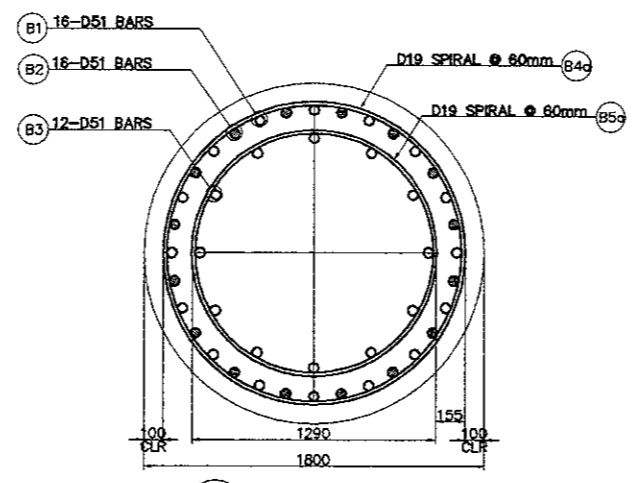
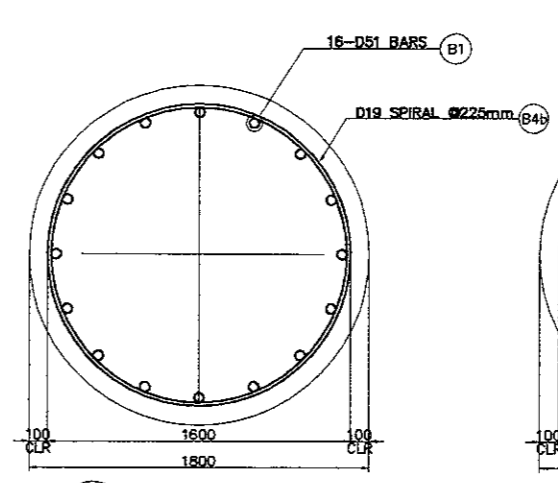


A ELEVATION
SCALE 1 : 100

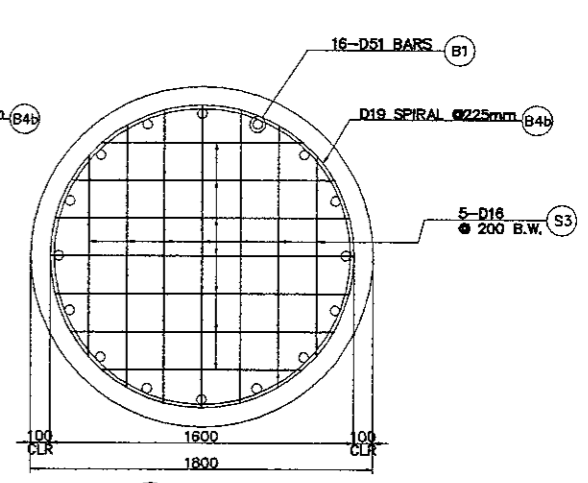
B LAYOUT OF STIFFENER
SCALE 1 : 100



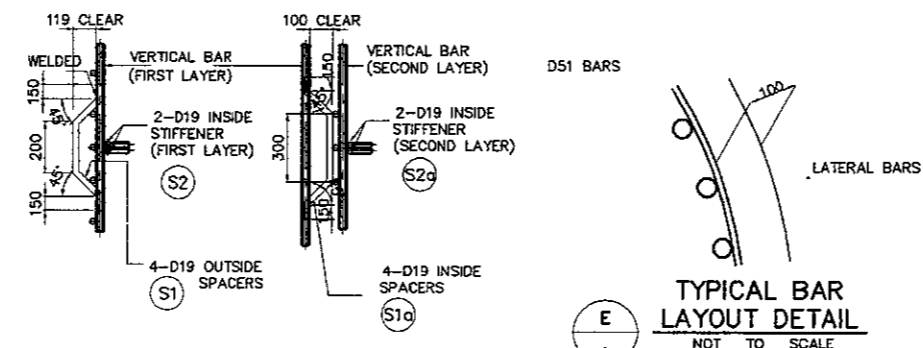
1 SECTION
SCALE 1 : 50



2 SECTION
SCALE 1 : 50

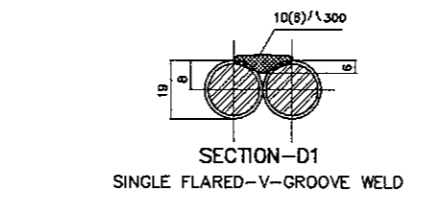


3 SECTION
SCALE 1 : 50

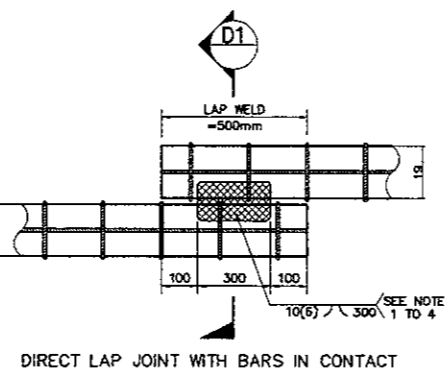


TYPICAL BAR LAYOUT DETAIL
NOT TO SCALE

DETAIL OF STIFFENER/SPACER
NOT TO SCALE



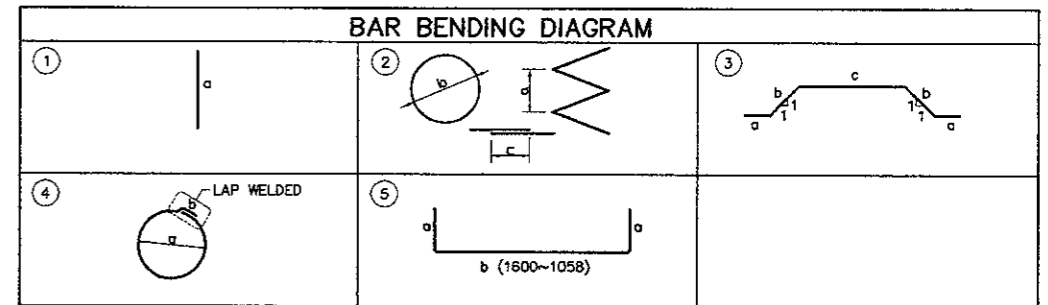
SECTION-D1
SINGLE FLARED-V-GROOVE WELD



DETAIL OF SPIRAL REINF. FULL LAP-WELD CONNECTION
NOT TO SCALE

- NOTES ON LAP-WELD CONNECTION :**
- SPIRAL REINFORCEMENT ARE LAP-WELD CONNECTED (FLARED-V-GROOVE TYPE)
 - WELDING SHOULD CONFORM TO AWS (D1.4) *STRUCTURAL WELDING CODE REINFORCED STEEL*
 - USE ELECTRODE E90XX.
 - CARE SHOULD BE TAKEN NOT TO DAMAGE THE COLUMN MAIN BARS DURING WELDING.
- NOTES :**
- ALL DIMENSIONS ARE IN MILLIMETERS.
 - BORED PILE MAIN BARS ARE PROVIDED WITHOUT ANY SPLICE. HOWEVER SPLICING OF MAIN BARS BY MECHANICAL COUPLERS ARE ALLOWED WITH PERMISSION FROM THE STRUCTURAL ENGINEER.
 - CONCRETE : $F_c' = 30MPa$
 - REINFORCING STEEL =
D51 : YIELD STRENGTH = 345 N/mm²
OTHERS : YIELD STRENGTH = 390 N/mm²

BORED PILE TYPE		BP-MF6
SIZE (mm)		D1800
MAIN BARS	SIZE (mm)	51
	NO. OF LAYERS	2.0
	NO. OF PCS. (1)	32
	NO. OF PCS. (2)	12
SPIRAL	SIZE (mm)	19
	NO. / SET	



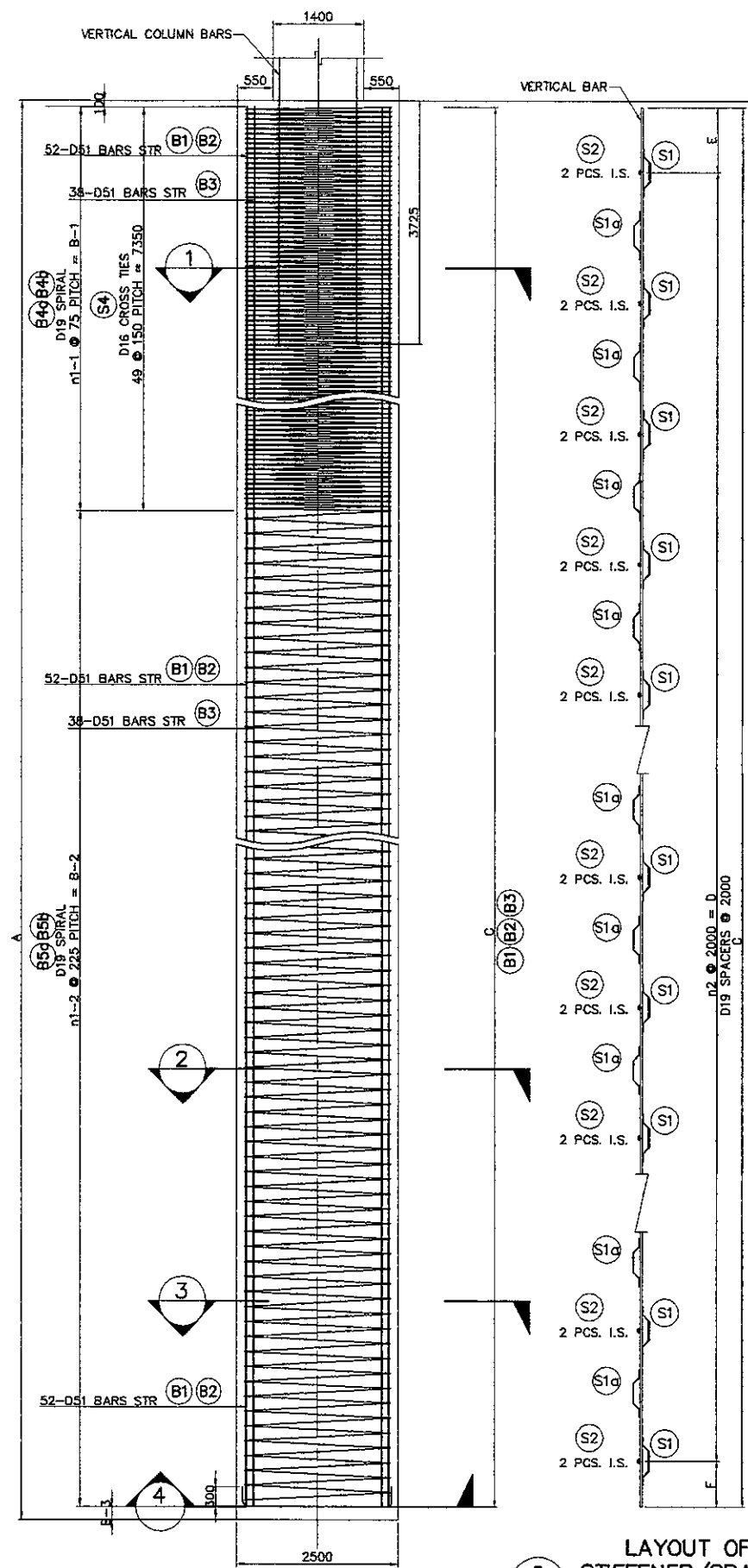
BAR BENDING DIAGRAM

LOCATION	BAR MARK	SIZE (mm)	BEND TYPE	DIMENSION(mm) OUT TO OUT						LENGTH (mm)	NO. REQ'D.	UNIT WEIGHT (kg/m)	TOTAL WEIGHT (kg)	VOLUME CONCRETE (kg)
				a	b	c	d	e	f					
PIER P14, P15, D=1800 L=24000	B1	51	1	23775						23775	16	15.90	6048	61.08
	B2	51	1	18000						18000	16	15.90	4579	
	B3	51	1	18000						18000	12	15.90	3434	
	B4a	19	2	60	1600	500				523400	1	2.23	1167	
	B4b	19	2	225	1600	500				413396	1	2.23	922	
	B5a	19	2	60	1290	500				422060	1	2.23	941	
	B5b	19	2	225	1290	500				328997	1	2.23	734	
	S1	19	3	150	170	250				890	48	2.23	95	
	S1a	19	3	150	150	350				950	32	2.23	68	
	S2	19	4	1460	170					4754	24	2.23	254	
	S2a	19	4	1150	170					3781	16	2.23	135	
	S3	16	5	150	1330					1630	14	1.58	36	
TOTAL WEIGHT PER PILE =												18,414 Kgs		

THE REINFORCEMENT SHOWN ON THIS TABLE IS FOR REFERENCE ONLY. THE CONTRACTOR SHOULD CHECK AND VERIFY ALL DIMENSIONS, SIZES AND QUANTITIES OF REINFORCEMENT.

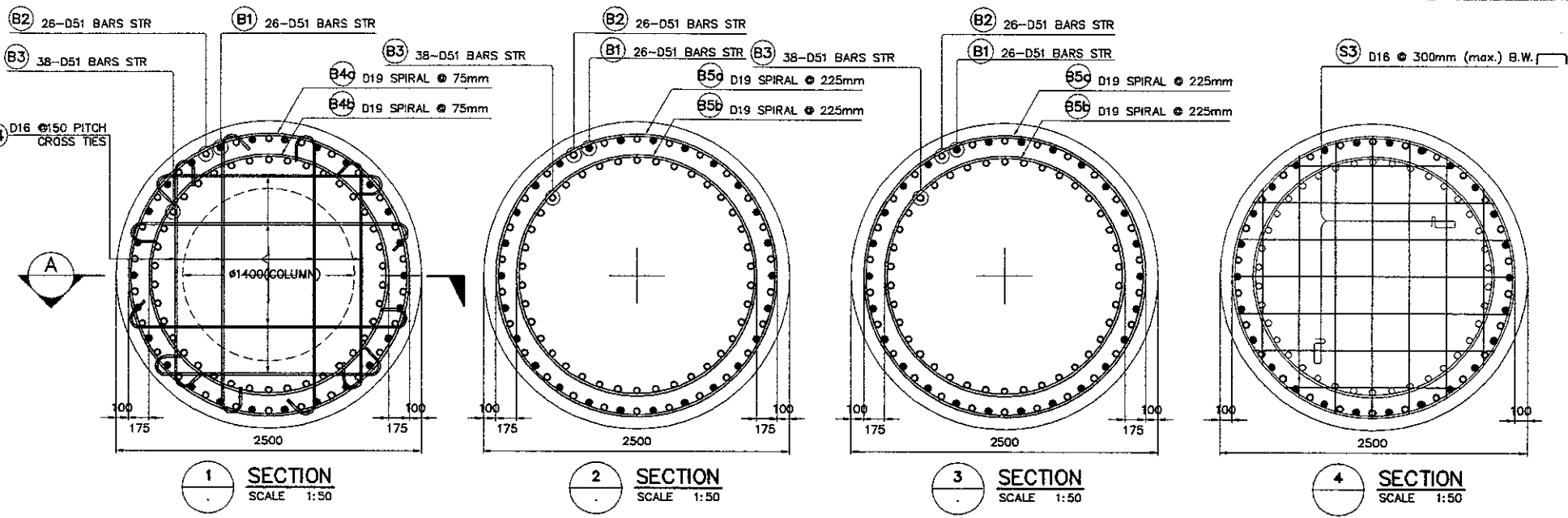
LOCATION	DIMENSION											
	A (mm)	B-1 (mm)	B-2 (mm)	B-3 (mm)	C (mm)	D (mm)	E (mm)	F (mm)	n1-1	n1-2	n2 (S1)	n2 (S1a)
P14, P15	24000	6000	17775	125	23775	22000	1000	775	100	79	11	8

1 BORED PILE REINF. DETAILS FOR PIER P14 & P15 (Ø1800mm)
SCALE AS SHOWN



A SECTION
 SCALE 1:100

B LAYOUT OF STIFFENER/SPACER
 SCALE 1:100

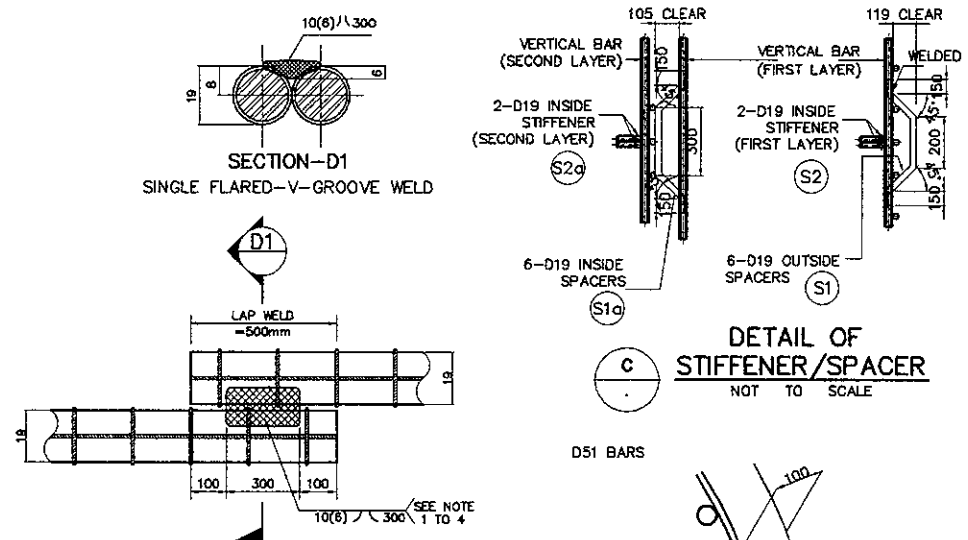


1 SECTION
 SCALE 1:50

2 SECTION
 SCALE 1:50

3 SECTION
 SCALE 1:50

4 SECTION
 SCALE 1:50



SECTION-D1
 SINGLE FLARED-V-GROOVE WELD

DETAIL OF STIFFENER/SPACER
 NOT TO SCALE

TYPICAL BAR LAYOUT DETAIL
 NOT TO SCALE

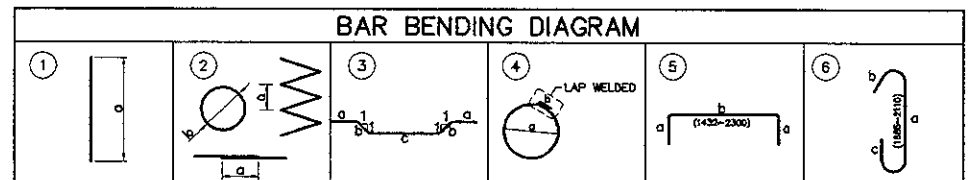
D DETAIL OF SPIRAL REINF. FULL LAP-WELD CONNECTION
 NOT TO SCALE

- NOTES ON LAP-WELD CONNECTION :
- SPIRAL REINFORCEMENT ARE LAP-WELD CONNECTED (FLARED-V-GROOVE TYPE)
 - WELDING SHOULD CONFORM TO AWS (D1.4)
 STRUCTURAL WELDING CODE REINFORCED STEEL
 - USE ELECTRODE E90XX.
 - CARE SHOULD BE TAKEN NOT TO DAMAGE THE COLUMN MAIN BARS DURING WELDING.

- NOTES :
- ALL DIMENSIONS ARE IN MILLIMETERS.
 - BORED PILE MAIN BARS ARE PROVIDED WITHOUT ANY SPLICE. HOWEVER SPLICING OF MAIN BARS BY MECHANICAL COUPLERS ARE ALLOWED WITH PERMISSION FROM THE STRUCTURAL ENGINEER.
 - CONCRETE : $F_c' = 30\text{MPa}$
 - REINFORCING STEEL=
 D51 : YIELD STRENGTH = 345 N/mm²
 OTHERS : YIELD STRENGTH = 380 N/mm²

BORED PILE TYPE		BP-GF4
SIZE (mm)		D2500
MAIN BARS	SIZE (mm)	51
	NO. OF LAYERS	2.0
	NO. OF PCS. (1)	52
	NO. OF PCS. (2)	38
SPIRAL	SIZE (mm)	19
	NO. / SET	

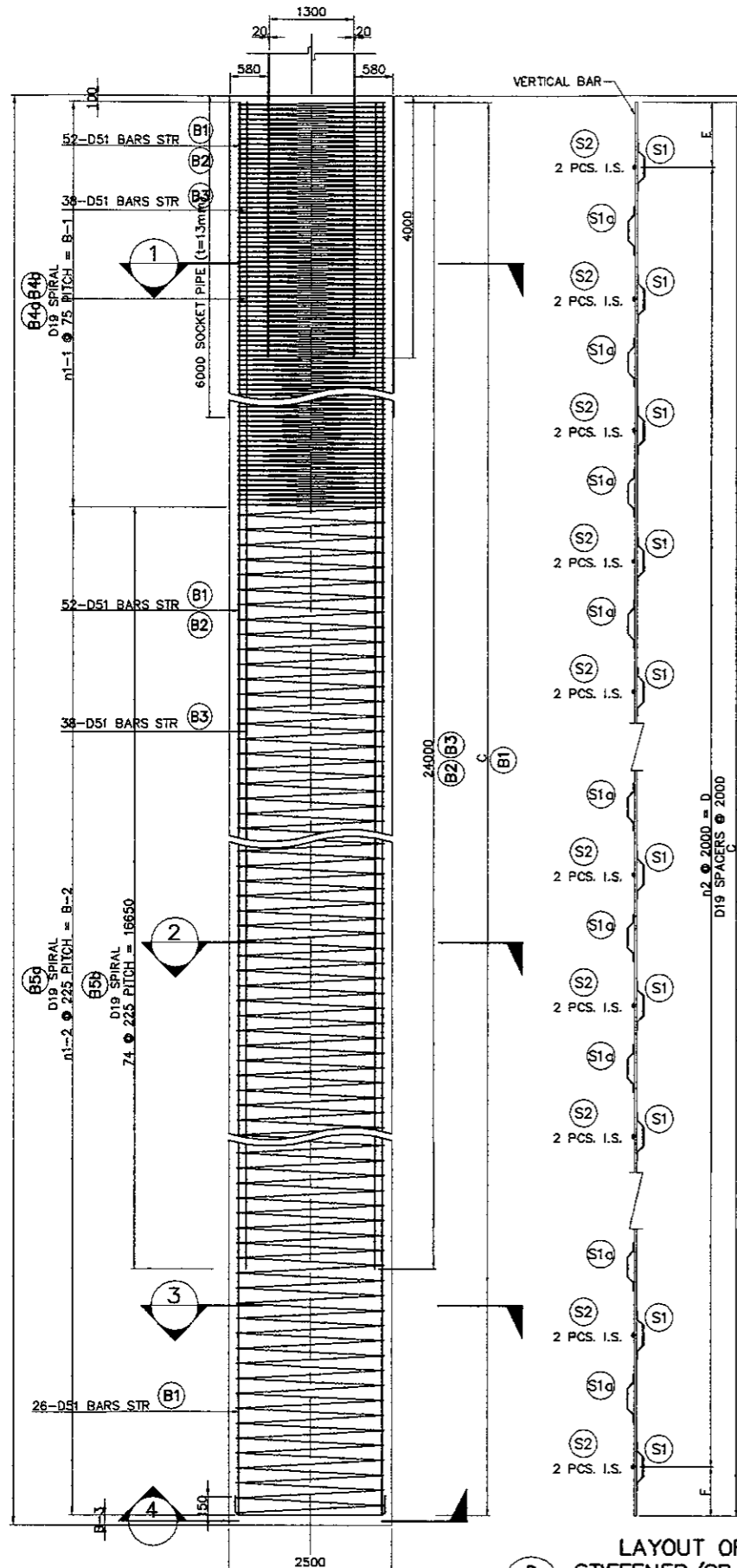
DIMENSION												
LOCATION	A (mm)	B-1 (mm)	B-2 (mm)	B-3 (mm)	C (mm)	D (mm)	E (mm)	F (mm)	n1-1	n1-2	n2 (S1)	n2 (S1a)
PB1, PB2, PB3	24000	7350	16425	125	23775	22000	1000	775	98	73	11	10



SCHEDULE OF REINFORCEMENT

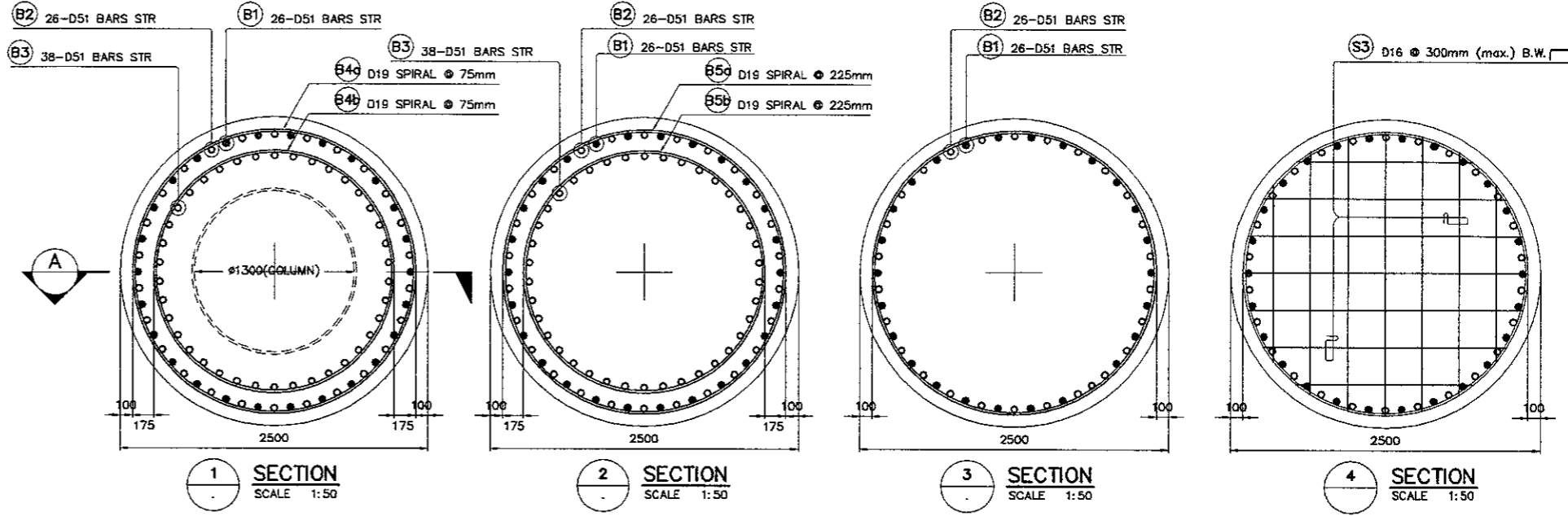
LOCATION	BAR MARK	SIZE (mm)	BEND TYPE	DIMENSION(mm) OUT TO OUT						LENGTH (mm)	NO. REQ'D.	UNIT WEIGHT (kg/m)	WEIGHT (kg)	
				a	b	c	d	e	f					
PIER PB1, PB2 & PB3 L = 24000 mm	B1	S1	1	23775							23775	26	15.90	9829
	B2	S1	1	23775							23775	26	15.90	9829
	B3	S1	1	23775							23775	38	15.90	14365
	B4a	19	2	75	2300	500					736756	1	2.23	1643
	B4b	19	2	75	1950	500					624554	1	2.23	1393
	B5a	19	2	225	2300	500					548706	1	2.23	1224
	B5b	19	2	225	1950	500					465479	1	2.23	1038
	S1	19	3	150	170	250					890	72	2.23	143
	S1a	19	3	150	150	350					950	60	2.23	127
	S2	19	4	2160	170						6952	24	2.23	372
	S2a	19	4	1810	170						5853	20	2.23	261
	S3	16	5	150	1865						2165	14	1.58	48
	S4	16	6	1895	316	380					4106	400	1.58	2595
												TOTAL WEIGHT FOR / PILE =	42,865	Kgs.
											TOTAL VOLUME CONCRETE =	117.81	m ³	

THE SCHEDULE OF REINFORCEMENT SHOWN ON THE BAR BENDING DIAGRAM TABLE IS FOR REFERENCE ONLY. THE CONTRACTOR SHOULD CHECK AND VERIFY ALL DIMENSIONS, SIZES AND QUANTITIES OF REINFORCEMENT.



A SECTION
 SCALE 1:100

B LAYOUT OF STIFFENER/SPACER
 SCALE 1:100

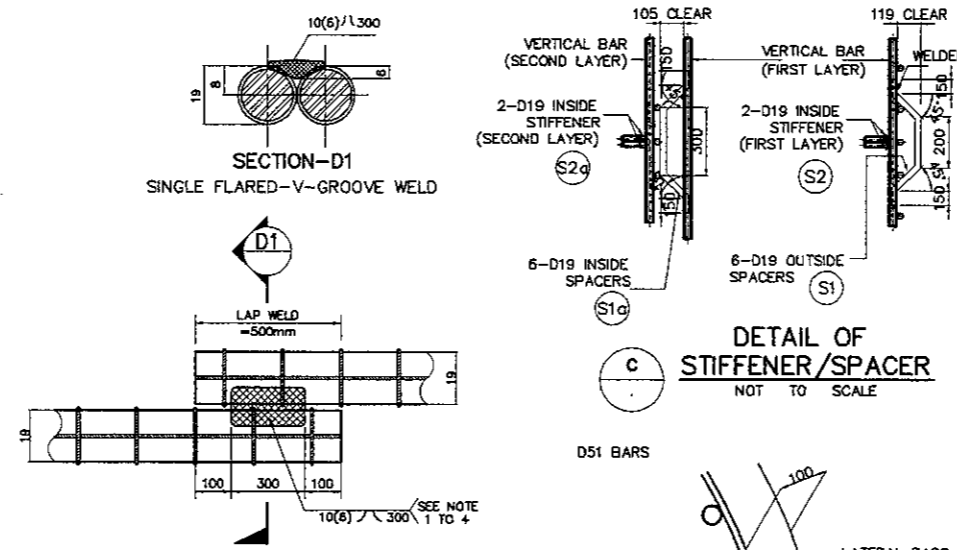


1 SECTION
 SCALE 1:50

2 SECTION
 SCALE 1:50

3 SECTION
 SCALE 1:50

4 SECTION
 SCALE 1:50



SECTION-D1
 SINGLE FLARED-V-GROOVE WELD

DETAIL OF STIFFENER/SPACER
 NOT TO SCALE

TYPICAL BAR LAYOUT DETAIL
 NOT TO SCALE

D DETAIL OF SPIRAL REINF. FULL LAP-WELD CONNECTION
 NOT TO SCALE

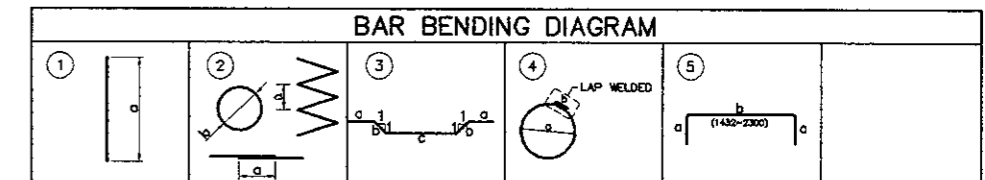
- NOTES ON LAP-WELD CONNECTION :**
1. SPIRAL REINFORCEMENT ARE LAP-WELD CONNECTED (FLARED-V-GROOVE TYPE)
 2. WELDING SHOULD CONFORM TO AWS (D1.4)
 STRUCTURAL WELDING CODE REINFORCED STEEL.
 3. USE ELECTRODE E80XX.
 4. CARE SHOULD BE TAKEN NOT TO DAMAGE THE COLUMN MAIN BARS DURING WELDING.

