

**K04** OVERPASS BRIDGE  
No.10(O10)-STA.11+261.000

# OVERPASS BRIDGE NO. 10 - GENERAL VIEW (1)

( STA. 11+261.000 )



1 PLAN  
SCALE 1:150

**NOTES :**

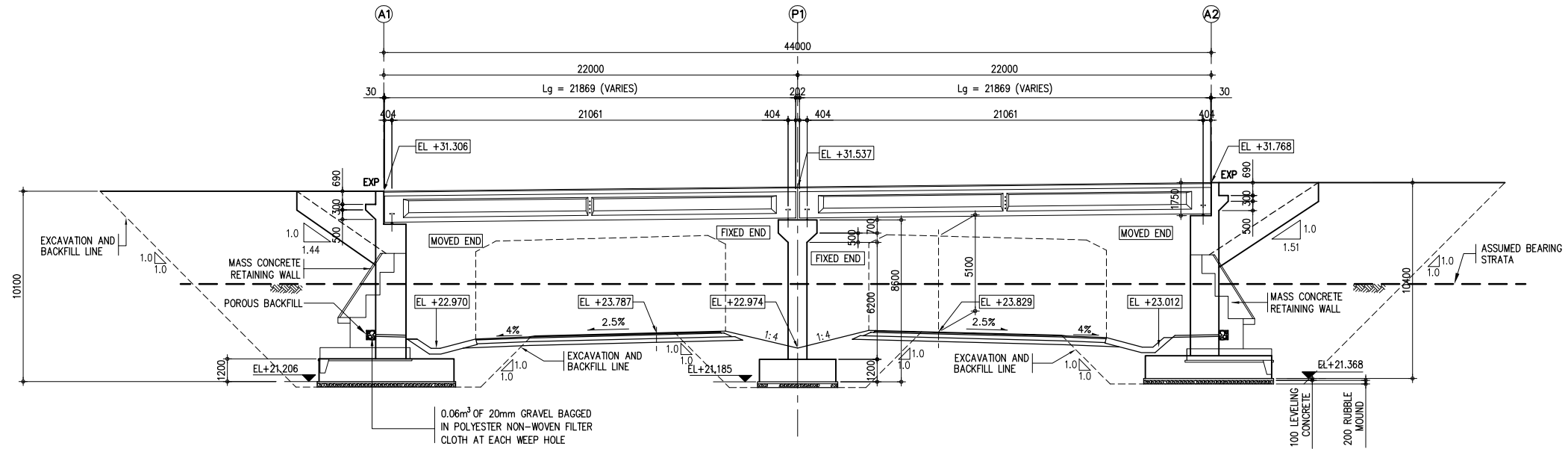
1. ALL DIMENSIONS ARE IN MILLIMETERS.
2. THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH THE OTHER RELEVANT DRAWINGS.

No	REVISION	DATE

DESIGNED BY:	
CHECKED BY:	
APPROVED BY:	
DWG. NO.	K04-00-A

# OVERPASS BRIDGE NO. 10 - GENERAL VIEW (2)

( STA. 11+261.000 )

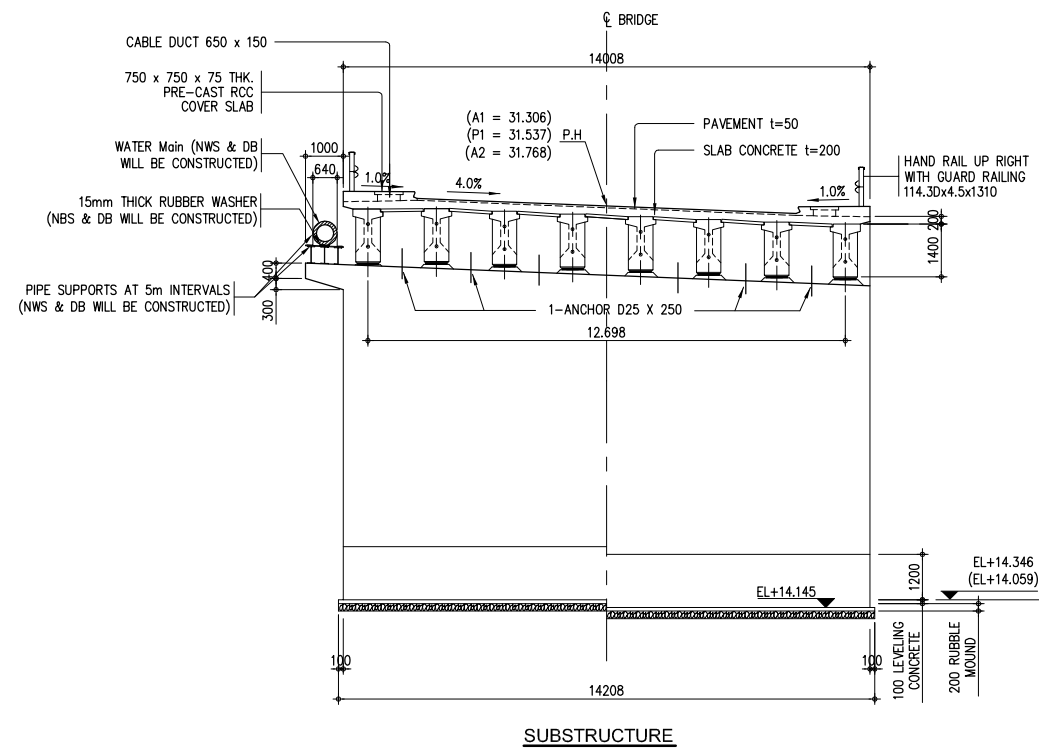
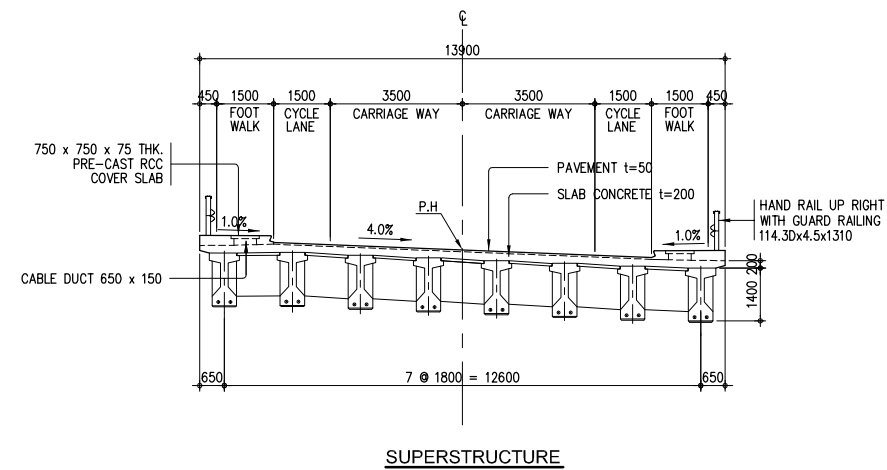


GRADE	31.120 P+40.000	1.025% L=14.0.0	32.555 +1.000
FINISHED ROAD LEVELS	31.306	31.537	31.768
EXISTING GROUND LEVELS			
STATION (km)	22.000	0.000	22.000
CURVE BAND	STRAIGHT		
SUPERELEVATION	-2.50%		

2 PROFILE  
SCALE 1:150

# OVERPASS BRIDGE NO. 10 - GENERAL VIEW (3)

( STA. 11+261.000 )



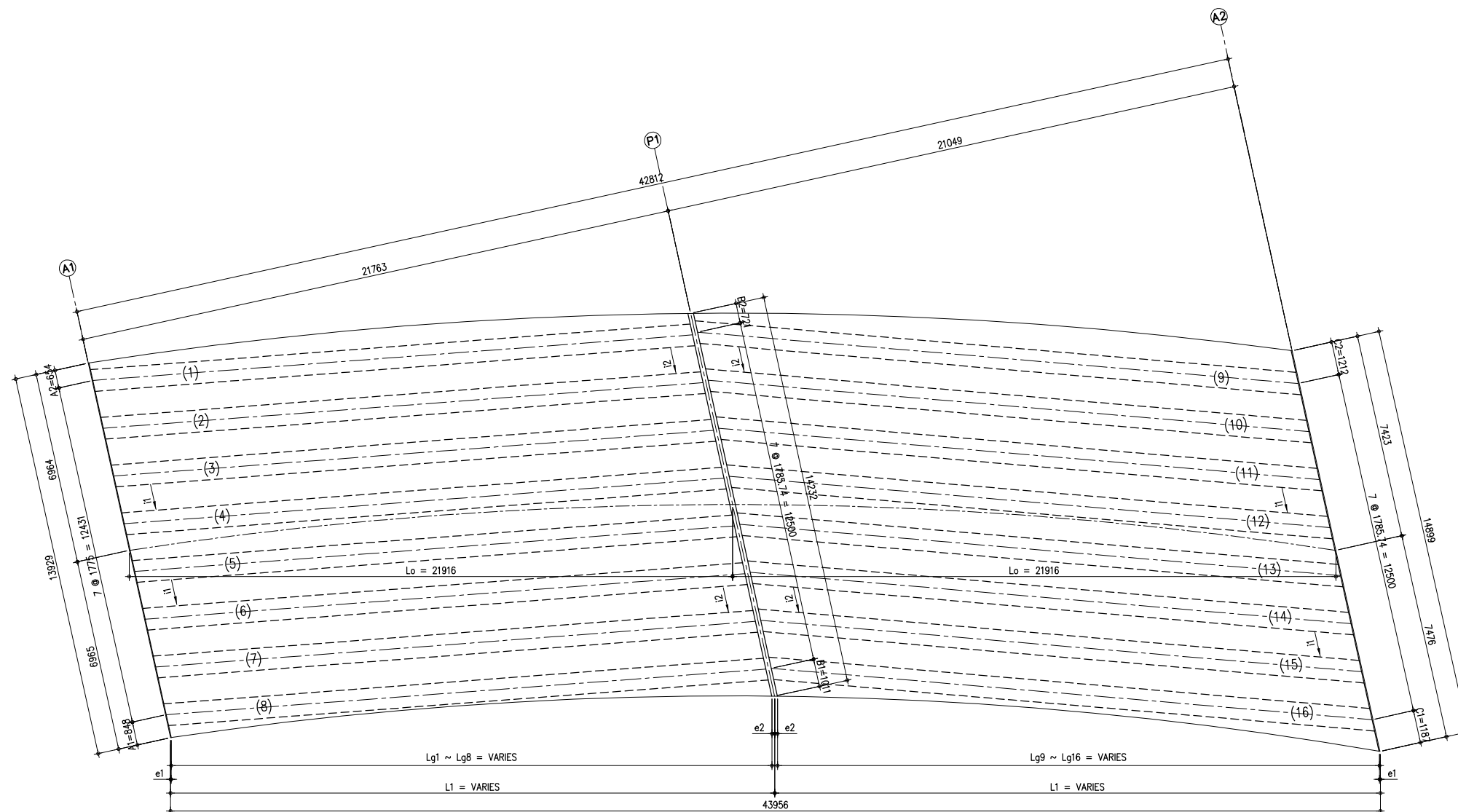
3 CROSS SECTION  
SCALE 1:100

**NOTES :**

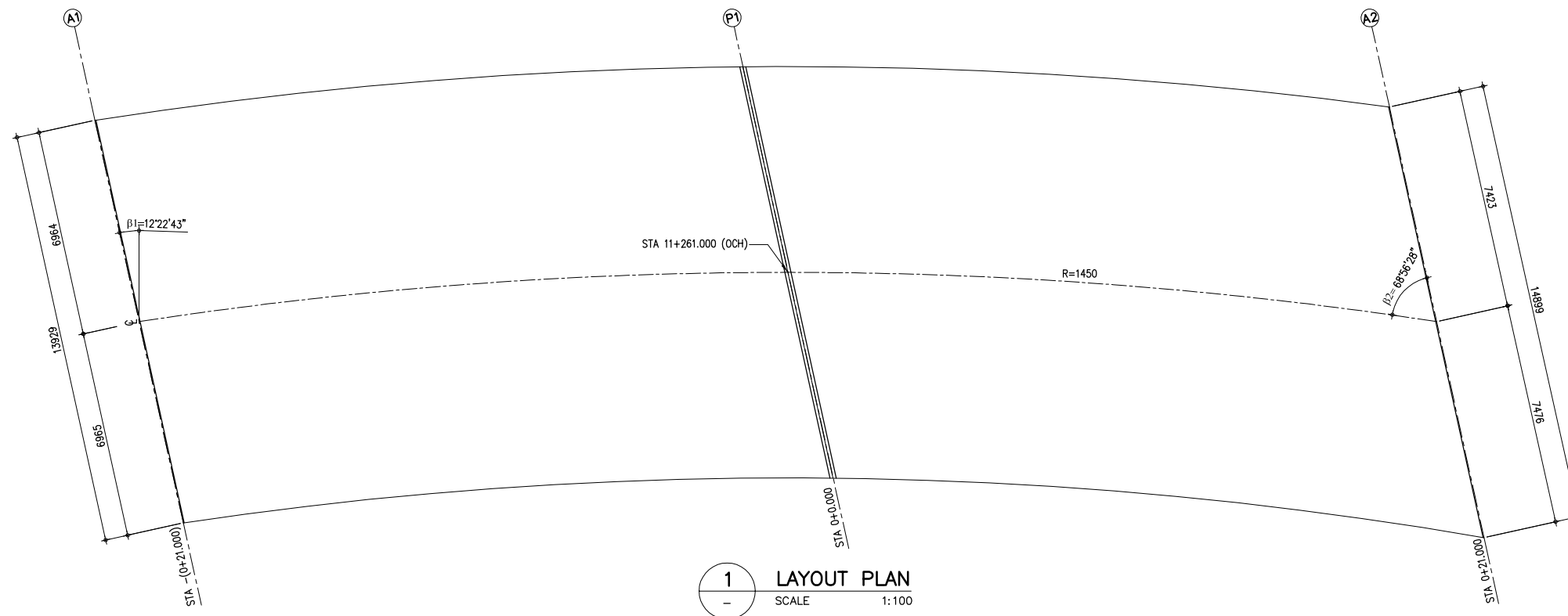
1. ALL DIMENSIONS ARE IN MILLIMETERS.
2. THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH THE OTHER RELEVANT DRAWINGS.

No	REVISION	DATE

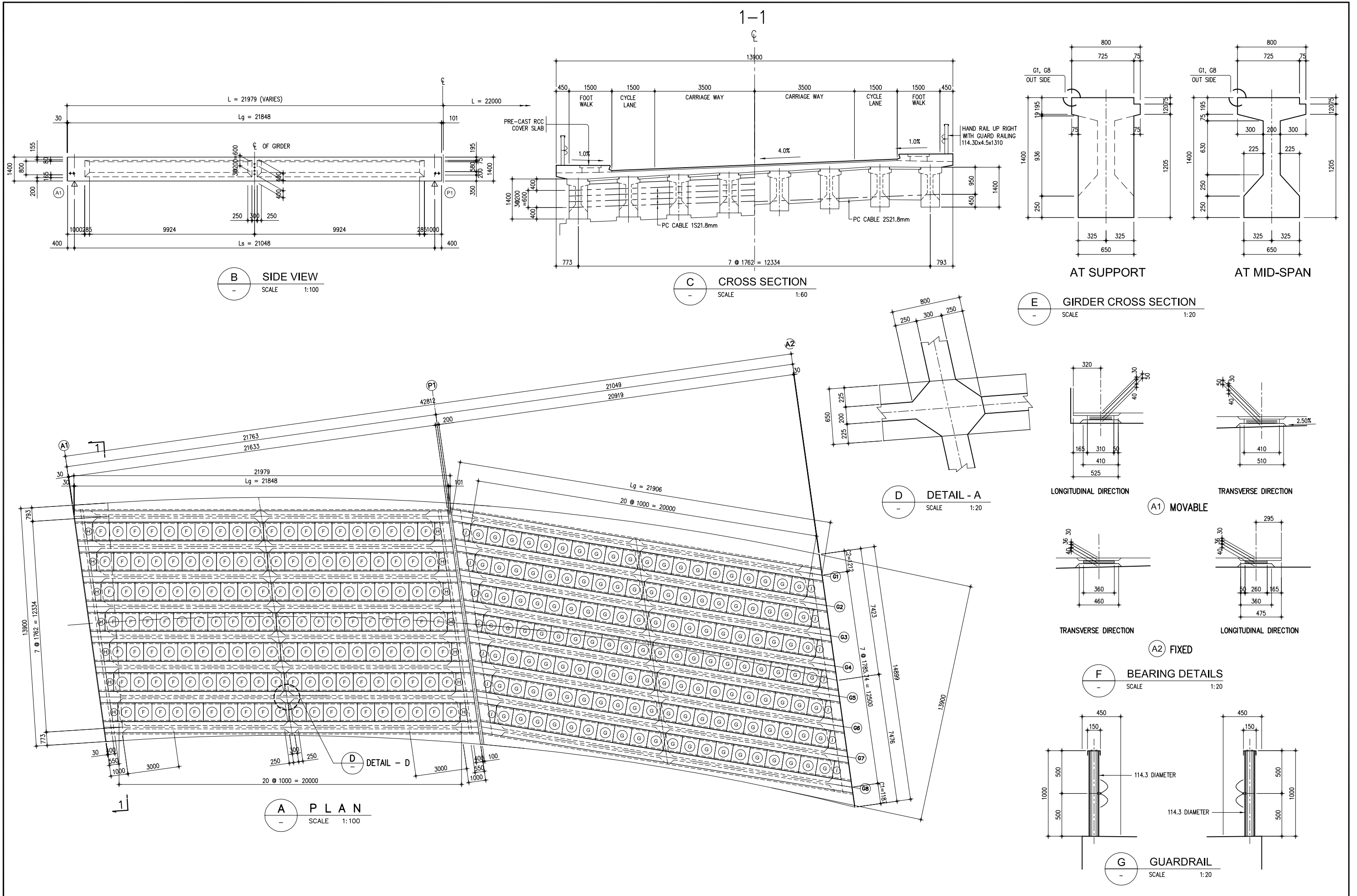
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APPROVED BY:	
DWG. NO.	K04-00-C

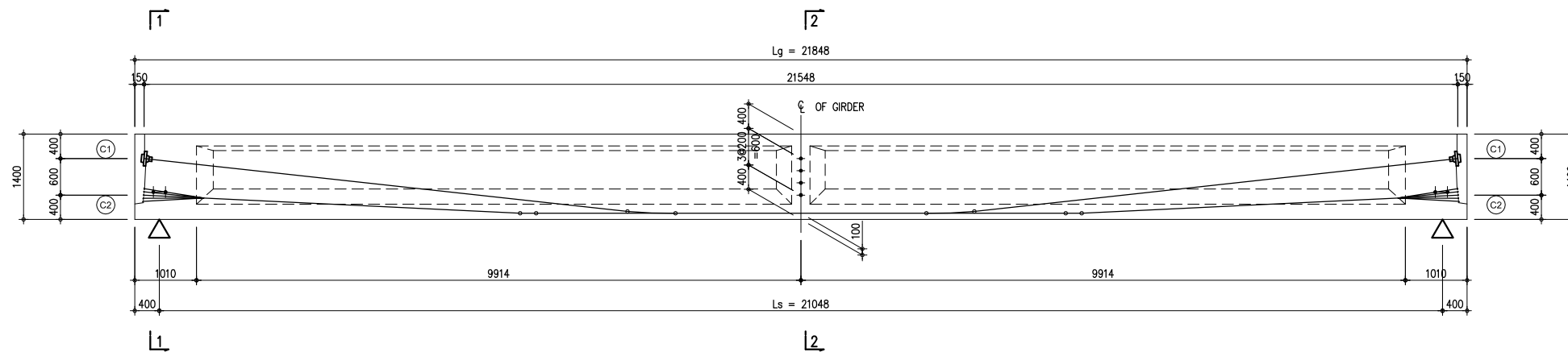


2 SPAN CONTINUOUS BRIDGE	
	A1~P1~A2
Lt (m)	44.000 (42.812)
Lo (m)	21.916
L1 (m)	VARIES
L2 (m)	21.771/21.050
$\beta$ (°)	12°22'43"
$\beta_2$ (°)	68°56'28"
e1/e2 (mm)	30/100
i1 (%)	4.00
i2 (%)	4.00
A1/A2 (mm)	848/654
B1/B2 (mm)	1011/721
C1/C2 (mm)	1187/1212
Lg1~Lg8 (m)	21.848
Lg9 ~ Lg16 (m)	21.906
SPAN LENGTH (m)	L=2@22.0=44.0
REMARKS	

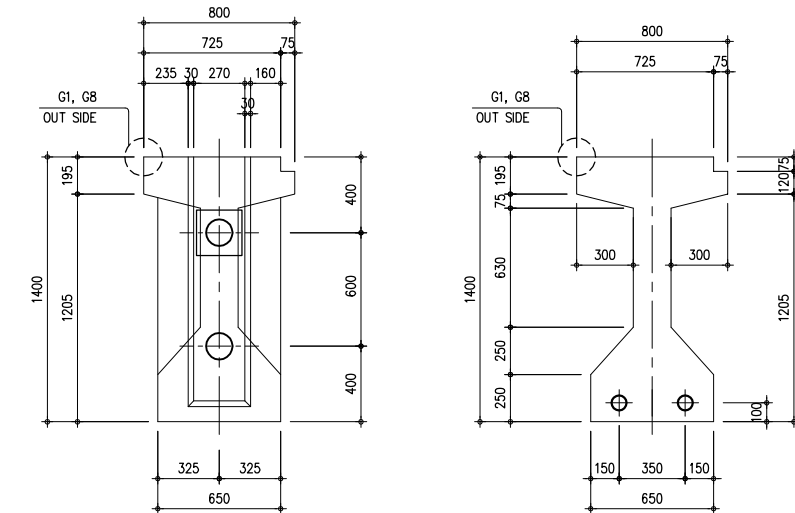
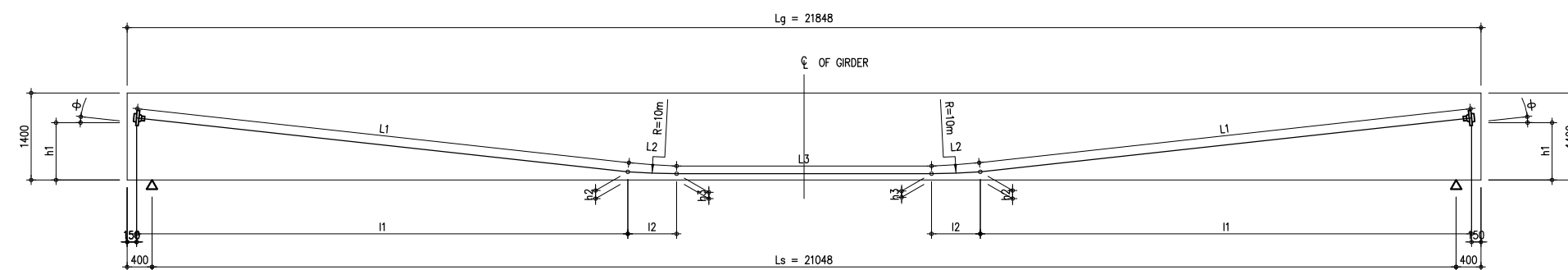


1 LAYOUT PLAN  
SCALE 1:100





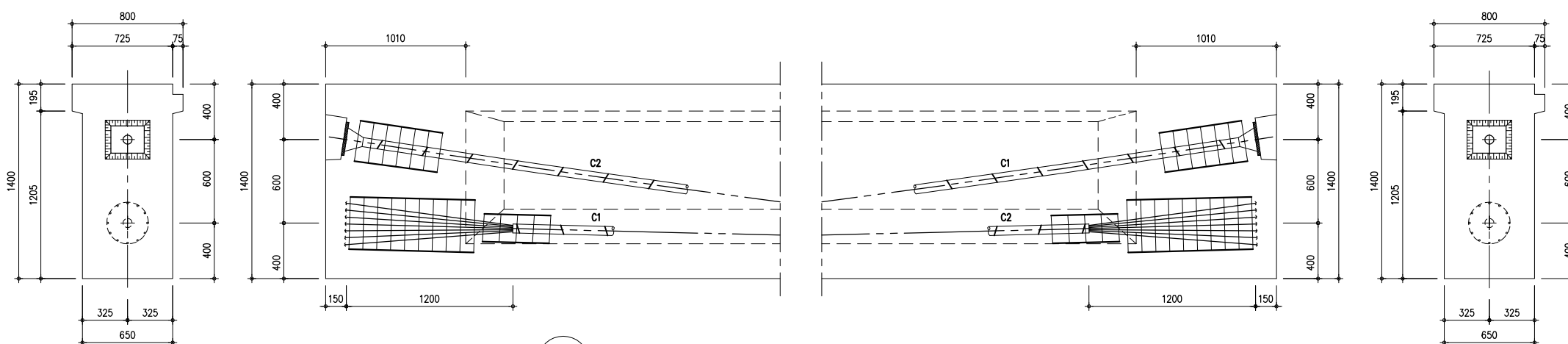
**A** CABLE ARRANGEMENT  
SCALE 1:50



**B** GIRDER CROSS SECTION  
SCALE 1:20

CABLE NO.	I1	I2	L1	L2	L3	$2\sum L + 3$	h1	h2	h3	$\theta =$ (degree)
C1	7931	785	7978	785	4117	21643	400	131	100	6° 15'
C2	6170	262	6177	262	8684	21562	1000	103	100	2° 45'

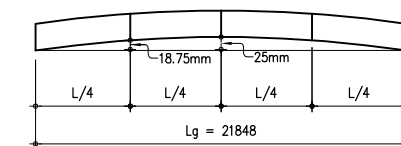
TOTAL LENGTH  $\sum l = 43.21m$   
TOTAL WEIGHT  $W = 43.21 \times 9.288 = 401.33 \text{ kg/l girder}$



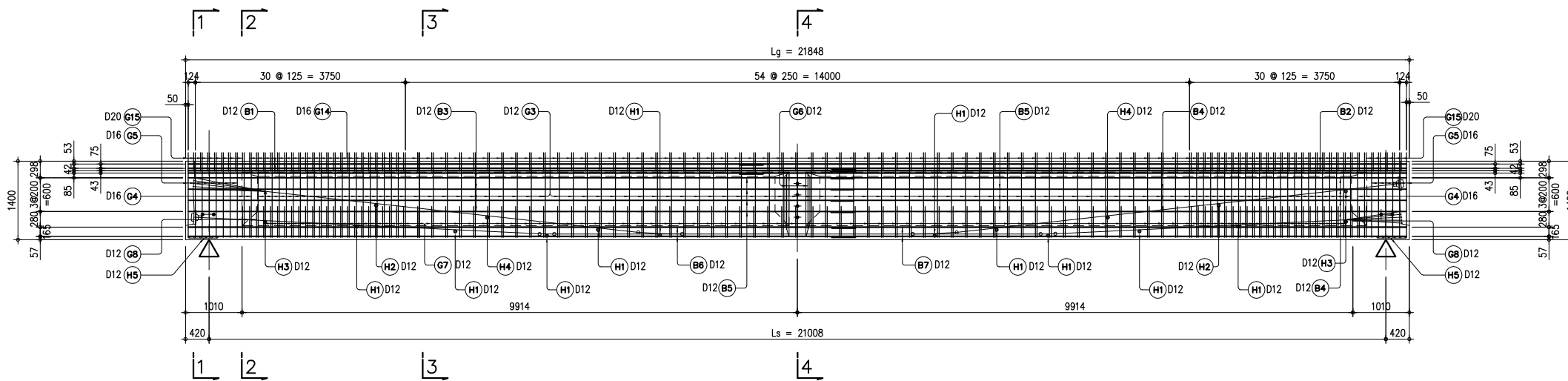
**C** JACKING END & DEAD END ANCHORAGE DETAILS  
SCALE 1:20

**NOTES:**

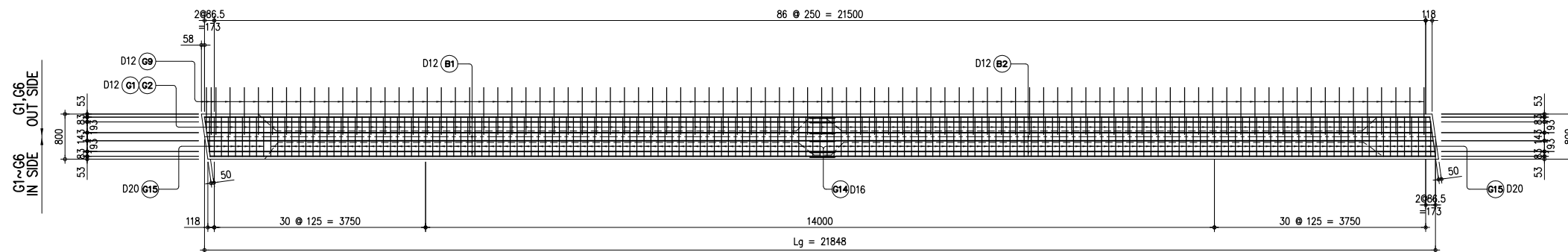
- PRESTRESSED CONCRETE:**
  - \* CONCRETE CUBE STRENGTH,  $f_{cu} = 50 \text{ MPa}$
  - \* AT TRANSFER OF PRESTRESS,  $f_{ci} = 36 \text{ MPa}$
- PRESTRESSING STRANDS:**
  - \* 1 - D12.7 IS A 7 - WIRE STRAND WITH NOMINAL TENSILE STRENGTH,  $f_{pu} = 1860 \text{ MPa}$
  - \* TOTAL NO. OF STRANDS =  $2 \times 12D12.7 = 24 - D12.7$
  - \* JACKING STRESS,  $f_{pa} = 1302 \text{ MPa}$
  - \* TOTAL JACKING FORCE,  $P_o = 2268 \text{ KN}$
  - \* CABLE DUCT INSIDE DIAMETER (12-D12.7) = 65mm.
- REINFORCING STEEL:**
  - \* ALL REINFORCING STEEL SHALL BE GRADE 460 WITH MINIMUM CHARACTERISTIC STRENGTH,  $f_y = 460 \text{ MPa}$
- GIRDER PRE-CAMBER PRIOR TO STRESSING SHALL BE AS SHOWN BELOW



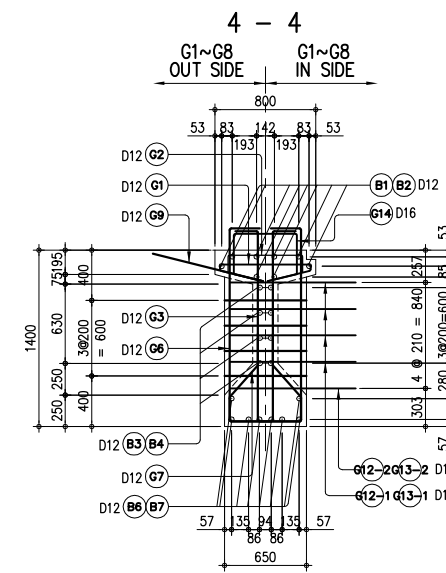
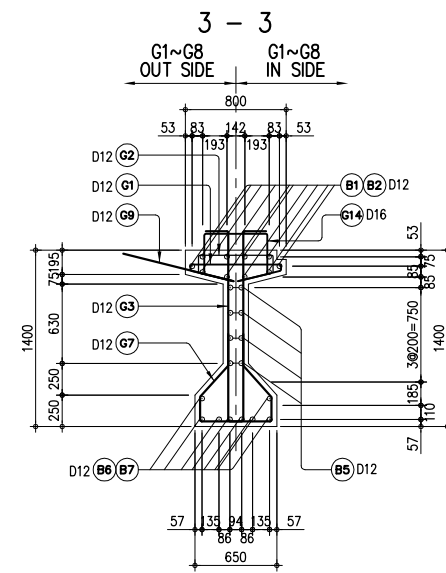
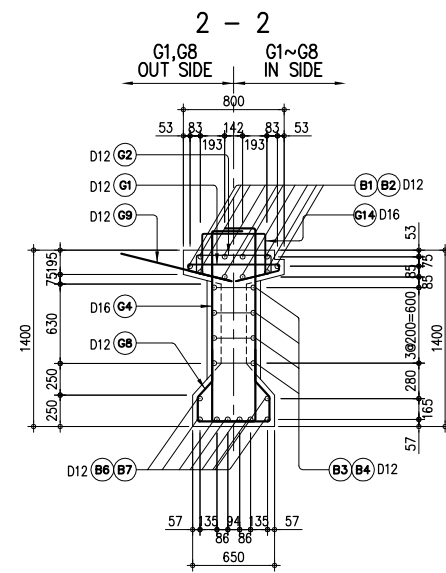
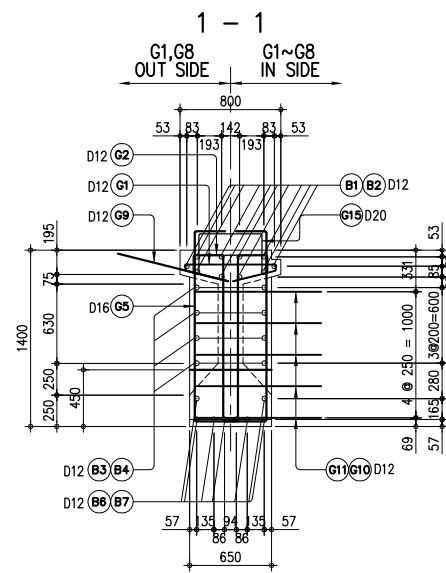
5. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SPECIFIED.



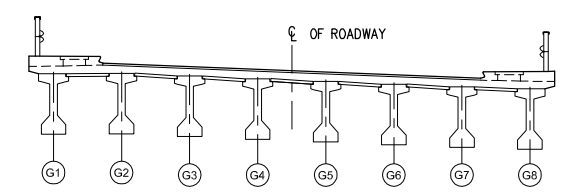
**B SIDE VIEW**  
SCALE 1:50



**A PLAN**  
SCALE 1:50



**C GIRDER CROSS SECTION**  
SCALE 1:30

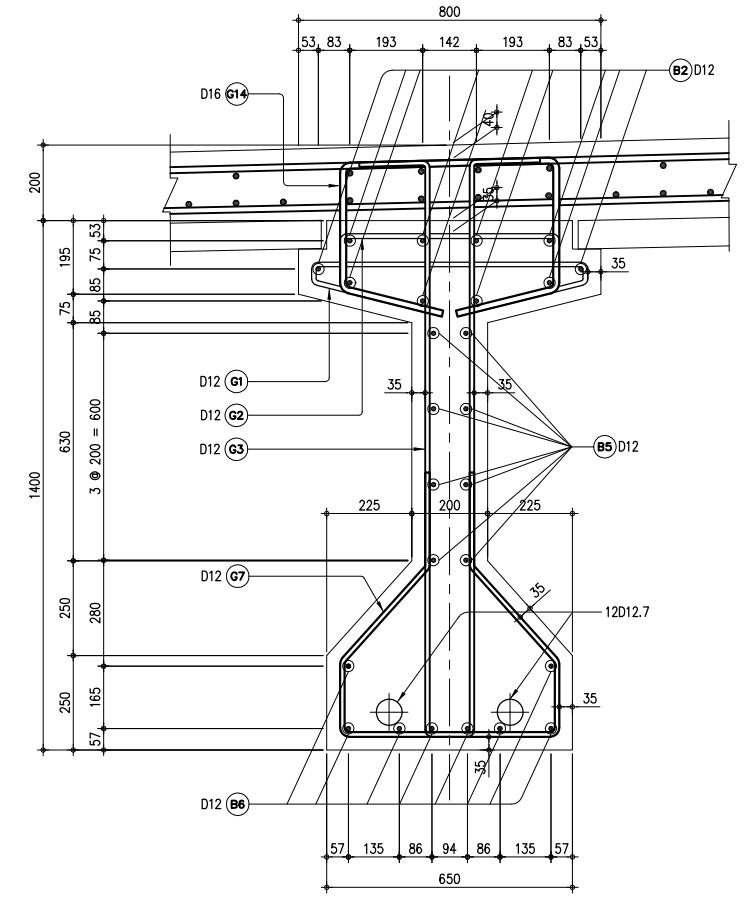
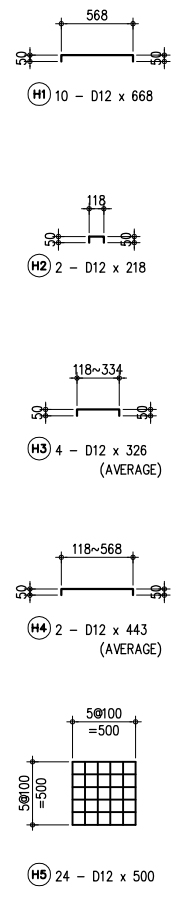
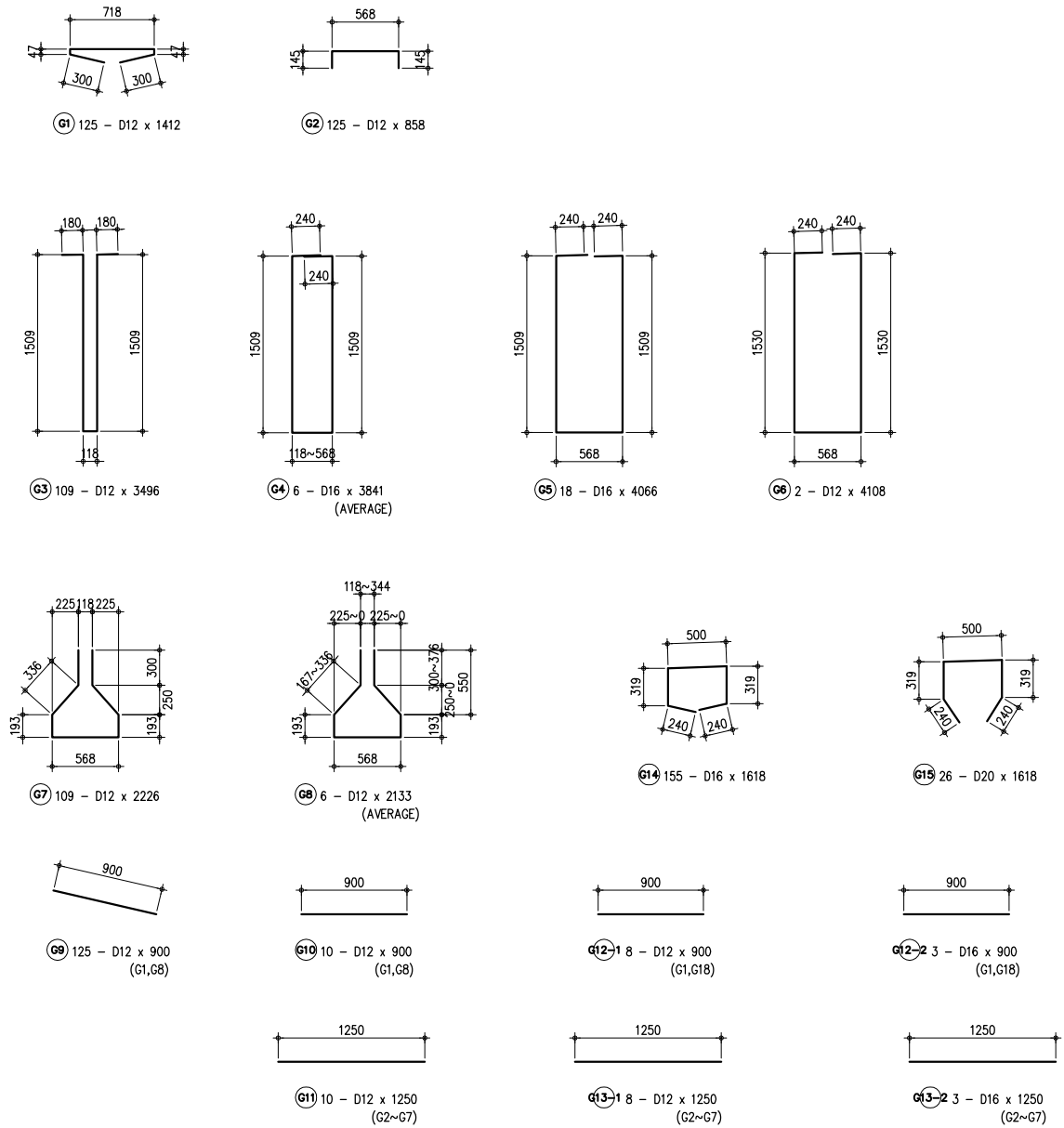


**D LOCATION MAP**  
SCALE 1:100

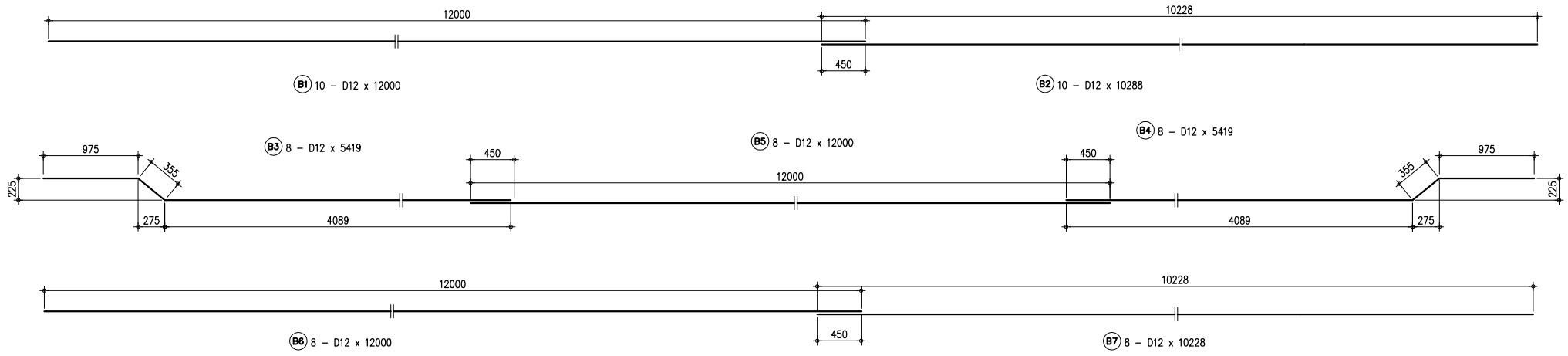
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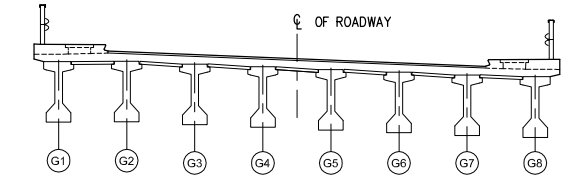




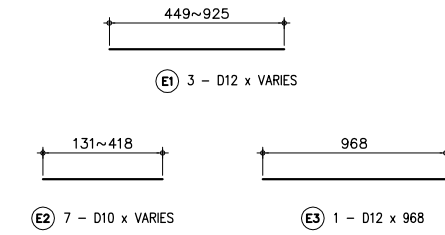
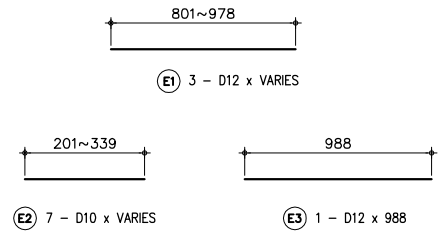
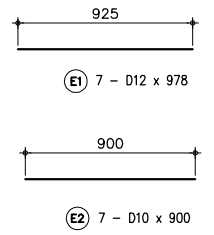
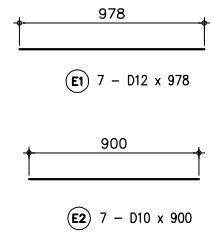
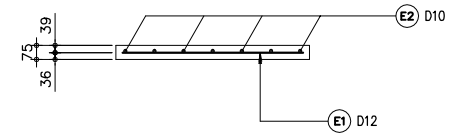
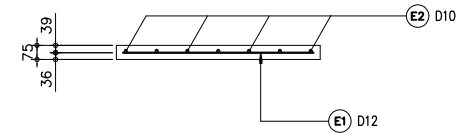
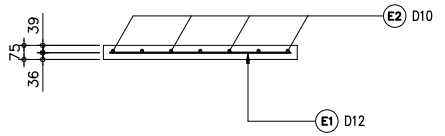
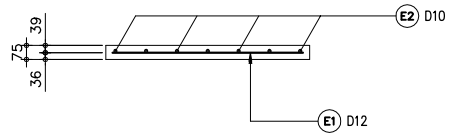
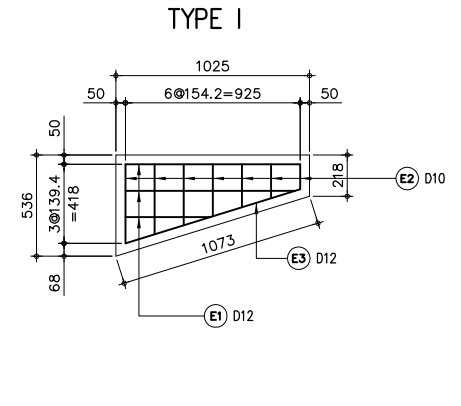
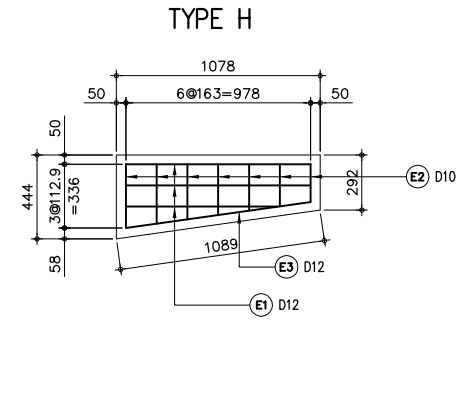
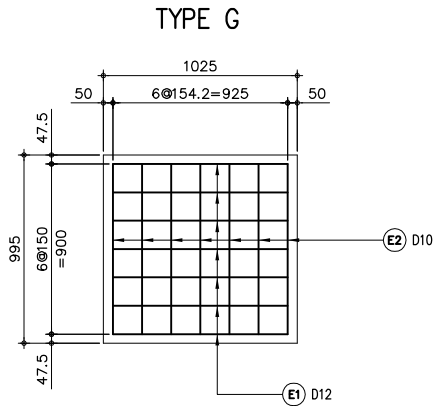
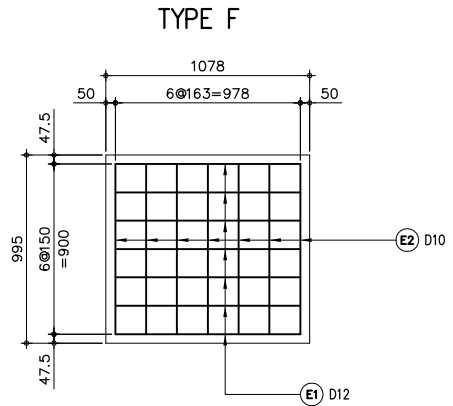
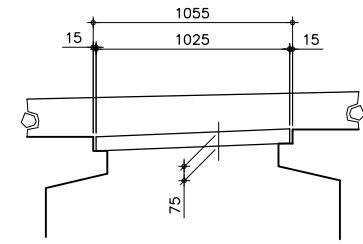
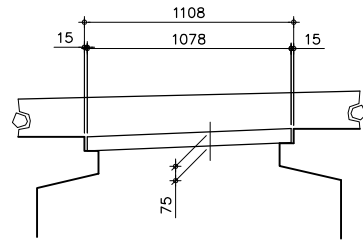
2 DETAIL OF GIRDER CENTER SCALE  
SCALE 1:10



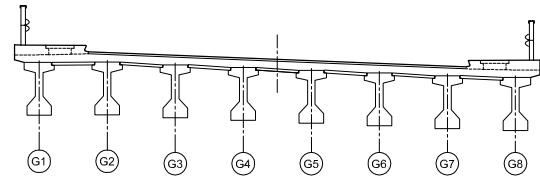
1 REINFORCEMENT OF GIRDER (2)  
SCALE 1:30



3 LOCATION MAP  
SCALE 1:100



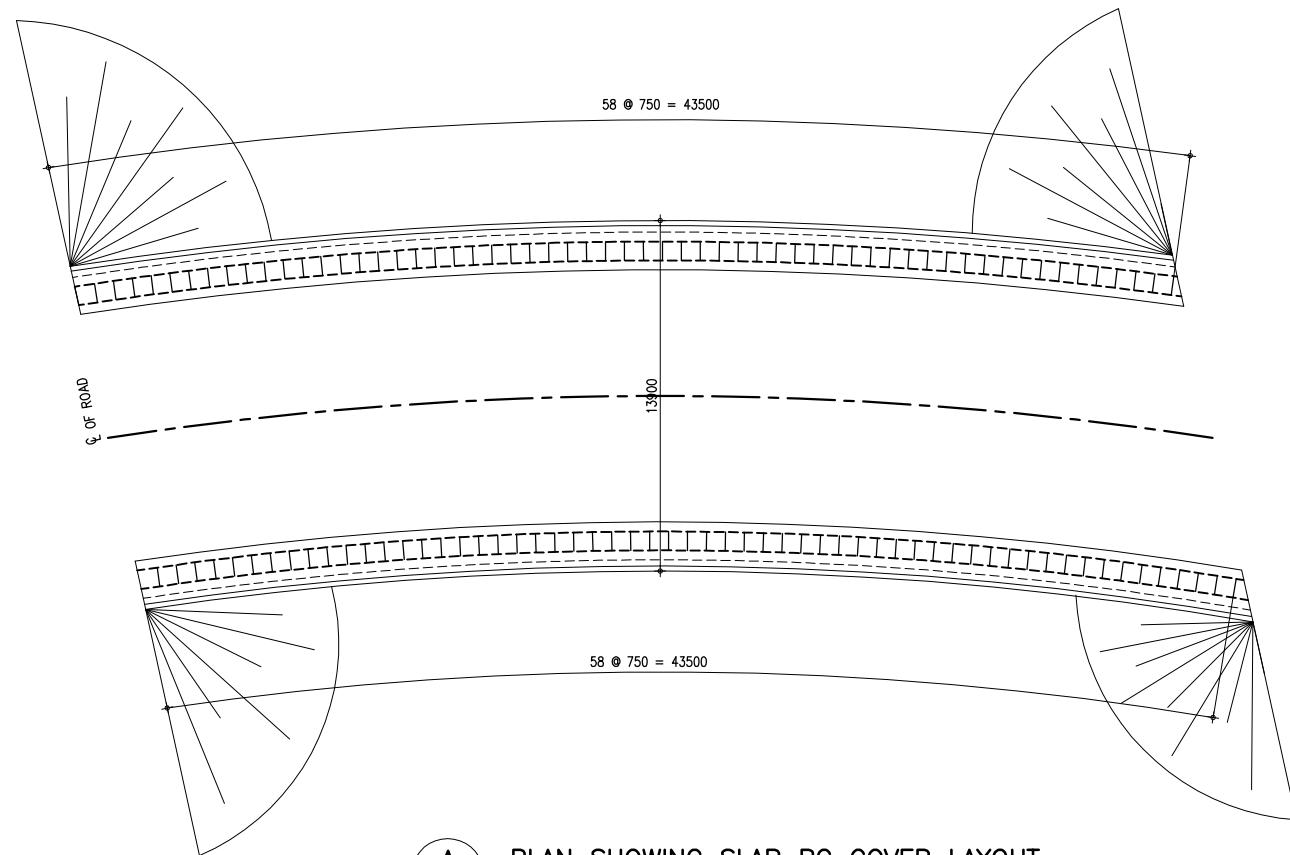
**A** DETAIL OF PRECAST PLATE  
SCALE 1:20



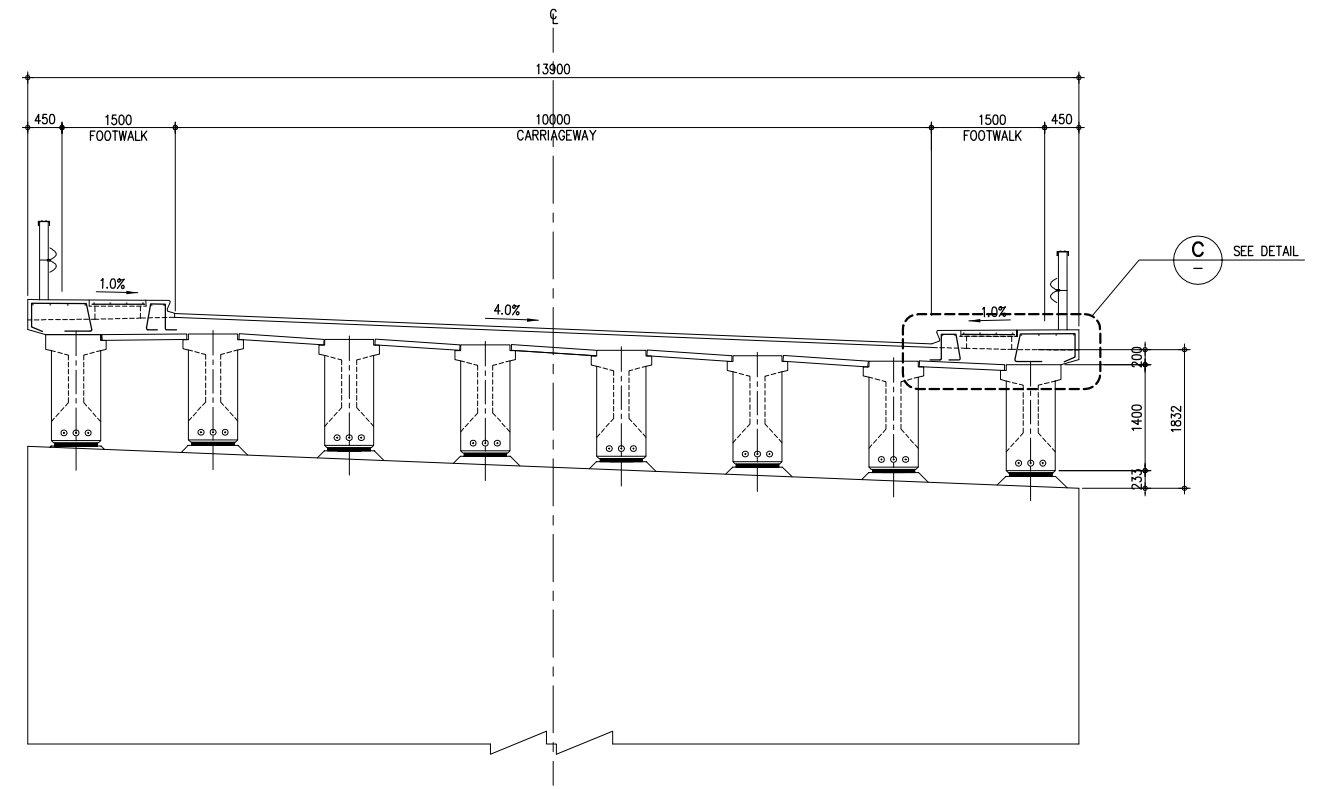
**B** LOCATION MAP  
SCALE 1:100

No	REVISION	DATE

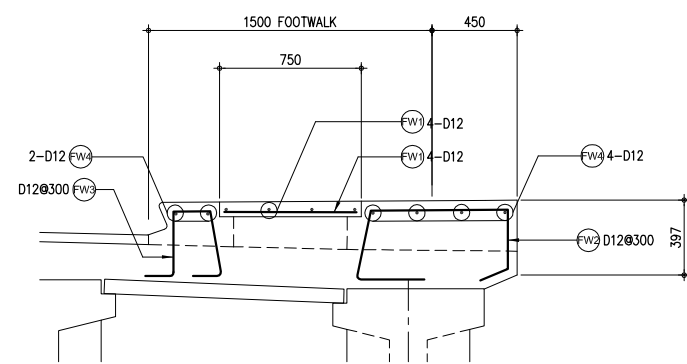
DESIGNED BY:	
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APPROVED BY:	
DWG. NO.	K04-06



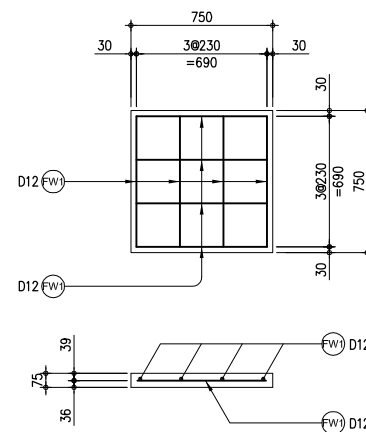
**A** PLAN SHOWING SLAB RC COVER LAYOUT  
SCALE 1:100



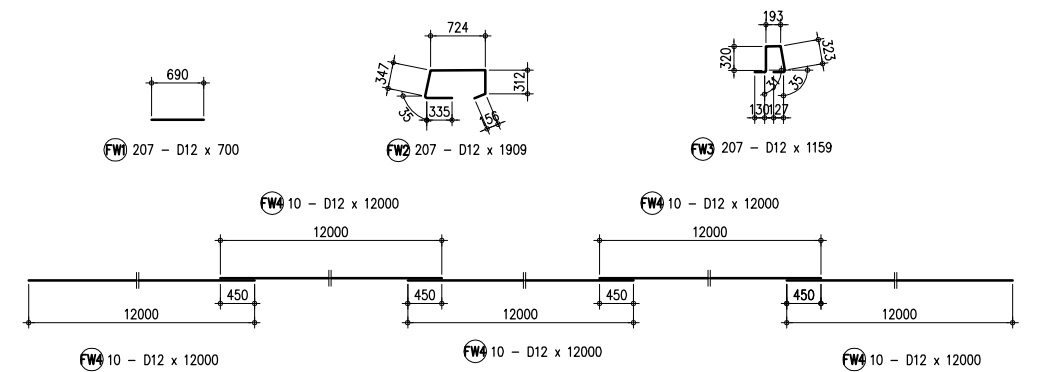
**B** SECTION  
SCALE 1:50



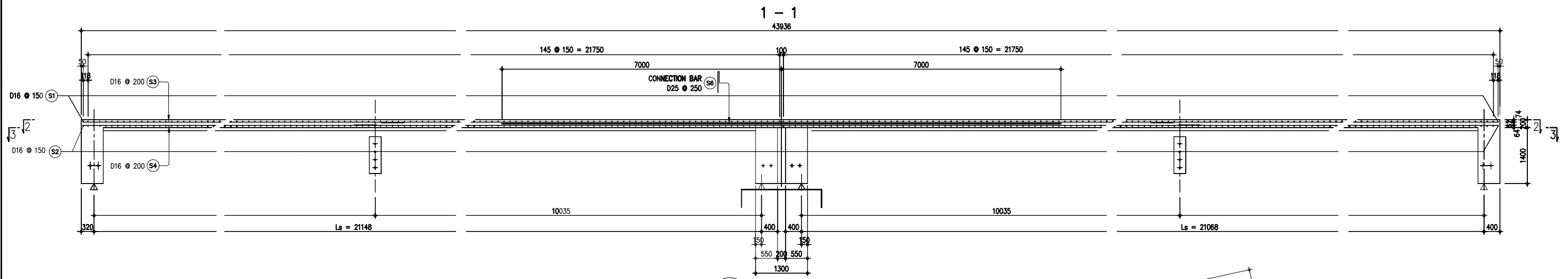
**C** DETAIL  
SCALE 1:20



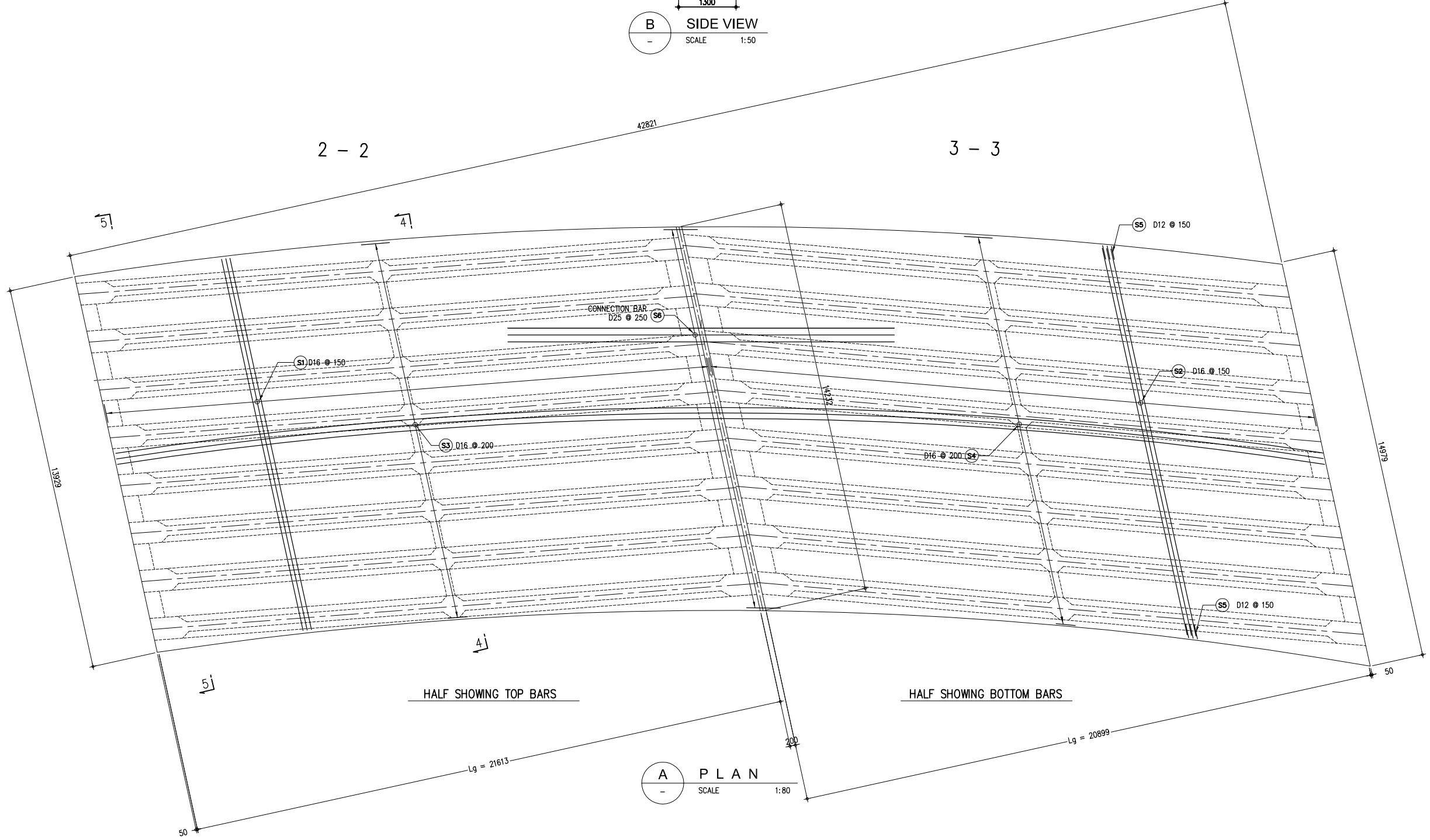
**D** DETAILS OF PRECAST PLATE  
SCALE 1:20



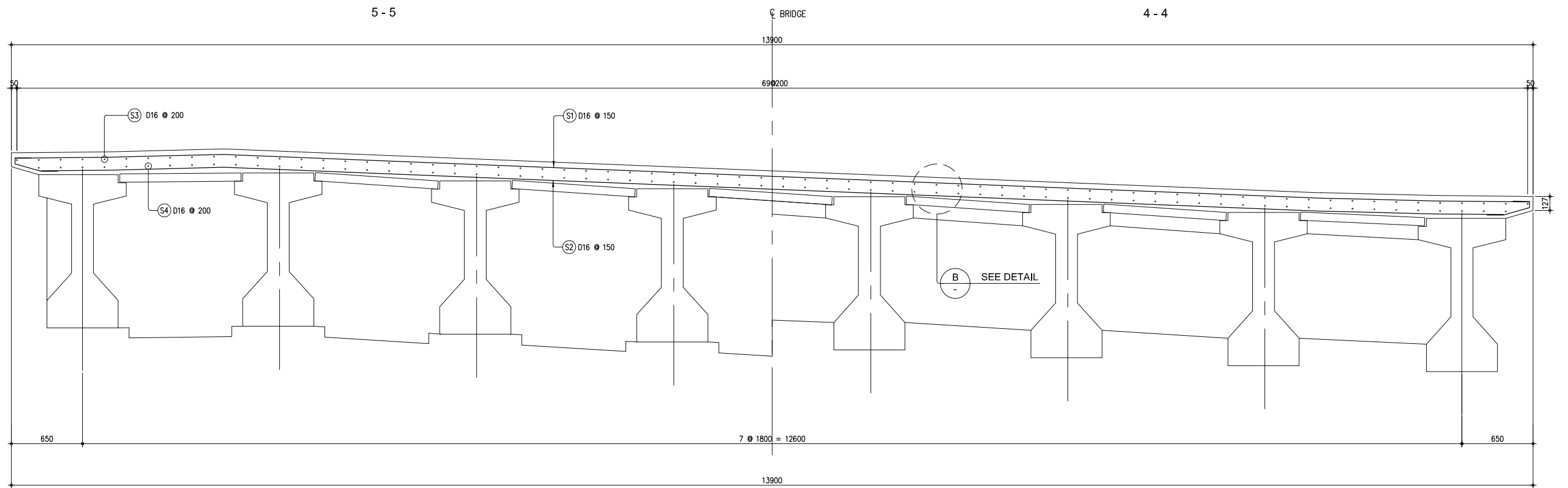
**E** BAR BENDING LAYOUT  
SCALE 1:50



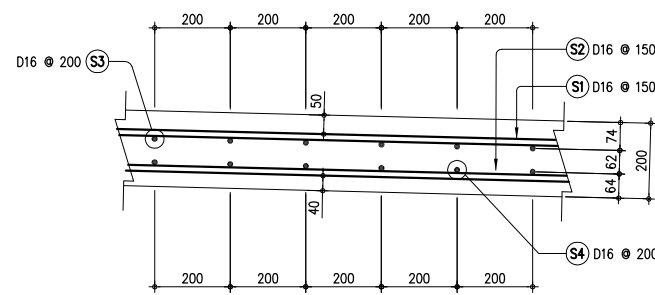
**B** SIDE VIEW  
SCALE 1:50



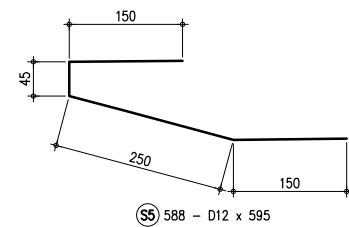
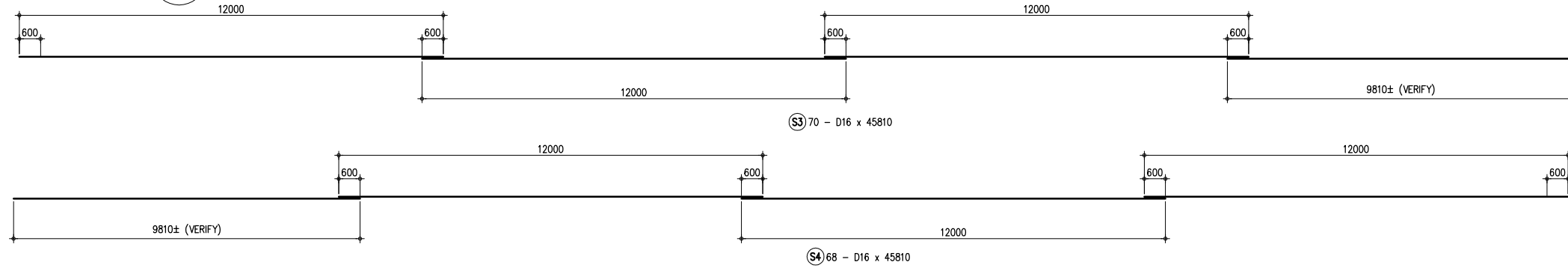
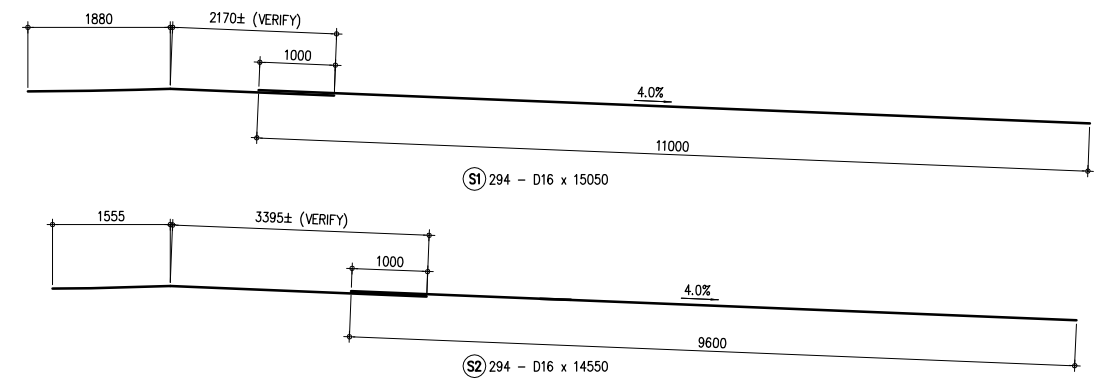
**A** PLAN  
SCALE 1:80



