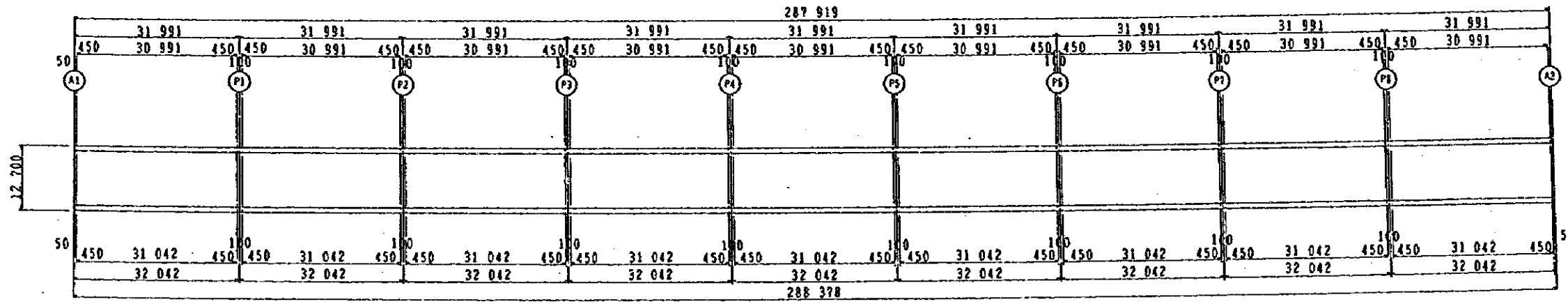
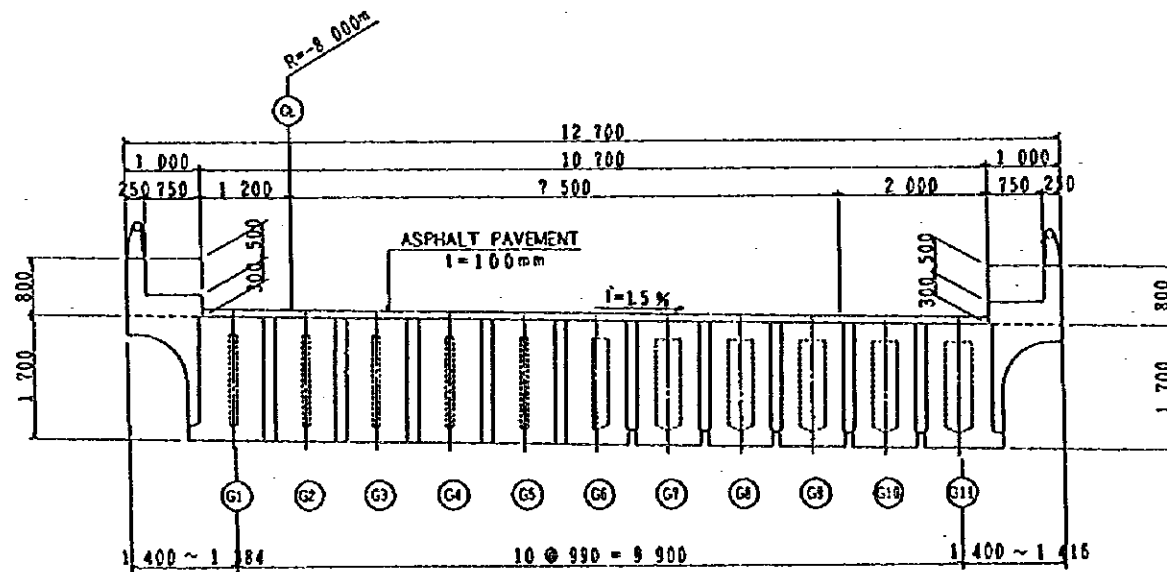


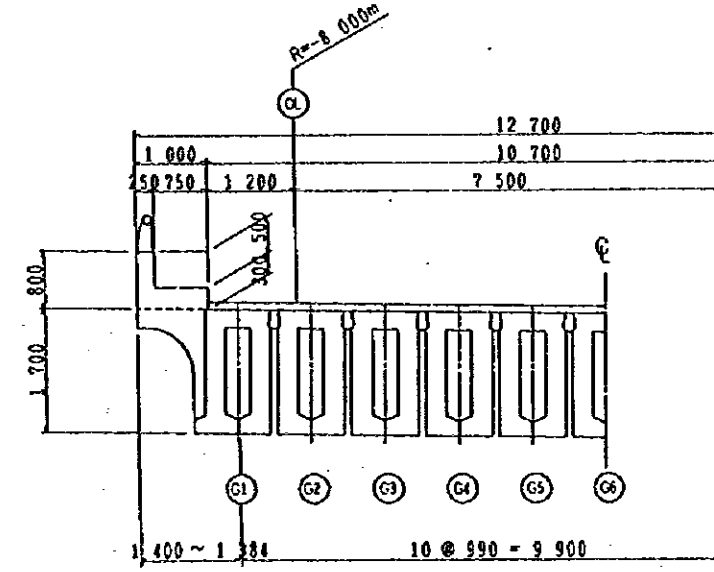
PROFILE OF BRIDGE (AT CL) s= 1/1000



PLAN s= 1/1000

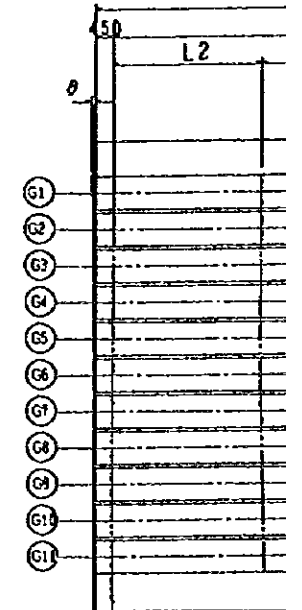


GIRDER END MIDDLE SPAN



TYPICAL SEC.

SECTION s= 1/100



		G1
A1 ~ P1	L0	31 899
	L1	30 991
	L2	3 874
P1 ~ A2	θ	0.1145
	L0	31 891
	L1	30 991
P1 ~ P2	L2	3 874
	θ	0.1145
	L0	31 891
P2 ~ P3	L1	30 991
	L2	3 874
	θ	0.1145
P2 ~ P3	L0	31 891
	L1	30 991
	L2	3 874
P3 ~ P4	θ	0.1145
	L0	31 891
	L1	30 991
P3 ~ P4	L2	3 874
	θ	0.1145
	L0	31 891
P4 ~ P5	L1	30 991
	L2	3 874
	θ	0.1145

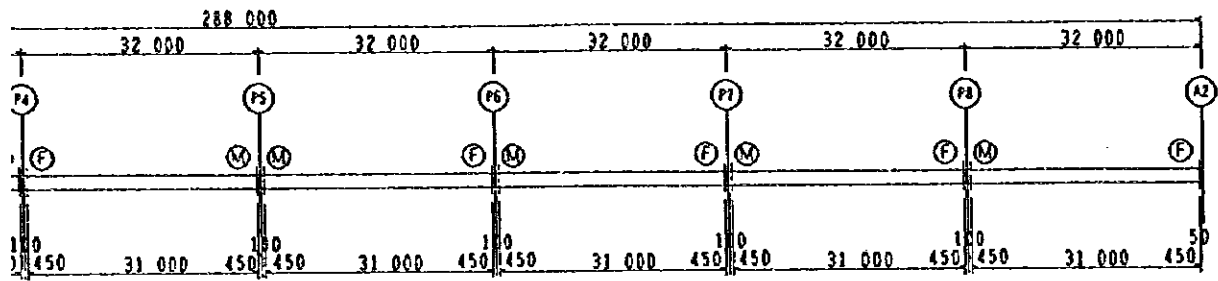
GENERAL VIEW OF BRIDGE AT B-LINE

NOTES:

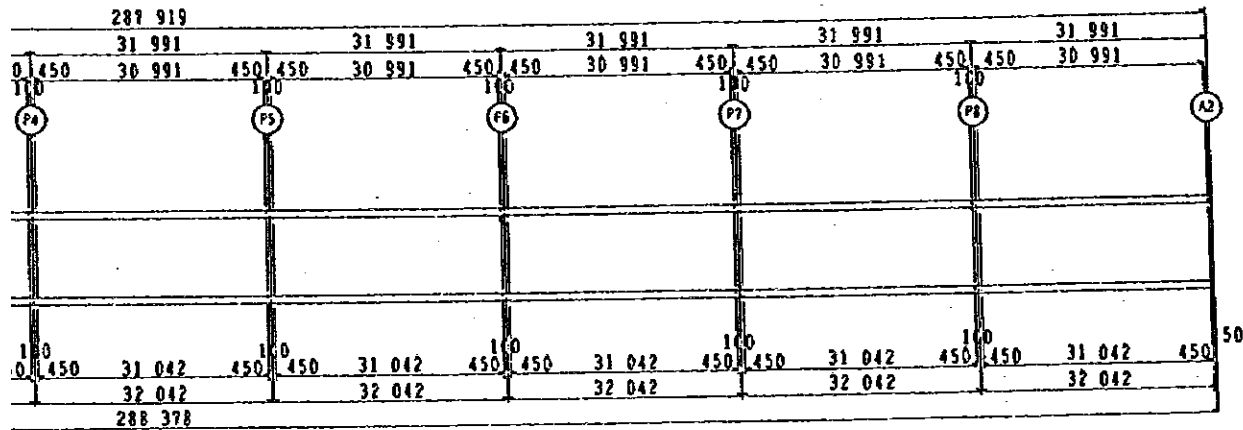
JAPAN INTERNATIO

JICA
PACIFIC CONSUI
FUKUYAMA CONS

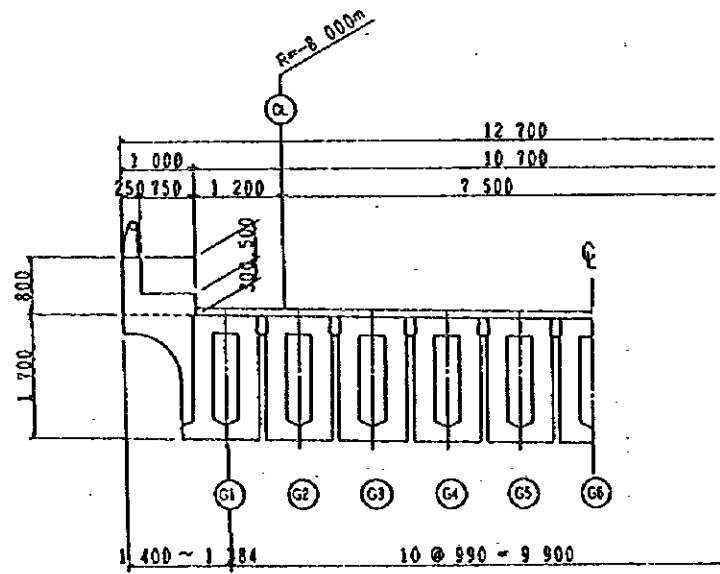
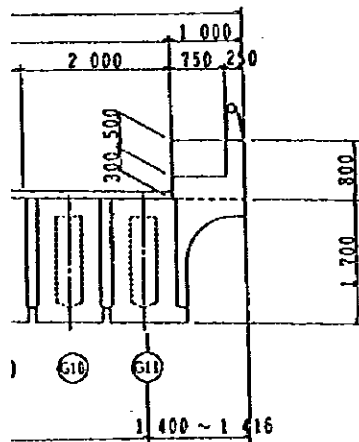
RA/2 A' NASEEM GARDEN



BRIDGE (AT CL) s= 1/1000



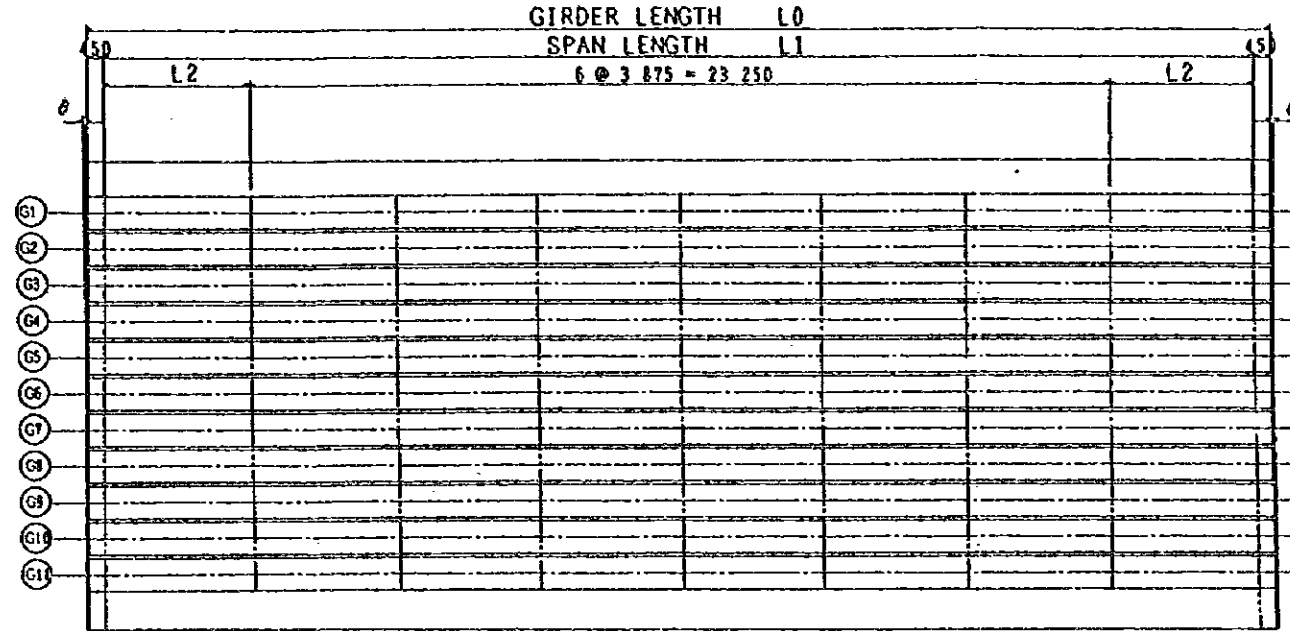
PLAN s= 1/1000



TYPICAL SEC.

SECTION s= 1/100

GENERAL VIEW OF BRIDGE AT B-LINE



R=8,000m(AT CL)

GIRDER LENGTH

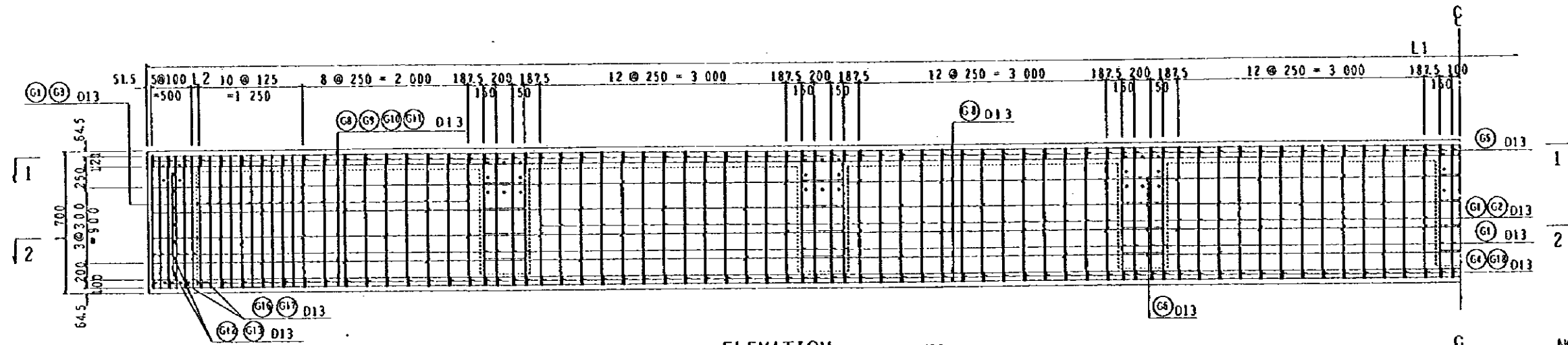
		G1	G2	G3	G4	G5	G6	G7	G8	G9	G10	G11	REMARKS
A1 ~ P1	L0	31 899	31 903	31 907	31 911	31 915	31 919	31 923	31 927	31 931	31 935	31 939	INCLINED LENGTH
	L1	30 999	31 003	31 007	31 011	31 015	31 019	31 023	31 027	31 031	31 035	31 039	"
P1 ~ A2	L2	3 874.5	3 876.5	3 878.5	3 880.5	3 882.5	3 884.5	3 886.5	3 888.5	3 890.5	3 892.5	3 894.5	"
	θ	0.11458	0.11458	0.11458	0.11458	0.11458	0.11458	0.11458	0.11458	0.11458	0.11458	0.11458	"
P1 ~ P2	L0	31 898	31 902	31 906	31 910	31 914	31 918	31 922	31 926	31 930	31 934	31 938	INCLINED LENGTH
	L1	30 998	31 002	31 006	31 010	31 014	31 018	31 022	31 026	31 030	31 034	31 038	"
P2 ~ P3	L2	3 874.5	3 876.0	3 878.0	3 880.0	3 882.0	3 884.0	3 886.0	3 888.0	3 890.0	3 892.0	3 894.0	"
	θ	0.11458	0.11458	0.11458	0.11458	0.11458	0.11458	0.11458	0.11458	0.11458	0.11458	0.11458	"
P3 ~ P4	L0	31 897	31 901	31 905	31 909	31 913	31 917	31 921	31 925	31 929	31 933	31 937	INCLINED LENGTH
	L1	30 997	31 001	31 005	31 009	31 013	31 017	31 021	31 025	31 029	31 033	31 037	"
P4 ~ P5	L2	3 873.5	3 877.5	3 877.5	3 879.5	3 881.5	3 883.5	3 885.5	3 887.5	3 889.5	3 891.5	3 893.5	"
	θ	0.11458	0.11458	0.11458	0.11458	0.11458	0.11458	0.11458	0.11458	0.11458	0.11458	0.11458	"
P5 ~ P6	L0	31 897	31 901	31 905	31 909	31 913	31 917	31 921	31 925	31 929	31 933	31 937	INCLINED LENGTH
	L1	30 997	31 001	31 005	31 009	31 013	31 017	31 021	31 025	31 029	31 033	31 037	"
P6 ~ P7	L2	3 873.5	3 877.5	3 877.5	3 879.5	3 881.5	3 883.5	3 885.5	3 887.5	3 889.5	3 891.5	3 893.5	"
	θ	0.11458	0.11458	0.11458	0.11458	0.11458	0.11458	0.11458	0.11458	0.11458	0.11458	0.11458	"
P7 ~ P8	L0	31 897	31 901	31 905	31 909	31 913	31 917	31 921	31 925	31 929	31 933	31 937	INCLINED LENGTH
	L1	30 997	31 001	31 005	31 009	31 013	31 017	31 021	31 025	31 029	31 033	31 037	"
P8 ~ P9	L2	3 873.5	3 877.5	3 877.5	3 879.5	3 881.5	3 883.5	3 885.5	3 887.5	3 889.5	3 891.5	3 893.5	"
	θ	0.11458	0.11458	0.11458	0.11458	0.11458	0.11458	0.11458	0.11458	0.11458	0.11458	0.11458	"

DIMENSION LIST FOR B-LINE

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: GENERAL VIEW OF BRIDGE AT B-LINE
 DATE: _____ DWGNO. B-15

RA/2 A'NASEEM GARDEN

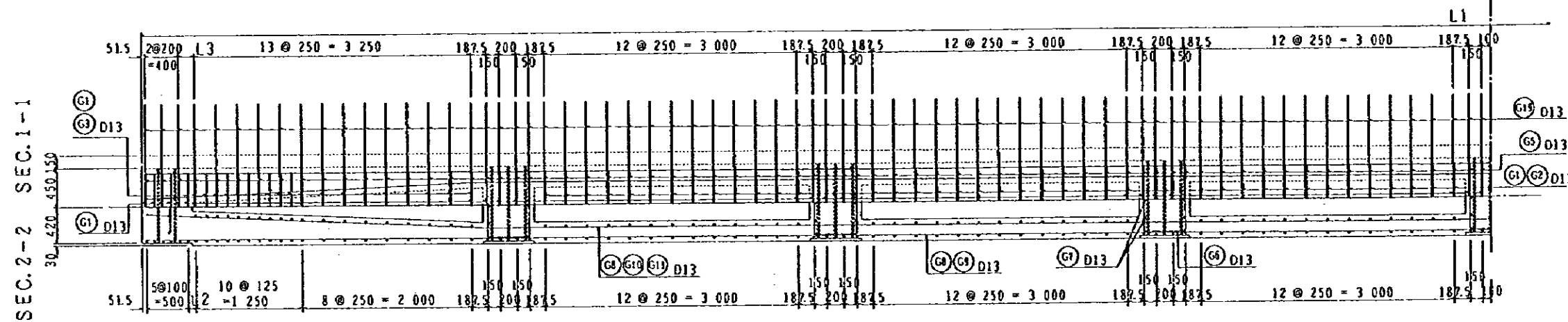


ELEVATION S = 1/60

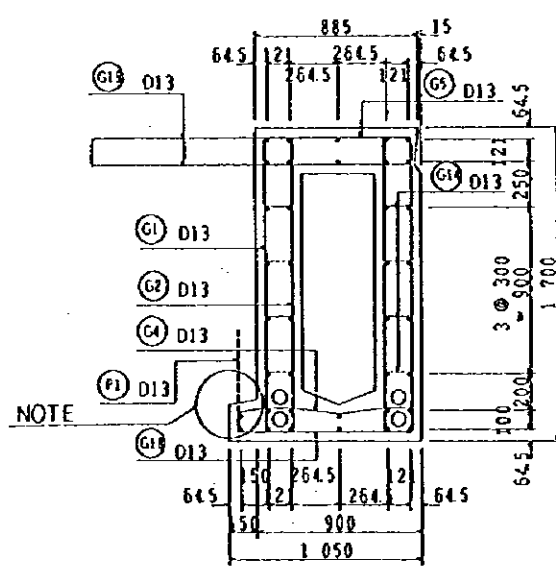
L1	31 939 ~ 31 897
L2	105.5 ~ 84.5
L3	205.5 ~ 184.5

1) SEE AND CHECK VALUE OF 'L' FOR OTHER EXT.GIRDER LENGTH FROM GENERAL VIEW SHEET

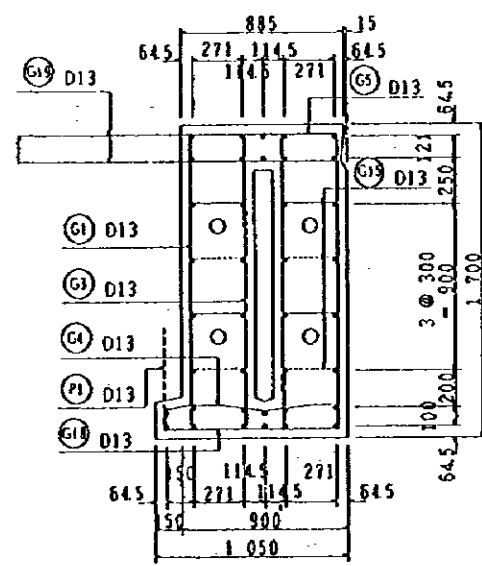
NOTE :
FOR ALTERNATIVE CONSTRUCTION JOINT, INSERT INSIDE THREADED JOINT TO HANDLE PLANTED VERTICAL BAR



