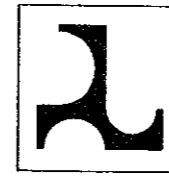




JAPAN INTERNATIONAL  
COOPERATION AGENCY

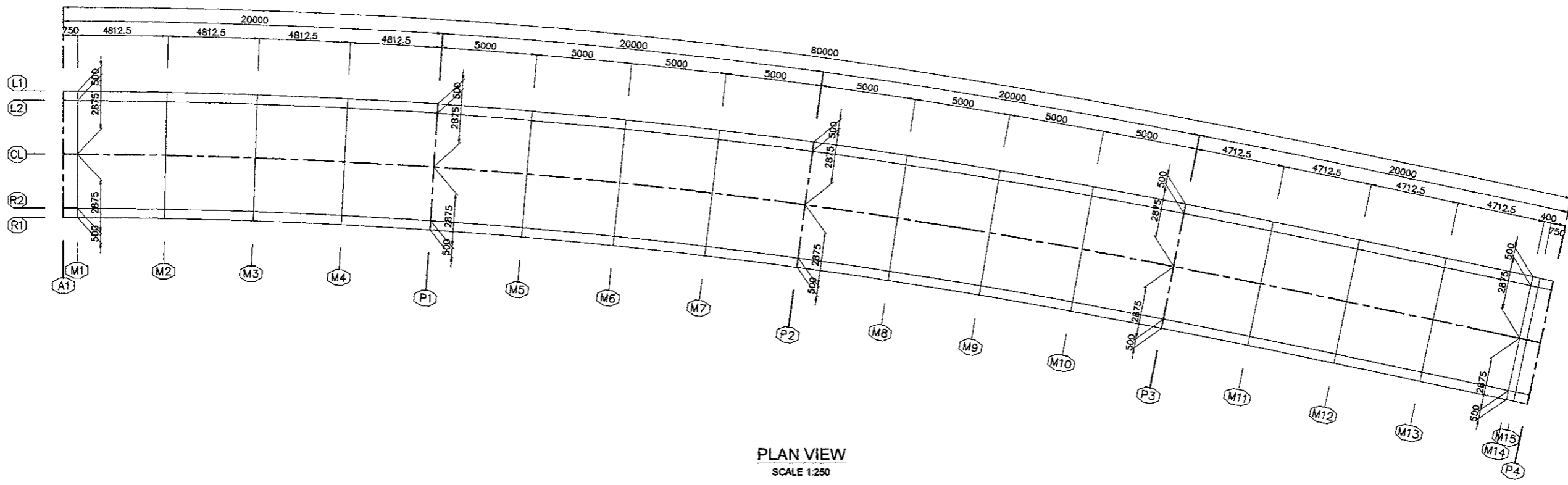


DIRECTORATE GENERAL OF HIGHWAY  
MINISTRY OF PUBLIC WORKS  
REPUBLIC OF INDONESIA

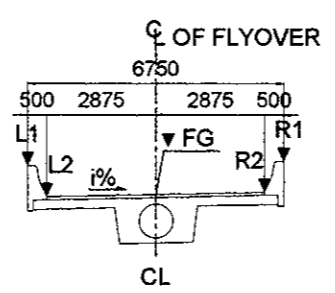
# CONCRETE SUPERSTRUCTURE

 **KEI** KATAHIRA & ENGINEERS INTERNATIONAL

 <b>JAPAN INTERNATIONAL COOPERATION AGENCY</b>  <b>KATAHIRA &amp; ENGINEERS INTERNATIONAL</b>	DESIGNED BY	CHECKED BY	SUBMITTED BY	 <b>REPUBLIC OF INDONESIA</b> <b>MINISTRY OF PUBLIC WORKS</b> <b>DIRECTORATE GENERAL OF HIGHWAYS</b>	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 MERAK FLYOVER - CONTRACT PACKAGE 1 (MERAK - BALARAJA) BANTEN PROVINCE	1 : 250 1 : 200 FULL SIZE A3	<b>COORDINATES AND ELEVATION FOR PC GIRDER</b>	<b>MCL-001</b> SHEET NO. : 01 / 59
	Sign		Sign			Sign					






**PLAN VIEW**  
SCALE 1:250



**SECTION VIEW**  
SCALE 1:200

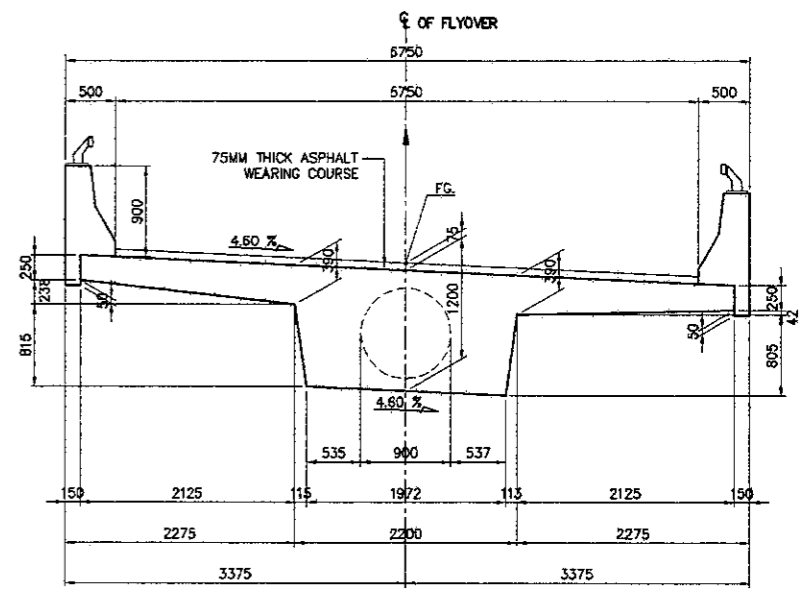
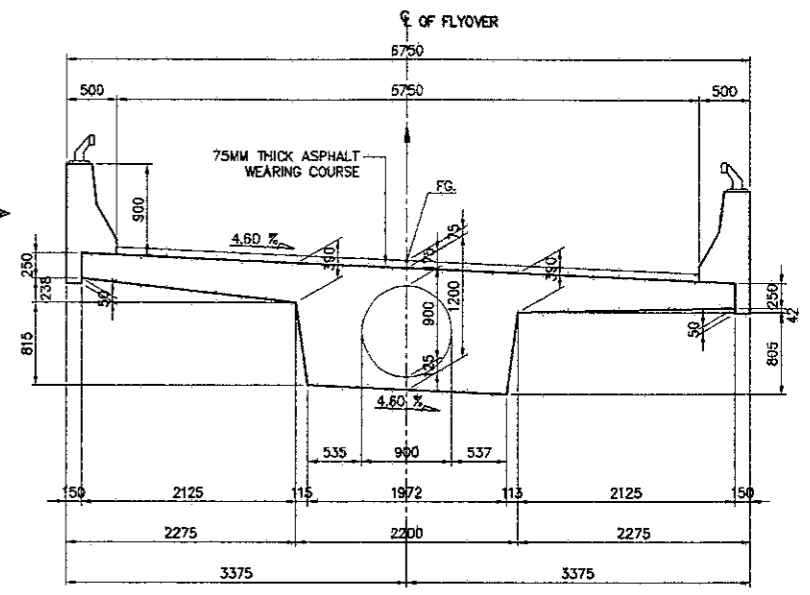
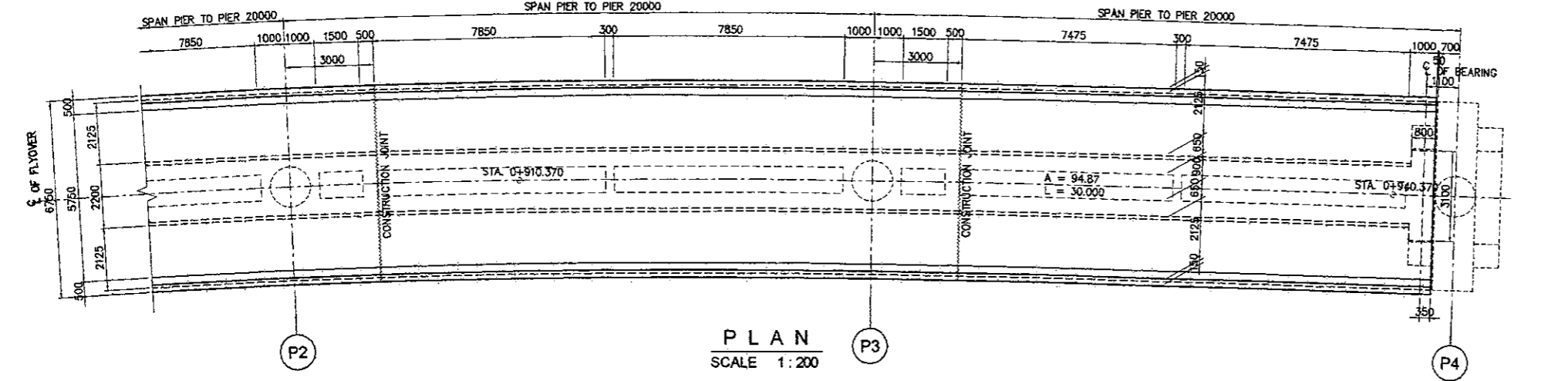
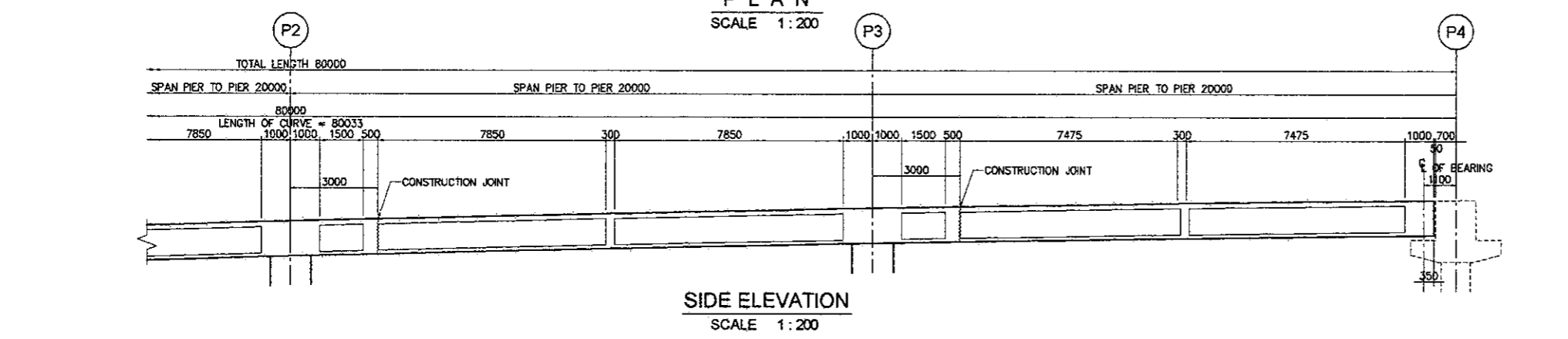
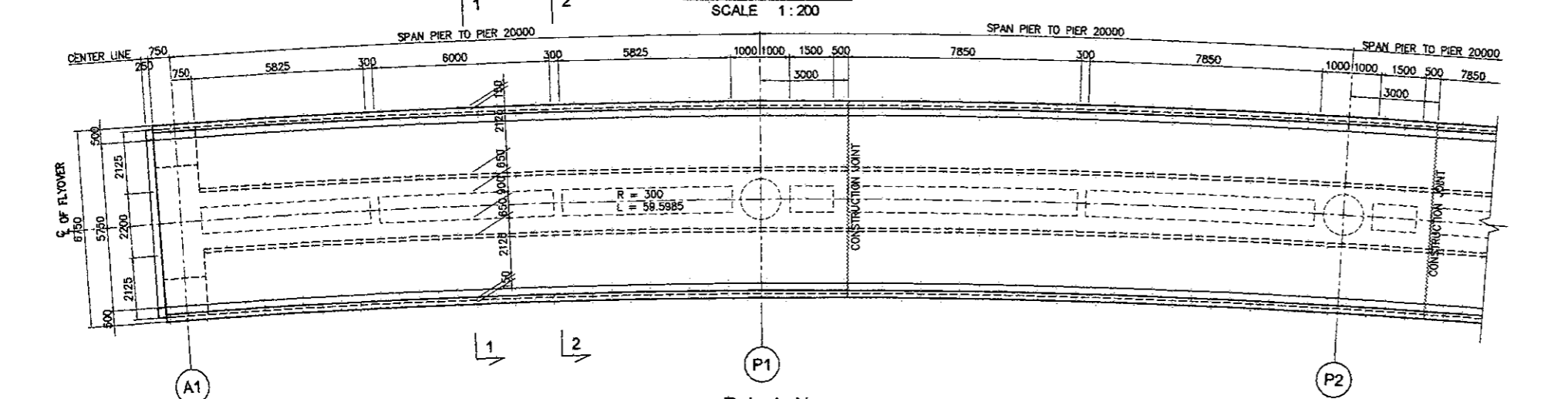
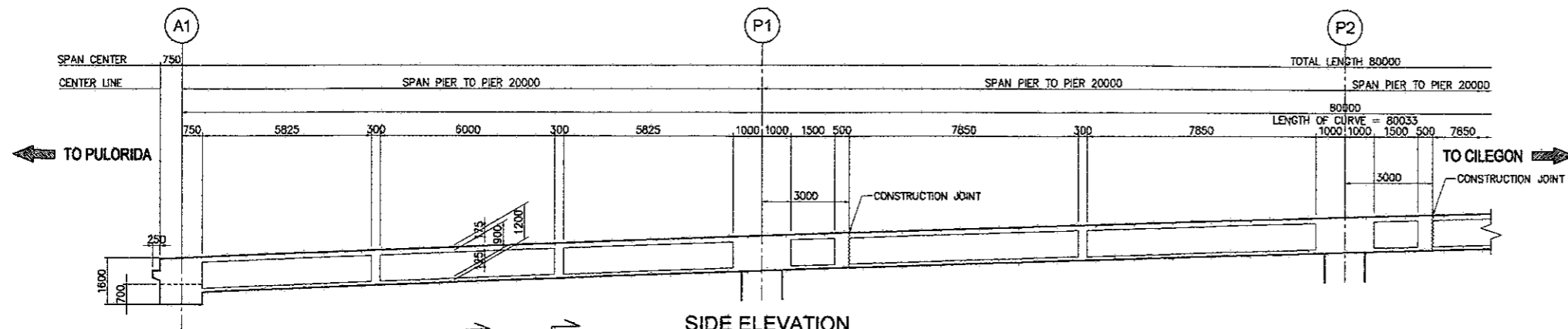
**LIST OF COORDINATES**

STA	A1	M1	M2	M3	M4	P1	M5	M6	M7	P2	M8	M9	M10	P3	M11	M12	M13	M14	M15	P4	
LABEL	0+882.5000	0+863.2500	0+868.0625	0+872.8750	0+877.6875	0+882.5000	0+887.5000	0+892.5000	0+897.5000	0+902.5000	0+907.5000	0+912.5000	0+917.5000	0+922.5000	0+927.2125	0+931.9250	0+936.6375	0+941.3500	0+941.7500	0+942.5000	
E	610534.8929	610535.4047	610538.6551	610541.8471	610544.9797	610548.0521	610551.1797	610554.2407	610557.2341	610560.1592	610563.0152	610565.8010	610568.5173	610571.1743	610573.6349	610576.0633	610578.4694	610580.8635	610581.0665	610581.4472	
N	9344378.3491	9344377.7894	9344374.1675	9344370.4939	9344366.7695	9344362.9955	9344359.0226	9344354.9983	9344350.9234	9344346.7993	9344342.6269	9344338.4084	9344334.1541	9344329.8735	9344325.8223	9344321.7614	9344317.6970	9344313.6349	9344313.2902	9344312.6440	
Z	11.0185	11.0513	11.2565	11.4519	11.6375	11.8135	11.9860	12.1480	12.2995	12.4405	12.5710	12.6922	12.8048	12.9068	12.9934	13.0707	13.1385	13.1971	13.2017	13.2100	
L1	E	610534.5243	610535.0353	610538.2804	610541.4670	610544.5945	610547.6618	610550.7843	610553.8402	610556.8287	610559.7490	610562.6003	610565.3815	610568.0940	610570.7481	610573.2066	610575.6335	610578.0388	610580.4327	610580.6357	610581.0164
L2	E	610534.3781	610534.8524	610538.0975	610541.2841	610544.4116	610547.4891	610550.6166	610553.6941	610556.7216	610559.7491	610562.7766	610565.8041	610568.8316	610571.8591	610574.8866	610577.9141	610580.9416	610581.1446	610581.5271	610581.9096
N	9344378.0113	9344377.4524	9344373.8365	9344370.1690	9344366.4508	9344362.6829	9344358.7166	9344354.6989	9344350.6308	9344346.5134	9344342.3480	9344338.1363	9344333.8879	9344329.6121	9344325.3644	9344321.1059	9344317.4429	9344313.3811	9344313.0364	9344312.3902	
Z	10.1935	10.2263	10.4315	10.6269	10.8125	10.9885	11.1610	11.3230	11.4745	11.6155	11.7460	11.8672	11.9798	12.0818	12.1684	12.2457	12.3135	12.3721	12.3767	12.3850	
CL	E	610532.4050	610532.9110	610536.1253	610539.2817	610542.3795	610545.4178	610548.5106	610551.5375	610554.4976	610557.4302	610560.3444	610563.2402	610566.1177	610568.9772	610571.8227	610574.6542	610577.4717	610580.2752	610581.0665	610581.8472
N	9344376.0686	9344375.5151	9344371.9335	9344368.3008	9344364.6179	9344360.8858	9344356.9571	9344352.9775	9344348.9480	9344344.8698	9344340.7438	9344336.5715	9344332.3573	9344328.1092	9344324.0814	9344320.0369	9344315.9817	9344311.9218	9344311.5772	9344310.9310	
Z	10.0612	10.0940	10.2992	10.4946	10.6802	10.8562	11.0287	11.1907	11.3422	11.4832	11.6137	11.7337	11.8432	11.9422	12.0259	12.0927	12.1513	12.2000	12.2253	12.2332	
R2	E	610530.2856	610530.7868	610533.9703	610537.0965	610540.1645	610543.1737	610546.2368	610549.2347	610552.1665	610555.0314	610557.8285	610560.5578	610563.2266	610565.8464	610568.2806	610570.6908	610573.0868	610575.4784	610575.6814	610576.0621
N	9344374.1260	9344373.5778	9344370.0305	9344366.4325	9344362.7850	9344359.0886	9344355.1977	9344351.2562	9344347.2653	9344343.2261	9344339.1397	9344335.0068	9344330.8267	9344326.6062	9344322.5984	9344318.5678	9344314.5206	9344310.4626	9344310.1180	9344309.4717	
Z	9.9290	9.9618	10.1670	10.3624	10.5480	10.7240	10.8965	11.0585	11.2100	11.3510	11.4815	11.6002	11.7066	11.8026	11.8834	11.9549	12.0171	12.0699	12.0739	12.0814	
R1	E	610529.9170	610530.4174	610533.5955	610536.7164	610539.7793	610542.7834	610545.8414	610548.8343	610551.7611	610554.6212	610557.4136	610560.1383	610562.8034	610565.4201	610567.8522	610570.2610	610572.6562	610575.0476	610575.2506	610575.6313
N	9344373.7881	9344373.2408	9344369.6995	9344366.1076	9344362.4662	9344358.7761	9344354.8917	9344350.9568	9344346.9726	9344342.9402	9344338.8607	9344334.7347	9344330.5605	9344326.3448	9344322.3405	9344318.3124	9344314.2664	9344310.2088	9344309.8642	9344309.2180	
Z	10.7540	10.7868	10.9920	11.1874	11.3730	11.5490	11.7215	11.8835	12.0350	12.1760	12.3065	12.4262	12.5316	12.6276	12.7084	12.7798	12.8421	12.8949	12.8989	12.9064	

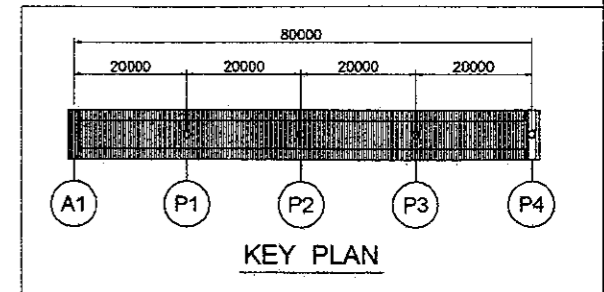
 JAPAN INTERNATIONAL COOPERATION AGENCY   KATAHIRA & ENGINEERS INTERNATIONAL	DESIGNED BY		CHECKED BY		SUBMITTED BY		 REPUBLIC OF INDONESIA MINISTRY OF PUBLIC WORKS DIRECTORATE GENERAL OF HIGHWAYS	PROJECT AND LOCATION :		SCALE :	DRAWING TITLE :	DRAWING NO. :
	Name	H. HONDA	Name	T. OKUMURA	Name	M. KIUCHI		DETAILED DESIGN STUDY OF NORTH JAVA CORRIDOR FLYOVER PROJECT MERAK FLYOVER - CONTRACT PACKAGE 1 (MERAK - BALARAJA) BANTEN PROVINCE		NOT TO SCALE	QUANTITIES SUMMARY FOR PC SUPERSTRUCTURE A1~P4, P4~P8, AB1~PB3, P13~A2	MCL-002
	Sign		Sign		Sign			APPROVED BY		Ir. HERRY VAZA M,Eng.Sc NIP. : 110038400		Sign
Date		Date		Date					Date		02 / 59	

**QUANTITY SUMMARY FOR PC SUPERSTRUCTURE**

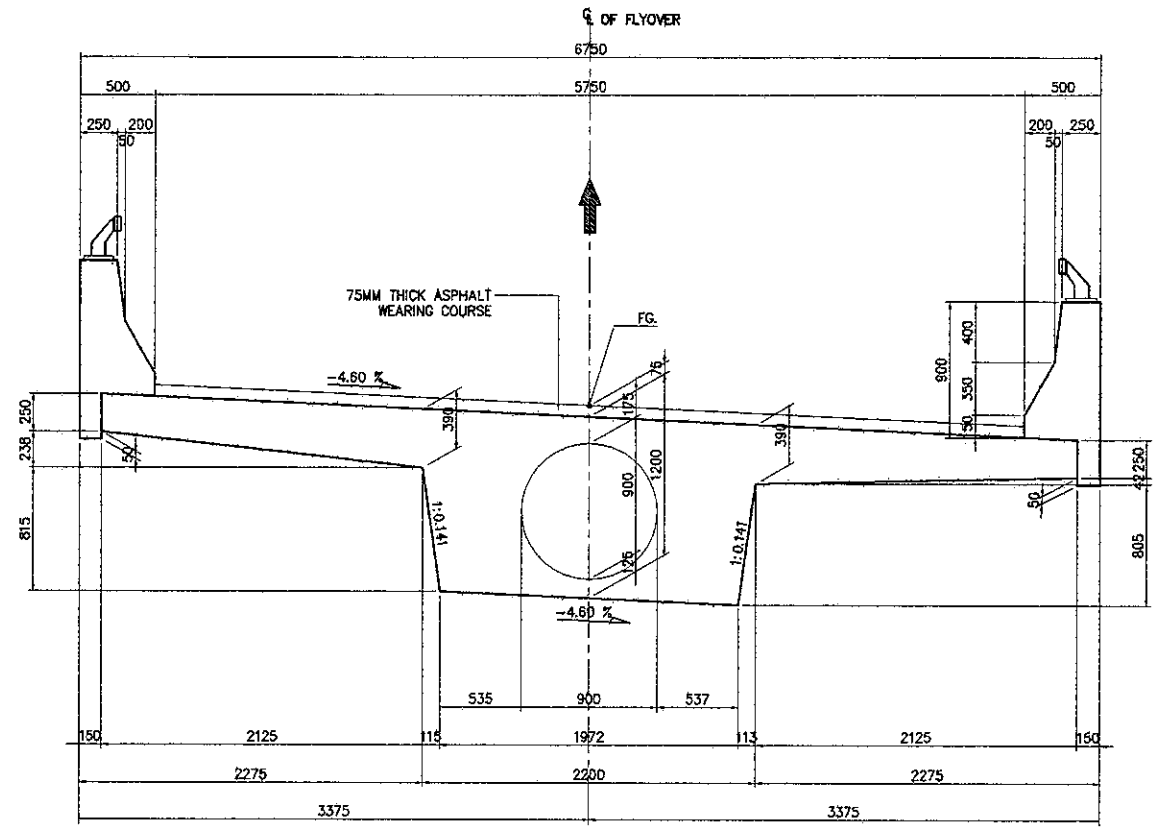
NO.		UNIT	QUANTITY	NOTES
1	CONCRETE $f'_c = 35 \text{ MPa}$	m <sup>3</sup>		
2	PC CABLE DECK SLAB	kg		
3	DEAD END ANCHORAGE PC DECK SLAB	pcs		
4	STRESSING ANCHORAGE PC DECK SLAB	pcs		
5	PC CABLE PPC GIRDER	kg		
6	DEAD END ANCHORAGE PPC GIRDER	pcs		
7	STRESSING ANCHORAGE PPC GIRDER	pcs		
8	COUPLER	pcs		
9	REBAR	ton		
10	WATERPROOFING	m <sup>2</sup>		
11	PAVEMENT	m <sup>2</sup>	-	HIGHWAY PORTION



- 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	

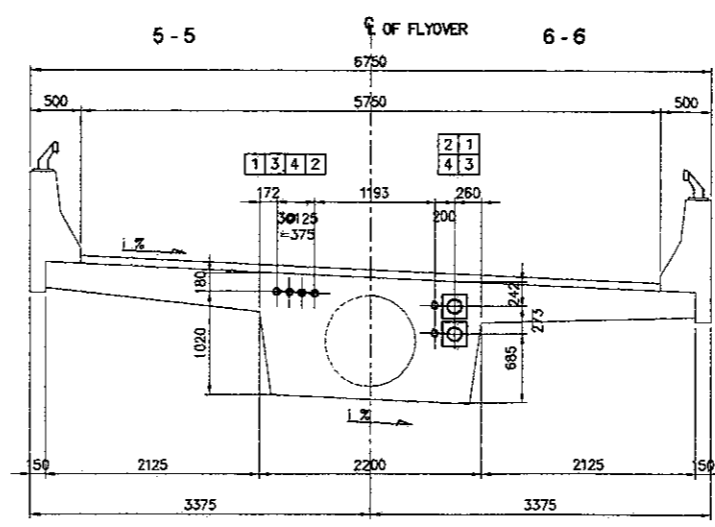
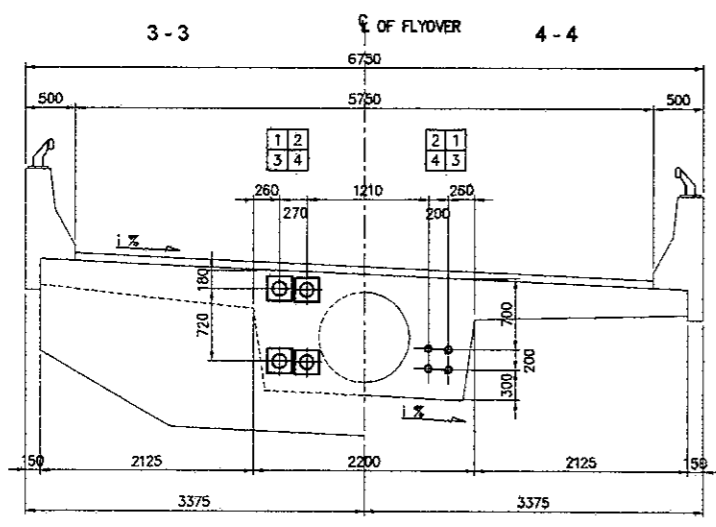
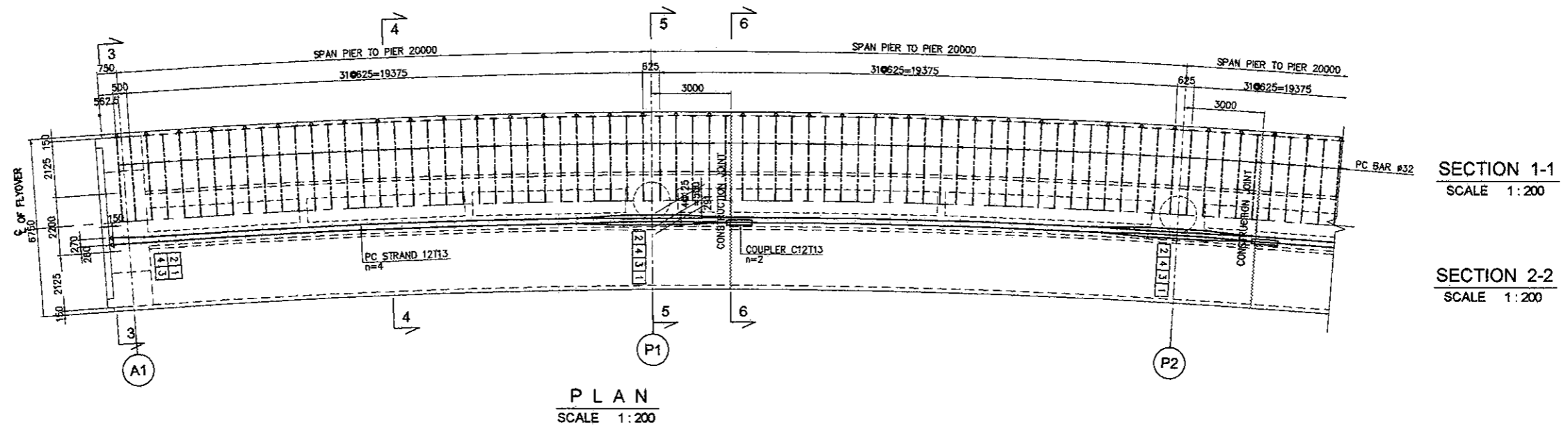
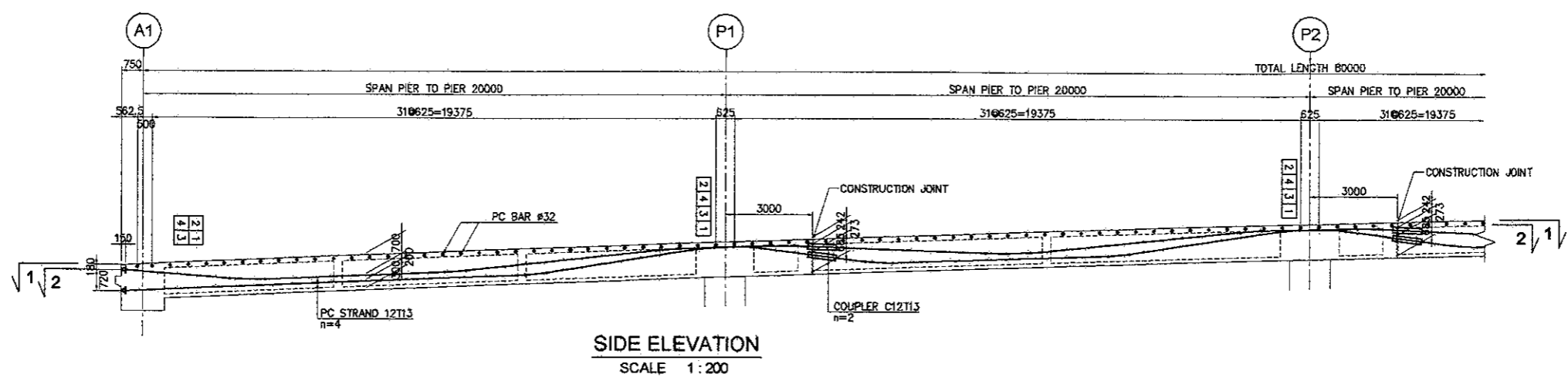


INFORMATION OF PC SUPERSTRUCTURE

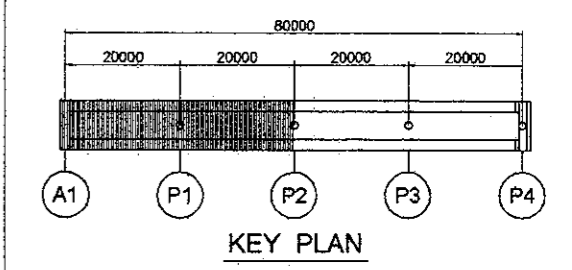
	A1	P1	P2	P3	P4'
FG.	10.061	10.856	11.483	11.942	12.224
Super Elev	4.600%	4.600%	4.600%	4.857%	5.262%
Top Slab	9.986	10.781	11.408	11.867	12.149
Bottom Girder	8.386	9.581	10.208	10.667	10.949
Station	0+862.50	0+882.500	0+902.500	0+922.500	0+941.600

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

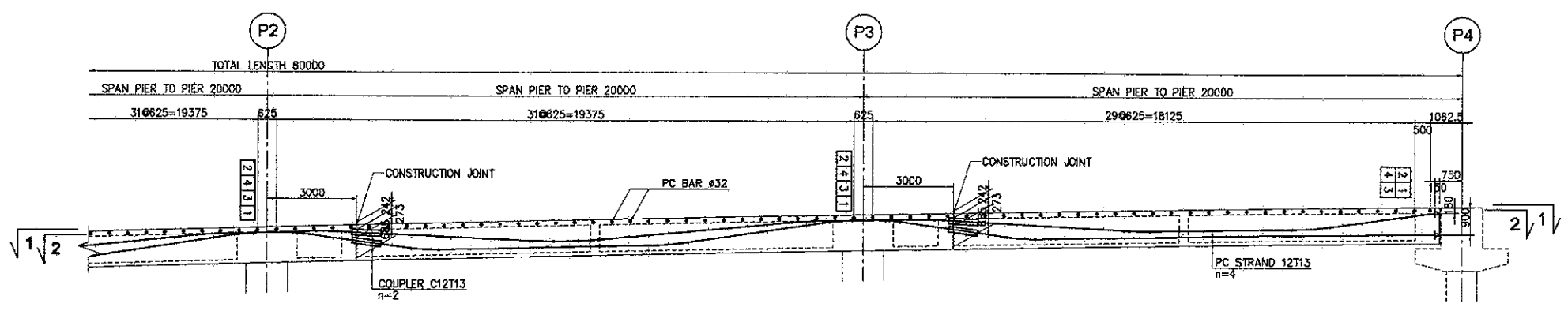
DESIGNED BY		CHECKED BY		SUBMITTED BY	
Name	H. HONDA	Name	T. OKUMURA	Name	M. KIUCHI
Sign		Sign		Sign	
Date		Date		Date	



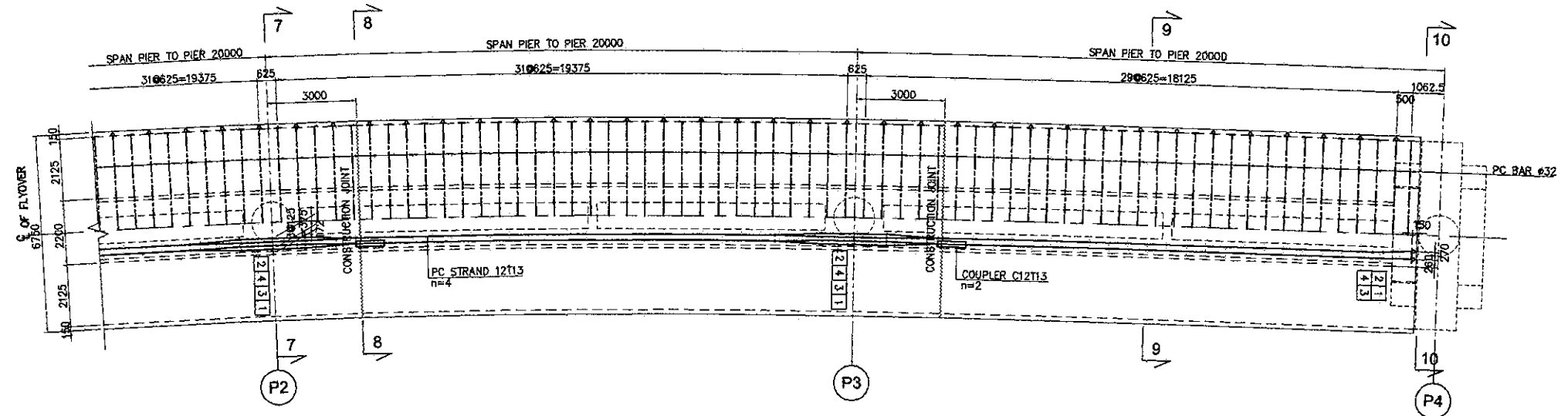
- NOTES :**
- All dimension are in mm unless noted otherwise.
  - Prestressing Tendon Shall be 12T13 (7 WIRE STRAND) Nominal Diameter 12.7mm.
  - Shows Bending Point Of Prestressing Cable.
- Stressing Anchorage  
 Dead End Anchorage



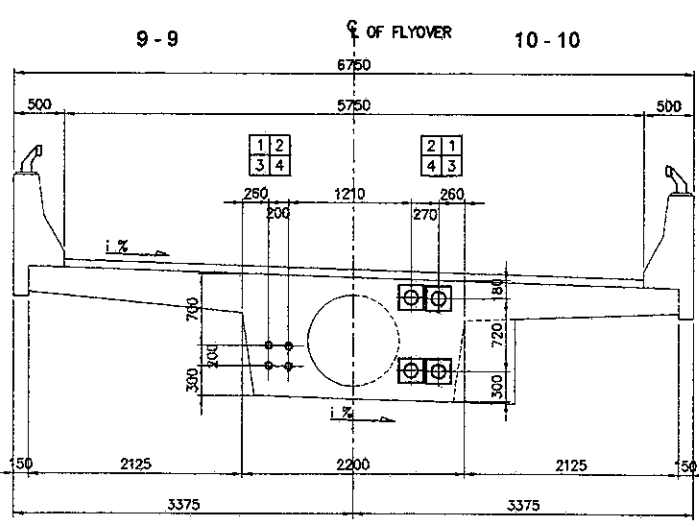
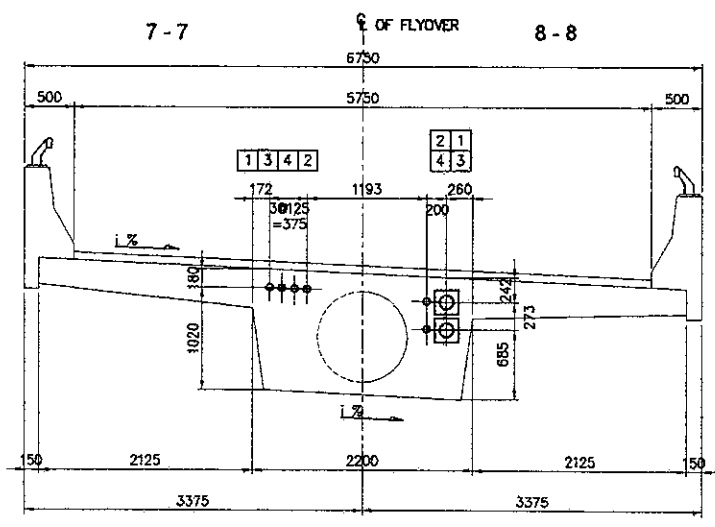
DESIGNED BY	CHECKED BY	SUBMITTED BY
Name: H. HONDA	Name: T. OKUMURA	Name: M. KIUCHI
Sign:	Sign:	Sign:
Date:	Date:	Date:



**SIDE ELEVATION**  
 SCALE 1 : 200



**PLAN**  
 SCALE 1 : 200

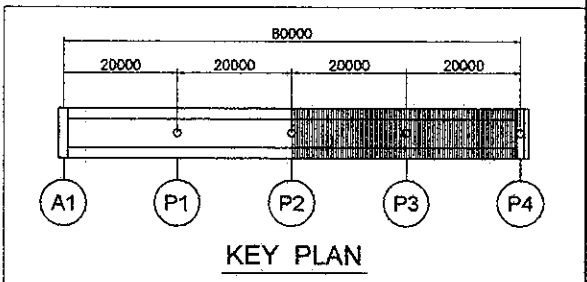


**CROSS SECTION**  
 SCALE : 1 : 100

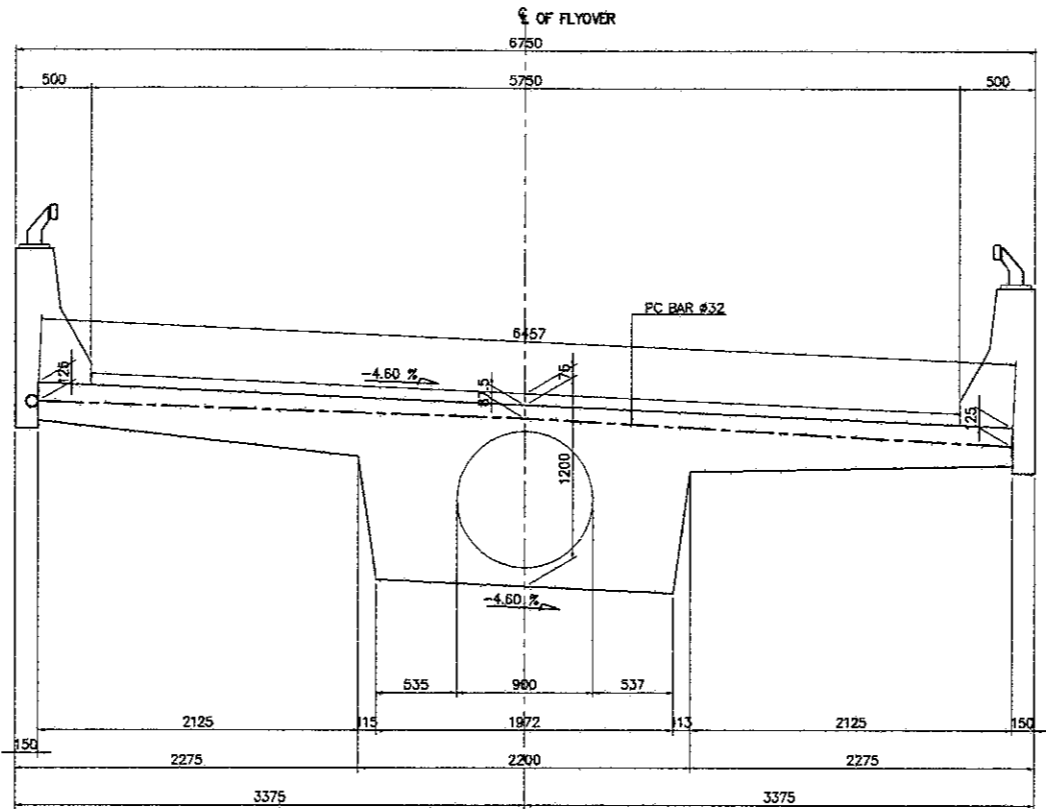
**SECTION 1-1**  
 SCALE 1 : 200

**SECTION 2-2**  
 SCALE 1 : 200

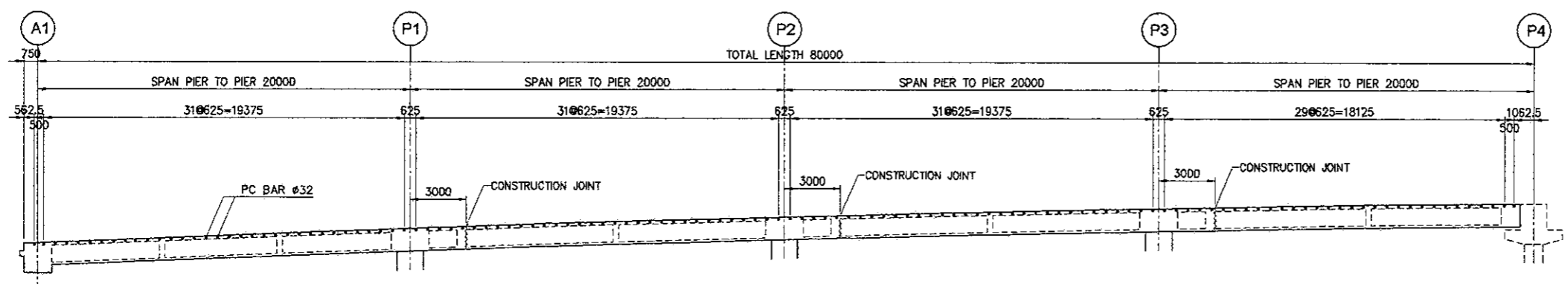
- NOTES :**
- All dimension are in mm unless noted otherwise.
  - Prestressing Tendon Shall be 12T13 (7 WIRE STRAND) Nominal Diameter 12.7mm.
  - Shows Bending Point Of Prestressing Cable.
- Stressing Anchorage  
 Dead End Anchorage



**KEY PLAN**



TRANVERSAL PC BAR  
 SCALE 1:50

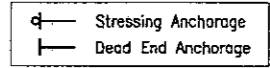


LONGITUDINAL PC BAR ARRANGEMENT  
 SCALE 1:300

TABEL OF PC BAR

Length (m)	Nos.	Unit Weight (kg/m)	Weight / 1 nos (kg)	Weight (kg)	Remarks
6.457	128	6.31	40.74	5,215.19	Stressing Anchorage One Side Staggered
TOTAL LENGTH (L) =			826.496	m	
TOTAL WEIGHT (W) =			5,215.19	kg	

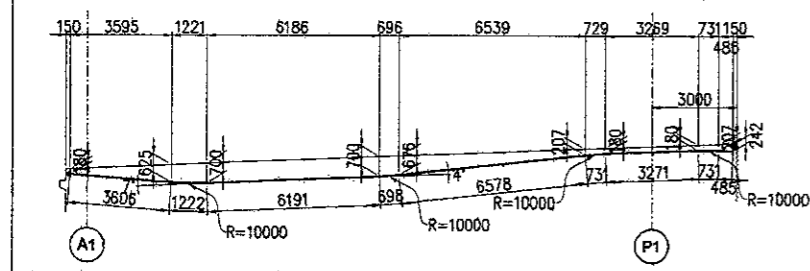
NOTES :  
 1. All dimension are in mm unless noted otherwise.



