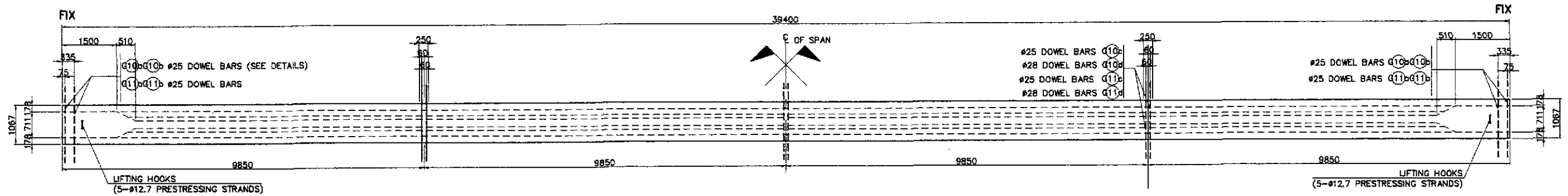
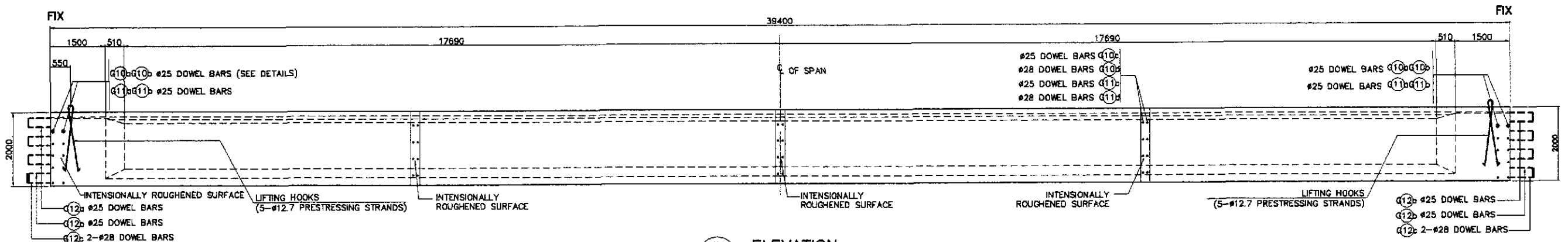


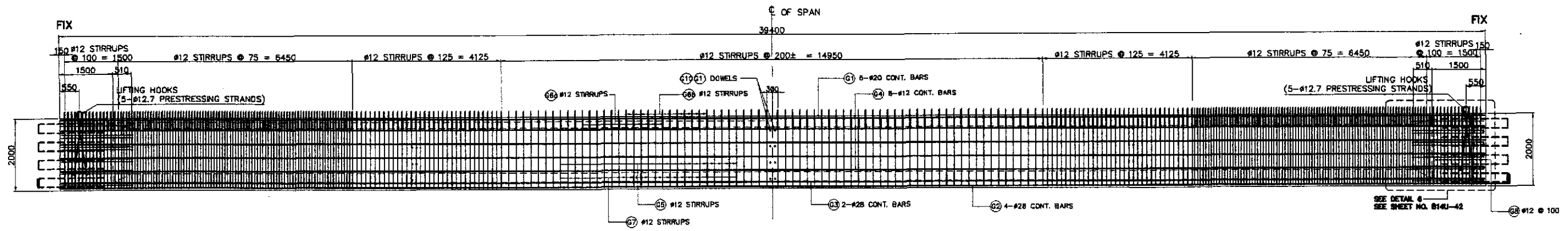
SUPERSTRUCTURE REINFORCEMENT DETAIL



A PLAN
SCALE 1:80



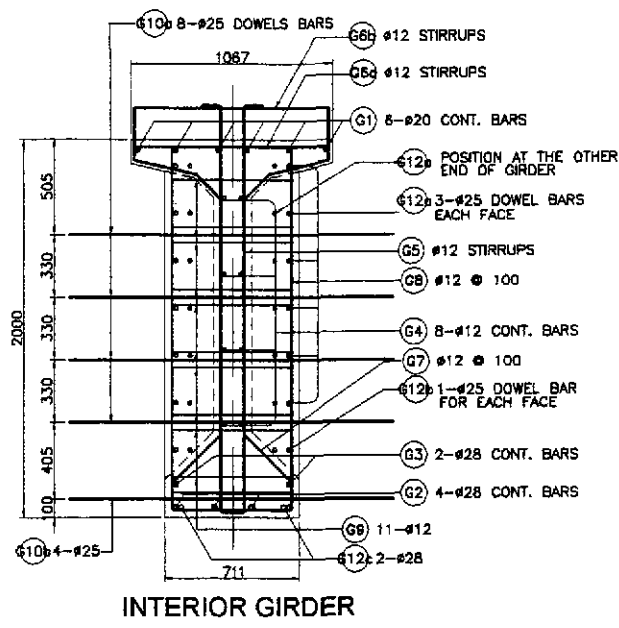
B ELEVATION
SCALE 1:80



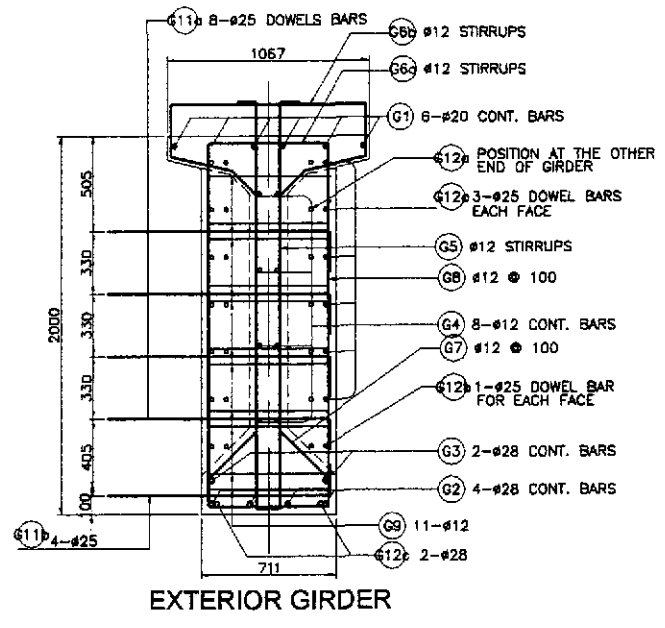
C DETAILS OF REINFORCEMENT
SCALE 1:80

1 39400 SPAN (GIRDER FIX-FIX)
SCALE AS SHOWN

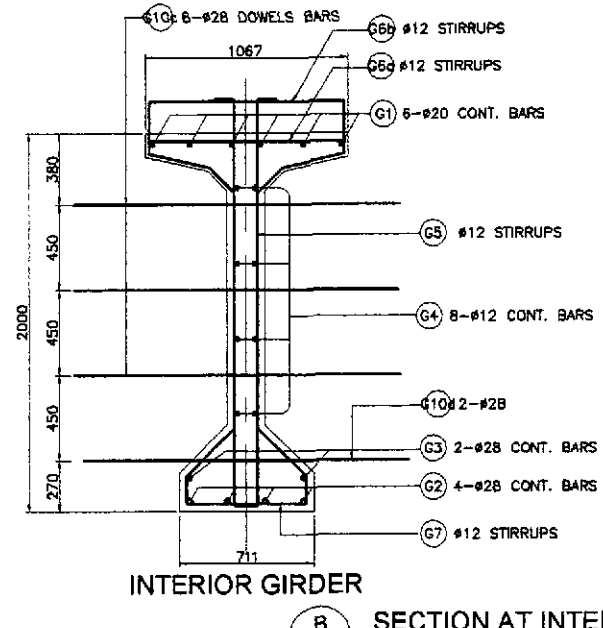
	DESIGNED	DATE	SIGNATURE	<p>REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS</p>	PROJECT AND LOCATION :			SCALE :	SHEET CONTENTS :	SHEET NO. :	
	CHECKED	10/19/02	<i>[Signature]</i>		BUREAU OF DESIGN	THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses)			AS SHOWN	BRIDGE NO.14 TALAVERA RIVER BRIDGE AASHTO GIRDER TYPE VI (MODIFIED) (REINF. DETAILS FIX-FIX) - 1 OF 2 (INITIAL STAGE)	B14U-41
	SUBMITTED	10/21/02	<i>[Signature]</i>		OFFICE OF THE SECRETARY	CABANATUAN BYPASS - CONTRACT PACKAGE IV			FULL SIZE A1		
<p>Submitted By: DANILLO C. TRAJANO, Project Director</p> <p>Reviewed By: ADRIANO M. DOROY, Chief, Bridges Division</p> <p>Recommended By: GILBERTO S. REYES, Director IV (DC)</p> <p>Recommended By: MANUEL M. BONGAN, Undersecretary</p> <p>Approved By: SIMEON A. DATUMANONG, Secretary</p>				<p>PROJECT AND LOCATION :</p> <p>THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses)</p> <p>CABANATUAN BYPASS - CONTRACT PACKAGE IV</p>			SCALE :	SHEET CONTENTS :	SHEET NO. :		



A SECTION AT END DIAPHRAGM
SCALE 1:20

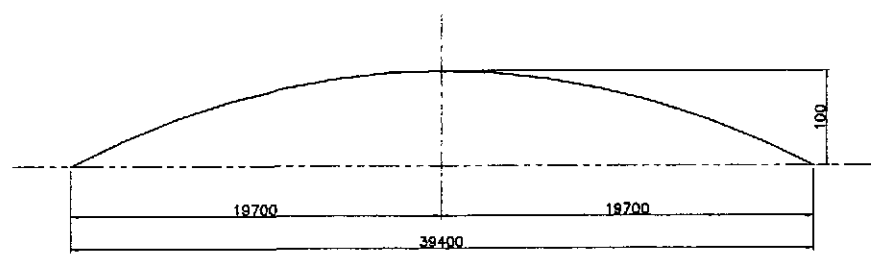


B SECTION AT INTERMEDIATE DIAPHRAGM
SCALE 1:20



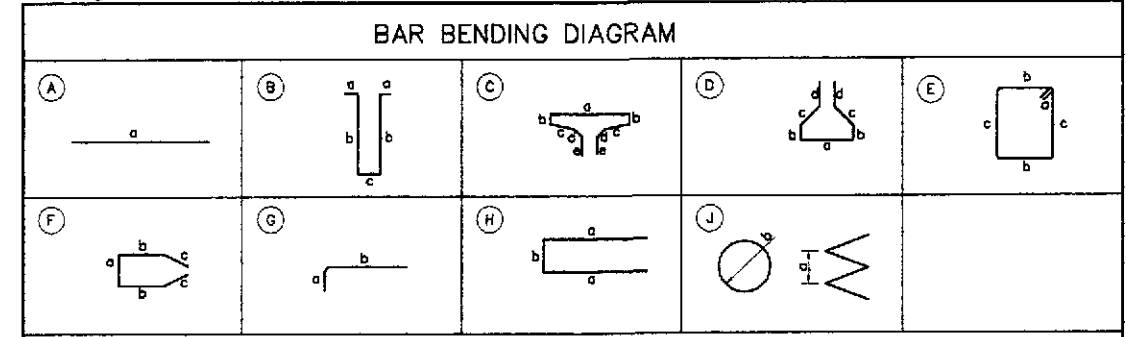
C TOOTH DETAIL
SCALE 1:5

NOTE :
REBAR (G12c) & (G12b) SHOULD BE MOVED 75mm INWARD ON THE OTHER END OF THE GIRDER TO AVOID CONFLICT WITH THE ADJACENT GIRDER AT THE END DIAPHRAGM.

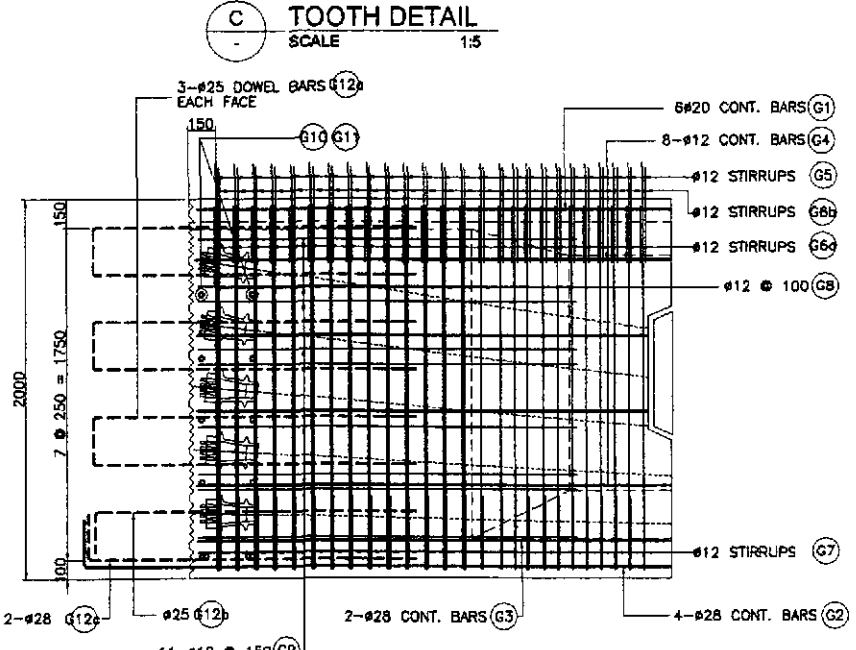


D CAMBER DIAGRAM
NOT TO SCALE

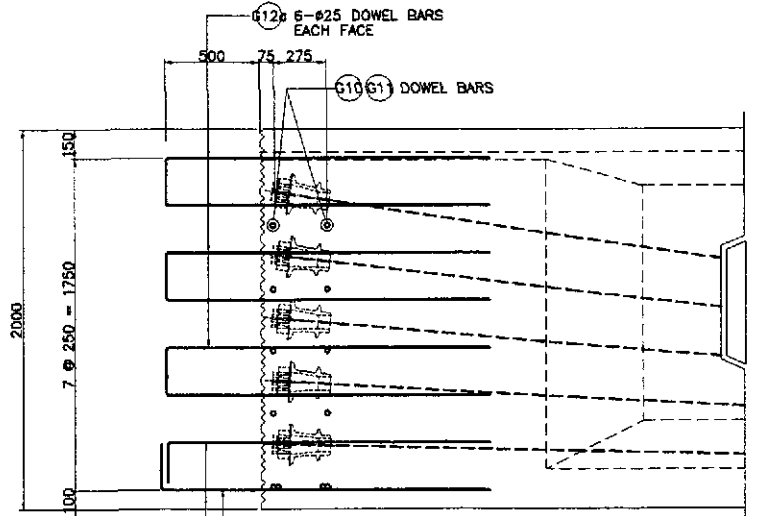
NOTE :
#12 SHALL BE INSTALLED ON FIX SIDE ONLY.



E BAR BENDING DIAGRAM



F END BLOCK REINF. DETAIL
SCALE 1:20



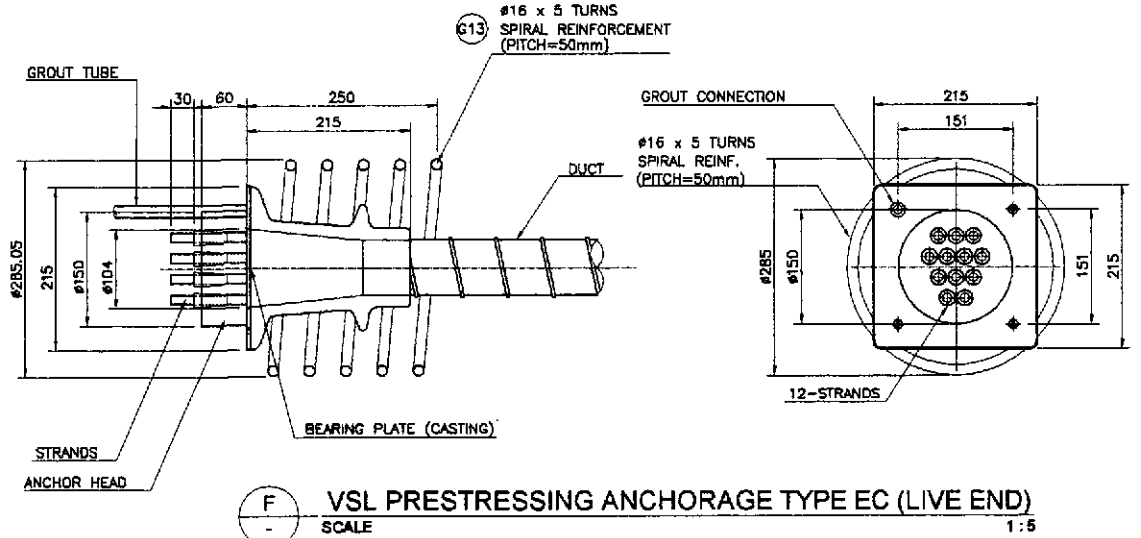
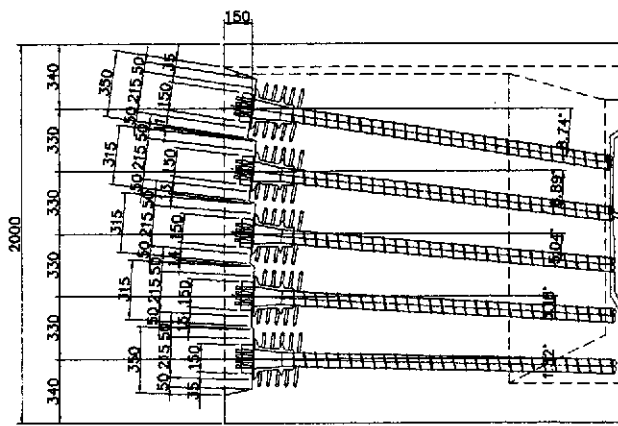
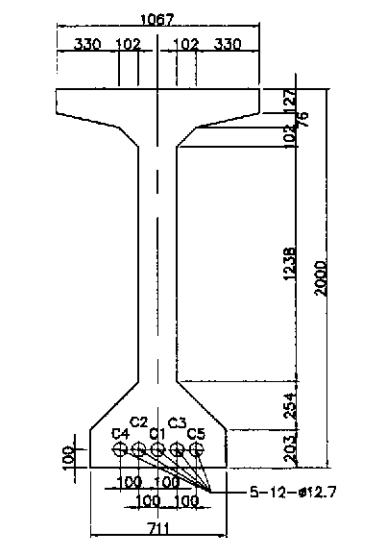
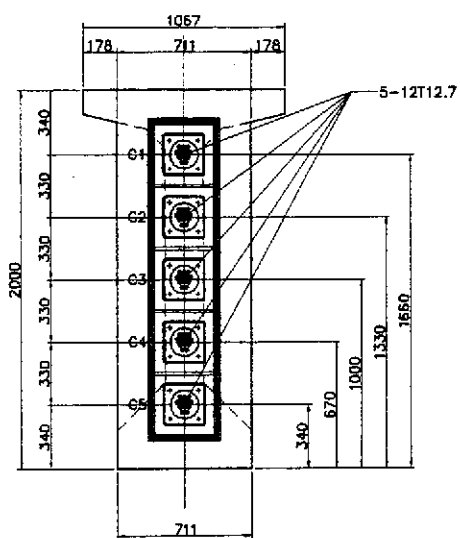
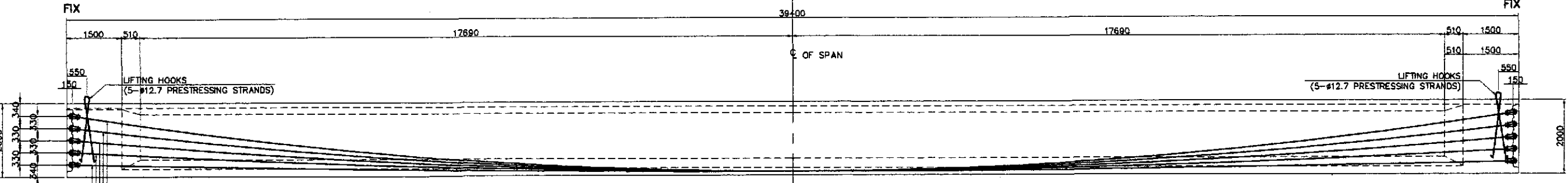
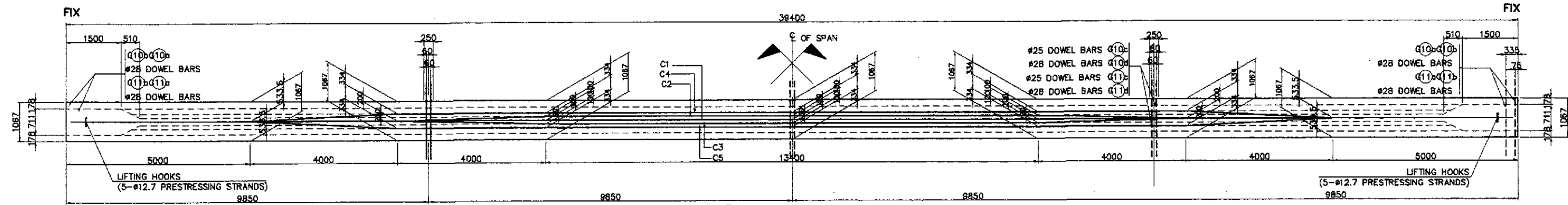
G END BLOCK DOWELS DETAIL
SCALE 1:20

SCHEDULE OF REINFORCEMENT

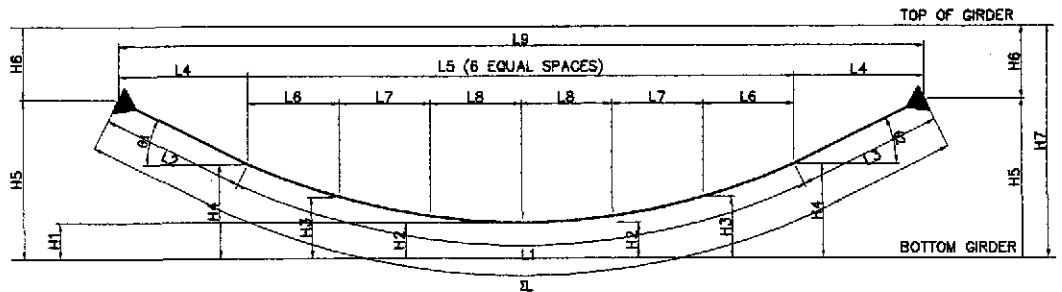
LOCATION	BAR MARK	SIZE (mm)	BEND TYPE	DIMENSION(mm) OUT TO OUT					LENGTH (mm)	NO. REQD.	UNIT WEIGHT (kg/m)	WEIGHT (kg)		REMARKS	
				a	b	c	d	e				GRADE 40	GRADE 60		
GIRDER	G1	20	A	39300					39050	6	2.466		581	1.) Quantities	
	G2	28	H	500	40500				41500	4	4.834		802	for one (1)	
	G3	28	A	39300					39050	2	4.834		380	girder only.	
	G4	12	A	39300					39050	8	0.888	279			
	G5	12	B	200	2100	103			4703	344	0.888	1437			
	G6	12	C	1000	50	340	200	150	2480	344	0.888	758			
	G6a	12	C	1000	150	340	200	150	2680	344	0.888	819			
	G7	12	D	635	160	550	150		2355	344	0.888	719		2.) Splice	
	G8	12	E	635	1900	150			4735	28	0.888	126		length not	
	G8	12	F	611	1450	570			4651	22	0.888	91		included.	
	G10a	25	A	2700					2700	32	3.853		333		
	G10b	25	A	2700					2700	16	3.853		188		
	G10c	25	A	2200					2200	36	3.853		305		
	G10d	28	A	2200					2200	12	4.834		128		
	G11a	25	G	300	1700				2000	32	3.853		247		
	G11b	25	G	300	1700				2000	16	3.853		123	3.) Bar mark	
	G11c	25	G	300	1200				1500	36	3.853		208	G10 is for	
	G11d	28	G	300	1200				1500	12	4.834		87	interior girder.	
G12a	25	H	1200	250				2650	12	3.854		123			
G12b	25	G	300	1200				1500	4	3.854		24			
G12c	28	G	500	1200				1700	4	4.834		99			
G13	16	J	50	285				4477	10	1.578	71				
											(EXTERIOR) TOTAL =	4300	2674		
											(INTERIOR) TOTAL =	4300	2941		

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

	DESIGNED	DATE	SIGNATURE	<p>REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS</p>	PROJECT AND LOCATION :			SCALE :	SHEET CONTENTS :	SHEET NO. :
	CHECKED	10/12/02	F. P. DE JESUS		THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Palarid, Cabanatuan and San Jose Bypasses)			AS SHOWN	BRIDGE NO.14 TALAVERA RIVER BRIDGE AASHTO GIRDER TYPE VI (MODIFIED) (REINF. DETAILS FIX-FIX) - 2 OF 2 (INITIAL STAGE)	B14U-42
	SUBMITTED	10/12/02	J. C. SANTOS		CABANATUAN BYPASS - CONTRACT PACKAGE IV			FULL SIZE A1		
<p>BUREAU OF DESIGN</p> <p>Submitted By: DANILLO C. TRAJANO, Project Director</p> <p>Recommended By: ADRIANO M. DORCOY, Chief, Bridges Division</p> <p>Recommended By: GILBERTO S. REYES, Director IV (OC)</p> <p>Recommended By: MANUEL M. BONGAN, Undersecretary</p> <p>Approved By: SIMEON A. DATUMANONG, Secretary</p>										



NOTE :
FRICTION COEFFICIENTS USED IN THE DESIGN ARE :
k = 0.001/m
 $\mu = 0.200/\text{RAD}$.



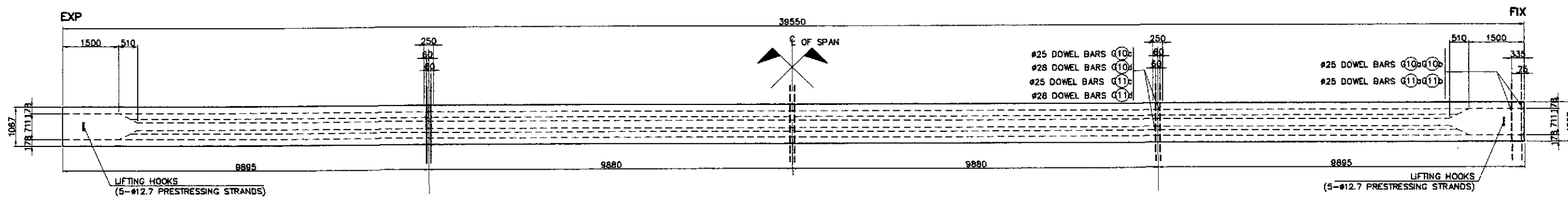
TENDON VERTICAL PROFILE

TENDON DESIGNATION	L1	L2	L3	L4	L5	L6	L7	L8	L9	L10	H1	H2	H3	H4	H5	H6	H7	θ_1	θ_2	TYPE - SIZE	FORCE IN TENDON @ JACK BEFORE LOCK OFF (KN)	ANCHORAGE SLIP (mm)	TENDON PRESTRESS FORCE @ MIDSPAN (KN)	TENDON LENGTH (mm)	TOTAL LENGTH (mm)	TOTAL WEIGHT OF TENDON (Kg)	
C1	36265	1500	1500	1483	36135	6022.5	6022.5	6022.5	39100	39265	100	248	691	1431	1660	340	2000	8.74°	8.74°	12-dia. 12.7	1654	6	1387	39265	471,180	365,164	
C2	36202	1500	1500	1489	36122	6020.3	6020.3	6020.3	39100	39202	100	217	567	1150	1330	670	2000	6.89°	6.89°	12-dia. 12.7	1654	6	1387	39202	470,424	364,578	
C3	36155	1500	1500	1494	36112	6018.7	6018.7	6018.7	39100	39155	100	186	444	868	1000	1000	2000	5.04°	5.04°	12-dia. 12.7	1654	6	1387	39155	469,860	364,141	
C4	36122	1500	1500	1498	36105	6017.5	6017.5	6017.5	39100	39122	100	155	319	586	670	1330	2000	3.18°	3.18°	12-dia. 12.7	1654	6	1387	39122	469,464	363,834	
C5	36104	1500	1500	1500	36101	6016.8	6016.8	6016.8	39100	39104	100	124	182	305	340	1660	2000	1.32°	1.32°	12-dia. 12.7	1654	6	1387	39104	469,248	363,667	
																							TOTAL	2,350,176	1,821,386		

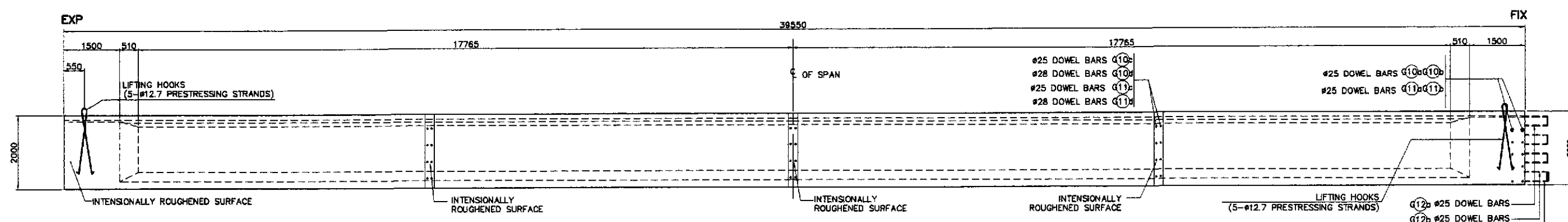
1 39400 SPAN (GIRDER FIX-FIX)
SCALE AS SHOWN

NOTE : AFTER FRICTION LOSS AND WEDGE DRAW-IN ONLY.

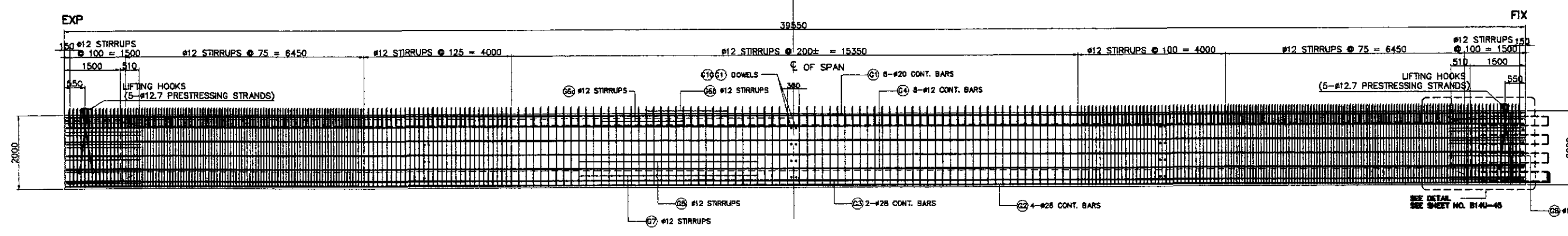
	DESIGNED	DATE	SIGNATURE	<p>REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS</p>	PROJECT AND LOCATION :			SCALE :	SHEET CONTENTS :	SHEET NO. :
	CHECKED	10/19/02	<i>[Signature]</i>		THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses)			AS SHOWN	BRIDGE NO.14 TALAVERA RIVER BRIDGE AASHTO GIRDER TYPE VI (MODIFIED) (PRESTRESSING DET. FIX-FIX SUPPORT) (INITIAL STAGE)	B14U-43
	SUBMITTED	10/21/02	<i>[Signature]</i>		CABANATUAN BYPASS - CONTRACT PACKAGE IV			FULL SIZE A1		
JICA JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS KEI INTERNATIONAL YACHYO ENGINEERING CO., LTD.				BUREAU OF DESIGN Submitted By: <i>[Signature]</i> Reviewed By: <i>[Signature]</i> Recommended By: <i>[Signature]</i> Office of the Secretary (See cover sheet for Signature/Approval) MANUEL M. SONGON Undersecretary						



(A) PLAN
SCALE 1:60



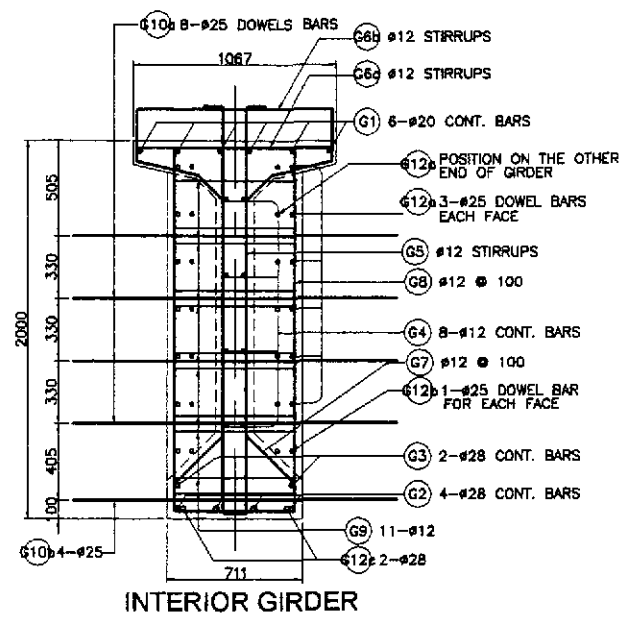
(B) ELEVATION
SCALE 1:60



(C) DETAILS OF REINFORCEMENT
SCALE 1:60

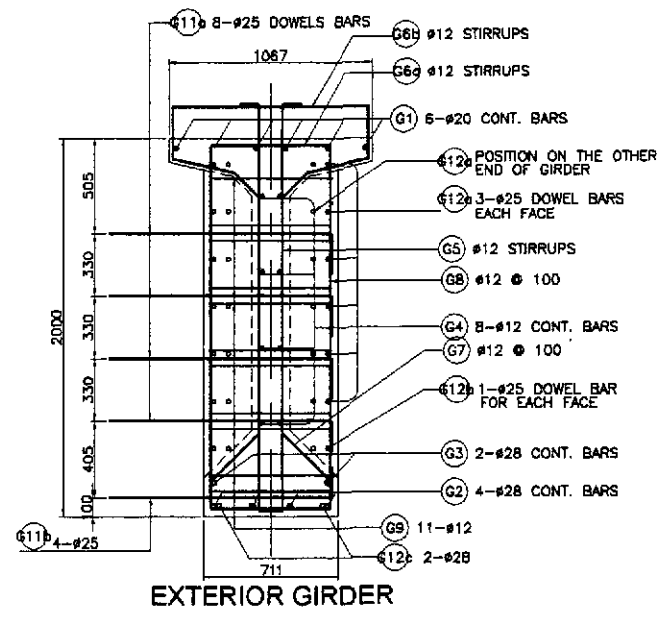
1 39550 SPAN (GIRDER EXP-FIX)
SCALE AS SHOWN

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	DATE	SIGNATURE																				
	DESIGNED 10/12/02	[Signature]																				
CHECKED 10/19/02	[Signature]																					
SUBMITTED 10/21/02	[Signature]																					
<table border="1"> <tr> <th colspan="2">BUREAU OF DESIGN</th> <th colspan="3">OFFICE OF THE SECRETARY</th> </tr> <tr> <td>Submitted By:</td> <td>Reviewed By:</td> <td>Recommended By:</td> <td>(See cover sheet for Signature/Approval)</td> <td>Approved By:</td> </tr> <tr> <td>DANILO C. TRAJANO Project Director</td> <td>ADRIANO M. DORCO Chief, Bridges Division</td> <td>GILBERTO S. REYES Director IV (OIC)</td> <td>MANUEL M. BONDAN Undersecretary</td> <td>SIMEON A. DATUMANONG Secretary</td> </tr> </table>	BUREAU OF DESIGN		OFFICE OF THE SECRETARY			Submitted By:	Reviewed By:	Recommended By:	(See cover sheet for Signature/Approval)	Approved By:	DANILO C. TRAJANO Project Director	ADRIANO M. DORCO Chief, Bridges Division	GILBERTO S. REYES Director IV (OIC)	MANUEL M. BONDAN Undersecretary	SIMEON A. DATUMANONG Secretary	CABANATUAN BYPASS - CONTRACT PACKAGE IV						
BUREAU OF DESIGN		OFFICE OF THE SECRETARY																				
Submitted By:	Reviewed By:	Recommended By:	(See cover sheet for Signature/Approval)	Approved By:																		
DANILO C. TRAJANO Project Director	ADRIANO M. DORCO Chief, Bridges Division	GILBERTO S. REYES Director IV (OIC)	MANUEL M. BONDAN Undersecretary	SIMEON A. DATUMANONG Secretary																		
<p><i>(This area contains handwritten notes and signatures from project officials.)</i></p>																						



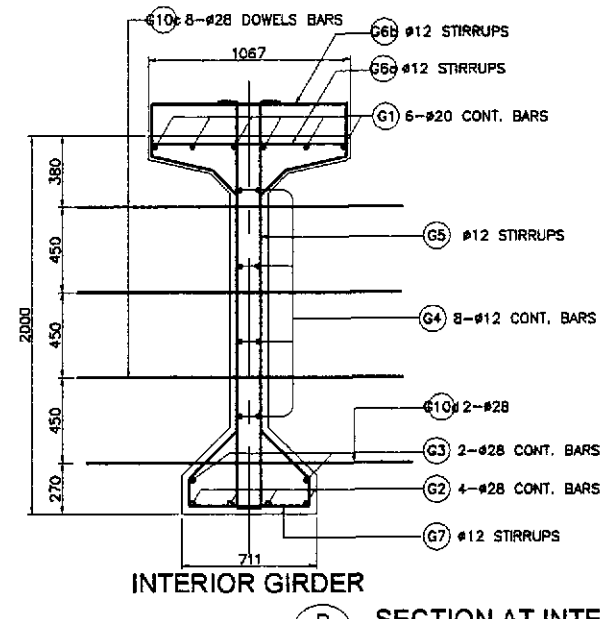
INTERIOR GIRDER

A SECTION AT END DIAPHRAGM
SCALE 1:20



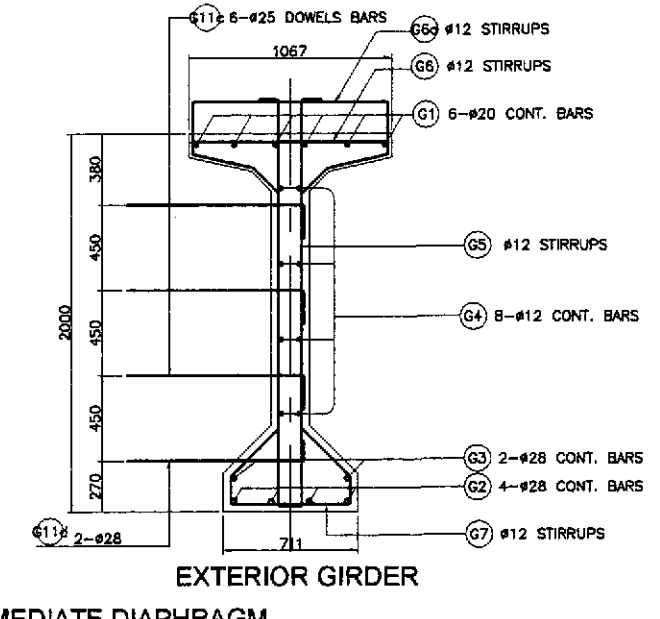
EXTERIOR GIRDER

NOTE :
REBAR (G12a) & (G12b) SHOULD BE MOVED 75mm INWARD ON THE OTHER END OF THE GIRDER TO AVOID CONFLICT WITH THE ADJACENT GIRDER AT THE END DIAPHRAGM.