- NOTES :**
1. ALL DIMENSIONS ARE IN MILLIMETERS.
 2. BORED PILE MAIN BARS ARE PROVIDED WITHOUT ANY SPLICE. HOWEVER SPLICING OF MAIN BARS BY MECHANICAL COUPLERS ARE ALLOWED WITH PERMISSION FROM THE STRUCTURAL ENGINEER.
 3. COMPOSITE COLUMN SOCKET TYPE CONNECTION SEE DWG. NO. MSB-072
 4. CONCRETE : $F_c' = 30\text{MPa}$
 5. REINFORCING STEEL=
 D51 : YIELD STRENGTH = 345 N/mm²
 OTHERS : YIELD STRENGTH = 390 N/mm²

BORED PILE TYPE		BP-GF4
SIZE (mm)		D2500
MAIN BARS	SIZE (mm)	51
	NO. OF LAYERS	2.0
	NO. OF PCS. (1)	52
	NO. OF PCS. (2)	38
SPIRAL	SIZE (mm)	19
	NO. / SET	

LOCATION	DIMENSION											
	A (mm)	B-1 (mm)	B-2 (mm)	B-3 (mm)	C (mm)	D (mm)	E (mm)	F (mm)	n1-1	n1-2	n2 (S1)	n2 (S1a)
PB4 L	28000	7275	20475	150	27750	26000	1000	750	97	91	13	11

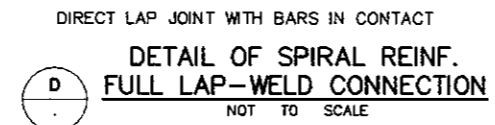
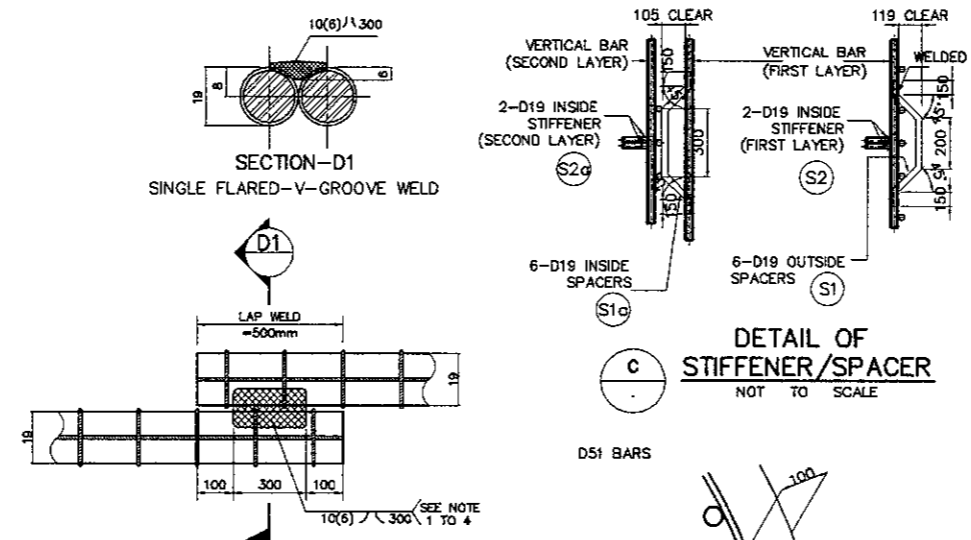
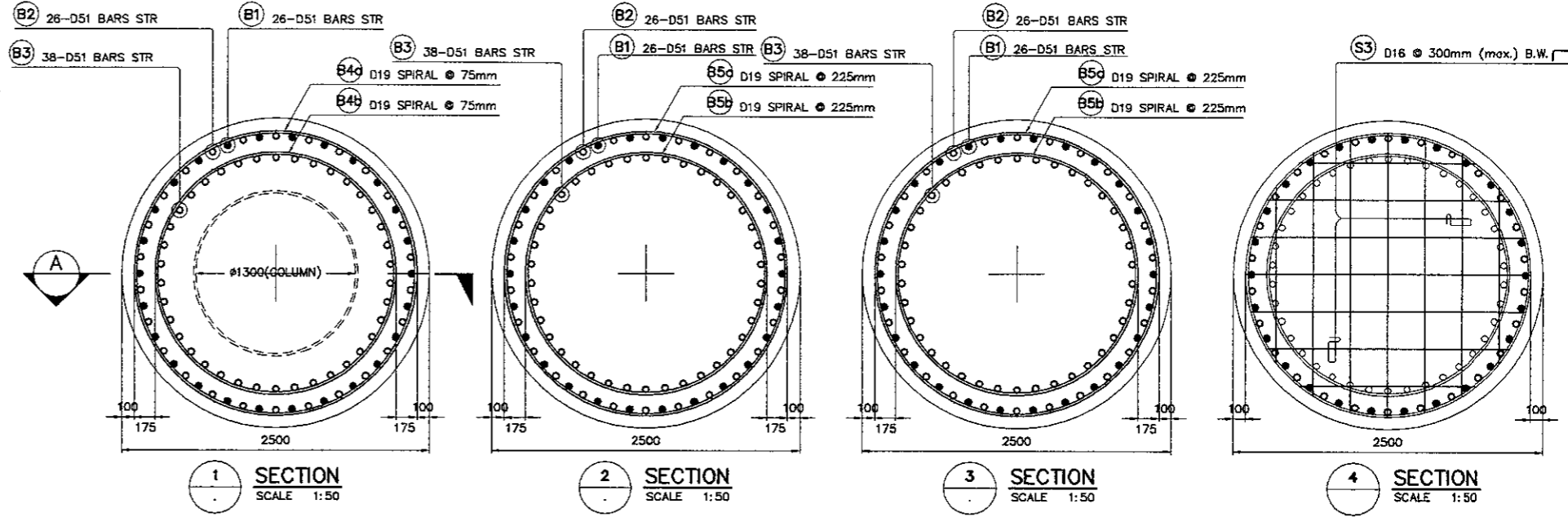
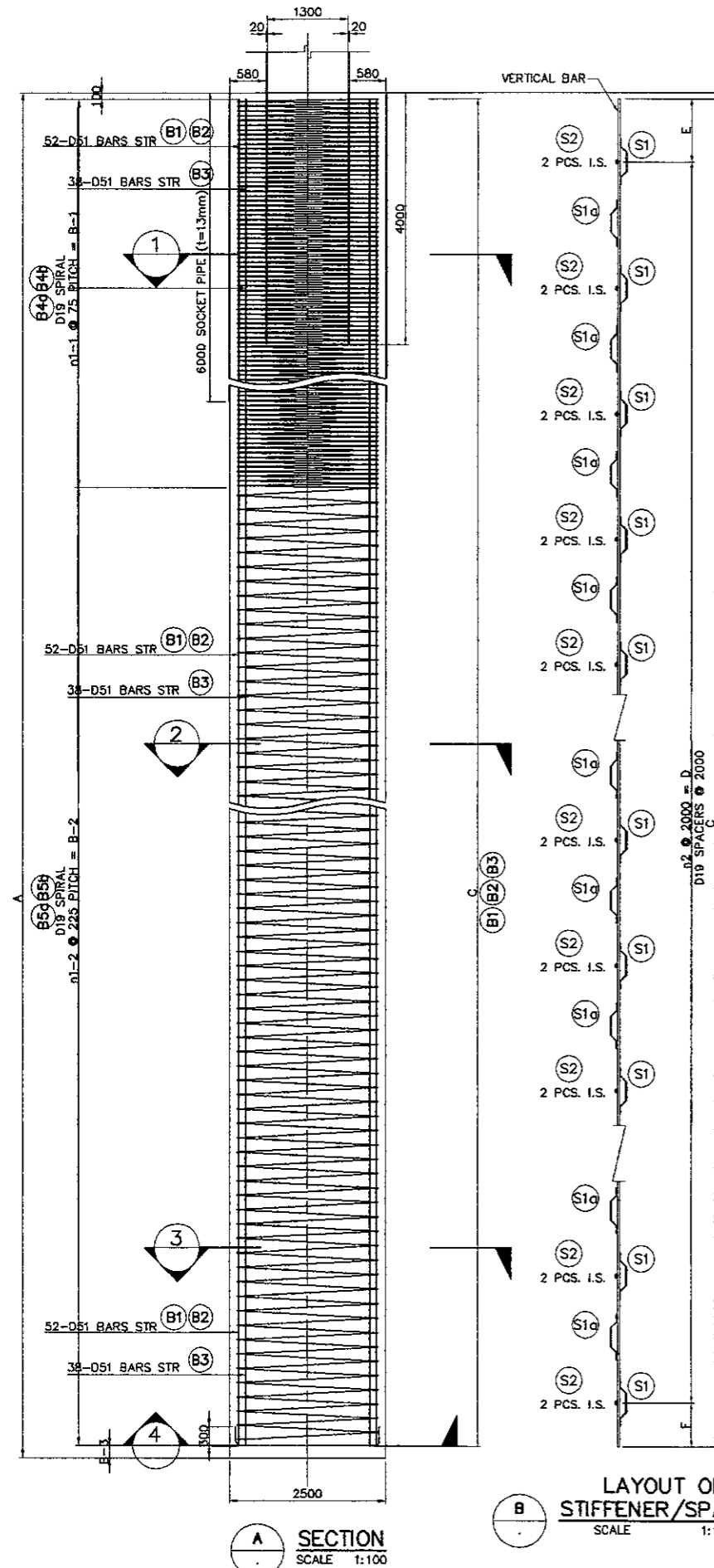
BORED PILE REINF. DETAILS (PB4 L)
 SCALE AS SHOWN



SCHEDULE OF REINFORCEMENT

LOCATION	BAR MARK	SIZE (mm)	BEND TYPE	DIMENSION(mm) OUT TO OUT						LENGTH (mm)	NO. REQ'D.	UNIT WEIGHT (kg/m)	WEIGHT (kg)
				a	b	c	d	e	f				
PIER PB4 L, DIA = 2500 mm L = 28000 mm	B1	51	1	27750						27750	26	15.90	11472
	B2	51	1	24000						24000	26	15.90	9922
	B3	51	1	24000						24000	38	15.90	14501
	B4a	19	2	75	2300	500				729034	1	2.23	1626
	B4b	19	2	75	1950	500				618431	1	2.23	1379
	B5a	19	2	225	2300	500				684202	1	2.23	1526
	B5b	19	2	225	1950	500				474143	1	2.23	1057
	S1	19	3	150	170	250				890	84	2.23	167
	S1a	19	3	150	150	350				950	66	2.23	140
	S2	19	4	2160	170					6952	28	2.23	434
	S2a	19	4	1810	170					5853	22	2.23	287
	S3	16	5	150	1865					2165	14	1.58	48
	TOTAL WEIGHT FOR / PILE = 42,558 Kgs.											TOTAL VOLUME CONCRETE = 137.44 m³	

THE SCHEDULE OF REINFORCEMENT SHOWN ON THE BAR BENDING DIAGRAM TABLE IS FOR REFERENCE ONLY. THE CONTRACTOR SHOULD CHECK AND VERIFY ALL DIMENSIONS, SIZES AND QUANTITIES OF REINFORCEMENT.



- NOTES ON LAP-WELD CONNECTION :**
- SPIRAL REINFORCEMENT ARE LAP-WELD CONNECTED (FLARED-V-GROOVE TYPE)
 - WELDING SHOULD CONFORM TO AWS (D1.4)
 STRUCTURAL WELDING CODE REINFORCED STEEL
 - USE ELECTRODE E90XX.
 - CARE SHOULD BE TAKEN NOT TO DAMAGE THE COLUMN MAIN BARS DURING WELDING.

BORED PILE TYPE		BP-GF4
SIZE (mm)		D2500
MAIN BARS	SIZE (mm)	51
	NO. OF LAYERS	2.0
	NO. OF PCS. (1)	52
	NO. OF PCS. (2)	38
SPIRAL	SIZE (mm)	19
	NO. / SET	

- NOTES :**
- ALL DIMENSIONS ARE IN MILLIMETERS.
 - BORED PILE MAIN BARS ARE PROVIDED WITHOUT ANY SPLICE. HOWEVER SPlicing OF MAIN BARS BY MECHANICAL COUPLERS ARE ALLOWED WITH PERMISSION FROM THE STRUCTURAL ENGINEER.
 - COMPOSITE COLUMN SOCKET TYPE CONNECTION SEE DWG. NO. MSB-072
 - CONCRETE : $F_c' = 30\text{MPa}$
 - REINFORCING STEEL=
 D51 : YIELD STRENGTH = 345 N/mm²
 OTHERS : YIELD STRENGTH = 390 N/mm²

LOCATION	DIMENSION											
	A (mm)	B-1 (mm)	B-2 (mm)	B-3 (mm)	C (mm)	D (mm)	E (mm)	F (mm)	n1-1	n1-2	n2 (S1)	n2 (S1g)
PB4 (R)	24000	7350	16425	125	23775	22000	1000	775	98	73	11	10

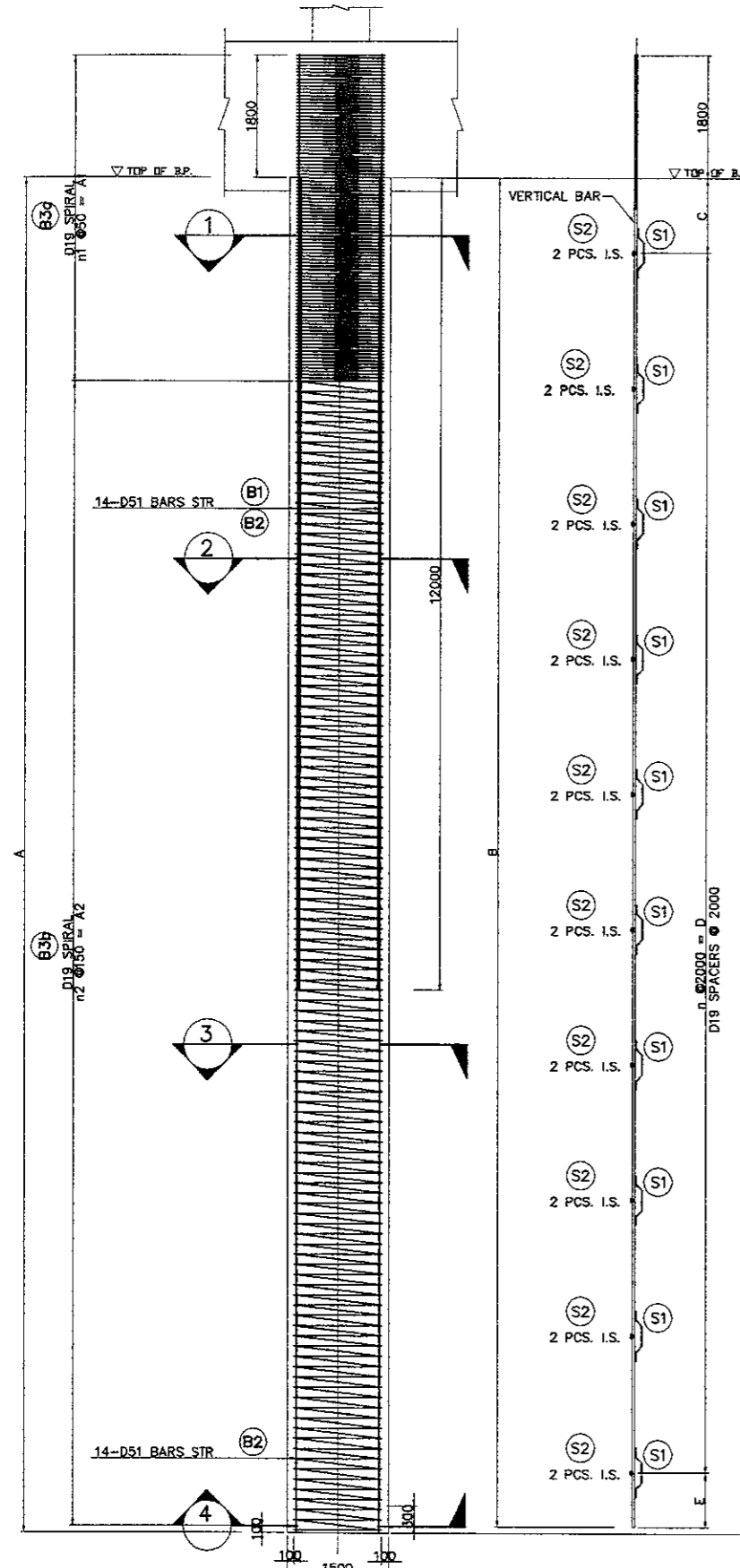
BAR BENDING DIAGRAM

SCHEDULE OF REINFORCEMENT

LOCATION	BAR MARK	SIZE (mm)	BEND TYPE	DIMENSION(mm) OUT TO OUT						LENGTH (mm)	NO. REQ'D.	UNIT WEIGHT (kg/m)	WEIGHT (kg)
				a	b	c	d	e	f				
PIER PB4 R, DIA = 2500 mm L = 4000 mm	B1	51	1	23775						23775	26	15.90	9829
	B2	51	1	23775						23775	26	15.90	9829
	B3	51	1	23775						23775	38	15.90	14365
	B4a	19	2	75	2300	500				736756	1	2.23	1643
	B4b	19	2	75	1950	500				624554	1	2.23	1393
	B5a	19	2	225	2300	500				548706	1	2.23	1224
	B5b	19	2	225	1950	500				465479	1	2.23	1038
	S1	19	3	150	170	250				890	72	2.23	143
	S1a	19	3	150	150	350				950	60	2.23	127
	S2	19	4	2160	170					6952	24	2.23	372
	S2a	19	4	1810	170					5653	20	2.23	261
	S3	16	5	150	1865					2165	14	1.58	48
	TOTAL WEIGHT FOR / PILE = 40,270 Kgs.											TOTAL VOLUME CONCRETE = 117.81 m³	

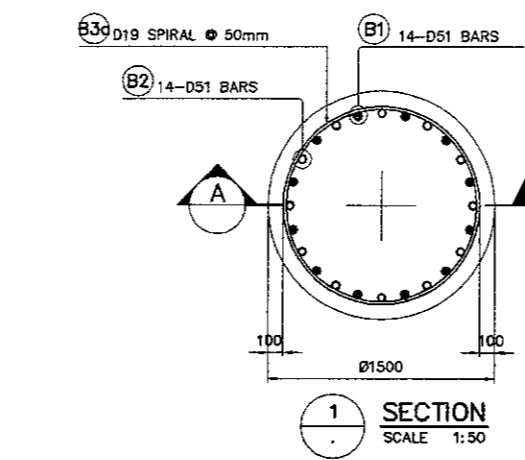
THE SCHEDULE OF REINFORCEMENT SHOWN ON THE BAR BENDING DIAGRAM TABLE IS FOR REFERENCE ONLY. THE CONTRACTOR SHOULD CHECK AND VERIFY ALL DIMENSIONS, SIZES AND QUANTITIES OF REINFORCEMENT.

DESIGNED BY	CHECKED BY	SUBMITTED BY
Name A. COURLEY	Name T. OKUMURA	Name M. KIUCHI
Sign	Sign	Sign
Date	Date	Date

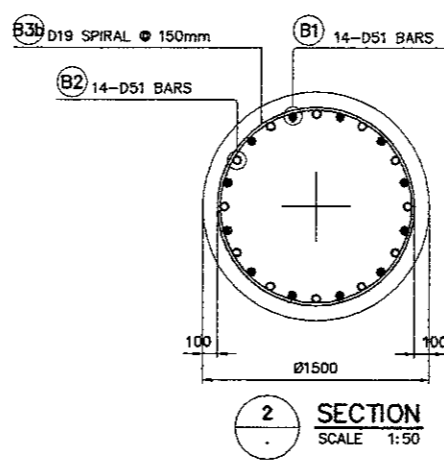


A SECTION
 SCALE 1:100

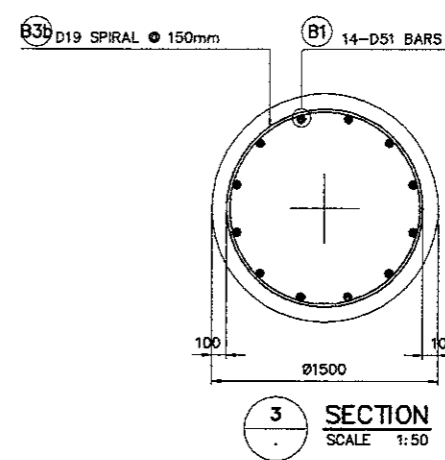
B LAYOUT OF STIFFENER/SPACER
 SCALE 1:100



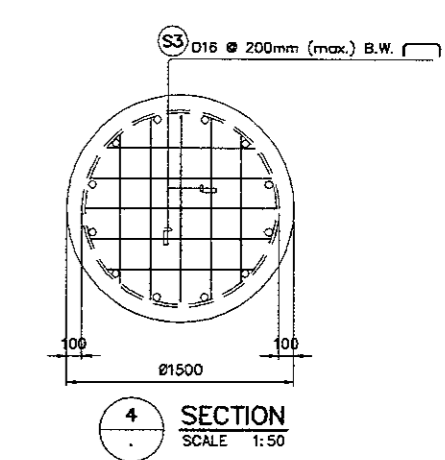
1 SECTION
 SCALE 1:50



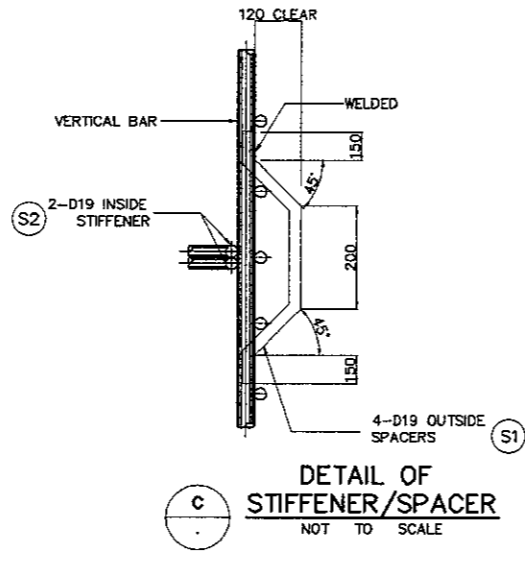
2 SECTION
 SCALE 1:50



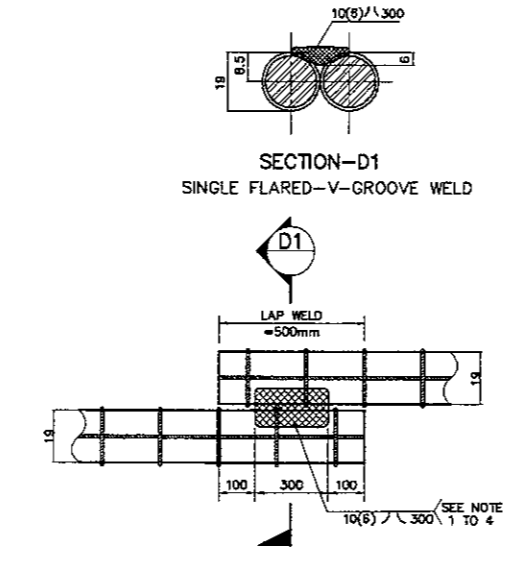
3 SECTION
 SCALE 1:50



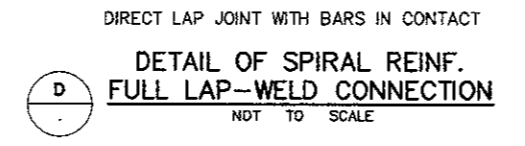
4 SECTION
 SCALE 1:50



DETAIL OF STIFFENER/SPACER
 NOT TO SCALE



SECTION-D1
 SINGLE FLARED-V-GROOVE WELD

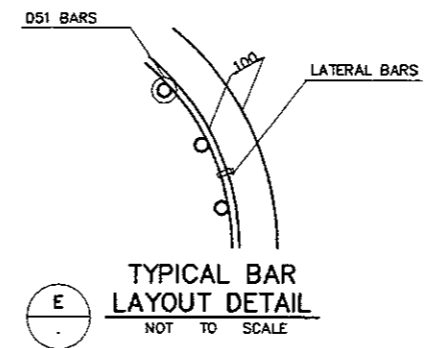


DETAIL OF SPIRAL REINF. FULL LAP-WELD CONNECTION
 NOT TO SCALE

BORED PILE TYPE		
SIZE (mm)		Ø1500
MAIN BARS	SIZE (mm)	51
	NO. OF LAYERS	1.0
	NO. OF PCS.	24
SPIRAL	SIZE (mm)	19
	NO. / SET	

LOCATION	DIMENSION					
	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	n
A1	30000	31650	1000	28000	650	14

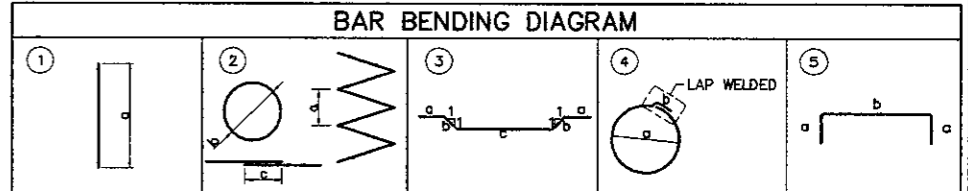
LOCATION	DIMENSION			
	A1 (mm)	A2 (mm)	n1	n2
A1	4800	26900	96	179



TYPICAL BAR LAYOUT DETAIL
 NOT TO SCALE

- NOTES ON LAP-WELD CONNECTION :**
- SPIRAL REINFORCEMENT ARE LAP-WELD CONNECTED (FLARED-V-GROOVE TYPE)
 - WELDING SHOULD CONFORM TO AWS (D1.4) *STRUCTURAL WELDING CODE REINFORCED STEEL.*
 - USE ELECTRODE E90XX.
 - CARE SHOULD BE TAKEN NOT TO DAMAGE THE COLUMN MAIN BARS DURING WELDING.

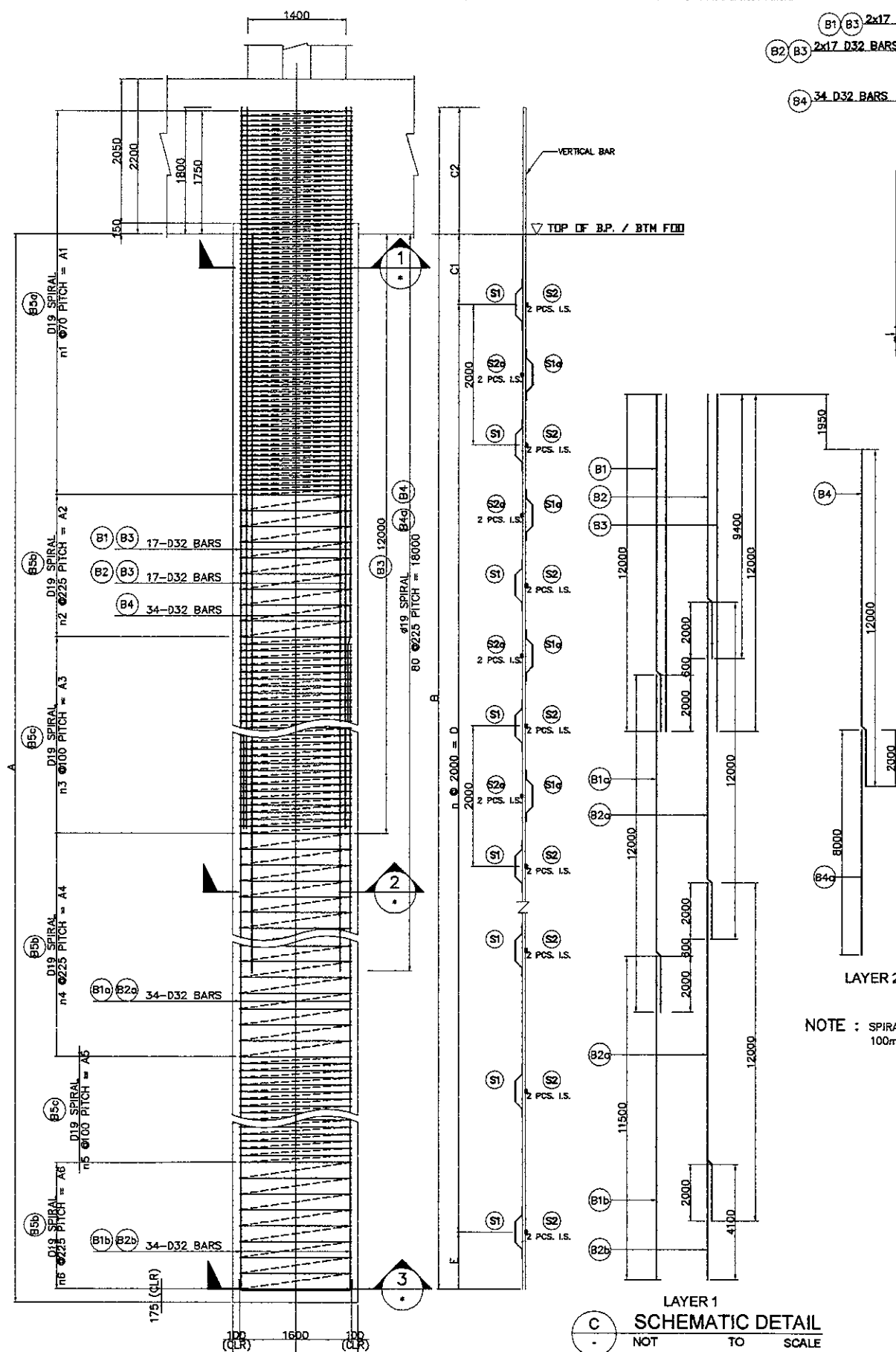
- NOTES :**
- ALL DIMENSIONS ARE IN MILLIMETERS.
 - BORED PILE MAIN BARS ARE PROVIDED WITHOUT ANY SPLICE. HOWEVER SPlicing OF MAIN BARS BY MECHANICAL COUPLERS ARE ALLOWED WITH PERMISSION FROM THE STRUCTURAL ENGINEER.
 - CONCRETE : $F_c' = 30MPa$
 - REINFORCING STEEL=
 D51 : YIELD STRENGTH = 345 N/mm²
 OTHERS : YIELD STRENGTH = 390 N/mm²



LOCATION	BAR MARK	SIZE (mm)	BEND TYPE	DIMENSION(mm) OUT TO OUT						LENGTH (mm)	NO. REQ'D.	UNIT WEIGHT (kg/m)	WEIGHT (kg)	
				a	b	c	d	e	f					
				ABUTMENT A1 DIA = 1500 mm L = 30000 mm										
	B1	51	1	31650							31650	14	15.90	7089
	B2	51	1	12000							12000	14	15.90	2671
	B3a	19	2	50	1300	500					408372	1	2.23	911
	B3b	19	2	150	1300	500					761178	1	2.23	1697
	S1	19	3	150	170	250					890	64	2.23	127
	S2	19	4	1058	170						3492	32	2.23	249
	S3	16	5	150	1865						2165	14	1.58	48
											TOTAL WEIGHT FOR / PILE = 12,792 Kgs.			
											VOLUME CONCRETE = 53.01 M3			

THE SCHEDULE OF REINFORCEMENT SHOWN ON THE BAR BENDING DIAGRAM TABLE IS FOR REFERENCE ONLY. THE CONTRACTOR SHOULD CHECK AND VERIFY ALL DIMENSIONS, SIZES AND QUANTITIES OF REINFORCEMENT.

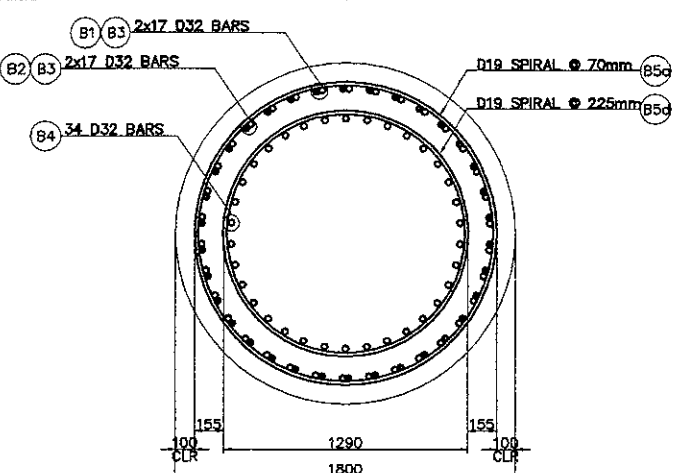
BORED PILE REINFORCEMENT DETAILS (ABUTMENT A1)
 SCALE AS SHOWN



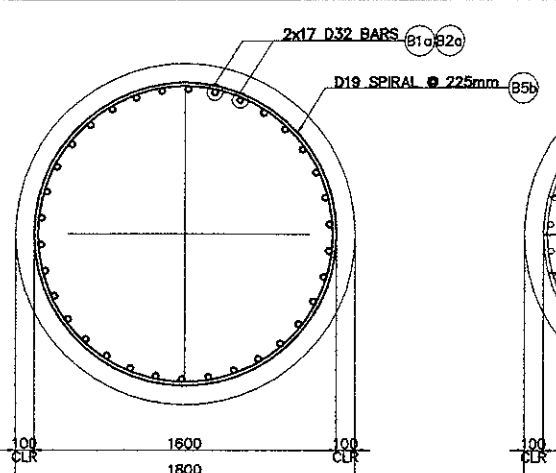
A ELEVATION
 SCALE 1:100

B LAYOUT OF STIFFENER
 SCALE 1:100

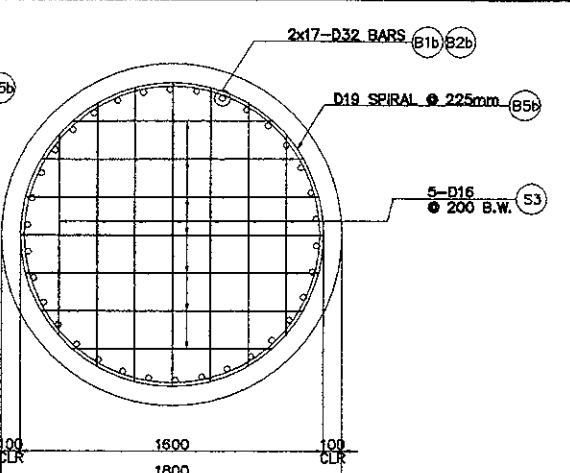
1 BORED PILE REINF. DETAILS FOR ABUT. A2 (Ø1800mm)
 SCALE AS SHOWN



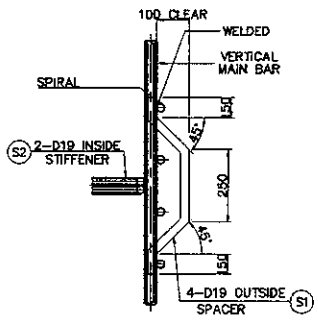
1 SECTION
 SCALE 1:40



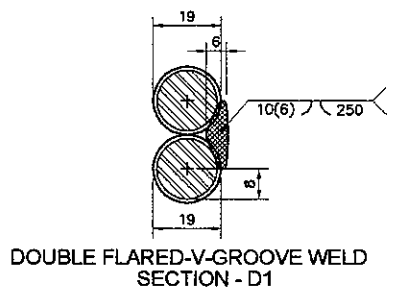
2 SECTION
 SCALE 1:40



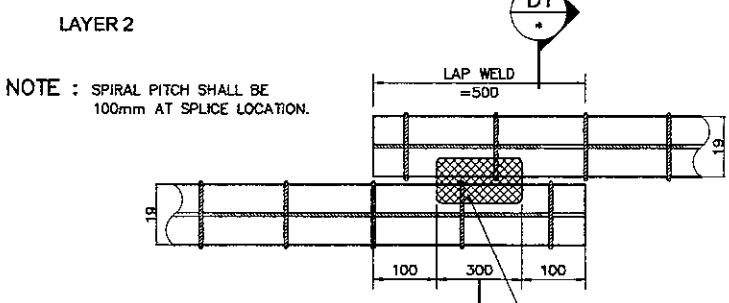
3 SECTION
 SCALE 1:40



E DETAIL OF STIFFENER/SPACER
 NOT TO SCALE



DOUBLE FLARED-V-GROOVE WELD SECTION - D1

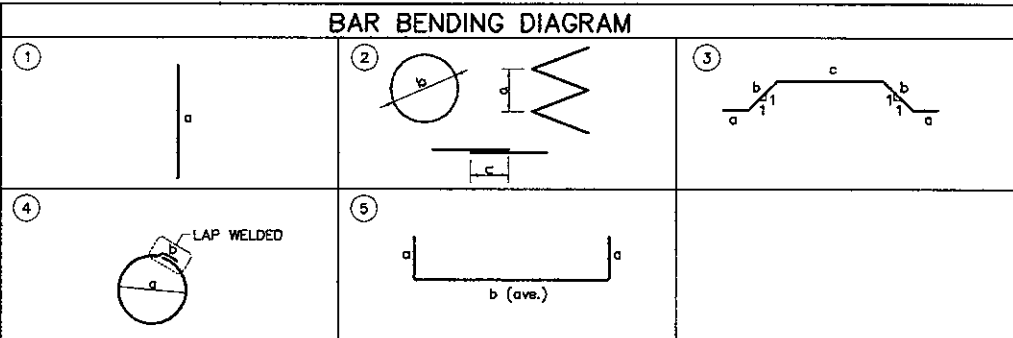


D1 DIRECT LAP JOINT WITH BARS IN CONTACT
 NOT TO SCALE

- NOTES ON LAP-WELD CONNECTION :**
1. SPIRAL REINFORCEMENT ARE LAP-WELD CONNECTED (FLARED-V-GROOVE TYPE)
 2. WELDING SHOULD CONFORM TO AWS (D1.4) *STRUCTURAL WELDING CODE REINFORCED STEEL.*
 3. USE ELECTRODE E90XX.
 4. CARE SHOULD BE TAKEN NOT TO DAMAGE THE COLUMN MAIN BARS DURING WELDING.
- NOTES :**
1. ALL DIMENSIONS ARE IN MILLIMETERS.
 2. BORED PILE MAIN BARS ARE PROVIDED WITHOUT ANY SPLICE, HOWEVER SPLICING OF MAIN BARS BY MECHANICAL COUPLERS ARE ALLOWED WITH PERMISSION FROM THE STRUCTURAL ENGINEER.
 3. CONCRETE : $F_c' = 30\text{MPa}$
 4. REINFORCING STEEL = D51 : YIELD STRENGTH = 345 N/mm²
 OTHERS : YIELD STRENGTH = 390 N/mm²

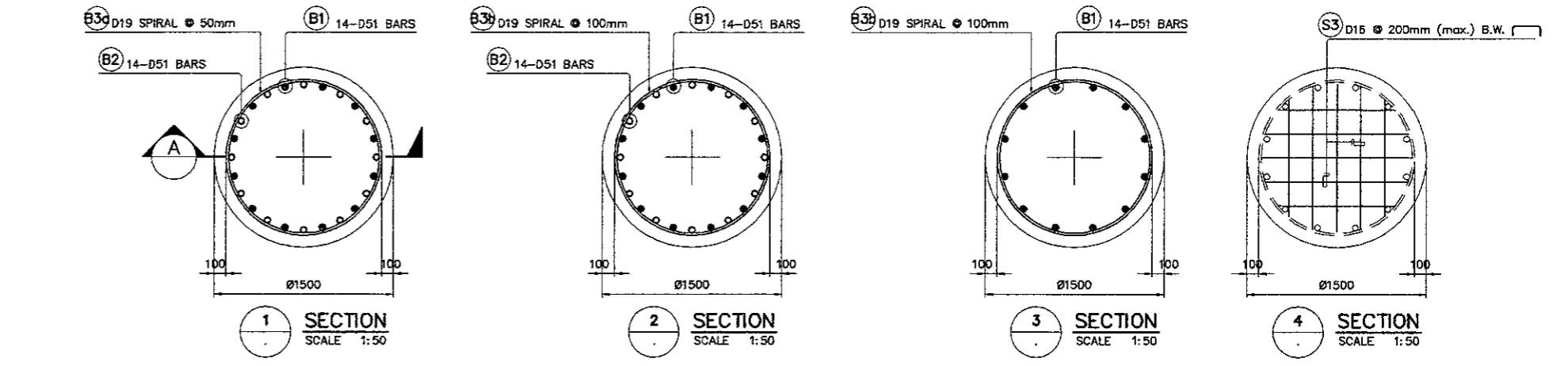
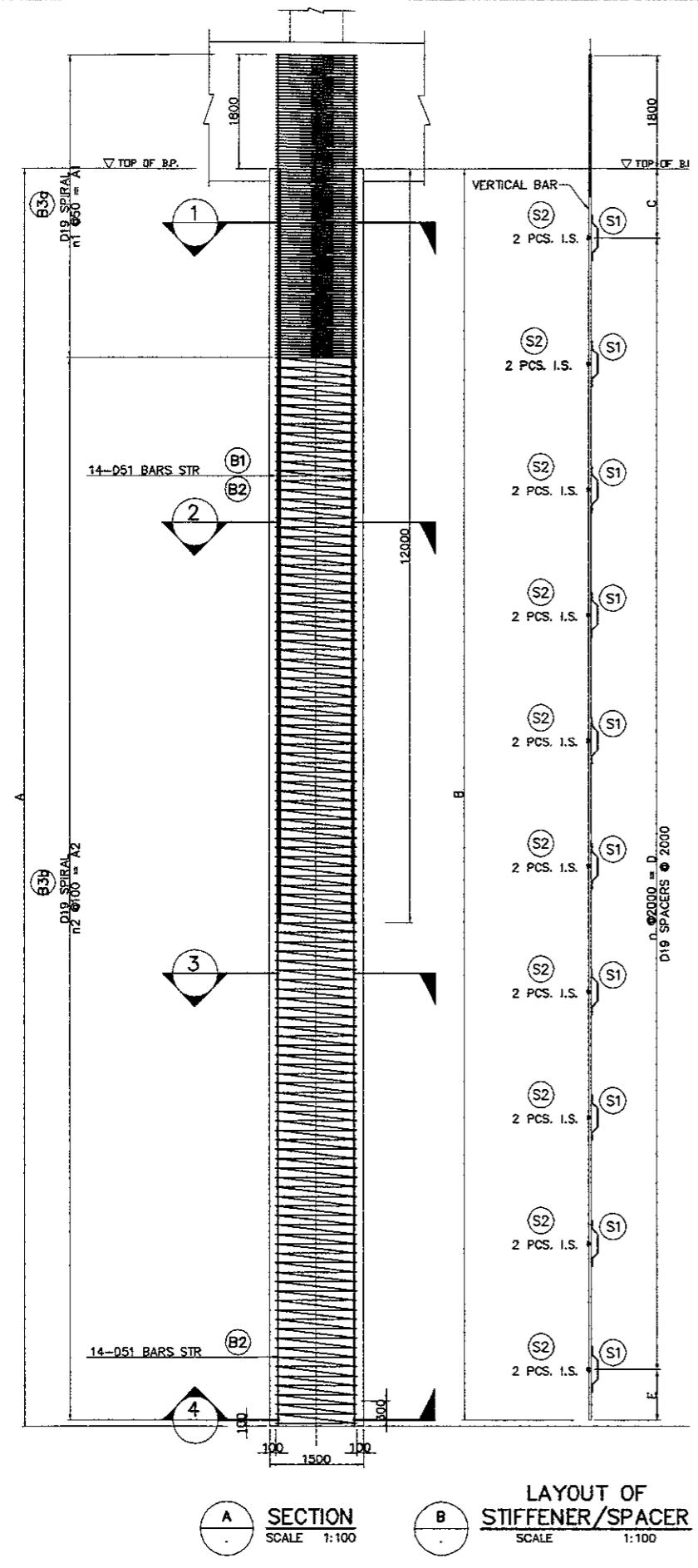
LOCATION	DIMENSION							
	A (mm)	B (mm)	C1 (mm)	C2 (mm)	D (mm)	E (mm)	n (S1)	n (S1a)
A2	30000	31750	1000	1800	28000	950	14	8

LOCATION	DIMENSION											
	A1 (mm)	A2 (mm)	A3 x 2 (mm)	A4 x 2 (mm)	A5 (mm)	A6 (mm)	n1	n2	n3x2	n4x2	n5	n6
A2	5600	2025	4800	5175	2200	1800	80	9	48	23	23	8



LOCATION	BAR MARK	SIZE (mm)	BEND TYPE	DIMENSION(mm) OUT TO OUT						LENGTH (mm)	NO. REQ'D.	UNIT WEIGHT (kg/m)	TOTAL WEIGHT (kg)	VOLUME CONCRETE (kg)
				a	b	c	d	e	f					
ABUTMENT A2 D = 1800 mm L = 30000 mm	B1	32	1	12000						12000	17	6.31	1287	76.35
	B1a	32	1	12000						12000	34	6.31	2574	
	B1b	32	1	11500						11500	17	6.31	1234	
	B2	32	1	12000						12000	17	6.31	1287	
	B2a	32	1	12000						12000	34	6.31	2574	
	B2b	32	1	4100						4100	17	6.31	440	
	B3	32	1	12000						12000	34	6.31	2574	
	B4	32	1	12000						12000	34	6.31	2574	
	B4a	32	1	8000						8000	34	6.31	1716	
	B5a	19	2	70	1800	500				418920	1	2.23	934	
	B5b	19	2	225	1800	500				213960	1	2.23	477	
	B5c	19	2	100	1800	500				378180	1	2.23	839	
	B5d	19	2	225	1290	500				337099	1	2.23	752	
	S1	19	3	150	170	250				890	60	2.23	119	
	S1a	19	3	150	150	350				950	32	2.23	68	
	S2	19	4	1498	170					4874	30	2.23	326	
	S2a	19	4	1188	170					3900	16	2.23	139	
	S3	16	5	150	1329					1829	14	1.58	36	
TOTAL WEIGHT PER PILE =												19,952 Kgs		

THE REINFORCEMENT SHOWN ON THIS TABLE IS FOR REFERENCE ONLY. THE CONTRACTOR SHOULD CHECK AND VERIFY ALL DIMENSIONS, SIZES AND QUANTITIES OF REINFORCEMENT.



