NOTES:
1. FOR GENERAL NOTES REFER TO DRAWING NOS. 60095653/IEC/3382.
 2. STEEL SECTION SHALL BE S355 JO TO BS EN 10025 UNLESS SHOWN OTHERWISE.
 3. CONCRETE FOR PIPE SLEEVE TO BE GRADE 45/200.
 4. GROUT TO BE GRADE 50 NON-SHRINK GROUT.



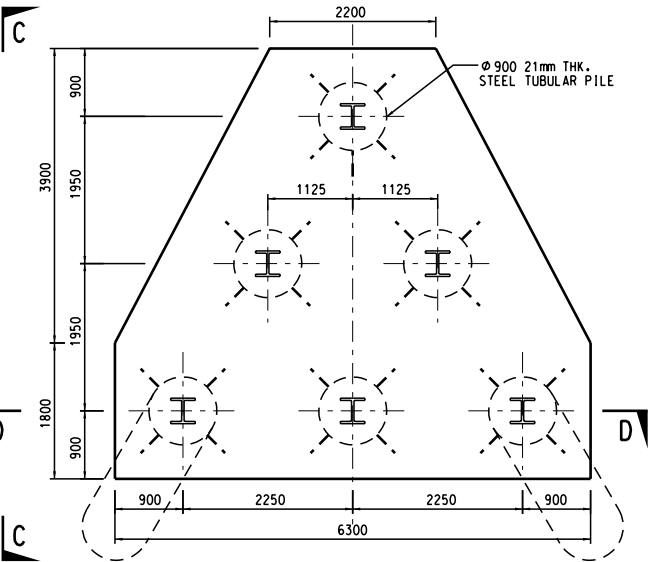
TYPE A PLAN
SCALE A1 1 : 50
A3 1 : 100



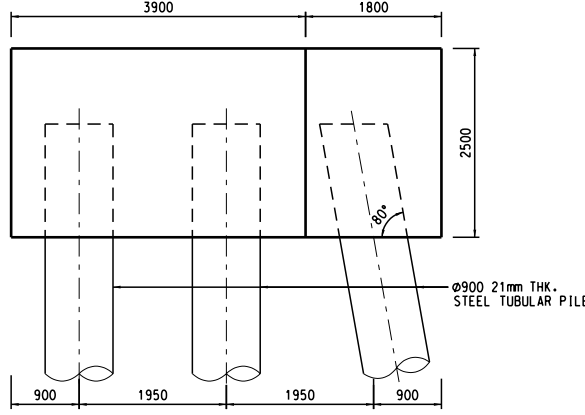
SECTION A - A
SCALE A1 1 : 50
A3 1 : 100



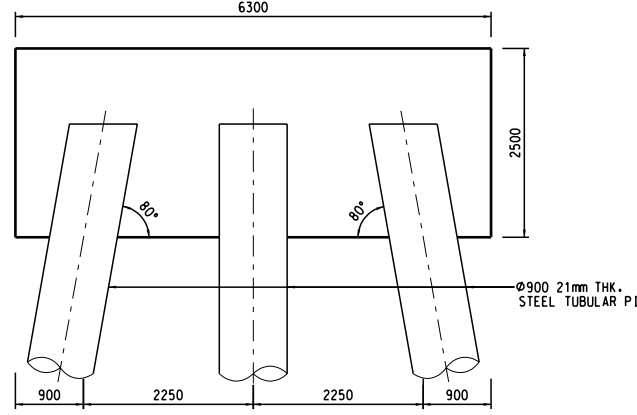
SECTION B - B
SCALE A1 1 : 50
A3 1 : 100



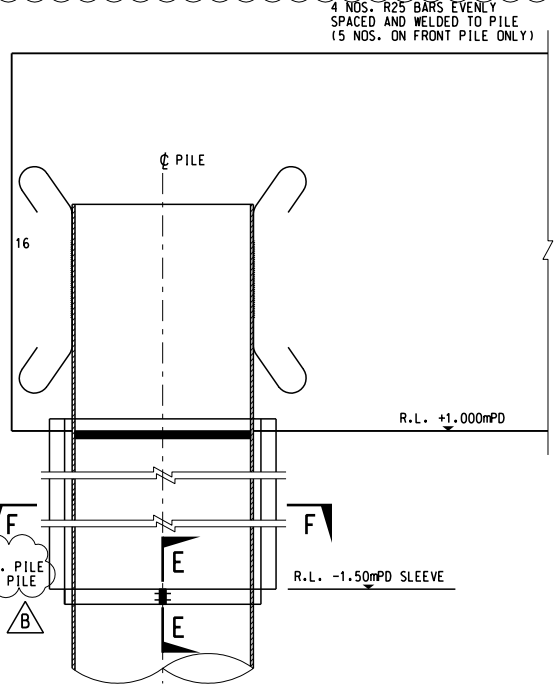
TYPE B PLAN
SCALE A1 1 : 50
A3 1 : 100



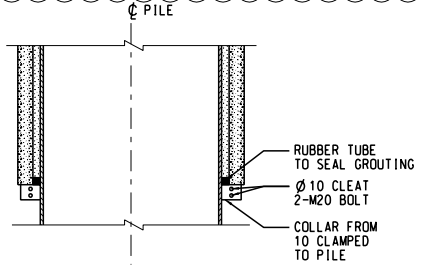
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A3 1 : 100



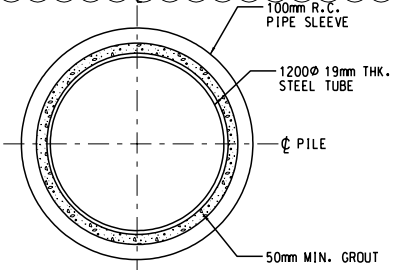
SECTION D - D
SCALE A1 1 : 50
A3 1 : 100



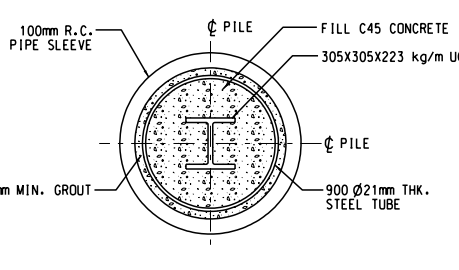
TYPICAL PILE HEAD DETAIL
(Ø900 STEEL TUBULAR PILE IS SIMILAR)
SCALE A1 1 : 25
A3 1 : 50



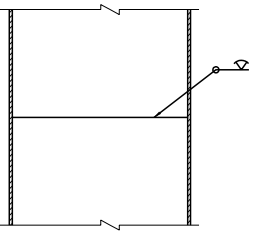
SECTION E - E
SCALE A1 1 : 25
A3 1 : 50



SECTION F - F
(TYPE A)
SCALE A1 1 : 25
A3 1 : 50



SECTION F - F
(TYPE B)
SCALE A1 1 : 25
A3 1 : 50



PILE TUBE JOINTS FOR 1200mm DIA. TUBE
(Ø900 STEEL TUBULAR PILE IS SIMILAR)
SCALE A1 1 : 25
A3 1 : 50

C	REV. WORKING DRAWING	ALCF	BCC	DEC 10
B	TENDER ADDENDUM NO.2	ALCF	BCC	JUL 10
A	TENDER ADDENDUM NO.1	ALCF	BCC	JUN 10
-	TENDER DRAWING	ALCF	BCC	MAY 10
REV.	DESCRIPTION	DATE	DATE	DATE