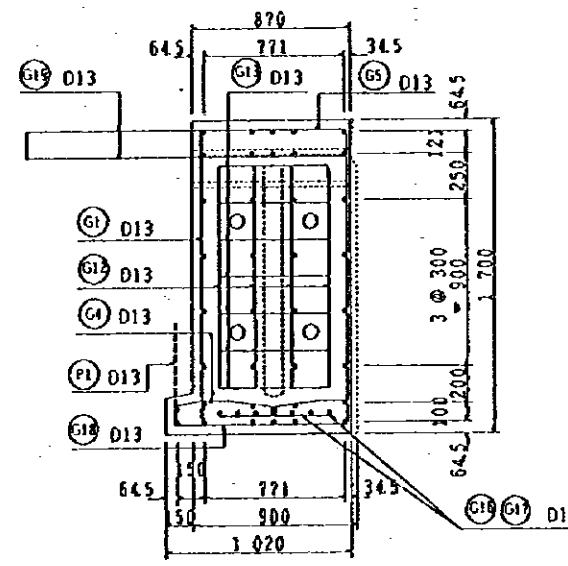
PLAN S = 1/60



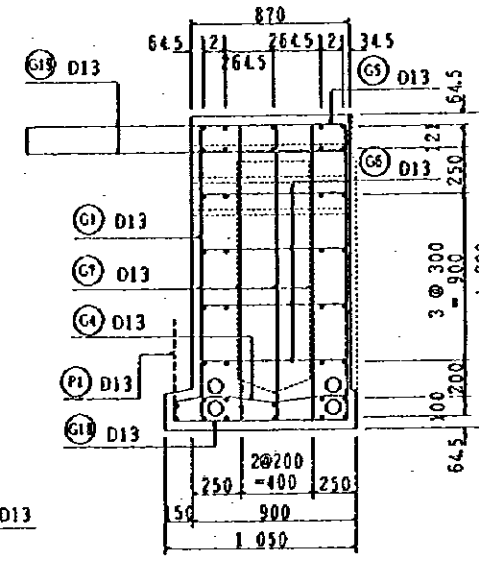
TYPICAL SECTION



AT WEB WIDENED



AT GIRDER END



AT CROSS BEAM

SECTION S = 1/40

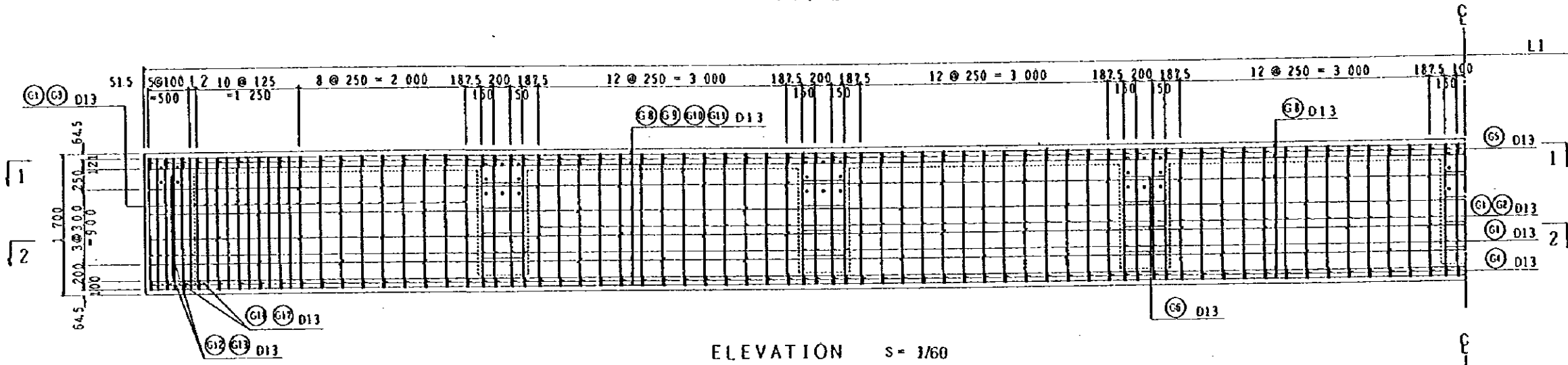
B-LINE RE-BAR ARRANGEMENT-1 (EXT.GIRDER)

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: RE-BAR ARRANGEMENT(1/2) AT B-LINE
DATE: _____ DWGNO. B-18

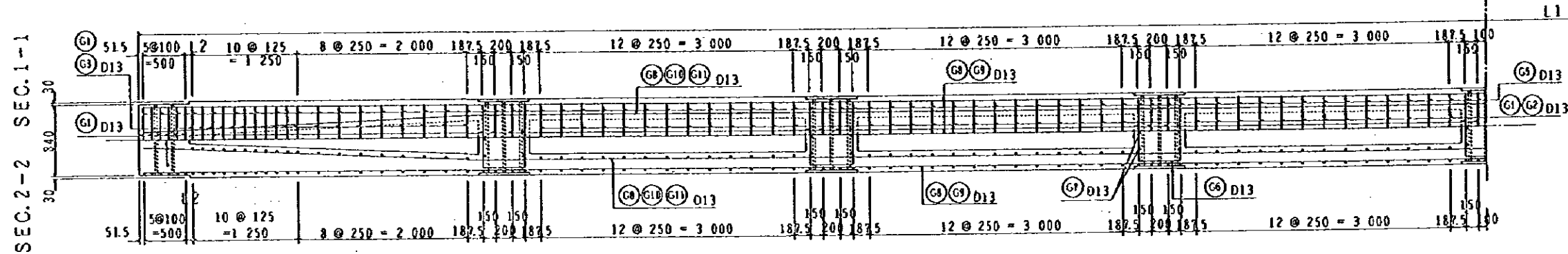
RA/2 A' NASEEM GARDEN



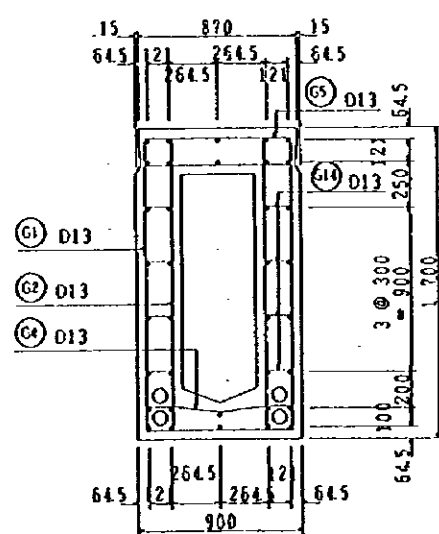
ELEVATION s = 1/60

L1	31 935 ~ 31 901
L2	1035 ~ 865

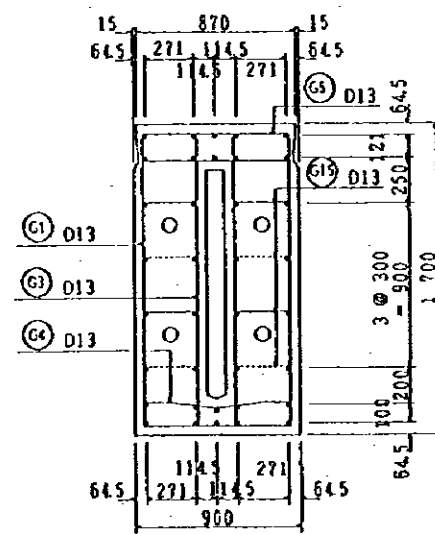
SEE AND CHECK VALUE OF 'L'
FOR OTHER INT.GIRDER LENGTH
FROM GENERAL VIEW SHEET



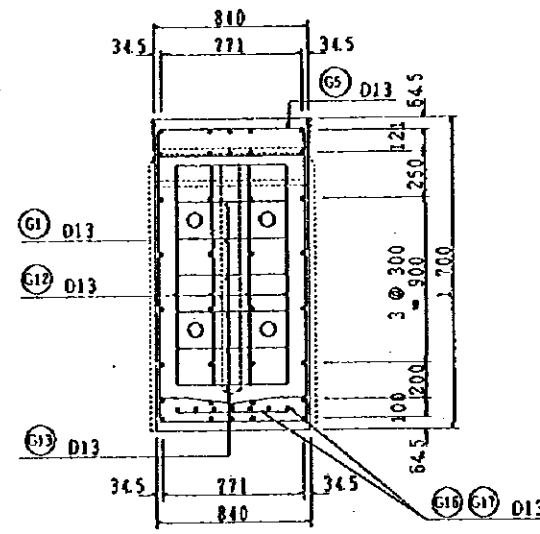
PLAN s = 1/60



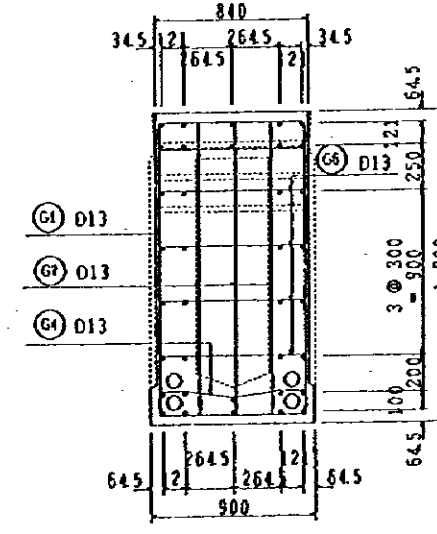
TYPICAL SECTION



AT WEB WIDENED



AT GIRDER END



AT CROSS BEAM

SECTION s = 1/40

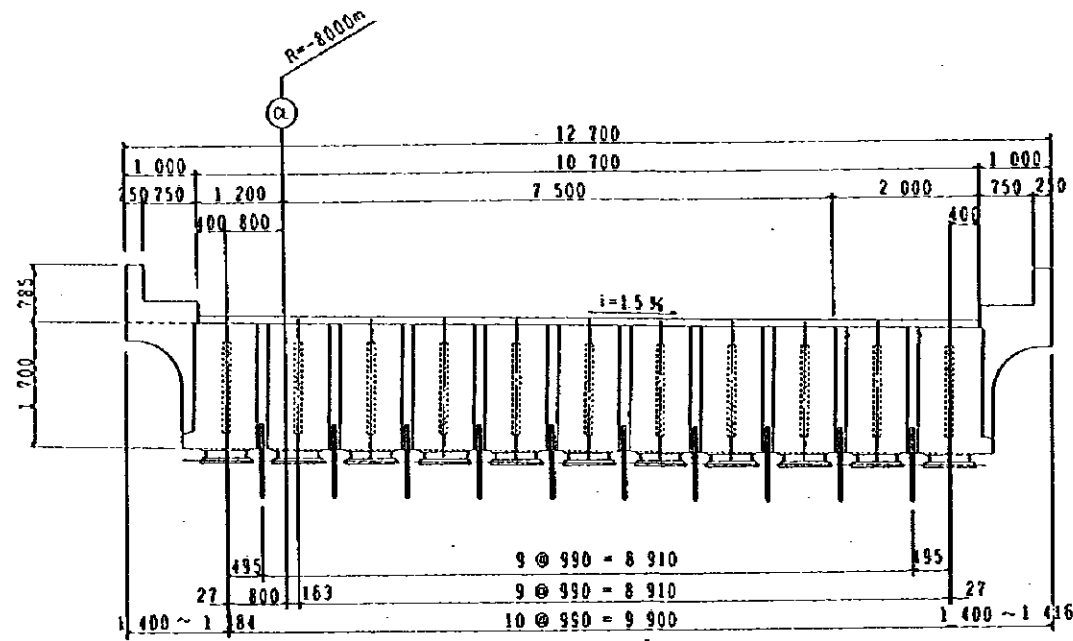
B-LINE RE-BAR ARRANGEMENT-2 (INT.GIRDER)

NOTES:

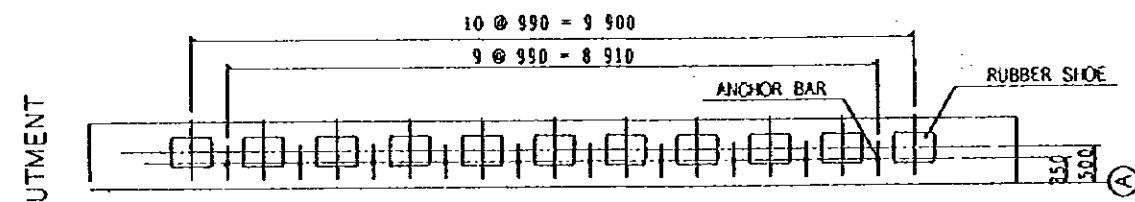
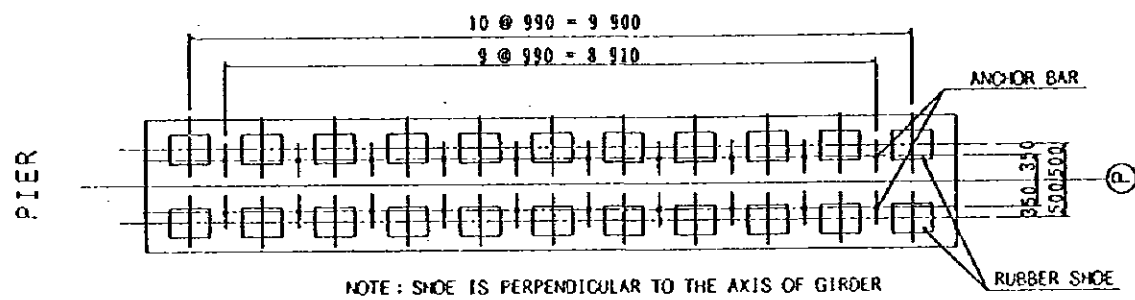
JAPAN INTERNATIONAL COOPERATION AGENCY
(JICA)
JICA STUDY TEAM
PACIFIC CONSULTANTS INTERNATIONAL
FUKUYAMA CONSULTANTS INTERNATIONAL

CLIENT: MINISTRY OF COMMUNICATIONS, DIRECTORATE GENERAL OF ROADS
PROJECT: D/D ON ROAD DEVELOPMENT PROJECT ON BATINAH HIGHWAY
TITLE: RE-BAR ARRANGEMENT(2) AT B-LINE
DATE: _____ DWGNO. B-19

RA/2 A' NASEEM GARDEN

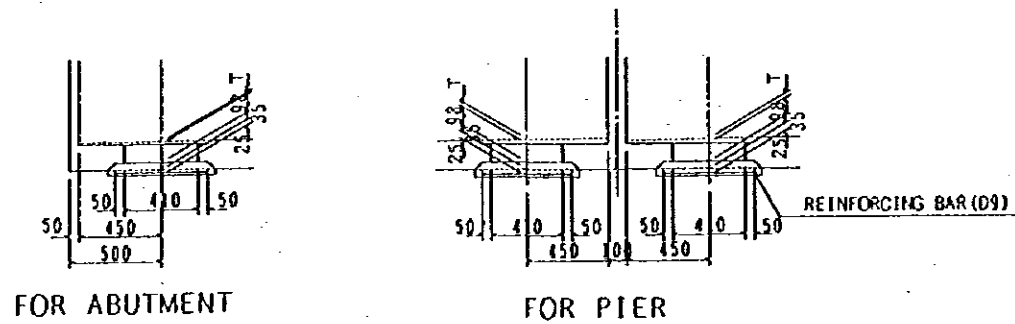


SECTION s= 1/100



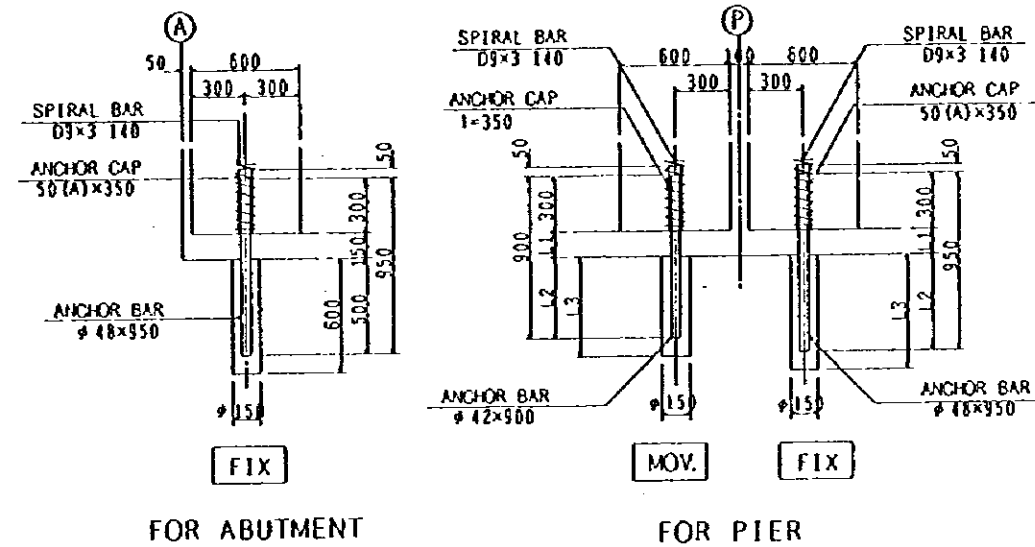
PLAN s= 1/100

DETAIL OF SHOE AND ANCHOR BAR

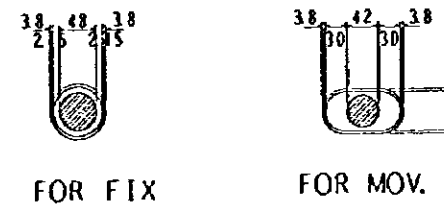


DETAIL OF SHOE s= 1/40

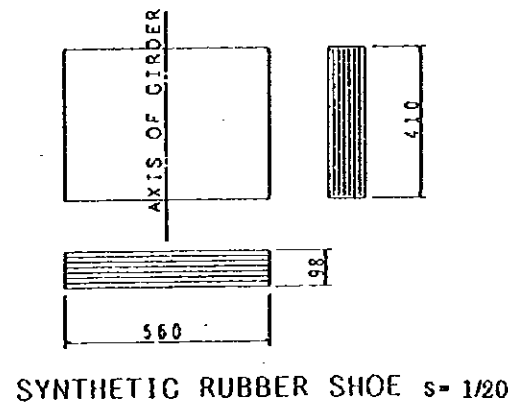
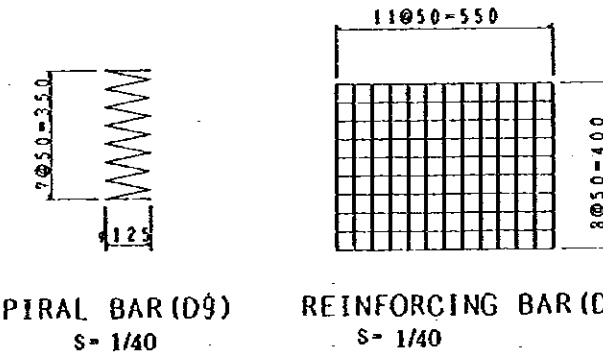
DETAIL OF SHOE AND ANCHOR BAR AT B-LINE



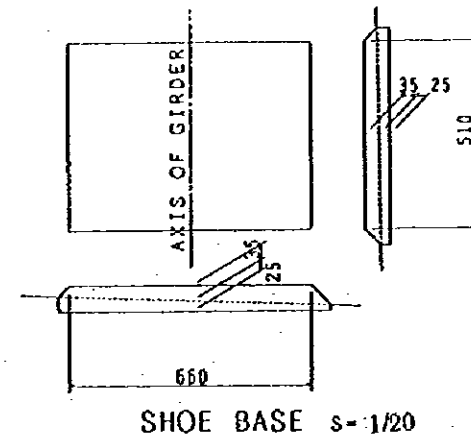
DETAIL OF ANCHOR BAR s= 1/40



ANCHOR CAP s= 1/10



SYNTHETIC RUBBER SHOE s= 1/20



SHOE BASE s= 1/20

	T	L1	L2	L3	
(A1)~(P1)	FIX	17	150	500	600
(P8)~(A2)	MOV.	13	146	454	555
(P1)~(P2)	FIX	25	158	492	600
(P7)~(P8)	MOV.	15	148	452	555
(P2)~(P3)	FIX	23	156	494	600
(P6)~(P7)	MOV.	17	150	450	555
(P3)~(P4)	FIX	22	155	495	600
(P5)~(P6)	MOV.	18	151	449	555
(P4)~(P5)	FIX	20	153	497	600
	MOV.	20	153	447	555

(PER SPAN)			
DESCRIPTION	UNIT	QUANTITY	REMARKS
ANCHOR BAR (GALV.)	kg	135.0	w=1350 kg/pc.
ANCHOR CAP (GALV.)	kg	18.6	w=1.86 kg/pc.
FILLER	kg	34	w=0.339 kg/anc.
SYNTHETIC RUBBER SHOE	Pcs	11	560x410x98
REINFORCING BAR	kg	73.0	w=6.64 kg/Set
SPIRAL BAR	kg	17.6	w=1.76 kg/pc.
NON SHRINKAGE MORTAR	m ³	0.264	0.024m ³ /Shoe
	m ³	0.100	0.010m ³ /Hole (AVE)
ANCHOR BAR (GALV.)	kg	97.9	w=9.79 kg/pc.
ANCHOR CAP (GALV.)	kg	28.9	w=2.89 kg/pc.
FILLER	kg	18.9	w=1.89 kg/anc.
SYNTHETIC RUBBER SHOE	Pcs	11	560x410x98
REINFORCING BAR	kg	73.0	w=6.64kg/Set
SPIRAL BAR	kg	17.6	w=1.76 kg/pc.
NON SHRINKAGE MORTAR	m ³	0.264	0.024m ³ /Shoe
	m ³	0.090	0.009m ³ /Hole (AVE)

