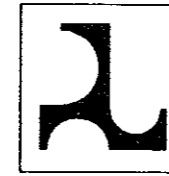




JAPAN INTERNATIONAL
COOPERATION AGENCY

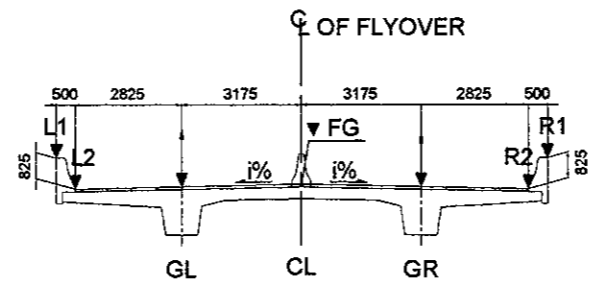
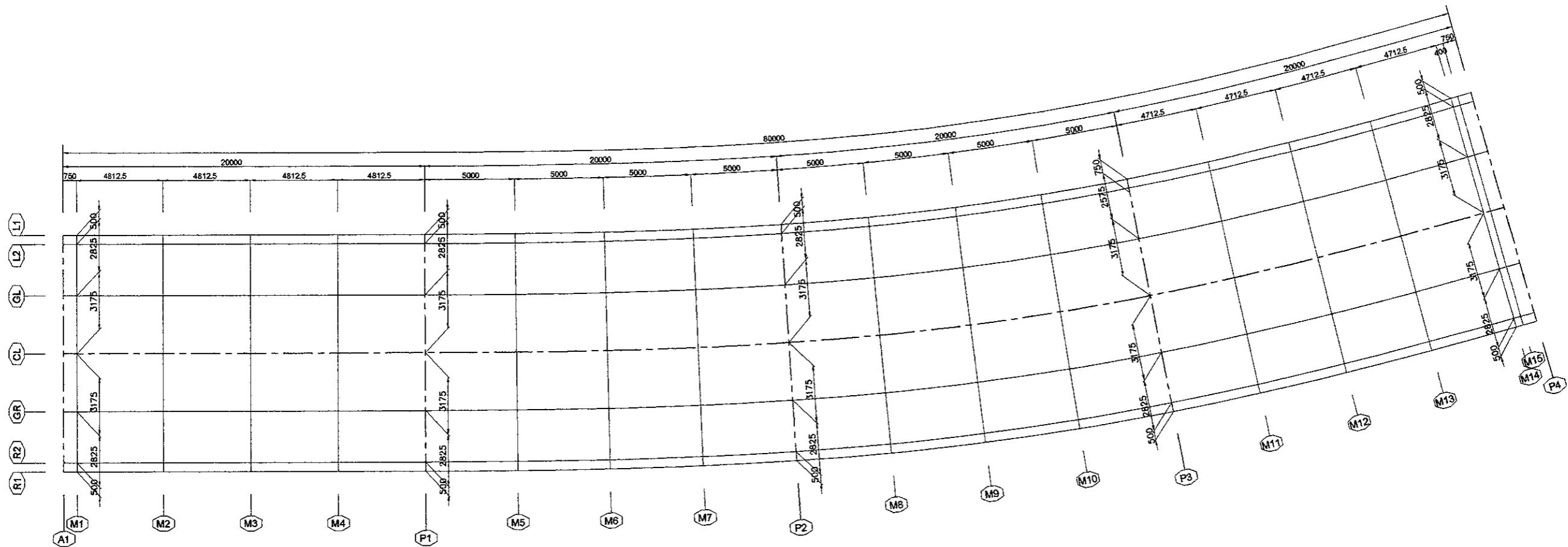


DIRECTORATE GENERAL OF HIGHWAY
MINISTRY OF PUBLIC WORKS
REPUBLIC OF INDONESIA

CONCRETE SUPERSTRUCTURE






KATAHIRA & ENGINEERS INTERNATIONAL



LIST OF COORDINATES

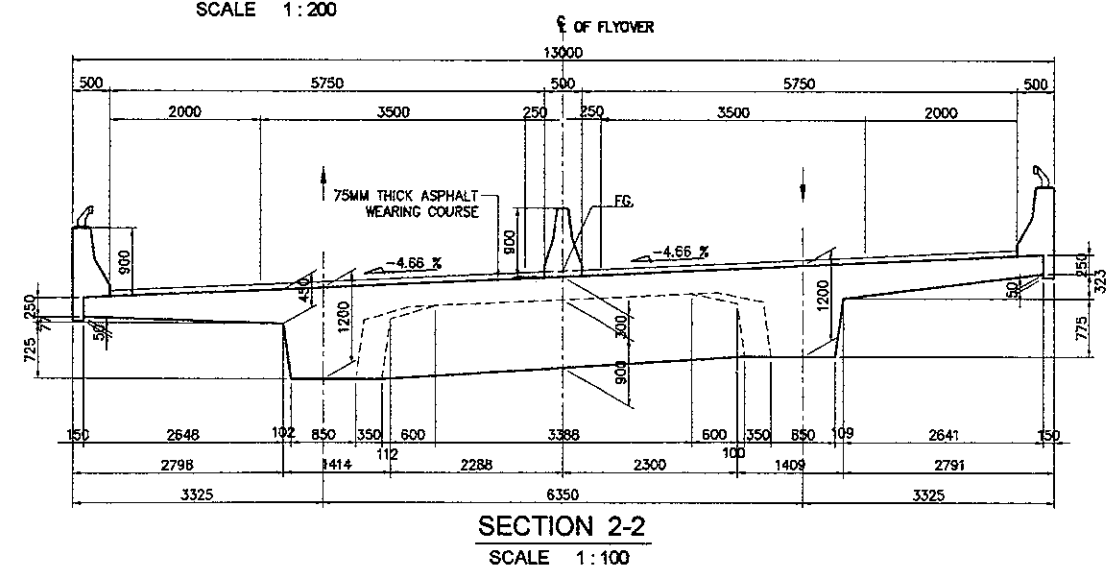
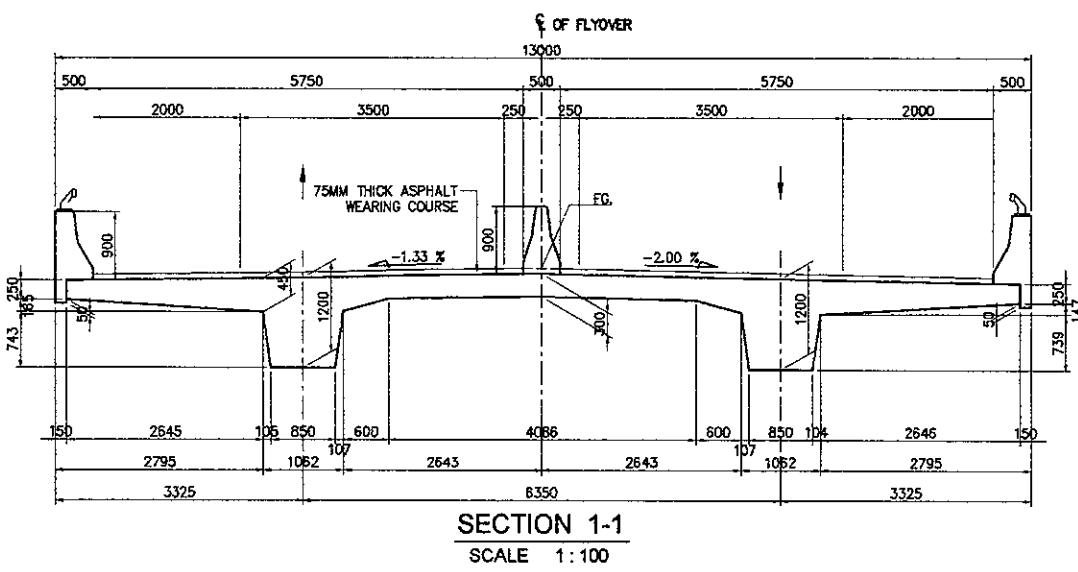
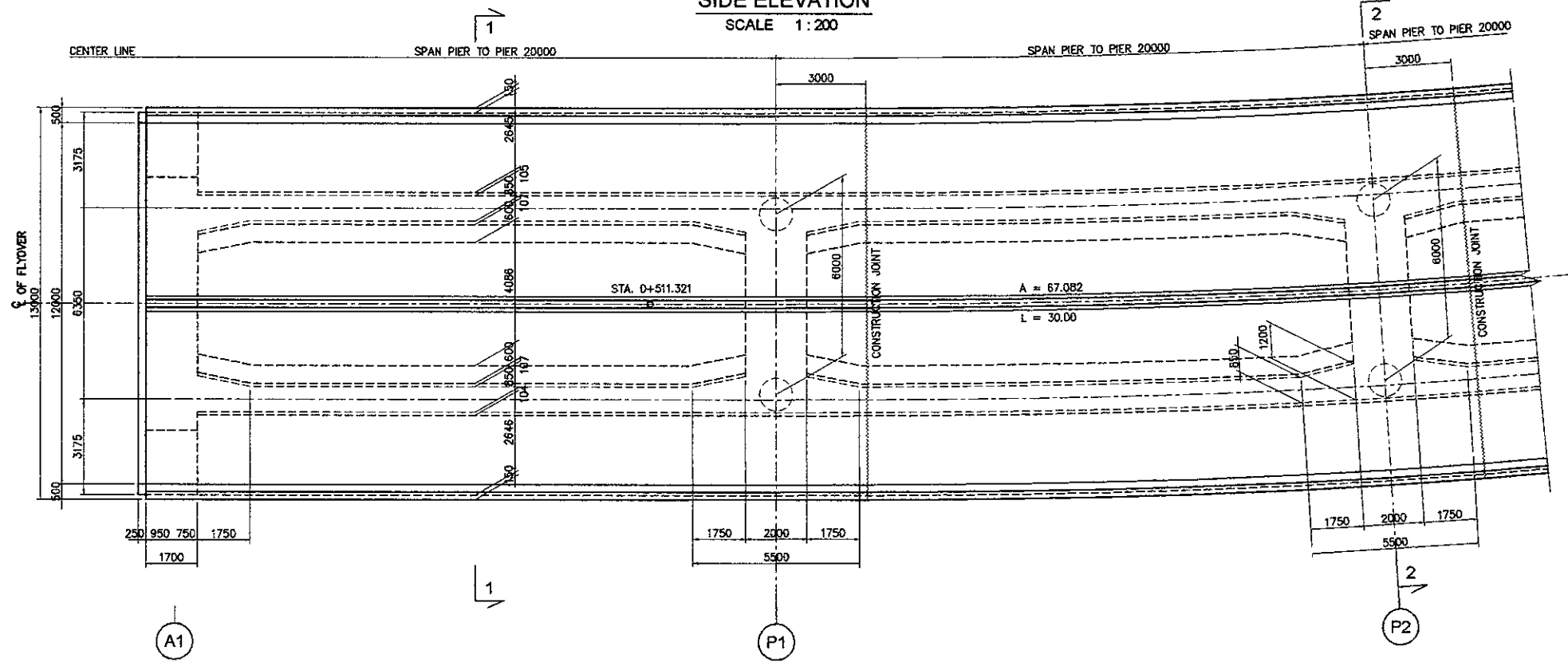
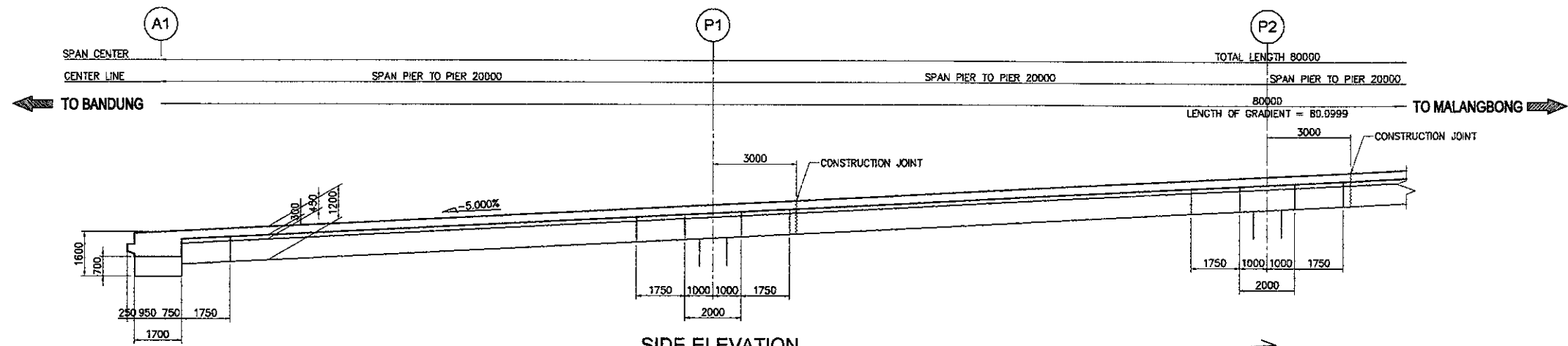
STA	A1	M1	M2	M3	M4	P1	M5	M6	M7	P2	M8	M9	M10	P3	M11	M12	M13	M14	M15	P4
LABEL	0+485.5000	0+498.2500	0+501.0825	0+505.8750	0+510.6875	0+515.5000	0+520.5000	0+525.5000	0+530.5000	0+535.5000	0+540.5000	0+545.5000	0+550.5000	0+555.5000	0+560.2125	0+564.9250	0+569.6375	0+574.3500	0+574.7500	0+575.5000
E	819456.8639	819457.5554	819461.9926	819466.4297	819470.8669	819475.2935	819479.6690	819484.4300	819488.9855	819493.5433	819498.1090	819502.6678	819507.3288	819511.9974	819516.4474	819520.9494	819525.4974	819530.0870	819531.2129	819531.2129
N	9222935.1457	9222934.8553	9222932.9921	9222931.1289	9222929.2657	9222927.4098	9222925.5164	9222923.6832	9222921.9350	9222919.2965	9222918.7923	9222917.4412	9222916.2438	9222915.2013	9222914.3515	9222913.6102	9222912.9572	9222912.3714	9222912.3240	9222912.2361
Z	865.7400	865.7775	866.0181	866.2588	866.4994	866.7400	866.9900	867.2400	867.4900	867.7400	867.9900	868.2400	868.4900	868.7400	868.9756	869.2113	869.4469	869.6825	869.7025	869.7400
E	819456.6703	819457.3618	819461.7990	819466.2362	819470.6733	819475.1008	819479.5279	819484.2467	819488.8109	819493.3800	819497.9598	819502.5646	819507.2116	819511.8965	819516.3603	819520.8736	819525.4307	819530.0268	819530.4186	819531.1539
N	9222934.6847	9222934.3943	9222932.5311	9222930.6678	9222928.8047	9222926.9484	9222925.0536	9222923.2180	9222921.4665	9222919.7200	9222918.3151	9222916.9592	9222915.7577	9222914.7116	9222913.8591	9222913.1160	9222912.4617	9222911.8750	9222911.8276	9222911.7396
Z	864.9150	864.9525	865.1931	865.4338	865.6744	865.9150	866.1650	866.4150	866.6650	866.9150	867.1650	867.4150	867.6650	867.9150	868.1506	868.3863	868.6219	868.8575	868.8775	868.9150
E	819455.5786	819456.2681	819460.7052	819465.1424	819469.5796	819474.0122	819478.6104	819483.2115	819487.8245	819492.4577	819497.1170	819501.8119	819506.5500	819511.3266	819515.8681	819520.4457	819525.0533	819529.6864	819530.0806	819530.8204
N	9222932.0800	9222931.7896	9222929.9264	9222928.0632	9222926.2000	9222924.3416	9222922.4388	9222920.5895	9222918.8193	9222917.1537	9222915.6187	9222914.2363	9222913.0112	9222911.9446	9222911.0773	9222910.3236	9222909.6620	9222909.0706	9222909.0229	9222908.9344
Z	864.9715	865.0090	865.2496	865.4903	865.7309	865.9715	866.2215	866.4715	866.7215	866.9715	867.2215	867.4715	867.7215	867.9715	868.2071	868.4428	868.6784	868.9140	868.9340	868.9715
E	819454.3473	819455.0388	819459.4760	819463.9132	819468.3504	819472.7886	819477.4086	819482.0479	819486.7160	819491.4210	819496.1698	819500.9660	819505.8066	819510.6862	819515.3148	819519.9646	819524.6292	819529.3038	819529.7009	819530.4456
N	9222929.1526	9222928.8622	9222926.9990	9222925.1358	9222923.2726	9222921.4119	9222919.5000	9222917.6354	9222915.8441	9222914.1527	9222912.5883	9222911.1761	9222909.9245	9222908.8349	9222907.9509	9222907.1852	9222906.5155	9222905.9187	9222905.8707	9222905.7816
Z	865.0350	865.0725	865.3131	865.5538	865.7944	866.0350	866.2850	866.5350	866.7850	867.0350	867.2850	867.5350	867.7850	868.0350	868.2706	868.5063	868.7419	868.9775	868.9975	869.0350
E	819453.1181	819453.8096	819458.2468	819462.6840	819467.1211	819471.5551	819476.2069	819480.8844	819485.6074	819490.3844	819495.2226	819500.1201	819505.0631	819510.0457	819514.7617	819519.4836	819524.2052	819528.9212	819529.3211	819530.0708
N	9222926.2252	9222925.9348	9222924.0716	9222922.2084	9222920.3452	9222918.4821	9222916.5612	9222914.6813	9222912.8689	9222911.1517	9222909.5579	9222908.1159	9222906.8378	9222905.7252	9222904.8245	9222904.0469	9222903.3689	9222902.7669	9222902.7185	9222902.6288
Z	864.9715	865.0090	865.2496	865.4903	865.7309	865.9715	866.2215	866.4715	866.7215	866.9715	867.2215	867.4715	867.7215	867.9715	868.2071	868.4428	868.6784	868.9140	868.9340	868.9715
E	819452.0244	819452.7159	819457.1531	819461.5902	819466.0274	819470.4764	819474.9276	819479.4811	819484.0210	819488.5621	819493.1098	819497.6798	819502.2660	819506.8631	819511.4664	819516.0707	819520.6807	819525.2912	819529.9000	819529.7373
N	9222923.6205	9222923.3301	9222921.4669	9222919.6037	9222917.7405	9222915.8753	9222913.9464	9222912.0526	9222910.2217	9222908.4815	9222906.8615	9222905.3930	9222904.0913	9222902.9582	9222902.0427	9222901.2545	9222900.5692	9222899.9624	9222899.9138	9222899.8235
Z	864.9150	864.9525	865.1931	865.4338	865.6744	865.9150	866.1650	866.4150	866.6650	866.9150	867.1650	867.4150	867.6650	867.9150	868.1506	868.3863	868.6219	868.8575	868.8775	868.9150
E	819451.8308	819452.5223	819456.9595	819461.3967	819465.8338	819470.2837	819474.8483	819479.6659	819484.4464	819489.2988	819494.2306	819499.2342	819504.2845	819509.3750	819514.1823	819518.9799	819523.7610	819528.5205	819528.9234	819529.6782
N	9222923.1595	9222922.8691	9222921.0058	9222918.1427	9222917.2795	9222915.4139	9222913.4836	9222911.5876	9222909.7532	9222908.0089	9222906.3843	9222904.9111	9222903.6052	9222902.4685	9222901.5503	9222900.7603	9222899.0737	9222898.4661	9222898.4174	9222898.3270
Z	865.7400	865.7775	866.0181	866.2588	866.4994	866.7400	866.9900	867.2400	867.4900	867.7400	867.9900	868.2400	868.4900	868.7400	868.9756	869.2113	869.4469	869.6825	869.7025	869.7400

 AN INTERNATIONAL COOPERATION AGENCY  KATAHIRA & ENGINEERS INTERNATIONAL	DESIGNED BY		CHECKED BY		SUBMITTED BY		 REPUBLIC OF INDONESIA MINISTRY OF PUBLIC WORKS DIRECTORATE GENERAL OF HIGHWAYS	PROJECT AND LOCATION :		SCALE :	DRAWING TITLE :	DRAWING NO. :		
	Name	H. HONDA	Name	T. OKUMURA	Name	M. KIUCHI		DETAILED DESIGN STUDY OF NORTH JAVA CORRIDOR FLYOVER PROJECT NAGREG FLYOVER - CONTRACT PACKAGE 2 (NAGREG - GEBANG) WEST JAVA PROVINCE		NOT TO SCALE	QUANTITIES SUMMARY FOR PC SUPERSTRUCTURE A1~P4, P8~A2	NCL-002		
	Sign		Sign		Sign			APPROVED BY		Ir. HERRY VAZA M,Eng.Sc NIP. : 110038400		Sign		SHEET NO. :
	Date		Date		Date			Date				Date		02 / 22

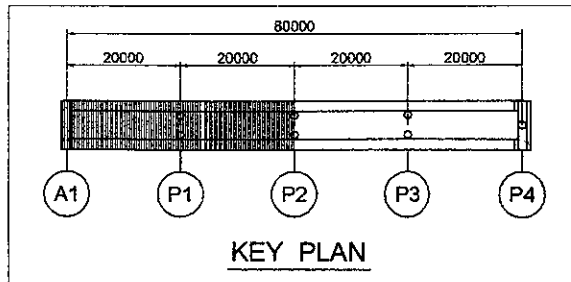
QUANTITY SUMMARY FOR PC SUPERSTRUCTURE

NO.		UNIT	QUANTITY	NOTES
1	CONCRETE $f_c = 35$ MPa	m ³	810.76	
2	PC CABLE DECK SLAB	kg	5,867.56	
3	DEAD END ANCHORAGE PC DECK SLAB	pcs	186	
4	STRESSING ANCHORAGE PC DECK SLAB	pcs	186	
5	PC CABLE PPC GIRDER	kg	15,628.96	
6	DEAD END ANCHORAGE PPC GIRDER	pcs	28	
7	STRESSING ANCHORAGE PPC GIRDER	pcs	28	
8	COUPLER	pcs	32	
9	REBAR	ton	-	
10	WATERPROOFING	m ²		
11	PAVEMENT	m ²	-	HIGHWAY PORTION

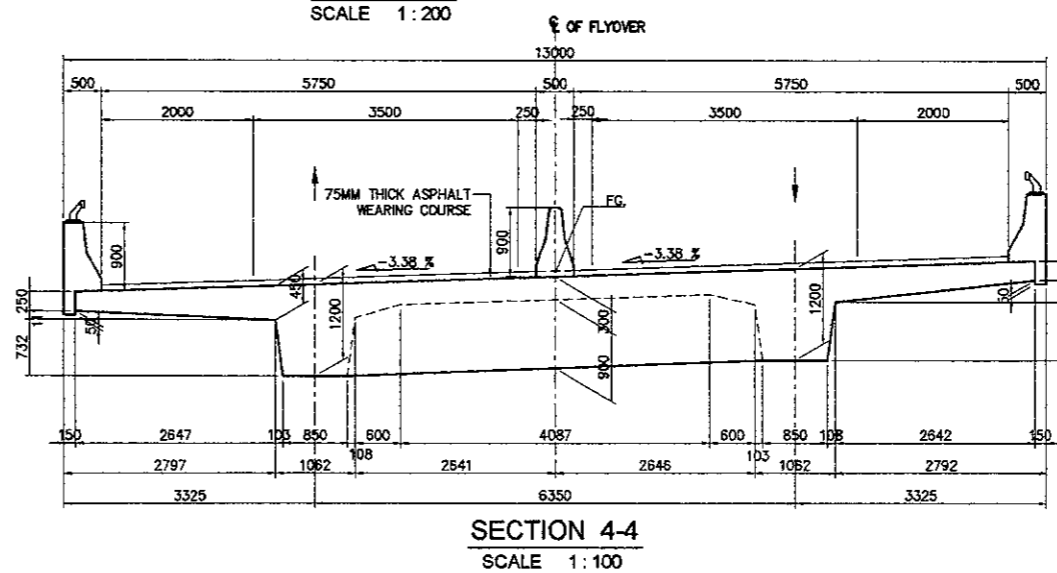
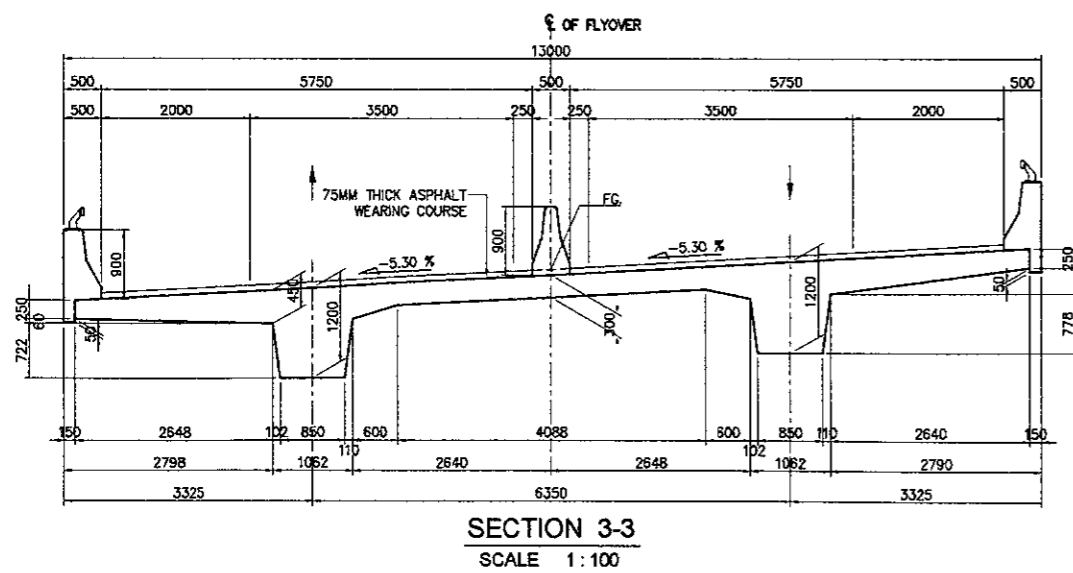
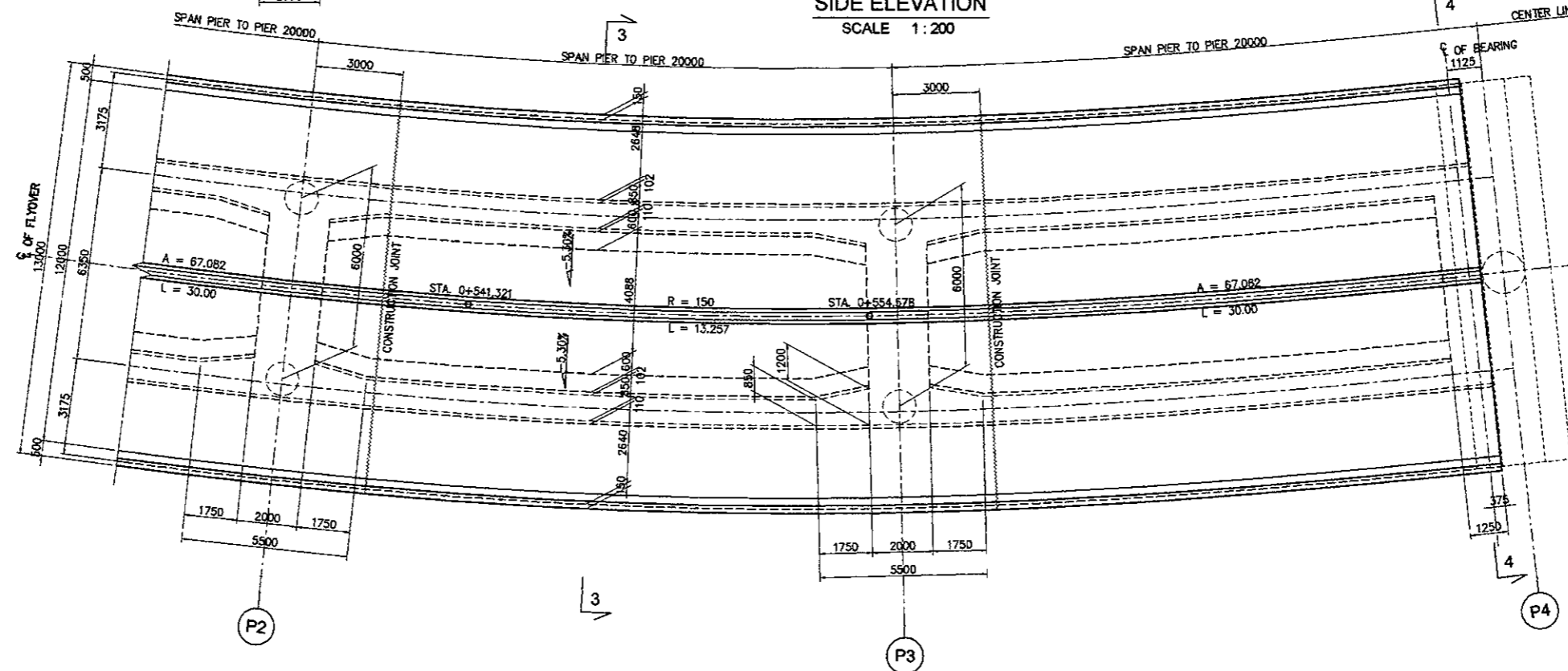
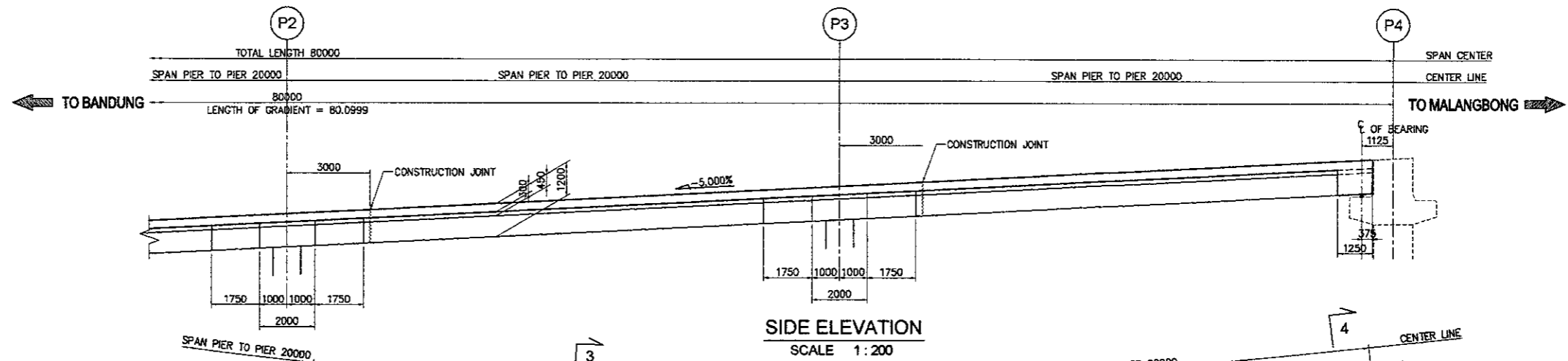
DESIGNED BY	CHECKED BY	SUBMITTED BY
Name: H. HONDA	Name: T. OKUMURA	Name: M. KIUCHI
Sign	Sign	Sign
Date	Date	Date



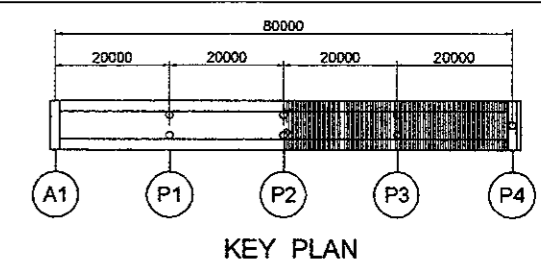
- NOTES :**
- All dimension are in mm unless noted otherwise
 - Concrete Girder and Slab $f_c' = 35$ MPa
 - All Reinforcing steel shall be BJTD 40 or ASTM A615 Grade 60 deformed bars.
 - The Contractor shall be responsible to carry out the following before Construction :
 - Verification of all elevations and dimensions, using actual field survey.
 - Preparation and submission of shop drawings for all bridge components for the Engineer's approval.