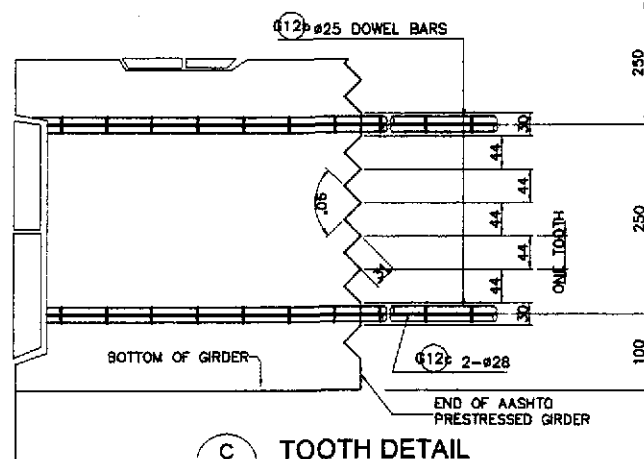
INTERIOR GIRDER

B SECTION AT INTERMEDIATE DIAPHRAGM
SCALE 1:20

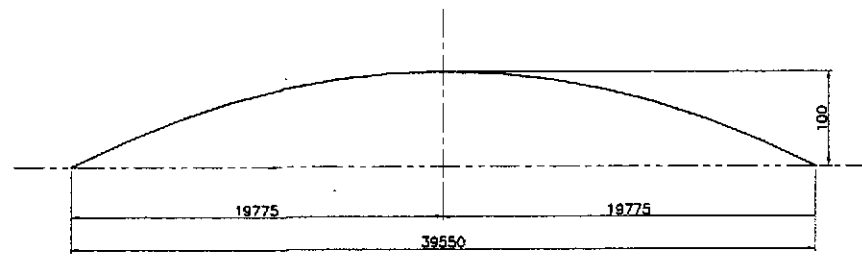


EXTERIOR GIRDER

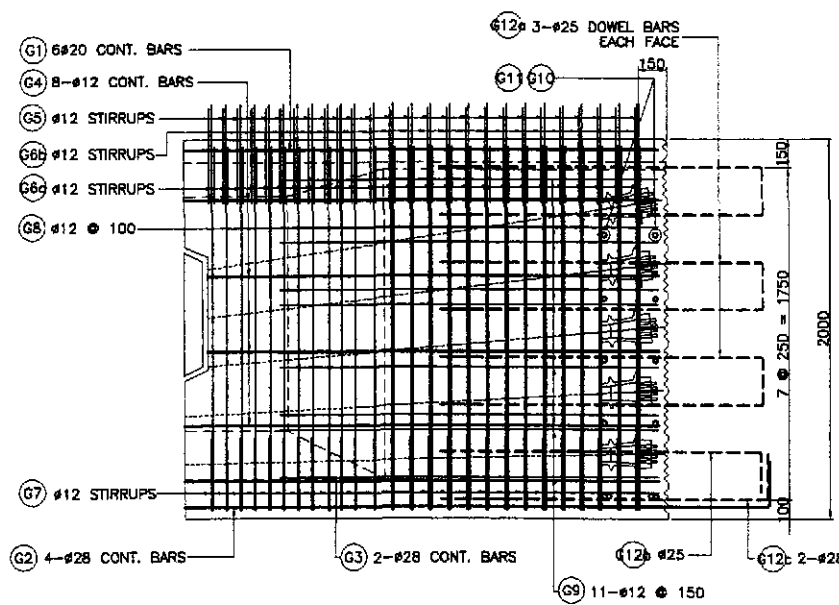
NOTE :
(12) SHALL BE INSTALLED ON FIX SIDE ONLY.



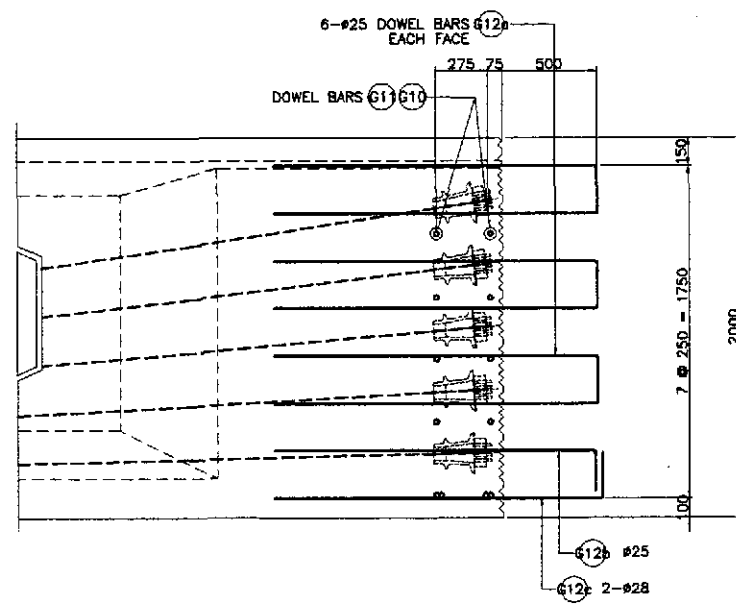
C TOOTH DETAIL
SCALE 1:5



F CAMBER DIAGRAM
NOT TO SCALE

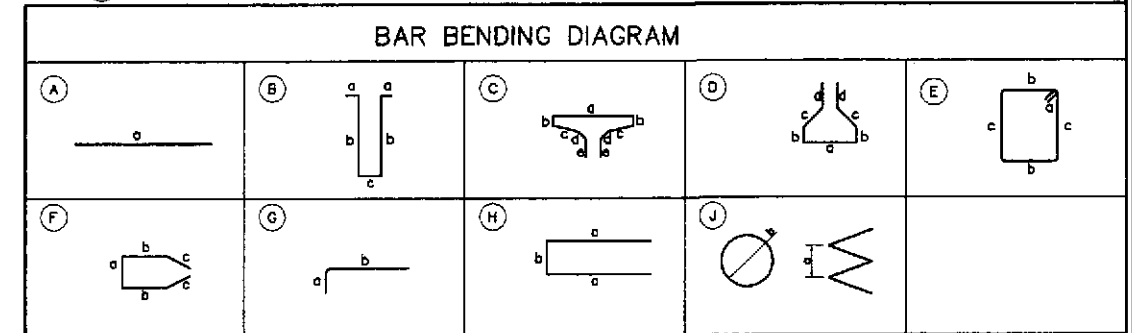


D END BLOCK REINF. DETAIL
SCALE 1:20



E END BLOCK DOWELS DETAIL @ FIX SIDE
SCALE 1:20

1 39550 SPAN (GIRDER EXP-EXP)
SCALE AS SHOWN

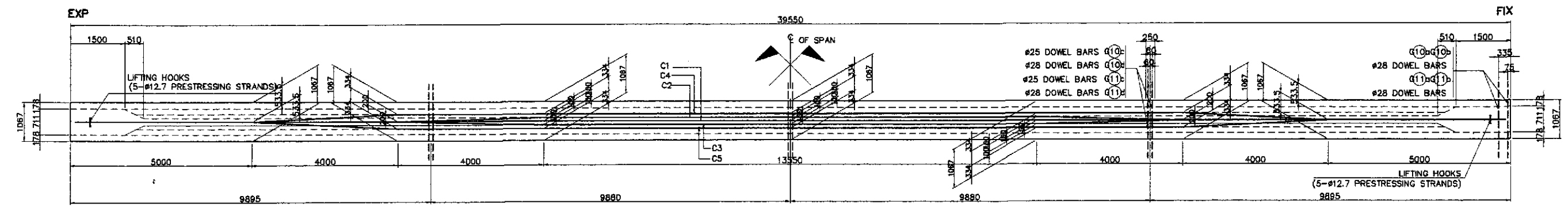


SCHEDULE OF REINFORCEMENT

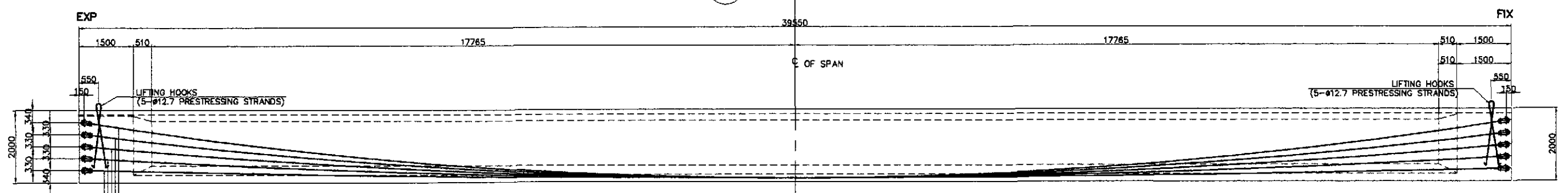
LOCATION	BAR MARK	SIZE (mm)	BEND TYPE	DIMENSION (mm) OUT TO OUT					LENGTH (mm)	NO. REQ'D.	UNIT WEIGHT (kg/m)	WEIGHT (kg)		REMARKS	
				a	b	c	d	e				GRADE 40	GRADE 60		
GIRDER	G1	20	A	39450					39450	6	2.486		584	1.) Quantities	
	G2	28	C	500	40600				41100	4	4.834		795	for one (1)	
	G3	28	A	39450					39450	2	4.834		381	girder only.	
	G4	12	A	39450					39450	8	0.888	280			
	G5	12	B	200	2100	103			4703	352	0.888	1470			
	G6a	12	C	1000	50	340	200	150	2480	352	0.888	775			
	G6b	12	C	1000	150	340	200	150	2680	352	0.888	838			
	G7	12	D	365	160	550	150		2355	352	0.888	736			
	G8	12	E	150	630	1900			5070	26	0.888	126		2.) Splice	
	G9	12	F	611	1450	570			4651	22	0.888	90		length not	
	G10a	25	A	2700					2700	32	3.853		333	included.	
	G10b	25	A	2700					2700	16	3.853		166		
	G10c	25	A	2200					2200	36	3.853		305		
	G10d	28	A	2200					2200	12	4.834		128		
	G11a	25	G	300	1700				2000	32	3.853		247		
	G11b	25	G	300	1700				2000	16	3.853		123		
	G11c	25	G	300	1200				1500	36	3.853		208		
	G11d	28	G	300	1200				1500	12	4.834		87	3.) Bar mark	
	G12a	25	H	1200	250				2650	8	3.854		62	G10 is for	
	G12b	25	G	300	1200				1500	2	3.854		8	interior girder.	
G12c	28	G	500	1200				1700	2	4.834		16			
G13	16	J	50	285				4477	10	1.578		71			
												(EXTERIOR)	TOTAL = 4386	2511	4.) Bar mark
												(INTERIOR)	TOTAL = 4386	2778	G11 is for

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

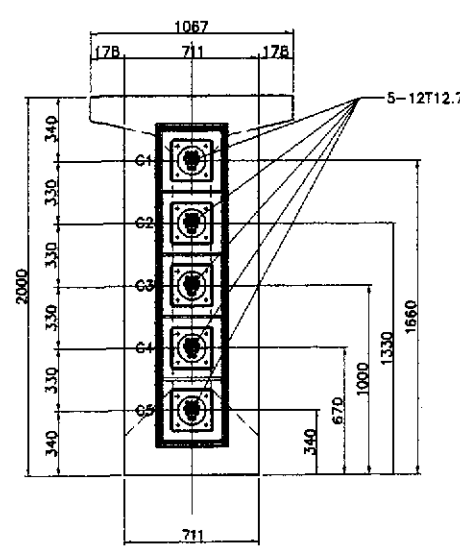
	DATE: 10/2/02 DESIGNED: P. DE JESUS CHECKED: J. C. SANTOS SUBMITTED: 10/2/02	SIGNATURE: [Signature] TEAM LEADER	REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS BUREAU OF DESIGN	FUHL - FINO Submitted By:	DANILLO C. TRAJANO Project Director	Reviewed By:	ADRIANO M. DORGY Chief, Bridges Division	Recommended By:	GILBERTO S. REYES Director IV (CIC)	Approved By:	(See cover sheet for Signature) MANUEL M. BONGAON Undersecretary	Approved By:	(See cover sheet for Signature/Approval) 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 IV	SCALE : AS SHOWN FULL SIZE A1	SHEET CONTENTS : BRIDGE NO.14 TALAVERA RIVER BRIDGE AASHTO GIRDER TYPE VI (MODIFIED) (REINF. DET. EXP.-FIX SUPPORT) - 2 OF 2 (INITIAL STAGE)	SHEET NO. : B14U-45
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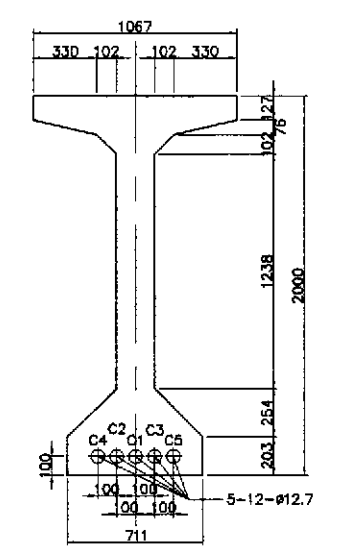
A PLAN
SCALE 1:80



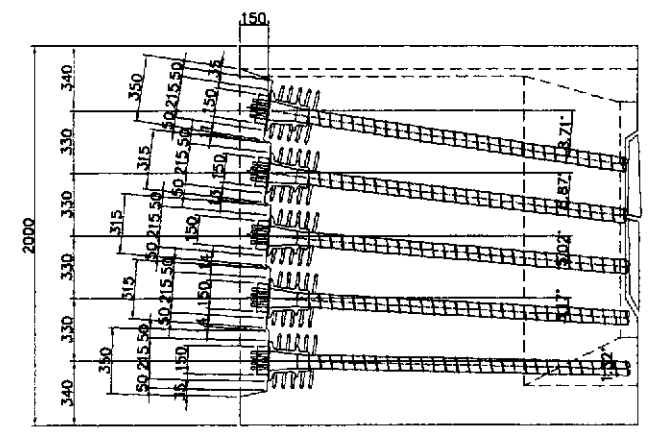
B ELEVATION
SCALE 1:80



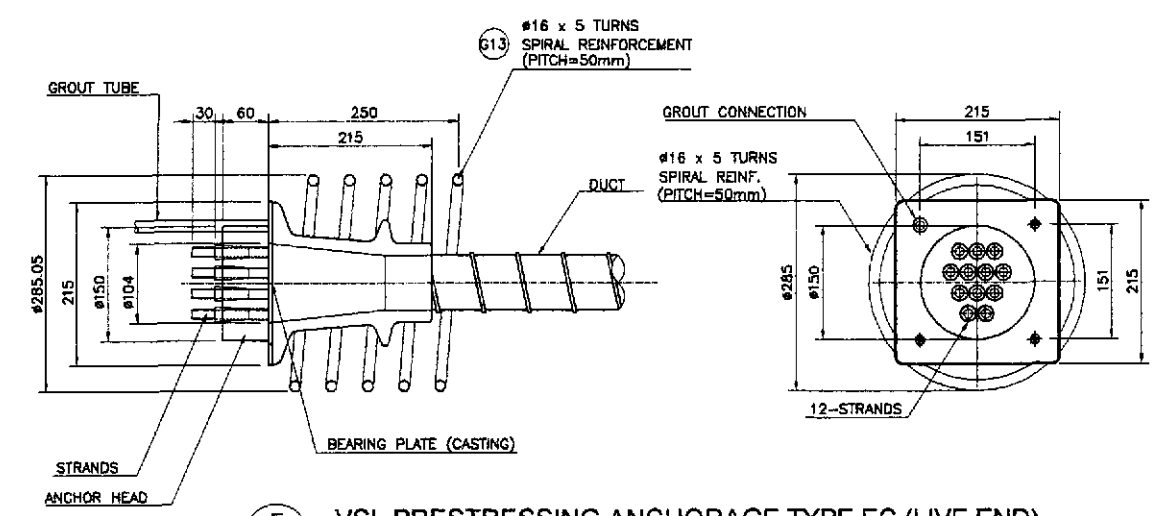
C SECTION @ GIRDER END
SCALE 1:20



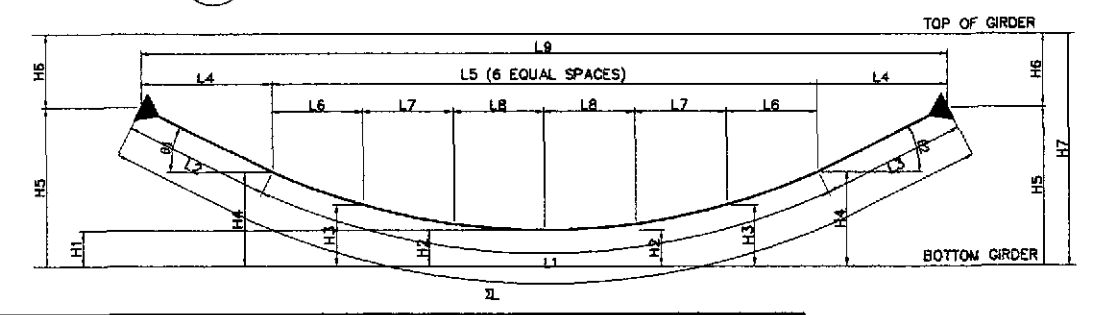
D SECTION @ MIDSPAN
SCALE 1:20



E ANCHORAGE DETAILS
SCALE 1:20



F VSL PRESTRESSING ANCHORAGE TYPE EC (LIVE END)
SCALE 1:5



TENDON VERTICAL PROFILE

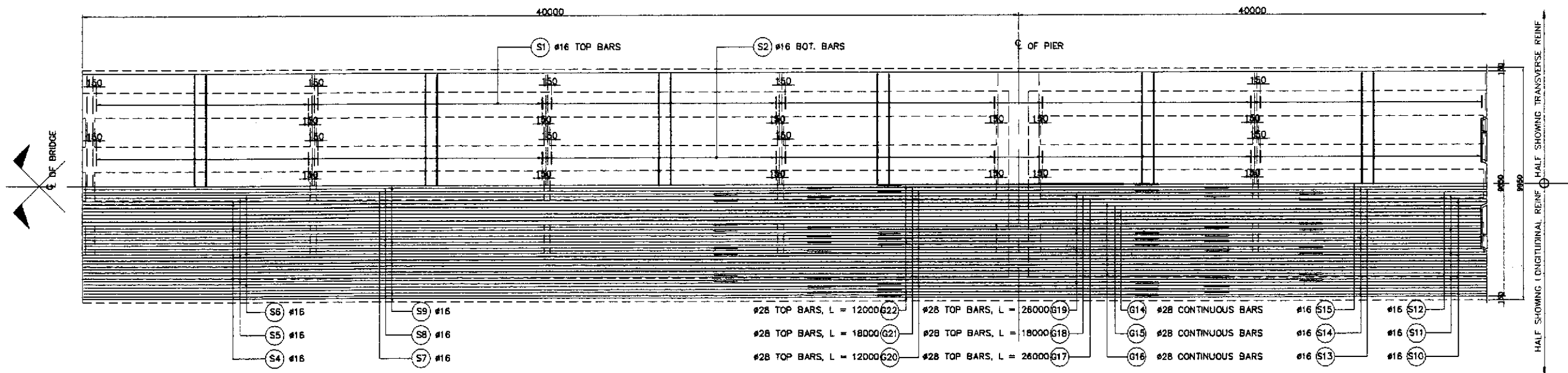
TENDON DESIGNATION	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	L5 (mm)	L6 (mm)	L7 (mm)	L8 (mm)	L9 (mm)	L (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H4 (mm)	H5 (mm)	H6 (mm)	H7 (mm)	θ1 (degree)	θ2 (degree)	TYPE - SIZE	FORCE IN TENDON @ JACK BEFORE LOCK OFF (kN)	ANCHORAGE SLIP (mm)	TENDON PRESTRESS FORCE AFTER LOCK-OFF @ MIDSPAN (kN)	TENDON LENGTH (mm)	TOTAL LENGTH (mm)	TOTAL WEIGHT OF TENDON (mm)
C1	36414	1500	1500	1483	36285	6047.5	6047.5	6047.5	39250	39414	100	248	692	1431	1660	340	2000	8.71°	8.71°	12-dia. 12.7	1654	6	1387	39414	472,968	368.550
C2	36352	1500	1500	1489	36272	6045.3	6045.3	6045.3	39250	39352	100	217	567	1150	1330	670	2000	6.87°	6.87°	12-dia. 12.7	1654	6	1387	39352	472,224	365.973
C3	36304	1500	1500	1494	36262	6043.7	6043.7	6043.7	39250	39304	100	186	442	868	1000	1000	2000	5.02°	5.02°	12-dia. 12.7	1654	6	1387	39304	471,648	365.527
C4	36272	1500	1500	1498	36255	6042.5	6042.5	6042.5	39250	39272	100	155	317	587	670	1330	2000	3.17°	3.17°	12-dia. 12.7	1654	6	1387	39272	471,264	365.229
C5	36254	1500	1500	1500	36251	6041.8	6041.8	6041.8	39250	39254	100	124	192	305	340	1660	2000	1.32°	1.32°	12-dia. 12.7	1654	6	1387	39254	471,048	365.062
TOTAL																								2,359,152	1,828,342	

NOTE :
FRICTION COEFFICIENTS USED IN THE DESIGN ARE :
k = 0.001/m
μ = 0.200/RAD.

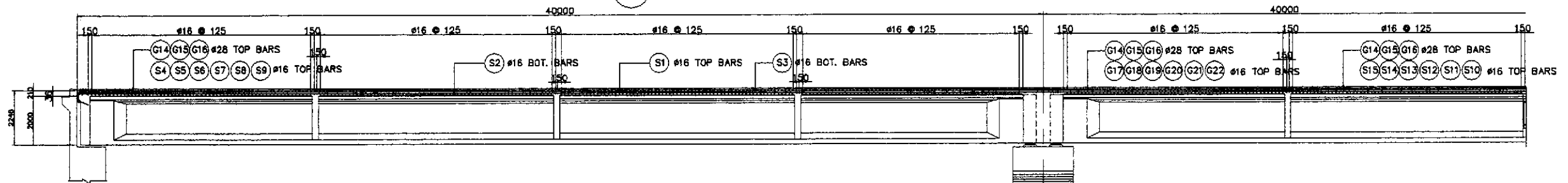
NOTE : AFTER FRICTION LOSS AND WEDGE DRAW-IN ONLY.

1 39550 SPAN (GIRDER EXP-FIX)
SCALE AS SHOWN

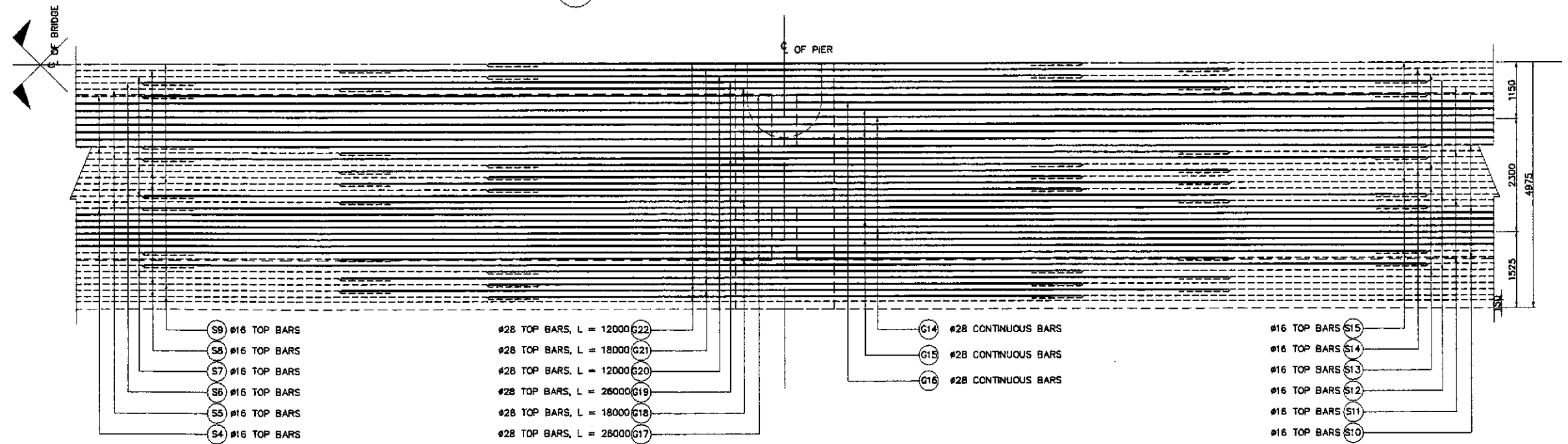
	DESIGNED: 10/12/02 CHECKED: 10/14/02 SUBMITTED: 10/21/02	DATE: 10/21/02 SIGNATURE: F. P. DE JESUS TEAM LEADER		REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS BUREAU OF DESIGN OFFICE OF THE SECRETARY	PROJECT AND LOCATION : THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses) CABANATUAN BYPASS - CONTRACT PACKAGE IV	SCALE : AS SHOWN FULL SIZE A1	SHEET CONTENTS : BRIDGE NO.14 TALAVERA RIVER BRIDGE AASHTO GIRDER TYPE VI (MODIFIED) (PRESTRESSING DET. (EXP-FIX SUPPORT)) (INITIAL STAGE)	SHEET NO. : B14U-46
	DANILLO C. TRAJANO Project Director	ADRIANO M. DOROS Chief, Bridge Division	GILBERTO S. REYES Director in Charge	MANUEL M. BONGAN Undersecretary	SIMON A. BATUMANONG Secretary	SCALE : AS SHOWN FULL SIZE A1	SHEET CONTENTS : BRIDGE NO.14 TALAVERA RIVER BRIDGE AASHTO GIRDER TYPE VI (MODIFIED) (PRESTRESSING DET. (EXP-FIX SUPPORT)) (INITIAL STAGE)	SHEET NO. : B14U-46



A PLAN SHOWING REINFORCEMENT
SCALE 1:100



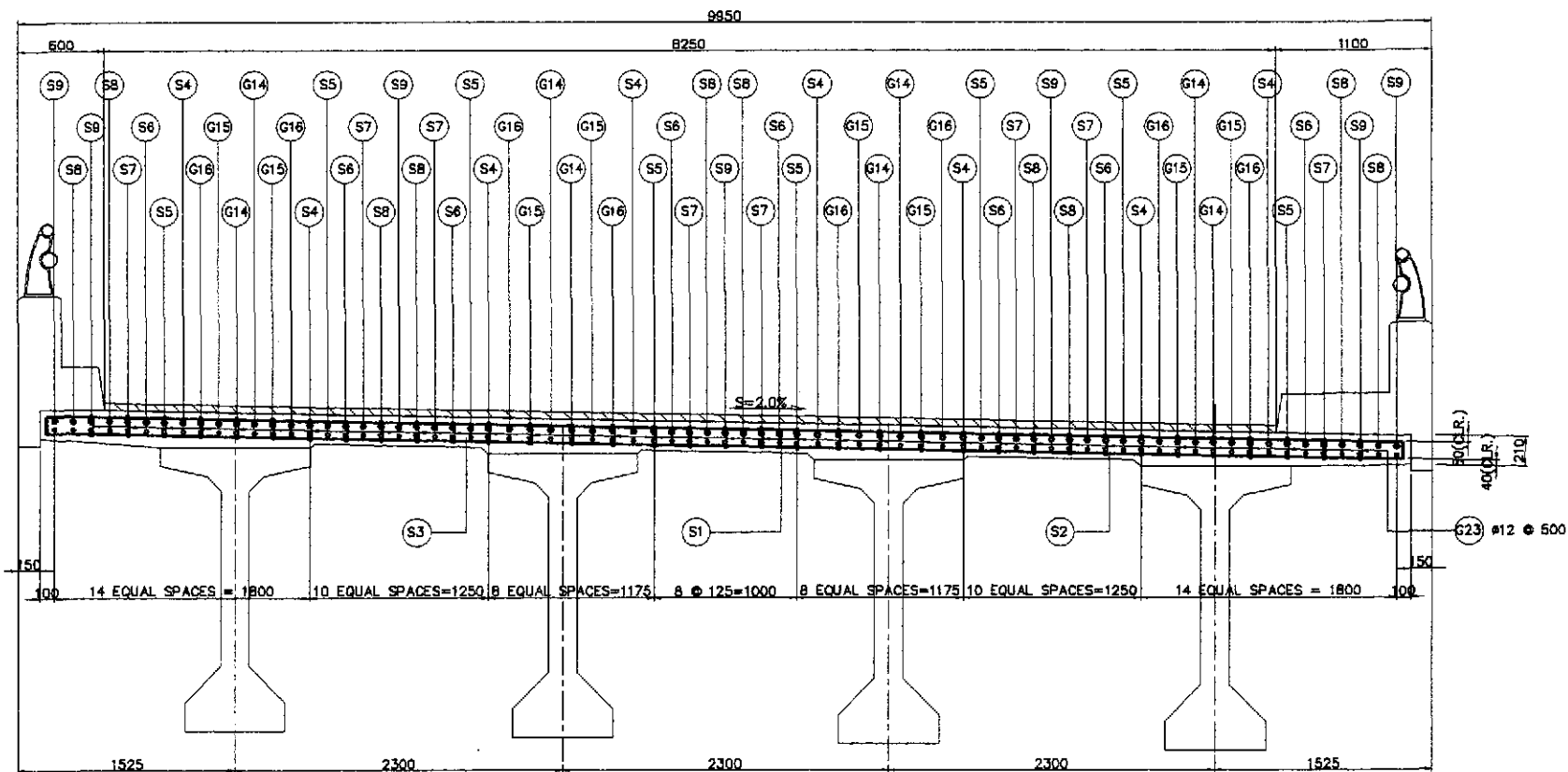
B LONGITUDINAL SECTION SHOWING REINF.
SCALE 1:100



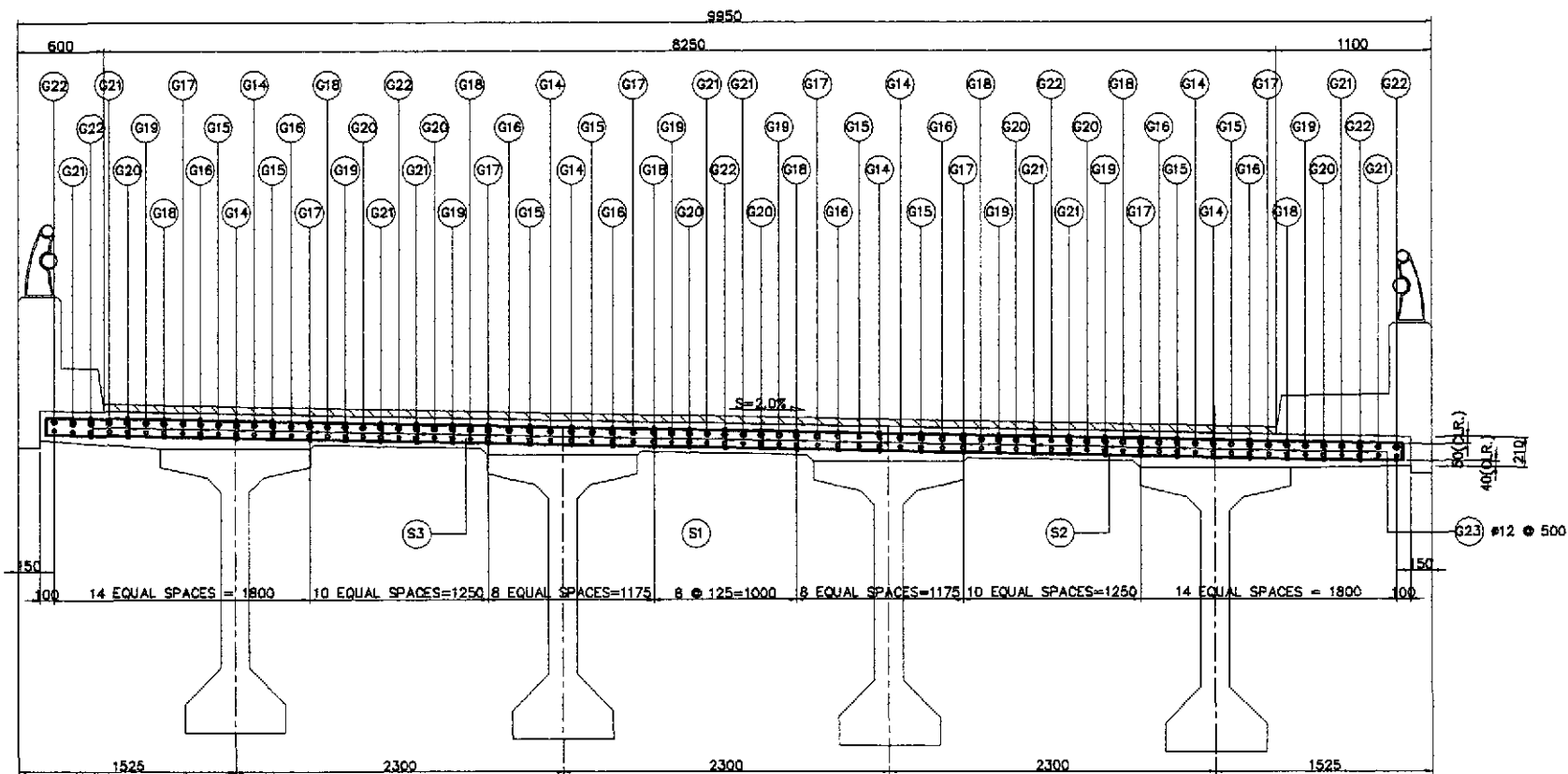
C REINFORCEMENT OVER PIER
SCALE 1:50

1 DECK SLAB REINFORCEMENT DETAILS
SCALE AS SHOWN

	DESIGNED	DATE	SIGNATURE	REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS			PROJECT AND LOCATION :	SCALE :	SHEET CONTENTS :	SHEET NO. :
	CHECKED	10/19/02	J. C. SANTOS	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 FULL SIZE A1	BRIDGE NO.14 TALAVERA RIVER BRIDGE DECK SLAB REINF. DETAILS - 1 OF 3 (INITIAL STAGE)	B14U-47
	SUBMITTED	10/21/02	M. R. ROCHA TEAM LEADER	FUHL - PMO Submitted By: DANILO C. TRAJANO Project Director	Reviewed By: ADRIANO M. DORGY Chief, Bridges Division	Recommended By: GILBERTO S. REYES Director IV (C/C)				

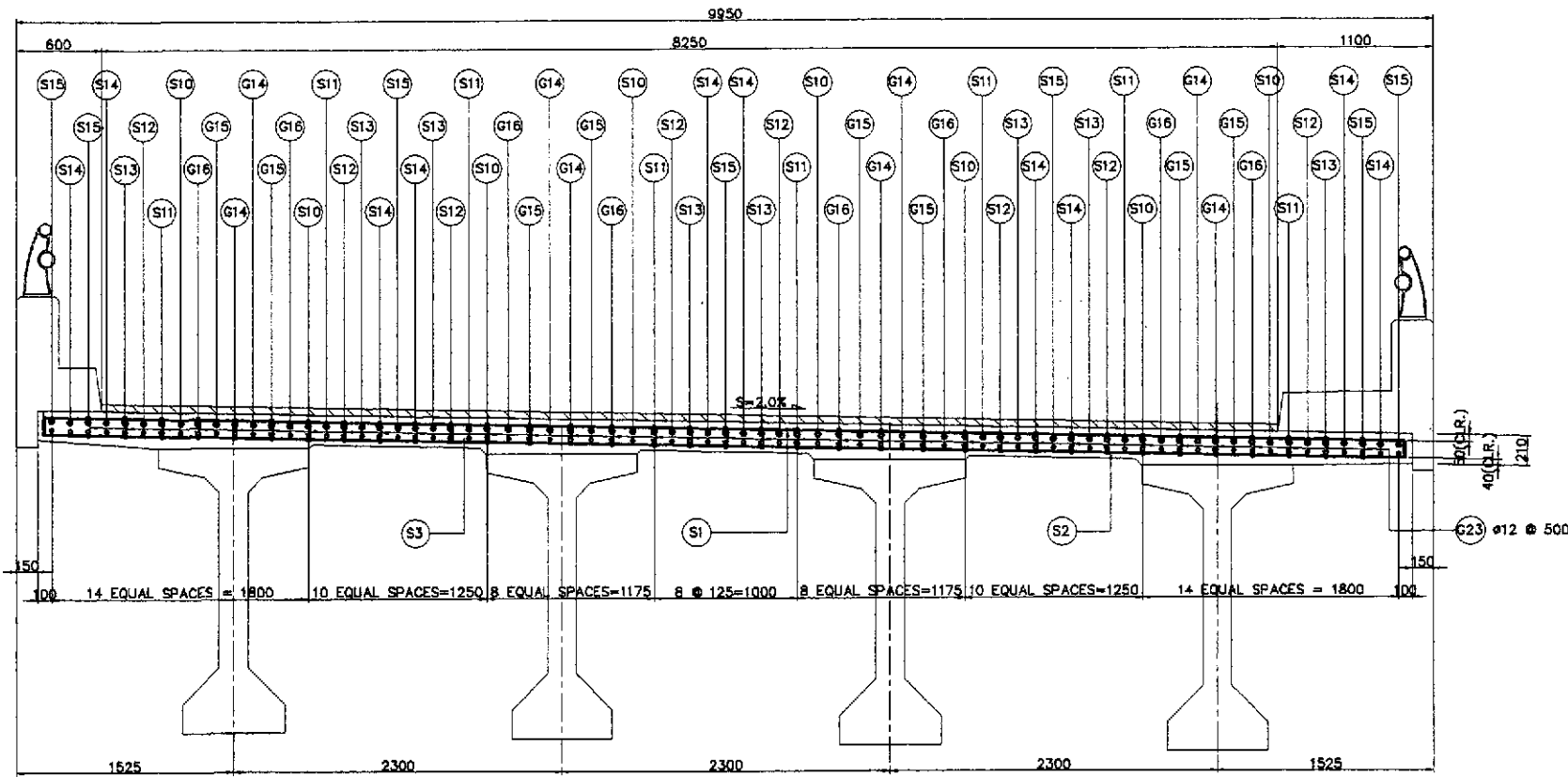


A TRANSVERSE SECTION NEAR ABUTMENT
SCALE 1:25

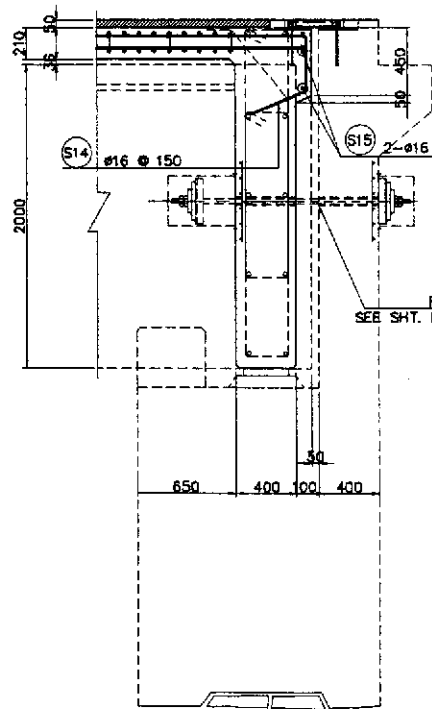


B TRANSVERSE SECTION OVER PIER
SCALE 1:25

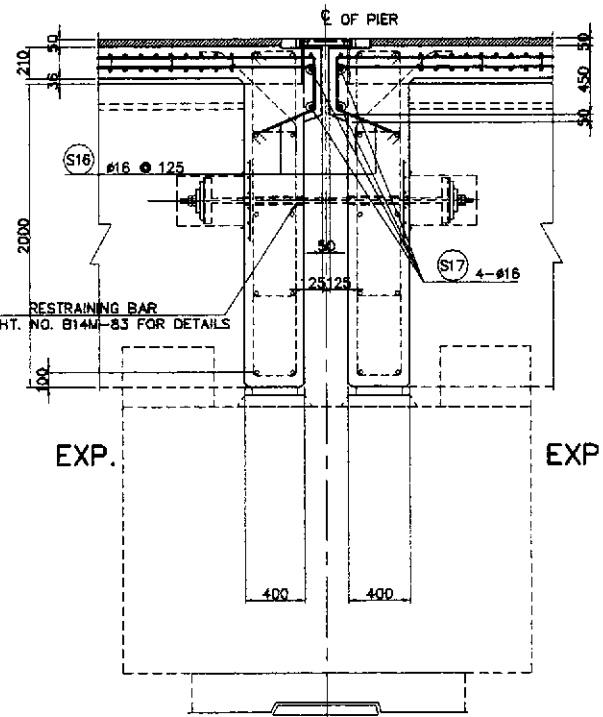
	DATE	SIGNATURE	REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS			PROJECT AND LOCATION : THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Pardel, Cabanatuan and San Jose Bypasses) CABANATUAN BYPASS - CONTRACT PACKAGE IV	SCALE : AS SHOWN FULL SIZE A1	SHEET CONTENTS : BRIDGE NO.14 TALAVERA RIVER BRIDGE DECK SLAB REINF. DETAILS - 2 OF 3 (INITIAL STAGE)	SHEET NO. : B14U-48
	DESIGNED	10/12/02	F. P. DE JESUS	BUREAU OF DESIGN	OFFICE OF THE SECRETARY				
CHECKED	10/19/02	J. C. SANTOS	Submitted By:	Reviewed By:	Recommended By:				
SUBMITTED	10/21/02	M. R. RIVERA TEAM LEADER	DANILO C. TRAJANO Project Director	ADRIANO M. DORCOY Chief, Bridges Division	GILBERTO S. REYES Director IV (CIC)	MANUEL M. BONGAN Undersecretary	SIMEON A. DATUMANONG Secretary		