Highways Department 路政署
Major Works Project Management Office

CENTRAL - WAN CHAI BYPASS AND IEC LINK

PWP ITEM NO. 579 TH
工務計劃項目編號

CENTRAL - WAN CHAI BYPASS - TUNNEL
(NORTH POINT SECTION) AND ISLAND EASTERN CORRIDOR LINK

DOLPHIN STRUCTURE
ARRANGEMENT AND DETAILS

SHEET 2 OF 2

AECOM

DRG.NO. 60095653/IEC/3382C
圖紙編號

DESIGNED BY ALCF	CONTRACT NO. HY/2009/19	P. BY C.W.
DRAWN BY ZHY	STATUS REVISED	
SCALE A1 1 : 50 A3 1 : 100		
DIMENSIONS ARE IN MILLIMETRES		

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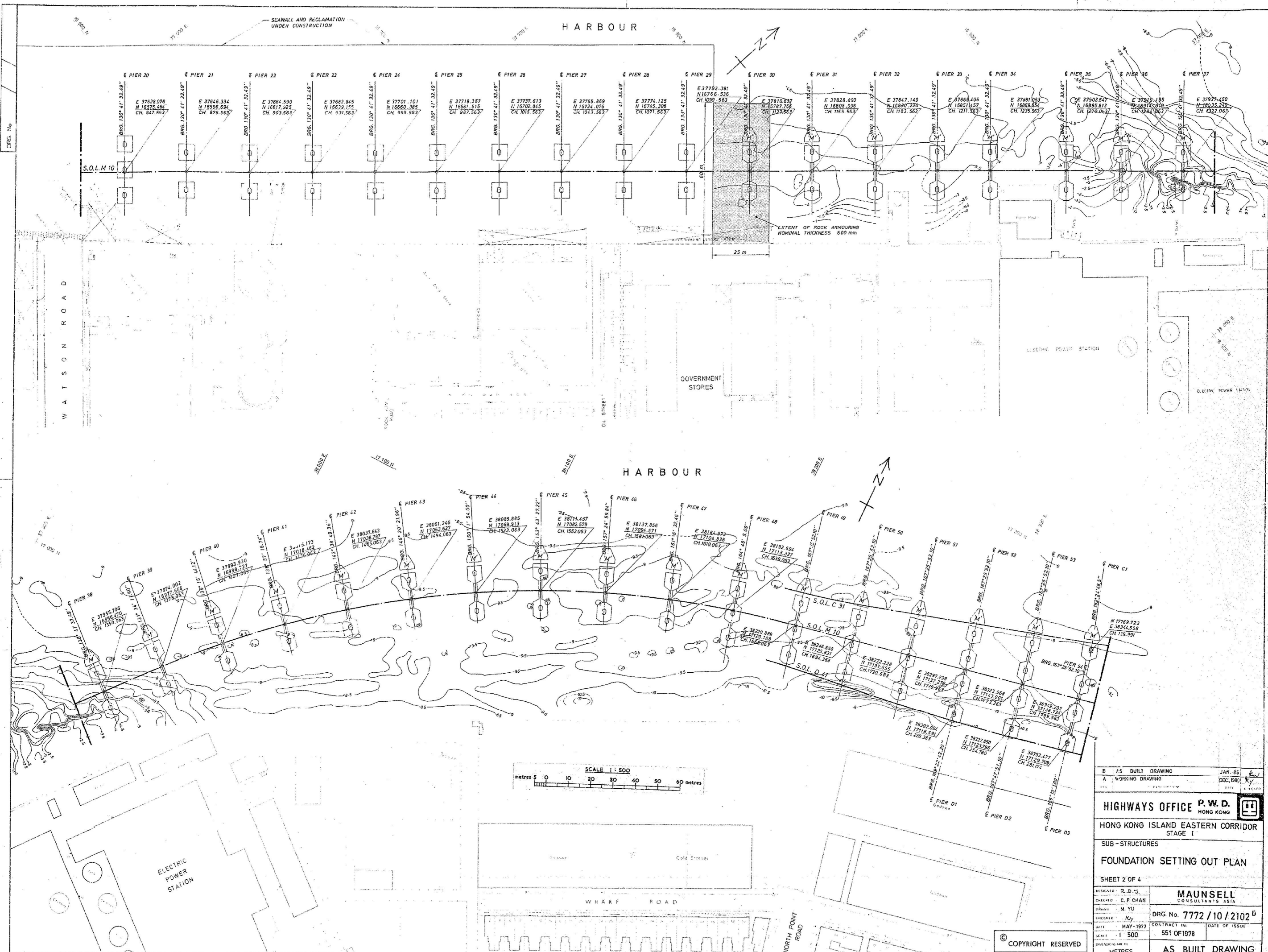
HARBOUR