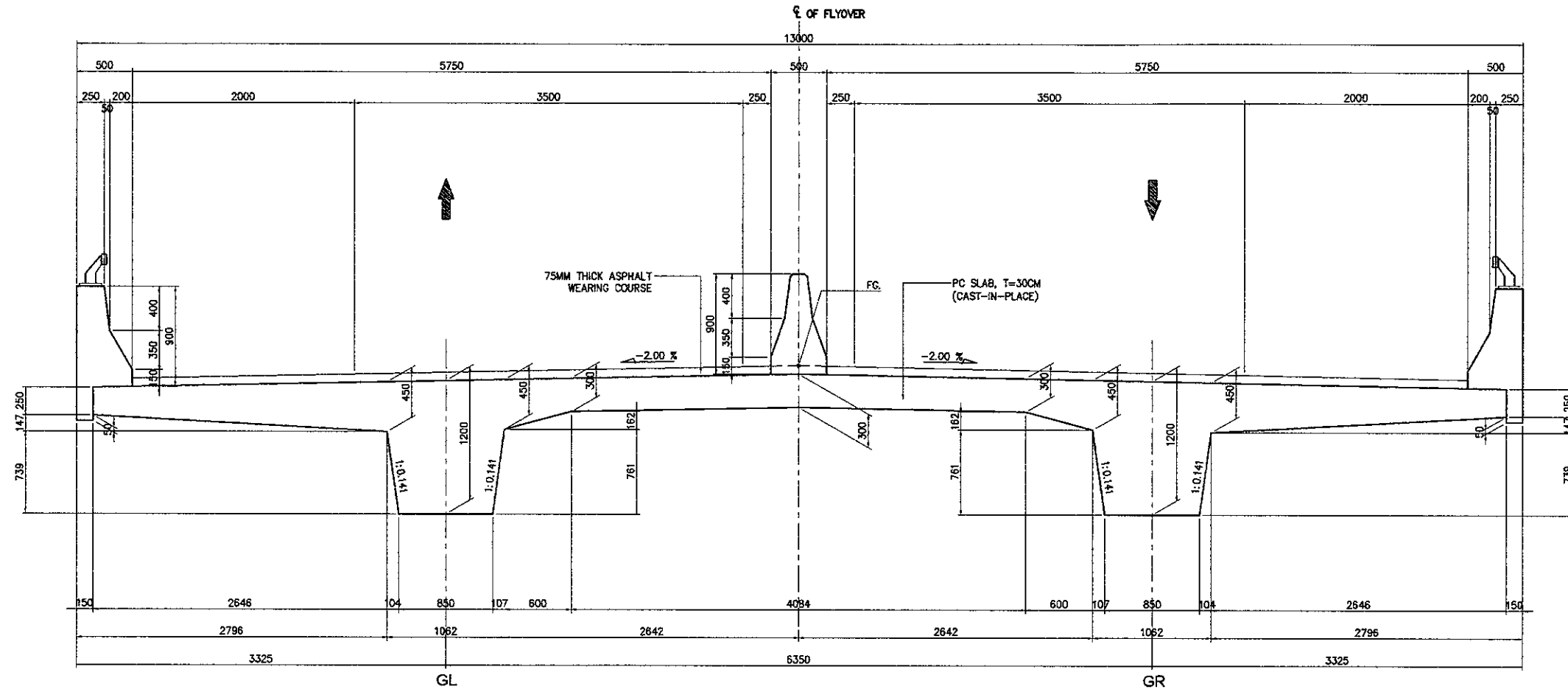


DESIGNED BY	CHECKED BY	SUBMITTED BY
Name: H. HONDA	Name: T. OKUMURA	Name: M. KIUCHI
Sign: _____	Sign: _____	Sign: _____
Date: _____	Date: _____	Date: _____



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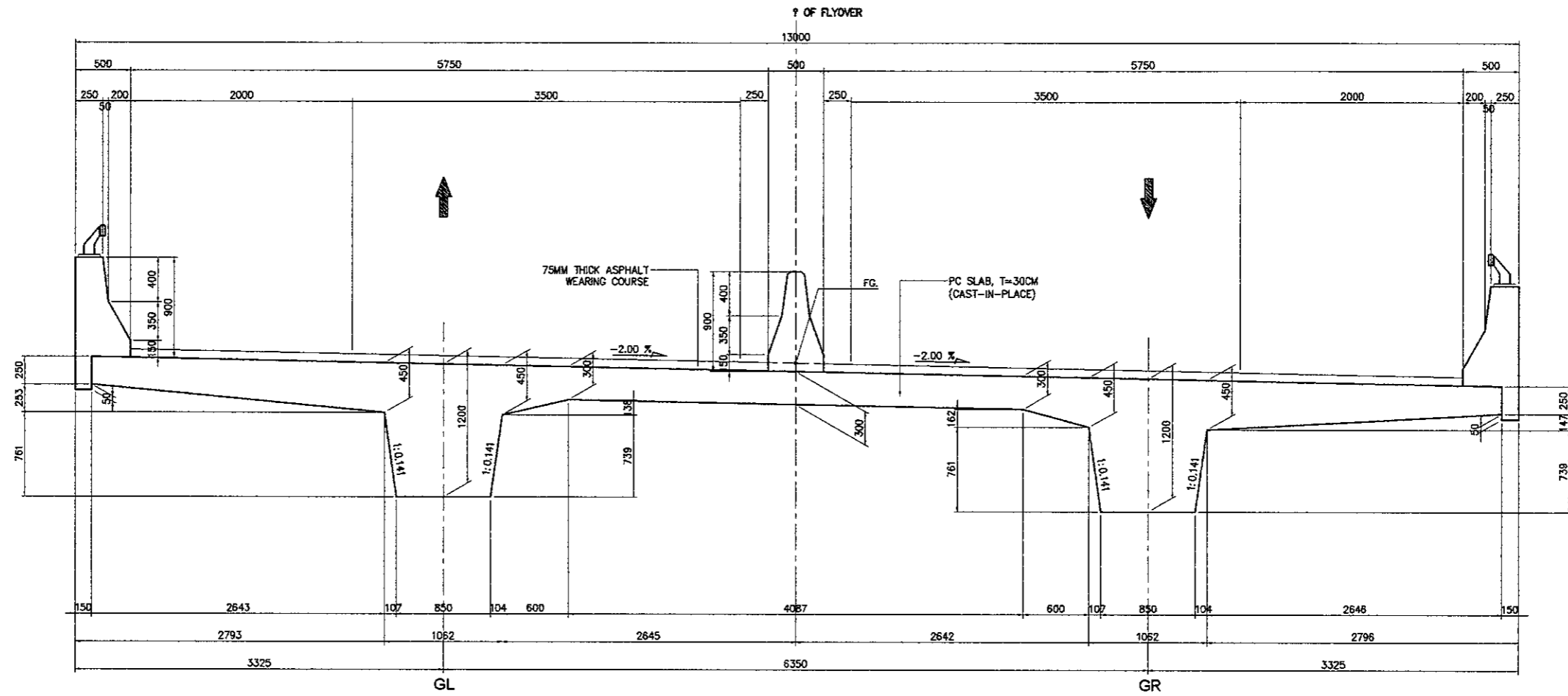




INFORMATION OF PC SUPERSTRUCTURE

	A1	P1	P2	P3	P4
FG.	885.035	866.035	867.035	868.035	868.979
Super Elev. GL	0.000%	-2.532%	-4.661%	-5.208%	-3.478%
Super Elev. GR	0.000%	2.532%	4.661%	5.208%	3.478%
Top Slab Girder GL	864.960	865.880	866.812	867.795	868.793
Top Slab Girder GR	864.960	865.040	867.108	868.125	869.014
Bottom GL	863.285	864.805	865.537	866.520	867.518
Bottom GR	863.285	864.785	865.833	866.850	867.739
Station	0+495.500	0+515.500	0+535.500	0+555.500	0+574.375

TYPICAL CROSS SECTION
 (Span Length = 20 M)
 SCALE : 1 : 50



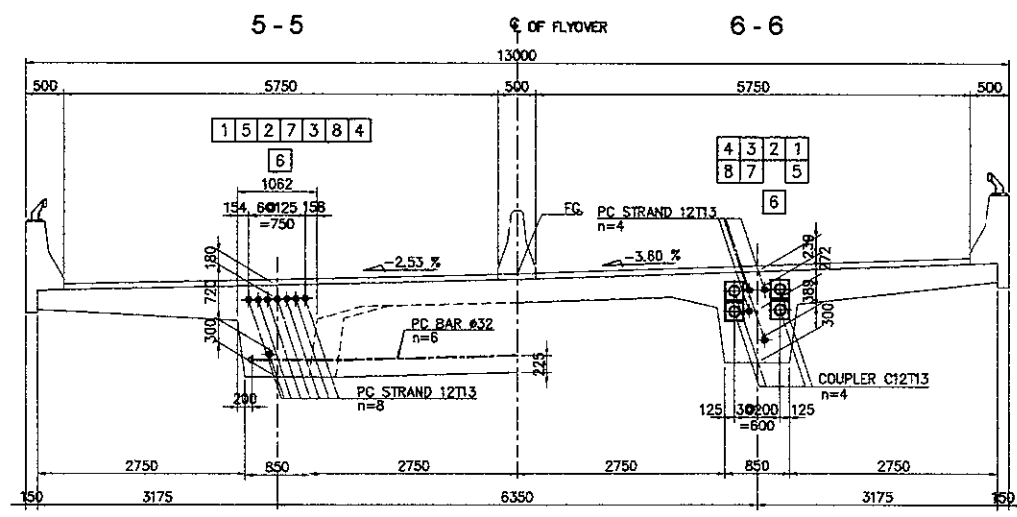
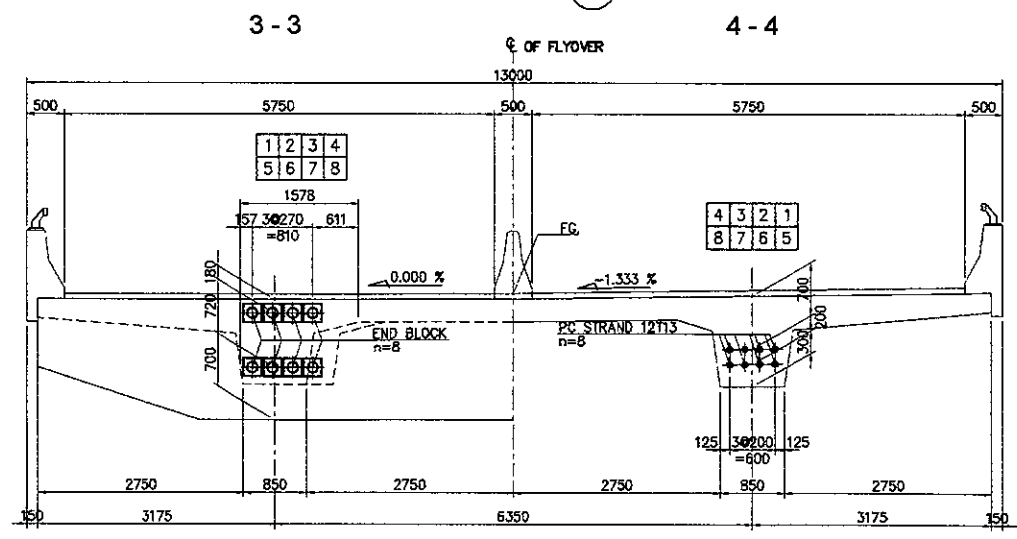
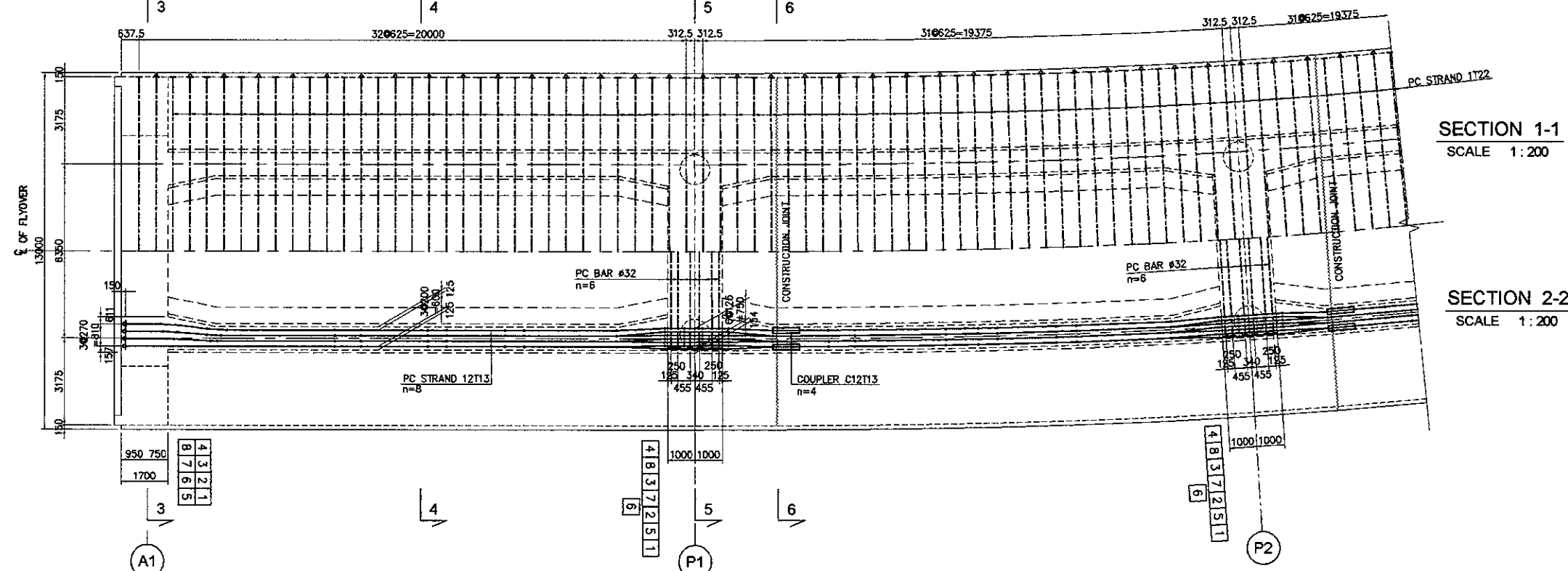
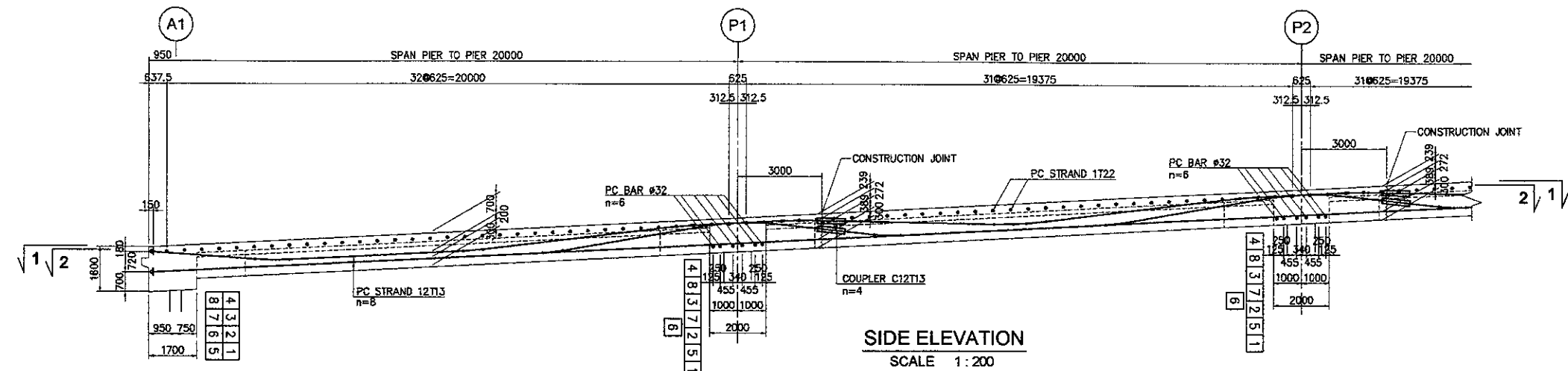
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Station	0+495.500	0+515.500	0+535.500	0+555.500	0+574.375

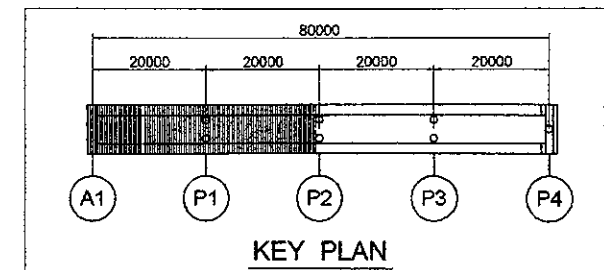
TYPICAL CROSS SECTION
 (Span Length = 20 M)

SCALE : 1 : 50

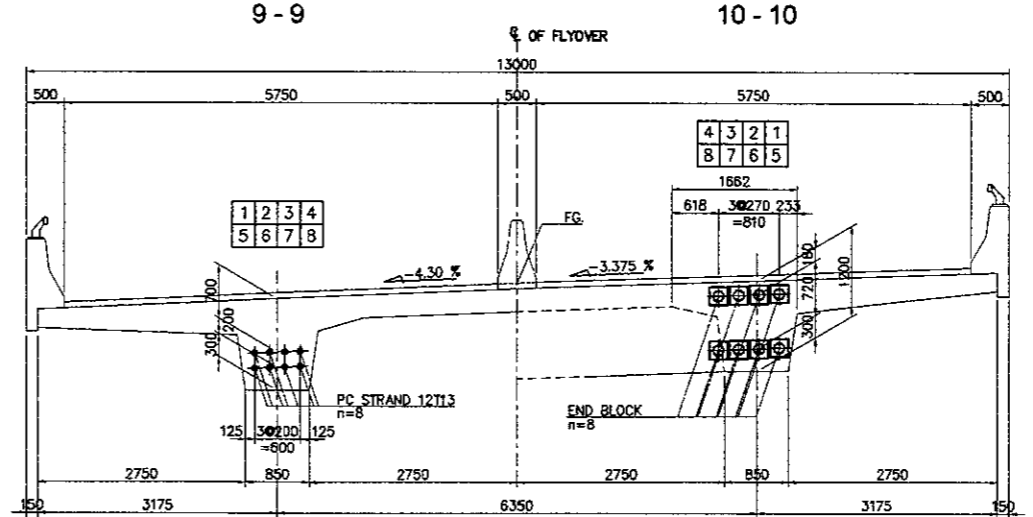
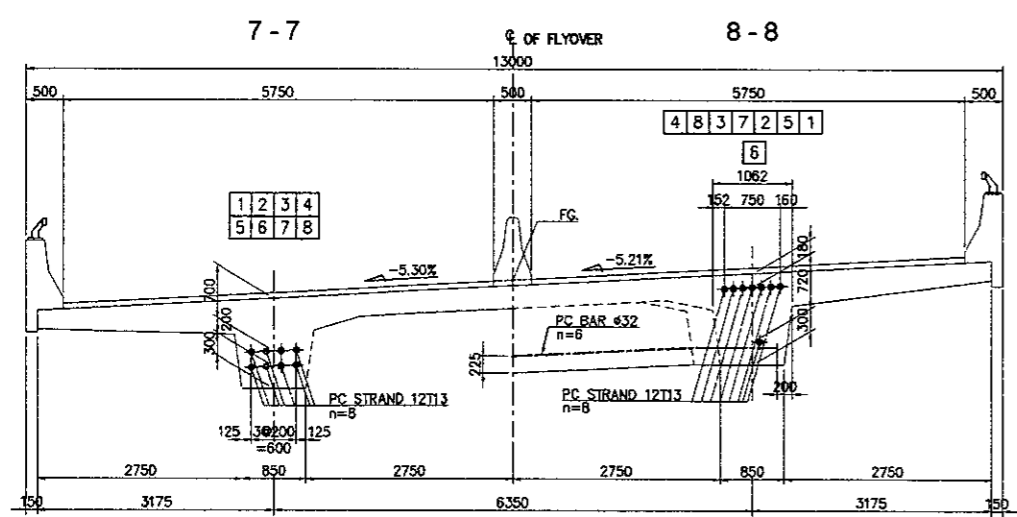
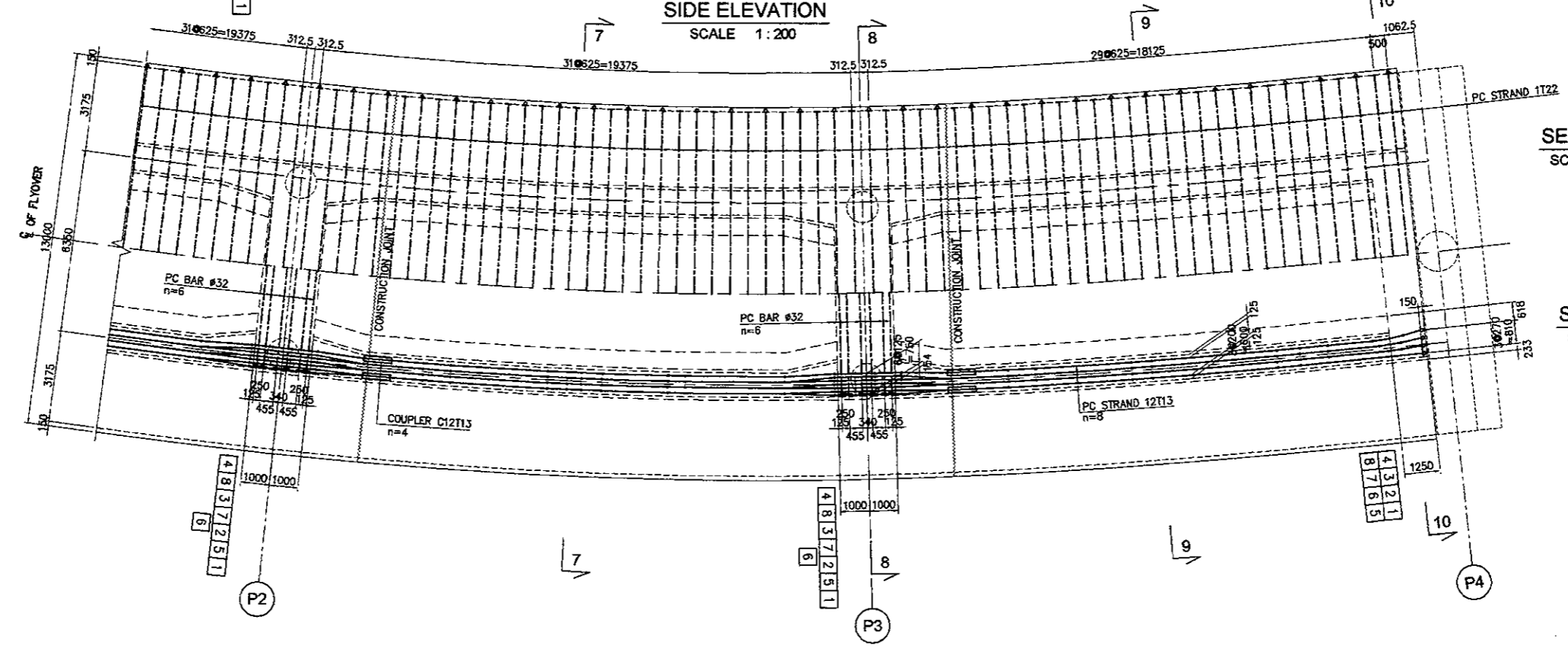
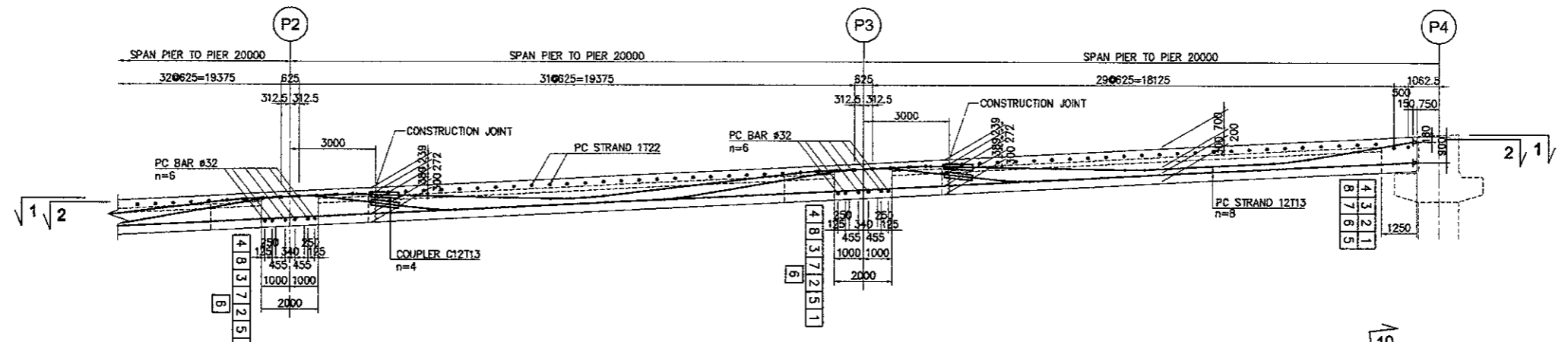
DESIGNED BY		CHECKED BY		SUBMITTED BY	
Name	H. HONDA	Name	T. OKUMURA	Name	M. KIUCHI
Sign		Sign		Sign	
Date		Date		Date	



- NOTES :**
- All dimension are in mm unless noted otherwise.
 - Prestressing Tendon Shall be 12T13 (7 WIRE STRAND).
 . Nominal Diameter 12.7mm.
 - Shows Bending Point Of Prestressing Cable.
- Stressing Anchorage
 Dead End Anchorage

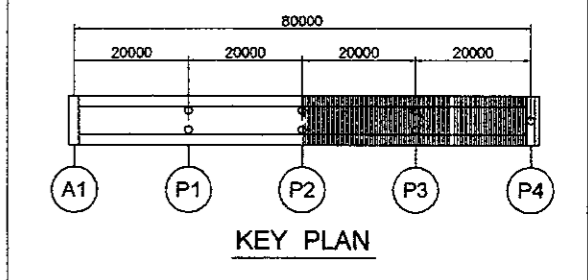


DESIGNED BY		CHECKED BY		SUBMITTED BY	
Name	H. HONDA	Name	T. OKUMURA	Name	M. KIUCHI
Sign		Sign		Sign	
Date		Date		Date	

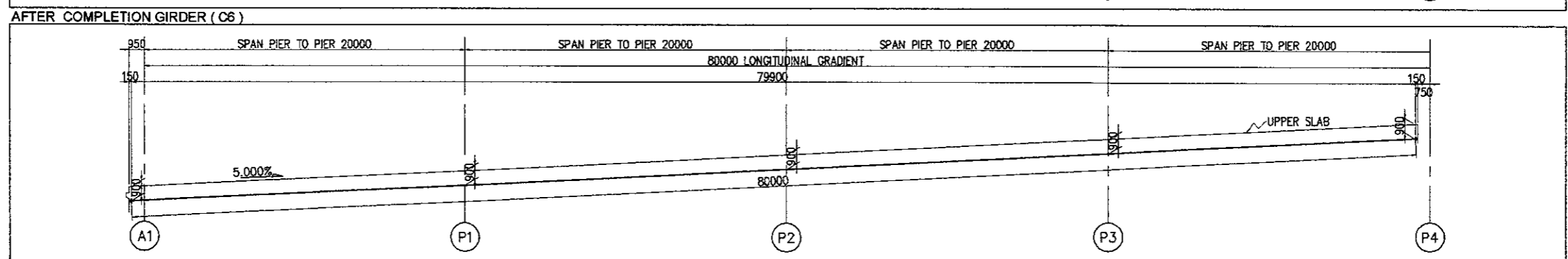
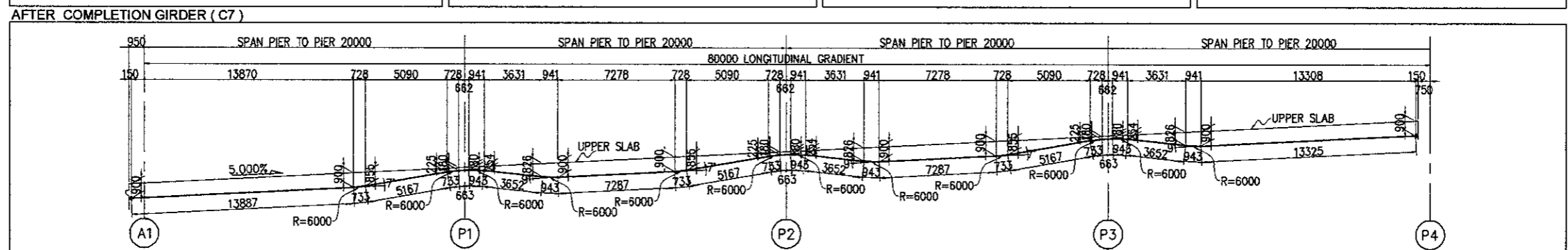
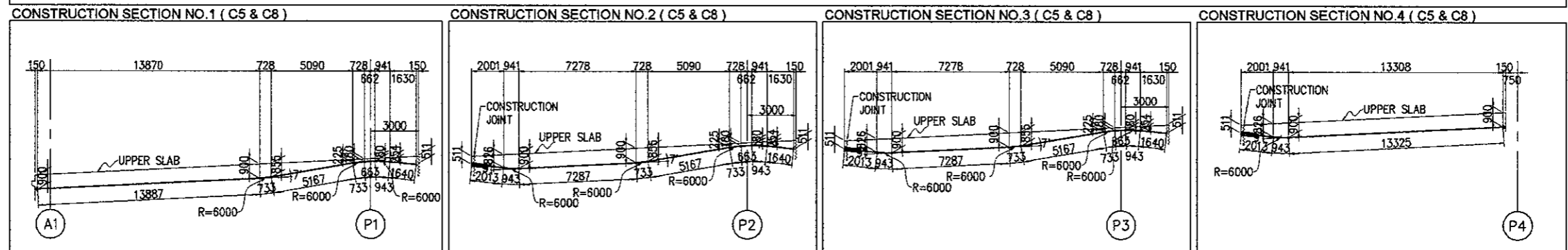
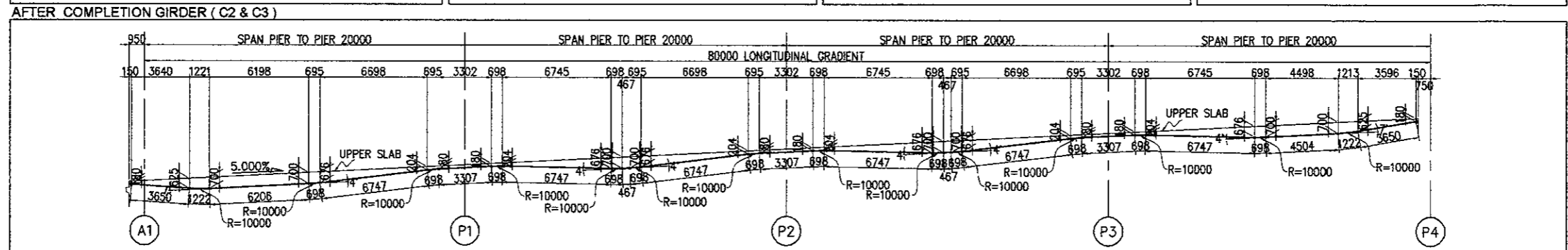
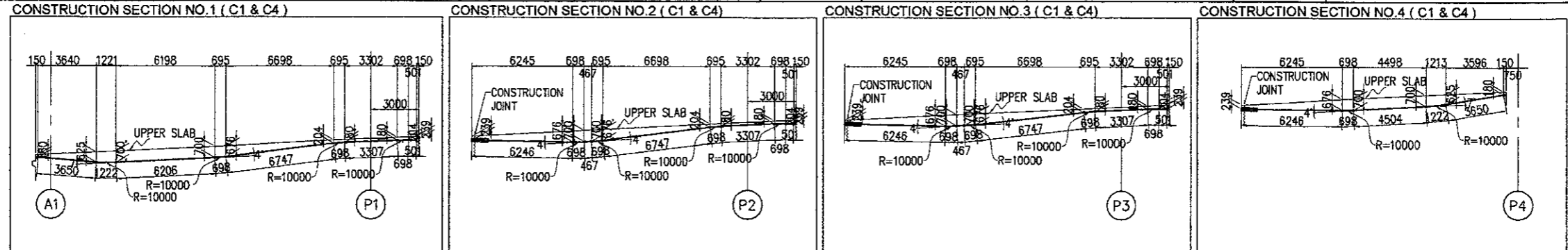


CROSS SECTION
 SCALE 1 : 100

- NOTES :**
- All dimension are in mm unless noted otherwise.
 - Prestressing Tendon Shall be 12T13 (7 WIRE STRAND). Nominal Diameter 12.7mm.
 - Shows Bending Point Of Prestressing Cable.
- Stressing Anchorage
 Dead End Anchorage

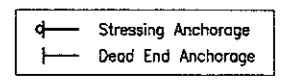


DESIGNED BY	CHECKED BY	SUBMITTED BY
Name: H. HONDA	Name: T. OKUMURA	Name: M. KIUCHI
Sign:	Sign:	Sign:
Date:	Date:	Date:

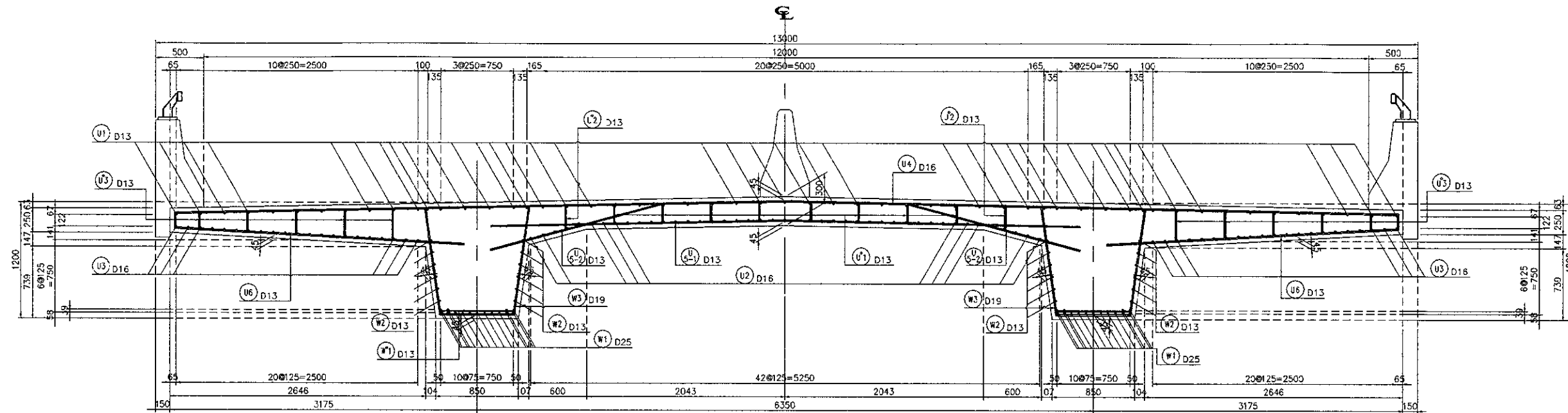


PC CABLES SCHEDULE A1 - P4
 SCALE : NON

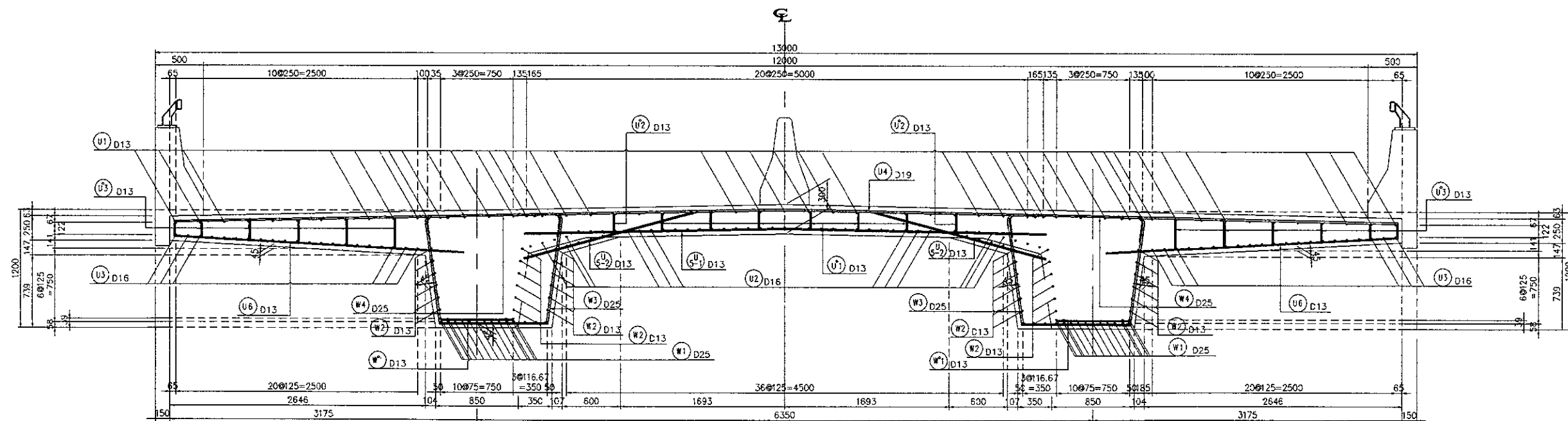
- NOTES :
- All dimension are in mm unless noted otherwise
 - Prestressing Tendon Shall be 12T13 (7 WIRE STRAND)
 Nominal Diameter 12.7mm
 - Shows Bending Point Of Prestressing Cable



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

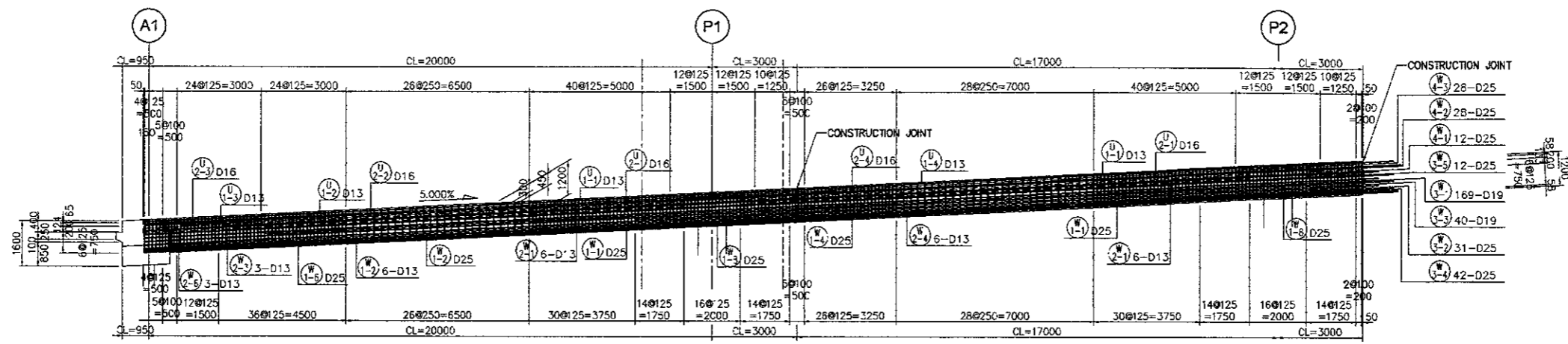


SECTION AT MID SPAN
 SCALE 1:50

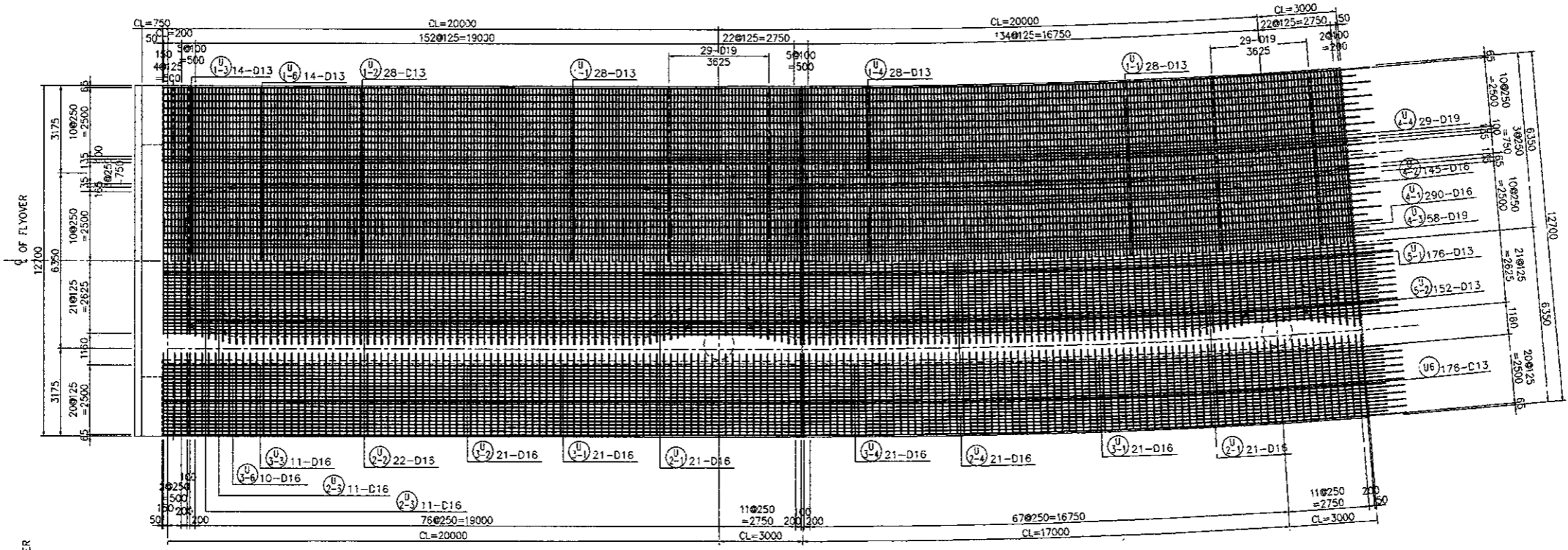


SECTION AT PIER
 SCALE 1:50

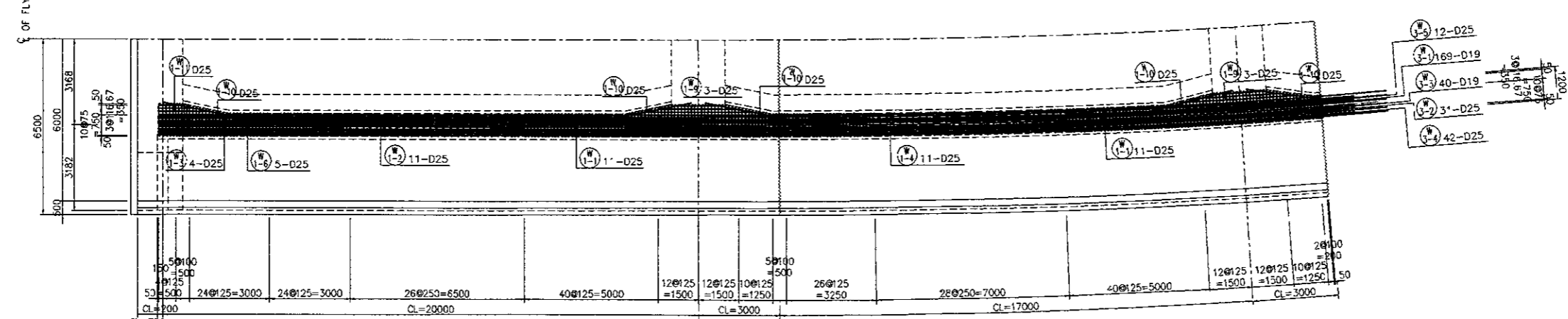
DESIGNED BY	CHECKED BY	SUBMITTED BY
Name H.HONDA	Name T. OKUMURA	Name M. KIUCHI
Sign	Sign	Sign
Date	Date	Date