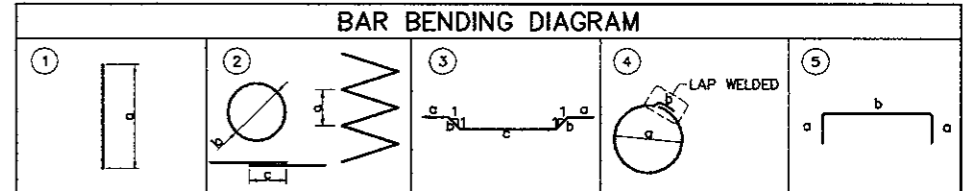
BORED PILE TYPE		-
SIZE (mm)		Ø1500
MAIN BARS	SIZE (mm)	51
	NO. OF LAYERS	1.0
SPIRAL	SIZE (mm)	19
	NO. / SET	

LOCATION	DIMENSION					
	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	n
ABT. AB1	34000	35650	1000	34000	650	17

LOCATION	DIMENSION			
	A1 (mm)	A2 (mm)	n1	n2
ABT. AB1	4850	30800	97	308

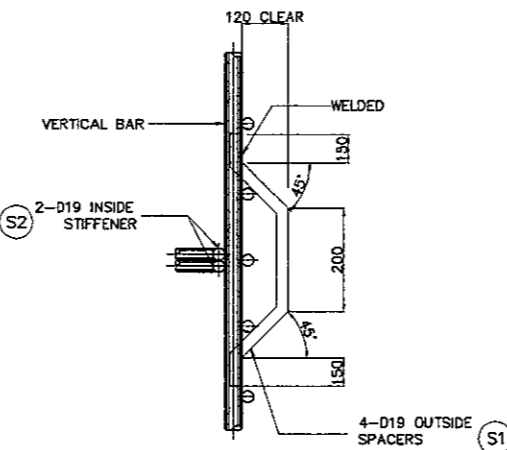
- NOTES ON LAP-WELD CONNECTION :**
1. SPIRAL REINFORCEMENT ARE LAP-WELD CONNECTED (FLARED-V-GROOVE TYPE)
 2. WELDING SHOULD CONFORM TO AWS (D1.4)
 STRUCTURAL WELDING CODE REINFORCED STEEL
 3. USE ELECTRODE E90XX.
 3. CARE SHOULD BE TAKEN NOT TO DAMAGE THE COLUMN MAIN BARS DURING WELDING.

- NOTES :**
1. ALL DIMENSIONS ARE IN MILLIMETERS.
 2. BORED PILE MAIN BARS ARE PROVIDED WITHOUT ANY SPLICE. HOWEVER SPLICING OF MAIN BARS BY MECHANICAL COUPLERS ARE ALLOWED WITH PERMISSION FROM THE STRUCTURAL ENGINEER.
 3. CONCRETE : $F_c' = 30MPa$
 4. REINFORCING STEEL =
 D51 : YIELD STRENGTH = 345 N/mm²
 OTHERS : YIELD STRENGTH = 390 N/mm²

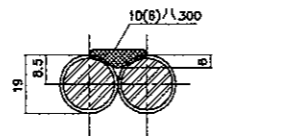


LOCATION	BAR MARK	SIZE (mm)	BEND TYPE	DIMENSION(mm) OUT TO OUT						LENGTH (mm)	NO. REQ'D.	UNIT WEIGHT (kg/m)	WEIGHT (kg)
				a	b	c	d	e	f				
ABUTMENT AB1 DIA = 1500 mm L = 34000 mm	B1	51	1	35650						35650	14	15.90	7936
	B2	51	1	12000						12000	14	15.90	2671
	B3a	19	2	50	1300	500				412454	1	2.23	920
	B3b	19	2	100	1300	500				1309756	1	2.23	2921
	S1	19	3	150	170	250				890	72	2.23	143
	S2	19	4	1058	170					3492	36	2.23	280
	S3	16	5	150	1885					2165	14	1.58	48
TOTAL WEIGHT FOR / PILE = 14,919 Kgs.											VOLUME CONCRETE = 60.08 M3		

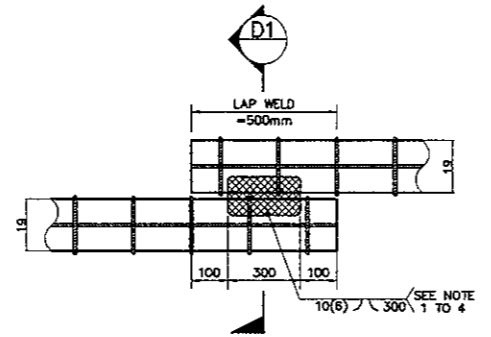
THE SCHEDULE OF REINFORCEMENT SHOWN ON THE BAR BENDING DIAGRAM TABLE IS FOR REFERENCE ONLY. THE CONTRACTOR SHOULD CHECK AND VERIFY ALL DIMENSIONS, SIZES AND QUANTITIES OF REINFORCEMENT.



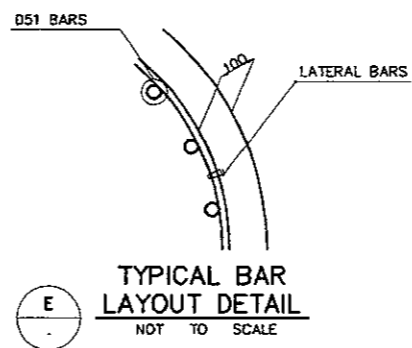
DETAIL OF STIFFENER/SPACER
 NOT TO SCALE



SECTION-D1
 SINGLE FLARED-V-GROOVE WELD



DETAIL OF SPIRAL REIN. FULL LAP-WELD CONNECTION
 NOT TO SCALE

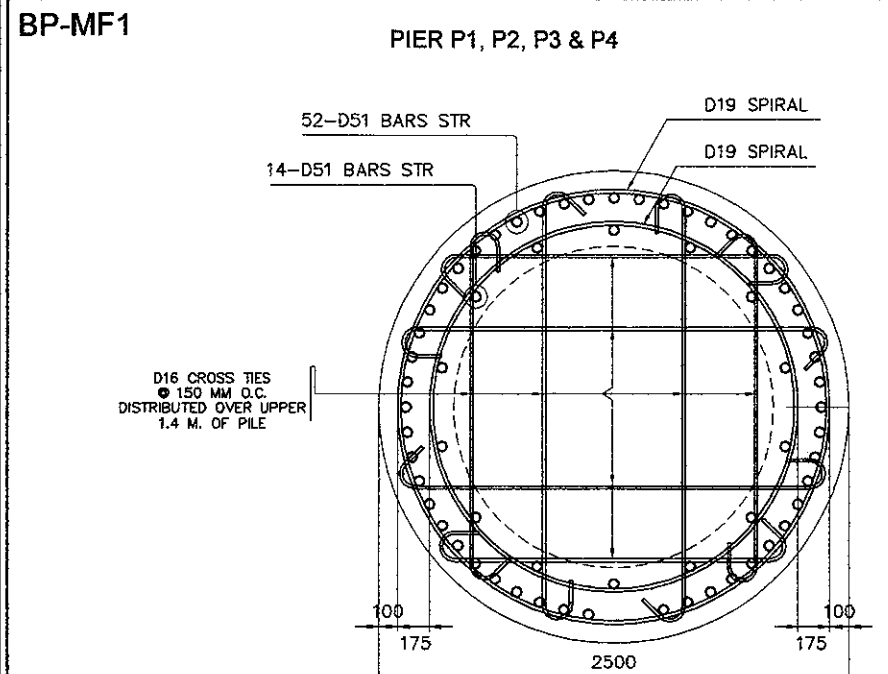


TYPICAL BAR LAYOUT DETAIL
 NOT TO SCALE

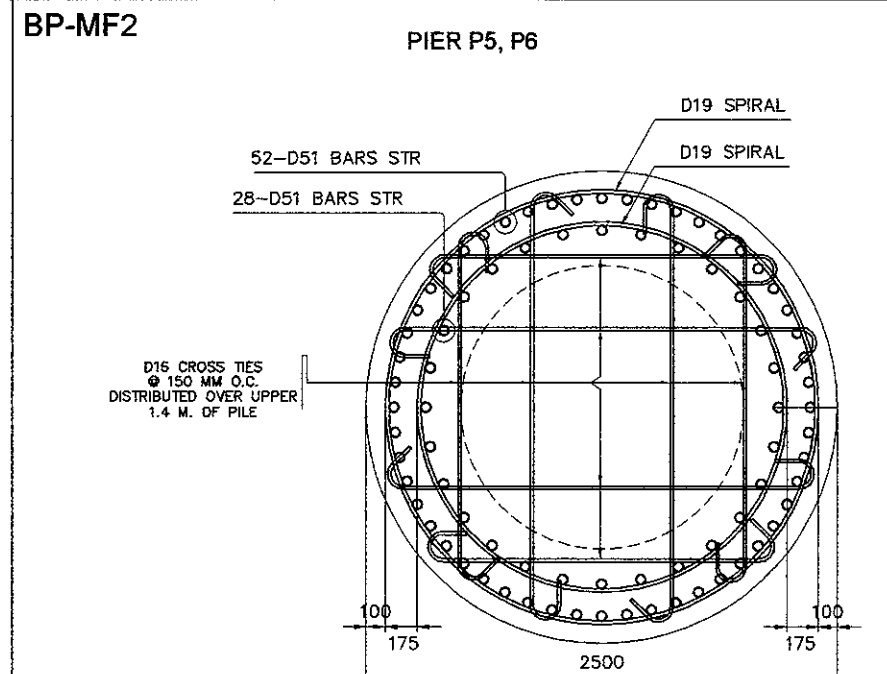
DIRECT LAP JOINT WITH BARS IN CONTACT

BORED PILE REINFORCEMENT DETAILS (ABUTMENT AB1)
 SCALE AS SHOWN

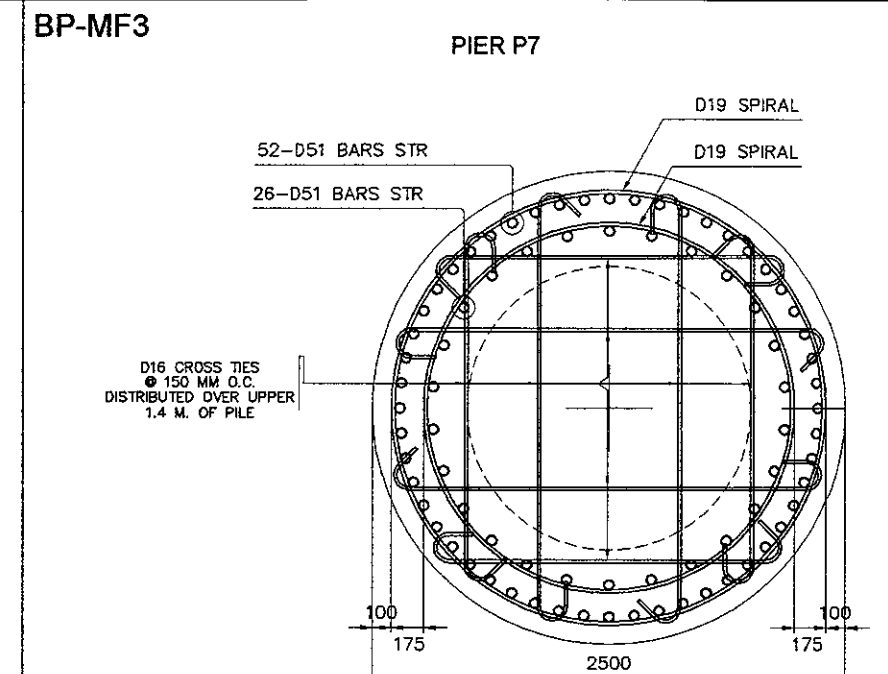
SCHEDULE OF BORED PILE



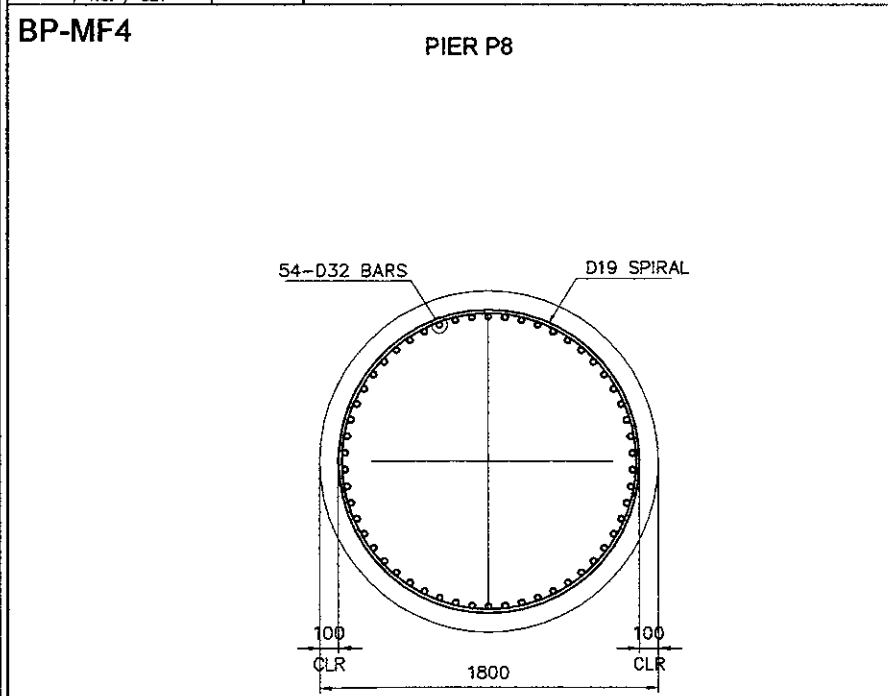
BORED PILE TYPE		BP-MF1
SIZE (mm)		2500
MAIN BARS	SIZE (mm)	51
	NO. LAYERS	2
	NO. OF PCS.(1)	52
	NO. OF PCS.(2)	14
SPIRAL	SIZE (mm)	19
	NO. / SET	



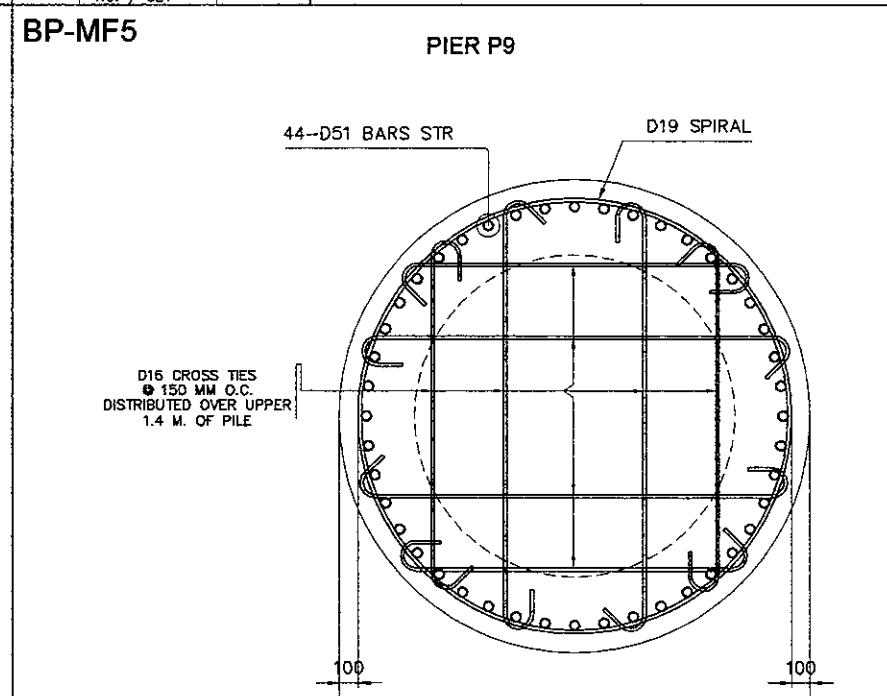
BORED PILE TYPE		BP-MF2
SIZE (mm)		2500
MAIN BARS	SIZE (mm)	51
	NO. LAYERS	2
	NO. OF PCS.(1)	52
	NO. OF PCS.(2)	28
SPIRAL	SIZE (mm)	19
	NO. / SET	



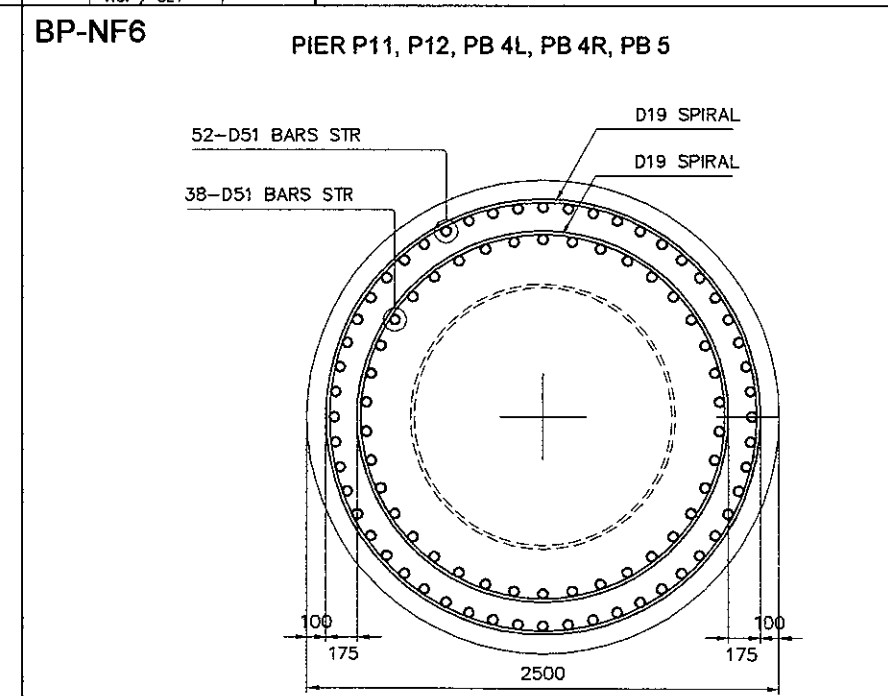
BORED PILE TYPE		BP-MF3
SIZE (mm)		2500
MAIN BARS	SIZE (mm)	51
	NO. LAYERS	2
	NO. OF PCS.(1)	52
	NO. OF PCS.(2)	26
SPIRAL	SIZE (mm)	19
	NO. / SET	



BORED PILE TYPE		BP-MF4
SIZE (mm)		1800
MAIN BARS	SIZE (mm)	32
	NO. LAYERS	1
	NO. OF PCS.	54
SPIRAL	SIZE (mm)	19
	NO. / SET	

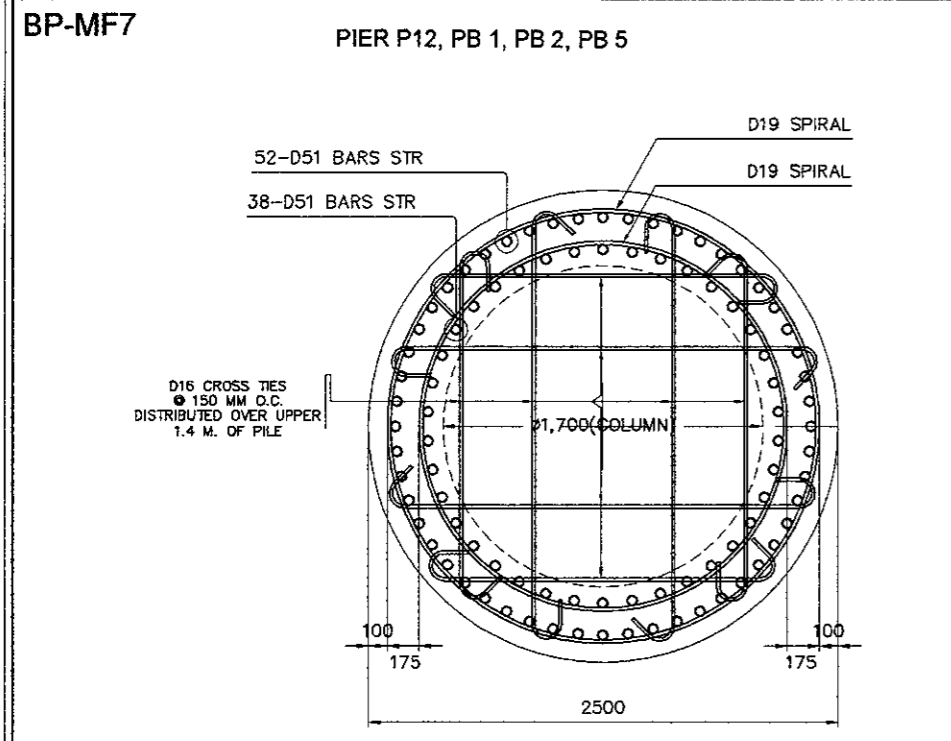


BORED PILE TYPE		BP-MF5
SIZE (mm)		2500
MAIN BARS	SIZE (mm)	51
	NO. LAYERS	1
	NO. OF PCS.(1)	44
	NO. OF PCS.(2)	
SPIRAL	SIZE (mm)	19
	NO. / SET	

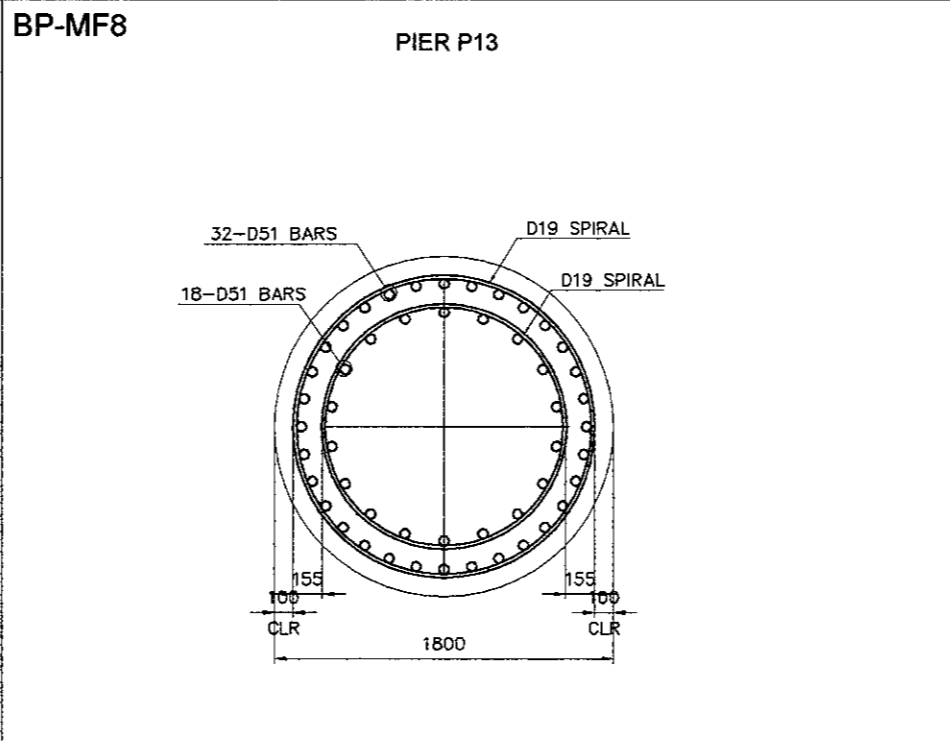


BORED PILE TYPE		BP-MF6
SIZE (mm)		2500
MAIN BARS	SIZE (mm)	51
	NO. LAYERS	2
	NO. OF PCS.(1)	52
	NO. OF PCS.(2)	38
SPIRAL	SIZE (mm)	19
	NO. / SET	

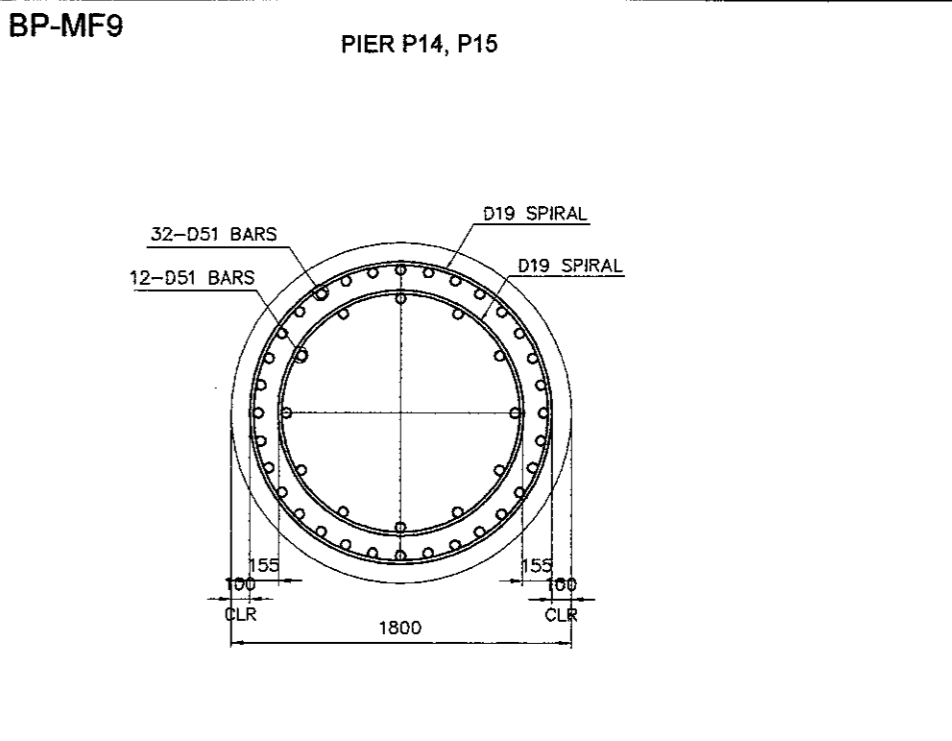
SCHEDULE OF BORED PILE



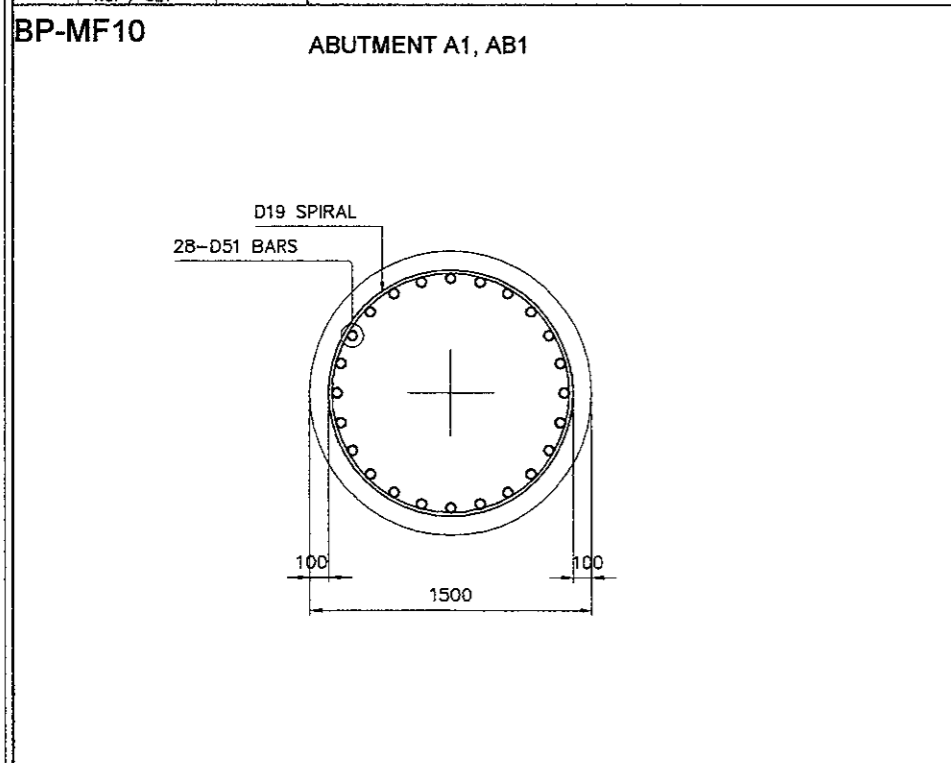
BORED PILE TYPE	BP-MF7
SIZE (mm)	2500
MAIN BARS	
SIZE (mm)	51
NO. LAYERS	2
NO. OF PCS.(1)	52
NO. OF PCS.(2)	38
SPIRAL	
SIZE (mm)	19
NO. / SET	



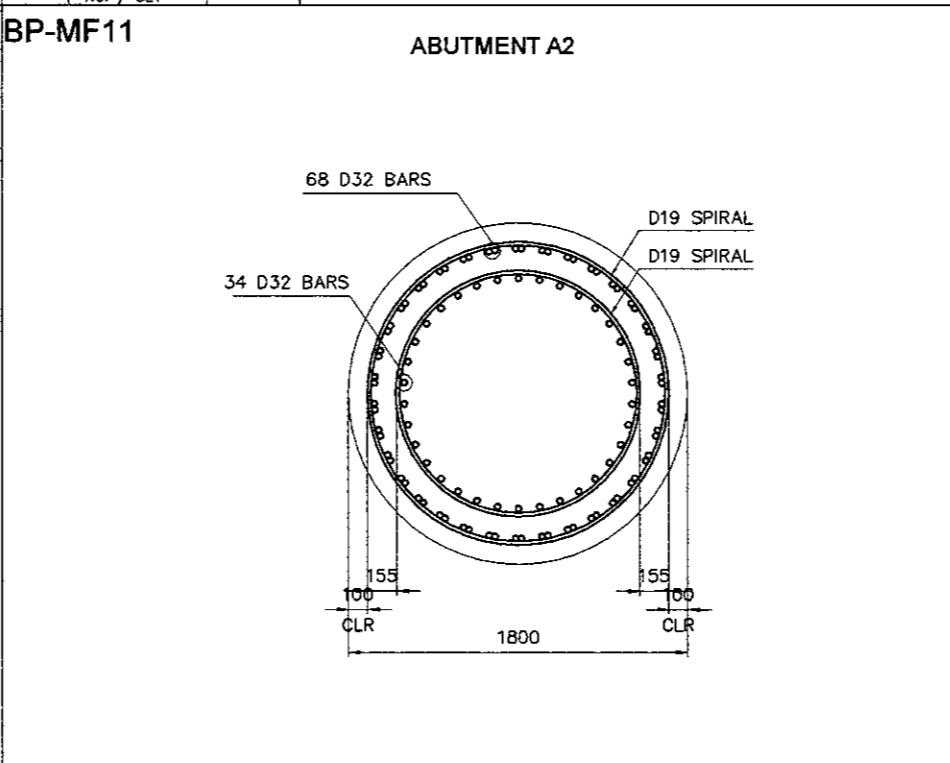
BORED PILE TYPE	BP-MF8
SIZE (mm)	1800
MAIN BARS	
SIZE (mm)	51
NO. LAYERS	2
NO. OF PCS.(1)	32
NO. OF PCS.(2)	18
SPIRAL	
SIZE (mm)	19
NO. / SET	