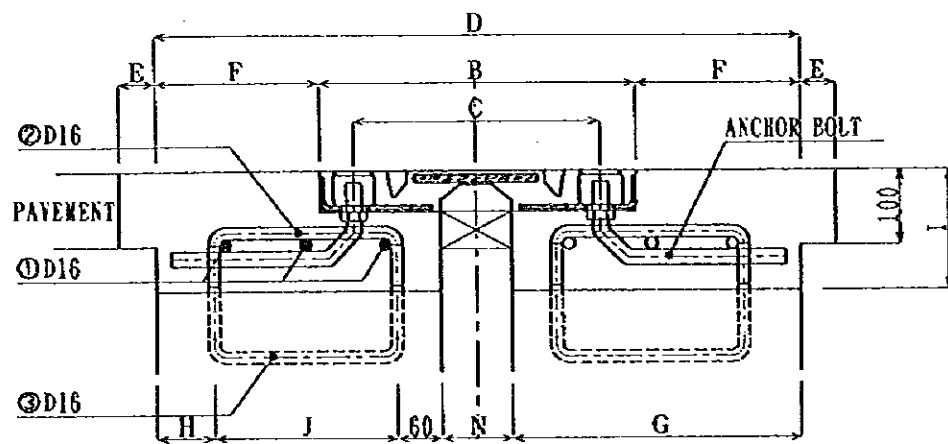
MATERIAL LIST

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: DETAIL OF SHOE AND ANCHOR BAR AT B-LINE
DATE: _____ DWGNO. B-22

A' NASEEM GARDEN

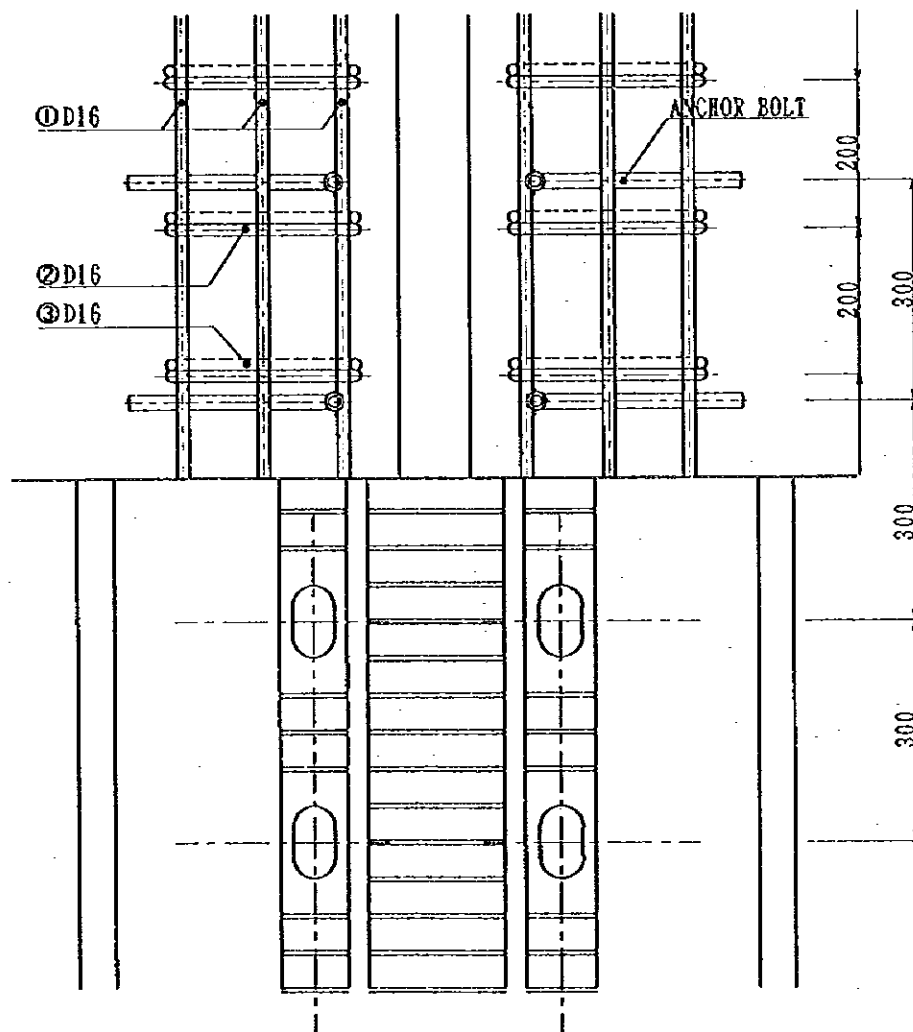


MEASURE DATA

	A	B	C	D	E	F	G	H	I	J	STANDARD SPACE BETWEEN SLABS N	TRAVEL
PIER	54	433	340	879	50	223	390	80	160	250	100	80
ABUT	40	303	235	709	50	203	330	70	150	200	50	50

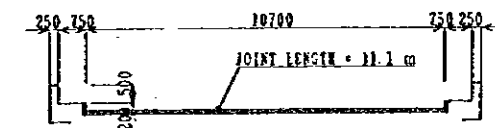
MATERIAL LIST (PER 10 m)

MATERIAL	CLASSIFICATION	UNIT	PIER	ABUT
TRANSFLEX JOINT	INCLUDING ANCHORBOLT	m	10.0	10.0
SEALANT	FOR JOINT SEALS	kg	22.5	16.0
	FOR PLUG HOLE	kg	8.5	4.0
REINFORCING BAR	ØD16	kg	93.60	93.60
	ØD16	kg	60.84	53.04
RECESS CONCRETE	HIGH-EARLY STRENGTH CONCRETE	m ³	1.143	0.964
COLORING AGENT OF THE FACE	3 kg/m ³	kg	16.0	15.0
POLYURETHANE FORM		m	10.0	10.0
TRANSIENT FILLING MATERIAL	SAND	m ³	0.66	0.53
	ASPHALT CONCRETE	m ³	0.73	0.60



QUANTITY LIST

	PIER	ABUTMENT
AL KHABURAHN	16	4
TOTAL LENGTH	177.6	44.4

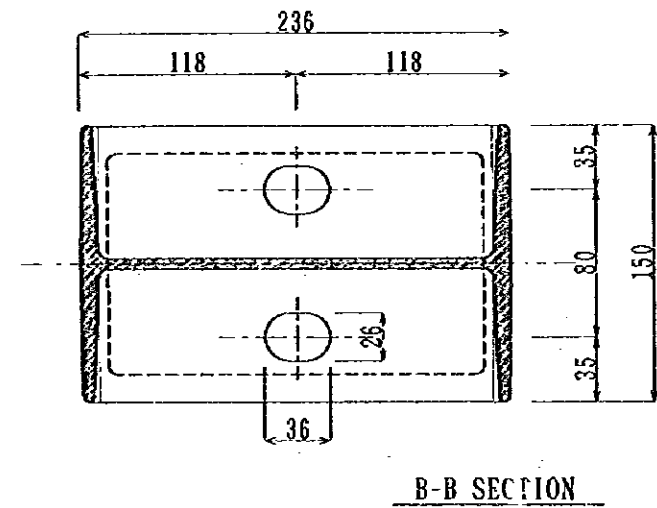
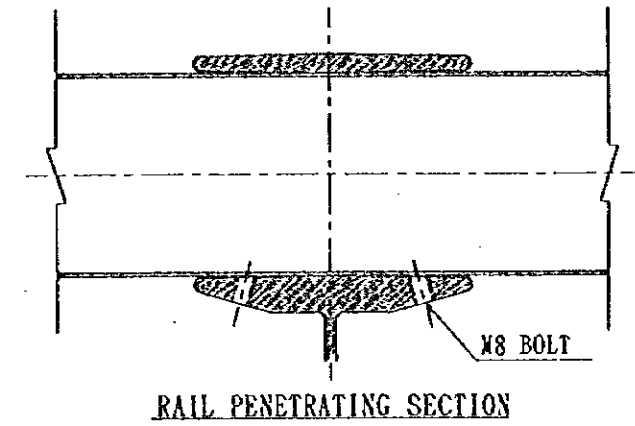
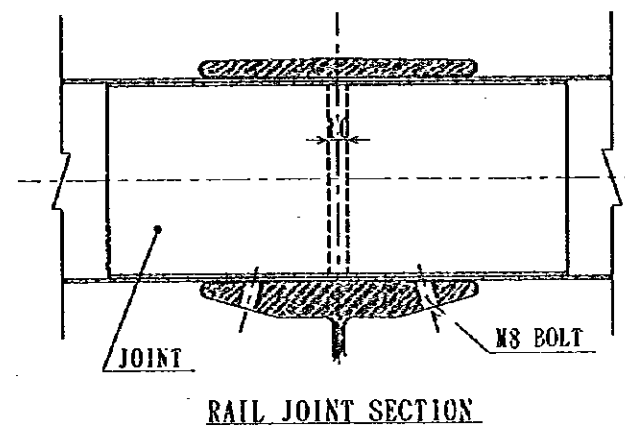
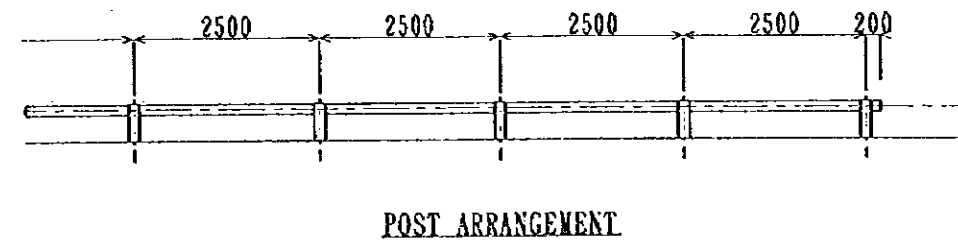
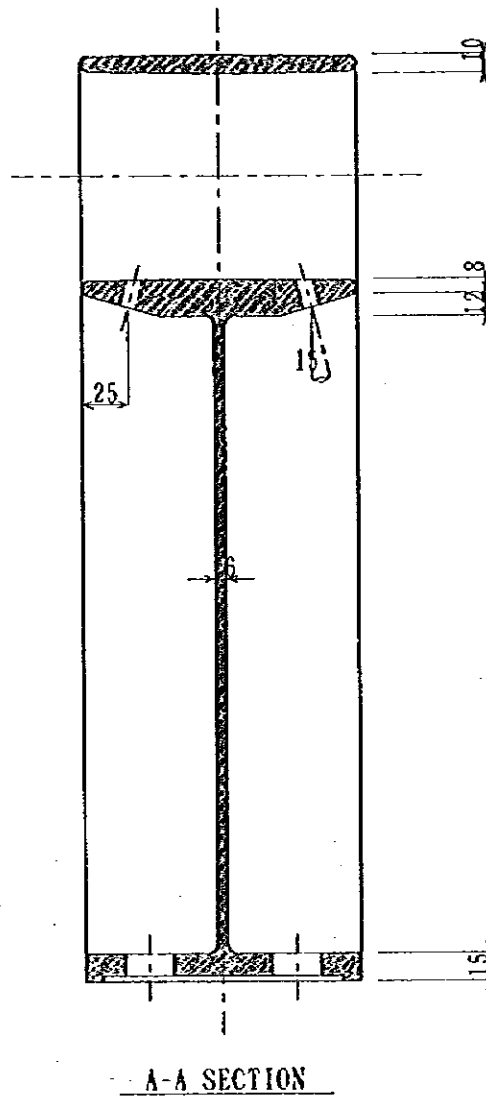
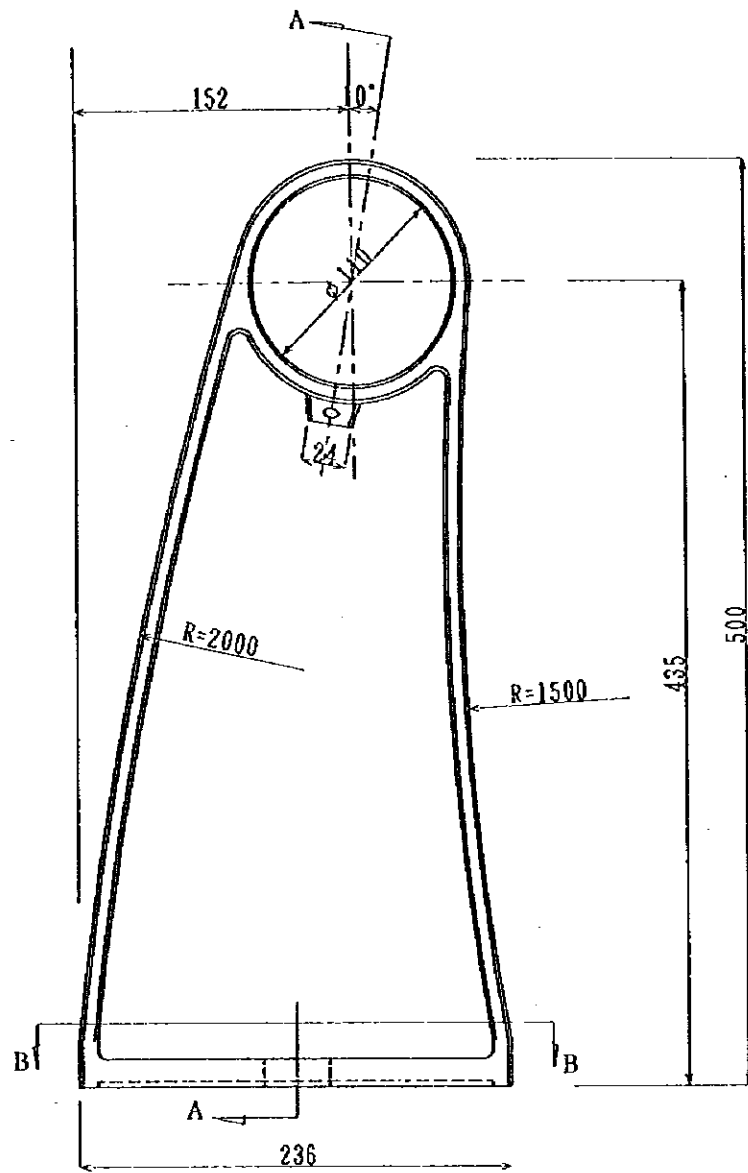


JOINT LENGTH PER 1 PLACE

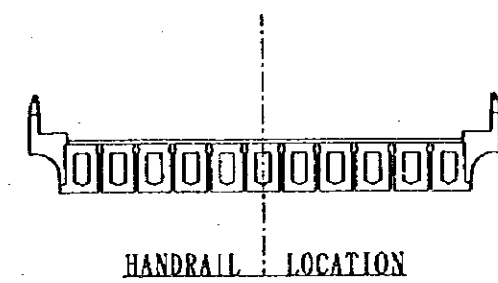
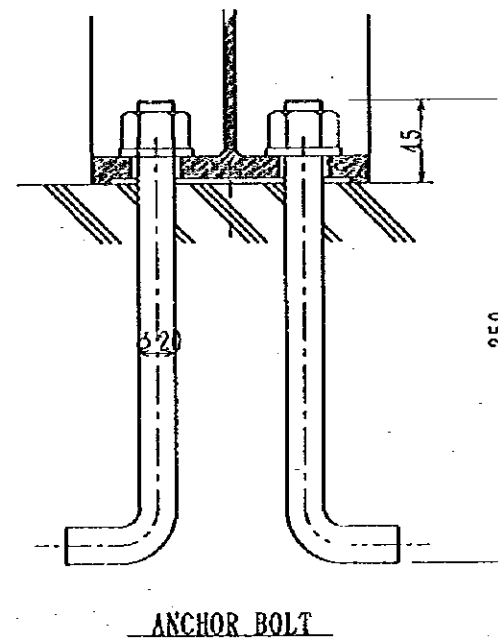
TRANSFLEX JOINT S-1/10

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: EXPANSION JOINT DATE: DWGNO. B-23

A' NASEEM GARDEN



POST SCALE



HANDRAIL S=1:4
ALMINIUM PRODUCTS

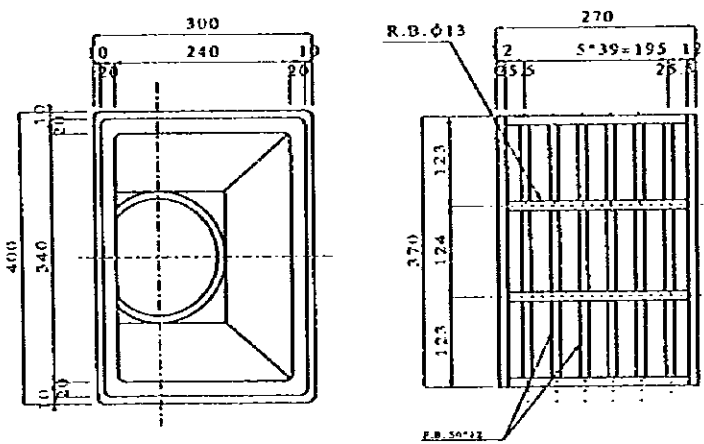
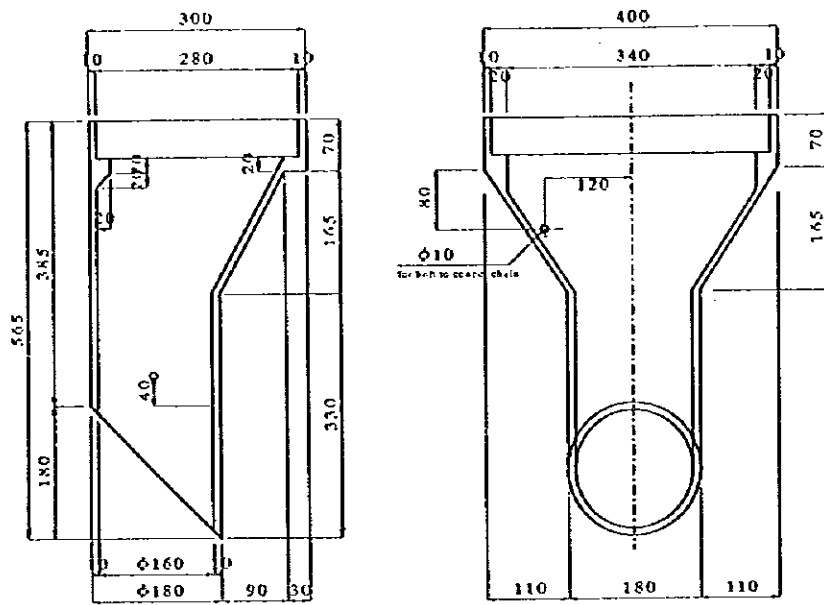
NOTES:

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

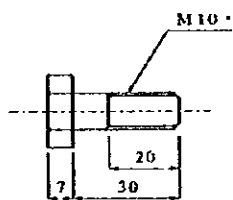
CLIENT: MINISTRY OF COMMUNICATIONS, DIRECTORATE GENERAL OF ROADS
PROJECT: D/D ON ROAD DEVELOPMENT PROJECT ON BATINAH HIGHWAY
TITLE: HANDRAIL
DATE: _____ DWGNO. B-24

BRIDGE DRAINAGE DETAILS (A'NASEEM GARDEN FLYOVER)

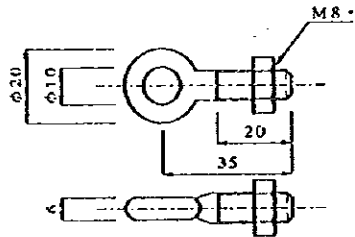
CATCH BASIN (S=1:5)



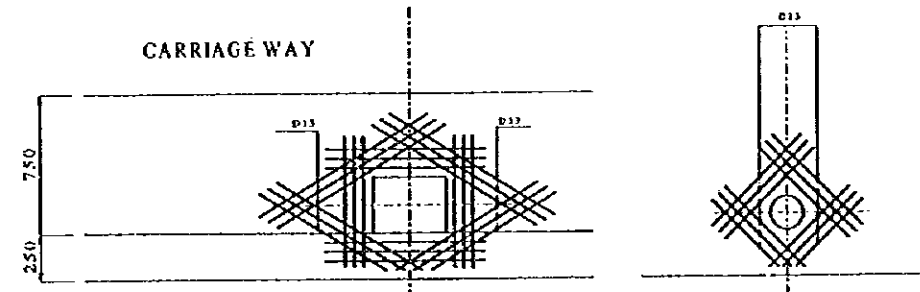
BISS (S=1:1)



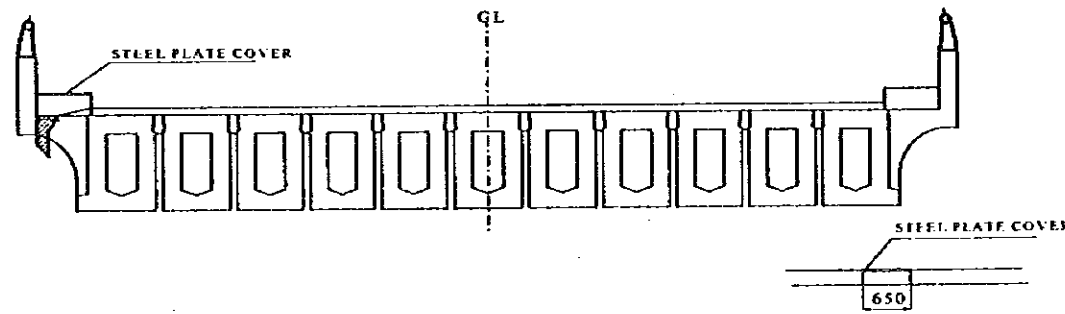
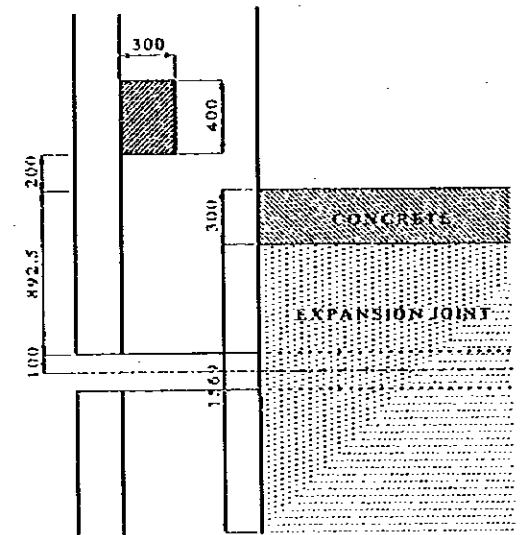
BOLT TO CONNECT CHAIN (S=1:1)



REINFORCING (S=1:20)

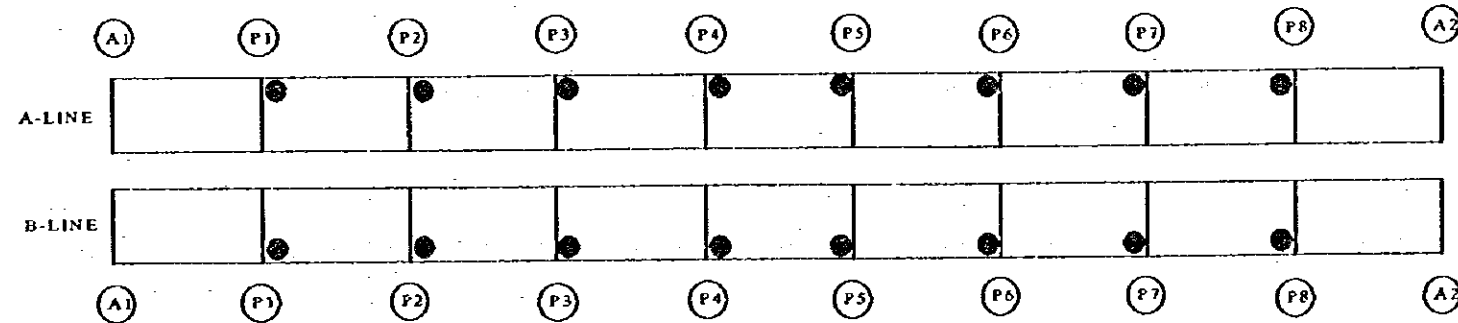


INSTALLING LOCATION DETAIL



CROSS SECTIONAL LOCATION

INSTALLING LOCATIONS



NOTES:

