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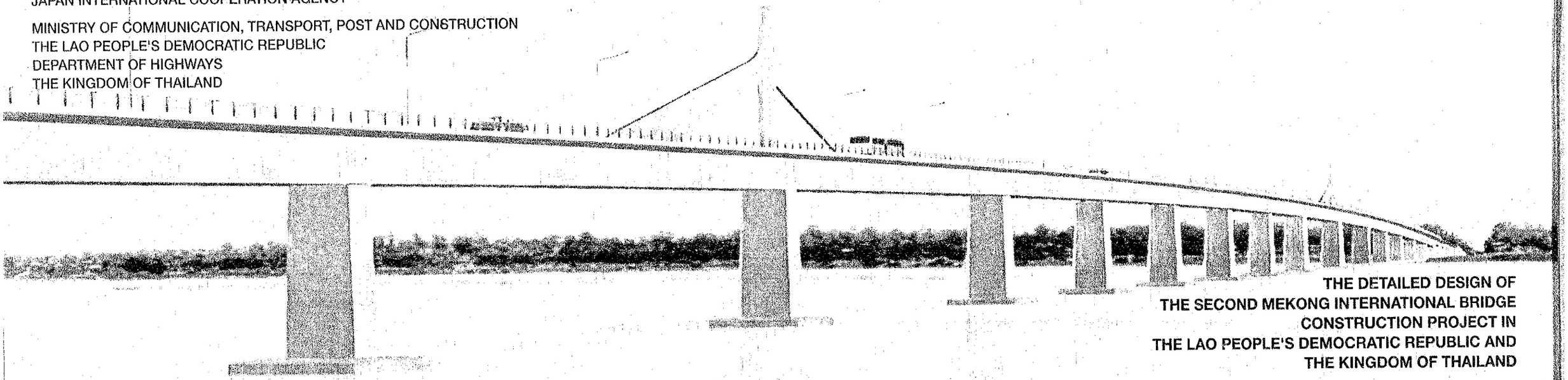
JAPAN INTERNATIONAL COOPERATION AGENCY

MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
THE LAO PEOPLE'S DEMOCRATIC REPUBLIC
DEPARTMENT OF HIGHWAYS
THE KINGDOM OF THAILAND

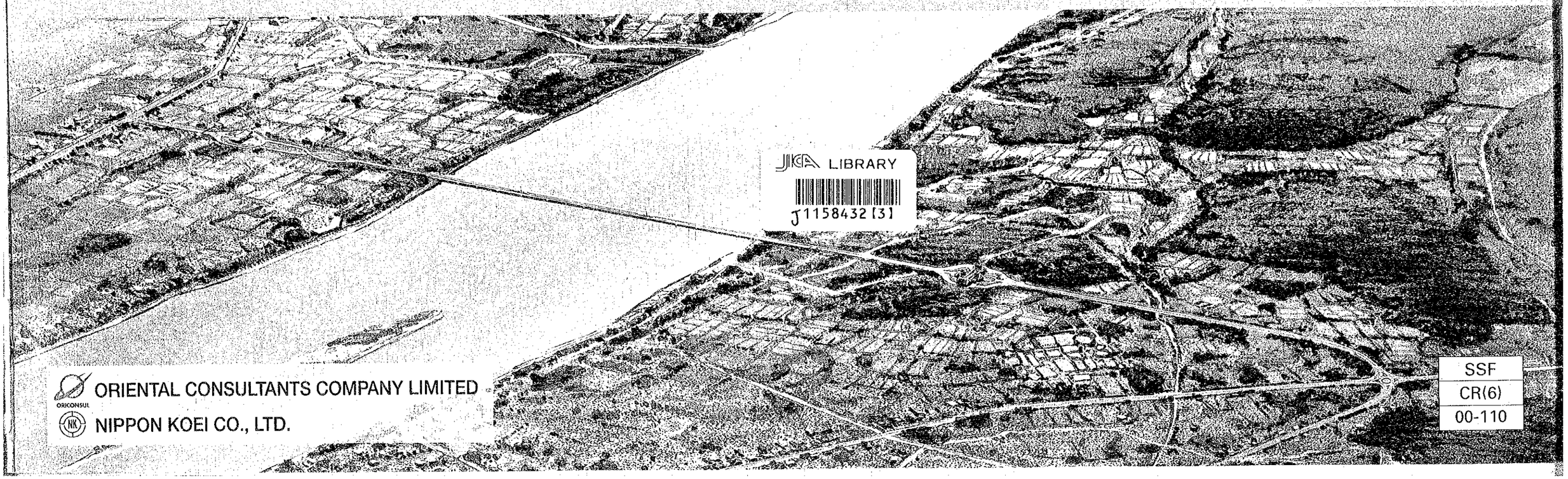


THE DETAILED DESIGN OF THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT IN THE LAO PEOPLE'S DEMOCRATIC REPUBLIC AND THE KINGDOM OF THAILAND

FINAL REPORT

DRAWINGS (PACKAGE 1)

JUNE 2000



ORICONSUL ORIENTAL CONSULTANTS COMPANY LIMITED
NIPPON KOEI CO., LTD.

JAPAN INTERNATIONAL COOPERATION AGENCY

MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
THE LAO PEOPLE'S DEMOCRATIC REPUBLIC
DEPARTMENT OF HIGHWAYS
THE KINGDOM OF THAILAND

THE DETAILED DESIGN OF
THE SECOND MEKONG INTERNATIONAL BRIDGE
CONSTRUCTION PROJECT IN
THE LAO PEOPLE'S DEMOCRATIC REPUBLIC AND
THE KINGDOM OF THAILAND

FINAL REPORT

DRAWINGS (PACKAGE 1)

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ORIENTAL CONSULTANTS COMPANY LIMITED
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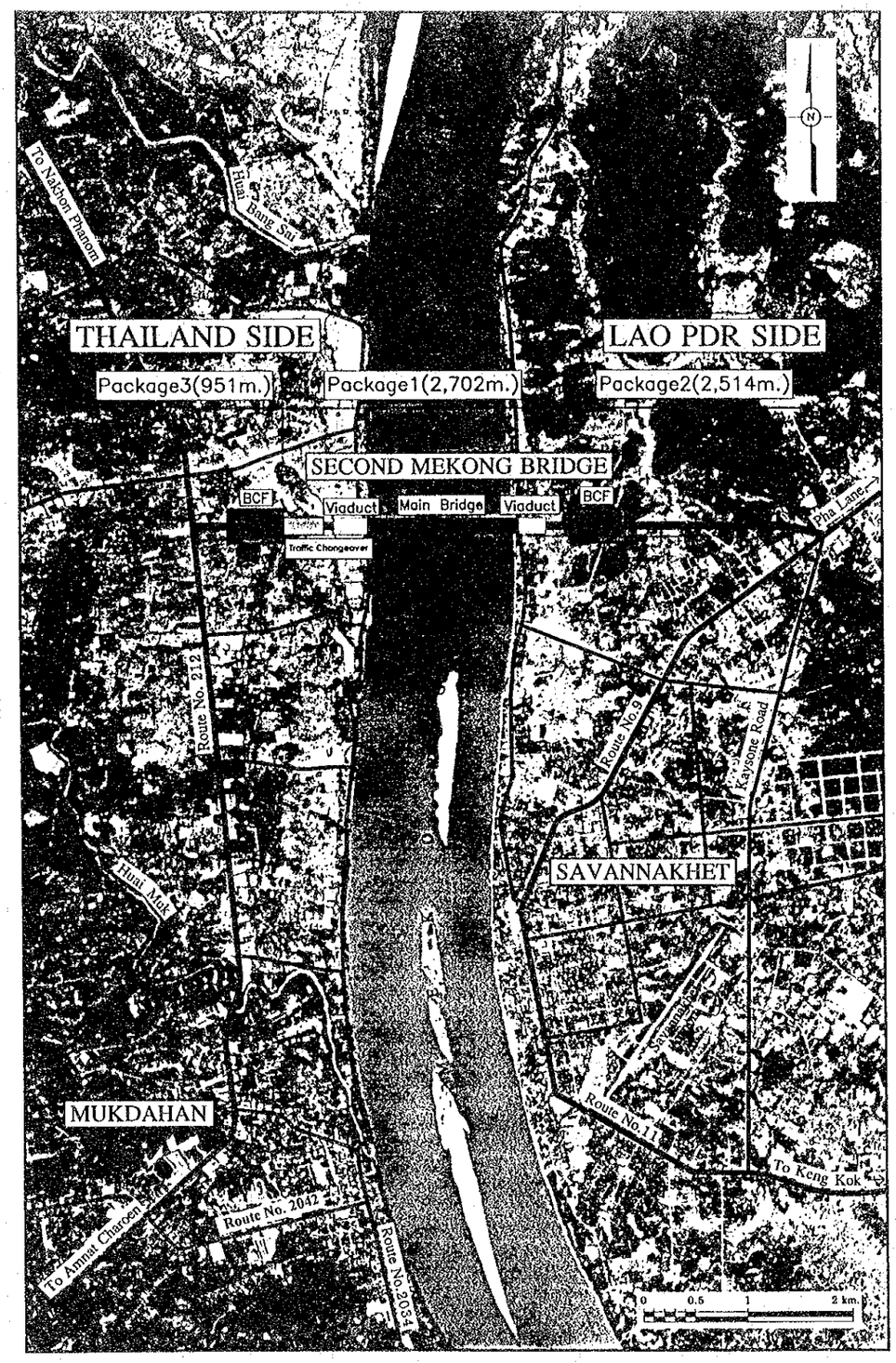
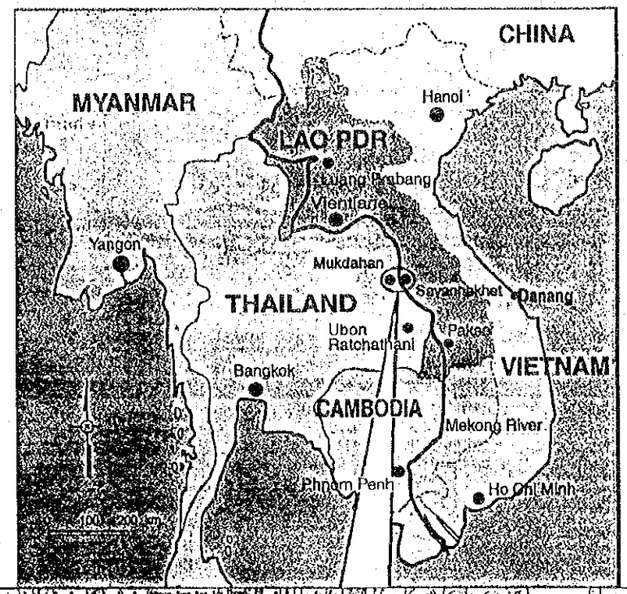
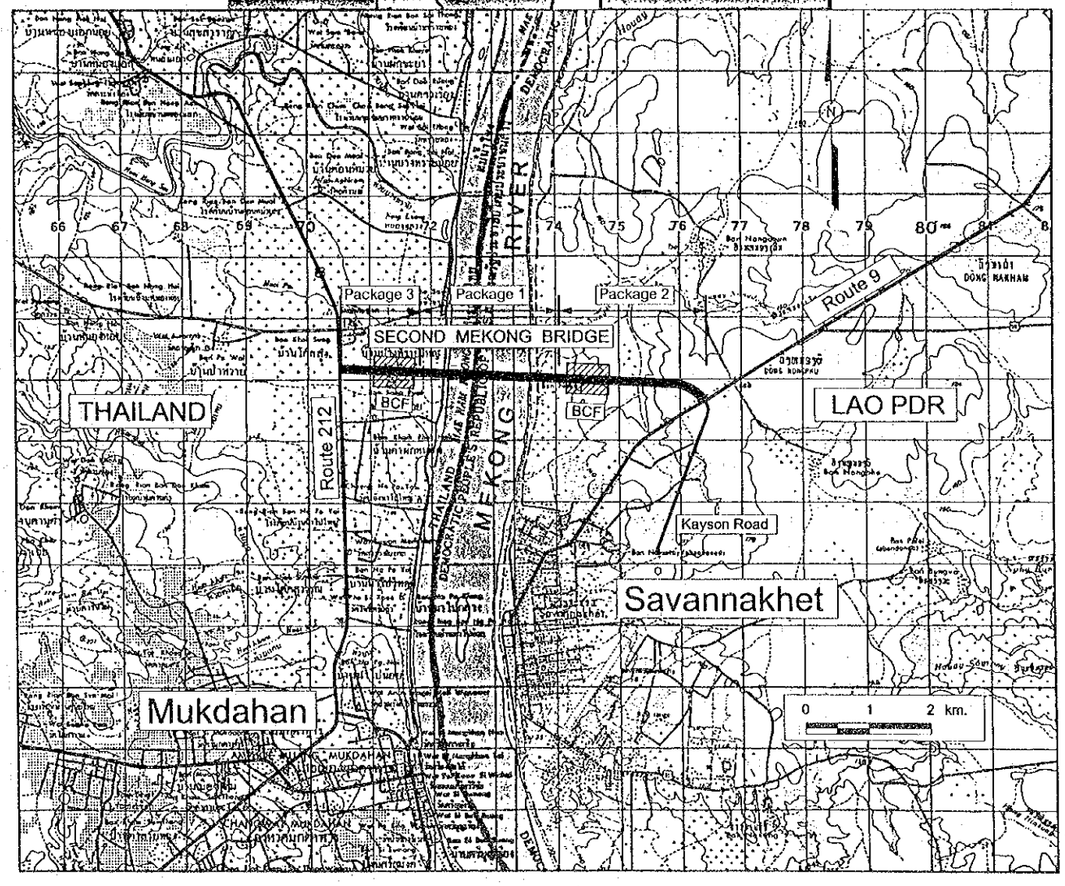
DATE OF ISSUE: 05/03/2000	
DWG. NO. GE-1	SHEET NO. 1
DWG. STATUS	







REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JICA JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	A. Morioka		16-03-00
DESIGN CHECK	T. Masuzawa		16-03-00
SUBMITTED	A. Hiratani		21/3/00
APPROVED	P. Viraphanth		21/3/00
	S. Tomiyabutra		29/03/00

DWG. TITLE:
LOCATION MAP

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DATE OF ISSUE: 05/03/2000
DWG. NO. GE-2 | SHEET NO. 2
DWG. STATUS

PACKAGE 1

SHEET NO.	TITLE	DRAWING NO.
	1. GENERAL	
1	LOCATION MAP	GE-1
2	LIST OF DRAWING (1)	GE-2
3	LIST OF DRAWING (2)	GE-3
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4	ABBREVIATION AND SYMBOLS	R-RG-1
5	GENERAL LAYOUT (THAILAND & LAO PDR SIDE)	R-RG-2
6	ALIGNMENT LAYOUT-1 (THAILAND SIDE)	R-RG-3
7	ALIGNMENT LAYOUT-2 (LAO PDR SIDE)	R-RG-4
8	SETTING OUT DATA-1 (THAILAND SIDE)	R-RG-5
9	SETTING OUT DATA-2 (THAILAND SIDE)	R-RG-6
10	SETTING OUT DATA-3 (LAO PDR SIDE)	R-RG-7
11	RIGHT OF WAY PLAN-1 (THAILAND SIDE)	R-RG-8
12	RIGHT OF WAY PLAN-2 (LAO PDR SIDE)	R-RG-9
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13	PLAN-1 STA. 0+950.000 - STA. 1+400.000	R-P-1
14	PLAN-2 STA. 1+400.000 - STA. 2+100.000	R-P-2
15	PLAN-3 STA. 2+100.000 - STA. 2+800.000	R-P-3
16	PLAN-4 STA. 2+800.000 - STA. 3+200.000	R-P-4
17	PLAN-5 STA. 3+200.000 - STA. 3+840.000	R-P-5
18	PROFILE-1 STA. 0+950.000 - STA. 1+400.000	R-P-6
19	PROFILE-2 STA. 1+400.000 - STA. 2+100.000	R-P-7
20	PROFILE-3 STA. 2+100.000 - STA. 2+800.000	R-P-8
21	PROFILE-4 STA. 2+800.000 - STA. 3+500.000	R-P-9
22	PROFILE-5 STA. 3+200.000 - STA. 3+840.000	R-P-10
	GEOMETRIC	
23	GEOMETRIC DETAILS-1 (THAILAND SIDE)	R-G-1
24	GEOMETRIC DETAILS-2 (THAILAND SIDE)	R-G-2
25	TRAFFIC CHANGEOVER DETAILS-1 (THAILAND SIDE)	R-G-3
26	TRAFFIC CHANGEOVER DETAILS-2 (THAILAND SIDE)	R-G-4
27	TRAFFIC CHANGEOVER DETAILS-3 (THAILAND SIDE)	R-G-5
28	APPROACH ROAD DETAILS-1 (THAILAND SIDE)	R-G-6
29	APPROACH ROAD DETAILS-2 (LAO PDR SIDE)	R-G-7
30	APPROACH ROAD DETAILS-3 (LAO PDR SIDE)	R-G-8
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31	TYPICAL CROSS SECTION-1 TRAFFIC CHANGEOVER (THAILAND SIDE)	R-C-1
32	TYPICAL CROSS SECTION-2 AT APPROACH ROAD (THAILAND SIDE)	R-C-2
33	TYPICAL CROSS SECTION-3 AT APPROACH ROAD (LAO PDR SIDE)	R-C-3
34	DETAIL OF 25 CM. CONCRETE PAVEMENT (THAILAND SIDE)	R-C-4
35	CROSS SECTION-1 STA. 0+960.000 TO STA. 1+020.000 (THAILAND SIDE)	R-C-5
36	CROSS SECTION-2 STA. 1+040.000 TO STA. 1+100.000 (THAILAND SIDE)	R-C-6
37	CROSS SECTION-3 STA. 1+120.000 TO STA. 1+180.000 (THAILAND SIDE)	R-C-7
38	CROSS SECTION-4 STA. 1+200.000 TO STA. 1+260.000 (THAILAND SIDE)	R-C-8
39	CROSS SECTION-5 STA. 1+280.000 TO STA. 1+340.000 (THAILAND SIDE)	R-C-9
40	CROSS SECTION-6 STA. 1+360.000 TO STA. 1+420.000 (THAILAND SIDE)	R-C-10
41	CROSS SECTION-7 STA. 3+467.339 TO STA. 3+560.000 (LAO PDR SIDE)	R-C-11
42	CROSS SECTION-8 STA. 3+580.000 TO STA. 3+680.000 (LAO PDR SIDE)	R-C-12
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43	R.C U-DITCH AND CATCH BASIN (THAILAND SIDE)	R-D-1
44	R.C U-DITCH AND SIDE DITCH (LAO PDR SIDE)	R-D-2
45	R.C. PIPE CULVERT INSTALLATION (THAILAND SIDE)	R-D-3
46	DRAINAGE ALONG SIDE WALK AT TRAFFIC CHANGEOVER (THAILAND SIDE)	R-D-4
47	R.C. DRAIN CHUTE (THAILAND SIDE)	R-D-5
48	IRRIGATION PUMPING CANAL DETAILS (THAILAND SIDE)	R-D-6
49	PIPE CULVERT (1) (LAO PDR SIDE)	R-D-7
50	PIPE CULVERT (2) (LAO PDR SIDE)	R-D-8
51	PIPE CULVERT (3) (LAO PDR SIDE)	R-D-9
52	CATCH BASIN (1) (LAO PDR SIDE)	R-D-10
53	CATCH BASIN (2) (LAO PDR SIDE)	R-D-11
54	CATCH BASIN (3) (LAO PDR SIDE)	R-D-12
55	CATCH BASIN (4) (LAO PDR SIDE)	R-D-13
	BOX CULVERT	
56	BOX CULVERT 2.40 M. x 2.40 M.-1 (THAILAND SIDE)	R-B-1
57	BOX CULVERT 2.40 M. x 2.40 M.-2 (THAILAND SIDE)	R-B-2
58	BOX CULVERT 2.40 M. x 2.40 M.-3 (THAILAND SIDE)	R-B-3
59	BOX CULVERT 3 x 3.60 M. x 3.60 M.-1 (THAILAND SIDE)	R-B-4
60	BOX CULVERT 3 x 3.60 M. x 3.60 M.-2 (THAILAND SIDE)	R-B-5
61	BOX CULVERT 3 x 3.60 M. x 3.60 M.-3 (THAILAND SIDE)	R-B-6
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62	TRAFFIC SIGN AND PAVEMENT MARKING LAYOUT PLAN-1 (THAILAND SIDE)	R-T-1
63	TRAFFIC SIGN AND PAVEMENT MARKING LAYOUT PLAN-2 (THAILAND SIDE)	R-T-2
64	TRAFFIC SIGN AND PAVEMENT MARKING LAYOUT PLAN-3 AT BRIDGE	R-T-3
65	TRAFFIC SIGN AND PAVEMENT MARKING LAYOUT PLAN-4 (LAO PDR SIDE)	R-T-4
66	TRAFFIC SIGN AND ROAD MARKING (LAO PDR SIDE)	R-T-5
67	MINOR SIGN & SIGN POST DETAILS (THAILAND SIDE)	R-T-6
68	OVERHEAD SIGN BOARD DETAILS (THAILAND SIDE)	R-T-7
69	STEEL POLE FOR OVERHANGING TRAFFIC SIGN-1 (THAILAND SIDE)	R-T-8
70	STEEL POLE FOR OVERHANGING TRAFFIC SIGN-2 (THAILAND SIDE)	R-T-9
71	TRAFFIC SIGN & SIGN LIST (THAILAND SIDE)	R-T-10
72	MARKING DETAILS-1 (LAO PDR SIDE & THAILAND SIDE)	R-T-11
73	MARKING DETAILS-2 (BRIDGE)	R-T-12
	MISCELLANEOUS	
74	SODDING DETAILS-1 (THAILAND SIDE)	R-MI-1
75	CURB AND CUTTER (LAO PDR SIDE & THAILAND SIDE)	R-MI-2
76	GUARDRAIL (LAO PDR SIDE & THAILAND PDR SIDE)	R-MI-3
77	FENCE DETAILS-1 (THAILAND SUDE)	R-MI-4
78	FENCE DETAILS-2 (LAO PDR SIDE)	R-MI-5
79	KILOMETER STONE (THAILAND SIDE)	R-MI-6
80	RIGHT OF WAY MONUMENT & BENCH MARK (THAILAND SIDE)	R-MI-7
81	KILOMETER POST & RIGHT OF WAY MONUMENT (LAO PDR SIDE)	R-MI-8
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82	ELECTRICAL SYMBOLS & ABBERVIATIONS (THAILAND SIDE)	R-L-1
83	LIGHTING LAYOUT-1	R-L-2
84	LIGHTING LAYOUT-2	R-L-3
85	LIGHTING LAYOUT-3	R-L-4
86	LIGHTING LAYOUT-4	R-L-5
87	LIGHTING LAYOUT-5	R-L-6
88	LIGHTING LAYOUT-6	R-L-7
89	LIGHTING LAYOUT-7	R-L-8
90	LIGHTING LAYOUT AND SINGLE LINE DIAGRAM (LAO PDR SIDE)	R-L-9
91	SINGLE LINE DIAGRAM & LIGHTING COLUMN (THAILAND SIDE)	R-L-10
92	SINGLE LINE DIAGRAM-1 AT BRIDGE (THAILAND SIDE)	R-L-11
93	SINGLE LINE DIAGRAM-2 AT BRIDGE (LAO PDR SIDE)	R-L-12
94	LIGHTING COLUMN DETAILS	R-L-13
95	DRAWPITS (THAILAND SIDE)	R-L-14
96	LIGHTING COLUMN CONNECTION & SUPPLY PILLAR	R-L-15
97	BRIDGE LIGHTING, TELEPHONE DETAILS AND SECTION AT CONDUIT CROSSING DETAILS	R-L-16
98	BRIDGE EMERGENCY TELEPHONE BLOCK DIAGRAM AND HANDHOLE DETAILS	R-L-17
99	BRIDGE TOWER AND PC. SAIL LIGHTING	R-L-18
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103	CROSS SECTION (1) (THAILAND SIDE)	R-R-2
104	CROSS SECTION (2) (THAILAND SIDE)	R-R-3
105	PLAN & DETAILS (LAO PDR SIDE)	R-R-4
106	CROSS SECTION (1) (LAO PDR SIDE)	R-R-5
107	CROSS SECTION (2) (LAO PDR SIDE)	R-R-6

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MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
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DESIGN CHECK	T. Masuzawa	[illegible]	[illegible]
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APPROVED	P. Viraphonth	[illegible]	[illegible]
	S. Terniyabutra	S. Tamiya	22/02/00

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DATE OF ISSUE: 05/03/2000	
DWG. NO. GE-3	SHEET NO. 3
DWG. STATUS	

PACKAGE 1

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	4. BRIDGE	
108	GENERAL NOTES (SHEET 1 OF 2)	B-G-1
109	GENERAL NOTES (SHEET 2 OF 2)	B-G-2
110	BRIDGE GENERAL ARRANGEMENT	B-B-1
111	PILING LAYOUT AND SOIL CONDITION	B-B-2
	MAIN BRIDGE SUPERSTRUCTURE	
112	PRECAST SEGMENT LAYOUT (SHEET 1 OF 3)	B-M-1
113	PRECAST SEGMENT LAYOUT (SHEET 2 OF 3)	B-M-2
114	PRECAST SEGMENT LAYOUT (SHEET 3 OF 3)	B-M-3
115	60 M.. SPAN PRECAST SEGMENT GENERAL ARRANGEMENT	B-M-4
116	80 M.. SPAN PRECAST SEGMENT GENERAL ARRANGEMENT	B-M-5
117	INTERFACE SPAN 110 m. PRECAST SEGMENT GENERAL ARRANGEMENT	B-M-6
118	110 M.. SPAN PRECAST SEGMENT GENERAL ARRANGEMENT	B-M-7
119	DAPPED HINGE SPAN PRECAST SEGMENT GENERAL ARRANGEMENT	B-M-8
120	TYPICAL SEGMENT GENERAL ARRANGMENT	B-M-9
121	TYPICAL SEGMENT CROSS SECTION	B-M-10
122	END FACE ANCHORAGE GENERAL ARRANGEMENT	B-M-11
123	END DIAPHRAGM DETAILS	B-M-12
124	PIER HEAD DIAPHRAGM DETAILS	B-M-13
125	PIER HEAD SEGMENT DETAILS	B-M-14
126	DEVIATOR AND BOTTOM BUSTER DETAILS	B-M-15
127	DAPPED HINGE SEGMENT DETAILS (SHEET 1 OF 2)	B-M-16
128	DAPPED HINGE SEGMENT DETAILS (SHEET 2 OF 2)	B-M-17
129	PC. CABLE DUCT LOCATIONS	B-M-18
130	LONGITUDINAL PRESTRESSING LAYOUT (SHEET 1 OF 6)	B-M-19
131	LONGITUDINAL PRESTRESSING LAYOUT (SHEET 2 OF 6)	B-M-20
132	LONGITUDINAL PRESTRESSING LAYOUT (SHEET 3 OF 6)	B-M-21
133	LONGITUDINAL PRESTRESSING LAYOUT (SHEET 4 OF 6)	B-M-22
134	LONGITUDINAL PRESTRESSING LAYOUT (SHEET 5 OF 6)	B-M-23
135	LONGITUDINAL PRESTRESSING LAYOUT (SHEET 6 OF 6)	B-M-24
136	TRANSVERSE PRESTRESSING LAYOUT AND DETAILS	B-M-25
137	DECK SLAB R.C. DETAILS (SHEET 1 OF 3)	B-M-26
138	DECK SLAB R.C. DETAILS (SHEET 2 OF 3)	B-M-27
139	DECK SLAB R.C. DETAILS (SHEET 3 OF 3)	B-M-28
140	WEB R.C. DETAILS	B-M-29
141	BOTTOM SLAB R.C. DETAILS	B-M-30
142	INSITU STITCH R.C. DETAILS	B-M-31
143	END DIAPHRAGM AND PIER HEAD SEGMENT R.C. DETAILS	B-M-32
144	PIER HEAD DIAPHRAGM R.C. DETAILS (SHEET 1 OF 2)	B-M-33
145	PIER HEAD DIAPHRAGM R.C. DETAILS (SHEET 2 OF 2)	B-M-34
146	DEVIATOR R.C. DETAILS	B-M-35
147	CABLE STAY ANCHOR RC. DETAILS	B-M-36
148	DAPPED HINGE SEGMENT R.C. DETAILS (SHEET 1 OF 2)	B-M-37
149	DAPPED HINGE SEGMENT R.C. DETAILS (SHEET 2 OF 2)	B-M-38
150	TOWER AND PC. SAIL GENERAL ARRANGEMENT	B-M-39
151	TOWER R.C. DETAILS (SHEET 1 OF 2)	B-M-40
152	TOWER R.C. DETAILS (SHEET 2 OF 2)	B-M-41
153	PC. SAIL R.C. DETAILS	B-M-42
154	CABLE LAYOUT AND DETAILS	B-M-43
155	CONSTRUCTION SEQUENCE (CASE OF STARTING FROM LAO PDR SIDE)	B-M-44
156	CONSTRUCTION SEQUENCE (CASE OF STARTING FROM THAILLAND SIDE)	B-M-45

SHEET NO.	TITLE	DRAWING NO.
	APPROACH VIADUCT SUPERSTRUCTURE	
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158	BOX GIRDER GENERAL ARRANGEMENT (LAO P.D.R. SIDE) (SHEET 1 OF 4)	B-A-2
159	BOX GIRDER GENERAL ARRANGEMENT (LAO P.D.R. SIDE) (SHEET 2 OF 4)	B-A-3
160	BOX GIRDER GENERAL ARRANGEMENT (LAO P.D.R. SIDE) (SHEET 3 OF 4)	B-A-4
161	BOX GIRDER GENERAL ARRANGEMENT (LAO P.D.R. SIDE) (SHEET 4 OF 4)	B-A-5
162	BOX GIRDER GENERAL ARRANGEMENT (THAILAND SIDE) (SHEET 1 OF 5)	B-A-6
163	BOX GIRDER GENERAL ARRANGEMENT (THAILAND SIDE) (SHEET 2 OF 5)	B-A-7
164	BOX GIRDER GENERAL ARRANGEMENT (THAILAND SIDE) (SHEET 3 OF 5)	B-A-8
165	BOX GIRDER GENERAL ARRANGEMENT (THAILAND SIDE) (SHEET 4 OF 5)	B-A-9
166	BOX GIRDER GENERAL ARRANGEMENT (THAILAND SIDE) (SHEET 5 OF 5)	B-A-10
167	ANCHORAGE GENERAL ARRANGEMENT AND PC. CABLE DUCT LOCATIONS	B-A-11
168	BUSTER DETAILS	B-A-12
169	LONGITUDINAL PRESTRESSING LAYOUT (LAO P.D.R. SIDE) (SHEET 1 OF 4)	B-A-13
170	LONGITUDINAL PRESTRESSING LAYOUT (LAO P.D.R. SIDE) (SHEET 2 OF 4)	B-A-14
171	LONGITUDINAL PRESTRESSING LAYOUT (LAO P.D.R. SIDE) (SHEET 3 OF 4)	B-A-15
172	LONGITUDINAL PRESTRESSING LAYOUT (LAO P.D.R. SIDE) (SHEET 4 OF 4)	B-A-16
173	LONGITUDINAL PRESTRESSING LAYOUT (THAILAND SIDE) (SHEET 1 OF 5)	B-A-17
174	LONGITUDINAL PRESTRESSING LAYOUT (THAILAND SIDE) (SHEET 2 OF 5)	B-A-18
175	LONGITUDINAL PRESTRESSING LAYOUT (THAILAND SIDE) (SHEET 3 OF 5)	B-A-19
176	LONGITUDINAL PRESTRESSING LAYOUT (THAILAND SIDE) (SHEET 4 OF 5)	B-A-20
177	LONGITUDINAL PRESTRESSING LAYOUT (THAILAND SIDE) (SHEET 5 OF 5)	B-A-21
178	TRANSVERSE PRESTRESSING LAYOUT AND DETAILS	B-A-22
179	DECK SLAB R.C. DETAILS (SHEET 1 OF 3)	B-A-23
180	DECK SLAB R.C. DETAILS (SHEET 2 OF 3)	B-A-24
181	DECK SLAB R.C. DETAILS (SHEET 3 OF 3)	B-A-25
182	WEB R.C. DETAILS (SHEET 1 OF 3)	B-A-26
183	WEB R.C. DETAILS (SHEET 2 OF 3)	B-A-27
184	WEB R.C. DETAILS (SHEET 3 OF 3)	B-A-28
185	BOTTOM SLAB R.C. DETAILS (SHEET 1 OF 3)	B-A-29
186	BOTTOM SLAB R.C. DETAILS (SHEET 2 OF 3)	B-A-30
187	BOTTOM SLAB R.C. DETAILS (SHEET 3 OF 3)	B-A-31
188	DIAPHRAGM RC. DETAILS (SHEET 1 OF 2)	B-A-32
189	DIAPHRAGM RC. DETAILS (SHEET 2 OF 2)	B-A-33
	MAIN BRIDGE SUBSTRUCTURE	
190	FOOTING AND PIER GENERAL ARRANGEMENT OF P6 AND P23	B-MS-1
191	PILE CAP AND PIER GENERAL ARRANGEMENT OF P7~P9, P13~P16 AND P20~P22	B-MS-2
192	PILE CAP AND PIER GENERAL ARRANGEMENT OF P10, P12, 917 AND P19	B-MS-3
193	PILE CAP AND PIER GENERAL ARRANGEMENT OF P11 AND P18	B-MS-4
194	FOOTING AND PIER R.C. DETAILS OF P6 AND P23	B-MS-5
195	PILE CAP AND PIER R.C. DETAILS OF P7~P9, P13~P16 AND P20~P22	B-MS-6
196	PILE CAP AND PIER R.C. DETAILS OF P10, P12, P17 AND P19	B-MS-7
197	PILE CAP AND PIER R.C. DETAILS OF P11 AND P18	B-MS-8
198	PILE DETAILS	B-MS-9
	APPROACH VIADUCT SUBSTRUCTURE	
199	PILE CAP AND PIER GENERAL ARRANGEMENT OF P1, P2, P4, P25 AND P27	B-AS-1
200	PILE CAP AND PIER GENERAL ARRANGEMENT OF P3 AND P26	B-AS-2
201	PILE CAP AND PIER GENERAL ARRANGEMENT OF P5 AND P24	B-AS-3
202	ABUTMENT GENERAL ARRANGEMENT (LAO P.D.R. SIDE)	B-AS-4

SHEET NO.	TITLE	DRAWING NO.
203	ABUTMENT GENERAL ARRANGEMENT (THAILAND SIDE)	B-AS-5
204	PILE CAP AND PIER RC. DETAILS OF P1, P2, P4, P25 AND P27	B-AS-6
205	PILE CAP AND PIER RC. DETAILS OF P3 AND P26	B-AS-7
206	PILE CAP AND PIER RC. DETAILS OF P5 AND P24	B-AS-8
207	ABUTMENT R.C. DETAILS (LAO P.D.R. SIDE)	B-AS-9
208	ABUTMENT R.C. DETAILS (THAILAND SIDE)	B-AS-10
209	PILE DETAILS	B-AS-11
	ACCESSORY	
210	BEARING INSTALLATION DETAILS AND SCHEDULE (SHEET 1 OF 2)	B-AC-1
211	BEARING INSTALLATION DETAILS AND SCHEDULE (SHEET 2 OF 2)	B-AC-2
212	BEARING DETAILS (SHEET 1 OF 3)	B-AC-3
213	BEARING DETAILS (SHEET 2 OF 3)	B-AC-4
214	BEARING DETAILS (SHEET 3 OF 3)	B-AC-5
215	TIE ROD STOPPER GENERAL ARRANGEMENT AND DETAILS	B-AC-6
216	EXPANSION JOINT DETAILS TYPE 1	B-AC-7
217	EXPANSION JOINT DETAILS TYPE 2	B-AC-8
218	BRIDGE RAILING	B-AC-9
219	SIDEWALK R.C. DETAILS & LIGHT POLE SUPPORTING	B-AC-10
220	CONCRETE BARRIER AND MEDIAN R.C. DETAILS	B-AC-11
221	BRIDGE PARAPET AT ABUTMENT, FLAG POLE & BRONZE BRIDGE NAME PLAQUE	B-AC-12
222	DECK DRAINAGE LAYOUT PLAN (SHEET 1 OF 6)	B-AC-13
223	DECK DRAINAGE LAYOUT PLAN (SHEET 2 OF 6)	B-AC-14
224	DECK DRAINAGE LAYOUT PLAN (SHEET 3 OF 6)	B-AC-15
225	DECK DRAINAGE LAYOUT PLAN (SHEET 4 OF 6)	B-AC-16
226	DECK DRAINAGE LAYOUT PLAN (SHEET 5 OF 6)	B-AC-17
227	DECK DRAINAGE LAYOUT PLAN (SHEET 6 OF 6)	B-AC-18
228	STEEL DOOR DETAILS	B-AC-19

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JICA JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	T. Ohno		
DESIGN CHECK	H. Watanabe		
SUBMITTED	A. Hirotani		
APPROVED	P. Wrophanth		
	S. Termiyabutra		21/3/00

DWG. TITLE:
LIST OF DRAWING (2)

Plot date: Wed, 19 Jan 2000 - 18:04:39
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DATE OF ISSUE: 05/03/2000	
DWG. NO. R-RG-1	SHEET NO. 4
DWG. STATUS	

GENERAL NOTES

ABBREVIATION

A	AREA	MM.	MILLIMETER
AASHTO	AMERICAN ASSOCIATION OF STAGE HIGHWAY AND TRANSPORTION OFFICIALS	MM^2	SQUARE MILLIMETER
		M.O.	MIDDLE ORDINATE
A.C.	ASPHALTIC CONCRETE	MONT.	MONUMENT
AGG.	AGGREGATE	M.S.L.	MEAN SEA LEVEL
APPROX.	APPROXIMATE	N.	NORTH
AH.	AHEAD	N/B	NORTH BOUND
ALT.	ALTERNATIVE	NO.	NUMBER
A S T M	AMERICAN SOCIETY FOR TESTING AND MATERIALS	O.D.	OUTSIDE DIAMETER
		P.B.M.	PERMANENT BENCH MARK
AVG.	AVERAGE	P.C.	POINT OF CURVE OR PRESTRESSED CONCRETE
BIT.	BITUMINOUS		
BK.	BACK	P.C.C.	POINT OF COMPOUND CURVE
BM.	BENCH MARK	P.G.	PROFILE GRADE
BOTT.	BOTTOM	P.G.LINE	PROFILE GRADE LINE
BRDG.	BRIDGE	P.I.	POINT OF HORIZONTAL INTERSECTION
BRG.	BEARING	PL.	PLATE
C.B.R.	CALIFORNIA BEARING RATIO	P.O.C.	POINT ON CURVE
C/C(OR ℄ TO ℄)	CENTER TO CENTER	P.O.S.T.	POINT ON SUBTANGENT
CL.	CLEARANCE	P.O.T.	POINT ON TANGENT
CM.	CENTIMETER	P.R.C.	POINT OF REVERSE CURVE
CM^2	SQUARE CENTIMETER	PROJ.	PROJECT
C.M.P.	CORRUGATED METAL PIPE	P.T.	POINT OF TANGENT
COL.	COLUMN	P.V.C.	POINT OF VERTICAL CURVE
CONC.	CONCRETE	P.V.I.	POINT OF VERTICAL INTERSECTION
CONSTR.	CONSTRUCTION	P.V.R.C.	POINT OF VERTICAL REVERSE CURVE
C.P.	CONCRETE PIPE	P.V.T.	POINT OF VERTICAL TANGENT
C.S.	CURVE – SPIRAL	R.	RADIUS
C/W	CARRIAGEWAY	R.C.	REINFORCED CONCRETE
CU.M.	CUBIC METER	R.C.B.	REINFORCED CONCRETE BOX CULVERT
D.	DEGREE OF CURVE	R.C.P.	REINFORCED CONCRETE PIPE CULVERT
D.B.S.T.	DOUBLE BITUMINOUS SURFACE TREATMENT	RD.	ROAD
DEG.	DEGREE	R.E.	RESIDENT ENGINEER
DIA.	DIAMETER	REF.	REFERENCE
D.O.H.	DEPARTMENT OF HIGHWAYS	REINF.	REINFORCEMENT
DWG.	DRAWING	REQ'D	REQUIRED
E.	EXTERNAL DISTANCE OF SIMPLE CURVE OR EAST	R.I.D.	ROYAL IRRIGATION DEPARTMENT
		R.P.	REFERENCE POINT
EA.	EACH	RT.	RIGHT
EL.(OR ELEV.)	ELEVATION	R/W	RIGHT OF WAY
ENGR.	ENGINEER	S.B.S.T.	SINGLE BITUMINOUS SURFACE TREATMENT
EP.	EDGE OF PAVEMENT		
EQ.(OR=)	EQUATION OR EQUAL	S.C.	SPIRAL – CURVE
EQUIV.	EQUIVALENT	SE.	SUPERELEVATION
EXIST.	EXISTING	SEC.(OR Sec.)	SECANT
EXP.	EXPANSION	SECT.	SECTION
E/B	EAST BOUND	SP.	SPAN
FTG.	FOOTING	SPG.	SPACING
GL.	GROUND LEVEL	S.R.	SIDE ROAD
H. & RN.	HUB AND RED NAIL	S.R.T.	STATE RAILWAYS OF THAILAND
HDWL.	HEADWALL	S.T.	SPIRAL – TANGENT
HOR.	HORIZONTAL	STA.	STATION
HPS.	HIGH PRESSURE SODIUM LAMP	STD.	STANDARD
H.W.L.	HIGH WATER LEVEL	STR.	STRAIGHT
HWY.	HIGHWAY	SYMM.	SYMMETRY OR SYMMETRICAL
I.D.	INSIDE DIAMETER	S/B	SOUTH BOUND
IN.	INCH	T.	TANGENT LENGHT, TON
INV.	INVERT	THK.	THICKNESS
JT.	JOINT	T.S.	TANGENT–SPIRAL
KG.	KILOGRAM	TYP.	TYPICAL
KM.	KILOMETER	VOL.	VOLUMN
KPH.	KILOMETER PER HOUR	V.C.	LENGTH OF VERTICAL CURVE
L.	LENGTH OF HORIZONTAL CURVE,LENGTH	V.	VELOCITY
LEV.	LEVEL	W.	WIDENING
L.M.	LINEAR METER	W/	WITH
LPS.	LOW PRESSURE SODIUM LAMP	W/B	WEST BOUND
Ls.	SUPERELEVATION TRANSITION LENGHT	W/O	WITHOUT
L.S.	LUMP SUM	X SECT.	CROSS SECTION
LT.	LEFT	℄	CENTERLINE
L.V.C.	LENGTH OF VERTICAL CURVE	ℙ	PROPERTY LINE
L.W.L.	LOW WATER LEVEL	ℒ	SPUR LINE OR SURVEY LINE
M.	METER	%	PERCENT
M^2	SQUARE METER	&	AND
M^3	CUBIC METER	@	SPACING
MAG.AZ	MAGNETIC AZIMUTH	"	INCH
MAX.	MAXIMUM	ø	DIAMETER
M.H.	MANHOLE	Δ	TOTAL DEFLECTION ANGLE AT ANY P.I.
MIN.	MINIMUM		
MISC.	MISCELLANEOUS		

SYMBOLS

- CONST. ℄ — CENTER LINE
- SURVEY.℄ — TRANSIT LINE
- EXIST. R/W — EXISTING R/W
- PROPOSED R/W — PROPOSED R/W
- ℙ — PROPERTY LINE
- EDGE OF PROPOSED PAVEMENT
- EDGE OF EXISTING PAVEMENT
- EXISTING SHOULDER LINE
- PROPOSED SHOULDER LINE
- EXISTING CURB
- PROPOSED CURB
- GROUND PROFILE
- EXISTING ROAD PROFILE
- EXISTING INLETS
- EXISTING PIPE
- EXISTING DITCHES
- PARALLEL DITCHES
- PIPES
- INLETS
- W — WATER & WATER VALVE
- T — UNDERGROUND TELEPHONE & MANHOLE
- E — ELECTRIC
- UE — UNDERGROUND ELECTRIC
- PT — PT — POWER TRANSMISSION LINE WITH STEEL TOWER
- WOODEN ELECTRIC POLE
- CONCRETE ELECTRIC POLE
- INDIVIDUAL TREES
- HEDGES
- BUS STOP SHELTER

- TELEPHONE JUNCTION
- PUBLIC TELEPHONE BOX
- MAIL BOX
- TRAFFIC SIGNAL
- FIRE HYDRANT
- EXISTING PIPE CULVERT (WITH OR WITHOUT HEADWALL)
- PROPOSED PIPE CULVERT (WITH OR WITHOUT HEADWALL)
- EXISTING BOX CULVERT
- NEW BOX CULVERT
- EXISTING HIGHWAY GUARD RAIL
- PROPOSED HIGHWAY GUARD RAIL
- RAIL ROAD CROSSING SIGN
- RAIL ROAD CROSSING SIGNAL LIGHT
- RAIL ROAD CROSSING BARRICADE
- GAS STATION
- 350 — INDEX CONTOUR
- INTERMEDIATE CONTOUR
- WOODEN OR BARBED WIRE FENCE
- BRIDGE,ROAD OVER STREAM
- RAIL ROAD SINGLE TRACK
- KHLONG OR RIVER
- DITCH , WATERWAY
- FLOW DIRECTION
- SWAMP AREA
- BILLBOARD,SINGLE FACE
- BILLBOARD,DOUBLE FACE
- POWER POST OR TELEPHONE POLE
- TRAFFIC SIGN
- GUIDE POST

- HIGH WATER LEVEL
- KILOMETER MARKER (EXISTING,PROPOSED)
- R/W MARKER (EXISTING,PROPOSED)
- RAILWAY
- SLOPE
- BENCH MARK
- PERMANENT BENCH MARK (P.B.M.)
- H — TEMPORARY SHELTER, HUT
- 1-S-W — BUILDING, ONE – STOREY WOODEN FRAME
- 2-S-W — BUILDING, TWO – STOREY WOODEN FRAME
- 1-S-C — BUILDING, ONE – STOREY CONCRETE
- 2-S-C — BUILDING, TWO – STOREY CONCRETE
- 1-S-W (10) — COMMERCIAL BUILDING, ONE-STORY WOODEN FRAME, 10 UNITS
- 2-S-W (10) — COMMERCIAL BUILDING, TWO-STORY WOODEN FRAME, 10 UNITS
- 1-S-C (10) — COMMERCIAL BUILDING, ONE-STORY CONCRETE, FRAME, 10 UNITS
- 2-S-C (10) — COMMERCIAL BUILDING, TWO-STORY CONCRETE, FRAME, 10 UNITS
- 1-S-W — SCHOOL BUILDING, ONE-STOREY WOODEN FRAME
- 2-S-W — SCHOOL BUILDING, TWO-STOREY WOODEN FRAME
- 1-S-C — SCHOOL BUILDING, ONE-STOREY CONCRETE
- 2-S-C — SCHOOL BUILDING, TWO-STOREY CONCRETE

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

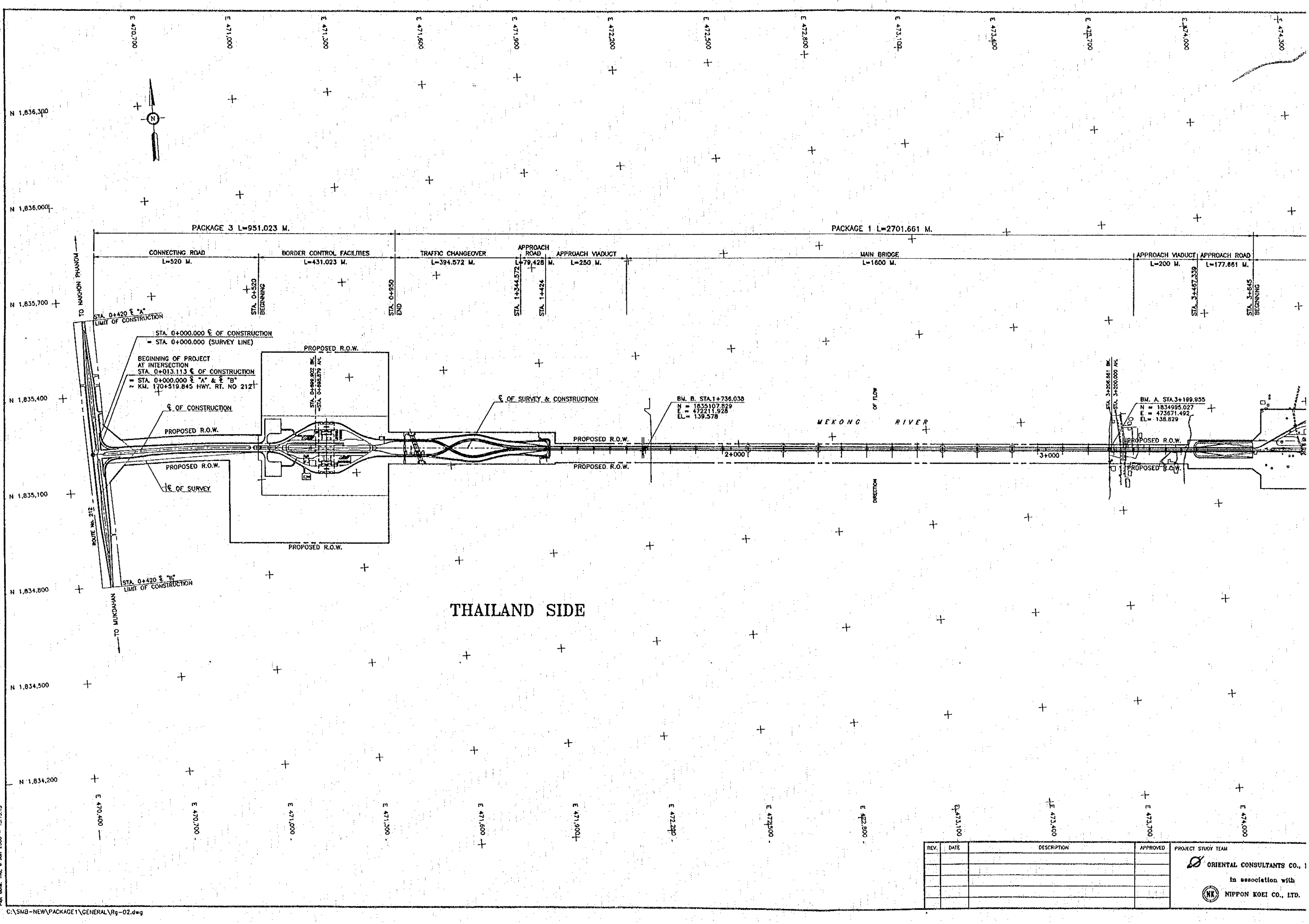
QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	H. Okita		02/04/00
DESIGN CHECK	T. Masuzawa		02/04/00
SUBMITTED	A. Hiratani		21/03/00
APPROVED	P. Viraphanth		
	S. Tamiyobutra		22/03/00

DWG. TITLE:

ABBREVIATION AND SYMBOLS
THAILAND SIDE

Plot date: Tue, 4 Jan 2000 – 11:29:01

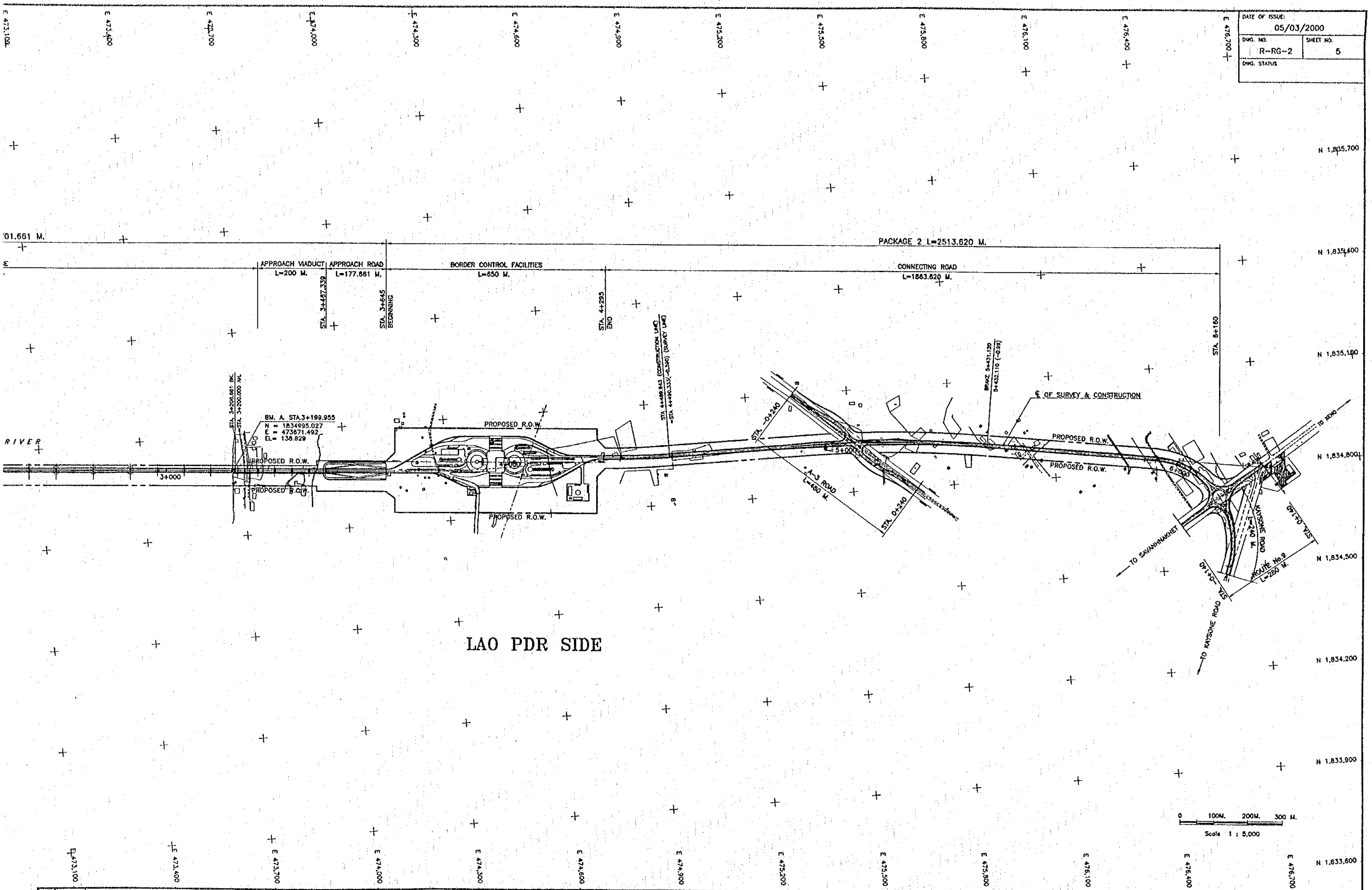
C:\1SMB-NEW\PACKAGE1\GENERAL\RG-01.dwg


PACKAGE 3 L=951.023 M.
PACKAGE 1 L=2701.661 M.
CONNECTING ROAD
L=520 M.
BORDER CONTROL FACILITIES
L=431.023 M.
TRAFFIC CHANGEOVER
L=394.572 M.
APPROACH ROAD
L=79.428 M.
APPROACH VIADUCT
L=250 M.
MAIN BRIDGE
L=1600 M.
APPROACH VIADUCT
L=200 M.
APPROACH ROAD
L=177.661 M.
STA. 0+520 BEGINNING
STA. 0+950 END
STA. 1+344.572
STA. 1+424
STA. 3+467.339
STA. 3+645 BEGINNING
TO NAKHON PHANOM
STA. 0+420 ℄ "A" LIMIT OF CONSTRUCTION
STA. 0+000.000 ℄ OF CONSTRUCTION
= STA. 0+000.000 (SURVEY LINE)
BEGINNING OF PROJECT
AT INTERSECTION
STA. 0+013.113 ℄ OF CONSTRUCTION
= STA. 0+000.000 ℄ "A" & ℄ "B"
= KM. 170+519.845 HWY. RT. NO 212
℄ OF CONSTRUCTION
PROPOSED R.O.W.
℄ OF SURVEY
℄ OF SURVEY & CONSTRUCTION
BM. B. STA.1+736.038
N = 1835107.829
E = 472211.928
EL= 139.578
MEKONG RIVER
DIRECTION OF FLOW
BM. A. STA.3+199.955
N = 1834995.027
E = 473671.492
EL= 138.829
2+000
3+000
ROUTE No. 212
STA. 0+420 ℄ "B" LIMIT OF CONSTRUCTION
TO MUKDAHAN
THAILAND SIDE
N 1,836,300
N 1,836,000
N 1,835,700
N 1,835,400
N 1,835,100
N 1,834,800
N 1,834,500
N 1,834,200
E 470,700
E 471,000
E 471,300
E 471,600
E 471,900
E 472,200
E 472,500
E 472,800
E 473,100
E 473,400
E 473,700
E 474,000
E 474,300
E 470,400
REV.
DATE
DESCRIPTION
APPROVED
PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., I
in association with
NIPPON KOEI CO., LTD.
C:\SMB-NEW\PACKAGE1\GENERAL\Rg-02.dwg

DATE OF ISSUE: 05/03/2000

DWG. NO. R-RG-2 | SHEET NO. 5

DWG. STATUS



PACKAGE 2 L=2513.620 M.
01.661 M.
APPROACH VIADUCT L=200 M.
APPROACH ROAD L=177.661 M.
BORDER CONTROL FACILITIES L=650 M.
CONNECTING ROAD L=1883.620 M.
STA. 3+467.339
STA. 3+645 BEGINNING
STA. 4+295 END
STA. 6+180
BM. A. STA.3+199.955
N = 1834995.027
E = 473671.492
EL= 138.829
PROPOSED R.O.W.
RIVER
3+000
5+000
A-3 ROAD L=480 M.
STA. 0+240
STA. -0+240
℄ OF SURVEY & CONSTRUCTION
TO SAVANNHAKHET
TO KAYSONE ROAD
KAYSONE ROAD
ROUTE No.9 L=280 M.
LAO PDR SIDE
N 1,835,700
N 1,835,400
N 1,835,100
N 1,834,800
N 1,834,500
N 1,834,200
N 1,833,900
N 1,833,600
E 473,100
E 473,400
E 473,700
E 474,000
E 474,300
E 474,600
E 474,900
E 475,200
E 475,500
E 475,800
E 476,100
E 476,400
E 476,700
0 100M. 200M. 300 M.
Scale 1 : 5,000

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM

ORIENTAL CONSULTANTS CO., LTD.

in association with

NIPPON KOEI CO., LTD.

JICA JAPAN INTERNATIONAL COOPERATION AGENCY

LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION

KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	H. Okita		16/03/00
DESIGN CHECK	T. Masuzawa		18-3-00
SUBMITTED	A. Hirotani		21/03/00
APPROVED	P. Viraphanth		22/03/00
	S. Temiyabutra		22/03/00

DWG. TITLE:

GENERAL LAYOUT
THAILAND SIDE & LAO PDR SIDE

DATE OF ISSUE: 05/03/2000
DWG. NO. R-RG-3 | SHEET NO. 6
DWG. STATUS

TO NAKHON PHANOM

STA. 0+420 ℄ "A" LIMIT OF CONSTRUCTION

STA. 0+000.000 ℄ OF CONSTRUCTION
=STA 0+000.000 ℄ OF SURVEY LINE

BEGINNING OF PROJECT AT INTERSECTION
STA. 0+013.113 ℄ OF CONSTRUCTION
= STA. 0+000.000 ℄ "A" & ℄ "B"
≃ KM. 170+519.845 HWY. RT. NO 212

HWY. ROUTE NO. 212

BREAK STA. 0+599.902 BK.
=STA. 0+598.879 AHD.

℄ OF SURVEY LINE
∢ AZ. = 90°-0'-5.9"

℄ OF SURVEY & CONSTRUCTION

∢ AZ. = 94°-25'-10.6"

POINT B. STA.1+736.038
N = 1835107.829
E = 472211.926
EL.= 139.578

∢ AZ. = 94°-25'-9.5"

MEKONG RIVER

DIRECTION OF FLOW

∢ AZ. = 94°-25'-9.5"

POINT A. STA.3+199.955
N = 1834995.027
E = 473671.492
EL.= 138.829

TO LAO PDR BORDER CONTROL FACILITIES

LAO P.D.R. SIDE

BREAK STA. 3+206.661 BK.
=STA. 3+200.000 AHD.

CONTROL LINE "A"
CONTROL LINE "C"
CONTROL LINE "B"

TO NAKHON PHANOM

STA. 0+420 ℄ "B" LIMIT OF CONSTRUCTION

BEGINNING STA. 0+000.000 CTL."A" =STA. 0+956.808 OF CONSTRUCTION LINE

BEGINNING STA. 0+000.000 CTL."C" =STA. 1+065.000 OF CONSTRUCTION LINE

END P.T. STA. 0+400.383 CTL."B" =STA. 1+344.572 OF CONSTRUCTION LINE

℄ OF SURVEY & CONSTRUCTION

BEGINNING STA. 0+000.000 CTL."B" =STA. 0+158.808 OF CONSTRUCTION LINE

END STA. 0+768.600 CTL."C" =STA. 1+065.000 OF CONSTRUCTION LINE

END P.T. STA. 0+400.383 CTL."A" =STA. 1+344.572 OF CONSTRUCTION LINE

CONTROL LINE "A"
CONTROL LINE "B"
CONTROL LINE "C"

DETAIL OF ALIGNMENT FOR TRAFFICE CHANGEOVER AND MAINTENANCE ROAD

Scale 1 : 2000

0 100M. 200M. 300 M.
Scale 1 : 5,000

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
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JICA JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	H. Okita		16/02/00
DESIGN CHECK	T. Masuzawa		16/2/00
SUBMITTED	A. Hirotani		16/2/00
APPROVED	P. Viraphanth		
	S. Temiyabutra		22/02/00

DWG. TITLE:
ALIGNMENT LAYOUT - 1
THAILAND SIDE

Plot date: Fri, 14 Jan 2000 - 18:30:50
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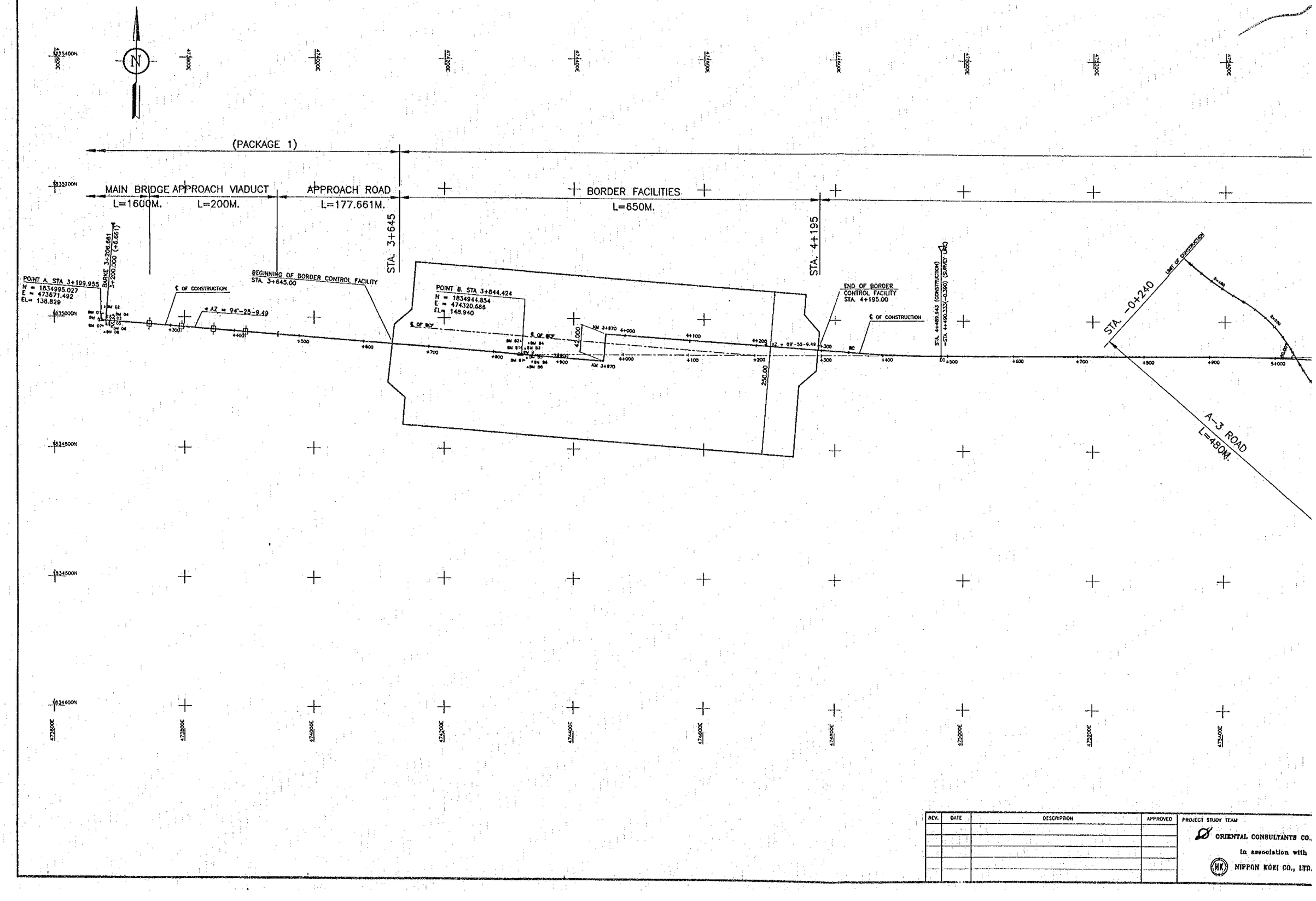

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM

ORIENTAL CONSULTANTS CO.,

in association with

NIPPON KOEI CO., LTD.

DATE OF ISSUE: 05/03/2000	
DWG. NO. R-RG-4	SHEET NO. 7
DWG. STATUS	

(PACKAGE 2)
L=2513.62M.

CONNECTING ROAD
L=1863.620M.

STA. -0+240

LIMIT OF CONSTRUCTION

STA. 4+485.843 (CONSTRUCTION)
=STA. 4+490.333(-0.360) (SURVEY LINE)

POINT C STA. 5+168.789
N = 1834946.719
E = 475645.060
EL= 153.831

BRAKE 5+431.120
5+432.110 (-0.99)

EOF CONSTRUCTION LINE

∢ AZ = 88°-31'-26.49"

A-3 ROAD
L=480M.

STA. 0+240

LIMIT OF CONSTRUCTION

STA. 6+160

POINT B STA. 6+240.000
N = 1834787.942
E = 476704.428
EL = 185.017

EOF CONSTRUCTION LINE

℄ OF SURVEY

∢ AZ = 95°-31'-26.49"

ROAD NO 9

LIMIT OF CONSTRUCTION

END OF PROJECT
STA. 6+160.00

STA. 0+160

STA. 0+140

ROUTE No.9
L=300M.

SCALE = 1:2500

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
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JAPAN INTERNATIONAL COOPERATION AGENCY
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MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	H. Okita		18/02/00
DESIGN CHECK	T. Masuzawa		18-02-00
SUBMITTED	A. Hirotani		31/03/00
APPROVED	P. Viraphanh		31/03/00
	S. Tomiyabuta		31/03/00

DWG. TITLE:

ALIGNMENT LAYOUT - 2
LAO PDR SIDE

DATE OF ISSUE: 05/03/2000	
DWG. NO. R-RG-5	SHEET NO. 8
DWG. STATUS	

SETTING OUT DATA

LOCATION	POINT	STATION	COORDINATES		CURVE DATA							
			EAST	NORTH	DEFLECTION ANGLE	SPIRAL IN A (M)	RADIUS R (M)	SPIRAL OUT A (M)	DEGREE OF CURVATURE, D (M)	TANGENT LENGTH, T (M)	LENGTH OF CURVE, L (M)	EXTERNAL LENGTH, E (M)
℄ OF CONSTRUCTION												
BEGINNING OF THAILAND SIDE	BOP	0+000.000	470478.975	1835217.773								
	P.C.	0+175.581	470654.556	1835217.768								
	P.I.	0+310.588	470789.562	1835217.764	4°-25'-04.7" RT.	-	3500	-	1°-38'-13.3"	135.007	269.879	2.603
	P.T.	0+445.460	470924.167	1835207.360								
℄ OF SURVEY & CONSTRUCTION												
BREAK POINT	BACK=	0+699.902 CONSTRUCTION LINE	471177.853	1835187.753								
	AHEAD	0+698.879 SURVEY LINE	471177.853	1835187.753								
	BM. B	1+736.038	472211.928	1835107.829								
END OF THAILAND SIDE	BM. A	3+199.955	473671.492	1834995.027								
MAINTENANCE ROAD												
CONTROL LINE "C"	BEGINNING	0+000.000	471544.897	1835185.573								
	P.C. C/1	0+117.219	471662.013	1835190.503								
	P.I. C/1	0+140.360	471685.133	1835191.477	21°-49'-48.6"RT.	-	120	-	47°-44'-47.3"	23.141	45.721	2.211
	P.T. C/1	0+162.940	471706.958	1835183.783								
	P.C. C/2	0+195.453	471737.822	1835172.973								
	P.I. C/2	0+249.090	471788.207	1835155.139	20°-16'-24.3"LT.	-	300	-	19°-05'-54.9"	53.636	106.151	4.757
	P.T. C/2	0+301.605	471841.837	1835155.938								
	P.I. C/3	0+329.880	471870.110	1835156.314	-	-	NO CURVE	-	-	-	-	-
	P.C. C/4	0+354.880	471895.035	1835154.387								
	P.I. C/4	0+367.880	471907.997	1835153.386	90°-00'-00" RT	-	13	-	-	13.00	20.420	5.385
	P.T. C/4	0+375.300	471906.995	1835140.424								
	P.C. C/5	0+393.300	471905.608	1835122.478								
	P.I. C/5	0+406.300	471904.608	1835109.516	90°-00'-00" RT	-	13	-	-	13.00	20.420	5.385
	P.T. C/5	0+413.721	471891.645	1835110.518								
	P.I. C/6	0+438.721	471866.719	1835112.445	-	-	NO CURVE	-	-	-	-	-
	P.C. C/7	0+466.998	471838.840	1835117.160								
	P.I. C/7	0+520.632	471785.969	1835126.191	20°-16'-24.3" LT.	-	300	-	19°-05'-54.9"	53.636	106.151	4.757
	P.T. C/7	0+573.147	471733.245	1835116.342								
	P.C. C/8	0+605.660	471701.284	1835110.372								
	P.I. C/8	0+628.802	471678.536	1835106.123	21°-49'-48.6" RT	-	120	-	47°-44'-47.3"	23.141	45.721	2.211
	P.T. C/8	0+651.381	471655.840	1835110.635								
	END	0+768.600	471540.873	1835133.506								

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JICA JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	H. Okita		6/12/00
DESIGN CHECK	T. Masuzawa		12-12-00
SUBMITTED	A. Hirotani		21/12/00
APPROVED	P. Wrapbanth		21/12/00
	S. Tamiyabutra		22/12/00

DWG. TITLE:
SETTING OUT DATA-1
THAILAND SIDE
SHEET 1 OF 2

Plot date: Wed, 29 Dec 1999 - 11:25:56

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DATE OF ISSUE: 05/03/2000	
DWG. NO. R-RG-6	SHEET NO. 9
DWG. STATUS	

SETTING OUT DATA

LOCATION	POINT	STATION	COORDINATES		CURVE DATA							
			EAST	NORTH	DEFLECTION ANGLE	SPIRAL IN A (M)	RADIUS R (M)	SPIRAL OUT A (M)	DEGREE OF CURVATURE, D (M)	TANGENT LENGTH, T (M)	LENGTH OF CURVE, L (M)	EXTERNAL LENGTH, E (M)
TRAFFIC CHANGEOVER												
CONTROL LINE "A"	BEGINNING	0+000.000	471438.941	1835192.803								
	T.S. A/1	0+075.303	471512.021	1835187.000								
	S.C. A/1	0+117.553	471553.729	1835180.801								
	P.I. A/1	0+123.391	471559.865	1835183.294	5°-47'-33.2" RT	42.25	100	42.25	57°-17'-44.8"	5.099	10.110	0.128
	C.S. A/1	0+127.663	471563.260	1835177.442								
	S.T. A/1	0+169.913	471599.634	1835158.113								
	T.S. A/2	0+173.738	471602.789	1835153.950								
	S.C. A/2	0+215.988	471639.163	1835132.621								
	P.I. A/2	0+236.561	471654.613	1835118.440	20°-47'-33.2" LT	42.25	100	42.25	57°-17'-44.8"	18.347	36.290	1.669
	C.S. A/2	0+252.278	471674.476	1835125.167								
	S.T. A/2	0+294.528	471716.367	1835129.975								
	P.C. A/3	0+308.754	471730.351	1835132.587								
	P.I. A/3	0+354.832	471775.646	1835141.048	15°-00'-00" RT	-	350	-	16°22'12.8"	46.078	91.630	3.020
	P.T. A/3 (END)	0+400.384	471821.587	1835137.497								
TRAFFIC CHANGEOVER												
CONTROL LINE "B"	BEGINNING	0+000.000	471433.088	1835142.951								
	T.S. B/1	0+075.303	471508.168	1835137.148								
	S.C. B/1	0+117.553	471550.333	1835136.864								
	P.I. B/1	0+123.391	471555.347	1835137.540	5°-47'-33.2" LT	42.25	100	42.25	57°-17'-44.8"	5.059	10.110	0.128
	C.S. B/1	0+127.663	471560.267	1835138.719								
	S.T. B/1	0+169.913	471599.486	1835154.206								
	T.S. B/2	0+173.738	471602.936	1835155.857								
	S.C. B/2	0+215.988	471642.156	1835171.344								
	P.I. B/2	0+236.561	471659.997	1835175.619	20°-47'-33.2" RT	42.25	100	42.25	57°-17'-44.8"	18.347	36.290	1.669
	C.S. B/2	0+252.278	471678.195	1835173.283								
	S.T. B/2	0+294.528	471718.850	1835162.095								
	P.C B/3	0+308.754	471732.266	1835157.365								
	P.I. B/3	0+354.832	471776.347	1835145.000	15°-00'-00" LT	-	350	-	16°-22'-12.8"	46.078	91.630	3.020
	P.T. B/3 (END)	0+400.384	471821.664	1835138.494								

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
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JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	H. Okita		4/2/00
DESIGN CHECK	T. Masuzawa		3/2/00
SUBMITTED	A. Hiratani		3/2/00
APPROVED	P. Vraphanh		
	S. Temiyabutra		22/2/00

DWG. TITLE:
SETTING OUT DATA-2
THAILAND SIDE
SHEET 2 OF 2

Plot date: Tue, 28 Dec 1999 - 18:28:45
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DATE OF ISSUE: 05/03/2000	
DWG. NO. R-RG-7	SHEET NO. 10
DWG. STATUS	

SETTING OUT DATA

LOCATION	POINT	STATION	COORDINATES EAST	COORDINATES NORTH	CURVE DATA: DEFLECTION ANGLE	SPIRAL IN A (M)	RADIUS R (M)	SPIRAL OUT A (M)	DEGREE OF CURVATURE, D (M)	TANGENT LENGTH ,T (M)	LENGTH OF CURVE, L (M)	EXTERNAL LENGTH ,E (M)
℄ OF CONSTRUCTION												
BEGINNING OF LOA SIDE	BM A	3+199.955	473671.492	1834995.027								
	ABUTMENT	3+467.339	473944.722	1834973.910								
	BM B	3+851.085	474320.686	1834944.854								
	END	3+970.000	474445.889	1834935.178								
BEGINNING	BOP	3+970	474774.973	1834951.869								
	PC1	4+296.820	474782.779	1834951.266								
	PI1	4+375.106	474853.027	1834945.837	4° 28' 58.44"	–	2000	–	–	78.286	156.493	1.532
	PT1	4+453.313	474931.313	1834945.924								
	PC2	4+904.277	475382.269	1834946.426								
	PI2	5+167.069	475645.060	1834946.719	8° 35' 16.08"	–	3500	–	–	262.792	524.598	9.852
	PT2	5+428.875	475904.948	1834907.767								
	PC3	5+929.103	476399.650	1834833.622								
	PI3	6+237.285	476704.428	1834787.942	101° 54' 5.76"	–	250	–	–	308.182	444.629	146.833
	PIT3	6+373.731	476596.876	1834499.136								
	END	6+413.731	476582.916	1834461.651								
ROAD A3	BOP	0+000	475511.000	1834944.000								
	PCA3/A1	0+013.557	476704.358	1834955.818								
	PIA3/A1	0+069.400	475477.000	1835004.500	31° 12' 4.32"	–	200	–	–	55.843	108.911	7.650
	PTA3/A1	0+122.468	475428.380	1835031.968								
	PCA3/A2	0+126.770	475424.634	1835034.084								
	PIA3/A2	0+175.393	475382.300	1835058.000	12° 20' 0.96"	–	450	–	–	48.623	96.87	2.619
	PTA3/A2	0+223.640	475346.052	1835090.407								
	END	0+240.000	475333.856	1835101.311								
A3	BEGINNING	0+000	475511.000	1834944.000								
	PCA3/B1	0+007.798	475514.713	1834937.143								
	PIA3/B1	0+069.937	475544.300	1834882.500	34° 31' 10.2"		200			62.139	120.495	9.431
	PTA3/B1	0+128.293	475599.643	1834854.244								
	PCA3/B2	0+135.754	475592.999	1834857.637								
	PIA3/B2	0+192.794	475643.800	1834831.700	13° 24' 55.44"		485			57.04	113.557	3.343
	PTA3/B2	0+249.311	475687.198	1834794.685								
	END	0+250	475687.722	1834794.238								
ROAD 9	BEGINNING											
	9A	0+000	476579.800	1834707.500								
	END	0+160	476714.255	1834794.229								
	9B	0+000	476579.800	1834707.500								
	END	0+140	476462.214	1834831.516								

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
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NIPPON KOEI CO., LTD.

JICA JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	H. Okita	Okita	16/2/00
DESIGN CHECK	T. Masuzawa		15-02-00
SUBMITTED	A. Hirotani		15-02-00
APPROVED	P. Vixaphanth		15/2/00
	S. Tomiyabutra	S. Tomiyabutra	22/2/00

DWG. TITLE:
SETTING OUT DATA – 3
LAO PDR SIDE

DATE OF ISSUE: 05/03/2000
DWG. NO. R-RG-8 | SHEET NO. 11
DWG. STATUS

PROPOSED R.O.W. AREA (PACKAGE 3) = 310,059 M^2
PROPOSED R.O.W. AREA (PACKAGE 1) = 100,182 M.^{2}

CONNECTING ROAD L=520 M. | BORDER FACILITIES L=431.023 M. | STA. 0+950 | TRAFFIC CHANGEOVER L=395.595 M. | APPROACH ROAD L=79.428M. | APPROACH BRIDGE L=250M. | MAIN BRIDGE L=1600M.

STA. 0+420 ℄ "A" LIMIT OF CONSTRUCTION

STA 0+000.000 ℄ OF CONSTRUCTION = STA 0+000.000 (SURVEY LINE)

BEGINNING OF PROJECT
AT INTERSECTION HWY. RT. NO 212
STA. 0+013.113 ℄ OF CONSTRUCTION
≈ KM. 170+519.845 HWY. RT. NO. 212

℄ OF CONSTRUCTION

℄ OF SURVEY & CONSTRUCTION

℄ OF SURVEY

BEGINNING OF BORDER CONTROL FACILITY STA. 0+520.000

END OF BORDER CONTROL FACILITY STA. 0+950.000

STA. 0+420 ℄ "B" LIMIT OF CONSTRUCTION

HWY. RT. NO. 212

EXISTING R.O.W.

PROPOSED R.O.W.

400.00 | 300.00 | 500.00 | 80.00 | 120.00 | 40.00 | 30.00 | 240.00 | 50.00 | 45.00 | 60.00 | 15.00

STA. 0+699.902 BK. = STA. 0+698.879 AH.

0+928.977

MEKONG RIVER

N 1,835,800 | N 1,835,600 | N 1,835,400 | N 1,835,200 | N 1,835,000 | N 1,834,800 | N 1,834,600

E 470,600 | E 470,800 | E 471,000 | E 471,200 | E 471,400 | E 471,600 | E 471,800 | E 472,000 | E 472,200

0 50 M. 100 M. 200 M.
Scale 1 : 2500

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
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JAPAN INTERNATIONAL COOPERATION AGENCY
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KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	H. Okita		14/01/00
DESIGN CHECK	T. Masuzawa		15-01-00
SUBMITTED	A. Hirotani		
APPROVED	P. Viraphanh		22/01/00
	S. Temiyabutra		22/1/00

DWG. TITLE:
RIGHT OF WAY PLAN-1
THAILAND SIDE

Plot date: Fri, 14 Jan 2000 - 18:37:40
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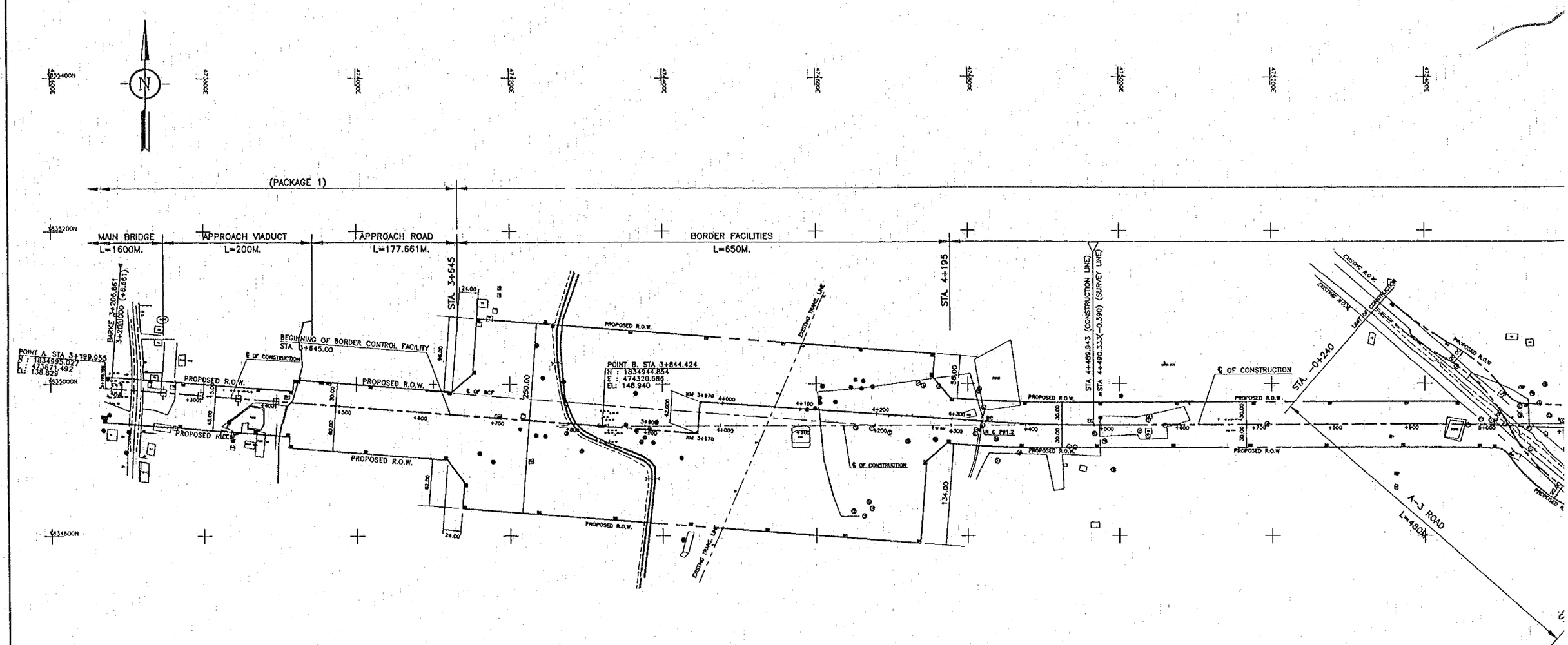

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM

ORIENTAL CONSULTANTS CO., LTD.

in association with

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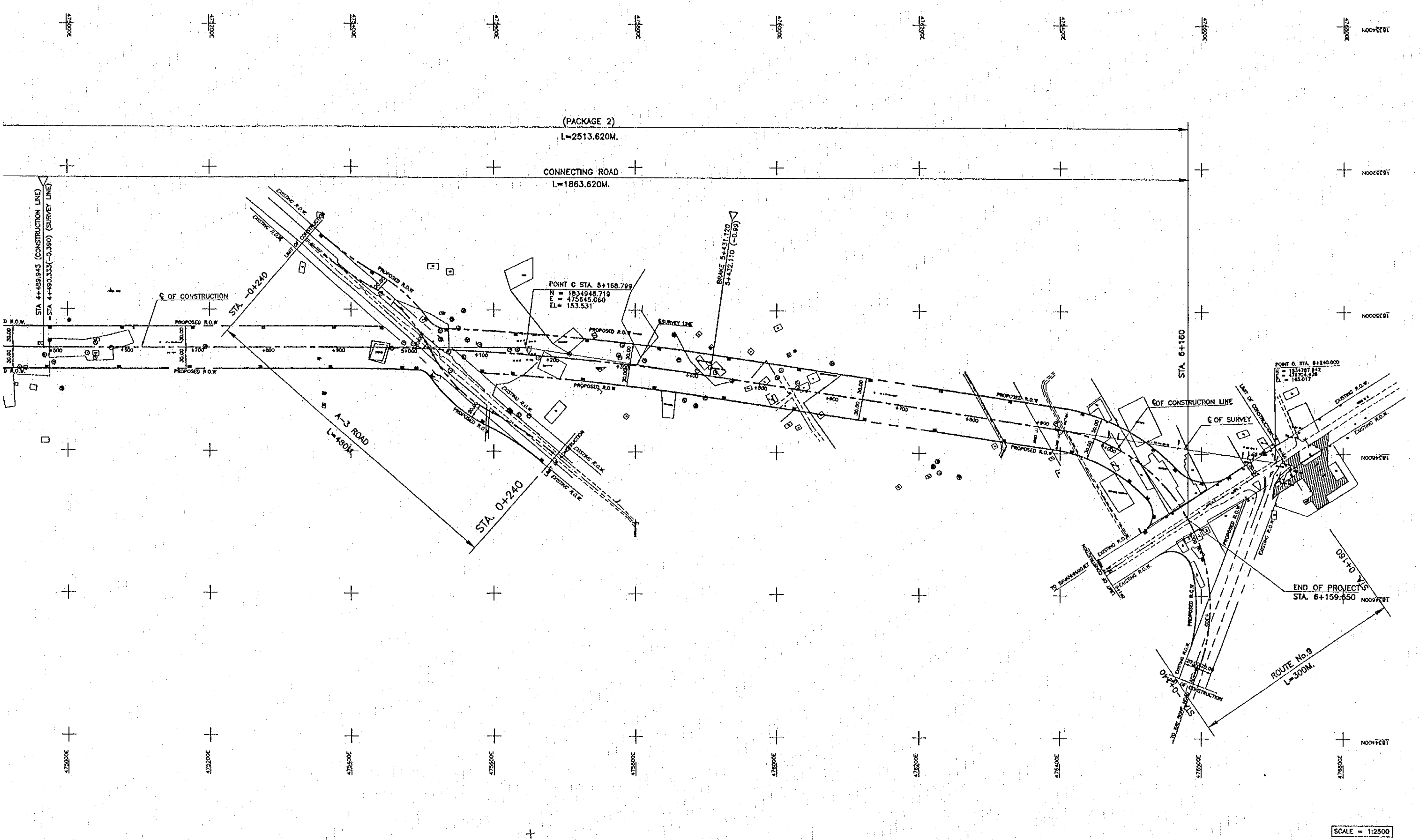
DATE OF ISSUE: 05/03/2000

DWG. NO. R-RG-9 | SHEET NO. 12

DWG. STATUS



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REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM

ORIENTAL CONSULTANTS CO., LTD.
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JAPAN INTERNATIONAL COOPERATION AGENCY

LAO PEOPLE'S DEMOCRATIC REPUBLIC
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KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

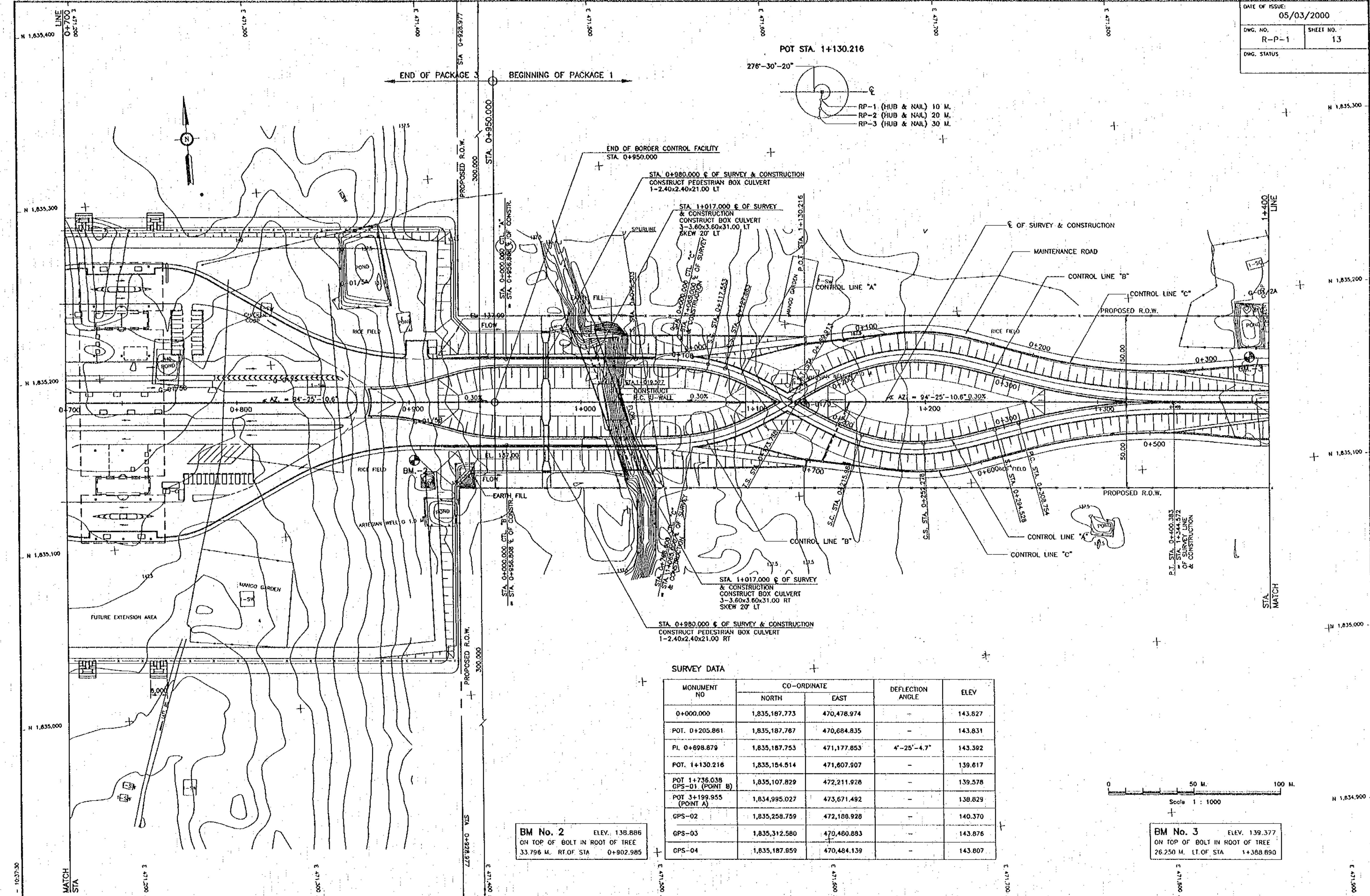
THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	H. Okita		
DESIGN CHECK	T. Masuzawa		
SUBMITTED	A. Hirotani		
APPROVED	P. Viraphonth		
	S. Temiyabutra		

DWG. TITLE:

RIGHT OF WAY PLAN-2

LAO PDR SIDE



SURVEY DATA

MONUMENT NO	CO-ORDINATE NORTH	CO-ORDINATE EAST	DEFLECTION ANGLE	ELEV
0+000.000	1,835,187.773	470,478.974	-	143.827
POT. 0+205.861	1,835,187.767	470,684.835	-	143.831
PI. 0+698.879	1,835,187.753	471,177.853	4°-25'-4.7"	143.392
POT. 1+130.216	1,835,154.514	471,607.907	-	139.617
POT 1+736.038 GPS-01 (POINT B)	1,835,107.829	472,211.928	-	139.578
POT 3+199.955 (POINT A)	1,834,995.027	473,671.492	-	138.829
GPS-02	1,835,258.759	472,188.928	-	140.370
GPS-03	1,835,312.580	470,460.883	-	143.876
GPS-04	1,835,187.859	470,484.139	-	143.807

BM No. 2 ELEV. 138.886
ON TOP OF BOLT IN ROOT OF TREE
33.796 M. RT.OF STA 0+902.985

BM No. 3 ELEV. 139.377
ON TOP OF BOLT IN ROOT OF TREE
26.250 M. LT.OF STA 1+388.690

DATE OF ISSUE: 05/03/2000
DWG. NO. R-P-1 | SHEET NO. 13
DWG. STATUS

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
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MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	H. Oiita		16/02/00
DESIGN CHECK	T. Masuzawa		18-02-00
SUBMITTED	A. Efrotani		21/02/00
APPROVED	P. Viraphanth		22/02/00
	S. Tamiyabutra		22/02/00

DWG. TITLE:
PLAN-1
STA. 0+950.000 - STA. 1+400.000

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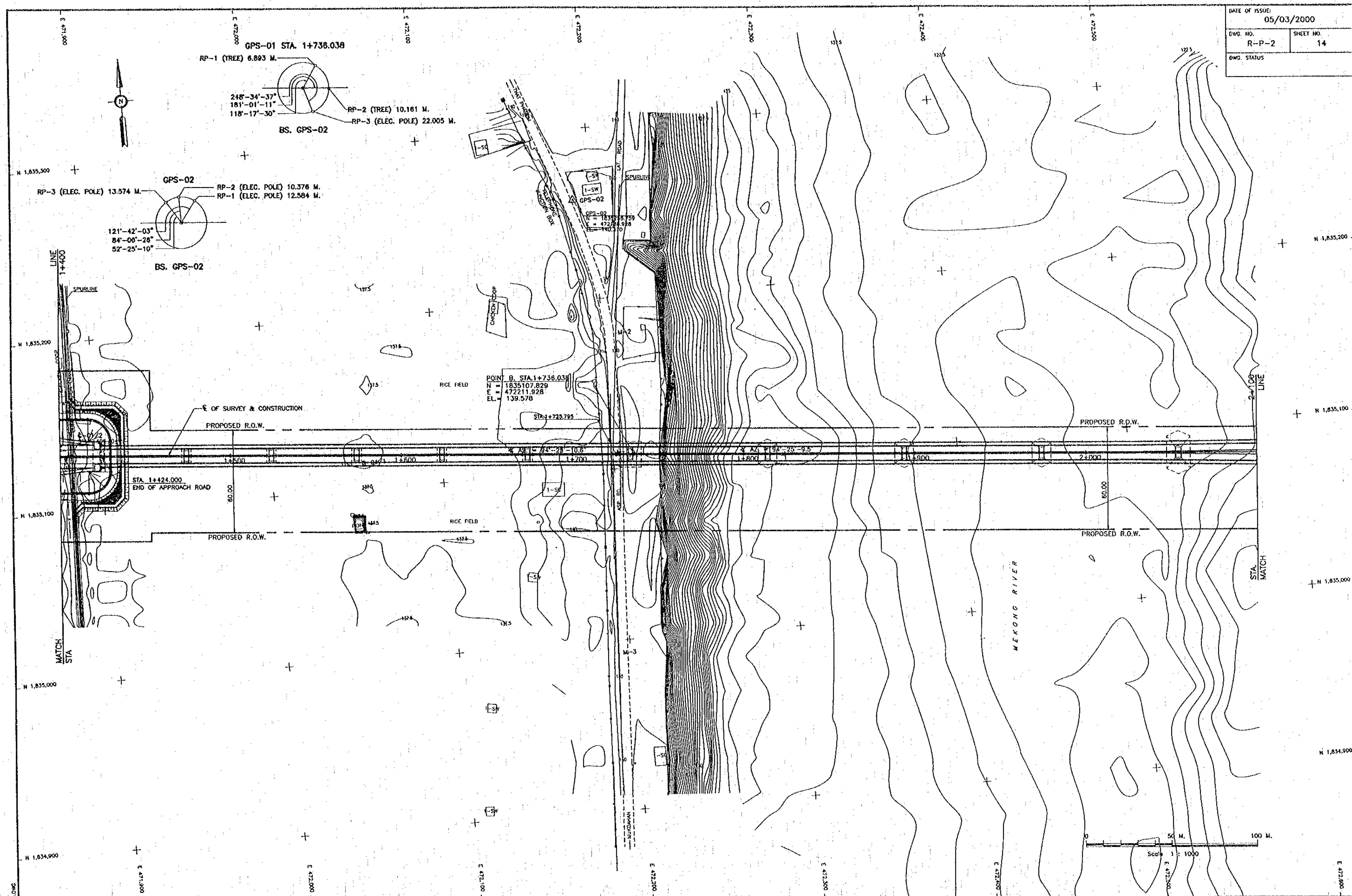
DATE OF ISSUE:	
05/03/2000	
DWG. NO. R-P-2	SHEET NO. 14
DWG. STATUS	



REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM

ORIENTAL CONSULTANTS CO., LTD.

in association with

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JICA JAPAN INTERNATIONAL COOPERATION AGENCY

LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION

KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

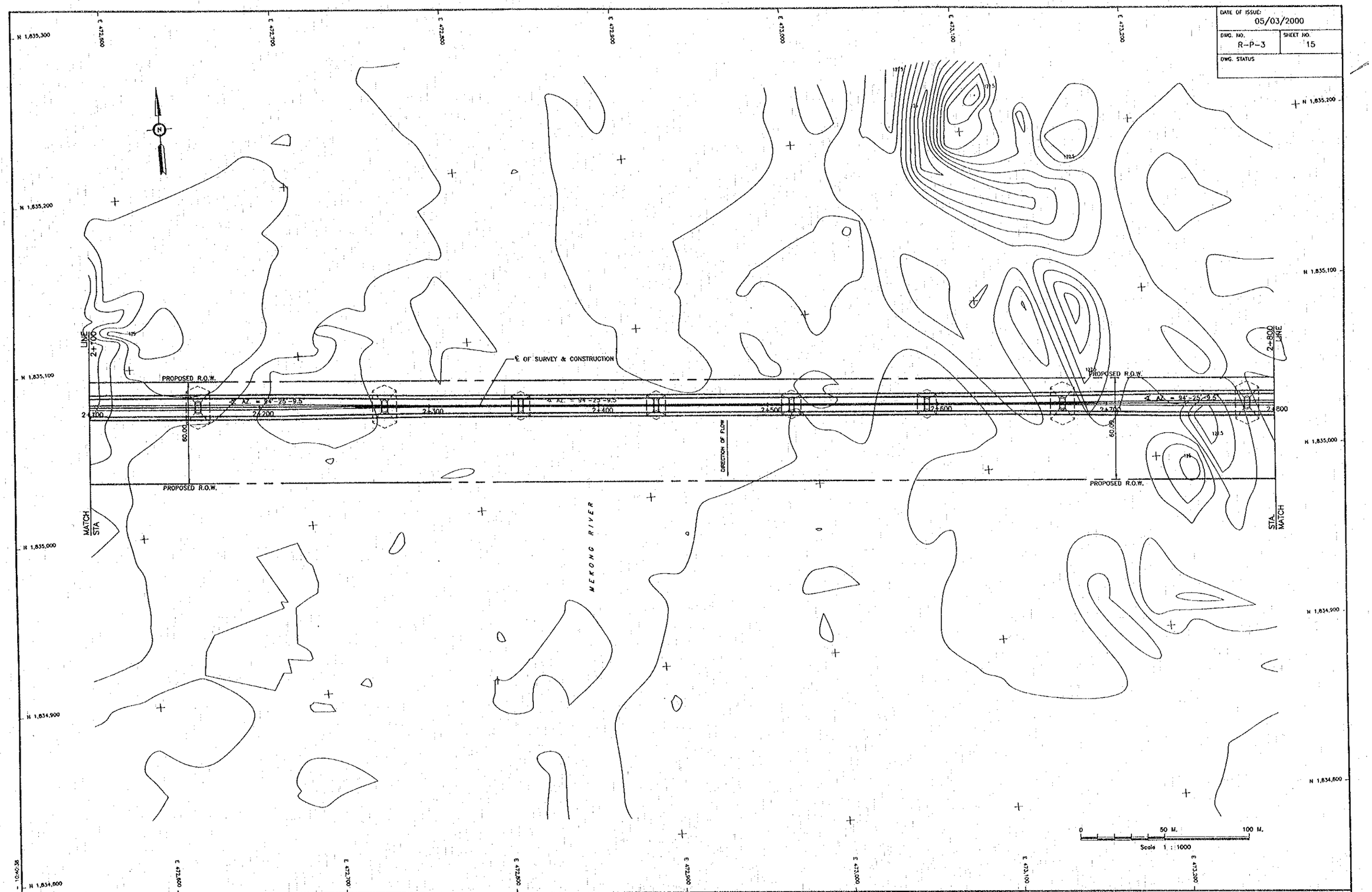
QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	H. Okita	Okita	16/03/00
DESIGN CHECK	T. Masuzawa	[illegible]	16-03-00
SUBMITTED	A. Hiratani	[illegible]	21/03/00
APPROVED	P. Viraphonh	[illegible]	22/03/00
	S. Temiyabutra	[illegible]	2-3/03/00

DWG. TITLE:

PLAN-2

STA. 1+400.000 - STA. 2+100.000

DATE OF ISSUE: 05/03/2000	
DWG. NO. R-P-3	SHEET NO. 15
DWG. STATUS	



REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JICA JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	H. Okita	Okita	15/03/00
DESIGN CHECK	T. Matsuzawa		15-3-00
SUBMITTED	A. Hiratani		21/3/00
APPROVED	P. Viraphanth		27/03/00
	S. Temiyabutra	S. Temiyabutra	27/03/00

DWG. TITLE:

PLAN--3

STA. 2+100.000 – STA. 2+800.000

Plot date: Fri, 11 Feb 2000 - 10:40:38

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DATE OF ISSUE:	
05/03/2000	
DWG. NO. R-P-4	SHEET NO. 16
DWG. STATUS	

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM

ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JAPAN INTERNATIONAL COOPERATION AGENCY

LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION

KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	H. Okita		16/02/00
DESIGN CHECK	T. Masuzawa		18-02-00
SUBMITTED	A. Hirotani		[illegible]
APPROVED	P. Viraphanth		22/02/00
	S. Temiyabutra		22/02/00

DWG. TITLE:

PLAN-4
STA.2+800.000 - STA.3+200.000

Plot date: Fri, 11 Feb 2000 - 10:41:45
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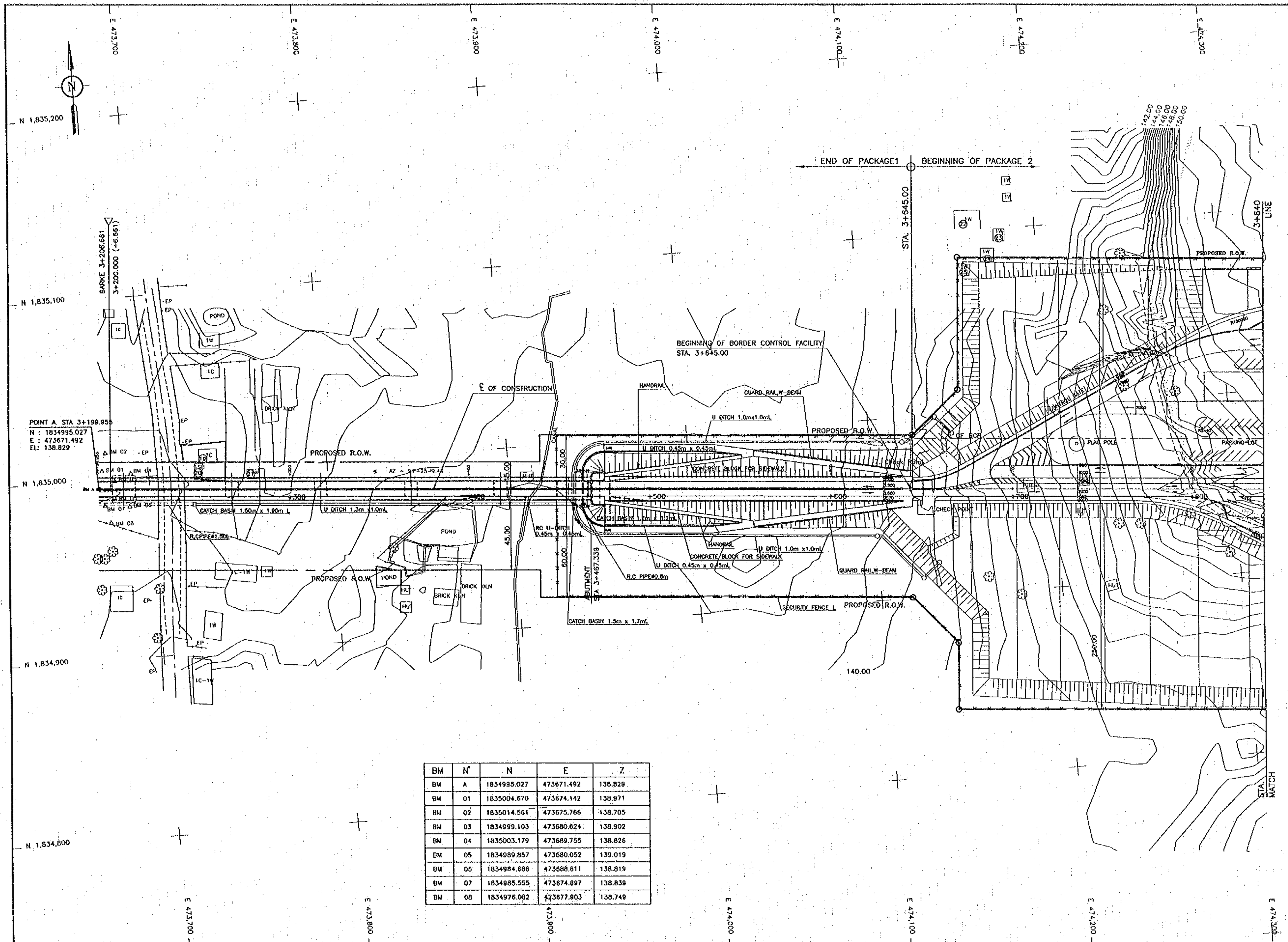


BM	N°	N	E	Z
BM	A	1834995.027	473671.492	138.829
BM	01	1835004.670	473674.142	138.971
BM	02	1835014.561	473675.786	138.705
BM	03	1834999.103	473680.624	138.902
BM	04	1835003.179	473689.755	138.826
BM	05	1834989.857	473680.052	139.019
BM	06	1834984.686	473688.611	138.819
BM	07	1834985.555	473674.897	138.839
BM	08	1834976.082	473677.903	138.749

SCALE = 1:1000

DATE OF ISSUE: 05/03/2000
DWG. NO. R-P-5
SHEET NO 17
DWG. STATUS

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

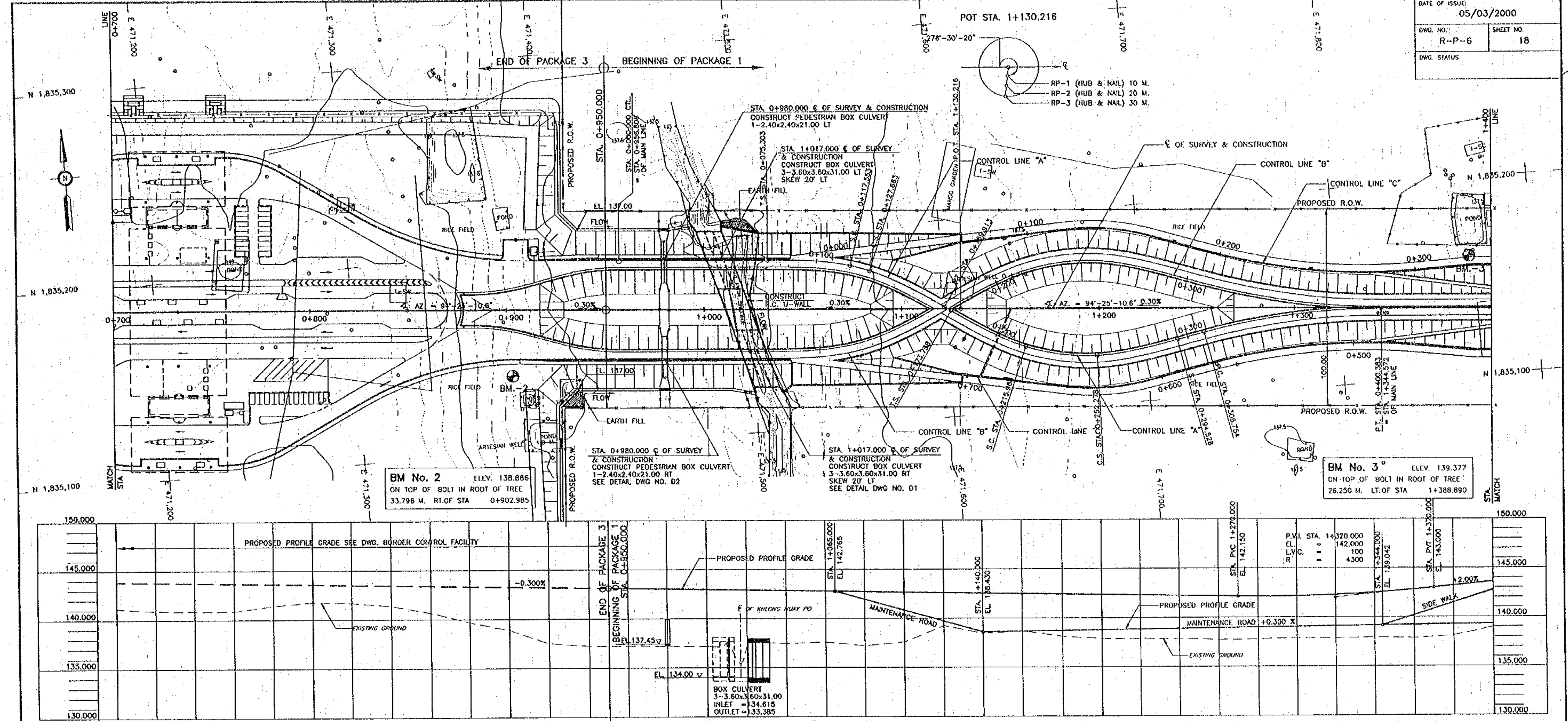
JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	H. Okita		
DESIGN CHECK	T. Masuzawa		
SUBMITTED	A. Hirotani		
APPROVED	P. Viraphonth		
	S. Temiyabutra		

DWG. TITLE:
PLAN-5
STA.3+200.000 - STA.3+840.000

C:\ SMB-NEW\LAO\Pk2-P01.DWG


POT STA. 1+130.216
END OF PACKAGE 3
BEGINNING OF PACKAGE 1
RP-1 (HUB & NAIL) 10 M.
RP-2 (HUB & NAIL) 20 M.
RP-3 (HUB & NAIL) 30 M.
STA. 0+980.000 ℄ OF SURVEY & CONSTRUCTION
CONSTRUCT PEDESTRIAN BOX CULVERT
1-2.40x2.40x21.00 LT
STA. 1+017.000 ℄ OF SURVEY & CONSTRUCTION
CONSTRUCT BOX CULVERT
3-3.60x3.60x31.00 LT
SKEW 20° LT
℄ OF SURVEY & CONSTRUCTION
CONTROL LINE "A"
CONTROL LINE "B"
CONTROL LINE "C"
PROPOSED R.O.W.
RICE FIELD
POND
EARTH FILL
FLOW
CONSTRUCT R.C. U-WALL
AZ. = 94°-25'-10.6"
BM.-2
BM.-3
N 1,835,300
N 1,835,200
N 1,835,100
BM No. 2 ELEV. 138.886
ON TOP OF BOLT IN ROOT OF TREE
33.796 M. RT.OF STA 0+902.985
STA. 0+980.000 ℄ OF SURVEY & CONSTRUCTION
CONSTRUCT PEDESTRIAN BOX CULVERT
1-2.40x2.40x21.00 RT
SEE DETAIL DWG NO. D2
STA. 1+017.000 ℄ OF SURVEY & CONSTRUCTION
CONSTRUCT BOX CULVERT
3-3.60x3.60x31.00 RT
SKEW 20° LT
SEE DETAIL DWG NO. D1
BM No. 3 ELEV. 139.377
ON TOP OF BOLT IN ROOT OF TREE
26.250 M. LT.OF STA 1+388.890
PROPOSED PROFILE GRADE SEE DWG. BORDER CONTROL FACILITY
PROPOSED PROFILE GRADE
-0.300%
EXISTING GROUND
MAINTENANCE ROAD
MAINTENANCE ROAD +0.300 %
SIDE WALK
+2.00%
P.V.I. STA. 1+320.000
EL 142.000
L.V.C. 100
R 4300
BOX CULVERT
3-3.60x3.60x31.00
INLET =134.615
OUTLET =133.385
EL 134.00
EL 137.45

DATE OF ISSUE:	05/03/2000
DWG. NO.	R-P-6
SHEET NO.	18
DWG. STATUS	

GRADIENT: -0.300% L=1130.000; (142.000)

SUPER ELEVATION: -2.0%, -2.0%, +6.0%, +6.0%, 0.0%, -6.0%, -6.0%, +2.0%, +2.0% (CONTROL LINE)

STATION OF CONTROL LINE "A"&"B": 0+956.808 =0+000.000 CTL "A"&"B"; T.S. 0+075.303; S.C. 0+117.553; C.S. 0+127.663; S.T. 0+169.913; T.S. 0+173.738; S.C. 0+215.988; C.S. 0+252.278; S.T. 0+294.528; P.C. 0+309.754; P.I. 0+354.832; P.T. 1+344.572 =STA.0+400.383 CTL "A"&"B"

STATION	PROPOSED HEIGHT	EXISTING HEIGHT
0+700	143.860	141.140
720	143.800	140.900
740	143.740	140.880
760	143.680	140.880
780	143.620	141.400
0+800	143.560	141.770
820	143.500	141.680
840	143.440	141.360
860	143.380	140.660
880	143.320	139.670
0+900	143.260	138.860
920	143.200	137.510
940	143.140	137.230
960	143.080	137.240
980	143.020	137.190
1+000	142.960	137.19
020	142.900	135.36 / 137.150
040	142.840	137.464
060	142.780	137.572
080	142.720	137.210
1+100	142.660	137.550
120	142.600	139.240
140	142.540	138.430
160	142.480	138.650
180	142.420	138.110
1+200	142.360	137.880
220	142.300	137.870
240	142.240	137.860
260	142.180	137.740
280	142.130	137.780
1+300	142.160	137.890
320	142.283	137.840
340	142.500	137.930
360	142.810	137.880
380	143.200	138.090
1+400	143.600	138.920

Scale H 1 : 1000
V 1 : 200

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
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NIPPON KOEI CO., LTD.

JICA JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	H. Okita		
DESIGN CHECK	T. Masuzawa		
SUBMITTED	A. Hirotani		
APPROVED	P. Viraphanth		
	S. Temiyabutra		

DWG. TITLE:
PROFILE-1
STA. 0+950.000 - STA. 1+400.000

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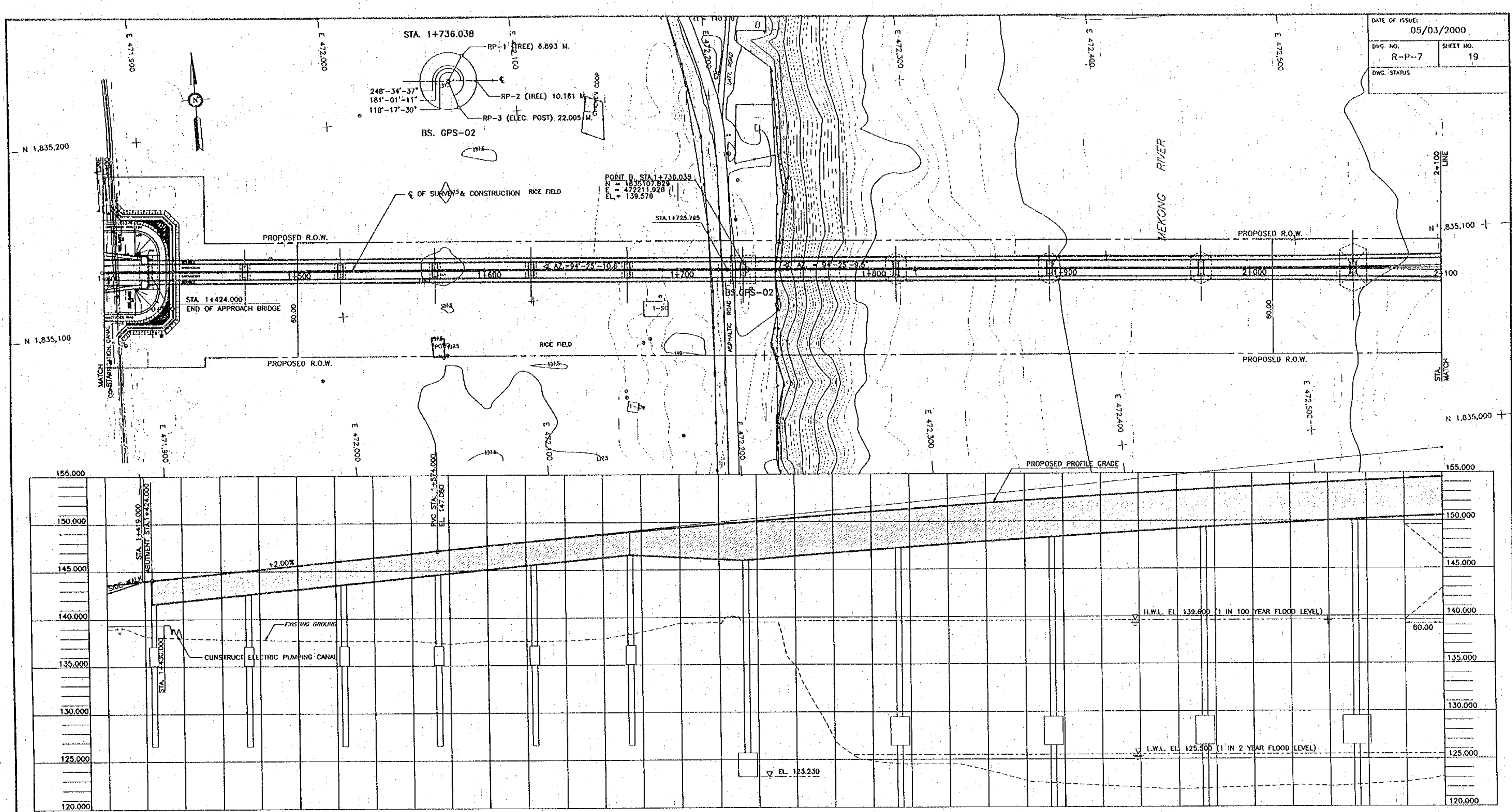
Plot date: Fri, 11 Feb 2000 - 10:43:33

DATE OF ISSUE: 05/03/2000

DWG. NO. R-P-7 | SHEET NO. 19

DWG. STATUS



GRADIENT: +2.00% L=1154.000

STATION	PROPOSED HEIGHT	EXISTING HEIGHT
1+400	143.600	138.970 / 140.520
420	144.000	138.150
440	144.400	137.970
460	144.800	137.850
480	145.200	137.760
1+500	145.600	137.660
520	146.000	137.640
540	146.400	137.630
560	146.800	137.610
580	147.200	137.500
1+600	147.592	137.570
620	147.976	137.560
640	148.352	137.580
660	148.718	137.790
680	149.075	138.460
1+700	149.424	139.400
720	149.763	139.450 / 140.126
740	150.094	139.496
760	150.416	134.795
780	150.728	127.052
1+800	151.032	124.829
820	151.328	124.577
840	151.614	124.533
860	151.891	123.821
880	152.160	122.770
1+900	152.419	122.445
920	152.670	122.228
940	152.912	122.012
960	153.144	121.826
980	153.368	121.946
2+000	153.584	122.074
020	153.790	122.202
040	153.987	122.123
060	154.175	122.307
080	154.355	122.557
2+100	154.525	123.173

0 50 M. 100 M. Scale H 1 : 1000 V 1 : 200

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM

ORIENTAL CONSULTANTS CO., LTD.

in association with

NIPPON KOEI CO., LTD.