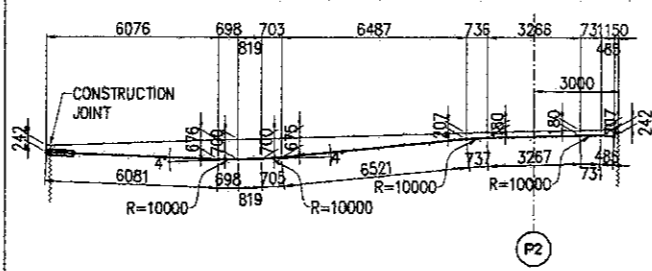


DESIGNED BY		CHECKED BY		SUBMITTED BY	
Name	H. HONDA	Name	T. OKUMURA	Name	M. KIUCHI
Sign		Sign		Sign	
Date		Date		Date	

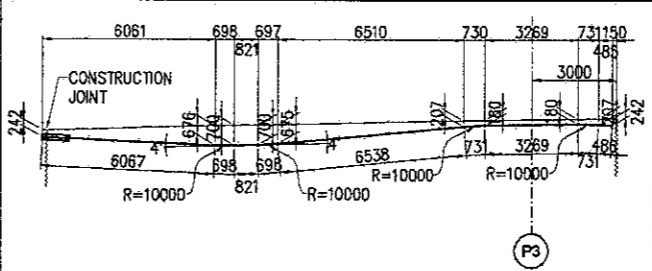
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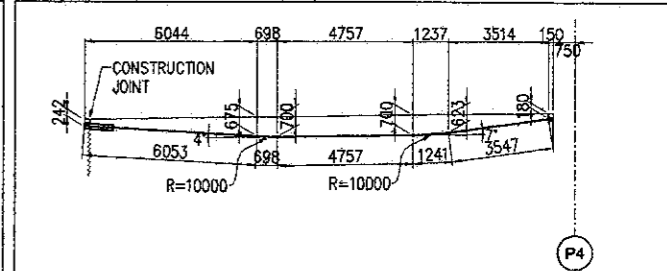
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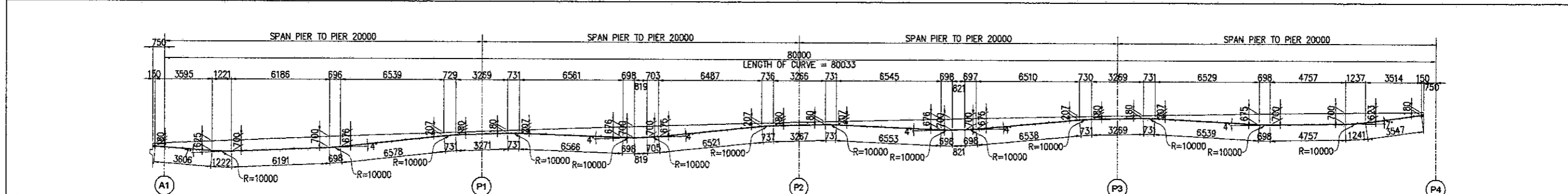
CONSTRUCTION SECTION NO.3 (C1)



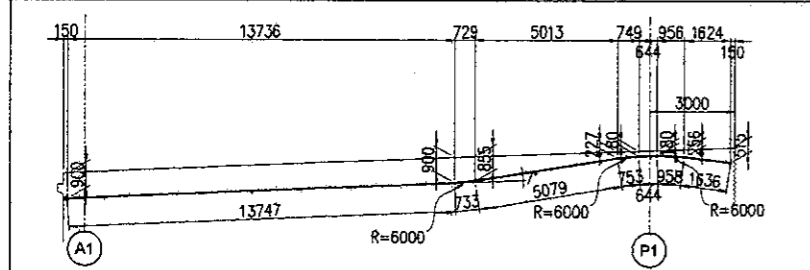
CONSTRUCTION SECTION NO.4 (C1)



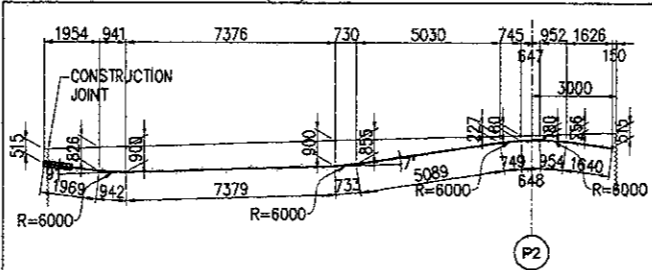
AFTER COMPLETION GIRDER (C2)



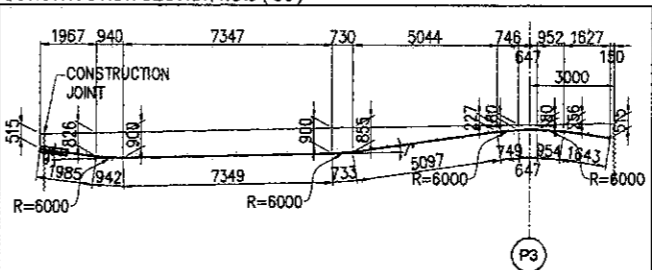
CONSTRUCTION SECTION NO.1 (C3)



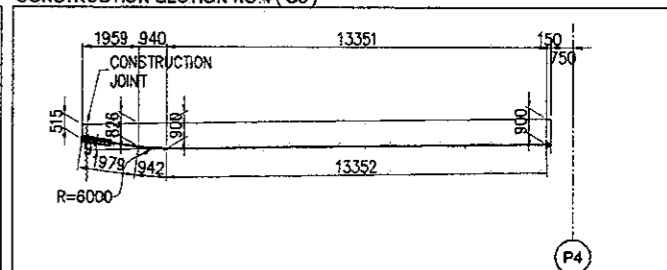
CONSTRUCTION SECTION NO.2 (C3)



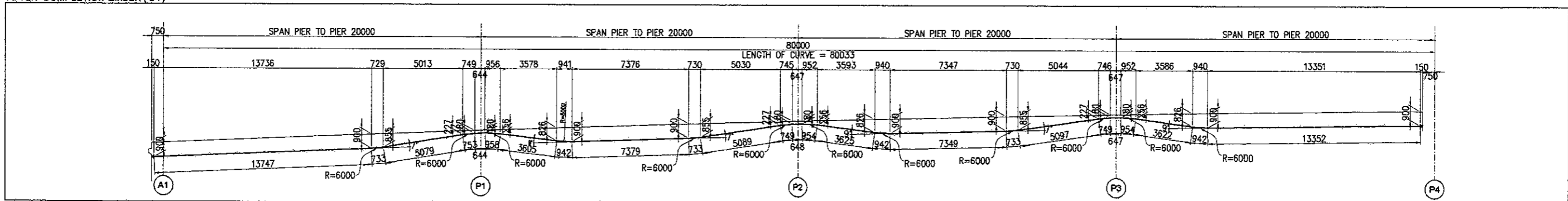
CONSTRUCTION SECTION NO.3 (C3)



CONSTRUCTION SECTION NO.4 (C3)



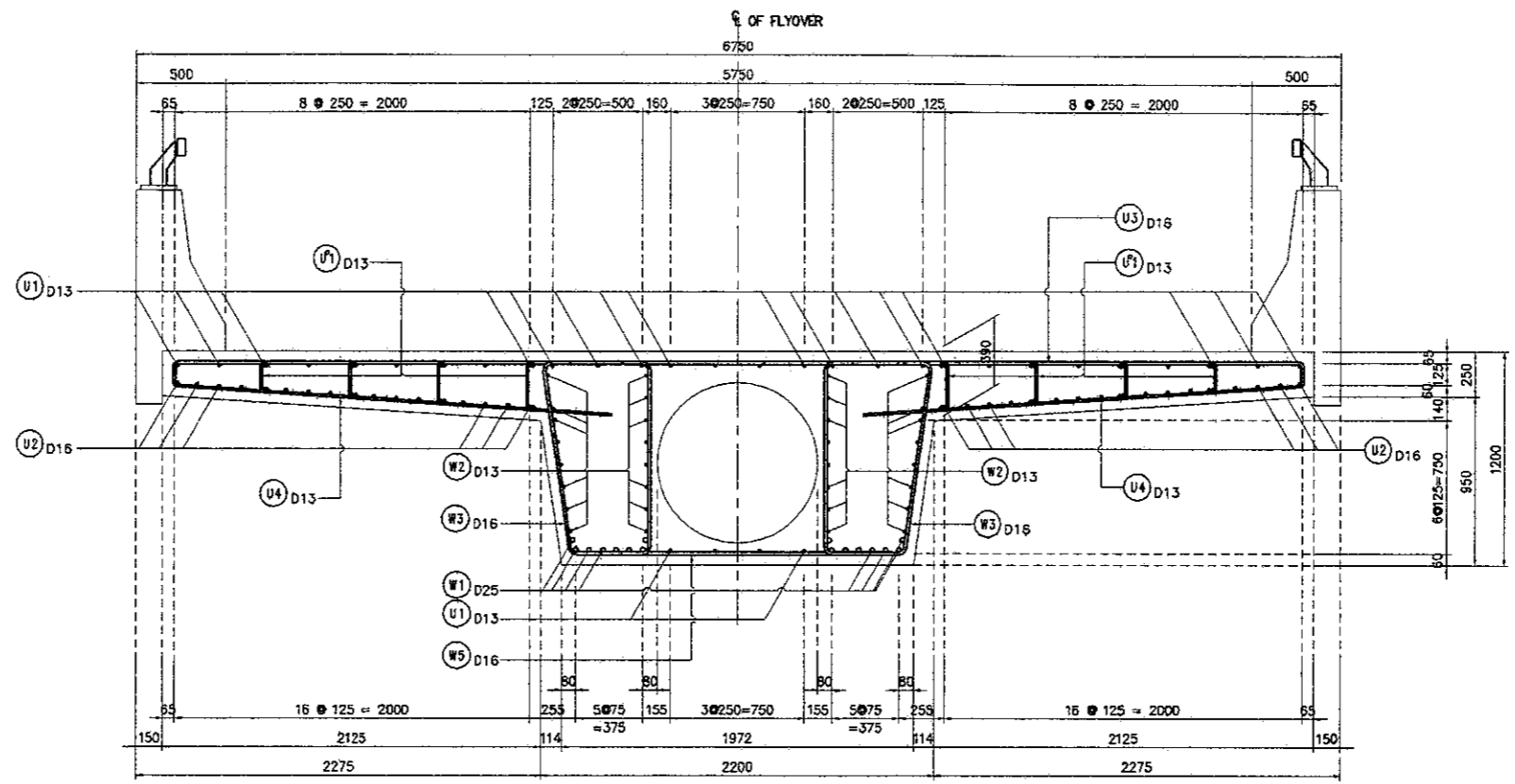
AFTER COMPLETION GIRDER (C4)



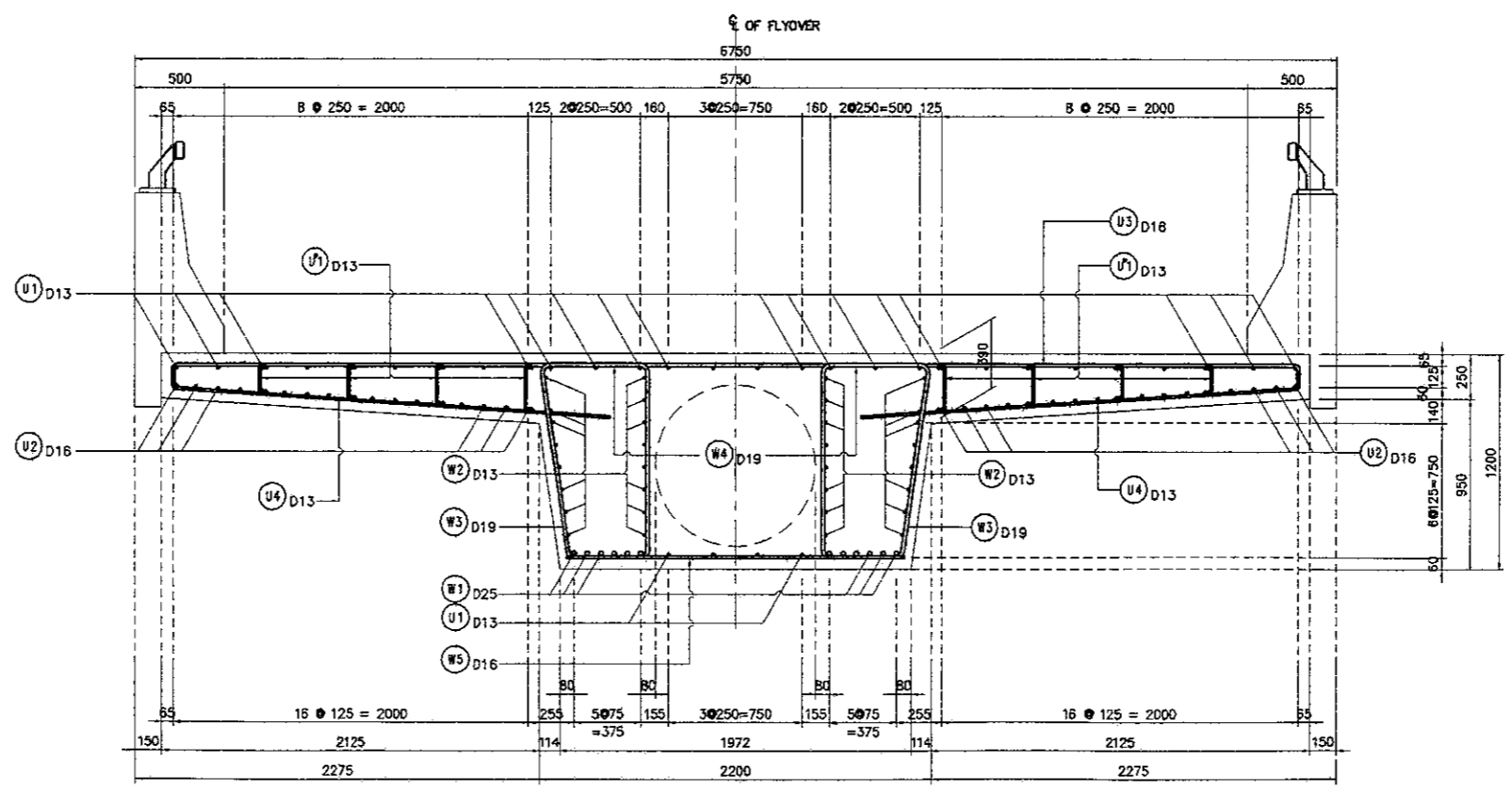
PC CABLES SCHEDULE A1 - P4  
 SCALE : NON

- 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
- 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	

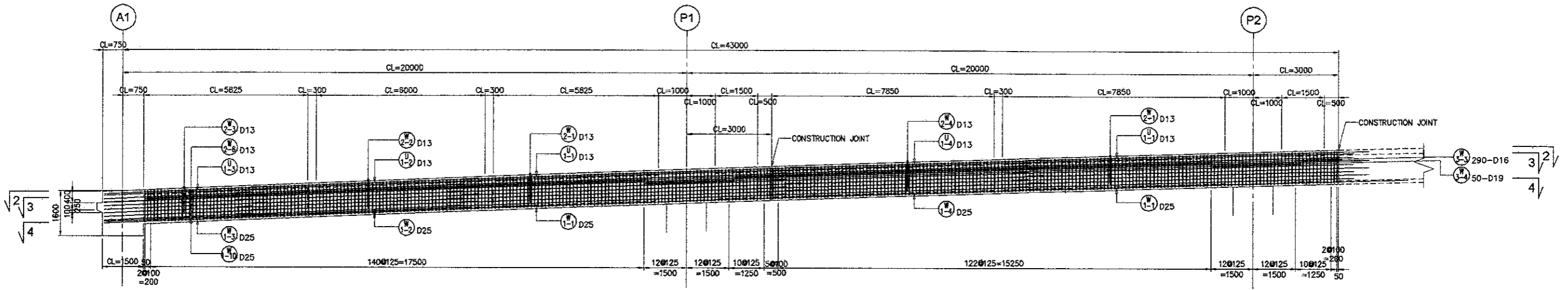


SECTION AT MID SPAN  
 SCALE 1 : 40

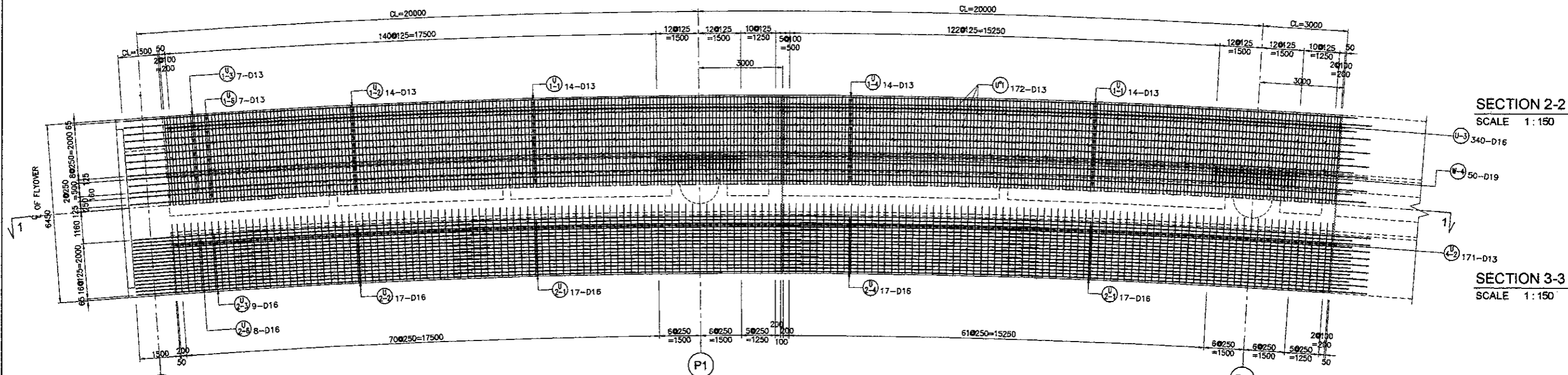


SECTION AT PIER  
 SCALE 1 : 40

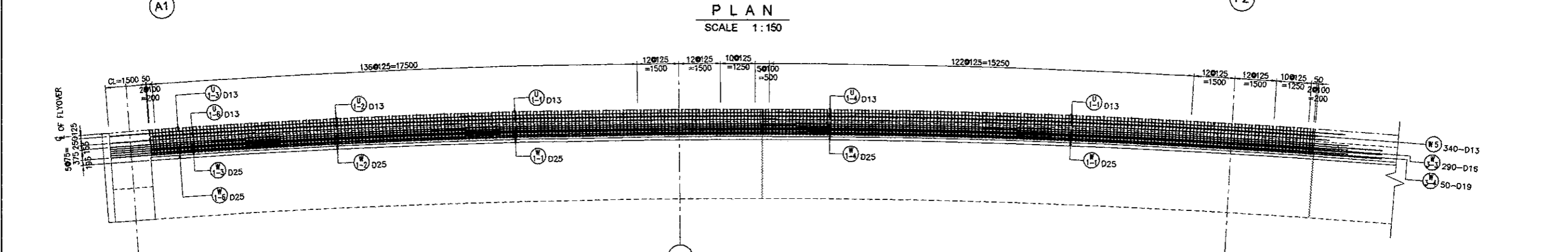
DESIGNED BY		CHECKED BY		SUBMITTED BY	
Name	H. HONDA	Name	T. OKUMURA	Name	M. KIUCHI
Sign		Sign		Sign	
Date		Date		Date	



**SECTION 1-1**  
 SCALE 1 : 150

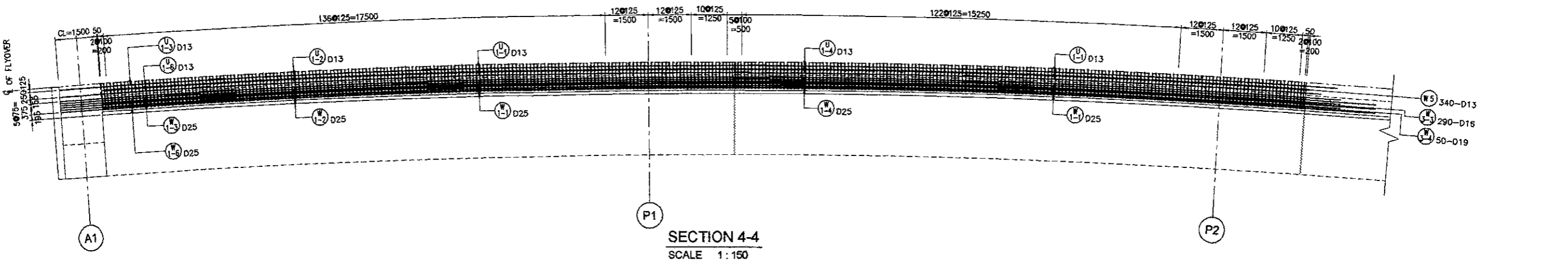


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 SCALE 1 : 150

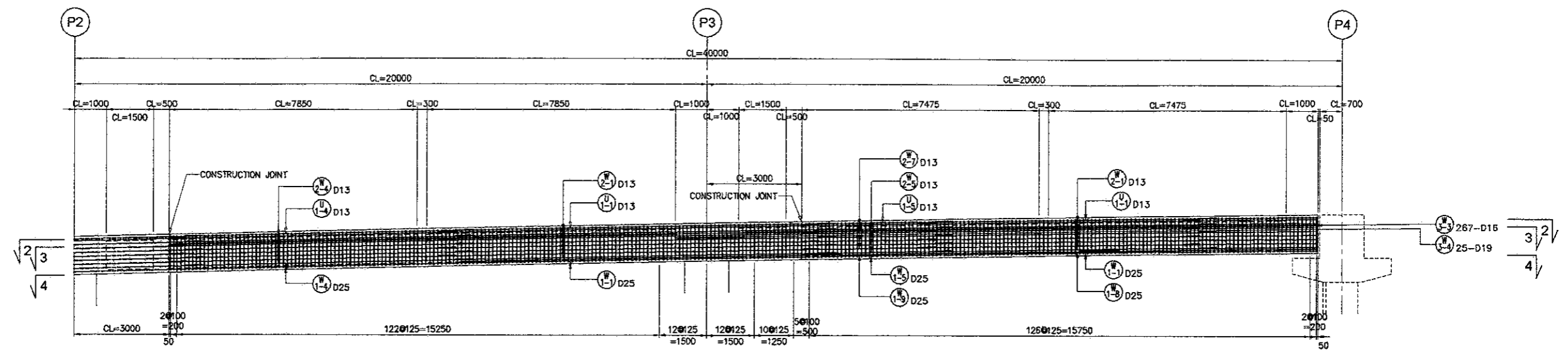


**SECTION 3-3**  
 SCALE 1 : 150

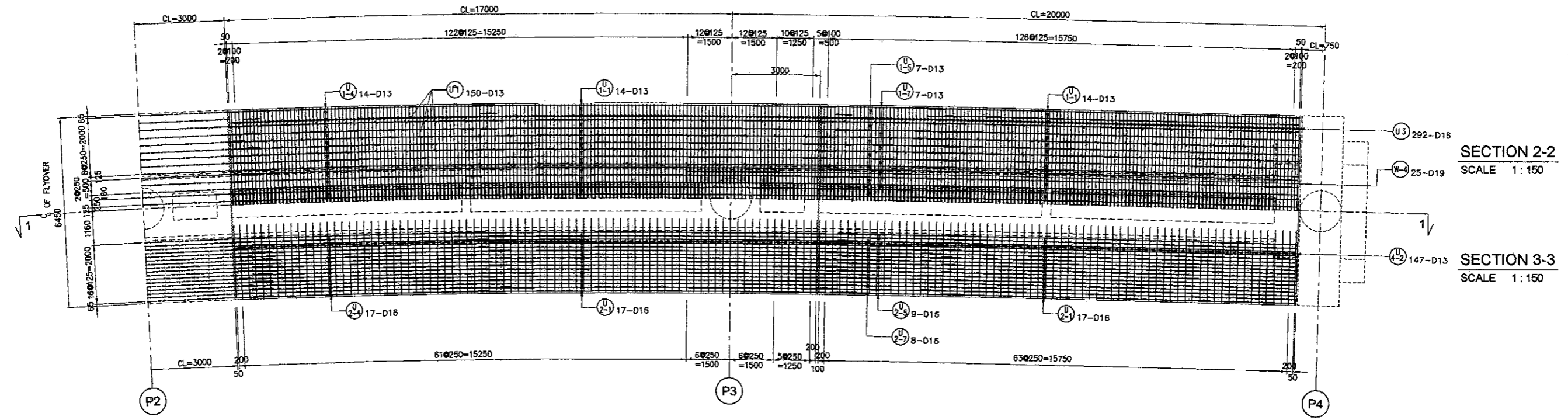
**PLAN**  
 SCALE 1 : 150



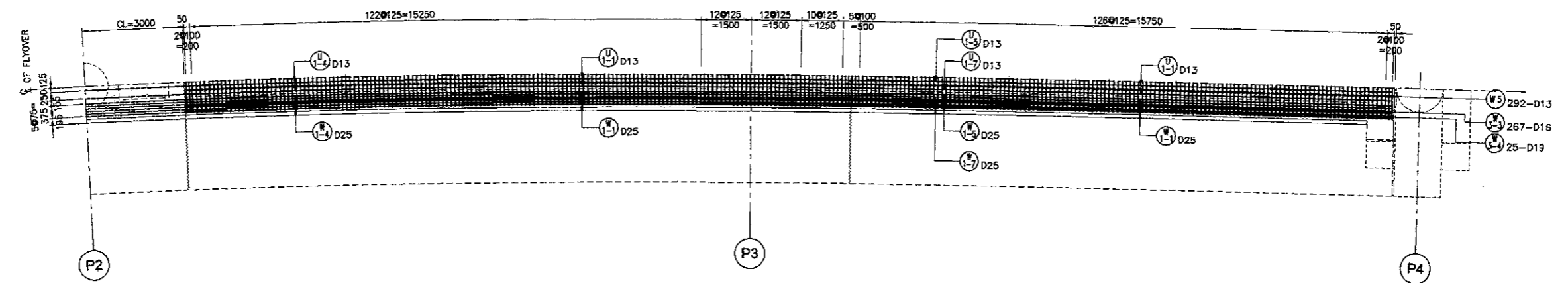
**SECTION 4-4**  
 SCALE 1 : 150



SECTION 1-1  
 SCALE 1 : 150



PLAN  
 SCALE 1 : 150

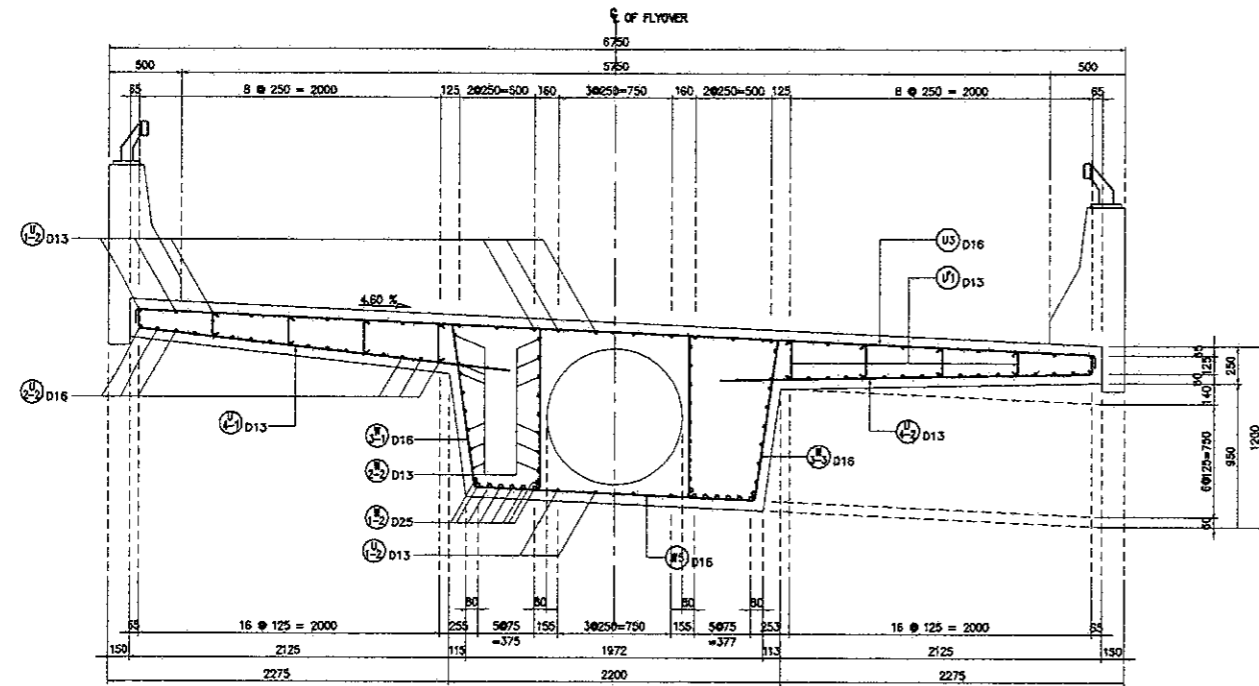


SECTION 4-4  
 SCALE 1 : 150

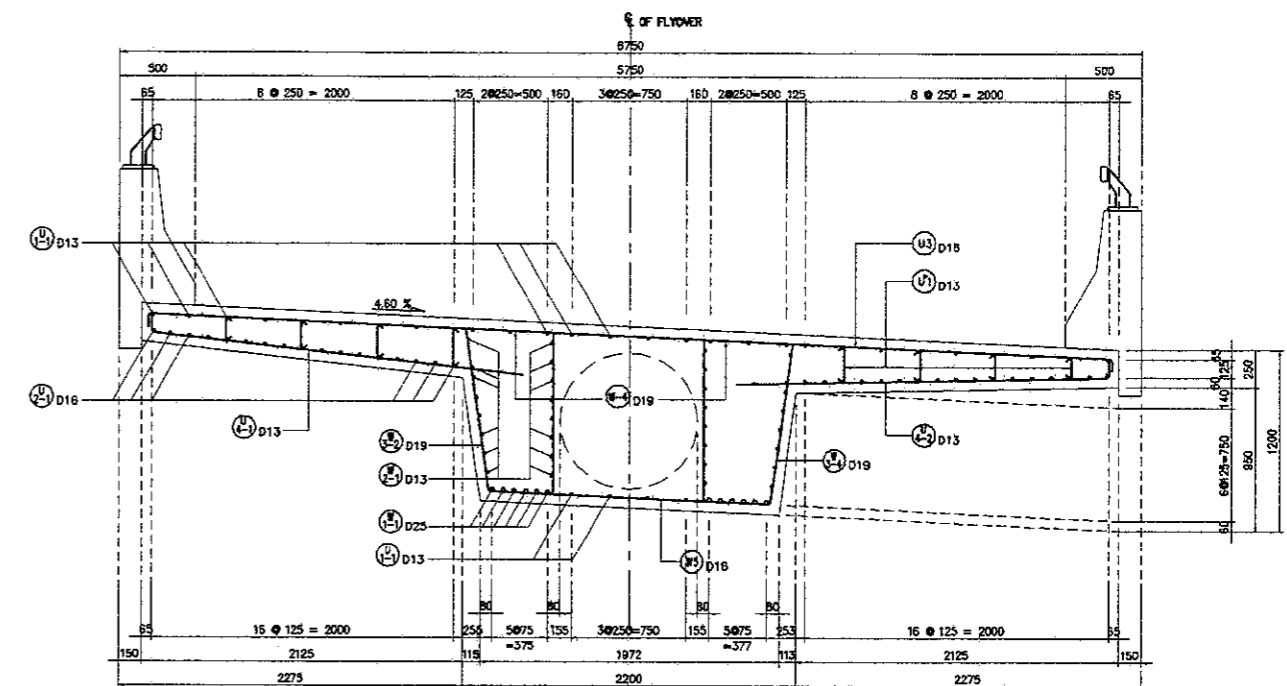
SECTION 2-2  
 SCALE 1 : 150

SECTION 3-3  
 SCALE 1 : 150

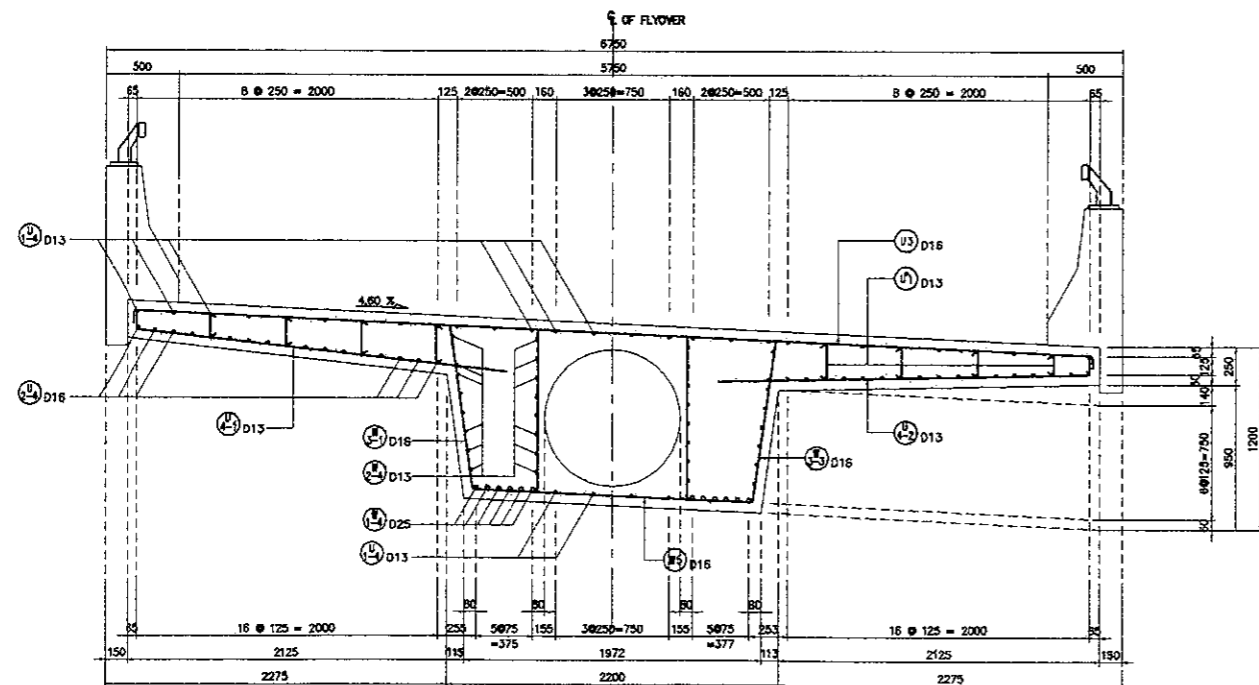
DESIGNED BY	CHECKED BY	SUBMITTED BY
Name: H. HONDA	Name: T. OKUMURA	Name: M. KIUCHI
Sign:	Sign:	Sign:
Date:	Date:	Date:



