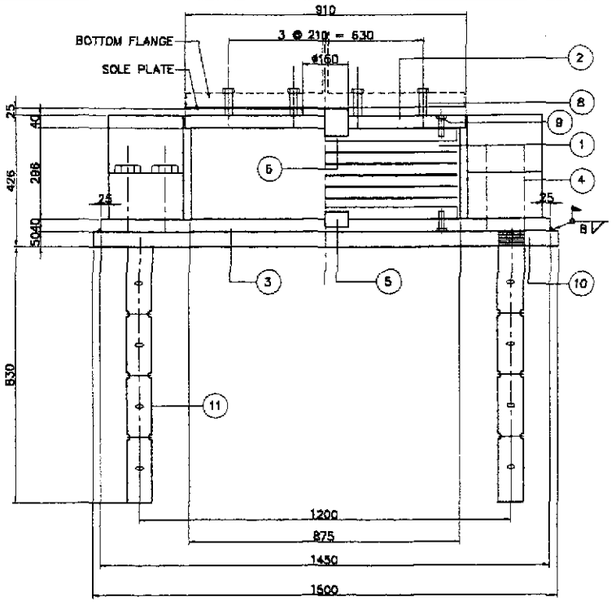
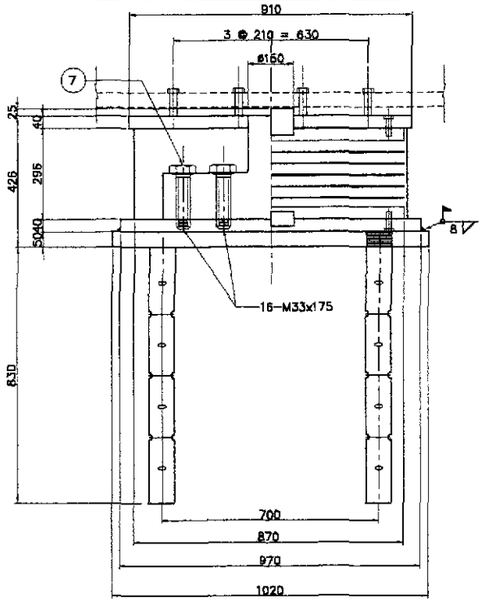
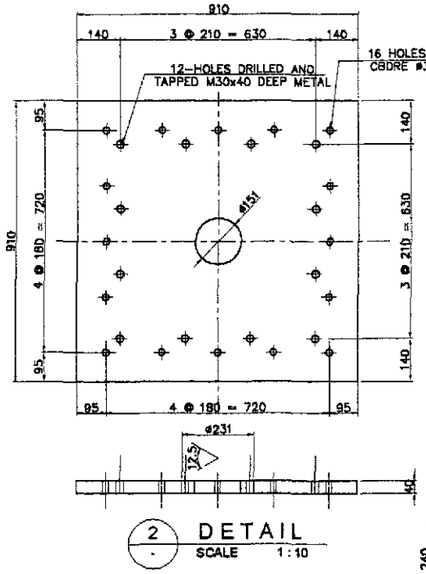
MISCELLANEOUS DRAWINGS



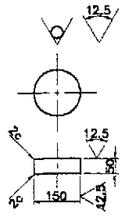
A TRANSVERSE SECTION
SCALE 1 : 10



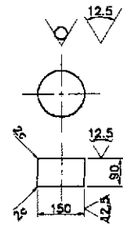
B LONGITUDINAL SECTION
SCALE 1 : 10



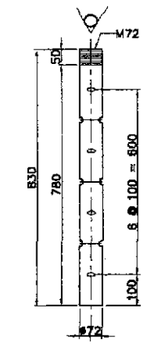
2 DETAIL
SCALE 1 : 10



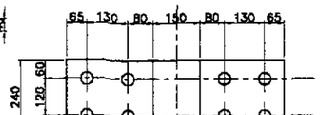
4 DETAIL
SCALE 1 : 10

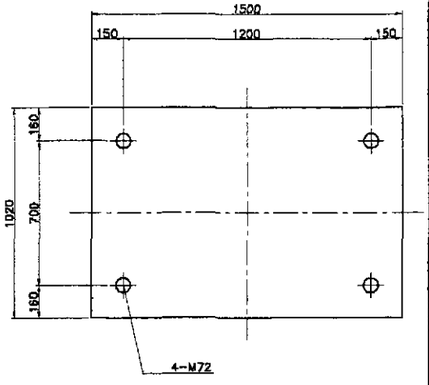


5 DETAIL
SCALE 1 : 10

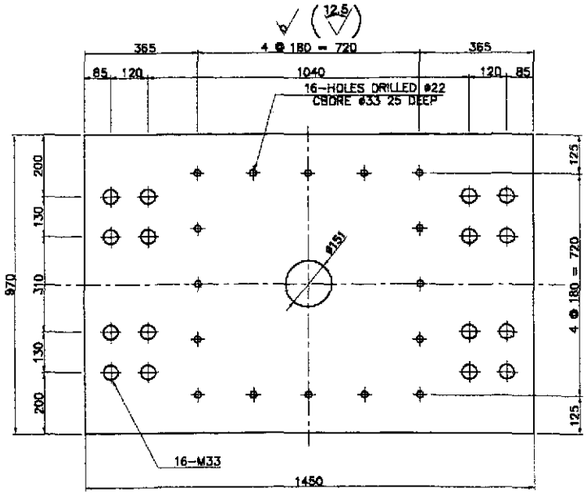


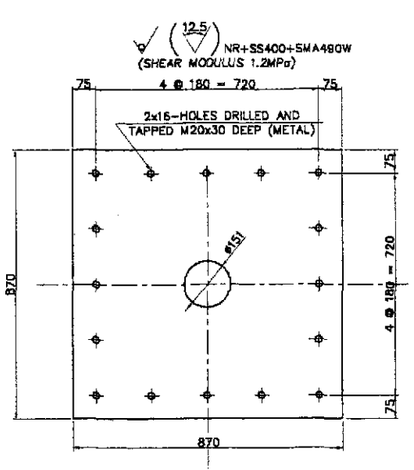
11 DETAIL
SCALE 1 : 10

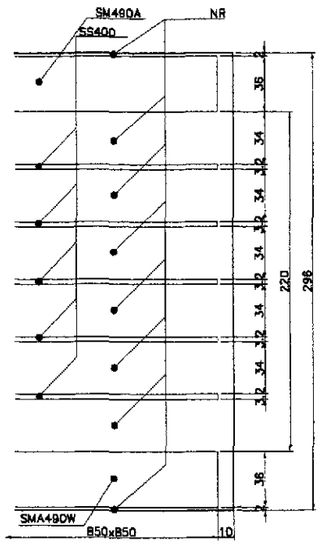




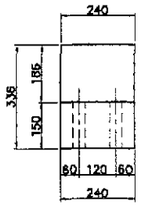
10 DETAIL
SCALE 1 : 15

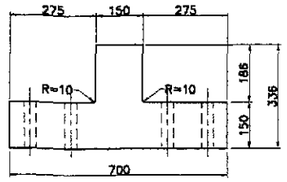




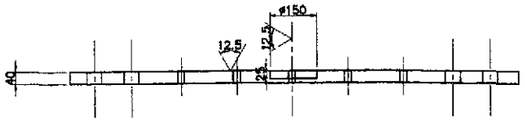


12 DETAIL
SCALE 1 : 2

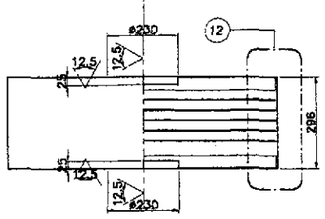




4 DETAIL
SCALE 1 : 10



3 DETAIL
SCALE 1 : 10



1 DETAIL
SCALE 1 : 10

MARKING PLAN

NO. OF LOCATIONS = 8

DESIGN CONDITION

REACTIONS		
MAXIMUM REACTION	Rmax	2194 kN
DEAD LOAD REACTION	Rd	1683 kN
LONGITUDINAL FORCE (UNDER EARTHQUAKE)	RH1e	1412 kN
TRANSVERSE FORCE (UNDER EARTHQUAKE)	RH2e	1412 kN
UPLIFT FORCE (UNDER EARTHQUAKE)	Ru	−489 kN
ELASTOMERIC BEARING DISPLACEMENT		
DISPLACEMENT UNDER NORMAL CONDITION	e1	55 mm
DISPLACEMENT UNDER UNDER EARTHQUAKE (L1)	e2	128 mm
DISPLACEMENT UNDER UNDER EARTHQUAKE (L2)	e3	333 mm
HORIZONTAL SEISMIC COEFFICIENT		
DESIGN HORIZONTAL — LONGITUDINAL	kH	0.67
SEISMIC COEFFICIENT — TRANSVERSE	kH	0.67
RUBBER BEARING		
STATISTIC SHEAR MODULUS	G	1.2 MPa
ULTIMATE STRAIN	γa	500%

MATERIALS

NO.	ITEM	MATERIAL	NUMBER	WEIGHT (kg)	REMARKS
①	RUBBER BEARING	NR	1	–	
	STEEL PLATES (THICKNESS=3.2MM)	SS400	5	90.7	
	STEEL PLATES (THICKNESS=36MM)	SMA490W	2	408.4	
②	UPPER BEARING PLATE	SMA490W	1	260.0	
③	LOWER BEARING PLATE	SMA490W	1	441.6	
④	SIDE BLOCK	SMA490W	2	500.8	
⑤	SHEAR KEY	SMA490W	1	6.9	
⑥	SHEAR KEY	SMA490W	1	12.5	
⑦	HEXAGON HEAD BOLT (W/ FLAT WASHER)	–	16	25.0	
⑧	HEXAGON HEAD BOLT (W/ TAPERED WASHER)	–	12	4.3	
⑨	BOLT W/ HEXAGON HOLE	–	32	6.8	
⑩	BASE PLATE	SMA490W	1	600.5	
⑪	ANCHOR BOLT	SS400	4	106.1	
		TOTAL WEIGHT =		2,463.8 kgs	

NOTE :

1. STRUCTURAL STEEL SHALL BE SMA490W/GRADE 50W (ATMOSHPERIC CORROSION RESISTANT) UNLESS OTHERWISE NOTED.
2. GALVANIZATION : BOLTS – MORE THAN 350g/m².

⑦ HEXAGON HEAD BOLT (WITH FLAT WASHER) M33 x 175 STRENGTH 10.9
⑧ HEXAGON HEAD BOLT (WITH TAPERED WASHER) M30 x 75 STRENGTH 8.8
⑨ BOLT W/ HEXAGON HOLE M20 x 40 STRENGTH 12.9

* ELASTOMERIC BEARING DETAILS (TYPE 1)
SCALE AS SHOWN

JICA
JAPAN INTERNATIONAL COOPERATION AGENCY
KEI KATAHIRA & ENGINEERS INTERNATIONAL
YEO YACHIYO ENGINEERING CO., LTD.

	DATE	SIGNATURE
DESIGNED	10/19/01	F. M. SALAS
CHECKED	10/19/01	J. C. SANTOS
SUBMITTED	10/19/01	TEAM LEADER

REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS

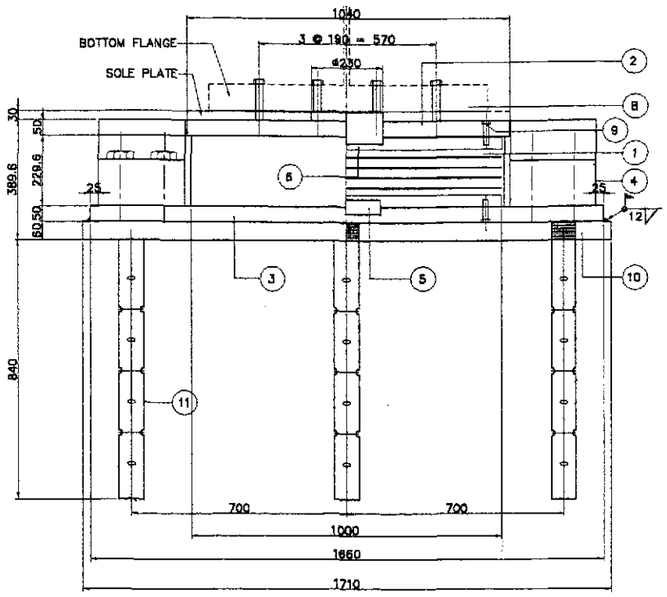
PJHL – PMO	BUREAU OF DESIGN		OFFICE OF THE SECRETARY	
Submitted By:	Reviewed By:	Recommended By:	Recommended By: (See cover sheet for Signature)	Approved By: (See cover sheet for Signature/Approval)
DANILO C. TRAJANO	ADRIANO M. DORDY	GILBERTO S. REYES	MANUEL M. BONOAN	SIMEON A. DATUMANONG
Project Director	Chief, Bridges Division	Director IV (OIC)	Undersecretary	Secretary

PROJECT AND LOCATION :
THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses)
CABANATUAN BYPASS - CONTRACT PACKAGE III

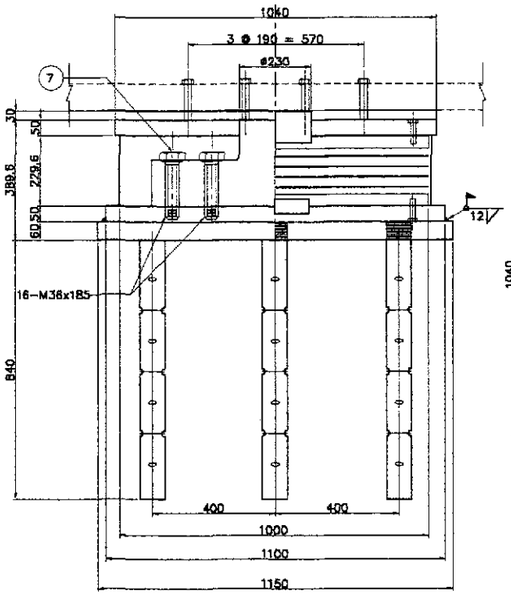
SCALE : AS SHOWN FULL SIZE A1

SHEET CONTENTS :
BRIDGE NO. 10 PAMPANGA RIVER BRIDGE
ELASTOMERIC BEARING DETAILS (TYPE 1)
(ULTIMATE STAGE)

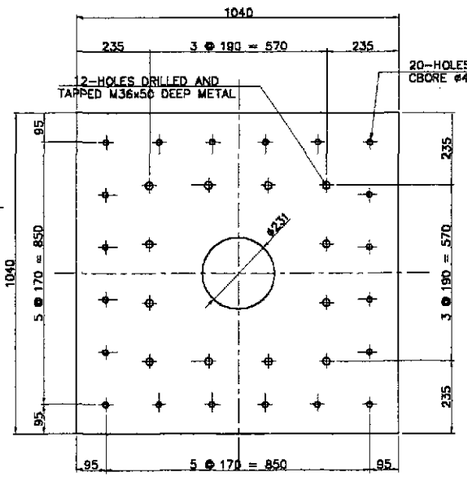
SHEET NO. : B10M-81

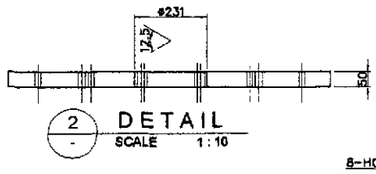


A TRANSVERSE SECTION
SCALE 1:10

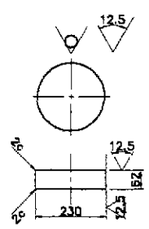


B LONGITUDINAL SECTION
SCALE 1:10

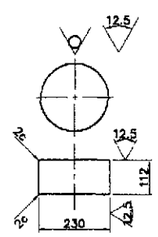




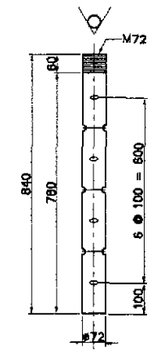
2 DETAIL
SCALE 1:10



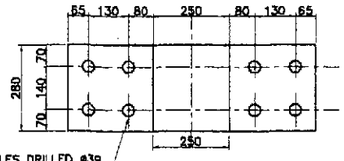
5 DETAIL
SCALE 1:10

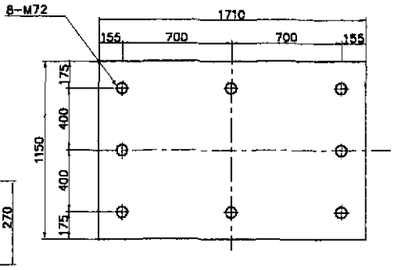


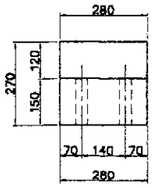
6 DETAIL
SCALE 1:10

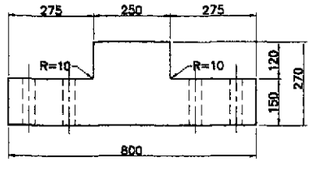


11 DETAIL
SCALE 1:10



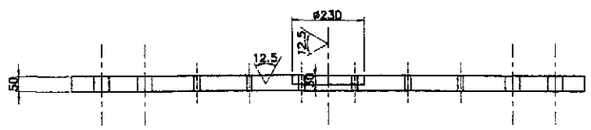




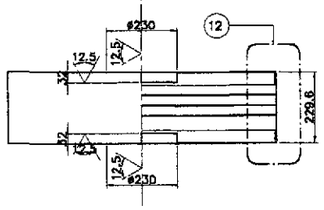


4 DETAIL
SCALE 1:10

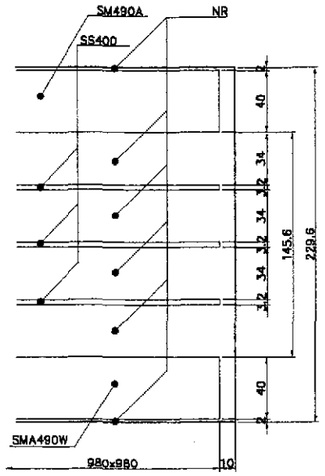
10 DETAIL
SCALE 1:20



3 DETAIL
SCALE 1:10



1 DETAIL
SCALE 1:10



12 DETAIL
SCALE 1:2

MARKING PLAN

NO. OF LOCATIONS = 8

NOTE :
1. MATERIALS, ASTM A36 EXCEPT NOTED.

DESIGN CONDITION

REACTIONS		
MAXIMUM REACTION	Rmax	6337 kN
DEAD LOAD REACTION	Rd	5057 kN
LONGITUDINAL FORCE (UNDER EARTHQUAKE)	RH1e	2824 kN
TRANSVERSE FORCE (UNDER EARTHQUAKE)	RH2e	2824 kN
UPLIFT FORCE (UNDER EARTHQUAKE)	Ru	-1517kN
ELASTOMERIC BEARING DISPLACEMENT		
DISPLACEMENT UNDER NORMAL CONDITION	e1	45 mm
DISPLACEMENT UNDER UNDER EARTHQUAKE (L1)	e2	129 mm
DISPLACEMENT UNDER UNDER EARTHQUAKE (L2)	e3	334 mm
HORIZONTAL SEISMIC COEFFICIENT		
DESIGN HORIZONTAL / SEISMIC COEFFICIENT	LONGITUDINAL / TRANSVERSE	kH 0.67 / kH 0.67
RUBBER BEARING		
STATIC SHEAR MODULUS	G	1.2 MPa
ULTIMATE STRAIN	εu	500%

MATERIALS

NO.	ITEM	MATERIAL	NUMBER	WEIGHT (kg)	REMARKS
①	RUBBER BEARING	NR	1	–	
	STEEL PLATES (THICKNESS=3.2MM)	SS400	3	72.4	
	STEEL PLATES (THICKNESS=40MM)	SMA490W	2	603.1	
②	UPPER BEARING PLATE	SMA490W	1	424.5	
③	LOWER BEARING PLATE	SMA490W	1	716.7	
④	SIDE BLOCK	SMA490W	2	659.4	
⑤	SHEAR KEY	SMA490W	1	20.9	
⑥	SHEAR KEY	SMA490W	1	35.6	
⑦	HEXAGON HEAD BOLT (W/ FLAT WASHER)	–	16	31.5	
⑧	HEXAGON HEAD BOLT (W/ TAPERED WASHER)	–	12	16.0	
⑨	BOLT W/ HEXAGON HOLE	–	40	15.8	
⑩	BASE PLATE	SMA490W	1	926.2	
⑪	ANCHOR BOLT	SS400	8	214.8	
		TOTAL WEIGHT =		3,736.8 kgs	

NOTE :
1. STRUCTURAL STEEL SHALL BE SMA490W/GRADE 50W (ATMOSHPERIC CORROSION RESISTANT) UNLESS OTHERWISE NOTED.
2. GALVANIZATION : BOLTS – MORE THAN 350g/m².

⑦ HEXAGON HEAD BOLT (WITH FLAT WASHER) M36 x 185 STRENGTH 10.9
⑧ HEXAGON HEAD BOLT (WITH TAPERED WASHER) M36 x 120 STRENGTH 8.8
⑨ BOLT W/ HEXAGON HOLE M24 x 45 STRENGTH 12.9

* ELASTOMERIC BEARING DETAILS (TYPE 2)
SCALE AS SHOWN

JICA
JAPAN INTERNATIONAL COOPERATION AGENCY
KATAHIRA & ENGINEERS INTERNATIONAL
YACHIYO ENGINEERING CO., LTD.

DESIGNED	10/18/07	F. M. SALAS	
CHECKED	10/17/07	J.C. SANTOS	
SUBMITTED	10/19/07	TEAM LEADER	

REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS

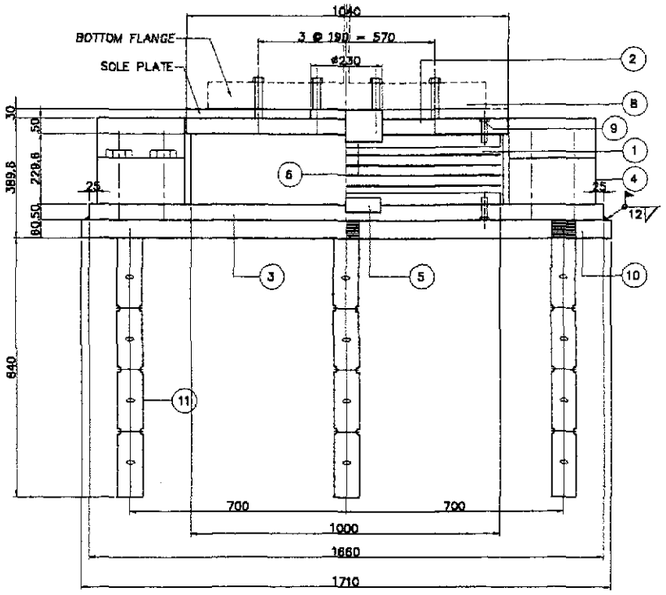
PJHL – PMO	BUREAU OF DESIGN		OFFICE OF THE SECRETARY	
Submitted By:	Reviewed By:	Recommended By:	Recommended By: (See cover sheet for Signature)	Approved By: (See cover sheet for Signature/Approval)
DANILO C. TRAJANO	ADRIANO M. DOROY	GILBERTO S. REYES	MANUEL M. BONOAN	SIMEON A. DATUMANONG
Project Director	Chief, Bridges Division	Director IV (OIC)	Undersecretary	Secretary

PROJECT AND LOCATION :
THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses)
CABANATUAN BYPASS - CONTRACT PACKAGE III

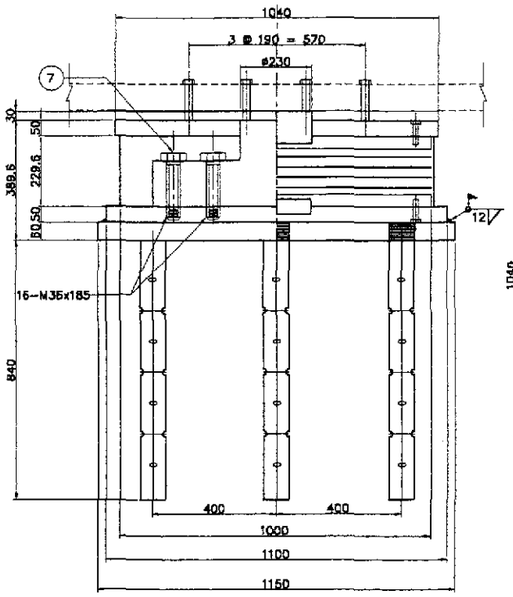
SCALE : AS SHOWN FULL SIZE A1

SHEET CONTENTS :
BRIDGE NO. 10 PAMPANGA RIVER BRIDGE
ELASTOMERIC BEARING DETAILS (TYPE 2)
(ULTIMATE STAGE)

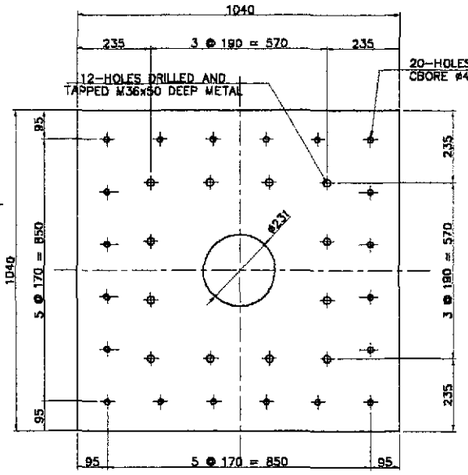
SHEET NO. : B10M-82

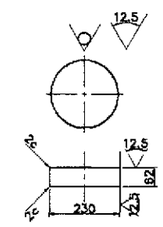


A TRANSVERSE SECTION
SCALE 1:10

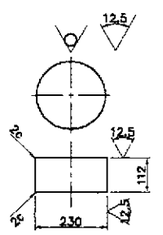


B LONGITUDINAL SECTION
SCALE 1:10

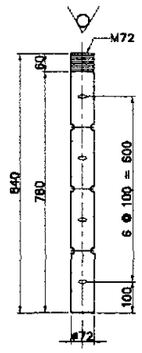




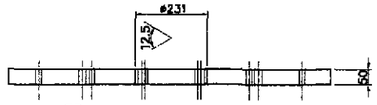
5 DETAIL
SCALE 1:10



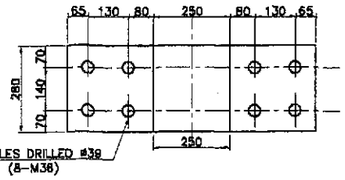
6 DETAIL
SCALE 1:10

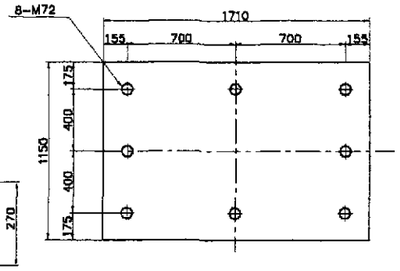


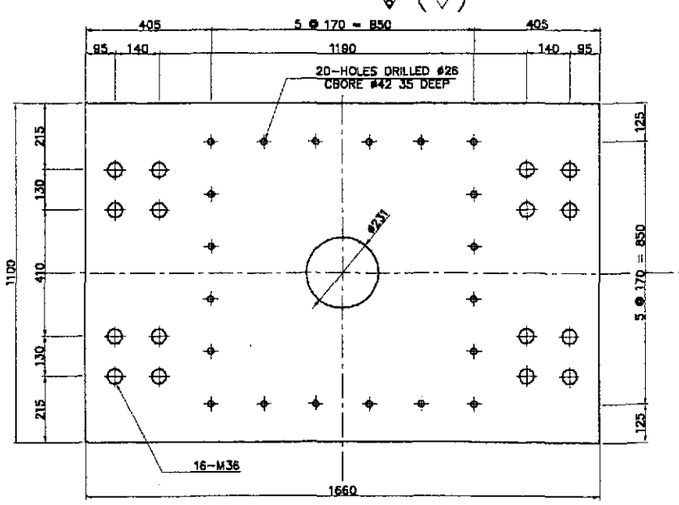
11 DETAIL
SCALE 1:10

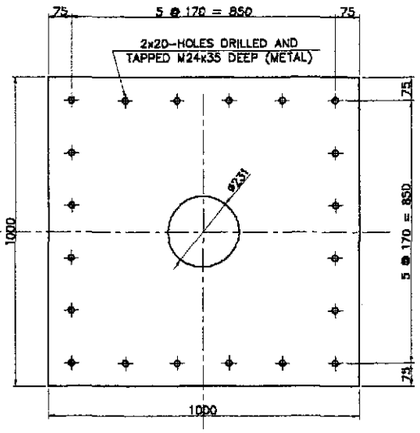


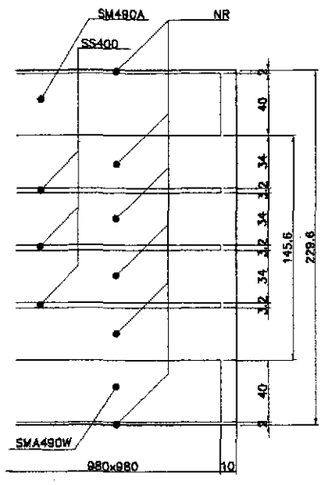
2 DETAIL
SCALE 1:10

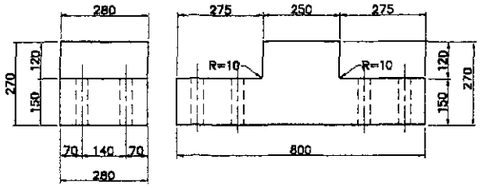






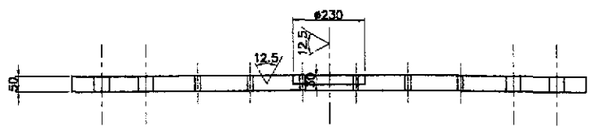




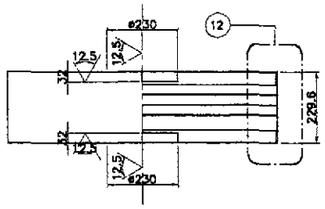


4 DETAIL
SCALE 1:10

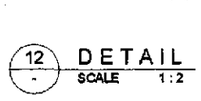
10 DETAIL
SCALE 1:20



3 DETAIL
SCALE 1:10

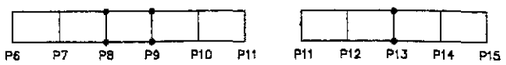


1 DETAIL
SCALE 1:10



12 DETAIL
SCALE 1:2

MARKING PLAN



NO. OF LOCATIONS = 6

NOTE :
1. MATERIALS, ASTM A36 EXCEPT NOTED.

DESIGN CONDITION

REACTIONS		
MAXIMUM REACTION	Rmax	5243 kN
DEAD LOAD REACTION	Rd	4148 kN
LONGITUDINAL FORCE (UNDER EARTHQUAKE)	RH1e	2824 kN
TRANSVERSE FORCE (UNDER EARTHQUAKE)	RH2e	2824 kN
UPLIFT FORCE (UNDER EARTHQUAKE)	Ru	-1245kN
ELASTOMERIC BEARING DISPLACEMENT		
DISPLACEMENT UNDER NORMAL CONDITION	e1	35 mm
DISPLACEMENT UNDER UNDER EARTHQUAKE (L1)	e2	129 mm
DISPLACEMENT UNDER UNDER EARTHQUAKE (L2)	e3	334 mm
HORIZONTAL SEISMIC COEFFICIENT		
DESIGN HORIZONTAL LONGITUDINAL	kH	0.67
SEISMIC COEFFICIENT TRANSVERSE	kH	0.67
RUBBER BEARING		
STATIC SHEAR MODULUS	G	1.2 MPa
ULTIMATE STRAIN	εu	500%

MATERIALS

NO.	ITEM	MATERIAL	NUMBER	WEIGHT (kg)	REMARKS
①	RUBBER BEARING	NR	1	-	
	STEEL PLATES (THICKNESS=3.2MM)	SS400	3	72.4	
	STEEL PLATES (THICKNESS=40MM)	SMA490W	2	603.1	
②	UPPER BEARING PLATE	SMA490W	1	424.5	
③	LOWER BEARING PLATE	SMA490W	1	716.7	
④	SIDE BLOCK	SMA490W	2	659.4	
⑤	SHEAR KEY	SMA490W	1	20.9	
⑥	SHEAR KEY	SMA490W	1	35.6	
⑦	HEXAGON HEAD BOLT (W/ FLAT WASHER)	-	16	31.5	
⑧	HEXAGON HEAD BOLT (W/ TAPERED WASHER)	-	12	16.0	
⑨	BOLT W/ HEXAGON HOLE	-	40	15.8	
⑩	BASE PLATE	SMA490W	1	926.2	
⑪	ANCHOR BOLT	SS400	8	214.8	
		TOTAL WEIGHT =		3,736.8 kgs	

NOTE :
1. STRUCTURAL STEEL SHALL BE SMA490W/GRADE 50W (ATMOSHPERIC CORROSION RESISTANT) UNLESS OTHERWISE NOTED.
2. GALVANIZATION : BOLTS – MORE THAN 350g/m².

⑦ HEXAGON HEAD BOLT (WITH FLAT WASHER) M36 x 185 STRENGTH 10.9
⑧ HEXAGON HEAD BOLT (WITH TAPERED WASHER) M36 x 120 STRENGTH 8.8
⑨ BOLT W/ HEXAGON HOLE M24 x 45 STRENGTH 12.9

* ELASTOMERIC BEARING DETAILS (TYPE 3)
SCALE AS SHOWN

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YACHIYO ENGINEERING CO., LTD.