HARBOUR

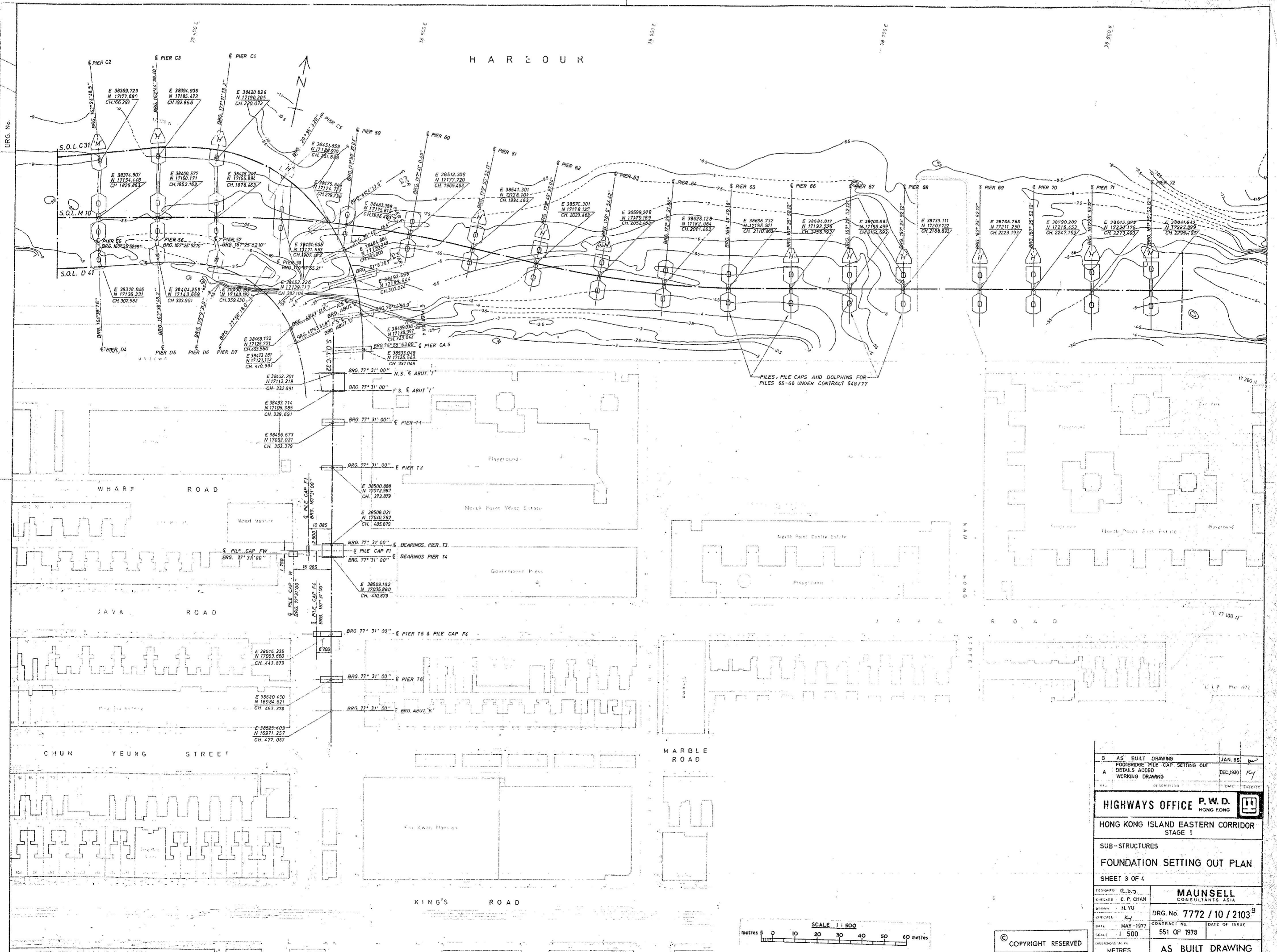
B / S BUILT DRAWING	JAN. 85
A WORKING DRAWING	DEC. 1980
DATE	
HIGHWAYS OFFICE P.W.D. HONG KONG ISLAND EASTERN CORRIDOR STAGE I SUB-STRUCTURES FOUNDATION SETTING OUT PLAN SHEET 2 OF 4	
DESIGNED - R.D.S.	MAUNSELL CONSULTANTS ASIA DRG No. 7772/10/2102 ^B
CHECKED - C.P. CHAN	
DRAWN - M. YU	DATE
CHECKED - K.Y.	DATE
DATE	DATE
SCALE	SCALE
500	500
METRES	METRES
CONTRACT NO. 551 OF 1978 DATE OF ISSUE AS BUILT DRAWING	

SCALE 1:500
metres 0 10 20 30 40 50 60 metres

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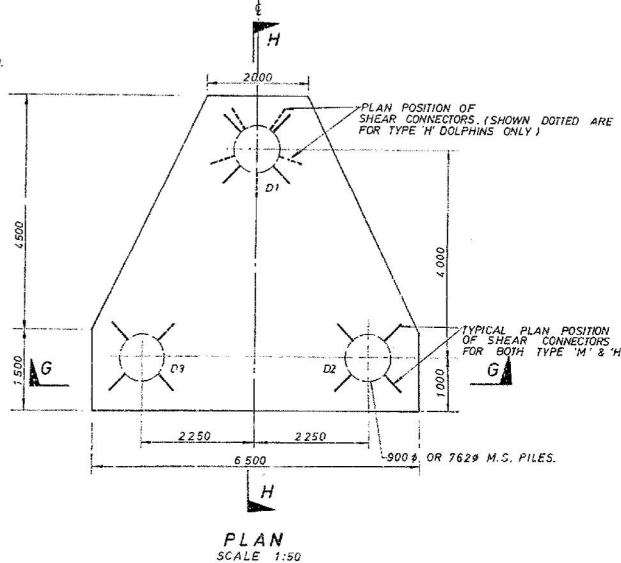
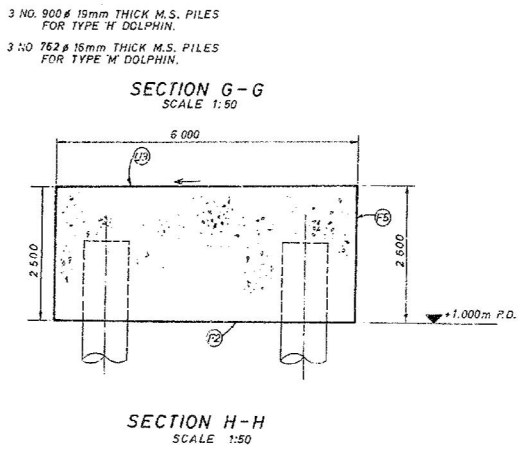
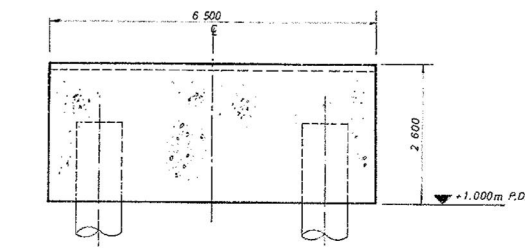
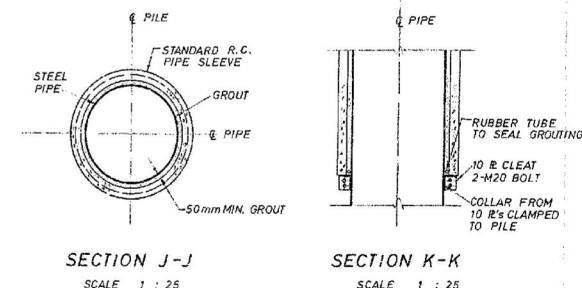
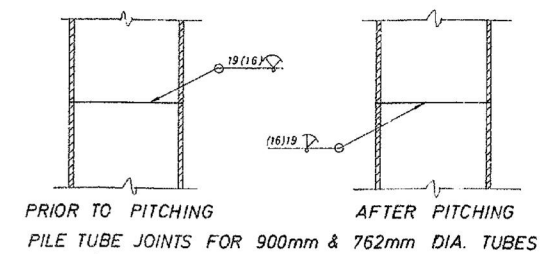
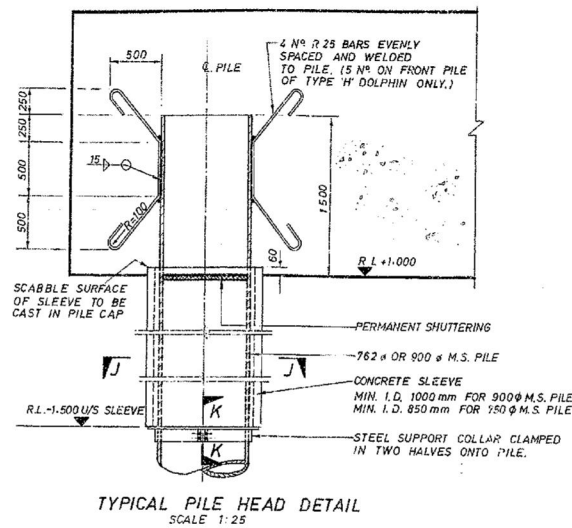
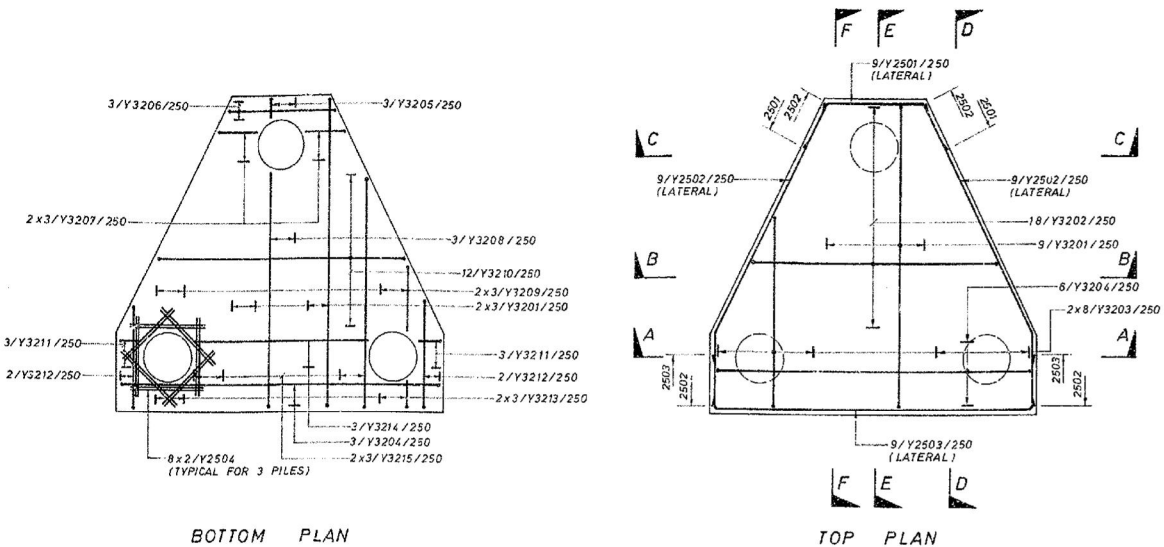