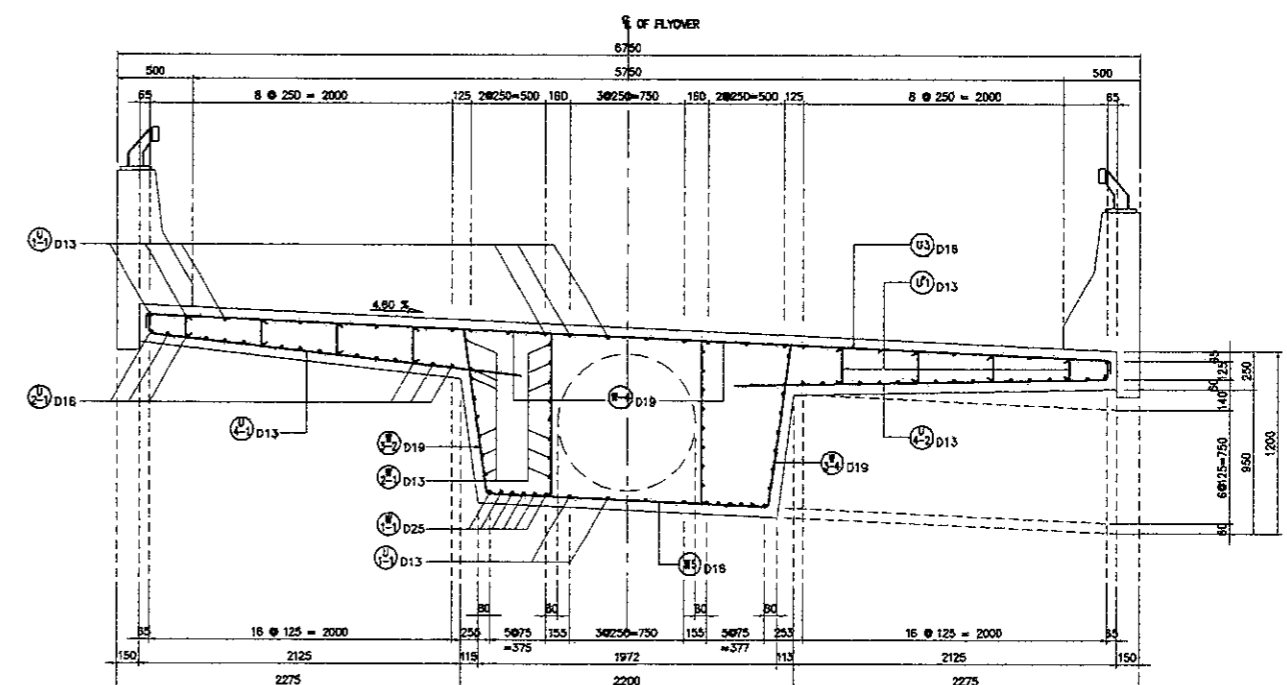
SECTION MID SPAN A1~P1  
 SCALE 1 : 50



SECTION AT P1  
 SCALE 1 : 50

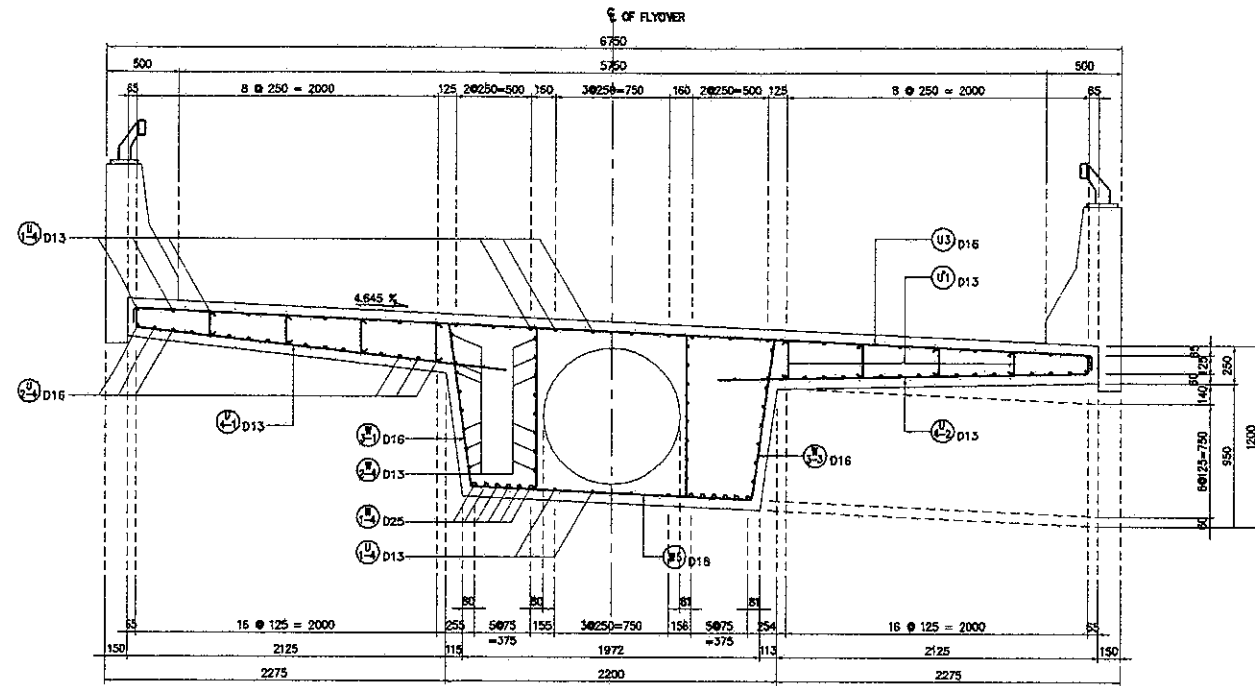


SECTION MID SPAN P1~P2  
 SCALE 1 : 50

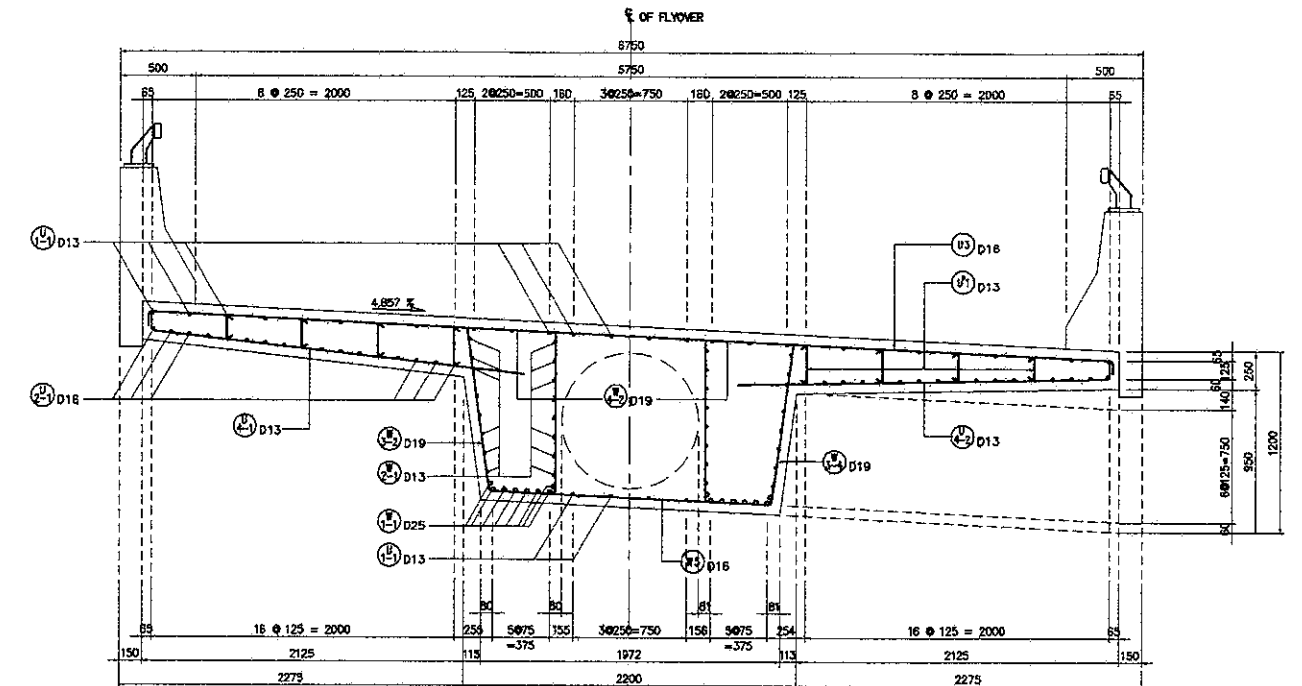


SECTION AT P2  
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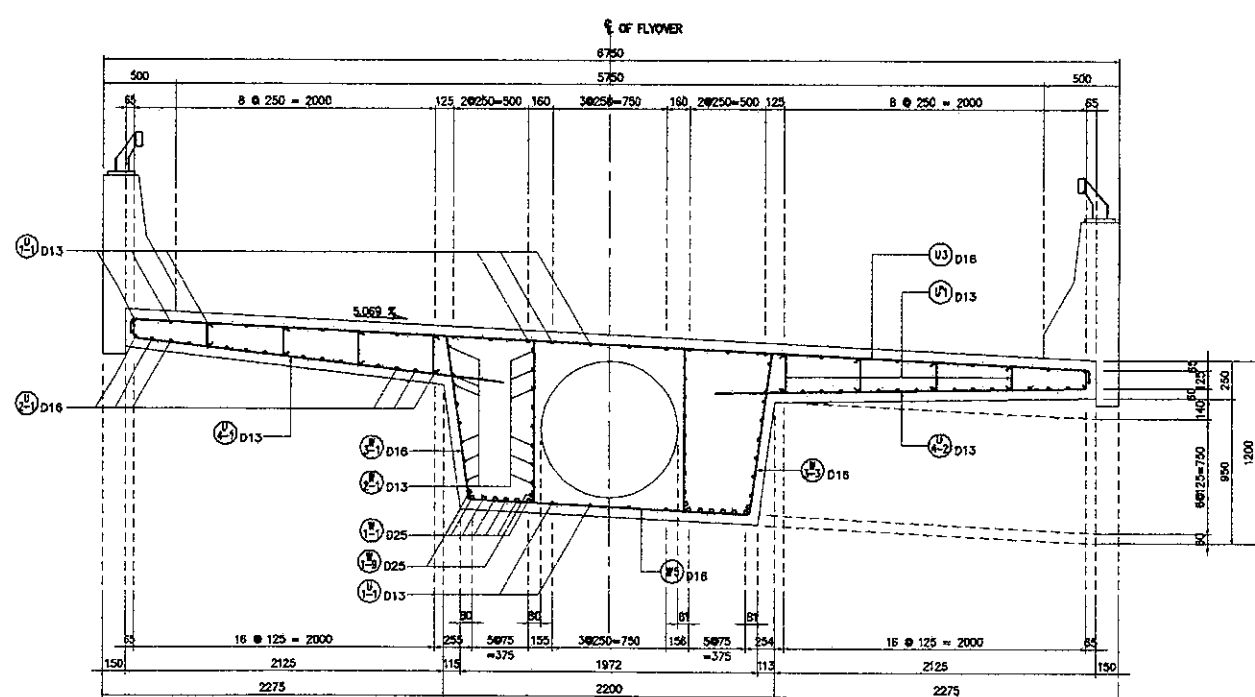
DESIGNED BY		CHECKED BY		SUBMITTED BY	
Name	H. HONDA	Name	T. OKUMURA	Name	M. KIUCHI
Sign		Sign		Sign	
Date		Date		Date	



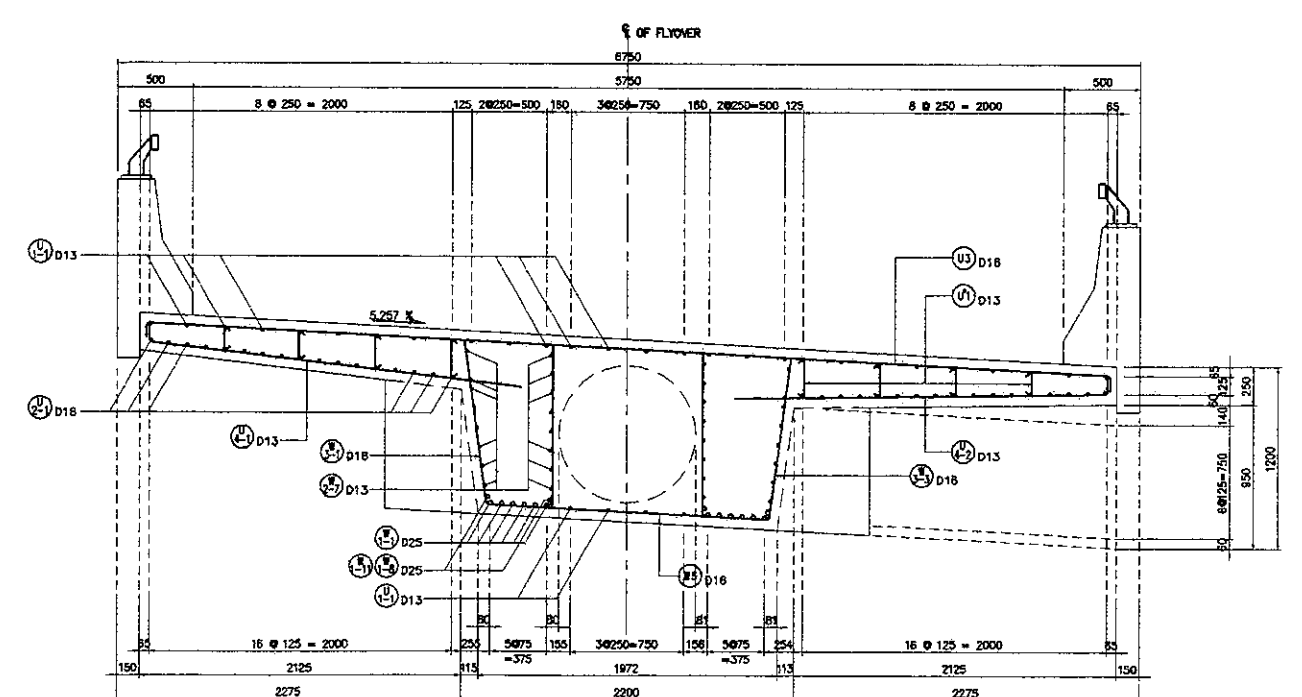
**SECTION MID SPAN P2~P3**  
 SCALE 1 : 50



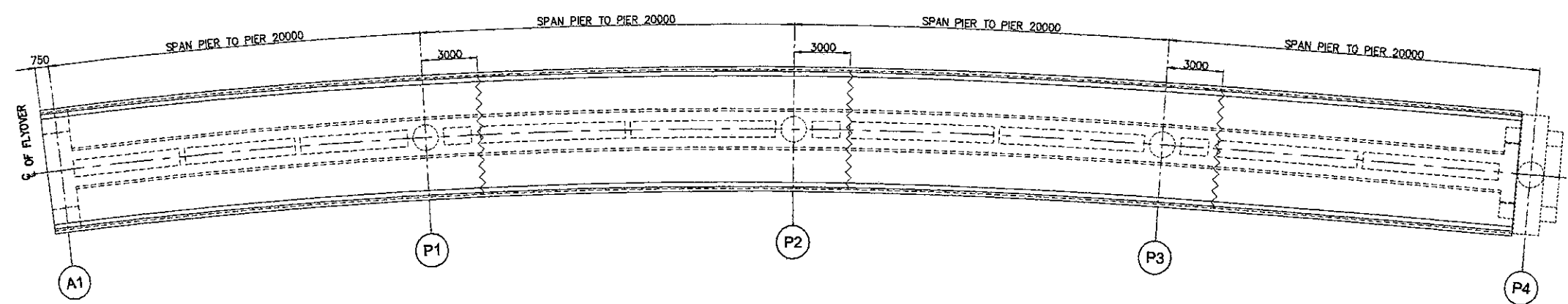
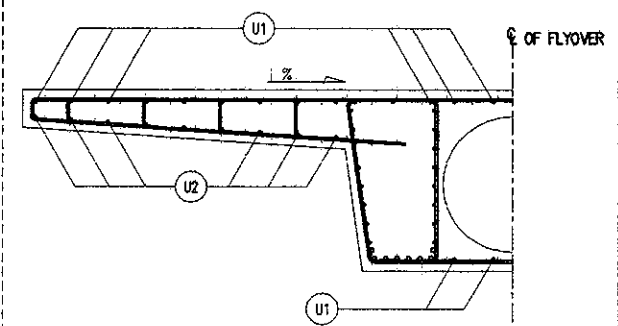
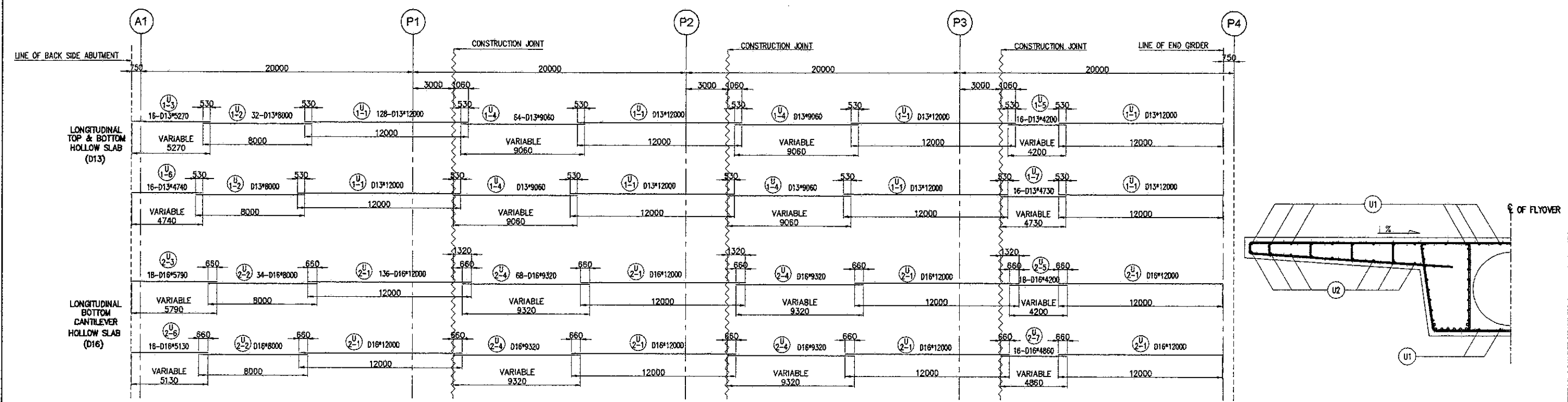
**SECTION AT P3**  
 SCALE 1 : 50



**SECTION MID SPAN P3~P4**  
 SCALE 1 : 50

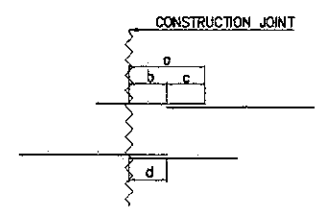


**SECTION AT P4**  
 SCALE 1 : 50

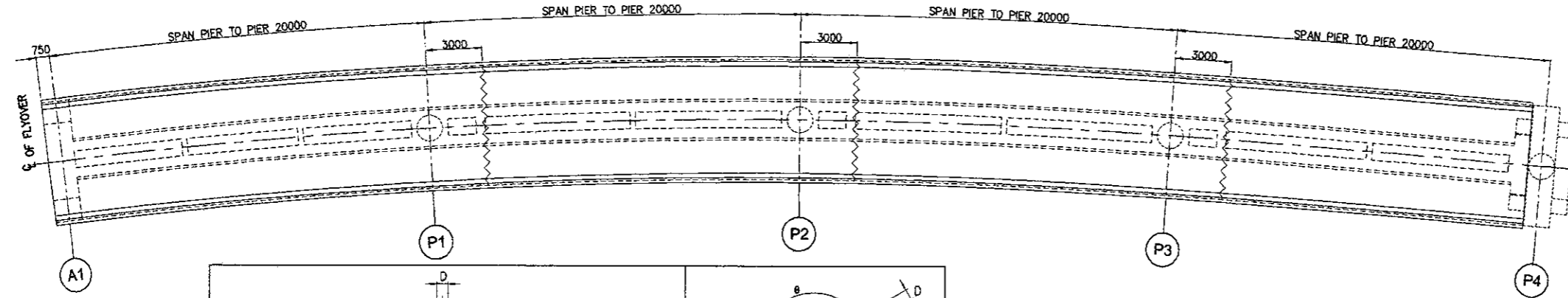
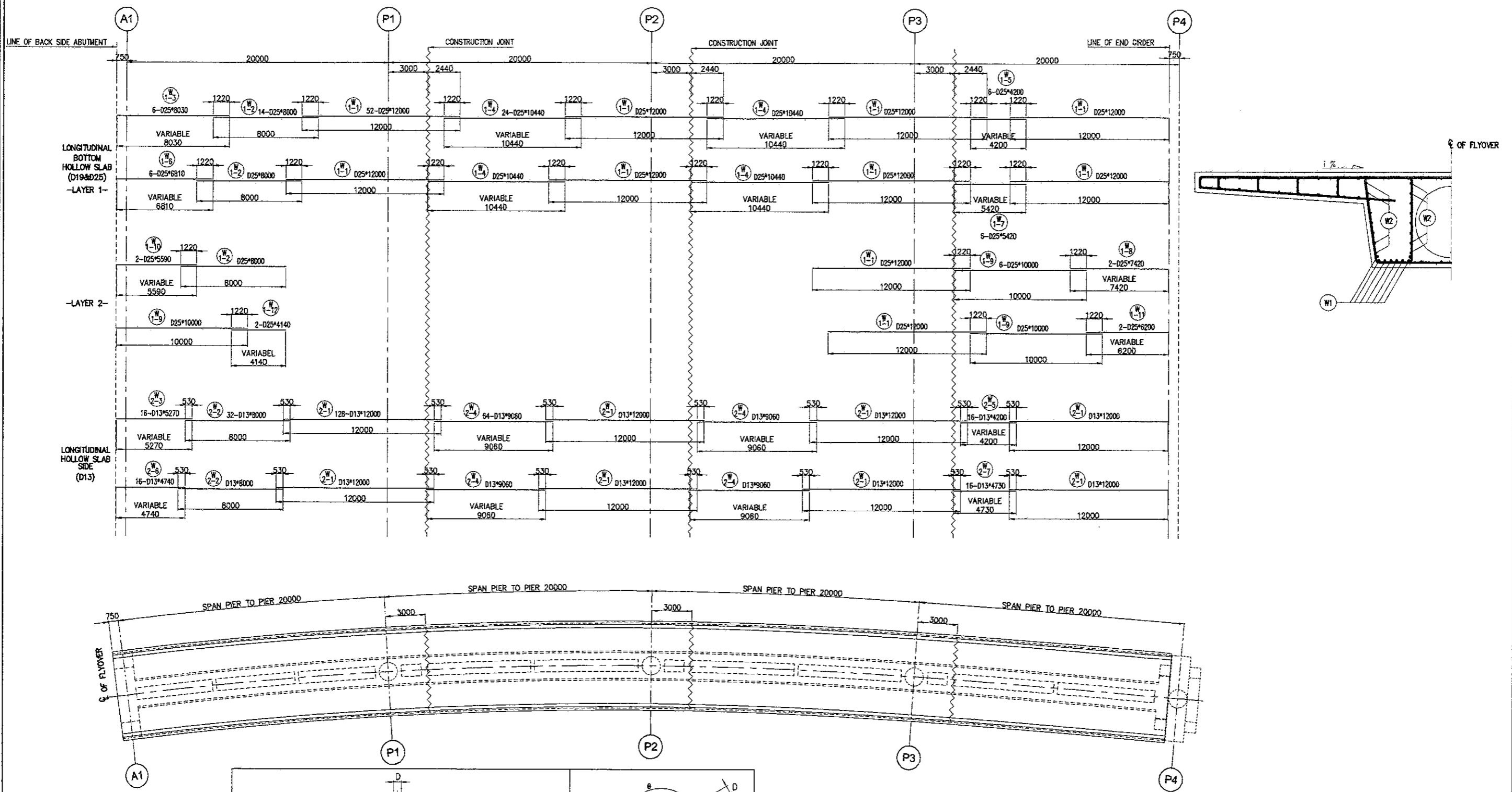


	MAIN REBARS								STIRRUP												
	$\theta \leq 90^\circ$ R=3 $\phi$		$\theta > 90^\circ$ R=5.5 $\phi$		$\theta = 45^\circ$		$\theta = 60^\circ$		$\theta = 90^\circ$		$\theta = 135^\circ$		R=2.5 $\phi$		$\theta = 45^\circ$		$\theta = 60^\circ$		$\theta = 90^\circ$		
	a	$\Delta L$	a	$\Delta L$	a	$\Delta L$	a	$\Delta L$	a	$\Delta L$	a	$\Delta L$	a	$\Delta L$	a	$\Delta L$	a	$\Delta L$	a	$\Delta L$	
D 13	39	71.5	92	96	82	53	16	17	56	3	32.5	77	80	68	45	51	14				
D 16	48	88	113	119	100	66	75	21	69	4	40	94	99	84	55	63	17				

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

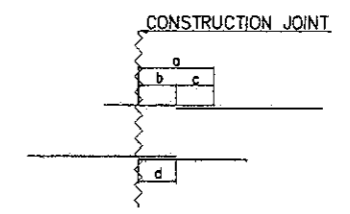




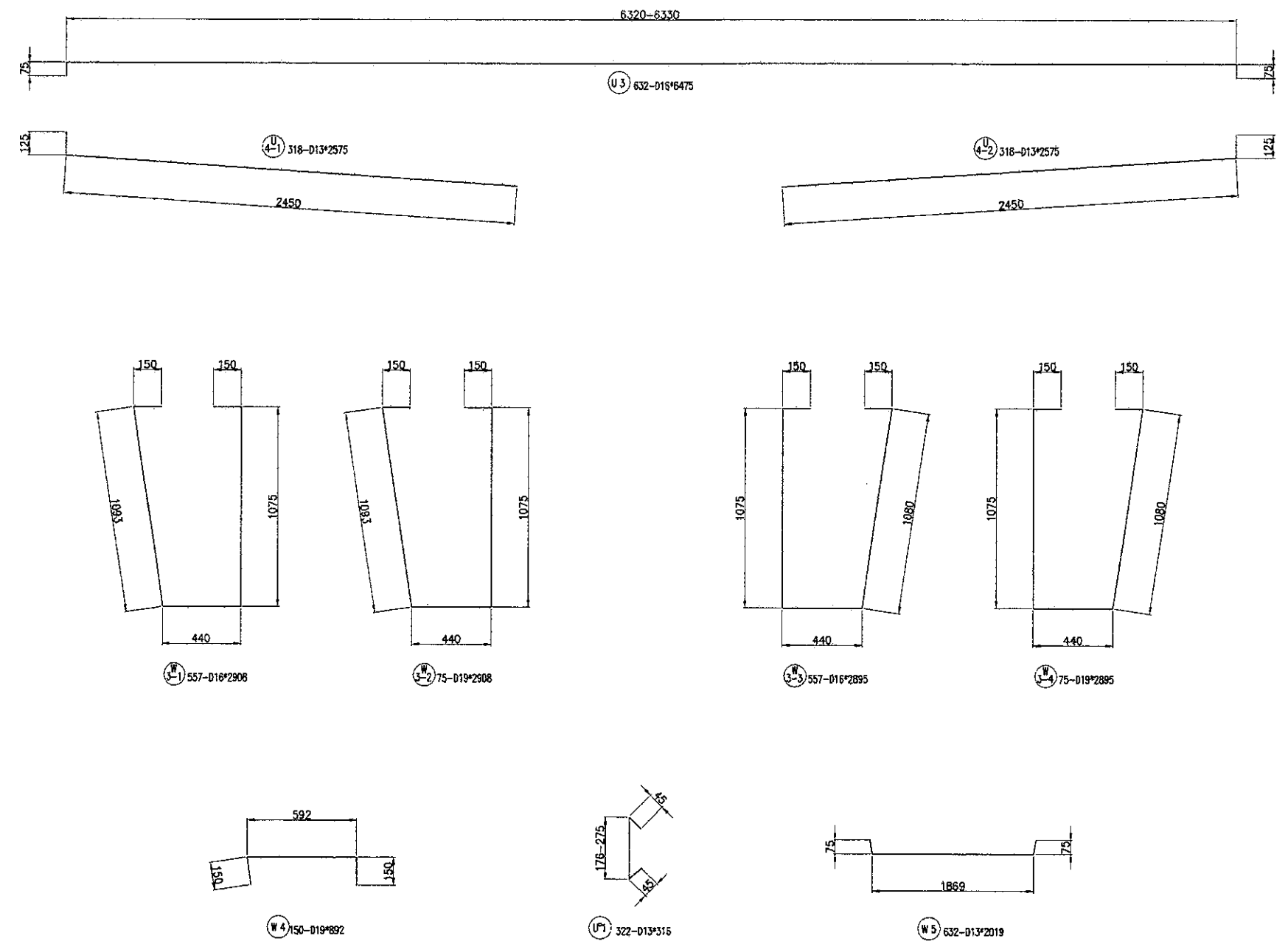


		MAIN REBARS								STIRRUP							
D	R	θ=45°		θ=60°		θ=90°		θ=135°		R=2.5φ		θ=45°		θ=60°		θ=90°	
		a	ΔL	a	ΔL	a	ΔL	a	ΔL	a	ΔL	a	ΔL	a	ΔL	a	ΔL
D 13	39	71.5	92	96	82	53	16	17	56	3	32.5	77	80	68	45	51	14
D 16	48	88	113	119	100	66	75	21	69	4	40	94	99	84	55	63	17

	a	b	c	d
D 13	1080	530	530	530
D 19	1560	780	780	780
D 25	2440	1220	1220	1220





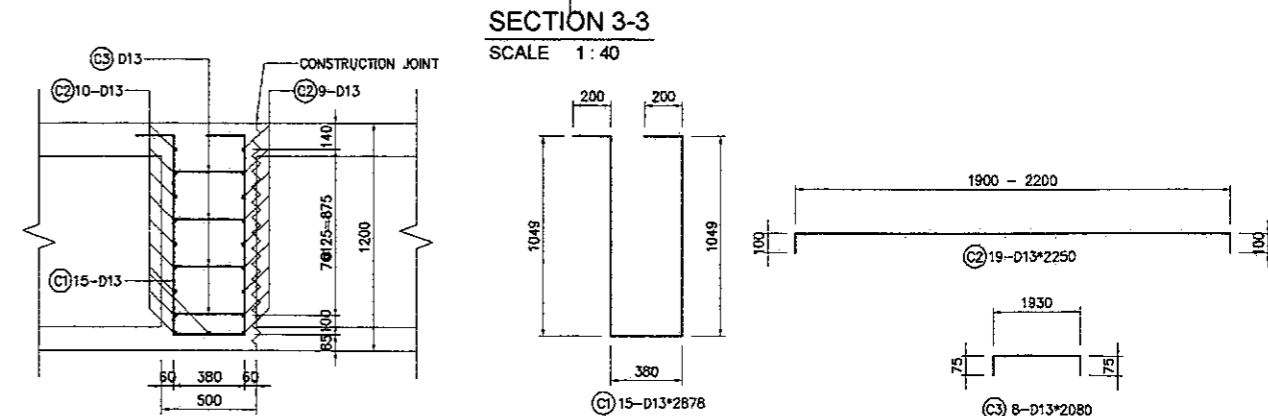
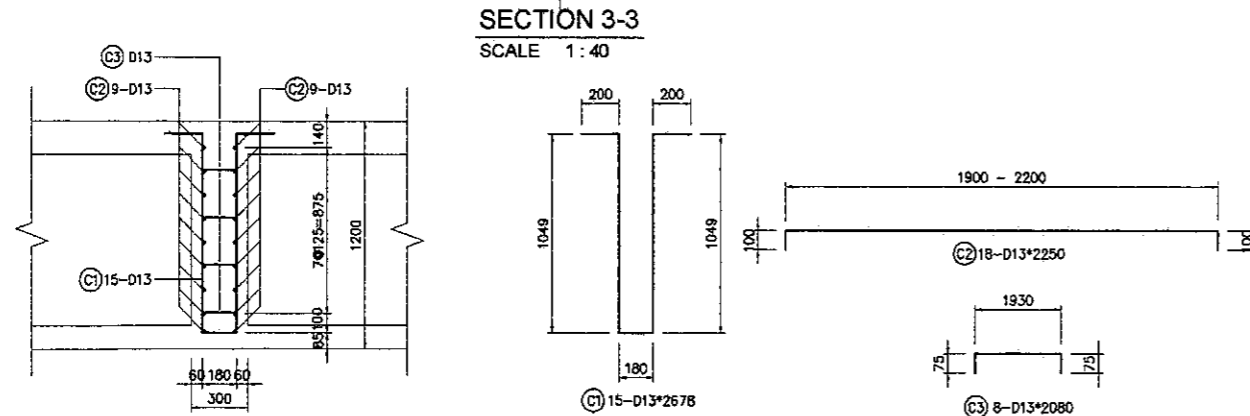
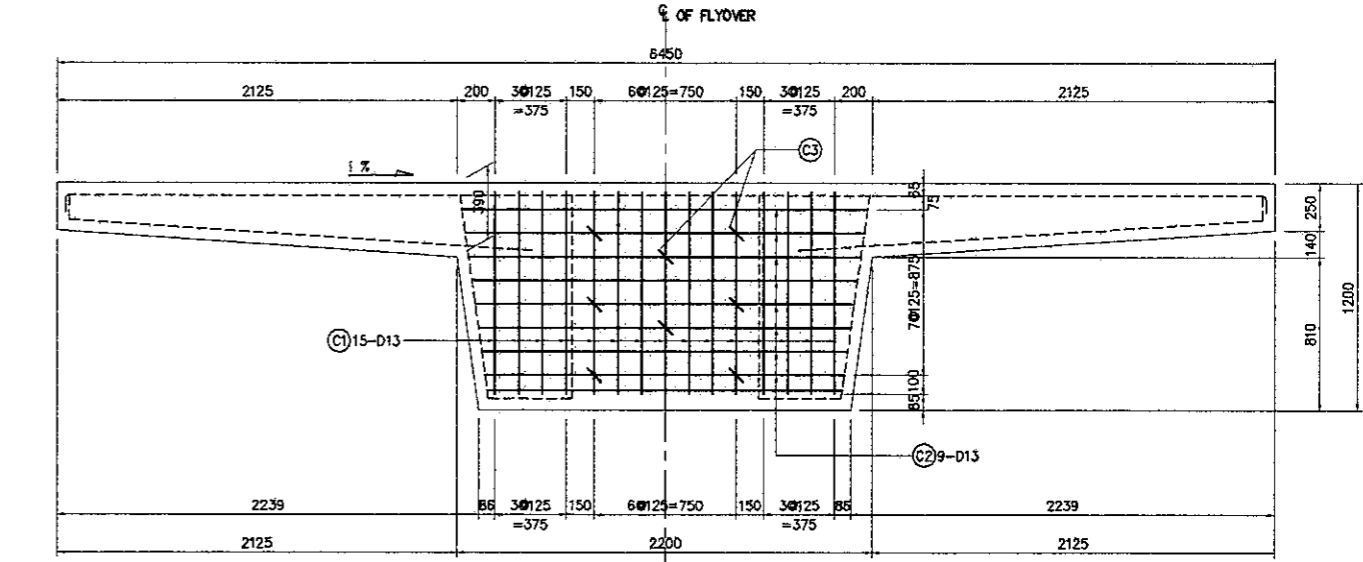
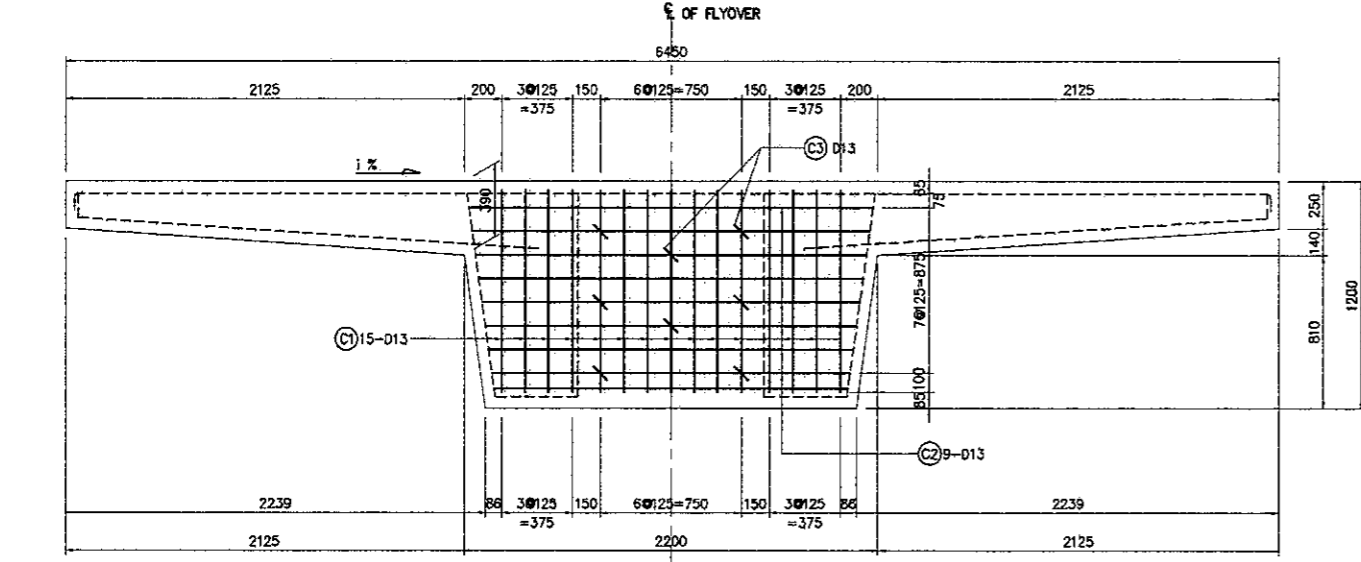
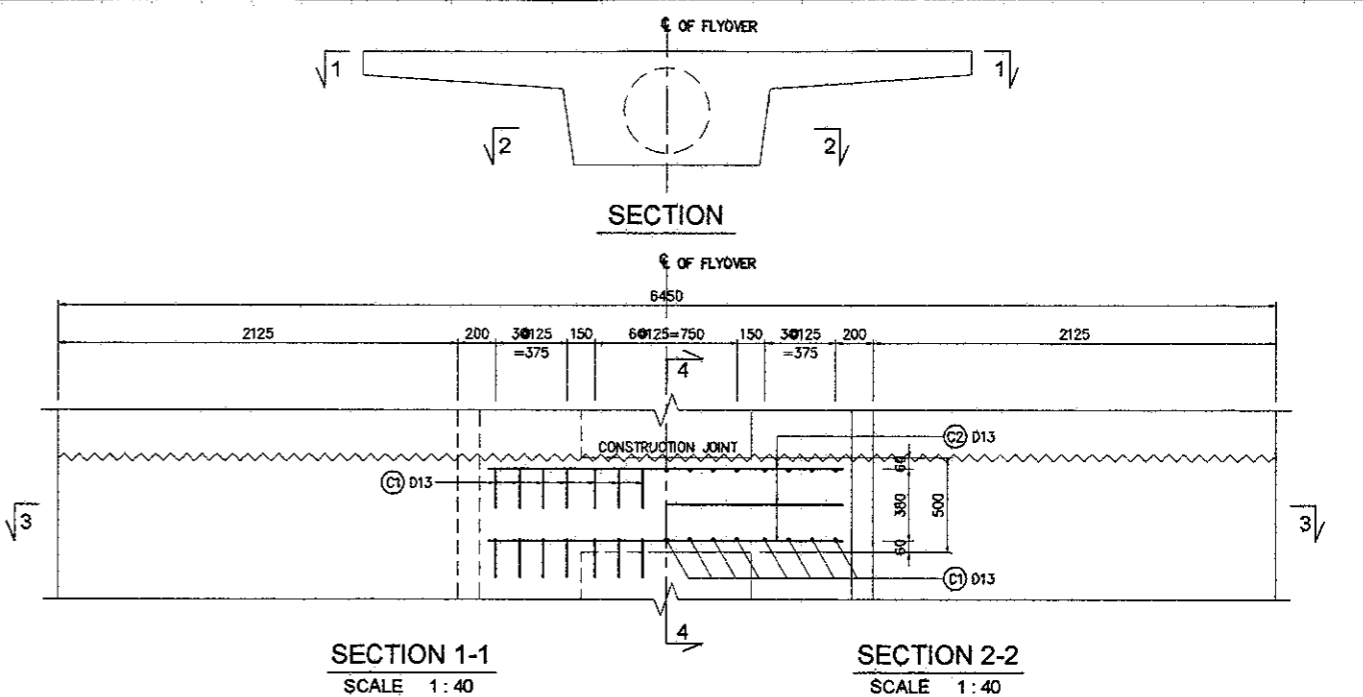
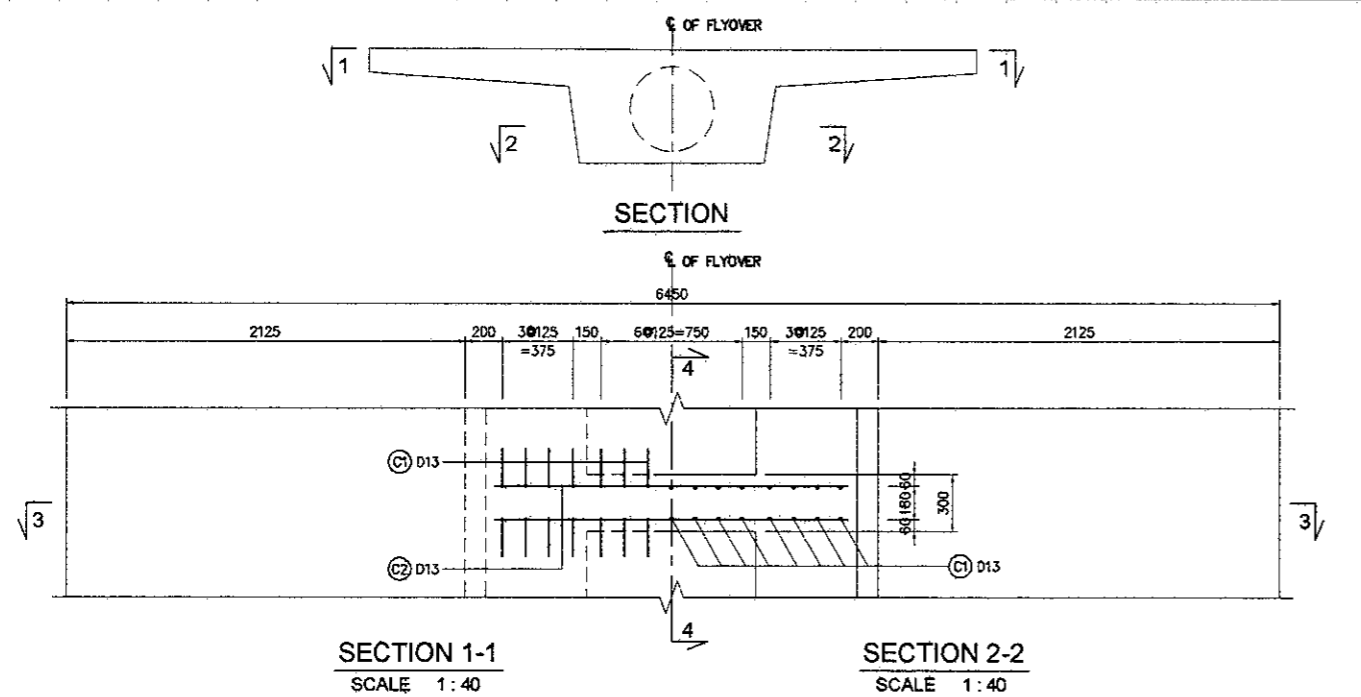


BAR BENDING SCHEDULE

REBAR NAME	DIA (mm)	LENGTH (mm)	NOS.	WEIGHT / METER (Kg / meter)	WEIGHT (Kg)	TOTAL WEIGHT (Kg)	DIAGRAM	REMARKS
U 1 - 1	13	12000	128	1.04	12.48	1597		
U 1 - 2	13	8000	32	1.04	8.32	268		
U 1 - 3	13	5270	16	1.04	5.48	88		
U 1 - 4	13	9060	64	1.04	9.42	603		
U 1 - 5	13	4200	16	1.04	4.37	70		
U 1 - 6	13	4740	16	1.04	4.93	79		
U 1 - 7	13	4730	16	1.04	4.92	79		
U 2 - 1	16	12000	136	1.58	18.96	2579		
U 2 - 2	16	8000	34	1.58	12.64	430		
U 2 - 3	16	5790	18	1.58	9.15	165		
U 2 - 4	16	9320	68	1.58	14.73	1001		
U 2 - 5	16	4200	16	1.58	6.64	119		
U 2 - 6	16	5130	16	1.58	8.11	130		
U 2 - 7	16	4880	16	1.58	7.88	123		
U 3	16	6475	632	1.58	10.23	6486		
U 4 - 1	13	2575	318	1.04	2.68	852		
U 4 - 2	13	2575	318	1.04	2.68	852		
U* 1	13	516	322	1.04	0.35	106		
SUB TOTAL - 1						15805		

REBAR NAME	DIA (mm)	LENGTH (mm)	NOS.	WEIGHT / METER (Kg / meter)	WEIGHT (Kg)	TOTAL WEIGHT (Kg)	DIAGRAM	REMARKS
W 1 - 1	25	12000	52	3.85	46.2	2402		
W 1 - 2	25	8000	14	3.85	30.8	431		
W 1 - 3	25	8030	6	3.85	30.92	185		
W 1 - 4	25	10440	24	3.85	40.19	965		
W 1 - 5	25	4200	6	3.85	16.17	97		
W 1 - 6	25	6810	6	3.85	26.22	157		
W 1 - 7	25	5420	6	3.85	20.87	125		
W 1 - 8	25	7420	2	3.85	28.57	57		
W 1 - 9	25	10000	6	3.85	38.5	231		
W 1 - 10	25	5580	2	3.85	21.52	43		
W 1 - 11	25	6200	2	3.85	23.87	48		
W 1 - 12	25	4140	2	3.85	15.94	32		
W 2 - 1	13	12000	128	1.04	12.48	1597		
W 2 - 2	13	8000	32	1.04	8.32	268		
W 2 - 3	13	5270	16	1.04	5.48	88		
W 2 - 4	13	9060	64	1.04	9.42	603		
W 2 - 5	13	4200	16	1.04	4.37	70		
W 2 - 6	13	4740	16	1.04	4.93	79		
W 2 - 7	13	4730	16	1.04	4.92	79		
W 3 - 1	16	2908	557	1.58	4.59	2559		
W 3 - 2	19	2908	75	2.23	6.48	486		
W 3 - 3	16	2885	557	1.58	4.57	2548		
W 3 - 4	19	2885	75	2.23	6.46	484		
W 4	19	892	150	2.23	1.99	299		
W 5	16	2019	632	1.58	3.19	2016		
SUB TOTAL - 2						15949		W 4
TOTAL REBAR WEIGHT A1 - P4						31554		W 5