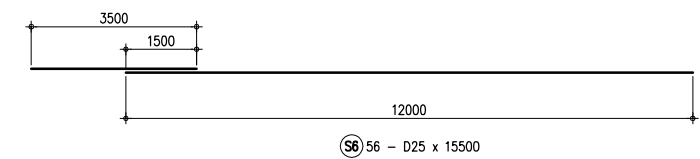
**A** CROSS SECTION  
SCALE 1:20

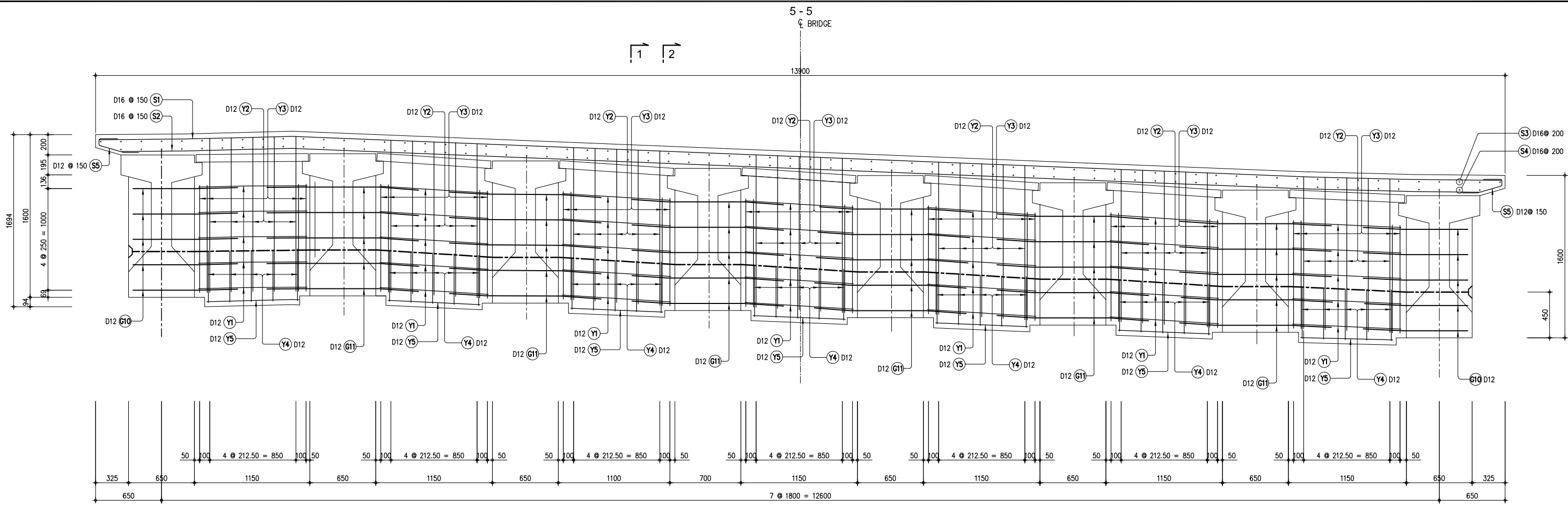


**B** DETAIL  
SCALE 1:10

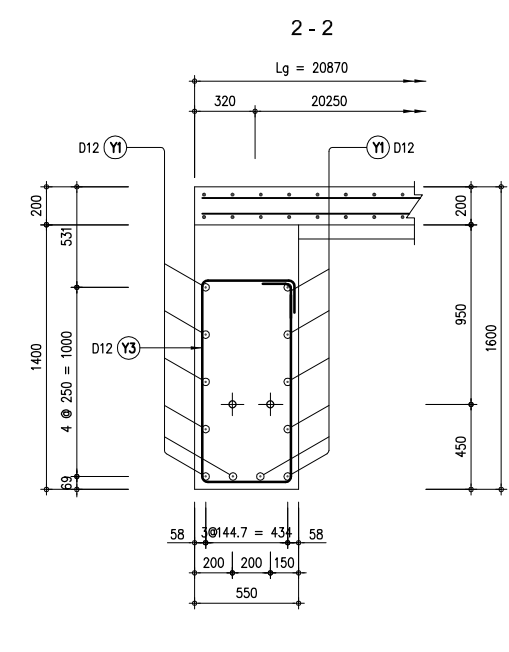
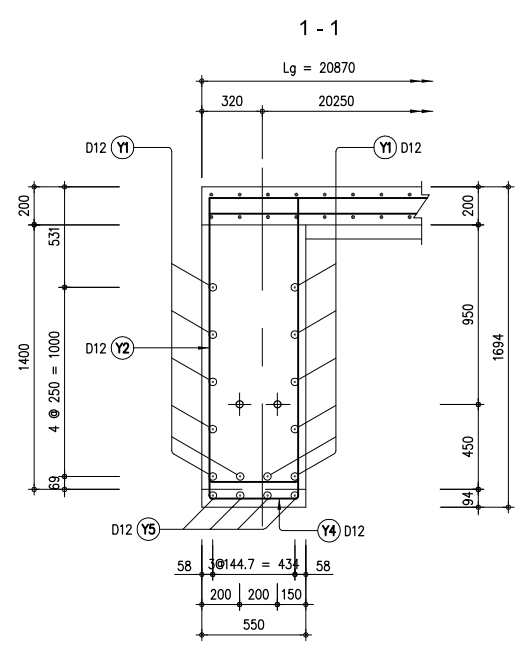


**C** BAR BENDING LAYOUT  
SCALE NTS

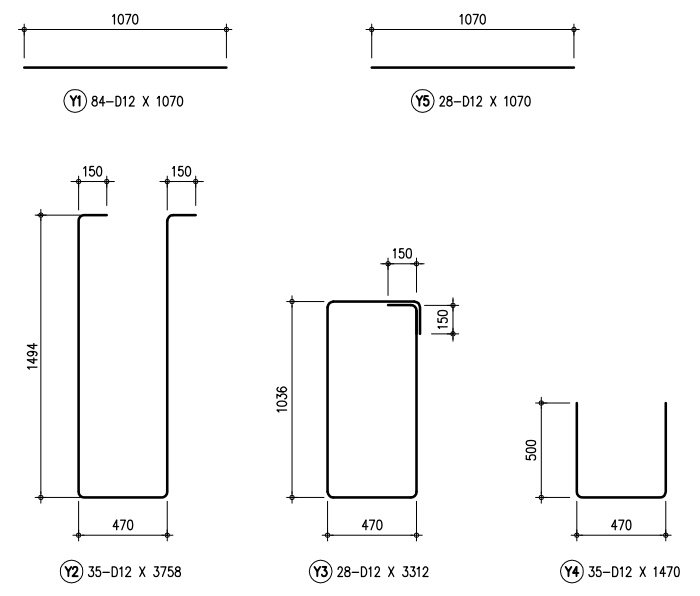




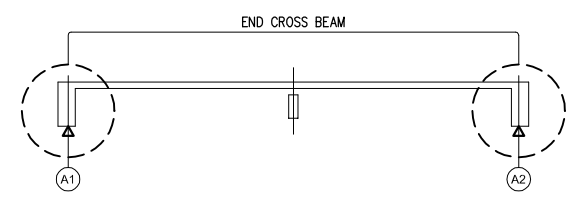
**A CROSS SECTION**  
SCALE 1:20



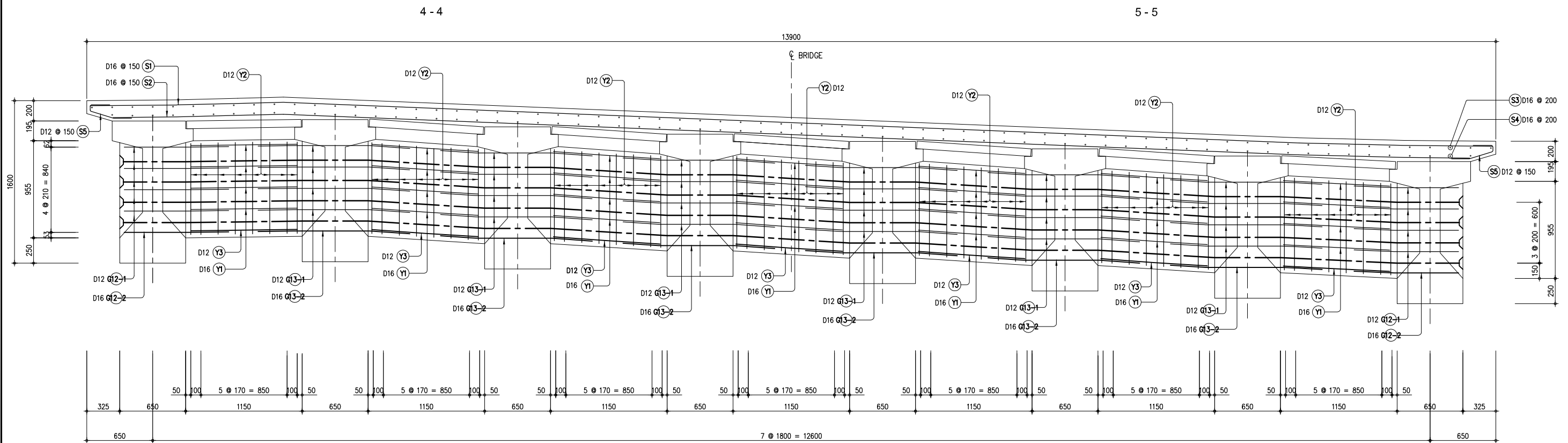
**B SIDE VIEW**  
SCALE 1:20



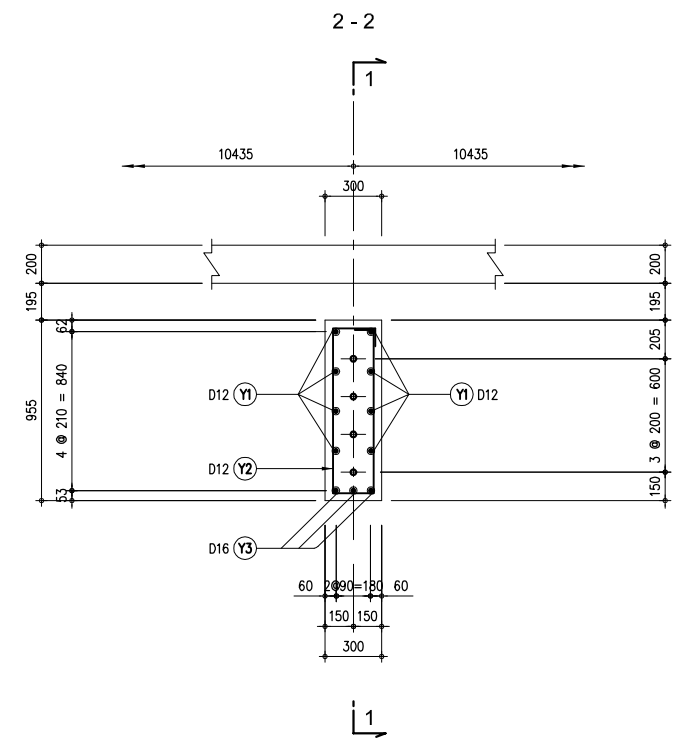
**C BAR BENDING LAYOUT**  
SCALE 1:20



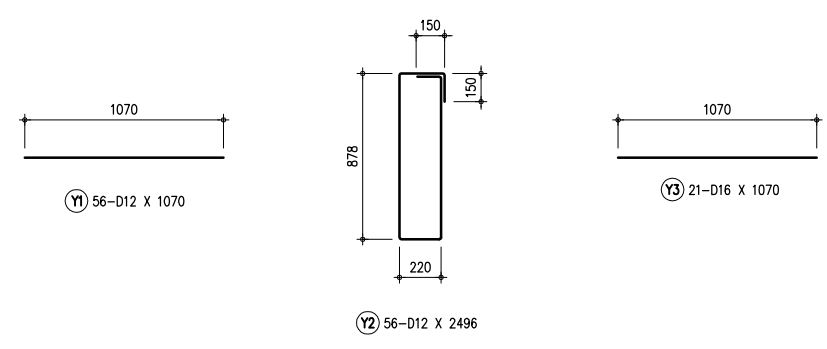
**E LOCATION MAP**  
SCALE 1:30



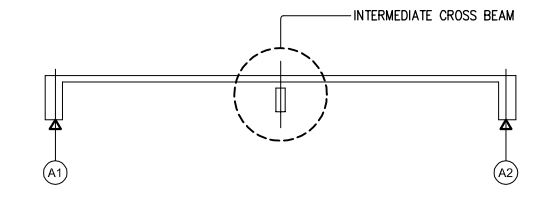
**A** CROSS SECTION  
SCALE 1:20



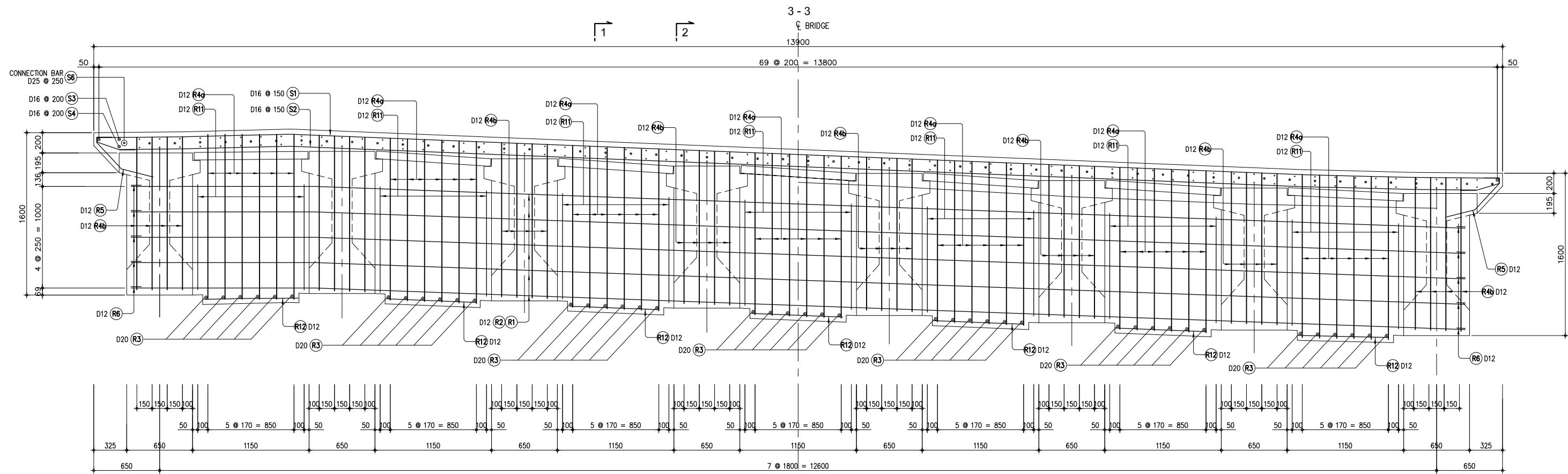
**B** SIDE VIEW  
SCALE 1:20



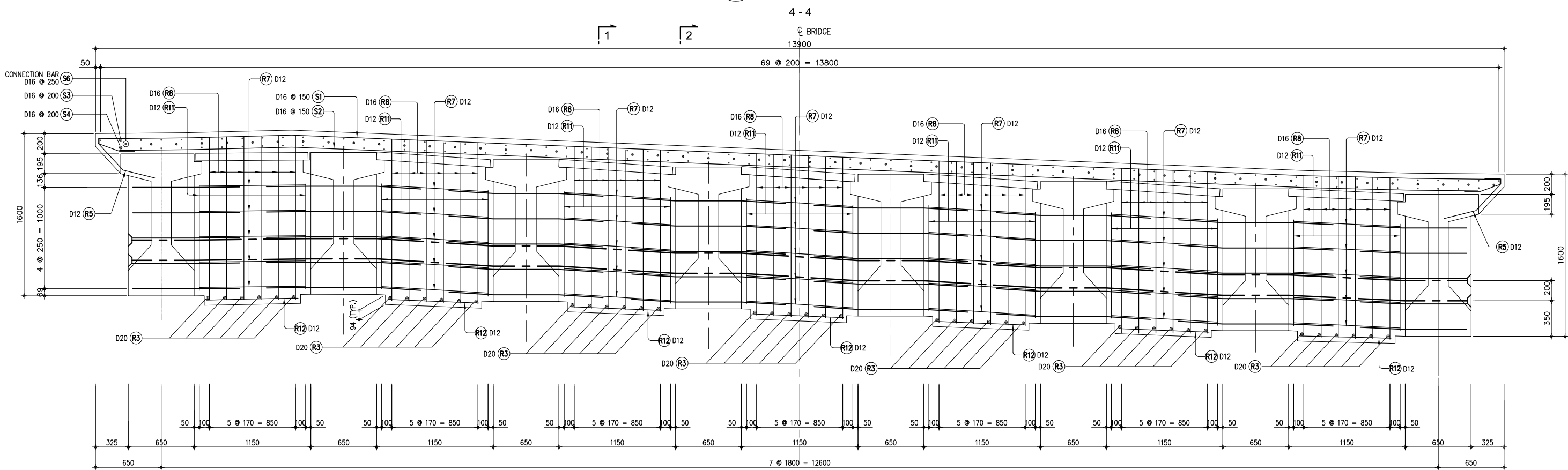
**C** BAR BENDING LAYOUT  
SCALE NTS



**D** LOCATION MAP  
SCALE NTS



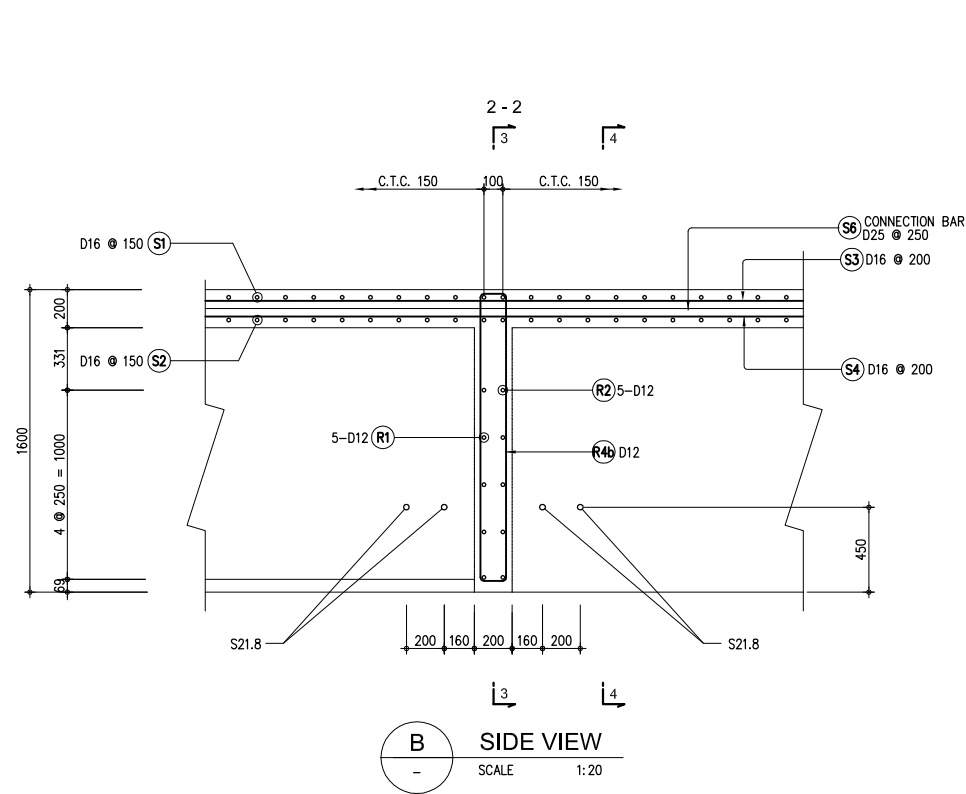
**A** CROSS SECTION  
SCALE 1:20



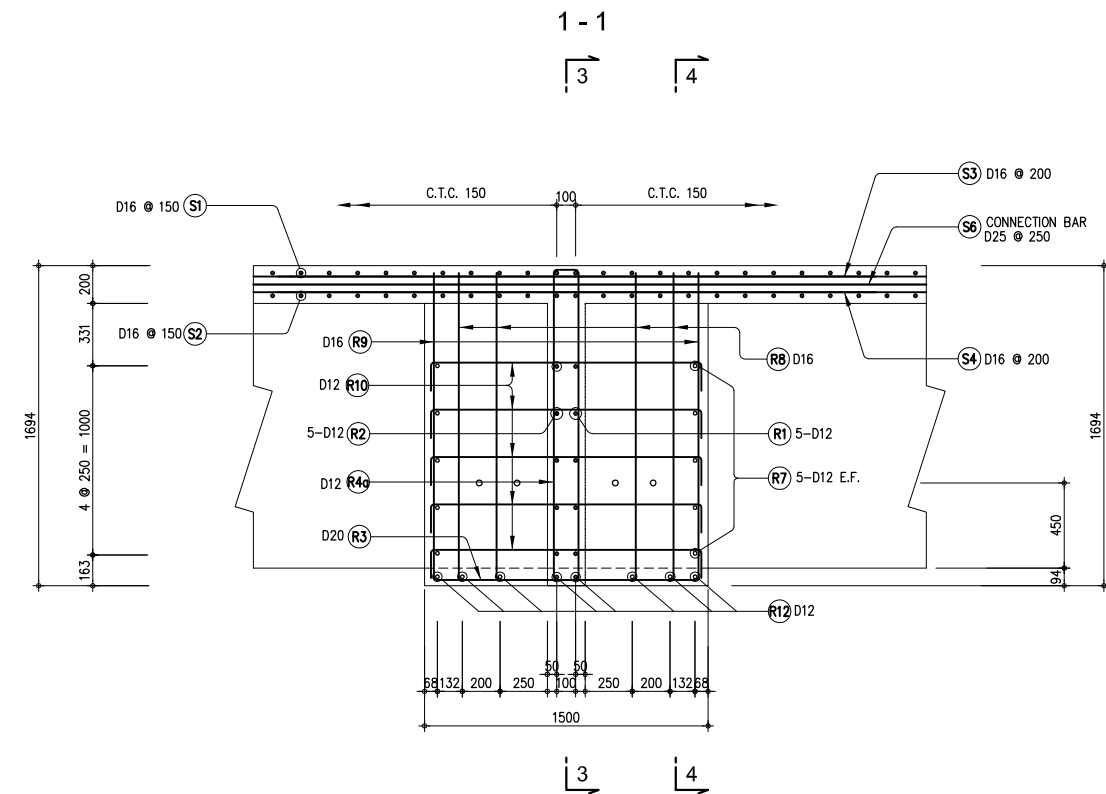
**A2** CROSS SECTION  
SCALE 1:20

No	REVISION	DATE

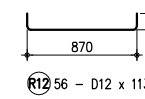
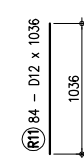
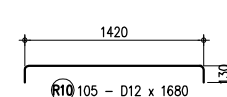
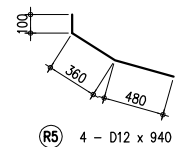
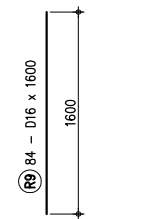
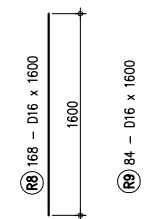
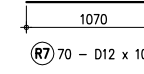
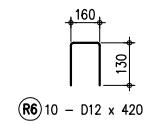
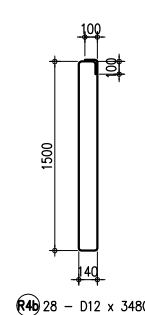
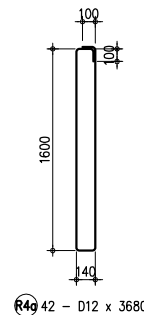
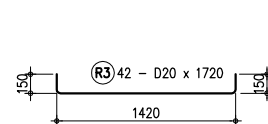
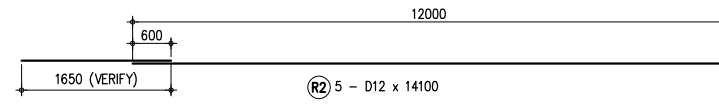
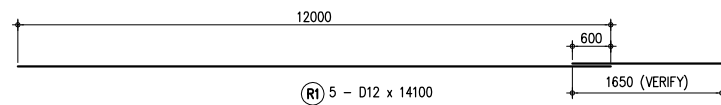




**B** SIDE VIEW  
SCALE 1:20



**C** SIDE VIEW  
SCALE 1:20



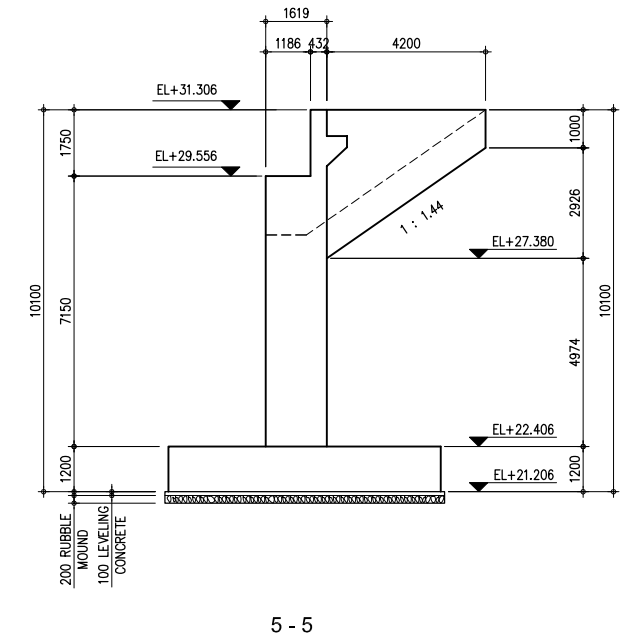
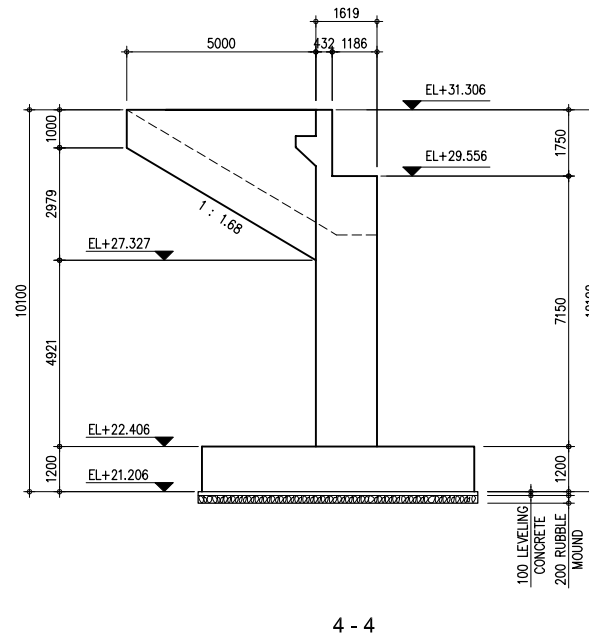
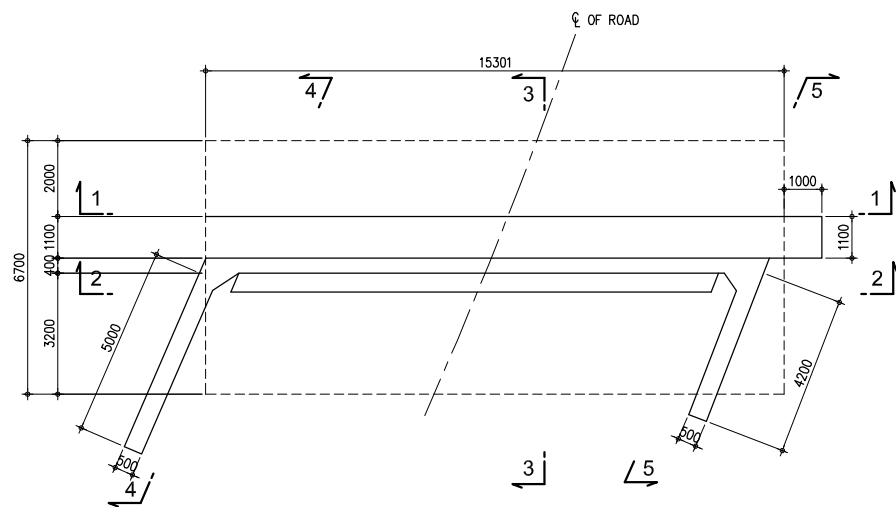
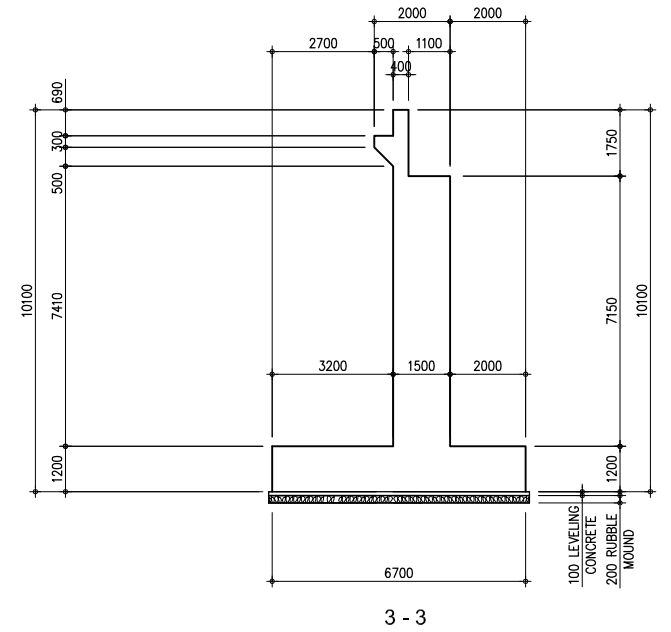
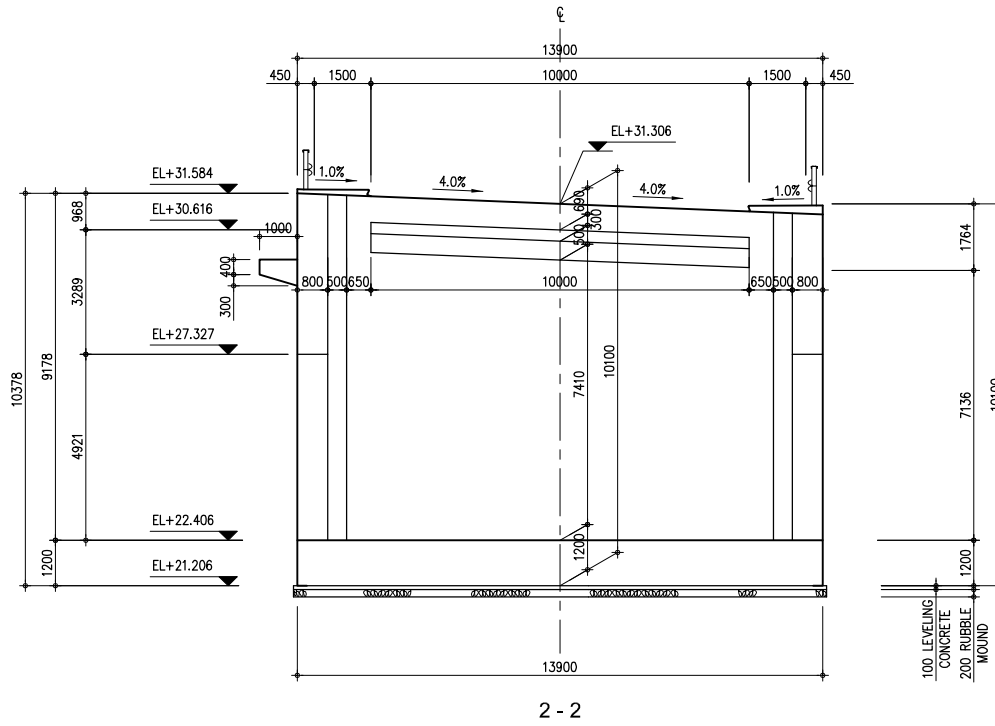
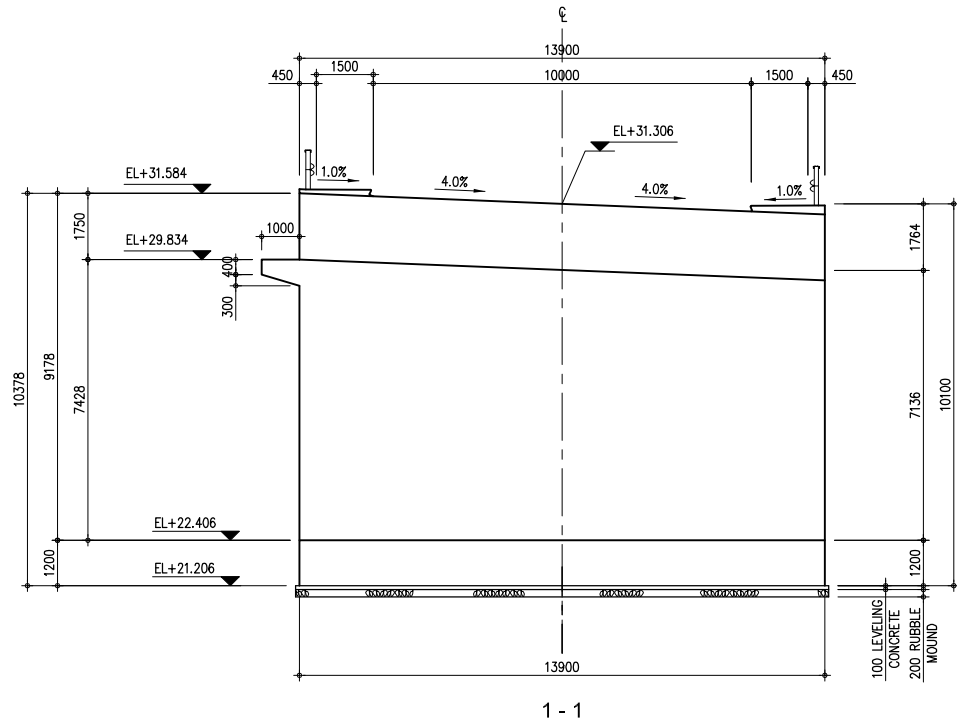
**D** BAR BENDING  
NOT TO SCALE

No	REVISION	DATE

DESIGNED BY:	
CHECKED BY:	
APPROVED BY:	
DWG. NO.	K04-13

ESTIMATED QUANTITIES FOR SUPERSTRUCTURE																
REINFORCING BARS																
LOCATION	BAR MARK	SPACING	QTY. (pcs)	SIZE (mm)	DIMENSION mm ( OUT TO OUT )							LENGTH PER BAR (mm)	TOTAL LENGTH (m)	UNIT WEIGHT (kg/m)	TOTAL WEIGHT (kg)	CONCRETE VOLUME (m³)
					a	b	c	d	e	f	g					
END CROSS BEAM (ABUTMENTS)	Y1	AS SHOWN	84	12	1070							1070	89.88	0.888	79.81	
	Y2	AS SHOWN	35	12	150	1588	470	1588	150			3946	138.11	0.888	122.64	
	Y3	AS SHOWN	28	12	150	470	1036	470	1036	150		3312	92.74	0.888	82.35	
	Y4	AS SHOWN	35	12	500	470	500					1470	51.45	0.888	45.69	
	Y5	AS SHOWN	28	12	1070							1070	29.96	0.888	26.60	
A. TOTAL QUANTITY FOR END DIAPHRAGM														357.10		
B. TOTAL NUMBER OF END DIAPHRAGM														4.00		
C. SUB TOTAL QUANTITY END DIAPHRAGM														1428.39	12.936	
INTERMEDIATE CROSS BEAM	Y1	AS SHOWN	56	12	1070							1070	59.92	0.888	53.21	
	Y2	AS SHOWN	56	12	150	220	878	220	878	150		2496	139.78	0.888	124.12	
	Y3	AS SHOWN	21	16	1070							1070	22.47	1.579	35.48	
	A. TOTAL QUANTITY PER INTERMEDIATE														212.81	
B. TOTAL NUMBER OF INTERMEDIATE DIAPHRAGM														2.00		
C. TOTAL QUANTITY OF INT. DIAPHRAGM														425.62	4.606	
SLAB CONNECTION CROSS BEAM	R1	AS SHOWN	5	12	12000							12000	60.00	0.888	53.28	
	R2	AS SHOWN	5	12	2100	12000						14100	70.50	0.888	62.60	
	R3	AS SHOWN	42	20	150	1420	150					1720	72.24	2.466	178.14	
	R4a	AS SHOWN	42	12	100	148	1600	148	1600	100		3696	155.23	0.888	137.85	
	R4b	AS SHOWN	28	12	100	148	1500	148	1500	100		3496	97.89	0.888	86.92	
	R5	AS SHOWN	20	12	50	360	480					890	17.80	0.888	15.81	
	R6	AS SHOWN	12	12	130	160	130					420	5.04	0.888	4.48	
	R7	AS SHOWN	70	12	1070							1070	74.90	0.888	66.51	
	R8	AS SHOWN	168	16	1600							1600	268.80	1.579	424.44	
	R9	AS SHOWN	84	16	1600							1600	134.40	1.579	212.22	
	R10	AS SHOWN	105	12	130	1420	130					1680	176.40	0.888	156.64	
	R11	AS SHOWN	56	12	1040							1040	58.24	0.888	51.72	
	R12	AS SHOWN	56	12	130	870	130					1130	63.28	0.888	56.19	
TOTAL QUANTITY														1506.80	18.996	
SLAB	S1	AS SHOWN	294	16	1880	5620	7500					15000	4410.00	1.579	6963.39	
	S2	AS SHOWN	294	16	1555	5745	7300					14600	4292.40	1.579	6777.70	
	S3	AS SHOWN	70	16	12000	12000	12000	9690				45690	3198.30	1.579	5050.12	
	S4	AS SHOWN	68	16	12000	12000	12000	9690				45690	3106.92	1.579	4905.83	
	S5	AS SHOWN	588	12	150	45	250	150				595	65.52	0.888	58.18	
	S6	AS SHOWN	56	25	2750	12000	2750					17500	980.00	3.854	3776.92	
A. TOTAL QUANTITY														27532.13	121.54	
FOOTWALK	FW1	AS SHOWN	464	12	700							700	324.80	0.888	288.42	
	FW2	300	207	12	335	35	347	724	312	156		1909	395.16	0.888	350.90	
	FW3	300	207	12	130	31	320	193	323	35	127	1159	239.91	0.888	213.04	
	FW4	AS SHOWN	10	12	12000	12000	12000	12000	3950			63950	639.50	0.888	567.88	
A. TOTAL QUANTITY PER SPAN														1,420.24	22.294	
B. TOTAL NUMBER OF SPANS														2.00		
C. SUB TOTAL QUANTITY FOR SIDEWALKS=(AXB)														2,840.48	44.588	

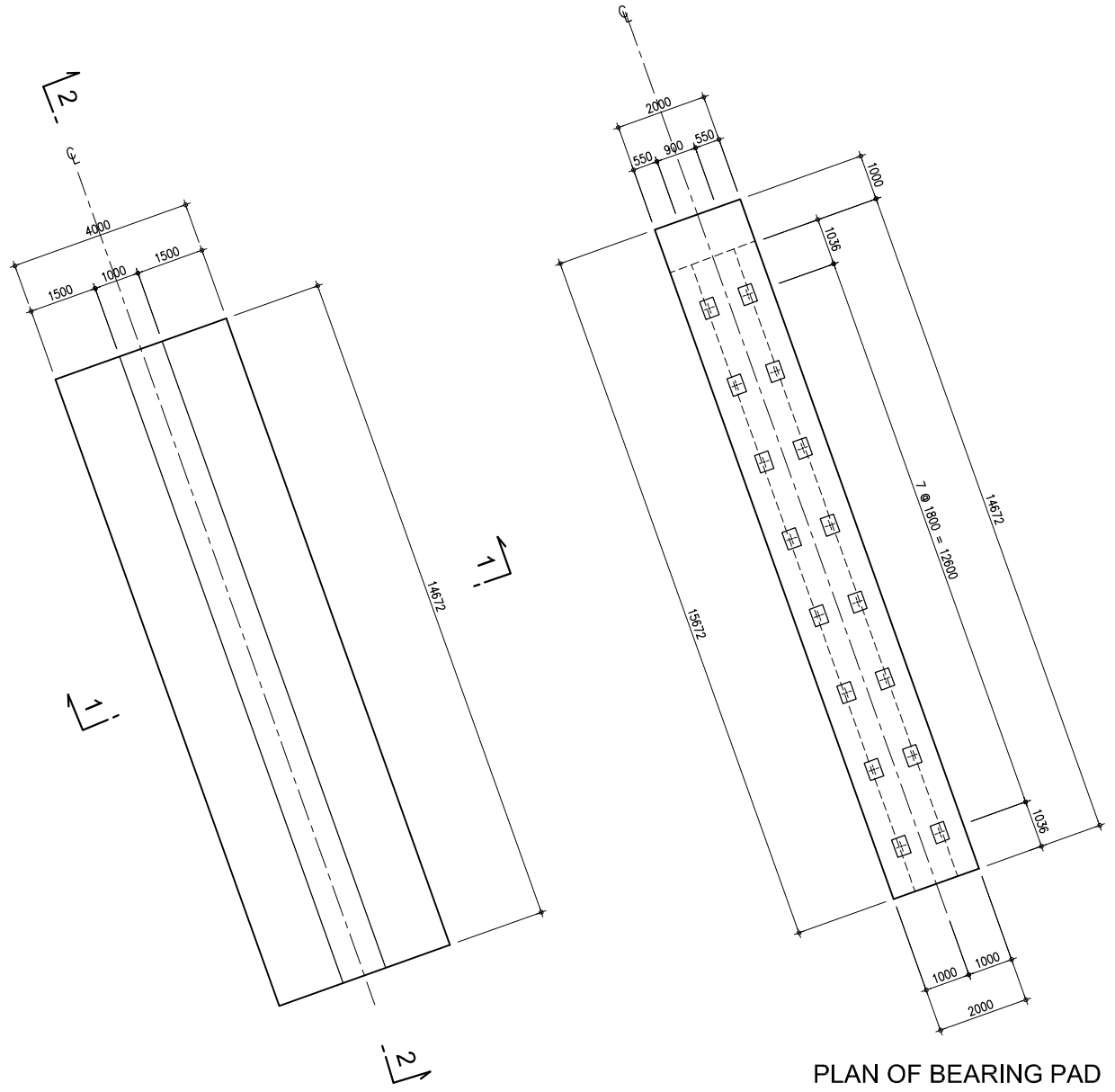
# DIMENSION DETAILS FOR ABUTMENT A1 (Scale 1:100)



No	REVISION	DATE

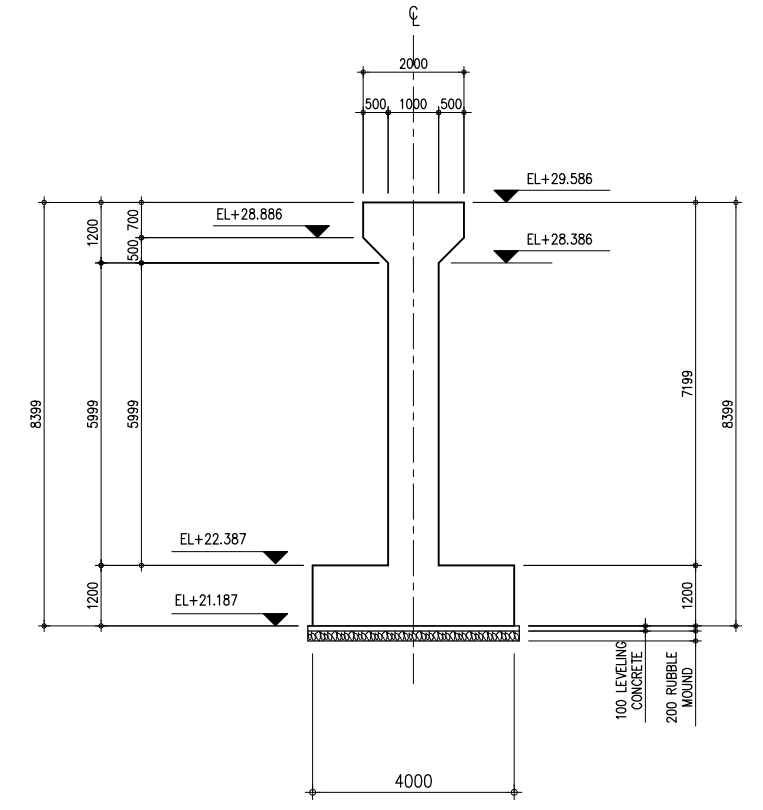
DESIGNED BY:	
CHECKED BY:	
APPROVED BY:	
DWG. NO.	K04-15

# DIMENSION DETAILS FOR PIER P1

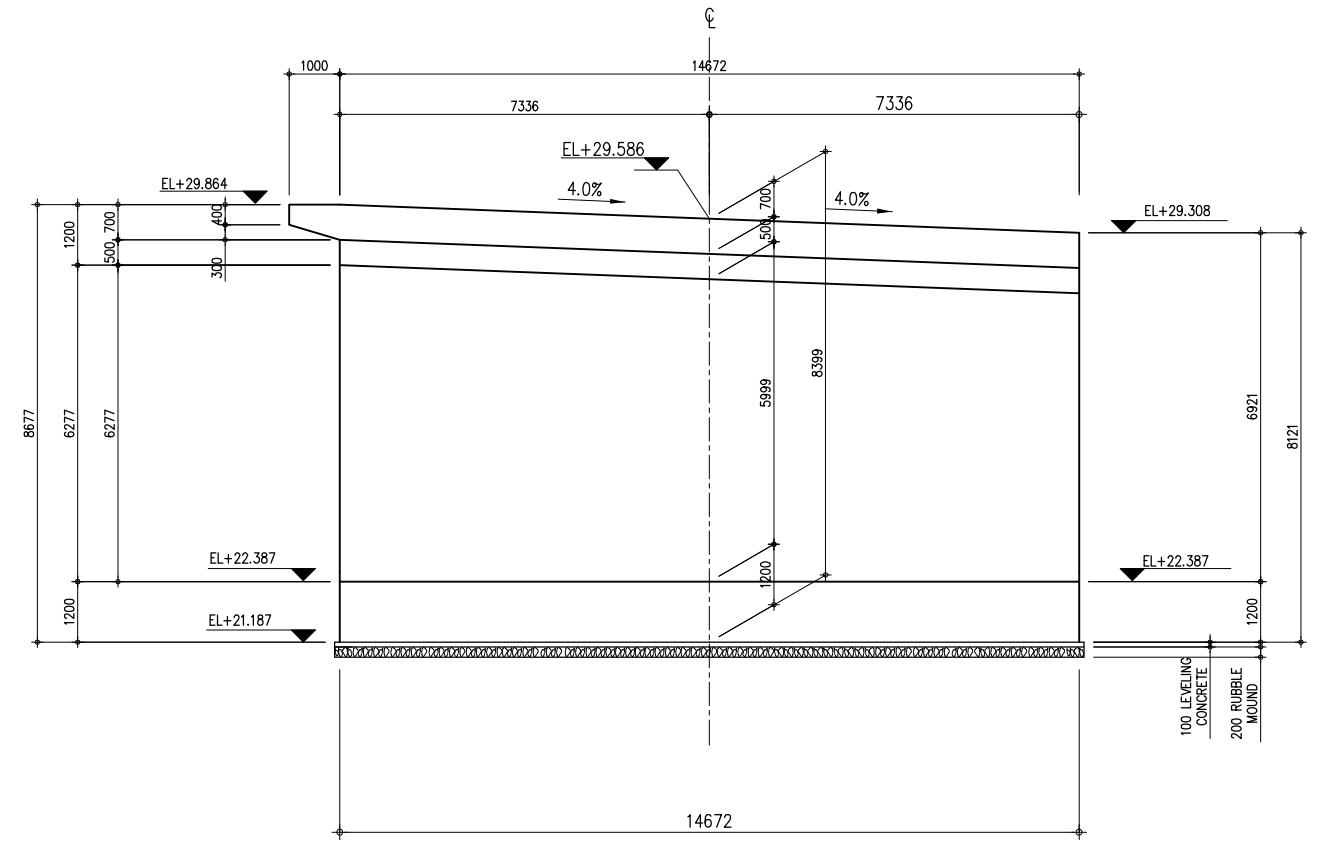


**A** PLAN  
SCALE 1:75

**B** PLAN SHOWING BEARING PAD  
SCALE 1:75

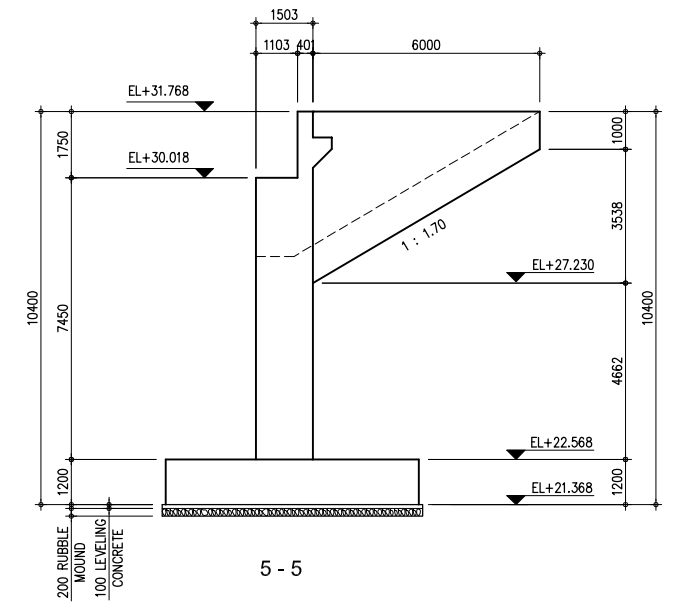
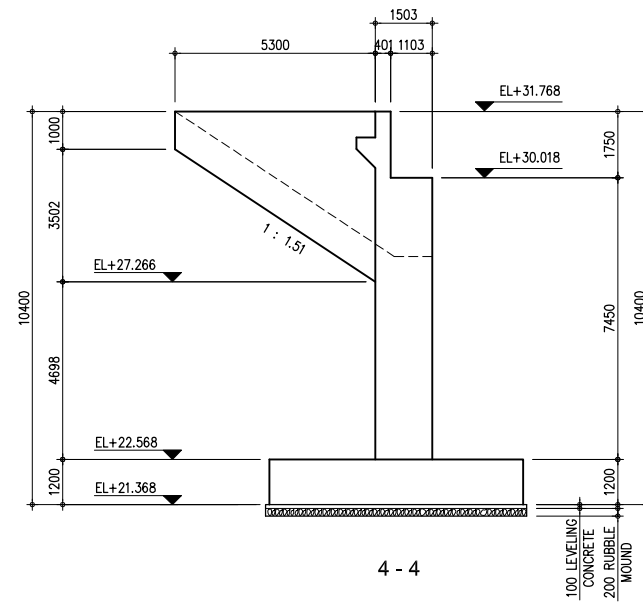
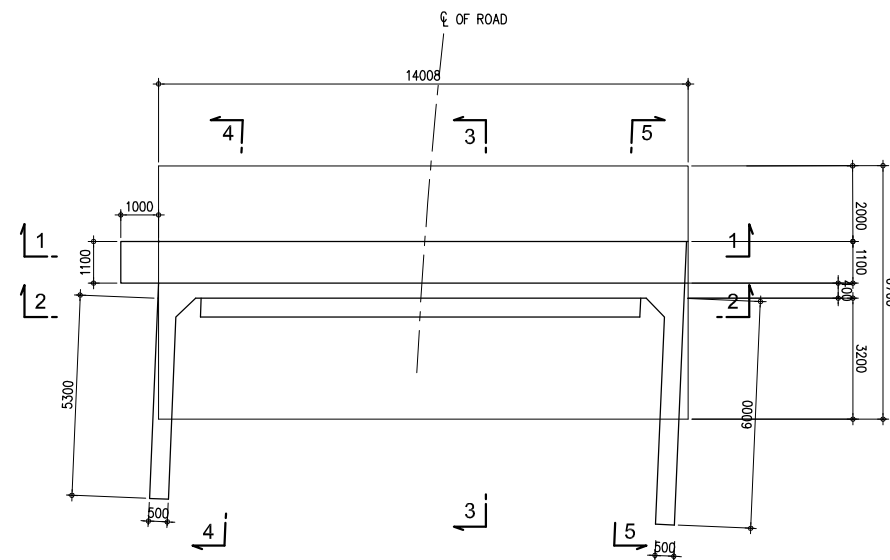
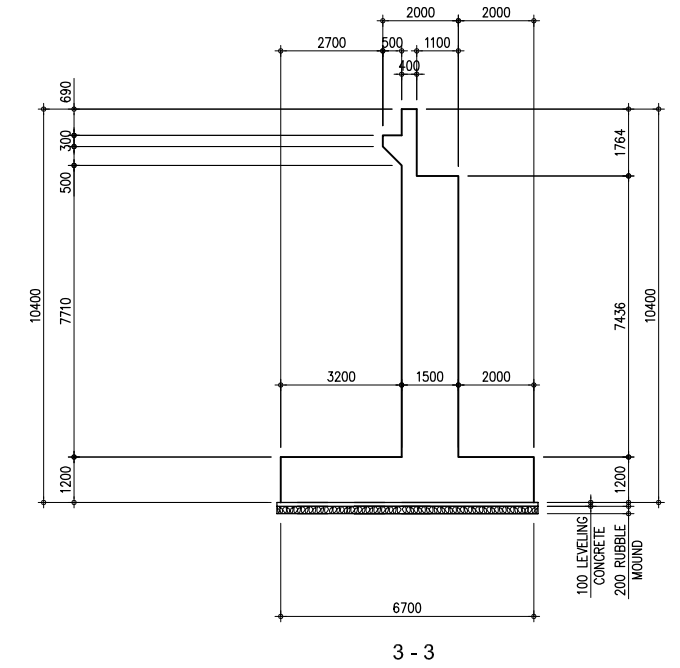
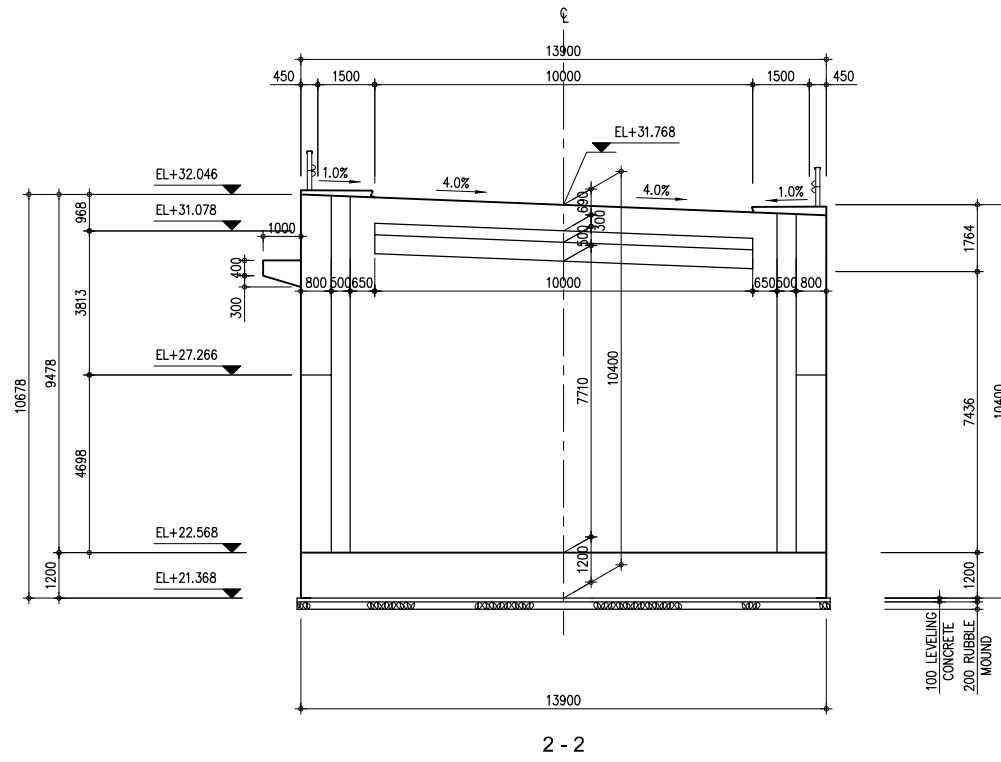
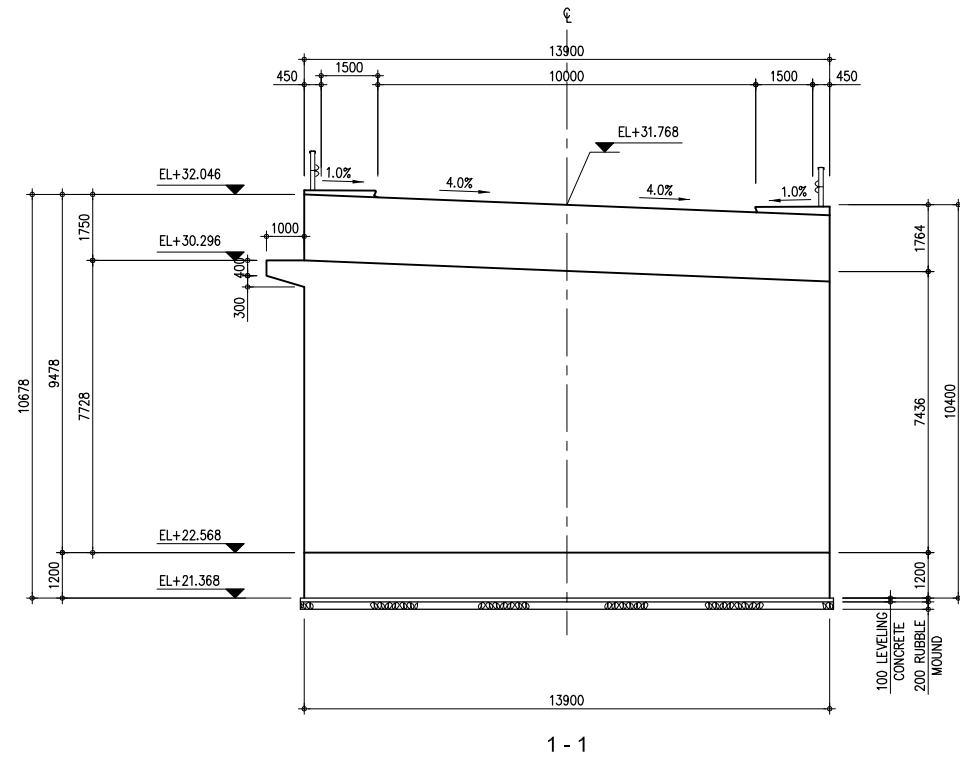


**1 - 1**  
**C** SECTION 1-1  
SCALE 1:75



**1 - 1**  
**D** ELEVATION  
SCALE 1:75

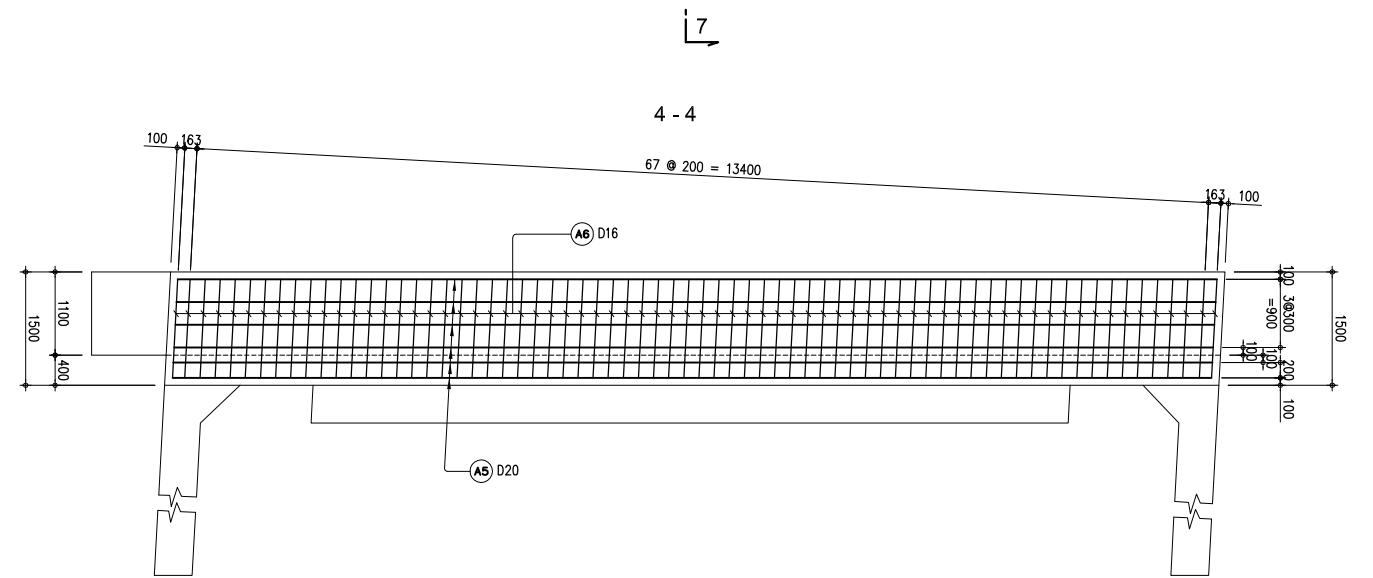
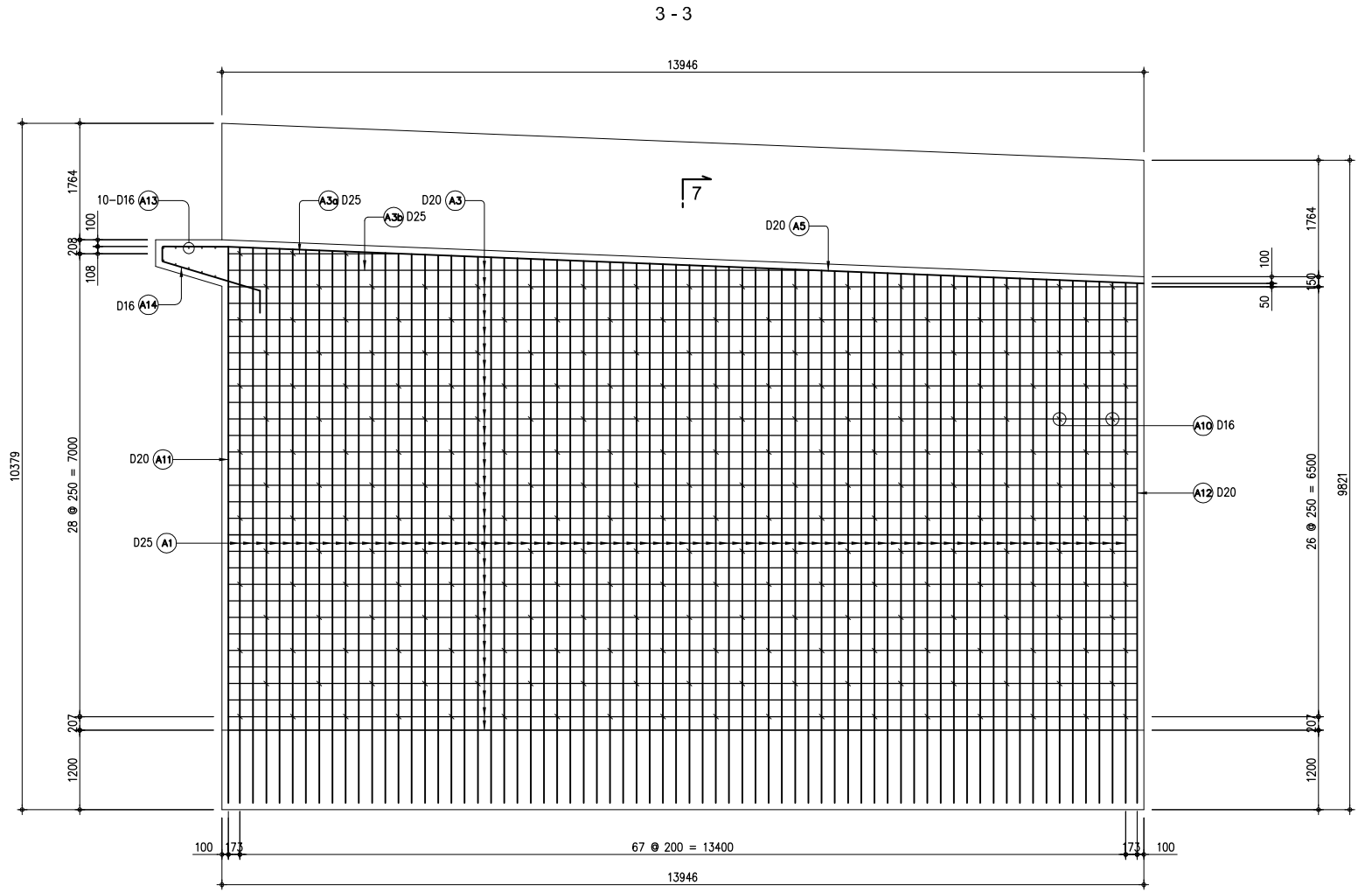
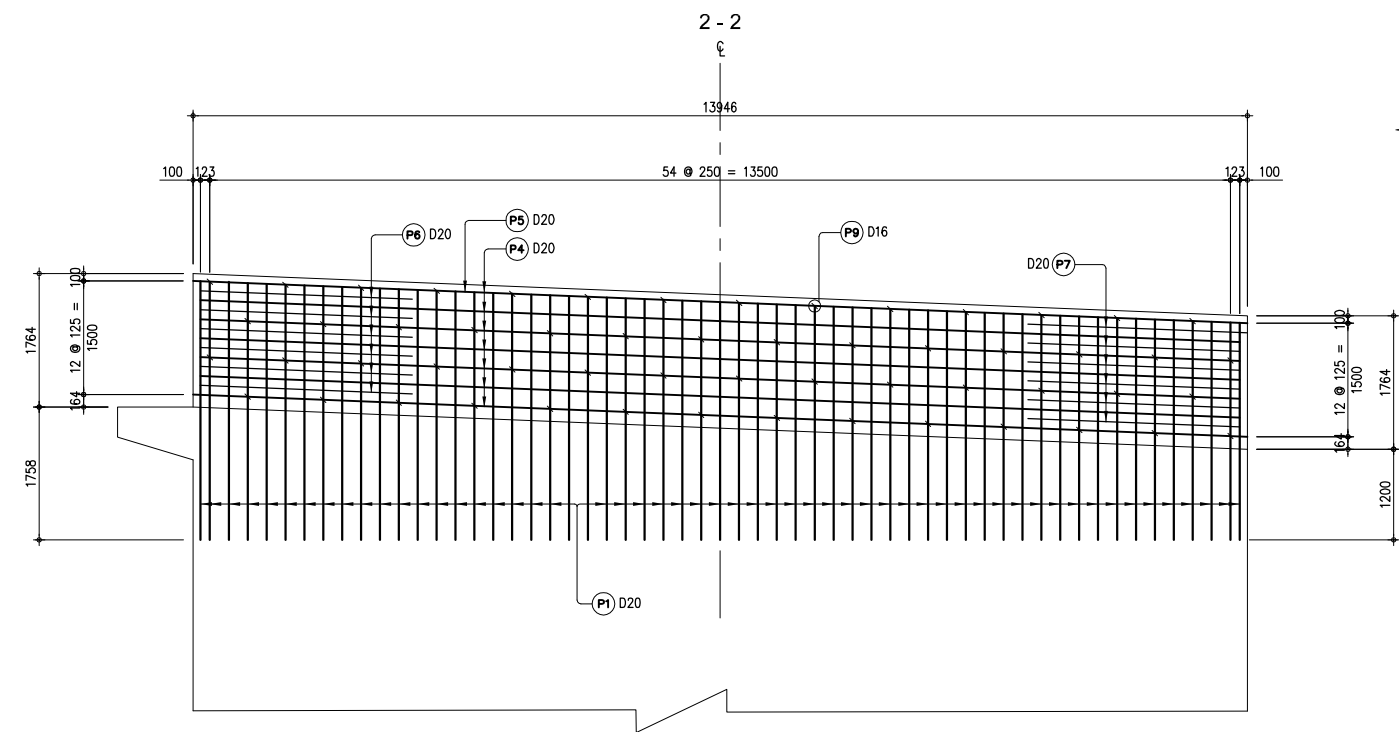
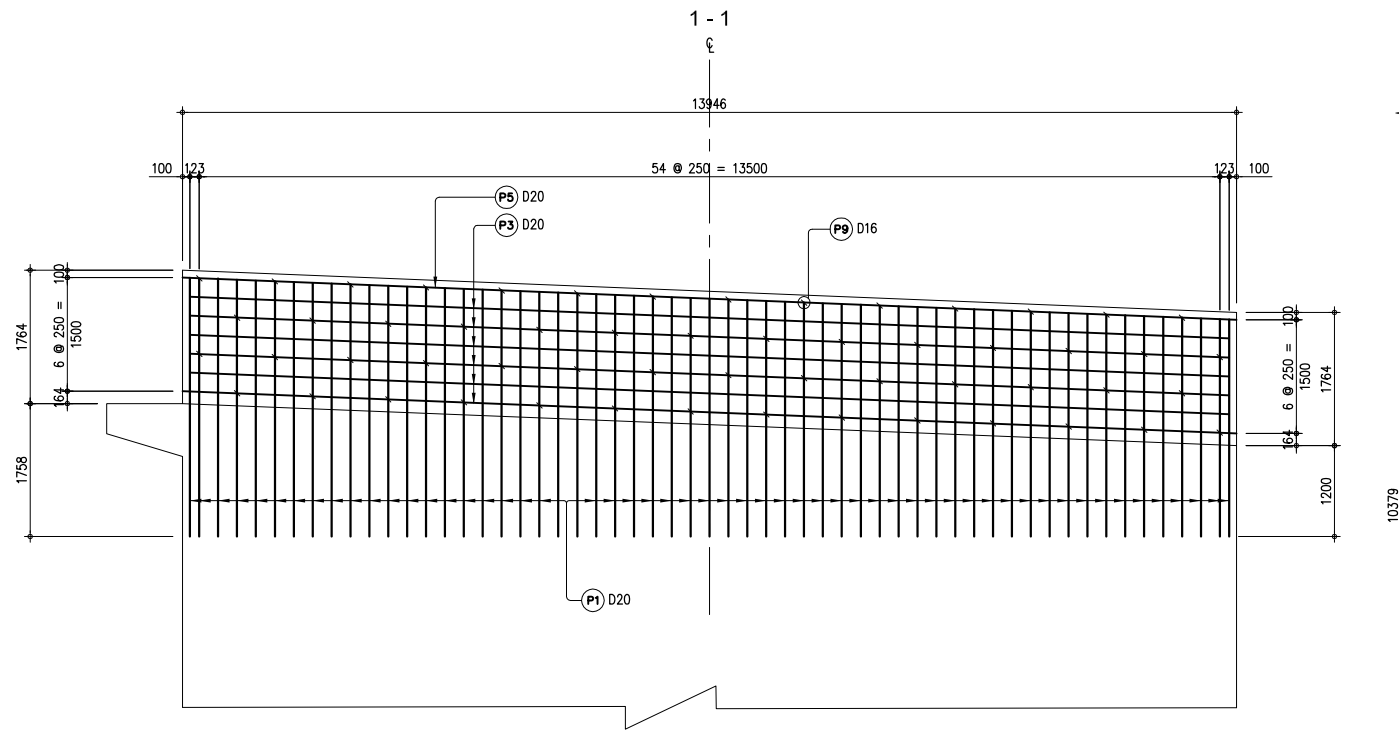
# DIMENSION DETAILS FOR ABUTMENT A2 (Scale 1:100)