JAPAN INTERNATIONAL COOPERATION AGENCY
(JICA)

JICA STUDY TEAM
PACIFIC CONSULTANTS INTERNATIONAL
FUKUYAMA CONSULTANTS INTERNATIONAL

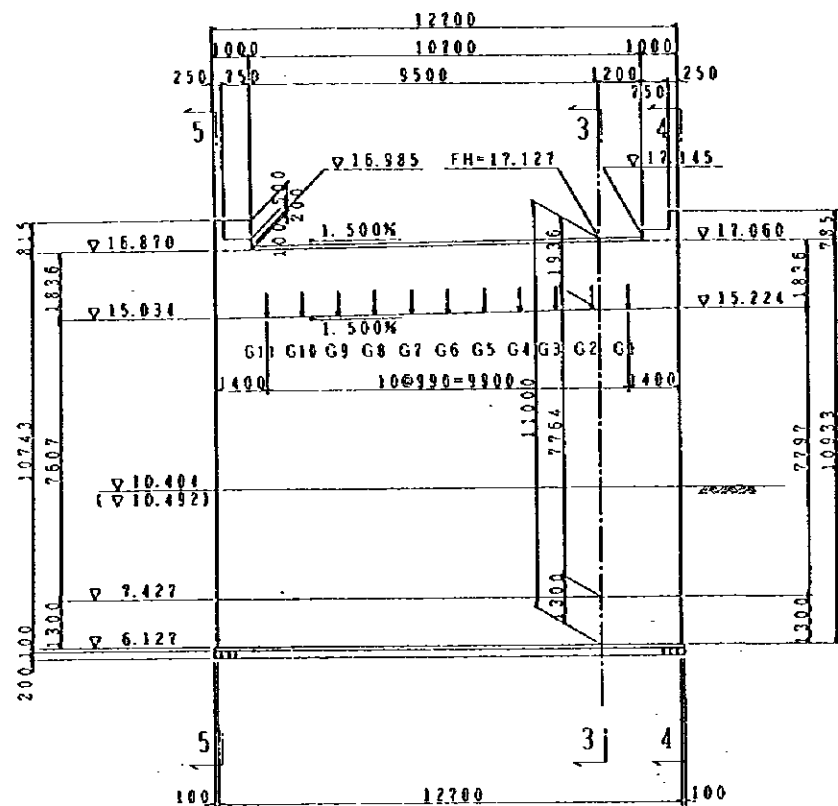
CLIENT: MINISTRY OF COMMUNICATIONS, DIRECTORATE GENERAL OF ROADS

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

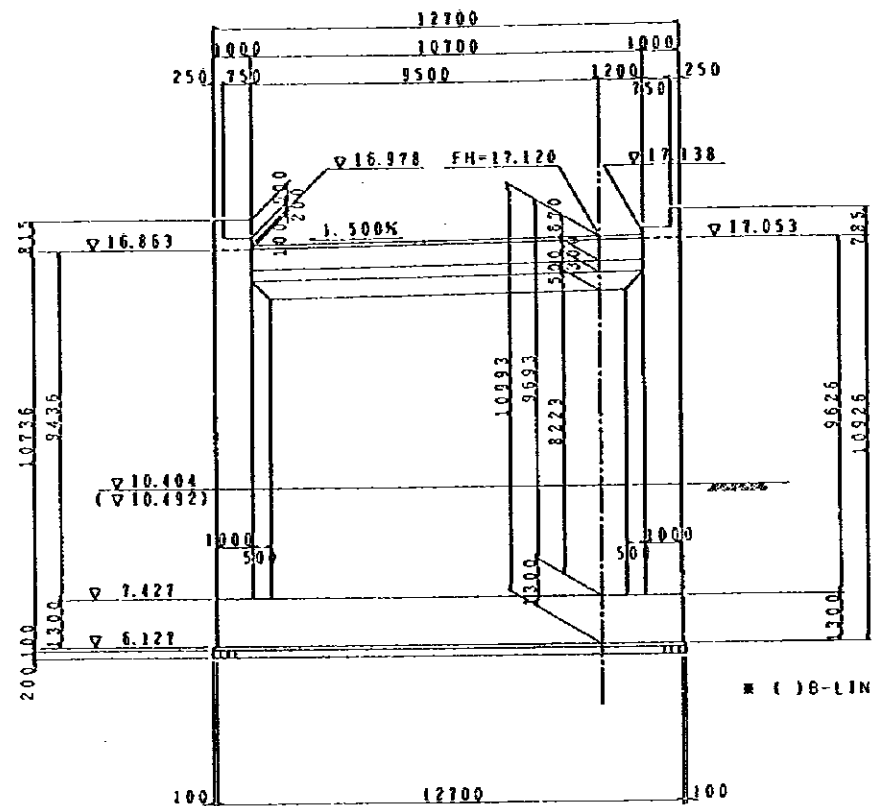
TITLE: BRIDGE DRAINAGE DETAILS (A'NASEEM GARDEN)

DATE: DWG. NO. B-25

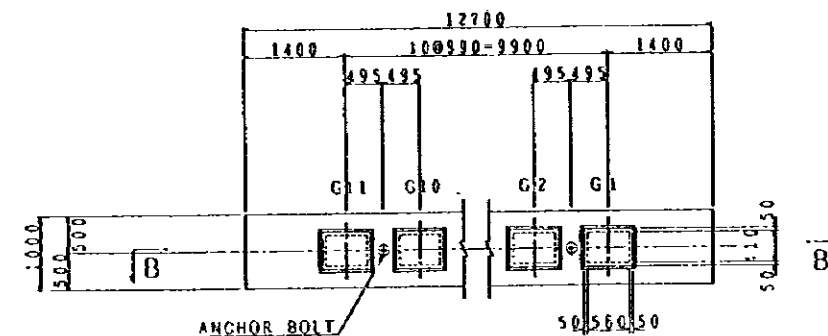
RA/2 A' NASEEM GARDEN



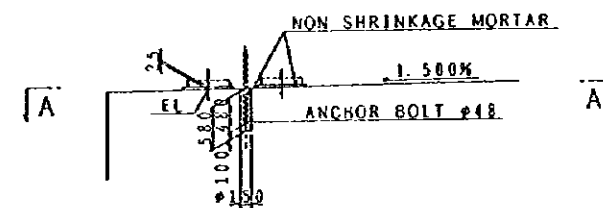
SECTION 1-1 S=1/200



SECTION 2-2 S=1/200



SECTION A-A S=1/100



SECTION B-B S=1/100

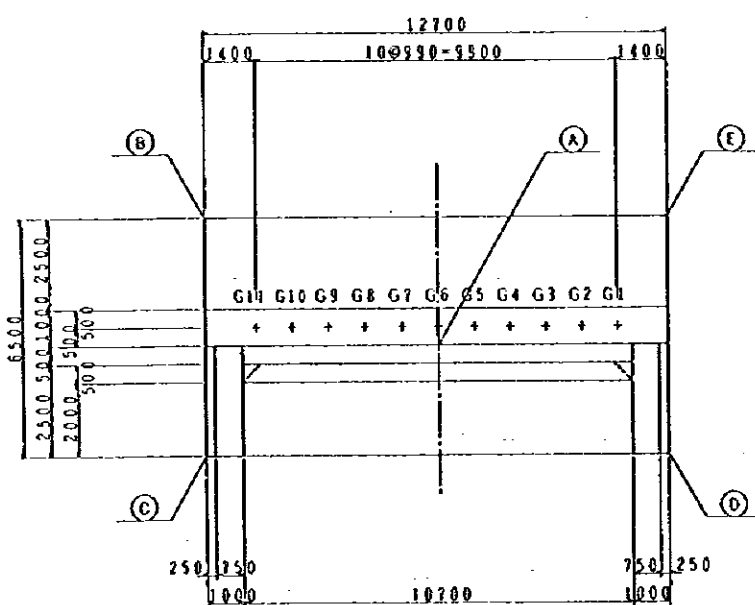
DETAIL OF SHOE BED

SHOE ELEVATION (EL) TABLE

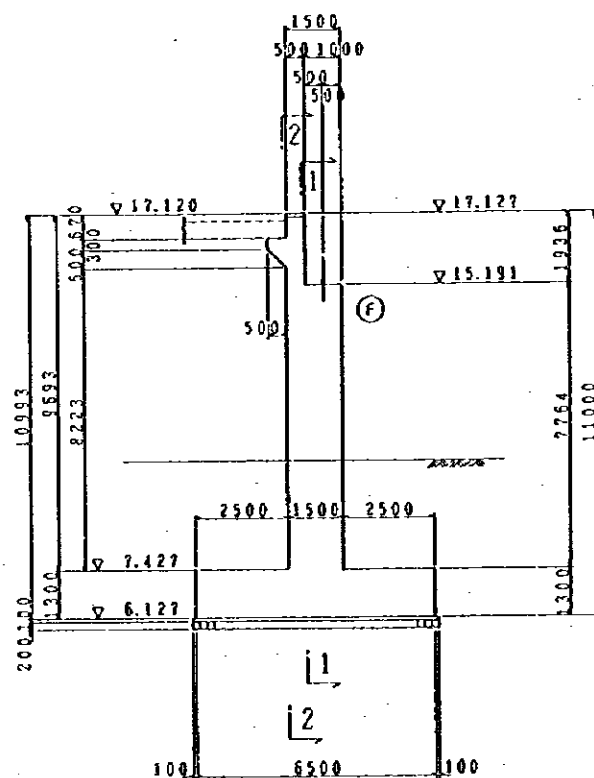
	G 1	G11
A-LINE	15.203	15.055
B-LINE	15.203	15.055

CO-ORDINATES LIST

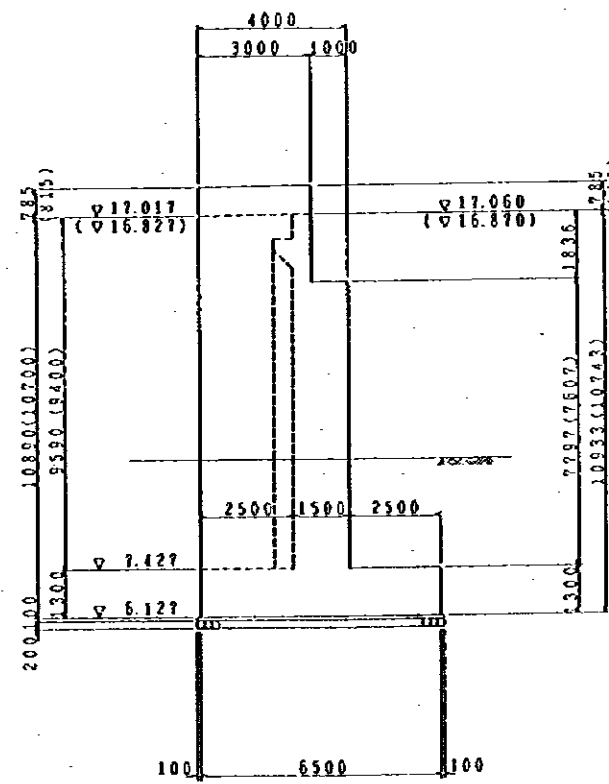
	A-LINE	B-LINE
A X	20061.3243	20034.5921
A Y	5149.3186	5177.0342
B X	20072.4022	20241.7572
B Y	5188.2867	5178.7435
C X	20074.5301	20039.7689
C Y	5183.1278	5173.5559
D X	20054.2927	20027.6772
D Y	5147.1764	5177.4399
E X	20060.5549	20029.6360
E Y	5179.3373	5183.6283



P L A N S=1/200

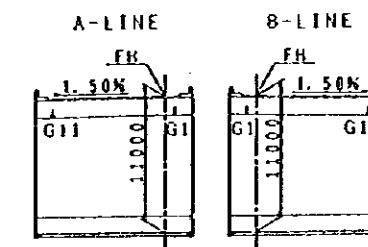


SECTION 3-3 S=1/200



SECTION 4-4 (5-5) S=1/200

STRUCTURAL DETAIL OF A1 ABUTMENT AT A-B-LINE



KEY PLAN

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 OF ROAD DEVELOPMENT PROJECT ON BATINAH HIGHWAY

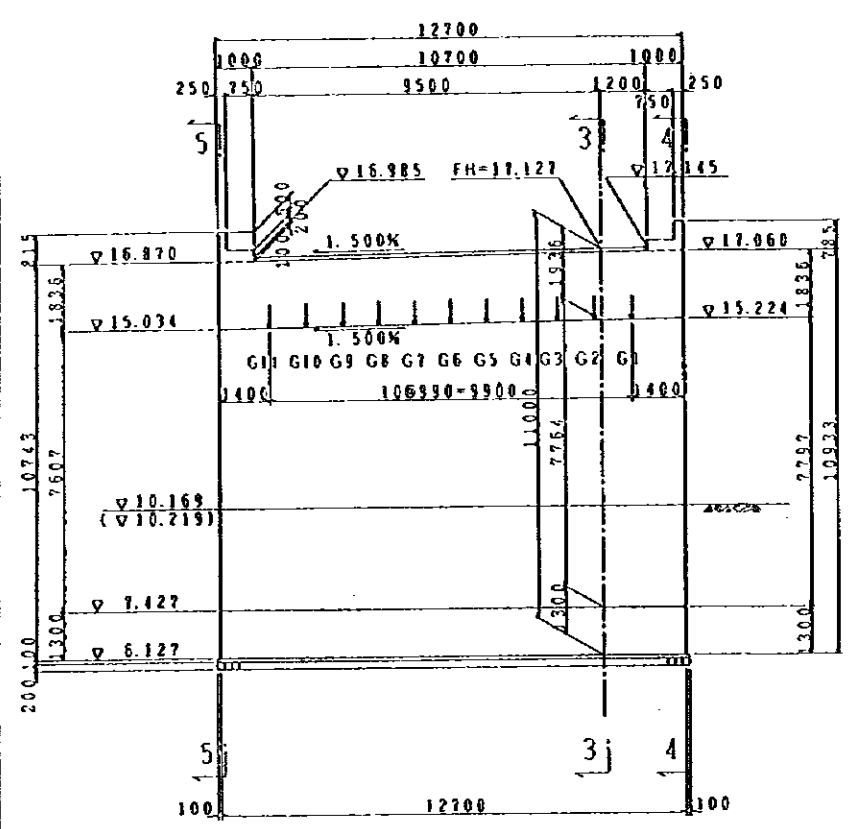
TITLE: STRUCTURAL DETAIL OF A1 ABUTMENT AT A-B-LINE

DATE

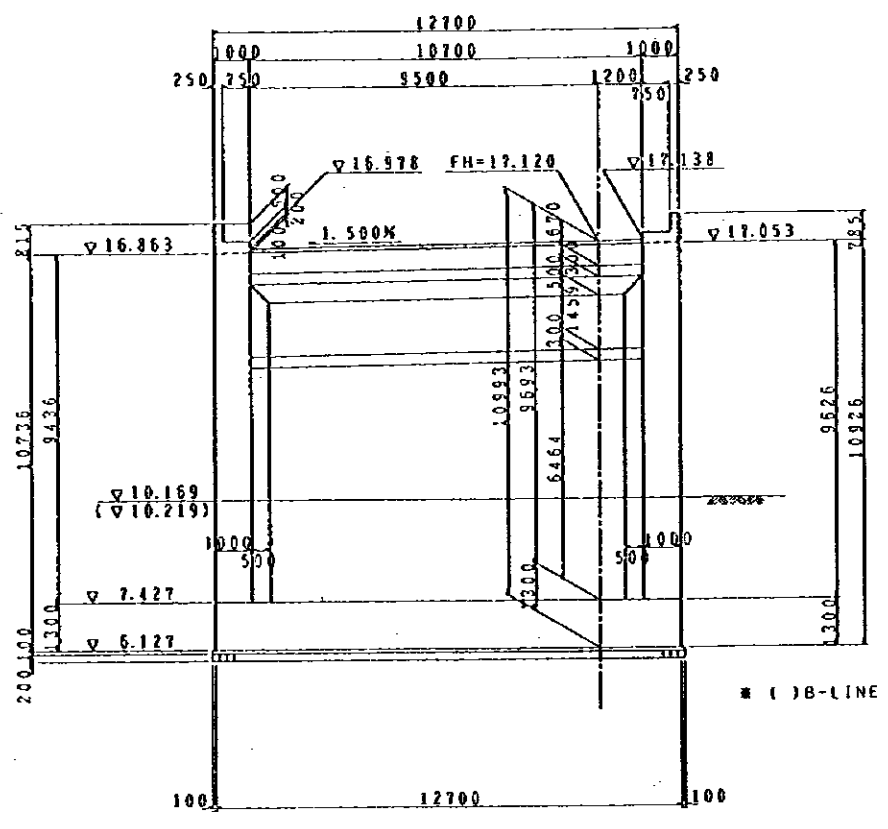
DWGNO.

B-26

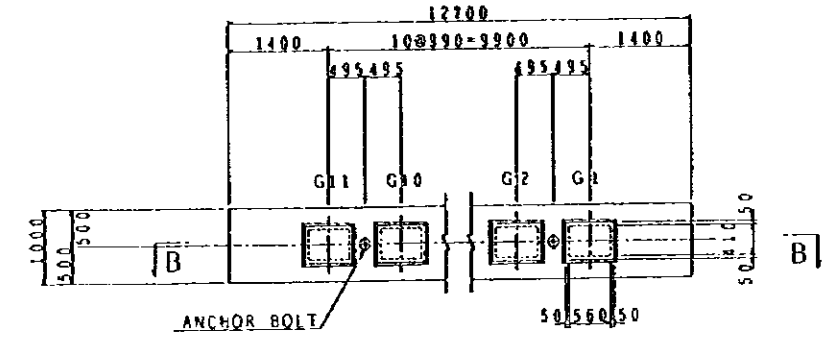
RA/2 A' NASEEM GARDEN



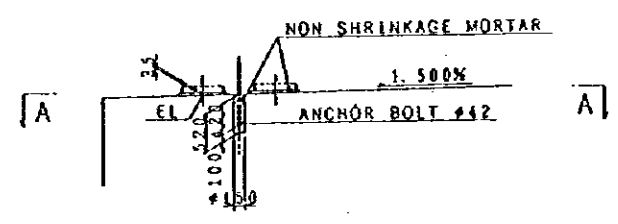
SECTION 1-1 S= 1/200



SECTION 2-2 S= 1/200



SECTION A-A S= 1/100



SECTION B-B S= 1/100

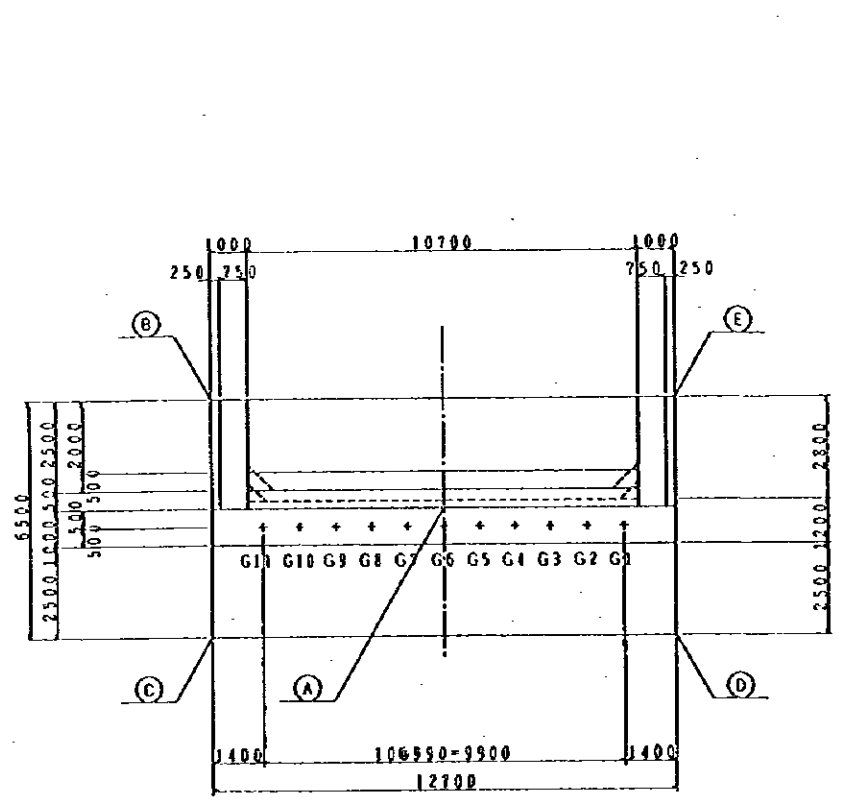
DETAIL OF SHOE BED

SHOE ELEVATION (EL) TABLE

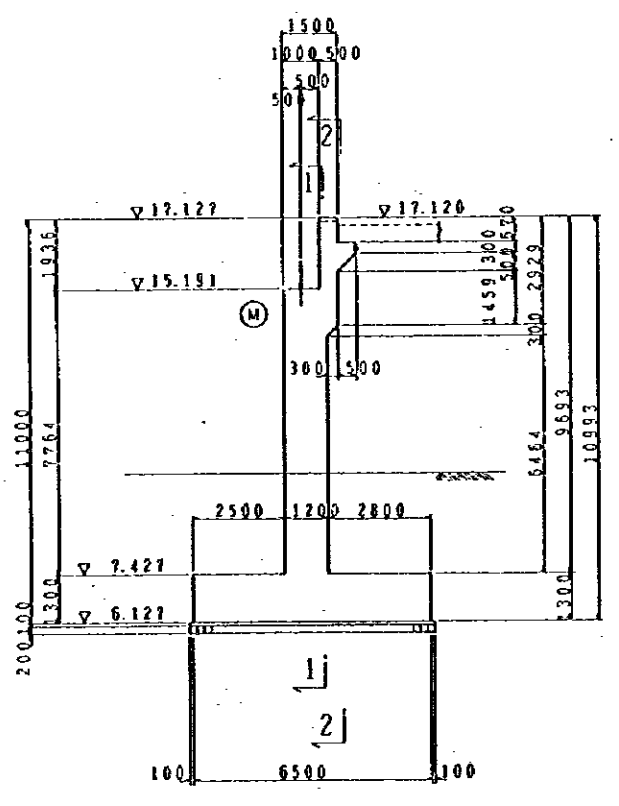
	G 1	G11
A-LINE	15.203	15.055
B-LINE	15.203	15.055

CO-ORDINATES LIST

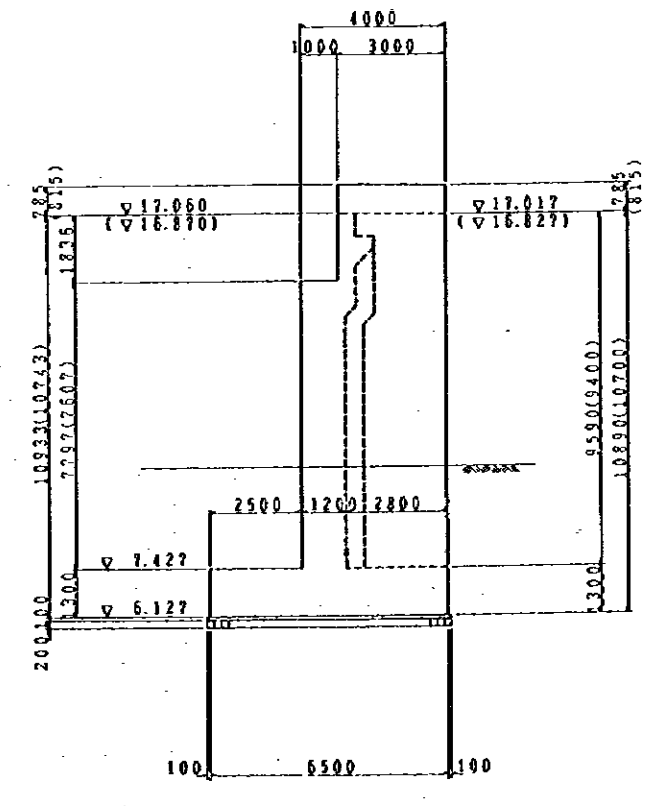
	A-LINE	B-LINE
A X	20154.6382	20131.6059
A Y	5441.3534	5449.4541
B X	20165.5927	20134.6348
B Y	5441.0251	5453.7075
C X	20163.3129	20132.4350
C Y	5454.0323	5445.5817
D X	20151.4354	20129.5422
D Y	5429.2091	5449.9129
E X	20153.6491	20132.7512
E Y	5445.3227	5453.0251



P L A N S= 1/200.

