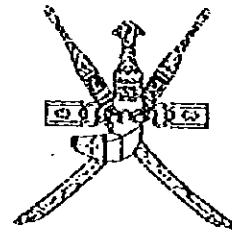




SULTANATE OF OMAN
MINISTRY OF COMMUNICATIONS
DIRECTORATE GENERAL OF ROADS

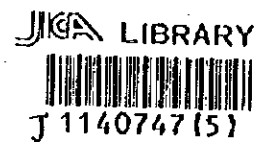


CONSTRUCTION OF PEDESTRIAN UNDERPASS
AT
LIWA
BATINAH HIGHWAY

TENDER DOCUMENT

DRAWINGS

PACIFIC CONSULTANTS INTERNATIONAL
FUKUYAMA CONSULTANTS INTERNATIONAL



March, 1997

SSF
CR(5)
97-015

DRAWING SCHEDULE
(PU11-LIWA PEDESTRIAN UNDERPASS)

SHEET NO.	DRAWING TITLE
G	
G - 1	GENERAL Drawing Schedule
P	
P - 1	PEDESTRIAN UNDERPASS General View (1)
P - 2	General View (2)
P - 3	General View (3)
P - 4	Re-bar Arrangement (1)
P - 5	Re-bar Arrangement (2)
P - 6	Re-bar Arrangement (3)
P - 7	Re-bar Arrangement (4)
P - 8	Re-bar Arrangement (5)
P - 9	Re-bar Arrangement (6)
P - 10	Re-bar Arrangement (7)
P - 11	Re-bar Arrangement (8)
P - 12	Re-bar Arrangement (9)
P - 13	Re-bar Arrangement (10)
T	
TEMPORARY WORKS	
T - 1	Construction Sequence
T - 2	Detour Layout

NOTES:		JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	CLIENT : MINISTRY OF COMMUNICATIONS, DIRECTORATE GENERAL OF ROADS
		JICA STUDY TEAM	PROJECT : D/D ON ROAD DEVELOPMENT PROJECT ON BATINAH HIGHWAY
		PACIFIC CONSULTANTS INTERNATIONAL FUKUYAMA CONSULTANTS INTERNATIONAL	TITLE : PU-11, LIWA DRAWING SCHEDULE
			DATE : _____ DWG NO. G-1

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Faint text block in the upper middle section of the page.

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1140747 (5)

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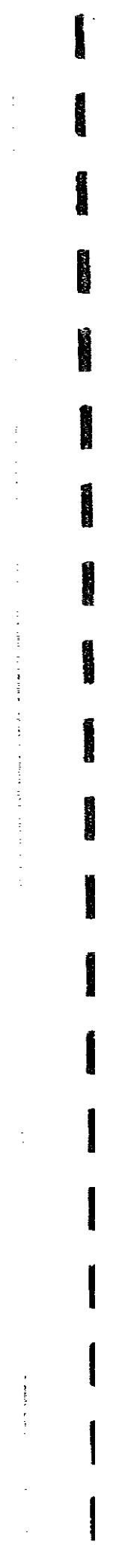
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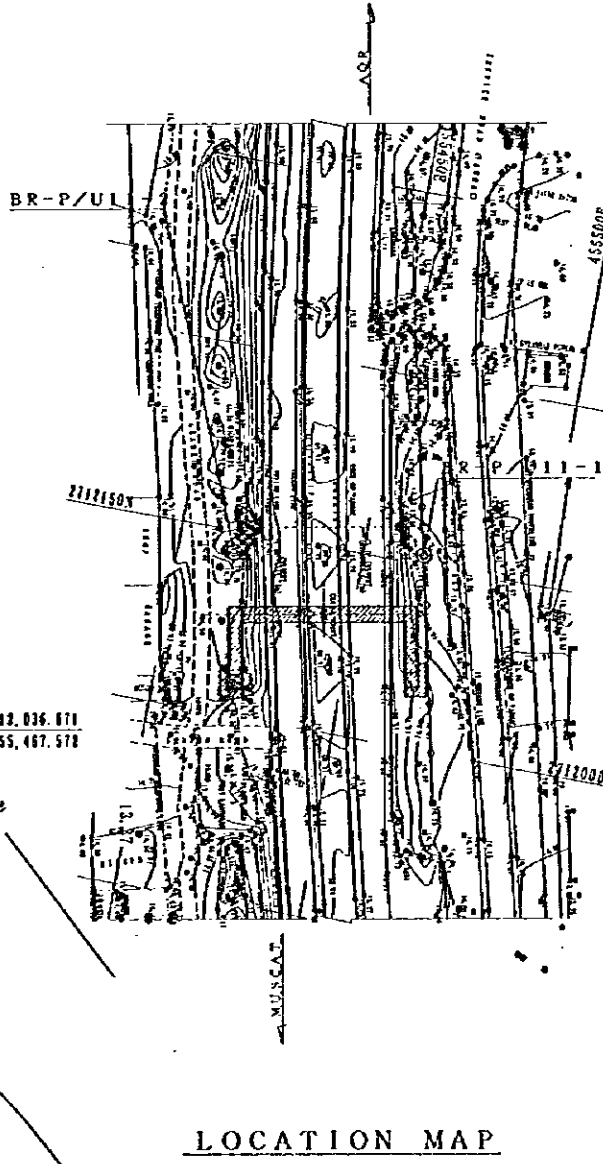
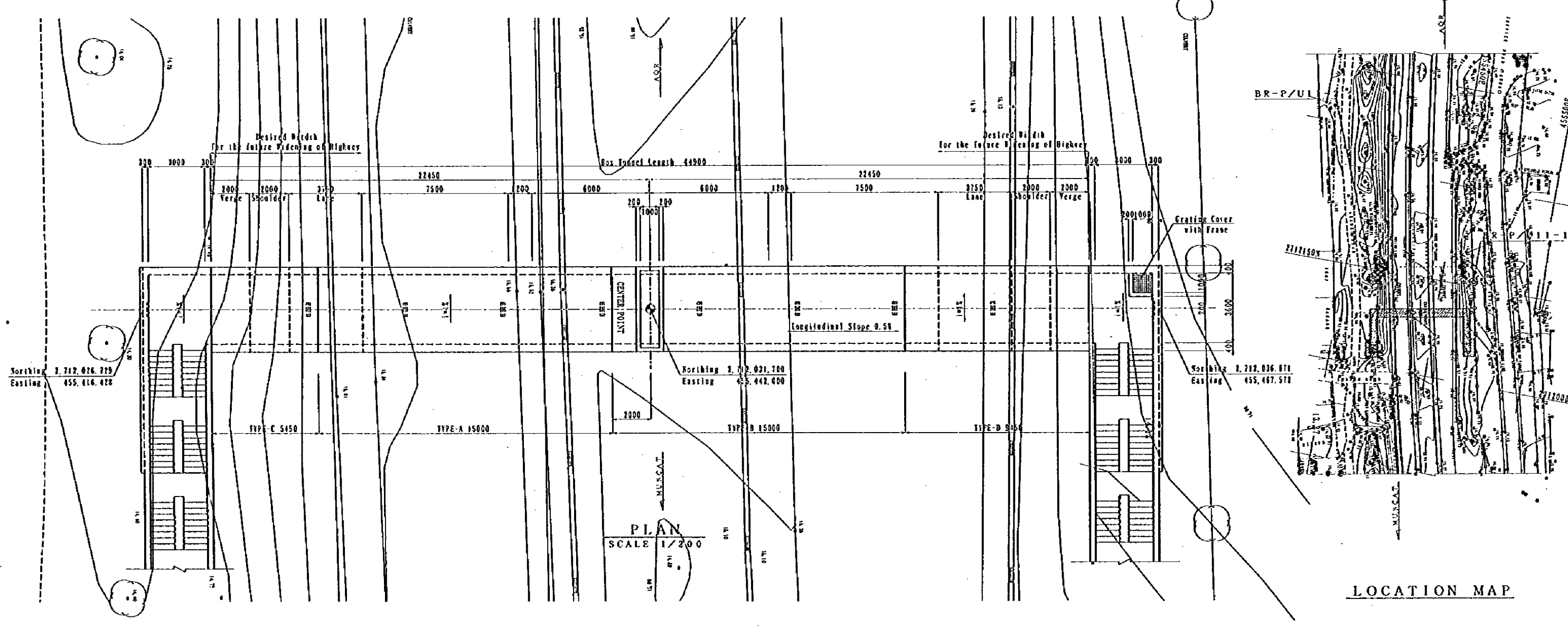
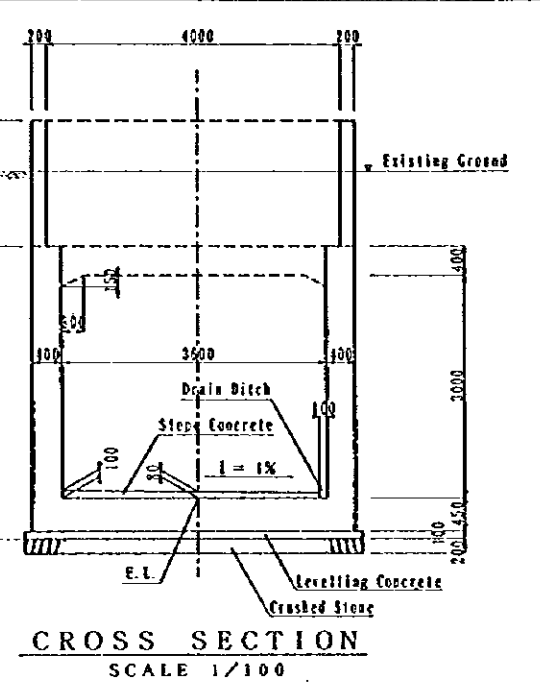
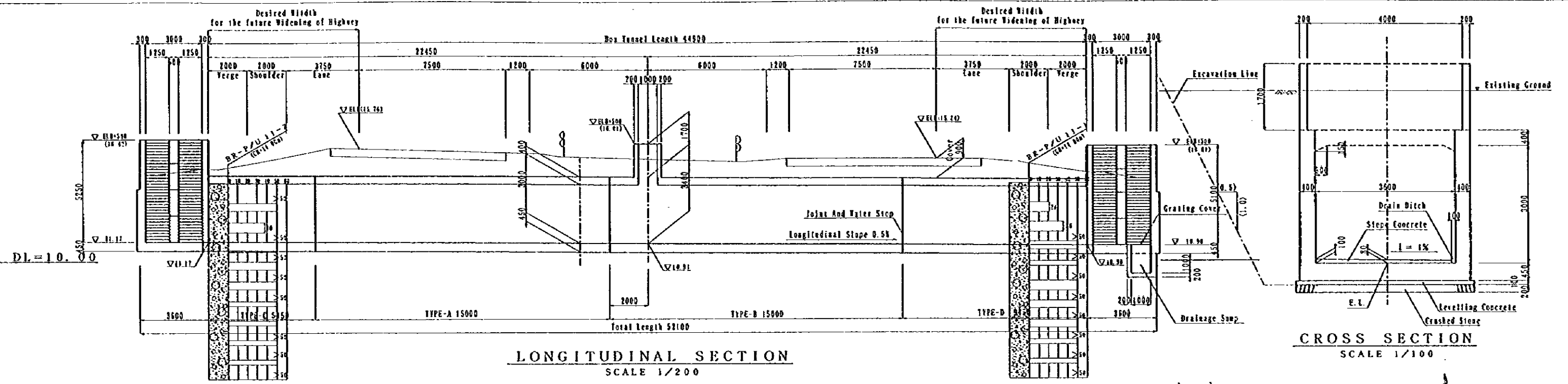
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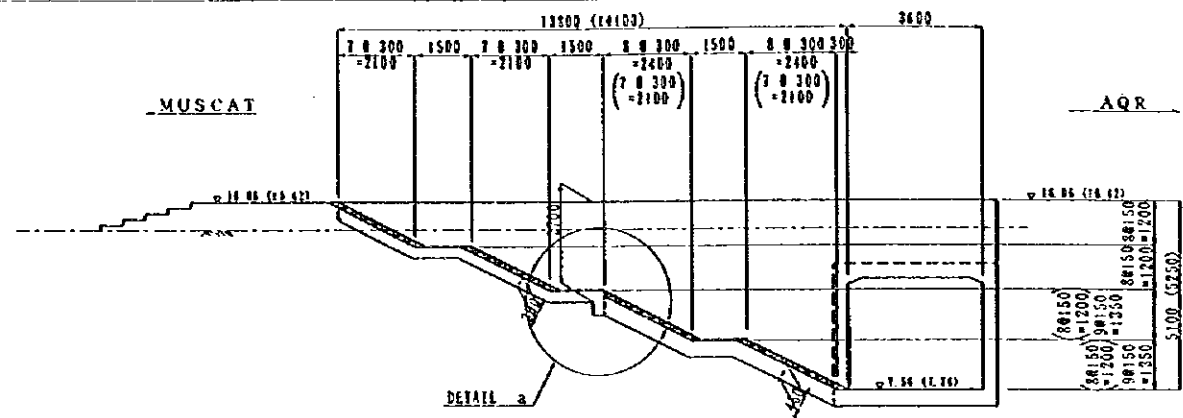
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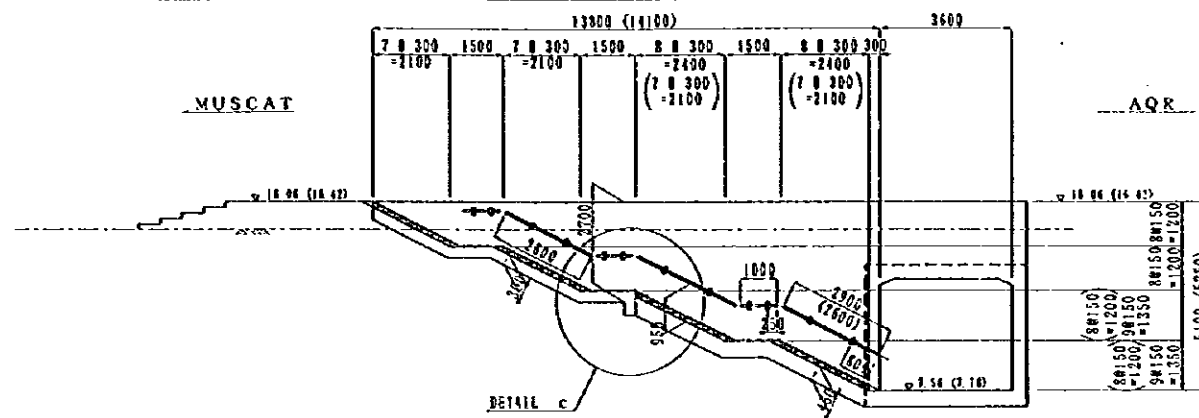




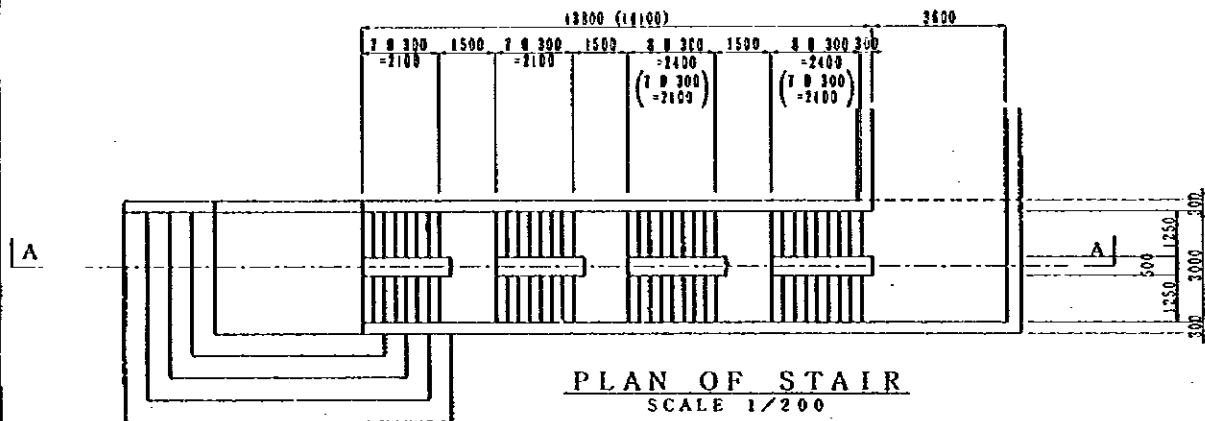
NOTES:	JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	CLIENT : MINISTRY OF COMMUNICATIONS, DIRECTORATE GENERAL OF ROADS
	JICA STUDY TEAM PACIFIC CONSULTANTS INTERNATIONAL FUKUYAMA CONSULTANTS INTERNATIONAL	PROJECT : D/D ON ROAD DEVELOPMENT PROJECT ON BATINAH HIGHWAY
		TITLE : P/U-11, LIWA GENERAL VIEW (1)
		DATE : _____
		DWG NO. P - 1