No	REVISION	DATE

DESIGNED BY:	
CHECKED BY:	
APPROVED BY:	
DWG. NO.	K04-17

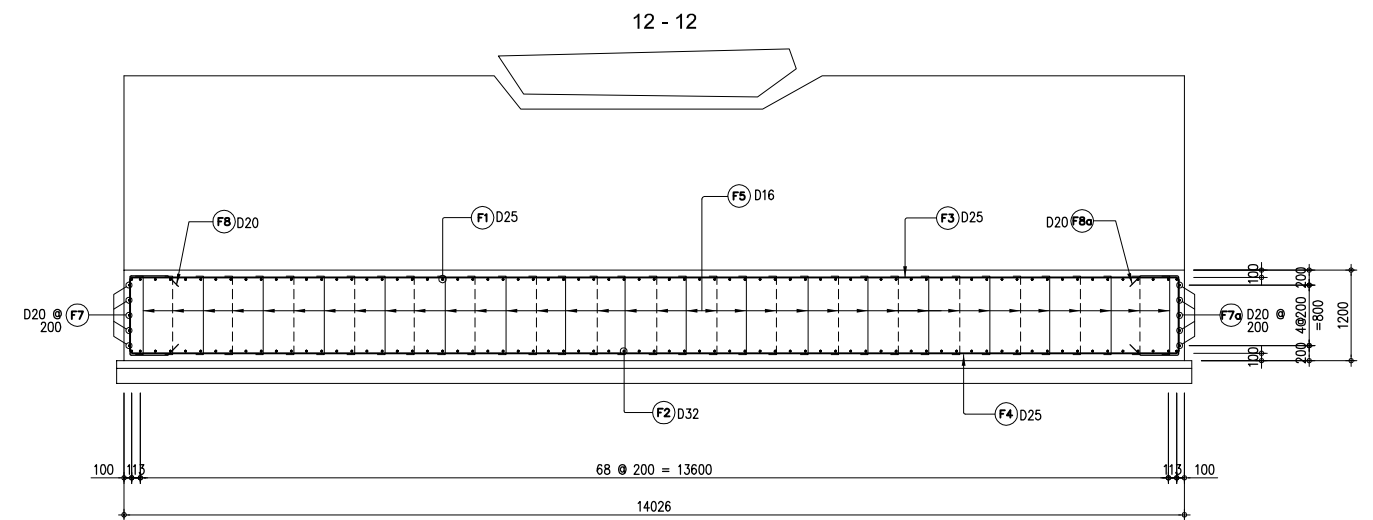
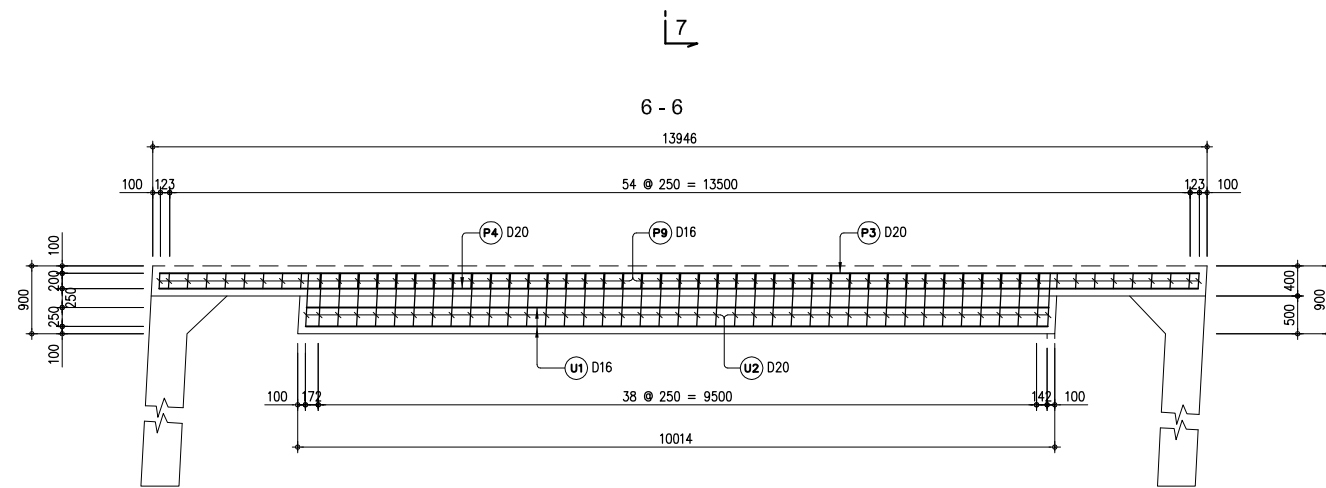
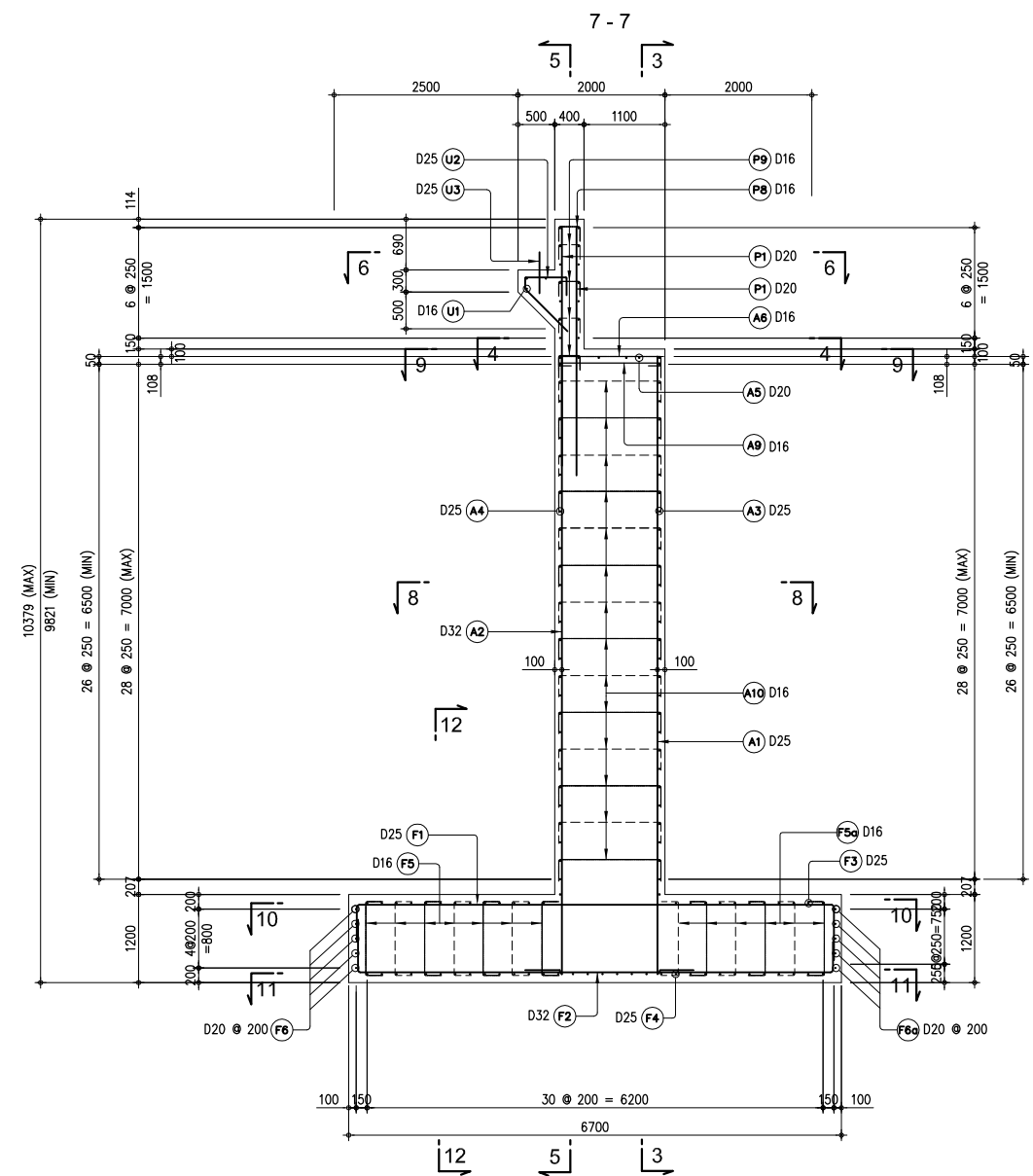
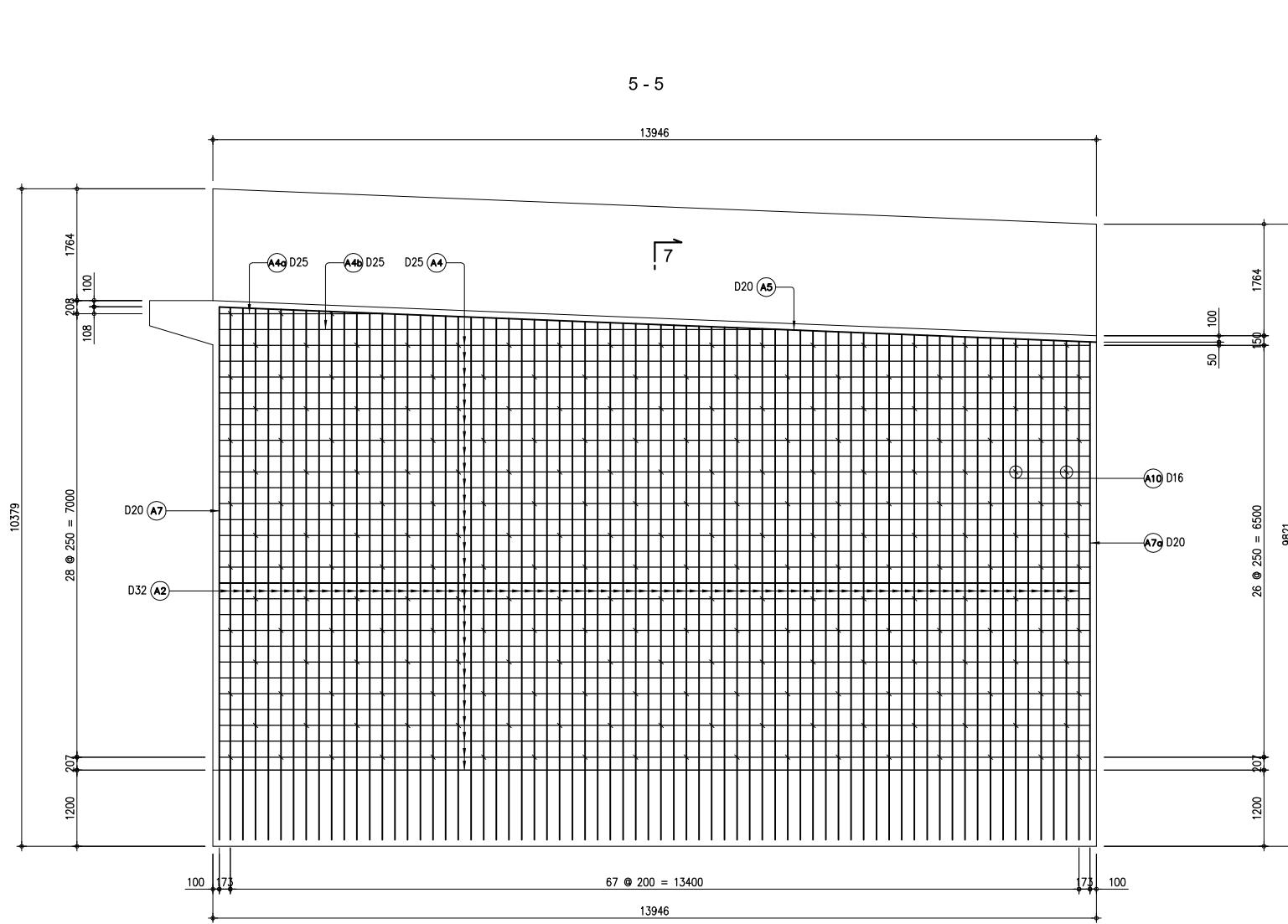
# REINFORCEMENT OF A1 ABUTMENT (1) Scale 1:50



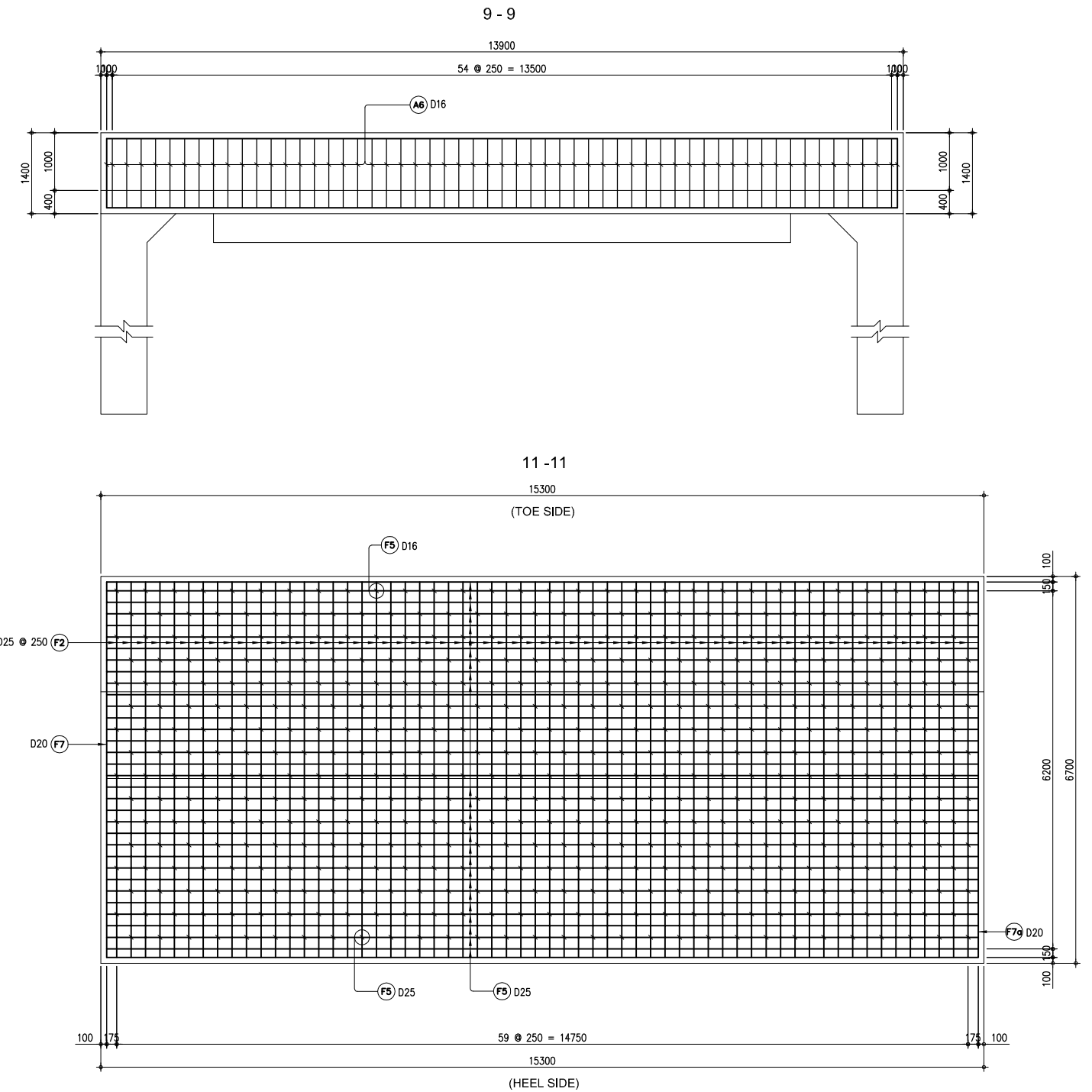
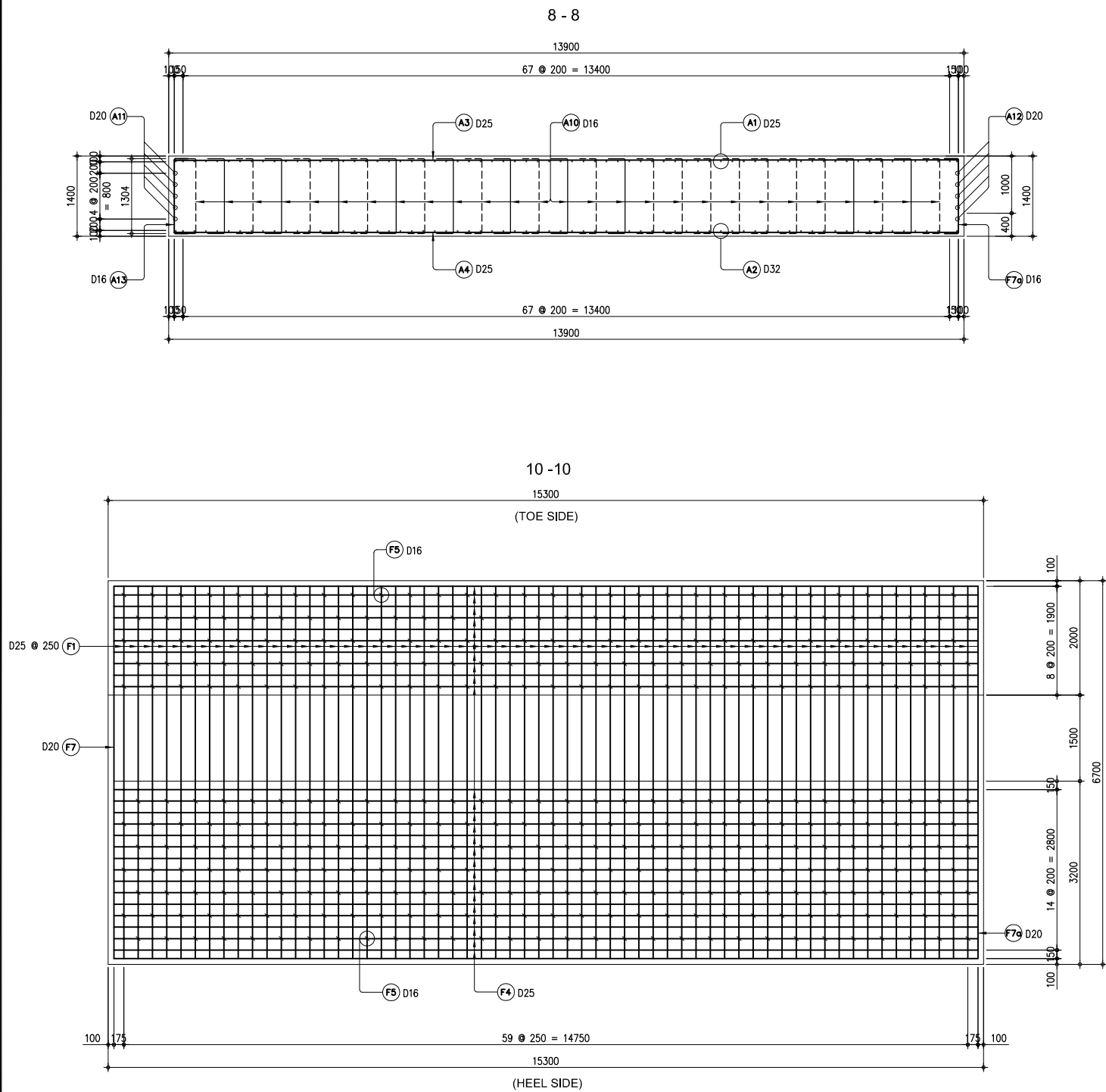
No	REVISION	DATE

DESIGNED BY:	
CHECKED BY:	
APPROVED BY:	
DWG. NO.	K04-18

# REINFORCEMENT OF ABUTMENT A1 & A2 Scale 1:50



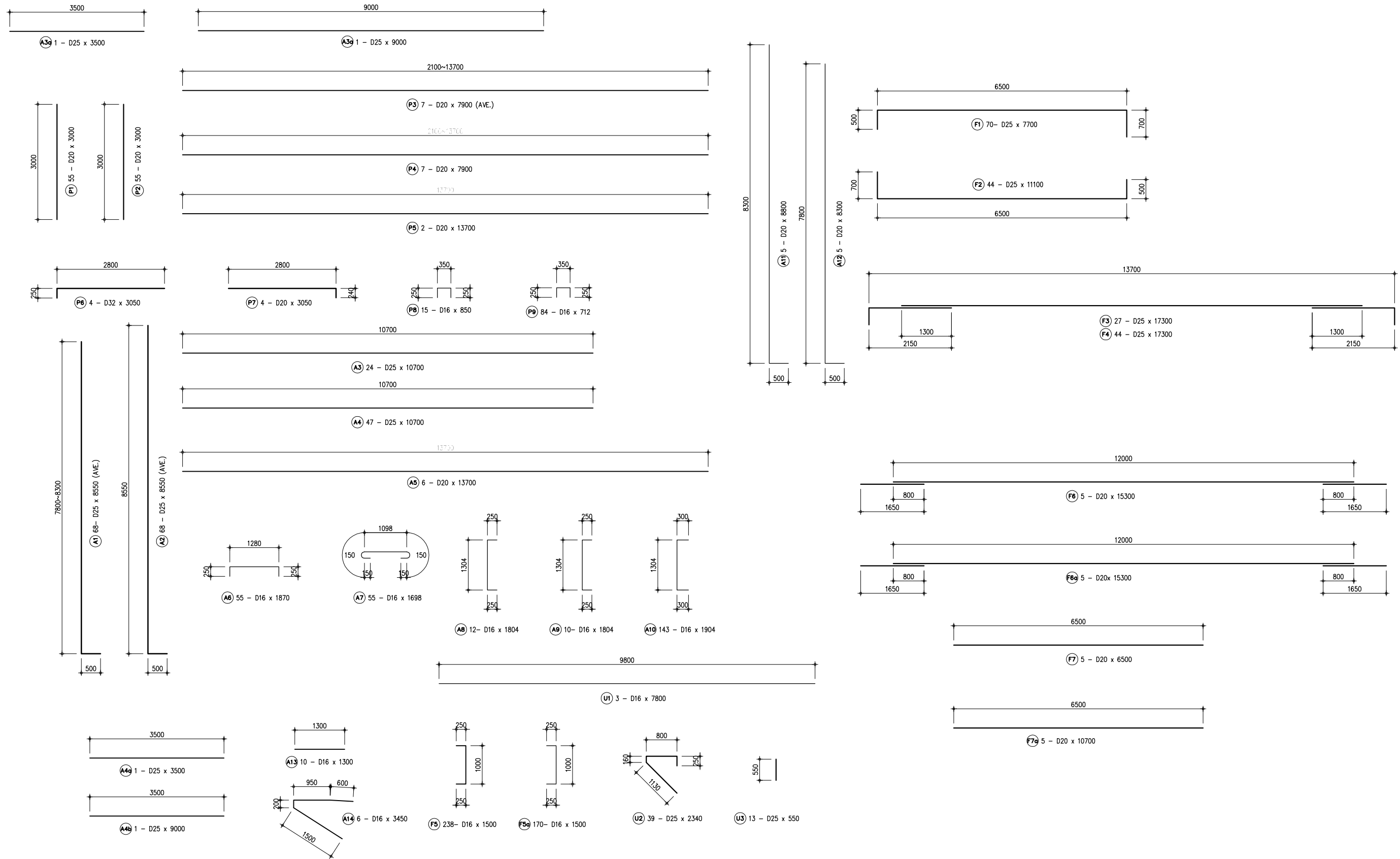
# REINFORCEMENT OF A1 & A2 ABUTMENT (3) Scale 1:50



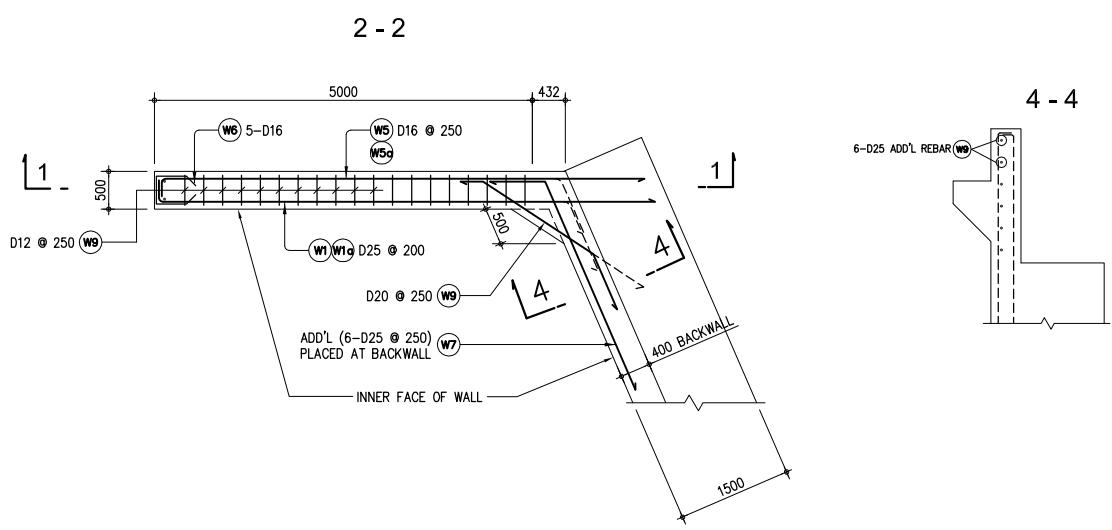
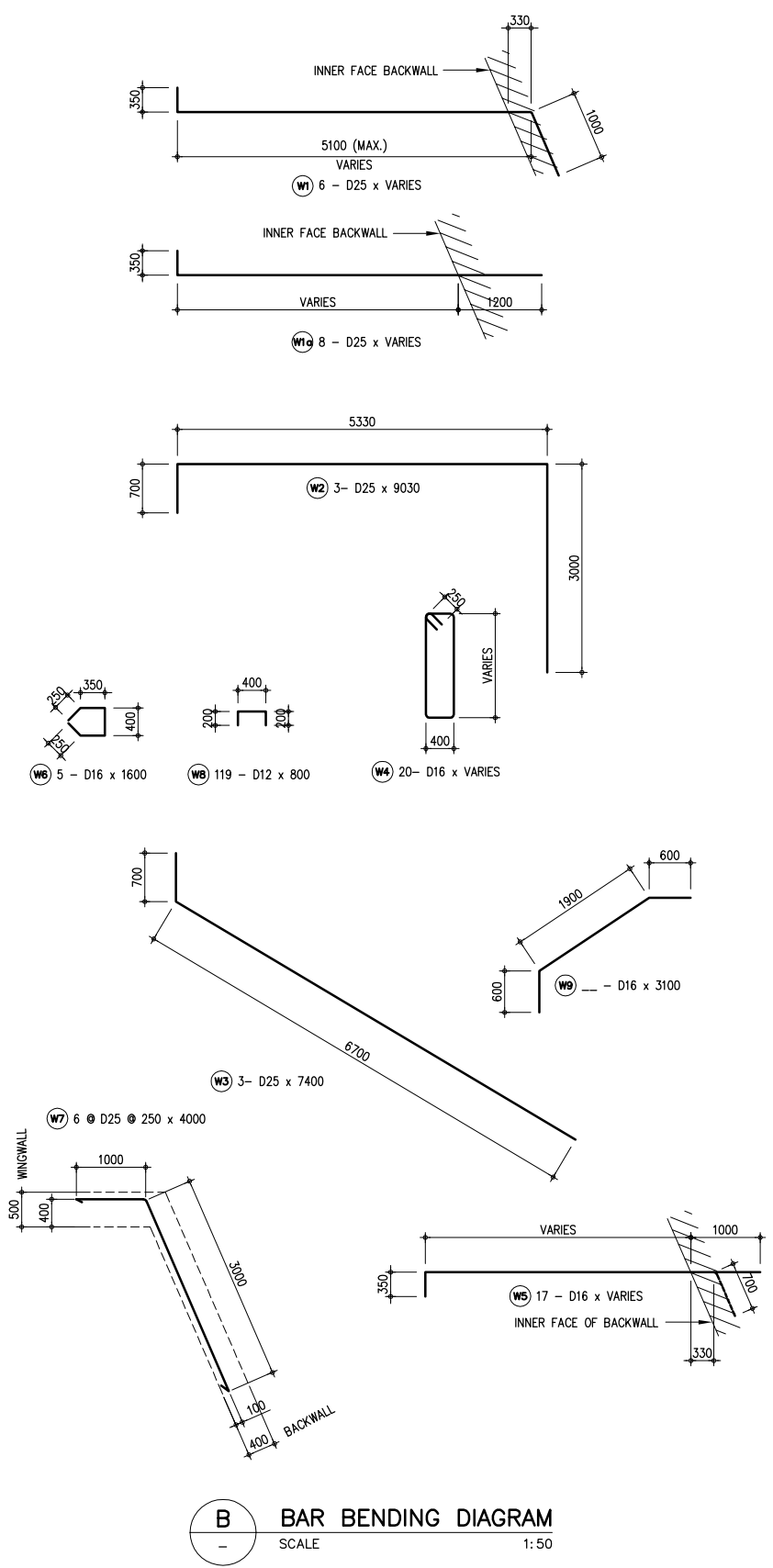
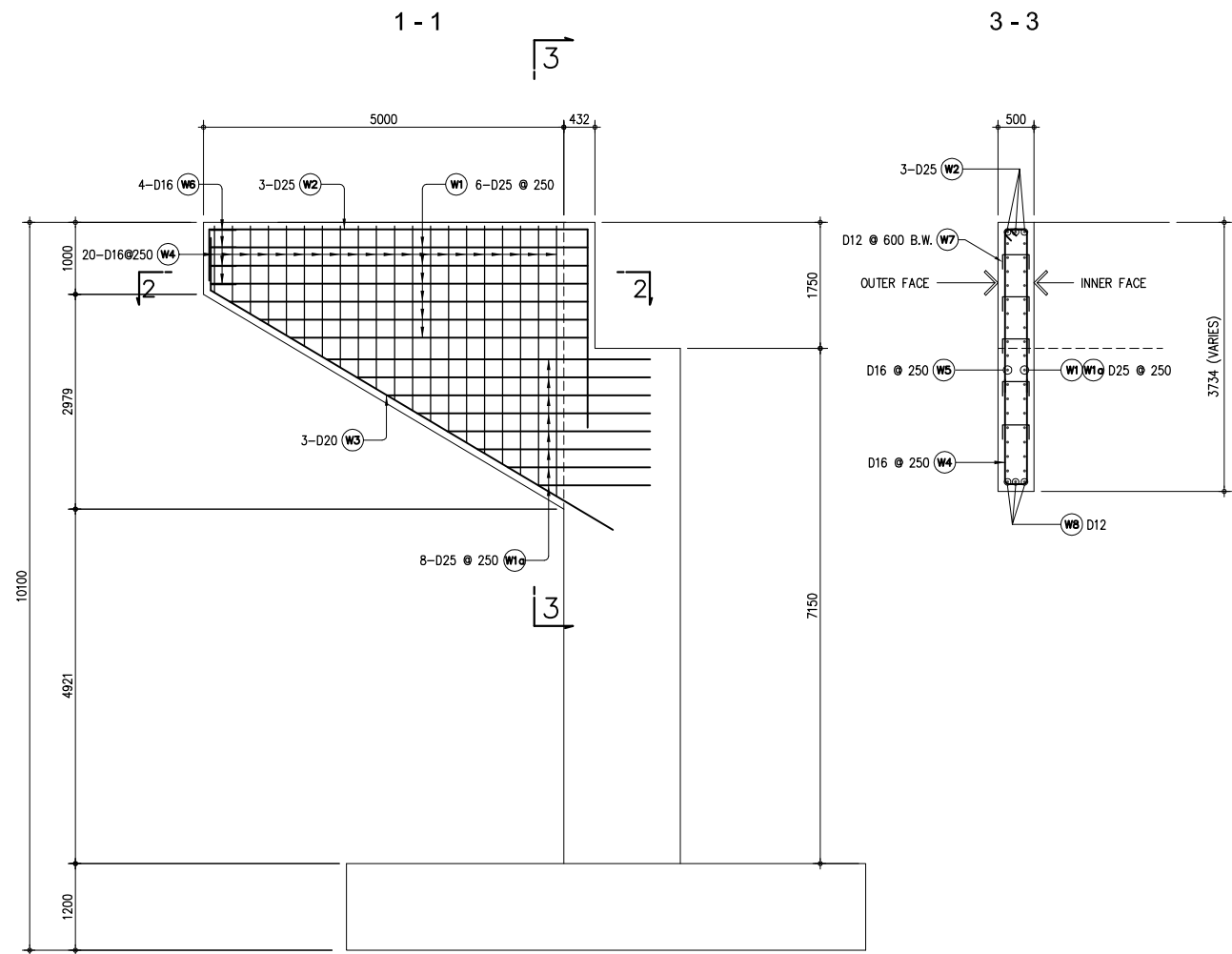
No	REVISION	DATE



# REINFORCEMENT OF A1 AND A2 ABUTMENT (5)



# REINFORCEMENT OF WINGWALL ABUTMENT A1 Scale 1:50



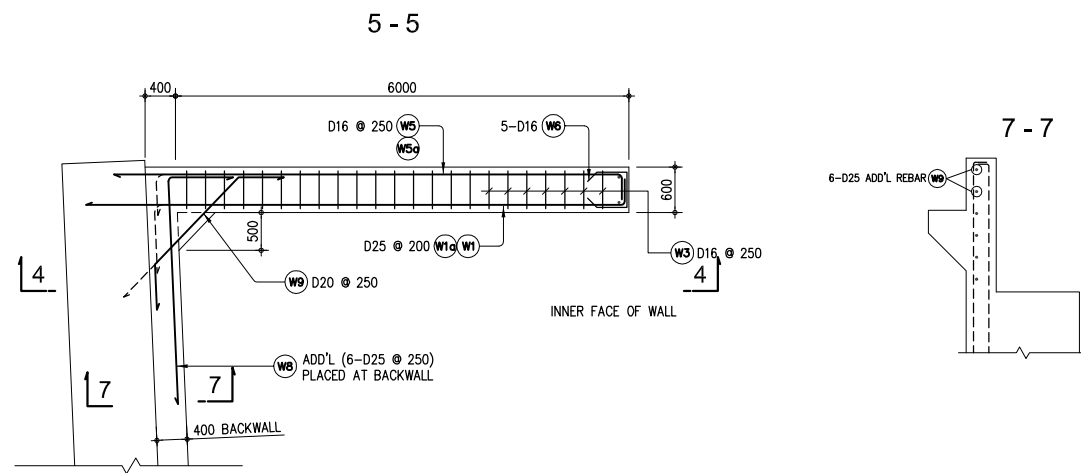
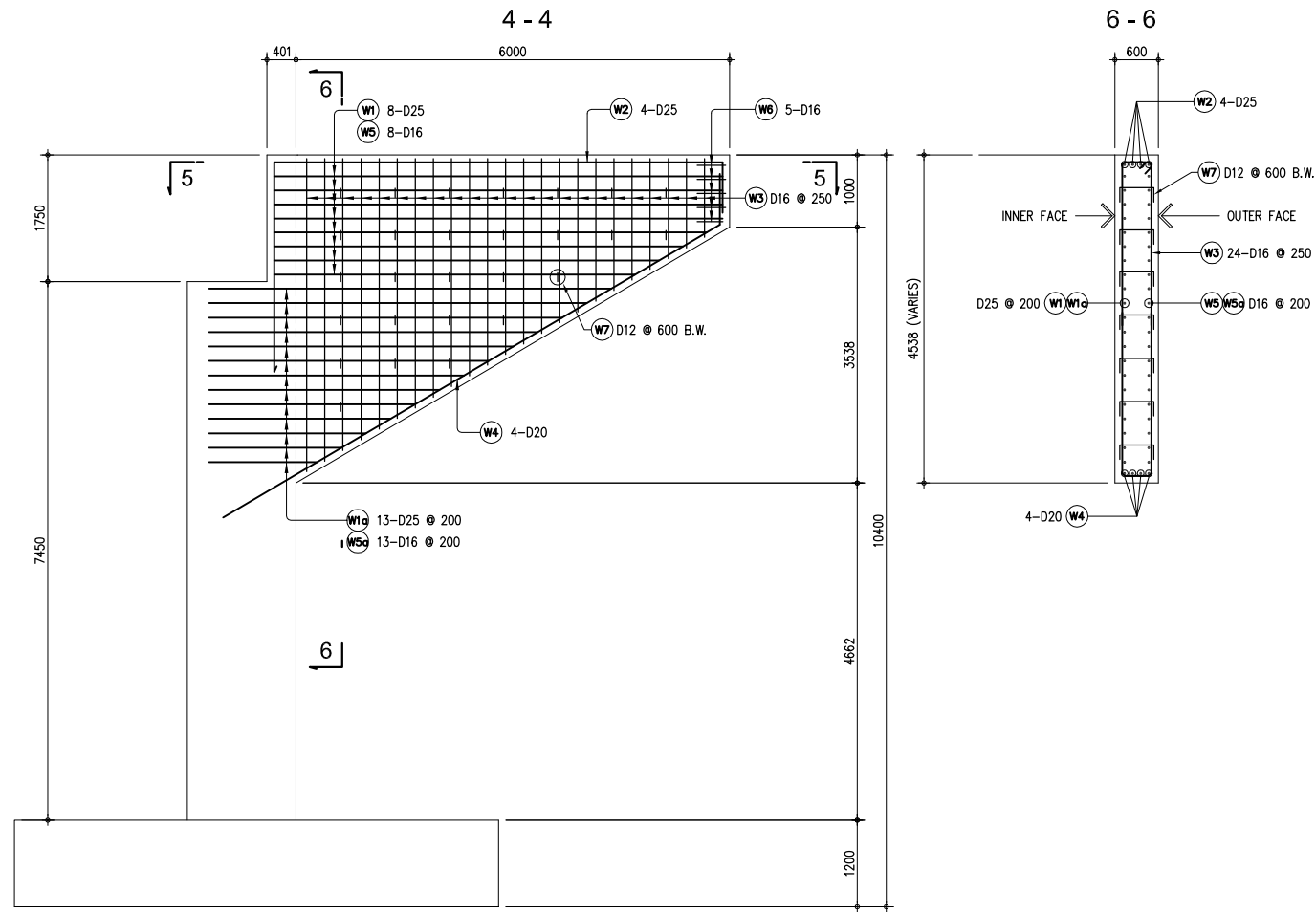
**A** REINFORCEMENT OF WINGWALL  
SCALE 1:50

**B** BAR BENDING DIAGRAM  
SCALE 1:50

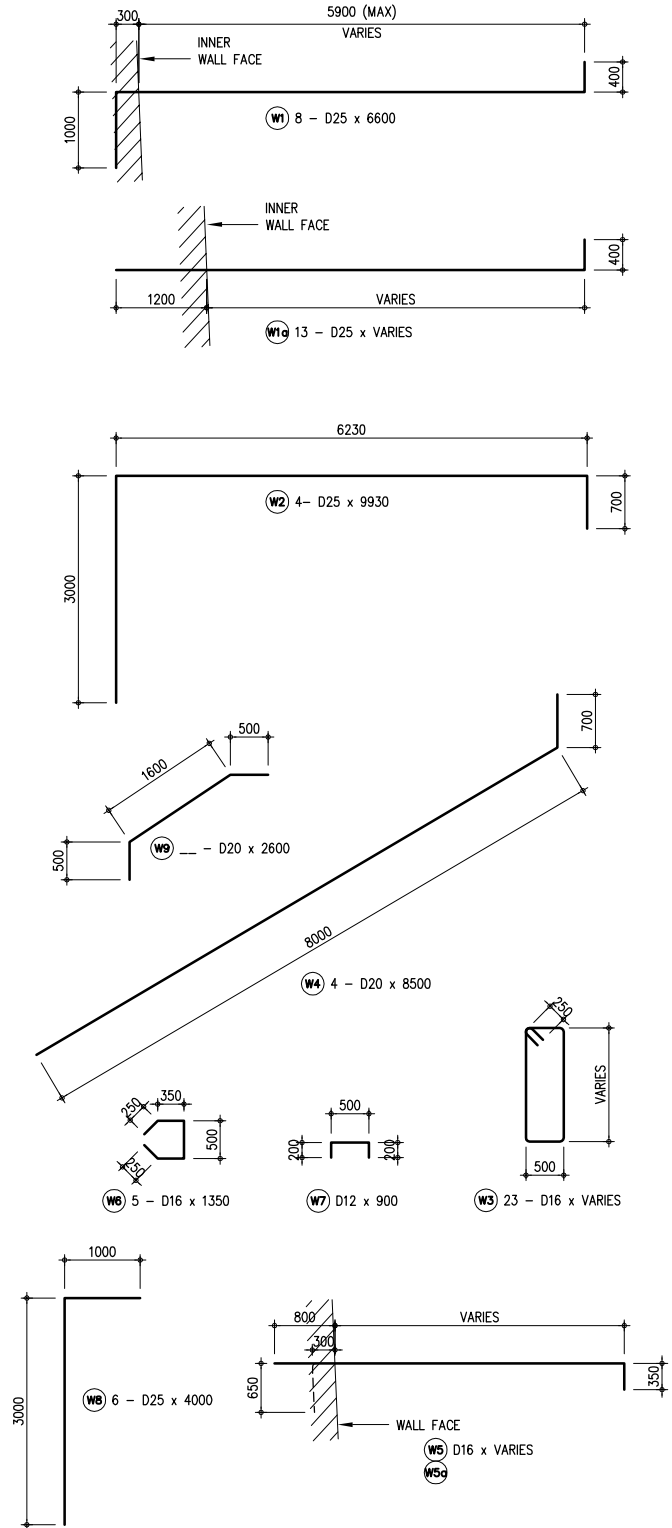
No	REVISION	DATE

DESIGNED BY:	
CHECKED BY:	
APPROVED BY:	
DWG. NO.	K04-22

# REINFORCEMENT OF WINGWALL ABUTMENT A-2



**A** REBAR DETAIL OF WINGWALL ABUTMENT A2  
SCALE 1:50

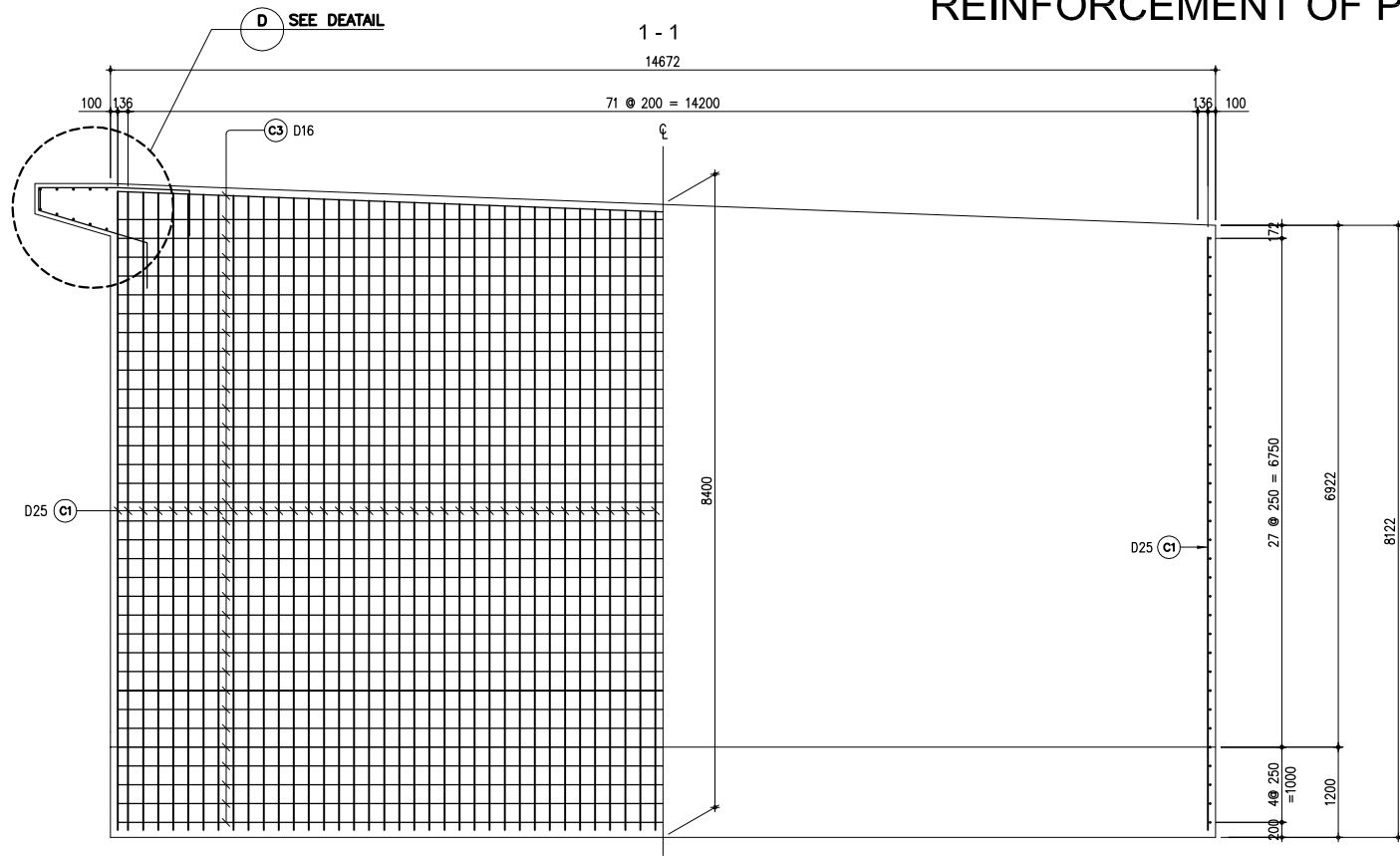


**B** BAR BENDING DIAGRAM  
SCALE 1:50

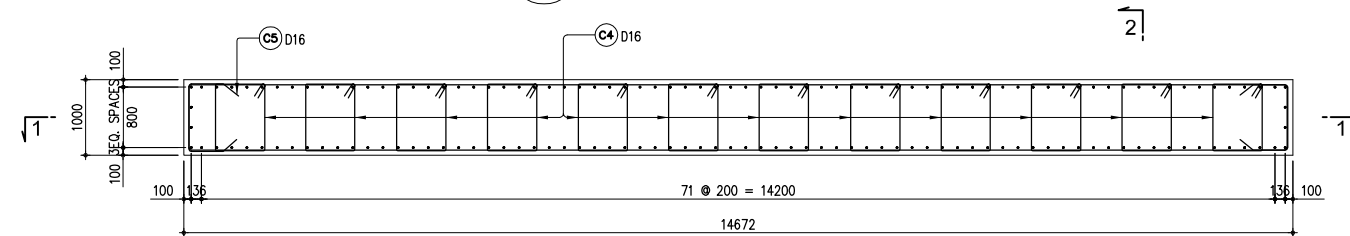
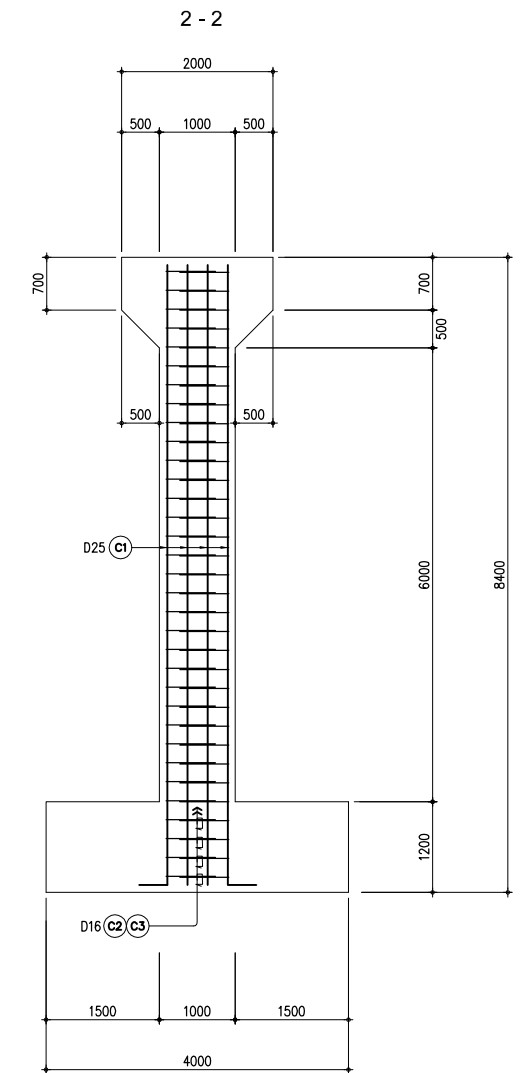
No	REVISION	DATE



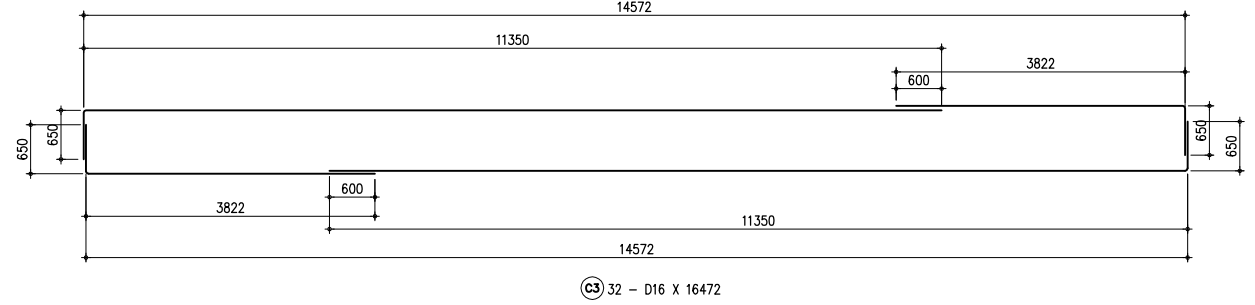
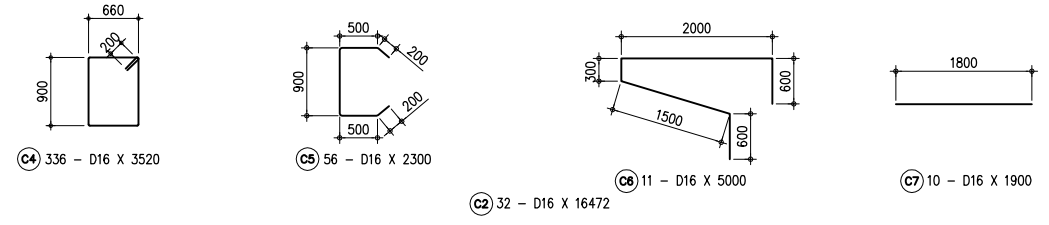
# REINFORCEMENT OF P1 PIER Scale 1:50



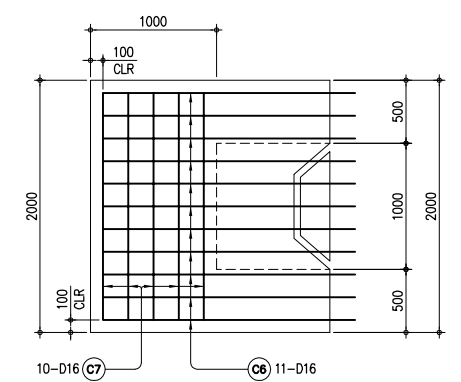
**1-1 SECTIONAL ELEVATION**  
SCALE 1:50



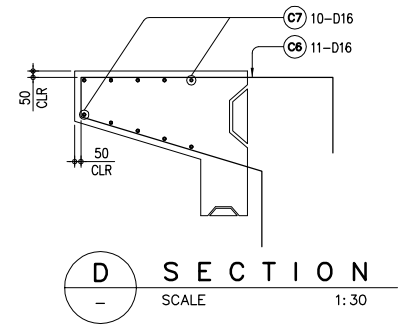
**A REINFORCEMENT PLAN**  
SCALE 1:50



**B BAR BENDING SCHEDULE**  
SCALE 1:50



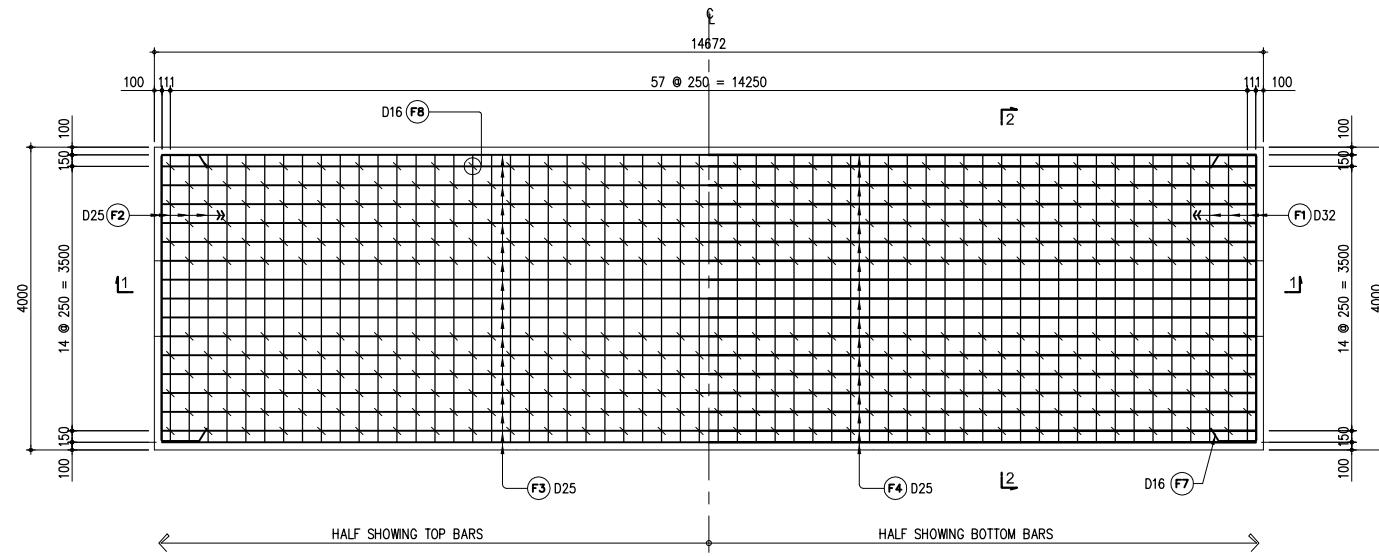
**C PLAN**  
SCALE 1:30



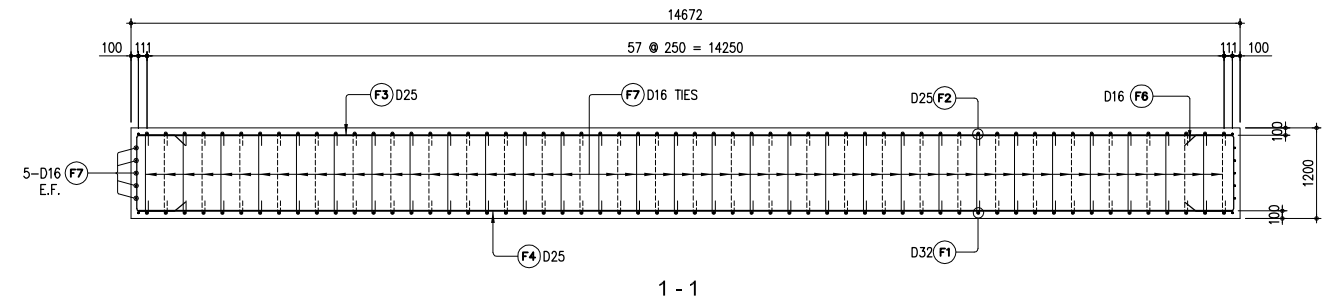
**D SECTION**  
SCALE 1:30

No	REVISION	DATE

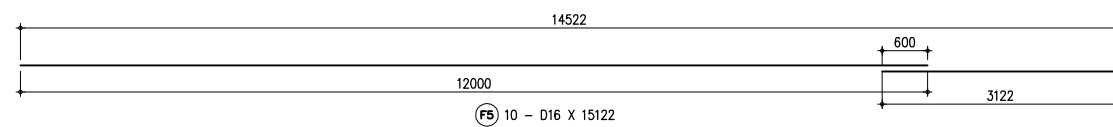
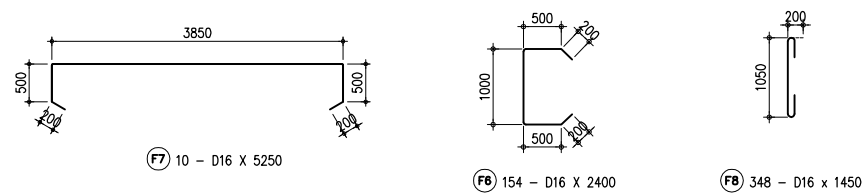
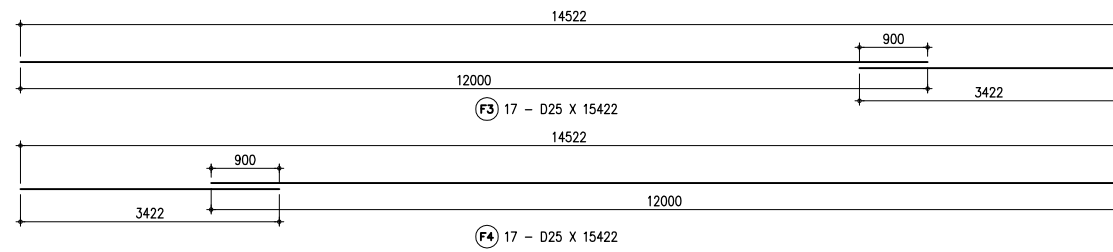
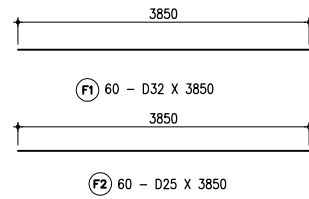
# REINFORCEMENT OF P1 PIER (2) Scale 1:50



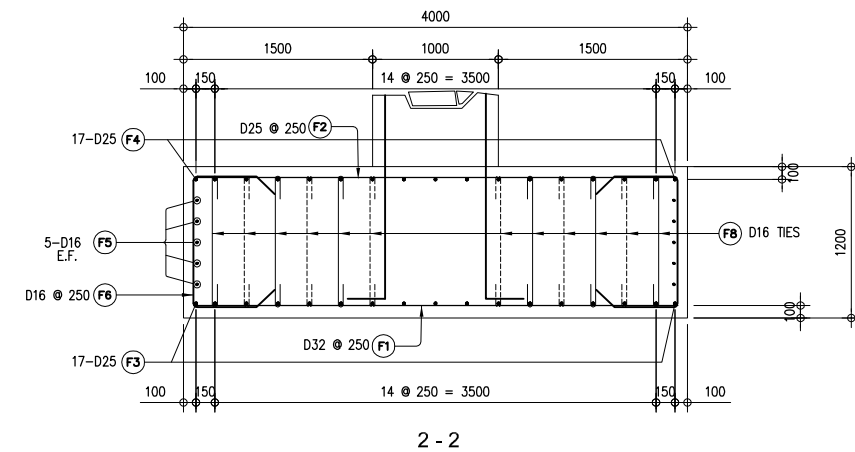
**A** REINFORCEMENT PLAN  
SCALE 1:50



**1 - 1** SECTIONAL ELEVATION  
SCALE 1:50

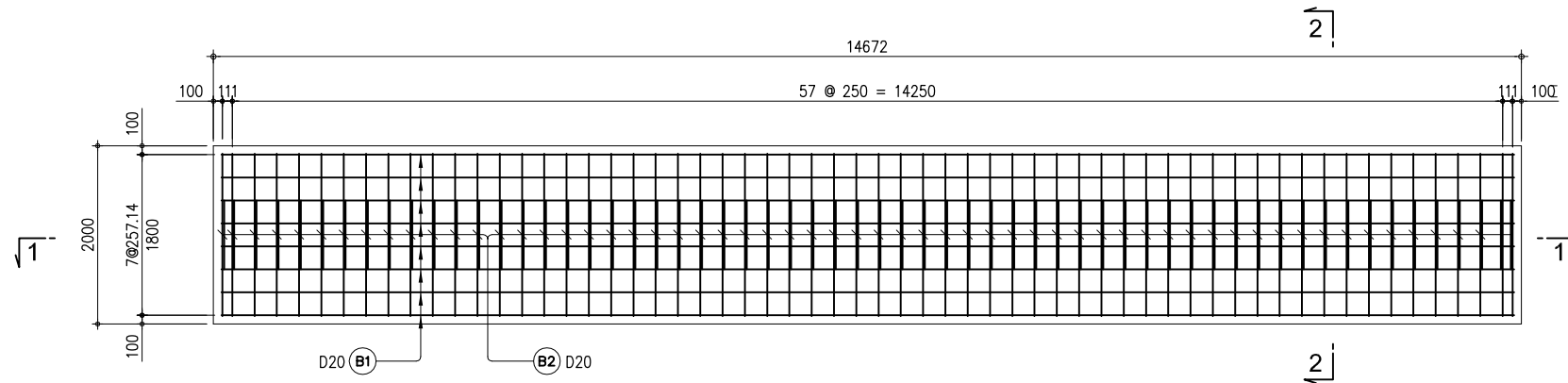


**B** BAR BENDING DIAGRAM  
SCALE NTS

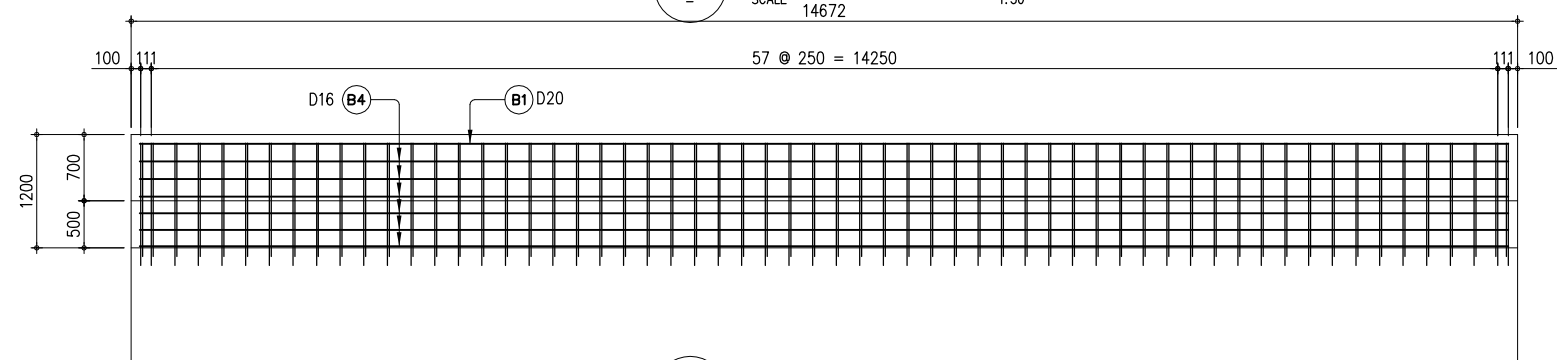


**2 - 2** SECTION  
SCALE 1:30

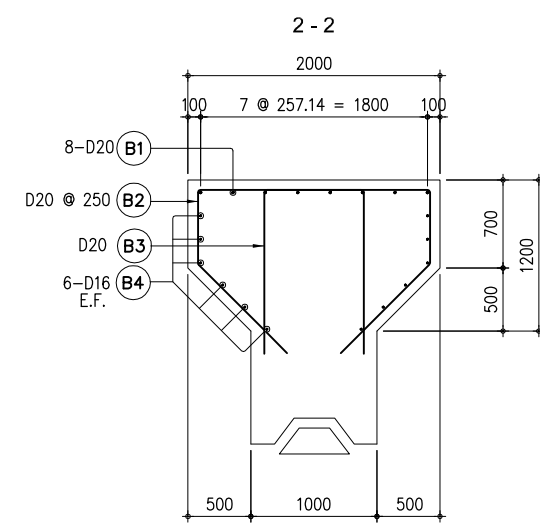
# REINFORCEMENT OF P1 PIER (3) Scale 1:50



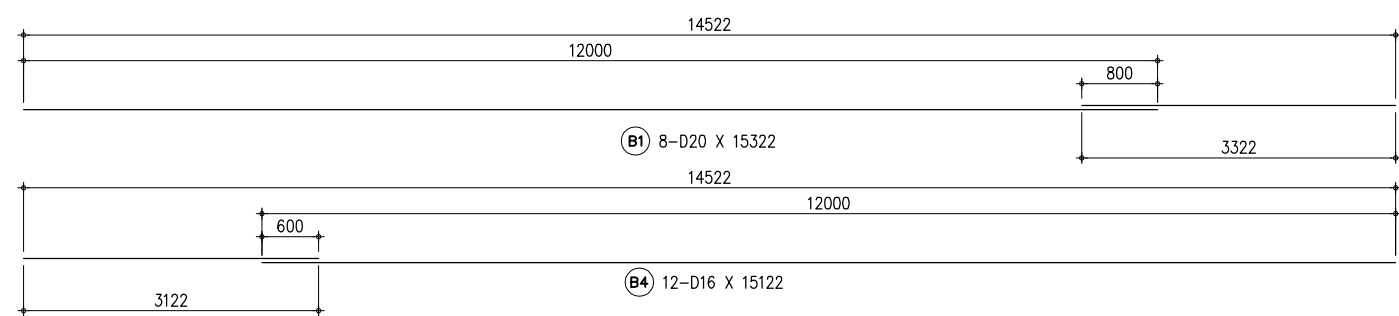
**A** REINFORCEMENT PLAN  
SCALE 1:50



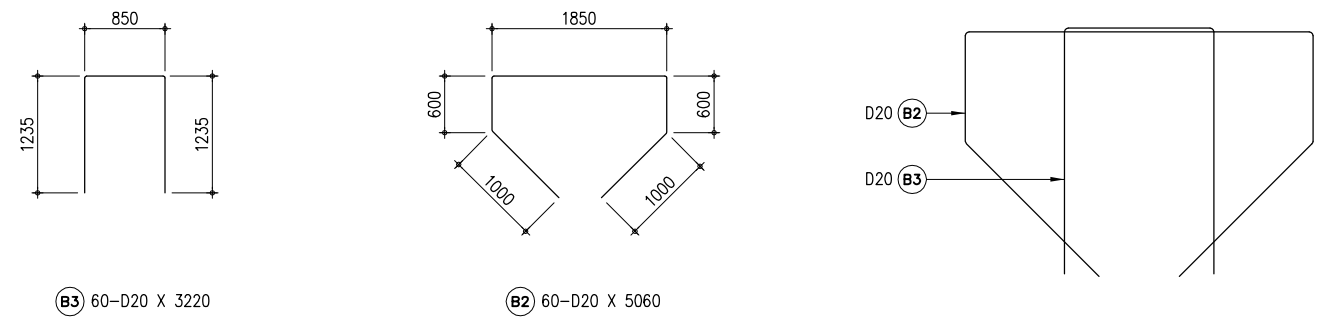
**1-1** SECTIONAL ELEVATION  
SCALE 1:50