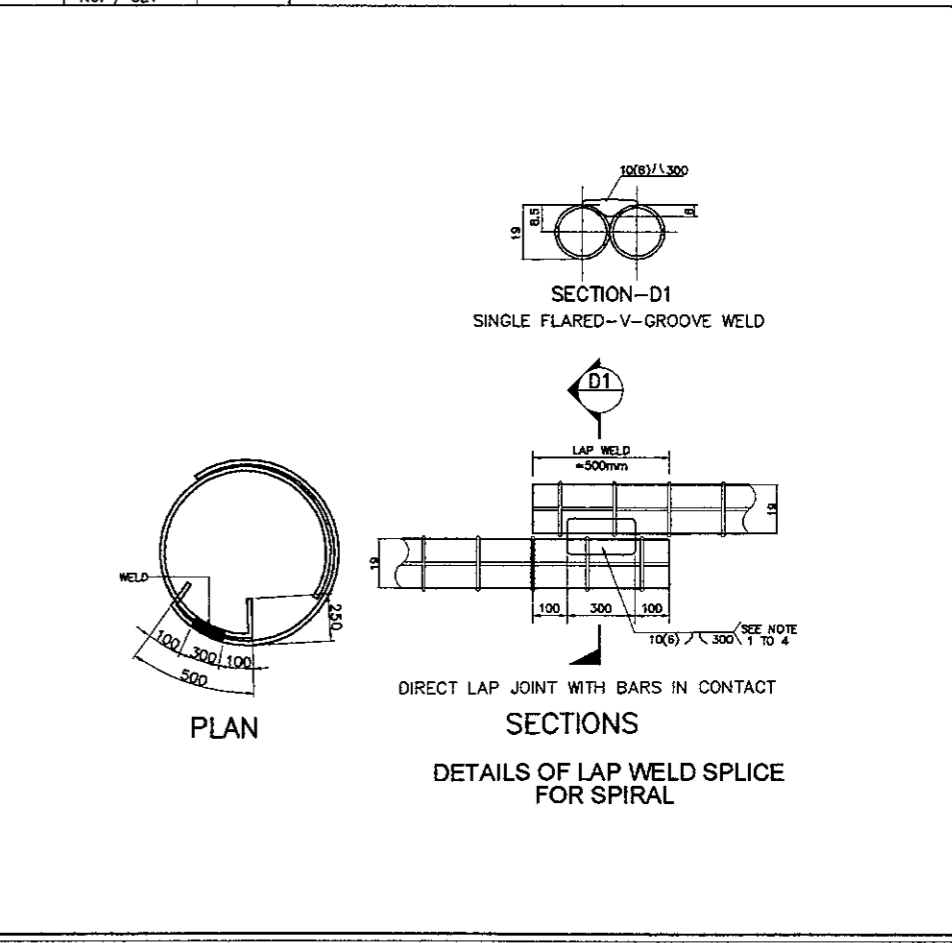
BORED PILE TYPE	BP-MF9
SIZE (mm)	1800
MAIN BARS	
SIZE (mm)	51
NO. LAYERS	2
NO. OF PCS.(1)	32
NO. OF PCS.(2)	12
SPIRAL	
SIZE (mm)	19
NO. / SET	

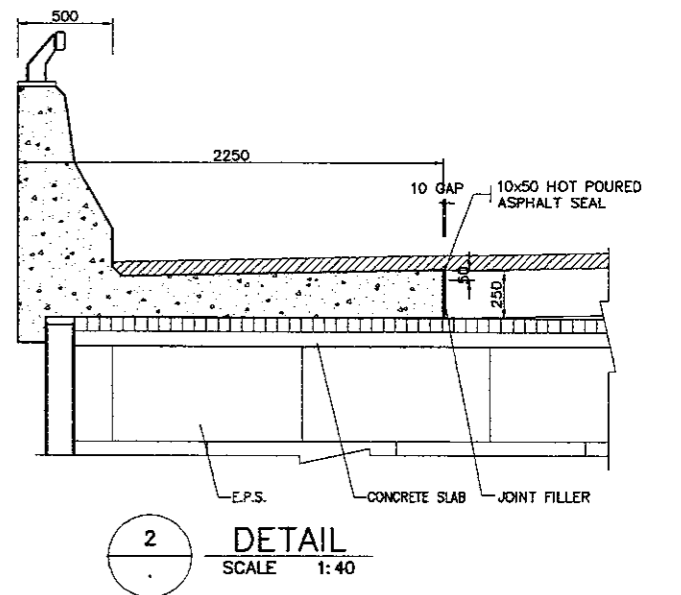
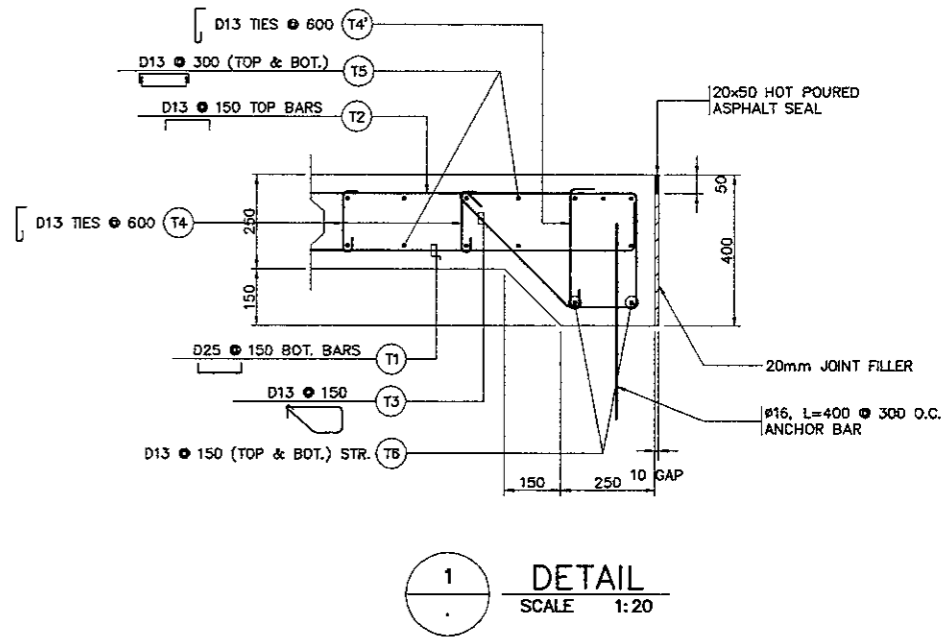
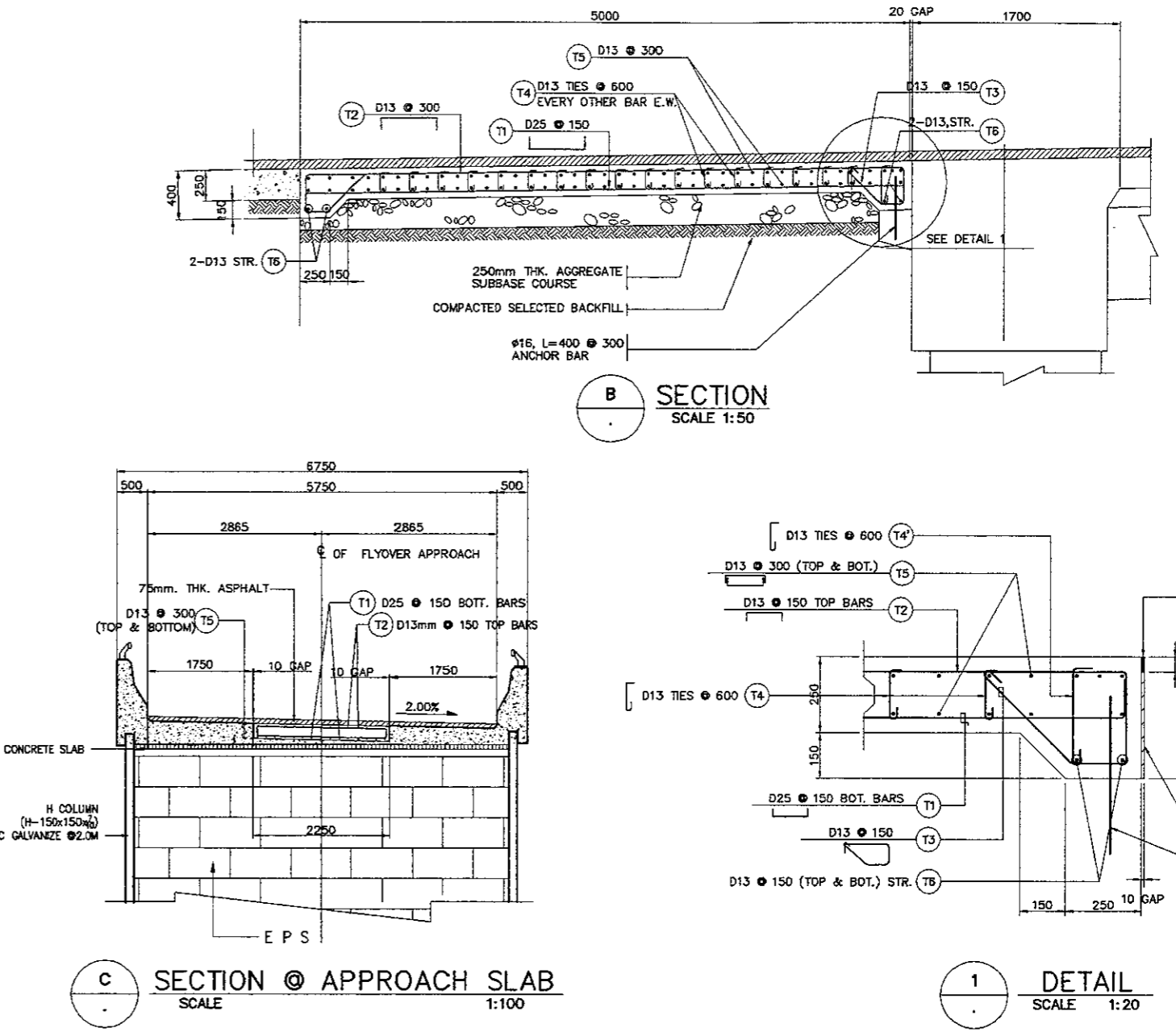
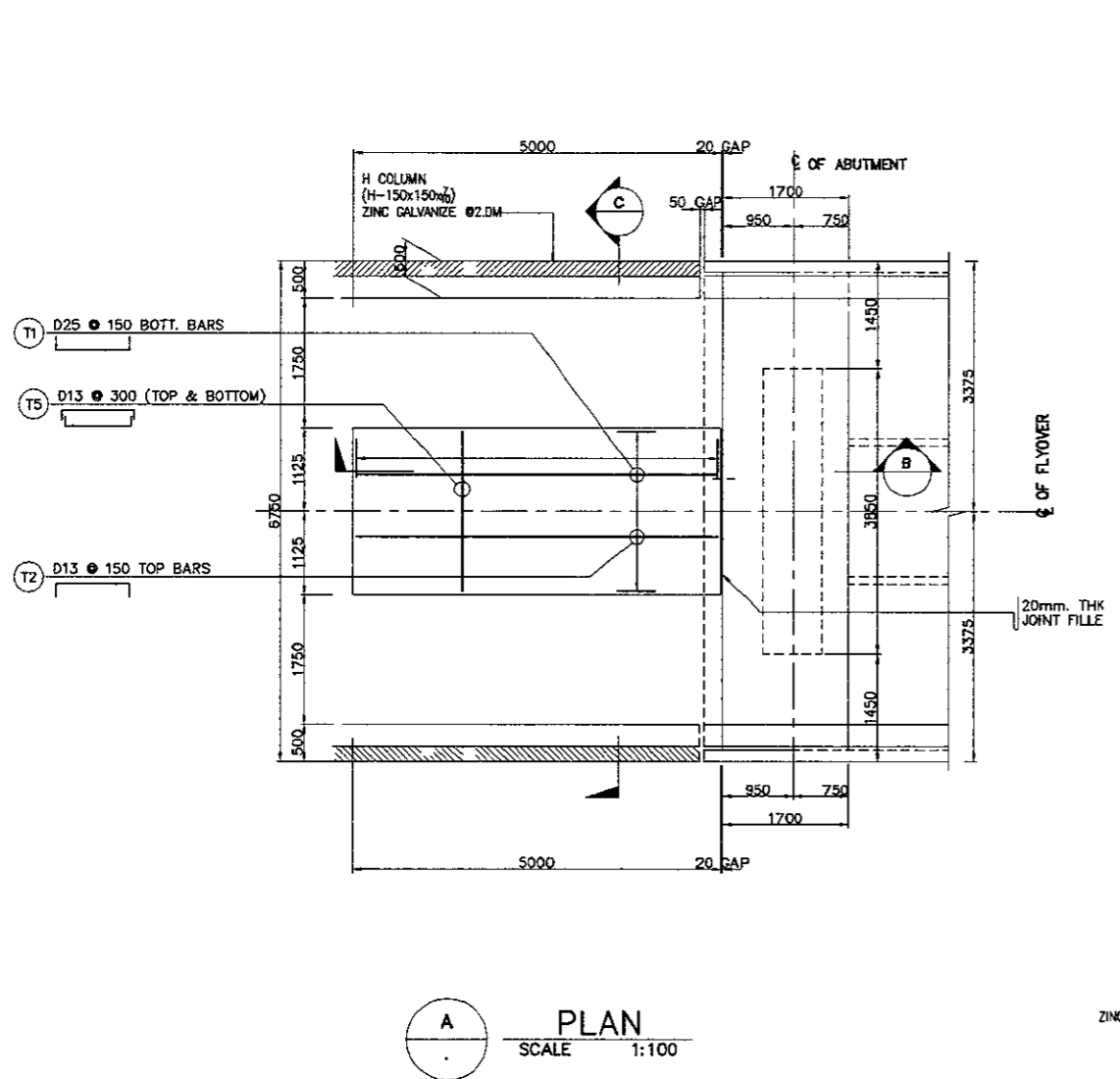


BORED PILE TYPE	BP-MF10
SIZE (mm)	1500
MAIN BARS	
SIZE (mm)	51
NO. LAYERS	1
NO. OF PCS.(1)	28
SPIRAL	
SIZE (mm)	19
NO. / SET	



BORED PILE TYPE	BP-MF11
SIZE (mm)	1800
MAIN BARS	
SIZE (mm)	32
NO. LAYERS	2
NO. OF PCS.(1)	68
NO. OF PCS.(2)	34
SPIRAL	
SIZE (mm)	19
NO. / SET	





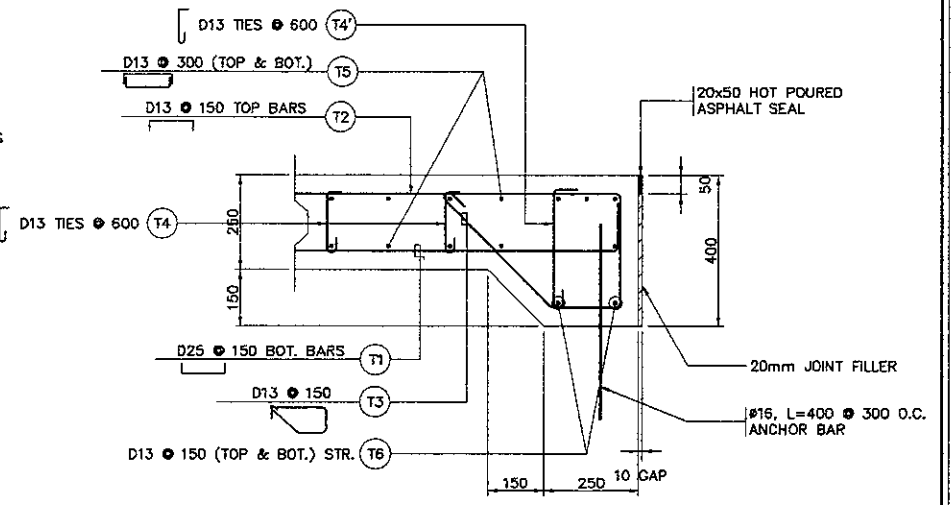
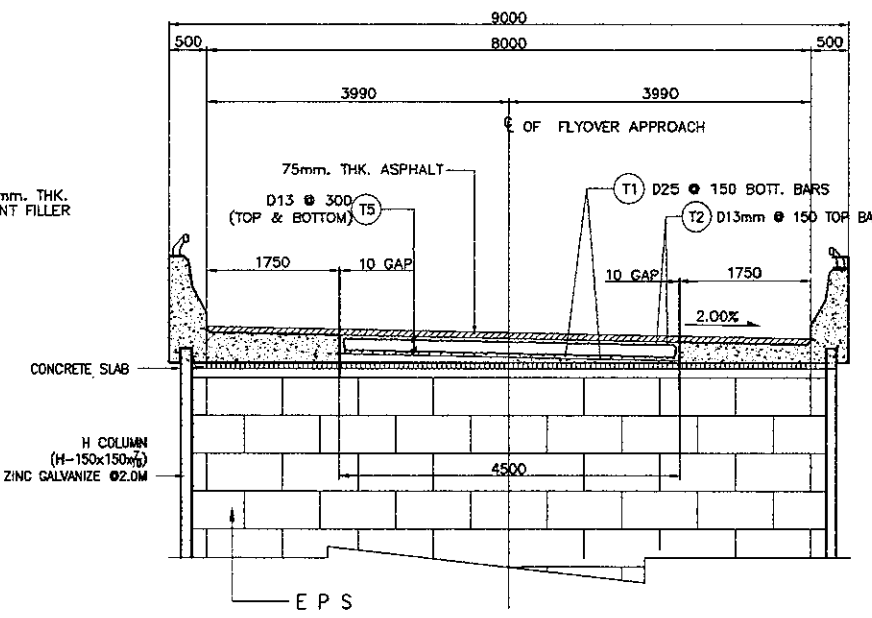
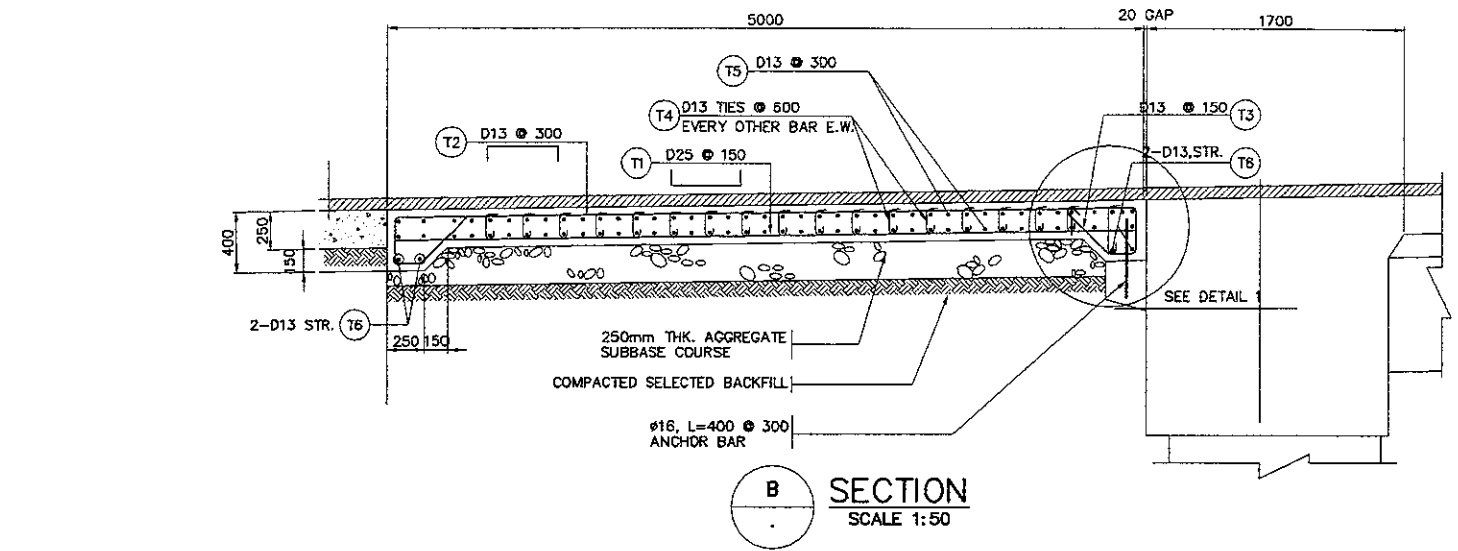
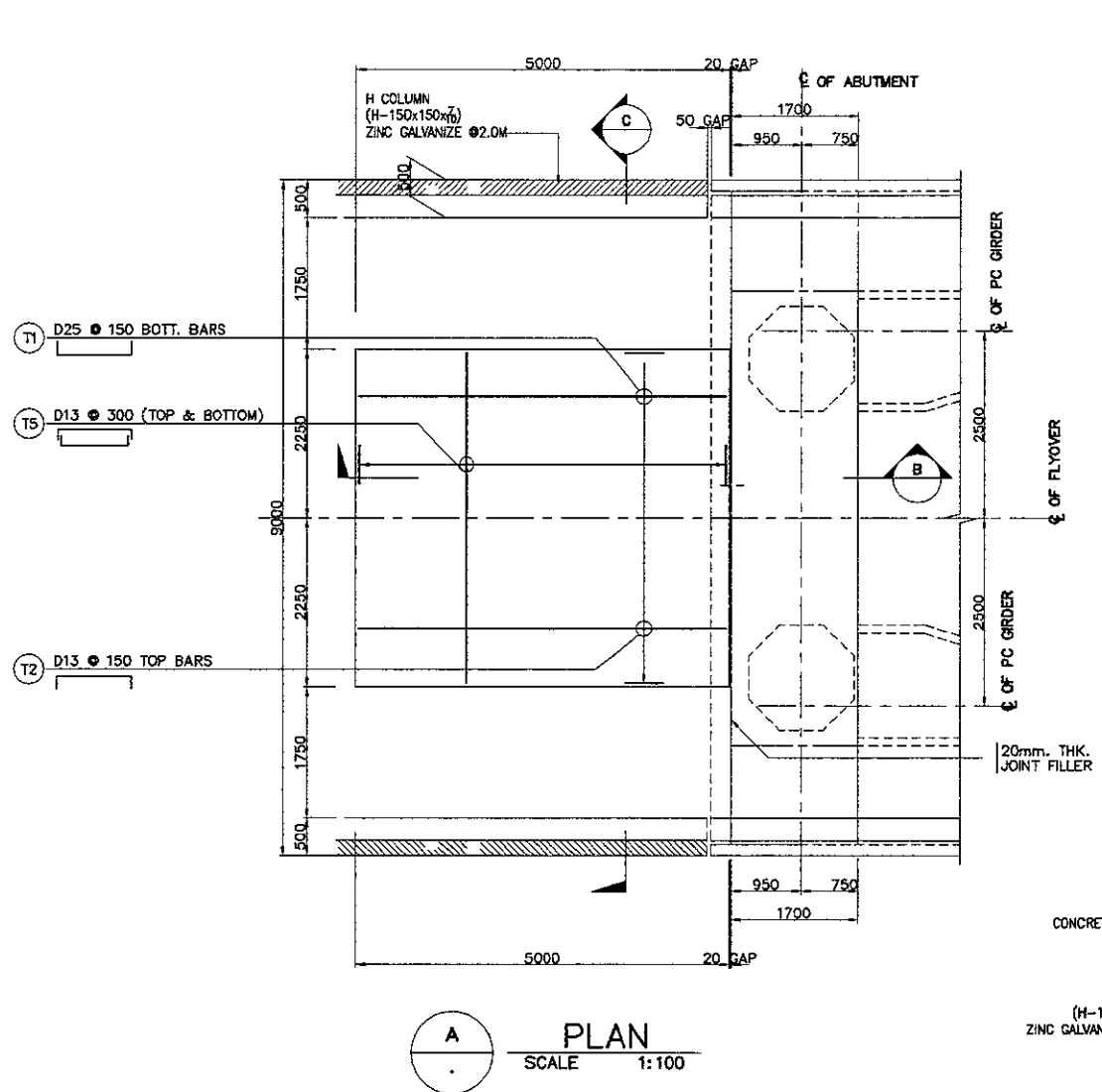
ESTIMATE OF QUANTITIES (PER APPROACH SLAB)

BAR BENDING DIAGRAM		SCHEDULE OF REINFORCEMENT													
①	②	LOCATION	BAR MARK	D (mm)	BEND TYPE	DIMENSION(mm) OUT TO OUT					LENGTH (mm)	NO. REQ'D.	UNIT WEIGHT (kg/m.)	WEIGHT (kg)	
						a	b	c	d	e					f
TRANSITION SLAB		TRANSITION SLAB	T1	25	1	100	4900					5100	15	3.85	295
			T2	13	1	100	4900					5100	15	1.04	80
			T3	13	2	150	300	250	300	550	150	1700	30	1.04	53
			T4	13	3	150	150	200				500	36	1.04	19
			T4'	13	3	150	300	200				650	8	1.04	5
			T5	13	1	100	2150					2350	34	1.04	83
VOLUME OF CONCRETE		APPROACH SLAB	T6	13	4	100	2150				2250	4	1.04	9	
			TOTAL WEIGHT												= 544 kg.
														= 2.8125 cu.m.	

NOTES :
 1. ALL DIMENSION ARE IN MILLIMETERS.
 2. CONCRETE : $f_c' = 24 \text{ MPa}$
 3. REINFORCING STEEL : YIELD STRENGTH = 390 N/mm^2
 4. QUANTITY SHOWN ON TABLE IS FOR ONE APPROACH SLAB ONLY

THE REINFORCEMENT SHOWN ON THIS TABLE IS FOR REFERENCE ONLY. THE CONTRACTOR SHOULD CHECK AND VERIFY ALL DIMENSIONS, SIZES AND QUANTITIES OF REINFORCEMENT.

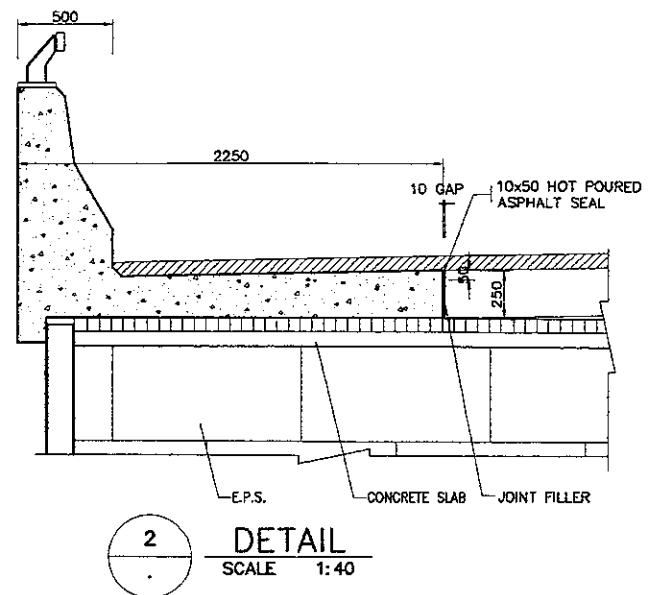
DESIGNED BY	CHECKED BY	SUBMITTED BY
Name: A. GOURLEY	Name: T. OKUMURA	Name: M. KIUCHI
Sign: _____	Sign: _____	Sign: _____
Date: _____	Date: _____	Date: _____

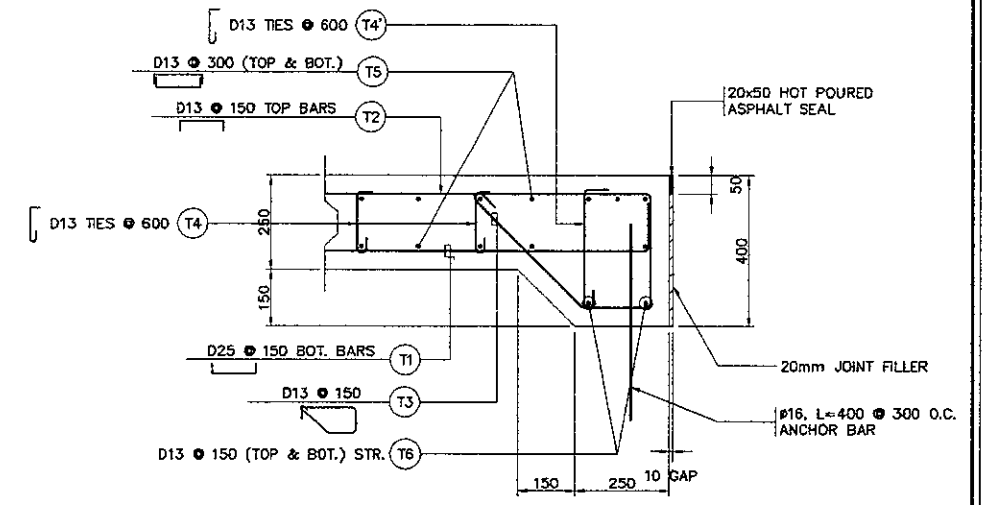
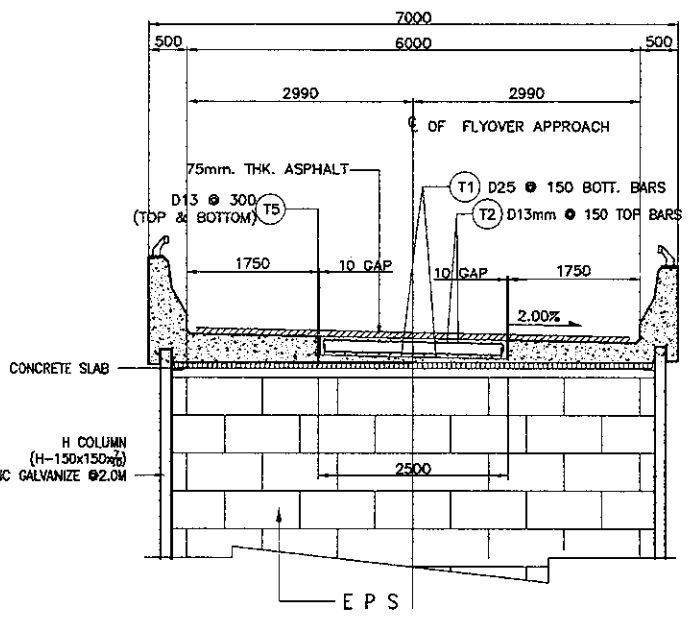
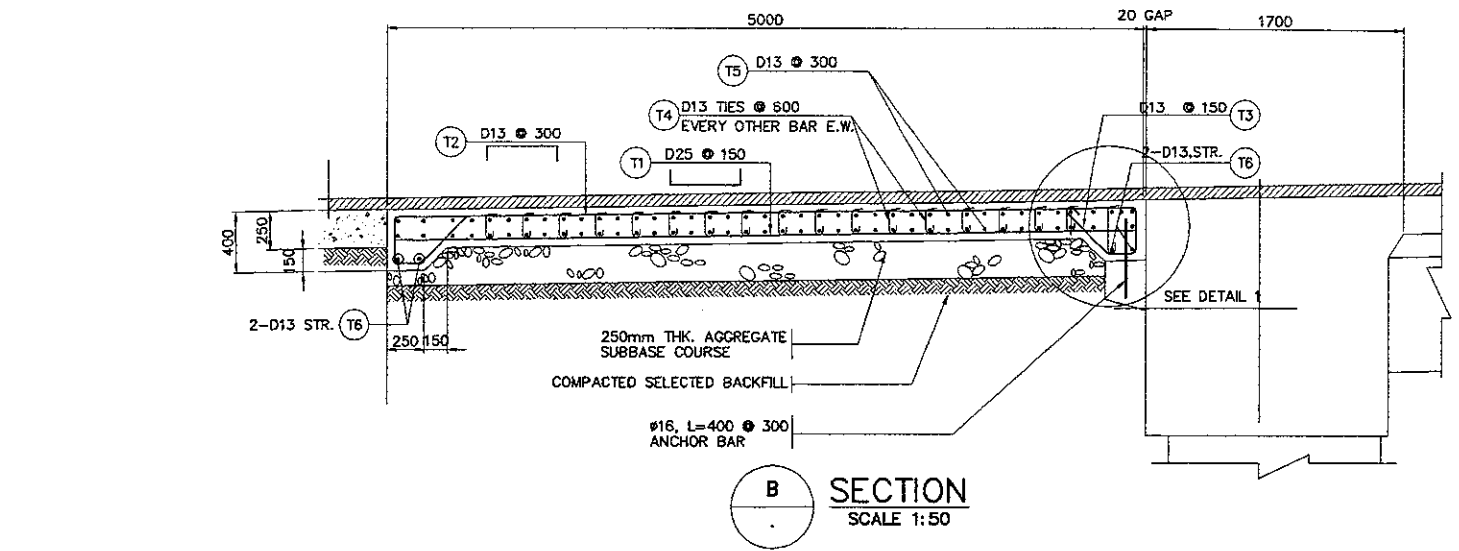
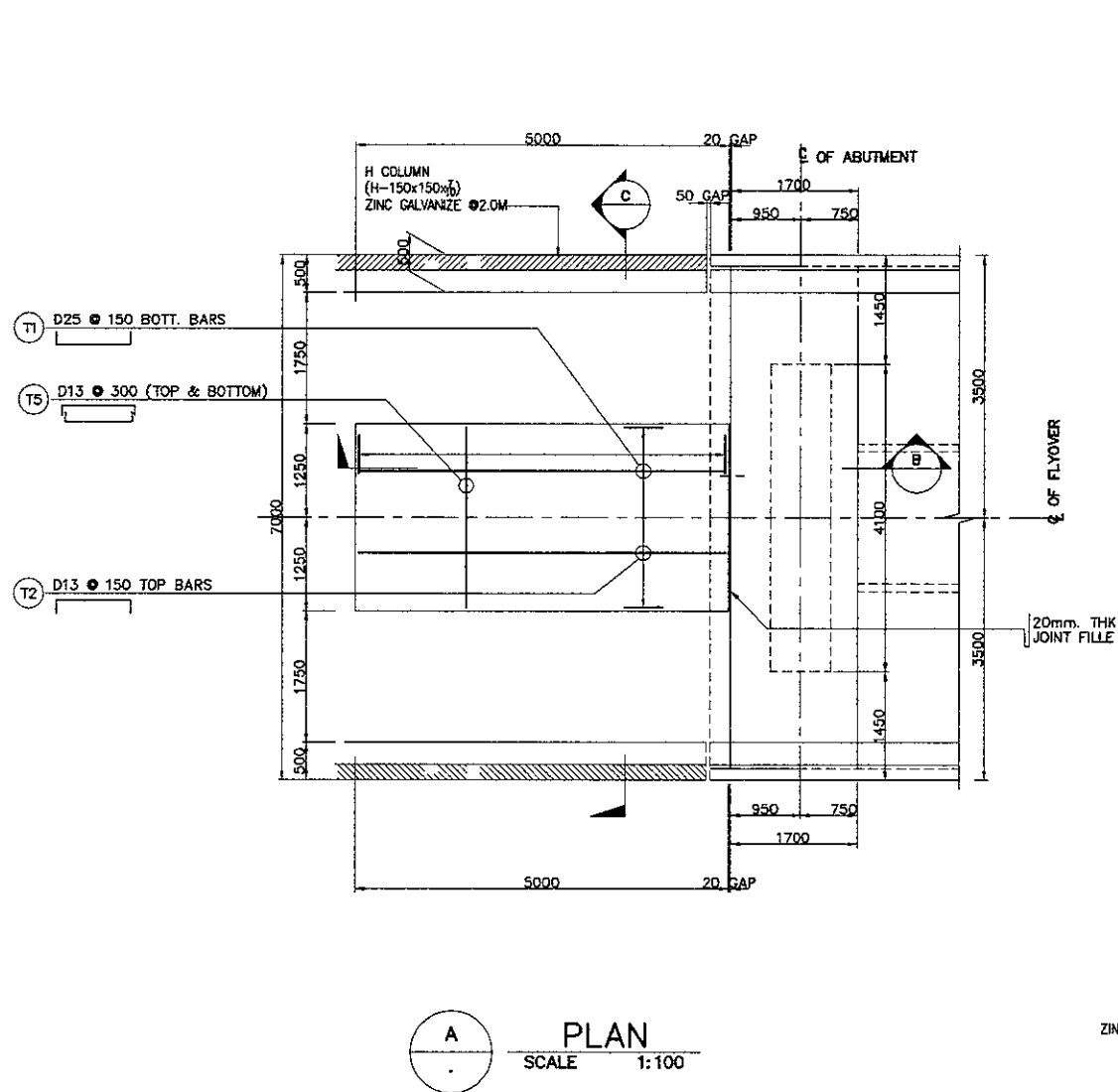


ESTIMATE OF QUANTITIES (PER APPROACH SLAB)

BAR BENDING DIAGRAM		SCHEDULE OF REINFORCEMENT													
NO.	DIAGRAM	LOCATION	BAR MARK	D (mm)	BEND TYPE	DIMENSION(mm) OUT TO OUT					LENGTH (mm)	NO. REQ'D.	UNIT WEIGHT (kg/m.)	WEIGHT (kg)	
						a	b	c	d	e					f
TRANSITION SLAB		T1	T1	25	1	100	4900					5100	30	3.85	589
		T2	T2	13	1	100	4900					5100	30	1.04	159
		T3	T3	13	2	150	300	250	300	550	150	1700	60	1.04	106
		T4	T4	13	3	150	150	200				500	72	1.04	37
		T4'	T4'	13	3	150	300	200				550	16	1.04	11
		T5	T5	13	1	100	4400					4600	34	1.04	163
VOLUME OF CONCRETE		T6	T6	13	4	100	4400				4500	4	1.04	19	
		TOTAL WEIGHT = 1,084 kg.													
APPROACH SLAB											= 5.625 cu.m.				
TOTAL VOLUME A1 + A2 = 11.250 cu.m.															