H A R B O U R



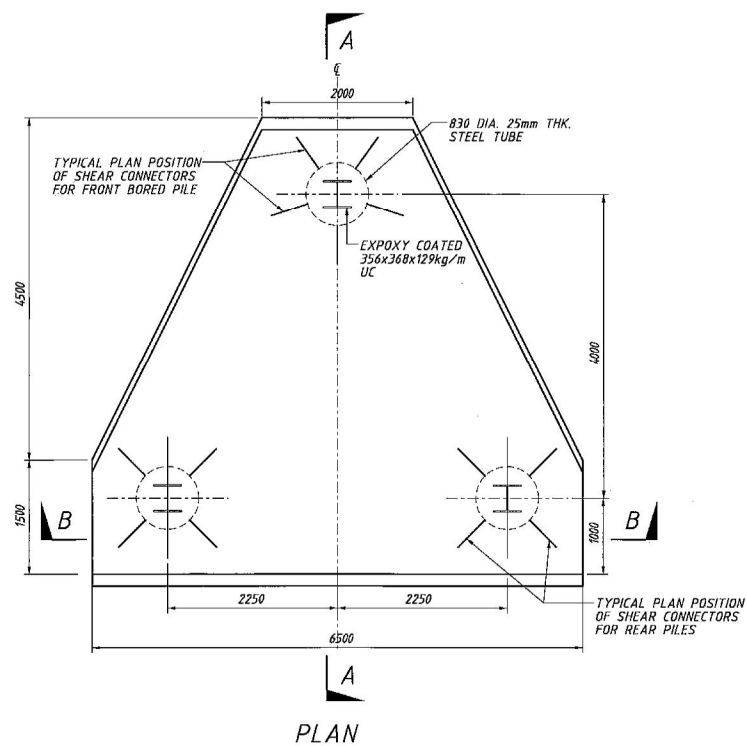
B	AS BUILT DRAWING	JAN 85	
A	FOURTH PILE CAP SETTING OUT	DEC 80	
A	DETAILS ADDED		
A	WORKING DRAWING		
HIGHWAYS OFFICE P.W.D. HONG KONG			
HONG KONG ISLAND EASTERN CORRIDOR STAGE 1			
SUB-STRUCTURES FOUNDATION SETTING OUT PLAN			
SHEET 3 OF 4			
DESIGNED	R.D.S.	MAUNSELL CONSULTANTS ASIA	
CHECKED	C.P. CHAN	DRG. No. 7772 / 10 / 2103 ^B	
DRAWN	H.YU	CONTRACT No. 551 OF 1978	
CHECKED	KY	DATE OF ISSUE	
DATE	MAY - 1977	SCALE 1:500	
SCALE	1:500	METRES	
AS BUILT DRAWING			