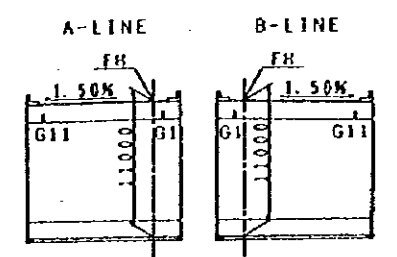


SECTION 3-3 S= 1/200



SECTION 4-4 (5-5) S= 1/200

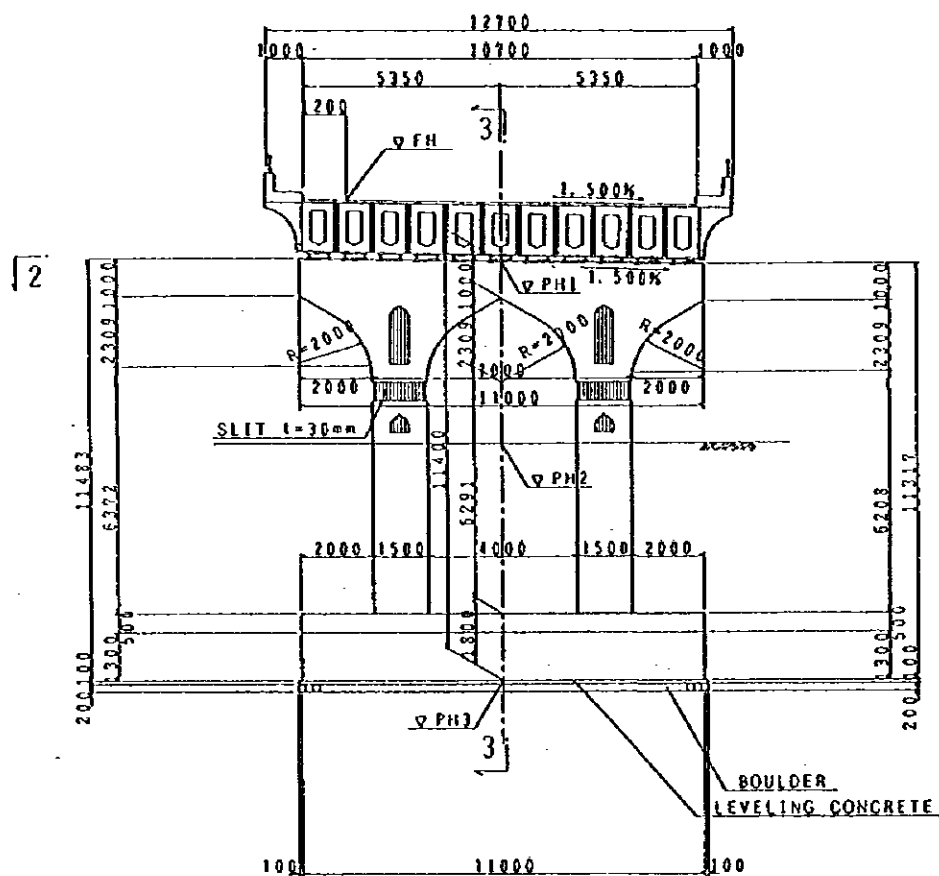
STRUCTURAL DETAIL OF A2 ABUTMENT AT A-B-LINE



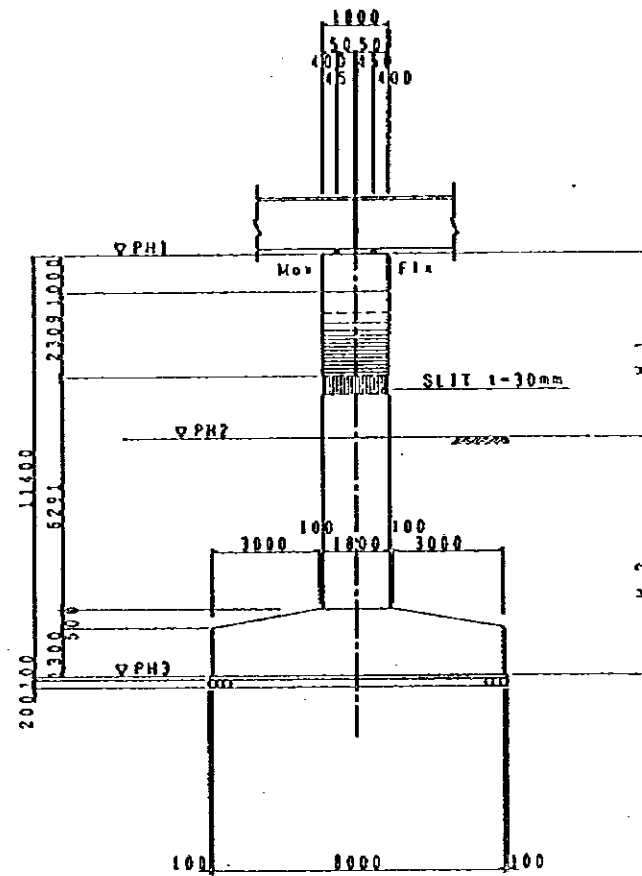
KEY PLAN

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: STRUCTURAL DETAIL OF A2 ABUTMENT AT A,B-LINE
		DATE: _____ DWGNO. B-27

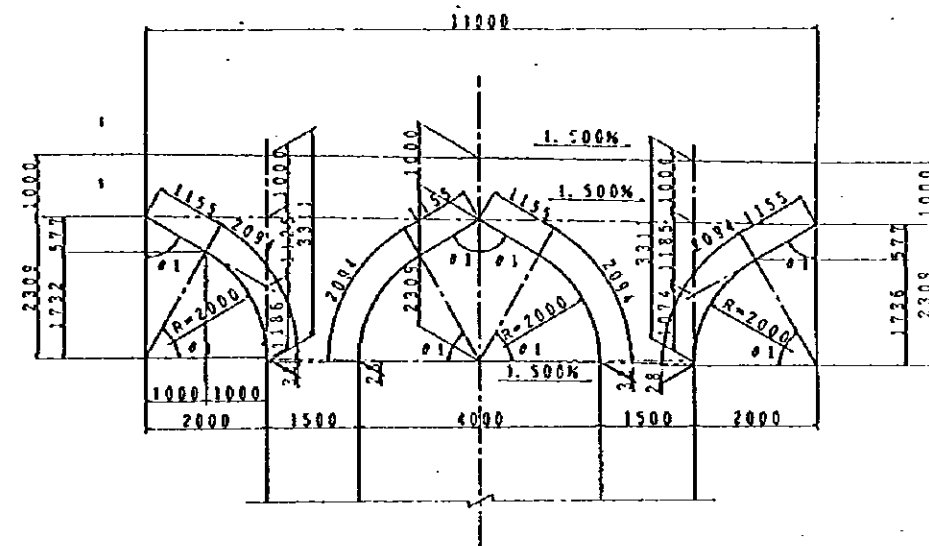
RA/2 A' NASEEM GARDEN



SECTION 1-1 S= 1/200



SECTION 3-3 S= 1/200



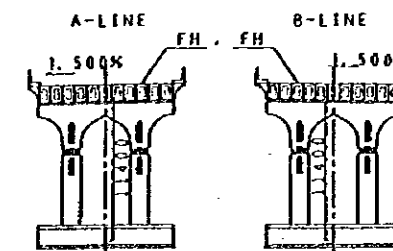
BEAM DETAIL S= 1/120

DIMENSION TABLE

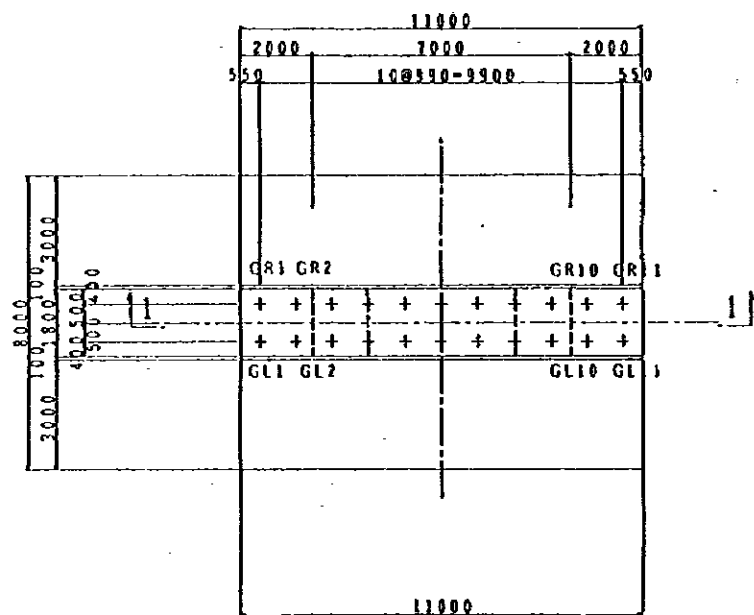
		PH1	PH2	PH3	H 1	H 2
A L I N E	P 1	15.522	10.377	4.122	5.145	6.255
	P 2	15.829	10.349	4.429	5.480	5.920
	P 3	16.034	10.300	4.634	5.734	5.666
	P 4	16.136	11.000	4.736	5.136	5.264
	P 5	16.136	11.100	4.736	5.036	6.364
	P 6	16.034	10.300	4.634	5.734	5.666
	P 7	15.829	10.244	4.429	5.585	5.815
	P 8	15.522	10.207	4.122	5.315	6.085
B L I N E	P 1	15.522	10.472	4.122	5.050	6.350
	P 2	15.829	10.452	4.429	5.377	6.023
	P 3	16.034	10.500	4.634	5.534	5.866
	P 4	16.136	10.700	4.736	5.436	5.964
	P 5	16.136	10.900	4.736	5.236	6.164
	P 6	16.034	10.150	4.634	5.884	5.516
	P 7	15.829	10.302	4.429	5.527	5.873
	P 8	15.522	10.260	4.122	5.262	6.138

SHOE ELEVATION (EL) TABLE

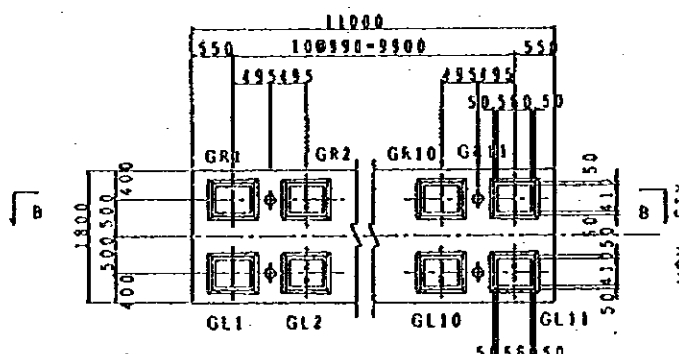
	G1L (G1R)	G1L (G1R)
P 1	15.596	15.448
P 2	15.903	15.755
P 3	16.108	15.960
P 4	16.210	16.062
P 5	16.210	16.352
P 6	16.108	15.960
P 7	15.903	15.755
P 8	15.596	15.448



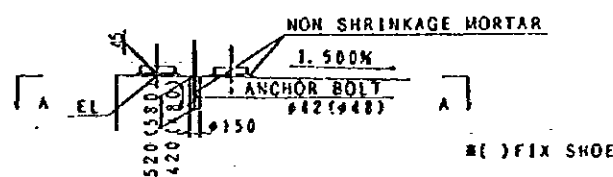
KEY PLAN



SECTION 2-2 S= 1/200



SECTION A-A S= 1/100



SECTION B-B S= 1/100

DETAIL OF SHOE BED

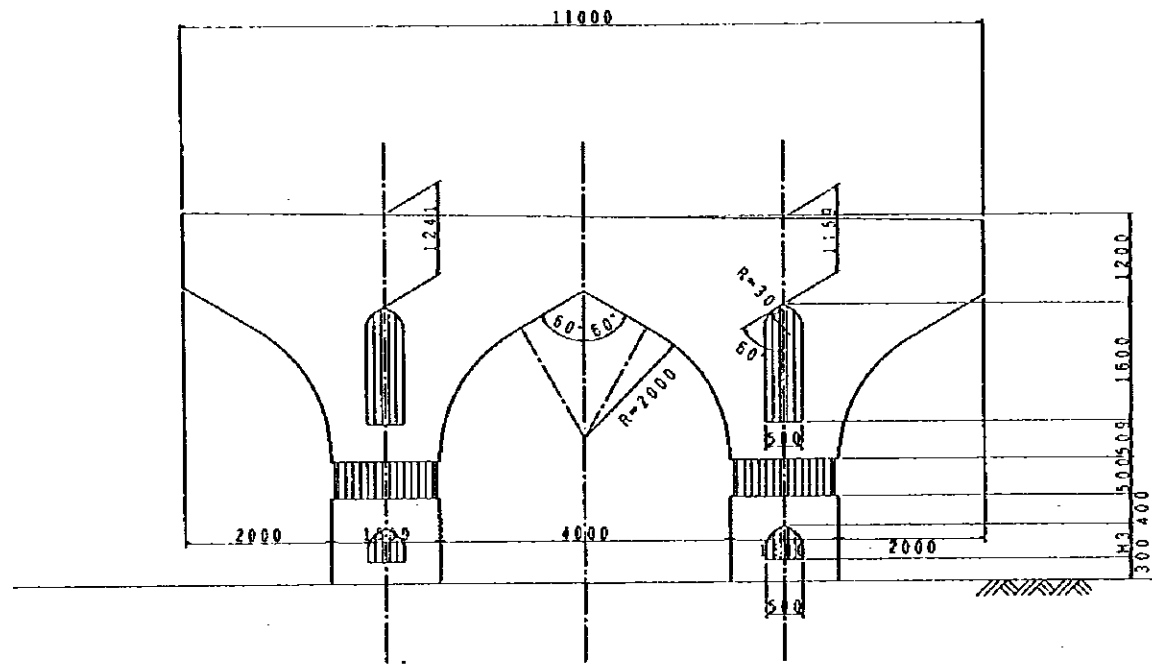
STRUCTURAL DETAIL OF TWO-COLUMN PIER FOR P1~P8 AT A-B-LINE (1/2)

NOTES:

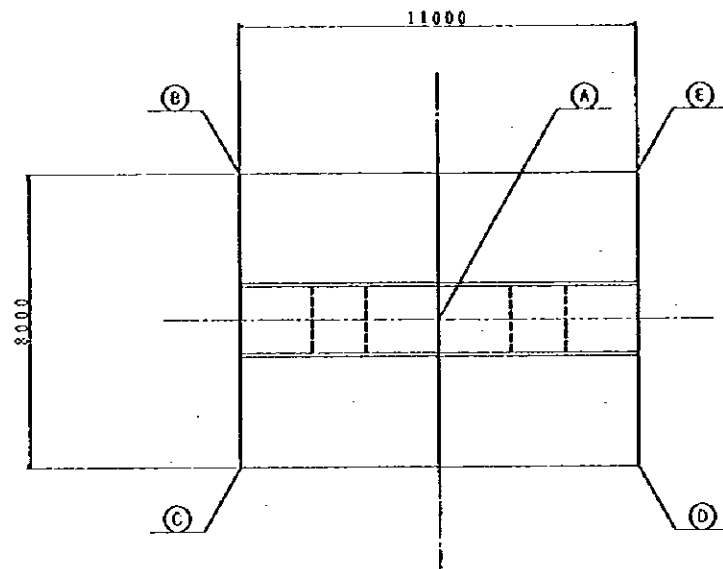
JAPAN INTERNATIONAL COOPERATION AGENCY
(JICA)
JICA STUDY TEAM
PACIFIC CONSULTANTS INTERNATIONAL
FUKUYAMA CONSULTANTS INTERNATIONAL

CLIENT: MINISTRY OF COMMUNICATIONS, DIRECTORATE GENERAL OF ROADS
PROJECT: D/D ON ROAD DEVELOPMENT PROJECT ON BATINAH HIGHWAY
TITLE: STRUCTURAL DETAIL OF TWO-COLUMN PIER (P1~P8) AT A-B-LINE (1/2)
DATE: DWGNO. B-28

RA/2 A' NASEEM GARDEN



SLIT OF PLAN S= 1/100



FRAMING PLAN S= 1/200

DIMENSION (H₃) TABLE

	A-LINE	B-LINE
P 1	636	541
P 2	971	868
P 3	1225	1025
P 4	627	927
P 5	527	727
P 6	1225	1375
P 7	1076	1018
P 8	806	753

CO-ORDINATES LIST

		A	B	C	D
A L I N E	P1	X 20071.4749	20081.8326	20079.3737	20068.8358
		Y 5199.6832	5200.4269	5192.8332	5196.2882
	P2	X 20081.5052	20091.8227	20069.4147	20078.9582
		Y 5230.0587	5238.8287	5223.2390	5228.6816
	P3	X 20091.5889	20102.0185	20099.4892	20089.8488
		Y 5260.4239	5261.1547	5258.5581	5251.9584
	P4	X 20101.9122	20112.2350	20103.6659	20099.2493
		Y 5290.7494	5291.4781	5283.8527	5287.8947
	P5	X 20112.1478	20122.5727	20119.1747	20109.5714
		Y 5321.0343	5321.8822	5314.1163	5317.6899
	P6	X 20122.6641	20133.0322	20130.4834	20120.0145
		Y 5351.2772	5351.8849	5344.9284	5347.8436
	P7	X 20133.1815	20143.6124	20140.8529	20130.5785
		Y 5381.4790	5382.0435	5374.4985	5378.1552
	P8	X 20143.8788	20154.3128	20151.6230	20141.2833
		Y 5411.8327	5412.1605	5404.6262	5408.8244
B L I N E	P1	X 20043.4618	20050.8640	20048.4064	20038.0273
		Y 5207.5308	5210.8159	5203.2092	5206.7159
	P2	X 20058.4129	20068.8428	20058.4408	20047.9524
		Y 5237.8374	5241.8125	5233.7158	5237.1644
	P3	X 20068.5057	20078.8531	20068.5188	20058.0852
		Y 5268.2541	5271.8890	5264.8824	5267.3727
	P4	X 20078.7189	20088.2828	20078.7147	20068.2855
		Y 5298.6301	5301.8340	5294.4884	5297.9404
	P5	X 20089.8559	20099.6318	20089.8326	20078.8239
		Y 5328.8151	5332.2505	5324.6834	5328.2611
	P6	X 20099.9118	20102.1014	20099.4722	20089.6632
		Y 5358.1584	5362.4925	5354.9501	5358.5581
	P7	X 20110.8882	20112.8921	20119.8327	20099.8583
		Y 5388.2587	5392.8854	5385.1584	5388.7951
	P8	X 20120.7878	20128.8635	20120.7139	20118.9542
		Y 5418.5184	5422.8317	5415.8974	5418.8958

STRUCTURAL DETAIL OF TWO-COLUMN PIER FOR P1~P8 AT A-B-LINE (2/2)

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

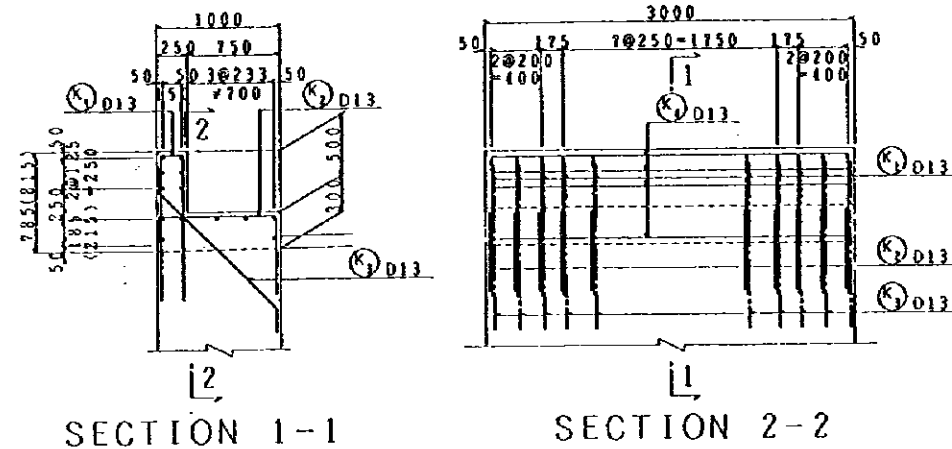
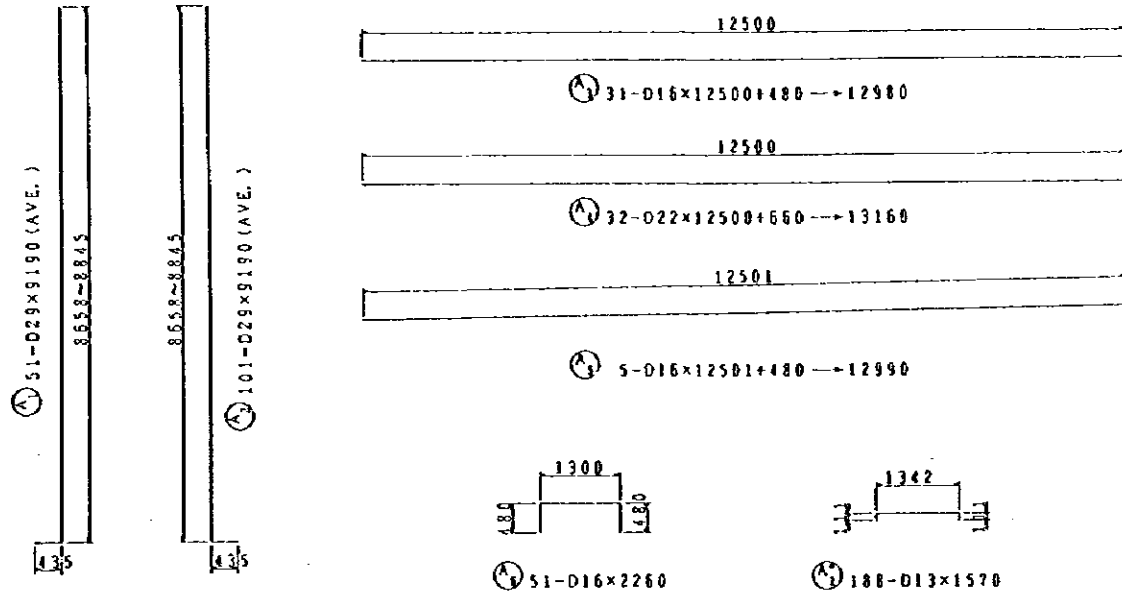
TITLE STRUCTURAL DETAIL OF TWO-COLUMN PIER(P1~P8) AT A,B-LINE (2/2)

DATE

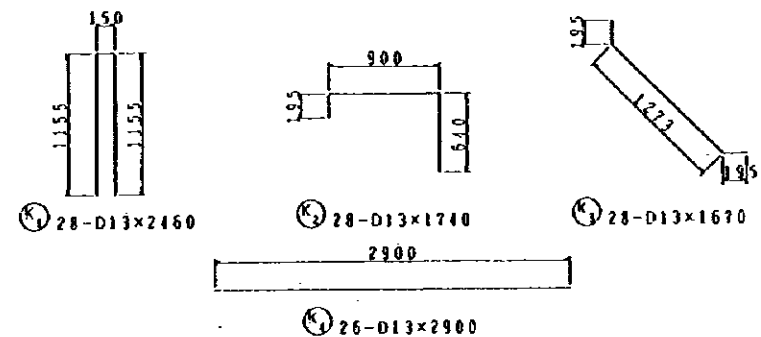
DWGNO.