**2-2** SECTION  
SCALE 1:30

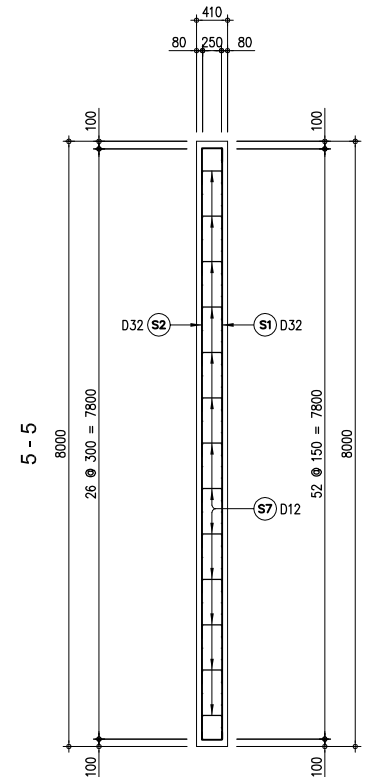
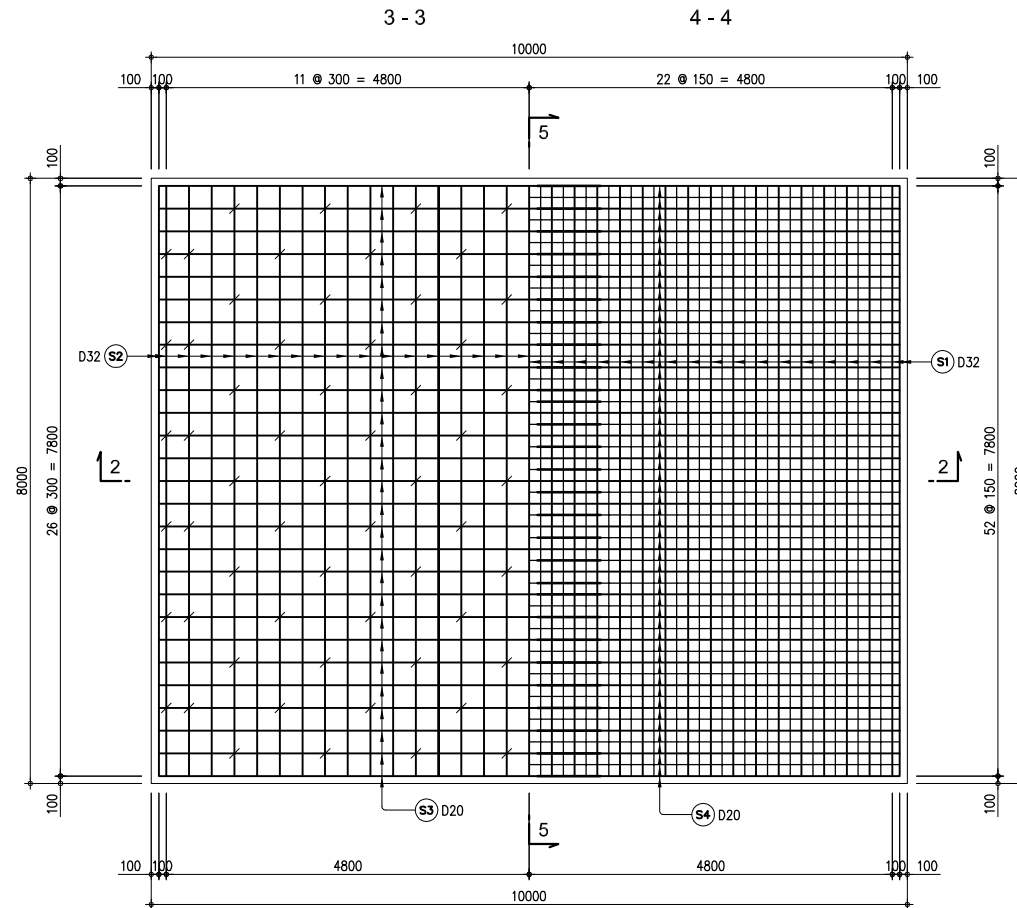
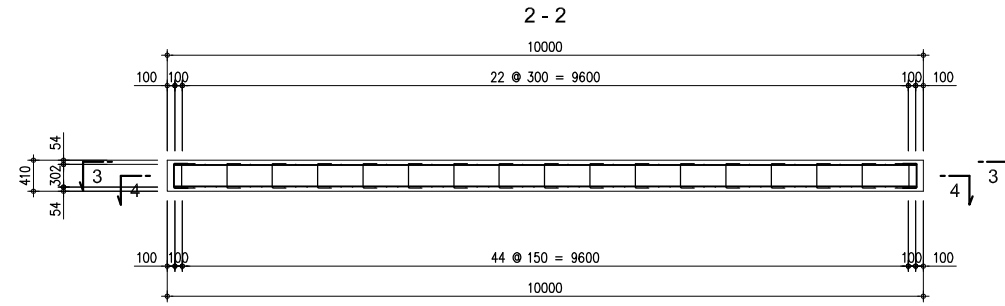
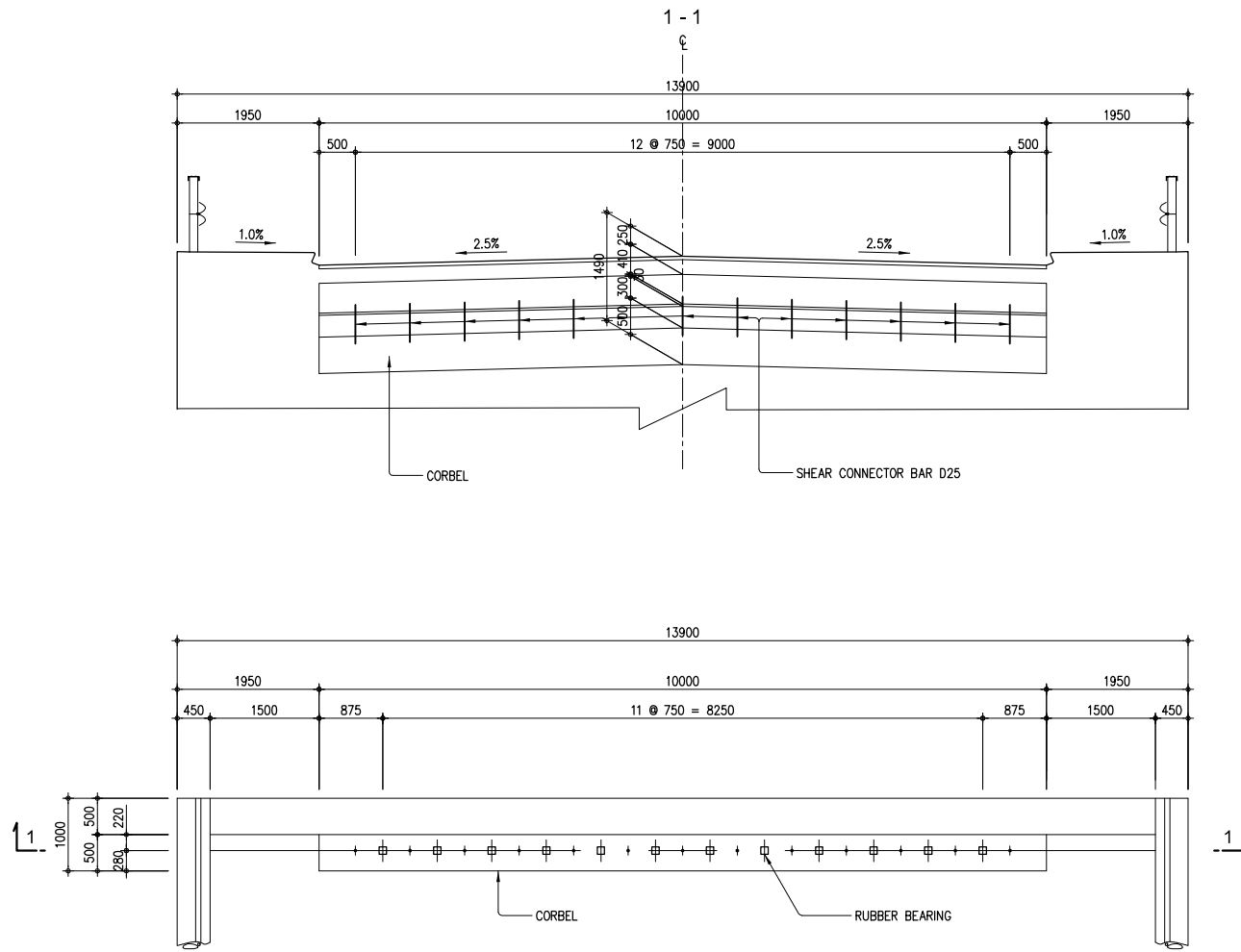


**B** BAR BENDING DIAGRAM  
SCALE NTS



ESTIMATED QUANTITIES FOR PIER										
REINFORCING BARS										
LOCATION	BAR MARK	BAR SHAPE	SPACING	QTY. (pcs)	SIZE (mm)	LENGTH PER BAR (mm)	TOTAL LENGTH (m)	UNIT WEIGHT (kg/m)	TOTAL WEIGHT (kg)	CONCRETE VOLUME (m <sup>3</sup> )
COLUMN / WALL	B1	AS SHOWN	AS SHOWN	8	20	15322	122.58	2.466	302.27	119.56
	B2	AS SHOWN	AS SHOWN	60	20	5060	303.60	2.466	748.68	
	B3	AS SHOWN	AS SHOWN	60	20	3320	199.20	2.466	491.23	
	B4	AS SHOWN	AS SHOWN	12	16	15122	181.46	1.579	286.53	
	C1	AS SHOWN	AS SHOWN	152	25	8631	1311.91	3.854	5056.11	
	C2	AS SHOWN	AS SHOWN	32	16	16472	527.10	1.579	832.30	
	C3	AS SHOWN	AS SHOWN	32	16	16472	527.10	1.579	832.30	
	C4	AS SHOWN	AS SHOWN	336	16	3520	1182.72	1.579	1867.51	
C5	AS SHOWN	AS SHOWN	56	16	2300	128.80	1.579	203.38		
SUB-TOTAL QUANTITY FOR COLUMN									10620.30	119.56
FOOTING	F1	AS SHOWN	AS SHOWN	60	32	3850	231.00	6.313	1458.30	70.43
	F2	AS SHOWN	AS SHOWN	60	25	3850	231.00	3.854	890.27	
	F3	AS SHOWN	AS SHOWN	17	25	15422	262.17	3.854	1010.42	
	F4	AS SHOWN	AS SHOWN	17	25	15422	262.17	3.854	1010.42	
	F5	AS SHOWN	AS SHOWN	10	16	15122	151.22	1.579	238.78	
	F6	AS SHOWN	AS SHOWN	154	16	2400	369.60	1.579	583.60	
	F7	AS SHOWN	AS SHOWN	10	16	5250	52.50	1.579	82.90	
	F8	AS SHOWN	AS SHOWN	348	16	1450	504.60	1.579	796.76	
SUB-TOTAL QUANTITY FOR PILECAP									6071.45	70.43
SUB-TOTAL QUANTITY FOR PIER									16691.75	189.99

# REINFORCEMENT OF APPROACH SLAB (1) Scale 1:50



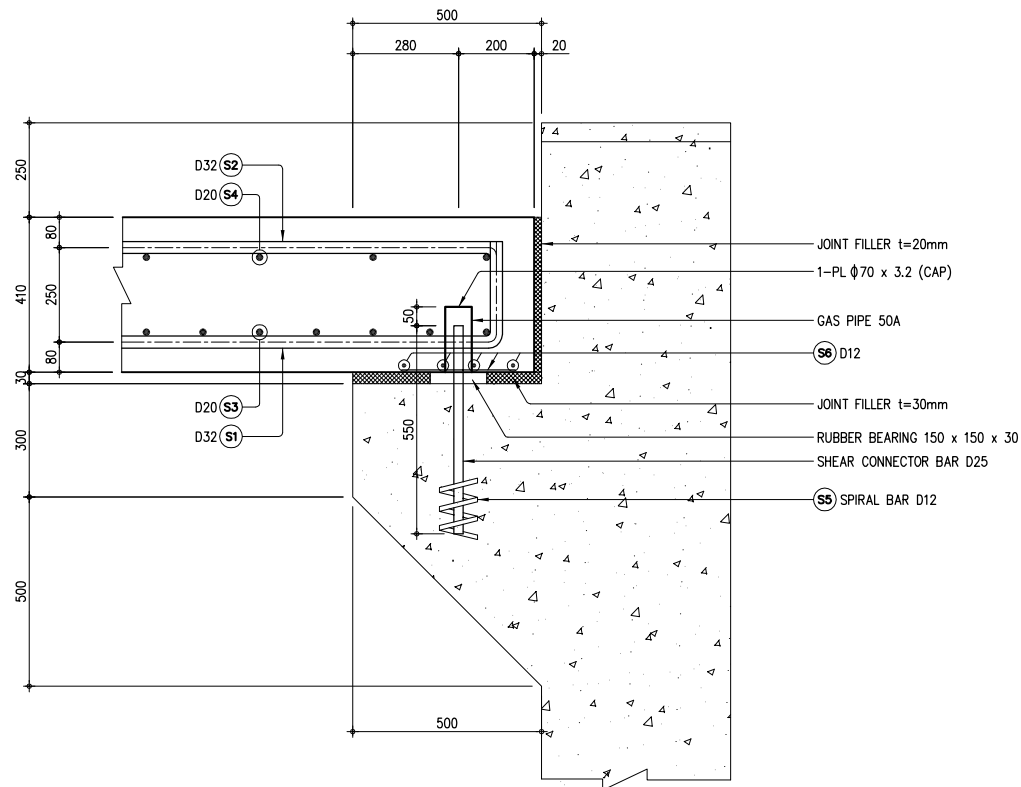
No	REVISION	DATE

DESIGNED BY:	
CHECKED BY:	
APPROVED BY:	
DWG. NO.	K04-28

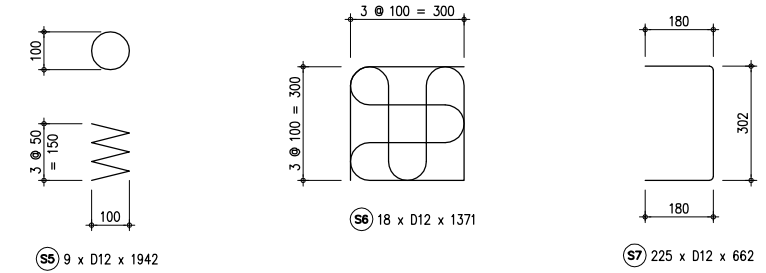


# REINFORCEMENT OF APPROACH SLAB (2)

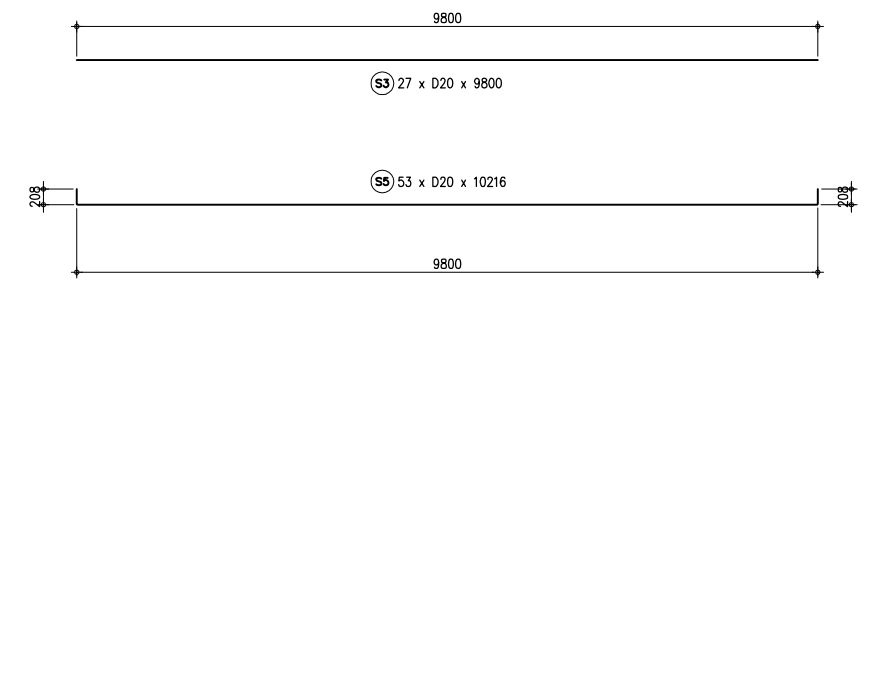
DETAILED OF PEDESTAL Scale 1:10



Scale 1:10

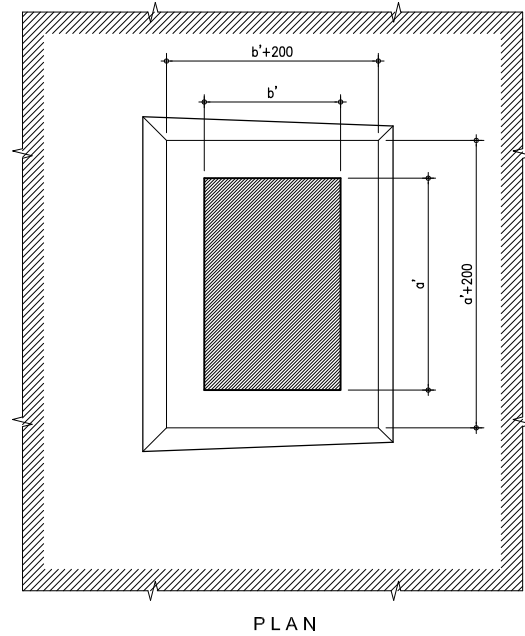


Scale 1:50

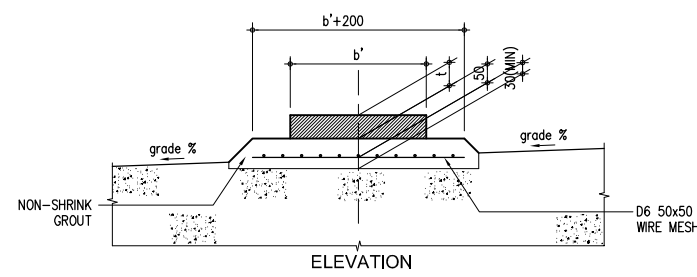


REINFORCING BARS										
BAR BENDING	BAR MARK	BAR SHAPE	QTY.	SIZE	DIMENSIONS		LENGTH PER BAR (mm)	TOTAL LENGTH (m)	UNIT WEIGHT (kg/m)	TOTAL WEIGHT (kg)
					a	b				
	S1	A	47	D32	7800	532	8332	391.60	6.314	2472.59
	S2	B	25	D32	7832	-	7832	195.80	6.314	1236.28
	S3	C	27	D20	9800	-	9800	264.6	2.466	652.5
	S4	A	53	D20	9800	416	10216	541.45	2.466	1335.2
	S5	E	9	D12	1942	-	1942	17.48	0.888	15.52
	S6	F	18	D12	1371	-	1371	24.68	0.888	21.91
	S7	A	225	D12	302	360	662	148.9	0.888	132.3
									D32	3708.87
									D20	1987.7
									D12	169.7
									<b>TOTAL</b>	<b>5772.8</b>
	SGP	50A	-	-	-	-	-	-	-	GAS PIPE
	PL	G	-	-	-	-	-	-	-	CAP
									CONCRETE	
									FORM	
									BEARING (T=30mm)	
									JOINT FILLER (T=20mm)	
									JOINT FILLER (T=30mm)	

NOTE: QUANTITIES ARE FOR (1) ONE APPROACH ONLY.

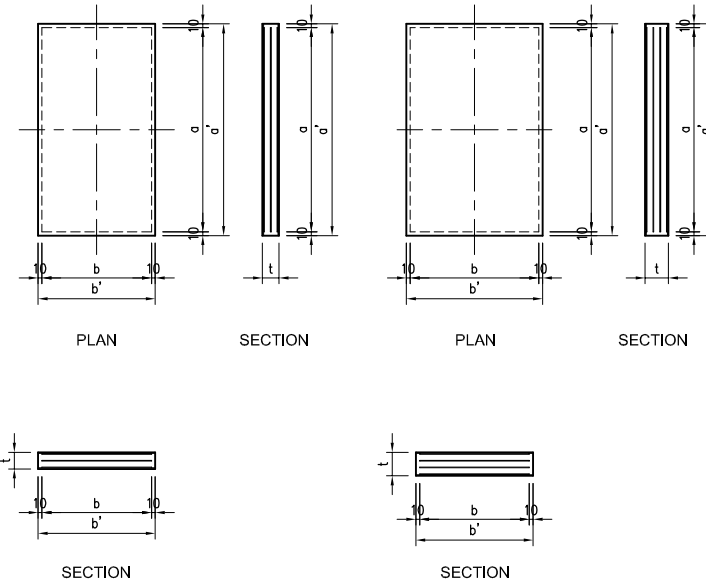


PLAN



ELEVATION

1 BEARING PAD  
SCALE 1:10

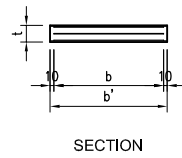


PLAN

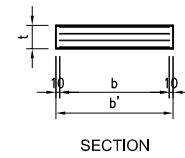
SECTION

PLAN

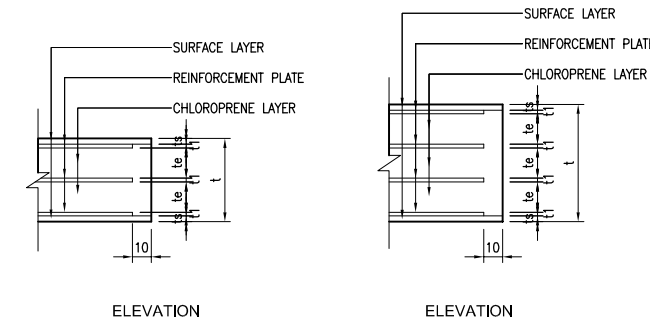
SECTION



SECTION



SECTION



ELEVATION

ELEVATION

A 2 LAYERS TYPE  
SCALE NTS

B 3 LAYERS TYPE  
SCALE NTS

DIMENSIONS OF BEARING PAD

TYPE	Dimensions a' x b' x t (mm)	Chloroprene Layers		Reinforcement Plate				Surface Layer
		Thickness of Layer te (mm)	Number of Layers ne	Transversal Width a (mm)	Longitudinal Width b (mm)	Thickness & Number		Thickness & Number
Fix	360 x 260 x 36	12	2	340	240	t1 x n (mm)	t2 x n (mm)	ts x n (mm)
Move	410 x 310 x 54	12	3	390	290	2 x 4	-	3 x 2

ELASTOMERIC MATERIAL (POLY-CHLOROPRENE)

ITEM	UNIT	REQUIRED VALUE	TEST METHOD
Static Shearing Elasticity Modulus	kgf/cm <sup>2</sup>	10 ± 1	JIS K6254
Hardness	-	A60 ± 5	JIS K6253
Elongation	%	440 or more	JIS K6251
Tensile Strength	Kg/cm <sup>2</sup>	150 or more	JIS K6251
Fatigue Test	Strength Changing Ratio for 25 % Elongation	%	between -10 and +100
	Elongation Ratio	%	-50 or more
Ratio of Compressive Permanent Strain	%	35 or less	JIS K6262 (100°C x 22hrs)
Ozone Deterioration	-	No crack to be observed by naked eye	JIS K6259
Moisture Absorption (Mass Change Ratio Due to Water)	%	10 or less	JIS K6258
Low Temperature Resistance	Degree	-30°C or less	JIS K6260
Resistance to Stripping	kgf/cm	7 or more	JIS K6256

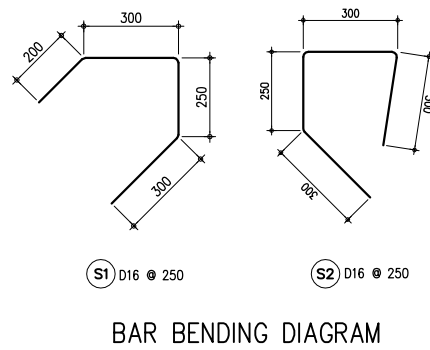
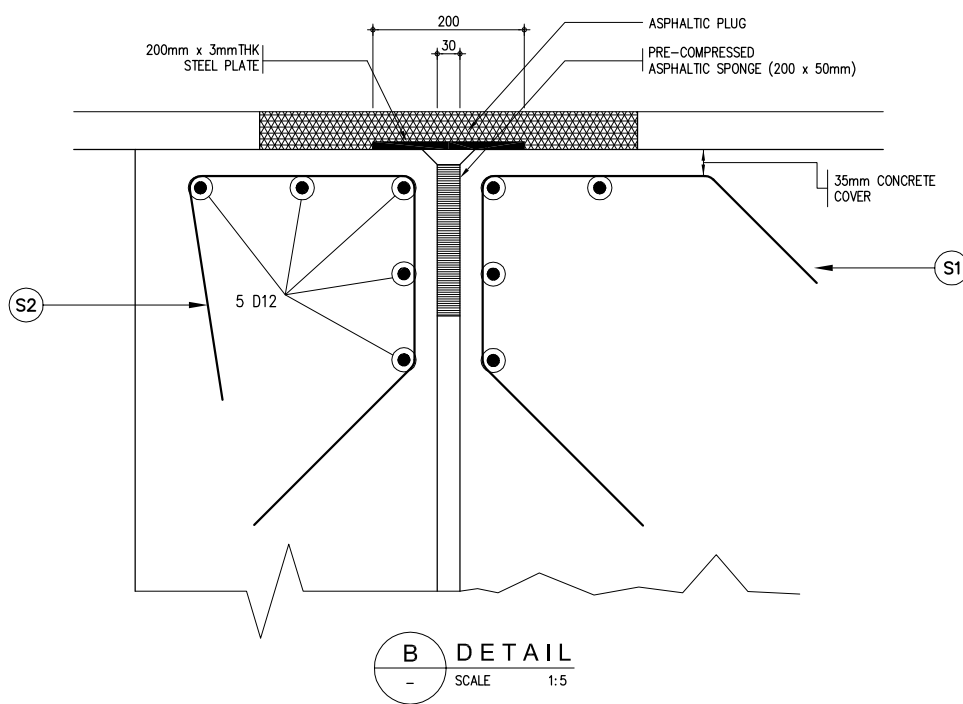
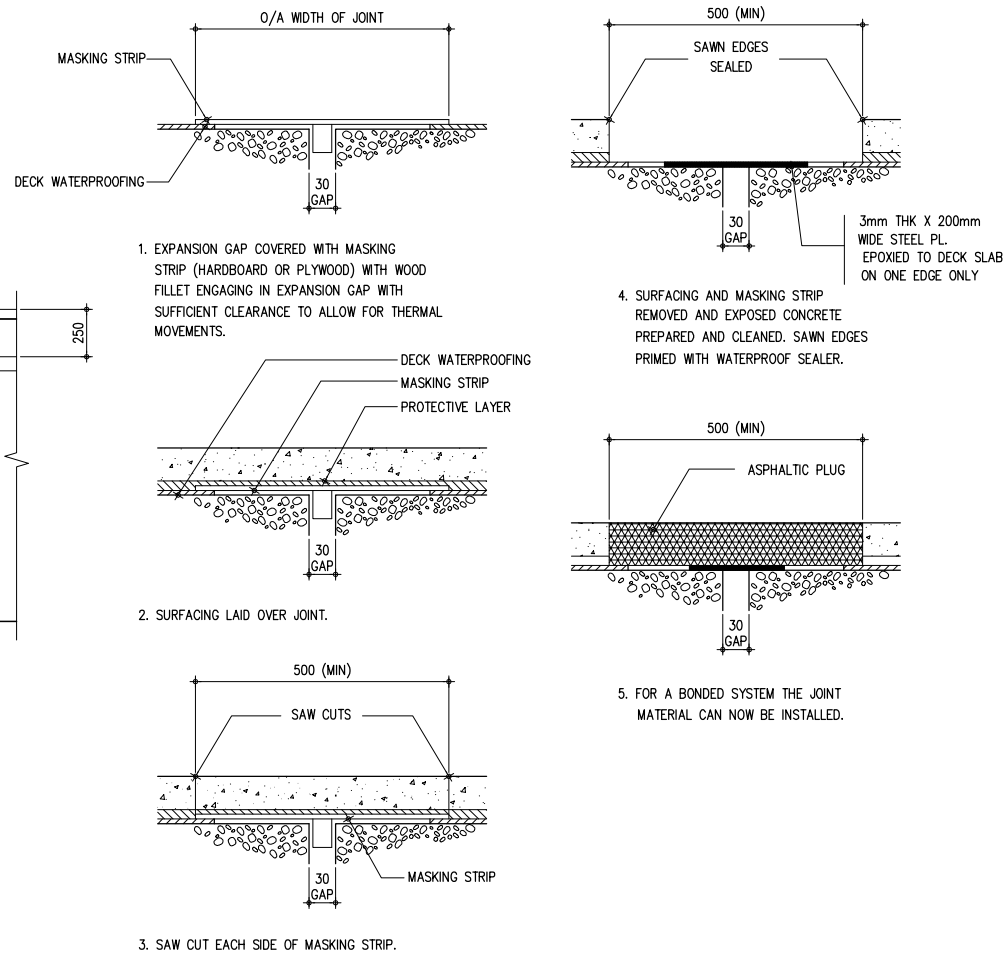
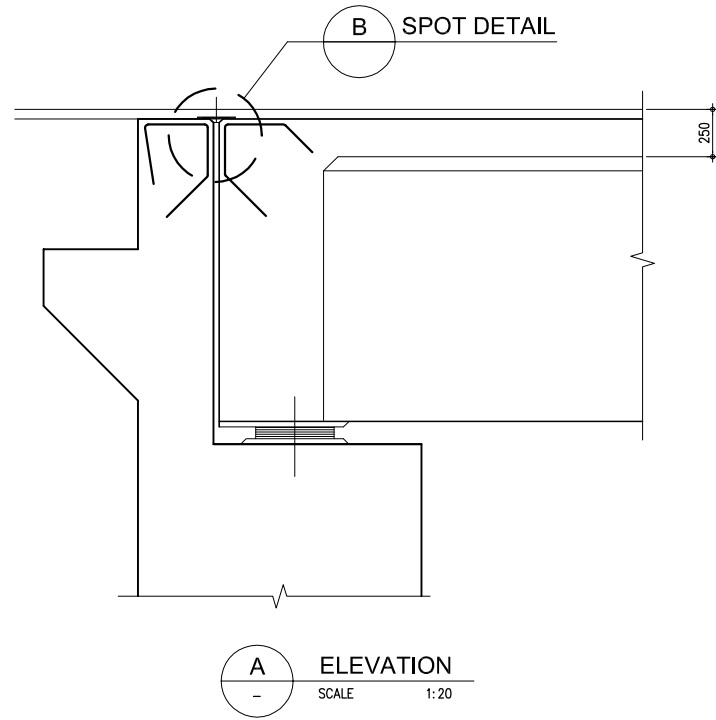
REINFORCEMENT PLATE (STEEL PLATE)

ITEM	UNIT	REQUIRED VALUE	TEST METHOD
Ultimate Strength	N/mm <sup>2</sup>	400 or more	JIS G3101
Elongation	%	21 or more	
Yield Strength	N/mm <sup>2</sup>	245 or more	

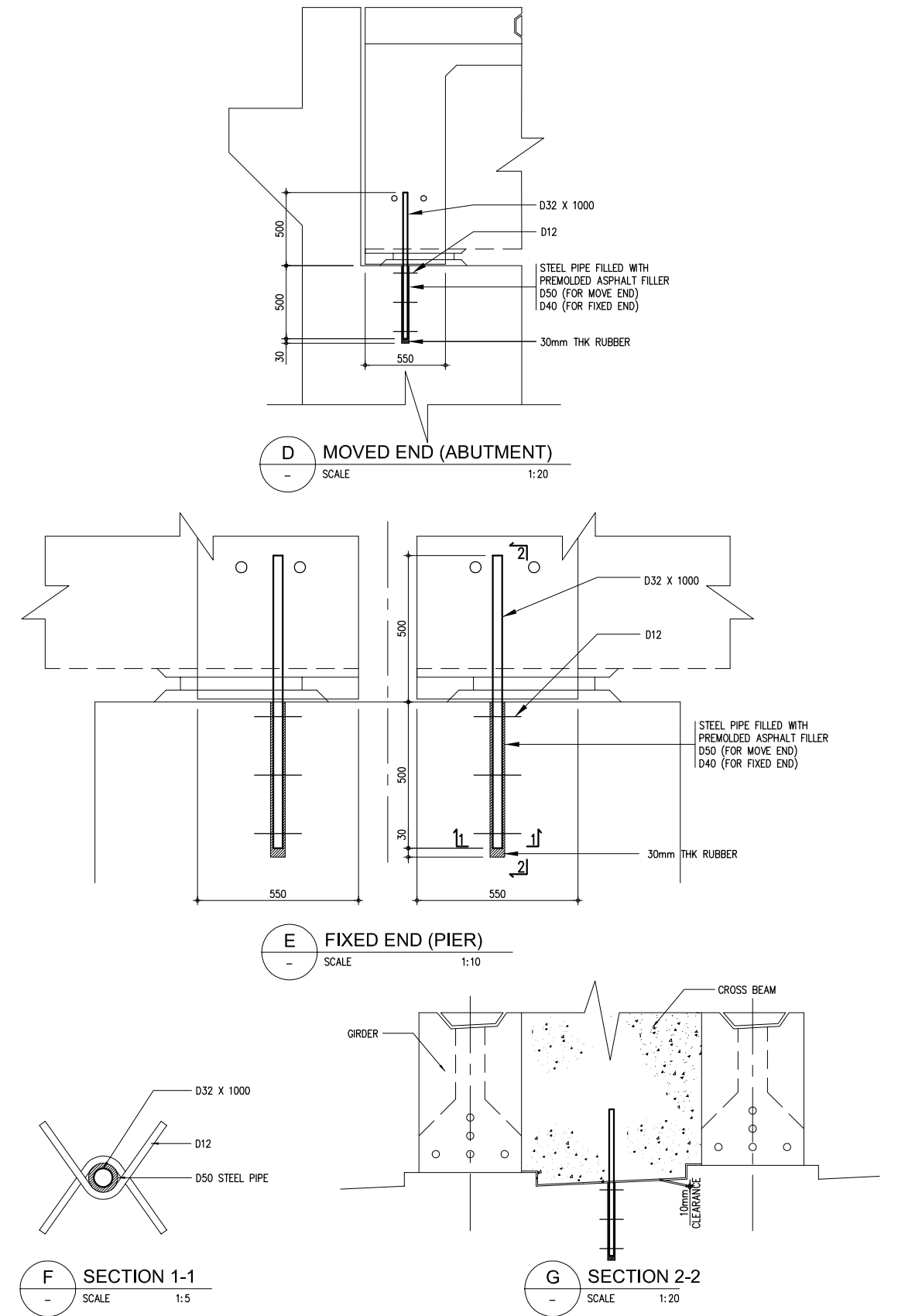
Note: All Elastomeric Bearing Pads shall be designed in accordance with Japan Road Association Standard or other equivalent Standard

LOCATIONS OF ELASTOMERIC BEARING PADS

BRIDGE NO.	OB-10			Total Number
	PC-I			
BRIDGE TYPE	A1	P1	A2	
LOCATION	M	F	M	
SUPPORT CONDITION				
ELASTOMERIC BEARING PAD	FIX	360 x 260 x 36	16	16
	MOVE	410 x 310 x 54	8	8

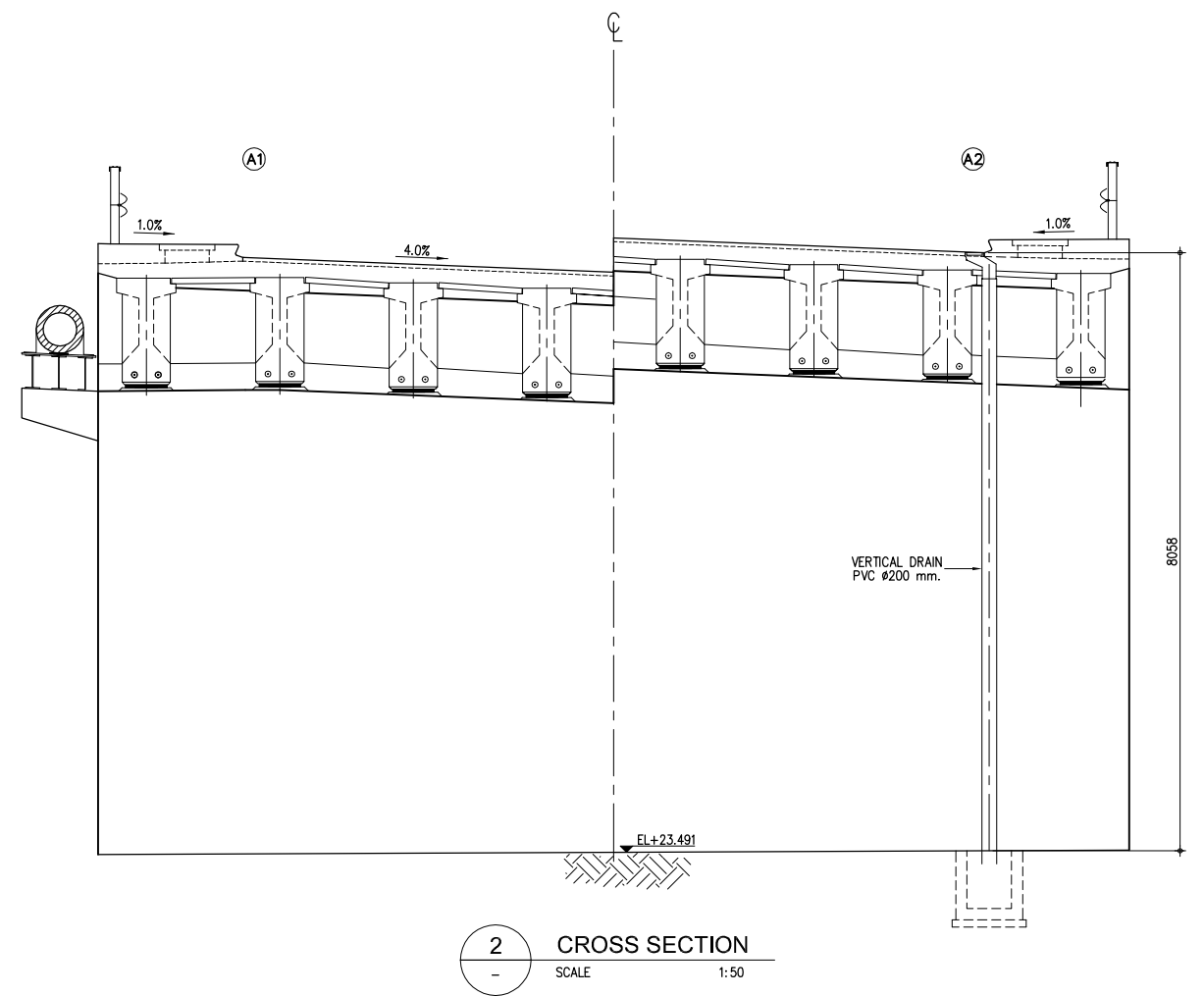
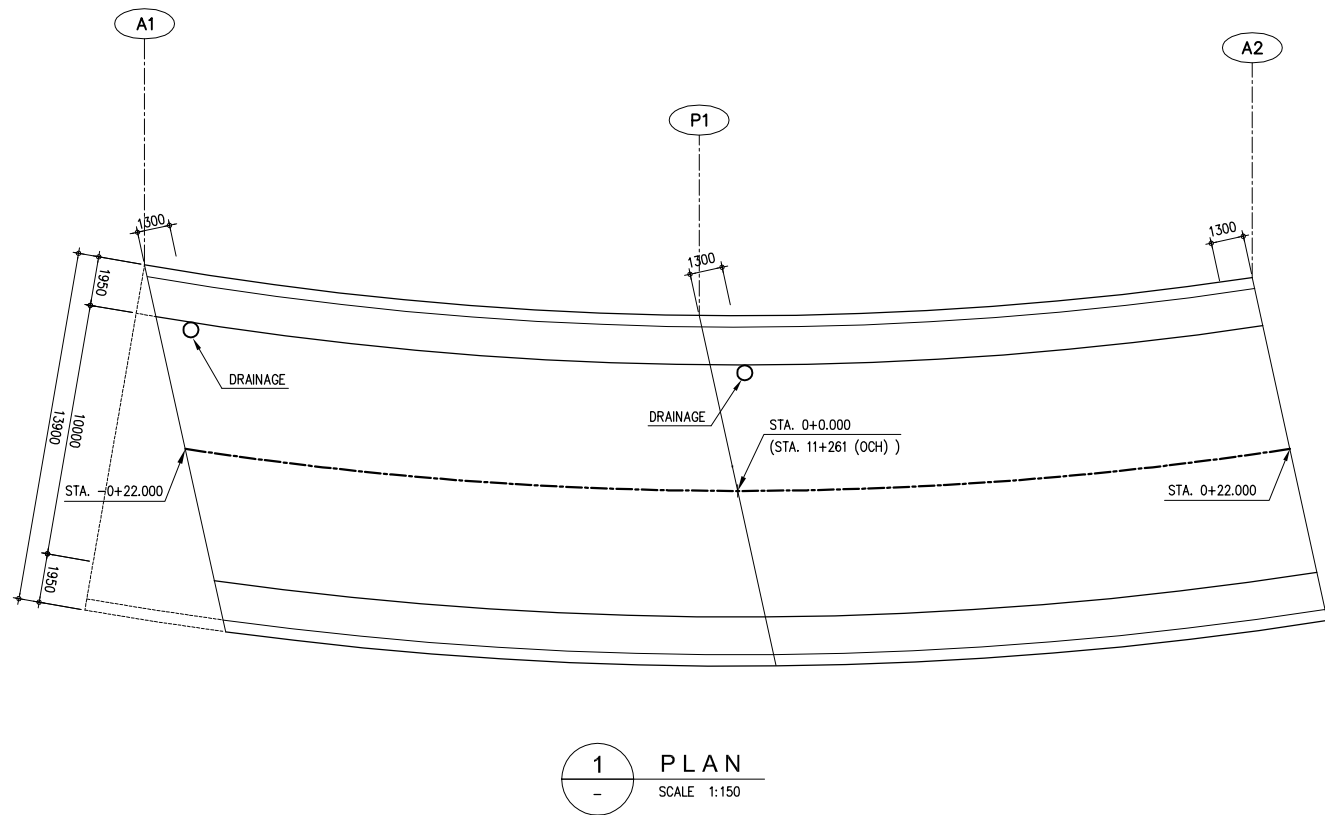


**1 DETAIL OF EXPANSION JOINT**  
SCALE AS SHOWN

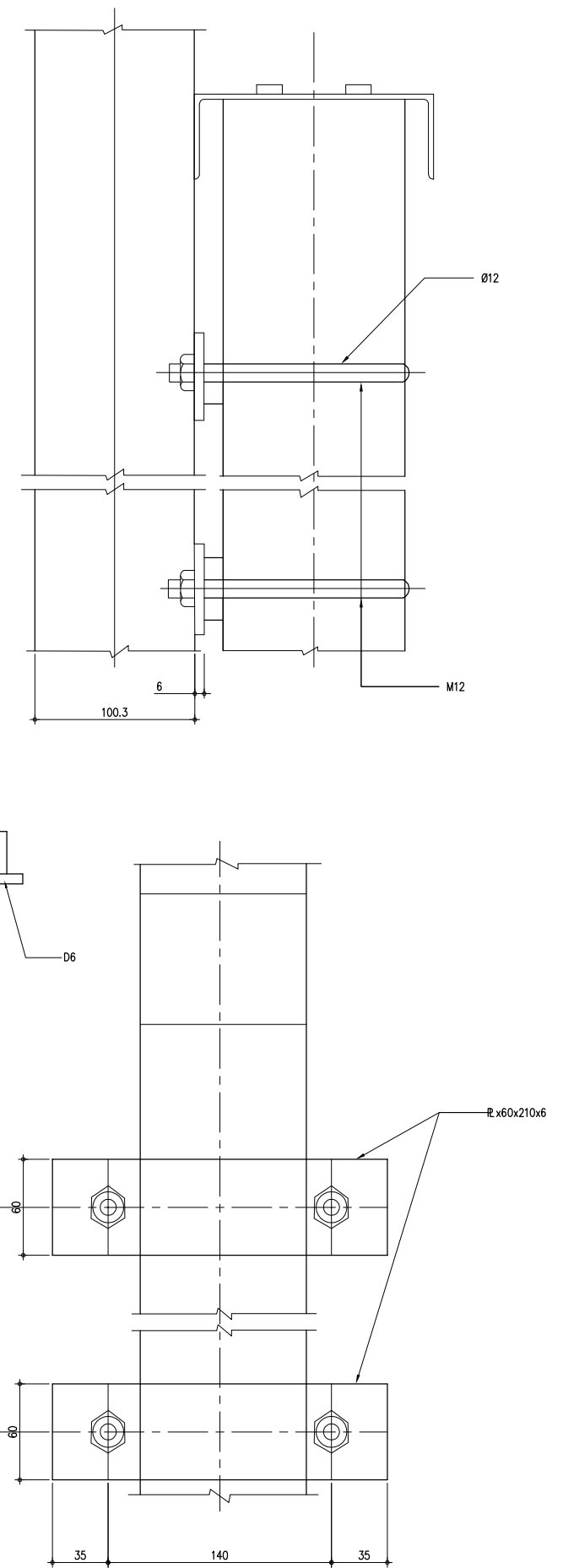
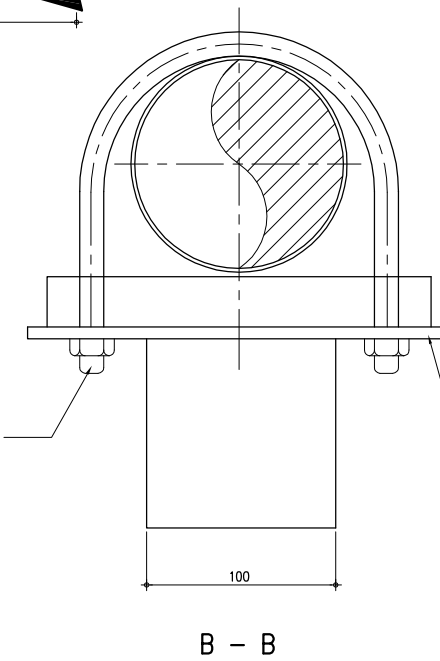
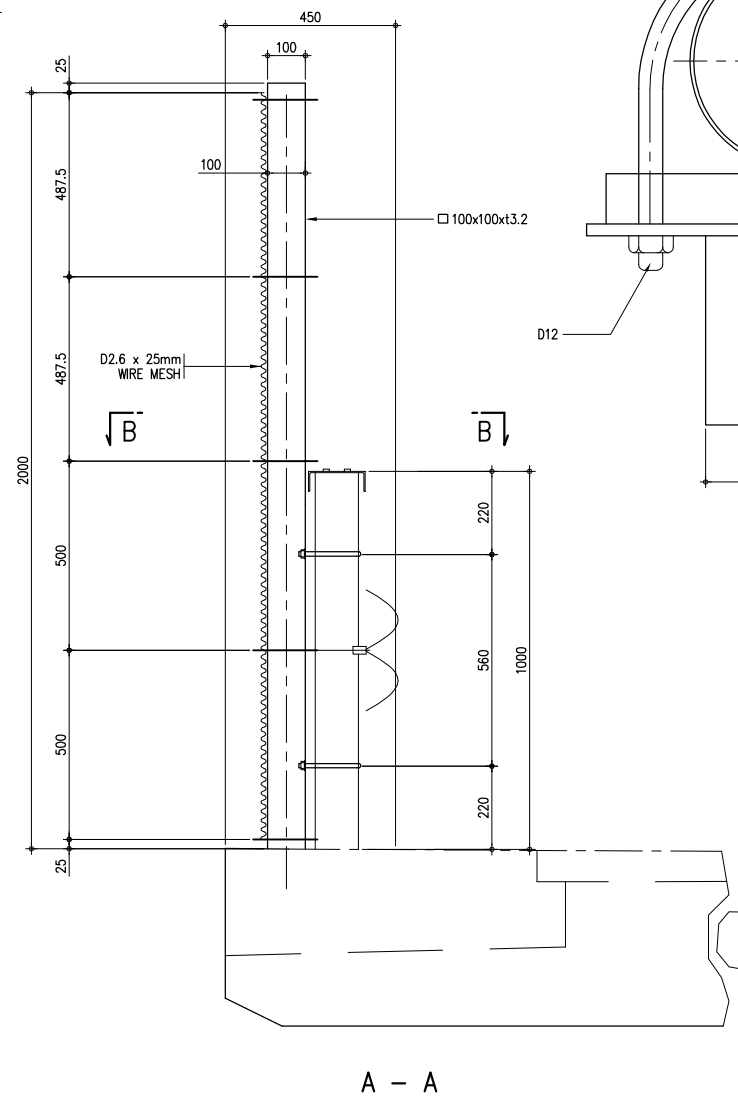
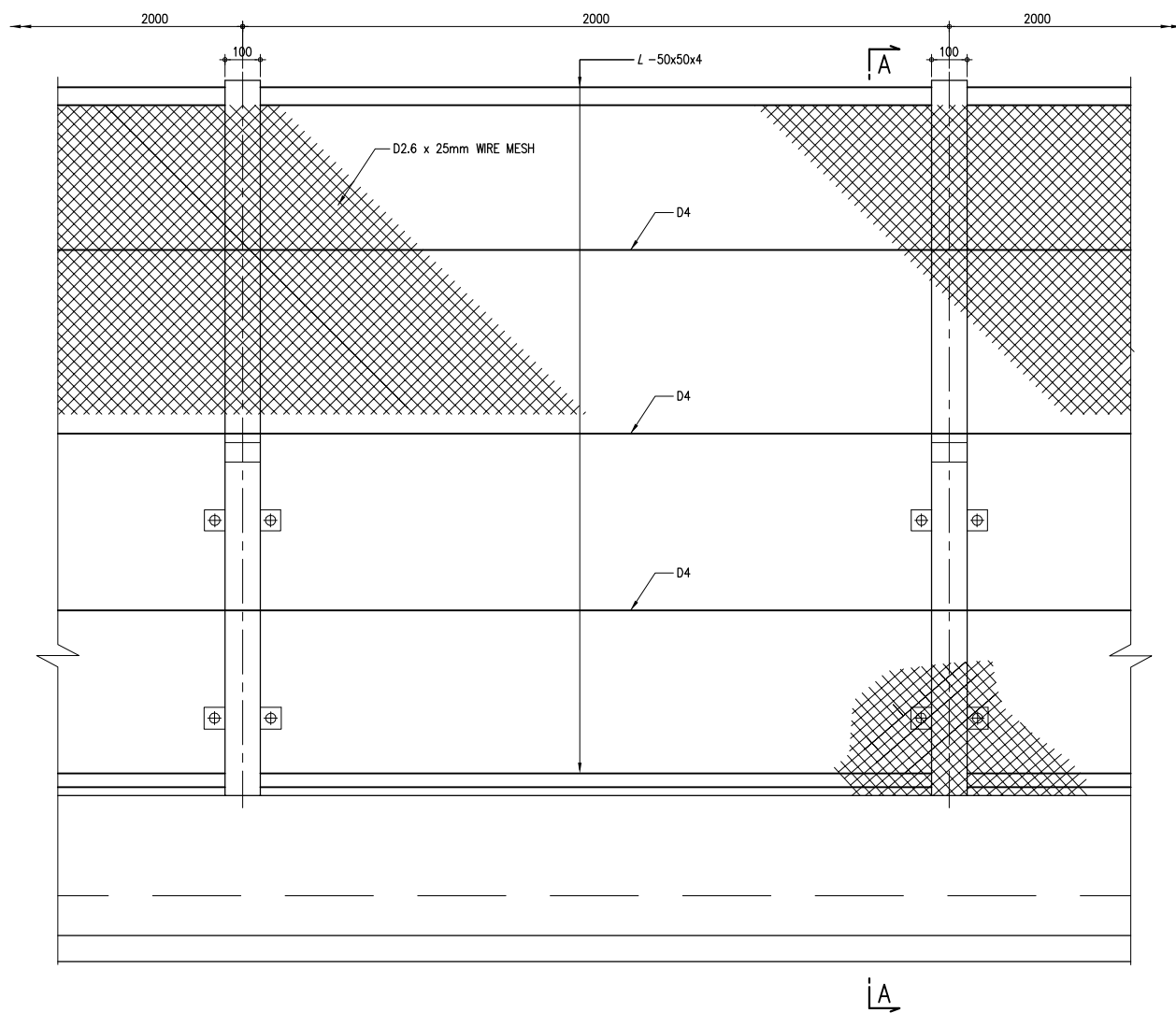
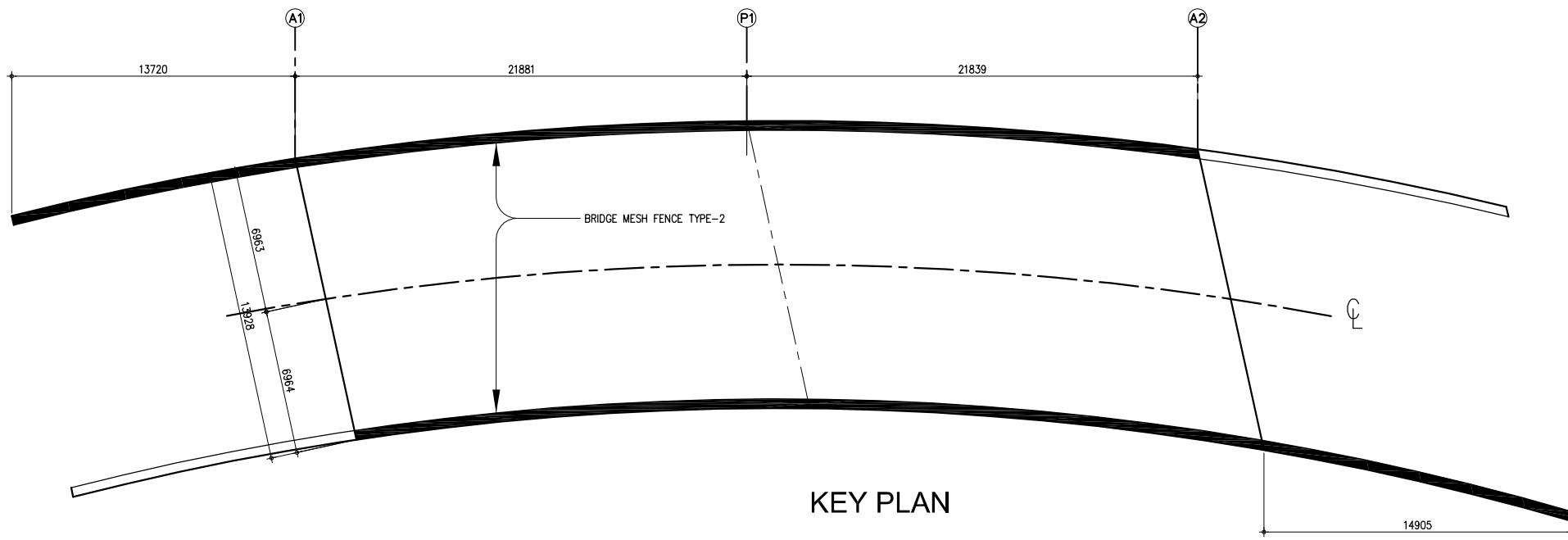


**2 ANCHORAGE DETAIL TYPICAL (MOVED AND FIXED)**  
SCALE AS SHOWN

# LAYOUT PLAN OF DRAINAGE (OB-10)



# BRIDGE MESH FENCE (1) TYPE-1

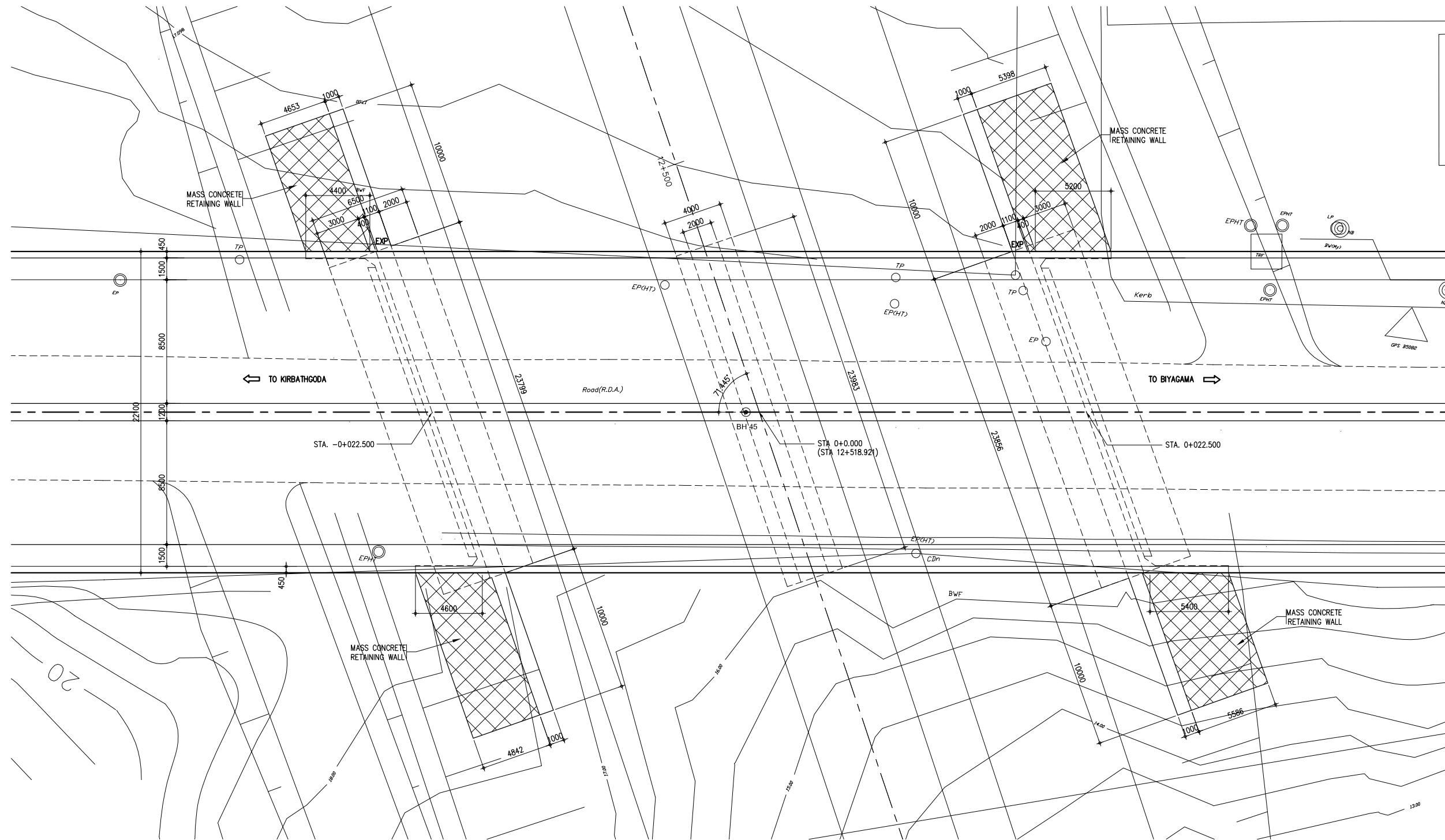


No	REVISION	DATE

**K05** OVERPASS BRIDGE  
No.11(011)-STA.12+518.921

# OVERPASS BRIDGE NO. 11 - GENERAL VIEW (1)

( STA. 12+518.921 )

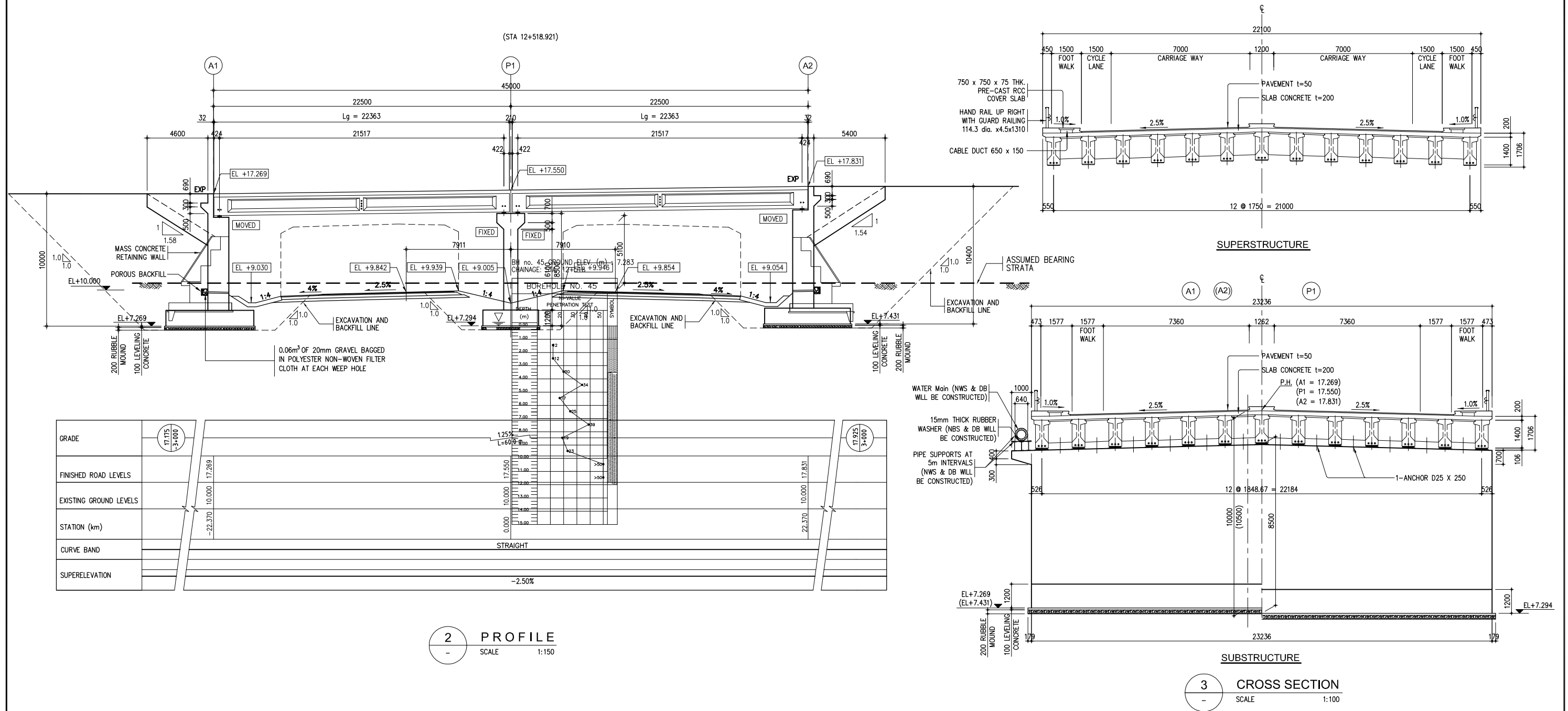


1 PLAN  
SCALE 1:150

- NOTES :
1. ALL DIMENSIONS ARE IN MILLIMETERS.
  2. THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH THE OTHER RELEVANT DRAWINGS.

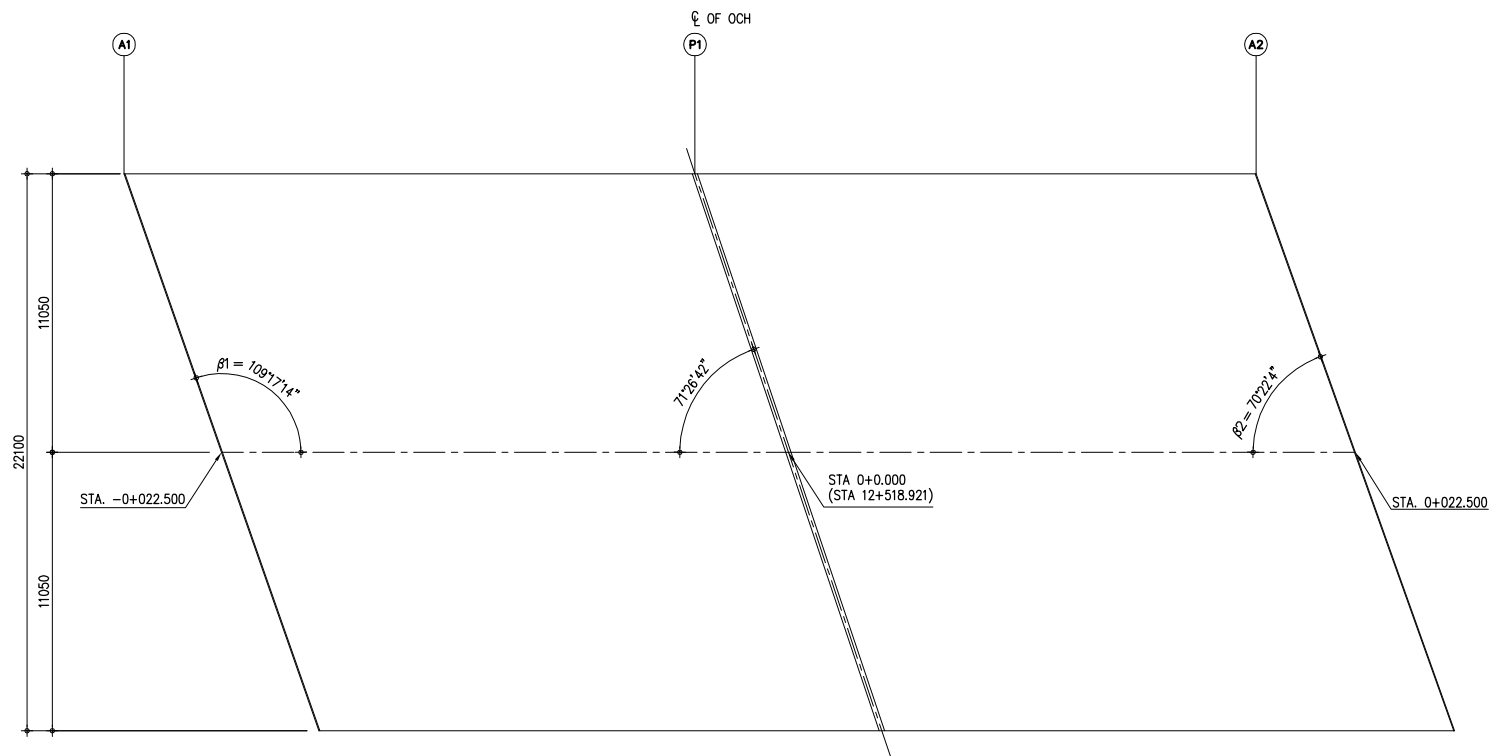
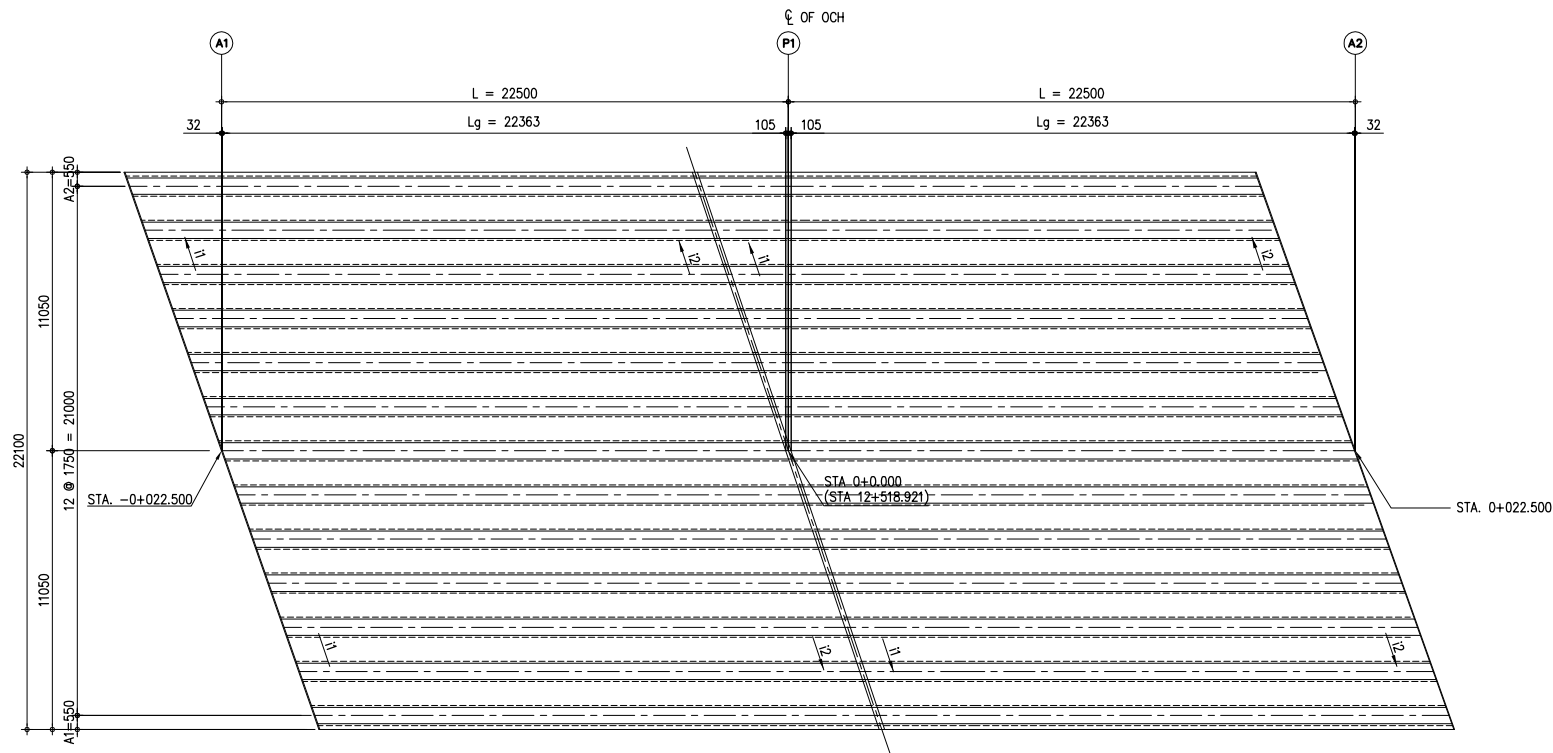
# OVERPASS BRIDGE NO. 11 - GENERAL VIEW (2)

(STA. 12+518.921)



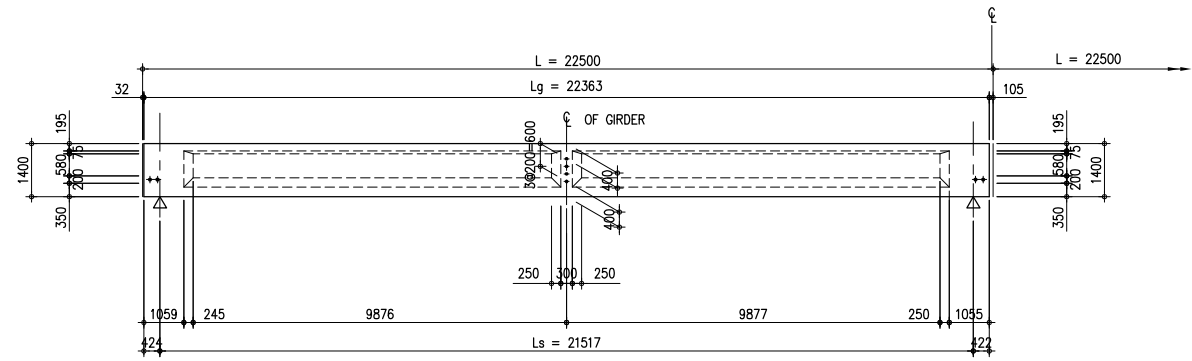
- NOTES :**
1. ALL DIMENSIONS ARE IN MILLIMETERS.
  2. THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH THE OTHER RELEVANT DRAWINGS.