	MAIN REBARS						STIRRUP												
	θ=90° R=3φ	θ=90° R=5.5φ	θ=45°		θ=60°		θ=90°		θ=135°		R=2.5φ	θ=45°		θ=60°		θ=90°			
	a	ΔL	a	ΔL	a	ΔL	a	ΔL	a	ΔL	a	ΔL	a	ΔL	a	ΔL	a	ΔL	
D 13	39	71.5	92	96	82	53	16	17	56	3	32.5	77	80	68	45	51	14		
D 16	48	88	113	119	100	66	21	69	4	40	94	99	84	55	63	17			
D 19	57	104.5	134	141	119	78	25	82	5	47.5	112	117	100	65	75	20			



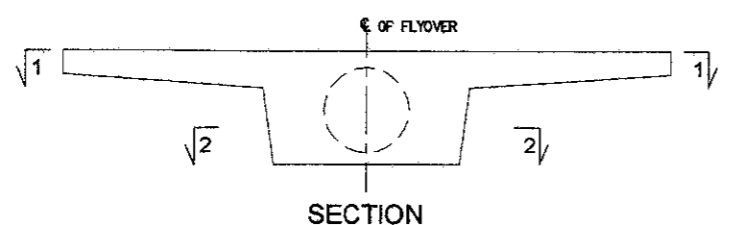
SECTION 4-4  
 SCALE 1:40  
 BAR BENDING SCHEDULE

REBAR NAME	ØA (mm)	LENGTH (mm)	NOS.	WEIGHT / METER (Kg / meter)	WEIGHT (Kg)	TOTAL WEIGHT (Kg)	DIAGRAM	REMARKS
C1	13	2678	15	1.04	2.79	42		
C2	13	2250	18	1.04	2.34	42		
C3	13	2080	8	1.04	2.16	17		
TOTAL REBAR WEIGHT A1 - P4						101 x 5 = 506 Kg		

SECTION 4-4  
 SCALE 1:40  
 BAR BENDING SCHEDULE

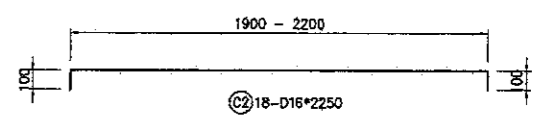
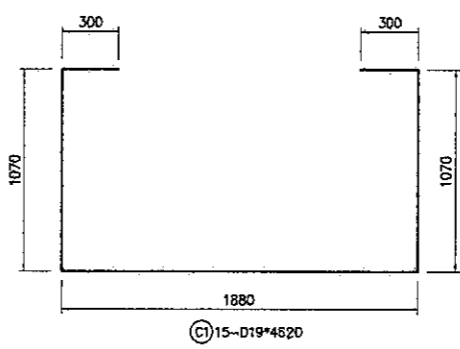
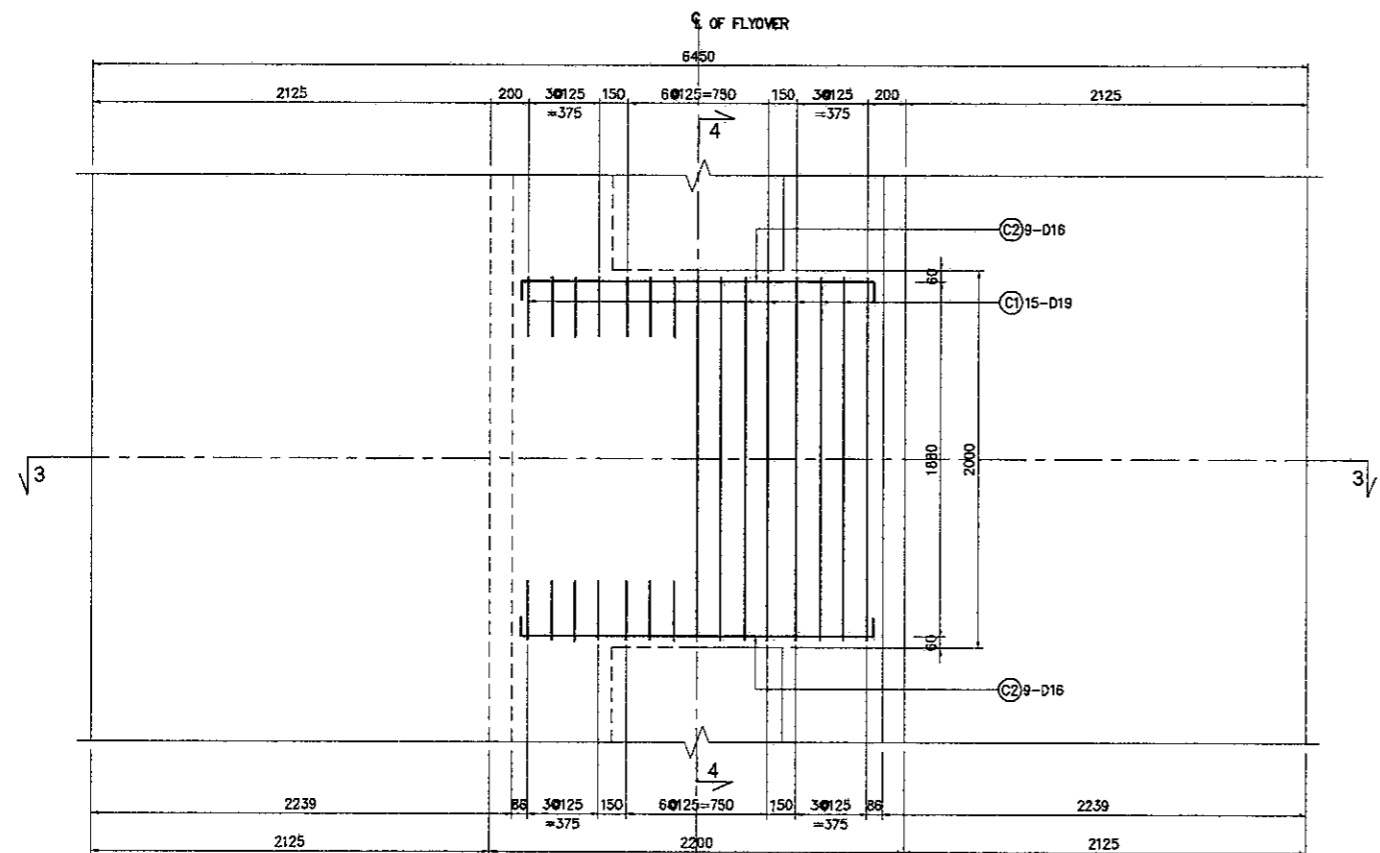
REBAR NAME	ØA (mm)	LENGTH (mm)	NOS.	WEIGHT / METER (Kg / meter)	WEIGHT (Kg)	TOTAL WEIGHT (Kg)	DIAGRAM	REMARKS
C1	13	2678	15	1.04	2.99	45		
C2	13	2250	19	1.04	2.34	44		
C3	13	2080	8	1.04	2.16	17		
TOTAL REBAR WEIGHT A1 - P4						106 x 3 = 318 Kg		

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

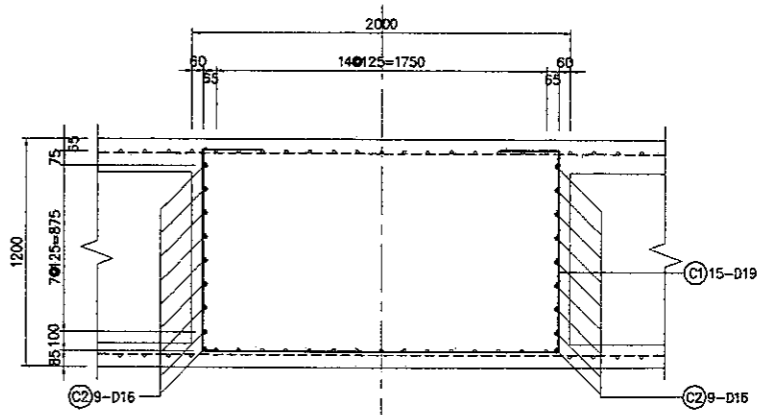
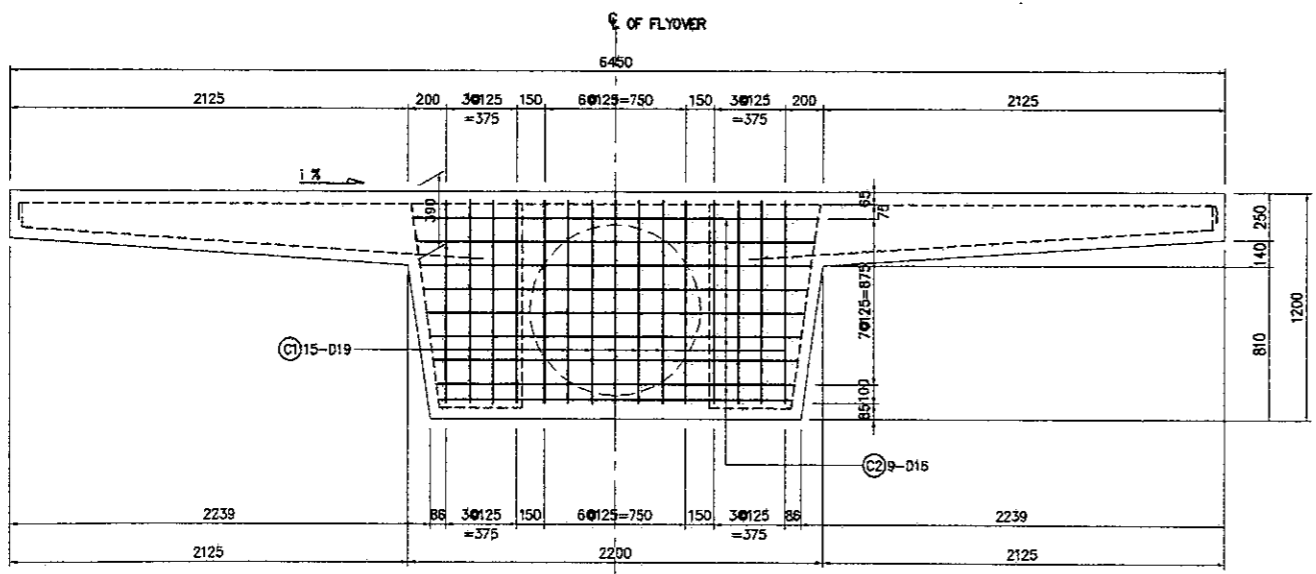


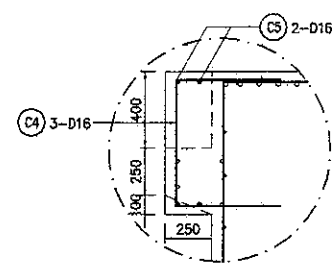
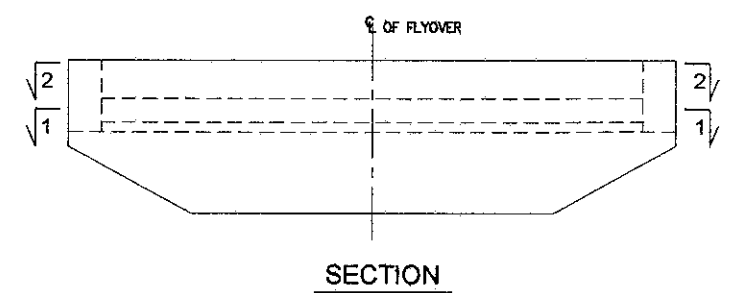
BAR BENDING SCHEDULE

REBAR NAME	DIA (mm)	LENGTH (mm)	NOS.	WEIGHT / METER (Kg / meter)	WEIGHT (Kg)	TOTAL WEIGHT (Kg)	DIAGRAM	REMARKS
C1	19	4620	15	2.23	10.30	155		
C2	16	2250	18	1.58	3.56	64		
TOTAL REBAR WEIGHT P1-P2-P3						219 x 3 = 657 Kg		



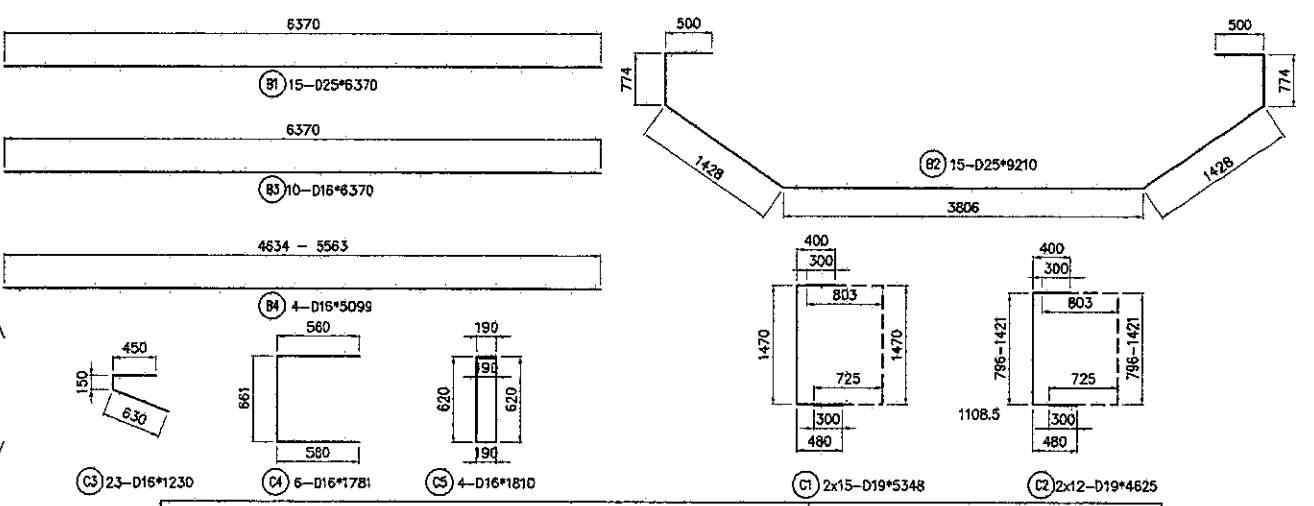
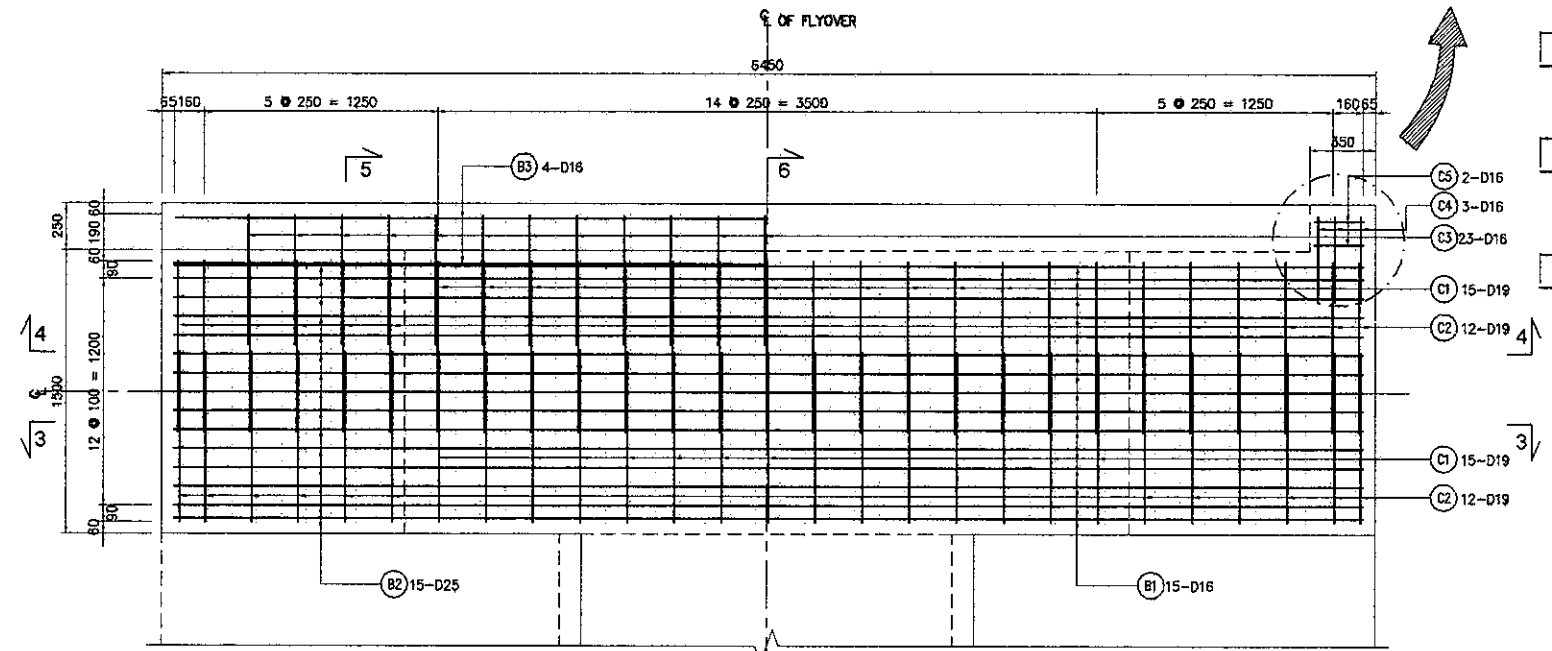
	MAIN REBARS						STIRRUP										
	θ=90° R=3d	θ=90° R=5.5d	θ=45°		θ=60°		θ=90°		θ=135°		R=2.5d	θ=45°		θ=60°		θ=90°	
	c	ΔL	α	ΔL	α	ΔL	α	ΔL	α	ΔL	a	ΔL	α	ΔL	α	ΔL	
D 16	48	88	113	119	100	66	75	21	69	4	40	94	99	84	55	63	17
D 19	57	104.5	134	141	119	78	90	25	82	5	47.5	112	117	100	85	75	20



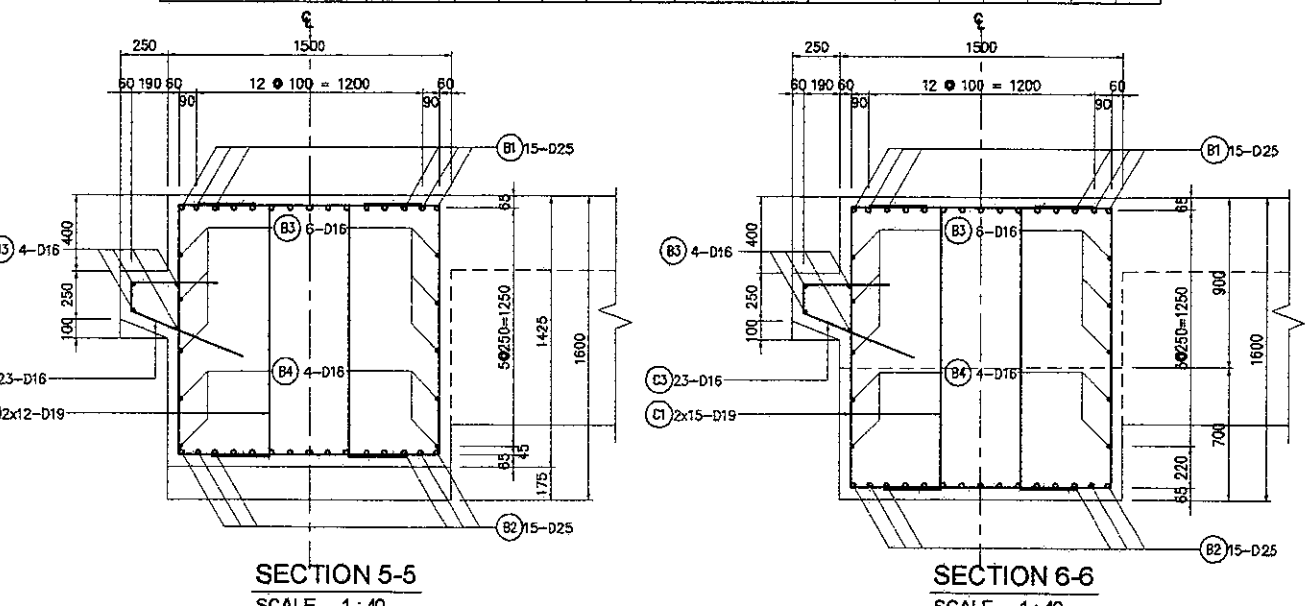
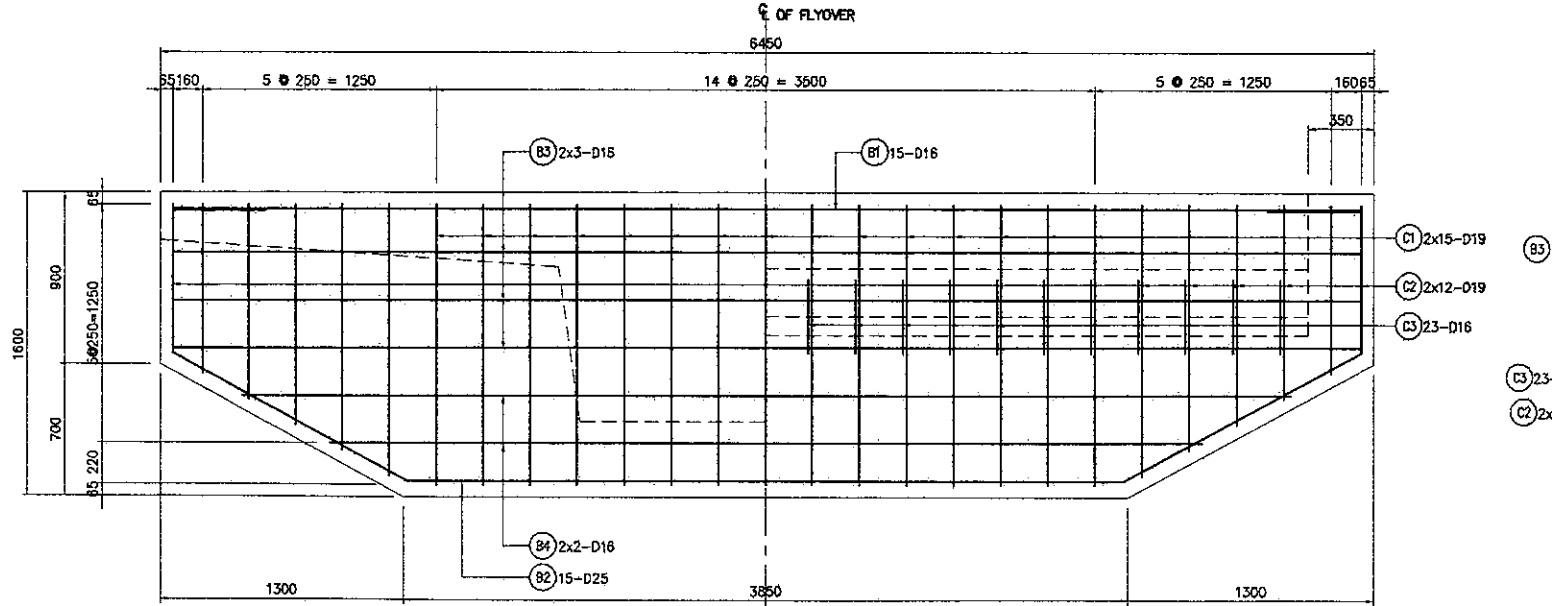


**BAR BENDING SCHEDULE**

REBAR NAME	DIAM (mm)	LENGTH (mm)	NOS.	WEIGHT / METER (kg / meter)	WEIGHT (Kg)	TOTAL WEIGHT (Kg)	DIAGRAM	REMARKS
B1	25	6370	15	3.85	24.52	368		
B2	25	9210	15	3.85	35.46	532		
B3	16	6370	10	1.58	10.06	101		
B4	16	5099	4	1.58	6.06	32		
C1	19	5348	30	2.23	11.93	358		
C2	19	4625	24	2.23	10.51	248		
C3	15	1230	23	1.58	1.94	45		
C4	16	1781	6	1.58	2.81	17		
C5	16	1810	4	1.58	2.86	11		
TOTAL REBAR WEIGHT ABUTMENT A1						1711		

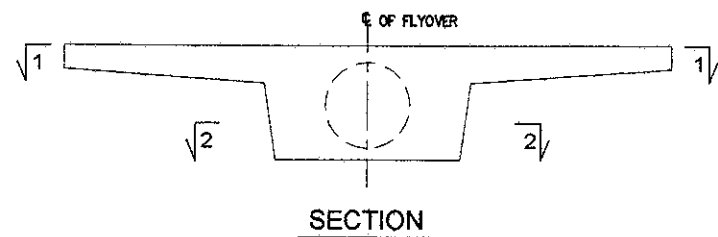


MAIN REBARS										STIRRUP							
	$\theta=90^\circ$ $R=3d$	$\theta=90^\circ$ $R=5.5d$	$\theta=45^\circ$	$\theta=60^\circ$	$\theta=90^\circ$	$\theta=135^\circ$		$R=2.5d$	$\theta=45^\circ$	$\theta=60^\circ$	$\theta=90^\circ$						
	a	$\Delta L$	a	$\Delta L$	a	$\Delta L$	a	$\Delta L$	a	$\Delta L$	a	$\Delta L$					
D 16	48	88	113	119	100	66	75	21	69	4	40	94	99	84	55	63	17
D 19	57	104.5	134	141	119	78	90	25	82	5	47.5	112	117	100	65	75	20
D 25	75	137.5	177	185	103	118	32	32	108	6	75	177	185	157	103	118	32



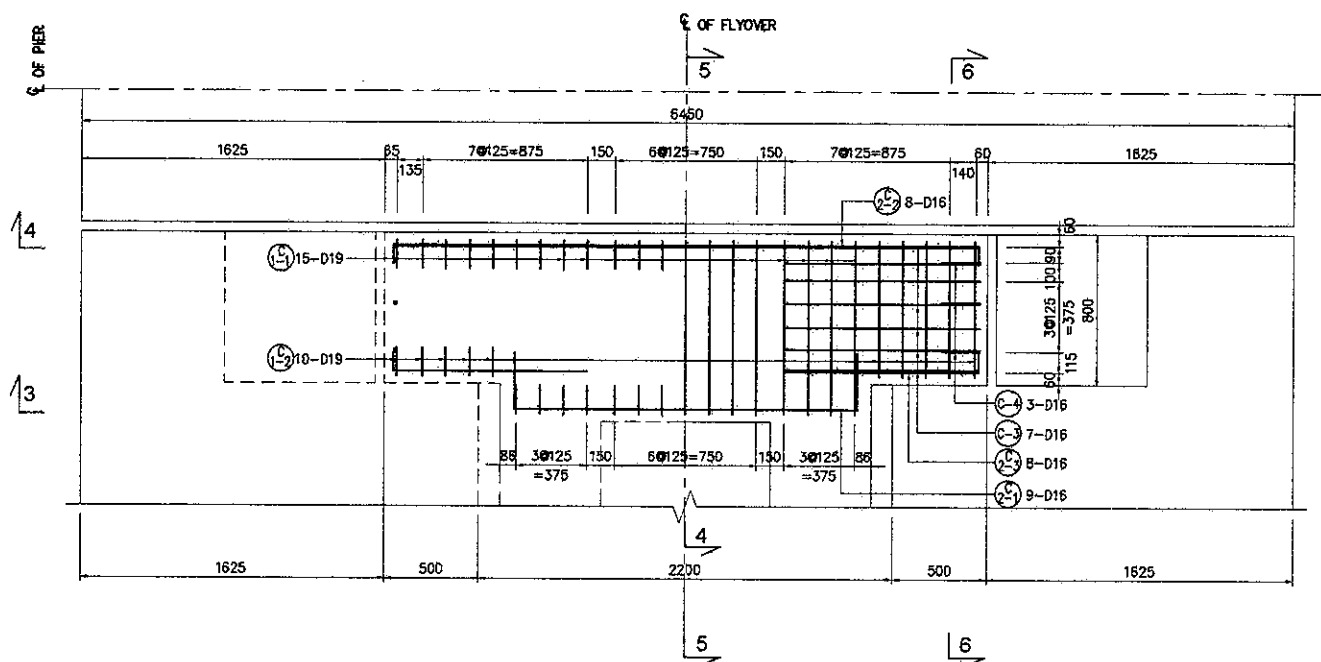
SECTION 3-3 SCALE 1:40  
 SECTION 4-4 SCALE 1:40

SECTION 5-5 SCALE 1:40  
 SECTION 6-6 SCALE 1:40



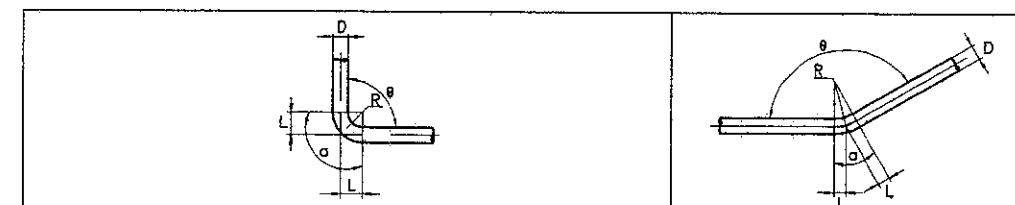
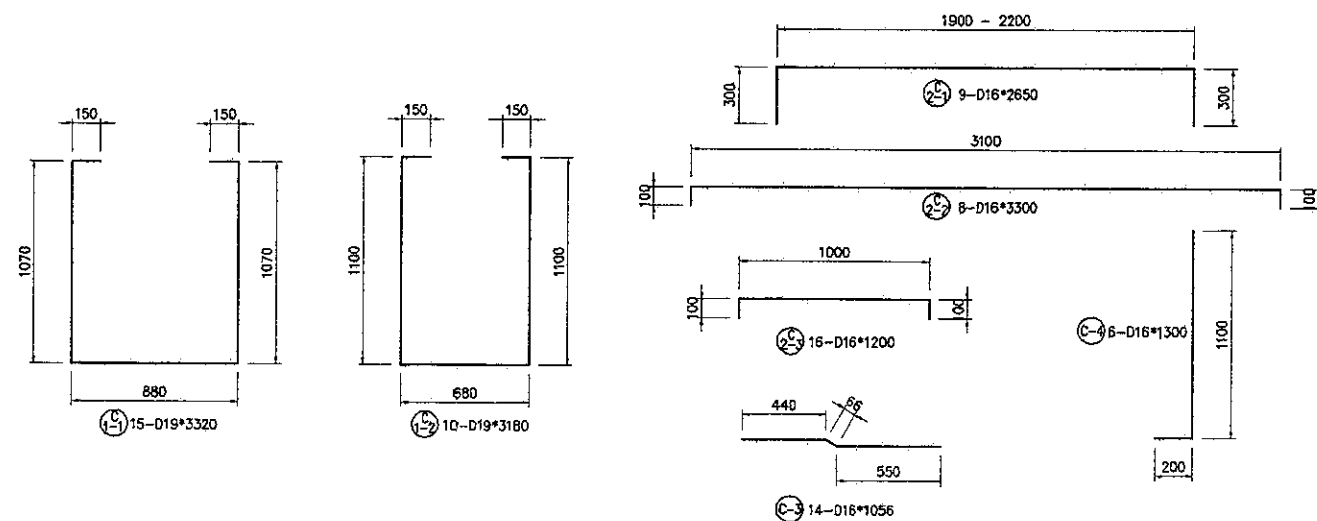
BAR BENDING SCHEDULE

REBAR NAME	DIA (mm)	LENGTH (mm)	NOS.	WEIGHT / METER (Kg / meter)	WEIGHT (Kg)	TOTAL WEIGHT (Kg)	DIAGRAM	REMARKS
C 1-1	19	3320	15	2.23	7.40	111		
C 1-2	19	3180	10	2.23	7.09	71		
C 2-1	16	2650	9	1.58	4.19	38		
C 2-2	16	3300	8	1.58	5.21	42		
C 2-3	16	1200	16	1.58	1.9	30		
C 3	16	1056	14	1.58	1.67	23		
C 4	16	1300	6	1.58	2.05	12		
TOTAL REBAR WEIGHT P4						327 Kg		

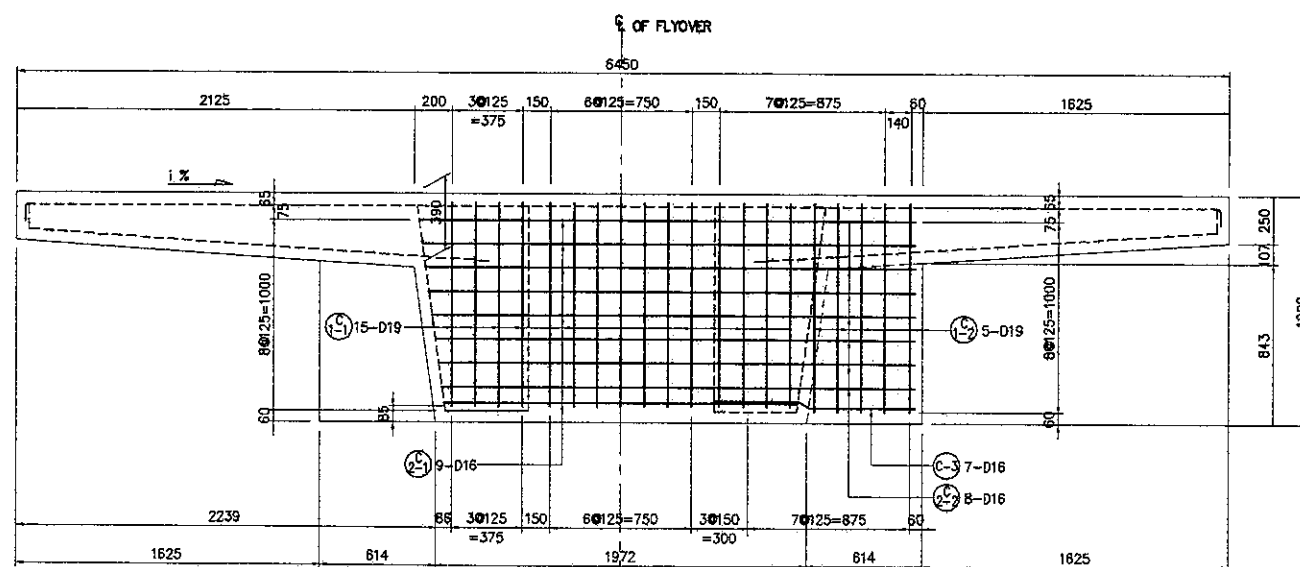


SECTION 1-1  
 SCALE 1:40

SECTION 2-2  
 SCALE 1:40

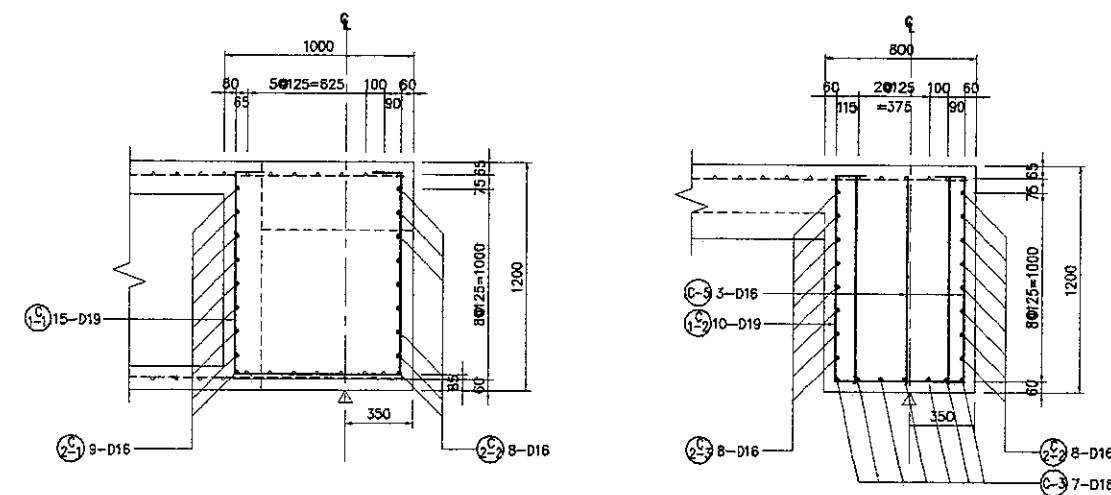


	MAIN REBARS						STIRRUP										
	$\theta \leq 90^\circ$ R=3 $\phi$	$\theta = 90^\circ$ R=5.5 $\phi$	$\theta = 45^\circ$		$\theta = 60^\circ$		$\theta = 90^\circ$		$\theta = 135^\circ$		R=2.5 $\phi$						
	a	$\Delta L$	a	$\Delta L$	a	$\Delta L$	a	$\Delta L$	a	$\Delta L$	a	$\Delta L$					
D 16	48	88	113	119	100	66	75	21	69	4	40	94	99	84	55	63	17
D 19	57	104.5	134	141	119	78	90	25	82	5	47.5	112	117	100	65	75	20