JICA JAPAN INTERNATIONAL COOPERATION AGENCY

LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION

KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	H. Okita		
DESIGN CHECK	T. Masuzawa		
SUBMITTED	A. Hirotani		
APPROVED	P. Viraphanh		
	S. Temiyabutra		

DWG. TITLE:

PROFILE-2

STA. 1+400.000 – STA. 2+100.000

Plot date: Fri, 11 Feb 2000 - 10:46:41

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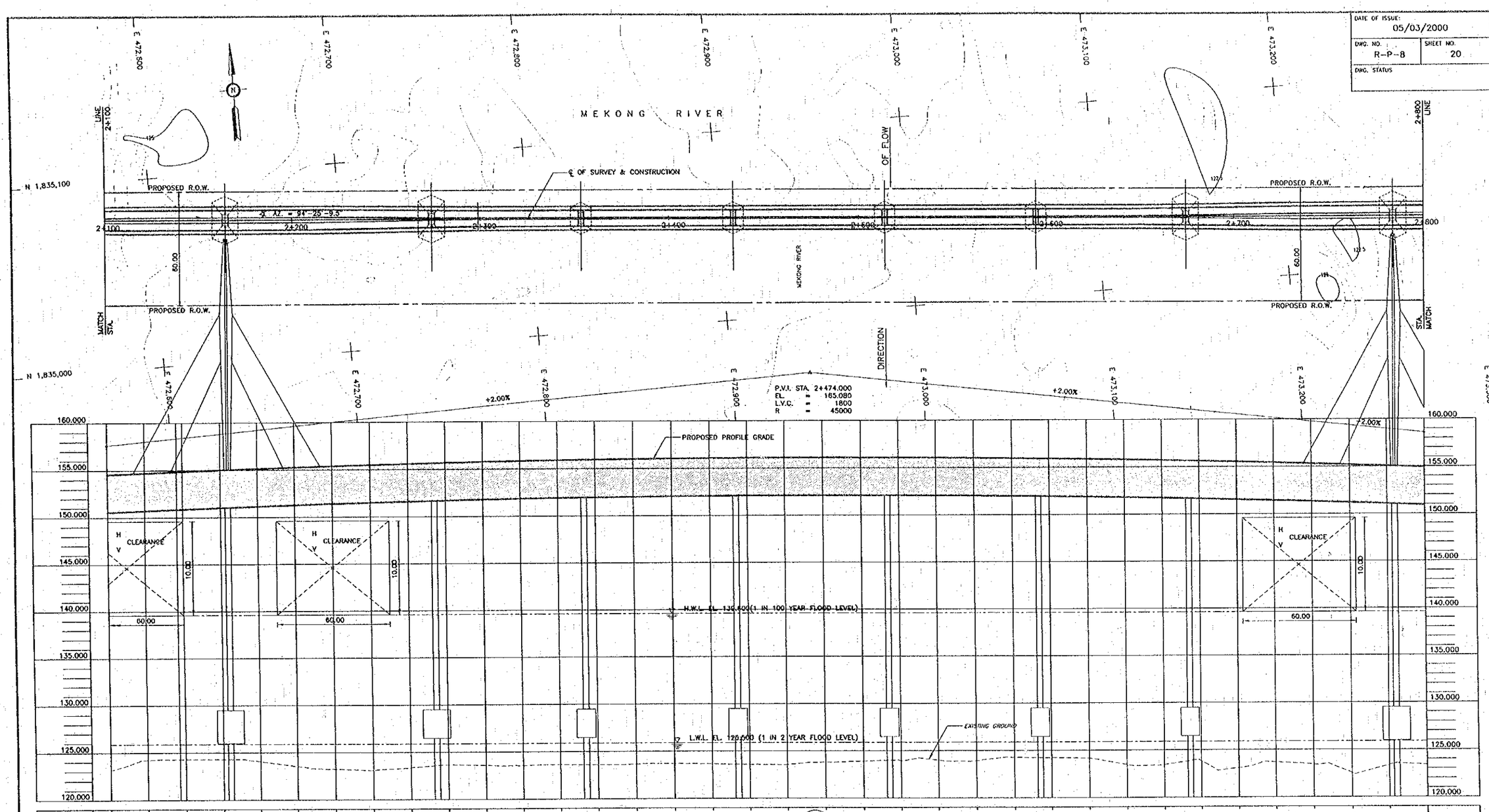
DATE OF ISSUE: 05/03/2000	
DWG. NO. R-P-8	SHEET NO. 20
DWG. STATUS	



GRADIENT	+2.00% L=1154.000	165.080	-2.00% L=1032.667

STATION	PROPOSED HEIGHT	EXISTING HEIGHT
2+100	154.526	123.173
120	154.888	124.257
140	154.840	124.317
160	154.984	124.318
180	155.120	124.057
2+200	155.246	123.523
220	155.363	123.242
240	155.427	123.127
260	155.571	122.959
280	155.662	123.672
2+300	155.744	123.365
320	155.816	123.522
340	155.880	123.629
360	155.936	123.625
380	155.982	123.660
2+400	156.091	123.697
420	156.048	123.827
440	156.067	123.993
450	156.078	123.558
480	156.080	123.801
2+500	156.072	123.907
520	156.056	123.969
540	156.032	123.991
560	155.998	123.943
580	155.955	124.272
2+600	155.904	124.241
620	155.843	124.186
640	155.774	123.459
660	155.696	123.448
680	155.609	123.824
2+700	155.513	123.094
720	155.408	123.673
740	155.294	123.434
760	155.171	123.528
780	155.040	123.378
2+800	154.898	123.304

0 50 M. 100 M. Scale H 1 : 1000 V 1 : 200

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
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JICA JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	H. Okita		16/02/00
DESIGN CHECK	T. Nagatawa		16/02/00
SUBMITTED	A. Hirotani		
APPROVED	P. Virophanth		22/02/00
	S. Temiyabutra		22/02/00

DWG. TITLE:

PROFILE-3

STA. 2+100.000 – STA. 2+800.000

Plot date: Fri, 11 Feb 2000 - 10:47:52

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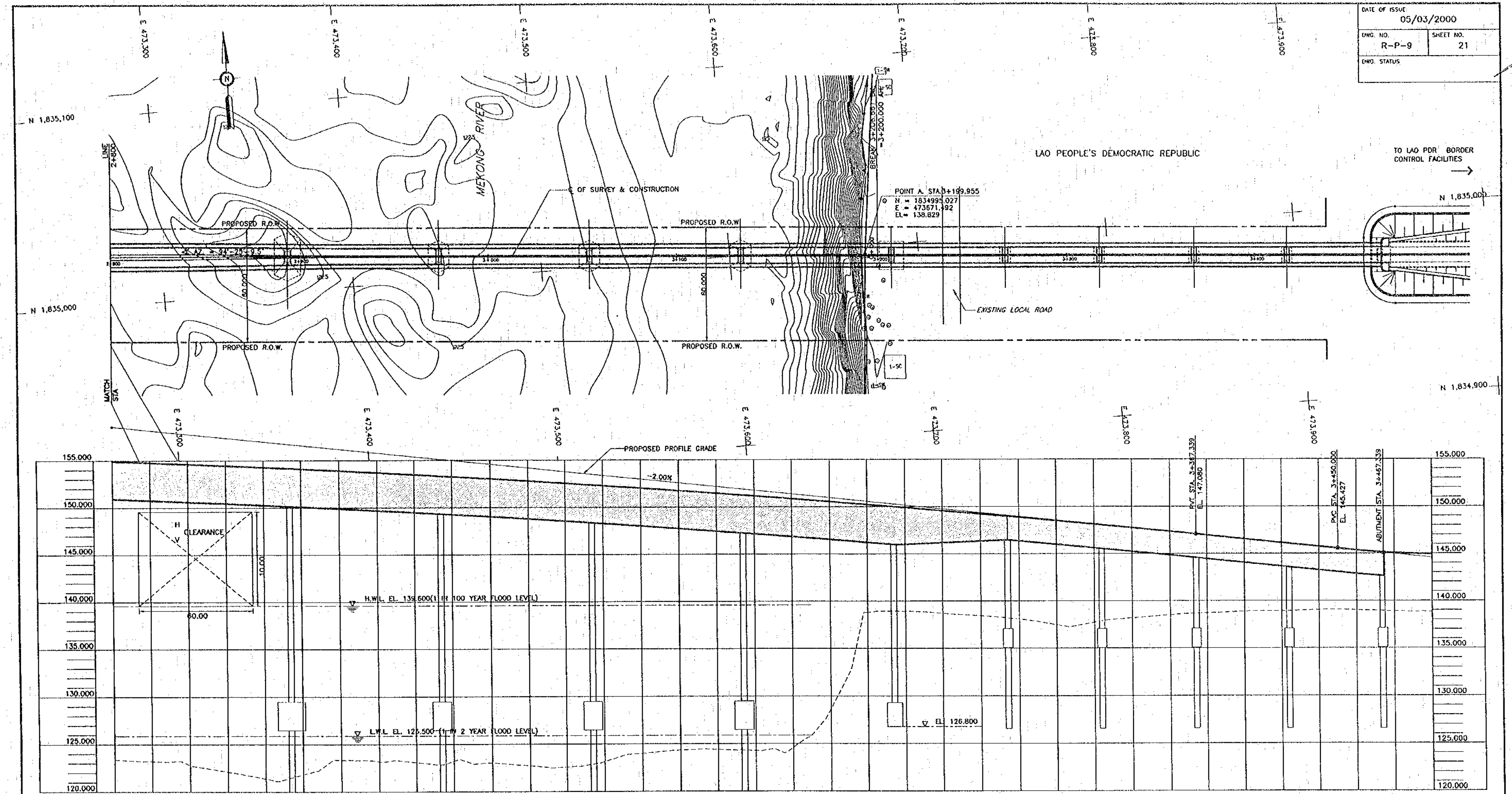

STATION	GRADIENT	PROPOSED HEIGHT	EXISTING HEIGHT
2+800	-2.00% L=1032.661	154.899	123.384
820		154.750	123.274
840		154.592	122.766
860		154.425	122.107
880		154.249	121.367
2+900		154.064	121.819
920		153.870	123.351
940		153.667	123.187
960		153.455	123.081
980		153.235	123.226
3+000		153.006	123.035
020		152.768	122.710
040		152.520	122.590
060		152.264	123.155
080		152.000	124.010
3+100		151.726	124.334
120		151.443	124.399
140		151.152	124.287
160		150.851	124.622
180		150.542	128.672
3+206.551 / 3+200.000		150.116	138.793 / 138.829
220 – 3+500		LAO P.D.R. SIDE	LAO P.D.R. SIDE

0 50 M. 100 M. Scale H 1 : 1000 V 1 : 200

DATE OF ISSUE: 05/03/2000
DWG. NO. R-P-9 SHEET NO. 21
DWG. STATUS

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	H. Okita		
DESIGN CHECK	T. Masuzawa		
SUBMITTED	A. Hirotani		
APPROVED	P. Viraphonth		22/01/00
	S. Tamlyabutra		

DWG. TITLE:
PROFILE-4
STA. 2+800.000 - STA. 3+500.000

Plot date: Fri, 11 Feb 2000 - 10:48:55
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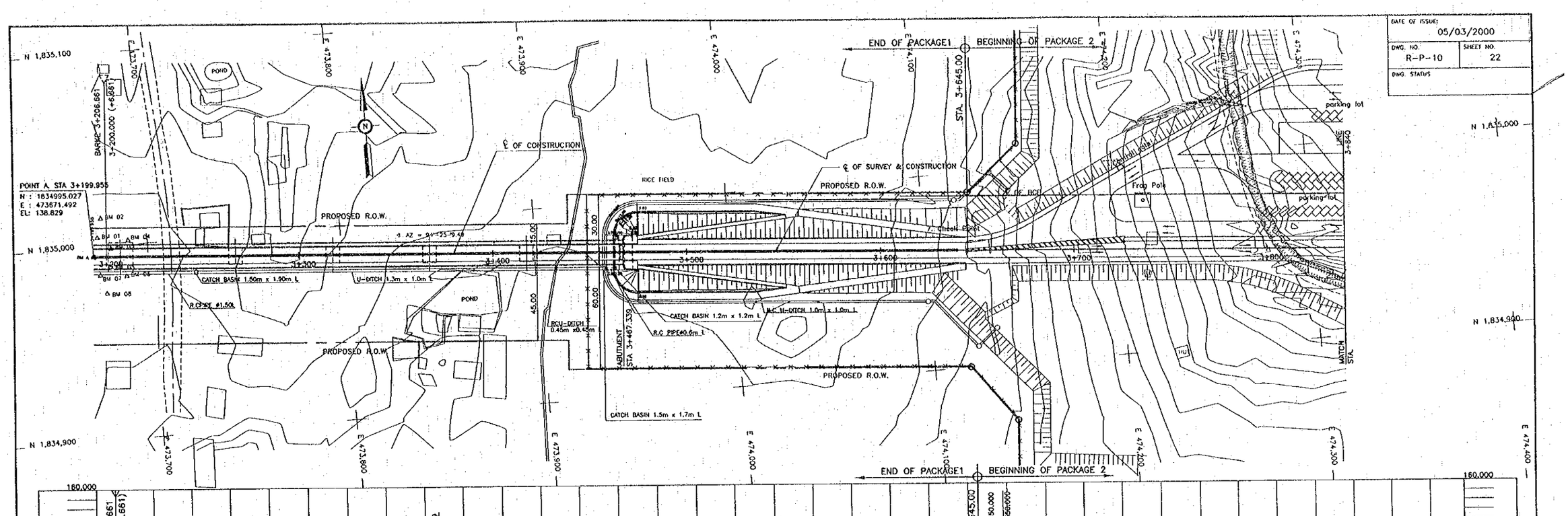
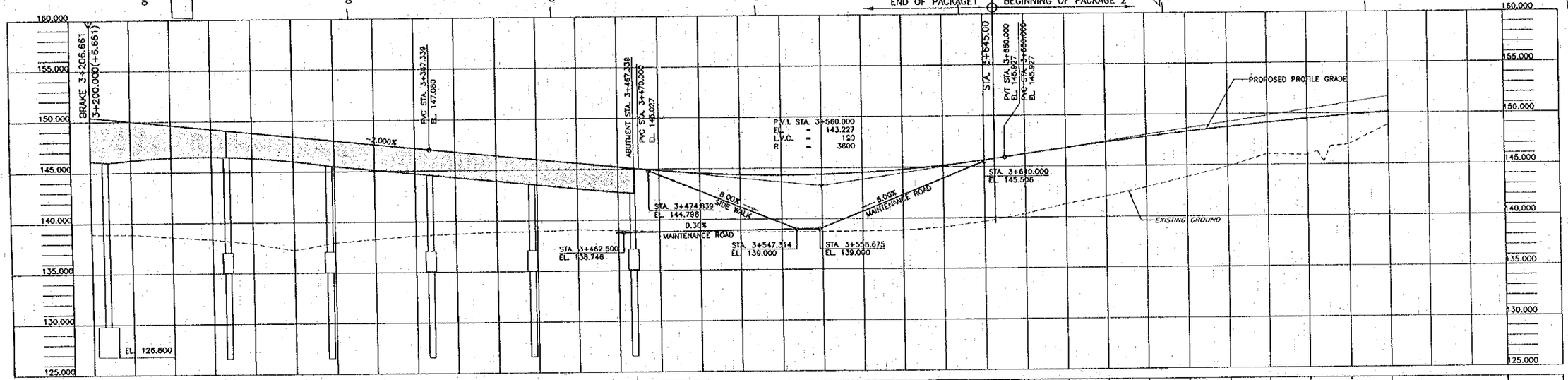
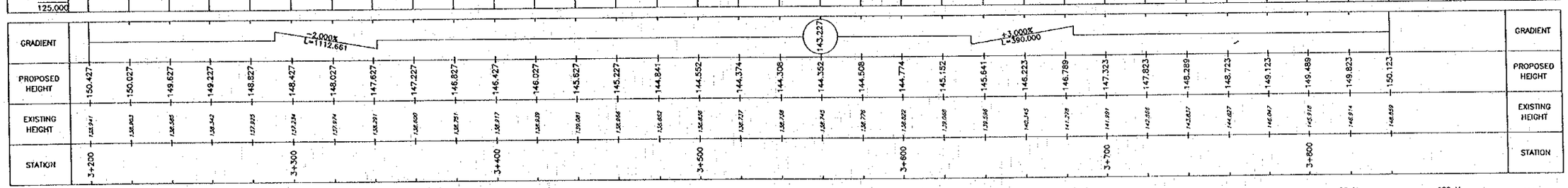
DATE OF ISSUE: 05/03/2000	
DWG. NO. R-P-10	SHEET NO. 22
DWG. STATUS	







REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
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JICA JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

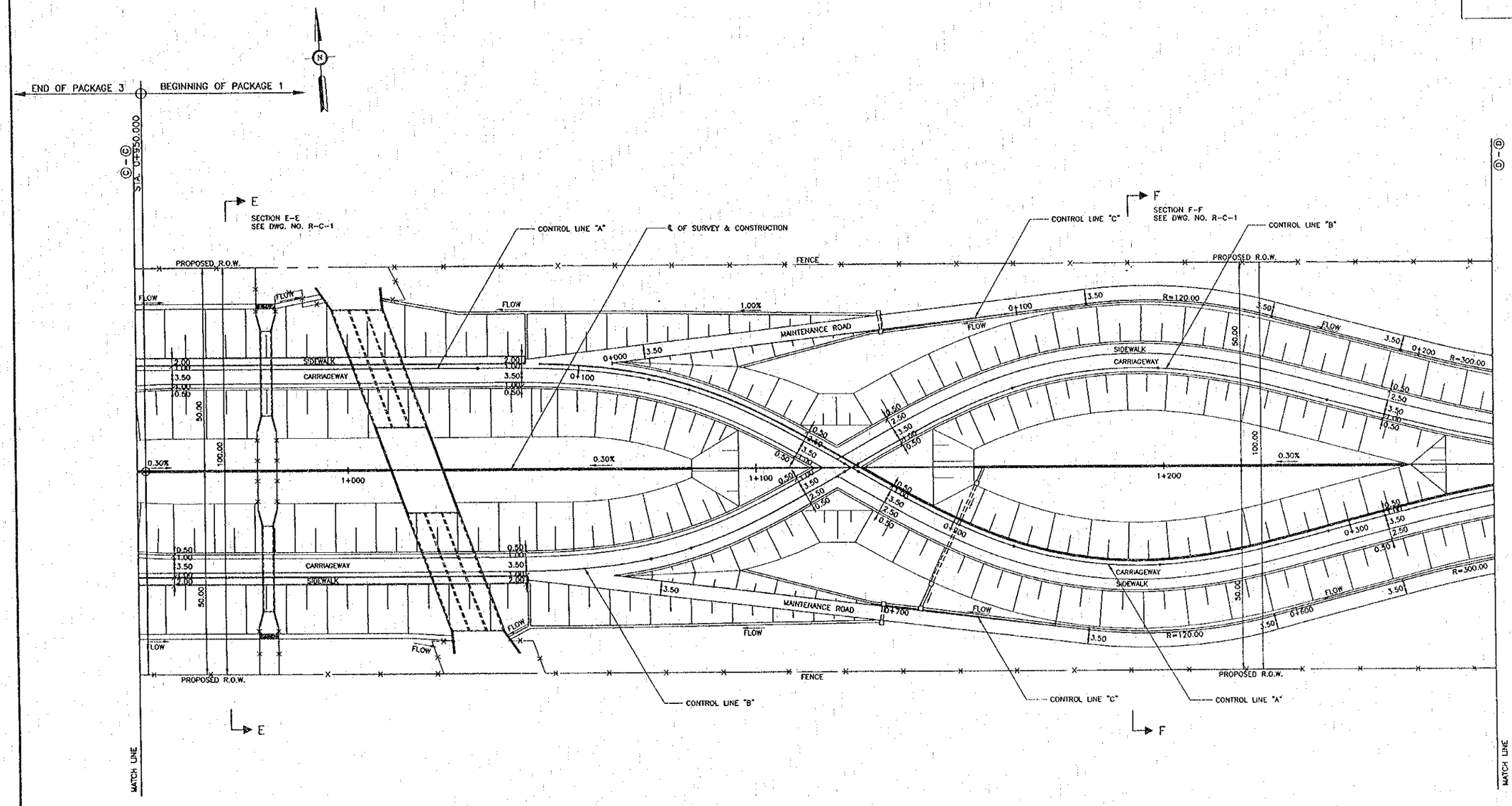
QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	H. Ohta		16/12/00
DESIGN CHECK	T. Masurawa		18.12.00
SUBMITTED	A. Hirotani		
APPROVED	P. Viraphanth		22/12/00
	S. Tamiyabutra		22/12/00

DWG. TITLE:

PROFILE – 5

STA. 3+199.955 – 3+840.00

DATE OF ISSUE: 05/03/2000	
DWG. NO. R-G-1	SHEET NO. 23
DWG. STATUS	



0 25 M. 50 M.
Scale 1 : 500

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JICA JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	H. Okita		4/2/00
DESIGN CHECK	T. Matsuzawa		12/2/00
SUBMITTED	A. Hiratani		
APPROVED	P. Viraphanh		22/12/00
	S. Tamyasubira		22/12/00

DWG. TITLE:
GEOMETRIC DETAILS-1
AT TRAFFIC CHANGEOVER
THAILAND SIDE

Plot date: Sat, 15 Jan 2000 - 10:04:07
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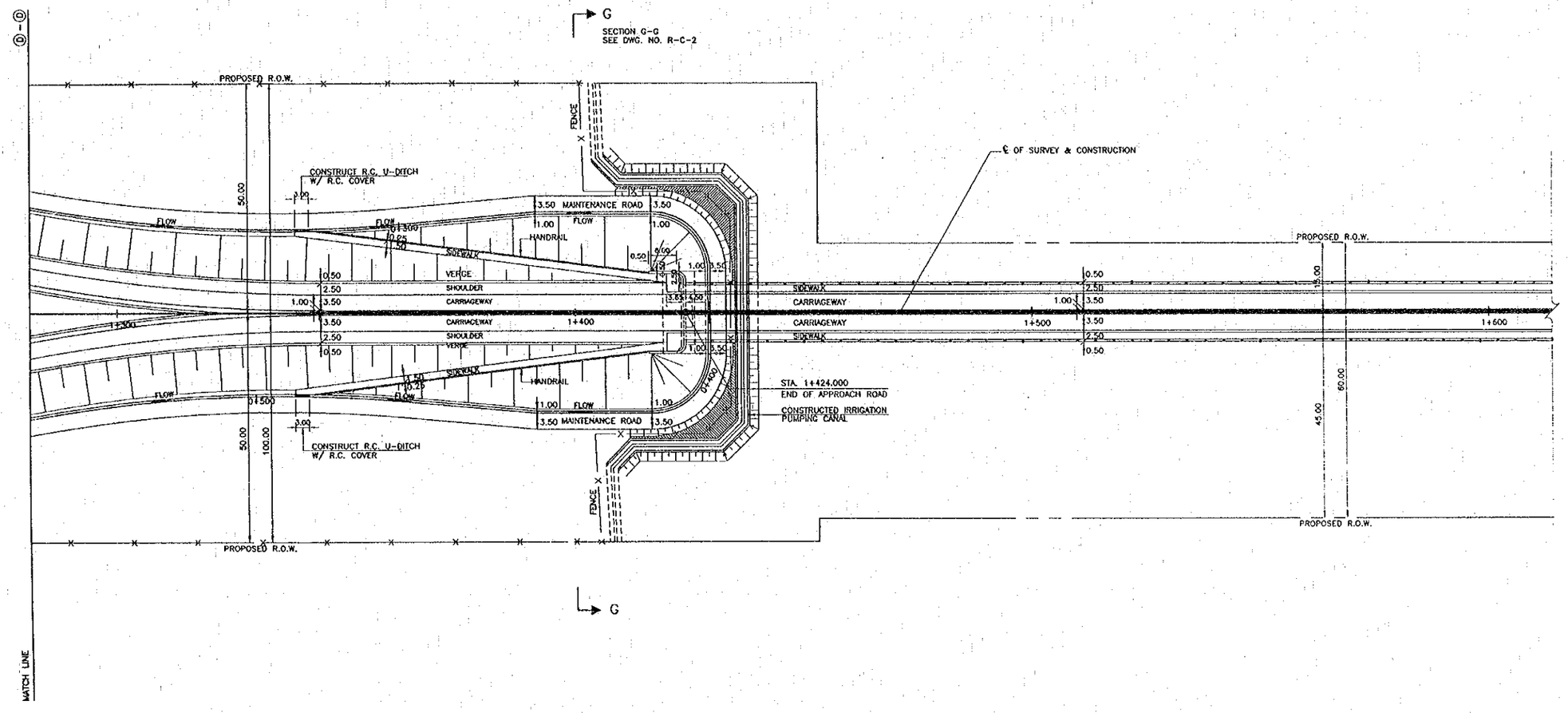
DATE OF ISSUE: 05/03/2000	
DWG NO R-G-2	SHEET NO. 24
DWG STATUS	



REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
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JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	H. Okita		14/12/00
DESIGN CHECK	T. Matsutawa		14/12/00
SUBMITTED	A. Heolani		
APPROVED	P. Vicaphanth		22/12/00
	S. Tamgobuto		22/12/00

DWG TITLE:
GEOMETRIC DETAILS-2
AT APPROACH ROAD
THAILAND SIDE

Plot date: Sat, 15 Jan 2000 - 10:24:54
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DATE OF ISSUE: 05/03/2000
DWG. NO. R-G-3 | SHEET NO. 25
DWG. STATUS

FENCE
PROPOSED R.O.W.
END OF PACKAGE 3
BEGINNING OF PACKAGE 1
E 471,400
E 471,450
E 471,475
E 471,500
EARTH FILL
CONSTRUCT R.C. U-DITCH 1.20x1.20 T
CONSTRUCT R.C. U-DITCH 0.60x0.60 T
EL. 137.00
FLOW
STA. 0+950.000
STA. 0+000.000 CTL "A" = STA. 0+956.808 ℄ OF CONSTRUCTION
CONTROL LINE "A"
STA. 0+980.000 ℄ OF SURVEY & CONSTRUCTION
CONSTRUCT PEDESTRIAN BOX CULVERT 1-2.40x2.40x21.00 LT
STA. 1+017.000 ℄ OF SURVEY & CONSTRUCTION
CONSTRUCT BOX CULVERT 3-3.60x3.60x31.00 LT SKEW 20° LT
CONSTRUCT R.C. DRAIN CHUTE
T.S. STA. 0+975.303
STA. 1+043.846
END OF HANDRAIL
STA. 1+045
N 1,835,200
HANDRAIL
BEGINNING OF HANDRAIL STA. 0+928.977
SIDE SLOPE 1:2
SIDEWALK
BARRIER CURB & GUTTER
CARRIAGEWAY
2.00
1.00
3.50
0.50
2.00%
P.C.
P.T.
R=110.00
T.S.
W-BEAM GUARDRAIL SPACING OF POST 1.00 M.
N 1,835,175
℄ OF SURVEY & CONSTRUCTION
CONSTRUCT R.C. U-WALL T 12.20x20.00 WITH BARBED WIRE
0.30%
0+900
0+950
1+000
1+017.000
MEKONG HWY 20
R.C. U-DITCH WITH COVER
N 1,835,150
STA. 1+017.000 ℄ OF SURVEY & CONSTRUCTION
CONSTRUCT BOX CULVERT T 3-3.60x3.60x31.00 RT SKEW 20° LT
CATCH BASIN 0.70x0.70 T WITH STEEL GRATING COVER
#0.40 R.C. PIPE CULVERT
END OF HANDRAIL STA. 1+043.846
CONSTRUCT R.C. DRAIN CHUTE
MATCH LINE
N 1,835,125
CONTROL LINE "B"
STA. 0+000.000 CTL "B" = STA. 0+956.808 ℄ OF CONSTRUCTION
CONSTRUCT R.C. U-DITCH 1.20x1.20 T
NOTE: T=THAILAND
0 10 M. 20 M.
Scale 1 : 200
E 471,525
E 471,575
N 1,835,125
E 471,375

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
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JICA JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	H. Okita		16/02/00
DESIGN CHECK	T. Masuzawa		15-02-00
SUBMITTED	A. Hirotani		
APPROVED	P. Viraphanth		22/02/00
	S. Tamiyobutra		22/2/00

DWG. TITLE:
TRAFFIC CHANGEOVER DETAILS-1
THAILAND SIDE
SHEET 1 OF 3

Plot date: Fri, 11 Feb 2000 - 8:24:44
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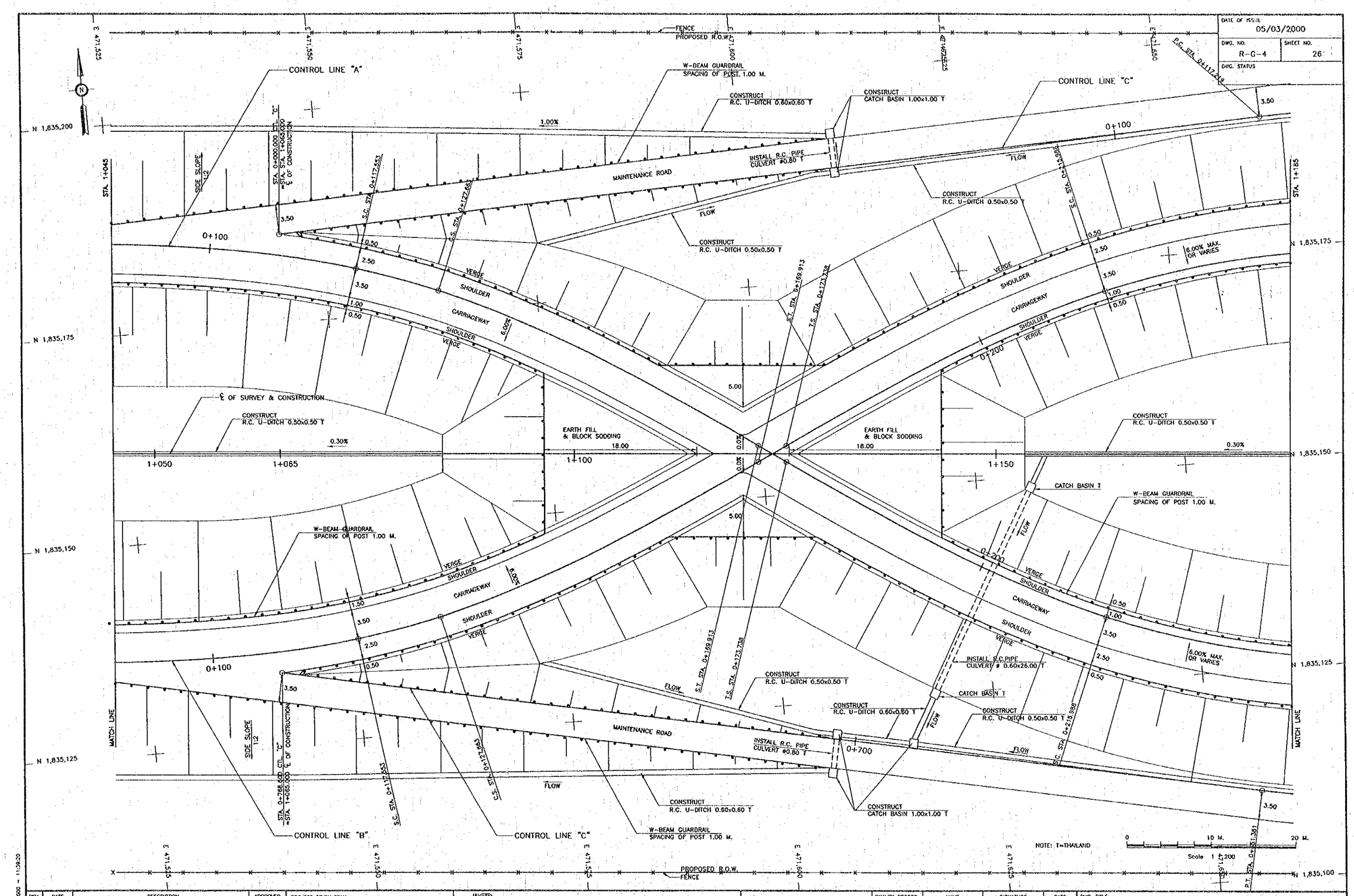

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM

ORIENTAL CONSULTANTS CO., LTD.

in association with

NIPPON KOEI CO., LTD.

JAPAN INTERNATIONAL COOPERATION AGENCY

LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION

KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG
INTERNATIONAL BRIDGE
CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	H. Okita		05/03/00
DESIGN CHECK	T. Masuzawa		05/03/00
SUBMITTED	A. Hirotani		
APPROVED	P. Viraphanth		17/3/00
	S. Tomiyabutra		17/3/00

DWG. TITLE:

TRAFFIC CHANGEOVER DETAILS--2

THAILAND SIDE

SHEET 2 OF 3

DATE OF ISSUE: 05/03/2000

DWG. NO. R-G-4 | SHEET NO. 26

DWG. STATUS

Plot date: Sat, 15 Jan 2000 - 11:39:20

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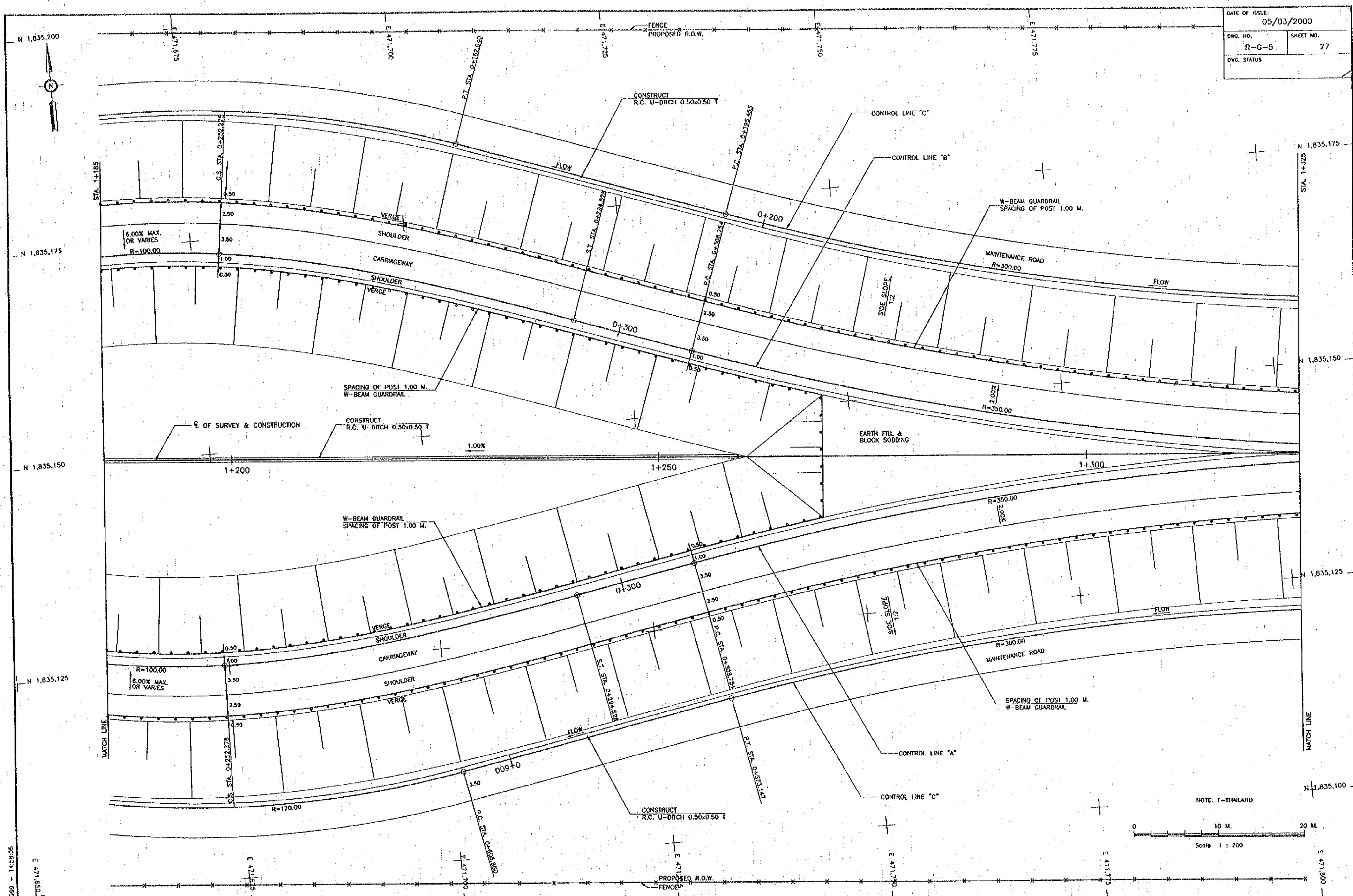
DATE OF ISSUE:	
05/03/2000	
DWG. NO. R-G-5	SHEET NO. 27
DWG. STATUS	



REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JICA JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

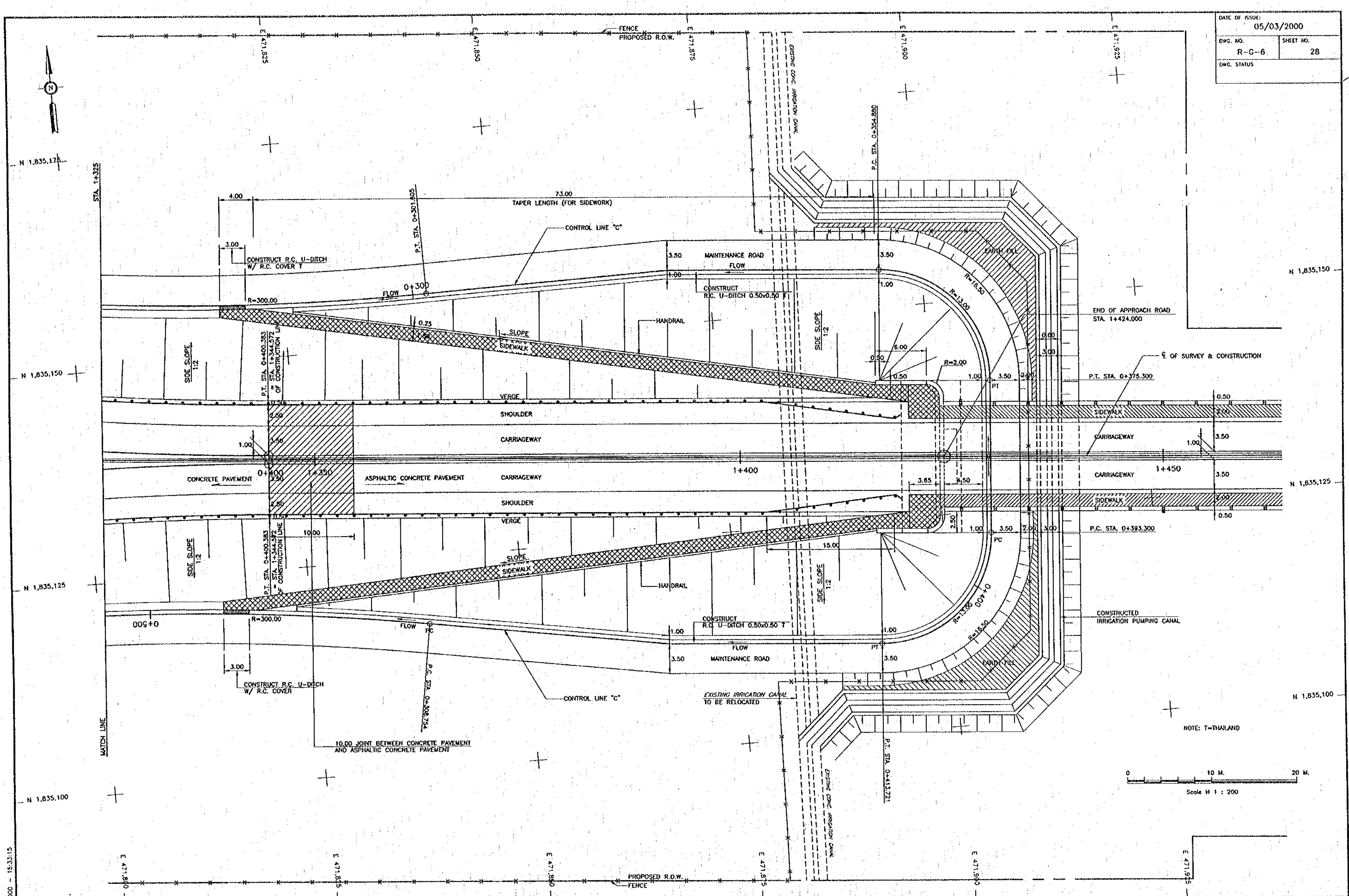
THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	H. Ohta	[signature]	16/02/00
DESIGN CHECK	T. Masuzawa	[signature]	12-02-00
SUBMITTED	A. Hirotani	[signature]	
APPROVED	P. Viraphonh	[signature]	12/02/00
	S. Temiyabutra	[signature]	22/02/00

DWG. TITLE:
TRAFFIC CHANGEOVER DETAIL-3
THAILAND SIDE
SHEET 3 OF 3

Plot date: Tue. 23 Nov 1999 - 14:58:05
C:\SMB-NEW\PACKAGE1\GEO\G-05.dwg

DATE OF ISSUE:	
05/03/2000	
DWG. NO. R-G-6	SHEET NO. 28
DWG. STATUS	



FENCE
PROPOSED R.O.W.
EXISTING CONC. IRRIGATION CANAL
P.C. STA. 0+354.880
73.00
TAPER LENGTH (FOR SIDEWORK)
4.00
P.T. STA. 0+501.605
CONTROL LINE "C"
3.00
CONSTRUCT R.C. U-DITCH W/ R.C. COVER T
3.50
MAINTENANCE ROAD
FLOW
CONSTRUCT R.C. U-DITCH 0.50x0.50 T
EARTH FILL
R=300.00
SIDE SLOPE 1:2
SLOPE
SIDEWALK
HANDRAIL
END OF APPROACH ROAD STA. 1+424.000
℄ OF SURVEY & CONSTRUCTION
P.T. STA. 0+375.300
VERGE
SHOULDER
CARRIAGEWAY
SIDEWALK
CONCRETE PAVEMENT
ASPHALTIC CONCRETE PAVEMENT
0+400
1+350
1+400
1+450
P.C. STA. 0+393.300
CONSTRUCTED IRRIGATION PUMPING CANAL
EXISTING IRRIGATION CANAL TO BE RELOCATED
P.C. STA. 0+308.754
10.00 JOINT BETWEEN CONCRETE PAVEMENT AND ASPHALTIC CONCRETE PAVEMENT
P.T. STA. 0+413.721
MATCH LINE
STA. 1+325
NOTE: T=THAILAND
Scale H 1 : 200
N 1,835,150
N 1,835,125
N 1,835,100
E 471,825
E 471,850
E 471,875
E 471,900
E 471,925

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JAPAN INTERNATIONAL COOPERATION AGENCY

LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION

KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	H. Okita		15/02/00
DESIGN CHECK	T. Masuzawa		[illegible]
SUBMITTED	A. Hirotani		[illegible]
APPROVED	P. Viraphanth		22/02/00
	S. Temiyabutra		22/02/00

DWG. TITLE:
APPROACH ROAD DETAILS-1
THAILAND SIDE

Plot date: Tue, 8 Feb 2000 - 15:33:15
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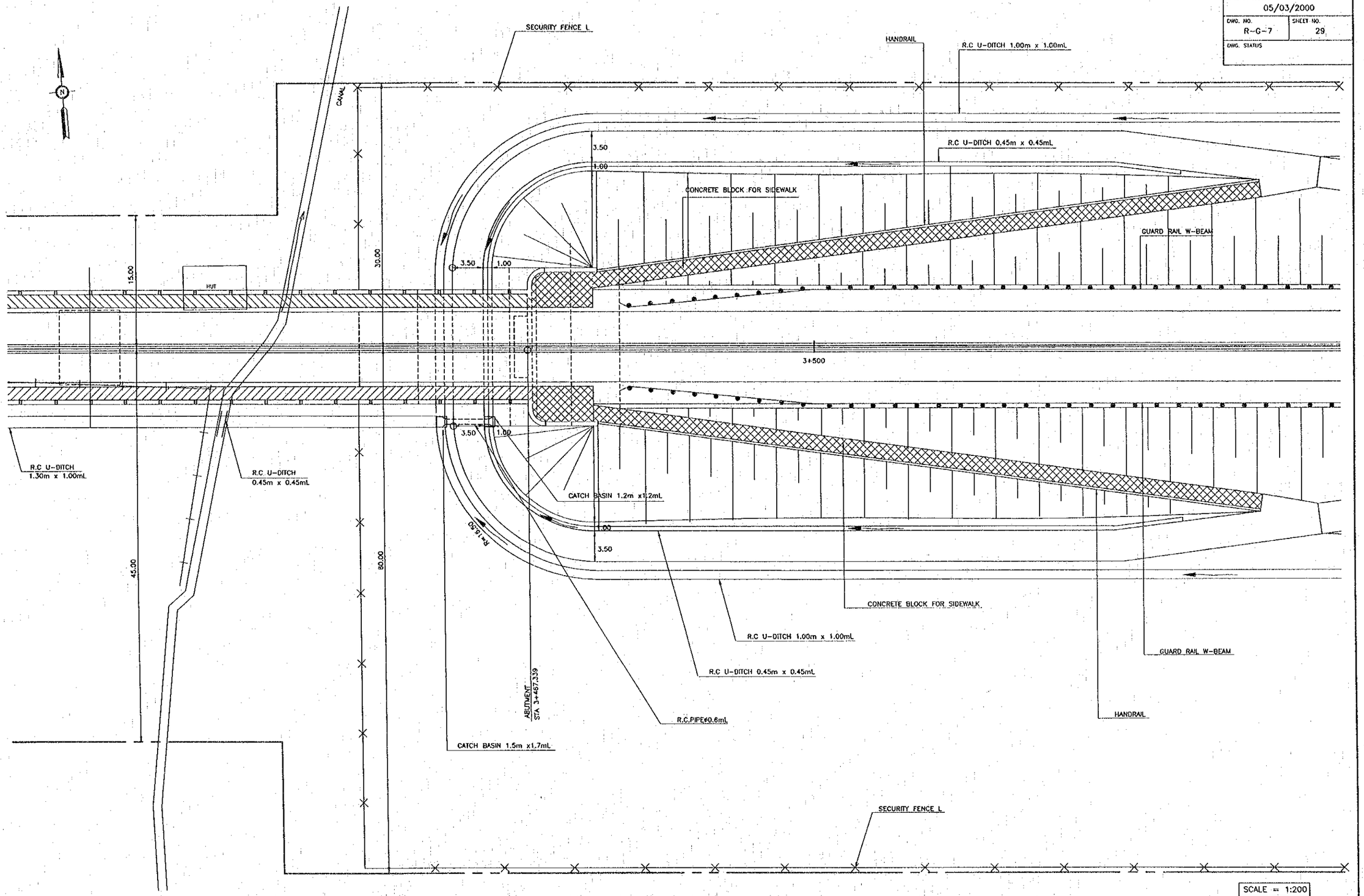
DATE OF ISSUE: 05/03/2000	
DWG. NO. R-G-7	SHEET NO. 29
DWG. STATUS	



SCALE = 1:200

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG
INTERNATIONAL BRIDGE
CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	H. Oida		16/03/00
DESIGN CHECK	T. Matsuzawa		16.03.00
SUBMITTED	A. Hirotani		16.03.00
APPROVED	P. Viraphanth		22/03/00
	S. Temiyabutra		22/03/00

DWG. TITLE:

APPROACH ROAD DETAILS - 2
LAO PDR SIDE

C:\SMB\LAO\ROAD\R-G-7.DWG

DATE OF ISSUE: 05/03/2000

DWG. NO. R-G-8 | SHEET NO. 30

DWG. STATUS

END OF PACKAGE1

BEGINNING OF PACKAGE 2

STA. 3+645.00

HANDRAIL

SECURITY FENCE L

PROPOSED R.O.W.

R.C U-DITCH 1.0m x1.0mL

GUARD RAIL,W-BEAM

7. Check Point

500
2500
3.500
3.500
2500
500

3+600

GUARD RAIL,W-BEAM

R.C U-DITCH 1.0m x1.0mL

GUARD RAIL,W-BEAM

HANDRAIL

BEGINNING OF BORDER CONTROL FACILITY
STA. 3+645.00

SECURITY FENCE L

PROPOSED R.O.W.

SCALE = 1:200

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

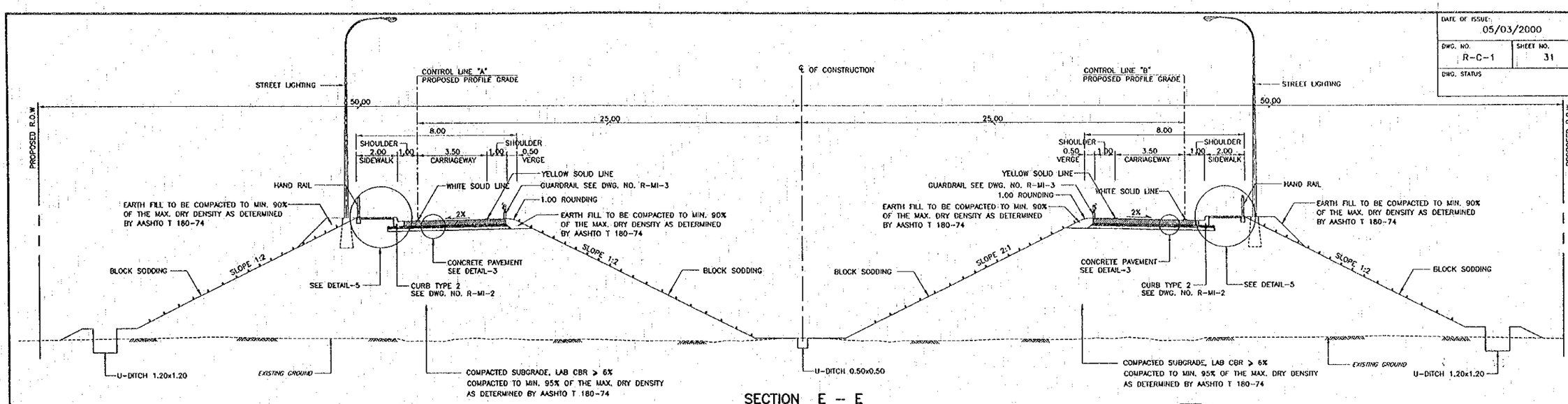
THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	H. Okita		16/2/00
DESIGN CHECK	T. Masuzawa		16-2-00
SUBMITTED	A. Hratani		
APPROVED	P. Viraphanth		22/02/00
	S. Temiyabutra		22/02/00

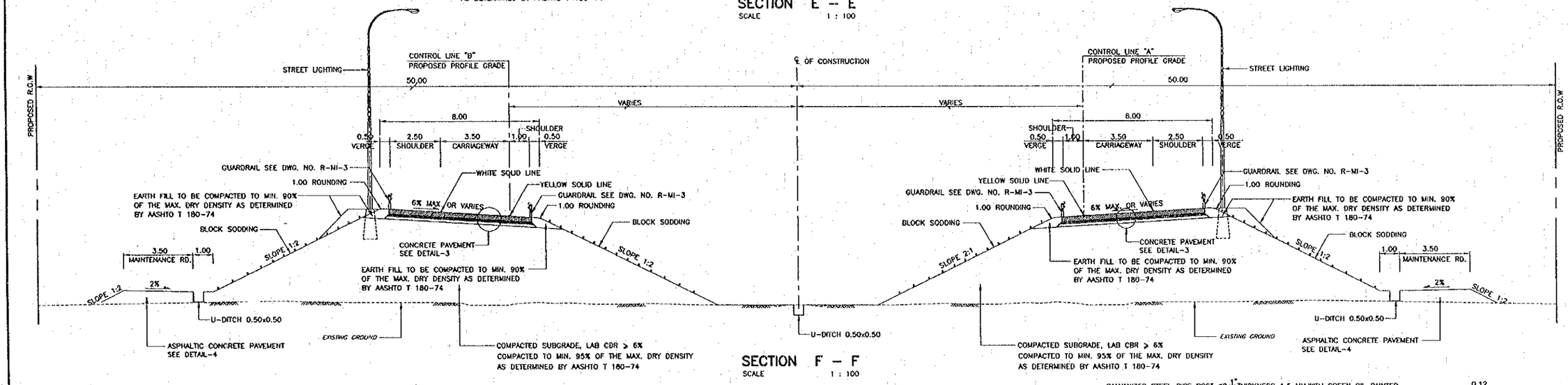
DWG. TITLE:

APPROACH ROAD DETAIL – 3
LAO PDR SIDE

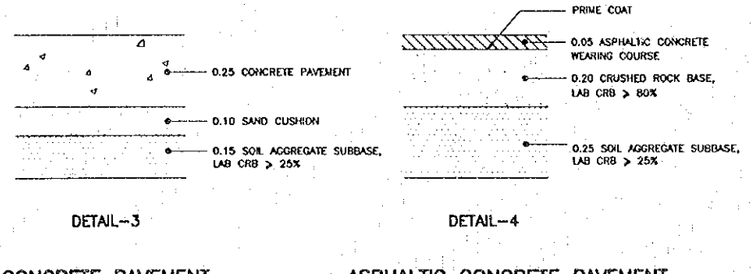
DATE OF ISSUE: 05/03/2000	
DWG. NO. R-C-1	SHEET NO. 31
DWG. STATUS	



SECTION E – E
SCALE 1 : 100



SECTION F – F
SCALE 1 : 100

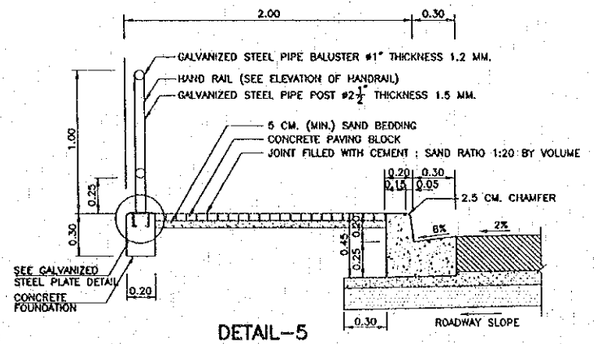


DETAIL–3

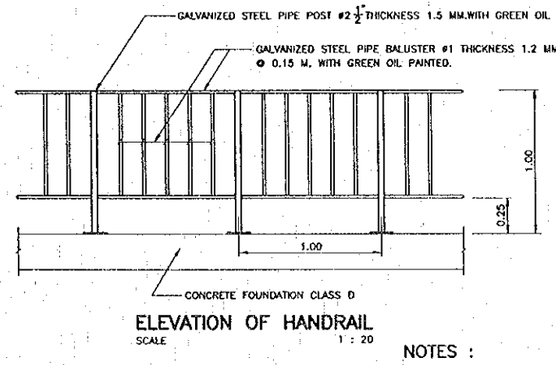
CONCRETE PAVEMENT
NOT TO SCALE

DETAIL–4

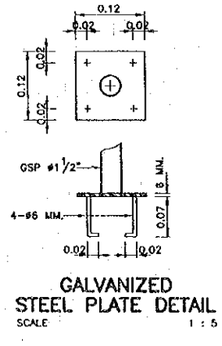
ASPHALTIC CONCRETE PAVEMENT
NOT TO SCALE



DETAIL–5
SCALE 1 : 20



ELEVATION OF HANDRAIL
SCALE 1 : 20



GALVANIZED STEEL PLATE DETAIL
SCALE 1 : 5

NOTES :
1. DIMENSIONS ARE IN METERS UNLESS OTHERWISED INDICATED.
2. SLOPE VERTICAL : HORIZONTAL

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JICA JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	H. Okita		6/12/00
DESIGN CHECK	F. Masuzawa		12-12-00
SUBMITTED	A. Hirotani		21-12-00
APPROVED	P. Viraphanth		22/12/00
	S. Tanriyabutra		22/12/00

DWG. TITLE:
TYPICAL CROSS SECTION–1
TRAFFIC CHANGEOVER
THAILAND SIDE

Plot date: Sat, 15 Jan 2000 - 13:51:34
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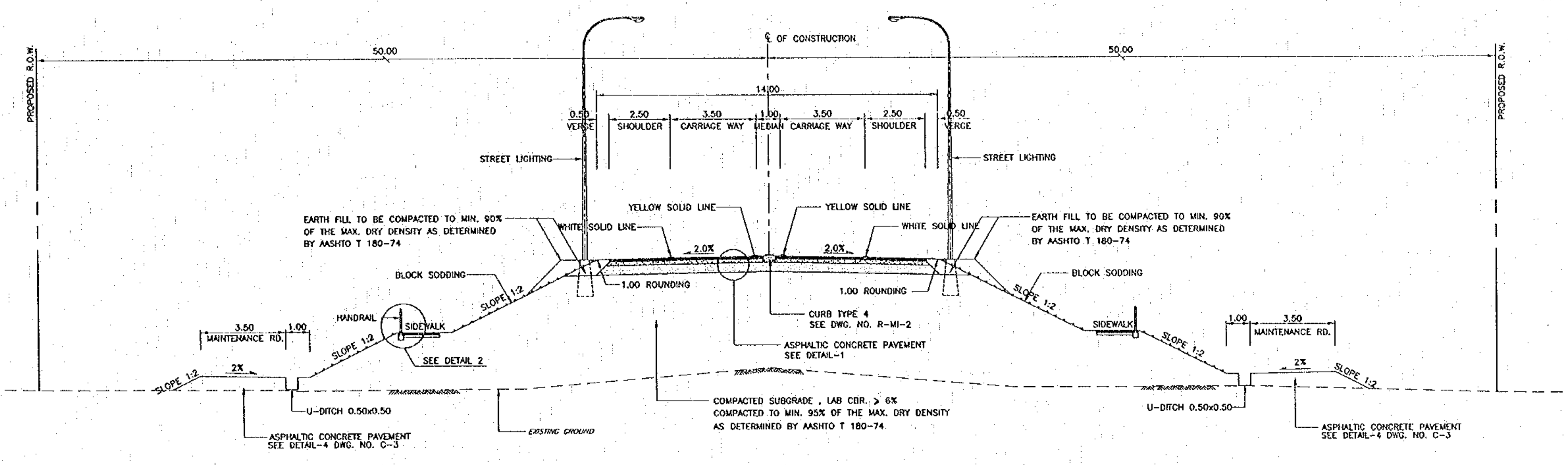
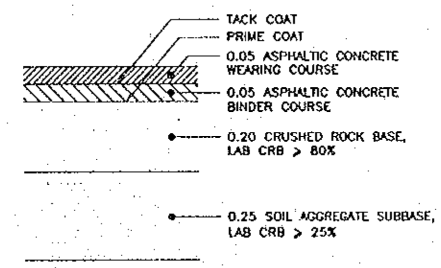
DATE OF ISSUE: 05/03/2000
DWG. NO. R-C-2 | SHEET NO. 32
DWG. STATUS



SECTION G – G

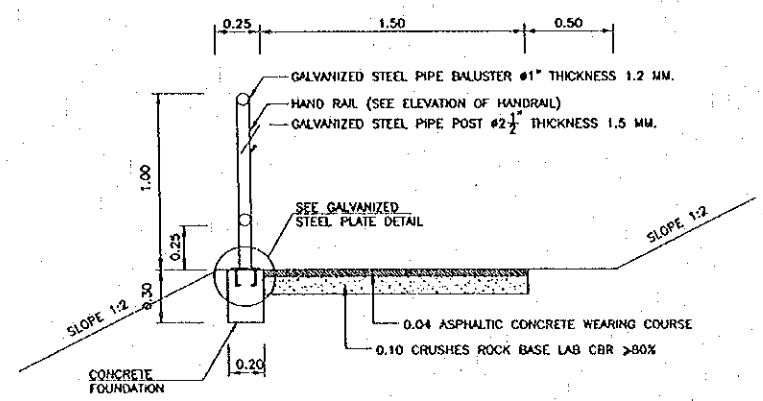
SCALE 1 : 100



DETAIL-1

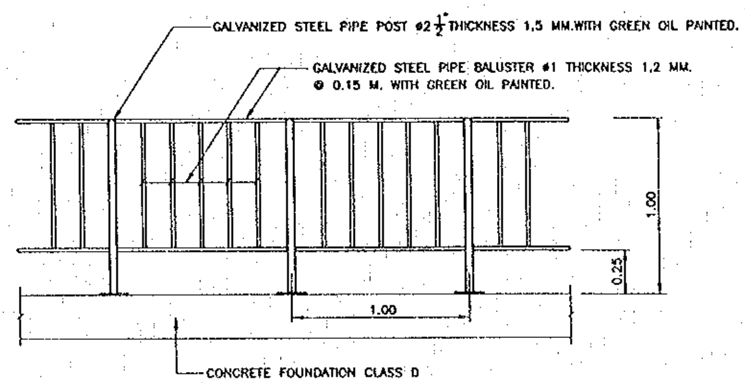
ASPHALTIC CONCRETE PAVEMENT

NOT TO SCALE



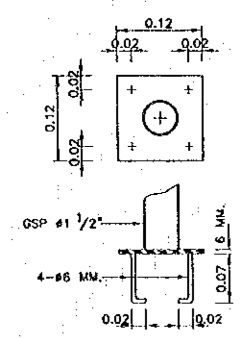
DETAIL-2

SCALE 1 : 20



ELEVATION OF HANDRAIL

SCALE 1 : 20



GALVANIZED STEEL PLATE DETAIL

SCALE 1 : 5

NOTES :

1. DIMENSIONS ARE IN METERS UNLESS OTHERWISED INDICATED.
2. SLOPE VERTICAL : HOLIZONTAL

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JICA JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	H. Okita		
DESIGN CHECK	T. Masuzawa		
SUBMITTED	A. Hirotani		
APPROVED	P. Viraphonth		
	S. Temiyabutra		

DWG. TITLE:
TYPICAL CROSS SECTION-2
AT APPROACH ROAD
THAILAND SIDE

Plot date: Sat, 15 Jan 2000 - 14:04:39
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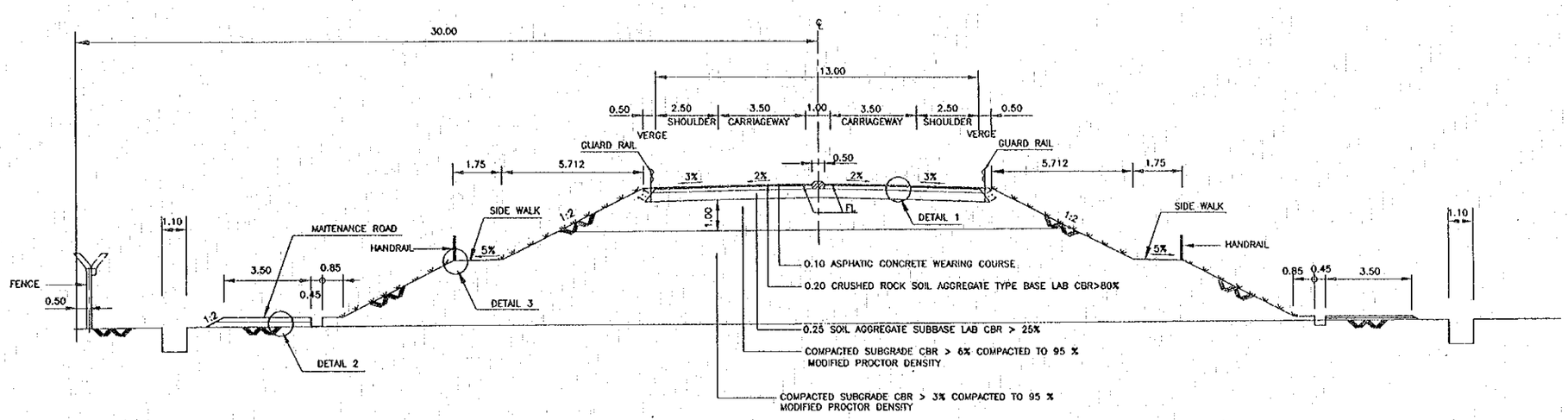
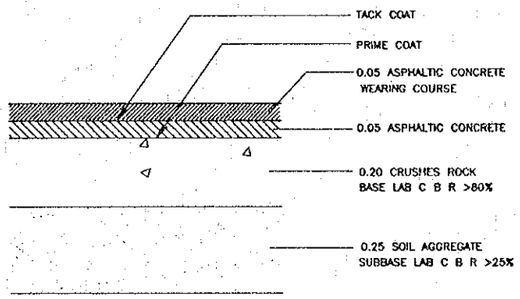
DATE OF ISSUE: 05/03/2000	
DWG. NO. R-C-3	SHEET NO. 33
DWG. STATUS	

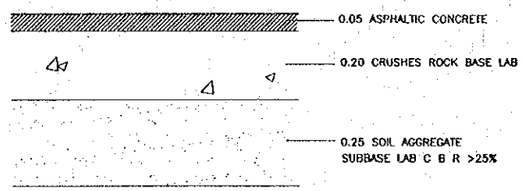


TYPICAL CROSS SECTION OF APPROACH ROAD

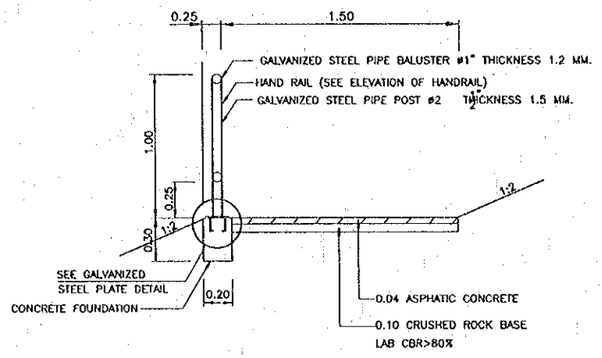
SCALE 1:200



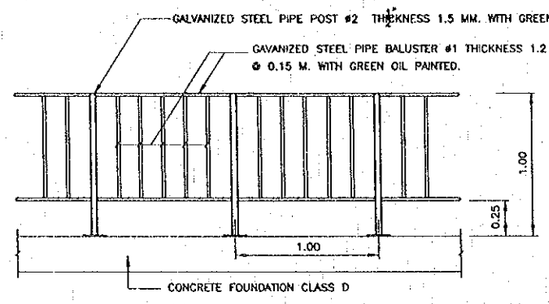
DETAIL 1
ASPHALTIC CONCRETE PAVEMENT
NOT TO SCALE



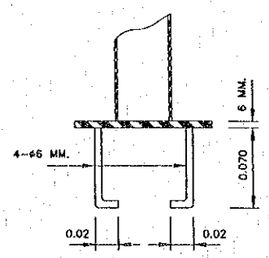
DETAIL 2
ASPHALTIC CONCRETE PAVEMENT
NOT TO SCALE

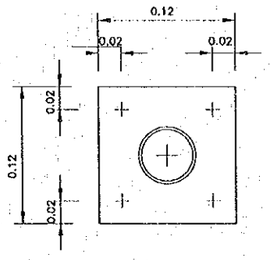


DETAIL 3
NOT TO SCALE



ELEVATION OF HANDRAIL
NOT TO SCALE





GALVANIZED
STEEL PLATE DETAIL
SCALE 1 : 20

NOTE:

1. DIMENSION ARE IN METRES UNLESS OTHERWISED INDICATED

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

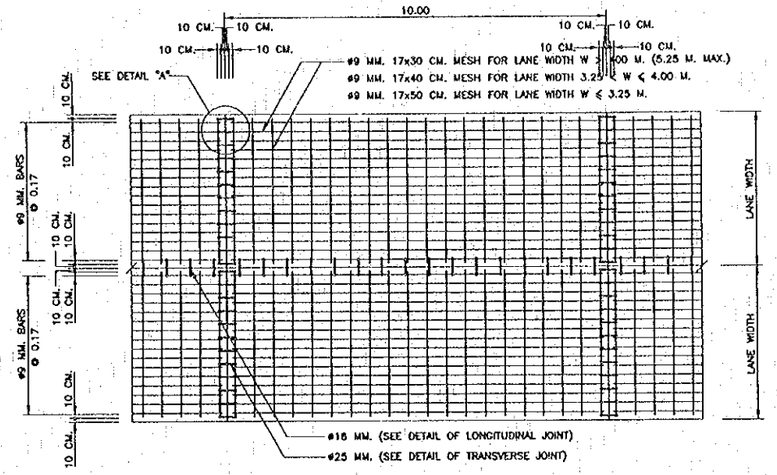
THE SECOND MEKONG
INTERNATIONAL BRIDGE
CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	H. Okita		16/12/00
DESIGN CHECK	T. Matsuzawa		18-12-00
SUBMITTED	A. Hirotani		21-12-00
APPROVED	P. Viraphanth		22/12/00
	S. Temiyabutra		22/12/00

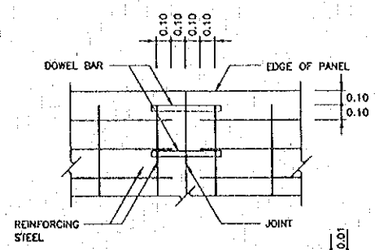
DWG. TITLE:

TYPICAL CROSS SECTION - 3
AT APPROACH ROAD
LAO PDR SIDE

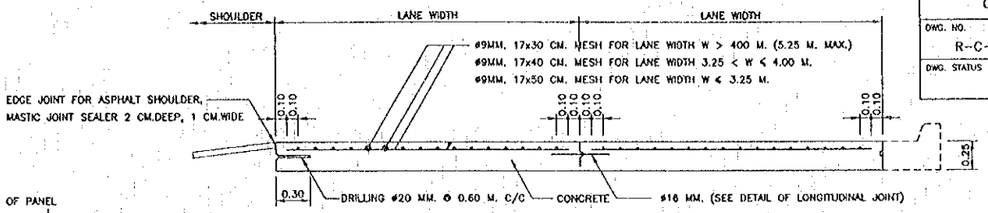
DATE OF ISSUE: 05/03/2000	
DWG. NO. R-C-4	SHEET NO. 34
DWG. STATUS	



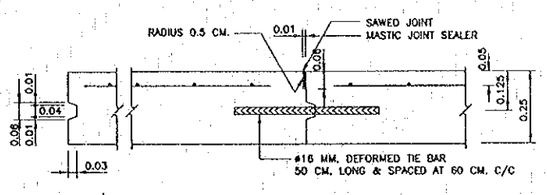
PLAN OF REINFORCED CONCRETE PAVEMENT
SCALE 1:75



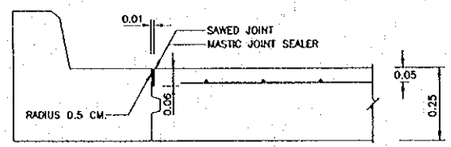
DETAIL " A "
SCALE 1:20



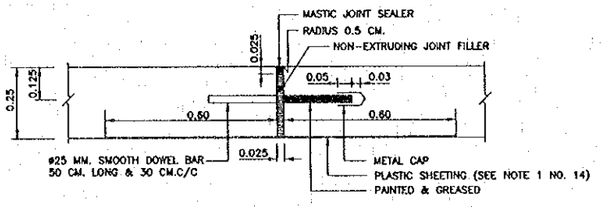
REINFORCEMENT DETAIL OF CONCRETE PAVEMENT CROSS-SECTION
SCALE 1:20



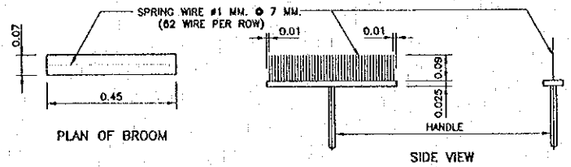
DETAIL OF LONGITUDINAL JOINT
SCALE 1:10



DETAIL OF DUMMY JOINT
SCALE 1:10



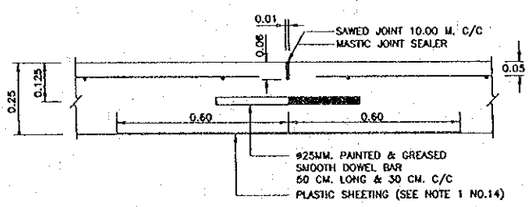
DETAIL OF EXPANSION JOINT



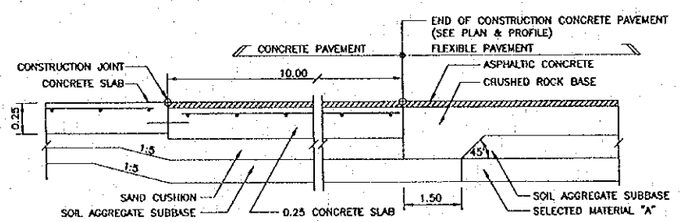
PLAN OF BROOM

SIDE VIEW

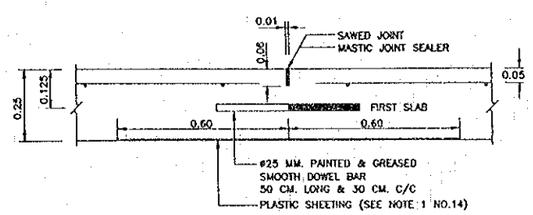
DETAIL OF BROOM SURFACE CONCRETE PAVEMENT
SCALE 1:10



DETAIL OF CONTRACTION JOINT

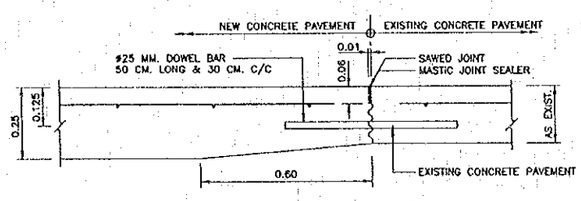


DETAIL OF JOINT BETWEEN CONCRETE PAVEMENT & FLEXIBLE PAVEMENT
NOT TO SCALE



DETAIL OF CONSTRUCTION JOINT

DETAIL OF TRANSVERSE JOINTS
SCALE 1:10



DETAIL OF TRANSVERSE JOINT BETWEEN
NEW AND EXISTING CONCRETE PAVEMENT
SCALE 1:10

NOTES 1 :

1. ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE INDICATED.
2. EXPANSION JOINT SHALL BE CONSTRUCTED AT THE INTERVAL OF 350 METERS. IF THE LAST INTERVAL IS LESS THAN 350 METERS, THE INTERVALS SHALL BE AVERAGED BUT BETWEEN 300 AND 350 METERS.
3. EXPANSION JOINT SHALL BE PROVIDED AT THE OUTER EDGE OF BOTH SIDES OF THE BOX CULVERT CROSSING.
4. MASTIC JOINT SEALER SHALL BE OF THE HOT POURED ELASTIC TYPE CONFORMING TO TIS. 479.
5. JOINT FILLER SHALL CONFORM TO THE AASHTO M. 213-74 OR ASTM. D1751-73 SPECIFICATION.
6. CONCRETE SHALL BE CLASS C (27N/mm^2) UNLESS OTHERWISE SHOWN.
7. REINFORCING STEEL SHALL CONFORM GRADE SR FOR ROUND BARS AND GRADE SD 295 FOR DEFORMED BAR.
8. WELDED WIRE CAN BE USED IN PLACE OF BAR MESH. (SEE NOTE ②)
9. CONCRETE PAVER SHALL BE REQUIRED FOR CONCRETE POURING. IN CASE OF NECESSARY POURING CONCRETE BY MAN-POWER, CONCRETE SHALL BE POURED ONLY GAP SPACE NOT MORE THAN 30.00 METERS LONG.
10. ALL JOINTS EXCEPT EXPANSION JOINT SHALL BE MADE BY SLOT CUTTING MACHINE ONLY. FOAM SHEET, PLYWOOD, TIMBER OR MATERIAL OF THE SAME TYPE SHALL NOT BE ALLOWED.
11. BROOMING CONCRETE SURFACE WITH A BROOM OF THE STANDARD TYPE SPECIFIED SHALL BE REQUIRED. THE DIRECTION OF BROOMING SHALL BE PERPENDICULAR TO THE DIRECTION OF TRAFFIC FROM ONE EDGE OR JOINT TO THE OTHER. ONE PHASE OF BROOM SURFACE SHALL PROPERLY OVERLAP WITH ANOTHER. CONCRETE BROOM SURFACE SHALL NOT BE OVER 3 MM. DEPTH. THE SURFACE SHALL BE FREE FROM PORES, HOLES OR LUMPS OF COARSE AGGREGATE OVER THE SURFACE.
12. BROOMING SURFACE CONCRETE SHALL CORRESPOND TO THE FIGURE.
13. PREPARATION OF JOINT FOR MASTIC JOINT SEALER.
    - 13.1 THE JOINT SHALL BE CLEANED WITH A BLOWER TO GET RID OF ALL KINDS OF DIRT THE JOINT SHALL BE COMPLETELY DRY.
    - 13.2 PRIMER SHALL BE APPLIED TO THE JOINT WITH A BRUSH OR SPRAYER THE JOINT SHALL BE LET DRY BEFORE THE POURING OF MASTIC JOINT SEALER WHICH HAS BEEN BOILED AND DISSOLVED BY MEANS OF HEAT CONDUCTIVITY TO THE SPECIFIED TEMPERATURE.
    - 13.3 JOINTS SHALL BE CUT AND MASTIC JOINT SEALER SHALL BE DROPPED AS SOON AS POSSIBLE.
    - 13.4 MASTIC JOINT SEALER SHALL BE DROPPED WITH JOINT SEALANT APPLYING MACHINE.
14. PLASTIC SHEET USED IN CONSTRUCTION SHALL HAVE THE FOLLOWING REQUIREMENTS
    - 14.1 THICKNESS OF 0.07 MM. WITH A TOLERANCE OF NOT MORE THAN 7% SHALL BE REQUIRED.
    - 14.2 WIDTH SHALL NOT BE LESS THAN 1.20 M.
    - 14.3 IT SHALL BE COLOURLESS, TRANSPARENT AND WATERROOF, FREE FROM POROUS AREA, TURN AREA AND BLISTERING AREA WHICH ARE VISIBLE BY NAKED EYE; EDGE SHALL BE STRAIGHT.
    - 14.4 CONTINUOUS LENGTH SHALL BE REQUIREMENT TO THE WIDTH OF TRAFFIC LANES. CONNECTION ALLOWED AT LONGITUDINAL JOINTS WITH NOT LESS THAN 20 CM. OVERLAPPING SHALL BE REQUIRED.

NOTES 2 :

1. BAR MESH 9 MM. AS SHOWN IN THIS DRAWING SHALL BE REPLACED BY WELDED STEEL WIRE WITH PROPERTIES CONFORMING TO STANDARD SPECIFICATION FOR WELDED STEEL WIRE FABRIC FOR CONCRETE REINFORCEMENT, AASHTO DESIGNATION M 55 - 75 (ASTM. DESIGNATION A 185 - 73). BEFORE USING WELDED STEEL WIRE FABRIC, THE SAMPLES SHALL BE SENT TO MATERIAL AND RESEARCH DIVISION DOH, FOR APPROVING.
2. MINIMUM SIZE OF WIRE TO BE USED SHALL NOT BE LESS THAN STANDARD WIRE AASHTO DESIGNATION M 32 - 76 (ASTM DESIGNATION A 82 - 76) SIZE NUMBER W. 12 AT NOMINAL DIAMETER OF 3.15 MM. AND NOMINAL AREA OF 0.007 CM.^{2} WIRE TO BE USED SHALL HAVE YIELD STRENGTH OF NOT LESS THAN 65,000 lb/INCH.^{2} (PSI.)
3. LAP SPLICES OF BAR MESH SHALL NOT BE LESS THAN 40 TIMES OF WIRE DIAMETER AND NOT LESS THAN SPACING OF CROSS WIRE + 5 CM.
4. QUANTITY OF STEEL WIRE FABRIC CALCULATED FROM NOMINAL AREA AND SPACING IN EACH DIRECTION SHALL CONFORM TO THE FOLLOWING REQUIREMENT
    - 4.1 LONGITUDINALL STEEL (STEEL BETWEEN TRANSVERSE JOINT) SHALL HAVE THE MINIMUM AREA OF 1.642 CM.^{2} /M.
    - 4.2 TRANSVERSE STEEL :
        - 4.2.1 MINIMUM OF 0.492 CM.^{2} /M. SHALL REQUIRED IF SPACE BETWEEN LONGITUDINAL JOINT OR FREE EDGE IS MEASURED AT 3.00 M.
        - 4.2.2 MINIMUM OF 0.534 CM.^{2} /M. SHALL REQUIRED IF SPACE BETWEEN LONGITUDINAL JOINT OR FREE EDGE IS MEASURED AT 3.25 M.
        - 4.3.3 MINIMUM OF 0.575 CM.^{2} /M. SHALL REQUIRED IF SPACE BETWEEN LONGITUDINAL JOINT OR FREE EDGE IS MEASURE AT 3.50 M.

    QUANTITY OF WELDED STEEL WIRE FABRIC SPECIFIED REFERS TO QUANTITY OF WELDED STEEL WIRE FABRIC MEASURED AGAINST AVERAGE SPACE LENGTH OF 1 METER FROM THE TOTAL SPACE LENGTH BETWENN JOINT OR FREE EDGE.
5. WELDING POINTS SHALL BE ADEQUATELY STRONG AND SHALL NOT COME OFF DURING TRANSPORTATION OR PLACING. HOWEVER, THEY SHALL NOT BE SUBJECT TO REJECTION IF COMING OFF DURING CONSTRUCTION WITH WHATEVER REASON EXCEPT THAT DISCONNECTED POINTS EXCEED 1% OF ALL WELDING POINTS. IF ROLLED OVER, DISCONNECTED POINTS SHALL NOT EXCEED 1% OF ALL POINTS IN THE AREA OF 14 M.^{2} DISCONNECTED POINTS FOR ONE WELDED STEEL WIRE FABRIC SHALL NOT EXCEED HALF OF ALL ALLOWABLE DISCONNECTED WELDING POINTS.
6. WELDED STEEL WIRE FABRIC SHEET SHALL BE SMOOTH NOT ROLL OR TWIST ALL DIRECTIONS, WHILE BEING PLACED DURING CONSTRUCTION.
7. CLEAR CONCRETE COVER SPACE OF WELDED STEEL WIRE FABRIC SHALL CONFORM TO BAR MESH SPECIFICATION IN THIS DRAWING.

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
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KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	H. Okita		16/05/00
DESIGN CHECK	T. Masuzawa		16-5-00
SUBMITTED	A. Hirotani		22/05/00
APPROVED	P. Virophanth		22/05/00
	S. Temiyabutra		22/05/00

DWG. TITLE:
DETAIL OF 25 CM. CONCRETE PAVEMENT
THAILAND SIDE

Plot date: Wed, 3 Jan 2000 - 14:15:26
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DATE OF ISSUE: 05/03/2000	
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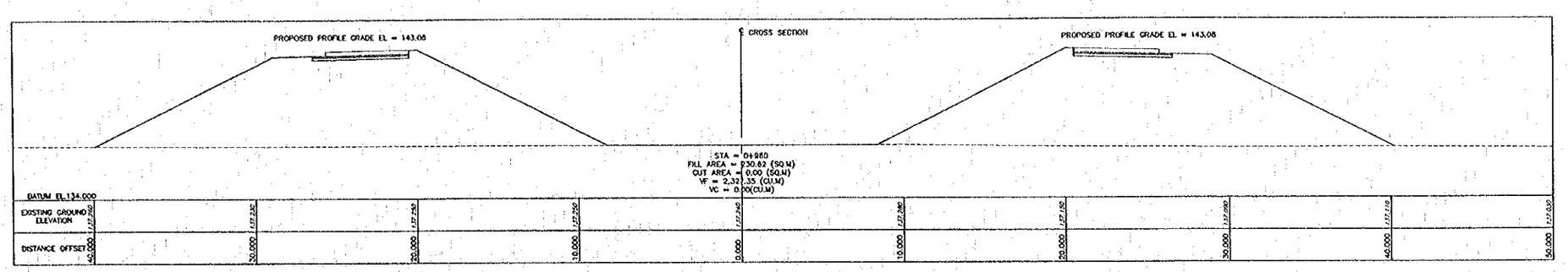

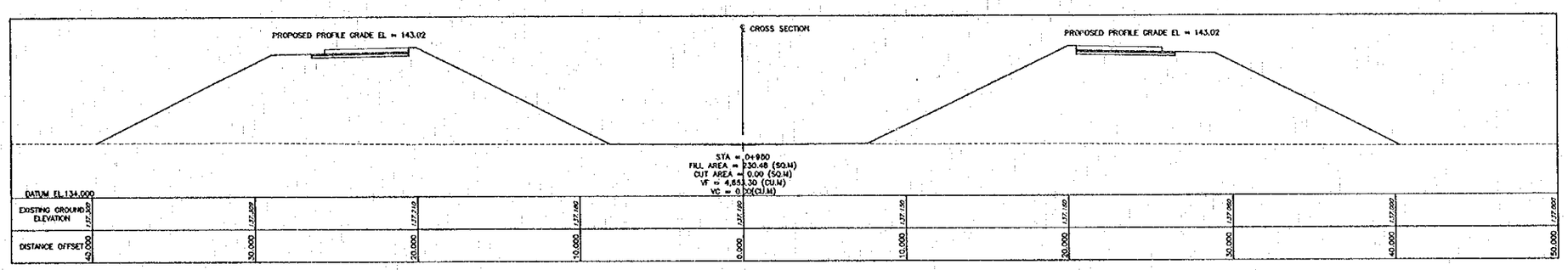

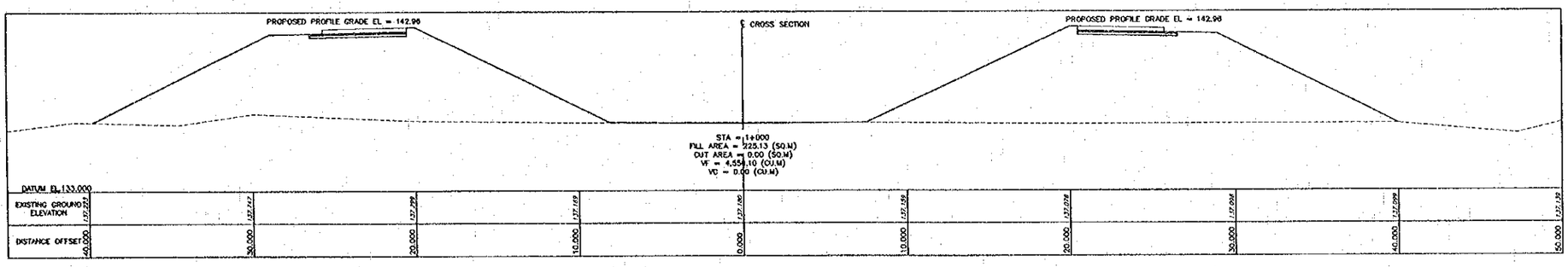

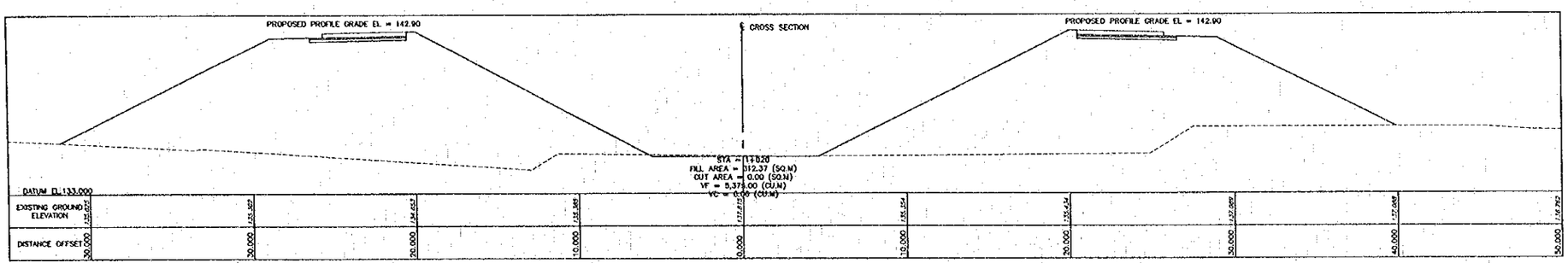

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REV.	DATE	DESCRIPTION	APPROVED

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THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	H. Okita		28/02/00
DESIGN CHECK	T. Matsuzawa		10-3-00
SUBMITTED	A. Hirotani		17-3-00
APPROVED	P. Viraphanth		22/03/00
	S. Teniyabutra		23/3/00

DWG. TITLE:

CROSS SECTION-1
STA. 0+960 TO STA. 1+020

Plot date: Sat, 15 Jan 2000 - 15:17:11
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DATE OF ISSUE: 05/03/2000	
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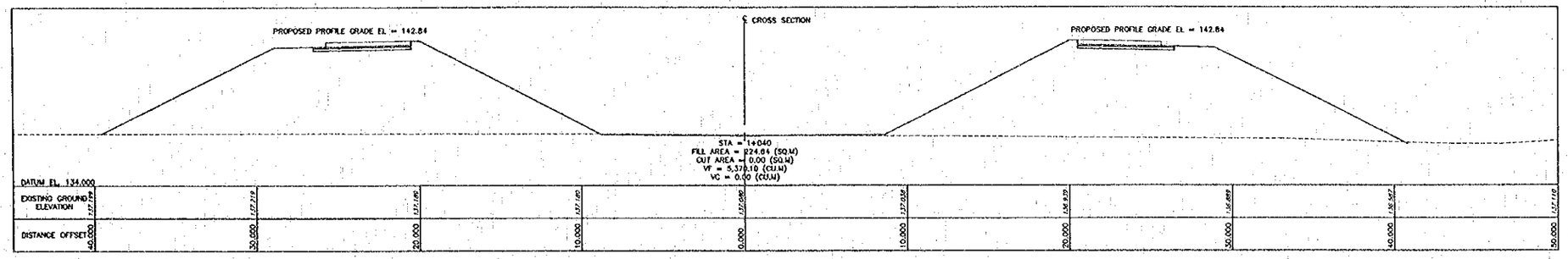

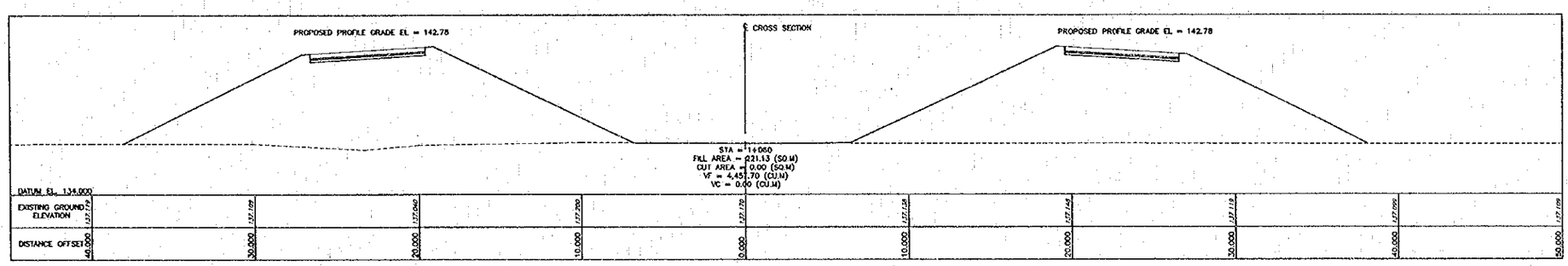

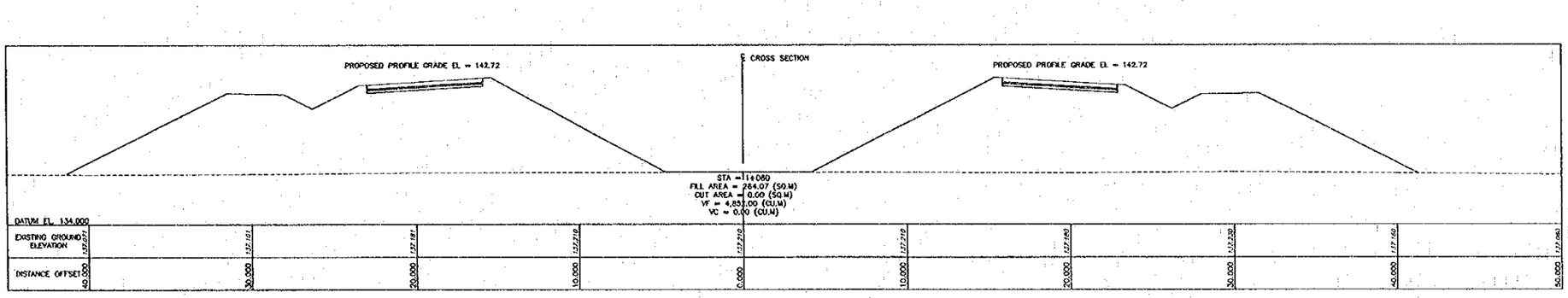

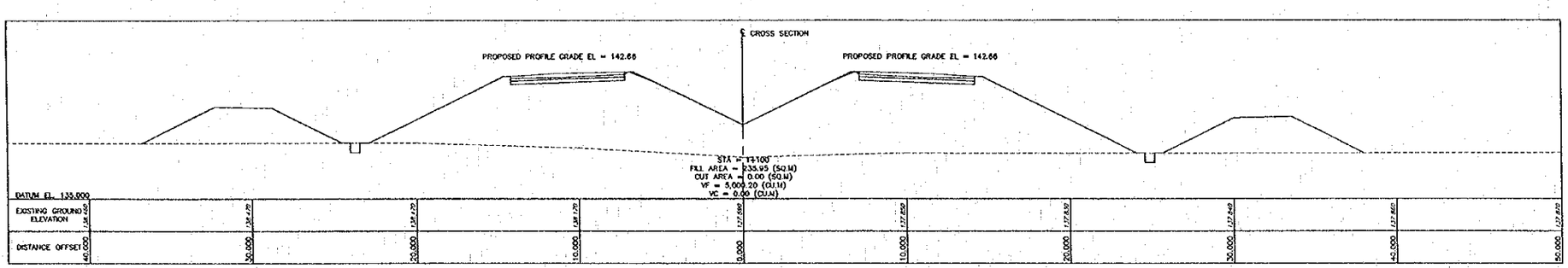

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REV.	DATE	DESCRIPTION	APPROVED

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THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	H. Okita		16/02/00
DESIGN CHECK	T. Mosuzawa		18-02-00
SUBMITTED	A. Hirotani		
APPROVED	P. Viraphanth		21/02/00
	S. Tamiyabutra		22/02/00

DWG. TITLE:
CROSS SECTION-2
STA. 1+040 TO STA. 1+100

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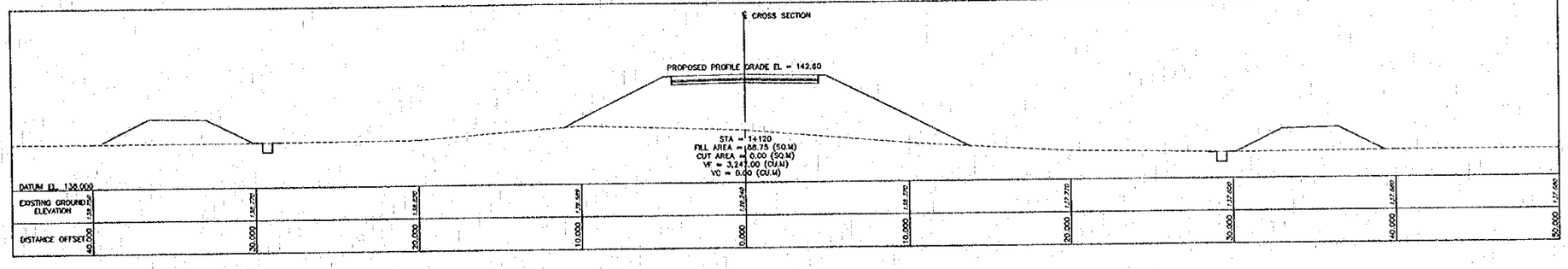

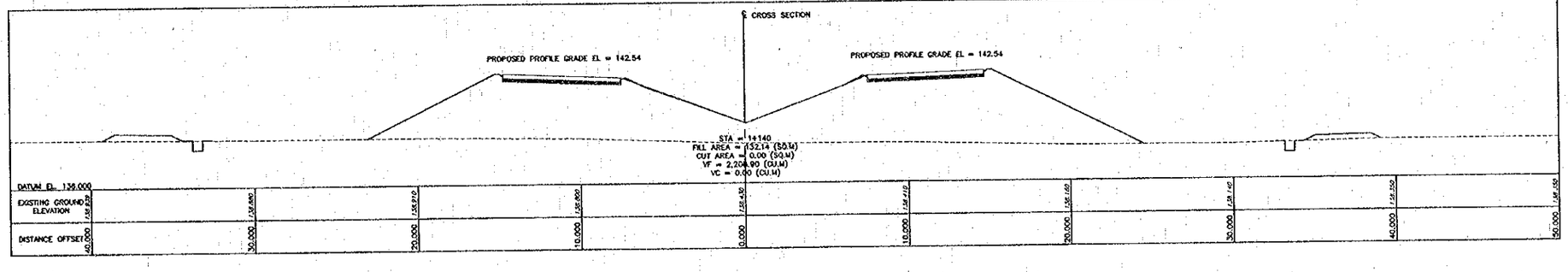

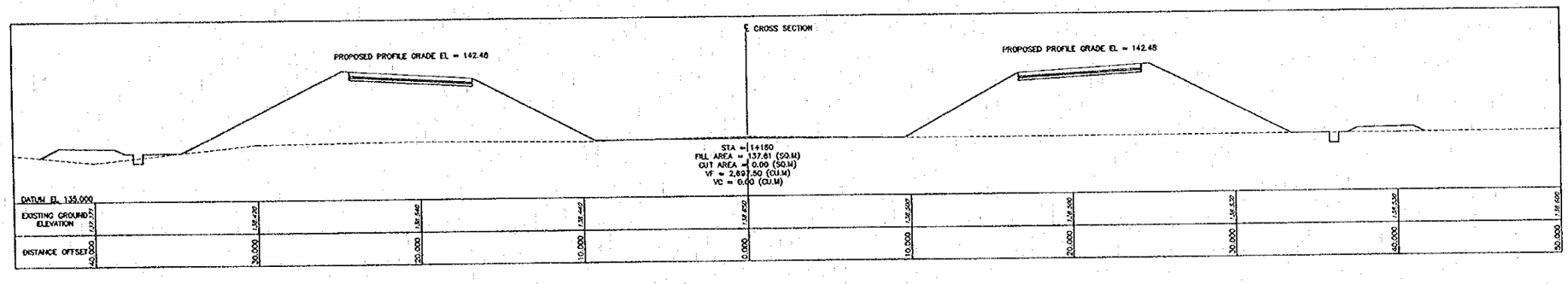

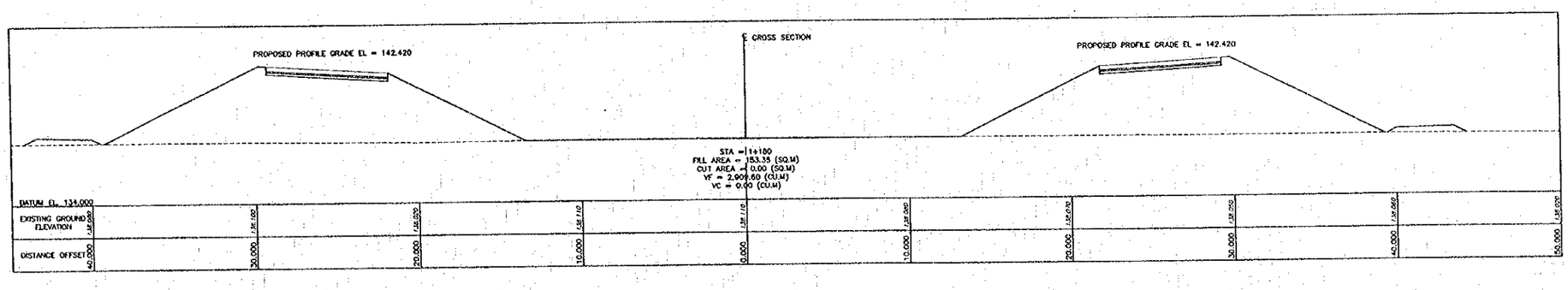

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REV.	DATE	DESCRIPTION	APPROVED

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THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	H. Okita	Okita	16/02/00
DESIGN CHECK	T. Masutawa	Masuta	18/2/00
SUBMITTED	A. Hirotani	Hirotani	21/2/00
APPROVED	P. Viraphanth		22/02/00
	S. Tanjobutra	S. Tanjobutra	23/2/00

DWG. TITLE:
CROSS SECTION--3
STA. 1+120 TO STA. 1+180

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DATE OF ISSUE: 05/03/2000	
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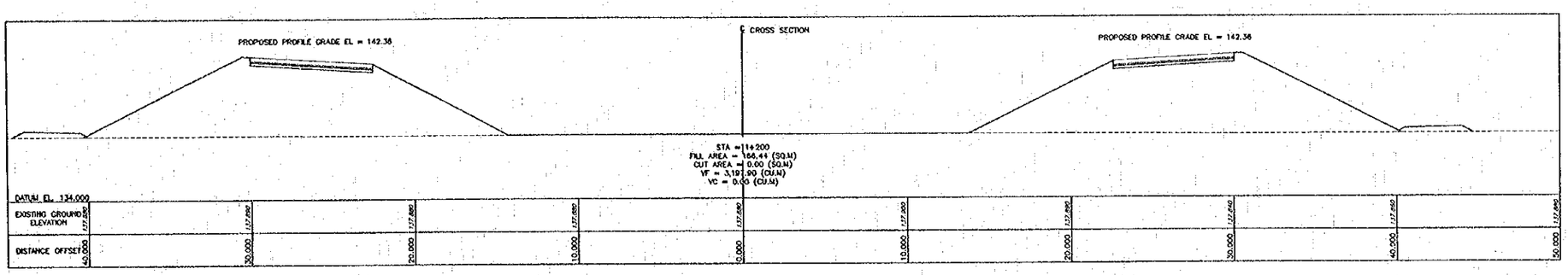

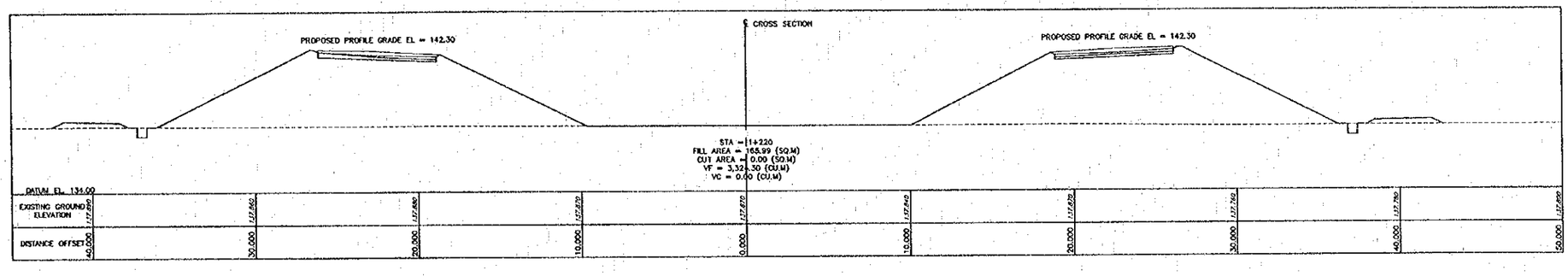

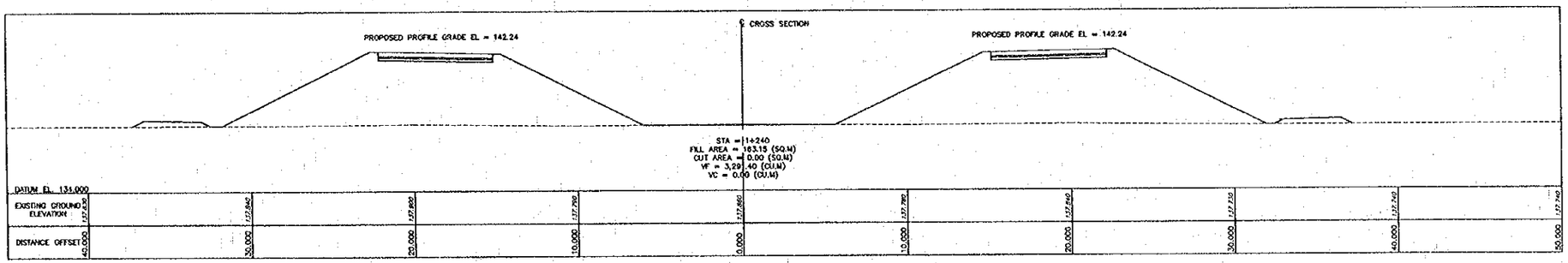

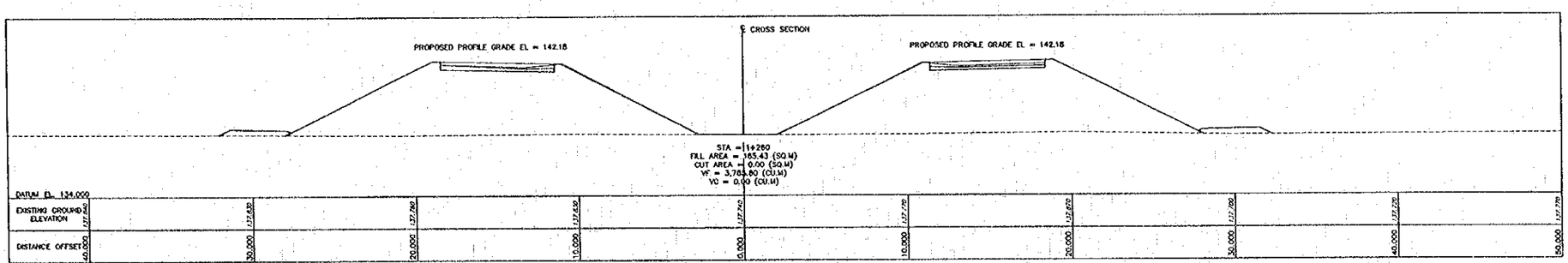

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REV.	DATE	DESCRIPTION	APPROVED

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THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	N. Okita	Okita	16/02/00
DESIGN CHECK	T. Nasuzawa		18-2-00
SUBMITTED	A. Hirotani		21-2-00
APPROVED	P. Viraphanth		22/02/00
	S. Temiyabutra	S. Temiyabutra	22/02/00

DWG. TITLE:

CROSS SECTION – 4
STA. 1+200 TO STA. 1+260

Plot date: Wed, 2 Feb 2000 - 9:43:15

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DATE OF ISSUE: 05/03/2000	
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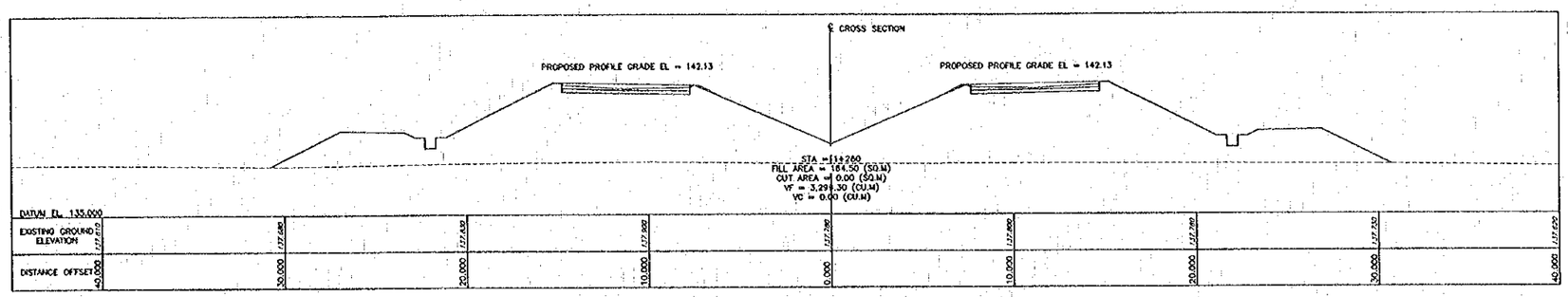

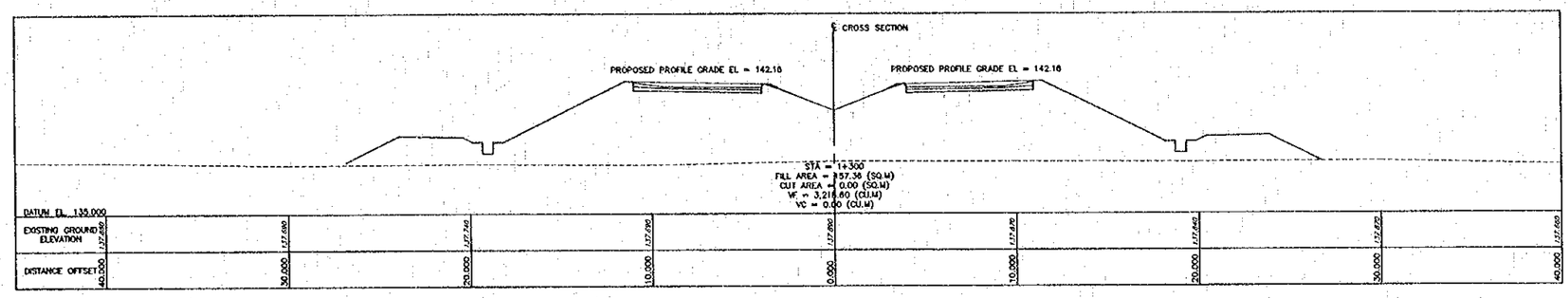

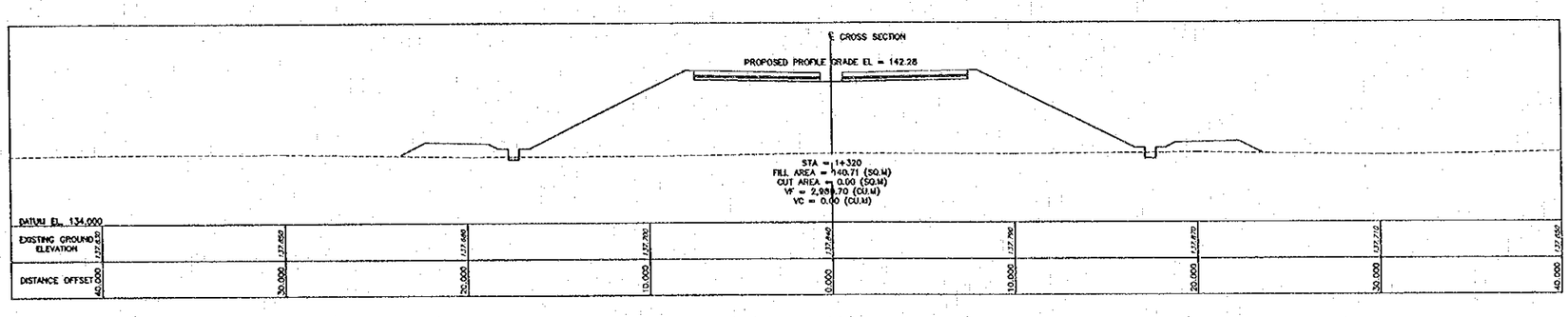

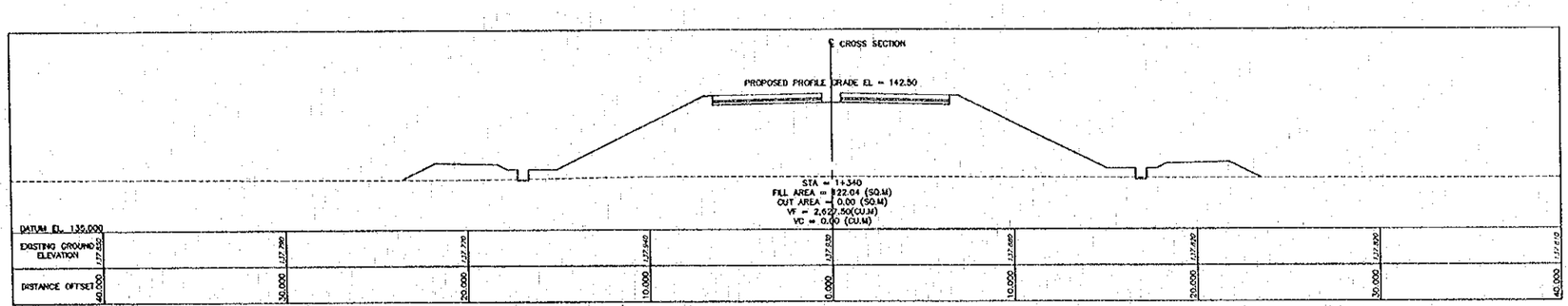

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REV.	DATE	DESCRIPTION	APPROVED

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THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	H. Okita		14/2/00
DESIGN CHECK	T. Masuzawa		15/2/00
SUBMITTED	A. Hiratani		21/2/00
APPROVED	P. Viraphanth		22/02/00
	S. Temiyabutra		22/02/00

DWG. TITLE:
CROSS SECTION - 5
STA. 1+280 TO STA. 1+340

Plot date: Wed, 2 Feb 2000 - 9:46:37
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DATE OF ISSUE: 05/03/2000	
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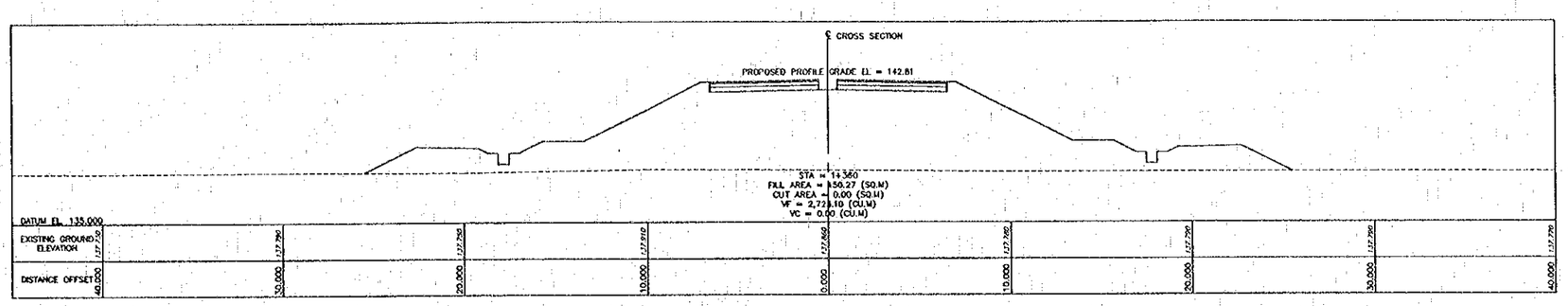

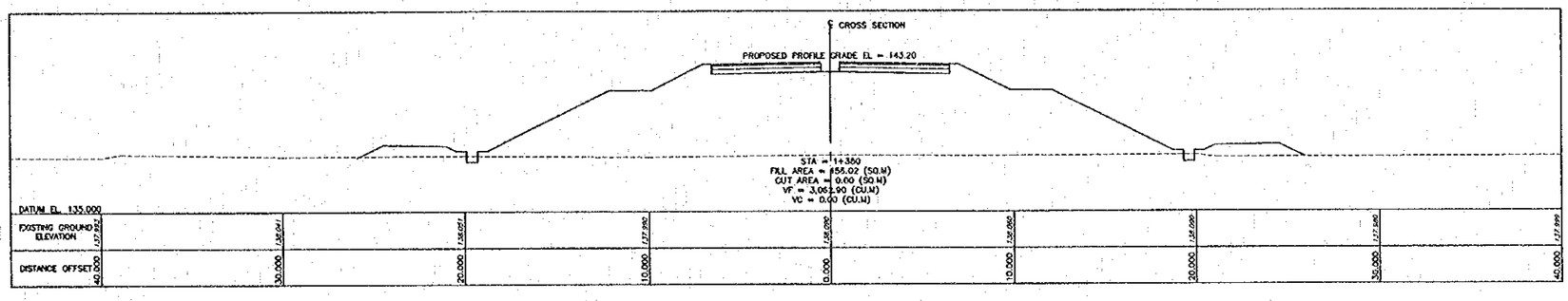

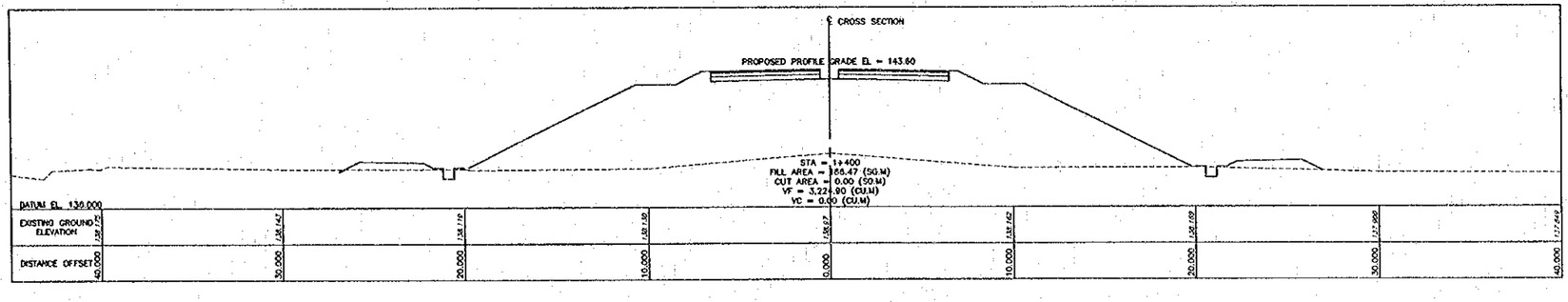

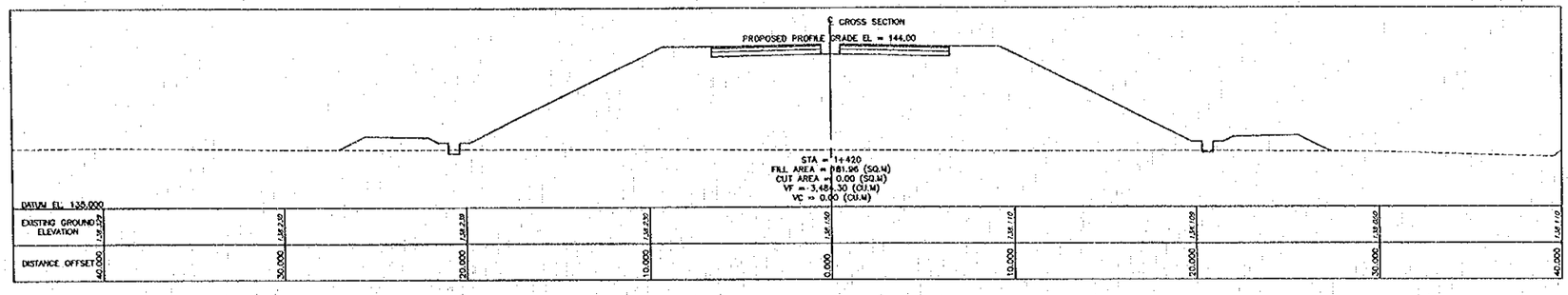

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REV.	DATE	DESCRIPTION	APPROVED

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THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	H. Okita	Okita	4/03/00
DESIGN CHECK	T. Masuzawa	Masuzawa	15-03-00
SUBMITTED	A. Hirotani		31/3/00
APPROVED	P. Viraphanth		31/3/00
	S. Temiyabutra	S. Temiyabutra	24/03/00

DWG. TITLE:
CROSS SECTION-6
STA. 1+360 TO STA. 1+420

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DATE OF ISSUE: 05/03/2000	
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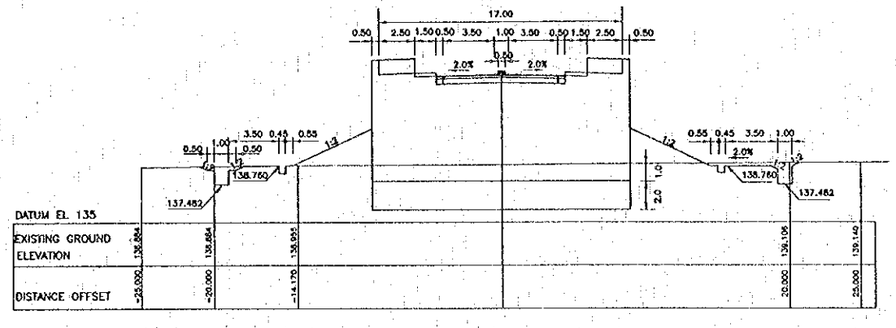

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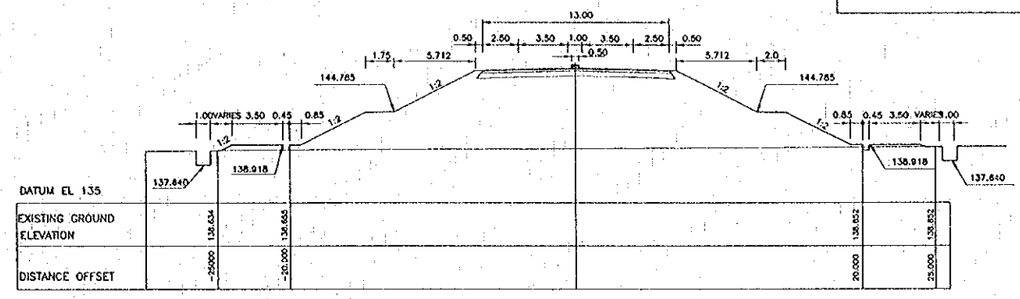

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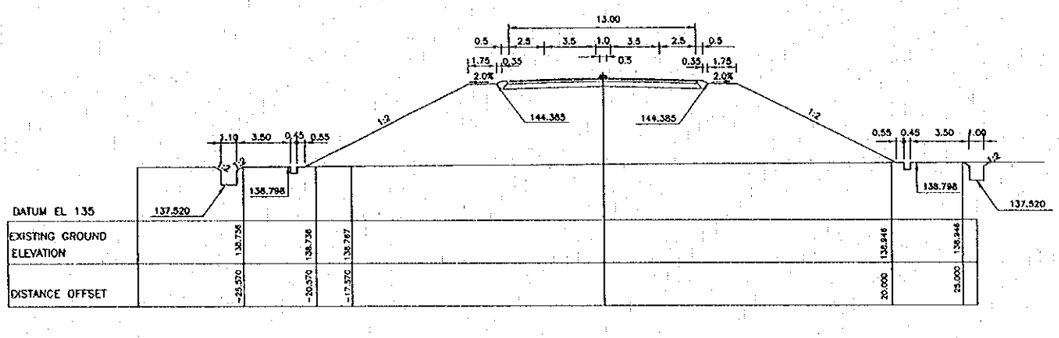

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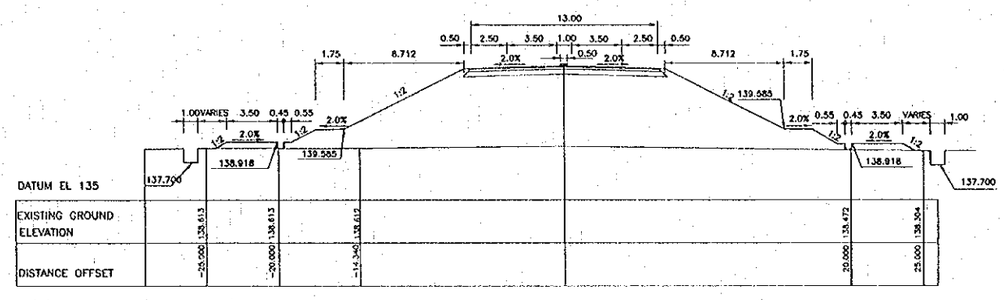

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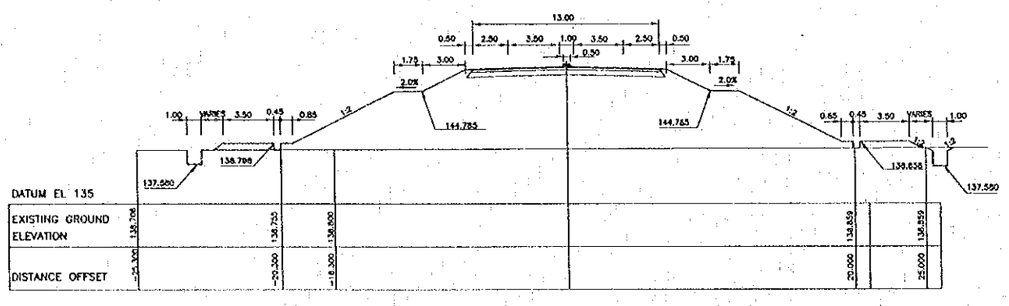

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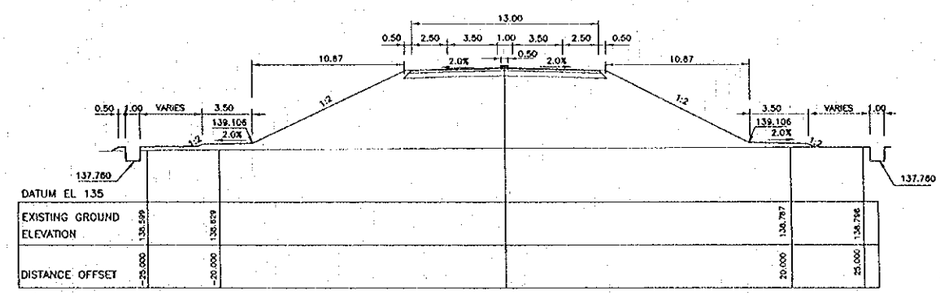

STA. 3+560
GL=138.745
FL=144.352

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JICA JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	H. Okita		16/02/06
DESIGN CHECK	T. Masuzawa		16-02-06
SUBMITTED	A. Hirotani		17/2/06
APPROVED	P. Yiraphanth		24/02/06
	S. Tamiyabutra		23/02/06

DWG. TITLE:

CROSS SECTION-7

STA 3+467.339 – 3+560
LAO PDR SIDE

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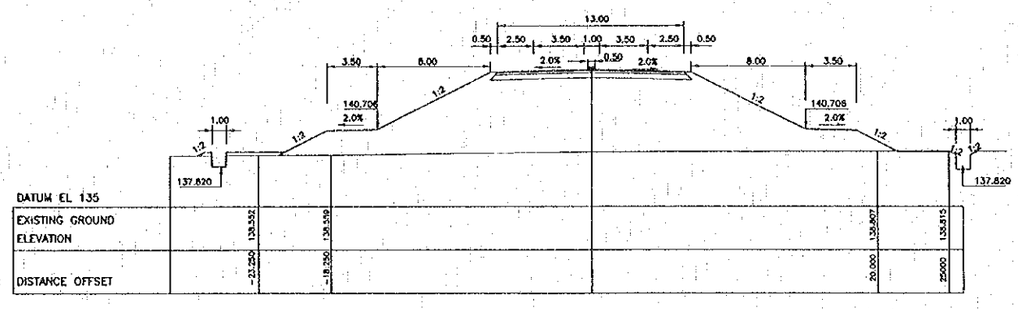
DATE OF ISSUE: 05/03/2000	
DWG. NO. R-C-12	SHEET NO. 42
DWG. STATUS	



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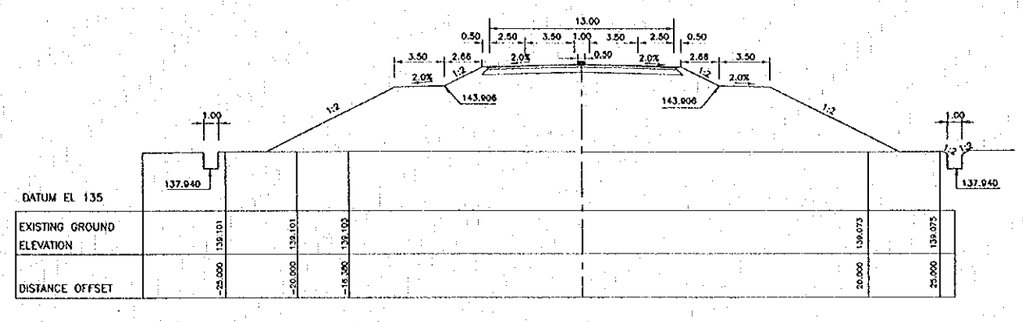

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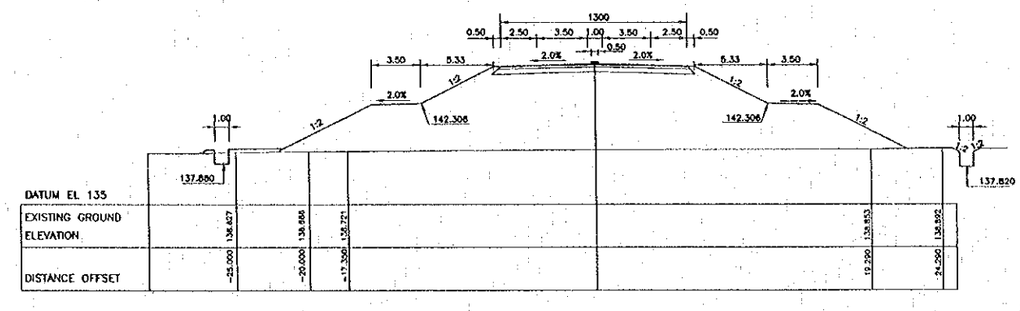

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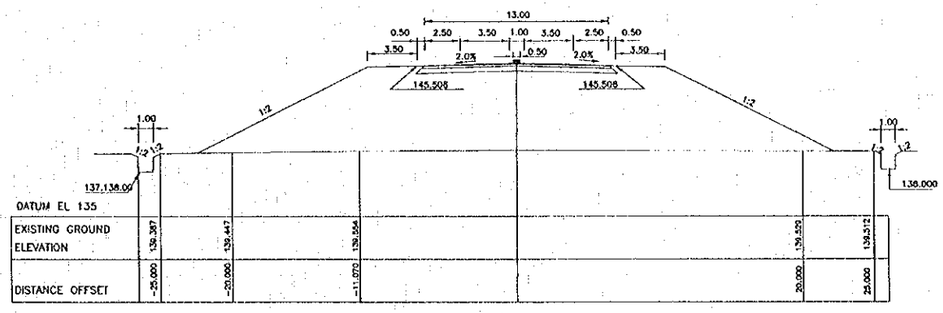

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PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
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LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

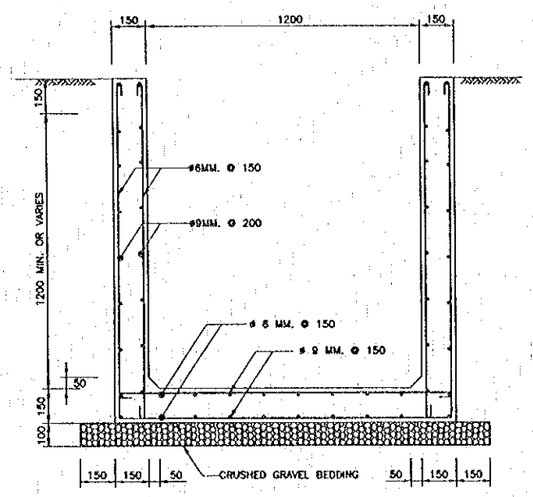
THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	H. Okita		16/02/00
DESIGN CHECK	T. Masutawa		18/02/00
SUBMITTED	A. Hiratani		21/02/00
APPROVED	P. Viraphanth		22/02/00
	S. Temiyabutra		22/02/00

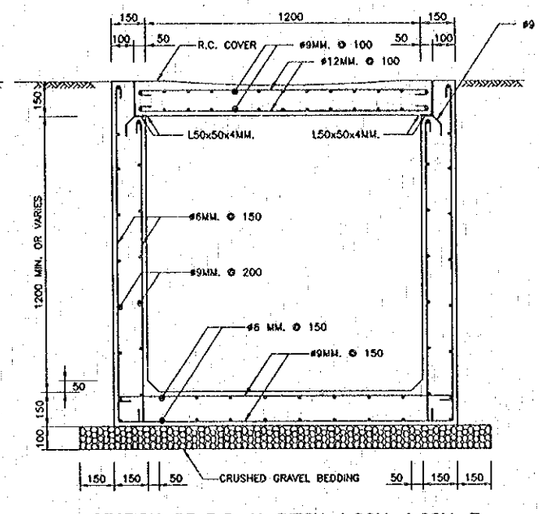
DWG. TITLE:

CROSS SECTION-8
STA 3+580 – 3+680
LAO PDR SIDE

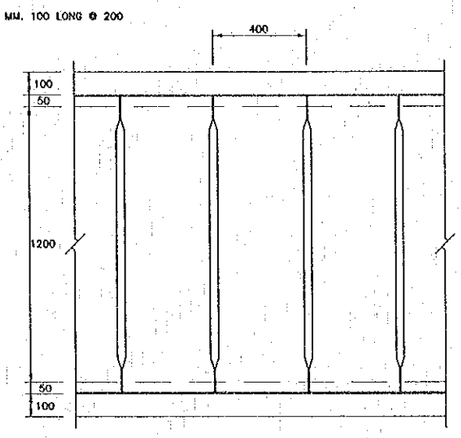
DATE OF ISSUE: 05/03/2000	
DWG. NO. R-D-1	SHEET NO. 43
DWG. STATUS	



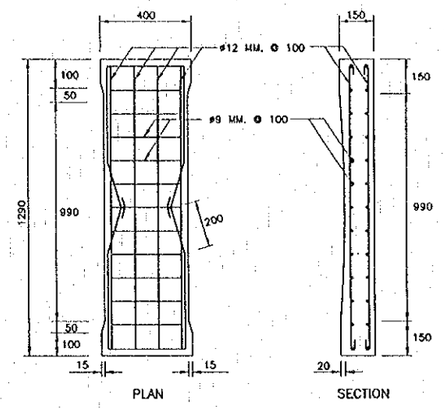
SECTION OF R.C. U-DITCH 1.20M.x1.20M. T
SCALE 1 : 12.5



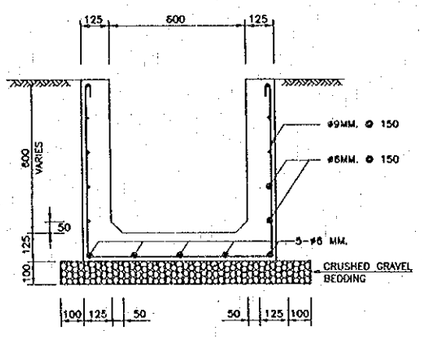
SECTION OF R.C. U-DITCH 1.20M.x1.20M. T WITH R.C. COVER
SCALE 1 : 12.5



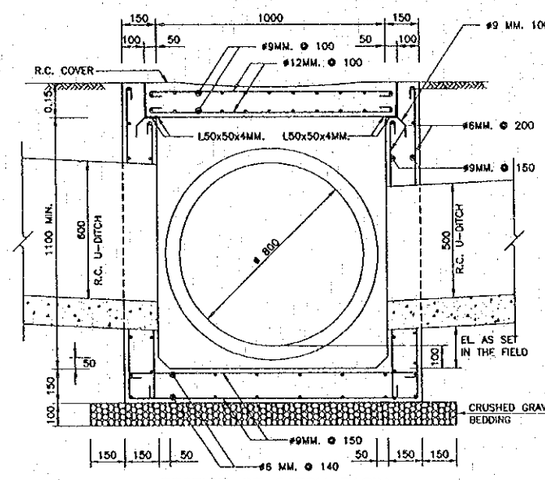
PLAN OF R.C. U-DITCH 1.20M.x1.20M. T WITH R.C. COVER
SCALE 1 : 12.5



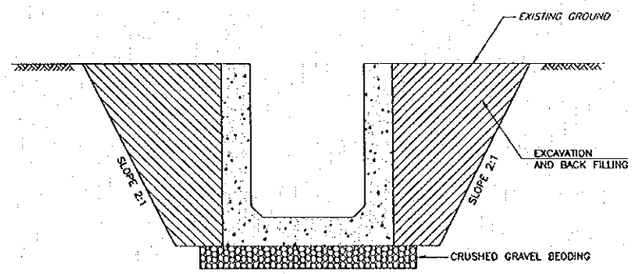
R.C. COVER OF R.C. U-DITCH 1.20M.x1.20M. T
SCALE 1 : 12.5



SECTION OF R.C. U-DITCH 0.60M.x0.60M. T
SCALE 1 : 12.5



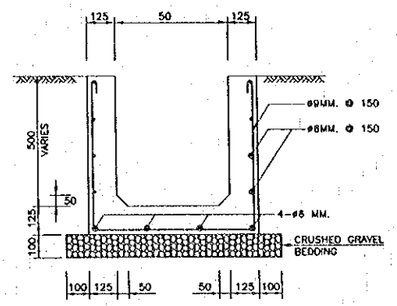
SECTION OF CATCH BASIN
SCALE 1:12.5



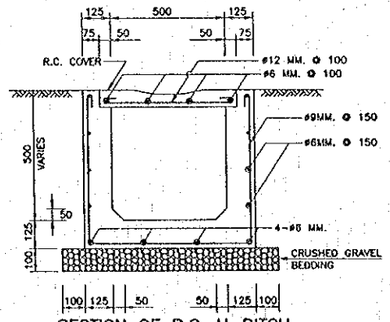
ELEVATON OF R.C. U-DITCH
(IN CASE OF EXCAVATION)
SCALE 1:12.5

NOTES :

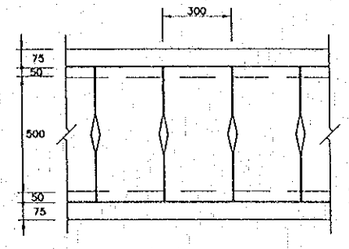
1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE INDICATED.
2. CONCRETE SHALL BE CLASS D (24N/MM.^{2}) OTHERWISE SHOWN.
3. REINFORCING STEEL BARS SHALL BE GRADE SR 235 FOR ROUND BAR.
4. STRUCTURAL STEEL SHALL CONFORM TO TIS. 116 GRADE Fe 30 AND PAINTED WITH RUST - OLEUM PAINT OR EQUIALENT IN TWO LAYER.
5. FLAT PLATE STEEL SHALL CONFORM TO TIS. 55 GRADE SR 24
6. LAP LENGTH SHALL NOT BE LESS THAN 40 BAR DIAMETERS.
7. CLEAR CONCRETE COVER SHALL BE 3 CM. UNLESS OTHERWISE INDICATED.
8. JOINT IN R.C. DITCH SHALL BE SPACED AT 10.00 M. INTERVAL WIDTH OF THE JOINT IS 1 CM. AND FILLED WITH MORTAR (PORTLAND CEMENT : SAND) RATIO 1:3 BY VOLUME.
9. R.C. DITCH CROSS DRAIN AT CONNECTION ROAD SHALL BE PRECAST 1 M. LONG. WIDTH OF THE JOINT IS 1 CM. AND FILLED WITH MORTAR (PORTLAND CEMENT : SAND) RATIO 1:3 BY VOLUME.