- NOTES :
- ALL DIMENSION ARE IN MILLIMETERS.
 - CONCRETE : $f_c' = 24 \text{ MPa}$
 - REINFORCING STEEL : YIELD STRENGTH = 390 N/mm^2
 - QUANTITY SHOWN ON TABLE IS FOR ONE APPROACH SLAB ONLY



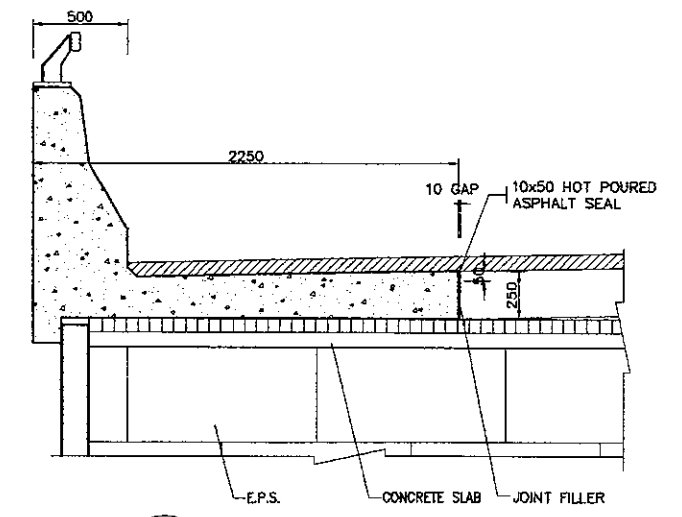


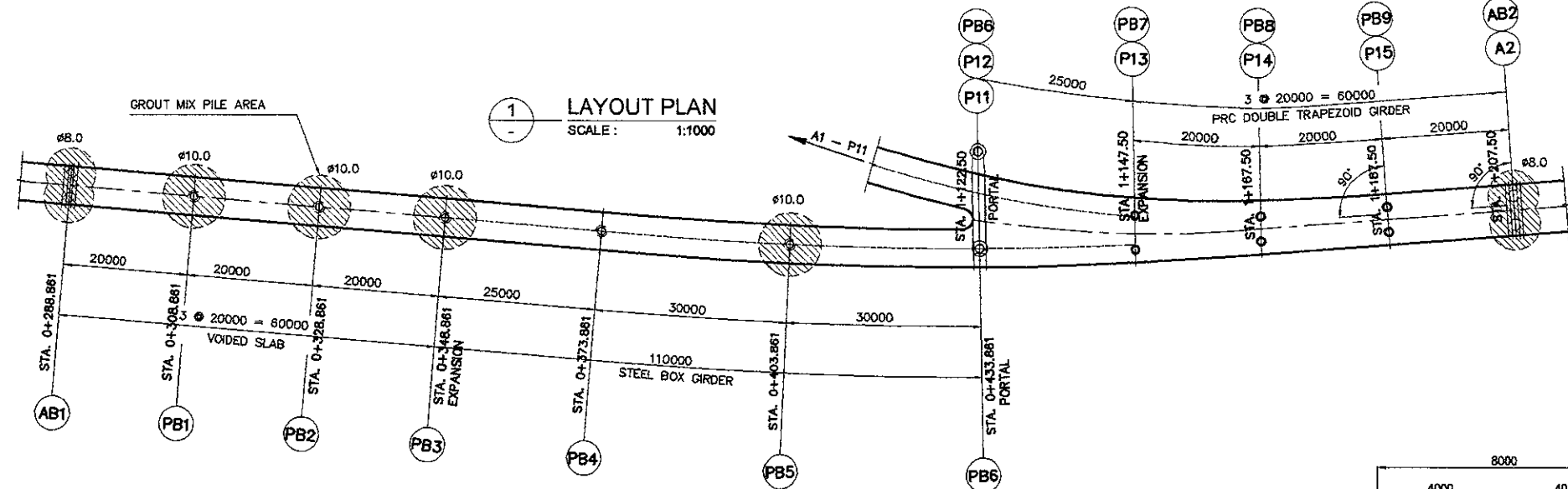
ESTIMATE OF QUANTITIES (PER APPROACH SLAB)

BAR BENDING DIAGRAM		SCHEDULE OF REINFORCEMENT												
NO.	DIAGRAM	LOCATION	BAR MARK	D (mm)	BEND TYPE	DIMENSION(mm) OUT TO OUT					LENGTH (mm)	NO. REQ'D.	UNIT WEIGHT (kg/m.)	WEIGHT (kg)
						a	b	c	d	e				
TRANSITION SLAB	[Diagram 1]	T1	T25	1	100	4900					5100	17	3.85	334
		T2	T13	1	100	4900					5100	17	1.04	90
		T3	T13	2	150	300	250	300	550	150	1700	34	1.04	60
		T4	T13	3	150	150	200				500	45	1.04	23
		T4'	T13	3	150	300	200				650	10	1.04	7
		T5	T13	1	100	2400					2600	34	1.04	92
VOLUME OF CONCRETE	[Diagram 2]	T6	T13	4	100	2400					2500	4	1.04	10
		TOTAL WEIGHT											= 617 kg.	
APPROACH SLAB											= 3.125 cu.m.			

THE REINFORCEMENT SHOWN ON THIS TABLE IS FOR REFERENCE ONLY. THE CONTRACTOR SHOULD CHECK AND VERIFY ALL DIMENSIONS, SIZES AND QUANTITIES OF REINFORCEMENT.

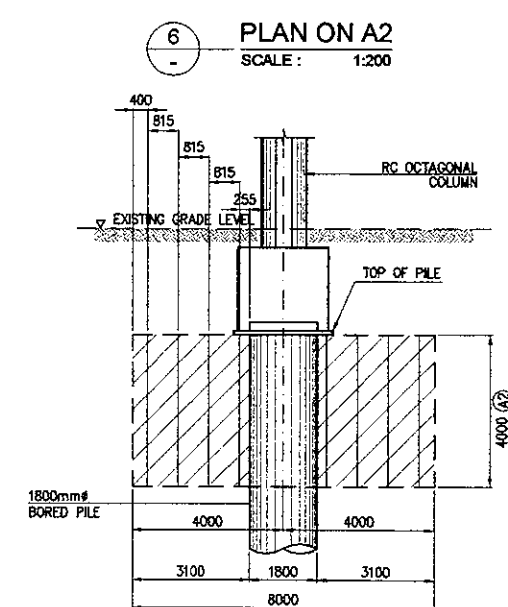
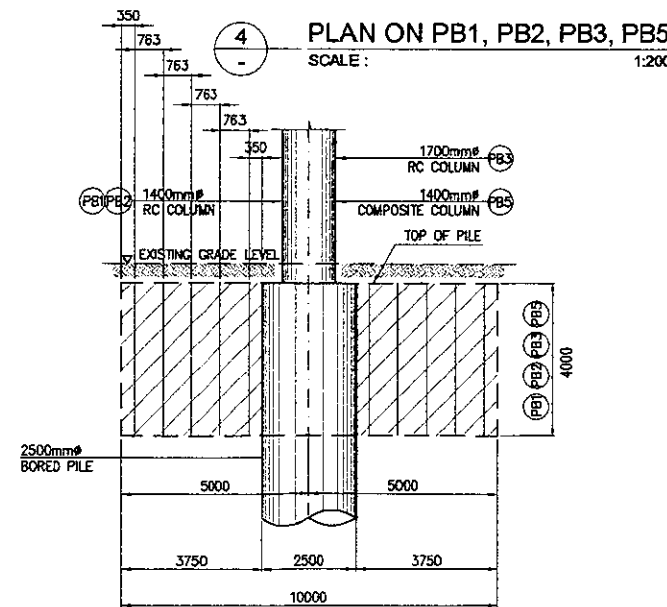
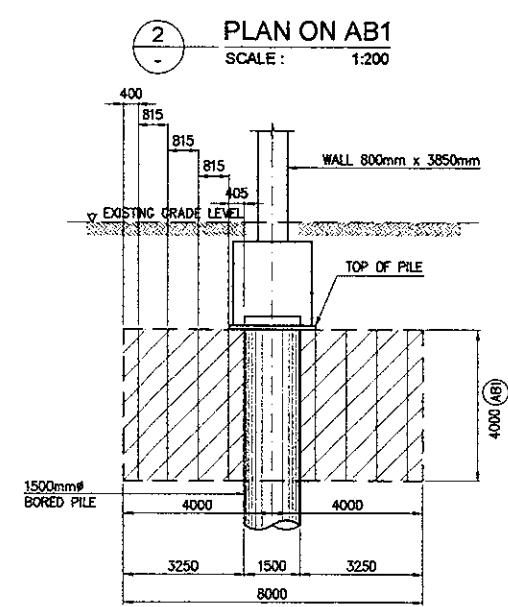
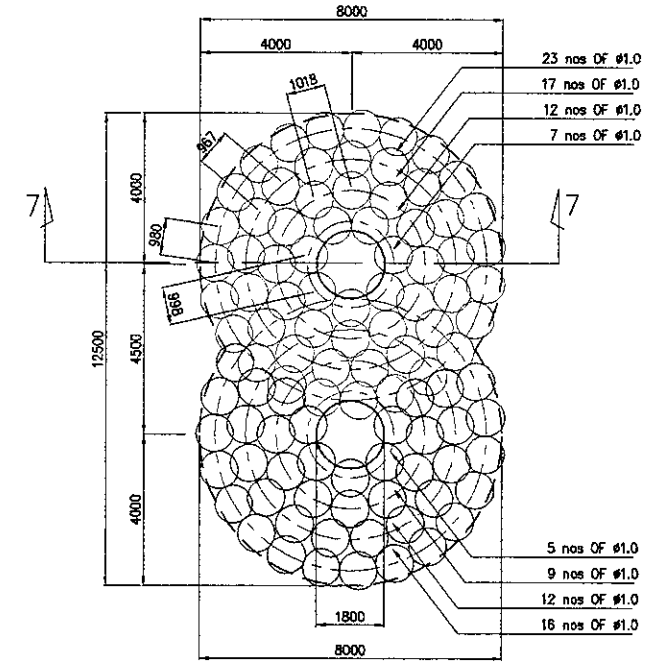
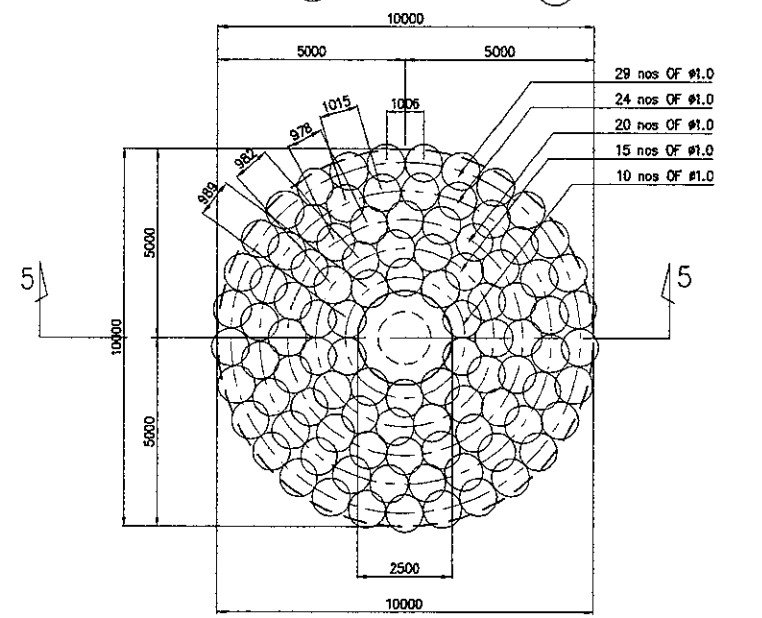
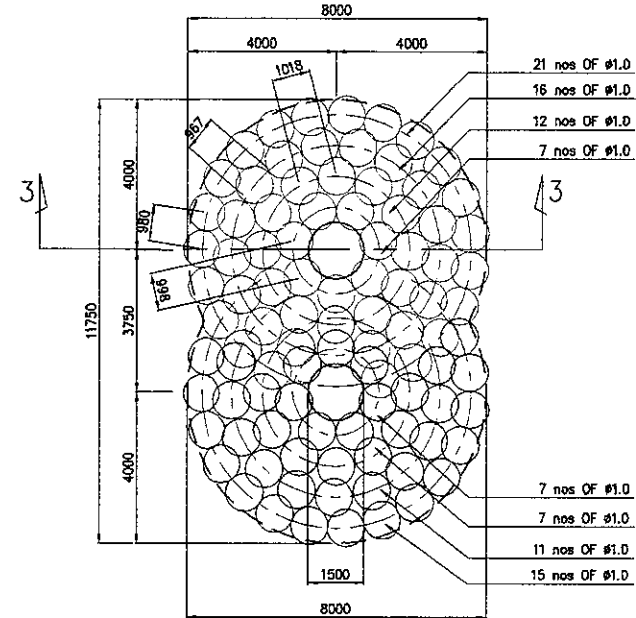
- NOTES :
- ALL DIMENSION ARE IN MILLIMETERS.
 - CONCRETE : $f_c' = 24 \text{ MPa}$
 - REINFORCING STEEL : YIELD STRENGTH = 390 N/mm^2
 - QUANTITY SHOWN ON TABLE IS FOR ONE APPROACH SLAB ONLY





SCHEDULE OF SOIL TREATMENT

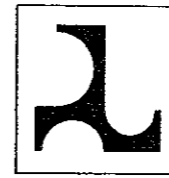
PIER	ELEVATION TOP OF PILE (m)	ELEVATION BOTTOM OF GROUT MIX PILE (m)	NOS OF GROUT MIX	VOLUME OF GROUT MIX PILE (m³)
AB1	-0.400	-4.400	96	301.593
PB1	1.300	-2.700	98	307.876
PB2	1.300	-2.700	98	307.876
PB3	1.700	-2.300	98	307.876
PB5	2.900	-1.100	98	307.876
A2	0.200	-3.800	101	317.301
TOTALS			589	1850.398



- NOTES :
- FOR GENERAL NOTES REFER TO DRAWING NO. TGE 011
 - ALL DIMENSION ARE IN MM
 - ALL ELEVATION ARE IN M
 - GROUT MIX PILE SHALL BE ACHIEVED BY MEANS OF A GROUT MIX METHOD PROPOSED BY THE CONTRACTOR IN ACCORDANCE WITH THE SPECIFICATION AND APPROVED BY THE ENGINEER



JAPAN INTERNATIONAL
COOPERATION AGENCY



DIRECTORATE GENERAL OF HIGHWAY
MINISTRY OF PUBLIC WORKS
REPUBLIC OF INDONESIA

M. S. E. WALL

 KATAHIRA & ENGINEERS INTERNATIONAL

MECHANICALLY STABILIZED EARTH WALL

NOTES :

1. THE MECHANICALLY STABILIZED EARTH WALL SHOWN IN THIS SET OF DRAWINGS SHALL COMPLY WITH THE REQUIREMENTS OF AASHTO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, DIVISION I AND II." THE CONTRACTOR MAY PROPOSE WALL TYPES OTHER THAN THAT SHOWN IN THE DRAWINGS AND APPROVED BY THE ENGINEER. DESIGN LIFE = 75 YEARS

2. MATERIALS

2.1 PRECAST CONCRETE PANELS

28TH DAY COMPRESSIVE STRENGTH OF CONCRETE = 30 MPa
THE EXTERIOR FACE OF THE PANELS MUST BE UNIFORM AND MUST NOT SHOW SIGNIFICANT VARIATIONS FROM ONE PANEL TO ANOTHER. PANELS SHOULD CONFORM TO THE DIMENSIONS SHOWN AND BE FREE OF HONEYCOMBS, STRAINS OR DEEP CRACKS IN THE FACE.

2.2 STEEL REINFORCING STRIPS

STEEL REINFORCING STRIPS SHALL BE HOT DIPPED GALVANIZED IN ACCORDANCE WITH ASTM A 123 AND HAVE A CORROSION-RESISTANCE DURABILITY IN ACCORDANCE WITH AASHTO REQUIREMENTS. A MINIMUM AVERAGE ZINC COATING MASS OF 600 GRAMS PER METER SQUARE AS PER ISO 1460 SHALL BE ADAPTED.
THE STEEL REINFORCING STRIPS(60mm x 4mm) SHALL BE RIBBED FLATS OF GRADE 350 (Fy=350MPa) AND CONFORMING TO THE LATEST AASHTO REQUIREMENTS. STEEL REINFORCING STRIPS MUST EXHIBIT A MAX. TENSILE LOAD OF 32.05 KN PER STRIP. THE REINFORCING STRIPS SHALL HAVE A MINIMUM APPARENT COEFFICIENT OF FRICTION, f*, OF 2.0 AT GROUND LEVEL.

2.3 STRUCTURE BACKFILL

THE STRUCTURE BACKFILL FOR MECHANICALLY STABILIZED EARTH WALL SHALL CONFORM TO THE FOLLOWING GRADING REQUIREMENTS.

SIEVE SIZE	PERCENT PASSING
4"	100
NO. 40	0-60
NO. 200	0-15

OTHER REQUIREMENTS FOR BACKFILL SHALL BE IN ACCORDANCE WITH THE LATEST AASHTO REQUIREMENTS OR AS PER MANUFACTURER'S / SUPPLIER'S RECOMMENDATIONS.

2.4 JOINT FILLER

FILLER FOR VERTICAL JOINTS SHALL BE FLEXIBLE OPEN CELL POLYURETHANE FOAM STRIPS OF 40mm SQUARE CROSS-SECTION OR EQUIVALENT. THE VERTICAL JOINT SHALL BE ENCLOSED WITH GEOTEXTILE MEMBRANE AS SHOWN IN THE DRAWINGS. HORIZONTAL JOINT FILLER SHALL BE RESIN BONDED CORK FILLER BOARD CONFORMING TO ASTM D 1752 AND RUBBER PAD WITH SHORE HARDNESS OF 85 +0, -5.

2.5 CONCRETE LEVELING PAD

CONCRETE LEVELING PAD SHALL HAVE A 28TH DAY COMPRESSIVE STRENGTH OF 21MPa.

3. ALLOWABLE SOIL BEARING CAPACITY

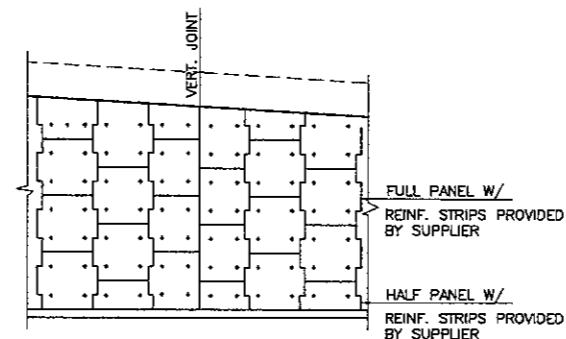
THE CONTRACTOR SHALL VERIFY THAT THE ALLOWABLE SOIL BEARING CAPACITY AT FOUNDATION LEVEL SHALL BE SUFFICIENT FOR M. S. E. WALL.

4. FOUNDATION TREATMENT

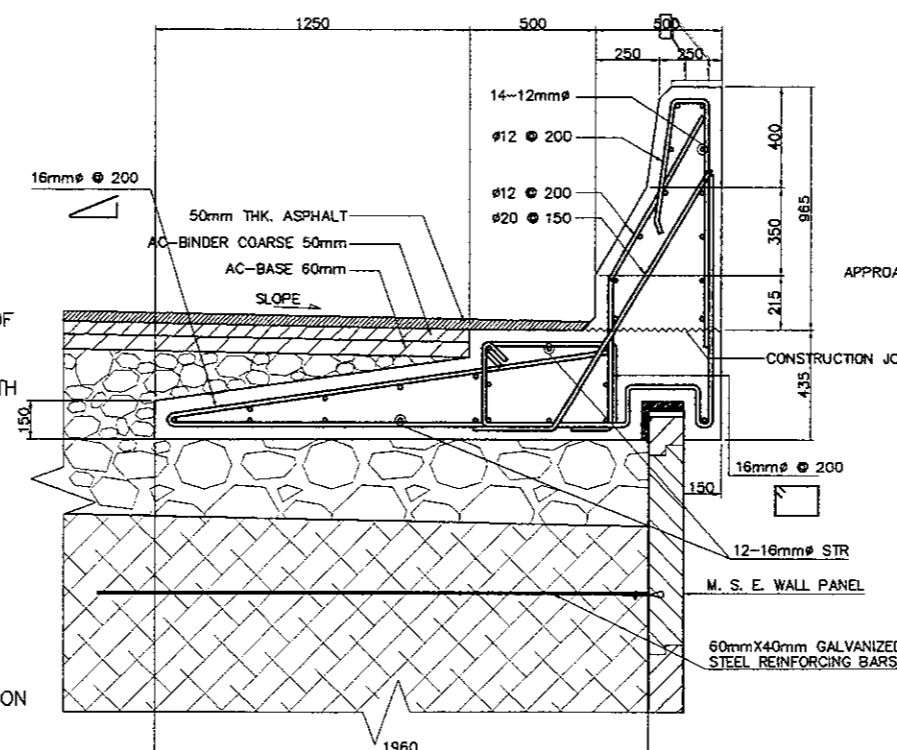
THE CONTRACTOR SHALL PREPARE THE FOUNDATION FOR MECHANICALLY STABILIZED EARTH WALL (M.S.E.W) IN ACCORDANCE WITH THE PLANS AND SHALL VERIFY IF THE EXISTING FOUNDATION IS SUITABLE TO SUPPORT THE M.S.E.W. IN AREAS WHERE EXCAVATION OF FOUNDATION MATERIAL IS NECESSARY, THE CONTRACTOR SHALL PERFORM SUCH EXCAVATION TO THE LIMITS SHOWN IN THE DRAWINGS. THE EXCAVATED MATERIALS SHALL BE REPLACED WITH STRUCTURE BACKFILL MATERIAL MEETING THE REQUIREMENTS OF THE EARTH RETAINING SYSTEM.

5. CONSTRUCTION

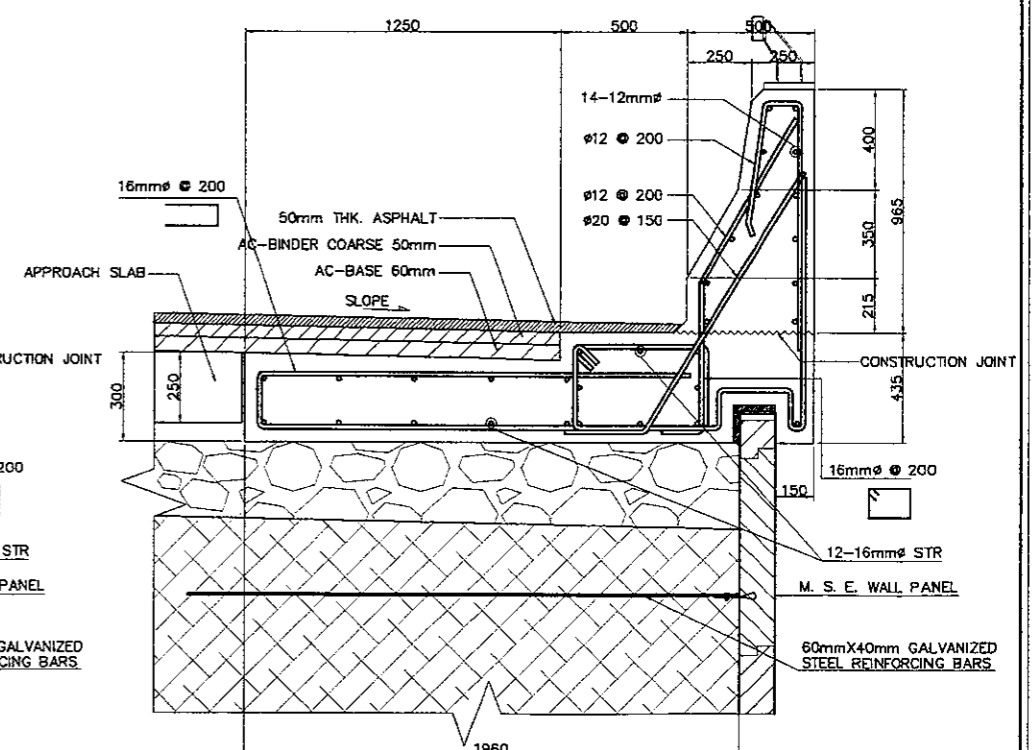
THE MECHANICALLY STABILIZED EARTH WALL SHALL BE CONSTRUCTED IN ACCORDANCE WITH AASHTO REQUIREMENTS OR RECOMMENDED BY THE MANUFACTURER / SUPPLIER. THE CONTRACTOR SHALL SUBMIT, FOR THE APPROVAL OF THE ENGINEER, WORKING PLAN AND DRAWINGS OF CONSTRUCTION METHOD, SEQUENCE, SAFETY AND QUALITY ASSURANCE.



TYPICAL WALL PANELS

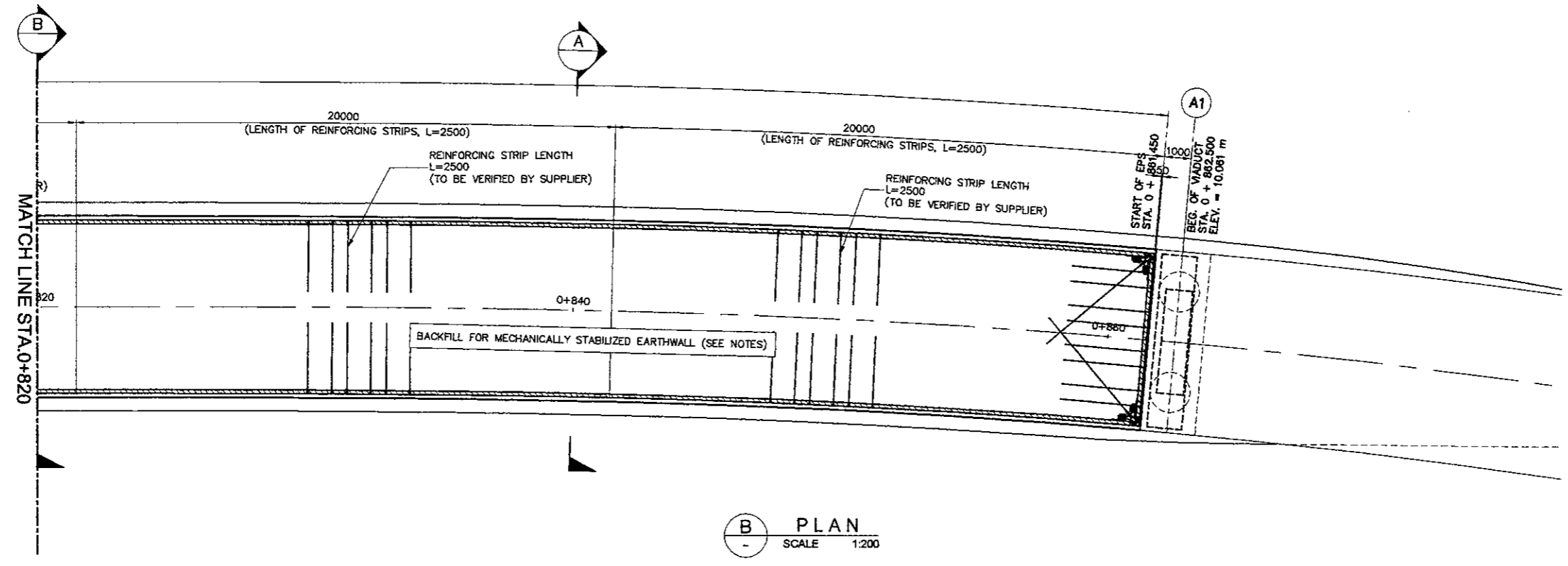
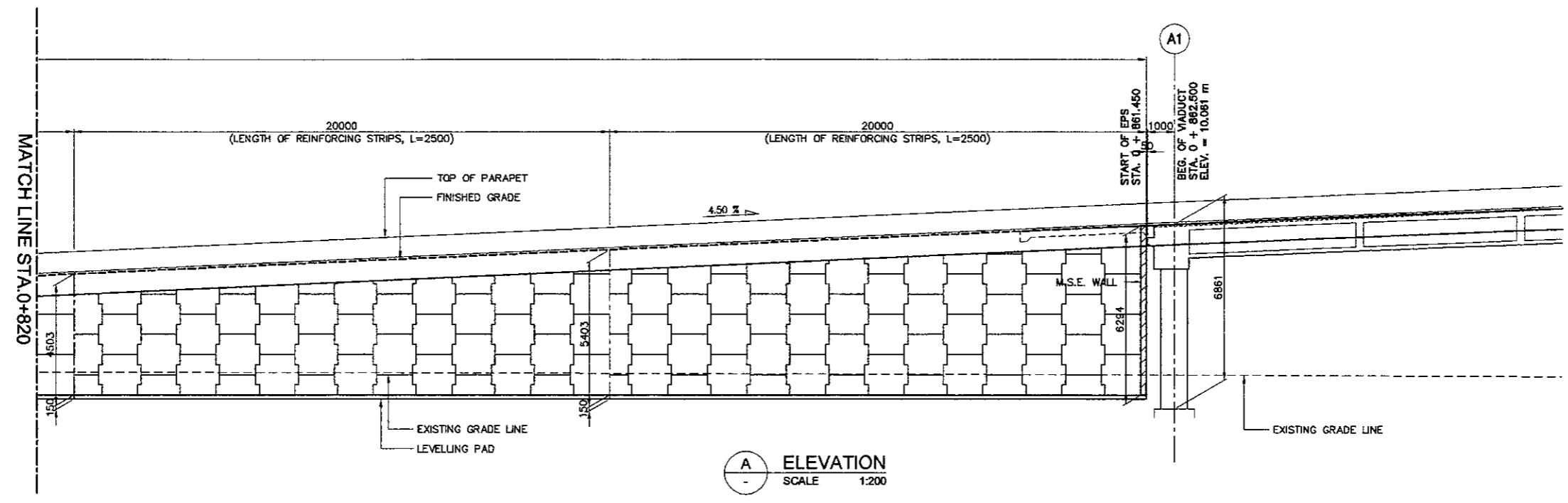


STANDARD DETAIL OF CONCRETE RAILING
AT M. S. E. WALL



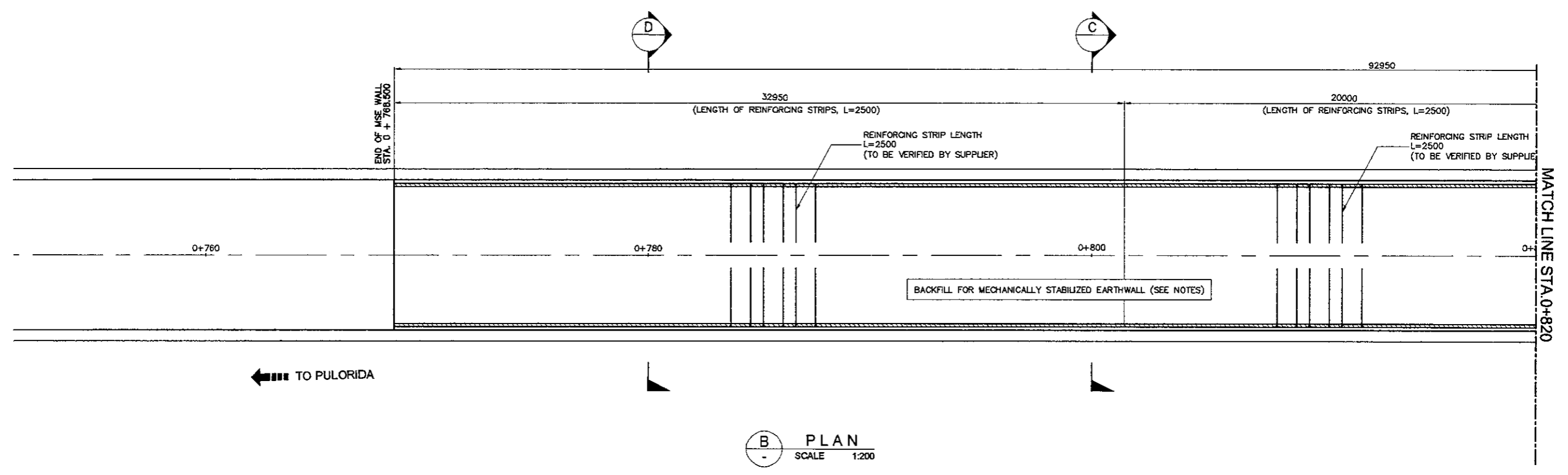
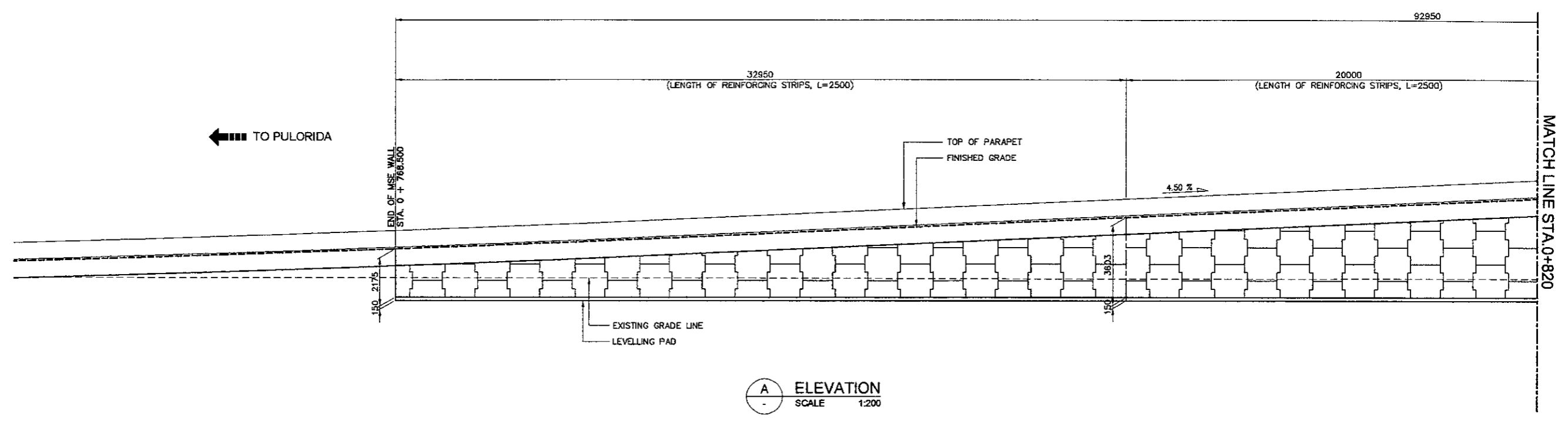
STANDARD DETAIL OF CONCRETE RAILING
AT APPROACH SLAB

DESIGNED BY		CHECKED BY		SUBMITTED BY	
Name	T. OKUMURA	Name	T. OKUMURA	Name	M. KIUCHI
Sign		Sign		Sign	
Date		Date		Date	



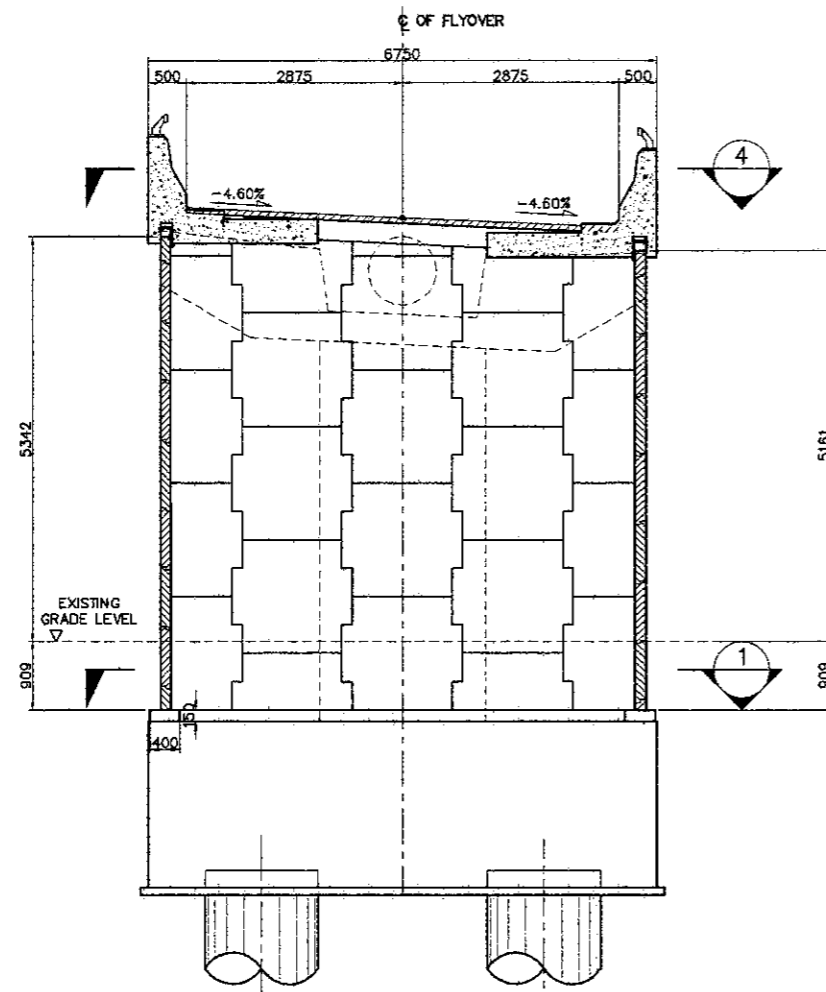
1 PLAN & PROFILE OF MSE WALL (ABUT. A1)
 SCALE 1:200