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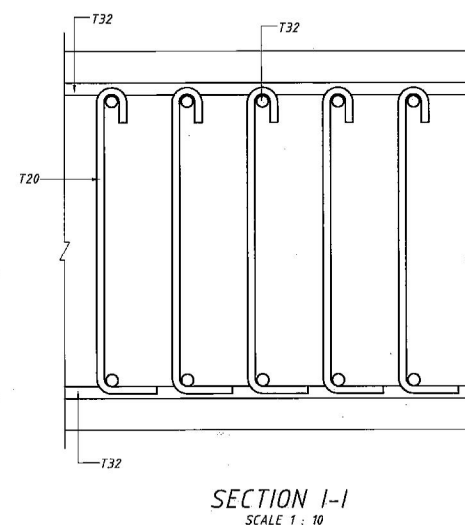
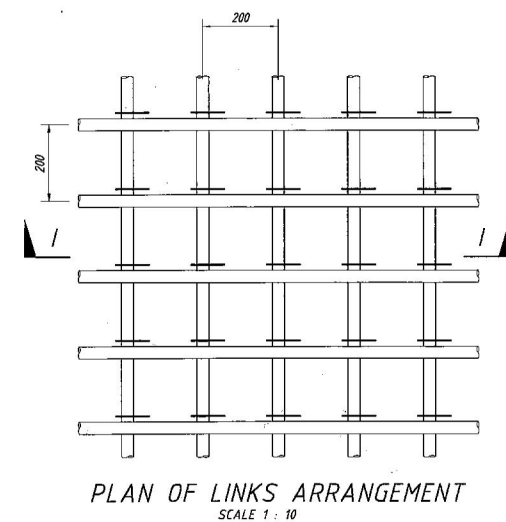
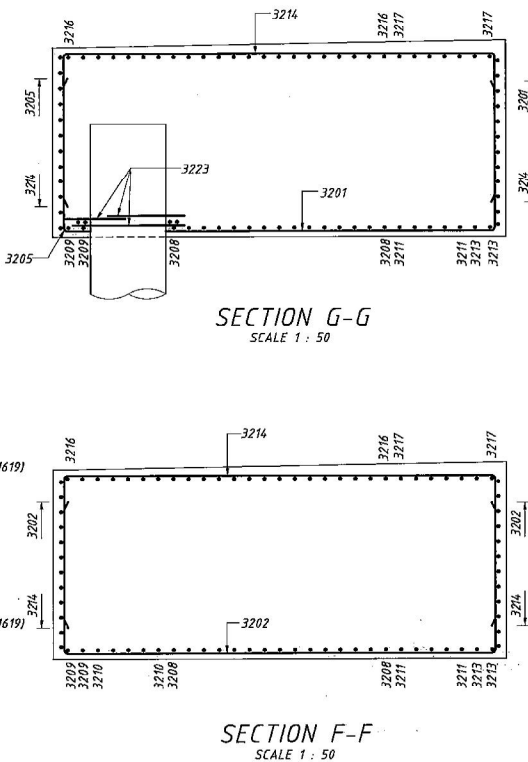
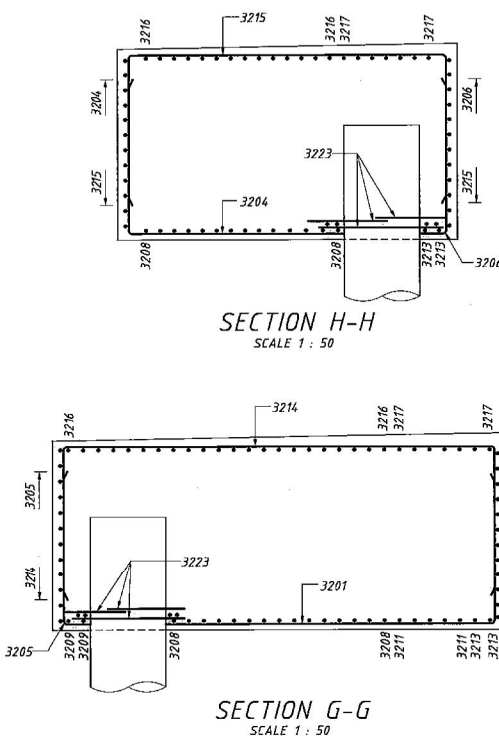
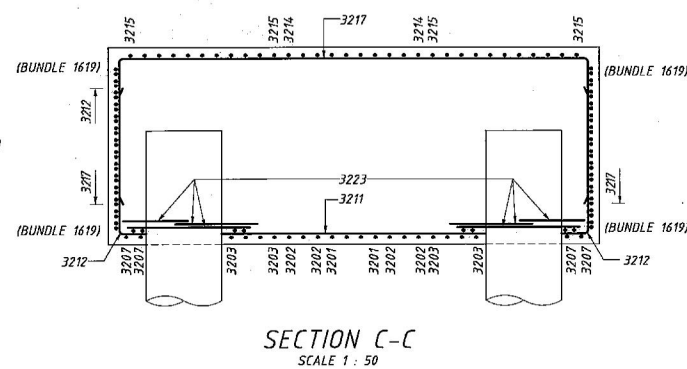
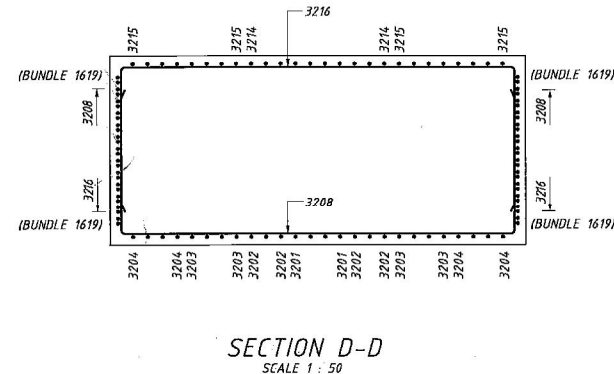
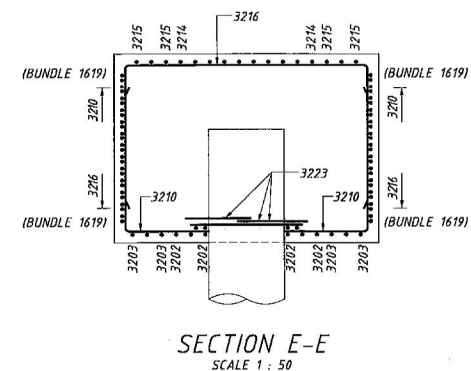
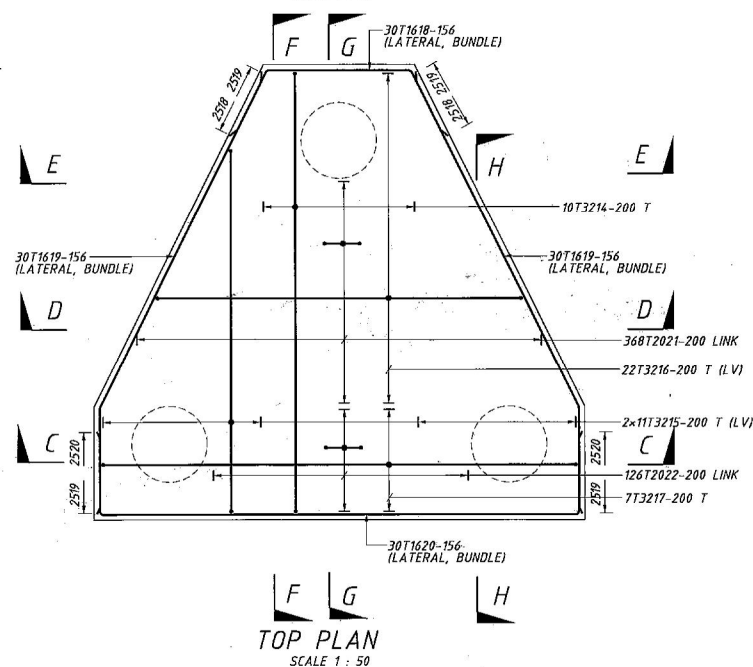
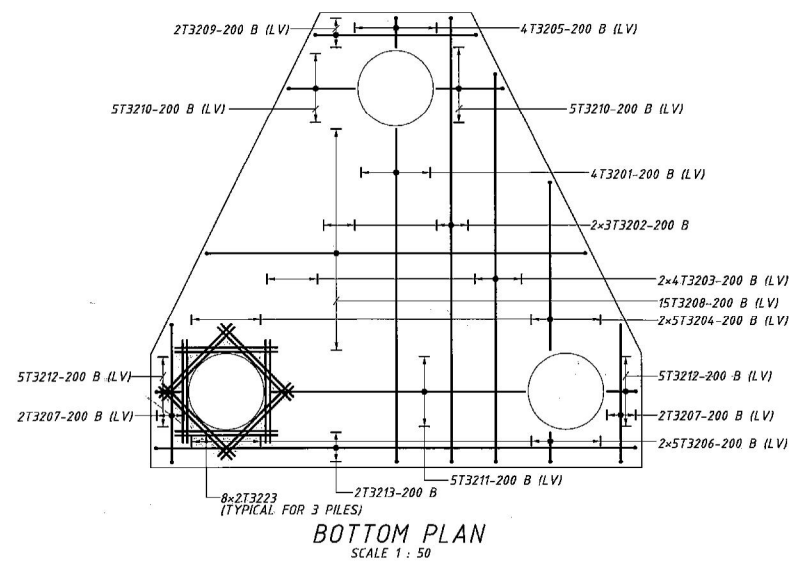
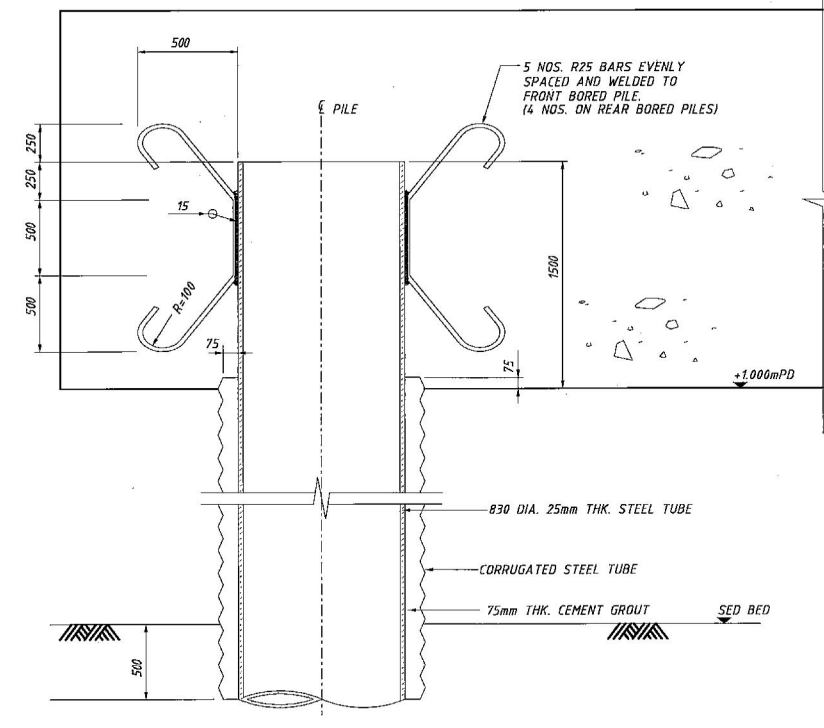
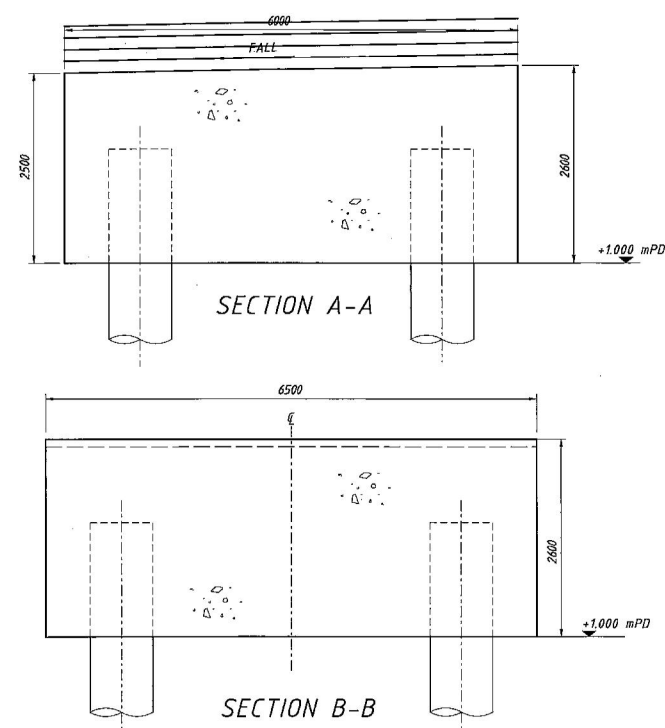