SECTION SPAN A1-P2
 SCALE : 1 : 200

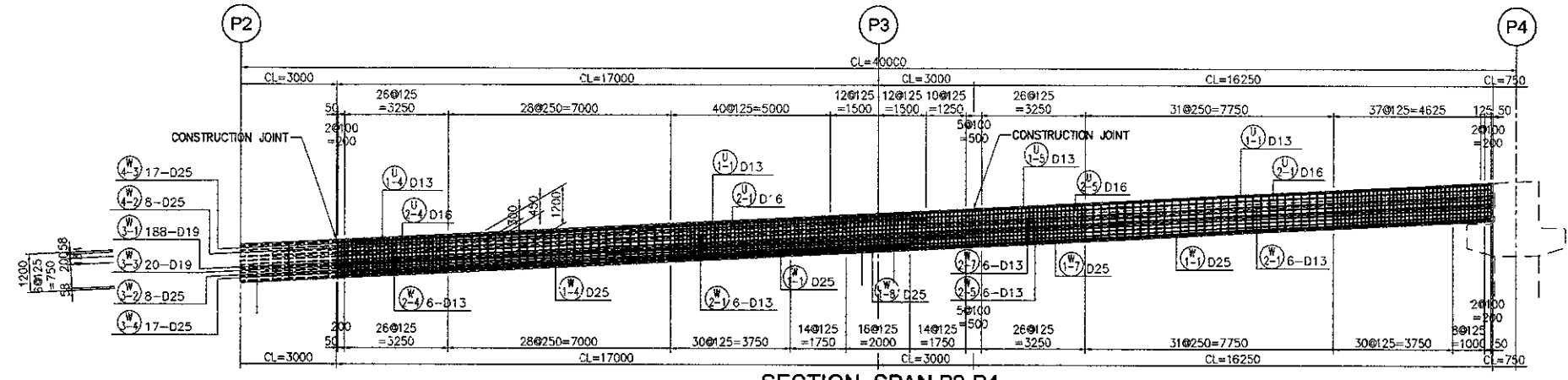


SECTION TOP SLAB
 SCALE : 1 : 200

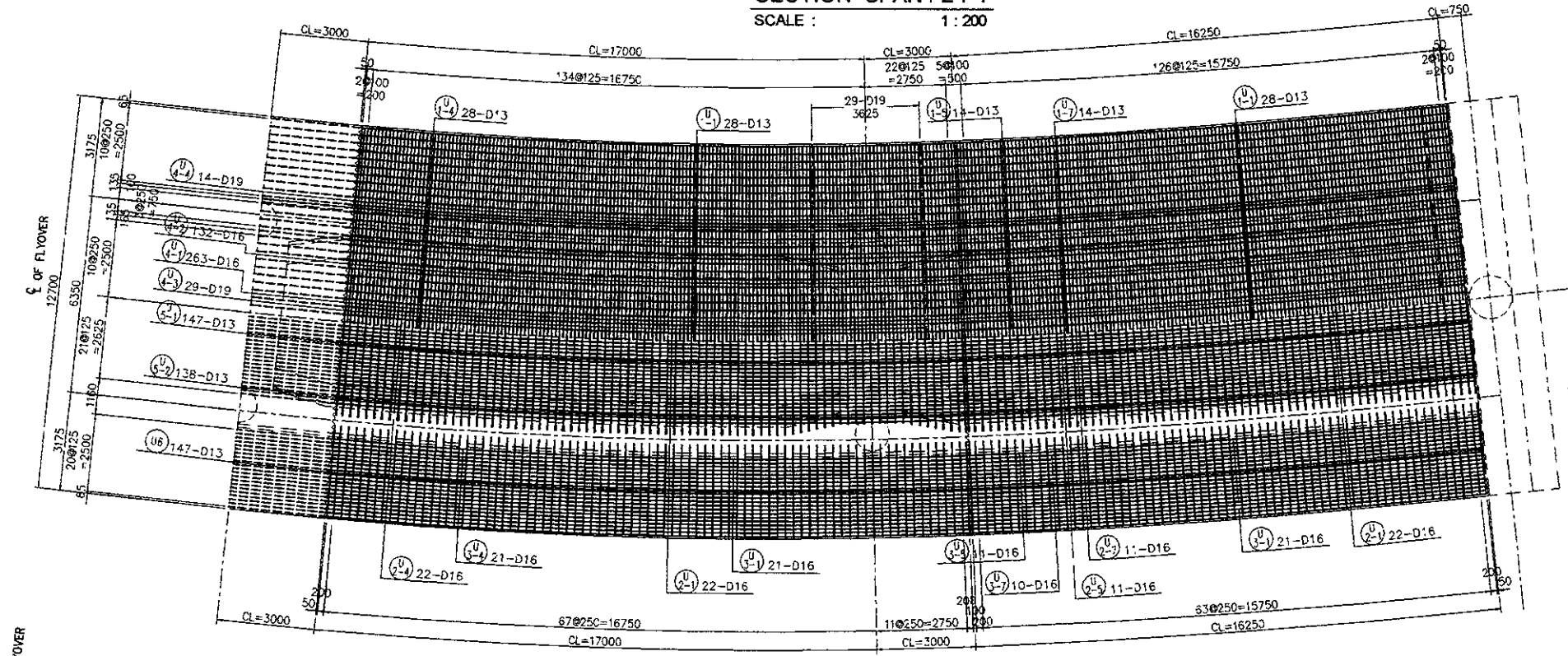


SECTION BOTTOM GIRDER
 SCALE : 1 : 200

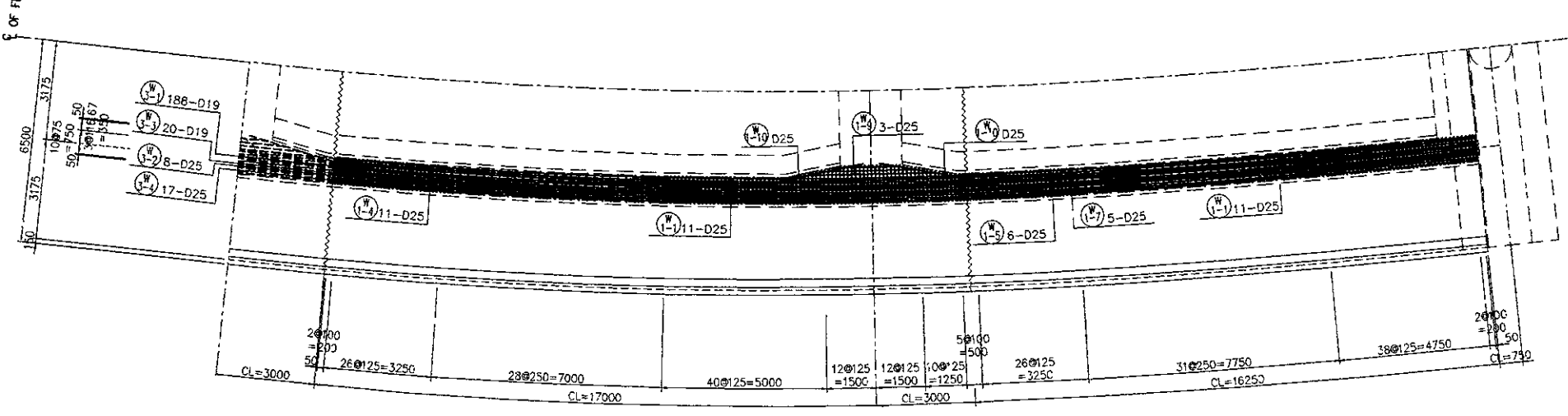
DESIGNED BY	CHECKED BY	SUBMITTED BY
Name: H.HONDA	Name: T. OKUMURA	Name: M. KIUCHI
Sign: _____	Sign: _____	Sign: _____
Date: _____	Date: _____	Date: _____



SECTION SPAN P2-P4
 SCALE : 1 : 200

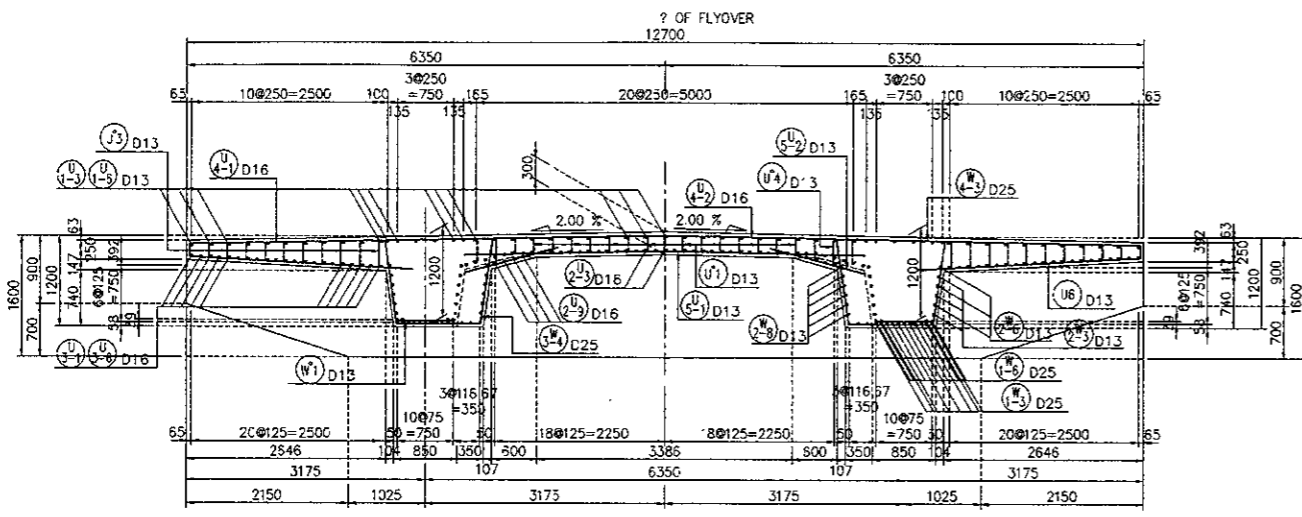


SECTION TOP SLAB
 SCALE : 1 : 200

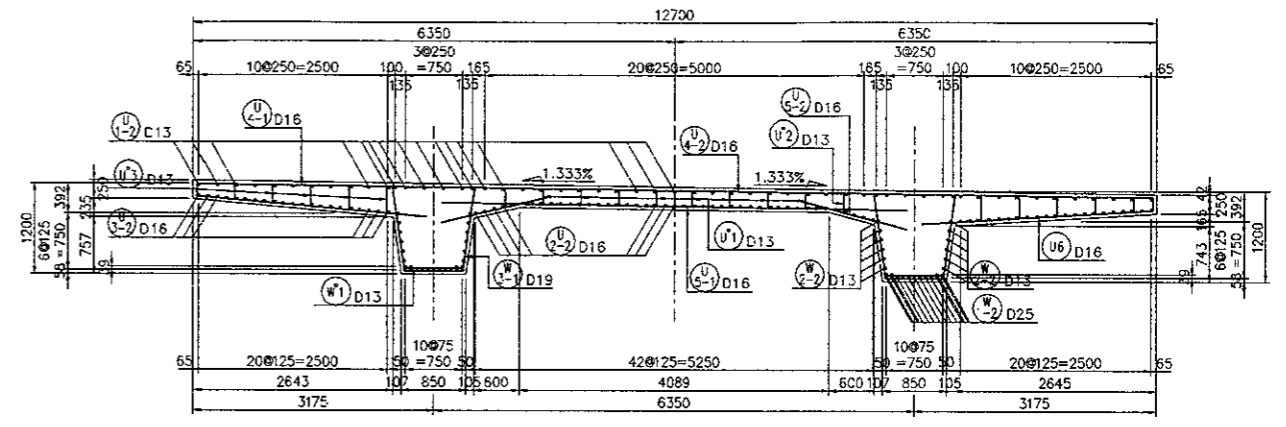


SECTION BOTTOM GIRDER
 SCALE : 1 : 200

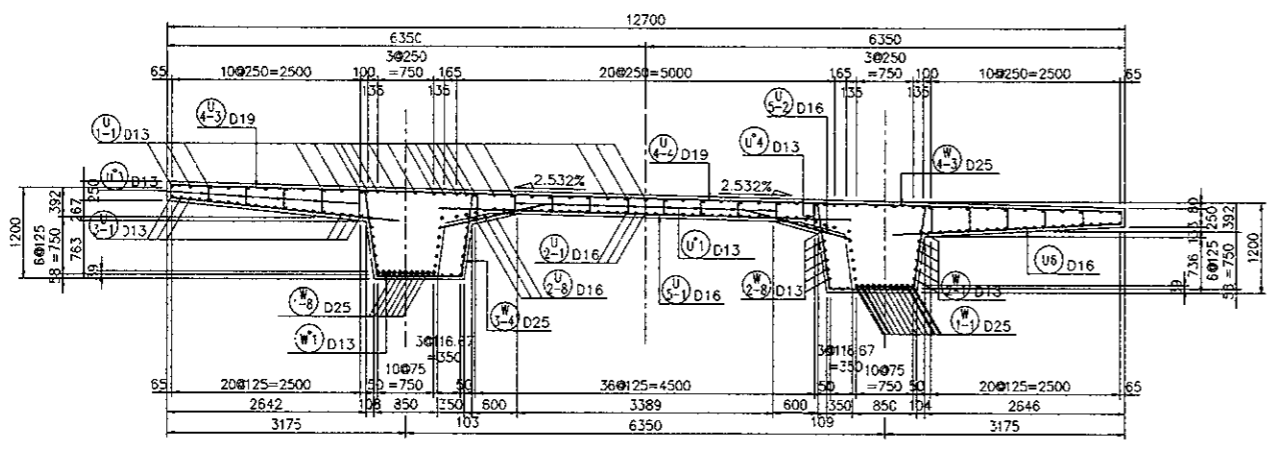
DESIGNED BY	CHECKED BY	SUBMITTED BY
Name: H.HONDA	Name: T. OKUMURA	Name: M. KIUCHI
Sign	Sign	Sign
Date	Date	Date



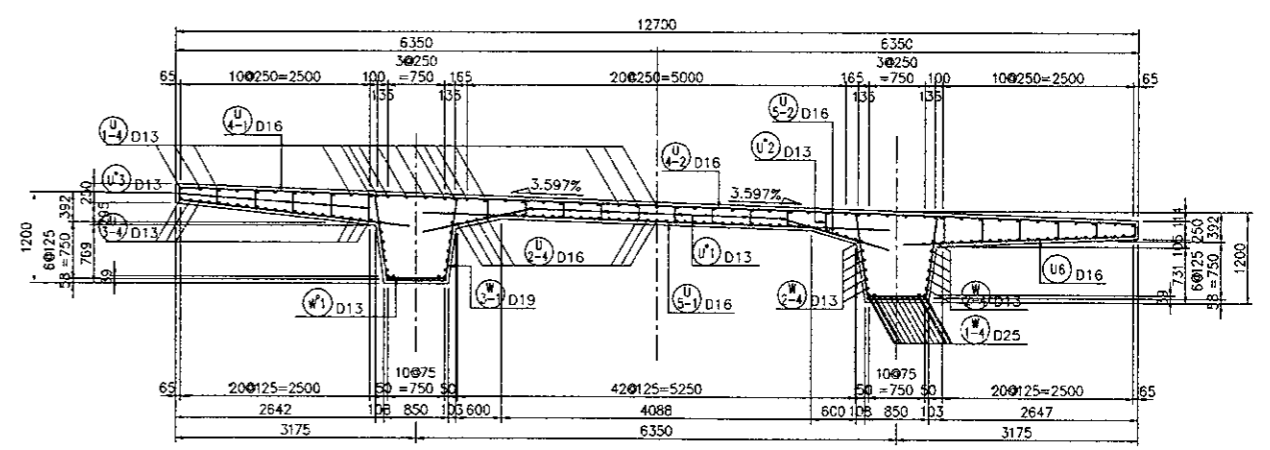
SECTION AT A1
 SCALE : 1 : 100



SECTION MID SPAN A1~P1
 SCALE : 1 : 100

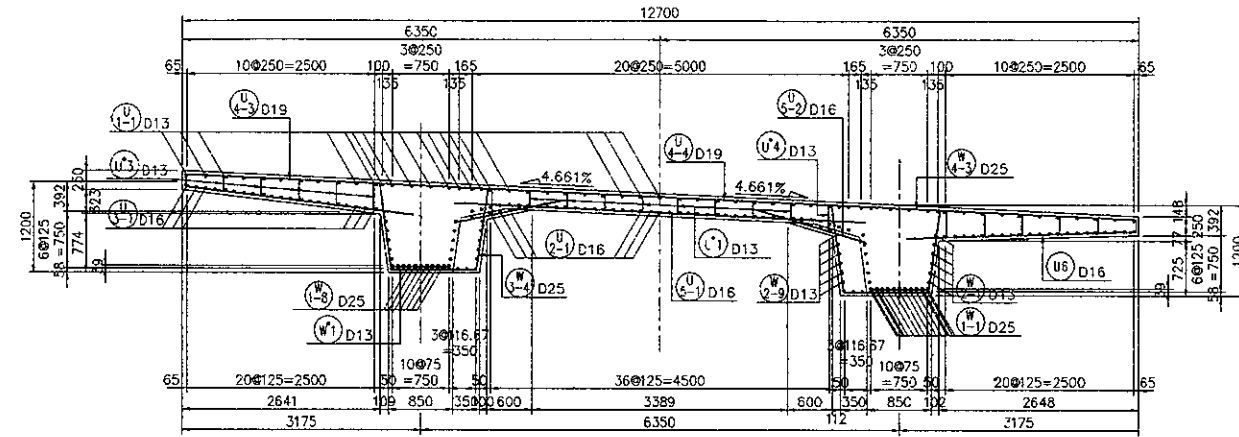


SECTION AT P1
 SCALE : 1 : 100

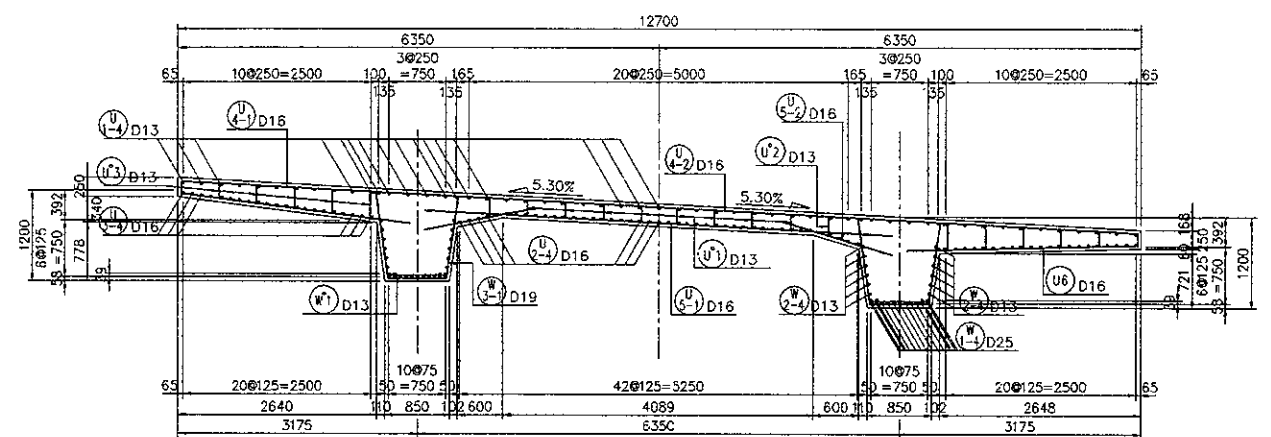


SECTION MID SPAN P1~P2
 SCALE : 1 : 100

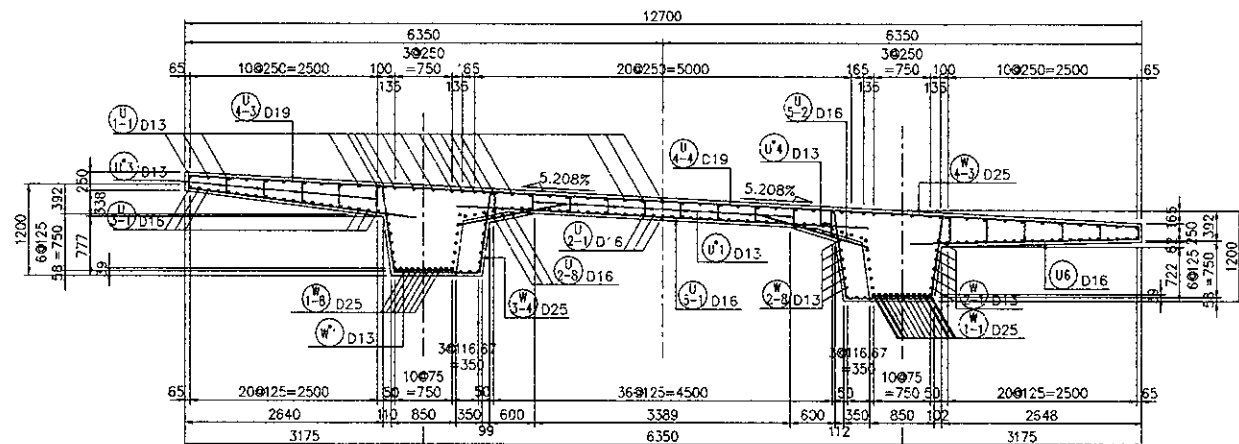
DESIGNED BY	CHECKED BY	SUBMITTED BY
Name: H.HONDA	Name: T. OKUMURA	Name: M. KIUCHI
Sign	Sign	Sign
Date	Date	Date



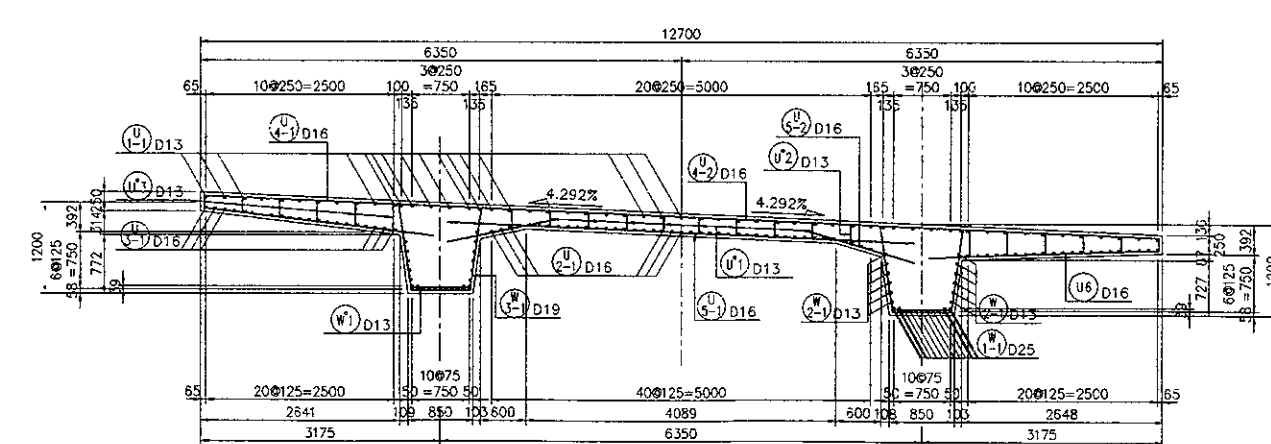
SECTION AT P2
 SCALE : 1 : 100



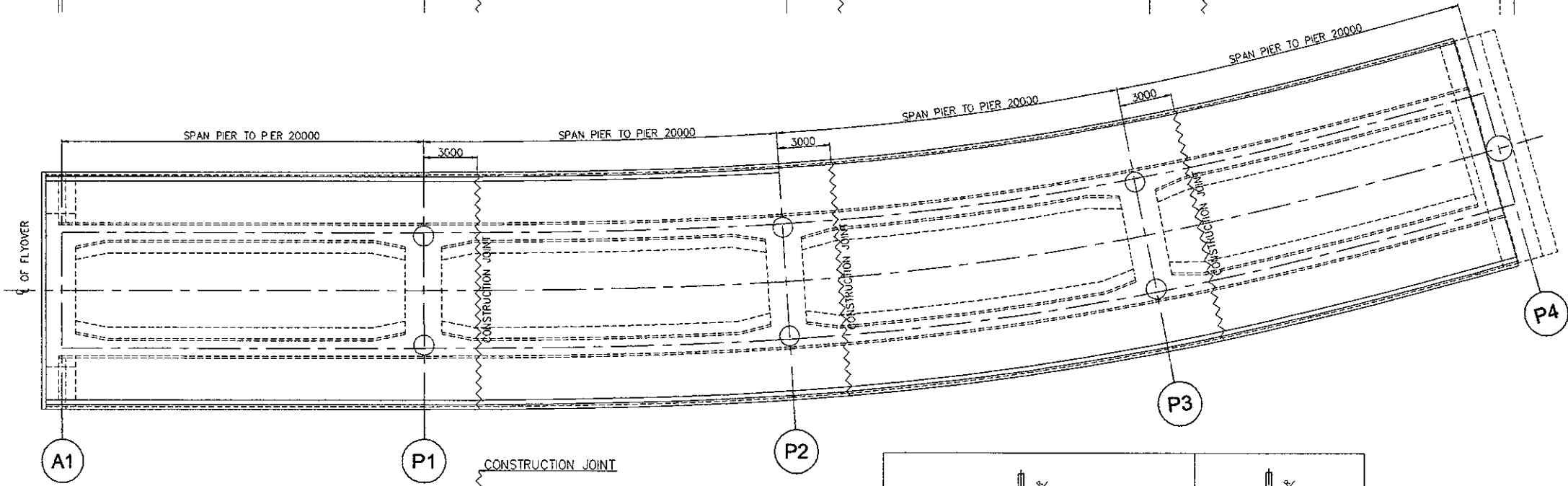
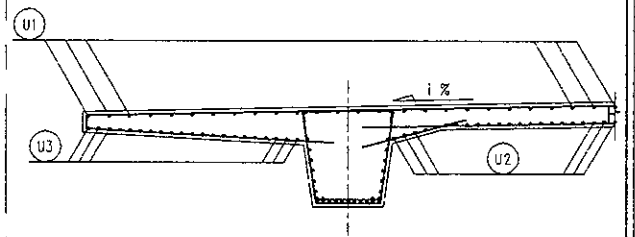
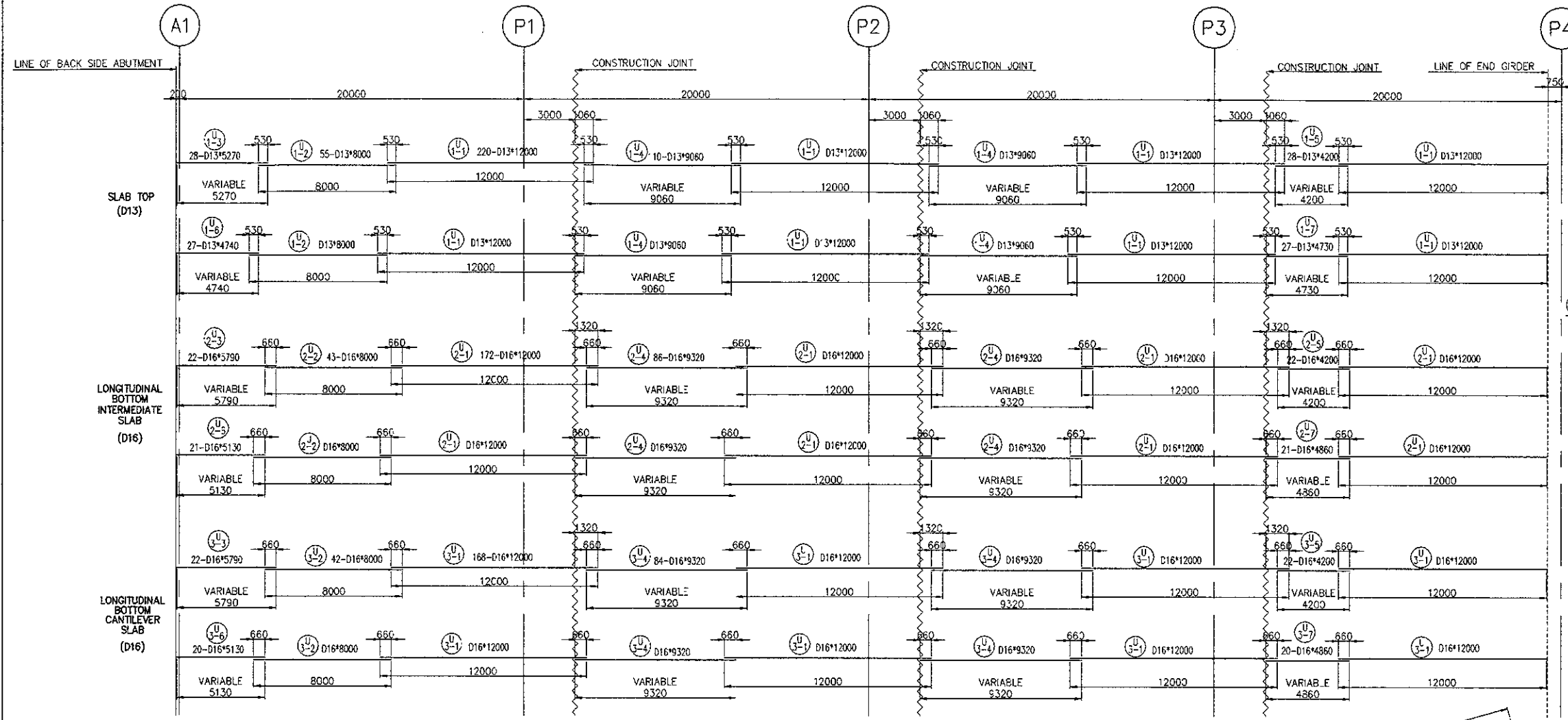
SECTION MID SPAN P2~P3
 SCALE : 1 : 100



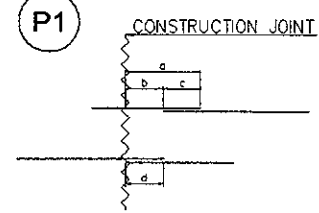
SECTION AT P3
 SCALE : 1 : 100



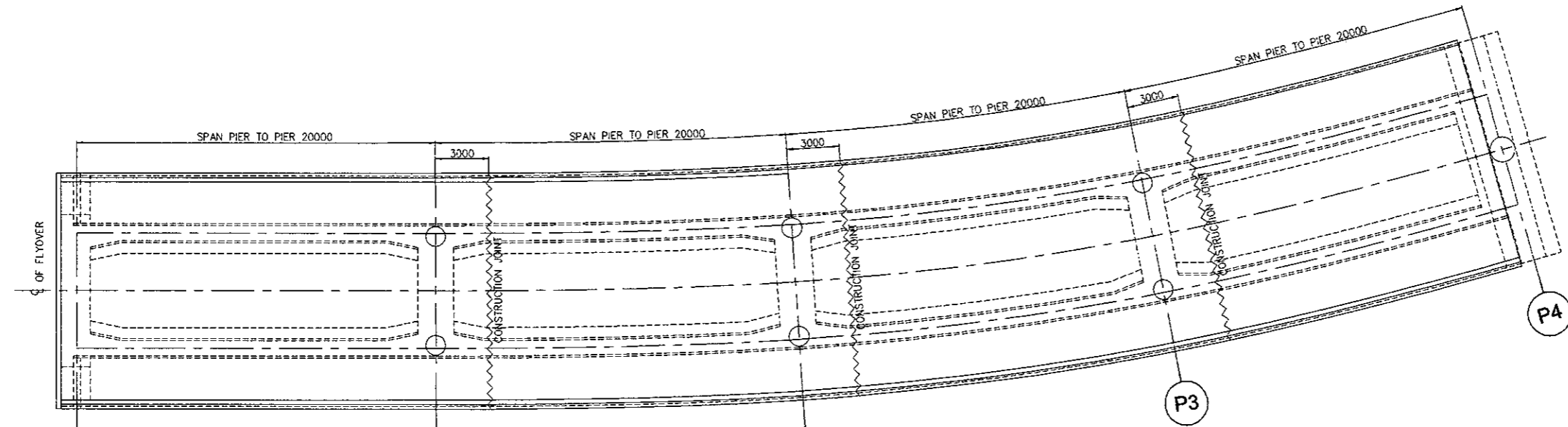
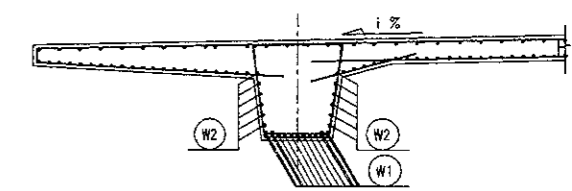
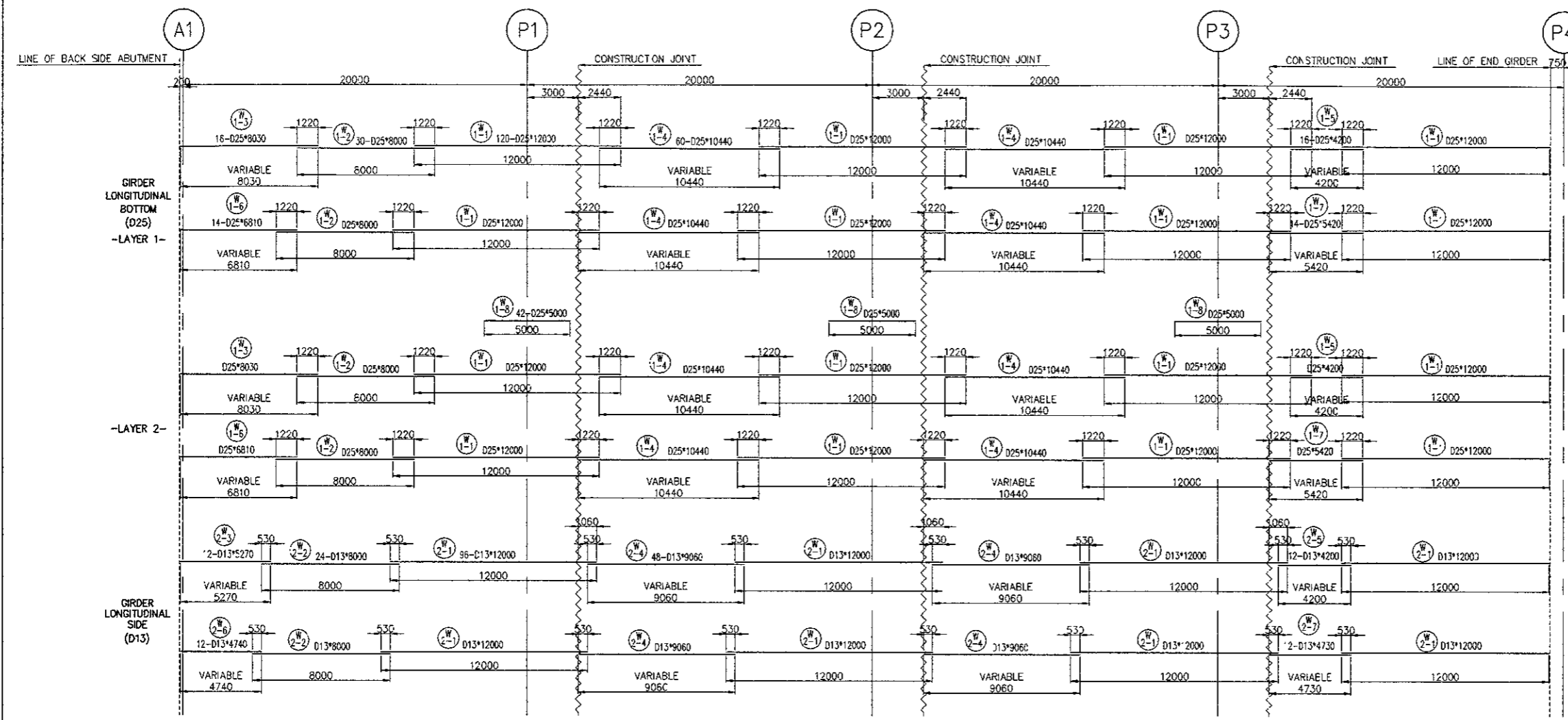
SECTION MID SPAN P3~P4
 SCALE : 1 : 100