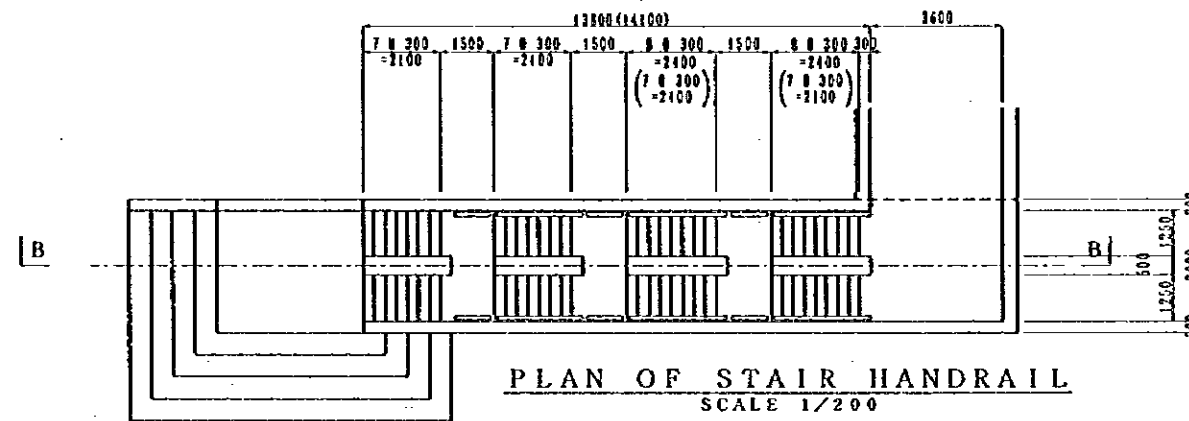
STAIR (SECTION A-A)
SCALE 1/200



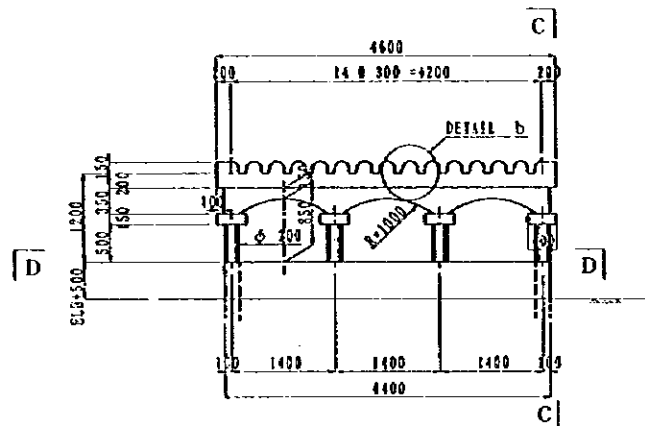
STAIR HANDRAIL (SECTION B-B)
SCALE 1/200



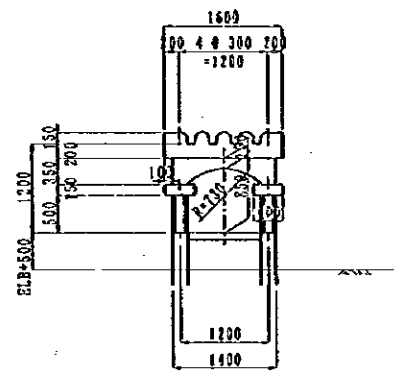
PLAN OF STAIR
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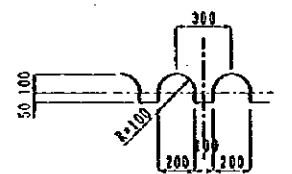
PLAN OF STAIR HANDRAIL
SCALE 1/200



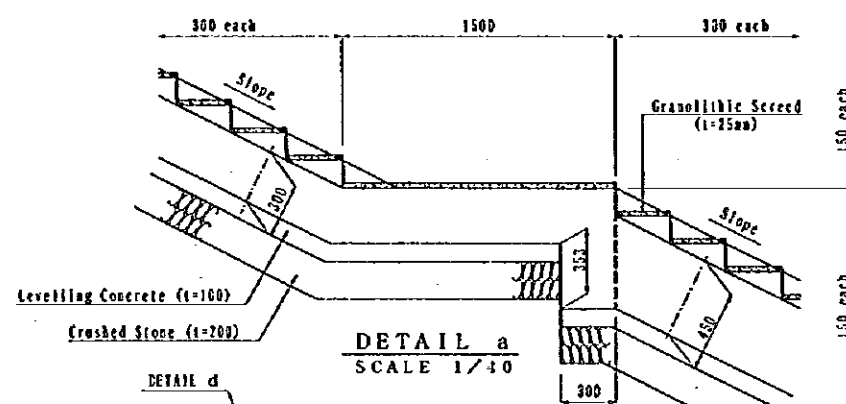
SIDE ELEVATION
SCALE 1/100



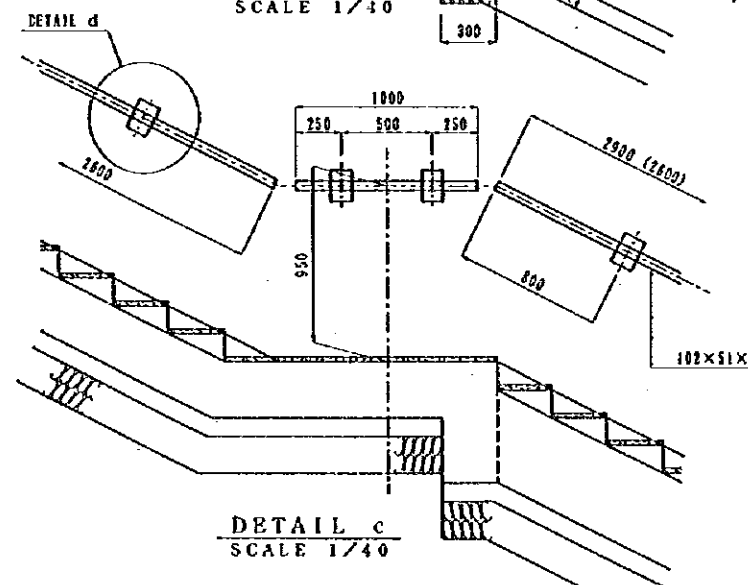
SECTION C-C
SCALE 1/100



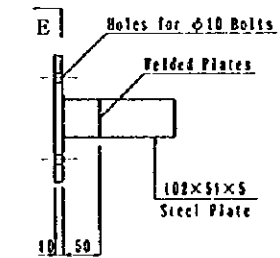
DETAIL b
SCALE 1/40



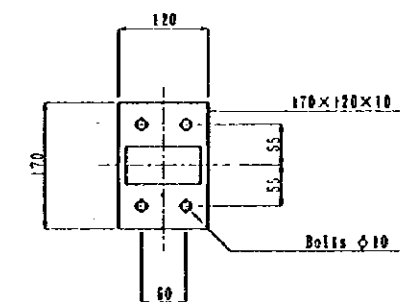
DETAIL a
SCALE 1/40



DETAIL c
SCALE 1/40



DETAIL d
SCALE 1/10



SECTION E-E
SCALE 1/10

NOTES: Dimensions of () value are for inland stair.

JAPAN INTERNATIONAL COOPERATION AGENCY
(JICA)

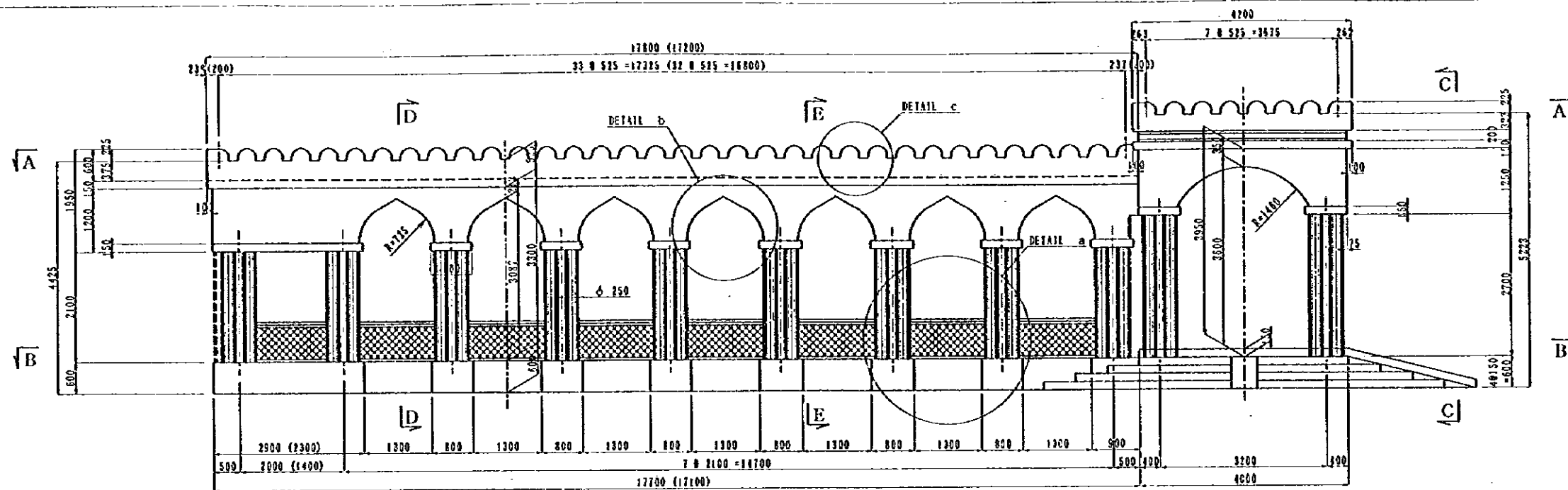
JICA STUDY TEAM
PACIFIC CONSULTANTS INTERNATIONAL
FUKUYAMA CONSULTANTS INTERNATIONAL

CLIENT : MINISTRY OF COMMUNICATIONS, DIRECTORATE GENERAL OF ROADS

PROJECT : D/D ON ROAD DEVELOPMENT PROJECT ON BATINAH HIGHWAY

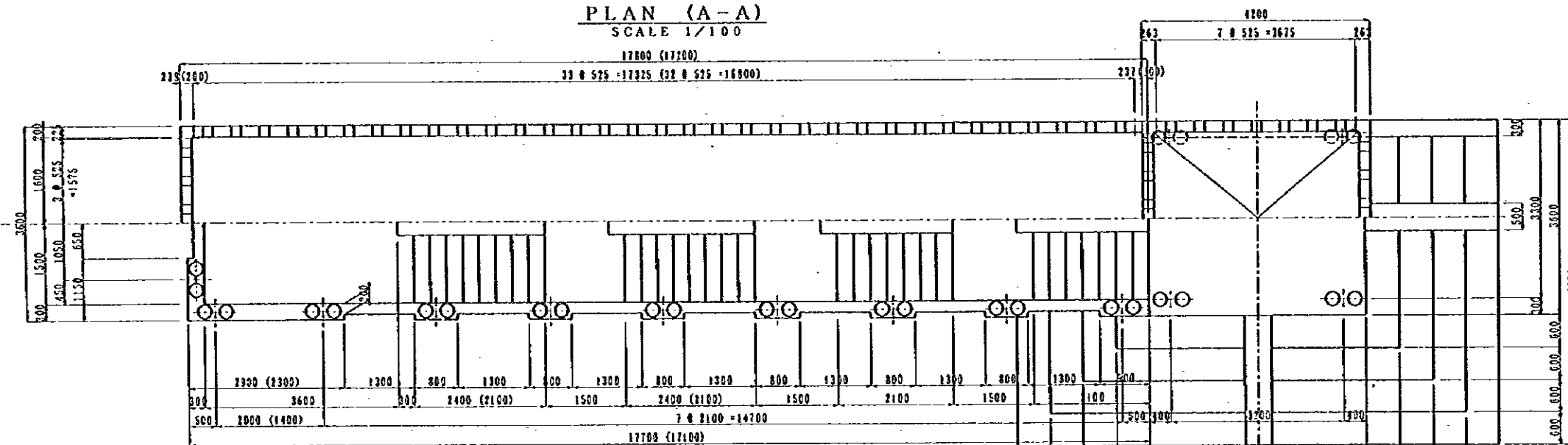
TITLE : P/U-11, LIWA GENERAL VIEW (2)