TYPE 'H' DOLPHIN PILE SCHEDULE (900 d)

PILE NO.	CUT-OFF LEVEL (M.P.D.)	RED. LEVEL (M.P.D.)	FOUND. LEVEL (M.P.D.)	ANCHOR STRIKE (M.P.D.)
30/D1	-2.50	-6.37	-18.70	1900
D2		-6.37	-28.27	-
D3		-6.30	-30.60	-
30/C1	-2.50	-6.37	-18.70	1900
D2		-6.37	-28.27	-
D3		-10.66	-45.62	-
30/C2	-2.50	-6.37	-18.70	1900
D2		-6.37	-37.08	-
D3		-10.60	-31.04	-
30/C3	-2.50	-6.37	-18.70	1900
D2		-13.52	-26.00	1850
D3		-12.22	-25.00	-
30/C4	-2.50	-6.37	-18.70	1900
D2		-11.61	-31.00	-
D3		-11.75	-28.00	1600
30/C5	-2.50	-6.37	-18.70	1900
D2		-11.80	-28.84	-
D3		-11.48	-28.91	-
30/C6	-2.50	-6.37	-18.70	1900
D2		-12.22	-30.60	-
D3		-12.22	-30.60	-
30/C7	-2.50	-6.37	-18.70	1900
D2		-12.13	-31.00	-
D3		-12.13	-31.00	-
30/C8	-2.50	-6.37	-18.70	1900
D2		-9.39	-33.26	1600
D3		-9.84	-32.00	-
30/C9	-2.50	-6.37	-18.70	1900
D2		-9.52	-29.00	-
30/C10	-2.50	-6.37	-18.70	1900
D2		-10.47	-30.47	1600
D3		-6.86	-26.60	-
30/C11	-2.50	-6.37	-18.70	1900
D2		-7.22	-25.65	-
D3		-11.30	-26.80	-
30/C12	-2.50	-6.37	-18.70	1900
D2		-8.50	-24.00	-
D3		-11.65	-22.80	-
30/C13	-2.50	-6.37	-18.70	1900
D2		-11.45	-30.36	1800
D3		-11.45	-30.36	-
30/C14	-2.50	-6.37	-18.70	1900
D2		-11.27	-22.00	-
30/C15	-2.50	-6.37	-18.70	1900
D2		-14.56	-32.18	1000
D3		-13.10	-40.52	-
30/C16	-2.50	-6.37	-18.70	1900
D2		-13.08	-40.00	-
D3		-15.61	-30.00	1000
30/C17	-2.50	-6.37	-18.70	1900
D2		-12.70	-40.82	-
D3		-12.70	-40.82	-
30/C18	-2.50	-6.37	-18.70	1900
D2		-21.21	-39.84	-
30/C19	-2.50	-6.37	-18.70	1900
D2		-14.49	-30.50	-
D3		-14.49	-30.50	-
30/C20	-2.50	-6.37	-18.70	1900
D2		-14.34	-42.20	-
D3		-12.83	-40.00	-
30/C21	-2.50	-6.37	-18.70	1900
D2		-15.02	-36.60	-
D3		-14.95	-36.60	-
30/C22	-2.50	-6.37	-18.70	1900
D2		-11.32	-34.29	1800
D3		-11.57	-25.15	-
30/C23	-2.50	-6.37	-18.70	1900
D2		-11.64	-21.60	-
D3		-20.37	-37.00	1000
30/C24	-2.50	-6.37	-18.70	1900
D2		-16.20	-37.00	-
D3		-9.76	-27.76	-



DOLPHIN GENERAL ARRANGEMENT
SCALE 1 : 50



NOTES:

1. THIS DRAWING TO BE READ IN CONJUNCTION WITH DRG. NO. 90199/4302.
2. ALL STEEL TO B.S. 4360 GRADE 43C.
3. WELDING SYMBOLS TO B.S. 499.