B-29

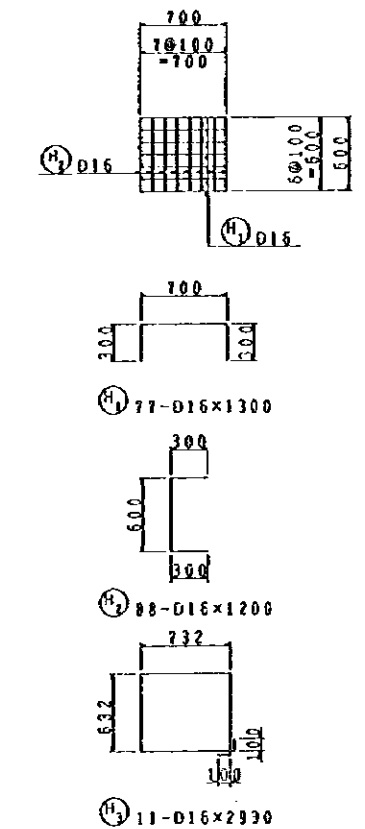
RA/2 A' NASEEM GARDEN



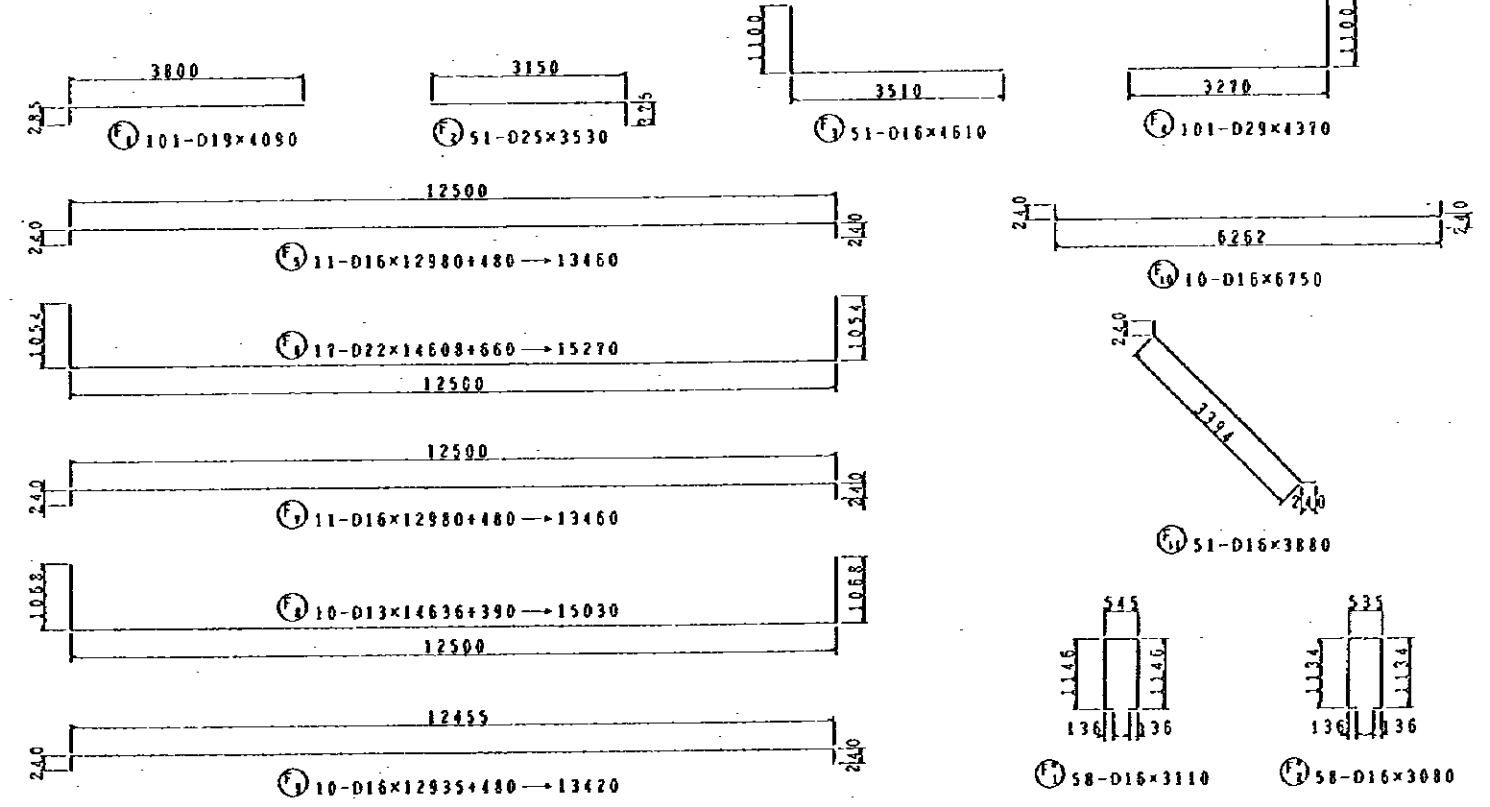
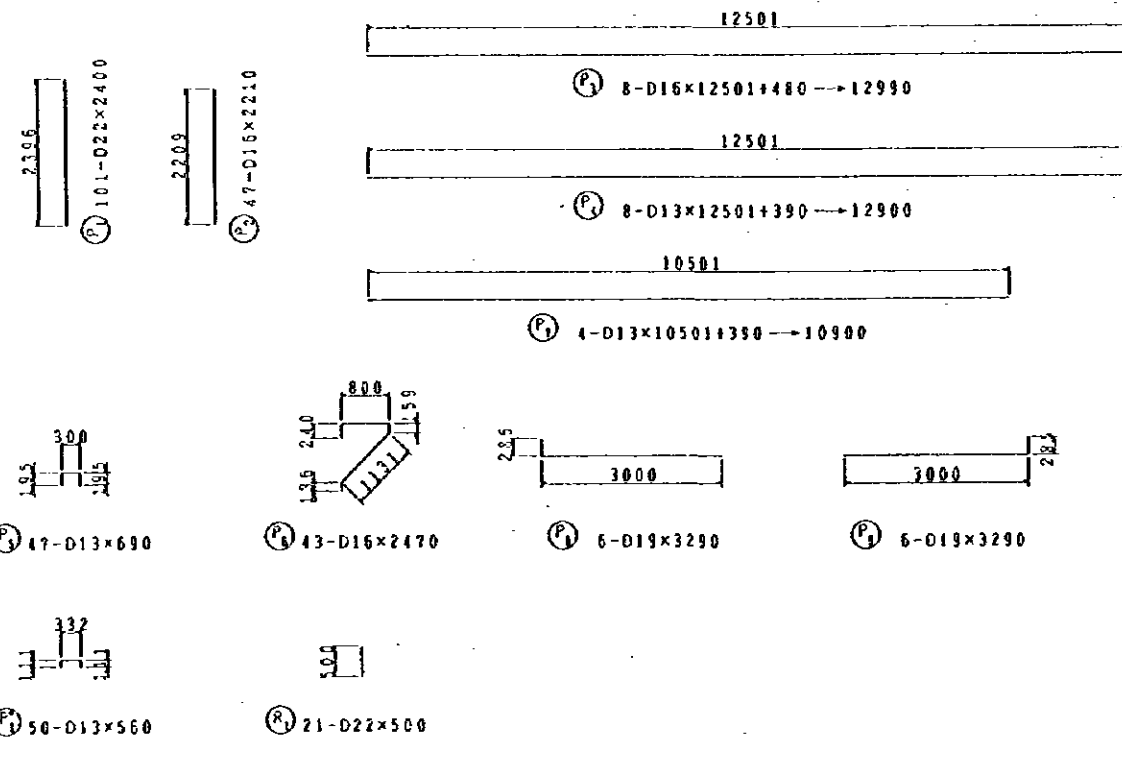
NOTE: () RIGHT RAILING



DETAIL OF RAILING S = 1/60



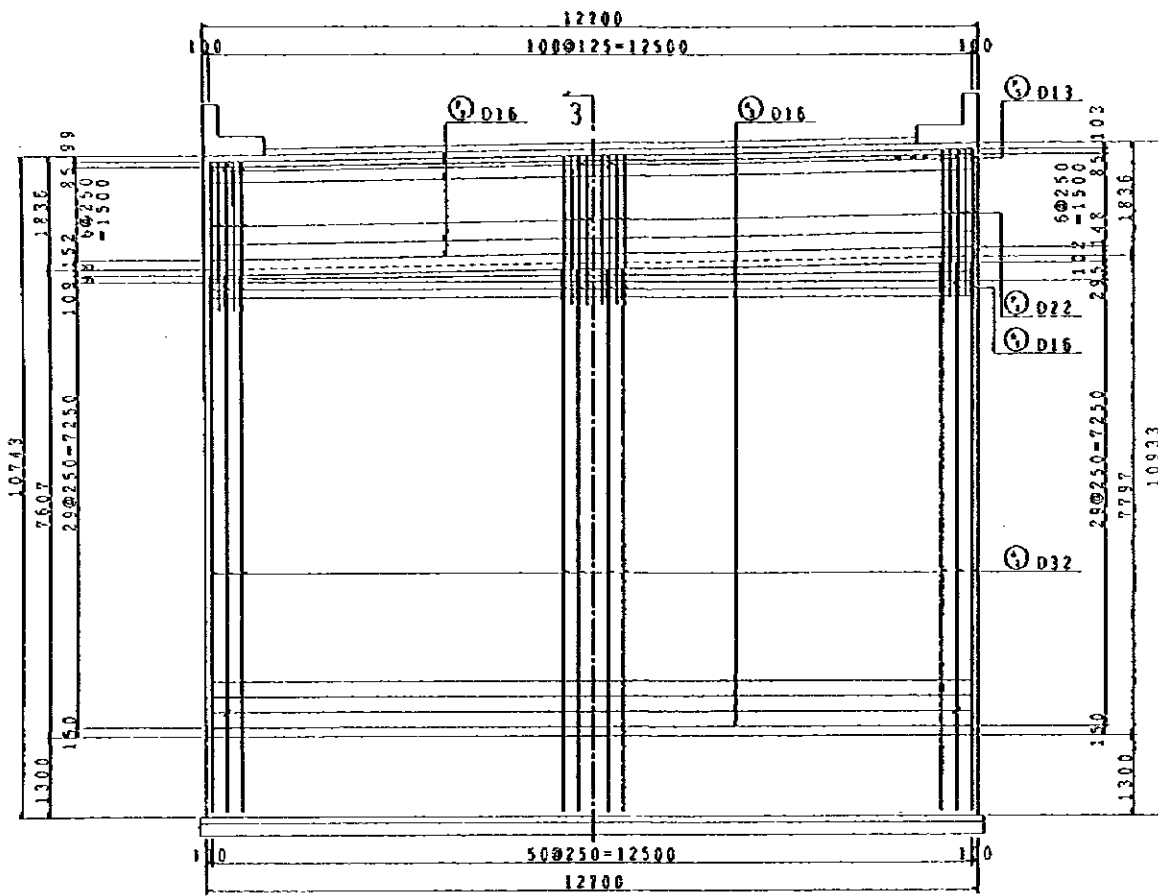
DETAIL OF SHOE BED S = 1/60



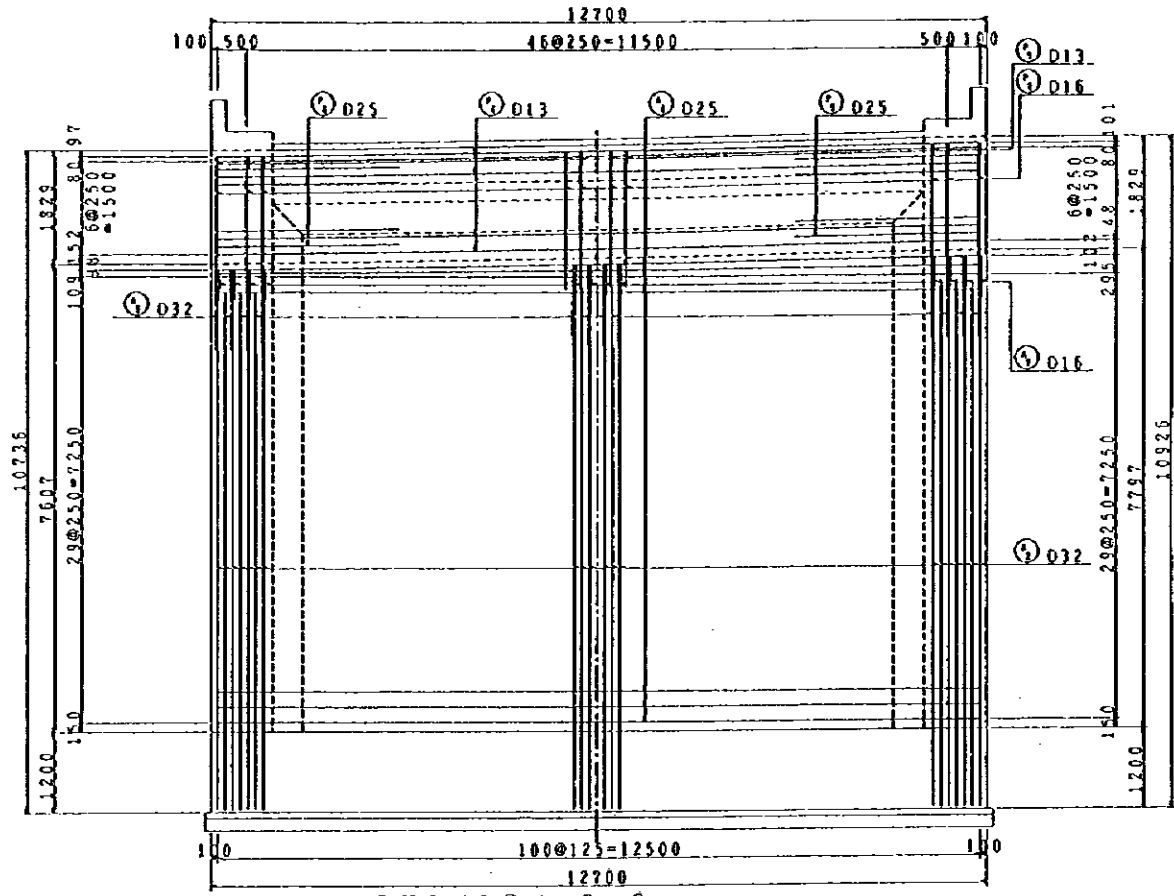
RE-BAR ARRANGEMENT OF A1 ABUTMENT AT A.B-LINE (3/3)

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: RE-BAR ARRANGEMENT OF A1 ABUTMENT AT A.B-LINE (3/3)	
		DATE:	DWGNO. B-32

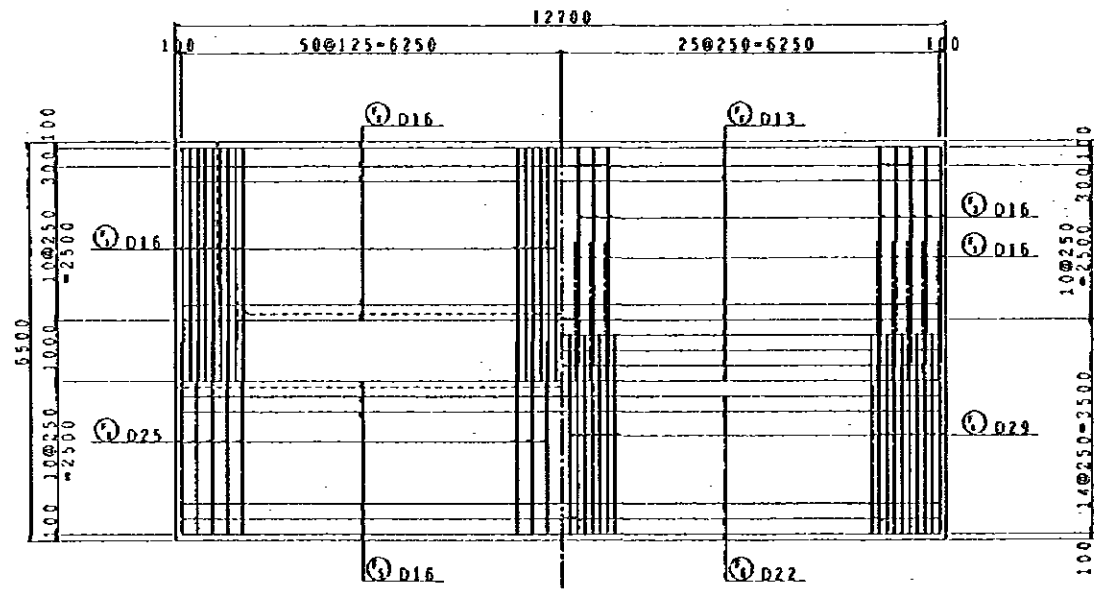
RA/2 A NASEEM GARDEN



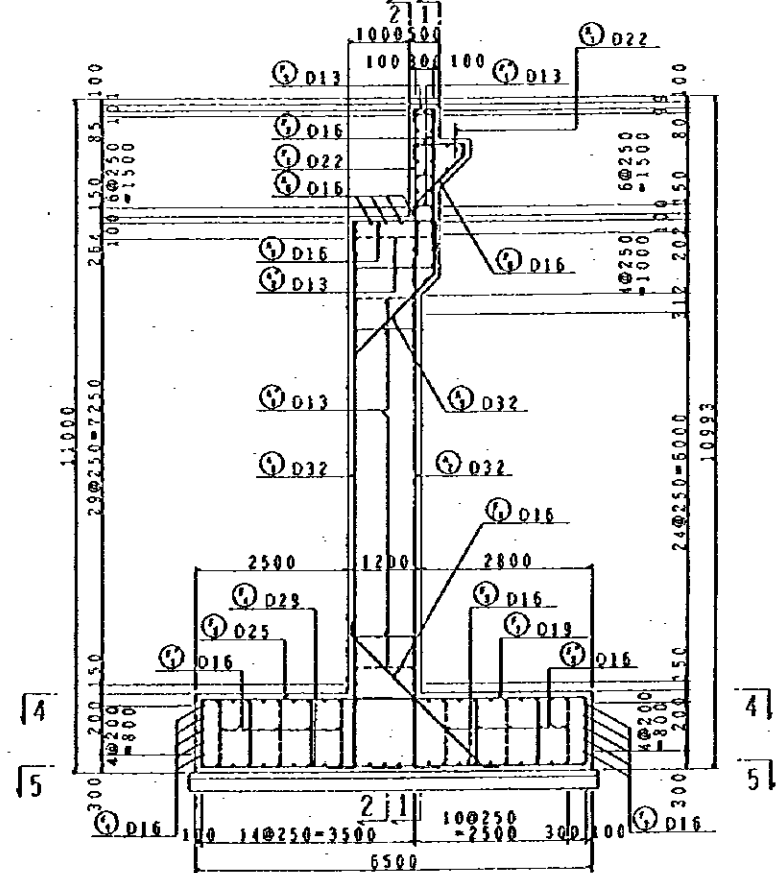
SECTION 1-1 S=1/120



SECTION 2-2 S=1/120



SECTION 4-4 S=1/120 SECTION 5-5 S=1/120



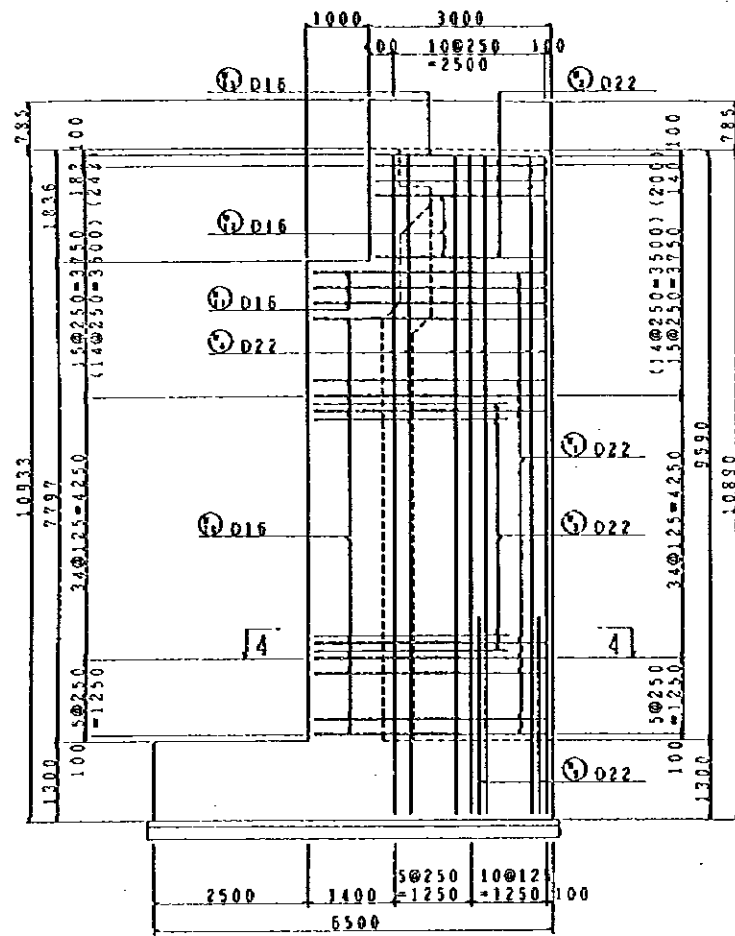
SECTION 3-3 S=1/120

RE-BAR ARRANGEMENT OF A2 ABUTMENT AT A.B-LINE (1/3)