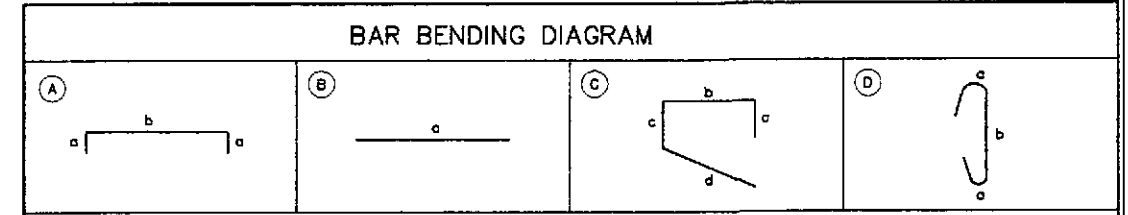
C TRANSVERSE SECTION NEAR PIER
SCALE 1:25



C DETAIL @ ABUTMENT
SCALE 1:25



D DETAIL @ EXP.-EXP. PIER
SCALE 1:25



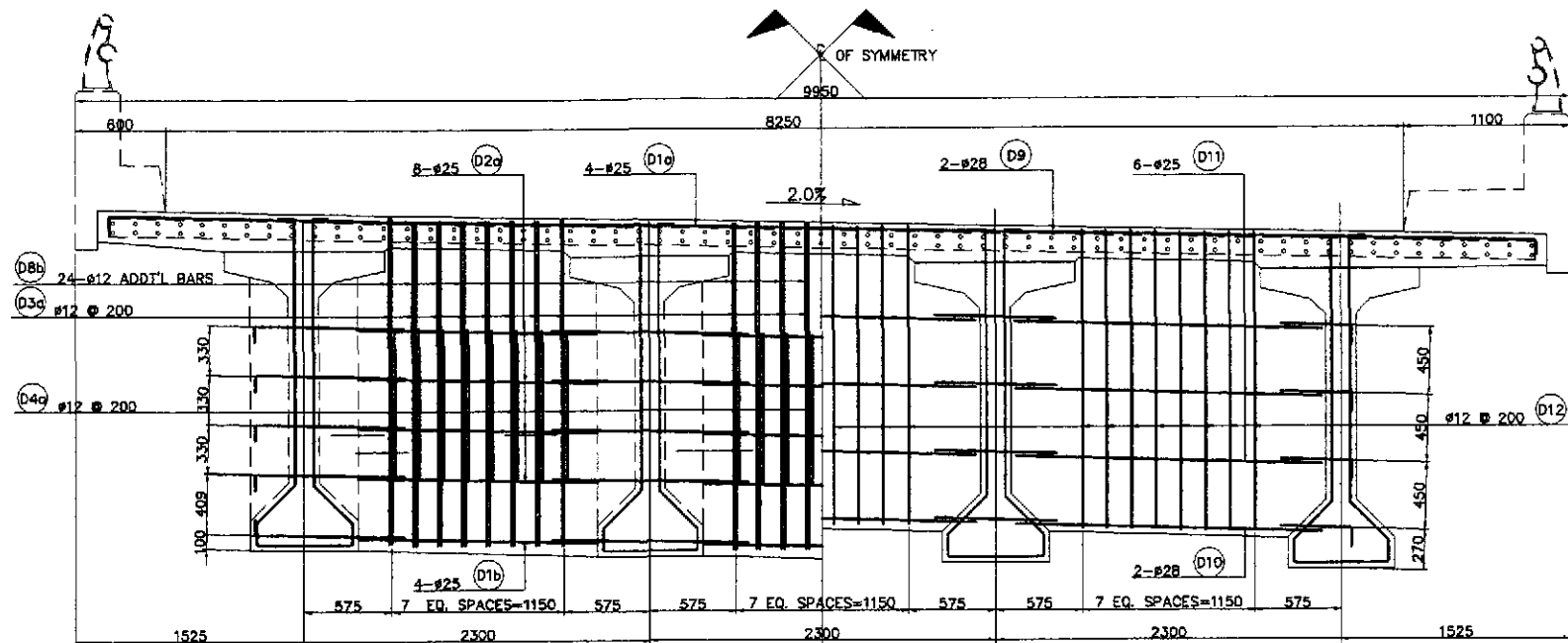
SCHEDULE OF REINFORCEMENT

LOCATION	BAR MARK	SIZE (mm)	BEND TYPE	DIMENSION(mm) OUT TO OUT					LENGTH (mm)	NO. REQ'D.	UNIT WEIGHT (kg/m)		WEIGHT (kg)
				a	b	c	d	e			GRADE 40	GRADE 60	
DECKSLAB	S1	16	A	100	9550				9750	900	1.578	13847	
	S2	16	A	100	9550				9750	900	1.578	13847	
	S3	16	B		119825				119825	73	1.578	13803	
	S4	16	B		26900				26900	16	1.578	679	
	S5	16	B		30900				30900	16	1.578	780	
	S6	16	B		26900				26900	16	1.578	679	
	S7	16	B		33900				33900	16	1.578	856	
	S8	16	B		30900				30900	20	1.578	975	
	S9	16	B		33900				33900	14	1.578	749	
	S10	16	B		14000				14000	8	1.578	177	
	S11	16	B		22000				22000	8	1.578	278	
	S12	16	B		14000				14000	8	1.578	177	
	S13	16	B		28000				28000	8	1.578	353	
	S14	16	B		22000				22000	10	1.578	347	
	S15	16	B		28000				28000	7	1.578	309	
	S16	16	C		50	420	350	423	1243	146	1.578	286	
	S17	16	B		9550				9550	4	1.578	60	
	G14	28	B		119840				119840	8	4.834	4634	
	G15	28	B		119840				119840	8	4.834	4634	
	G16	28	B		119840				119840	8	4.834	4634	
	G17	28	B		26000				26000	16	4.834	2011	
	G18	28	B		18000				18000	16	4.834	1392	
	G19	28	B		26000				26000	16	4.834	2011	
G20	28	B		12000				12000	16	4.834	926		
G21	28	B		18000				18000	20	4.834	1740		
G22	28	B		12000				12000	14	4.834	812		
G23	12	D		150	110			410	4080	0.888	1485		
TOTAL WEIGHT=											49867	22796	

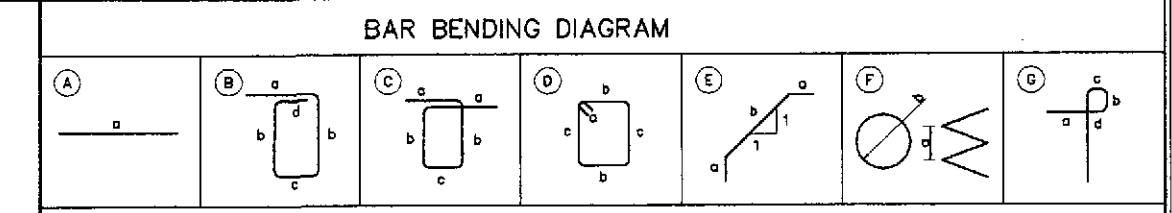
1.) SPLICE LENGTH NOT INCLUDED
 2.) MINIMUM LENGTH OF SPLICE IS 1000mm
 3.) SPlicing OF CONTINUOUS BARS (#28) IS ALLOWED ONLY
 4.) 6000mm FROM CENTERLINE OF PIERS
 5.) ESTIMATED QUANTITY FOR ONE(1) SPAN CONTINUOUS
 (3 SPANS @ 40000) ONLY

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

	DATE	SIGNATURE	REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS			PROJECT AND LOCATION :	SCALE :	SHEET CONTENTS :	SHEET NO. :	
	DESIGNED	10/12/02	P. DE JESUS	BUREAU OF DESIGN			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.14 TALavera RIVER BRIDGE DECK SLAB REINF. DETAILS - 3 OF 3	B14U-49
	CHECKED	10/17/02	J.C. SANTOS	OFFICE OF THE SECRETARY			CABANATUAN BYPASS - CONTRACT PACKAGE IV	FULL SIZE A1	(INITIAL STAGE)	
SUBMITTED	10/21/02	Mr. Kuroki TEAM LEADER	Submitted By:	Reviewed By:	Recommended By:					
			DANILO C. TRAJANO Project Director	ADRIANO M. DORCY Chief, Bridges Division	GILBERTO S. REYES Director IV (OIC)	MANUEL M. BONDAN Undersecretary	SIMEON A. DATUMANONG Secretary			



A TRANSVERSE SECTION
SCALE 1:25

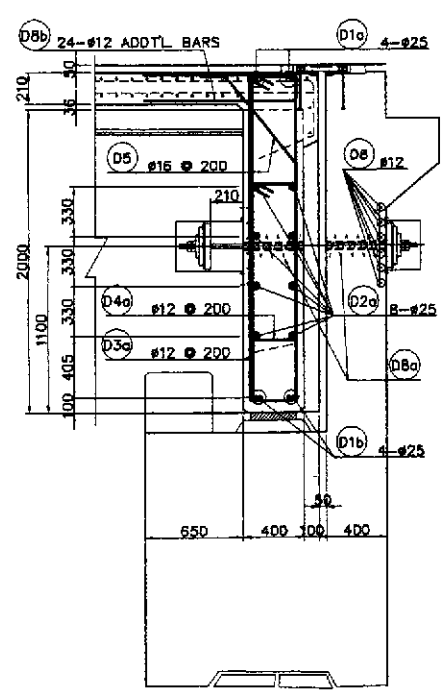


SCHEDULE OF REINFORCEMENT

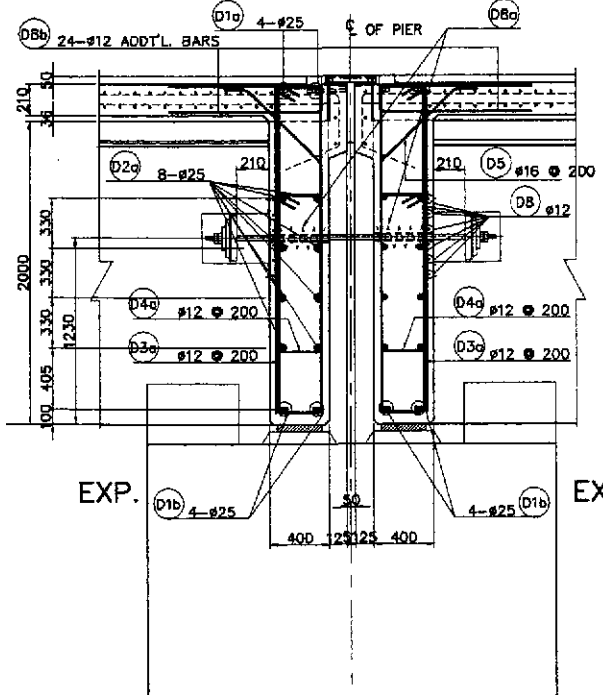
LOCATION	BAR MARK	SIZE (mm)	BEND TYPE	DIMENSION (mm) OUT TO OUT						LENGTH (mm)	NO. REQ'D.	UNIT WEIGHT (kg/m)	WEIGHT (kgs)	
				a	b	c	d	e	f				GRADE 40	GRADE 60
END DIAPHRAGM & PIER DIAPHRAGM	D1a	25	A	9550						9550	24	3.853		883
	D1b	25	A	1580						1580	72	3.853		438
	D2a	25	A	1580						1580	144	3.853		877
	D2b	25	A	7500						7500	20	3.853		578
	D3a	12	B	1000	2170	300	250			5890	144	0.888	753	
	D3b	12	C	1500	2170	500				7840	92	0.888	640	
	D3c	12	D	150	1300	2170				7240	48	0.888	309	
	D4a	12	B	150	300	1550				4000	144	0.888	511	
	D4b	12	B	150	1300	1550				6000	48	0.888	256	
	D4c	12	B	150	500	1550				4400	92	0.888	359	
	D5	16	E	150	770					1070	144	1.578	243	
	D6	25	A	9550						9550	8	3.853		294
D7	25	A	7500						7500	8	3.853		231	
D8	12	A	750						750	288	0.888	192		
D8a	6	F	75	150					1885	42	0.222	18		
D8b	12	G	1000	180	300	2100			3560	48	0.888	152		
SUB TOTAL =												3333	3301	
INTERMEDIATE DIAPHRAGM	D9	28	A	9550						9550	18	4.834		831
	D10	28	A	2000						2000	54	4.834		522
	D11	25	A	2000						2000	162	3.853		1248
	D12	12	D	150	150	1750				4100	216	0.888	786	
SUB TOTAL =												786	2601	
GRAND TOTAL WEIGHT =												4219	5902	

1.) ESTIMATED QUANTITIES FOR ONE (1) SPANS CONT. (3040 M)
2.) SIX(6) END DIAPHRAGMS
3.) TWO(2) PIER DIAPHRAGMS
4.) NINE(9) INTERMEDIATE DIAPHRAGMS

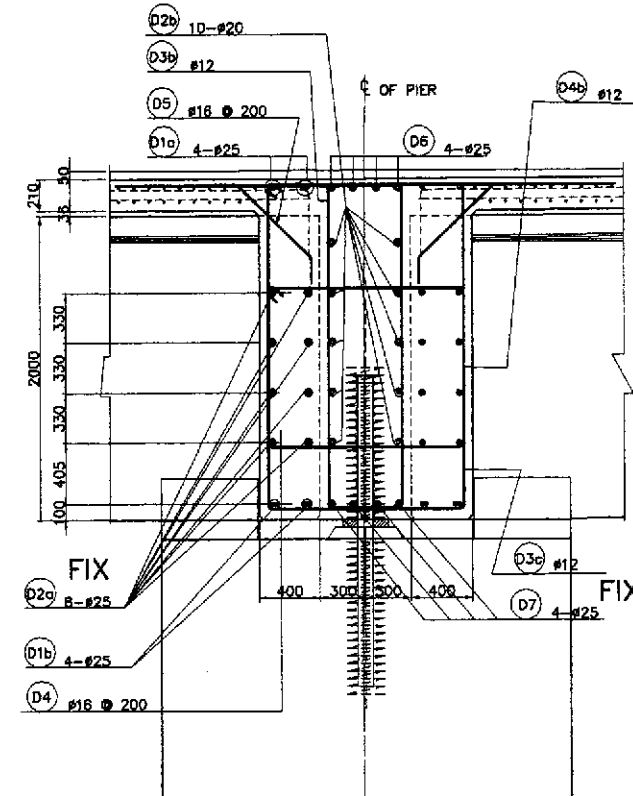
THE REINFORCEMENT SHOWN ON THIS TABLE IS FOR REFERENCE ONLY. THE CONTRACTOR SHOULD CHECK AND VERIFY ALL DIMENSIONS, SIZES AND QUANTITIES OF REINFORCEMENT.



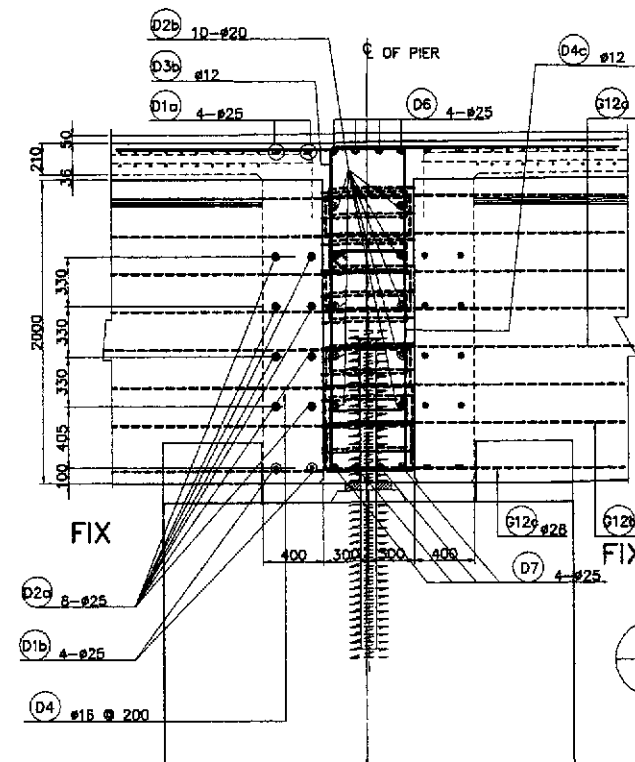
B SECTION @ ABUTMENT
SCALE 1:25



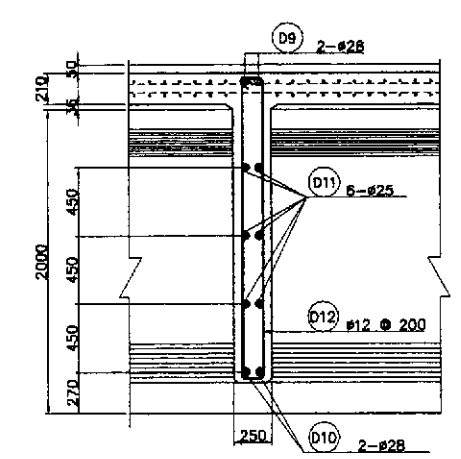
C SECTION @ EXP. PIER
SCALE 1:25



D-1 @ DIAPHRAGM
SCALE 1:25



D-2 @ GIRDER
SCALE 1:25



E SECTION @ INTERMEDIATE DIAPHRAGM
SCALE 1:25

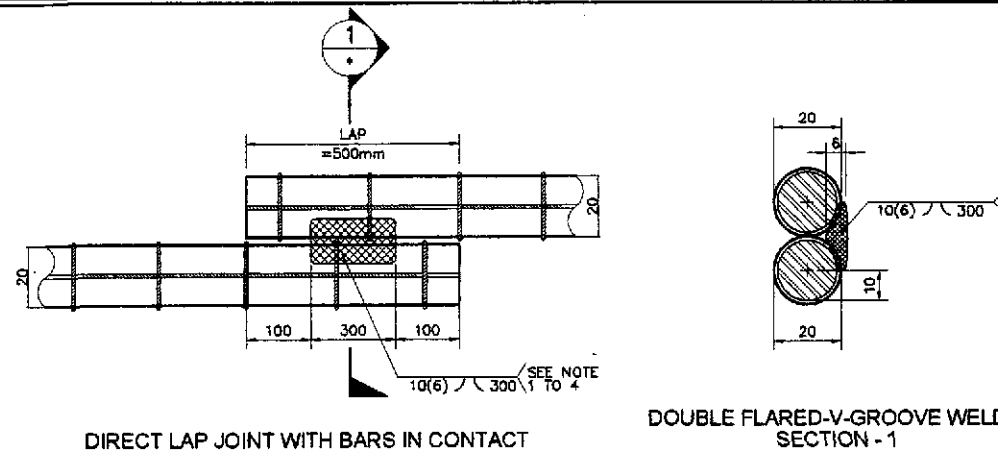
1 END, INTERMEDIATE & CONTINUITY DIAPHRAGM REINF. DETAILS
SCALE AS SHOWN

	DESIGNED	DATE	SIGNATURE	REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS				PROJECT AND LOCATION :	SCALE :	SHEET CONTENTS :	SHEET NO. :
	CHECKED	10/19/02	J.C. SANTOS	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) CABANATUAN BYPASS - CONTRACT PACKAGE IV	AS SHOWN	BRIDGE NO.14 TALAVERA RIVER BRIDGE END, INTERMEDIATE & CONTINUITY DIAPHRAGM REINFORCEMENT DETAILS (INITIAL STAGE)	B14U-50
SUBMITTED	10/21/02	M. K. SANTOS	Submitted By:	Reviewed By:	Recommended By:	Approved By:					
			DANILLO C. TRAJANO Project Director	ADRIANO M. DORAY Chief, Bridge Division	GILBERTO S. REYES Director IV (OC)	MANUEL M. BONDAN Undersecretary					

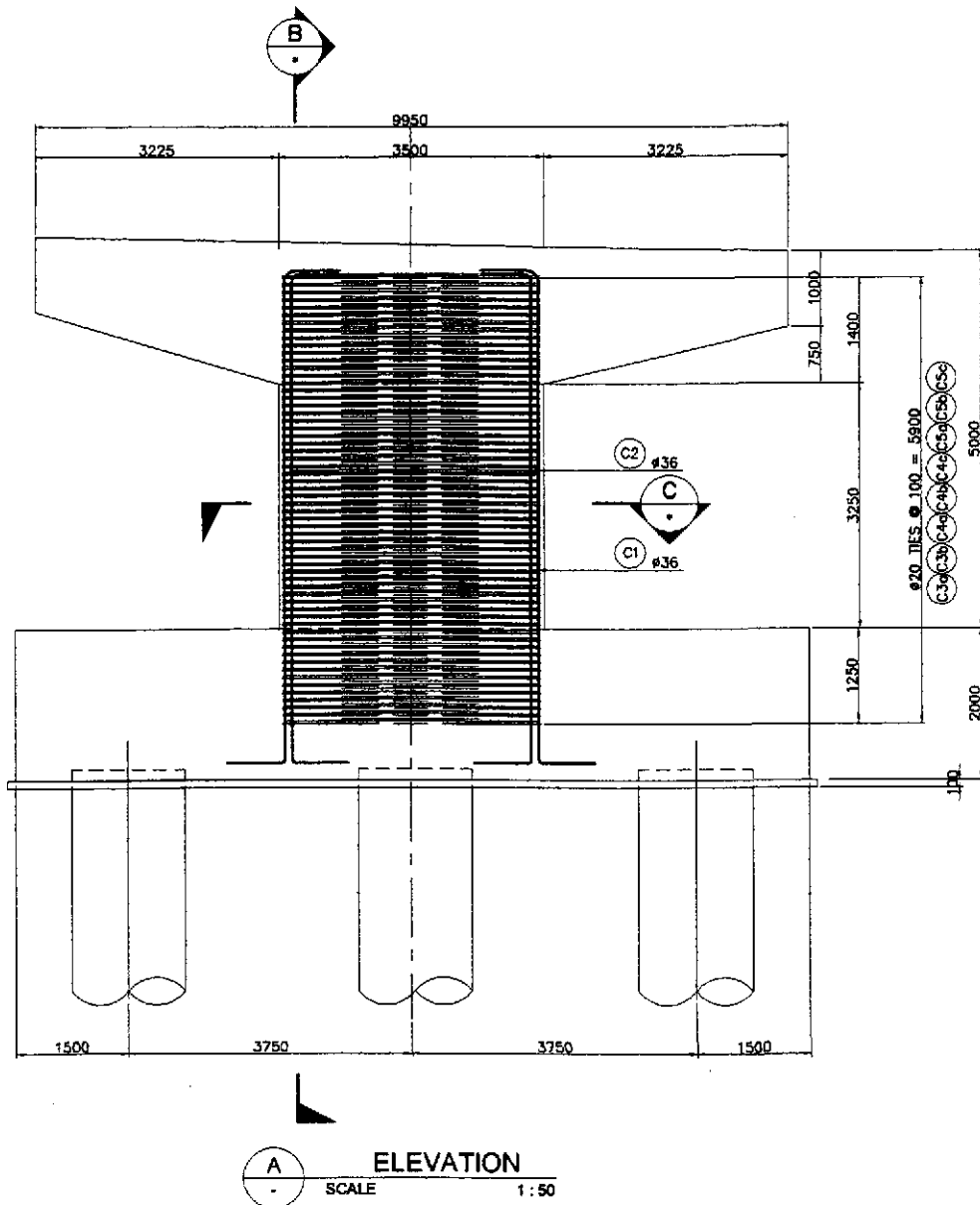
SUBSTRUCTURE REINFORCING DETAIL

NOTES ON LAP WELD CONNECTION

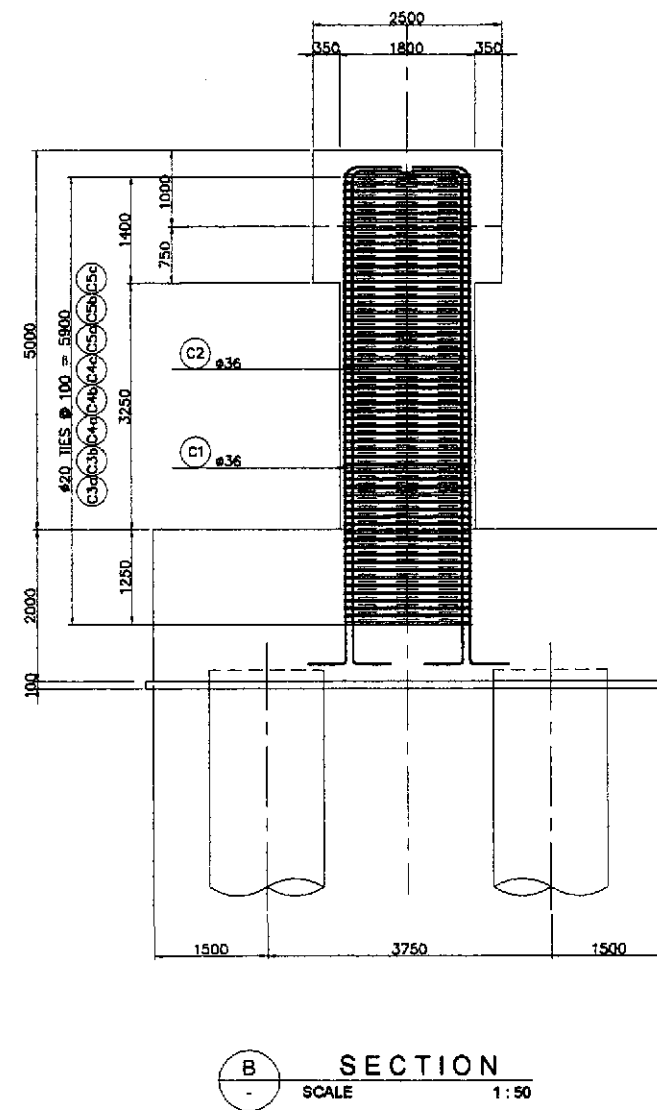
1. TIES REINFORCEMENT ARE LAP-WELD CONNECTED (FLARED-V-GROOVE TYPE).
2. WELDING SHOULD CONFORM TO ANSI/AWS D1.4-92 "STRUCTURAL WELDING CODE REINFORCEMENT STEEL".
3. USE ELECTRODE E90XX-X.
4. CARE SHOULD BE TAKEN NOT TO DAMAGE THE BORED PILE MAIN BARS DURING WELDING.



D DETAILS OF TIES REINF. LAP-WELD CONNECTION
NOT TO SCALE



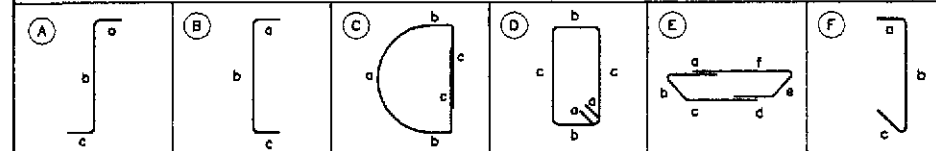
A ELEVATION
SCALE 1:50



B SECTION
SCALE 1:50

1 COLUMN REINFORCEMENT DETAILS (PIER 1 & PIER 2 - FIXED PIER)
SCALE AS SHOWN

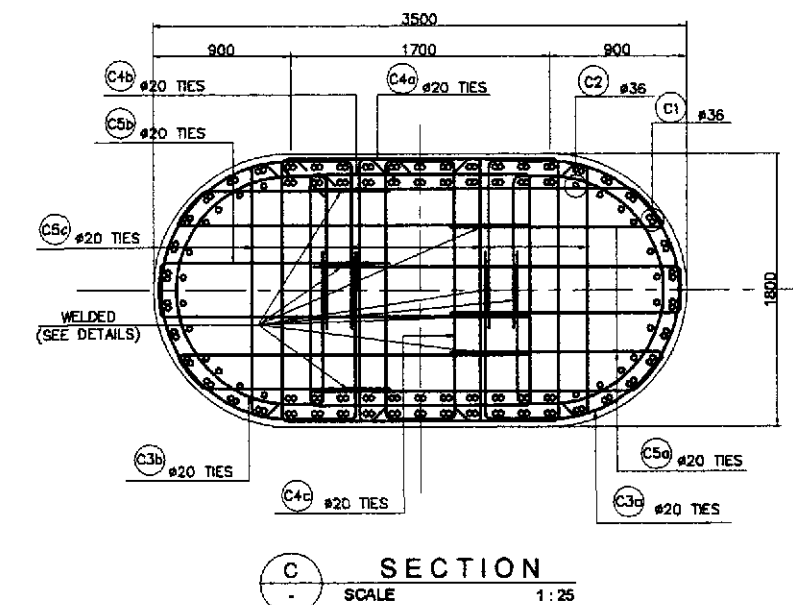
BAR BENDING DIAGRAM



SCHEDULE OF REINFORCEMENT

LOCATION	BAR MARK	SIZE (mm)	BEND TYPE	DIMENSION (mm) OUT TO OUT						LENGTH (mm)	NO. REQD.	UNIT WEIGHT (kg/m)	WEIGHT (kg)	
				a	b	c	d	e	f					
PIER 1	C1	36	A	650	6500	650					7800	92	7.990	5734
	C2	36	B	650	6500	650					7800	68	7.990	4238
	C3a	20	C	2580	390	1075					5510	120	2.466	1631
	C3b	20	C	2260	200	975					4610	120	2.466	1364
	C4a	20	D	280	1810	1850					7440	60	2.466	1101
	C4b	20	D	260	1440	1450					6300	60	2.466	932
	C4c	20	D	260	1650	450					4720	180	2.466	2104
	C5a	20	E	1420	280	2440	1420	280	1420		7260	120	2.466	2231
	C5b	20	E	1160	270	2340	1160	270	2340		5200	60	2.466	1074
	C5c	20	F	300	1650	350					2300	240	2.466	1361
TOTAL WEIGHT (GRADE 60) = 21,770 Kgs.														
PIER 2	C1	36	A	650	6500	650					7800	92	7.990	5734
	C2	36	B	650	6500	650					7800	68	7.990	4238
	C3a	20	C	2580	390	1075					5510	120	2.466	1631
	C3b	20	C	2260	200	975					4610	120	2.466	1364
	C4a	20	D	260	1810	1850					7440	60	2.466	1101
	C4b	20	D	260	1440	1450					6300	60	2.466	932
	C4c	20	D	260	1650	450					4720	180	2.466	2104
	C5a	20	E	1420	280	2440	1420	280	1420		7260	120	2.466	2231
C5b	20	E	1160	270	2340	1160	270	2340		5200	60	2.466	1074	
C5c	20	F	300	1650	350					2300	240	2.466	1361	
TOTAL WEIGHT (GRADE 60) = 21,770 Kgs.														

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

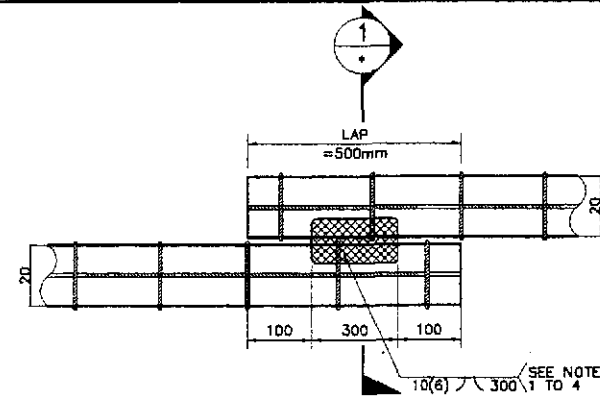


C SECTION
SCALE 1:25

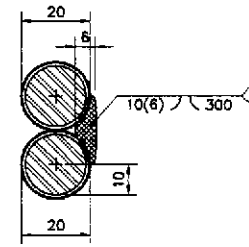
	DESIGNED	DATE	SIGNATURE	REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS				PROJECT AND LOCATION :	SCALE :	SHEET CONTENTS :	SHEET NO. :
	CHECKED	10/19/02	[Signature]	BUREAU OF DESIGN OFFICE OF THE SECRETARY				THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses)	AS SHOWN	BRIDGE NO.14 TALAVERA RIVER BRIDGE COLUMN REINFORCEMENT DETAILS (PIER 1 & PIER 2 - FIXED PIER) (INITIAL STAGE)	B14S-61
	SUBMITTED	10/21/02	[Signature]	Submitted By:	Reviewed By:	Recommended By:	Approved By:	FULL SIZE A1			
					DANILO C. TRAJANO Project Director	ADRIANO M. DORCY Chief, Bridges Division	GILBERTO S. REYES Director IV (OIC)	MANUEL M. BONICAN Undersecretary	SIMEON A. DATUMANONG Secretary		

NOTES ON LAP WELD CONNECTION

1. TIES REINFORCEMENT ARE LAP-WELD CONNECTED (FLARED-V-GROOVE TYPE).
2. WELDING SHOULD CONFORM TO ANSI/AWS D1.4-92 "STRUCTURAL WELDING CODE REINFORCEMENT STEEL".
3. USE ELECTRODE E90XX-X.
4. CARE SHOULD BE TAKEN NOT TO DAMAGE THE BORED PILE MAIN BARS DURING WELDING.