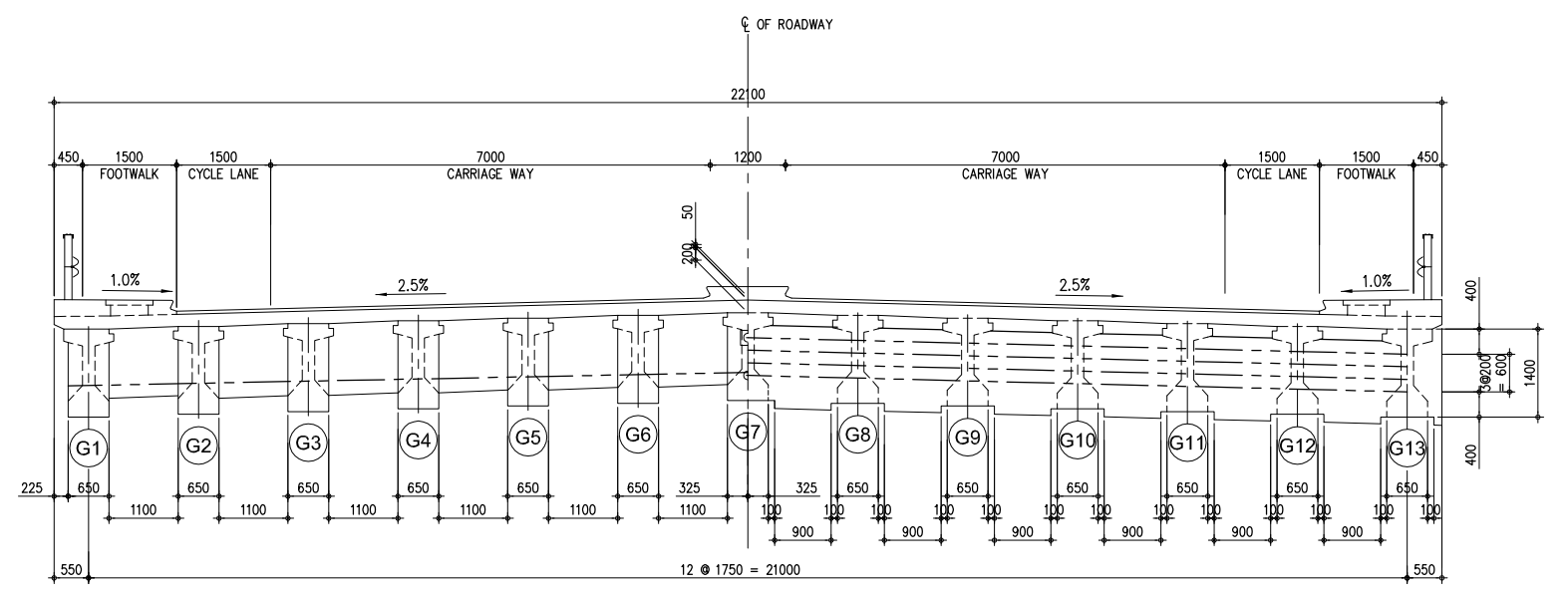


1 LAYOUT PLAN  
SCALE 1:150

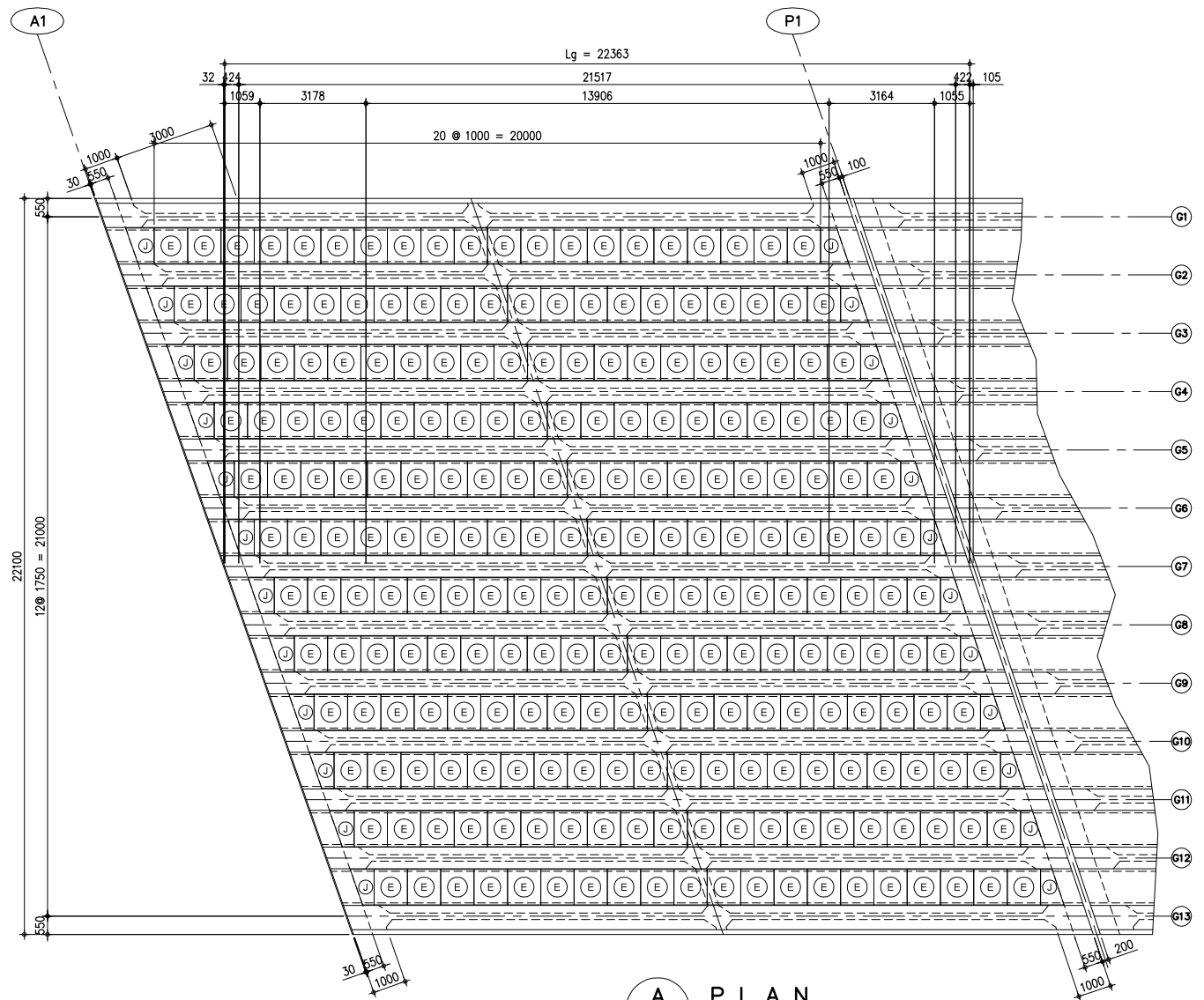
2 SPAN CONTINUOUS BRIDGE	
A1~P1~A2	
Lt (m)	45.000
Lo (m)	22.500
L1 (m)	22.500
L2 (m)	22.500
$\beta 1$ (°)	10917'14"
$\beta 2$ (°)	7'22'4"
e1/e2 (mm)	30/100
i1 (%)	2.50
i2 (%)	2.50
A1/A2 (mm)	550/550
B1/B2 (mm)	550/550
C1/C2 (mm)	550/550
Lg1 (m)~Lg13 (m)	22.363
SPAN LENGTH (m)	L=2*22.5=45.0
REMARKS	



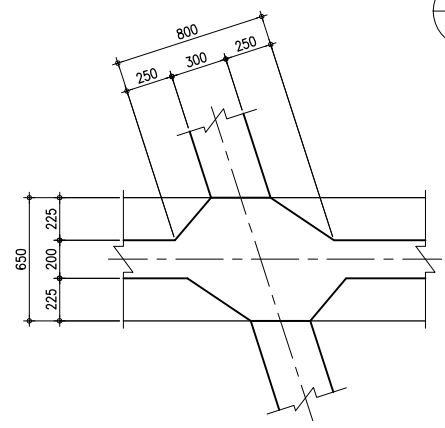
**B SIDE VIEW**  
SCALE 1:100



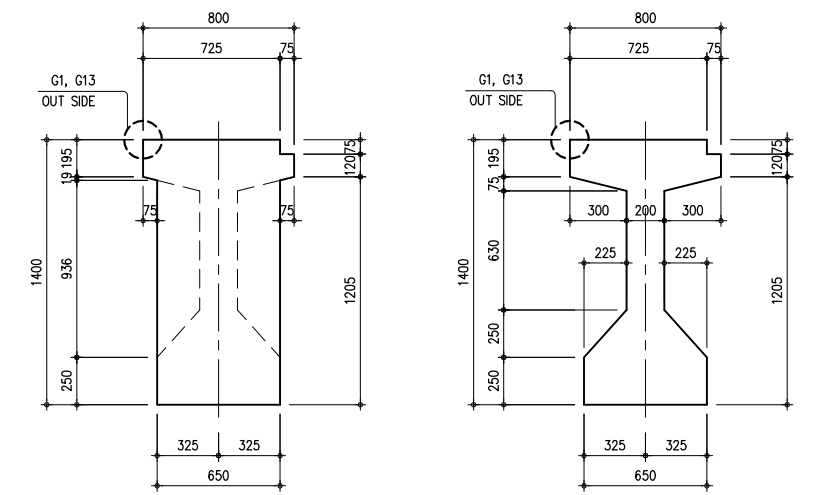
**C CROSS SECTION**  
SCALE 1:60



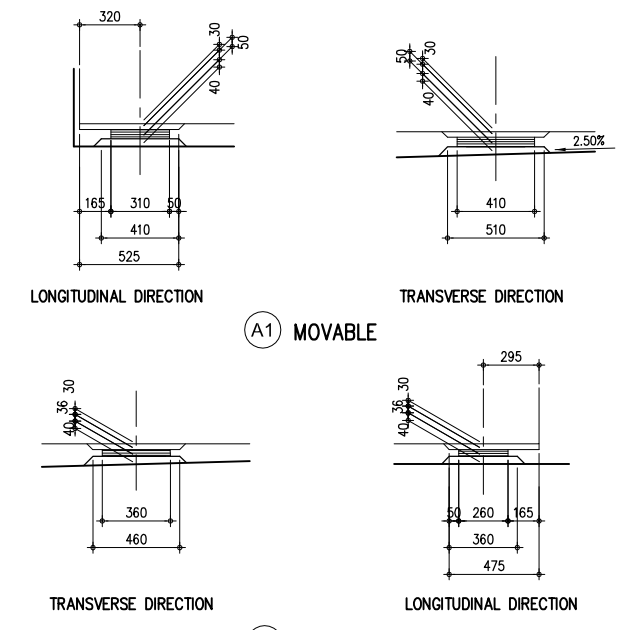
**A PLAN**  
SCALE 1:100



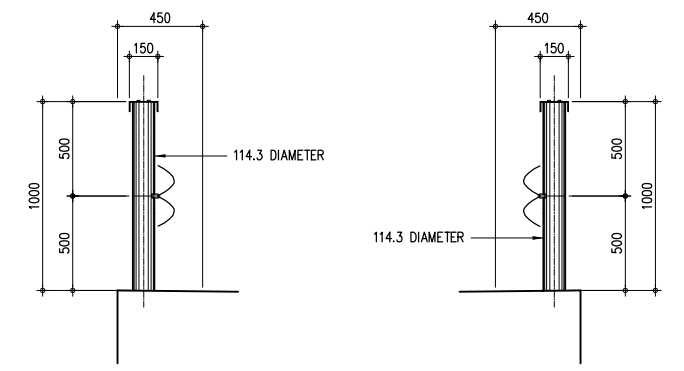
**D DETAIL-D**  
SCALE 1:20



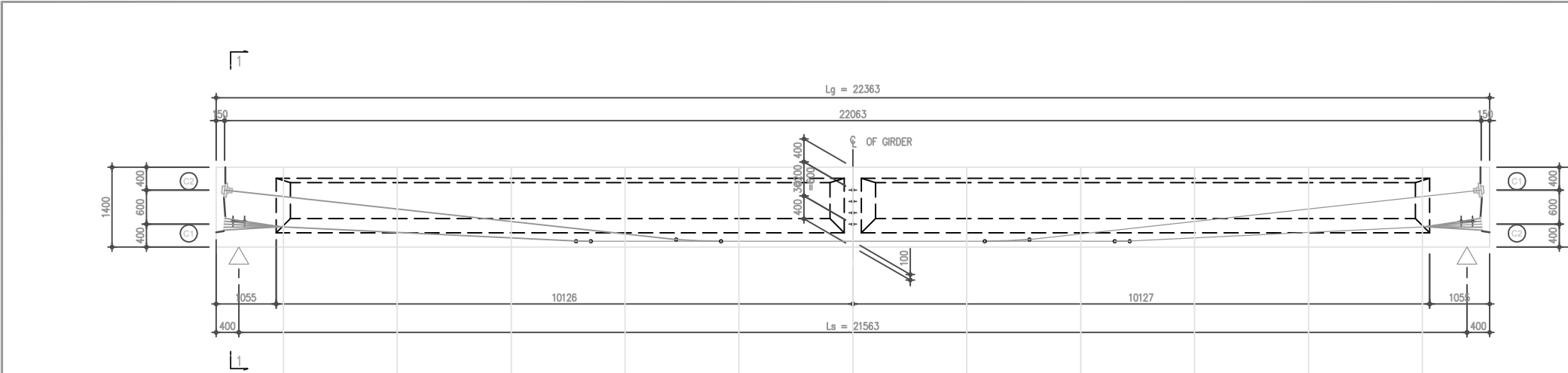
**E GIRDER CROSS SECTION**  
SCALE 1:20



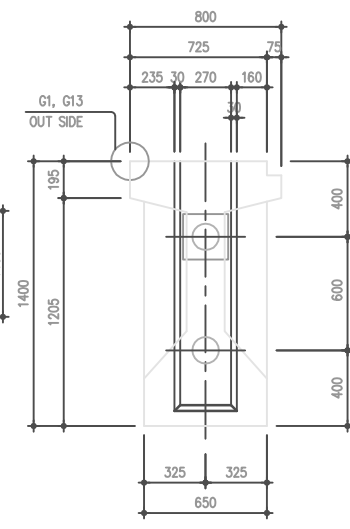
**F BEARING DETAILS**  
SCALE 1:20



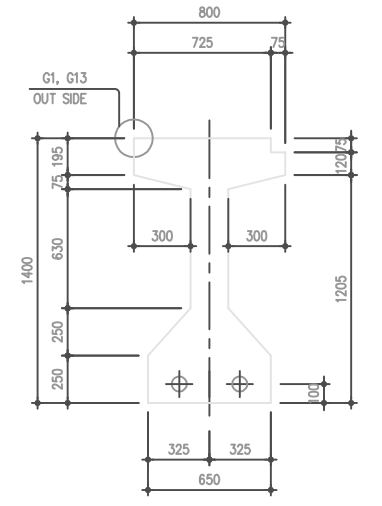
**G GUARDRAIL**  
SCALE 1:20



CABLE PROFILE (mm)	DISTANCE FROM Q <sub>c</sub> (m)												CABLE NO.	
	DEAD END	388	254	158	100	100	100	100	229	449	668	973		JACKING END
C1	DEAD END	388	254	158	100	100	100	100	229	449	668	973	JACKING END	C1
C2	JACKING END	973	668	449	229	100	100	100	100	158	254	388	DEAD END	C2

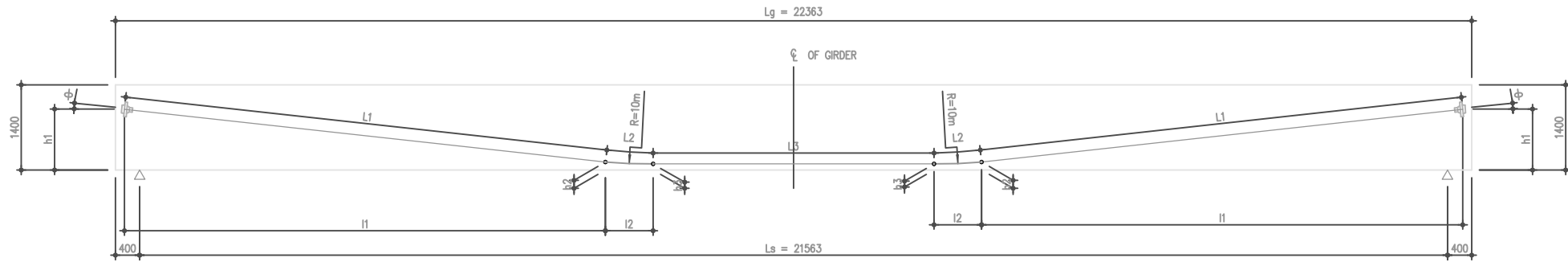


1-1



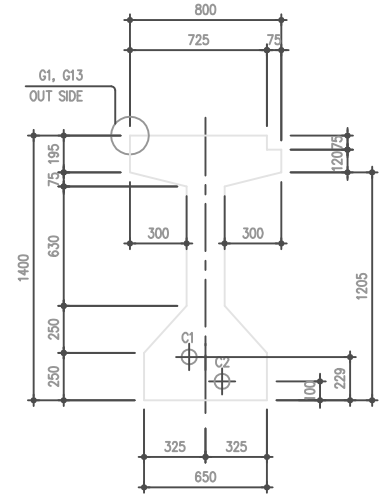
SECTION @ MIDSPAN

A PROFILE OF CABLES  
SCALE 1:50

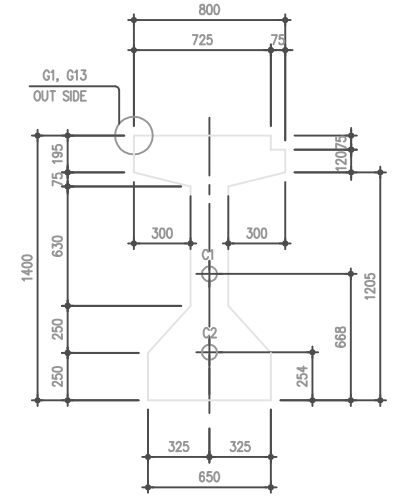


CABLE NO.	I1	I2	L1	L2	L3	$\frac{2}{3}L + 3$	h1	h2	h3	$\phi =$ (degree)
C1	7931	785	7978	785	4632	22158	400	131	100	6° 15'
C2	6170	262	6177	262	9199	22077	1000	100	100	2° 45'

TOTAL LENGTH  $\Sigma l = 44.24$  m  
 TOTAL WEIGHT  $W = 44.24 \times 9.288 = 410.90$  kg/1 girder



SECTION @ 4.00m

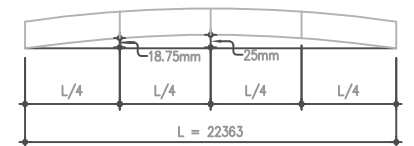


SECTION @ 8.00m

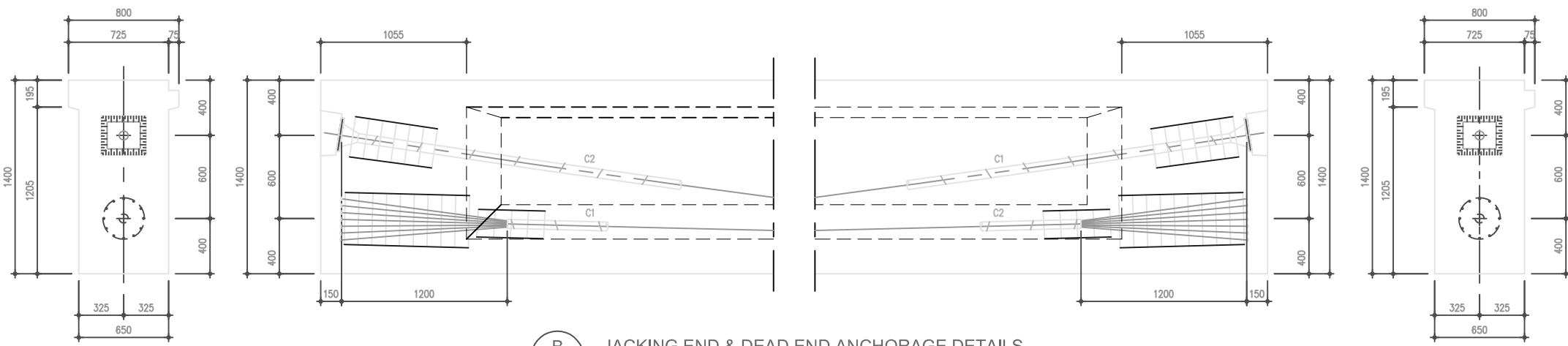
C GIRDER CROSS SECTION  
SCALE 1:20

NOTES:

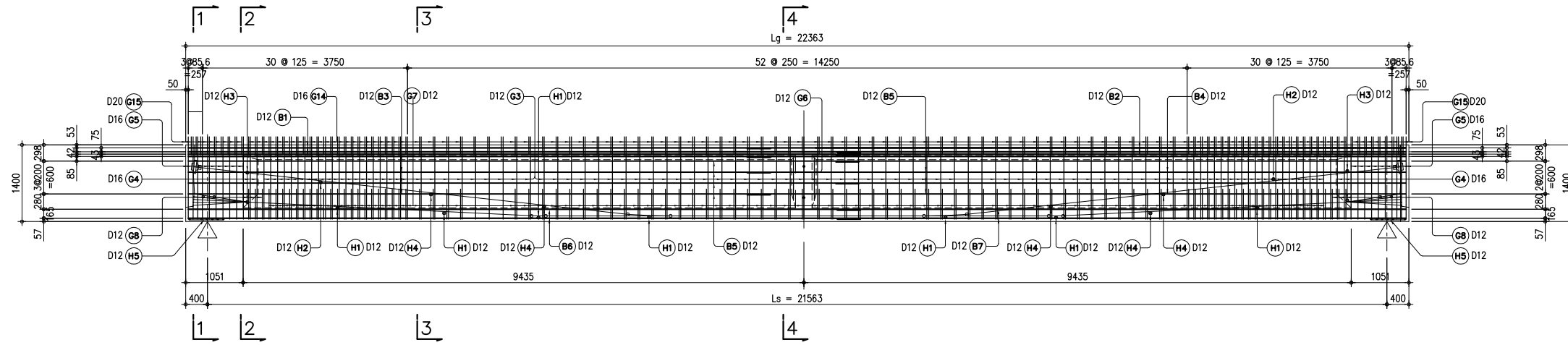
- PRESTRESSED CONCRETE:
  - CONCRETE CUBE STRENGTH,  $f_{cu} = 50$  MPa
  - AT TRANSFER OF PRESTRESS,  $f_{ci} = 36$  MPa
- PRESTRESSING STRANDS:
  - 1 - D12.7 IS A 7 - WIRE STRAND WITH NOMINAL TENSILE STRENGTH,  $f_{pu} = 1860$  MPa
  - TOTAL NO. OF STRANDS =  $2 \times 12 \times 12.7 = 24 - D12.7$
  - JACKING STRESS,  $f_{po} = 1302$  MPa
  - TOTAL JACKING FORCE,  $P_o = 2268$  KN
  - CABLE DUCT INSIDE DIAMETER (12-D12.7) = 65mm.
- REINFORCING STEEL:
  - ALL REINFORCING STEEL SHALL BE GRADE 460 WITH MINIMUM CHARACTERISTIC STRENGTH,  $f_y = 460$  MPa
- GIRDER PRE-CAMBER PRIOR TO STRESSING SHALL BE AS SHOWN BELOW



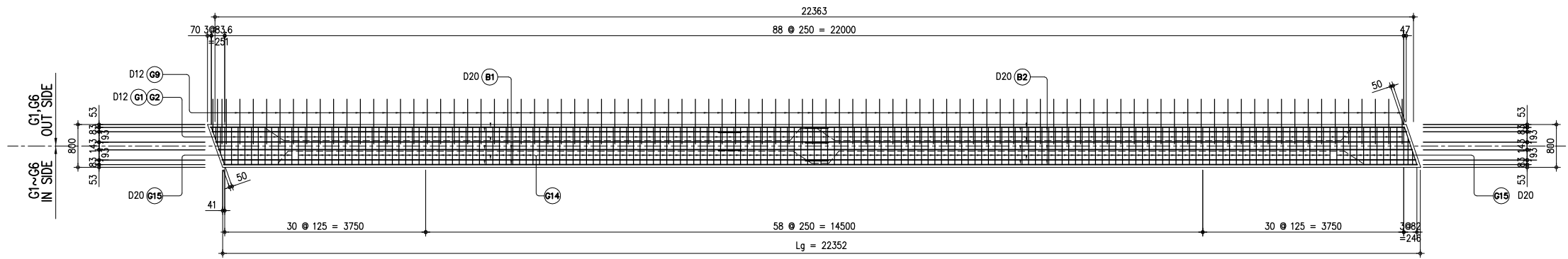
5. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SPECIFIED.



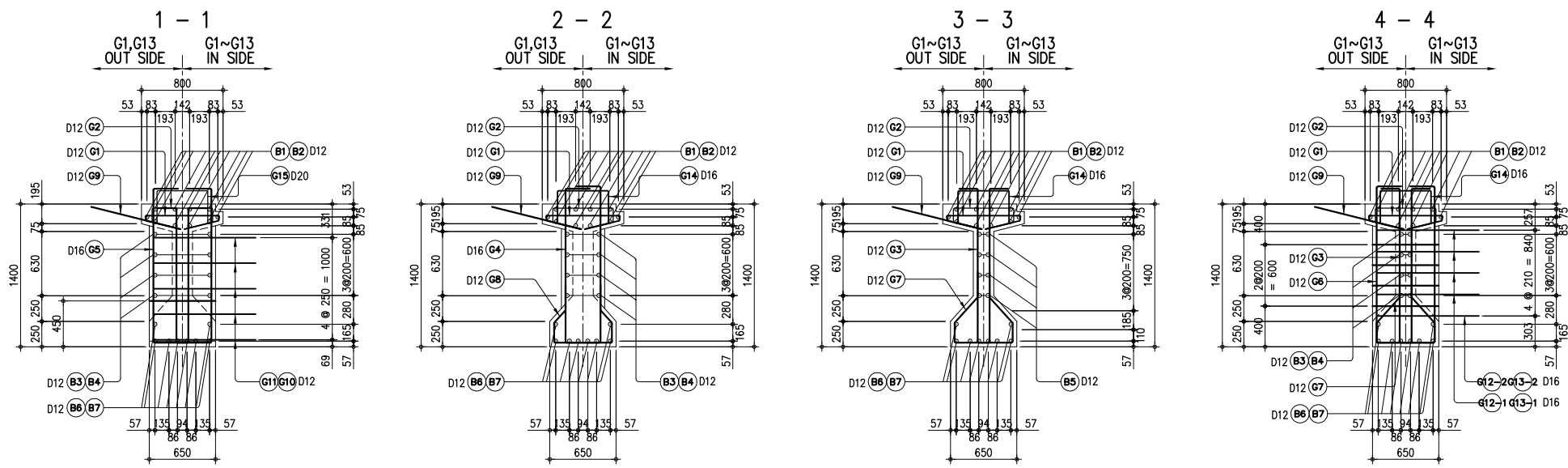
B JACKING END & DEAD END ANCHORAGE DETAILS  
SCALE 1:20



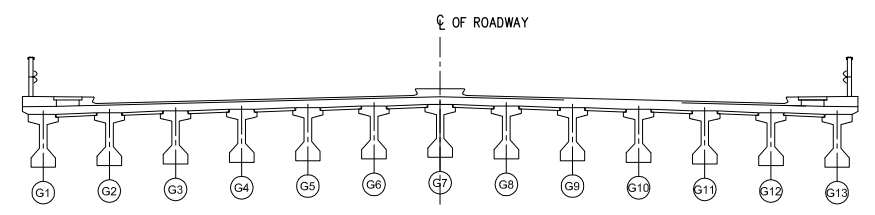
**B SIDE VIEW**  
SCALE 1:50



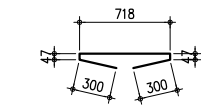
**A PLAN**  
SCALE 1:50



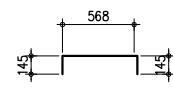
**C GIRDER CROSS SECTION**  
SCALE 1:30



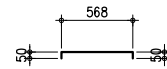
**D LOCATION MAP**  
SCALE 1:100



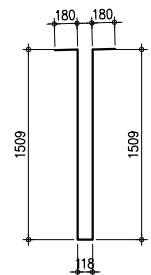
G1 129 - D12 x 1412



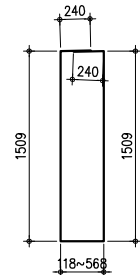
G2 129 - D2 x 858



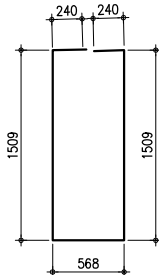
H1 8 - D12 x 668



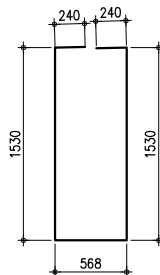
G3 107 - D12 x 3496



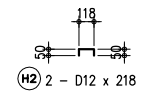
G4 4 - D16 x 3841 (AVERAGE)



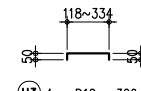
G5 18 - D16 x 4066



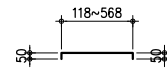
G6 2 - D12 x 4108



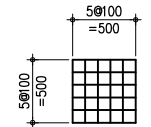
H2 2 - D12 x 218



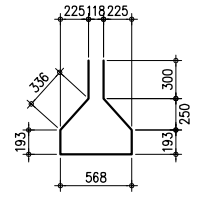
H3 4 - D12 x 326 (AVERAGE)



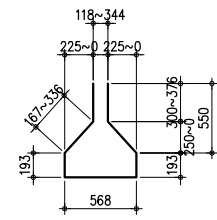
H4 2 - D12 x 443 (AVERAGE)



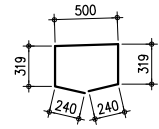
H5 24 - D12 x 500



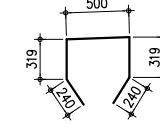
G7 107 - D12 x 2226



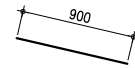
G8 4 - D12 x 2133 (AVERAGE)



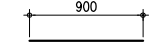
G14 111 - D16 x 1618



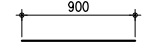
G15 18 - D20 x 1618



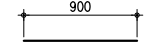
G9 129 - D12 x 900 (G1,G13)



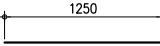
G10 10 - D12 x 900 (G1,G13)



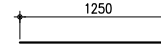
G11 8 - D12 x 900 (G1,G13)



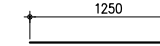
G12 4 - D16 x 900 (G1,G13)



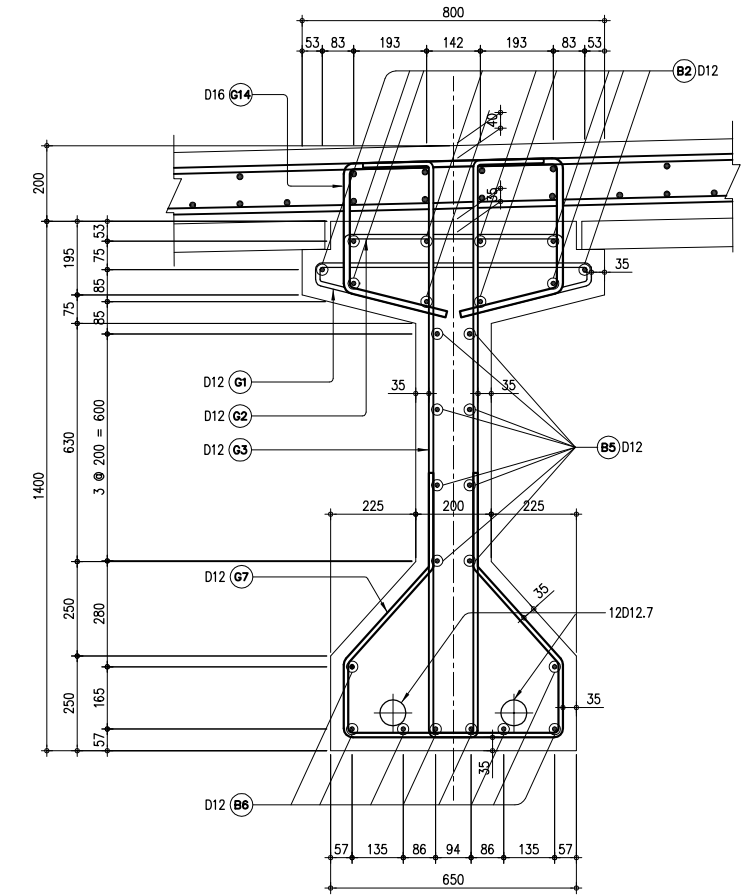
G11 10 - D12 x 1250 (G2-G12)



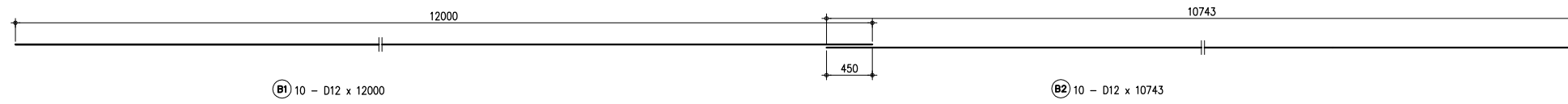
G13 8 - D12 x 1250 (G2-G12)



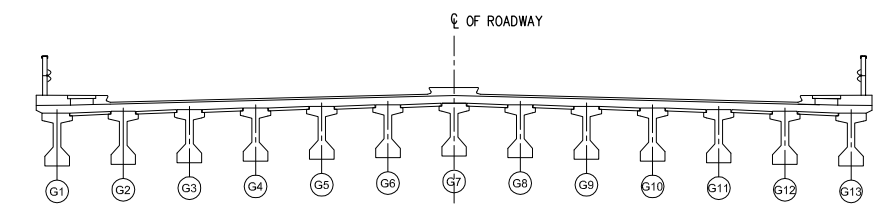
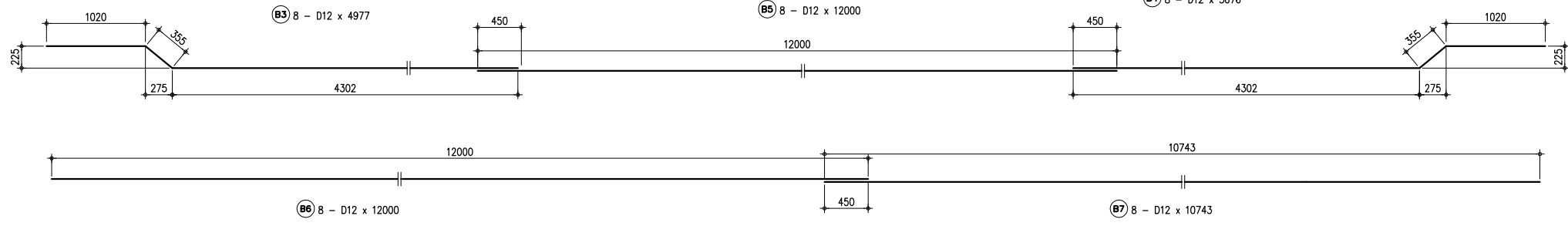
G13 4 - D16 x 1250 (G2-G12)



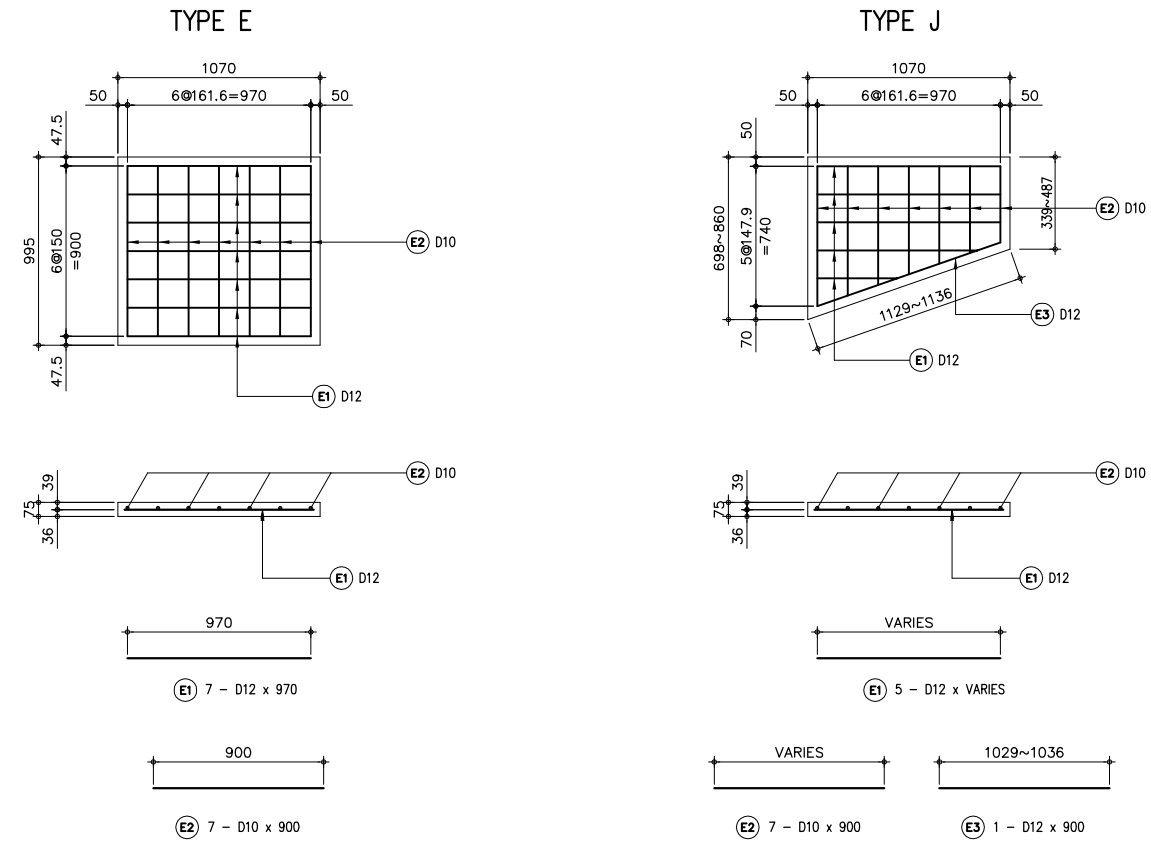
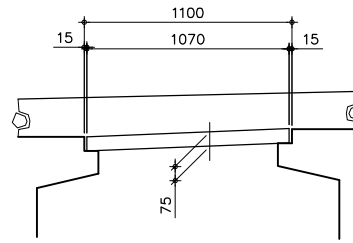
2 DETAIL OF GIRDER CENTER SCALE  
SCALE 1:10



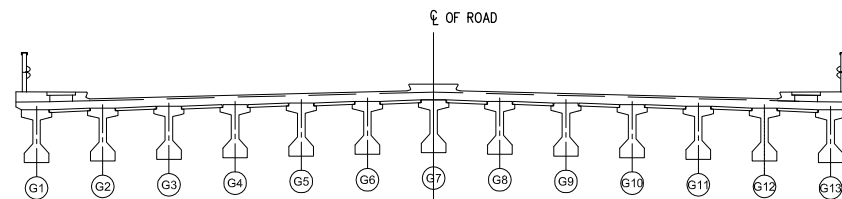
1 REINFORCEMENT OF GIRDER  
SCALE 1:30



3 LOCATION MAP  
SCALE NTS



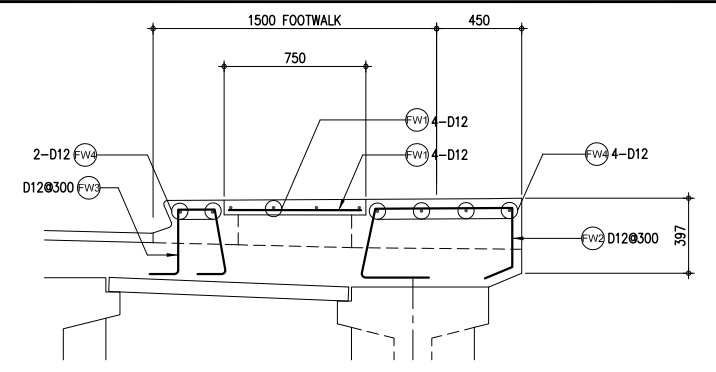
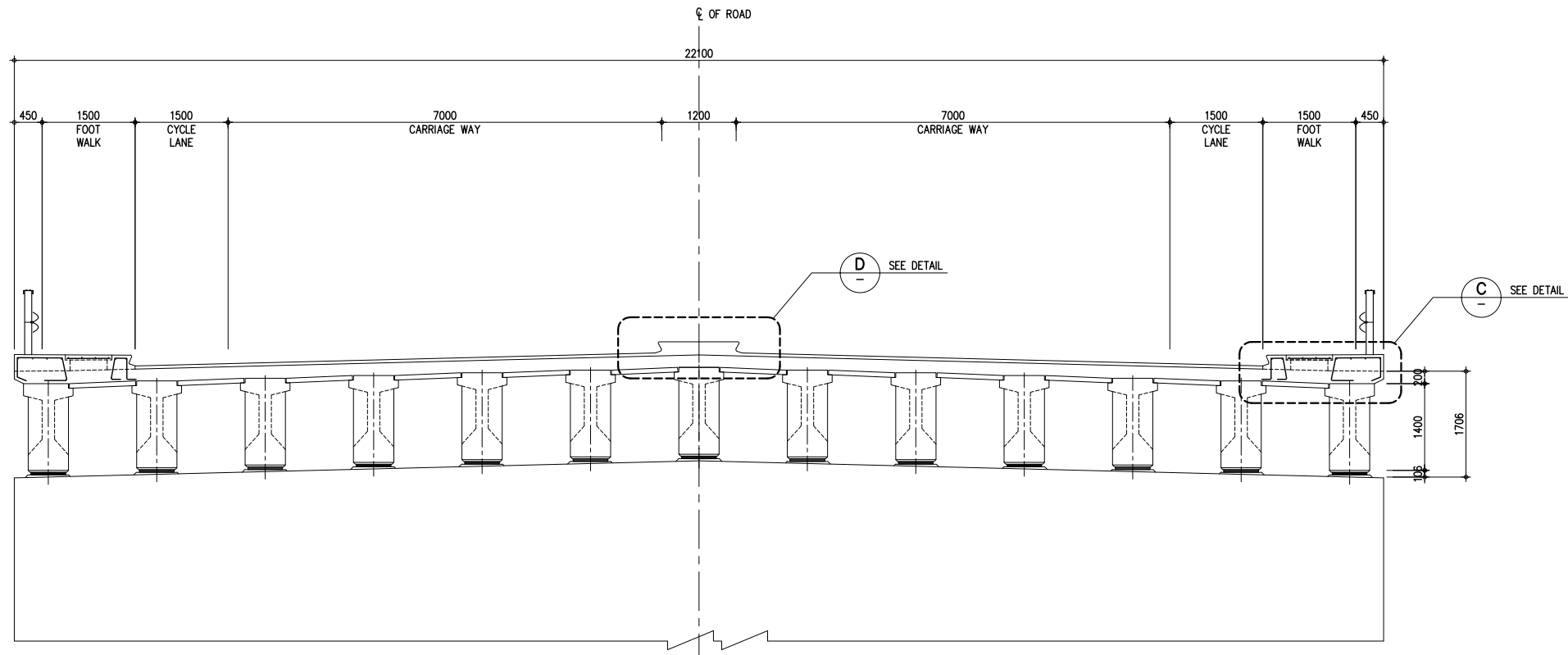
**A** DETAIL OF PRECAST PLATE  
SCALE 1:20



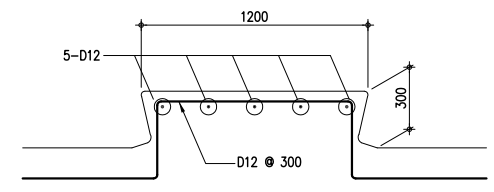
**B** LOCATION MAP  
SCALE 1:100

No	REVISION	DATE

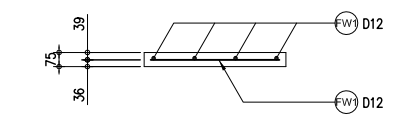
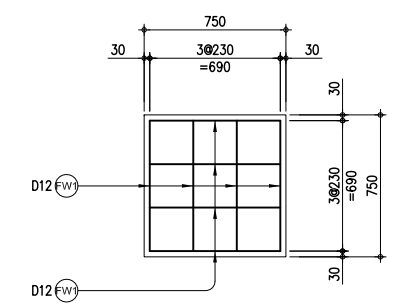
DESIGNED BY:	
CHECKED BY:	
APPROVED BY:	
DWG. NO.	K05-06



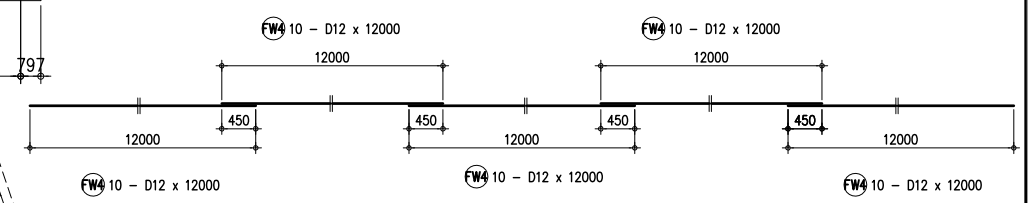
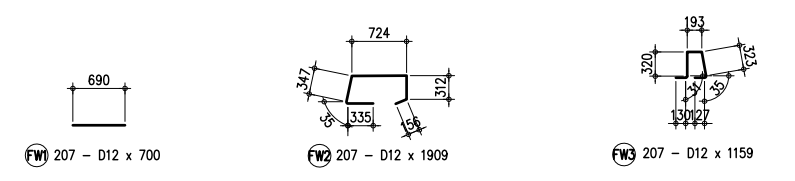
**C** DETAIL  
SCALE 1:20



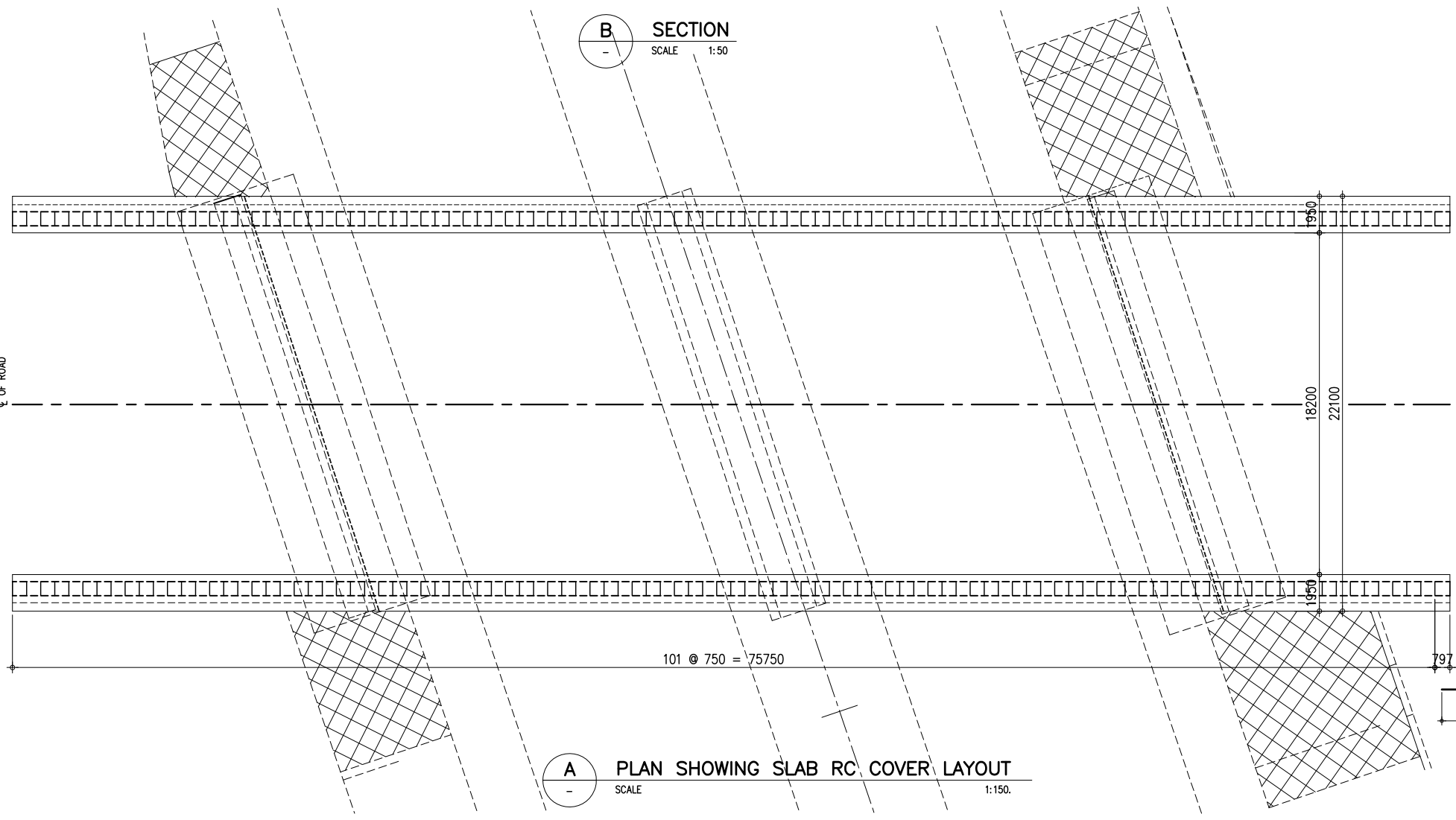
**D** DETAIL  
SCALE 1:20



**E** DETAILS OF PRECAST PLATE  
SCALE 1:20

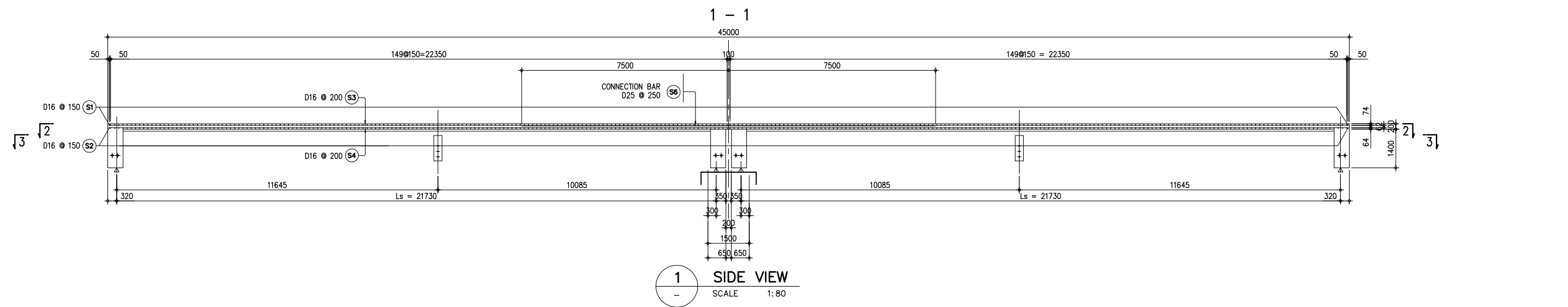


**F** BAR BENDING LAYOUT  
SCALE 1:50

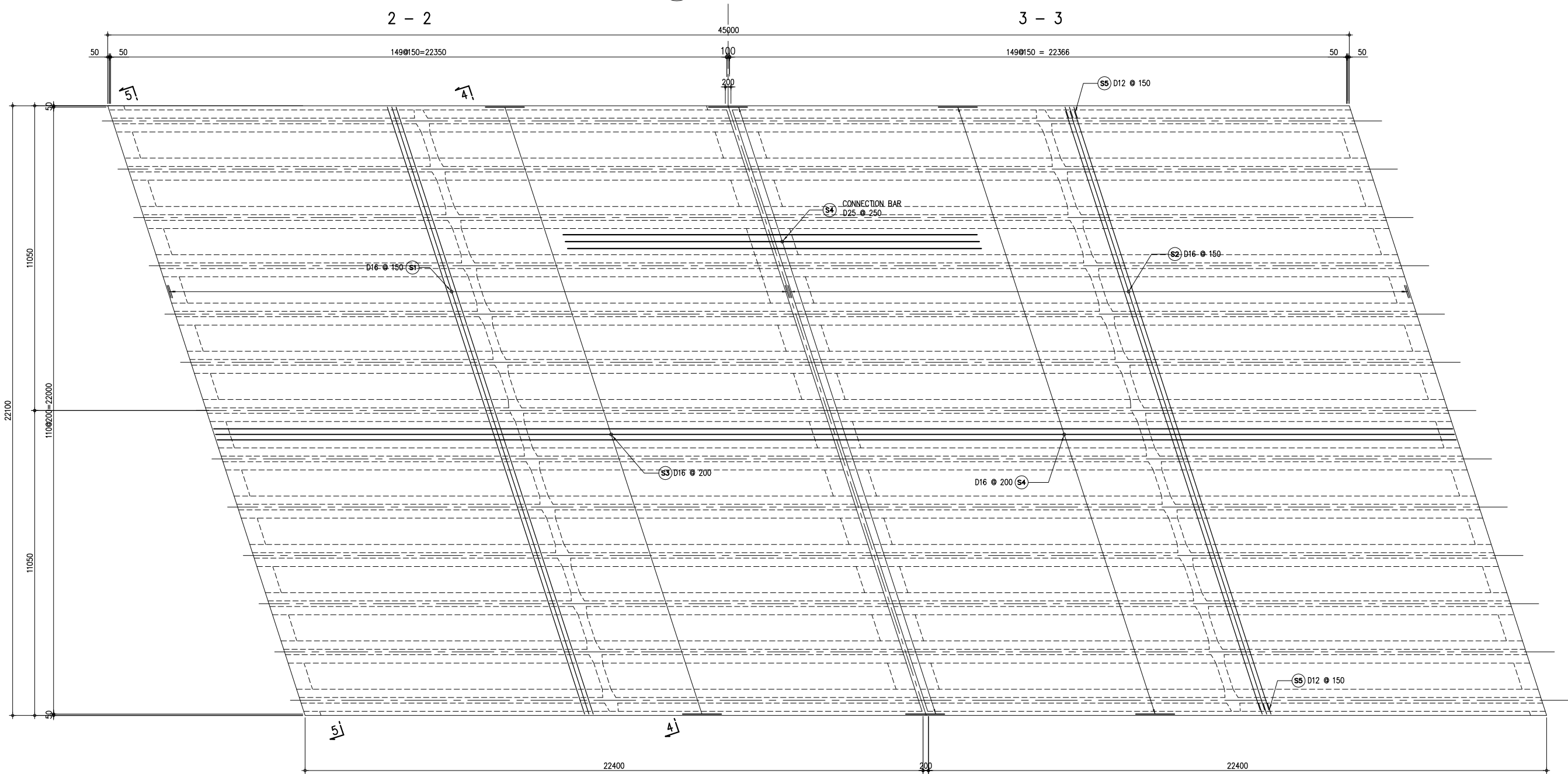


**B** SECTION  
SCALE 1:50

**A** PLAN SHOWING SLAB RC COVER LAYOUT  
SCALE 1:150



1 SIDE VIEW  
SCALE 1:80



HALF SHOWING TOP BARS

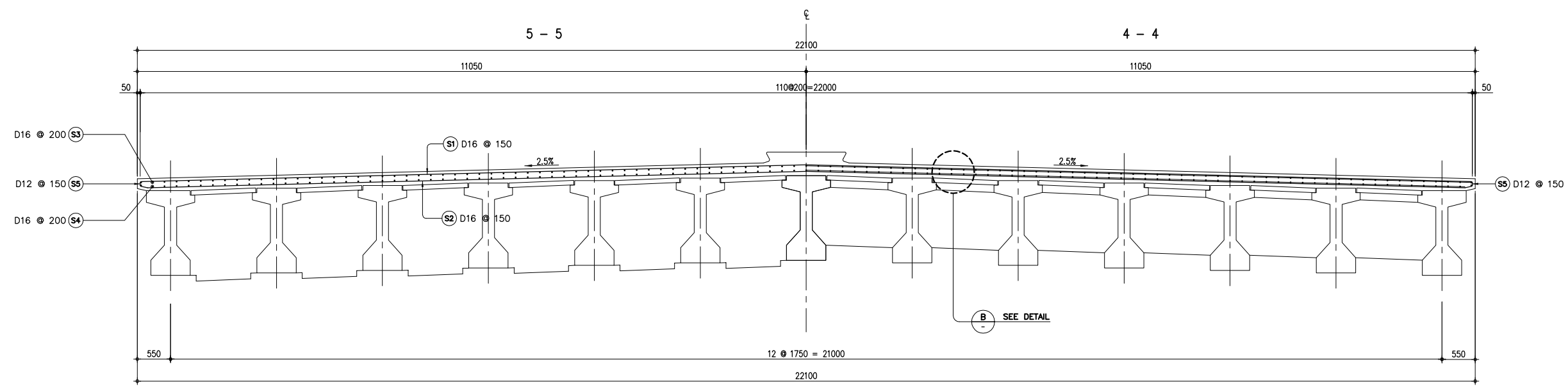
1 PLAN  
SCALE 1:80

HALF SHOWING BOTTOM BARS

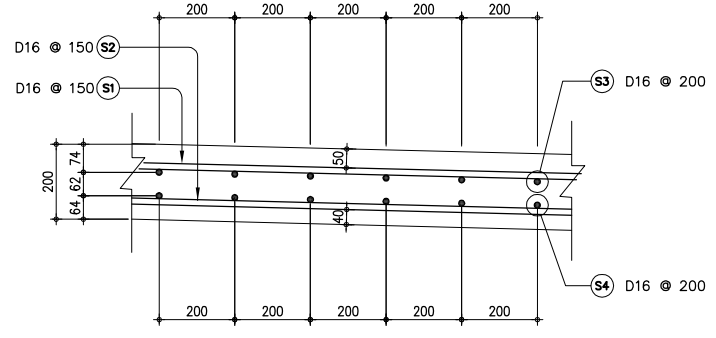
No	REVISION	DATE

DESIGNED BY:	
CHECKED BY:	
APPROVED BY:	
DWG. NO.	K05-08

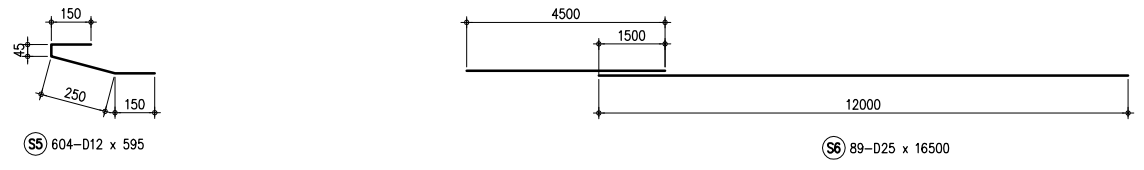
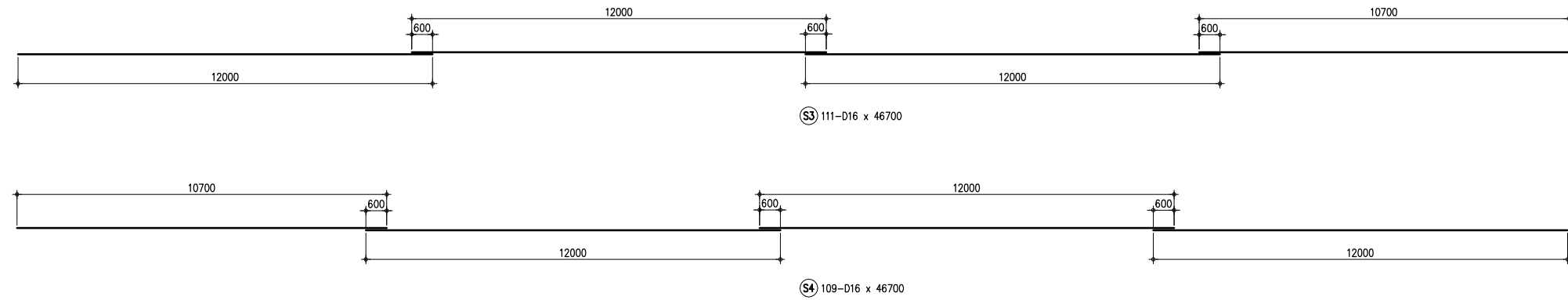
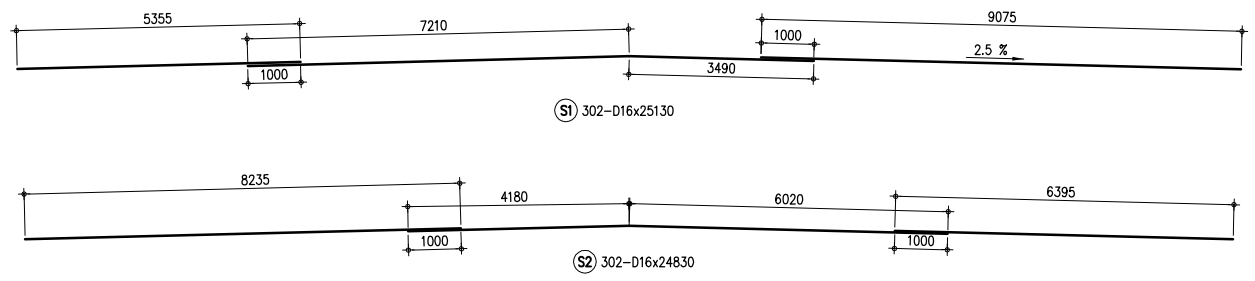




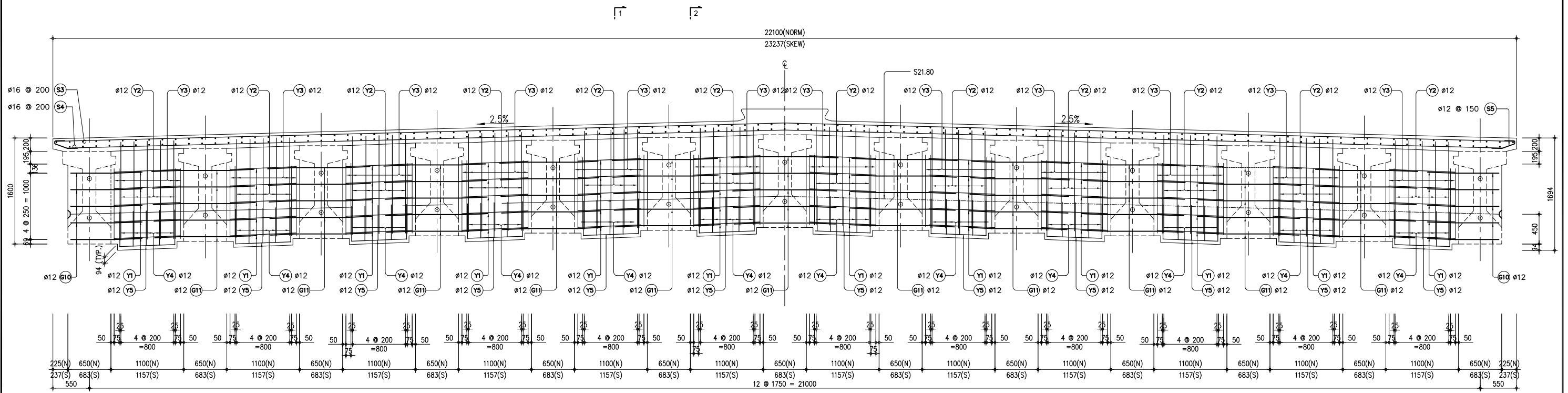
**A** CROSS SECTION  
SCALE 1:40



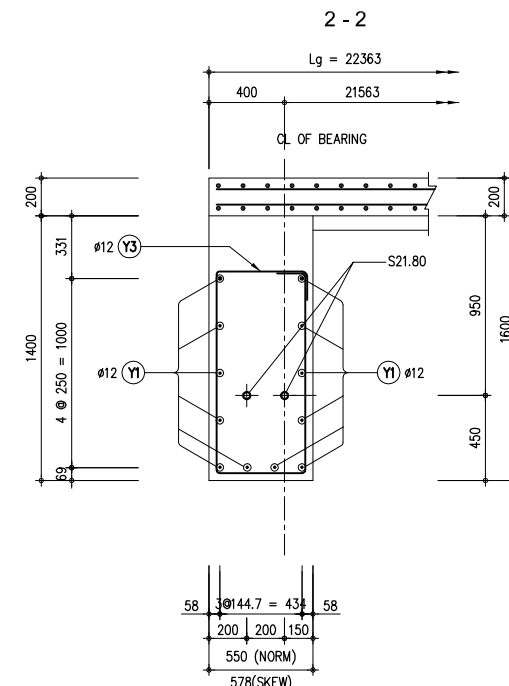
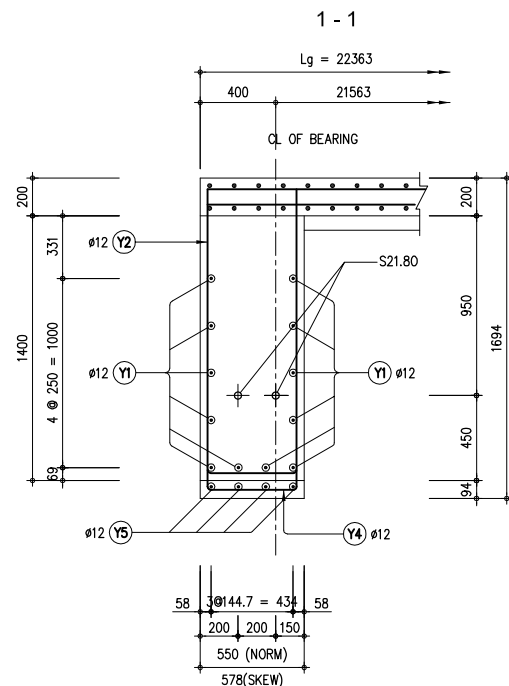
**B** DETAIL  
SCALE 1:10