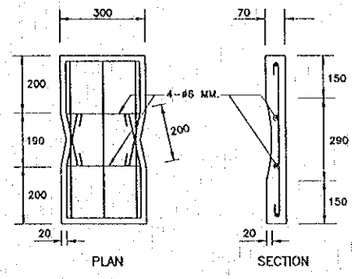
SECTION OF R.C. U-DITCH 0.50M.x0.50M. T
SCALE 1 : 12.5



SECTION OF R.C. U-DITCH 0.50M.x0.50M. T WITH R.C. COVER
SCALE 1 : 12.5



PLAN OF R.C. U-DITCH 0.50M.x0.50M. T WITH R.C. COVER
SCALE 1 : 12.5



R.C. COVER OF R.C. U-DITCH 0.50M.x0.50M. T
SCALE 1 : 10

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
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JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

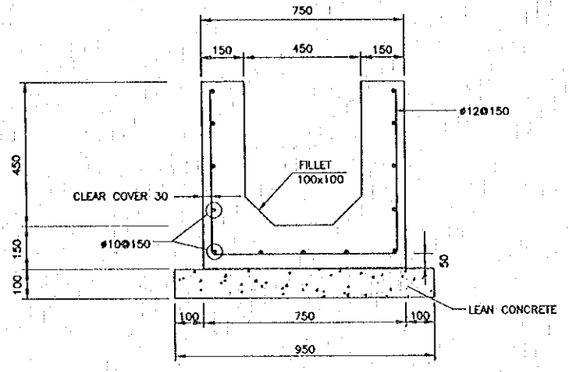
QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	H. Ohito		16/02/00
DESIGN CHECK	T. Masuzawa		16-2-00
SUBMITTED	A. Hirotani		21-2-00
APPROVED	P. Wraphanth		27/02/00
	S. Temiyabutra		22-02-00

DWG. TITLE:
R.C. U-DITCH AND CATCH BASIN
THAILAND SIDE

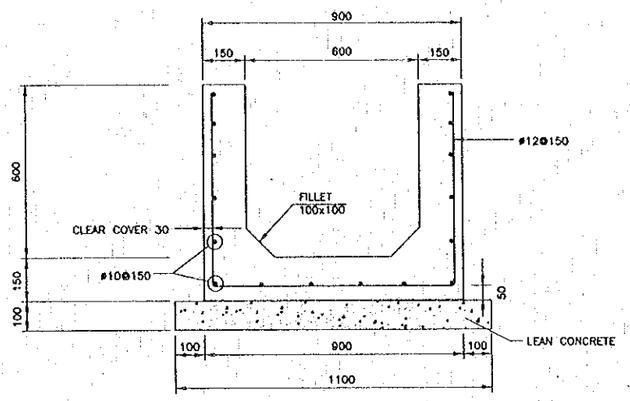
Plot date: Sat, 15 Jan 2000 - 17:02:14

C:\SMB-NEW\PACKAGE1\DRAIN\Pkt-d01.dwg

DATE OF ISSUE: 05/03/2000	
DWG. NO. R-D-2	SHEET NO. 44
DWG. STATUS	



SECTION OF R.C. U-DITCH 0.45x0.45L
SCALE 1:10



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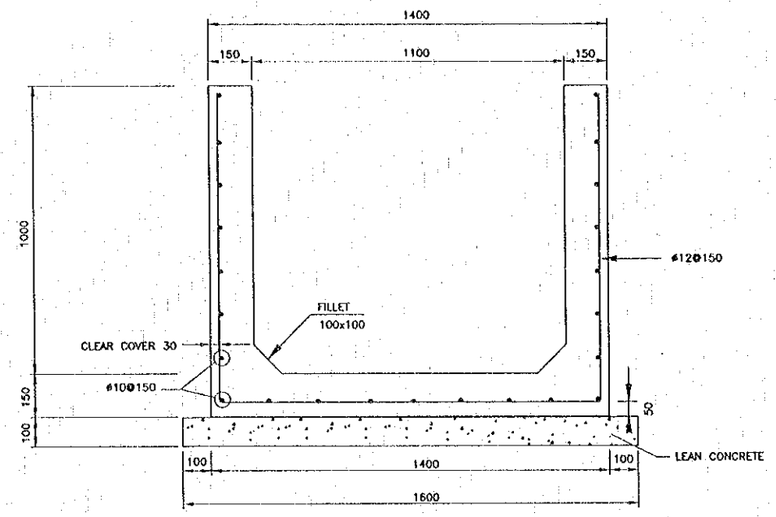
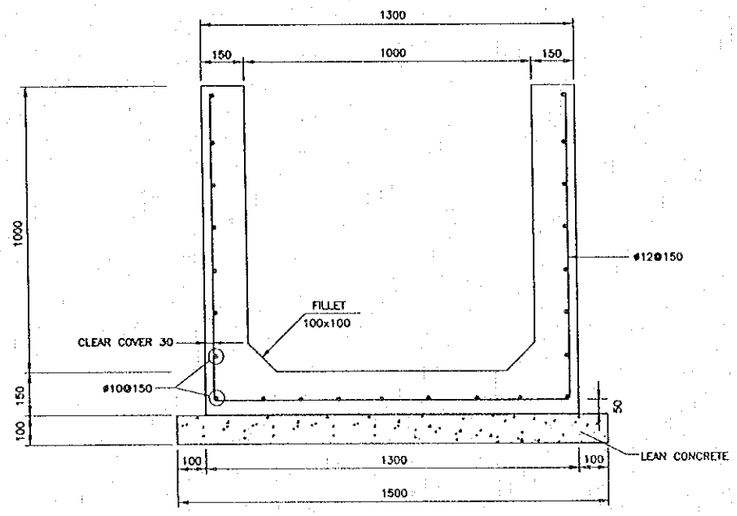
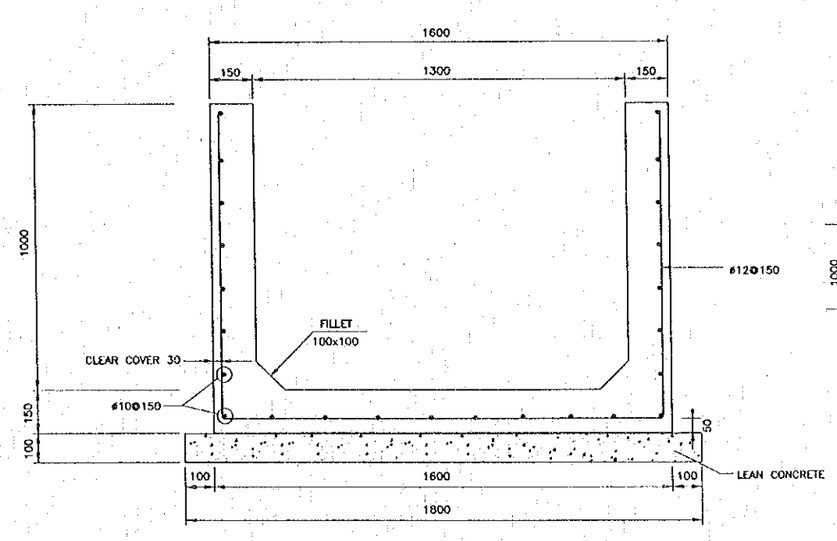


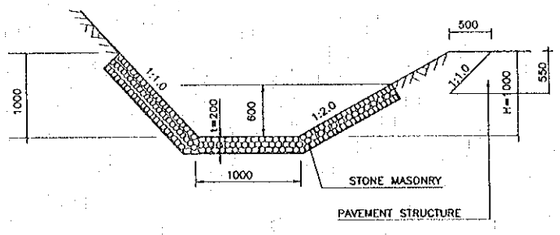
SECTION OF R.C. U-DITCH 1.10x1.00L
SCALE 1:10



SECTION OF R.C. U-DITCH 1.00x1.00L
SCALE 1:10



SECTION OF R.C. U-DITCH 1.30x1.00L
SCALE 1:10



SIDE DITCH TYPE 3
NOT TO SCALE

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED
2. CONCRETE SHALL BE CLASS D (24N/mm^2)
2. REINFOCING STELL BAR SHALL BE GRADE SD295

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
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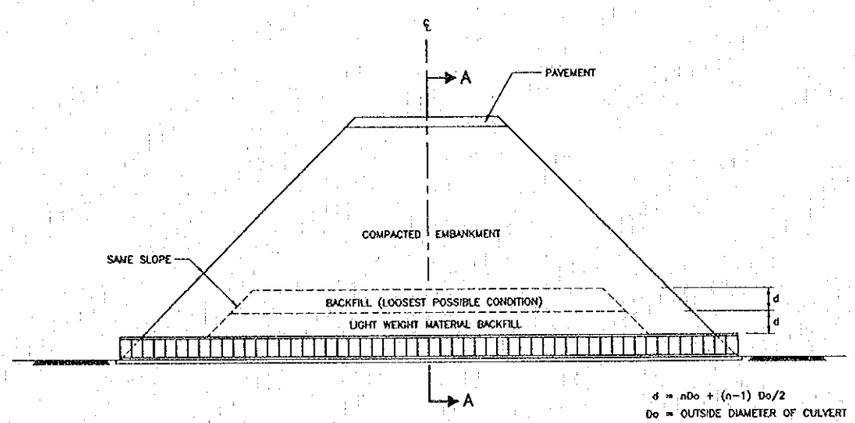
JICA JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

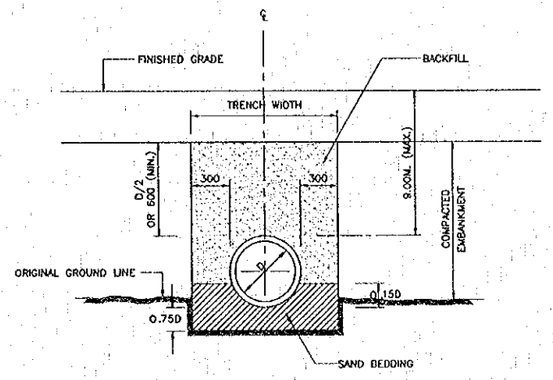
QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	H. Okita	Okita	15/12/00
DESIGN CHECK	T. Masuzawa	Masuzawa	15/12/00
SUBMITTED	A. Hiratani		21/12/00
APPROVED	P. Viraphanh		22/12/00
	S. Temiyabutra	S. Temiyabutra	22/12/00

DWG. TITLE:
RC.U-DITCH AND SIDE DITCH
LAO PDR SIDE

DATE OF ISSUE: 05/03/2000	
DWG. NO. R-D-3	SHEET NO. 45
DWG. STATUS	



LONGITUDINAL SECTION
NOT TO SCALE



R.C. PIPE CULVERTS INSTALLATION BY TRENCH METHOD
NOT TO SCALE

NOTES :

REINFORCED CONCRETE CULVERT PIPE INSTALLATION
(MAX. FILL HEIGHT 9.00 M.)

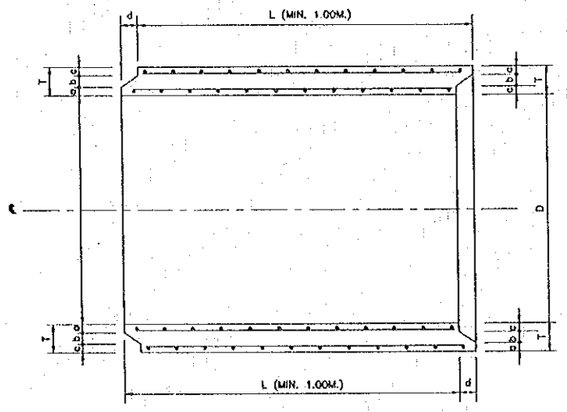
1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE INDICATED.

A.) CONSTRUCTION METHODS WHEN FILL HEIGHT IS LESS THAN 1.2 M.

1. THE PROJECTION METHODS SHALL BE EMPLOYED FOR PIPE INSTALLATION.
2. THE PIPELINE LAYOUT SHALL BE SUITABLE FOR THE TERRAIN. THE EXISTING GROUND ALONG THE LINE OF CULVERT SHALL BE PREPARED TO THE SPECIFIED SLOPE.
3. PIPE BEDDING SHALL BE AS SHOWN ON THE DRAWING AND SHALL DEPEND UPON PREVAILING SOIL CONDITIONS AND THE JUDGEMENT OF THE ENGINEER.
4. AFTER THE PIPE HAS BEEN PLACED,THE SUBGRADE AND/OR PORTION OF PAVEMENT SECTION WHICH ARE TO BE LAID ALONG BOTH SIDES OF THE LINE WITHIN A DISTANCE OF 4 PIPE DIAMETERS BUT NOT LESS THAN 5.0 M. FROM CENTERLINE OF THE PIPE SHALL BE CONSTRUCTED. LIGHT WIGHT CONSTRUCTION EQUIPMENT USED FOR COMPACTION SHALL OPERATE IN A DIRECTION PERPENDICULAR TO CENTERLINE OF ROADWAY (OR PARALLEL TO PIPELINE) UNTIL THE BACKFILL HAS REACHED AN ELEVATION OF AT LEAST 30 CM. ABOVE THE TOP OF PIPE.

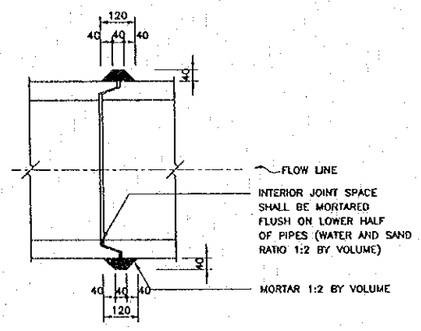
B.) CONSTRUCTION METHODS WHEN FILL HEIGHT EXCEEDS 1.2 M.

1. PIPE INSTALLATION SHALL BE BY TRENCH METHOD. SUBGRADE SHALL BE FIRST CONSTRUCTED TO AN ELEVATION D/2 OR AT LEAST 60 CM. OVER TOP OF PROPOSED PIPE. A TRENCH SHALL THEN BE EXCAVATED ALONG THE PROPOSED LINE AS SHOWN ON THE DRAWING. TRENCH WALLS SHALL HAVE A SMOOTH SURFACE AND SHALL BE CONSTRUCTED VERTICALLY.
2. THE TRENCH BED SHALL BE PREPARED TO THE SPECIFIED SLOPE. BEDDING TYPE SHALL BE DEPENDING ON FOUNDATION SOIL AND AS DIRECTED BY THE ENGINEER.
3. PIPE SHALL BE INSTALLED ACCORDING TO SIZES SHOWN ON THE DRAWINGS. BACKFILLING OF PIPE CULVERTS SHALL NOT BE PERMITTED UNTIL AT LEAST 48 HOURS HAVE ELAPSED AFTER JOINTS HAVE BEEN COMPLETED.
4. BACKFILL SHALL BE PLACED TO THE SUBGRADE ELEVATION AS DESCRIBED IN NOTE 1 BACKFILL SHALL BE A SELECT MATERIAL AND SHALL REQUIRE THE APPROVAL OF THE ENGINEER. METHOD OF COMPACTION OF BACKFILL SHALL BE THE SAME AS REQUIRED FOR SUBGRADE COMPACTION EQUIPMENT SHALL BE APPROVED BY THE ENGINEER.



TONGUE AND GROOVE TYPE

DETAIL OF R.C. PIPE CULVERT
NOT TO SCALE



TONGUE AND GROOVE TYPE

PIPE CONNECTION DETAILS
NOT TO SCALE

NOTES :

1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE INDICATED.
2. REINFORCED CONCRETE PIPE CULVERT CLASSES 2 SHALL CONFORM TO TIS 128.
3. CEMENT, STEEL REINFORCEMENT, AGGREGATES AND TEST METHODS USED FOR R.C. PIPE CULVERT SHALL CONFORM TO THE REQUIREMENT OF TIS. 128 OR TO THE DEPARTMENT OF HIGHWAYS STANDARDS.
   - 3.1 CEMENT CONTENT USED FOR CONCRETE MIX SHALL NOT BE LESS THAN 335 KILOGRAM PER CUBIC METER OF CONCRETE.
   - 3.2 CONCRETE COVER FOR SINGLE LAYER CIRCULAR REINFORCEMENT SHALL BE 0.35 TO 0.5 TIME OF WALL THICKNESS (MEASURED FROM INNER WALL).
   - 3.3 CONCRETE COVER FOR DOUBLE LAYERS CIRCULAR REINFORCREMENT SHALL BE 2.5 CM. IN AVERAGE BUT NOT LESS THAN 1.5 CM.
   - 3.4 LONGITUDINAL REINFORCEMENT SPACING FOR PIPE SIZE ø50 CM. OR SMALLER SHALL BE A MINIMUM OF 4-ø4 MM. BARS OR 8-ø4 MM. BARS FOR PIPE ø60 CM. OR LARGER.
   - 3.5 CIRCULAR REINFORCEMENT SPACING FOR PIPE SIZE ø30 CM. TO ø80 CM. SHALL BE 10 CM. OR LESS AND FOR PIPE SIZE ø100 CM. TO ø150 CM. SHALL BE 15 CM. OR LESS BUT NOT MORE THAN THEIR WALL THICKNESS.
4. THE CULVERT WHICH HAVING TRANSVERSE REINFORCEMENT IN ELLIPTICAL CAGE AS SPECIFIED IN THE TIS. 128 SHALL NOT BE USED .
5. CULVERT JOINTS SHALL BE MORTARED AS SHOWN ON THE DRAWING WITH CEMENT MORTAR (1:2 BY VOLUME).
6. CULVERT LENGTH (L) SHALL BE MIN. 1.00M. UNLESS OTHERWISE SPECIFIED.

TABLE 1

R.C. PIPE CULVERT CLASS	INSIDE DIAMETER (D) (MM.)	WALL THICKNESS (T) (MM.)	MIN. CIRCULAR REINFORCEMENT (CM^2/M)		CRUSHING LOAD TO PRODUCE 0.03 CM. CRACK WIDTH AND 30 CM CRACK LENGTH (KG./M.)	MAXIMUM CRUSHING LOAD (KG./M.)	ULTIMATE STRENGTH FOR 15x30 CM. CONCRETE CYLINDER AT 28 DAYS AGE ($KG./CM^2$)	OVER FILL ON R.C. PIPE CULVERT NOT MORE THAN (METERS)
			INNER CAGE	OUTER CAGE				
2	600	75	5.7	–	6,120	9,180	280 (350)	10.0
	800	95	5.8	4.1	8,160	12,240		
	1200	125	8.9	6.8	12,240	18,360		

FIGURES IN PARENTHESIS ARE ULTIMATE STRENGTH FOR 15X15X15 CM. CONCRETE CUBE AT 28 DAYS AGE.

TABLE 2

R.C. PIPE CULVERT CLASS	INSIDE DIAMETER (D) (MM.)	WALL THICKNESS (T) (MM.)	PIPE END DETAILS (MM.)			
			TONGUE & GROOVE TYPE			
			a	b	c	d
2	600	75	28	15	32	40
	800	95	38	15	42	45
	1200	125	48	25	52	50

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
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NIPPON KOEI CO., LTD.

JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	H. Okita		1/12/00
DESIGN CHECK	T. Masuzawa		8/12/00
SUBMITTED	A. Hratani		21/12/00
APPROVED	P. Vraphanh		22/12/00
	S. Temiyabutra		22/12/00

DWG. TITLE:
R.C. PIPE CULVERT INSTALLATION
THAILAND SIDE

Plot date: Sat, 8 Jan 2000 - 14:06:21
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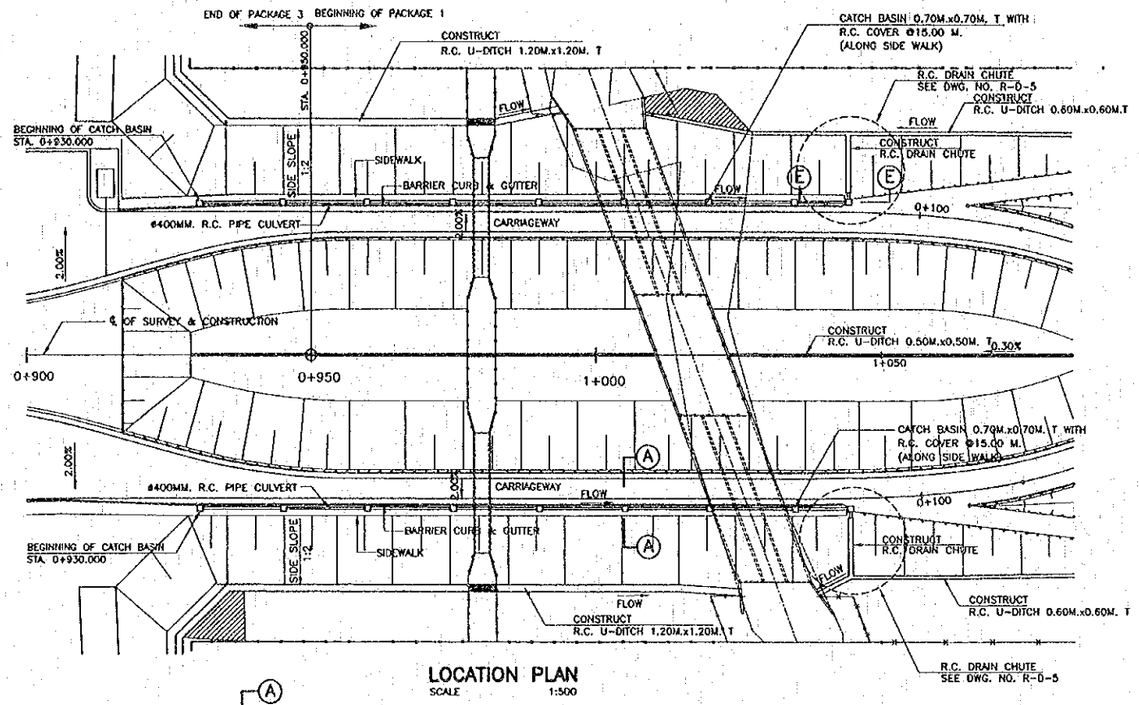
DATE OF ISSUE: 05/03/2000	
DWG. NO. R-D-4	SHEET NO. 46
DWG. STATUS	



LOCATION PLAN
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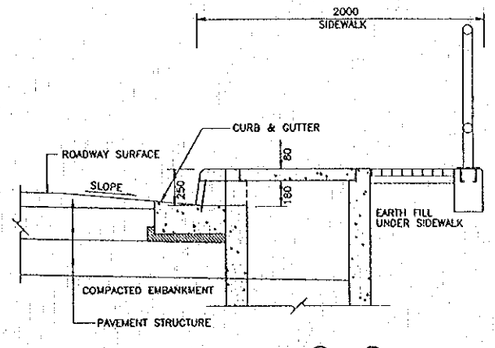
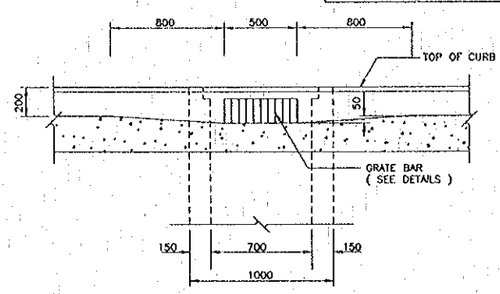
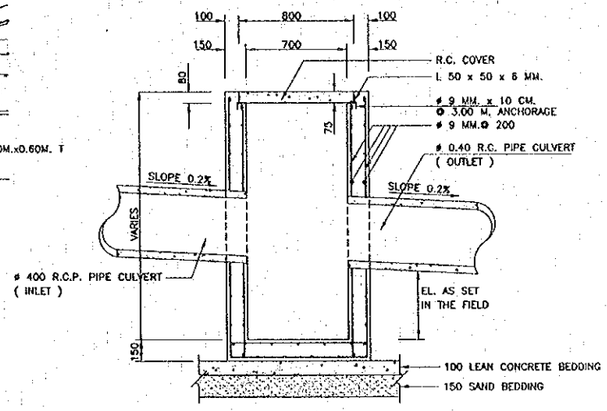


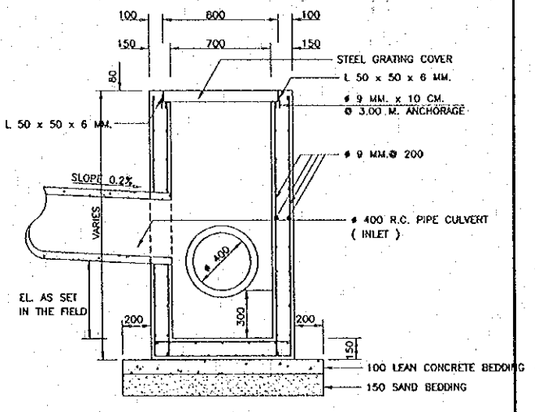
SECTION Ⓐ – Ⓐ
SCALE 1:20



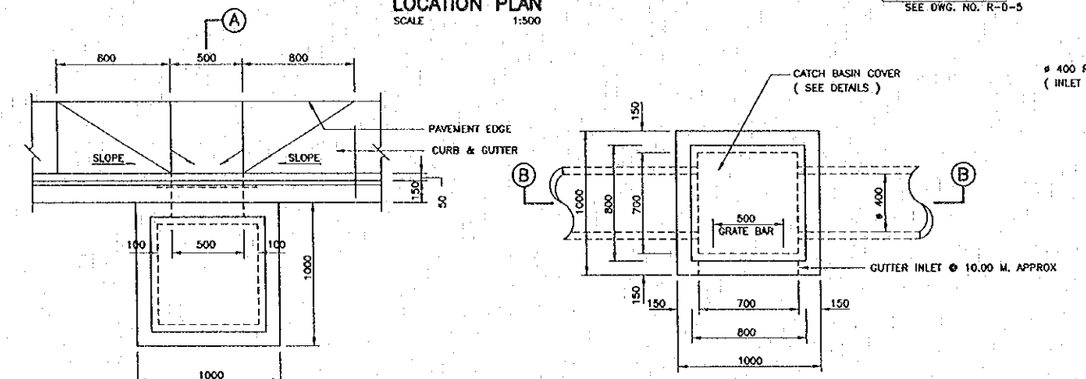
FRONT VIEW OF GRATING
SCALE 1:20



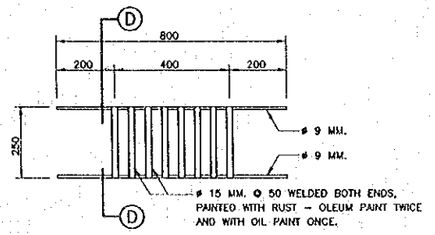
SECTION Ⓑ – Ⓑ
SCALE 1:20



SECTION Ⓔ – Ⓔ
(CONNECTING WITH R.C. DRAIN CHUTE DWG. NO. R-D-5)
SCALE 1:20

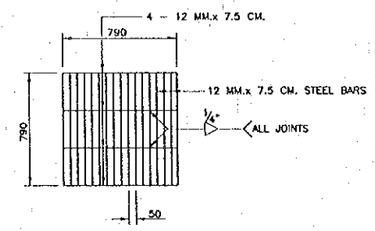


PLAN OF CATCH BASIN
SCALE 1:20

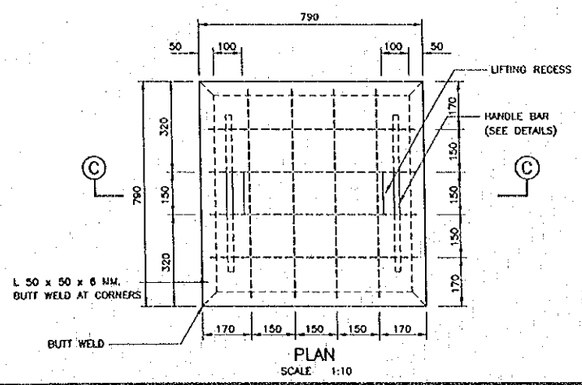


GRATE BAR DETAILS
SCALE 1:10

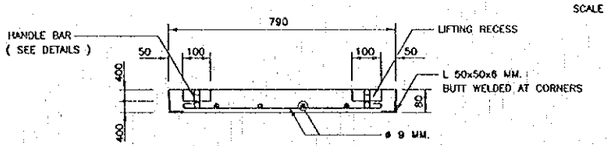
SECTION Ⓓ – Ⓓ
SCALE 1:10



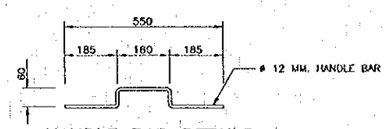
STEEL GRATING COVER PLAN
(AT END OF CATCH BASIN)
SCALE 1:20



PLAN
SCALE 1:10



SECTION Ⓒ – Ⓒ
CATCH BASIN COVER
SCALE 1:10



HANDLE BAR DETAILS
SCALE 1:10

NOTES :

1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE INDICATED.
2. CONCRETE SHALL BE CLASS D (24N/MM^2) UNLESS OTHERWISE SHOWN
3. REINFORCING STEEL BARS SHALL BE GRADE SD 295

REMARK :

T = THAILAND

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

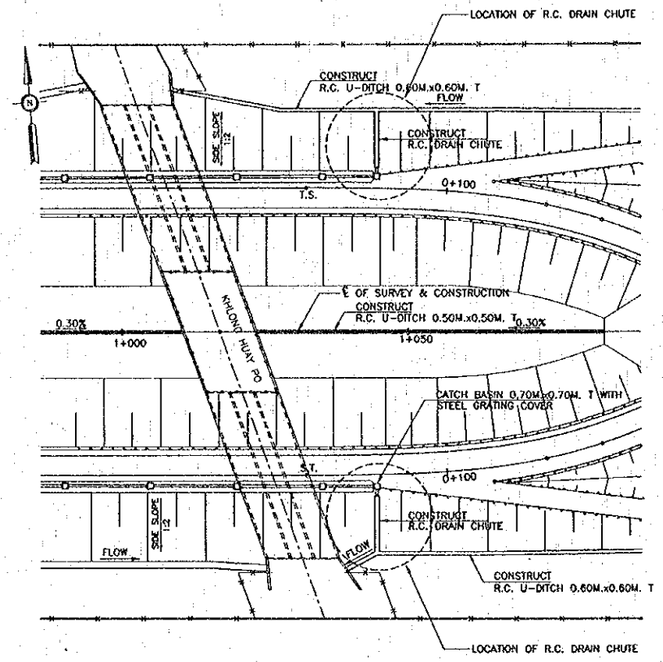
THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	H. Okita		15/03/00
DESIGN CHECK	T. Maeizawa		15/03/00
SUBMITTED	A. Hirotani		
APPROVED	P. Viraphanth		22/03/00
	S. Tamiyabutra		21/03/00

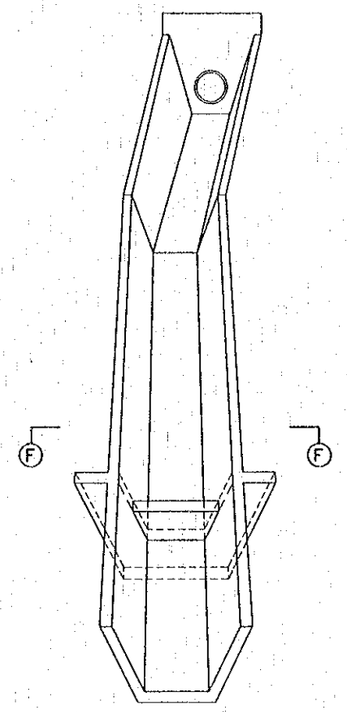
DWG. TITLE:
DRAINAGE ALONG SIDE WALK AT TRAFFIC CHANGEOVER
THAILAND SIDE

Plot date: Sat, 13 Jan 2000 – 13:51:34
C:\SMB-NEW\PACKAGE1\DRAIN\Pk1-d04.dwg

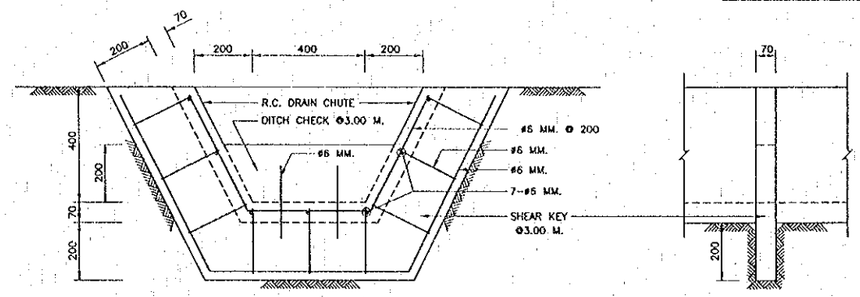
DATE OF ISSUE:	05/03/2000
DWG. NO.	R-D-5
SHEET NO.	47
DWG. STATUS	



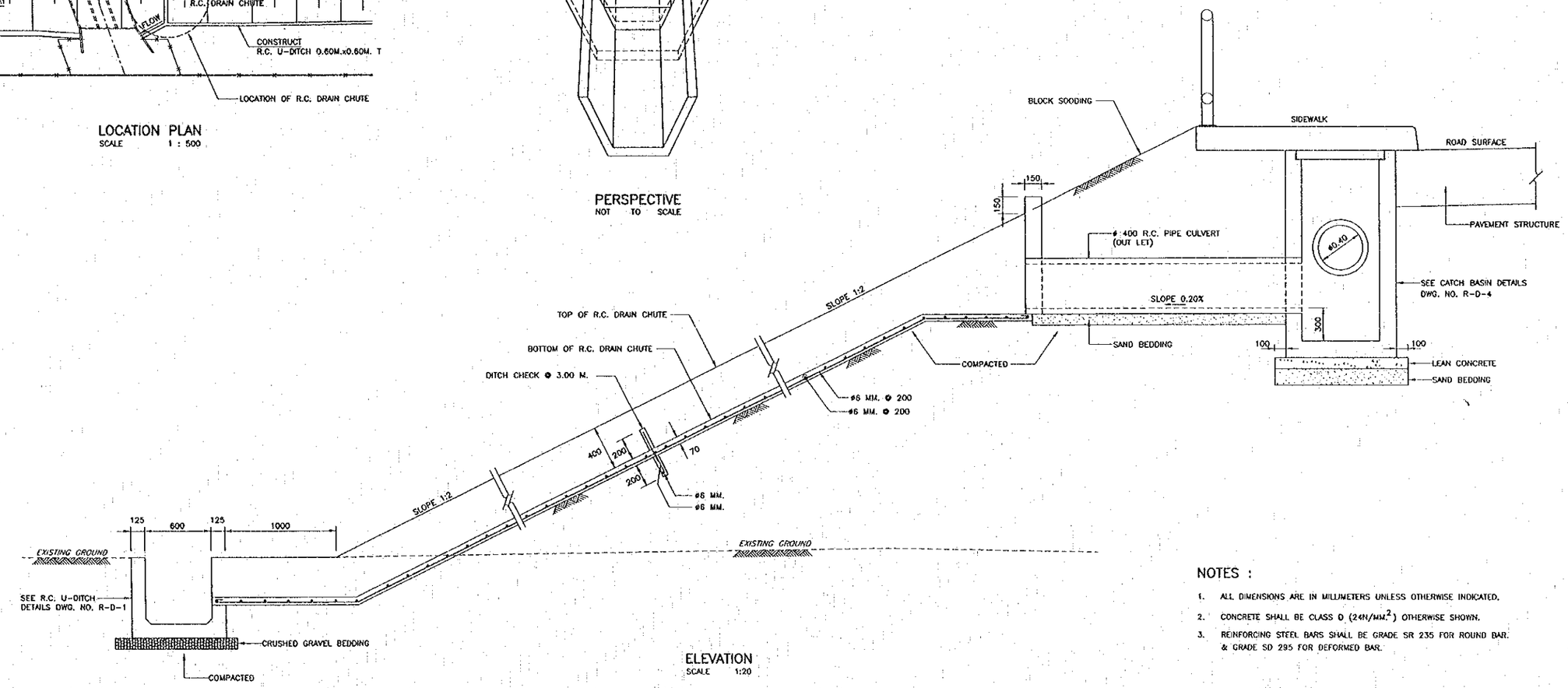
LOCATION PLAN
SCALE 1 : 500



PERSPECTIVE
NOT TO SCALE



SECTION Ⓕ-Ⓕ R.C. DRAIN CHUTE , SHEAR KEY AND DITCH CHECK
SCALE 1 : 10



ELEVATION
SCALE 1:20

NOTES :

1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE INDICATED.
2. CONCRETE SHALL BE CLASS D (24N/MM.^{2}) OTHERWISE SHOWN.
3. REINFORCING STEEL BARS SHALL BE GRADE SR 235 FOR ROUND BAR. & GRADE SD 295 FOR DEFORMED BAR.

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	H. Okita		6/12/00
DESIGN CHECK	T. Masuzawa		12-12-00
SUBMITTED	A. Hirotani		
APPROVED	P. Viraphanth		13/12/00
	S. Temiyabutra		22/12/00

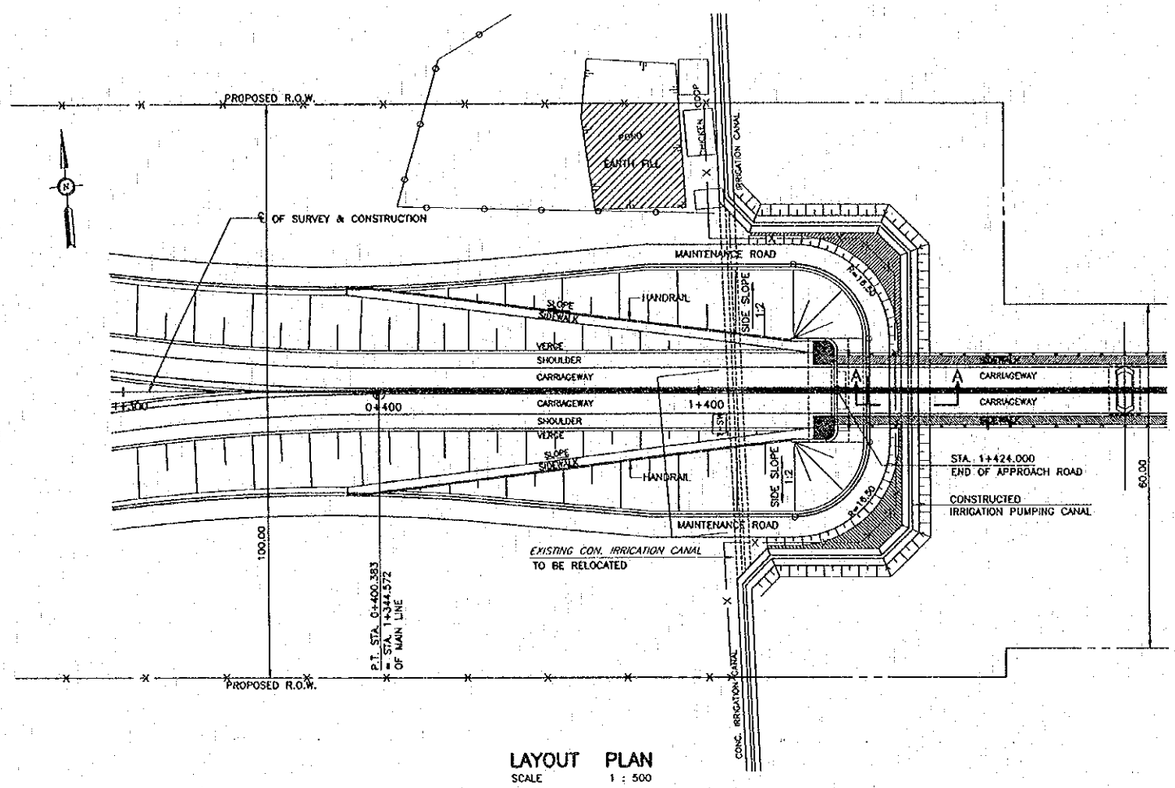
DWG. TITLE:

R.C. DRAINAGE CHUTE
THAILAND SIDE

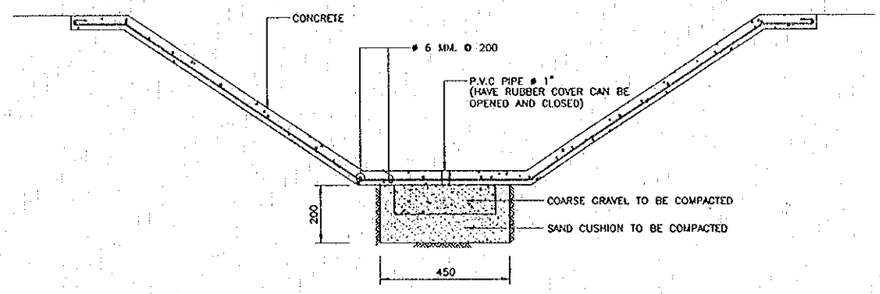
Plot date: Wed, 9 Feb 2000 - 14:21:04

C:\SKB-NEW\PACKAGE1\DRAIN\Pk1-d05.dwg

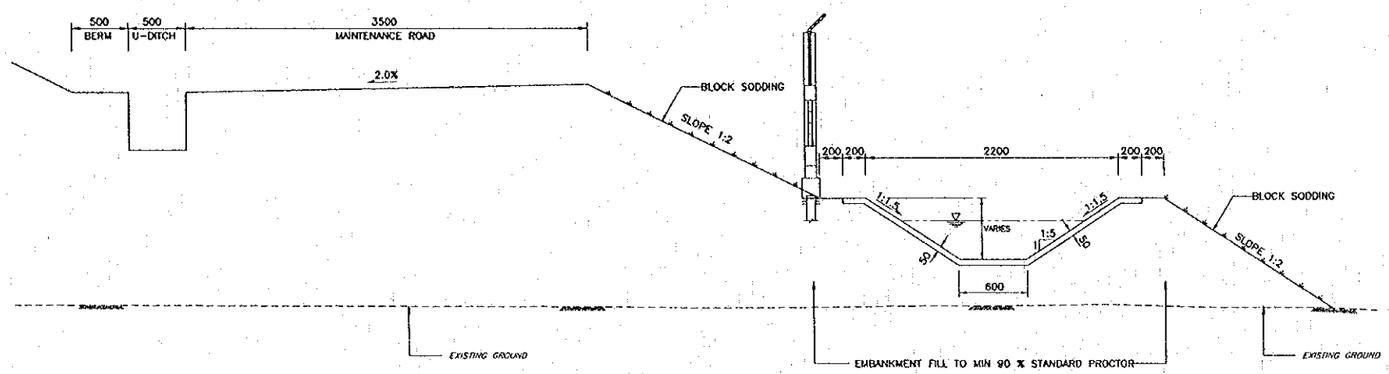
DATE OF ISSUE: 05/03/2000	
DWG. NO. R-D-6	SHEET NO. 48
DWG. STATUS	



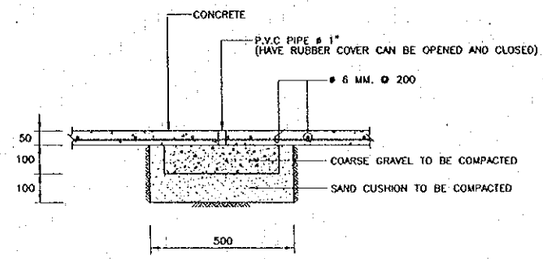
LAYOUT PLAN
SCALE 1 : 500



CROSS SECTION
SCALE 1 : 10



SECTION A-A
SCALE 1 : 25



LONGITUDINAL SECTION
SCALE 1 : 10

NOTES :

1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE INDICATED.
2. CONCRETE SHALL BE CLASS D (24N/MM.^{2}) OTHERWISE SHOWN.
3. REINFORCING STEEL BARS SHALL BE GRADE SR 235 FOR ROUND BAR.

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	H. Ohta	Ohta	6/03/00
DESIGN CHECK	T. Masuzawa	Masuzawa	6-3-00
SUBMITTED	A. Hirotani		6/3/00
APPROVED	P. Virophanth		23/03/00
	S. Temiyabutra	S. Temiyabutra	22/03/00

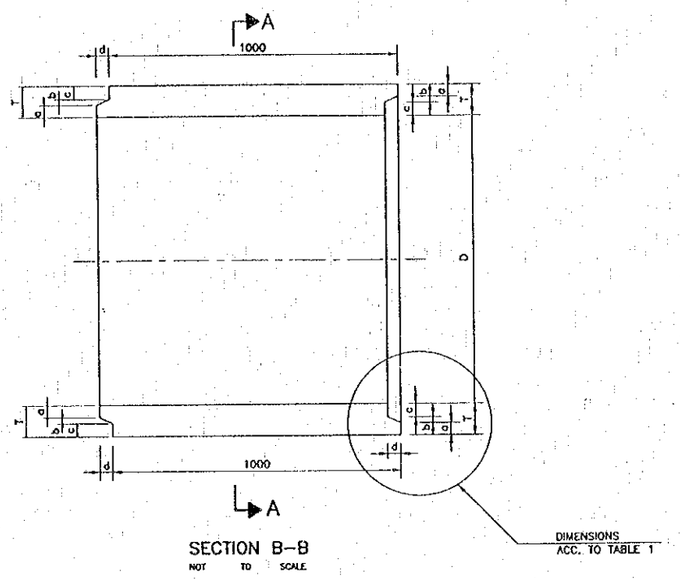
DWG. TITLE:

IRRIGATION PUMPING CANAL DETAILS
THAILAND SIDE

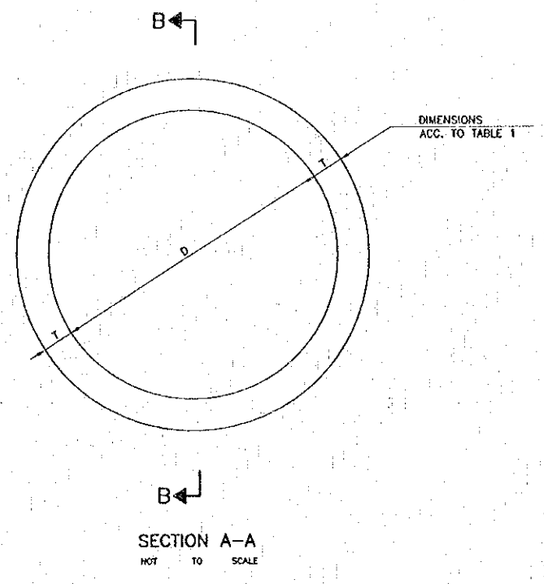
Plot date: Thu, 6 Jan 2000 - 9:23:07

C:\SMB-NEW\PACKAGE1\DRAIN\Pk1-606.dwg

DATE OF ISSUE: 05/03/2000	
DWG. NO. R--D--7	SHEET NO. 49
DWG. STATUS	

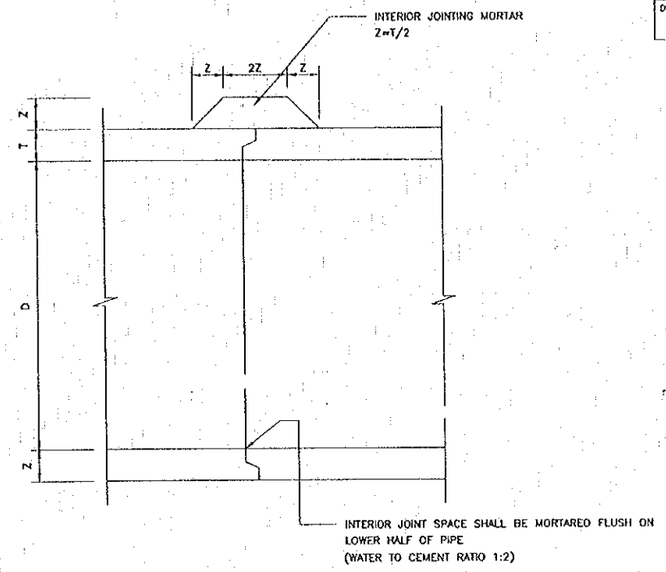


SECTION B–B
NOT TO SCALE

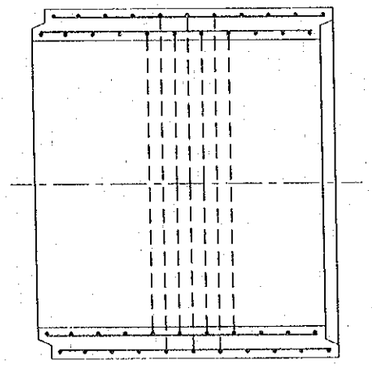


SECTION A–A
NOT TO SCALE

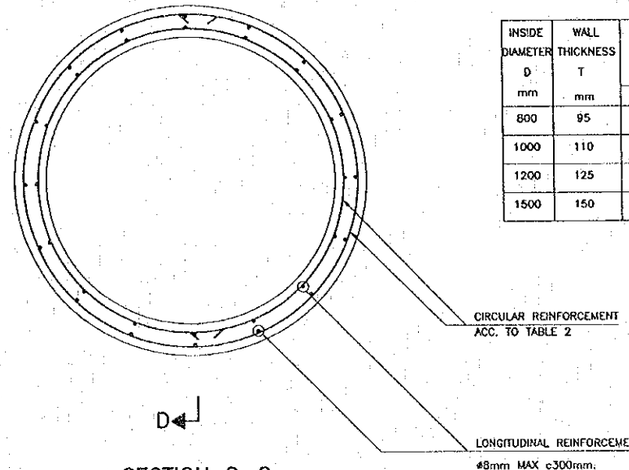
R.C PIPE ø0.80–ø1.50 L
DIMENSIONS



PIPE CONNECTION JOINT DETAIL



SECTION D–D
NOT TO SCALE



SECTION C--C
NOT TO SCALE

R.C PIPE ø0.80–ø1.50 L
REINFORCEMENT

TABLE 1

INSIDE DIAMETER D mm	WALL THICKNESS T mm	DIMENSION OF PIPE END DETAILS IN mm TONGUE AND GROOVE			
		a	b	c	d
800	95	38	15	42	45
1000	110	43	20	47	45
1200	125	48	25	52	50
1500	150	57	30	63	60

TABLE 2

INSIDE DIAMETER D mm	MIN. CIRCULAR REINFORCEMENT mm²/m		CRUSHING LOAD TO PRODUCE 0.30mm CRACK WIDTH AND 310mm CRACKLENGTH kg/m	ULTIMATE CRUSHING LOAD kg/m	ULTIMATE STRENGTH FOR 152 X 304mm CONCRETE CYLINDER AT 28 DAY AGE N/mm²
	INNER CAGE	OUTER CAGE			
800	940	710	11,420	14,280	40
1000	1200	900	14,280	17,850	
1200	1550	1160	17,130	21,410	
1500	2133	1598	21,413	26,767	

NOTES

1. ALL DIMENSIONS SHOWN ARE IN mm, UNLESS OTHERWISE SHOWN.
2. ALL PIPE BARRELS SHALL CONFORM TO REQUIREMENTS OF AASHTO M170M , REINFORCED CONCRETE CULVERT , STORM DRAIN , AND SEWER PIPE (METRIC) CLASS II , WALL B .
3. ALL CONCRETE SHALL BE CLASS A, UNLESS OTHERWISE SHOWN, CYLINDER STRENGTH OF CONCRETE AT 28 DAYS f'c=40N/mm²
4. ALL STEEL REINFORCEMENT SHALL BE GRADE SR 235 FOR ROUND BARS GRADE SD 295 FOR DEFORMED BARS
5. MORTAR FOR PIPE CONNECTION JOINT SHALL CONSIST OF 1 PART PORTLAND CEMENT TO 2 PARTS OF SAND BY VOLUME.

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JICA JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

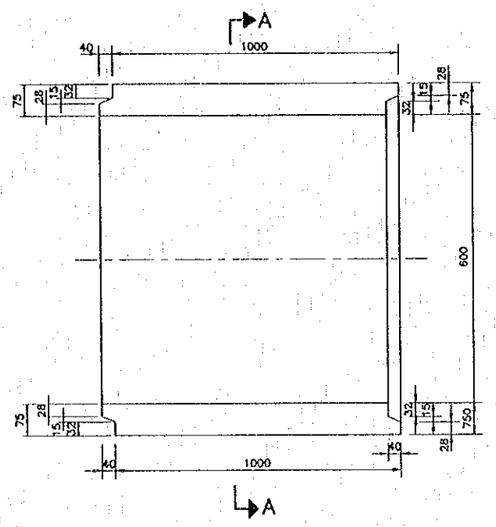
THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	H. Okita		16/02/00
DESIGN CHECK	T. Masuzawa		18/2/00
SUBMITTED	A. Hirotani		[illegible]
APPROVED	P. Virophanth		22/02/00
	S. Teniyabutra		22/02/00

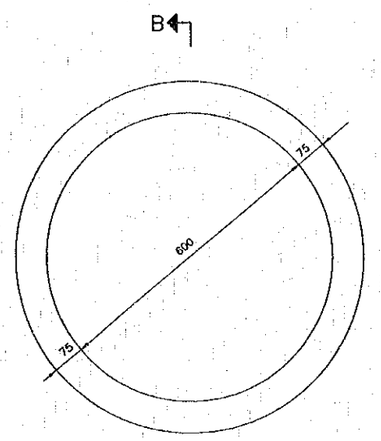
DWG. TITLE :

PIPE CULVERT(1)
RC. PIPE ø0.80–ø1.50 L
LAO PDR SIDE

DATE OF ISSUE: 05/03/2000	
DWG. NO. R-D-8	SHEET NO. 50
DWG. STATUS	



SECTION B–B
NOT TO SCALE

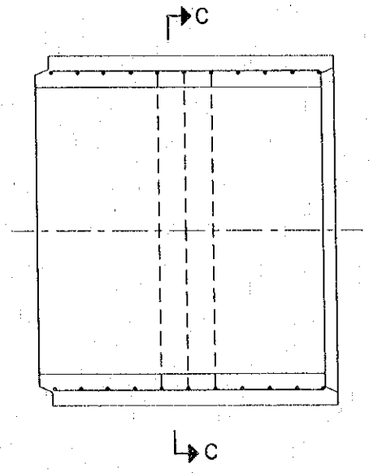


SECTION A–A
NOT TO SCALE

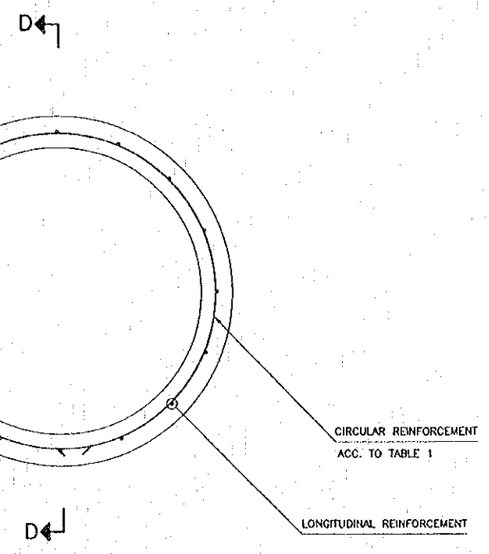
TABLE 1

INSIDE DIAMETER D mm	MIN. CIRCULAR REINFORCEMENT (mm^2/m) INNER CAGE	OUTER CAGE	CRUSHING LOAD TO PRODUCE 0.30mm CRACK WIDTH AND 310mm CRACKLENGTH kg/m	ULTIMATE CRUSHING LOAD kg/m	ULTIMATE STRENGTH FOR 152 X 304mm CONCRETE CYLINDER AT 28 DAY AGE N/mm^2
600	640	--	8565	10707	40

R.C. PIPE ø0.60 L
DIMENSIONS



SECTION D–D
NOT TO SCALE



SECTION C–C
NOT TO SCALE

NOTES

1. ALL DIMENSIONS SHOWN ARE IN mm, UNLESS OTHERWISE SHOWN.
2. ALL PIPE BARRELS SHALL CONFORM TO REQUIREMENTS OF AASHTO M170M, REINFORCED CONCRETE CULVERT, STORM DRAIN,AND SEWER PIPE (METRIC) CLASS V , WALL B .
3. ALL CONCRETE SHALL BE CLASS A, UNLESS OTHERWISE SHOWN CYLINGDER STRENGTH OF CONCRETE AT 28 DAYS $f'c=40N/mm^2$
4. ALL STEEL REINFORCEMENT SHALL BE GRADE SR 235 FOR ROUND BARS GRADE SD 295 FOR DEFORMED BARS

R.C. PIPE ø0.60 L
REINFORCEMENT

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

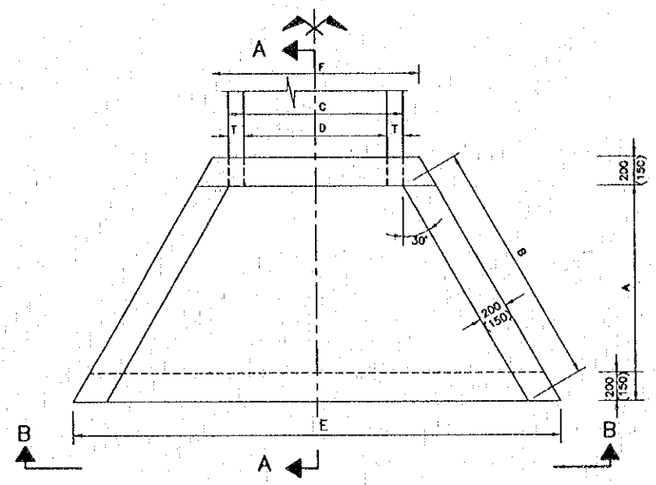
JICA JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

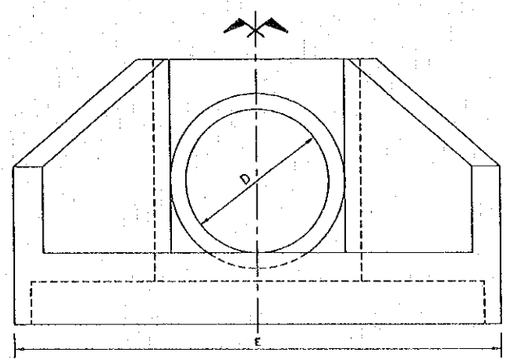
QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	H. Ohito		16/03/00
DESIGN CHECK	T. Masuzawa		16/03/00
SUBMITTED	A. Hirotani		
APPROVED	P. Viraphanh		17/03/00
	S. Tomiyabutra		17/03/00

DWG. TITLE:
PIPE CULVERT(2)
RC. PIPE ø0.60 L
LAO PDR SIDE

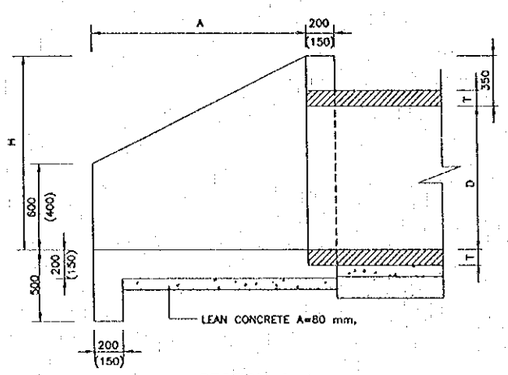
DATE OF ISSUE: 05/03/2000	
DWG. NO. R-D-9	SHEET NO. 51
DWG. STATUS	



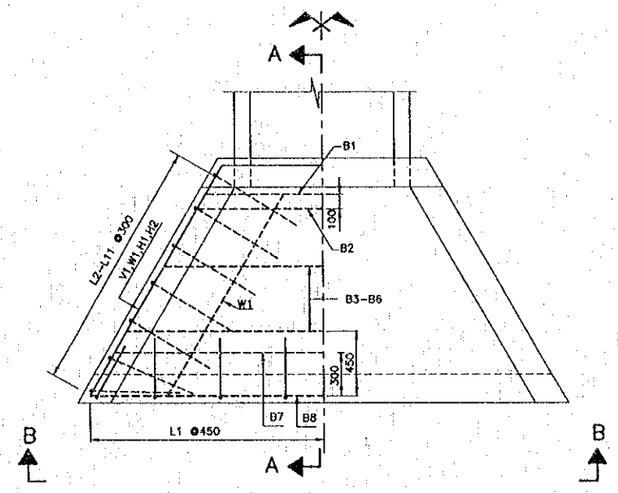
PLAN
SCALE 1:20



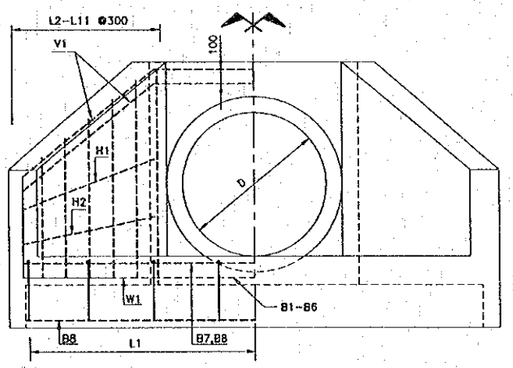
END VIEW B-B
SCALE 1:20



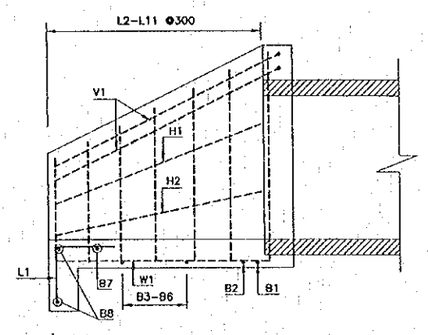
SECTION A-A
SCALE 1:20



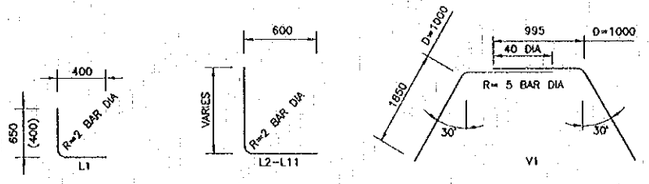
PLAN
SCALE 1:20



END VIEW B-B
SCALE 1:20



SECTION A-A
SCALE 1:20



BENDING AS SHOWN
REINFORCEMENT

TABLE 1

DIA. OF PIPE D mm	WALL THICKNESS mm	TABLE OF DIMENSIONS					
		A mm	B mm	C mm	E mm	F mm	H mm
600	75	1100	1270	750	2370	920	950
800	95	1500	1730	990	3070	1160	1150
1000	110	1500	1730	1220	3410	1450	1350
1200	125	1900	2190	1450	4110	1680	1550

TABLE 2

TABLE OF REINFORCEMENT FOR ONE WINGWALL END									
BAR MARK	SIZE ϕmm	D=600		D=800		D=1000		D=1200	
		No.	LENGTH	No.	LENGTH	No.	LENGTH	No.	LENGTH
B1	16			–	–	1	1620	1	1850
B2	16			–	–	1	1740	1	1970
B3	12			–	–	1	2200	1	2420
B4	12			–	–	1	2720	1	2940
B5	12			–	–	–	–	1	3460
B6	12			–	–	–	–	–	–
B7	12			1	2550	1	2890	1	3590
B8	12			2	2900	2	3240	2	3940
L1	12	6	800	8	600	8	800	10	800
L2	16(12)	2	1040	2	1070	2	1320	2	1320
L3	16(12)	2	1150	2	1200	2	1450	2	1450
L4	16(12)	2	1260	2	1330	2	1580	2	1580
L5	16(12)	2	1370	2	1460	2	1710	2	1710
L6	16(12)	2	1480	2	1590	2	1840	2	1840
L7	16(12)			2	1720	2	1970	2	1970
L8	16			–	–	–	–	2	2100
L9	16			–	–	–	–	2	2250
L10	16			–	–	–	–	–	–
L11	16			–	–	–	–	–	–
H1	12	2	1210	2	1690	2	1810	2	2250
H2	12			–	–	2	1770	2	2230
V1	16(12)	2	1980	2	2695	4	2975	4	3590
W1	12	2	1210	4	1650	4	1650	4	2110
CONC. m^3		0.80		1.20		2.00		2.80	
REINF. Kg		31.00		41.57		85.76		114.05	
NOTE: FOR ϕ 800 PIPE CULVERT V1,L2-L7 SHALL BE ϕ12mm REBARS									

NOTES:

1. ALL DIMENSIONS ARE IN mm.
2. ALL CONCRETE SHALL BE CLASS D, UNLESS OTHERWISE SHOWN, (CYLINDER STRENGTH OF CONCRETE AT 28 DAYS $f'c=24$ N/mm^2)
3. ALL STEEL REINFORCEMENT SHALL BE GRADE SD295
4. CONCRETE COVER SHALL BE 50 mm, IF NOT OTHERWISE SHOWN AND MEASURED FROM THE SURFACE OF CONCRETE TO THE FACE OF NEAREST BAR.
5. LAP LENGTH OF REINFORCEMENT BARS SHALL BE AS SHOWN IN THE SPECIFICATIONS.
6. ALL EXPOSED CONCRETE EDGES SHALL BE CHAMFERED 20mm.
7. DIMENSIONS IN BRACKETS ( ) ARE FOR PIPE CULVERT DIA 800.

HEAD WALL FOR R.C. PIPE ϕ0.60--ϕ1.20 L DIMENSIONS

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

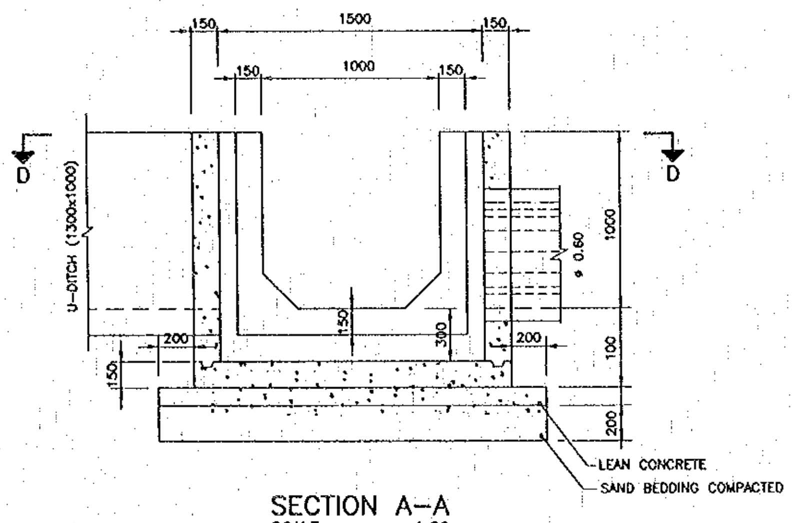
JICA JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

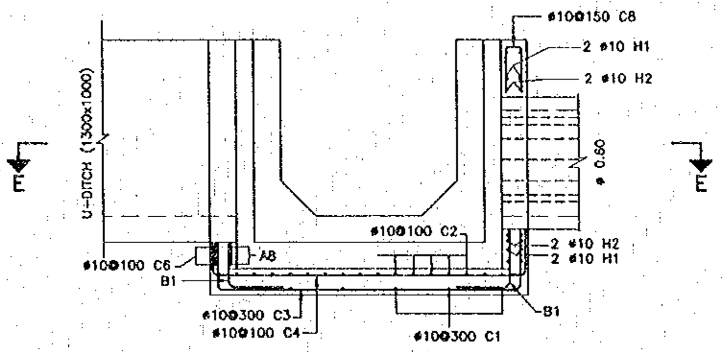
QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	H. Okita		16/10/00
DESIGN CHECK	T. Masuzawa		16/10/00
SUBMITTED	A. Hirotani		16/10/00
APPROVED	P. Virophanth		27/10/00
	S. Tamiyabutra		27/10/00

DWG. TITLE:
PIPE CULVERT(3)
HEAD WALL FOR PIPE CULVERT
LAO PDR SIDE

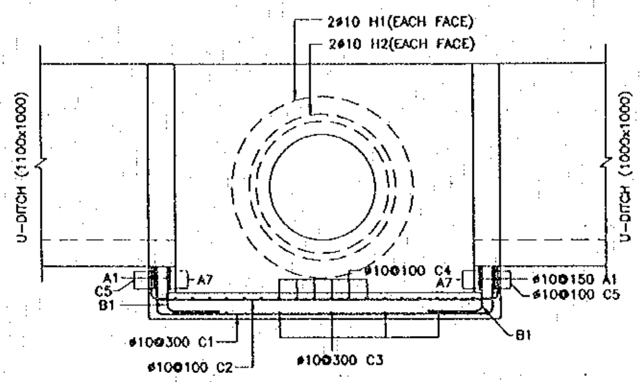
DATE OF ISSUE:	
05/03/2000	
DWG. NO. R-D-10	SHEET NO. 52
DWG. STATUS	



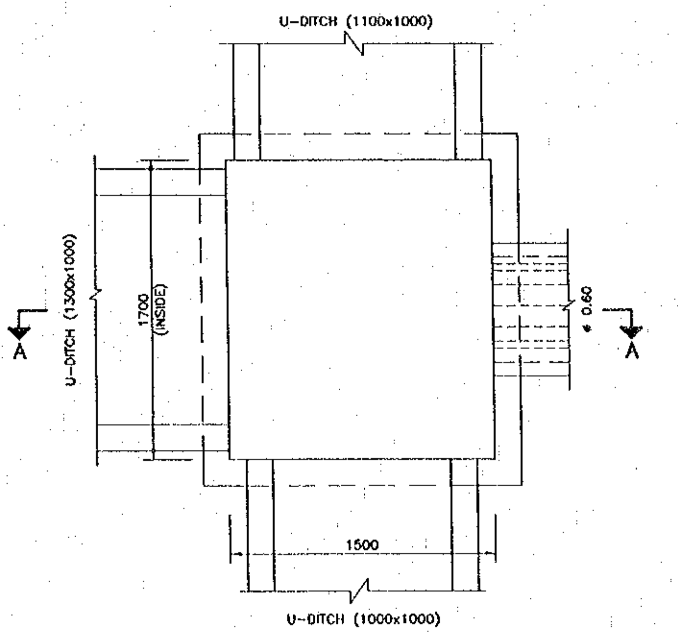
SECTION A–A
SCALE 1:20



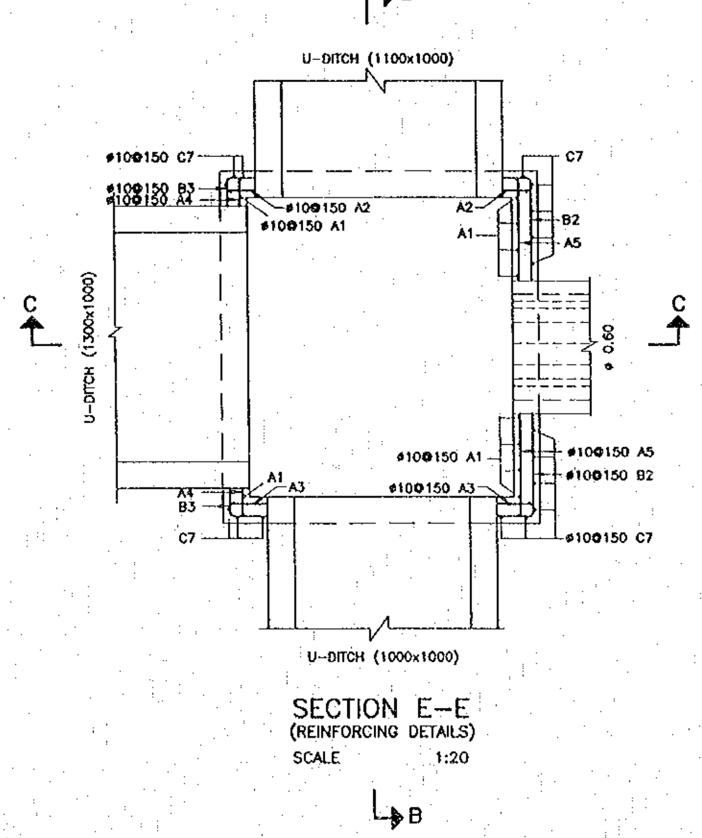
SECTION C–C
(REINFORCING DETAILS)
SCALE 1:20



SECTION B–B
(REINFORCING DETAILS)
SCALE 1:20



SECTION E–E
SCALE 1:20



SECTION E–E
(REINFORCING DETAILS)
SCALE 1:20

NOTES:

1. ALL DIMENSIONS SHOWN ARE IN MILLIMETRES UNLESS OTHERWISE INDICATED
2. CONCRETE SHALL BE CLASS D ($24N/mm^2$)
3. ALL REINFORCING STEEL SHALL BE DEFORMED BARS AND SHALL CONFORM GRADE SD295
4. STRUCTURAL STEEL SHALL CONFORM TO AASHTO M183
5. FLAT PLATE STEEL SHALL CONFORM TO AASHTO M160
6. THE CONCRETE COVER SHALL BE 30mm.
7. THE COVER SHALL BE MEASURED FROM THE CONCRETE SURFACE TO THE FACE OF THE NEAREST BAR
8. LAP LENGTH OF BARS SHALL NOT BE LESS THAN 30 BAR DIAMETERS OR 300mm, WHICHEVER IS BIGGER.

ALL REINFORCING BARS ARE NOTED IN THE FOLLOWING MANNER

4 ø10 @150 C8
- C8 — BAR MARK
- @150 — BAR SPACING IN mm.
- ø10 — BAR DIAMETER IN mm.
- 4 — NO OF BARS

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

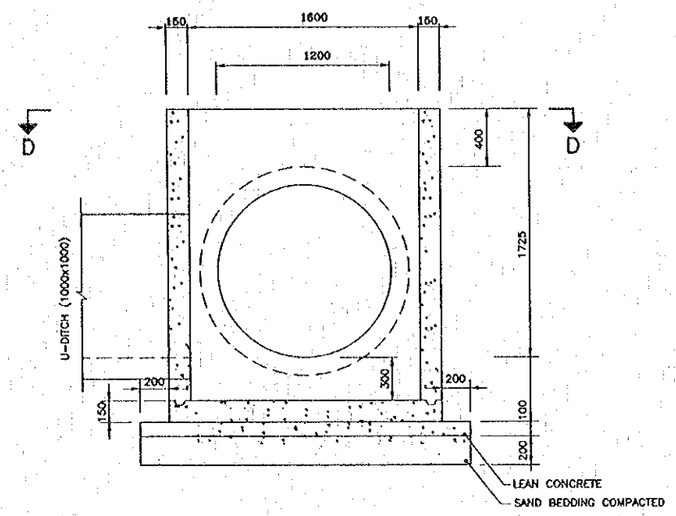
JICA JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

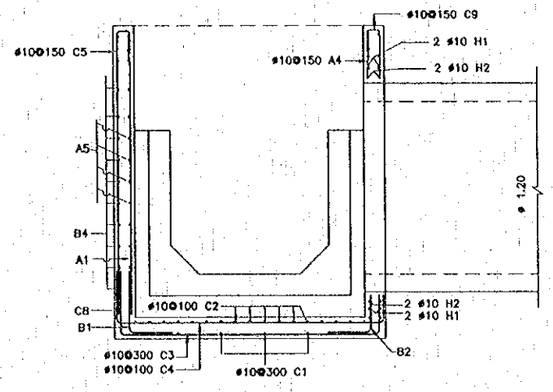
QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	H. Ohta	[signature]	16/02/00
DESIGN CHECK	T. Masurawa	[signature]	18-02-00
SUBMITTED	A. Hirotani	[signature]	21.02.00
APPROVED	P. Viraphanh	[signature]	22/02/00
	S. Tomiyabutra	[signature]	23/02/00

DWG. TITLE:
CATCH BASIN (1)
1.50m x 1.70m L
LAO PDR SIDE

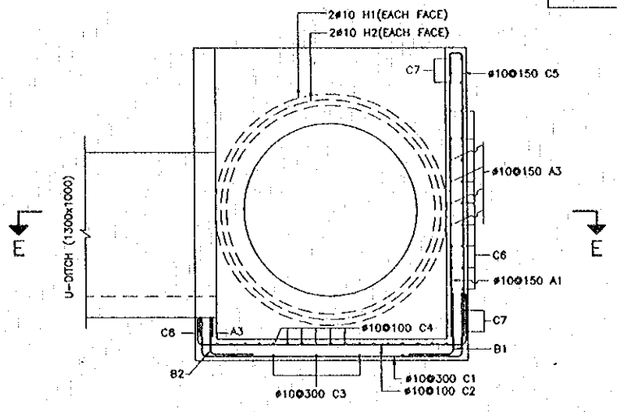
DATE OF ISSUE: 05/03/2000	
DWG. NO. R-D-11	SHEET NO. 53
DWG. STATUS	



SECTION A–A
SCALE 1:20

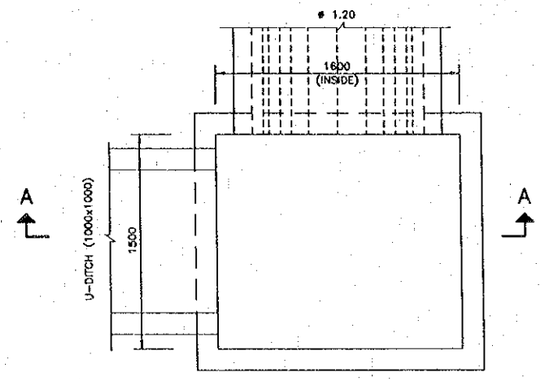


SECTION B–B
(REINFORCING DETAILS)
SCALE 1:20

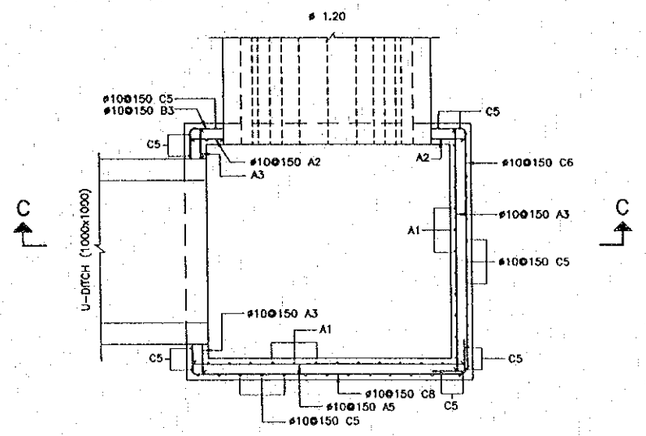


SECTION C–C
(REINFORCING DETAILS)
SCALE 1:20

B



SECTION D–D
SCALE 1:20



SECTION E–E
(REINFORCING DETAILS)
SCALE 1:20

B

NOTES:

1. ALL DIMENSIONS SHOWN ARE IN MILLIMETRES UNLESS OTHERWISE INDICATED
2. CONCRETE SHALL BE CLASS D (24N/mm^2)
3. ALL REINFORCING STEEL SHALL BE DEFORMED BARS AND SHALL CONFORM GRADE SD295
4. STRUCTURAL STEEL SHALL CONFORM TO AASHTO M183
5. FLAT PLATE STEEL SHALL CONFORM TO AASHTO M160
6. THE CONCRETE COVER SHALL BE 30mm.
7. THE COVER SHALL BE MEASURED FROM THE CONCRETE SURFACE TO THE FACE OF THE NEAREST BAR
8. LAP LENGTH OF BARS SHALL NOT BE LESS THAN 30 BAR DIAMETERS OR 300mm, WHICHEVER IS BIGGER.

ALL REINFORCING BARS ARE NOTED IN THE FOLLOWING MANNER

4 ø10 @150 C8
- C8 — BAR MARK
- @150 — BAR SPACING IN mm.
- ø10 — BAR DIAMETER IN mm.
- 4 — NO OF BARS

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JICA JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

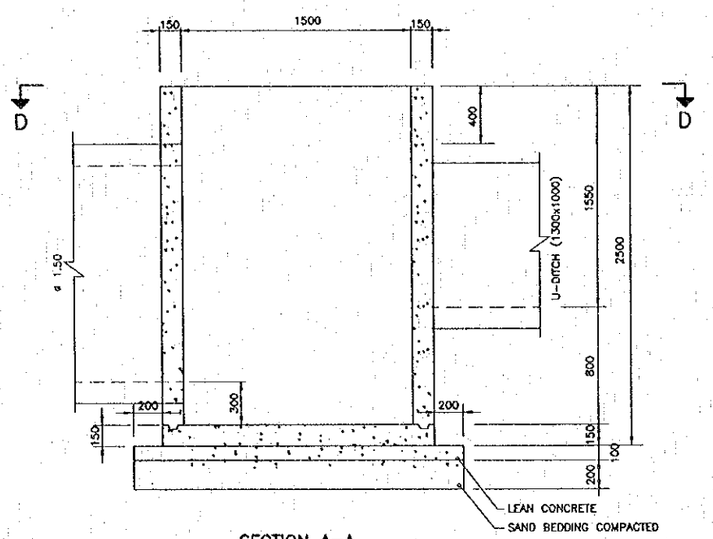
THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	H. Okita		16/02/00
DESIGN CHECK	T. Masuzawa		18/2/00
SUBMITTED	A. Ratanl		
APPROVED	P. Viraphanh		22/02/00
	S. Tomiyabutra		22/02/00

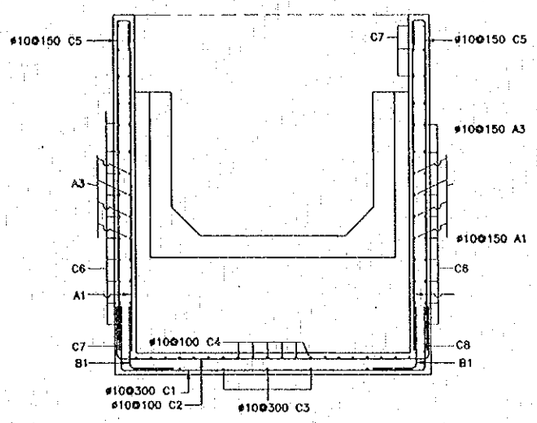
DWG. TITLE:

CATCH BASIN (2)
1.50m x1.60m L
LAO PDR SIDE

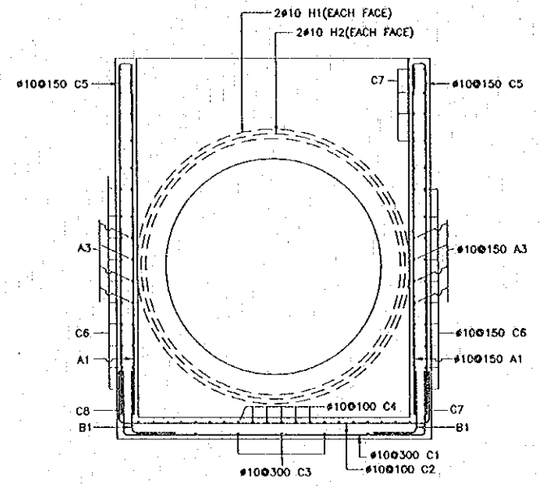
DATE OF ISSUE: 05/03/2000	
DWG. NO. R-D-12	SHEET NO. 54
DWG. STATUS	



SECTION A–A
SCALE 1:20

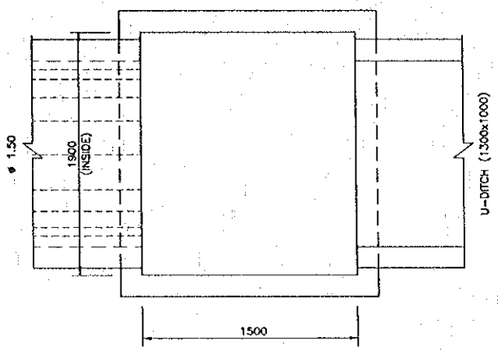


SECTION B–B
(REINFORCING DETAILS)
SCALE 1:20

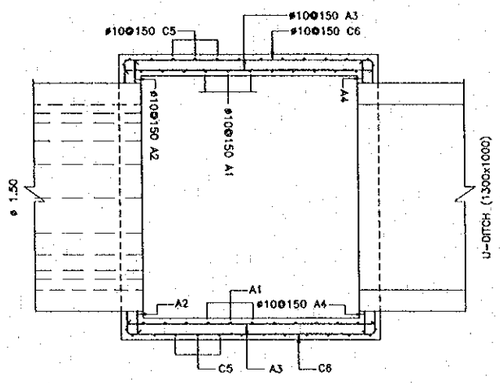


SECTION C–C
(REINFORCING DETAILS)
SCALE 1:20

C ⟷ B



SECTION D–D
SCALE 1:20



REINFORCEMENT
SCALE 1:20

C ⟷ B

NOTES:

1. ALL DIMENSIONS SHOWN ARE IN MILLIMETRES UNLESS OTHERWISE INDICATED
2. CONCRETE SHALL BE CLASS D (24N/mm^2)
3. ALL REINFORCING STEEL SHALL BE DEFORMED BARS AND SHALL CONFORM GRADE SD295
4. STRUCTURAL STEEL SHALL CONFORM TO AASHTO M183
5. FLAT PLATE STEEL SHALL CONFORM TO AASHTO M160
6. THE CONCRETE COVER SHALL BE 30mm.
7. THE COVER SHALL BE MEASURED FROM THE CONCRETE SURFACE TO THE FACE OF THE NEAREST BAR
8. LAP LENGTH OF BARS SHALL NOT BE LESS THAN 30 BAR DIAMETERS OR 300mm, WHICHEVER IS BIGGER.

ALL REINFORCING BARS ARE NOTED IN THE FOLLOWING MANNER

4 ø10 @150 C8

- C8 — BAR MARK
- @150 — BAR SPACING IN mm.
- ø10 — BAR DIAMETER IN mm.
- 4 — NO OF BARS

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KORI CO., LTD.

JICA JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

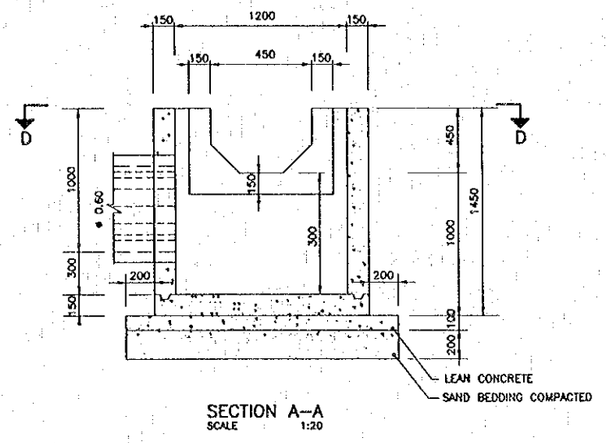
THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	H. Okita		16/02/00
DESIGN CHECK	T. Magusawa		16/02/00
SUBMITTED	A. Hirotani		
APPROVED	P. Virophanth		22/02/00
	S. Tomiyabutra		22/02/00

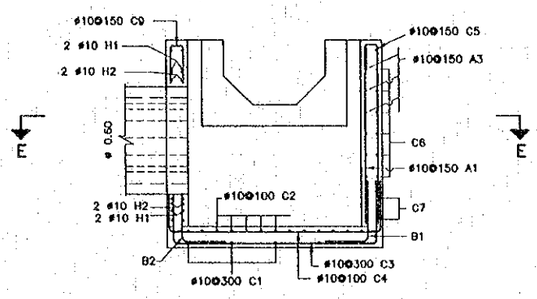
DWG. TITLE:

CATCH BASIN (3)
1.50m x 1.90m L
LAO PDR SIDE

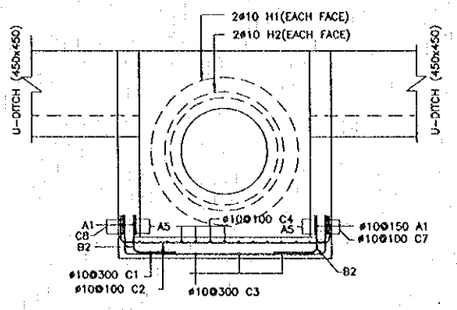
DATE OF ISSUE:	
	05/03/2000
DWG. NO.	SHEET NO.
R-D-13	55
DWG. STATUS	



SECTION A–A
SCALE 1:20

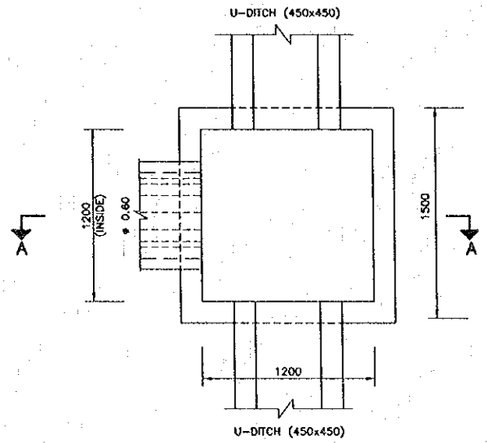


SECTION C–C
(REINFORCING DETAILS)
SCALE 1:20

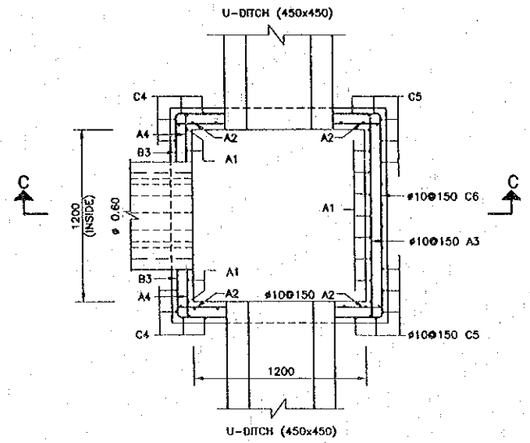


SECTION B–B
(REINFORCING DETAILS)
SCALE 1:20

B



SECTION D–D
SCALE 1:20



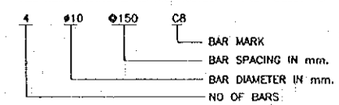
SECTION E–E
(REINFORCING DETAILS)
SCALE 1:20

B

NOTES:

1. ALL DIMENSIONS SHOWN ARE IN MILLIMETRES UNLESS OTHERWISE INDICATED
2. CONCRETE SHALL BE CLASS D (24N/mm^2)
3. ALL REINFORCING STEEL SHALL BE DEFORMED BARS AND SHALL CONFORM GRADE SD295
4. STRUCTURAL STEEL SHALL CONFORM TO AASHTO M183
5. FLAT PLATE STEEL SHALL CONFORM TO AASHTO M160
6. THE CONCRETE COVER SHALL BE 30mm.
7. THE COVER SHALL BE MEASURED FROM THE CONCRETE SURFACE TO THE FACE OF THE NEAREST BAR
8. LAP LENGTH OF BARS SHALL NOT BE LESS THAN 30 BAR DIAMETERS OR 300mm, WHICHEVER IS BIGGER.

ALL REINFORCING BARS ARE NOTED IN THE FOLLOWING MANNER



REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

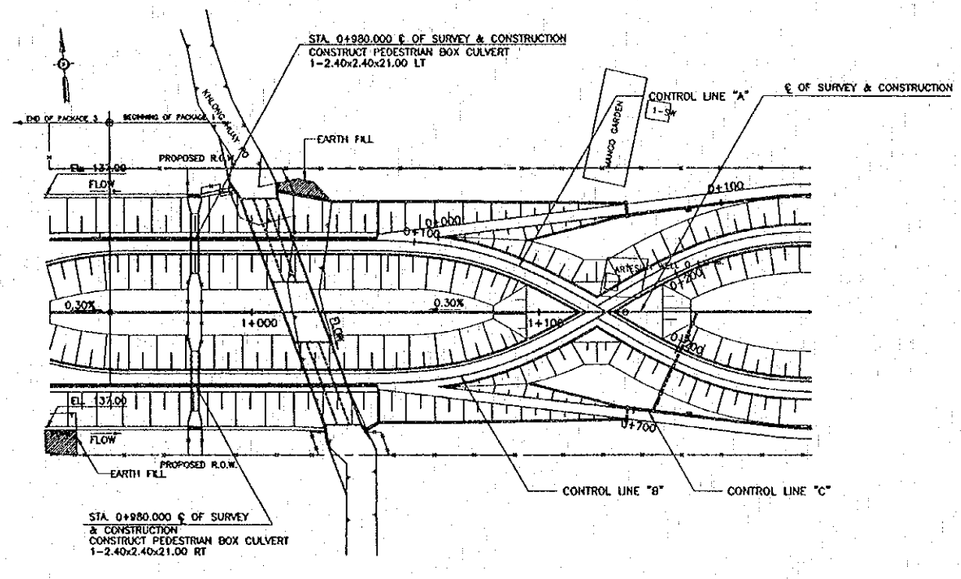
THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	H. Okita		14/2/00
DESIGN CHECK	T. Masuzawa		22/02/00
SUBMITTED	A. Hiratani		22/02/00
APPROVED	P. Viraphanh		22/02/00
	S. Tamiyabutra		22/02/00

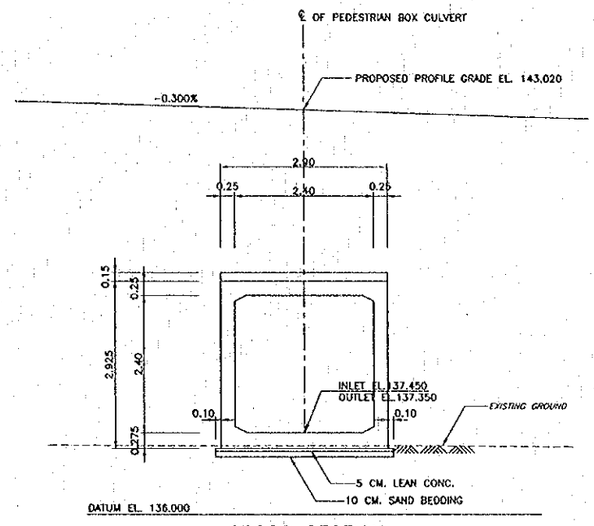
DWG. TITLE:

CATCH BASIN (4)
1.20m x 1.20m L
LAO PDR SIDE

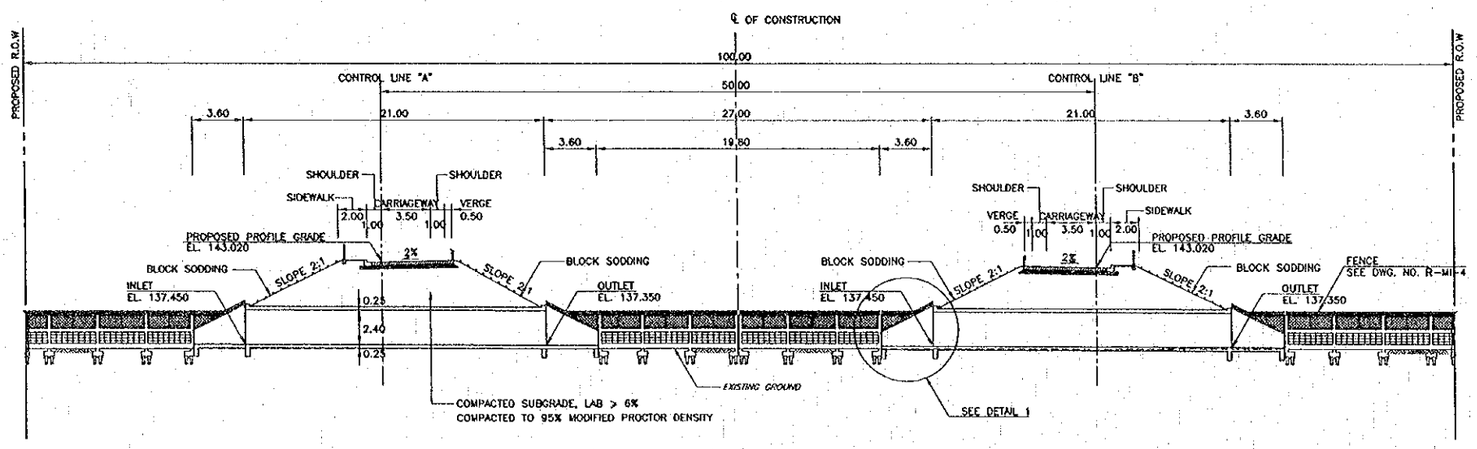
DATE OF ISSUE: 05/03/2000	
DWG. NO. R-B-1	SHEET NO. 56
DWG. STATUS	



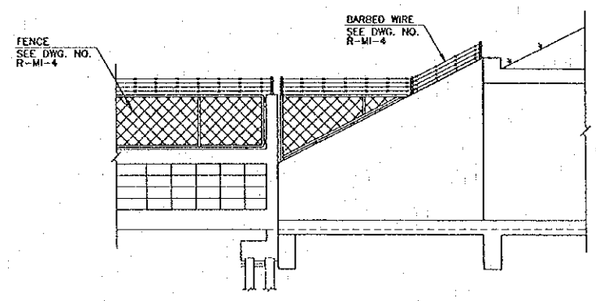
LAYOUT PLAN
SCALE 1 : 1,000



CROSS SECTION
SCALE 1 : 50



TYPICAL LONGITUDINAL SECTION
SCALE 1 : 200



DETAIL 1
SCALE 1 : 50

GENERAL NOTES FOR CONSTRUCTION OF R.C. BOX CULVERT:

1. ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE INDICATED.
2. THIS DRAWING SHALL BE USED FOR LAYING OUT AND CONSTRUCTION OF STANDARD RIGID FRAME BOX CULVERT.
3. ANY DISCREPANCY BETWEEN DRAWING AND ACTUAL SITUATION AT THE SITE SHALL BE CORRECTED AS DIRECTED BY THE ENGINEER.
4. THE LENGTH OF THE BOX CULVERT SHALL BE AS SHOWN IN THIS DRAWING OR EQUAL TO THE ROADWAY EMBANKMENT MESURED ALONG THE ℄ OF BOX AT ITS TOP.

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	H. Okita		1/03/00
DESIGN CHECK	T. Masuzawa		2/03/00
SUBMITTED	A. Hiratani		21/03/00
APPROVED	P. Virophanh		22/3/00
	S. Tamiyabutra		22/3/00

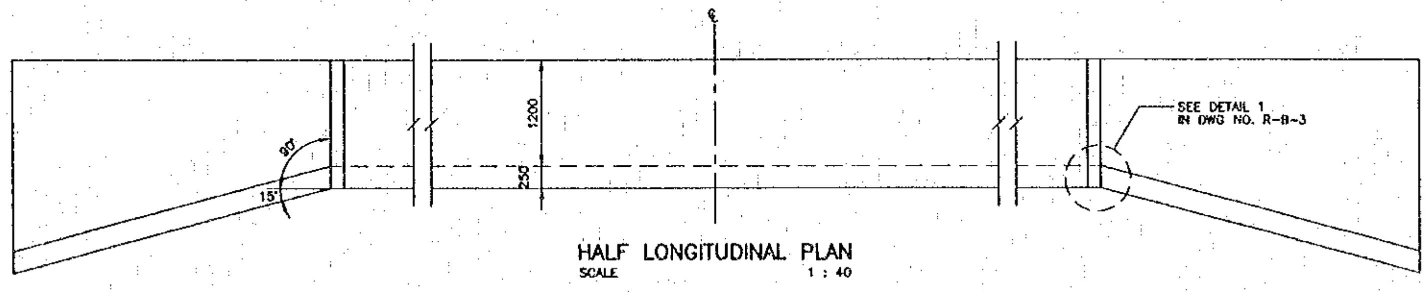
DWG. TITLE:

BOX CULVERT 2.40M.x2.40M.-1
THAILAND SIDE

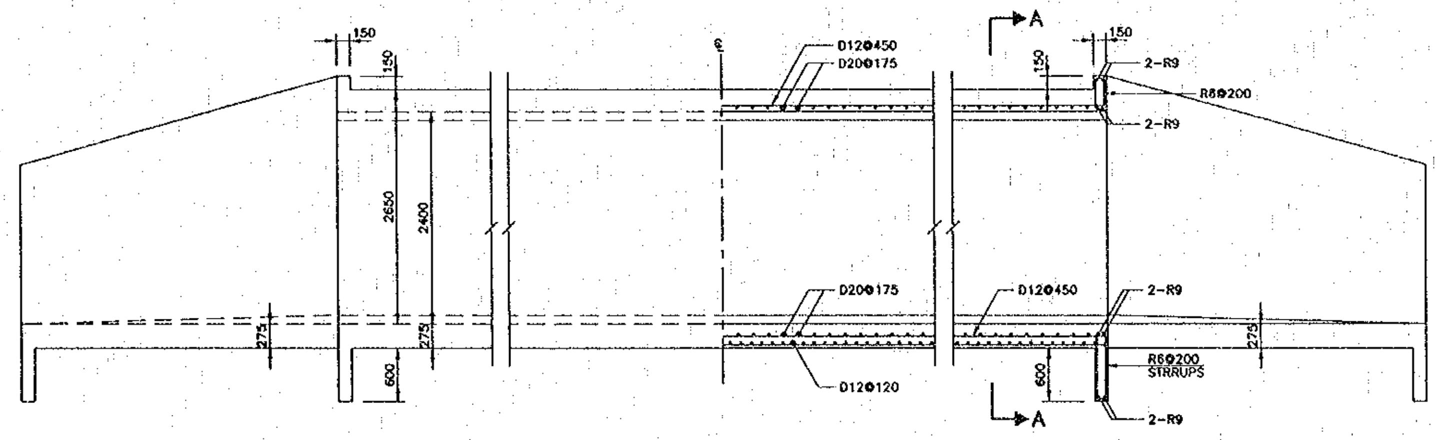
Plot date: Tue, 18 Jan 2000 - 13:51:44

C:\1SMB-NEW\PACKAGE1\BOX\Pk1-b01.dwg

DATE OF ISSUE:	
05/03/2000	
DWG. NO. R-B-2	SHEET NO. 57
DWG. STATUS	

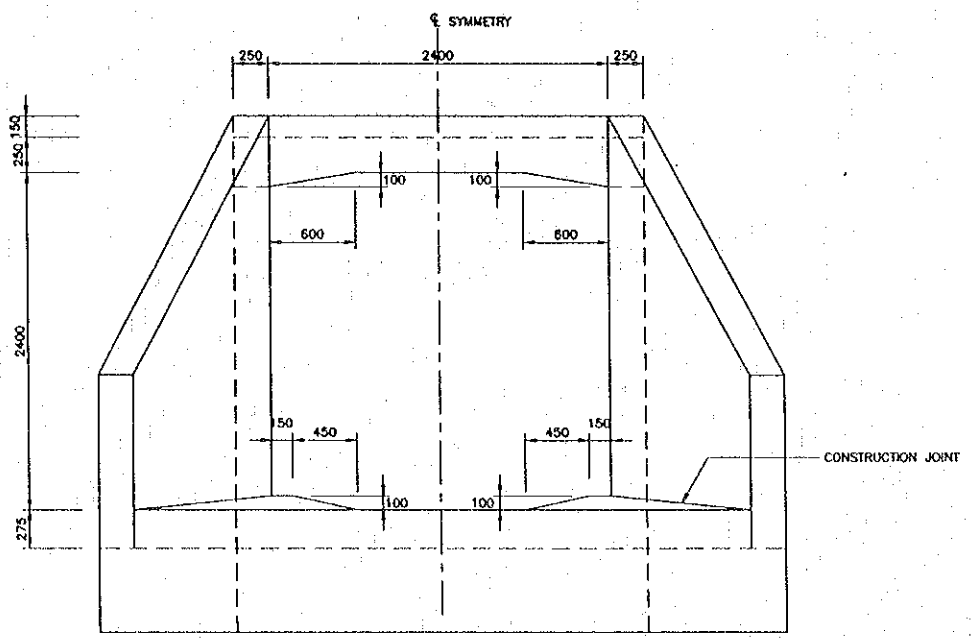


HALF LONGITUDINAL PLAN
SCALE 1 : 40

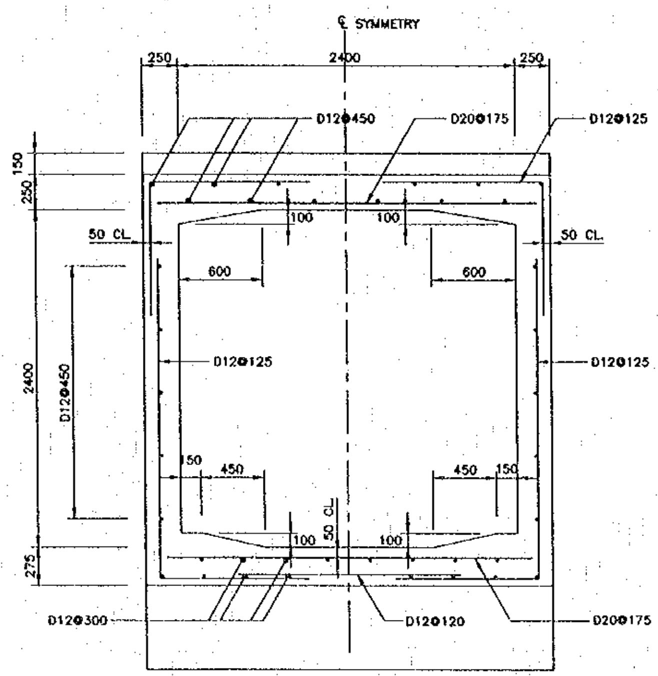


HALF LONGITUDINAL SIDE VIEW
SCALE 1 : 40

HALF LONGITUDINAL SECTION
SCALE 1 : 40



TRANSVERSE ELEVATION
SCALE 1 : 25



SINGLE BOX TYPE A

SECTION A – A
SCALE 1 : 25

NOTES :

1. ALL DIMENSIONS SHOWN ARE IN MILLIMETERS UNLESS OTHERWISE INDICATED.
2. CLEAR CONCRETE COVER SHALL BE 50 MM. EXCEPT THE BOTTOM OF BOTTOM SLABS OR WALLS WHERE CLEAR COVER OF 75 MM. SHALL BE PROVIDED.
3. CONCRETE SHALL BE CLASS D (24N/MM.^{2}) UNLESS OTHERWISE SHOWN.
4. REINFORCING STEEL BARS SHALL BE GRADE SD 295.

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JICA JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	H. Okita	[signature]	16/03/00
DESIGN CHECK	T. Masuzawa	[signature]	18-03-00
SUBMITTED	A. Hiratani	[signature]	21/03/00
APPROVED	P. Viraphanth	[signature]	20/03/00
	S. Tamiyabutra	[signature]	22/03/00

DWG. TITLE:
BOX CULVERT 2.40M.x2.40M.– 2
THAILAND SIDE

Plot date: Mon, 17 Jan 2000 – 18:33:36
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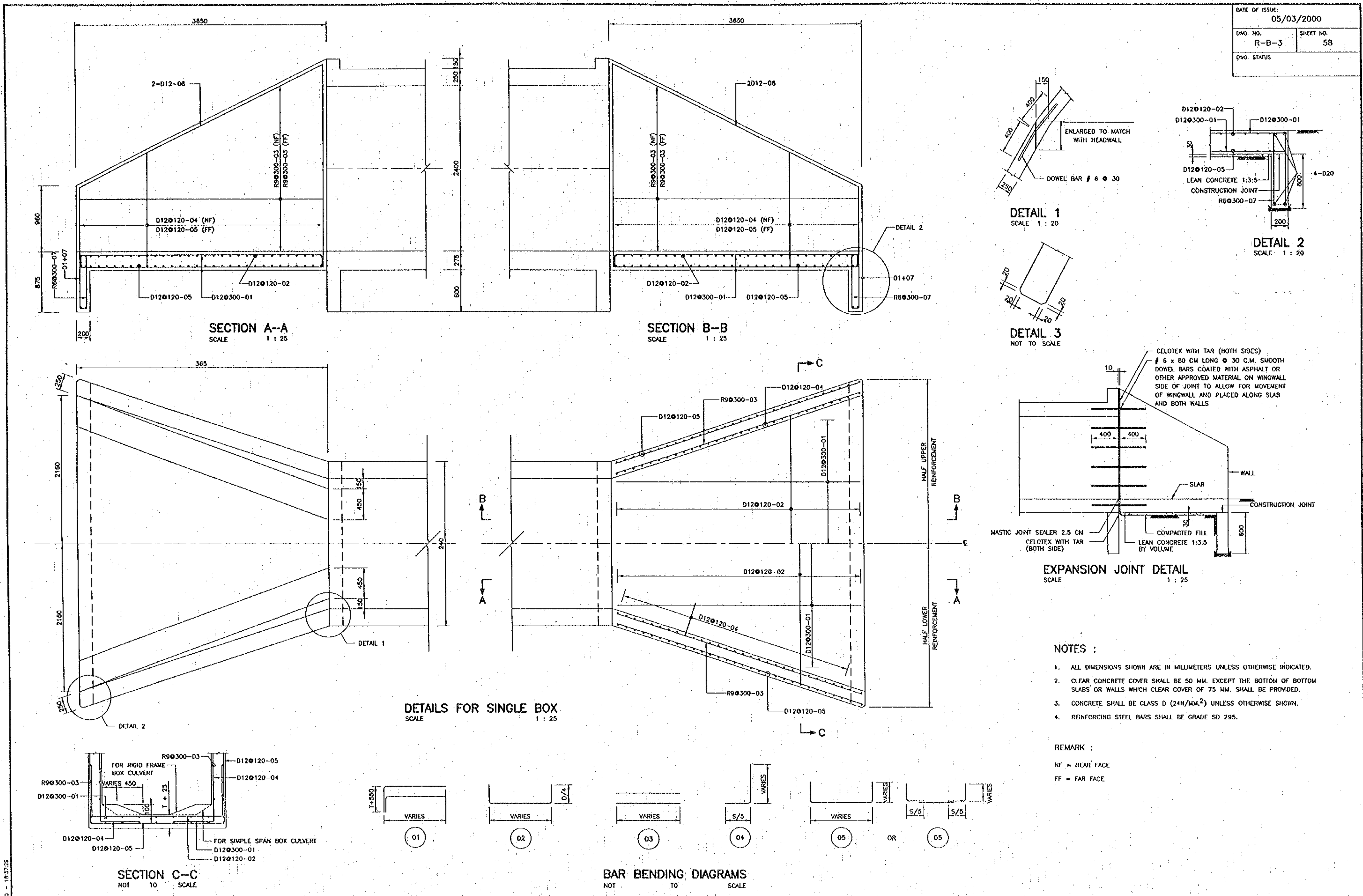


NOTES :

1. ALL DIMENSIONS SHOWN ARE IN MILLIMETERS UNLESS OTHERWISE INDICATED.
2. CLEAR CONCRETE COVER SHALL BE 50 MM. EXCEPT THE BOTTOM OF BOTTOM SLABS OR WALLS WHICH CLEAR COVER OF 75 MM. SHALL BE PROVIDED.
3. CONCRETE SHALL BE CLASS D (24N/MM.^{2}) UNLESS OTHERWISE SHOWN.
4. REINFORCING STEEL BARS SHALL BE GRADE SD 295.

REMARK :

NF = NEAR FACE

FF = FAR FACE

DATE OF ISSUE: 05/03/2000

DWG. NO. R-B-3 | SHEET NO. 58

DWG. STATUS

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM: ORIENTAL CONSULTANTS CO., LTD. in association with NIPPON KOEI CO., LTD.

JAPAN INTERNATIONAL COOPERATION AGENCY

LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION

KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

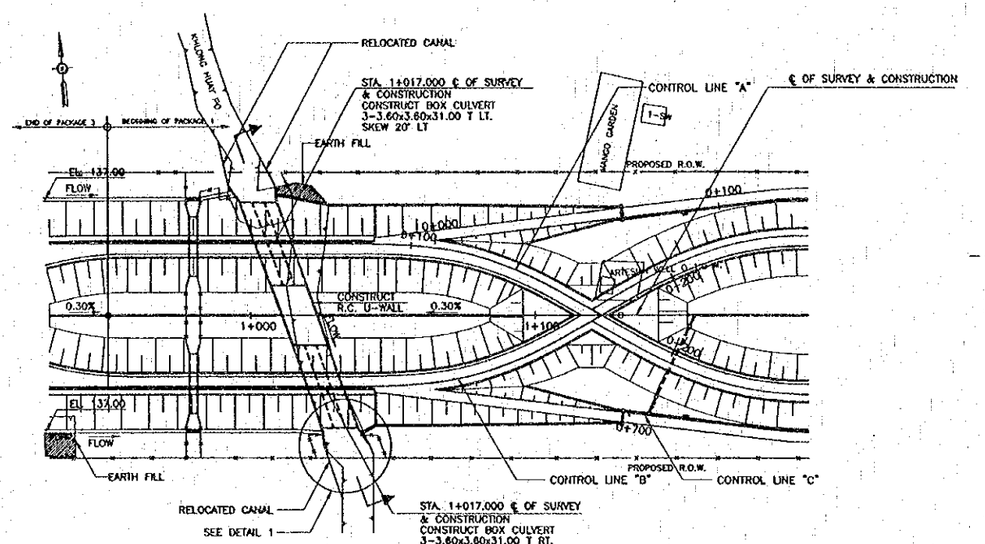
QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	H. Okita		
DESIGN CHECK	I. Mazuzawa		
SUBMITTED	A. Hiratani		
APPROVED	P. Viraphanh		
	S. Tamiyabutra		

DWG. TITLE: BOX CULVERT 2.40M.x2.40M.–3
THAILAND SIDE

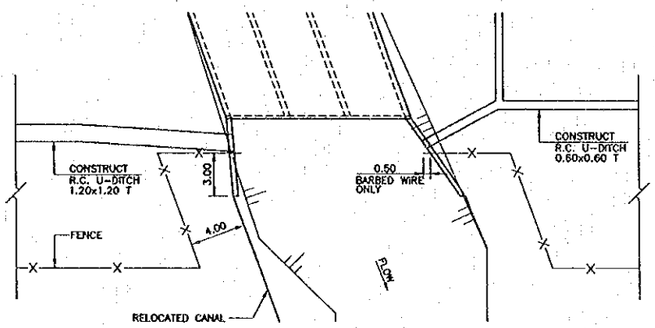
Plot date: Mon, 17 Jan 2000 – 18:37:29

C:\ISMB-NEW\PACKAGE1\BOX\Pk1-b03.dwg

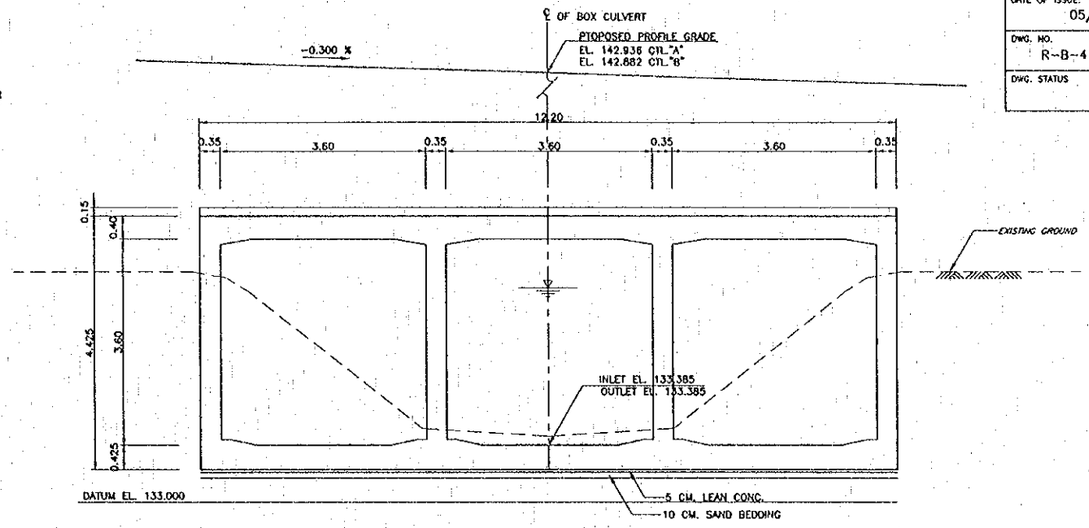
DATE OF ISSUE: 05/03/2000	
DWG. NO. R-B-4	SHEET NO. 59
DWG. STATUS	



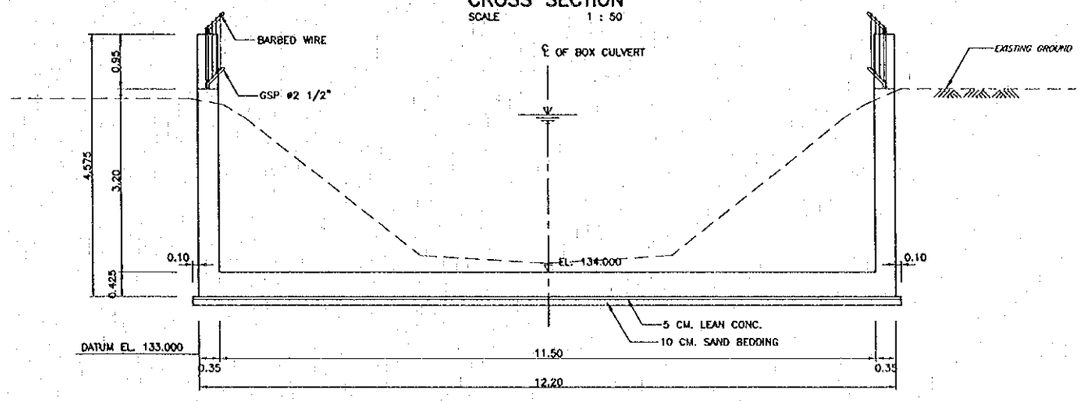
LAYOUT PLAN
SCALE 1 : 1,000



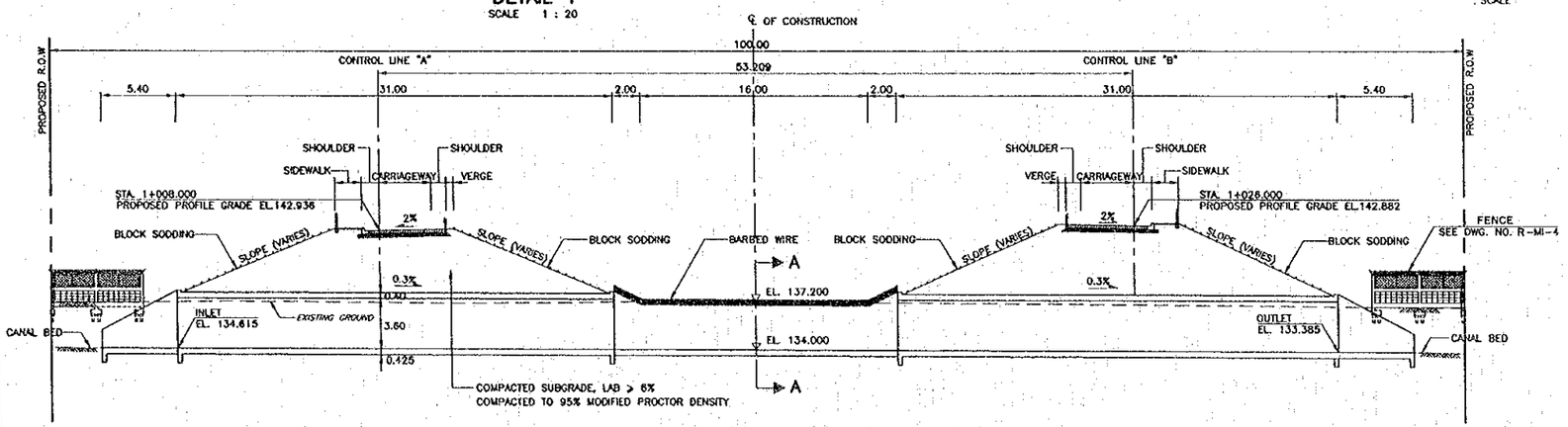
DETAIL 1
SCALE 1 : 20



CROSS SECTION
SCALE 1 : 50



SECTION A – A
SCALE 1 : 50



TYPICAL LONGITUDINAL SECTION
SCALE 1 : 200

GENERAL NOTES FOR CONSTRUCTION OF R.C. BOX CULVERT:

1. ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE INDICATED.
2. THIS DRAWING SHALL BE USED FOR LAYING OUT AND CONSTRUCTION OF STANDARD RIGID FRAME BOX CULVERT.
3. ANY DISCREPANCY BETWEEN DRAWING AND ACTUAL SITUATION AT THE SITE SHALL BE CORRECTED AS DIRECTED BY THE ENGINEER.
4. THE LENGTH OF THE BOX CULVERT SHALL BE AS SHOWN IN THIS DRAWING OR EQUAL TO THE ROADWAY EMBANKMENT MESURED ALONG THE ℄ OF BOX AT ITS TOP.

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JICA JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

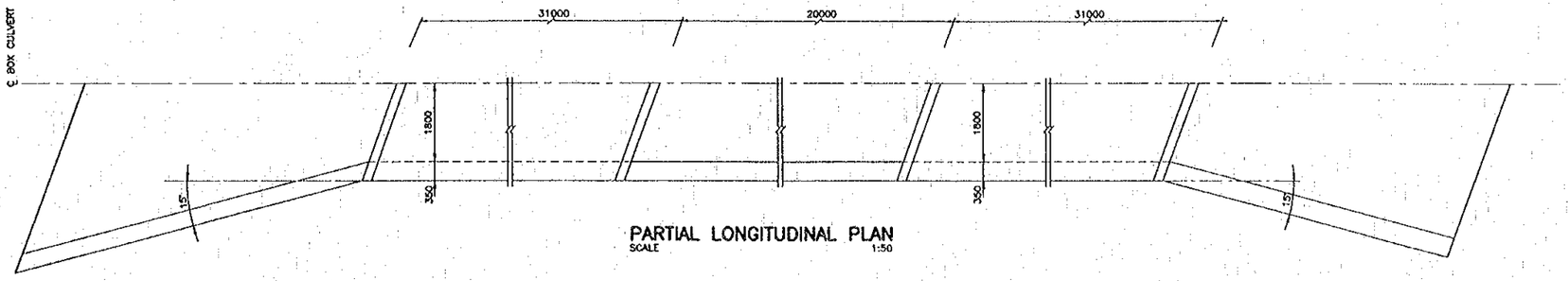
THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	H. Okita		16/02/00
DESIGN CHECK	T. Masuzawa		16/02/00
SUBMITTED	A. Hirotani		21/02/00
APPROVED	P. Viraphanth		28/03/00
	S. Tamiyabutra		28/03/00

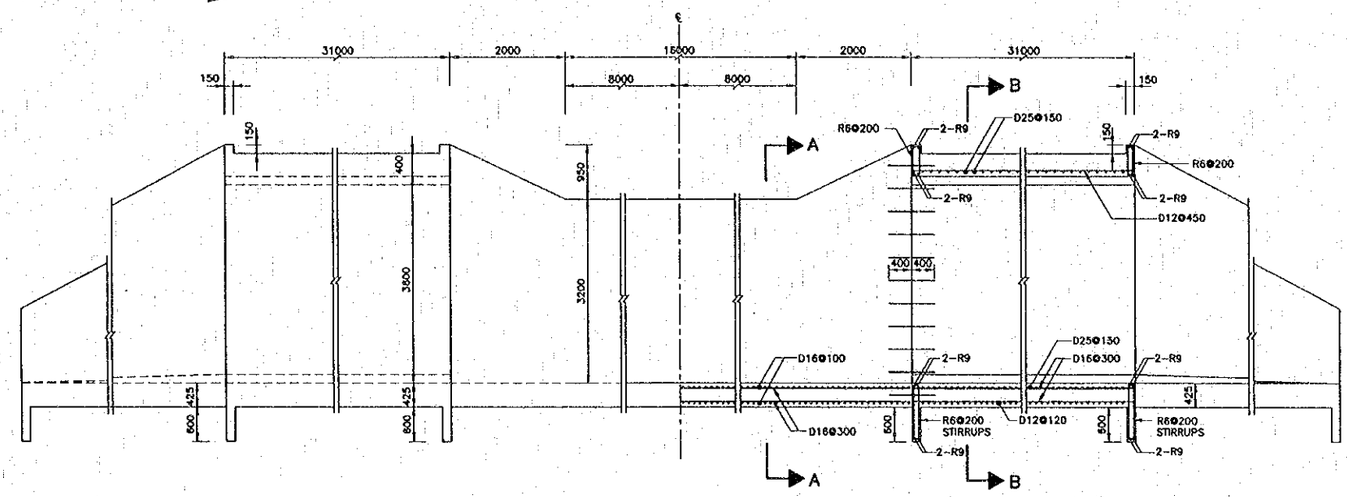
DWG. TITLE:
BOX CULVERT 3x3.60M.x3.60M.-1
THAILAND SIDE

Plot date: Thu, 6 Jan 2000 - 8:41:37
C:\1SMB-NEW\PACKAGE1\BOX\Px1-b04.dwg

DATE OF ISSUE: 05/03/2000	
DWG. NO. R-B-5	SHEET NO. 60
DWG. STATUS	

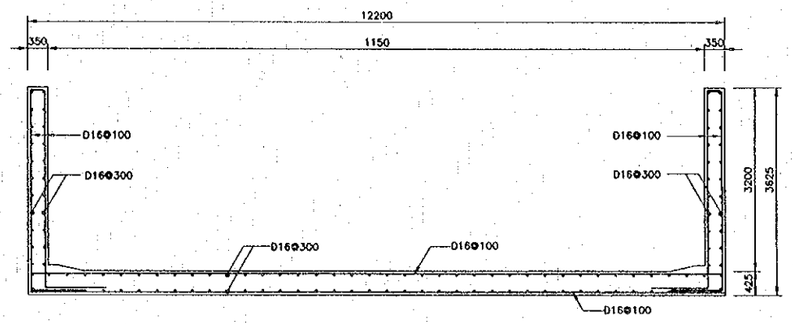


PARTIAL LONGITUDINAL PLAN
SCALE 1:50

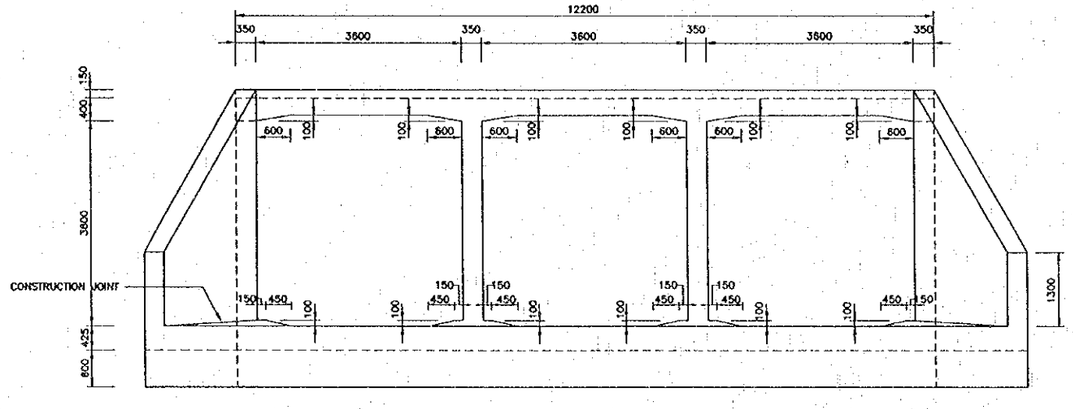


HALF LONGITUDINAL ELEVATION
SCALE 1:50

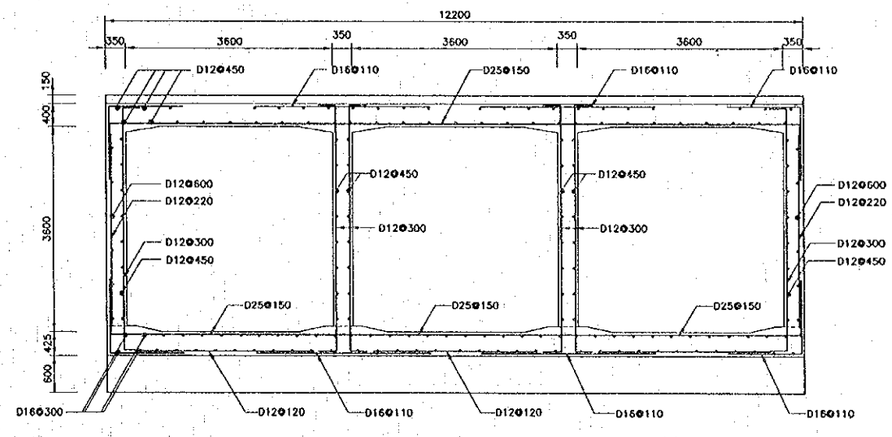
HALF LONGITUDINAL SECTION
SCALE 1:50



SECTION A-A
SCALE 1:50



ELEVATION
SCALE 1:50



SECTION B-B
SCALE 1:50

NOTES :

1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE INDICATED.
2. READ THIS DRAWING IN CONJUNCTION WITH DWG. NO. R-B-6.
3. CONCRETE SHALL BE CLASS D (24N/MM.^{2}) UNLESS OTHERWISE SHOWN.
4. REINFORCING BARS SHALL BE GRADE SD 295.