DIRECT LAP JOINT WITH BARS IN CONTACT

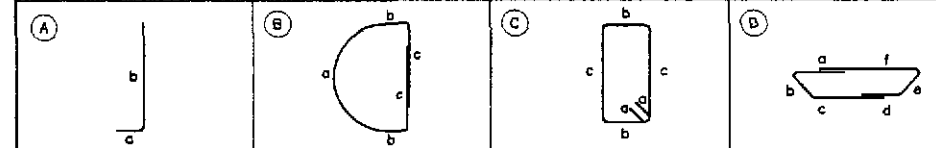


DOUBLE FLARED-V-GROOVE WELD SECTION - 1

DETAILS OF TIES REINF. LAP-WELD CONNECTION



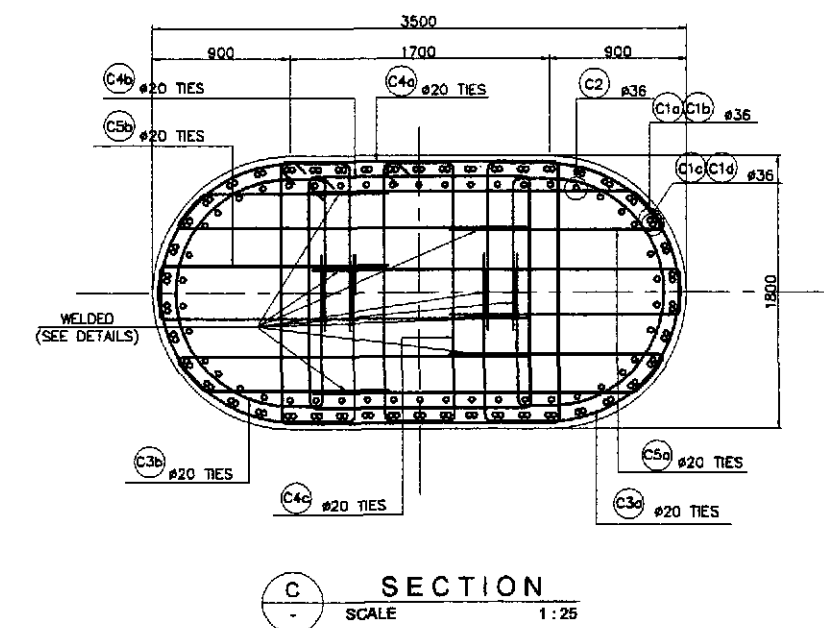
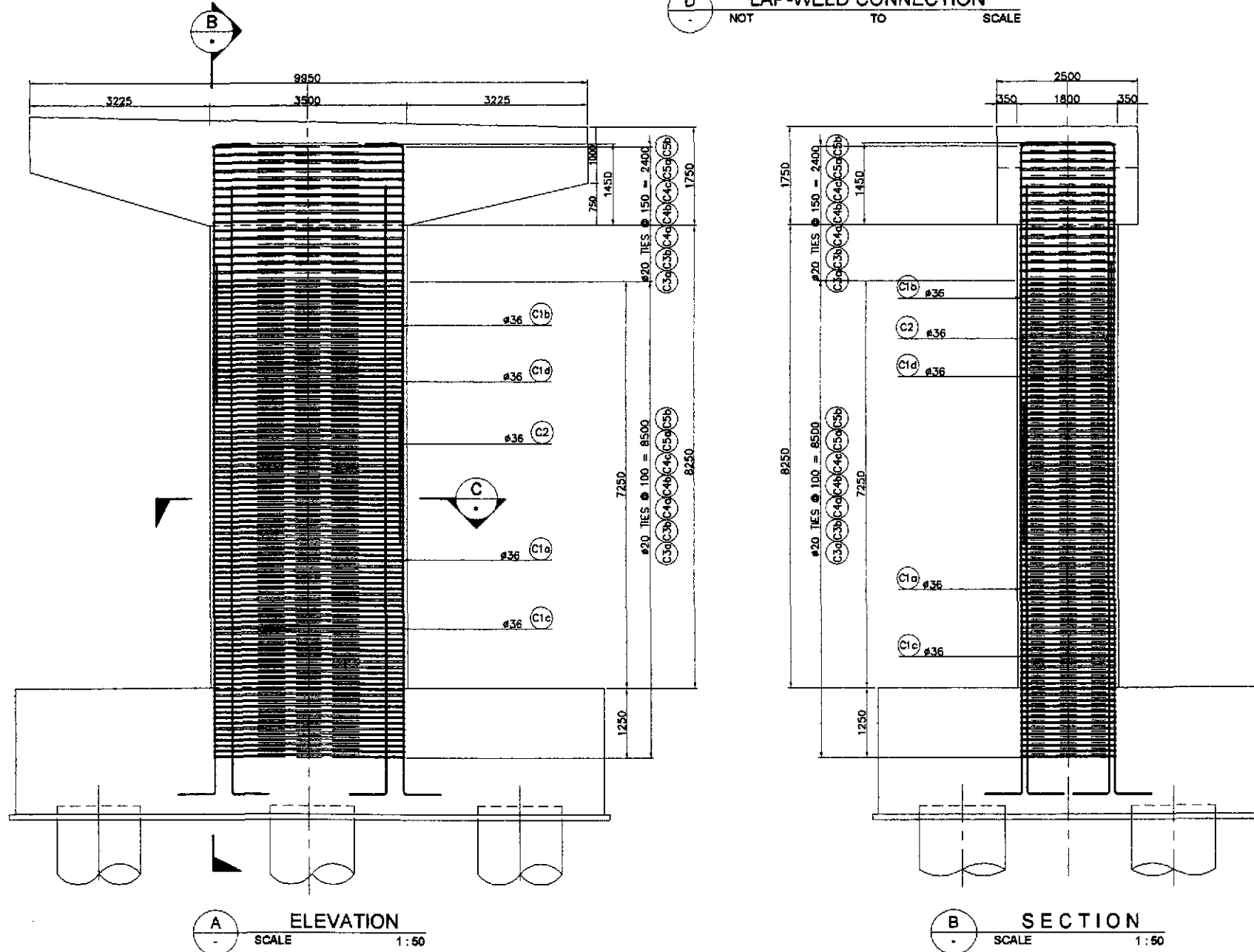
BAR BENDING DIAGRAM



SCHEDULE OF REINFORCEMENT

LOCATION	BAR MARK	SIZE (mm)	BEND TYPE	DIMENSION(mm) OUT TO OUT						LENGTH (mm)	NO. REQ'D.	UNIT WEIGHT (kg/m)	WEIGHT (kg)
				a	b	c	d	e	f				
PIER 4, PIER 5, PIER 7 & PIER 8	C1a	36	A	850	6750					7400	46	7.990	2720
	C1b	36	A	650	6900					7550	46	7.990	2775
	C1c	36	A	650	8950					9600	46	7.990	3526
	C1d	36	A	650	4700					5350	46	7.990	1966
	C2	36	A	650	11350					12000	46	7.990	4410
	C3a	20	B	2580	390	1075				5510	206	2.466	2799
	C3b	20	B	2260	200	975				4610	206	2.466	2342
	C4a	20	C	260	1810	1650				7440	103	2.466	1890
	C4b	20	C	260	1440	1450				6300	103	2.466	1600
	C4c	20	C	260	460	1650				4740	309	2.466	3612
C5a	20	D	1160	270	2340	1160	270	2340	7540	206	2.466	3830	
C5b	20	D	1420	280	2440	1420	280	1420	7260	103	2.466	1844	
TOTAL WEIGHT (GRADE 60) = 33,316 Kgs.													

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

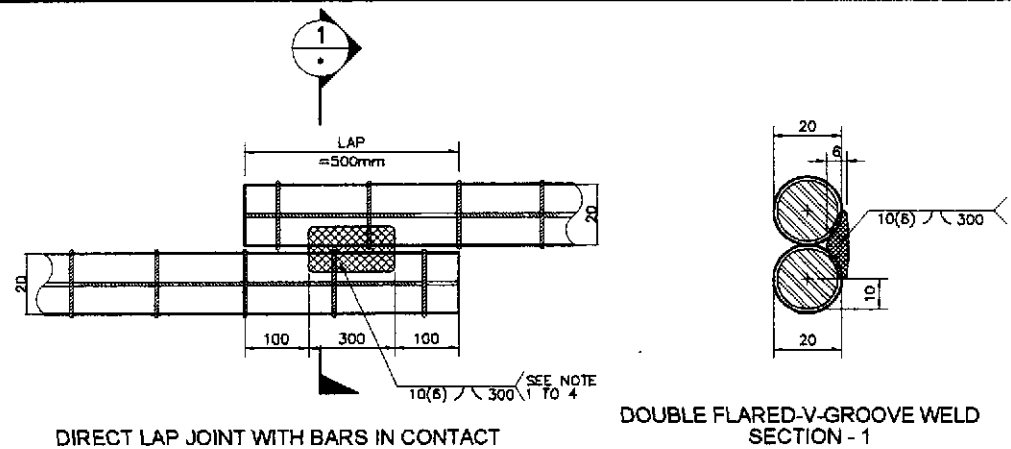


1 COLUMN REINFORCEMENT DETAILS (PIER 4, PIER 5, PIER 7 & PIER 8 - FIXED PIERS)

	DESIGNED	DATE	SIGNATURE	REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS			PROJECT AND LOCATION :	SCALE :	SHEET CONTENTS :	SHEET NO. :
	CHECKED	10/19/02	F. P. DE JESUS	BUREAU OF DESIGN			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.14 TALAVERA RIVER BRIDGE COLUMN REINFORCEMENT DETAILS (PIERS P4, P5, P7 & P8 - FIXED PIER) (INITIAL STAGE)	B14S-62
	SUBMITTED	10/21/02	J. E. SANTOS	Submitted By:	Reviewed By:	Recommended By:	CABANATUAN BYPASS - CONTRACT PACKAGE IV	FULL SIZE A1		

NOTES ON LAP WELD CONNECTION

1. TIES REINFORCEMENT ARE LAP-WELD CONNECTED (FLARED-V-GROOVE TYPE).
2. WELDING SHOULD CONFORM TO ANSI/AWS D1.4-92 "STRUCTURAL WELDING CODE REINFORCEMENT STEEL".
3. USE ELECTRODE E90XX-X.
4. CARE SHOULD BE TAKEN NOT TO DAMAGE THE BORED PILE MAIN BARS DURING WELDING.



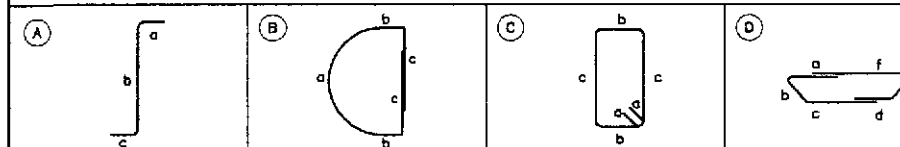
DIRECT LAP JOINT WITH BARS IN CONTACT

DOUBLE FLARED-V-GROOVE WELD SECTION - 1

DETAILS OF TIES REINF. LAP-WELD CONNECTION



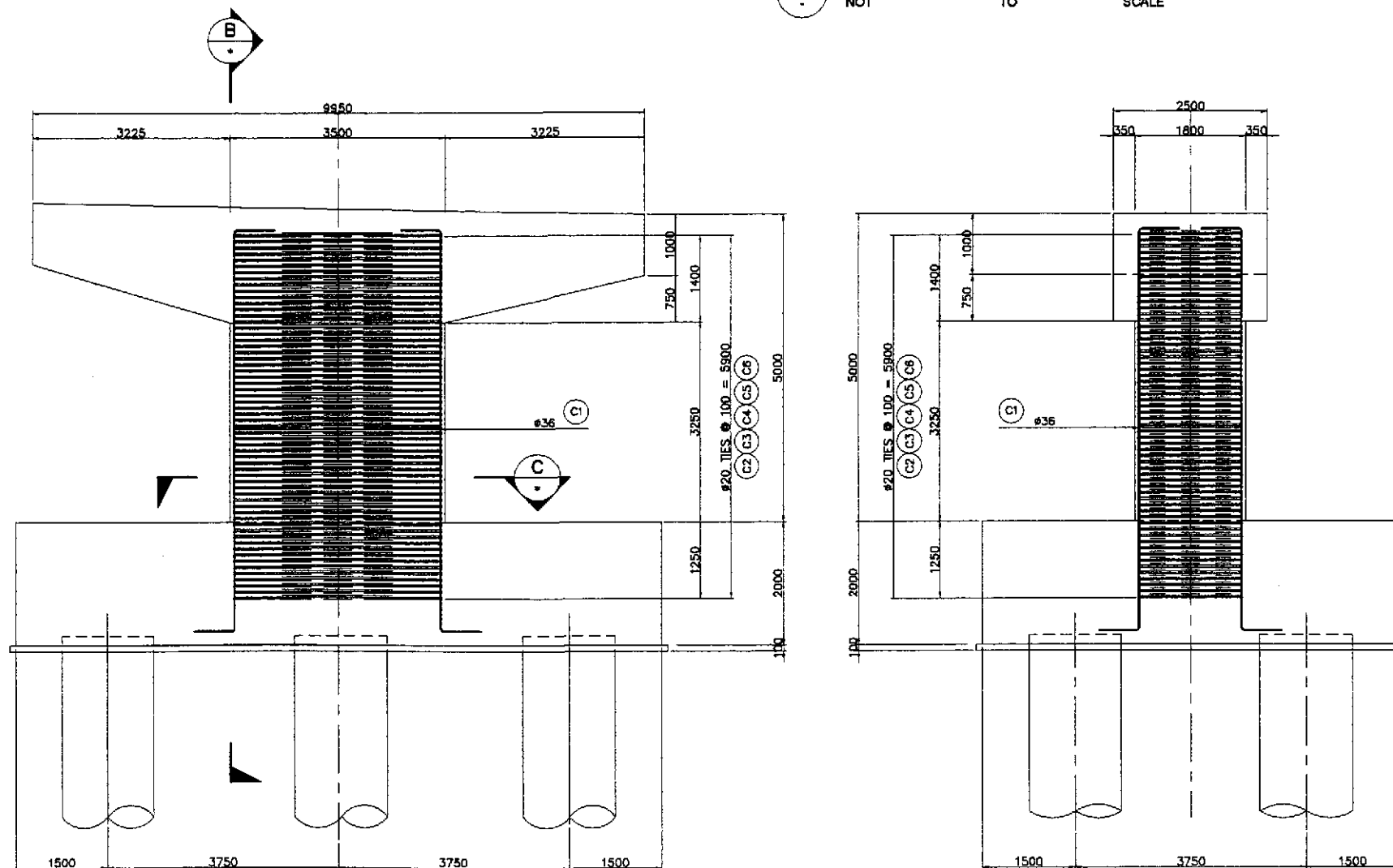
BAR BENDING DIAGRAM



SCHEDULE OF REINFORCEMENT

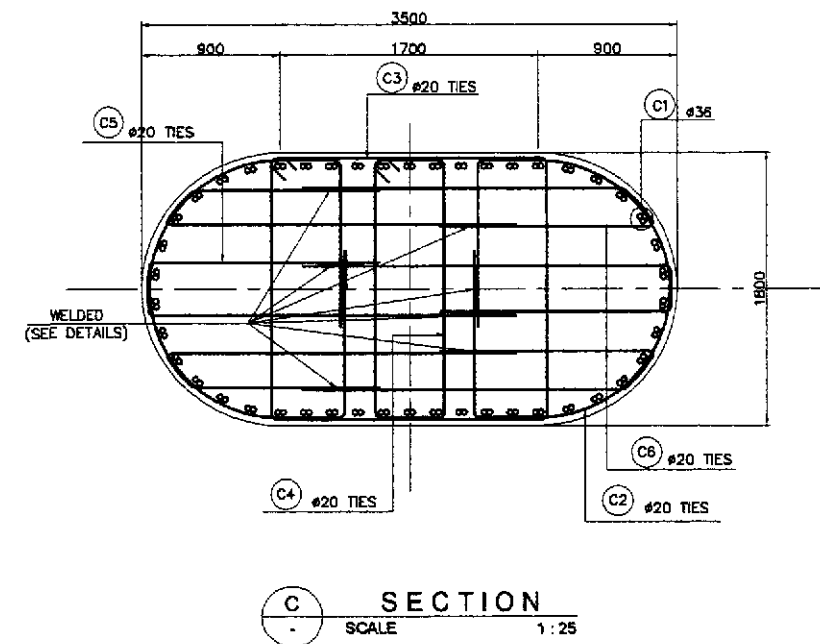
LOCATION	BAR MARK	SIZE (mm)	BEND TYPE	DIMENSION(mm) OUT TO OUT						LENGTH (mm)	NO. REQ'D.	UNIT WEIGHT (kg/m)	WEIGHT (kg)
				a	b	c	d	e	f				
PIER 3	C1	36	A	650	6500	650				7800	92	7.990	5734
	C2	20	B	2580	390	1075				5510	120	2.466	1631
	C3	20	C	260	1650	1810				7440	60	2.466	1101
	C4	20	C	260	1650	450				4740	180	2.466	2104
	C5	20	D	1160	270	2340	1160	270	2340	7540	120	2.466	2231
	C6	20	D	1420	280	2440	1420	280	1420	7260	80	2.466	1074
TOTAL WEIGHT (GRADE 60) = 13,875 Kgs.													
PIER 6	C1o	36	A	650	6750					7400	46	7.990	2720
	C1b	36	A	650	6900					7550	46	7.990	2775
	C1c	36	A	650	8950					9600	46	7.990	3528
	C1d	36	A	650	4700					5350	46	7.990	1966
	C2	20	B	2580	390	1075				5510	206	2.466	2799
	C3	20	C	260	1810	1650				7440	103	2.466	1890
	C4	20	C	260	460	1650				4740	309	2.466	3612
C5	20	D	1160	270	2340	1160	270	2340	7540	103	2.466	1915	
C6	20	D	1420	280	2440	1420	280	1420	7260	206	2.466	3688	
TOTAL WEIGHT (GRADE 60) = 24,893 Kgs.													

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



A ELEVATION
SCALE 1:50

B SECTION
SCALE 1:50



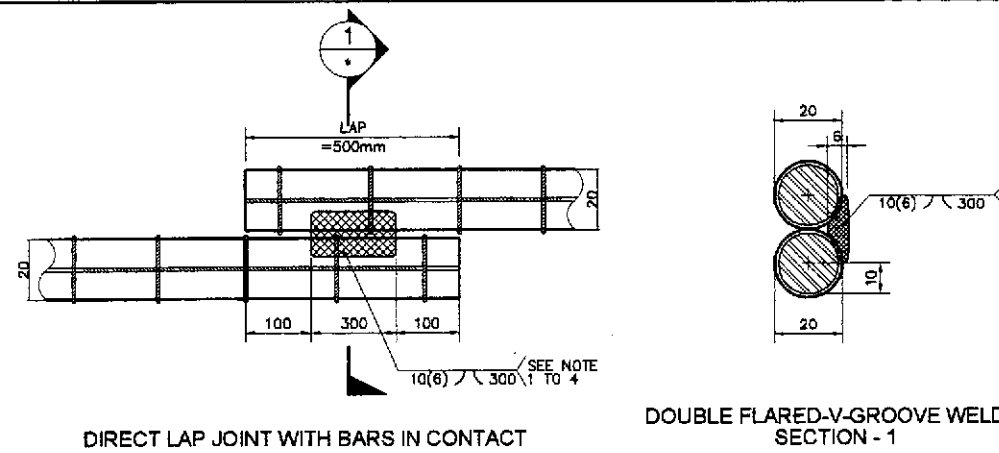
C SECTION
SCALE 1:25

1 COLUMN REINFORCEMENT DETAILS (PIER 3 - EXP. PIER)
SCALE AS SHOWN

	DESIGNED	10/12/02	F. P. DE JESUS		REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS				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 IV	SCALE : AS SHOWN FULL SIZE A1	SHEET CONTENTS : BRIDGE NO.14 TALAVERA RIVER BRIDGE COLUMN REINFORCEMENT DETAILS (PIER 3 - EXP. PIER) (INITIAL STAGE)	SHEET NO. : B14S-63
	CHECKED	10/19/02	J. C. SANTOS		BUREAU OF DESIGN							
	SUBMITTED	10/21/02	Dr. Francisco		OFFICE OF THE SECRETARY							
			Submitted By:	Reviewed By:	Recommended By:	Approved By:						
			DANILO C. TRAJANO Project Director	ADRIANO M. DOROY Chief, Bridges Division	GILBERTO S. REYES Director IV (OIC)	MANUEL M. BONGAN Undersecretary	SIMEON A. DATUMANONG Secretary					

NOTES ON LAP WELD CONNECTION

1. TIES REINFORCEMENT ARE LAP-WELD CONNECTED (FLARED-V-GROOVE TYPE).
2. WELDING SHOULD CONFORM TO ANSI/AWS D1.4-92 "STRUCTURAL WELDING CODE REINFORCEMENT STEEL".
3. USE ELECTRODE E90XX-X.
4. CARE SHOULD BE TAKEN NOT TO DAMAGE THE BORED PILE MAIN BARS DURING WELDING.



DIRECT LAP JOINT WITH BARS IN CONTACT

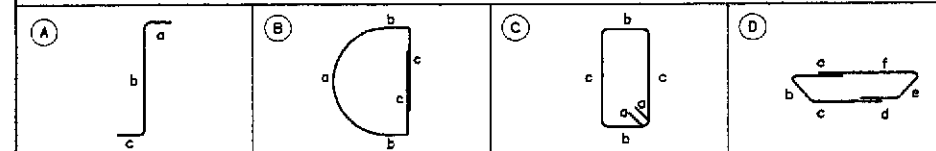
DOUBLE FLARED-V-GROOVE WELD SECTION - 1

DETAILS OF TIES REINF. LAP-WELD CONNECTION



NOT TO SCALE

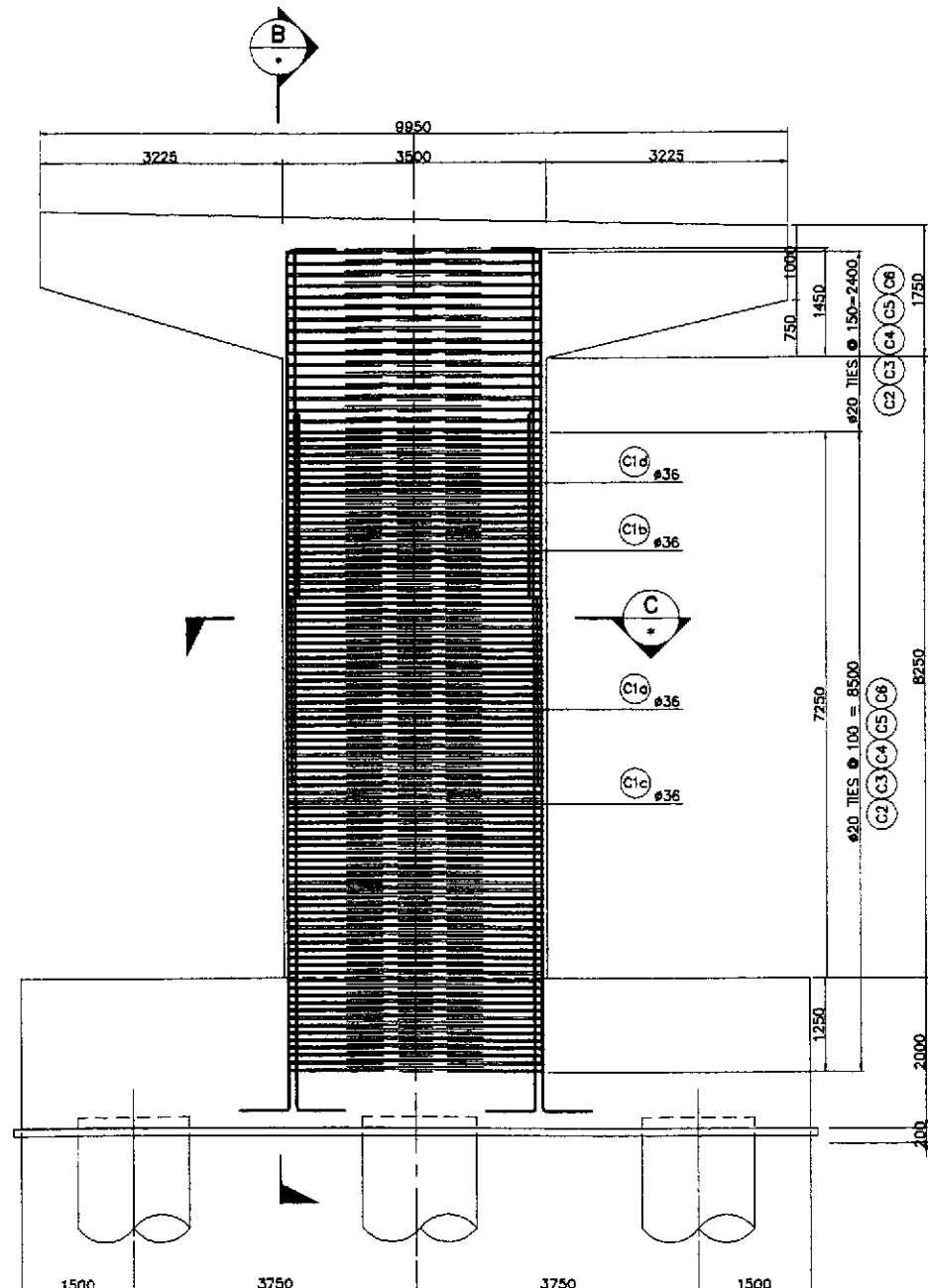
BAR BENDING DIAGRAM



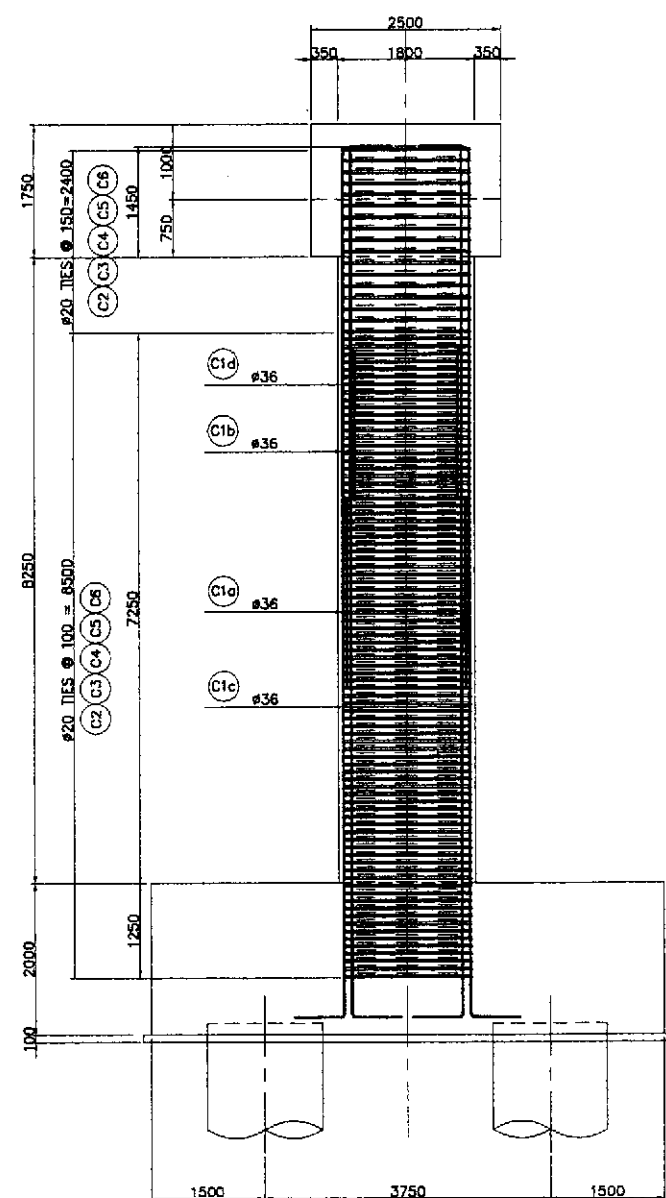
SCHEDULE OF REINFORCEMENT

LOCATION	BAR MARK	SIZE (mm)	BEND TYPE	DIMENSION(mm) OUT TO OUT						LENGTH (mm)	NO. REQD.	UNIT WEIGHT (kg/m)	WEIGHT (kg)
				a	b	c	d	e	f				
PIER 5	C1	36	A	650	6500	650				7800	92	7.990	5734
	C2	20	B	2580	390	1075				5510	120	2.466	1631
	C3	20	C	260	1650	1810				7440	60	2.466	1101
	C4	20	C	260	1650	460				4740	180	2.466	2104
	C5	20	D	1160	270	2340	1160	270	2340	7540	120	2.466	2231
	C6	20	D	1420	280	2440	1420	280	1420	7260	60	2.466	1074
												TOTAL WEIGHT (GRADE 60) = 13,875 Kgs.	
PIER 6	C1a	36	A	650	6750					7400	46	7.990	2720
	C1b	36	A	650	6900					7550	46	7.990	2775
	C1c	36	A	650	8950					9600	46	7.990	3528
	C1d	36	A	650	4700					5350	46	7.990	1966
	C2	20	B	2580	390	1075				5510	206	2.466	2799
	C3	20	C	260	1610	1650				7440	103	2.466	1890
	C4	20	C	260	460	1650				4740	309	2.466	3612
	C5	20	D	1160	270	2340	1160	270	2340	7540	103	2.466	1915
	C6	20	D	1420	280	2440	1420	280	1420	7260	206	2.466	3688
													TOTAL WEIGHT (GRADE 60) = 24,893 Kgs.

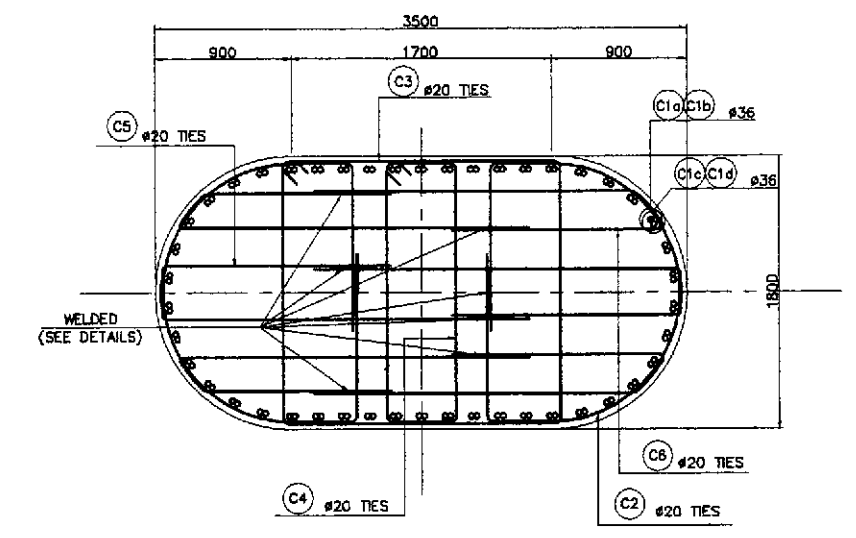
THE REINFORCEMENT SHOWN ON THIS TABLE IS FOR REFERENCE ONLY. THE CONTRACTOR SHOULD CHECK AND VERIFY ALL DIMENSIONS, SIZES AND QUANTITIES OF REINFORCEMENT.



A ELEVATION
SCALE 1:50



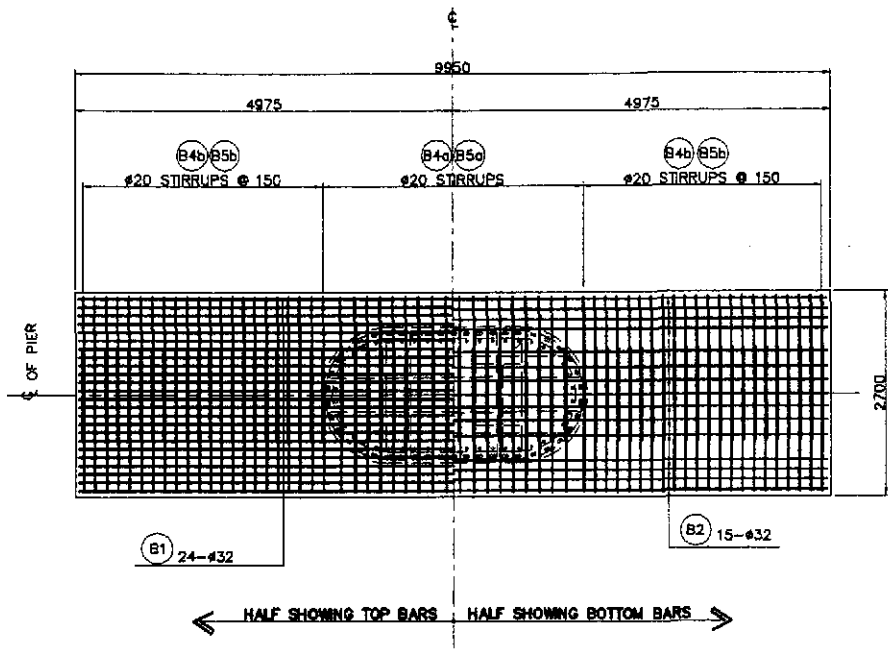
B SECTION
SCALE 1:50



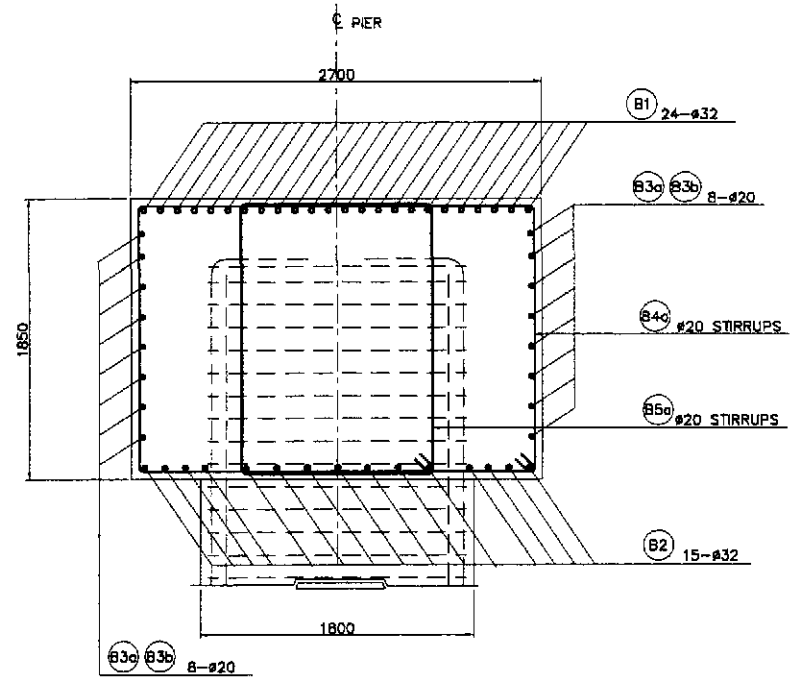
C SECTION
SCALE 1:25

1 COLUMN REINFORCEMENT DETAILS (PIER 6 - EXP. PIER)
SCALE AS SHOWN

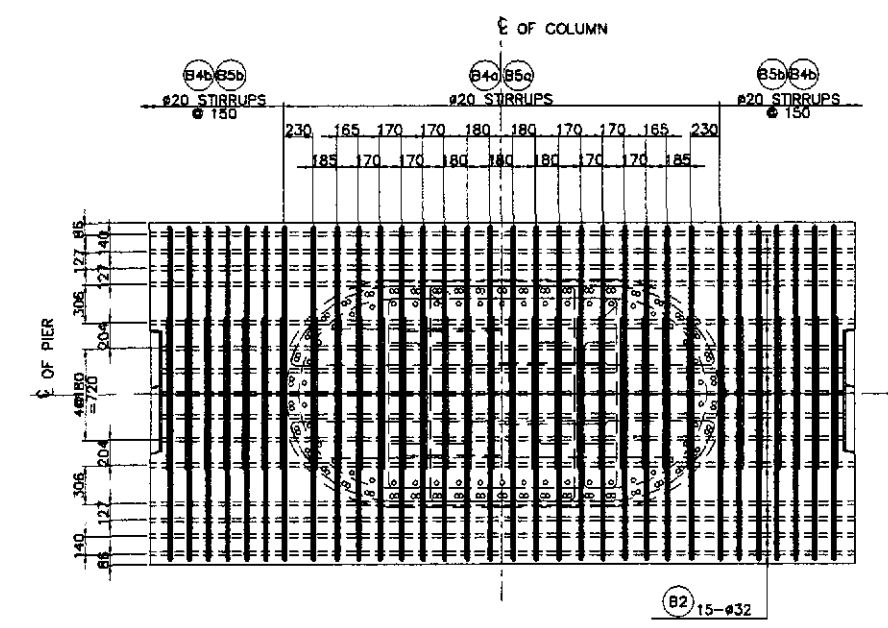
	DESIGNED	10/12/02	 P. DE JESUS			REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS			PROJECT AND LOCATION : THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses) CABANATUAN BYPASS - CONTRACT PACKAGE IV	SCALE : AS SHOWN FULL SIZE A1	SHEET CONTENTS : BRIDGE NO.14 TALAVERA RIVER BRIDGE COLUMN REINFORCEMENT DETAILS (PIER 6 - EXP. PIER) (INITIAL STAGE)	SHEET NO. : B14S-64
	CHECKED	10/19/02	 R. SANTOS			BUREAU OF DESIGN						
	SUBMITTED	10/21/02	 R. SANTOS TEAM LEADER			Submitted By: DANILO C. TRAJANO Project Director	Reviewed By: ADRIANO M. DORCY Chief, Bridges Division	Recommended By: GILBERTO S. REYES Director IV (OIC)				