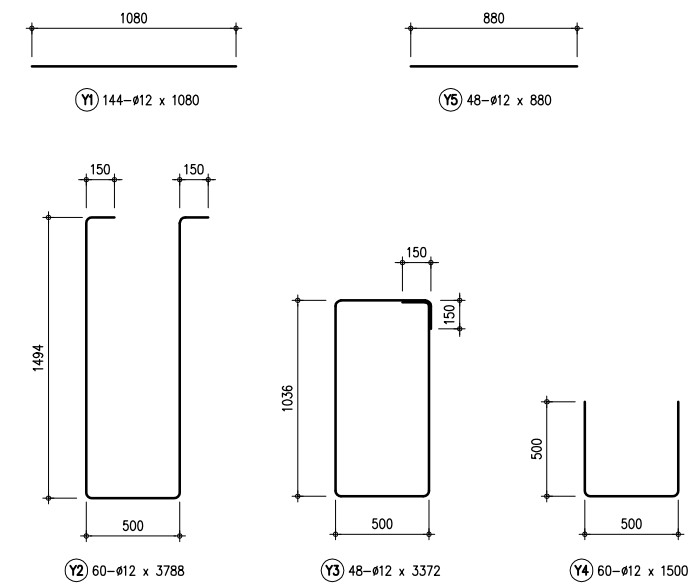
**C** BAR BENDING LAYOUT  
SCALE NTS



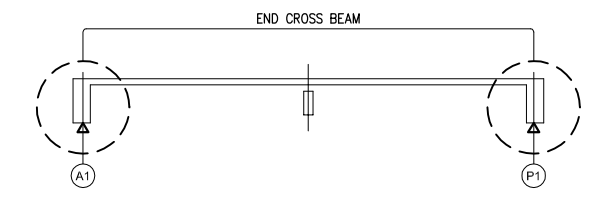
**A CROSS SECTION**  
SCALE 1:30



**B SIDE VIEW**  
SCALE 1:20

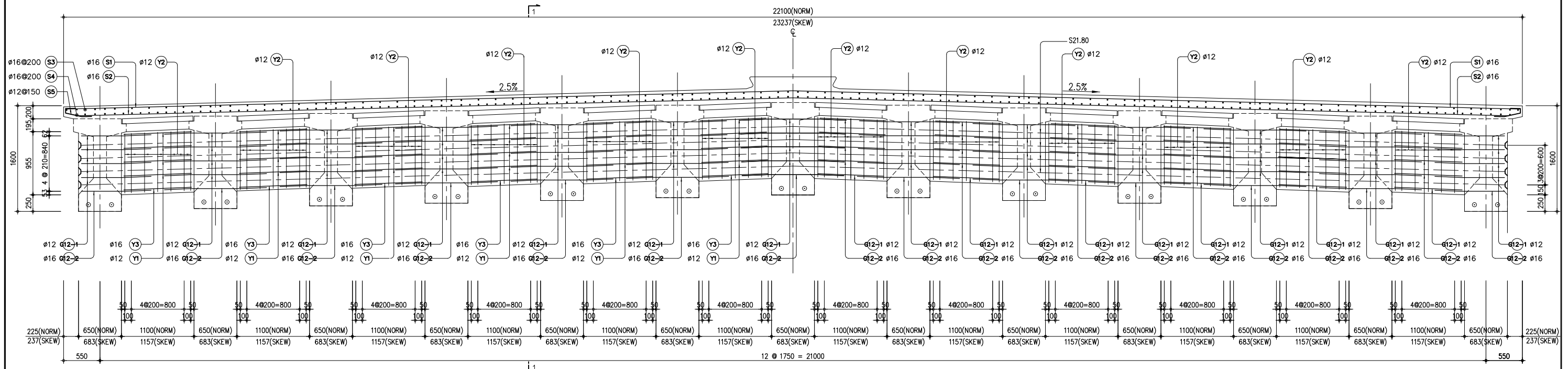


**C BAR BENDING LAYOUT**  
SCALE 1:20

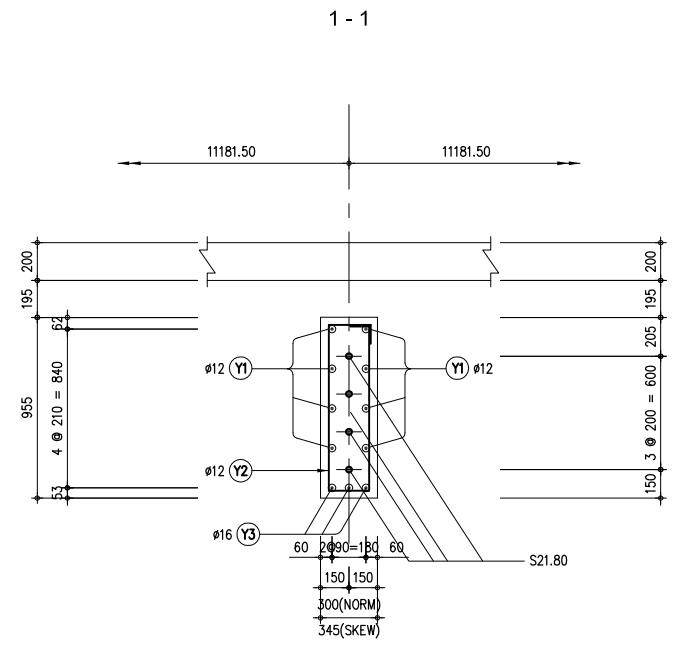


**E LOCATION MAP**  
SCALE 1:30

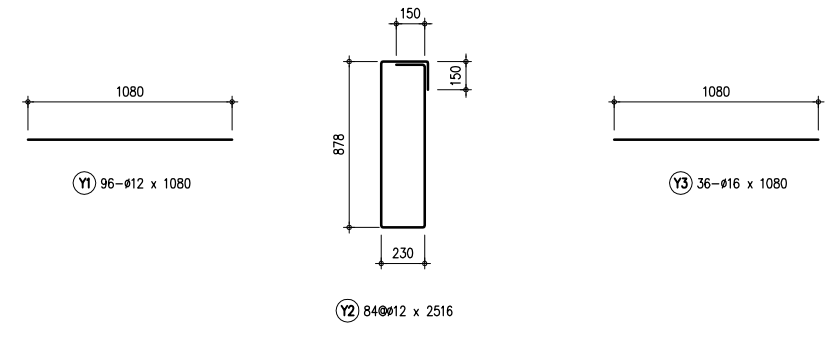
No	REVISION	DATE



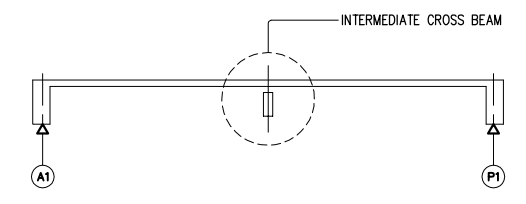
**A** CROSS SECTION  
SCALE 1:30



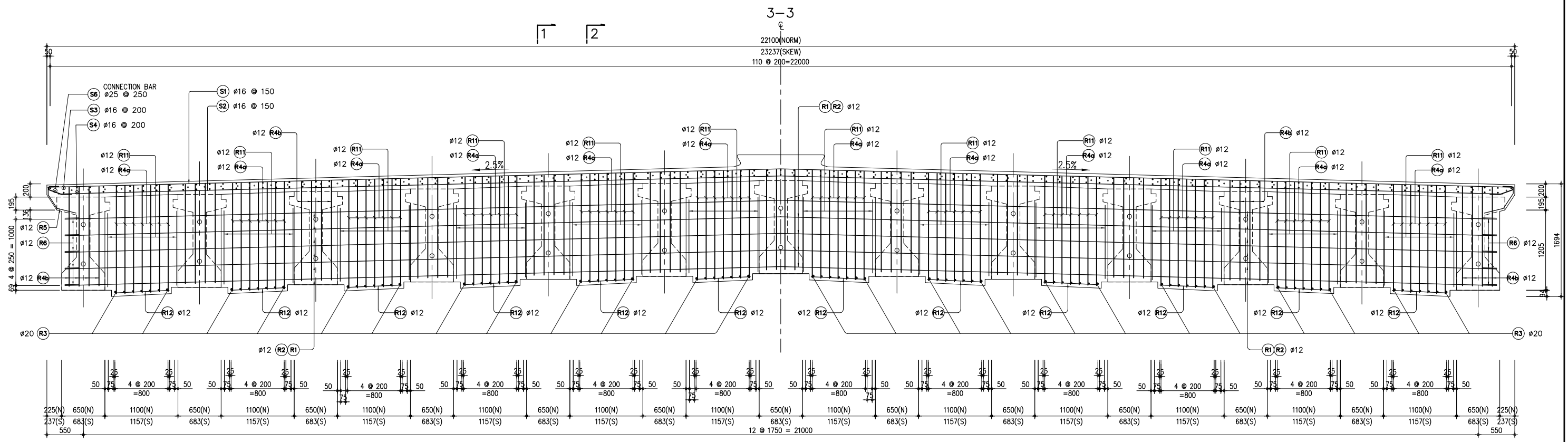
**B** SIDE VIEW  
SCALE 1:20



**C** BAR BENDING LAYOUT  
SCALE 1:20



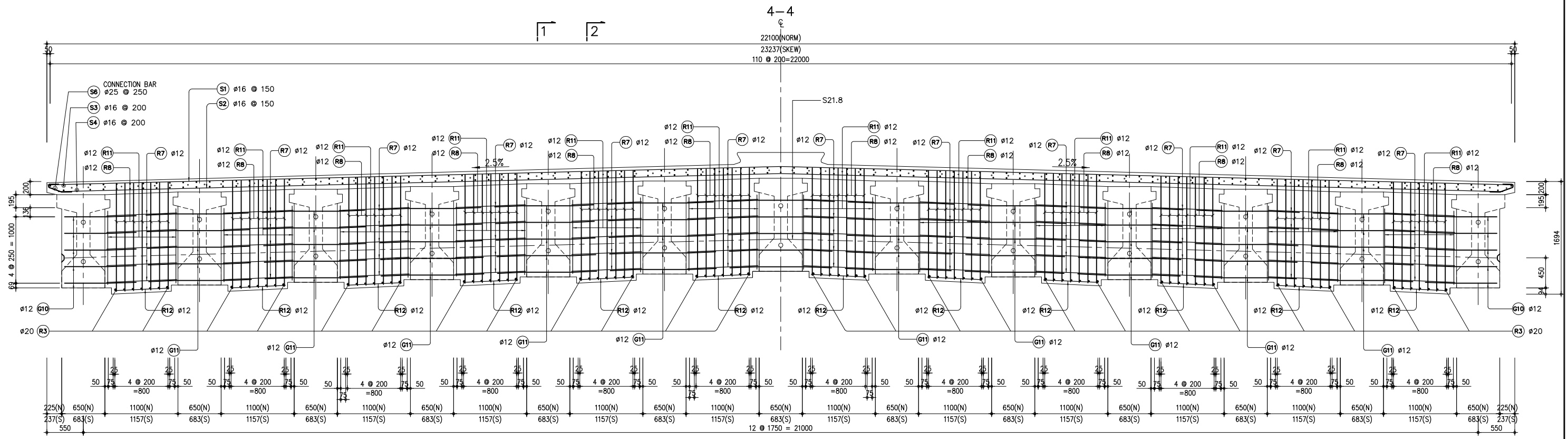
**E** LOCATION MAP  
SCALE 1:30



3-3  
22100(NORM)  
23237(SKEW)  
110 @ 200=22000

1 2

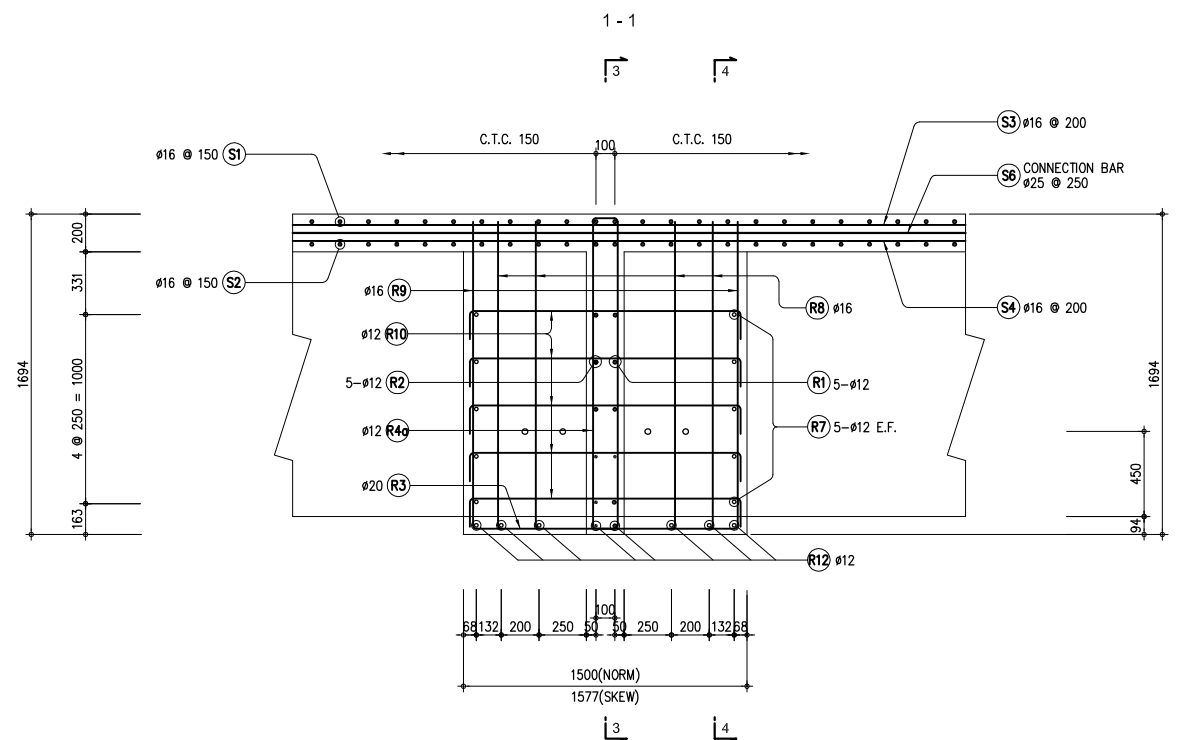
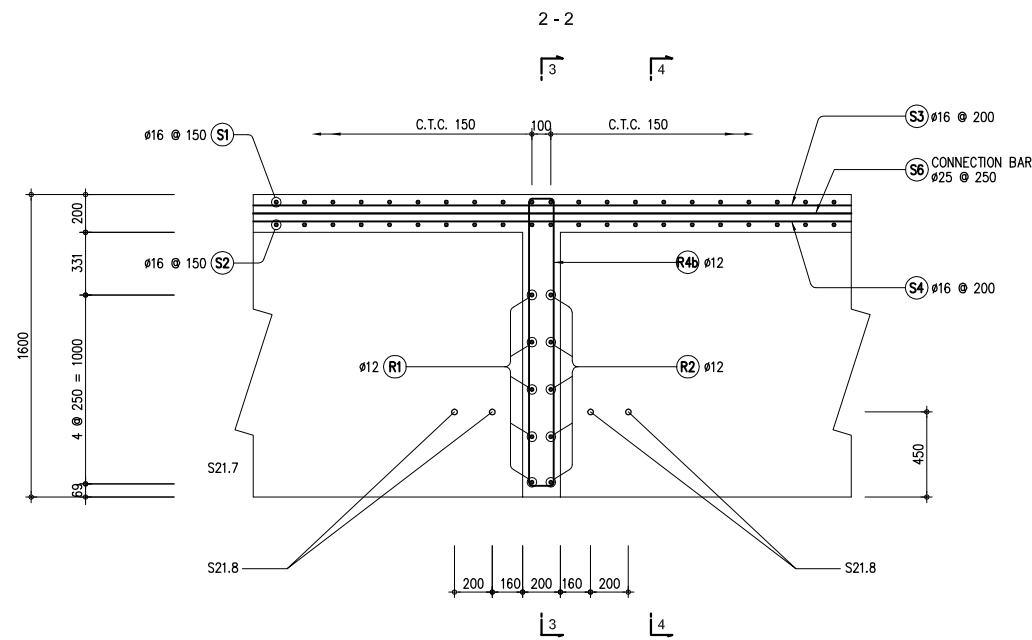
A CROSS SECTION  
SCALE 1:30



4-4  
22100(NORM)  
23237(SKEW)  
110 @ 200=22000

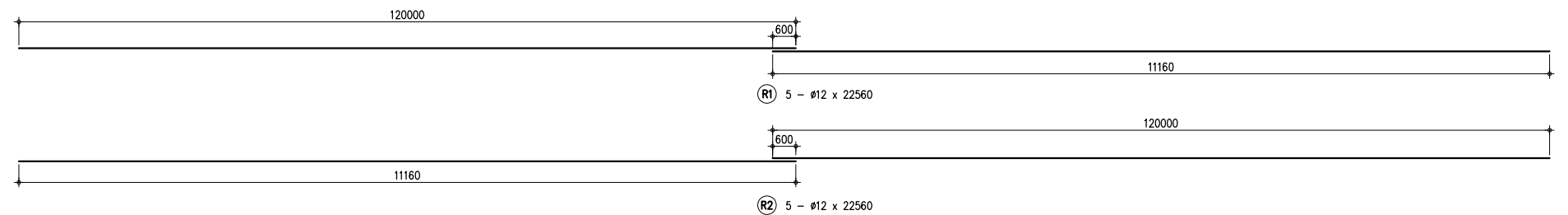
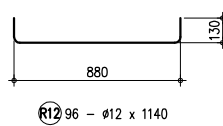
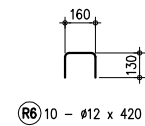
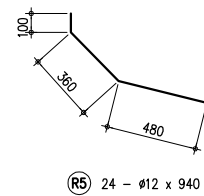
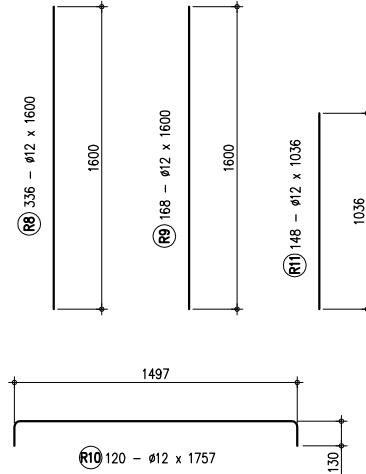
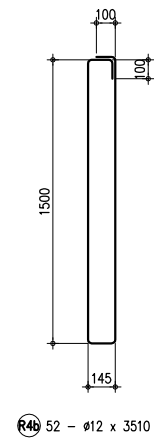
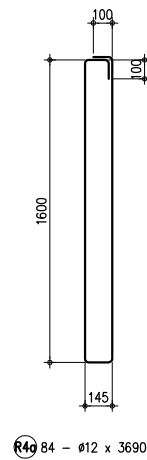
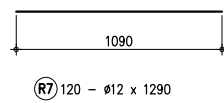
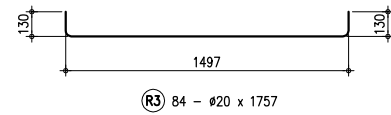
1 2

A CROSS SECTION  
SCALE 1:30



**B** SIDE VIEW  
SCALE 1:20

**C** SIDE VIEW  
SCALE 1:20

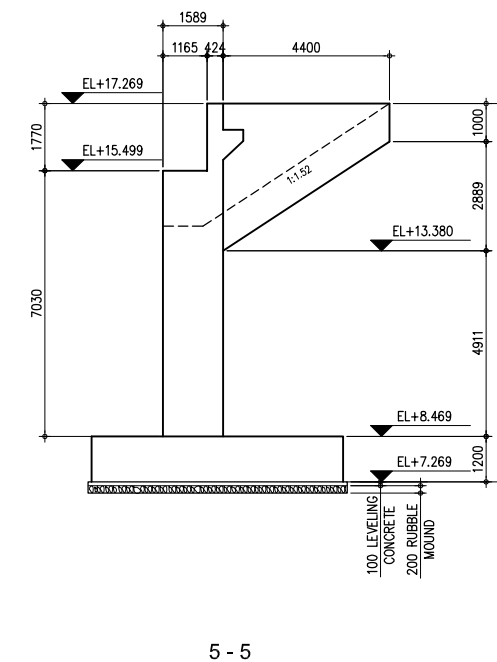
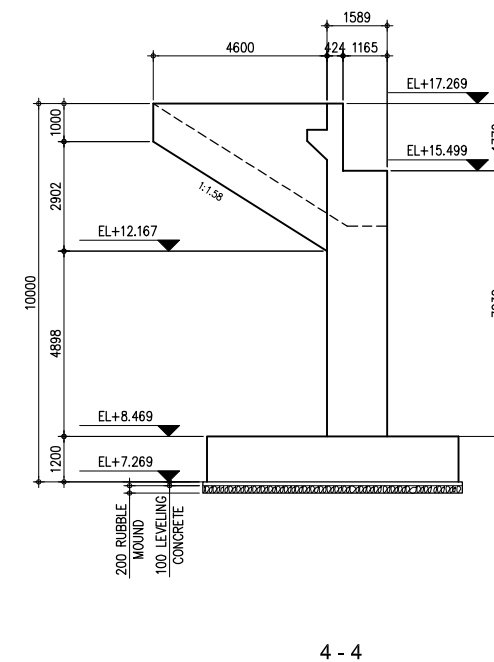
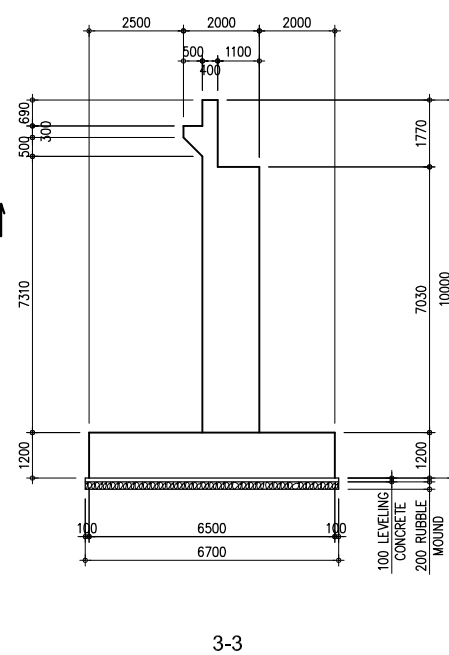
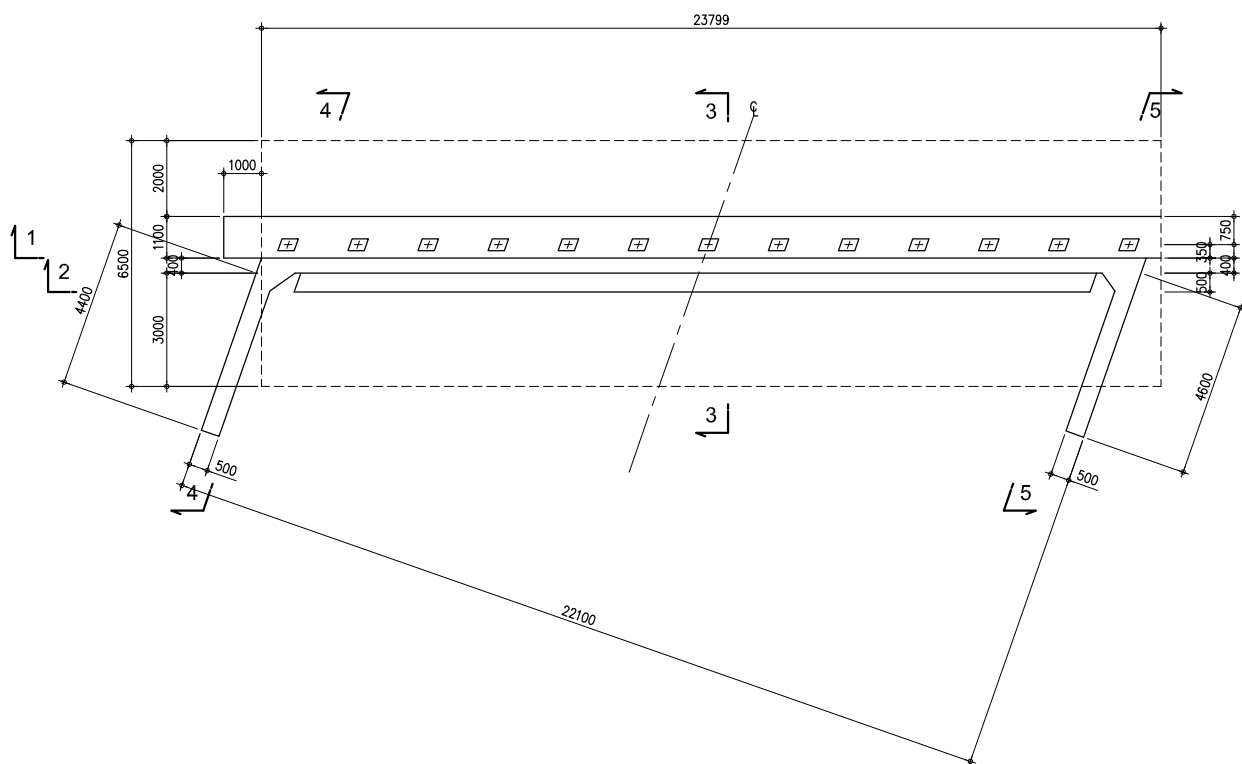
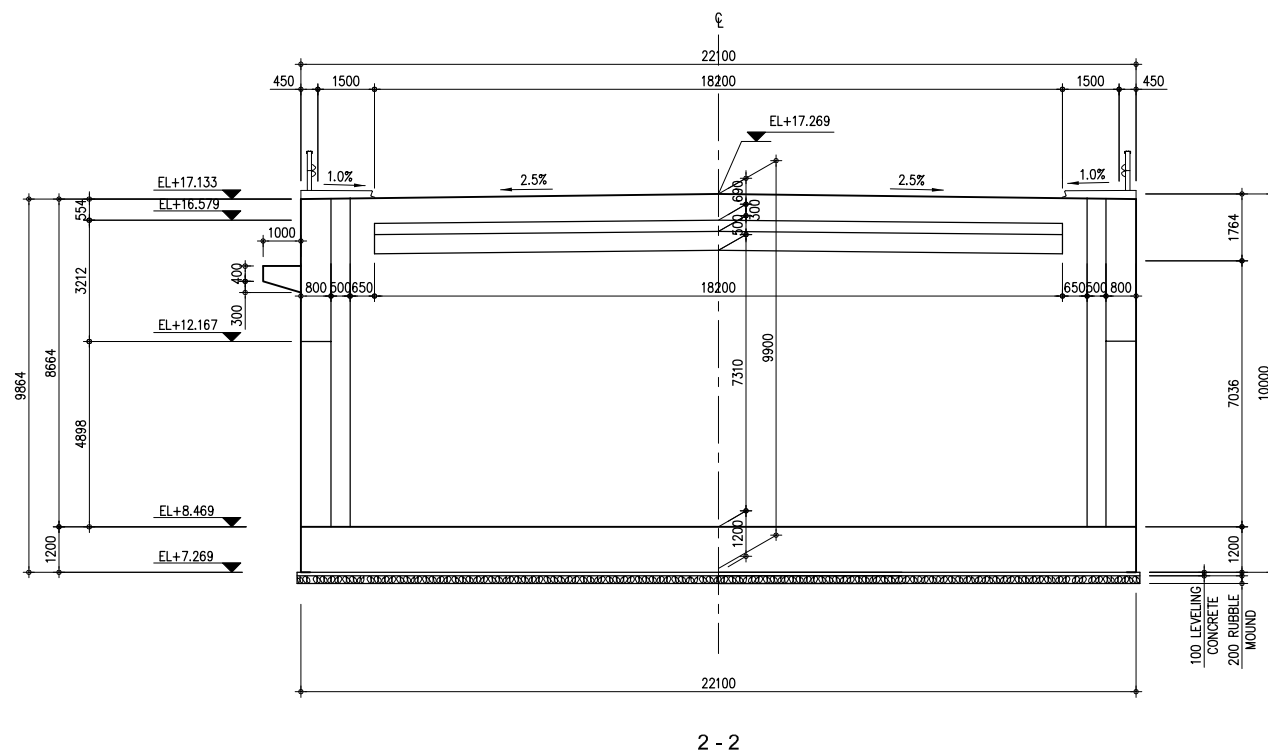
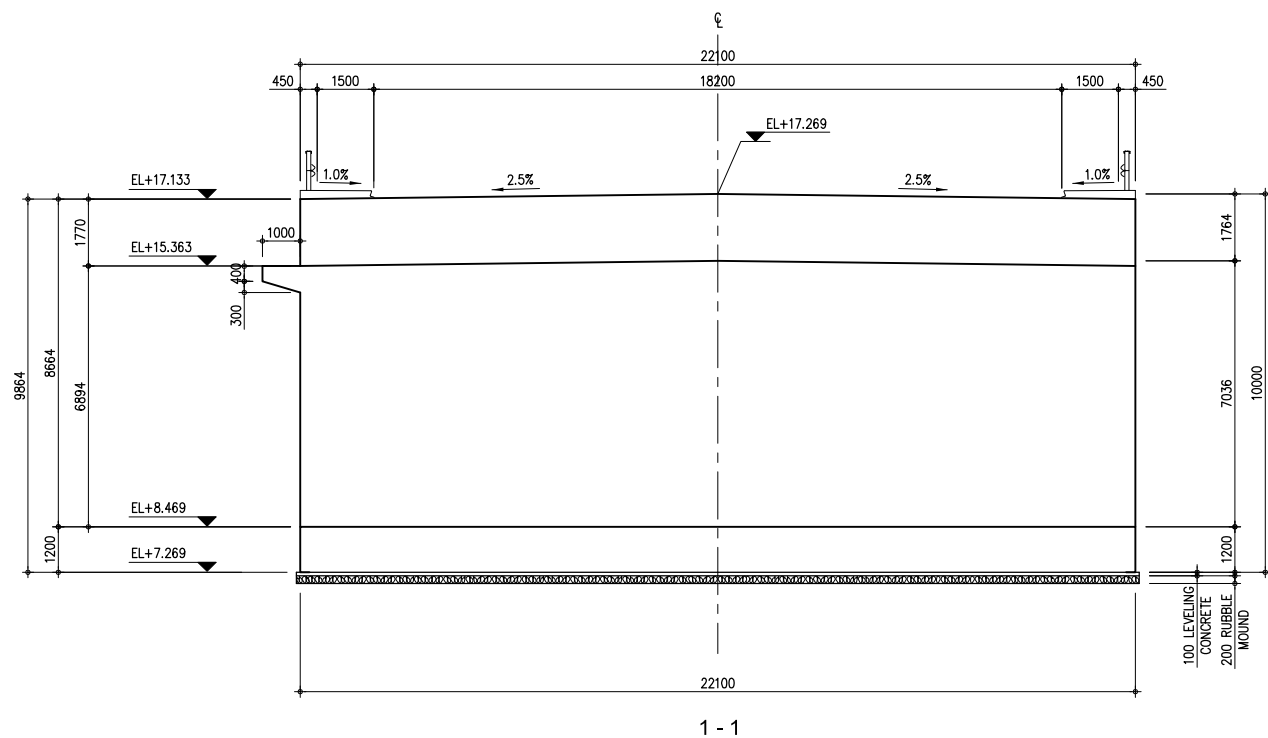


**D** SLAB CONNECTION BAR BENDING  
SCALE NTS

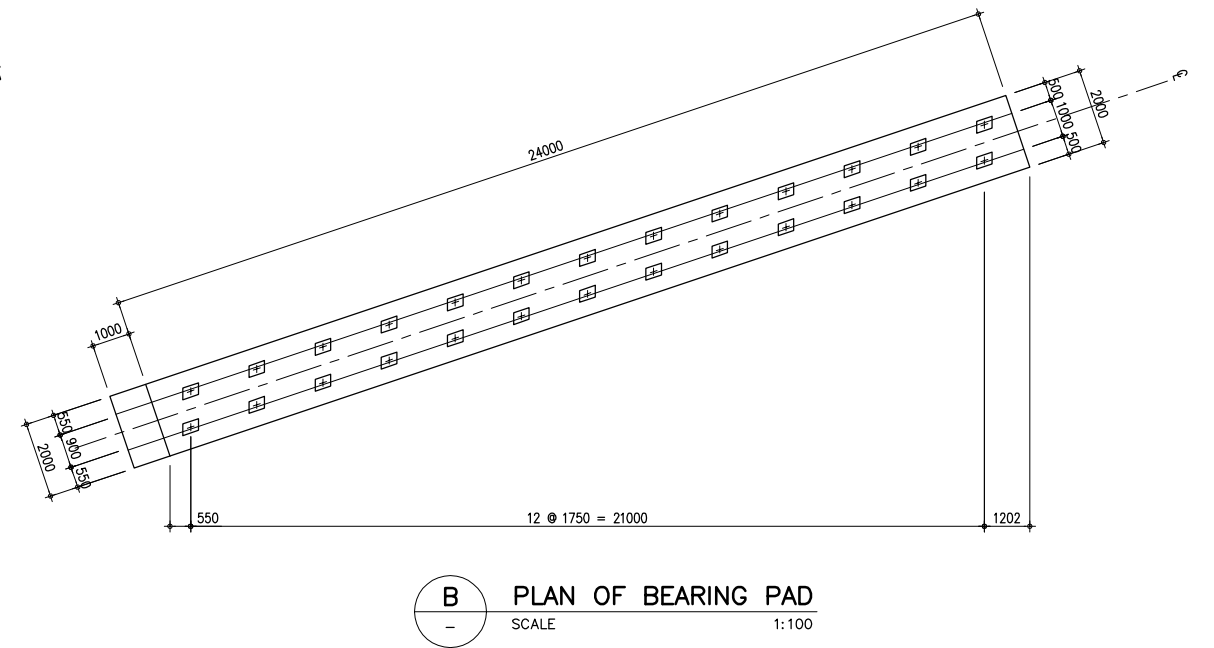
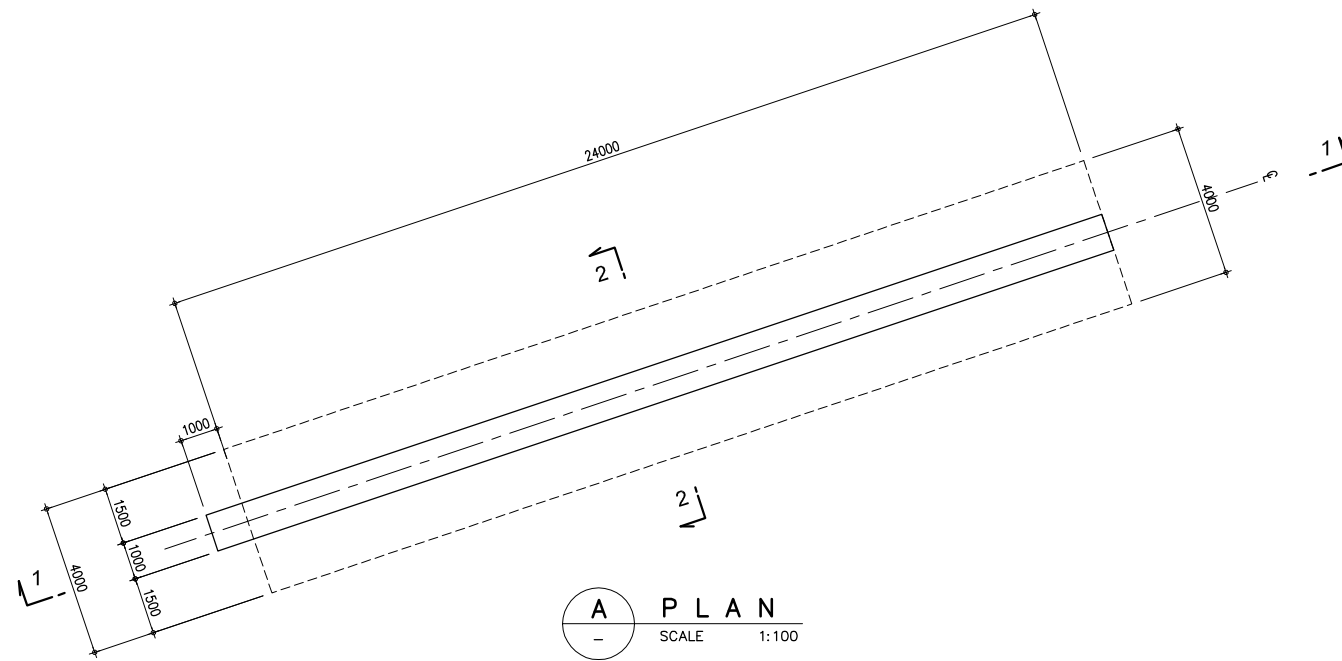
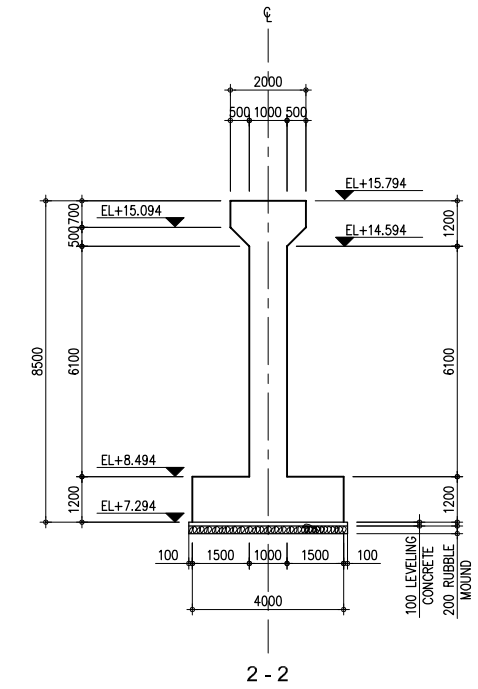
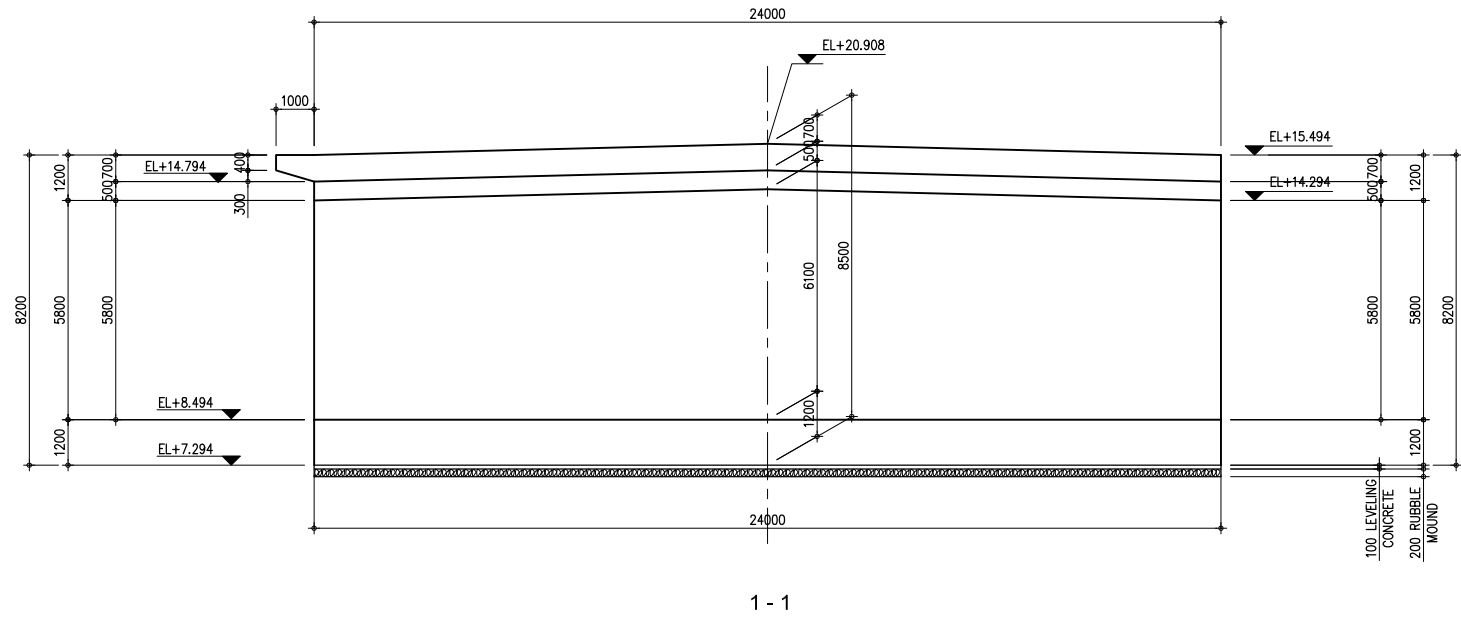
ESTIMATED QUANTITIES FOR SLAB & DIAPHRAGM CONNECTION OF OB - 11															
REINFORCING BARS															
LOCATION	BAR MARK	SPACING	QTY. (pcs)	SIZE (mm)	DIMENSION mm ( OUT TO OUT )						LENGTH PER BAR (mm)	TOTAL LENGTH (m)	UNIT WEIGHT (kg/m)	TOTAL WEIGHT (kg)	
					a	b	c	d	e	f					
SLAB	S1	AS SHOWN	300	16	12000							12,000	3,600.00	1.579	5,682.73
	S1a	AS SHOWN	300	16	12000							12,000	3,600.00	1.579	5,682.73
	S2	AS SHOWN	300	16	12000							12,000	3,600.00	1.579	5,682.73
	S2a	AS SHOWN	300	16	12000							12,000	3,600.00	1.579	5,682.73
	S3	AS SHOWN	333	16	12000							12,000	3,600.00	1.579	5,682.73
	S4	AS SHOWN	222	16	5610							5,610	1,245.42	1.579	1,965.94
	S5a	AS SHOWN	300	12	150	150	45	150				495	148.50	0.888	131.86
	S5b	AS SHOWN	300	12	150	150	45	150				495	148.50	0.888	131.86
	S6	AS SHOWN	88	25	12000							12,000	1,056.00	3.854	4,069.67
													35,338.09		
SLAB CONNECTION CROSS BEAM	R1	AS SHOWN	6	12	22,000							22,000	132.00	0.888	117.21
	R2	AS SHOWN	6	12	22,000							22,000	132.00	0.888	117.21
	R3	AS SHOWN	84	20	130	1,420	130					1,680	141.12	2.466	348.07
	R4a	AS SHOWN	84	12	100	148	1605	148	1605	100		3,706	311.30	0.888	276.42
	R4b	AS SHOWN	48	12	100	148	1510	148	1510	100		3,516	168.77	0.888	149.85
	R5	AS SHOWN	20	12	150	480						630	12.60	0.888	11.19
	R6	AS SHOWN	12	12	130	160	130					420	5.04	0.888	4.48
	R7	AS SHOWN	144	12	1,020							1,020	146.88	0.888	130.42
	R8	AS SHOWN	336	12	1,605							1,605	539.28	0.888	478.84
	R9	AS SHOWN	168	12	1,605							1,605	269.64	0.888	239.42
	R10	AS SHOWN	144	12	130	1420	130					1,680	241.92	0.888	214.81
	R11	AS SHOWN	96	12	1,070							1,070	102.72	0.888	91.21
R12	AS SHOWN	96	12	130	820	130					1,080	103.68	0.888	92.06	
													2,271.17		
END DIAPHRAGM	Y1	AS SHOWN	144	12	1020							1020	146.88	0.888	130.43
	Y2	AS SHOWN	60	12	150	1490	470	1490	150			3750	225.00	0.888	199.80
	Y3	AS SHOWN	48	12	150	470	1036	470	1036	150		3312	158.98	0.888	141.17
	Y4	AS SHOWN	60	12	500	470	500					1470	88.20	0.888	78.32
	Y5	AS SHOWN	48	12	820							820	39.36	0.888	34.95
A. TOTAL QUANTITY FOR END DIAPHRAGM													584.67		
B. ABUTMENTS A1 & A2													2.00		
C. SUB TOTAL QUANTITY END DIAPHRAGM = (AxB)													1,169.35		
INTERMEDIATE DIAPHRAGM	Y1	AS SHOWN	120	12	1020							1020	122.40	0.888	108.69
	Y2	AS SHOWN	84	12	150	220	875	220	875	150		2490	209.16	0.888	185.73
	Y3	AS SHOWN	36	16	1020							1020	36.72	1.579	57.98
	A. TOTAL QUANTITY PER INTERMEDIATE DIAPHRAGM													352.41	
B. SPANS 1 & 2													2.00		
C. SUBTOTAL QUANTITY OF INT. DIAPHRAGM = (AxB)													704.81		

LOCATION	BAR MARK	SPACING	QTY. (pcs)	SIZE (mm)	DIMENSION mm ( OUT TO OUT )						LENGTH PER BAR (mm)	TOTAL LENGTH (m)	UNIT WEIGHT (kg/m)	TOTAL WEIGHT (kg)	CONCRETE VOLUME (m³)
					a	b	c	d	e	f					
FOOTWALK	FW1	AS SHOWN	552	12	700							700	386.40	0.888	343.12
	FW2	AS SHOWN	255	12	335	35	347	724	312	156		1909	547.21	0.888	485.92
	FW3	AS SHOWN	255	12	130	31	320	193	323	35	127	1159	308.23	0.888	273.70
	FW4	AS SHOWN	6	12	8202	12000	12000	12000	12000	12000	12000	80202	481.21	0.888	427.31
											A. TOTAL QUANTITY PER SPAN	1,563.40	21.904		
											B. TOTAL NUMBER OF SPANS	2.000			
											C. SUB TOTAL QUANTITY FOR SIDEWALKS = (AxB)	3,126.80	43.808		

# DIMENSION DETAILS FOR ABUTMENT-A1 (Scale 1:100)

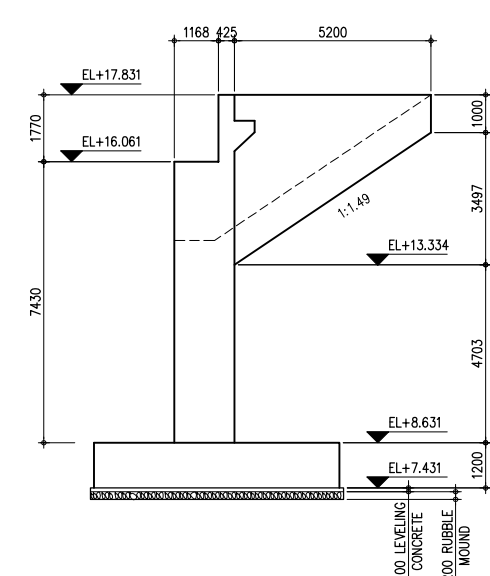
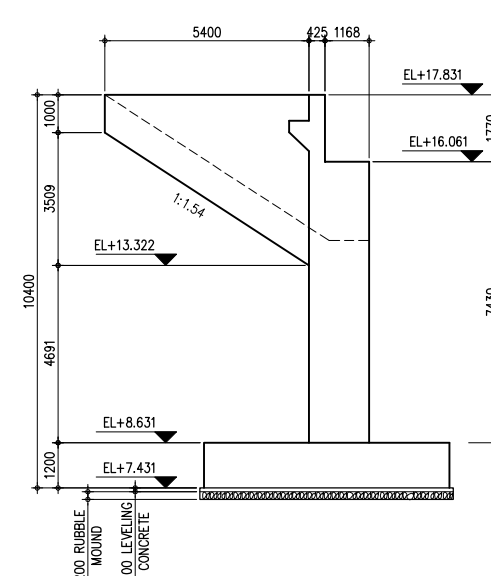
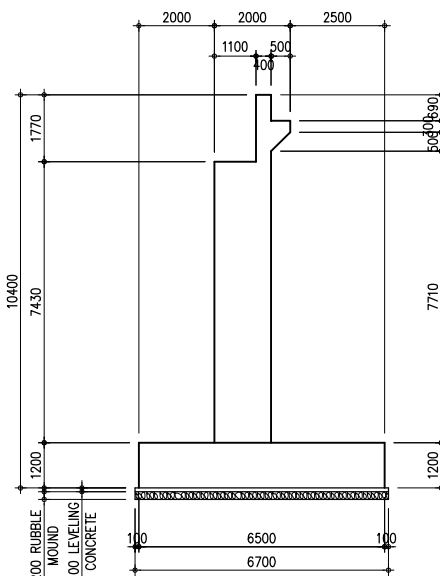
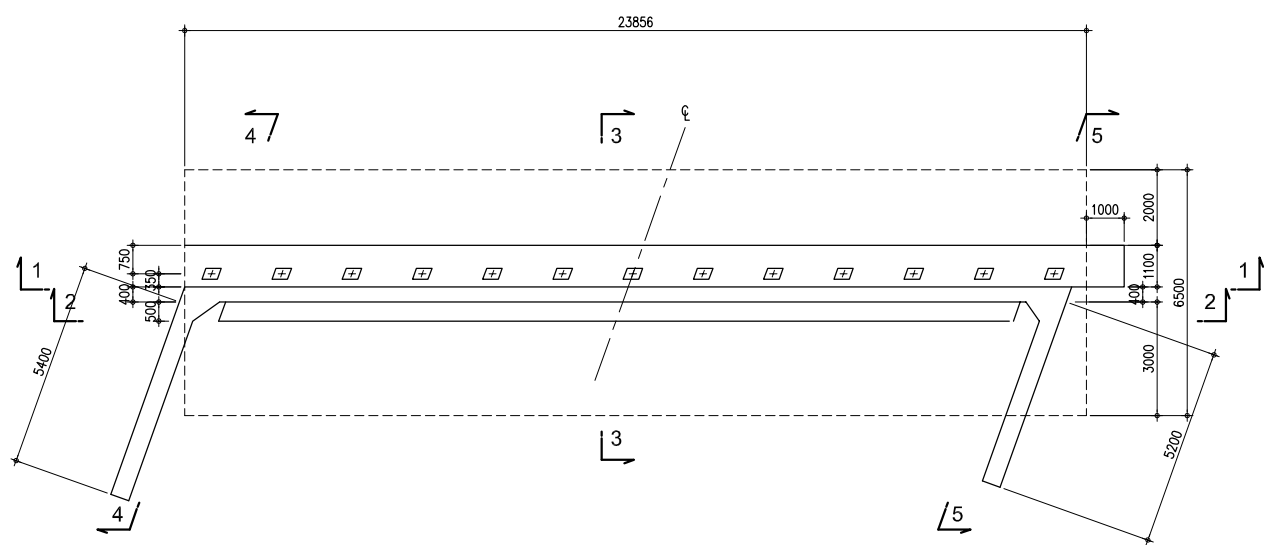
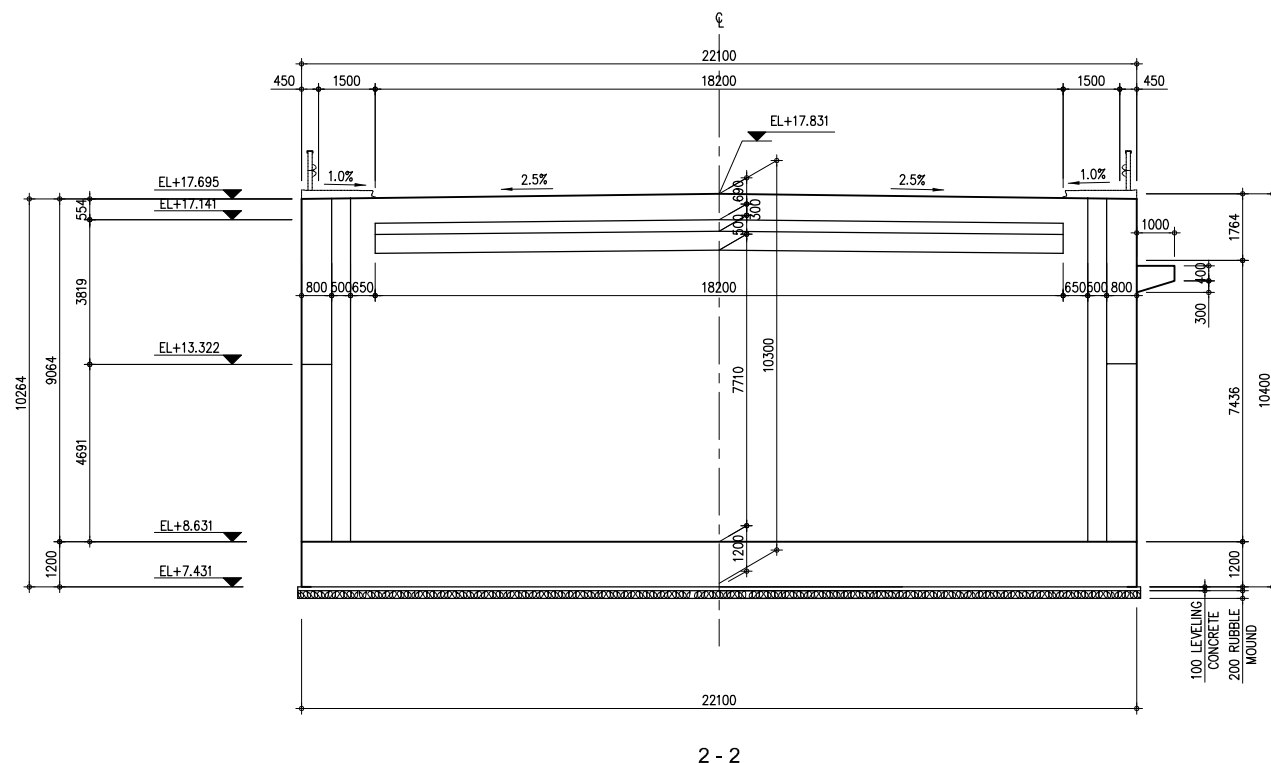
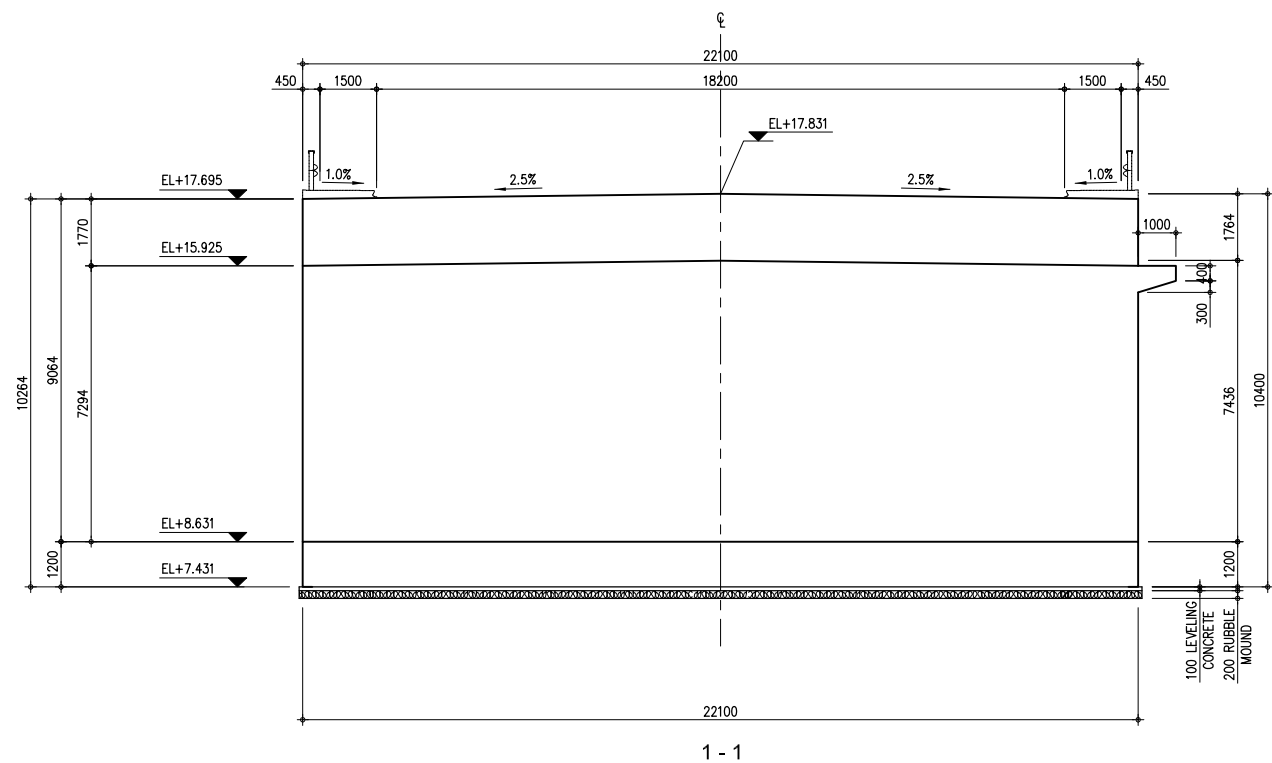


# DIMENSION DETAILS FOR PIER-1 (Scale 1:100)

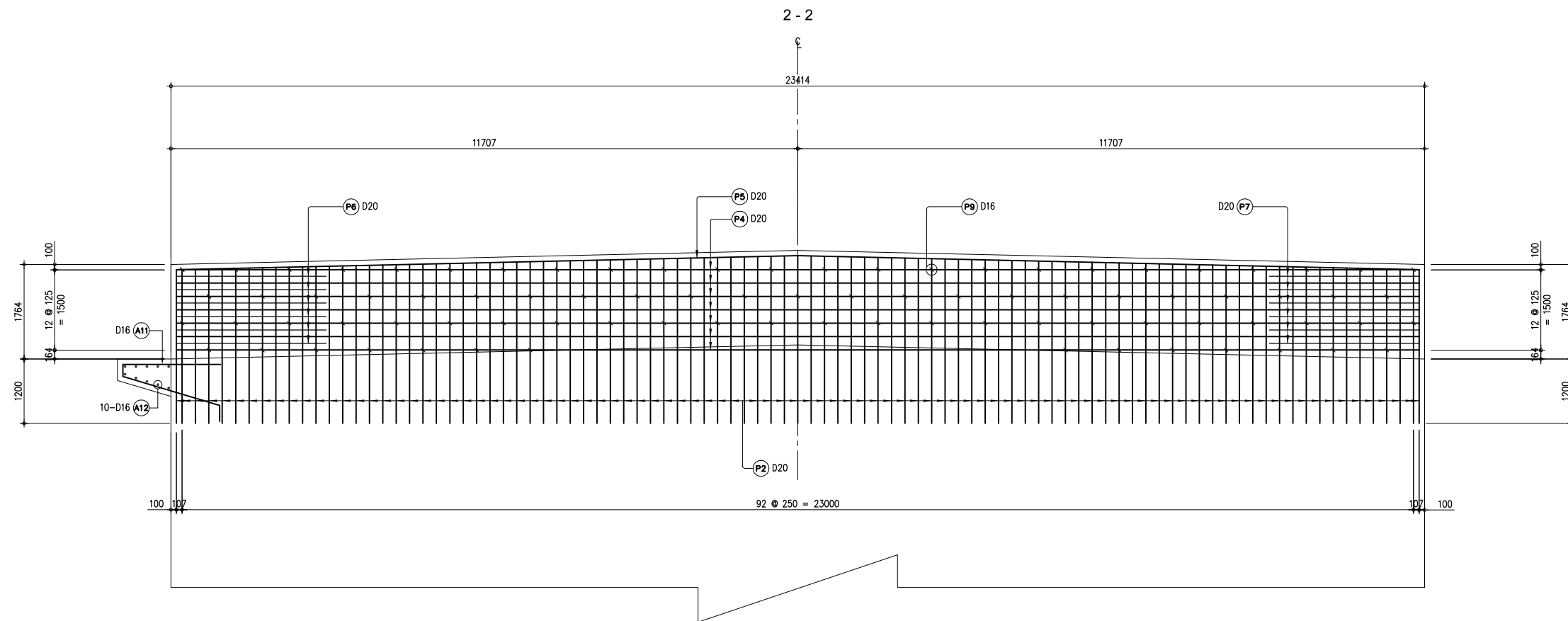
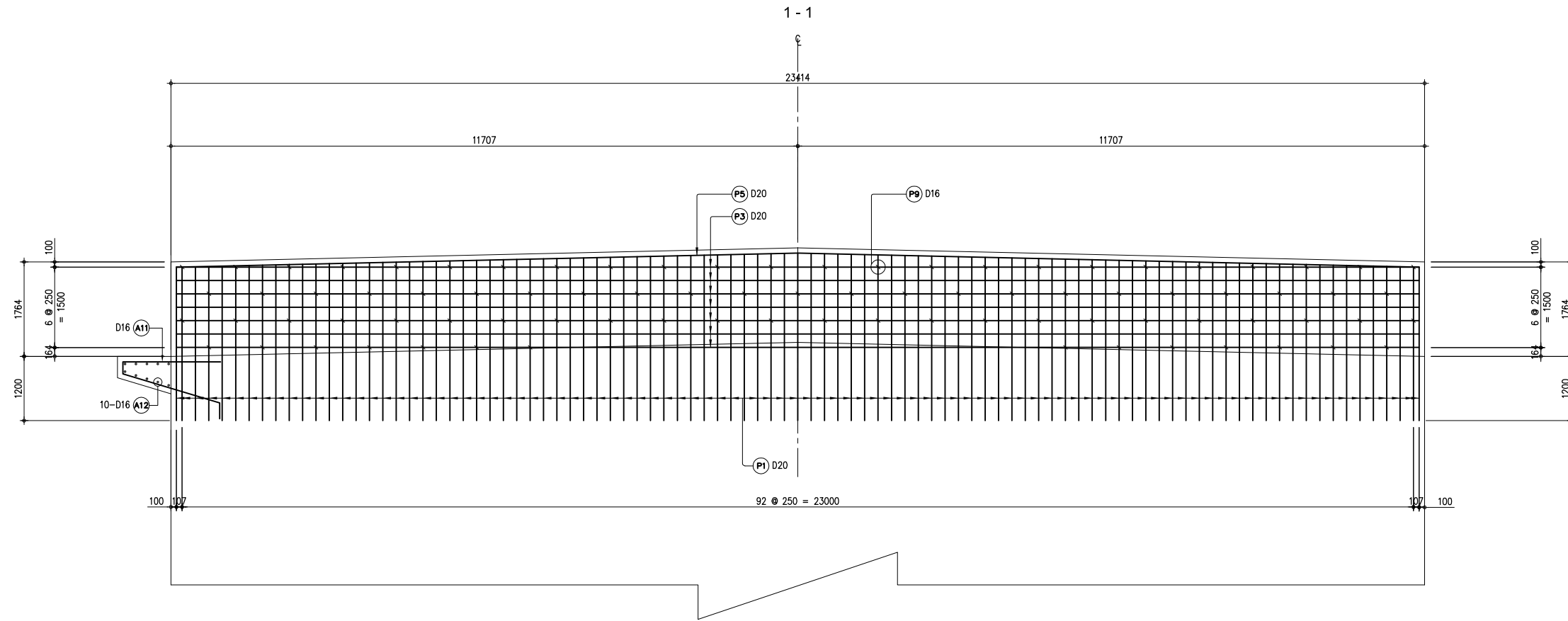




# DIMENSION DETAILS FOR ABUTMENT-A2 (Scale 1:100)



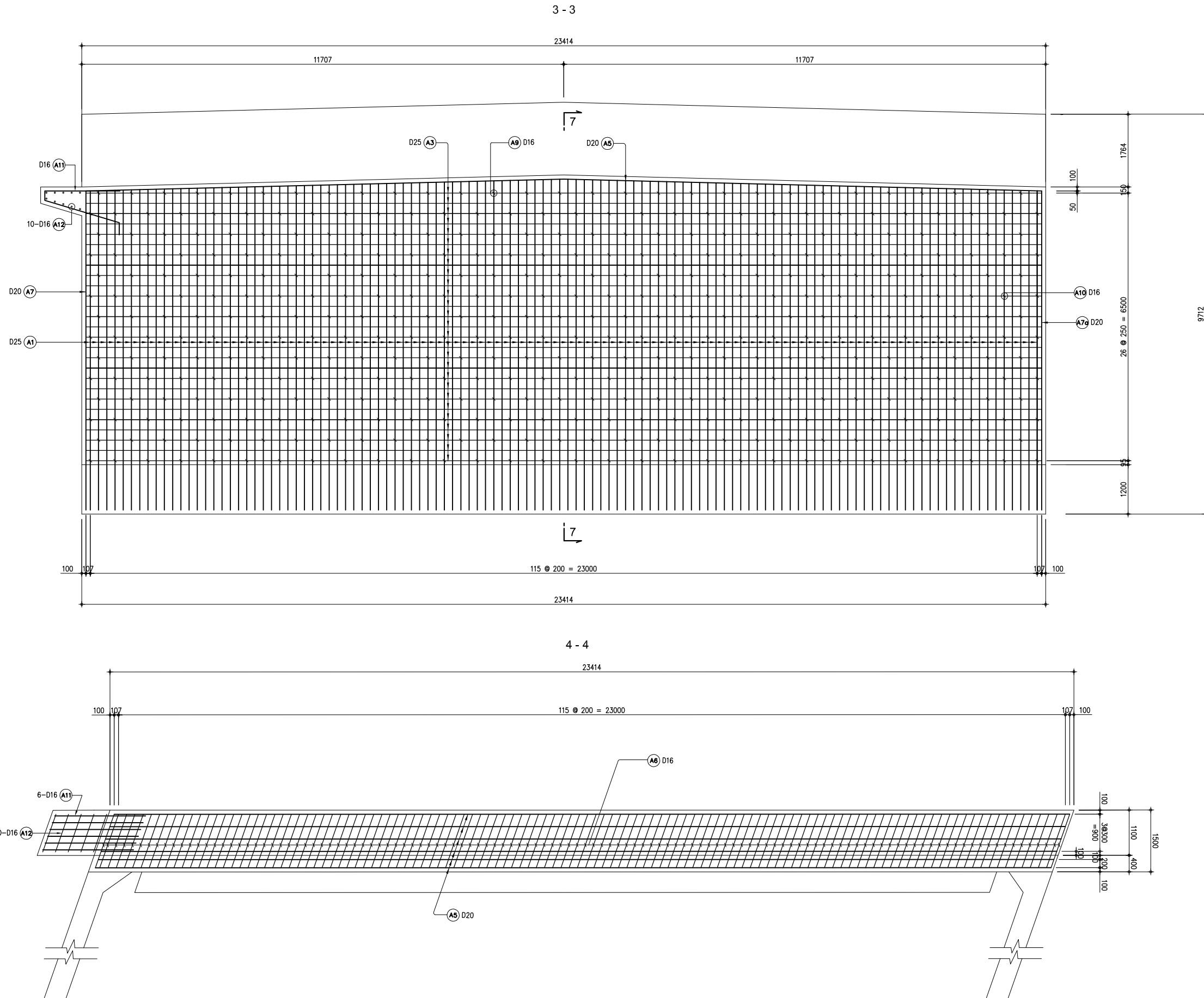
# REINFORCEMENT OF A1 ABUTMENT (1) Scale 1:50



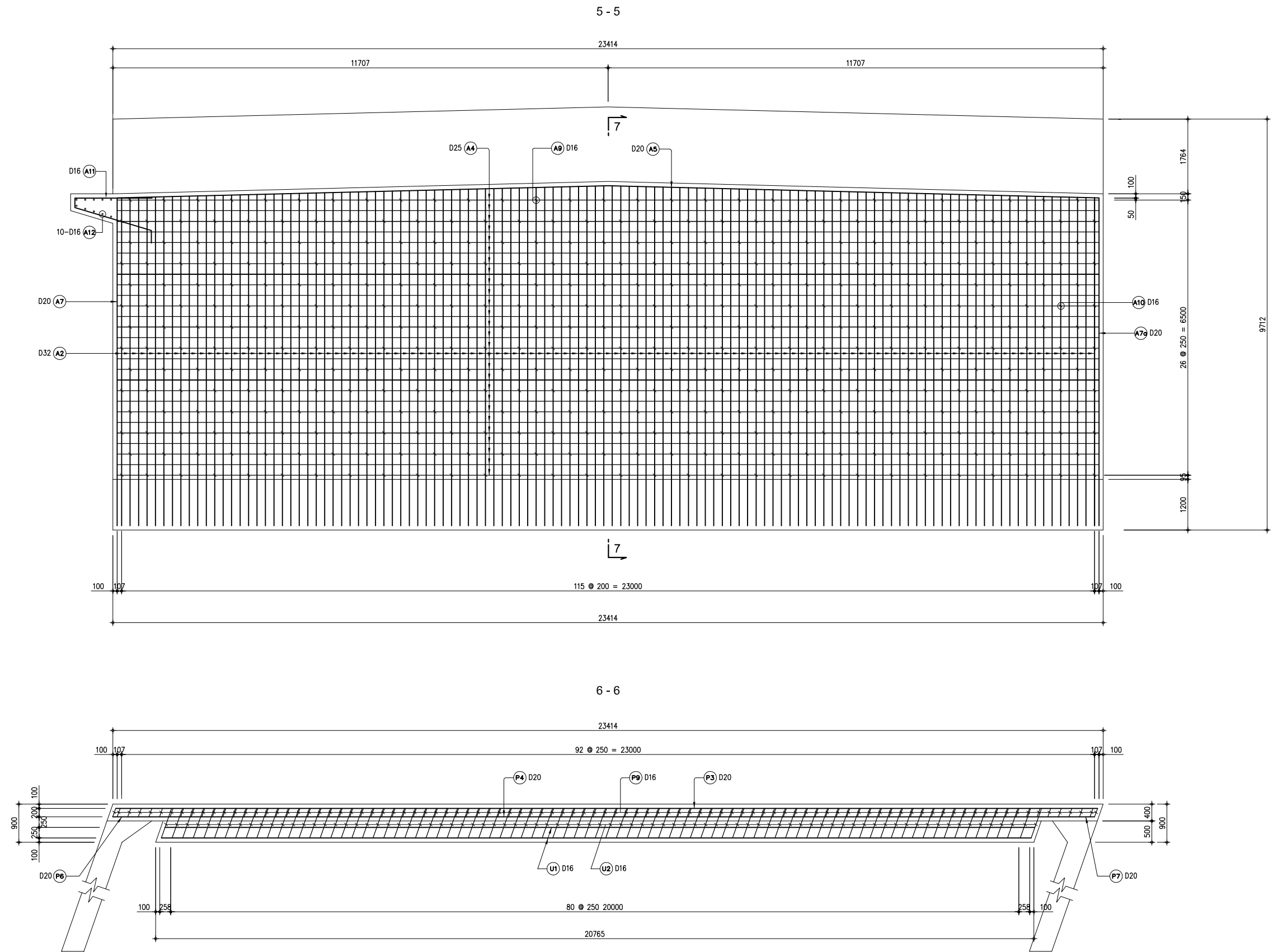
No	REVISION	DATE

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APPROVED BY:	
DWG. NO.	K05-18

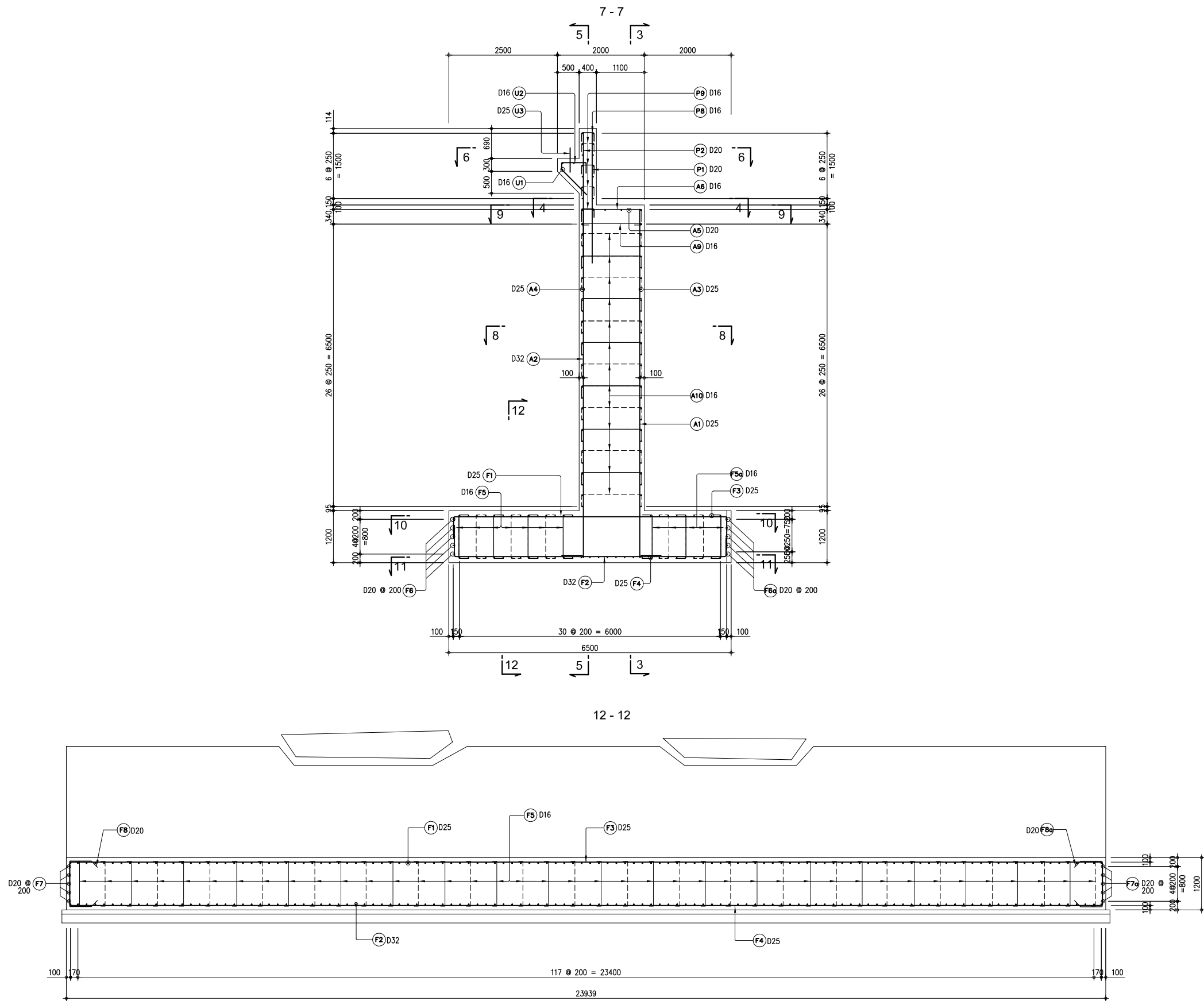
# REINFORCEMENT OF A1 ABUTMENT (2) Scale 1:50