DESIGNED BY		CHECKED BY		SUBMITTED BY	
Name	T. OKUMURA	Name	T. OKUMURA	Name	M. KIUCHI
Sign		Sign		Sign	
Date		Date		Date	

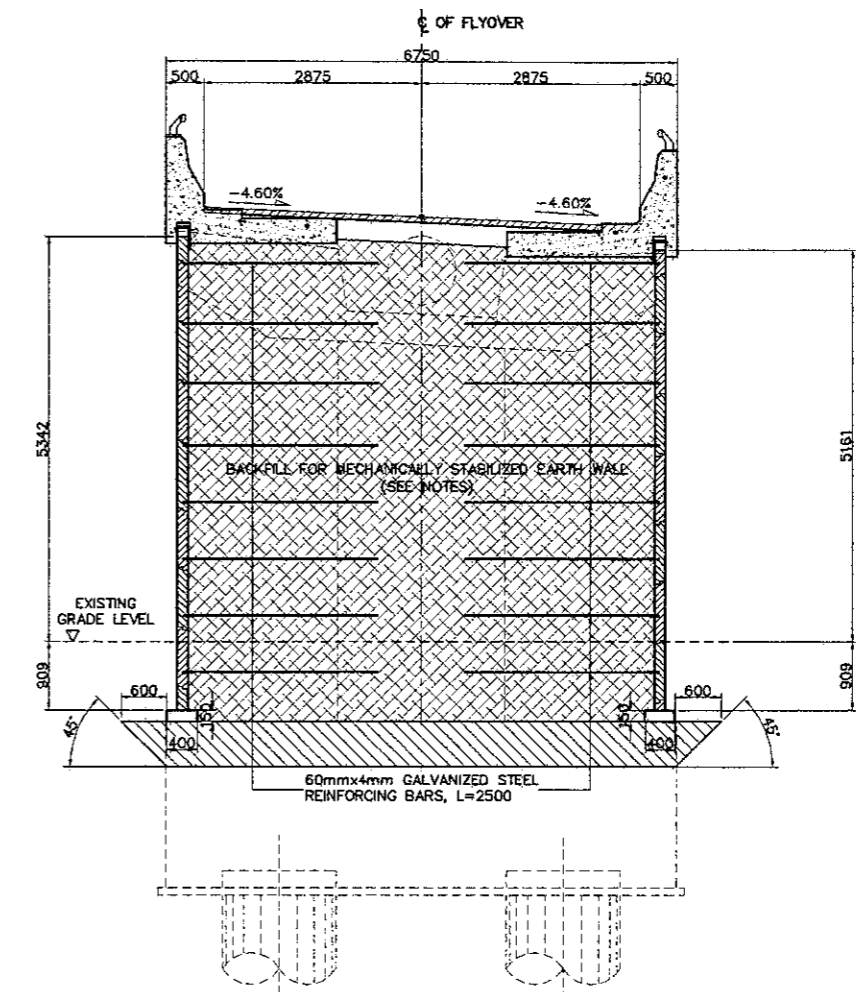


1 PLAN & PROFILE OF MSE WALL (ABUT. A1)
 SCALE 1:200

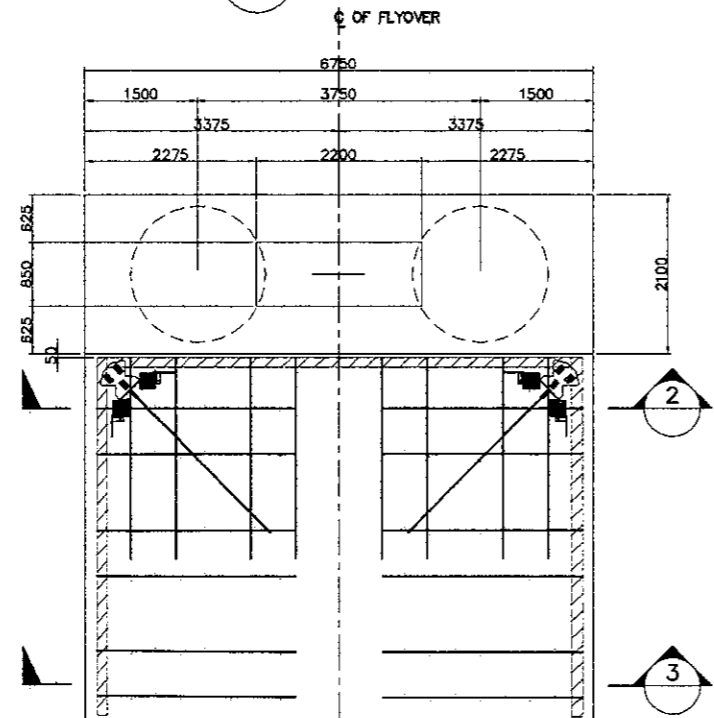
DESIGNED BY	CHECKED BY	SUBMITTED BY
Name T. OKUMURA	Name T. OKUMURA	Name M. KIUCHI
Sign	Sign	Sign
Date	Date	Date



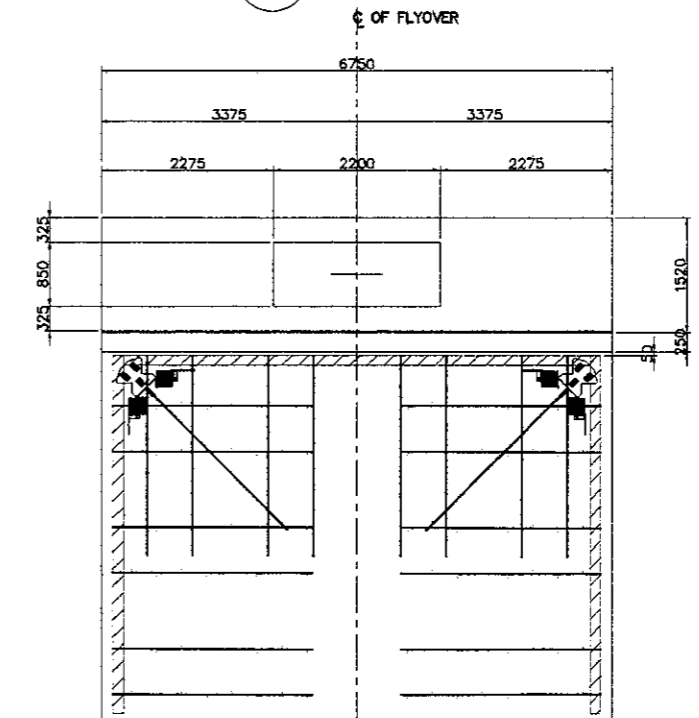
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 SCALE 1:100



3 SECTION
 SCALE 1:100

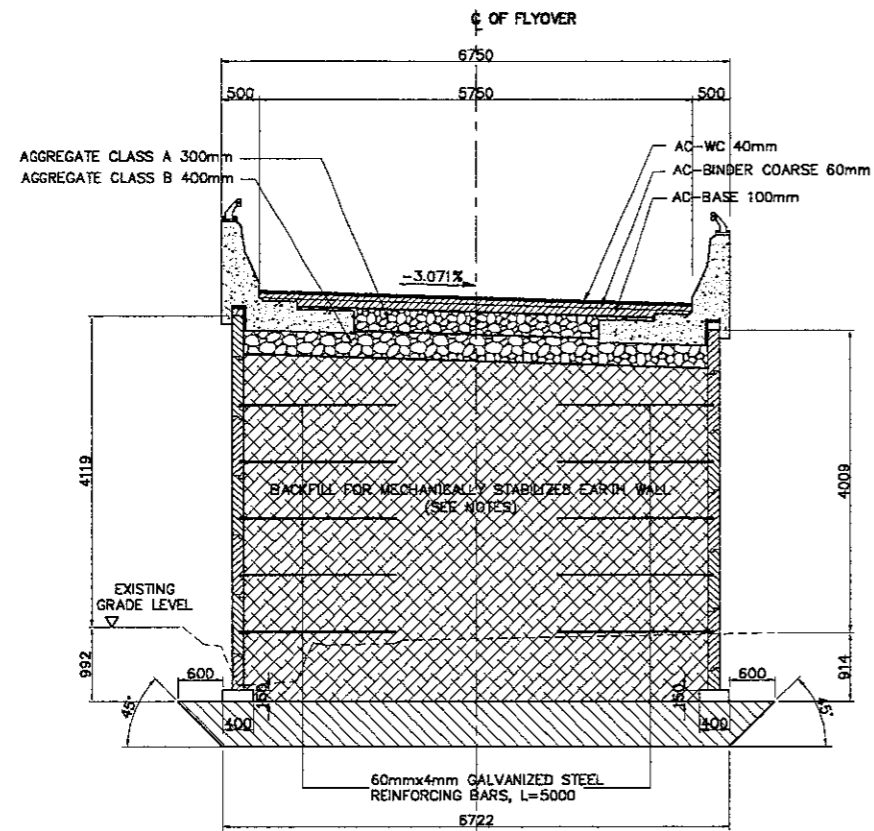


1 SECTION
 SCALE 1:100



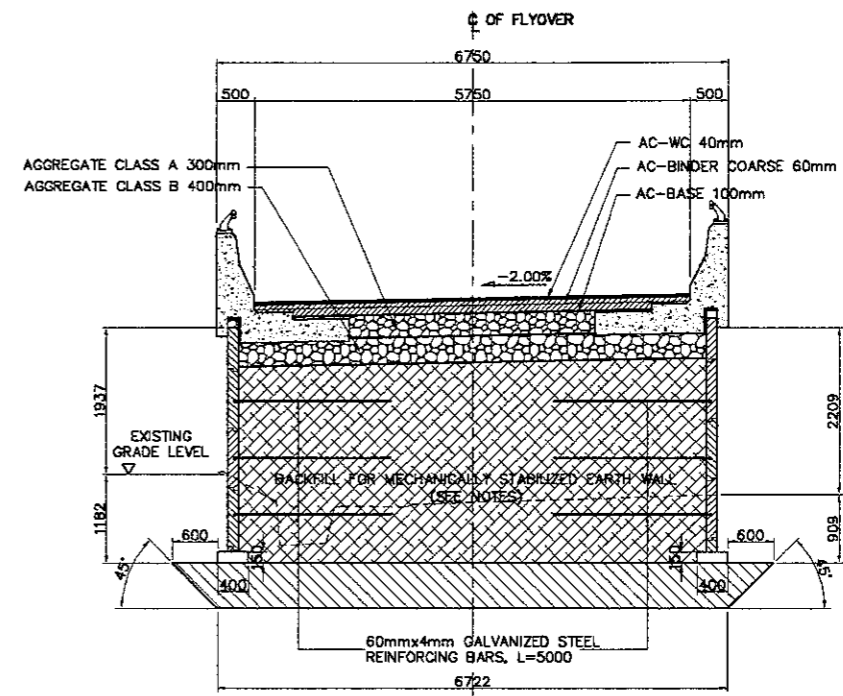
4 SECTION
 SCALE 1:100

DESIGNED BY	CHECKED BY	SUBMITTED BY
Name T. OKUMURA	Name T. OKUMURA	Name M. KIUCHI
Sign	Sign	Sign
Date	Date	Date



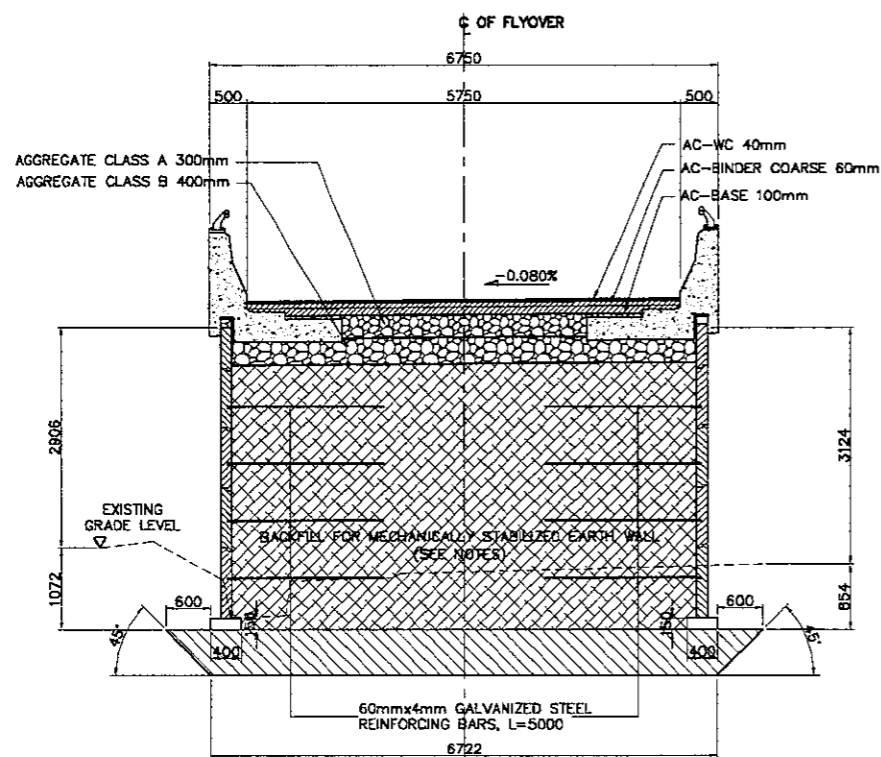
A SECTION

 SCALE 1:100



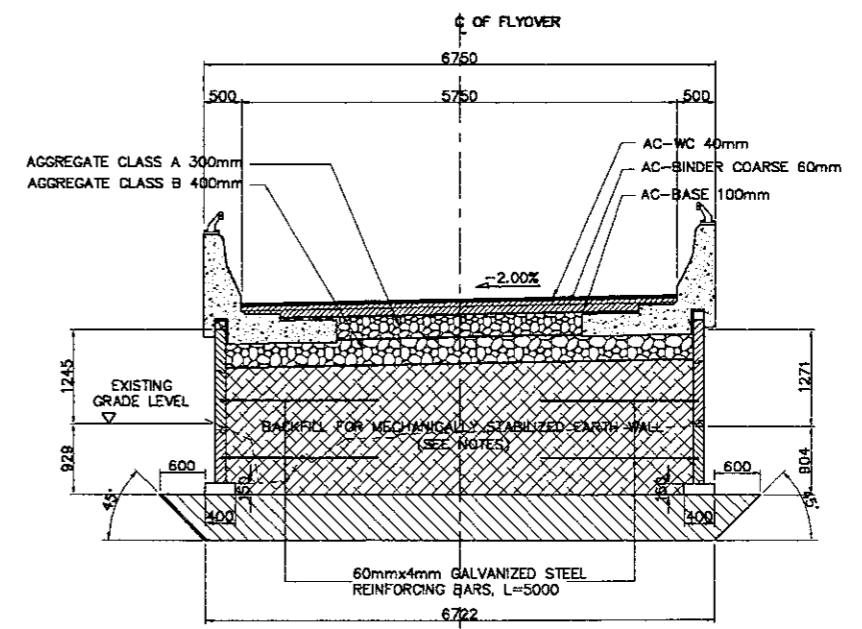
C SECTION

 SCALE 1:100



B SECTION

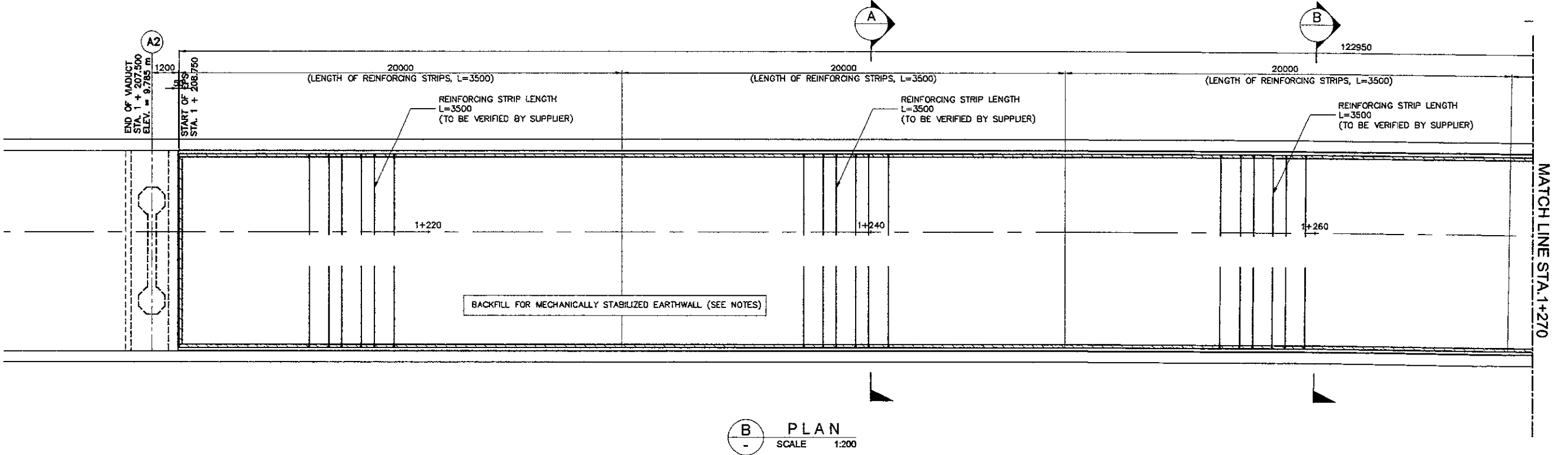
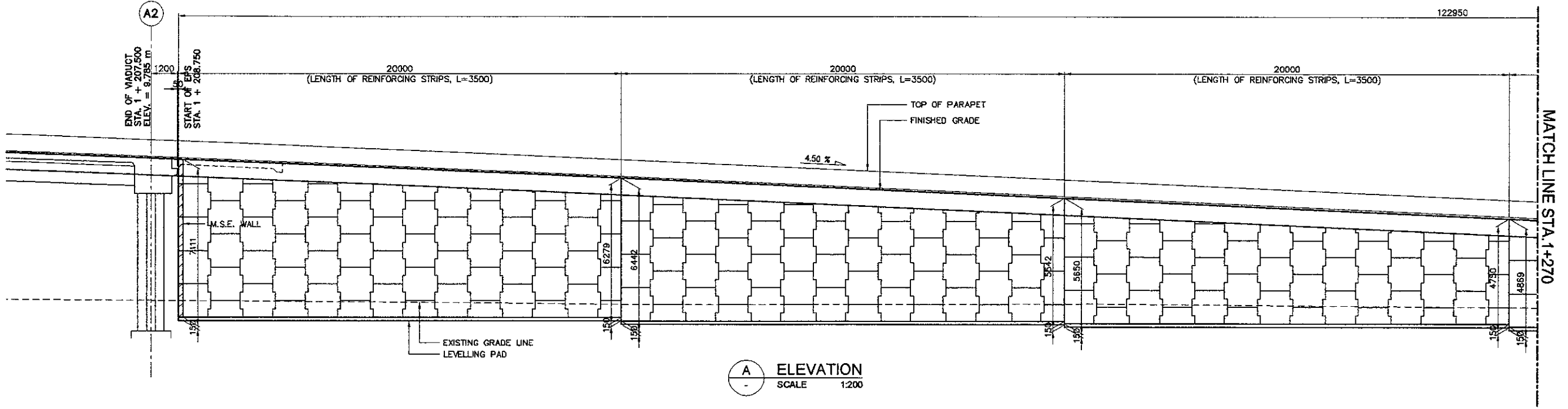
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D SECTION

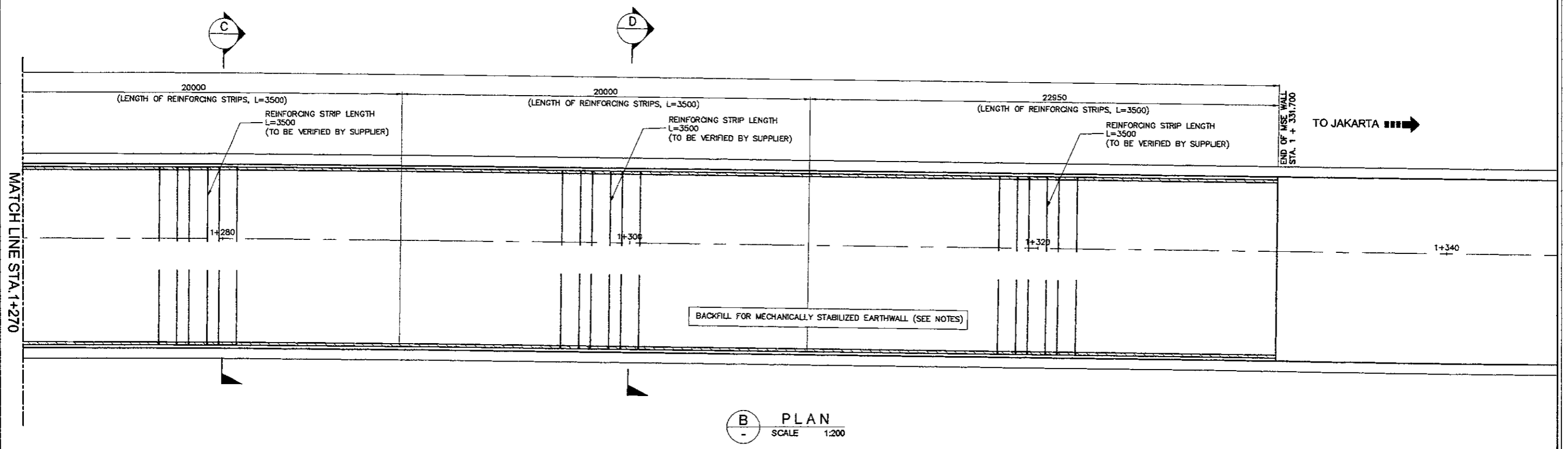
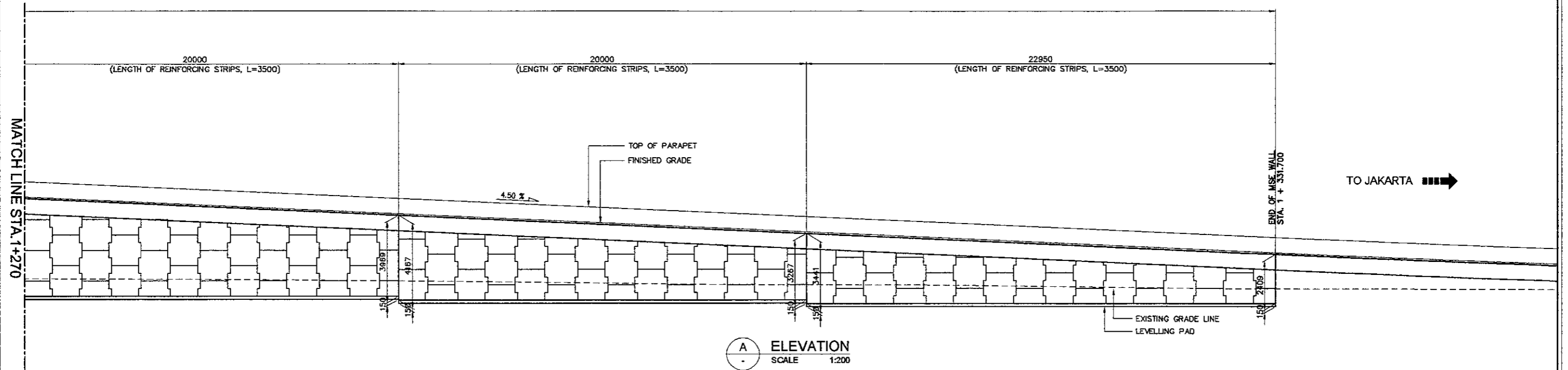
 SCALE 1:100

DESIGNED BY	CHECKED BY	SUBMITTED BY
Name T. OKUMURA	Name T. OKUMURA	Name M. KIUCHI
Sign	Sign	Sign
Date	Date	Date



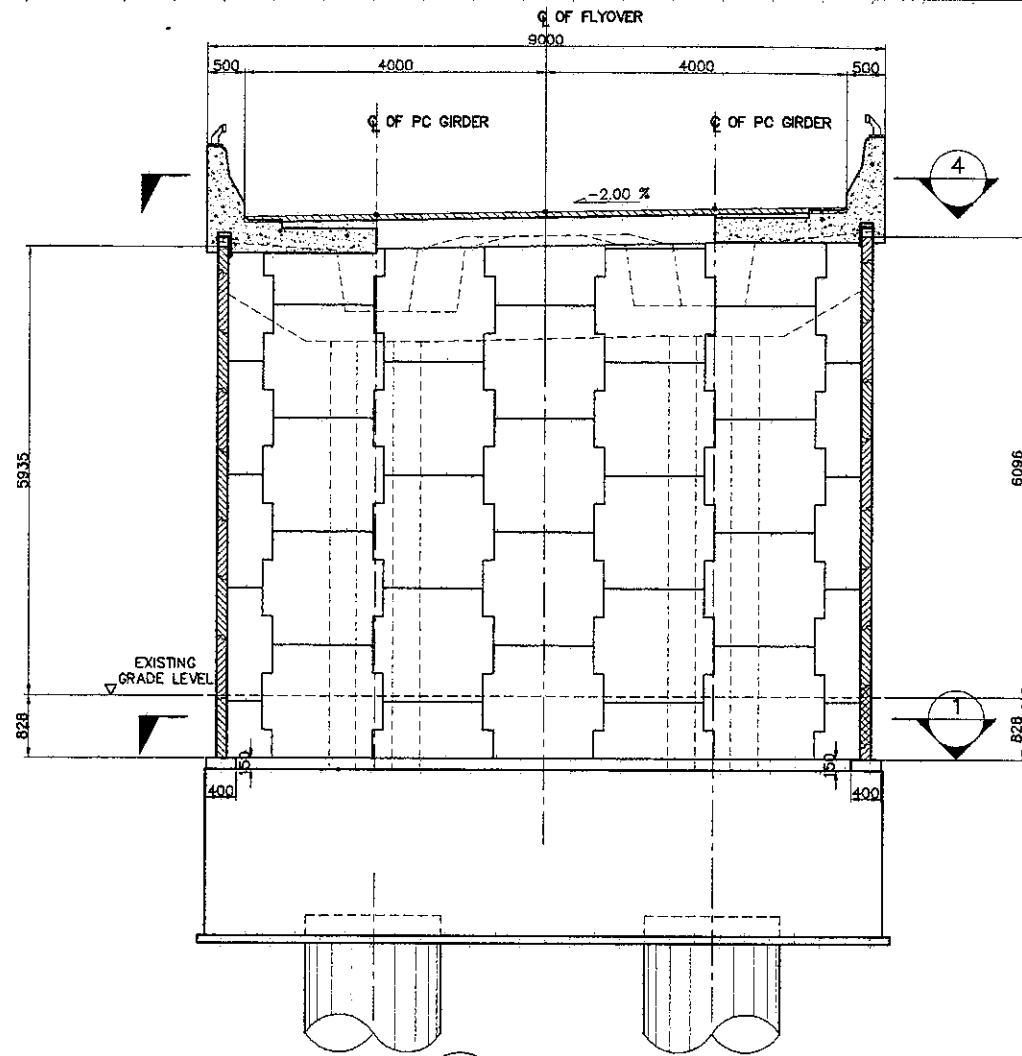
1 PLAN & PROFILE OF MSE WALL (ABUT. A2)
 SCALE 1:200

DESIGNED BY		CHECKED BY		SUBMITTED BY	
Name	T. OKUMURA	Name	T. OKUMURA	Name	M. KIUCHI
Sign		Sign		Sign	
Date		Date		Date	

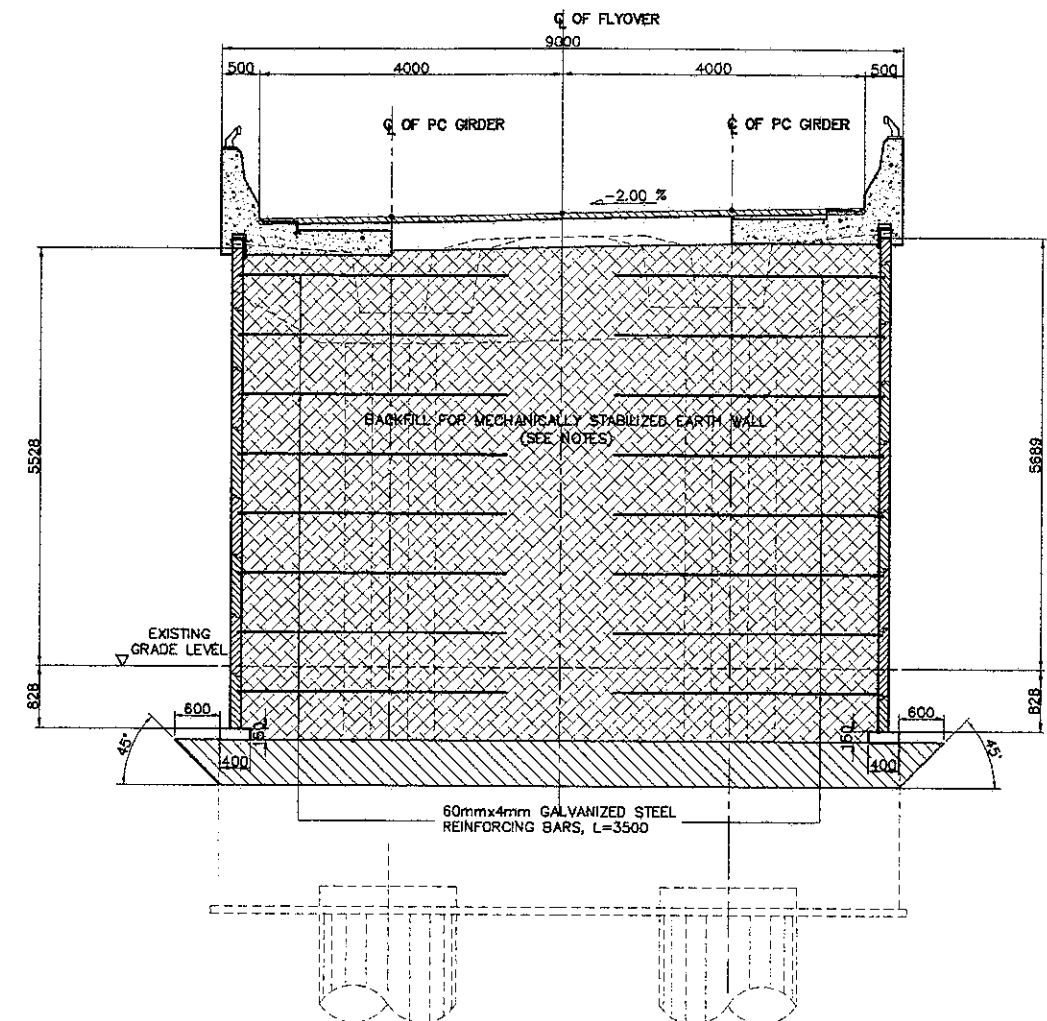


1 PLAN & PROFILE OF MSE WALL ABUT. A2)
 SCALE 1:200

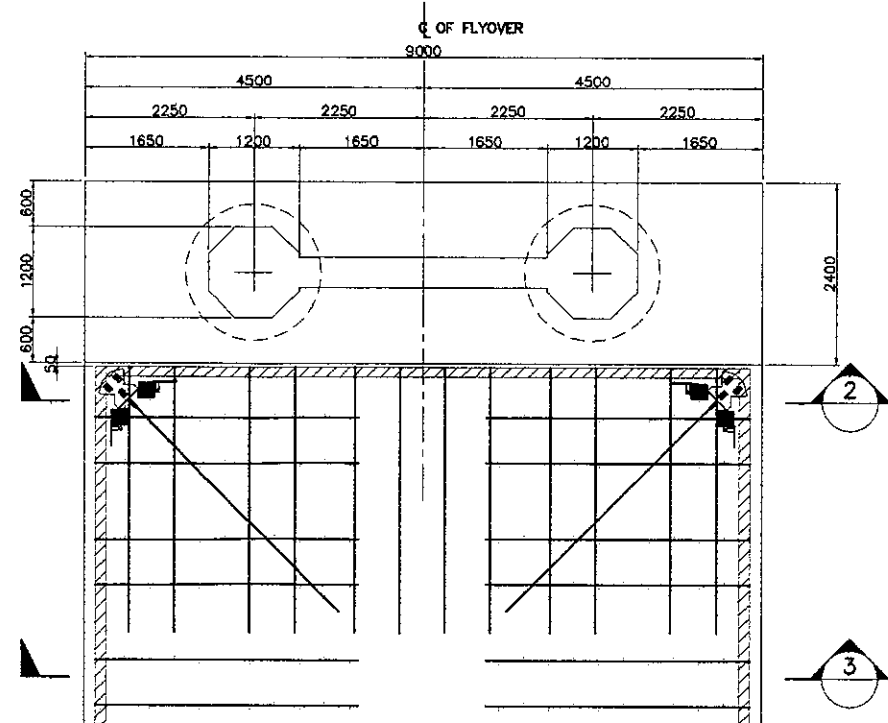
DESIGNED BY	CHECKED BY	SUBMITTED BY
Name: T. OKUMURA	Name: T. OKUMURA	Name: M. KIUCHI
Sign: _____	Sign: _____	Sign: _____
Date: _____	Date: _____	Date: _____



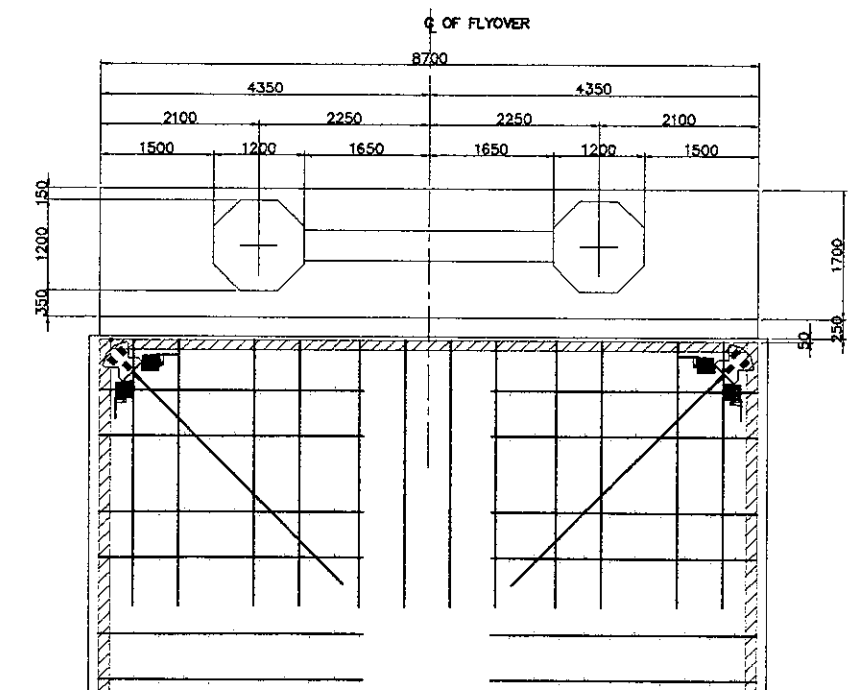
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 SCALE 1:100