DATE : _____ DWG NO. P - 2

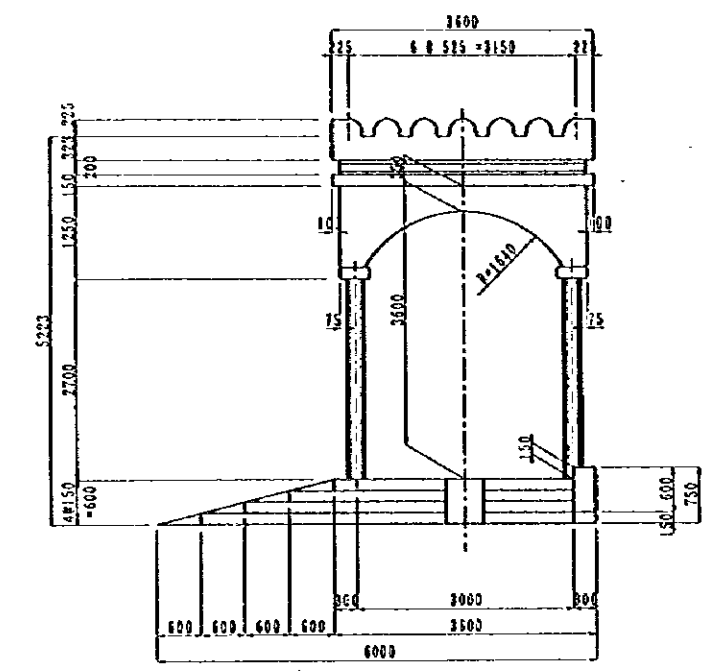


PROFILE OF CANOPY
SCALE 1/100

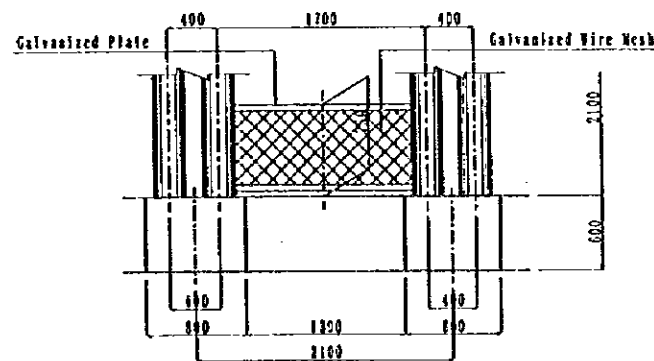
PLAN (A-A)
SCALE 1/100



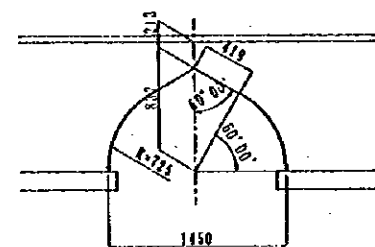
PLAN (B-B)
SCALE 1/100



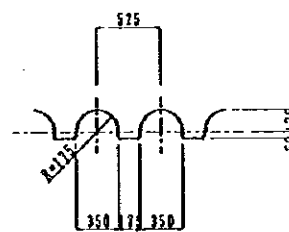
ENTRANCE (C-C)
SCALE 1/100



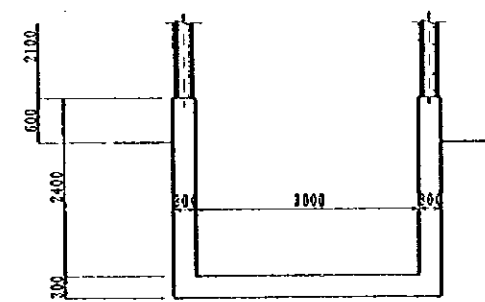
DETAIL a
SCALE 1/60



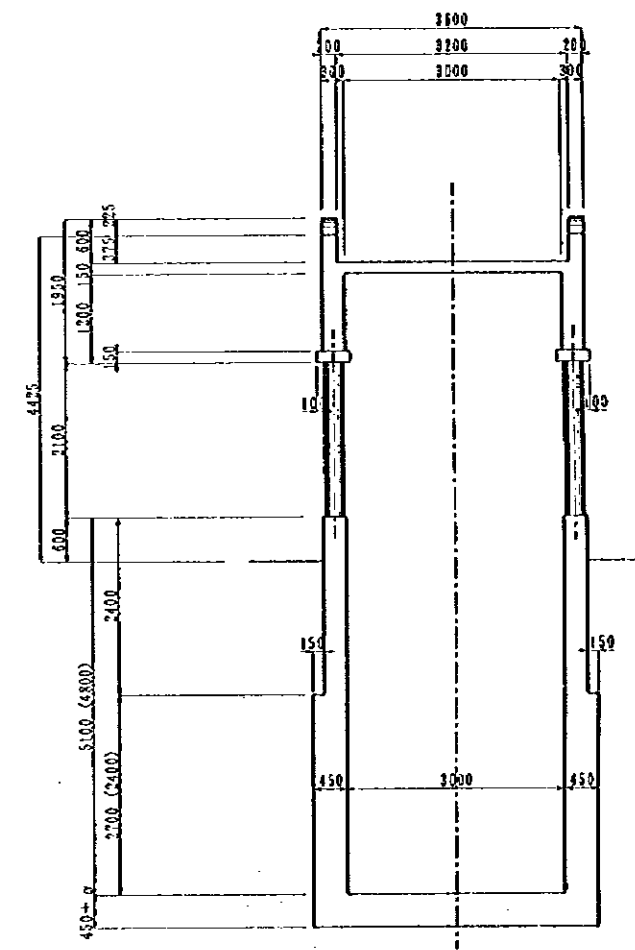
DETAIL b
SCALE 1/60



DETAIL c
SCALE 1/60



CROSS SECTION E-E
SCALE 1/100

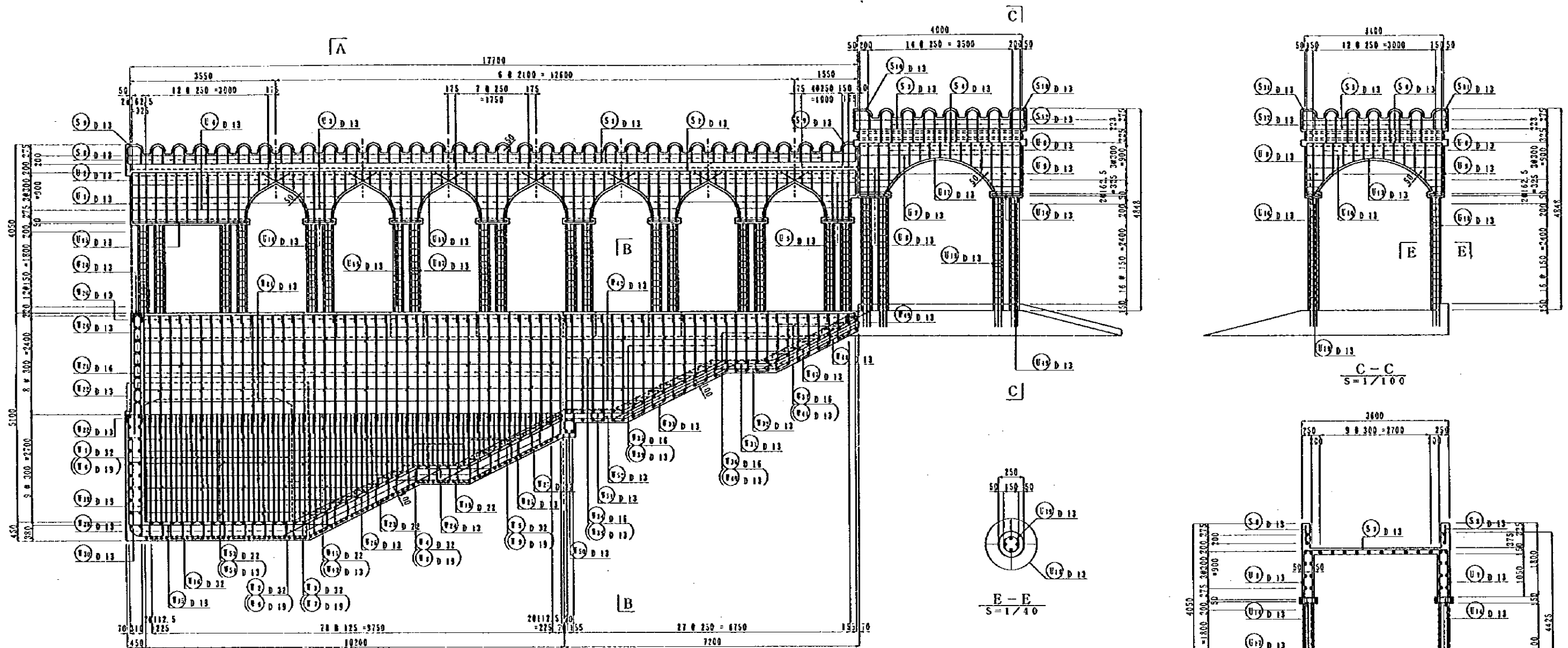


CROSS SECTION D-D
SCALE 1/100

NOTES: Dimensions of () value are for inland stair.

JAPAN INTERNATIONAL COOPERATION AGENCY
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PACIFIC CONSULTANTS INTERNATIONAL

CLIENT : MINISTRY OF COMMUNICATIONS, DIRECTORATE GENERAL OF ROADS
PROJECT : D/D ON ROAD DEVELOPMENT PROJECT ON BATINAH HIGHWAY
TITLE : P/U-11, LIWA GENERAL VIEW (3)
DATE : DVC NO. P- 3

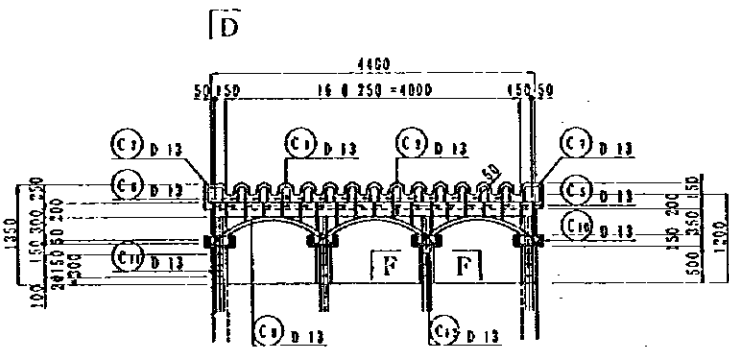


A SIDE VIEW
S=1/100

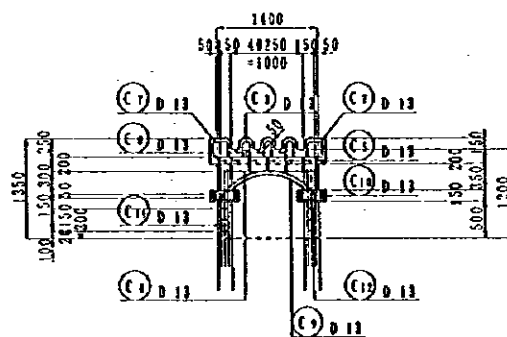
C - C
S=1/100

E - E
S=1/40

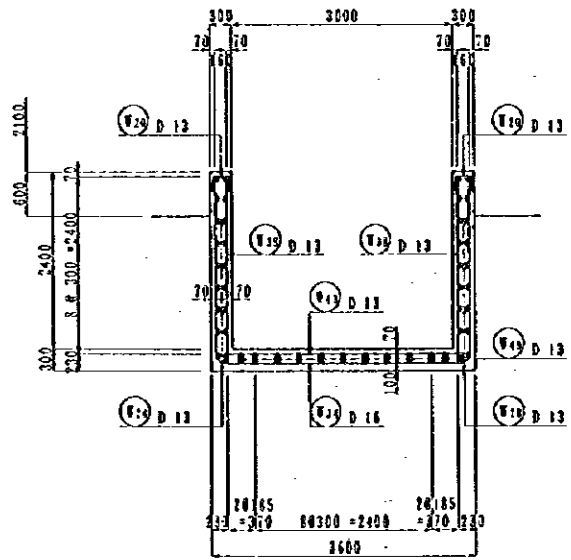
A - A
S=1/100



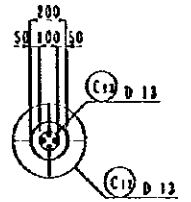
D CANOPY ON LIGHT
S=1/100



D - D
S=1/100



B - B
S=1/100

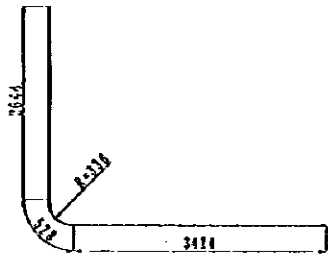


F - F
S=1/40

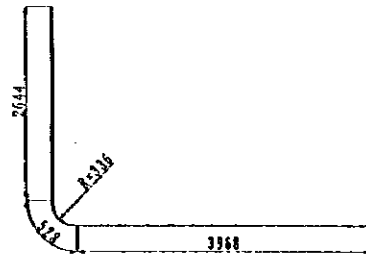
NOTES:

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PACIFIC CONSULTANTS INTERNATIONAL
FUKUYAMA CONSULTANTS INTERNATIONAL

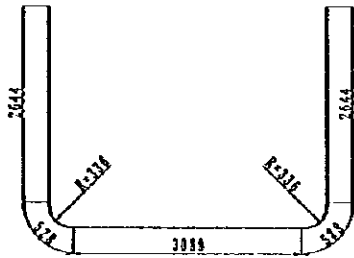
CLIENT : MINISTRY OF COMMUNICATIONS, DIRECTORATE GENERAL OF ROADS
PROJECT : D/D ON ROAD DEVELOPMENT PROJECT ON BATINAH HIGHWAY
TITLE : P/U-11, LIWA RE-BAR ARRANGEMENT (I)
DATE : _____
DWG NO. P - 4



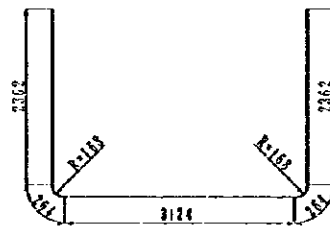
11 30-D22x 6 600



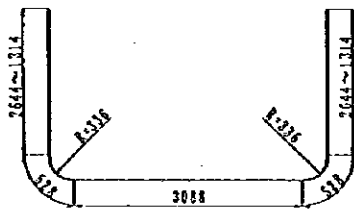
12 30-D22x 7 140



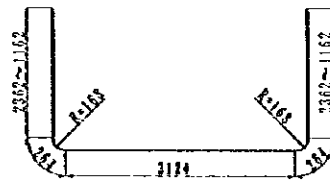
13 7-D22x 5 410



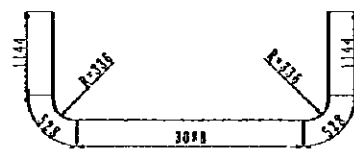
14 7-D16x 8 330



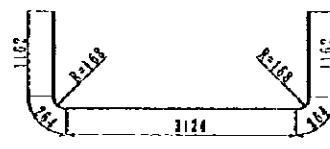
15 22-D22x 8 110



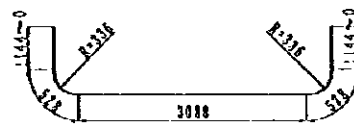
16 5-D16x 7 180



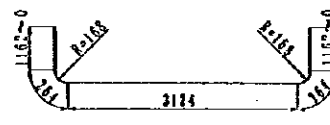
17 10-D22x 6 440



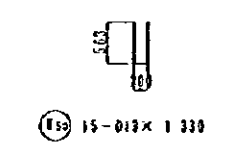
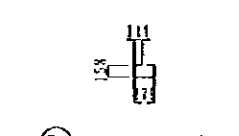
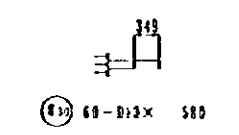
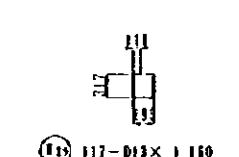
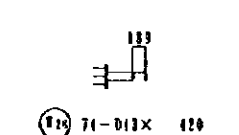
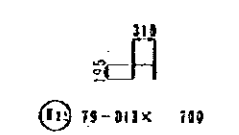
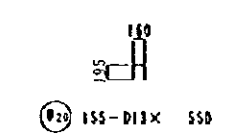
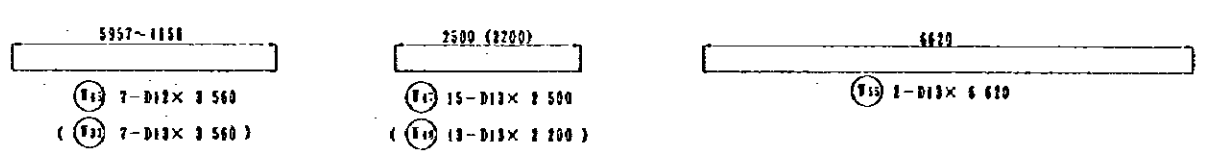
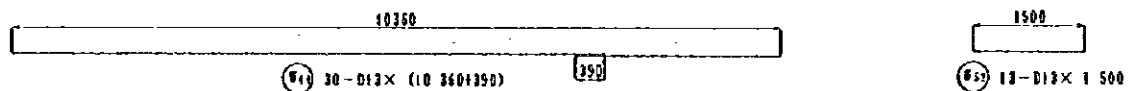
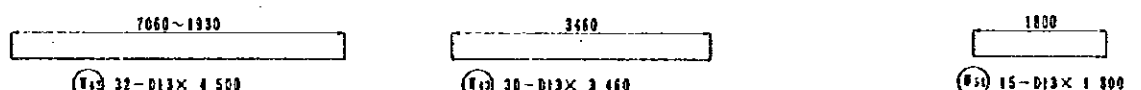
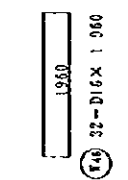
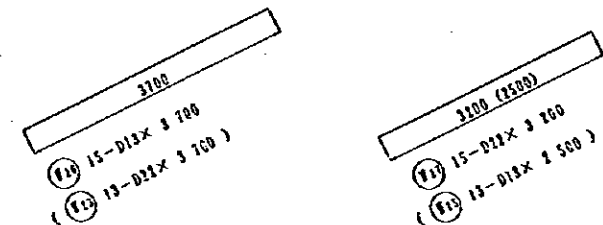
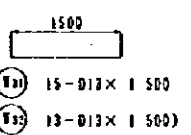
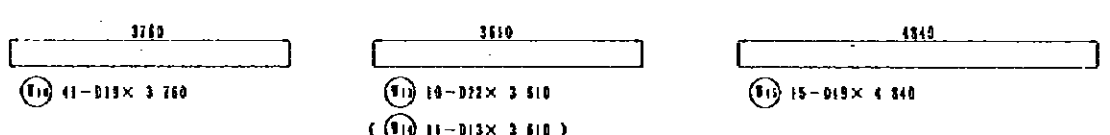
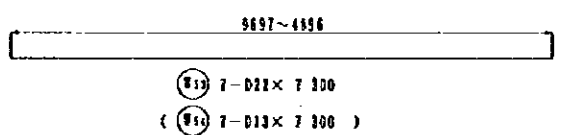
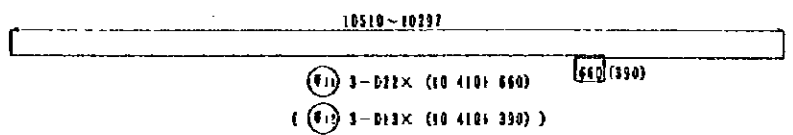
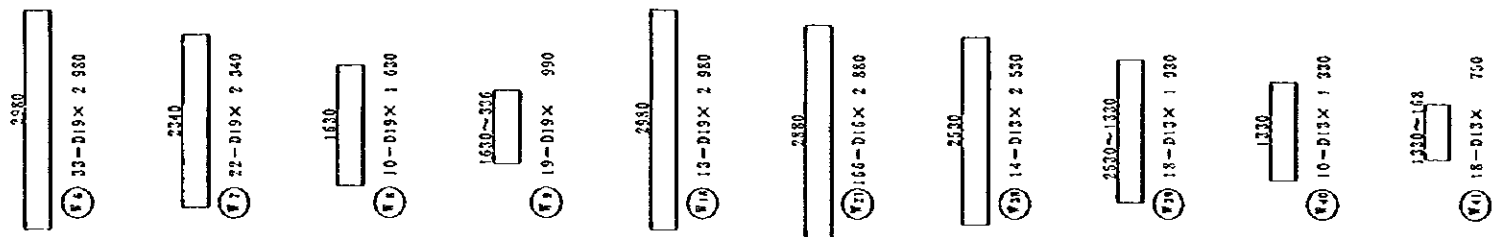
18 5-D16x 5 980