DESIGNED	10/14/02	F. M. SILAS
CHECKED	10/14/02	J. C. SANTOS
SUBMITTED	10/14/02	M. KUWABARA TEAM LEADER

REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS

PUHL – PMO	BUREAU OF DESIGN		OFFICE OF THE SECRETARY	
Submitted By:	Reviewed By:	Recommended By:	Recommended By: (See cover sheet for Signature)	Approved By: (See cover sheet for Signature/Approval)
DANILO C. TRAJANO Project Director	ADRIANO M. DOROY Chief, Bridges Division	GILBERTO S. REYES Director IV (OIC)	MANUEL M. BONOAN Undersecretary	SIMEON A. DATUMANONG Secretary

PROJECT AND LOCATION :
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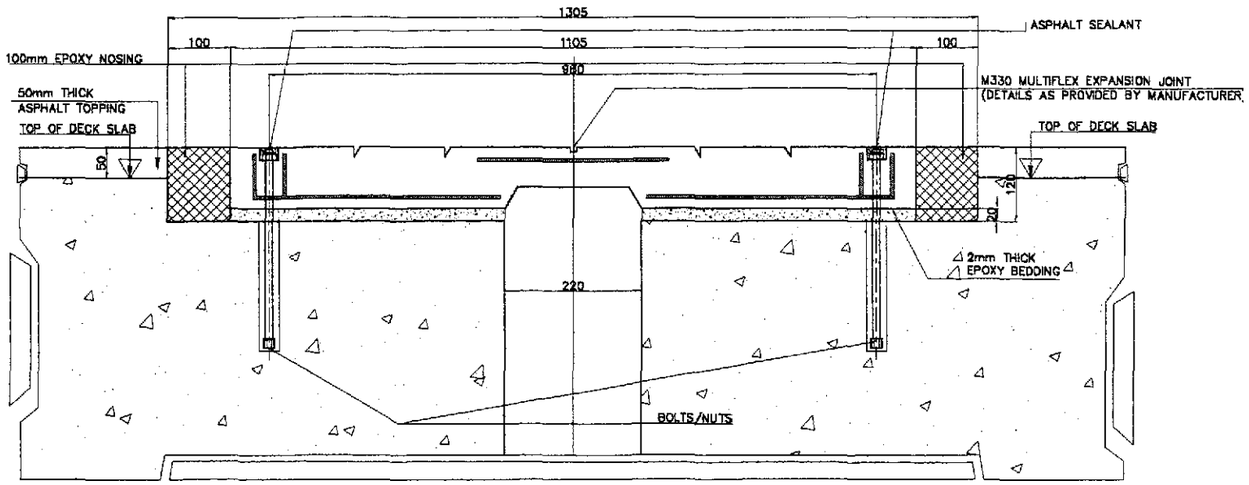
ALONG THE PAN-PHILIPPINE HIGHWAY
(Plaridel, Cabanatuan and San Jose Bypasses)
CABANATUAN BYPASS - CONTRACT PACKAGE III

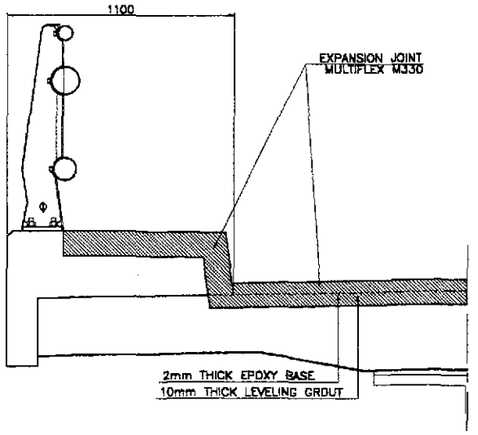
SCALE : AS SHOWN FULL SIZE A1

SHEET CONTENTS :
BRIDGE NO. 10 PAMPANGA RIVER BRIDGE
ELASTOMERIC BEARING DETAILS
(TYPE 3)
(ULTIMATE STAGE)

SHEET NO. : B10M-83

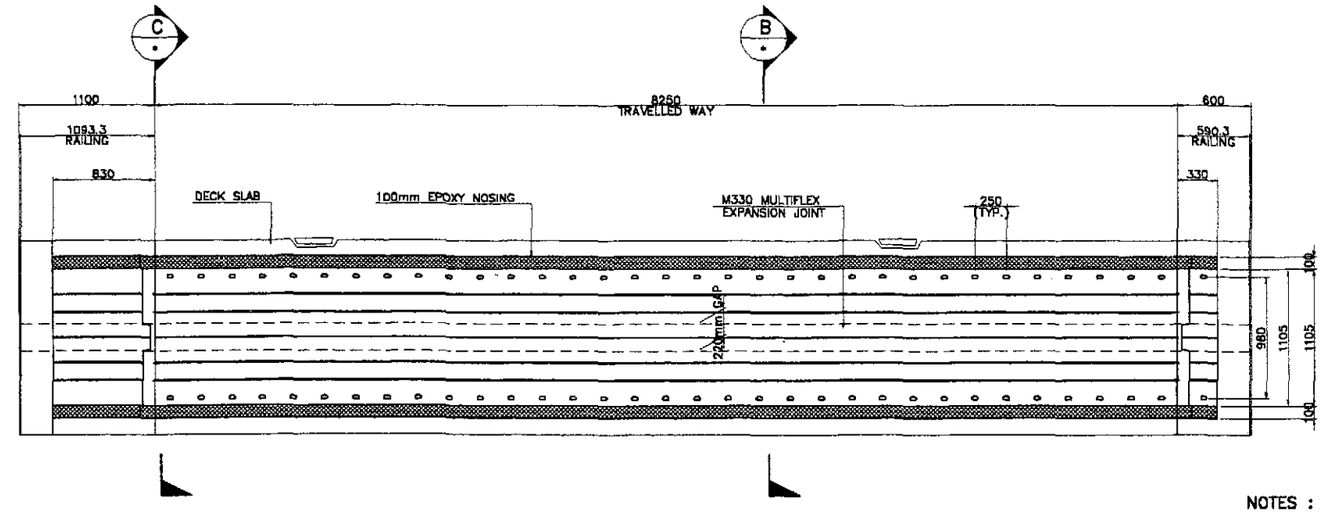


B — SECTION
TYPE EJ - 1 (M330) FOR P11, P6 & P15
SCALE 1 : 5

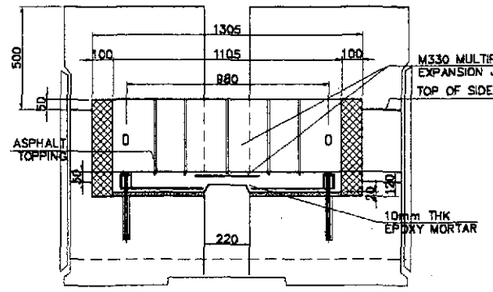


2 — DETAIL
SCALE 1 : 15

LOCATION	EXPANSION JOINT TYPE	MOVEMENT (mm)	LENGTH (m)
PIER 6	MULTIPLEX M330	±165(TOTAL=330mm)	10.00
PIER 11	MULTIPLEX M330	±165(TOTAL=330mm)	10.00
PIER 15	MULTIPLEX M330	±165(TOTAL=330mm)	10.00



A — PLAN
TYPE EJ - 1 (M330)
SCALE 1 : 25



C — SECTION
SCALE 1 : 15

NOTES :

1. THE EXPANSION JOINT SHALL BE MULTIPLEX M330 OR EQUIVALENT.
2. THE CONTRACTOR SHALL GUARANTEE WATERTIGHTNESS OF EXPANSION JOINTS INCLUDING SIDEWALK JOINTS.
3. THE EXPANSION JOINT SHALL HAVE A 15–YEAR WARRANTY PERIOD. DAMAGES ON THE JOINTS WITHIN THIS PERIOD SHALL BE REPLACED BY THE CONTRACTOR.
4. VERIFY ACTUAL DIMENSIONS OF EXPANSION JOINT BLOCK–OUT AS PER MANUFACTURER'S RECOMMENDATION.

1 — EXPANSION JOINT DETAILS
SCALE AS SHOWN

A.) QUALITY TESTING OF RUBBER COMPOUND

PROPERTIES	SPECIFICATION
HARDNESS (SHORE A)	50 ± 5
TENSILE STRENGTH (MPA)	13 MIN
ELONGATION AT BREAK (%)	400 MIN
COMPRESSION SET (AFTER 22h AT 70°C)	20% MAX
OZONE RESISTANCE (AFTER 72h AT 40°C, 20% STRAIN 100 pphm)	NO CRACK
OIL RESISTANCE IN ASTM NO. 3 OIL (168h AT 25°C. VOLUME CHANGE)	15% MAX

B.) DIMENSION CHECK ON METAL PLATES

DIMENSION	SPECIFICATION
LENGTH	± 1
WIDTH	0 TO –1.5 MIN
THICKNESS	± 0.5 MIN

C.) QUALITY CHECK

PROPERTY	SPECIFICATION
DIMENSION	ACCORDING TO PRODUCT DRAWING
SURFACE APPEARANCE	NO VISIBLE CRACK
RUBBER COVER HARDNESS (SHORE A)	50 ± 5

INSTALLATION MATERIALS

1. EPOXY BEDDING
2. EPOXY NOSING
3. BOLT / NUTS
4. SEALANT

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YACHIYO ENGINEERING CO., LTD.

DESIGNED	10/4/02	F. M. SALAS
CHECKED	10/17/02	J. E. SANTOS
SUBMITTED	10/19/02	TEAM LEADER

REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS

PUHL – PMO	BUREAU OF DESIGN		OFFICE OF THE SECRETARY	
Submitted By:	Reviewed By:	Recommended By:	Recommended By: (See cover sheet for Signature)	Approved By: (See cover sheet for Signature/Approval)
DANILO C. TRAJANO, Project Director	ADRIANO M. DOROY, Chief, Bridges Division	GILBERTO S. REYES, Director IV (OIC)	MANUEL M. BONDAN, Undersecretary	SIMEON A. DATUMANONG, Secretary

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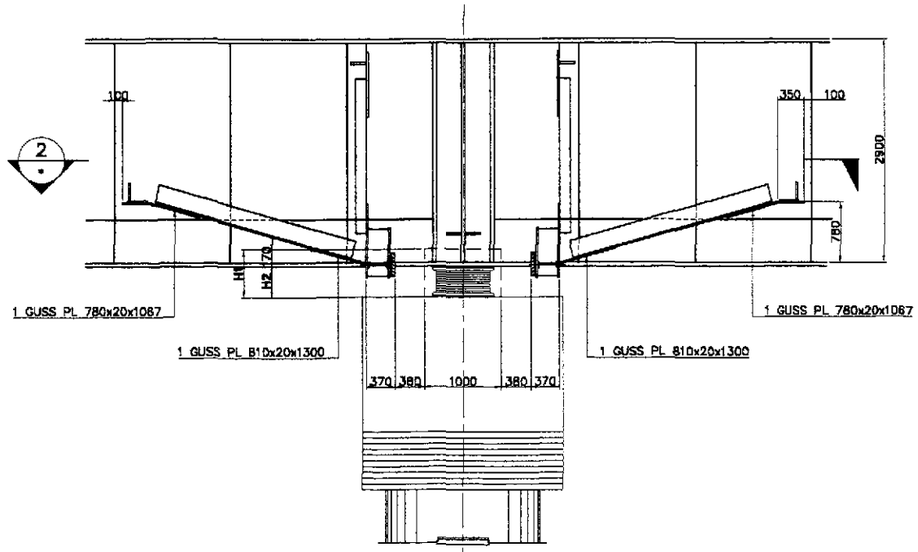
CABANATUAN BYPASS - CONTRACT PACKAGE III

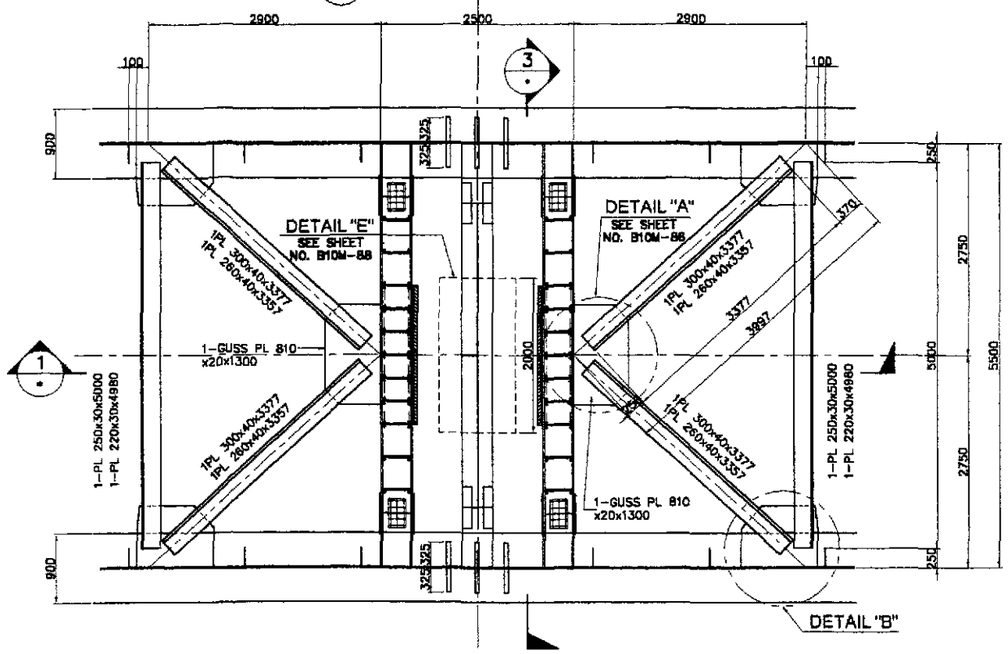
SCALE : AS SHOWN FULL SIZE A1

SHEET CONTENTS :
BRIDGE NO. 10 PAMPANGA RIVER BRIDGE
EXPANSION JOINT DETAILS
(ULTIMATE STAGE)

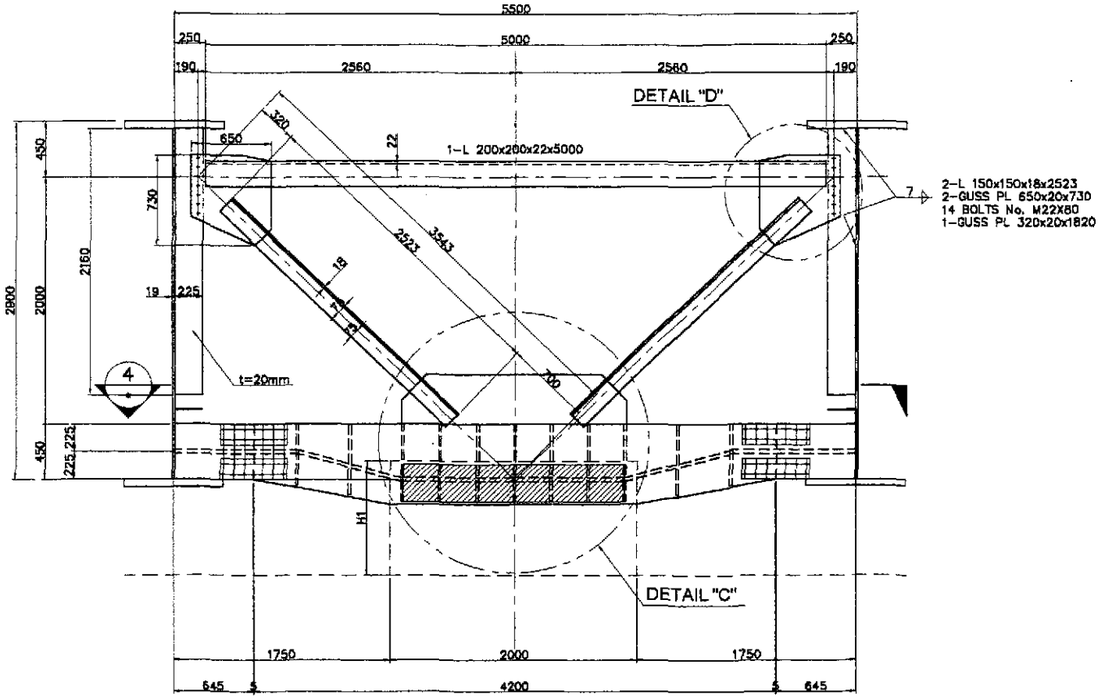
SHEET NO. : B10M-84



1 SECTION
SCALE 1 : 40



2 SECTION
SCALE 1 : 40



3 SECTION
SCALE 1 : 25

PIER	P7	P8	P9	P10	P12	P13	P14
HEIGHT OF REACTION WALL (H1)	850.4	787.2	787.2	850.4	850.4	787.2	850.4
HEIGHT OF B. FLG TO SUBSTRUCTURE (H2)	680.4	617.2	617.2	680.4	680.4	617.2	680.4
B. FLG	86	56	56	86	86	56	86
SOLE PL	33	33	33	33	33	33	33
BEARING	389.6	389.6	389.6	389.6	389.6	389.6	389.6
NON-SHRINK GROUT (AVE.)	116.8	83.6	83.6	116.8	116.8	83.6	116.8

NOTES:

1. ALL STEEL SHALL BE SMA 490W/GRADE 50 CONFORMING TO ASTM A 709M UNLESS OTHERWISE NOTED.
2. ALL BOLTS SHALL BE HIGH STRENGTH BOLTS CONFORMING TO ASTM A 490M UNLESS OTHERWISE NOTED.

MARKING

A LONGITUDINAL STOPPER DETAILS - 1 of 2
SCALE AS SHOWN

JAPAN INTERNATIONAL COOPERATION AGENCY

KATAHIRA & ENGINEERS INTERNATIONAL — YACHIYO ENGINEERING CO., LTD.

	DATE	SIGNATURE
DESIGNED	10/14/02	F. M. SAYAS
CHECKED	10/17/02	J. C. SANTOS
SUBMITTED	10/19/02	TEAM LEADER

REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS

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Project Director	Chief, Bridges Division	Director IV (OIC)	Undersecretary	Secretary

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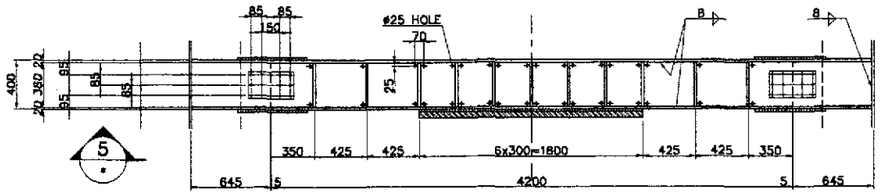
CABANATUAN BYPASS - CONTRACT PACKAGE III

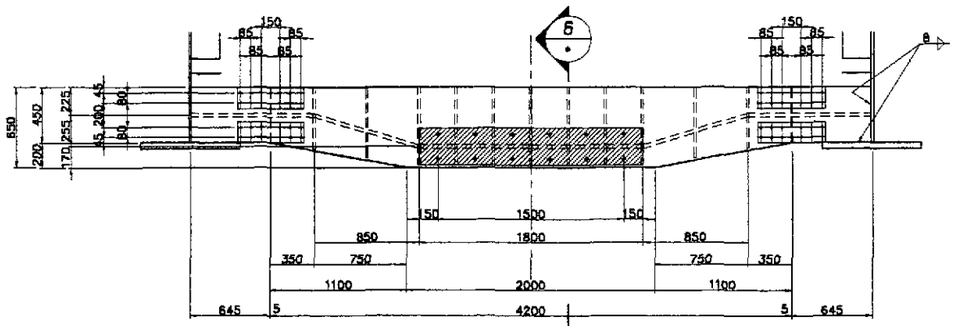
SCALE : AS SHOWN — FULL SIZE A1

SHEET CONTENTS :
BRIDGE NO. 10 PAMPANGA RIVER BRIDGE
LONGITUDINAL STOPPER DETAILS - 1 of 2
(ULTIMATE STAGE)

SHEET NO. : B10M-85



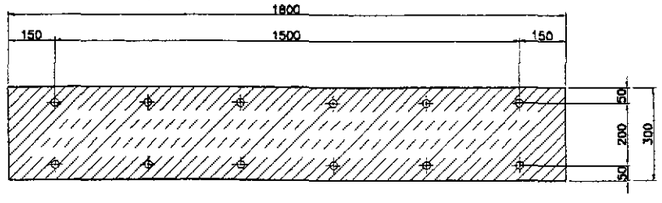
4 SECTION
SCALE 1:25



2-FLG PL 650x20x4200
1-WEB PL 360x30x4275
7-RIB PL 360x20x445
7-RIB PL 360x20x135
2-RIB PL 360x20x317
2-RIB PL 360x20x190
2-RIB PL 360x20x203
2-RIB PL 360x20x253
1-PL 300x20x1800

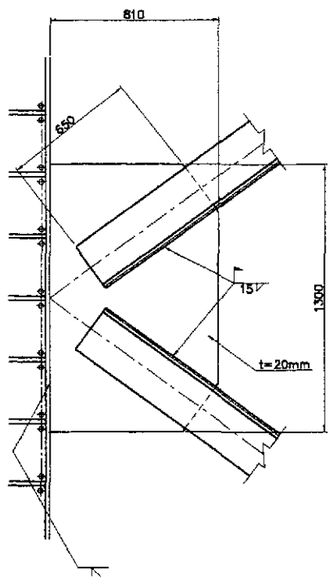
16-SPL PL 170x15x570
96-BOLTS No. M22x90
4-SPL PL 250x15x400
24-BOLTS No. M22x100

5 SECTION
SCALE 1:25

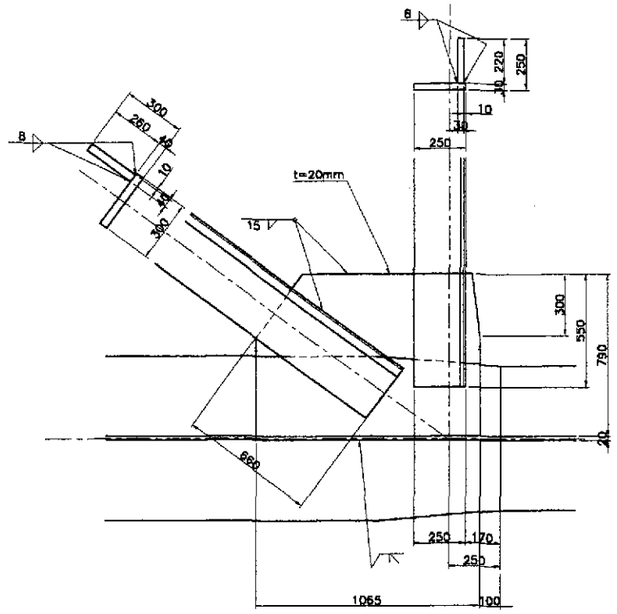


1-NATURAL RUBBER 300x50x1800
12-B.N. M12x85(1-WASHER)

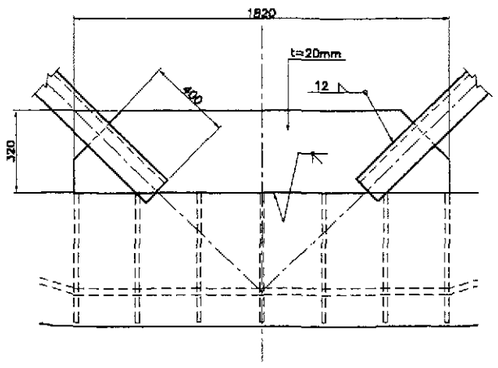
E BUFFER DETAIL
SCALE 1:10



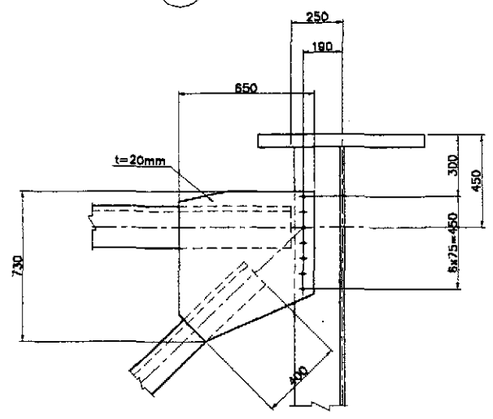
A DETAIL
SCALE 1:15



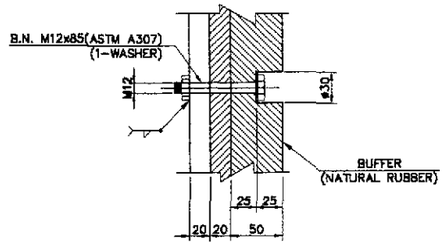
B DETAIL
SCALE 1:15



C DETAIL
SCALE 1:15



D DETAIL
SCALE 1:15



6 BUFFER CONNECTION DETAIL
SCALE 1:10

RESTRAINER		
MATERIAL	SIZE(mm)	TOTAL NO.
BUFFER	270x50x300	8
NATURAL RUBBER	300x50x1800	14

NOTES:

1. ALL STEEL SHALL BE GRADE 50 CONFORMING TO ASTM A 709M UNLESS OTHERWISE NOTED.
2. ALL BOLTS SHALL BE HIGH STRENGTH BOLTS CONFORMING TO ASTM A 490M UNLESS OTHERWISE NOTED.

A LONGITUDINAL STOPPER DETAILS - 2 of 2
SCALE AS SHOWN

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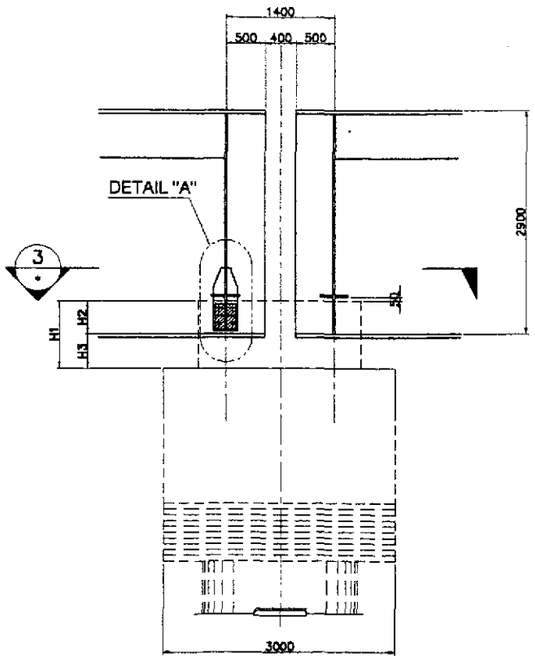
SCALE : AS SHOWN
FULL SIZE A1

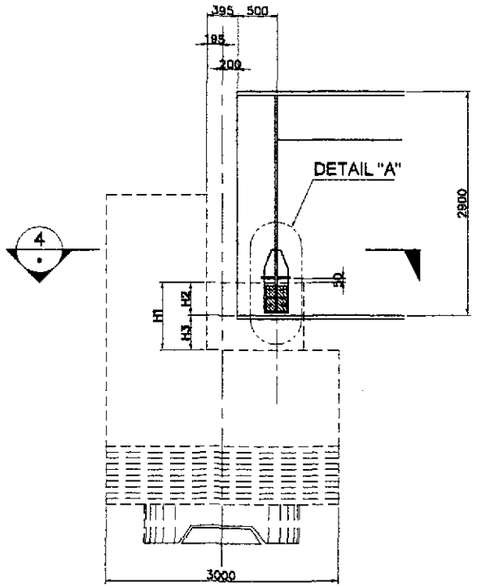
SHEET CONTENTS :
BRIDGE NO. 10 PAMPANGA RIVER BRIDGE
LONGITUDINAL STOPPER
DETAILS - 2 of 2
(ULTIMATE STAGE)

SHEET NO. : B10M-86

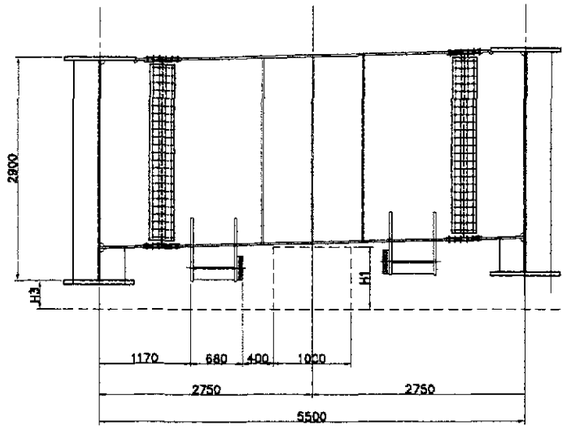
PIER	P6	P11	P15
HEIGHT OF REACTION WALL (H1)	936.6	936.6	936.6
HEIGHT OF B. FLG TO REACTION WALL (H2)	300	300	300
HEIGHT OF B. FLG TO SUBSTRUCTURE (H3)	636.6	636.6	636.6
B. FLG	47	47	47
SOLE PL	28	28	28
BEARING	426	426	426
NON-SHRINK GROUT (AVE.)	135.6	135.6	135.6



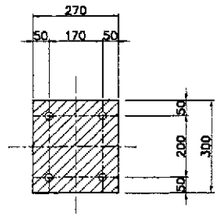
1 SECTION (PIER 11)
SCALE 1 : 40



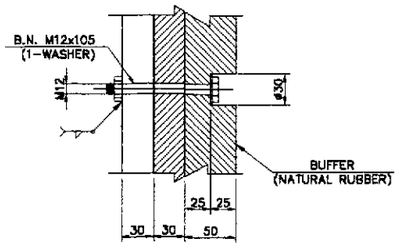
2 SECTION (PIER 6 & PIER 15)
SCALE 1 : 40



5 SECTION
SCALE 1 : 40

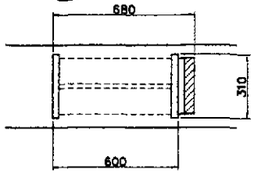


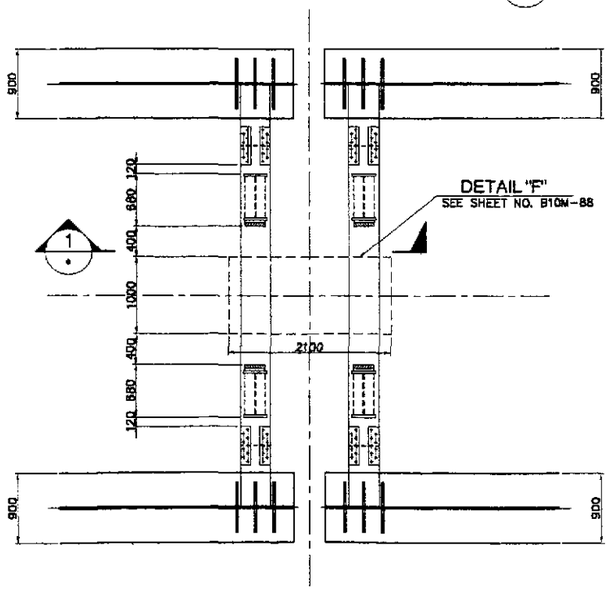
1-NATURAL RUBBER 270x50x300
4-B. N M12x105(ASTM A307)



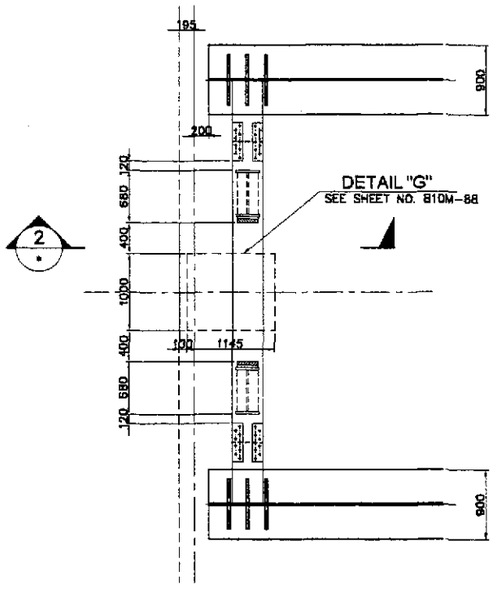
B BUFFER DETAIL
SCALE 1 : 10

C BUFFER CONNECTION DETAIL
SCALE 1 : 3



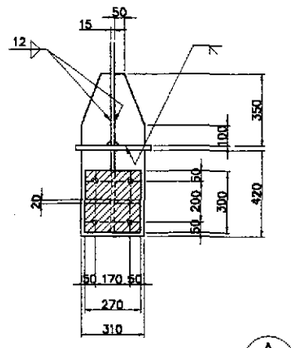


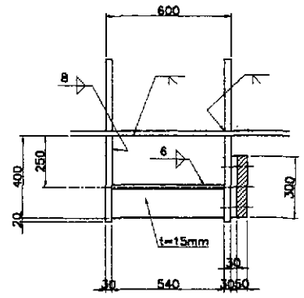
3 SECTION (PIER 11)
SCALE 1 : 40



4 SECTION (PIER 6 & PIER 15)
SCALE 1 : 40

2-FLG PL 310x30x420
1-WEB PL 400x15x540
2-PL 128x20x540
4-RIB PL 148x30x350
1-PL 270x30x300

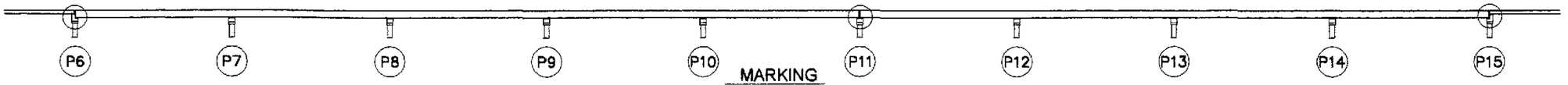




A DETAIL
SCALE 1 : 15

NOTE:

1. ALL STEEL SHALL BE GRADE 50 CONFORMING TO ASTM A 709M UNLESS OTHERWISE NOTED.



MARKING

A TRANSVERSE STOPPER DETAILS
SCALE AS SHOWN

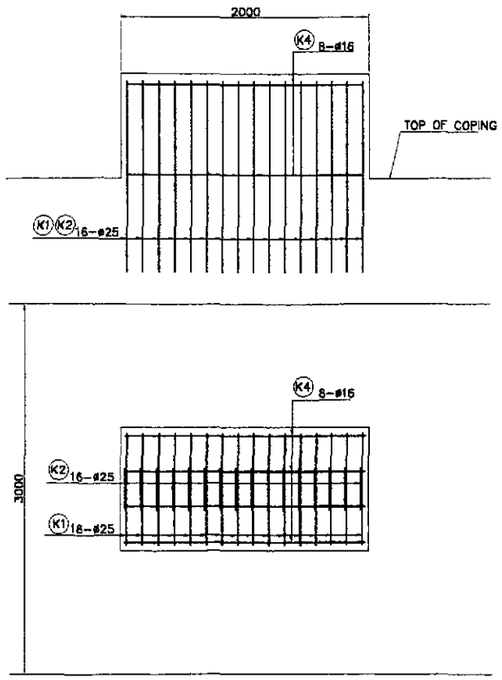
JICA
JAPAN INTERNATIONAL COOPERATION AGENCY
KATAHIRA & ENGINEERS INTERNATIONAL
YACHIYO ENGINEERING CO., LTD.