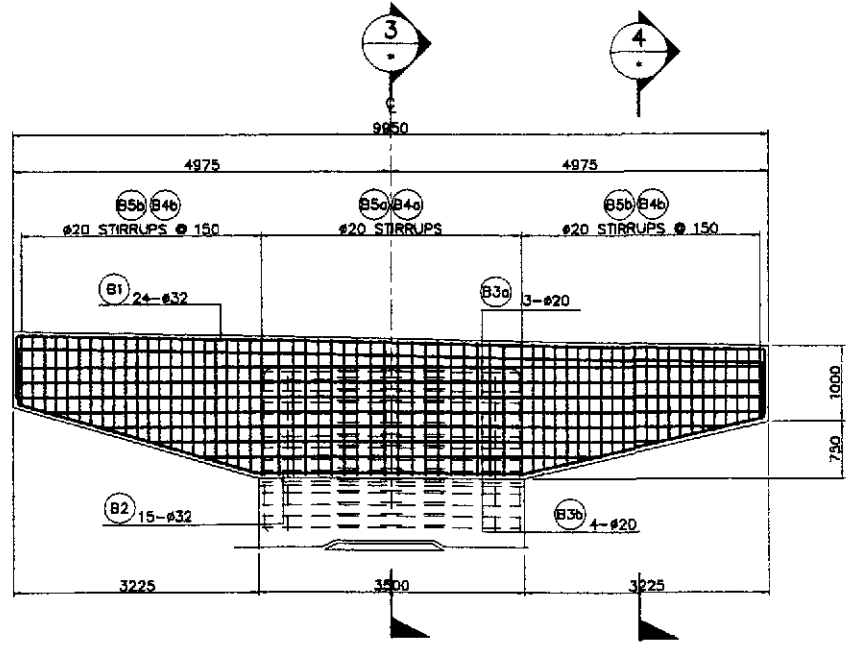
1 PLAN
SCALE 1:50



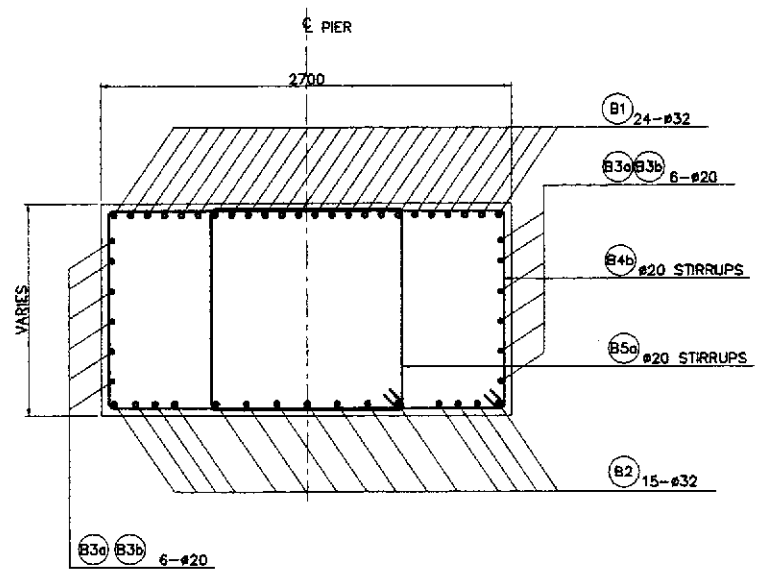
3 SECTION
SCALE 1:25



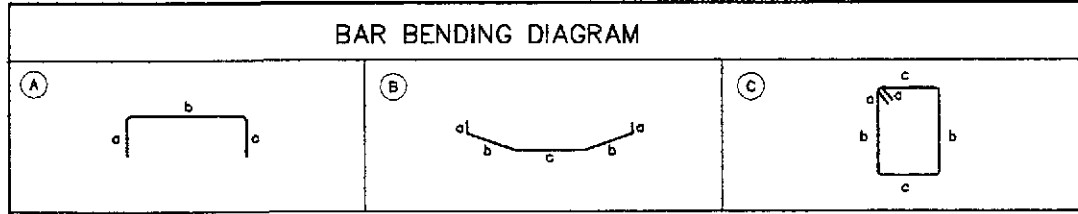
5 DETAIL
SCALE 1:30



2 ELEVATION
SCALE 1:50



4 SECTION
SCALE 1:25

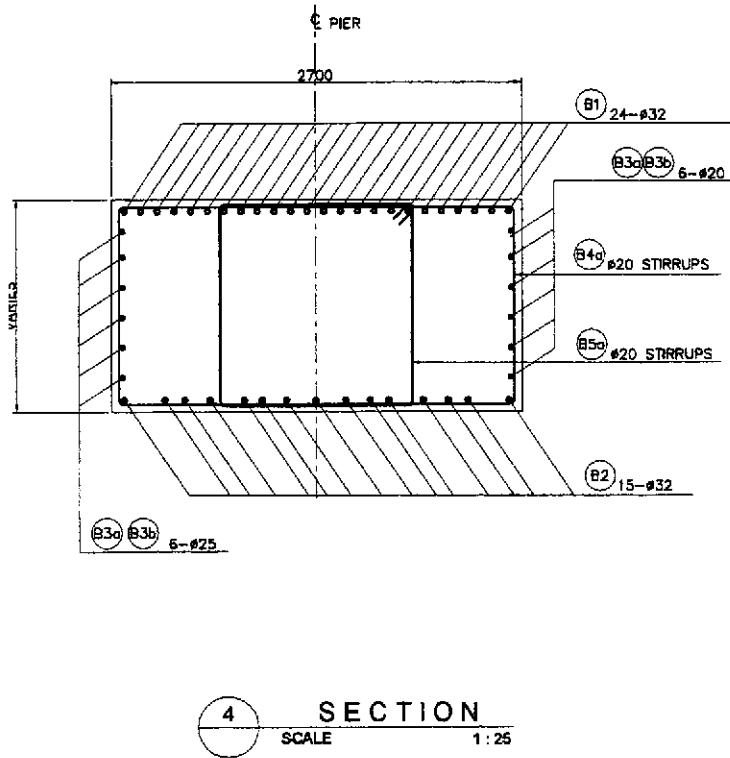
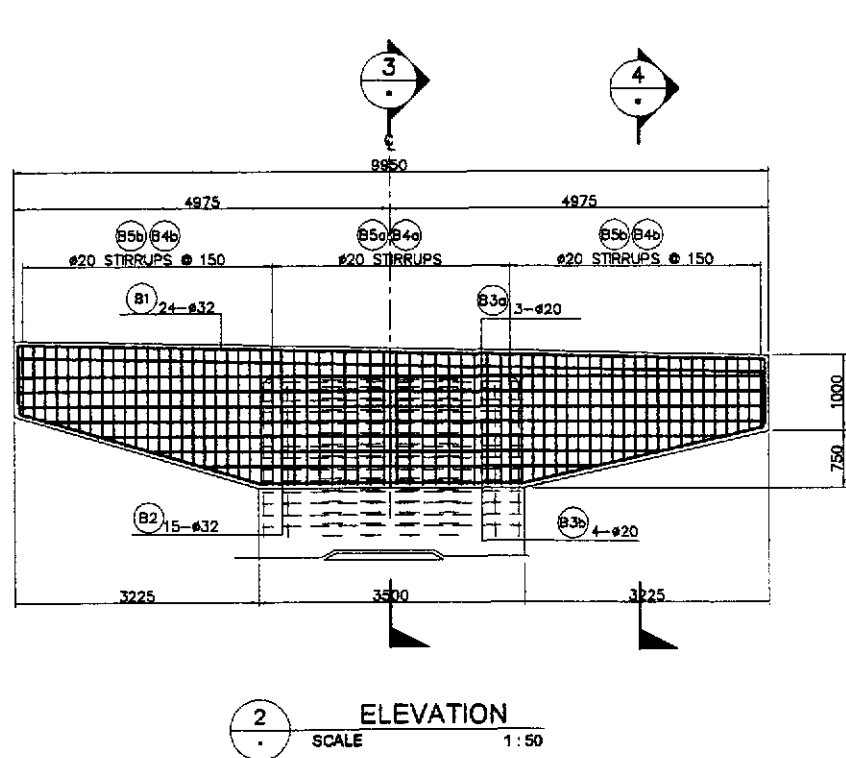
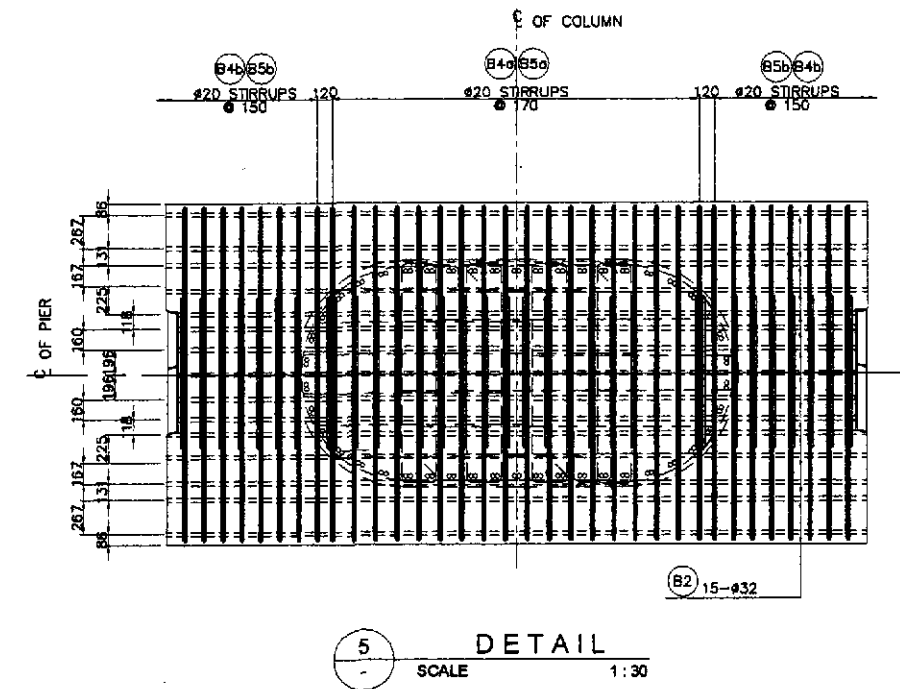
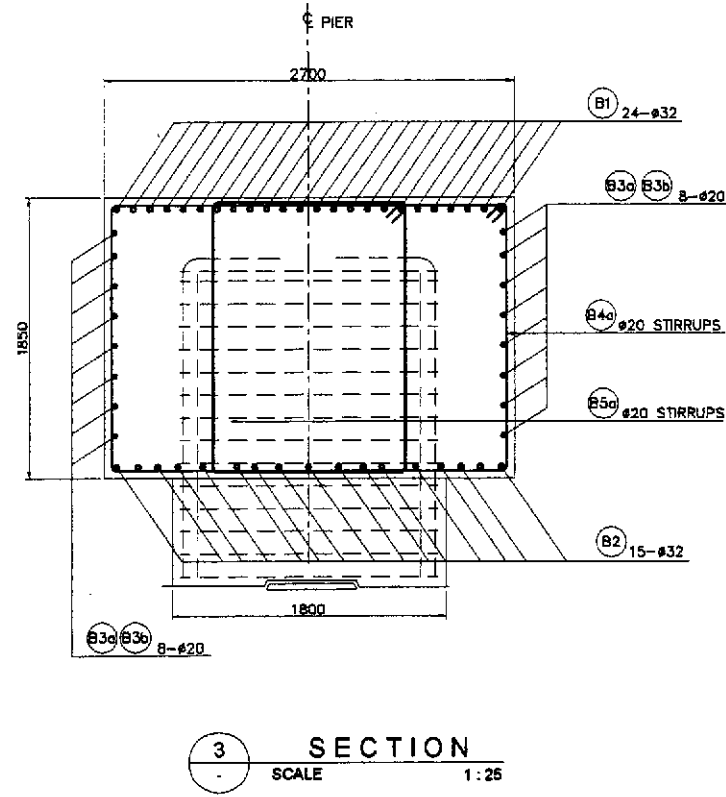
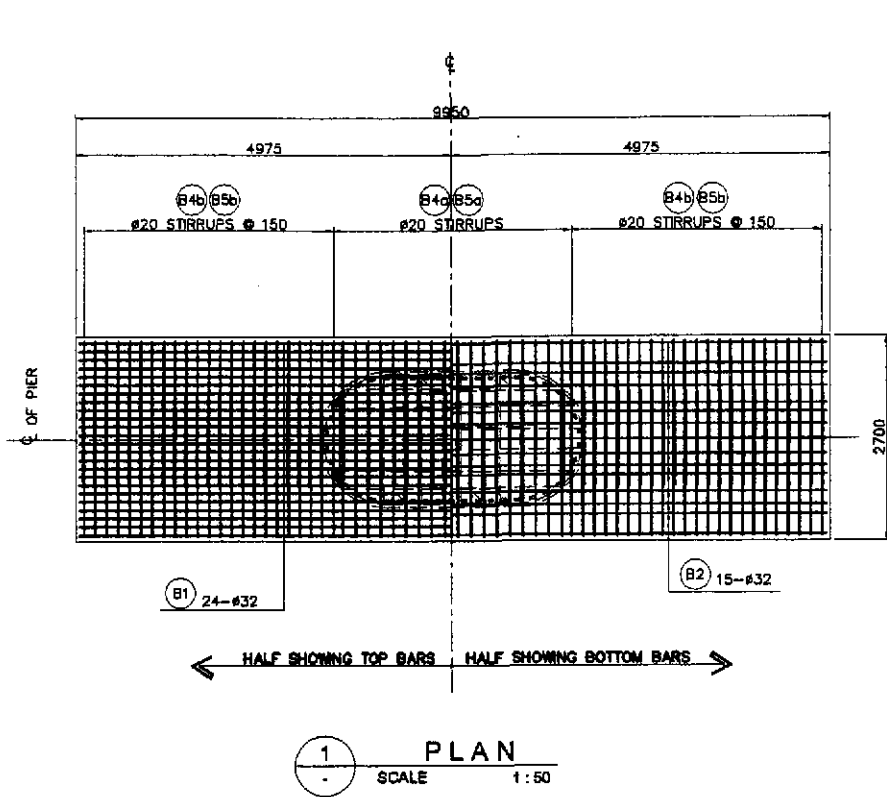


LOCATION	BAR MARK	SIZE (mm)	BEND TYPE	DIMENSION (mm) OUT TO OUT						LENGTH (mm)	NO. REQ'D.	UNIT WEIGHT (kg/m)	WEIGHT (kg) GRADE 60	REMARKS
				a	b	c	d	e	f					
PIER 1, PIER 2, PIER 4, PIER 5, PIER 7, & PIER 8) COPING	B1	32	A	600	9850					11050	24	6.313	1674	Quantities for one(1) coping only.
	B2	32	B	600	3350	3400				11300	15	6.313	1070	
	B3a	20	A	600	9850					11050	8	2.466	218	
	B3b	20	A	600	9350(max)					8425	8	2.466	166	
	B4a	25	C	260	2600	1650				9020	20	2.466	445	
	B4b	20	C	260	2600	1650(max)				8270	42	2.466	857	
	B5a	20	C	260	2000	1650	900(min)			7820	20	2.466	386	
	B5b	20	C	260	2000	1650(max)	900(min)			8270	42	2.466	857	
	TOTAL WEIGHT = 5672 Kgs.													
	TOTAL WEIGHT FOR (B) COPING = 34033 Kgs.													

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

A COPING REINFORCEMENT DETAILS (FIXED PIERS)
SCALE AS SHOWN

	DESIGNED	10/12/01		REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS			PROJECT AND LOCATION :	SCALE :	SHEET CONTENTS :	SHEET NO. :
	CHECKED	10/19/01		BUREAU OF DESIGN			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.14 TALAVERA RIVER BRIDGE COPING REINF. DETAILS (FIXED PIERS) (PIERS P1, P2, P4, P5, P7 & P8) (INITIAL STAGE)	B14S-65
	SUBMITTED	10/21/01		OFFICE OF THE SECRETARY			CABANATUAN BYPASS - CONTRACT PACKAGE IV	FULL SIZE A1		



BAR BENDING DIAGRAM

(A) (B) (C)

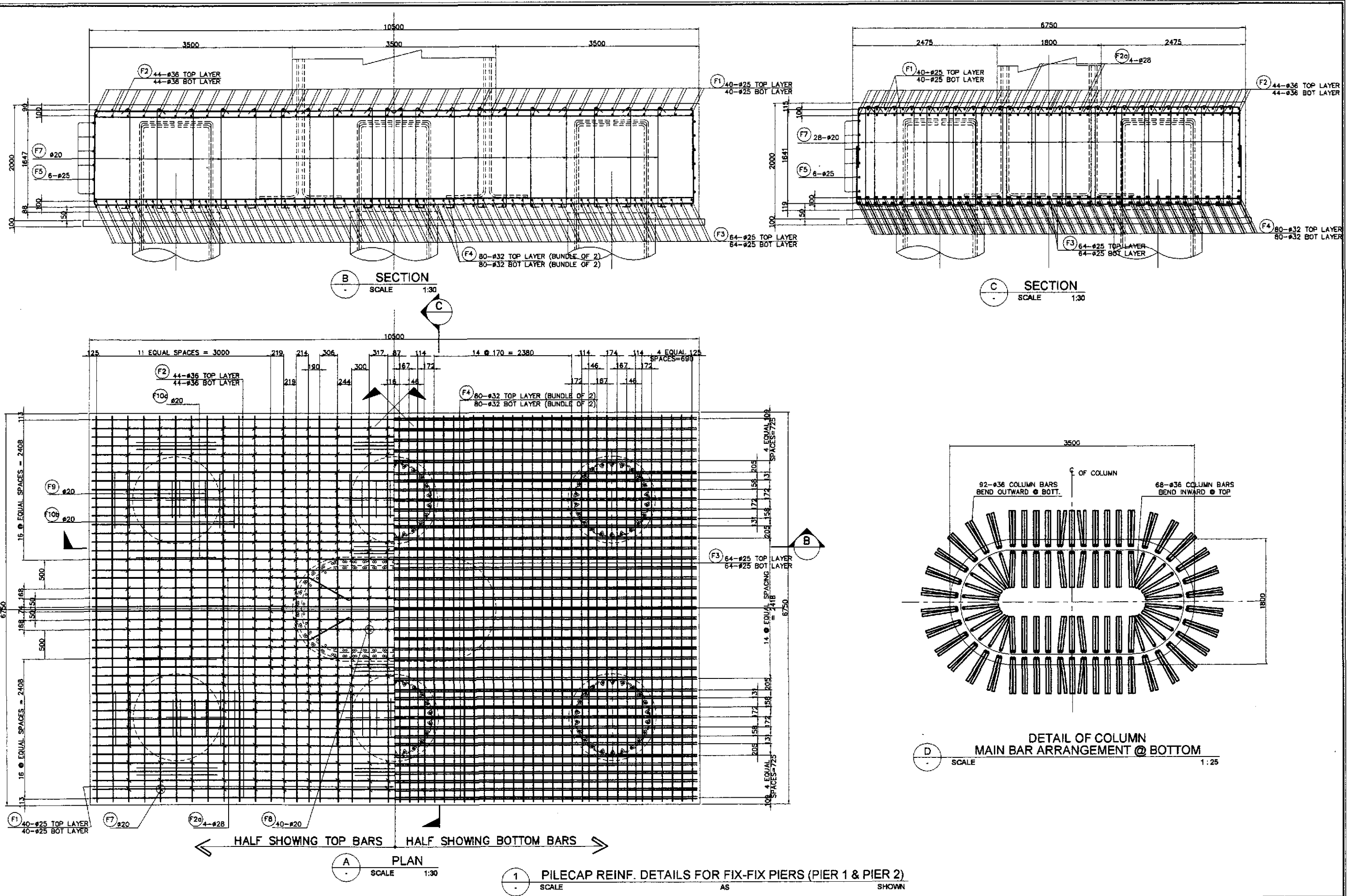
SCHEDULE OF REINFORCEMENT

LOCATION	BAR MARK	SIZE (mm)	BEND TYPE	DIMENSION(mm) OUT TO OUT						LENGTH (mm)	NO. REQD.	UNIT WEIGHT (kg/m)	WEIGHT (kg) GRADE 60	REMARKS
				a	b	c	d	e	f					
PIER 3 & PIER 6 COPING	B1	32	A	600	9850					11050	24	6.313	1674	Quantities for one(1) coping only.
	B2	32	B	600	3350	3400				11300	15	6.313	1070	
	B3a	20	A	600	9850					11050	8	2.466	218	
	B3b	20	A	600	8350(max) 5100(min)					8425	8	2.466	186	
	B4a	25	C	260	2600	1650				9020	20	2.466	445	
	B4b	20	C	260	2600	1650(max) 900(min)				8270	42	2.466	857	
	B5a	20	C	260	2000	1650				7820	20	2.466	386	
	B5b	20	C	260	2000	1650(max) 900(min)				8270	42	2.466	857	
	TOTAL WEIGHT = 5672 Kgs.											TOTAL WEIGHT FOR (2) COPING = 11344 Kgs.		

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

A COPING REINFORCEMENT DETAILS (EXP. PIERS)
SCALE AS SHOWN

	DESIGNED	10/12/01	SIGNATURE		 F. P. DE JESUS			REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS				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 IV	SCALE : AS SHOWN FULL SIZE A1	SHEET CONTENTS : BRIDGE NO.14 TALAVERA RIVER BRIDGE COPING REINF. DETAILS (EXP. PIERS) (PIER 3 & PIER 6) (INITIAL STAGE)	SHEET NO. : B14S-66
	CHECKED	10/19/01	 C. SANTOS		BUREAU OF DESIGN Submitted By: DANILLO C. TRAJANO, Project Director			OFFICE OF THE SECRETARY Recommended By: ADRIANO M. DOROY, Chief, Bridges Division		Approved By: SIMEON A. DATUMANONG, Secretary					
	SUBMITTED	10/21/01	 M. RIVERA TEAM LEADER		DANILLO C. TRAJANO, Project Director			ADRIANO M. DOROY, Chief, Bridges Division		GILBERTO S. REYES, Director IV (OIC)					



B SECTION
SCALE 1:30

C SECTION
SCALE 1:30

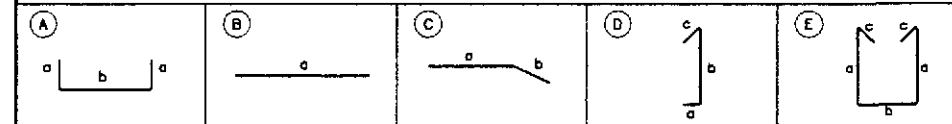
A PLAN
SCALE 1:30

D DETAIL OF COLUMN MAIN BAR ARRANGEMENT @ BOTTOM
SCALE 1:25

1 PILECAP REINF. DETAILS FOR FIX-FIX PIERS (PIER 1 & PIER 2)
SCALE AS SHOWN

	DATE: 10/12/02 DESIGNED: P. P. DE JESUS CHECKED: J. C. SANTOS SUBMITTED: 10/21/02 TEAM LEADER:	REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS BUREAU OF DESIGN OFFICE OF THE 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 IV	SCALE: AS SHOWN FULL SIZE A1	SHEET CONTENTS: BRIDGE NO.14 TALAVERA RIVER BRIDGE PILECAP REINF. DETAILS FOR FIX PIERS (PIERS P1 & P2) - 1 OF 2 (INITIAL STAGE)	SHEET NO.: B14S-67	
	Submitted By: DANILLO C. TRAJANO Project Director	Reviewed By: ADRIANO M. DORCY Chief, Bridge Division	Recommended By: GILBERTO S. REYES Director IV (CIC)	Approved By: MANUEL M. BONCAN Undersecretary	Approved By: SIMEON A. DATUMANONG Secretary		
	JICA JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS INTERNATIONAL YEO YACHYO ENGINEERING CO., LTD.						

BAR BENDING DIAGRAM

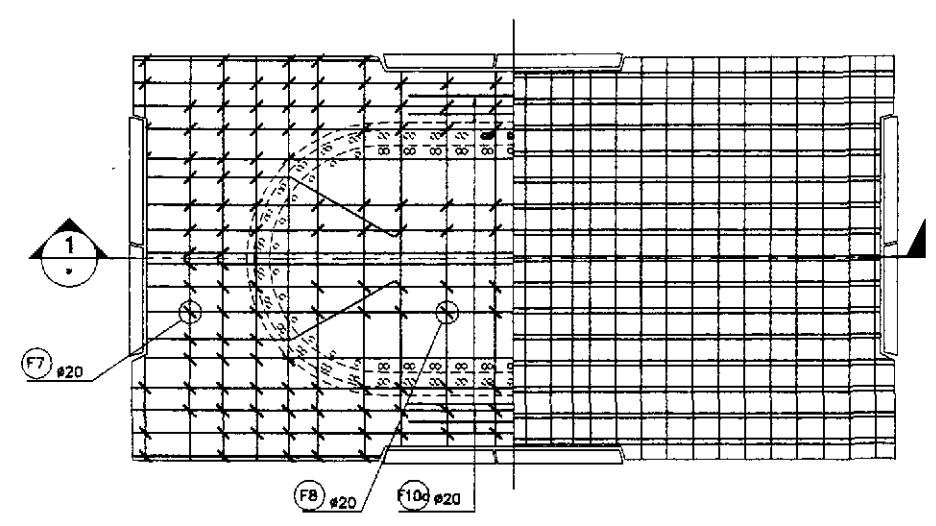


SCHEDULE OF REINFORCEMENT

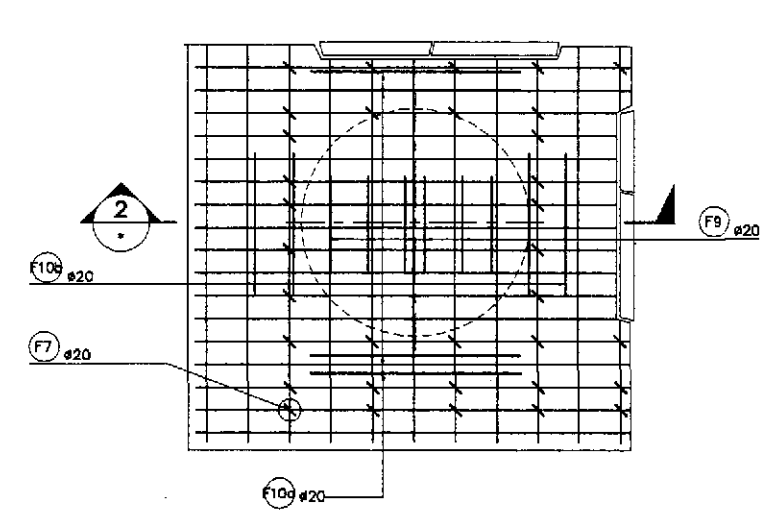
LOCATION	BAR MARK	SIZE (mm)	BEND TYPE	DIMENSION(mm) OUT TO OUT					LENGTH (mm)	NO. REQ'D.	UNIT WEIGHT (kg/m)	WEIGHT (kg)	
				a	b	c	d	e				GRADE 40	GRADE 60
PIERS P1 & P2	F1	25	A	1000	6600				8600	80	3.853		2651
	F2	36	A	825	10350				12000	88	7.990		8437
	F2a	36	C	3700	1500				5200	8	7.990		332
	F3	25	A	1000	6600				8600	128	3.853		4241
	F4	32	A	825	10350				12000	160	6.313		12121
	F5	25	B	6600					6600	12	3.853		305
	F6	25	B	10350					10350	12	3.853		479
	F7	20	D	350	1670	300			2320	588	2.466		3364
	F8	20	D	350	1670	300			2320	40	2.466		229
	F9	20	E	1670	640	300			4580	36	2.466		407
F10a	20	E	1670	1550	300			5490	24	2.466		325	
F10b	20	E	1670	1600	300			5540	24	2.466		328	

TOTAL WEIGHT PER PIER = 33,218 kg.
TOTAL WEIGHT FOR (2) PIERS = 66,436 kg.

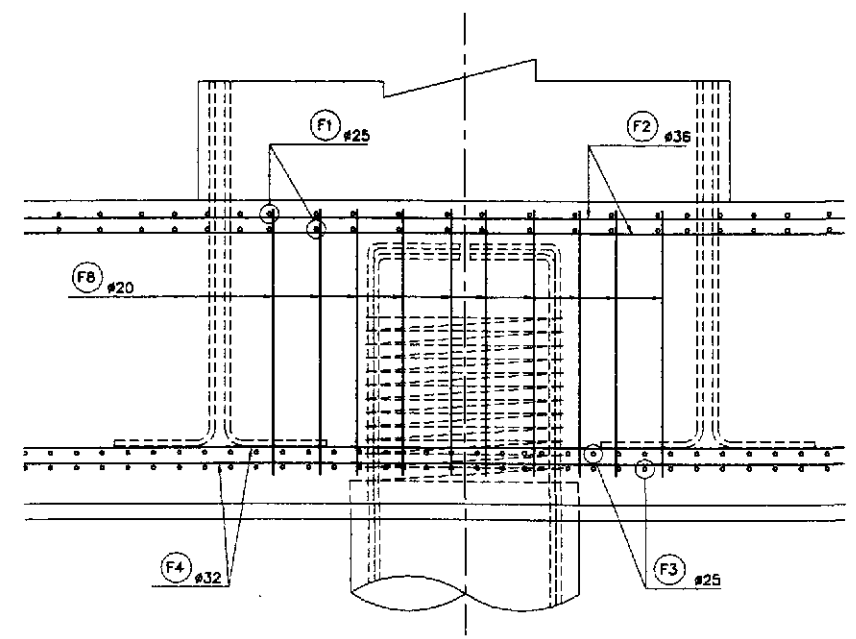
THE REINFORCEMENT SHOWN ON THIS TABLE IS FOR REFERENCE ONLY. THE CONTRACTOR SHOULD CHECK AND VERIFY ALL DIMENSIONS, SIZES AND QUANTITIES OF REINFORCEMENT.



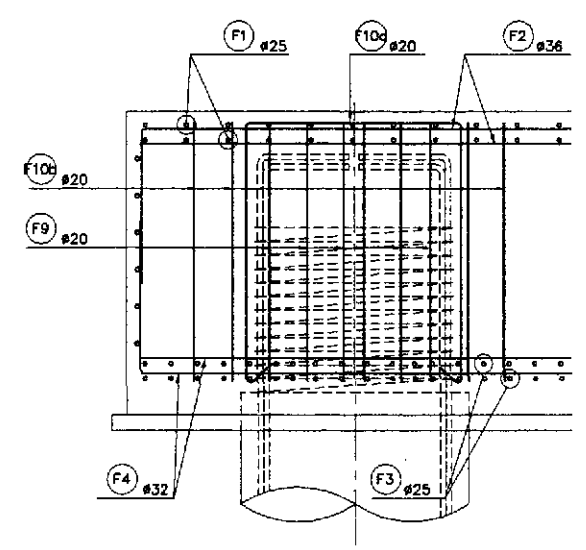
A PLAN SCALE 1:25



B PLAN SCALE 1:25



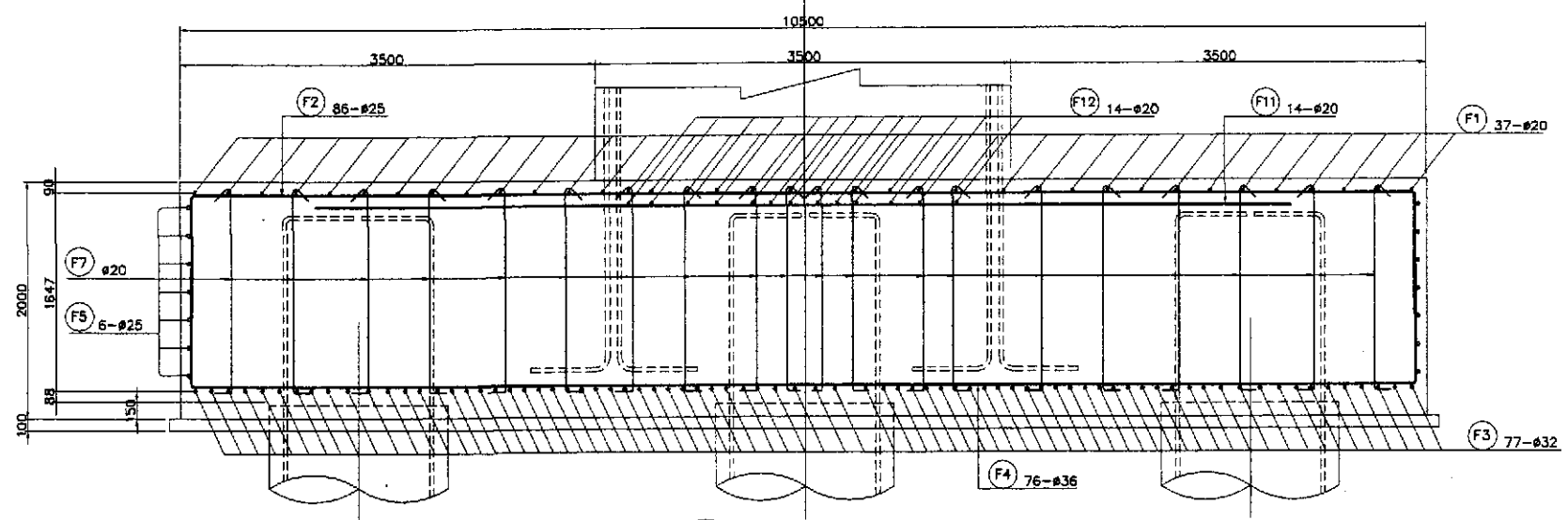
1 SECTION SCALE 1:25



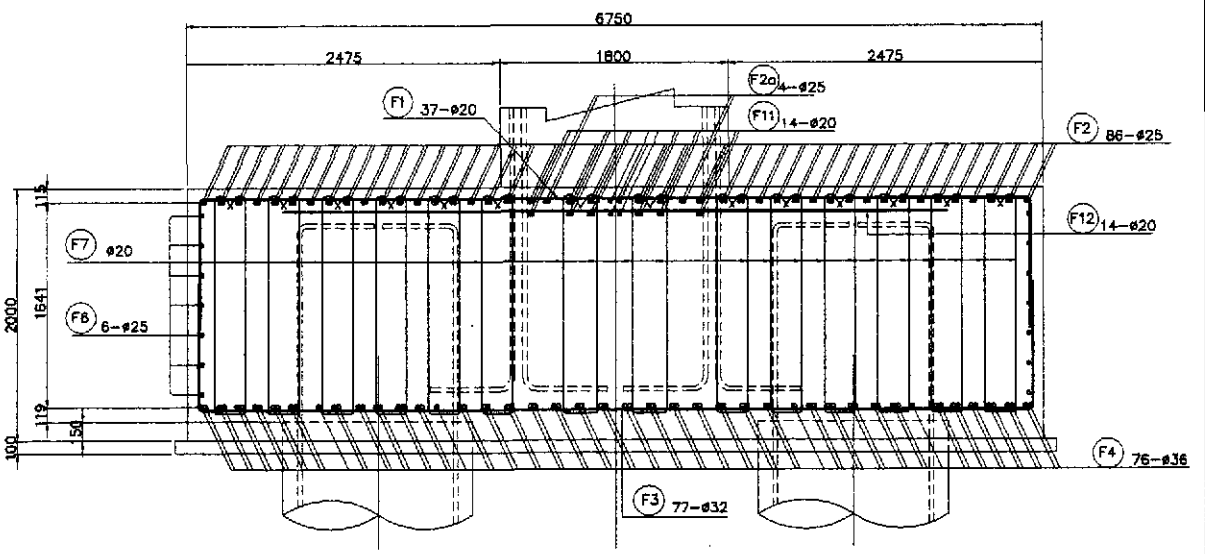
2 SECTION SCALE 1:25

1 PILECAP REINF. DETAILS FOR FIX-FIX PIERS (PIER 1 & PIER 2) SCALE AS SHOWN

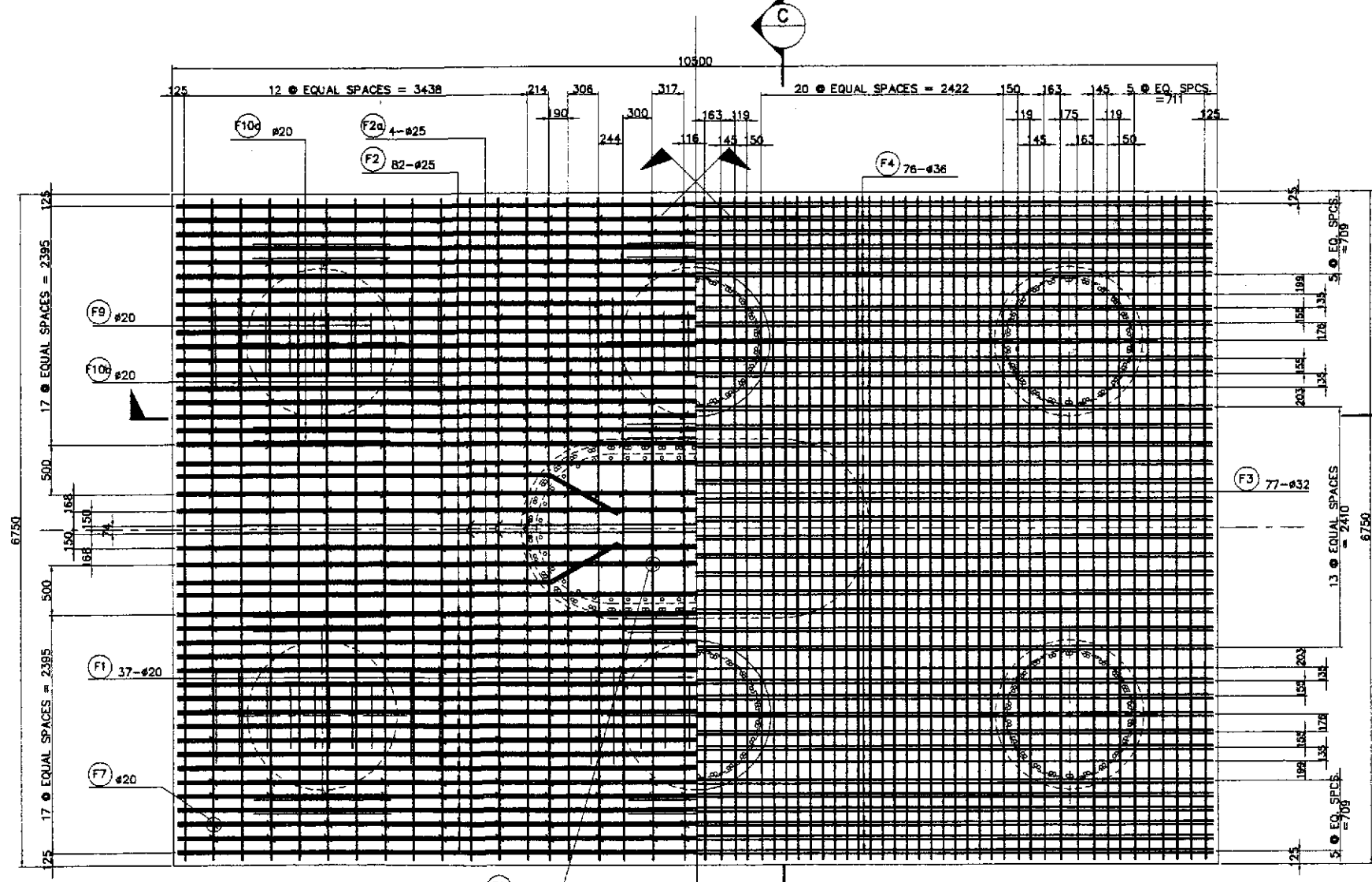
	DATE: 10/12/02 DESIGNED: P. P. DE JESUS CHECKED: J. C. SANTOS SUBMITTED: 10/21/02 TEAM LEADER	REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS BUREAU OF DESIGN Submitted By: DANILO C. TRAJANO, Project Director Reviewed By: ADRIANO M. DOROY, Chief, Bridges Division Recommended By: GILBERTO S. REYES, Director IV (CIC) Recommended By: MANUEL M. BONONAN, Undersecretary Approved By: SIMON 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 IV	SCALE : AS SHOWN FULL SIZE A1	SHEET CONTENTS : BRIDGE NO.14 TALAVERA RIVER BRIDGE PILECAP REINF. DETAILS FOR FIX PIERS (PIERS P1 & P2) - 2OF 2 (INITIAL STAGE)	SHEET NO. : B14S-68
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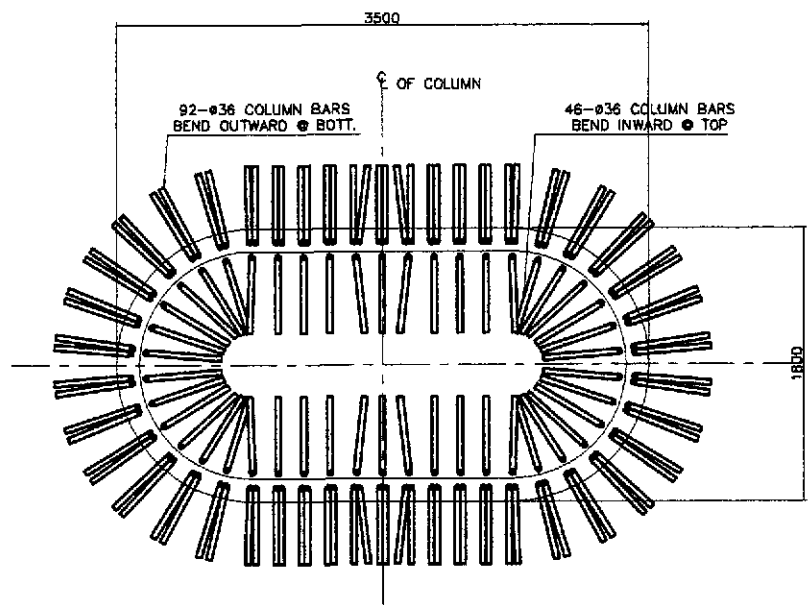
B SECTION
SCALE 1:30



C SECTION
SCALE 1:30



A PLAN
SCALE 1:30

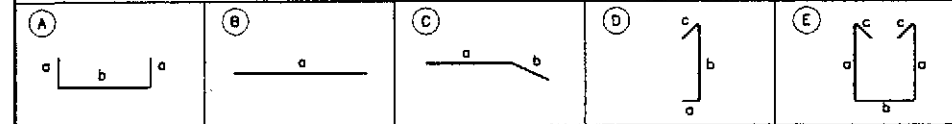


D DETAIL OF COLUMN
MAIN BAR ARRANGEMENT @ BOTTOM
SCALE 1:25

1 PILECAP REINF. DETAILS FOR FIX PIERS (PIER 4, PIER 5, PIER 7 & PIER 8)
SCALE AS SHOWN

	DATE: 10/12/02 DESIGNED: P. R. DE JESUS CHECKED: J. C. SANTOS SUBMITTED: 10/21/02 TEAM LEADER	REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS BUREAU OF DESIGN OFFICE OF THE SECRETARY	PROJECT AND LOCATION : THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Pinaridel, Cabanatuan and San Jose Bypasses) CABANATUAN BYPASS - CONTRACT PACKAGE IV	SCALE : AS SHOWN FULL SIZE A1	SHEET CONTENTS : BRIDGE NO.14 TALAVERA RIVER BRIDGE PILECAP REINF. DET. FOR FIX PIERS (PIERS P4, P5, P7 & P8) - 1 OF 2 (INITIAL STAGE)	SHEET NO. : B14S-69	
	Submitted By: DANILLO C. TRAJANO Project Director	Reviewed By: ADRIANO M. DOROY Chief, Bridge Division	Recommended By: GILBERTO S. REYES Director IV (DIC)	Recommended By: MANNUEL M. BONGAN Undersecretary	Approved By: SIMEON A. DATUMANONG Secretary		
	JICA JAPAN INTERNATIONAL COOPERATION AGENCY KATAHIRA & ENGINEERS INTERNATIONAL YEO YACHIYO ENGINEERING CO., LTD.						