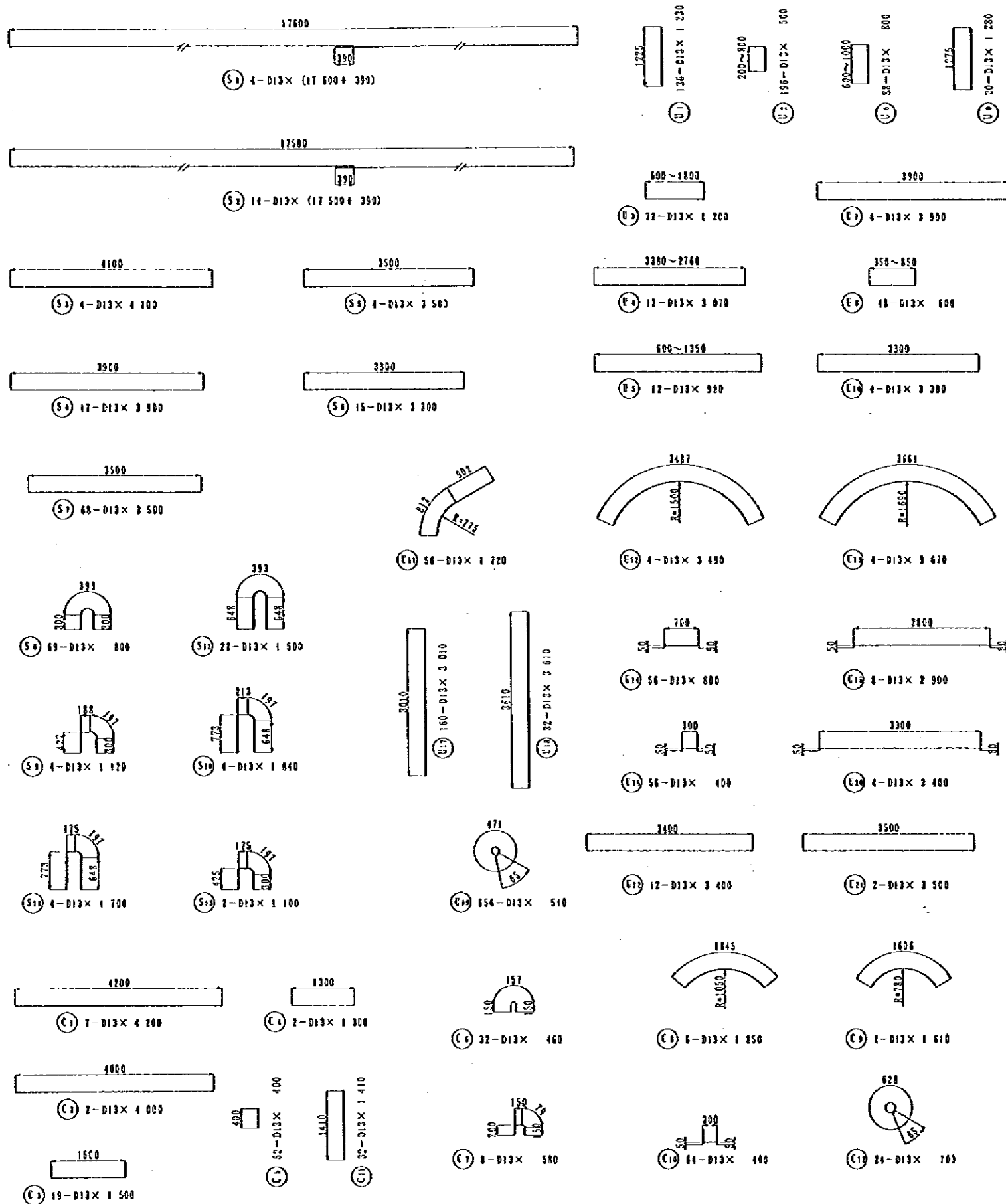
19 10-D22x 5 230



20 5-D16x 4 820

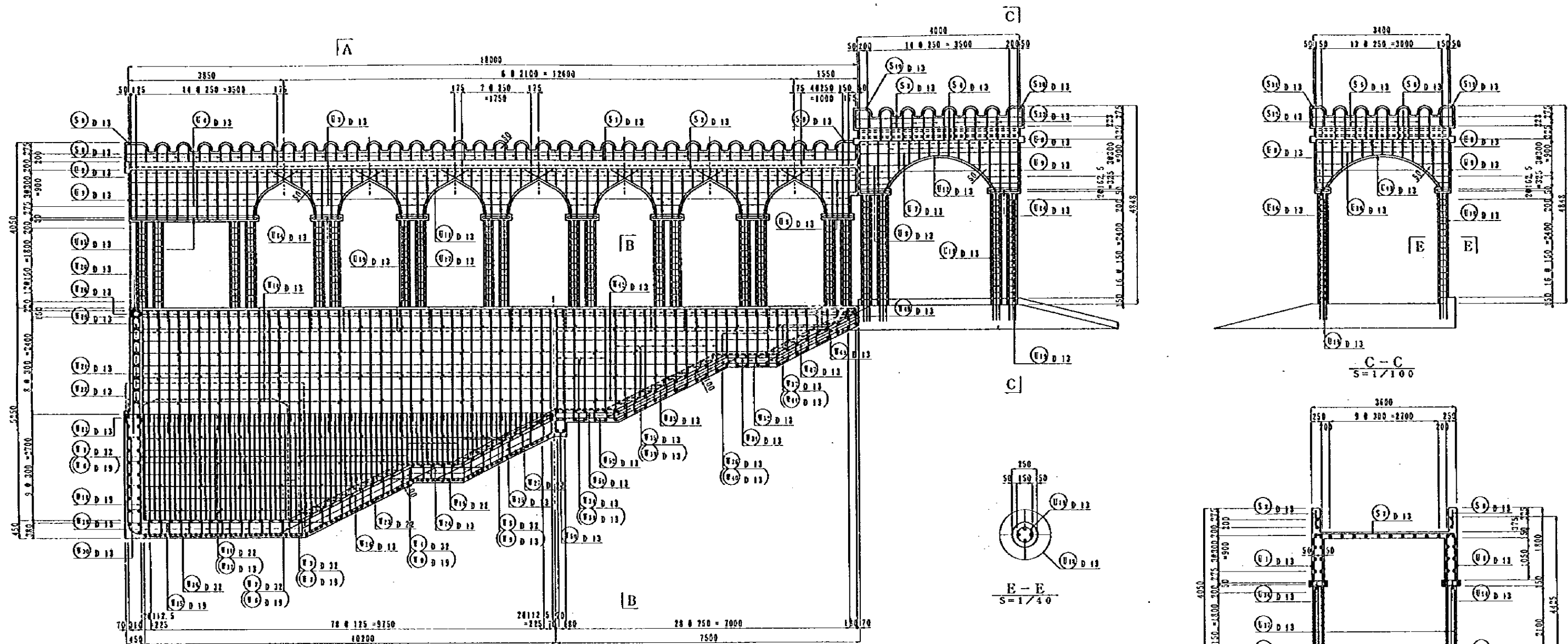


NOTES:	JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	CLIENT : MINISTRY OF COMMUNICATIONS, DIRECTORATE GENERAL OF ROADS
	JICA STUDY TEAM PACIFIC CONSULTANTS INTERNATIONAL FUJYAMA CONSULTANTS INTERNATIONAL	PROJECT : D/D ON ROAD DEVELOPMENT PROJECT ON BATINAH HIGHWAY
		TITLE : P/U-11, LIWA RE-BAR ARRANGEMENT (2)
		DATE : _____ DWG NO. P - 5



REIN. NO.	Ø (mm)	LENGTH (mm)	VOLUMETRIC WEIGHT	NO. OF BARS	WEIGHT	REMARKS
1	D 32	8 600	1.403	29	42.240	1275.6
2	"	9 410	"	2	60.444	120.9
3	"	8 110	"	22	51.928	1142.4
4	"	6 410	"	10	41.235	412.4
5	"	5 290	"	19	33.872	643.8
6	D 19	2 980	2.735	33	6.669	219.8
7	"	2 310	"	22	5.230	115.1
8	"	1 630	"	10	3.643	36.4
9	"	990	"	19	2.213	42.0
10	"	3 700	"	41	8.270	329.1
11	D 22	11 070	3.042	3	33.675	181.0
12	D 13	10 800	0.994	3	10.735	32.2
13	D 22	3 610	3.042	10	10.982	109.8
14	D 13	3 610	0.994	11	3.588	39.5
15	"	4 340	"	15	4.811	72.2
16	D 32	7 410	6.433	30	47.448	1473.4
17	D 13	3 440	0.994	16	3.433	55.0
18	D 19	2 980	2.735	12	6.660	80.6
19	D 22	1 800	3.042	13	5.476	71.2
20	D 13	550	0.994	155	0.547	84.8
21	D 13	2 880	1.552	166	4.470	742.0
22	D 13	700	0.994	79	0.686	55.0
23	D 22	3 700	3.042	13	11.255	146.3
24	D 13	1 800	0.994	15	1.783	26.8
25	"	2 500	"	13	2.485	32.3
26	"	3 700	"	15	3.678	55.2
27	D 22	3 200	3.042	15	9.734	146.0
28	D 13	420	0.994	91	0.417	37.9
29	"	1 160	"	117	1.153	124.9
30	"	530	"	60	0.577	34.6
31	"	1 500	"	15	1.491	22.4
32	"	1 500	"	13	1.491	19.4
33	"	3 560	"	7	3.539	24.8
34	D 16	8 380	1.552	7	13.006	91.0
35	"	7 180	"	7	11.143	78.0
36	"	5 980	"	5	9.281	46.4
37	"	6 820	"	9	7.481	67.2
38	D 13	2 530	0.994	14	2.515	35.2
39	"	1 930	"	18	1.918	34.5
40	"	1 330	"	10	1.327	18.2
41	"	750	"	18	0.746	13.4
42	"	4 500	"	32	4.473	143.1
43	"	3 480	"	30	3.433	103.2
44	"	10 250	"	30	10.684	320.6
45	"	3 580	"	7	3.539	24.8
46	D 16	1 960	1.552	32	3.042	97.3
47	D 13	2 500	0.994	15	2.485	37.3
48	"	2 200	"	13	2.307	28.4
49	"	820	"	68	0.815	55.4
50	"	1 330	"	15	1.327	19.8
51	"	1 800	"	15	1.783	26.8
52	"	1 500	"	13	1.491	19.4
53	D 22	2 300	3.042	7	22.207	155.4
54	D 13	7 300	0.994	7	7.256	50.8
55	"	6 620	"	2	6.580	19.8
9375.0						

REIN. NO.	Ø (mm)	LENGTH (mm)	VOLUMETRIC WEIGHT	NO. OF BARS	WEIGHT	REMARKS
S 1	D 13	17 950	0.994	4	17.832	71.5
2	"	17 830	"	14	17.283	249.0
3	"	4 100	"	4	4.075	16.3
4	"	3 900	"	17	3.877	55.9
5	"	3 500	"	4	3.479	13.9
6	"	3 300	"	15	3.280	49.2
7	"	3 500	"	69	3.479	236.6
8	"	800	"	69	0.795	54.9
9	"	1 830	"	4	1.874	4.3
10	"	1 840	"	4	1.829	7.3
11	"	1 700	"	4	1.630	6.8
12	"	1 500	"	22	1.491	37.6
13	"	1 100	"	2	1.093	2.2
818.7						
C 1	D 13	1 230	0.994	138	1.223	166.3
2	"	500	"	196	0.497	97.4
3	"	1 200	"	72	1.193	85.9
4	"	3 070	"	12	3.052	36.6
5	"	830	"	12	0.974	11.7
6	"	800	"	88	0.795	70.0
7	"	3 900	"	4	3.877	15.5
8	"	600	"	40	0.596	28.6
9	"	1 280	"	20	1.272	25.4
10	"	3 300	"	4	3.280	13.1
11	"	1 720	"	58	1.710	95.8
12	"	3 490	"	4	3.469	13.9
13	"	3 670	"	4	3.648	14.6
14	"	800	"	56	0.795	44.5
15	"	2 300	"	8	2.383	23.1
16	"	400	"	54	0.398	21.3
17	"	3 610	"	160	2.392	478.7
18	"	3 610	"	32	3.588	114.8
19	"	540	"	66	0.537	352.3
20	"	3 400	"	4	3.380	13.5
21	"	3 500	"	2	3.479	7.0
22	"	3 400	"	12	3.380	40.6
1771.6						
C 1	D 13	4 200	0.994	7	4.175	29.2
2	"	4 000	"	2	3.976	8.0
3	"	1 500	"	19	1.491	28.3
4	"	1 300	"	2	1.292	2.6
5	"	400	"	52	0.298	20.7
6	"	460	"	32	0.457	14.8
7	"	580	"	8	0.577	4.6
8	"	1 850	"	6	1.833	11.0
9	"	1 610	"	2	1.600	3.2
10	"	400	"	64	0.398	25.5
11	"	1 410	"	32	1.402	14.9
12	"	700	"	24	0.696	16.7
269.3						
TOTAL WEIGHT 12116.6						



A SIDE VIEW
S=1/100

D CANOPY ON LIGHT
S=1/100

D-D
S=1/100

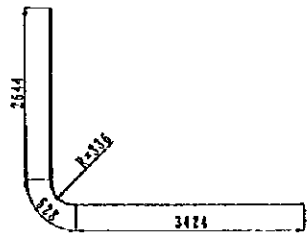
B-B
S=1/100

A-A
S=1/100

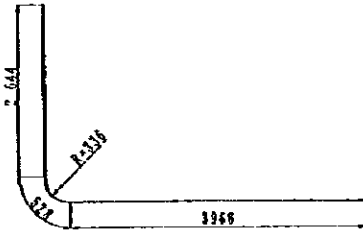
NOTES:

JAPAN INTERNATIONAL COOPERATION AGENCY
(JICA)
JICA STUDY TEAM
PACIFIC CONSULTANTS INTERNATIONAL
FUKUYAMA CONSULTANTS INTERNATIONAL

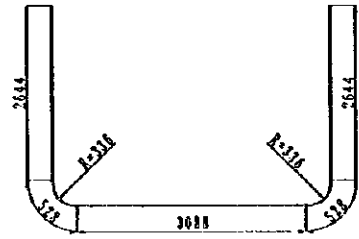
CLIENT : MINISTRY OF COMMUNICATIONS, DIRECTORATE GENERAL OF ROADS
PROJECT : D/D ON ROAD DEVELOPMENT PROJECT ON BATINAH HIGHWAY
TITLE : P/U-11. LIWA RE-BAR ARRANGEMENT (4)
DATE :
DWG NO. P-7



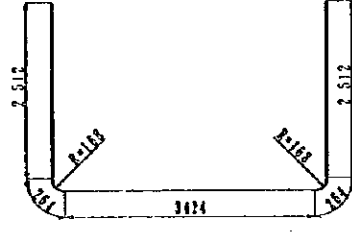
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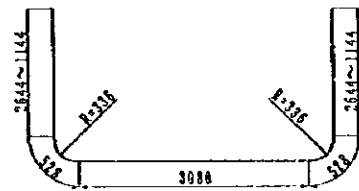
(E10) 30-D32 x 7 140