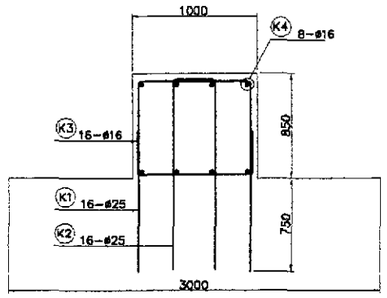
	DATE	SIGNATURE
DESIGNED	10/14/02	F. M. SARASO
CHECKED	10/17/02	J. SANTOS
SUBMITTED	10/19/02	M. KIDOKORO TEAM LEADER

REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS

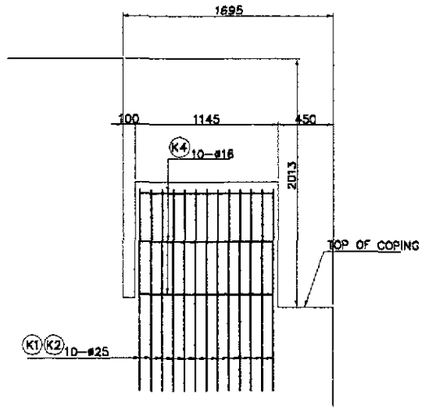
PUHL - PMO	BUREAU OF DESIGN		OFFICE OF THE SECRETARY	
Submitted By:	Reviewed By:	Recommended By:	Recommended By: (See cover sheet for Signature)	Approved By: (See cover sheet for Signature/Approval)
DANILO C. TRAJANO Project Director	ADRIANO M. DOROY Chief, Bridges Division	GILBERTO S. REYES Director IV (OIC)	MANUEL M. BONOAN Undersecretary	SIMEON A. DATUMANONG Secretary

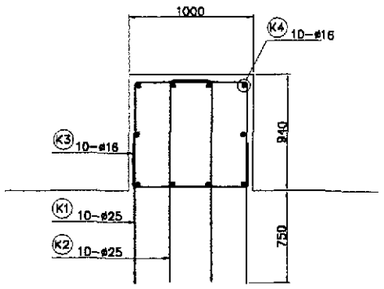
PROJECT AND LOCATION :	SCALE :	SHEET CONTENTS :	SHEET NO. :
THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses) CABANATUAN BYPASS - CONTRACT PACKAGE III	AS SHOWN FULL SIZE A1	BRIDGE NO. 10 PAMPANGA RIVER BRIDGE TRANSVERSE STOPPER DETAILS (ULTIMATE STAGE)	B10M-87

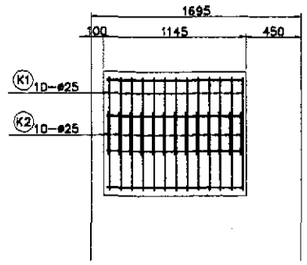




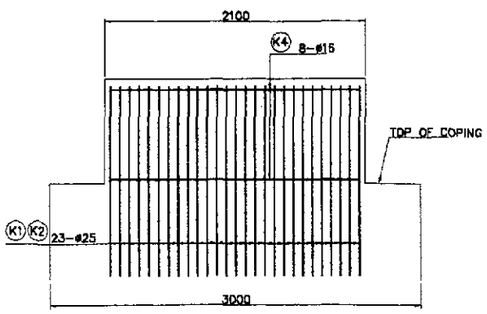
E LONGITUDINAL SEISMIC BUFFER (PIER 7-10, PIER 12-14)
SCALE 1:25

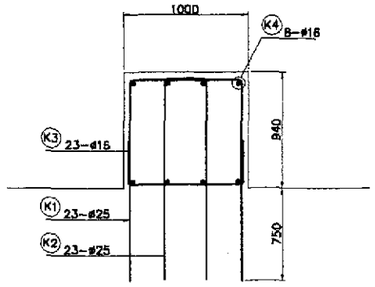


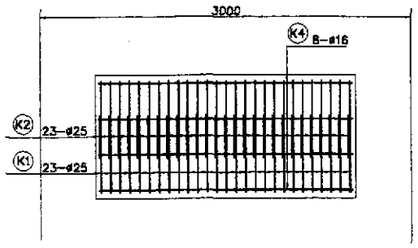




G TRANSVERSE SEISMIC BUFFER (PIER 6 & 15)
SCALE 1:25



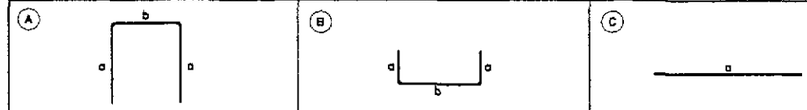




F TRANSVERSE SEISMIC BUFFER (PIER 11)
SCALE 1:25

1 SEISMIC BUFFER REINFORCEMENT DETAILS
SCALE AS SHOWN

BAR BENDING DIAGRAM



SCHEDULE OF REINFORCEMENT

LOCATION	BAR MARK	SIZE (mm)	BEND TYPE	DIMENSION(mm) OUT TO OUT a	b	c	d	e	f	LENGTH (mm)	NO. REQ'D.	UNIT WEIGHT (Kg/m)	WEIGHT (kg) GRADE 40	GRADE 60
P7, P8, P9, P10 P12, P13, P14	K1	25	A	1550	900					4000	16	3.854		247
	K2	25	A	1550	500					3600	16	3.854		222
	K3	16	B	300	900					1500	16	1.579	38	
	K4	16	C	1900						1900	8	1.579	24	
											TOTAL =		62	469
P11	K1	25	A	1640	900					4180	23	3.854		371
	K2	25	A	1640	500					3780	23	3.854		336
	K3	16	B	300	900					1500	23	1.579	55	
	K4	16	C	2000						2000	8	1.579	26	
											TOTAL =		81	707
P8, P15	K1	25	A	1640	900					4180	8	3.854		129
	K2	25	A	1640	500					3780	8	3.854		117
	K3	16	B	300	900					1500	8	1.579	19	
	K4	16	C	1045						1045	8	1.579	14	
											TOTAL =		33	246

THE REINFORCEMENT SHOWN ON THIS TABLE IS FOR REFERENCE ONLY. THE CONTRACTOR SHOULD CHECKED AND VERIFY ALL DIMENSIONS, SIZES AND QUANTITIES OF REINFORCEMENT.

JICA JAPAN INTERNATIONAL COOPERATION AGENCY
KEI KATAHIRA & ENGINEERS INTERNATIONAL
YEC YACHIYO ENGINEERING CO., LTD.

	DATE	SIGNATURE
DESIGNED	10/14/02	F. M. RAMOS
CHECKED	10/17/02	J. C. SANTOS
SUBMITTED	10/19/02	TEAM LEADER

REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS

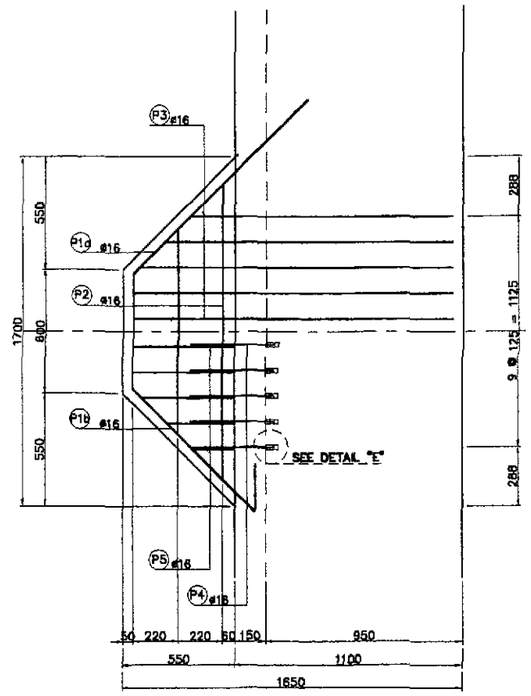
PJHL - PMO	BUREAU OF DESIGN		OFFICE OF THE SECRETARY	
Submitted By:	Reviewed By:	Recommended By:	Recommended By: (See cover sheet for Signature)	Approved By: (See cover sheet for Signature/Approval)
DANILO C. TRAJANO	ADRIANO M. DOROY	GILBERTO S. REYES	MANUEL M. BONOAN	SIMEON A. DATUMANONG
Project Director	Chief, Bridges Division	Director IV (OIC)	Undersecretary	Secretary

PROJECT AND LOCATION :
THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses)
CABANATUAN BYPASS - CONTRACT PACKAGE III

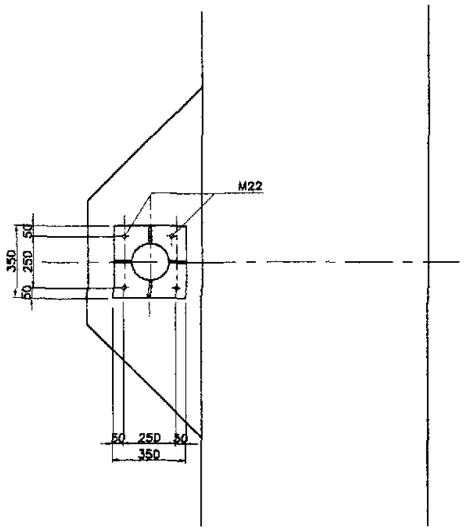
SCALE : AS SHOWN FULL SIZE A1

SHEET CONTENTS :
BRIDGE NO. 10 PAMPANGA RIVER BRIDGE
SEISMIC BUFFER REINFORCEMENT DETAILS
(ULTIMATE STAGE)

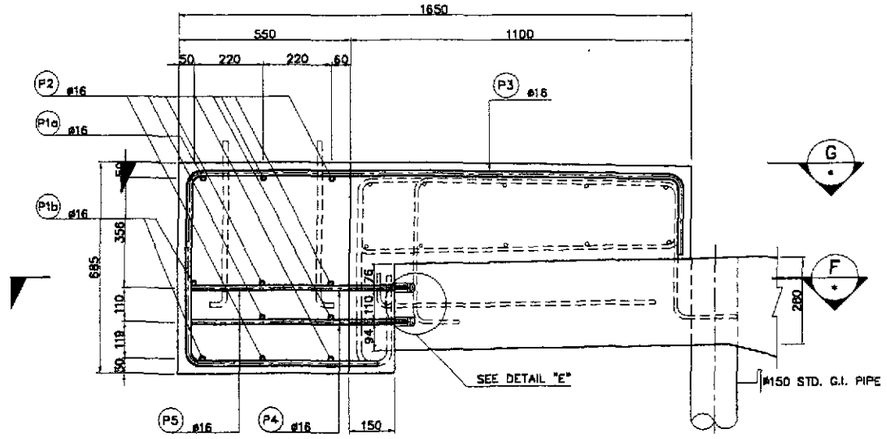
SHEET NO. : B10M-88



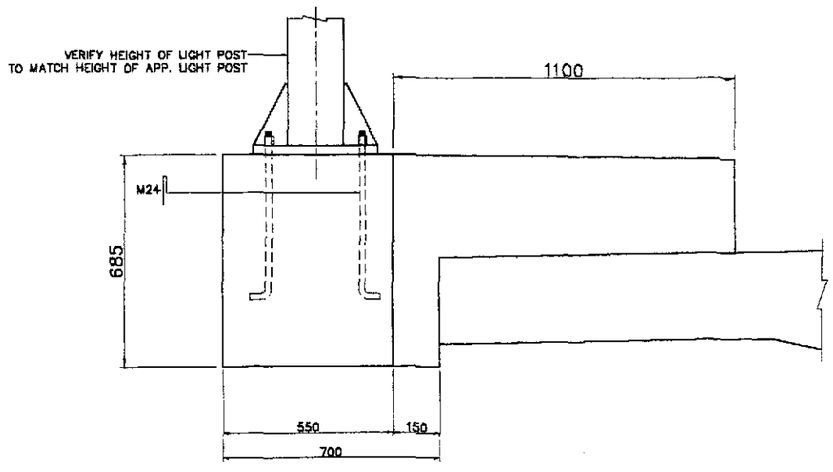
A PLAN
SCALE 1:15



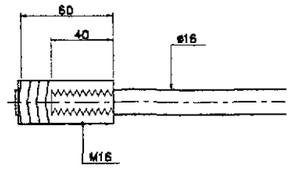
B PLAN
SCALE 1:15



C ELEVATION
SCALE 1:10

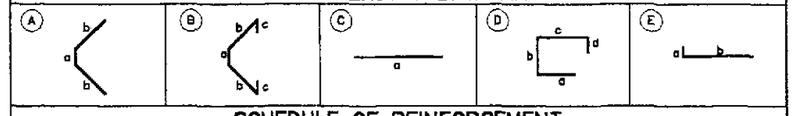


D ELEVATION
SCALE 1:10



E DOWEL BAR ANCHOR DETAIL
SCALE 1:2

BAR BENDING DIAGRAM



SCHEDULE OF REINFORCEMENT

LOCATION	BAR MARK	SIZE (mm)	BEND TYPE	DIMENSION(mm) OUT TO OUT a	b	c	d	e	f	LENGTH (mm)	NO. REQ'D.	UNIT WEIGHT (kg/m)	WEIGHT (kg) GRADE 40
LIGHT POST	P1a	16	A	560	1200					2980	1	1.579	5
	P1b	16	B	560	850	240				2740	2	1.579	9
	P2a	16	C	1000	min					1000	4	1.579	7
	P2b			1440						1440	4	1.579	10
	P3	16	D	615	580	600	240			2180	10	1.579	35
						880	max						
	P4	16	C	400						400	20	1.579	13
	P5	16	E	100	220					460	20	1.579	15
					500	max							
										TOTAL WEIGHT =			94.0

THE REINFORCEMENT SHOWN ON THIS TABLE IS FOR REFERENCE ONLY. THE CONTRACTOR SHOULD CHECKED AND VERIFY ALL DIMENSIONS, SIZES AND QUANTITIES OF REINFORCEMENT.

1 LIGHT POST BASE REINFORCEMENT DETAIL
SCALE AS SHOWN

JICA
JAPAN INTERNATIONAL COOPERATION AGENCY
KATAHIRA & ENGINEERS INTERNATIONAL
YACHIYO ENGINEERING CO., LTD.

	DATE	SIGNATURE
DESIGNED	10/14/02	F. M. SALAS
CHECKED	10/17/02	J. C. SANTOS
SUBMITTED	10/19/02	M. ALCANTARA TEAM LEADER

REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS

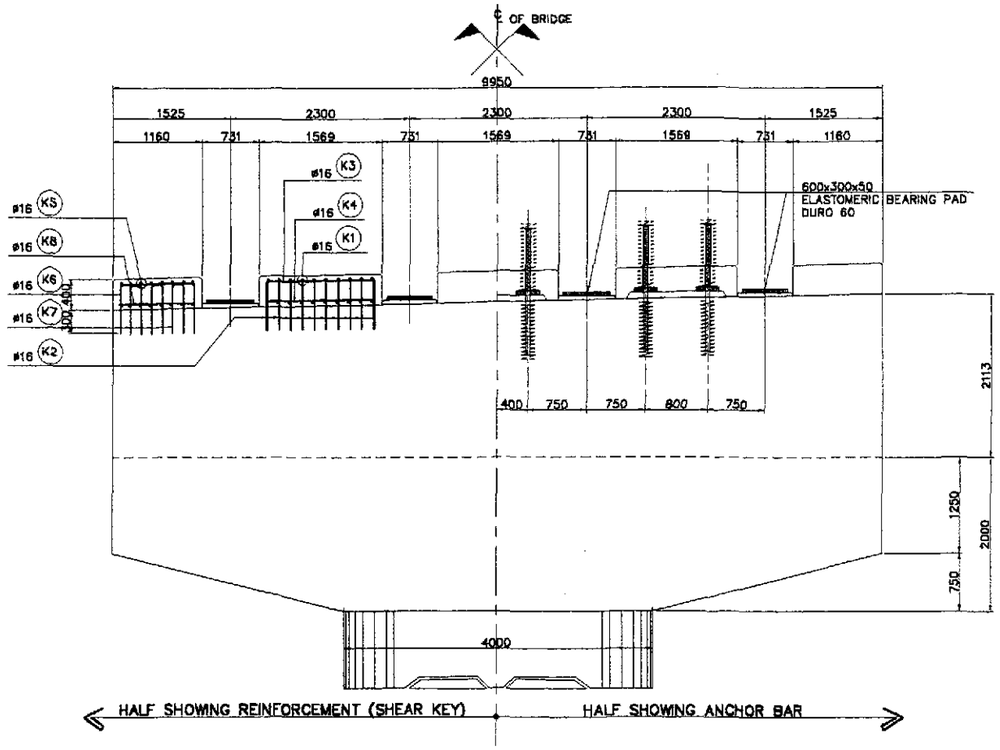
PUHL – PMO	BUREAU OF DESIGN		OFFICE OF THE SECRETARY	
Submitted By:	Reviewed By:	Recommended By:	Recommended By: (See cover sheet for Signature)	Approved By: (See cover sheet for Signature/Approval)
DANILO C. TRAJANO	ADRIANO M. DOROY	GILBERTO S. REYES	MANUEL M. BONOAN	SIMEON A. DATUMANONG
Project Director	Chief, Bridges Division	Director IV (OIC)	Undersecretary	Secretary

PROJECT AND LOCATION :
THE DETAILED DESIGN STUDY ON
UPGRADING INTER-URBAN HIGHWAY SYSTEM
ALONG THE PAN-PHILIPPINE HIGHWAY
(Plaridel, Cabanatuan and San Jose Bypasses)
CABANATUAN BYPASS - CONTRACT PACKAGE III

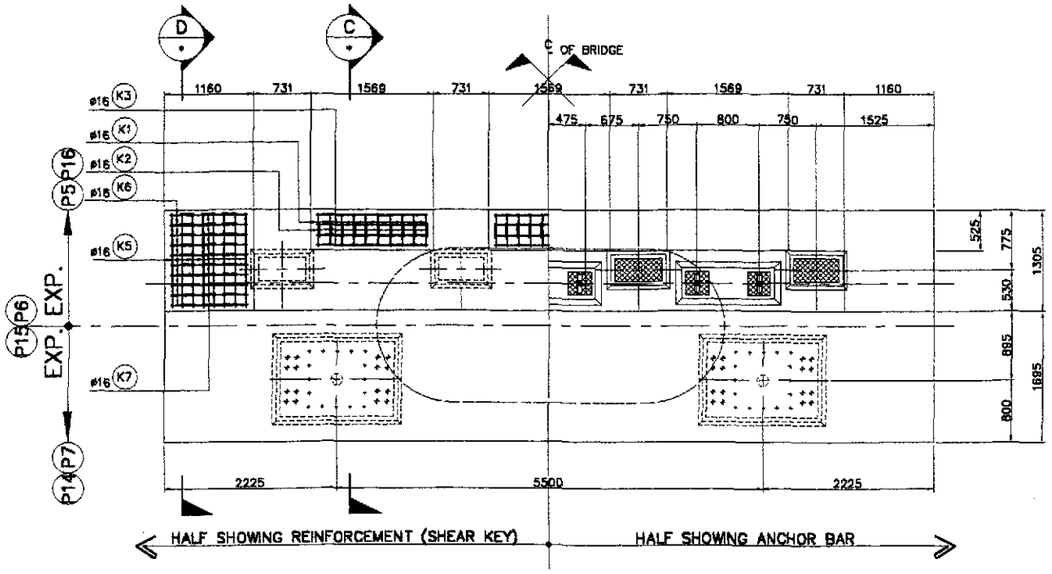
SCALE : AS SHOWN
FULL SIZE A1

SHEET CONTENTS :
BRIDGE NO. 10 PAMPANGA RIVER BRIDGE
LIGHT POST BASE
REINFORCEMENT DETAIL
(ULTIMATE STAGE)

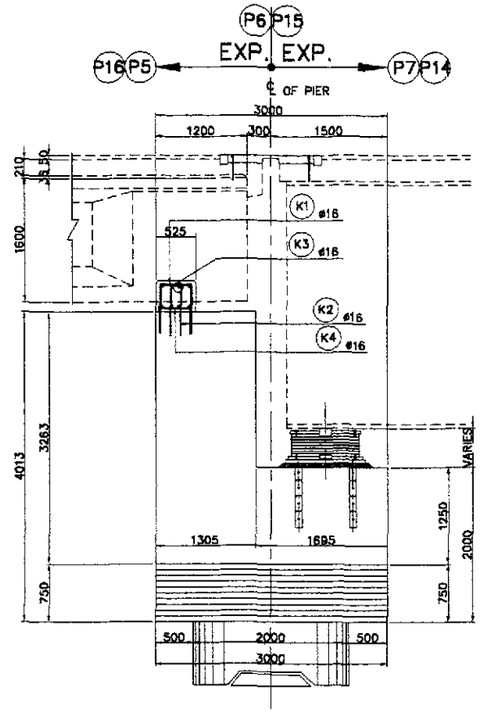
SHEET NO. : B10M-89



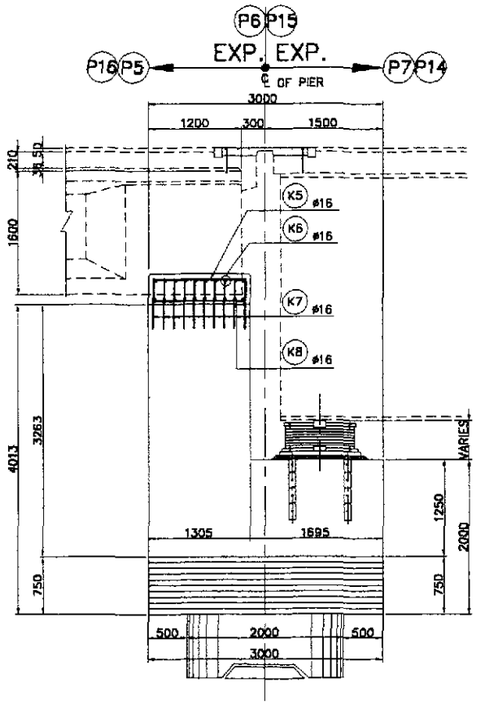
B ELEVATION @ AASHTO GIRDER SIDE
SCALE 1 : 40



A PLAN
SCALE 1 : 40



C SECTION
SCALE 1 : 40



D SECTION
SCALE 1 : 40

BAR BENDING DIAGRAM

SCHEDULE OF REINFORCEMENT

LOCATION	BAR MARK	SIZE (mm)	BEND TYPE	DIMENSION(mm) OUT TO OUT a	b	c	d	e	LENGTH (mm)	NO. REQ'D.	UNIT WEIGHT (kg/m)	WEIGHT(kgs.) Grade 40	Grade 60
SHEAR KEY @ PIER P6 & P15 (EXP.-EXP.)	K1	16	A	860	595				1915	30	1.578		90.66
	K2	16	A	560	200				1520	30	1.578		71.96
	K3	16	A	560	1490				2810	12	1.578		53.21
	K4	16	B	1490					1490	12	1.578		28.21
	K5	16	A	660	1300				2620	16	1.578		66.15
	K6	16	A	560	1080				2400	20	1.578		75.74
	K7	16	A	560	165				1485	60	1.578		140.60
	K8	16	B	1080					1080	60	1.578		102.25
									TOTAL WEIGHT PER PIER =				828.78
									TOTAL WEIGHT FOR (2) PIERS =				1257.57

THE REINFORCEMENT SHOWN ON THIS TABLE IS FOR REFERENCE ONLY. THE CONTRACTOR SHOULD CHECK AND VERIFY ALL DIMENSIONS, SIZES AND QUANTITIES OF REINFORCEMENT.

1 DETAIL OF SHEAR KEY AND ANCHOR BAR (PIER 6 & PIER 15)
SCALE AS SHOWN

JICA JAPAN INTERNATIONAL COOPERATION AGENCY
KEI KATAHIRA & ENGINEERS INTERNATIONAL
YEO YACHIYO ENGINEERING CO., LTD.

	DATE	SIGNATURE
DESIGNED	10/17/02	F. M. SALAS
CHECKED	10/17/02	J. C. SANTOS
SUBMITTED	10/19/02	M. KATSUMOTA TEAM LEADER

REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS

PUHL – PMO	BUREAU OF DESIGN		OFFICE OF THE SECRETARY	
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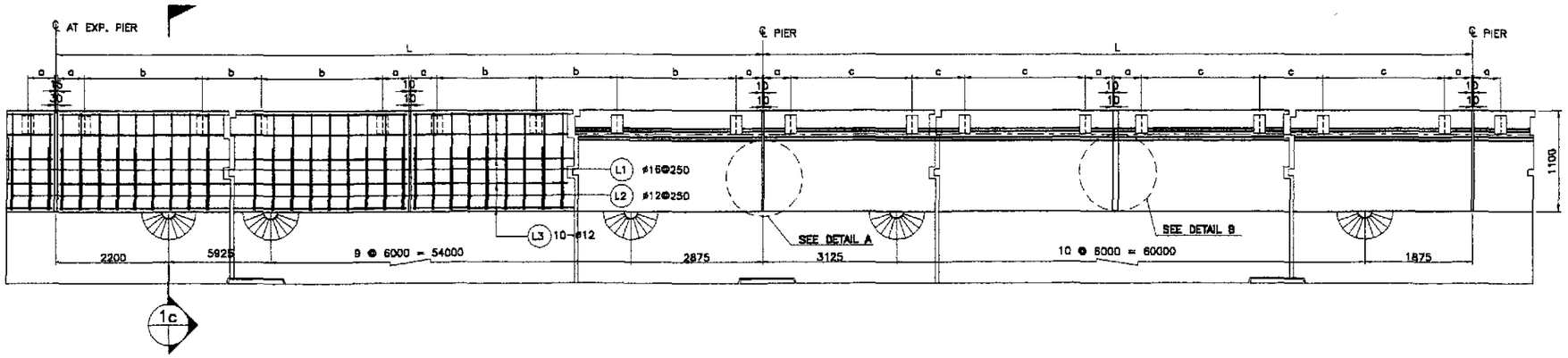
DANILO C. TRAJANO	ADRIANO M. DOROY	GILBERTO S. REYES	MANUEL M. BONOAN	SIMEON A. DATUMANONG
Project Director	Chief, Bridges Division	Director IV (OIC)	Undersecretary	Secretary

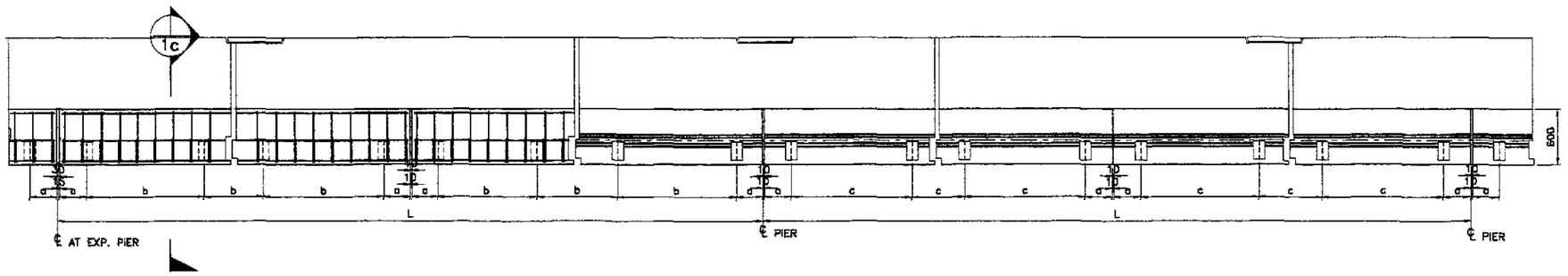
PROJECT AND LOCATION :
THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses)
CABANATUAN BYPASS - CONTRACT PACKAGE III

SCALE : AS SHOWN FULL SIZE A1

SHEET CONTENTS :
BRIDGE NO. 10 PAMPANGA RIVER BRIDGE
DETAIL OF SHEAR KEY & ANCHOR BAR (PIER 6 & PIER 15) (ULTIMATE STAGE)

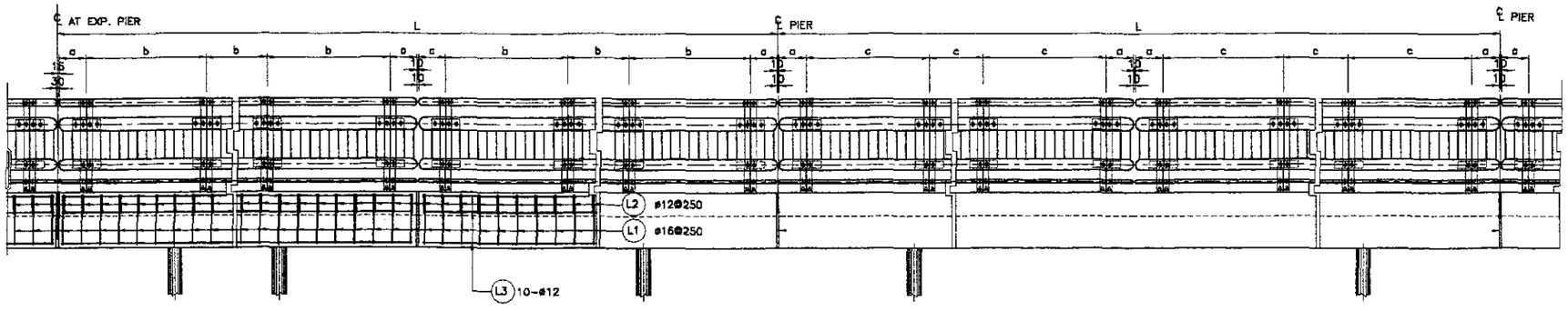
SHEET NO. : B10M-90





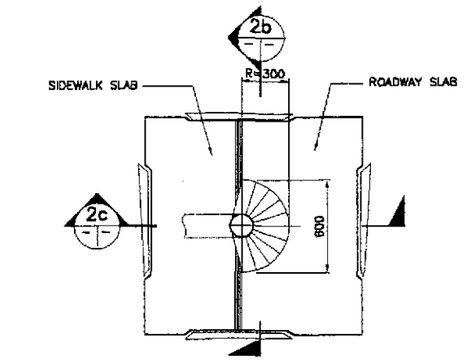
1a PLAN
NOT TO SCALE

SCHEDULE OF RAILING					
SPAN LENGTH (m)	NO. OF EXP. JT. INSIDE SPAN	NO. OF RAIL POST PER SPAN	a (mm)	b (mm)	c (mm)
65.000	5	66	407	2000	2000

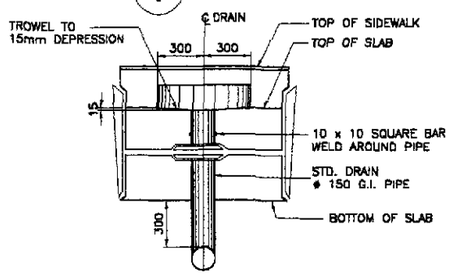


1b ELEVATION
NOT TO SCALE

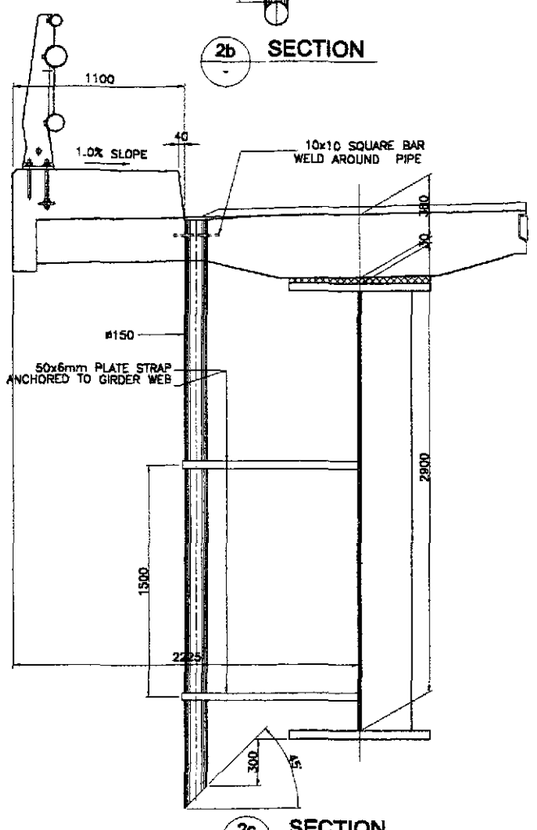
1 TYPICAL SIDEWALK, RAILING AND DRAIN DETAILS - 1 of 2
SCALE AS SHOWN



2a PLAN



2b SECTION



2c SECTION

2 TYPICAL DRAIN DETAILS
SCALE 1:20

JAPAN INTERNATIONAL COOPERATION AGENCY

KATAHIRA & ENGINEERS INTERNATIONAL — YACHIYO ENGINEERING CO., LTD.