3 SECTION
 SCALE 1:100

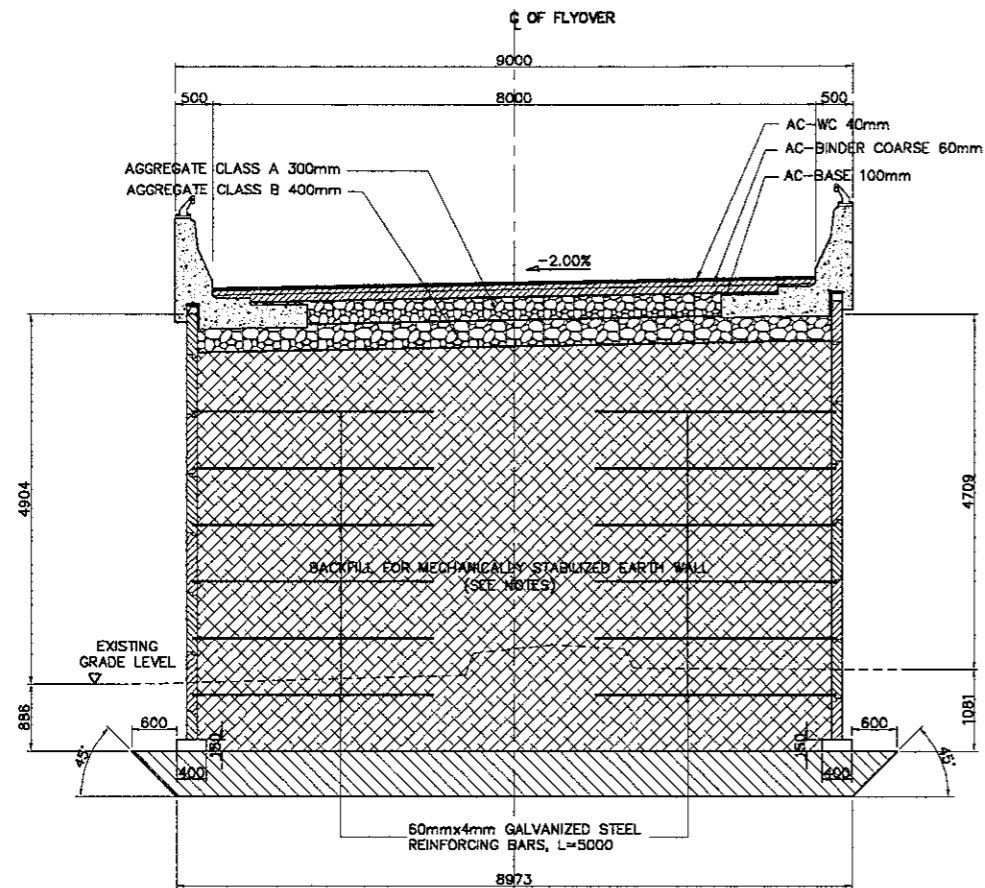


1 SECTION
 SCALE 1:100

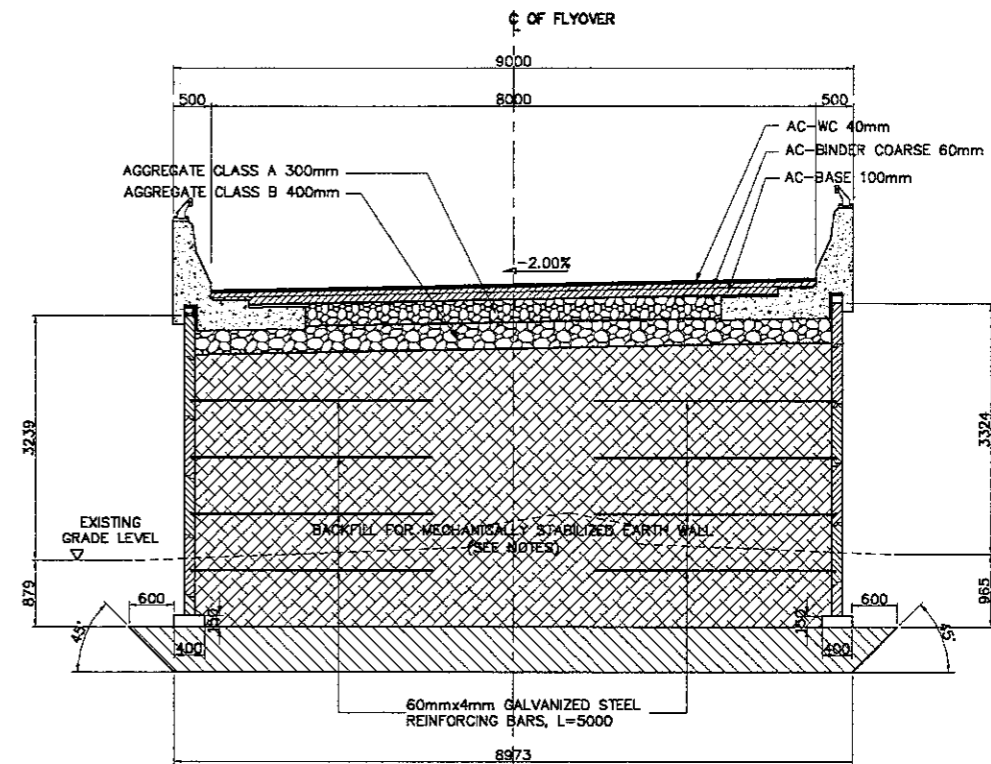


4 SECTION
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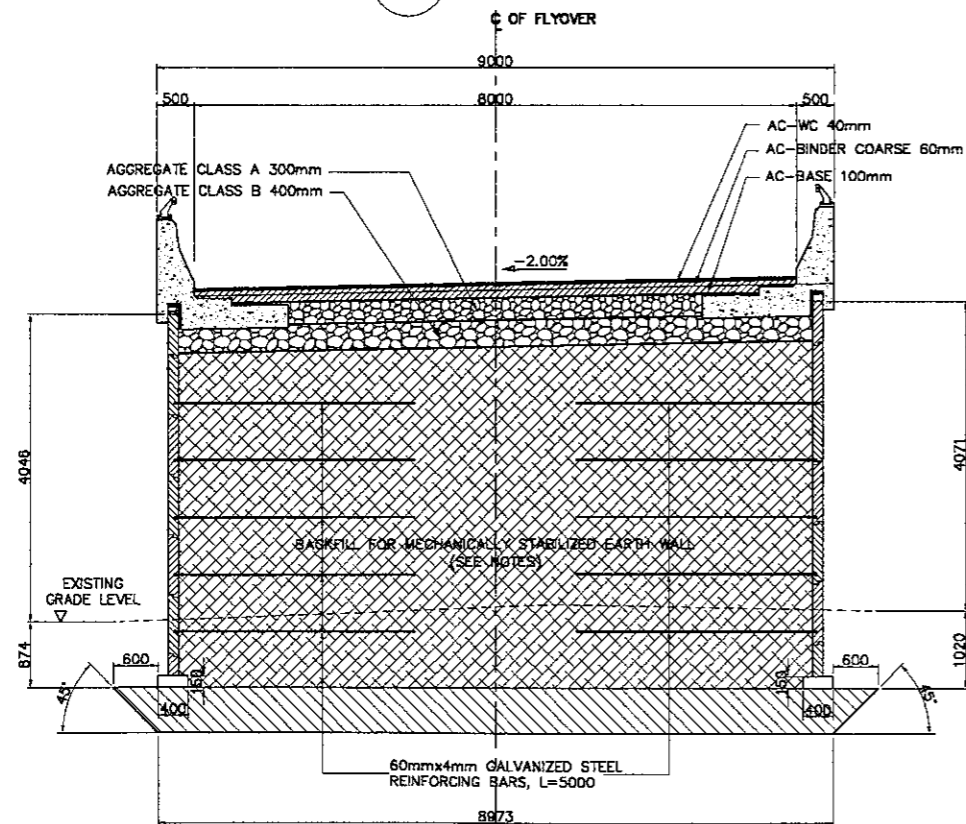
DESIGNED BY	CHECKED BY	SUBMITTED BY
Name: T. OKUMURA	Name: T. OKUMURA	Name: M. KIUCHI
Sign: _____	Sign: _____	Sign: _____
Date: _____	Date: _____	Date: _____



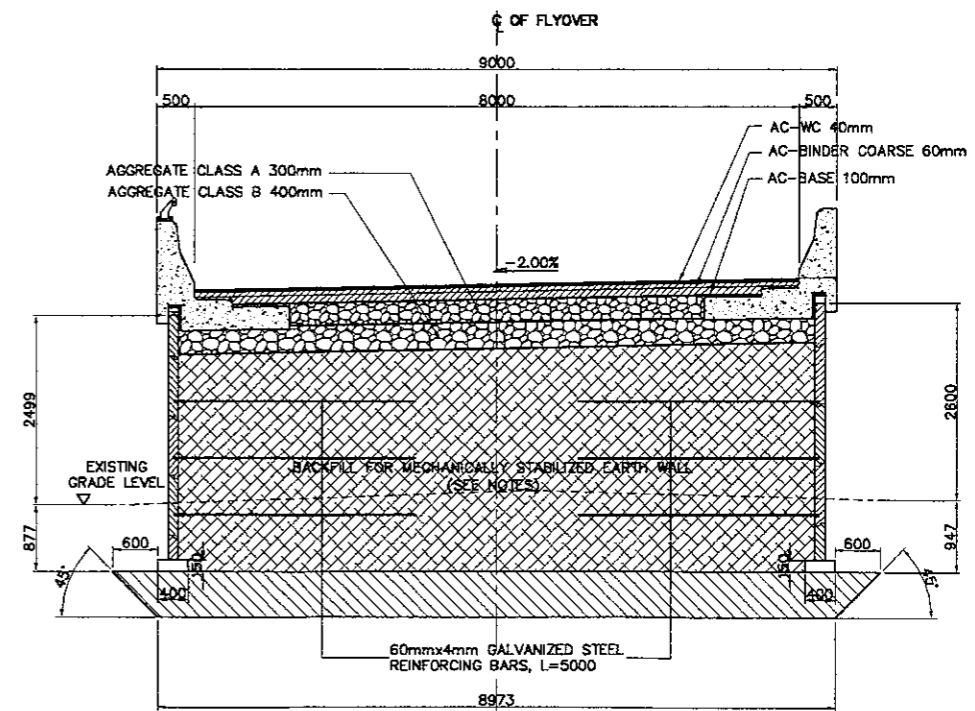
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C SECTION
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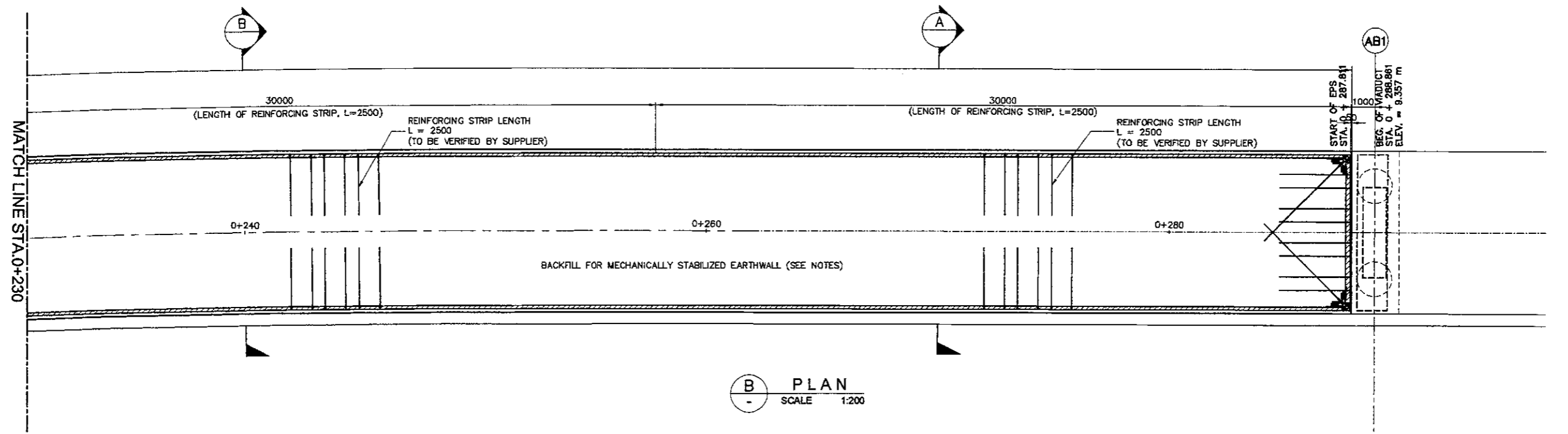
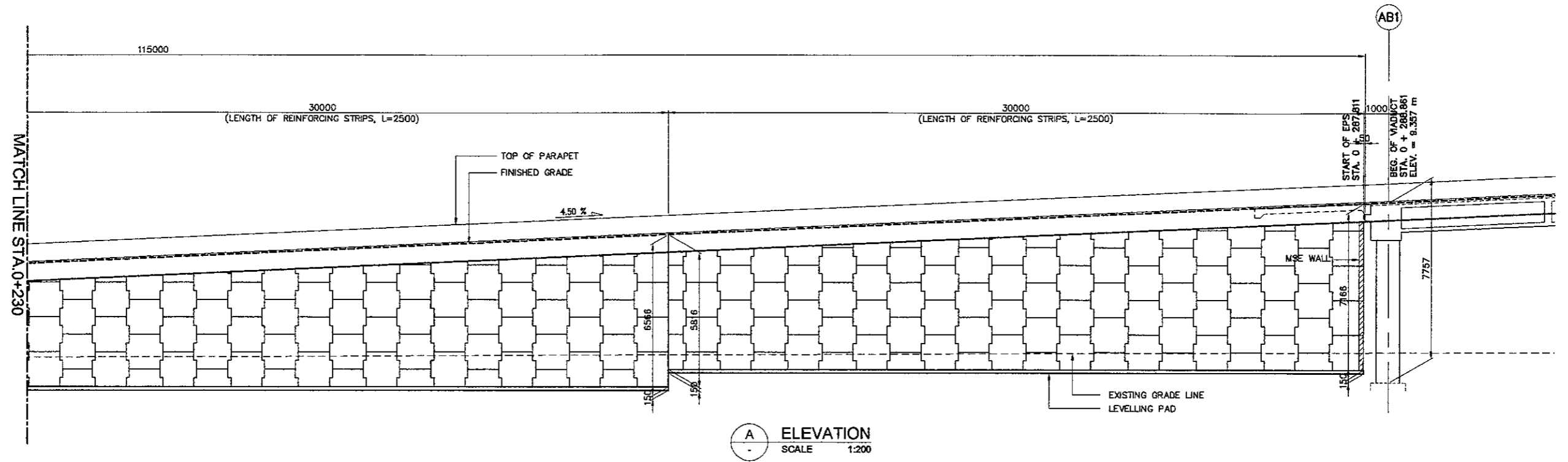


B SECTION
 SCALE 1:100



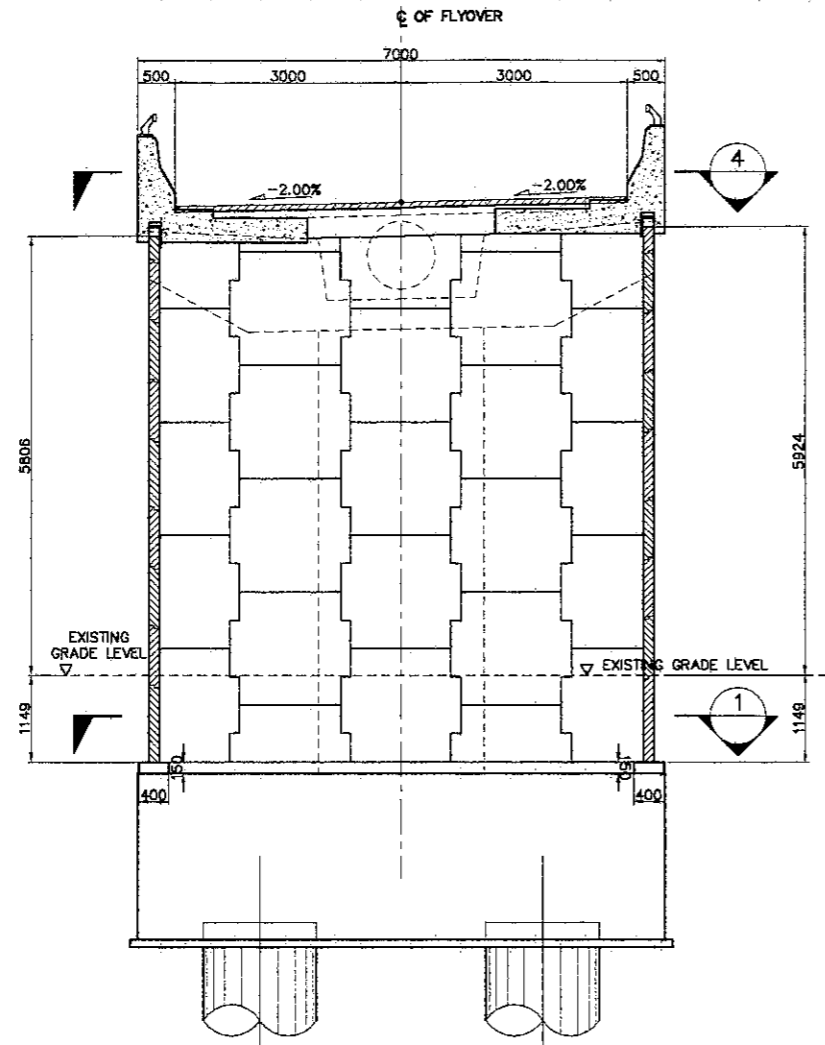
D SECTION
 SCALE 1:100

DESIGNED BY	CHECKED BY	SUBMITTED BY
Name T. OKUMURA	Name T. OKUMURA	Name M. KIUCHI
Sign	Sign	Sign
Date	Date	Date

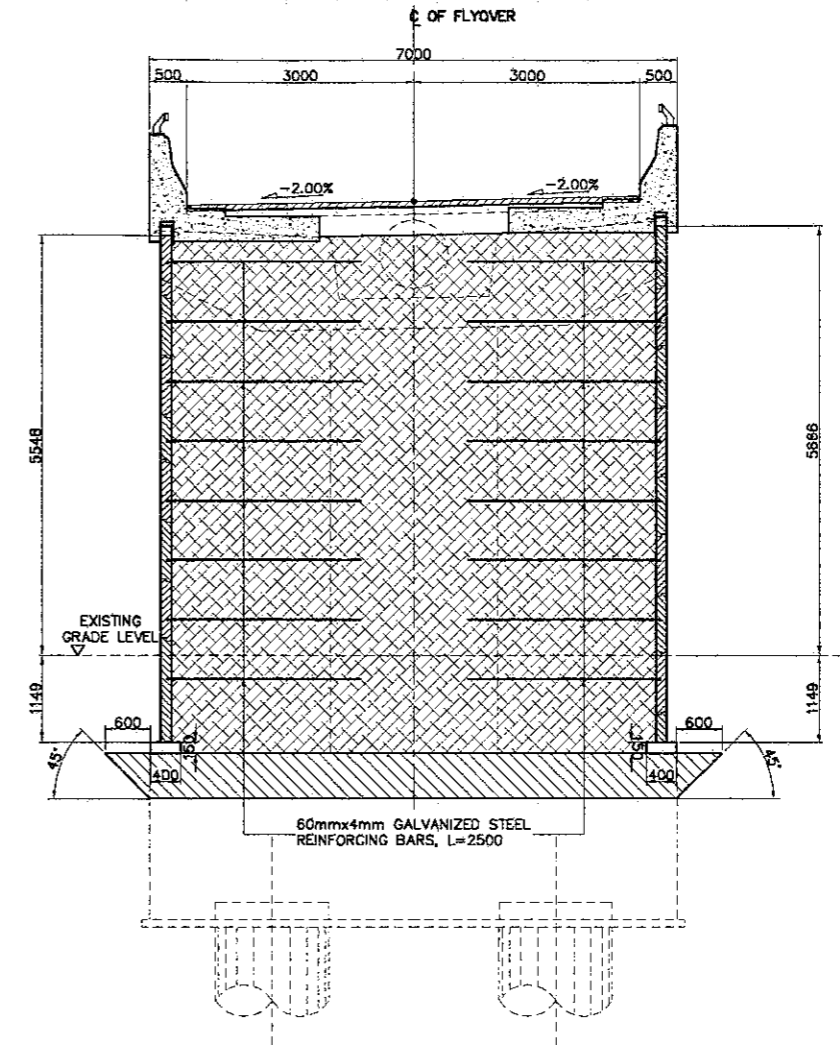


1 PLAN & PROFILE OF MSE WALL (ABUT. AB1)
 SCALE 1:200

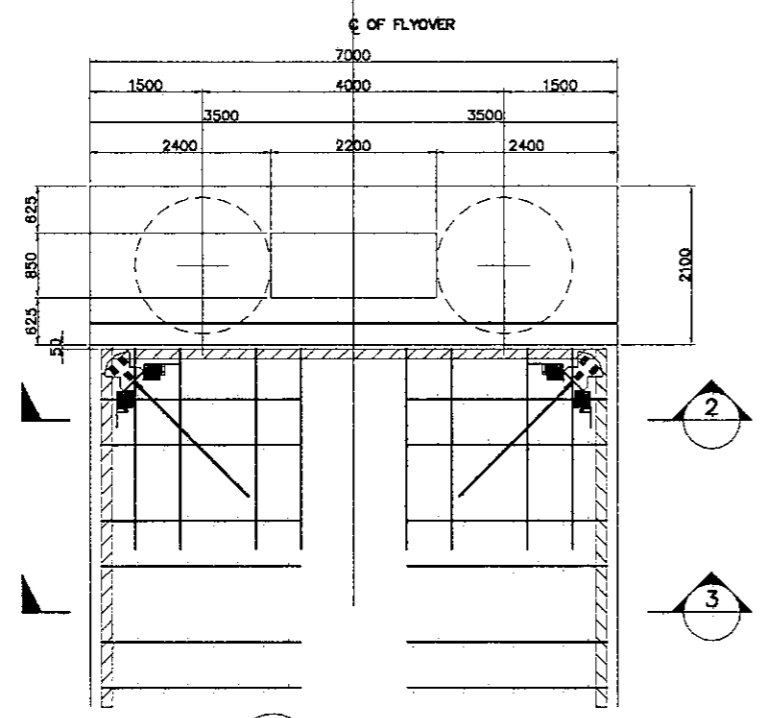
DESIGNED BY	CHECKED BY	SUBMITTED BY
Name T. OKUMURA	Name T. OKUMURA	Name M. KIUCHI
Sign	Sign	Sign
Date	Date	Date



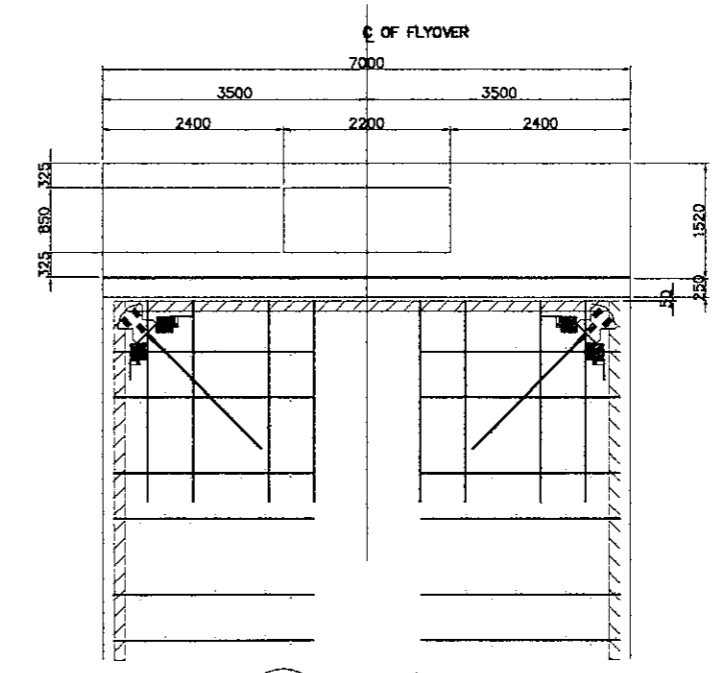
2 SECTION
 SCALE 1:100



3 SECTION
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1 SECTION
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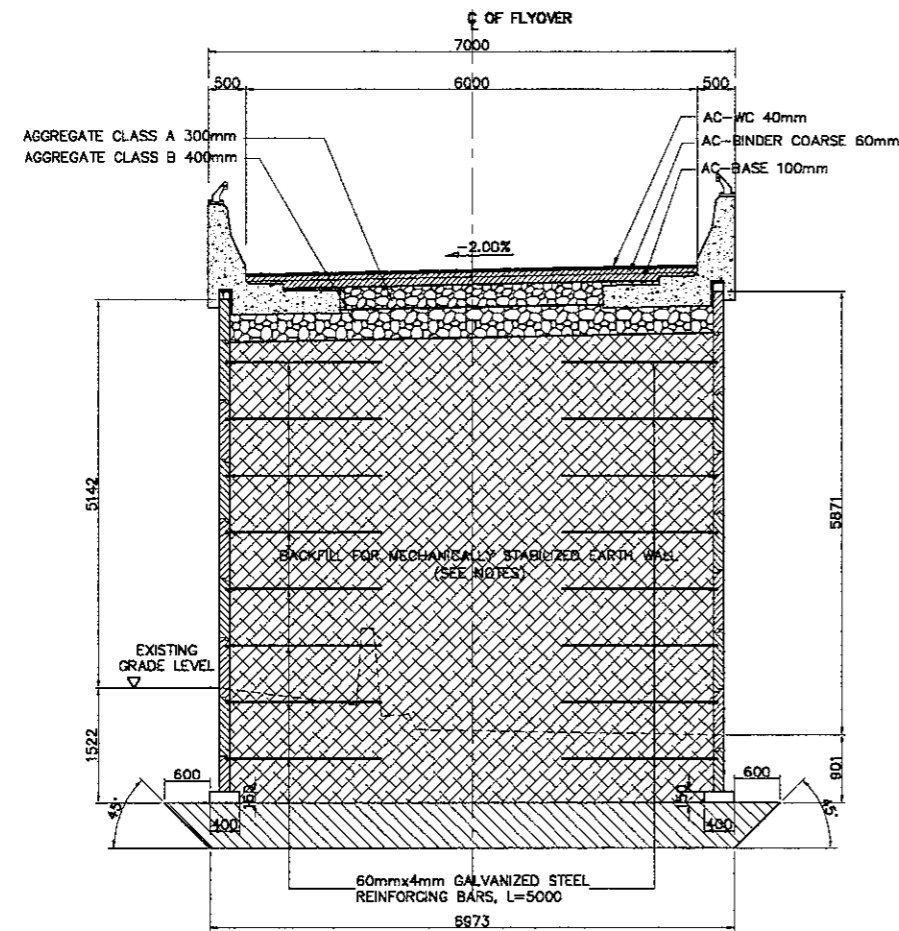


4 SECTION
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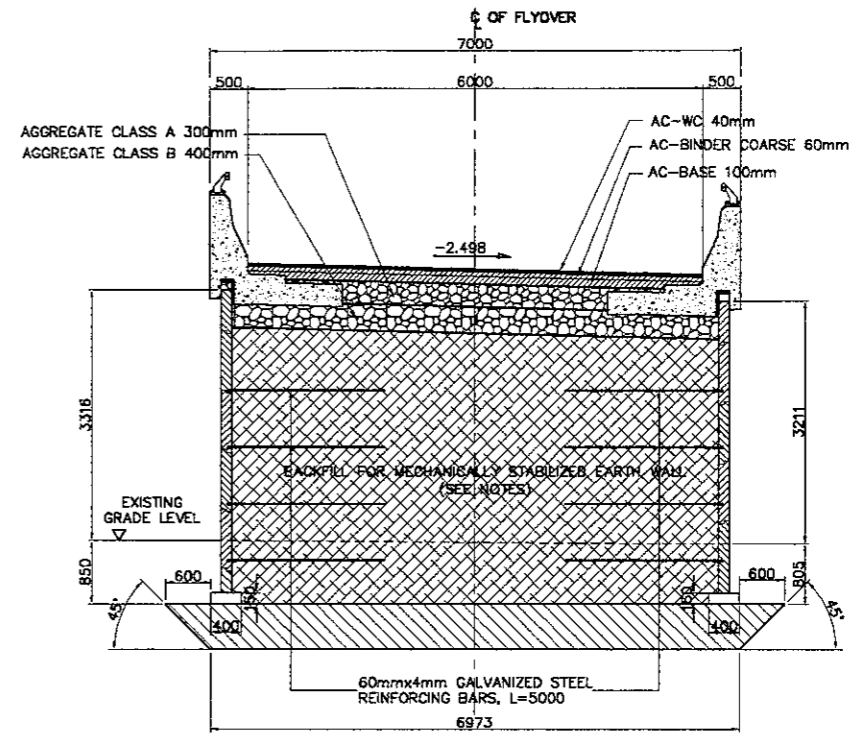
DESIGNED BY	CHECKED BY	SUBMITTED BY
Name: T. OKUMURA	Name: T. OKUMURA	Name: M. KIUCHI
Sign	Sign	Sign
Date	Date	Date

APPROVED BY: Ir. HERRY VAZA M,Eng.Sc
 NIP. : 110038400

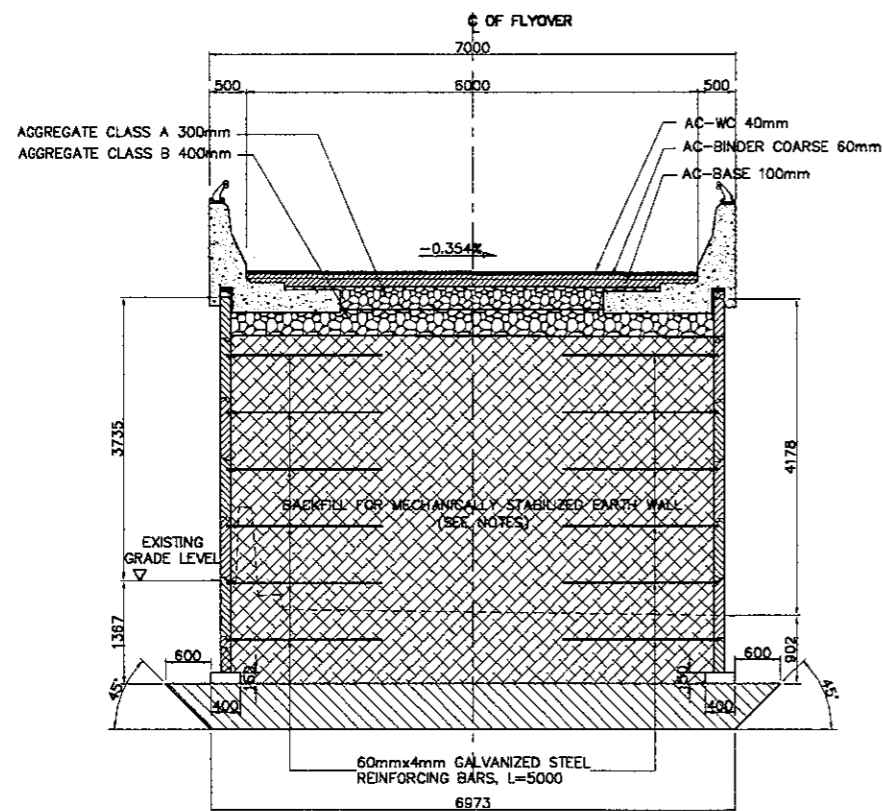
Sign	Date
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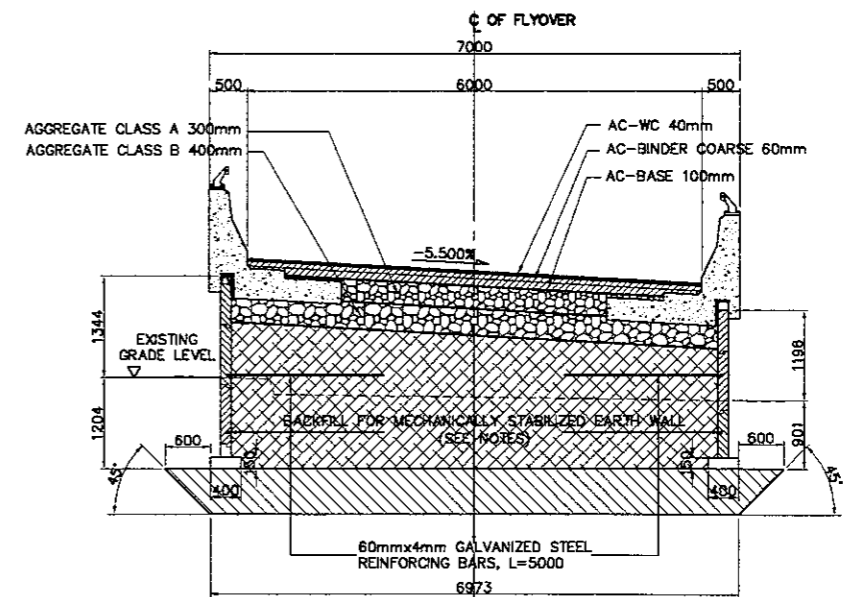
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 SCALE 1:100



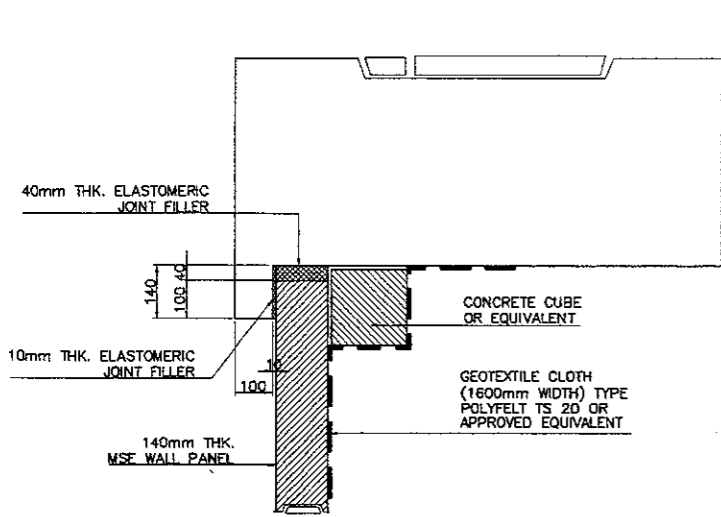
C SECTION
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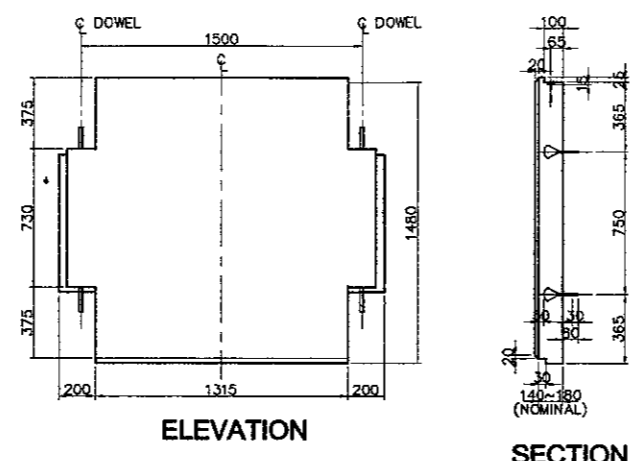
B SECTION
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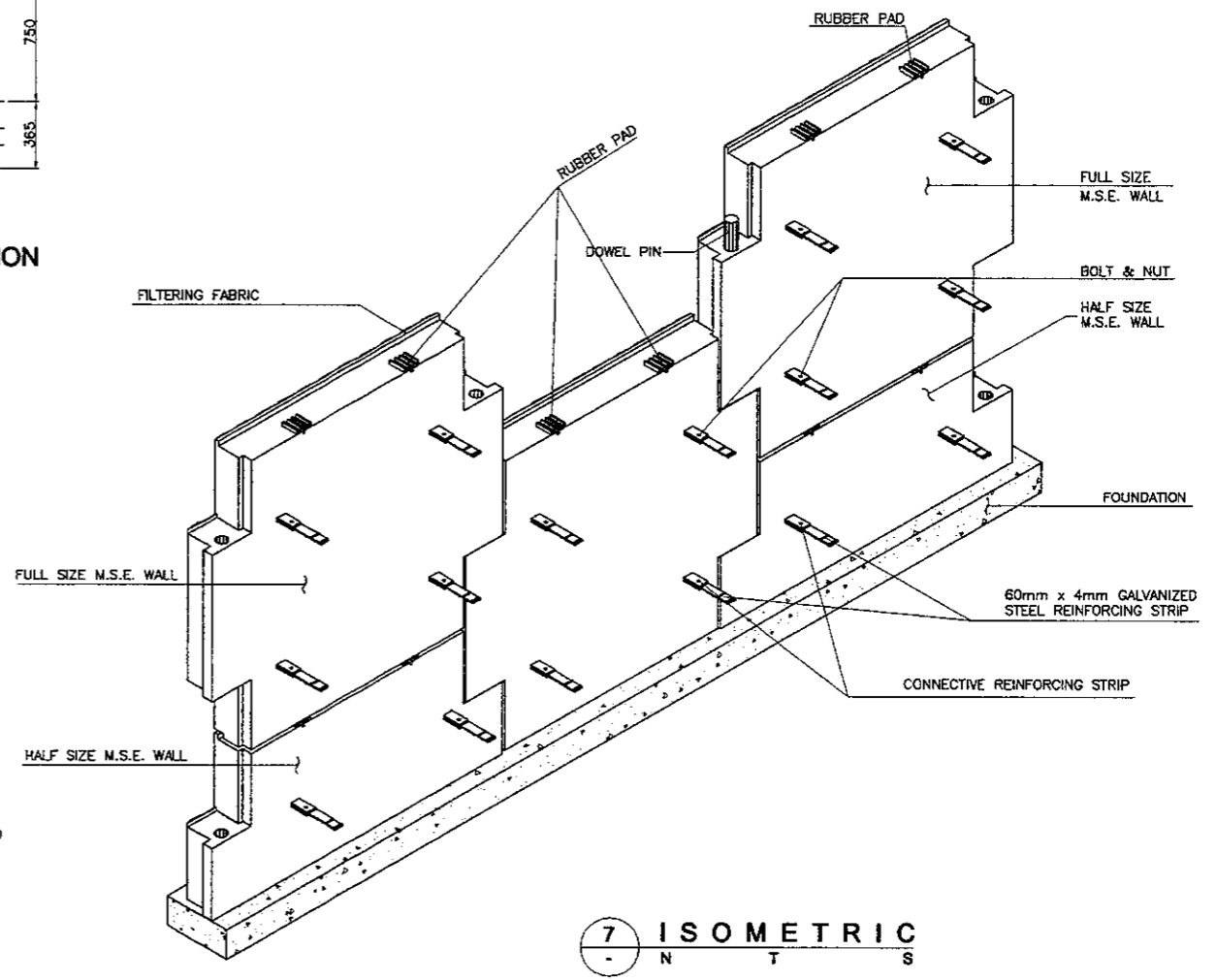
D SECTION
 SCALE 1:100



5 RE PANEL / CAPPING BEAM DETAIL
 SCALE 1:20

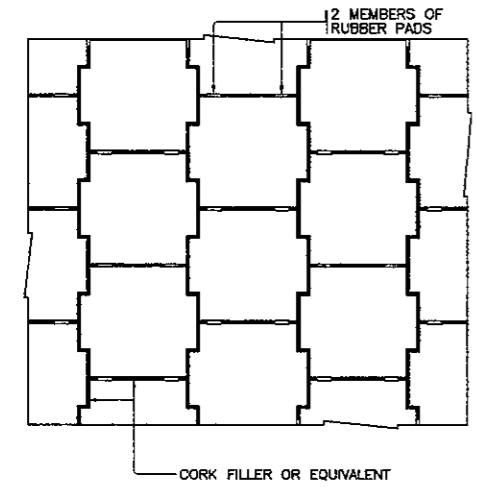


6 NORMAL FACING PANEL
 SCALE 1:40

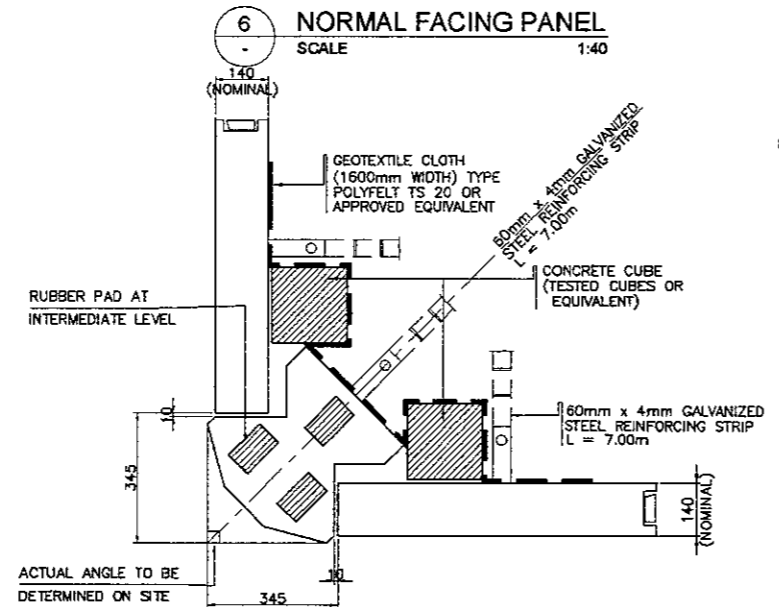


7 ISOMETRIC
 N T S

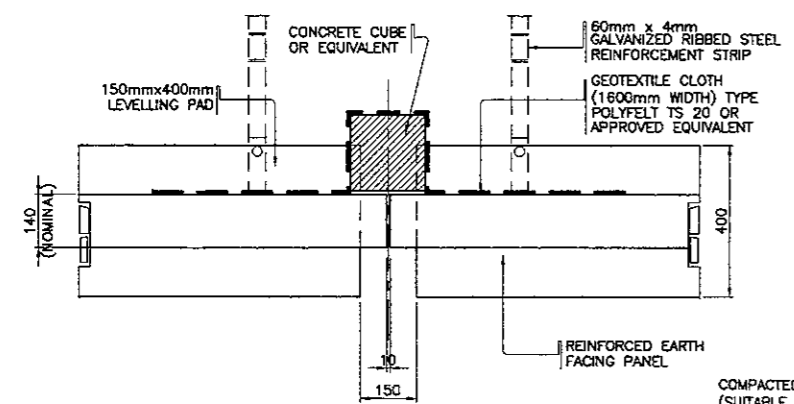
NOTES:
 1. REINFORCING BARS FOR THE PC-PANELS SHALL BE PROVIDED / DESIGN BY THE MANUFACTURER / SUPPLIER FOR APPROVAL OF THE ENGINEER PRIOR TO CASTING AND / OR FABRICATION.