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JICA JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

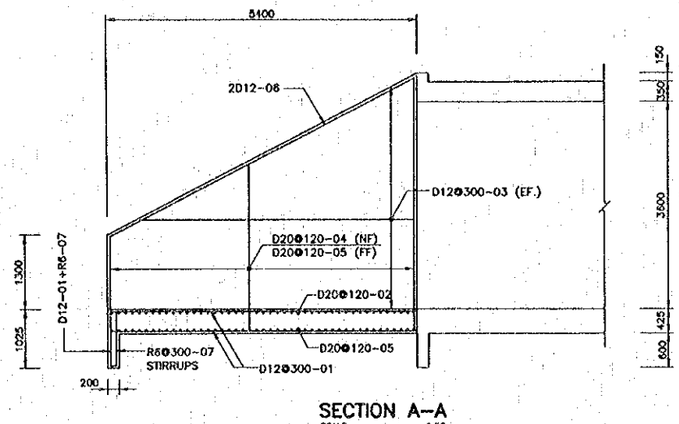
QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	H. Okita		16/02/00
DESIGN CHECK	T. Matsuzawa		16-02-00
SUBMITTED	A. Hirotani		21/2/00
APPROVED	P. Virophanth		23/02/00
	S. Temiyabutra		23/02/00

DWG. TITLE:

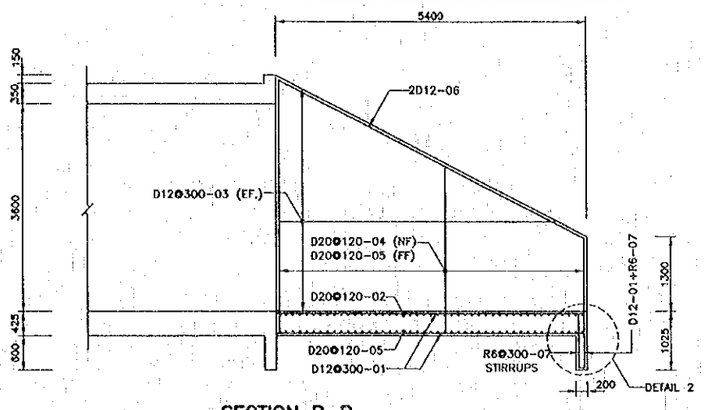
BOX CULVERT 3x3.60M.x3.60M.-2
THAILAND SIDE

Plot date: Tue, 18 Jan 2000 - 13:53:03
C:\1SMR-NEW\PACKAGE1\BOX\Pkt-b05.dwg

DATE OF ISSUE: 05/03/2000	
DWG. NO. R-B-6	SHEET NO. 61
DWG. STATUS	

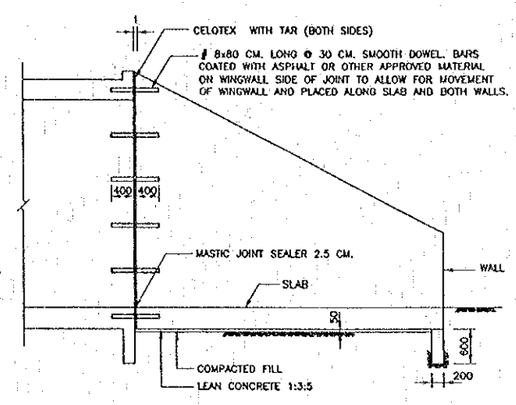


SECTION A-A
SCALE 1:50

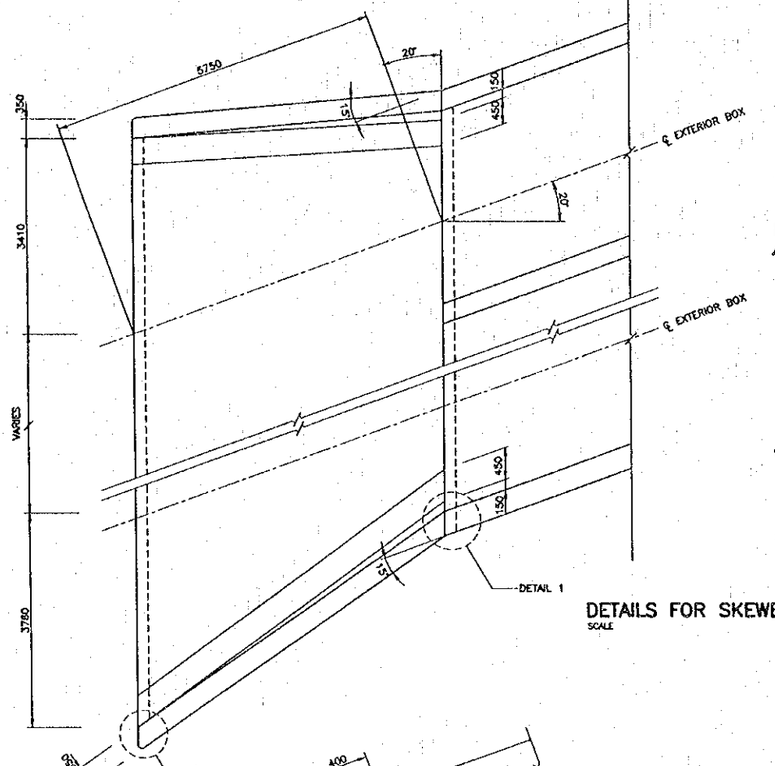


SECTION B-B
SCALE 1:50

REMARK :
1. EF = EACH FACE
2. NF = NEAR FACE
3. FF = FAR FACE

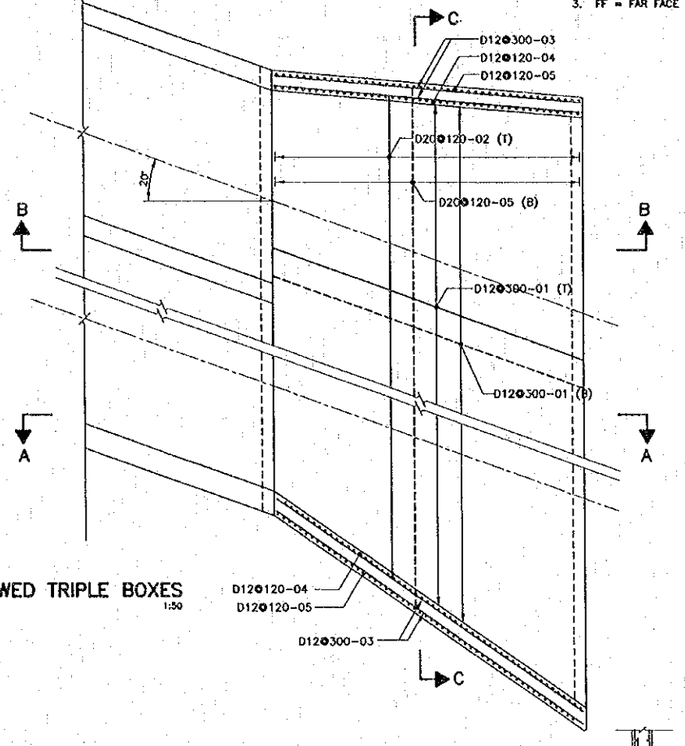


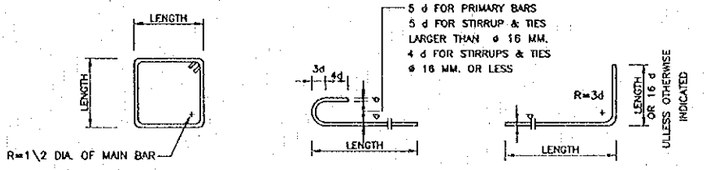
EXPANSION JOINT DETAIL
SCALE 1:50

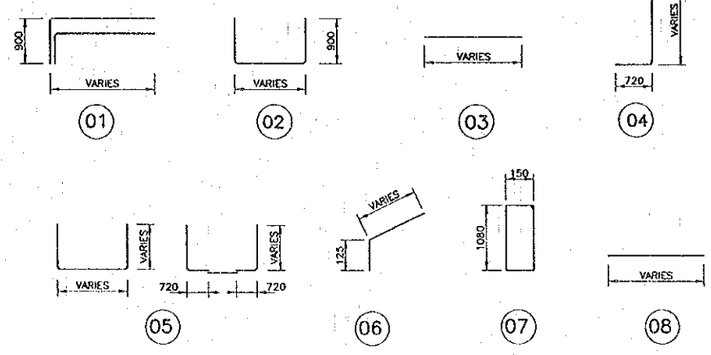


DETAILS FOR SKEWED TRIPLE BOXES
SCALE 1:50

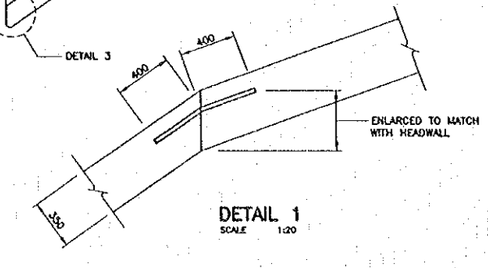
DETAIL 1
SCALE 1:20



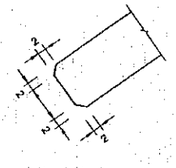




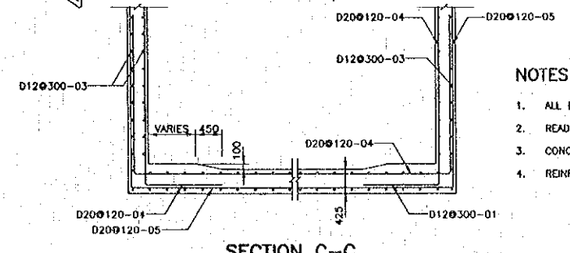
BAR BENDING DIAGRAMS
SCALE 1:50



DETAIL 2
SCALE 1:20



DETAIL 3
NOT TO SCALE



SECTION C-C
SCALE 1:50

NOTES :
1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISED INDICATED.
2. READ THIS DRAWING IN CONJUNCTION WITH DWG. NO. R-B-5.
3. CONCRETE SHALL BE CLASS D (24N/mm^2) OTHERWISE SHOWN.
4. REINFORCING BARS SHALL BE GRADE SD 295.

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JICA JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

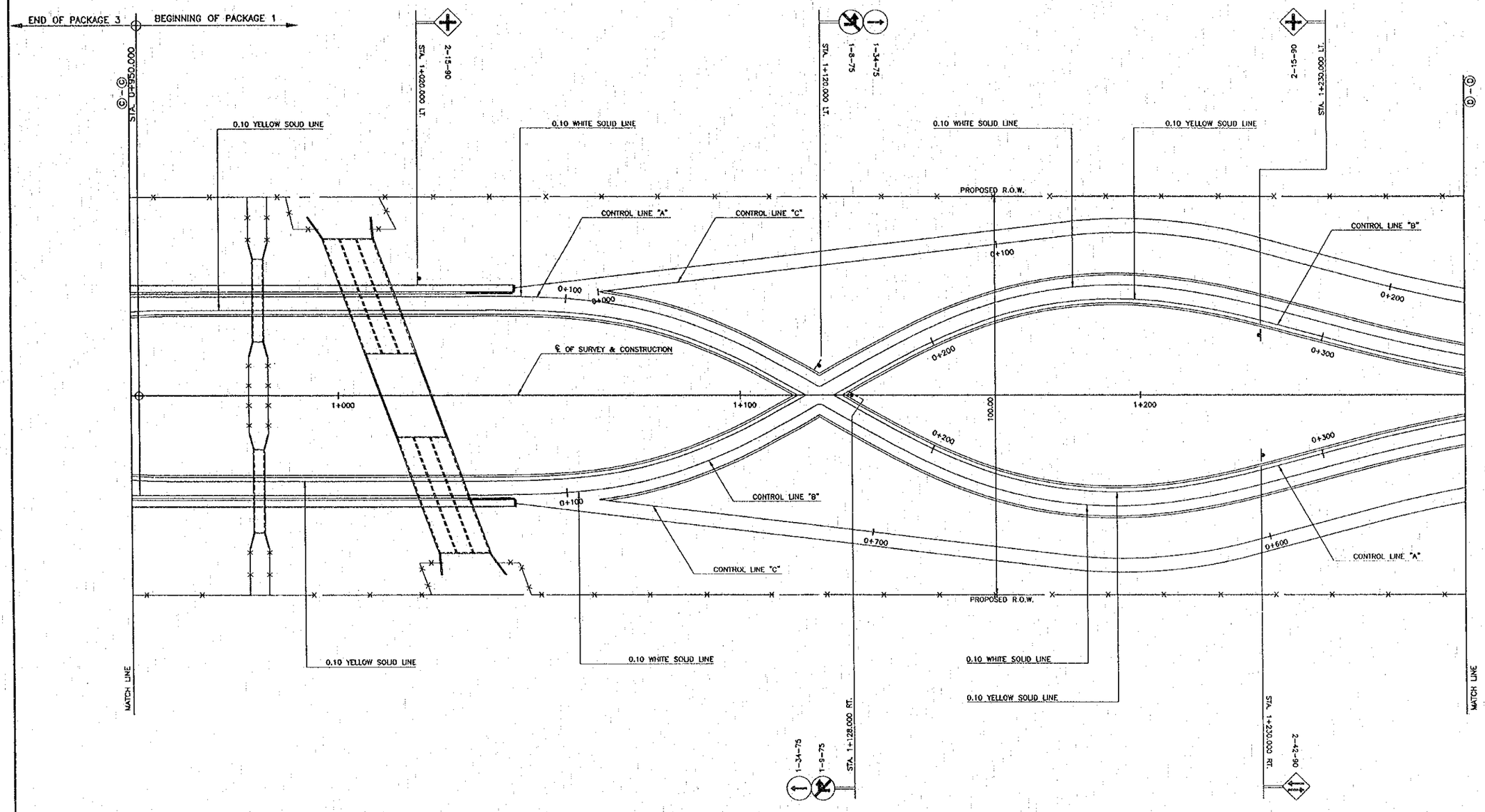
THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	H. Okita		4/12/00
DESIGN CHECK	T. Masuzawa		4/12/00
SUBMITTED	A. Hirotani		4/12/00
APPROVED	P. Viraphanh		22/12/00
	S. Tamiyabutra		22/12/00

DWG. TITLE:
BOX CULVERT 3x3.60M.x3.60M.-3
THAILAND SIDE

Plot Date: Tue, 18 Jan 2000 - 13:54:41
C:\1SMB-NEW\PACKAGE1\BOX\Pk1-b06.dwg

DATE OF ISSUE: 05/03/2000	
DWG. NO. R-T-1	SHEET NO. 62
DWG. STATUS	



REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JICA JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	H. Okita		16/03/00
DESIGN CHECK	T. Maruiama		20/3/00
SUBMITTED	A. Hirotani		21/3/00
APPROVED	P. Wrophanth		22/03/00
	S. Tamiyabutra		22/03/00

DWG. TITLE:
TRAFFIC SIGN AND PAVEMENT MARKING LAYOUT PLAN-1
THAILAND SIDE

Plot date: Mon, 17 Jan 2000 - 12:59:56
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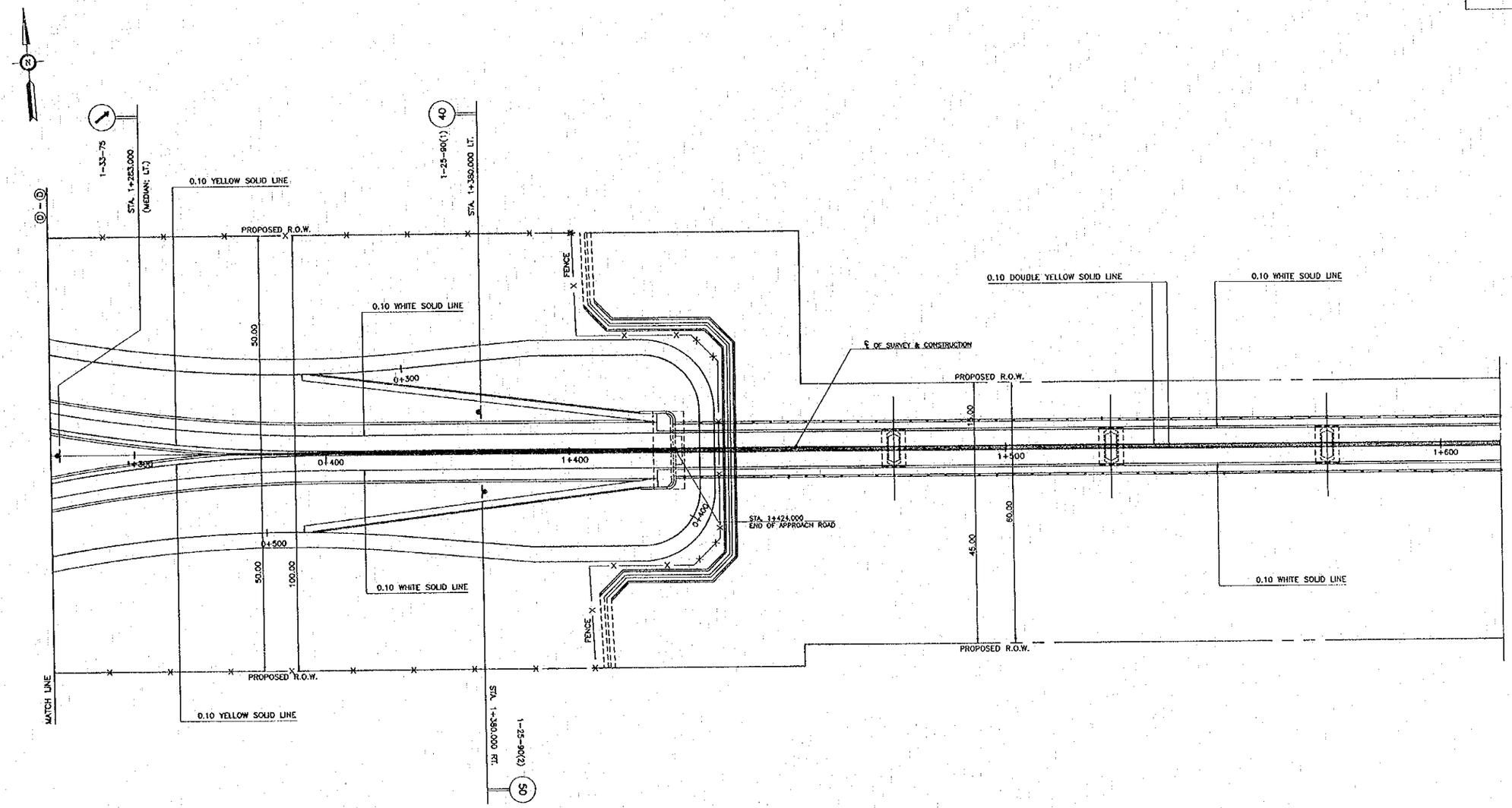
DATE OF ISSUE: 05/03/2000	
DWG. NO. R-T-2	SHEET NO. 63
DWG. STATUS	



REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM

ORIENTAL CONSULTANTS CO., LTD.

in association with

NIPPON KOEI CO., LTD.

JAPAN INTERNATIONAL COOPERATION AGENCY

LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION

KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	H. Okita		4/03/00
DESIGN CHECK	T. Matsuzawa		6/03/00
SUBMITTED	A. Hirotani		7/03/00
APPROVED	P. Vraphanh		22/02/00
	S. Temiyabutra		23/03/00

DWG. TITLE:

TRAFFIC SIGN AND PAVEMENT MARKING LAYOUT PLAN-2

THAILAND SIDE

Plot date: Mon, 17 Jan 2000 - 13:03:55

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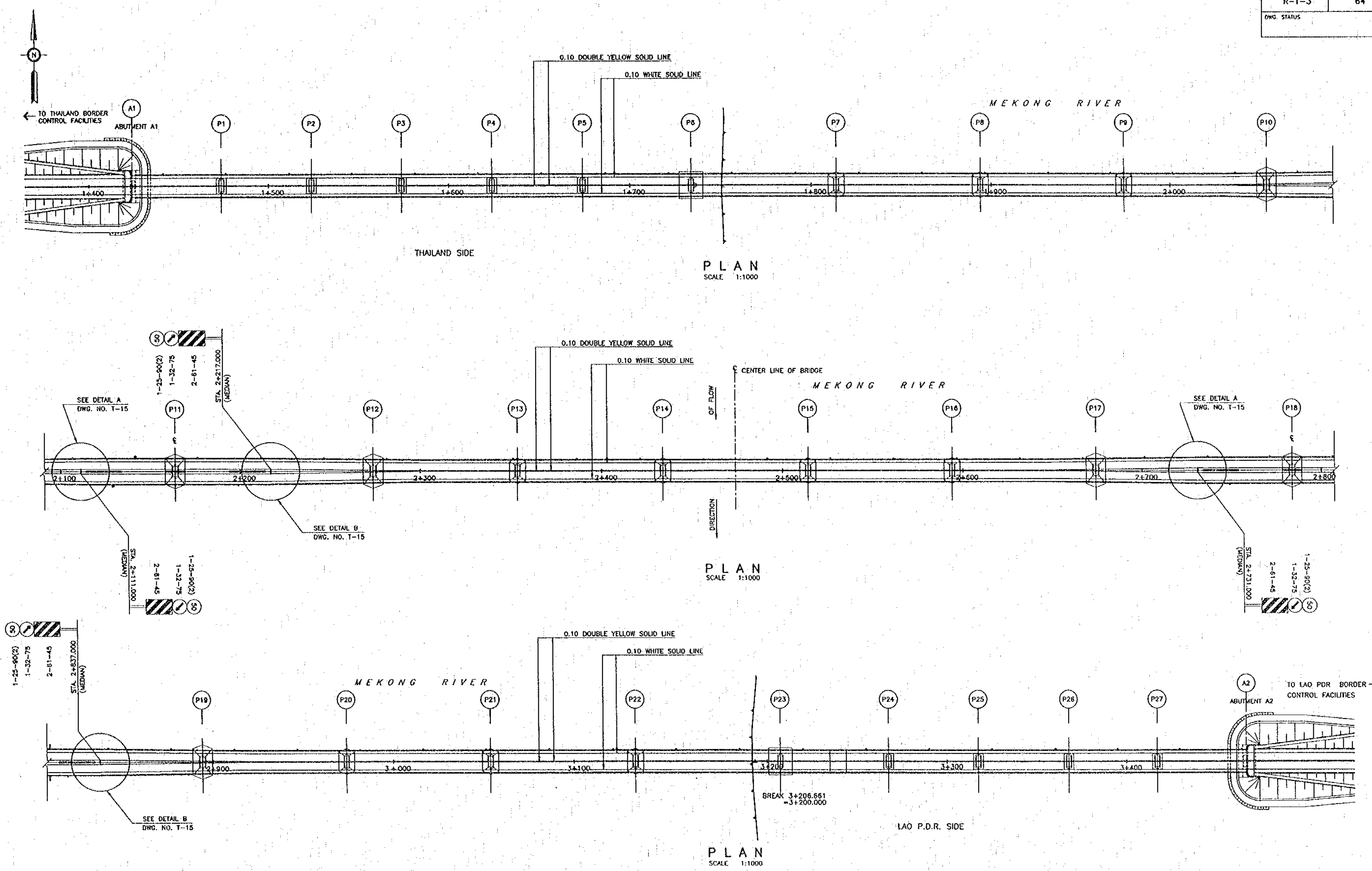
DATE OF ISSUE: 05/03/2000
DWG. NO. R-T-3
SHEET NO. 64
DWG. STATUS



REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JICA JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	H. Okita		
DESIGN CHECK	T. Masuzawa		
SUBMITTED	A. Hiratani		
APPROVED	P. Viraphonth		
	S. Temiyabutra		

DWG. TITLE:
TRAFFIC SIGN AND PAVEMENT MARKING LAYOUT PLAN-3
AT BRIDGE

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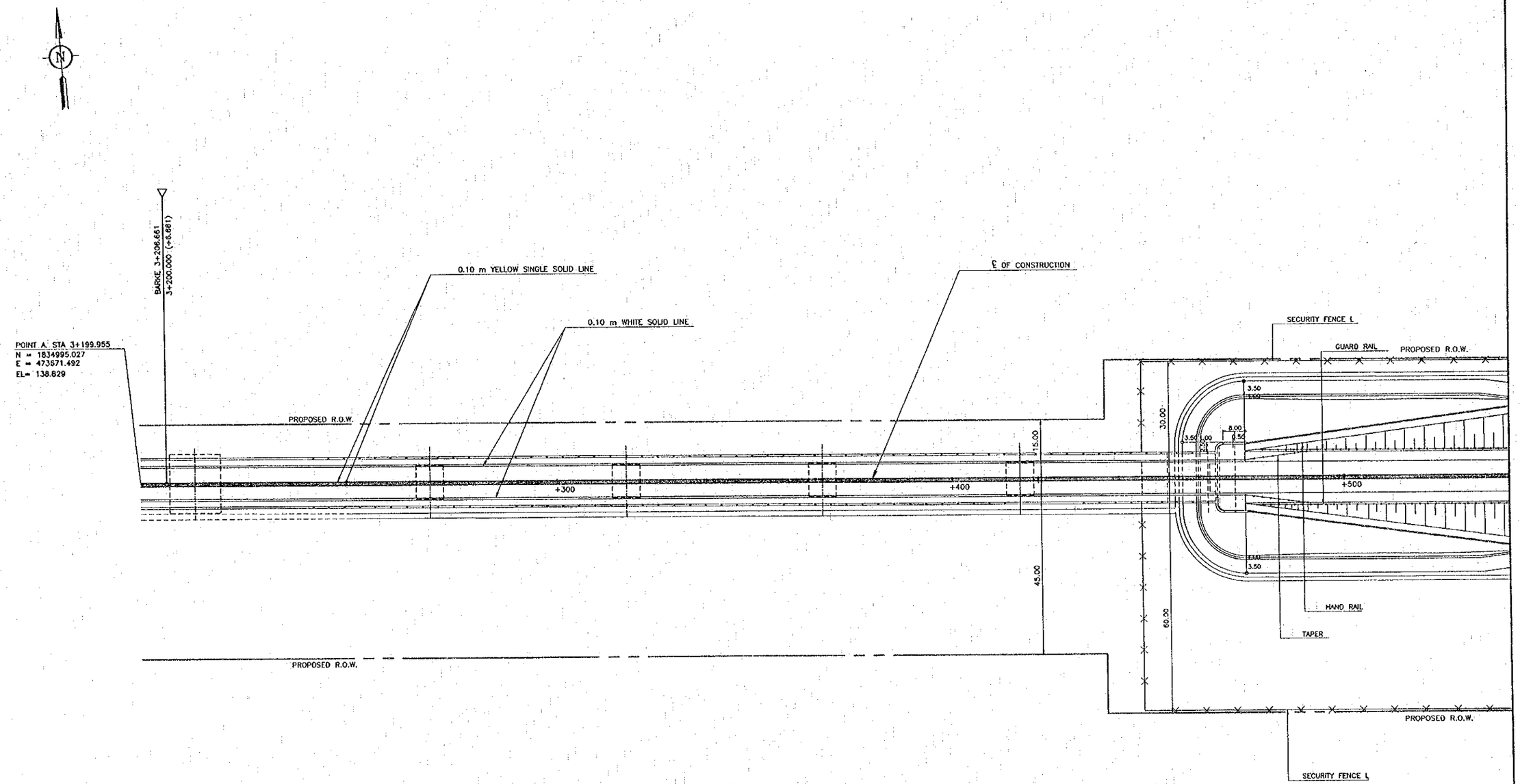
DATE OF ISSUE: 05/03/2000	
DWG. NO. R-T-4	SHEET NO. 65
DWG. STATUS	



REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM

ORIENTAL CONSULTANTS CO., LTD.

in association with

NIPPON KOEI CO., LTD.

JICA JAPAN INTERNATIONAL COOPERATION AGENCY

LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION

KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	H. Ohita		4/12/00
DESIGN CHECK	T. Masuzawa		18/12/00
SUBMITTED	A. Hirotani		21/12/00
APPROVED	P. Viraphanth		27/12/00
	S. Temiyabutra		22/12/00

DWG. TITLE:

TRAFFIC SIGN AND PAVEMENT MARKING LAYOUT PLAN – 4

STA 3+199.955.000 – 3+560.000
LAO PDR SIDE

C:\LAOS\PACKAGE1\TRAFFIC\PK1-104L.dwg

DATE OF ISSUE: 05/03/2000
DWG. NO. R-T-5 | SHEET NO. 66
DWG. STATUS

PACKAGE 1 | PACKAGE 2

PROPOSED R.O.W.

WHITE CHEVROW HATCHING

OVERTAKING PROHIBITED R 9-1

RESTRICRED STOPPING AND PARKING R 7-7

PRIORITY TO BE GIVEN TO VEHICLES COMING IN THE OPPOSITE DIRECTION R 12-1

MANDATORY MOVEMENT R 17-6L

0.10 WHITE SOLID LINE

GENERAL PARKING I 20-1

GENERAL PARKING I 20-1

LEFT DIRECTION OR RIGHT TO BE FOLLOWED R 16-1

YELLOW AND WHITE REFLECTIVE PAINTING

0.10 WHITE BROKEN LINE 4.00m LONG . 8.00m CAP

BLACK AND WHITE PAINTING

STOP R 2-2

R160000

TRUCKS PARKING LOT

7450 | 8550 | 5750 | 6650

5750 | 7700 | 5750

PARKING LOT

GARBAGE

Car Inspection area

BEGINNING OF BORDER CONTROL FACILITY
STA. 3+645.000

STA. 3+645.000

SECURITY FENCE L

GUARD RAIL

WHITE CHEVROW HATCHING

MANDATORY MOVEMENT R 17-6R

CONTROL GATE

2000 | 5000 | 7000

7000

BUS STOP

R4360.24

R5450

R5460

C

FLAG POLE

PARKING LOT

TO MEKONG BRIDGE

+600 | +700 | +800 | +900

500 | 7000 | 3000 | 7000 | 500 | 2000

500 | 7000 | 3000 | 2000 | 500

CHECK POINT

TRUCKS PARKING LOT

5500 | 7000 | 5500 | 6250 | 8000 | 6250 | 4300

TRUCKS PARKING LOT

WHITE CHEVROW HATCHING

YELLOW CROSS HATCHING

BLACK AND WHITE PAINTING

WATER RECEIVING TANK

GUARD RAIL

RESTRICRED STOPPING OR WAITING R 7-8

MANDATORY MOVEMENT R 17-2

MANDATORY MOVEMENT R 17-1R

0.10 WHITE SOLID LINE

BLACK AND WHITE PAINTING

0.10 WHITE SINGLE BROKEN LINE 4.00m LONG . 8.00m CAP

YELLOW CROSS HATCHING

SECURITY FENCE L

0.10 DUBLE YELLOW SOLID LINE

ARRIVAL
LAO P.D.R
SAVANNAKHET
OVERHANGING SIGN
S-2 (2)

GENERAL PARKING ON LEFT
I 20-2

CAR | BUS | TRUCK
OVERHANGING SIGN
S-2 (1)

RESTRICRED STOPPING AND PARKING R 7-7

MANDATORY MOVEMENT R 17-3

0.10 WHITE BROKEN LINE 4.00m LONG . 8.00m CAP

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JICA JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	H. Okita		16/03/00
DESIGN CHECK	T. Masuzawa		16-03-00
SUBMITTED	A. Hiratani		
APPROVED	P. Viraphanth		27/04/00
	S. Temiyabutra		27/04/00

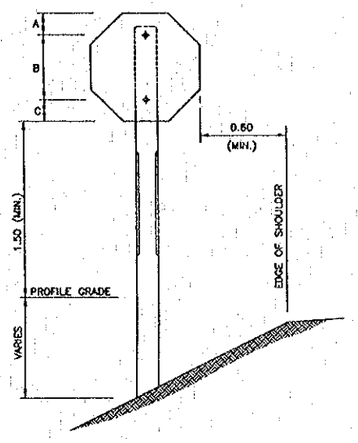
DWG. TITLE:

TRAFFIC SIGN AND ROAD MARKING

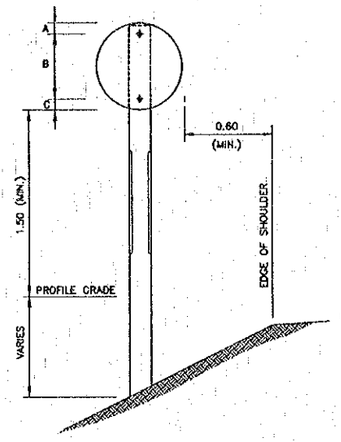
STA 3+560.00 – 3+950.00

G:\LAOS\PACKAGE1\TRAFFIC\PK1-105L.dwg

DATE OF ISSUE: 05/03/2000	
DWG. NO. R-T-6	SHEET NO. 67
DWG. STATUS	



REGULATORY SIGN



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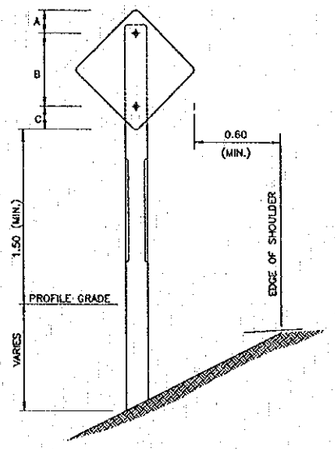
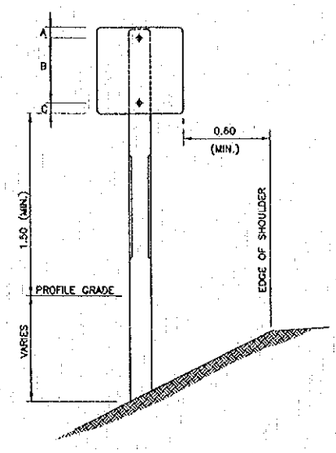
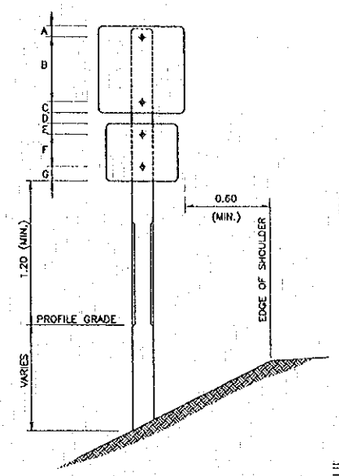
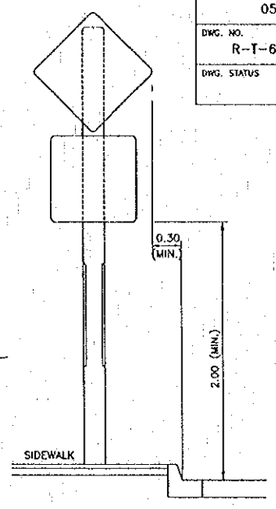


WARNING SIGN

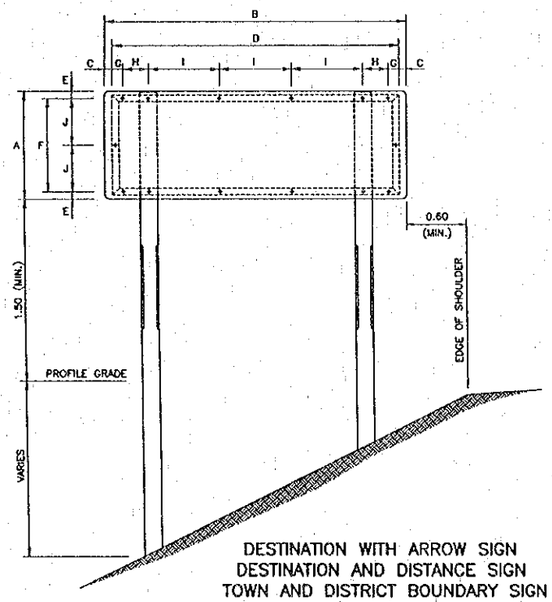


ROUTE MARKER

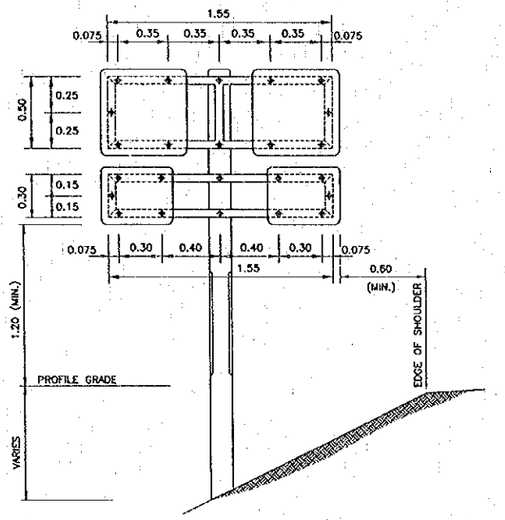




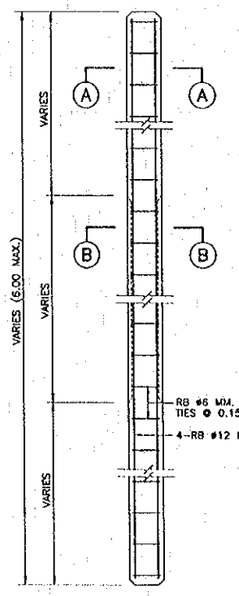
ROUTE TURN ASSEMBLIES TYPE I
OR DIRECTIONAL ASSEMBLIES



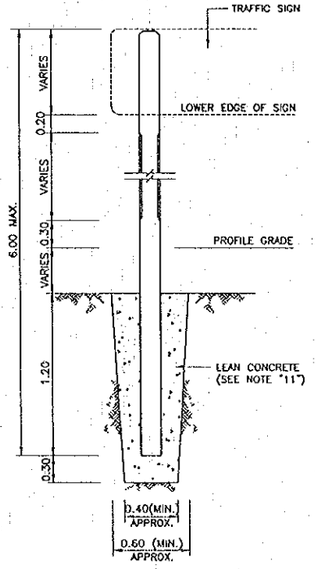
DESTINATION WITH ARROW SIGN
DESTINATION AND DISTANCE SIGN
TOWN AND DISTRICT BOUNDARY SIGN
WITH THAI AND ENGLISH WORDS
OR THAI WORDS ONLY



ROUTE TURN ASSEMBLIES TYPE II



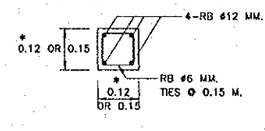
REINFORCED CONCRETE POST DETAIL
NOT TO SCALE



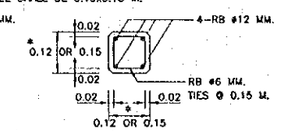
SIGN POST INSTALLATION DETAIL
NOT TO SCALE

TYPICAL SIGN INSTALLATION AT SIDEWALK

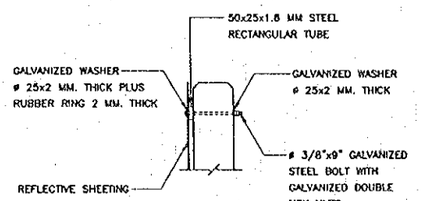
* SIZE OF POST SHALL BE 0.12X0.12 M. FOR SINGLE POST AND TWIN POST WITH TOTAL AREA OF THE SIGN PLATES IS NOT MORE THAN 2 SQ.M. AND 4 SQ.M. RESPECTIVELY OR OTHERWISE THE SIZE SHALL BE 0.15x0.15 M.



SECTION (A) – (A)
NOT TO SCALE



SECTION (B) – (B)
NOT TO SCALE



TYPICAL FIXING OF SIGN PLATE

TABLE I POSITION OF HOLES FOR FIXING SIGN PLATES TO SIGN POST

DIMENSION	REGULATORY SIGN SIZES (CM.)			WARNING SIGN SIZES (CM.)			ROUTE MARKER (CM.)			ROUTE TURN ASSEMBLIES TYPE I & TYPE II (CM.)		
	60	75	90	60	75	90	60	75	90	60	75	90
A	7.5	15	15	20	20	20	7.5	7.5	7.5	7.5	7.5	7.5
B	45	45	60	45	68.5	90	45	60	75	45	60	75
C	7.5	15	15	20	17.5	17.5	7.5	7.5	7.5	7.5	7.5	7.5
D							7.5	7.5	7.5	7.5	7.5	7.5
E							7.5	7.5	7.5	7.5	7.5	7.5
F							22.5	35	45	22.5	35	45
G							10	7.5	7.5	10	7.5	7.5

TABLE II POSITION OF HOLES FOR FIXING SIGN PLATES TO SIGN POST

SIGN SIZE (CM.)		DIMENSION (CM.)								REMARKS
WIDTH A	LENGTH B	C	D	E	F	G	H	I	J	
75	210	5	200	5	65	7.5	17.5	50	32.5	DESTINATION WITH ARROW
90	240	20	200	12.5	65	7.5	17.5	50	32.5	SIGN , THAI & ENGLISH WORDS
60	210	5	200	5	50	7.5	17.5	50	25	DESTINATION WITH ARROW
75	240	20	200	12.5	50	7.5	17.5	50	25	SIGN , THAI WORDS ONLY
75	180	5	170	5	65	7.5	17.5	40	32.5	DESTINATION AND DISTANCE
90	180	5	170	12.5	65	7.5	17.5	40	32.5	SIGN , THAI & ENGLISH WORDS
60	180	5	170	5	50	7.5	17.5	40	25	DESTINATION AND DISTANCE
75	180	5	170	12.5	50	7.5	17.5	40	25	SIGN , THAI ONLY
65	180	5	170	5	55	7.5	17.5	40	27.5	TOWN & DISTRICT BOUNDARY
80	180	5	170	12.5	55	7.5	17.5	40	27.5	SIGN , THAI & ENGLISH WORDS

NOTES :

1. ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE INDICATED.
2. SIGN PLATE SHALL BE MADE OF 2 MM. THICK ALLUMINIUM ALLOY.
3. ALLUMINIUM ALLOY SIGN PLATE SHALL CONFORM TO TIS. 331
4. UNLESS OTHERWISE INDICATED , SIGN AND THEIR SUPPORTS SHALL BE OF THE SIZES , COLORS AND TYPES PRESCRIBED BY , AND SITE IN ACCORDANCE WITH THE RECOMMENDATIONS OF, THE DEPARTMENT'S TRAFFIC CONTROL DEVICE MANUAL , PAST I ISSUED B.E. 2531
5. REFLECTIVE SHEETING SHALL CONFORM TO TIS.606 TYPE 1 (ESEFFICIENT OF RETRO-REFLECTION LEVEL 1)
6. SIGN FRAME SHALL BE MADE OF 50x25x1.6 MM. STEEL RECTANGULAR TUBING FRAME WELDED AND SMOOTHED IN PRIMING PAINT FOR FRAME SHALL BE RUST PREVENTIVE PAINT (RED LEAD BASED PRIMERD FOR IRON AND STEEL SURFACED , TYPE 3) WHICH CONFORMS TO TIS.389; THE SUCCEEDING COATING SHALL BE PAINTED WITH BLACK METAL PAINT.
7. LENGTH OF SIGN POSTS AND POSITIONS OF HOLES STATED IN THE DRAWING ARE FOR THE MIN. SIZE ONLY THESE LENGTHS AND POSITION OF HOLES SHALL BE ADJUSTED DEPENDING ON SITE CONDITIONS.
8. PORTION OF CONCRETE POST FROM GROUND LINE TO THE ELEVATION OF 20 CM. ABOVE FINISHED ROADWAY PROFILE SHALL BE PAINTED IN BLACK AND ALL OTHER PART SHALL BE PAINTED IN WHITE.
9. BACK OF SIGN , CLOSE TO EDGE OF PAVEMENT SIDE , SHALL BE STAMPED WITH DEPTH NOT LESS THAN 0.5 MM.
10. CONCRETE SHALL BE CLASS D ($24N/mm^2$) OTHERWISE SHOWN.
11. LEAN CONCRETE FOR SIGN POST BASE SHALL HAVE A PROPORTION OF CEMENT : SAND : AGGREGATE 1:3:6 BY VOLUME AND A CONCRETE SLUMP OF 10 CM.(MAX.)
12. CLEAR CONCRETE COVER SHALL BE 2.5 CM.
13. REINFORCING STEEL BARS SHALL BE GRADE SR 235 FOR ROUND BAR.

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG
INTERNATIONAL BRIDGE
CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	H. Okita		05/03/00
DESIGN CHECK	T. Masuzawa		05-03-00
SUBMITTED	A. Hirotani		05-03-00
APPROVED	P. Viraphanh		23/03/00
	S. Temiyabutra		23/03/00

DWG. TITLE:

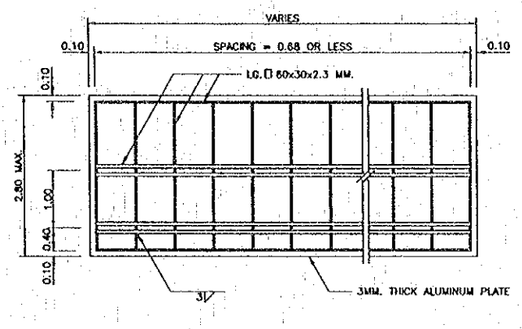
MINOR SIGN & SIGN POST DETAILS

THAILAND SIDE

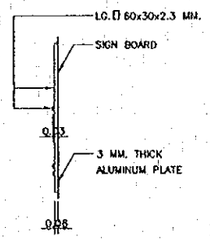
Plot date: Mon, 17 Jan 2000 - 13:21:58

C:\15MB-NEW\PACKAGE1\SIGN\Pk1-106.dwg

DATE OF ISSUE: 05/03/2000	
DWG. NO. R--T--7	SHEET NO. 68
DWG. STATUS	

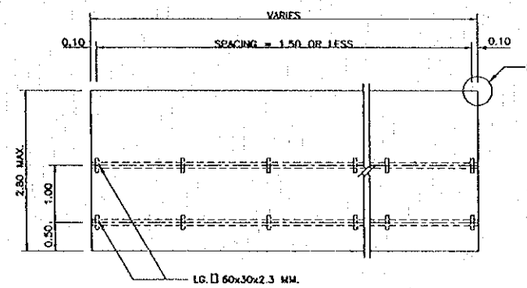


FRONT VIEW

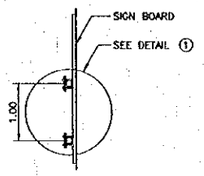


SIDE VIEW

TYPICAL SIGN FRAME
SCALE 1:50

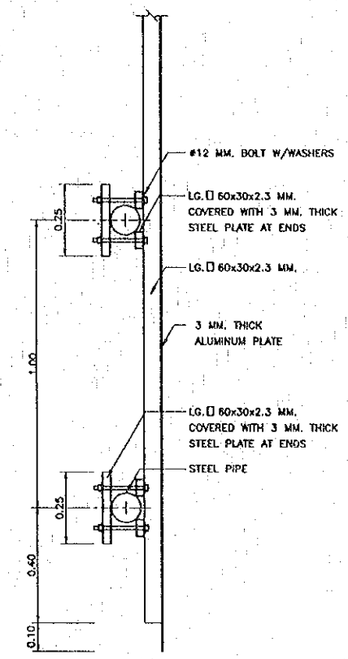


FRONT VIEW

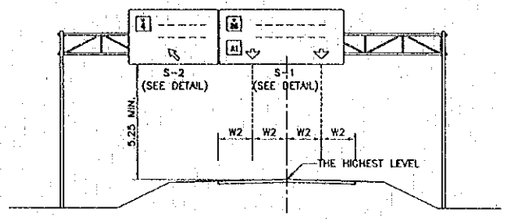


SIDE VIEW

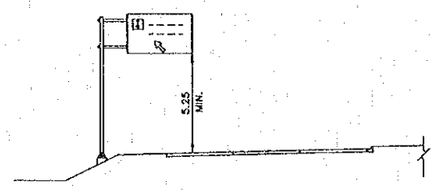
ERECTION FOR SIGN BOARD
SCALE 1:50



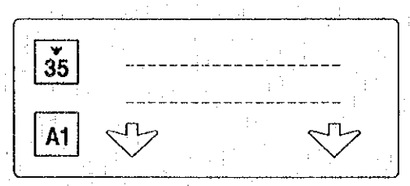
DETAIL ①
SCALE 1:10



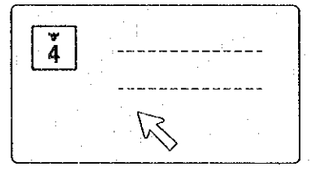
SECTION FOR OVERHEAD TRAFFIC SIGN
NOT TO SCALE



SECTION FOR OVERHANGING TRAFFIC SIGN
NOT TO SCALE



DETAIL "S-1"



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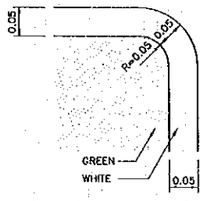
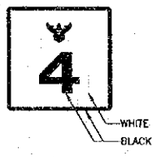
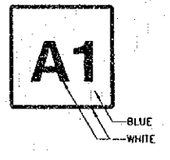


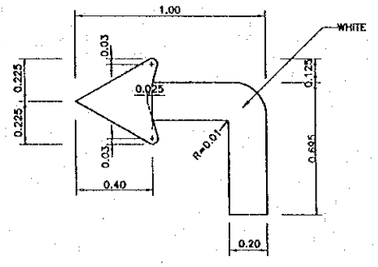
DETAIL ②
SCALE 1:5



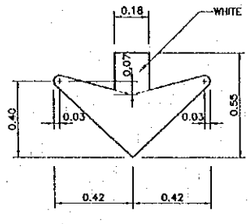


NOTES :

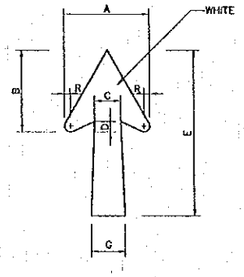
1. ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE INDICATED.
2. LIGHT GAUGE STEEL (LG.) OF SIGN FRAME SHALL BE CONNECTED TOGETHER WITH 3 MM. WELD.
3. ALL STEEL AND BOLT ASSEMBLY SHALL BE GALVANIZED ZINC COATING SHALL NOT BE LESS THAN 550 GRAMS PER SQUARE METER.
4. OVERHEAD SIGN BOARD SHALL BE OF ALUMINUM PLATE COVERED WITH REFLECTIVE SHEETING CONFORMED TO TIS 606 TYPE 2 (ESEFFICIENT OF RETRO-REFLECTION LEVEL 2)



TURN OFF ARROW
SCALE 1 : 15



VERTICAL DOWN ARROW
SCALE 1 : 15



TURN OFF ARROW
NOT TO SCALE

ALPHABET HEIGHT (CM.)	DIMENSION (CM.)						
	A	B	C	D	E	F	G
20	38	30	9	3	62	1.5	12
25-35	48	35	12	4	75	2	16
40	56	42	14	5	87	2.5	18

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JICA JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	H. Okita		16/6/00
DESIGN CHECK	T. Masuzawa		22/6/00
SUBMITTED	A. Hirotani		
APPROVED	P. Virephanh		22/02/01
	S. Temiyabutra		22/6/00

DWG. TITLE:
OVERHEAD SIGN BOARD DETAILS
THAILAND SIDE

Plot date: Mon, 17 Jan 2000 - 13:23:59

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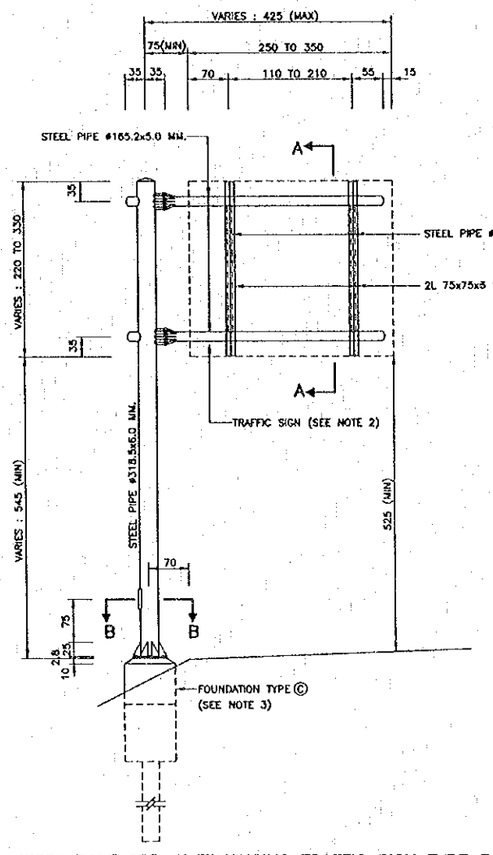
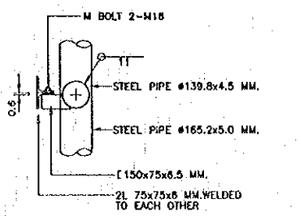
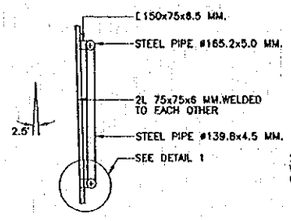
DATE OF ISSUE: 05/03/2000	
DWG. NO. R-T-8	SHEET NO. 69
DWG. STATUS	



STEEL POLE FOR OVERHANGING TRAFFIC SIGN TYPE 3 AT SIDE SLOPE

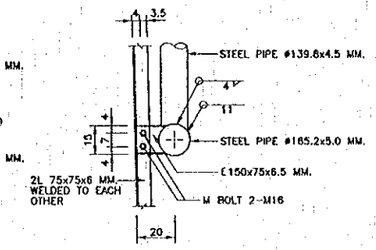
SCALE 1 : 50





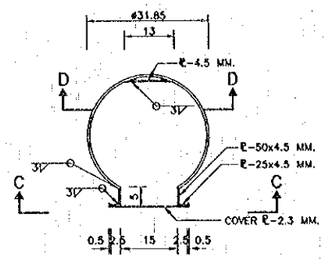
SECTION A-A

SCALE 1 : 50



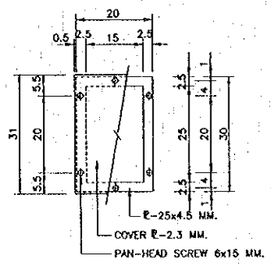
DETAIL 1

SCALE 1 : 15



SECTION B-B

SCALE 1 : 7.5

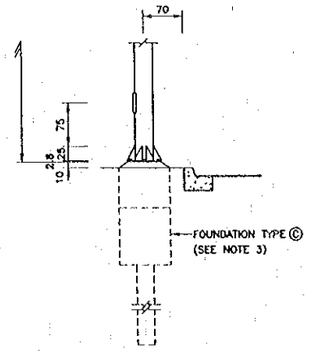


SECTION C-C

SCALE 1 : 7.5

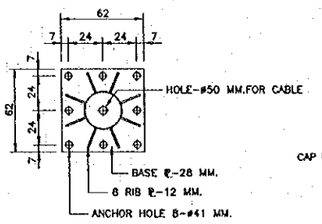
NOTES :

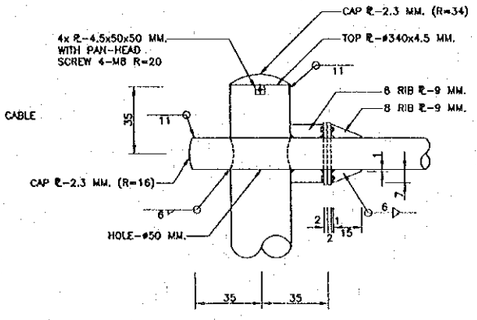
1. DIMENSIONS FOR WELDING SYMBOLS ARE IN MILLIMETERS , ALL OTHER DIMENSIONS ARE IN CENTIMETERS UNLESS OTHERWISE INDICATED.
2. THIS DRAWING SHALL BE USED FOR TRAFFIC SIGNS, WHERE THE AREA OF THE SIGN IS NOT MORE THAN 108,000 SQ.CM THE MAXIMUM LENGTH AND WIDTH OF THE SIGN SHALL NOT EXCEED 350 CM. AND 330 RESPECTIVELY.
3. INCASE OF THE PILES SHALL NOT BE DRIVEN TO THE SOIL OR THE ALLOWABLE SOIL BEARING CAPACITY UNDER THE FOUNDATION MORE THAN 10 TON PER SQUARE METER.
4. THE DIMENSIONS OF STEEL PIPE SHOWN ARE THE OUTER DIAMETER AND THE THICKNESS OF THE PIPE FOR EXAMPLE : ø318.5x6.0 MM. MEANS THE OUTER DIAMETER OF THE PIPE IS 318.5 MM. AND THE THICKNESS IS 6.0 MM.
5. STEEL PIPE SHALL CONFORM TO ONE OF THE FOLLOWING SPECIFICATIONS
   - 5.1 TIS. 107 GRADE HS41
   - 5.2 JIS. G3444 GRADE STK41
   - 5.3 ASTM. A252-75 GRADE 2
6. STRUCTURAL STEEL SECTION SHALL CONFORM TO TIS.116 GRADE Fe 24
7. STEEL PIPE, STRUCTURAL STEEL SECTION, STEEL PLATE, BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED. ZINC COATING SHALL NOT BE LESS THAN 550 GRAMS PER SQUARE METER.
8. ELETRIC ARC WELDING WHICH CONFORMS TO AISC STANDARD SHALL BE USED FOR WELDING STEEL.
9. CANTILEVER BEAM SHALL BE INSTALLED PERPENDICULAR TO THE ROADWAY ALIGNMENT. CAMBER SHALL BE PROVIDED FOR BEAM DEFLECTION.
10. WHERE SIGN LIGHTING IS REQUIRED, THE ELECTRICAL COMPONENTS SHALL CONFORM TO THE ELECTRICITY SUPPLY AUTHORITY'S REQUIREMENTS AND REGULATIONS.
11. THIS DRAWING SHALL BE USED IN COMBINATION WITH DWG. NO. R-T-8.

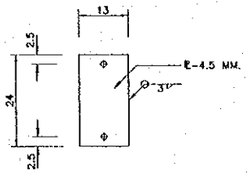


STEEL POLE FOR OVERHANGING TRAFFIC SIGN TYPE 3 AT SIDEWALK OR RAISED MEDIAN

SCALE 1 : 50

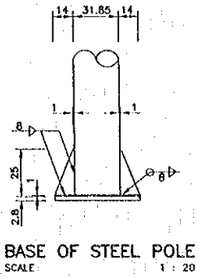






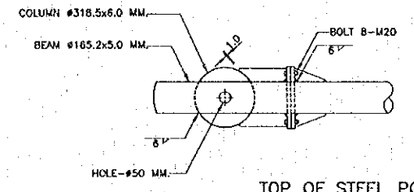
SECTION D-D

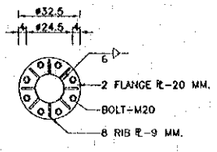
SCALE 1 : 7.5



BASE OF STEEL POLE

SCALE 1 : 20





TOP OF STEEL POLE AND JOINT DETAIL

SCALE 1 : 15

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM

ORIENTAL CONSULTANTS CO., LTD.

In association with

NIPPON KOEI CO., LTD.

JAPAN INTERNATIONAL COOPERATION AGENCY

LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION

KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	H. Okita		4/03/00
DESIGN CHECK	T. Murayama		4/03/00
SUBMITTED	A. Hiratani		/ /
APPROVED	P. Viraphanth		22/03/00
	S. Temiyabutra		22-03-00

DWG. TITLE:

STEEL POLE FOR OVERHANGING TRAFFIC SIGN-1

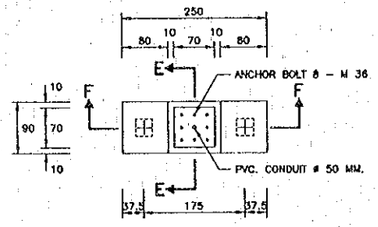
FOR SIGN PLATES NOT MORE THAN 108,000 SQ.CM.-I

THAILAND SIDE

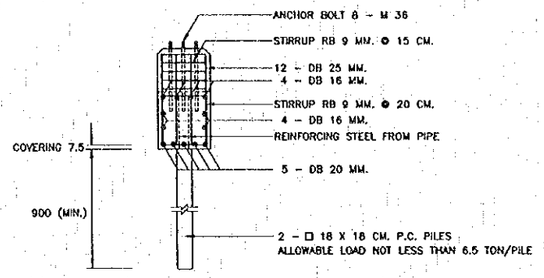
Plot date: Mon, 17 Jan 2000 - 13:26:37

C:\15MD-NEW\PACKAGE1\SIGN\Pk1-R07.dwg

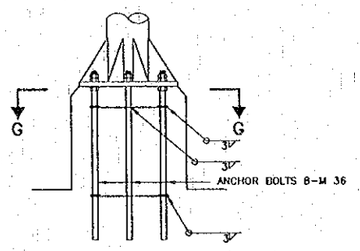
DATE OF ISSUE: 05/03/2000	
DWG. NO. R-T-9	SHEET NO. 70
DWG. STATUS	



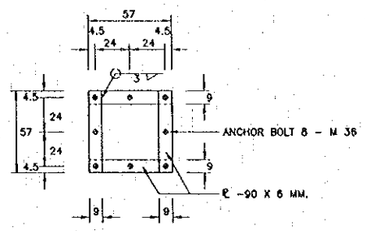
PLAN OF FOUNDATION TYPE C
SCALE 1:50



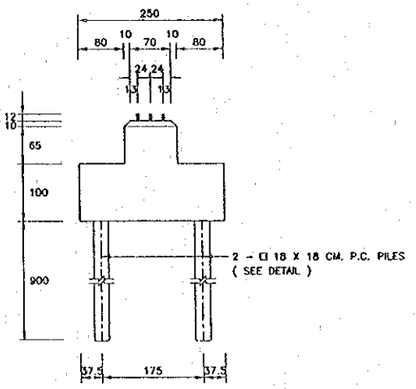
SECTION E - E
SCALE 1:50



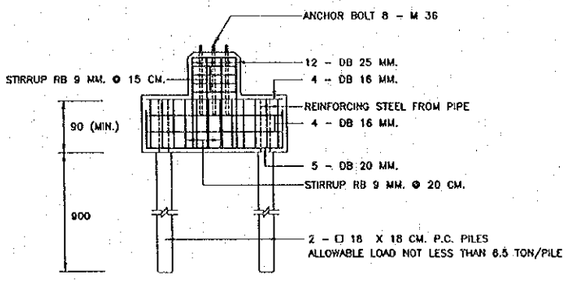
ANCHOR BOLT DETAIL
SCALE 1:20



SECTION G - G
SCALE 1:20



SIDE ELEVATION OF FOUNDATION TYPE C
SCALE 1:50



SECTION F - F
SCALE 1:50

NOTES:

1. ALL DIMENSIONS ARE IN CENTIMETERS UNLESS OTHERWISE INDICATED.
2. CONCRETE FOR PRESTRESS CONCRETE PILE SHALL BE CLASS B (30N/mm^2) .
3. CONCRETE FOR FOUNDATION SHALL BE CLASS D (24N/mm^2) .
4. REINFORCING STEEL BARS SHALL BE GRADE SD 295 FOR ROUND BAR.
5. PRESTRESSING WIRE SHALL CONFORM TO TIS.95
6. NORMAL CLEAR CONCRETE COVER SHALL BE 5 CM. BUT FOR FOUNDATION SHALL BE 7.5 CM., UNLESS OTHERWISE INDICATED.
7. THIS DRAWING SHALL BE USED IN COMBINATION WITH DWG. NO. R-T-8.

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

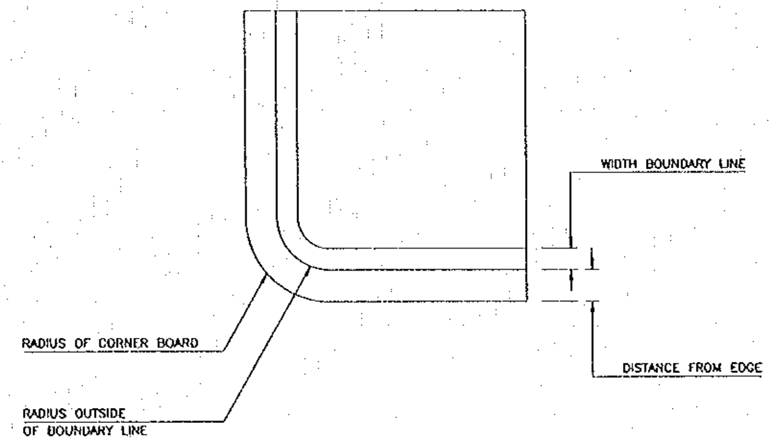
THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	H. Okita		16/02/00
DESIGN CHECK	T. Masuzawa		16/02/00
SUBMITTED	A. Hirotani		16/02/00
APPROVED	P. Viraphanh		17/02/00
	S. Temiyabutra		22/02/00

DWG. TITLE:
STEEL POLE FOR OVERHANGING TRAFFIC SIGN-2
FOR SIGN PLATE NOT MORE THAN 108,000 SQ.CM. - II
THAILAND SIDE

Plot date: Mon, 17 Jan 2000 - 14:34:05
D:\1SMB-NEW\PACKAGE1\SIGN\Pk1-109.dgn

SIGN CODE	SIZE (CM. x CM.)	STANDARD BOUNDARY LINE				REQUIREMENT OF COLORS–REFLECTION			HEIGHT OF TEXT	
		DISTANCE FROM EDGE (CM.)	WIDTH BOUNDARY LINE (CM.)	RADIUS OF CORNER BOARD (CM.)	RADIUS OUTSIDE OF BOUNDARY LINE (CM.)	BACKGROUND	WORDING AND/OR SYMBOL	BOUNDARY LINE OR CROSS LINE	THAI (CM.)	ENGLISH (CM.)
1–8–75	ø 75	–	5.0	–	–	WHITE – REF	BLACK – NON REF	RED – REF	–	–
1–9–75	ø 75	–	5.0	–	–	WHITE – REF	BLACK – NON REF	RED – REF	–	–
1–25–75 (1)	ø 75	–	6.0	–	–	WHITE – REF	BLACK – NON REF	RED – REF	–	30
1–25–75 (2)	ø 75	–	6.0	–	–	WHITE – REF	BLACK – NON REF	RED – REF	–	30
1–32–75	ø 75	–	5.0	–	–	WHITE – REF	BLACK – NON REF	RED – REF	–	–
1–33–75	ø 75	–	5.0	–	–	WHITE – REF	BLACK – NON REF	RED – REF	–	–
1–34–75	ø 75	–	5.0	–	–	WHITE – REF	BLACK – NON REF	RED – REF	–	–
2–15–90	90 x 90	1.8	2.4	5.4	3.6	YELLOW – REF	BLACK – NON REF	BLACK – NON REF	–	–
2–42–90	90 x 90	1.8	2.4	5.4	3.6	YELLOW – REF	BLACK – NON REF	BLACK – NON REF	–	–
2–61–45	45 x 75	0.9	1.2	0.9	8.1	YELLOW – REF	BLACK – NON REF	–	–	–



TYPE I FOR USED WARNING SIGNS & GUIDE SIGNS

STANDARD BOUNDARY
NOT TO SCALE

1–8–75

1–9–75

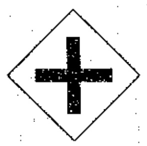
1–25–75 (1)

1–25–75 (2)

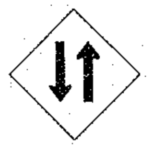
1–32–75

1–33–75

1–34–75



2–15–90



2–42–90

2–61–45

DATE OF ISSUE	05/03/2000
DWG. NO. R–T–10	SHEET NO. 71
DWG. STATUS	

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JICA JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

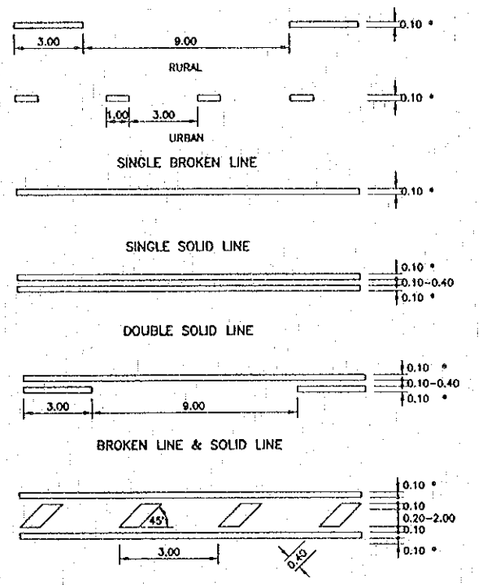
THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	H. Ohta	[signature]	
DESIGN CHECK	T. Masuzawa	[signature]	
SUBMITTED	A. Hirotani		
APPROVED	P. Viraphanth	[signature]	27/02/00
	S. Tamiyabutra	[signature]	27/02/00

DWG. TITLE
TRAFFIC SIGN & SIGN LIST
THAILAND SIDE

Plot date: Tue, 18 Jan 2000 – 14:41:34
C:\SMB-NEW\PACKAGE1\SIGN\Pa1-110.dwg

DATE OF ISSUE: 05/03/2000	
DWG. NO. R-T-11	SHEET NO. 72
DWG. STATUS	

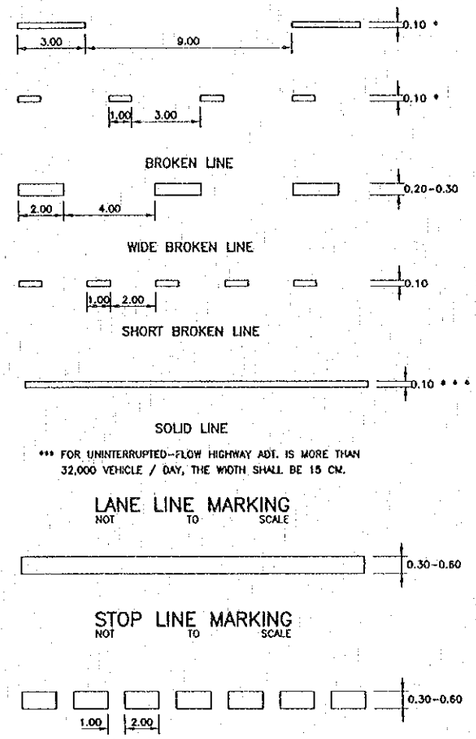


* STANDARD WIDTH IS 10 CM, THE ADJUSTED WIDTH SHALL CONFORM TO THE TABLE.

CENTER LINE MARKINGS
NOT TO SCALE

** STANDARD WIDTH IS 10 CM, FOR UNINTERRUPTED-FLOW HIGHWAY WITH ADT. IS MORE THAN 32,000 VEHICLE/DAY, THE WIDTH SHALL BE 15 CM.

EDGE LINE MARKINGS
NOT TO SCALE

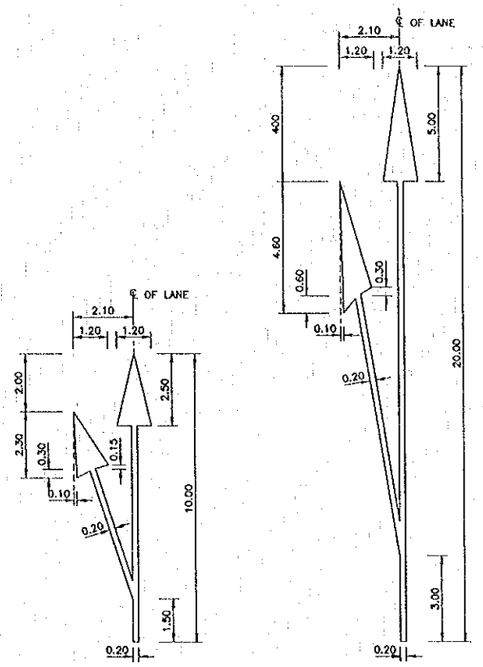


*** FOR UNINTERRUPTED-FLOW HIGHWAY ADT. IS MORE THAN 32,000 VEHICLE / DAY, THE WIDTH SHALL BE 15 CM.

LANE LINE MARKING
NOT TO SCALE

STOP LINE MARKING
NOT TO SCALE

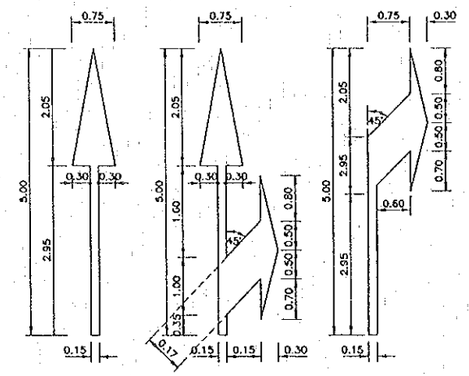
GIVEWAY LINE MARKING
NOT TO SCALE



AT BEGINNING OF TAPER FOR DECELERATION LANE, FOR NORMAL INSTALLATION

AT BEGINNING OF TAPER FOR DECELERATION LANE, FOR DIVIDED HIGHWAY

LONG DIRECTIONAL ARROWS
SCALE 1 : 100



DIRECTIONAL ARROWS
SCALE 1 : 50

TABLE : WIDTH OF CENTER LINE MARKING

A.TWO-LANE HIGHWAY

(NUMBERS ARE IN CENTIMETERS)

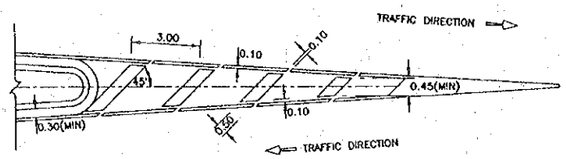
ADT. (VEHICLE / DAY)	WIDTH OF TRAVELED WAY (METERS)					
	5.00	5.50	6.00	6.50	7.00	MORE THAN 7.00
LESS THAN 500	7	7	10	10	10	10
MORE THAN 500	10	10	10	10	10	10
MORE THAN 4000	10	10	15	15	15	15
MORE THAN 8000	10	10	15	15	15	20

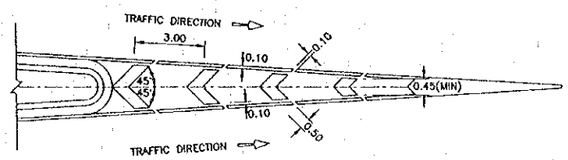
B. MULTILANE UNDIVIDED HIGHWAY (DOUBLE SOLID LINE)

(NUMBERS ARE IN CENTIMETERS)

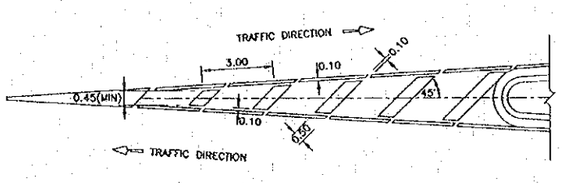
ADT. (VEHICLE / DAY)	WIDTH OF TRAVELED WAY (METERS)		
	LESS THAN 14.00(1)	14.00	MORE THAN 14.00
MORE THAN 8000	WIDTH 10 GAP 10	WIDTH 10 GAP 10	WIDTH 10 GAP 10
MORE THAN 16000	WIDTH 10 GAP 10	WIDTH 15 GAP 15	WIDTH 15 GAP 15-60 (2)
MORE THAN 32000	WIDTH 15 GAP 15	WIDTH 20 GAP 20	WIDTH 20 GAP20-80(2)

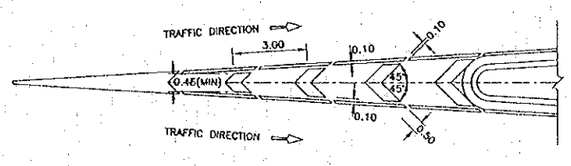
REMARKS: (1) FOR ULTIMATE STAGE WHICH THE TRAVELED WAY WIDTH IS LESS THAN 13.00 METERS, THE CENTER LINE MARKINGS SHALL BE TWO-LANE HIGHWAY FORMAT.
(2) IF WIDTH OF GAP IS MORE THAN 40 CM.,THE CENTER LINE MAKING SHALL BE DOUBLE LINE WITH CROSS HATCHING FORMAT.





CROSS HATCHING MARKING
NOT TO SCALE





CHEVRON HATCHING MARKING
NOT TO SCALE

NOTE :

1. ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE INDICATED.

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	H. Okita		05/03/00
DESIGN CHECK	T. Nasuzawa		05/03/00
SUBMITTED	A. Hirotani		
APPROVED	P. Virophanth		23/02/00
	S. Temiyabutra		23/02/00

DWG. TITLE:

MARKING DETAILS-1
LAO PDR SIDE & THAILAND SIDE

Plot date: Wed, 5 Jan 2000 - 18:37:24

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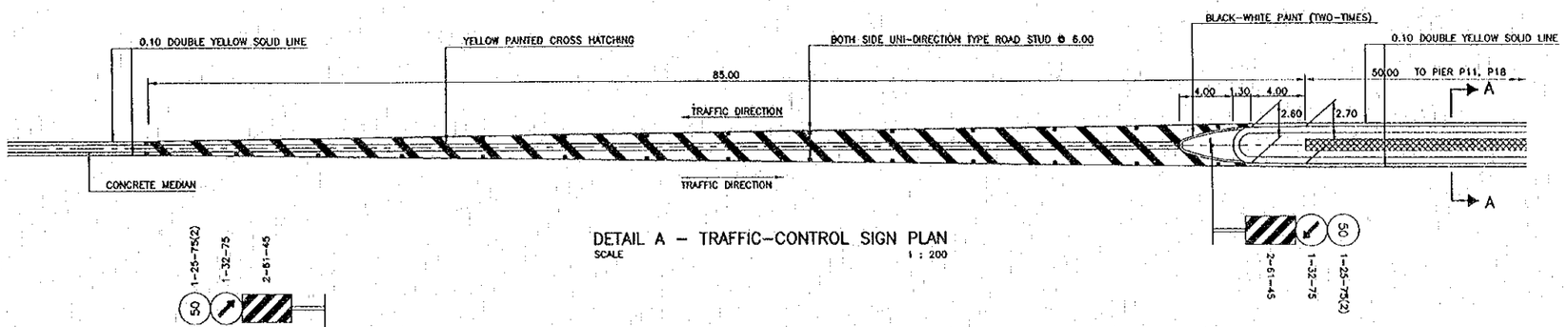
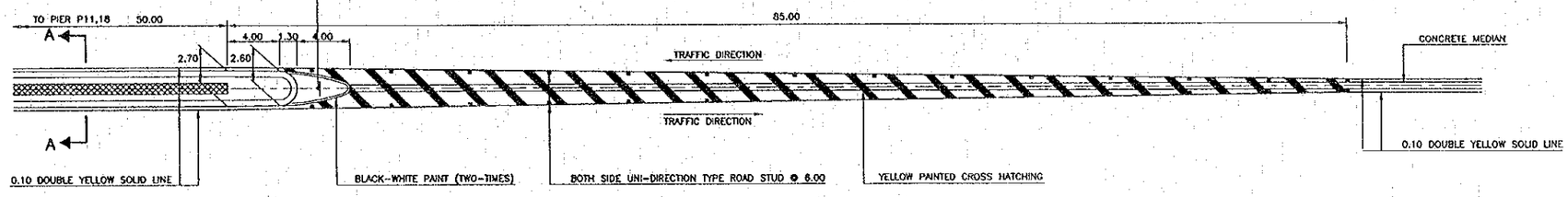
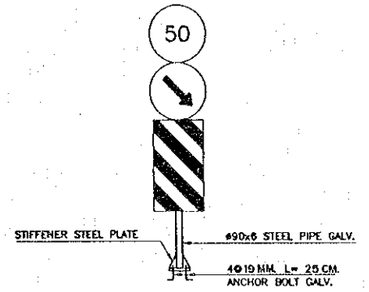
DATE OF ISSUE:	
DWG. NO. R-T-12	SHEET NO. 73
DWG. STATUS	



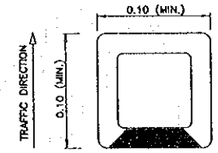
DETAIL A – TRAFFIC-CONTROL SIGN PLAN
SCALE 1 : 200



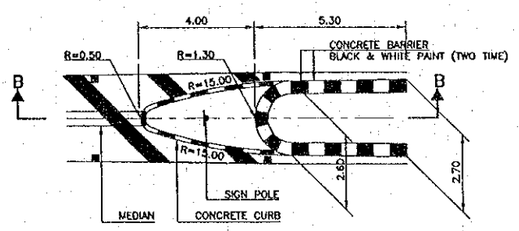
DETAIL B – TRAFFIC-CONTROL SIGN PLAN
SCALE 1 : 200



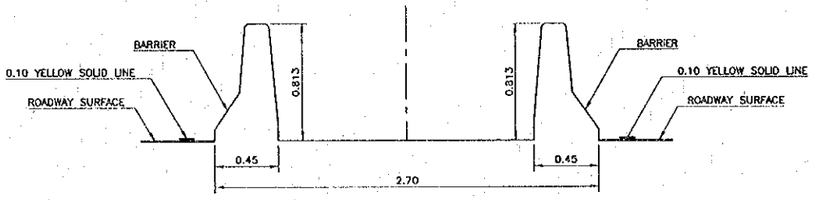
SIGN POLE
NOT TO SCALE



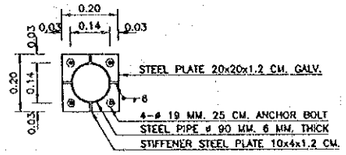
PLAN OF UNI-DIRECTIONAL TYPE ROAD STUD
NOTE TO SCALE



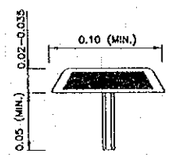
DETAIL OF CURB
SCALE 1 : 100



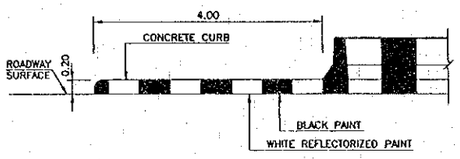
SECTION A–A
SCALE 1 : 20



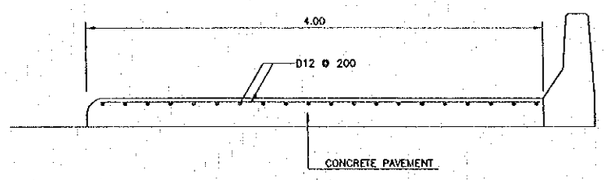
BASE DETAILS
NOT TO SCALE



SIDE ELEVATION OF ROAD STUD
NOT TO SCALE



PAINTING ON CURB
SCALE 1 : 50



SECTION B–B
SCALE 1 : 25

NOTES :

1. DIMENSIONS ARE IN METERS UNLESS OTHER WISE INDICATED.
2. ROAD STUD SHALL BE MADE OF ALLUMINUM OR ALLUMINUM ALLOY. SIZE OF THE BASE SHALL BE NOT LESS THAN 100x100 MM. WITH 20–35 MM. HIGH LENGTH OF THE SHANK SHALL BE NOT LESS THAN 50 MM. ROAD STUD SHALL WITHSTAND TO IMPACT LOAD WITHOUT DISTORTION OR CRACK.
3. REFLECTOR SHALL BE YELLOW REFLECTIVE BEADS WHICH MANUFACTURING EXCLUSIVELY FOR REFLECTOR. AMOUNT OF BEADS SHALL BE NOT LESS THAN 40 PER SIDE, EMBEDED TO THE ROAD STUD.
4. THE PROCEDURES OF INSTALLATION
   - 4.1 THE HOLE SHALL BE DRILLED WIDER THAN DIAMETER OF THE SHANK ABOUT 3 MM.
   - 4.2 MATERIALS IN THE HOLE SHALL BE REMOVED.
   - 4.3 EPOXY ADHESIVE SHALL BE APLIED FULLY INTO THE HOLE.
   - 4.4 THE SHANK SHALL BE EMBEDED INTO THE HOLE. THE ROAD STUD SHALL BE PRESSED UNTIL EPOXY ADHESIVE SHALL BE BLEEDED TO ADHERE BETWEEN PAVEMENT SURFACE AND ROAD STUD.

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

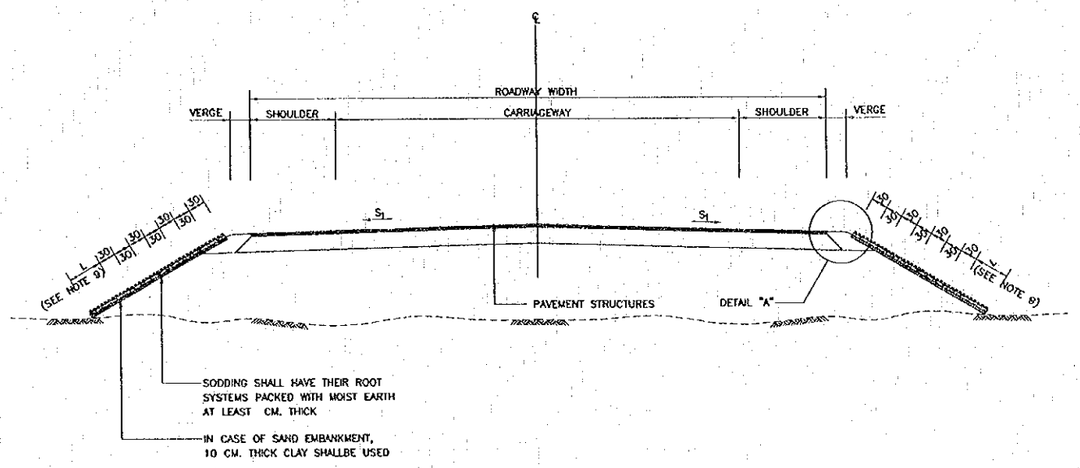
THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

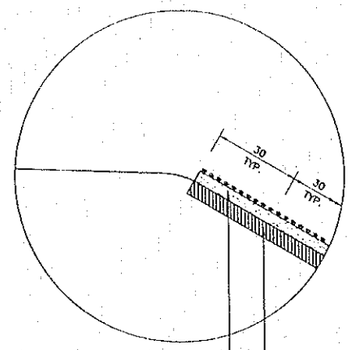
QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN			4/01/00
DESIGN CHECK			18-1-00
SUBMITTED	A. Hirotani		
APPROVED	P. Virephanth		22/01/00
	S. Termjaibutra		22/1/00

DWG. TITLE:
MARKING DETAILS–2
BRIDGE

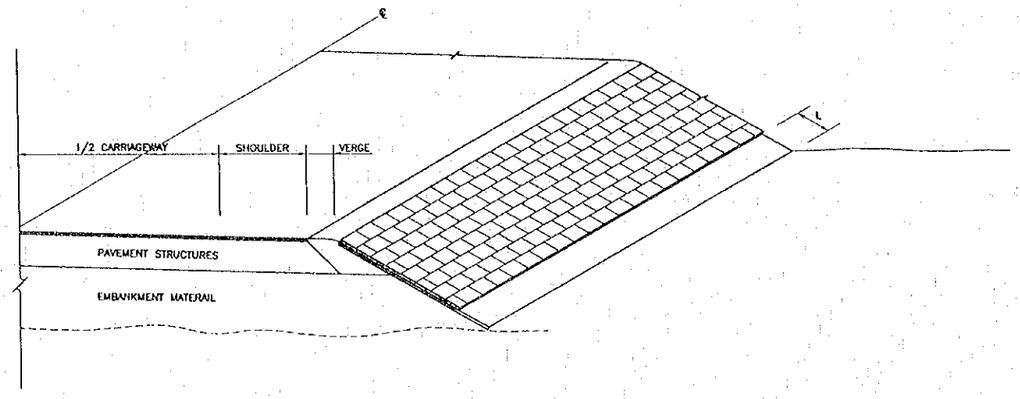
Plot date: Tue, 18 Jan 2000 – 16:42:03
C:\1SMB-NEW\PACKAGE1\SIGN\Px1-112.dwg

DATE OF ISSUE: 05/03/2000	
DWG. NO. R-MI-1	SHEET NO. 74
DWG. STATUS	





DETAIL "A"
NOT TO SCALE



ISOMETRIC DIAGRAM BLOCK SODDING
NOT TO SCALE

NOTES :

GENERAL

1. ALL DIMENSION ARE IN CENTIMETERS UNLESS OTHERWISE INDICATED.
2. THE ENGINEER SHALL DECIDE WHETHER OR NOT TO PROVIDE SODDING FOR SLOPE PROTECTION GENERALLY EMBANKMENTS COMPOSED OF SANDY OR SILTY MATERIALS WILL REQUIRE SODDING, CUT SLOPE WILL NOT NORMALLY BE SODDED AND THEN ONLY AT THE DIRECTION OF THE ENGINEER
3. WHERE THE SIDE SLOPE MATERIAL IS NOT SUITABLE FOR GROWING GRASS, ORGANIC TOP SOIL APPROXIMATELY 10 CM. THICK SHALL BE PLACED ON THE SIDE SLOPES AND LIGHTLY COMPACTED TO THE SATISFACTION OF THE ENGINEER, THOROUGHLY MOISTENED WITH WATER AND SODDING PLACED.
4. WHERE THE SIDE SLOPE MATERIAL IS SUITABLE FOR GRASS, THE FOLLOWING PROCEDURES SHALL APPLY AFTER THE ROADWAY FORMATION IS CONSTRUCTED TO THE ELEVATION AS SHOWN ON THE DRAWING AND THE SIDE SLOPE HAS BEEN SHAPED AS REQUIRED, THE SIDE SLOPE MATERIAL SHALL BE SCARIFIED TO A MINIMUM DEPTH OF 5 CM, THOROUGHLY MOISTENED WITH WATER AND SODDING PLACED.
5. THE TYPE OF GRASS USED SHALL BE A LOCAL SPECIES WHICH GROWS RAPIDLY THE ENGINEER SHALL DECIDE IN THE FIELD WHETHER TOP SOIL IS REQUIRED AND WHICH TYPE OF GRASS SHALL BE USED THE WORK SHALL BE COMPLETED TO THE DETAILS AS SPECIFIED ON THE DRAWING.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE GRASS UNTIL THE END OF THE MAINTENANCE PERIOD.

BLOCK SODDING

7. BLOCK SODDING OBTAINED FROM PLANTED GROUND FOR PLACING SHALL HAVE THEIR ROOT SYSTEM PACKED WITH MOIST EARTH AT LEAST 4 CM. THICK AND HAVE A MINIMUM SIZE OF APPROXIMATELY 30 X 30 CM. THE SODDING SHALL BE PLACED ON THE SIDE SLOPES WITHIN 48 HOURS AFTER REMOVAL FROM BORROW AREA
8. SODDING SHALL BE LAID IN STAGGERED ROWS PARALLEL TO ROADWAY ALIGNMENT AS SHOWN ON THE DRAWING EACH BLOCK SHALL BE STAGGERED ONE HALF ITSLENGTH AND BE FIRMLY BUTTED AGAINST THE PREVIOUS BLOCK(S)
9. THE LENGTH OF "L" SHALL BE DIRECTED BY THE ENGINEER WHICH ABOVE EXISTING GROUND APPROXIMATELY 30 CM. OR NO EROSIVE POSITION
10. PLANTED BLOCK SHALL BE PLACED AND LIGHTLY COMPACTED ON THE DESIGNATED AREAS AND THE LONGITUDINAL INTERSTICES SEALED WITH TOP SOIL. THE PLANTED SODS SHALL BE WATERED DAILY UNTIL THEY HAVE ROOTED AND HAVE ESTABLISHED THEMSELVES IN THE NEW AREAS

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	H. Okita		15/12/00
DESIGN CHECK	T. Masuzawa		18-12-00
SUBMITTED	A. Hirotani		
APPROVED	P. Viraphanth		22/12/00
	S. Tenjyobuto		22/12/00

DWG. TITLE:
SODDING DETAILS
THAILAND SIDE

Plot date: Wed, 5 Jan 2000 - 16:43:05

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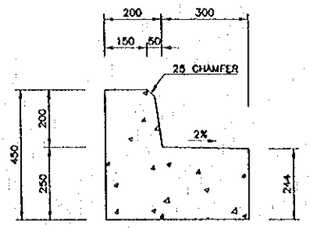
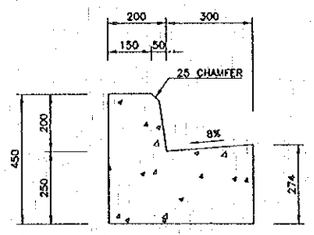
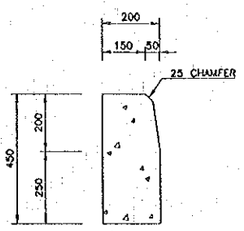
DATE OF ISSUE: 05/03/2000	
DWG. NO. R-MI-2	SHEET NO. 75
DWG. STATUS	



CURB TYPE 1
SCALE 1 : 10



CURB TYPE 2
SCALE 1 : 10



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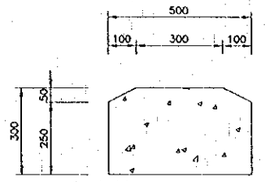
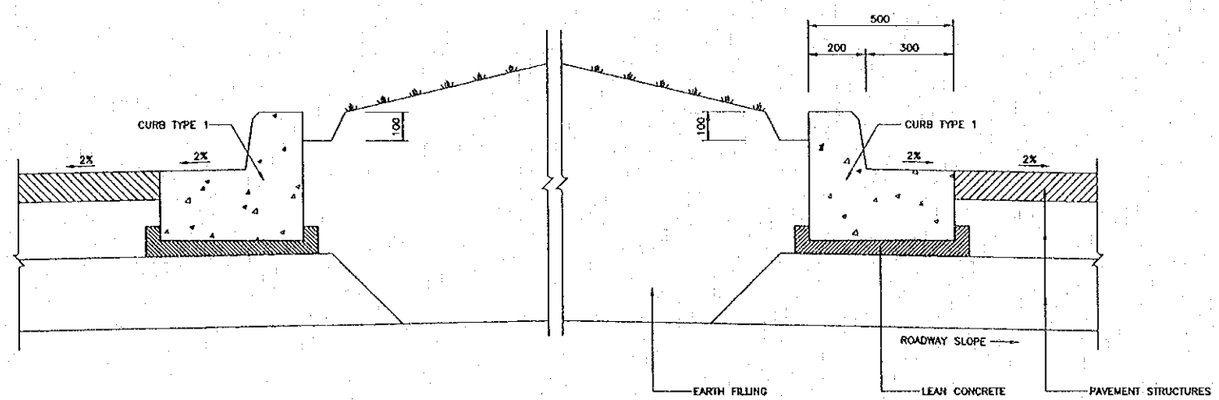


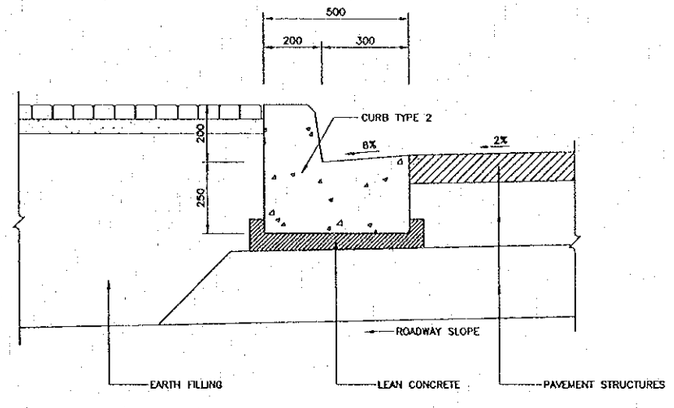
CURB TYPE 4
SCALE 1 : 10

NOTES :

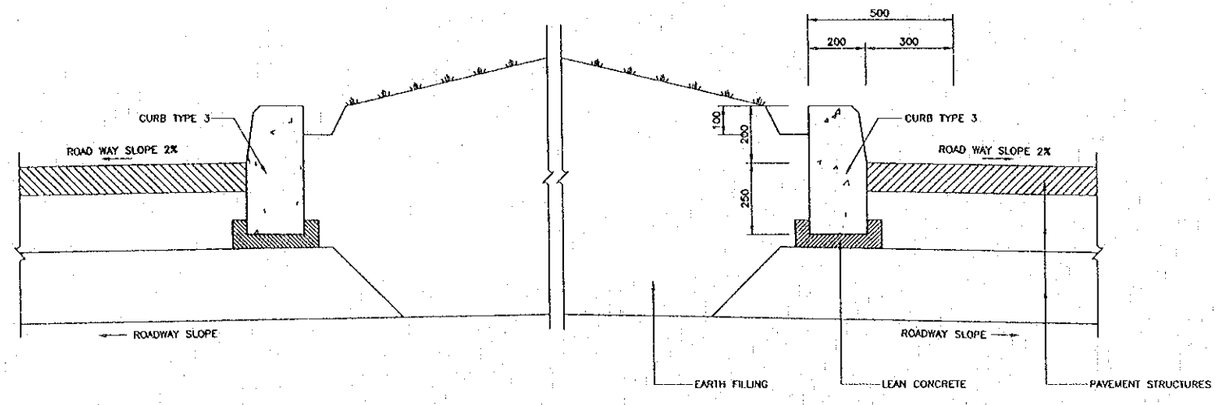
1. ALL DIMENSIONS ARE IN MILLIMETERS.
2. CONCRETE SHALL BE CLASS E (18N/MM^2).
3. REINFORCING STEEL BARS SHALL BE GRADE SD 235.



AT MEDIAN OF CONNECTING ROAD
SCALE 1 : 10



AT SIDEWALK, ISLAND OF BCF
SCALE 1 : 10



AT MEDIAN OF CONNECTING ROAD
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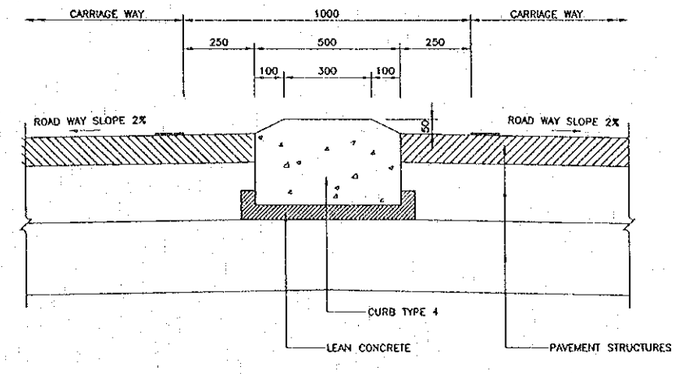

AT MEDIAN OF APPROACH ROAD
SCALE 1 : 10

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JICA JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	H. Ohito		14/2/00
DESIGN CHECK	T. Mazutawa		15/2/00
SUBMITTED	A. Hiratani		
APPROVED	P. Vieyahanth		22/02/00
	S. Temjobutra		22/02/00

DWG. TITLE:

CURB AND GUTTER
LAO PDR SIDE & THAILAND SIDE

Plot date: Tue, 8 Feb 2000 - 15:28:55

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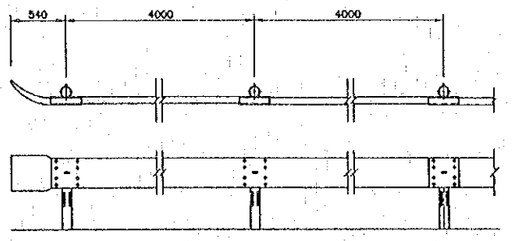
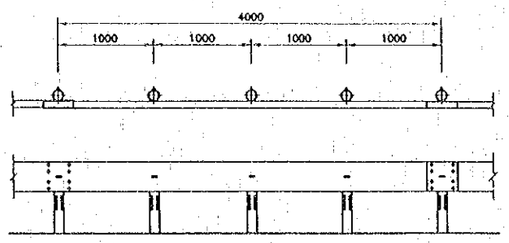
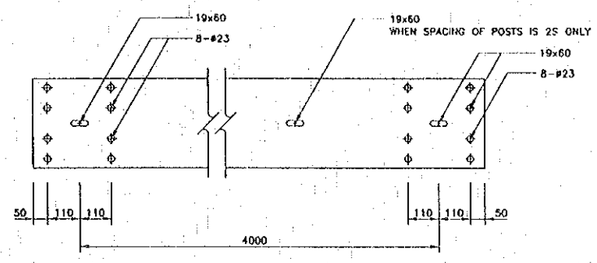
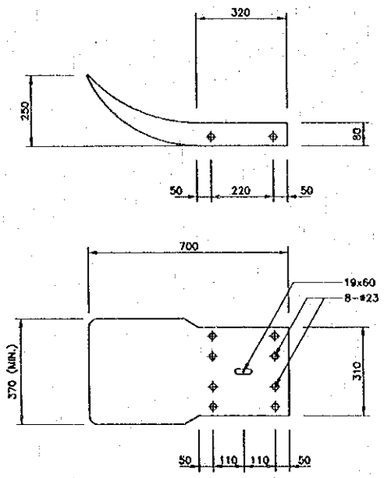
DATE OF ISSUE: 05/03/2000	
DWG. NO. R-MI-3	SHEET NO. 76
DWG. STATUS	



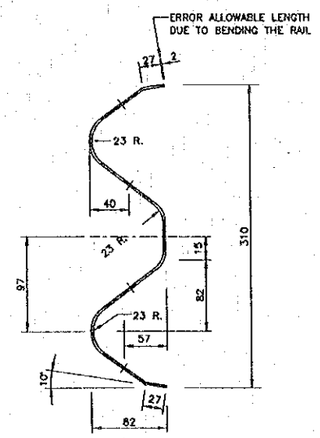




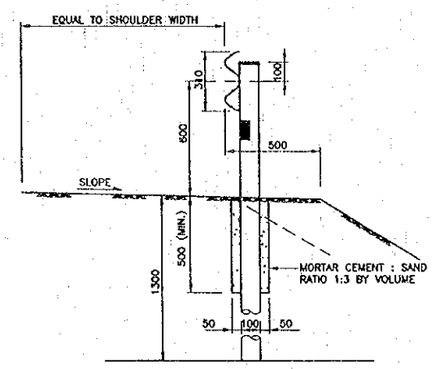
PLAN AND ELEVATION
SCALE 1 : 30



TERMINAL SECTION
SCALE 1 : 10



RAIL SECTION
SCALE 1 : 3



NOTES:

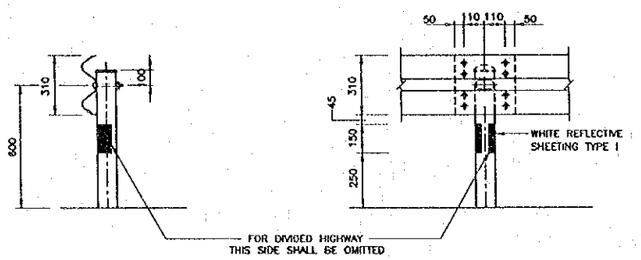
1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE INDICATED.
2. GUARDRAIL SHALL CONFORM TO THE FOLLOWING REQUIREMENT :
   - 2.1 STEEL RAIL SHALL BE MADE FROM STEEL OF THICKNESS NOT LESS THAN THE MINIMUM THICKNESS SPECIFIED FOR EACH CLASS OF RAIL AND SHALL BE GALVANIZED WITH THE MINIMUM WEIGHT OF ZINC COATING ACCORDING TO THE TYPE OF RAIL AS SPECIFIED IN TABLE BELOW:

RAIL		MIN. RAIL THICKNESS (MILLIMETER)	MIN. WEIGHT OF ZINC COATING (GRAMS PER SQUAREMETER)
CLASS	TYPE		
1	1	3.2	550

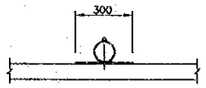
   - 2.2 MECHANICAL PROPERTIES OF RAIL :

RAIL		MIN. ULTIMATE TENSILE STRENGTH ($KG/MM.^2$)	MIN. PERCENTAGE OF ELONGATION	MAX. DEFLECTION			
				MAX. LOAD TRAFFIC FACE UP		MAX. LOAD TRAFFIC FACE DOWN	
CLASS	TYPE			KG.	DEFLECTION (MM.)	KG.	DEFLECTION (MM.)
1	1	41	21	910	50	720	50

   - 2.3 POST SHALL BE GALVANIZED STANDARD STEEL PIPE
   - 2.4 THE GALVANIZING OF BOLTS, NUTS, WASHERS AND SIMILAR THREADED FASTENERS SHALL BE IN ACCORDANCE WITH TIS. 171 CLASS 5.8.
3. UNLESS OTHERWISE SPECIFIED ON THIS DRAWING, GUARDRAIL SHALL BE IN ACCORDANCE WITH TIS. 248
4. REFLECTIVE SHEETING SHALL CONFORM TO TIS. 606 TYPE I. (ESEFICIENT OF RETRO- REFLECTION LEVEL I)



POST
SCALE 1:15



BACK-UP PLATE
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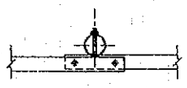
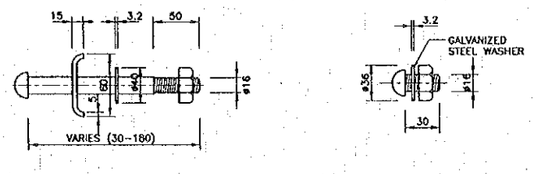


TOP VIEW
NOT TO SCALE



BOLT & NUT
SCALE 1 : 3

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG
INTERNATIONAL BRIDGE
CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	H. Okita		6/6/00
DESIGN CHECK	T. Masuzawa		6.6.00
SUBMITTED	A. Hirotani		7.6.00
APPROVED	P. Viraphanth		13/02/00
	S. Temiyabutra		22/02/00

DWG. TITLE:

GUARDRAIL
LAO PDR SIDE & THAILAND SIDE

Plot date: Tue, 8 Feb 2000 - 15:30:17

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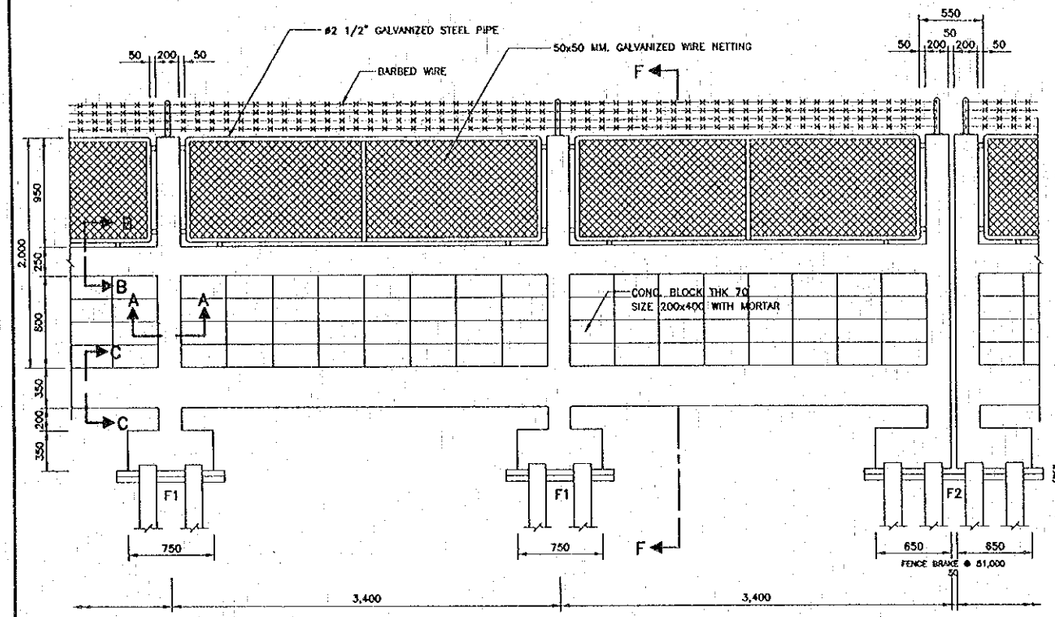
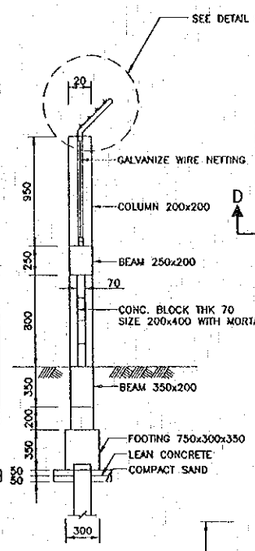
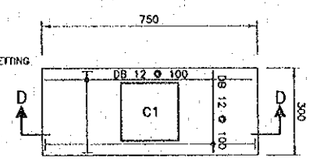
DATE OF ISSUE: 05/03/2000	
DWG. NO. R--MI--4	SHEET NO. 77
DWG. STATUS	



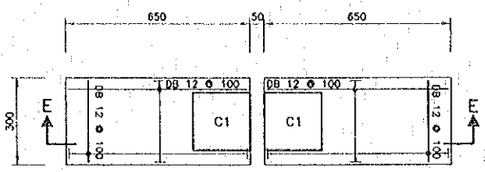
ELEVATION
SCALE 1 : 25



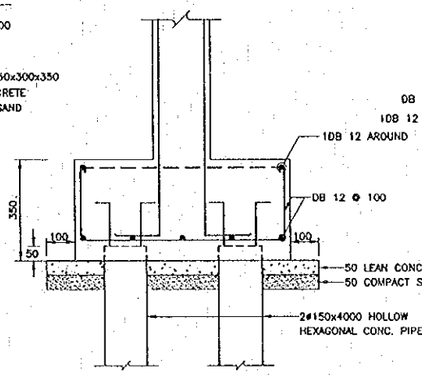
SECTION F--F
SCALE 1 : 25

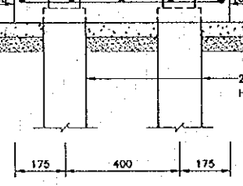


DETAIL F1
SCALE 1 : 10

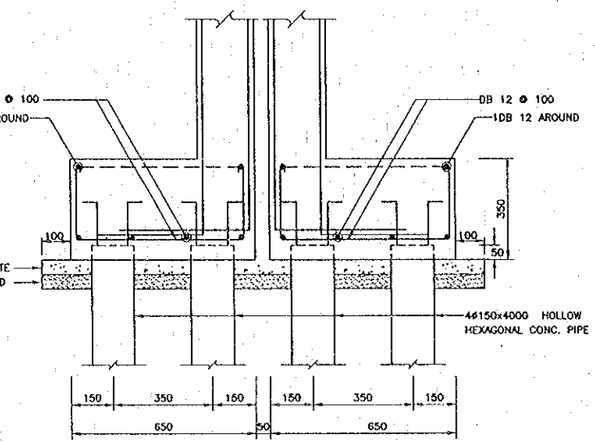


DETAIL F2
SCALE 1 : 10

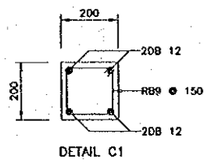




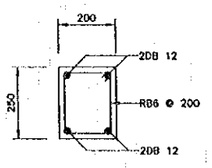
SECTION D--D
SCALE 1 : 10



SECTION E--E
SCALE 1 : 10

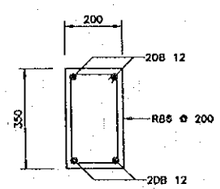


DETAIL C1



SECTION A--A
SCALE 1 : 10

SECTION B--B
SCALE 1 : 10



SECTION C--C
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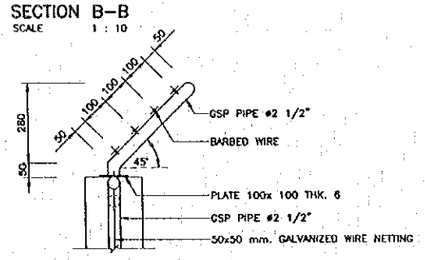

DETAIL P1
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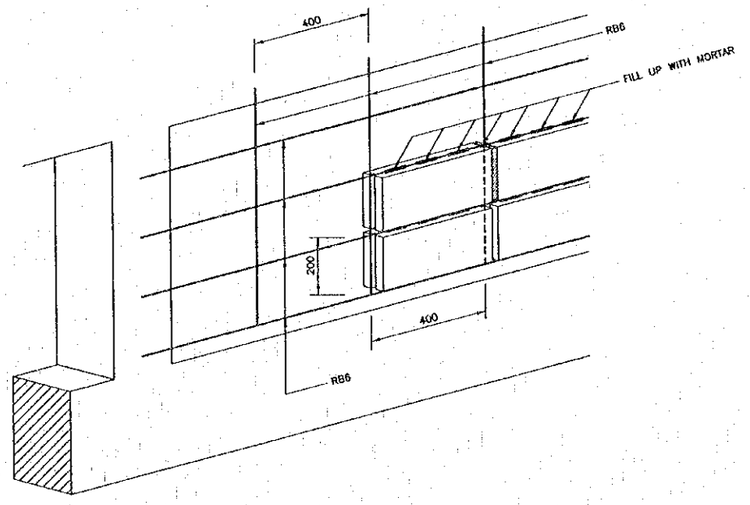


DETAIL OF INSTALLATION CONCRETE BLOCK METHOD
SCALE 1 : 10

NOTES :

1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE INDICATED.
2. IN GENERAL, THE EXISTING GROUND LEVEL IS UNDULATE, FENCE SHALL BE CONSTRUCTED INSTEP, THE LENGTH OF EACH STEP BE SUBJECT TO APPROVAL BY THE ENGINEER.
3. GENERAL NOTES
   - 3.1 HEXAGONAL REINFORCEMENT CONCRETE PILE LENGTH SHALL NOT BE LESS 4.00 M.
   - 3.2 CONCRETE SHALL BE CLASS D (24 N/MM^2)
   - 3.3 REINFORCING STEEL SHALL BE GRADE SR 235 FOR ROUND BARS AND GRADE SD 295 FOR DEFORMED BAR.
   - 3.4 CONCRETE BLOCK SHALL BE CONFORM TO TIS. 60
   - 3.5 STEEL PIPE SHALL BE GALVANIZED.
   - 3.6 WIRE NETTING SHALL BE GALVANIZED AS SPECIFIED BY TIS. 208.

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JICA JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	H. Okita		16/02/00
DESIGN CHECK	T. Masuzawa		16-2-00
SUBMITTED	A. Hirotani		
APPROVED	P. Viraphanh		22/02/00
	S. Tamiyabutra		21/02/00

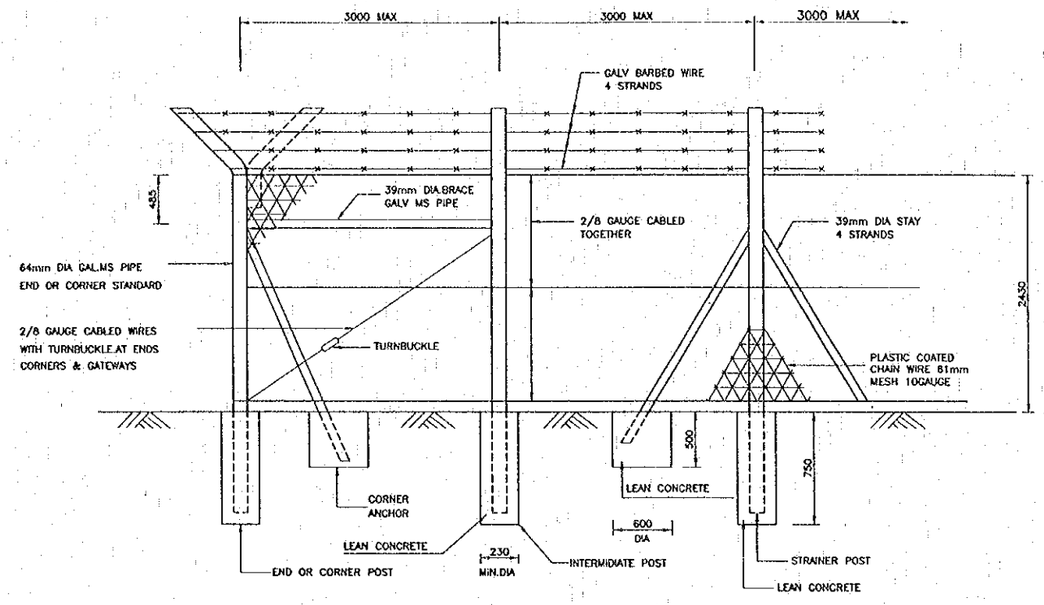
DWG. TITLE:

FENCE DETAILS -- 1
THAILAND SIDE

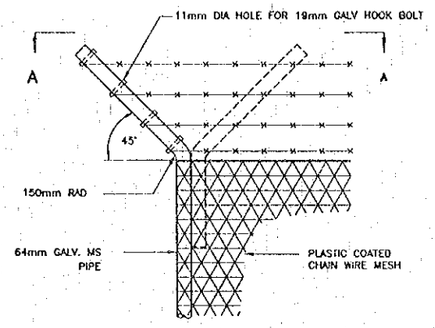
Plot date: Mon, 17 Jan 2000 - 11:36:55

C:\ISUB-NEW\PACKAGE1\MIS\Pk1-M06.dwg

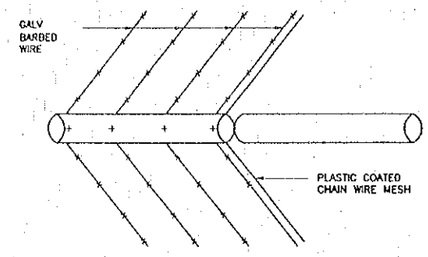
DATE OF ISSUE: 05/03/2000	
DWG. NO. R-MI-5	SHEET NO. 78
DWG. STATUS	



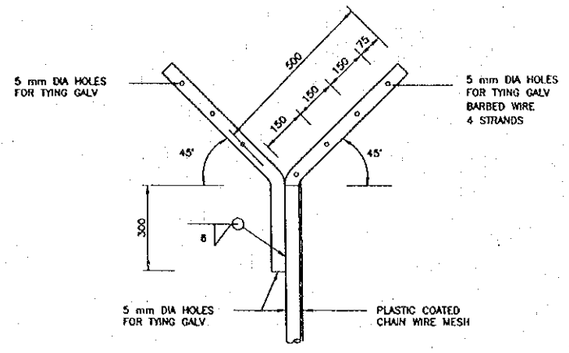
ELEVATION–SECURITY FENCE
NOT TO SCALE



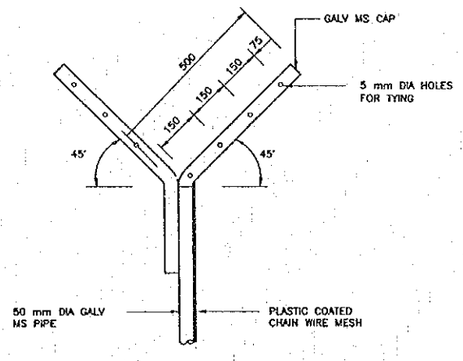
CORNER POST DETAIL
NOT TO SCALE



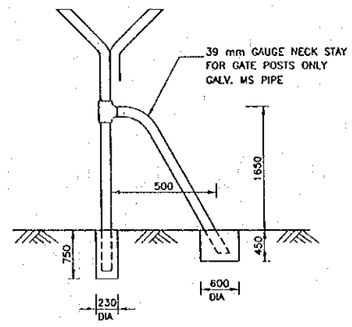
PLAN A–A
NOT TO SCALE



POST DETAIL
NOT TO SCALE



INTERMEDIATE OR STRAINER POST DETAIL
NOT TO SCALE



SECTION AT GATE POST
NOT TO SCALE

NOTE:
1. ALL DIMENSIONS ARE IN MILLIMETER ORTHERWISE INDICATED.

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

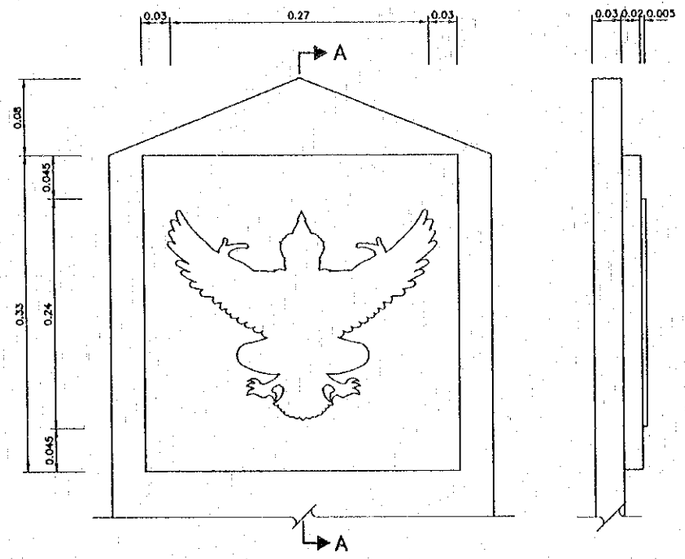
THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	H. Okita		16/02/00
DESIGN CHECK	T. Masuzawa		18.02.00
SUBMITTED	A. Hiratani		
APPROVED	P. Viraphanth		22/02/00
	S. Temiyabutra		22/02/00

DWG. TITLE:
FENCE DETAIL – 2
LAO PDR SIDE

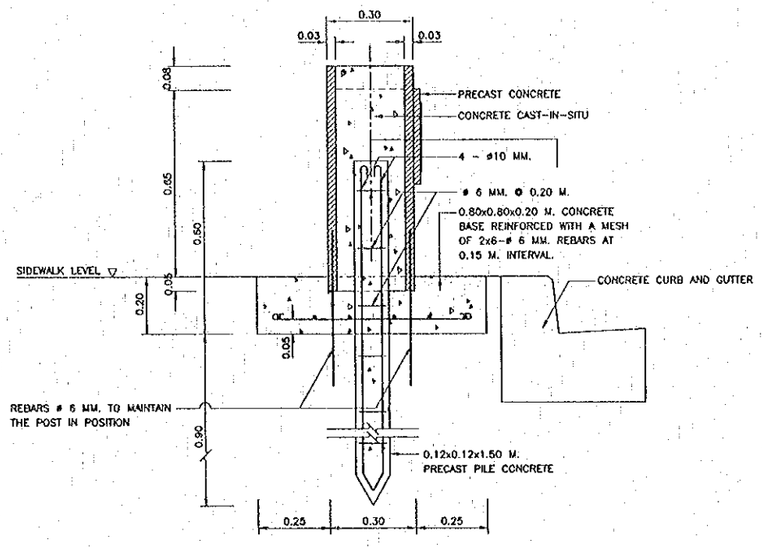
C:\SMB-NEW\Pk1-M05.DWG

DATE OF ISSUE: 05/03/2000	
DWG. NO. R-MI-6	SHEET NO. 79
DWG. STATUS	



ELEVATION OF GARUDA
SCALE 1 : 3

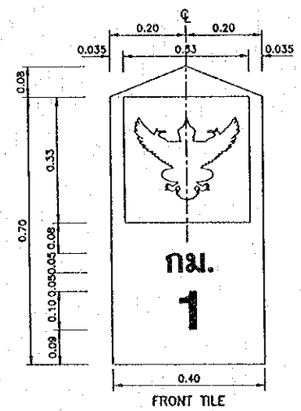
SECTION A – A
SCALE 1 : 3



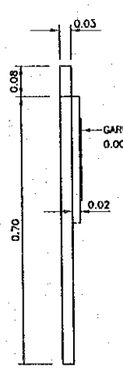
GENERAL DETAIL AT SIDEWALK AND VILLAGE SECTION
SCALE 1 : 10

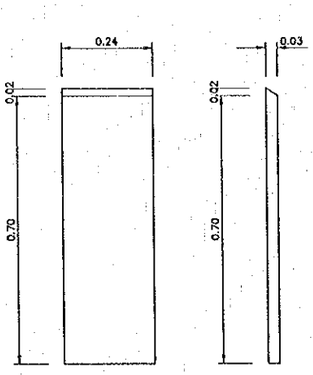
NOTES :

1. ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE INDICATED.
2. KILOMETER STONE SHALL BE PAINTED WHITE WITH ALL INSCRIPTIONS PAINTED BLACK AND WITH THE GARUDA FRAME PAINTED IN GREY LINE OF 1 CENTIMETER.
3. CONSTRUCTION METHOD
   ALL KILOMETER POST SHALL BE PRECAST IN SEPARATE PARTS AND INSTALLED INPLACE OR BY PRECASTING THE WHOLE UNIT AS SPECIFIED IN THE DRAWING WITH THE ENGINEER'S APPROVAL.
4. WHERE PENETRATION CANNOT BE ACHIEVED FOR PILING THE KILOMETER POST MAY BE ERECTED WITHOUT PILING WHEN APPROVED BY THE ENGNEER.
5. ALL INSCRIPTIONS SHOWN IN THIS DRAWING ARE SET UP FOR EXAMPLE PURPOSES ONLY.
6. THE KILOMETER STONE SHALL BE PLACED AT 1 KILOMETER INTERVAL AT 0.50 M. FROM EDGE OF LEFT SHOULDER OR AT 0.65 M. FROM CURB.
2. CONCRETE SHALL BE CLASS E (18N/MM^2) OTHERWISE SHOWN.
3. REINFORCING STEEL BARS SHALL BE GRADE SR 235 FOR ROUND BAR.



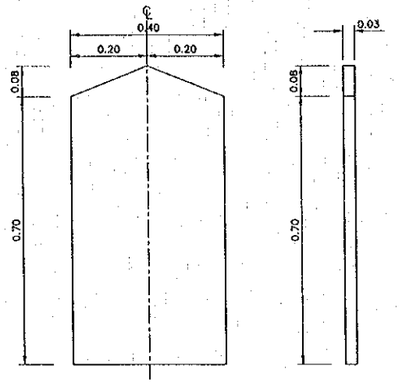
FRONT TILE



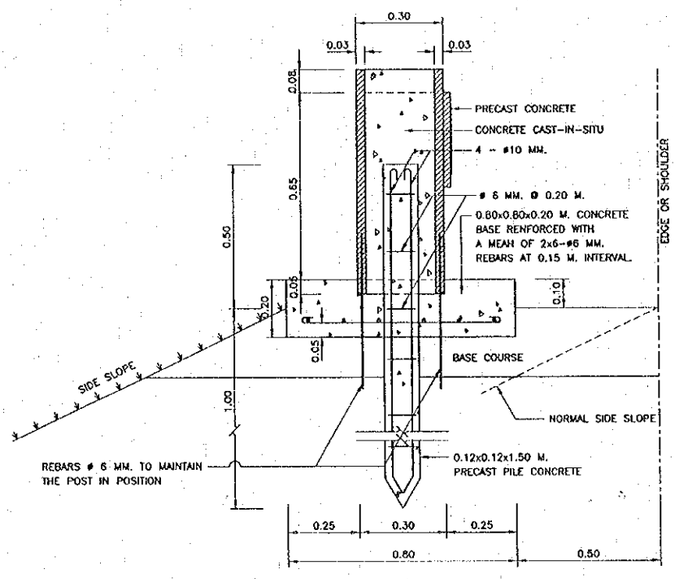


SIDE TILE

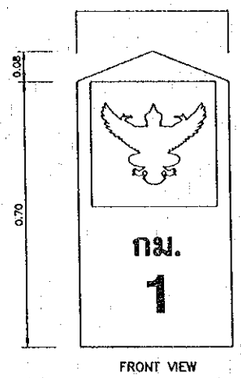
TILE DETAIL
SCALE 1 : 7.5



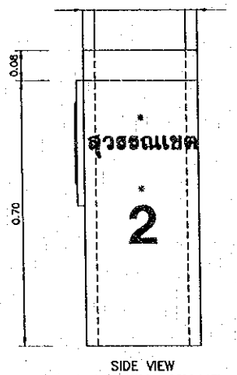
BACK TILE



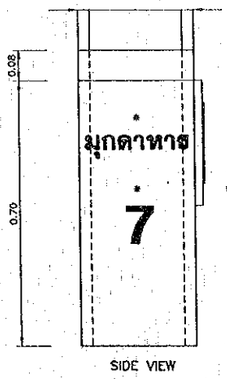
GENERAL DETAIL AT SHOULDER
SCALE 1 : 10



FRONT VIEW



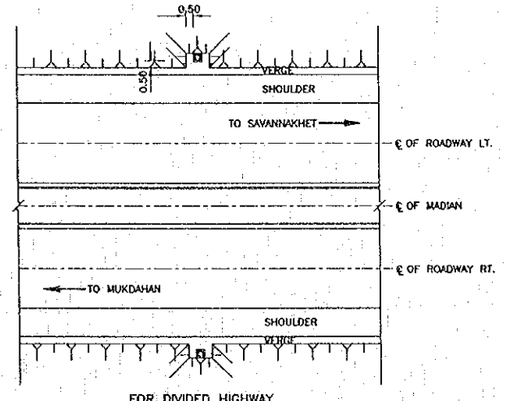
SIDE VIEW



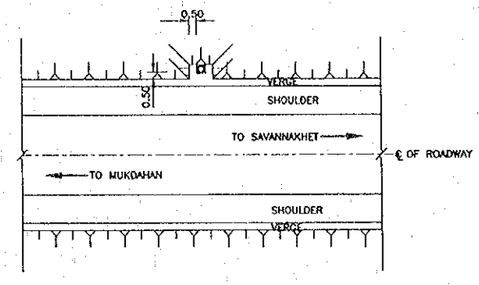
SIDE VIEW

KILOMETER STONE
SCALE 1 : 7.5

* THE LETTERS MAY BE TWO DESTINATIONS.



FOR DIVIDED HIGHWAY



FOR TWO – LANE HIGHWAY

PLAN
NOT TO SCALE

REV.	DATE	DESCRIPTION	APPROVED

Plot date: Thu, 6 Jan 2000 – 8:53:01

C:\1SMB-NEW\PACKAGE1\MIS\Pk1-MI06.dwg

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
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JICA JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
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MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	H. Okita		16/2/00
DESIGN CHECK	T. Masuzawa		16/2/00
SUBMITTED	A. Hirotani		21/2/00
APPROVED	P. Varaphanith		22/02/00
	S. Temiyabutra		22/02/00

DWG. TITLE:

KILOMETER STONE
THAILAND SIDE

DATE OF ISSUE: 05/03/2000	
DWG. NO. R-MI-7	SHEET NO. 80
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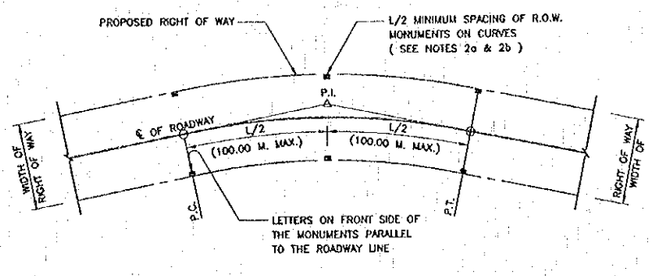
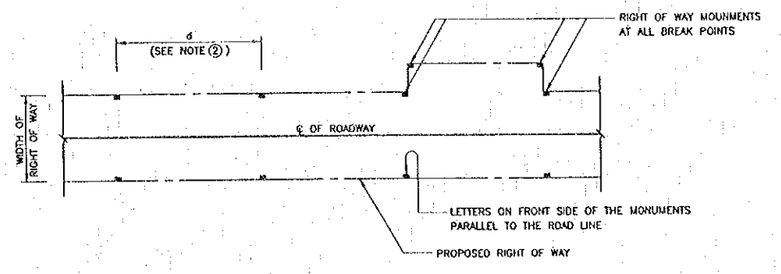
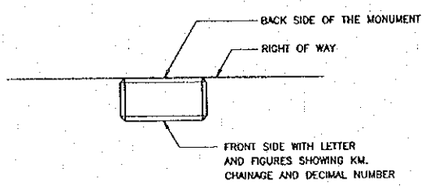


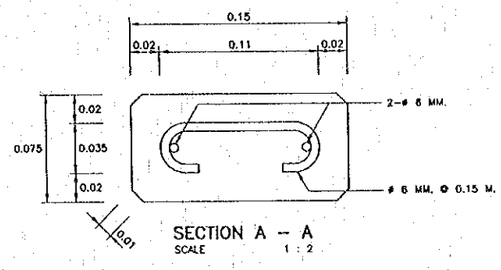
R.O.W. MONUMENT IN HORIZONTAL CURVES
NOT TO SCALE



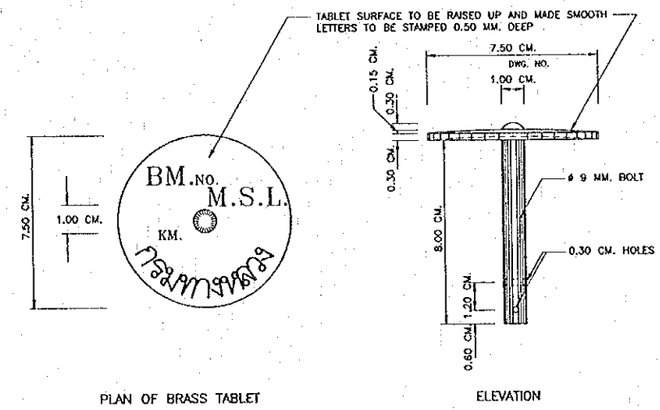
R.O.W. MONUMENT IN STRAIGHT LINE
NOT TO SCALE



PLAN

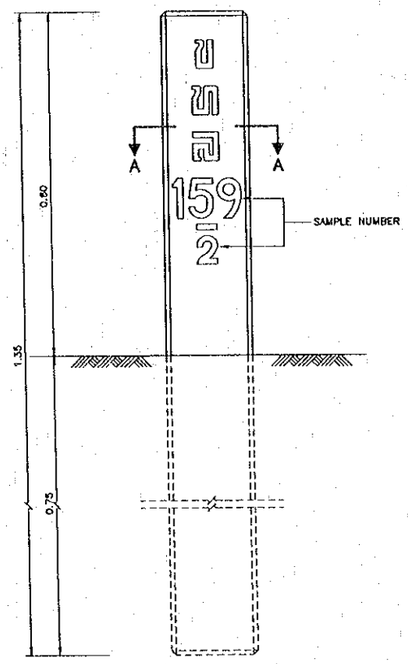


SECTION A – A
SCALE 1 : 2



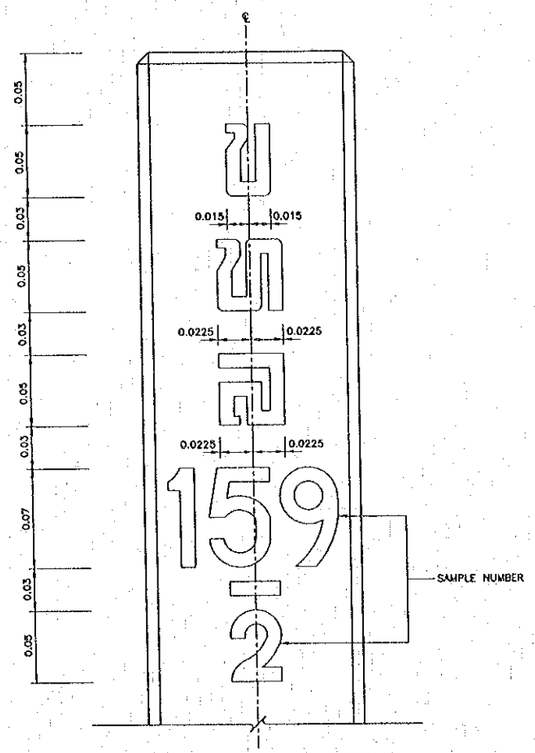
PLAN OF BRASS TABLET ELEVATION

BENCH MARK DETAILS
NOT TO SCALE

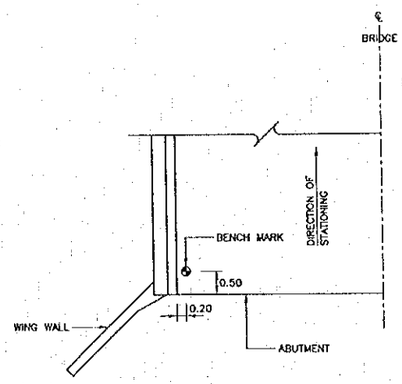


FRONT ELEVATION

RIGHT OF WAY MONUMENT
SCALE 1 : 5



STANDARD LETTERS & FIGURES
SCALE 1 : 2



BENCH MARK LOCATION DETAIL ON BRIDGE
NOT TO SCALE

NOTES :

1. ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE INDICATED.
2. LOCATION OF R.O.W. MONUMENTS SHALL BE AS SHOWN ON THE PLAN AND SHALL BE SPECIFIED AS FOLLOWS :
   a) RURAL (RICE FIELD, WOOD AND ETC.) d = 100 M.
   b) URBAN (TOWNS AND VILLAGES) d = 25 M.
   c) AT ALL BREAK POINTS OF R.O.W.
   d) AT P.C., P.T. AND MIDDLE POINT OF HORIZONTAL CURVE
3. PAINTING OF R.O.W. POSTS.
   a) POSTS, WHITE
   b) LETTERS & FIGURES, BLACK
4. BLACK AND WHITE PAINTS MUST BE GLOSS ENAMAL PAINTS IN ACCORDANCE WITH TIS. 327 AND SHALL BE APPLIED IN 2-LAYERS.
5. LETTERS ARE DEPRESSED 1 CM. INTO THE CONCRETE.
6. POSTS SHALL BE ERECTED TRULY VERTICAL.
7. SIZES OF LETTERS AND FIGURES SHALL BE IN ACCORDANCE WITH DOH,S TRAFFIC CONTROL MANUAL AND THE DRAWING.
8. CONCRETE SHALL BE CLASS E (18N/MM.^{2}) OTHERWISE SHOWN.
9. REINFORCING STEEL BARS SHALL BE GRADE SR 235 FOR ROUND BAR.