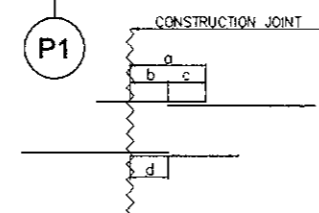
	a	b	c	d
D 13	1060	530	530	530
D 16	1320	660	660	660



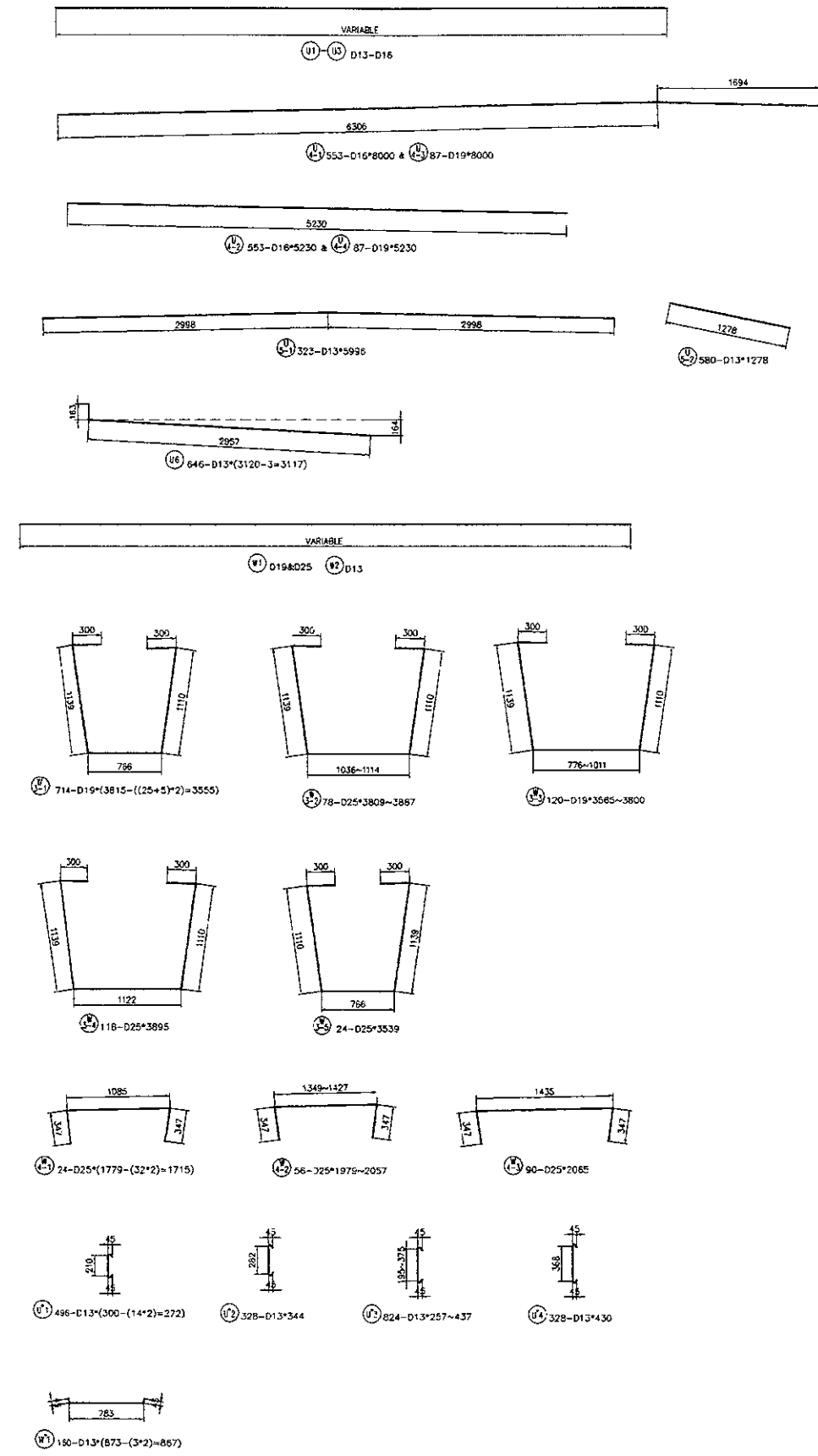
D	MAIN REBAR					BINDER											
	90°	45°	45°	90°	90°	45°	45°	90°	90°								
D 13	36	71.5	82	98	82	81	17	25	3	32.5	77	80	88	45	51	14	
D 16	48	95	119	119	100	88	75	21	60	4	40	94	98	94	55	63	17



	a	b	c	d
D 13	1060	530	530	530
D 25	2440	1220	1220	1220



	MAIN REBAR						STIRREP										
	0°-90° R=3d	0°-90° R=5.5d	0°-45° a AL	0°-60° a AL	0°-90° a AL	0°-135° a AL	R=2.5d	0°-45° a AL	0°-60° a AL	0°-90° a AL	0°-90° a AL						
D 13	38	71.5	82	98	82	83	81	17	88	3	32.5	77	80	88	45	51	14
D 25	75	137.5	117	185	167	168	118	32	108	8	62.5	177	185	157	109	118	32



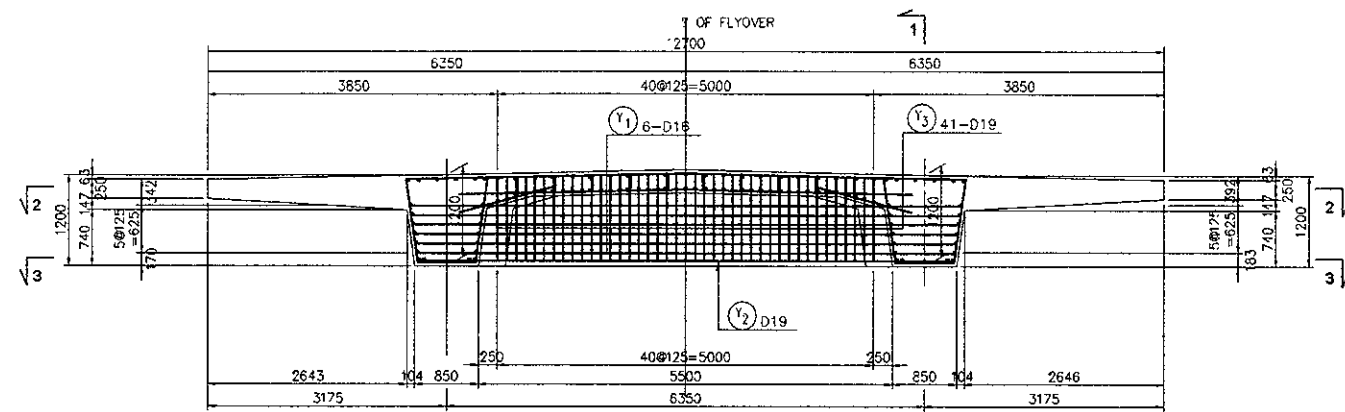
BAR BENDING SCHEDULE

REBAR NAME	DIA (mm)	LENGTH (mm)	NOS.	UNIT WEIGHT (kg/m)	WEIGHT (kg)	TOTAL WEIGHT (kg)	DIAGRAM	REMARKS
U 1 - 1	13	12000	220	1.04	1248	2748		
U 1 - 2	13	8000	55	1.04	832	458		
U 1 - 3	13	5270	28	1.04	548	153		varies length
U 1 - 4	13	9080	110	1.04	842	1058		varies length
U 1 - 5	13	4200	28	1.04	437	122		varies length
U 1 - 6	13	4740	27	1.04	493	133		varies length
U 1 - 7	13	4730	27	1.04	492	133		varies length
U 2 - 1	16	12000	172	1.58	1896	3261		
U 2 - 2	16	8000	43	1.58	1264	544		
U 2 - 3	16	5790	22	1.58	815	201		varies length
U 2 - 4	16	9320	96	1.58	1473	1298		varies length
U 2 - 5	16	4200	22	1.58	654	146		varies length
U 2 - 6	16	5130	21	1.58	811	170		varies length
U 2 - 7	16	4890	21	1.58	768	161		varies length
U 2 - 8	16	3194	24	1.58	500	120		varies length
U 2 - 9	16	1582	8	1.58	250	20		varies length
U 3 - 1	16	12000	168	1.58	1896	3185		
U 3 - 2	16	8000	42	1.58	1264	531		
U 3 - 3	16	5790	22	1.58	815	201		varies length
U 3 - 4	16	9320	84	1.58	1473	1237		varies length
U 3 - 5	16	4200	22	1.58	654	146		varies length
U 3 - 6	16	5130	20	1.58	811	182		varies length
U 3 - 7	16	4890	20	1.58	768	154		varies length
U 4 - 1	16	8000	553	1.58	1264	8900		
U 4 - 2	16	5230	553	1.58	828	4570		
U 4 - 3	16	8000	87	2.23	1784	1552		
U 4 - 4	16	5230	87	2.23	1180	1015		
U 5 - 1	13	5986	323	1.04	824	2014		
U 5 - 2	13	1278	580	1.04	133	771		
U 6	13	3117	848	1.04	324	2084		
UP 1	13	272	496	1.04	0.28	140		
UP 2	13	344	328	1.04	0.38	117		varies length
UP 3	13	347	824	1.04	0.38	297		varies length
UP 4	13	430	328	1.04	0.45	147		varies length
SUB TOTAL - 1						35994		

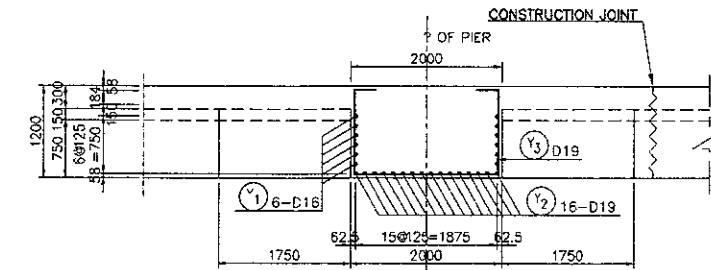
REBAR NAME	DIA (mm)	LENGTH (mm)	NOS.	UNIT WEIGHT (kg/m)	WEIGHT (kg)	TOTAL WEIGHT (kg)	DIAGRAM	REMARKS
W 1 - 1	25	12000	120	3.85	4620	5544		
W 1 - 2	25	8000	30	3.85	3080	924		
W 1 - 3	25	8030	16	3.85	3082	495		varies length
W 1 - 4	25	19440	60	3.85	4019	2412		varies length
W 1 - 5	25	4200	16	3.85	1617	259		varies length
W 1 - 6	25	8810	14	3.85	2822	387		varies length
W 1 - 7	25	5420	14	3.85	2087	292		varies length
W 1 - 8	25	5000	42	3.85	1925	869		
W 1 - 9	25	2830	18	3.85	1090	196		varies length
W 1 - 10	25	3225	14	3.85	1281	177		varies length
W 1 - 11	25	1315	8	3.85	508	30		varies length
W 2 - 1	13	12000	86	1.04	1248	1198		
W 2 - 2	13	8000	24	1.04	832	290		
W 2 - 3	13	5270	12	1.04	548	66		varies length
W 2 - 4	13	9080	48	1.04	842	452		varies length
W 2 - 5	13	4200	12	1.04	437	52		varies length
W 2 - 6	13	4740	12	1.04	493	59		varies length
W 2 - 7	13	4730	12	1.04	492	59		varies length
W 2 - 8	13	3185	30	1.04	331	89		varies length
W 2 - 9	13	1583	10	1.04	186	17		varies length
W 3 - 1	16	3555	714	2.23	793	5660		
W 3 - 2	25	3848	78	3.85	1481	1155		varies length
W 3 - 3	16	3983	120	2.23	821	988		varies length
W 3 - 4	25	3895	118	3.85	1500	1789		
W 3 - 5	25	3539	24	3.85	1383	327		
W 4 - 1	25	1715	24	3.85	640	158		
W 4 - 2	25	2018	72	3.85	777	559		varies length
W 4 - 3	25	2085	122	3.85	785	970		
W 4 - 4	13	887	150	1.04	890	144		
SUB TOTAL - 2						25435		
TOTAL REBAR WEIGHT A1 - P4						61430		

DIA	MAIN REBAR										STIRRUP						
	90°	90°	45°	60°	90°	135°	R=2.5d	45°	60°	90°	45°	60°	90°				
D 13	39	71.5	92	98	82	83	81	17	35	3	32.5	77	88	85	45	51	14
D 16	48	88	113	119	100	100	75	21	49	4	40	94	98	84	55	53	17
D 19	57	104.5	134	141	119	119	78	25	62	5	47.5	112	117	99	66	78	20
D 25	78	137.5	177	185	157	153	118	32	108	8	75	177	185	157	103	118	32

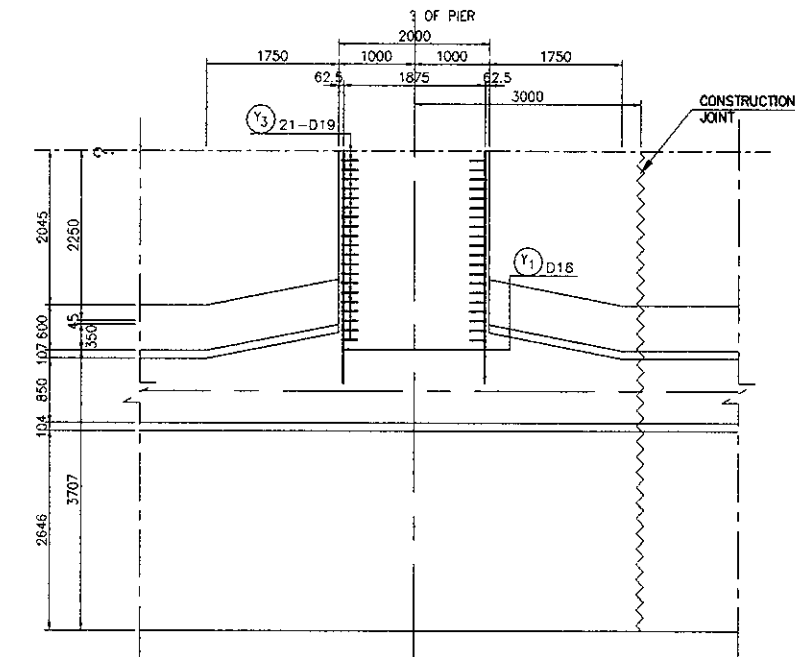
*R=2d



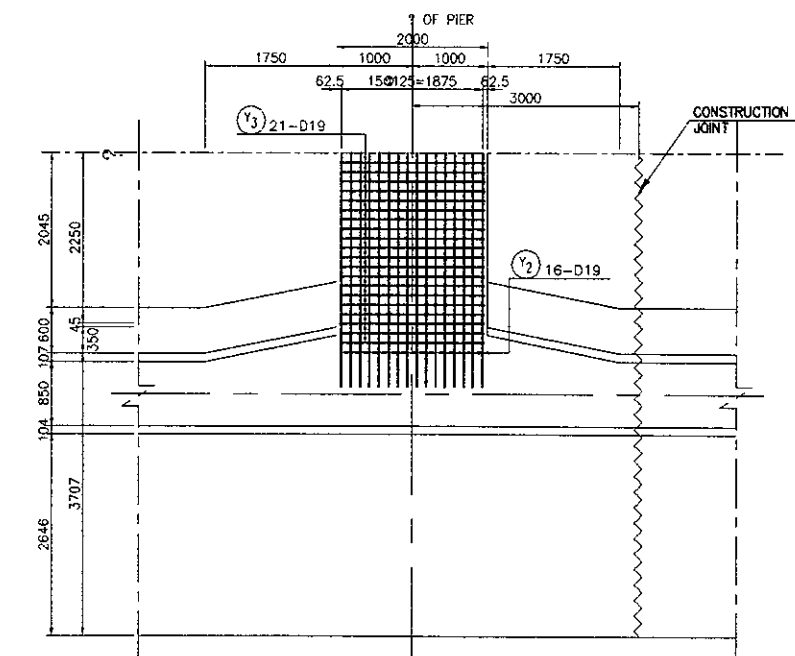
SECTION AT PIER
 SCALE : 1 : 100



SECTION 1 - 1
 SCALE : 1 : 100



SECTION 2 - 2
 SCALE : 1 : 100

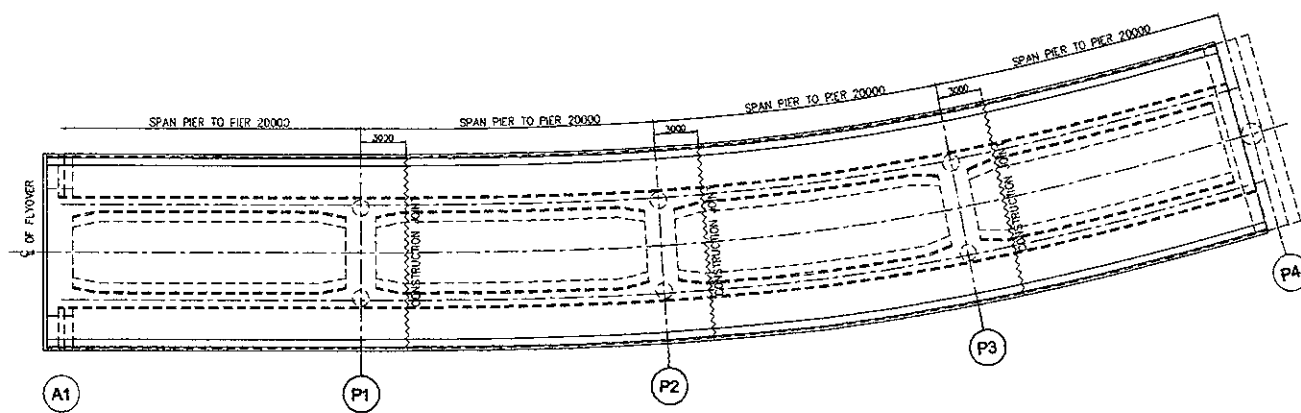
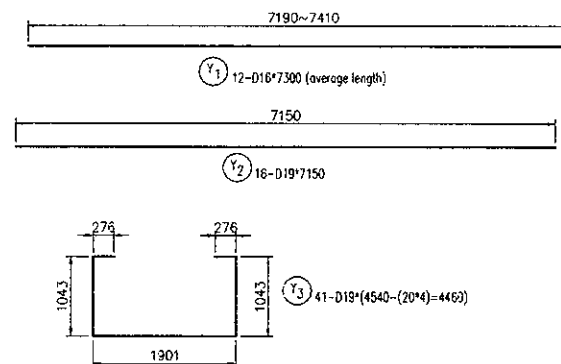


SECTION 3 - 3
 SCALE : 1 : 100

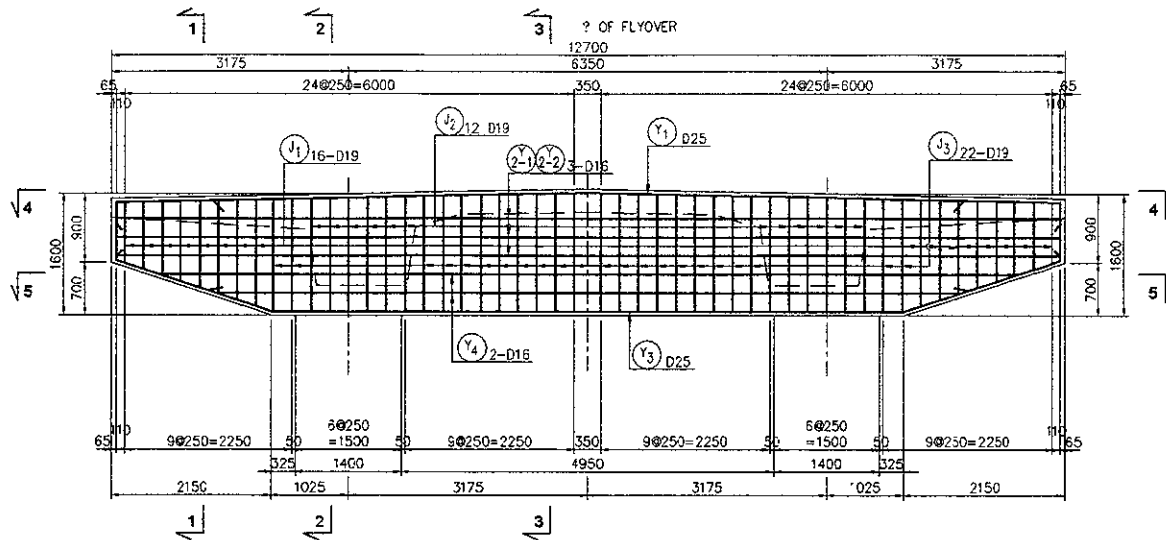
REINF NO.	φ (mm)	TYPE	BENDING DIMENSION (mm)				TOTAL LENGTH (m)	NUMBER	UNIT WEIGHT (kg/m)	WEIGHT (kg)	REMARK
			a	b	c	d					
PIER											
Y 1	D16	A	7300				7.30	12	1.58	138	—
2	D19	A	7150				7.15	16	2.23	255	—
3	D19	B	1901	1043	276		4.46	41	2.23	408	□
										D19	663
										D16	138
										TOTAL (per 1 pier)	801
PIER LOCATION			A1 - P4 (P1, P2, P3)								
REBAR WEIGHT TOTAL			801 x 3 = 2403 kg								

STIRRUP

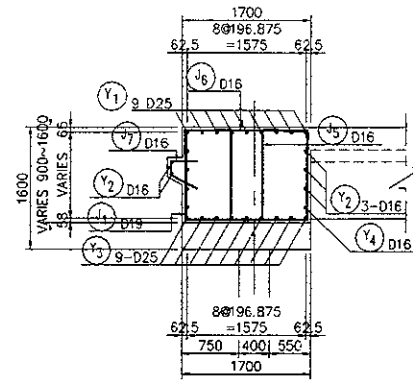
R=2.5φ	θ=45°		θ=60°		θ=90°	
	α	ΔL	α	ΔL	α	ΔL
D16	40	94	99	84	55	63
D19	47.5	112	117	99	66	75



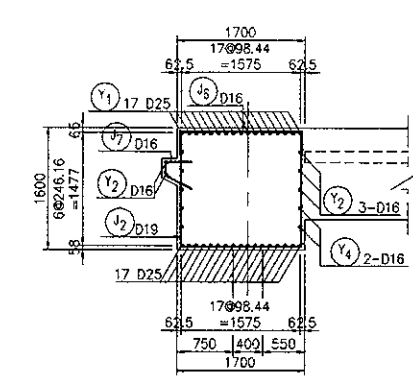
KEY PLAN
 SCALE : 1 : 500



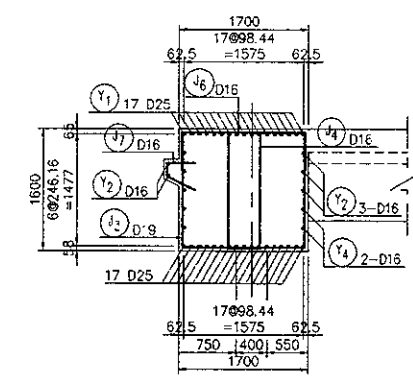
SECTION AT ABUTMENT
 SCALE : 1 : 100



SECTION 1 - 1
 SCALE : 1 : 100



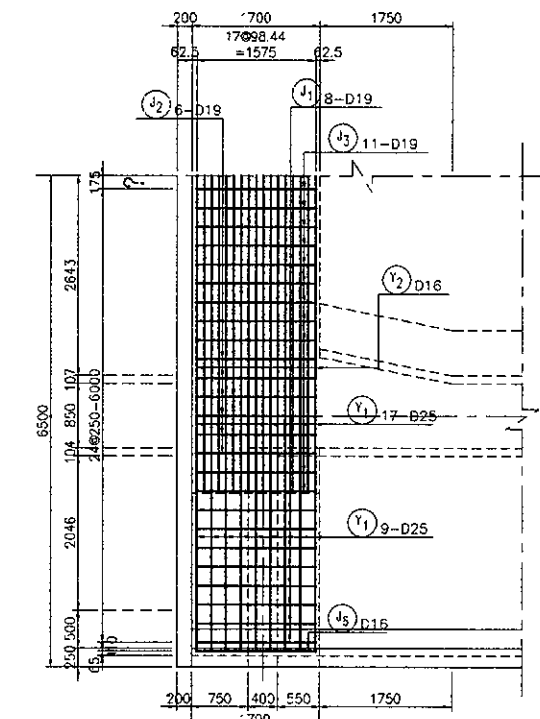
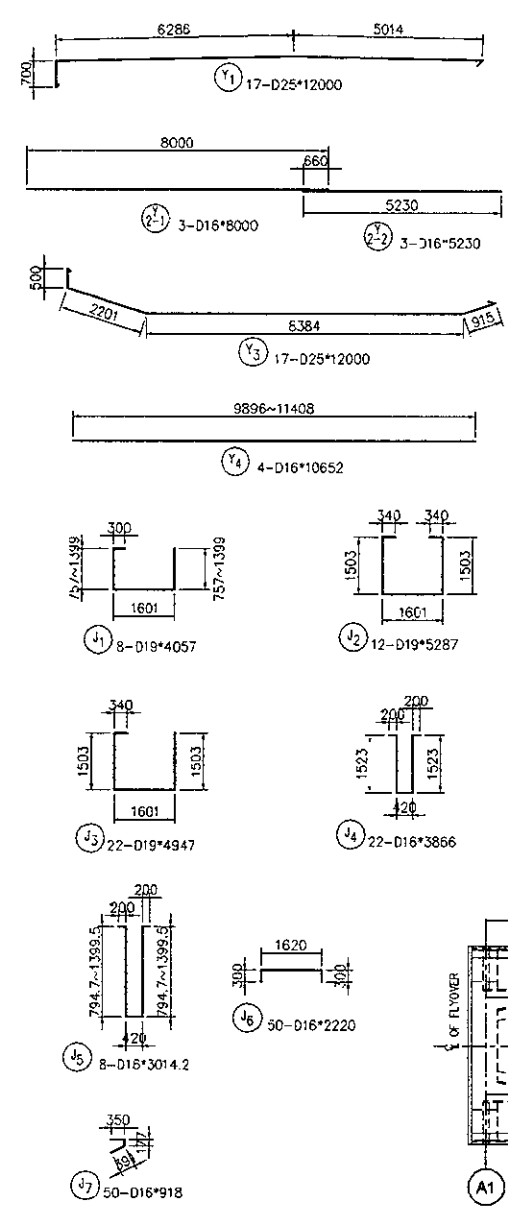
SECTION 2 - 2
 SCALE : 1 : 100



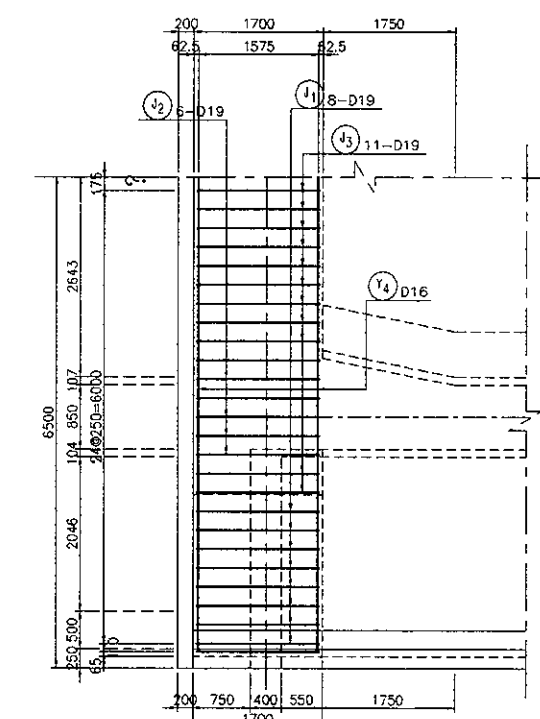
SECTION 3 - 3
 SCALE : 1 : 100

BAR BENDING ABUTMENT

REINF NO.	φ (mm)	TYPE	BENDING DIMENSION (mm)					TOTAL LENGTH (m)	NUMBER	UNIT WEIGHT (kg/m)	WEIGHT (kg)	REMARK
			a	b	c	d	e					
A 1												
J 1	D19	F	1601	1078	300			4.057	8	2.23	82	
2	D19	I	1601	1503	340			5.287	12	2.23	141	
3	D19	F	1601	1503	340			4.947	22	2.23	243	
4	D16	G	420	1523	200			3.866	22	1.58	134	
5	D16	G	420	1097.1	200			3.0142	8	1.58	38	
6	D16	E	1620	300				2.22	50	1.58	175	
7	D16	H	350	177	391			0.918	50	1.58	73	
Y 1												
2-1	D16	A	8000					8	3	1.58	38	
2-2	D16	A	5230					5.23	3	1.58	25	
3	D25	C	8384	2201	915	500		12	17	3.85	785	
4	D16	A	10652					10.652	4	1.58	67	
REBAR WEIGHT TOTAL										2578 kg		

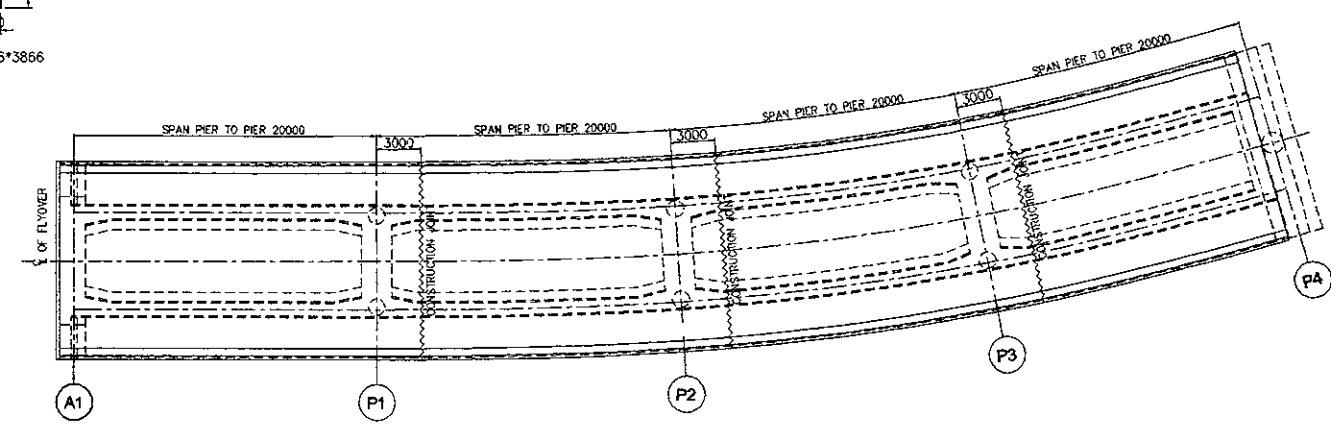


SECTION 4 - 4
 SCALE : 1 : 100

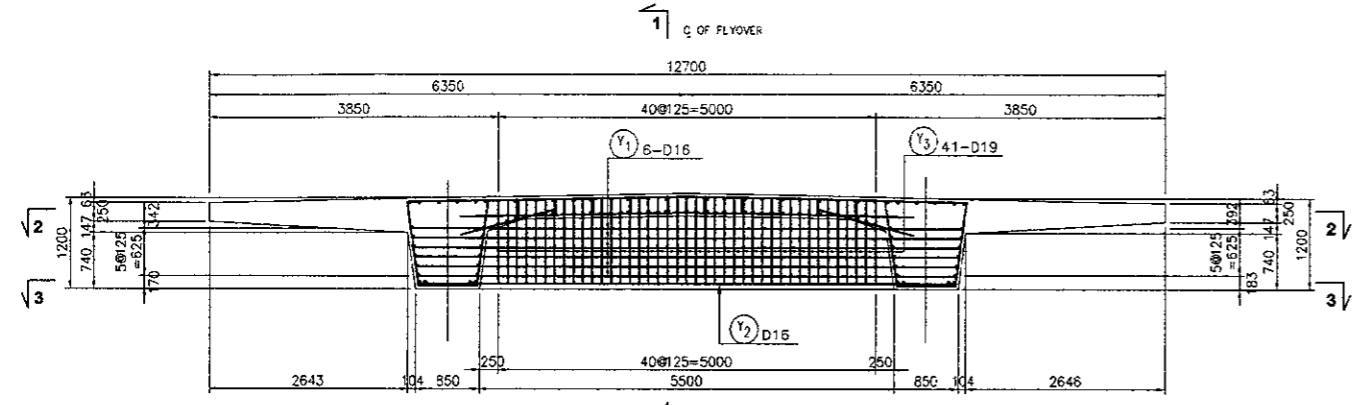


SECTION 5 - 5
 SCALE : 1 : 100

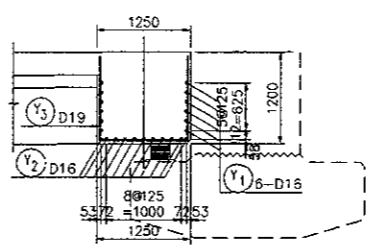
	MAIN REBAR								STIRRUP							
	φ=90° R=3φ	φ=90° R=5.5φ	φ=45° c	φ=45° d	φ=45° e	φ=45° f	φ=45° g	φ=45° h	R=2.5φ	φ=45° c	φ=45° d	φ=45° e	φ=45° f	φ=45° g	φ=45° h	
D 16	48	88	113	119	100	88	75	21	88	40	84	88	88	88	17	
D 19	57	104.5	134	141	119	106	93	28	106	47.5	112	117	117	117	20	
D 25	78	157.5	117	125	157	153	118	32	158	75	177	185	187	188	32	