# REINFORCEMENT OF A1 ABUTMENT (3) Scale 1:50

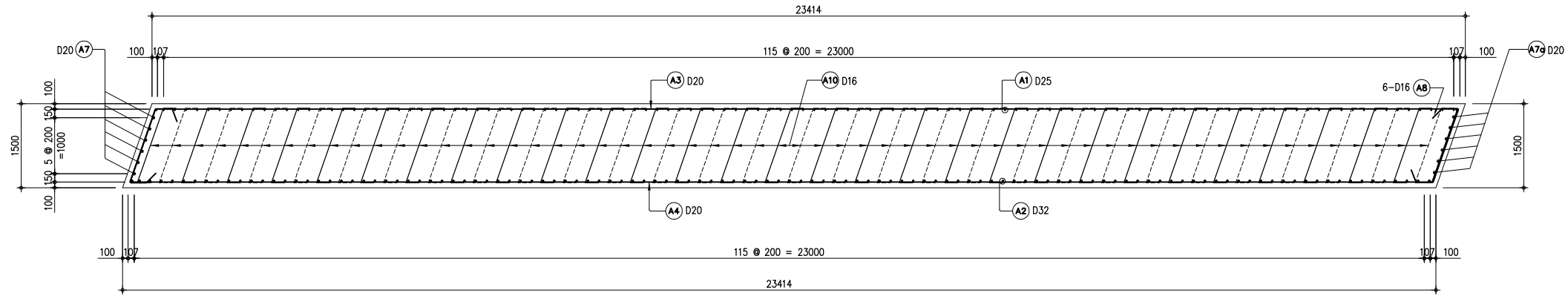


# REINFORCEMENT OF A1 ABUTMENT (4) Scale 1:50

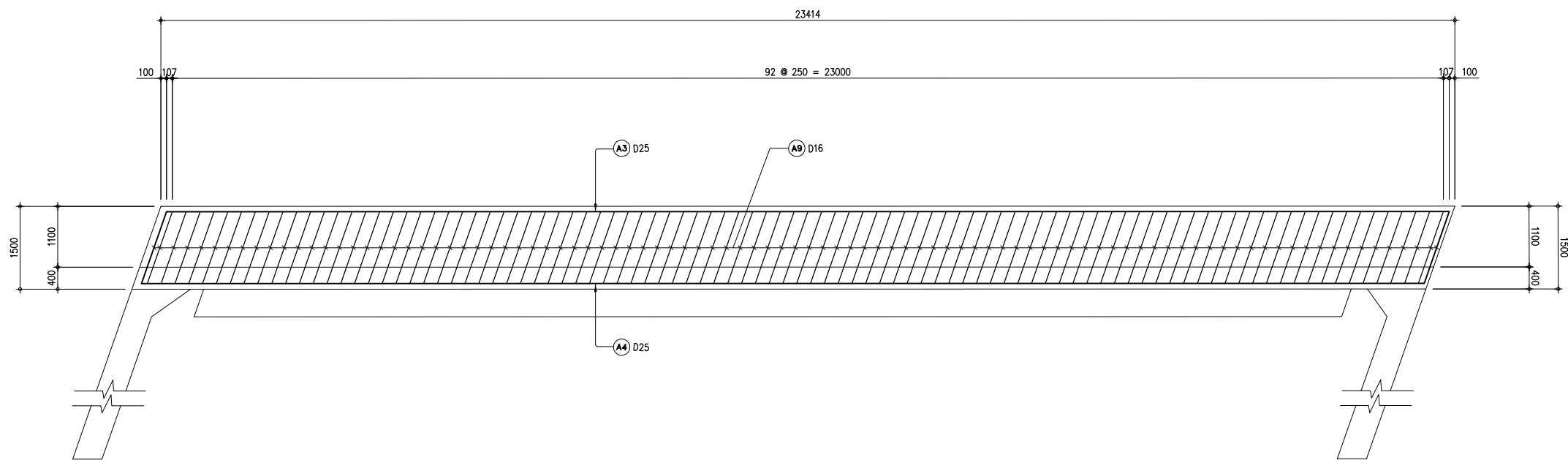


# REINFORCEMENT OF A1 ABUTMENT (5) Scale 1:50

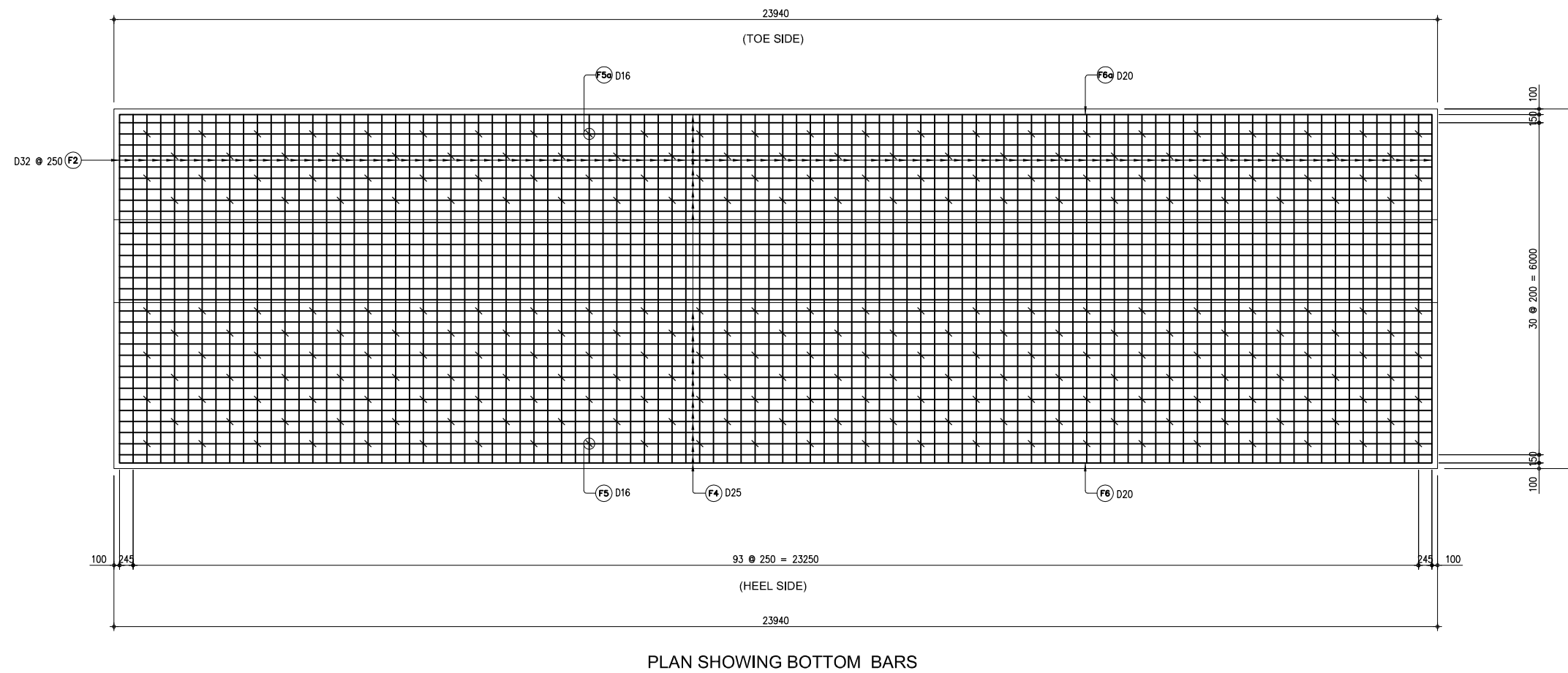
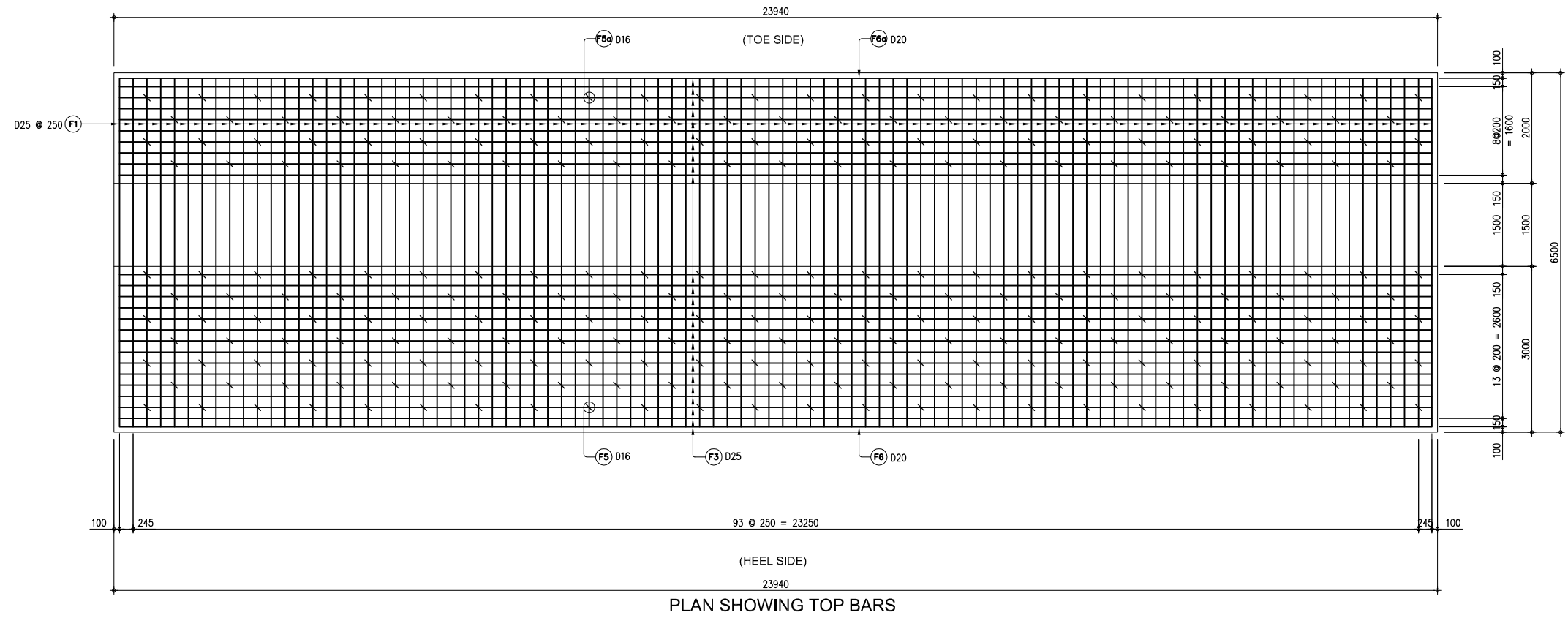
8 - 8



9 - 9

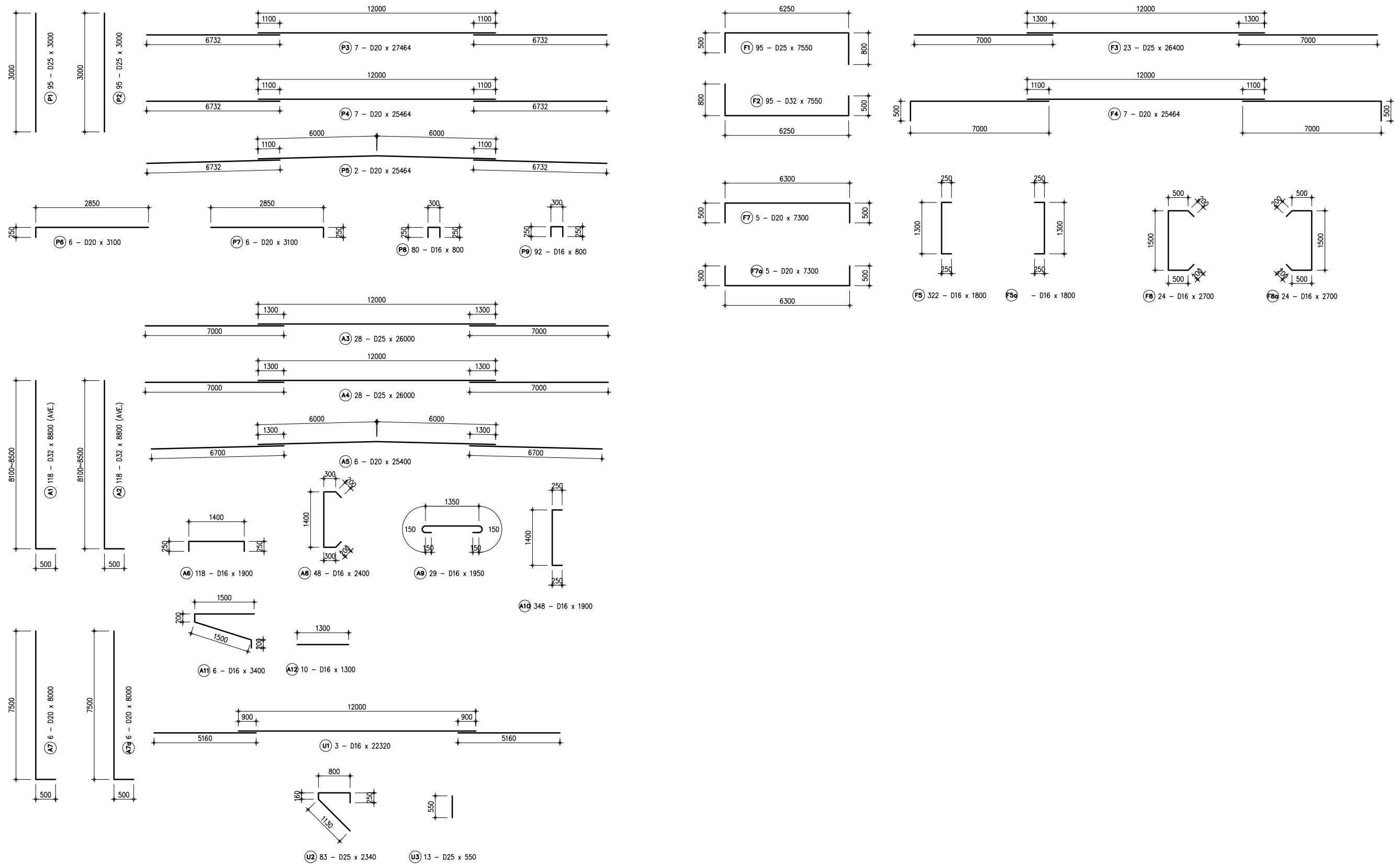


# REINFORCEMENT OF A1 ABUTMENT (6) Scale 1:50



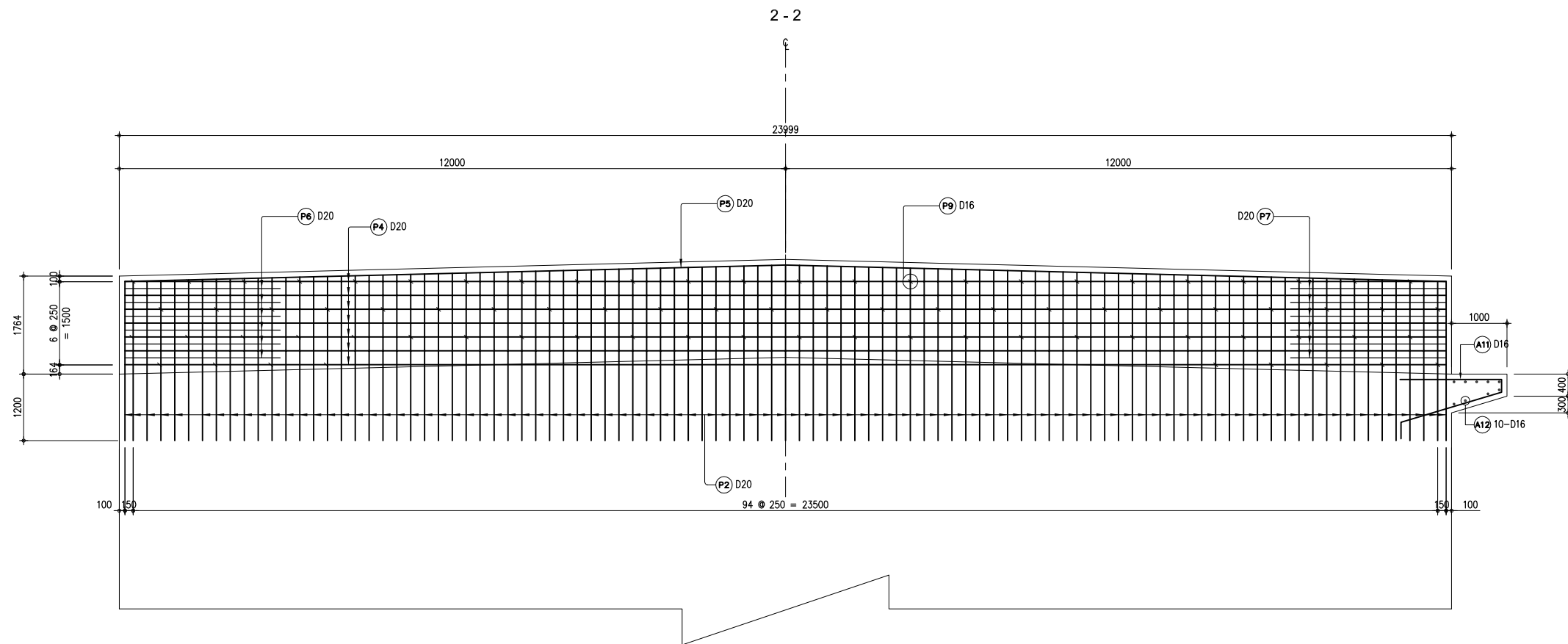
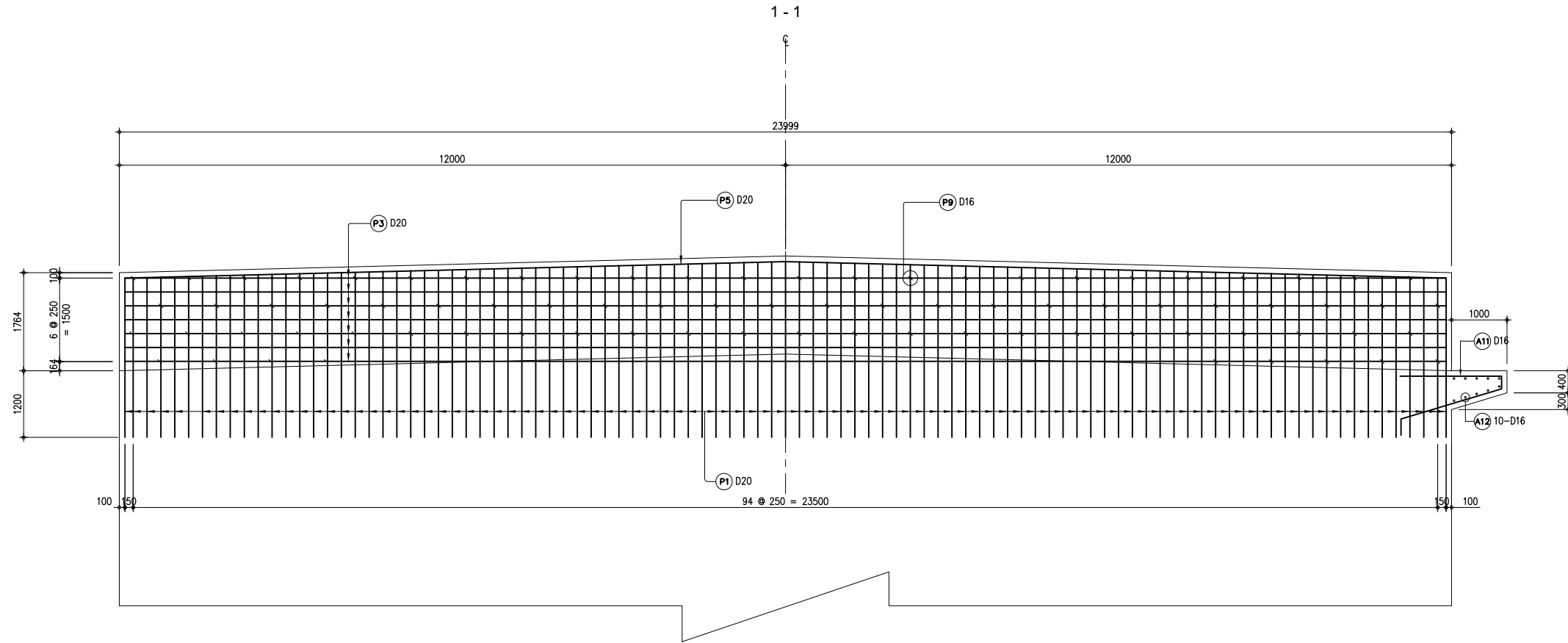
No	REVISION	DATE

# REINFORCEMENT OF A1 ABUTMENT (7) Scale 1:50

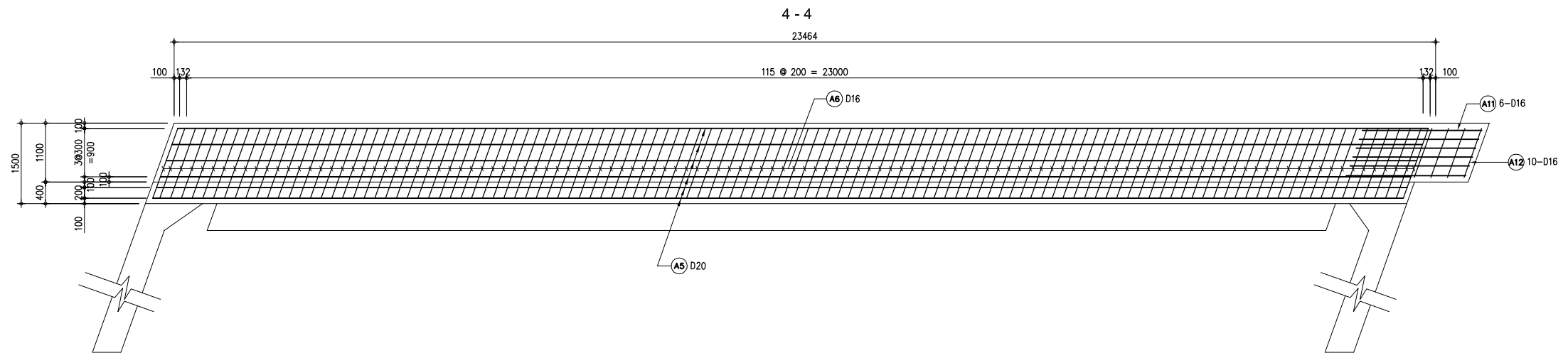
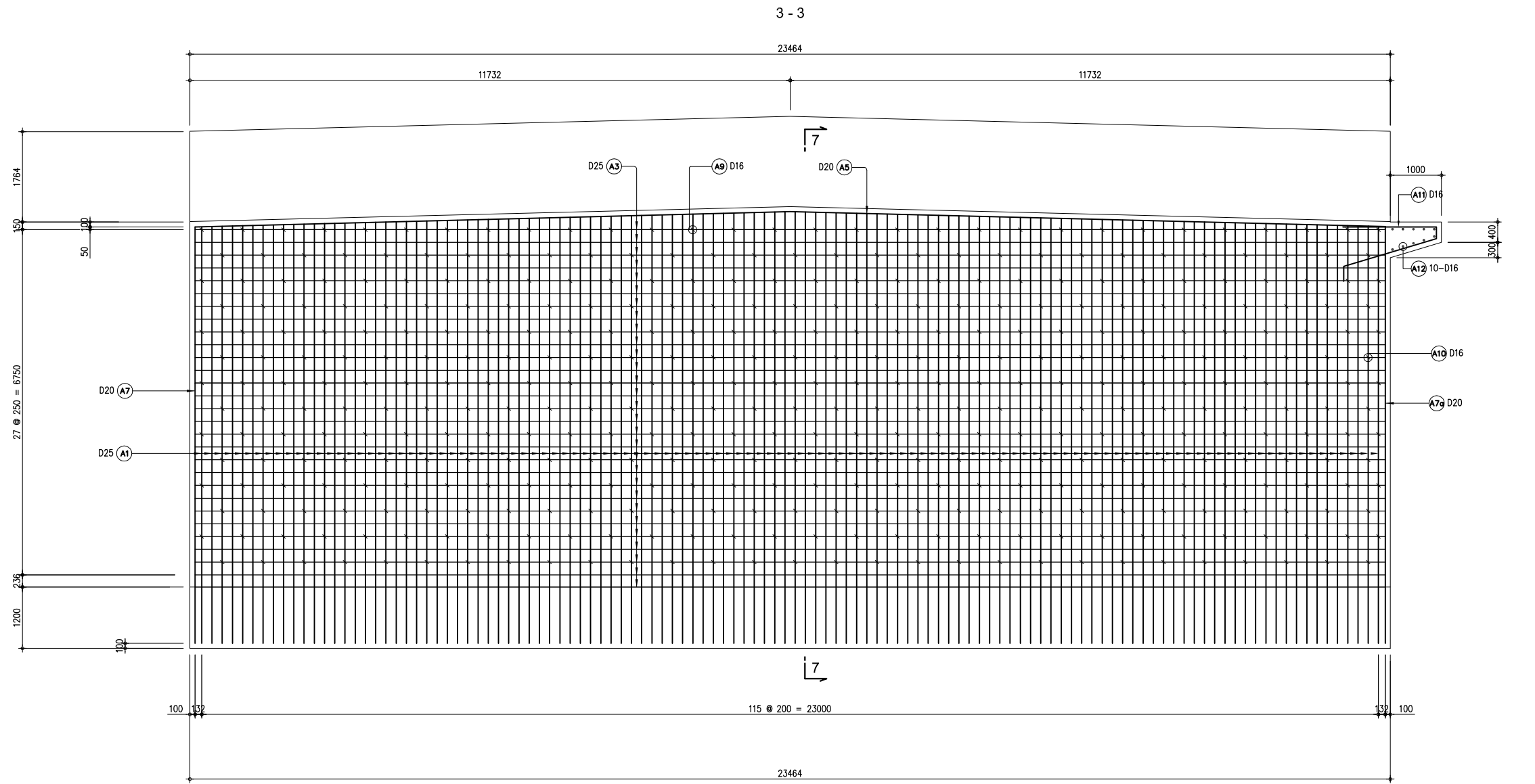




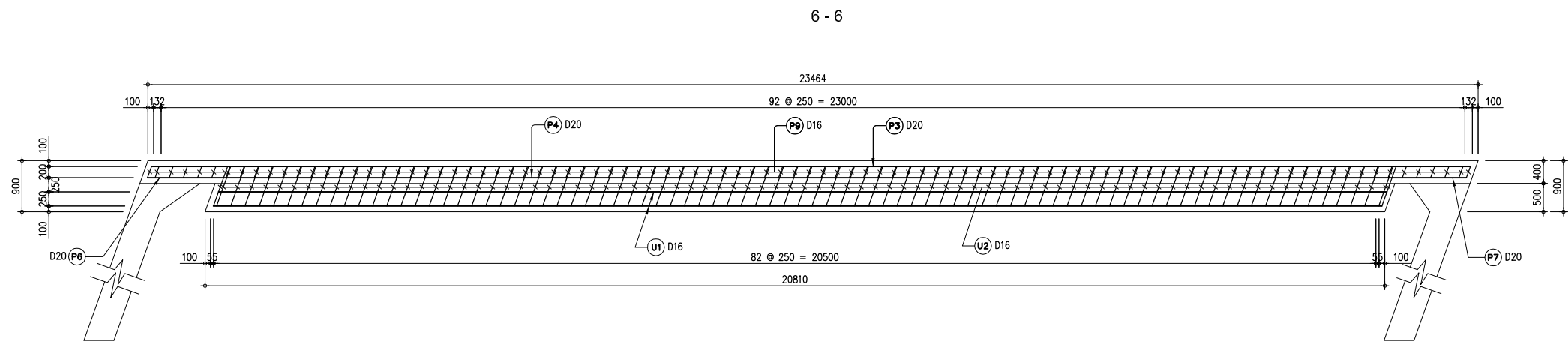
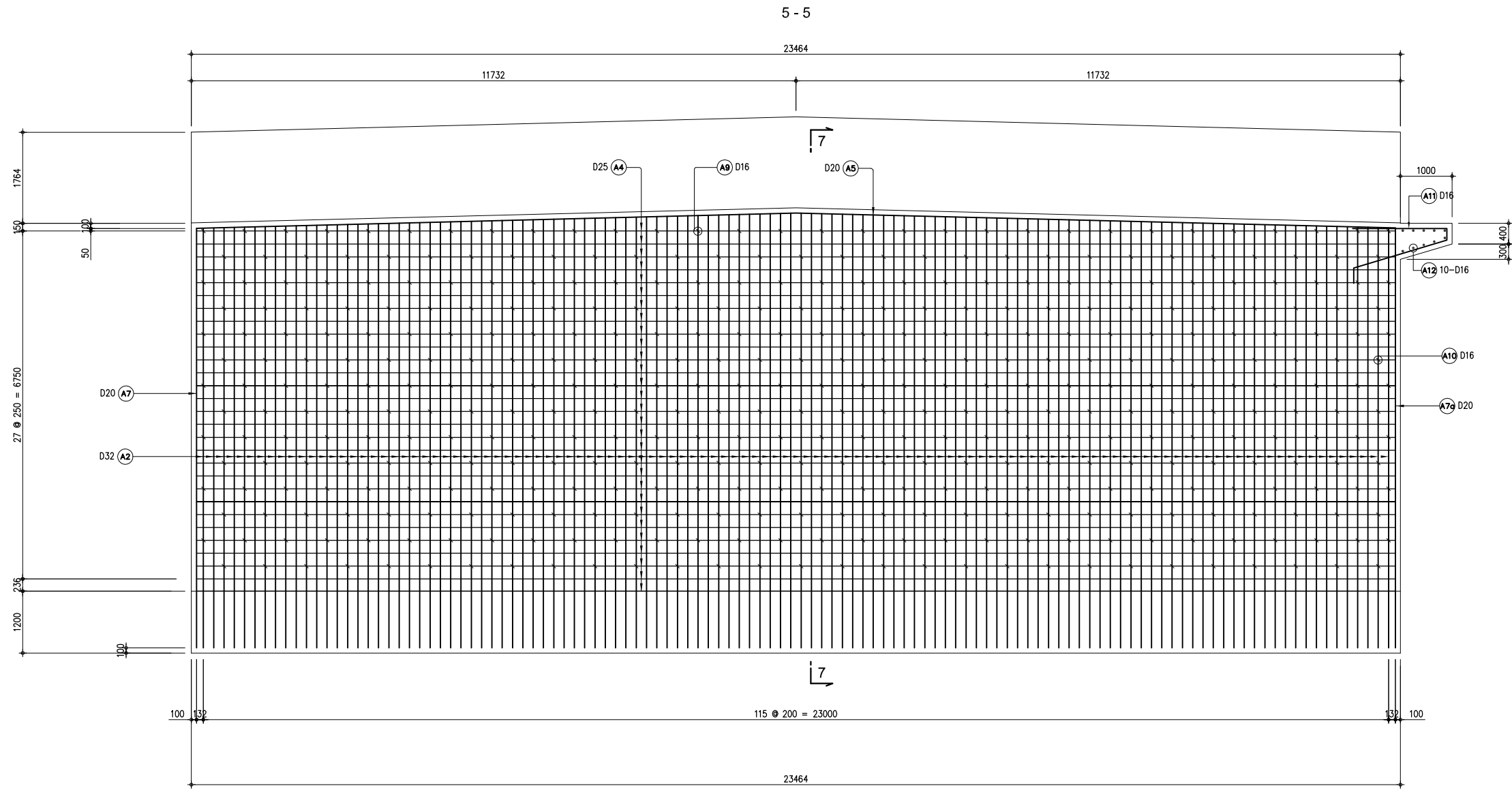
# REINFORCEMENT OF A2 ABUTMENT (1) Scale 1:50



# REINFORCEMENT OF A2 ABUTMENT (2) Scale 1:50



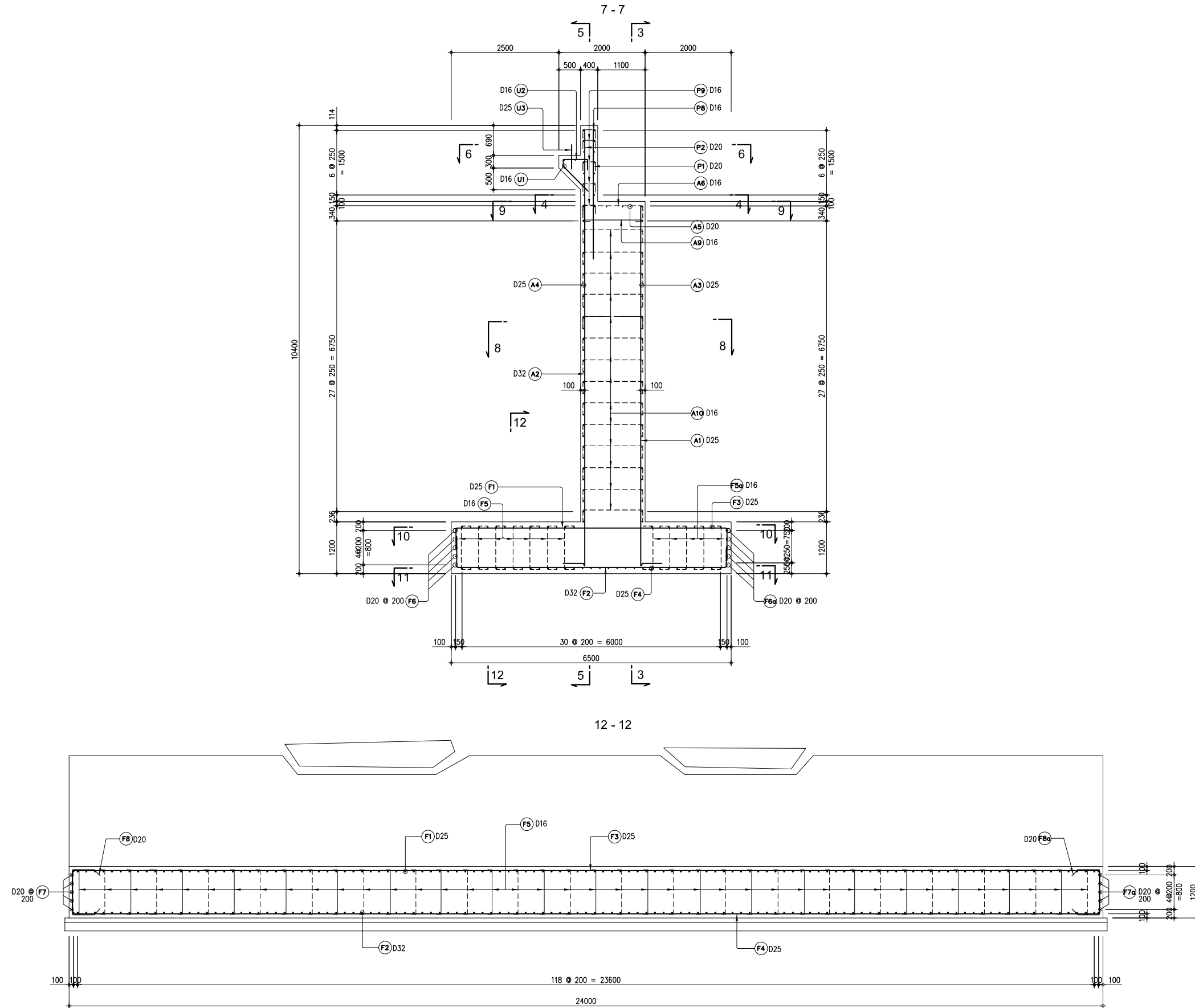
# REINFORCEMENT OF A2 ABUTMENT (3) Scale 1:50



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DWG. NO.	K05-27

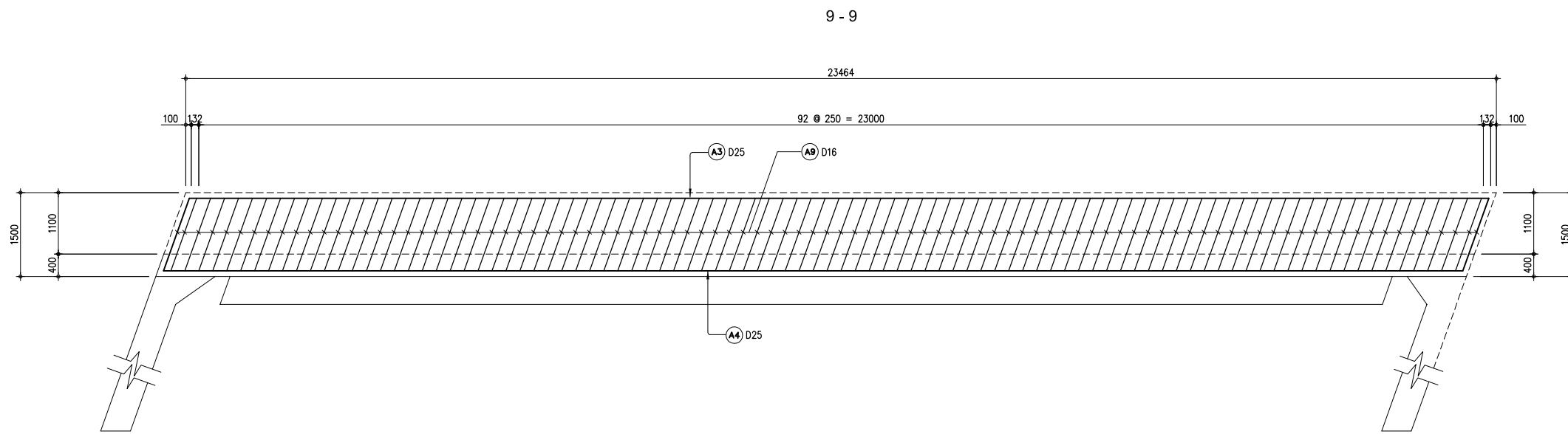
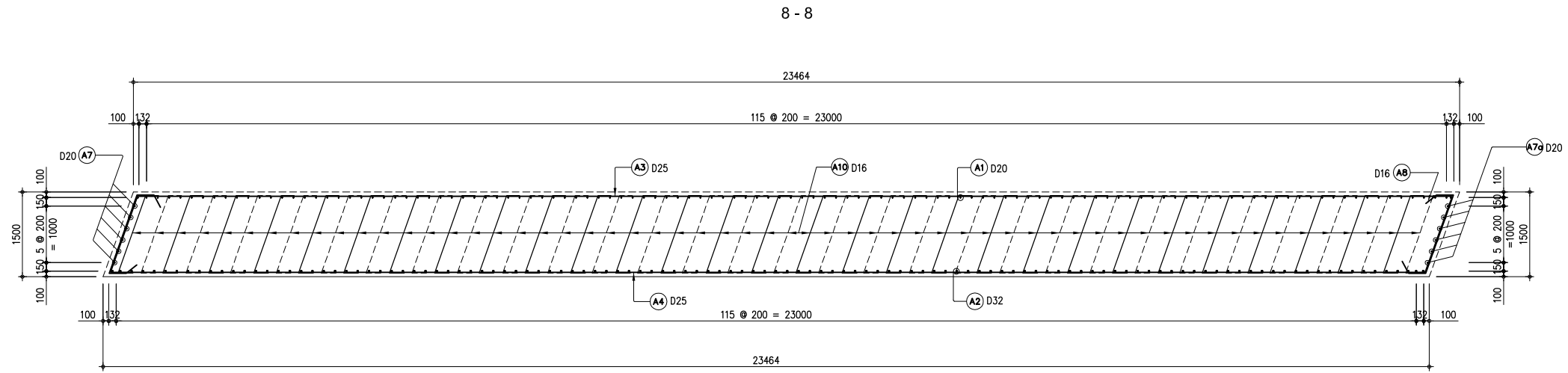
# REINFORCEMENT OF A2 ABUTMENT (4) Scale 1:50



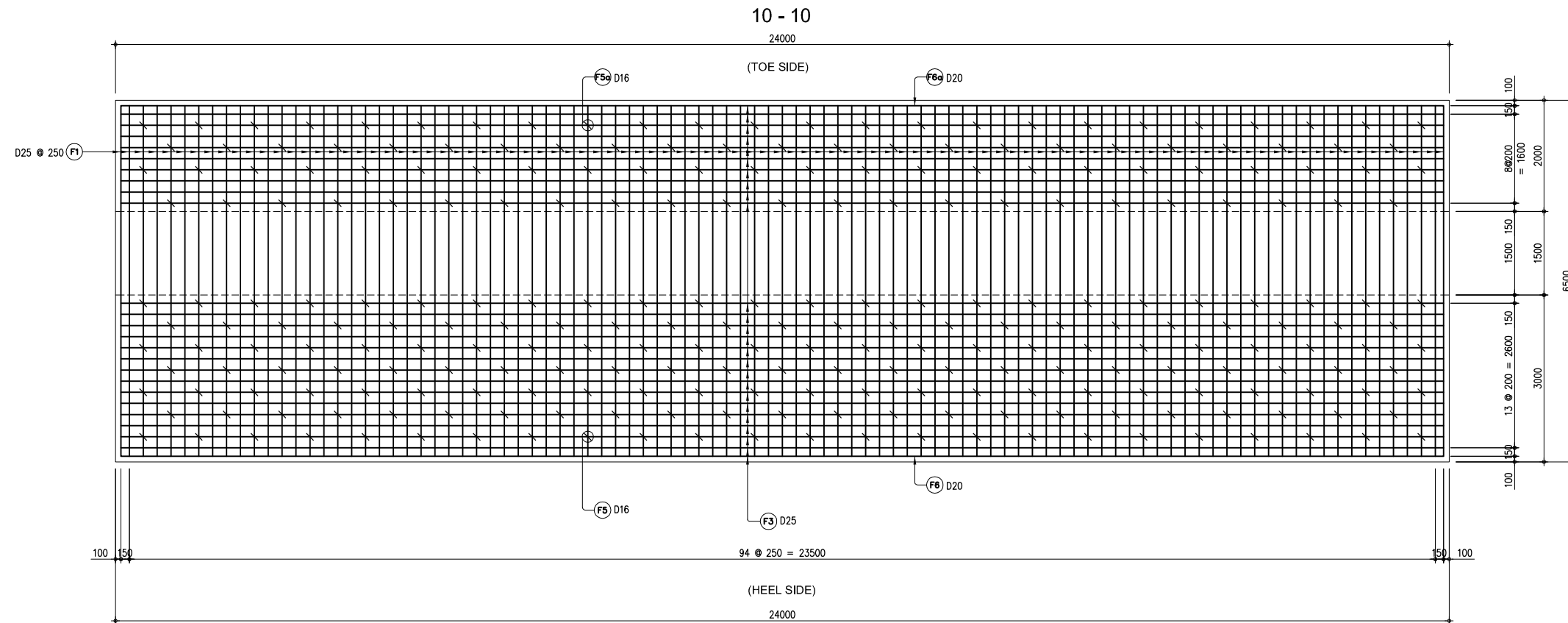
No	REVISION	DATE

DESIGNED BY:	
CHECKED BY:	
APPROVED BY:	
DWG. NO.	K05-28

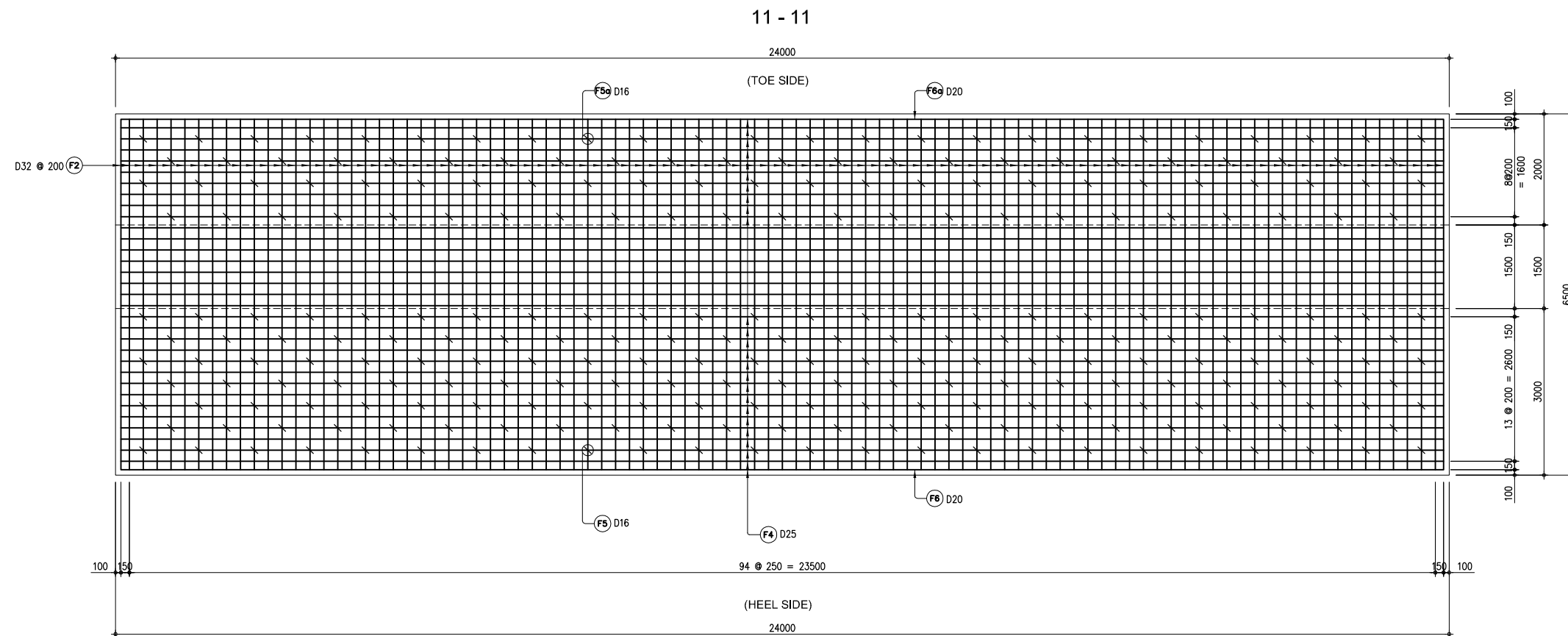
# REINFORCEMENT OF A2 ABUTMENT (4) Scale 1:50



# REINFORCEMENT OF A2 ABUTMENT (6) Scale 1:50



PLAN SHOWING TOP BARS



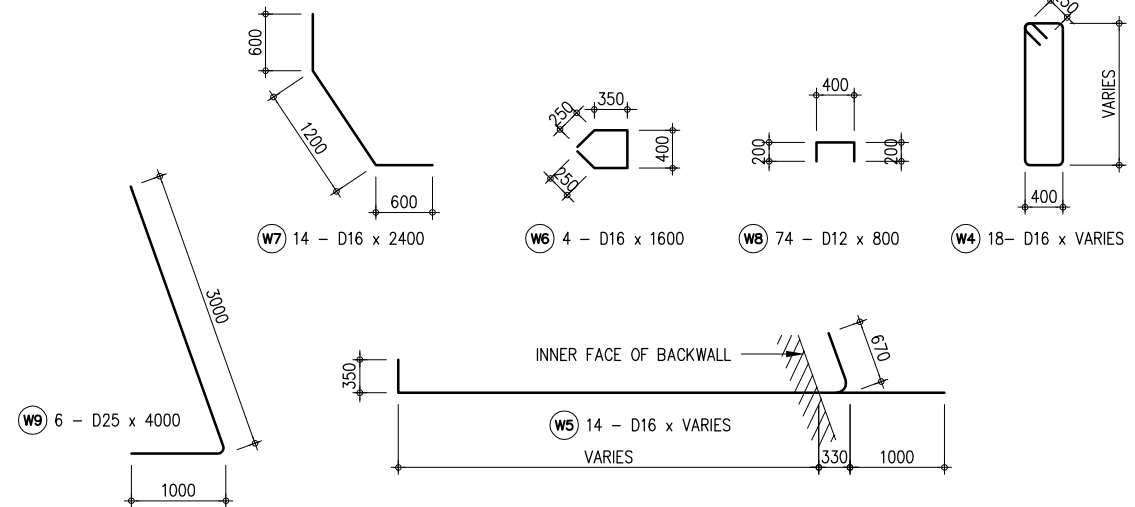
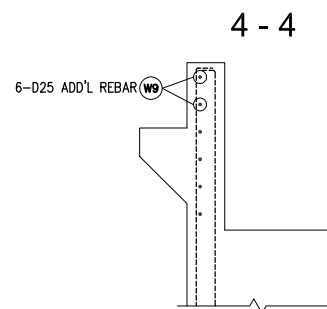
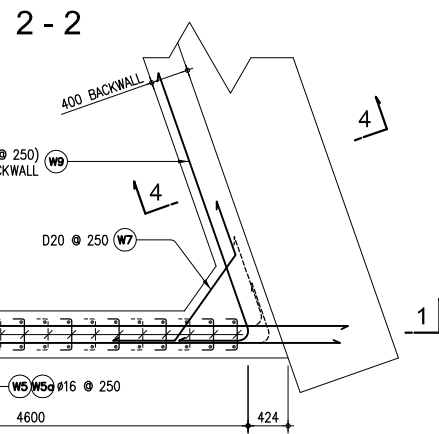
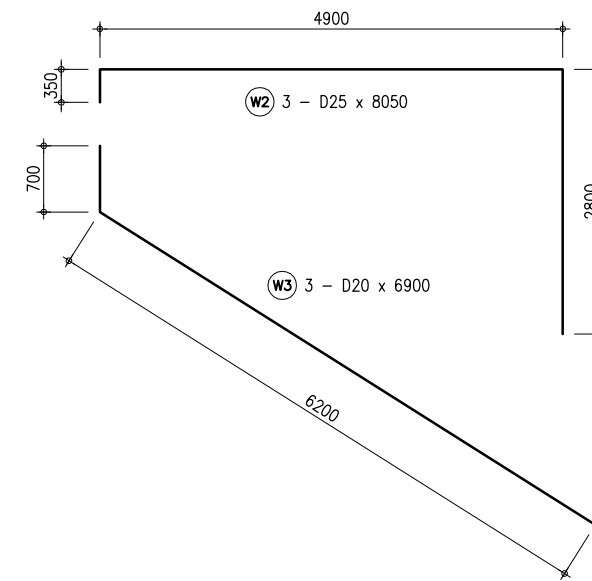
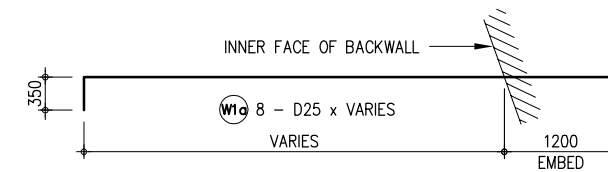
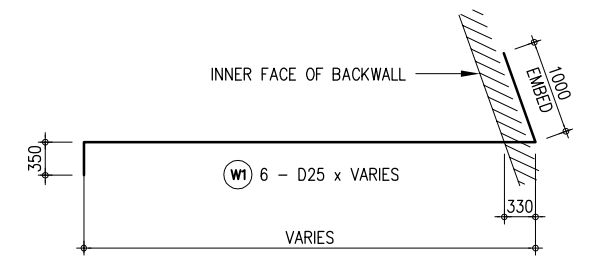
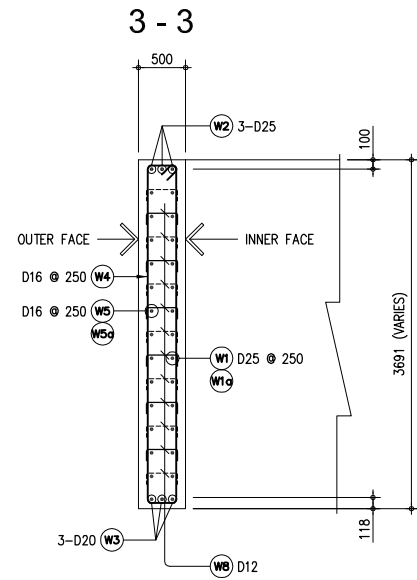
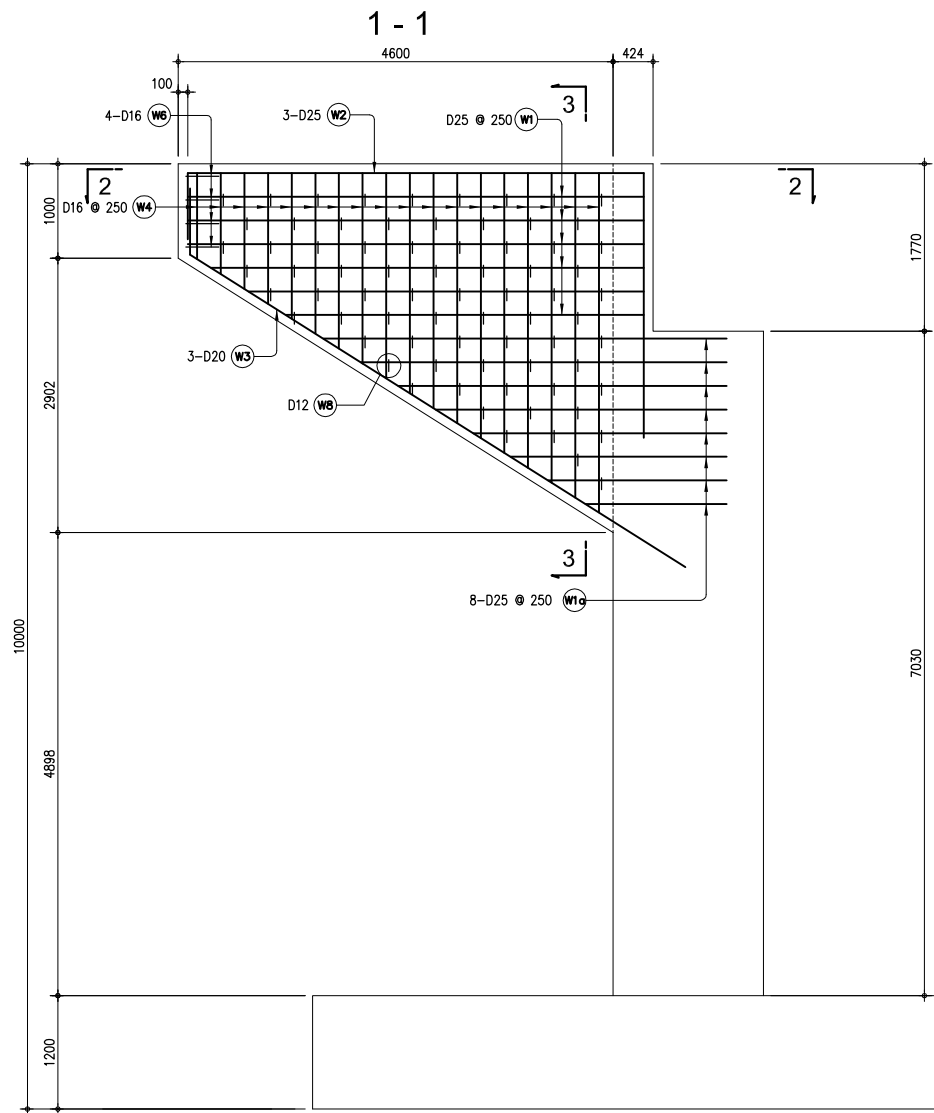
PLAN SHOWING BOTTOM BARS

No	REVISION	DATE



# REINFORCEMENT OF WINGWALL ABUTMENT-A1 Scale 1:40

## A1 ABUTMENT



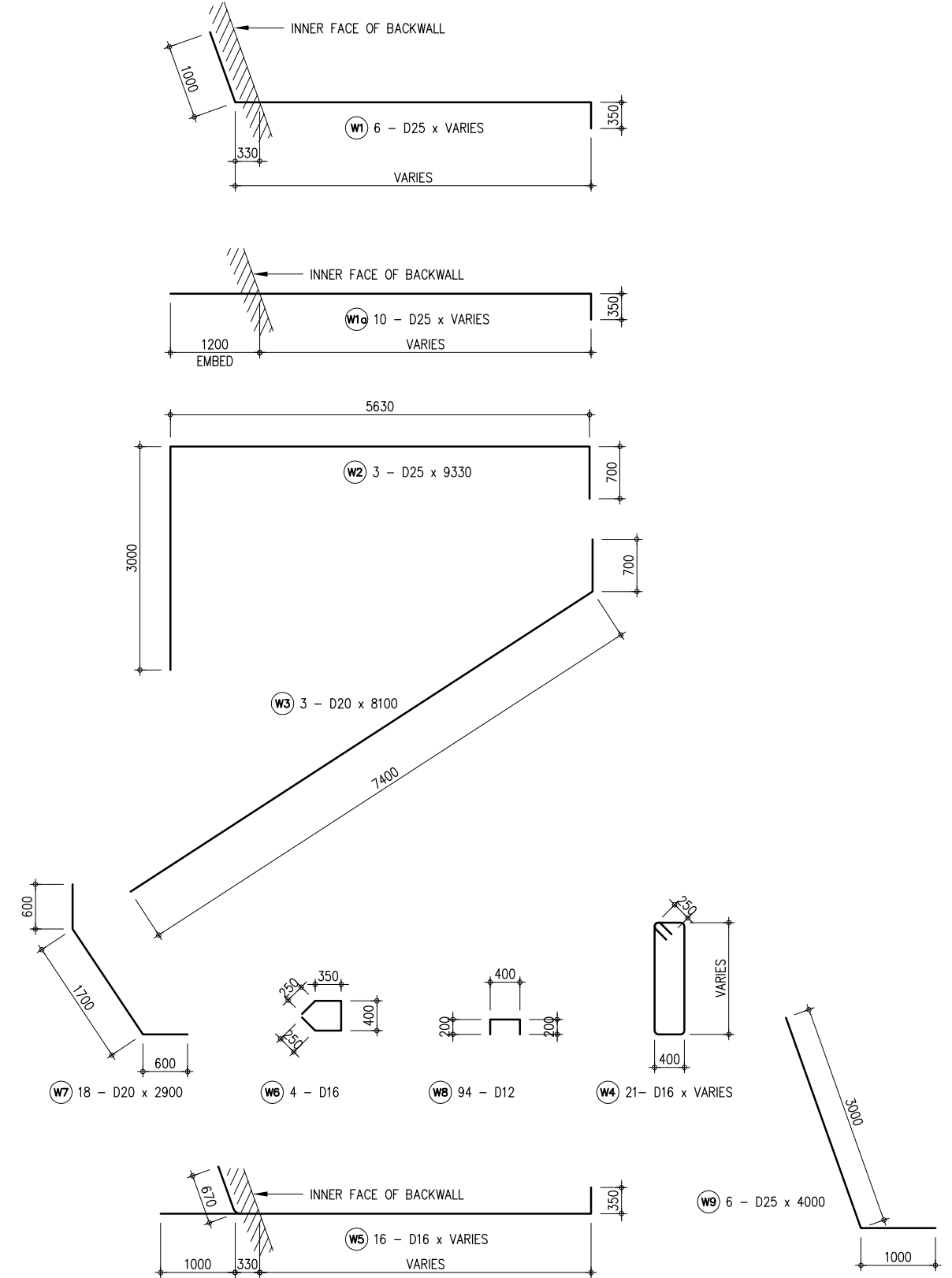
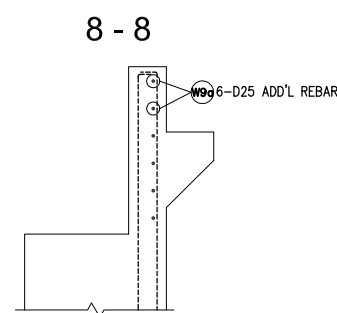
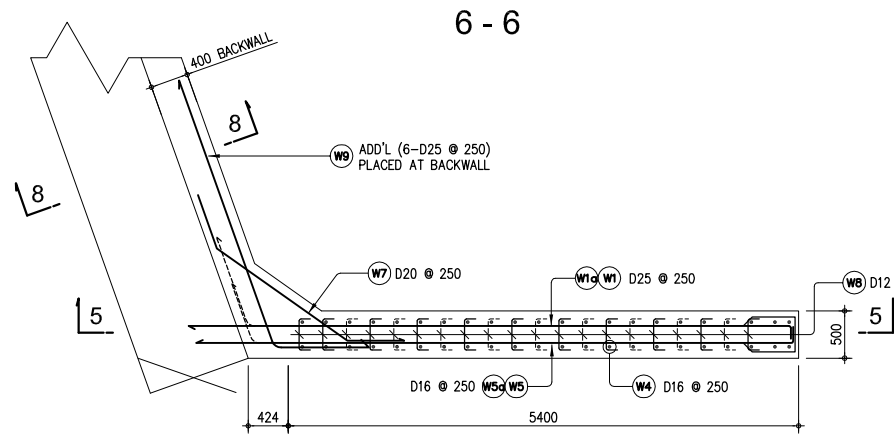
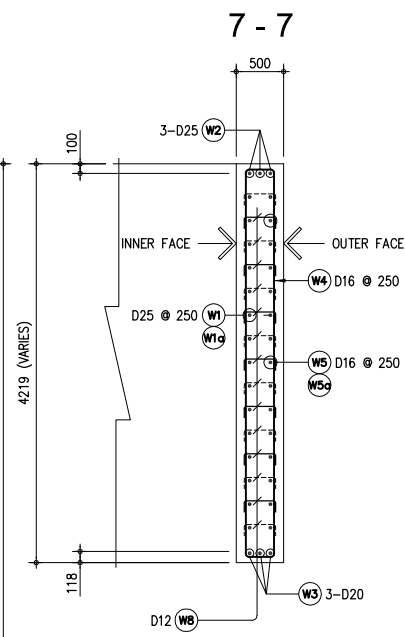
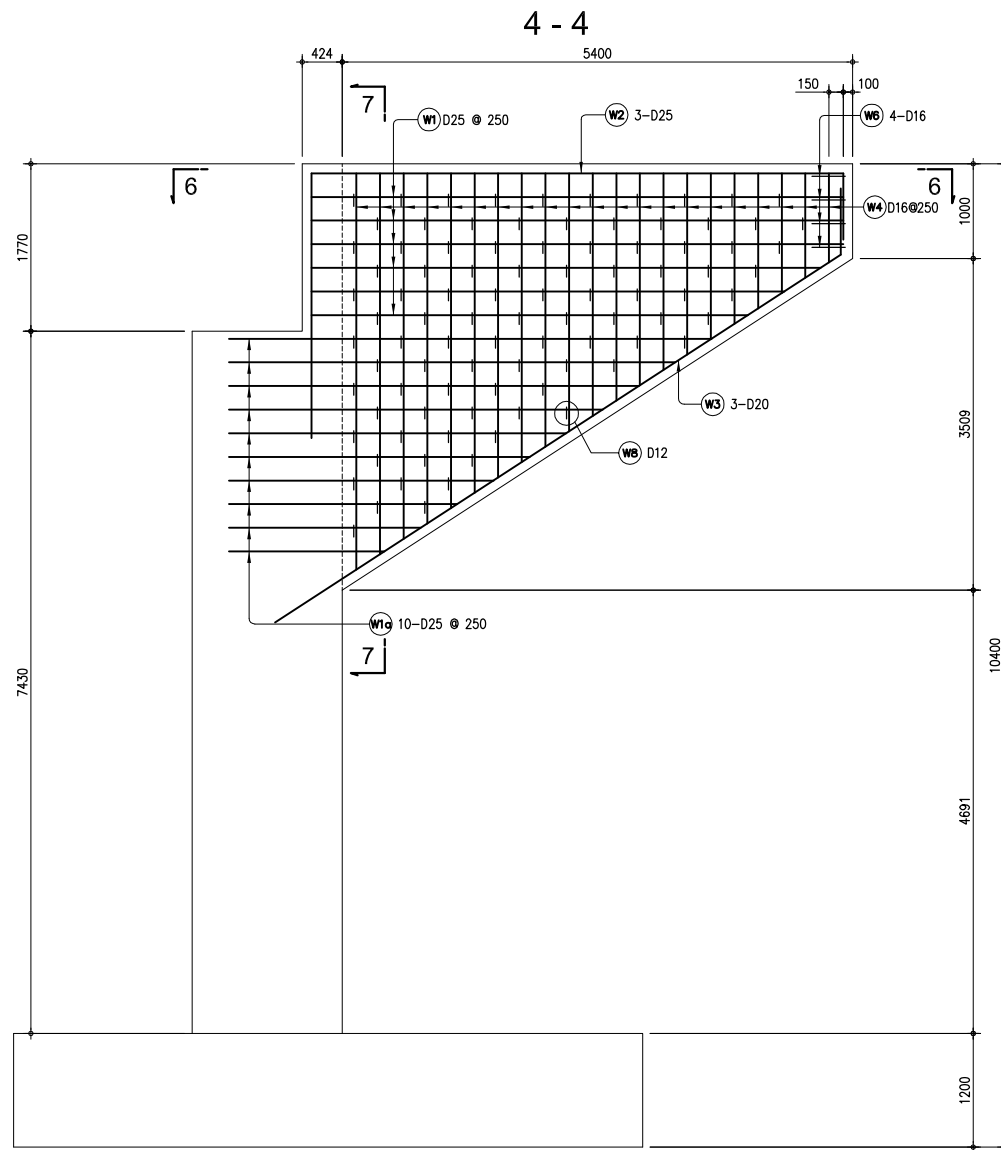
**A** REBAR DETAIL OF WINGWALL ABUTMENT-A1  
SCALE 1:40

**B** BAR BENDING DIAGRAM  
SCALE N T S



# REINFORCEMENT OF WINGWALL ABUTMENT-A2 Scale 1:40

## A2 ABUTMENT



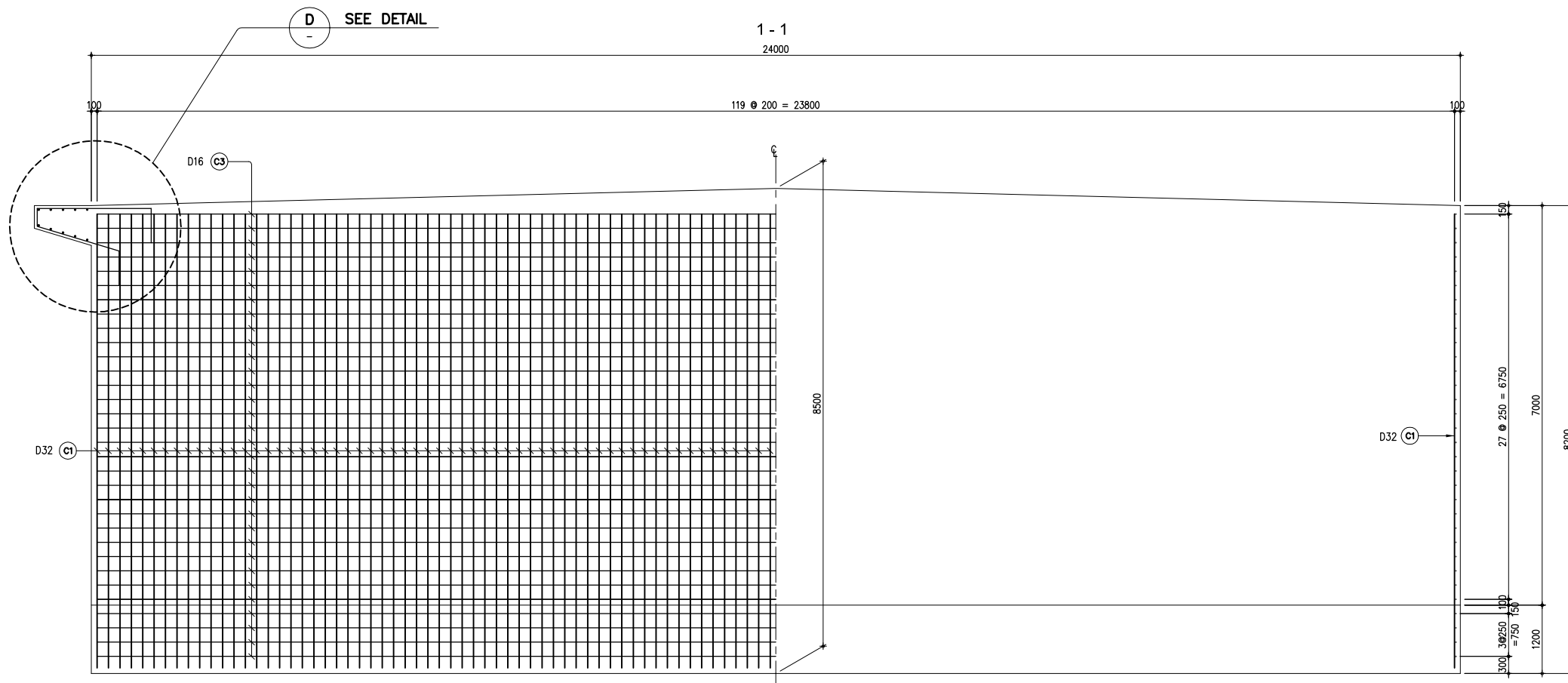
**A** REBAR DETAIL OF WINGWALL ABUTMENT-A2  
SCALE 1:40

**B** BAR BENDING DIAGRAM  
SCALE N T S

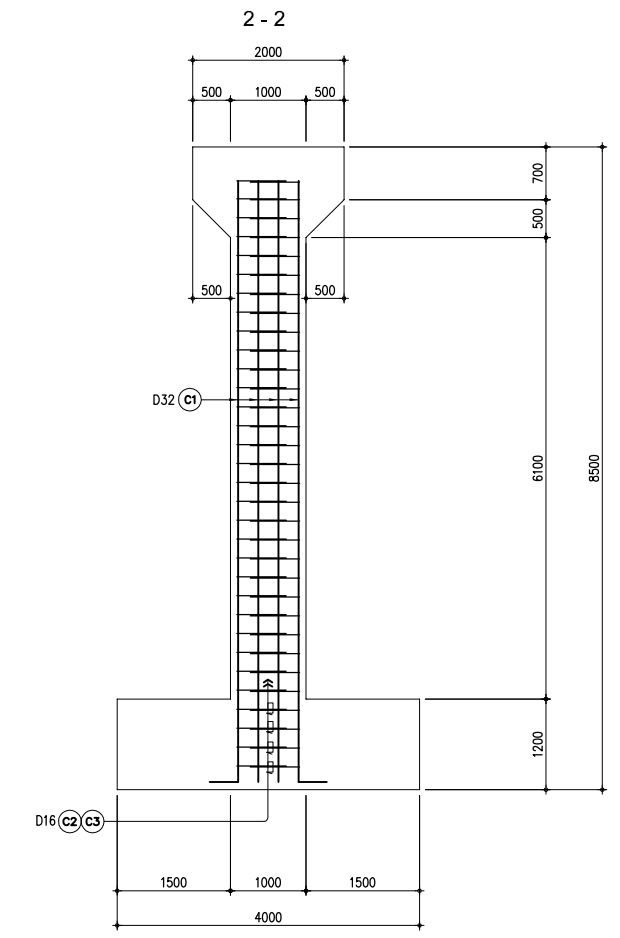
No	REVISION	DATE



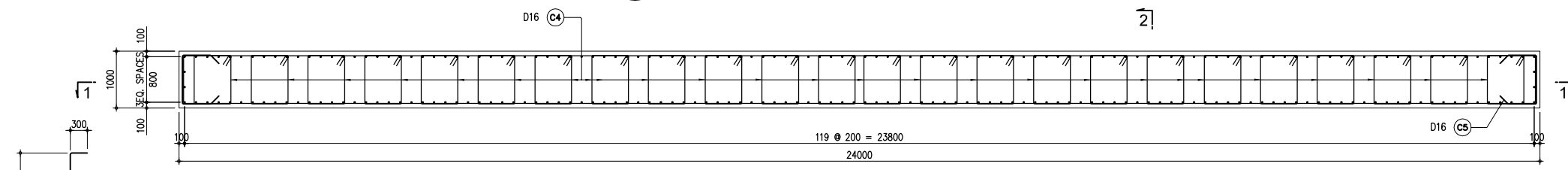
# REINFORCEMENT OF P1 PIER Scale 1:50



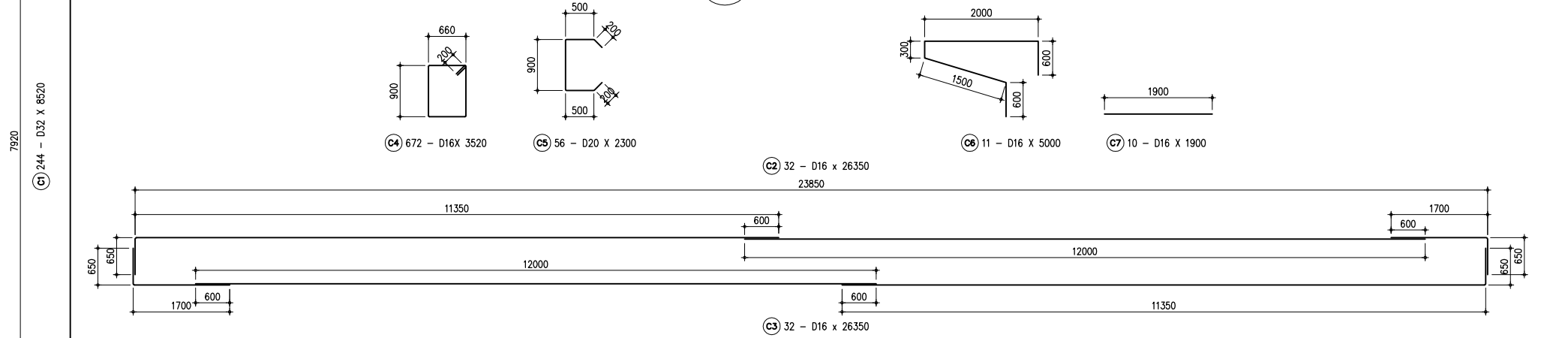
**1-1 SECTIONAL ELEVATION**  
SCALE 1:50