B	AS-BUILT DRAWING	GR	CKWY	AL	MAR.03
A	WORKING DRAWING				JULY 00
-	TENDER DRAWING				MAR.00


Highways Department
 Major Works Project Management Office

IMPROVEMENTS TO ISLAND EASTERN CORRIDOR SECTION
BETWEEN NORTH POINT INTERCHANGE AND SAI WAN HO

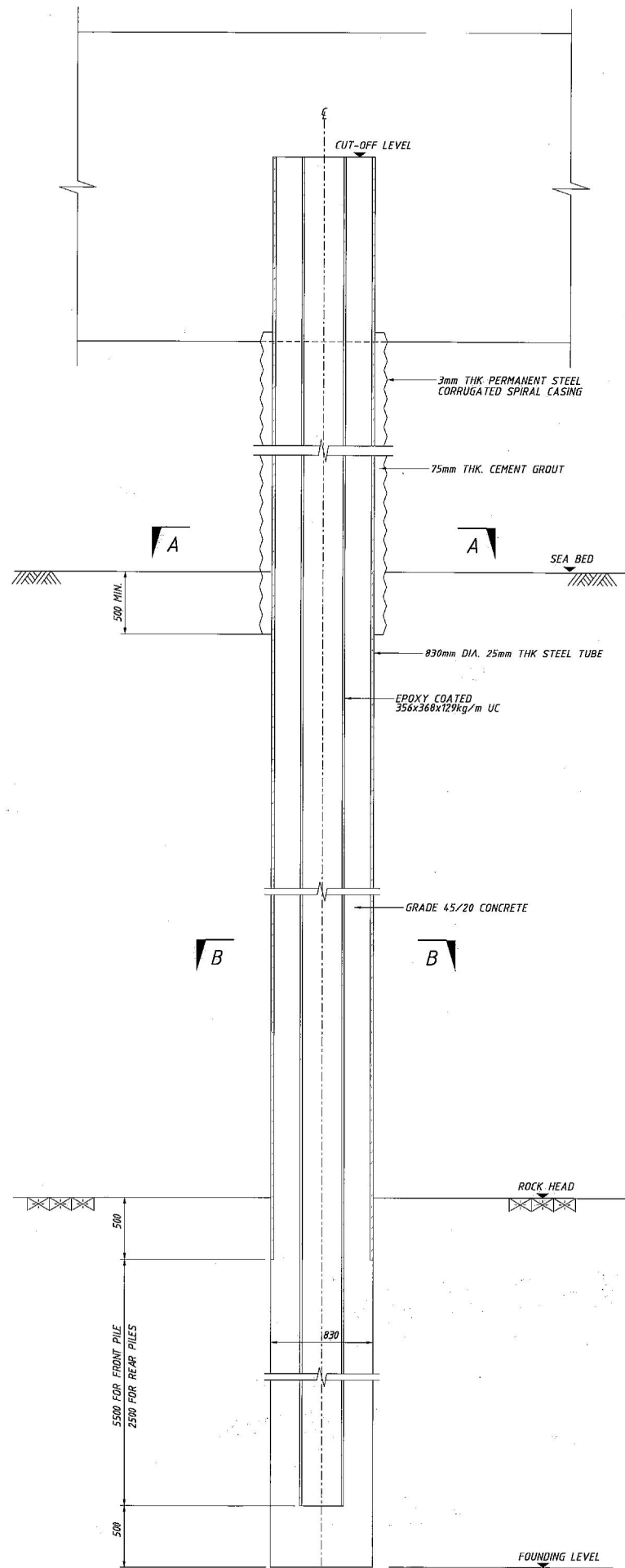
BRIDGE A DOLPHIN
GENERAL ARRANGEMENT
AND REINFORCEMENT DETAILS

MAUNSELL CONSULTANTS ASIA LTD
茂盛亞洲工程顧問有限公司

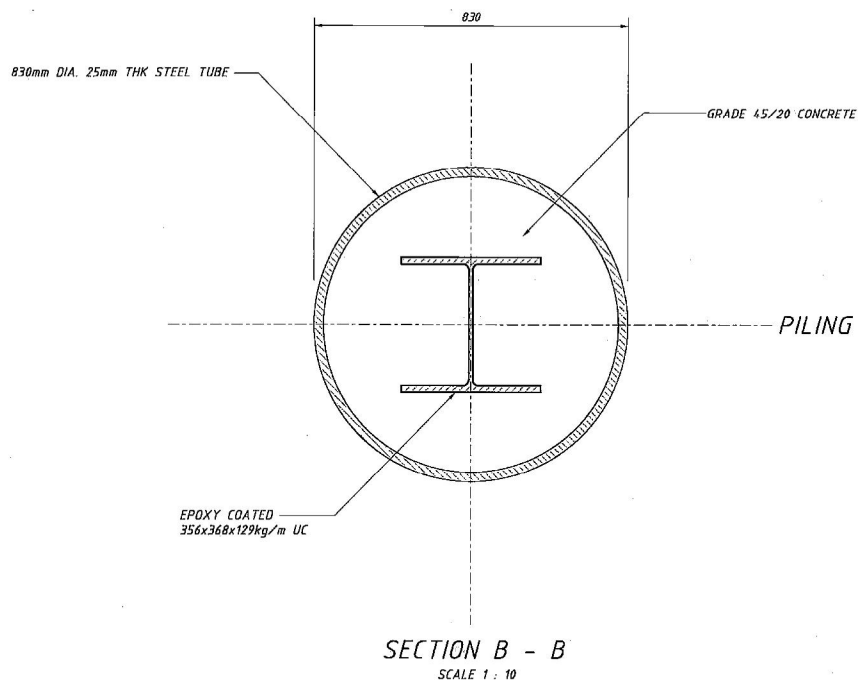
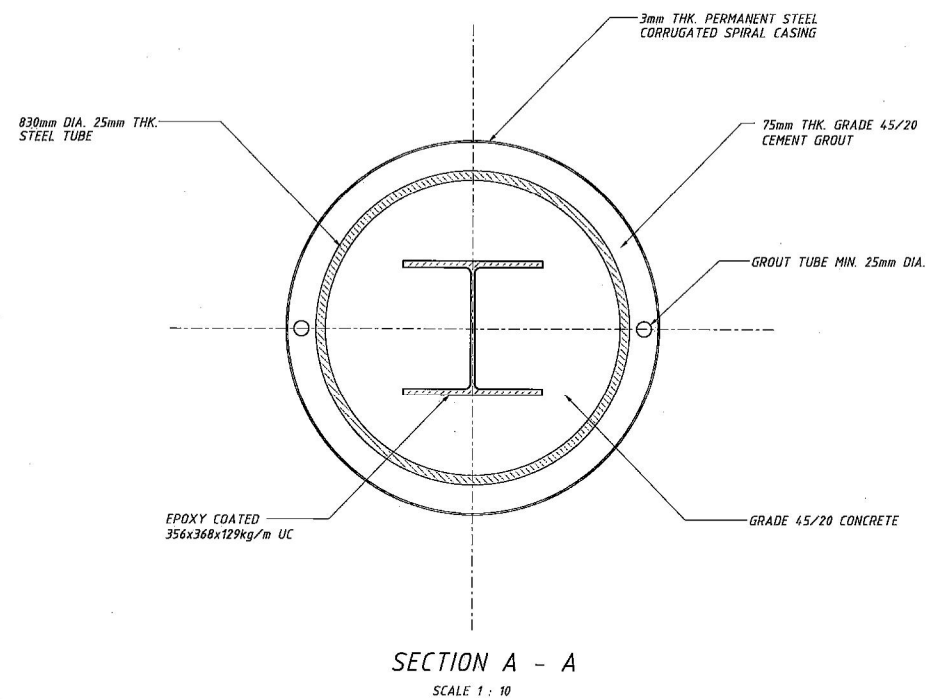
DRGNO. 90199/4271 B
圖紙編號