	DATE	SIGNATURE
DESIGNED	10/14/02	F. M. SALAS
CHECKED	10/17/02	J. E. SANTOS
SUBMITTED	10/19/02	TEAM LEADER

REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS

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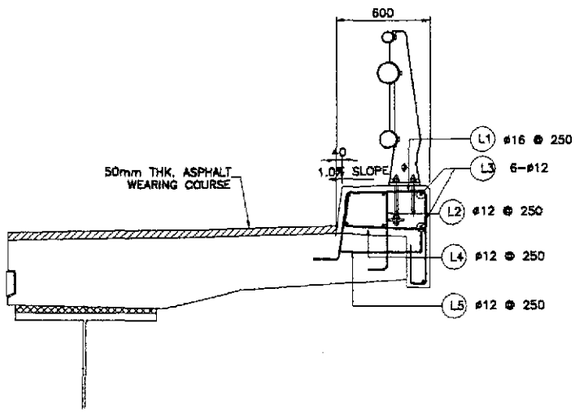
DANILO C. TRAJANO, Project Director	ADRIANO M. DORDY, Chief, Bridges Division	GILBERTO S. REYES, Director IV (OIC)	MANUEL M. BONOAN, Undersecretary	SIMEON A. DATUMANONG, Secretary

PROJECT AND LOCATION :
THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses)
CABANATUAN BYPASS - CONTRACT PACKAGE III

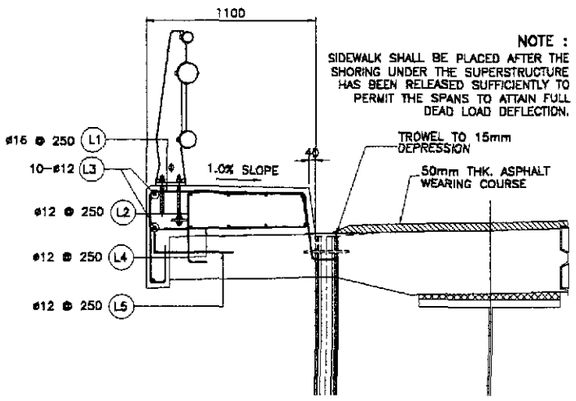
SCALE : AS SHOWN — FULL SIZE A1

SHEET CONTENTS :
BRIDGE NO. 10 PAMPANGA RIVER BRIDGE
TYPICAL SIDEWALK, RAILING AND DRAIN DETAILS - 1 of 2 (ULTIMATE STAGE)

SHEET NO. : B10M-91

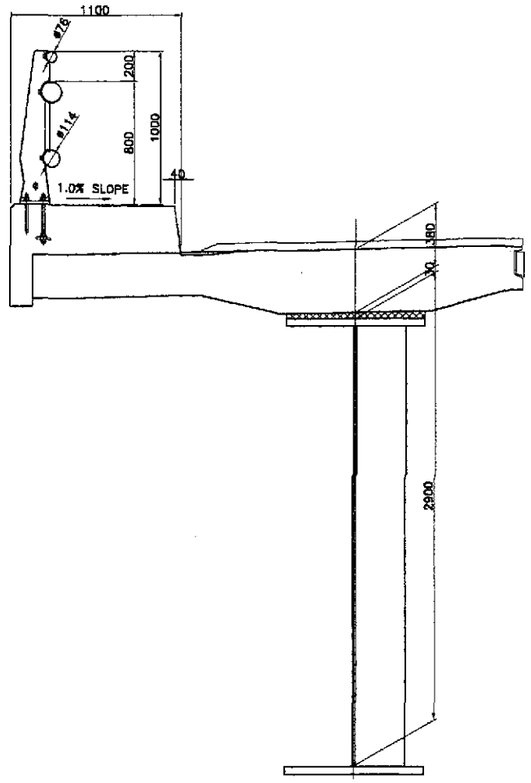


1c — SIDEWALK (TRAFFIC)
SCALE 1:20

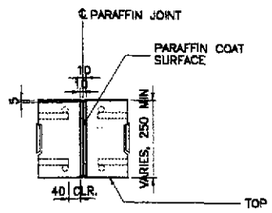


NOTE :
SIDEWALK SHALL BE PLACED AFTER THE SHORING UNDER THE SUPERSTRUCTURE HAS BEEN RELEASED SUFFICIENTLY TO PERMIT THE SPANS TO ATTAIN FULL DEAD LOAD DEFLECTION.

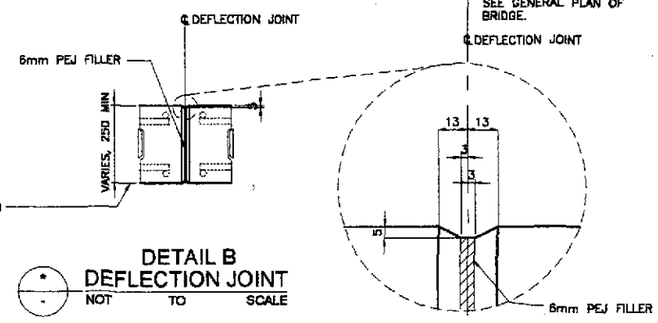
1ca — SIDEWALK (PEDESTRIAN)
1:20 SCALE 1:20



B — DETAILED DIMENSION OF SIDEWALK/RAILING
SCALE 1:20



DETAIL A
PARAFFIN JOINT
NOT TO SCALE

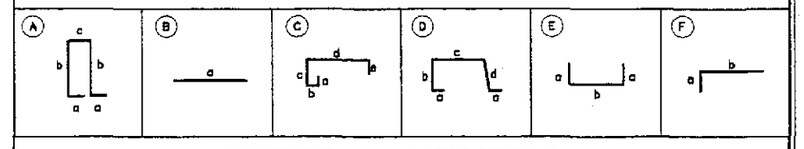


NOTE :
FOR LOCATION OF JOINTS SEE GENERAL PLAN OF BRIDGE.

DETAIL B
DEFLECTION JOINT
NOT TO SCALE

1 — TYPICAL SIDEWALK, RAILING & DRAIN DETAIL - 2 of 2
SCALE AS SHOWN

BAR BENDING DIAGRAM



SCHEDULE OF REINFORCEMENT

LOCATION	BAR MARK	SIZE (mm)	BEND TYPE	DIMENSION(mm) OUT TO OUT a	b	c	d	e	LENGTH (mm)	NO. REQ'D.	UNIT WEIGHT (kg/m)	WEIGHT(kgs.) Grade 40	Grade 60
SIDEWALK (PEDESTRIAN)	L1	16	B	100	70	450	980	260	1860	261	1.579	767	
	L2	12	C	200	375	700	375		1850	261	0.888	429	
	L3	12	A	64950					64950	11	0.888	635	
	L4	12	D	200	980				1380	261	0.888	320	
	L5	12	E	200	400				600	261	0.888	140	
									TOTAL WEIGHT (1 SPANS) =			2, 291 Kgs.	
									TOTAL WEIGHT (9 SPANS) =			20, 619 Kgs.	
SIDEWALK (TRAFFIC)	L1	16	B	100	70	450	480	260	1360	261	1.579	561	
	L2	12	C	200	375	200	375		1350	261	0.888	313	
	L3	12	A	64950					64950	7	0.888	404	
	L4	12	D	200	480				880	261	0.888	204	
	L5	12	E	200	400				600	261	0.888	140	
									TOTAL WEIGHT (1 SPANS) =			1, 822 Kgs.	
									TOTAL WEIGHT (9 SPANS) =			14, 598 Kgs.	

THE REINFORCEMENT SHOWN ON THIS TABLE IS FOR REFERENCE ONLY. THE CONTRACTOR SHOULD CHECK AND VERIFY ALL DIMENSIONS, SIZES AND QUANTITIES OF REINFORCEMENT.

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KEI KATAHIRA & ENGINEERS INTERNATIONAL
YEC YACHIYO ENGINEERING CO., LTD.

	DATE	SIGNATURE
DESIGNED	10/14/02	F. M. SALAS
CHECKED	10/17/02	J. E. SANTOS
SUBMITTED	10/19/02	TEAM LEADER

REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS

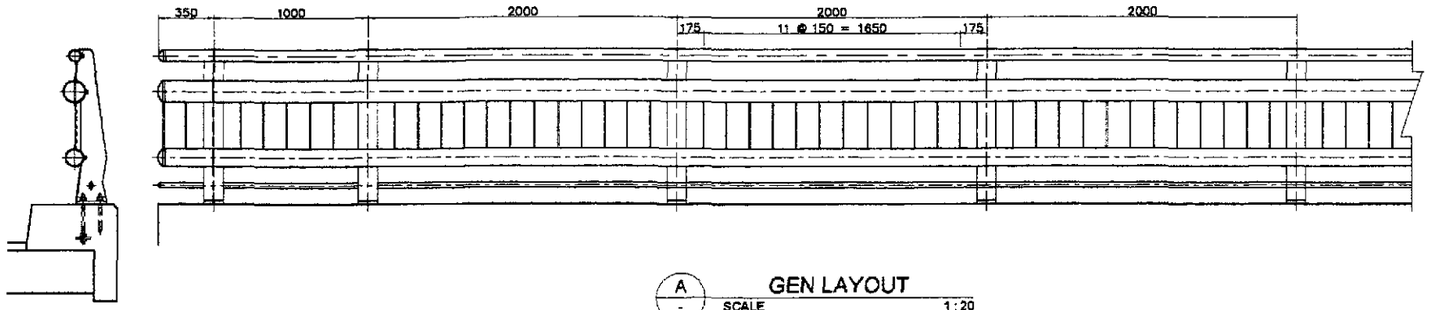
PJHL – PMO	BUREAU OF DESIGN		OFFICE OF THE SECRETARY	
Submitted By:	Reviewed By:	Recommended By:	Recommended By: (See cover sheet for Signature)	Approved By: (See cover sheet for Signature/Approval)
DANILO C. TRAJANO, Project Director	ADRIANO M. DOROY, Chief, Bridges Division	GILBERTO S. REYES, Director IV (OIC)	MANUEL M. BONOAN, Undersecretary	SIMEON A. DATUMANONG, Secretary

PROJECT AND LOCATION :
THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses)
CABANATUAN BYPASS - CONTRACT PACKAGE III

SCALE : AS SHOWN
FULL SIZE A1

SHEET CONTENTS :
BRIDGE NO. 10 PAMPANGA RIVER BRIDGE
TYPICAL SIDEWALK, RAILING AND DRAIN DETAILS - 2 of 2 (ULTIMATE STAGE)

SHEET NO. : B10M-92



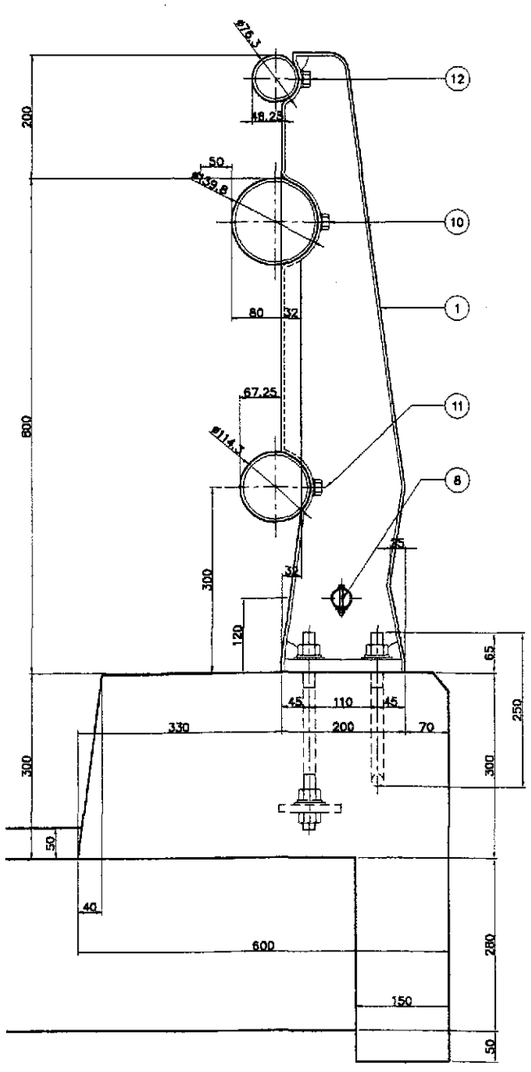
A — GEN LAYOUT
SCALE 1:20

MATERIALS (FOR 20.35m LONG)

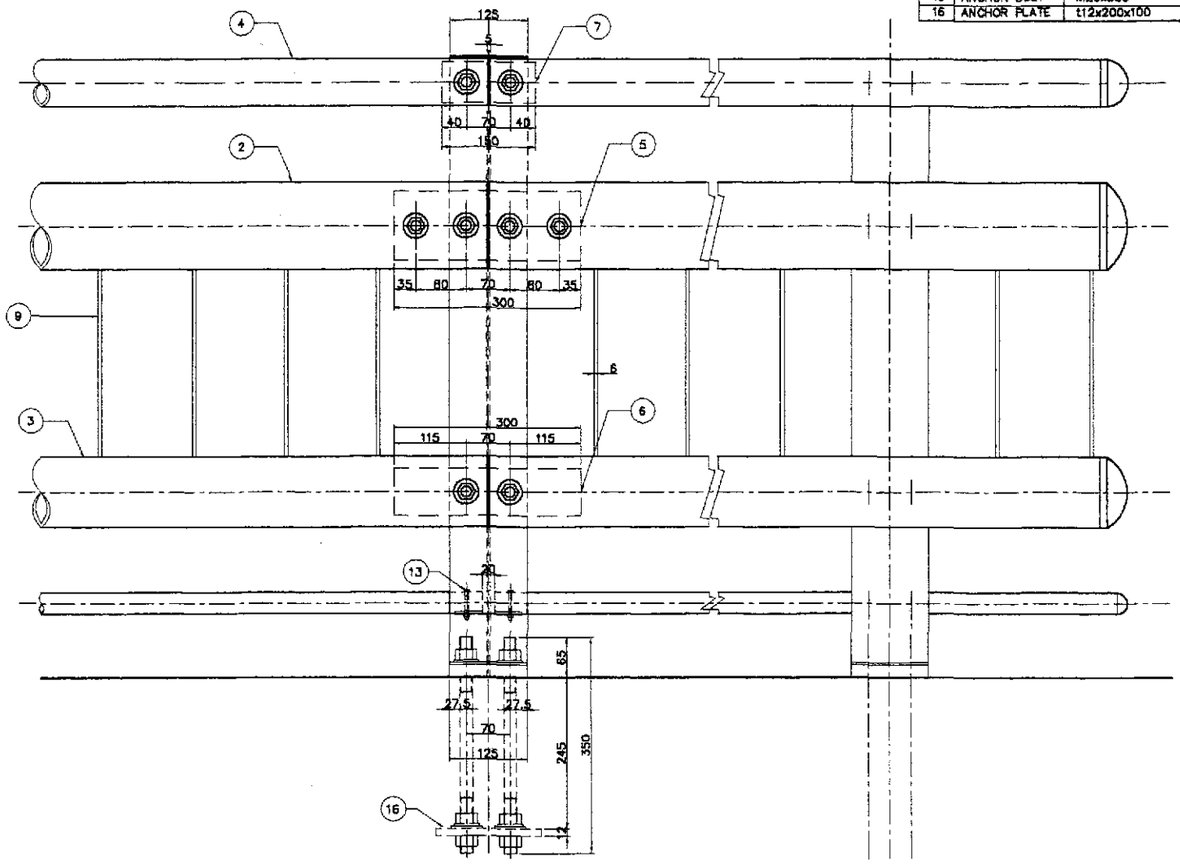
	MEMBER	SIZE	SPECIFICATION	UNIT WEIGHT	QTY	WEIGHT
1	POST	1000x200x125xt8	SS400	21.08 Kgf/m	11	232.0
2	TOP RAIL	ø139.8xt6	STK400	19.80 Kgf/m	20.35m	402.9
3	BOTTOM RAIL	ø114.3xt6	STK400	9.56 Kgf/m	20.35m	194.5
4	UPPER RAIL	ø76.3xt2.8	STK400	5.08 Kgf/m	20.35m	103.4
5	TOP SLEEVE	ø120xt7x300	STK400	5.85 Kgf/⊐	10 ⊐	58.5
6	BOTTOM SLEEVE	ø101.6xt4.5x300	STK400	3.23 Kgf/⊐	10 ⊐	32.3
7	UPPER SLEEVE	ø65xt3.5x150	STK400	0.80 Kgf/⊐	10 ⊐	8.0
8	BOTTOM RAIL	ø34xt2.3	STK400	1.80 Kgf/m	20.13m	36.2
9	BALLUSTER	32xt6x329	SS400	0.50 Kgf/	121	60.5
10	BOLT	M16x40	SS400	0.12 Kgf/	42	5.0
11	BOLT	M16x40	SS400	0.12 Kgf/	22	2.6
12	BOLT	M12x40	SS400	0.06 Kgf/	22	1.3
13	BOLT	M8x60	SS400	0.04 Kgf/	22	0.8
14	ANCHOR BOLT	M20x250x100	SS400	0.92 Kgf/	22	20.2
15	ANCHOR BOLT	M20x350	SS400	1.12 Kgf/	22	24.6
16	ANCHOR PLATE	t12x200x100	SS400	1.88 Kgf/⊐	11 ⊐	20.7
				1189.5 Kgf		58.5kgf/m

SURFACE PROTECTION

GALVANIZED COATING
- GALVANIZATION HDZ55 (STANDARD)
- FOR t<3.0mm USE HDZ40



B — SECTION
SCALE 1:5



C — ELEVATION DETAILS
SCALE 1:5

1 — DETAILS OF RAILING
SCALE AS SHOWN

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YEO YACHIYO ENGINEERING CO., LTD.

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CHECKED	10/11/02	J. C. SANTOS
SUBMITTED	10/14/02	TEAM LEADER

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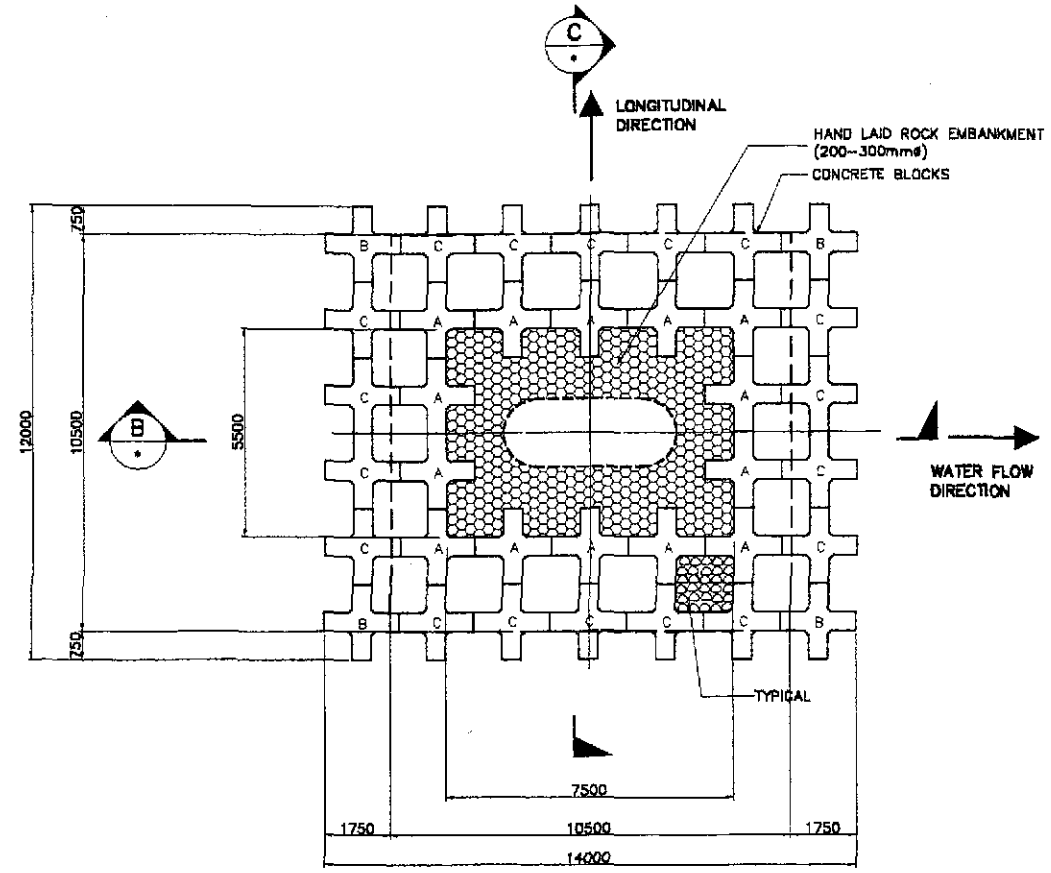
(Plaridel, Cabanatuan and San Jose Bypasses)
CABANATUAN BYPASS - CONTRACT PACKAGE III

SCALE : AS SHOWN
FULL SIZE A1

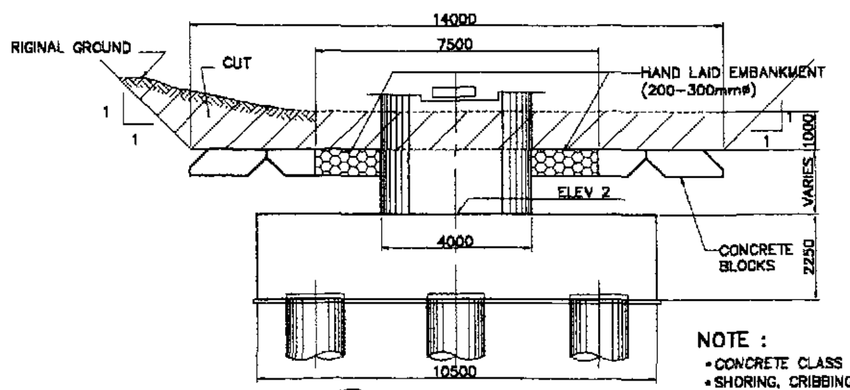
SHEET CONTENTS :
BRIDGE NO. 10 PAMPANGA RIVER BRIDGE
DETAILS OF RAILING
(ULTIMATE STAGE)

SHEET NO. : B10M-93

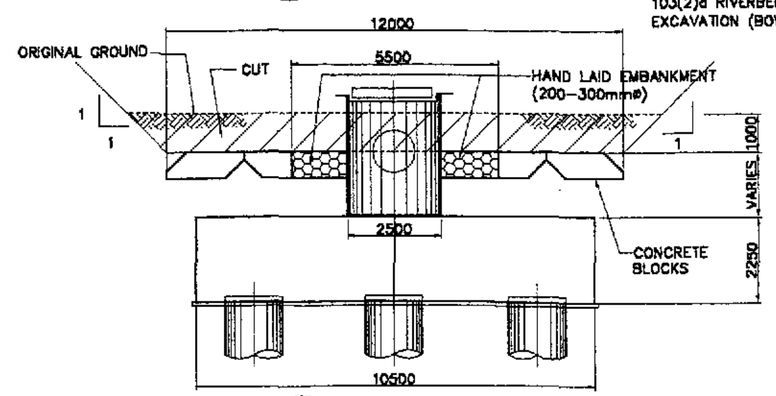
PIER NO.	ELEVATION	
	ELEV 1	ELEV 2
P9	25.087	22.587
P10	25.121	22.621
P11	25.186	22.686
P12	25.121	22.621
P13	25.087	22.587



A PLAN SHOWING CONCRETE BLOCK ARRANGEMENT
SCALE 1:100

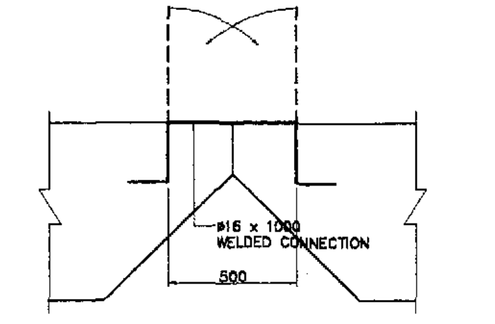


B SECTION
SCALE 1:100

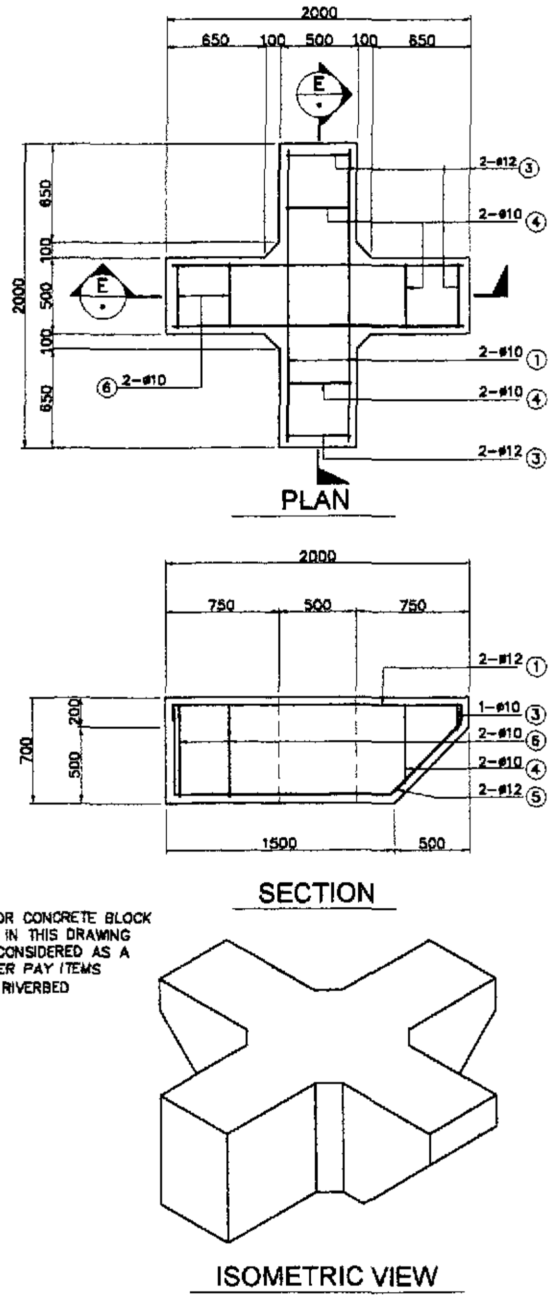


C SECTION
SCALE 1:100

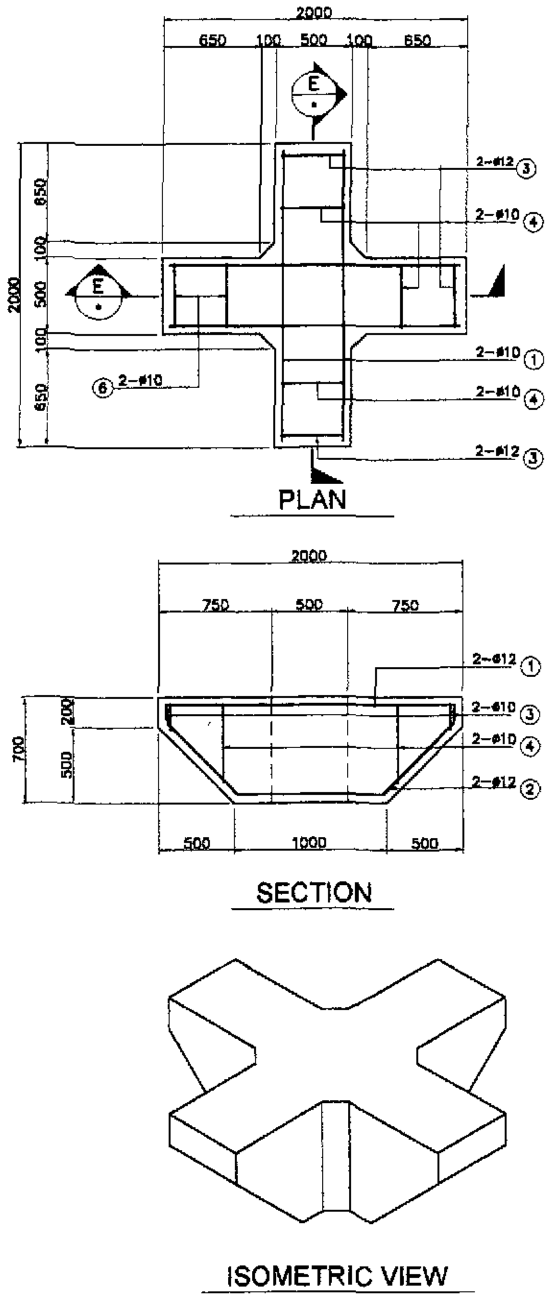
NOTE :
- CONCRETE CLASS "B" FOR CONCRETE BLOCKS.
- SHORING, CRIBBING & RELATED WORK REQUIRED FOR CONCRETE BLOCK SETTING & HAND LAID EMBANKMENT SC SPECIFIED IN THIS DRAWING WILL NOT BE PAID FOR DIRECTLY, BUT SHALL BE CONSIDERED AS A SUBSIDIARY OBLIGATION OF THE CONTRACTOR UNDER PAY ITEMS 103(2)a RIVERBED EXCAVATION (AOWL) & 103(2)c RIVERBED EXCAVATION (BOWL).