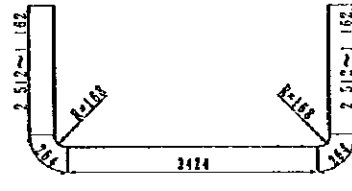
(E2) 2-D32 x 9 440



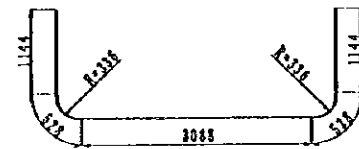
(E12) 6-D16 x 8 980



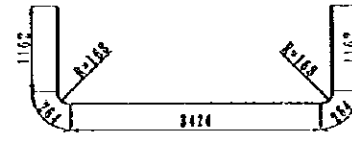
(E3) 22-D32 x 8 110



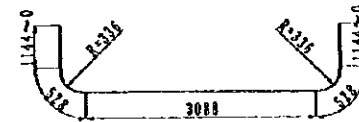
(E20) 11-D16 x 7 830



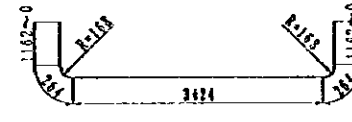
(E4) 10-D32 x 6 440



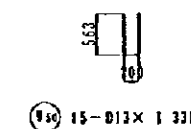
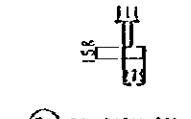
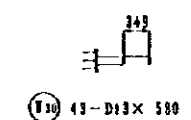
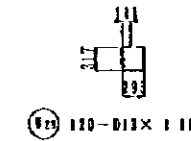
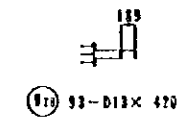
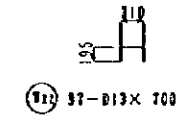
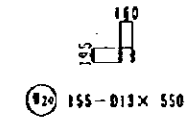
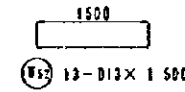
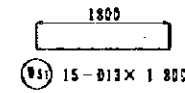
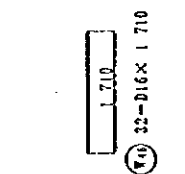
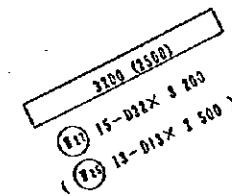
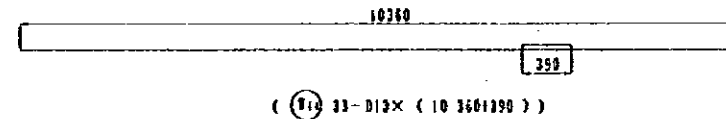
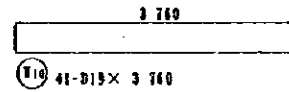
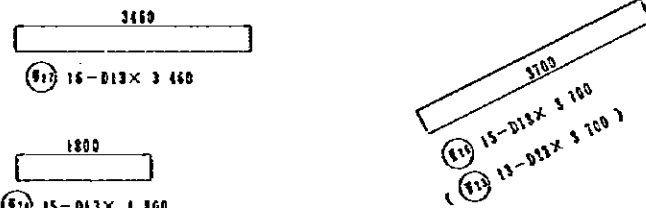
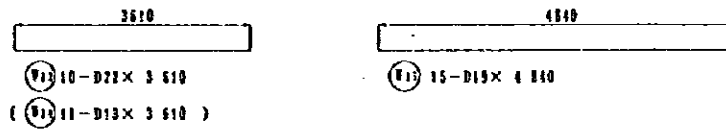
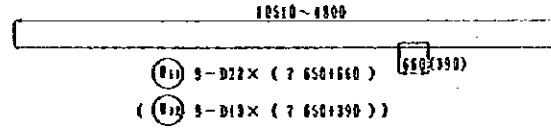
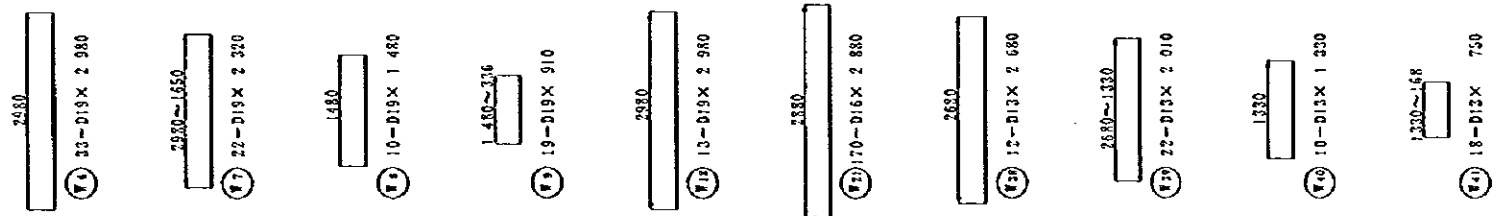
(E21) 5-D16 x 6 280



(E5) 19-D32 x 5 280



(E22) 9-D16 x 5 120



NOTES:

JAPAN INTERNATIONAL COOPERATION AGENCY
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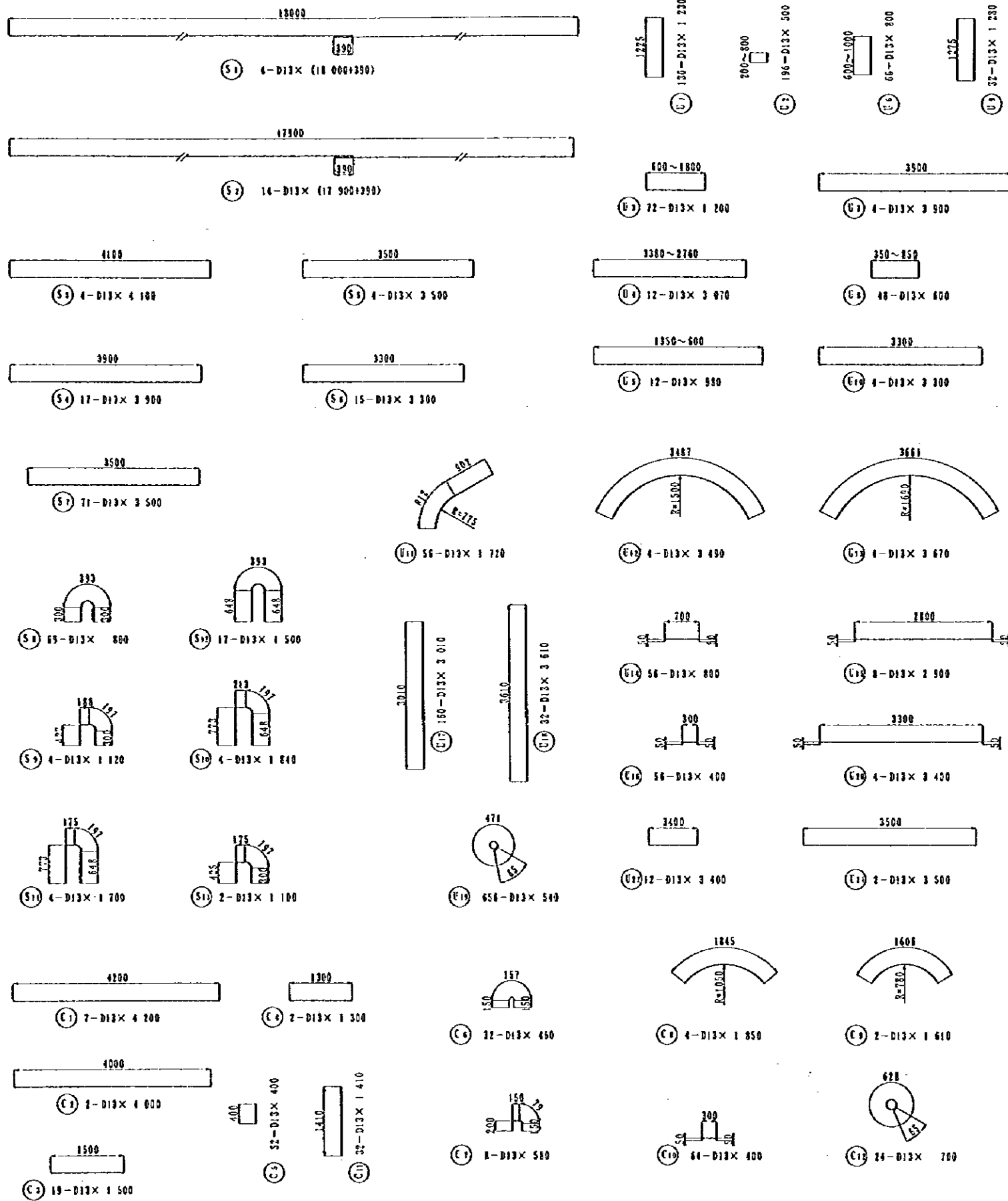
JICA STUDY TEAM
PACIFIC CONSULTANTS INTERNATIONAL
FLUYANA CONSULTANTS INTERNATIONAL

CLIENT : MINISTRY OF COMMUNICATIONS, DIRECTORATE GENERAL OF ROADS

PROJECT : D/D ON ROAD DEVELOPMENT PROJECT ON BATINAH HIGHWAY

TITLE : P/U-11, LIWA RE-BAR ARRANGEMENT (5)

DATE : _____ DWG NO. P - 8



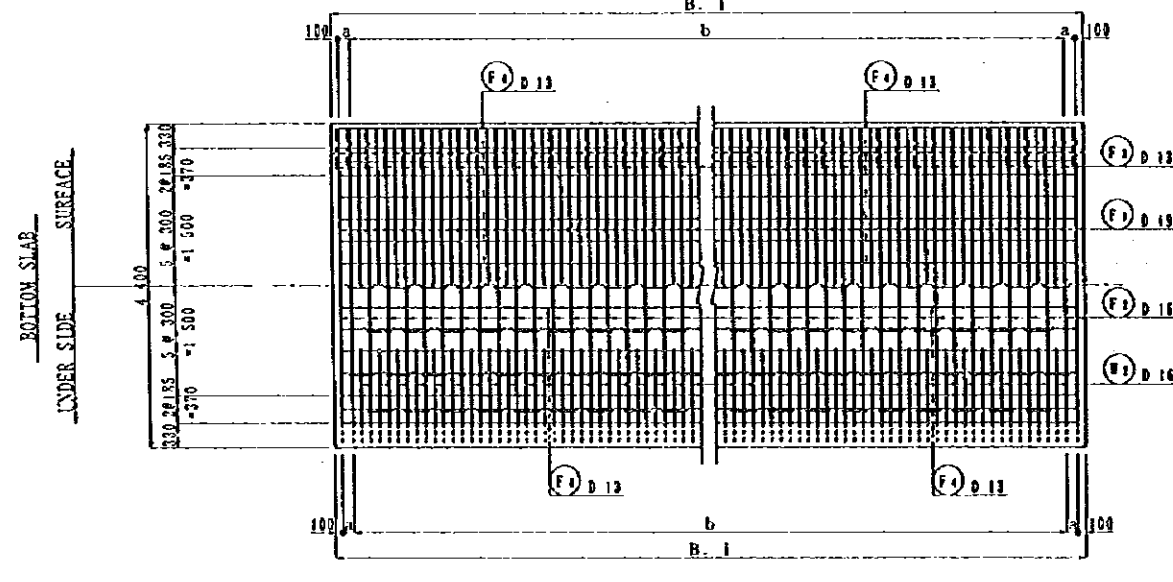
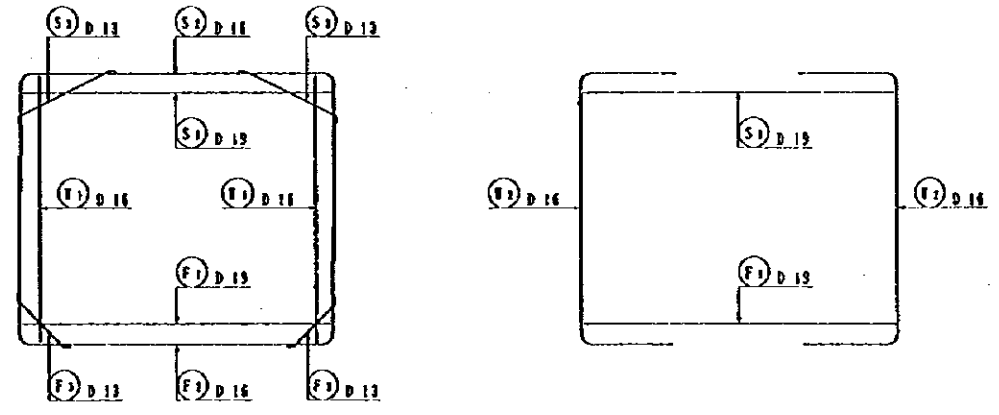
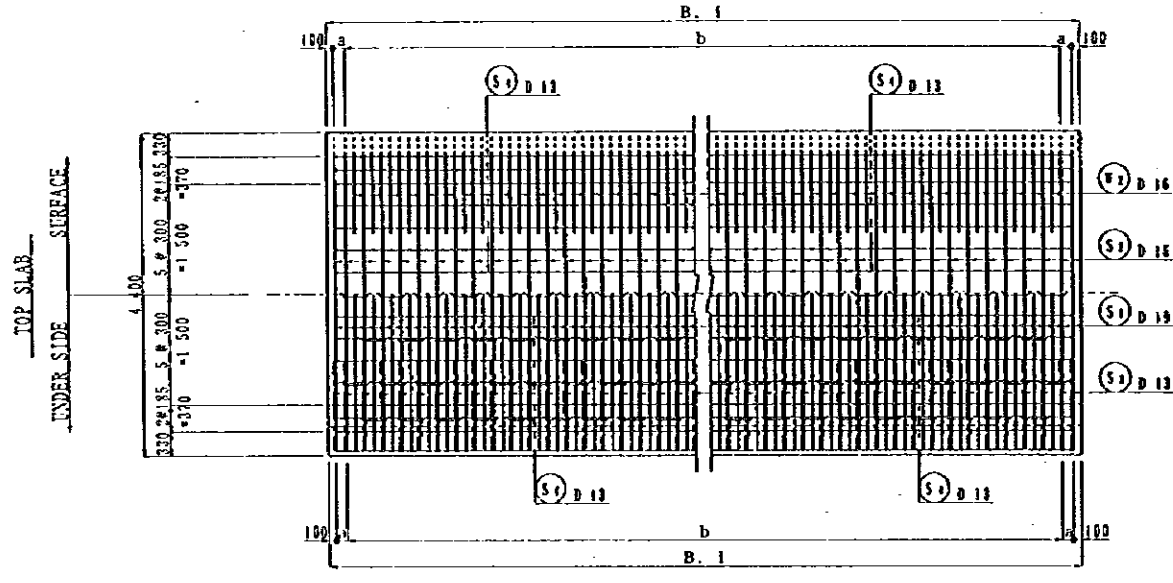
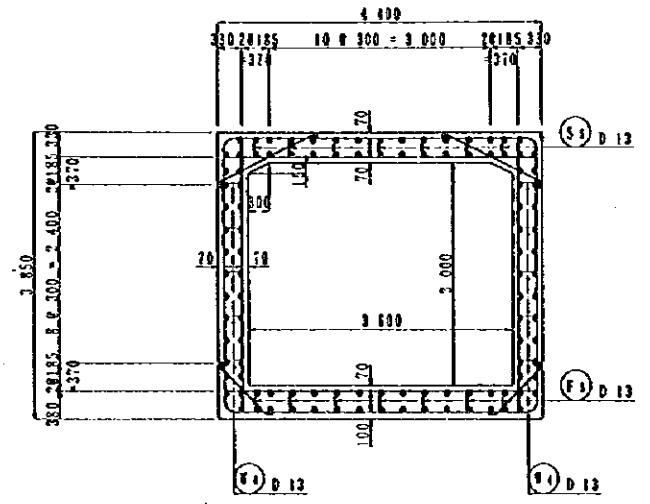
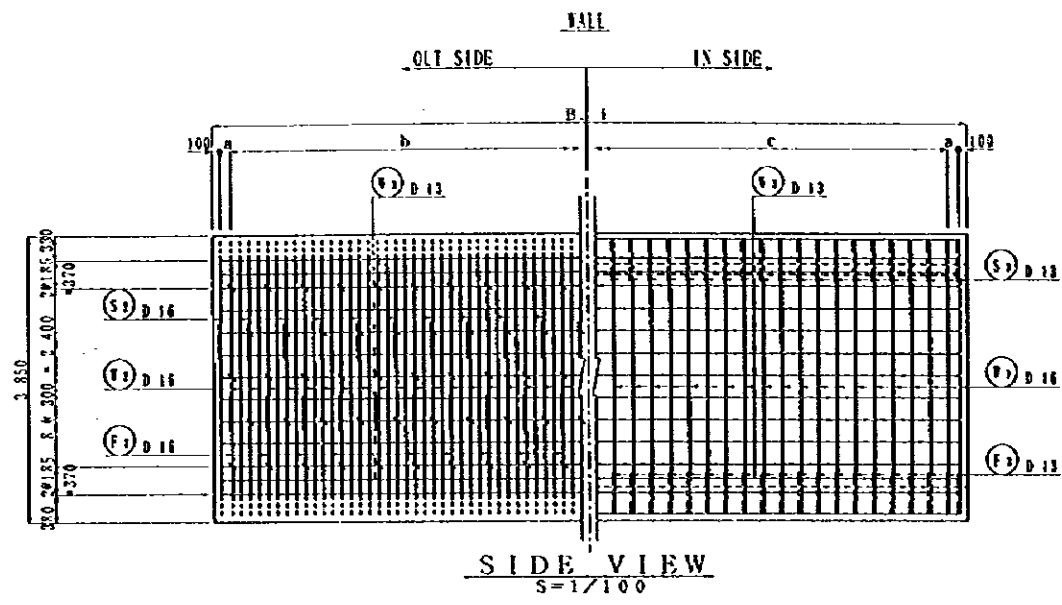
REIN. NO.	Ø (mm)	LENGTH (cm)	THEORETICAL WEIGHT	NO.	U WEIGHT	WEIGHT	REMARKS
1	D 22	6 600	6.403	31	43.260	1 225.5	┌
2	"	9 640	"	7	69.464	128.9	└
3	"	8 160	"	22	51.928	1147.4	┌
4	"	6 440	"	10	41.235	412.4	└
5	"	5 290	"	19	33.672	638.6	┌
6	D 18	2 380	2.235	35	6.660	238.8	└
7	"	2 320	"	22	5.185	114.1	┌
8	"	1 480	"	10	2.305	23.0	└
9	"	510	"	19	2.034	20.3	┌
10	"	3 260	"	41	8.404	344.5	└
11	D 22	8 320	3.042	9	25.309	227.8	┌
12	D 18	2 050	0.994	9	6.002	72.0	└
13	D 21	3 610	3.042	18	10.981	109.8	┌
14	D 18	3 610	0.994	11	2.588	29.5	└
15	D 18	4 840	2.235	15	10.817	162.3	┌
16	D 22	2 140	6.403	30	45.712	1 371.5	└
17	D 18	3 150	0.994	16	3.161	50.3	┌
18	D 18	2 980	2.235	13	6.660	86.6	└
19	D 22	1 800	0.994	13	5.476	71.2	┌
20	D 18	550	"	155	0.547	84.7	└
21	D 18	2 880	1.552	132	4.470	590.0	┌
22	D 18	700	0.994	97	0.696	67.5	└
23	D 22	3 700	3.042	13	11.255	146.3	┌
24	D 18	1 800	0.994	15	1.789	26.8	└
25	"	2 500	"	12	2.485	32.3	┌
26	"	3 700	"	15	3.678	55.2	└
27	D 22	3 200	3.042	15	9.734	146.0	┌
28	D 18	420	0.994	93	2.181	295.8	└
29	"	1 760	"	120	1.152	138.4	┌
30	"	580	"	43	0.572	24.8	└
31	"	1 500	"	45	1.491	22.4	┌
32	"	1 500	"	13	1.491	19.4	└
33	D 22	3 210	3.042	9	11.894	107.0	┌
34	D 18	8 980	1.552	6	13.937	83.6	└
35	"	7 630	"	11	11.643	130.3	┌
36	"	6 280	"	5	9.747	48.7	└
37	"	5 120	"	9	7.940	71.5	┌
38	D 18	2 660	0.994	12	2.664	32.0	└
39	"	2 010	"	22	1.598	44.0	┌
40	"	1 330	"	19	1.322	13.2	└
41	"	750	"	18	0.746	13.4	┌
42	"	4 830	"	36	4.801	172.8	└
43	"	3 460	"	31	3.439	106.6	┌
44	"	10 750	"	33	10.686	352.6	└
45	"	3 910	"	9	3.887	35.0	┌
46	D 18	1 710	1.552	32	2.654	84.9	└
47	D 18	2 500	0.994	15	2.485	37.3	┌
48	"	2 200	"	13	2.187	28.4	└
49	"	820	"	24	0.615	68.6	┌
50	"	1 330	"	15	1.322	19.8	└
51	"	1 850	"	15	1.789	26.8	┌
52	"	1 500	"	13	1.491	19.4	└
3652.2							