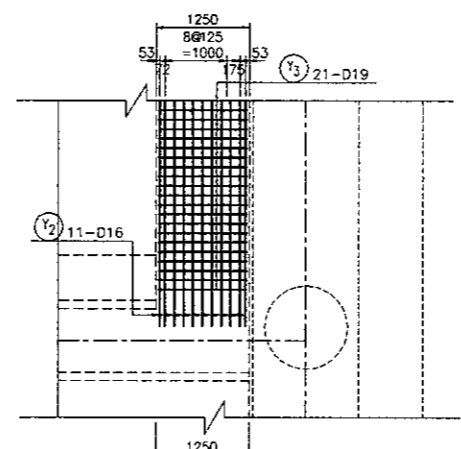
KEY PLAN
 SCALE : 1 : 500



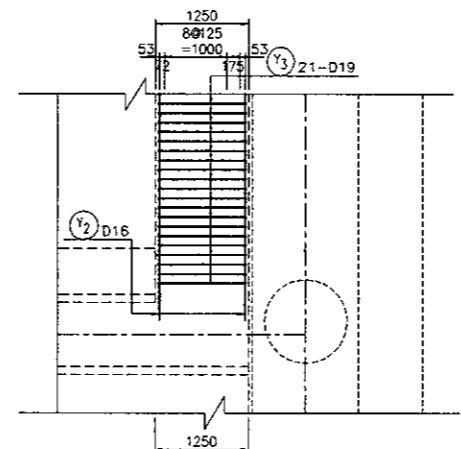
SECTION AT COPING PIER
 SCALE : 1 : 100



SECTION 1 - 1
 SCALE : 1 : 100



SECTION 2 - 2
 SCALE : 1 : 100



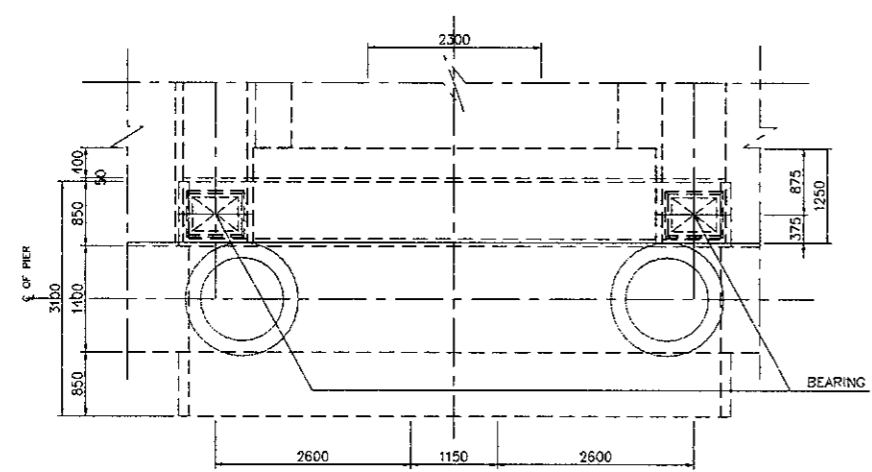
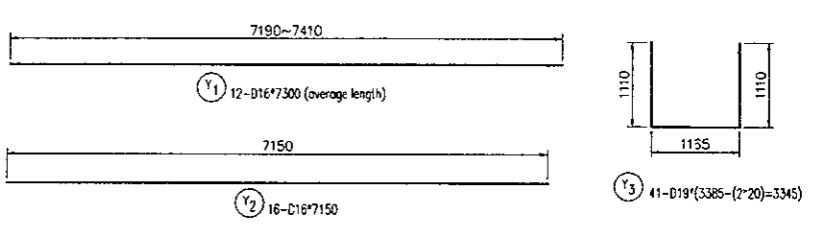
SECTION 3 - 3
 SCALE : 1 : 100

BAR BENDING

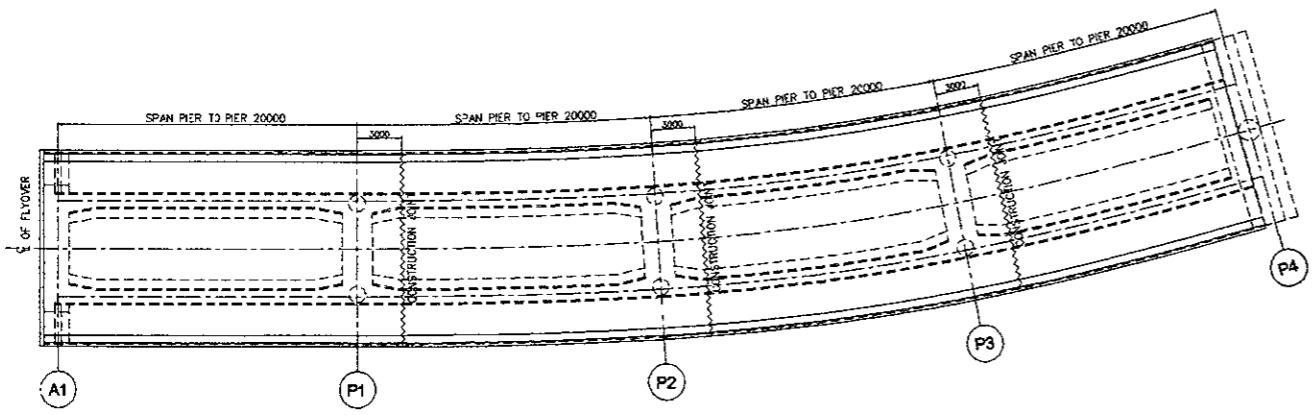
REINF NO.	φ (mm)	TYPE	BENDING DIMENSION (mm)				TOTAL LENGTH (m)	NUMBER	UNIT WEIGHT (kg/m)	WEIGHT (kg)	REMARK
			a	b	c	d					
PIER											
Y 1	D16	A	7300				7.3	12	1.58	138	—
2	D16	A	7150				7.15	11	1.58	124	—
3	D19	B	1165	1110			3.345	41	2.23	306	□
										D19	306
										D16	262
REBAR WEIGHT TOTAL										568 kg	

STIRRUP

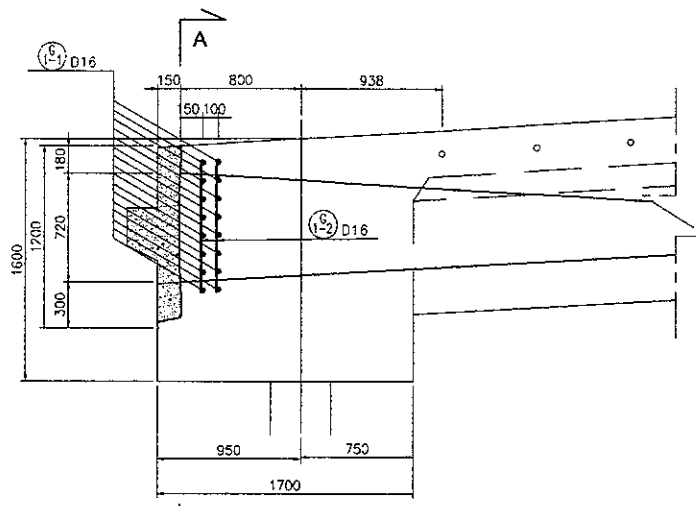
	R=2.5φ	θ=45°		θ=60°		θ=90°	
		α	ΔL	α	ΔL	α	ΔL
D16	40	94	99	84	55	63	17
D19	47.5	112	117	99	66	75	20



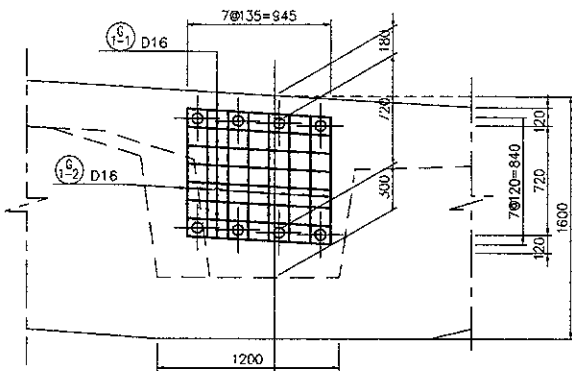
SECTION
 SCALE : 1 : 100



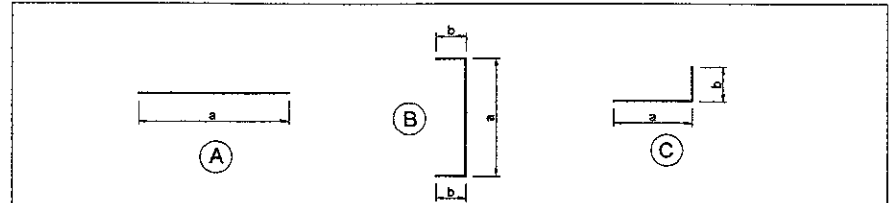
KEY PLAN
 SCALE : 1 : 500



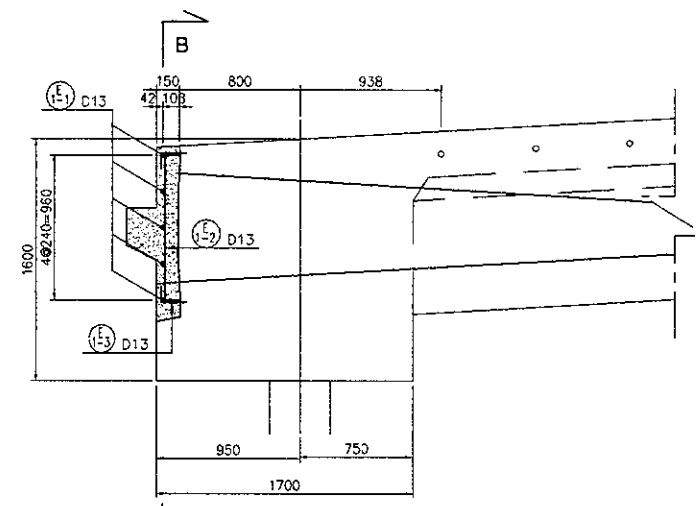
SECTION END ANCHORAGE
 SCALE : 1 : 50



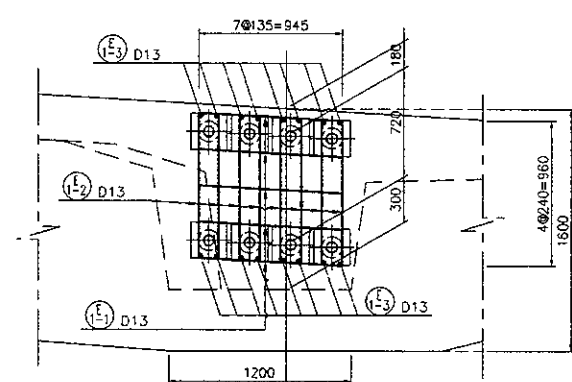
SECTION A - A
 SCALE : 1 : 50



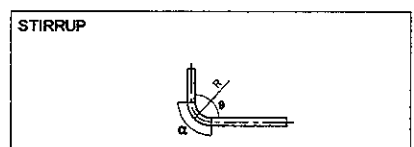
REINF. NO.	φ (mm)	TYPE	BENDING DIMENSION (mm)				TOTAL LENGTH (m)	NUMBER	UNIT WEIGHT (kg/m)	WEIGHT (kg)	REMARK
			a	b	c	d					
E 1-1	D13	A	945				0.945	16	1.04	16	—
E 1-2	D13	B	960	100			1.132	10	1.04	12	└
E 1-3	D13	C	150	50			0.186	32	1.04	6	└
G 1-1	D16	A	945				0.945	32	1.58	48	—
G 1-2	D16	A	840				0.84	32	1.58	43	—
									D16	91	
									D13	34	
									REBAR WEIGHT TOTAL		125 kg



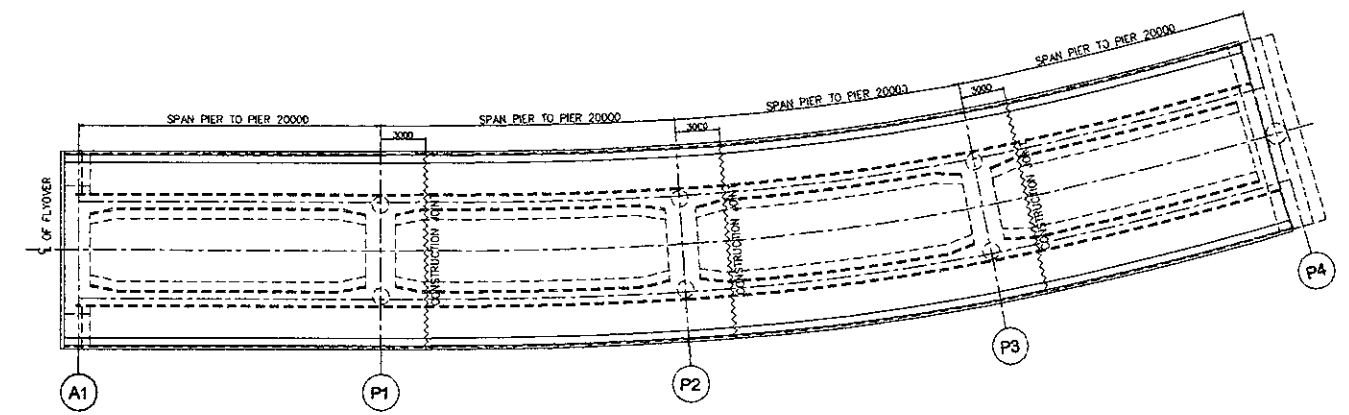
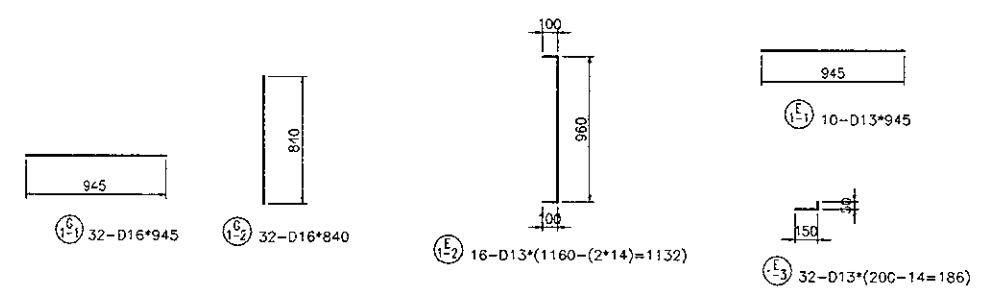
SECTION END ANCHORAGE
 SCALE : 1 : 50



SECTION B - B
 SCALE : 1 : 50

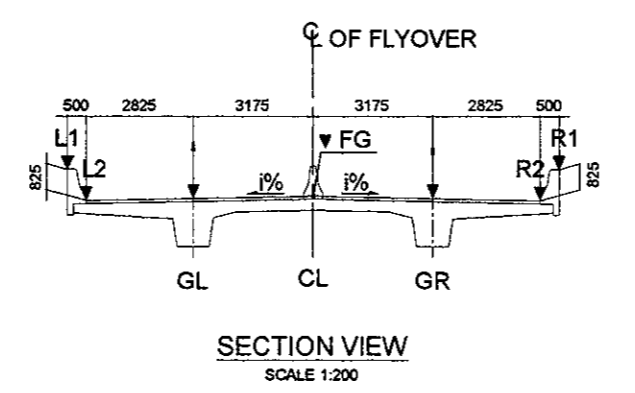
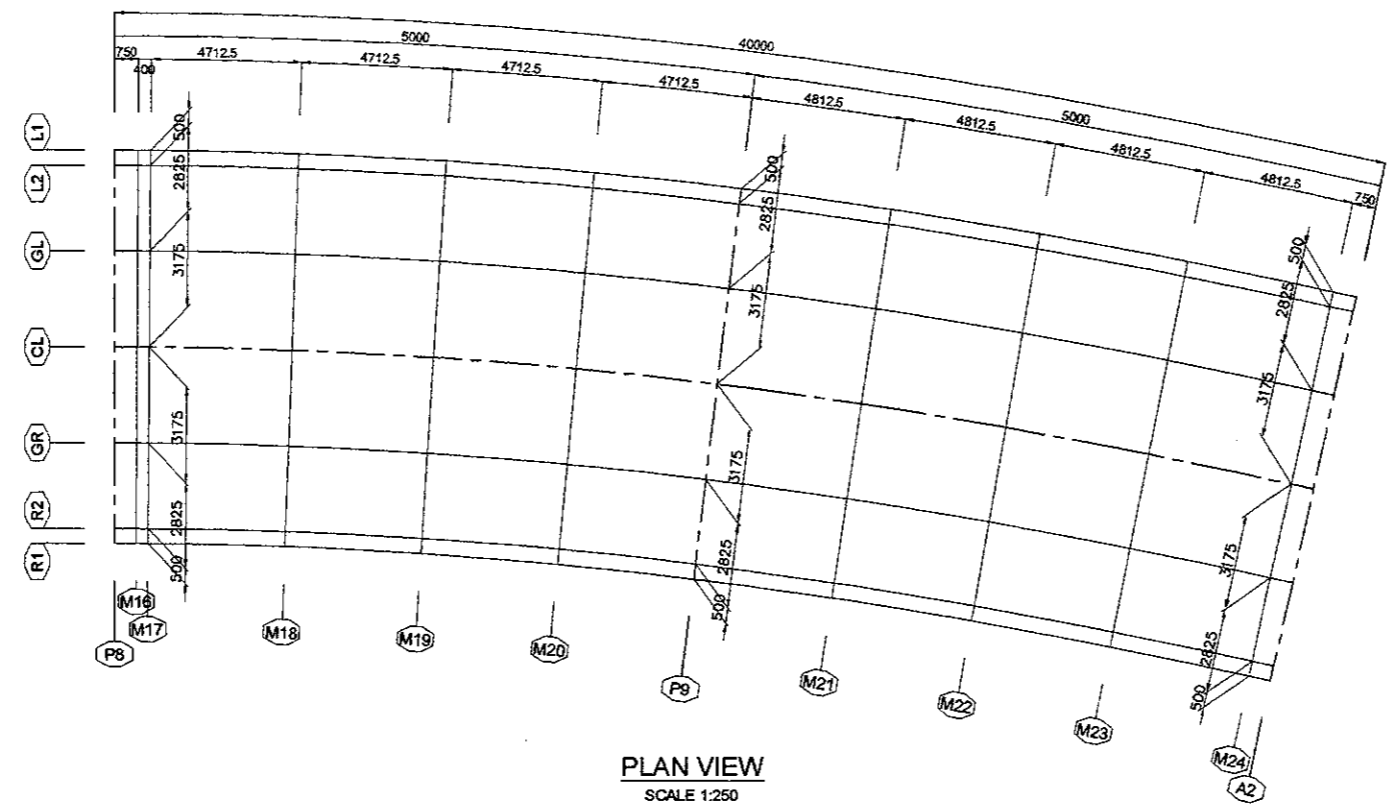


R=2.5φ	θ=45°		θ=60°		θ=90°	
	o	ΔL	o	ΔL	o	ΔL
D16	40	94	99	84	55	63
D19	47.5	112	117	99	66	75



KEY PLAN
 SCALE : 1 : 500

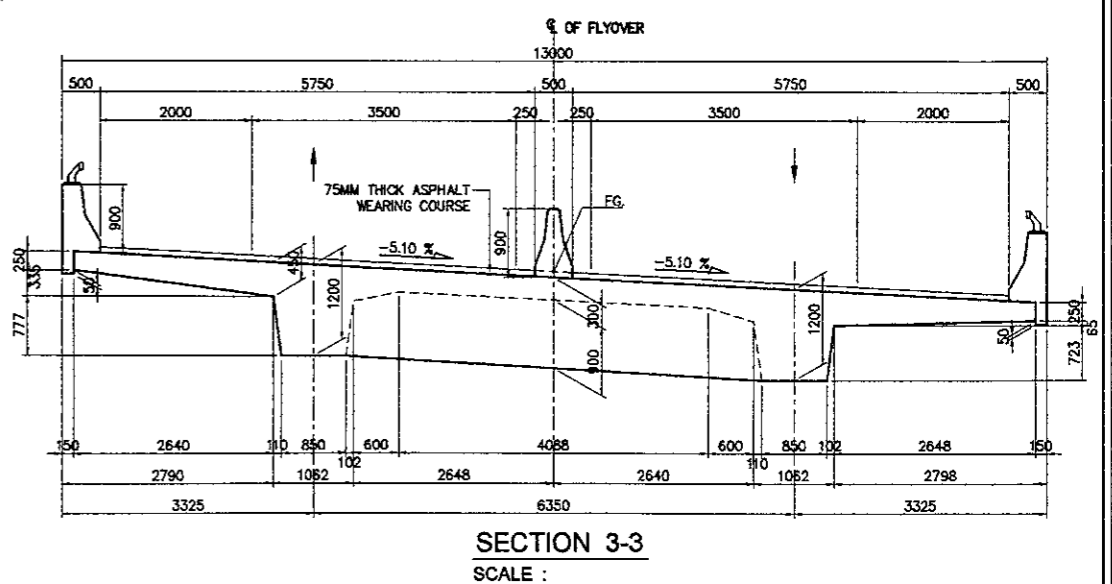
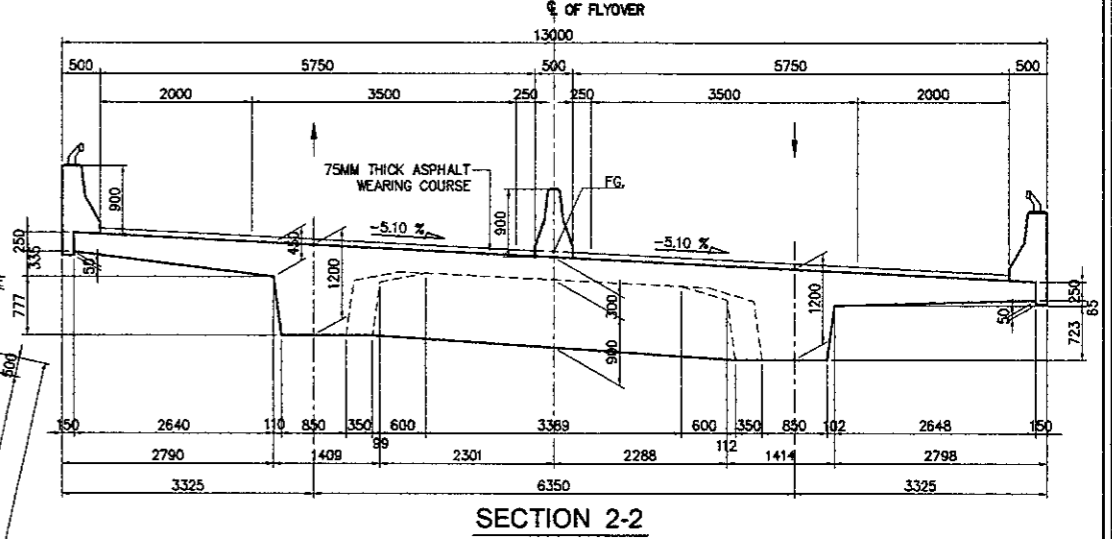
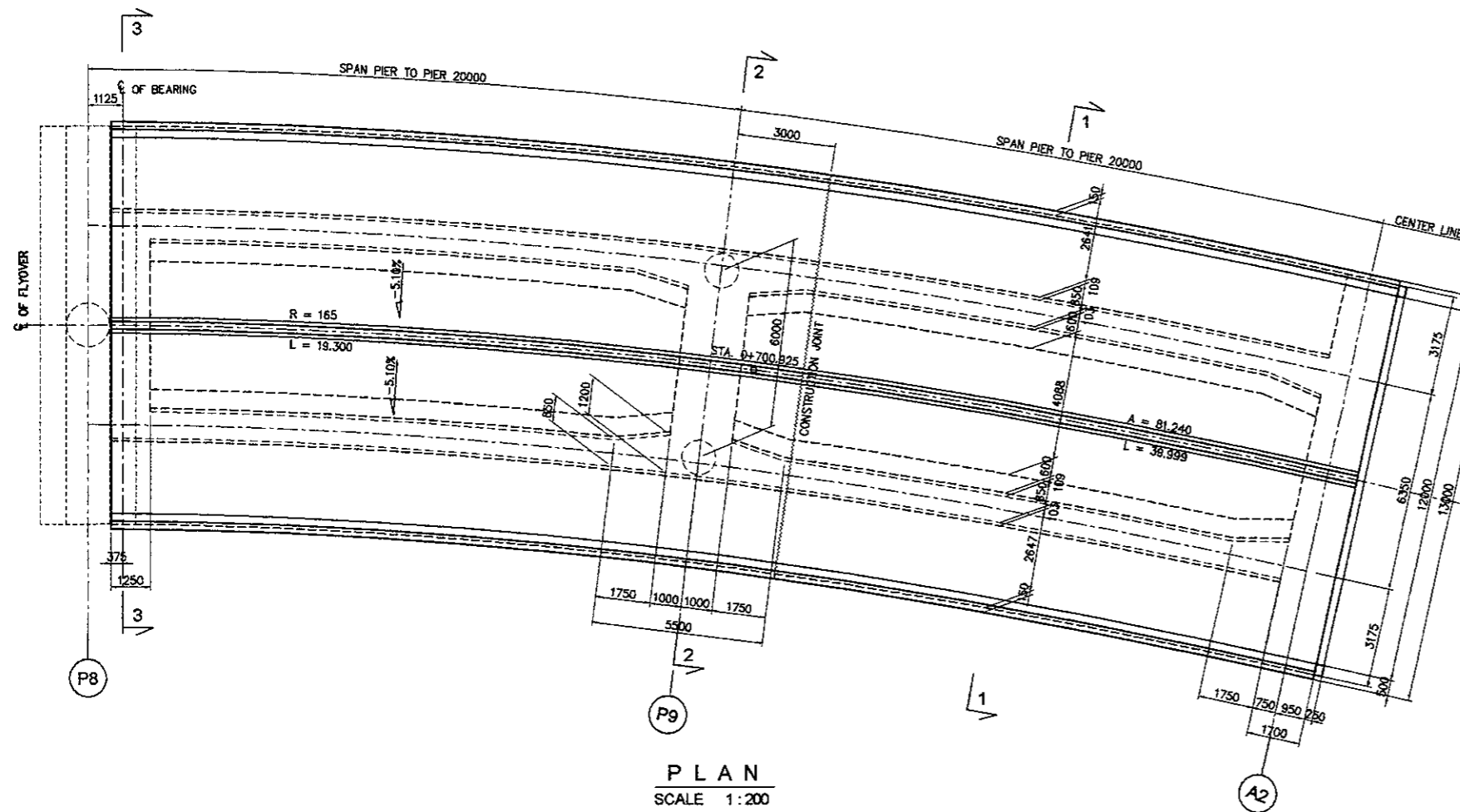
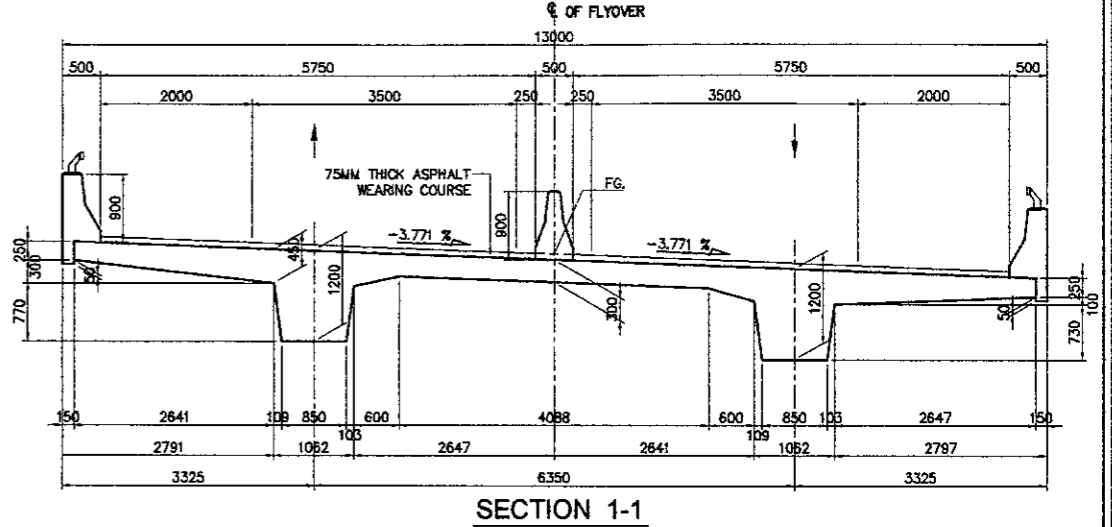
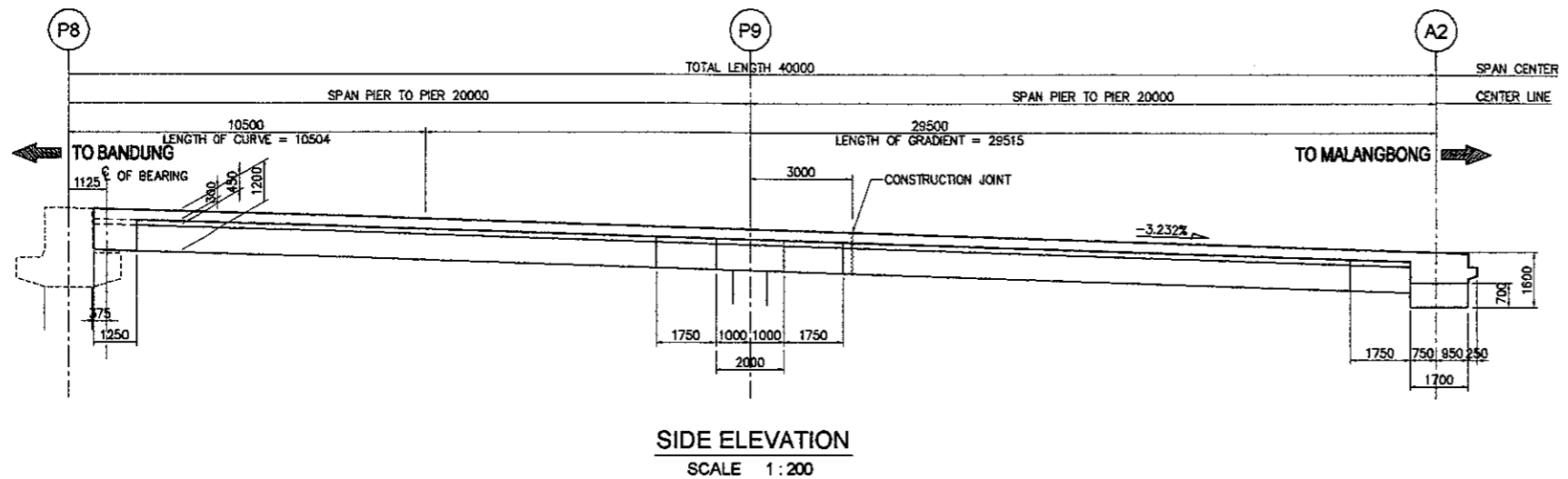
DESIGNED BY		CHECKED BY		SUBMITTED BY	
Name	H. HONDA	Name	T. OKUMURA	Name	M. KIUCHI
Sign		Sign		Sign	
Date		Date		Date	



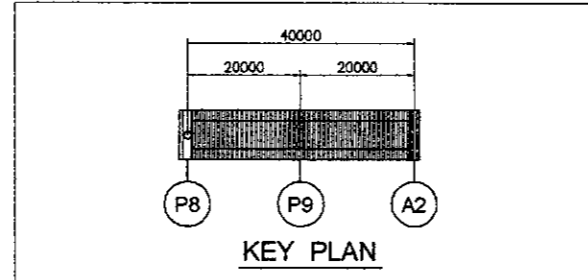
LIST OF COORDINATES

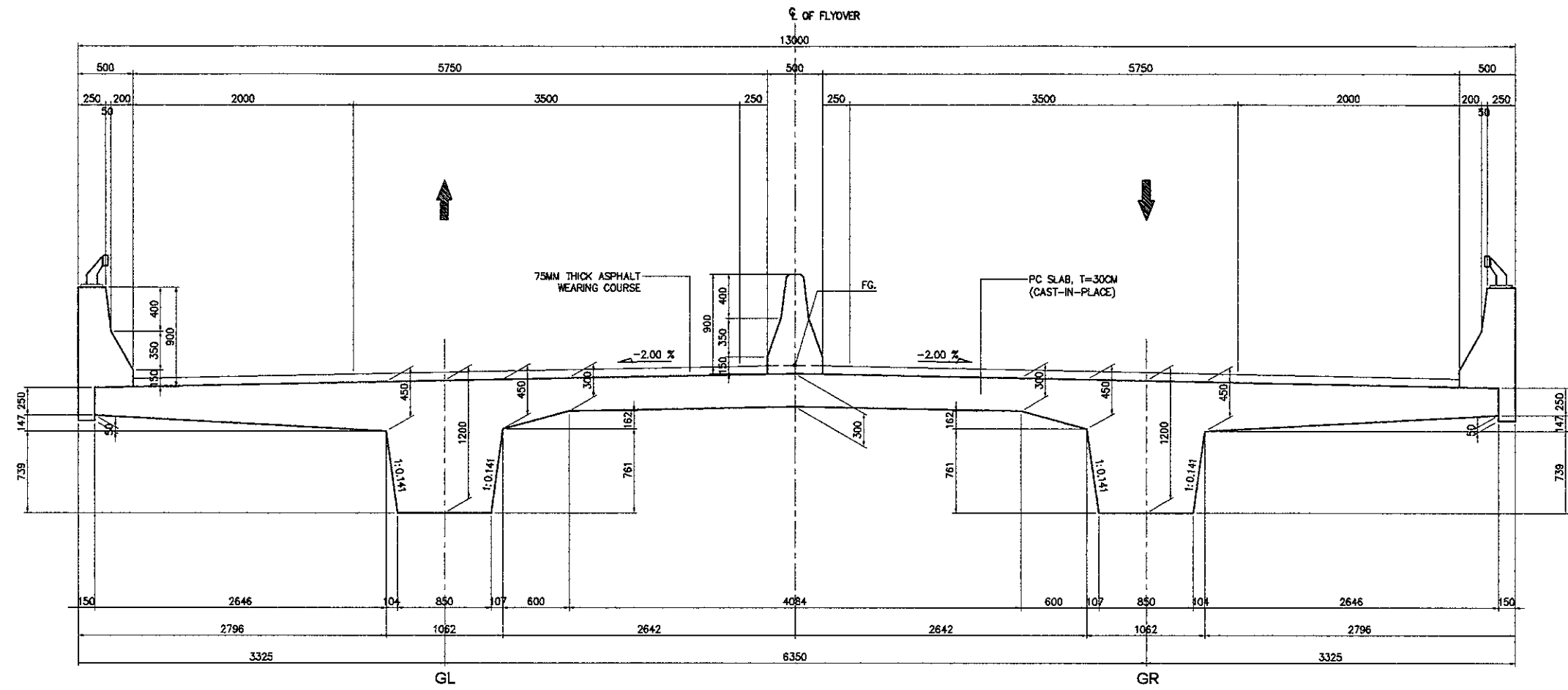
STA	P8	M16	M17	M18	M19	M20	P9	M21	M22	M23	M24	A2
LABEL	0+679.5000	0+680.2500	0+680.6500	0+685.3625	0+690.0750	0+694.7875	0+699.5000	0+704.3125	0+709.1250	0+713.9375	0+718.7500	0+719.5000
L1	E 819633.6157	819634.2911	819634.6506	819638.8472	819642.9699	819647.0154	819650.9804	819654.9392	819658.7985	819662.5666	819666.2537	819666.8218
N	9222886.1855	9222885.7962	9222885.5874	9222883.0617	9222880.4171	9222877.6560	9222874.7804	9222871.7324	9222868.5937	9222865.3811	9222862.1101	9222861.5960
Z	871.6431	871.6852	871.7354	871.6702	871.5868	871.4662	871.3456	871.2218	871.0981	870.9743	870.8504	870.8516
L2	E 819633.3671	819634.0405	819634.3989	819638.5832	819642.6939	819646.7276	819650.6811	819654.6287	819658.4783	819662.2383	819665.9187	819666.4858
N	9222885.7517	9222885.3636	9222885.1554	9222882.6370	9222880.0002	9222877.2471	9222874.3799	9222871.3405	9222868.2097	9222865.0040	9222861.7389	9222861.2257
Z	870.8181	870.8602	870.9104	870.8452	870.7618	870.6412	870.5206	870.3968	870.2731	870.1493	870.0254	870.0265
GL	E 819631.9621	819632.6244	819632.9769	819637.0921	819641.1348	819645.1019	819648.9900	819652.8743	819656.6593	819660.3831	819664.0257	819664.5876
N	9222883.3009	9222882.9192	9222882.7144	9222880.2376	9222877.6444	9222874.9367	9222872.1169	9222869.1263	9222866.0399	9222862.8735	9222859.6420	9222859.1335
Z	870.8746	870.8885	870.9104	870.8170	870.7053	870.5698	870.4343	870.2955	870.1568	870.0181	869.8793	869.8685
CL	E 819630.3830	819631.0328	819631.3787	819635.4162	819639.3826	819643.2748	819647.0895	819650.9026	819654.6361	819658.2981	819661.9981	819662.4542
N	9222880.5464	9222880.1719	9222879.9710	9222877.5410	9222874.9967	9222872.3401	9222869.5735	9222866.6378	9222863.6013	9222860.4790	9222857.2653	9222856.7820
Z	870.9381	870.9202	870.9104	870.7852	870.6418	870.4895	870.3372	870.1817	870.0262	869.8707	869.7151	869.6909
GR	E 819628.8039	819629.4412	819629.7804	819633.7402	819637.6304	819641.4476	819645.1989	819648.9309	819652.6029	819656.2132	819659.7705	819660.3208
N	9222877.7919	9222877.4246	9222877.2276	9222874.8443	9222872.3490	9222869.7436	9222867.0302	9222864.1492	9222861.1627	9222858.0846	9222854.9286	9222854.4306
Z	870.8746	870.8567	870.8489	870.7217	870.5783	870.4092	870.2401	870.0679	869.8956	869.7233	869.5509	869.5133
R2	E 819627.3989	819628.0251	819628.3584	819632.2491	819636.0713	819639.8219	819643.4979	819647.1765	819650.7938	819654.3580	819657.8775	819658.4226
N	9222875.3411	9222874.9802	9222874.7865	9222872.4449	9222869.9932	9222867.4332	9222864.7672	9222861.9350	9222858.9929	9222855.9541	9222852.3384	9222852.3384
Z	870.8181	870.8002	870.7904	870.6652	870.5218	870.3378	870.1538	869.9666	869.7793	869.5921	869.4048	869.3552
R1	E 819627.1502	819627.7745	819628.1067	819631.9851	819635.7953	819639.5342	819643.1986	819646.8660	819650.4736	819654.0297	819657.5424	819658.0866
N	9222874.9073	9222874.5476	9222874.3545	9222872.0203	9222869.5762	9222867.0243	9222864.3667	9222861.5431	9222858.6089	9222855.5770	9222852.4605	9222851.9681
Z	871.6431	871.6252	871.6154	871.4902	871.3468	871.1628	870.9788	870.7916	870.6043	870.4171	870.2298	870.1802

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



- NOTES :**
- All dimension are in mm unless noted otherwise.
 - Concrete Girder and Slab $f_c' = 35$ MPa.
 - All Reinforcing steel shall be BJTD 40 or ASTM A615 Grade 60 deformed bars.
 - The Contractor shall be responsible to carry out the following before Construction :
 - Verification of all elevations and dimensions, using actual field survey.
 - Preparation and submission of shop drawings for all bridge components for the Engineer's approval.