BAR BENDING DIAGRAM



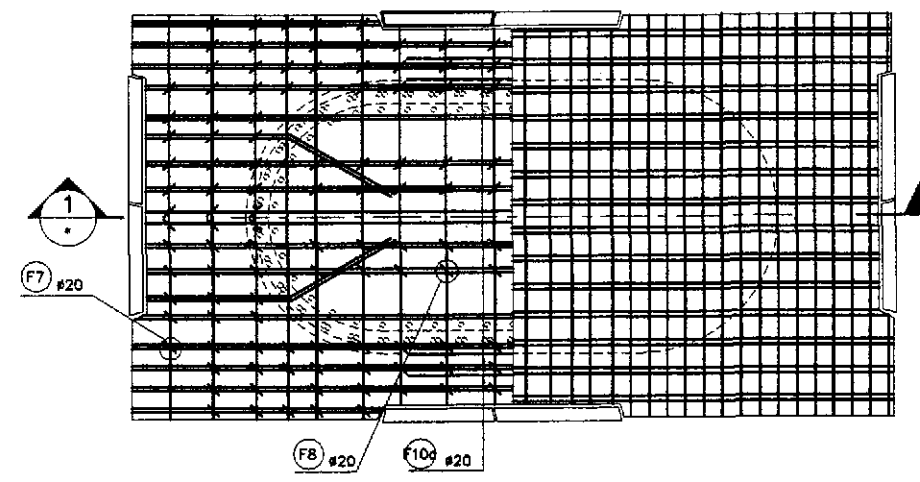
SCHEDULE OF REINFORCEMENT

LOCATION	BAR MARK	SIZE (mm)	BEND TYPE	DIMENSION(mm) OUT TO OUT					LENGTH (mm)	NO. REQ'D.	UNIT WEIGHT (kg/m)	WEIGHT (Kg)	
				a	b	c	d	e				GRADE 40	GRADE 60
PIERS P4, P5, P7 & P8	F1	20	A	1000	6500				8600	37	2.466		785
	F2	25	A	825	10350				12000	86	3.854		3677
	F2a	25	C	3700	1000				4700	4	3.854		72
	F3	32	A	1000	6600				8600	77	6.313		4180
	F4	36	A	825	10350				12000	76	7.991		7288
	F5	25	B	6600					8600	12	3.854		305
	F6	25	B	10350					10350	12	3.854		479
	F7	20	D	350	1670	300			2320	568	2.466		3250
	F8	20	D	350	1670	300			2320	40	2.466		228
	F9	20	E	1670	780	300			4720	36	2.466		419
	F10a	20	E	1670	1760	300			5700	24	2.466		337
	F10b	20	E	1670	1480	300			5420	24	2.466		321
F11	20	B	9000					9000	14	2.466		311	
F12	20	B	5000					5000	14	2.466		173	

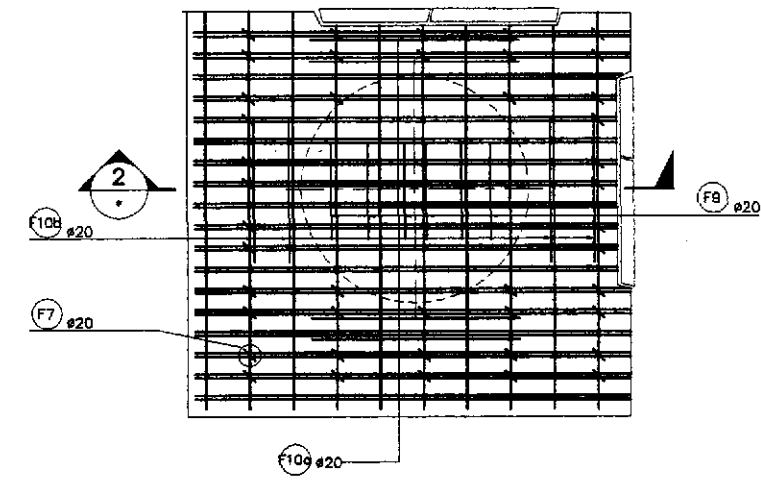
TOTAL WEIGHT PER PIER = 22126 kg.

TOTAL WEIGHT FOR (4) PIERS = 88502 kg.

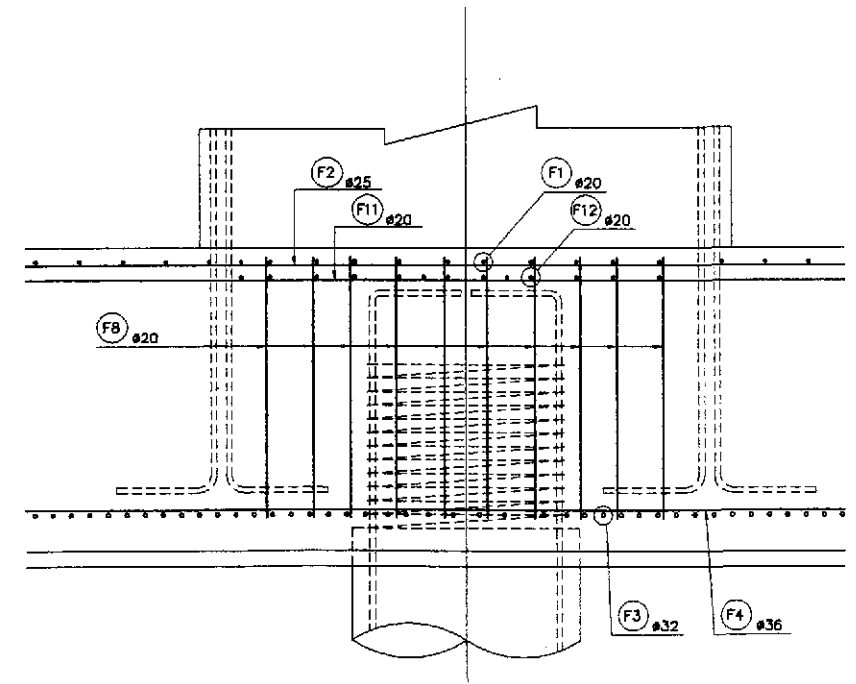
THE REINFORCEMENT SHOWN ON THIS TABLE IS FOR REFERENCE ONLY. THE CONTRACTOR SHOULD CHECK AND VERIFY ALL DIMENSIONS, SIZES AND QUANTITIES OF REINFORCEMENT.



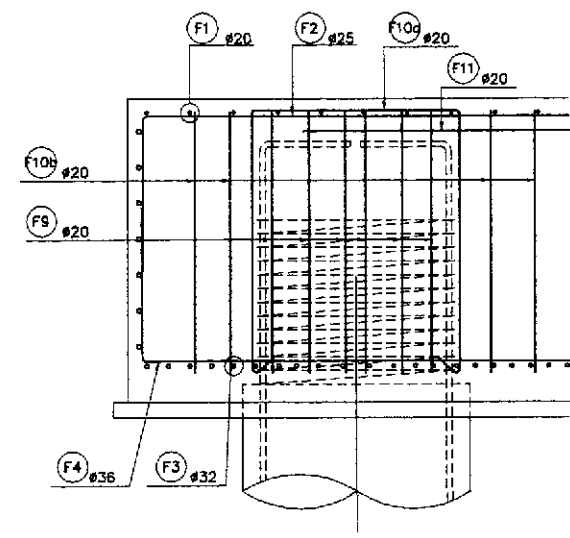
A PLAN SCALE 1:25



B PLAN SCALE 1:25



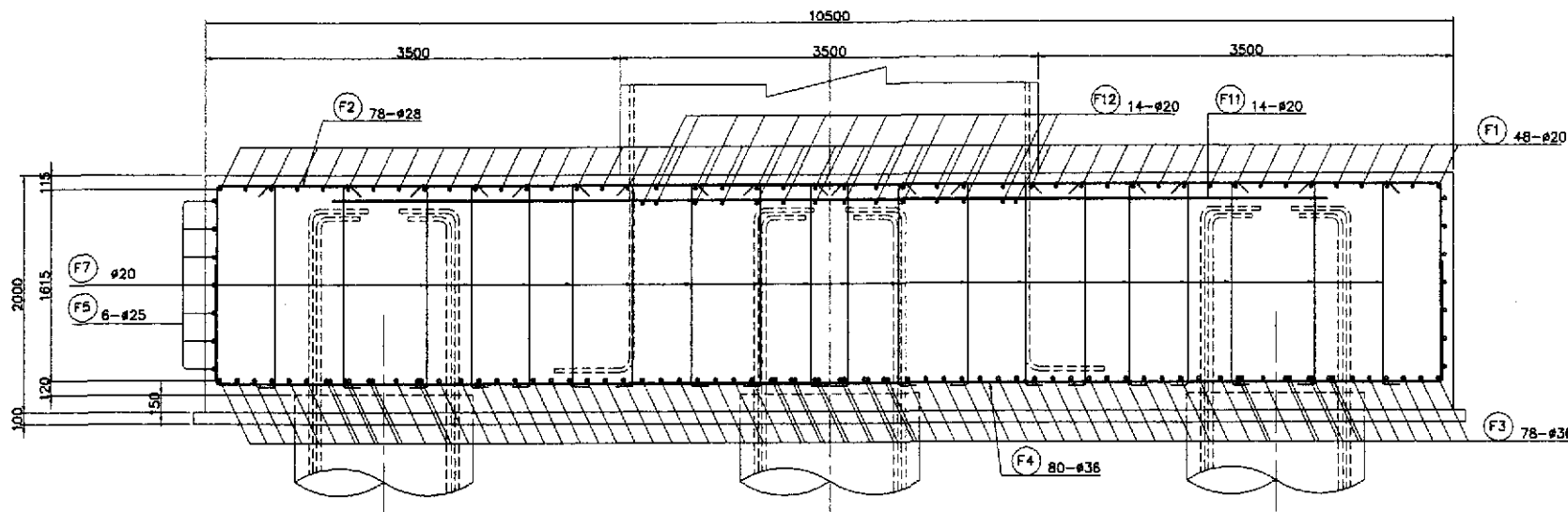
1 SECTION SCALE 1:25



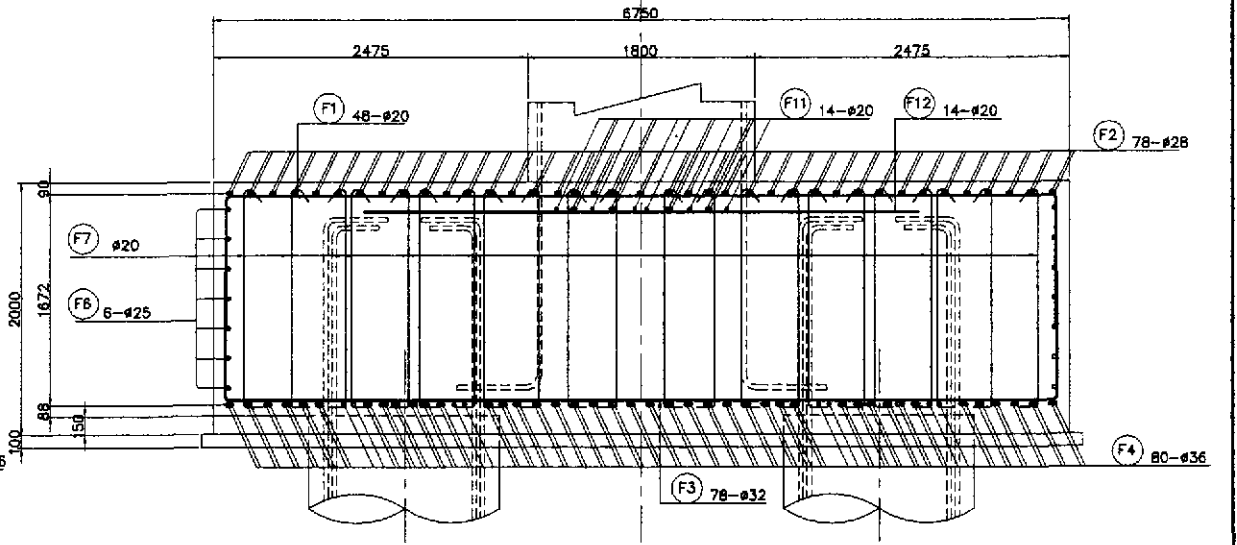
2 SECTION SCALE 1:25

1 PILECAP REINF. DETAILS FOR FIX PIERS (PIER 4, PIER 5, PIER 7 & PIER 8) SCALE AS SHOWN

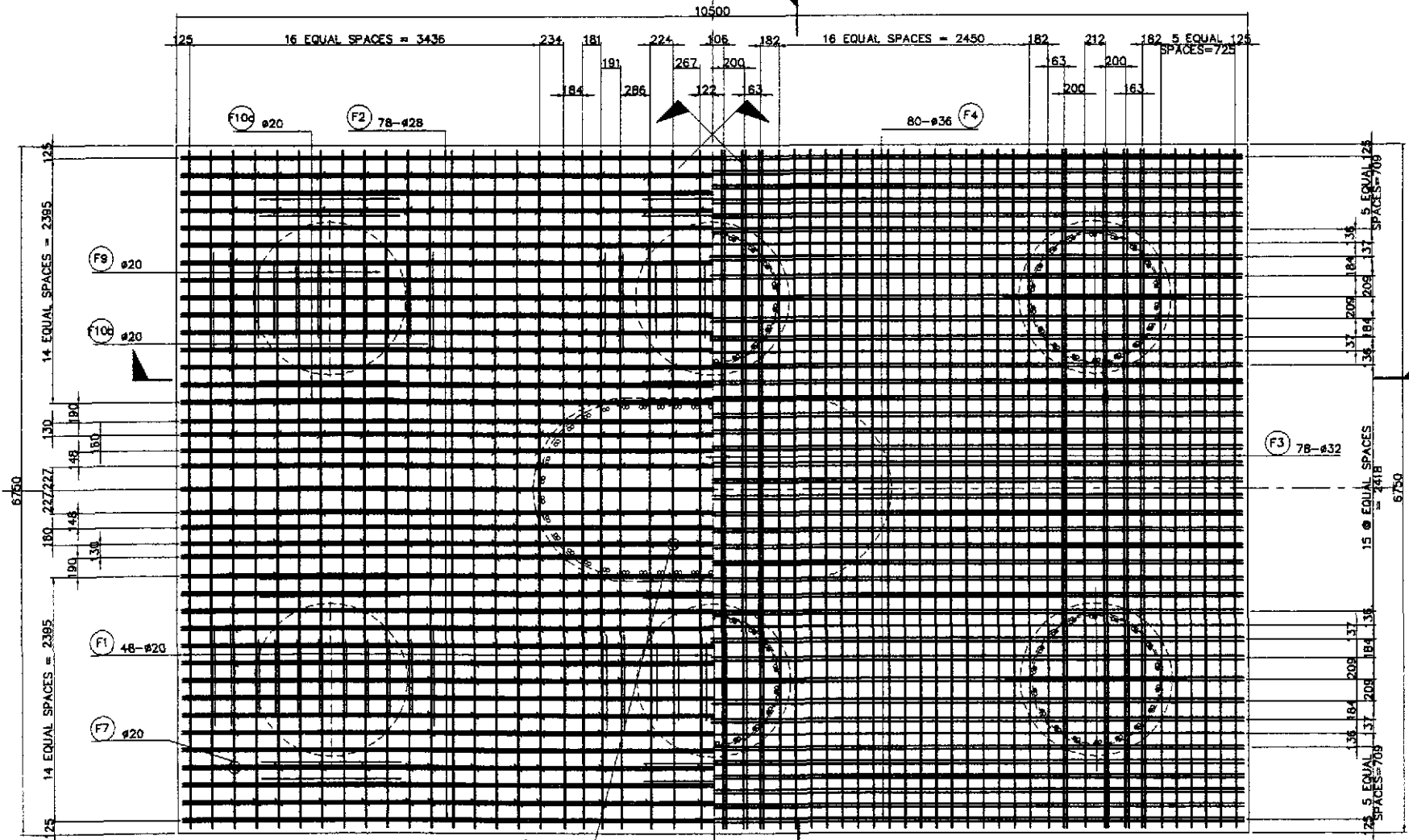
	DESIGNED	DATE	SIGNATURE	<p>REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS</p>	PROJECT AND LOCATION :			SCALE :	SHEET CONTENTS :	SHEET NO. :
	CHECKED	10/19/02	F. P. DE JESUS		THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses)			AS SHOWN	BRIDGE NO.14 TALAVERA RIVER BRIDGE PILECAP REINF. DET. FOR FIX PIERS (PIERS P4, P5, P7 & P8) - 2 OF 2 (INITIAL STAGE)	B14S-70
	SUBMITTED	10/21/02	J. C. SANTIAGO		CABANATUAN BYPASS - CONTRACT PACKAGE IV			FULL SIZE A1		
<p>Submitted By: DANILLO C. TRAJANO, Project Director</p> <p>Reviewed By: ADRIANO M. DOROY, Chief, Bridges Division</p> <p>Recommended By: GILBERTO S. REYES, Director IV (OIC)</p> <p>Recommended By: MANUEL M. BONDAN, Undersecretary</p> <p>Approved By: SIMEON A. DATUMANONG, Secretary</p>										



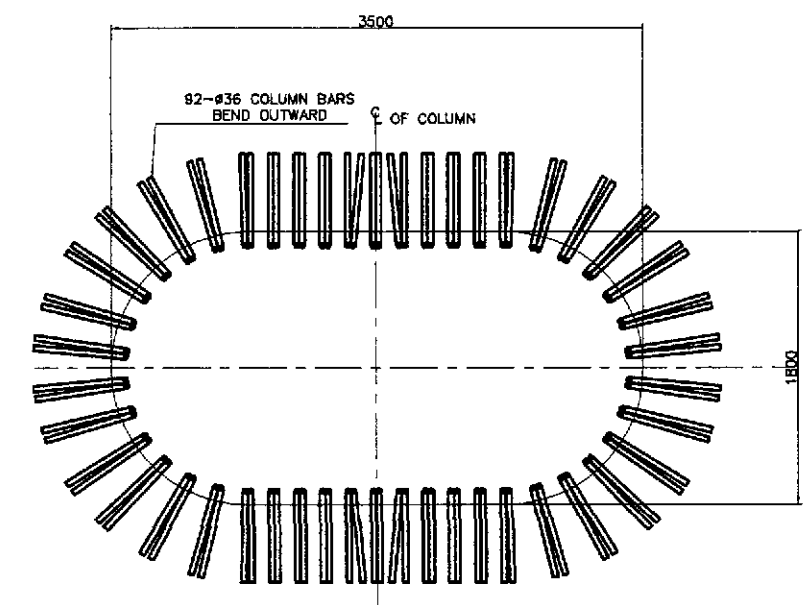
B SECTION
SCALE 1:30



C SECTION
SCALE 1:30



A PLAN
SCALE 1:30



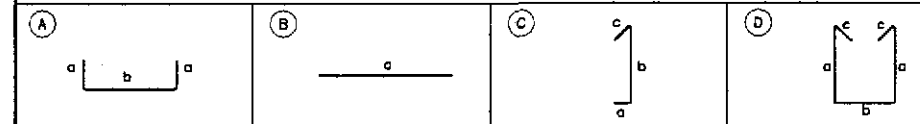
D DETAIL OF COLUMN MAIN BAR ARRANGEMENT @ BOTTOM
SCALE 1:25

1 PILECAP REINF. DETAILS FOR EXP. PIERS (PIER 3 & PIER 6)
SCALE AS SHOWN

← HALF SHOWING TOP BARS | HALF SHOWING BOTTOM BARS →

	DESIGNED	10/2/02	 F. P. DE JESUS	 REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS	PROJECT AND LOCATION :			SCALE :	SHEET CONTENTS :	SHEET NO. :
	CHECKED	10/19/02			THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses)			AS SHOWN		
SUBMITTED	10/21/02	BUREAU OF DESIGN Submitted By: DANILLO C. TRAJANO Project Director			OFFICE OF THE SECRETARY Recommended By: ADRIANO M. DORCO Chief, Bridges Division			FULL SIZE A1		
				CABANATUAN BYPASS - CONTRACT PACKAGE IV						

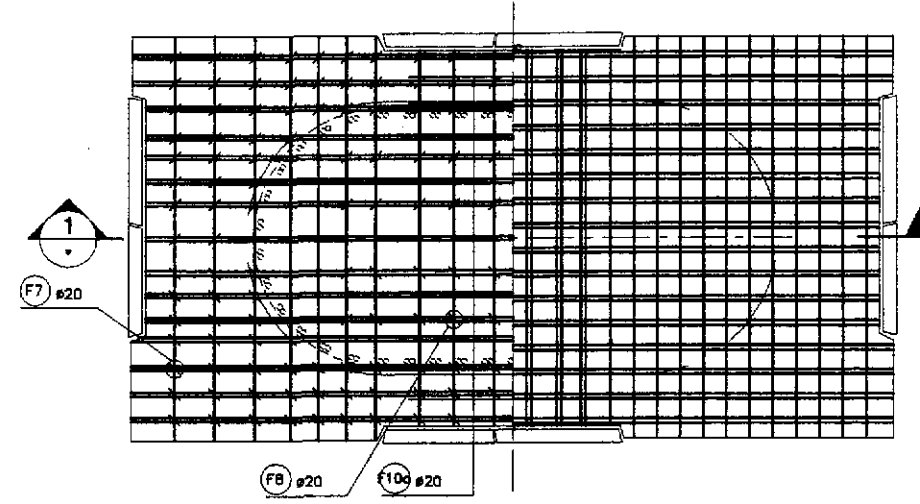
BAR BENDING DIAGRAM



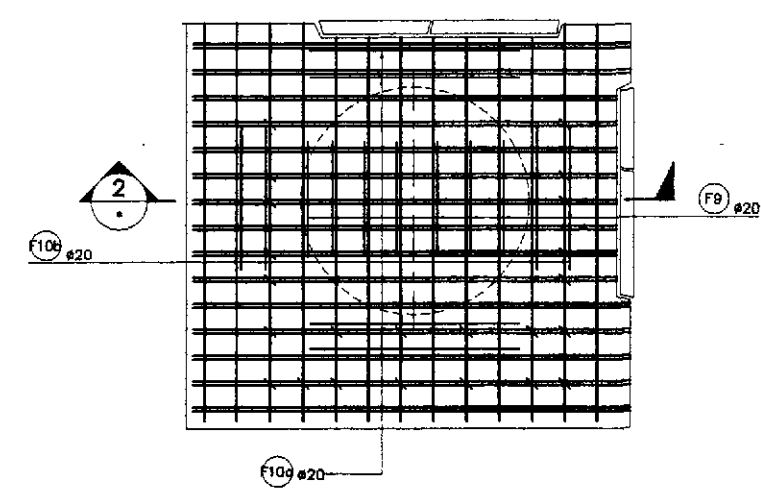
SCHEDULE OF REINFORCEMENT

LOCATION	BAR MARK	SIZE (mm)	BEND TYPE	DIMENSION(mm) OUT TO OUT					LENGTH (mm)	NO. REQ'D.	UNIT WEIGHT (kg/m)	WEIGHT (kg)	
				a	b	c	d	e				GRADE 40	GRADE 60
PIERS P3 & P6	F1	20	A	1000	6600				8600	48	2.466		1018
	F2	28	A	825	10350				12000	78	4.833		4525
	F3	32	A	1000	6600				8600	78	6.313		4235
	F4	36	A	825	10350				12000	80	7.991		7671
	F5	25	B	6600					6600	12	3.854		305
	F6	25	B	10350					10350	12	3.854		479
	F7	20	C	350	1670	300			2320	464	2.466		2855
	F8	20	C	350	1670	300			2320	40	2.466		229
	F9	20	D	1670	590	300			4530	36	2.466		402
	F10a	20	D	1670	1360	300			5300	24	2.466		314
	F10b	20	D	1670	1450	300			5380	24	2.466		318
	F11	20	B	9000					9000	14	2.466		311
F12	20	B	5000					5000	14	2.466		173	
TOTAL WEIGHT PER PIER = 22835 kg													
TOTAL WEIGHT FOR (2) PIERS = 45270 kg													

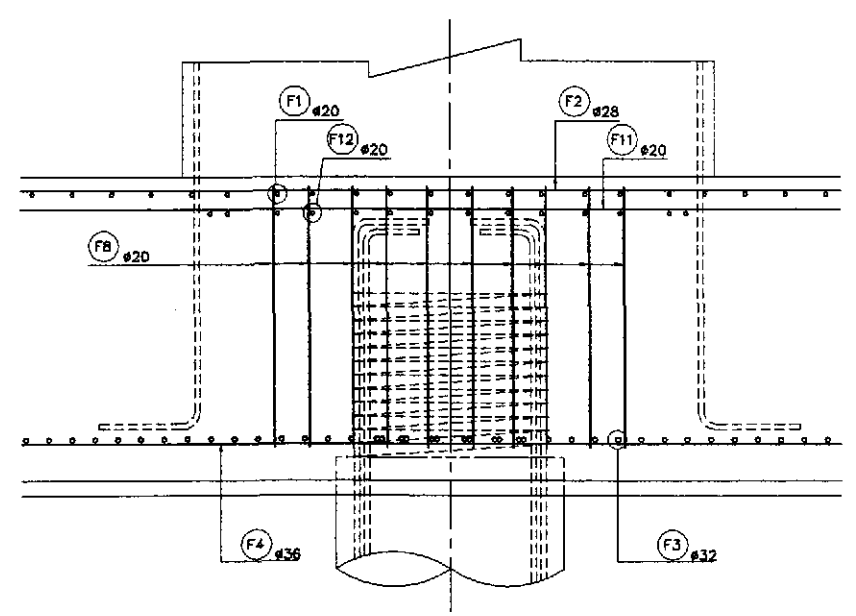
THE REINFORCEMENT SHOWN ON THIS TABLE IS FOR REFERENCE ONLY, THE CONTRACTOR SHOULD CHECK AND VERIFY ALL DIMENSIONS, SIZES AND QUANTITIES OF REINFORCEMENT.



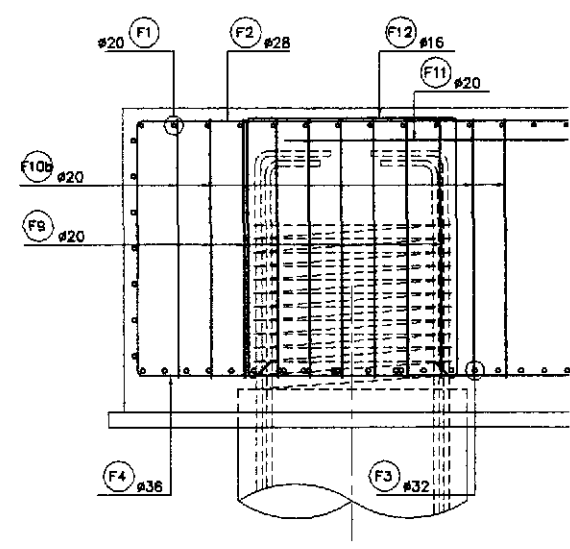
A PLAN SCALE 1:25



B PLAN SCALE 1:25



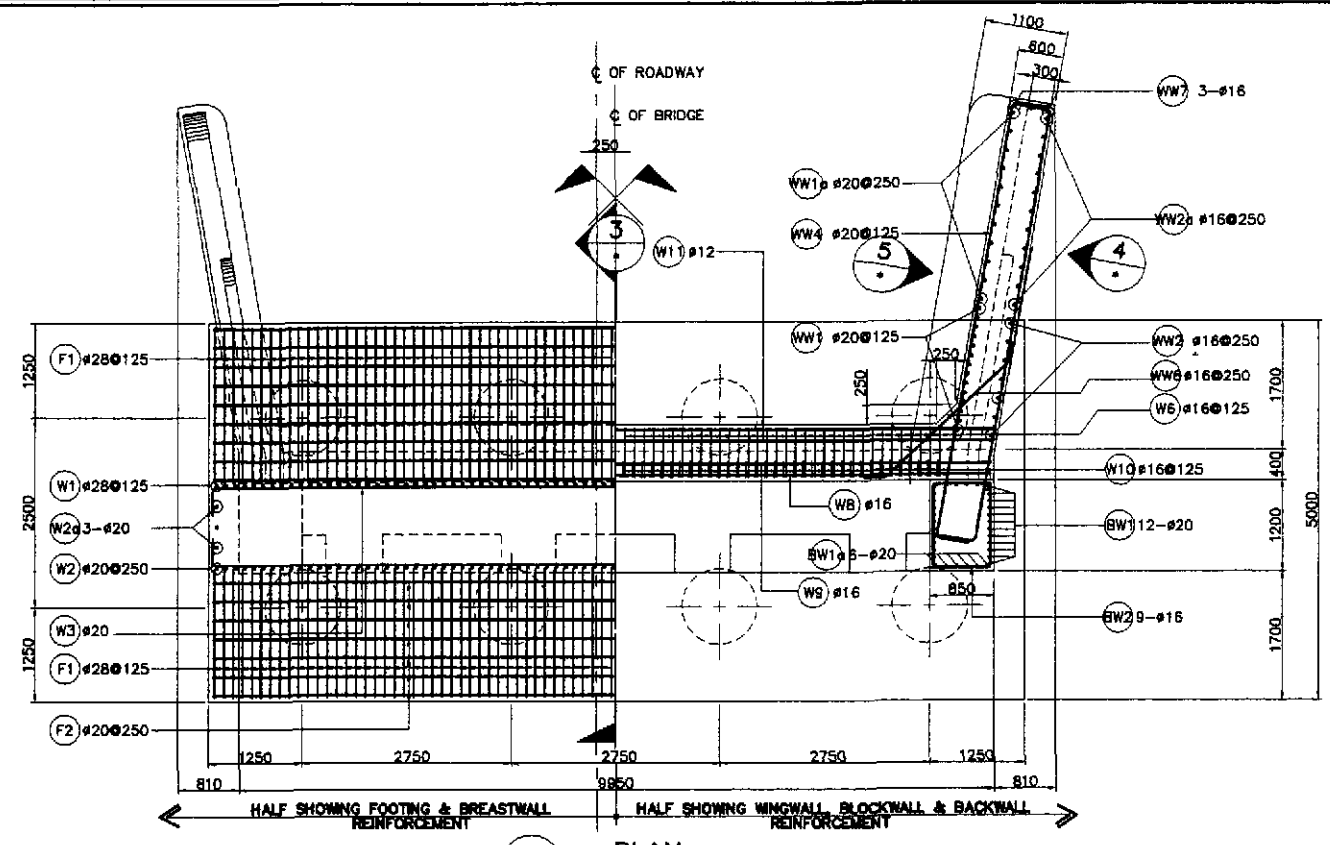
1 SECTION SCALE 1:25



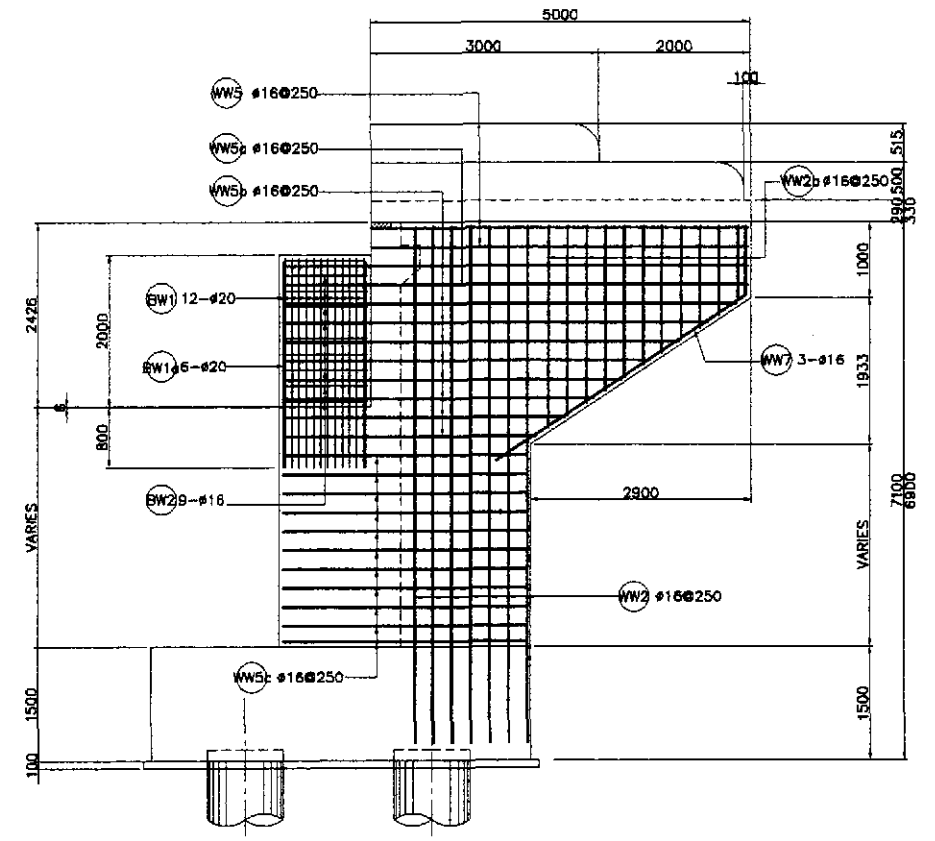
2 SECTION SCALE 1:25

1 PILECAP REINF. DETAILS FOR EXP. PIERS (PIER 3 & PIER 6) SCALE AS SHOWN

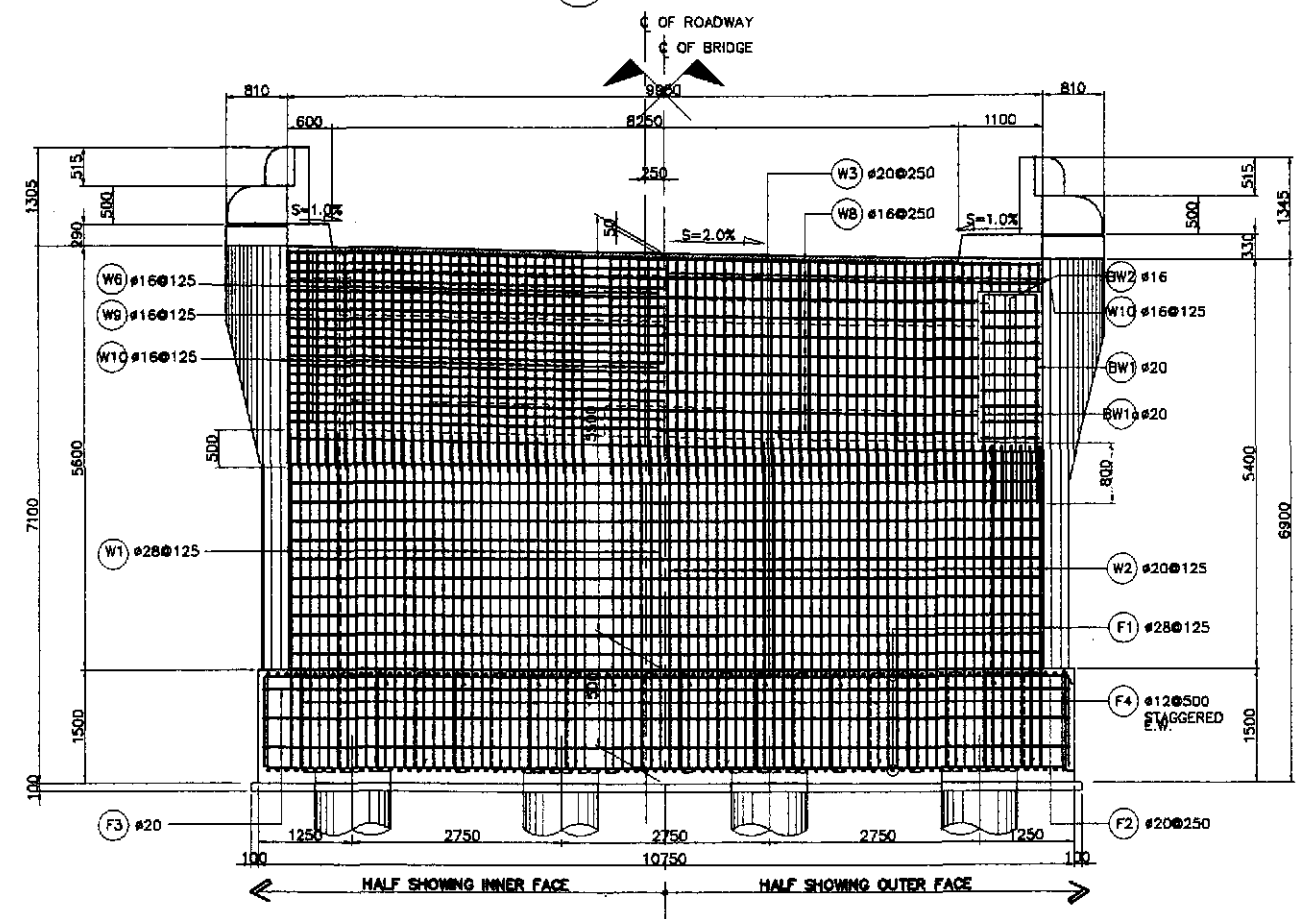
	DESIGNED	DATE	SIGNATURE	REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS			PROJECT AND LOCATION :	SCALE :	SHEET CONTENTS :	SHEET NO. :
	CHECKED	10/19/02	H. P. DE JESUS	BUREAU OF DESIGN			THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses)	AS SHOWN	BRIDGE NO.14 TALAVERA RIVER BRIDGE PILECAP REINF. DETAILS FOR EXP. (PIERS P3 & P6) - 2 OF 2 (INITIAL STAGE)	B14S-72
	SUBMITTED	10/21/02	J.C. SANTOS	OFFICE OF THE SECRETARY			CABANATUAN BYPASS - CONTRACT PACKAGE IV	FULL SIZE A1		