REIN. NO.	Ø (mm)	LENGTH (cm)	THEORETICAL WEIGHT	NO.	U WEIGHT	WEIGHT	REMARKS
S 1	D 13	18 390	0.994	4	18.780	73.1	┌
2	"	18 290	"	14	18.168	254.5	└
3	"	4 100	"	4	4.015	16.3	┌
4	"	3 900	"	12	3.872	65.9	└
5	"	3 500	"	4	3.479	13.9	┌
6	"	3 300	"	15	3.260	49.2	└
7	"	3 500	"	71	3.479	247.0	┌
8	"	800	"	69	0.795	54.9	└
9	"	1 120	"	4	1.113	4.5	┌
10	"	1 640	"	4	1.629	7.3	└
11	"	1 700	"	4	1.690	6.8	┌
12	"	1 500	"	22	1.491	32.8	└
13	"	1 400	"	2	1.093	2.2	┌
922.4							
U 1	D 13	1 230	0.994	136	1.223	166.3	┌
2	"	500	"	196	0.497	97.4	└
3	"	1 200	"	72	1.193	85.9	┌
4	"	3 070	"	12	3.052	36.6	└
5	"	980	"	12	0.974	11.7	┌
6	"	800	"	88	0.795	70.0	└
7	"	3 900	"	4	3.872	15.5	┌
8	"	600	"	48	0.596	28.6	└
9	"	1 280	"	32	1.272	40.7	┌
10	"	3 320	"	2	3.280	6.6	└
11	"	1 720	"	56	1.710	95.8	┌
12	"	3 450	"	4	3.465	13.9	└
13	"	3 670	"	4	3.648	14.6	┌
14	"	800	"	56	0.795	44.5	└
15	"	2 900	"	8	2.883	23.1	┌
16	"	400	"	56	0.398	22.3	└
17	"	3 010	"	160	2.992	478.7	┌
18	"	3 610	"	32	3.598	114.8	└
19	"	540	"	658	0.537	352.1	┌
20	"	3 400	"	4	3.380	13.5	└
21	"	3 500	"	2	3.479	7.0	┌
22	"	3 400	"	12	3.380	40.6	└
1780.1							
C 1	D 13	4 200	0.994	7	4.175	29.2	┌
2	"	4 000	"	2	3.976	8.0	└
3	"	1 500	"	19	1.491	28.3	┌
4	"	1 300	"	2	1.292	2.6	└
5	"	400	"	58	0.398	20.7	┌
6	"	460	"	32	0.457	14.6	└
7	"	580	"	8	0.577	4.6	┌
8	"	1 850	"	6	1.839	11.0	└
9	"	1 610	"	3	1.600	3.2	┌
10	"	400	"	64	0.398	25.4	└
11	"	1 610	"	32	1.402	44.8	┌
12	"	700	"	24	0.698	16.7	└
TOTAL WEIGHT 12 470.3							

NOTES:

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)
 JICA STUDY TEAM
 PACIFIC CONSULTANTS INTERNATIONAL
 FUNYAMA CONSULTANTS INTERNATIONAL

CLIENT : MINISTRY OF COMMUNICATIONS, DIRECTORATE GENERAL OF ROADS
 PROJECT : D/D ON ROAD DEVELOPMENT PROJECT ON BATINAH HIGHWAY
 TITLE : P/U-11, LIWA RE-BAR ARRANGEMENT (6)
 DATE : _____ DWG NO. P-9

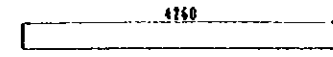
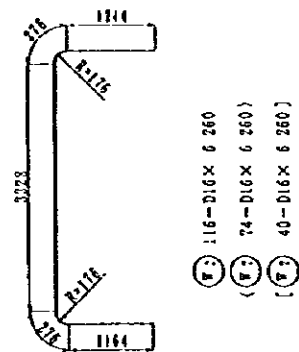
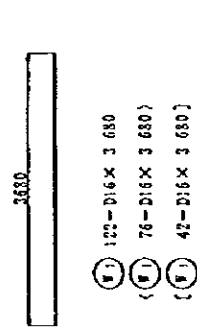


	B. I	a	b	c
TYPE A	15 000	150	116 @ 125	58 @ 250
TYPE C	5 450	100	40 @ 125	20 @ 250
TYPE D	9 450	---	54 @ 125	37 @ 250

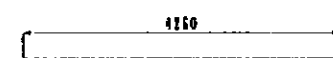
NOTES:

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)
 JICA STUDY TEAM
 PACIFIC CONSULTANTS INTERNATIONAL
 FUKUYAMA CONSULTANTS INTERNATIONAL

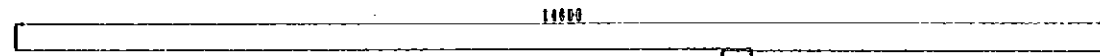
CLIENT : MINISTRY OF COMMUNICATIONS, DIRECTORATE GENERAL OF ROADS
 PROJECT : D/D ON ROAD DEVELOPMENT PROJECT ON BATINAH HIGHWAY
 TITLE : P/U-11, LIWA RE-BAR ARRANGEMENT (7)
 DATE : _____ DWG NO. P-10



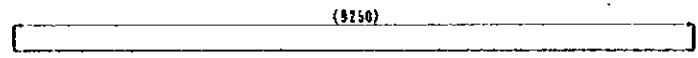
- (S) 118-D19 x 4 260
- (S) 75-D19 x 4 260
- (S) 41-D19 x 4 260



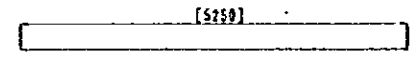
- (F) 118-D19 x 4 260
- (F) 75-D19 x 4 260
- (F) 41-D19 x 4 260



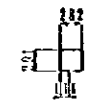
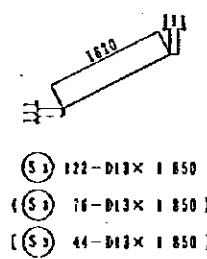
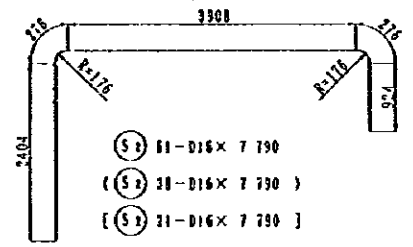
- (S) 32-D13 x (14 800 + 390)
- (W) 44-D13 x (14 800 + 390)
- (F) 32-D13 x (14 800 + 390)



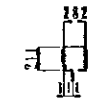
- (S) 32-D13 x 9 250
- (W) 44-D13 x 9 250
- (F) 32-D13 x 9 250



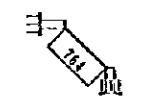
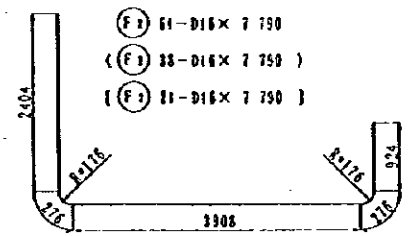
- (S) 32-D13 x 5 250
- (W) 44-D13 x 5 250
- (F) 32-D13 x 5 250



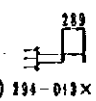
- (S) 203-D13 x 1 090
- (S) 130-D13 x 1 090
- (S) 70-D13 x 1 090



- (F) 203-D13 x 1 130
- (F) 130-D13 x 1 130
- (F) 70-D13 x 1 130



- (F) 122-D13 x 990
- (F) 76-D13 x 990
- (F) 44-D13 x 990



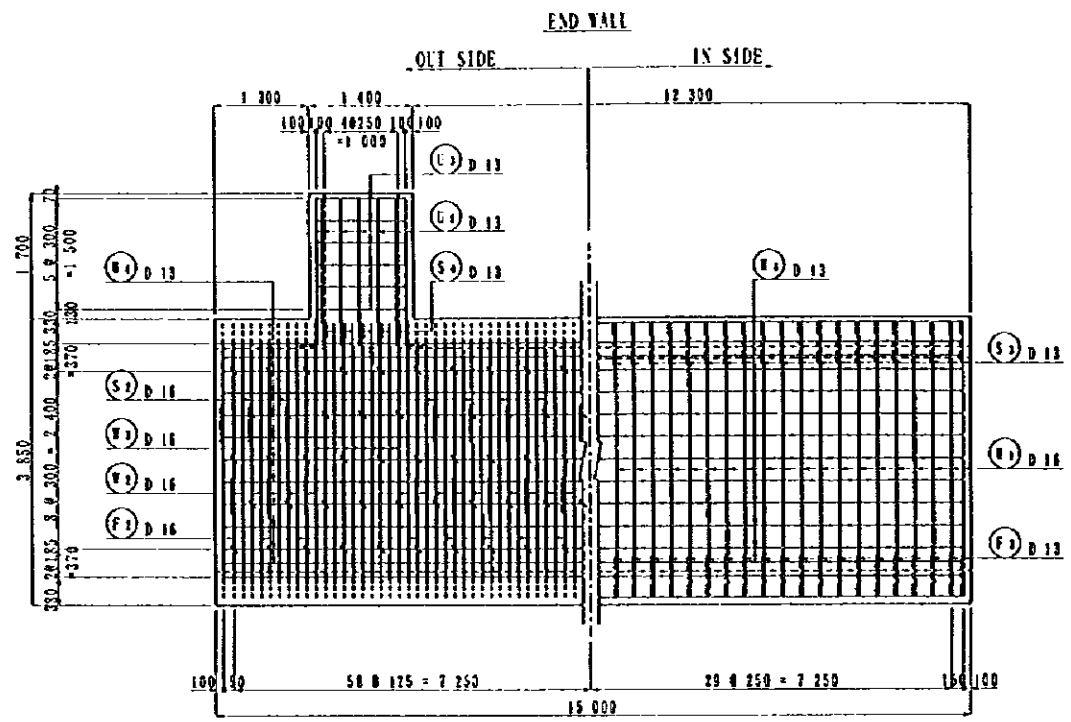
- (F) 203-D13 x 520
- (F) 130-D13 x 520
- (F) 106-D13 x 520

REIN. NO.	φ (mm)	LENGTH (mm)	NOMINAL WEIGHT	NLMB	U WEIGHT	WEIGHT	REMARKS
TYPE-A							
S 1	D 19	4 260	2.235	118	9.521	1139.0	
2	D 16	7 790	1.552	61	12.090	737.5	
3	D 13	1 850	0.934	122	0.839	224.4	
4	"	15 190	"	32	15.039	493.2	
5	"	1 090	"	203	1.083	219.9	□
W 1	D 16	3 680	1.552	122	5.214	658.2	
2	"	6 260	"	116	9.716	1127.1	
3	D 13	15 190	0.934	44	15.039	664.4	
4	"	520	"	294	0.517	152.0	
F 1	D 19	4 260	2.235	118	9.521	1139.0	
2	D 16	7 790	1.552	61	12.090	737.5	
3	D 13	990	0.934	122	0.984	120.0	
4	"	15 190	"	32	15.039	493.2	
5	"	1 130	"	203	1.123	228.0	□
							1139.9
TYPE-C							
S 1	D 13	4 260	2.235	75	9.521	710.1	
2	D 16	7 790	1.552	38	12.090	459.4	
3	D 13	1 850	0.934	76	1.833	139.8	
4	"	9 250	"	32	9.185	294.2	
5	"	1 090	"	130	1.083	140.8	□
W 1	D 16	3 680	1.552	76	5.214	434.0	
2	"	6 260	"	74	9.716	719.0	
3	D 13	9 250	0.934	44	9.185	436.3	
4	"	520	"	186	0.517	96.2	
F 1	D 13	4 260	2.235	75	9.521	710.1	
2	D 16	7 790	1.552	38	12.090	459.4	
3	D 13	990	0.934	76	0.984	74.8	
4	"	9 250	"	32	9.185	294.2	
5	"	1 130	"	130	1.123	146.0	□
							5432.6
TYPE-D							
S 1	D 19	4 260	2.235	41	9.521	390.4	
2	D 16	7 790	1.552	21	12.090	259.9	
3	D 13	1 850	0.934	44	1.833	80.9	
4	"	5 250	"	32	5.219	167.0	
5	"	1 090	"	70	1.083	75.8	□
W 1	D 16	3 680	1.552	42	5.214	239.9	
2	"	6 260	"	40	9.716	389.6	
3	D 13	5 250	0.934	44	5.219	229.6	
4	"	520	"	106	0.517	54.8	
F 1	D 19	4 260	2.235	41	9.521	390.4	
2	D 16	7 790	1.552	21	12.090	259.9	
3	D 13	990	0.934	44	0.984	43.3	
4	"	5 250	"	32	5.219	167.0	
5	"	1 130	"	70	1.123	78.6	□
							2814.1
							D 19 4475.0
							D 16 8664.1
							D 13 5247.5
							TOTAL WEIGHT 16366.6