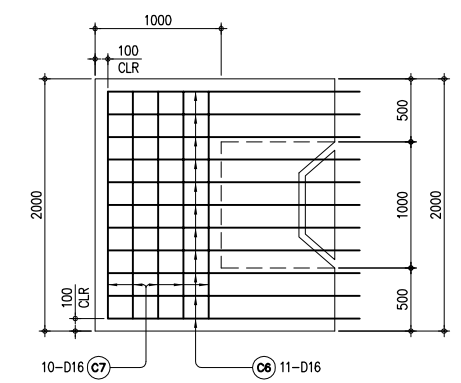
**2-2 SECTION**  
SCALE 1:50



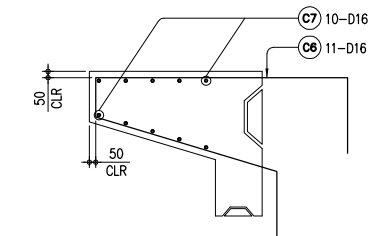
**A REINFORCEMENT PLAN**  
SCALE 1:50



**B BAR BENDING SCHEDULE**  
SCALE 1:50

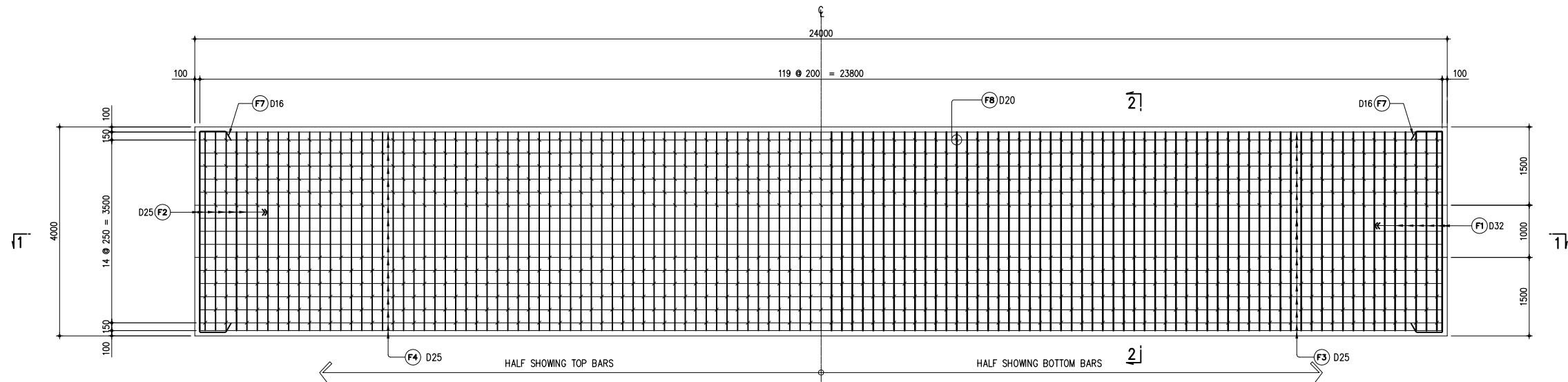


**C PLAN**  
SCALE 1:30

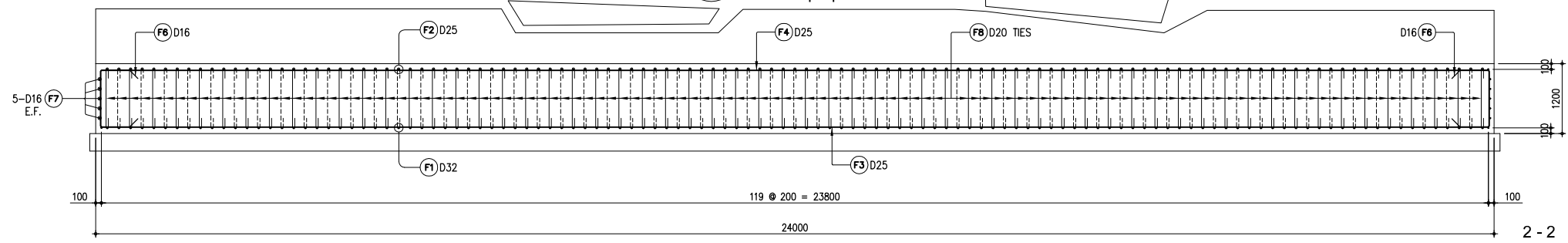


**D SECTION**  
SCALE 1:30

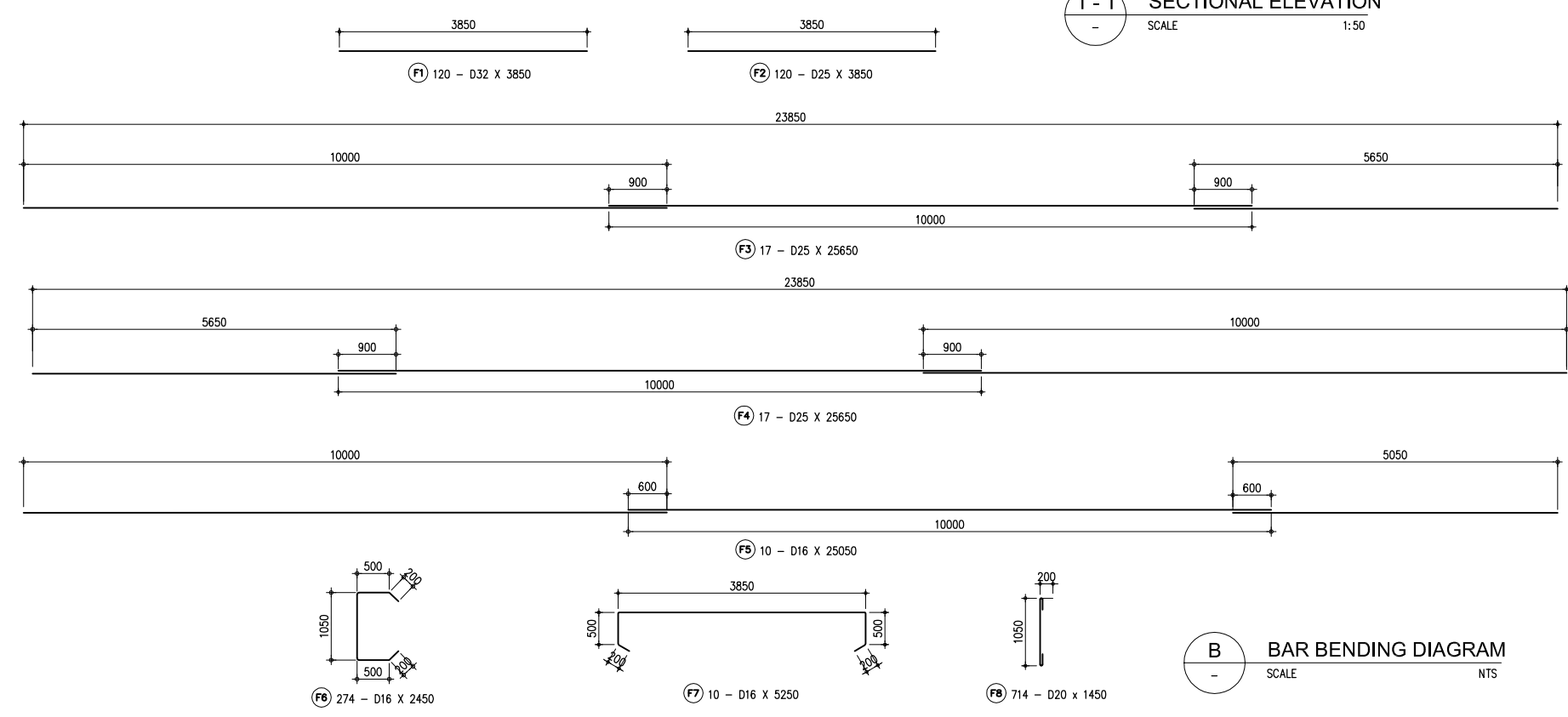
# REINFORCEMENT OF P1 PIER Scale 1:50



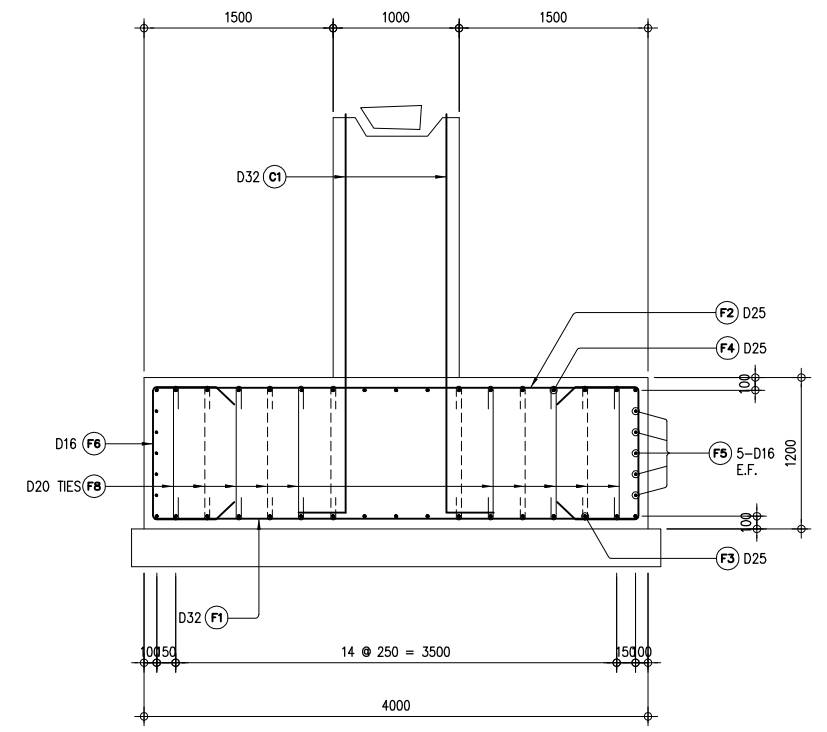
**A REINFORCEMENT PLAN**  
SCALE 1:50



**1 - 1 SECTIONAL ELEVATION**  
SCALE 1:50



**B BAR BENDING DIAGRAM**  
SCALE NTS

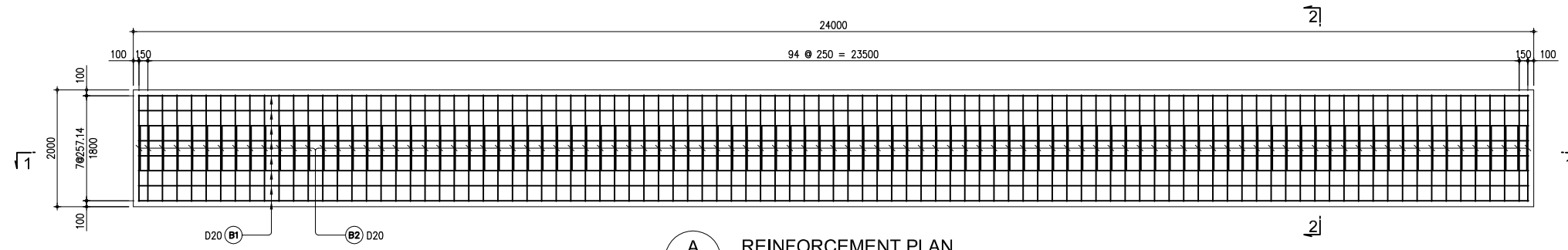


**2 - 2 SECTION**  
SCALE 1:30

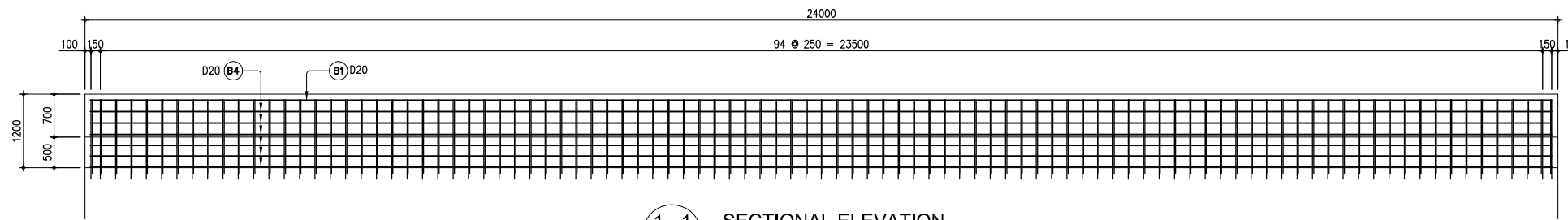
No	REVISION	DATE

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APPROVED BY:	
DWG. NO.	K05-36

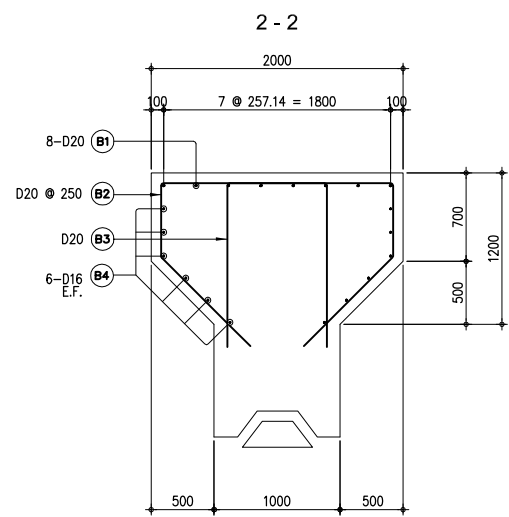
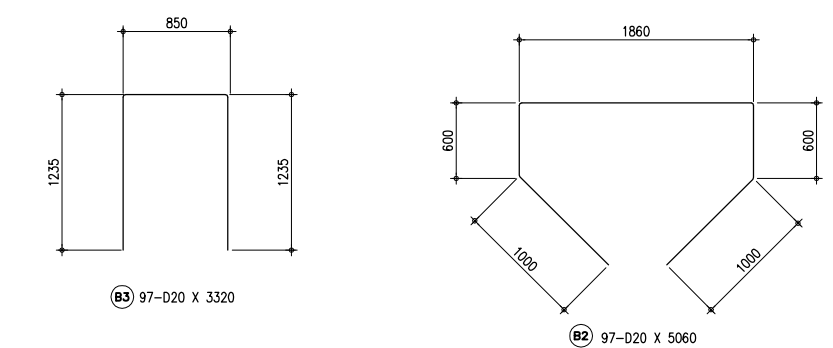
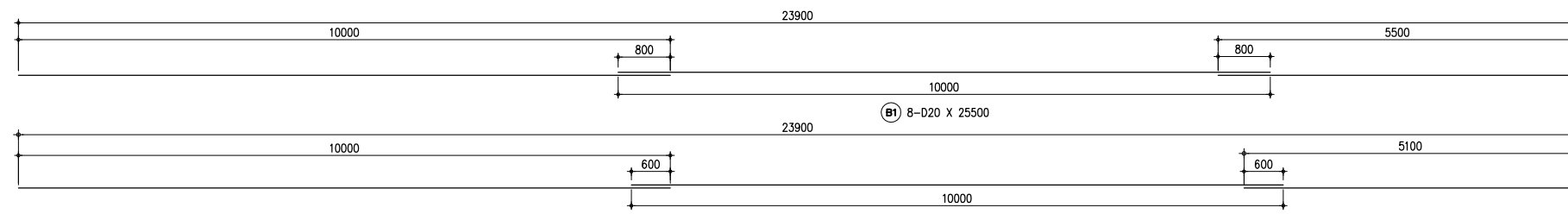
# REINFORCEMENT OF P1 PIER Scale 1:50



**A REINFORCEMENT PLAN**  
SCALE 1 - 1 1:50



**1 - 1 SECTIONAL ELEVATION**  
SCALE 1:50

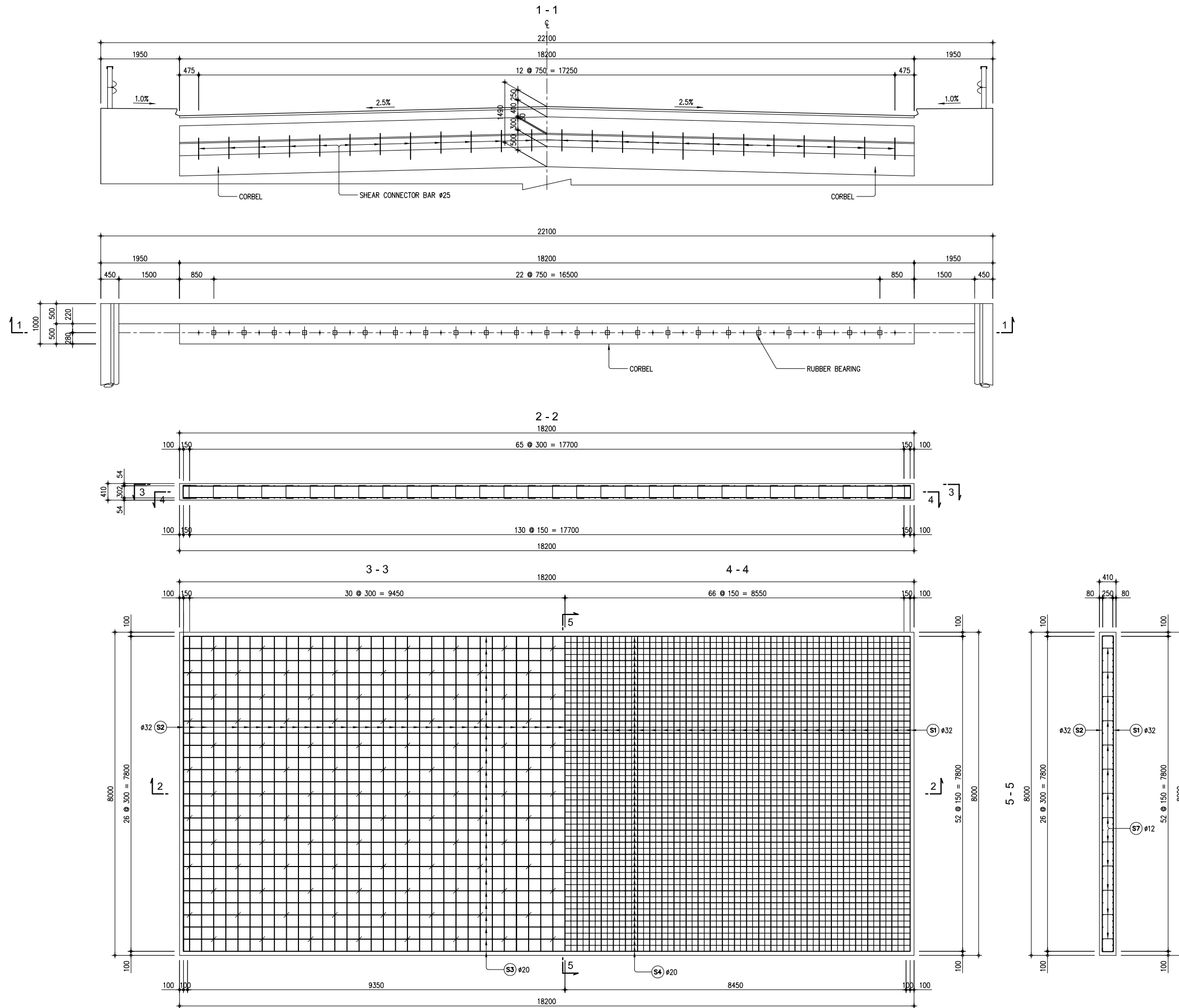


**2 - 2 SECTION**  
SCALE 1:30

**B BAR BENDING SCHEDULE**  
SCALE NTS

ESTIMATED QUANTITIES FOR PIER															
REINFORCING BARS															
LOCATION	BAR MARK	SPACING	QTY. (pcs)	SIZE (mm)	DIMENSION in mm (OUT TO OUT)						LENGTH PER BAR (mm)	TOTAL LENGTH (m)	UNIT WEIGHT (kg/m)	TOTAL WEIGHT (kg)	CONCRETE VOLUME (m <sup>3</sup> )
					a	b	c	d	e	f					
COLUMN	B1	AS SHOWN	8	20	10000	10000	5500					25500	204.00	2.466	503.06
	B2	AS SHOWN	97	20	1000	600	1860	600	1000			5060	490.82	2.466	1210.36
	B3	AS SHOWN	97	20	1235	850	1235					3320	322.04	2.466	794.15
	B4	AS SHOWN	12	16	10000	10000	5100					25100	301.20	1.579	475.59
	C1	AS SHOWN	244	32	300	7920	300					8520	2078.88	6.313	13123.97
	C2	AS SHOWN	32	16	650	11350	12000	1700	650			26350	843.20	1.579	1331.41
	C3	AS SHOWN	32	16	650	1700	12000	11350	650			26350	843.20	1.579	1331.41
	C4	AS SHOWN	672	16	200	660	900	660	900	200		3520	2365.44	1.579	3735.03
C5	AS SHOWN	56	16	200	500	900	500	200			2300	128.80	1.579	203.38	
C6	AS SHOWN	11	16	600	1500	300	2000	600			5000	55.00	1.579	86.85	
C7	AS SHOWN	10	16	1900							1900	19.00	1.579	30.00	
<b>SUB-TOTAL QUANTITY FOR COLUMN</b>												<b>22,825.22</b>		<b>194.40</b>	
PILECAP	F1	AS SHOWN	120	32	3850							3850	462.00	6.313	2916.61
	F2	AS SHOWN	120	25	3850							3850	462.00	3.854	1780.55
	F3	AS SHOWN	17	25	10000	10000	5650					25650	436.05	3.854	1680.54
	F4	AS SHOWN	17	25	5650	10000	10000					25650	436.05	3.854	1680.54
	F5	AS SHOWN	10	16	10000	10000	5050					25050	250.50	1.579	395.54
	F6	AS SHOWN	274	16	200	500	1050	500	200			2450	671.30	1.579	1059.98
	F7	AS SHOWN	10	16	200	500	3850	500	200			5250	52.50	1.579	82.90
	F8	AS SHOWN	714	20	200	1050	200					1450	1035.30	2.466	2553.05
<b>SUB-TOTAL QUANTITY FOR PILECAP</b>												<b>12,149.70</b>		<b>115.20</b>	
<b>SUB-TOTAL QUANTITY PIER</b>												<b>34,974.91</b>		<b>309.60</b>	

# REINFORCEMENT OF APPROACH SLAB (1) Scale 1:50

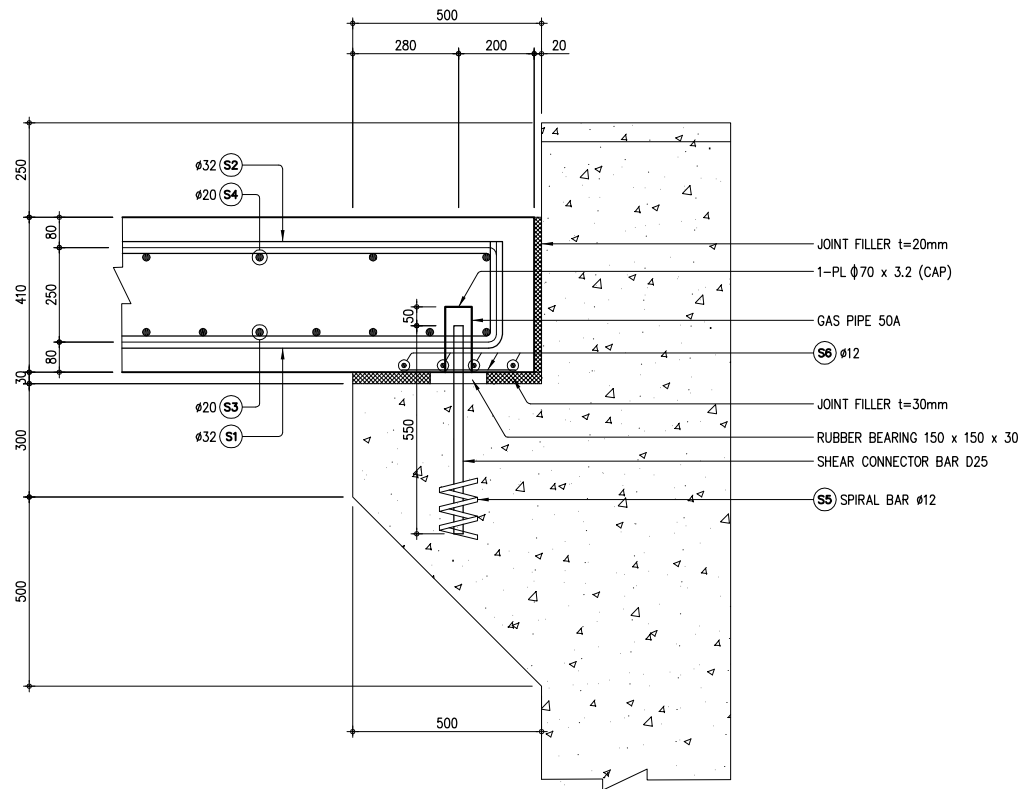


No	REVISION	DATE

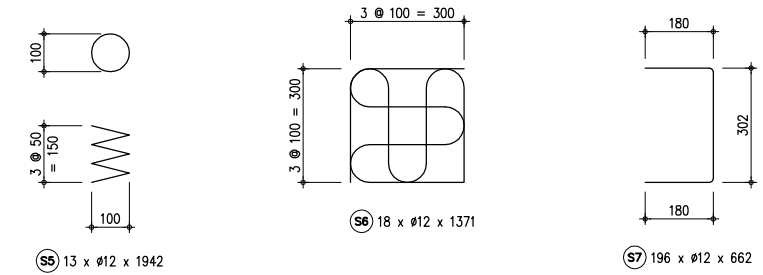
DESIGNED BY:	
CHECKED BY:	
APPROVED BY:	
DWG. NO.	K05-38

# REINFORCEMENT OF APPROACH SLAB (2)

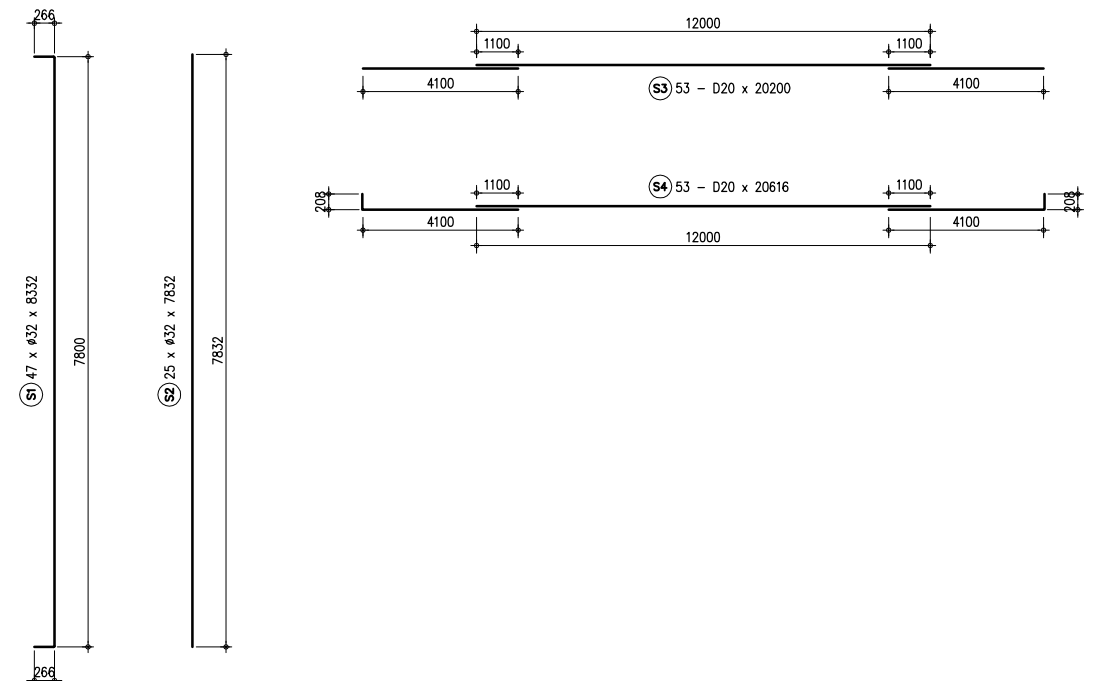
DETAILED OF PEDESTAL Scale 1:10



Scale 1:10

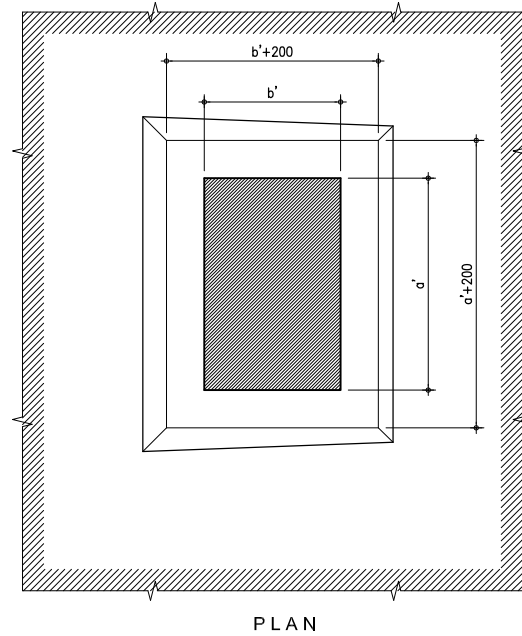


Scale 1:50

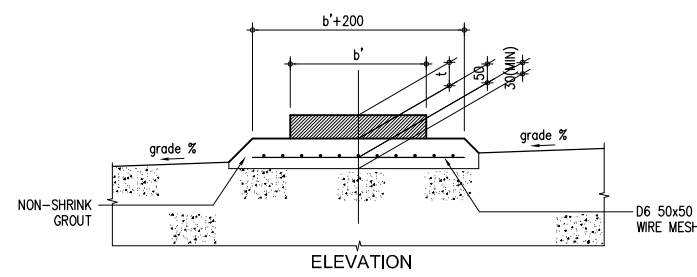


REINFORCING BARS										
BAR BENDING	BAR MARK	BAR SHAPE	QTY.	SIZE	DIMENSIONS		LENGTH PER BAR (mm)	TOTAL LENGTH (m)	UNIT WEIGHT (kg/m)	TOTAL WEIGHT (kg)
					a	b				
(A)	S1	A	47	D32	7800	532	8332	391.60	6.314	2,472.59
(B)	S2	B	25	D32	7832	-	7832	195.80	6.314	1,236.28
(C)	S3	C	53	D20	20200	-	20200	1,070.60	2.466	2,640.10
(D)	S4	A	53	D20	20200	416	20616	1,092.60	2.466	2,694.50
(E)	S5	E	9	D12	1942	-	1942	25.20	0.888	22.40
(F)	S6	F	18	D12	1371	-	1371	24.68	0.888	21.91
	S7	A	66	D12	302	360	662	129.80	0.888	115.20
<p style="text-align: right;">D32 5,334.60</p> <p style="text-align: right;">D20 159.50</p> <p style="text-align: right;">D12 76.23</p> <p style="text-align: right;"><b>TOTAL 9,202.90</b></p>										
	SGP	50A	-	-	-	-	-	-	-	GAS PIPE
	PL	G	-	-	-	-	-	-	-	CAP
CONCRETE FORM BEARING (T=30mm) JOINT FILLER (T=20mm) JOINT FILLER (T=30mm)										

NOTE: QUANTITIES ARE FOR (1) ONE APPROACH ONLY.

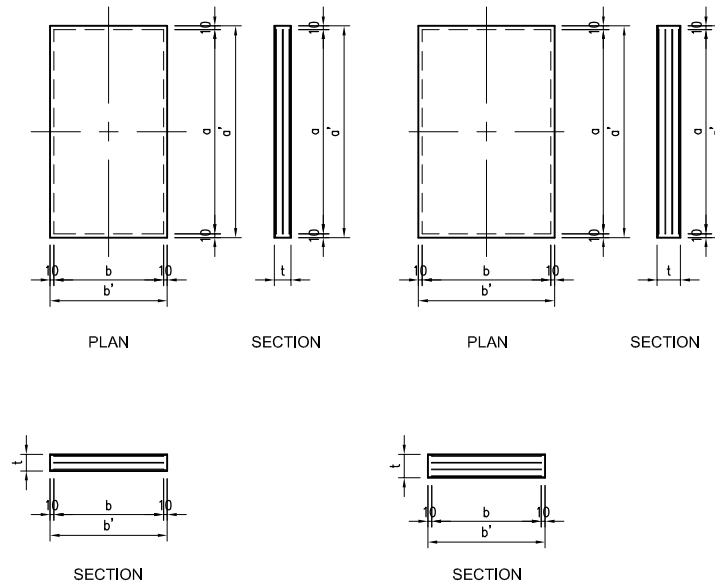


PLAN



ELEVATION

1 BEARING PAD  
SCALE 1:10



PLAN

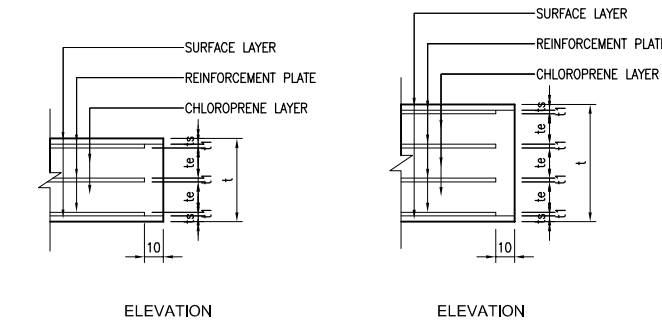
SECTION

PLAN

SECTION

SECTION

SECTION



ELEVATION

ELEVATION

A 2 LAYERS TYPE  
SCALE NTS

B 3 LAYERS TYPE  
SCALE NTS

DIMENSIONS OF BEARING PAD

TYPE	Dimensions a' x b' x t (mm)	Chloroprene Layers		Reinforcement Plate				Surface Layer
		Thickness of Layer te (mm)	Number of Layers ne	Transversal Width a (mm)	Longitudinal Width b (mm)	Thickness & Number		Thickness & Number
Fix	360 x 260 x 36	12	2	340	240	t1 x n (mm)	t2 x n (mm)	3 x 2
Move	410 x 310 x 54	12	3	390	290	2 x 4	-	3 x 2

ELASTOMERIC MATERIAL (POLY-CHLOROPRENE)

ITEM	UNIT	REQUIRED VALUE	TEST METHOD
Static Shearing Elasticity Modulus	kgf/cm <sup>2</sup>	10 ± 1	JIS K6254
Hardness	-	A60 ± 5	JIS K6253
Elongation	%	440 or more	JIS K6251
Tensile Strength	Kg/cm <sup>2</sup>	150 or more	JIS K6251
Fatigue Test	Strength Changing Ratio for 25 % Elongation	%	between -10 and +100
	Elongation Ratio	%	-50 or more
Ratio of Compressive Permanent Strain	%	35 or less	JIS K6262 (100°C x 22hrs)
Ozone Deterioration	-	No crack to be observed by naked eye	JIS K6259
Moisture Absorption (Mass Change Ratio Due to Water)	%	10 or less	JIS K6258
Low Temperature Resistance	Degree	-30°C or less	JIS K6260
Resistance to Stripping	kgf/cm	7 or more	JIS K6256

REINFORCEMENT PLATE (STEEL PLATE)

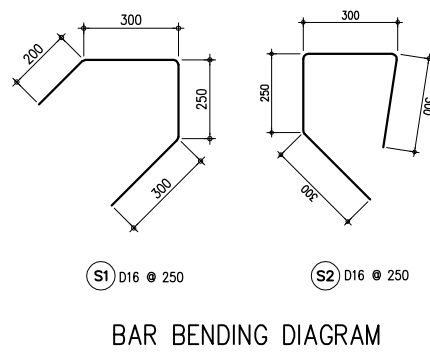
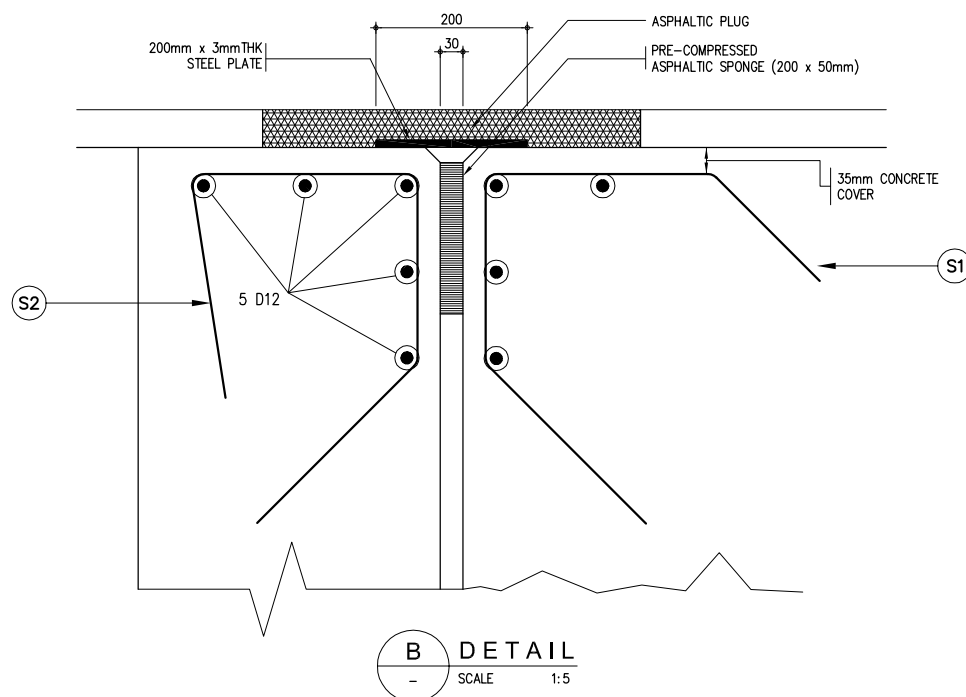
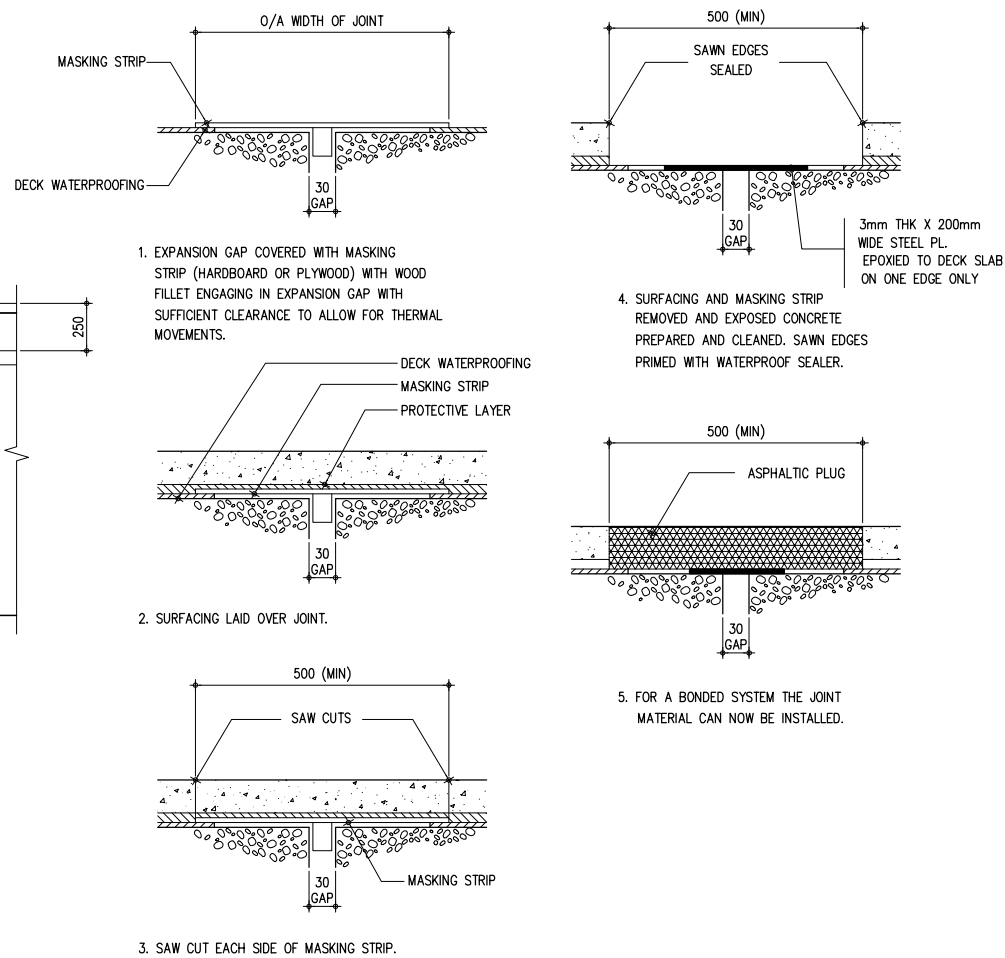
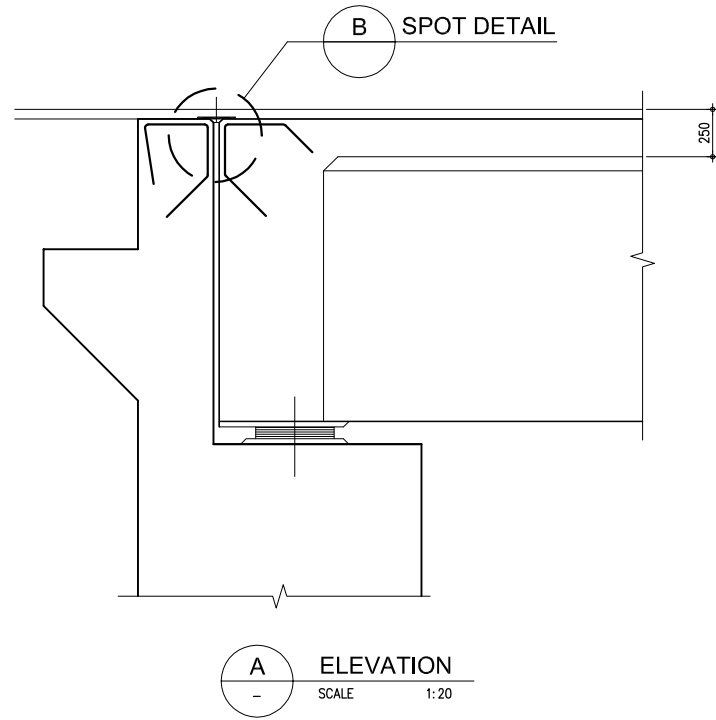
ITEM	UNIT	REQUIRED VALUE	TEST METHOD
Ultimate Strength	N/mm <sup>2</sup>	400 or more	JIS G3101
Elongation	%	21 or more	
Yield Strength	N/mm <sup>2</sup>	245 or more	

Note: All Elastomeric Bearing Pads shall be designed in accordance with Japan Road Association Standard or other equivalent Standard

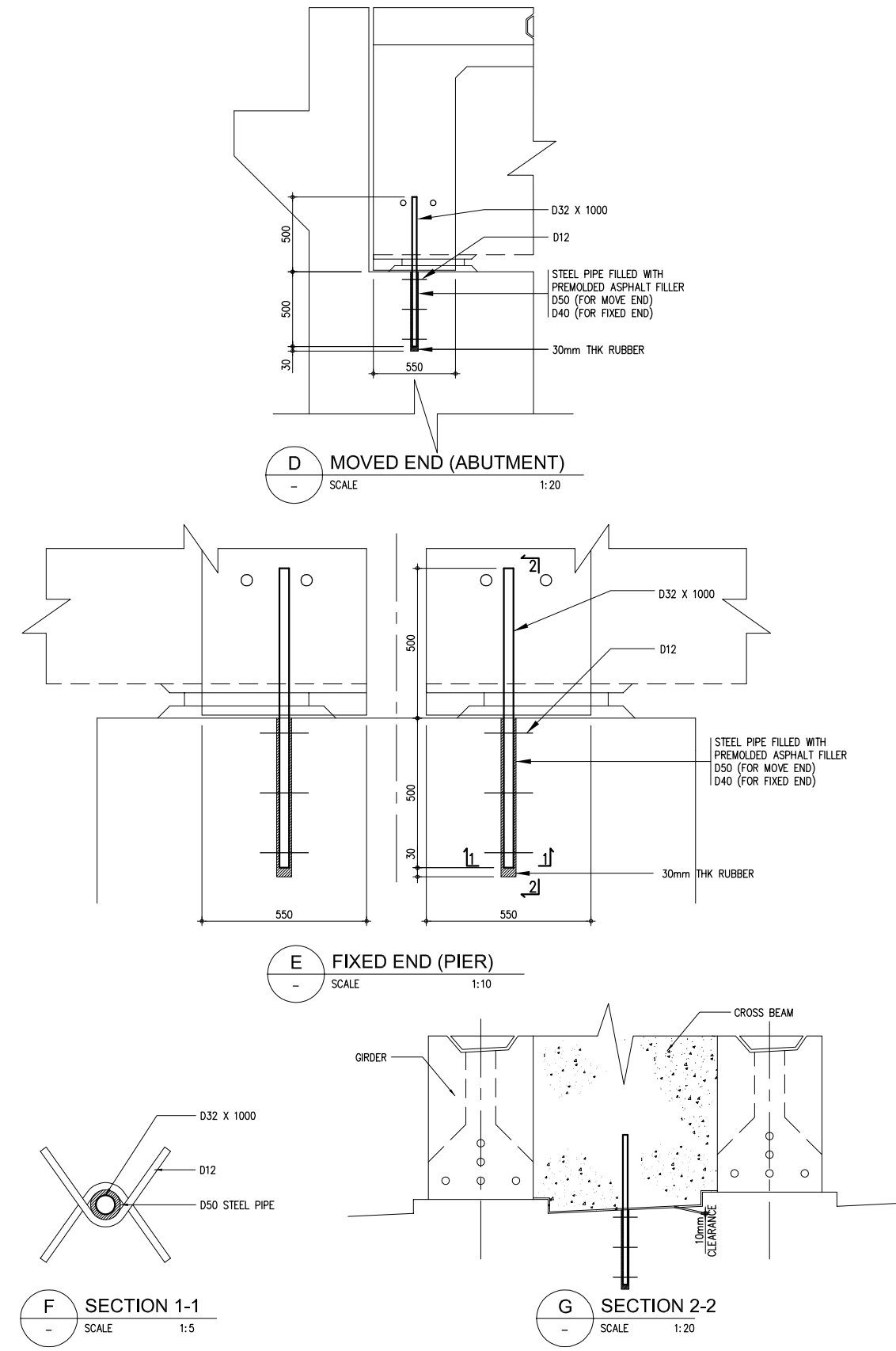
LOCATIONS OF ELASTOMERIC BEARING PADS

BRIDGE NO.	OB-11			Total Number
	PC-I			
BRIDGE TYPE	A1	P1	A2	
LOCATION	M	F	M	
SUPPORT CONDITION				
ELASTOMERIC BEARING PAD	FIX	360 x 260 x 36	26	
	MOVE	410 x 310 x 54	13	13



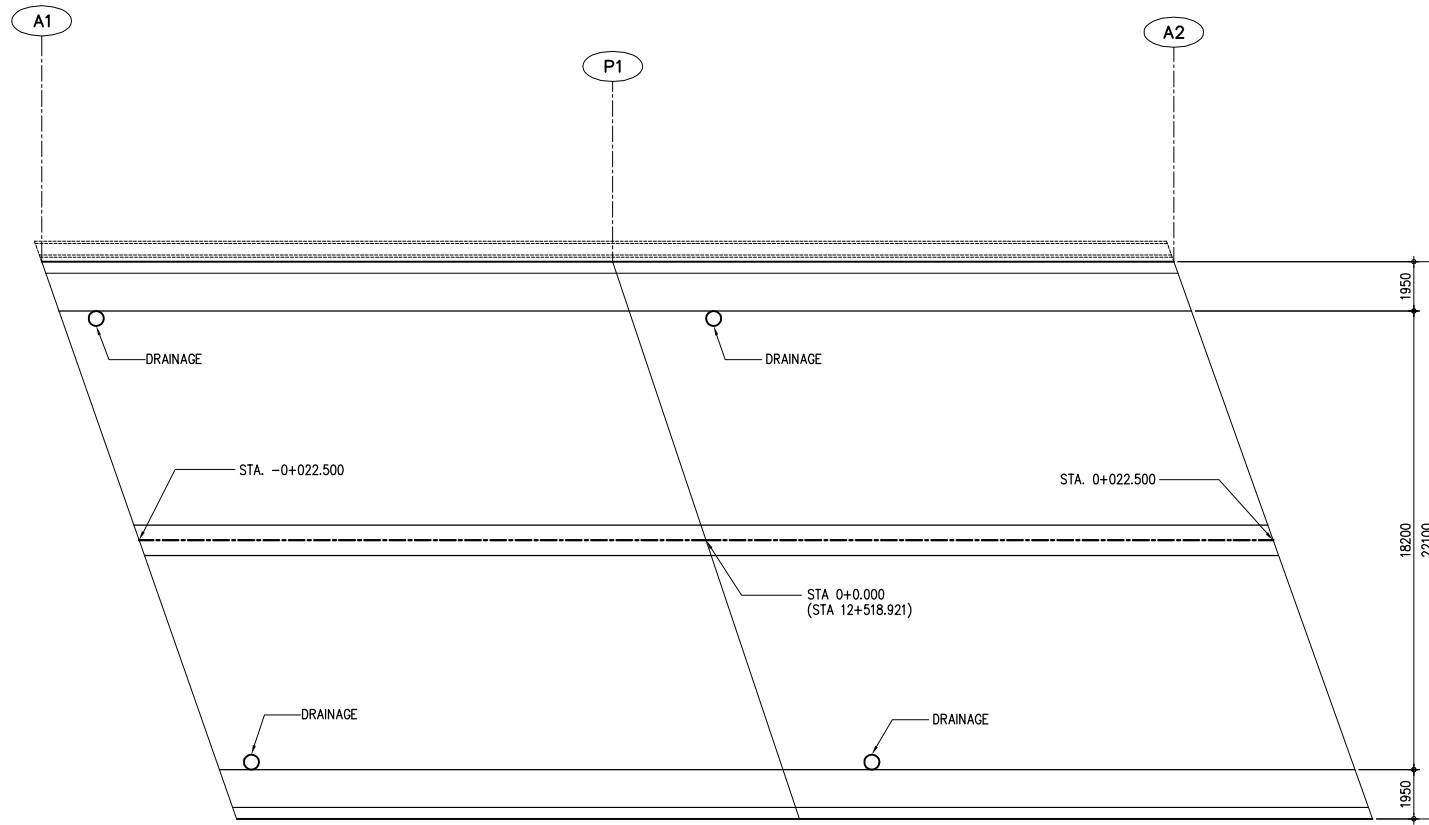


**1 DETAIL OF EXPANSION JOINT**  
SCALE AS SHOWN

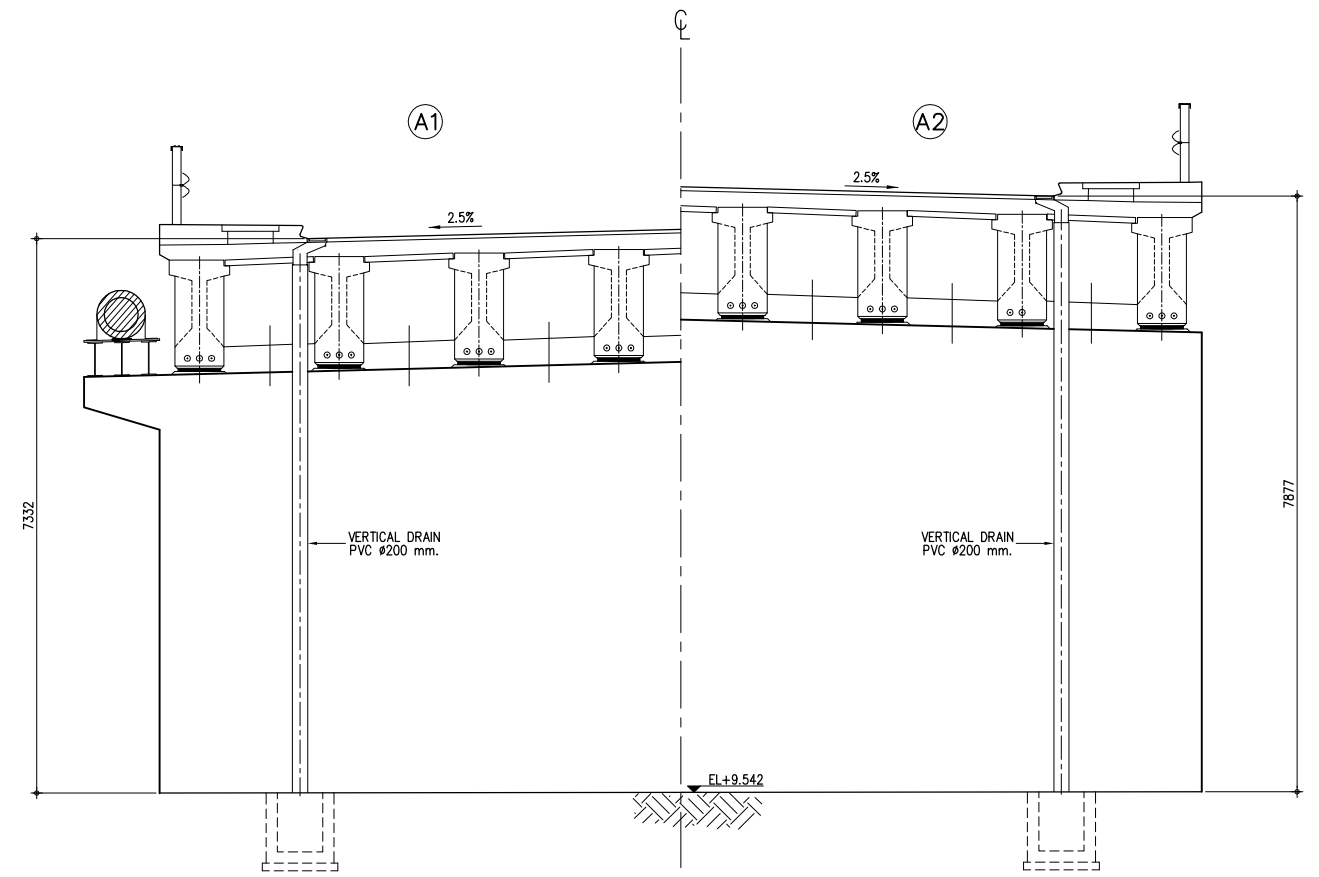


**2 ANCHORAGE DETAIL TYPICAL (MOVED AND FIXED)**  
SCALE AS SHOWN

# LAYOUT PLAN OF DRAINAGE (OB-11)



1 PLAN  
SCALE 1:150

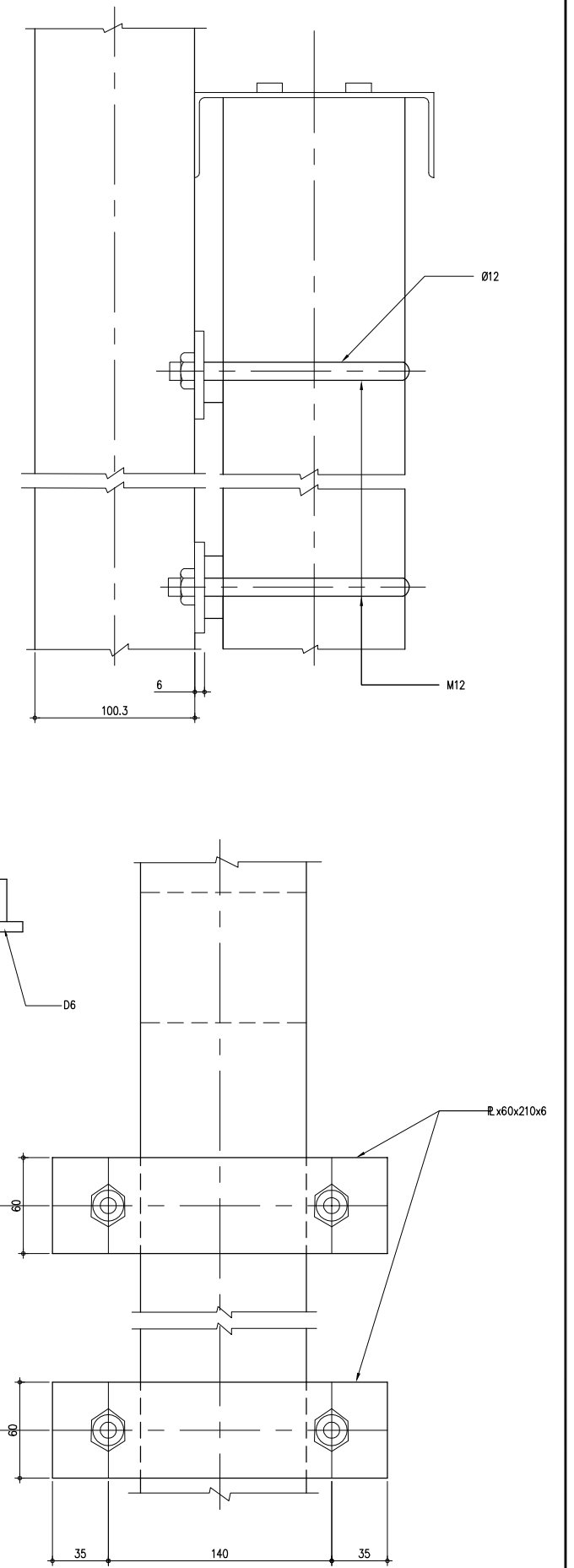
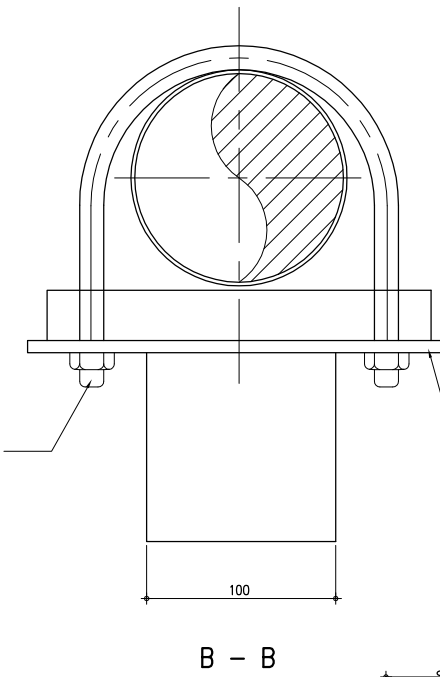
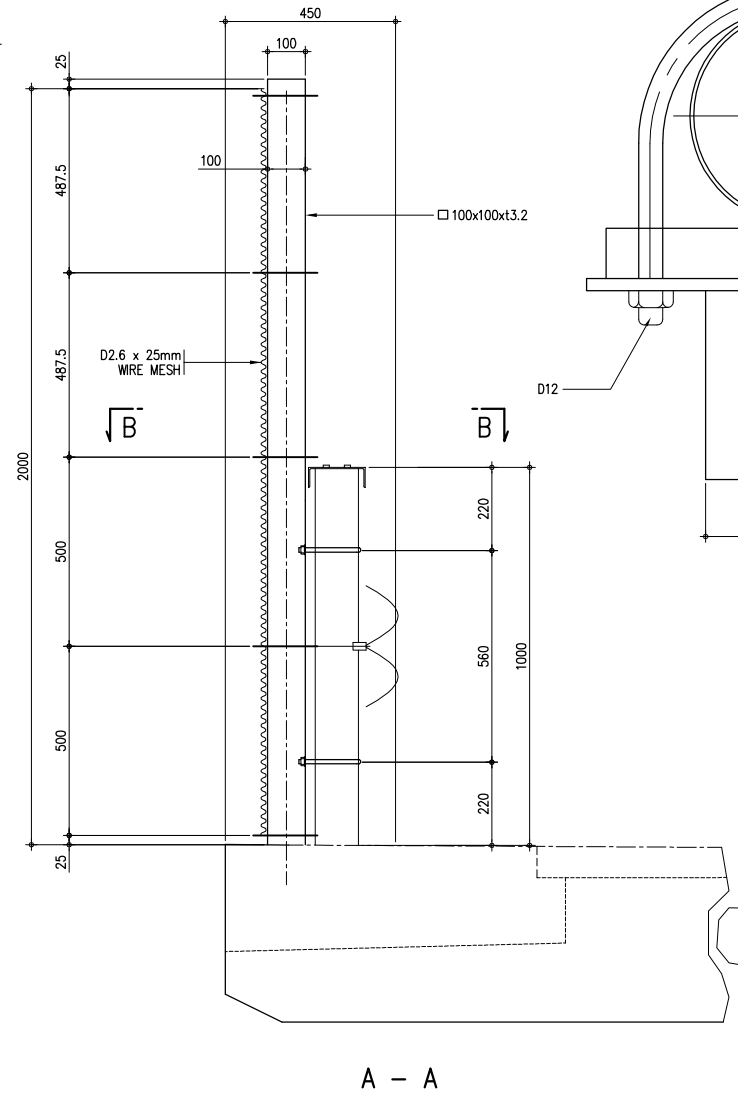
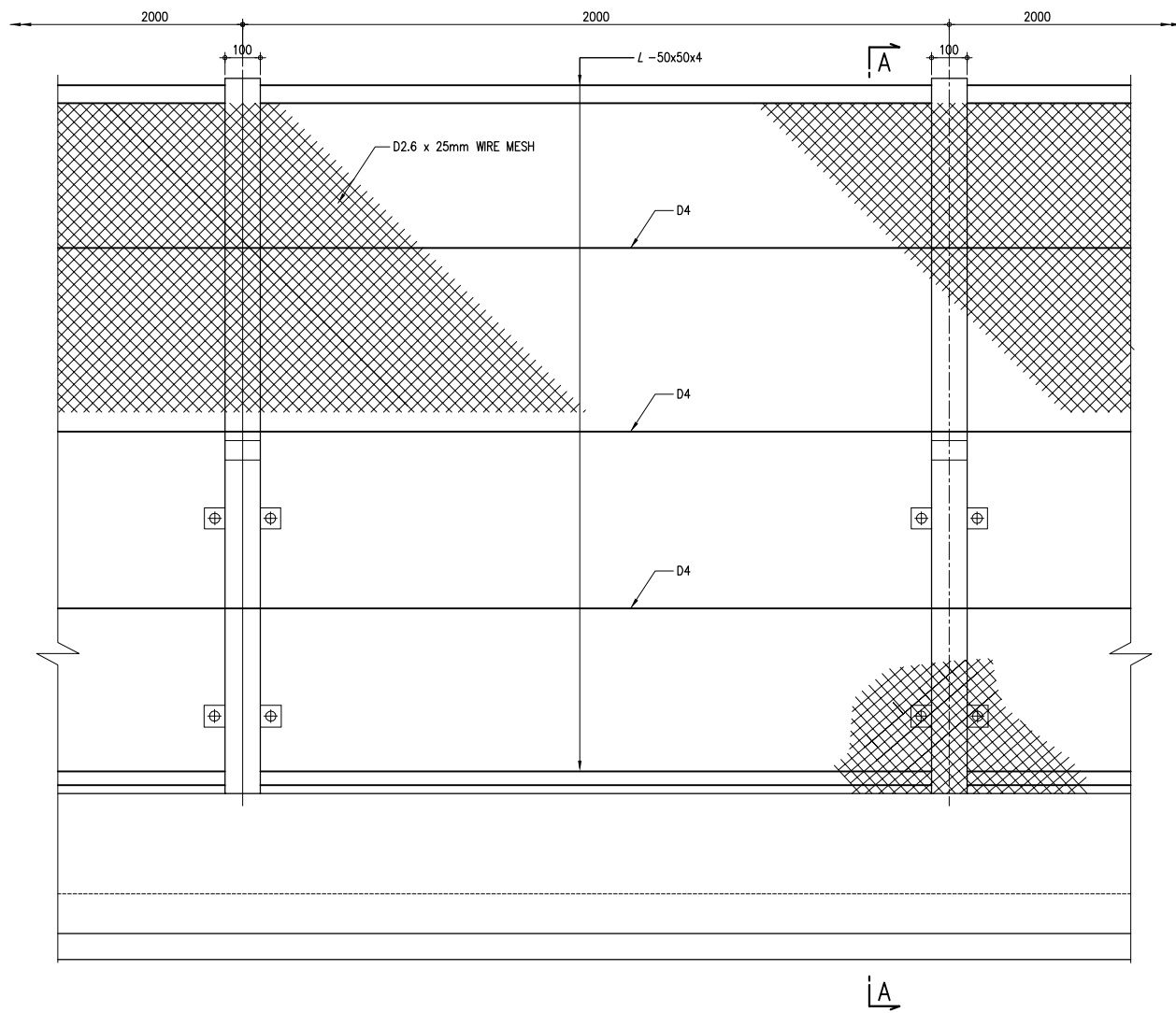
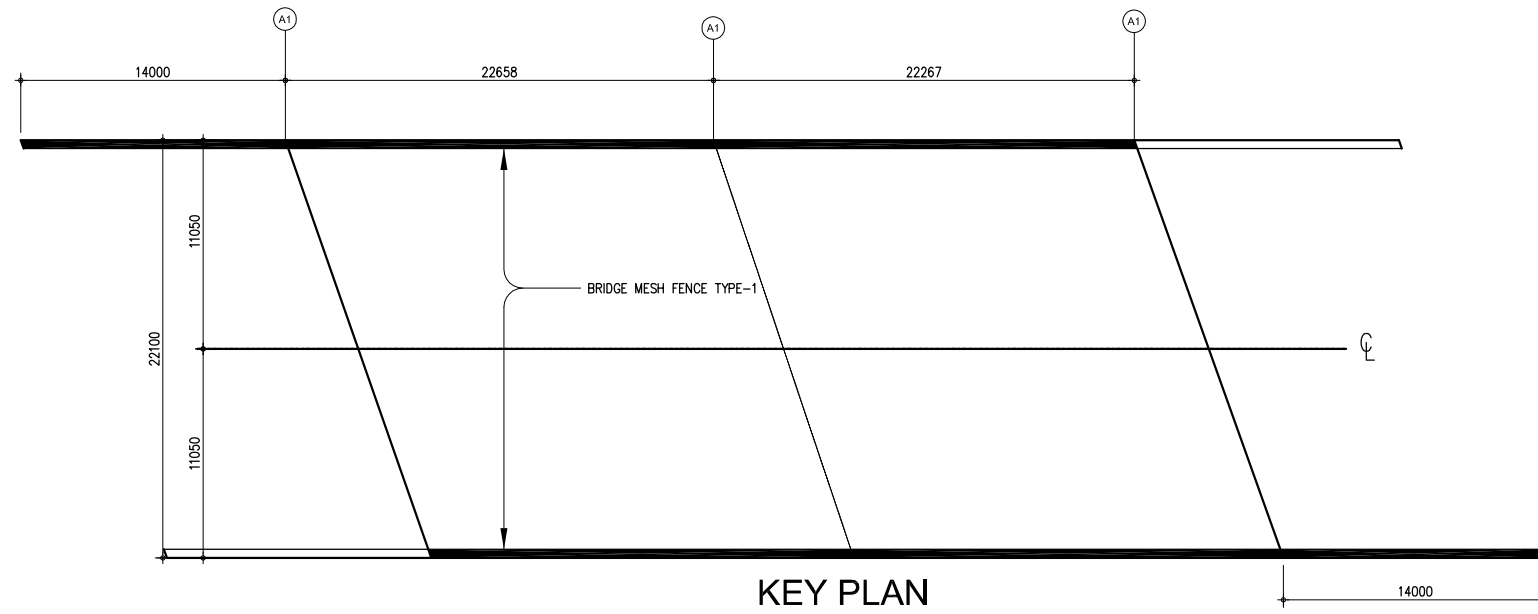


2 CROSS SECTION  
SCALE 1:50

No	REVISION	DATE

DESIGNED BY:	
CHECKED BY:	
APPROVED BY:	
DWG. NO.	K05-42

# BRIDGE MESH FENCE TYPE-1



No	REVISION	DATE