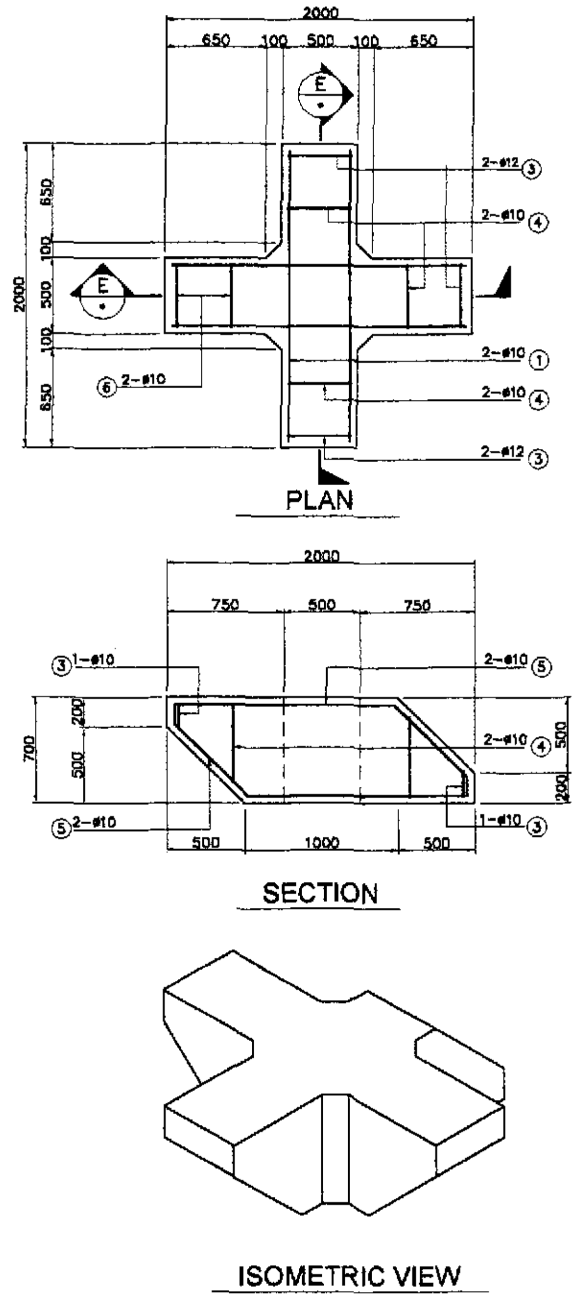
G JOINT CONNECTION DETAIL
SCALE 1:15



D TYPE-A CONC. BLOCK
SCALE 1:25



E TYPE-B CONC. BLOCK
SCALE 1:25



F TYPE-C CONC. BLOCK
SCALE 1:25

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CHECKED	10/17/02	J. C. SANTOS
SUBMITTED	10/18/02	TEAM LEADER

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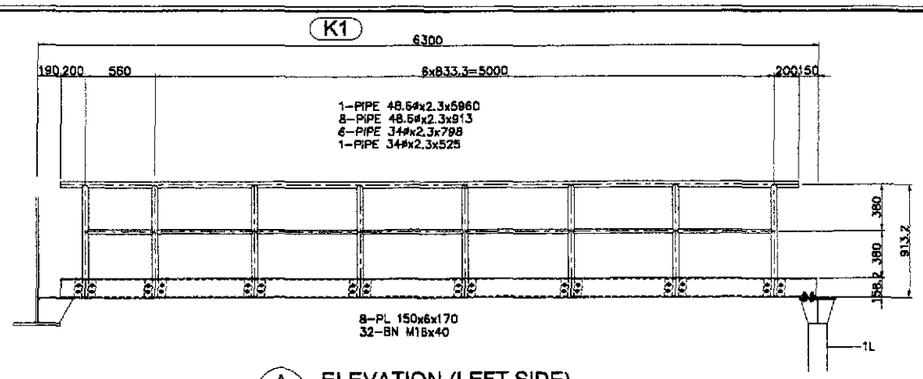
CABANATUAN BYPASS - CONTRACT PACKAGE III

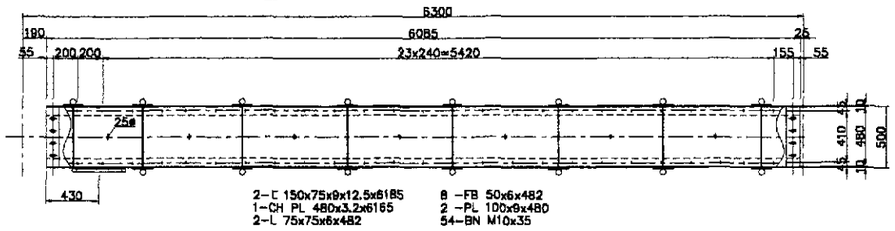
SCALE : AS SHOWN
FULL SIZE A1

SHEET CONTENTS :
BRIDGE NO. 10 PAMPANGA RIVER BRIDGE
DETAILS OF PIER PROTECTION (PIER 9 to PIER 13) (ULTIMATE STAGE)

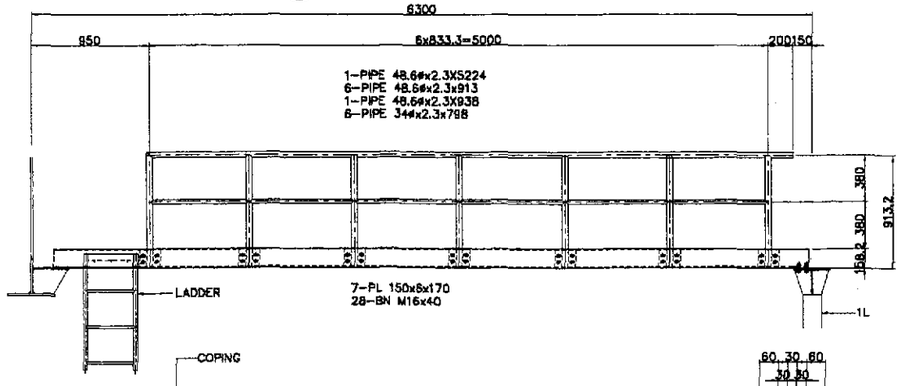
SHEET NO. : B10M-94

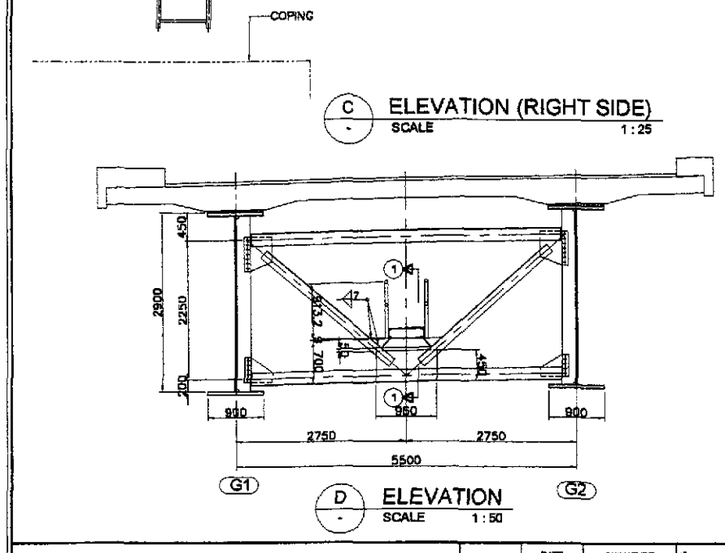


A ELEVATION (LEFT SIDE)
SCALE 1 : 25



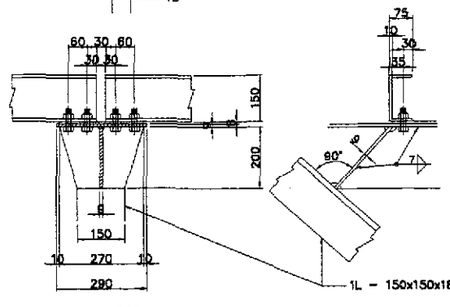
B P L A N
SCALE 1 : 25





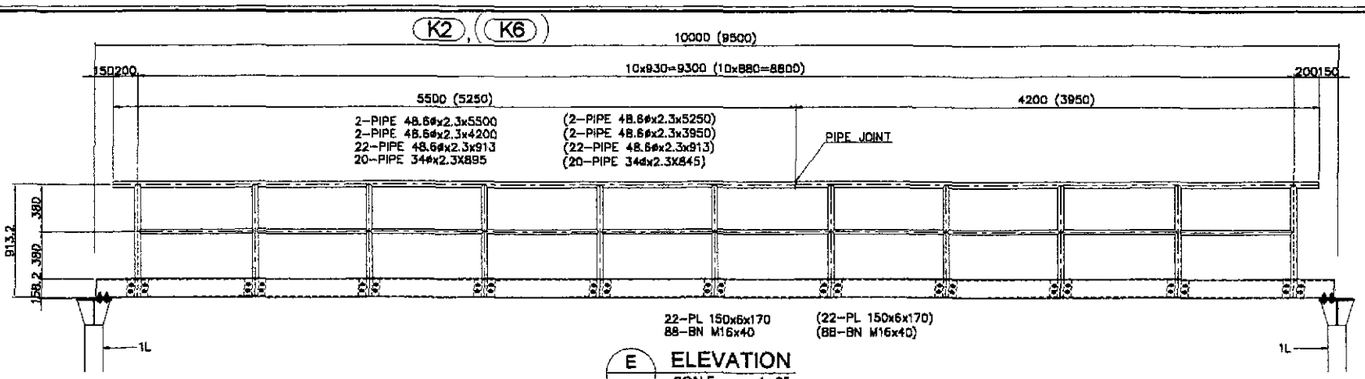
C ELEVATION (RIGHT SIDE)
SCALE 1 : 25

D ELEVATION
SCALE 1 : 50

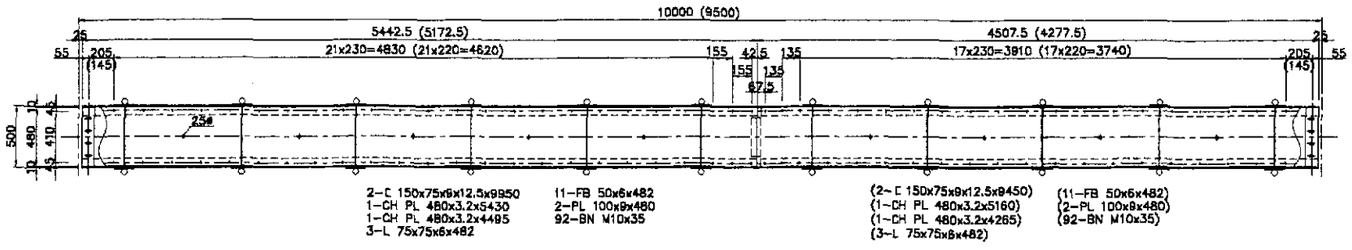


1 SECTION
SCALE 1 : 10

K2 , K6

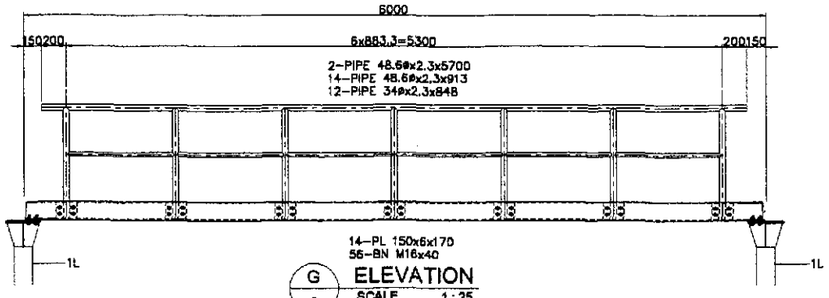


E ELEVATION
SCALE 1 : 25

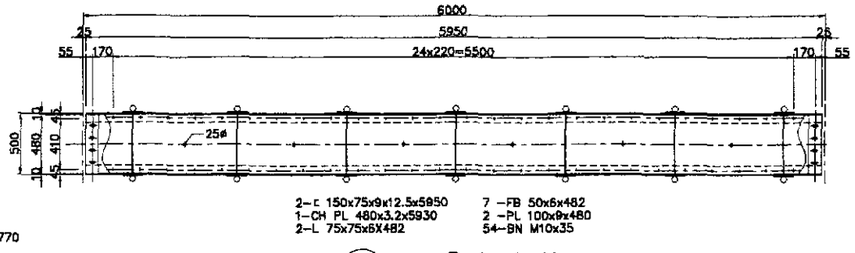


F P L A N
SCALE 1 : 25

K3

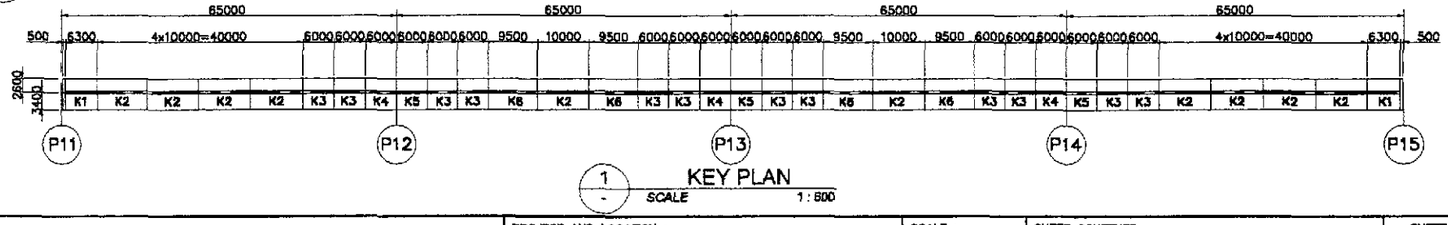


G ELEVATION
SCALE 1 : 25



H P L A N
SCALE 1 : 25

NOTES :
1. ALL STEEL PIPES SHALL BE STK400 OR SIMILAR GRADE.
2. ALL STEEL PLATES SHALL BE SM400A OR SIMILAR GRADE.



1 KEY PLAN
SCALE 1 : 800

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KATAHIRA & ENGINEERS INTERNATIONAL
YACHIYO ENGINEERING CO., LTD.

	DATE	SIGNATURE
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SUBMITTED	10/19/02	TEAM LEADER

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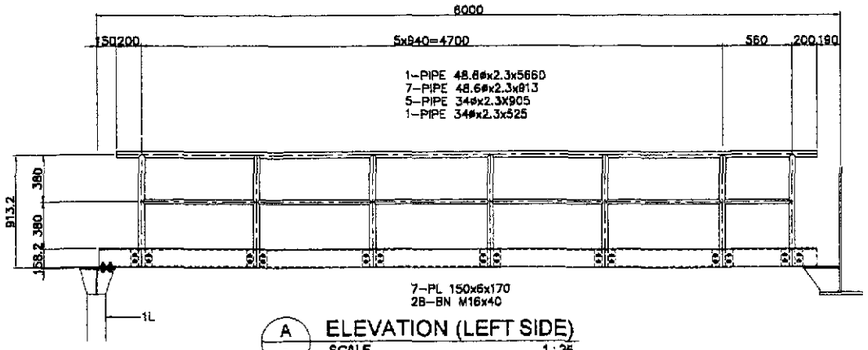
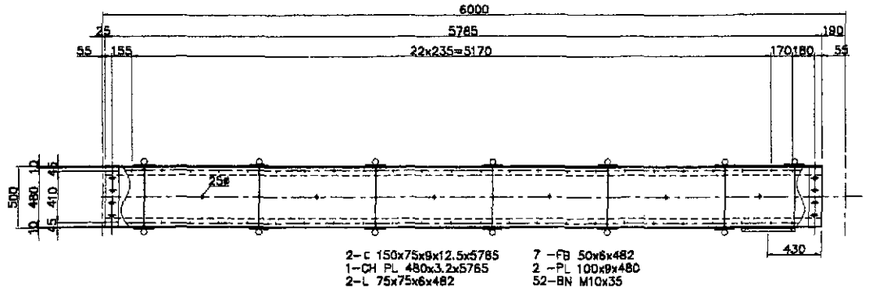
PROJECT AND LOCATION :	SCALE :	SHEET CONTENTS :	SHEET NO. :
THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses) CABANATUAN BYPASS - CONTRACT PACKAGE III	AS SHOWN FULL SIZE A1	BRIDGE NO. 10 PAMPANGA RIVER BRIDGE DETAILS OF MAINTENANCE CATWALK - 1 of 3 (ULTIMATE STAGE)	B10M-95

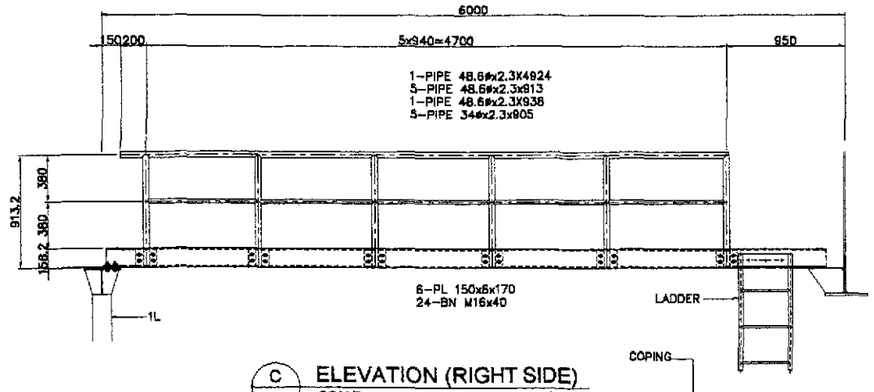
K4



A — ELEVATION (LEFT SIDE)
SCALE 1:25

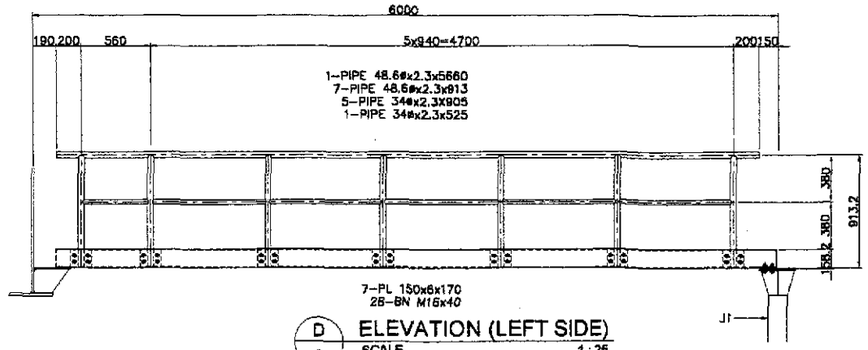


B — PLAN
SCALE 1:25

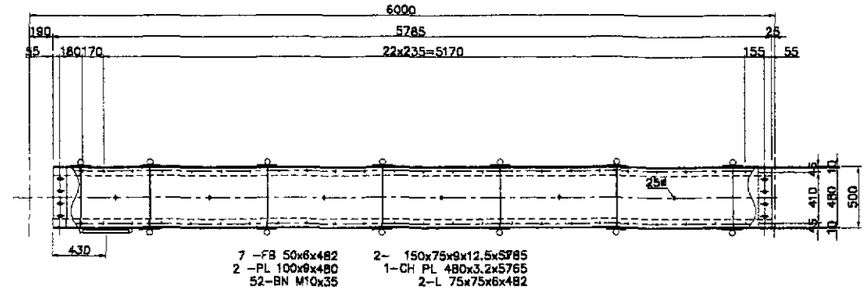


C — ELEVATION (RIGHT SIDE)
SCALE 1:25

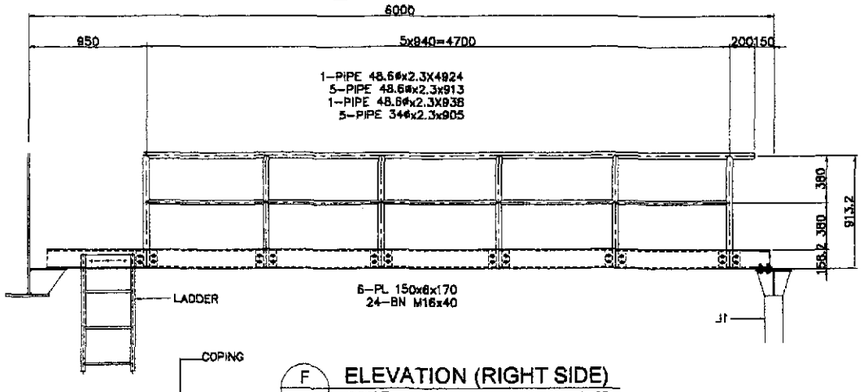
K5



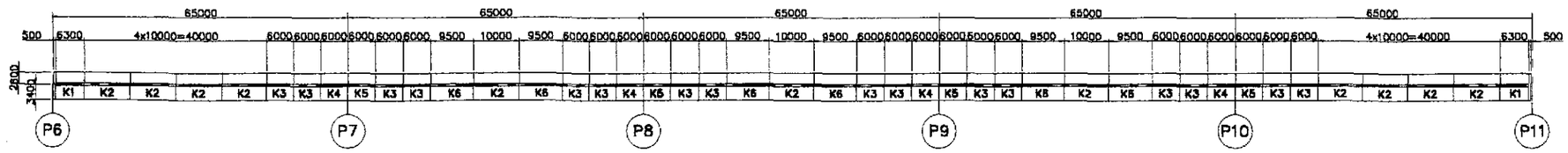
D — ELEVATION (LEFT SIDE)
SCALE 1:25



E — PLAN
SCALE 1:25



F — ELEVATION (RIGHT SIDE)
SCALE 1:25



1 — KEY PLAN
SCALE 1:600

JAPAN INTERNATIONAL COOPERATION AGENCY

KATAHIRA & ENGINEERS INTERNATIONAL

YACHIYO ENGINEERING CO., LTD.

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SUBMITTED	10/19/02	TEAM LEADER

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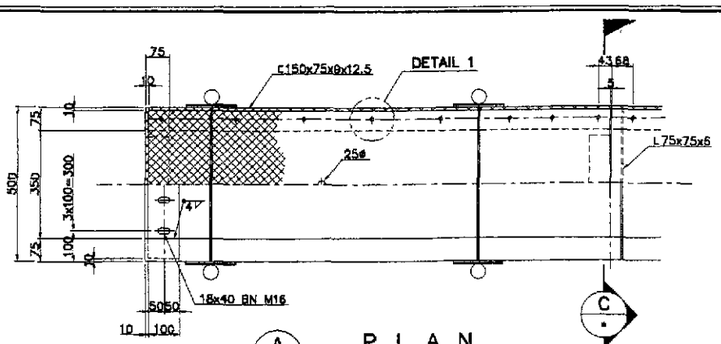
Submitted By:	Reviewed By:	Recommended By:	Recommended By: (See cover sheet for Signature)	Approved By: (See cover sheet for Signature/Approval)
DANILO C. TRAJANO	ADRIANO M. DOROY	GILBERTO S. REYES	MANUEL M. BONOAN	SIMEON A. DATUMANONG
Project Director	Chief, Bridges Division	Director IV (OIC)	Undersecretary	Secretary

PROJECT AND LOCATION :
THE DETAILED DESIGN STUDY ON
UPGRADING INTER-URBAN HIGHWAY SYSTEM
ALONG THE PAN-PHILIPPINE HIGHWAY
(Plaridel, Cabanatuan and San Jose Bypasses)
CABANATUAN BYPASS - CONTRACT PACKAGE III

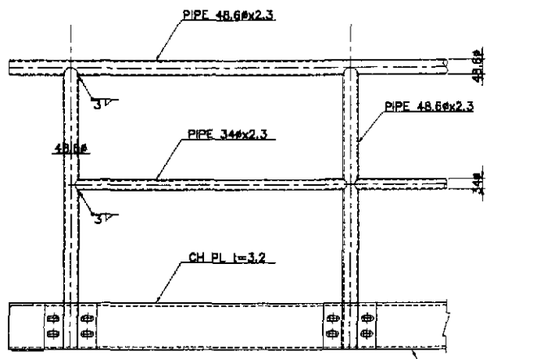
SCALE :
AS SHOWN
FULL SIZE A1

SHEET CONTENTS :
BRIDGE NO. 10 PAMPANGA RIVER BRIDGE
DETAILS OF MAINTENANCE
CATWALK - 2 of 3
(ULTIMATE STAGE)

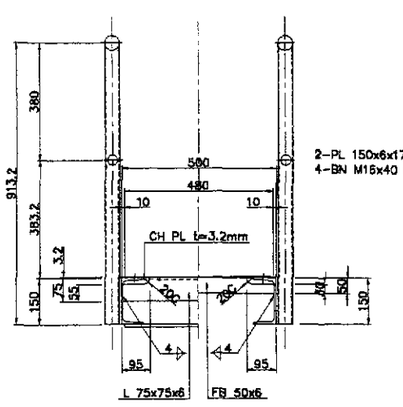
SHEET NO. :
B10M-96



A — PLAN
SCALE 1 : 10

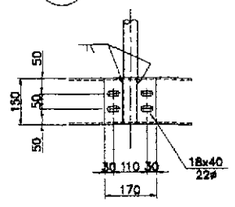


B — ELEVATION
SCALE 1 : 10

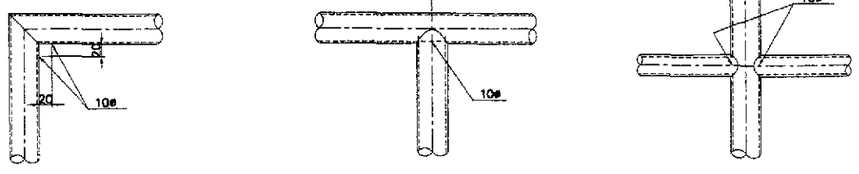


2-PL 150x6x170
4-BN M16x40 (2-W)

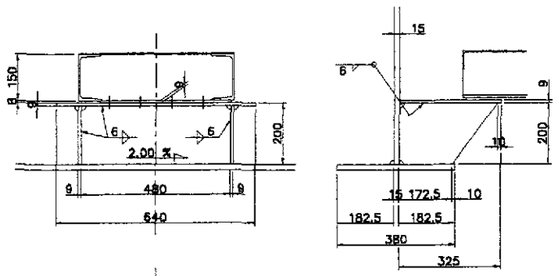
1 — DETAIL
SCALE 1 : 5

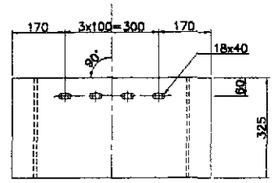


C — SECTION
SCALE 1 : 10



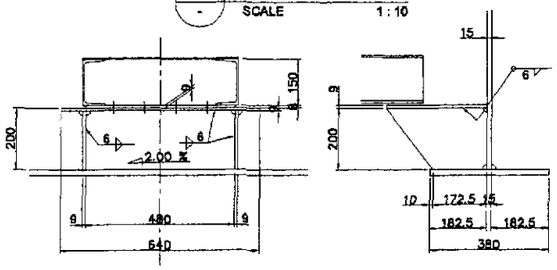
2 — DETAIL
SCALE 1 : 5

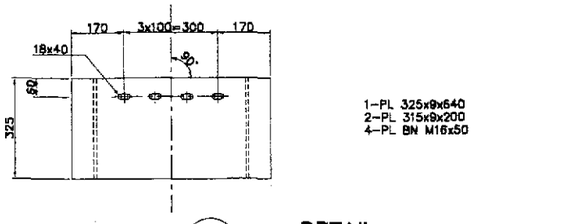




1-PL 325x9x640
2-PL 315x9x200
4-PL BN M16x50

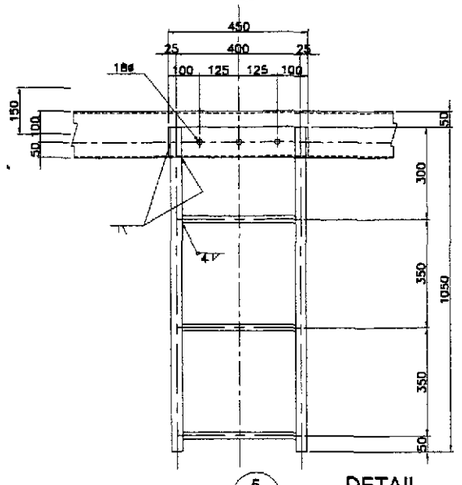
3 — DETAIL
SCALE 1 : 10



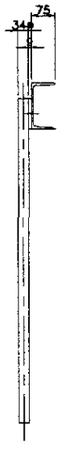


1-PL 325x9x640
2-PL 315x9x200
4-PL BN M16x50

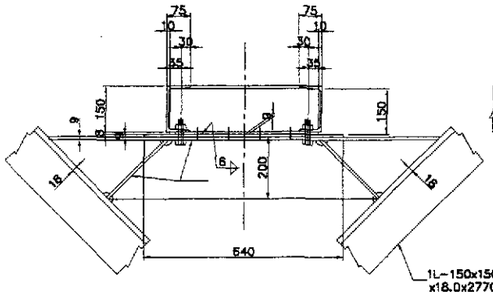
4 — DETAIL
SCALE 1 : 10

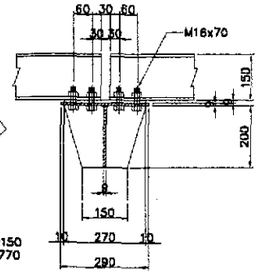


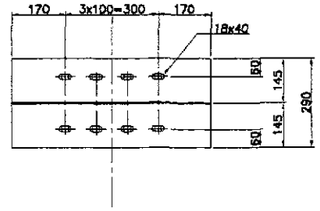
5 — DETAIL
SCALE 1 : 10



2-PIPE 25Ax1050 (SGP)
3-RB 22ø x324
1-PL 100x9x450 (SM400A)
3-BN M16x40

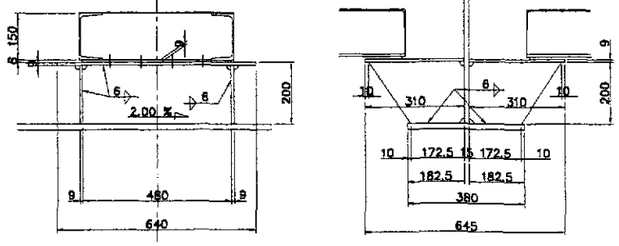


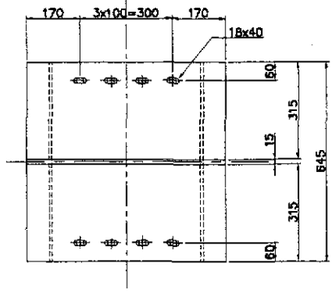




1-PL 290x9x1370
1-PL 200x9x1370
4-PL DIAG. PL 1.30x9x300
8-BN M16X70
8-BN M16x50

6 — DETAIL
SCALE 1 : 10





4-PL 300x9x200 2-PL 310x9x640
8-BN M16x50

7 — DETAIL
SCALE 1 : 10

JICA
JAPAN INTERNATIONAL COOPERATION AGENCY
KATAHIRA & ENGINEERS INTERNATIONAL
YACHIYO ENGINEERING CO., LTD.

	DATE	SIGNATURE
DESIGNED	10/14/02	F. A. SALAS
CHECKED	10/17/02	J. C. SANTOS
SUBMITTED	10/19/02	TEAM LEADER

REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS

FUHL – PMO	BUREAU OF DESIGN		OFFICE OF THE SECRETARY	
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Project Director	Chief, Bridges Division	Director IV (OIC)	Undersecretary	Secretary

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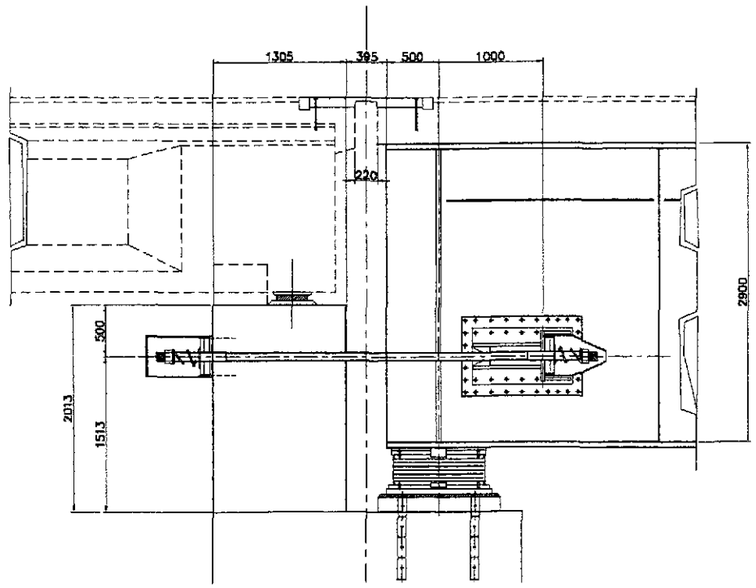
(Plaridel, Cabanatuan and San Jose Bypasses)
CABANATUAN BYPASS - CONTRACT PACKAGE III

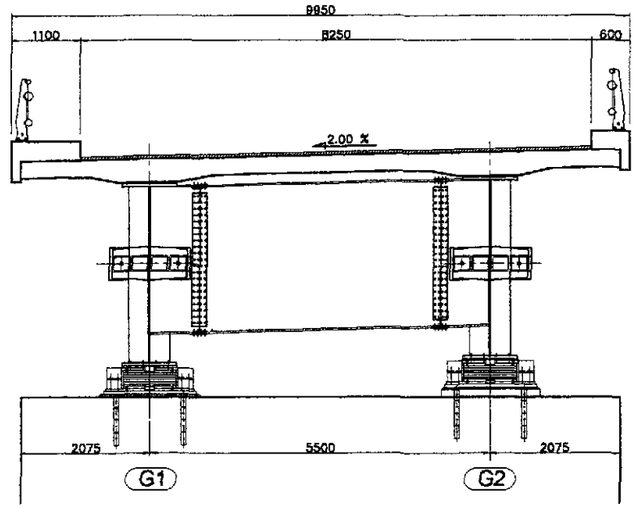
SCALE :
AS SHOWN
FULL SIZE A1

SHEET CONTENTS :
BRIDGE NO. 10 PAMPANGA RIVER BRIDGE
DETAILS OF MAINTENANCE
CATWALK - 3 of 3
(ULTIMATE STAGE)

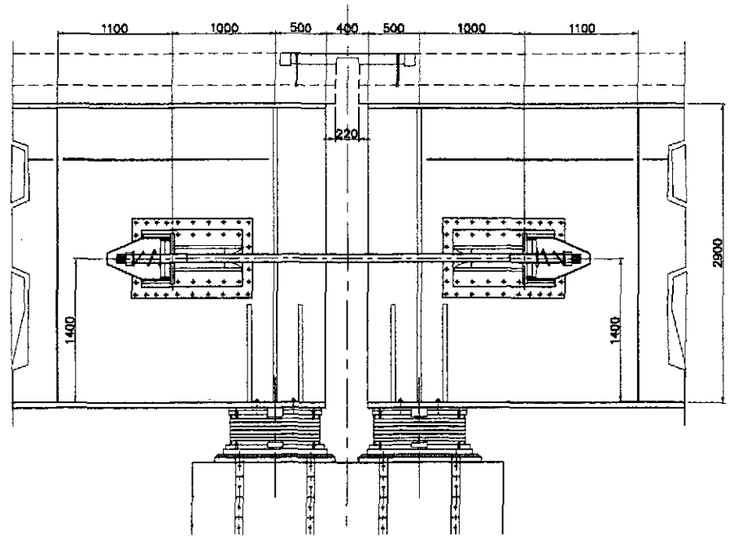
SHEET NO. :
B10M-97



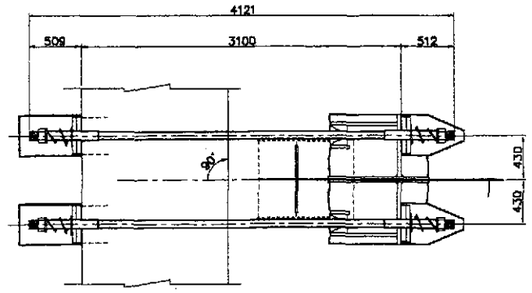
A SIDE ELEVATION
SCALE 1 : 30



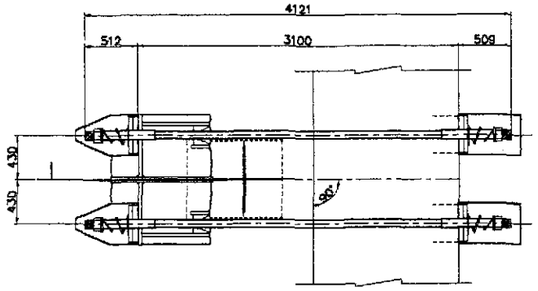
B FRONT ELEVATION
SCALE 1 : 50



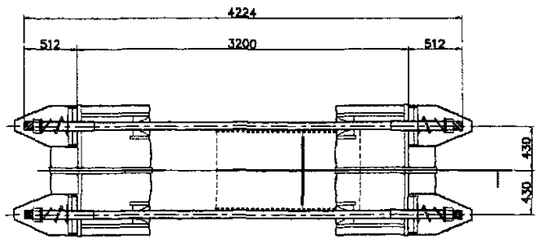
C SIDE ELEVATION
SCALE 1 : 30



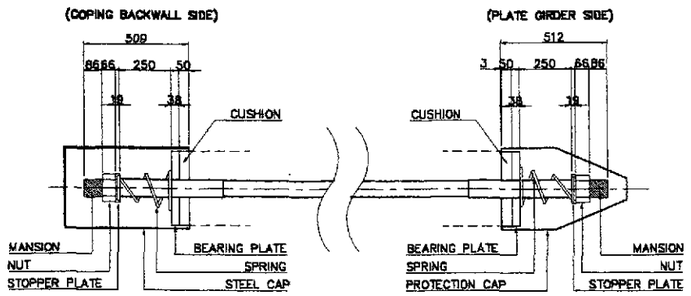
1B DETAIL PIER 6 (TYPE 1)
SCALE 1 : 30



1C DETAIL PIER 15 (TYPE 1)
SCALE 1 : 30



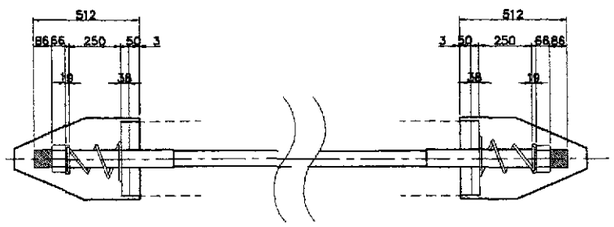
2B DETAIL PIER 11 (TYPE 2)
SCALE 1 : 30



1A DETAIL OF RESTRAINER (PIER 6 & PIER 15)
SCALE 1 : 15

1 LONGITUDINAL SPRING RESTRAINER (PIER 6 & PIER 15)
SCALE AS SHOWN

QUANTITIES OF RESTRAINER		
LOCATION	RESTRAINER TYPE	QUANTITY
PIER 6	1	4
PIER 11	2	4
PIER 15	1	4



2A DETAIL OF RESTRAINER (PIER 11)
SCALE 1 : 15

2 LONGITUDINAL SPRING RESTRAINER (PIER 11)
SCALE AS SHOWN

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JAPAN INTERNATIONAL COOPERATION AGENCY
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YACHIYO ENGINEERING CO., LTD.