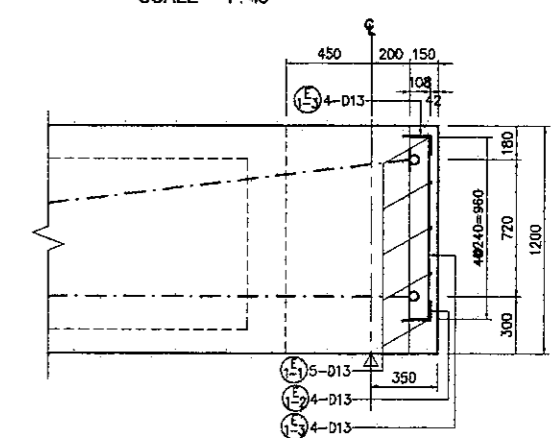
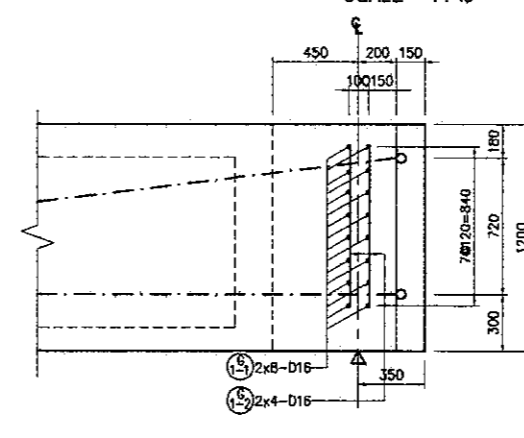
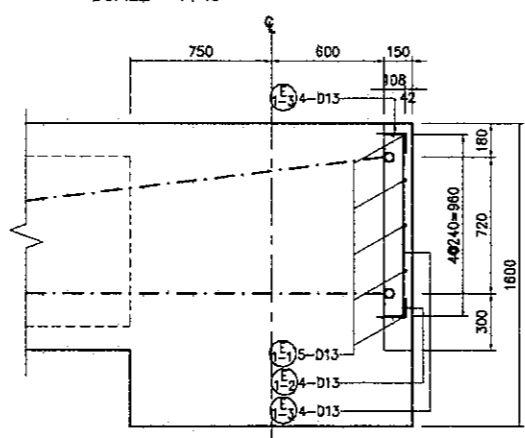
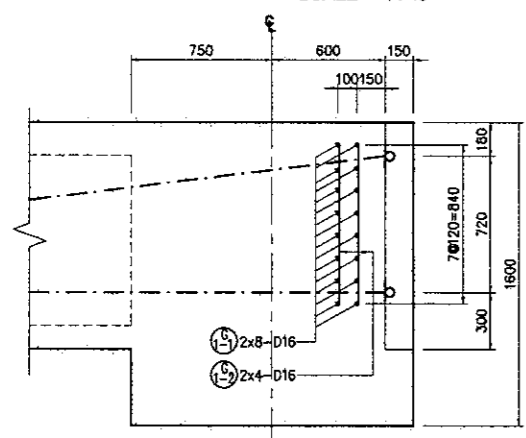
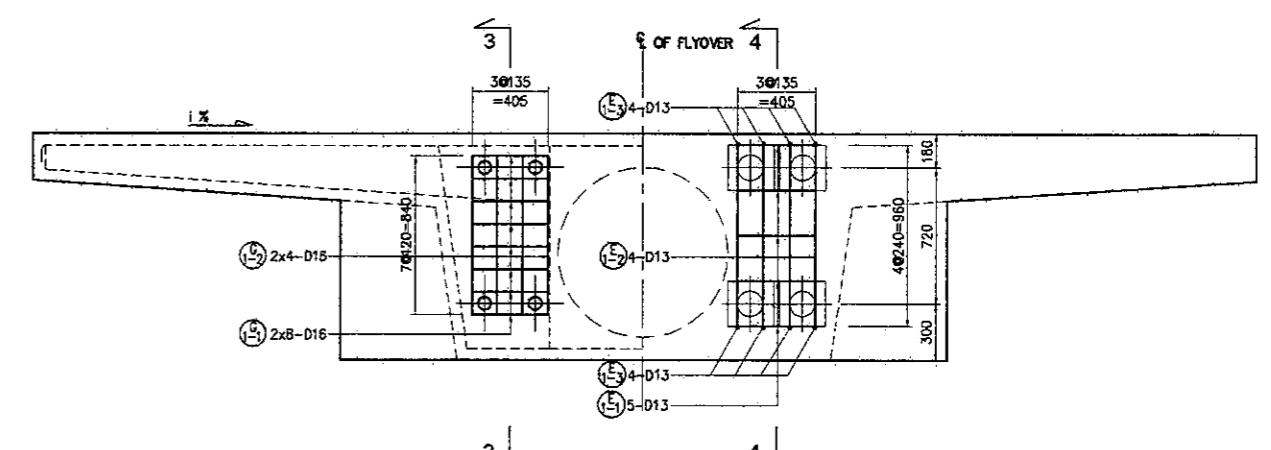
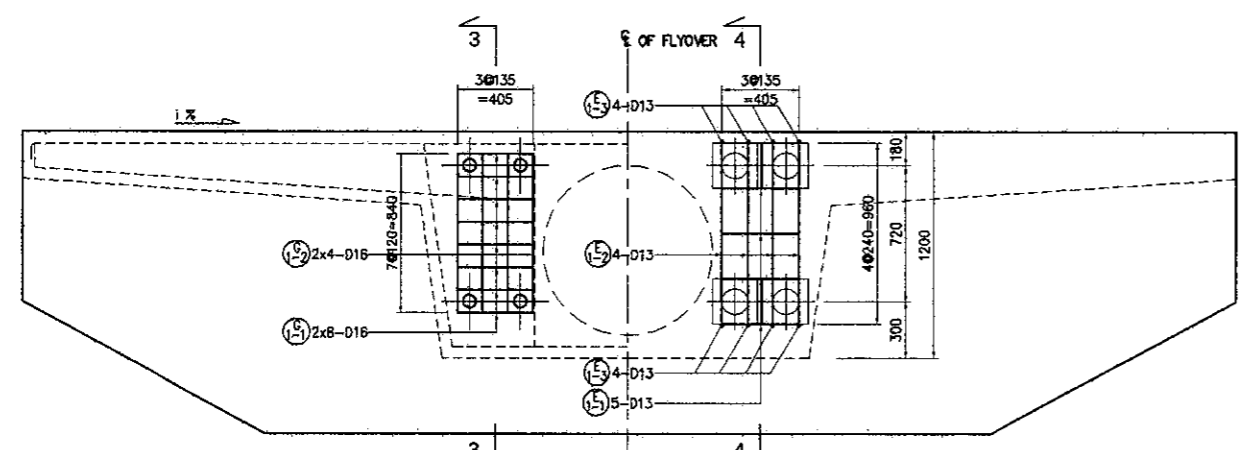
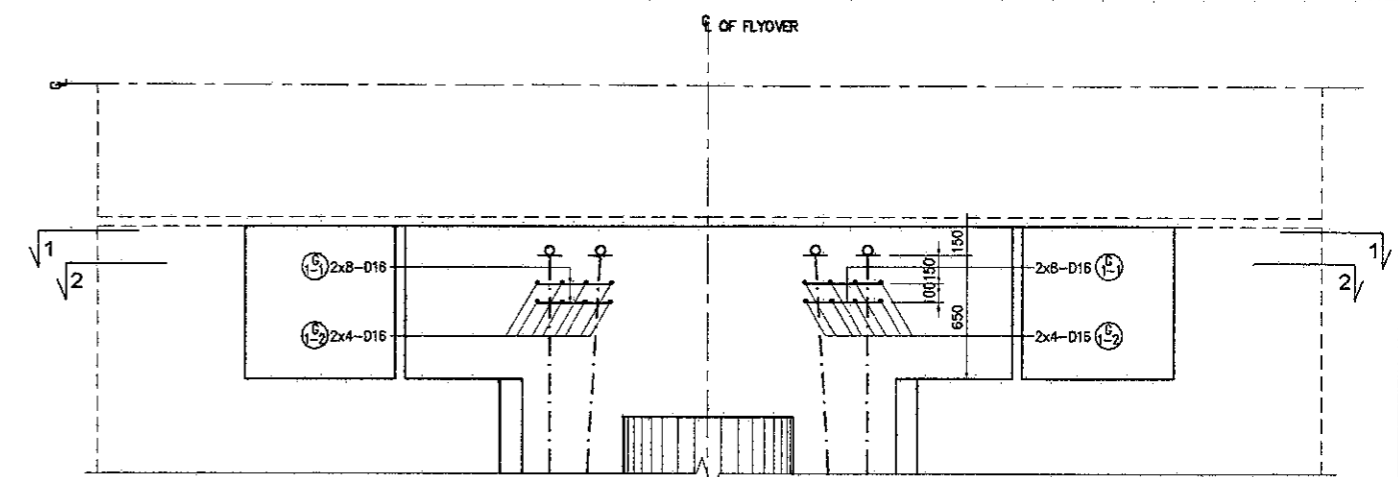
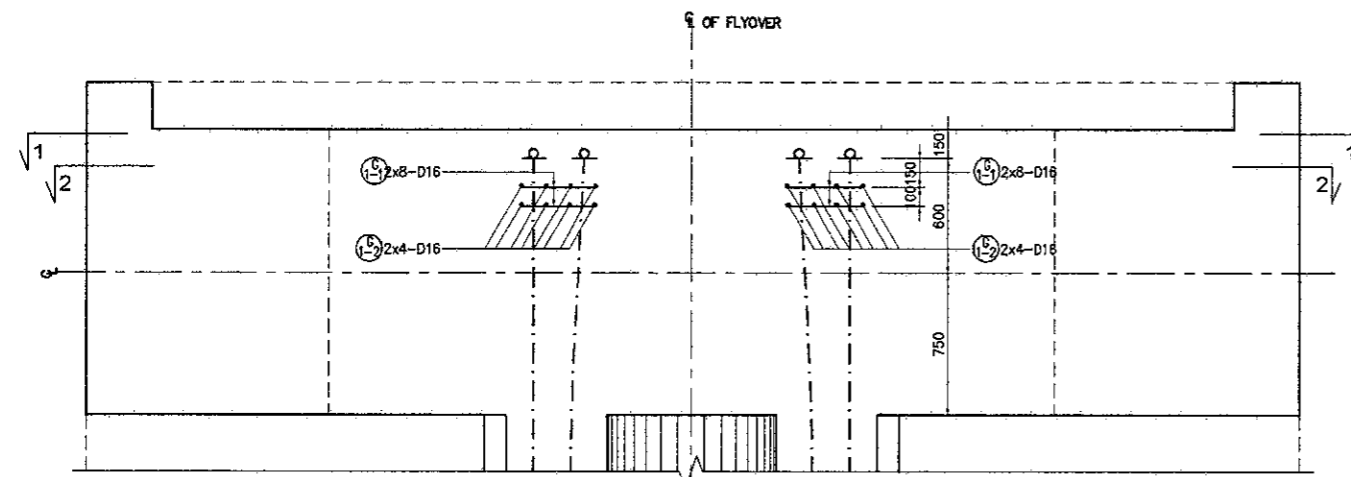
SECTION 3-3  
 SCALE 1:40

SECTION 4-4  
 SCALE 1:40



SECTION 5-5  
 SCALE 1:40

SECTION 6-6  
 SCALE 1:40

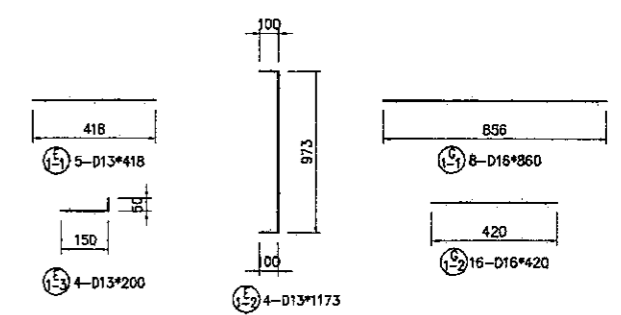


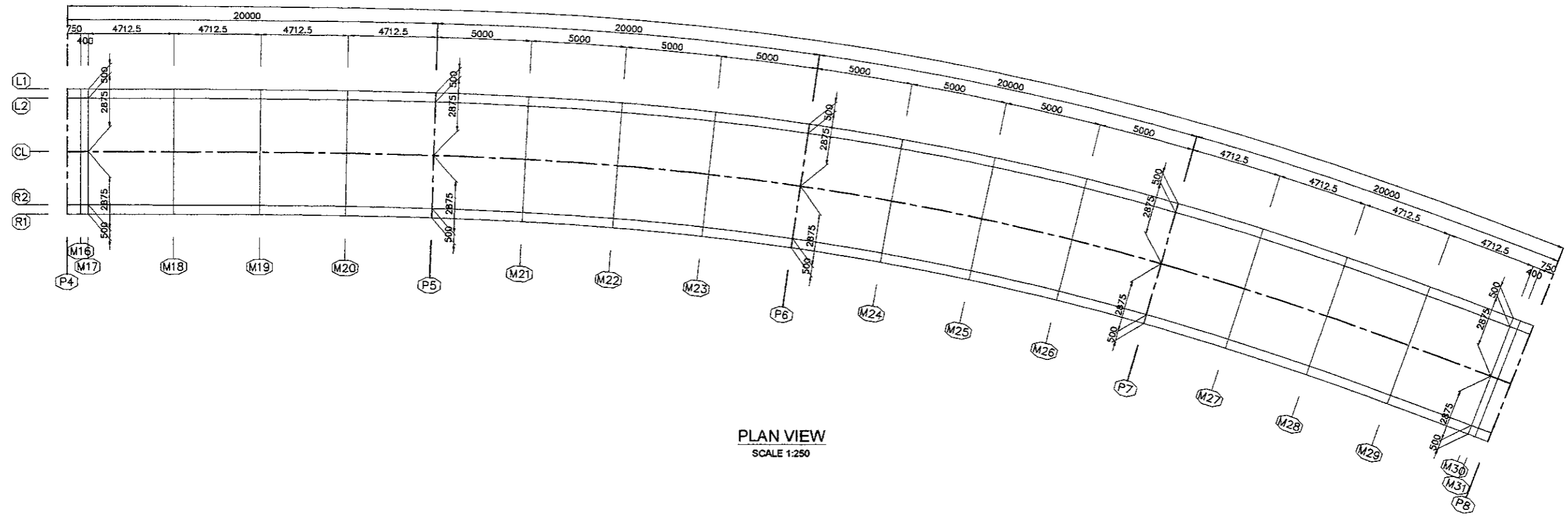
**MAIN REBARS**

	θ=90° R=3φ		θ=45° R=5.5φ		θ=60°		θ=90°		θ=135°	
	o	ΔL	o	ΔL	o	ΔL	o	ΔL	o	ΔL
D 13	39	71.5	92	95	82	53	16	17	56	3
D 16	48	88	113	119	100	66	75	21	69	4

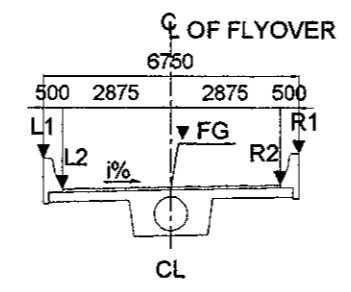
**BAR BENDING SCHEDULE**

REBAR NAME	DIA (mm)	LENGTH (mm)	NOS.	WEIGHT / METER (Kg / meter)	WEIGHT (Kg)	TOTAL WEIGHT (Kg)	DIAGRAM	REMARKS
E 1-1	13	418	5	1.04	0.44	2.2		
E 1-2	13	1173	4	1.04	1.22	5		
E 1-3	13	200	4	1.04	0.21	1		
C 1-1	16	860	8	1.58	1.36	11		
G 1-2	16	420	16	1.58	0.66	11		
TOTAL REBAR WEIGHT A1 - P4						29 x 4 = 116 Kg		





**PLAN VIEW**  
 SCALE 1:250

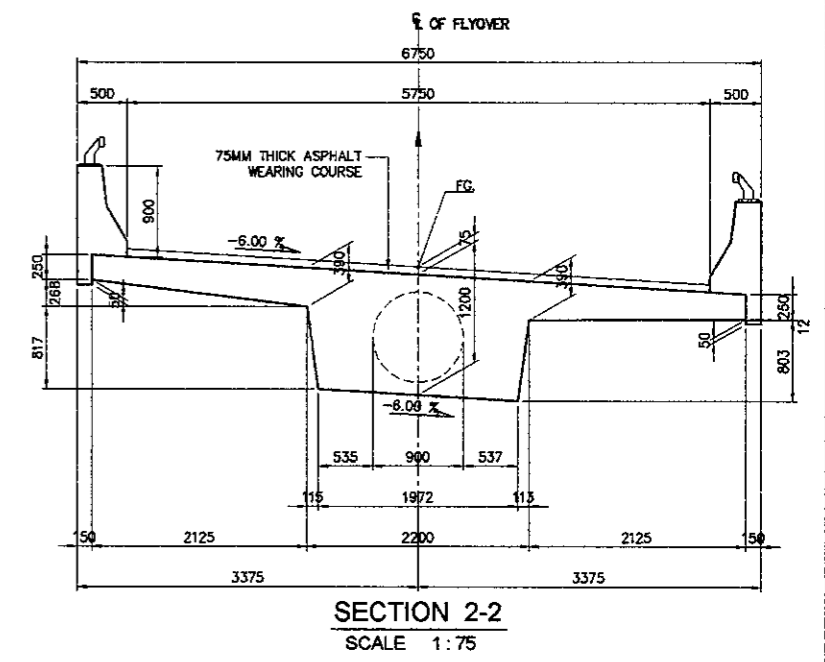
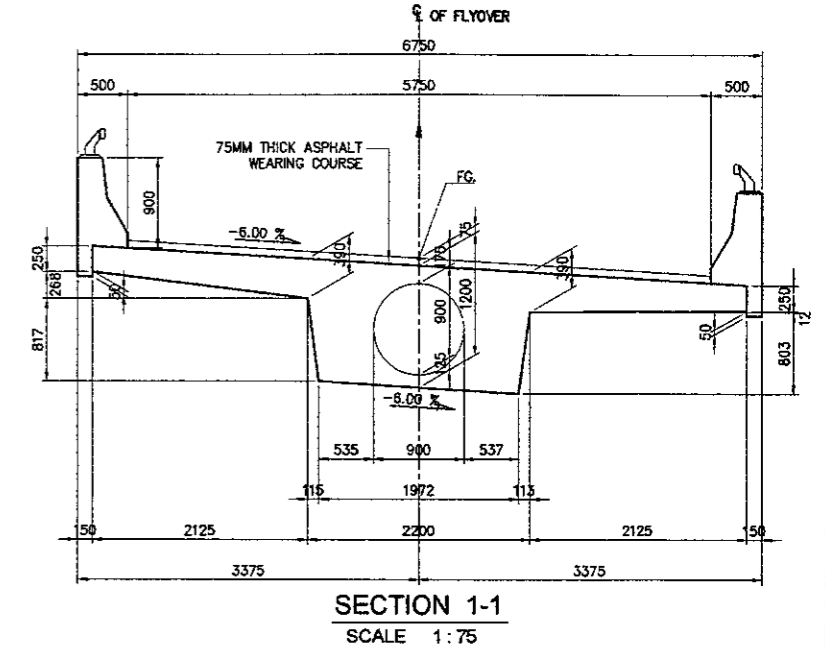
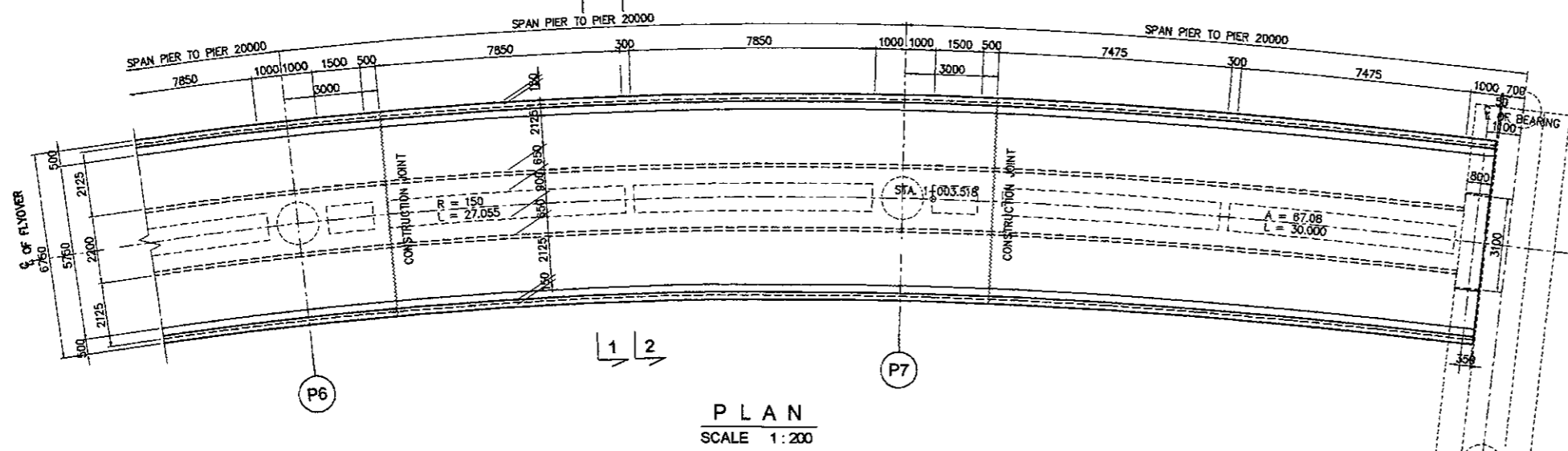
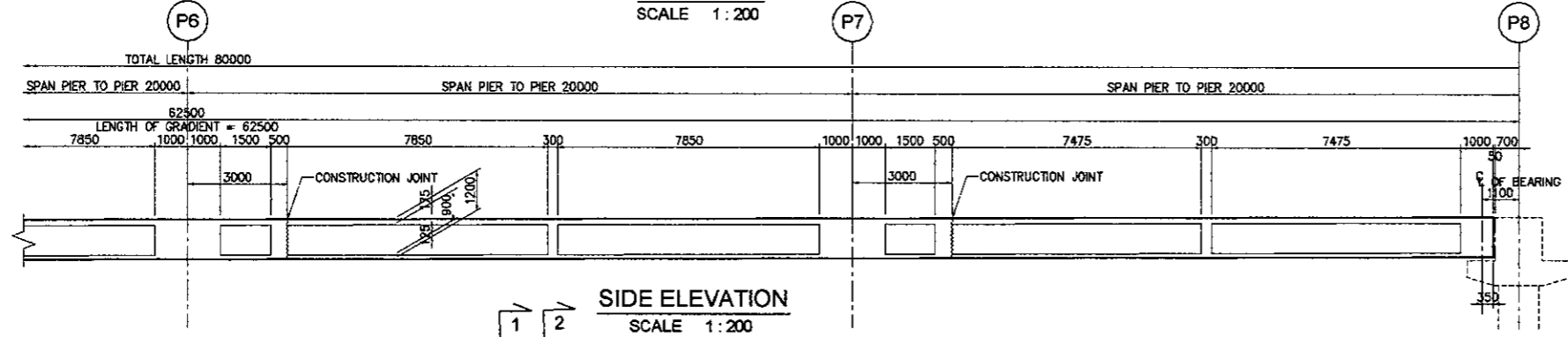
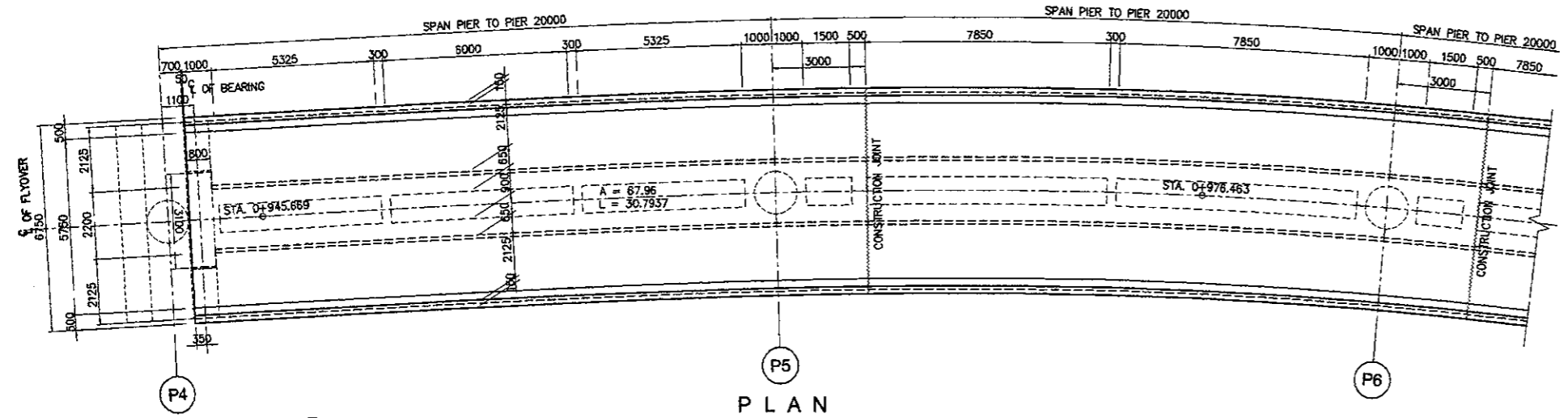
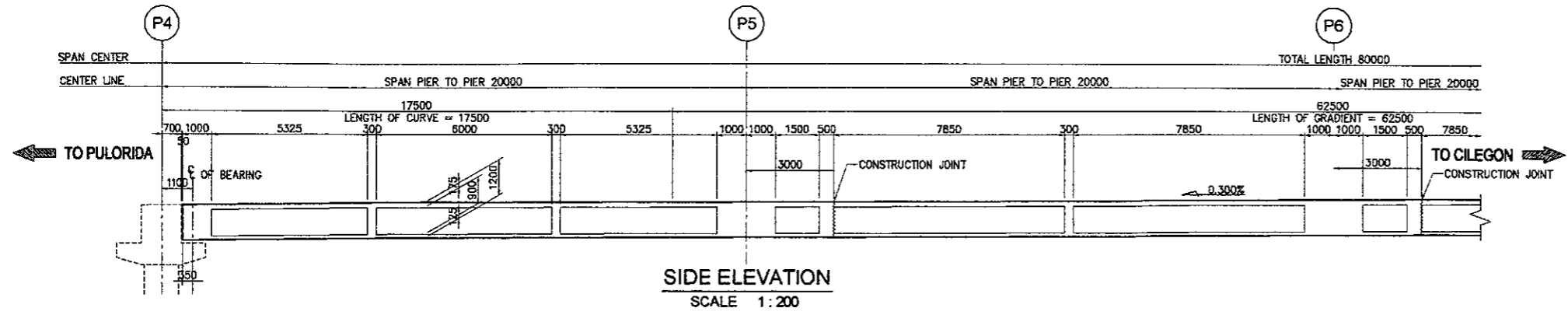


**SECTION VIEW**  
 SCALE 1:200

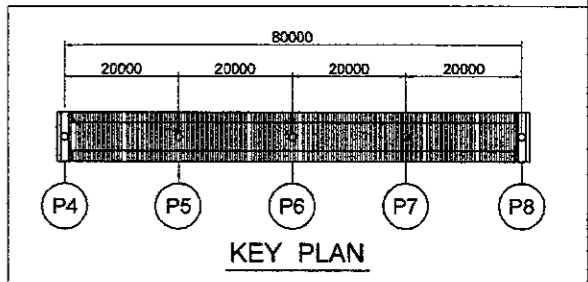
**LIST OF COORDINATES**

STA	P4	M16	M17	M18	M19	M20	P5	M21	M22	M23	P6	M24	M25	M26	P7	M27	M28	M29	M30	M31	P8
LABEL	0+942.5000	0+943.2500	0+943.6500	0+948.3625	0+953.0750	0+957.7875	0+962.5000	0+967.5000	0+972.5000	0+977.5000	0+982.5000	0+987.5000	0+992.5000	0+997.5000	1+002.5000	1+007.2125	1+011.9250	1+016.6375	1+021.3500	1+021.7500	1+022.5000
L1	E 610581.4472	610581.8278	610582.0309	610584.4235	610586.8121	610589.1779	610591.5005	610593.8943	610596.1900	610598.3605	610600.3801	610602.2421	610603.9444	610605.4850	610606.8624	610608.0103	610609.0257	610609.9317	610610.7516	610610.8180	610610.9414
L1	N 9344312.6440	9344311.9578	9344311.6531	9344307.5901	9344303.5077	9344299.3933	9344295.2358	9344290.7659	9344286.2244	9344281.6021	9344276.9057	9344272.1445	9344267.3240	9344262.4494	9344257.5262	9344252.8518	9344248.1635	9344243.4697	9344238.7771	9344237.6327	9344237.6327
L1	Z 13.2100	13.2181	13.2223	13.2870	13.3025	13.3284	13.3465	13.3645	13.3826	13.4000	13.4150	13.4300	13.4450	13.4508	13.4428	13.4352	13.4277	13.4202	13.4132	13.4129	13.4123
L2	E 610581.0164	610581.3970	610581.6001	610583.9925	610586.3798	610588.7431	610591.0622	610593.4510	610595.7408	610597.9045	610599.9178	610601.7735	610603.4702	610605.0058	610606.3787	610607.5231	610608.5358	610609.4398	610610.2585	610610.3248	610610.4480
L2	N 9344312.3902	9344311.7440	9344311.3994	9344307.3367	9344303.2565	9344299.1464	9344294.9953	9344286.0049	9344281.3969	9344276.7158	9344271.9702	9344267.1654	9344262.3067	9344257.3995	9344252.7397	9344248.0636	9344243.3797	9344238.6945	9344238.2970	9344237.5516	9344237.5516
L2	Z 12.3850	12.3931	12.3973	12.4420	12.4775	12.5034	12.5215	12.5395	12.5576	12.5750	12.5900	12.6050	12.6200	12.6258	12.6178	12.6102	12.6027	12.5952	12.5882	12.5879	12.5873
CL	E 610578.5392	610578.9199	610579.1229	610581.5142	610583.8940	610586.2431	610588.5414	610590.9019	610593.1576	610595.2827	610597.2579	610599.0789	610600.7437	610602.2504	610603.5975	610604.7213	610605.7187	610606.6118	610607.4229	610607.4887	610607.6110
CL	N 9344310.9310	9344310.2848	9344309.9401	9344305.6794	9344301.6120	9344297.7267	9344293.6127	9344289.2051	9344284.7430	9344280.2173	9344275.6242	9344270.9679	9344266.2534	9344261.4861	9344256.6712	9344252.0948	9344247.4892	9344242.8622	9344238.2201	9344237.8255	9344237.0856
CL	Z 12.2332	12.2408	12.2448	12.2866	12.3192	12.3423	12.3575	12.3725	12.3875	12.4025	12.4175	12.4325	12.4475	12.4625	12.4775	12.4916	12.5058	12.5199	12.5340	12.5352	12.5375
R2	E 610576.0621	610576.4427	610576.6458	610579.0359	610581.4083	610583.7431	610586.0207	610588.3528	610590.5743	610592.6608	610594.5982	610596.3843	610598.0171	610599.4950	610600.8163	610601.9196	610602.9017	610603.7838	610604.5873	610604.6526	610604.7740
R2	N 9344309.4717	9344308.8255	9344308.4909	9344304.4221	9344300.3675	9344296.3070	9344292.2301	9344287.8755	9344283.4810	9344279.0376	9344274.5326	9344269.9655	9344265.3414	9344260.6655	9344255.9428	9344251.4500	9344246.9148	9344242.3447	9344237.7456	9344237.3541	9344236.6195
R2	Z 12.0614	12.0685	12.0923	12.1312	12.1609	12.1812	12.1935	12.2055	12.2174	12.2300	12.2450	12.2600	12.2750	12.2992	12.3372	12.3730	12.4089	12.4446	12.4798	12.4825	12.4877
R1	E 610575.6313	610576.0119	610576.2150	610578.6049	610580.9760	610583.3083	610585.5823	610587.9095	610590.1251	610592.2049	610594.1356	610595.9156	610597.5430	610599.0158	610600.3326	610601.4323	610602.4118	610603.2919	610604.0942	610604.1594	610604.2808
R1	N 9344309.2180	9344308.5717	9344308.2271	9344304.1687	9344300.1163	9344296.0601	9344291.9897	9344287.6443	9344283.2615	9344278.8325	9344274.3428	9344269.7912	9344265.1828	9344260.5227	9344255.8162	9344251.3378	9344246.8149	9344242.2547	9344237.6631	9344237.2721	9344236.5384
R1	Z 12.9064	12.9135	12.9173	12.9562	12.9859	13.0062	13.0185	13.0305	13.0424	13.0550	13.0700	13.0850	13.1000	13.1242	13.1622	13.1980	13.2339	13.2696	13.3048	13.3075	13.3127

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

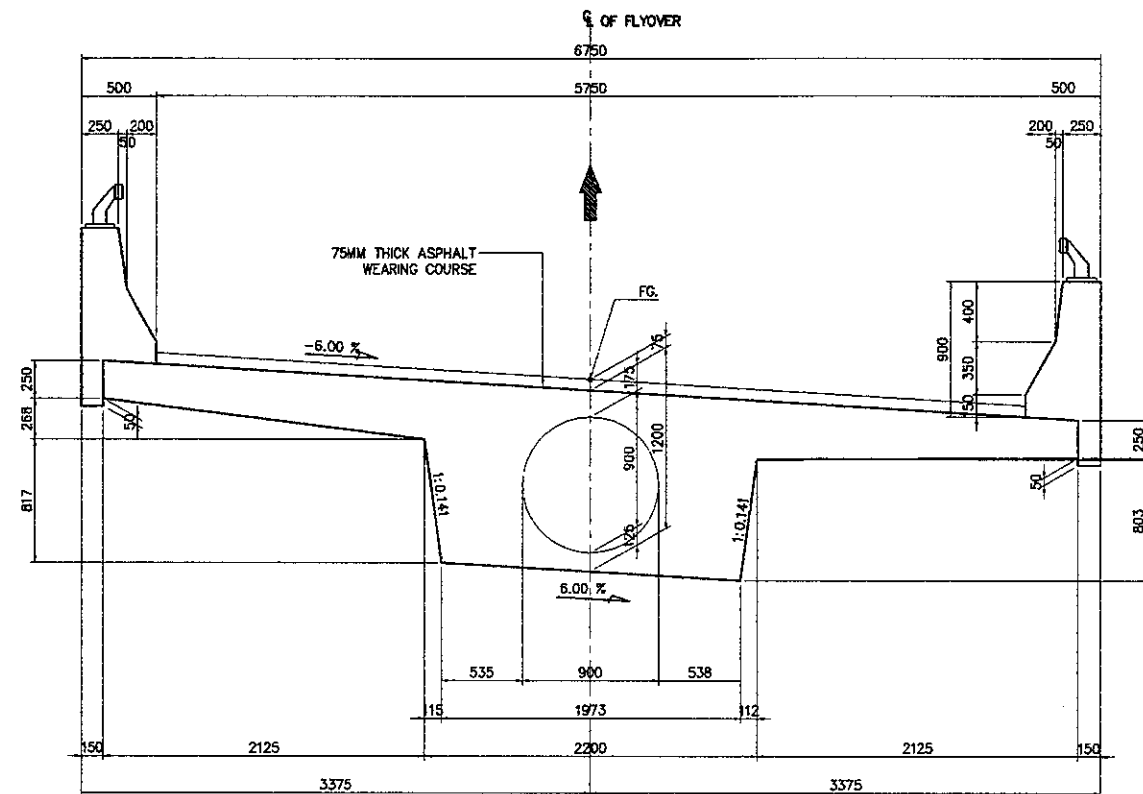


- NOTES :**
- All dimension are in mm unless noted otherwise.
  - Concrete Girder and Slab  $f_c' = 35$  MPa.
  - All Reinforcing steel shall be BJTD 40 or ASTM A615 Grade 60 deformed bars.
  - The Contractor shall be responsible to carry out the following before Construction :
    - Verification of 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	

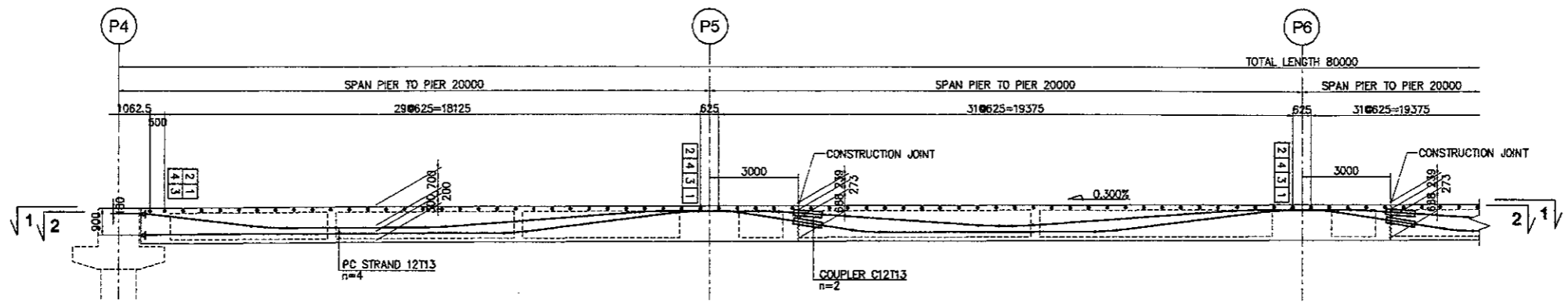


INFORMATION OF PC SUPERSTRUCTURE

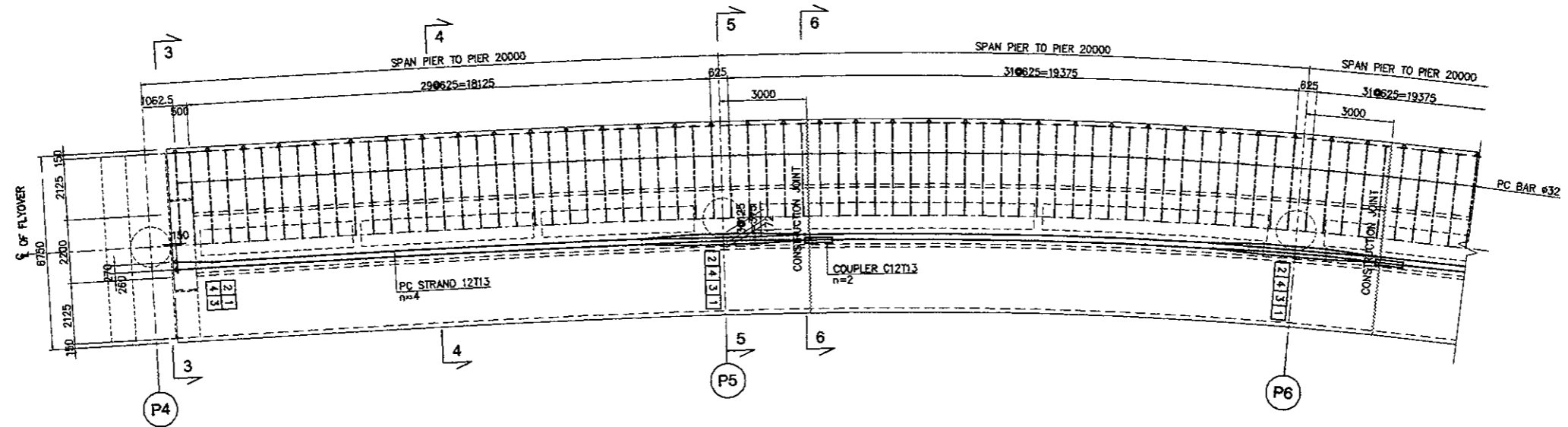
	P4'	P5	P6	P7	P8'
FG.	12.242	12.358	12.418	12.478	12.535
Super Elev	5.300%	5.704%	6.000%	4.880%	1.853%
Top Slab Box	12.167	12.283	12.343	12.403	12.460
Bottom Box	10.957	11.083	11.143	11.203	11.260
Station	0+943.40	0+962.500	0+982.500	1+002.500	1+021.600

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	

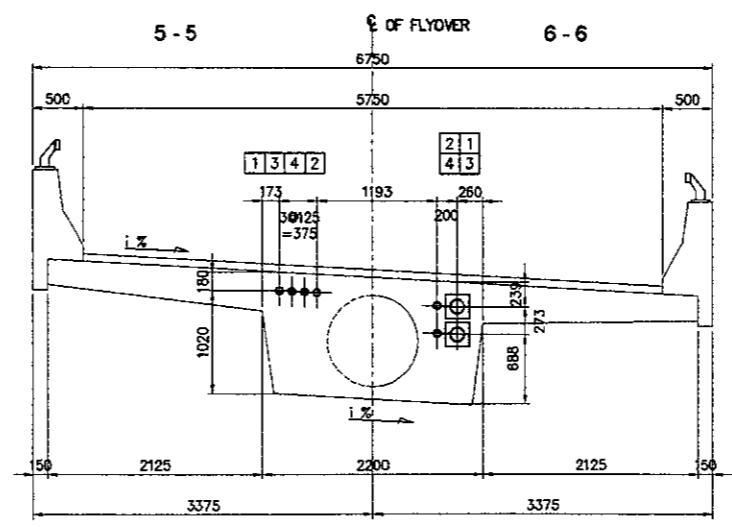
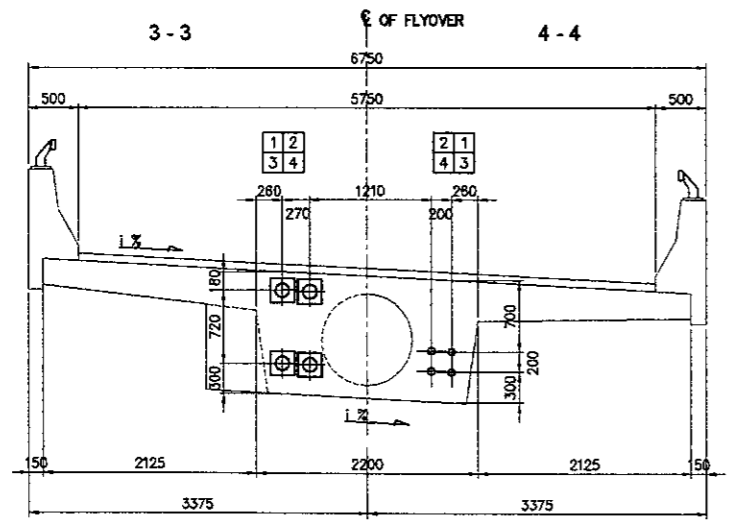


**SIDE ELEVATION**  
 SCALE 1 : 200



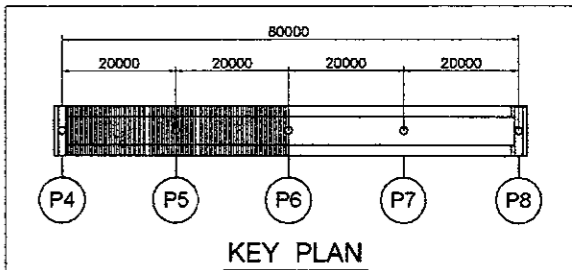
**SECTION 1-1**  
 SCALE 1 : 200

**SECTION 2-2**  
 SCALE 1 : 200



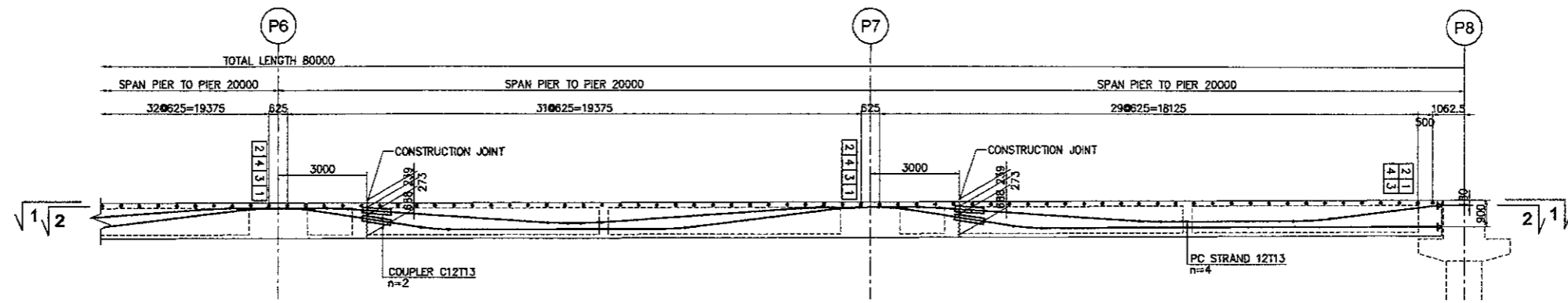
**CROSS SECTION**  
 SCALE : 1 : 75

- 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

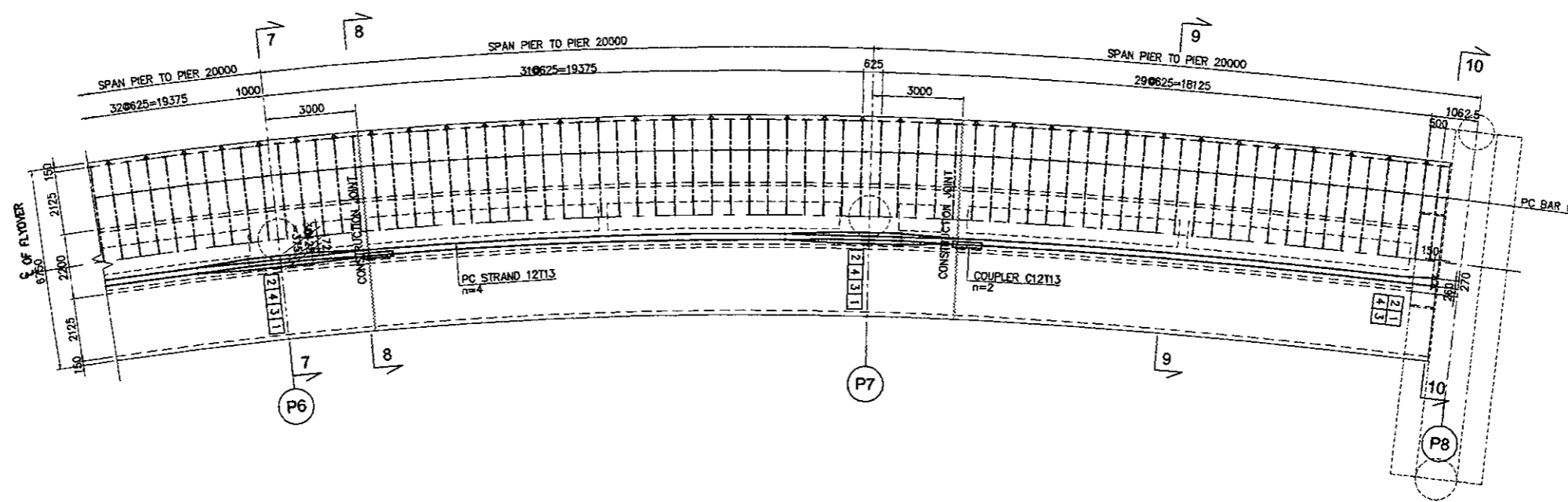


**KEY PLAN**

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

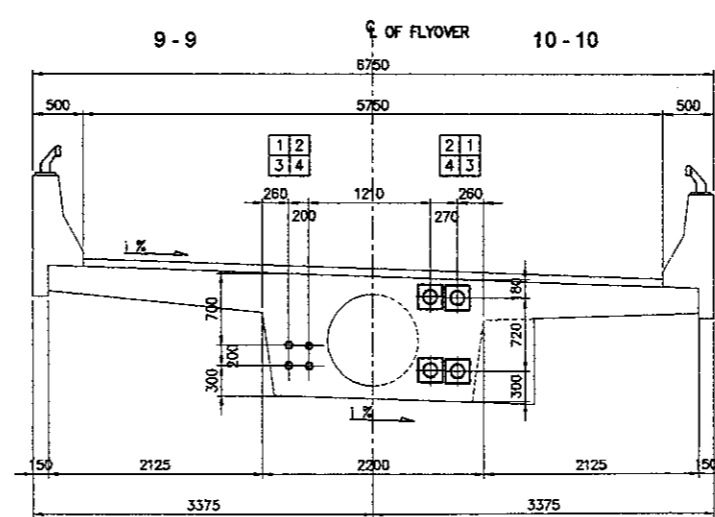
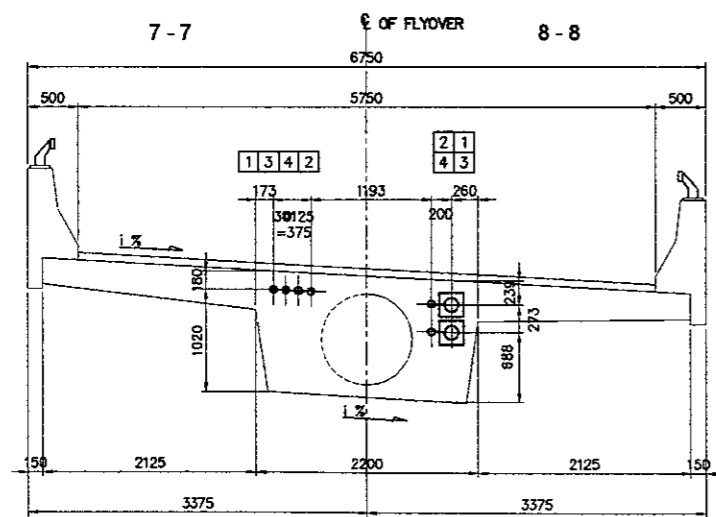