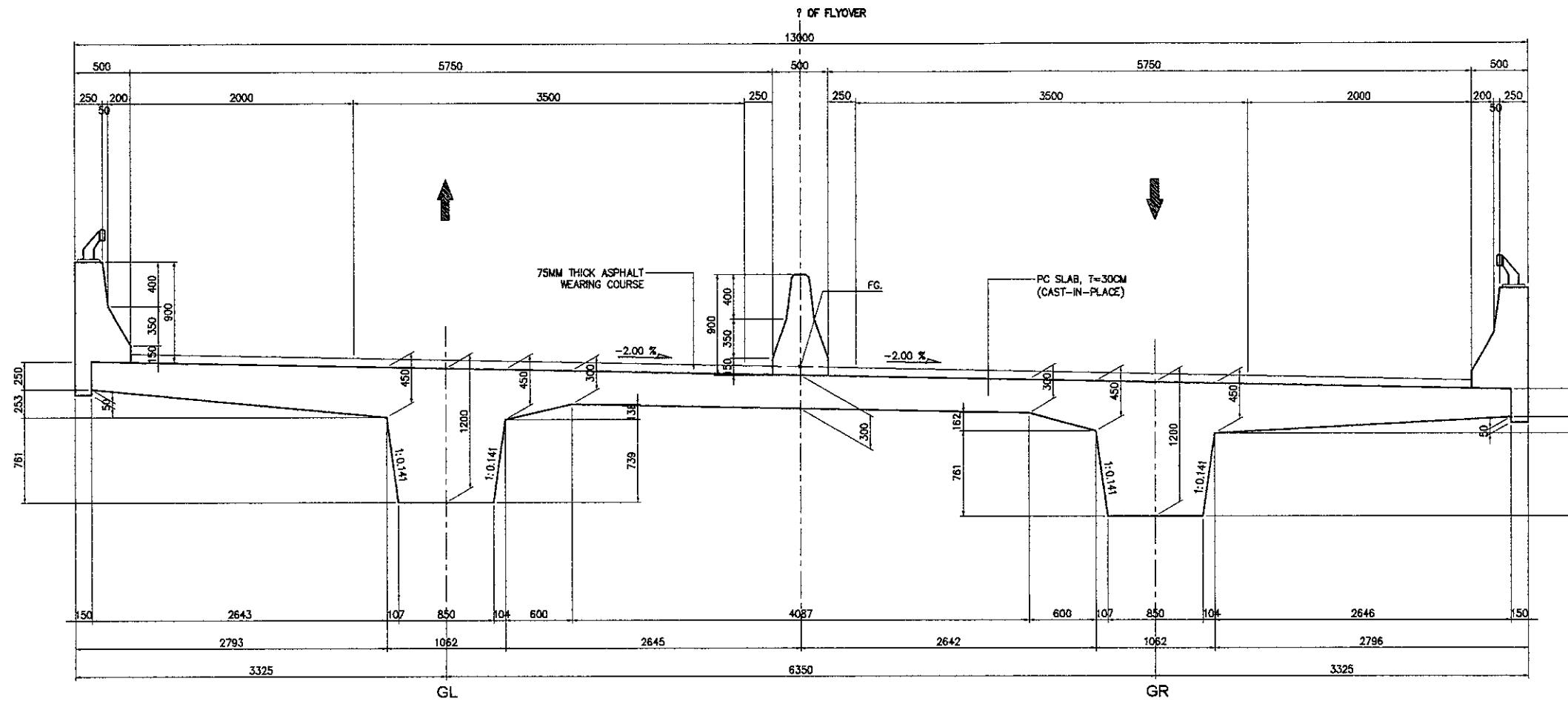




INFORMATION OF PC SUPERSTRUCTURE

	P8	P9	A2
FG.	866.770	870.337	869.691
Super Elev. GL	5.100%	5.100%	2.221%
Super Elev. GR	-5.100%	-5.100%	-2.221%
Top Slab Girder GL	866.857	870.424	869.686
Top Slab Girder GR	866.533	870.100	869.545
Bottom GL	864.933	868.825	868.270
Bottom GR	864.933	868.900	868.345
Station	0+680.625	0+699.500	0+719.500

TYPICAL CROSS SECTION
 (Span Length = 20 M)
 SCALE : 1 : 50



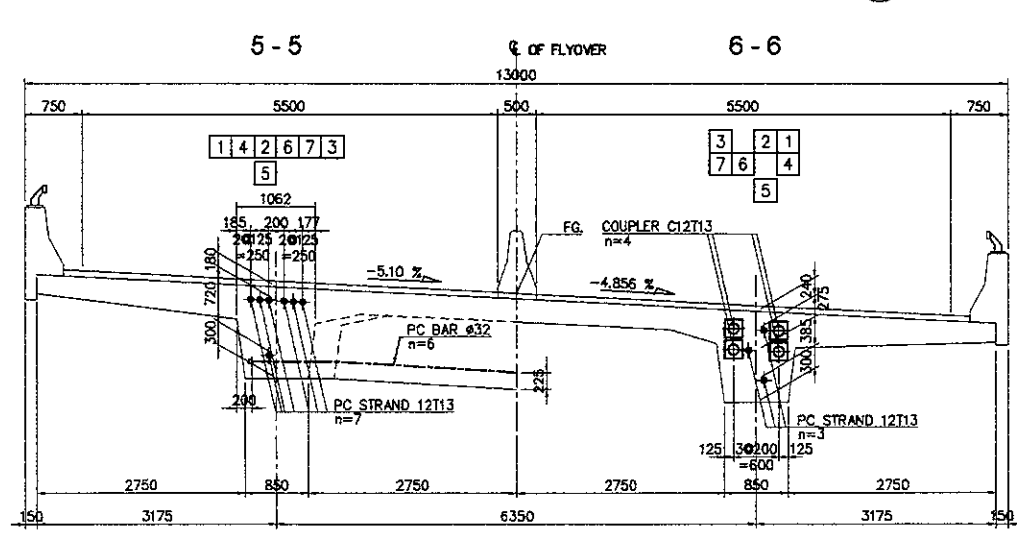
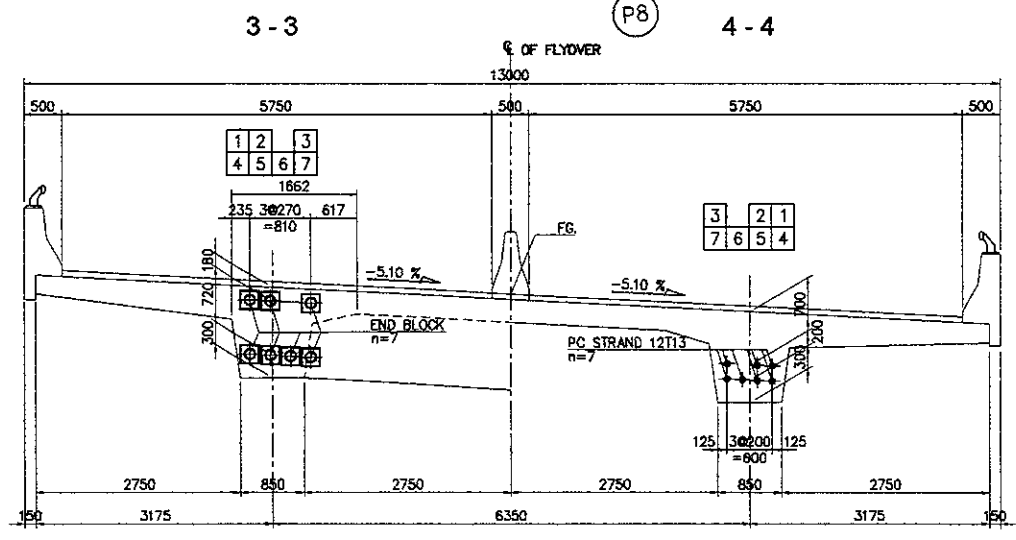
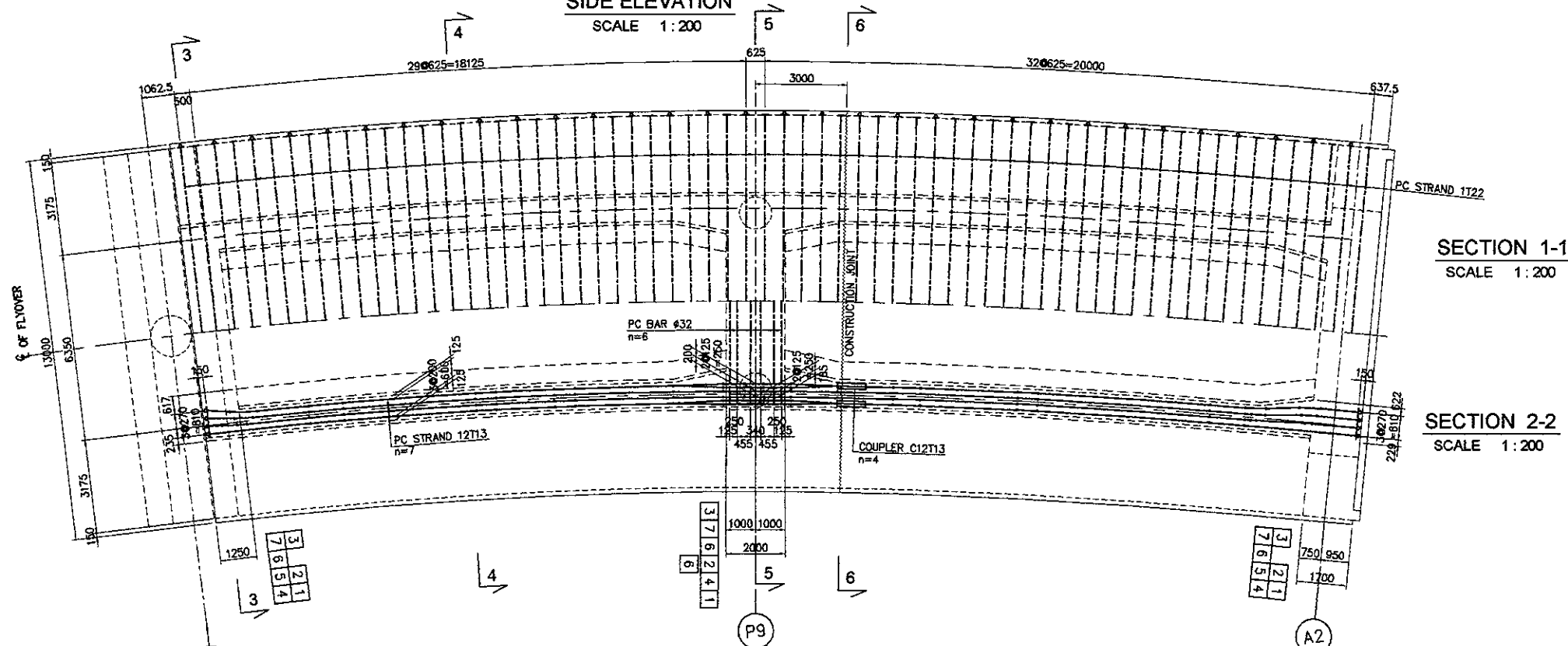
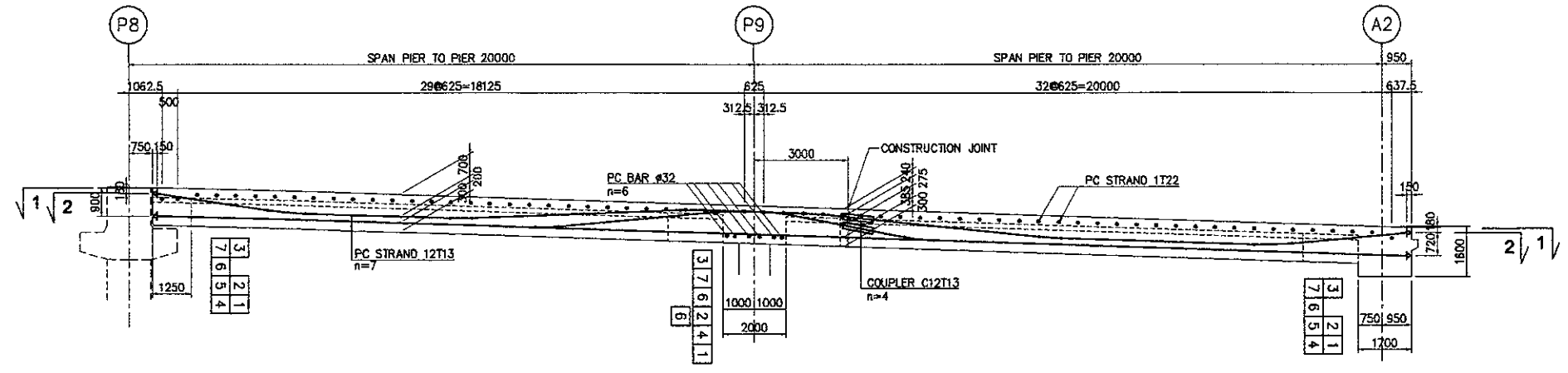
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Bottom GR	864.933	868.900	868.345
Station	0+680.625	0+699.500	0+719.500

TYPICAL CROSS SECTION
 (Span Length = 20 M)

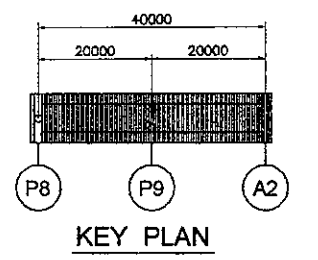
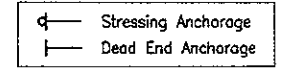
SCALE : 1 : 50

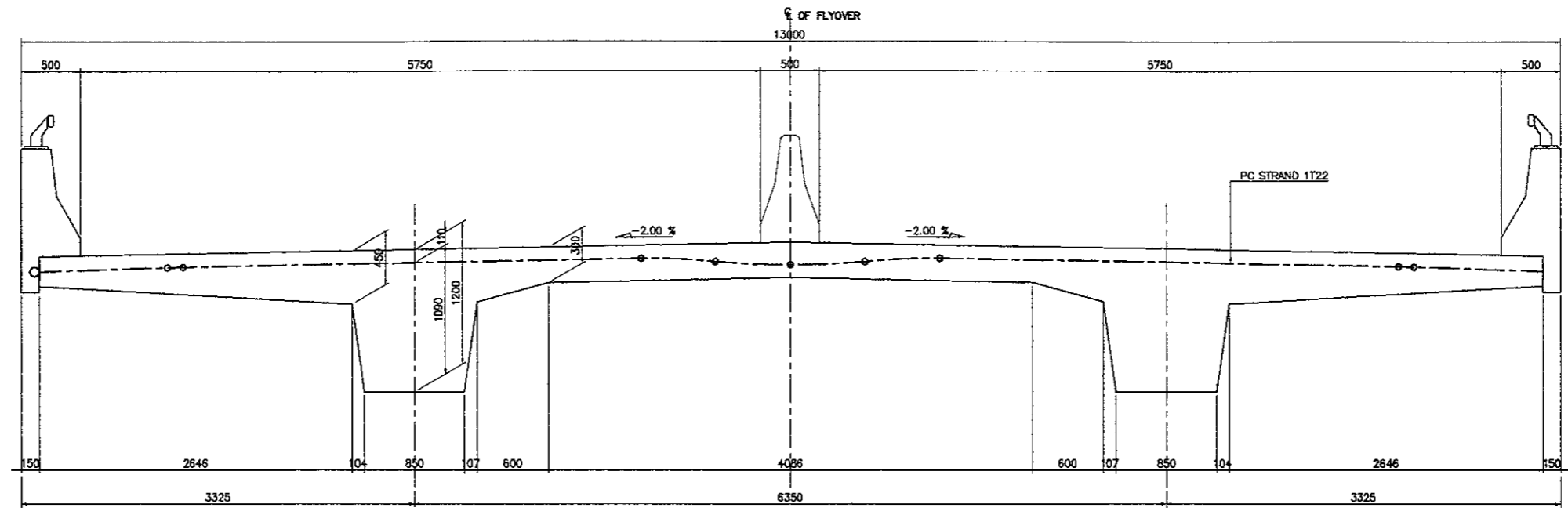
DESIGNED BY	CHECKED BY	SUBMITTED BY
Name: H. HONDA	Name: T. OKUMURA	Name: M. KIUCHI
Sign:	Sign:	Sign:
Date:	Date:	Date:



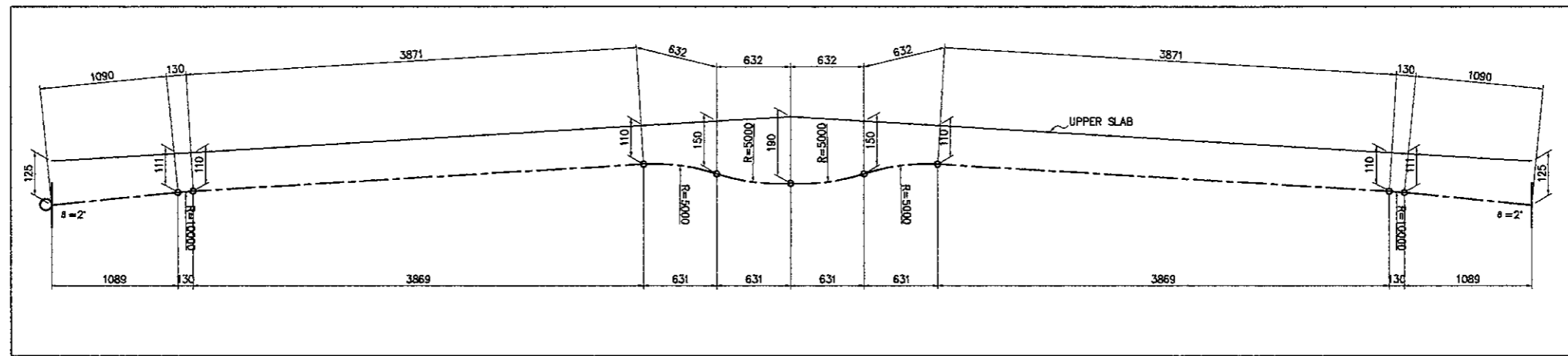
CROSS SECTION
 SCALE 1:100

- NOTES :**
- All dimension are in mm unless noted otherwise.
 - Prestressing Tendon Shall be 12T13 (7 WIRE STRAND).
 Nominal Diameter 12.7mm.
 - Shows Bending Point Of Prestressing Cable.

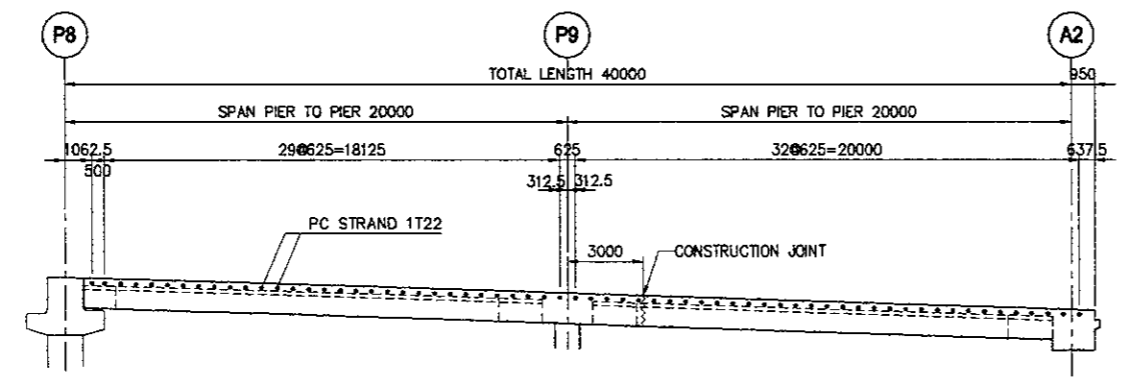




TRANVERSAL PC CABLE
 SCALE 1 : 50



PC CABLE PROFILE

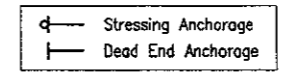


LONGITUDINAL PC CABLE ARRANGEMENT
 SCALE 1 : 300

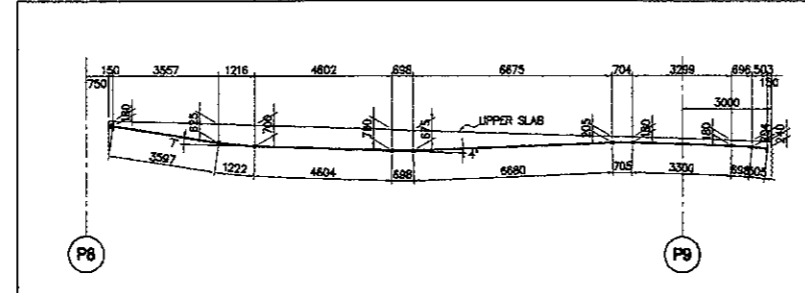
TABEL OF PC CABLES

Length (m)	Nos.	Unit Weight (kg/m)	Weight / 1 nos (kg)	Weight (kg)	Remarks
12.710	64	2.482	31.55	2,018.96	Stressing Anchorage One Side Staggered
TOTAL LENGTH (L) =			813.44	m	
TOTAL WEIGHT (W) =			2,018.96	kg	

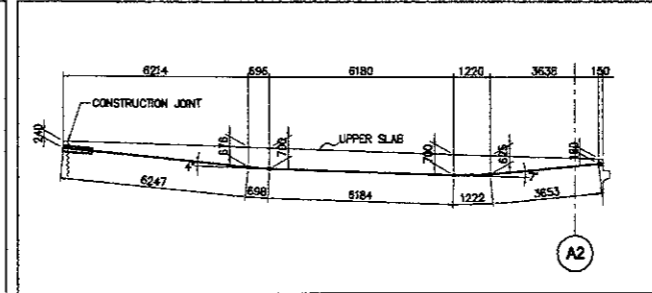
NOTES :
 1. All dimension are in mm unless noted otherwise.
 2. Shows Bending Point Of Prestressing Cable.



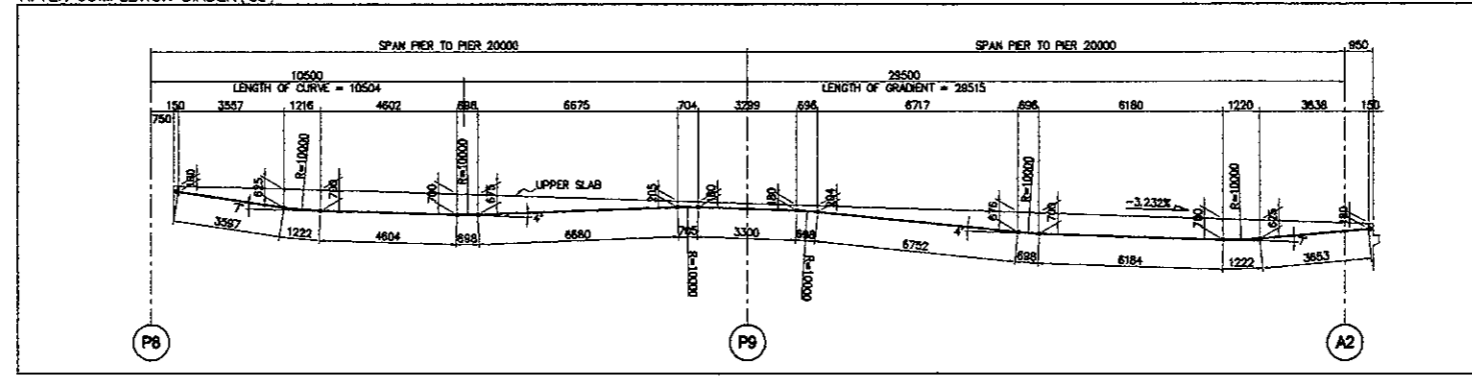
CONSTRUCTION SECTION NO.1 (C1 & C3)



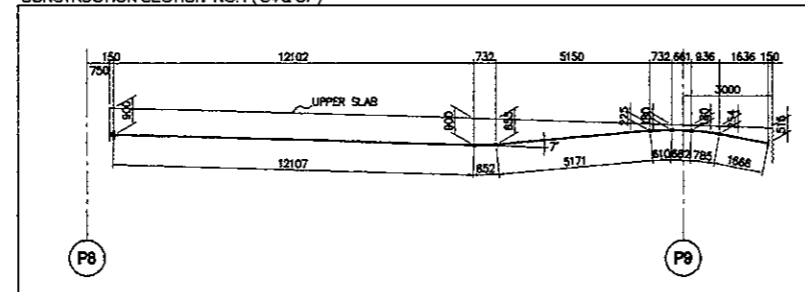
CONSTRUCTION SECTION NO.2 (C1 & C3)



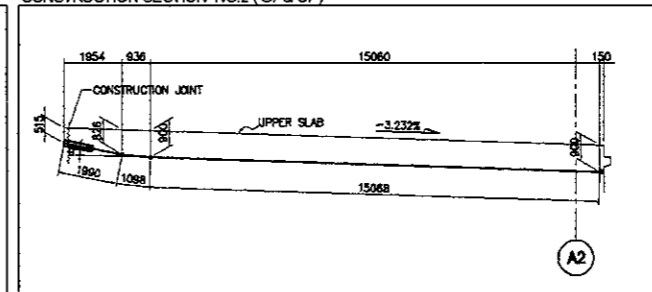
AFTER COMPLETION GIRDER (C2)



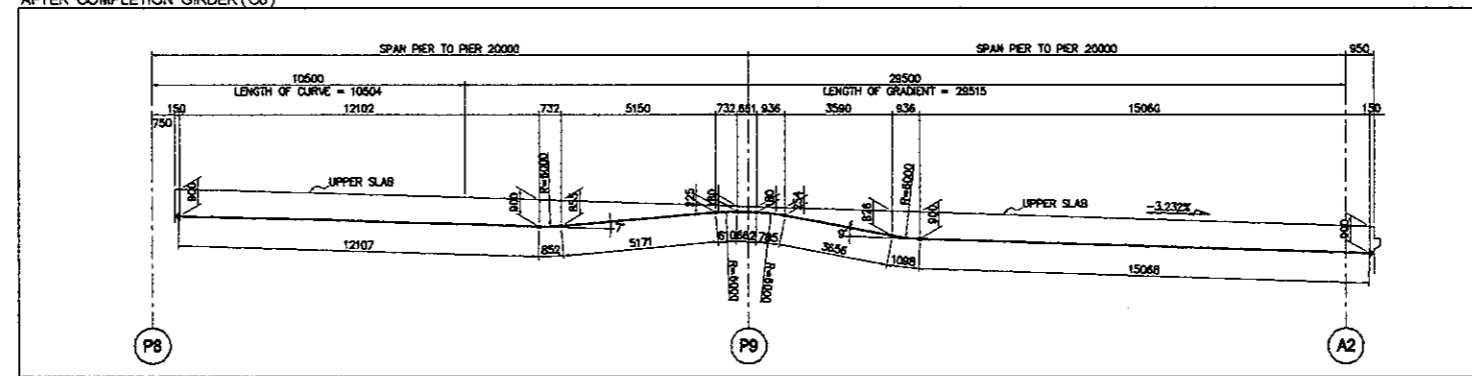
CONSTRUCTION SECTION NO.1 (C4 & C7)



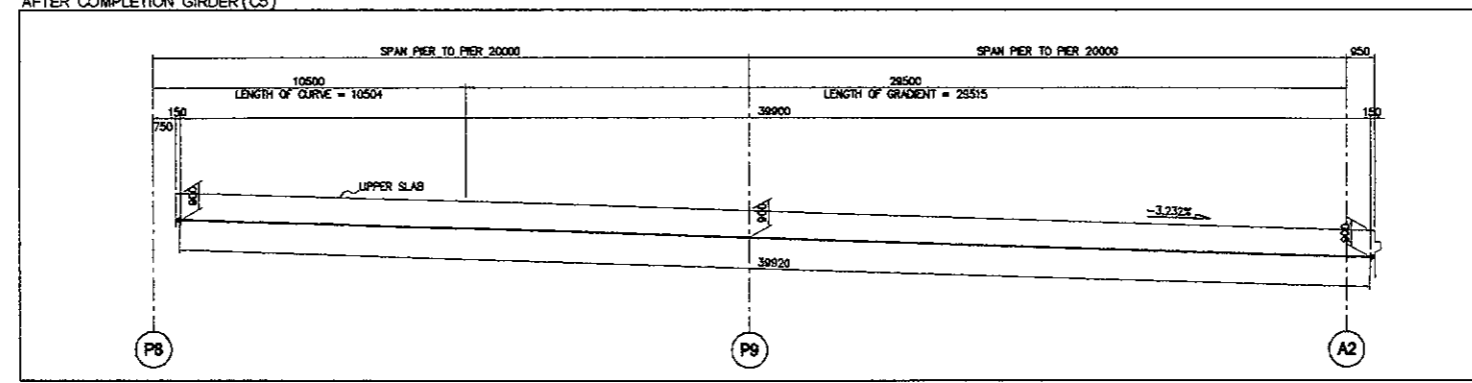
CONSTRUCTION SECTION NO.2 (C7 & C7)



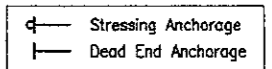
AFTER COMPLETION GIRDER (C6)



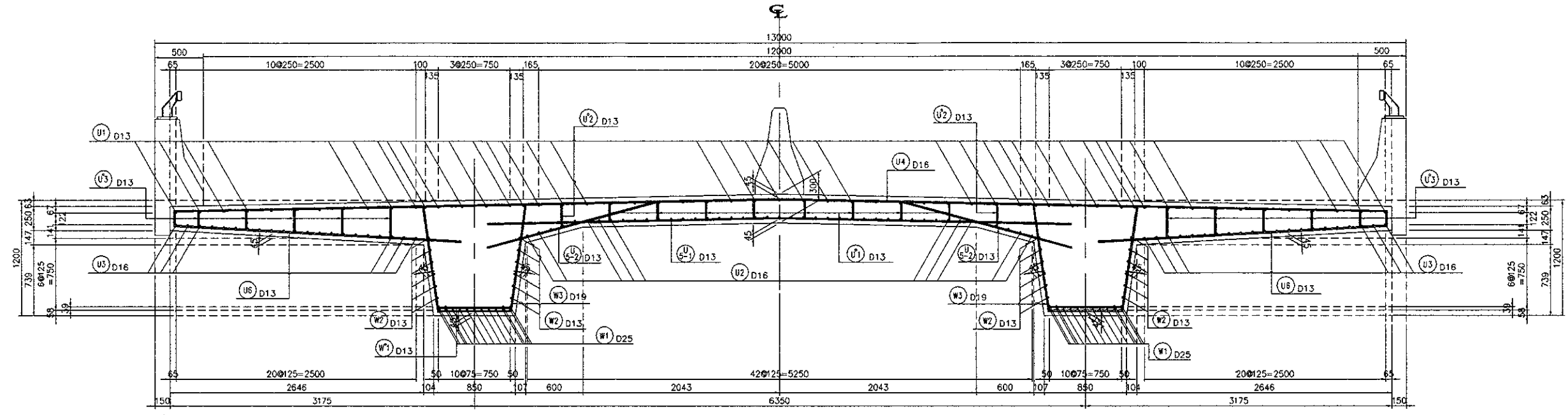
AFTER COMPLETION GIRDER (C5)



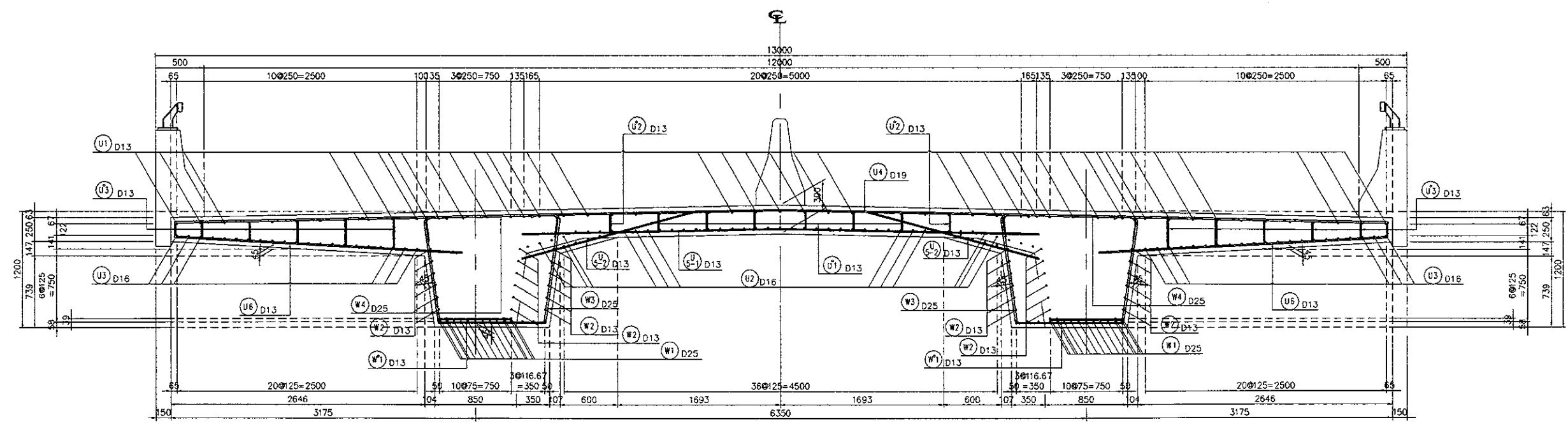
NOTES :
 1. All dimension are in mm unless noted otherwise
 2. Prestressing Tendon Shall be 12T13 (7 WIRE STRAND)
 . Nominal Diameter 12.7mm
 3. Shows Bending Point Of Prestressing Cable