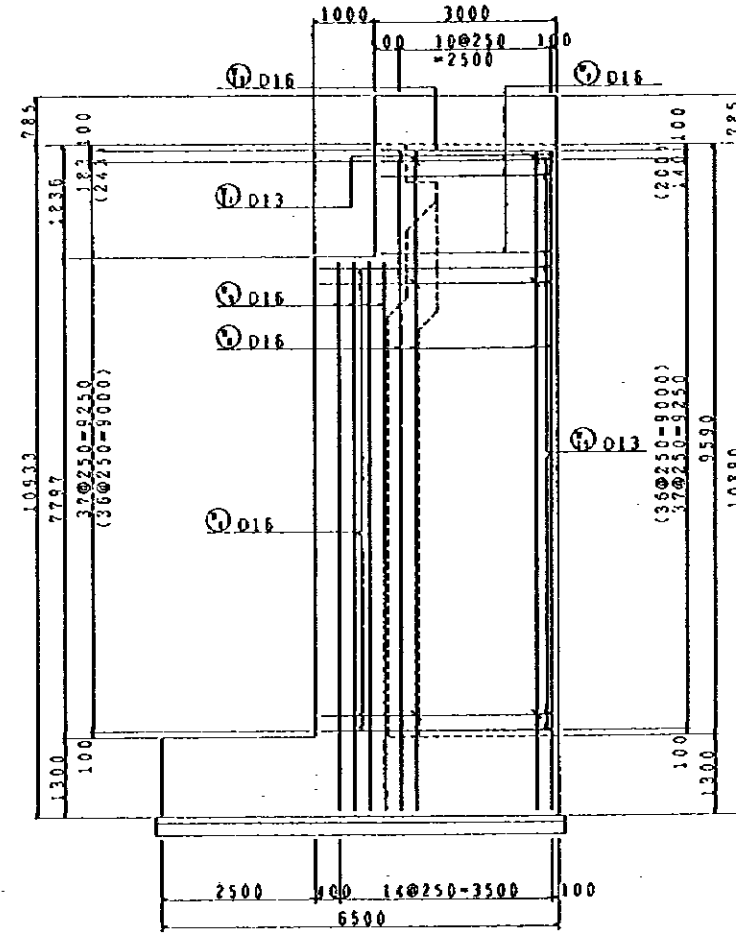
NOTES:

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: RE-BAR ARRANGEMENT OF A2 ABUTMENT AT A.B-LINE (1/3)		DATE:
DATE:		DWGNO. B-33

RA/2 A NASEEM GARDEN

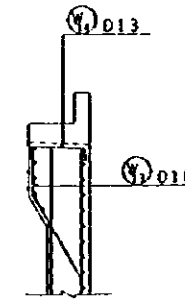


SECTION 1-1 S=1/120

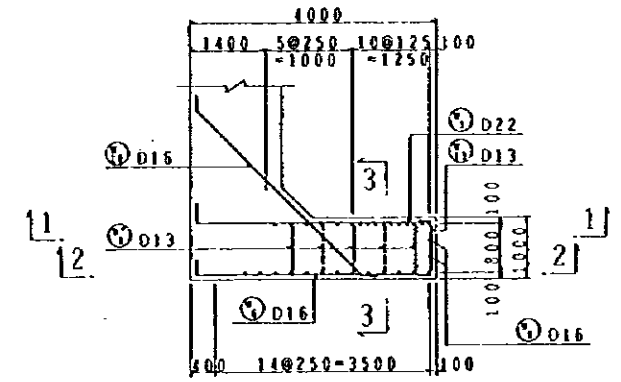


SECTION 2-2 S=1/120

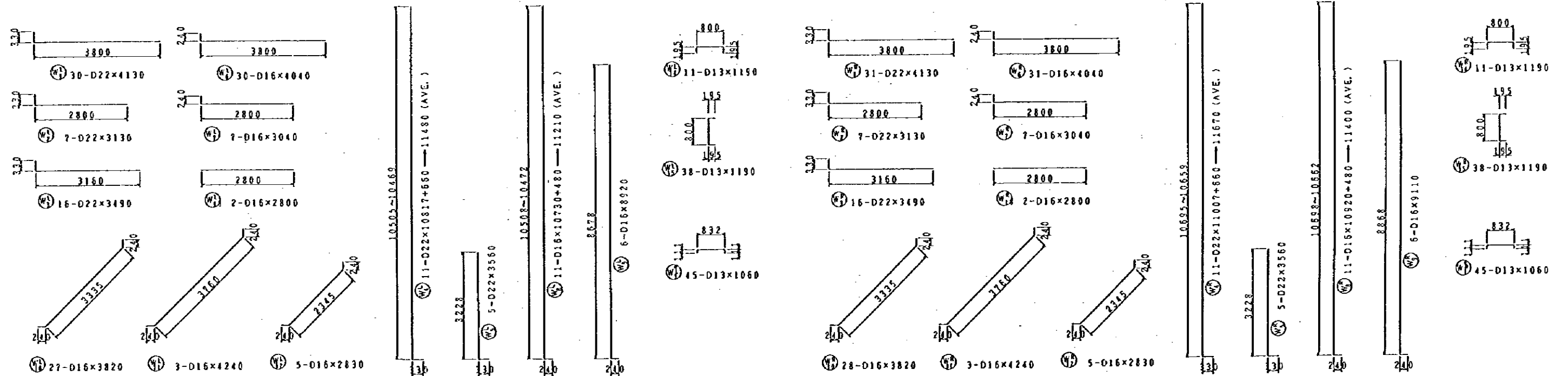
NOTE: () LEFT WING



SECTION 3-3 S=1/120



SECTION 4-4 S=1/120



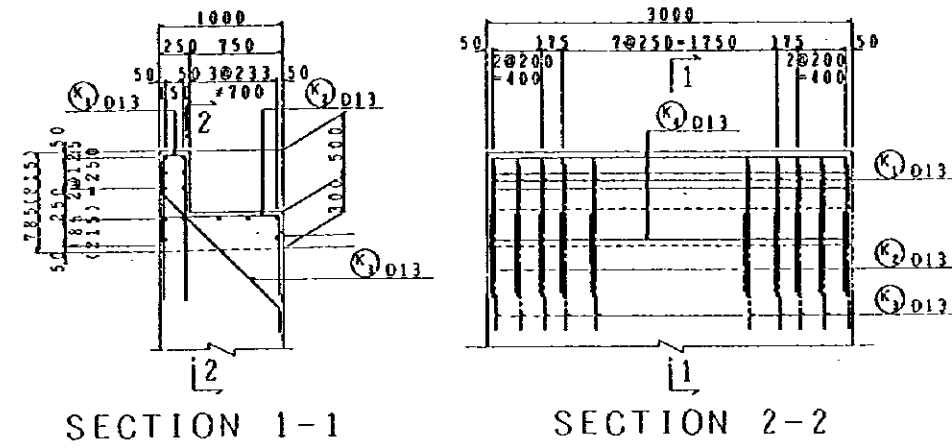
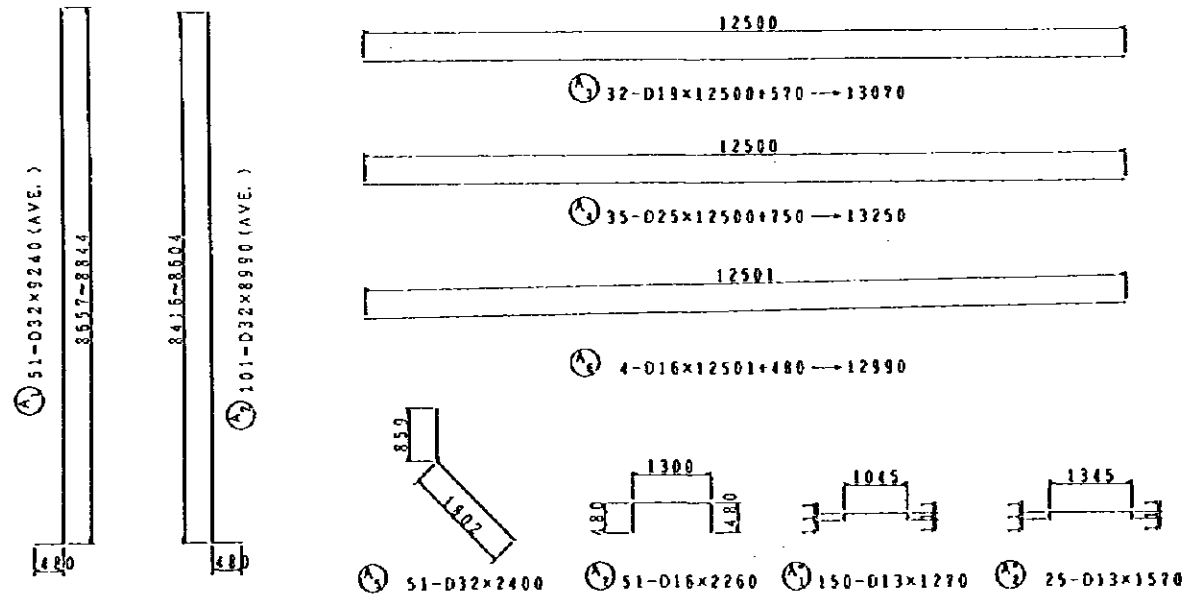
RE-BAR ARRANGEMENT OF A2 ABUTMENT AT A.B-LINE (2/3)

NOTES:

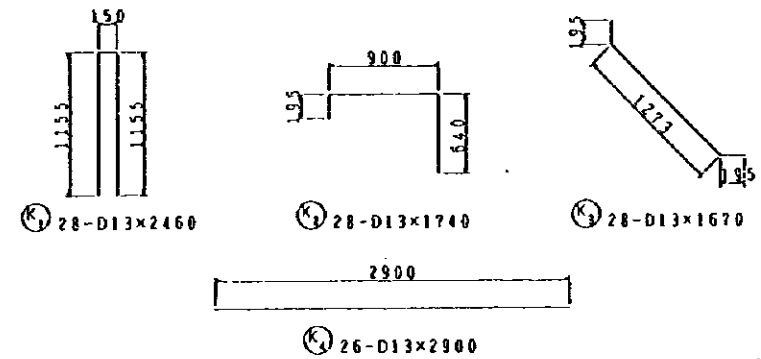
JAPAN INTERNATIONAL COOPERATION AGENCY
(JICA)
JICA STUDY TEAM
PACIFIC CONSULTANTS INTERNATIONAL
FUKUYAMA CONSULTANTS INTERNATIONAL

CLIENT: MINISTRY OF COMMUNICATIONS, DIRECTORATE GENERAL OF ROADS
PROJECT: D/D ON ROAD DEVELOPMENT PROJECT ON BATINAH HIGHWAY
TITLE: RE-BAR ARRANGEMENT OF A2 ABUTMENT AT A.B-LINE (2/3)
DATE: _____ DWGNO. B-34

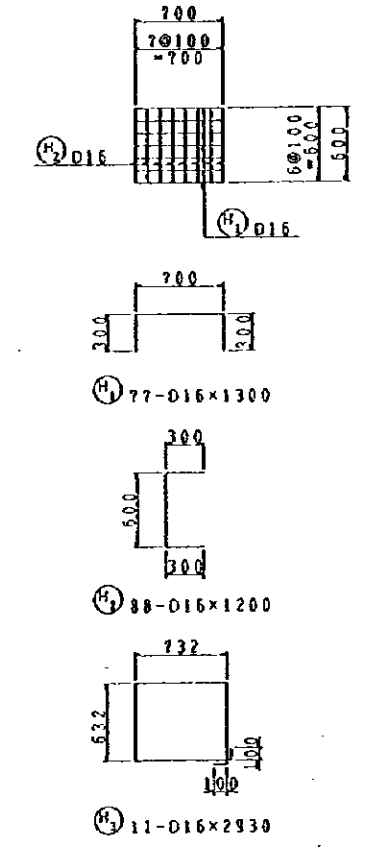
RA/2 A NASEEM GARDEN



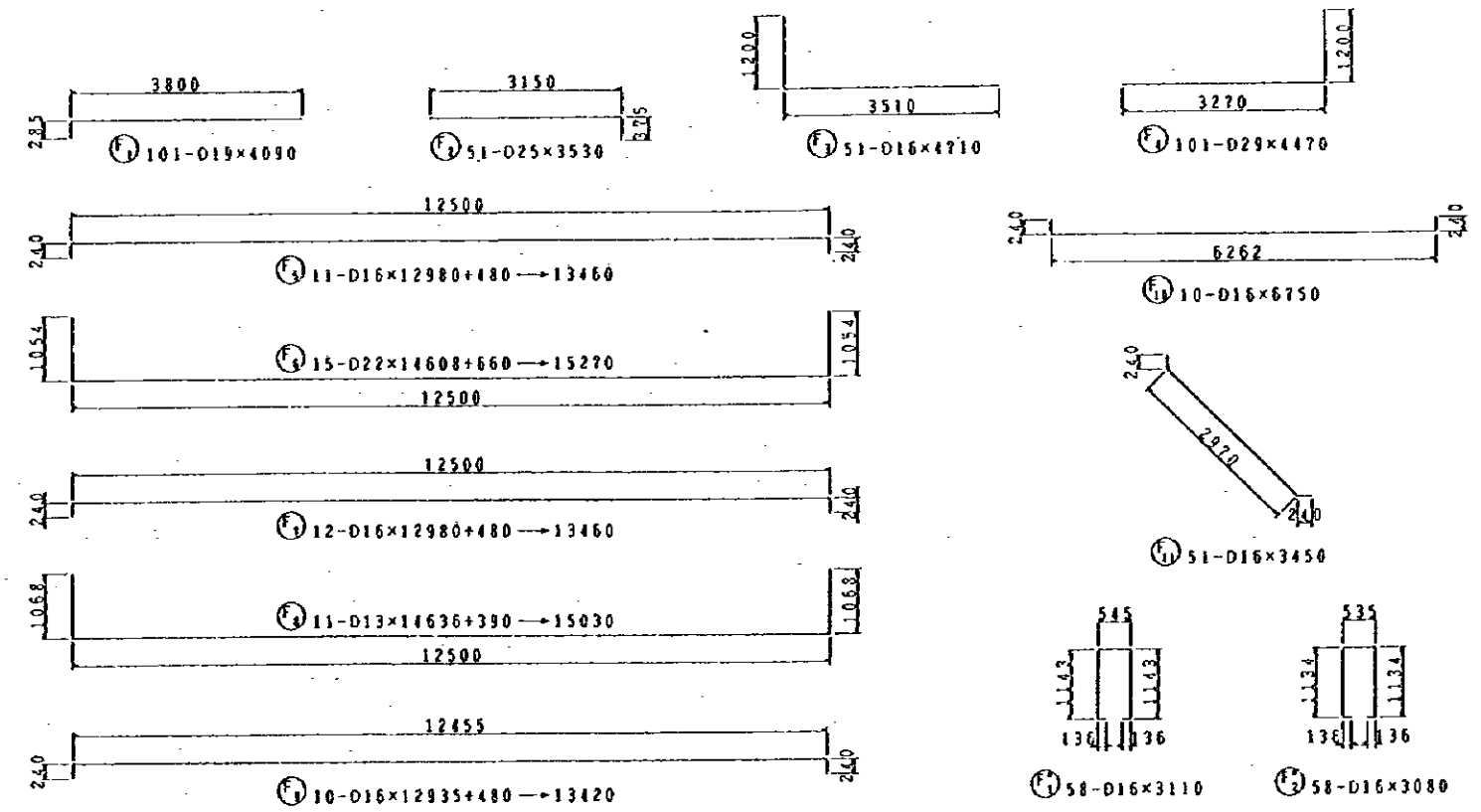
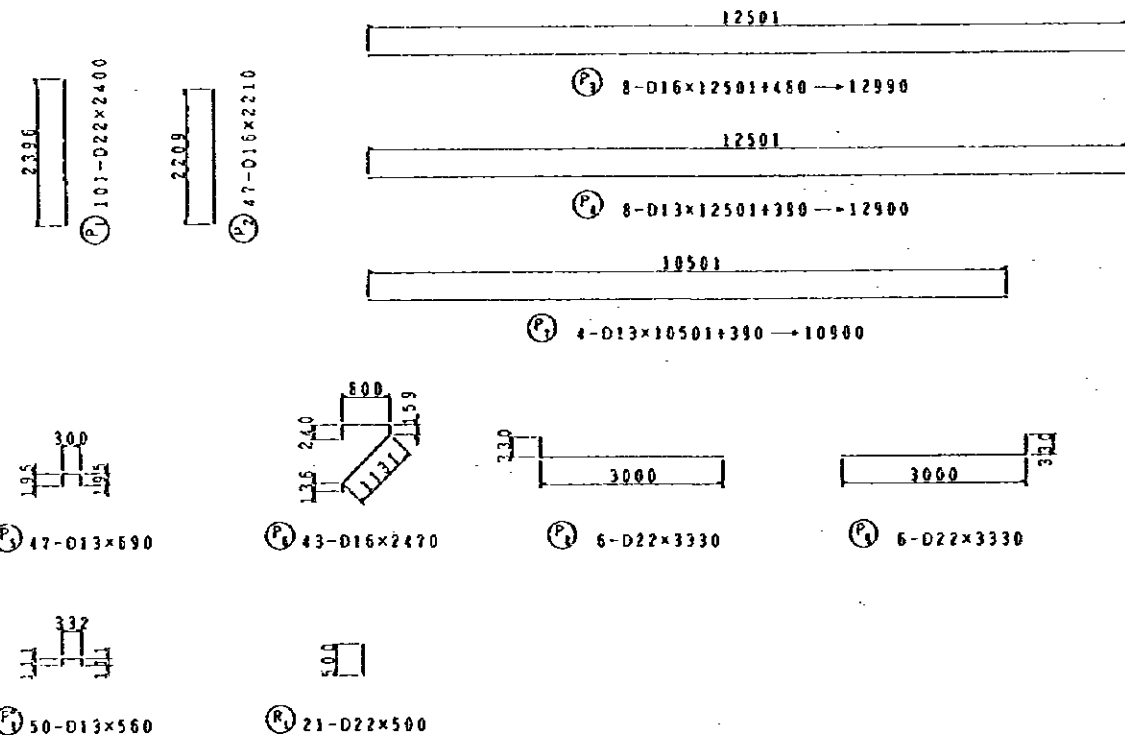
NOTE: () RIGHT RAILING



DETAIL OF RAILING S= 1/60



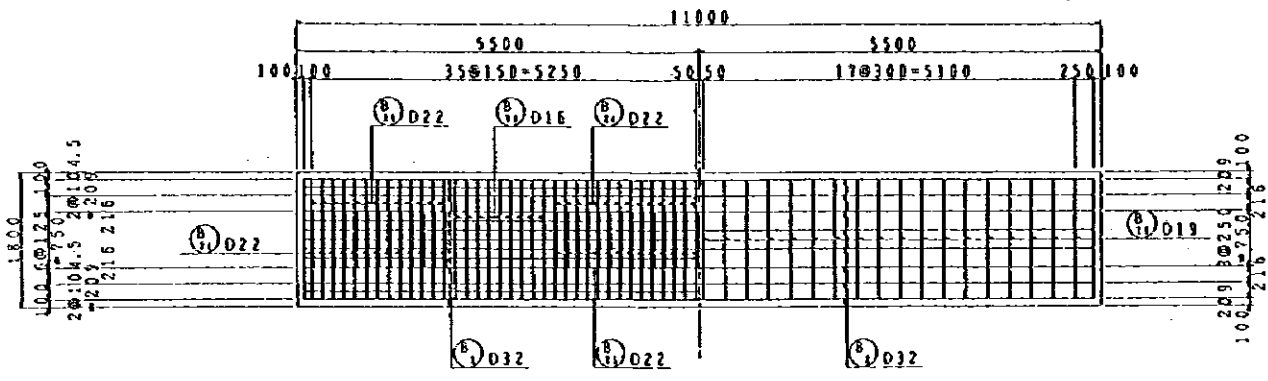
DETAIL OF SHOE BED S= 1/60



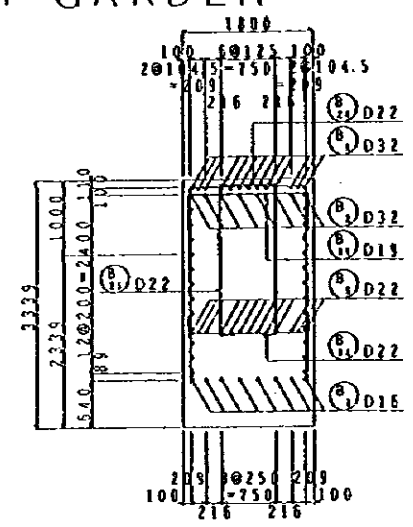
RE-BAR ARRANGEMENT OF A2 ABUTMENT AT A.B-LINE (3/3)

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 RE-BAR ARRANGEMENT OF A2 ABUTMENT AT A.B-LINE (3/3)
	DATE	DWGNO. B-35