**SIDE ELEVATION**  
 SCALE 1 : 200



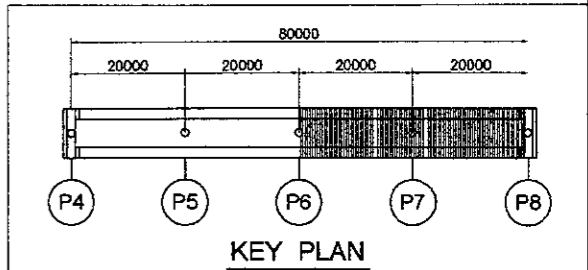
**SECTION 1-1**  
 SCALE 1 : 200

**SECTION 2-2**  
 SCALE 1 : 200



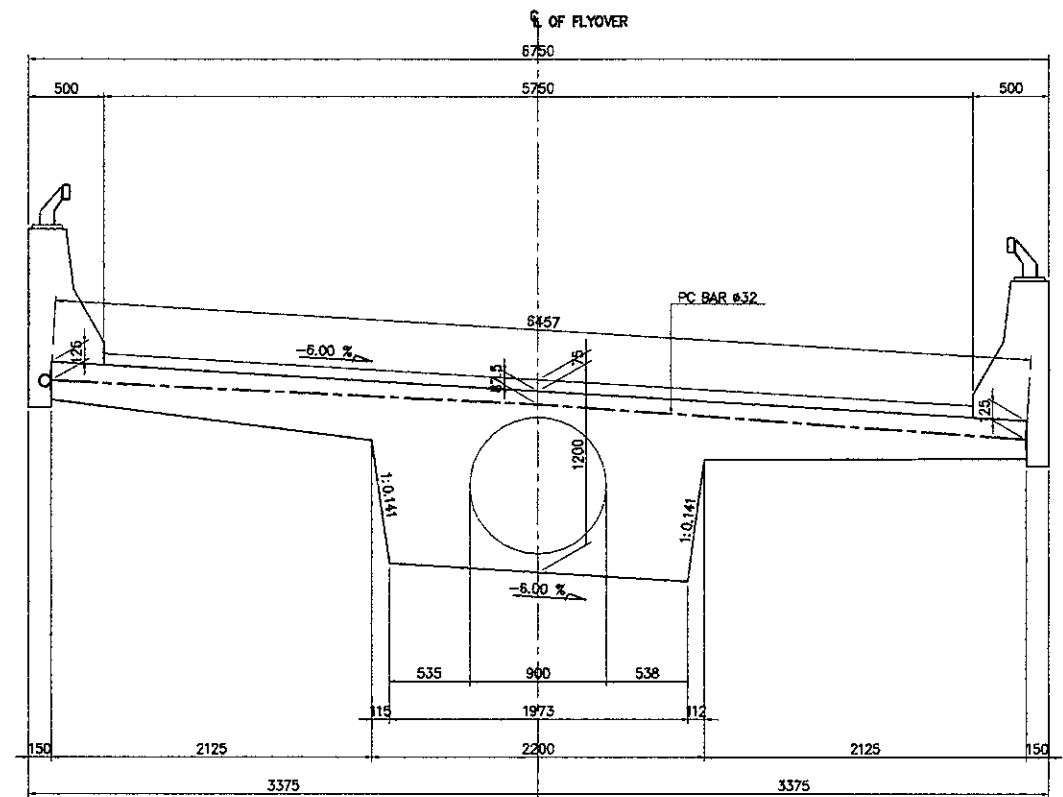
**CROSS SECTION**  
 SCALE : 1 : 75

- 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

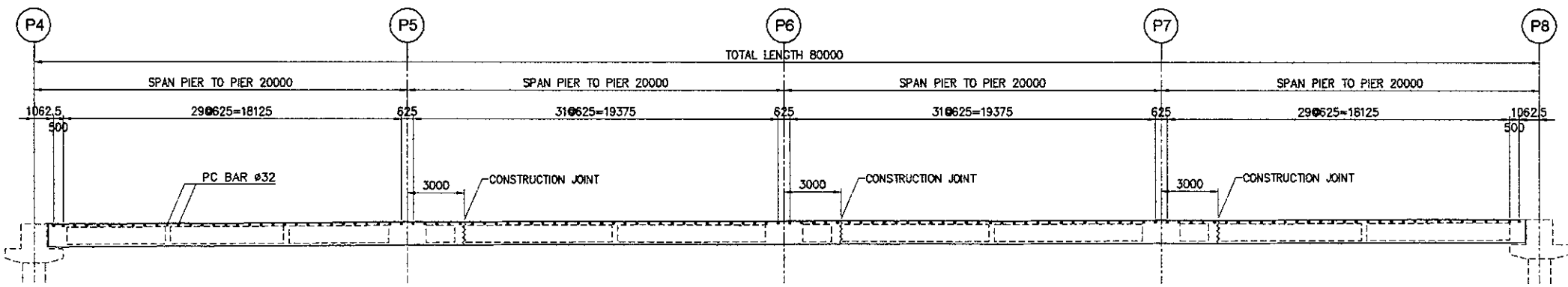


**KEY PLAN**

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



TRANVERSAL PC BAR  
 SCALE 1 : 50

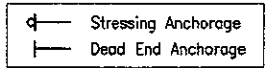


LONGITUDINAL PC BAR ARRANGEMENT  
 SCALE 1 : 300

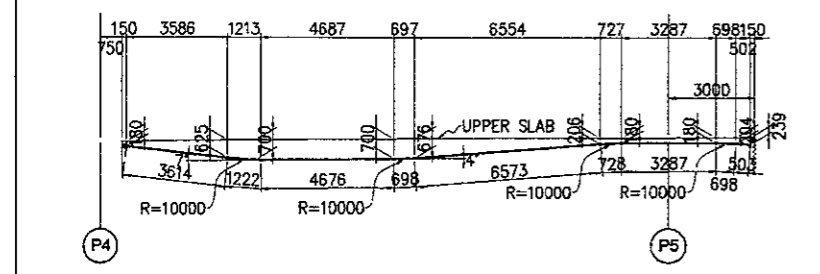
TABEL OF PC BAR

Length (m)	Nos.	Unit Weight (kg/m)	Weight / 1 nos (kg)	Weight (kg)	Remarks
6.457	126	6.31	40.74	5,133.70	Stressing Anchorage One Side Staggered
TOTAL LENGTH (L) =			813.582	m	
TOTAL WEIGHT (W) =			5,133.70	kg	

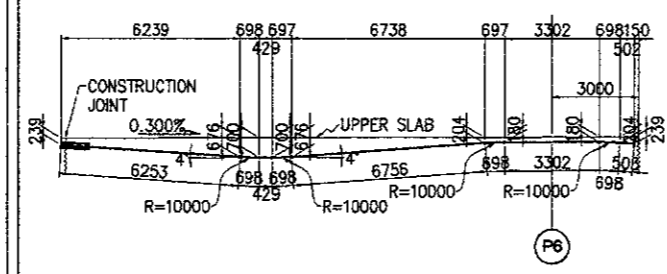
NOTES :  
 1. All dimension are in mm unless noted otherwise



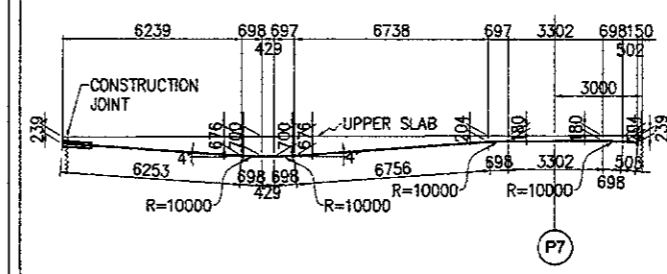
CONSTRUCTION SECTION NO.1 ( C1 )



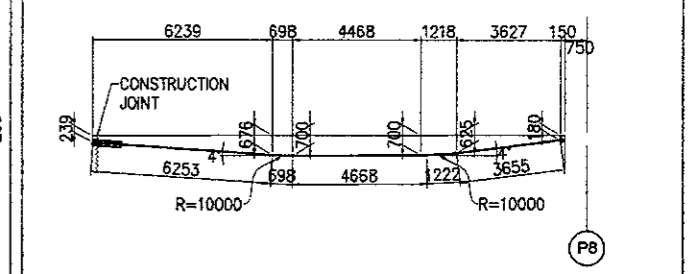
CONSTRUCTION SECTION NO.2 ( C1 )



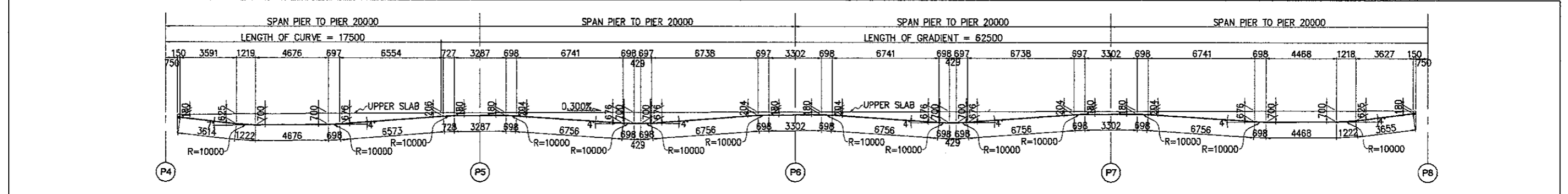
CONSTRUCTION SECTION NO.3 ( C1 )



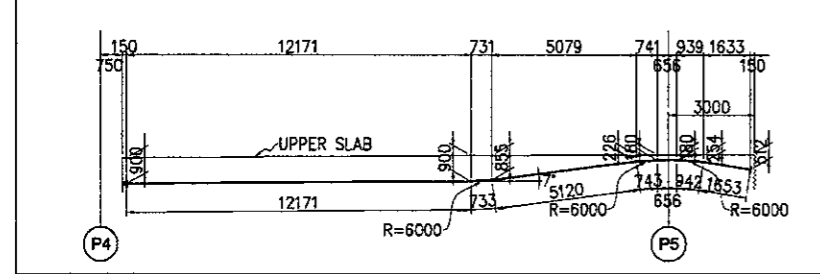
CONSTRUCTION SECTION NO.4 ( C1 )



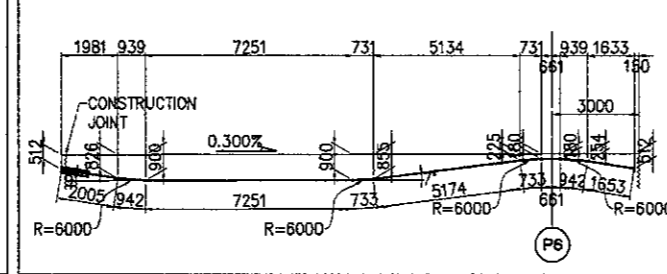
AFTER COMPLETION GIRDER ( C2 )



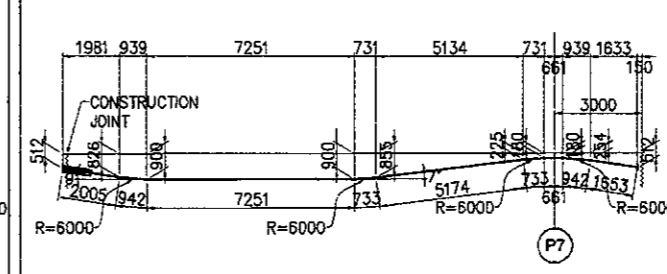
CONSTRUCTION SECTION NO.1 ( C3 )



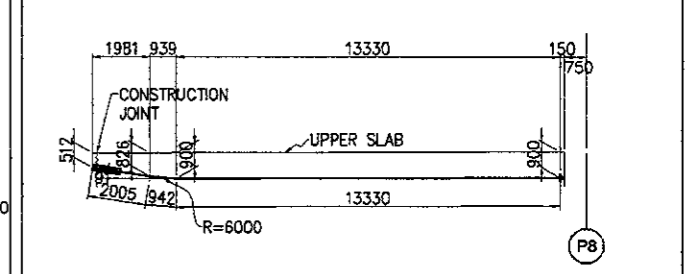
CONSTRUCTION SECTION NO.2 ( C3 )



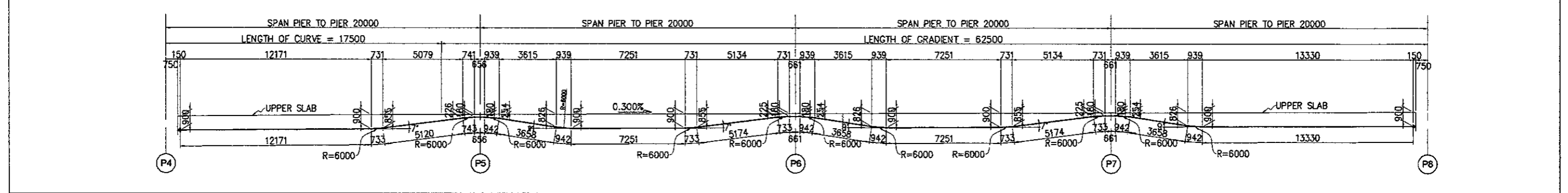
CONSTRUCTION SECTION NO.3 ( C3 )



CONSTRUCTION SECTION NO.4 ( C3 )

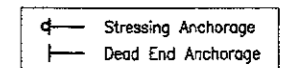


AFTER COMPLETION GIRDER ( C4 )

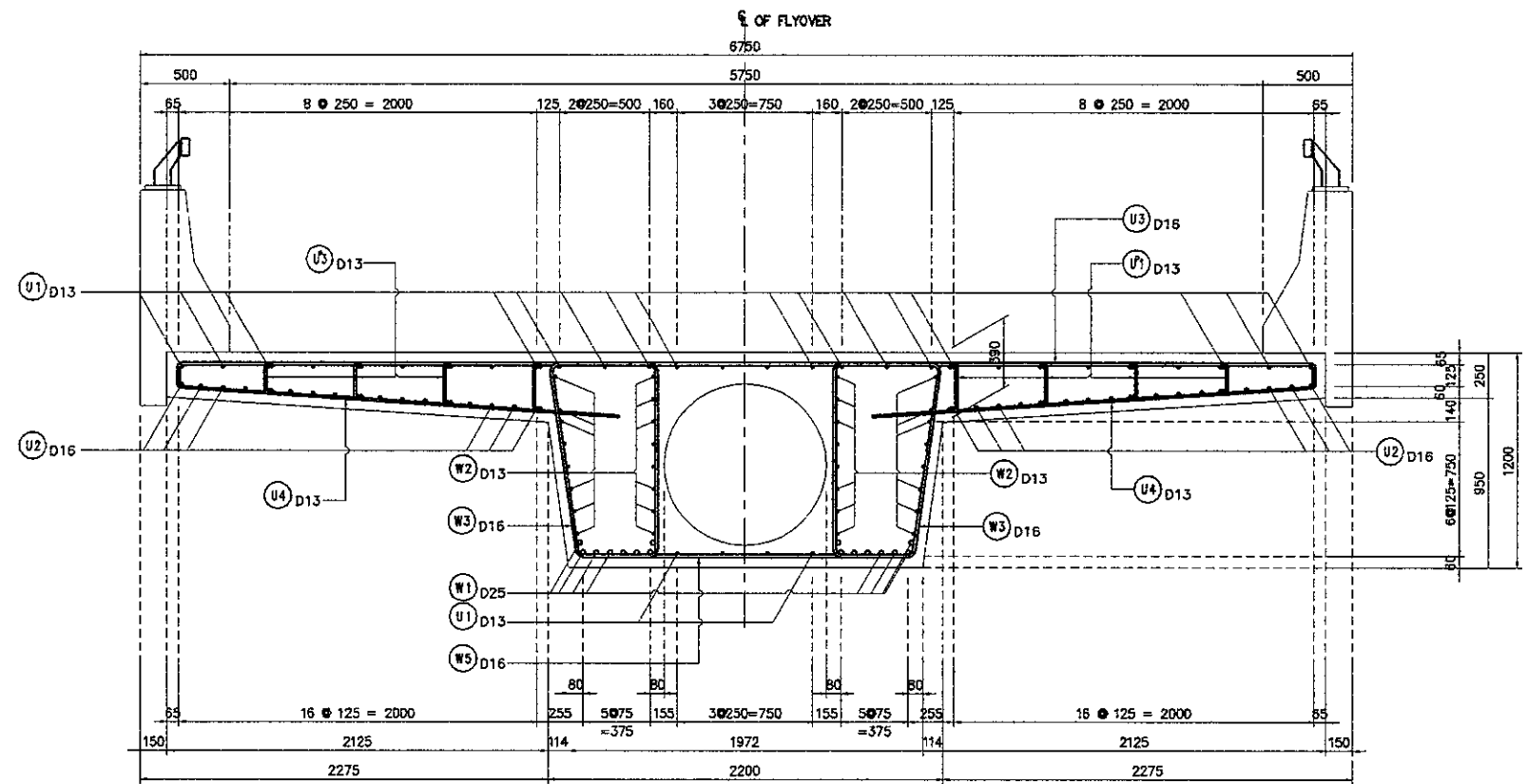


PC CABLES SCHEDULE P4 - P8  
 SCALE : NON

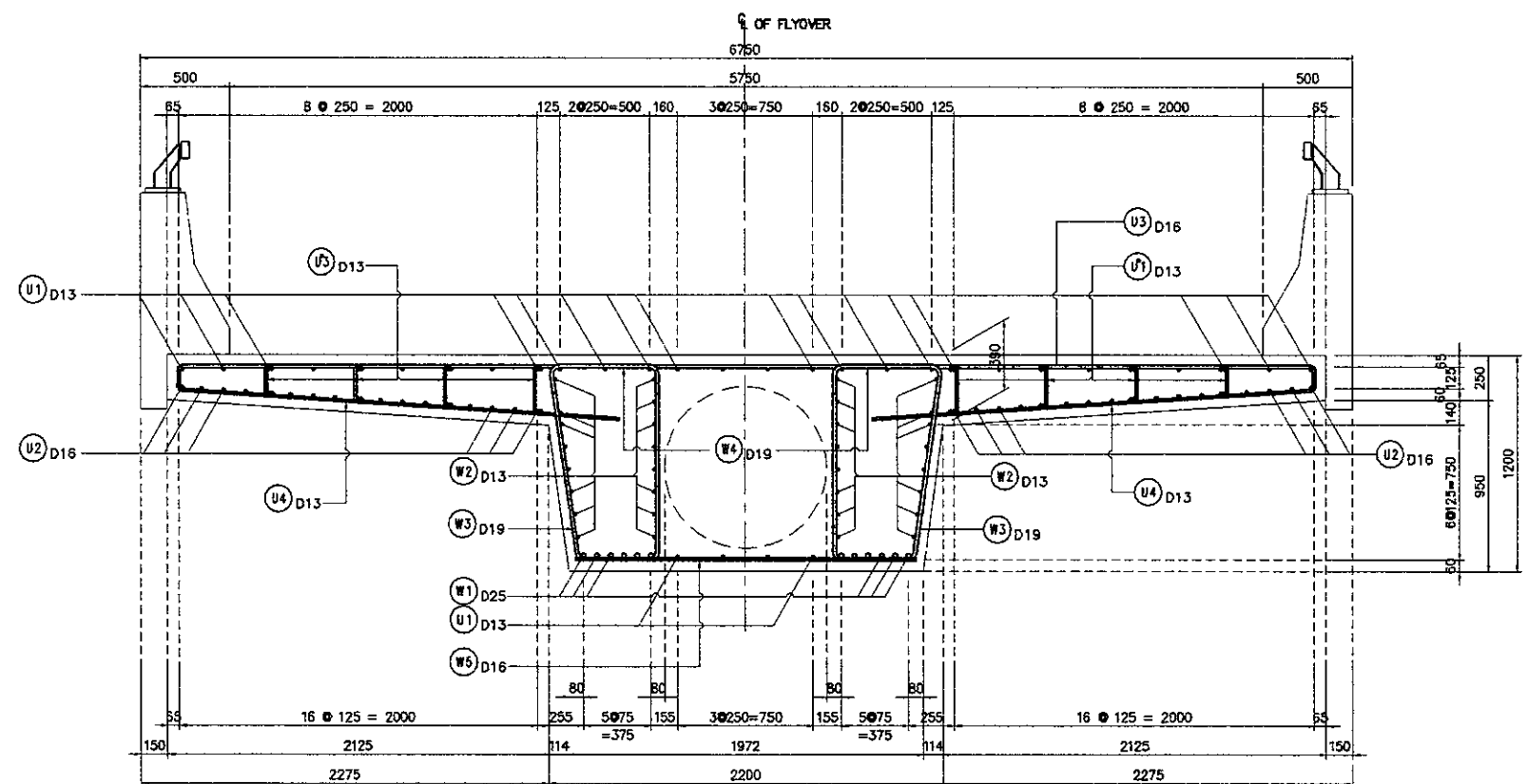
- NOTES :
- All dimension are in mm unless noted otherwise
  - Prestressing Tendon Shall be 12T13 (7 WIRE STRAND)  
 . Nominal Diameter 12.7mm
  - Shows Bending Point Of Prestressing Cable



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

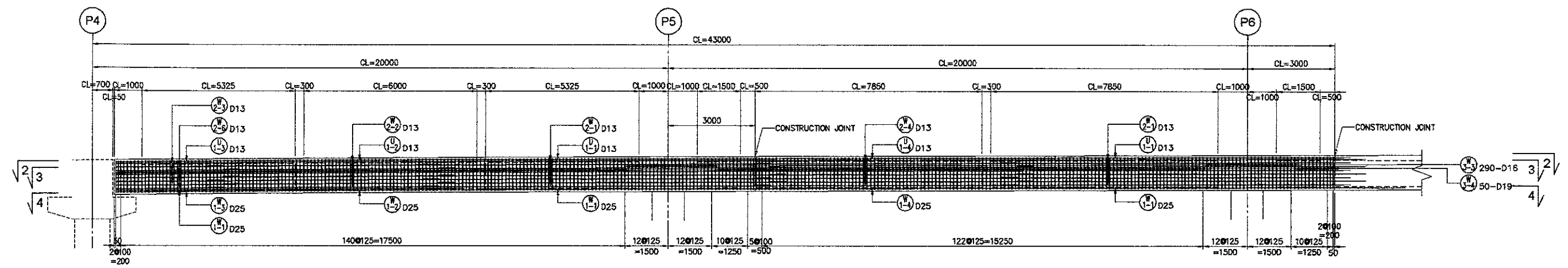


SECTION AT MID SPAN  
 SCALE 1 : 200

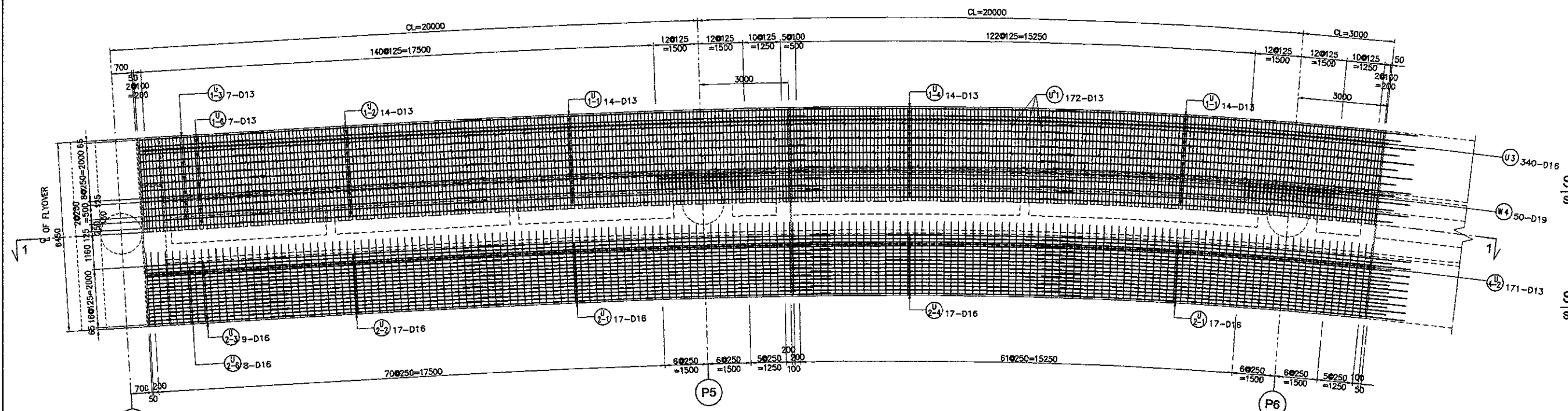


SECTION AT PIER  
 SCALE 1 : 200

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



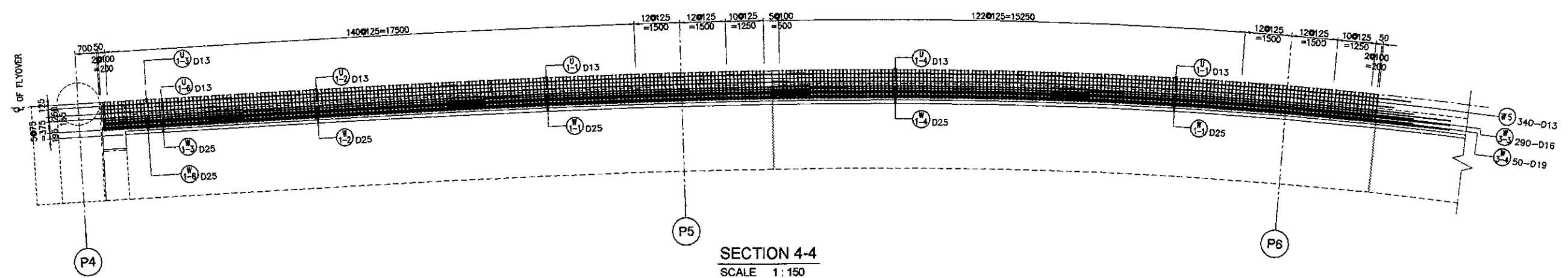
SECTION 1-1  
 SCALE 1 : 150



PLAN  
 SCALE 1 : 150

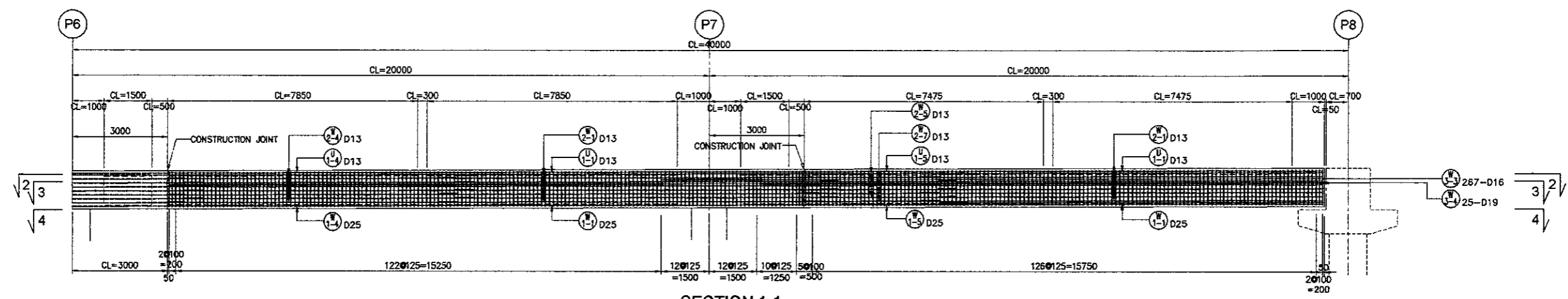
SECTION 2-2  
 SCALE 1 : 150

SECTION 3-3  
 SCALE 1 : 150

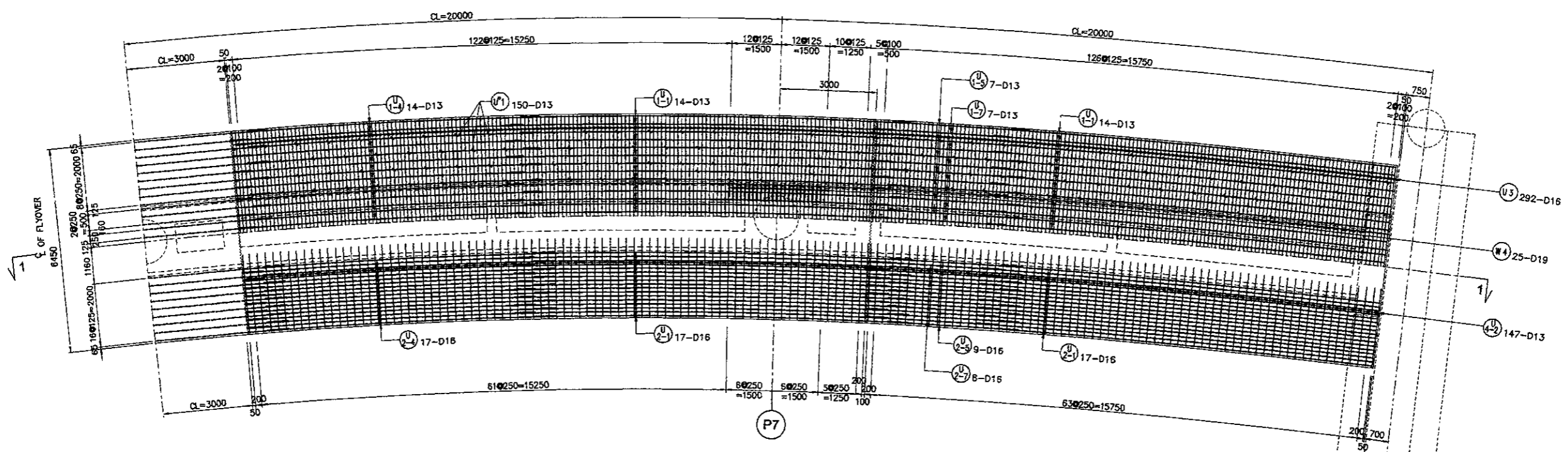


SECTION 4-4  
 SCALE 1 : 150

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



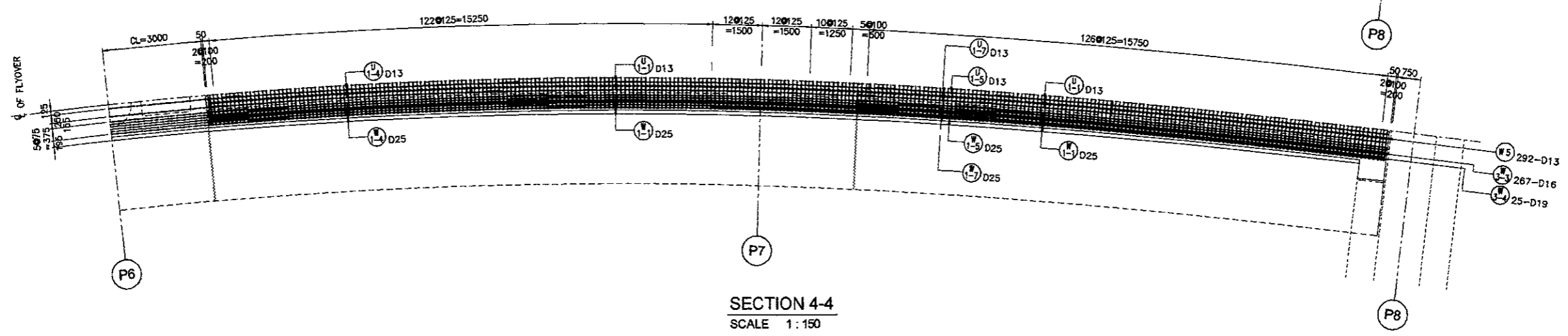
SECTION 1-1  
 SCALE 1 : 150



PLAN  
 SCALE 1 : 150

SECTION 2-2  
 SCALE 1 : 150

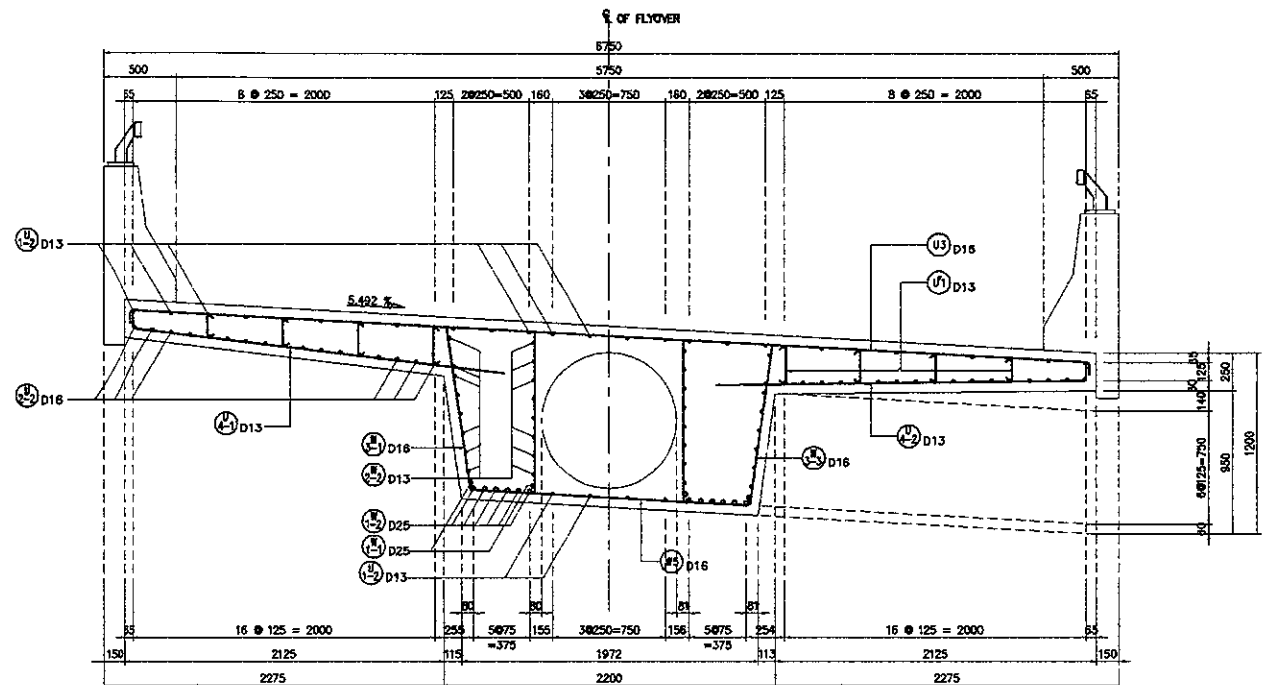
SECTION 3-3  
 SCALE 1 : 150



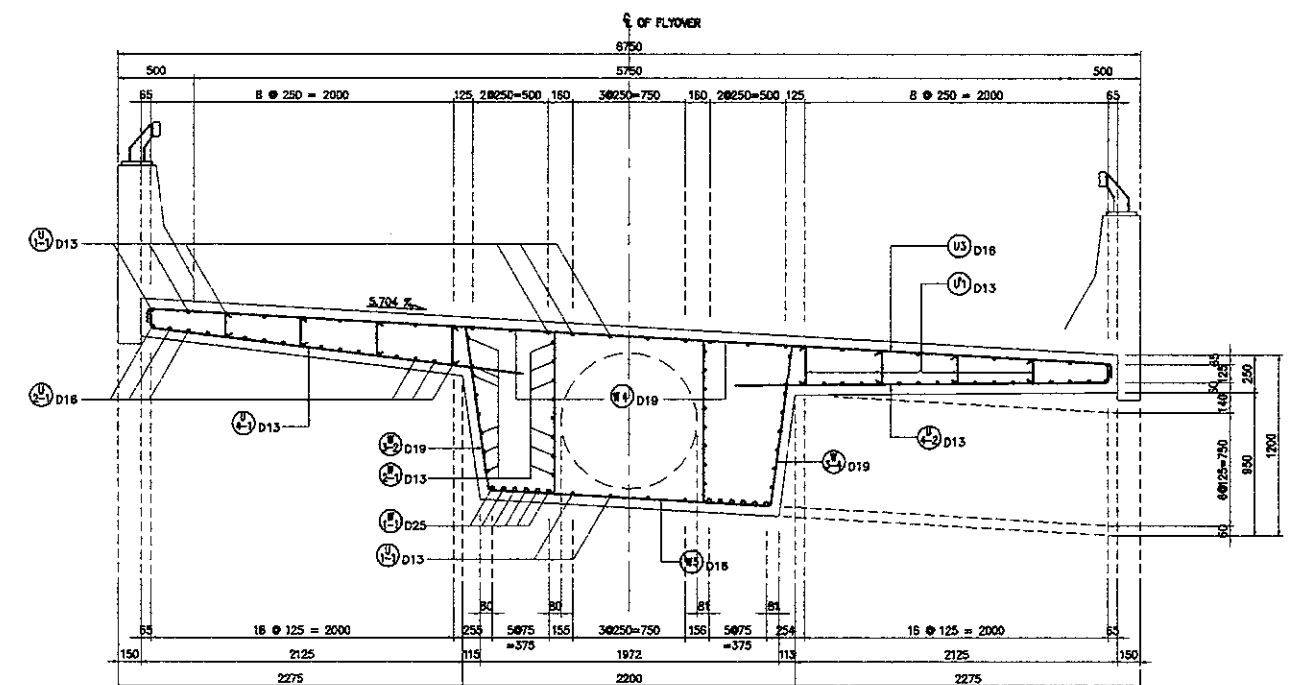
SECTION 4-4  
 SCALE 1 : 150



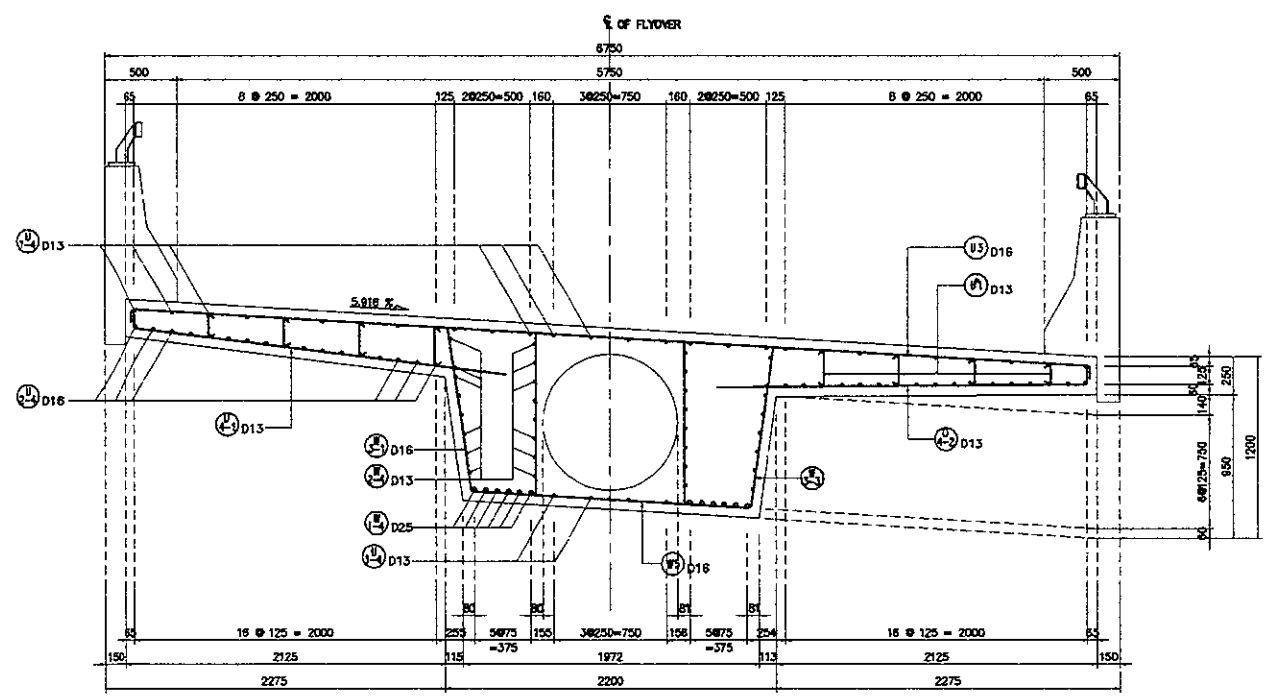
DESIGNED BY		CHECKED BY		SUBMITTED BY	
Name	H. HONDA	Name	T. OKUMURA	Name	M. KIUCHI
Sign		Sign		Sign	
Date		Date		Date	