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



SECTION AT MID SPAN
 SCALE 1:50



SECTION AT PIER
 SCALE 1:50

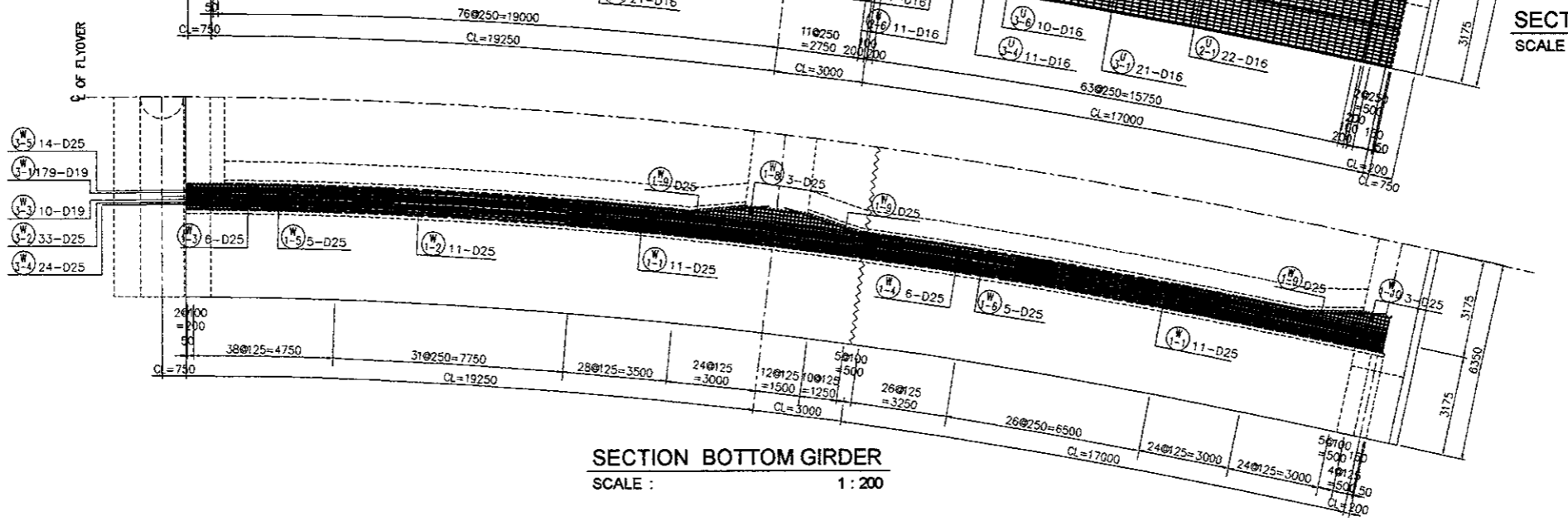
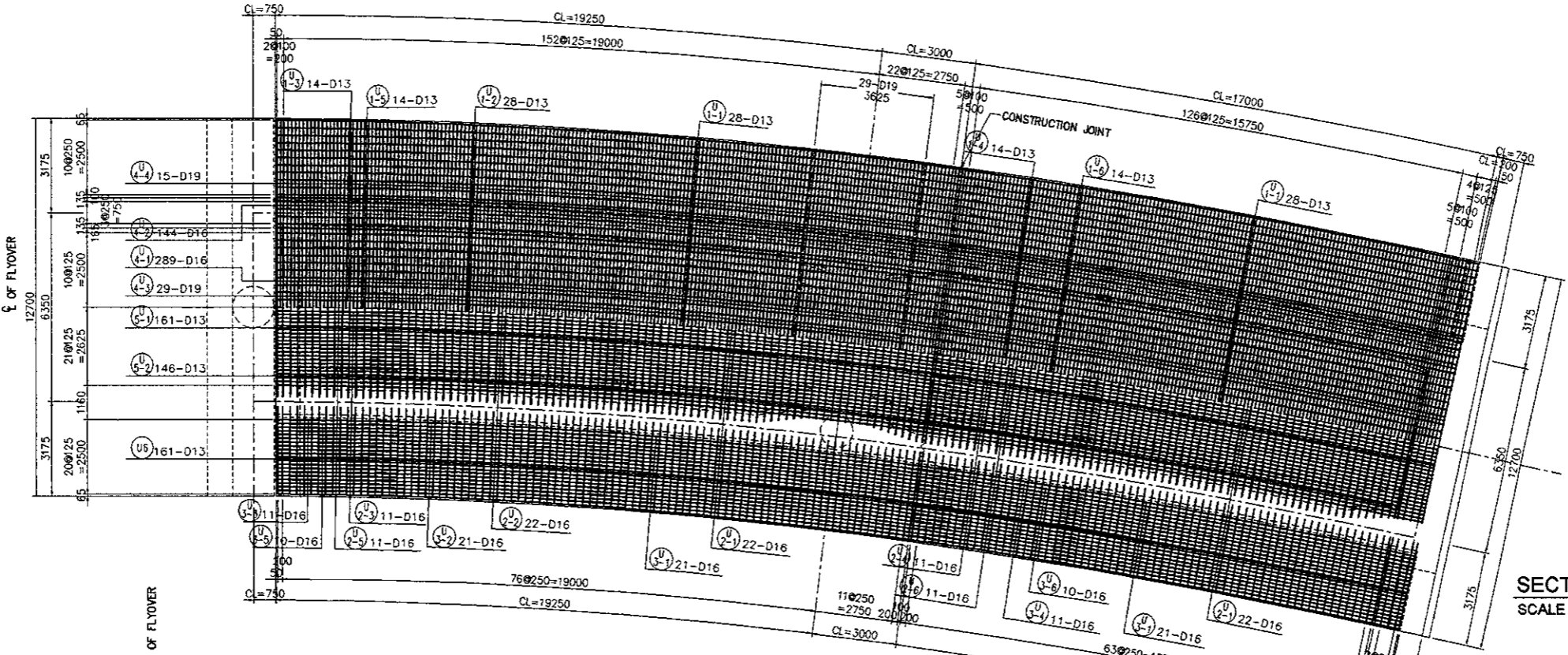
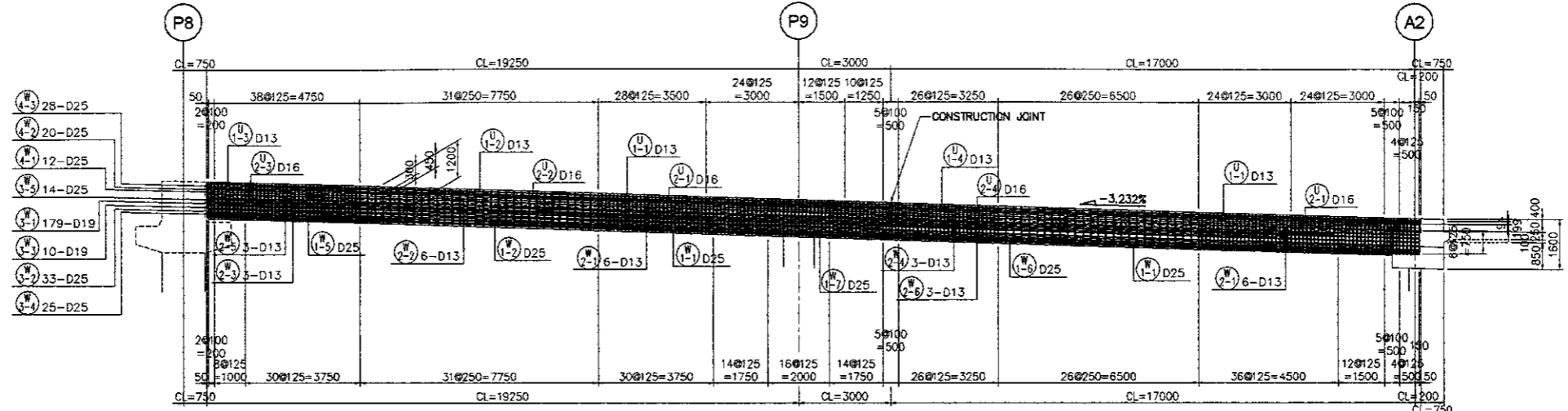
DESIGNED BY		CHECKED BY		SUBMITTED BY	
Name	H.HONDA	Name	T. OKUMURA	Name	M. KIUCHI
Sign		Sign		Sign	
Date		Date		Date	

PROJECT AND LOCATION :
 DETAILED DESIGN STUDY OF
 NORTH JAVA CORRIDOR FLYOVER PROJECT
 NAGREG FLYOVER - CONTRACT PACKAGE 2
 (NAGREG - GEBANG)
 WEST JAVA PROVINCE

SCALE :
 1 : 200
 FULL SIZE A3

DRAWING TITLE :
 ARRANGEMENT OF REINFORCEMENT
 FOR PC GIRDER P8 - A2 (1 OF 3)

DRAWING NO :
 NCR-009
 SHEET NO :
 09 / 18

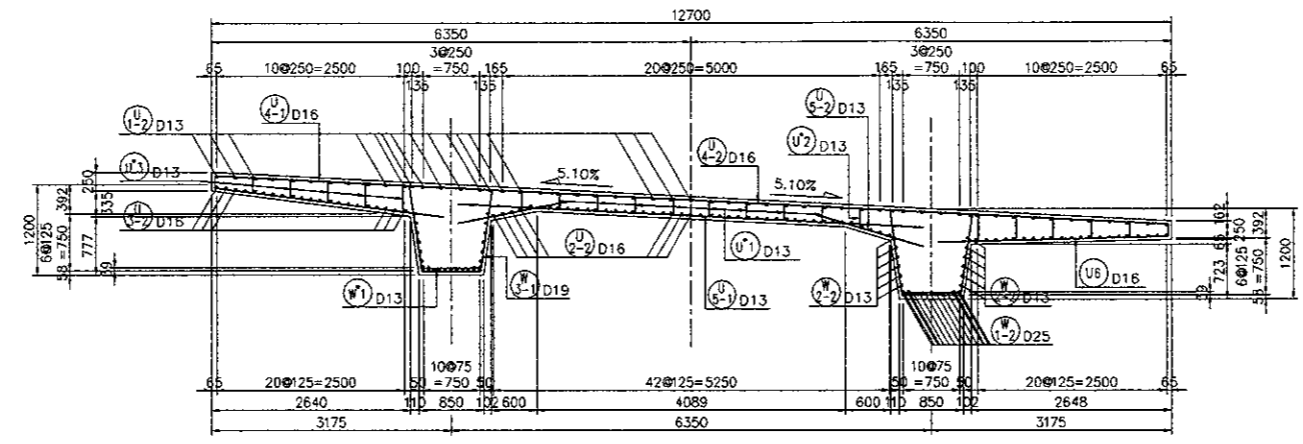


DESIGNED BY		CHECKED BY		SUBMITTED BY	
Name	H.HONDA	Name	T. OKUMURA	Name	M. KIUCHI
Sign		Sign		Sign	
Date		Date		Date	

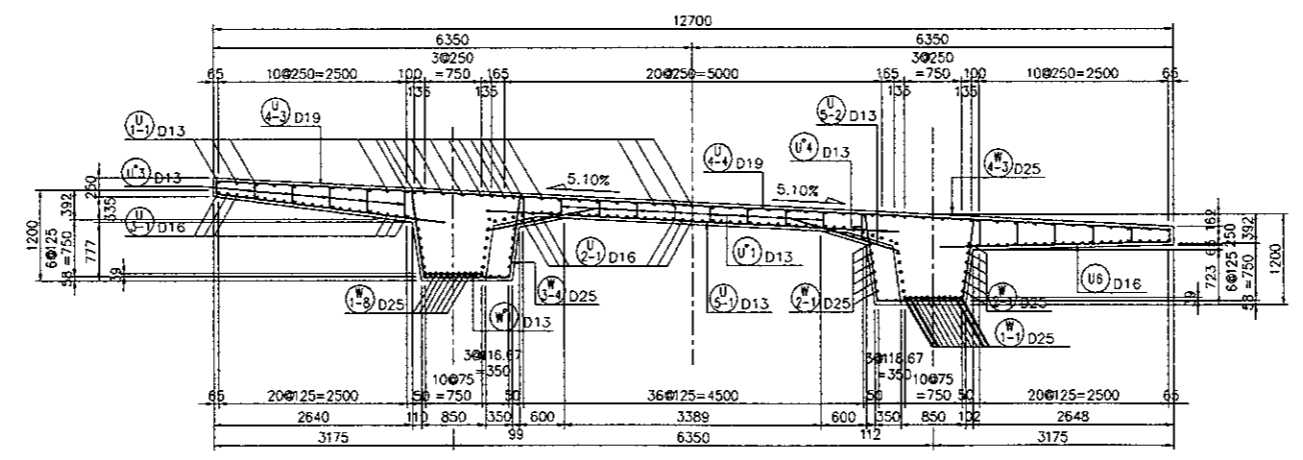
APPROVED BY	Ir. HERRY VAZA M.Eng.Sc	Sign	
	NIP. : 110038400	Date	

SCALE :	1 : 100
FULL SIZE A3	

DRAWING NO :	NCR-010
SHEET NO :	10 / 18

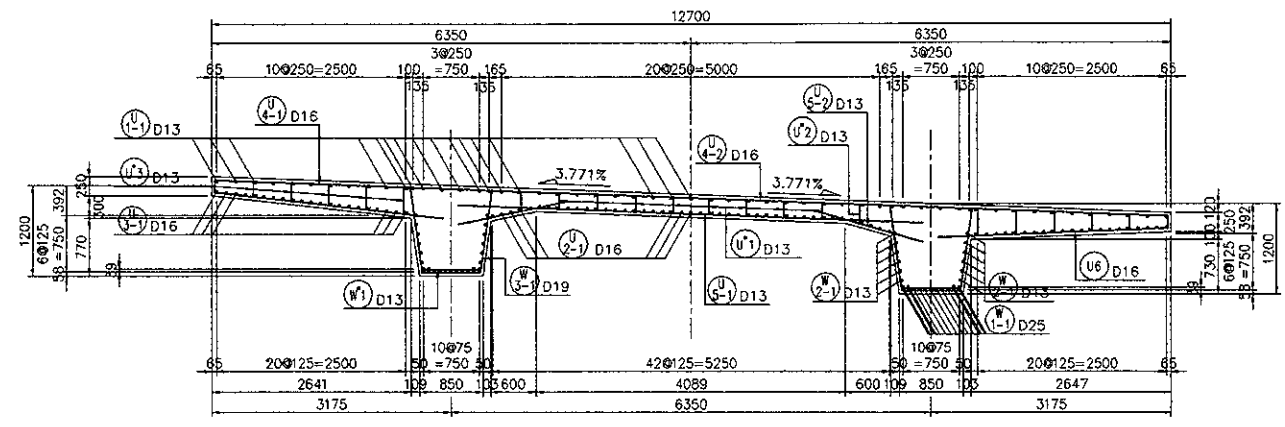


SECTION MID SPAN P8~P9
 SCALE : 1 : 100



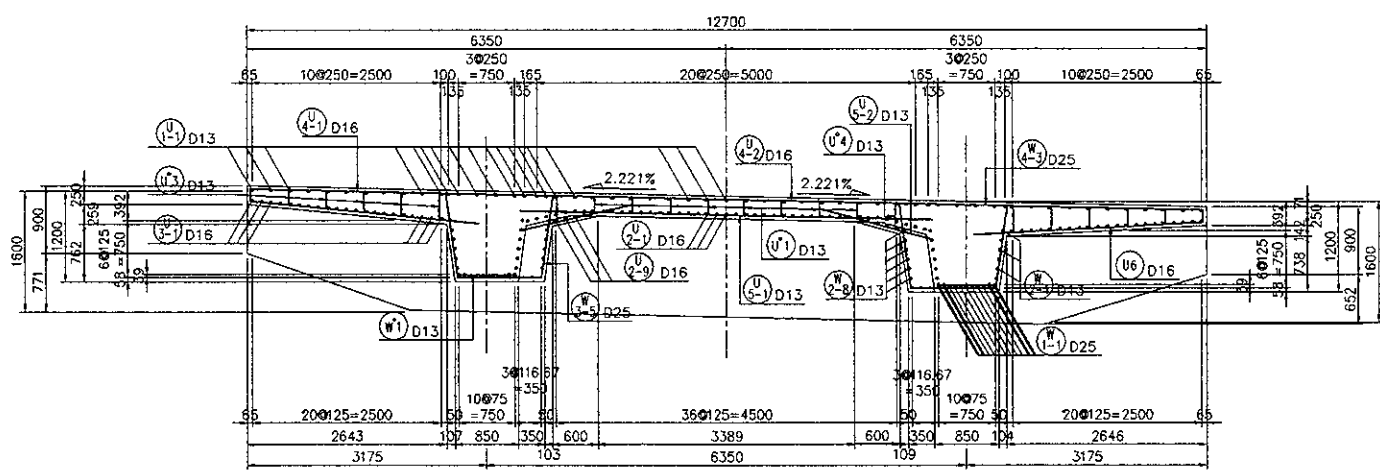
SECTION AT P9
 SCALE : 1 : 100

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



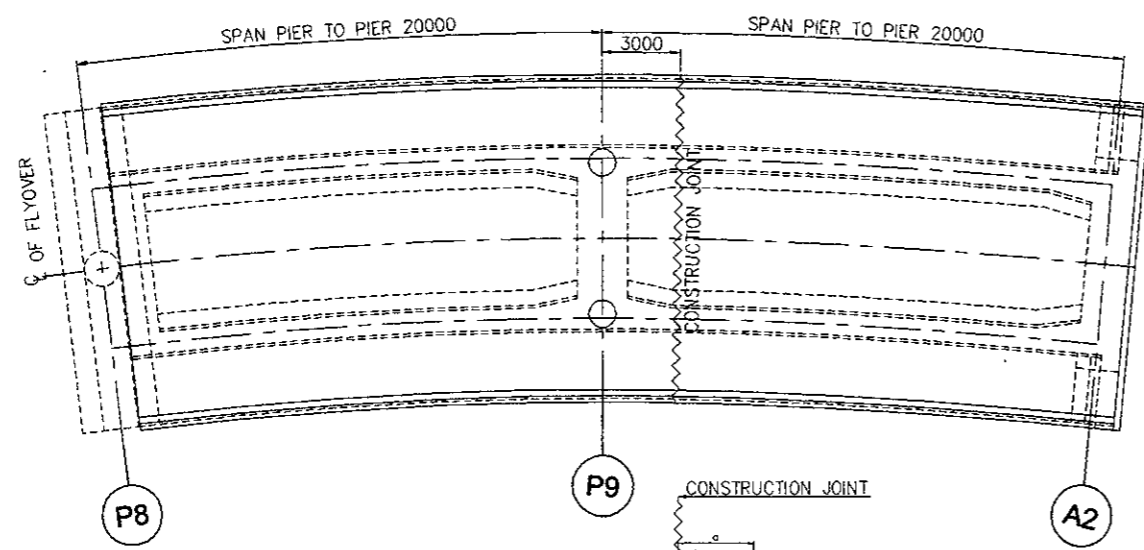
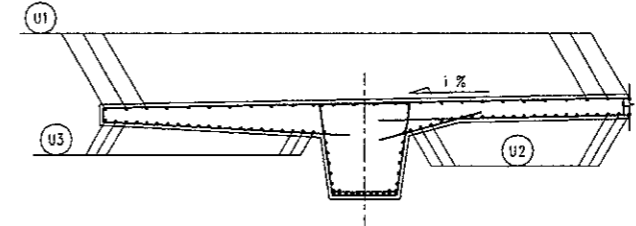
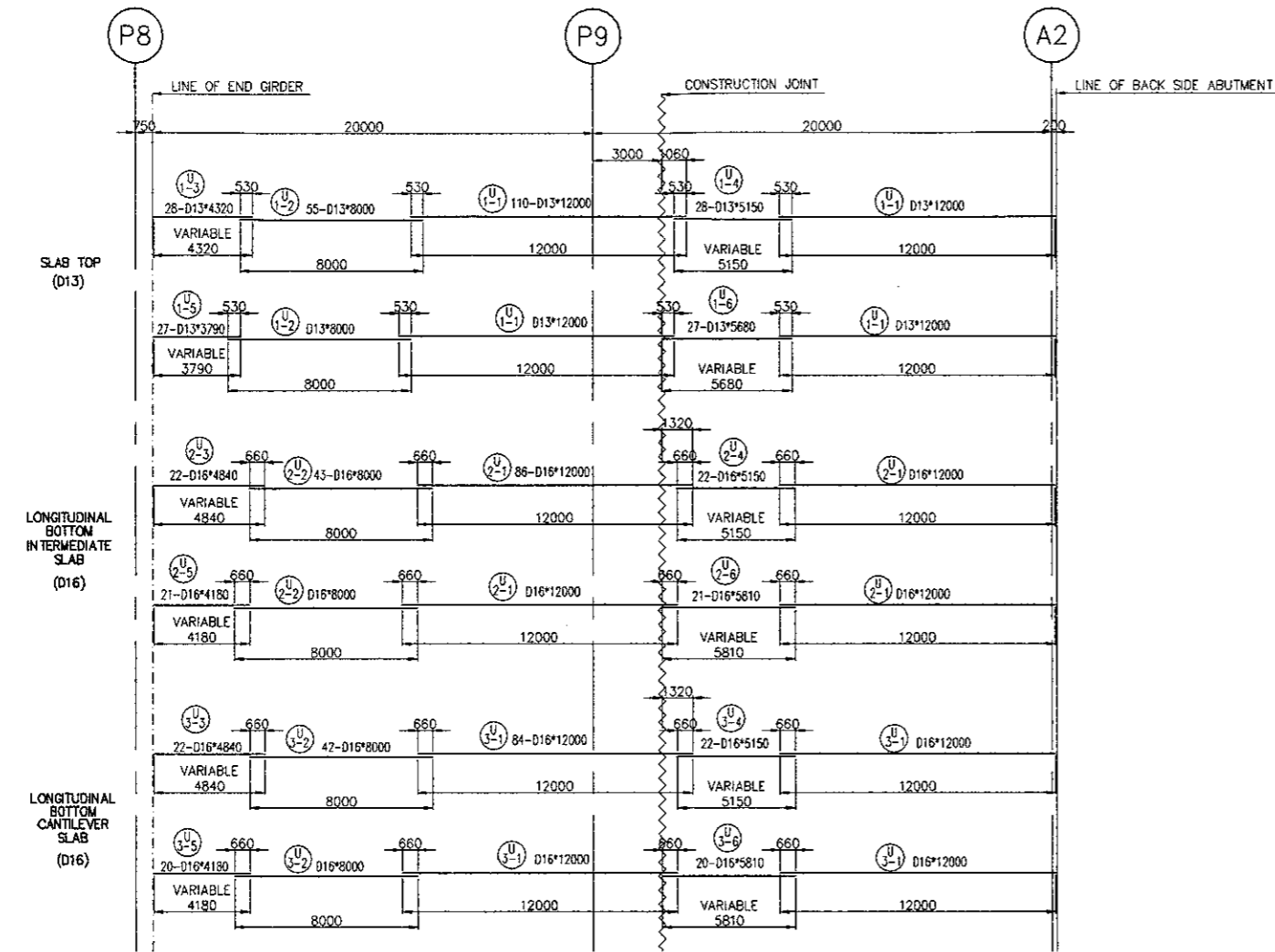
SECTION MID SPAN P9-A2

 SCALE : 1 : 100



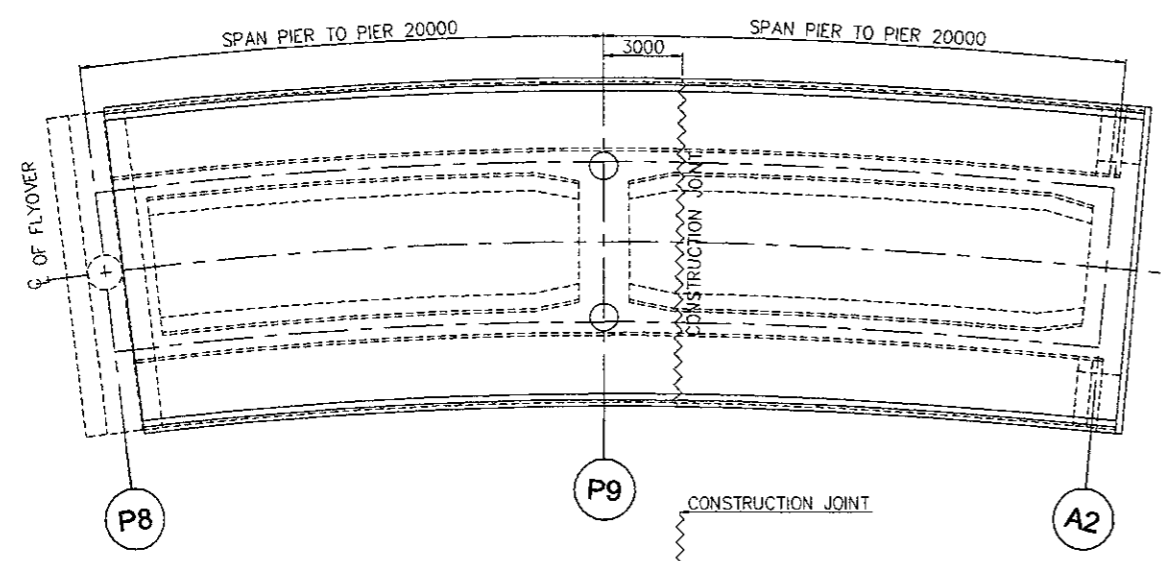
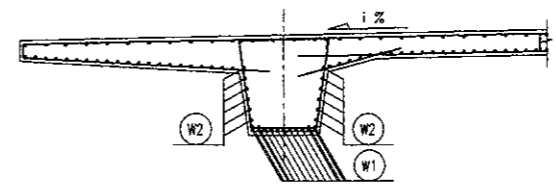
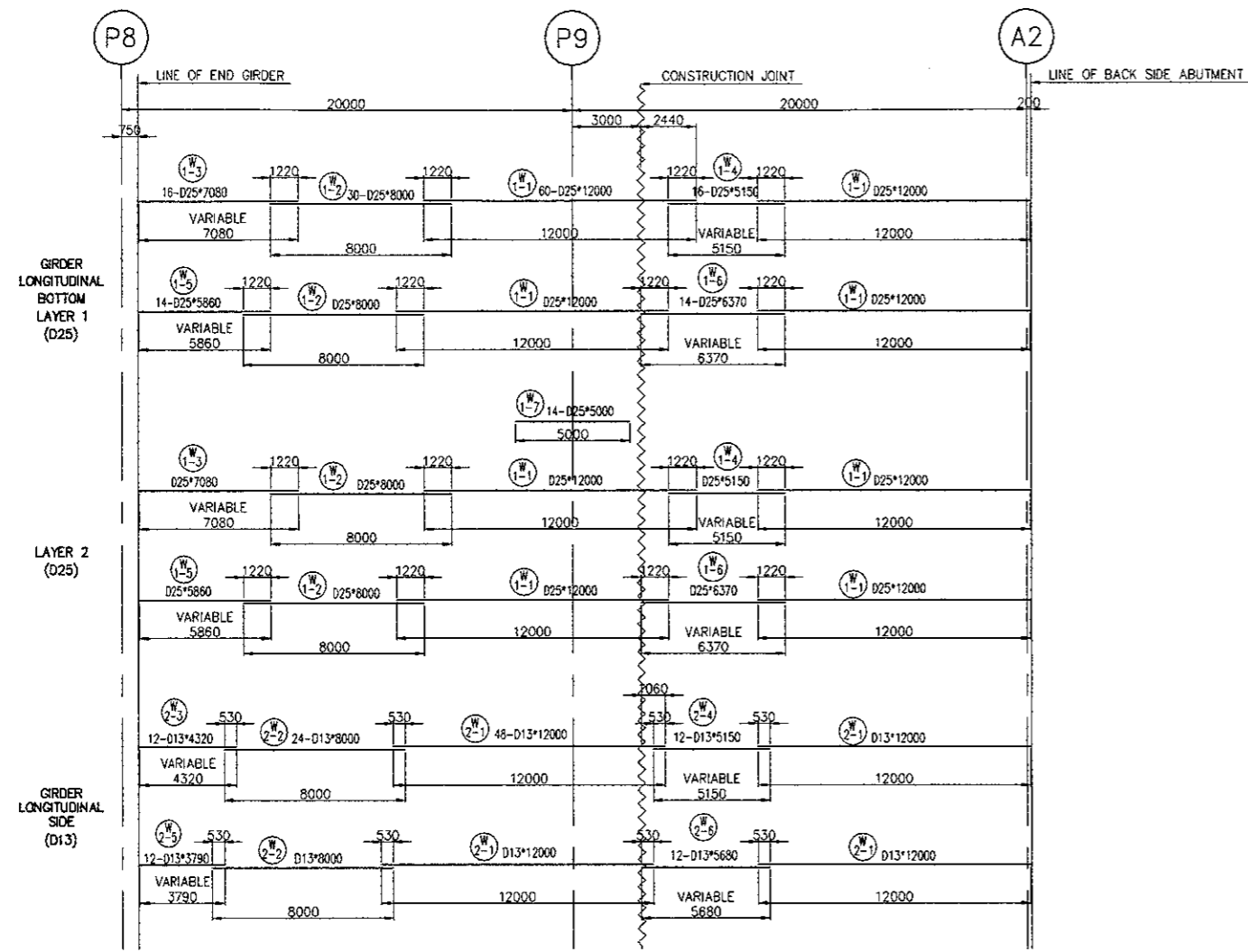
SECTION AT A2

 SCALE : 1 : 100

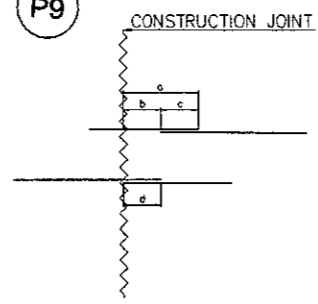


	a	b	c	d
D 13	1060	530	530	530
D 16	1320	660	660	660

E=30° R=3d	E=30° R=5.5d	MAIN REBAR						STIRRUP									
		α=45°	α=60°	α=90°	α=135°	R=2.5d	α=45°	α=60°	α=90°	α=135°							
D 13	39	71.5	92	98	82	83	81	17	88	3	32.5	77	80	88	45	81	14
D 16	48	88	113	119	100	88	75	21	88	4	40	84	98	84	85	83	17



	a	b	c	d
D 13	1060	530	530	530
D 25	2440	1220	1220	1220

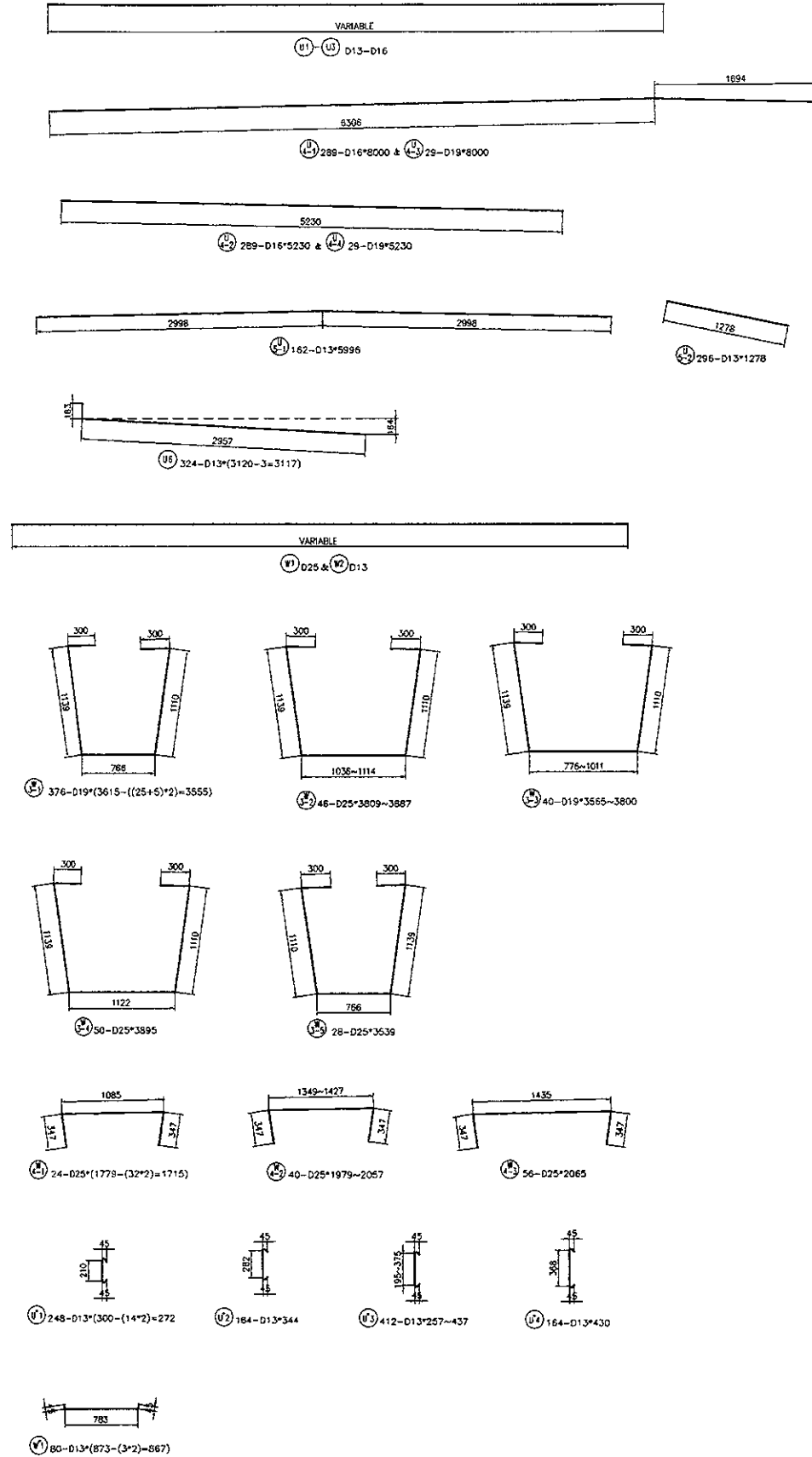


	MAIN REBARS								STIRRUPS								
	B=90° R=3d	B=90° R=5.5d	B=45° α	B=60° α	B=90° α	B=135° α	R=2.5d	B=45° α	B=60° α	B=90° α							
D 13	30	71.5	82	86	82	83	81	17	86	3	32.5	77	80	88	45	81	14
D 25	75	157.5	117	106	107	103	118	32	109	8	82.5	177	185	157	108	118	32

* R=3d

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

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



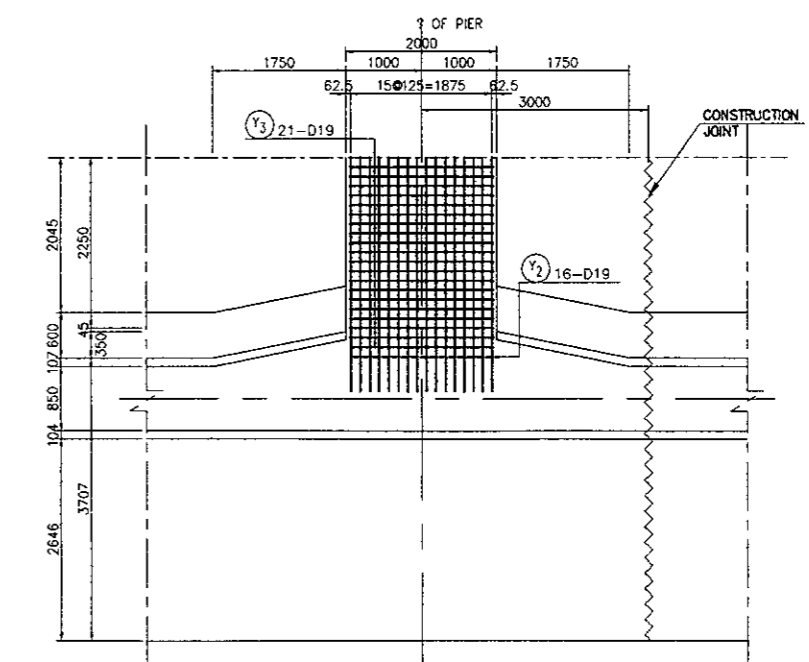
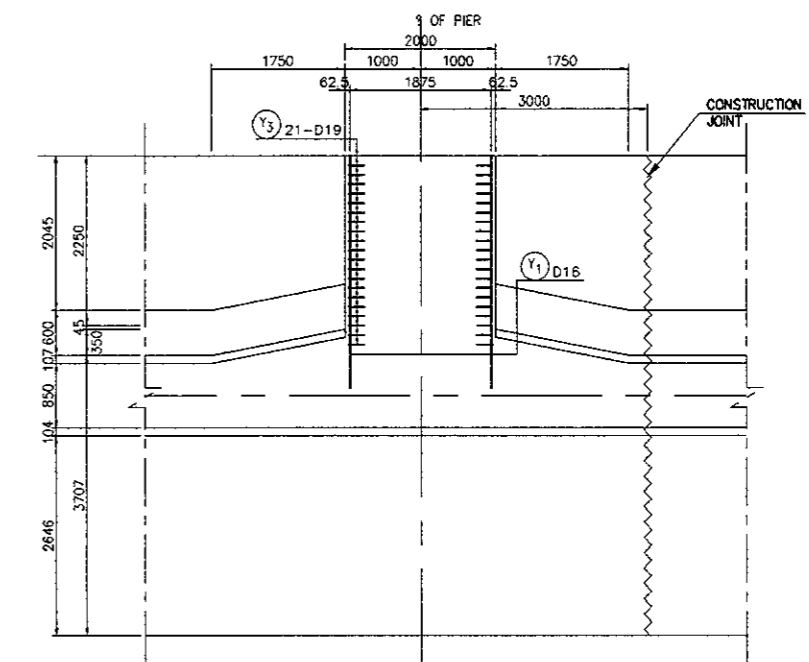
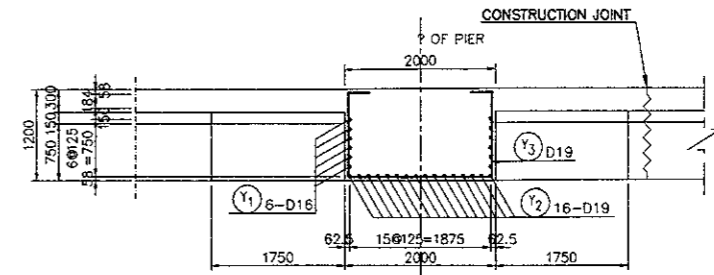
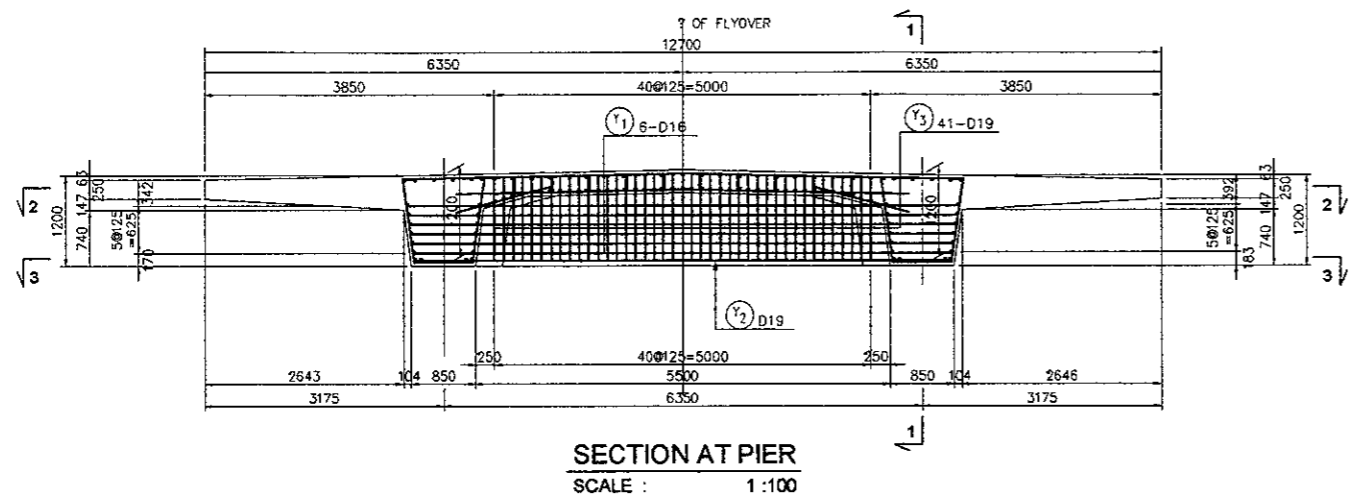
BAR BENDING SCHEDULE