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
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JAPAN INTERNATIONAL COOPERATION AGENCY
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KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	H. Okita		4/5/00
DESIGN CHECK	T. Masuzawa		12-4-00
SUBMITTED	A. Hirotani		21-4-00
APPROVED	P. Wrophanth		22/05/00
	S. Temiyabutra		22/5/00

DWG. TITLE:
RIGHT OF WAY MONUMENT & BENCH MARK
THAILAND SIDE

Plot date: Thu, 6 Jan 2000 - 8:57:37

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DATE OF ISSUE: 05/03/2000	
DWG. NO. R-MI-8	SHEET NO. 81
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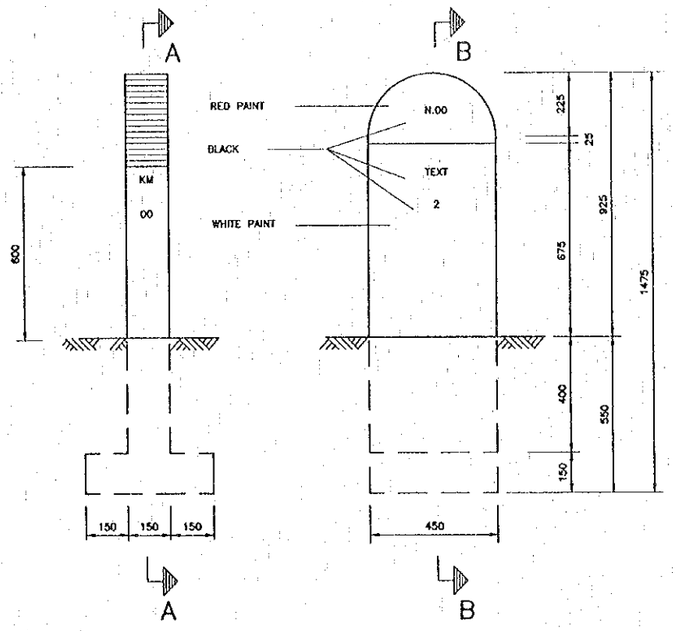
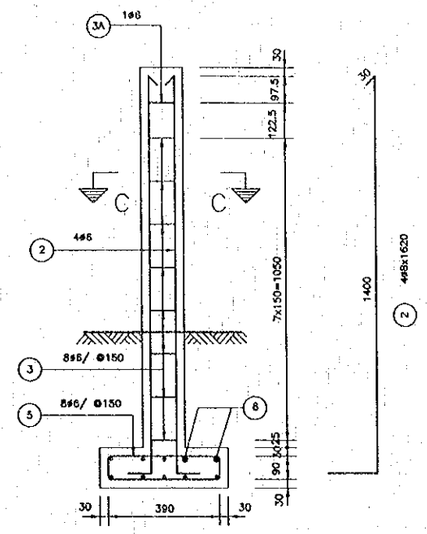
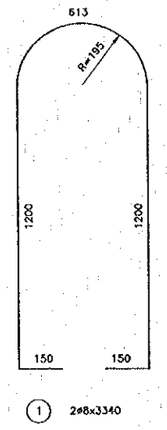


SIDE ELEVATION
SCALE 1:10

END ELEVATION
SCALE 1:10



SECTION B-B
SCALE 1:10

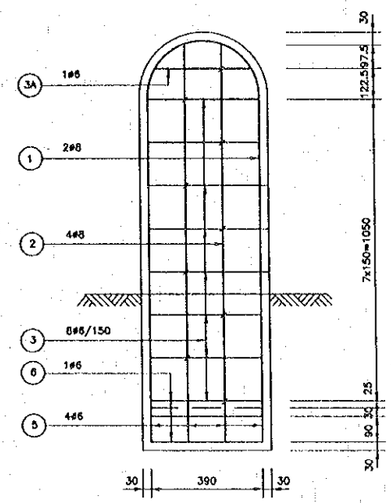


1 2#8x3340

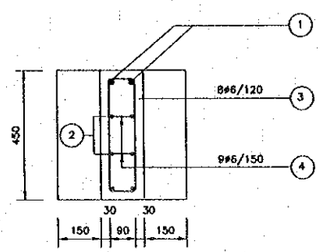
KILOMETER POST

SYMBOLS	ø(MM)	NUMBERS	LENGTH (MM)
1	8	2	3340
2	8	4	1620
3	6	8	1850
3A	6	1	840
4	6	9	160
5	6	4	1050
6	6	10	460

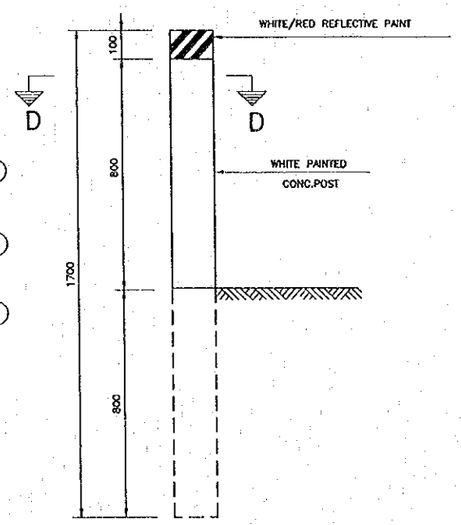
KILOMETER POST



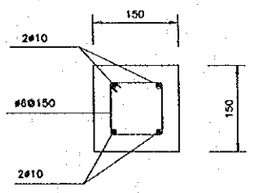
SECTION A-A
SCALE 1:10



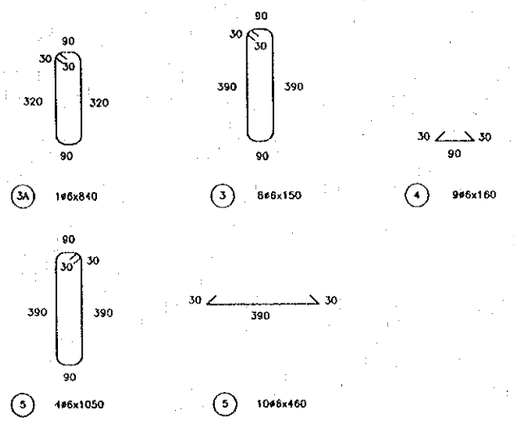
SECTION C-C
SCALE 1:10



RIGHT OF WAY MONUMENT POST
SCALE 1:10



SECTION D-D
SCALE 1:5



NOTES:
1. KILOMETER POSTS AND EDGE MARKER POSTS SHALL BE MADE WITH CONCRETE CLASS D (24 N/mm^2)
2. ALL REINFORCING STELL SHALL BE GRADE SR235
3. ALL DIMENSIONS ARE IN MILLIMETER IF NOT OTHERWISE INDICATED

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
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DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	H. Okita		6/03/00
DESIGN CHECK	T. Masurawa		1/03/00
SUBMITTED	A. Hirotani		21/03/00
APPROVED	P. Viraphanth		21/03/00
	S. Temiyabutra		22/3/00

DWG. TITLE:
KILOMETER POST &
RIGTH OF WAY MONUMENT POST
LAO PDR SIDE

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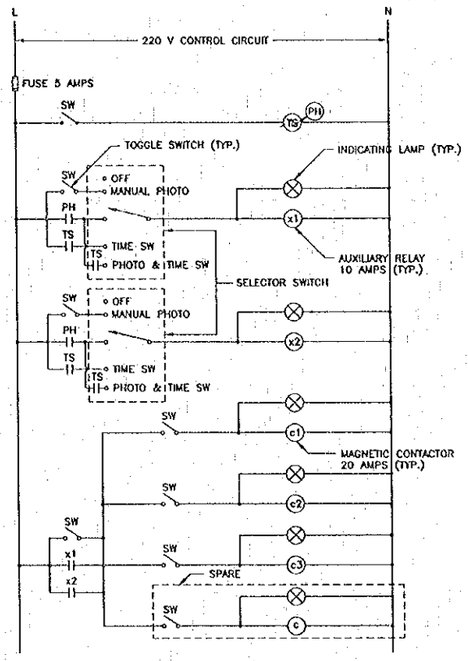
DATE OF ISSUE: 05/03/2000	
DWG. NO. R-L-1	SHEET NO. 82
DWG. STATUS	

EXTERIOR ELECTRICAL SYMBOLS

- EXISTING PEA'S ELECTRIC POLE
- EXISTING ELECTRIC POLE TO REMAIN
- EXISTING ELECTRIC POLE TO BE REMOVED
- SINGLE ARM LIGHTING COLUMN
- DOUBLE ARM LIGHTING COLUMN
- DRAW PIT
- PULL BOX
- TRANSFORMER BANK
- JUNCTION BOX OR PULL BOX
- SUPPLY PILLAR No. 1
- CONTACTOR
- CONTACTOR COIL
- TIME SWITCH
- PHOTO SWITCH
- CARTRIDGE FUSE, SIZE AS INDICATED
- FUSED SAFETY SWITCH
- FEEDER RUN UNDERGROUND
- JUNCTION BOX OR PULL BOX
- LIGHTING MAST No. 11
- CABLE JOINT IN LIGHT COLUMN TERMINAL BOARD
- CABLE SIZE, 4 CORE 16 MM²
- CABLE CIRCUIT No. 1 abc FROM SUPPLY PILLAR No. 1
- VOLT SELECTOR SWITCH
- AMP. SELECTOR SWITCH
- AMPMETER
- VOLTMETER
- KILOWATTMETER
- RED-YELLOW-BLUE LAMP INDICATOR
- FUSE 6A
- CURRENT TRANSFORMER

ABBREVIATIONS

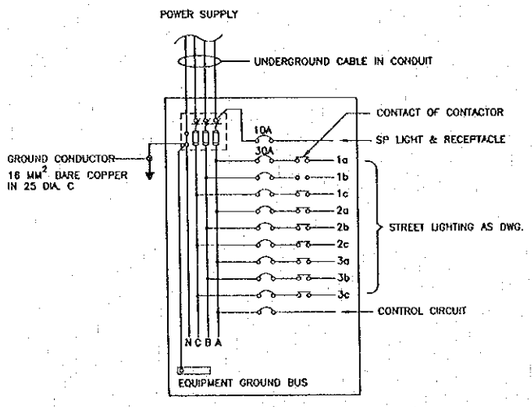
PEA	PROVINCIAL ELECTRICITY AUTHORITY
NIC	NOT IN THIS CONTRACT
C	CONDUIT
DOH	DEPARTMENT OF HIGHWAYS
SP	SUPPLY PILLAR
WP	WEATHERPROOF
AFG	ABOVE FINISHED GRADE
CH	CHAINAGE
JB	JUNCTION BOX
EC	EMPTY CONDUIT
HPS	HIGH PRESSURE SODIUM
DWG	DRAWING
DP	DRAWPIT
℄	CENTERLINE
TOT	TELEPHONE ORGANIZATION OF THAILAND
GRSC	GALVANIZED RIGID STEEL CONDUIT
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
EXO	EXOTHERIC WELD
PCD	PERIPHERICAL CENTER DIAMETER
HM	HIGH MAST
BC	BARE COPPER CONDUCTOR
SF	SOFFIT LANTERN
℄ OF CONSTR.	CENTERLINE OF CONSTRUCTION
CTL	CONTROL LONE
UPVC	POLYVINYL CHLORIDE CONDUIT (TIS.216-2524)



TYPICAL CONTACTOR CIRCUIT

CONTROL SELECTOR SWITCH POSITION

1. OFF – SWITCH OFF ALL LUMINARIES
2. MANUAL – MANUALLY SWITCH ON/OFF ALL LUMINARIES
3. PHOTO – ALL LUMINARIES BE SWITCHED ON/OFF BY PHOTOCELL CONTROL
4. TIME SW – ALL LUMINARIES BE SWITCHED ON/OFF BY PROGRAMMABLE TIMER SWITCH CONTROL
5. PHOTO & TIME SW – ALL LUMINARIES BE SWITCHED ON/OFF BY BOTH PHOTOCELL AND TIMER SWITCH CONTROL



TYPICAL DIAGRAM OF SUPPLY PILLAR

NOTES:

1. ALL DIMENSIONS ARE SHOWN IN METERS UNLESS OTHERWISE INDICATED.
2. THE PEA SHALL BE RESPONSIBLE FOR REMOVAL AND RELOCATION OF ALL EXISTING ELECTRIC POLES AND LINES, HIGH VOLTAGE, LOW VOLTAGE, OVERHEAD AND UNDERGROUND WITHIN BOUNDARY OF RIGHT OF WAYS IN THIS CONTRACT.
3. THE PEA SHALL ARRANGE POWER SUPPLY FOR THE SUPPLY PILLARS, THE CONTRACTOR SHALL COORDINATE WITH THE PEA FOR LOCATION, HE SHALL PROVIDE THE INCOMING SERVICE CABLE FROM SUPPLY PILLARS TO PEA'S METERING POLE WITH FUSIBLE SAFETY SWITCH, SERVICE HEAD AND SLACK CABLES READY FOR PEA'S CONNECTIONS.
4. EXACT LOCATION OF SUPPLY PILLARS SHALL BE AS DIRECTED BY THE ENGINEER DURING CONSTRUCTION.
5. ALL POWER CABLES SHALL BE COPPER, 0.6/1 KV 90°C CROSS-LINKED POLYETHYLENE INSULATED AND PVC SHEATHED POWER CABLE (IEC 502 STANDARD)
6. ALL CONDUITS SHALL BE HIGH DENSITY POLYETHYLENE CONDUITS UNLESS OTHERWISE INDICATED.
7. ALL WIRING CROSS UNDER ROADWAY OR PAVEMENT SHALL BE RUN IN HIGH DENSITY POLYETHYLENE CONDUITS REINFORCED CONCRETE ENCASED EXTENDED 1.50 M. BEYOND PAVEMENT NUMBER OF CONDUITS SHALL BE AS REQUIRED.
8. ALL WIRING ON, IN OR UNDER STRUCTURE SHALL BE RUN IN UPVC CONDUITS.
9. ALL DRAWPITS SHALL BE TYPE "B" UNLESS OTHERWISE INDICATED THE EXACT LOCATION SHALL BE AS DIRECTED BY THE ENGINEER DURING CONSTRUCTION.
10. FOR SIMPLICITY, THE DIAGRAM OF SUPPLY PILLARS AS SHOWN IN STREET LIGHTING DIAGRAMS IN OTHER DRAWINGS ARE INCOMPLETE, REFER TO TYPICAL DIAGRAM IN THIS DWG.
11. ON BRIDGE, ALL CONNECTING CABLES NOT IN LIGHTING POLES SHALL BE USE CABLE CONNECTOR W/ RUBBER TAPE & PVC TAPE AND ALLOW ONLY IN STEEL PULL BOXES.

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JICA JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	T. Tokoobushi	T. Tabi	17.09.00
DESIGN CHECK	T. Masuzawa		18.09.00
SUBMITTED	A. Hirotani		21.09.00
APPROVED	P. Vrapharith		22/09/00
	S. Temiyabutra	S. Temi	22/09/00

DWG. TITLE:
ELECTRICAL SYMBOLS AND ABBREVIATIONS
THAILAND SIDE

Plot date: Mon, 17 Jan 2000 - 15:27:24
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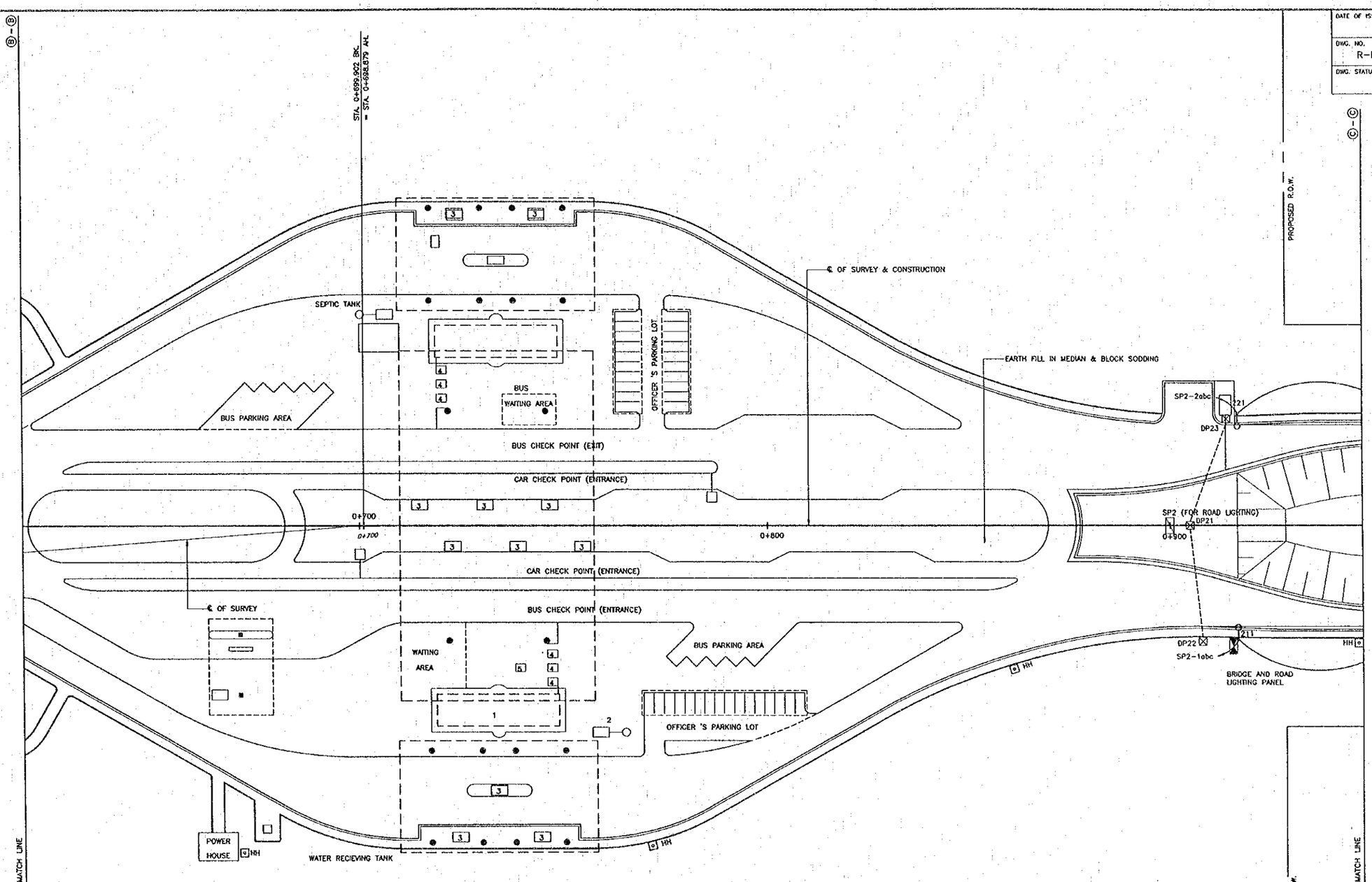
DATE OF ISSUE: 05/03/2000	
DWG. NO. R-L-2	SHEET NO. 83
DWG. STATUS	



FUTURE EXTENSION AREA
L OF BCF

LIGHTING LAYOUT – 1
SCALE 1:500

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
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LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	T. Tokoobushi	T. Tabo	17-02-00
DESIGN CHECK	T. Masutowa		18-02-00
SUBMITTED	A. Hirotani		
APPROVED	P. Virephanth		27/03/00
	S. Temiyabutra		22/03/00

DWG. TITLE:
LIGHTING LAYOUT-1
BORDER CONTROL FACILITY
THAILAND SIDE

Plot date: Mon, 17 Jan 2000 - 15:30:23
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DATE OF ISSUE: 05/03/2000	
DWG. NO. R-L-3	SHEET NO. 84
DWG. STATUS	

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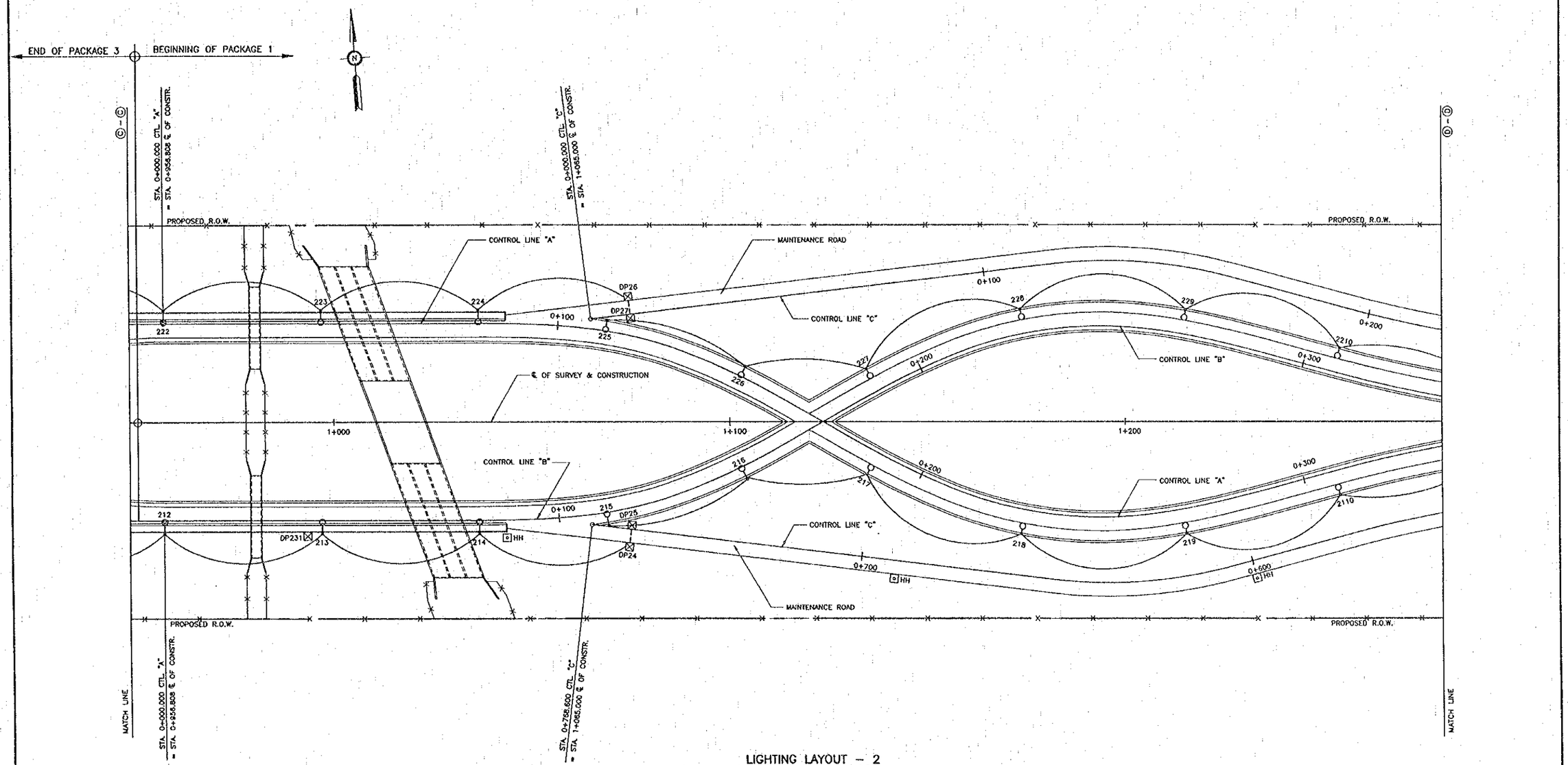

LIGHTING LAYOUT – 2
SCALE 1:500

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
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JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
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KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	T. Tokoobushi	T. Tabu	19-02-00
DESIGN CHECK	T. Masutano		18-02-00
SUBMITTED	A. Hirotani		21-02-00
APPROVED	P. Virophanth		22/02/00
	S. Temiyabutra	S. Temiyabutra	22/02/00

DWG. TITLE:
LIGHTING LAYOUT–2
TRAFFIC CHANGEOVER
THAILAND SIDE

Plot date: Tue, 28 Dec 1999 – 8.37:43

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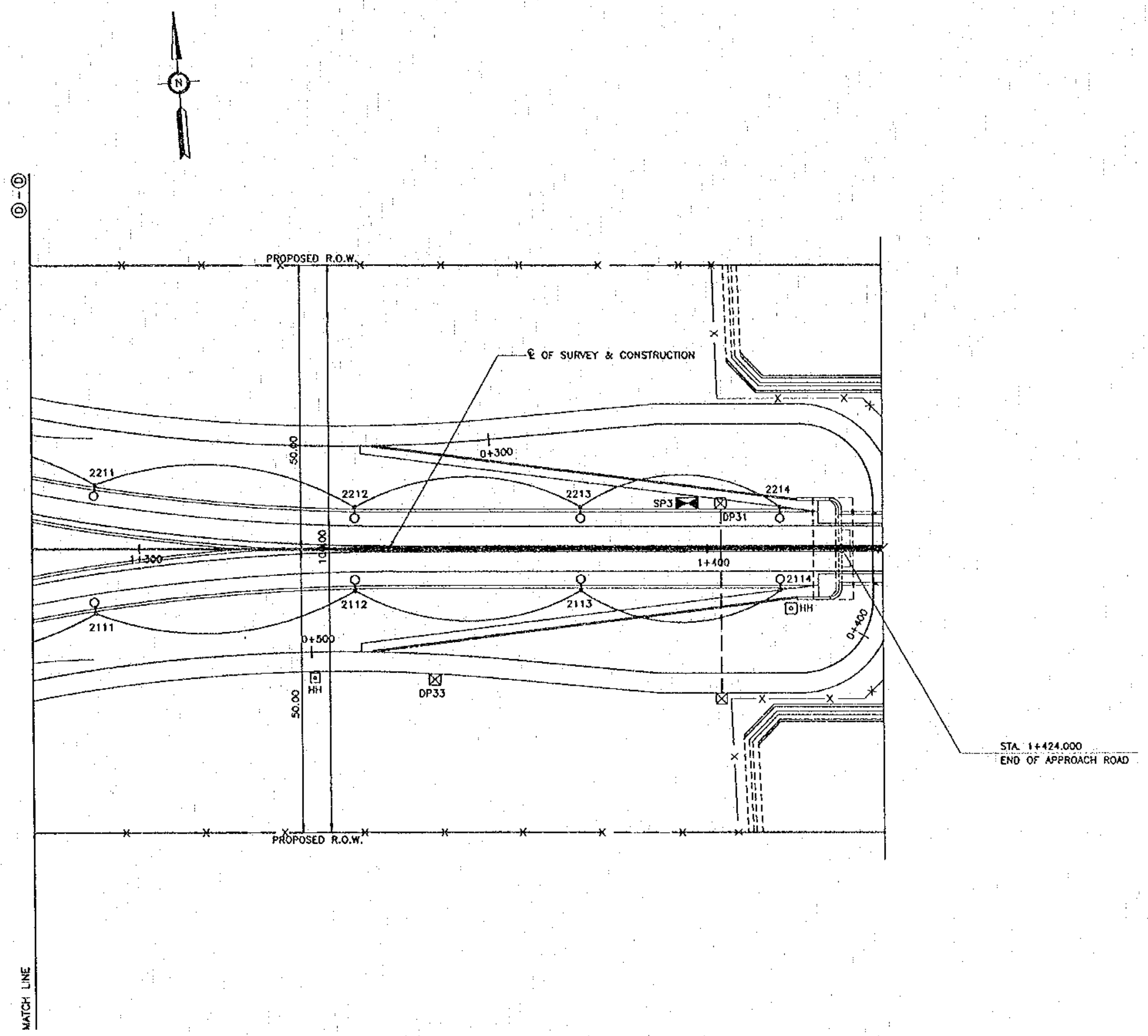
DATE OF ISSUE:	
05/03/2000	
DWG. NO. R-L-4	SHEET NO. 85
DWG. STATUS	



LIGHTING LAYOUT - 3
SCALE 1:500

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
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JICA JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	T. Takaobushi		18-02-00
DESIGN CHECK	T. Masuzawa		
SUBMITTED	A. Hirotani		
APPROVED	P. Viraphanth		22/02/00
	S. Temiyabutra		24/02/00

DWG. TITLE:
LIGHTING LAYOUT-3
STA. 1+424.000
THAILAND SIDE

Plot date: Tue. 28 Dec 1999 - 8:34:24
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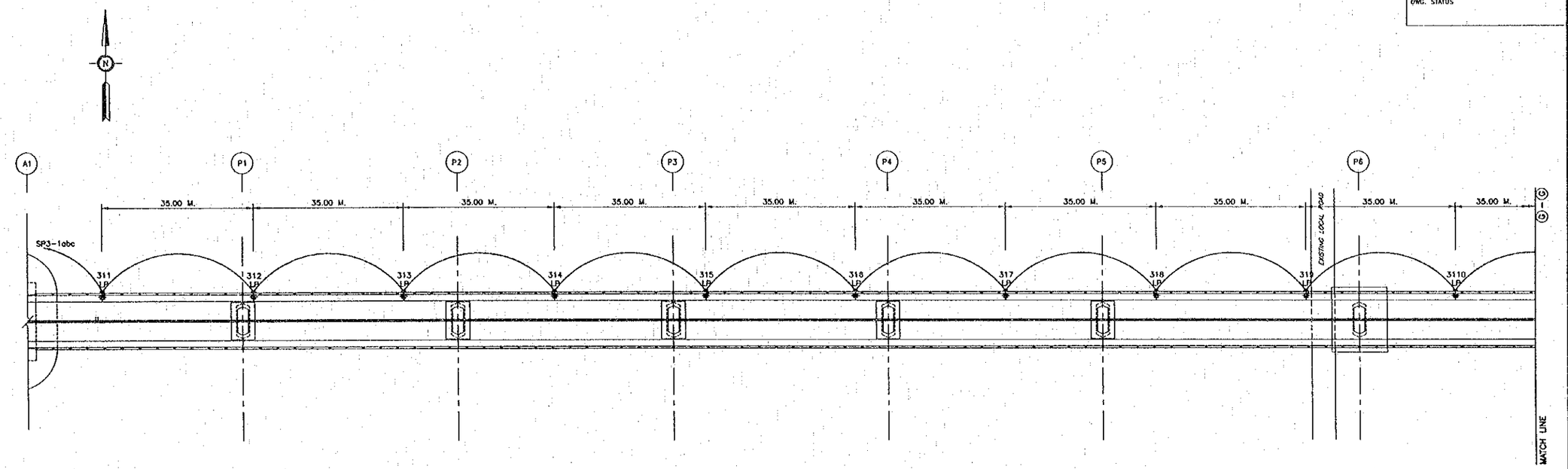
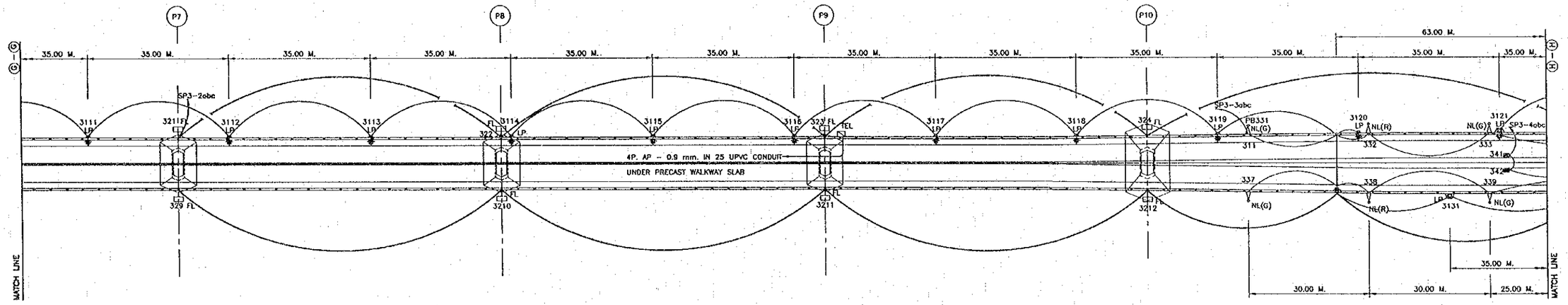
DATE OF ISSUE:	
	05/03/2000
DWG. NO. R-L-5	SHEET NO. 86
DWG. STATUS	





LIGHTING LAYOUT – 4

SCALE 1:500

LEGEND (ELECTRICAL)

- LP LIGHT POLE LOCATIONS : 10 M. HIGH TAPPERED STEEL POLE, SINGLE BRACKET WITH 1x250 HPS .
- FL PIER FLOOD LIGHT : 1x250 HPS FLOOD
- NL(R) NAVIGATION LIGHT (RED) : 1x100 GLS SINGLE LAMP
- NL(G) NAVIGATION LIGHT (GREEN) : 1x100 GLS SINGLE LAMP
- TEL TELEPHONE
- PC SAIL LIGHT : 1x1,000 HPS FLOOD

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM

ORIENTAL CONSULTANTS CO., LTD.

in association with

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JAPAN INTERNATIONAL COOPERATION AGENCY

LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION

KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	T. Takeabushi	T. Taka	18-02-00
DESIGN CHECK	T. Masuzawa		18.02.00
SUBMITTED	A. Hiratani		2/2/00
APPROVED	P. Viraphanh		22/02/00
	S. Terriyabuba		22/02/00

DWG. TITLE:

LIGHTING LAYOUT–4
AT BRIDGE
THAILAND SIDE

Plot date: Mon, 17 Jan 2000 – 16:04:51

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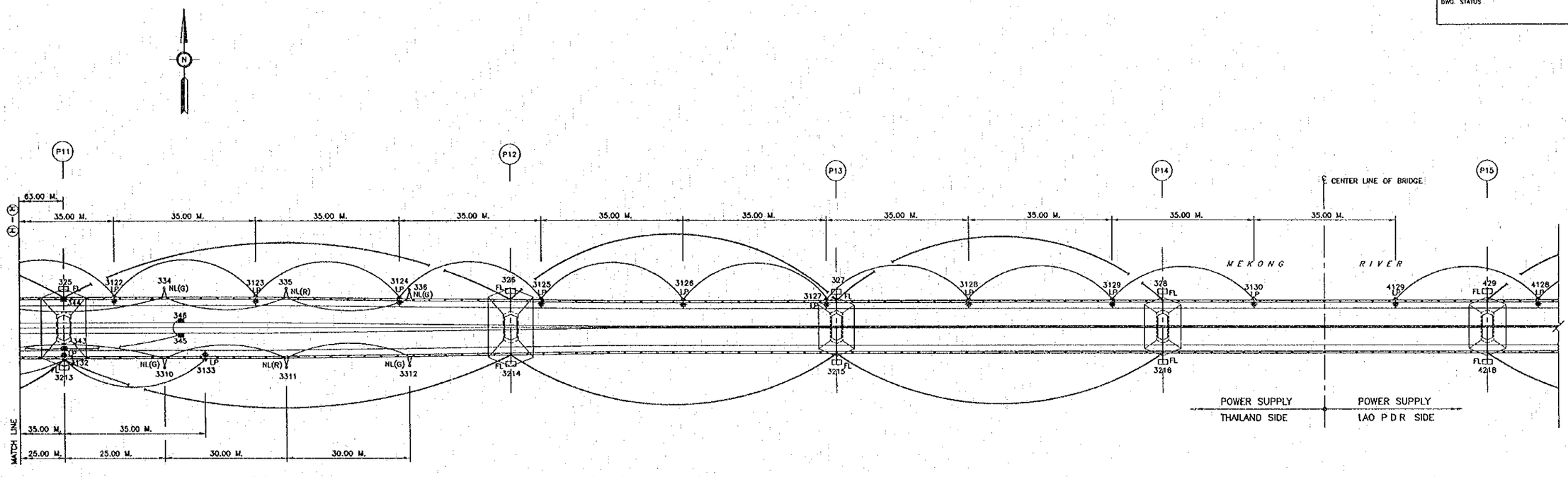
DATE OF ISSUE: 05/03/2000	
DWG. NO. R-L-6	SHEET NO. 87
DWG. STATUS	



LIGHTING LAYOUT – 5

SCALE 1:500

LEGEND (ELECTRICAL)

- LP LIGHT POLE LOCATIONS : 10 M. HIGH TAPPERED STEEL POLE, SINGLE BRACKET WITH 1x250 HPS
- FL PIER FLOOD LIGHT : 1x250 HPS FLOOD
- NL(R) NAVIGATION LIGHT (RED) : 1x100 GLS SINGLE LAMP
- NL(G) NAVIGATION LIGHT (GREEN) : 1x100 GLS SINGLE LAMP
- TEL TELEPHONE
- PC SAIL LIGHT : 1x1,000 HPS FLOOD

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
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NIPPON KOEI CO., LTD.

JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	T. Takaobushi	T. Taka	17-01-00
DESIGN CHECK	T. Masutomo		18-01-00
SUBMITTED	A. Hiratani		21-01-00
APPROVED	P. Virophanth		22/02/00
	S. Temiyabutra		22/02/00

DWG. TITLE:
LIGHTING LAYOUT–5
AT BRIDGE
THAILAND SIDE

Plot date: Mon, 17 Jan 2000 – 16:11:07

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DATE OF ISSUE: 05/03/2000	
DWG. NO. R--L--7	SHEET NO. 88
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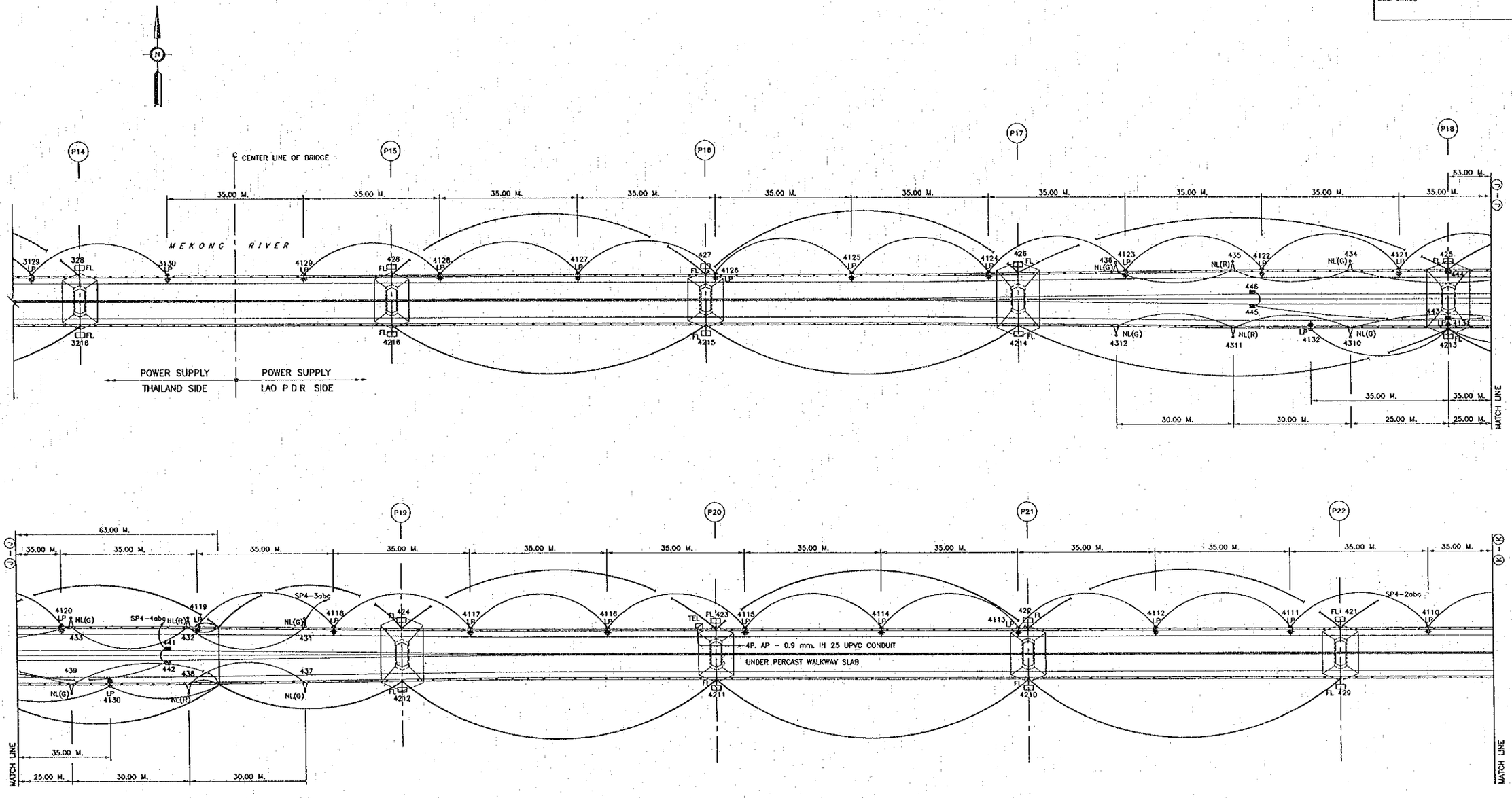

LIGHTING LAYOUT – 6

SCALE 1:500

LEGEND (ELECTRICAL)

- LP LIGHT POLE LOCATIONS : 10 M. HIGH TAPPERED STEEL POLE, SINGLE BRACKET WITH 1x250 HPS
- FL PIER FLOOD LIGHT : 1x250 HPS FLOOD
- NL(R) NAVIGATION LIGHT (RED) : 1x100 GLS SINGLE LAMP
- NL(G) NAVIGATION LIGHT (GREEN) : 1x100 GLS SINGLE LAMP
- TEL TELEPHONE
- PC SAIL LIGHT : 1x1,000 HPS FLOOD

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
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JICA JAPAN INTERNATIONAL COOPERATION AGENCY

LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION

KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	T. Takaobushi	T. Takao	18-02-00
DESIGN CHECK	T. Masuzawa		18-02-00
SUBMITTED	A. Hiratani		21-02-00
APPROVED	P. Viraphanith		22/02/00
	S. Temlyabutra	S. Temlya	22-02-00

DWG. TITLE:

LIGHTING LAYOUT–6
AT BRIDGE
LAO P D R SIDE

Plot date: Mon, 17 Jan 2000 - 16:12:31

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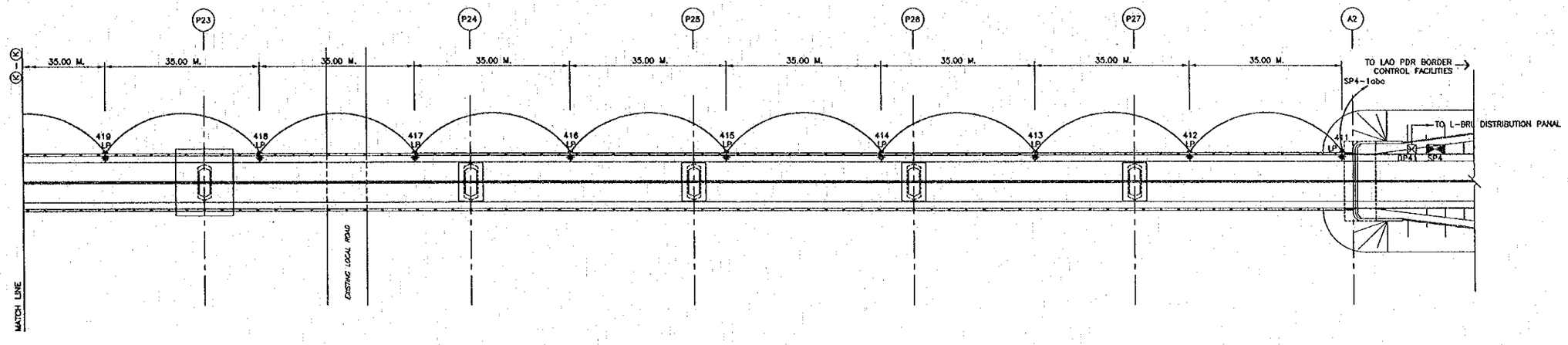
DATE OF ISSUE: 05/03/2000	
DWG. NO. R--L--8	SHEET NO. 89
DWG. STATUS	



LIGHTING LAYOUT – 7

SCALE 1:500

LEGEND (ELECTRICAL)

- LP LIGHT POLE LOCATIONS : 10 M. HIGH TAPPERED STEEL POLE, SINGLE BRACKET WITH 1x250 HPS
- FL PIER FLOOD LIGHT : 1x250 HPS FLOOD
- NL(R) NAVIGATION LIGHT (RED) : 1x100 GLS SINGLE LAMP
- NL(G) NAVIGATION LIGHT (GREEN) : 1x100 GLS SINGLE LAMP
- TEL TELEPHONE
- PC SAIL LIGHT : 1x1,000 HPS FLOOD

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
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JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
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KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	T. Takachushi	T. Taka	18-02-00
DESIGN CHECK	T. Masuzawa		18/2/00
SUBMITTED	A. Hirotani		21/12/99
APPROVED	P. Viraphanh		22/02/00
	S. Temiyabutra		22/12/99

DWG. TITLE:
LIGHTING LAYOUT–7
AT BRIDGE
LAO PDR SIDE

Plot date: Mon, 17 Jan 2000 – 18:16:31

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DATE OF ISSUE: 05/03/2000	
DWG. NO. R-L-9	SHEET NO. 90
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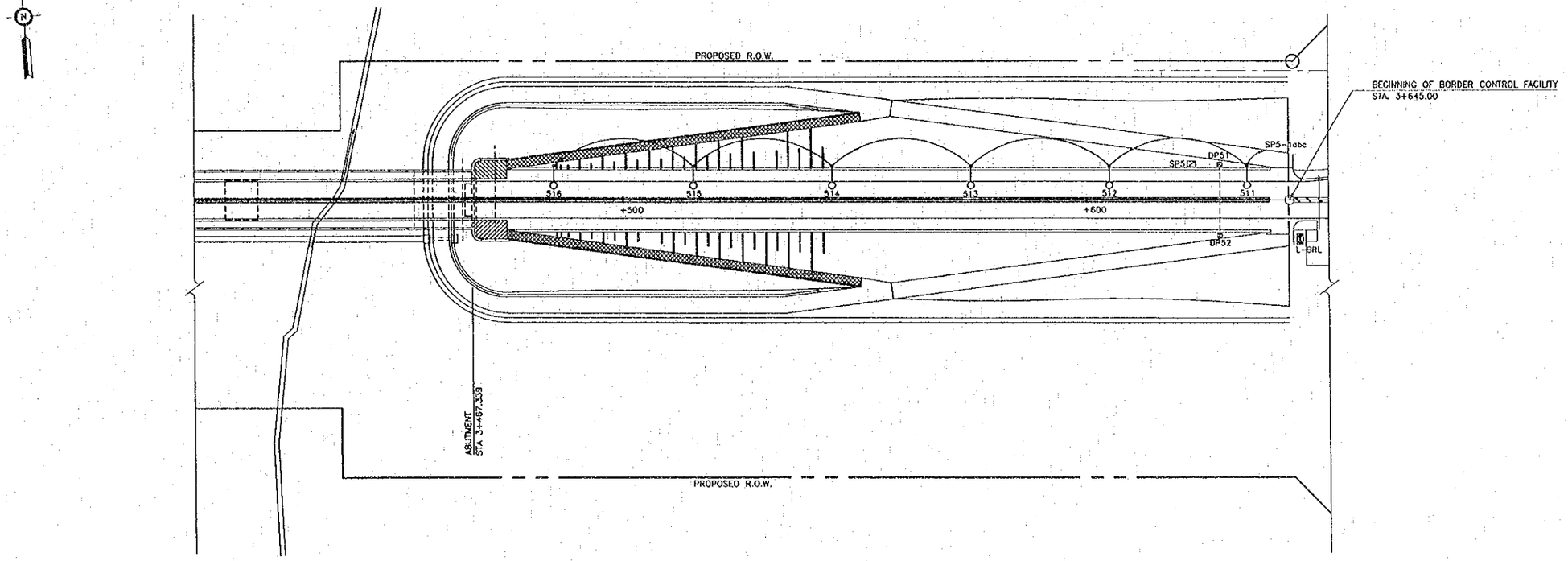
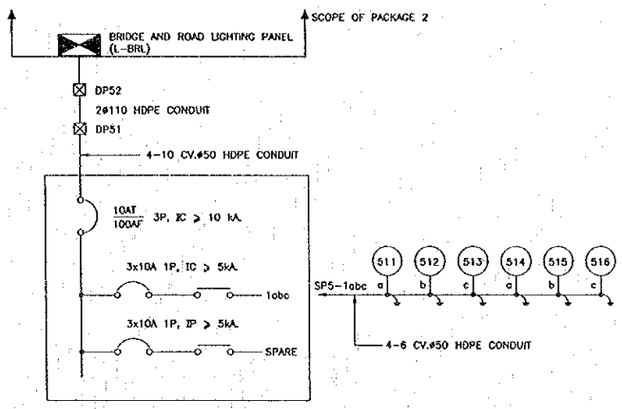


LIGHTING COLUMN SCHEDULE									
COLUMN NUMBER	STA.	ROAD	COLUMN HEIGHT	COLUMN TYPE	MOUNTING TYPE	ARM LENGTH (m.)	LANTERN TYPE	LAMP TYPE	REMARK
SP5	3+623.000	℄ OF CONSTR.	–	PILLAR	AT GRADE	–	–	–	TOTAL LOAD 2.5 kVA.
511	3+635.000	℄ OF CONSTR.	10	SINGLE	AT GRADE	2.50	CO.	1x250HPS	
512	3+605.000	℄ OF CONSTR.	10	SINGLE	AT GRADE	2.50	CO.	1x250HPS	
513	3+575.000	℄ OF CONSTR.	10	SINGLE	AT GRADE	2.50	CO.	1x250HPS	
514	3+545.000	℄ OF CONSTR.	10	SINGLE	AT GRADE	2.50	CO.	1x250HPS	
515	3+515.000	℄ OF CONSTR.	10	SINGLE	AT GRADE	2.50	CO.	1x250HPS	
516	3+485.000	℄ OF CONSTR.	10	SINGLE	AT GRADE	2.50	CO.	1x250HPS	



SUPPLY PILLAR : "SP5"
MOUNTING TYPE : AT GRADE

NOTES :

EACH ROAD LIGHTING CONSTRUCTION, WHICH NEED TO BE DONE DURING THE ROAD CONSTRUCTION SHOULD BE CARRIED OUT THE FOLLOWING ORDERS:

1. THE BOTH ENDS OF THE PIPE LAYING UNDERGROUND CROSS THE ROAD, WHICH IT MUST BE DONE DURING THE ROAD CONSTRUCTION MUST BE CROSED BY SPECIAL END COVERS. THE PROPOSE OF WHICH IS MADE BE IN THE CONDITION OF NO WATER FILLED IN. THE SYMBOLS TO DEMONSTRATE OF THE PIPE WAS LAID UNDERGROUND CROSS THE ROAD MUST BE MADE TO EACH POINTS OF THE ROADS.
2. AT THE CROSS-ROADS OR AT THE OTHER POINTS WHERE THE PIPES NEED TO BE LAID UNDERGROUND CROSS THE ROAD OR NEED TO MAKE THE DRAWPITS DURING THE ROAD CONSTRUCTION, ALL OF THESE CONSTRUCTION MUST BE FOLLOWED THE MODEL ATTACHED HEREWITH.

SINGLE LINE DIAGRAM (SP5)

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
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JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
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KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	T. Takaobushi	T. Takaobushi	8-02-00
DESIGN CHECK	T. Masuzawa		10-2-00
SUBMITTED	A. Hiratani		
APPROVED	P. Virophonth		23/2/00
	S. Temiyabutra		22/2/00

DWG. TITLE:
LIGHTING LAYOUT AND SINGLE LINE DIAGRAM
APPROACH ROAD
LAO PDR SIDE

Plot date: Tue, 6 Feb 2000 - 15:26:20
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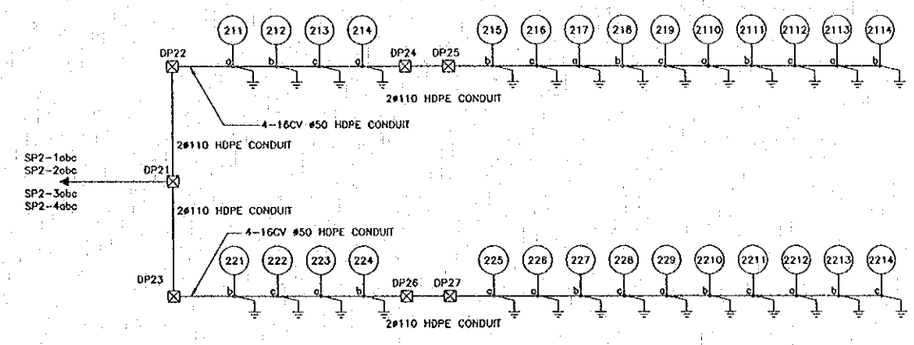
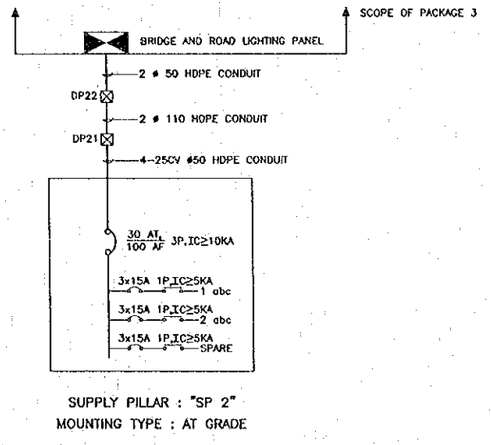
DATE OF ISSUE: 05/03/2000	
DWG. NO. R-L-10	SHEET NO. 91
DWG. STATUS	

LIGHTING COLUMN SCHEDULE

COLUMN NUMBER	STA.	ROAD	COLUMN HEIGHT	COLUMN TYPE	MOUNTING TYPE	ARM LENGTH (M.)	LANTERN TYPE	LAMP TYPE	REMARK
SP2	0+900.000	℄ OF CONSTR.	–	PILLAR	GRADE	–	–	–	TOTAL LOAD 20 KVA
211	0+917.000	℄ OF CONSTR.	10	SINGLE	M-2	2.50	CO	1x250 HPS	
212	0+000.000	CTL. "B"	10	SINGLE	M-2	2.50	CO	1x250 HPS	
213	0+040.000	CTL. "B"	10	SINGLE	M-2	2.50	CO	1x250 HPS	
214	0+080.000	CTL. "B"	10	SINGLE	M-2	2.50	CO	1x250 HPS	
215	0+112.000	CTL. "B"	10	SINGLE	M-2	2.50	CO	1x250 HPS	
216	0+148.000	CTL. "B"	10	SINGLE	M-2	2.50	CO	1x250 HPS	
217	0+188.000	CTL. "A"	10	SINGLE	M-2	2.50	CO	1x250 HPS	
218	0+228.000	CTL. "A"	10	SINGLE	M-2	2.50	CO	1x250 HPS	
219	0+268.000	CTL. "A"	10	SINGLE	M-2	2.50	CO	1x250 HPS	
2110	0+308.000	CTL. "A"	10	SINGLE	M-2	2.50	CO	1x250 HPS	
2111	0+340.000	CTL. "A"	10	SINGLE	M-2	2.50	CO	1x250 HPS	
2112	1+338.000	℄ OF CONSTR.	10	SINGLE	M-2	2.50	CO	1x250 HPS	
2113	1+378.000	℄ OF CONSTR.	10	SINGLE	M-2	2.50	CO	1x250 HPS	
2114	1+418.000	℄ OF CONSTR.	10	SINGLE	M-2	2.50	CO	1x250 HPS	
221	0+917.000	℄ OF CONSTR.	10	SINGLE	M-2	2.50	CO	1x250 HPS	
222	0+000.000	CTL. "A"	10	SINGLE	M-2	2.50	CO	1x250 HPS	
223	0+040.000	CTL. "A"	10	SINGLE	M-2	2.50	CO	1x250 HPS	
224	0+080.000	CTL. "A"	10	SINGLE	M-2	2.50	CO	1x250 HPS	
225	0+112.000	CTL. "A"	10	SINGLE	M-2	2.50	CO	1x250 HPS	
226	0+148.000	CTL. "A"	10	SINGLE	M-2	2.50	CO	1x250 HPS	
227	0+188.000	CTL. "B"	10	SINGLE	M-2	2.50	CO	1x250 HPS	
228	0+228.000	CTL. "B"	10	SINGLE	M-2	2.50	CO	1x250 HPS	
229	0+268.000	CTL. "B"	10	SINGLE	M-2	2.50	CO	1x250 HPS	
2210	0+308.000	CTL. "B"	10	SINGLE	M-2	2.50	CO	1x250 HPS	
2211	0+348.000	CTL. "B"	10	SINGLE	M-2	2.50	CO	1x250 HPS	
2212	1+338.000	℄ OF CONSTR.	10	SINGLE	M-2	2.50	CO	1x250 HPS	
2213	1+378.000	℄ OF CONSTR.	10	SINGLE	M-2	2.50	CO	1x250 HPS	
2214	1+413.000	℄ OF CONSTR.	10	SINGLE	M-2	2.50	CO	1x250 HPS	





SUPPLY PILLAR : "SP 2"
MOUNTING TYPE : AT GRADE

SINGLE LINE DIAGRAM (SP2)

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
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JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	T. Takaobushi	T. Takaobushi	18-02-00
DESIGN CHECK	T. Matsuzawa		18-02-00
SUBMITTED	A. Hirotani		21/02/00
APPROVED	P. Virophanth		22/02/00
	S. Temiyabutra	S. Temiyabutra	22/02/00

DWG. TITLE:
SINGLE LINE DIAGRAM & LIGHTING COLUMN
TRAFFIC CHANGEOVER
THAILAND SIDE

Plot date: Tue, 8 Feb 2000 - 15:24:13

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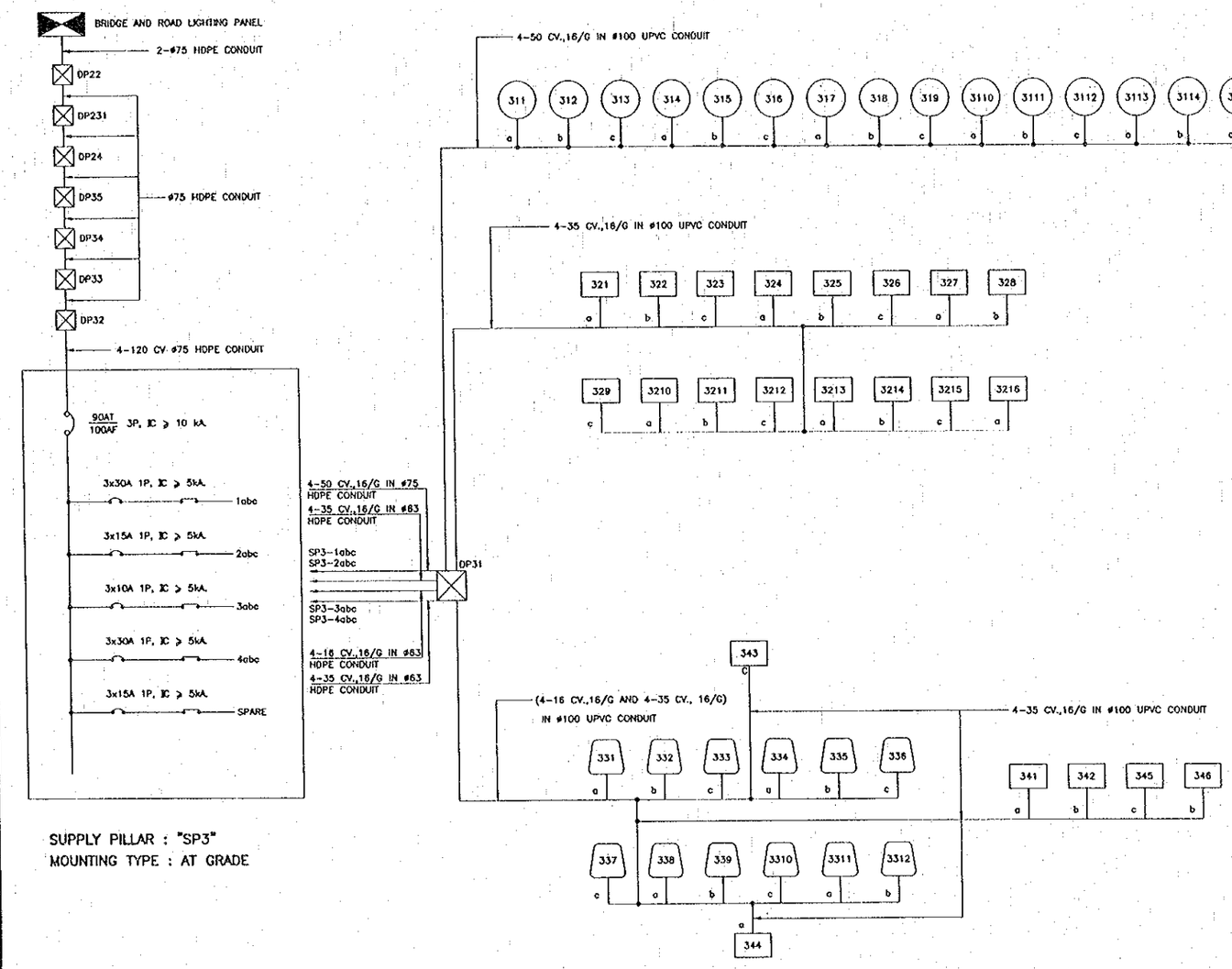
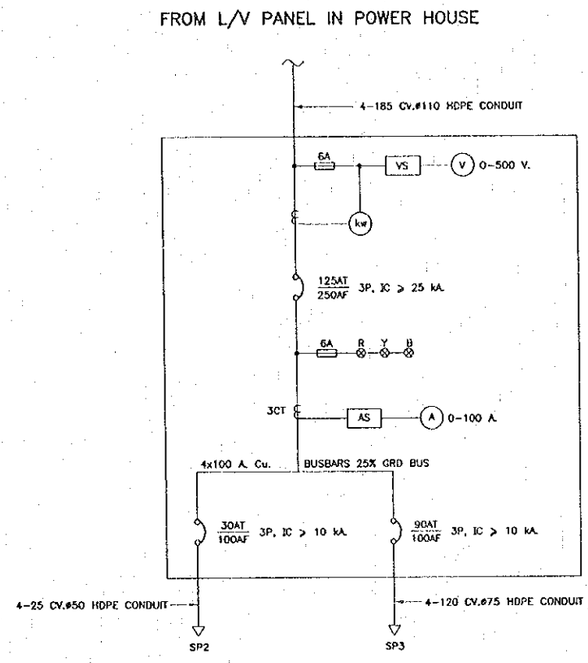
DATE OF ISSUE: 05/03/2000	
DWG. NO. R-L-11	SHEET NO. 92
DWG. STATUS	



SUPPLY PILLAR : "SP3"
MOUNTING TYPE : AT GRADE

SINGLE LINE DIAGRAM (SP3)



SINGLE LINE DIAGRAM
(BRIDGE AND ROAD LIGHTING PANEL)
MOUNTING TYPE : AT GRADE

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	T. Takaobushi		
DESIGN CHECK	T. Masuzawa		
SUBMITTED	A. Hirotani		
APPROVED	P. Viraphanth		22/03/00
	S. Temiyabutra		22/3/2000

DWG. TITLE:
SINGLE LINE DIAGRAM-1
AT BRIDGE
THAILAND SIDE

Plot date: Tue, 8 Feb 2000 - 15:21:33
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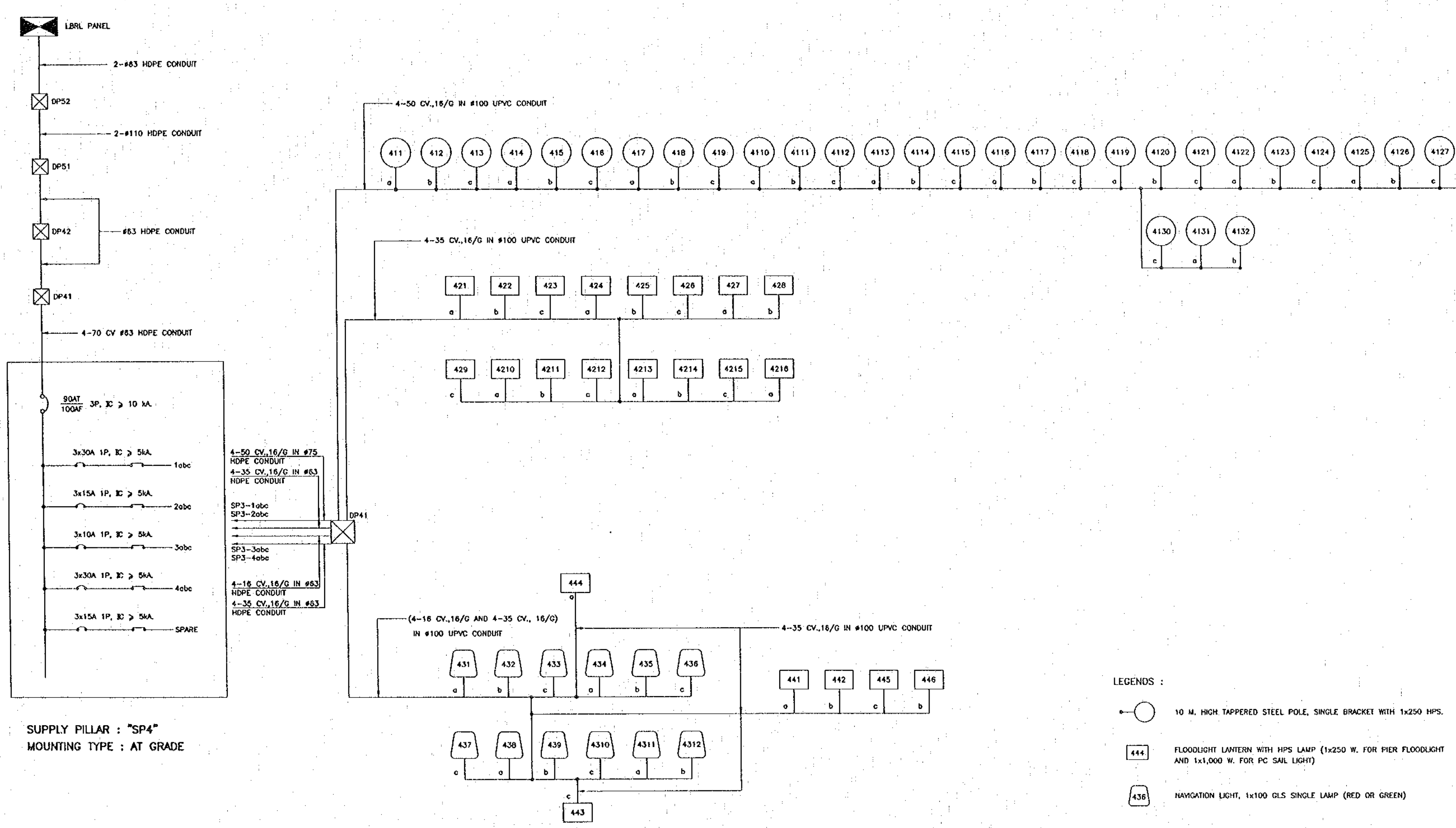
DATE OF ISSUE:	
05/03/2000	
DWG. NO. R-L-12	SHEET NO. 93
DWG. STATUS	



SINGLE LINE DIAGRAM (SP4)

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JICA JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	T. Takeobushi		18.02.00
DESIGN CHECK	T. Masuzono		18/02/00
SUBMITTED	A. Hiratani		
APPROVED	P. Viraphonth		24/02/00
	S. Tomiyabutra		29/02/00

DWG. TITLE:
SINGLE LINE DIAGRAM-2
AT BRIDGE
LAO PDR SIDE

Plot date: Mon, 17 Jan 2000 - 16:25:42
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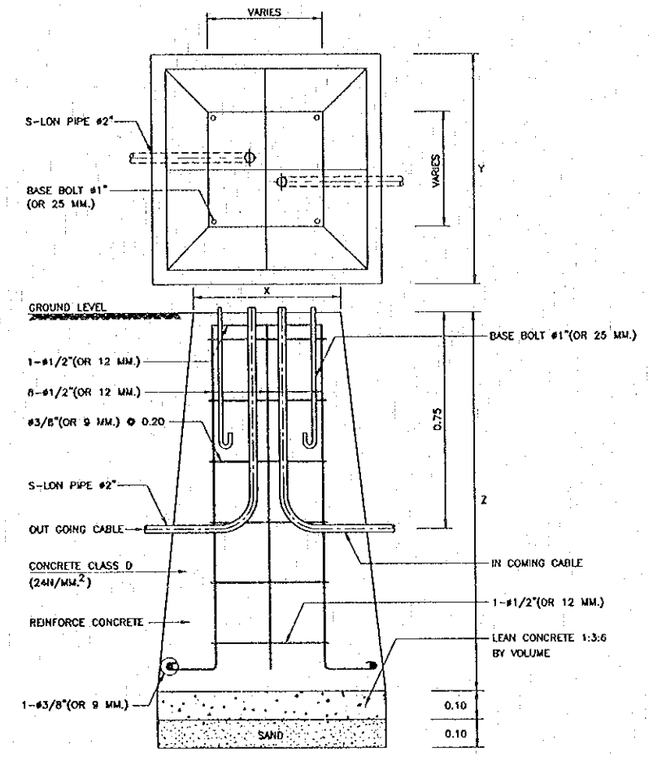
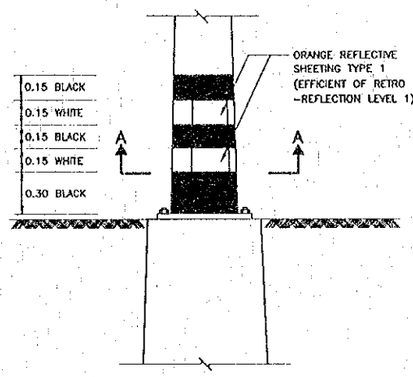
DATE OF ISSUE: 05/03/2000	
DWG. NO. R-L-13	SHEET NO. 94
DWG. STATUS	

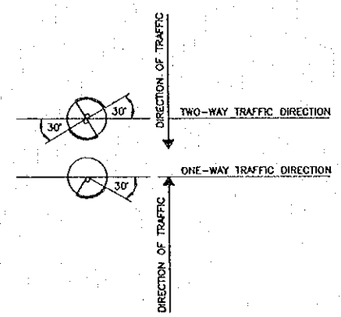


LIGHTING POLE FOUNDATION DETAILS
NOT TO SCALE

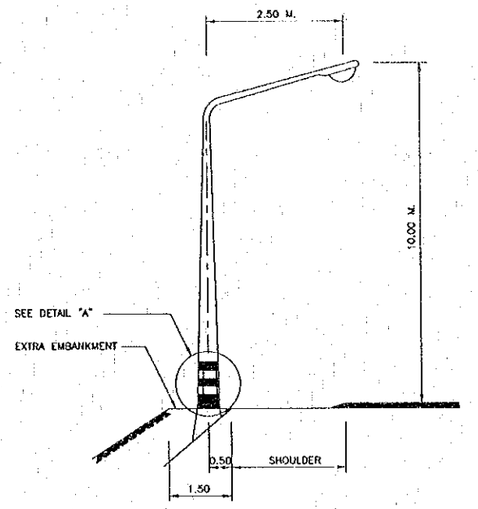
H	X(CM.)	Y(CM.)	Z(CM.)	REMARKS
10.00	45x45	120x120	180	FOR SIDE ENTRY OR POST TOP MOUNTING



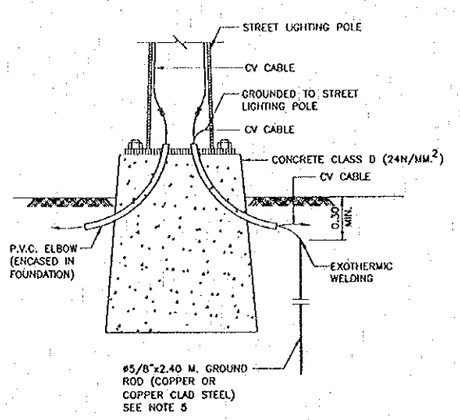
DETAIL "A"
NOT TO SCALE



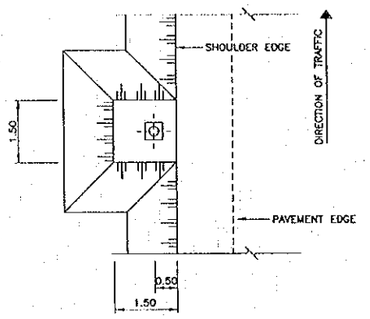
SECTION A-A
NOT TO SCALE



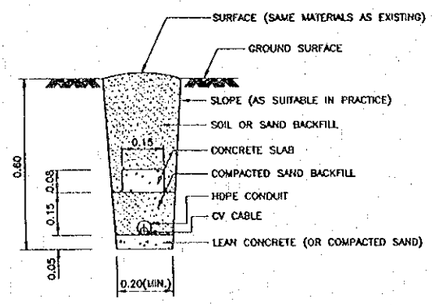
MOUNTING TYPE M-2
NOT TO SCALE



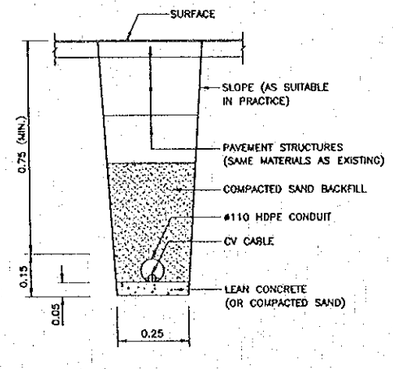
DETAIL OF GROUND ROD
SCALE 1:20



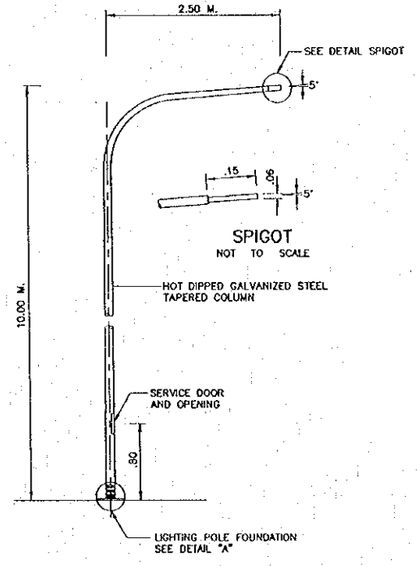
LOCATION OF LIGHTING POLE
NOT TO SCALE



DETAIL OF BURIAL CABLE UNDER GROUND
SCALE 1:10



DETAIL OF BURIAL CABLE UNDER ROADWAY
SCALE 1:10



SPIGOT
NOT TO SCALE

TYPICAL LIGHTING COLUMN
NOT TO SCALE

NOTES:

1. ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE INDICATED.
2. THE DETAIL DRAWING IS THE MINIMUM REQUIREMENT BY THE DOH. INCASE OF ANY DISCREPANCY BETWEEN THIS DRAWING AND M.E.A. OR P.E.A. STANDARDS ARISES, SUCH ORGANIZING STANDARDS SHALL PREVAIL AT THE EXPENSE OF THE CONTRACTOR.
3. THE ELEVATION OF LIGHTING POLE FOUNDATION SHALL BE LOCATED AS FOLLOWS :
   - 3.1 FOR LIGHTING POLE ON EDGE OF SHOULDER, RAISED MEDIAN AND SIDEWALK, THE TOP OF FOUNDATION LEVEL SHALL BE ABOUT 5 CM. HIGHER THAN GROUND LEVEL.
   - 3.2 FOR LIGHTING POLE IN DEPRESSED MEDIAN, THE TOP OF FOUNDATION LEVEL SHALL KEEP THE SAME ELEVATION AS ROAD PROFILE GRADE.
4. THE GALVANIZED RIGID STEEL CONDUIT (GRC.) SHALL CONFORM TO TIS. 770
5. FOR P.E.A. GROUND ROD SHALL USE GALVANIZED STEEL ROD.

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
In association with
NIPPON KOEI CO., LTD.

JICA JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG
INTERNATIONAL BRIDGE
CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	T. Takeobushi	T. Take	15-02-00
DESIGN CHECK	T. Masuzawa		15-02-00
SUBMITTED	A. Hiratani		
APPROVED	P. Yiraphanth		22/03/00
	S. Temiyabutra		22/03/00

DWG. TITLE:
LIGHTING COLUMN DETAILS

Plot date: Tue, 8 Feb 2000 - 13:17:39
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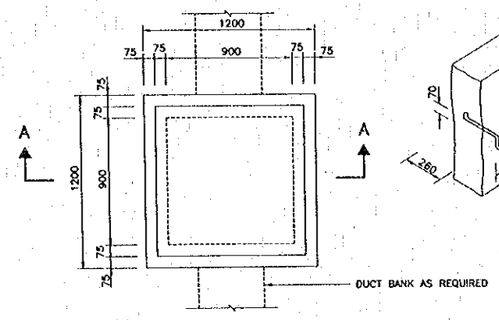
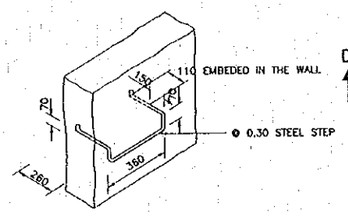
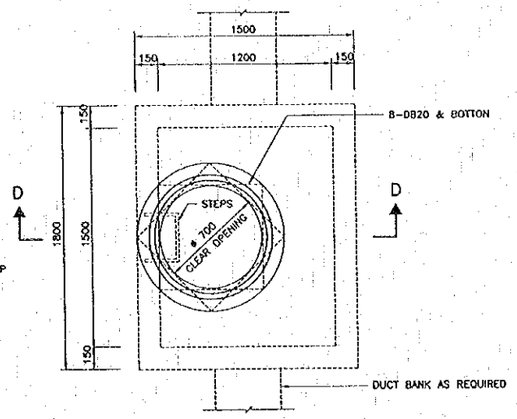
DATE OF ISSUE: 05/03/2000	
DWG. NO. R-L-14	SHEET NO. 95
DWG. STATUS	



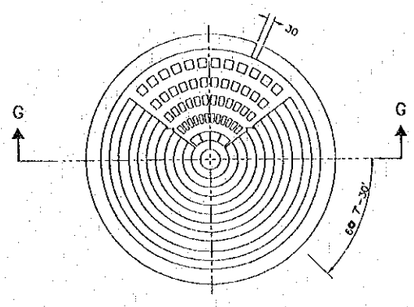
PLAN



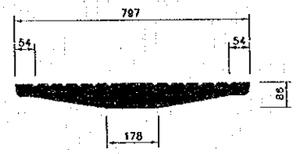
STEP DETAIL
NOT TO SCALE



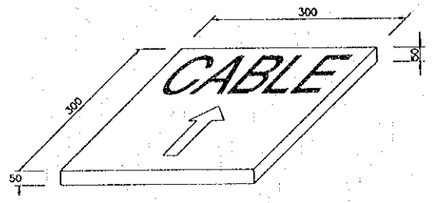
PLAN



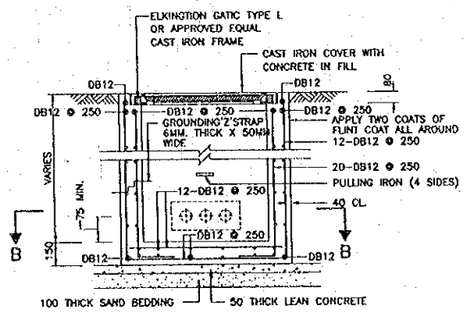
PLAN – COVER FRAME



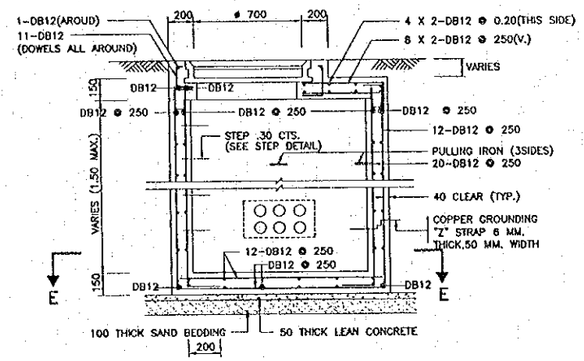
SECTION G–G



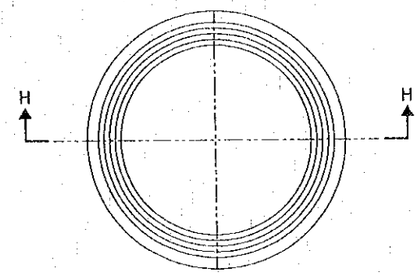
CABLE MARKER DETAIL (CONCRETE)



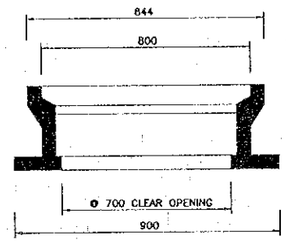
SECTION A–A



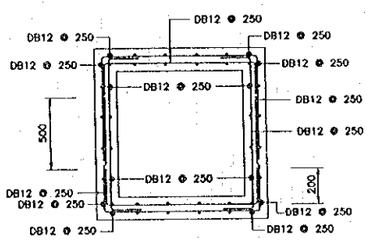
SECTION D–D



PLAN – COVER

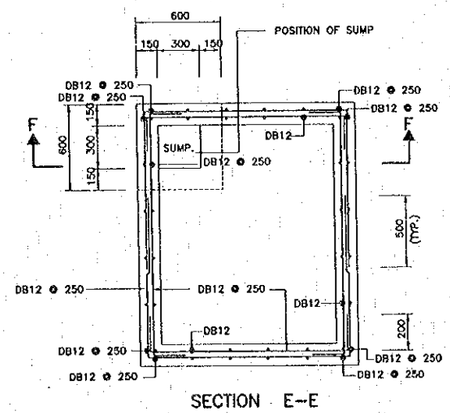


SECTION H–H

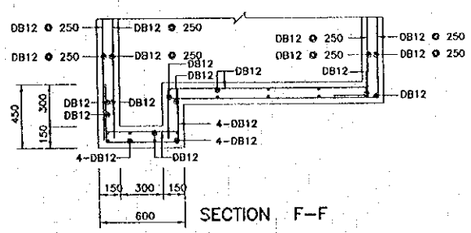


SECTION B–B

DRAWPIT TYPE B DETAILS
SCALE 1 : 20



SECTION E–E



SECTION F–F

DRAWPIT TYPE A DETAILS
SCALE 1 : 20

NOTES :

1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE INDICATED.
2. CONCRETE SHALL BE CLASS D (24N/MM^2) UNLESS OTHERWISE SHOWN.
3. REINFORCING STEEL BARS SHALL BE GRADE SD295.

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG
INTERNATIONAL BRIDGE
CONSTRUCTION PROJECT

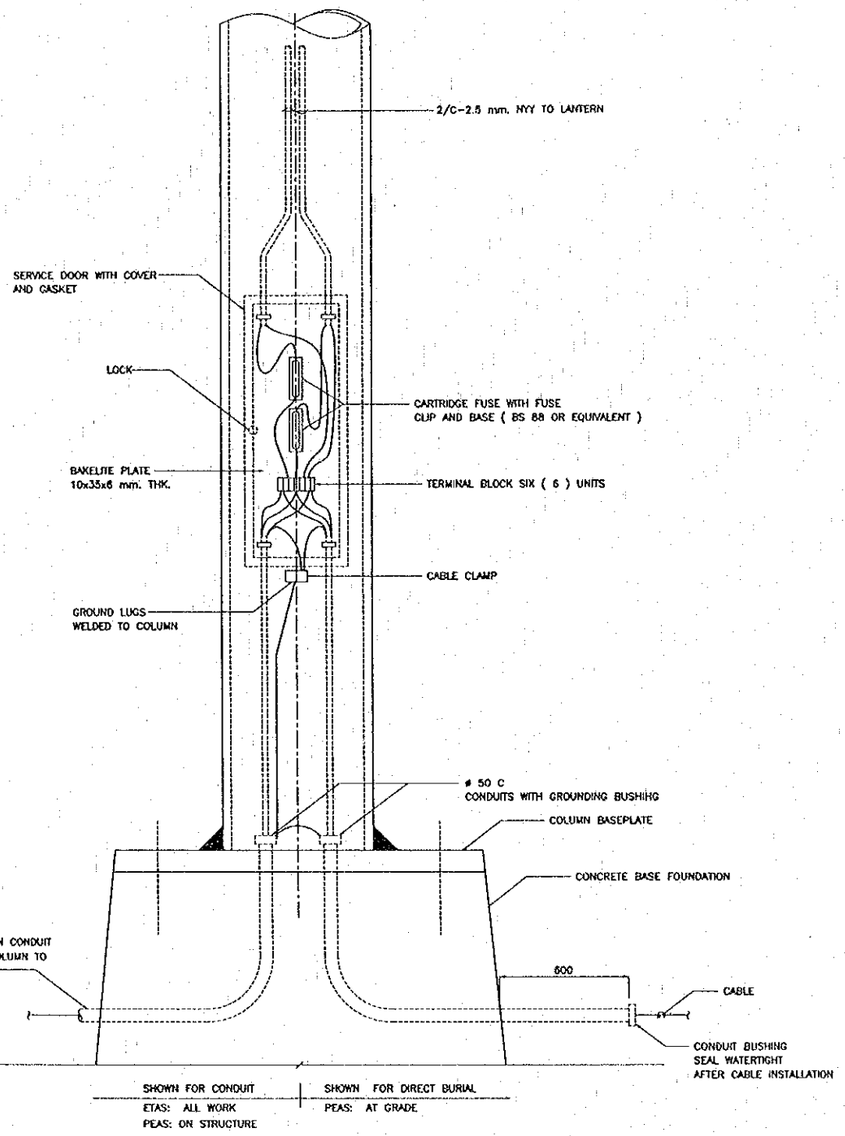
QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	T. Takaobushi	T. Takao	15-02-00
DESIGN CHECK	T. Masusawa		22/2/00
SUBMITTED	A. Hirotani		22/2/00
APPROVED	P. Virophonth		22/2/00
	S. Temiyabutra	S. Temiya	22/2/00

DWG. TITLE:
DRAWPITS
THAILAND SIDE

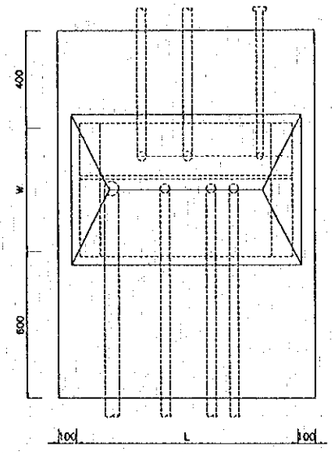
Plot date: Tue, 8 Feb 2000 - 15:15:47

C:\1SMB-NEW\PACKAGE1\LIGHTING\PL1-L14.dwg

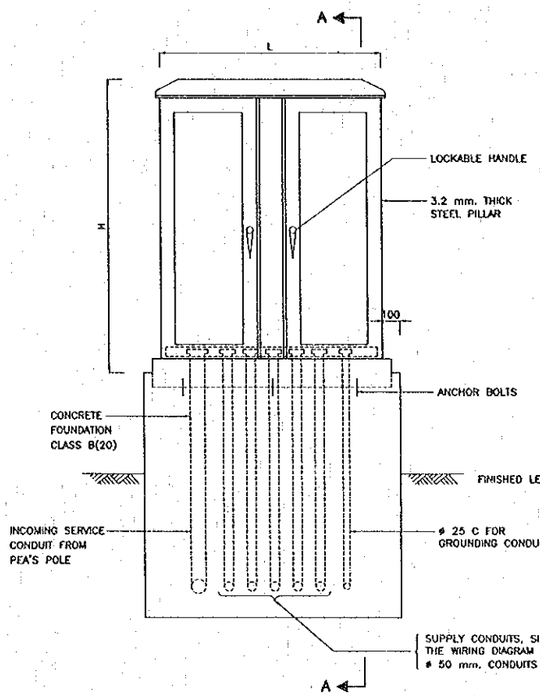
DATE OF ISSUE:	05/03/2000
DWG. NO.	R-L-15
SHEET NO.	96
DWG. STATUS	



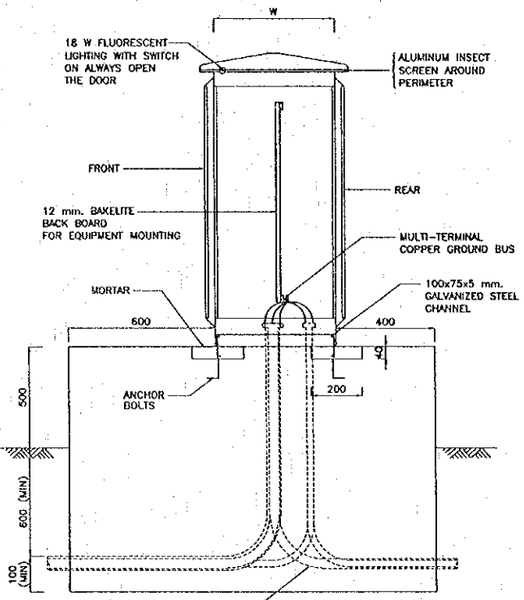
TYPICAL ELECTRICAL CONNECTION IN LIGHTING COLUMN
NOT TO SCALE



PLAN SUPPLY PILLAR
NOT TO SCALE



ELEVATION
NOT TO SCALE



SECTION "A"
NOT TO SCALE

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE INDICATED.
2. THE CONTRACTOR SHALL RESPONSIBLE FOR SIZING THE SUPPLY PILLAR TO ACCOMODATE ALL EQUIPMENT INSTALLED AND ALLOW FOR USABLE SPACE FOR FUTURE ADDITION, REFERRED TO THE SPECIFICATIONS.

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JICA JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

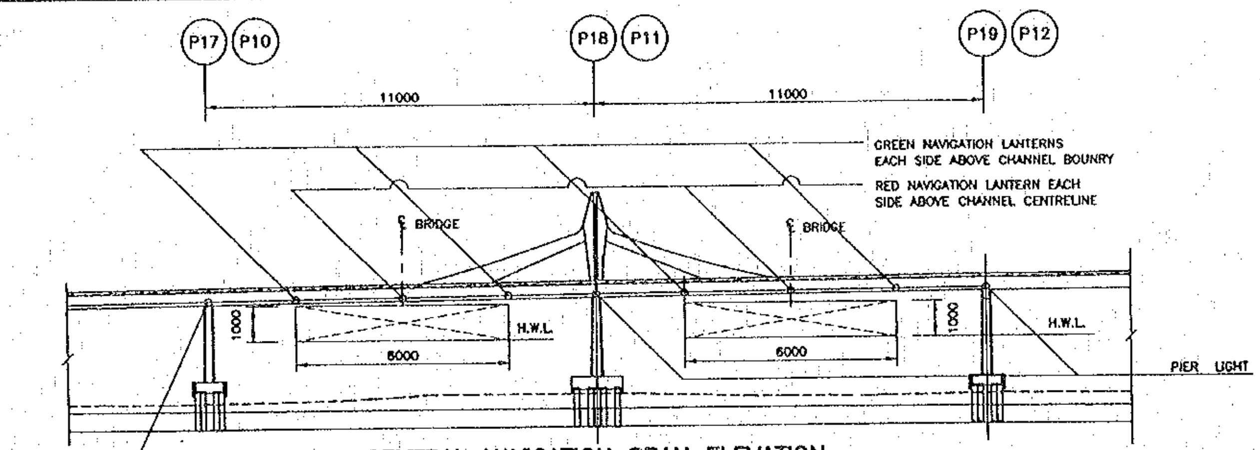
THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	T. Takaobushi	T. Taka	18-02-00
DESIGN CHECK	T. Masuzawa		18-02-00
SUBMITTED	A. Hirotani		21-2-00
APPROVED	P. Wrapbanth		22/02/00
	S. Temiyabutra	S. Temiya	22/02/00

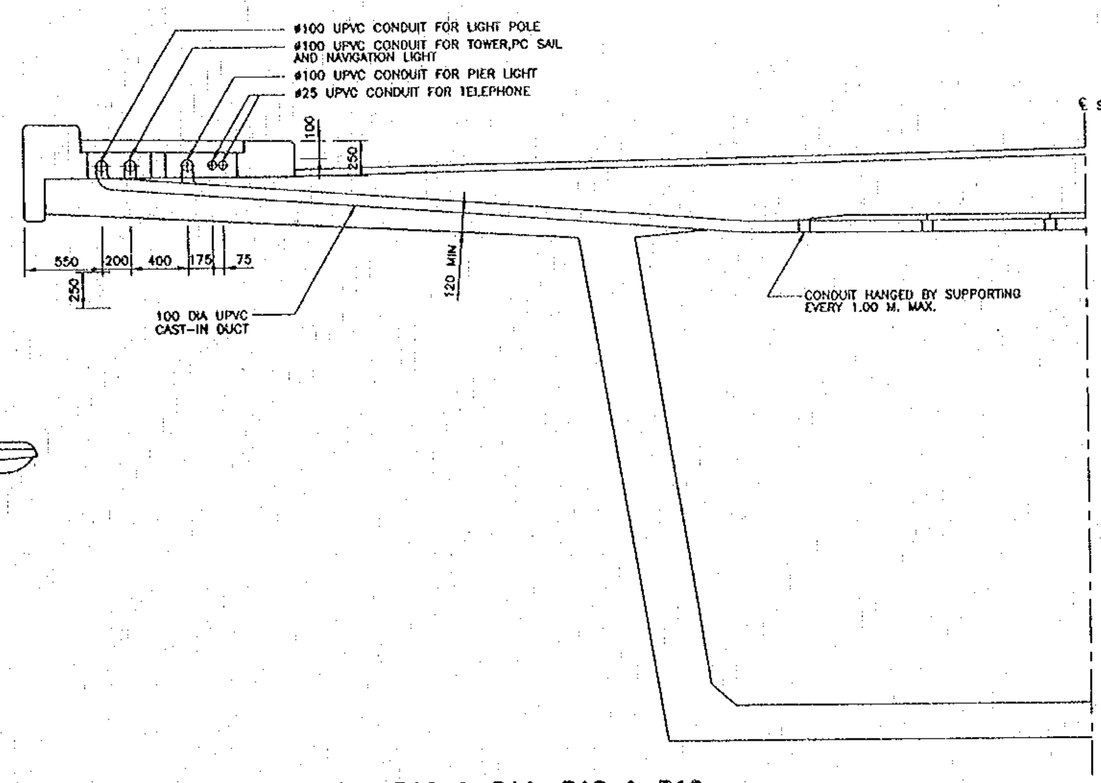
DWG. TITLE:
LIGHTING COLUMN CONNECTION & SUPPLY PILLAR

Plot date: Tue, 8 Feb 2000 - 15:12:44
C:\1SMB-NEW\PACKAGE1\LIGHTING\Pk1-L15.dwg

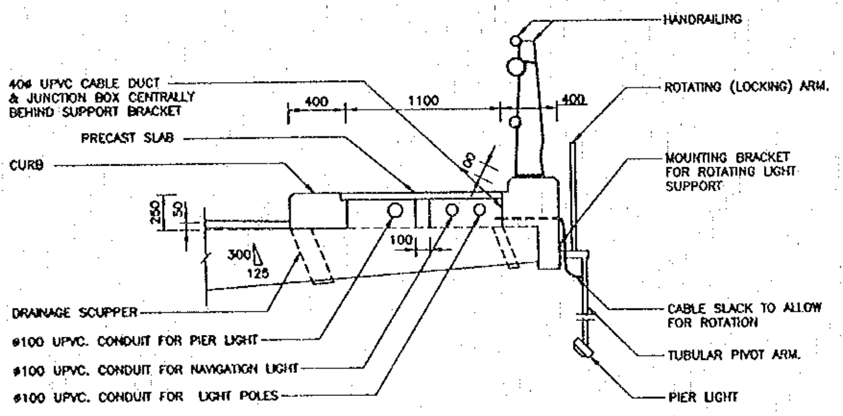
DATE OF ISSUE	
05/03/2000	
DWG. NO. R-L-16	SHEET NO. 97
DWG. STATUS	



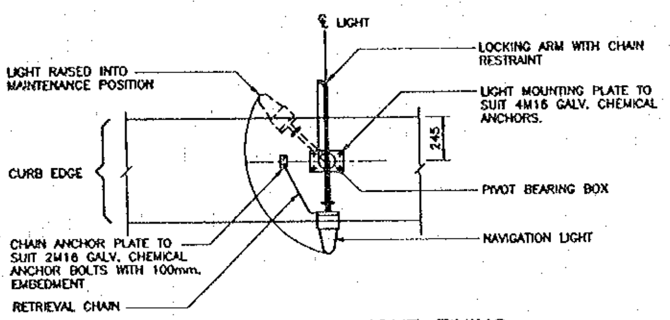
CENTRAL NAVIGATION SPAN ELEVATION
SCALE 1:25



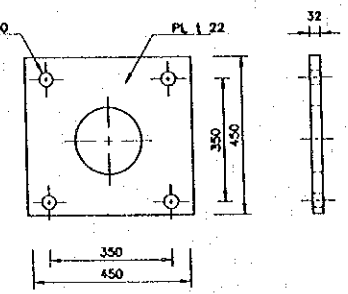
SECTION BETWEEN P10 & P11, P18 & P19
SCALE 1:25



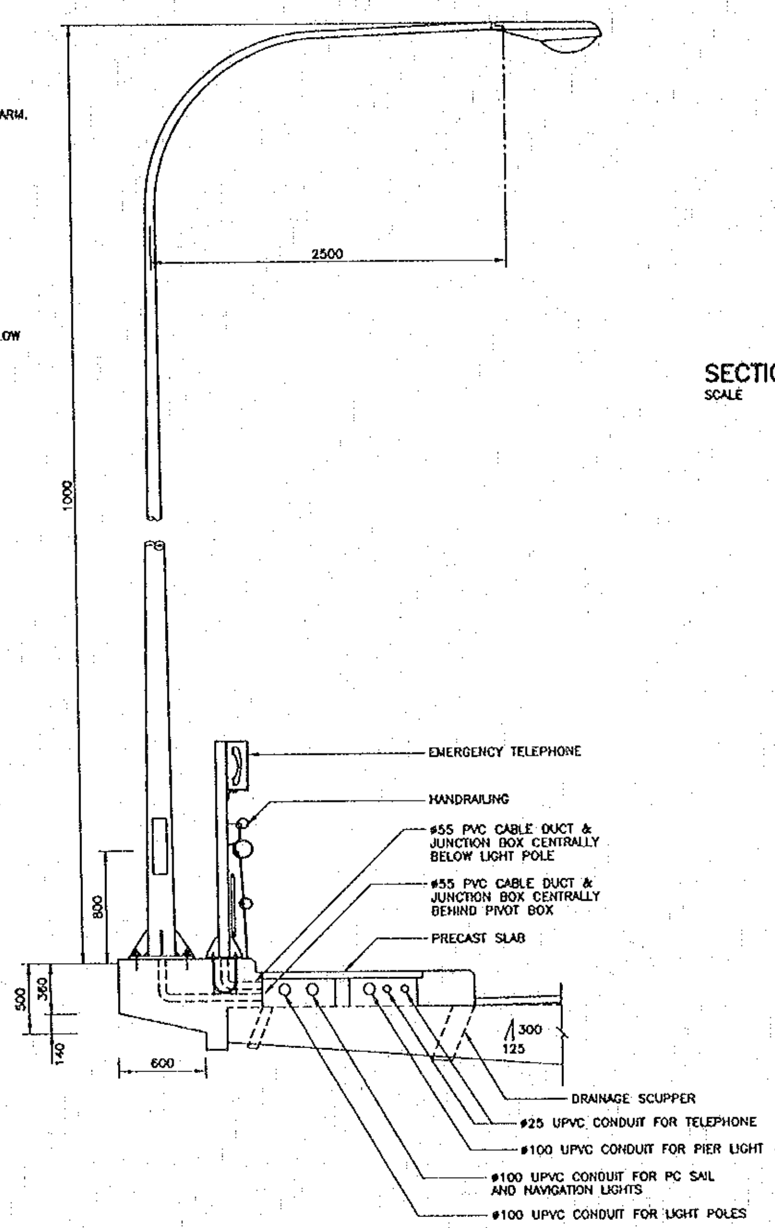
TYPICAL SECTION AT PIER LIGHT MOUNTING
NAVIGATION LIGHT SIMILAR
DOWNSTEAM SIDE SHOWN
SCALE 1:50



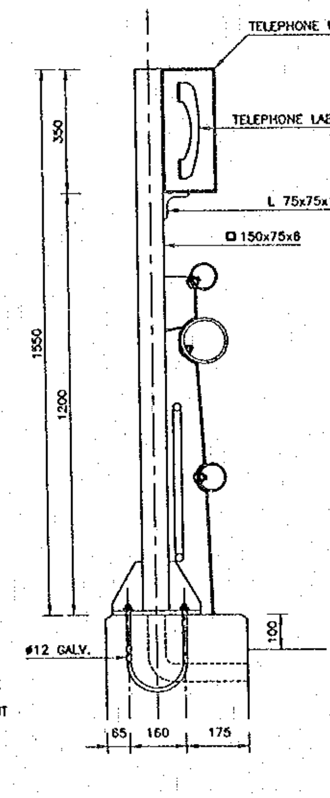
TYPICAL NAVIGATION LIGHT FIXING
PIER LIGHT SIMILAR
SCALE 1:20



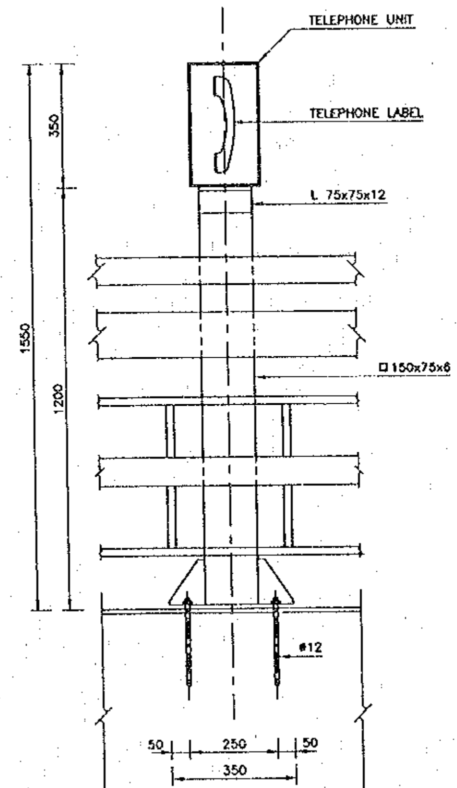
BASE PLATE OF LIGHT POLE
SCALE 1:10



TYPICAL SECTION AT LIGHT POLE MOUNTING
SCALE 1:50



CROSS SECTION
SCALE 1:10



SIDE VIEW OF EMERGENCY TELEPHONE
SCALE 1:10

NOTES :

1. FOR DETAILS OF LIGHT POLE NAVIGATION, PIER FLOOD LIGHTS AND EMERGENCY TELEPHONE, REFER SPECIFICATION
2. MOUNTING BRACKETS FOR NAVIGATION AND PIER FLOOD LIGHTS SHALL BE STANDARD "TIDELAND" FITTINGS OR EQUIVALENT
3. ALL DIMENSIONS AS SHOWN ARE IN MM. UNLESS OTHERWISE INDICATED.
4. ALL STEEL TO BE IS G3101 "SS400" UNLESS OTHERWISE NOTED.
5. ALL STEEL WORK, INCLUDING NUTS BOLTS SHALL BE HOT DIP GALVANIZED, ZINC COATING SHALL NOT BE LESS THAN 550 GRAMS PER SQUARE METER BY JIS H8641 HDZ55 (550G/M2).

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JICA JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

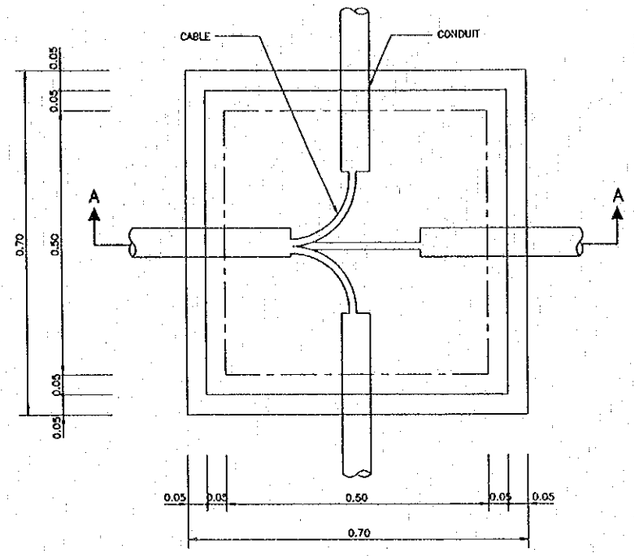
THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	T. Takaobushi	[signature]	11-02-00
DESIGN CHECK	T. Masuzawa	[signature]	18-02-00
SUBMITTED	A. Hiraloni	[signature]	21/02/00
APPROVED	P. Viraphanth	[signature]	28/02/00
	S. Temiyabutra	[signature]	23/02/00

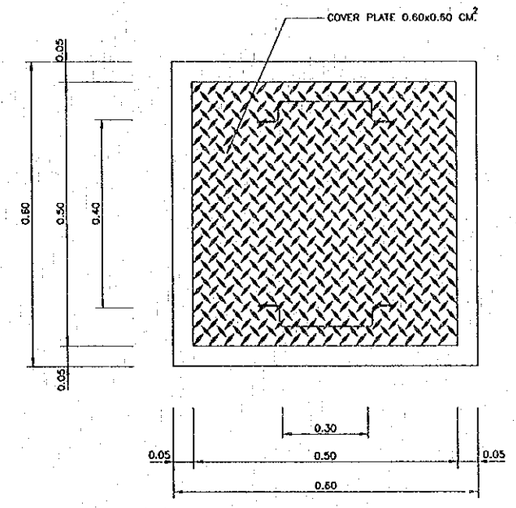
DWG. TITLE:
BRIDGE LIGHTING, TELEPHONE DETAILS AND SECTION AT CONDUIT CROSSING DETAILS

C:\SMB-NEW\PACKAGE1\PK1-L16.DWG
Plot date: Tue, 8 Feb 2000 - 15:11:19

DATE OF ISSUE: 05/03/2000	
DWG. NO. R-L-17	SHEET NO. 98
DWG. STATUS	



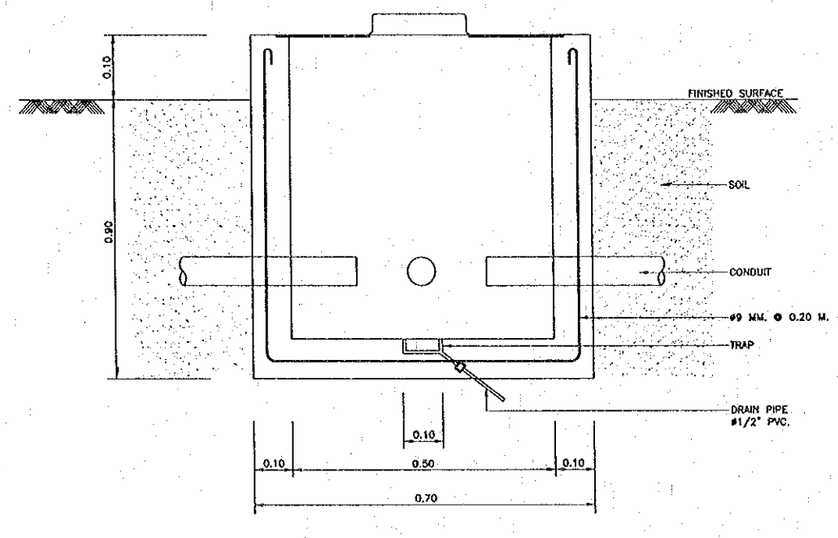
HANDHOLE
NOT TO SCALE



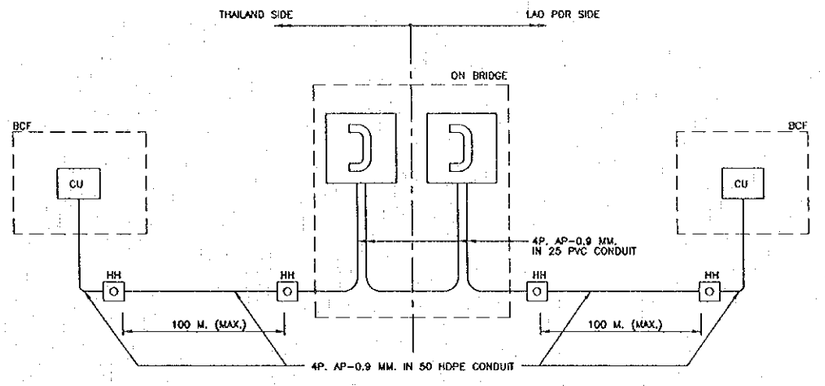
STEEL PLATE COVER DETAIL
NOT TO SCALE

LEGEND : (TELEPHONE)

CU	CENTRAL UNIT
	EMERGENCY TELEPHONE UNIT
BCF	BORDER CONTROL FACILITIES
HH	HANDHOLE 70 x 70 CM.
AP	OUTSIDE TELEPHONE WIRING ALPETH CABLES WITHOUT SUPPORT MESSENGER WIRE



SECTION A – A
NOT TO SCALE



EMERGENCY TELEPHONE BLOCK DIAGRAM
NOT TO SCALE

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JICA JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

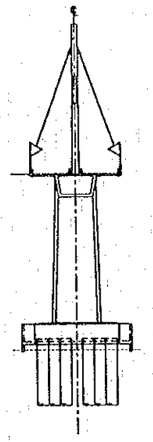
QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	T. Takeobushi	T. Take	15-01-00
DESIGN CHECK	T. Masuzawa		18-01-00
SUBMITTED	A. Hirotani		21/1/00
APPROVED	P. Viraphanth		22/02/00
	S. Temiyabutra	S. Temiya	22/02/00

DWG. TITLE:
BRIDGE EMERGENCY TELEPHONE BLOCK DIAGRAM AND HANDHOLE DETAILS

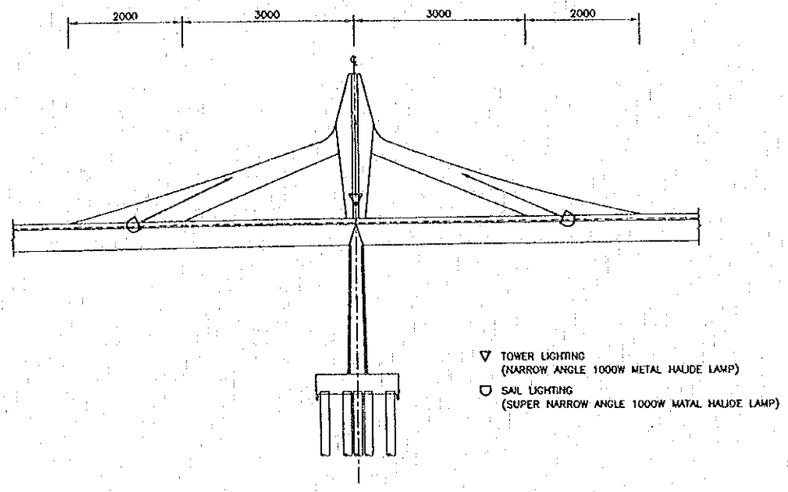
Plot date: Tue, 8 Feb 2000 — 15:07:33

C:\SUB-NEW\PACKAGE1\LIGHTING\Pk1-117.dwg

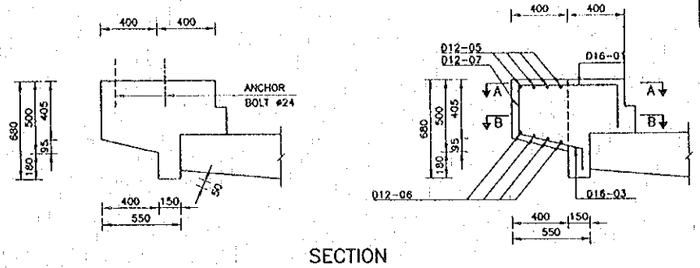
DATE OF ISSUE: 05/03/2000	
DWG. NO. R-L-18	SHEET NO. 99
DWG. STATUS	



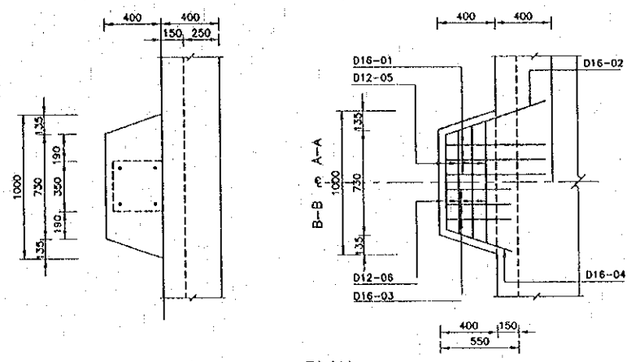
PIERS P11 OR P18 SECTION
SCALE 1:50



PIERS P11 OR P18 ELEVATION
SCALE 1:50

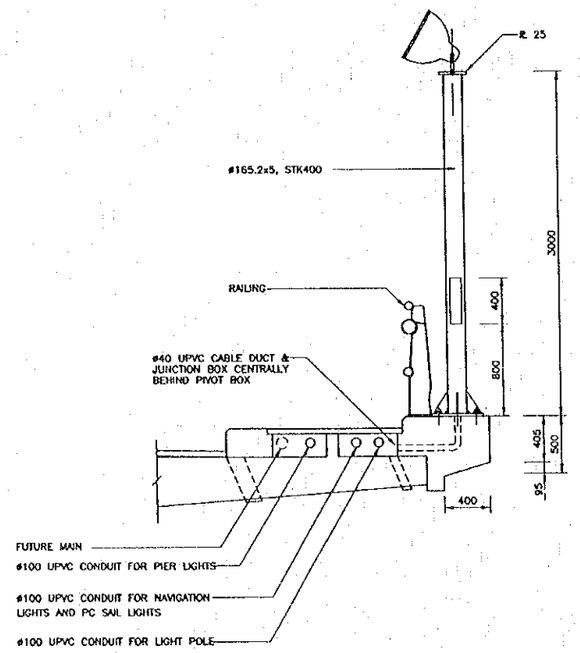


SECTION
SCALE 1:20

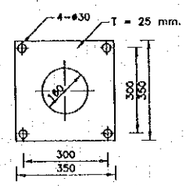


PLAN
SCALE 1:20

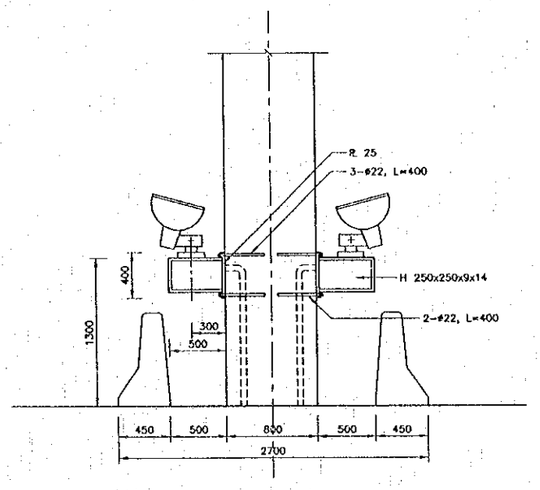
TOWER LIGHT POLE SUPPORTING



TYPICAL TOWER LIGHTING FIXING
SCALE 1:25



BASE PLATE
OF TOWER LIGHT POLE
SCALE 1:10



TYPICAL SAIL LIGHTING FIXING
SCALE 1:25

NOTES :

1. ALL DIMENSIONS AS SHOWN ARE IN MILLIMETRE UNLESS OTHERWISE INDICATED.
2. ALL LIGHT POSTION SHOWN ARE INDICATIVE ONLY. THE CONTRACTOR SHALL PREPARE AND SUBMIT SHOP DRAWING AND ILLUMINATIVE CALCULATIONS FOR THE LIGHTS.
3. ALL STEEL TO BE IS G3101 "SS400" UNLESS OTHERWISE NOTED.
2. ALL STEELWORK, INCLUDING NUTS BOLTS SHALL BE HOT DIP GALVANIZED, ZINC COATING SHALL NOT BE LESS THAN 550 GRAMS PER SQUARE METER.

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JICA JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG
INTERNATIONAL BRIDGE
CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	T. Takaobushi		18-02-00
DESIGN CHECK	T. Masuzawa		
SUBMITTED	A. Hirotani		
APPROVED	P. Viraphanth		28/04/00
	S. Temiyabutra		22/12/00

DWG. TITLE:
BRIDGE TOWER AND PC. SAIL LIGHTING

Plot date: Tue, 8 Feb 2000 - 15:05:43
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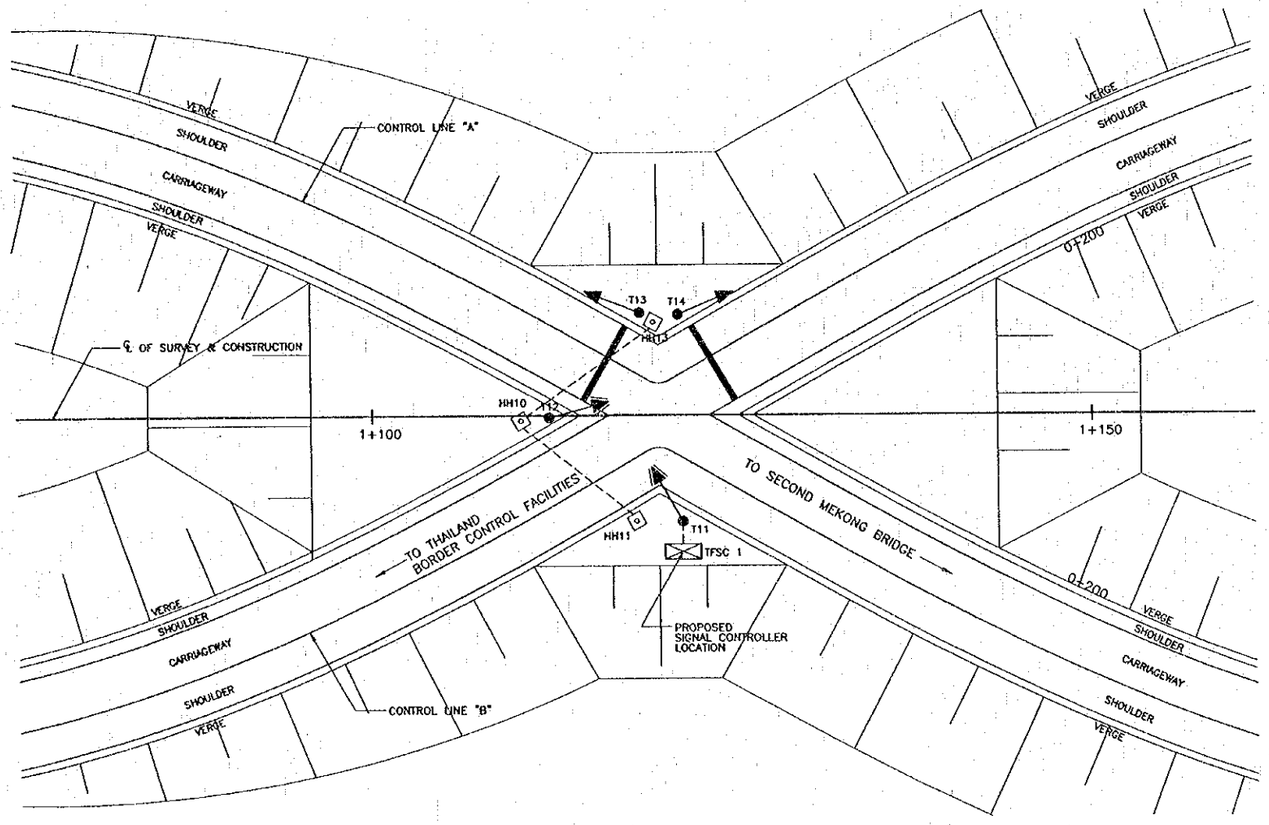
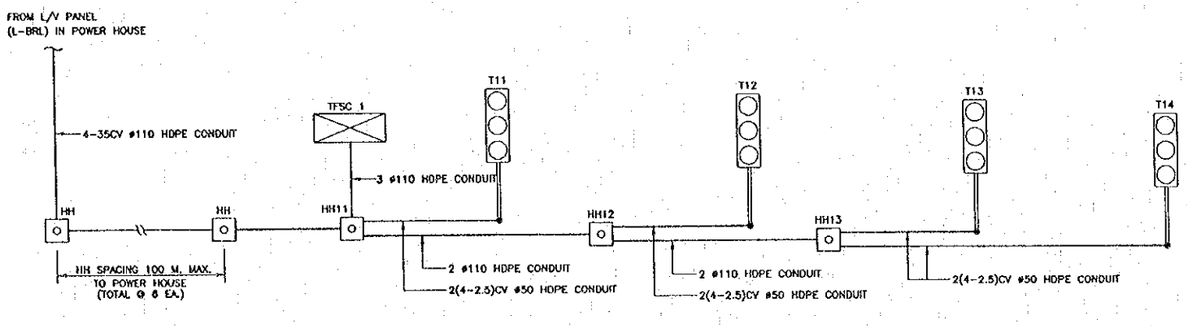
DATE OF ISSUE: 05/03/2000	
DWG. NO. R-L-19	SHEET NO. 100
DWG. STATUS	



TRAFFIC SIGNAL
SCALE 1 : 200

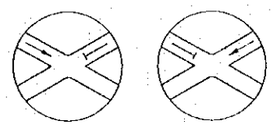


SINGLE LINE DIAGRAM FOR TRAFFIC SIGNAL AT TRAFFIC CHANGEOVER
NOT TO SCALE

NOTES:

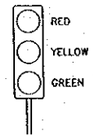
1. THIS PLAN TO BE READ IN CONJUCTION WITH STANDARD INSTALLATION DRAWINGS SUPPLIED.
2. THE LOCATION OF SIGNAL HEAD SPECIFIED ON THE DRAWING IS ONLY RECOMMEND. THE EXACT LOCATION SHALL BE CONFIRMED ON SITE APPROVAL BY THE ENGINEER.
3. THE TYPE OF LAMPS SHALL BE "HALOGEN" 50 WATTS.
4. THE SIGNAL SHALL BE "FIXED TIME" SYSTEM. THE SIGNAL CONTROLLER SHALL BE "MICROPROCESSOR" TYPE, SUITABLE FOR OPERATION AT 200-250 VOLTS, 50 HZ, AC.
5. WIRING DIAGRAM : THE CONTRACTOR SHALL SUBMIT THE DETAILED DRAWINGS INCLUDING ALL THE ELECTRICAL SYSTEM, WIRING DIAGRAM AND INSTALLATION, TOGETHER WITH THE OTHER TENDER DOCUMENTS.

RECOMMENDED PHASING DIAGRAM

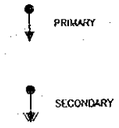


PHASE 1 PHASE 2

LANTERNS



SYMBOLS:



REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JICA JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	T. Takeobushi	T. Take	18-02-00
DESIGN CHECK	T. Masuzawa		18-02-00
SUBMITTED	A. Hirotani		21/02/00
APPROVED	P. Viraphanth		27/02/00
	S. Tamiyabutra	S. Tamiya	22/02/00

DWG. TITLE:
TRAFFIC SIGNAL
AND SINGLE LINE DIAGRAM
THAILAND SIDE

Plot date: Tue, 8 Feb 2000 - 15:03:11
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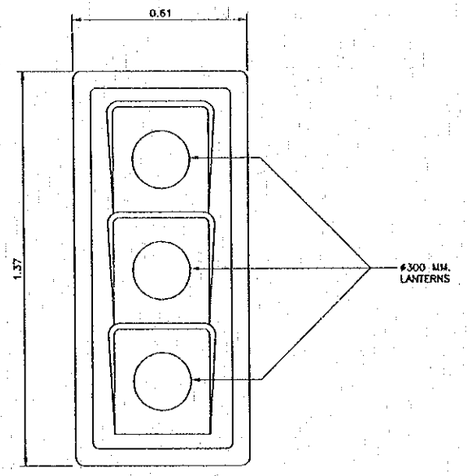
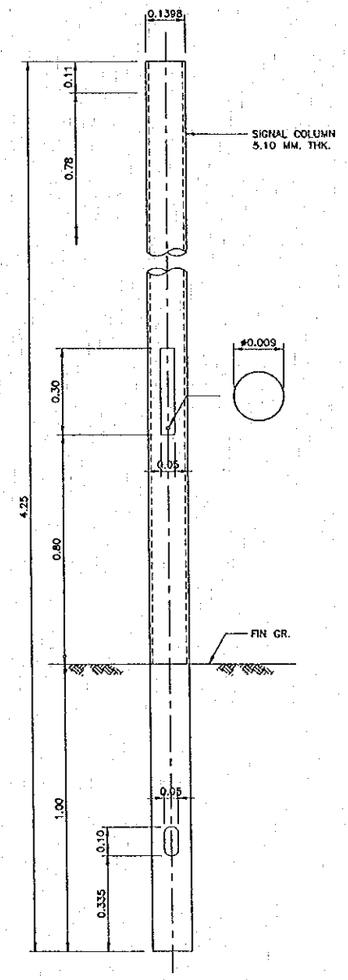
DATE OF ISSUE: 05/03/2000	
DWG. NO. R-L-20	SHEET NO. 101
DWG. STATUS	



TYPICAL RED-AMBER-GREEN

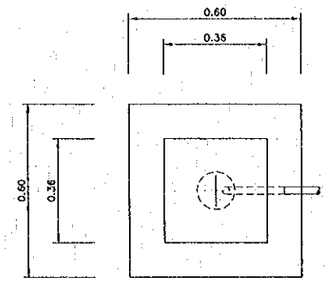
SIGNAL HEAD DIMENSION LANTERN AND BACK BOARD

SCALE 1 : 10

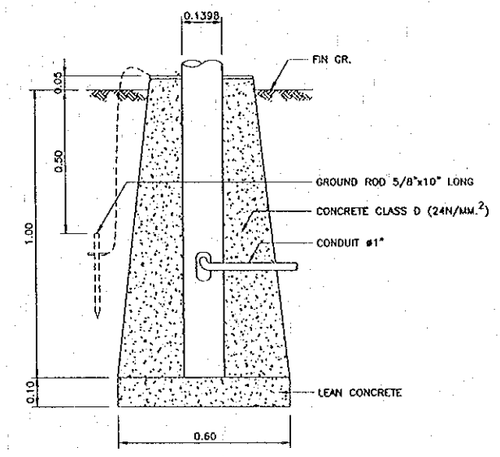


TYPICAL STANDARD POLE

SCALE 1 : 10



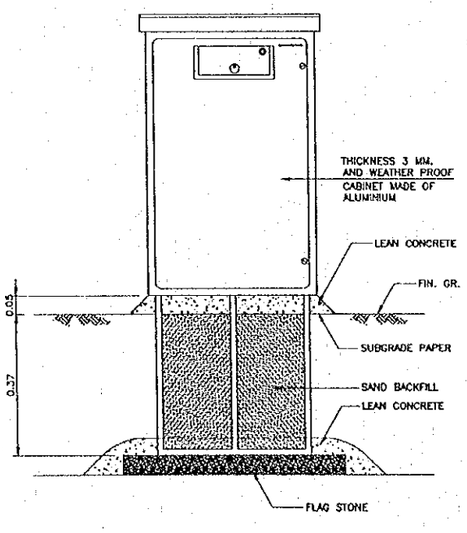
PLAN



SECTION

CONCRETE FOUNDATION FOR STANDARD POLE

SCALE 1 : 10



CONTROLLER (TFSC)

NOT TO SCALE

NOTES:

1. ALL DIMENSIONS AS SHOWN ARE IN METERS UNLESS OTHERWISE INDICATED.
2. THE CONTRACTOR MAY PROPOSE EQUIVALENT ALTERNATIVES SUBJECT TO THE APPROVAL OF THE ENGINEER.
3. THIS DRAWING SHOWS TYPICAL DIMENSIONS OF TRAFFIC SIGNAL EQUIPMENT.
4. ALL CIVIL AND STRUCTURAL WORKS DETAILS AS SHOWN IN THIS DRAWING SHALL SERVE AS A GUIDE ONLY, CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO THE ENGINEER FOR APPROVAL.
5. THE ORIENTATION OF TRAFFIC SIGNAL HEAD OR GREEN ARROW MAY BE VARIED AS APPROVED BY THE ENGINEER.