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SUBMITTED	10/18/02	TEAM LEADER

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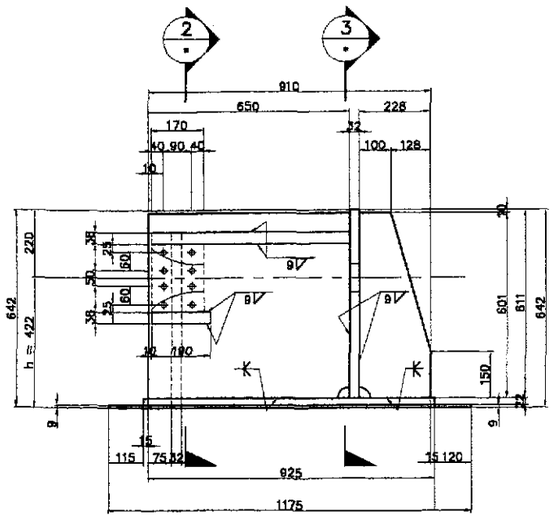
CABANATUAN BYPASS - CONTRACT PACKAGE III

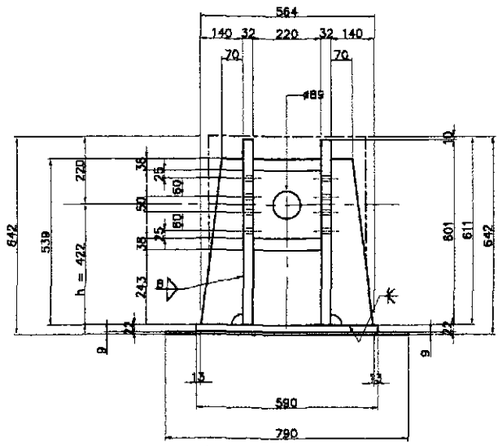
SCALE : AS SHOWN FULL SIZE A1

SHEET CONTENTS :
BRIDGE NO. 10 PAMPANGA RIVER BRIDGE
LONGITUDINAL SPRING RESTRAINER DETAILS (PIERS P6, P11 & P15) - 1 of 3
(ULTIMATE STAGE)

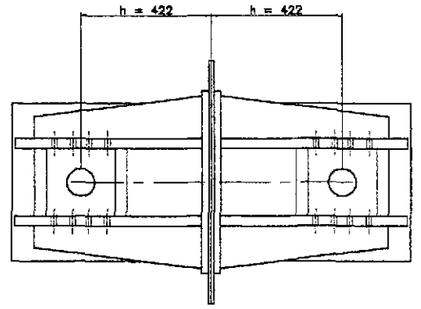
SHEET NO. : B10M-98

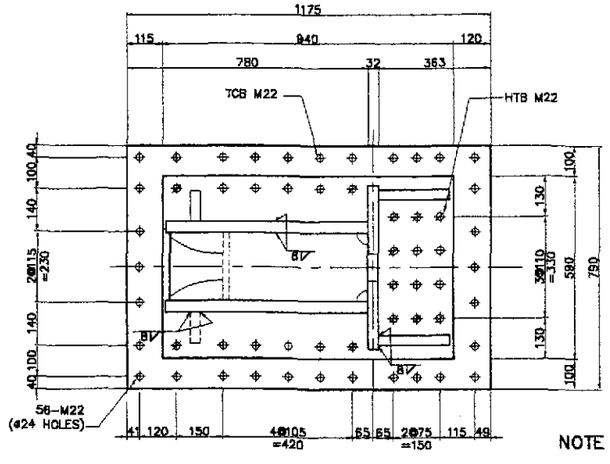


A SECTION 1
SCALE 1 : 10



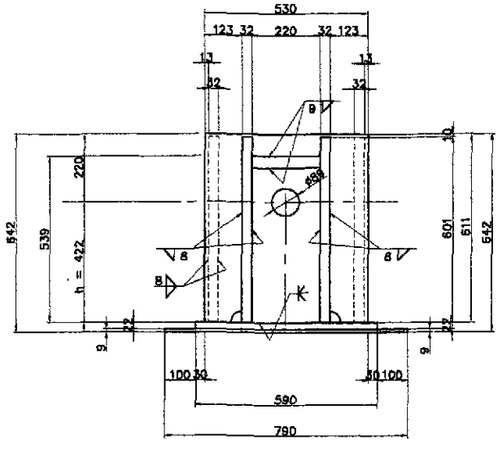
B SECTION 2
SCALE 1 : 10





NOTE : ⊕ – M22 (S10TW)
⊗ – M22 (F10TW)

C SECTION 4
SCALE 1 : 10



D SECTION 3
SCALE 1 : 10

4 – PL 228 x 32 x 601 (SMA 400 BW)
4 – PL 650 x 32 x 601 (SMA 400 BW)
4 – PL 140 x 32 x 539 (SMA 400 BW)
2 – PL 640 x 38 x 220 (SMA 400 BW)
2 – PL 190 x 38 x 220 (SMA 400 BW)
2 – PL 940 x 22 x 580
2 – PL 1175 x 9 x 790
12 – HTB M22 x 120 (F10TW)
12 – HTB M22 x 115 (S10TW)
32 – HTB M22 x 70 (S10TW)

1 LONGITUDINAL SPRING RESTRAINER DETAILS (PIERS P6, P11 & P15) - 2 of 3
SCALE AS SHOWN

JICA
JAPAN INTERNATIONAL COOPERATION AGENCY
KEI KATAHIRA & ENGINEERS INTERNATIONAL
YEO YACHIYO ENGINEERING CO., LTD.

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(Plaridel, Cabanatuan and San Jose Bypasses)
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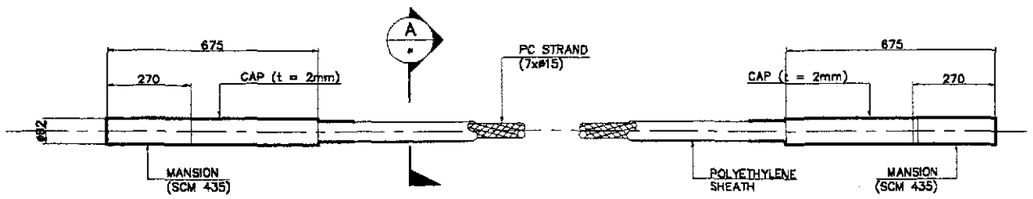
SCALE :
AS SHOWN
FULL SIZE A1

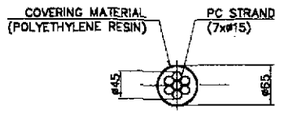
SHEET CONTENTS :
BRIDGE NO. 10 PAMPANGA RIVER BRIDGE
LONGITUDINAL SPRING RESTRAINER DETAILS (PIERS P6, P11 & P15) 2 of 3
(ULTIMATE STAGE)

SHEET NO. :
B10M-99

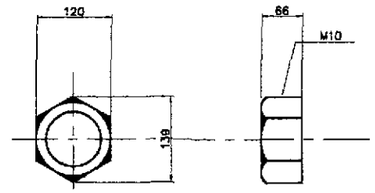
PC CABLE : 7 – ø15mm STRANDS
YIELD STRENGTH = 1500 MPa
YIELD FORCE = 1575 KN



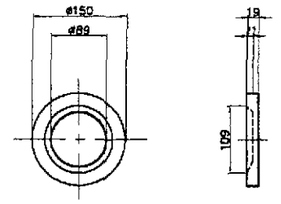
A - RESTRAINING CABLE
SCALE 1:10



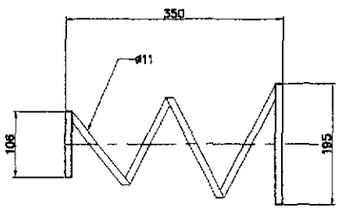
A - SECTION A
SCALE 1:5

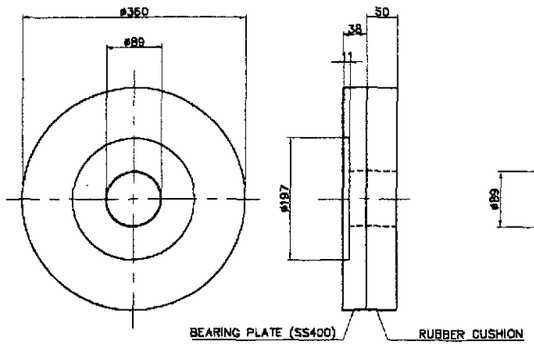


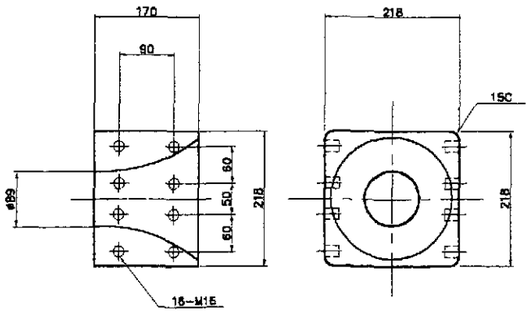
B - NUT (S45C)
SCALE 1:5

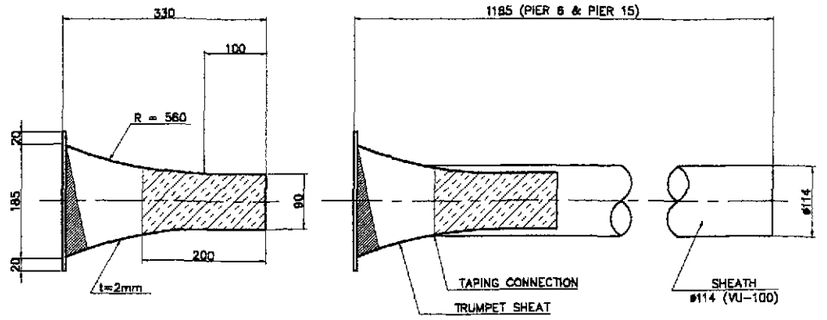


C - STOPPER PLATE (SS400 : STAINLESS STEEL)
SCALE 1:5









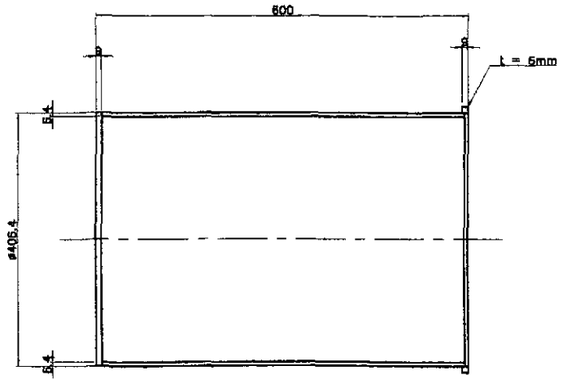
D - SPRING
SCALE 1:5

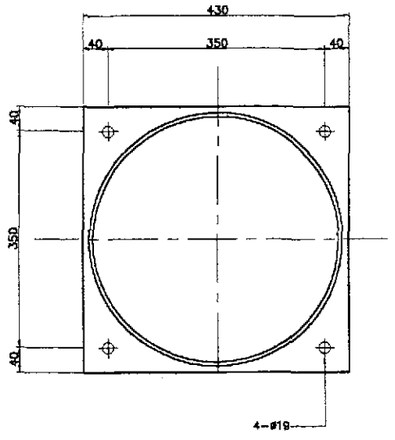
E - BEARING PLATE
SCALE 1:5

F - DEVIATOR (POLYETHYLENE)
SCALE 1:5

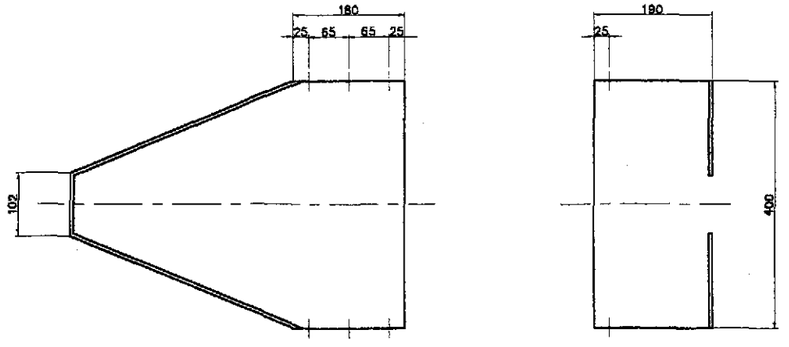
G - TRUMPET SHEATH (@ PLATE GIRDER)
SCALE 1:5

H - TRUMPET SHEATH (@ PIER 6 & PIER 15)
SCALE 1:5





I - STEEL CAP (STK 400, SS400 : STAINLESS STEEL)
SCALE 1:5



J - PROTECTION CAP (POLYETHYLENE)
SCALE 1:5

1 - LONGITUDINAL SPRING RESTRAINER DETAILS (PIERS P6, P11 & P15) - 3 of 3
SCALE AS SHOWN

JICA
JAPAN INTERNATIONAL COOPERATION AGENCY

KATAHIRA & ENGINEERS INTERNATIONAL
YACHIYO ENGINEERING CO., LTD.

	DATE	SIGNATURE
DESIGNED	10/16/02	F. M. ROMAS
CHECKED	10/17/02	J. C. SANTOS
SUBMITTED	10/19/02	TEAM LEADER

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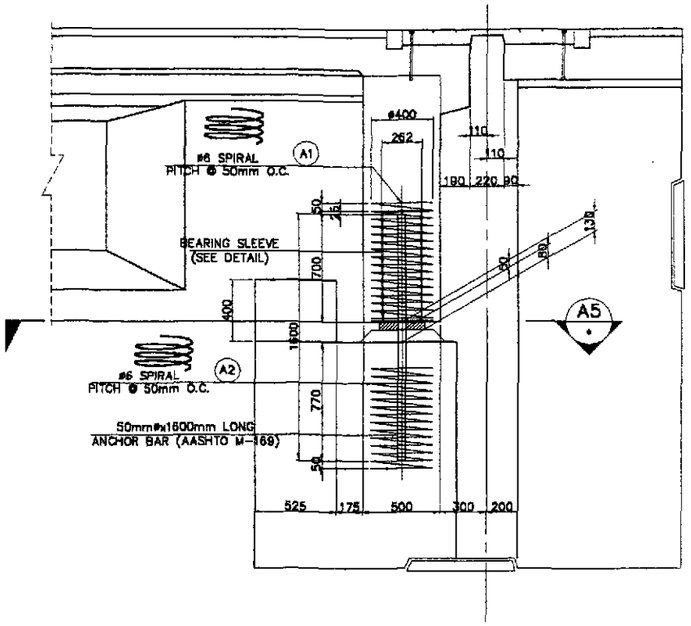
PUHL – PMO	BUREAU OF DESIGN		OFFICE OF THE SECRETARY	
Submitted By:	Reviewed By:	Recommended By:	Recommended By: (See cover sheet for Signature)	Approved By: (See cover sheet for Signature/Approval)
DANILO C. TRAJANO, Project Director	ADRIANO M. DOROY, Chief, Bridges Division	GILBERTO S. REYES, Director IV (OIC)	MANUEL M. BONOAN, Undersecretary	SIMEON A. DATUMANONG, Secretary

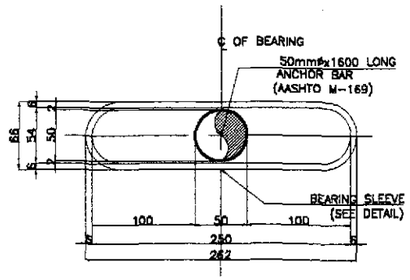
PROJECT AND LOCATION :	SCALE :	SHEET CONTENTS :	SHEET NO. :
THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses) CABANATUAN BYPASS - CONTRACT PACKAGE III	AS SHOWN FULL SIZE A1	BRIDGE NO. 10 PAMPANGA RIVER BRIDGE LONGITUDINAL SPRING RESTRAINER DETAILS (PIERS P6, P11 & P15) - 3 of 3 (ULTIMATE STAGE)	B10M-100



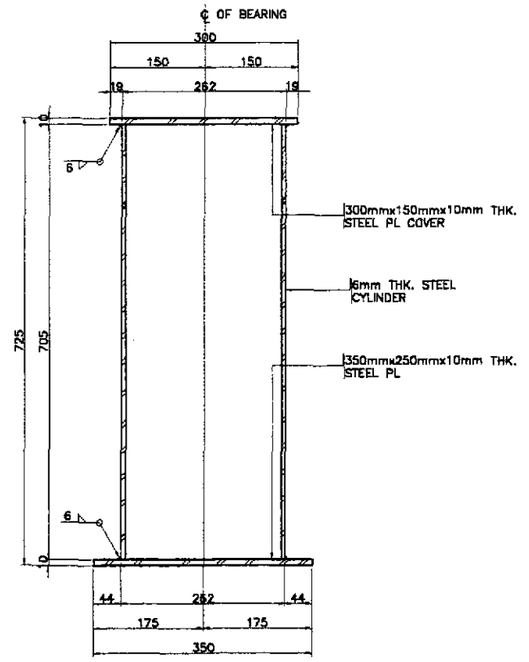
A1 LONG'L ELEVATION
SCALE 1:20

NOTE :

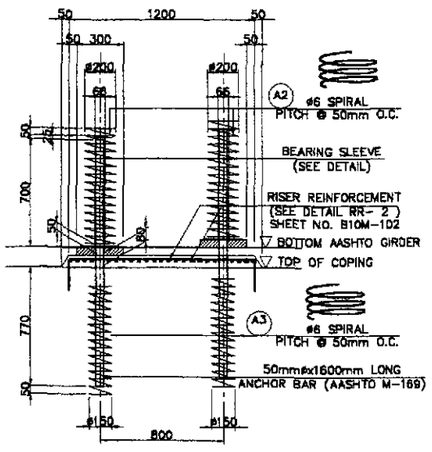
1. ALL METALS SHOWN IN THIS DRAWING SHALL BE HOT-DIP GALVANIZED IN ACCORDANCE WITH THE SPECIFICATIONS FOR ZINC (HOT-GALVANIZE) COATING CONFORMING TO AASHTO M111 (ASTM A123) OR AASHTO M232 (ASTM A153). THE WEIGHT OF ZINC COATING SHALL AVERAGE NOT LESS THAN 365 g PER SQ. METER OF ACTUAL SURFACE AREA WITH NO INDIVIDUAL SPECIMEN HAVING A COATING OF LESS THAN 305 g PER SQ. METER.



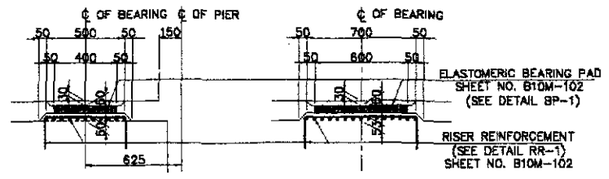
A5 SECTION
NOT TO SCALE



B1 ELEVATION
SCALE 1:5

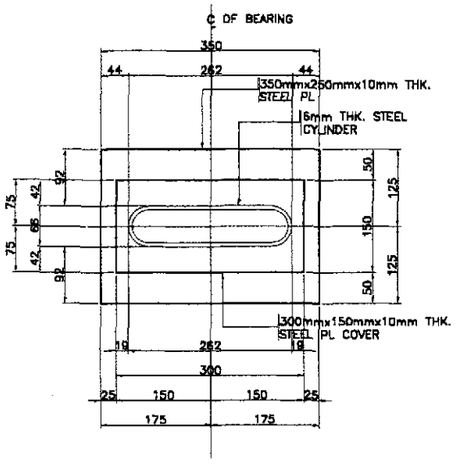


A2 TRAN'L ELEVATION
SCALE 1:20



A3 LONG'L SECTION
SCALE 1:20

A4 TRAN'L SECTION
SCALE 1:20



B2 P L A N
SCALE 1:5

B BEARING SLEEVE DETAILS
SCALE AS SHOWN

A MISCELLANEOUS DETAILS AT APPROACH SIDE BEARING (P6 & P15)
SCALE AS SHOWN

JAPAN INTERNATIONAL COOPERATION AGENCY

KATAHIRA & ENGINEERS INTERNATIONAL

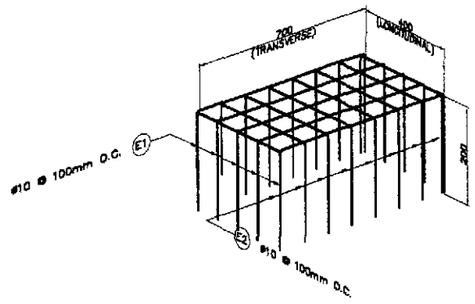
YACHIYO ENGINEERING CO., LTD.

	DATE	SIGNATURE
DESIGNED	10/14/02	F. M. SALAS
CHECKED	10/17/02	J. C. SANTOS
SUBMITTED	10/19/02	M. KINOSHITA TEAM LEADER

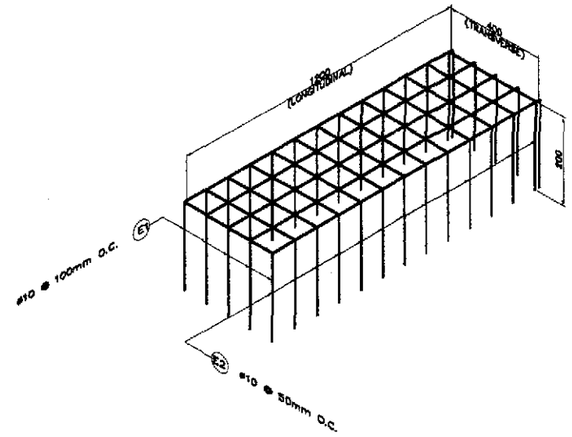
REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS

PUHL – PMO	BUREAU OF DESIGN		OFFICE OF THE SECRETARY	
Submitted By:	Reviewed By:	Recommended By:	Recommended By: (See cover sheet for Signature)	Approved By: (See cover sheet for Signature/Approval)
DANILO C. TRAJANO Project Director	ADRIANO M. DOROY Chief, Bridges Division	GILBERTO S. REYES Director IV (OIC)	MANUEL M. BONOAN Undersecretary	SIMEON A. DATUMANONG Secretary

PROJECT AND LOCATION :	SCALE :	SHEET CONTENTS :	SHEET NO. :
THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses) CABANATUAN BYPASS - CONTRACT PACKAGE III	AS SHOWN FULL SIZE A1	BRIDGE NO. 10 PAMPANGA RIVER BRIDGE MISCELLANEOUS DETAILS AT APP. SIDE BEARING (P6 & P15) (ULTIMATE STAGE)	B10M-101

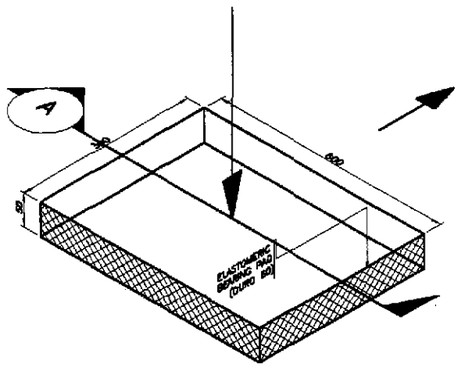


A — RR-1 (BEARING PAD)
N T S

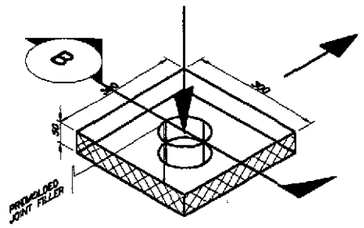


B — RR-2 (DOWEL)
N T S

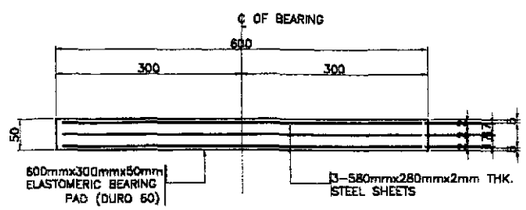
3 — RISER REINFORCEMENT DETAILS
N T S



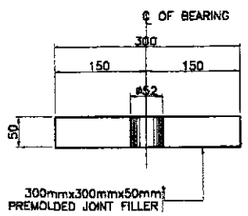
ISOMETRIC VIEW



ISOMETRIC VIEW



SECTION A



SECTION B

D — BP-1 @ BEARING
N T S

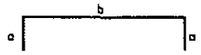
D — BP-2 @ ANCHOR BAR
N T S

1 — ELASTOMERIC BEARING PAD DETAILS
SCALE AS SHOWN

2 — PREMOLDED JOINT FILLER DETAILS
SCALE AS SHOWN

BAR BENDING DIAGRAM

A



SCHEDULE OF REINFORCEMENT

LOCATION	BAR MARK	SIZE (mm)	BEND TYPE	DIMENSION(mm) OUT TO OUT a	b	c	d	e	LENGTH (mm)	NO. REQ'D.	UNIT WEIGHT (kg/m)	WEIGHT(kgs.) Grade 40	Grade 60	REMARKS
RISER P6/P15 ANCHOR BAR	E1	10	A	200	700				1100	20	0.616	13.55		1. ESTIMATED QUANTITY FOR ONE(1) PIER ONLY.
	E2	10	A	200	500				900	52	0.616	28.83		
											TOTAL=	42.38	0	
RISER P6/P15 BEARING PAD	E1	10	A	200	700				1100	20	0.616	13.55		
	E2	10	A	200	500				900	32	0.616	17.74		
											TOTAL=	31.29	0	

THE REINFORCEMENT SHOWN ON THIS TABLE IS FOR REFERENCE ONLY. THE CONTRACTOR SHOULD CHECK AND VERIFY ALL DIMENSIONS, SIZES AND QUANTITIES OF REINFORCEMENT.

JICA
JAPAN INTERNATIONAL COOPERATION AGENCY
KATAHIRA & ENGINEERS INTERNATIONAL
YACHIYO ENGINEERING CO., LTD.