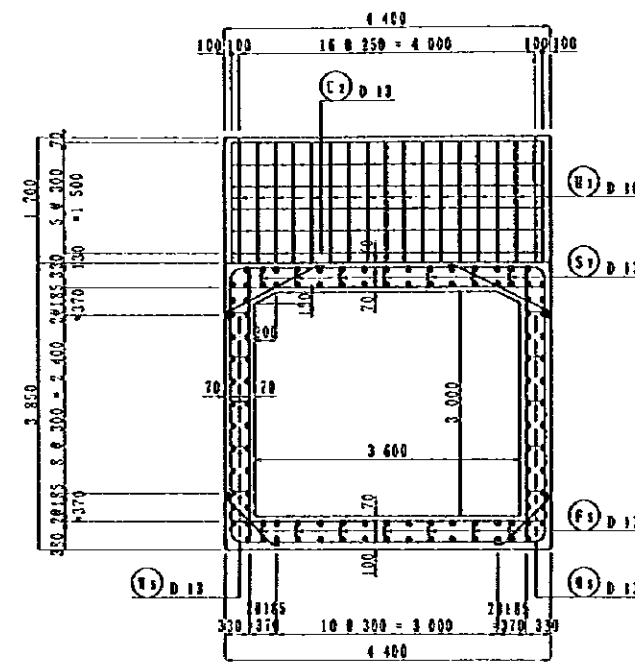
NOTES: () TYPE-C
() TYPE-D

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)
JICA STUDY TEAM
PACIFIC CONSULTANTS INTERNATIONAL
FUKUYAMA CONSULTANTS INTERNATIONAL

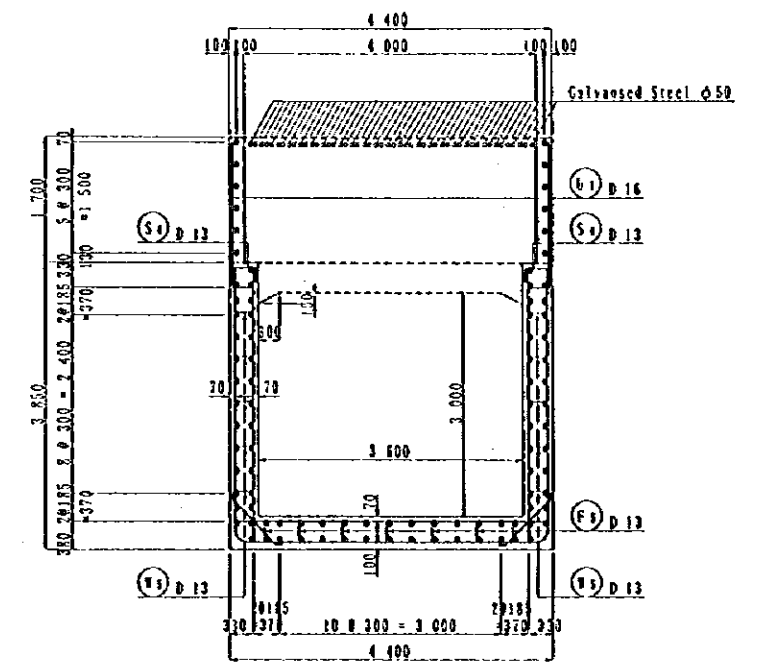
CLIENT : MINISTRY OF COMMUNICATIONS, DIRECTORATE GENERAL OF ROADS
PROJECT : D/D ON ROAD DEVELOPMENT PROJECT ON BATINAH HIGHWAY
TITLE : P/U-11, LIWA RE-BAR ARRANGEMENT (8)
DATE : _____ DWG NO. P-11



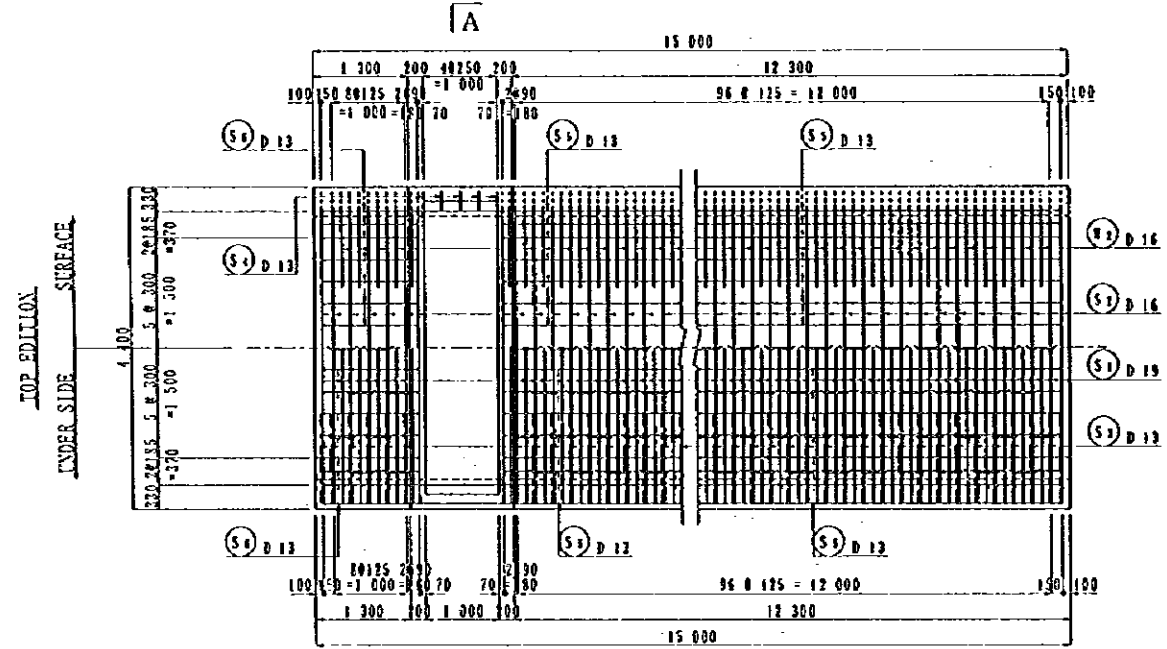
SIDE VIEW
S=1/100



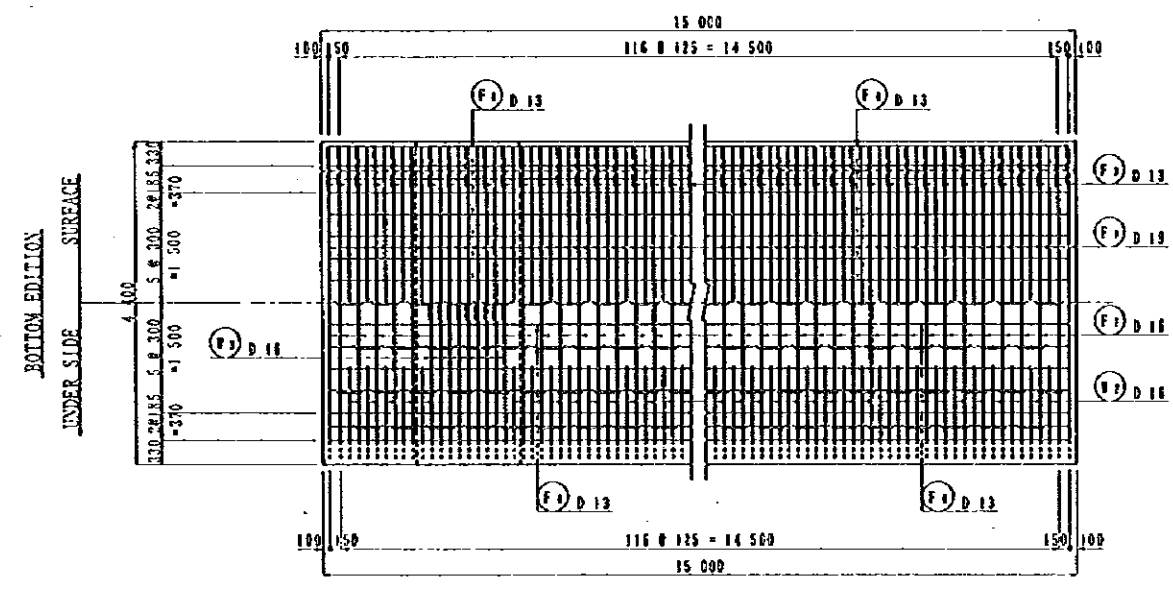
SECTION
S=1/100



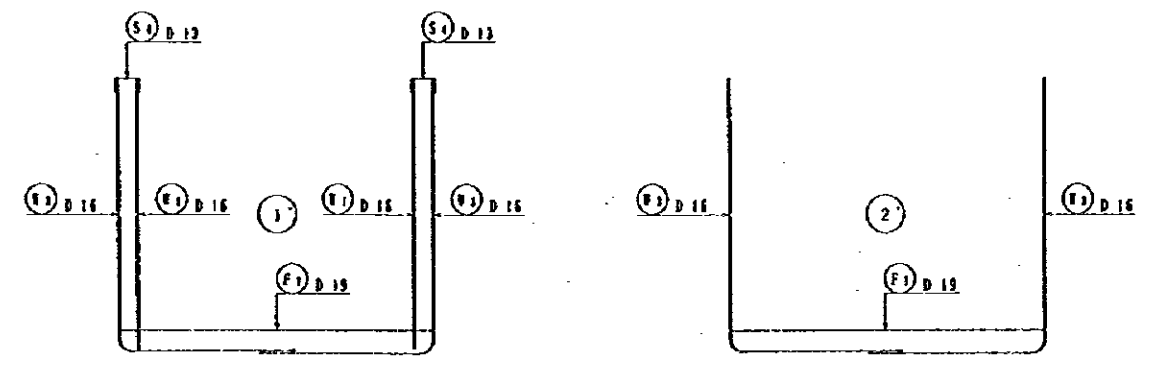
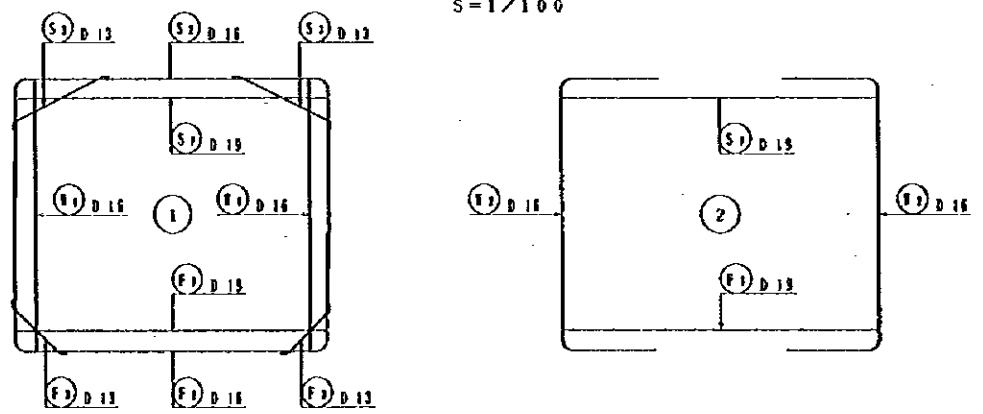
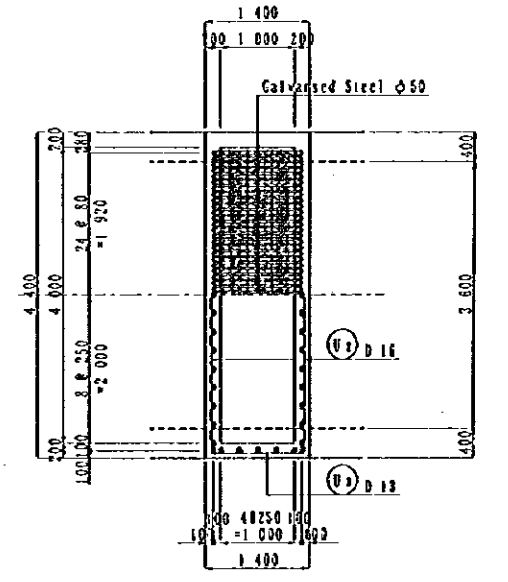
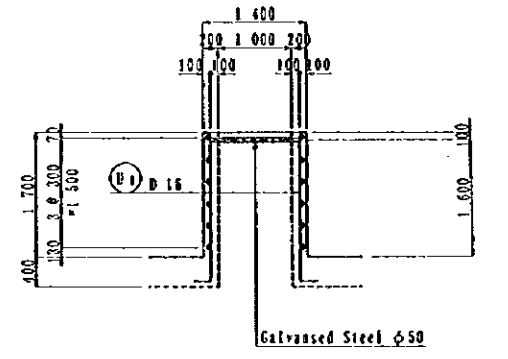
A-A
S=1/100



PLAN
S=1/100

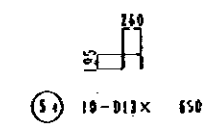
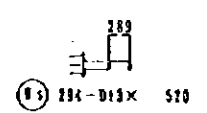
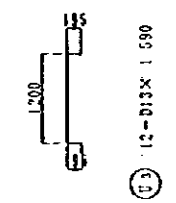
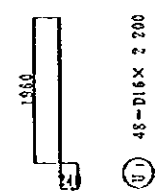
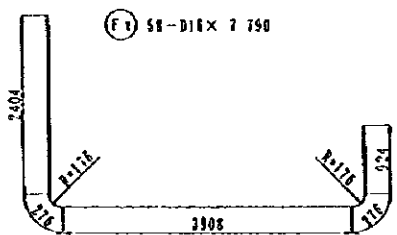
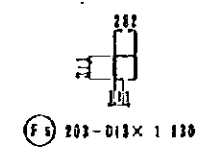
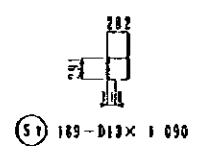
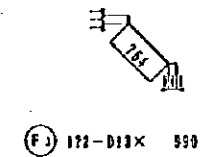
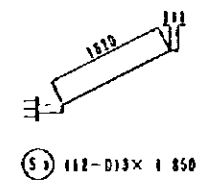
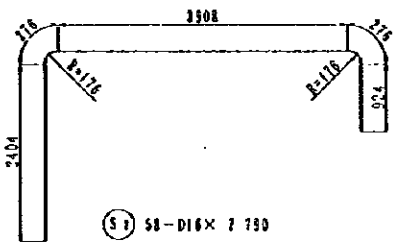
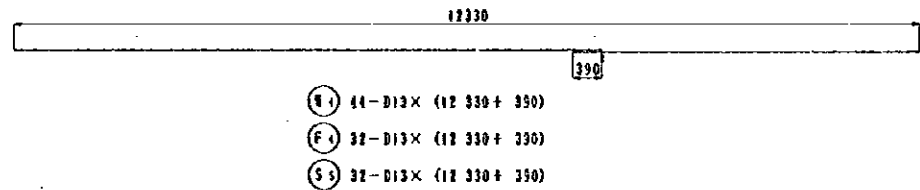
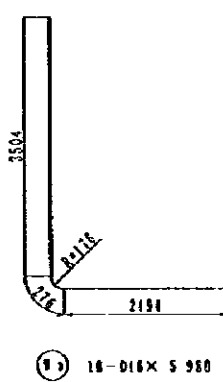
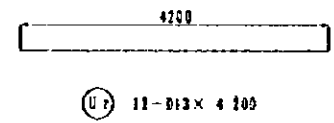
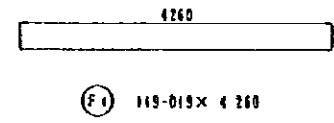
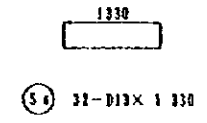
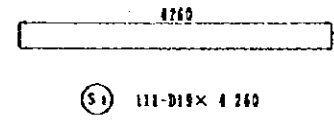
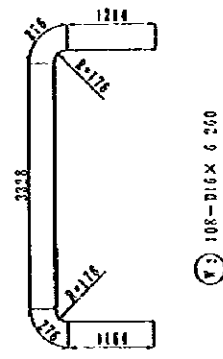
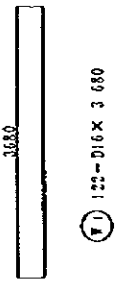