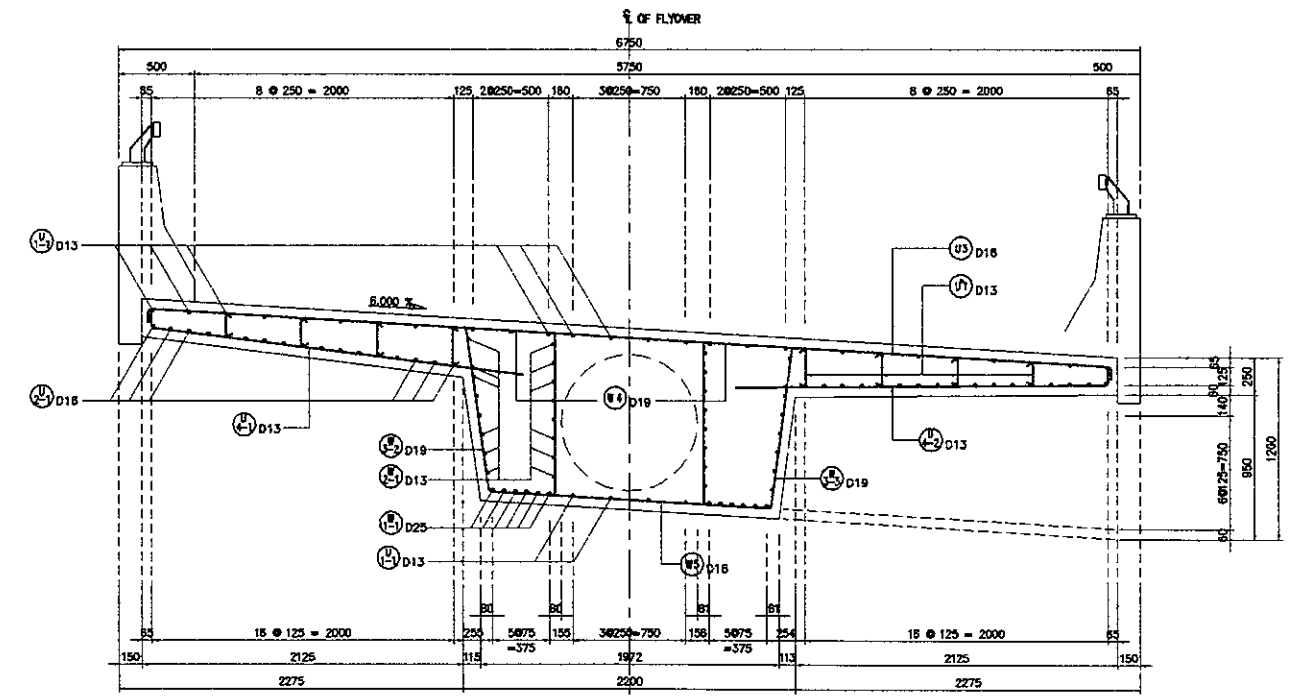
SECTION MID SPAN P4~P5  
 SCALE 1 : 50



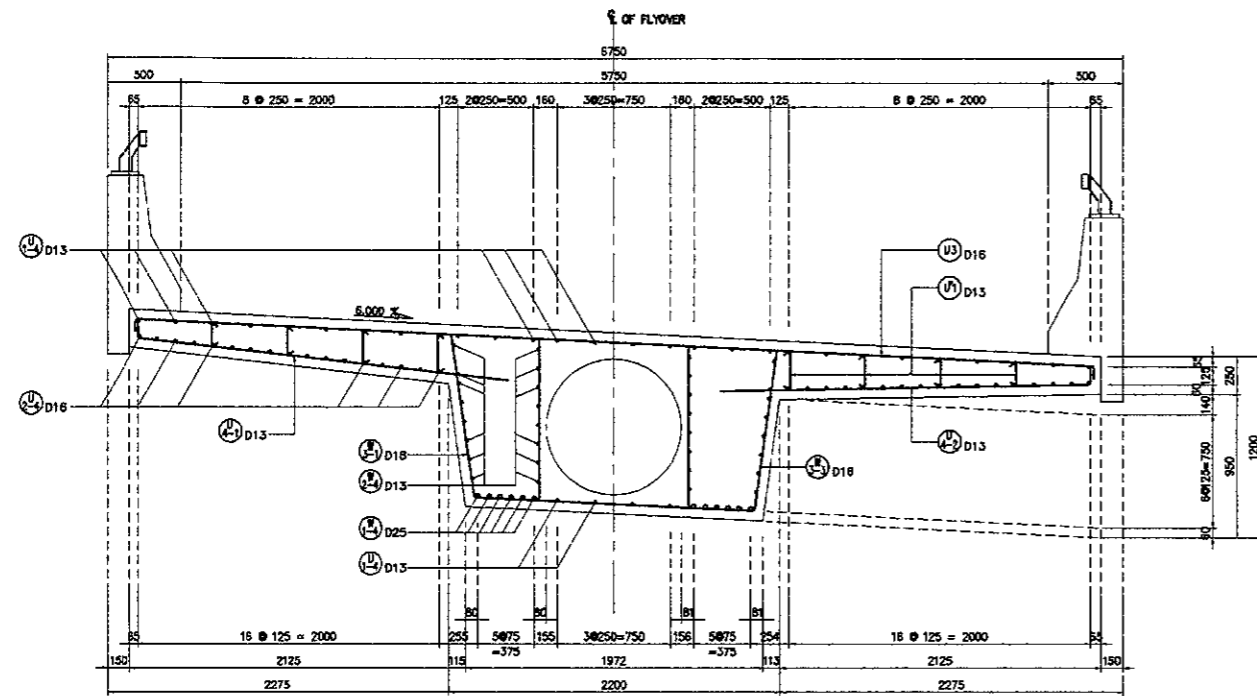
SECTION AT P5  
 SCALE 1 : 50



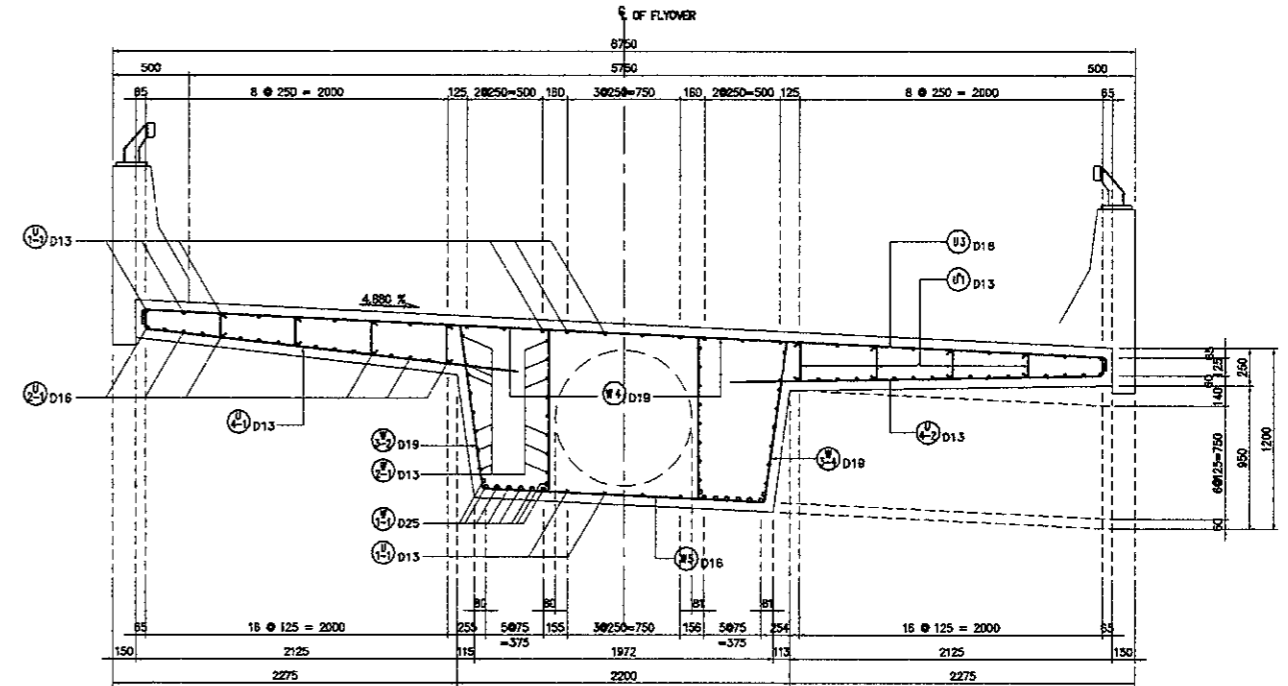
SECTION MID SPAN P5~P6  
 SCALE 1 : 50



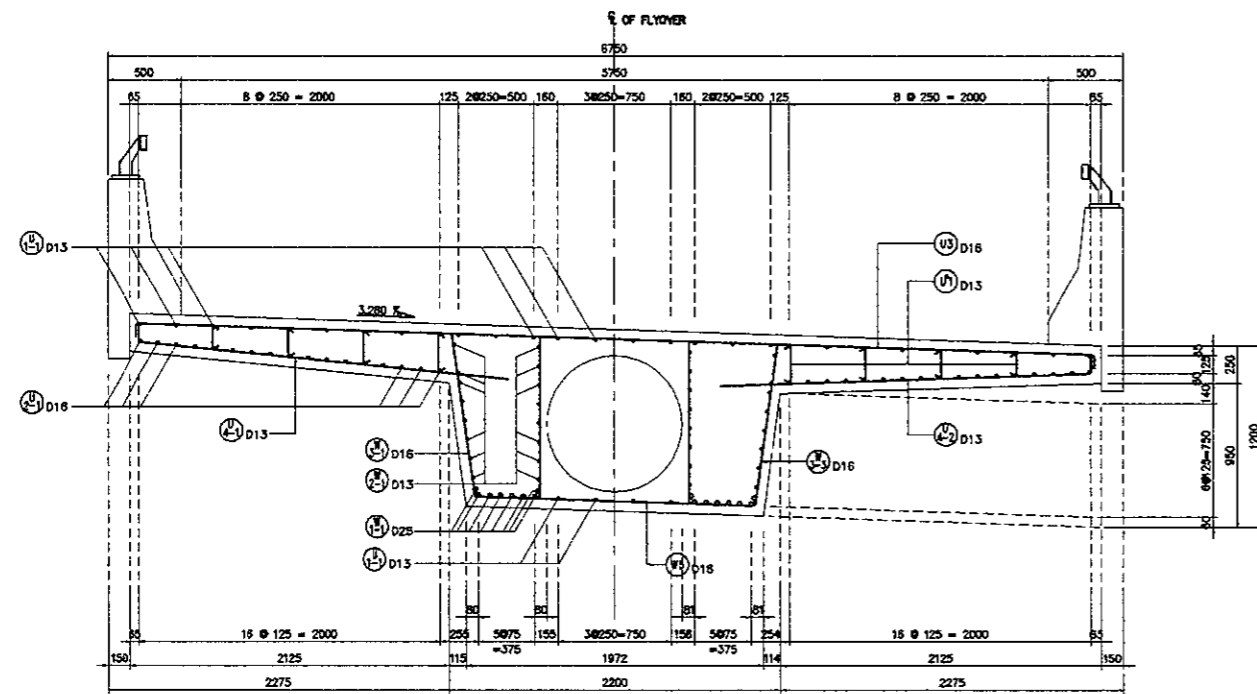
SECTION AT P6  
 SCALE 1 : 50



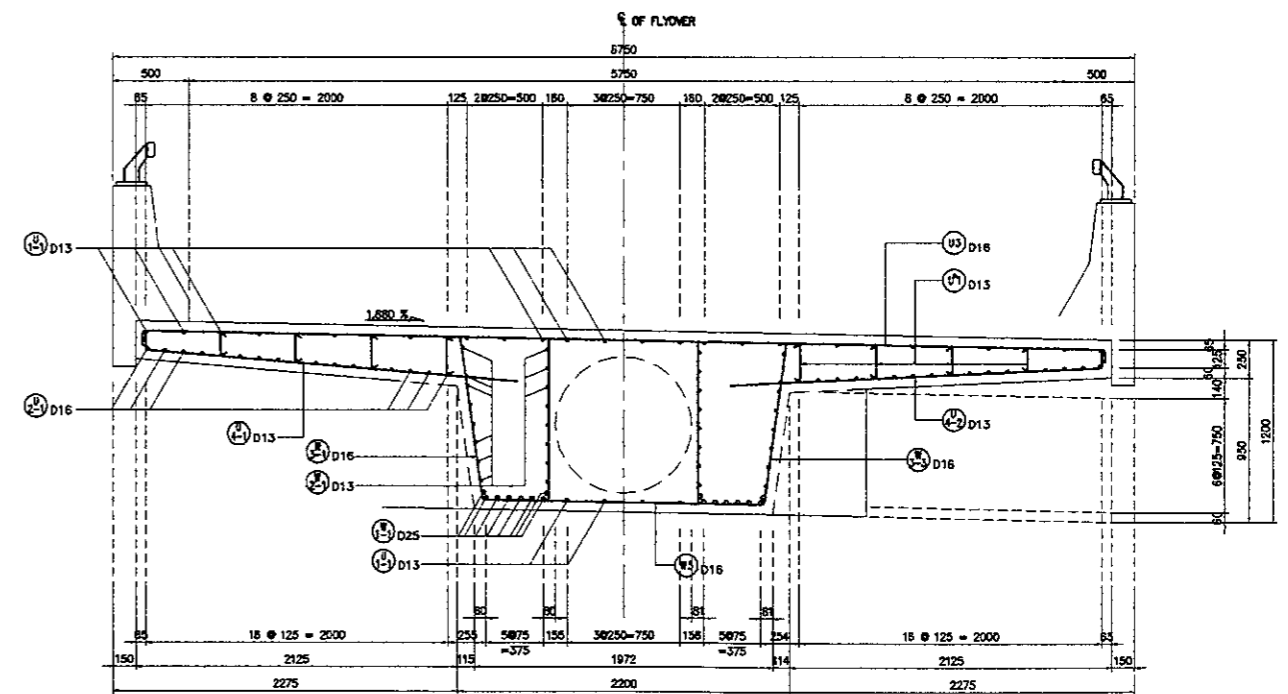
SECTION MID SPAN P6~P7  
 SCALE 1 : 50



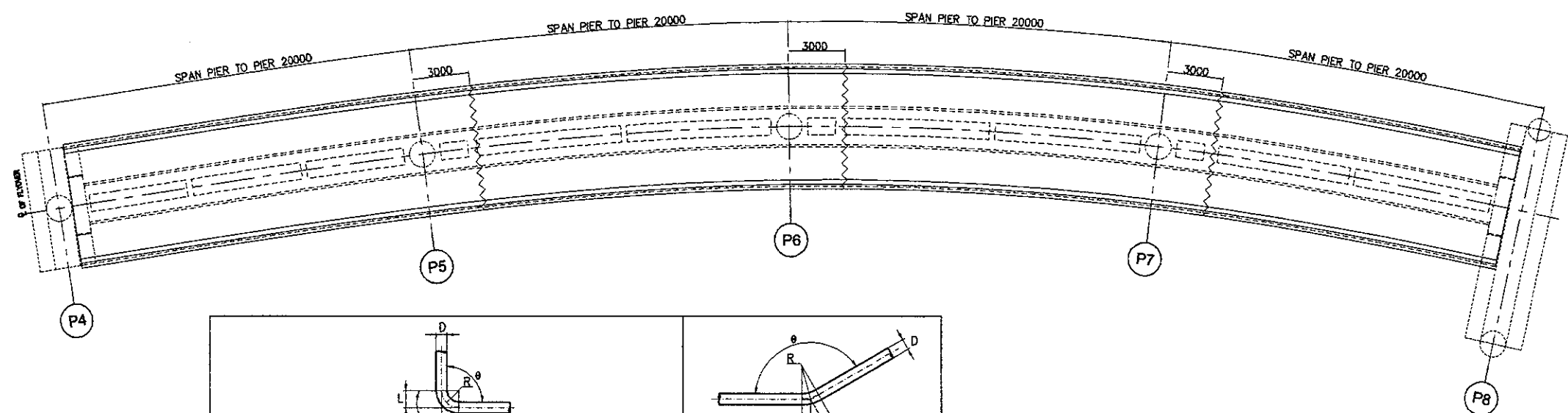
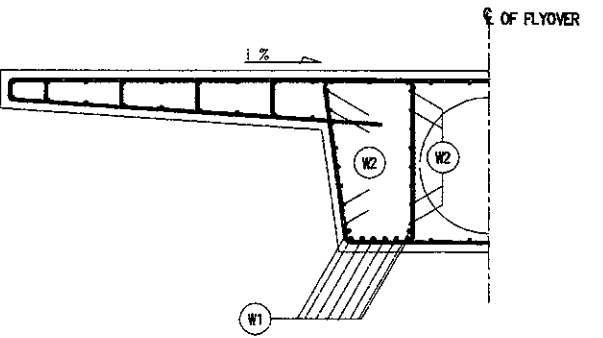
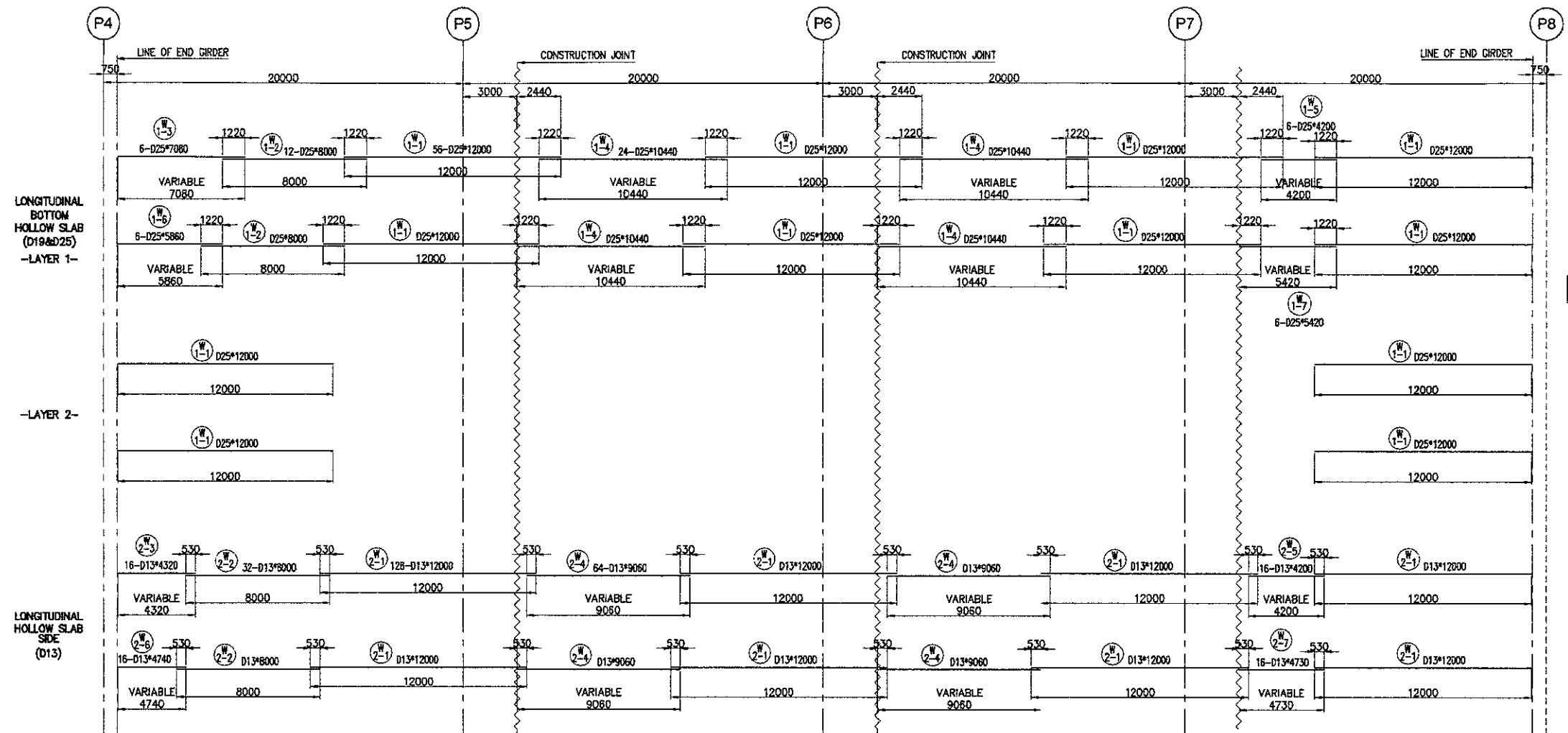
SECTION AT P7  
 SCALE 1 : 50



SECTION MID SPAN P7~P8  
 SCALE 1 : 50

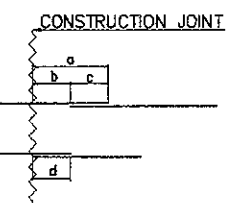


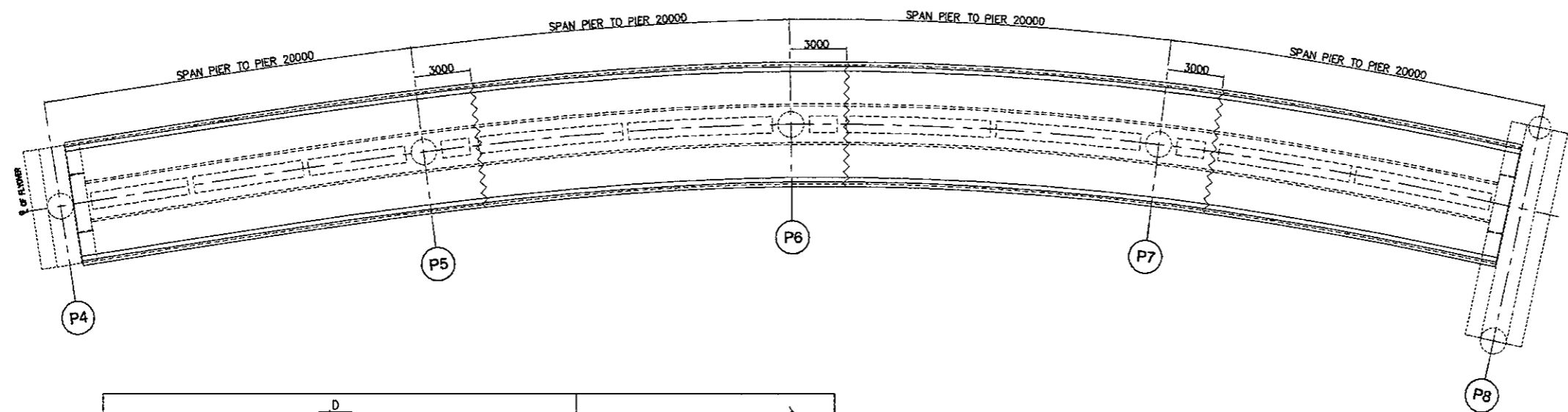
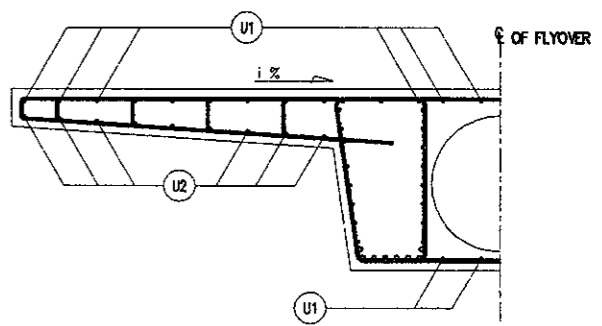
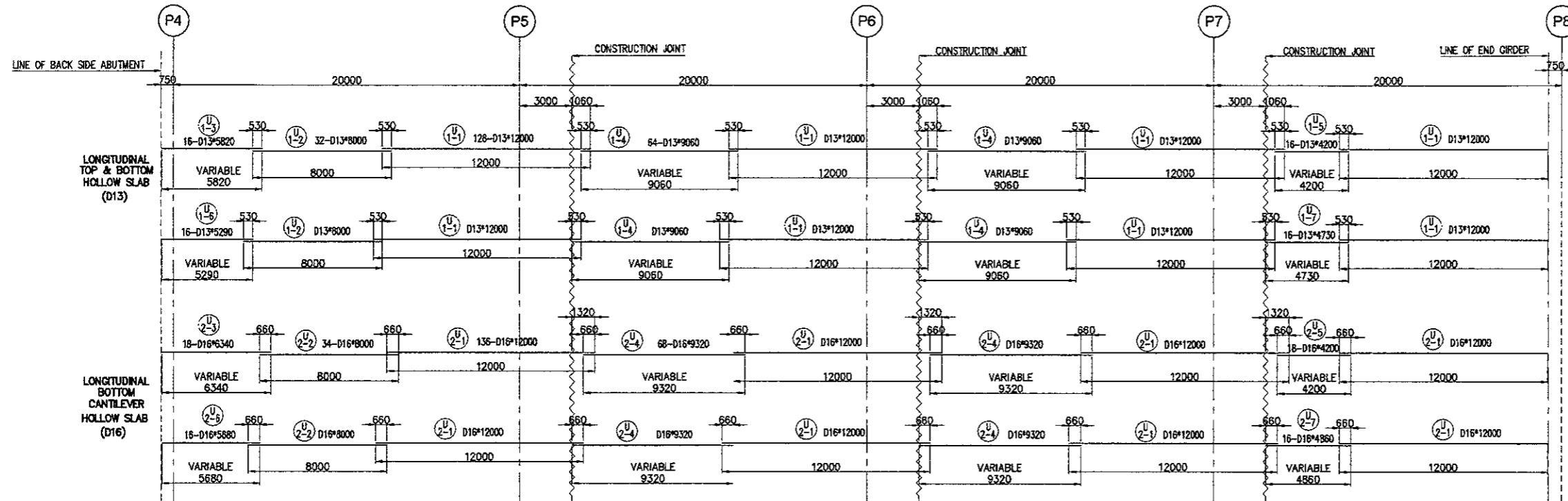
SECTION AT P8  
 SCALE 1 : 50



	MAIN REBARS										STIRRUP						
	θ ≤ 90° R=3d	θ > 90° R=5.5d	θ=45°		θ=60°		θ=90°		θ=135°		R=2.5d	θ=45°		θ=60°		θ=90°	
	a	ΔL	a	ΔL	a	ΔL	a	ΔL	a	ΔL		a	ΔL	a	ΔL	a	ΔL
D 19	57	104.5	134	141	119	78	90	25	82	5	47.5	112	117	100	85	75	20
D 25	75	137.5	177	185	103	118	32	32	108	6	75	177	185	157	103	118	32

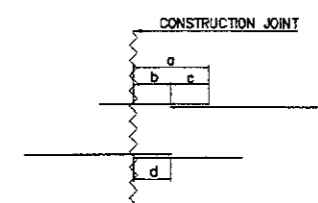
	a	b	c	d
D 13	1060	530	530	530
D 19	1560	780	780	780
D 25	2440	1220	1220	1220

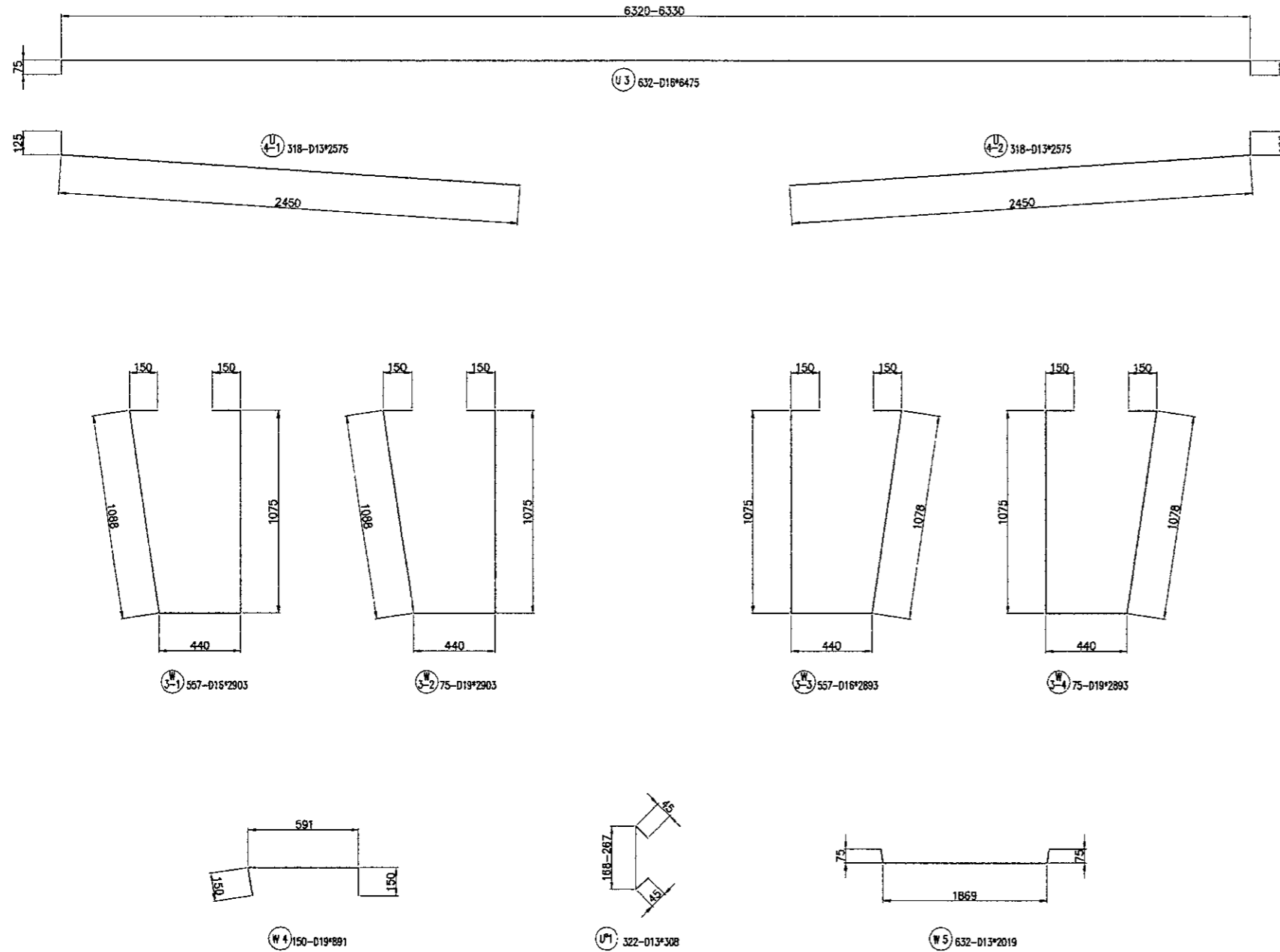




D	MAIN REBARS					STIRRUP											
	$\theta=90^\circ$ R=3d	$\theta=90^\circ$ R=5.5d	$\theta=45^\circ$	$\theta=60^\circ$	$\theta=90^\circ$	$\theta=135^\circ$	R=2.5d	$\theta=45^\circ$	$\theta=60^\circ$	$\theta=90^\circ$							
D 13	39	71.5	92	96	82	53	16	17	56	3	32.5	77	80	68	45	51	14
D 16	48	88	113	119	100	66	75	21	89	4	40	94	99	84	55	63	17

	a	b	c	d
D 13	1080	530	530	530
D 16	1320	660	660	660



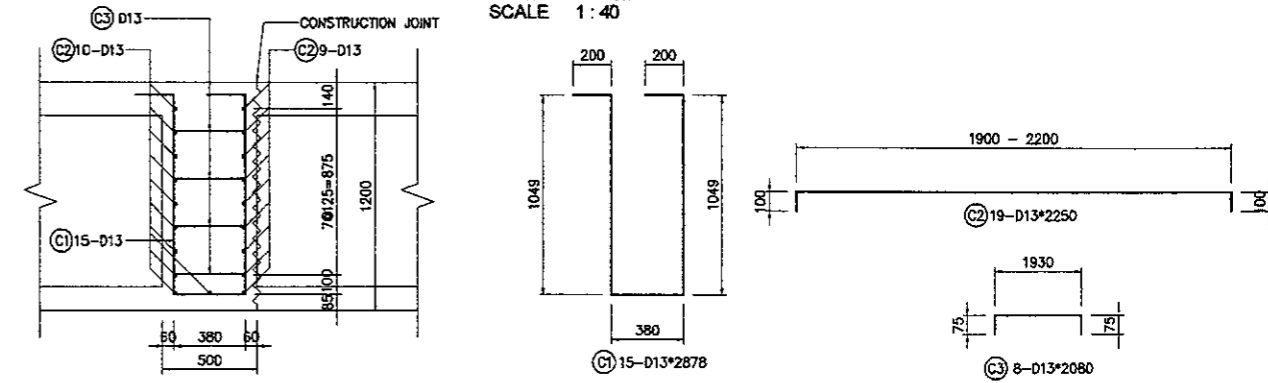
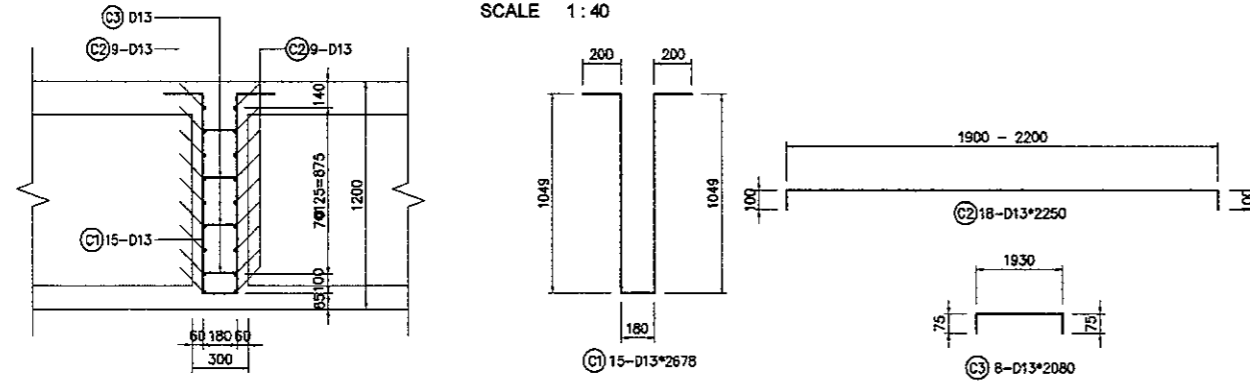
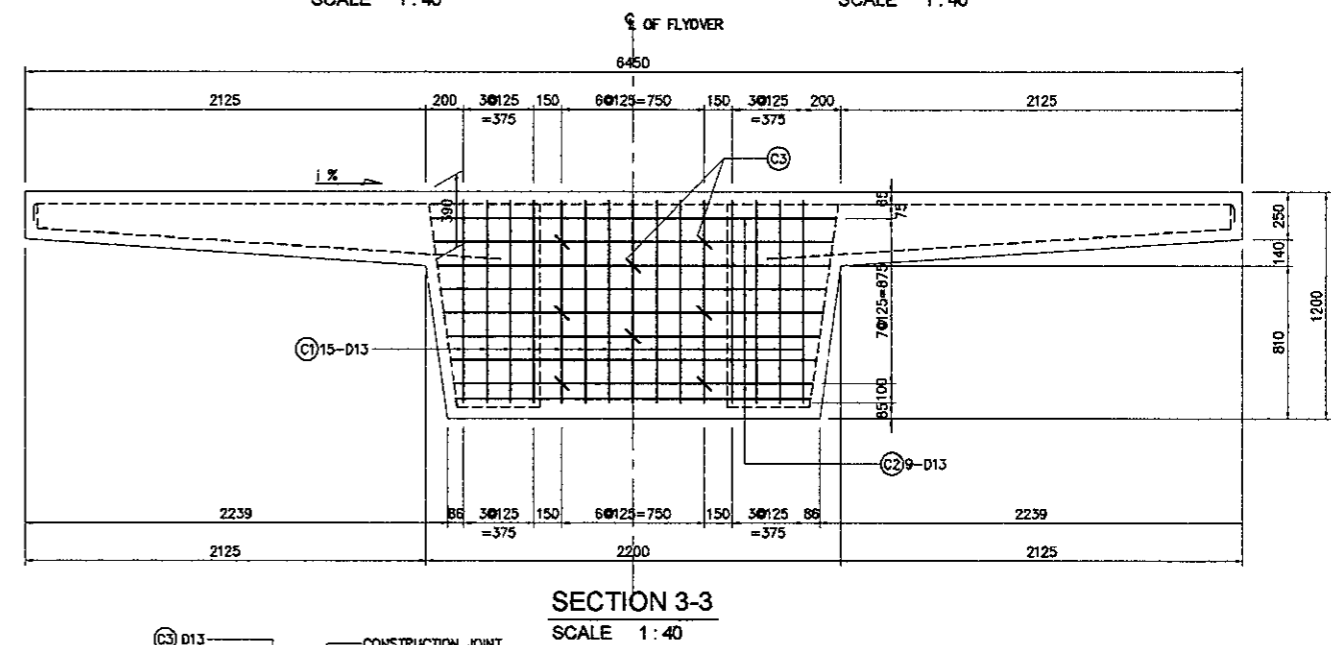
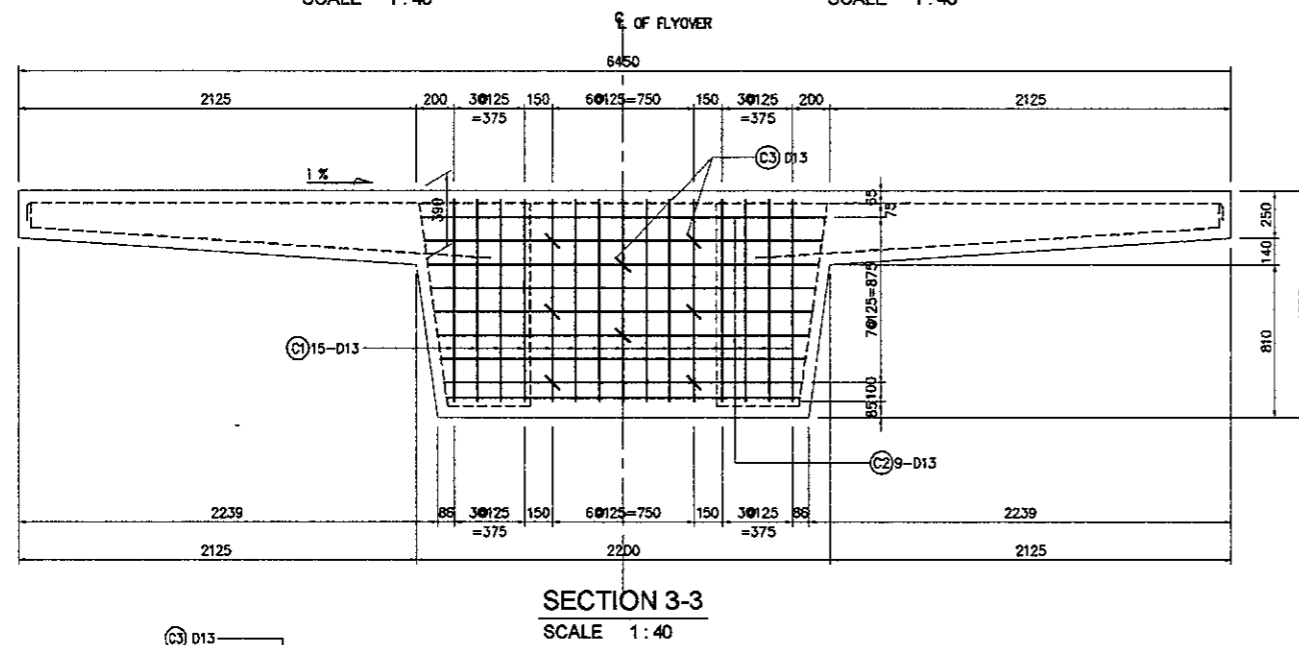
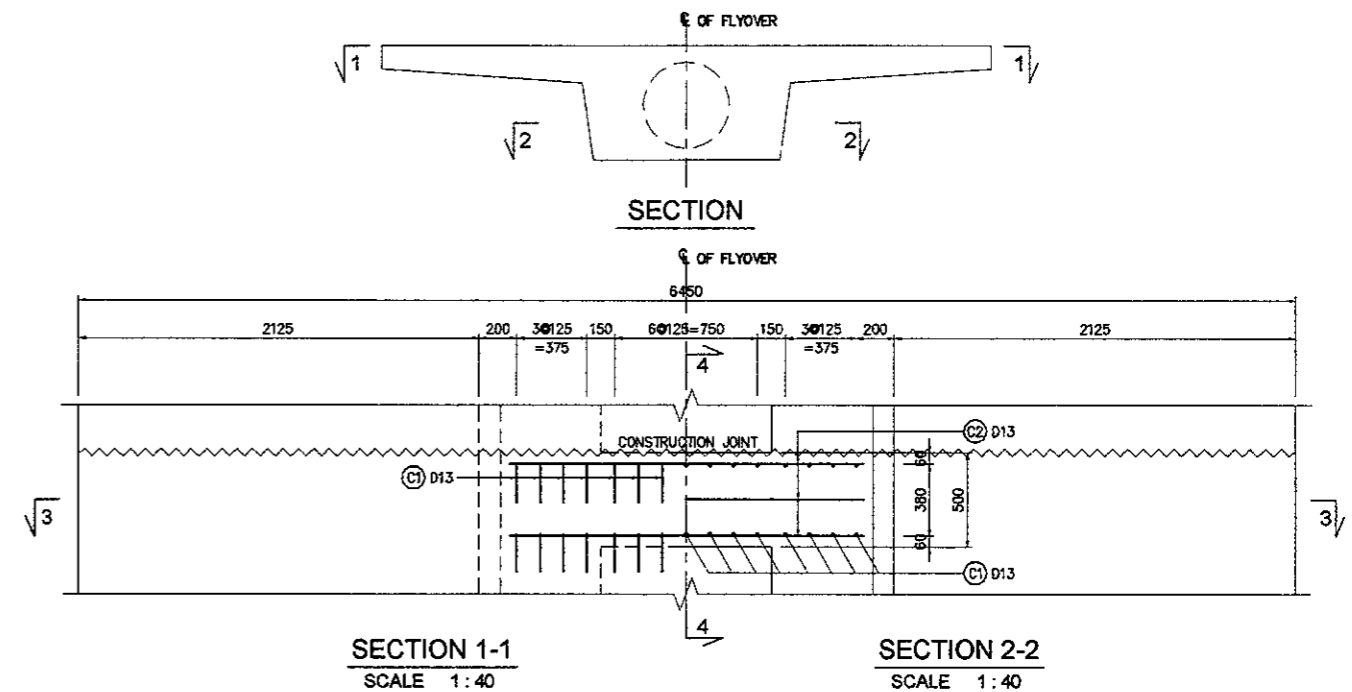
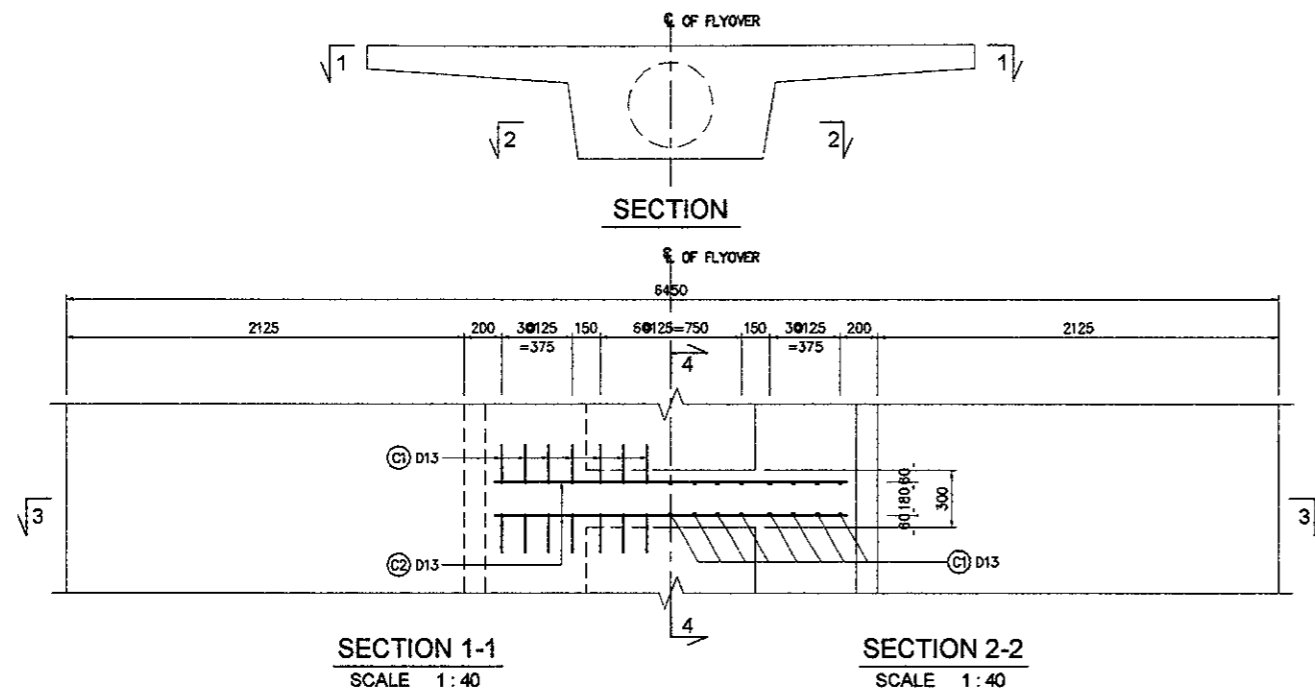