	DATE	SIGNATURE
DESIGNED	10/19/02	F. M. SALAS
CHECKED	10/19/02	J. C. SANTOS
SUBMITTED	10/19/02	M. KUDOH, TEAM LEADER

REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS

PJHL - PMO	BUREAU OF DESIGN		OFFICE OF THE SECRETARY	
Submitted By:	Reviewed By:	Recommended By:	Recommended By: (See cover sheet for Signature)	Approved By: (See cover sheet for Signature/Approval)
DANILO C. TRAJANO, Project Director	ADRIANO M. DOROY, Chief, Bridges Division	GILBERTO S. REYES, Director IV (OIC)	MANUEL M. BONOAN, Undersecretary	SIMEON A. DATUMANONG, Secretary

PROJECT AND LOCATION :
THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses)
CABANATUAN BYPASS - CONTRACT PACKAGE III

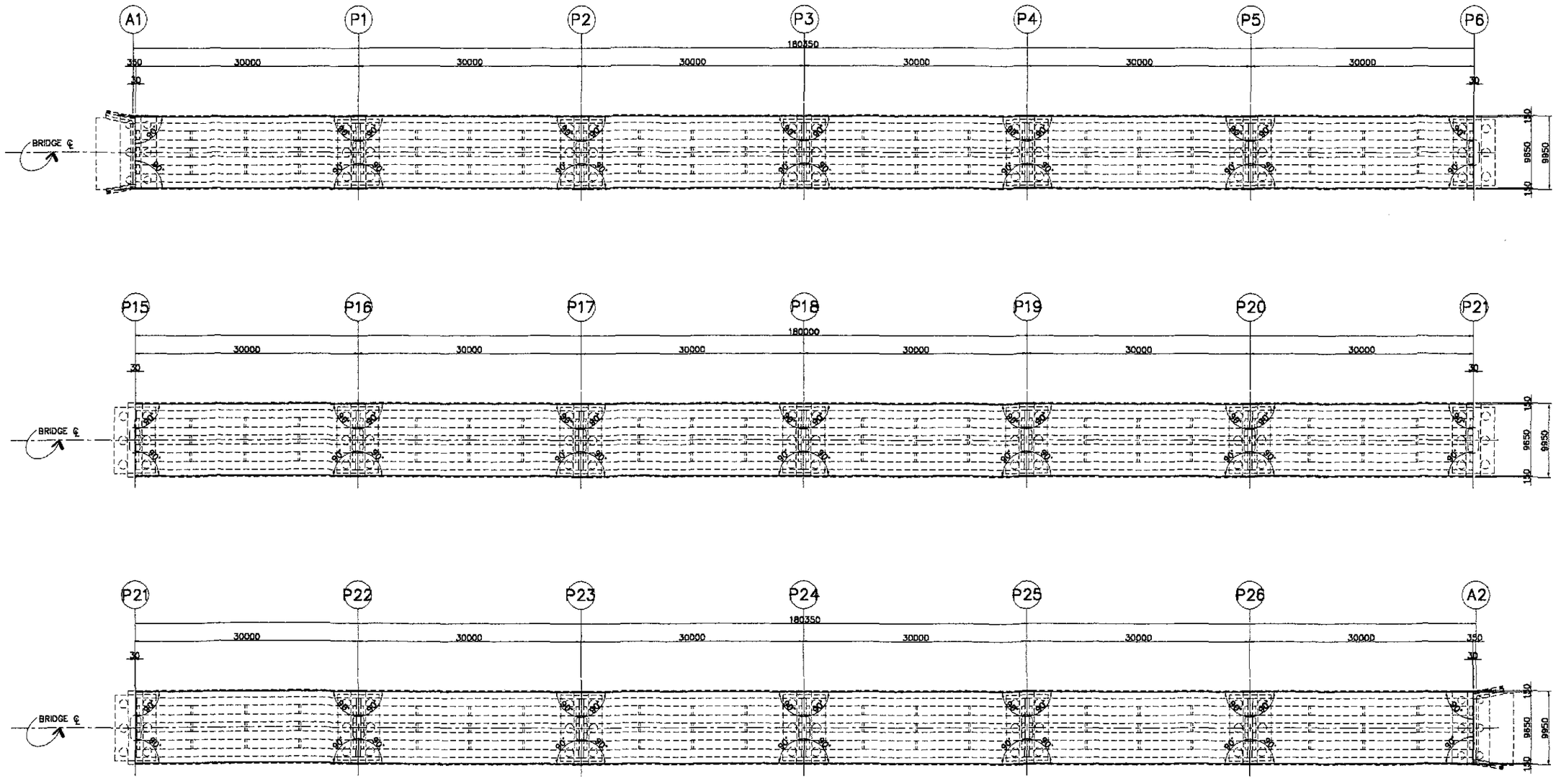
SCALE :
AS SHOWN
FULL SIZE A1

SHEET CONTENTS :
BRIDGE NO. 10 PAMPANGA RIVER BRIDGE
RISER REINF. & BEARING PAD DETAILS AT APPROACH SIDE (P6 & P15)
(ULTIMATE STAGE)

SHEET NO. :
B10M-102

APPROACH SPANS

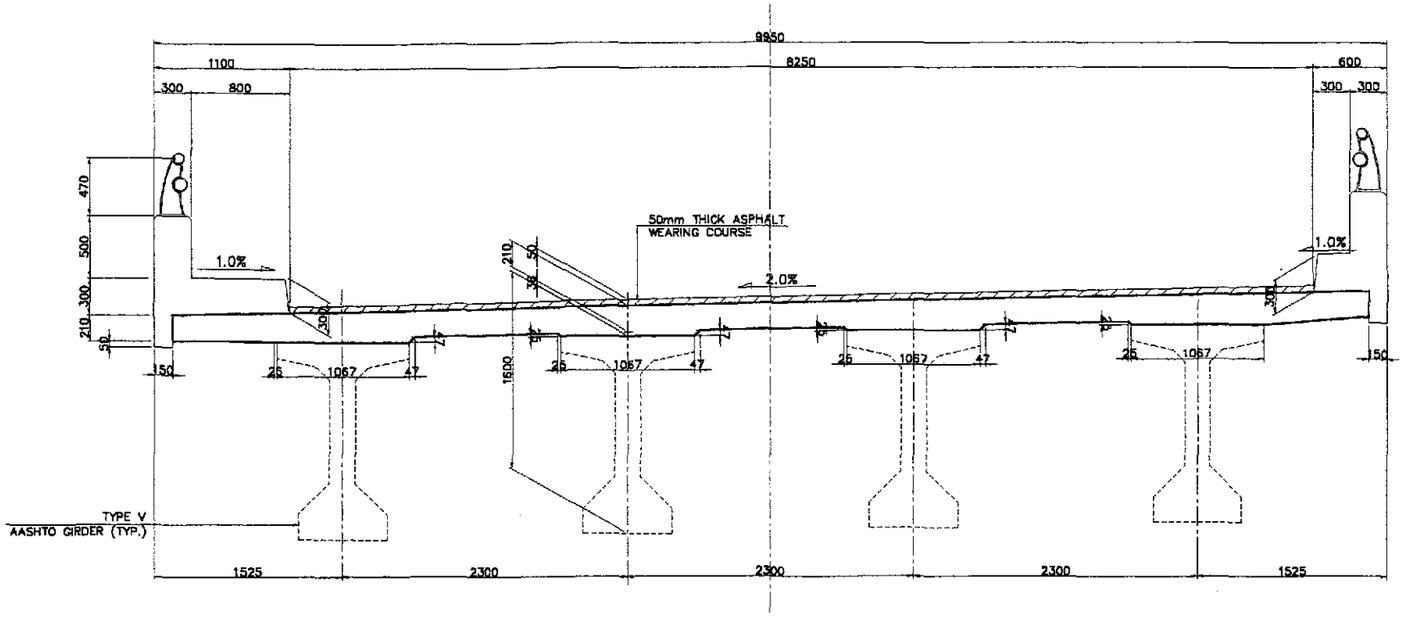
LAYOUT AND DIMENSIONS



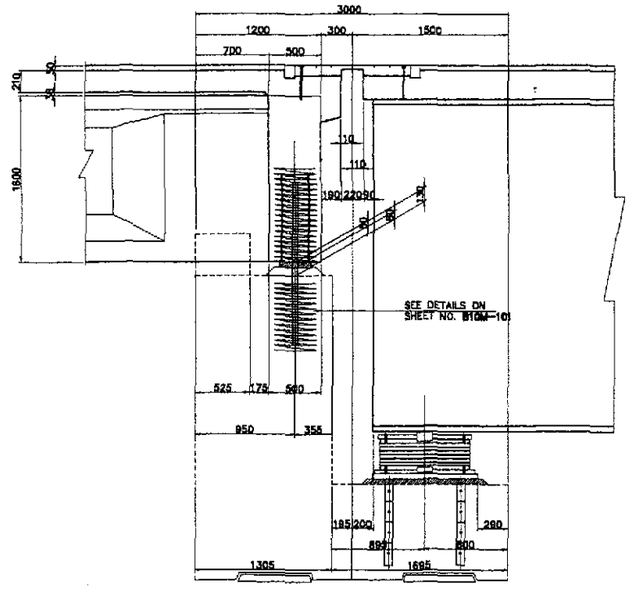
A DECK SLAB LAYOUT (ABUT. 1 to PIER 6 & PIER 15 to ABUT. 2) - 1 of 2

SCALE 1:300

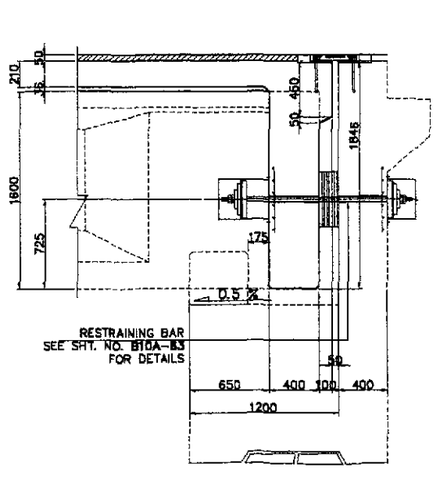
JICA JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS INTERNATIONAL · YACHIYO ENGINEERING CO., LTD.		DATE	SIGNATURE	REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS	PROJECT AND LOCATION :	SCALE :	SHEET CONTENTS :	SHEET NO. :
	DESIGNED	10/14/02	F. M. SALAS	PJHL – PMO / BUREAU OF DESIGN / OFFICE OF THE SECRETARY	THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses)	AS SHOWN	BRIDGE NO.10 PAMPANGA RIVER BRIDGE DECK SLAB LAYOUT (ABUT. A1 to P6 & P15 to ABTU. A2)-1 of 2 (ULTIMATE STAGE)	B10A-01
	CHECKED	10/17/02	J. Q. SANTOS					
	SUBMITTED	10/19/02	M. KISHIDA TEAM LEADER	Submitted By: DANILO C. TRAJANO, Project Director; Reviewed By: ADRIANO M. DORDY, Chief, Bridge Division; Recommended By: GILBERTO S. REYES, Director IV (OIC); Recommended By: (See cover sheet for Signature) MANUEL M. BONOAN, Undersecretary; Approved By: (See cover sheet for Signature/Approval) SIMEON A. DATUMANONG, Secretary	CABANATUAN BYPASS - CONTRACT PACKAGE III	FULL SIZE A1		



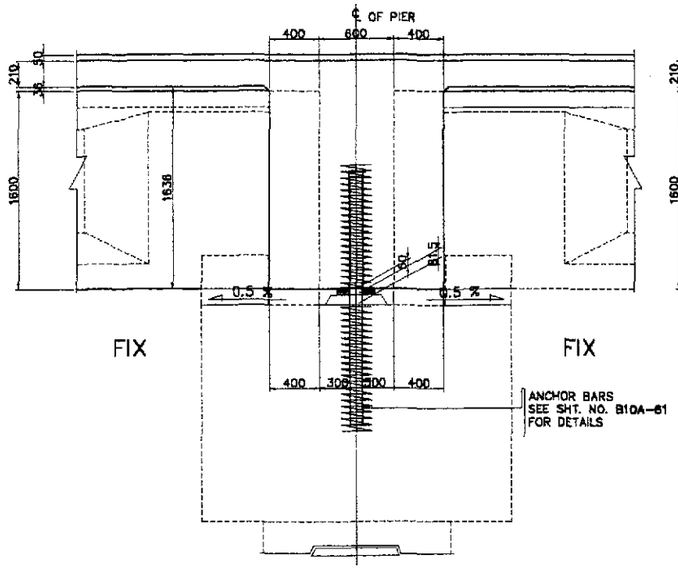
A — TYPICAL SECTION
SCALE 1:25



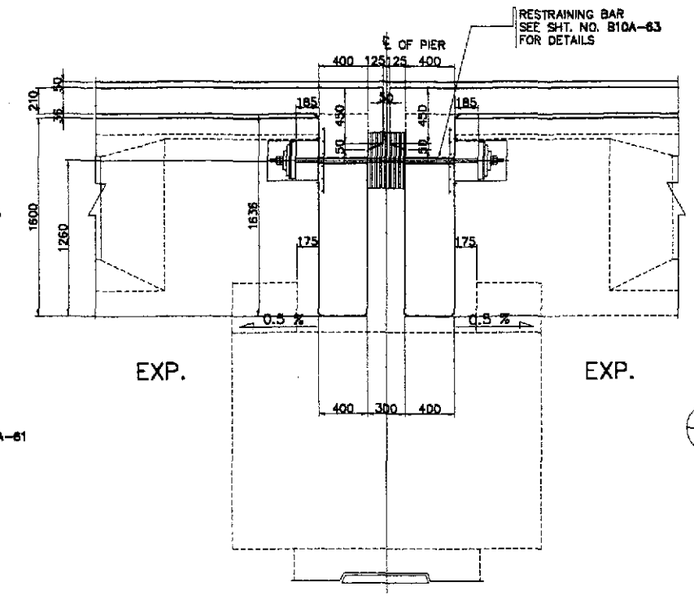
B — SECTION @ END DIAPHRAGM (P6 & P15)
SCALE 1:25



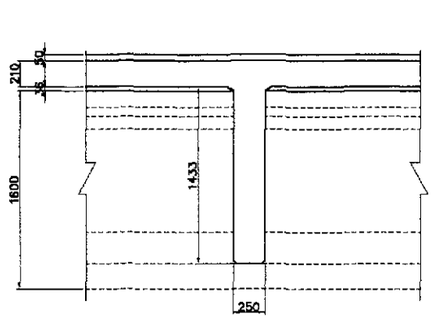
C — SECTION @ END DIAPHRAGM (ABUTMENT)
SCALE 1:25



D — SECTION @ END DIAPHRAGM (FIX-FIX PIERS)
SCALE 1:25



E — SECTION @ END DIAPHRAGM (EXP.-EXP. PIERS)
SCALE 1:25



F — SECTION @ INTERMEDIATE DIAPHRAGM
SCALE 1:25

1 — DECK SLAB LAYOUT (ABUT. 1 to PIER 6 & PIER 15 to ABUT. 2) - 2 of 2
SCALE 1:300

JICA
JAPAN INTERNATIONAL COOPERATION AGENCY
KATAHIRA & ENGINEERS INTERNATIONAL
YACHIYO ENGINEERING CO., LTD.

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SUBMITTED	10/19/02	M. HIGUCHI TEAM LEADER

REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS

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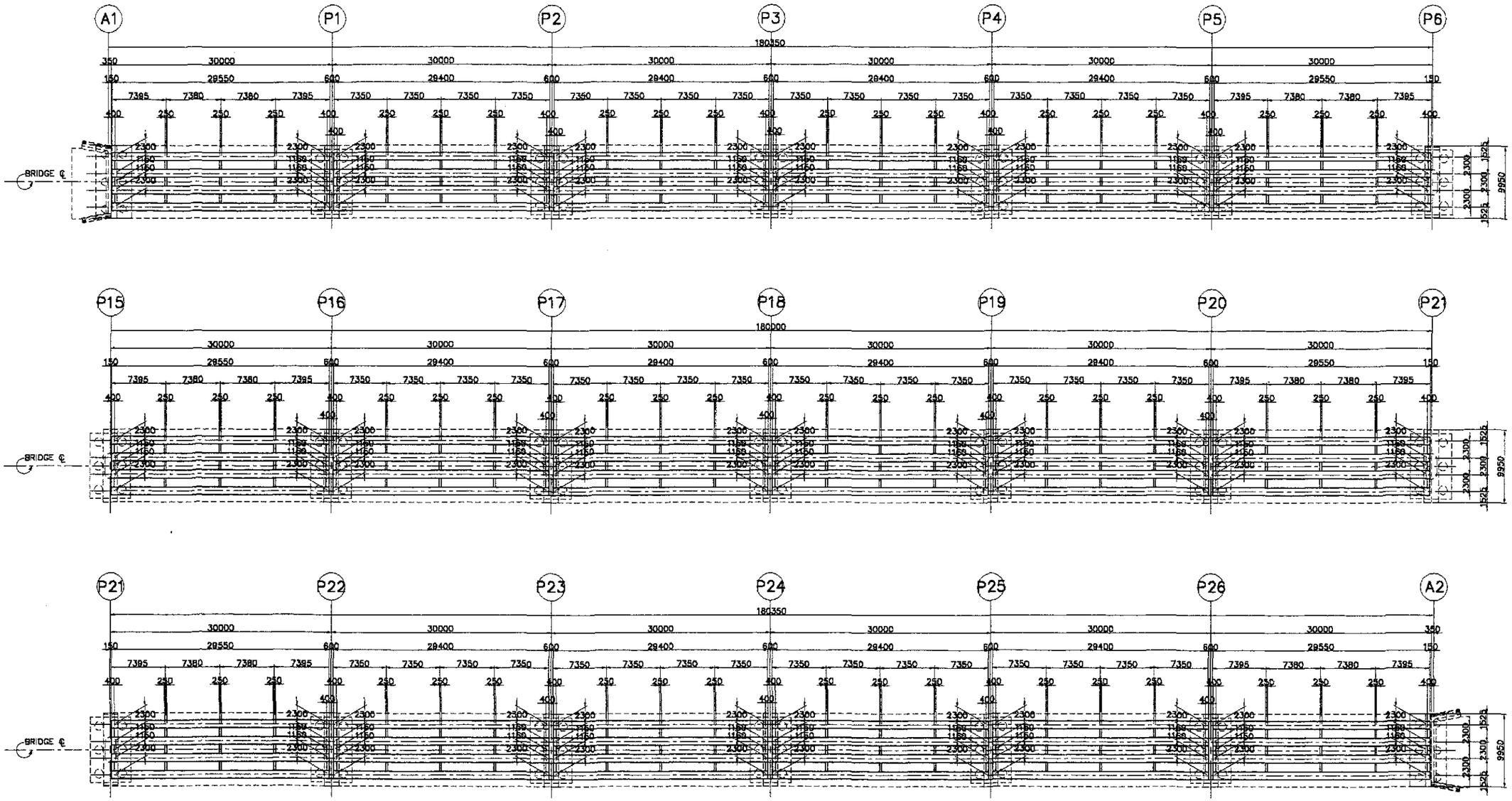
PROJECT AND LOCATION :
THE DETAILED DESIGN STUDY ON
UPGRADING INTER-URBAN HIGHWAY SYSTEM
ALONG THE PAN-PHILIPPINE HIGHWAY
(Plaridel, Cabanatuan and San Jose Bypasses)
CABANATUAN BYPASS - CONTRACT PACKAGE III

SCALE : AS SHOWN FULL SIZE A1

SHEET CONTENTS :
BRIDGE NO.10 PAMPANGA RIVER BRIDGE
DECK SLAB LAYOUT
(ABUT. A1 to P6 & P15 to ABUT. A2)-2 of 2
(ULTIMATE STAGE)

SHEET NO. : B10A-02



A GIRDER LAYOUT PLAN (ABUT. 1 to PIER 6 & PIER 15 to ABUT. 2)
SCALE 1:300

JAPAN INTERNATIONAL COOPERATION AGENCY

KATAHIRA & ENGINEERS INTERNATIONAL — YACHIYO ENGINEERING CO., LTD.

	DATE	SIGNATURE
DESIGNED	10/14/12	F. M. SALAS
CHECKED	10/17/12	J. SOTTO
SUBMITTED	10/19/12	TEAM LEADER

REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS

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Project Director	Chief, Bridge Division	Director IV (OIC)	Undersecretary	Secretary

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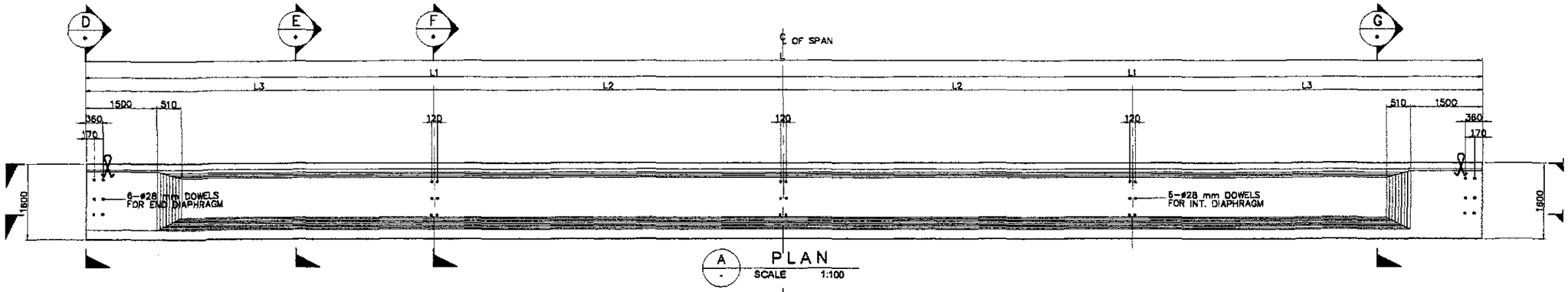
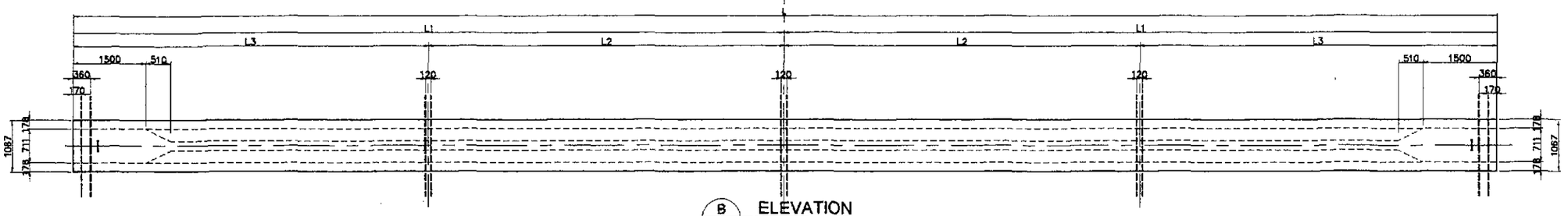
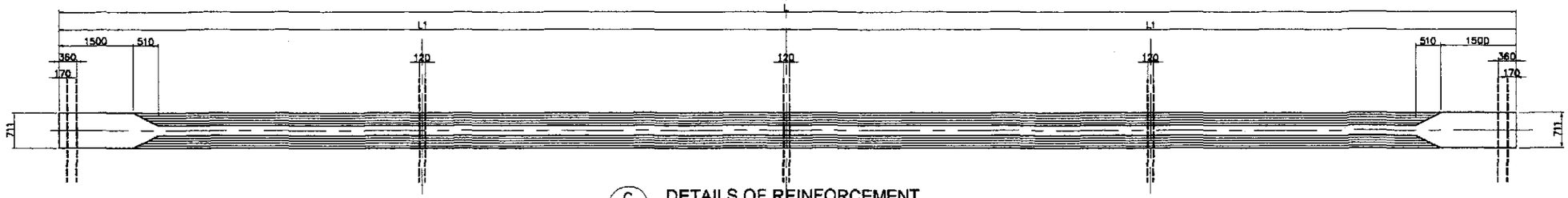
CABANATUAN BYPASS - CONTRACT PACKAGE III	FULL SIZE A1		



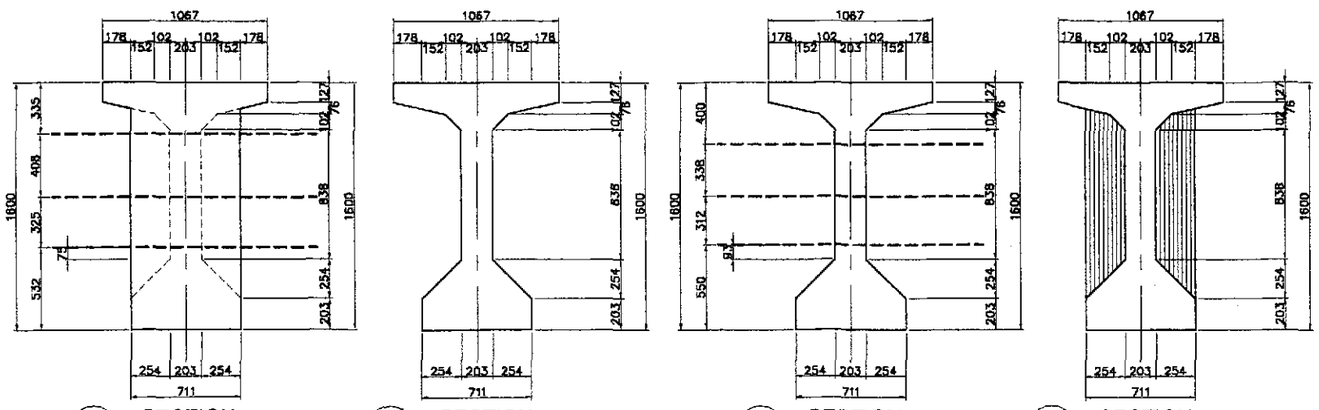
A PLAN
SCALE 1:100



B ELEVATION
SCALE 1:100



C DETAILS OF REINFORCEMENT
SCALE 1:100



D SECTION
SCALE 1:40

E SECTION
SCALE 1:40

F SECTION
SCALE 1:40

G SECTION
SCALE 1:40

* AASHTO GIRDER TYPE - V LAYOUT & DIMENSIONS
SCALE AS SHOWN

SCHEDULE OF DIMENSIONS

LOCATION	L	L1	L2	L3
ABUT. 1 to PIER 1	29550	14775	7380	7395
PIER 1 to PIER 2	29400	14700	7350	7350
PIER 2 to PIER 3	29400	14700	7350	7350
PIER 3 to PIER 4	29400	14700	7350	7350
PIER 4 to PIER 5	29400	14700	7350	7350
PIER 5 to PIER 6	29400	14775	7380	7395
PIER 15 to PIER 16	29400	14775	7380	7395
PIER 16 to PIER 17	29400	14700	7350	7350
PIER 17 to PIER 18	29400	14700	7350	7350
PIER 18 to PIER 19	29400	14700	7350	7350
PIER 19 to PIER 20	29400	14700	7350	7350
PIER 20 to PIER 21	29550	14775	7380	7395
PIER 21 to PIER 22	29550	14775	7380	7395
PIER 22 to PIER 23	29400	14700	7350	7350
PIER 23 to PIER 24	29400	14700	7350	7350
PIER 24 to PIER 25	29400	14700	7350	7350
PIER 25 to PIER 26	29400	14700	7350	7350
PIER 26 to ABUT. 2	29550	14775	7380	7395

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SUBMITTED	10/19/02	TEAM LEADER

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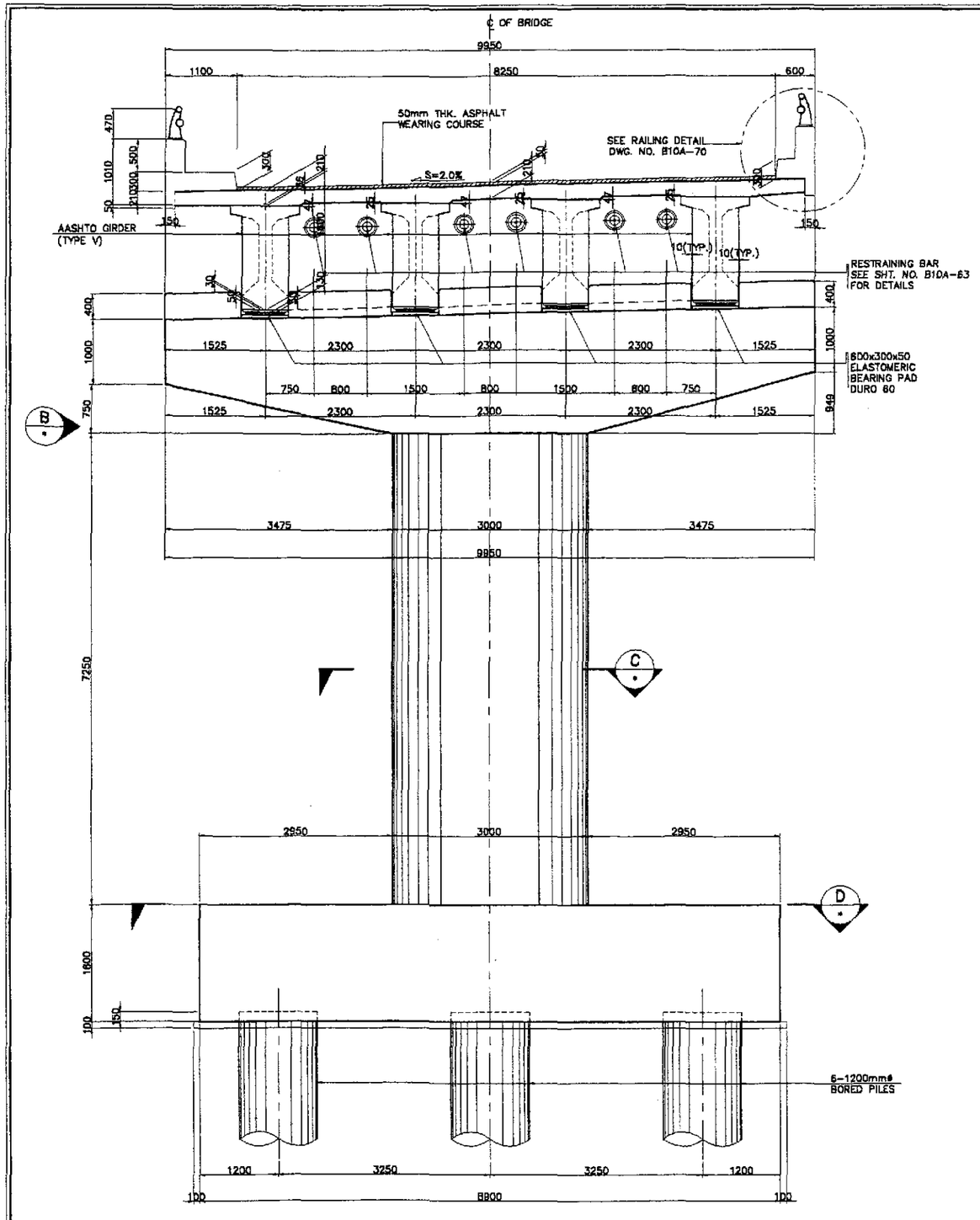
CABANATUAN BYPASS - CONTRACT PACKAGE III

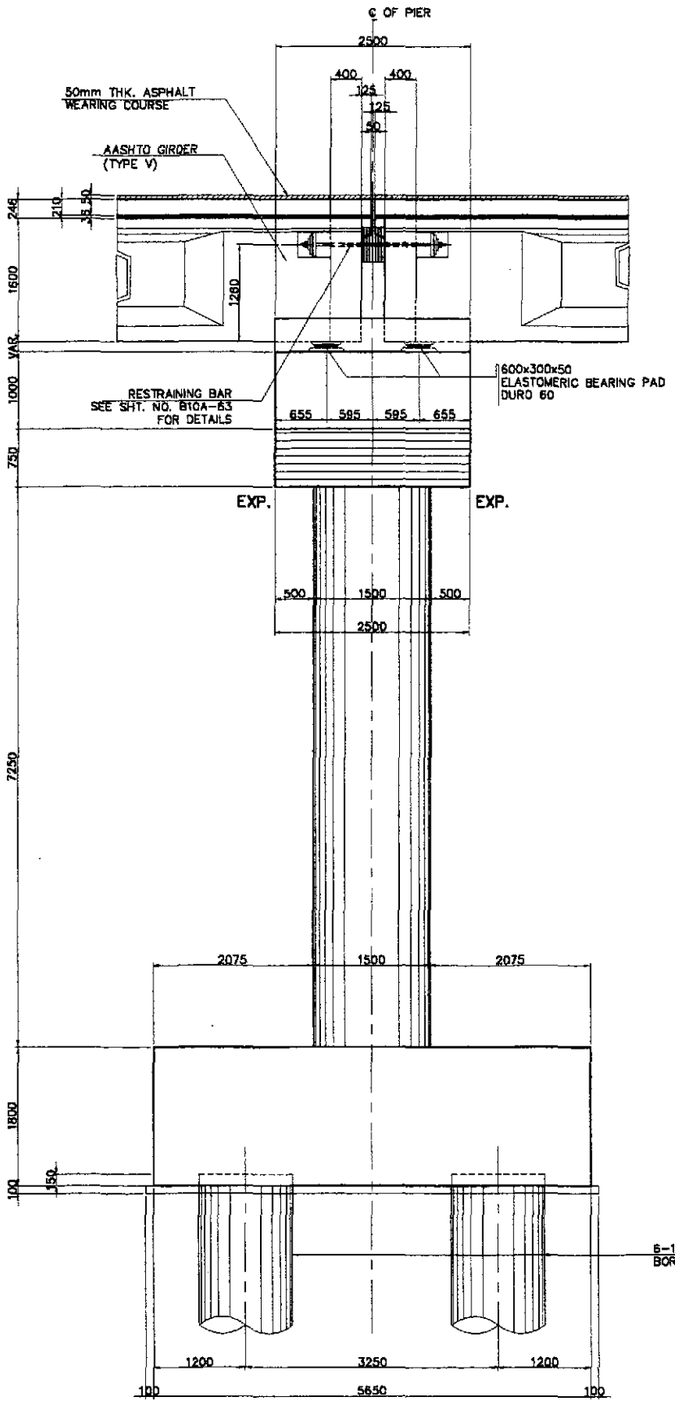
SCALE : AS SHOWN
FULL SIZE A1

SHEET CONTENTS :
BRIDGE NO.10 PAMPANGA RIVER BRIDGE
AASTHO GIRDER TYPE - V LAYOUT & DIMENSIONS
(ULTIMATE STAGE)

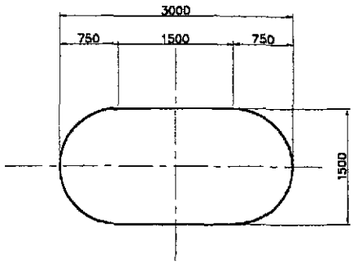
SHEET NO. : B10A-04



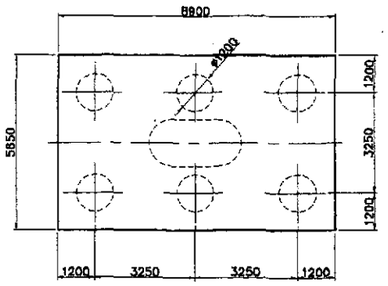
A ELEVATION
SCALE 1:40



B SIDE ELEVATION
SCALE 1:40



C SECTION
SCALE 1:40



D SECTION
SCALE 1:100

1 PIER LAYOUT & DIMENSIONS (P21)
SCALE AS SHOWN

JAPAN INTERNATIONAL COOPERATION AGENCY
KATAHIRA & ENGINEERS INTERNATIONAL
YACHIYO ENGINEERING CO., LTD.