REBAR NAME	DIA (mm)	LENGTH (mm)	NOS.	UNIT WEIGHT (kg/m)	WEIGHT (kg)	TOTAL WEIGHT (kg)	DIAGRAM	REMARKS
U 1 - 1	13	12000	110	1.04	12.48	1373		
U 1 - 2	13	8000	55	1.04	8.32	468		
U 1 - 3	13	4320	28	1.04	4.49	128		varies length
U 1 - 4	13	5150	28	1.04	5.38	150		varies length
U 1 - 5	13	3790	27	1.04	3.94	108		varies length
U 1 - 6	13	5880	27	1.04	5.91	159		varies length
U 2 - 1	16	12000	86	1.58	18.98	1631		
U 2 - 2	16	8000	43	1.58	12.64	544		
U 2 - 3	16	4840	22	1.58	7.65	168		varies length
U 2 - 4	16	5150	22	1.58	8.14	179		varies length
U 2 - 5	16	4180	21	1.58	6.80	138		varies length
U 2 - 6	16	5810	21	1.58	9.18	193		varies length
U 2 - 7	16	3184	8	1.58	5.00	40		varies length
U 2 - 8	16	1582	8	1.58	2.50	20		varies length
U 3 - 1	16	12000	84	1.58	18.98	1593		
U 3 - 2	16	8000	42	1.58	12.64	531		
U 3 - 3	16	4840	22	1.58	7.65	168		varies length
U 3 - 4	16	5150	22	1.58	8.14	179		varies length
U 3 - 5	16	4180	20	1.58	6.80	132		varies length
U 3 - 6	16	5810	20	1.58	9.18	184		varies length
U 4 - 1	16	8000	289	1.58	12.64	3653		
U 4 - 2	16	5230	289	1.58	8.26	2388		varies length
U 4 - 3	19	8000	29	2.23	17.84	517		
U 4 - 4	19	5230	29	2.23	11.66	336		
U 5 - 1	13	5696	182	1.04	8.24	1010		varies length
U 5 - 2	13	1278	296	1.04	1.33	383		varies length
U 6	13	3117	324	1.04	3.24	1050		varies length
U ^o 1	13	272	248	1.04	0.28	70		
U ^o 2	13	344	184	1.04	0.36	59		varies length
U ^o 3	13	347	412	1.04	0.36	149		varies length
U ^o 4	13	430	184	1.04	0.45	73		varies length
SUB TOTAL - 1						17773		

REBAR NAME	DIA (mm)	LENGTH (mm)	NOS.	UNIT WEIGHT (kg/m)	WEIGHT (kg)	TOTAL WEIGHT (kg)	DIAGRAM	REMARKS
W 1 - 1	25	12000	60	3.85	46.20	2772		
W 1 - 2	25	8000	30	3.85	30.80	924		
W 1 - 3	25	7080	16	3.85	27.28	436		varies length
W 1 - 4	25	5150	16	3.85	19.83	317		varies length
W 1 - 5	25	5680	14	3.85	22.56	318		varies length
W 1 - 6	25	6370	14	3.85	24.52	343		varies length
W 1 - 7	25	5000	14	3.85	19.25	270		varies length
W 1 - 8	25	2830	8	3.85	10.90	65		varies length
W 1 - 9	25	3275	8	3.85	12.61	76		varies length
W 1 - 10	25	1315	8	3.85	5.06	30		varies length
W 2 - 1	13	12000	48	1.04	12.48	599		
W 2 - 2	13	8000	24	1.04	8.32	200		
W 2 - 3	13	4320	12	1.04	4.49	54		varies length
W 2 - 4	13	5150	12	1.04	5.38	64		varies length
W 2 - 5	13	3790	12	1.04	3.94	47		varies length
W 2 - 6	13	5880	12	1.04	5.91	71		varies length
W 2 - 7	13	3185	10	1.04	3.31	33		varies length
W 2 - 8	13	1693	10	1.04	1.66	17		varies length
W 3 - 1	19	3555	378	2.23	7.93	2881		
W 3 - 2	25	3840	46	3.85	14.81	681		varies length
W 3 - 3	19	3683	40	2.23	8.21	329		varies length
W 3 - 4	25	3895	50	3.85	15.00	750		
W 3 - 5	25	3639	26	3.85	13.63	382		
W 4 - 1	25	1715	24	3.85	6.80	158		
W 4 - 2	25	2018	40	3.85	7.77	311		varies length
W 4 - 3	25	2065	56	3.85	7.95	445		
W ^o 1	13	567	80	1.04	0.90	72		
SUB TOTAL - 2						12743		
TOTAL REBAR WEIGHT P8 - A2						30515		

REBAR	MAIN REBAR										STIRRLP						
	α	β	γ	δ	ε	ζ	η	θ	ι	κ	α	β	γ	δ	ε		
D 13	30	71.5	92	98	92	83	81	17	88	3	32.5	77	80	88	46	81	14
D 16	48	88	113	118	100	88	75	21	99	4	40	94	96	84	55	83	17
D 19	57	104.5	134	141	119	78	60	28	82	5	47.5	112	117	99	68	75	20
D 25	75	137.5	177	186	167	108	118	32	90	8	75*	177	186	157	103	118	32

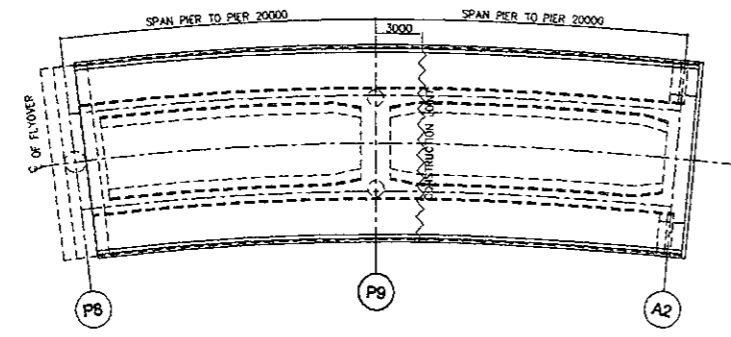
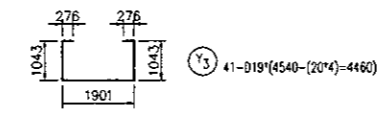
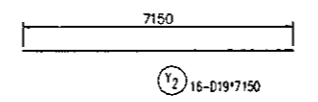
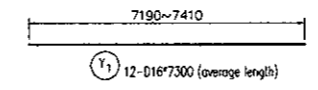
DESIGNED BY		CHECKED BY		SUBMITTED BY	
Name	H.HONDA	Name	T. OKUMURA	Name	M. KIUCHI
Sign		Sign		Sign	
Date		Date		Date	

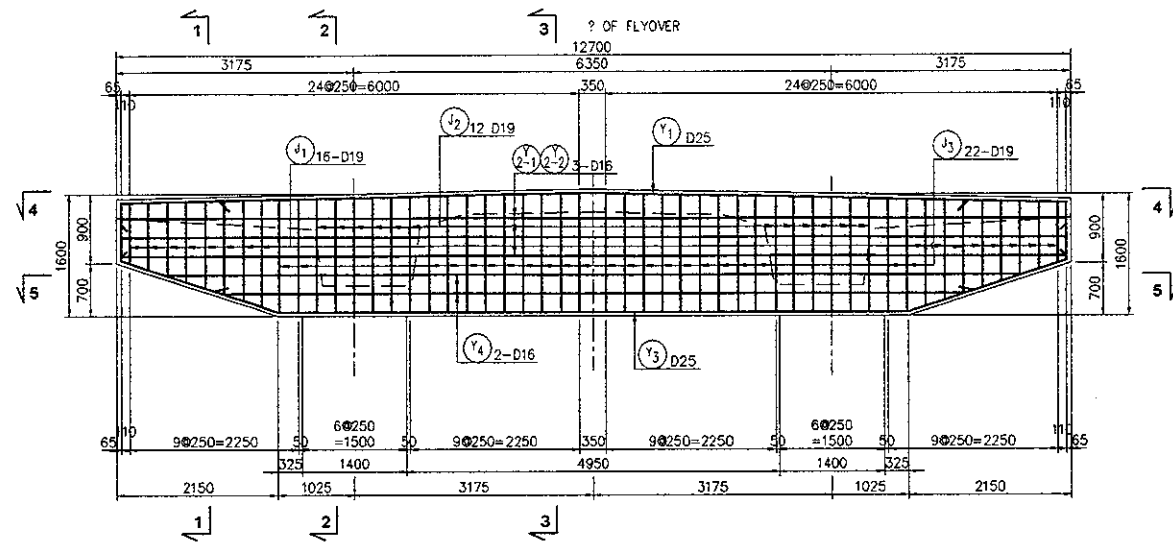


REINF NO.	φ (mm)	TYPE	BENDING DIMENSION (mm)				TOTAL LENGTH (m)	NUMBER	UNIT WEIGHT (kg/m)	WEIGHT (kg)	REMARK
			a	b	c	d					
PIER											
Y 1	D16	A	7300				7.30	12	1.58	138	—
2	D19	A	7150				7.15	16	2.23	255	—
3	D19	B	1901	1043	276		4.46	41	2.23	408	□
										D19	663
										D16	138
										TOTAL	801
PIER LOCATION							P8 - A2 (P9)				
REBAR WEIGHT TOTAL							801 kg				

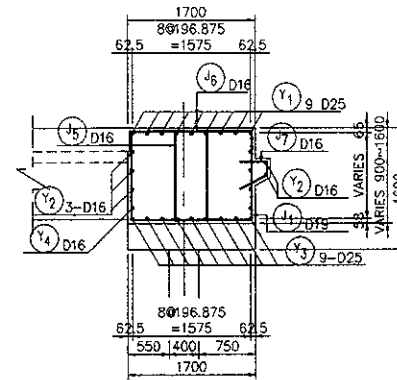
STIRRUP

R=2.5φ	θ=45°		θ=60°		θ=90°	
	a	ΔL	a	ΔL	a	ΔL
D16	40	84	99	84	55	63
D19	47.5	112	117	99	66	75

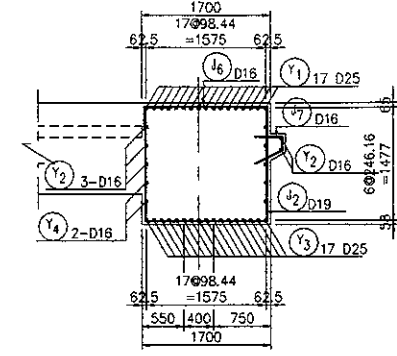




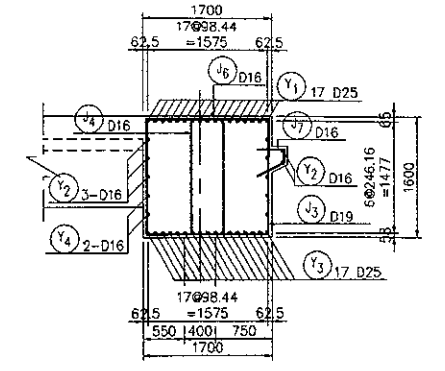
SECTION AT ABUTMENT
 SCALE : 1:100



SECTION 1 - 1
 SCALE : 1:100

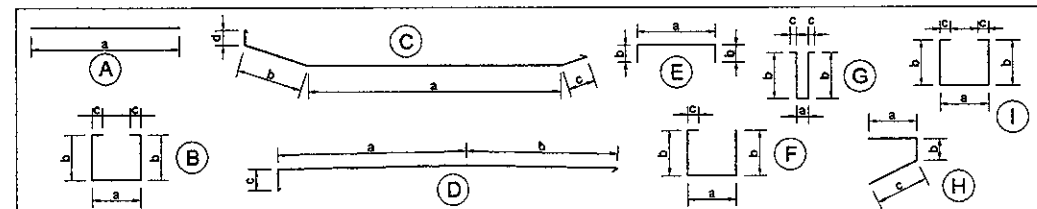


SECTION 2 - 2
 SCALE : 1:100

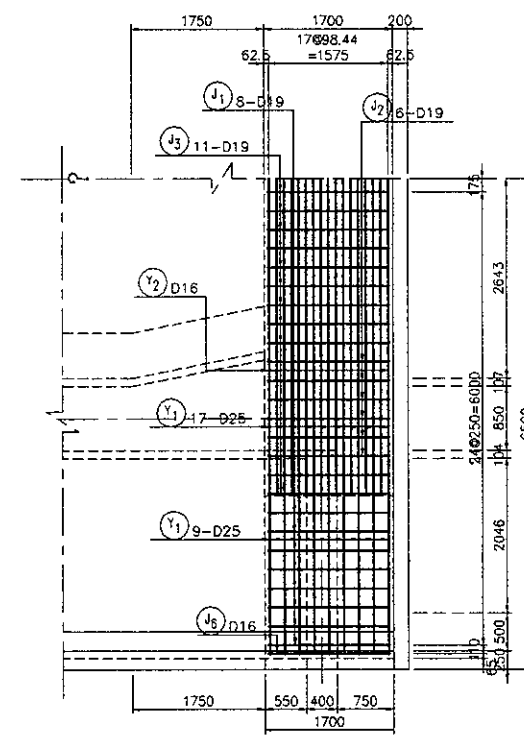
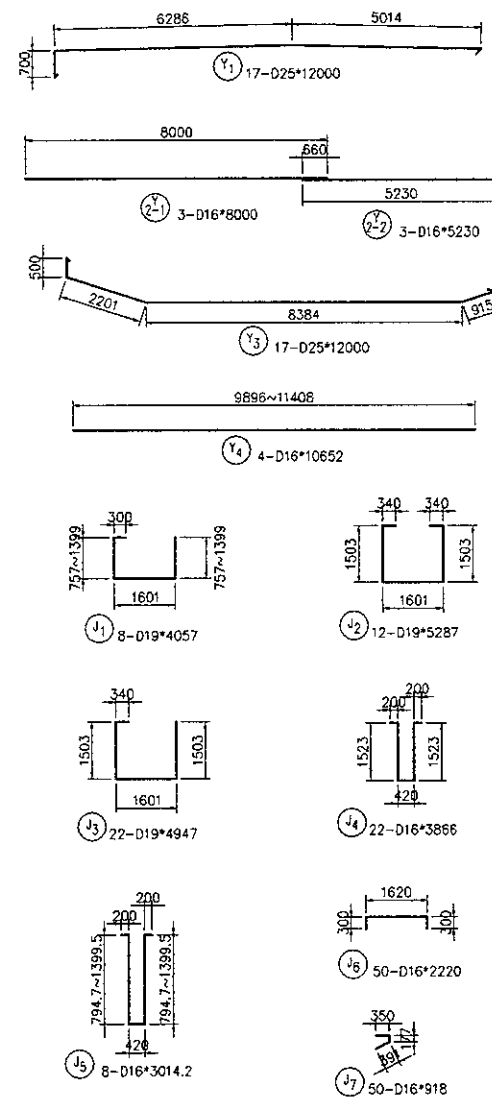


SECTION 3 - 3
 SCALE : 1:100

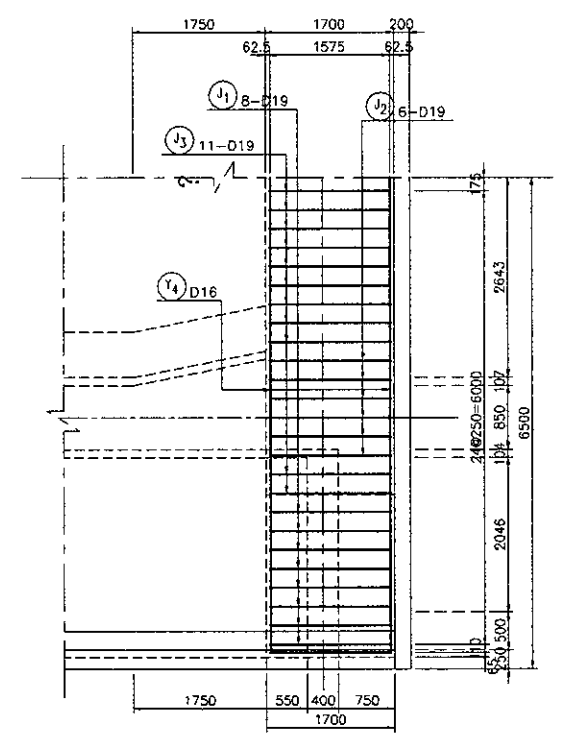
BAR BENDING ABUTMENT



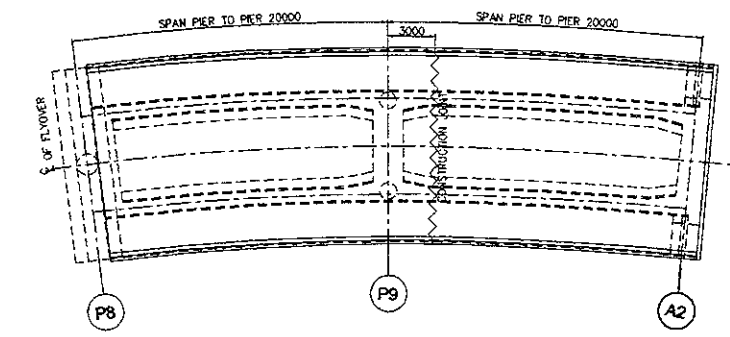
REINF NO.	φ (mm)	TYPE	BENDING DIMENSION (mm)					TOTAL LENGTH (m)	NUMBER	UNIT WEIGHT (kg/m)	WEIGHT (kg)	REMARK
			a	b	c	d	e					
A2												
J 1	D19	F	1601	1078	300		4.57	8	2.23	82		
2	D19	I	1601	1503	340		5.287	12	2.23	141		
3	D19	F	1601	1503	340		4.947	22	2.23	243		
4	D16	G	420	1523	200		3.866	22	1.58	134		
5	D16	G	420	1097.1	200		3.0142	8	1.58	38		
8	D16	E	1620	300			2.22	50	1.58	175		
7	D16	H	350	177	391		0.918	50	1.58	73		
Y												
1	D25	D	6286	5014	700		12	17	3.85	785		
2-1	D16	A	8000				8	3	1.58	38		
2-2	D16	A	5230				5.23	3	1.58	25		
3	D25	C	8384	2201	915	500	12	17	3.85	785		
4	D16	A	10652				10.652	4	1.58	67		
										D25	1570	
										D19	466	
										D16	550	
REBAR WEIGHT TOTAL										2586 kg		



SECTION 4 - 4
 SCALE : 1:100



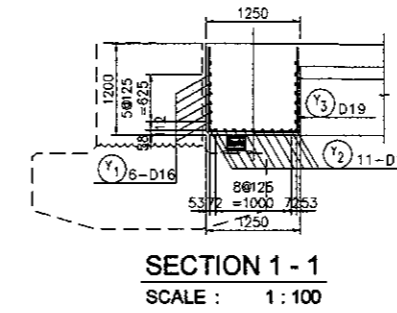
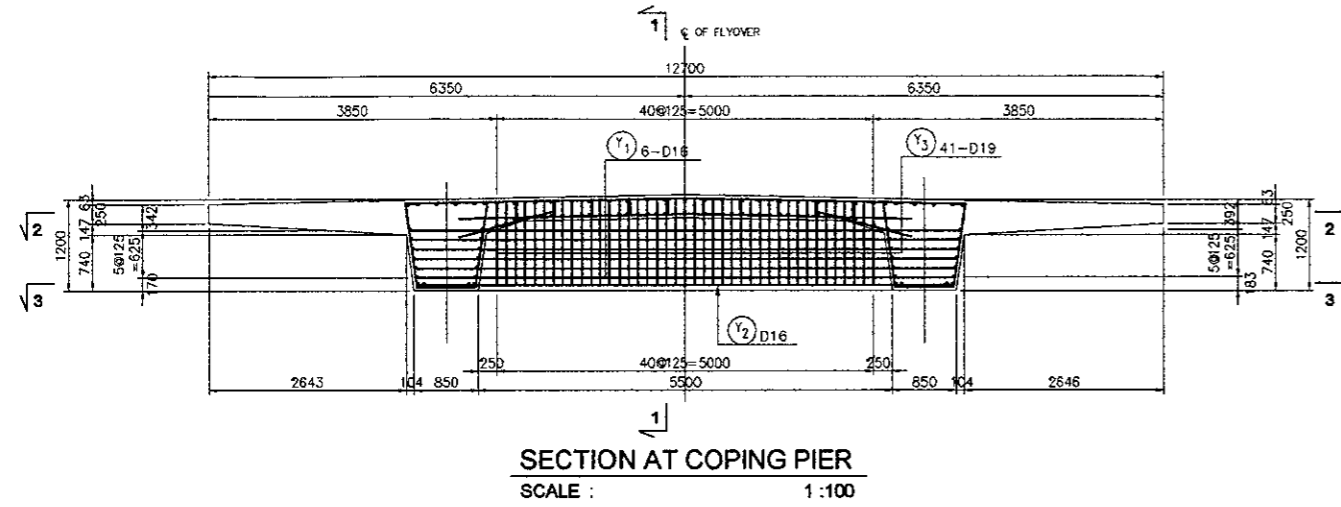
SECTION 5 - 5
 SCALE : 1:100



KEY PLAN
 SCALE : 1:500

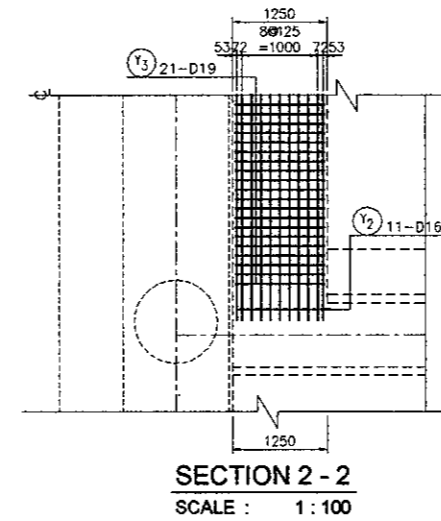
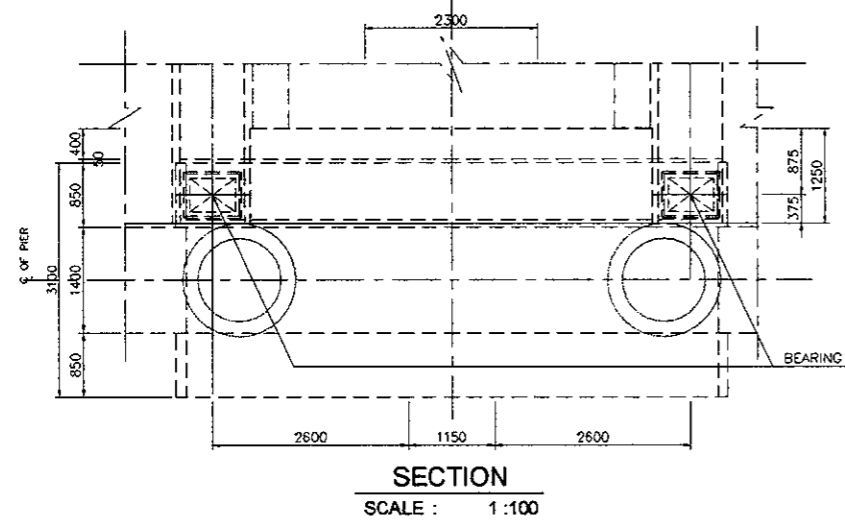
	MAN REBARS						STIRRUP									
	α=90° R=3φ	α=90° R=5.5φ	α=45°	α=0°	α=90°	α=135°	R=2.5φ	α=45°	α=90°	α=90°	α=90°					
D-16	46	88	113	119	100	88	75	21	89	4	40	94	99	94	88	87
D-19	57	104.5	134	141	119	79	89	25	82	5	47.5	112	117	99	88	73
D-25	75	137.5	177	186	167	103	118	32	108	5	76	177	185	157	103	118

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



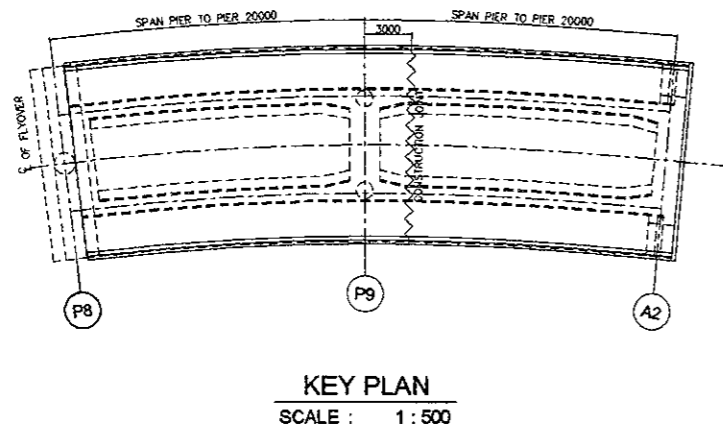
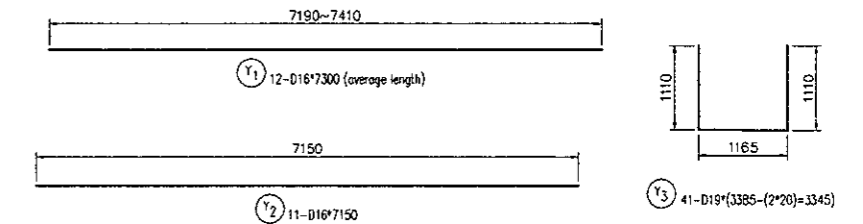
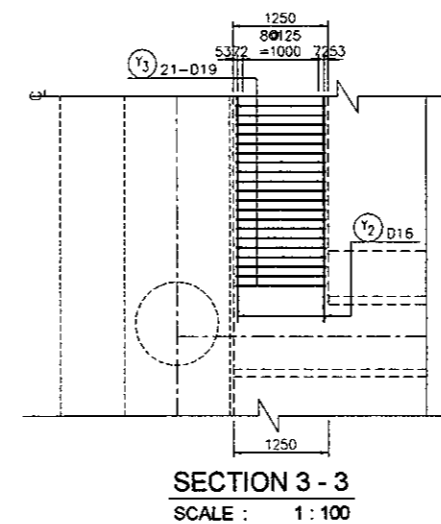
BAR BENDING

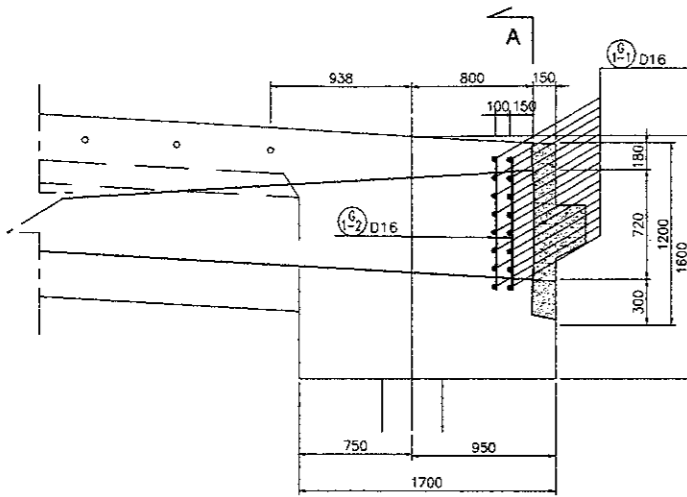
REINF NO.	φ (mm)	TYPE	BENDING DIMENSION (mm)				TOTAL LENGTH (m)	NUMBER	UNIT WEIGHT (kg/m)	WEIGHT (kg)	REMARK
			a	b	c	d					
PIER											
Y 1	D16	A	7300				7.3	12	1.58	138	—
2	D16	A	7150				7.15	11	1.58	124	—
3	D19	B	1165	1110			3.345	41	2.23	306	□
										D19	306
										D16	262
REBAR WEIGHT TOTAL										568 kg	



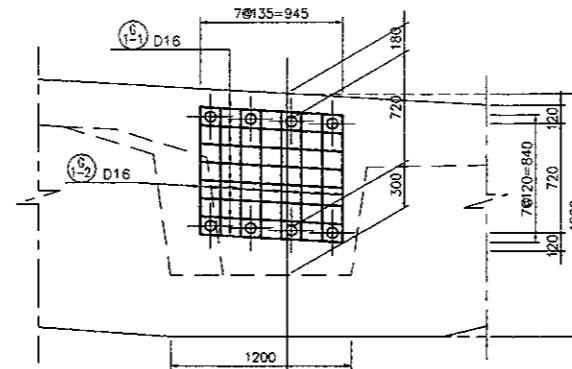
STIRRUP

	R=2.5φ	θ=45°		θ=60°		θ=90°	
		α	ΔL	α	ΔL	α	ΔL
D16	40	94	99	84	55	63	17
D19	47.5	112	117	98	68	75	20

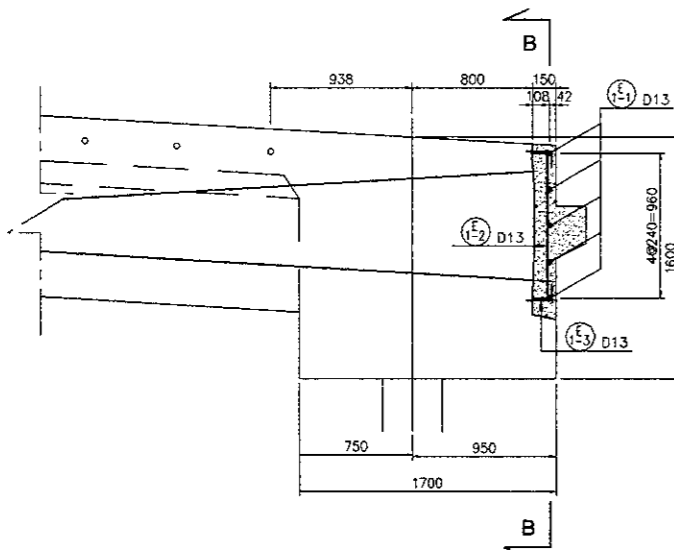




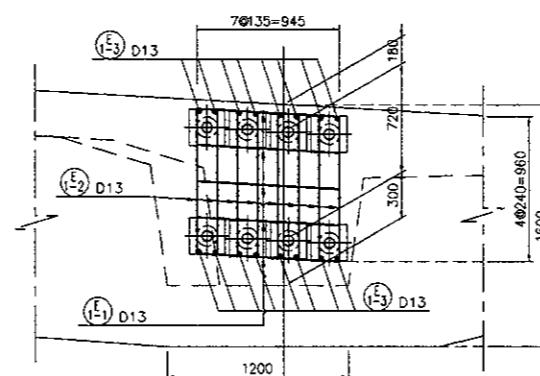
SECTION END ANCHORAGE
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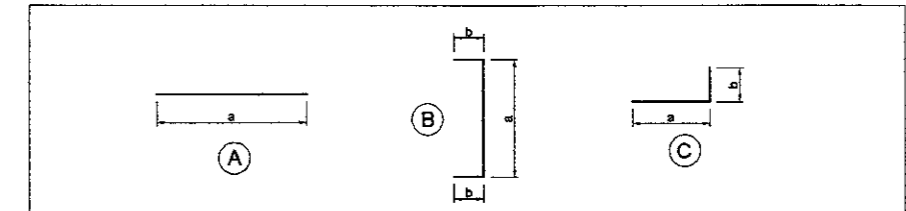
SECTION A - A
 SCALE : 1 : 50



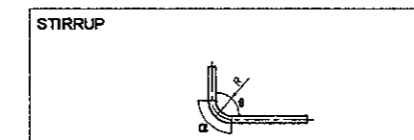
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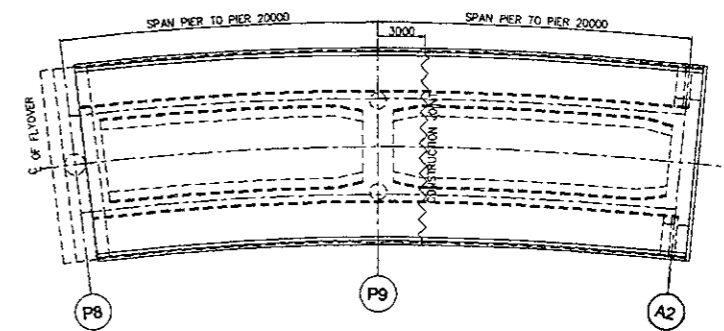
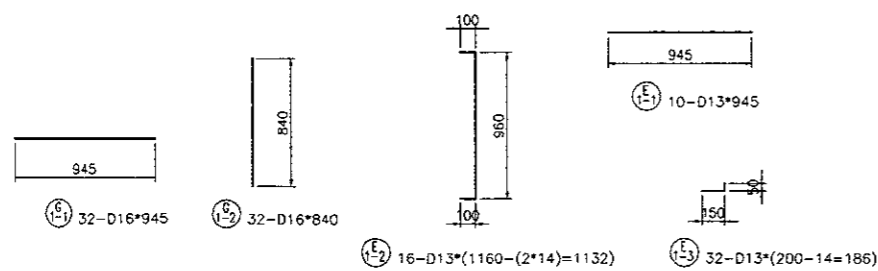
SECTION B - B
 SCALE : 1 : 50



REINF. NO.	φ (mm)	TYPE	BENDING DIMENSION (mm)				TOTAL LENGTH (m)	NUMBER	UNIT WEIGHT (kg/m)	WEIGHT (kg)	REMARK
			a	b	c	d					
E 1-1	D13	A	945				0.945	16	1.04	16	—
E 1-2	D13	B	960	100			1.132	10	1.04	12	┌
E 1-3	D13	C	150	50			0.186	32	1.04	6	└
G 1-1	D16	A	945				0.945	32	1.58	48	—
G 1-2	D16	A	840				0.84	32	1.58	43	—
									D16	91	
									D13	34	
									REBAR WEIGHT TOTAL		125 kg



	R=2.5φ	θ=45°		θ=60°		θ=90°	
		o	Δℓ	o	Δℓ	o	Δℓ
D16	40	94	99	84	55	63	17
D19	47.5	112	117	99	66	75	20



KEY PLAN
 SCALE : 1 : 500