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

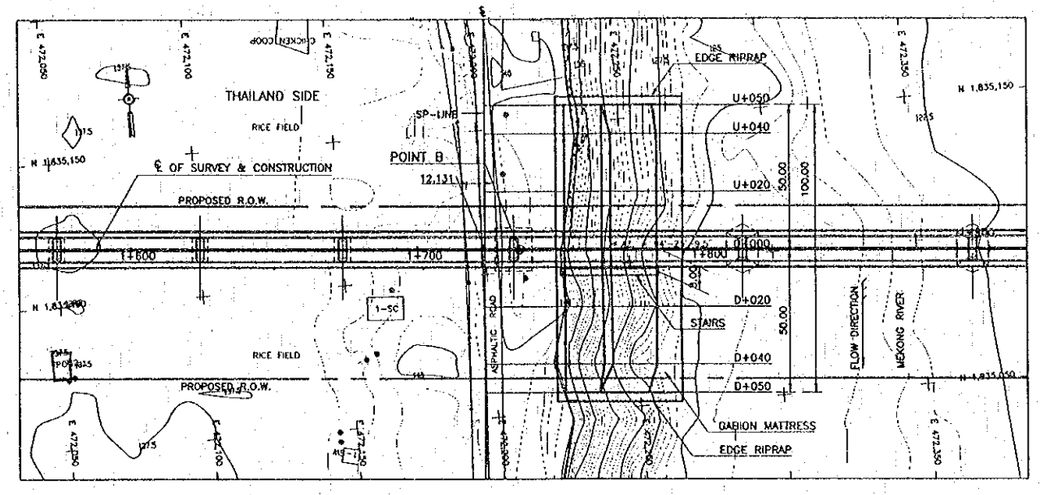
QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	T. Takaobushi	T. Taka	05-02-00
DESIGN CHECK	T. Matsuzawa		05-02-00
SUBMITTED	A. Hiratani		
APPROVED	P. Vaiphanith		22/01/00
	S. Temiyabutra	S. Temi	22/1/00

DWG. TITLE:
SIGNAL HEAD, POLE AND CONTROLLER
THAILAND SIDE

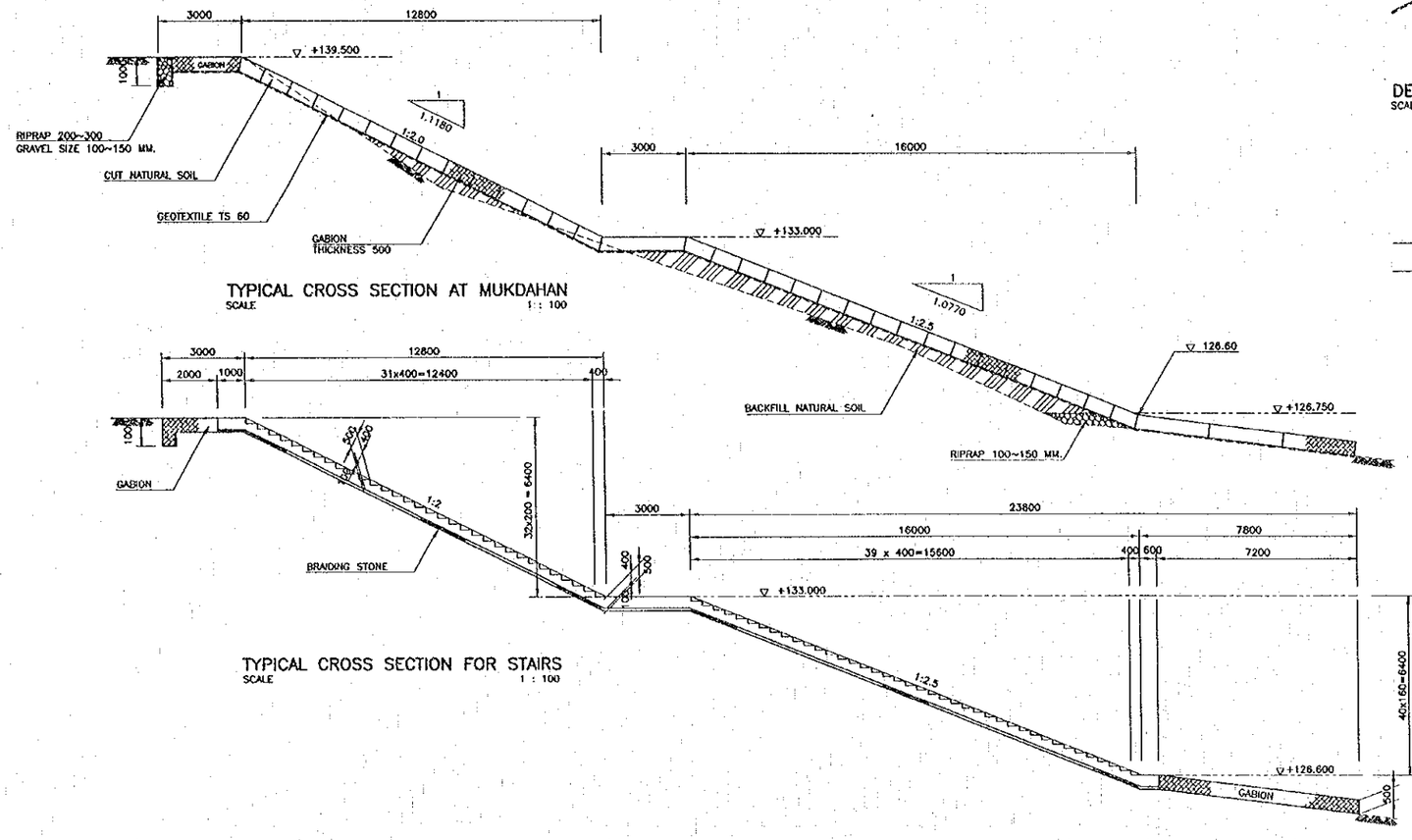
Plot date: Tue, 8 Feb 2000 — 14:57:57

C:\SUB-NEW\PACKAGE1\LIGHTING\Pk1-120.dwg

DATE OF ISSUE: 05/03/2000	
DWG. NO. R-R-1	SHEET NO. 102
DWG. STATUS	

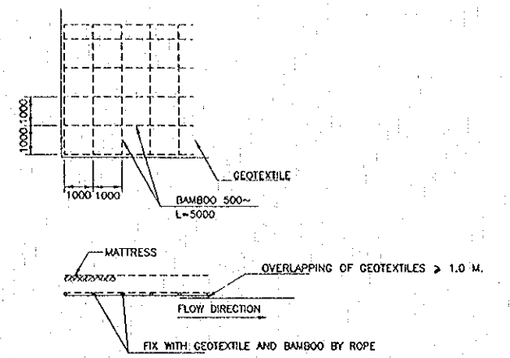


PLAN
SCALE 1 : 1000

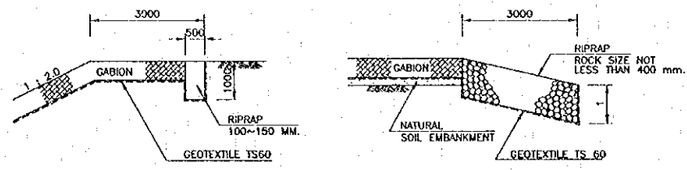


TYPICAL CROSS SECTION AT MUKDAHAN
SCALE 1 : : 100

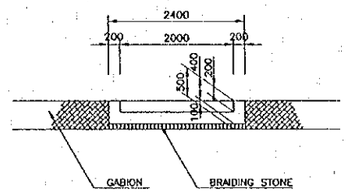
TYPICAL CROSS SECTION FOR STAIRS
SCALE 1 : 100



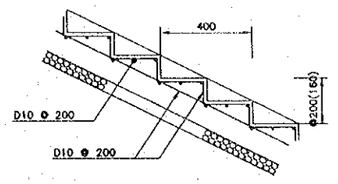
WHEN BELOW LOW WATER LEVEL, SHOULD BE USED FRAME WORK
SCALE 1 : 100



DETAIL OF END EDGE OF REVETMENT
SCALE 1 : 75



CROSS SECTION STAIRS
SCALE 1 : 50



TEMPERATURE REINFOCEMENT FOR STAIRS
SCALE 1 : 25

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETER UNLESS OTHERWISE INDICATED.
2. CLEAR AND GRUB THE GROUND AND SLOPE SURFACE
3. EXCAVATE THE SLOPE IN A SERIES OF STEPS GREATER THAN 0.50 M. IN HEIGHT.
4. COMPACT THE SLOPE TO THE ENGINEERS SATISFACTION BUT NOT LESS THE 90% OF STANDARD PROCTOR.
5. COVER THE SLOPE UNDER THE WATER BY RIPRAP.
6. GABION MESH SIZE : 8.0CM.x10.0CM.
   MESH THICKNESS : 50CM.
   SIZE OF GALVANIZED WIRE : 3.0MM.
   GABION BOX FIX WIRE : 3.0MM.
7. HARD ROCKS FOR RIPRAP SHALL BE DETERMINED BY THE ENGINEER.
8. GEOTEXTILE TYPE IS PLOYFELT TS 60 OR APPROVED EQUIVALENT.
9. FOR GEOTEXFILE UNDER THE WATER HOLD DOWN BY WEIGHTED BAMBOO FRAMES.

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KORI CO., LTD.

JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

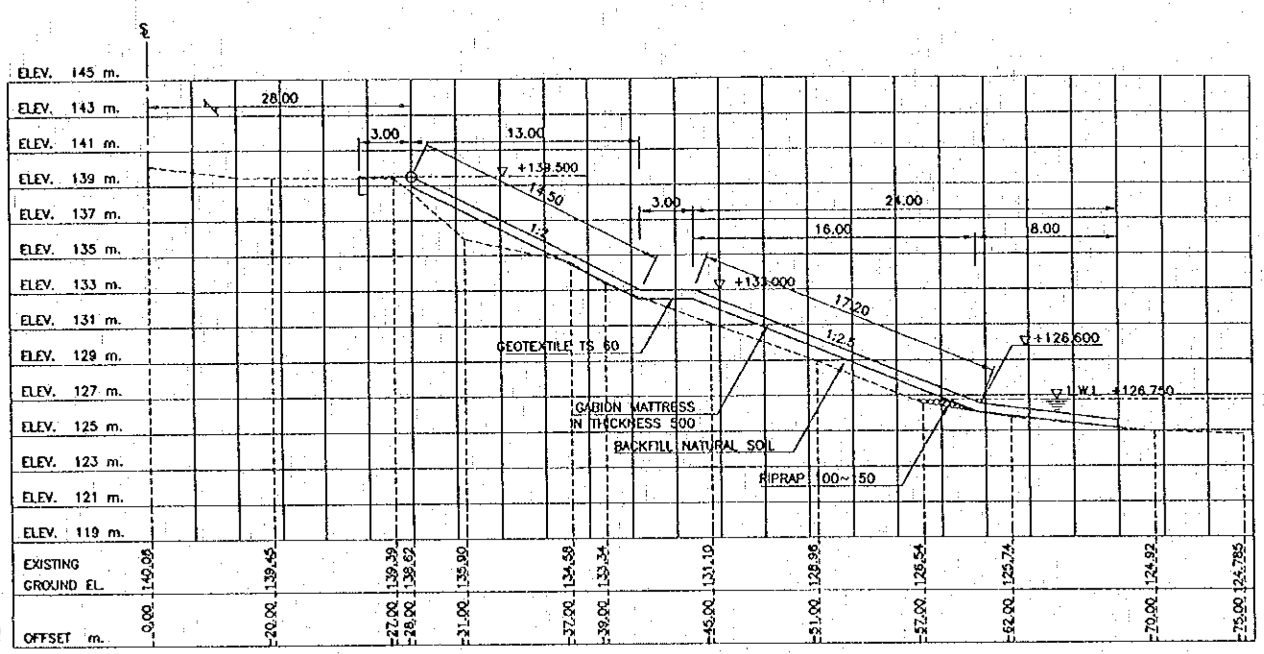
THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	T. Inoue		8-02-00
DESIGN CHECK	T. Masuzawa		10-2-00
SUBMITTED	A. Hirotani		11-2-00
APPROVED	P. Viraphanth		22/02/00
	S. Temjobutra		23/02/00

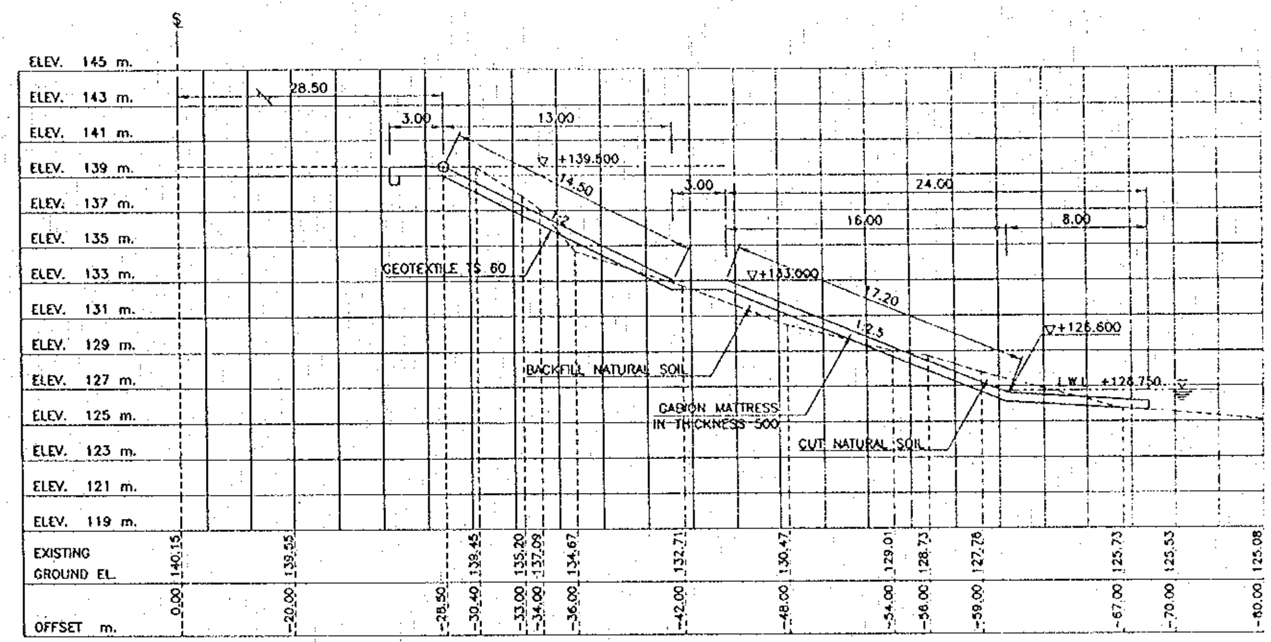
DWG. TITLE:
PLAN & DETAILS
THAILAND SIDE

Plot date: Mon, 17 Jan 2000 - 8:00:50
C:\1SMB-NEW\THAIBANK\PK1-R01.dwg

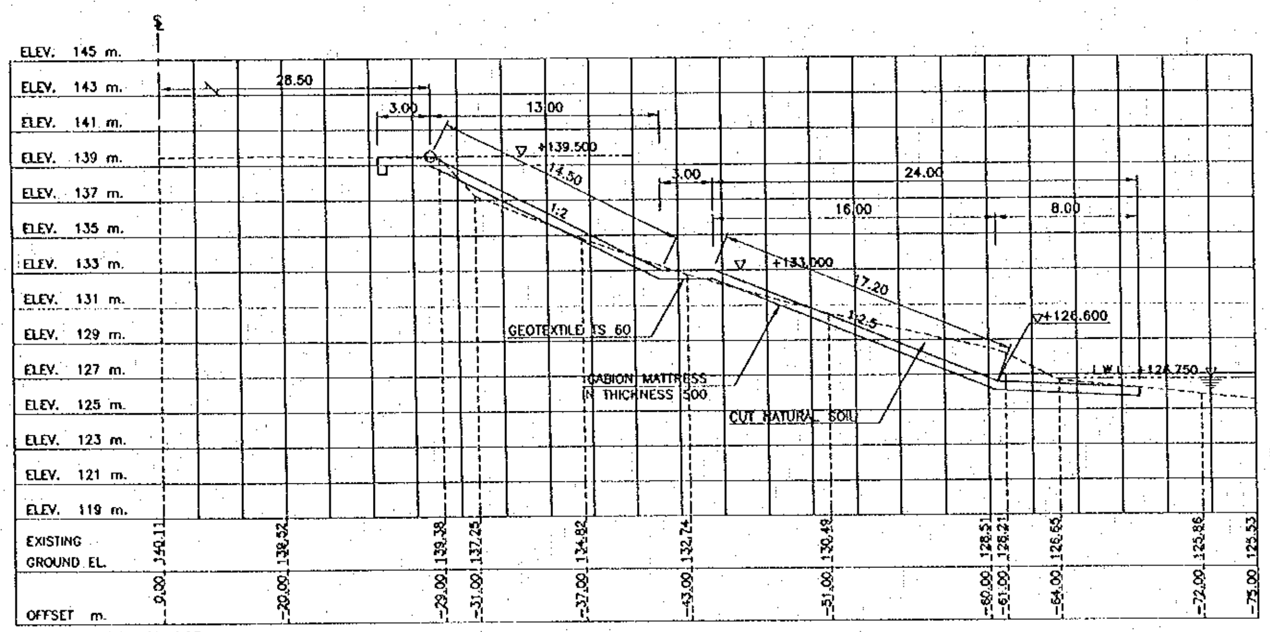
DATE OF ISSUE:	
05/03/2000	
DWG. NO. R-R-2	SHEET NO. 103
DWG. STATUS	



STA. U+000



STA. U+040



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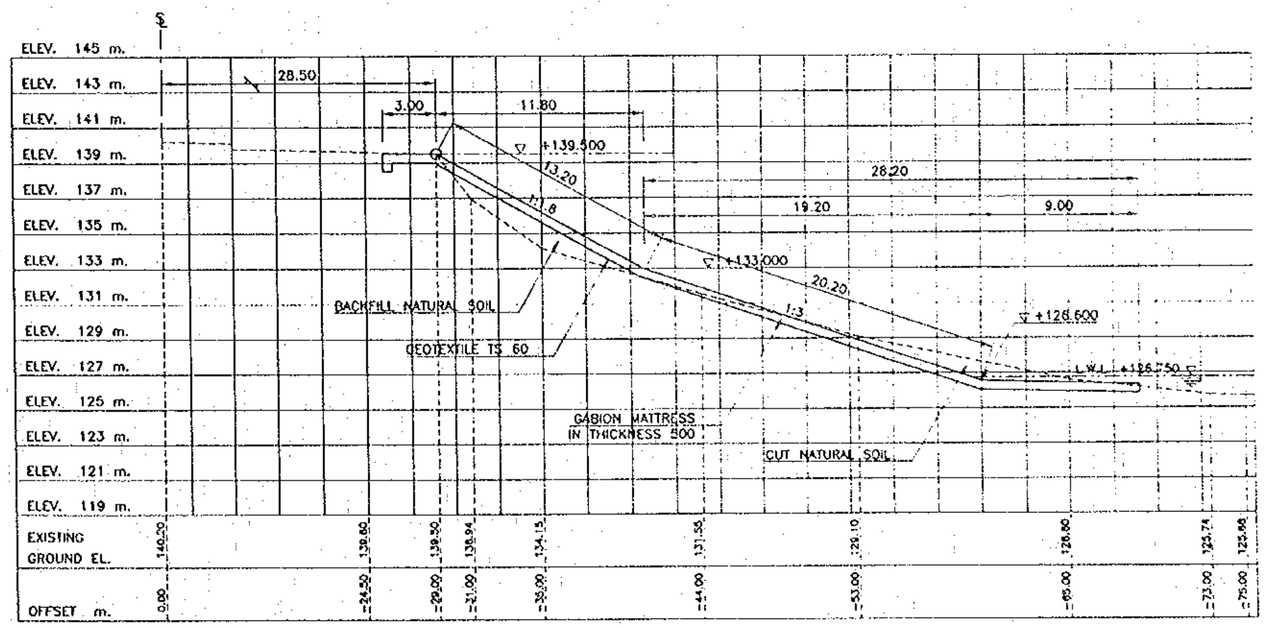


STA. U+050

CROSS SECTION AT MUKDAHAN

SCALE 1 : 200

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JICA JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

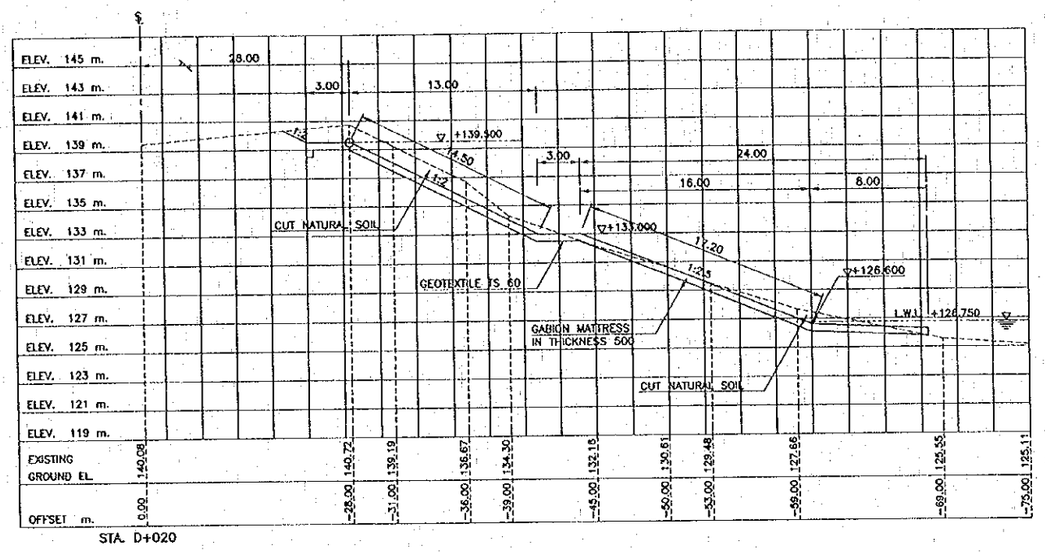
THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

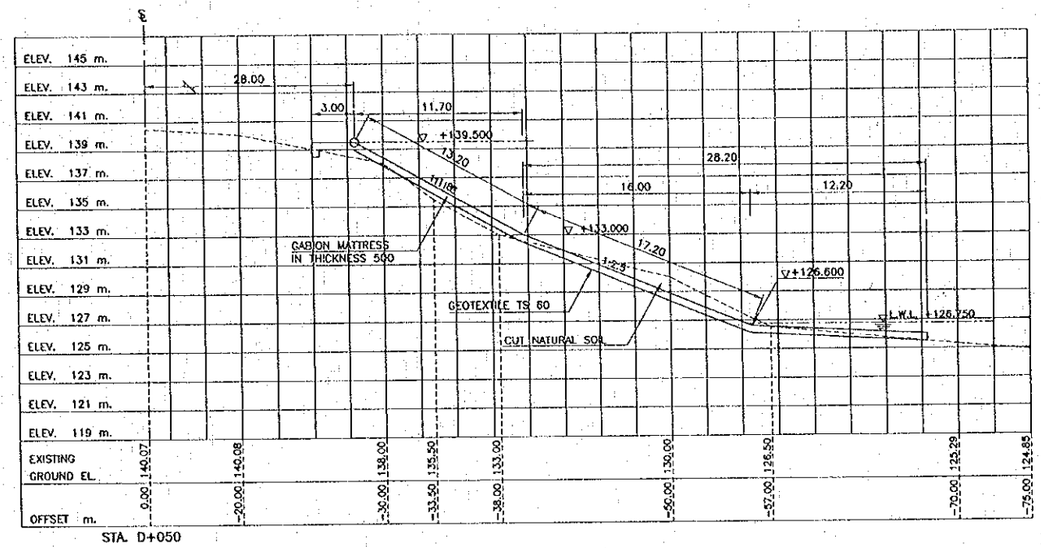
QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	T. Inoue		
DESIGN CHECK	T. Masuzawa		
SUBMITTED	A. Hirotani		
APPROVED	P. Vinaphunth		23/03/00
	S. Tanvisuthiru		

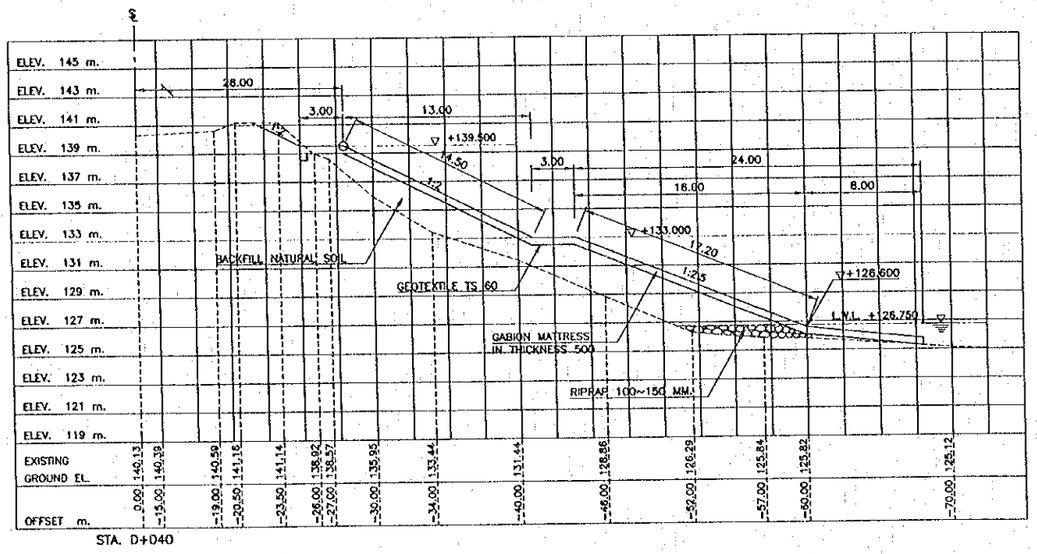
DWG. TITLE
CROSS SECTION (1)
THAILAND SIDE

C:\SMB-NEW\PACKAGE1\PK1-R02.dwg

DATE OF ISSUE:	05/03/2000
DWG. NO.	R-R-3
SHEET NO.	104
DWG. STATUS	







CROSS SECTION AT MUKDAHAN

SCALE 1 : 200

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JICA JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

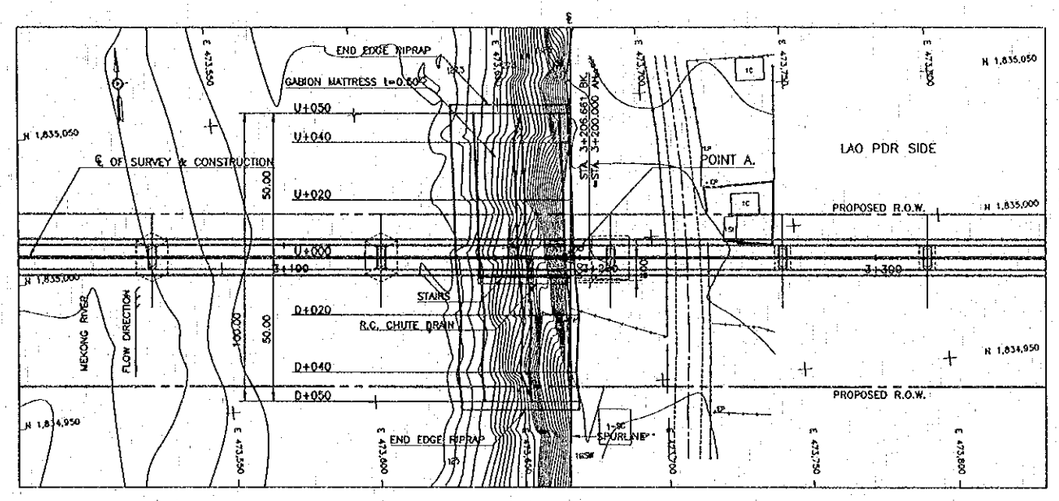
THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	T. Inoue	Inoue	18-01-99
DESIGN CHECK	T. Masurowa		18-01-99
SUBMITTED	A. Hirotani		21/1/99
APPROVED	P. Vinyphanith		22/1/99
	S. Temiyabutra		22/1/99

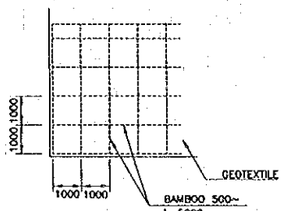
DWG. TITLE:
CROSS SECTION (2)
THAILAND SIDE

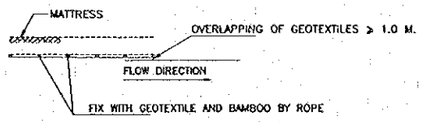
Plot date: Tue, 16 Nov 1999 - 17:47:28
C:\15MB-NEW\PACKAGE1\Pk1-R02.dwg

DATE OF ISSUE: 05/03/2000	
DWG. NO. R-R-4	SHEET NO. 105
DWG. STATUS	

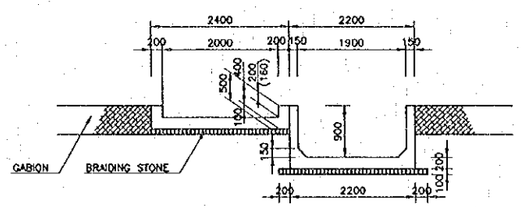


PLAN
SCALE 1 : 1000





WHEN BELOW LOW WATER LEVEL, SHOULD BE USED FRAME WORK
SCALE 1 : 100



STAIRS R.C. CHUTE DRAIN

CROSS SECTION STAIRS AND RC CHUTE DRAIN
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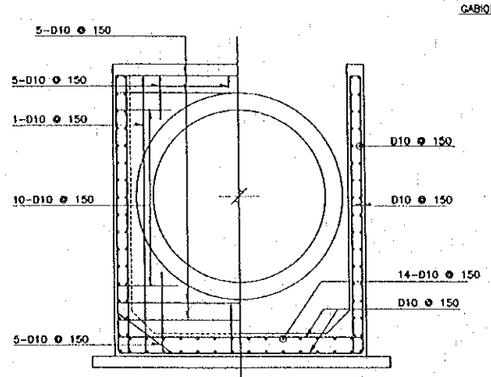
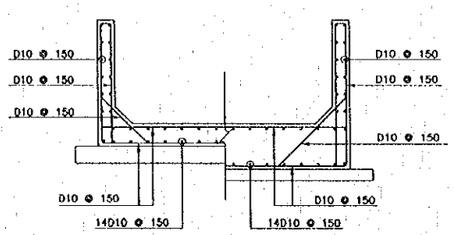
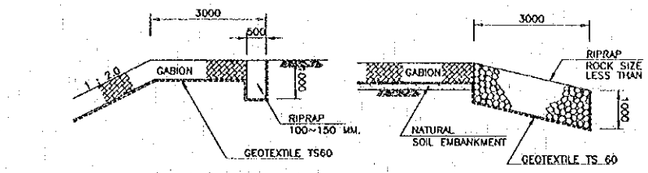


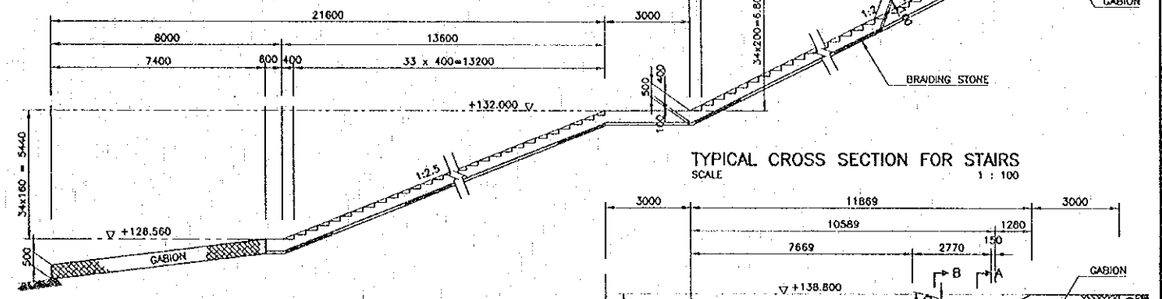
SECTION A-A SCALE 1 : 25
SECTION B-B SCALE 1 : 25

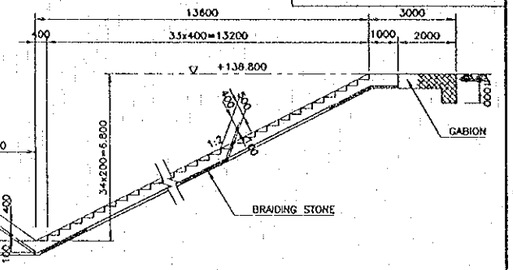


SECTION C-C SCALE 1 : 25
SECTION D-D SCALE 1 : 25

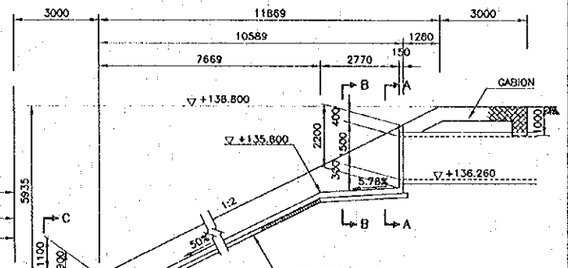


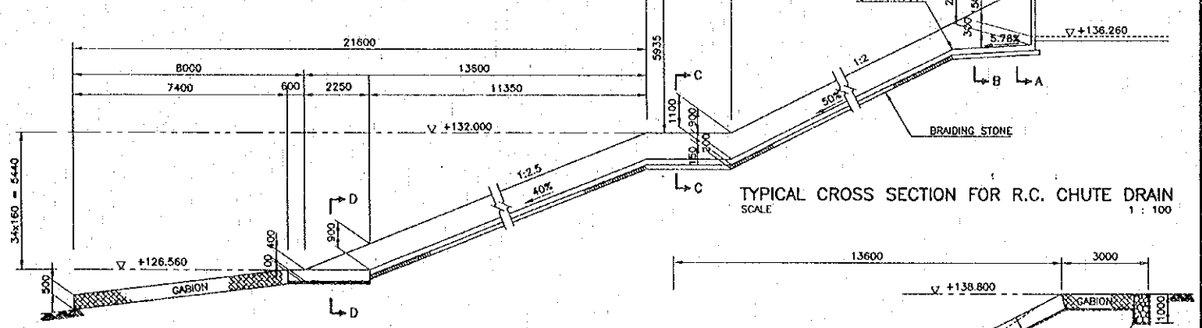
DETAIL OF END EDGE OF REVETMENT
SCALE 1 : 75



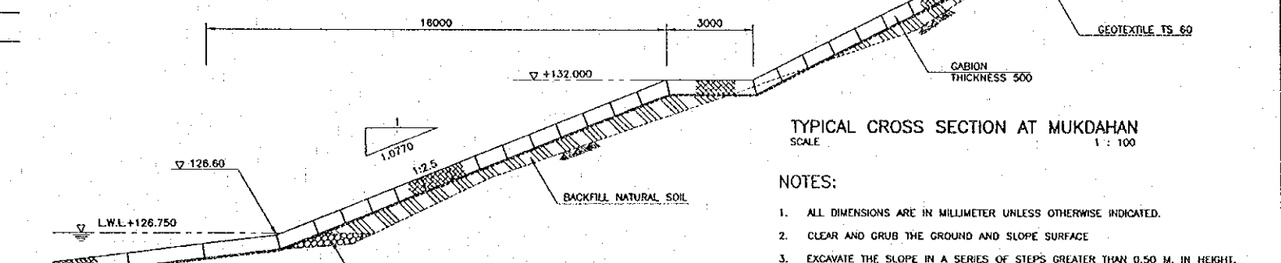


TYPICAL CROSS SECTION FOR STAIRS
SCALE 1 : 100

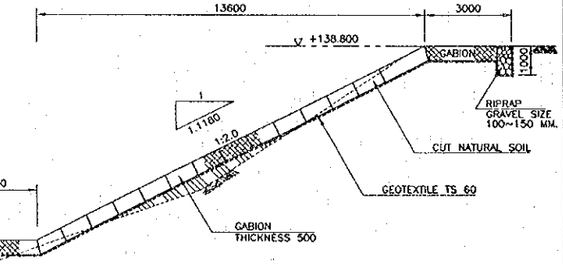




TYPICAL CROSS SECTION FOR R.C. CHUTE DRAIN
SCALE 1 : 100



TEMPERATURE REINFOCEMENT FOR STAIRS
SCALE 1 : 25



TYPICAL CROSS SECTION AT MUKDAHAN
SCALE 1 : 100

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETER UNLESS OTHERWISE INDICATED.
2. CLEAR AND GRUB THE GROUND AND SLOPE SURFACE
3. EXCAVATE THE SLOPE IN A SERIES OF STEPS GREATER THAN 0.50 M. IN HEIGHT.
4. COMPACT THE SLOPE TO THE ENGINEERS SATISFACTION BUT NOT LESS THE 90% OF STANDARD PROCTOR.
5. COVER THE SLOPE UNDER THE WATER BY RIPRAP.
6. GABION MESH SIZE : 8.0CM.x10.0CM.
   MESH THICKNESS : 50CM.
   SIZE OF GALVANIZED WIRE : 3.0MM.
   GABION BOX FIX WIRE : 3.0MM.
7. HARD ROCKS FOR RIPRAP SHALL BE DETERMINED BY THE ENGINEER.
8. GEOTEXTILE TYPE IS PLOYFELT TS 60 OR APPROVED EQUIVALENT.
9. FOR GEOTEXFILE UNDER THE WATER HOLD DOWN BY WEIGHTED BAMBOO FRAMES.

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JICA JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	T. Inoue		
DESIGN CHECK	T. Masuzawa		
SUBMITTED	A. Hiratani		
APPROVED	P. Viraphanth		
	S. Temiyabutra		

DWG. TITLE:
PLAN & DETAILS
LAO PDR SIDE

Plot date: Mon, 17 Jan 2000 - 17:37:45
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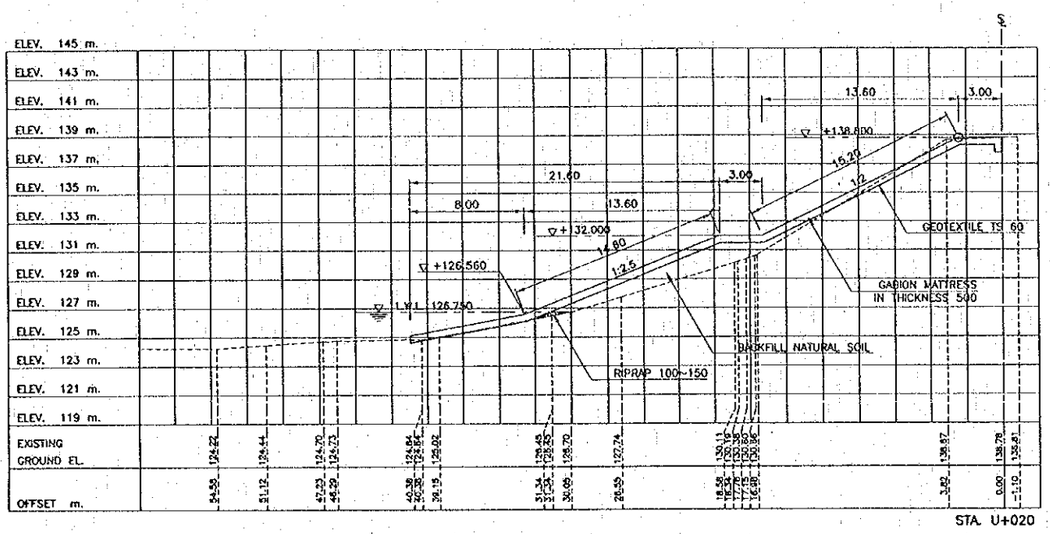
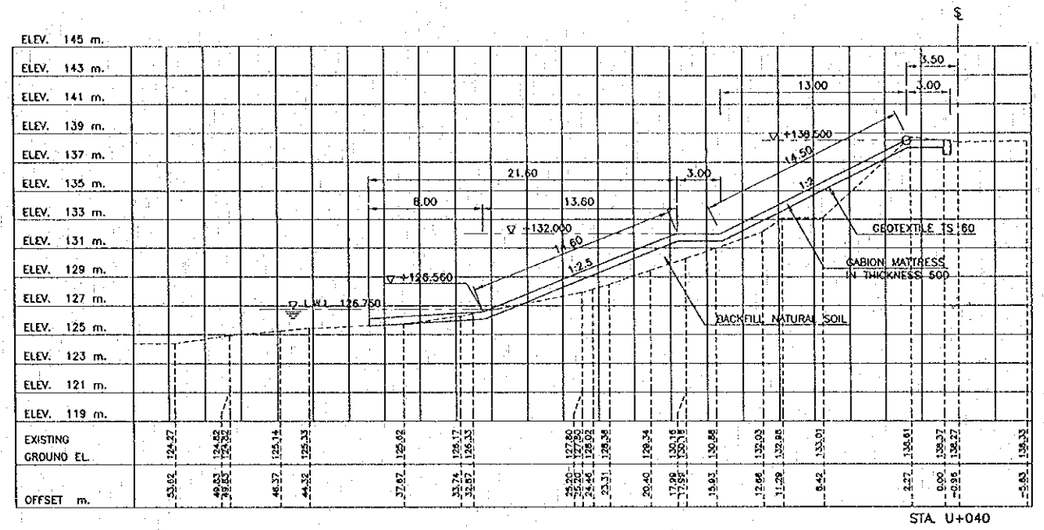
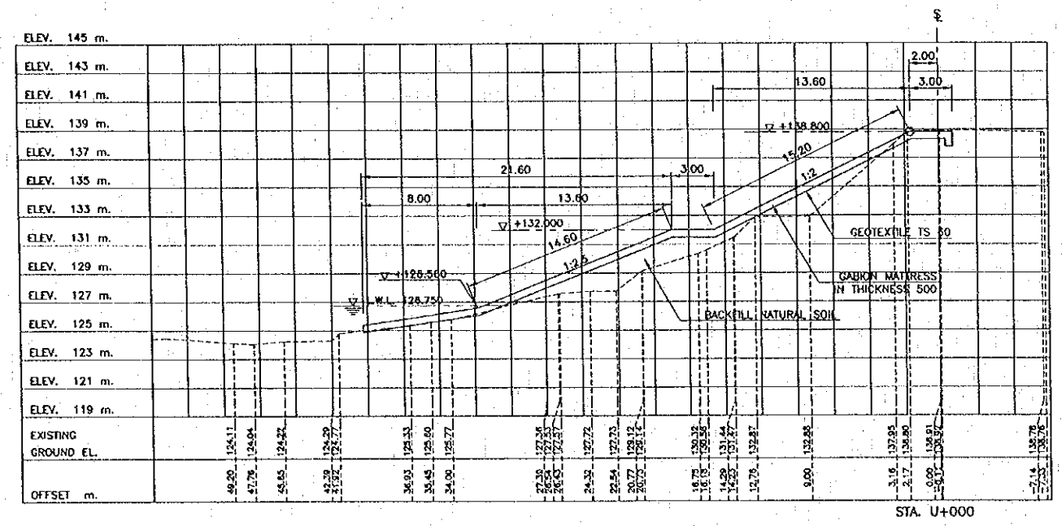
DATE OF ISSUE: 05/03/2000	
DWG. NO. R-R-5	SHEET NO. 106
DWG. STATUS	



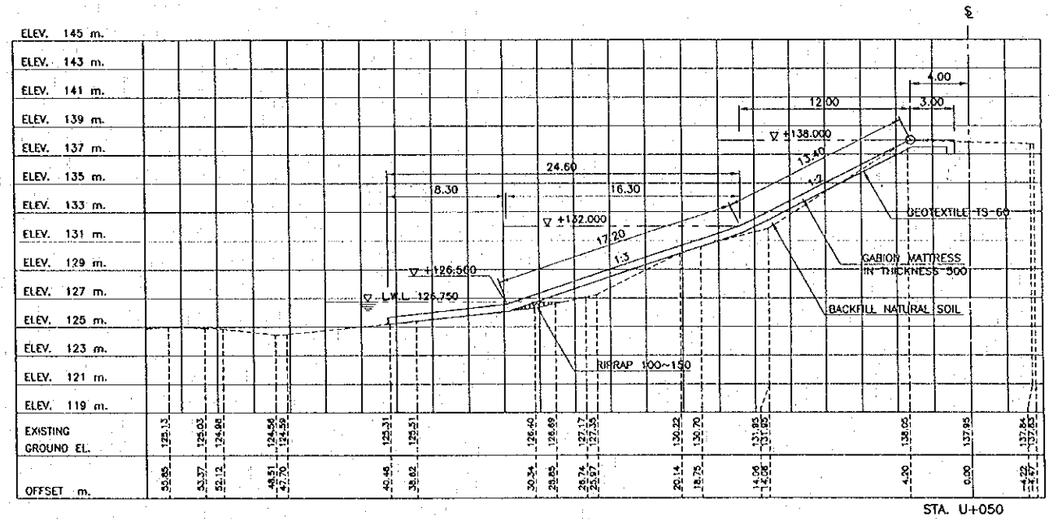
STA. U+020



STA. U+040



STA. U+000



STA. U+050

CROSS SECTION AT SAWANAKHET

SCALE 1 : 200

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM

ORIENTAL CONSULTANTS CO., LTD.

in association with

NIPPON KOEI CO., LTD.

JAPAN INTERNATIONAL COOPERATION AGENCY

LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION

KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	T. Inoue		16.02.00
DESIGN CHECK	T. Masuzawa		17.02.00
SUBMITTED	A. Hirotani		21.2.00
APPROVED	P. Viraphanth		24/02/00
	S. Temiyabutra		22/02/00

DWG. TITLE:

CROSS SECTION (1)

LAO PDR SIDE

Plot date: Mon, 17 Jan 2000 - 8:58:30

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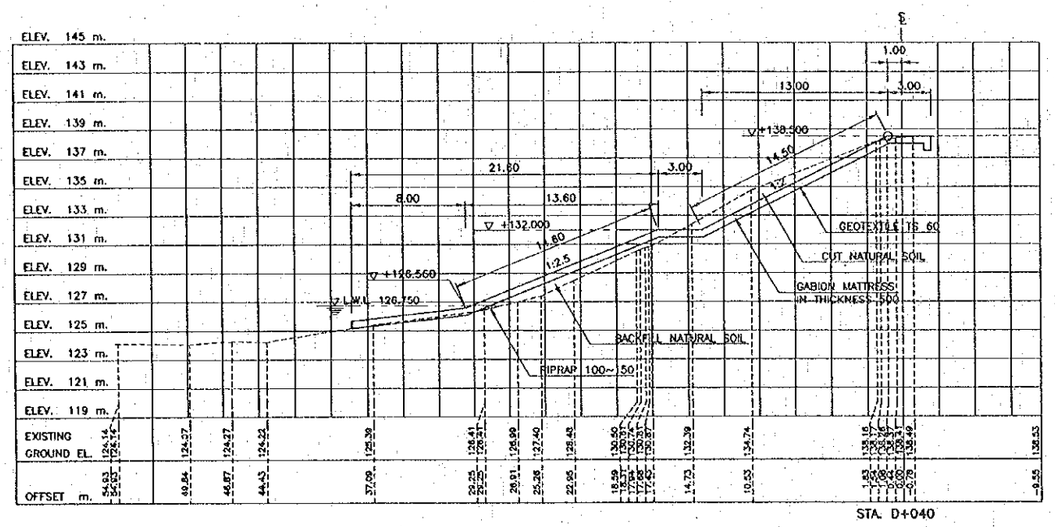
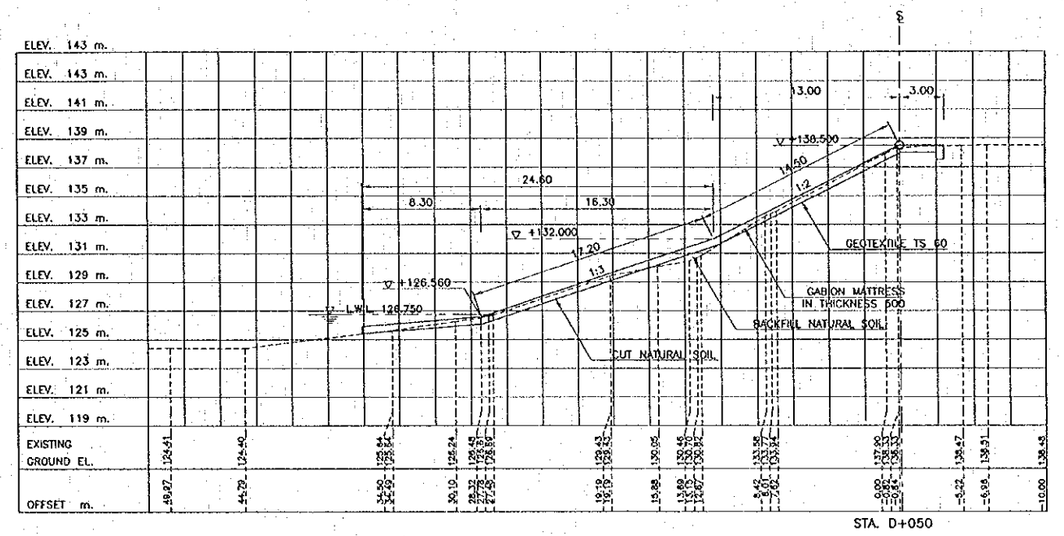
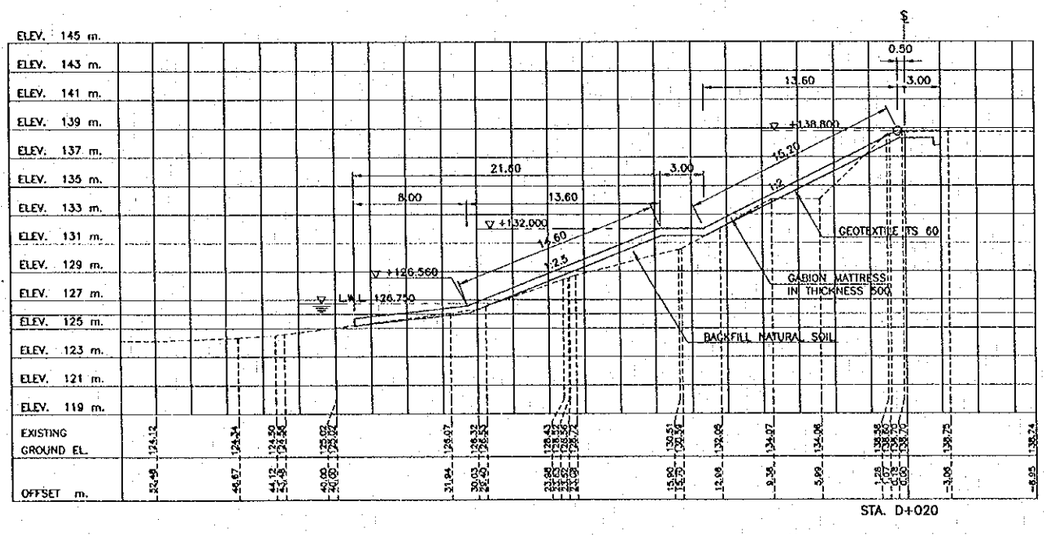
DATE OF ISSUE: 05/03/2000	
DWG. NO. R-R-6	SHEET NO. 107
DWG. STATUS	







CROSS SECTION AT SAWANAKHET

SCALE 1 : 200

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM

ORIENTAL CONSULTANTS CO., LTD.

in association with

NIPPON KOEI CO., LTD.

JICA JAPAN INTERNATIONAL COOPERATION AGENCY

LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION

KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	T. Inoue		18-12-00
DESIGN CHECK	T. Masuzawa		19-12-00
SUBMITTED	A. Hiratani		21/12/00
APPROVED	P. Viraphanh		12/01/00
	S. Temiyabutra		22/12/00

DWG. TITLE:

CROSS SECTION (2)
LAO PDR SIDE

Plot date: Mon, 17 Jan 2000 - 8:56:30

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DATE OF ISSUE: 05/03/2000	
DWG. NO. B-G-1	SHEET NO. 108
DWG. STATUS	

A. GENERAL

1. UNLESS OTHERWISE MENTIONED THESE NOTES ARE APPLICABLE TO ALL DRAWINGS.
2. DRAWING REFERENCES SHOWN THUS [1234]
3. ALL DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE SPECIFICATION
4. ALL CHAINAGE CO-ORDINATES AND REDUCED LEVELS ARE GIVEN IN METERS
5. ALL DIMENSIONS ARE GIVEN IN MILLIMETERS UNLESS OTHERWISE NOTED. ALL SETTING OUT DIMENSIONS SHALL BE CHECKED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.
6. BRIDGE BOX GIDER LONGITUDINAL SETTING OUT DIMENSIONS ARE HORIZONTAL AND RELATE TO A DATUM AT UNIFORM CONCRETE TEMPERATURE 25°C
7. REDUCED LEVELS AND CO-ORDINATES ARE RELATED TO THE PERMANENT BENCHMARKS POINT A AND POINT B SHOWN ON DWG. No. N5. THE CONTRACTOR SHOULD VERIFY THESE BENCHMARKS BEFORE ANY CONTRUCTION SETTING OUT IS COMMENCED AND VERIFY WITH THE ENGINEER. THE ORIGIN OF LEVELS AND CO-ORDINATES IS THE ROYAL THAI SURVEY DEPARTMENT BENCHMARK AT THE MUKDAHAN PROVINCE CITY HALL.
8. CO-ORDINATES ARE RELATED TO THE PROJECT DATUM AS SHOWN ON THE SETTING-OUT DRAWING.
9. UNLESS OTHERWISE NOTED ALL WORK SHALL COMPLY WITH THE CURRENT RELEVANT JRA OR AASHTO STANDARDS.
10. KEY LEGEND:
    - CONSTRUCTION JOINT ——— C.J. ———
    - MOVEMENT JOINT ——— M.J. ———
    - BUNDING ≡≡≡≡≡≡≡≡
    - SETTING OUT LINE ——— SOL ———
    - SETTING OUT POINT ⊗ SOP.
11. WHERE REFERENCE IS MADE TO PROPRIETARY COMPONENT NAMES ON THE DRAWINGS, THE CONTRACTOR MAY PROPOSE ALTERNATIVES AS LONG AS THEY ARE EQUIVALENT AND SATISFY WITH REQUIREMENTS OF THE TECHNICAL SPECIFICATIONS.

B. DESIGN CRITERIA

1. THE STRUCTURE SHALL BE DESIGNED IN ACCORDANCE WITH JRA-SHB SPECIFICATIONS (JAPAN ROAD ASSOCIATION : SPECIFICATIONS FOR HIGHWAY BRIDGES), 1998.
2. KINGDOM OF THAILAND MINISTRY OF TRANSPORT AND COMMUNICATIONS DEPAREMENT OF HIGHWAY STANDARD (DOH) : DOH ADOPTS AASHTO

C. DESIGN LOADS

1. THE BRIDGE DECK IS DESIGNED FOR THE FOLLOWING INDIVIDUAL LOAD CASES
   1.) LIVE LOAD FOR MAIN GIRDER : DOH STANDARD (AASHTO HS20-44 x 1.30)
   2.) LIVE LOAD FOR SIDE WALK : DOH STANDARD (AASHTO)
   3.) LIVE LOAD FOR BRIDGE DECK SLAB ; B-LIVE LOAD BY JRA-SHB
2. BRIDE DECK SURFACING
   1.) ASPHALT PAVEMENT : 50 mm.
   2.) HAND RAIL : 500 N/M. EACH SIDE
   3.) ELECTRONIC CABLE INCLUDING FUTURE SERVICES LOAD : 500 N/M. EACH SIDE
3. SEISMIC HORIZONTAL LOAD
   - 6.0 % OF DEAD LOAD EQUIVALENT STATIC HORIZONTAL LOAD IN ANY DIRECTIONS.
4. THE MAIN BRIDGE PIERS ARE DESIGNED FOR A SHIP IMPACT OF 3400 kN ACTING IN ANY DIRECTION. CORRESPONDING TO A 300 TON DISPLACEMENT CARGO VESSEL IMPACTING AT A VELOCITY OF 5 m/sec IN THE DOWNSTREAM DIRECTION.
5. THE STRUCTURE IS DESIGNED IN ACCORDANCE WITH THE JRA-SHB BRIDGE DESIGN SPECIFICATIONS 1998 EXCEPT WHERE MODIFIED BY THE DESIGN STATEMENTS.

D. BRIDGE SUPERSTRUCTURE

1. MAIN BRIDGE
   1.) BRIDGE TYPE : PC SAIL TYPE CONTINUOUS BOX GIRDER BRIDGE
   2.) BRIDGE SPAN : 60+4@80+2@110+5@80+2@110+4@80+60 = 1600 m.
   3.) PRECAST SEGMENT MANUFACTURE METHOD : MATCH-CASTING (LONG-LINE OR SHORT-LINE CASTING)
   4.) ERECTION METHOD : PRECAST SEGMENT BALANCED CANTILEVER METHOD USING ERECTION TRUSS. THE DESIGN IS BASED ON THE ASSUMPTION THAT ERECTION METHOD WILL BE USED AS SHOWN ON THE DRAWING NO. M-44. MAXIMUM SEGMENT WEIGHT IS 1350 KN. SHOULD THE CONTRACTOR CHOOSE TO USE A DIFFERENT METHOD OF ERECTION AND/OR USE HEAVIER CONSTRUCTION LOADING, HE SHALL SUBMIT FULL DESIGN CALCULATIONS AND REVISED DRAWINGS FOR THE ENGINEERS APPROVAL.
2. APPROACH VIADUCT
   1. BRIDGE TYPE ; PC CONTINUOUS BOX GIRDER BRIDGE
   2. BRIDGE SPAN : LAO PDR SIDE=5@34 = 200 M., THAILAND SIDE=5@35 = 250 M.
   3. CONSTRUCTION METHOD : TEMPORARY STAGING AND CAST-IN-PLACE CONCRETE METHOD. WILL BE USE AS SHOWN ON THE DRAWING NO. M-44
      THE DESIGN IS BASED ON ASSUMPTION OF THE CONSTRUCTION METHOD. SHOULD THE CONTRACTOR CHOOSE TO USE A DIFFERENT METHOD OF CONSTRUCTION, HE SHALL SUBMIT FULL DESIGN CALCULATIONS AND REVISED DRAWINGS FOR THE ENGINEERS APPRPVAL.

E. BRIDGE FOUNDATION

1. THE MAIN BRIDGE PIERS P7 TO P22 ARE DESIGNED TO BE FOUNDED ON 2.0 m. DIAMETER CAST IN-PLACE REINFORCED CONCRETE PILES WITH A MAXIMUM WORKING AXIAL COMPRESSION LOAD OF 13970 KN. AND TENSION LOAD OF 294 KN.
2. THE APPROACH BRIDGE PIERS P1 TO P5 AND P24 TO P27 AND THE ABUTMENTS ARE DESIGNED TO BE FOUNDED ON 1.0 m. CAST IN-PLACE REINFORCED CONCRETE PILES WITH A MAXIMUM WORKING COMPRESSION LOAD OF 4560 KN.
3. PIERS P6 AND P23 ARE DESIGNED TO BE FOUNDED ON DIRECT FOUNDATIONS OVER ROCK OR SOIL WITH AN SPT VALUE N>50.
4. THE PIERS ARE TO BE INSTALLED AND TESTED IN ACCORDANCE WITH THE TECHNICAL SPECIFICATIONS.
5. FOR ADDITIONAL GEOTECHNICAL INFORMATION, REFER TO SEPARATE DOCUMENTS TITLED "THE GEOLOGICAL SURVEY FOR THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT" JULY 1999 AND "THE BASIC DESIGN REPORT VOLUME-1 MAIN REPORT" AUGUST 1999.

F. CONCRETE FOR BRIDGEWORKS

1. UNLESS OTHERWISE INDICATED ON THE DRAWING, CONCRETE SHALL BE OF THE FOLLOWING.

CLASS : CONCRETE CLASSES ARE DEFINED ON THE DRAWING FOR EACH INDIVIDUAL ELEMENT.

CLASS OF CONCRETE	STRUCTURE AND COMPONENTS
A 40 N/mm^2	PRECAST SEGMENT, CLOSURE POUR OF MAIN BRIDGE, CAST-IN-PLACE PC SAIL AND TOWER, CAST-IN-PLACE PC BOX GIRDER OF APPROACH VIADUCT.
B 30 N/mm^2	BORED PILE DIA 2.00 M. OF MAIN BRIDGE, BORED PILE DIA 1.00 M. OF APPROACH VIADUCT.
C 27 N/mm^2	R.C. RIGID PIER OF MAIN BRIDGE, BRIDGE APPROACH SLAB,
D 24 N/mm^2	R.C. MOVABLE PIER OF MAIN BRIDGE, R.C. PILE CAP OF MAIN BRIDGE, R.C. PIER OF APPROACH VIADUCT, R.C. PILE CAP OF APPROACH VIADUCT, ABUTMENT, PRECAST R.C. SKIRT OF MAIN BRIDGE PILE CAP, CURBS, BRIDGE LIGHTING POLES BRACKET, BRIDGE SIDEWALK PRECAST R.C. PLATE CONCRETE BARRIER.
E 15 N/mm^2	LEAN CONCRETE.

CONCRETE STRENGTH IS THE MINIMUM 28 DAY COMPRESSIVE STRENGTH BY CYLINDER TEST.

2. CONSTITUENT METERIALS, MIX DESIGN AND TESTING REQUIREMENTS ARE DEFINED IN THE TECHNICAL SPECIFICATIONS.
3. SURFACE FINISH REQUIREMENT
   (A) FORMED SURFACES
   - ALL SURFACES IN CONTACT WITH SOIL AND OTHER HIDDEN SURFACES F1
   - BOX GIRDER INTERNAL FACES, RIVER PILE CAPS AND IN-PLACE BARRIER F2
   - ABUTMENT PARAPET CAPPING F3
   - BOX GIRDER EXPOSED FACES, PIER, COLUMN, ABUTMENT AND EDGE PANELS F4

   (B) UNFORMED SURFACES
   - BURIED CONSTRUCTION U1
   - ALL SURFACES OTHER THAN U1 OR U3 ..... U2
   - UPPER SURFACES OF PARAPET PLINTHS, TOP OF BEARING PLINTHS..... U3
4. KICKERS SHALL BE A MINIMUM 150 mm. HIGH UNLESS OTHERWISE SHOWN.
5. BUNDING CONCRETE SHELL BE CLASS F WITH A MINIMUM THICKNESS OF 50 mm.
6. UNLESS OTHERWISE SHOWN, ALL CONCRETE CORNERS SHALL HAVE 20 x 20 mm. CHAMFERS.

G. REINFORCEMENT

1. UNLESS OTHERWISE INDICATED ON THE DRAWING REINFORCEMENT SHALL BE OF THE FOLLOWING.

CLASS	YIELD STRESS N/mm^2 (MIN.)	STRUCTURE AND COMPONENTS
SD 390 (SD40)	≥ 390	SUPERSTRUCTURE AND SUBSTRUCTURE
SD 295 (SD30)	≥ 295	SUPERSTRUCTURE AND SUBSTRUCTURE
SD 235 (SR24)	≥ 235	SUPERSTRUCTURE AND SUBSTRUCTURE

- -DEFORMED BAR GRADE SD380 ; TO TIS G3112, SD40 TO TIS 24-2527
- -DEFORMED BAR GRADE SD295 ; TO TIS G3112, SD30 TO TIS 24-2527
- -PLAIN BAR GRADE SR235 ; TO TIS G3112, SR24 TO TIS 20-2527

2. REINFORCEMENT ANCHORAGE AND LAP LENGTHS SHALL COMPLY WITH THE REQUIREMENTS OF THE JRA-SHB SPECIFICATIONS. MINIMUM REQUIREMENTS SHALL BE AS SHOWN CONCRETE CYLINDER STRENGTHS IN THE TABLE ARE SHOWN AT TOP OF TABLE.

CONCRETE STRENGTH (N/mm^2)		40	30	27	24	18
BOND	GENERAL (TENSION)	$35d_b$	$38d_b$	$40d_b$	$42d_b$	$48d_b$
	TOP BAR (TENSION)	$35d_b$	$38d_b$	$40d_b$	$42d_b$	$48d_b$
	COMPRESSION	$28d_b$	$30d_b$	$32d_b$	$34d_b$	$38d_b$
SPLICES	GENERAL (TENSION)	$35d_b$	$38d_b$	$40d_b$	$42d_b$	$48d_b$
	COMPRESSION	$28d_b$	$30d_b$	$32d_b$	$34d_b$	$38d_b$

WHERE :

(A) d_b = DIAMETER OF LARGER BAR.

(B) SPLICE LENGTHS TO BE INCREASED BY 33 % WHERE AT LOCATIONS OF MAXIMUM STRESS OR WHERE MORE THAN ONE HALF OF BARS ARE SPLICED AT ANY LOCATIONS.

3. REINFORCEMENT IS DESIGNED ON THE DRAWING AS FOLLOWS

[EXAMPLE]

3 x 2D25-01-150 B1 (V IN PAIRS)

- NUMBER OF GROUP
- NUMBER OFF
- TYPE OF BAR
- BAR SIZE
- COMMENT
- LOCATION
- BAR CENTERS (SPACING)
- BAR MARK

R GRADE SR235 HOT ROLLED MILD STEEL

D GRADE SD295 OR SD390 HOT ROLLED OR COLD WORKED HIGH YIELD STEEL WITH TYPE 2 DEFORMATION

BAR SPACING INDICATED ON THE DRAWINGS SHALL BE PERPENDICULAR TO BAR, UNLESS INDICATED OTHERWISE.

[SUFFIX]

AP ALTERNATIVELY PLACED (BARS OF ONE MARK ALTERNATING WITH BARS OF ANOTHER MARK)

AR ALTERNATIVELY REVERSED (ALTERNATIVE BARS TURNED END FOR END AND POSSIBLY MOVED ALONG THEIR LENGTH, AS INDICATED BY TYPICAL BARS.)

AS ALTERNATIVELY STAGGERED (BARS OF ONE MARK WITH ALTERNATIVE BARS MOVED ALONG THEIR LENGTH, SO THAT TWO SETS OF PLAN POSITIONS ARE OCCUPIED, AS INDICATED BY TYPICAL BARS.)

B BOTTOM FACE

EF EACH FACE

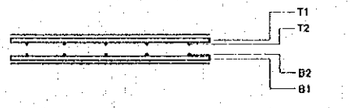
FF FAR FACE

NF NEAR FACE

RL RANDOM LENGTH (BARS OF SECONDARY REINFORCEMENT IN WHICH THE POSITION OF LAPS ARE NOT DEFINED. NO SINGLE BAR TO BE LESS THAN 6000 mm. NOR GREATER THAN 12000 mm. LONG.)

T TOP FACE

V VARIES (BAR OF VARYING DIMENSION)

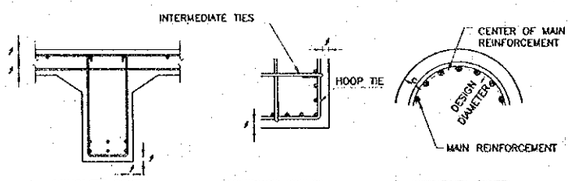


TOP OR NEARSIDE REINFORCEMENT SHOWN THUS ———————

ALL OTHER REINFORCEMENT SHOWN THUS - - - - - - - - -

4. THE CONTRACTOR IS RESPONSIBLE FOR PREPARATION OF ALL BAR SCHEDULES TO THE SATISFACTION OF THE ENGINEER.
5. CONCRETE COVER TO REINFORCEMENT SHALL BE AS FOLLOWS UNLESS OTHERWISE STATED ON THE DRAWINGS.

MAIN BRIDGE (PRECAST SEGMENT)	EXPOSED SURFACES OF GIRDERS	35 mm.
	INTERNAL SURFACES OF GIRDERS	30 mm.
	DECK SLAB SURFACES	40 mm.
APPROACH VIADUCT (CAST-IN-PLACE-CONCRETE)	EXPOSED SURFACES OF GIRDERS	45 mm.
	INTERNAL SURFACES OF GIRDERS	40 mm.
	DECK SLAB SURFACES	35 mm.
	PRECAST SLAB	25 mm.
	PRECAST BARRIERS	25 mm.
	CURB	35 mm.
PIERS	PILE CAP	80 mm.
	FOOTING	80 mm.
	WALL	80 mm.
	PILE ø 2.00 M. ø M. (C : FROM PILE SURFACE TO CENTER OF MAIN REINFORCEMENT)	150 mm.
ABUTMENT	FOOTING	80 mm.
	APPROACH SLAB	80 mm.
	WALLS IN CONTACT WITH GROUND	80 mm.
	ELSEWHERE	80 mm.



6. WELDING OF REINFORCEMENT IS NOT PERMITTED WITHOUT APPROVAL OF THE ENGINEER
7. REINFORCEMENT IS SHOWN DIAGRAMMATICALLY ON THE DRAWINGS AND THEREFORE DOES NOT DEPICT THE PRECISE POSITION OF BARS.

H. PRESTRESSING

1. UNLESS OTHERWISE INDICATED ON THE DRAWING, PRESTRESSING STEEL SHALL BE OF THE FOLLOWING.

CLASS	TENSILE LOAD OR STRENGTH	STRUCTURE AND COMPONENTS
19S15.2 STRAND	SBPR 7BL (7-15.2 MM.) ≥ 261 KN.	-PC-SAIL OF MAIN BRIDGE
12S15.2 STRAND	SBPR 7BL (7-15.2 MM.) ≥ 261 KN.	-EXTERNAL CABLE OF MAIN BRIDGE AND APPROACH VIADUCT -INNER CABLE OF MAIN BRIDGE AND APPROACH VIADUCT
4S15.2 STRAND	SBPR 7BL (7-15.2 MM.) ≥ 261 KN.	-DECK SLAB, DAPPED HINGE
32 MM. BAR	SBPR 930/1180 ≥ 1180 N/MM^2	-TEMPORARY BAR OF MAIN BRIDGE

1.) PRESTRESSING STRAND SHALL BE 7 WIRES LOW RELAXATION IN ACCORDANCE WITH TIS (THAILAND INDUSTRIAL STANDARD), JIS (JAPANESE INDUSTRIAL STANDARD).
2.) THE 4S15.2 INDICATERS 4 STRANDS FLAT SLAB ANCHORAGE SYSTEM.
3.) ALL STRANDS TO BE S15.2 WITH A ULTIMATE TENSILE STRENGTH OF 261 KN.

2. THE BRIDGE DECK DESIGN OF THE MAIN BRIDGE IS BASED ON USE OF BOTH INTERNAL AND EXTERNAL PRESTRESSING SYSTEMS. APPROACH VIADUCT IS BASED ON USE OF INTERNAL PRESTRESSING SYSTEMS. THE POST TENSIONING SYSTEMS PROPOSED BY THE CONTRACTOR MUST BE RECOGNIZED TYPES. ALL DETAILS OF THE PROPOSED PRESTRESSING SYSTEMS INCLUDING THE COMPLETE GROUTING OPERATION MUST BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JICA JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	T. Ohno		5/3/00
DESIGN CHECK	H. Watanabe		18/02/00
SUBMITTED	A. Hiratani		21/02/00
APPROVED	P. Viraphanh		22/02/00
	S. Temiyabutra		22/02/00

DWG. TITLE:

GENERAL NOTES

SHEET 1 OF 2

Plot date: Fri, 25 Jan 2000 - 10:34:22

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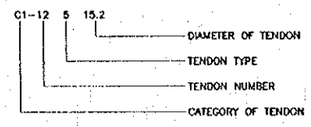
DATE OF ISSUE: 05/03/2000	
DWG. NO. B-G-2	SHEET NO. 109
DWG. STATUS	

3. THE BRIDGE DECK DESIGN IS BASED ON SEQUENTIAL PRESTRESSING IN STAGES SHOWN ON THE DRAWINGS. ANY CHANGE TO THE STAGE SEQUENCE OF PRESTRESSING WILL REQUIRE RE-DESIGN OF THE BRIDGE DECK.
4. THE RECOmmENDED PRESTRESSING SEQUENCE IS SHOWN ON THE PRESTRESSING DETAILS DRAWINGS. ANY ALTERNATIVE SEQUENCES MUST BE APPROVED BY THE ENGINEER.
5. DUCT SIZES TO 95 (INNER DIAMETER) FOR 19S15.2 TENDONS AND 80 (INNER DIAMETER) FOR 12S15.2 TENDONS.
6. PRESTRESSING DUCTS SHALL BE PLACED AND MAINTAINED TO THE PROFILES SPECIFIED TO WITHIN ±6 mm.
7. DUCTING FOR INTERNAL TENDONS SHALL BE SUPPORTED AT NOT MORE THAN 750 mm. CENTERS AND SHALL BE SET OUT TO PROVIDE A SMOOTH PROFILE THROUGHOUT
8. ALL PRESTRESSING DUCT SHALL BE PROVIDED WITH GROUT INLET/OUTLET VENTS AT ALL HIGH AND LOW POINTS, THE TENDON PROFILE AS WELL AS AT ALL ANCHORAGES.
9. TENDON PROFILES ARE SPECIFIED TO THE CENTER OF DUCTING.
10. THE TENDON IS TO BE STRAIGHT FOR AT LEAST 200 mm. OVER EITHER SIDE OF SEGMENT JOINT.
11. ALL TENDONS ARE TO BE PLACED IN SHEATH TO COMPLY WITH REQUIREMENTS OF SPECIFICATIONS CLAUSE, WHICH ARE TO BE PULLED WITH CEMENTITOUS GROUT AFTER THE TENDONS HAVE BEEN STRESSED.
12. NOTATION OF TENDON



13. JACKING FORCE SHALL BE 2200 KN. IN 12S15.2, 3490 KN. IN 19S15.2 BEFORE LOCKING OFF.
14. PARAMETERS ASSUMED IN POST-TENSION DESIGN ARE :

	INTERNAL TENDONS	EXTERNAL TENDONS
COEFFICIENT OF FRICTION (PER RADIAN, ANGLE)	0.3	0.1
WOBBLE FACTOR (PER METER)	0.004	0.0013
ANCHORAGE PULL IN	5 mm.	5 mm.
YOUNGS MODULUS PER STRAND KN/mm.^{2}	195	195

15. MINIMUM STRENGTH OF CONCRETE AT TRANSFER=40 N/mm.^{2}
16. NO STRAND PER TENDON SHALL BE STRESSED WHEN THE CONCRETE HAS ATTAINED A STRENGTH OF 20 N/mm.^{2} AND BEFORE THE DECK SLAB SHUTTERS ARE REMOVED FROM THE CONCRETE SUPPORTING. REMAINING STRANDS SHALL BE STRESSED AND THE INITIAL STRAND RESTRESSED AFTER THE CONCRETE HAS OBTAINED A STRENGTH OF 40 N/mm^2
17. ANCHORAGE WORKING FACES ARE PLANED PERPENDICULAR TO THE TENDON CENTER LINE.
18. ALL EXTERNAL EDGES TO HAVE 25x25 CHAMFER UNLESS NOTED OTHERWISE.
19. ALL INTERNAL RE-ENTRANT CORNERS TO HAVE 50x50 CHAMFER UNLESS NOTED OTHERWISE.
20. SHEAR KEYS TO BE PROVIDED AT ALL SEGMENT JOINTS.
21. THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN AND DETAILING OF ALL TEMPORARY PRESTRESSED ERECTION BARS AND ANCHORAGES.
22. TEMPORARY WORKS NECESSARY TO SECURE SEGMENTS DURING ERECTION UNTILL INSTALLATION OF PERMANENT PRESTRESSING TO BE DETAILED BY THE CONTRACTOR.
23. SHEAR KEYS MAY BE OMITTED WHERE THEY INTERFERE WITH PRESTRESSING DUCTS OR ANCHORAGES, SUBJECT TO APPROVAL OF THE ENGINEER.
24. THERMAL MOVEMENT IS BASED ON MEAN TEMPERATURE OF 25°C AND SHALL BE ADJUSTED FOR DIFFERENT ERECTION TEMPERATURE ACCORDINGLY.
25. ALL DETAILS SHOWN ARE INDICATIVE ONLY. THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN AND ALL ERECTIONS OF ROADWAY, FOOTWAY, AND PARAPET EXPANSION JOINTS. DESIGN SHALL BE IN ACCORDANCE WITH JRA-SHB.

I. BRIDGE BEARING AND SEISMIC RESTRAINER

1. THE BOX GIRDER OF MAIN BRIDGE WILL BE SUPPORTED ON TWO ELASTOMERIC LAMINATED BEARINGS. FOR LONGITUDINAL SEISMIC EFFECTS RIGID CONNECTION BETWEEN GIRDER AND PIER WILL BE PROVIDED AT PIER P10, P11, P12, P17, P18, P19
2. THE BOX GIRDER OF APPROACH VIADUCT WILL BE SUPPORTED ON TWO ELASTOMERIC LAMINATED BEARINGS, AND FOR LONGITUDINAL SEISMIC EFFECTS A FIXED SUPPORT WILL BE PROVIDER AT PIER P26 (LAO P.D.R. SIDE) AND P3 (THAILAND SIDE)
3. THE BOX GIRDER AT DAPPED HINGE BETWEEN PIER P14 AND P15 WILL BE CONNECTED BY TIE ROD STOPPERS.
4. ALL BEARINGS SHALL BE SET LEVEL ON A BED OF MORTAR GROUT MAXIMUM DEPTH 20mm.
5. THE BEARINGS AND THEIR CONNECTIONS TO THE STRUCTURE SHALL BE DESIGNED FOR THE FORCES STATED ON THE DRAWINGS, WHERE THE DESIGN HORIZONTAL FORCES (IF ANY) DO NOT DICTATE LARGER FIXINGS. EACH BEARING PLATE SHALL BE FIXED TO THE STRUCTURE.
6. ALL BEARINGS MUST BE REPLACEABLE WITHOUT DAMAGE TO THE STRUCTURE.
7. EACH BEARING SHALL BE PERMANENTLY MARKED WITH THE BEARING IDENTIFICATION MARK. THE TOP FACE AND THE DIRECTION OF MOVEMENT OF EACH BEARING SHALL BE IDENTIFIABLE.

J. EXPANSION JOINTS

1. ARMOURED , SKIN RESISTANT , ELASTOMERIC BRIDGE DECK JOINTS SHALL BE PROVIDED. THE JOINT SHALL BE GUARATEED BY MANUFACTURER TO A MINIMUM LIFE OF 10 YEARS IN THE PREVAILING CLIMATE AND TRAFFIC LOADING CONDITIONS OF THAILAND AND THE LAO P.D.R.
2. THE JOINT SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE DETAILS SHOWN ON THE DRAWINGS AND THE MANUFACTURERS RECOmmENDATIONS.
3. ALL KERBS AND UPSTANDS SHALL BE VULCANIZED PREFABRICATED SHOP UNIT INCLUDING MITERED WELDS TO GIVE A COMPLETELY WATERPROOF JOINT.
4. THE JOINT IS TO BE SET 3-4mm. BELOW THE WEARING SURFACE AND 3-4mm. BACK FROM THE PRECAST CONCRETE KERB LINE UNLESS OTHERWISE RECOmmENDED BY THE JOINT MANUFACTURER.
5. JOINT SHALL BE WATER TIGHT AND EASY TO MAINTAIN.
6. THE JOINT MANUFACTURER SHALL PROVIDE DESIGN CALCULATIONS., INSTALLATION, INSTRUCTIONS AND A MAINTENANCE MANUAL AT TIME THE JOINTS ARE SUBMITTED TO THE ENGINEER FOR APPROVAL.
7. ALL FIXINGS TO BE OF STANLESS STEEL.

K. WATERPROOFING

1. BRIDGE DECK IS TO BE PROTECTED BY WATERPROOF MEMBRANE IN ACCORDANCE WITH THE SPECIFICATIONS.

L. BACKFILL TO STRUCTURES

1. THE DIFFERENTIAL HEIGHT AT BACKFILLING TO STRUCTURES MUST BE RESTRICTED TO 10m. MAXIMUM.
2. NO BACKFILL SHALL BE PLACED ADJACENT TO CONCRETE BEFORE THE CONCRETE ATTAINS 28 DAYS STRENGTH.

M. STEEL WORK

1. UNLESS OTHERWISE INDICATED ON THE DRAWING PRESTRESSING STEEL SHALL BE OF THE FOLLOWINGS.

CLASS	TENSILE STRENGTH (N/mm.^{2})	STRUCTURE AND COMPONENTS
SS400 (JIS G3101)	400~510	BEARING (STEEL PLATE) EXPANSION JOINT, HANDRAIL TEMPORARY JETTY, TEMPORARY STAGING, TEMPORARY SUPPORT, SURVEY TABLE, THE OTHERS
SS490 (JIS G3101)	490~810	ERECTION TRUSS, GANTRY CRANE
SM400 (JIS G3106)	400~510	EXPANSION JOINT
STK400 (JIS G3444)	≥ 400	HANDRAIL
SKK400 (JIS A5525)	≥ 400	CASING PIPE FOR RC PILE
SY295 (JIS A5528)	≥ 400	COFFERDAM (STEEL SHEET PILE)

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THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	T. Ohno		15/12/99
DESIGN CHECK	H. Watanabe		18/12/99
SUBMITTED	A. Hirotani		21/12/99
APPROVED	P. Vrapbanth		14/02/00
	S. Temiyabutra		22/02/00

DWG. TITLE:
GENERAL NOTES
SHEET 2 OF 2

Plot date: Thu, 13 Jan 2000 - 13:13:29
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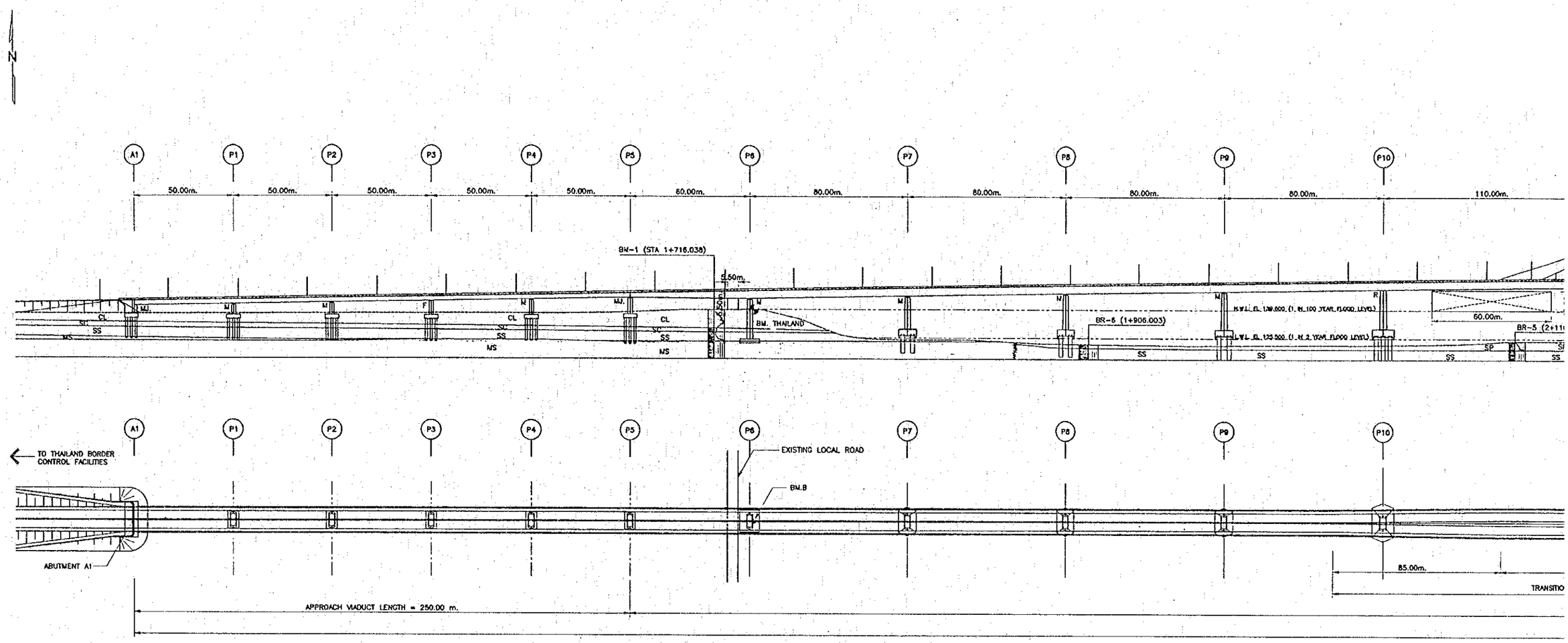
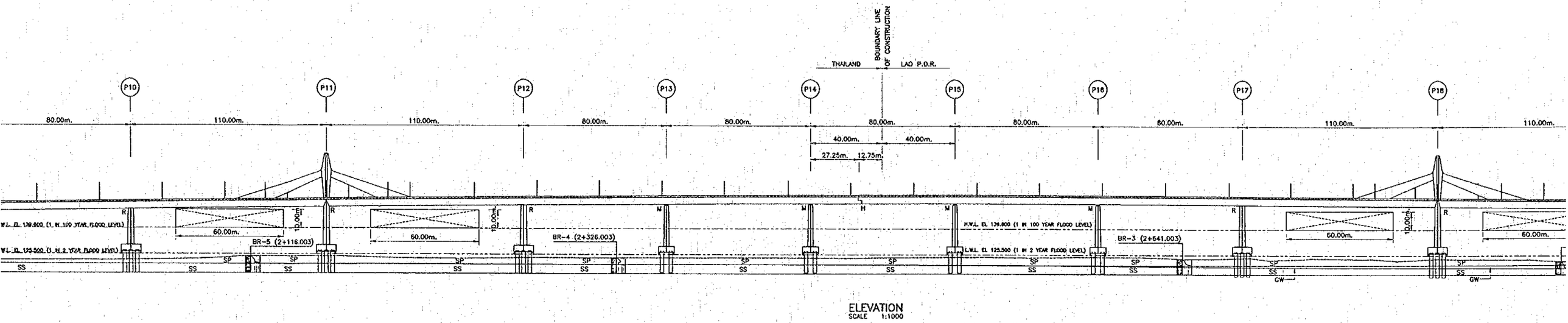


VERTICAL GEOMETRY															(+2.00 % GRADE)	
EL BRIDGE SETTING OUT LINE (SOL).	144.080	145.080	146.080	147.080	148.052	148.969			149.998		151.240	152.342		153.302	154.120	
EL NATURAL SURFACE LEVELS	138.200	137.850	137.700	137.500	137.650	138.300	139.440		139.550	139.485	124.500	122.500	122.380	121.900	122.300	124.155
STATION	1+424.000	1+474.000	1+524.000	1+574.000	1+624.000	1+674.000	1+716.038	1+725.705	1+734.000	1+736.038	1+814.000	1+894.000	1+906.003	1+974.000	2+054.000	2+116.003



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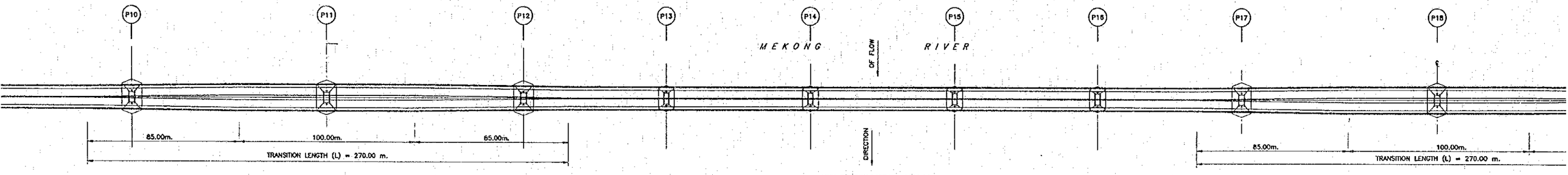


MAIN BRIDGE LENGTH = 1600.00 m.

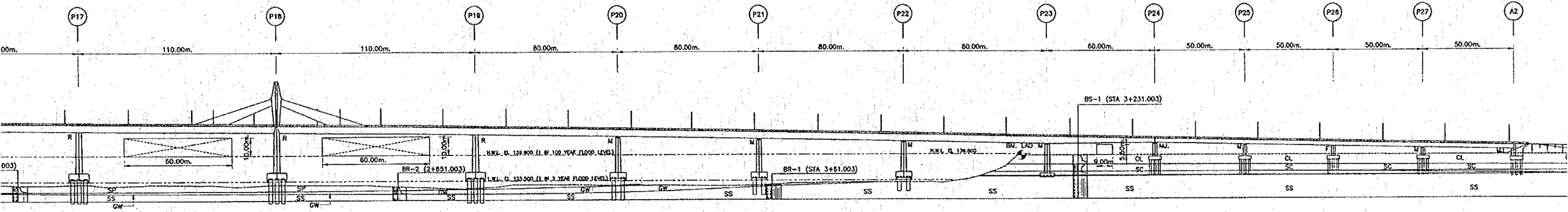
BRIDGE LENGTH = 2050.00 m.

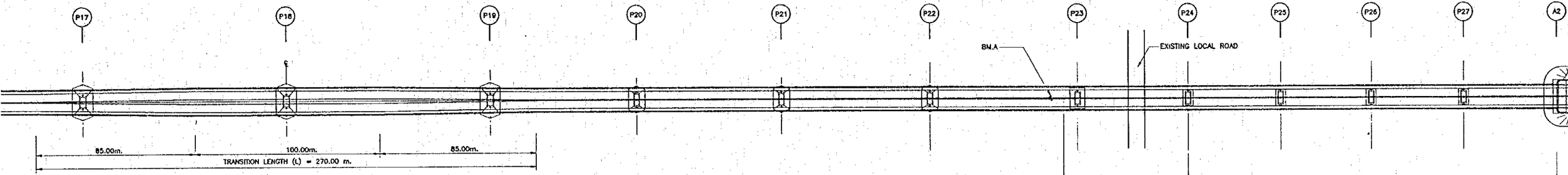
PLAN
SCALE 1:1000

(+2.00 % GRADE)

VERTICAL CURVE LENGTH | L= 1800.00 m. (R=45.00 m.)

154.120		155.012		155.636		155.920	156.062	156.062	155.920		155.636		155.012				
122.300	124.155	124.400	123.600	123.590	123.600	123.600	124.100	124.300	123.420	123.900		123.600	122.395				
2+054.000	2+116.003	2+164.000	2+274.000	2+326.003	2+354.000	2+434.000	2+514.000	2+594.000	2+641.003	2+674.000		2+784.000	2+851.003				

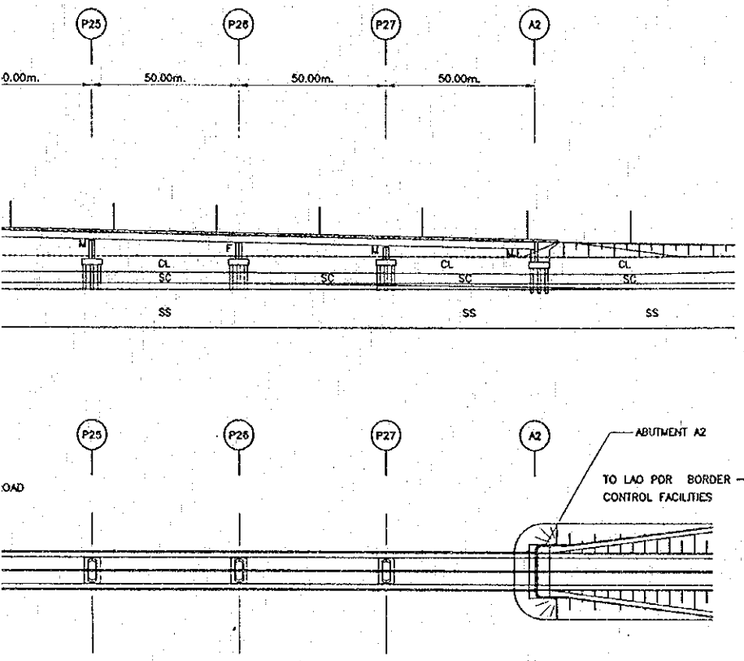




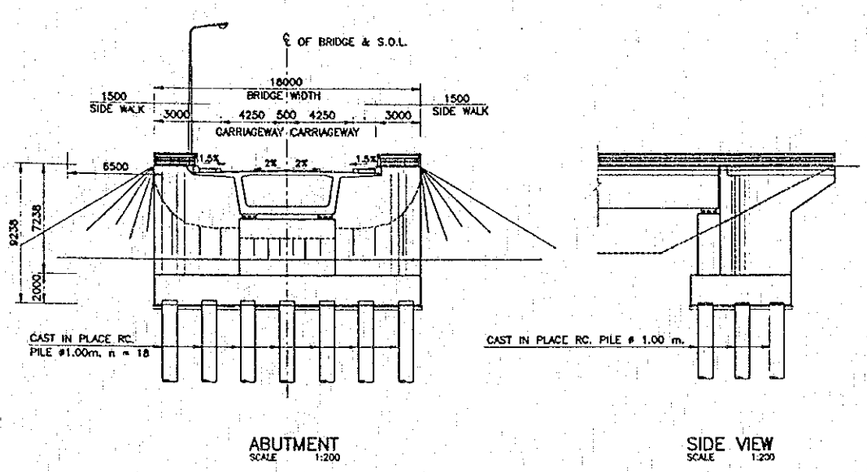
BREAKE 3+206.681 BK
3+200.000 AH.

(-2.00 % GRADE)

2+641.003	123.420	155.636	2+674.000	123.900	155.012	2+784.000	123.600	154.120	2+851.003	122.395	153.302	2+874.000	122.900	152.342	3+054.000	123.000	151.240	3+061.003	123.215	149.996	3+134.000	124.400	148.969
3+199.955	138.830	148.052	3+207.339	139.000	147.080	3+231.003	138.830	146.080	3+267.339	138.300	145.080	3+317.339	138.000		3+367.339	138.800		3+417.339	139.100		3+467.339	138.900	



148.052	147.080	146.080	145.080
138.000	136.800	135.100	136.900
3+317.339	3+367.339	3+417.339	3+467.339



ABUTMENT
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SIDE VIEW
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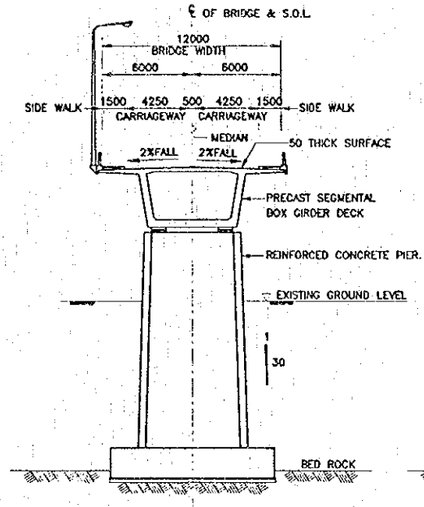

TYPICAL SECTION P6 & P23
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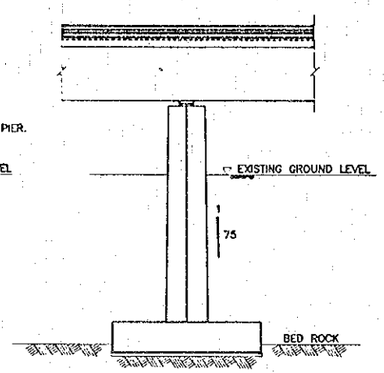

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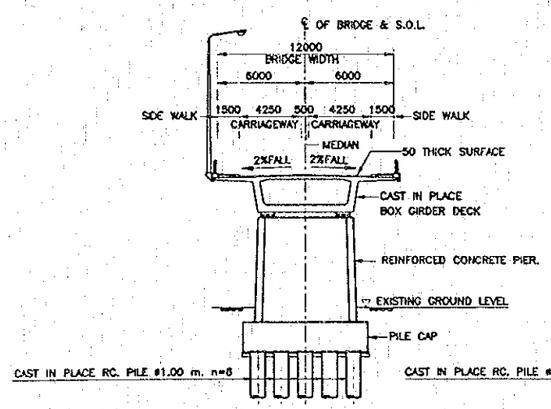
CAST IN PLACE RC.



TYPICAL SECTION P1 TO P5
& P24 TO P27
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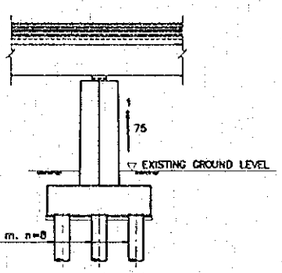

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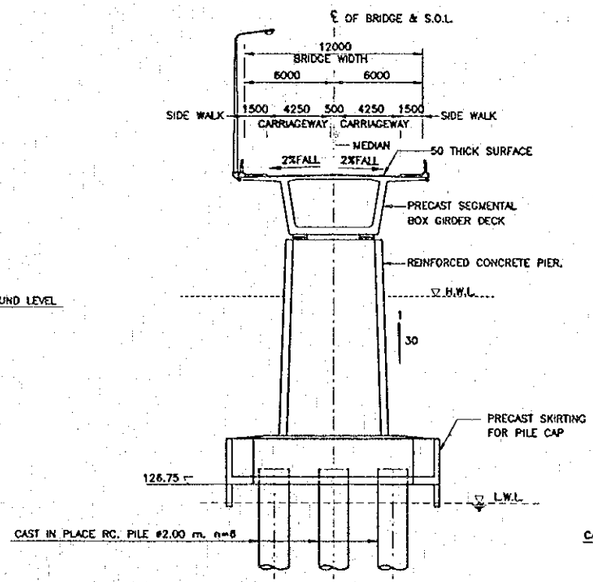

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& P20 TO P22
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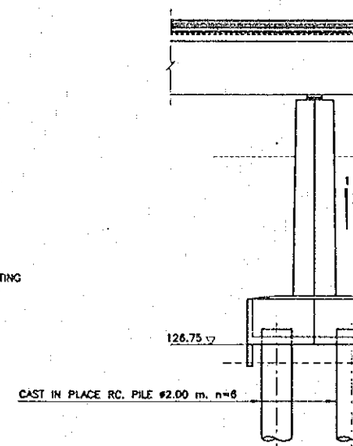

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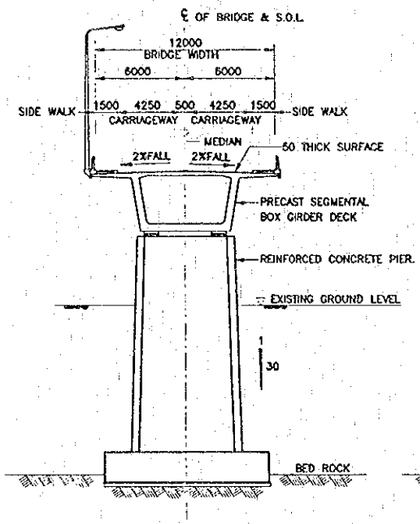

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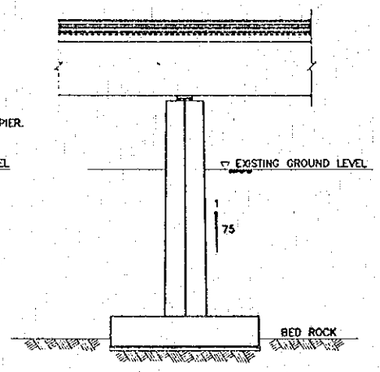

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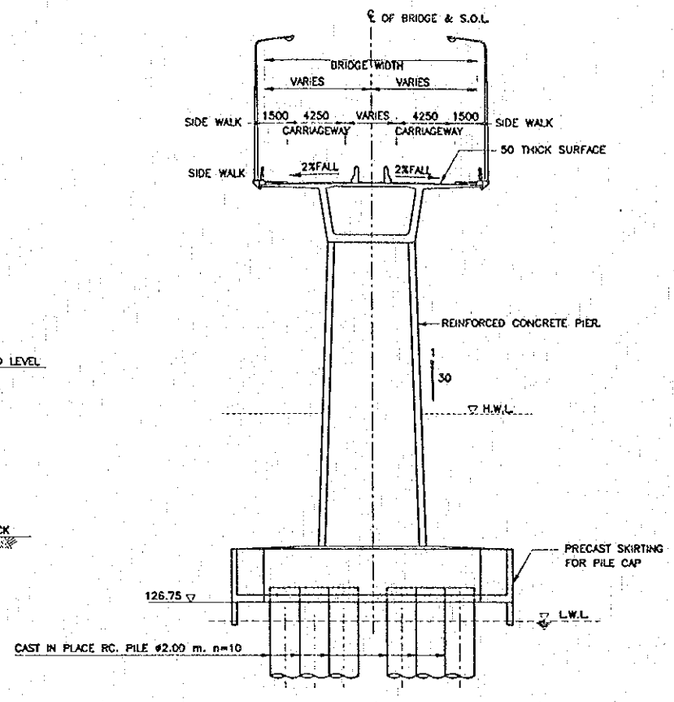

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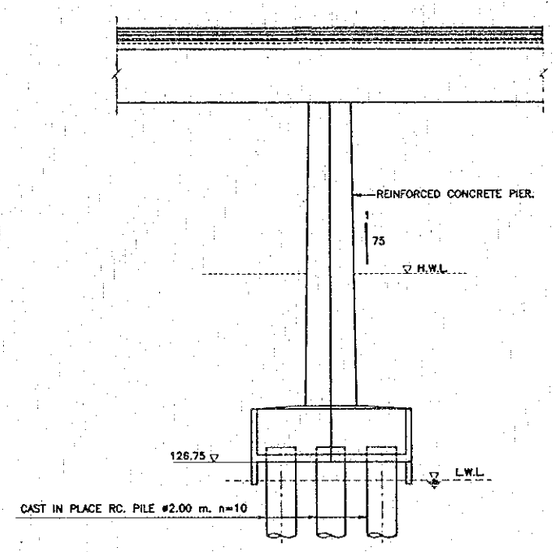

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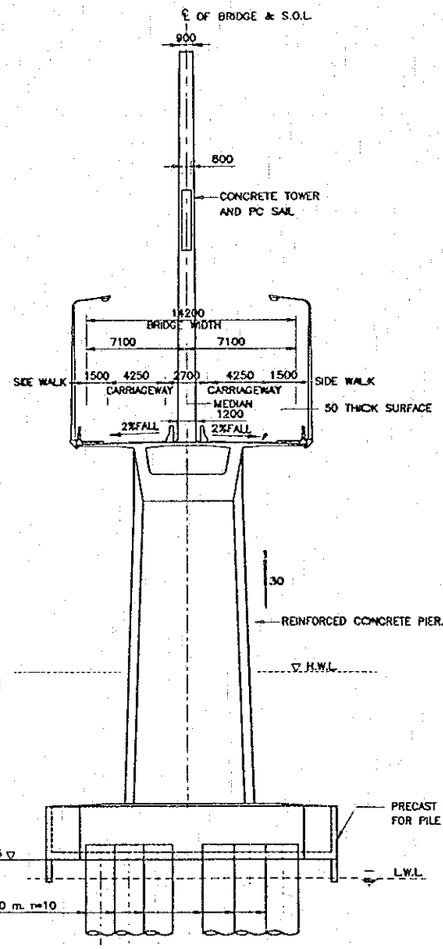

TYPICAL SECTION P11 & 18
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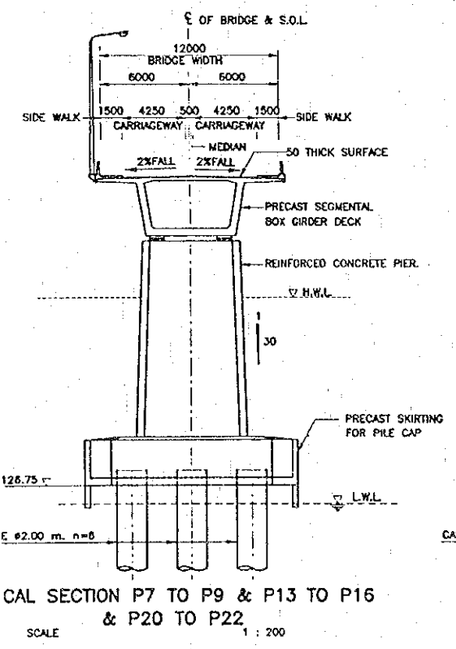

CAL SECTION P7 TO P9 & P13 TO P16
& P20 TO P22
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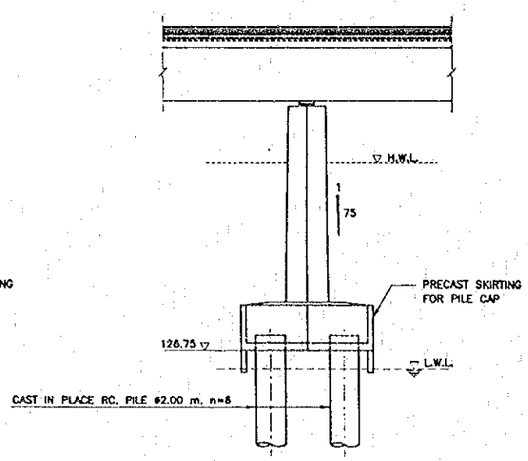

SIDE VIEW
SCALE 1 : 200

GEOLOGICAL TABLE

	CLASSIFICATION	CONTENTS
SP	River Bed Deposit	Sand , fine to medium grain , poor graded
GW		Gravel , size 4~40 mm. , well graded
CL	Terrace/Back Marsh Deposit	Clay , stiff
SC		Sandy clay , medium stiff
SF	Decomposed Rock	Decomposed Sandstone , changed into clay very stiff
ML		Decomposed Mudstone , changed into silty sand , very dense
SS	Base Rock	Sandstone , Mudstone Alternation , hard
MS		Mudstone , reddish brown , moderately hard

REV.	DATE	DESCRIPTION	APPROVED

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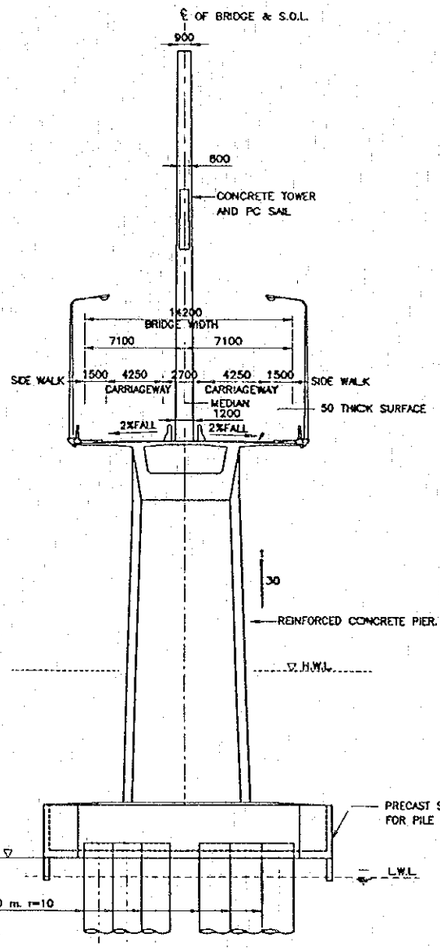
DWG. STATUS	



TYPICAL SECTION P11 & 18
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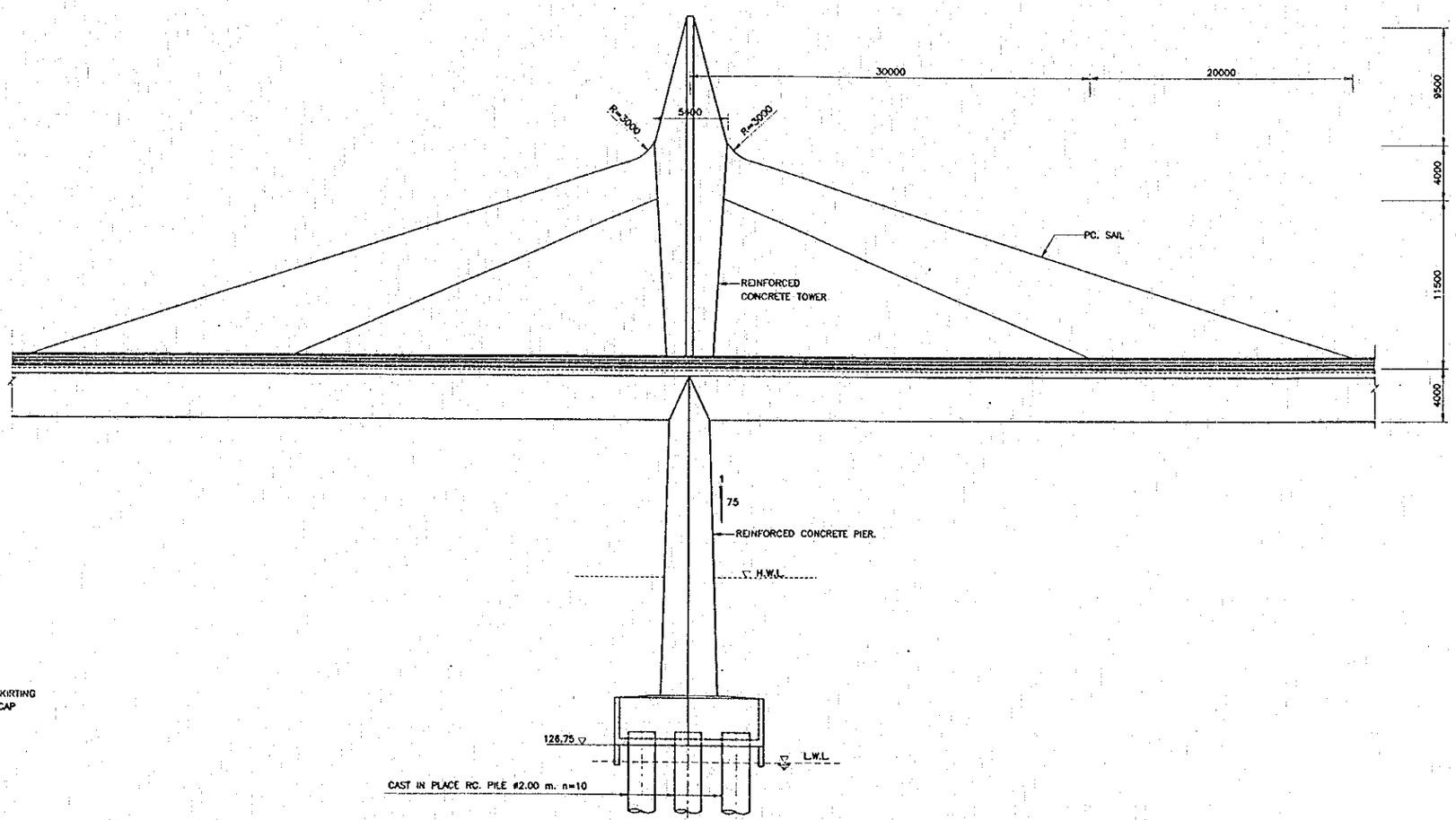

SIDE VIEW
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NOTES:
1. FOR GENERAL NOTES REFER G-2 & G-3
2. LEGEND.
   SLIDING BEARING DENOTED THUS : M
   FIXED BEARING DENOTED THUS : F
   RIGID CONNECTION : R
   DAPPED HINGE : D.H

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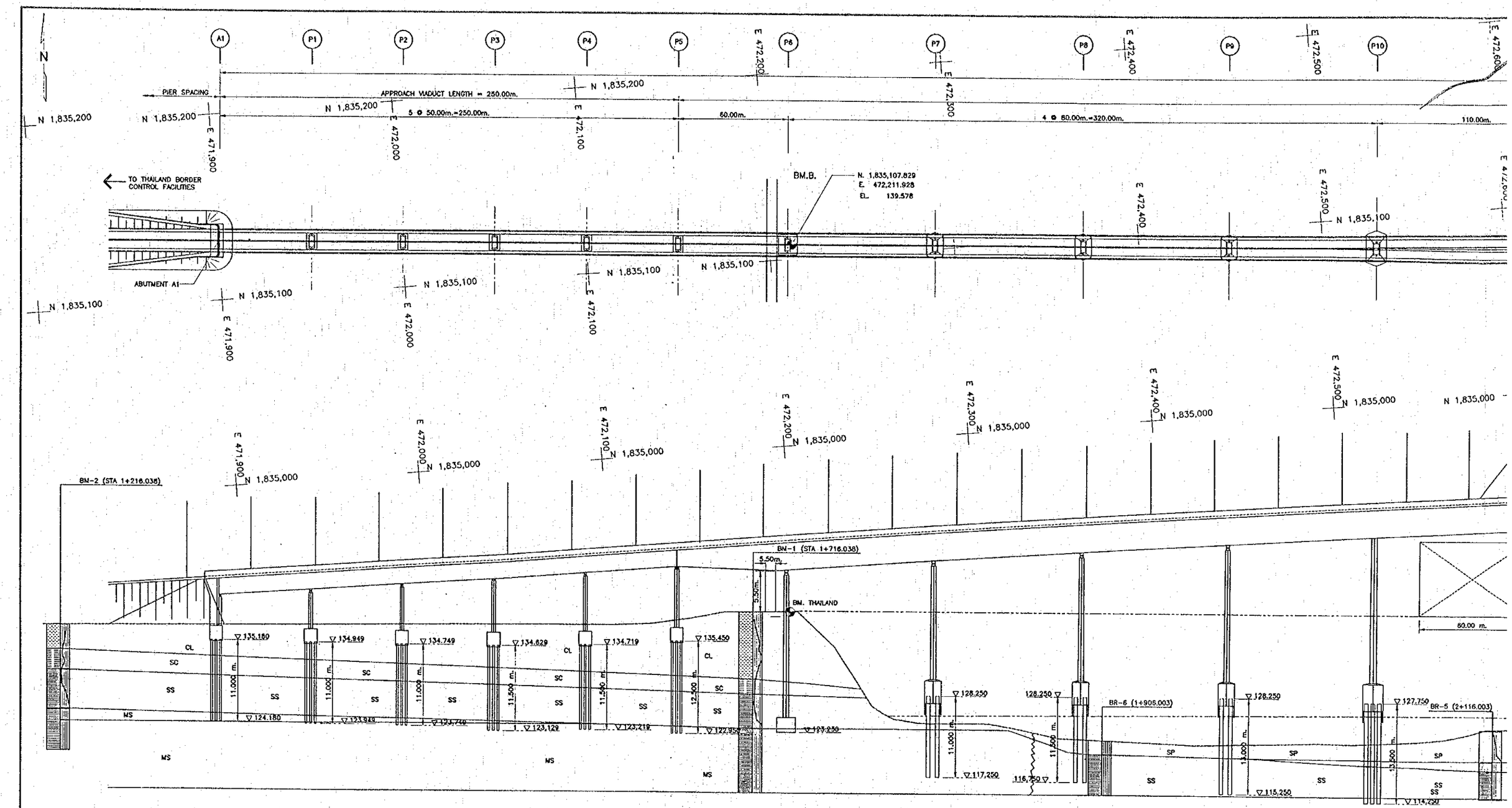
DESIGN	T. Ohno		15/12/00
DESIGN CHECK	H. Watanabe		12/12/00
SUBMITTED	A. Hiratani		21/12/00
APPROVED	P. Viraphanth		22/02/01
	S. Tamiyasutra		22/2/01

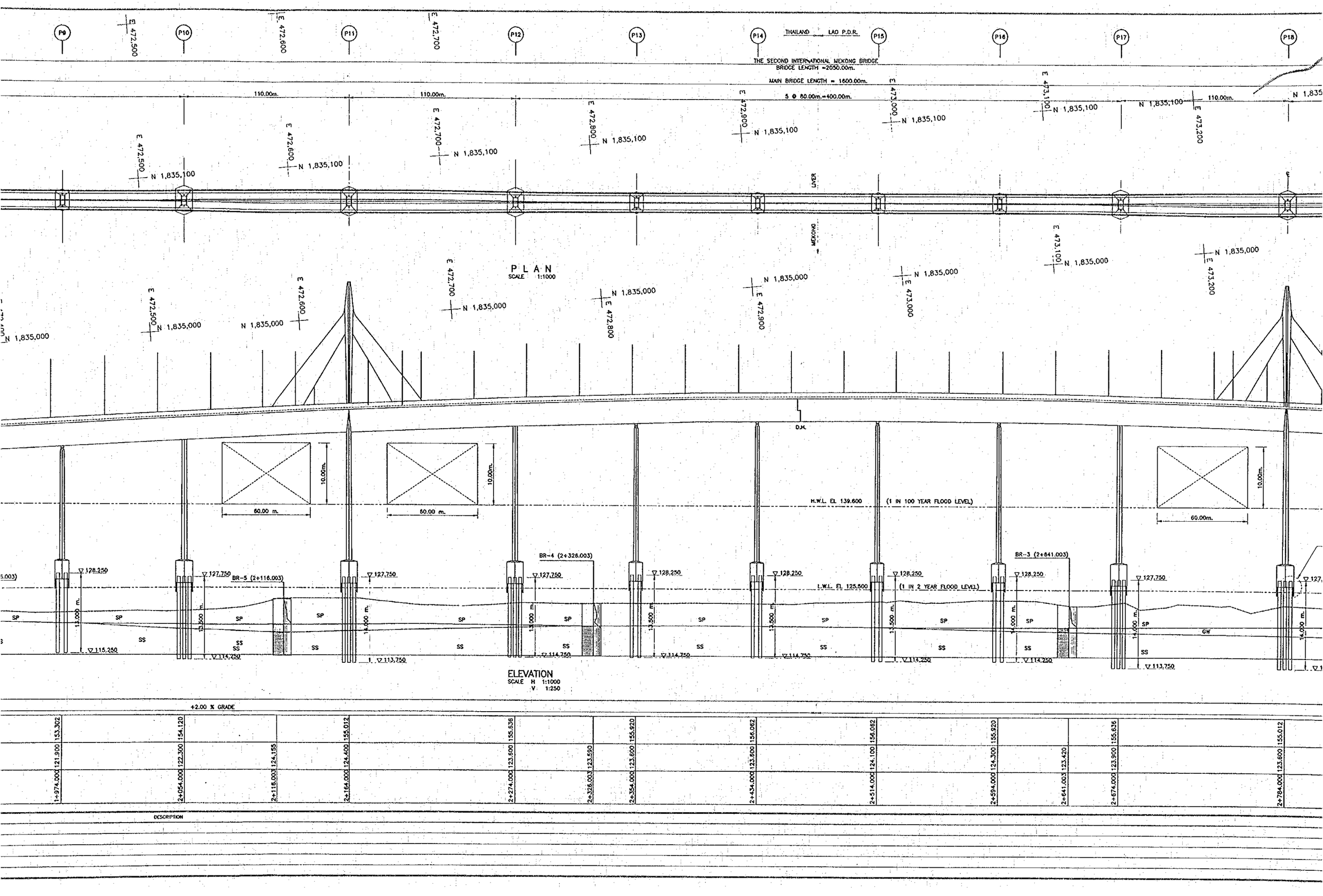
DWG. TITLE:
BRIDGE GENERAL ARRANGEMENT

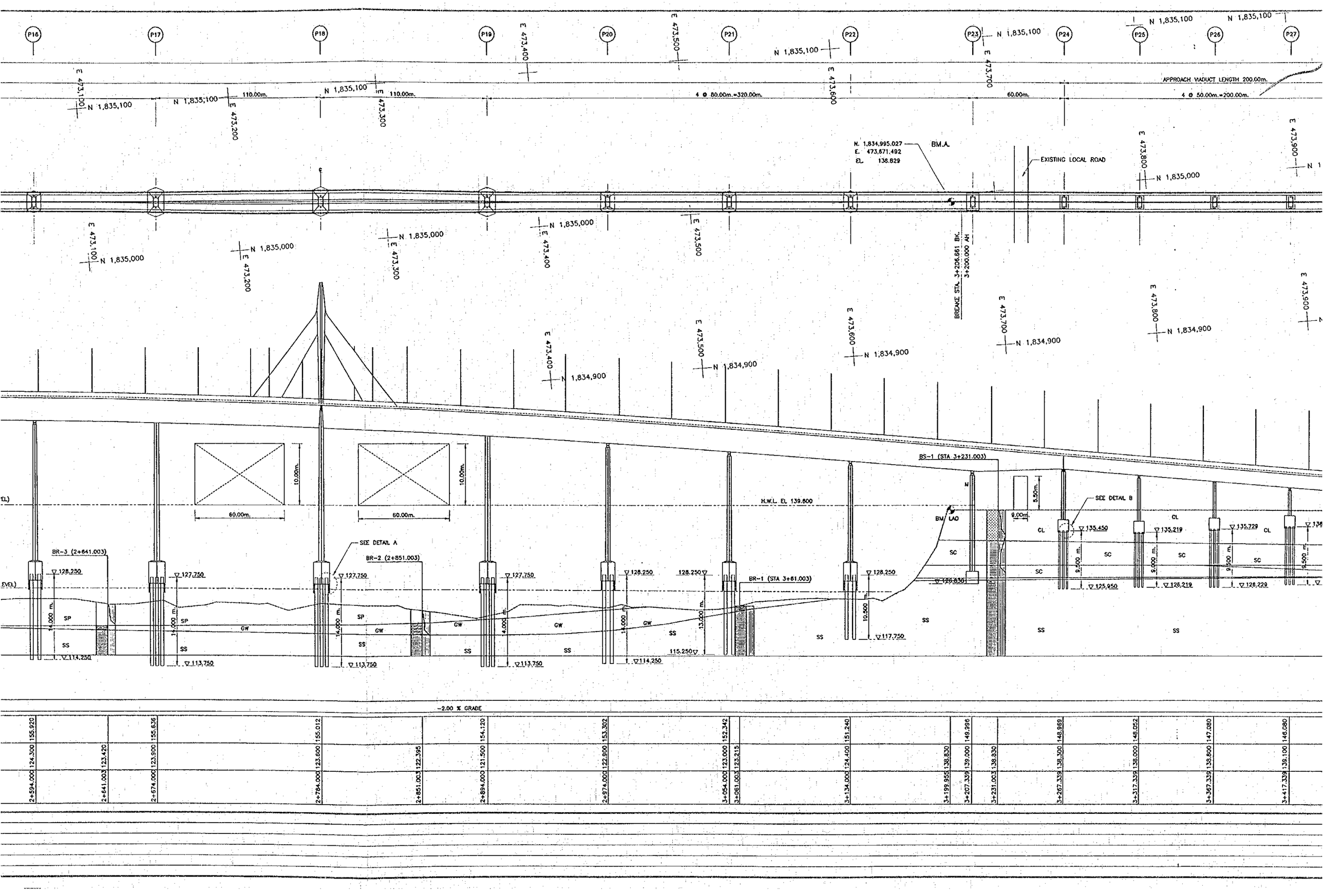


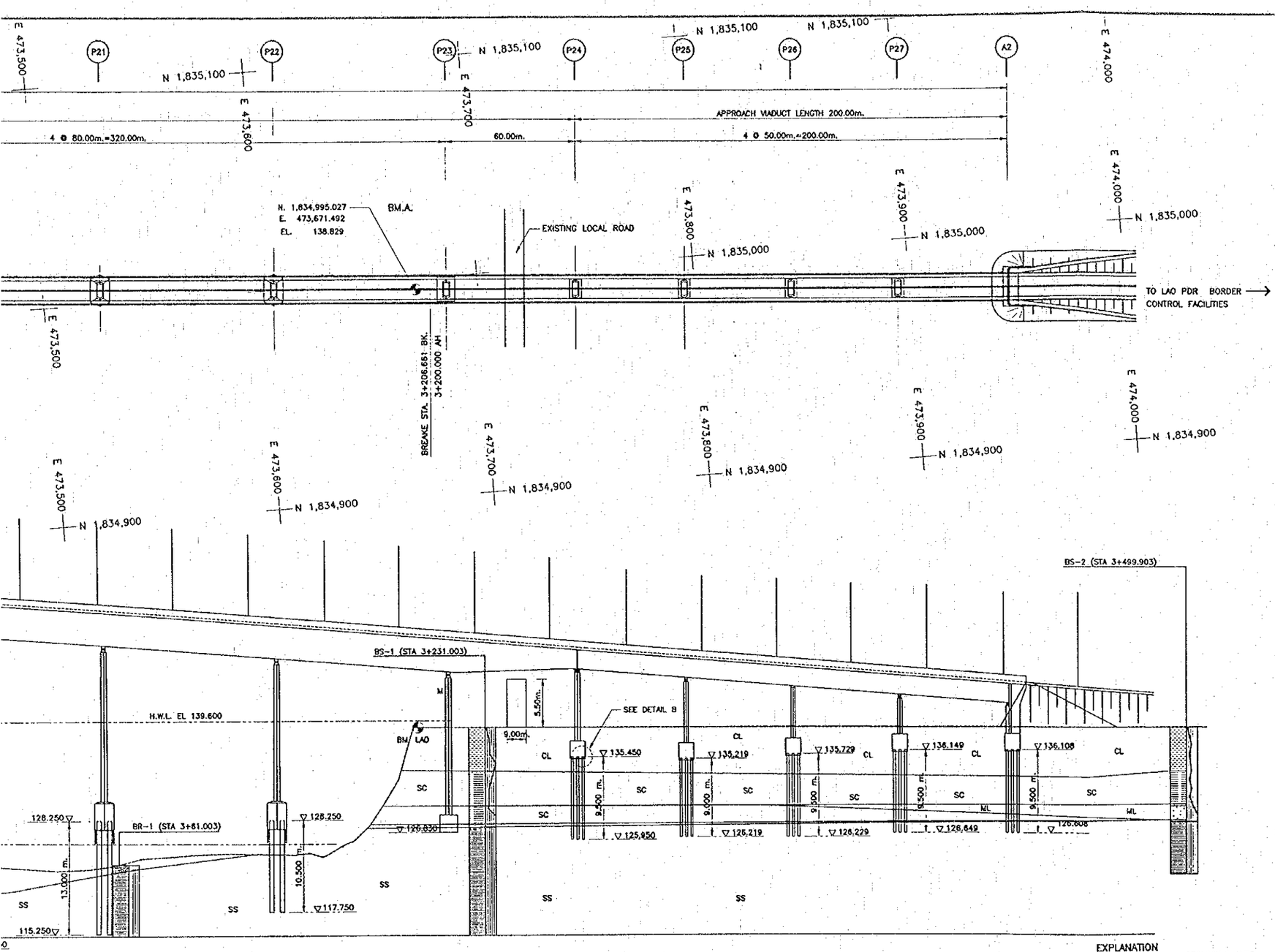
VERTICAL GEOMETRY															+2.00 % GRADE
EL BRIDGE SETTING OUT LINE (SOL).	144.080	145.080	146.080	147.080	148.052	148.969		149.996		151.240	152.342		153.302	154.120	
EL NATURAL SURFACE LEVELS	138.200	137.850	137.700	137.500	137.650	138.300	139.440	139.550	139.485	124.500	122.500	122.380	121.900	122.300	124.155
STATION	1+424.000	1+474.000	1+524.000	1+574.000	1+624.000	1+674.000	1+716.038	1+734.000	1+736.038	1+814.000	1+894.000	1+906.003	1+974.000	2+054.000	2+116.003

REV.	DATE	DESCRIPTION

C:\SMB\DETAIL\BRIDGE\B-2.dwg


P9
P10
P11
P12
P13
P14
P15
P16
P17
P18
THAILAND
LAO P.D.R.
THE SECOND INTERNATIONAL MEKONG BRIDGE
BRIDGE LENGTH =2050.00m.
MAIN BRIDGE LENGTH = 1600.00m.
5 @ 80.00m.=400.00m.
110.00m.
E 472,500
E 472,600
E 472,700
E 472,800
E 472,900
E 473,000
E 473,100
E 473,200
N 1,835,100
N 1,835,000
MEKONG
PLAN
SCALE 1:1000
10.00m.
60.00 m.
H.W.L. EL 139.600
(1 IN 100 YEAR FLOOD LEVEL)
L.W.L. EL 125.500
(1 IN 2 YEAR FLOOD LEVEL)
BR-5 (2+116.003)
BR-4 (2+326.003)
BR-3 (2+641.003)
▽128.250
▽127.750
▽115.250
▽114.750
▽113.750
13.000 m.
13.500 m.
14.000 m.
SP
SS
GW
ELEVATION
SCALE H 1:1000
V 1:250
+2.00 % GRADE
1+974.000 121.900 153.302
2+054.000 122.300 154.120
2+116.003 124.155
2+164.000 124.400 155.012
2+274.000 123.600 155.636
2+326.003 123.590
2+354.000 123.600 155.920
2+434.000 123.600 156.062
2+514.000 124.100 156.062
2+594.000 124.300 155.920
2+641.003 123.420
2+674.000 123.900 155.636
2+784.000 123.600 155.012
DESCRIPTION


P16
P17
P18
P19
P20
P21
P22
P23
P24
P25
P26
P27
E 473,100
N 1,835,100
110.00m.
E 473,200
E 473,300
E 473,400
E 473,500
E 473,600
E 473,700
4 @ 80.00m.=320.00m.
60.00m.
APPROACH VIADUCT LENGTH 200.00m.
4 @ 50.00m.=200.00m.
N. 1,834,995.027
E. 473,671.492
EL. 138.829
BM.A.
EXISTING LOCAL ROAD
E 473,800
E 473,900
N 1,835,000
BREAK STA. 3+206.661 BK.
3+200.000 AH
N 1,834,900
10.00m.
60.00m.
BR-3 (2+641.003)
BR-2 (2+851.003)
SEE DETAIL A
BR-1 (STA 3+61.003)
BS-1 (STA 3+231.003)
H.W.L EL 139.600
BM LAO
SEE DETAIL B
9.00m.
5.50m.
CL
SC
SS
GW
SP
128.250
127.750
135.450
135.219
135.729
125.950
126.219
126.229
117.750
115.250
114.250
113.750
-2.00 % GRADE
2+594.000 124.300 155.920
2+641.003 123.420 155.636
2+674.000 123.900 155.012
2+784.000 123.600 154.120
2+851.003 122.395 153.302
2+894.000 121.500 152.342
2+974.000 122.900 153.215
3+054.000 123.000 151.240
3+061.003 123.215 138.830
3+134.000 124.400 149.996
3+199.955 138.830 139.000
3+207.339 139.000 138.830
3+231.003 138.830 148.969
3+257.339 138.300 148.052
3+317.339 138.000 147.080
3+367.339 138.800 146.080
3+417.339 139.100 146.080



DETAIL A
(CAST IN-SITU R.C. PILE)
SCALE 1 :100

3+054.000	3+061.003	3+134.000	3+199.955	3+207.339	3+231.003	3+267.339	3+317.339	3+367.339	3+417.339	3+467.339
123.000	123.215	124.400	138.830	139.000	138.830	138.300	138.000	138.800	139.100	138.900
152.342		151.240		149.998		148.959	148.052	147.080	146.080	145.080

EXPLANATION

	GEOLOGICAL TYPE	
SP	River Bed Deposit	Sand , fine to medium grain , poor graded
GW		Gravel , size 4-40 mm. , well graded
CL	Terrace/Back Marsh Deposit	Clay , stiff
SC		Sandy clay , medium stiff
SF	Decomposed Rock	Decomposed Sandstone , changed into clay very stiff
ML		Decomposed Mudstone , changed into silty sand , very dense
SS	Base Rock	Sandstone , Mudstone Alternation , hard
MS		Mudstone , reddish brown , moderately hard

CO-ORDINATE FOR PIER AND ABUTMENT
THAILAND SIDE

LOCATION	STATION. NO.		NORTHING (m.)	EASTING (m.)
A1	1+424.000		1,835,131.873	471,900.818
P1	1+474.000		1,835,128.020	471,950.869
P2	1+524.000		1,835,124.165	472,000.520
P3	1+574.000		1,835,120.315	472,050.372
P4	1+624.000		1,835,116.462	472,100.223
P5	1+ 674.000	CL. P.CL	1,835,112.609 1,835,112.606	472,150.074 472,150.124
P6	1+734.000		1,835,107.986	472,209.898
P7	1+814.000		1,835,101.822	472,289.656
P8	1+954.000		1,835,095.657	472,369.420
P9	1+974.000		1,835,089.493	472,449.182
P10	2+054.000		1,835,083.328	472,528.945
P11	2+164.000		1,835,074.852	472,638.618
P12	2+274.000		1,835,066.376	472,748.291
P13	2+354.000		1,835,060.212	472,828.053
P14	2+434.000		1,835,054.048	472,907.815

CO-ORD
LAO P.D.