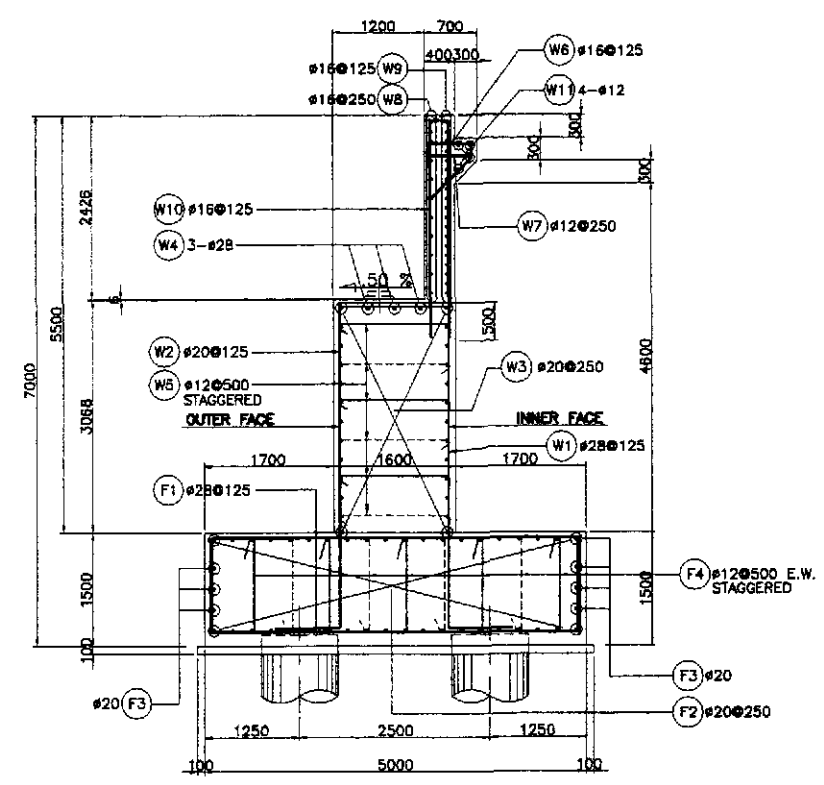
1 PLAN
SCALE 1:50



4 WINGWALL ELEVATION
SCALE 1:50

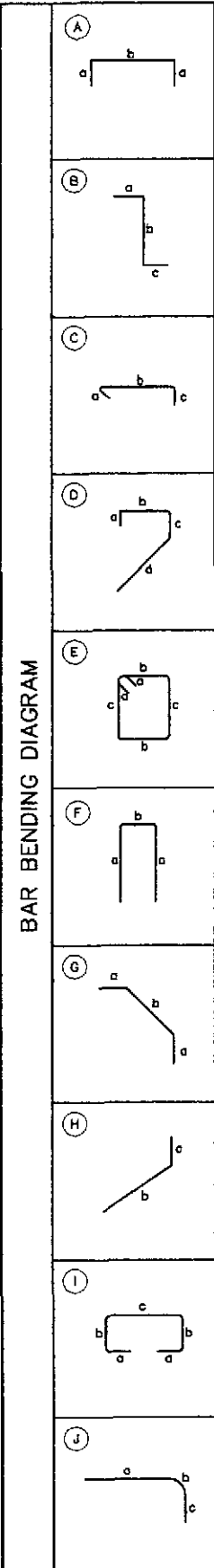
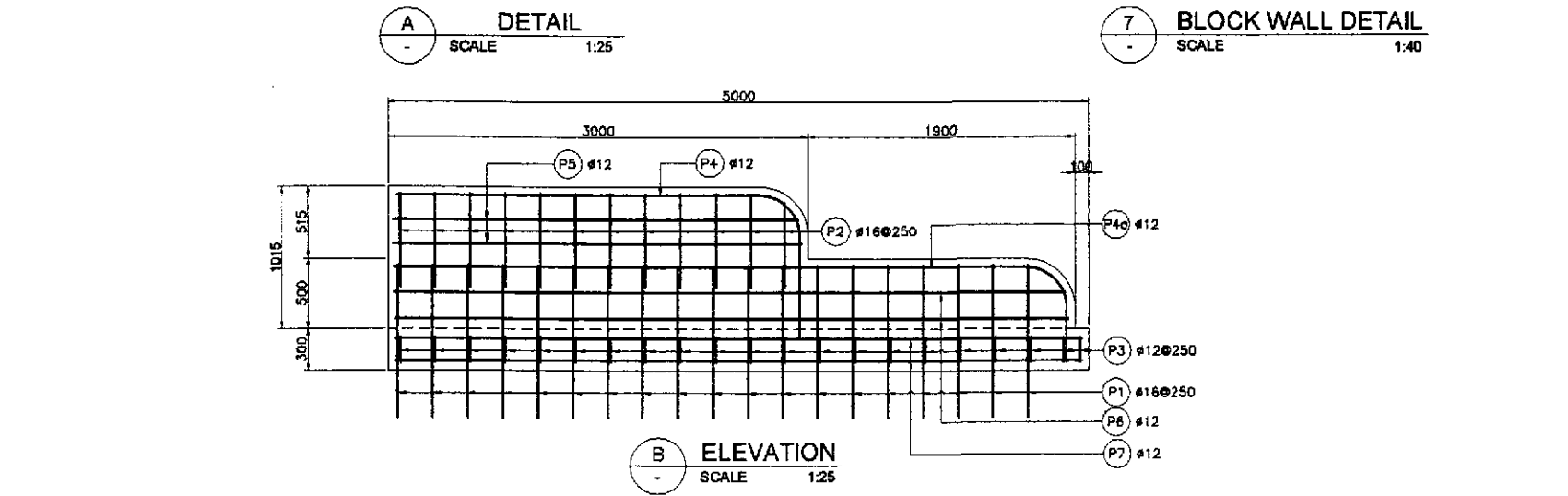
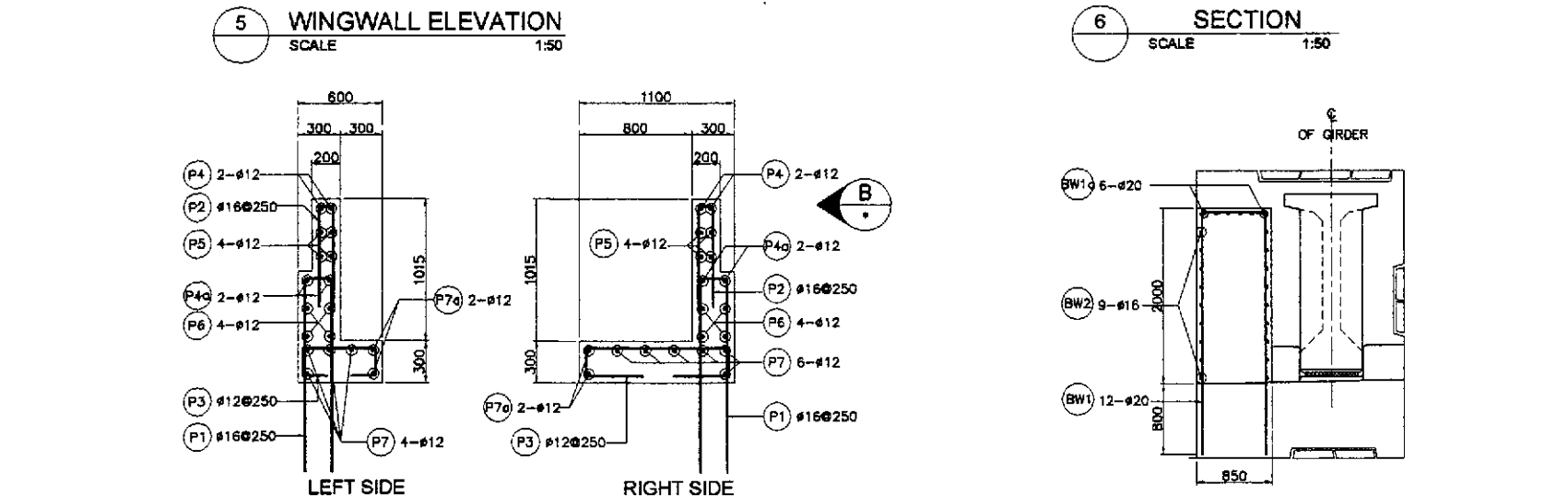
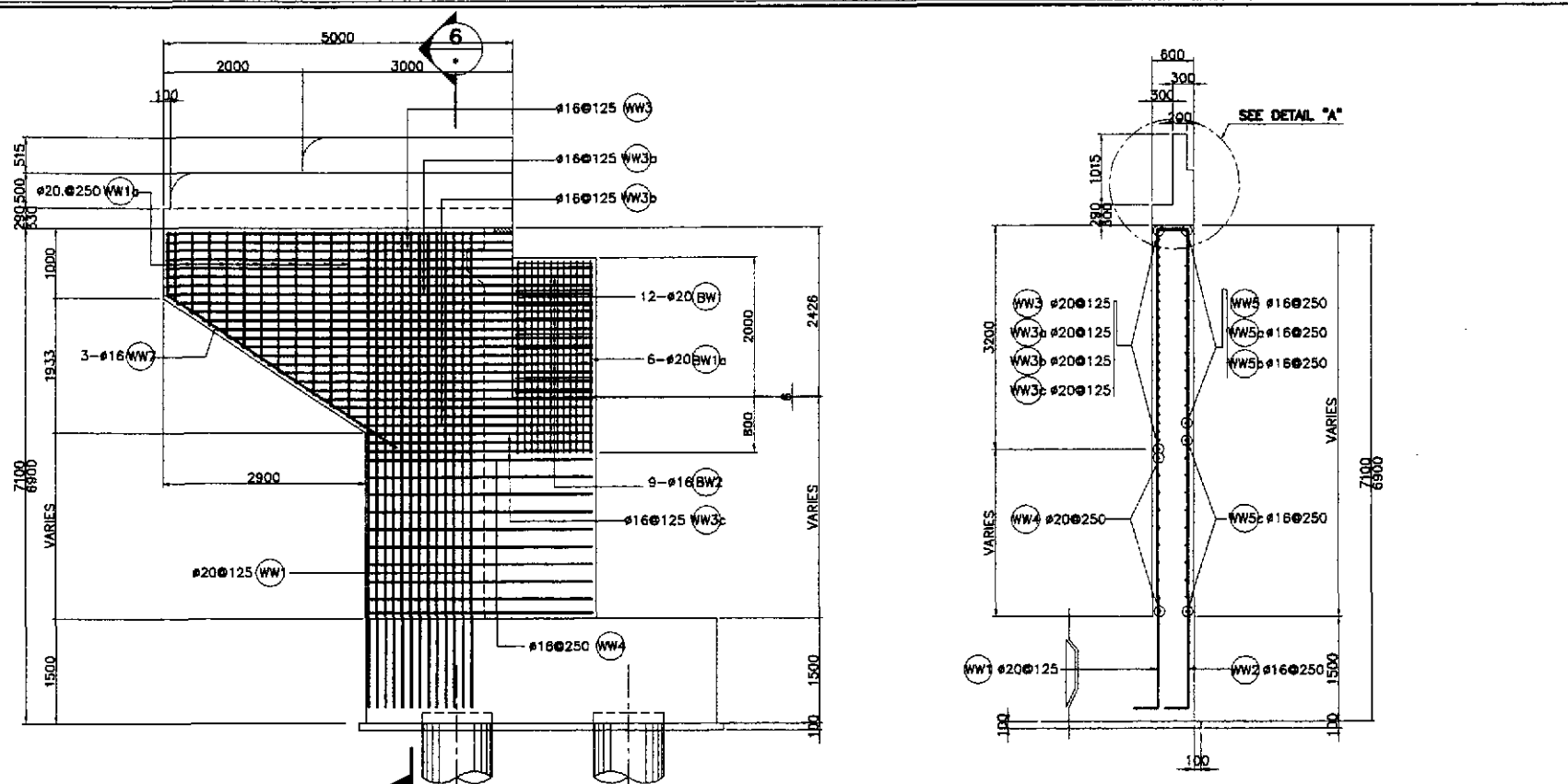


2 ELEVATION
SCALE 1:50



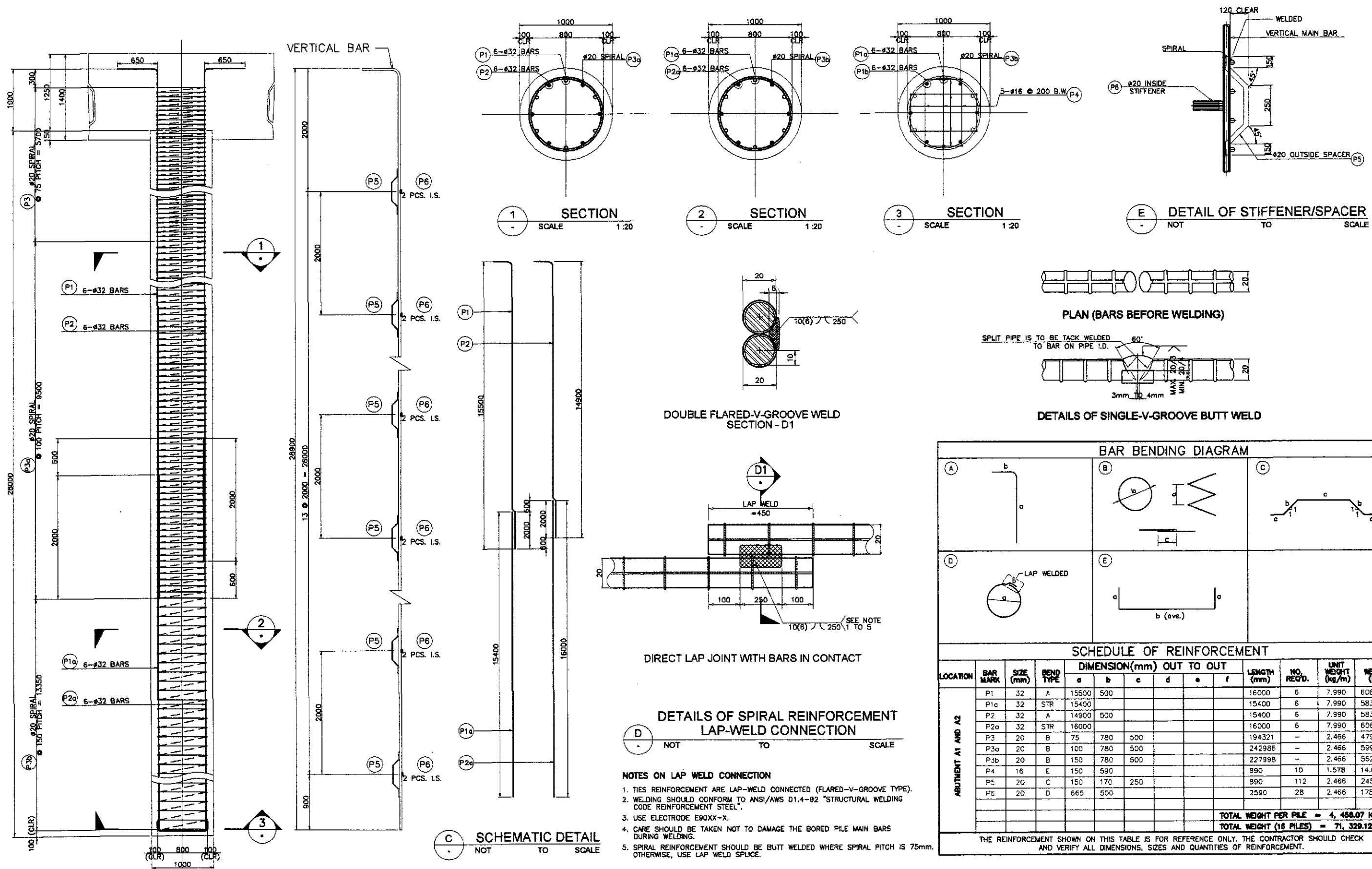
3 SECTION
SCALE 1:50

	DESIGNED	DATE	SIGNATURE	<p>REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS</p>	PROJECT AND LOCATION :		SCALE :	SHEET CONTENTS :	SHEET NO. :	
	CHECKED	10/14/02	F. P. DE JESUS		BUREAU OF DESIGN	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.14 TALAVERA RIVER BRIDGE REINFORCEMENT DETAILS (ABUTMENT A1 & A2) - 1 OF 2 (INITIAL STAGE)	B14S-73
	SUBMITTED	10/14/02	J. C. SANTOS TEAM LEADER		OFFICE OF THE SECRETARY	CABANATUAN BYPASS - CONTRACT PACKAGE IV		FULL SIZE A1		
				Reviewed By:	Recommended By:	Recommended By:	Approved By:			
				ADRIANO M. DORCY Chief, Bridges Division	GLBERTO S. REYES Director IV (CIC)	MANUEL M. BONOAN Undersecretary	SIMEON A. DATUMANONG Secretary			



SCHEDULE OF REINFORCEMENT														
LOCATION	BAR MARK	SIZE (mm)	BEND TYPE	DIMENSION(mm) OUT TO OUT					LENGTH (mm)	NO. REQ'D.	UNIT WEIGHT (kg/m)	WEIGHT (kg)		
				a	b	c	d	e				GRADE 40	GRADE 60	
WINGWALL	W1	28	B	1350	4375	525			6150	80	4.834		2378	
	W2	20	B	1350	4375	525			6150	80	2.466		1213	
	W2a	20	A	1350	4375	525			7075	6	2.466		105	
	W2b	20	A	1350	4175	525			6875	6	2.466		102	
	W3	20	A	335	9800				10470	26	2.466		671	
	W4	28	A	500	9800				10800	3	4.834		157	
	W5	12	C	130	1350	110			1590	53	0.888		75	
	Sub-Total =											75	4626	
	W6	16	D	300	550	200	700		1750	70	1.578		193	
	W7	12	STR	550					550	70	0.888		34	
	W8	16	A	150	9800				10100	10	1.578		159	
W9	16	A	150	9800				10100	19	1.578		303		
W10	16	F	2700	250				5650	70	1.578		624		
W11	12	STR	9850					9850	4	0.888		35		
Sub-Total =											1346	0		
BW1	20	F	2750	750				6250	24	2.466		370		
BW1c	20	F	2750	1100				6600	12	2.466		195		
BW2	16	E	175	750	1050			3950	18	1.578		112		
Sub-Total =											112	565		
WW1	20	B	335	6750	335			7320	28	2.466		505		
WW1a	20	A	335	2756	max.			2493	22	2.466		135		
WW2	16	A	335	6750	min.			7320	14	1.578		162		
WW2a	16	A	335	2756	max.			2493	22	1.578		87		
WW3	20	A	335	4900	min.			5570	8	2.466		110		
WW3a	20	A	335	6050				6720	8	2.466		133		
WW3b	20	A	335	6050				5270	32	2.466		416		
WW3c	20	A	335	3150				3150						
WW4	20	A	335	3150				3820	4	2.466		38		
WW5	16	A	150	4900				3820	21	2.466		198		
WW5a	16	A	150	4900				5200	4	1.578		33		
WW5b	16	A	150	6050				4900	14	1.578		108		
WW5c	16	A	150	3150				3150						
WW6	16	G	450	1900				3450	45	1.578		245		
WW7	16	H	900	3800				2800	67	1.578		296		
Sub-Total (For 2 Wingwalls) =											1015	1535		
P1	16	F	1250	200				2700	20	1.578		85		
P2	16	F	800	100				1700	12	1.578		32		
P3	12	I	420	200	1000			2240	19	0.888		38		
P4	12	J	2600	472	500			3572	2	0.888		6		
P4a	12	J	4500	472	400			5372	2	0.888		10		
P5	12	STR	2900					2900	4	0.888		10		
P6	12	STR	4800					4800	4	0.888		17		
P7	12	STR	4800					4900	6	0.888		26		
P7a	12	J	4650	393	750			5793	2	0.888		10		
Sub-Total =											234	0		
P1	16	F	1250	200				2700	20	1.578		85		
P2	16	F	800	100				1700	12	1.578		32		
P3	12	I	420	200	500			1740	19	0.888		29		
P4	12	J	2600	472	500			3572	2	0.888		6		
P4a	12	J	4500	472	400			5372	2	0.888		10		
P5	12	STR	2900					2800	4	0.888		10		
P6	12	STR	4800					4800	4	0.888		17		
P7	12	STR	4800					4900	4	0.888		17		
P7a	12	J	4650	393	250			5293	2	0.888		9		
Sub-Total =											215	0		
F1	28	A	1350	4850				7550	170	4.834		6204		
F2	20	A	335	10600				11270	40	2.466		1112		
F3	20	A	335	10600				11270	6	2.466		167		
F4	12	C	130	1350	110			1590	242	0.888		342		
Sub-Total =											342	7463		
Total Per Abutment =											3341	14209		
Grand Total (Two Abutments) =											6682	28418		

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



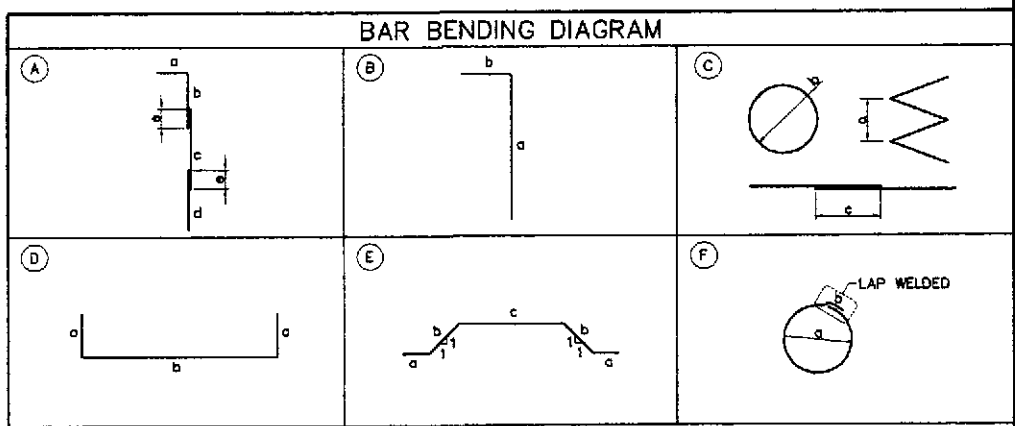
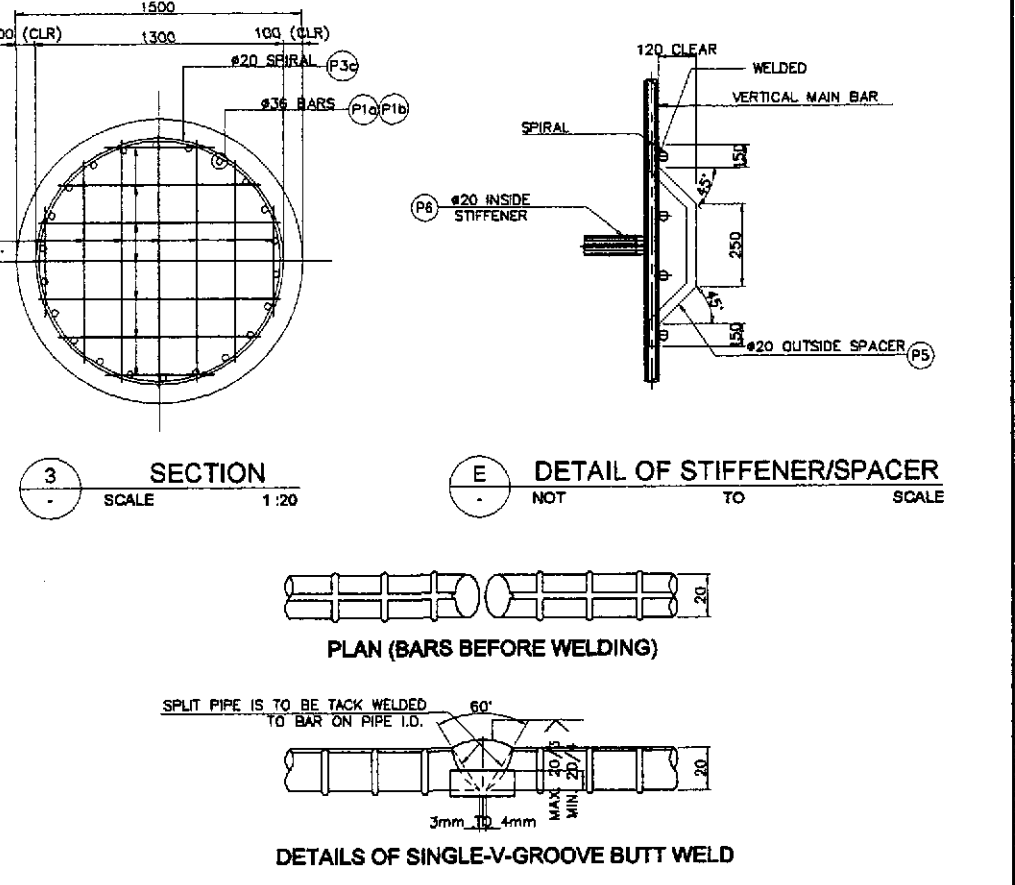
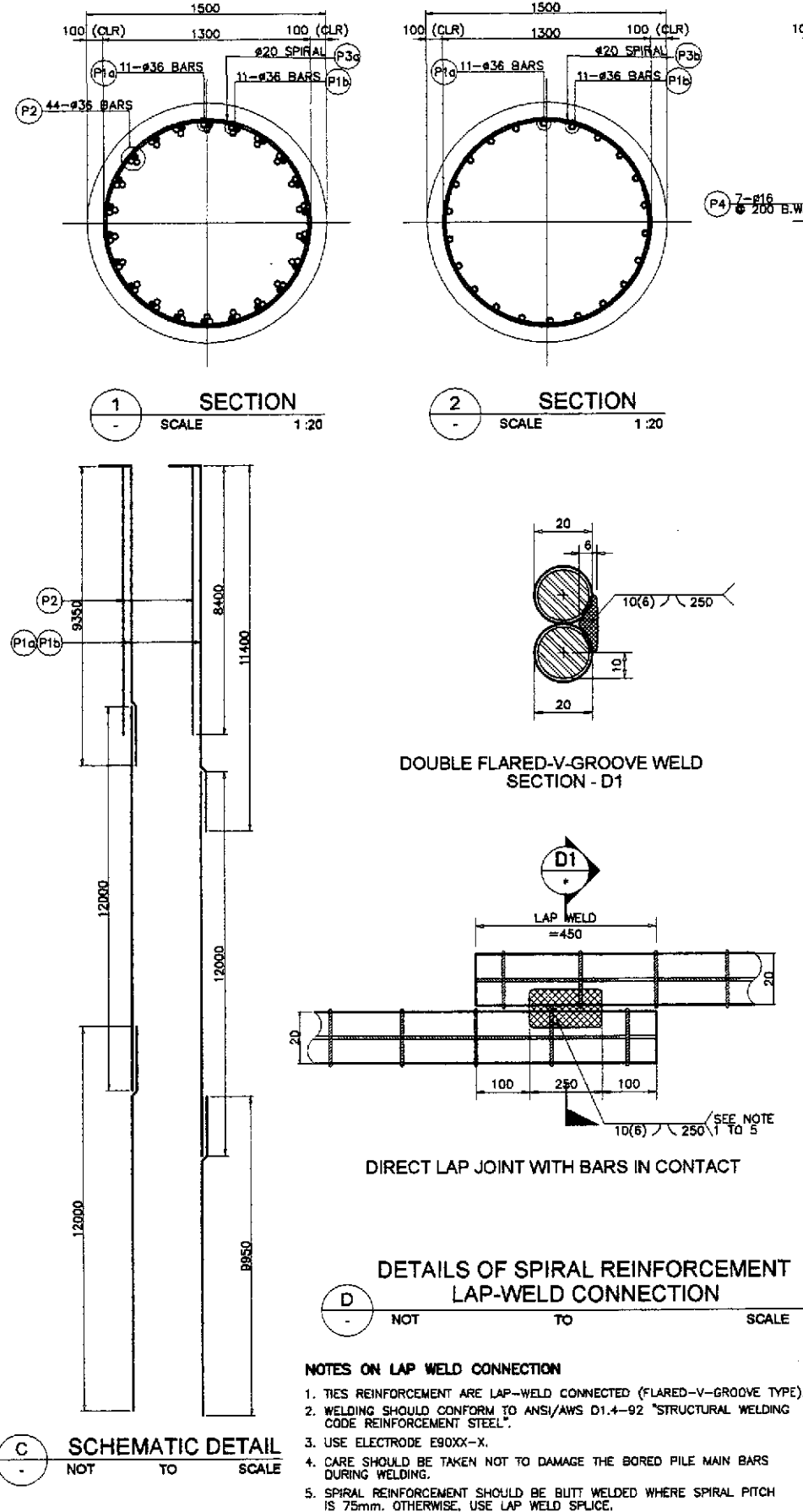
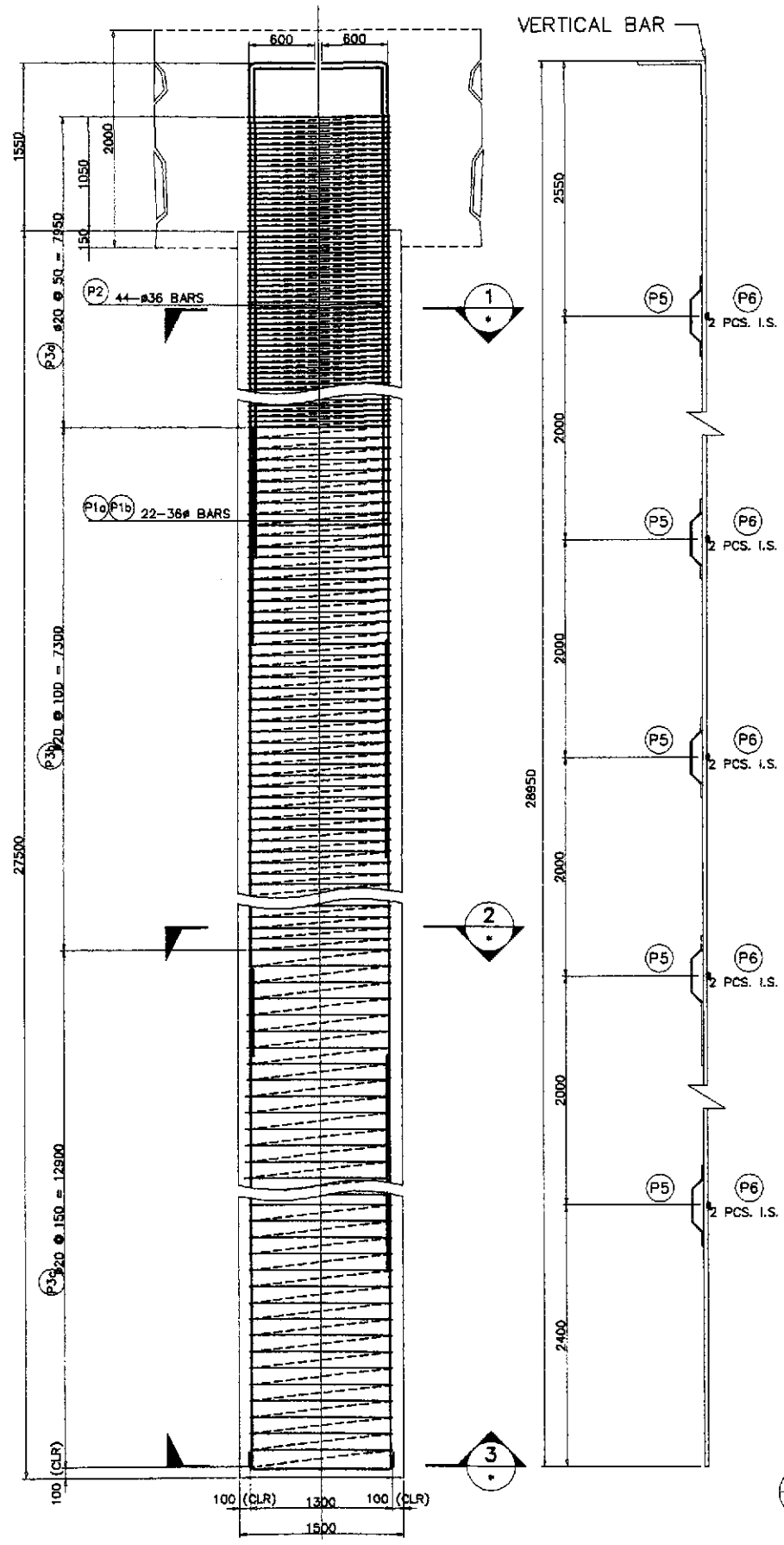
A ELEVATION SCALE 1:30 **B** LAYOUT OF STIFFENER SCALE 1:30 **1** BORED PILE REINFORCEMENT DETAILS, Ø1000mm (ABUTMENT A1&A2) SCALE AS SHOWN

	DATE: 10/21/02 SIGNATURE: P. DE JESUS DESIGNED: J.C. SANTOS CHECKED: J.C. SANTOS SUBMITTED: 10/21/02	REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS BUREAU OF DESIGN OFFICE OF THE SECRETARY	PROJECT AND LOCATION: THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Pilaridel, Cabanatuan and San Jose Bypasses) CABANATUAN BYPASS - CONTRACT PACKAGE IV	SCALE: AS SHOWN FULL SIZE A1	SHEET CONTENTS: BRIDGE NO.14 TALAVERA RIVER BRIDGE BORED PILE REINF. DETAILS, Ø1000mm (ABUTMENT A1 & A2) (INITIAL STAGE)	SHEET NO. : B14S-75	
	Submitted By: DANILLO C. TRILANO Project Director	Reviewed By: ADRIANO M. DORCY Chief, Bridges Division	Recommended By: GILBERTO S. REYES Director IV (CIC)	Recommended By: MANUEL M. BONDAN Undersecretary	Approved By: SIMON A. DATUMANONG Secretary		
	THE REINFORCEMENT SHOWN ON THIS TABLE IS FOR REFERENCE ONLY. THE CONTRACTOR SHOULD CHECK AND VERIFY ALL DIMENSIONS, SIZES AND QUANTITIES OF REINFORCEMENT.						

LOCATION	BAR MARK	SIZE (mm)	BEND TYPE	DIMENSION(mm) OUT TO OUT						LENGTH (mm)	NO. RECD.	UNIT WEIGHT (kg/m)	WEIGHT (kg)
				a	b	c	d	e	f				
ABUTMENT A1 AND A2	P1	32	A	15500	500					16000	6	7.990	606.05
	P1a	32	STR	15400						15400	6	7.990	583.32
	P2	32	A	14900	500					15400	6	7.990	583.32
	P2a	32	STR	16000						16000	6	7.990	606.05
	P3	20	B	75	780	500				194321	-	2.466	479.20
	P3a	20	B	100	780	500				242986	-	2.466	599.20
	P3b	20	B	150	780	500				227998	-	2.466	562.24
	P4	16	E	150	590					890	10	1.578	14.04
	P5	20	C	150	170	250				890	112	2.466	245.81
	P6	20	D	665	500					2590	28	2.466	178.83
TOTAL WEIGHT PER PILE = 4,488.07 Kgs.													
TOTAL WEIGHT (16 PILES) = 71,329.12 Kgs.													

NOTES ON LAP WELD CONNECTION

- TIES REINFORCEMENT ARE LAP-WELD CONNECTED (FLARED-V-GROOVE TYPE).
- WELDING SHOULD CONFORM TO ANSI/AWS D1.4-82 "STRUCTURAL WELDING CODE REINFORCEMENT STEEL".
- USE ELECTRODE E90XX-X.
- CARE SHOULD BE TAKEN NOT TO DAMAGE THE BORED PILE MAIN BARS DURING WELDING.
- SPIRAL REINFORCEMENT SHOULD BE BUTT WELDED WHERE SPIRAL PITCH IS 75mm. OTHERWISE, USE LAP WELD SPLICE.

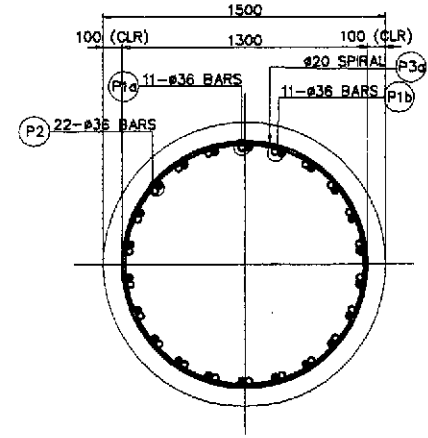
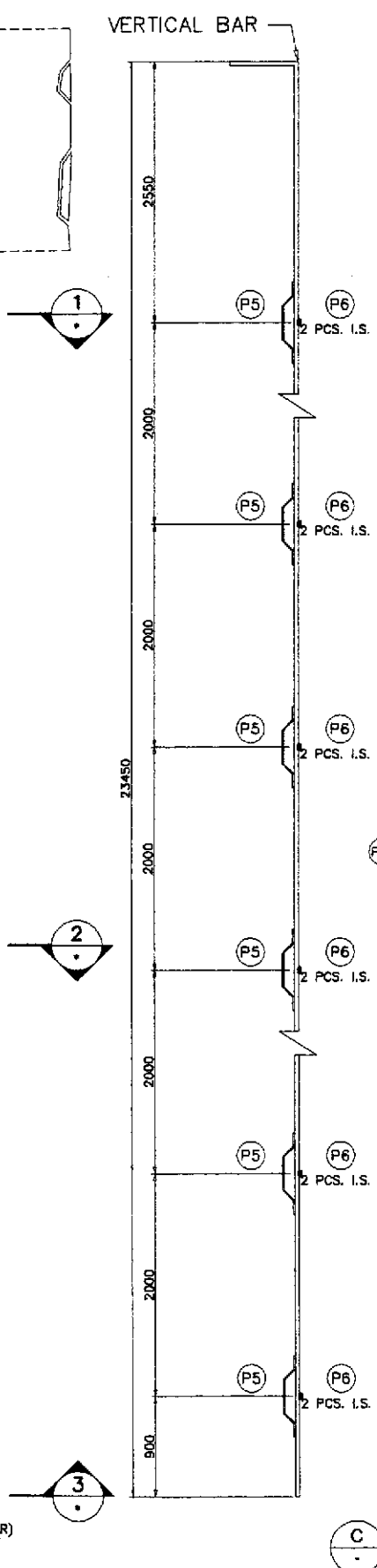
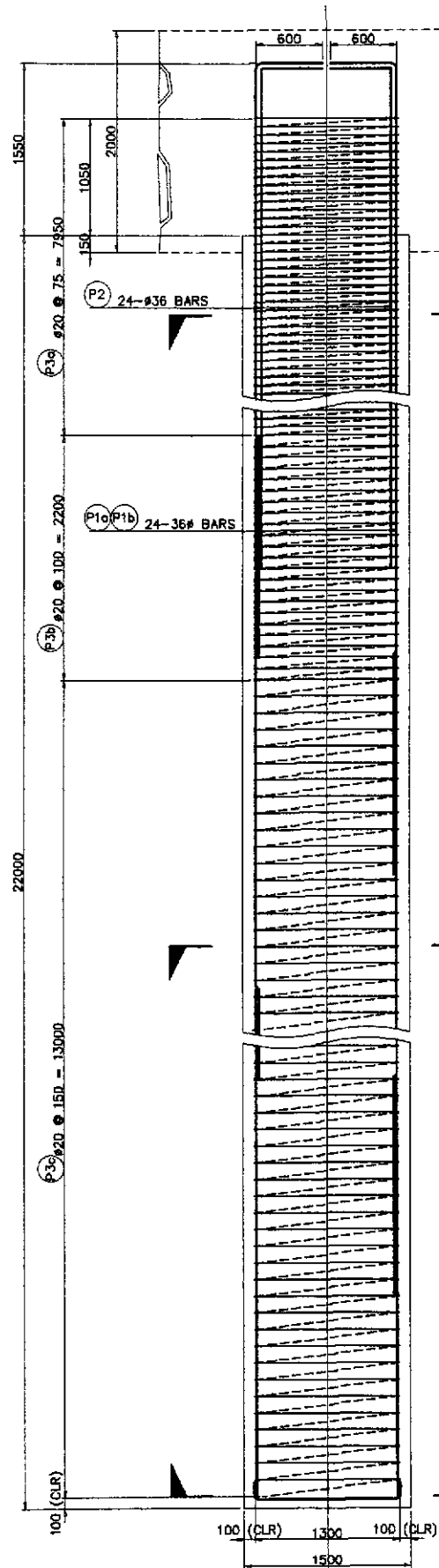


SCHEDULE OF REINFORCEMENT														
LOCATION	BAR MARK	SIZE (mm)	BEND TYPE	DIMENSION (mm) OUT TO OUT						LENGTH (mm)	NO. REQ'D.	UNIT WEIGHT (kg/m)	WEIGHT (kg)	
				a	b	c	d	e	f				GRADE 40	GRADE 60
PIERS P1 & PIER 2 (FIX-TYP) BORED PILE	P1a	36	A	600	11400	12000	9950	2200		38350	11	7.990		3371
	P1b	36	A	600	9350	12000	12000	2200		38350	11	7.990		3371
	P2	36	B	600	8400					9000	44	7.990		3164
	P3a	20	C	100	1300	1200				715367	1	2.466		1764
	P3b	20	C	150	1300	1200				328137	1	2.466		809
	P3c	20	C	200	1300	1200				387230	1	2.466		955
	P4	16	D	200	950	ove.				1350	14	1.578	30	
	P5	20	E	150	170	200				840	52	2.466		108
P6	20	F	1188	150					3883	26	2.466		249	
TOTAL WEIGHT											=	30	13791	

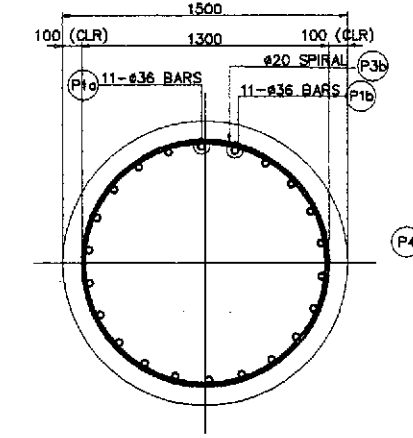
THE REINFORCEMENT SHOWN ON THIS TABLE IS FOR REFERENCE ONLY. THE CONTRACTOR SHOULD CHECK AND VERIFY ALL DIMENSIONS, SIZES AND QUANTITIES OF REINFORCEMENT.