DESIGNED BY 设计	BHWK	CONTRACT NO. 合同编号	HY/99/15	DATE OF ISSUE 发出日期
DRAWN BY 绘图	LJH	STATUS 编制情况	AS-BUILT DRAWING © COPYRIGHT RESERVED 版权所有	
SCALE 比例	A1 AS SHOWN			
DIMENSIONS ARE IN 尺寸在		MILLIMETRES		

Maunsell



BORED PILE DETAILS
SCALE 1:25

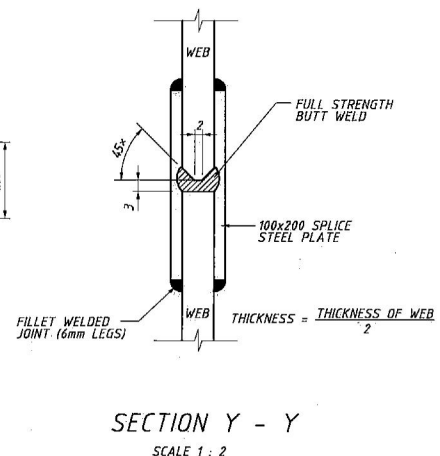
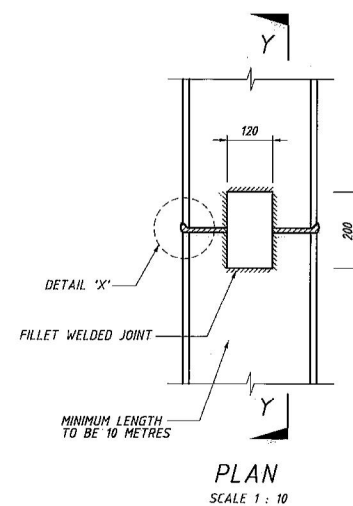
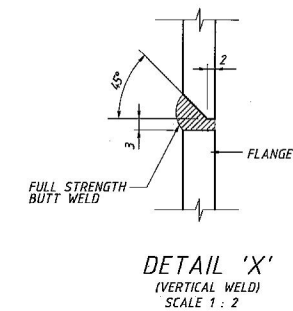
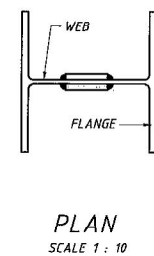


PIER NO.	APPROX. SEABED LEVEL (mPD)	APPROX. BED-ROCK LEVEL (mPD)	APPROX. PILE FOUNDING LEVEL (mPD)	
			FRONT PILE	REAR PILES
A2	-6.9	-50.8	-57.3	-54.3
A3	-6.0	-50.3	-56.8	-53.8
A4	-6.1	-49.5	-56.0	-53.0
A5	-6.2	-48.7	-55.2	-52.2
A6	-6.4	-48.0	-54.5	-51.5
A7	-6.5	-47.2	-53.7	-50.7
A8	-7.9	-47.5	-54.0	-51.0
A9	-9.3	-47.9	-54.4	-51.4
A10	-9.4	-44.7	-51.2	-48.2
A11	-9.5	-41.6	-48.1	-45.1
A12	-9.6	-38.5	-45.0	-42.0
A13	-9.7	-35.3	-41.8	-38.8
A14	-9.8	-32.2	-38.7	-35.7
A15	-9.9	-29.0	-35.5	-32.5
A16	-10.0	-26.0	-32.5	-29.5
A18	-11.1	-29.2	-35.7	-32.7
A19	-12.0	-30.9	-37.4	-34.4
A20	-11.6	-36.0	-36.0	-35.5
A21	-11.1	-38.0	-44.5	-41.5
A22	-10.7	-37.0	-43.5	-40.5
A23	-10.7	-37.0	-43.5	-40.5
A24	-10.7	-37.2	-43.7	-40.7
A25	-10.7	-37.4	-43.9	-40.9

PILE LOADING SCHEDULE

PILE	DESIGN VERTICAL LOAD (kN)	
	MINIMUM	MAXIMUM
FRONT PILE	-2207	-732
REAR PILE	-732	3267

- REMARKS:
- 1.) SELF-WEIGHT OF PILE NOT INCLUDED.
 - 2.) MINUS SIGN INDICATES TENSION.



TYPICAL SPLICING DETAIL FOR UC
AT BRIDGE A DOLPHIN PILES

NOTES:

- 1.) THIS DRAWING TO BE READ IN CONJUNCTION WITH DRG. NO. 90199/4271.
- 2.) FOR PILING NOTES, REFER TO DRG. NO. 90199/4001.

C	AS-BUILT DRAWING	GR	CRWY	AL	MAR.03
B	WORKING DRAWING				JULY.00
A	TENDER ADDENDUM NO. 2				APR.00
	TENDER DRAWING	BITWK	DF	DL	MAR.00
REV.	DESCRIPTION	DATE	BY	APPROVED	DATE
1	ISSUED FOR CONSTRUCTION	15/03/00	AL	AL	15/03/00
Highways Department Major Works Project Management Office IMPROVEMENTS TO ISLAND EASTERN CORRIDOR SECTION BETWEEN NORTH POINT INTERCHANGE AND SAI WAN HO BRIDGE A DOLPHIN GENERAL ARRANGEMENT AND REINFORCEMENT DETAILS SHEET 2 OF 2 MAUNSELL CONSULTANTS ASIA LTD 茂盛 亞洲 工程顧問有限公司 DRG. NO. 90199/4272 DESIGNED BY BHWK CHECKED BY LJH DATE OF ISSUE 15/03/00 STATUS AS-BUILT DRAWING SCALE AS SHOWN DIMENSIONS ARE IN MILLIMETRES COPYRIGHT RESERVED 茂盛 所有					