LOCATIC
P15
P16
P17
P18
P19
P20
P21
P22
P23
P24
P25
P26
P27
A2

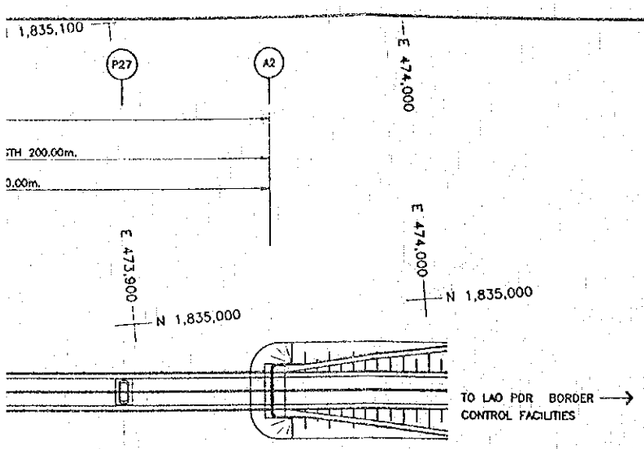
APPROVED

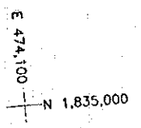
PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

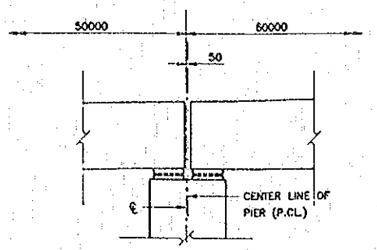
JICA JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

DATE OF ISSUE: 05/03/2000	
DWG. NO. B-B-2	SHEET NO. 111
DWG. STATUS	







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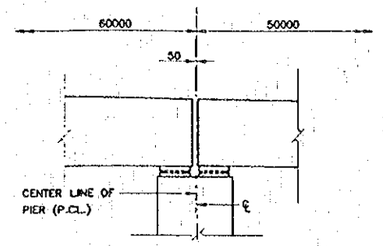
SCALE 1 :100



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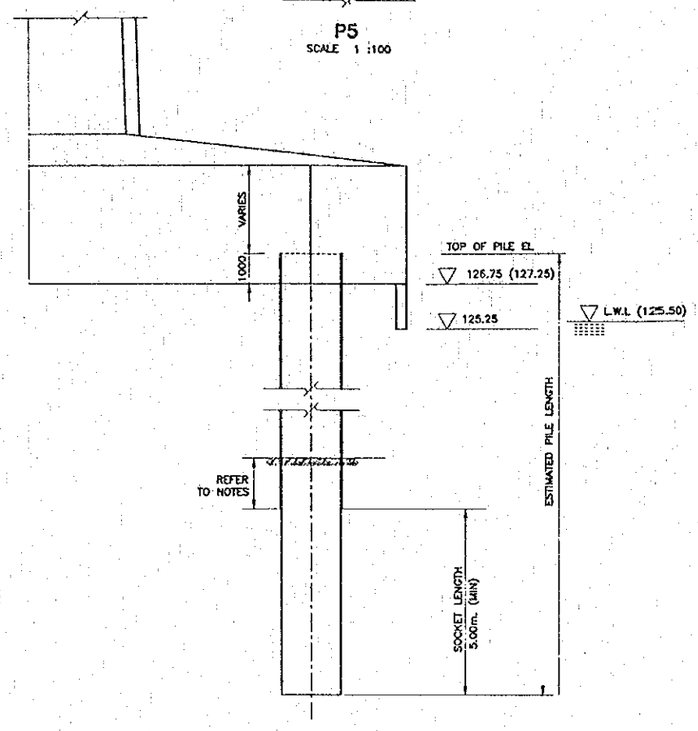
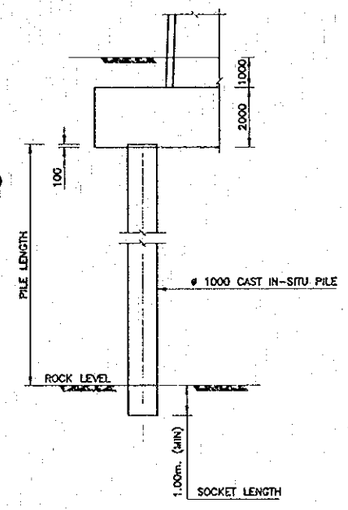
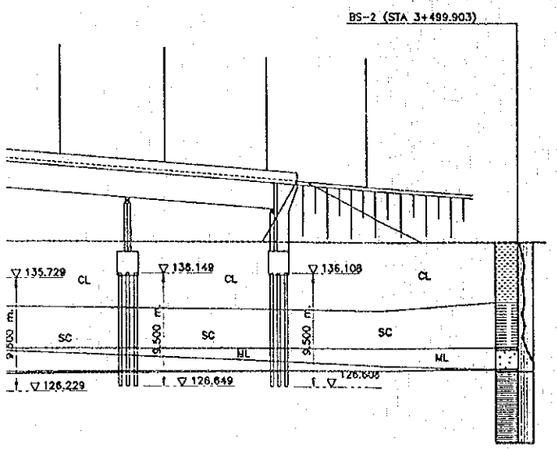
SCALE 1 :100

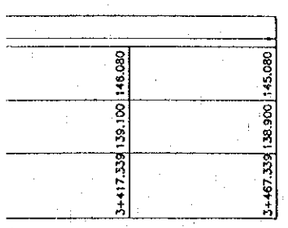


DETAIL A
(CAST IN-SITU R.C. PILE)
SCALE 1 :100



DETAIL B
(CAST IN-SITU R.C. PILE)
SCALE 1 :100





EXPLANATION

	GEOLOGICAL TYPE	
SP	River Bed Deposit	Sand , fine to medium grain , poor graded
GW		Gravel , size 4-40 mm. , well graded
CL	Terrace/Back Marsh Deposit	Clay , stiff
SC		Sandy clay , medium stiff
SF	Decomposed Rock	Decomposed Sandstone , changed into clay very stiff
ML		Decomposed Mudstone , changed into silty sand , very dense
SS	Base Rock	Sandstone , Mudstone Alternation , hard
MS		Mudstone , reddish brown , moderately hard

CO-ORDINATE FOR PIER AND ABUTMENT
THAILAND SIDE

LOCATION	STATION. NO.		NORTHING (m.)	EASTING (m.)
A1	1+424.000		1,835,131.873	471,900.818
P1	1+474.000		1,835,128.020	471,950.869
P2	1+524.000		1,835,124.168	472,000.520
P3	1+574.000		1,835,120.315	472,050.372
P4	1+624.000		1,835,116.462	472,100.223
P5	1+674.000	CL.	1,835,112.809	472,150.074
		P.CL.	1,835,112.606	472,150.124
P6	1+734.000		1,835,107.986	472,209.898
P7	1+814.000		1,835,101.822	472,289.658
P8	1+984.000		1,835,095.657	472,369.420
P9	1+974.000		1,835,089.493	472,449.182
P10	2+054.000		1,835,083.328	472,528.945
P11	2+164.000		1,835,074.852	472,638.618
P12	2+274.000		1,835,066.376	472,748.291
P13	2+354.000		1,835,060.212	472,828.053
P14	2+434.000		1,835,054.048	472,907.815

CO-ORDINATE FOR PIER AND ABUTMENT
LAO P.D.R. SIDE

LOCATION	STATION. NO.		NORTHING (m.)	EASTING (m.)
P15	2+514.000		1,835,047.883	472,987.577
P16	2+594.000		1,835,041.719	473,067.339
P17	2+674.000		1,835,035.554	473,147.101
P18	2+784.000		1,835,027.078	473,256.774
P19	2+894.000		1,835,018.602	473,366.447
P20	2+974.000		1,835,012.438	473,446.209
P21	3+054.000		1,835,006.274	473,525.971
P22	3+134.000		1,835,000.109	473,605.734
P23	3+207.339		1,834,993.945	473,685.496
P24	3+287.339	P.CL.	1,834,985.325	473,745.268
		CL.	1,834,985.321	473,745.317
P25	3+317.339		1,834,985.469	473,795.169
P26	3+369.339		1,834,981.616	473,845.020
P27	3+417.339		1,834,977.763	473,894.871
A2	3+467.339		1,834,973.910	473,944.723

NOTES :

1. FOR GENERAL NOTES REFER
2. FOR CAST-IN-SITU PILES REFER
   (A) THE DESIGN SOCKET LENGTH SHALL BE THE LENGTH DOWN FROM THE TOE OF THE CASING OR DOWN FROM THE CONTRACT TOP OF ROCK LEVEL WHICH EVER IS THE LOWER ELEVATION.
   (B) THE ESTIMATED PILE LENGTH ASSUMES A PENETRATION OF THE ROCK BY THE STEEL CASING OF 0.30M. BUT THIS DIMENSION SHALL BE DESIGNED BY THE CONTRACTOR TO SUIT HIS CONSTRUCTION METHOD. REFER SPECIFICATION.

APPROVED	PROJECT STUDY TEAM
	ORIENTAL CONSULTANTS CO., LTD. in association with NIPPON KOEI CO., LTD.

JICA JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

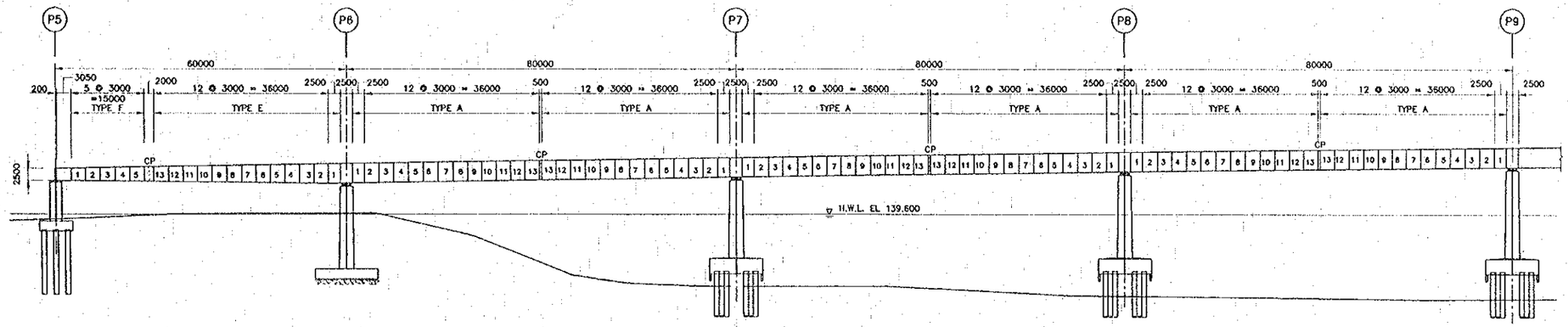
THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	T. Ohno	T. Ohno	15/12/00
DESIGN CHECK	H. Watanabe	H. W	18/12/00
SUBMITTED	A. Hiratani	A. H	21/12/00
APPROVED	P. Viraphanth	P. V	22/12/00
	S. Tamiyobutra	S. Tamiyo	22/12/00

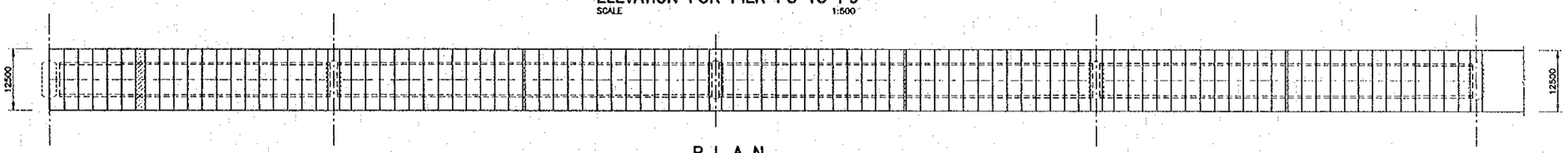
DWG. TITLE:

PILING LAYOUT AND SOIL CONDITION

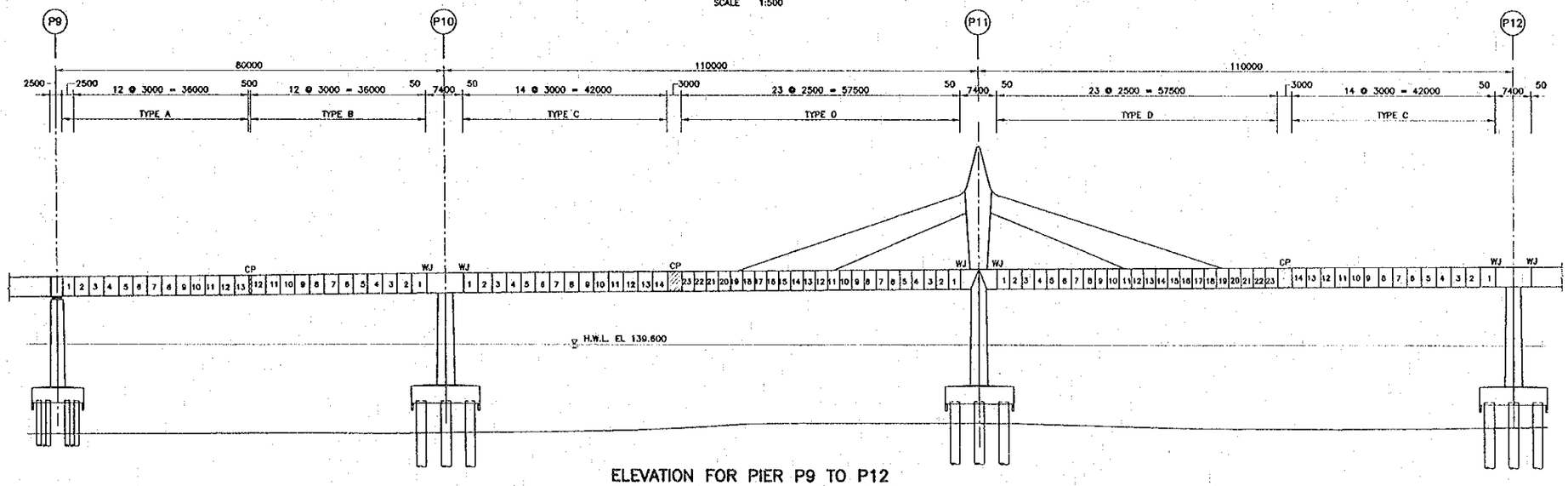
DATE OF ISSUE: 05/03/2000	
DWG. NO. B-M-1	SHEET NO. 112
DWG. STATUS	



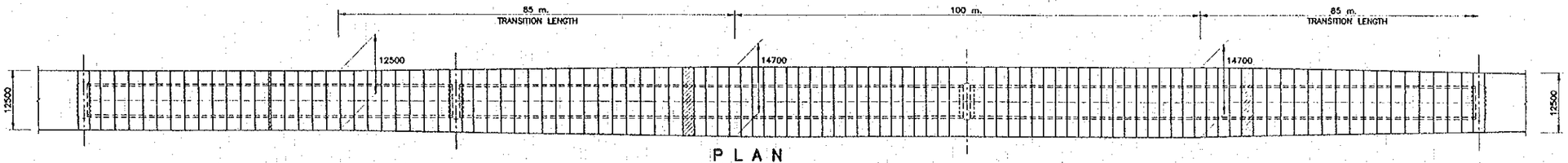
ELEVATION FOR PIER P5 TO P9
SCALE 1:500



PLAN
SCALE 1:500



ELEVATION FOR PIER P9 TO P12
SCALE 1:500



PLAN
SCALE 1:500

NOTES :
1. TYPE A ~D : SEGMENT TYPE
   1,2,3.....SEGMENT NO.
2. FOR DETAILS OF SEGMENT
   REFER TO B-M-9 ~ B-M-11
3. FOR DETAILS OF END DIAPHRAGM
   REFER TO B-M-12
4. FOR DETAILS OF PIER
   HEAD DIAPHRAGM
   REFER TO B-M-13
5. FOR DETAILS OF PIER
   HEAD DIAPHRAGM
   REFER TO B-M-14
6. LEGENDS
   CP : CLOSURE POUR
   WJ : WET JOINT

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JICA JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

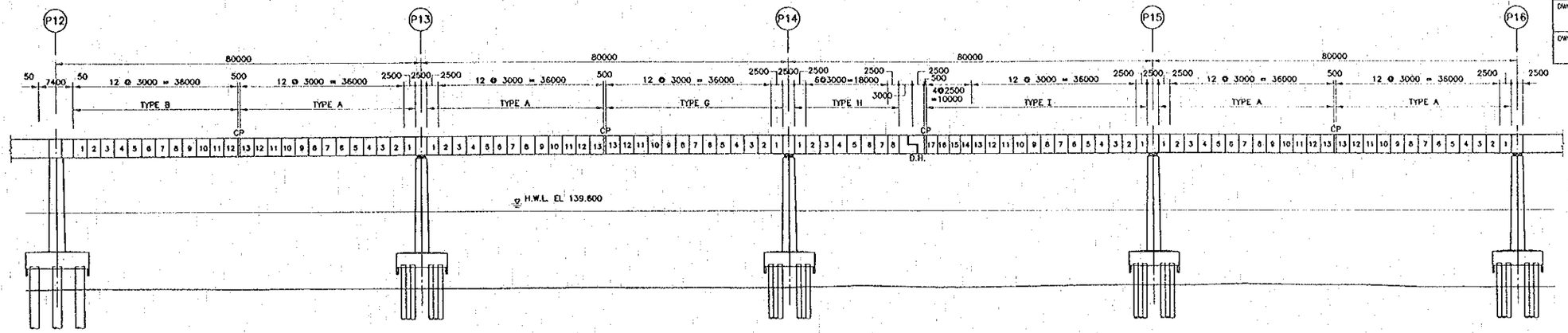
THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	T. Ohno		15/12/00
DESIGN CHECK	H. Watanabe		18/12/00
SUBMITTED	A. Hirotani		21/12/00
APPROVED	P. Xiraphanth		27/12/00
	S. Temiyabutra		27/12/00

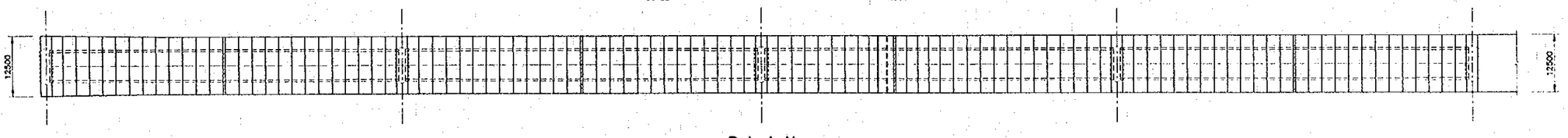
DWG. TITLE:
MAIN BRIDGE SUPERSTRUCTURE
PRECAST SEGMENT LAYOUT
SHEET 1 OF 3

DATE 8/11/1999
C:\SUB\DETAIL\MAIN-BRI\M-1.DWG

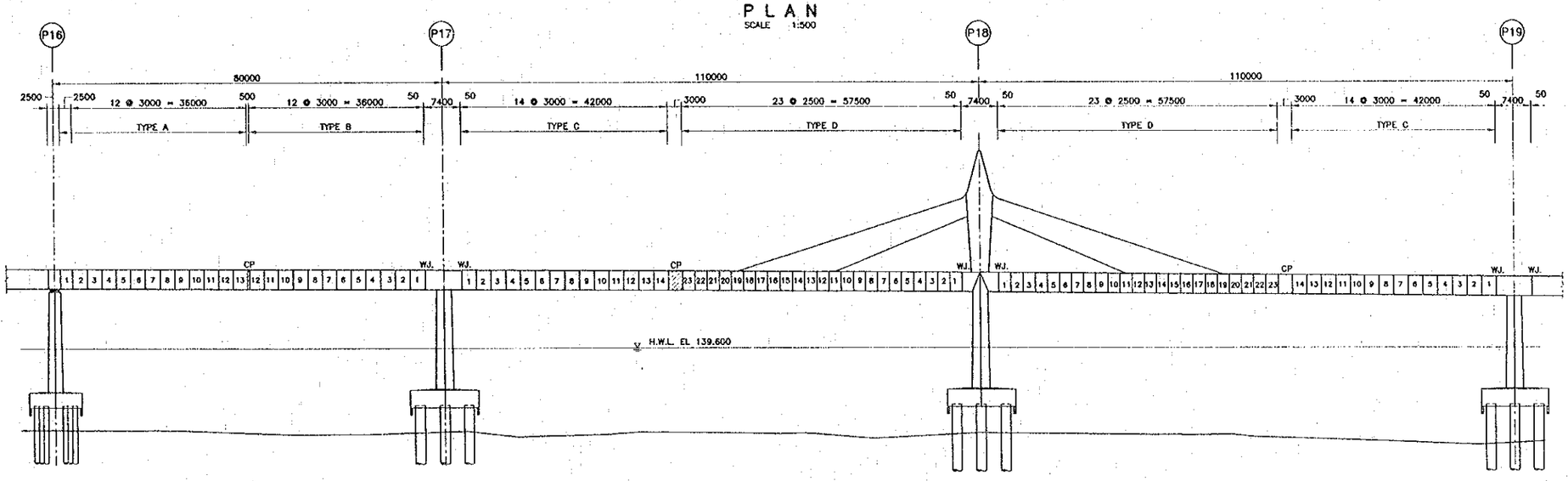
DATE OF ISSUE:	05/03/2000
DWG. NO.	SHEET NO.
B-M-2	113
DWG. STATUS	



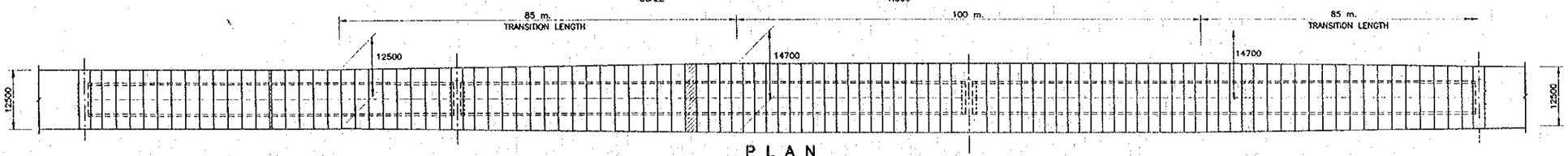
ELEVATION FOR PIER P12 TO P16
SCALE 1:500



P L A N
SCALE 1:500



ELEVATION FOR PIER P16 TO P19
SCALE 1:500



P L A N
SCALE 1:500

NOTES :
1. TYPE A : SEGMENT TYPE 1,2,3.....SEGMENT NO.
2. FOR DETAILS OF DAPPED HINGE REFER TO B-M-17
3. LEGENDS
   CP : CLOSURE POUR
   WJ : WET JOINT
   DH : DAPPED HINGE

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JICA JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

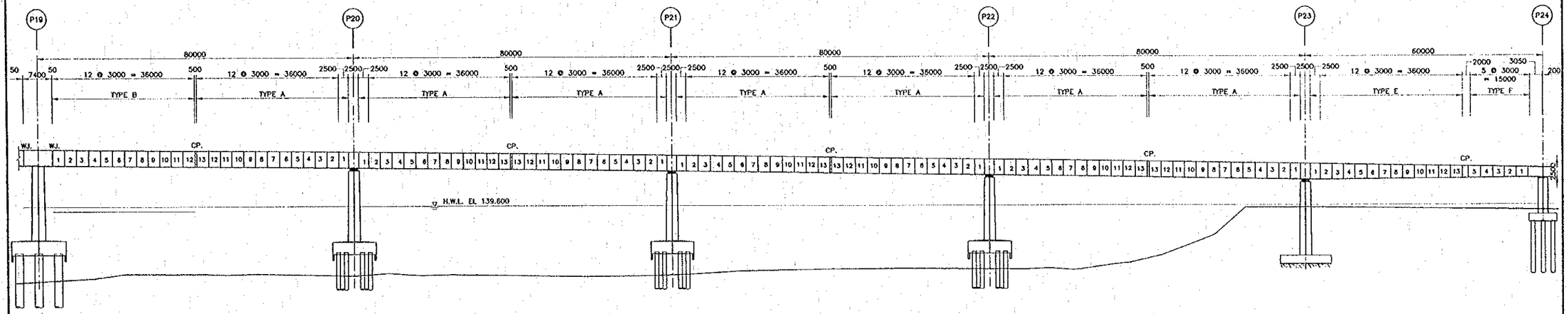
THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	T. Ohno		15/2/00
DESIGN CHECK	H. Watanabe		18/2/00
SUBMITTED	A. Hirotani		21/2/00
APPROVED	P. Viraphanh		28/02/00
	S. Tamiyabutra		2/3/00

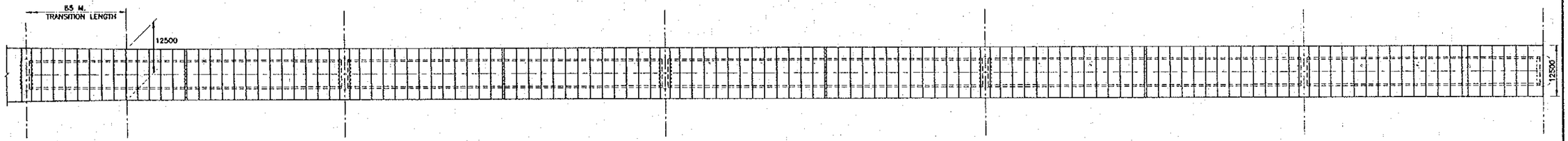
DWG. TITLE:
MAIN BRIDGE SUPERSTRUCTURE
PRECAST SEGMENT LAYOUT
SHEET 2 OF 3

DATE : 8/11/1999
C:\SMB\DESIGN\MAIN BRIDGE 2.DAS

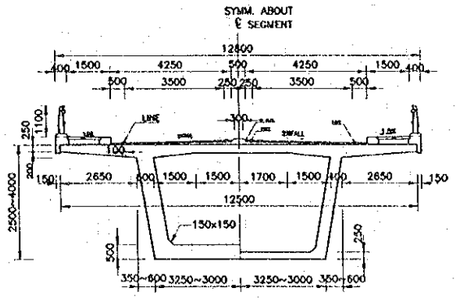
DATE OF ISSUE: 05/03/2000	
DWG. NO. B-M-3	SHEET NO. 114
DWG. STATUS	



ELEVATION FOR PIER P19 TO P24
SCALE 1:500

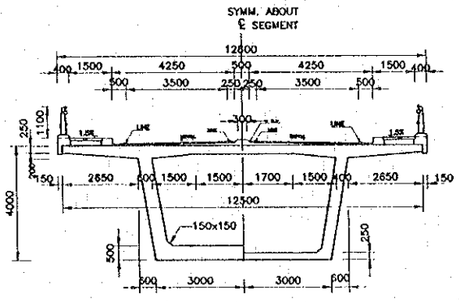


PLAN
SCALE 1:500



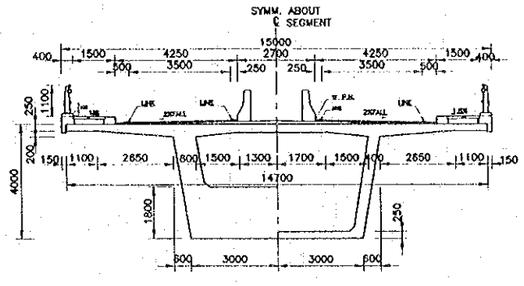
HALF SECTION AT PIER HALF SECTION AT MID SPAN

SPAN 60 M.
SCALE 1:100



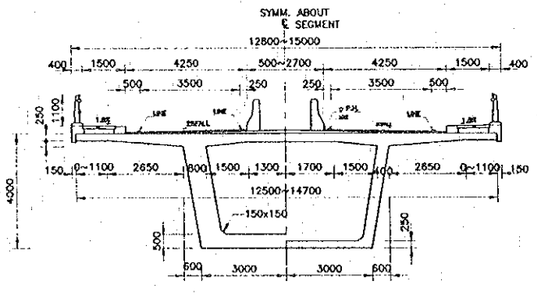
HALF SECTION AT PIER HALF SECTION AT MID SPAN

SPAN 80 M.
SCALE 1:100



HALF SECTION AT PIER HALF SECTION AT MID SPAN

SPAN 110 M.
SCALE 1:100



HALF SECTION AT PIER HALF SECTION AT MID SPAN

INTERFACE SPAN 110 M.
SCALE 1:100

NOTES :
1. TYPE A : SEGMENT TYPE
   1,2,3.....SEGMENT NO.
2. LEGENDS
   CP : CLOSURE POUR
   WJ : WET JOINT

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JICA JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

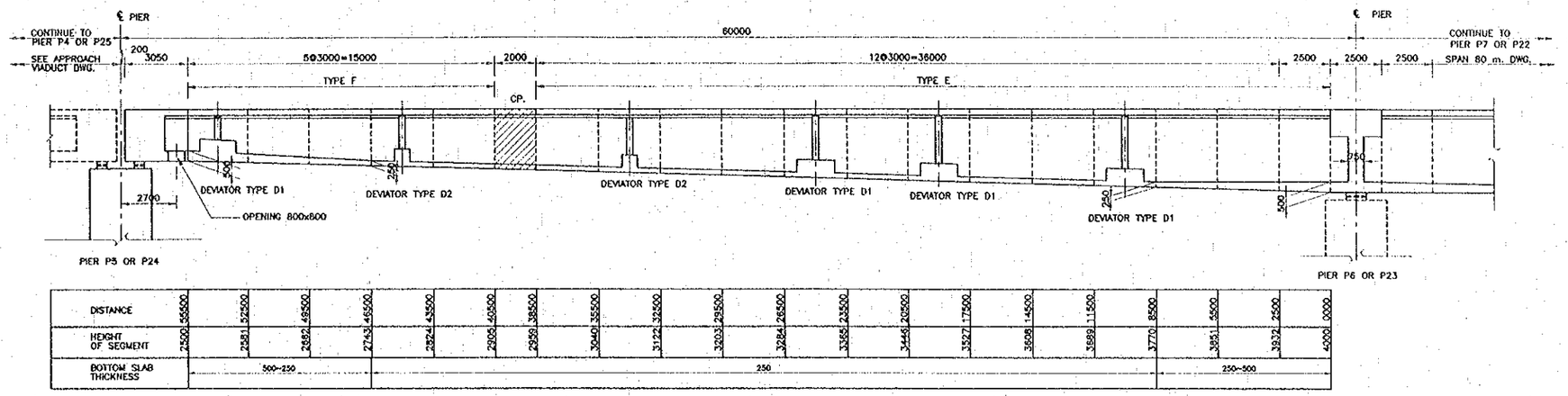
THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	T. Ohno		15/11/99
DESIGN CHECK	H. Watanabe		16/11/99
SUBMITTED	A. Hirotani		21/12/99
APPROVED	P. Virophanth		22/02/00
	S. Tamiyabutra		24/02/00

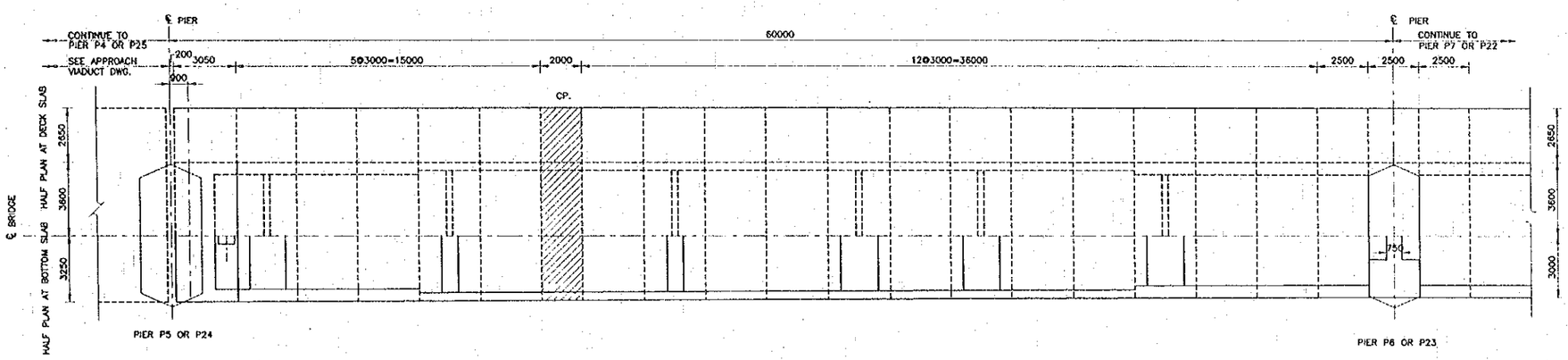
DWG. TITLE:
MAIN BRIDGE SUPERSTRUCTURE
PRECAST SEGMENT LAYOUT
SHEET 3 OF 3

Plot date: Thu, 16 Dec 1999 - 10:31:42
C:\CHANTHA\SUB\MAIN-BR\M-3.DGN

DATE OF ISSUE: 05/03/2000	
DWG. NO. B-M-4	SHEET NO. 115
DWG. STATUS	



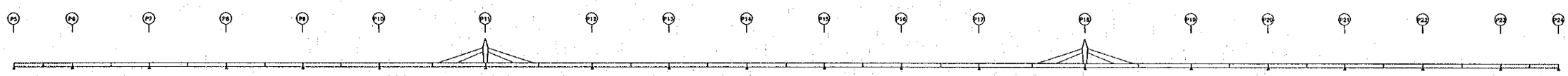
SIDE ELEVATION
SCALE 1:125



PLAN
SCALE 1:125

NOTES:

1. FOR DETAILS OF DEVIATOR TYPE REFER B-M-15 ~ B-M-16
2. FOR BOTTOM SLAB OF DEVIATOR AND DIAPHRAGM SEGMENT, MAKE DRAIN HOLE ø50 MM.



KEY ELEVATION
NOT TO SCALE

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JICA JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	T. Ohno		
DESIGN CHECK	H. Watanabe		
SUBMITTED	A. Hirotani		
APPROVED	P. Viraphanth		22/02/00
	S. Temiyabutra		22/02/00

DWG. TITLE:

MAIN BRIDGE SUPERSTRUCTURE 60 M. SPAN PRECAST SEGMENT GENERAL ARRANGEMENT

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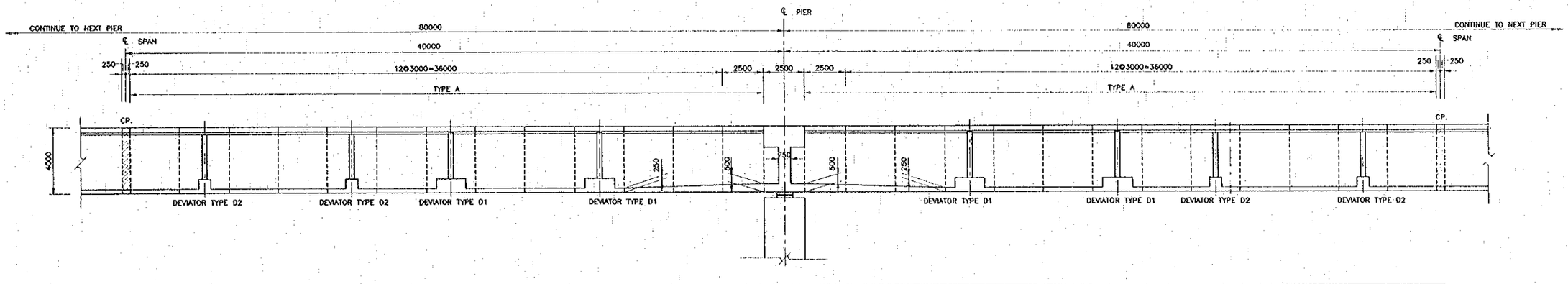
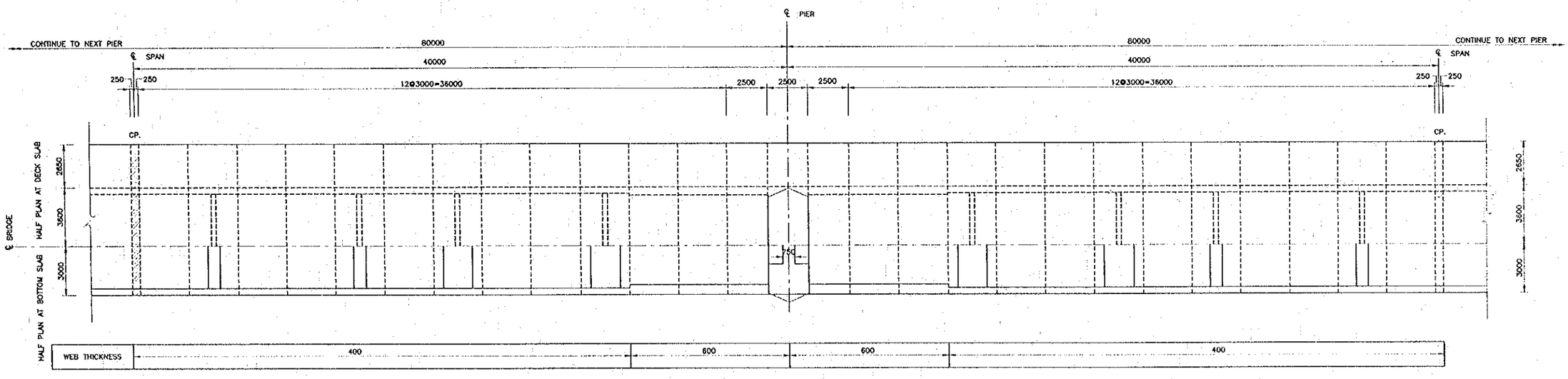
DATE OF ISSUE: 05/03/2000	
DWG. NO. B-M-5	SHEET NO. 116
DWG. STATUS	

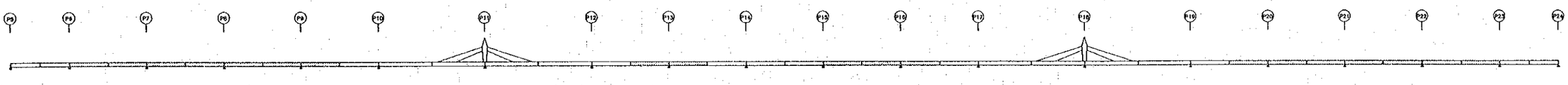


HEIGHT OF SEGMENT	4000			
BOTTOM SLAB THICKNESS	250	250~500	500~250	250

SIDE ELEVATION
SCALE 1:125



P L A N
SCALE 1:125



KEY ELEVATION
NOT TO SCALE

NOTES:
1. DETAILS OF DEVIATOR TYPE REFER B-M-15 ~ B-M-16

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	T. Ohno		15/12/00
DESIGN CHECK	H. Watanabe		15/12/00
SUBMITTED	A. Hirotani		15/12/00
APPROVED	P. Viraphanth		22/01/00
	S. Tanniobutra		22/01/00

DWG. TITLE:
MAIN BRIDGE SUPERSTRUCTURE
80 M. SPAN PRECAST SEGMENT
GENERAL ARRANGEMENT

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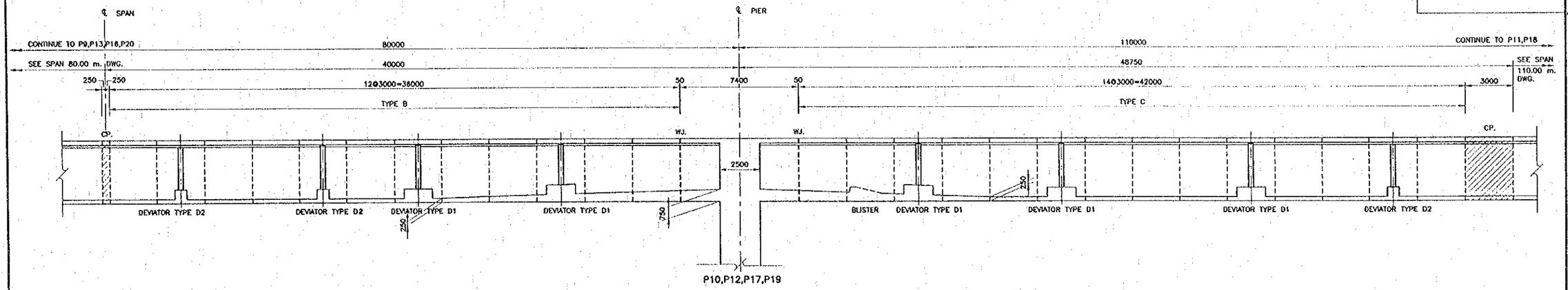
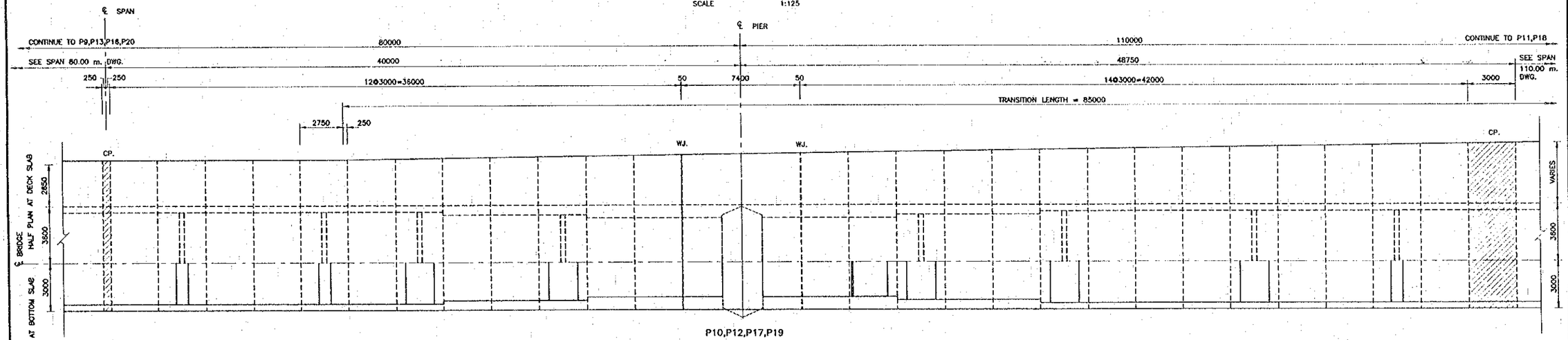
DATE OF ISSUE: 05/03/2000	
DWG. NO. B-M-6	SHEET NO. 117
DWG. STATUS	



HEIGHT OF SEGMENT	4000			
BOTTOM SLAB THICKNESS	250	250~750	750~250	250

SIDE ELEVATION

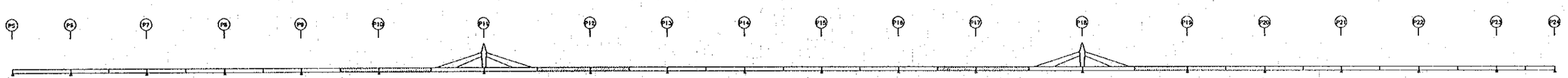
SCALE 1:125



DECK SLAB HALF WIDTH	2850	2850	2850	2850	2850	2850	2853	2892	2731	2770	2809	2847	2888	2925	2957	2974	2990	3022	3061	3100	3139	3177	3216	3255	3294	3333	3371	3410	3449	3488	3527	3566	3604
WEB THICKNESS	400								600				800				800				600			400									

P L A N

SCALE 1:125



KEY ELEVATION

NOT TO SCALE

NOTES:

1. FOR DETAILS OF DEVIATOR TYPE REFER B-M-15 ~ B-M-16

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM

ORIENTAL CONSULTANTS CO., LTD.

in association with

NIPPON KOEI CO., LTD.

JAPAN INTERNATIONAL COOPERATION AGENCY

LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION

KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	T. Ohno	T. Ohno	12/12/00
DESIGN CHECK	H. Watanabe		12/12/00
SUBMITTED	A. Hirotani		12/12/00
APPROVED	P. Viraphanth		12/02/01
	S. Temiyabutra	S. Temiyabutra	12/12/00

DWG. TITLE:

MAIN BRIDGE SUPERSTRUCTURE INTERFACE SPAN 110 M. PRECAST SEGMENT GENERAL ARRANGEMENT

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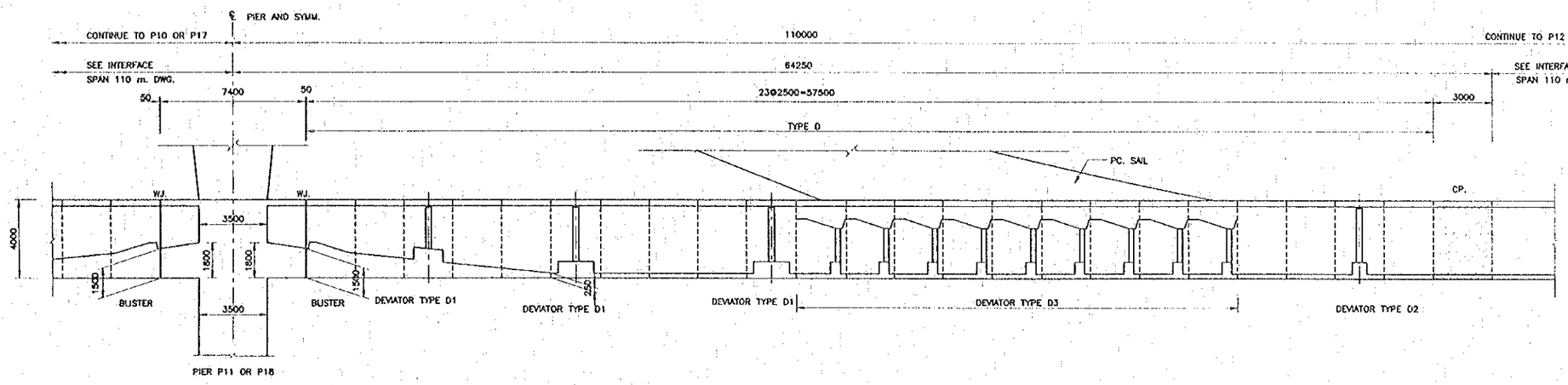
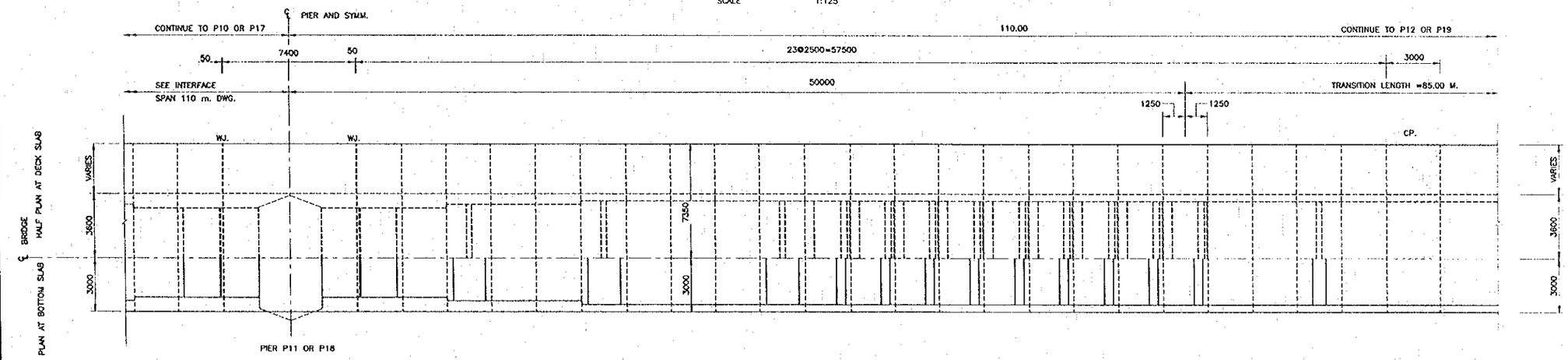
DATE OF ISSUE: 05/03/2000	
DWG. NO. B-M-7.	SHEET NO. 118
DWG. STATUS	



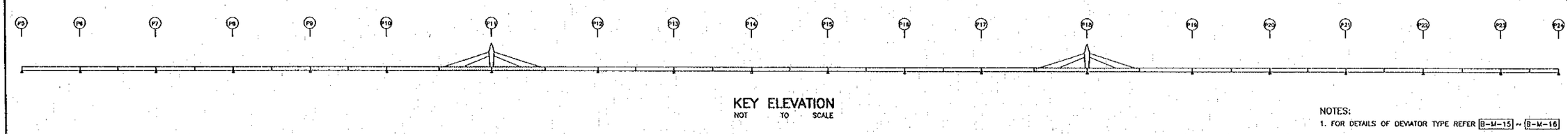
HEIGHT OF SEGMENT	4000			
BOTTOM SLAB THICKNESS	1500~1800	1500~250	250	

SIDE ELEVATION
SCALE 1:125



DECK SLAB HALF WIDTH	3750							
	3750	3734	3701	3689	3637	3604	3568	
WEB THICKNESS	800	800	600	400				

PLAN
SCALE 1:125



KEY ELEVATION
NOT TO SCALE

NOTES:
1. FOR DETAILS OF DEVIATOR TYPE REFER B-M-15 ~ B-M-16

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	T. Ohno		15/12/99
DESIGN CHECK	H. Watanabe		18/12/99
SUBMITTED	A. Hiratani		21/12/99
APPROVED	P. Viraphanth		22/01/00
	S. Temiyabutra		20/12/00

DWG. TITLE:
MAIN BRIDGE SUPERSTRUCTURE
110 M. SPAN PRECAST SEGMENT
GENERAL ARRANGEMENT

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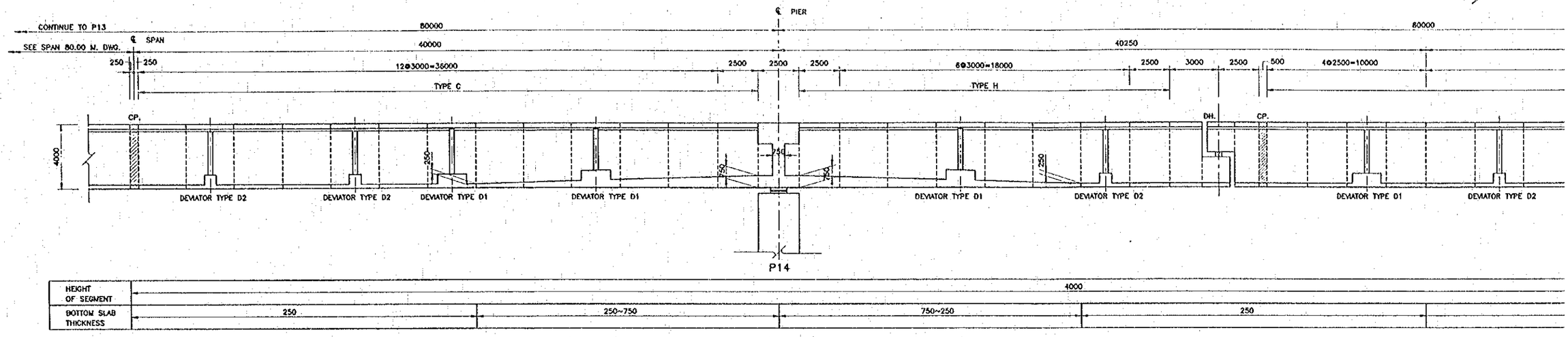
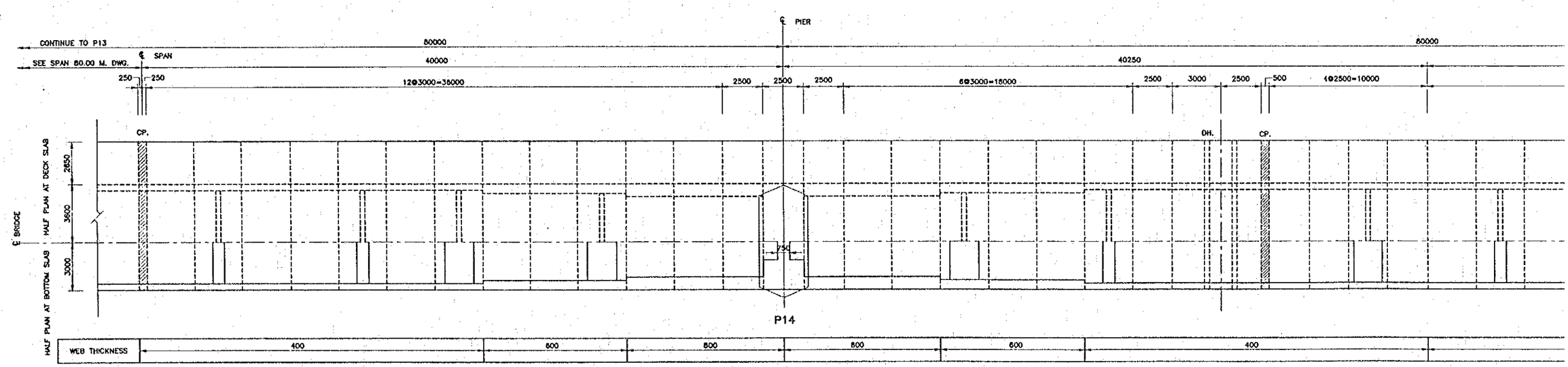


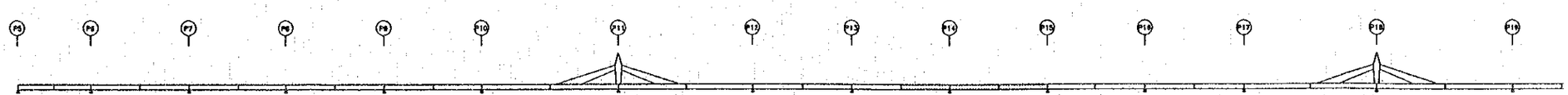
SIDE ELEVATION

SCALE 1:125



PLAN

SCALE 1:125



KEY ELEVATION

NOT TO SCALE

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM

ORIENTAL CONSULTANTS CO., LTD.

in association with

NIPPON KOEI CO., LTD.

JAPAN INTERNATIONAL COOPERATION AGENCY

LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION

KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND INTERNATIONA
CONSTRUCTION

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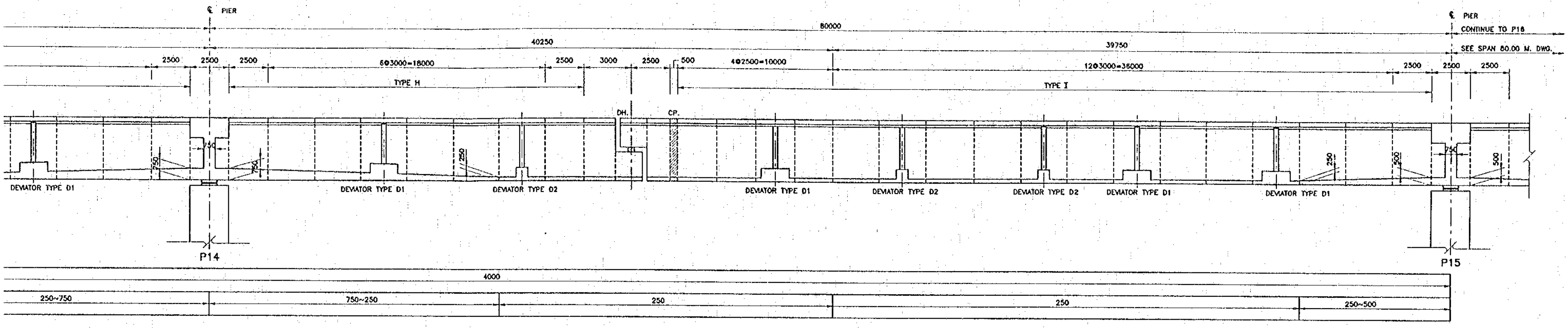
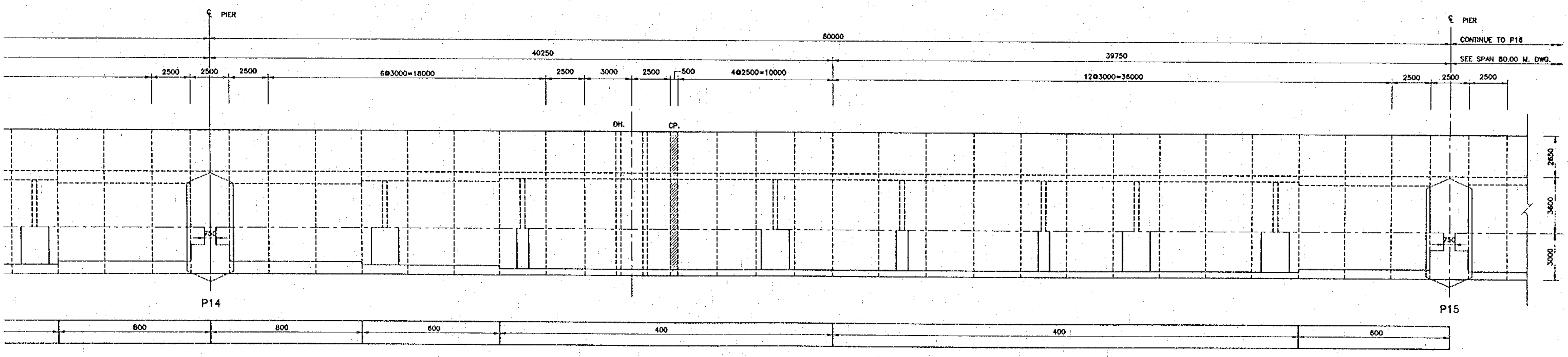
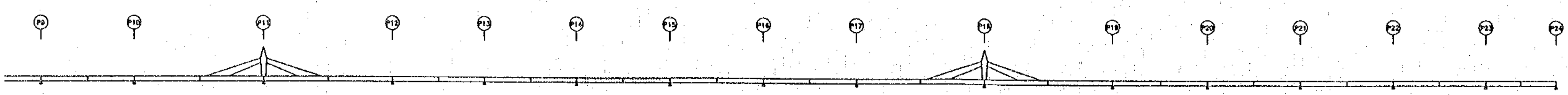
DATE OF ISSUE:	05/03/2000
DWG. NO. B-M-8	SHEET NO. 119
DWG. STATUS	



SIDE ELEVATION
SCALE 1:125



PLAN
SCALE 1:125



KEY ELEVATION
NOT TO SCALE

NOTES:
1. FOR DETAILS OF DEVIATOR TYPE REFER B-M-15 ~ B-M-18

APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

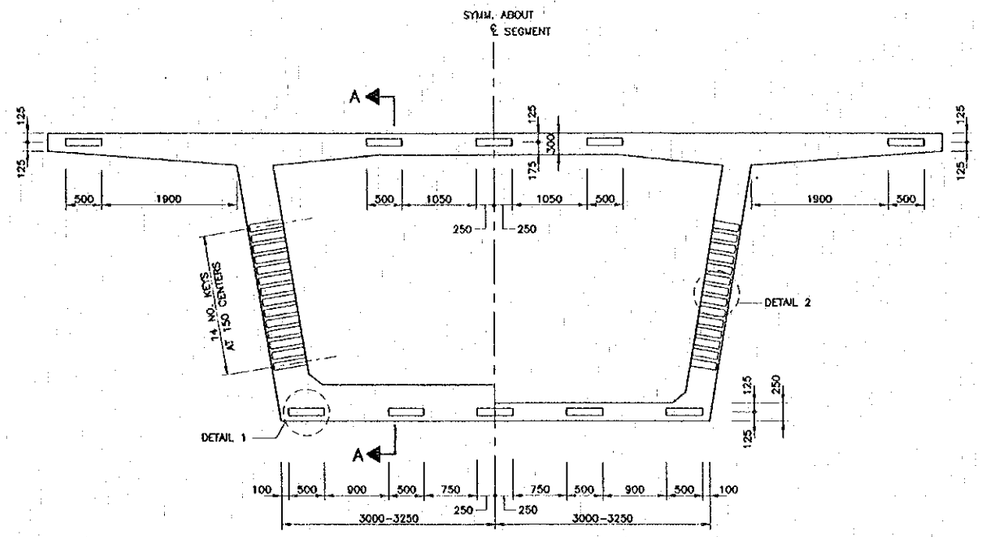
JICA JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	T. Ohno		15/2/00
DESIGN CHECK	H. Watanabe		18/02/00
SUBMITTED	A. Hirotani		21/02/00
APPROVED	P. Viraphonth		22/02/00
	S. Temiyabutra		22/02/00

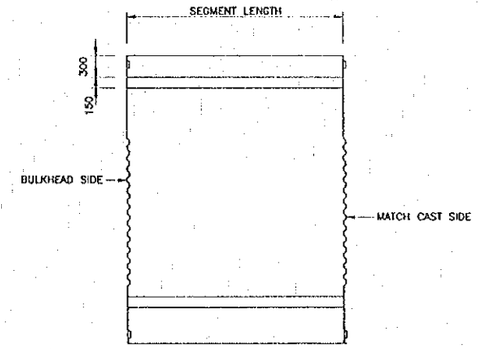
DWG. TITLE:
MAIN BRIDGE SUPERSTRUCTURE
DAPPED HINGE SPAN PRECAST SEGMENT
GENERAL ARRANGEMENT

DATE OF ISSUE: 05/03/2000	
DWG. NO. B-M-9	SHEET NO. 120
DWG. STATUS	

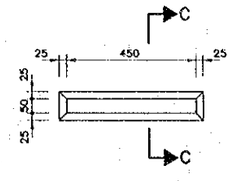


HALF SECTION FOR 600 WEB HALF SECTION FOR 400 WEB

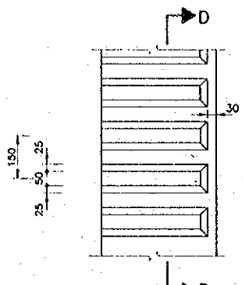
SPAN 60 M. AND 80 M.
SCALE 1:40



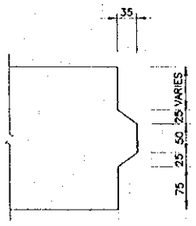
SECTION A-A
SCALE 1:40



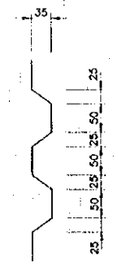
DETAIL 1
SCALE 1:10



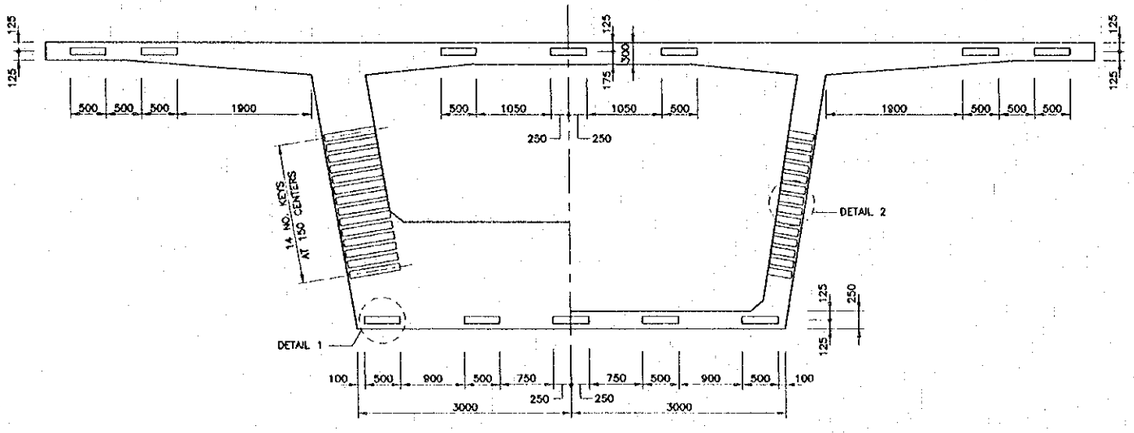
DETAIL 2
SCALE 1:10



SECTION C-C
SCALE 1:5



SECTION D-D
SCALE 1:5



HALF SECTION FOR 800 WEB HALF SECTION FOR 400 WEB

SPAN 110 M.
SCALE 1:40

NOTES :

1. ALL TENDON DUCTS AND ANCHORAGES OMITTED FOR CLARITY.
2. SHEAR KEYS TO BE PROVIDED AT ALL SEGMENT JOINT.

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JICA JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	T. Ohno		
DESIGN CHECK	H. Watanabe		
SUBMITTED	A. Hiratani		
APPROVED	P. Virephanh		22/02/00
	S. Temyobutra		22/02/00

DWG. TITLE:
MAIN BRIDGE SUPERSTRUCTURE
TYPICAL SEGMENT GENERAL ARRANGEMENT

3/9/99
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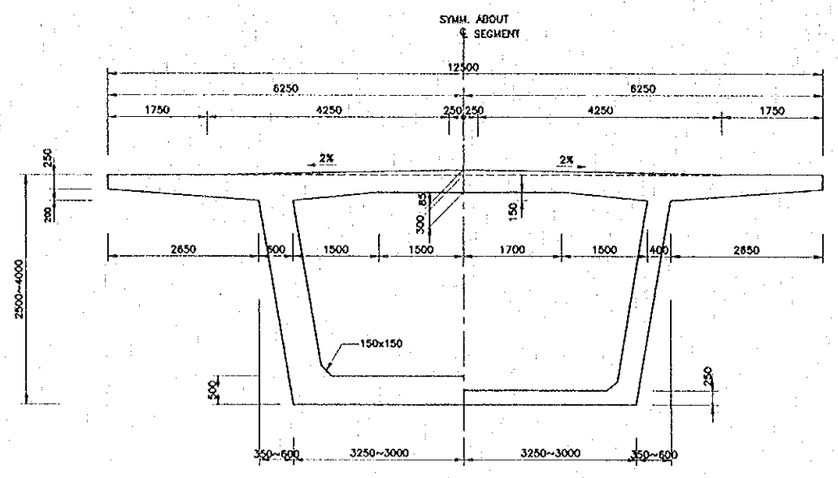
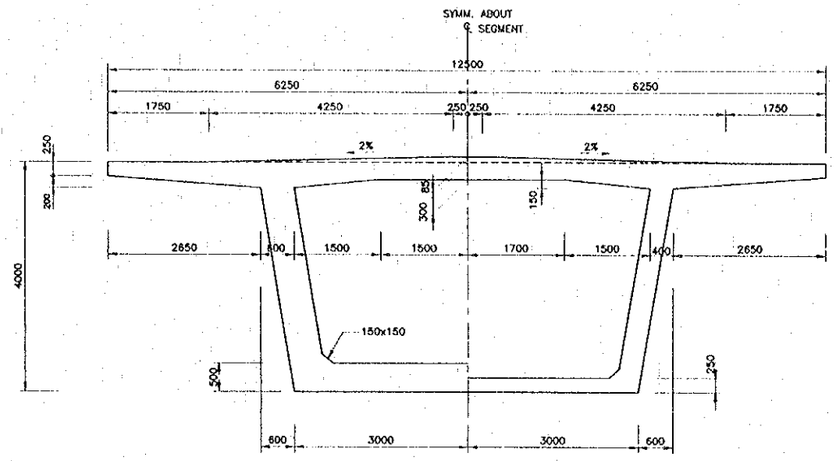
DATE OF ISSUE:	
	05/03/2000
DWG. NO.	SHEET NO.
B-M-10	121
DWG. STATUS	



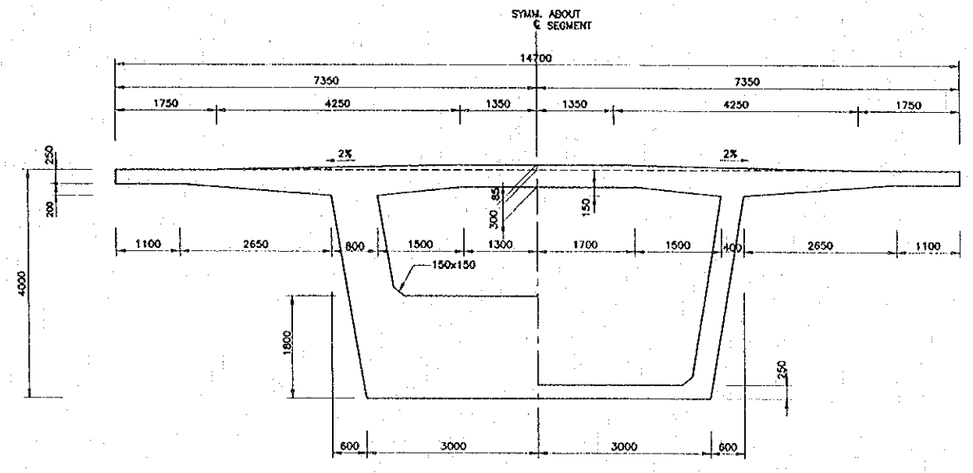
HALF SECTION AT PIER HALF SECTION AT MID SPAN

SPAN 60 M.
SCALE 1 : 50



HALF SECTION AT PIER HALF SECTION AT MID SPAN

SPAN 80 M.
SCALE 1 : 50



HALF SECTION AT PIER HALF SECTION AT MID SPAN

SPAN 110 M.
SCALE 1 : 50

NOTES :
1. ALL TENDON DUCTS AND ANCHORAGES OMITTED FOR CLARITY.
2. ALL EXTERNAL EDGES TO HAVE 25x25 CHAMFER UNLESS NOTED OTHERWISE.
3. ALL INTERNAL RE-ENTRANT CONNERS TO HAVE 50x50 CHAMFER UNLESS NOTED OTHERWISE.

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JICA JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	T. Ohno		
DESIGN CHECK	H. Watanabe		
SUBMITTED	A. Hirotani		
APPROVED	P. Viraphanth		
	S. Temiyabutra		

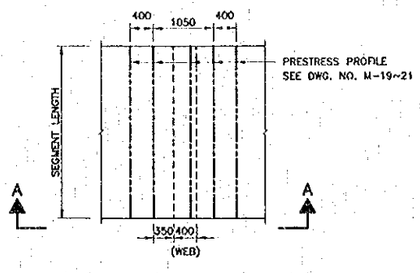
DWG. TITLE:

MAIN BRIDGE SUPERSTRUCTURE
TYPICAL SEGMENT CROSS SECTION

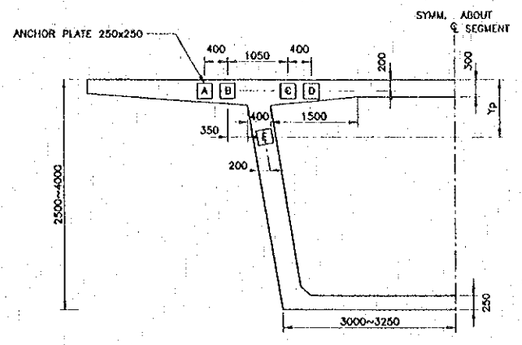
Plot date : Thu, 17 Nov 1999 - 13:40:05

C:\SMB\DETAIL\MAIN-BRI\M-10.DWG

DATE OF ISSUE: 05/03/2000	
DWG. NO. B-M-11	SHEET NO. 122
DWG. STATUS	



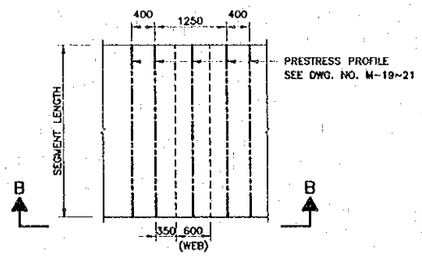
PLAN – 400 MM. THICK WEB
SCALE 1:50



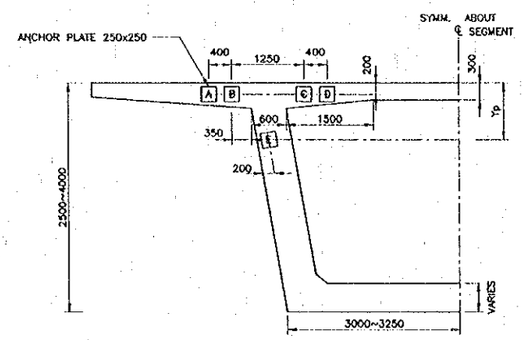
SECTION A–A
SCALE 1:50

DUCT NO.	Yp
10, 11	440
20, 21	565
24, 25	690
26, 27	815
28, 29	940

P6,P7,P8,P9,P10,P11,P12
P13,P16,P17,P18,P19
P20,P21,P22,P23



PLAN – 600 MM. THICK WEB
SCALE 1:50



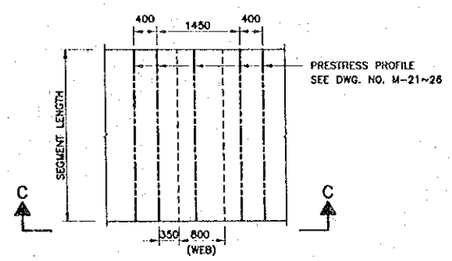
SECTION B–B
SCALE 1:50

DUCT NO.	Yp
10, 11	440
20, 21	565
25	690
27	815
24	915
29	940
26	1040
28	1165

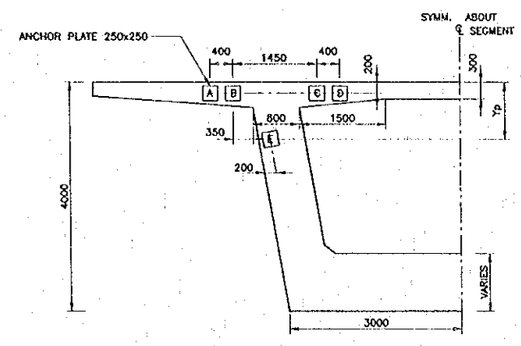
P14 (THAILAND SIDE)

DUCT NO.	Yp
11, 20,21	565
10	740
25, 27	815
24	915
29	940
26,28	1165

P14 (LAO P.D.R. SIDE)



PLAN – 800 MM. THICK WEB
SCALE 1:50



SECTION C–C
SCALE 1:50

DUCT NO.	Yp
10, 11	440
20, 21	565
24, 25	690
26, 27	815
28, 29	940

P15 (THAILAND SIDE)

DUCT NO.	Yp
10	440
24,25	690
11	790
26, 27	815
28, 29	940
20	1140
21	1490

P15 (LAO P.D.R. SIDE)

NOTES
1. ALL TENDON DUCTS OMITTED FOR CLARITY.
2. YP. TABLES USE FOR ONLY EXISTENSE DUCTS.
3. THIS DRAWINGS SHALL BE READ IN CONJUNCTION WITH DWG. NO. B-M-18, B-M-19, B-M-20 AND B-M-21

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

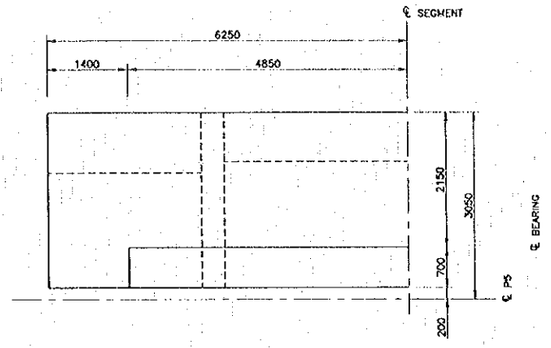
THE SECOND MEKONG
INTERNATIONAL BRIDGE
CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	T. Ohno		5/12/00
DESIGN CHECK	H. Watanabe		15/12/00
SUBMITTED	A. Hirotani		15/12/00
APPROVED	P. Viraphanh		15/12/00
	S. Temiyabutra		22/12/00

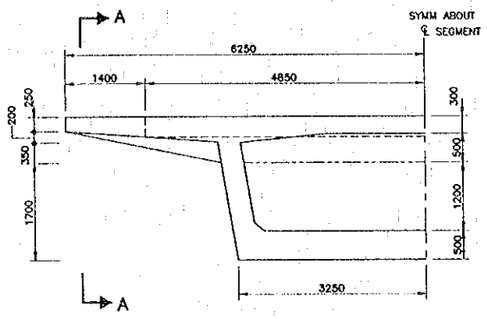
DWG. TITLE:
MAIN BRIDGE SUPERSTRUCTURE
END FACE ANCHORAGE
GENERAL ARRANGEMENT

Plot date: Mon, 29 Nov 1999 - 16:14:34
C:\SMB\MAIN-BRIDGE\M-11.DWG

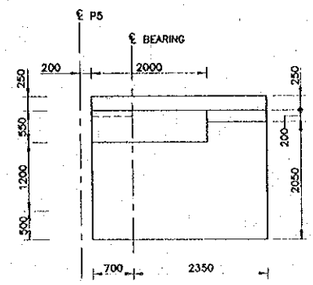
DATE OF ISSUE: 05/03/2000	
DWG. NO. B-M-12	SHEET NO. 123
DWG. STATUS	



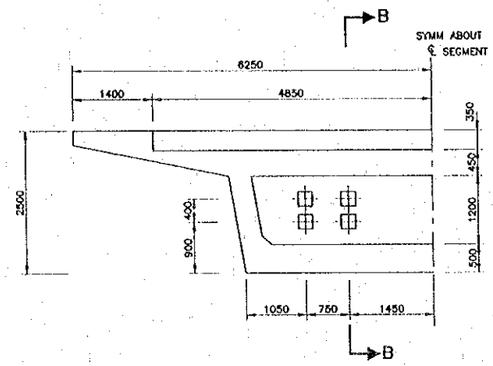
PLAN
SCALE 1 : 50



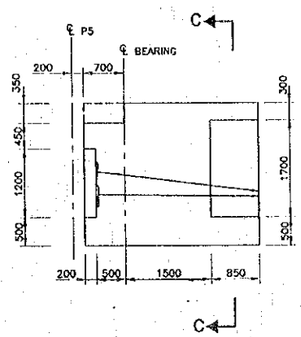
END DIAPHRAGM DETAILS AT P5 AND P24
SCALE 1 : 50



SECTION A–A
SCALE 1 : 50



SECTION C–C
SCALE 1 : 50



SECTION B–B
SCALE 1 : 50

NOTES :

1. ALL TENDON DUCTS AND ANCHORAGES OMITTED FOR CLARITY.
2. FOR DETAILS OF BEARING DOWNSTAND SEE DWG. NO. B-AC-1.

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JICA JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

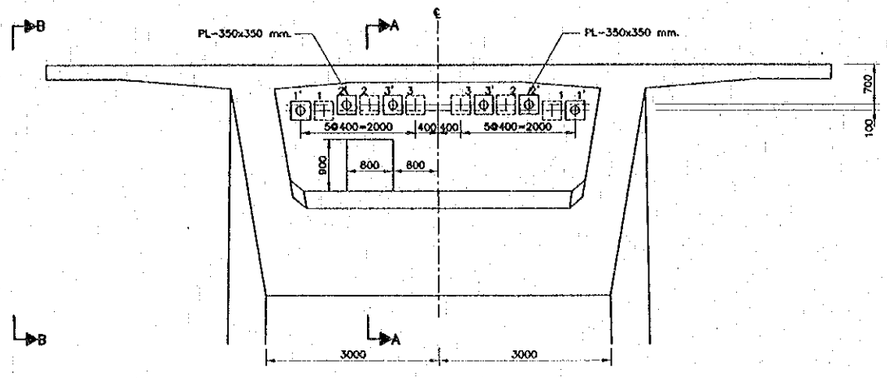
THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	T. Ohno	T. Ohno	15/12/00
DESIGN CHECK	H. Watanabe	H. Watanabe	15/12/00
SUBMITTED	A. Hirotani	A. Hirotani	21/12/00
APPROVED	P. Wrophanth	P. Wrophanth	22/12/00
	S. Temjyabutra	S. Temjyabutra	22/12/00

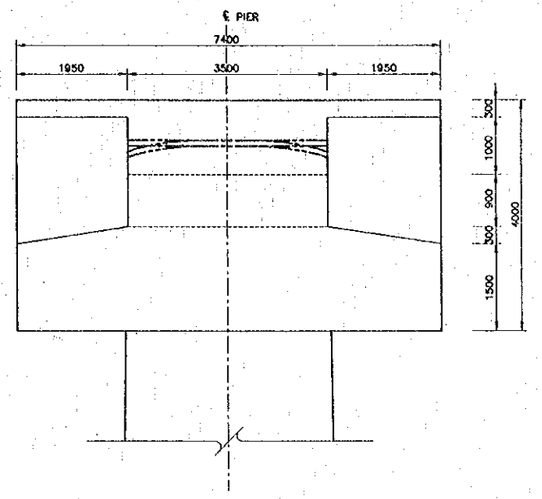
DWG. TITLE:
MAIN BRIDGE SUPERSTRUCTURE
END DIAPHRAGM DETAILS

Plot date: Thu, 13 Jan 2000 - 9:41:02
C:\SMB\MAIN-BRIDGE\M-12.DWG

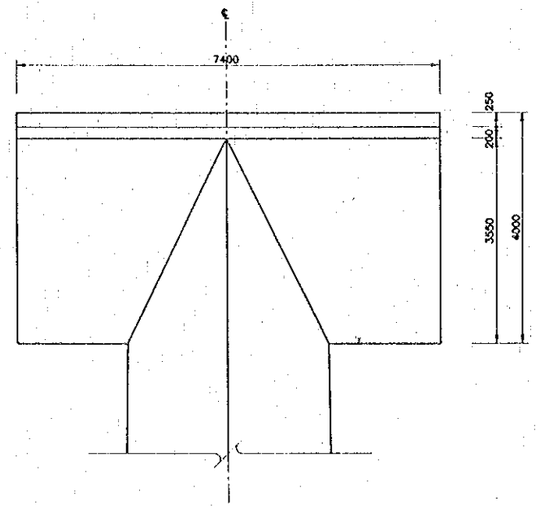
DATE OF ISSUE:	05/03/2000
DWG. NO. B-M-13	SHEET NO. 124
DWG. STATUS	



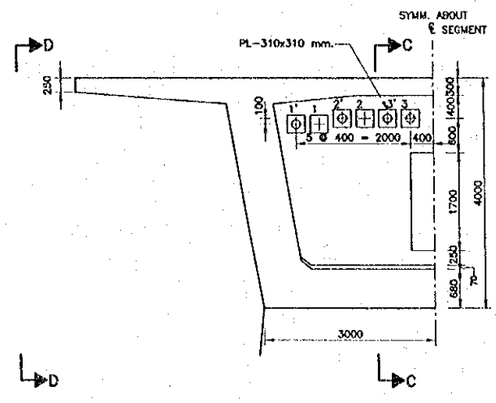
DIAPHRAGM DETAILS AT P11 AND P18
SCALE 1:50



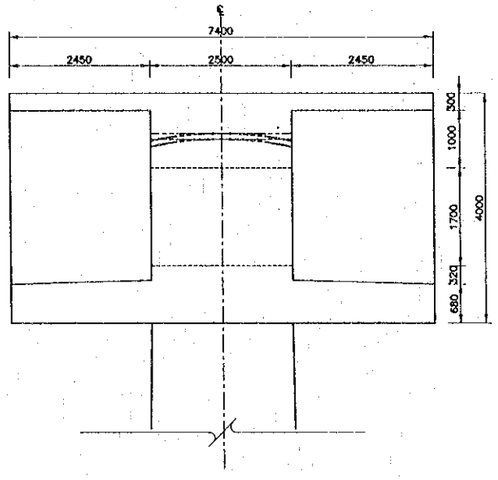
SECTION A–A
SCALE 1:50



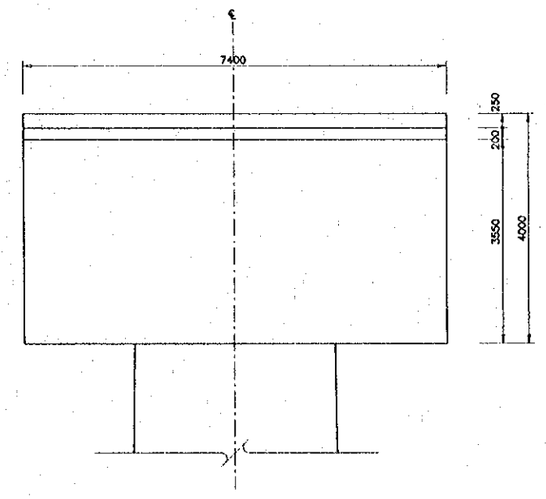
SECTION B–B
SCALE 1:50



DIAPHRAGM DETAILS AT P10,P12,P17 & P19
SCALE 1:50



SECTION C–C
SCALE 1:50



SECTION D–D
SCALE 1:50

NOTES :

1. ALL TENDON DUCTS AND ANCHORAGES OMITTED FOR CLARITY.
2. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH DWG. NO. B-M-6, B-M-7, B-M-10 B-MS-3 AND B-MS-4

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JICA JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

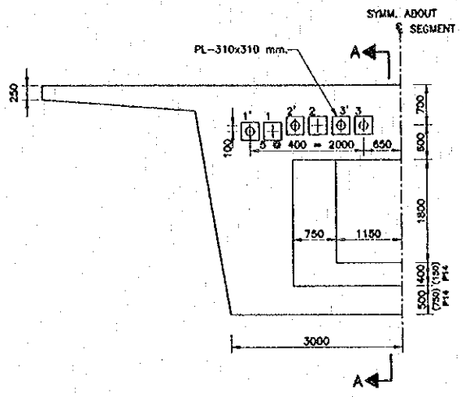
QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	T. Ohno	T.Ohno	18/02/00
DESIGN CHECK	H. Watanabe	H.Watanabe	18/02/00
SUBMITTED	A. Hiratani	A.Hiratani	21/02/00
APPROVED	P. Viraphanith	P.Viraphanith	22/02/00
	S. Termyobutra	S.Termyobutra	22/02/00

DWG. TITLE:
MAIN BRIDGE SUPERSTRUCTURE
PIER HEAD DIAPHRAGM DETAILS

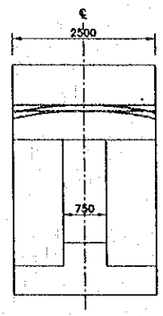
Plot date: Tue, 30 Nov 1999 - 15:42:04

C:\SMB\MAIN-BRIDGE\M-13.DWG

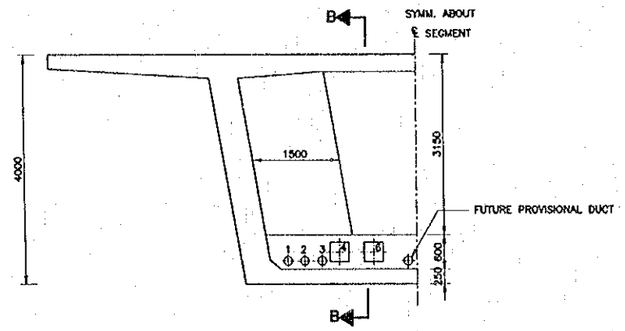
DATE OF ISSUE: 05/03/2000	
DWG. NO. B-M-14	SHEET NO. 125
DWG. STATUS	



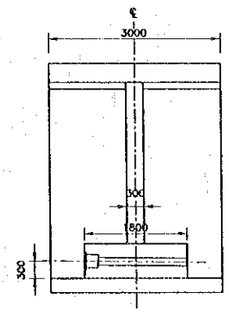
PIER HEAD DIAPHRAGM AT 80 M. SPAN
SCALE 1:50



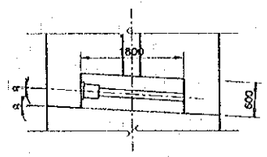
SECTION A–A
SCALE 1:50



DEVIATOR DETAIL TYPE D1
SCALE 1:50



SECTION B–B
SCALE 1:50



END SPAN AND TRANSITION BOTTOM SLAB
SCALE 1:50

NOTES:
1. NUMBER IN BRACKET FOR P14.
2. ALL INNER TENDON DUCTS OMITTED FOR CLARITY.
3. FOR DETAILS OF BEARING DOWNSTAND SEE DWG. NO. B-AC-1

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JICA JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	T. Ohno	T. Ohno	15/6/00
DESIGN CHECK	H. Watanabe	H. W.	15/6/00
SUBMITTED	A. Hirotani		21/6/00
APPROVED	P. Wrophanth		22/6/00
	S. Temjobutra	S. Temjobutra	22/6/00

DWG. TITLE:
MAIN BRIDGE SUPERSTRUCTURE
PIER HEAD SEGMENT DETAILS

Plot date: Tue, 16 Nov 1999 - 12:00:40
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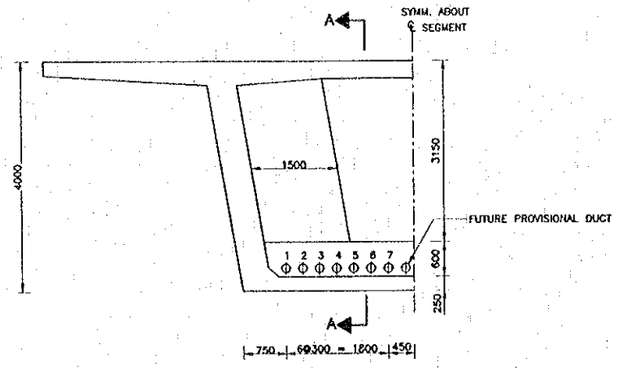
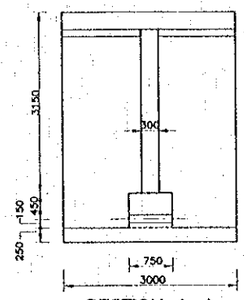
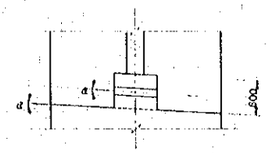
DATE OF ISSUE: 05/03/2000	
DWG. NO. B-M-15	SHEET NO. 126
DWG. STATUS	



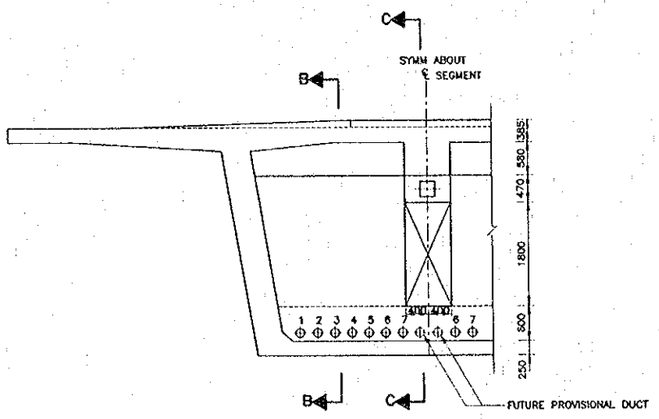
DEVIATOR DETAIL TYPE D2
SCALE 1:50



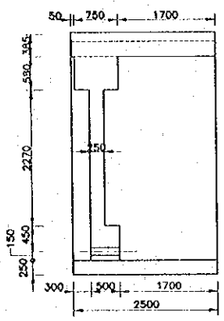
SECTION A-A
SCALE 1:50



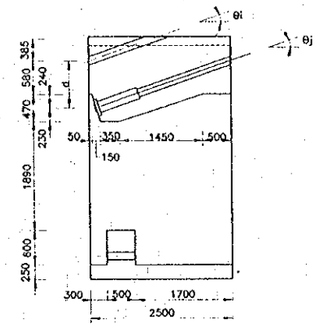
END SPAN AND TRANSITION BOTTOM SLAB
SCALE 1:50



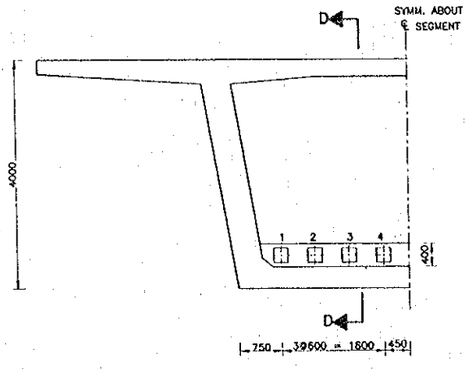
DEVIATOR DETAIL TYPE D3
SCALE 1:50



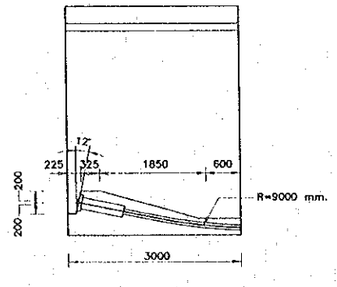
SECTION B-B
SCALE 1:50



SECTION C-C
SCALE 1:50



BOTTOM BLISTER DETAILS
SCALE 1:50



SECTION D-D
SCALE 1:50

NOTES :
1. ALL TENDON DUCTS AND ANCHORAGES OMITTED FOR CLARITY.
2. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH DWG. NO. B-M-4 ~ B-M-10
3. ALL INNER TENDON DUCTS OMITTED FOR CLARITY.
3. θi , θj , d SUBJECT TO PRECAMBER CALCULATION.

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

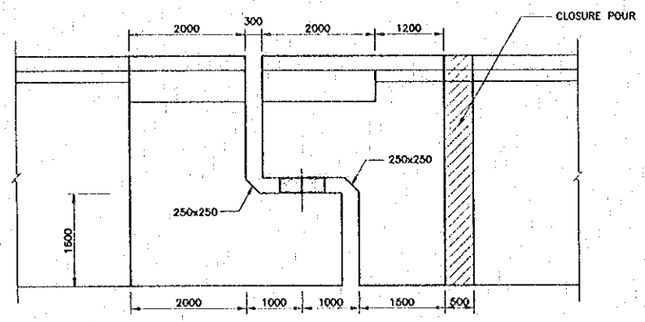
THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	T. Ohno		
DESIGN CHECK	H. Watanabe		15/02/00
SUBMITTED	A. Hirotani		17/02/00
	P. Wrephanth		21/02/00
APPROVED	S. Tamiyabuto		22/02/00

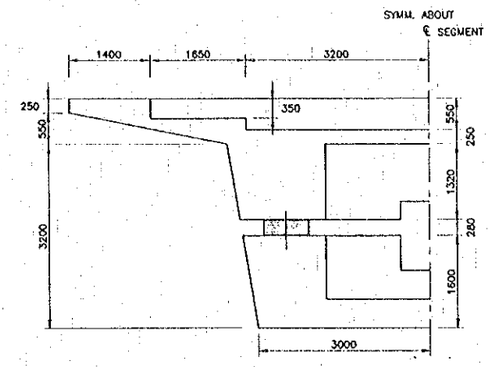
DWG. TITLE:
MAIN BRIDGE SUPERSTRUCTURE
DEVIATOR AND BOTTOM BLISTER DETAILS

DATE 09/11/1999
H:\STRUCTURE\SMB\M-15.DWG

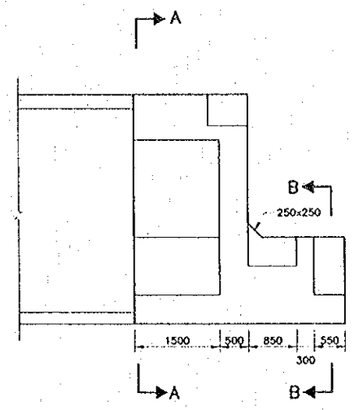
DATE OF ISSUE: 05/03/2000	
DWG. NO. B-M-16	SHEET NO. 127
DWG. STATUS	



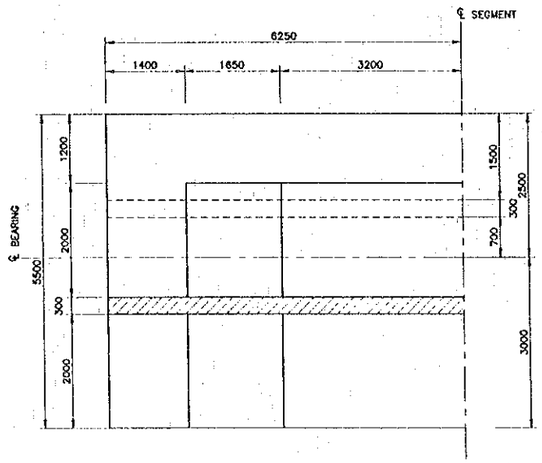
SIDE VIEW OF DAPPED HINGE
SCALE 1:50



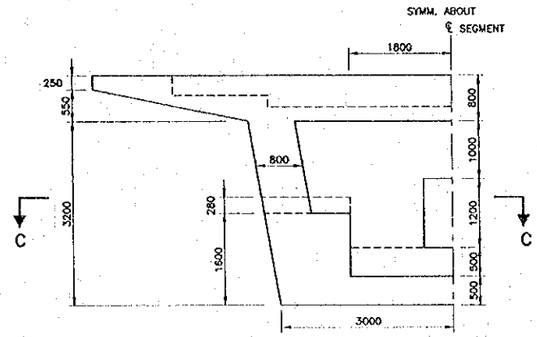
SECTION AT CENTER OF DAPPED HINGE
SCALE 1:50



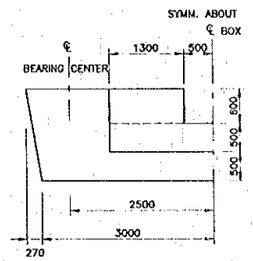
DAPPED SEGMENT INTERNAL SECTION
SCALE 1:50



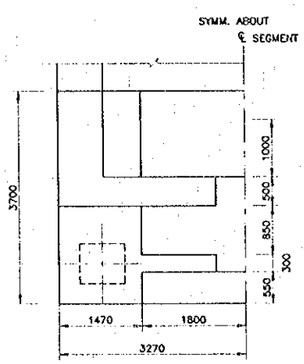
PLAN
SCALE 1 : 50



SECTION A–A
SCALE 1:50



SECTION B–B
SCALE 1:50



SECTION C–C
SCALE 1:50

NOTES:
1. ALL TENDON DUCTS OMITTED FOR CLARITY.
2. FOR DETAILS OF BEARING DOWNSTAND SEE DWG. NO. B-AC-1

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JICA JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	T. Ohno		
DESIGN CHECK	H. Watanabe		11/01/00
SUBMITTED	A. Hirotani		21/1/00
APPROVED	P. Virephanth		28/02/00
	S. Temyobutra		22/02/00

DWG. TITLE:
MAIN BRIDGE SUPERSTRUCTURE
DAPPED HINGE SEGMENT DETAILS
SHEET 1 OF 2

Plot date: Tue, 18 Jan 2000 - 16:13:43
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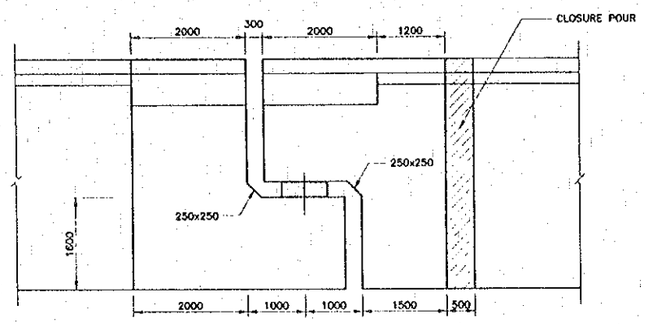
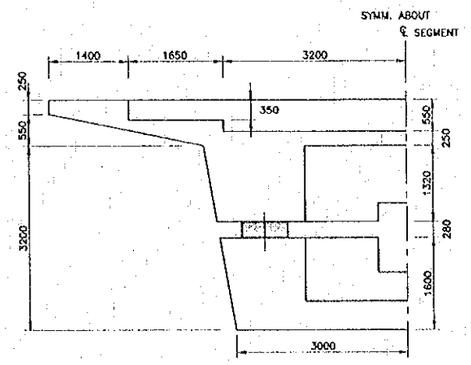
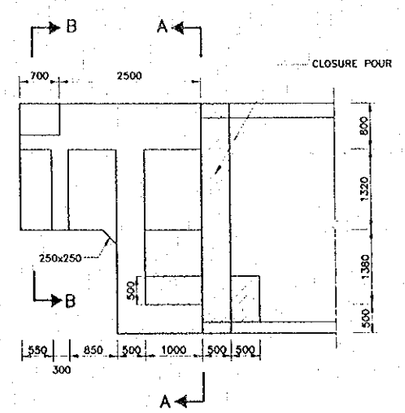
DATE OF ISSUE: 05/03/2000	
DWG. NO. B-M-17	SHEET NO. 128
DWG. STATUS	



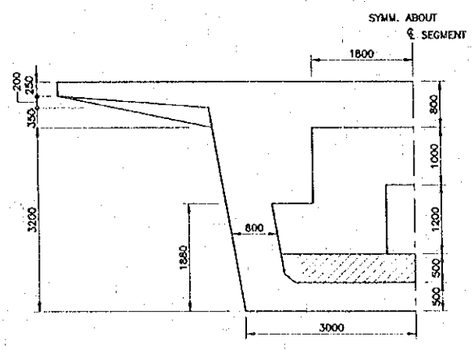
SIDE VIEW OF DAPPED HINGE
SCALE 1:50



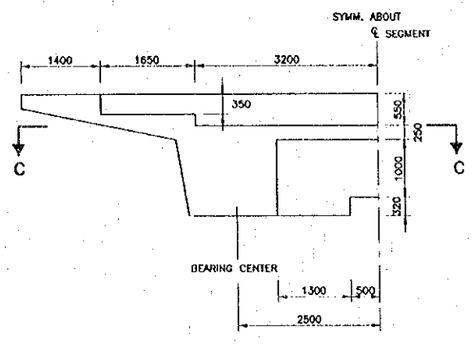
SECTION AT CENTER OF DAPPED HINGE
SCALE 1:50



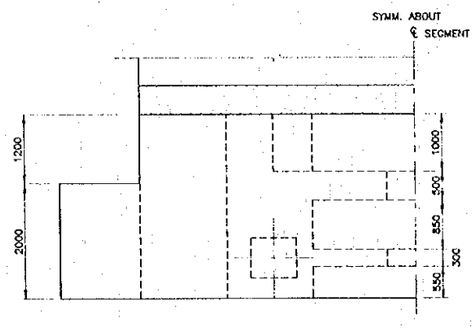
DAPPED SEGMENT INTERNAL SECTION
SCALE 1:50



SECTION A–A
SCALE 1:50



SECTION B–B
SCALE 1:50



SECTION C–C
SCALE 1:50

NOTES:
1. ALL TENDON DUCTS OMITTED FOR CLARITY.
2. FOR DETAILS OF BEARING DOWNSTAND SEE DWG. NO. B-AC-1

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JICA JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	T. Ohno		
DESIGN CHECK	H. Watanabe		12/12/00
SUBMITTED	A. Hirotani		
APPROVED	P. Viraphanh		22/02/00
	S. Tamiyabutra	S. Tamiya	22/02/00

DWG. TITLE:
MAIN BRIDGE SUPERSTRUCTURE
DAPPED HINGE SEGMENT DETAILS
SHEET 2 OF 2

Plot date: Tue, 18 Jan 2000 - 15:43:52
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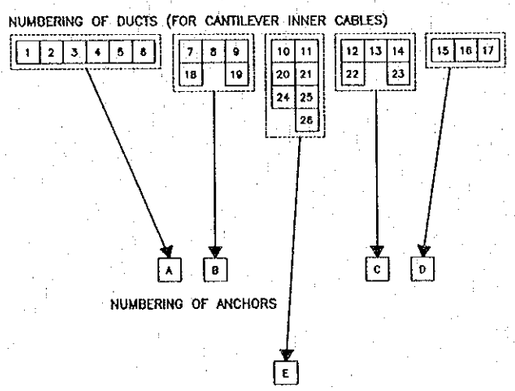
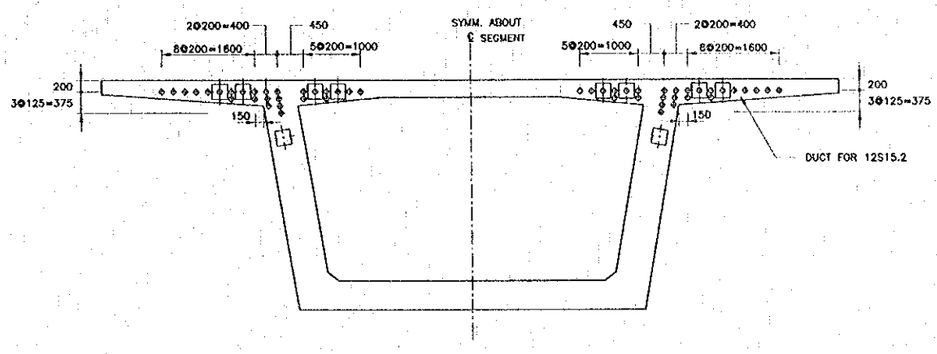
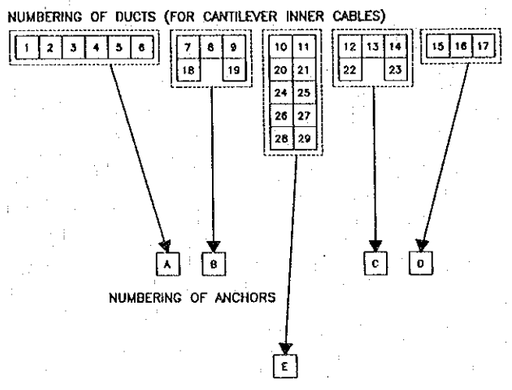
DATE OF ISSUE: 05/03/2000	
DWG. NO. B-M-18	SHEET NO. 129
DWG. STATUS	

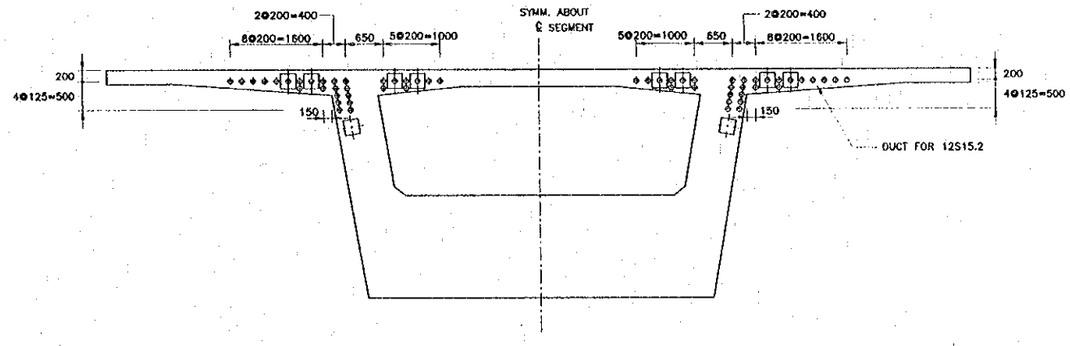




TYPICAL SEGMENT DUCT LOCATOIN AT PIER (60 M. AND 80 M. SPAN)

SCALE 1:50





800 MM. WEB SEGMENT DUCT LOCATOIN

SCALE 1:50

NOTES :

1. DUCT LOCATIONS SHOWN ARE FOR CENTRE OF THE PIERS.
2. DUCT SIZE TO BE ID FOR 12S15.2 TENDONS.

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	T. Ohno		15/5/00
DESIGN CHECK	H. Watanabe		15/5/00
SUBMITTED	A. Hirotani		21/5/00
APPROVED	P. Viraphanh		24/01/00
	S. Tamiyabutra		22/5/00

DWG. TITLE:

MAIN BRIDGE SUPERSTRUCTURE
PC. CABLE DUCT LOCATIONS

Plot date: Mon, 29 Nov 1999 - 16:51:01

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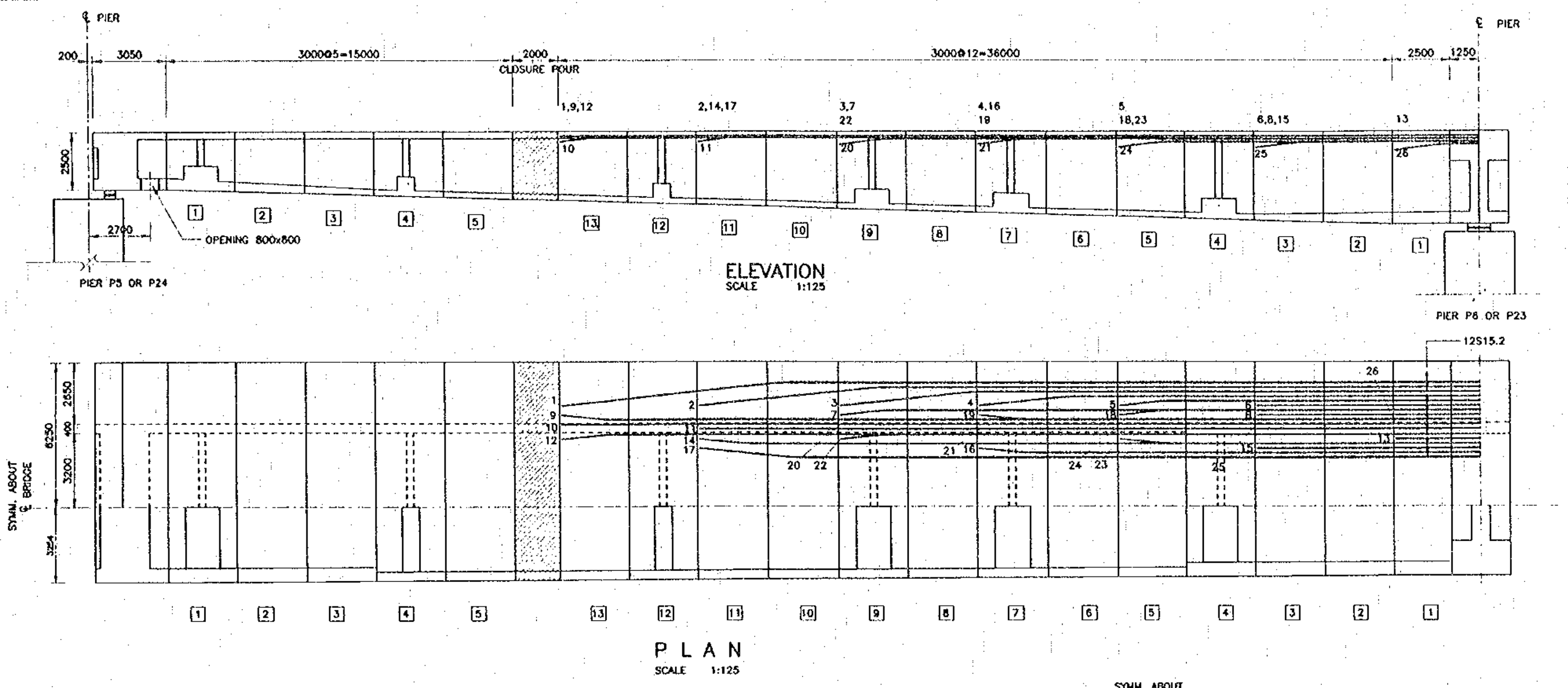
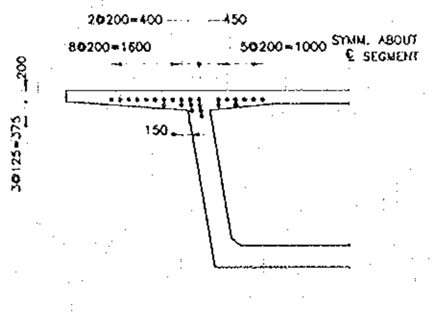
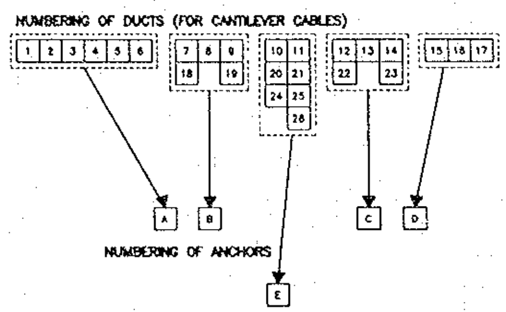
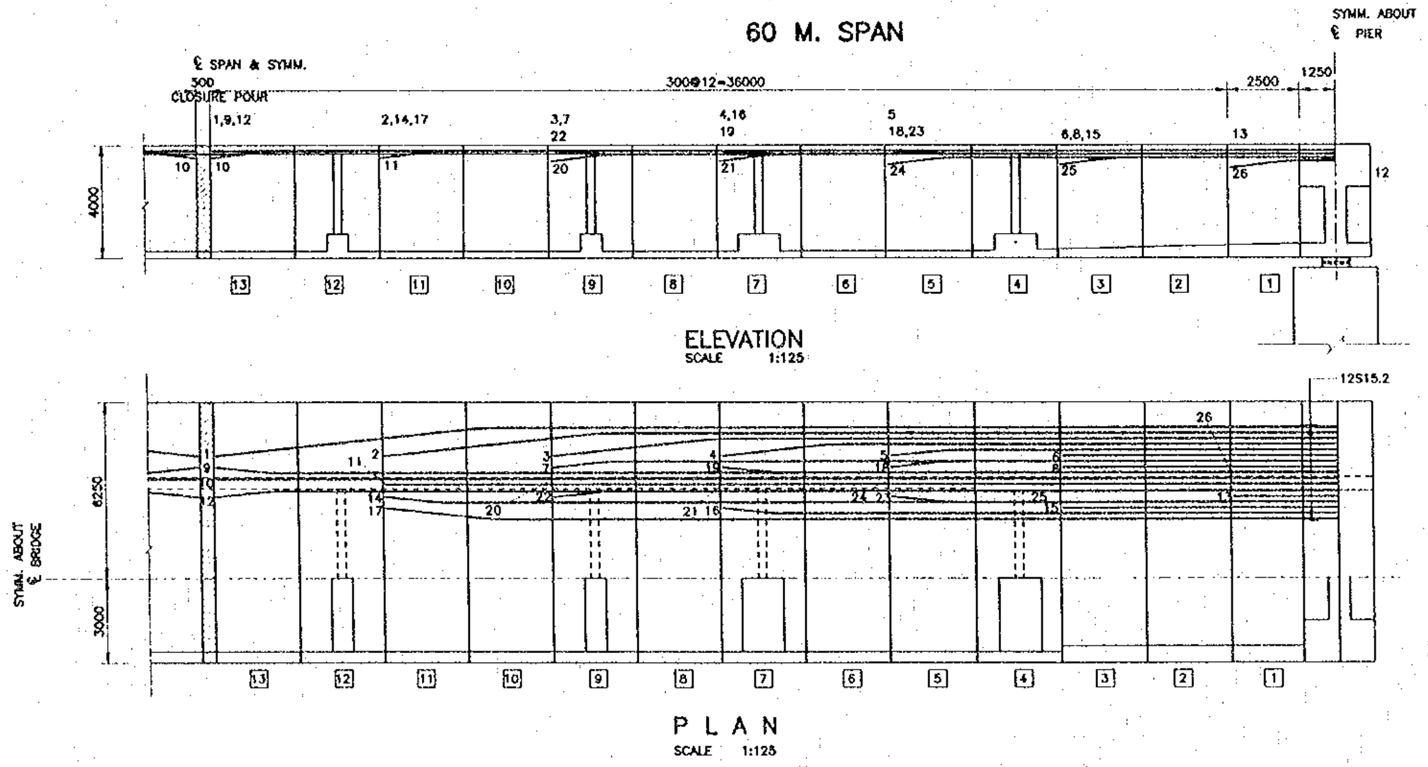
DATE OF ISSUE:	05/03/2000
DWG. NO. B-M-19	SHEET NO. 130
DWG. STATUS	

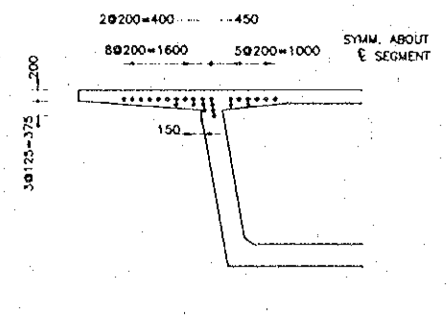




DUCT LOCATOIN AT P6 AND P23 (60 M. SPAN)
SCALE 1:100







DUCT LOCATOIN AT PIERS (80 M. SPAN)
SCALE 1:100

NOTES :

1. DUCT LOCATION SHOWN ARE FOR CENTRE OF THE PIERS.
2. DUCT SIZE TO 80 ID FOR 12S15.2 TENDONS.
3. DUCT CURVATURE RADIAL AS 9000 mm.
4. STRESSING
   - 13,15,25 FROM THAILAND SIDE
   - 26,6,8 FROM LAO PDR SIDE
   - OTHERS FROM BOTH SIDE

KEY ELEVATION
NOT TO SCALE

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	T. Ohno		
DESIGN CHECK	H. Watanabe		
SUBMITTED	A. Hiratani		
APPROVED	P. Vieophanh		
	S. Iamyabutra		

DWG. TITLE
MAIN BRIDGE SUPERSTRUCTURE
LONGITUDINAL PRESTRESSING LAYOUT
SHEET 1 OF 6

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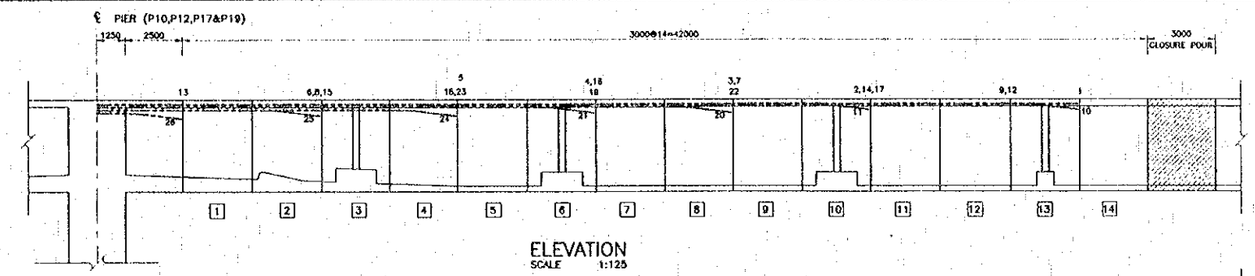
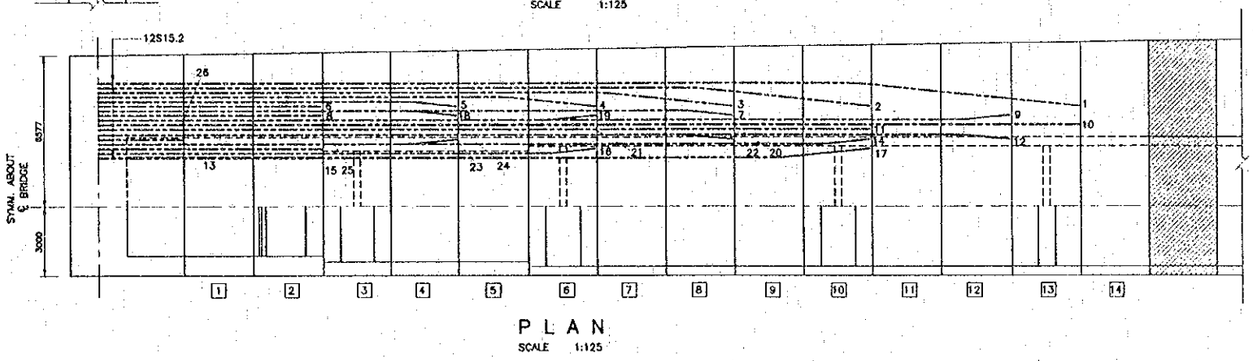
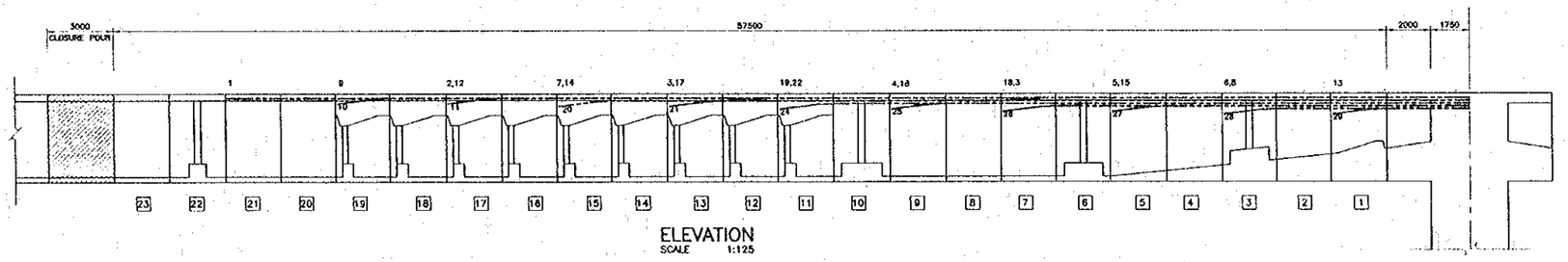
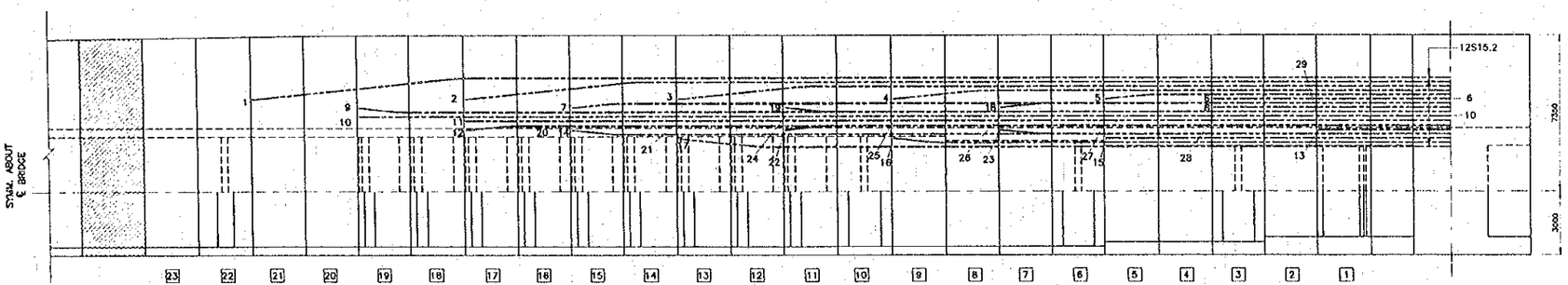
DATE OF ISSUE:	05/03/2000
DWG. NO. B-M-20	SHEET NO. 131
DWG. STATUS	



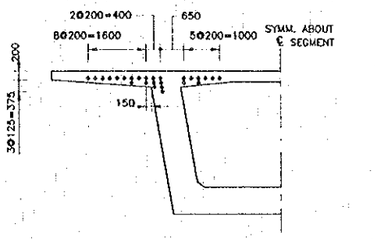


INTTERFACE SPAN 110 M.

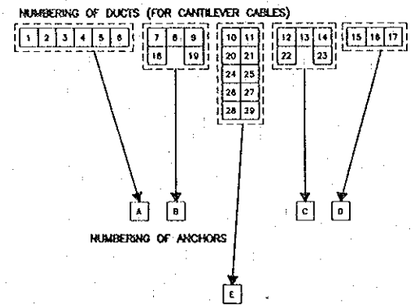


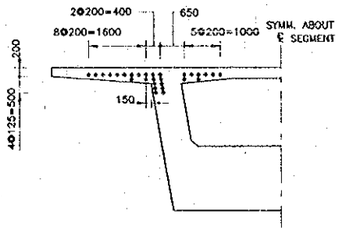


110 M. SPAN



DUCT LOCATOIN AT P10,P12,P17 AND P19
SCALE 1:100

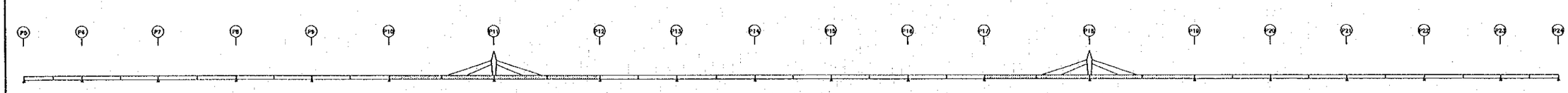




DUCT LOCATOIN AT P11 AND P18
SCALE 1:100

NOTES :

1. DUCT LOCATION SHOWN ARE FOR CENTRE OF THE PIERS.
2. DUCT SIZE TO BE ID FOR 12S15.2 TENDONS.
3. DUCT CURVATURE RADIAL AS 9000 mm.
4. STRESSING
   - INTERFACE SPAN 110 m.
     SEE DWG. NO. B-M-19 NOTES 4.
   - 110 m. SPAN
     13,28,5,15 FROM THAILAND SIDE
     29,6,8,27 FROM LAO PDR SIDE
     OTHES FROM BOTH SIDES



REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	T. Ohno		17/4/00
DESIGN CHECK	H. Watanabe		17/4/00
SUBMITTED	A. Hirotani		17/4/00
APPROVED	P. Varaphanith		17/4/00
	S. Temiyabutra		22/6/00

DWG. TITLE:
MAIN BRIDGE SUPERSTRUCTURE
LONGITUDINAL PRESTRESSING LAYOUT
(FOR CANTILER INNER CABLES)
SHEET 2 OF 6

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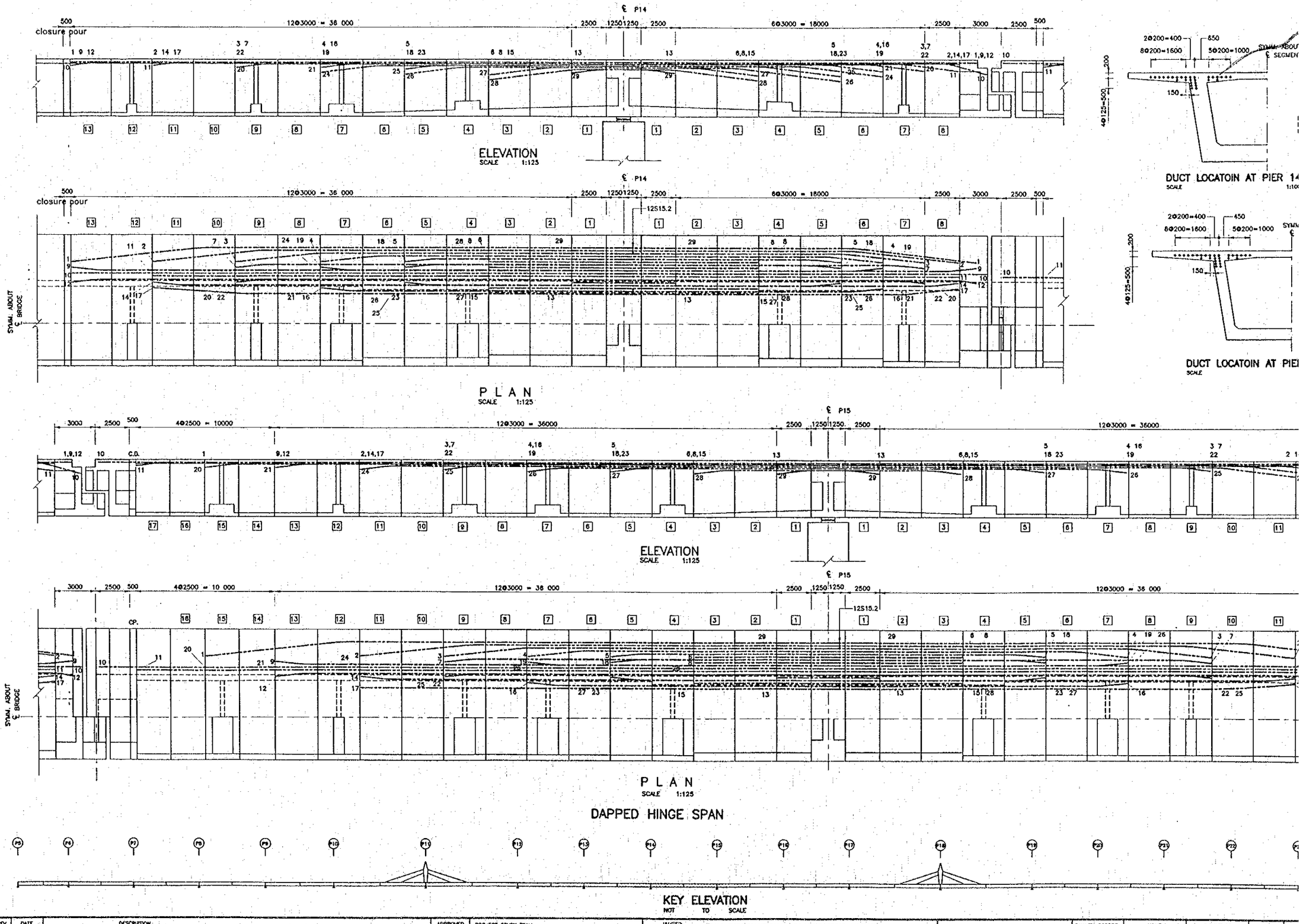

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM

ORIENTAL CONSULTANTS CO., LTD.

in association with

NIPPON KOEI CO., LTD.