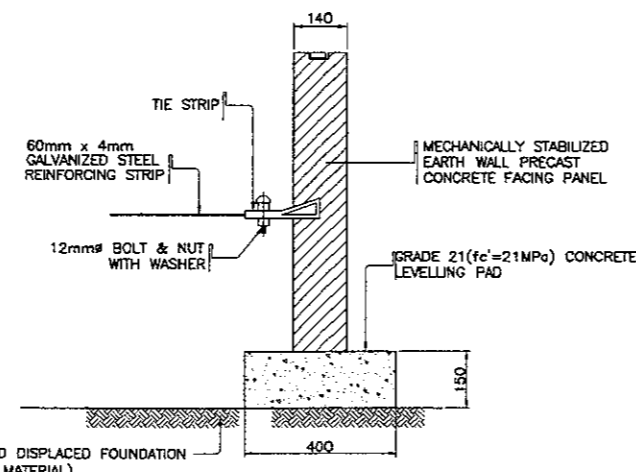
1 JOINT MATERIAL DETAIL
 SCALE 1:100



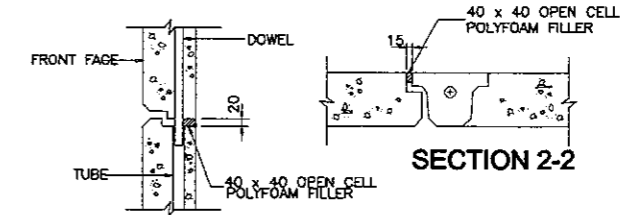
3 CORNER PANEL DETAILS
 SCALE 1:20



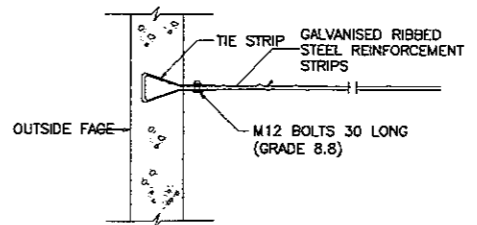
2 VERTICAL MATERIAL DETAIL
 SCALE 1:20



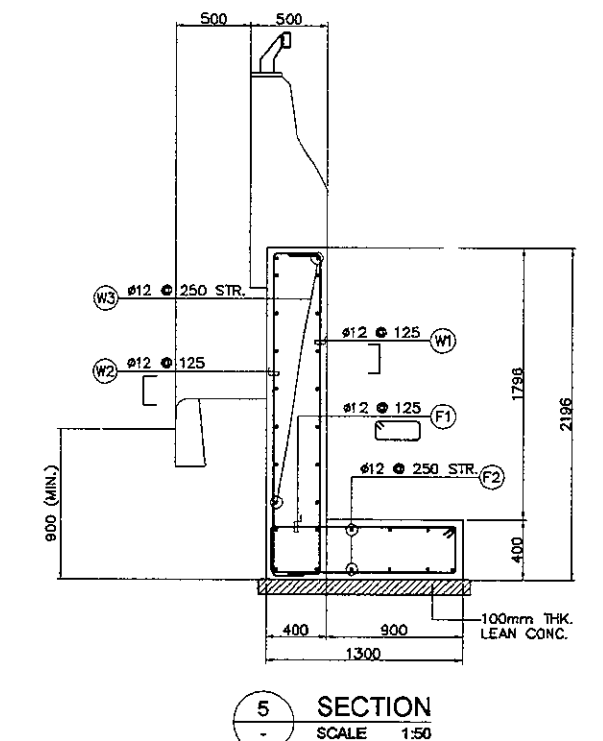
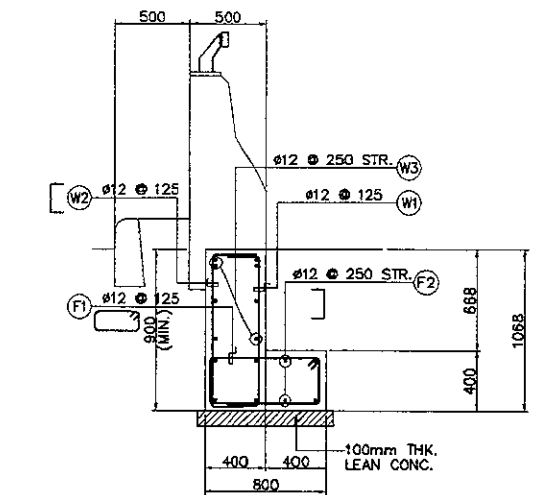
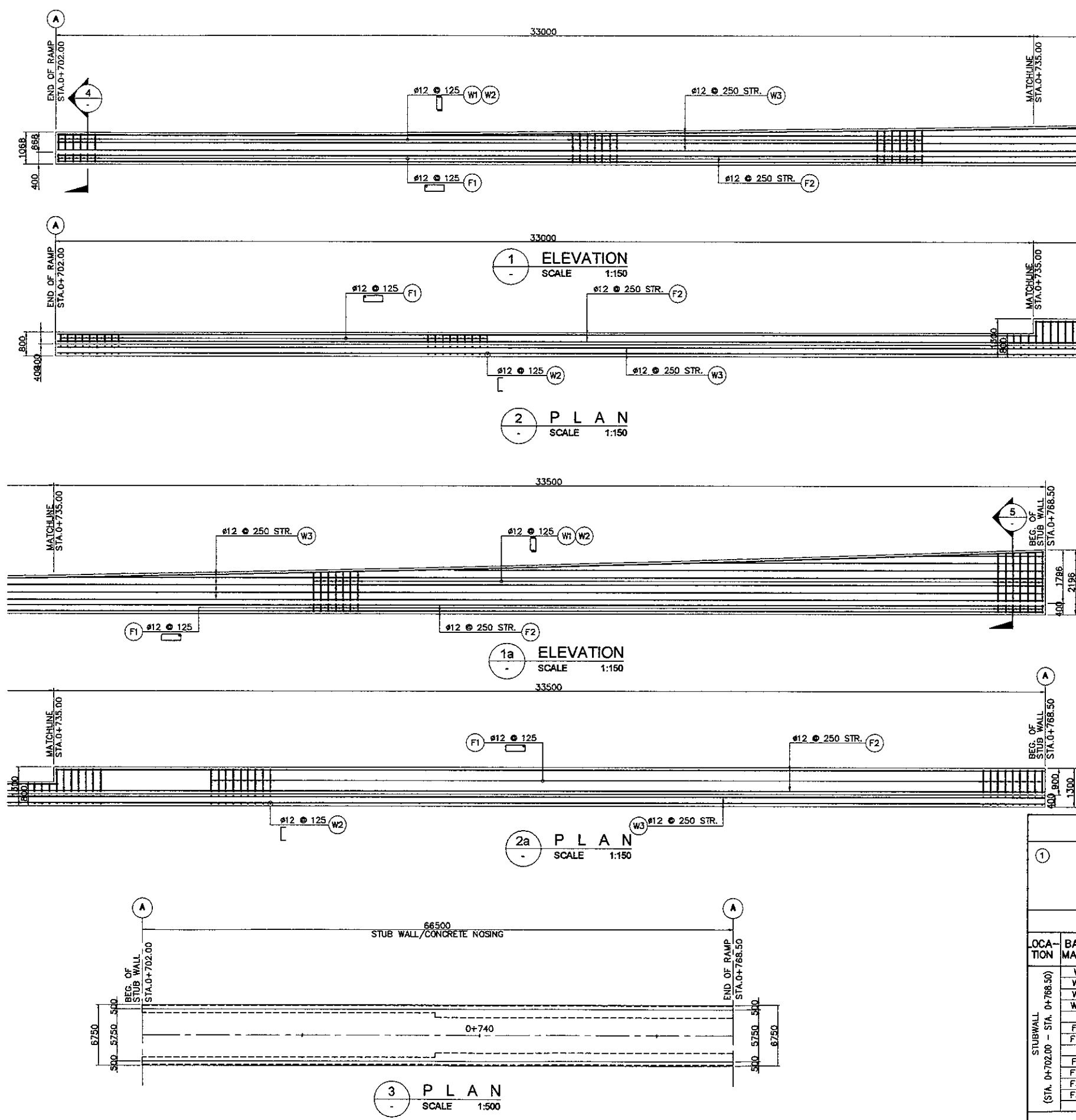
4 DETAIL
 SCALE 1:20



SECTION 1-1



8 PLAN / STRIP ASSEMBLY
 SCALE 1:20

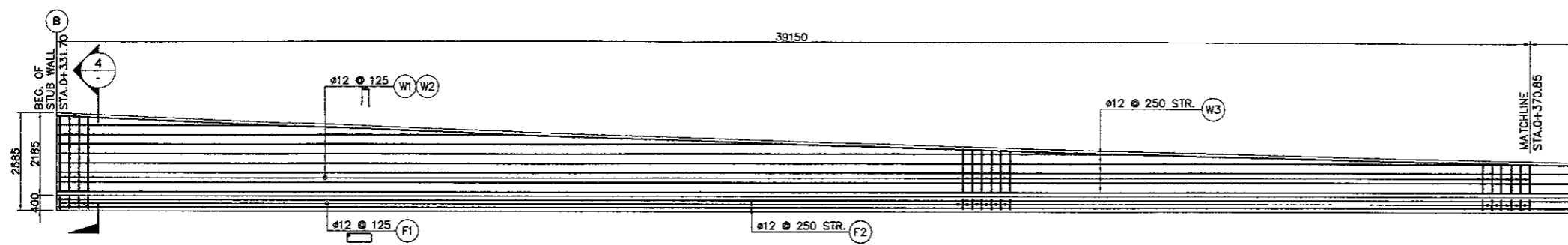


BAR BENDING DIAGRAM

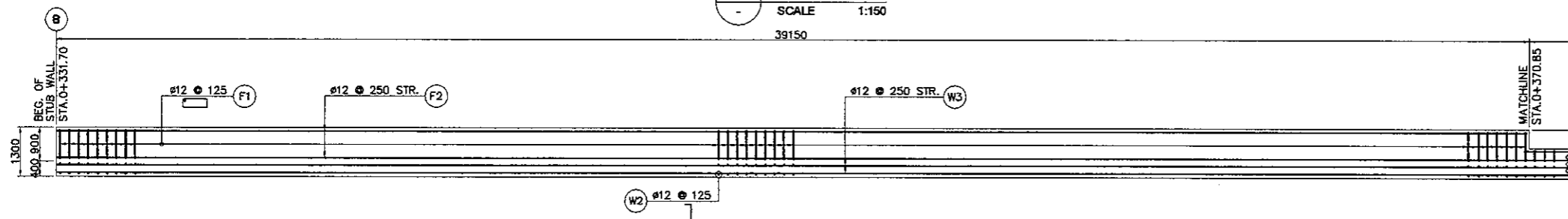
SCHEDULE OF REINFORCEMENT

LOCATION	BAR MARK	SIZE (mm)	BEND TYPE	DIMENSION (mm) OUT TO OUT						LENGTH (mm)	NO. REQ'D.	UNIT WT. (kg/m)	WEIGHT (kg)	REMARKS
				a	b	c	d	e	f					
STUBWALL (STA. 0+702.00 - STA. 0+788.50)	W1	12	2	300	1440	300				2040	1064	0.888	1927.00	b is ave.
	W2	12	2	300	1440	300				2040	1064	0.888	1927.00	b is ave.
	W3	12	1	12000						12000	80	0.888	852.00	b is ave.
	W3a	12	1	7920						7920	16	0.888	113.00	
	F1	12	3	150	150	720	320	720	320	2380	528	0.888	1116.00	
	F1a	12	3	150	150	1220	320	1220	320	3380	536	0.888	1609.00	
	F2	12	1	12000						12000	32	0.888	314.00	
	F2a	12	1	9860						9860	16	0.888	140.00	
	F3	12	1	12000						12000	48	0.888	51.00	
	F3a	12	1	10360						10360	24	0.888	221.00	
TOTAL WEIGHT = 8,757.00														

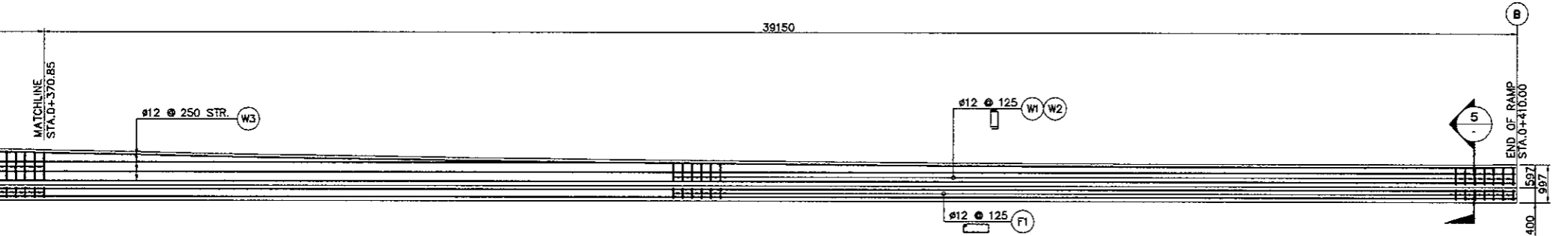
THE REINFORCEMENT SHOWN ON THIS TABLE IS FOR REFERENCE ONLY. THE CONTRACTOR SHOULD CHECKED AND VERIFY ALL DIMENSIONS, SIZES AND QUANTITIES OF REINFORCEMENT.



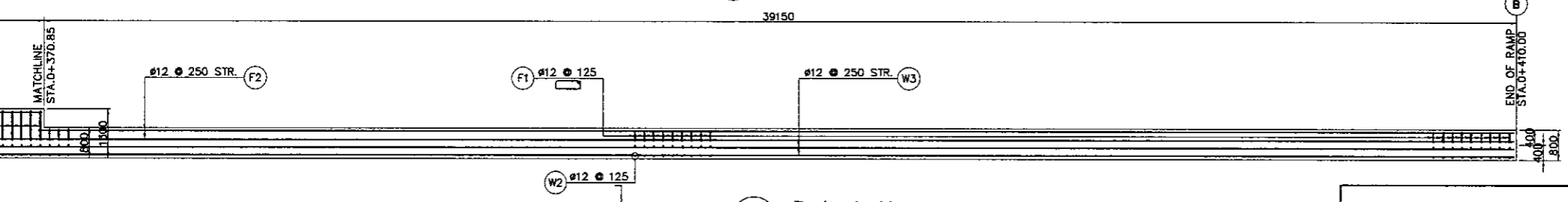
1 ELEVATION
 SCALE 1:150



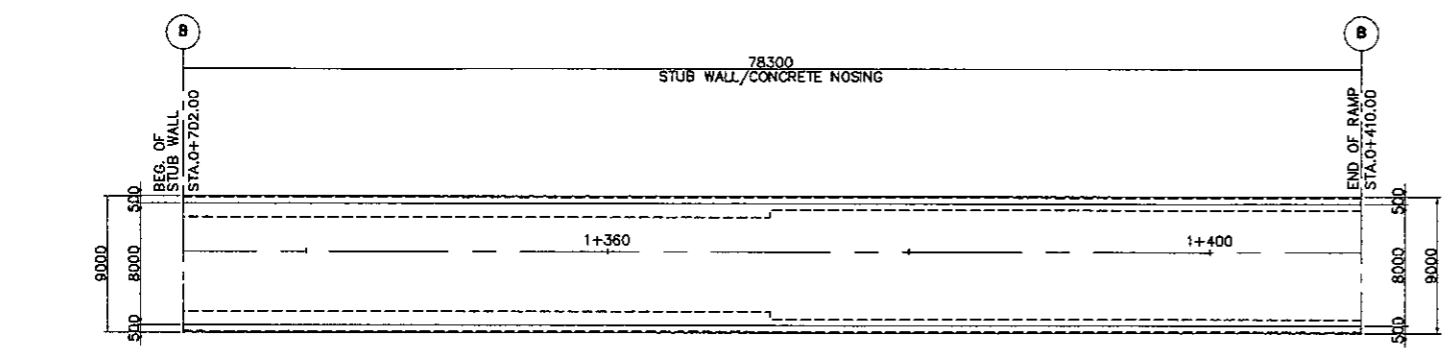
2 PLAN
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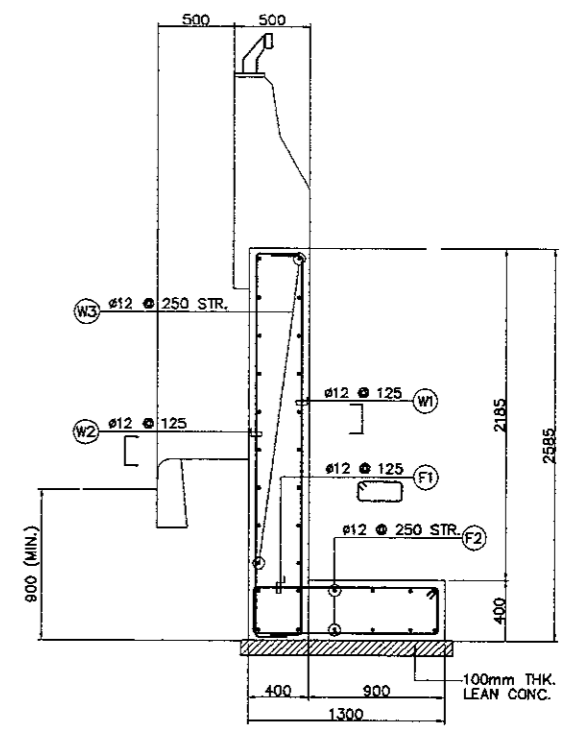
1a ELEVATION
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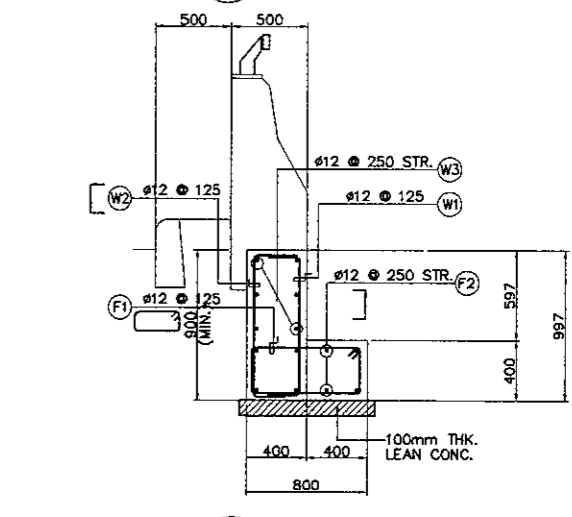
2a PLAN
 SCALE 1:150



3 PLAN
 SCALE 1:500



4 SECTION
 SCALE 1:50



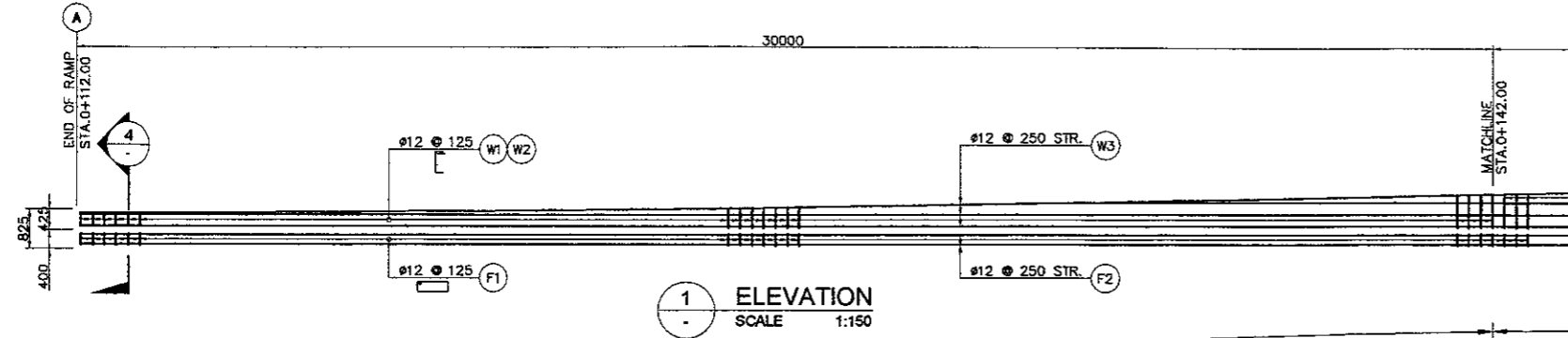
5 SECTION
 SCALE 1:50

BAR BENDING DIAGRAM

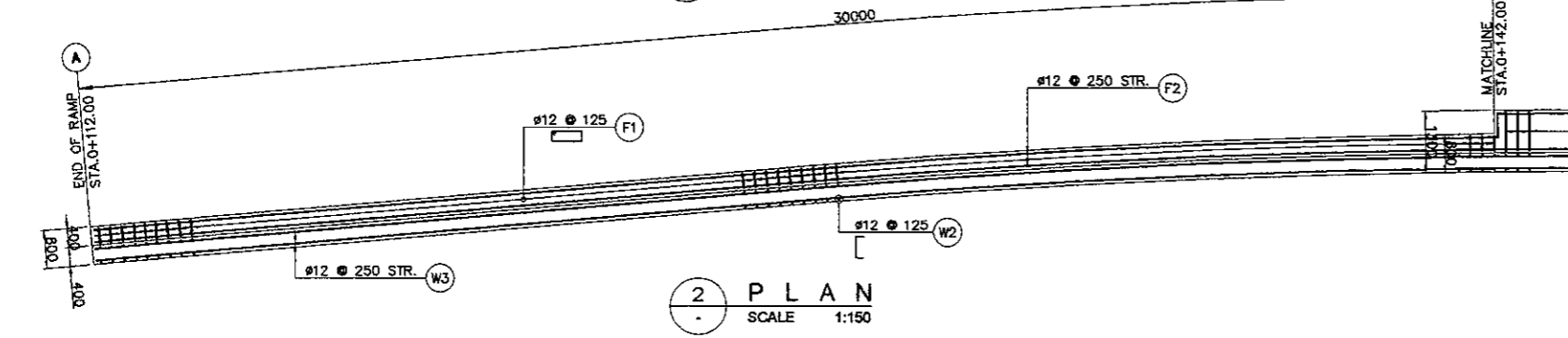
SCHEDULE OF REINFORCEMENT

LOCATION	BAR MARK	SIZE (mm)	BEND TYPE	DIMENSION (mm) OUT TO OUT						LENGTH (mm)	NO. REQ'D.	UNIT WT. (kg/m)	WEIGHT (kg)	REMARKS
				a	b	c	d	e	f					
STUBWALL (STA. 1+331.70 - STA. 1+410.00)	W1	12	2	300	1571	300				2171	1254	0.888	2418.00	AVE. LENGTH
	W2	12	2	300	1571	300				2171	1254	0.888	2418.00	
	W3	12	1	12000						12000	120	0.888	1279.00	
	W3a	12	1	8320						8320	20	0.888	148.00	
	F1	12	3	150	150	720	320	720	320	2380	628	0.888	1327.00	
	F1a	12	3	150	150	1220	320	1220	320	3380	628	0.888	1885.00	
	F2	12	1	12000						12000	48	0.888	511.00	
	F2a	12	1	4010						4010	16	0.888	57.00	
	F3	12	1	12000						12000	72	0.888	767.00	
	F3a	12	1	4010						4010	24	0.888	85.00	
TOTAL WEIGHT = 10,895.00														

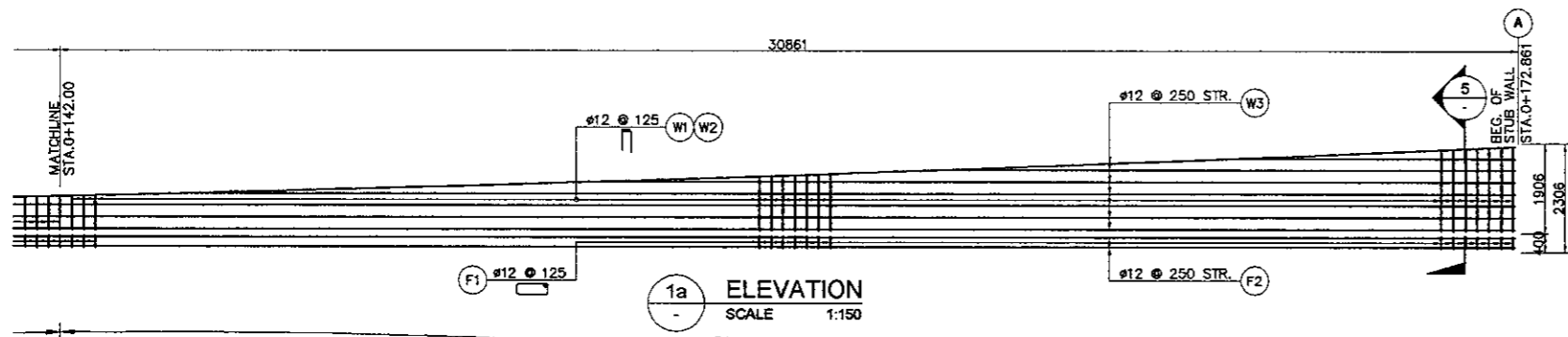
THE REINFORCEMENT SHOWN ON THIS TABLE IS FOR REFERENCE ONLY. THE CONTRACTOR SHOULD CHECKED AND VERIFY ALL DIMENSIONS, SIZES AND QUANTITIES OF REINFORCEMENT.



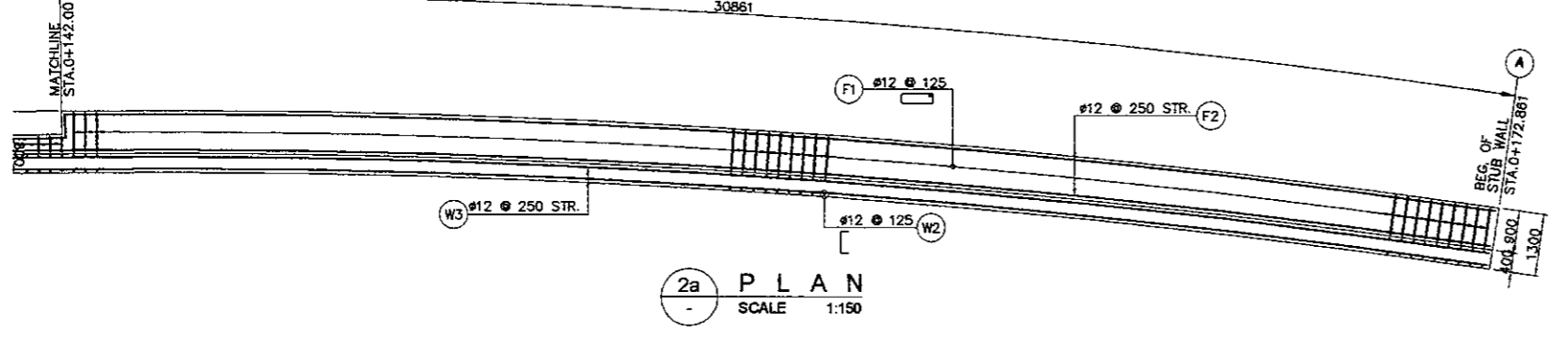
1 ELEVATION
 SCALE 1:150



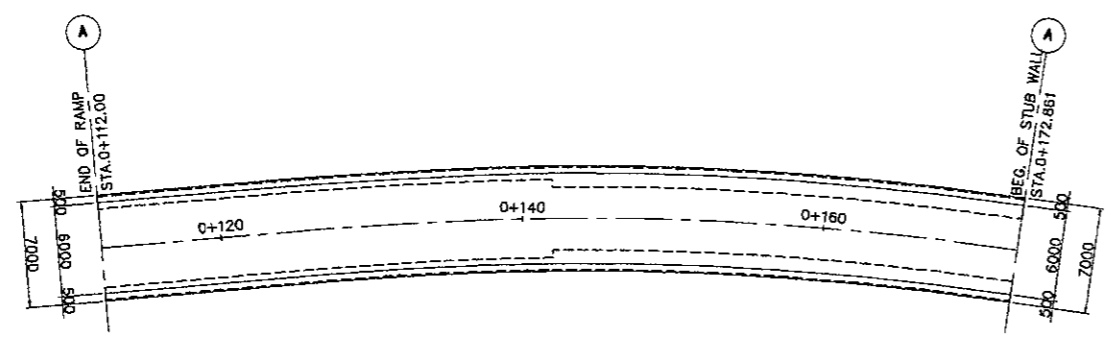
2 PLAN
 SCALE 1:150



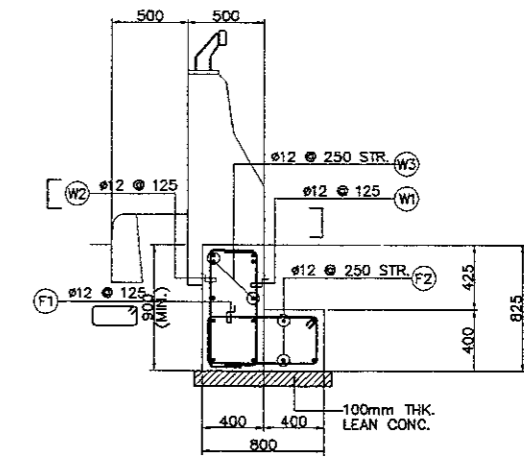
1a ELEVATION
 SCALE 1:150



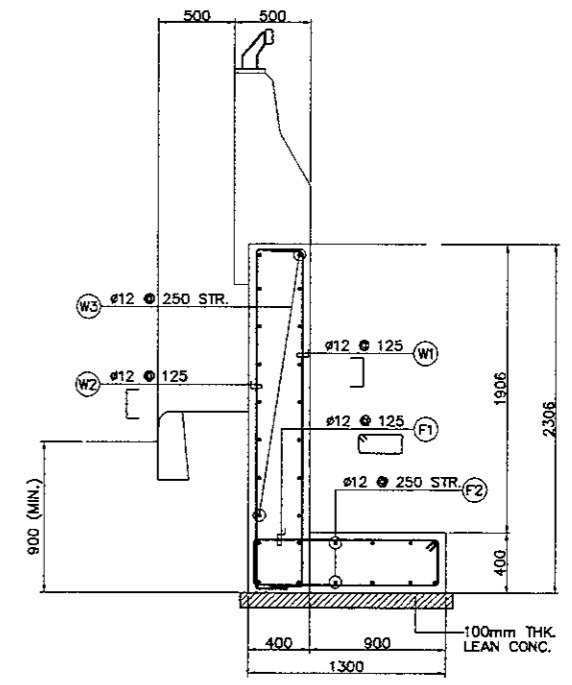
2a PLAN
 SCALE 1:150



3 PLAN
 SCALE 1:500



4 SECTION
 SCALE 1:50



5 SECTION
 SCALE 1:50

BAR BENDING DIAGRAM

SCHEDULE OF REINFORCEMENT

LOCATION	BAR MARK	SIZE (mm)	BEND TYPE	DIMENSION (mm) OUT TO OUT						LENGTH (mm)	NO. REQ'D.	UNIT WT (kg/m)	WEIGHT (kg)	REMARKS
				a	b	c	d	e	f					
(W1-W2) LEFT & RIGHT	W1	12	2	300	1374	300				1974	974	0.888	1707	b is ave.
	W2	12	2	300	1374	300				1974	974	0.888	1707	b is ave.
	W3	12	1	12000						12000	64	0.888	682	b is ave.
	W3a	12	1	2281						2281	16	0.888	32	
	F1	12	3	150	150	720	320	720	320	2380	482	0.888	1019	
	F1a	12	3	150	150	1220	320	1220	320	3380	496	0.888	1489	
(W1-W2) LEFT & RIGHT	F2	12	1	12000						12000	32	0.888	341	
	F2a	12	1	6820						6820	16	0.888	97	
	F3	12	1	12000						12000	48	0.888	511	
	F3a	12	1	7681						7681	24	0.888	164	
TOTAL WEIGHT = 7,749.00														

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