A ELEVATION SCALE 1:30 B LAYOUT OF STIFFENER SCALE 1:30 1 BORED PILE REINFORCEMENT DETAILS, Ø1500mm (PIER 1 & PIER 2) SCALE AS SHOWN

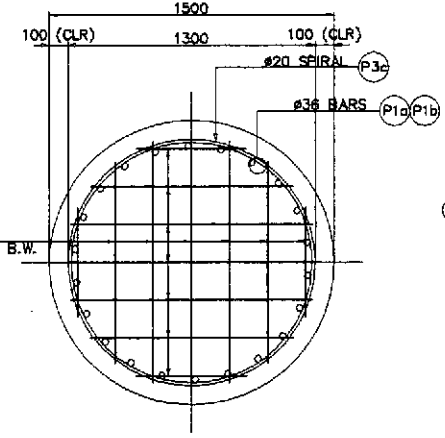
	DESIGNED	DATE	SIGNATURE		REPUBLIC OF THE PHILIPPINES			PROJECT AND LOCATION : THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses) CABANATUAN BYPASS - CONTRACT PACKAGE IV	SCALE : AS SHOWN FULL SIZE A1	SHEET CONTENTS : BRIDGE NO.14 TALAVERA RIVER BRIDGE BORED PILE REINF. DETAILS, Ø1500mm (PIERS 1 & 2) (INITIAL STAGE)	SHEET NO. : B14S-76	
	CHECKED	10/19/02	J. P. DE JESUS		DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS							
	SUBMITTED	10/21/02	M. M. BONDAN		BUREAU OF DESIGN							
				OFFICE OF THE SECRETARY								
				Submitted By: DANILLO C. TRAJANO, Project Director			Reviewed By: ADRIANO M. DORCY, Chief, Bridges Division	Recommended By: GILBERTO S. REYES, Director IV (OIC)	Recommended By: MANUEL M. BONDAN, Undersecretary	Approved By: SIMON A. DATUMANONG, Secretary		



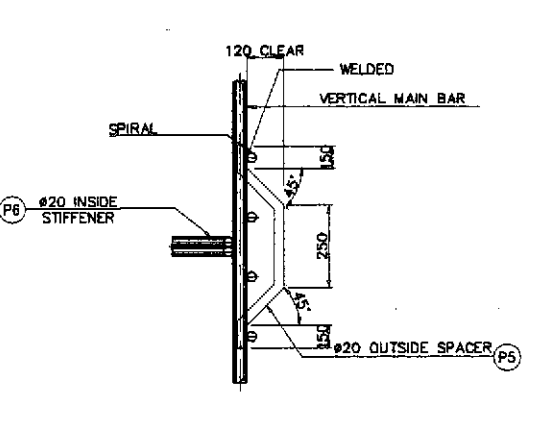
1 SECTION SCALE 1:20



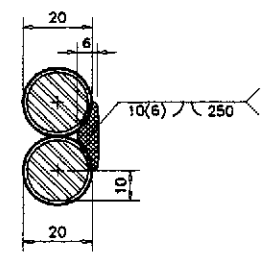
2 SECTION SCALE 1:20



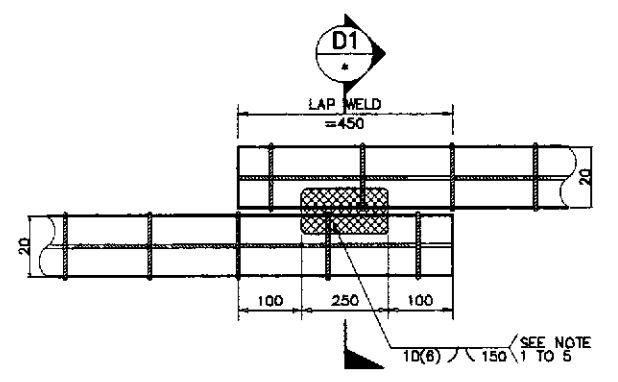
3 SECTION SCALE 1:20



E DETAIL OF STIFFENER/SPACER NOT TO SCALE

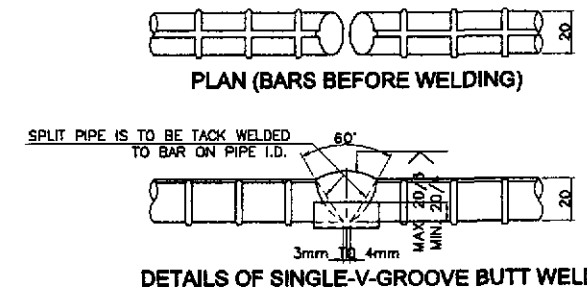


DOUBLE FLARED-V-GROOVE WELD SECTION - D1

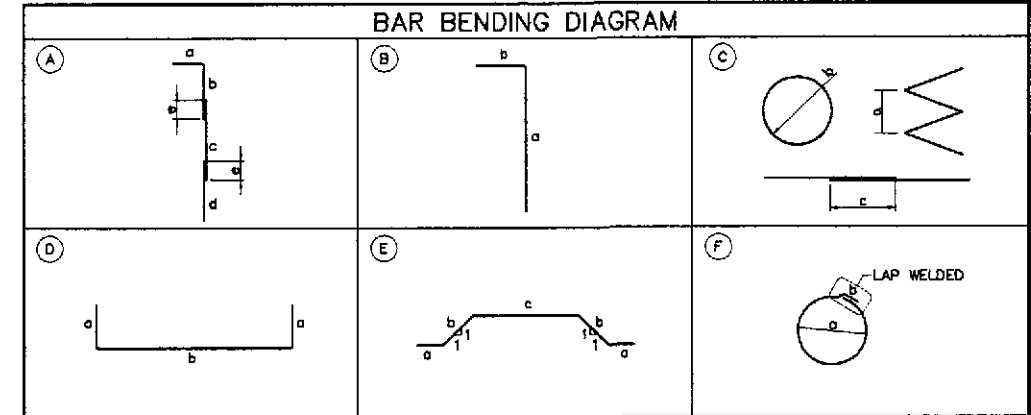


DIRECT LAP JOINT WITH BARS IN CONTACT
DETAILS OF SPIRAL REINFORCEMENT FULL LAP-WELD CONNECTION
NOT TO SCALE

- NOTES ON LAP WELD CONNECTION
1. TIES REINFORCEMENT ARE LAP-WELD CONNECTED (FLARED-V-GROOVE TYPE).
 2. WELDING SHOULD CONFORM TO ANSI/AWS D1.4-92 "STRUCTURAL WELDING CODE REINFORCEMENT STEEL".
 3. USE ELECTRODE E90XX-X.
 4. CARE SHOULD BE TAKEN NOT TO DAMAGE THE BORED PILE MAIN BARS DURING WELDING.
 5. SPIRAL REINFORCEMENT SHOULD BE BUTT WELDED WHERE SPIRAL PITCH IS 75mm. OTHERWISE, USE LAP WELD SPLICE.



DETAILS OF SINGLE-V-GROOVE BUTT WELD



BAR BENDING DIAGRAM

LOCATION	BAR MARK	SIZE (mm)	BEND TYPE	DIMENSION (mm) OUT TO OUT						LENGTH (mm)	NO. REQ'D.	UNIT WEIGHT (kg/m)	WEIGHT (kg)
				a	b	c	d	e	f				
PIERS P4, P5, P7 & P8 (FIX-PIED) #1500 BORED PILE	P1a	36	A	600	11400	12000	4450	2200		32850	11	7.990	2887
	P1b	36	A	600	9200	12000	6650	2200		32850	11	7.990	2887
	P2	36	B	600	8400					9000	22	7.990	1582
	P3a	20	C	100	1300	1200				47731	1	2.466	1177
	P3b	20	C	150	1300	1200				99450	1	2.466	245
	P3c	20	C	200	1300	1200				377862	1	2.466	932
	P4	16	D	200	950	ave.				1350	14	1.578	30
	P5	20	E	150	170	200				840	44	2.466	91
	P6	20	F	1188	150					3883	22	2.466	211
	TOTAL WEIGHT											30	10012

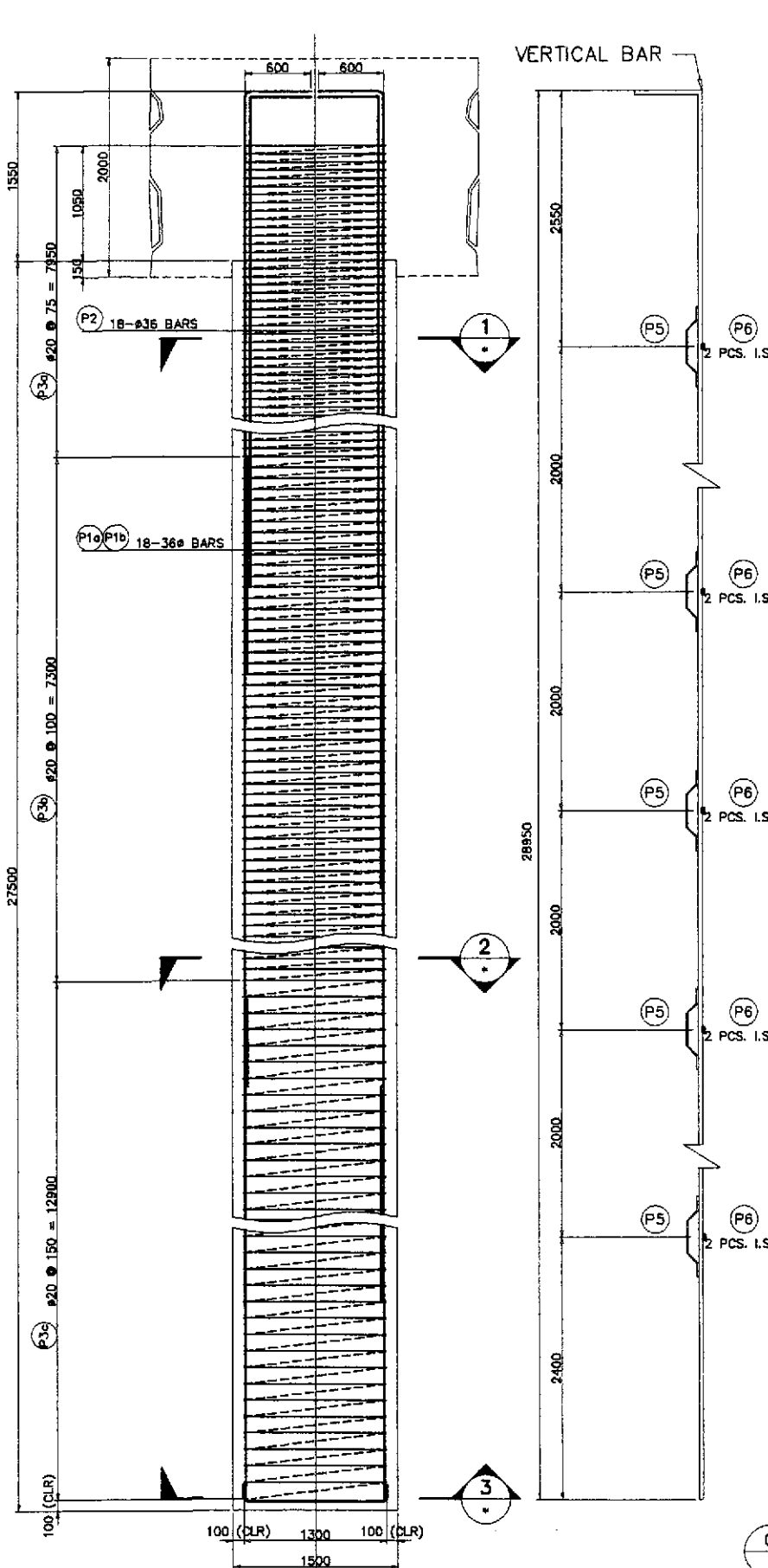
THE REINFORCEMENT SHOWN ON THIS TABLE IS FOR REFERENCE ONLY. THE CONTRACTOR SHOULD CHECK AND VERIFY ALL DIMENSIONS, SIZES AND QUANTITIES OF REINFORCEMENT.

A ELEVATION SCALE 1:30

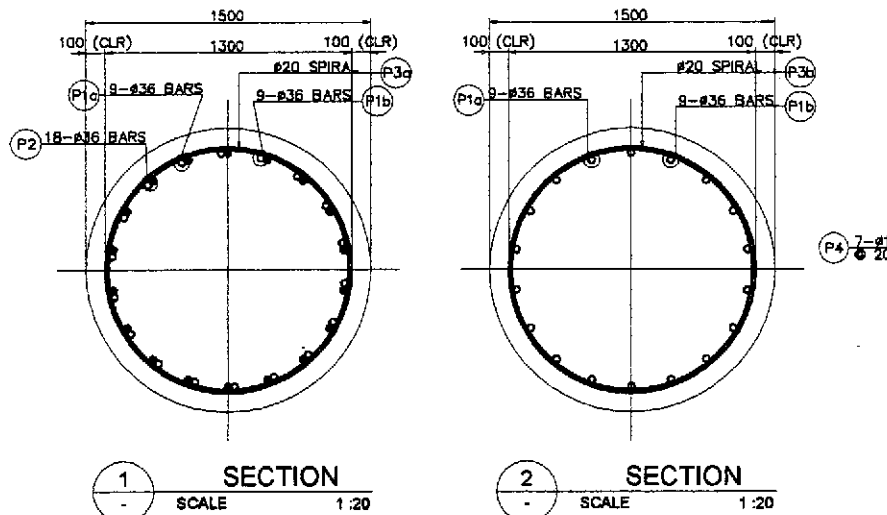
B LAYOUT OF STIFFENER SCALE 1:30

1 BORED PILE REINFORCEMENT DETAILS, Ø1500mm (PIER 4, PIER 5, PIER 7 & PIER 8) AS SHOWN

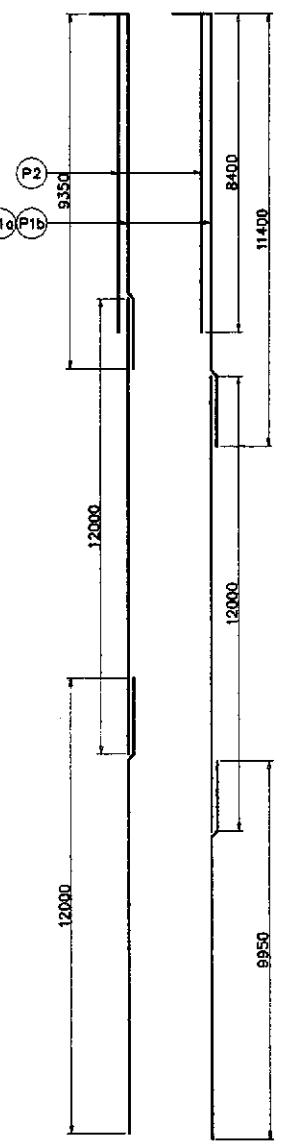
	DESIGNED	DATE	SIGNATURE		REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS					PROJECT AND LOCATION : THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Plaridel, Cabanatuan and San Jose Bypasses) CABANATUAN BYPASS - CONTRACT PACKAGE IV	SCALE :	SHEET CONTENTS :	SHEET NO. :			
	CHECKED	10/19/02	F. P. DE JESUS		BUREAU OF DESIGN									AS SHOWN	BRIDGE NO. 145 TALAVERA RIVER BRIDGE BORED PILE REINF. DETAILS, Ø1500mm (PIERS 4, 5, 7 & 8) (INITIAL STAGE)	B14S-77
	SUBMITTED	10/21/02	J. C. SANTOS		Submitted By:	Reviewed By:	Recommended By:	Approved By:	FULL SIZE A1							



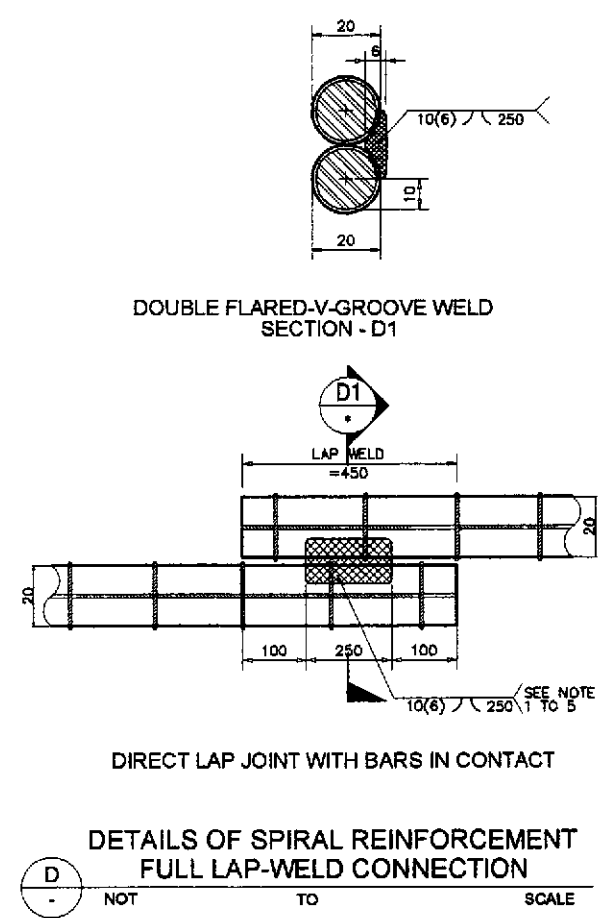
A ELEVATION SCALE 1:30
B LAYOUT OF STIFFENER SCALE 1:30



1 SECTION SCALE 1:20
2 SECTION SCALE 1:20
3 SECTION SCALE 1:20

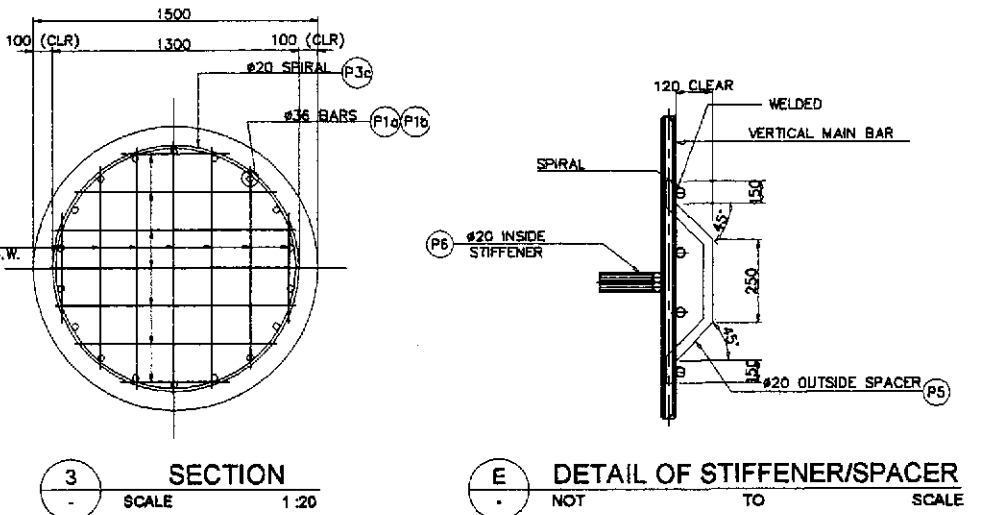


C SCHEMATIC DETAIL NOT TO SCALE

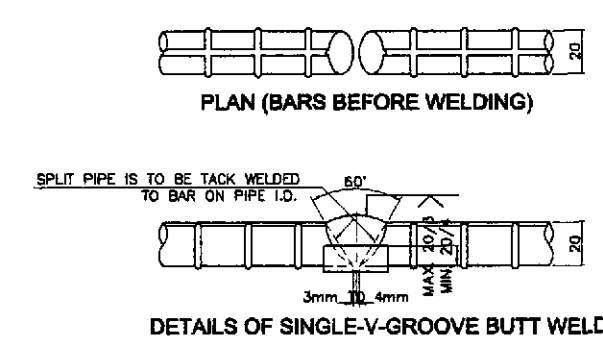


D DETAILS OF SPIRAL REINFORCEMENT FULL LAP-WELD CONNECTION NOT TO SCALE

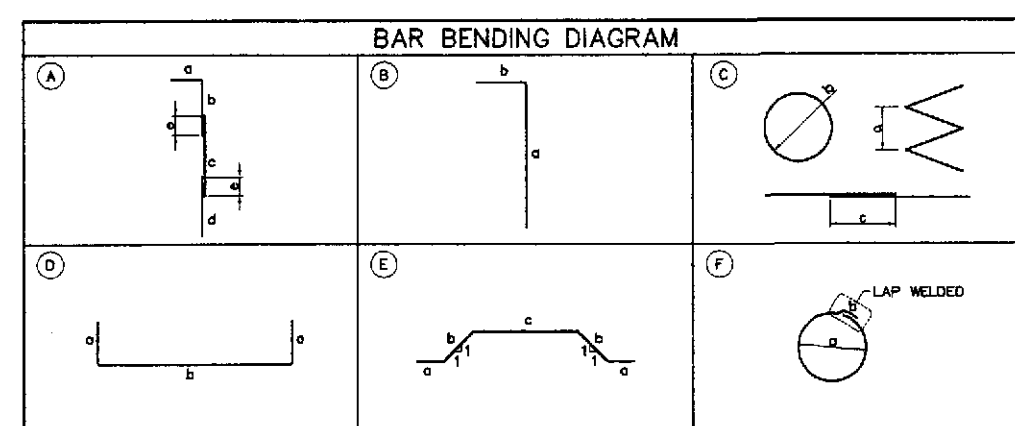
NOTES ON LAP WELD CONNECTION
 1. TIES REINFORCEMENT ARE LAP-WELD CONNECTED (FLARED-V-GROOVE TYPE).
 2. WELDING SHOULD CONFORM TO ANSI/AWS D1.4-92 "STRUCTURAL WELDING CODE REINFORCEMENT STEEL".
 3. USE ELECTRODE E90XX-X.
 4. CARE SHOULD BE TAKEN NOT TO DAMAGE THE BORED PILE MAIN BARS DURING WELDING.
 5. SPIRAL REINFORCEMENT SHOULD BE BUTT WELDED WHERE SPIRAL PITCH IS 75mm. OTHERWISE, USE LAP WELD SPLICE.



E DETAIL OF STIFFENER/SPACER NOT TO SCALE



DETAILS OF SINGLE-V-GROOVE BUTT WELD

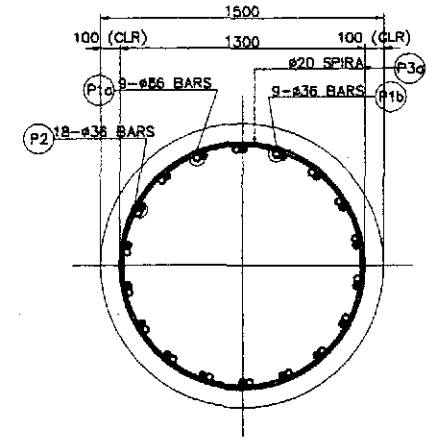
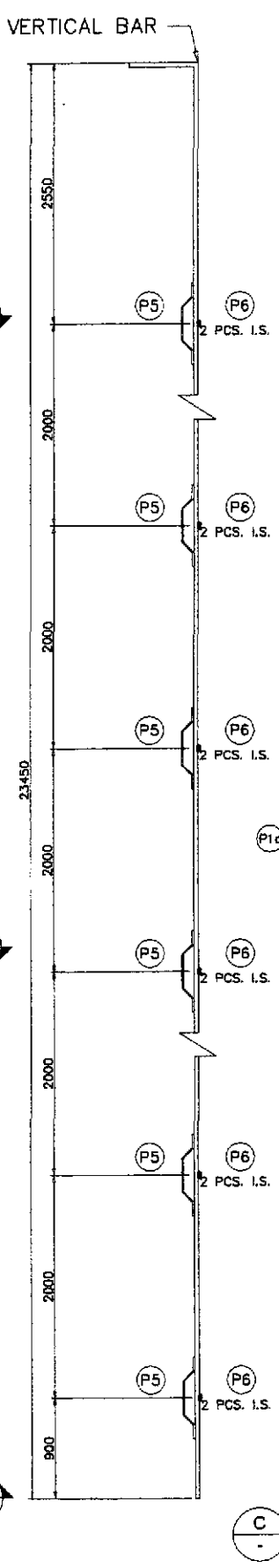
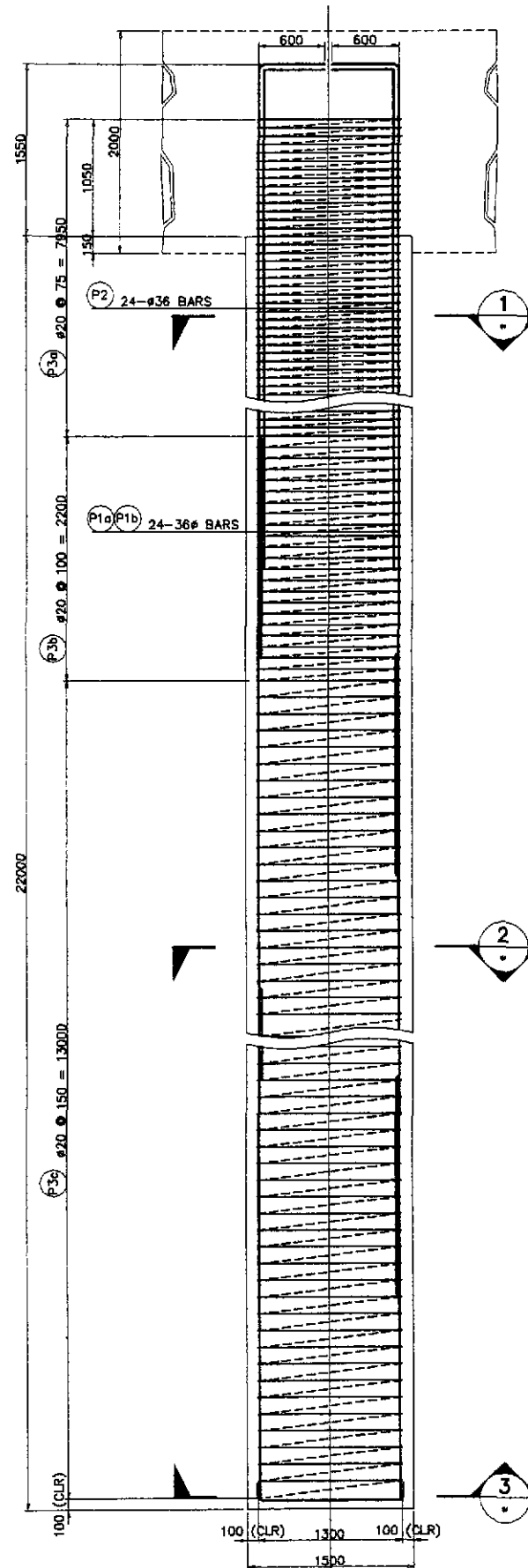


BAR BENDING DIAGRAM

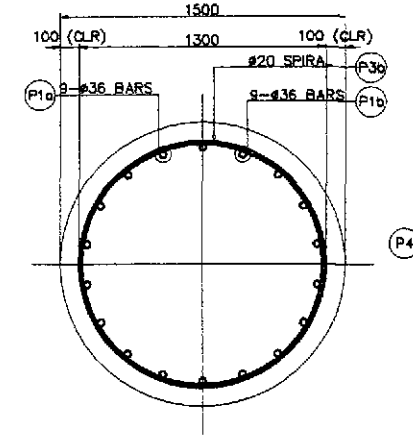
LOCATION	BAR MARK	SIZE (mm)	BEND TYPE	DIMENSION (mm) OUT TO OUT						LENGTH (mm)	NO. REQ'D.	UNIT WEIGHT (kg/m)	WEIGHT (kg)	
				a	b	c	d	e	f				GRADE 40	GRADE 80
PIER P3 (EXP-EXP) Ø1500 BORED PILE	P1a	36	A	600	11400	12000	9950	2200		38350	9	7.990		2758
	P1b	36	A	600	9350	12000	12000	2200		38350	9	7.990		2758
	P2	36	B	600	8400					9000	18	7.990		1294
	P3c	20	C	100	1300	1200				477311	1	2.466		1177
	P3b	20	C	150	1300	1200				328137	1	2.466		809
	P3c	20	C	200	1300	1200				387230	1	2.466		955
P4	16	D	200	950	ave.				1350	14	1.578	30		
P5	20	E	150	170	200				840	52	2.466		108	
P6	20	F	1188	150					3883	26	2.466		249	
TOTAL WEIGHT											30		10168	

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

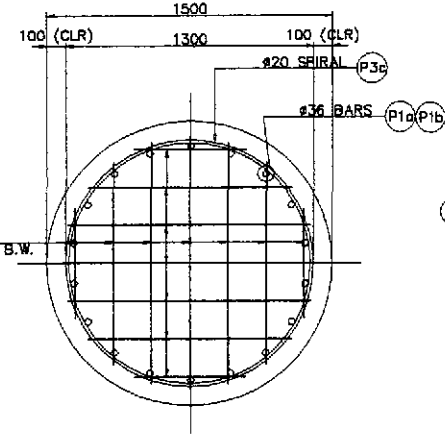
	DESIGNED	DATE	SIGNATURE		REPUBLIC OF THE PHILIPPINES			PROJECT AND LOCATION :	SCALE :	SHEET CONTENTS :	SHEET NO. :
	CHECKED	10/12/02	R. P. DE JESUS		DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS			THE DETAILED DESIGN STUDY ON UPGRADING INTER-URBAN HIGHWAY SYSTEM ALONG THE PAN-PHILIPPINE HIGHWAY (Pilaridel, Cabanatuan and San Jose Bypasses)	AS SHOWN	BRIDGE NO.14 TALAVERA RIVER BRIDGE BORED PILE REINF. DETAILS, Ø1500mm (PIER 3) (INITIAL STAGE)	B14S-78
SUBMITTED	10/23/02	J. S. SANTIAGO	DANILO C. TRAJANO	BUREAU OF DESIGN			CABANATUAN BYPASS - CONTRACT PACKAGE IV	FULL SIZE A1			
		M. R. RIVERA	ADRIANO M. DORCOY	OFFICE OF THE SECRETARY							
		M. RIVERA	GILBERTO S. REYES	BUREAU OF DESIGN							
		M. RIVERA	MANUEL M. BONDAN	OFFICE OF THE SECRETARY							
		M. RIVERA	SIMEON A. DATUMAHONG	OFFICE OF THE SECRETARY							



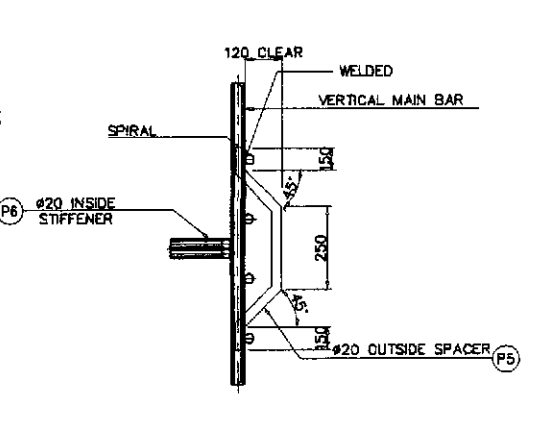
1 SECTION SCALE 1:20



2 SECTION SCALE 1:20



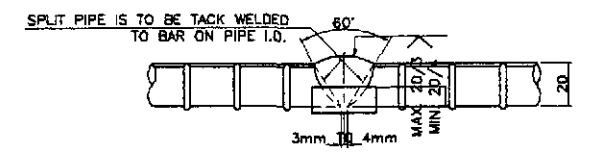
3 SECTION SCALE 1:20



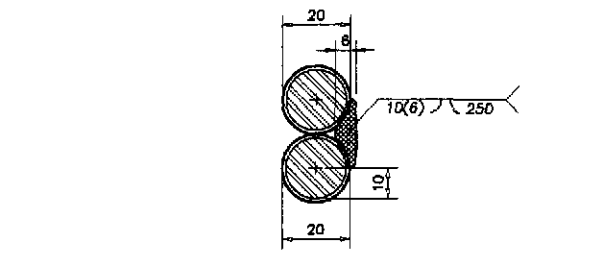
E DETAIL OF STIFFENER/SPACER NOT TO SCALE



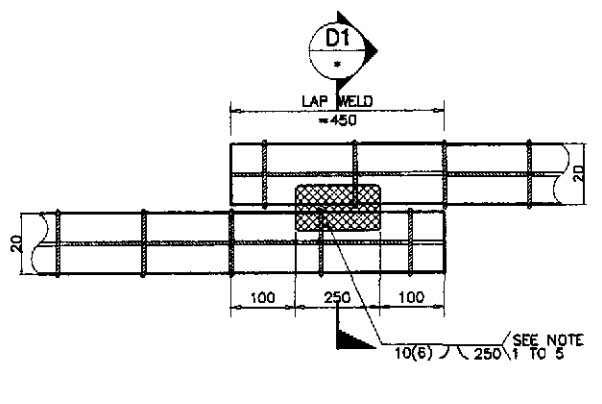
PLAN (BARS BEFORE WELDING)



DETAILS OF SINGLE-V-GROOVE BUTT WELD



DOUBLE FLARED-V-GROOVE WELD SECTION - D1



DIRECT LAP JOINT WITH BARS IN CONTACT

DETAILS OF SPIRAL REINFORCEMENT FULL LAP-WELD CONNECTION

D NOT TO SCALE

NOTES ON LAP WELD CONNECTION

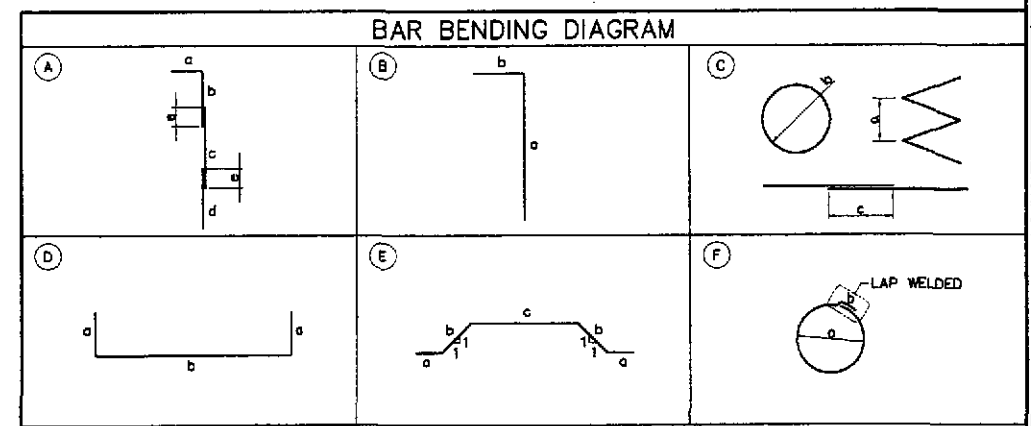
1. TIES REINFORCEMENT ARE LAP-WELD CONNECTED (FLARED-V-GROOVE TYPE).
2. WELDING SHOULD CONFORM TO ANSI/AWS D1.4-92 "STRUCTURAL WELDING CODE REINFORCEMENT STEEL".
3. USE ELECTRODE E90XX-X.
4. CARE SHOULD BE TAKEN NOT TO DAMAGE THE BORED PILE MAIN BARS DURING WELDING.
5. SPIRAL REINFORCEMENT SHOULD BE BUTT WELDED WHERE SPIRAL PITCH IS 75mm. OTHERWISE, USE LAP WELD SPLICE.

C SCHEMATIC DETAIL NOT TO SCALE

A ELEVATION SCALE 1:30

B LAYOUT OF STIFFENER SCALE 1:30

1 BORED PILE REINFORCEMENT DETAILS, Ø1500mm (PIER 6) AS SHOWN



BAR BENDING DIAGRAM

		SCHEDULE OF REINFORCEMENT													
LOCATION	BAR MARK	SIZE (mm)	BEND TYPE	DIMENSION (mm) OUT TO OUT						LENGTH (mm)	NO. REQ'D.	UNIT WEIGHT (kg/m)	WEIGHT (kg)		
				a	b	c	d	e	f				GRADE 40	GRADE 80	
PIERS P6 (EXP. EXP.) Ø1500 BORED PILE	P1a	36	A	600	11400	12000	4450	2200			32850	9	7.990	2362	
	P1b	36	A	600	9200	12000	6650	2200			32850	9	7.990	2362	
	P2	36	B	600	8400						9000	18	7.990	1294	
	P3a	20	C	100	1300	1200					477311	1	2.466	1177	
	P3b	20	C	150	1300	1200					99450	1	2.466	245	
	P3c	20	C	200	1300	1200					377862	1	2.466	932	
P4	16	D	200	950	ave.					1350	14	1.578	30		
P5	20	E	150	170	200					840	44	2.466	91		
P6	20	F	1188	150						3883	22	2.466	211		
											TOTAL WEIGHT		=	30	8674

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