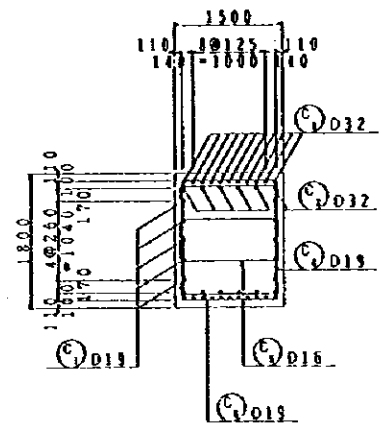
RA/2 A' NASEEM GARDEN



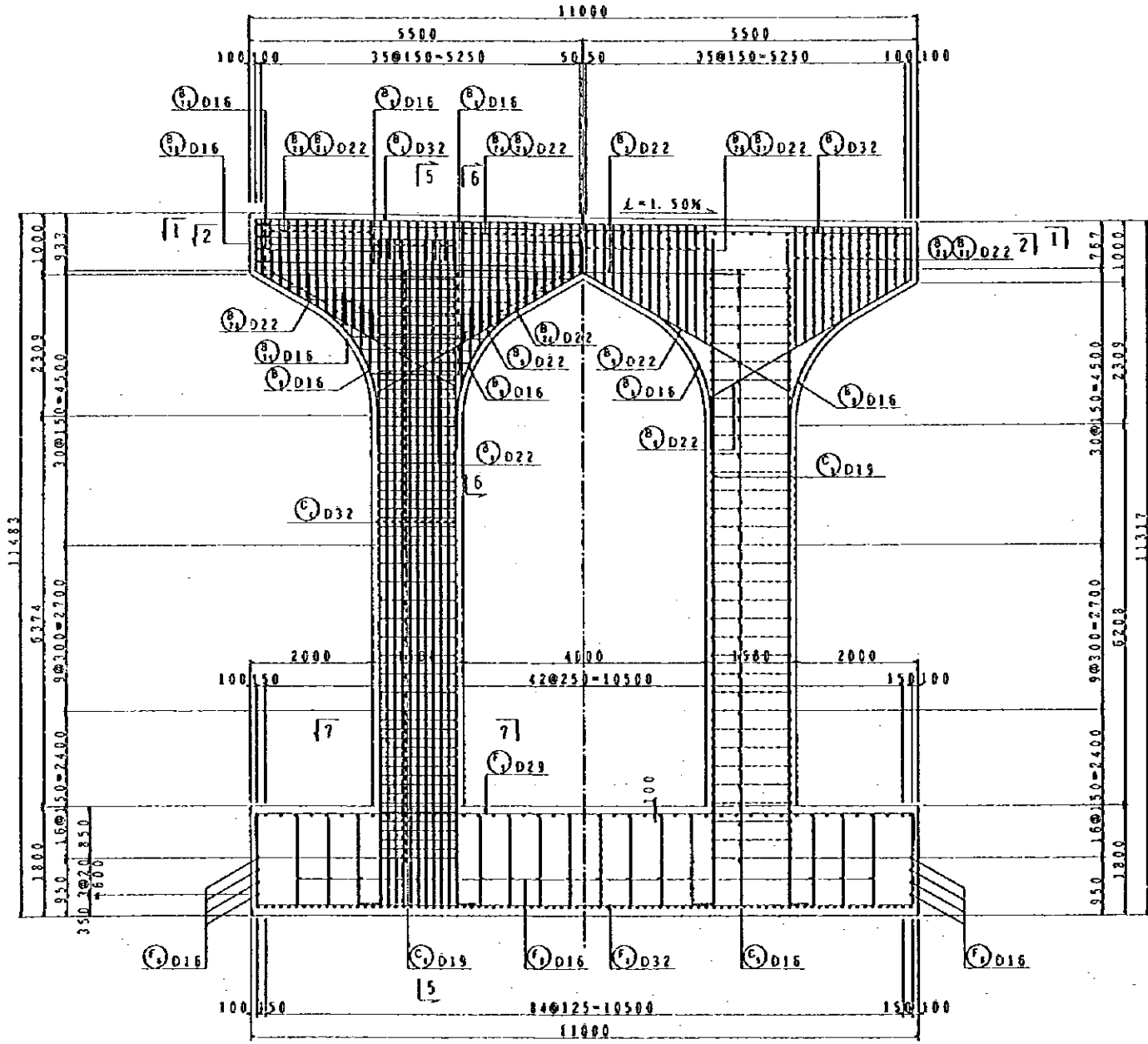
SECTION 1 - 1 S= 1/100 SECTION 2 - 2 S= 1/100



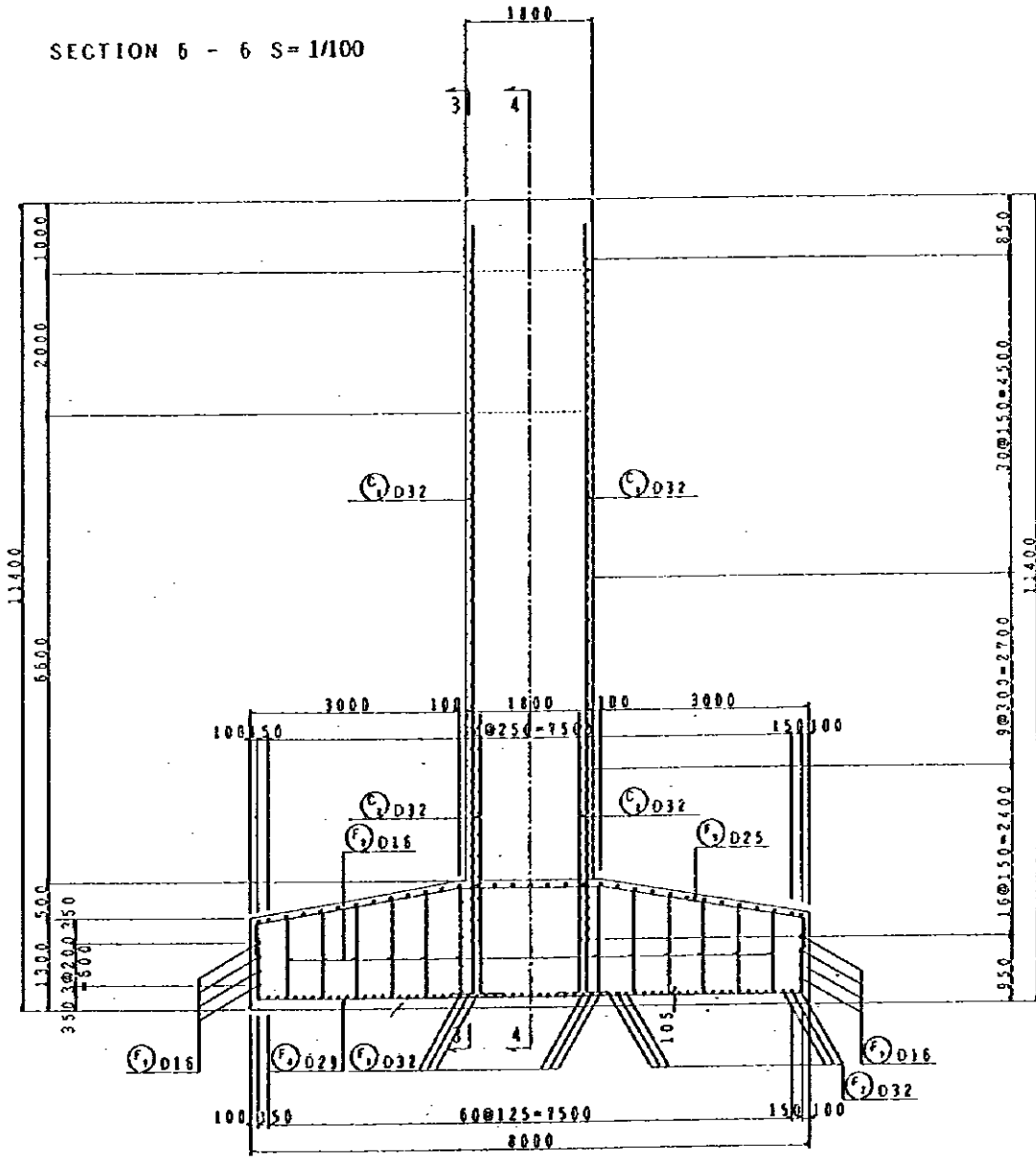
SECTION 6 - 6 S= 1/100



SECTION 7 - 7 S= 1/100



SECTION 3 - 3 S= 1/100 SECTION 4 - 4 S= 1/100



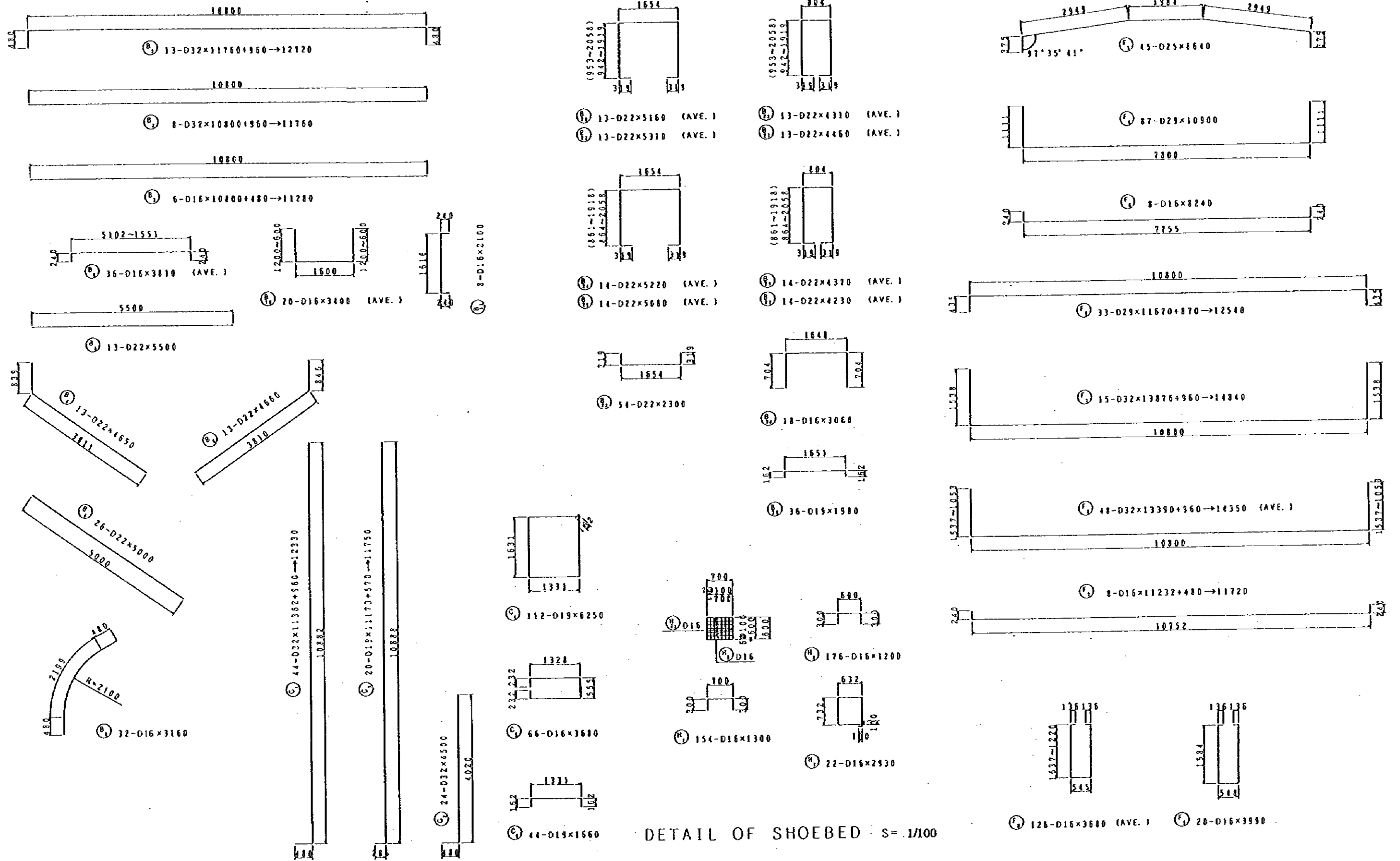
SECTION 5 - 5 S= 1/100

RE-BAR ARRANGEMENT OF TWO-COLUMN PIER FOR P1~P8 AT A,B-LINE (1/2)

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: RE-BAR ARRANGEMENT OF TWO-COLUMN PIER(P1~P8) AT A,B-LINE (1/2)	DATE:
DWGNO.	B-36

RA/2 A'NASEEM GARDEN

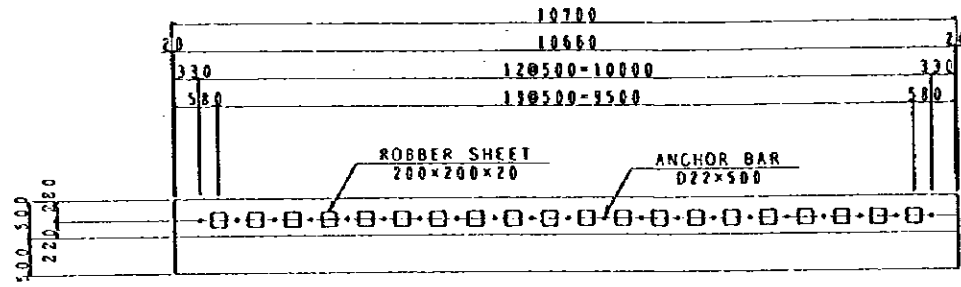


DETAIL OF SHOE BED S= 1/100

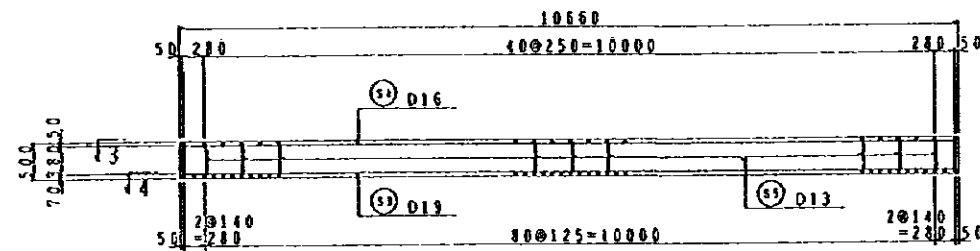
RE-BARARRANGEMENT OF TWO-COLUMN PIER FOR PI~P8 AT A,B-LINE (2/2)

NOTES:

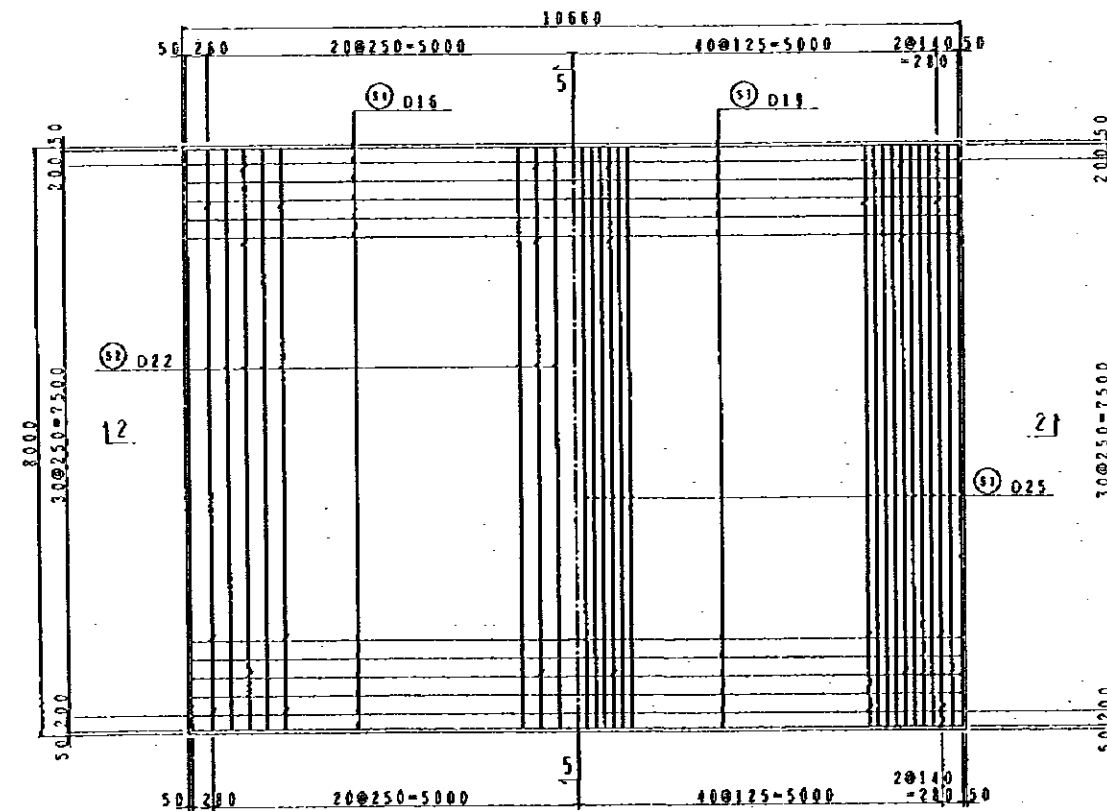
JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	CLIENT: MINISTRY OF COMMUNICATIONS, DIRECTORATE GENERAL OF ROADS	
	PROJECT: D/D ON ROAD DEVELOPMENT PROJECT ON BATINAH HIGHWAY	
JICA STUDY TEAM PACIFIC CONSULTANTS INTERNATIONAL FUKUYAMA CONSULTANTS INTERNATIONAL	TITLE STRUCTURAL DETAIL OF TWO-COLUMN PIER(PI~P8) AT A,B-LINE (2/2)	
DATE	DWGNO.	B-37



SECTION 1-1 S=1/100

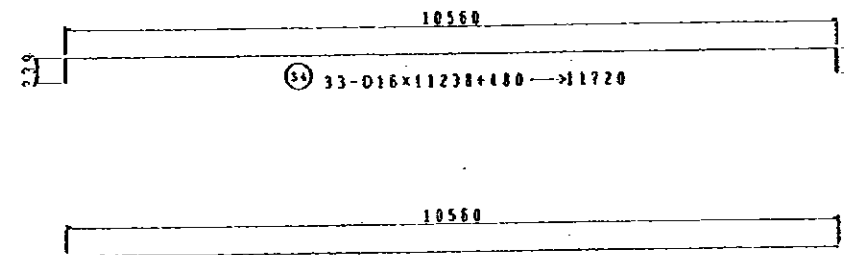


SECTION 2-2 S=1/100

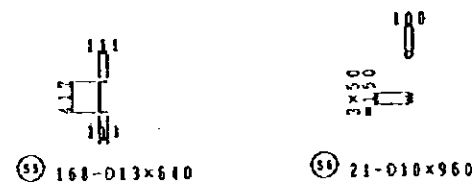


SECTION 3-3 S=1/100

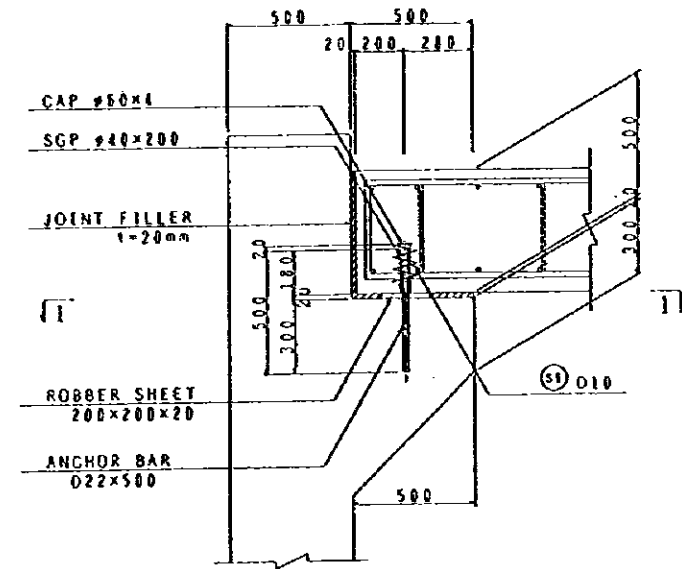
SECTION 4-4 S=1/100



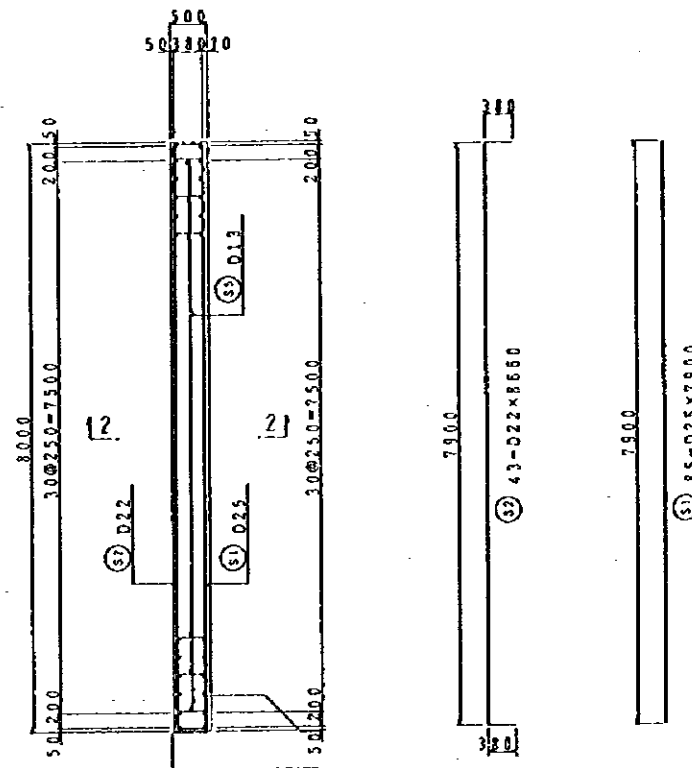
SECTION 5-5 S=1/100



SECTION 6-6 S=1/100



PLAN S=1/30



SECTION 7-7 S=1/100

RE-BAR ARRANGEMENT OF APPROACH SLAB

NOTES:

This drawing shows one approach slab. This is applied for all 4 abutments. So the total number of approach slabs are 4.

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

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

TITLE: RE-BAR ARRANGEMENT OF APPROACH SLAB

DATE: _____ DWGNO. B-38

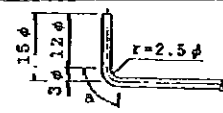
BAR BENDING DIAGRAM

LAP JOINT LENGTH

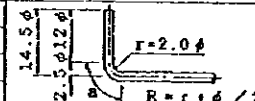
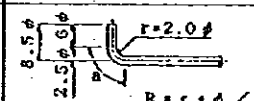

ϕ	a	LAP JOINT LENGTH
D13	390	
D16	480	
D19	570	
D22	660	
D25	750	
D29	870	
D32	960	

	JAPAN		ORAN	
	CROSS-SECTIONAL AREA (cm ²)	NOMINAL WEIGHT (kg/m)	CROSS-SECTIONAL AREA (cm ²)	NOMINAL WEIGHT (kg/m)
D13	1.267	0.995	1.250	0.991
D16	1.986	1.56	2.000	1.552
D19	2.865	2.25	2.839	2.235
D22	3.871	3.04	3.871	3.042
D25	5.067	3.98	5.097	3.973
D29	6.424	5.04	6.452	5.059
D32	7.942	6.23	8.194	6.403

BENDING DIMENSION (MAIN REINFORCEMENT)

D	HOOK LENGTH		
	$\theta \leq 90^\circ$ R=3 ϕ	$\theta > 90^\circ$ R=5.5 ϕ	
D13	39	71.5	$R = r + \phi / 2$
D16	48	88	
D19	57	104.5	
D22	66	121	
D25	75	137.5	
D29	87	159.5	
D32	96	176	

BENDING DIMENSION (STIRRUP, ERECTION BAR)

D	R=2.5 ϕ	$\theta=90^\circ$		$\theta=45^\circ$		HOOK LENGTH		
		a	a	a	a	STIRRUP	ERECTION BAR	HOOP
D13	32.5	31	77					
D16	40	63	94					
D19	47.5	75	112					
D22	55	86	130					

NOTES:

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

TITLE: BAR BENDING DIAGRAM

DATE: _____ DWGNO. B-39