PLAN
S=1/100



NOTES:

	JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	CLIENT :	MINISTRY OF COMMUNICATIONS, DIRECTORATE GENERAL OF ROADS
	JICA STUDY TEAM PACIFIC CONSULTANTS INTERNATIONAL FLUKEVAMA CONSULTANTS INTERNATIONAL	PROJECT :	D/D ON ROAD DEVELOPMENT PROJECT ON BATINAH HIGHWAY
		TITLE :	P/U-11, LIWA RE-BAR ARRANGEMENT (9)
		DATE	DWG NO. P-12



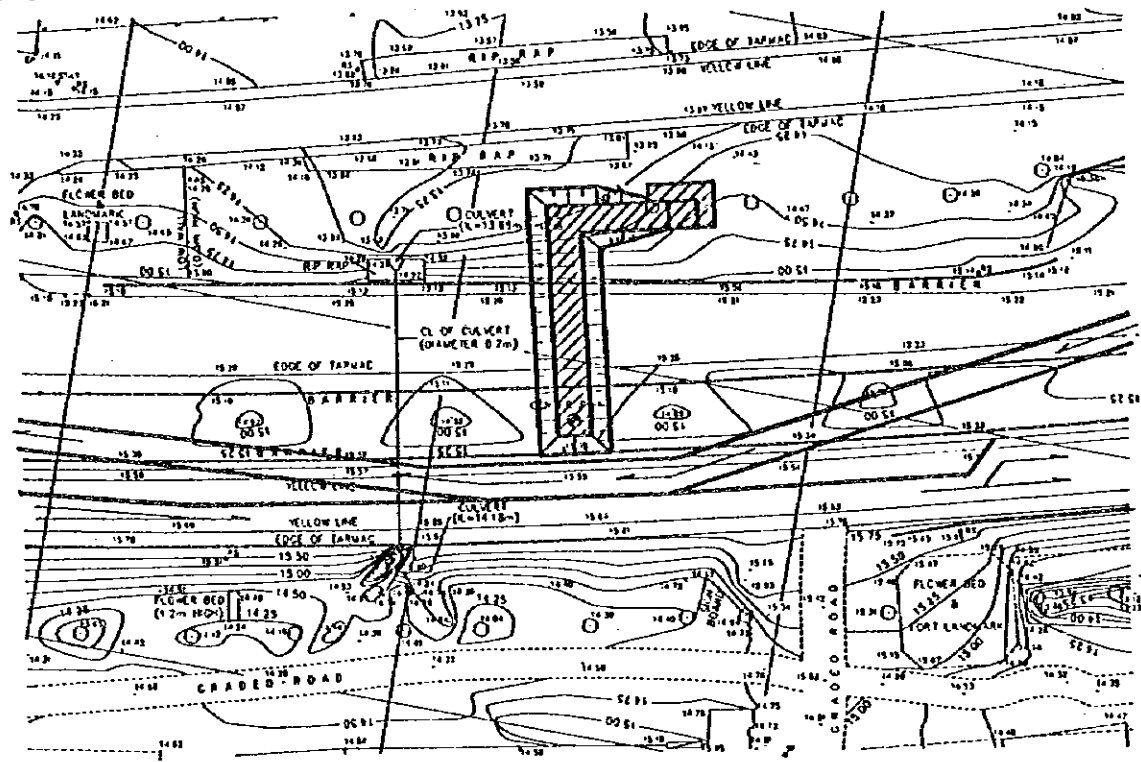
REIN. NO.	Ø (mm)	LENGTH (mm)	NOMINAL WEIGHT	NO.	E WEIGHT	WEIGHT	REMARKS
TYPE - B							
S 1	D 19	4 260	2.225	111	9.595	1056.8	—
2	D 16	7 790	1.552	58	12.090	701.2	—
3	D 13	1 850	0.931	112	1.841	206.2	—
4	"	650	"	10	0.646	6.5	—
5	"	12 720	"	32	12.644	404.8	—
6	"	1 330	"	32	1.322	42.3	—
7	"	1 090	"	183	1.083	204.7	—
U 1	D 16	3 630	1.552	122	5.711	636.7	—
2	"	6 260	"	108	9.716	1059.3	—
3	"	5 980	"	18	9.281	167.1	—
4	D 13	12 720	0.931	44	12.644	556.3	—
5	"	520	"	294	0.517	152.0	—
F 1	D 19	4 260	2.225	119	9.521	1133.0	—
2	D 16	7 790	1.552	58	12.090	701.2	—
3	D 13	990	0.931	122	0.934	120.0	—
4	"	12 720	"	32	12.644	404.8	—
5	"	1 170	"	283	1.123	228.0	—
U 1	D 16	2 200	1.552	48	3.614	163.9	—
2	D 13	4 200	0.931	12	4.175	50.1	—
3	"	1 590	"	12	1.500	19.0	—
					D 19	2183.8	
					D 16	3479.4	
					D 13	2394.1	
					TOTAL WEIGHT	8063.3	

NOTES:

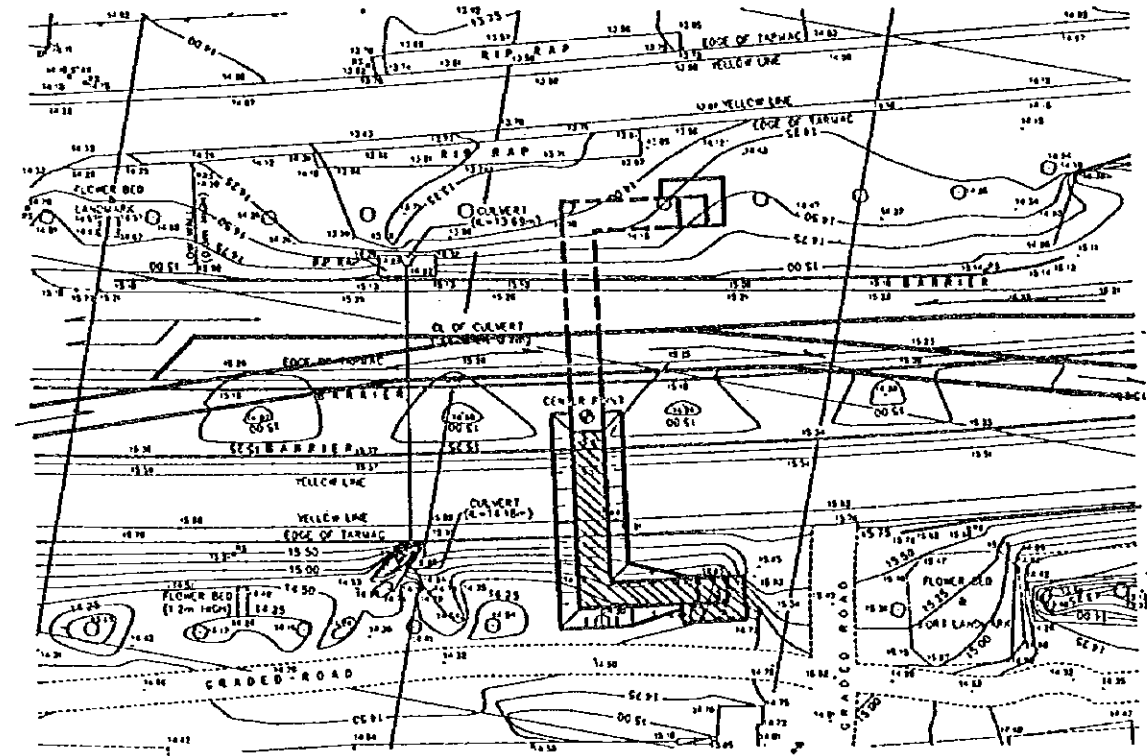
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)
 JICA STUDY TEAM
 PACIFIC CONSULTANTS INTERNATIONAL
 FUKUYAMA CONSULTANTS INTERNATIONAL

CLIENT : MINISTRY OF COMMUNICATIONS, DIRECTORATE GENERAL OF ROADS
 PROJECT : D/D ON ROAD DEVELOPMENT PROJECT ON BATINAH HIGHWAY
 TITLE : P/U-11, LIWA RE-BAR ARRANGEMENT (10)
 DATE : _____ DWG NO. P-13

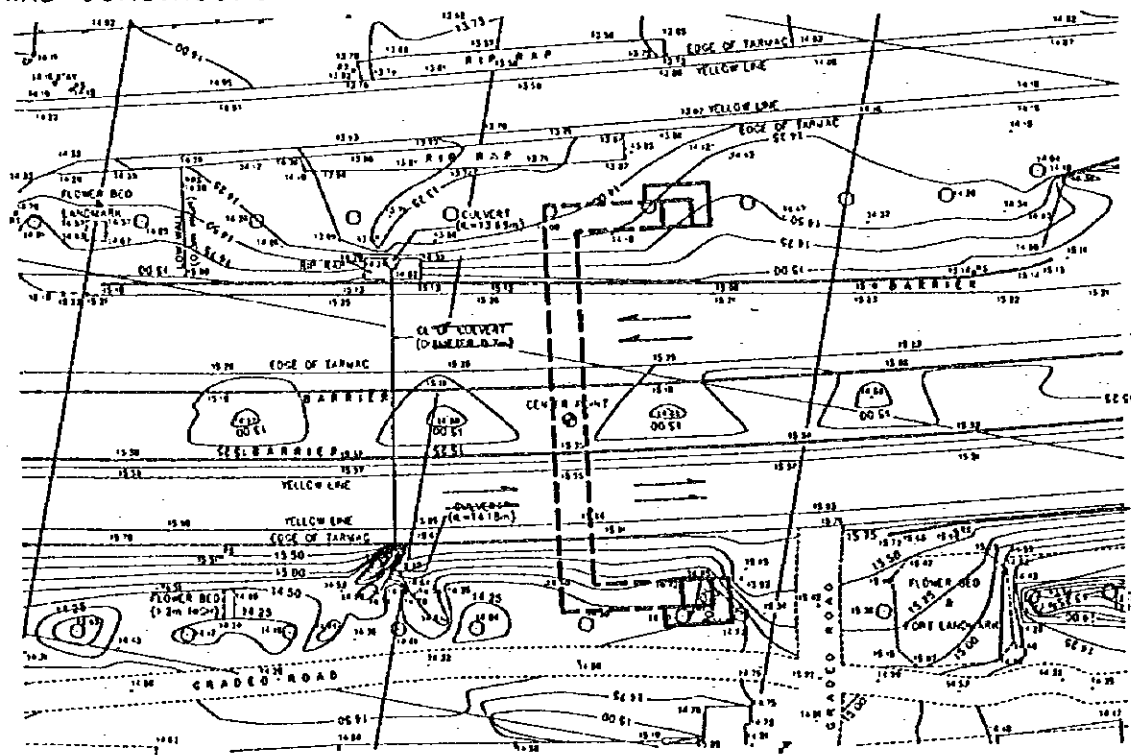
FIRST CONSTRUCTION STAGE



SECOND CONSTRUCTION STAGE



THIRD CONSTRUCTION STAGE



FIRST CONSTRUCTION STAGE

1. Divert traffic from the existing carriageway and demarcate the yard for the first stage of construction.
2. Carry out the first stage of construction for the underpass.
3. After completion of first stage of construction, restore the existing carriageway to allow traffic flow.

SECOND CONSTRUCTION STAGE

1. Divert traffic from the other carriageway and demarcate the yard for the second stage of construction.
2. Carry out the second stage of construction for the underpass.
3. After completion of second stage of construction, restore the existing carriageway to allow traffic flow.

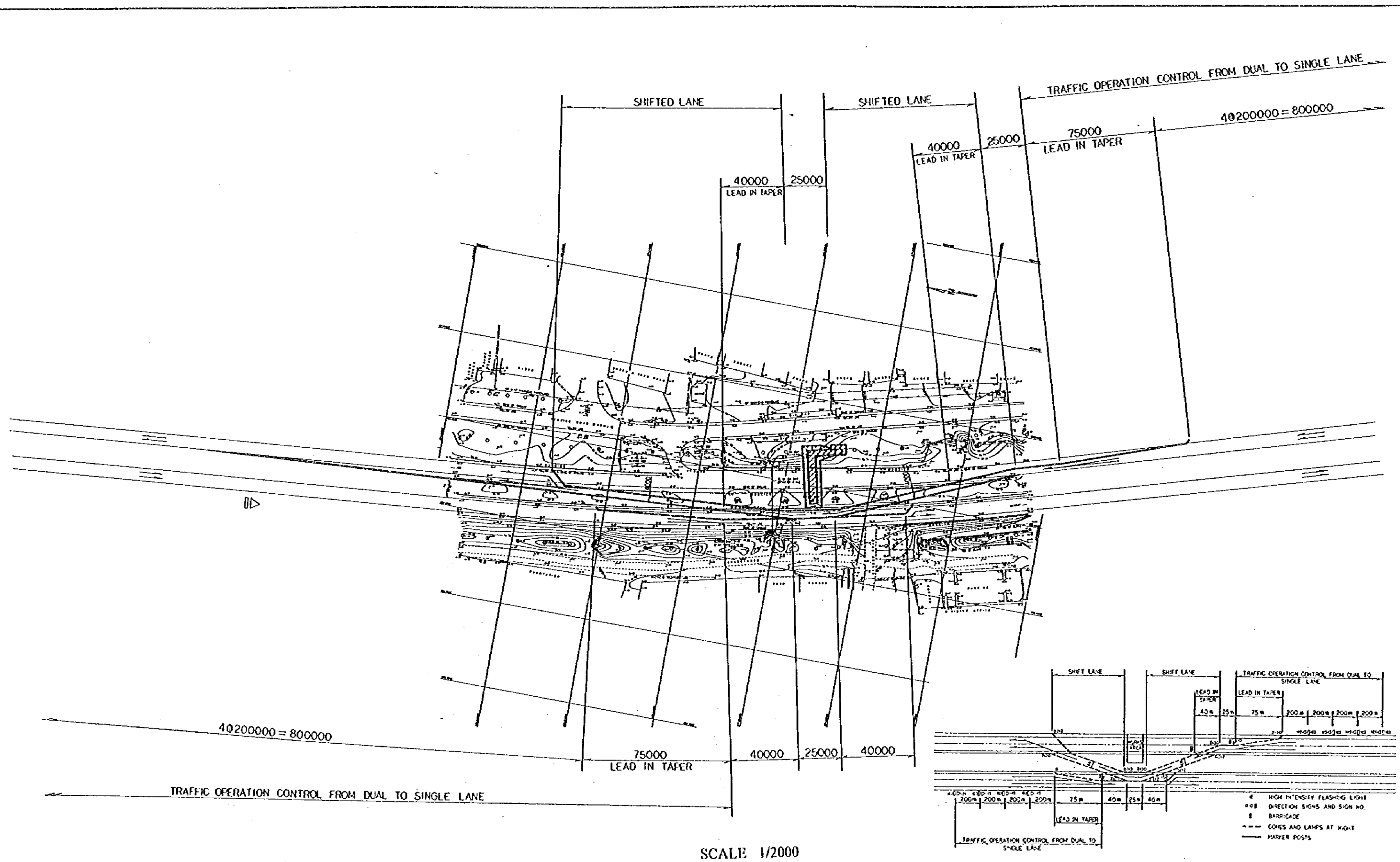
THIRD CONSTRUCTION STAGE

1. Carry out accessory installation work for pedestrian underpass and open it to use.
2. Construction completed.

NOTES:

JAPAN INTERNATIONAL COOPERATION AGENCY
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FUKUYAMA CONSULTANTS INTERNATIONAL

CLIENT: MINISTRY OF COMMUNICATIONS, DIRECTORATE GENERAL OF ROADS
PROJECT: D/D ON ROAD DEVELOPMENT PROJECT ON BATINAH HIGHWAY
TITLE SEQUENCE OF LIWA P/U CONSTRUCTION
DATE _____ DWGNO. T-1



SCALE 1/2000

GENERAL LAYOUT PLAN OF P/U WORKS

NOTES:

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA) JICA STUDY TEAM PACIFIC CONSULTANTS INTERNATIONAL FUKUYAMA CONSULTANTS INTERNATIONAL	CLIENT: MINISTRY OF COMMUNICATIONS, DIRECTORATE GENERAL OF ROADS
	PROJECT: D/D ON ROAD DEVELOPMENT PROJECT ON BATINAH HIGHWAY
TITLE: DETOUR LAYOUT OF LIWA P/U WORKS	DATE:
DWGNO.	T-2