	DATE	SIGNATURE
DESIGNED	10/14/02	F. M. SILVAS
CHECKED	10/17/02	J. E. SANTOS
SUBMITTED	10/19/02	TEAM LEADER

REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS

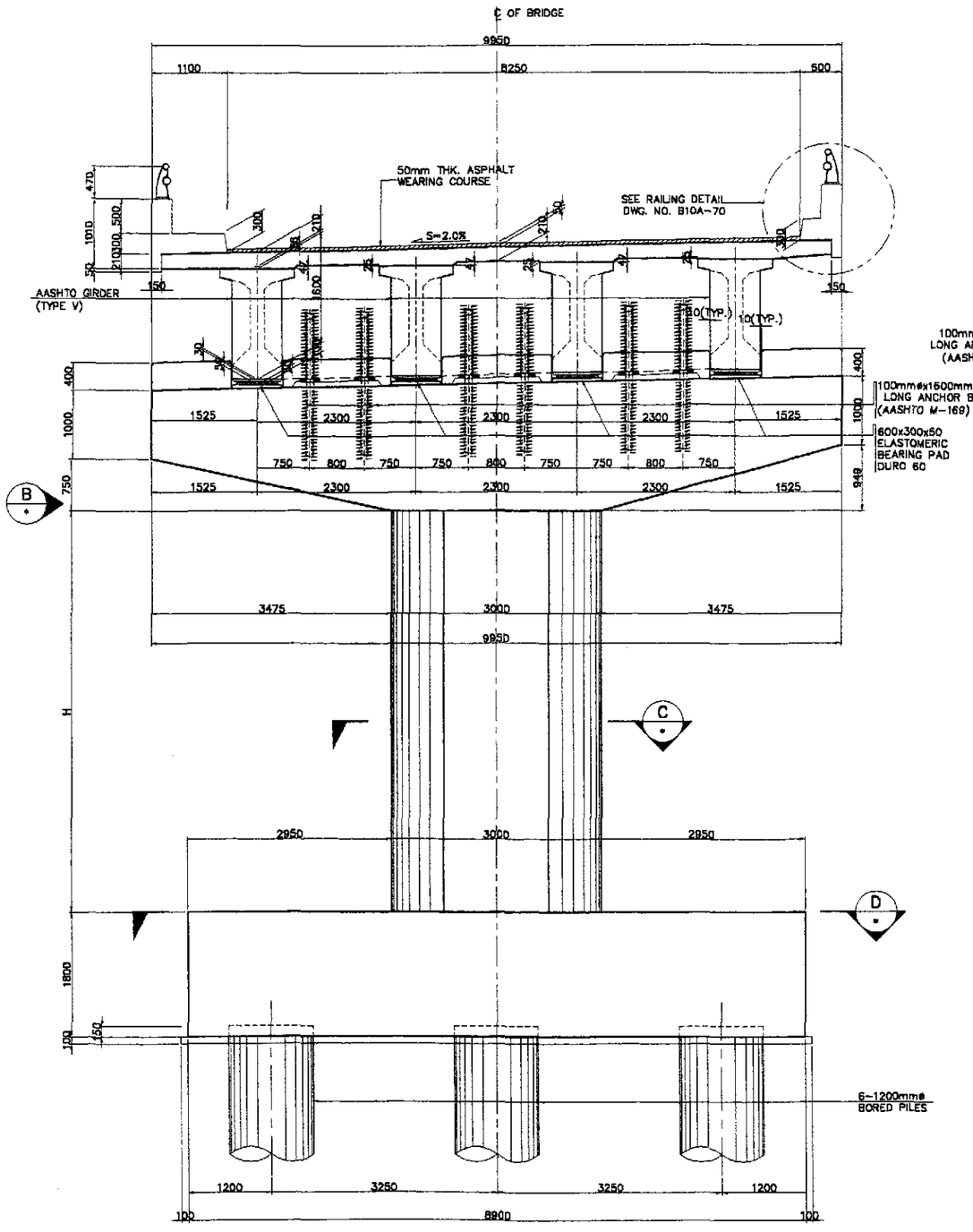
PJHL - PMO	BUREAU OF DESIGN		OFFICE OF THE SECRETARY	
Submitted By:	Reviewed By:	Recommended By:	Recommended By: (See cover sheet for Signature)	Approved By: (See cover sheet for Signature/Approval)
DANILO C. TRAJANO	ADRIANO M. DOROY	GILBERTO S. REYES	MANUEL M. BONOAN	SIMEON A. DATUMANONG
Project Director	Chief, Bridge Division	Director IV (OIC)	Undersecretary	Secretary

PROJECT AND LOCATION :
THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses)
CABANATUAN BYPASS - CONTRACT PACKAGE III

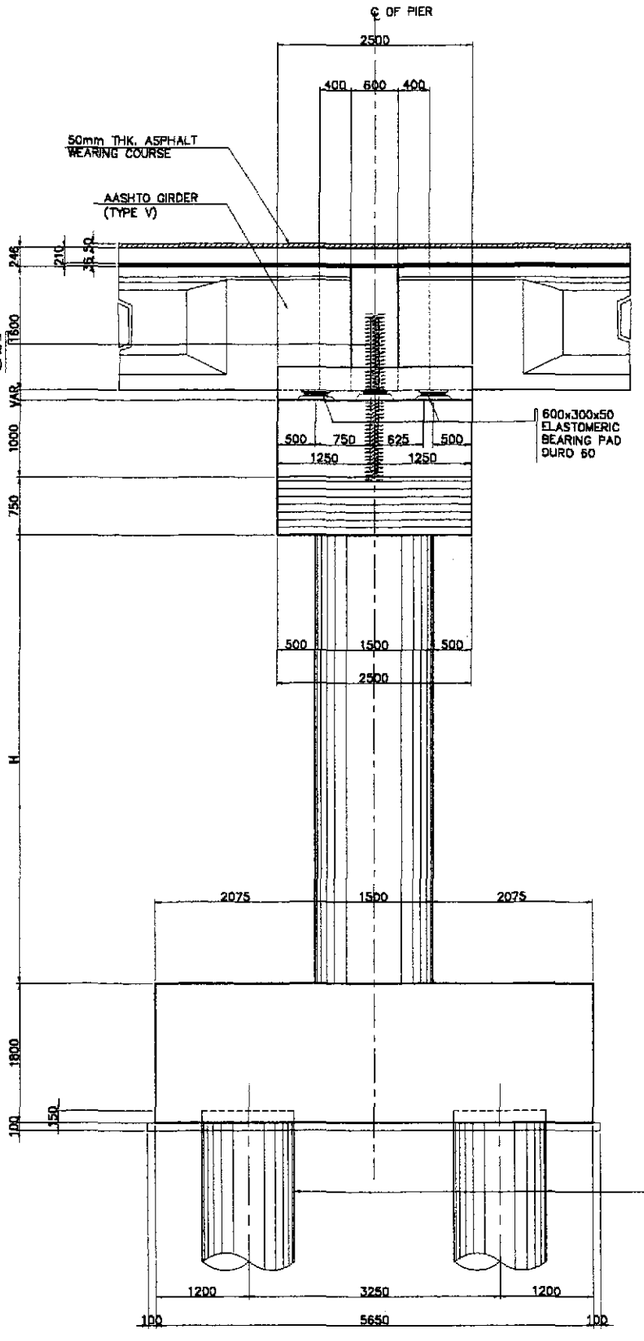
SCALE : AS SHOWN FULL SIZE A1

SHEET CONTENTS :
BRIDGE NO.10 PAMPANGA RIVER BRIDGE
PIER LAYOUT & DIMENSIONS (P21)
(ULTIMATE STAGE)

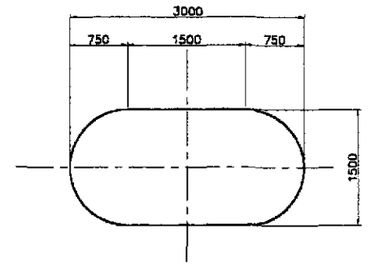
SHEET NO. : B10A-05



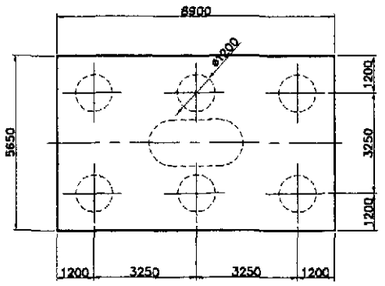
A SCALE 1:40 ELEVATION



B SCALE 1:40 SIDE ELEVATION



C SCALE 1:40 SECTION



D SCALE 1:100 SECTION

SCHEDULE OF DIMENSIONS			
PIER	H (mm)	BORED PILE	
		N (PCS)	LENGTH (mm)
P1 ~ P5	5250	6	19000
P16 ~ P20 P22 ~ P26	7250	6	16000

1 SCALE AS SHOWN PIER LAYOUT & DIMENSIONS (P1 to P5, P16 to P20 & P22 to P26)

JICA JAPAN INTERNATIONAL COOPERATION AGENCY

KATAHIRA & ENGINEERS INTERNATIONAL — YACHIYO ENGINEERING CO., LTD.

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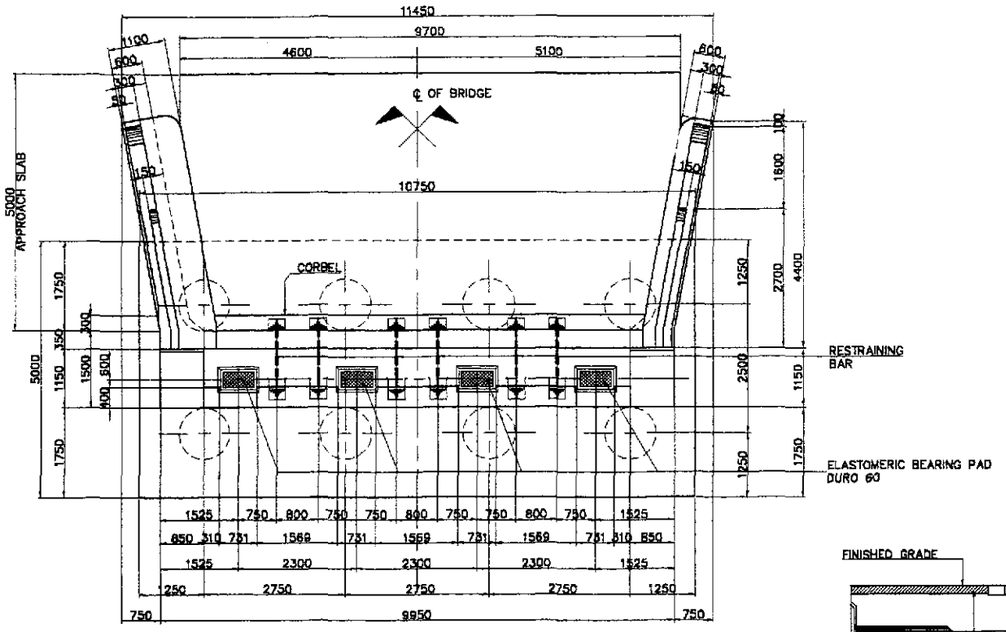
CABANATUAN BYPASS - CONTRACT PACKAGE III

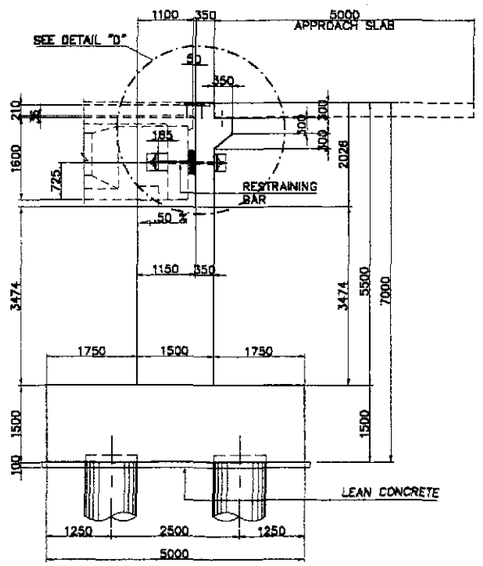
SCALE : AS SHOWN — FULL SIZE A1

SHEET CONTENTS :
BRIDGE NO.10 PAMPANGA RIVER BRIDGE
PIER LAYOUT & DIMENSIONS (P1 to P5, P16 to P20 & P22 to P26)
(ULTIMATE STAGE)

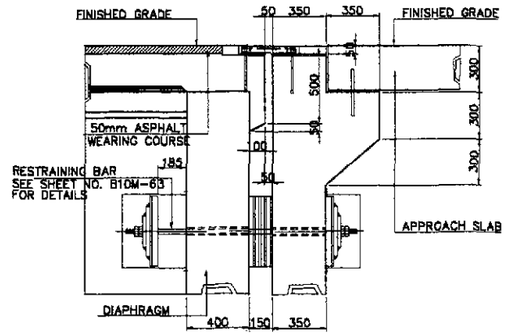
SHEET NO. : B10A-06



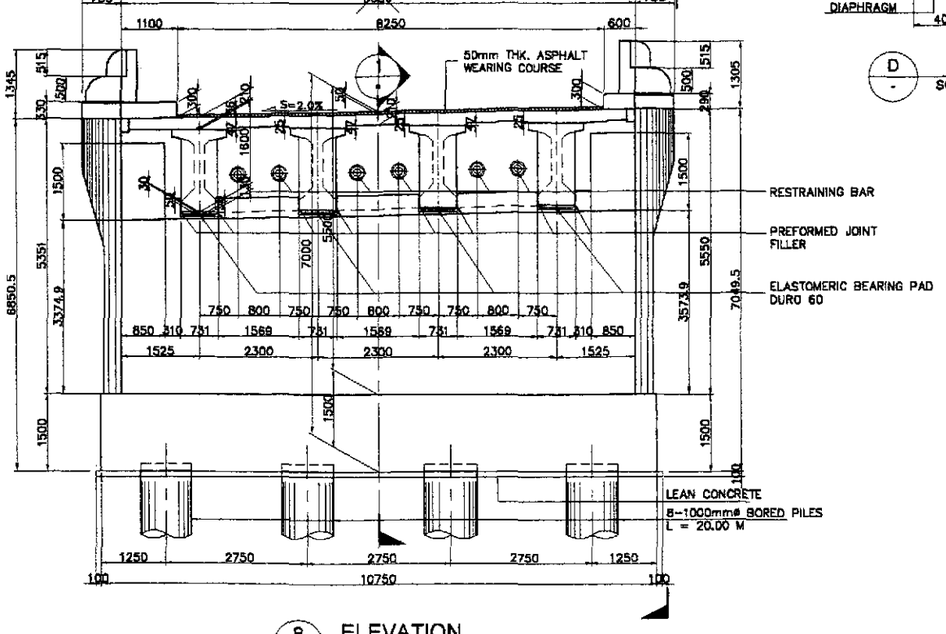
A PLAN
SCALE 1:120



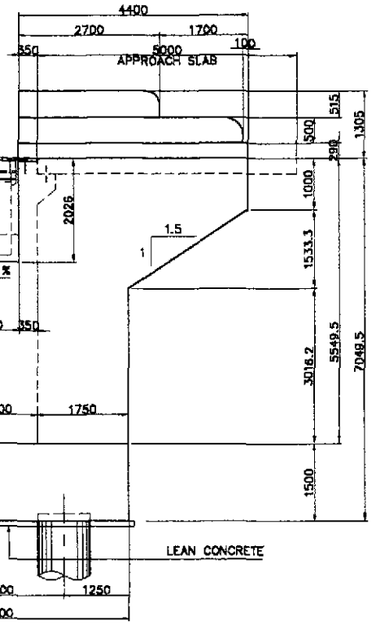
1 SECTION
SCALE 1:120



D DETAIL
SCALE 1:20



B ELEVATION
SCALE 1:120



C SIDE ELEVATION
SCALE 1:120

1 ABUTMENT LAYOUT & DIMENSIONS (ABUT. A1 & A2)
SCALE AS SHOWN

JICA
JAPAN INTERNATIONAL COOPERATION AGENCY

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YACHIYO ENGINEERING CO., LTD.

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PROJECT AND LOCATION :
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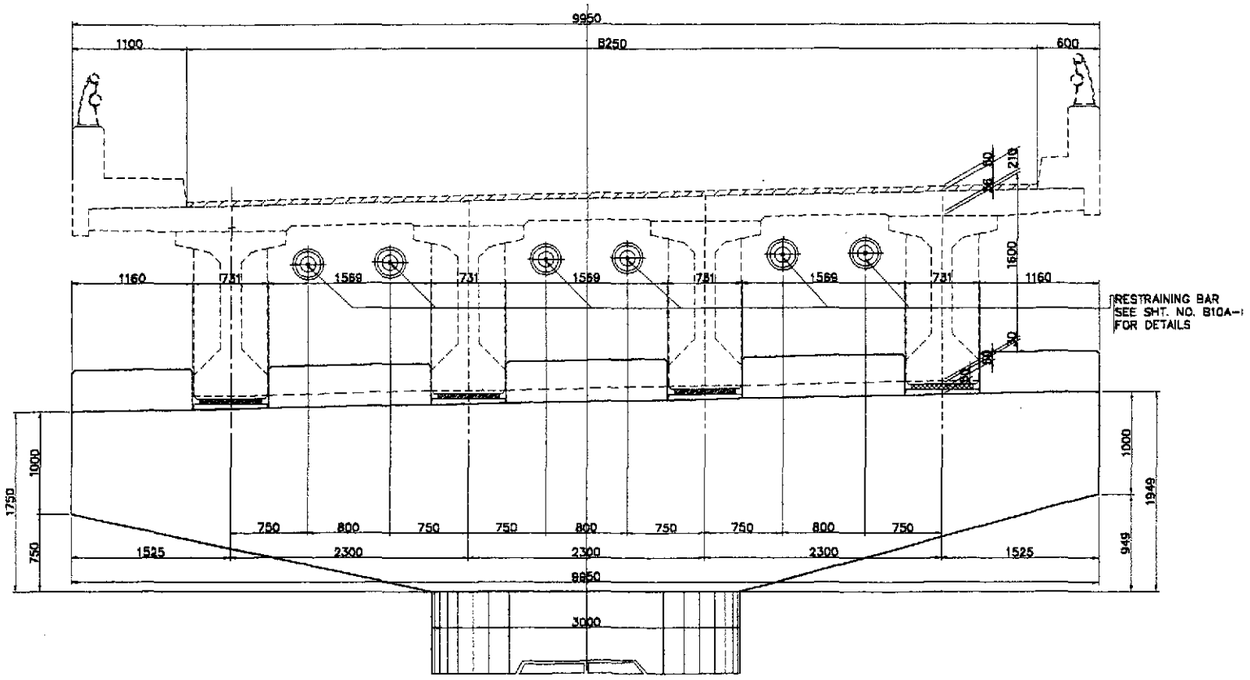
UPGRADING INTER-URBAN HIGHWAY SYSTEM
ALONG THE *PAN-PHILIPPINE HIGHWAY*
(Plaridel, Cabanatuan and San Jose Bypasses)
CABANATUAN BYPASS - CONTRACT PACKAGE III

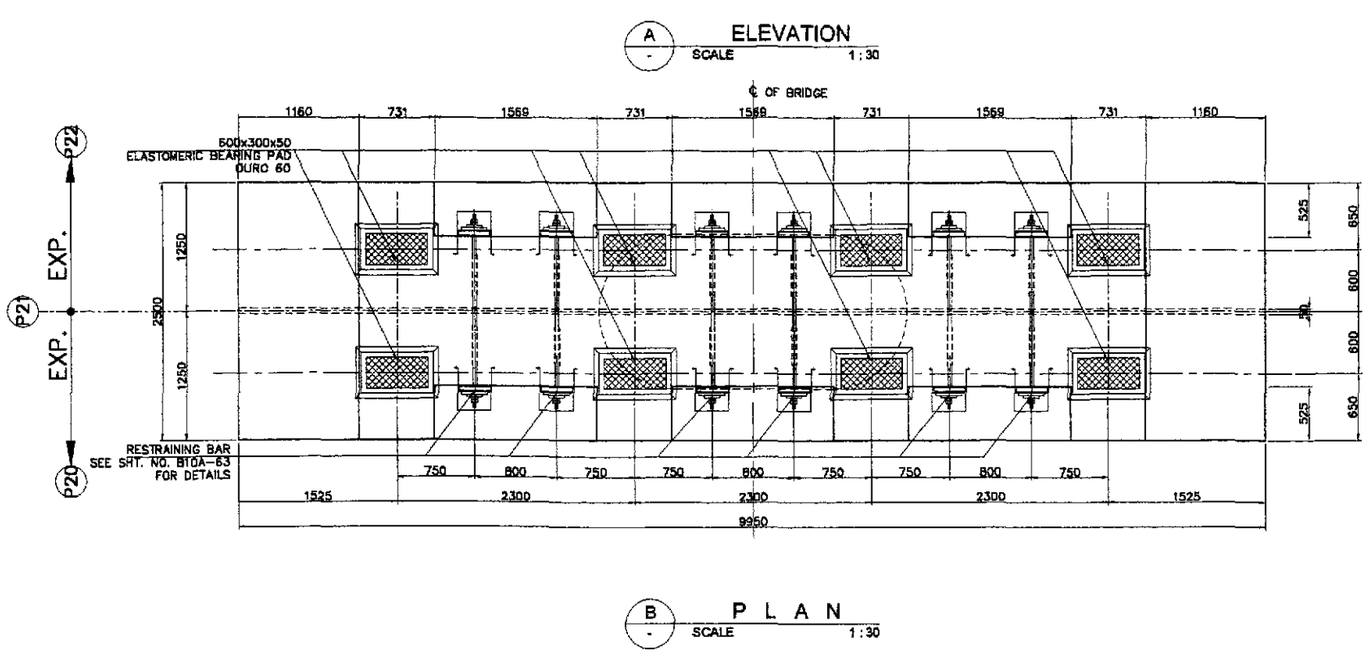
SCALE : AS SHOWN FULL SIZE A1

SHEET CONTENTS :
BRIDGE NO.10 PAMPANGA RIVER BRIDGE
ABUTMENT LAYOUT & DIMENSIONS
(ABUTMENT A1 & A2)
(ULTIMATE STAGE)

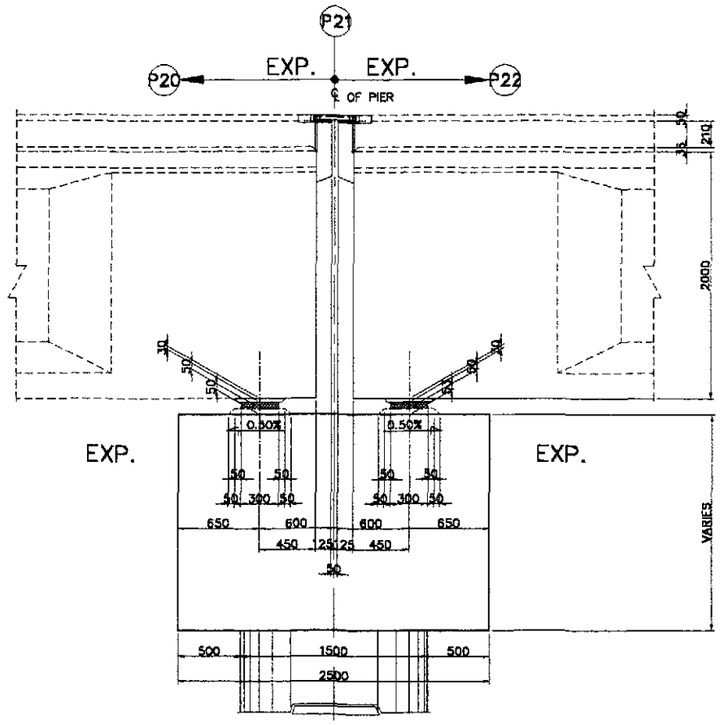
SHEET NO. : **B10A-07**



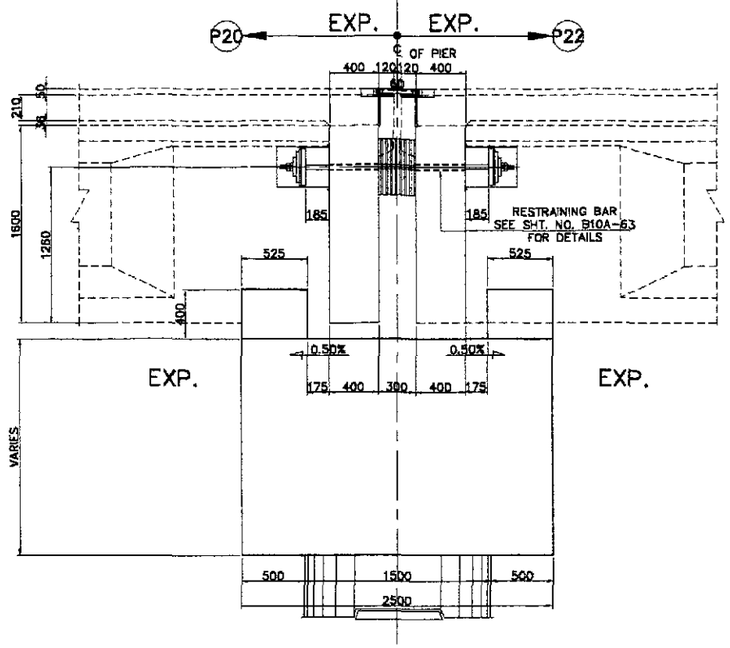
A — ELEVATION
SCALE 1:30



B — P L A N
SCALE 1:30



C — SECTION @ BEARING PAD
SCALE 1:25



D — SECTION @ ANCHOR BAR
SCALE 1:25

1 — COPING LAYOUT AND DIMENSIONS (P21)
SCALE AS SHOWN

JAPAN INTERNATIONAL COOPERATION AGENCY
KATAHIRA & ENGINEERS INTERNATIONAL
YACHIYO ENGINEERING CO., LTD.

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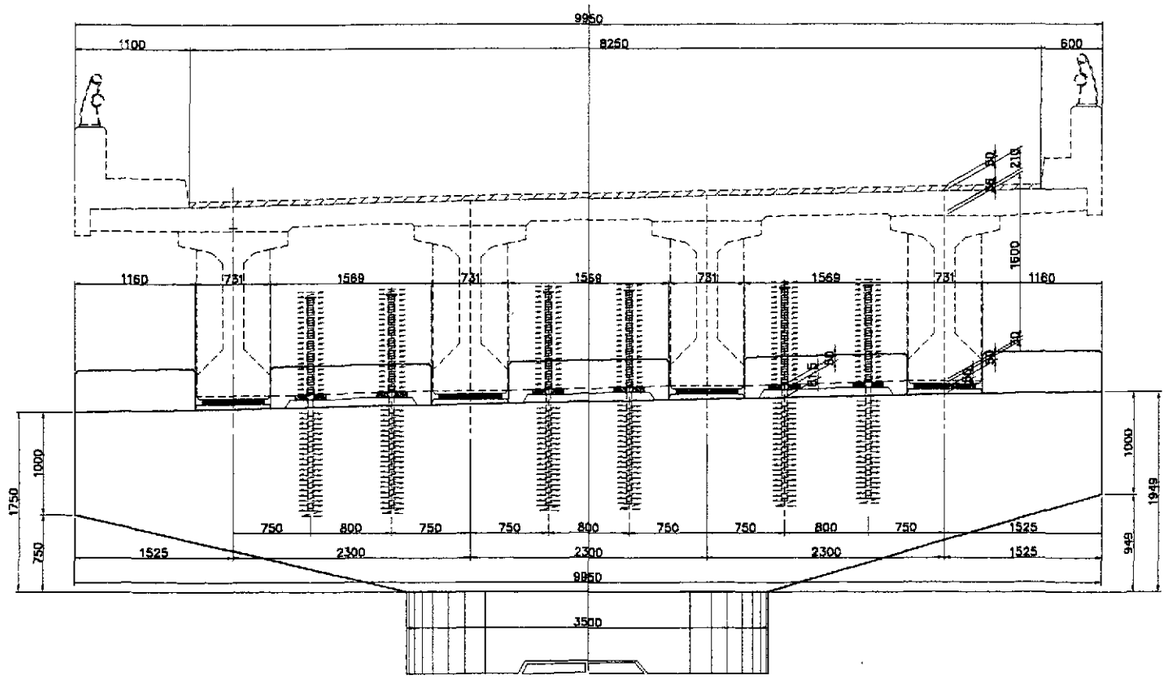
(Plaridel, Cabanatuan and San Jose Bypasses)
CABANATUAN BYPASS - CONTRACT PACKAGE III

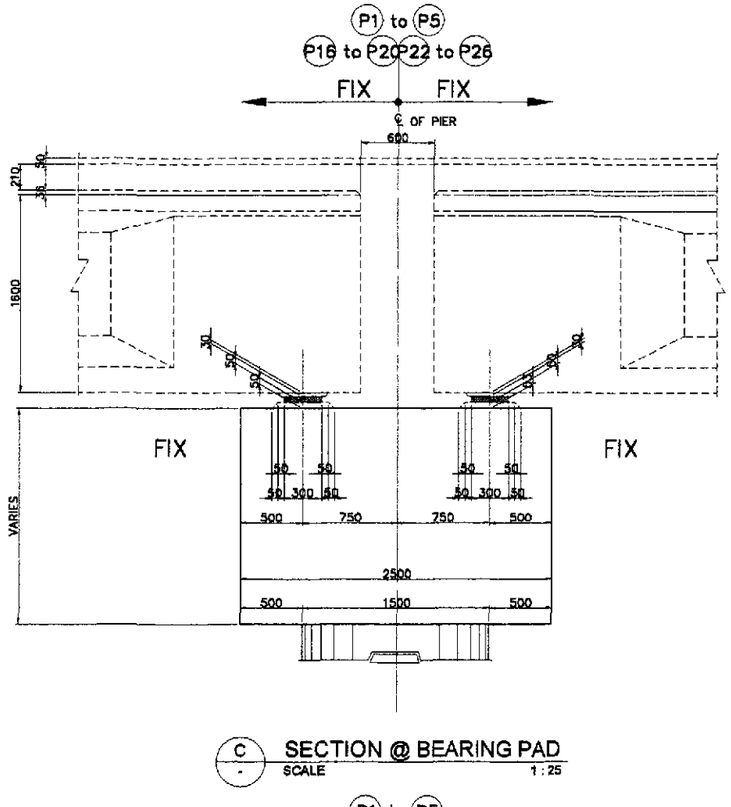
SCALE :
AS SHOWN
FULL SIZE A1

SHEET CONTENTS :
BRIDGE NO.10 PAMPANGA RIVER BRIDGE
COPING LAYOUT & DIMENSIONS (P21)
(ULTIMATE STAGE)

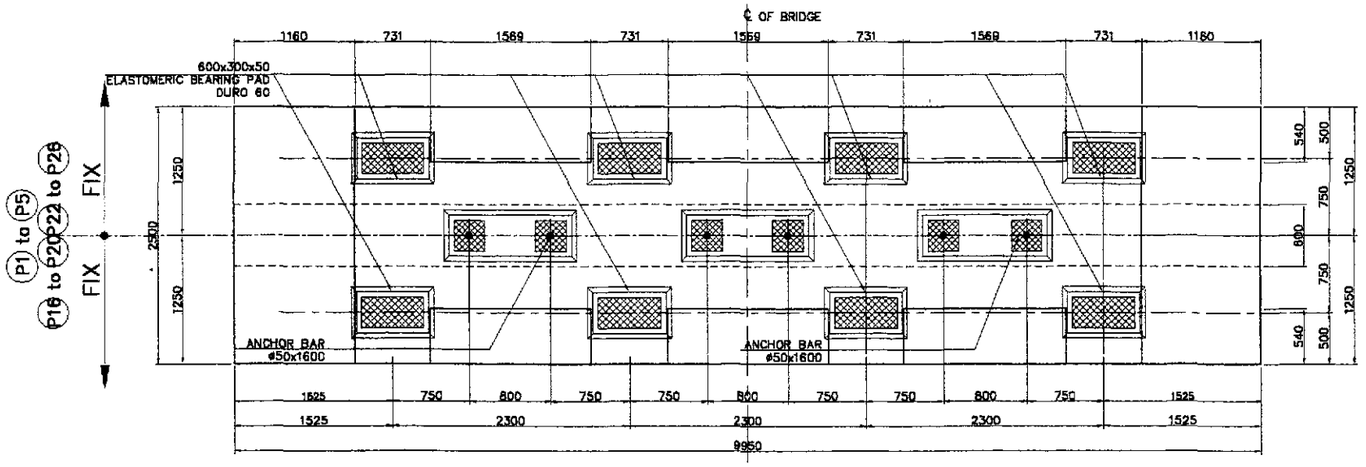
SHEET NO. :
B10A-08



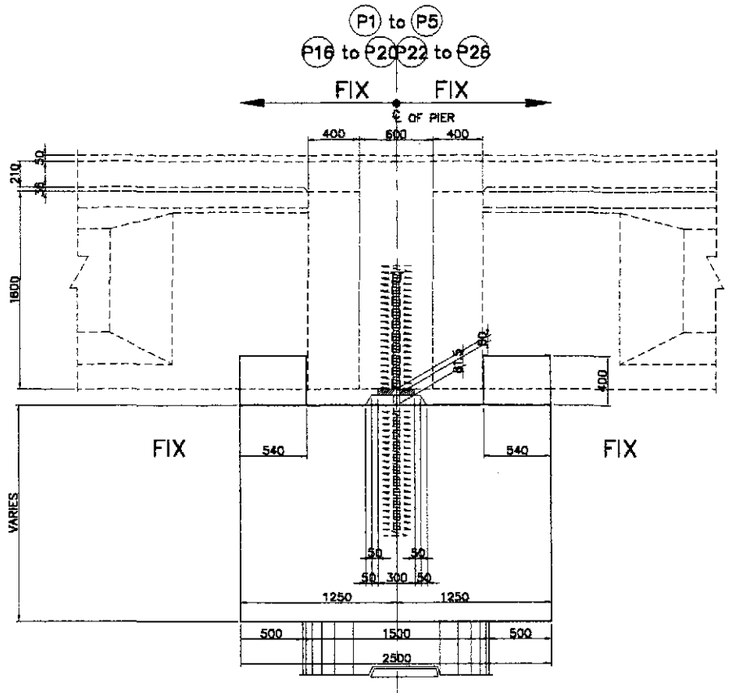
A — ELEVATION
SCALE 1 : 30



C — SECTION @ BEARING PAD
SCALE 1 : 25



B — P L A N
SCALE 1 : 30



D — SECTION @ ANCHOR BAR
SCALE 1 : 25

1 — COPING LAYOUT AND DIMENSIONS (P1 to P5, P16 to P20 & P22 to P26)
SCALE AS SHOWN

JICA
JAPAN INTERNATIONAL COOPERATION AGENCY
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ALONG THE PAN-PHILIPPINE HIGHWAY
(Plaridel, Cabanatuan and San Jose Bypasses)
CABANATUAN BYPASS - CONTRACT PACKAGE III

SCALE : AS SHOWN, FULL SIZE A1

SHEET CONTENTS :
BRIDGE NO.10 PAMPANGA RIVER BRIDGE
COPING LAYOUT & DIMENSIONS
(P1 to P5, P16 to P20 & P22 to P26)
(ULTIMATE STAGE)

SHEET NO. : B10A-09