**BAR BENDING SCHEDULE**

REBAR NAME	DIA (mm)	LENGTH (mm)	NOS.	WEIGHT / METER (Kg / meter)	WEIGHT (Kg)	TOTAL WEIGHT (Kg)	DIAGRAM	REMARKS
U 1 - 1	13	12000	128	1.04	12.48	1597		
U 1 - 2	13	8000	32	1.04	8.32	266		
U 1 - 3	13	5820	16	1.04	5.05	97		
U 1 - 4	13	9080	64	1.04	9.42	603		
U 1 - 5	13	4200	16	1.04	4.37	70		
U 1 - 6	13	5290	16	1.04	5.5	88		
U 1 - 7	13	4730	16	1.04	4.92	79		
U 2 - 1	16	12000	136	1.58	18.96	2579		
U 2 - 2	16	8000	34	1.58	12.64	430		
U 2 - 3	16	6340	18	1.58	10.02	180		
U 2 - 4	16	9320	88	1.58	14.73	1001		
U 2 - 5	16	4200	18	1.58	6.64	119		
U 2 - 6	16	5680	16	1.58	8.97	144		
U 2 - 7	16	4860	16	1.58	7.88	123		
U 3	16	6475	632	1.58	10.23	6486		
U 4 - 1	13	2575	318	1.04	2.68	852		
U 4 - 2	13	2575	318	1.04	2.68	852		
U* 1	13	308	322	1.04	0.32	103		
SUB TOTAL - 1						15649		

REBAR NAME	DIA (mm)	LENGTH (mm)	NOS.	WEIGHT / METER (Kg / meter)	WEIGHT (Kg)	TOTAL WEIGHT (Kg)	DIAGRAM	REMARKS
W 1 - 1	25	12000	56	3.85	46.2	2587		
W 1 - 2	25	8000	12	3.85	30.8	370		
W 1 - 3	25	7080	6	3.85	27.26	164		
W 1 - 4	25	10440	24	3.85	40.19	965		
W 1 - 5	25	4200	6	3.85	16.17	97		
W 1 - 6	25	5860	6	3.85	22.56	135		
W 1 - 7	25	5420	6	3.85	20.87	125		
W 2 - 1	16	12000	128	1.58	18.96	2427		
W 2 - 2	16	8000	32	1.58	12.64	404		
W 2 - 3	16	4320	16	1.58	6.83	109		
W 2 - 4	16	9080	64	1.58	14.31	916		
W 2 - 5	16	4200	16	1.58	6.64	106		
W 2 - 6	16	4740	16	1.58	7.49	120		
W 2 - 7	16	4730	16	1.58	7.47	120		
W 3 - 1	16	2903	557	1.58	4.59	2555		
W 3 - 2	19	2903	75	2.23	6.47	486		
W 3 - 3	16	2893	557	1.58	4.57	2546		
W 3 - 4	19	2893	75	2.23	6.45	484		
W 4	19	891	150	2.23	1.99	299		
W 5	16	2019	632	1.58	3.19	2016		
SUB TOTAL - 2						17030		
TOTAL REBAR WEIGHT P4 - P8						32679		

	MAIN REBARS										STIRRUP						
	$\theta \leq 90^\circ$ R=3d	$\theta > 90^\circ$ R=5.5d	$\theta = 45^\circ$	$\theta = 60^\circ$	$\theta = 90^\circ$	$\theta = 135^\circ$	R=2.5d	$\theta = 45^\circ$	$\theta = 60^\circ$	$\theta = 90^\circ$							
D 13	39	71.5	92	96	82	53	16	17	56	3	32.5	77	80	68	45	51	14
D 16	48	88	113	119	100	66	75	21	69	4	40	94	99	84	55	63	17
D 19	57	104.5	134	141	119	78	90	25	82	5	47.5	112	117	100	65	75	20

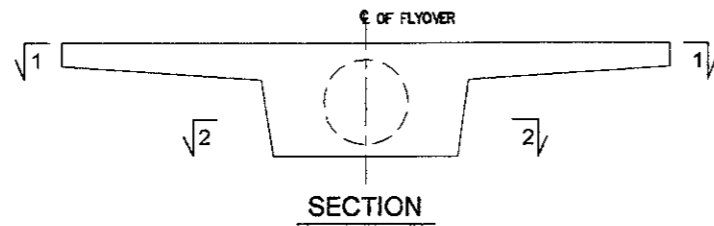


SECTION 4-4  
 SCALE 1:40  
 BAR BENDING SCHEDULE

REBAR NAME	DA (mm)	LENGTH (mm)	NOS.	WEIGHT / METER (Kg / meter)	WEIGHT (Kg)	TOTAL WEIGHT (Kg)	DIAGRAM	REMARKS
C1	13	2678	15	1.04	2.79	42		
C2	13	2250	18	1.04	2.34	42		
C3	13	2080	8	1.04	2.16	17		
TOTAL REBAR WEIGHT A1 - P4						101 x 5 = 506 Kg		

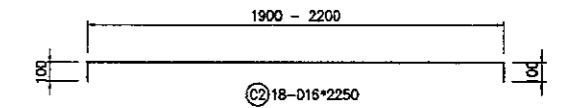
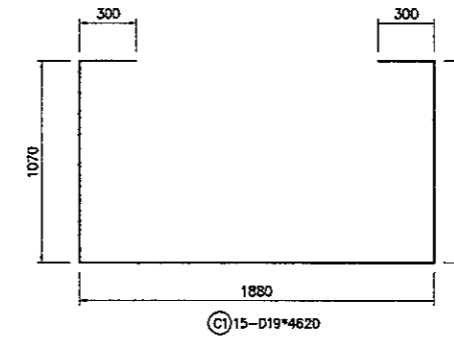
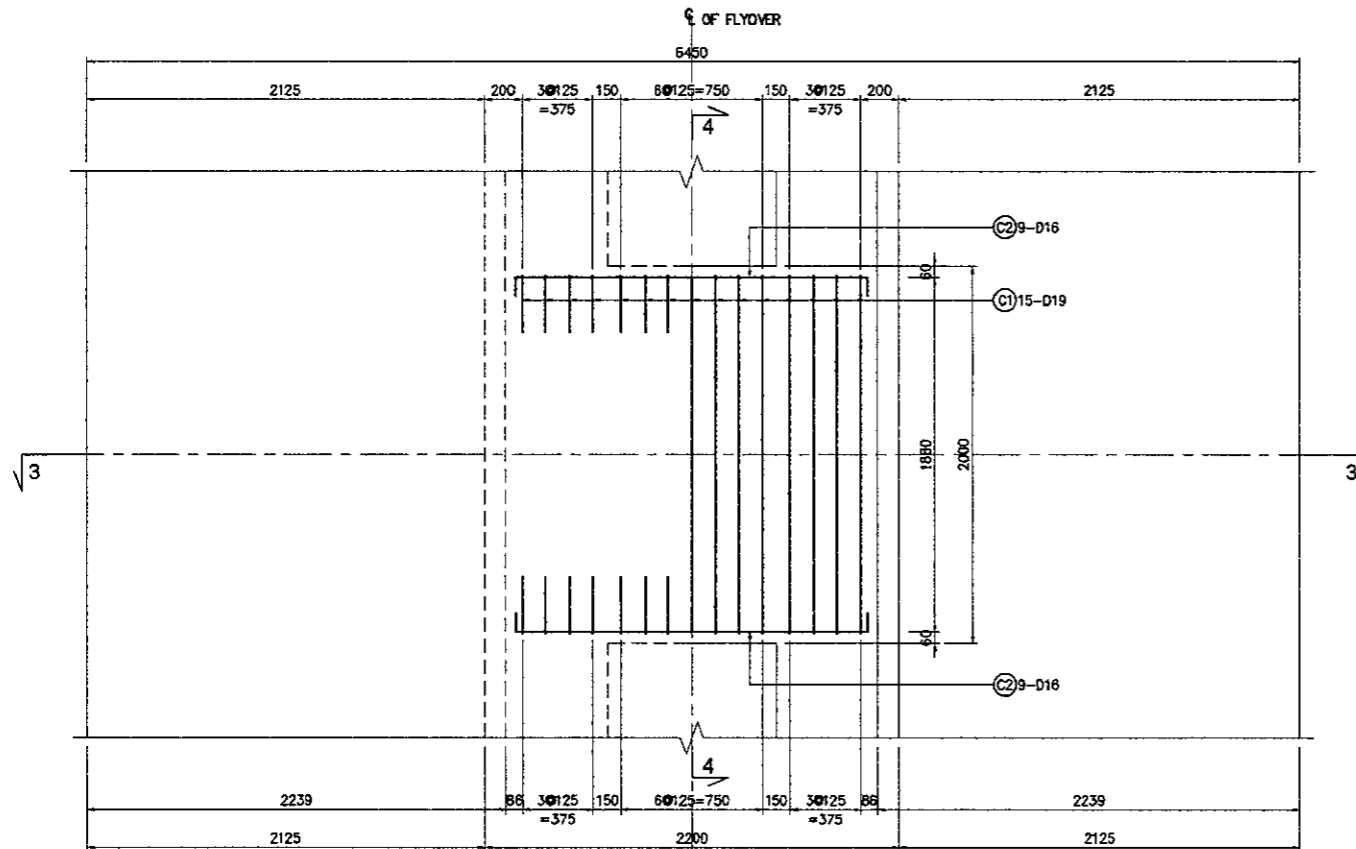
SECTION 4-4  
 SCALE 1:40  
 BAR BENDING SCHEDULE

REBAR NAME	DA (mm)	LENGTH (mm)	NOS.	WEIGHT / METER (Kg / meter)	WEIGHT (Kg)	TOTAL WEIGHT (Kg)	DIAGRAM	REMARKS
C1	13	2878	15	1.04	2.99	45		
C2	13	2250	19	1.04	2.34	44		
C3	13	2080	8	1.04	2.16	17		
TOTAL REBAR WEIGHT A1 - P4						106 x 3 = 318 Kg		

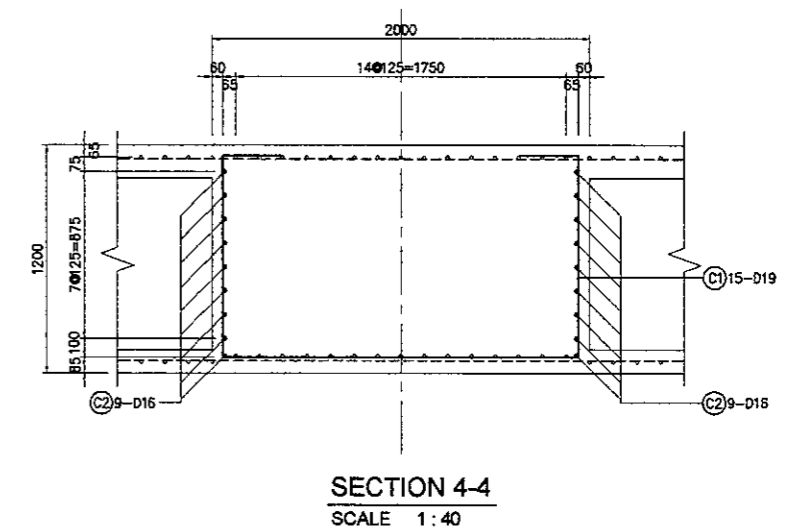
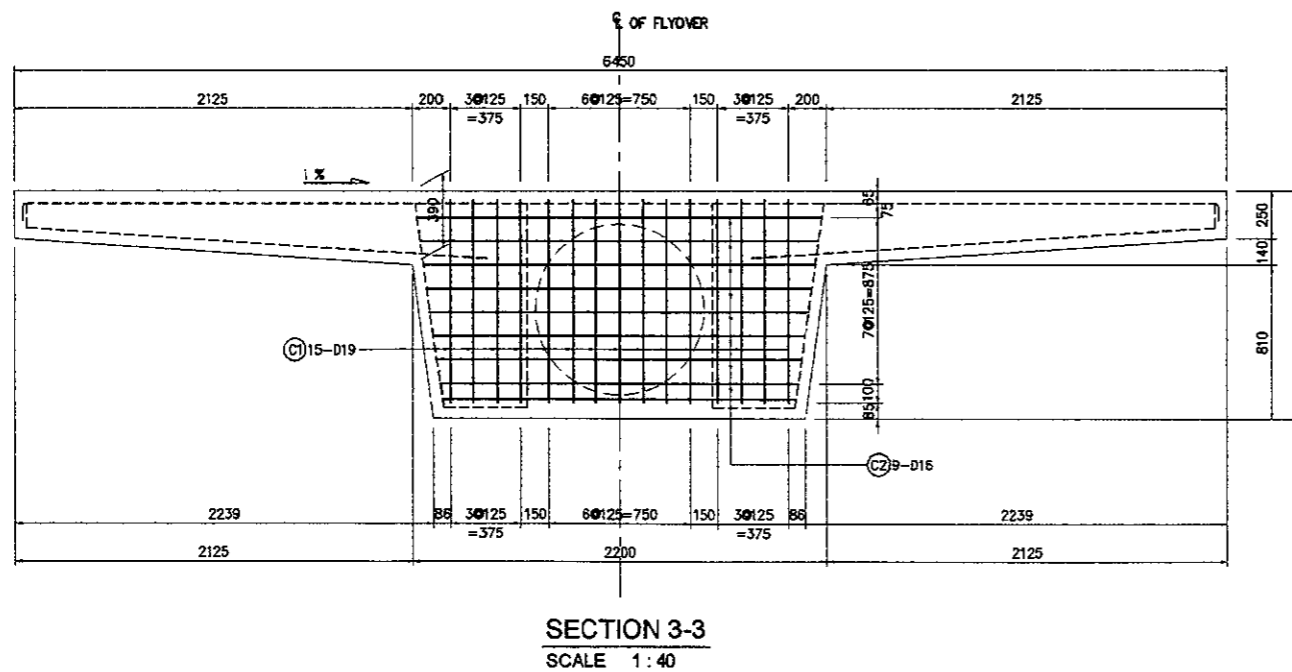


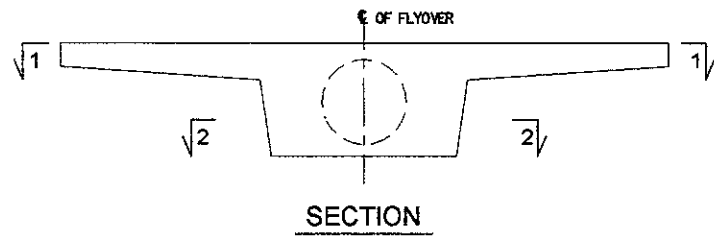
BAR BENDING SCHEDULE

REBAR NAME	DIA (mm)	LENGTH (mm)	NOS.	WEIGHT / METER (kg / meter)	WEIGHT (kg)	TOTAL WEIGHT (kg)	DIAGRAM	REMARKS
C1	19	4620	15	2.23	10.30	155		
C2	16	2250	18	1.58	3.58	64		
TOTAL REBAR WEIGHT P5-P6-P7						219 x 3 = 657 Kg		



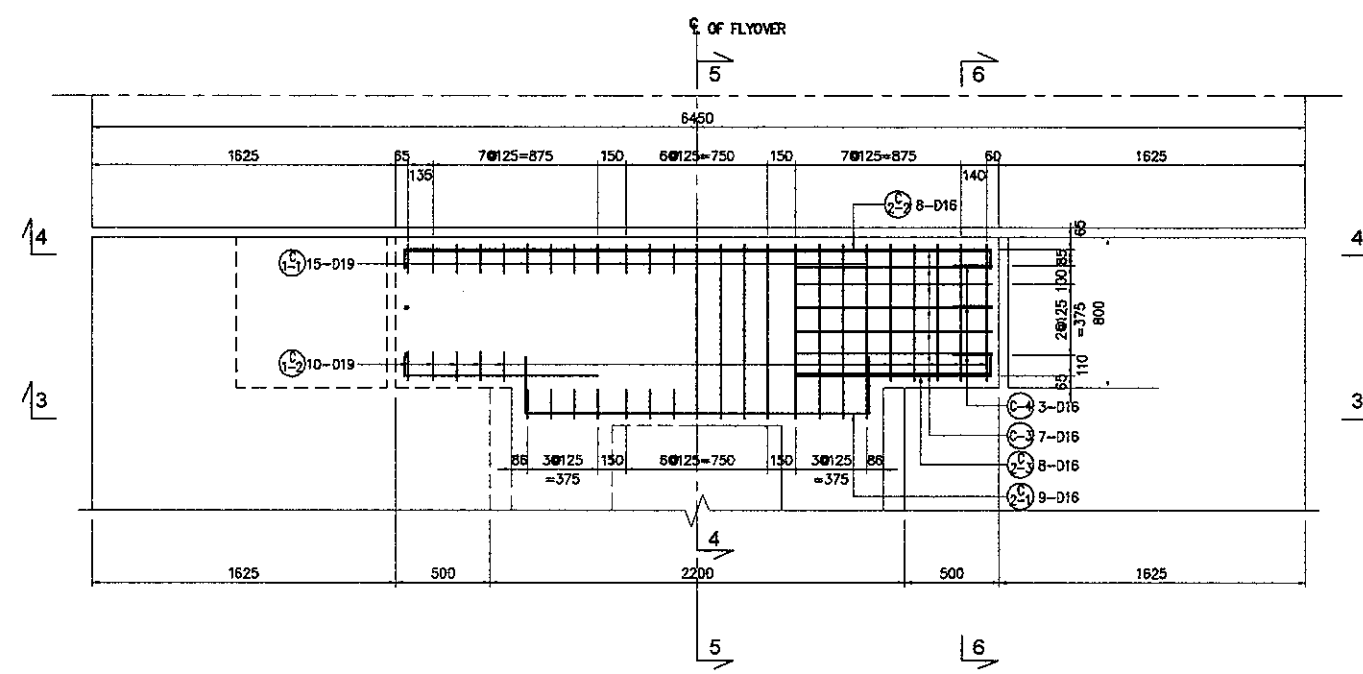
	MAIN REBARS						STIRRUP					
	$\theta \leq 90^\circ$ $R=3d$	$\theta > 90^\circ$ $R=5.5d$	$\theta=45^\circ$ $\alpha$ $\Delta L$	$\theta=60^\circ$ $\alpha$ $\Delta L$	$\theta=90^\circ$ $\alpha$ $\Delta L$	$\theta=135^\circ$ $\alpha$ $\Delta L$	$R=2.5d$	$\theta=45^\circ$ $\alpha$ $\Delta L$	$\theta=60^\circ$ $\alpha$ $\Delta L$	$\theta=90^\circ$ $\alpha$ $\Delta L$	$\theta=90^\circ$ $\alpha$ $\Delta L$	
D 16	48	88	113 119	100 66	75 21	69 4	40	94 99	84 55	63 17		
D 19	57	104.5	134 141	119 78	90 25	82 5	47.5	112 117	100 65	75 20		





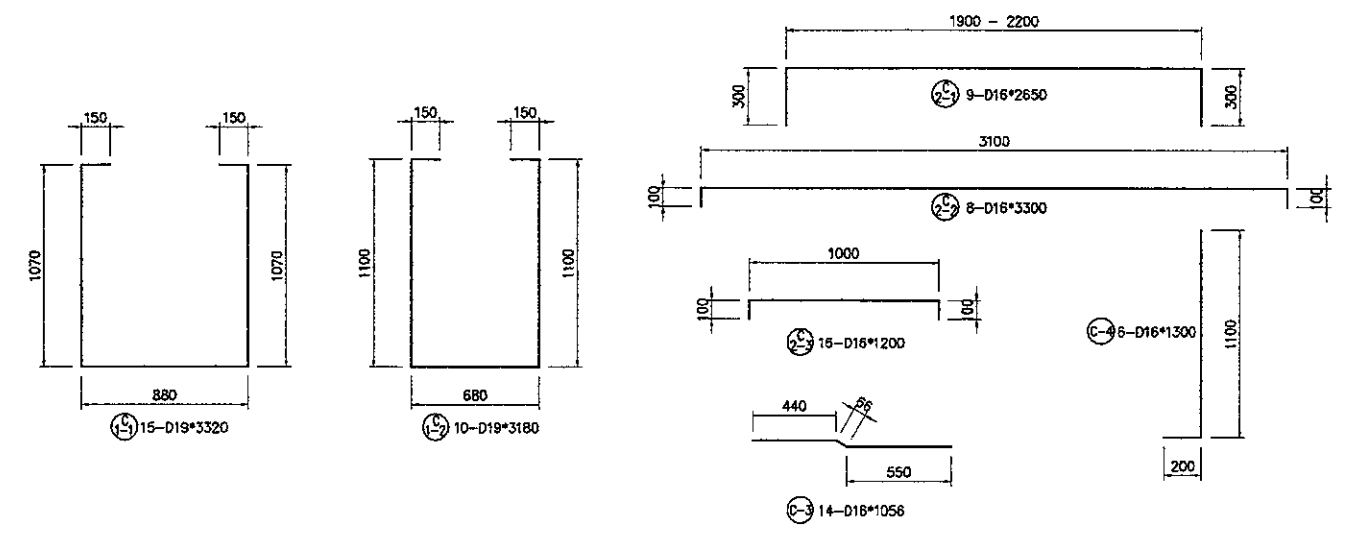
BAR BENDING SCHEDULE

REBAR NAME	DIA (mm)	LENGTH (mm)	NOS.	WEIGHT / METER (kg / meter)	WEIGHT (Kg)	TOTAL WEIGHT (Kg)	DIAGRAM	REMARKS
C 1-1	19	3320	15	2.23	7.40	111		
C 1-2	19	3180	10	2.23	7.09	71		
C 2-1	16	2650	9	1.58	4.19	38		
C 2-2	16	3300	8	1.58	5.21	42		
C 2-3	16	1200	16	1.58	1.9	30		
C 3	16	1056	14	1.58	1.67	23		
C 4	16	1300	6	1.58	2.05	12		
TOTAL REBAR WEIGHT P4 & P8						327 x 2 = 654 Kg		

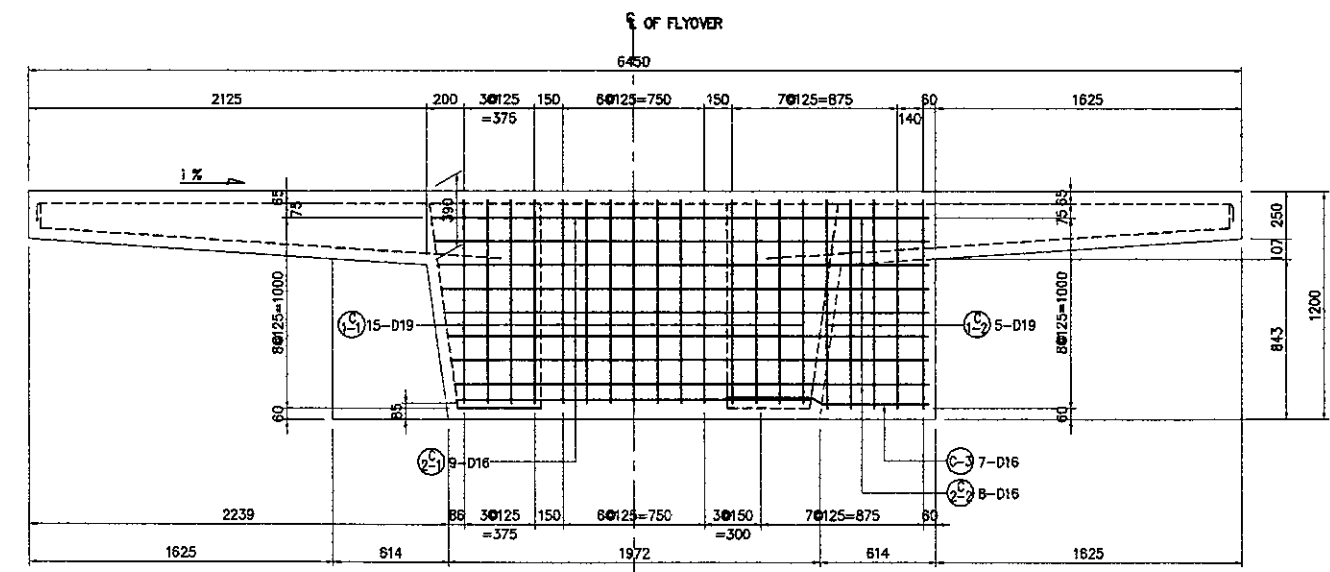


SECTION 1-1  
 SCALE 1:40

SECTION 2-2  
 SCALE 1:40

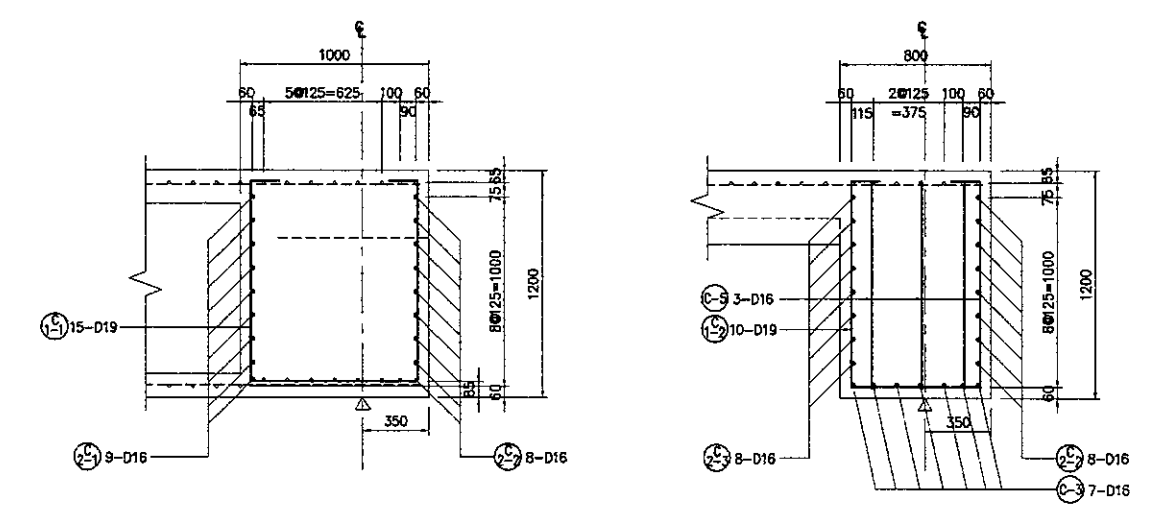


	MAIN REBARS						STIRRUP										
	$\theta \leq 90^\circ$ R=3 $\phi$	$\theta = 90^\circ$ R=5.5 $\phi$	$\theta = 45^\circ$ $\alpha$ $\Delta L$	$\theta = 60^\circ$ $\alpha$ $\Delta L$	$\theta = 90^\circ$ $\alpha$ $\Delta L$	$\theta = 135^\circ$ $\alpha$ $\Delta L$	R=2.5 $\phi$	$\theta = 45^\circ$ $\alpha$ $\Delta L$	$\theta = 60^\circ$ $\alpha$ $\Delta L$	$\theta = 90^\circ$ $\alpha$ $\Delta L$	$\theta = 90^\circ$ $\alpha$ $\Delta L$						
D 16	48	88	113	119	100	66	75	21	69	4	40	94	99	84	55	63	17
D 19	57	104.5	134	141	119	78	90	25	82	5	47.5	112	117	100	65	75	20



SECTION 3-3  
 SCALE 1:40

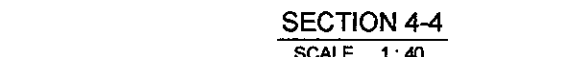
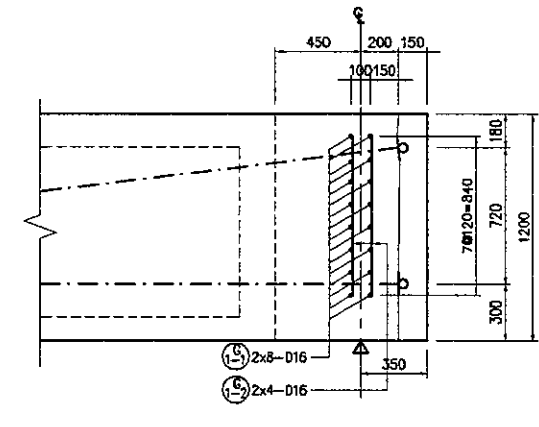
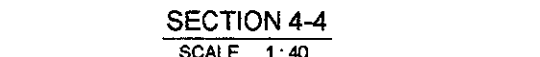
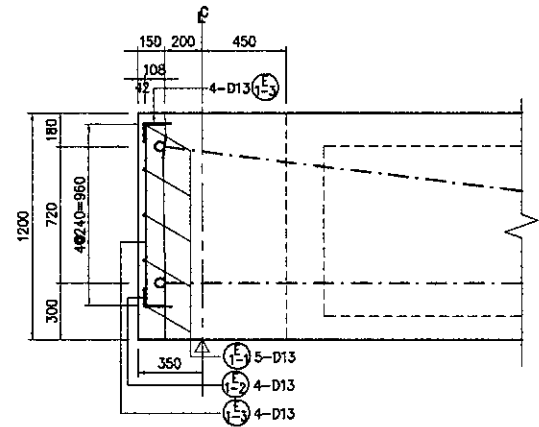
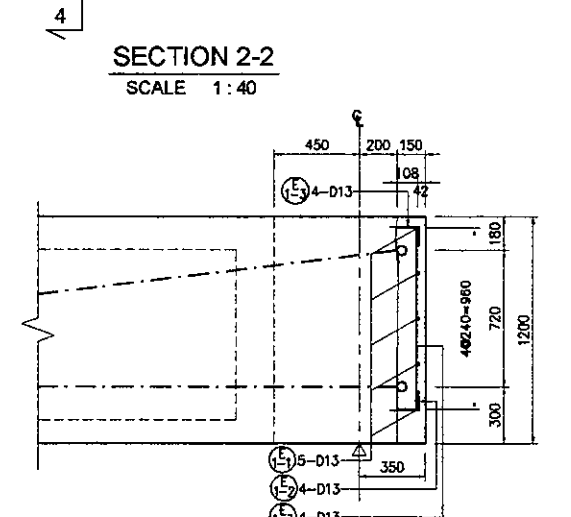
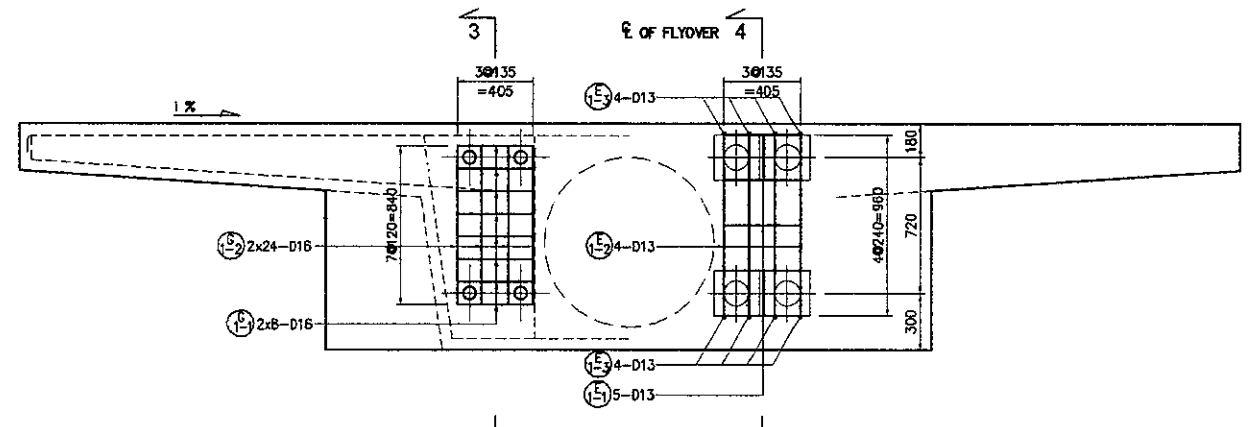
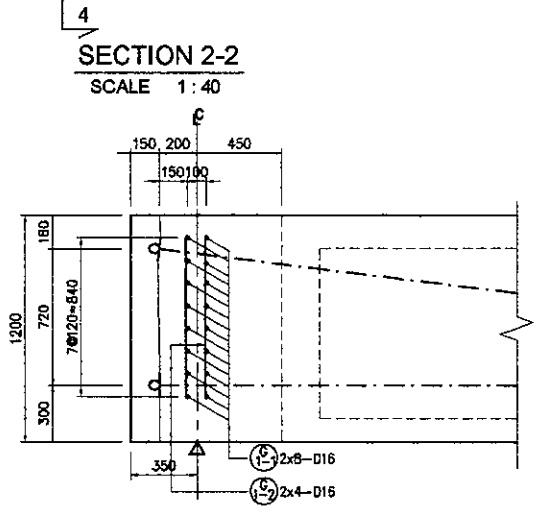
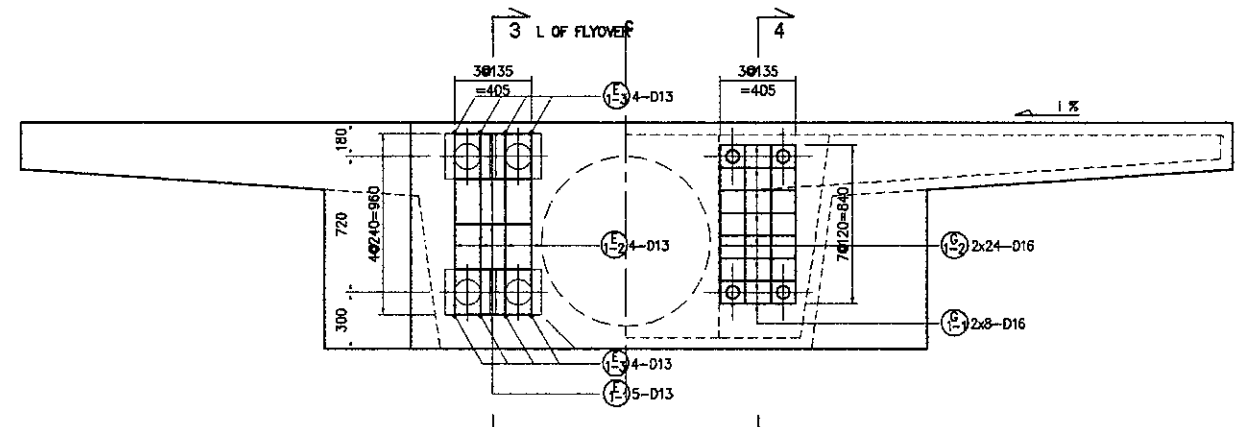
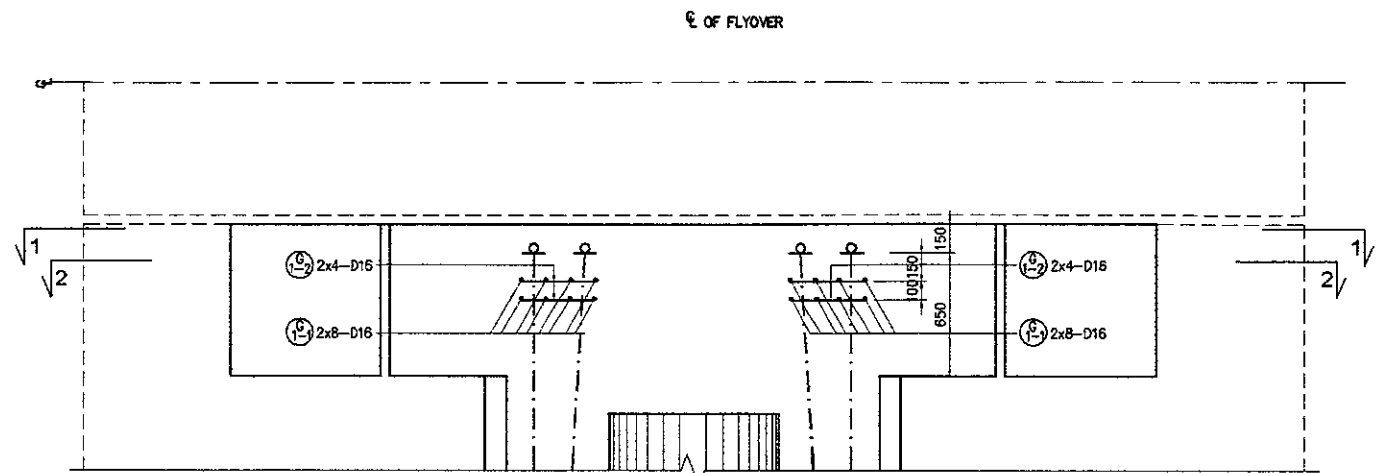
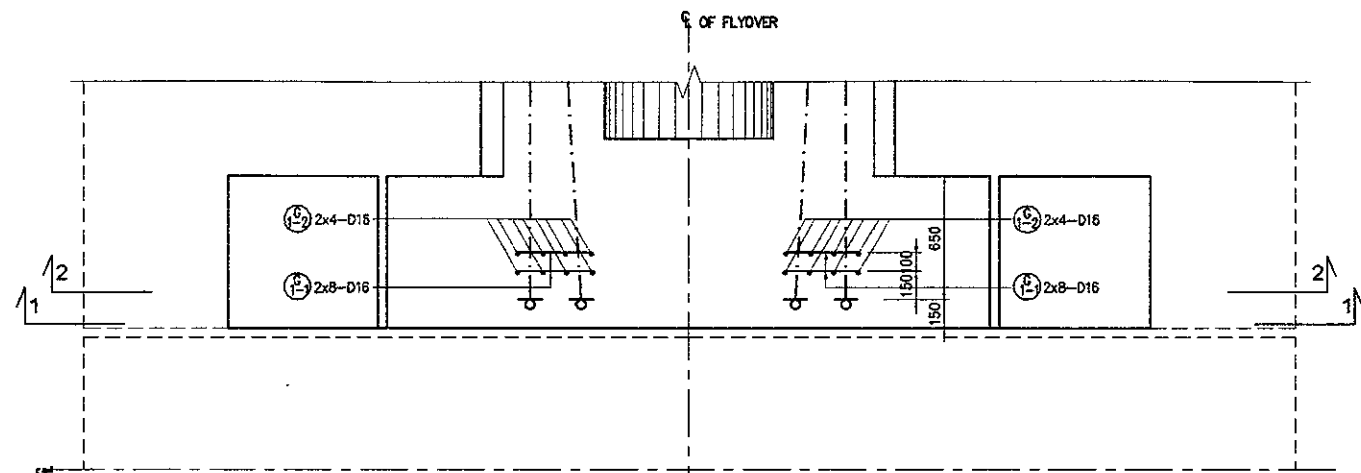
SECTION 4-4  
 SCALE 1:40



SECTION 5-5  
 SCALE 1:40

SECTION 6-6  
 SCALE 1:40





MAIN REBARS

	θ=90° R=3φ		θ=90° R=5.5φ		θ=45°		θ=60°		θ=90°		θ=135°	
	a	ΔL	a	ΔL	a	ΔL	a	ΔL	a	ΔL	a	ΔL
D 13	39	71.5	92	96	82	53	16	17	56	3		
D 16	48	88	113	119	100	66	75	21	69	4		

BAR BENDING SCHEDULE

REBAR NAME	ØA (mm)	LENGTH (mm)	NOS.	WEIGHT / METER (Kg / meter)	WEIGHT (Kg)	TOTAL WEIGHT (Kg)	DIAGRAM	REMARKS
E 1-1	13	418	5	1.04	0.44	2.2		
E 1-2	13	1173	4	1.04	1.22	5		
E 1-3	13	200	4	1.04	0.21	1		
G 1-1	16	850	8	1.58	1.36	11		
G 1-2	16	420	16	1.58	0.96	11		
TOTAL REBAR WEIGHT P4 - P8						29 x 4 = 118 Kg		