JICA JAPAN INTERNATIONAL COOPERATION AGENCY

LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION

KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	T. Ohno	T. Ohno	15/12/00
DESIGN CHECK	H. Watanabe	H. Watanabe	18/12/00
SUBMITTED	A. Hirotani	A. Hirotani	21/12/00
APPROVED	P. Viraphanh	P. Viraphanh	22/12/00
	S. Tomiyobutra	S. Tomiyobutra	22/12/00

DWG

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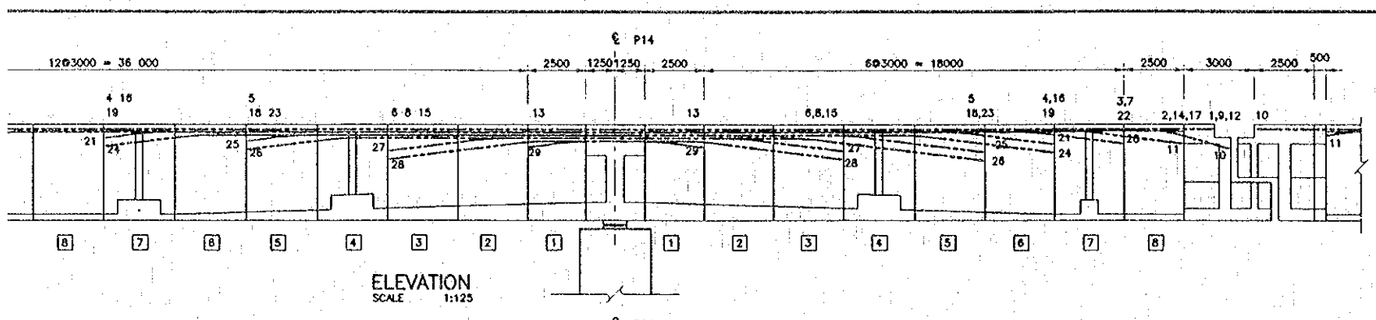
DATE OF ISSUE:	05/03/2000
DWG. NO. B-M-21	SHEET NO. 132
DWG. STATUS	



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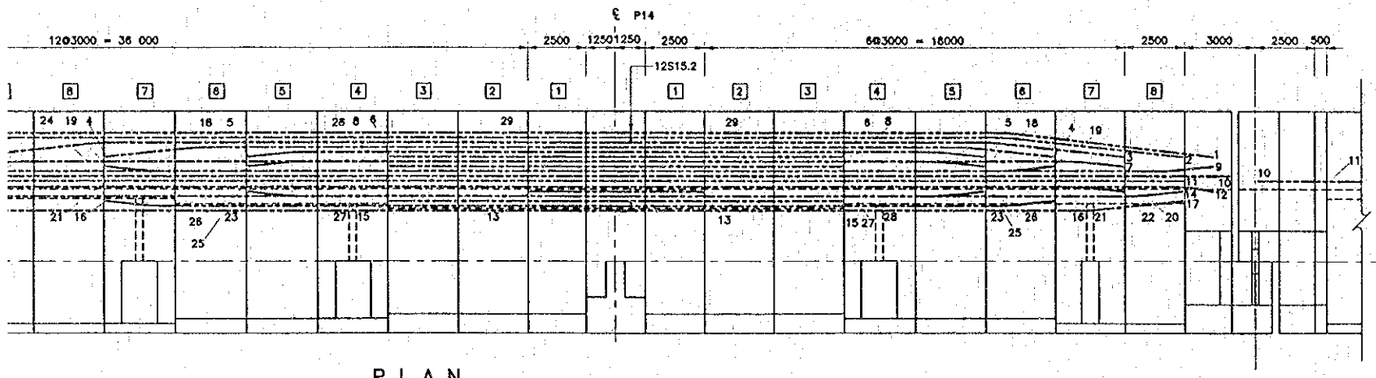
SCALE 1:125



P L A N
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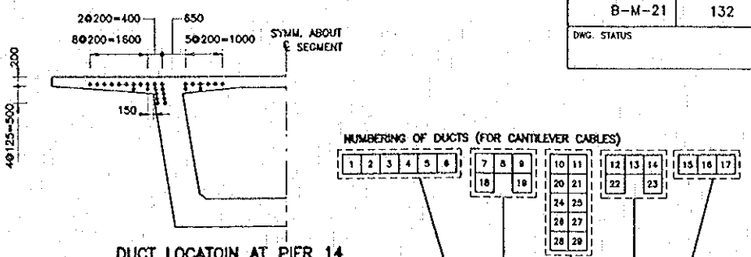
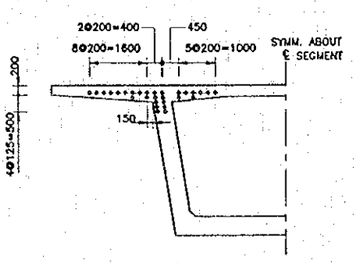
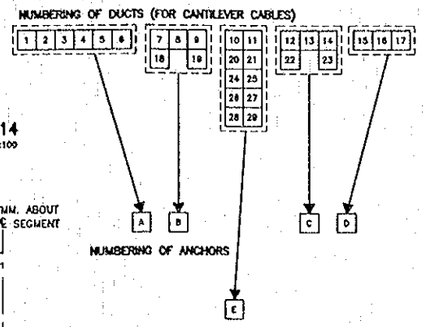
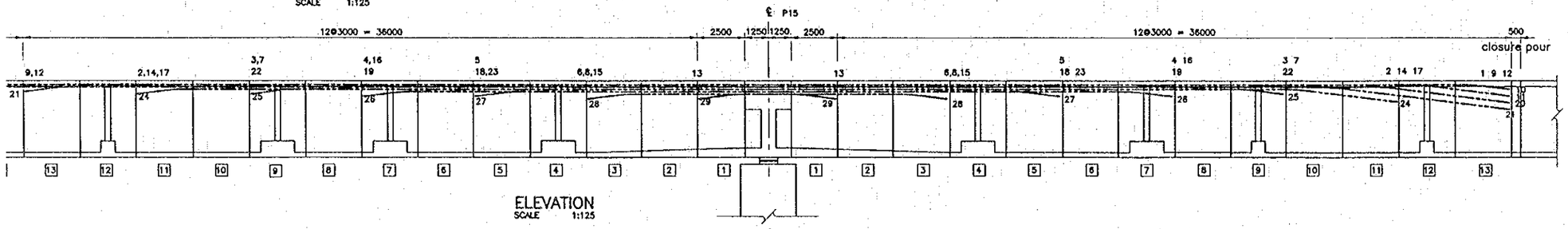


DUCT LOCATOIN AT PIER 14
SCALE 1:100



DUCT LOCATOIN AT PIER 15
SCALE 1:100





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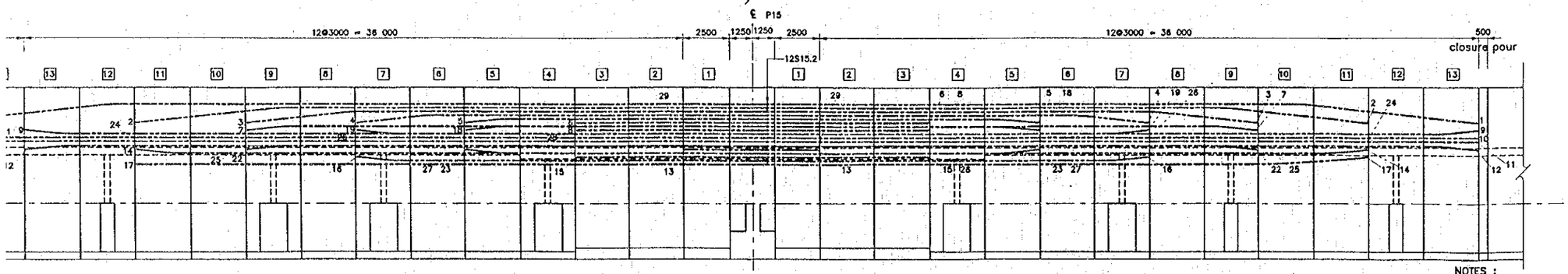

P L A N
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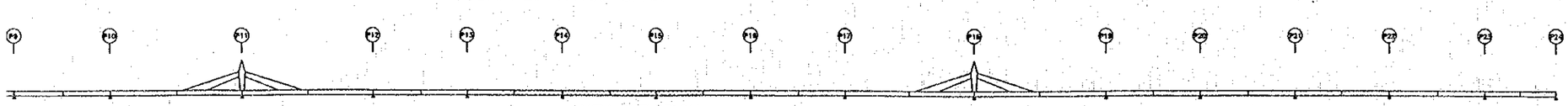
DAPPED HINGE SPAN



KEY ELEVATION
NOT TO SCALE

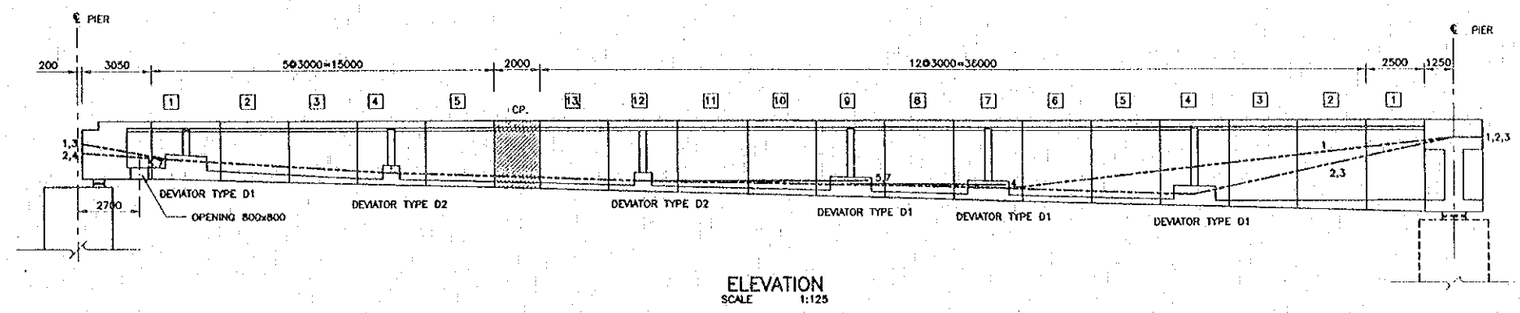
NOTES :

1. DUCT LOCATION SHOWN ARE FOR CENTRE OF THE PIERS.
2. DUCT SIZE TO BE ID FOR 12S15.2 TENDONS.
3. DUCT CURVATURE RADIAL AS 8000 mm.
4. STRESSING

P14		
	-13,15,27,28	FROM THAILAND SIDE
	-29,6,8	FROM LAO PDR SIDE
	-OTHERS	FROM BOTH SIDE
P15		
	-13,15,28	FROM THAILAND SIDE
	-29,6,8	FROM LAO PDR SIDE
	-OTHERS	FROM BOTH SIDE

APPROVED	PROJECT STUDY TEAM	JICA JAPAN INTERNATIONAL COOPERATION AGENCY		QUALITY RECORD	NAME	SIGNATURE	DATE	DWG. TITLE:
	ORIENTAL CONSULTANTS CO., LTD.	LAO PEOPLE'S DEMOCRATIC REPUBLIC MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION	THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT	DESIGN	Y. Ohno	T. Ohno	15/07/00	MAIN BRIDGE SUPERSTRUCTURE LONGITUDINAL PRESTRESSING LAYOUT SHEET 3 OF 6
	in association with			DESIGN CHECK	H. Watanabe		15/11/00	
	NIPPON KOEI CO., LTD.	KINGDOM OF THAILAND MINISTRY OF TRANSPORT AND COMMUNICATIONS DEPARTMENT OF HIGHWAYS		SUBMITTED	A. Hiratani		2/12/00	
				APPROVED	P. Virophanth		22/12/00	
					S. Terajobutra	B.T.	22/02/00	

DATE OF ISSUE: 05/03/2000	
DWG. NO. B-M-22	SHEET NO. 133
DWG. STATUS	



ELEVATION
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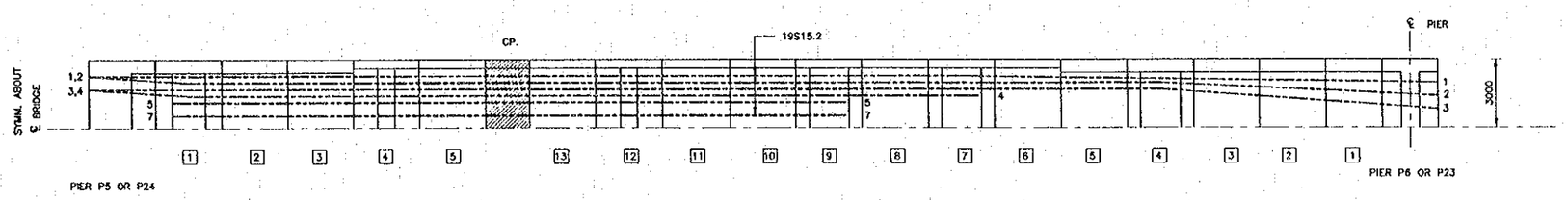
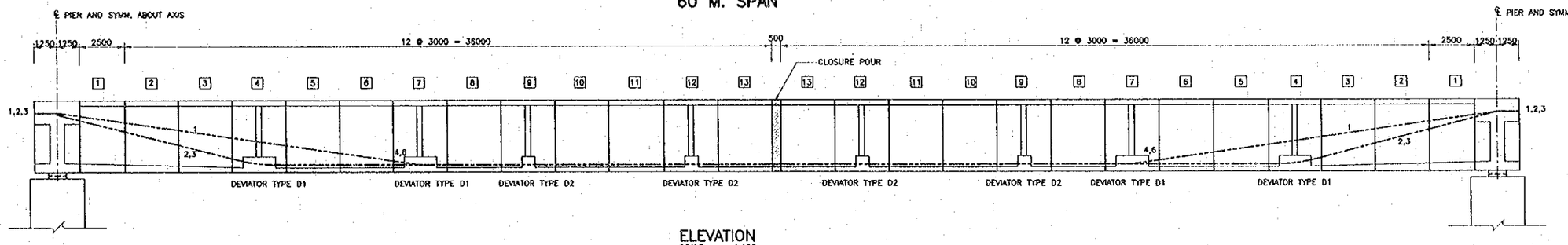


P L A N
SCALE 1:125

60 M. SPAN



ELEVATION
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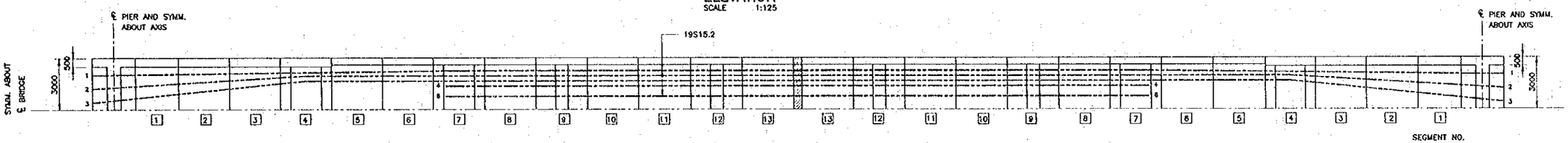
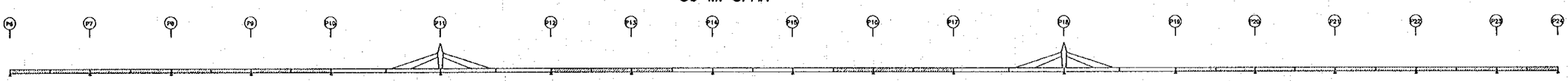


P L A N
SCALE 1:125

80 M. SPAN



KEY ELEVATION
NOT TO SCALE

NOTES :
1. DUCT SIZE TO 95 ID FOR 19S15.2 TENDONS (EXTERNAL CABLES)
2. STRESSING
   - 60 m. SPAN ALL TENDONS FROM P6 OR P23
   - 80 m. SPAN 4 FROM THAILAND SIDE
     6 FROM LAO PDR SIDE
     1,2,3 FROM BOTH SIDES

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JICA JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	T. Ohno	T. Ohno	15/2/00
DESIGN CHECK	H. Watanabe	H. Watanabe	15/2/00
SUBMITTED	A. Hiratani	A. Hiratani	15/2/00
APPROVED	P. Virophanth	P. Virophanth	22/2/00
	S. Temiyabutra	S. Temiyabutra	22/2/00

DWG. TITLE:
MAIN BRIDGE SUPERSTRUCTURE
LONGITUDINAL PRESTRESSING LAYOUT
SHEET 4 OF 6

DATE 23/9/1999
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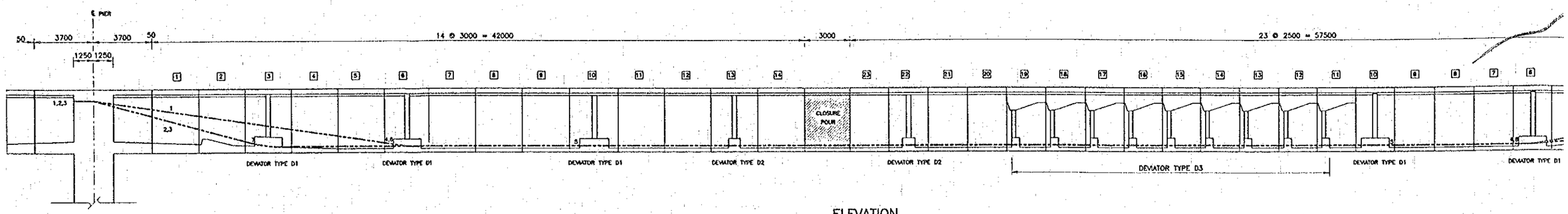
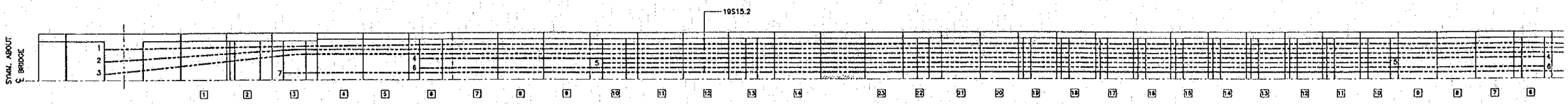
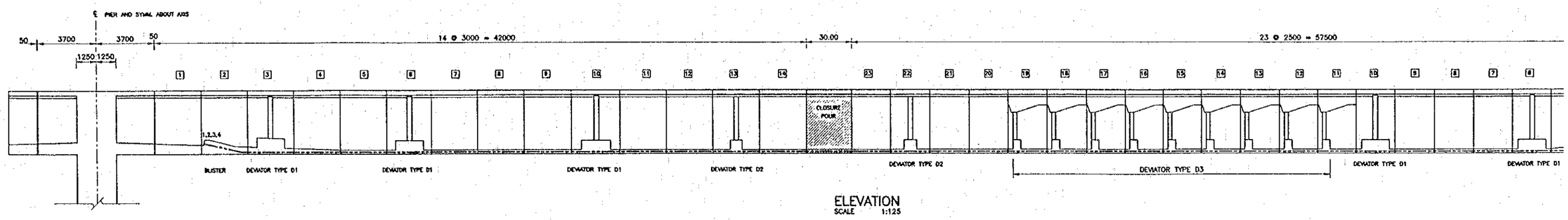


ELEVATION
SCALE 1:125



PLAN
SCALE 1:125



ELEVATION
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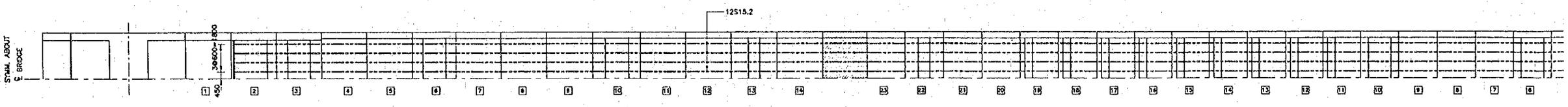
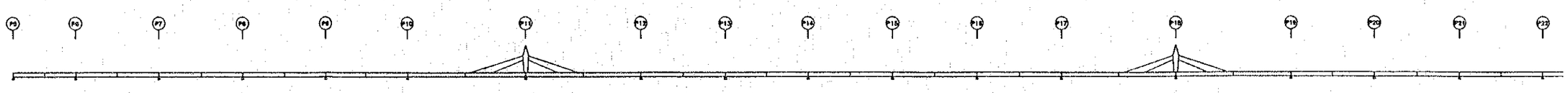


PLAN
SCALE 1:125

110 M. SPAN



KEY ELEVATION
NOT TO SCALE

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JICA JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	
DESIGN	T. Ohno
DESIGN CHECK	H. Wata
SUBMITTED	A. Hirol
APPROVED	P. Viroj
	S. Tem

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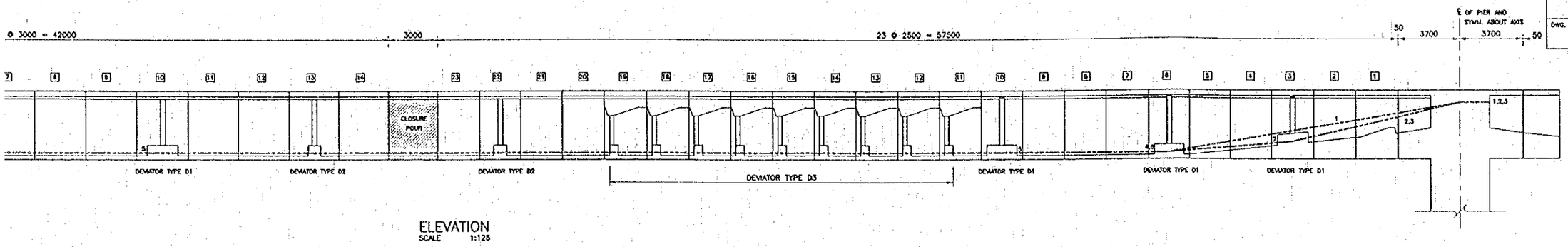
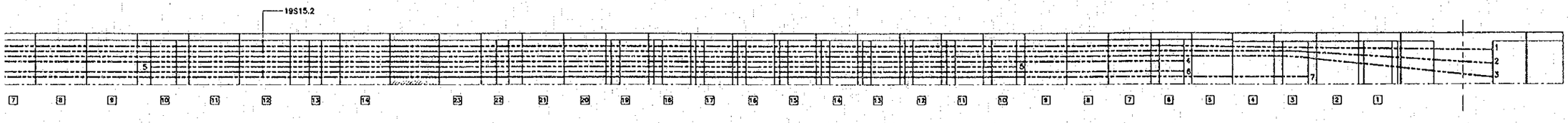
DATE OF ISSUE: 05/03/2000	
DWG. NO. B-M-23	SHEET NO. 134
DWG. STATUS	



ELEVATION
SCALE 1:125



PLAN
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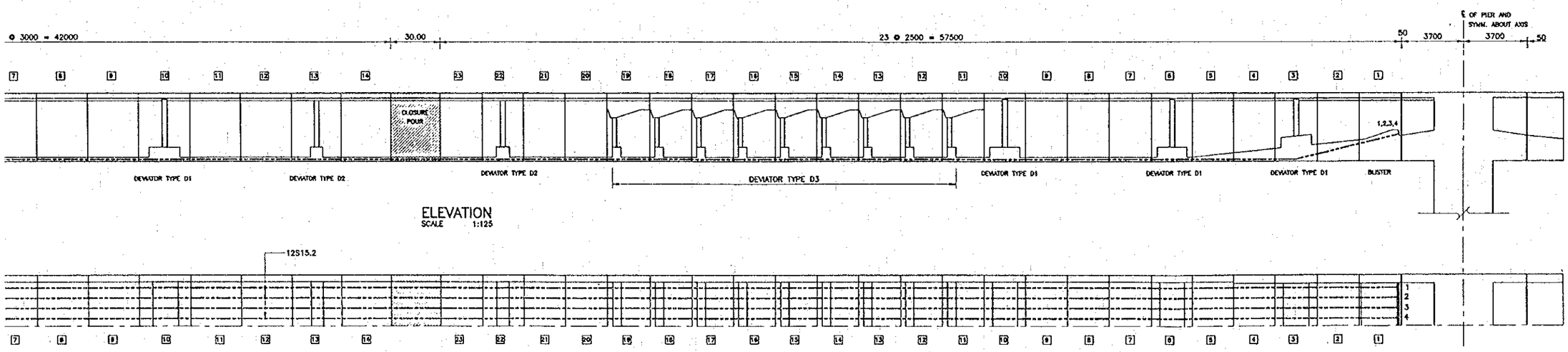
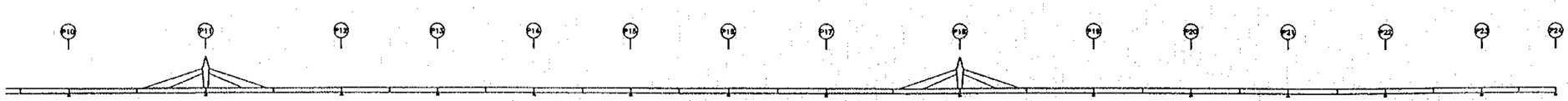


ELEVATION
SCALE 1:125

PLAN
SCALE 1:125

110 M. SPAN



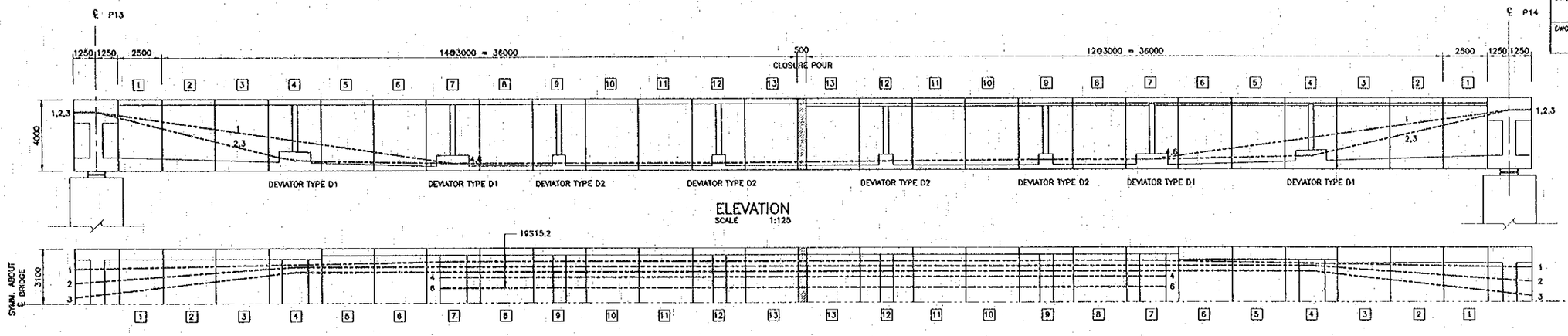
KEY ELEVATION
NOT TO SCALE

NOTES:
1. DUCT SIZE TO 95 ID FOR 19S15.2 (EXTERNAL CABLES) AND 80 ID FOR 12S15.2 (INNER CABLES) TENDONS.
2. STRESSING
   -19S15.2 TENDONS FROM BOTH SIDES
   -12S15.2 TENDONS FROM BOTH SIDES

APPROVED	PROJECT STUDY TEAM	JAPAN INTERNATIONAL COOPERATION AGENCY		QUALITY RECORD	NAME	SIGNATURE	DATE
	ORIENTAL CONSULTANTS CO., LTD. in association with NIPPON KOEI CO., LTD.	LAO PEOPLE'S DEMOCRATIC REPUBLIC MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION KINGDOM OF THAILAND MINISTRY OF TRANSPORT AND COMMUNICATIONS DEPARTMENT OF HIGHWAYS	THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT	DESIGN	T. Ohno	T. Ohno	15/12/00
				DESIGN CHECK	H. Watanabe	H. Watanabe	18/12/00
				SUBMITTED	A. Hirotani	A. Hirotani	21/12/00
				APPROVED	P. Viraphanh	P. Viraphanh	27/01/00
					S. Temiyabutra	S. Temiyabutra	28/02/00

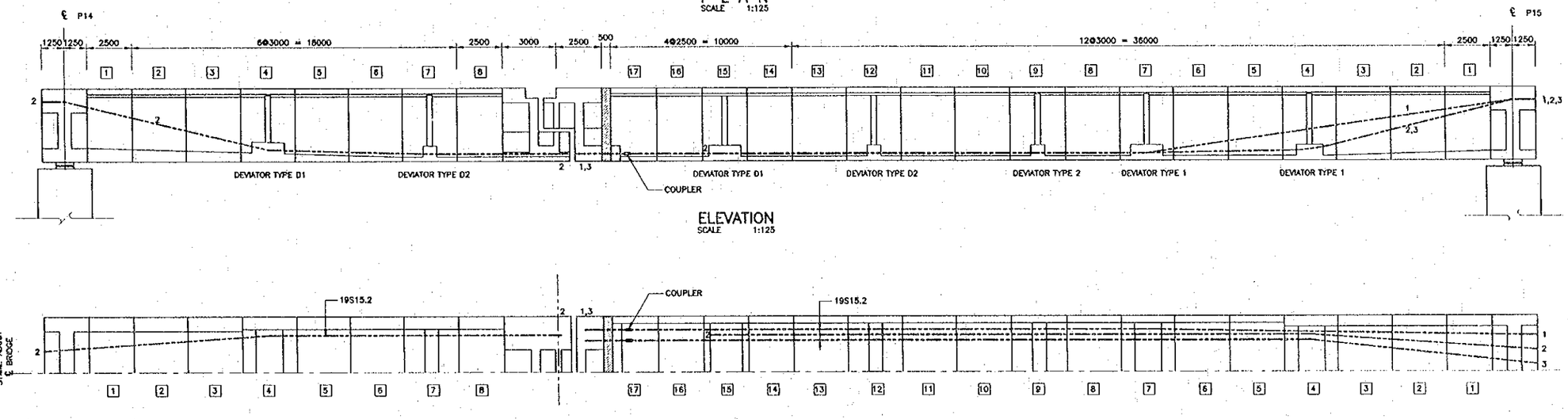
DWG. TITLE:
MAIN BRIDGE SUPERSTRUCTURE
LONGITUDINAL PRESTRESSING LAYOUT
SHEET 5 OF 6

DATE OF ISSUE:	05/03/2000
DWG. NO. 8-M-24	SHEET NO. 135
DWG. STATUS	



ELEVATION
SCALE 1:125

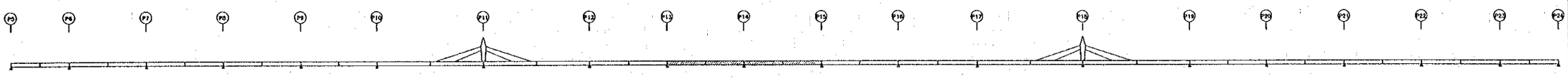
PLAN
SCALE 1:125



ELEVATION
SCALE 1:125

PLAN
SCALE 1:125

DAPPED HINGE SPAN



KEY ELEVATION
NOT TO SCALE

NOTES :
1. DUCT SIZE TO 95 ID FOR 19S15.2 TENDONS.
2. STRESSING
–P13~P14 SPAN
4 FROM THAILAND SIDE
6 FROM LAO PDR SIDE
1,2,3 FROM BOTH SIDES
DAPPED HINGE SPAN ALL TENDONS FROM PIER HEAD

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	T. Ohno		17/3/00
DESIGN CHECK	H. Watanabe		17/3/00
SUBMITTED	A. Hirotani		17/3/00
APPROVED	P. Viraphanth		22/3/00
	S. Temiyabutra		22/3/00

DWG. TITLE:
MAIN BRIDGE SUPERSTRUCTURE
LONGITUDINAL PRESTRESSING LAYOUT
SHEET 6 OF 6

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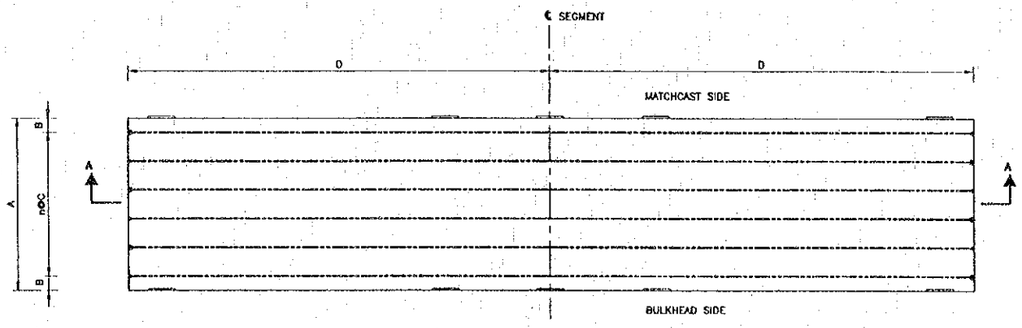
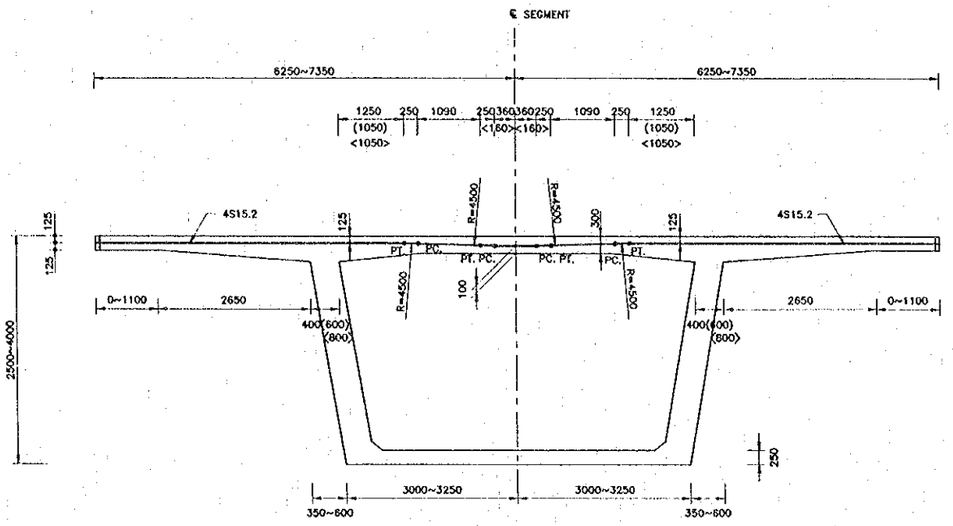
DATE OF ISSUE: 05/03/2000	
DWG. NO. B-M-25	SHEET NO. 136
DWG. STATUS	



PLAN
SCALE 1:50



SECTION A–A
SCALE 1:50

SPAN LENGTH	SEGMENT	A	B	nØC (max.)	D
60 M. 80 M.	TYPICAL (L=2.50 m.)	2500	250(375)	3Ø625=1875	6250
	TYPICAL (L=3.00 m.)	3000	250	4Ø625=2500	6250
	WIDENED DECK SLAB STANDARD	3000	250	5Ø500=2500	VARY
	PIER HEAD SEGMENT	2500	375	2Ø625+500=1750	6250
	END DIAGPHRAGM	3050	275	4Ø625=2500	6250
	CLOSURE POUR (L=0.50 m.)	500	250	----	6250
	CLOSURE POUR (L=2.0 m.)	2000	250	3Ø500=1500	6250
	DAPPED HINGE SEGMENT (P15)	3200	375	4Ø612.5=2450	6250
	DAPPED HINGE SEGMENT (P14)	2000	375	2Ø625=1250	6250
110 M.	TYPICAL (L=2.50 m.)	2500	250	4Ø500=2000	7350
	SPREAD DECK (L=2.50m.)	2500	250	4Ø500=2000	VARY
	SPREAD DECK (L=3.00m.)	3000	250	5Ø500=2500	VARY
	PIER HEAD (P10, 12, 17, 19)	7400	250	13Ø500+400=6900	VARY
	PIER HEAD (P11, 18)	7400	250	13Ø500+400=6900	7350
	CLOSURE POUR	3000	250	5Ø500=2500	7350

( ) BULK HEAD SIDE

NOTES :
1. LEGENDS
   ⊢— PRESTRESSING END ANCHORAGE
   o— DEAD END ANCHORAGE
2. 4S15.2 INDICATES A 4 STRANDS FLAT SLAB ANCHORAGE SYSTEM.
3. ALL STRANDS TO BE S15.2 WITH A UTS OF 261 KN.
4. ALL STRANDS IN THE TENDONS SHALL BE STRESSED FROM ONE END ONLY WITH JACKING FORCE OF 710 KN BEFORE LOCK OFF.
5. NUMBER IN BRACKET <> FOR 800 mm. WEB SEGMENT.
   NUMBER IN BRACKET ( ) FOR 600 mm. WEB SEGMENT.

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JICA JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	T. Ohno	T. Ohno	15/02/00
DESIGN CHECK	H. Watanabe		17/02/00
SUBMITTED	A. Hiratani		21/2/00
APPROVED	P. Yraphanth		22/2/00
	S. Temiyabutra	S. Temiya	22/2/00

DWG. TITLE:
MAIN BRIDGE SUPERSTRUCTURE
TRANSVERSE PRESTRESSING LAYOUT AND DETAILS

Plot date: Thu, 9 Dec '99 - 8:50:37
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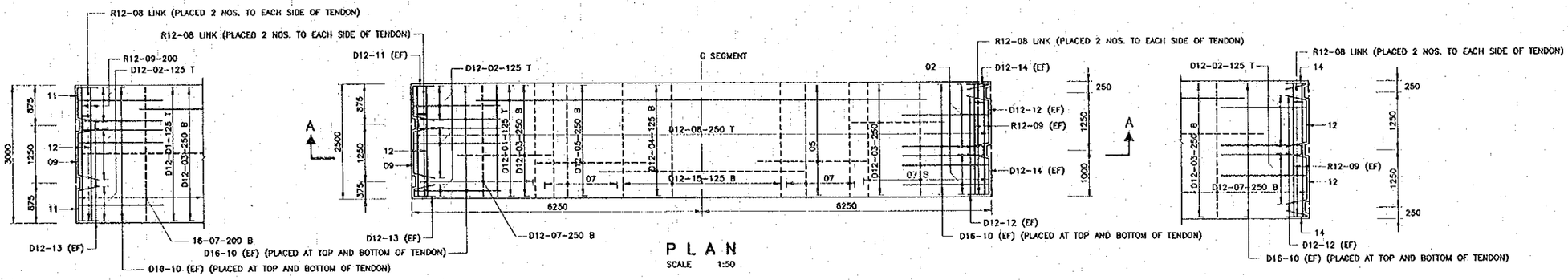
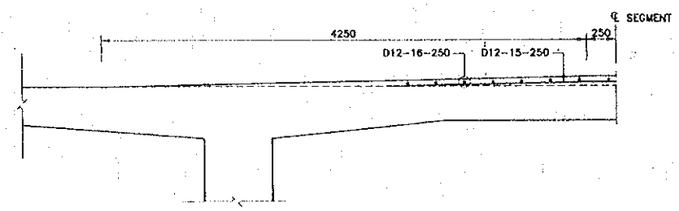
DATE OF ISSUE: 05/03/2000	
DWG. NO. B-M-26	SHEET NO. 137
DWG. STATUS	



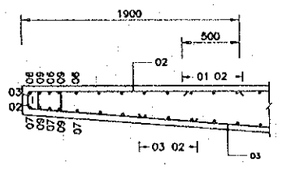
SEGMENT L=3.0 M. (L)
SCALE 1:50

PLAN
SCALE 1:50

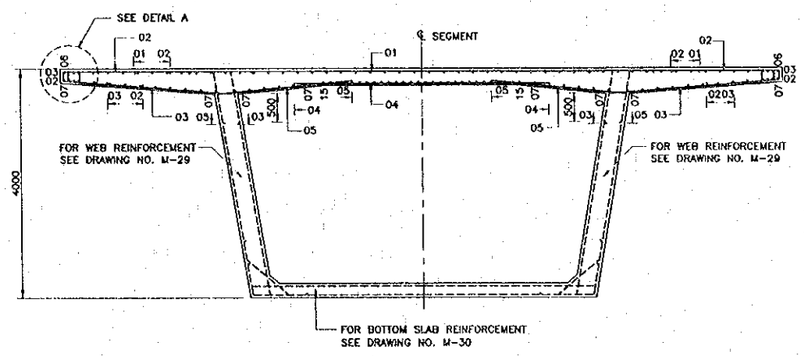
SEGMENT L=3.0 M. (R)
SCALE 1:50



DECK SLOPE REINFORCEMENT DETAIL
SCALE 1:25



DETAIL A
SCALE 1:25



SECTION A-A
SCALE 1:50

NOTES :

1. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH. DWG. No. B-M-29 , B-M-30
2. DECK SLOP REINFORCEMENT SHALL ARRANGE ON THE WHOLE BRIDGE SUBJECT TO NECESSITY.

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	T. Ohno	T. Ohno	15/12/00
DESIGN CHECK	H. Watanabe		18/12/00
SUBMITTED	A. Hirotani		21/12/00
APPROVED	P. Viraphanth		24/12/00
	S. Tamiyabutra	S. Tamiya	27/12/00

DWG. TITLE:

MAIN BRIDGE SUPERSTRUCTURE
DECK SLAB R.C. DETAILS
SHEET 1 OF 3

Plot date: Tue, 1 Feb 2000 - 17:45:33
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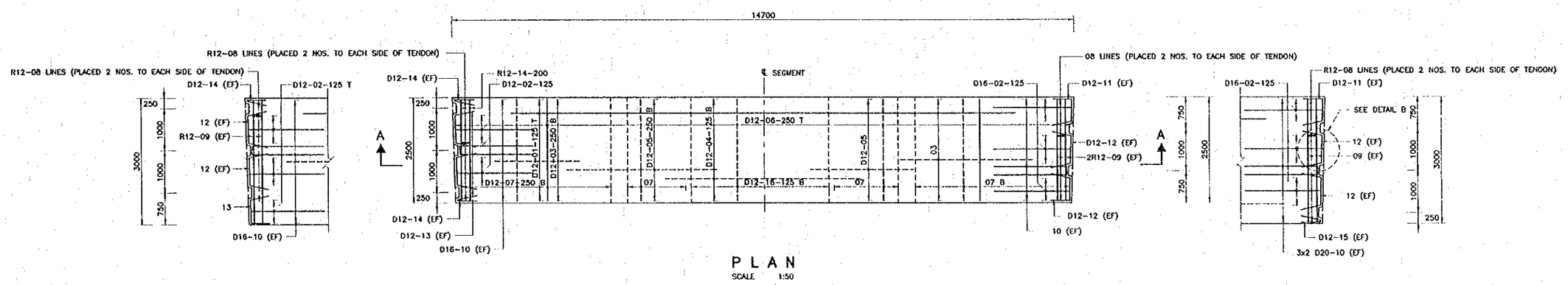
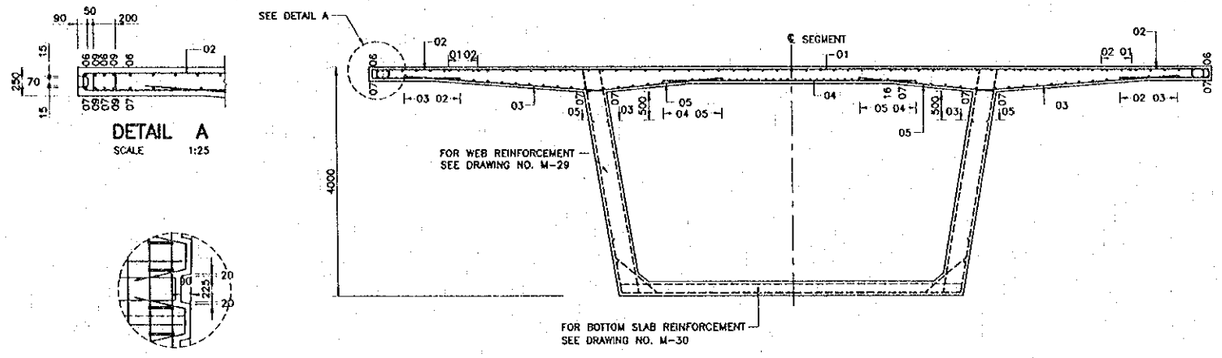
DATE OF ISSUE: 05/03/2000	
DWG. NO. B-M-27	SHEET NO. 138
DWG. STATUS	



PLAN
SCALE 1:50



SECTION A-A
SCALE 1:50

DETAIL A
SCALE 1:25

DETAIL B
SCALE 1:25

NOTES :

1. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH DWG. NO. B-M-29 AND B-M-30

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	T. Ohno		
DESIGN CHECK	H. Watanabe		12/12/00
SUBMITTED	A. Hirotani		21/12/00
APPROVED	P. Wiraphanth		22/12/00
	S. Terniyabutra		22/12/00

DWG. TITLE:

MAIN BRIDGE SUPERSTRUCTURE
DECK SLAB R.C. DETAILS
SHEET 2 OF 3

Plot date: Tue, 5 Feb 2000 - 19:12:35

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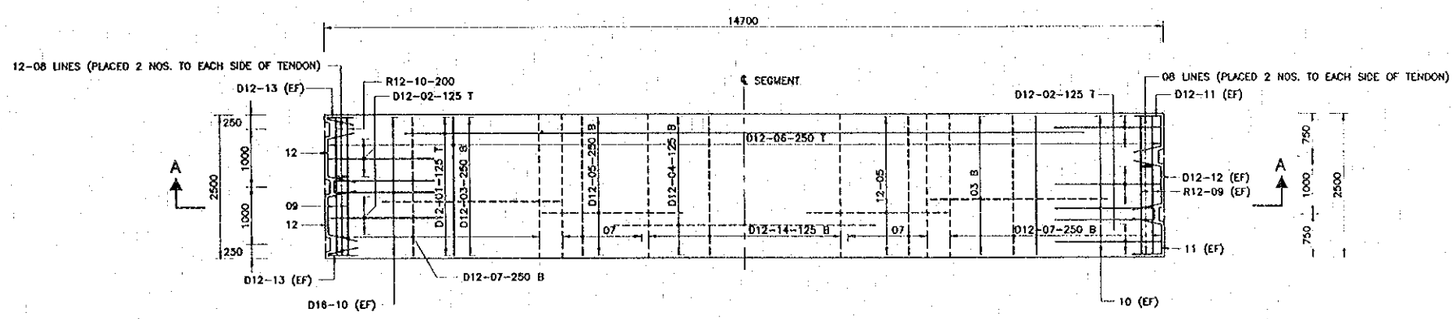
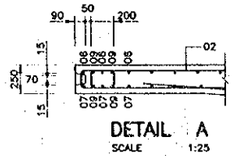
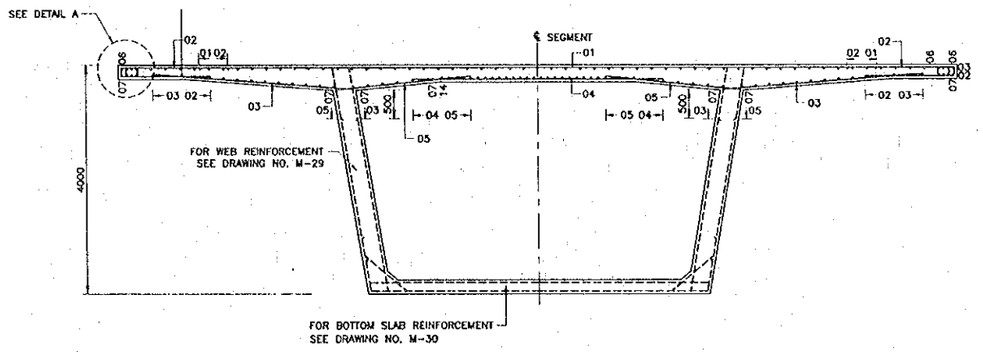
DATE OF ISSUE	
05/03/2000	
DWG. NO. B-M-28	SHEET NO. 139
DWG. STATUS	



PLAN
SCALE 1:50



DETAIL A
SCALE 1:25



SECTION A-A
SCALE 1:50

NOTES :

1. REINFORCEMENT SHOWN AND CALL UP FOR HALF SECTION ONLY.
2. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH DWG. NO. B-M-29 AND B-M-30

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	T. Ohno		15/01/00
DESIGN CHECK	H. Watanabe		
SUBMITTED	A. Hirotani		12/01/00
APPROVED	P. Wiraphanth		
	S. Tamiyabatra		12/01/00

DWG. TITLE:

MAIN BRIDGE SUPERSTRUCTURE
DECK SLAB R.C. DETAILS
SHEET 3 OF 3

Plot date: Tue, 8 Feb 2000 - 19:15:02
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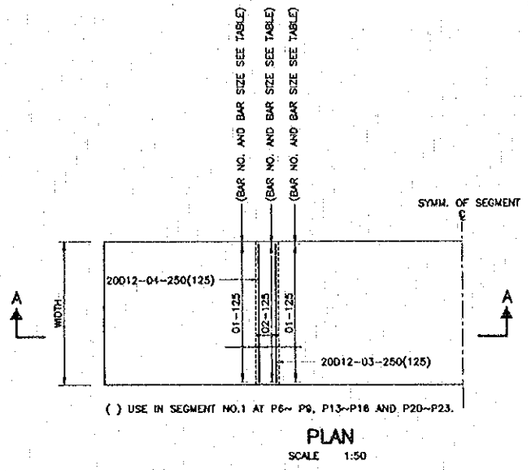
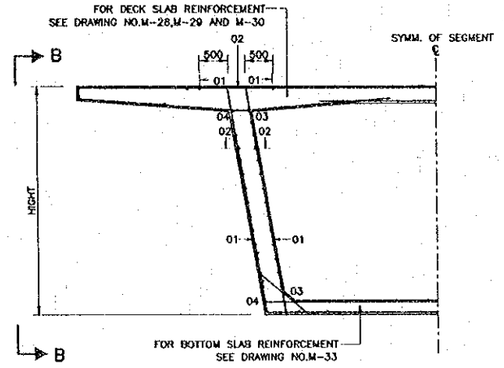
DATE OF ISSUE: 05/03/2000	
DWG. NO. B-M-29	SHEET NO. 140
DWG. STATUS	



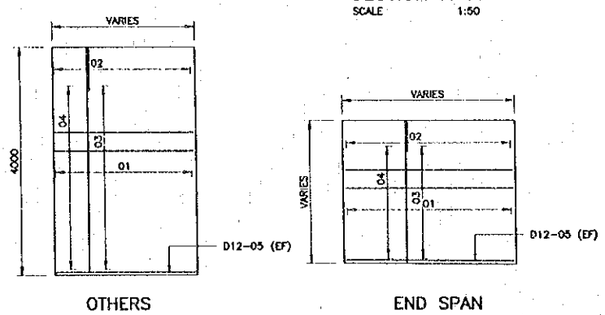
PLAN

SCALE 1:50



SECTION A-A

SCALE 1:50



SECTION B-B

SCALE 1:50

(PER WEB)

TYPE	SEGMENT NO.	BAR MARK 01		BAR MARK 02		REMARK
		NOS.	BAR SIZE	NOS.	BAR SIZE	
A	1	40	D20	40	D20	BUNDLE
	2	24	D25	24	D25	
	3	24	D25	24	D25	
	4	24	D25	24	D25	
	5	24	D25	24	D25	
	6	24	D25	24	D25	
	7	24	D25	24	D25	
	8	24	D25	24	D25	
	9	24	D20	24	D20	
	10	24	D20	24	D20	
	11	24	D16	24	D16	
	12	24	D16	24	D16	
	13	24	D16	24	D16	
B	1	40	D20	40	D20	BUNDLE
	2	48	D20	48	D20	BUNDLE
	3	24	D25	24	D25	
	4	24	D25	24	D25	
	5	24	D25	24	D25	
	6	24	D25	24	D25	
	7	24	D25	24	D25	
	8	24	D20	24	D20	
	9	24	D20	24	D20	
	10	24	D16	24	D16	
	11	24	D16	24	D16	
	12	24	D16	24	D16	
C	1	40	D25	40	D25	BUNDLE
	2	48	D25	48	D25	BUNDLE
	3	24	D25	24	D25	
	4	24	D25	24	D25	
	5	24	D25	24	D25	
	6	24	D25	24	D25	
	7	24	D25	24	D25	
	8	24	D25	24	D25	
	9	24	D25	24	D25	
	10	24	D20	24	D20	
	11	24	D20	24	D20	
	12	24	D16	24	D16	
	13	24	D16	24	D16	
	14	24	D16	24	D16	

(PER WEB)

TYPE	SEGMENT NO.	BAR MARK 01		BAR MARK 02		REMARK
		NOS.	BAR SIZE	NOS.	BAR SIZE	
D	1	40	D25	40	D25	BUNDLE
	2	40	D25	40	D25	BUNDLE
	3	40	D25	40	D25	BUNDLE
	4	40	D25	40	D25	BUNDLE
	5	40	D25	40	D25	BUNDLE
	6	40	D20	40	D25	BUNDLE
	7	40	D20	40	D25	BUNDLE
	8	40	D20	40	D25	BUNDLE
	9	20	D25	20	D25	
	10	20	D25	20	D25	
	11	20	D25	20	D25	
	12	20	D25	20	D25	
	13	20	D20	20	D20	
	14	20	D20	20	D20	
	15	20	D20	20	D20	
	16	20	D20	20	D20	
	17	20	D20	20	D20	
	18	20	D20	20	D20	
	19	20	D20	20	D20	
	20	20	D20	20	D20	
	21	20	D16	20	D16	
	22	20	D16	20	D16	
	23	20	D16	20	D16	
E	1	40	D20	40	D20	BUNDLE
	2	24	D25	24	D25	
	3	24	D25	24	D25	
	4	24	D25	24	D25	
	5	24	D25	24	D25	
	6	24	D25	24	D25	
	7	24	D25	24	D25	
	8	24	D25	24	D25	
	9	24	D25	24	D25	
	10	24	D25	24	D25	
	11	24	D20	24	D20	
	12	24	D20	24	D20	
	13	24	D16	24	D16	
F	1	48	D20	48	D20	BUNDLE
	2	24	D20	24	D20	
	3	24	D20	24	D20	
	4	24	D16	24	D16	
	5	24	D16	24	D16	

(PER WEB)

TYPE	SEGMENT NO.	BAR MARK 01		BAR MARK 02		REMARK
		NOS.	BAR SIZE	NOS.	BAR SIZE	
G	1	40	D20	40	D20	BUNDLE
	2	48	D20	48	D20	BUNDLE
	3	48	D20	48	D20	BUNDLE
	4	24	D25	24	D25	
	5	24	D25	24	D25	
	6	24	D25	24	D25	
	7	24	D25	24	D25	
	8	24	D25	24	D25	
	9	24	D20	24	D20	
	10	24	D20	24	D20	
	11	24	D16	24	D16	
	12	24	D16	24	D16	
	13	24	D16	24	D16	
H	1	40	D20	40	D20	BUNDLE
	2	48	D20	48	D20	BUNDLE
	3	48	D20	48	D20	BUNDLE
	4	24	D25	24	D25	
	5	24	D25	24	D25	
	6	24	D25	24	D25	
	7	24	D25	24	D25	
	8	24	D25	24	D25	
I	1	40	D20	40	D20	BUNDLE
	2	24	D25	24	D25	
	3	24	D25	24	D25	
	4	24	D25	24	D25	
	5	24	D25	24	D25	
	6	24	D25	24	D25	
	7	24	D25	24	D25	
	8	24	D25	24	D25	
	9	24	D25	24	D25	
	10	24	D20	24	D20	
	11	24	D20	24	D20	
	12	24	D20	24	D20	
	13	24	D20	24	D20	
	14	24	D20	24	D20	
	15	24	D20	24	D20	
	16	24	D20	24	D20	
	17	24	D20	24	D20	

NOTES :

1. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH DWG. NO. B-M-26 , B-M-27 , B-M-28 AND B-M-30
2. REINFORCEMENT SHOWN AND CALL UP FOR HALF SECTION ONLY.
3. TYPE, SEGMENT NO., WIDTH AND HIGHT SEE DWG. NO. B-M-1 , B-M-2 AND B-M-3

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM

ORIENTAL CONSULTANTS CO., LTD.

in association with

NIPPON KOEI CO., LTD.

JAPAN INTERNATIONAL COOPERATION AGENCY

LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION

KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	T. Ohno		25/2/01
DESIGN CHECK	H. Watanabe		18/04/05
SUBMITTED	A. Hiratani		01/02/07
APPROVED	P. Viraphanth		22/02/07
	S. Tamiyabutra		22/02/07

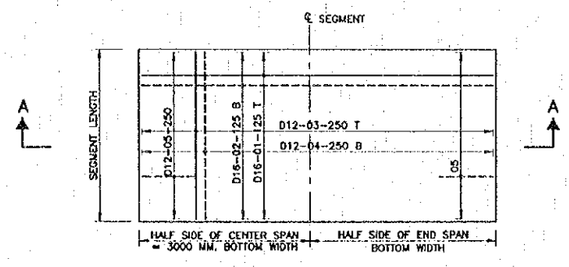
DWG. TITLE:

MAIN BRIDGE SUPERSTRUCTURE
WEB R.C. DETAILS

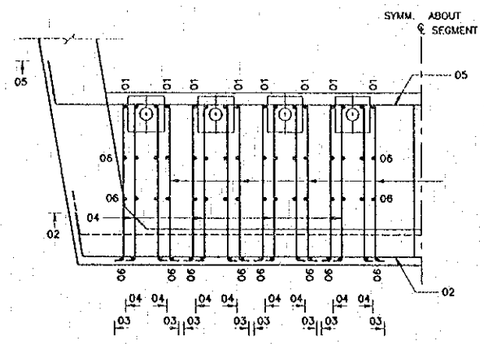
Plot date: Tue, 8 Feb 2000 - 18:27:27

C:\SMB\MAIN BRIDGE\M-29.DWG

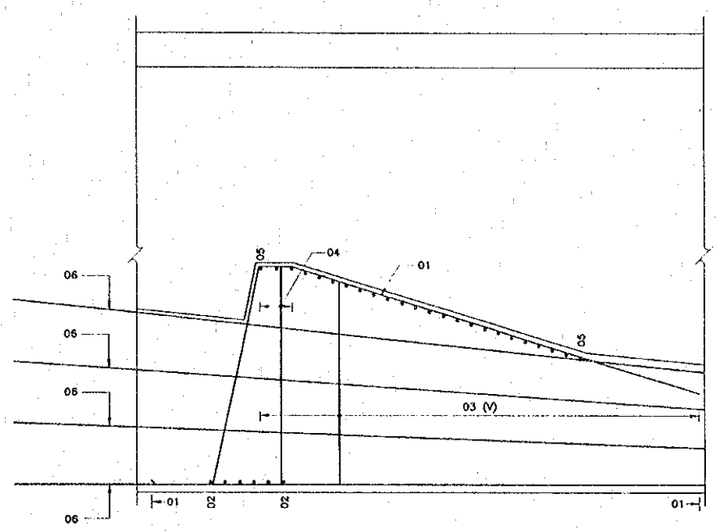
DATE OF ISSUE: 05/03/2000	
DWG. NO. B-M-30	SHEET NO. 141
DWG. STATUS	



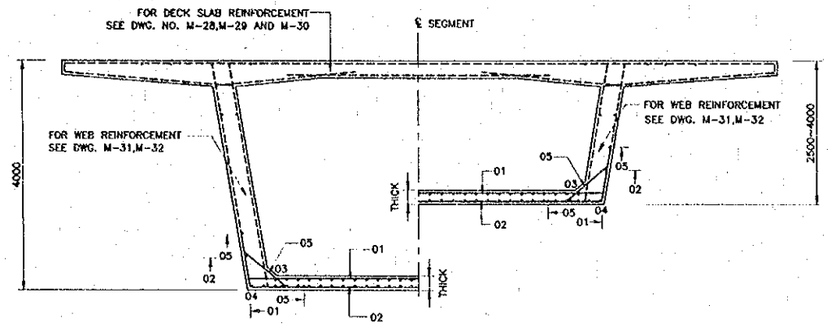
PLAN
SCALE 1:50



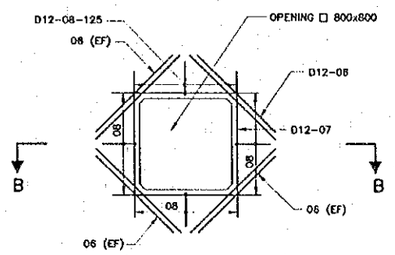
BOTTOM SLAB BLISTER FRONT VIEW
SCALE 1:25



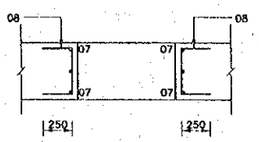
BOTTOM SLAB BLISTER SECTION
SCALE 1:25



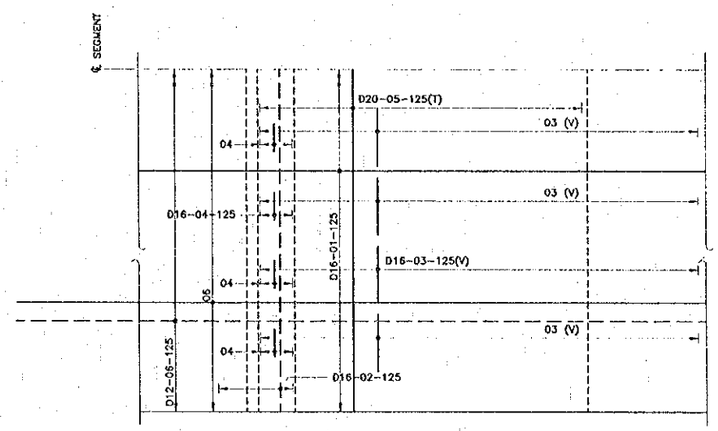
SECTION A-A
SCALE 1:50



OPENING REINFORCEMENT AT P5 & P24
SCALE 1:25



SECTION B-B
SCALE 1:25



BOTTOM SLAB BLISTER PLAN
SCALE 1:25

NOTES :

1. REINFORCEMENT SHOWN AND CALL UP FOR HALF SECTION ONLY.
2. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH DWG. NO. B-M-26, B-M-27, B-M-28 AND B-M-29

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JICA JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	T. Ohno		10/03/00
DESIGN CHECK	H. Watanabe		10/03/00
SUBMITTED	A. Hiraiwa		22/03/00
APPROVED	P. Virophanth		22/03/00
	S. Tamiyobutra		22/03/00

DWG. TITLE:

MAIN BRIDGE SUPERSTRUCTURE
BOTTOM SLAB R.C. DETAILS

Plot date: Tue, 23 Jan 2000 - 3:28:59

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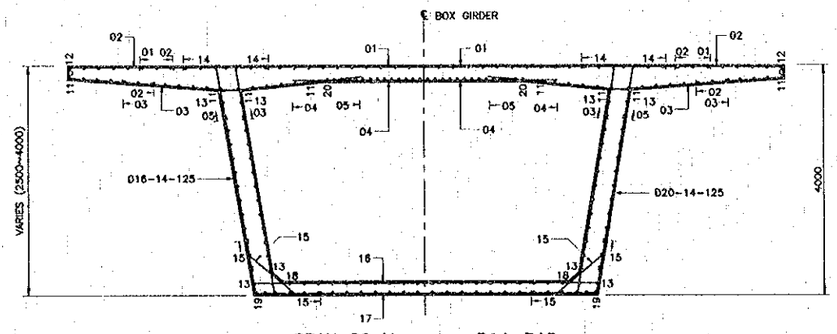
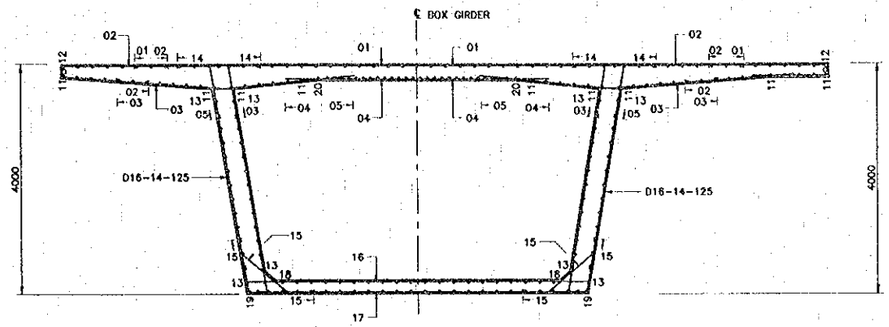
DATE OF ISSUE: 05/03/2000	
DWG. NO. B-M-31	SHEET NO. 142
DWG. STATUS	



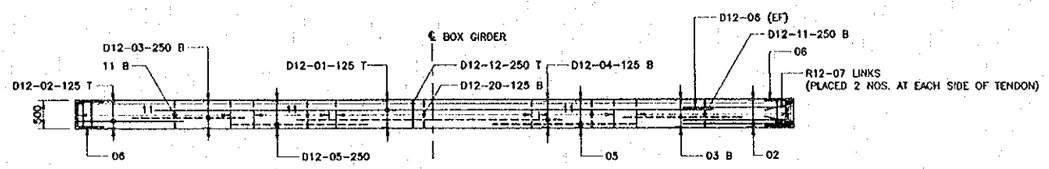
SPAN 60 M. P14--P15

ELEVATION INSITU STITCH
SCALE 1:50

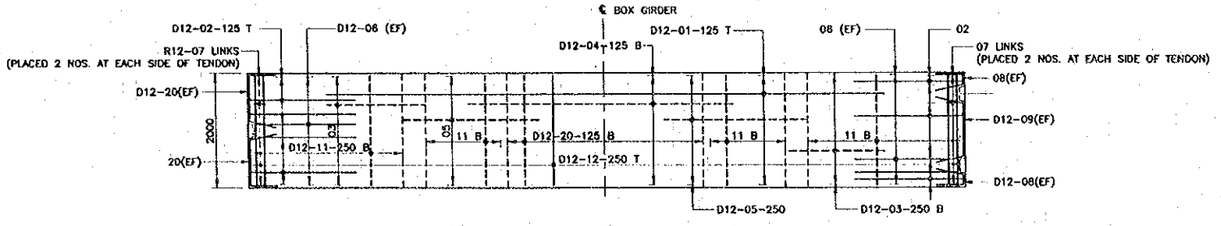


SPAN 80 M. SPAN 110 M.

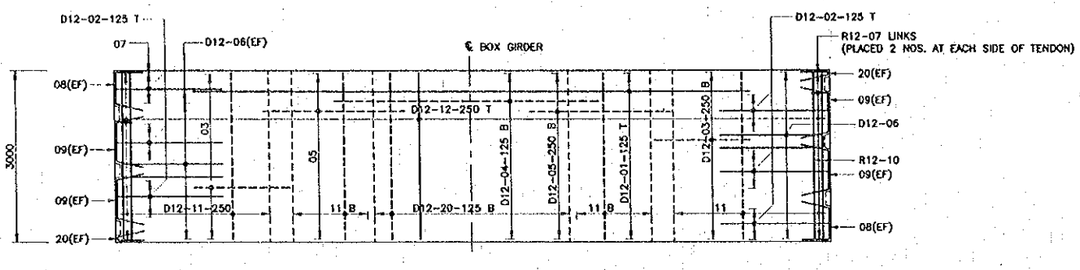
ELEVATION INSITU STITCH
SCALE 1:50



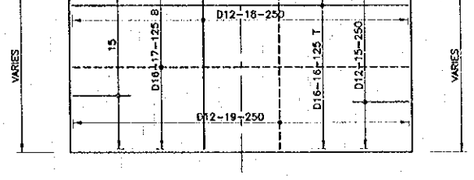
TOP PLAN (500 INSITU STITCH)
SCALE 1:50



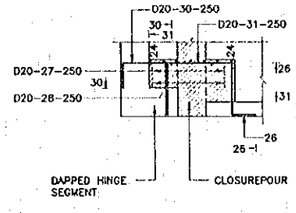
TOP PLAN (2000 INSITU STITCH)
SCALE 1:50

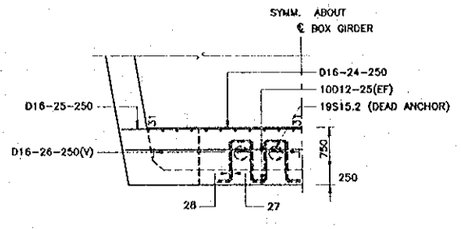


TOP PLAN (3000 INSITU STITCH)
SCALE 1:50



BOTTOM PLAN (500, 2000 & 3000 INSITU STITCH)
SCALE 1:50





P14~P15 INSITU STITCH R.C. DETAILS
SCALE 1:20

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	T. Ohno	T. Ohno	15/2/00
DESIGN CHECK	H. Watanabe		18/02/00
SUBMITTED	A. Hirotani		21/2/00
APPROVED	P. Viraphanth		22/02/00
	S. Temiyabutra	S. Temiyabutra	22/02/00

DWG. TITLE:
MAIN BRIDGE SUPERSTRUCTURE
INSITU STITCH R.C. DETAILS

Plot date: Tue, 8 Feb 2000 - 18:31:27

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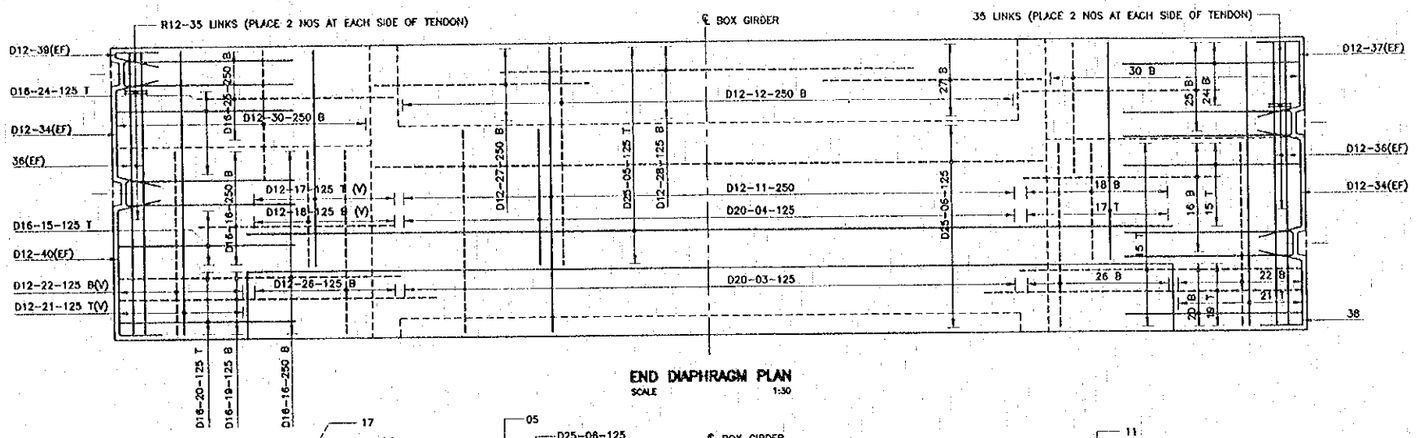
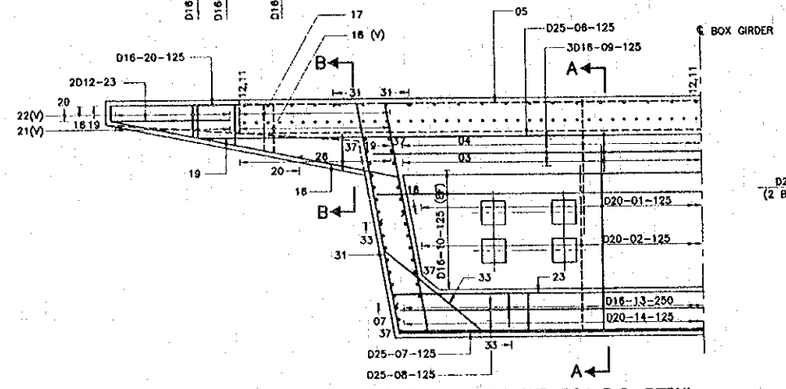
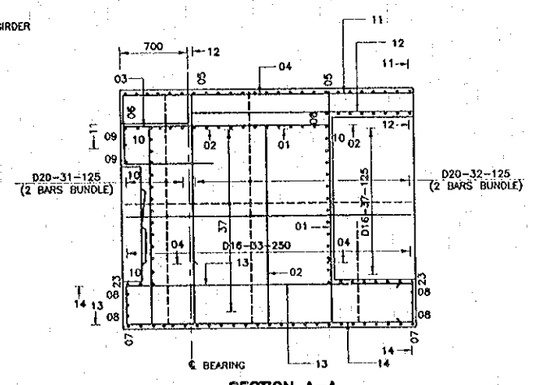
DATE OF ISSUE: 05/03/2000	
DWG. NO. B-M-32	SHEET NO. 143
DWG. STATUS	



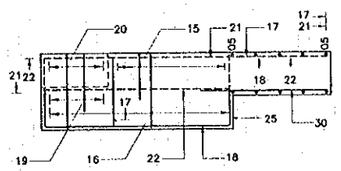
END DIAPHRAGM PLAN
SCALE 1:30



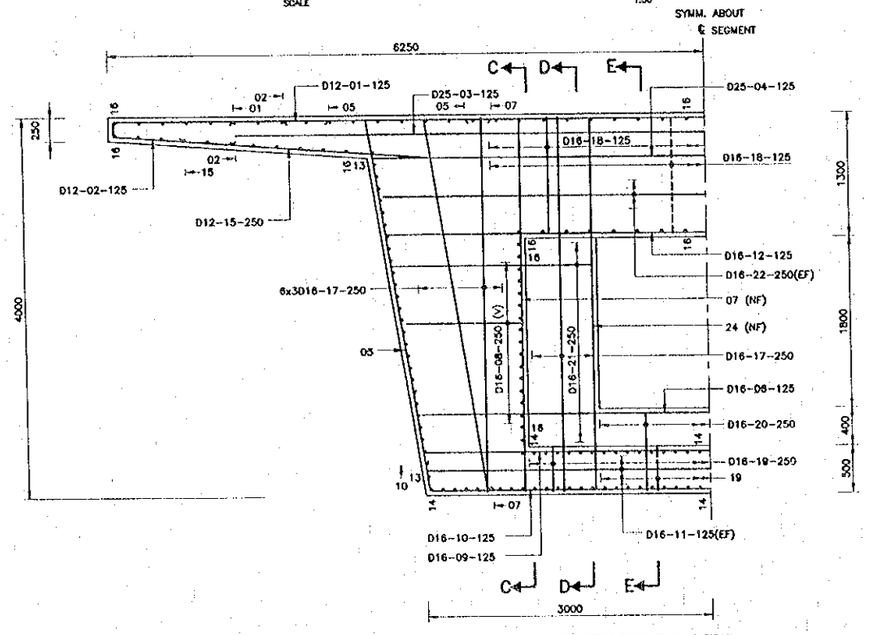
END DIAPHRAGM AT P5 AND P24 R.C. DETAIL
SCALE 1:30



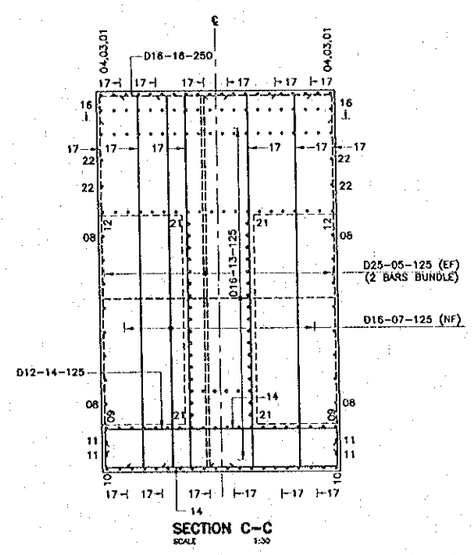
SECTION A-A
SCALE 1:30



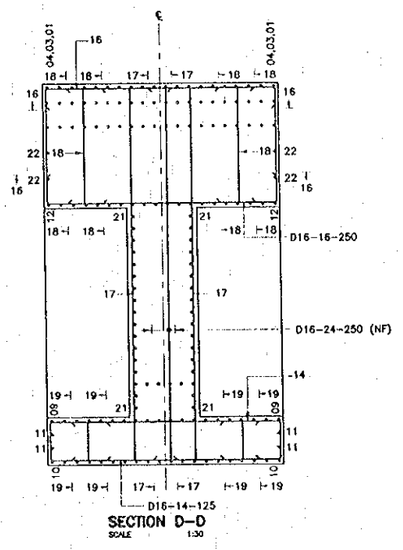
SECTION B-B
SCALE 1:30



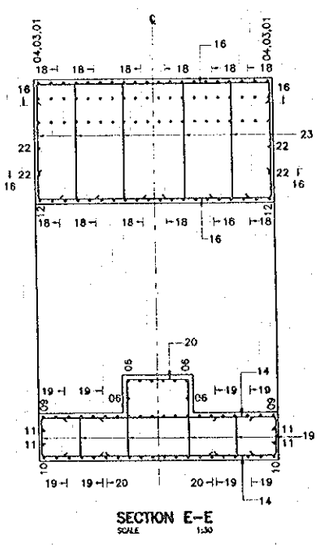
PIER HEAD SEGMENT R.C. DETAIL
SCALE 1:30



SECTION C-C
SCALE 1:30



SECTION D-D
SCALE 1:30



SECTION E-E
SCALE 1:30

NOTES :
1. REINFORCEMENT SHOWN AND CALL UP FOR HALF SECTION ONLY.
2. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH B-AC-2.

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JICA JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

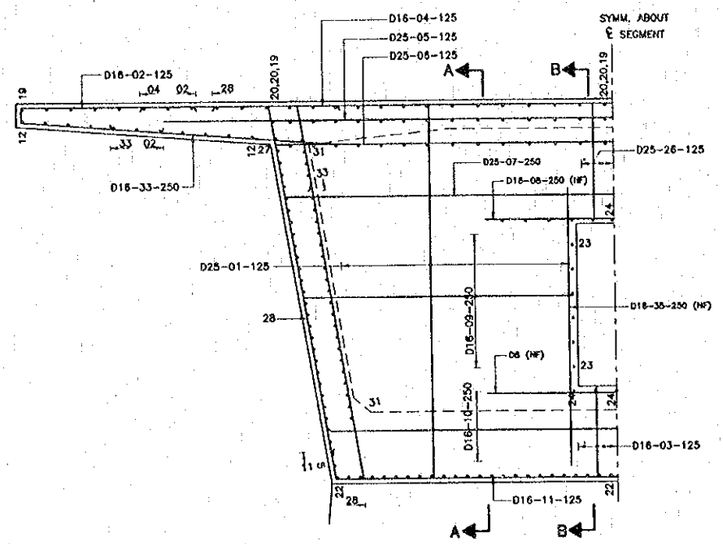
THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	T. Ohno		
DESIGN CHECK	H. Watanabe		12/12/00
SUBMITTED	A. Hirotani		12/12/00
APPROVED	P. Viraphanth		12/12/00
	S. Tamiyobutra		12/12/00

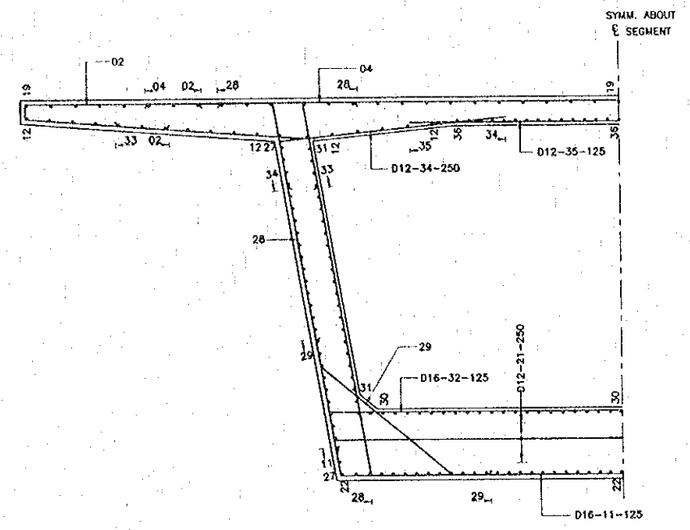
DWG. TITLE:
MAIN BRIDGE SUPERSTRUCTURE
END DIAPHRAGM AND PIER HEAD SEGMENT R.C. DETAILS

Plot date: Fri, 4 Feb 2000 - 4:15:35
C:\SMB\MAIN-BRIDGE\SUPER\M-32.dwg

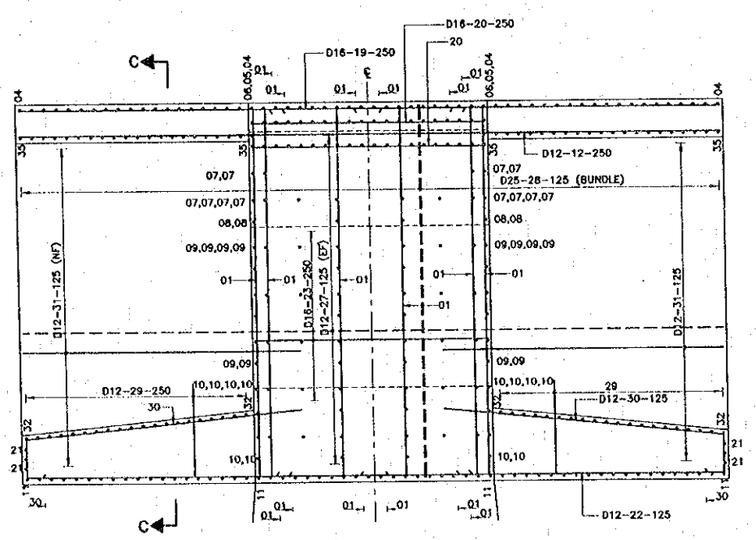
DATE OF ISSUE: 05/03/2000	
DWG. NO. B-M-33	SHEET NO. 144
DWG. STATUS	



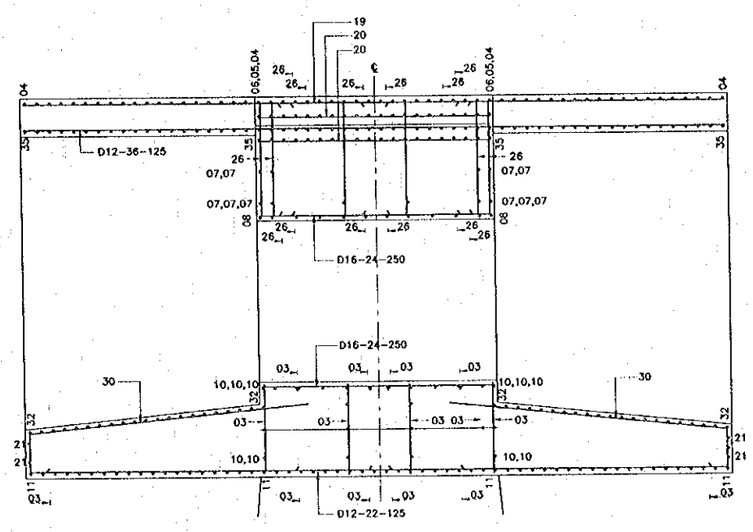
RIGID FRAME AT 80 M. PIER P10,P12,P17 & P19
SCALE 1:30



SECTION C-C
SCALE 1:30



SECTION A-A
SCALE 1:30



SECTION B-B
SCALE 1:30

NOTES:
1. REINFORCEMENT SHOWN AND CALL UP FOR HALF SECTION ONLY.
2. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH DWG. NO. B-MS-7, B-M-25, B-M-26 (DETAIL A)

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JICA JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	T. Ohno	T. Ohno	15/12/00
DESIGN CHECK	H. Watanabe		14/12/00
SUBMITTED	A. Hirotani		22/12/00
APPROVED	P. Viraphanth		22/12/00
	S. Temiyabutra	S. Temiyabutra	22/12/00

DWG. TITLE:
MAIN BRIDGE SUPERSTRUCTURE
PIER HEAD DIAPHRAGM R.C. DETAILS
SHEET 1 OF 2

Plot date: Tue, 11 Jan 2000 - 18:45:10
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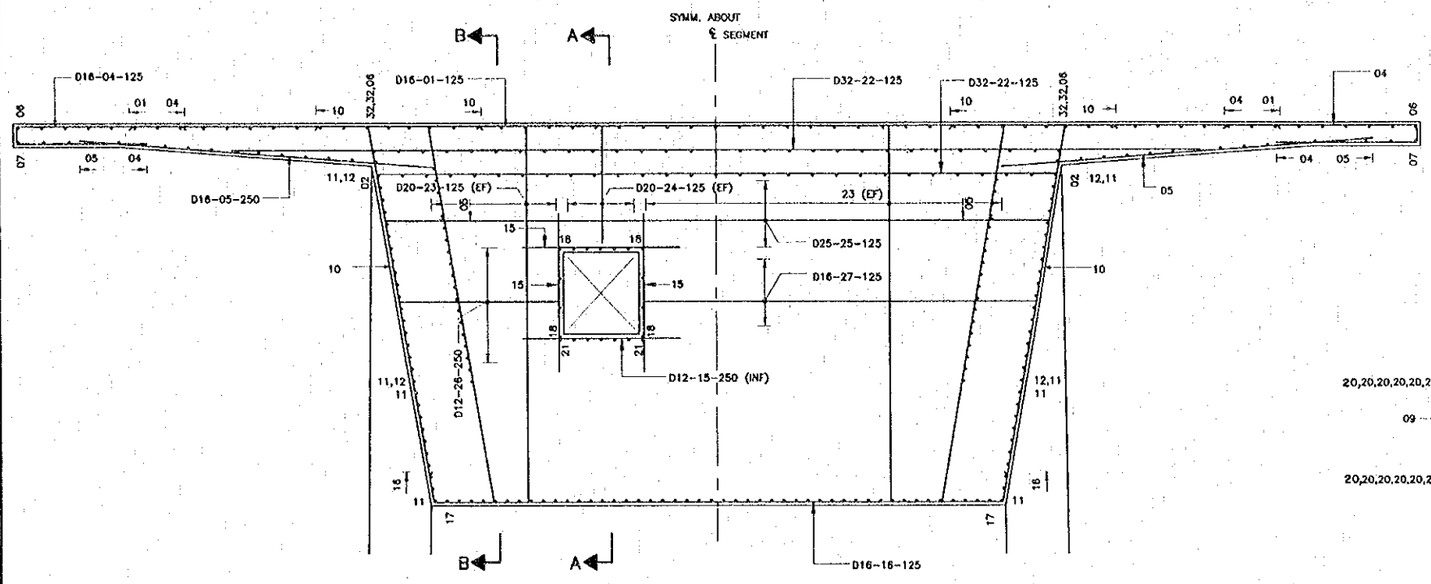
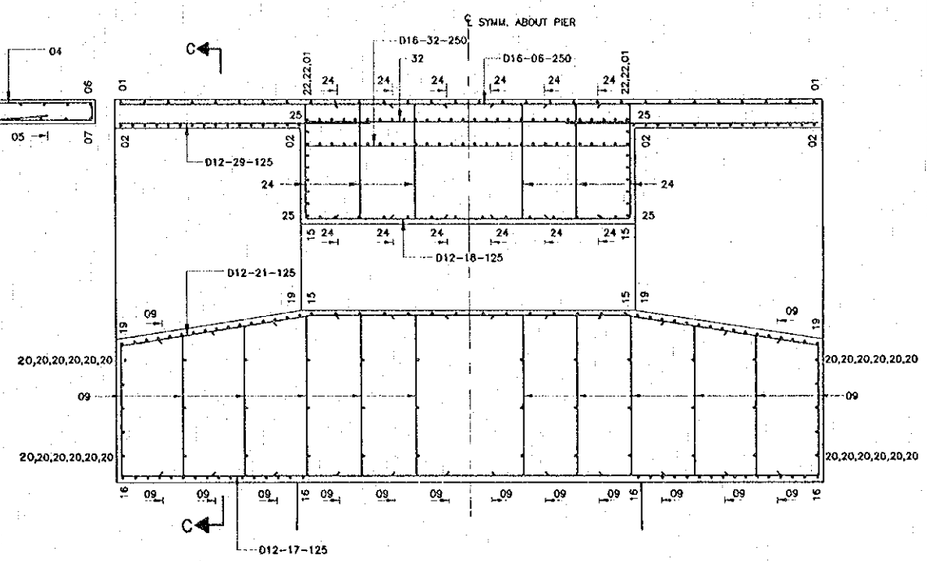
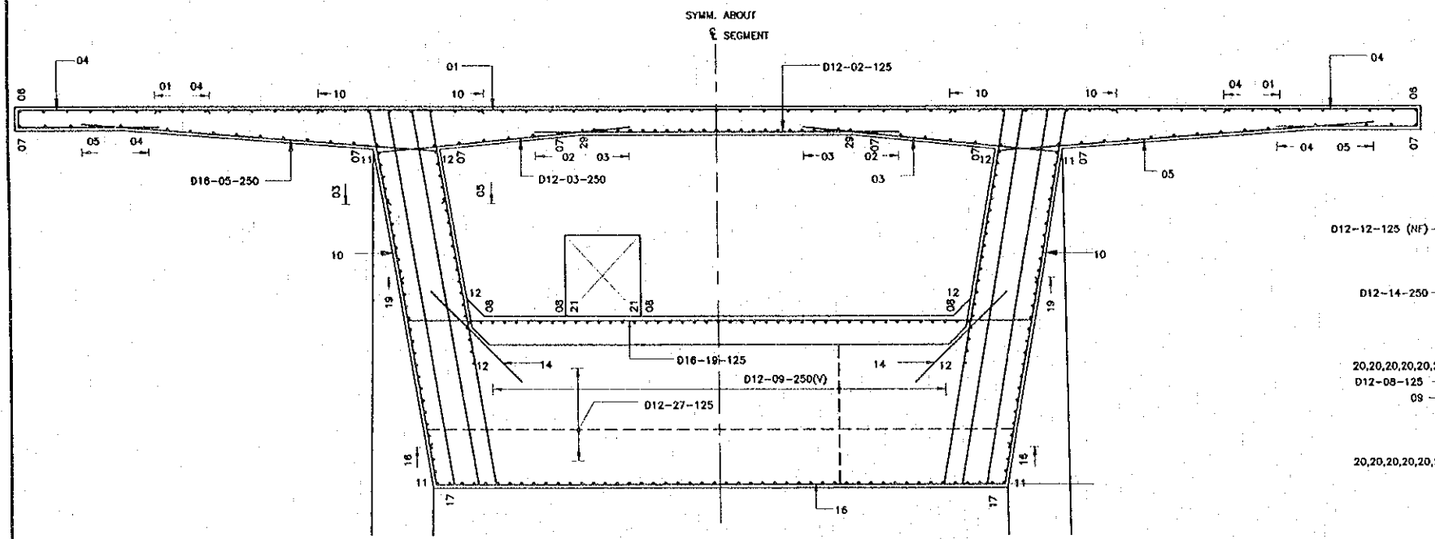
DATE OF ISSUE: 05/03/2000	
DWG. NO. B-M-34	SHEET NO. 145
DWG. STATUS	



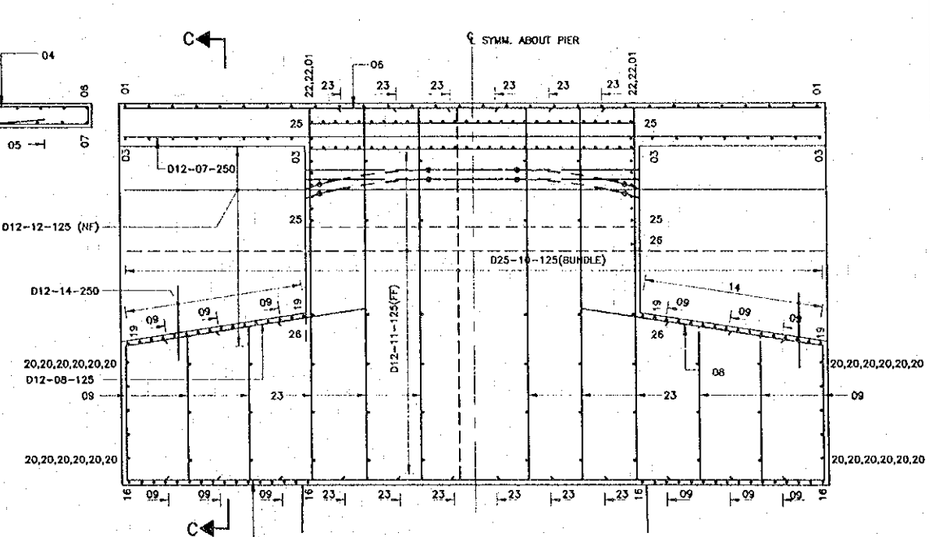
DIAPHRAGM DETAIL P11 & P18
SCALE 1:30



SECTION A-A
SCALE 1:30



SECTION C-C
SCALE 1:30



SECTION B-B
SCALE 1:30

P11,P18 PIER HEAD DIAPHRAGM R.C. DETAIL

NOTES :
1. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH DWG. NO. B-MS-8, B-M-25, B-M-28 (DETAIL A)

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JICA JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

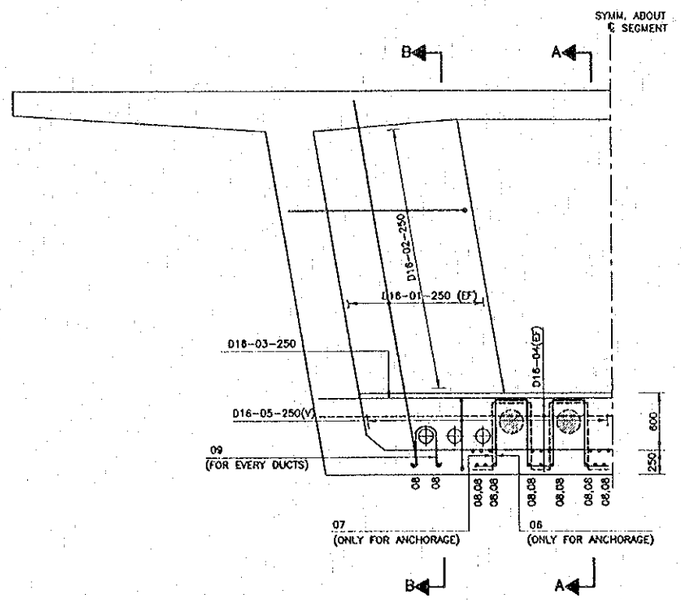
THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	T. Ohno		
DESIGN CHECK	H. Watanabe		11/01/00
SUBMITTED	A. Hirotani		
APPROVED	P. Virephanh		12/01/00
	S. Tamyobutra		12/01/00

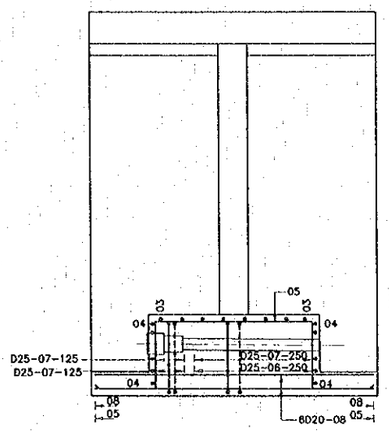
DWG. TITLE:
MAIN BRIDGE SUPERSTRUCTURE
PIER HEAD DIAPHRAGM R.C. DETAILS
SHEET 2 OF 2

Plot date: Fri, 7 Jan 2000 - 11:43:15
C:\SMB\MAIN-BRIDGE\M-34.DWG

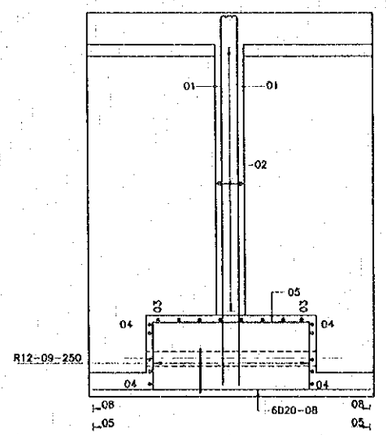
DATE OF ISSUE:	05/03/2000
DWG. NO. B-M-35	SHEET NO. 146
DWG. STATUS	



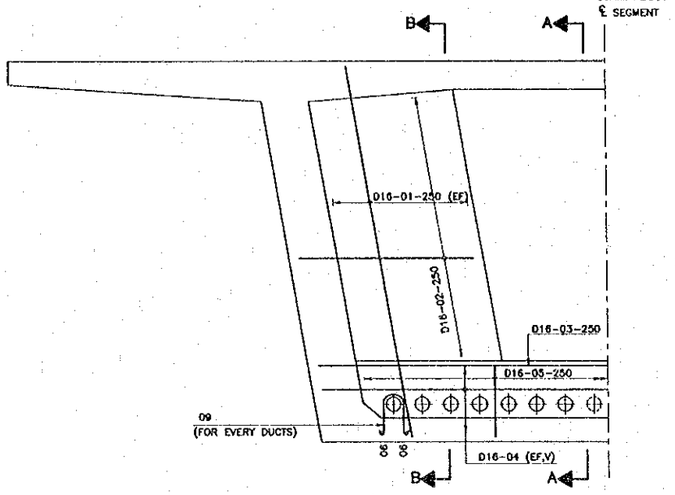
DEVIATOR R.C. DETAIL TYPE D1
SCALE 1:30



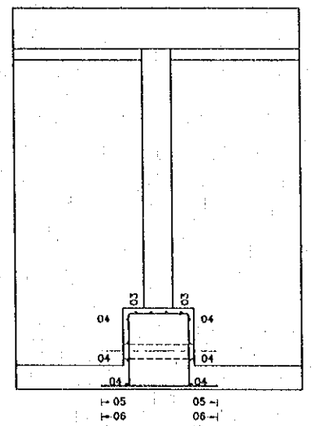
SECTION A-A
SCALE 1:30



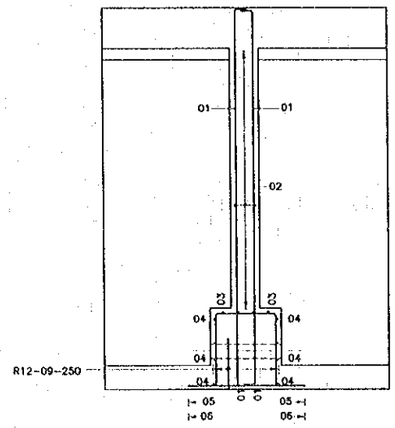
SECTION B-B
SCALE 1:30



DEVIATOR R.C. DETAIL TYPE D2
SCALE 1:30



SECTION A-A
SCALE 1:30



SECTION B-B
SCALE 1:30

NOTES :

1. REINFORCEMENT SHOWN AND CALL UP FOR HALF SECTION ONLY.
2. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH DWG. NO. B-M-26 ~ B-M-30
3. ANCHOR CAP OMIT FOR CLARITY .
4. S.T.K (GALVANIZED) FOR DUCT.

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JICA JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

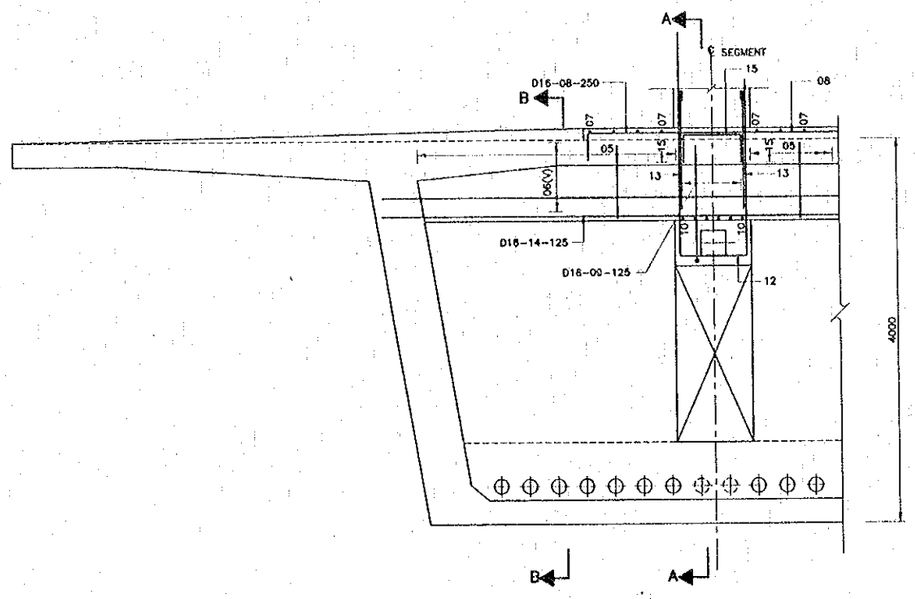
THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	T. Ohno		12/12/99
DESIGN CHECK	H. Watanabe		12/12/99
SUBMITTED	A. Hirotani		12/12/99
APPROVED	P. Viraphanth		12/12/99
	S. Temiyabutra		22/12/99

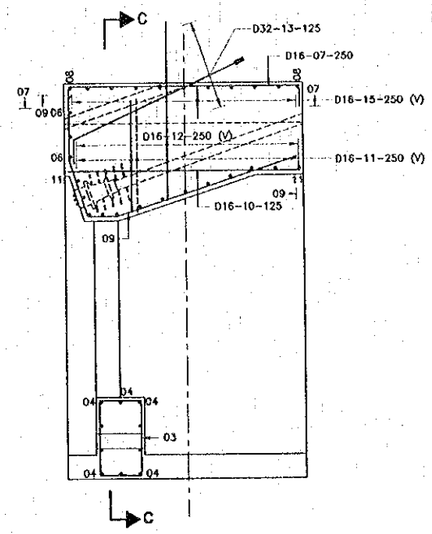
DWG. TITLE:
MAIN BRIDGE SUPERSTRUCTURE
DEVIATOR RC. DETAILS

Plot date: Wed, 22 Dec 1999 - 15:17:44
C:\SMB\MAIN-BRIDGE\M-35.DAG

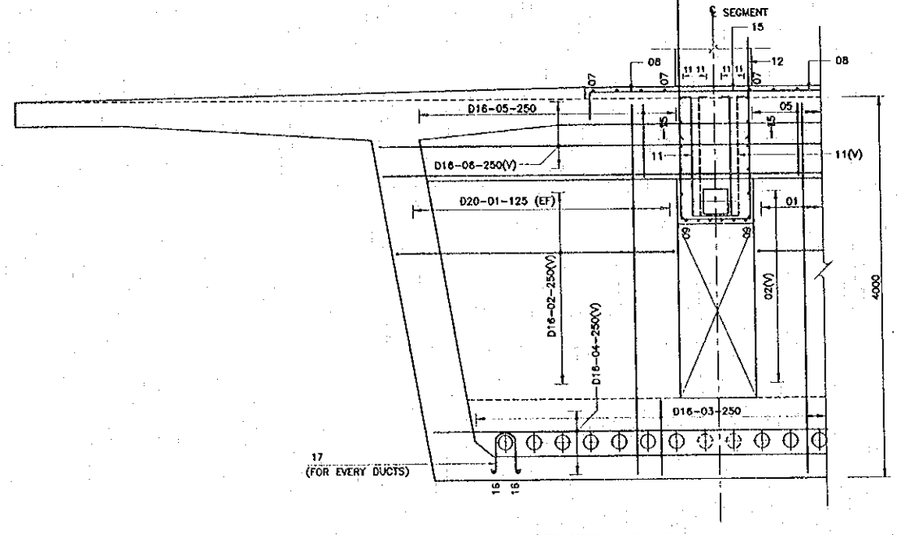
DATE OF ISSUE: 05/03/2000	
DWG. NO. B-M-36	SHEET NO. 147
DWG. STATUS	



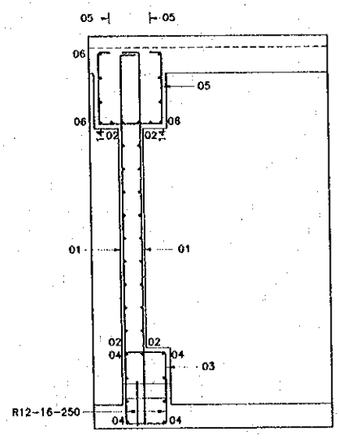
DEVIATOR TYPE D3 (BLISTER)
SCALE 1:30



SECTION A-A
SCALE 1:30



SECTION C-C
SCALE 1:30



SECTION B-B
SCALE 1:30

NOTES :

1. REINFORCEMENT SHOWN AND CALL UP FOR HALF SECTION ONLY.
2. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH DWG. NO. B-M-26 ~ B-M-30
3. ANCHOR CAP OMIT FOR CLARITY.
4. REINFORCEMENT BAR NO. 13 & NO. 09 AND TO CONNECT WITH PC. SAIL REINFORCEMENT BY MEANS OF MECHANICAL JOINT, AND FOR BAR NO. 11, LAPS OR MECHANICAL JOINT.
5. S.T.K. (GALVANIZED) FOR DUCT.

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	T. Ohno		15/2/01
DESIGN CHECK	H. Watanabe		15/2/01
SUBMITTED	A. Hirotani		15/2/01
APPROVED	P. Viraphanh		12/02/01
	S. Temiyabutra		22/02/01

DWG. TITLE:
MAIN BRIDGE SUPERSTRUCTURE
CABLE STAY ANCHOR RC. DETAILS

Plot date: Wed, 26 Jan 2000 - 10:45:24
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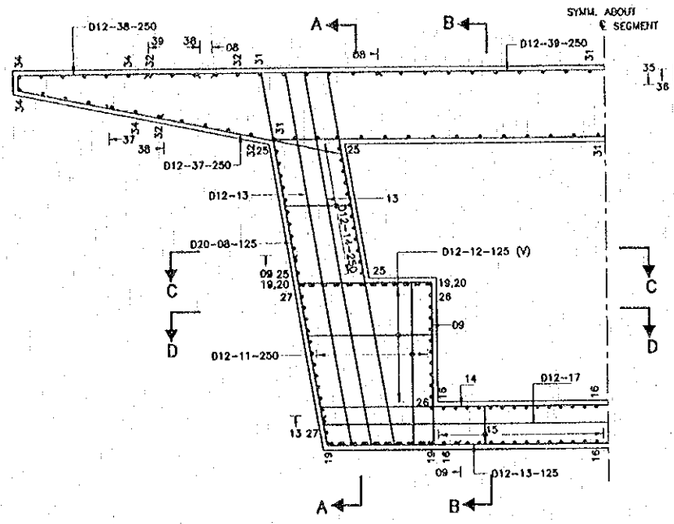
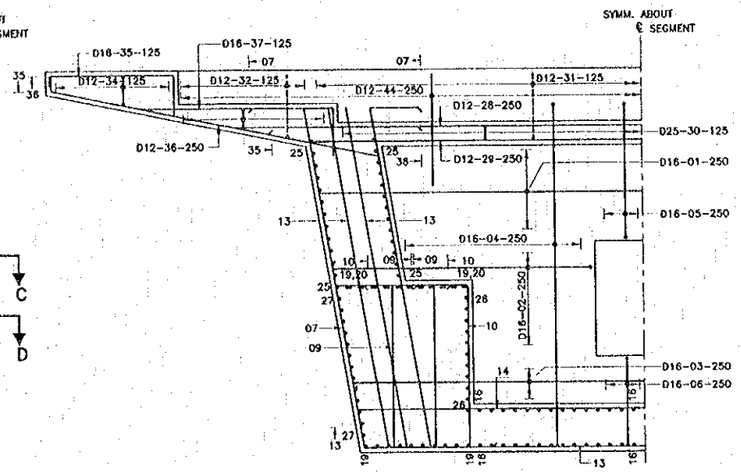
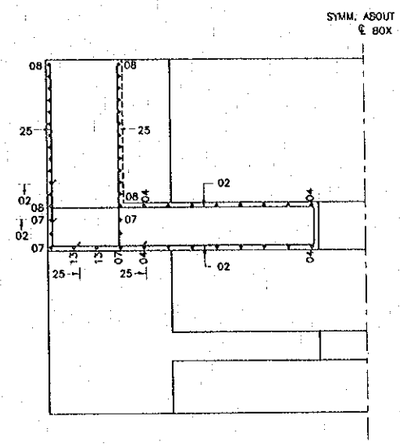
DATE OF ISSUE: 05/03/2000	
DWG. NO. B-M-37	SHEET NO. 148
DWG. STATUS	



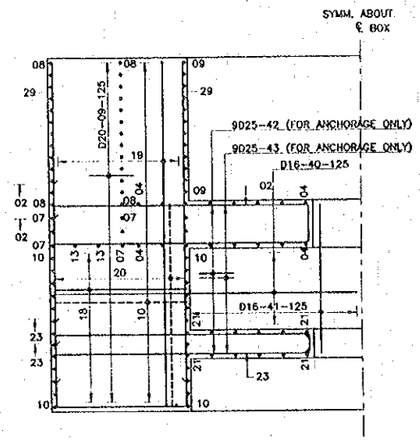
SECTION E-E
SCALE 1:30



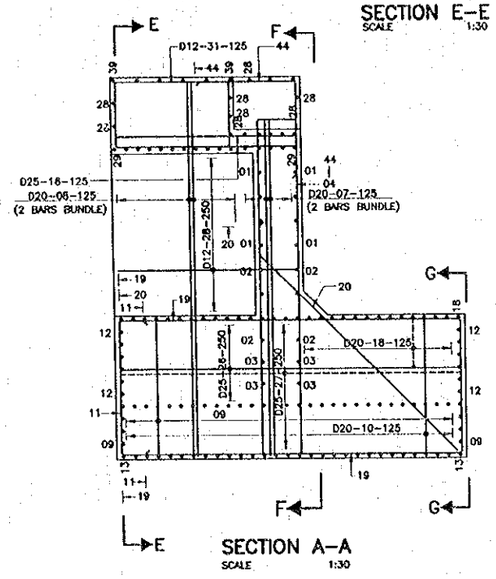
SECTION F-F
SCALE 1:30



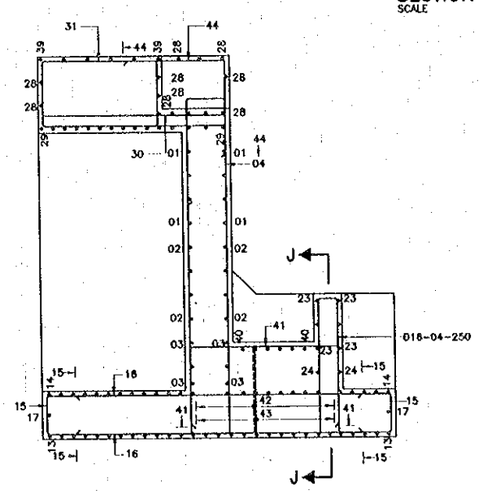
SECTION C-C
SCALE 1:30



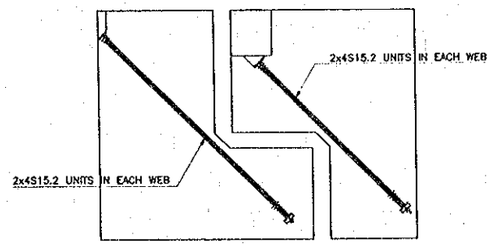
SECTION D-D
SCALE 1:30



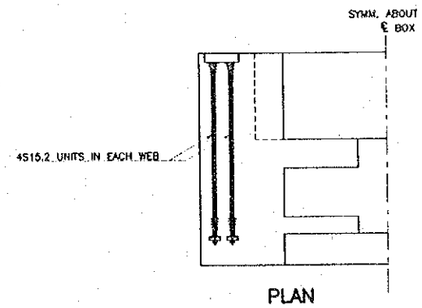
SECTION A-A
SCALE 1:30



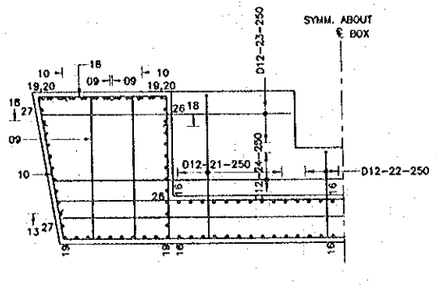
SECTION B-B
SCALE 1:30



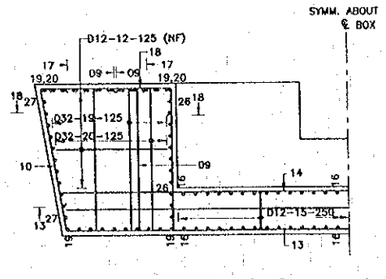
SIDE VIEW
DIAGONAL PRESTRESSING IN DAPPED HINGE
SCALE 1:50



PLAN
DIAGONAL PRESTRESSING TENDON LAYOUT
SCALE 1:50



SECTION J-J
SCALE 1:30



SECTION G-G
SCALE 1:30

NOTES :

1. REINFORCEMENT SHOWN AND CALL UP FOR HALF SECTION ONLY.
2. ALL STRANDS TO BE S15.2 WITH A UTS OF 261 KN.
3. ALL STRANDS IN THE TENDONS SHALL BE STRESSED FROM ONE END ONLY WITH JACKING FORCE OF 710 KN BEFORE LOCK OFF.
4. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH B-M-25 , B-M-26 (DETAILS A) , B-AC-2 AND B-AC-5

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JICA JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

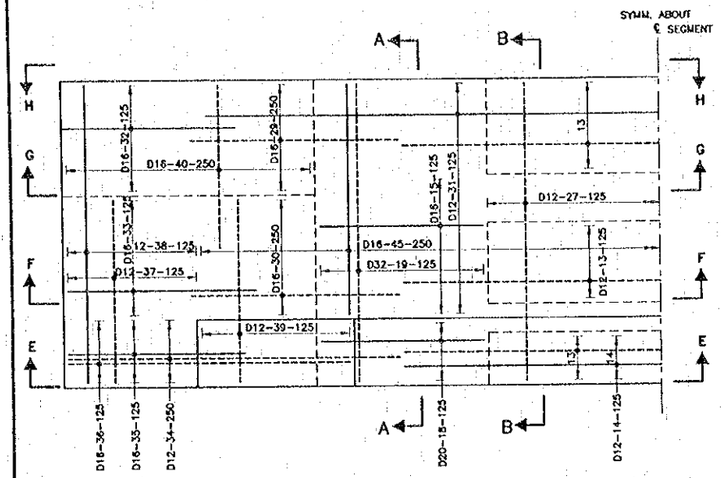
THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	T. Ohno		14/11/00
DESIGN CHECK	H. Watanabe		17/02/00
SUBMITTED	A. Horatani		21/2/00
APPROVED	P. Virophanth		18/02/00
	S. Temiyabutra		22/2/00

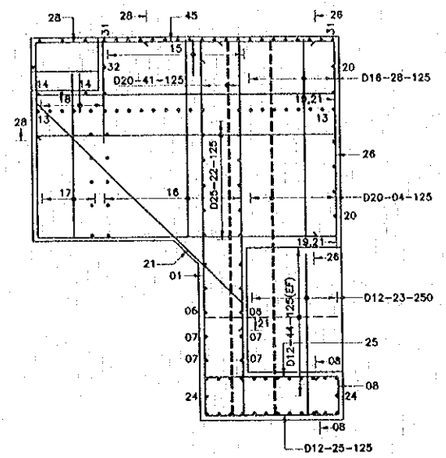
DWG. TITLE:
MAIN BRIDGE SUPERSTRUCTURE
DAPPED HINGE SEGMENT R.C. DETAILS
SHEET 1 OF 2

Plot date: Tue, 8 Feb 2000 - 17:41:20
C:\SWB\MAIN-BRIDGE\M-37.dgn

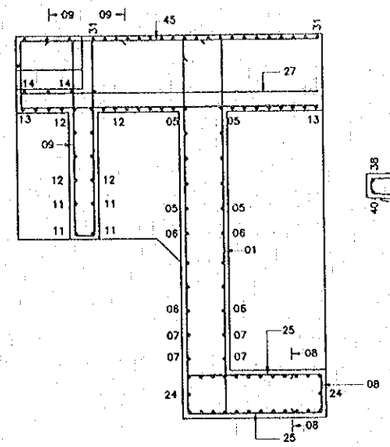
DATE OF ISSUE: 05/03/2000	
DWG. NO. B-M-38	SHEET NO. 149
DWG. STATUS	



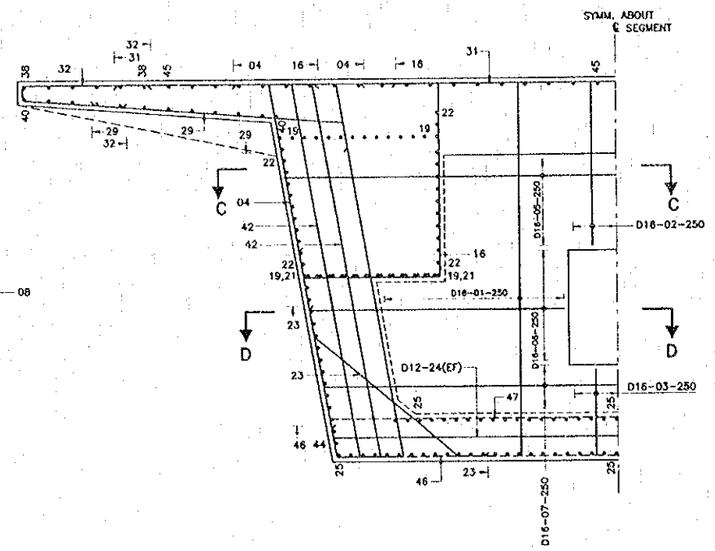
DECK SLAB OF UPPER DAPPED SUPPORT
SCALE 1:30



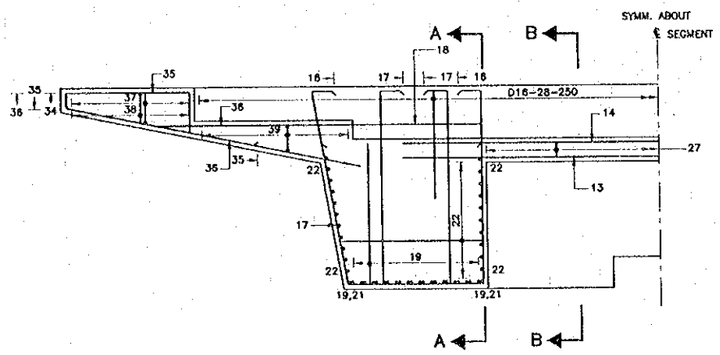
SECTION A–A
SCALE 1:30



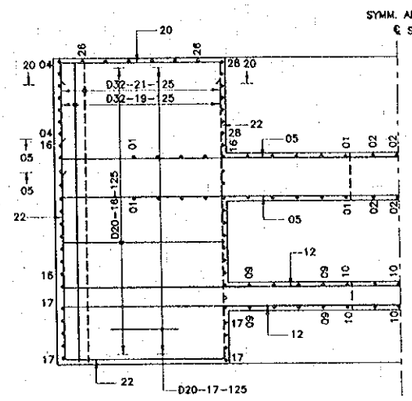
SECTION B–B
SCALE 1:30



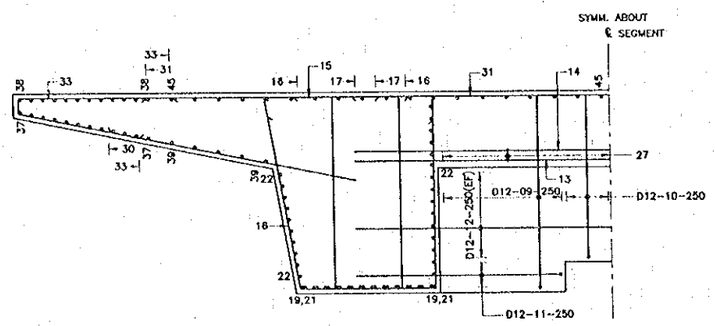
SECTION G–G
SCALE 1:30



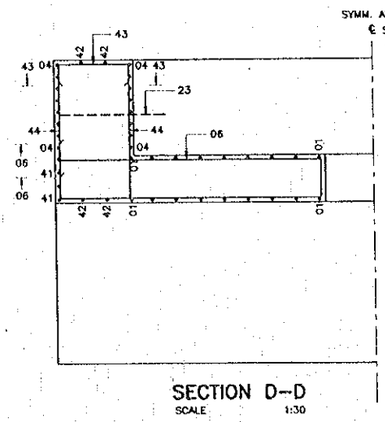
SECTION E–E
SCALE 1:30



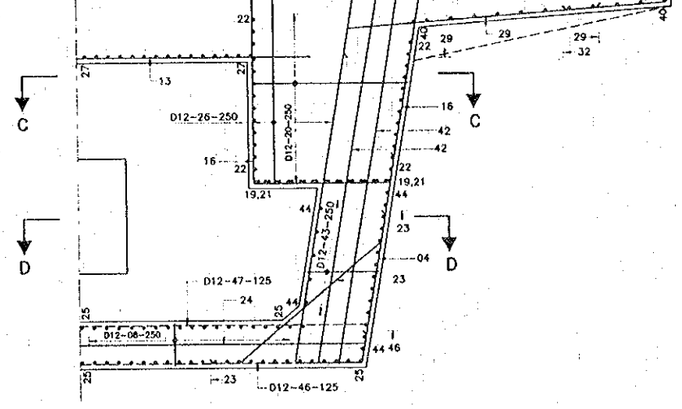
SECTION C–C
SCALE 1:30



SECTION F–F
SCALE 1:30



SECTION D–D
SCALE 1:30



SECTION H–H
SCALE 1:30

NOTES :
1. REINFORCEMENT SHOWN AND CALL UP FOR HALF SECTION ONLY.
2. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH B-M-25, B-M-26 (DETAIL A), B-AC-2, B-AC-5

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JICA JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

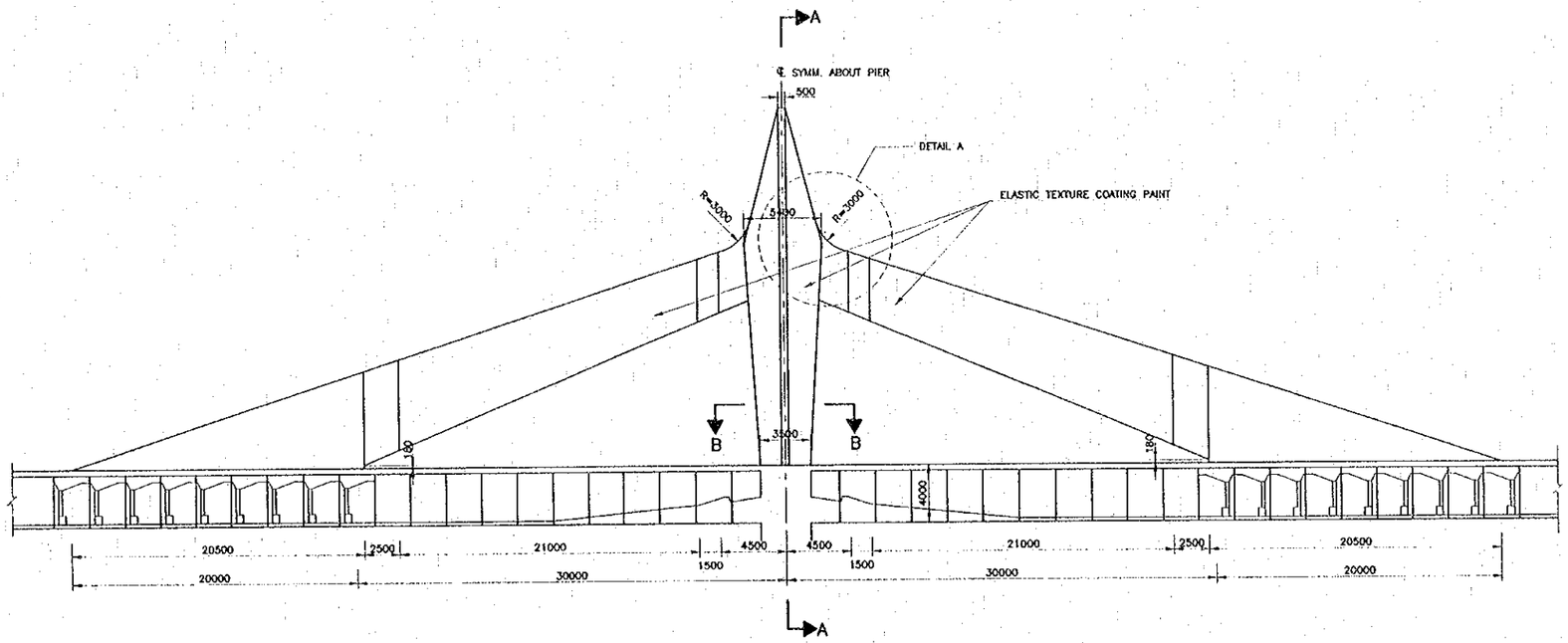
THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	T. Ohno		
DESIGN CHECK	H. Watanabe		
SUBMITTED	A. Hirotani		
APPROVED	P. Viraphanth		22/02/00
	S. Temyabutra		22/02/00

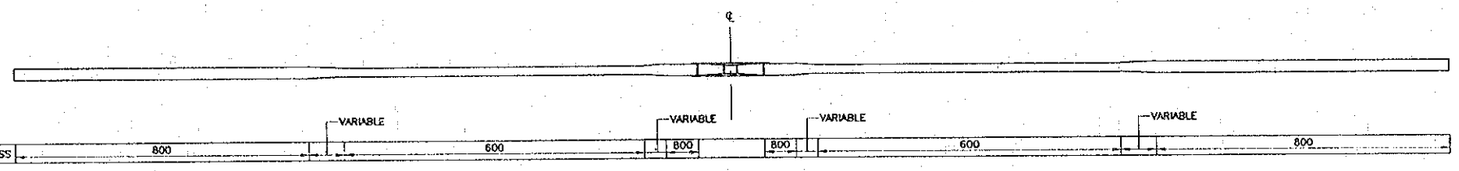
DWG. TITLE:
MAIN BRIDGE SUPERSTRUCTURE
DAPPED HINGE SEGMENT R.C. DETAILS
(SHEET 2 OF 2)

Plot date: Thu, 10 Feb 2000 - 2:52:39
C:\SUB\MAIN-BRIDGE\M-38.dwg

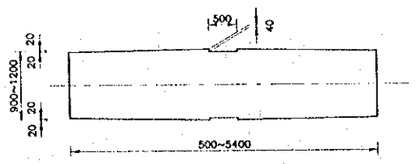
DATE OF ISSUE: 05/03/2000	
DWG. NO. B-M-39	SHEET NO. 150
DWG. STATUS	



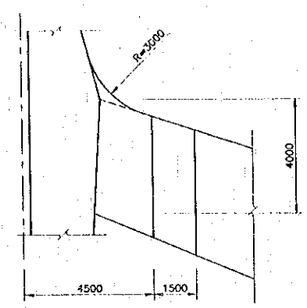
PC. SAIL ELEVATION
SCALE 1:200



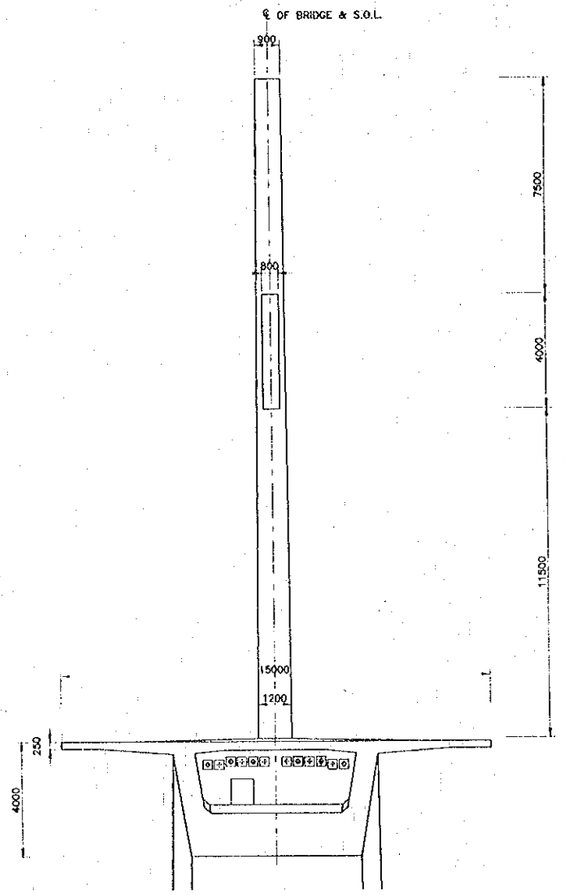
PC. SAIL PLAN
SCALE 1:200



SECTION B-B
SCALE 1:50



DETAIL A
SCALE 1:100



SECTION A-A
SCALE 1:100

NOTES :

1. ELASTIC TEXTURE COATING FOR TOWER AND PC. SAIL SHALL FOLLOW THE SPECIFICATIONS.

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	T. Ohno		
DESIGN CHECK	H. Watanabe		
SUBMITTED	A. Hiratani		
APPROVED	P. Viraphanth		22/02/00
	S. Tamiyabutra		22/02/00

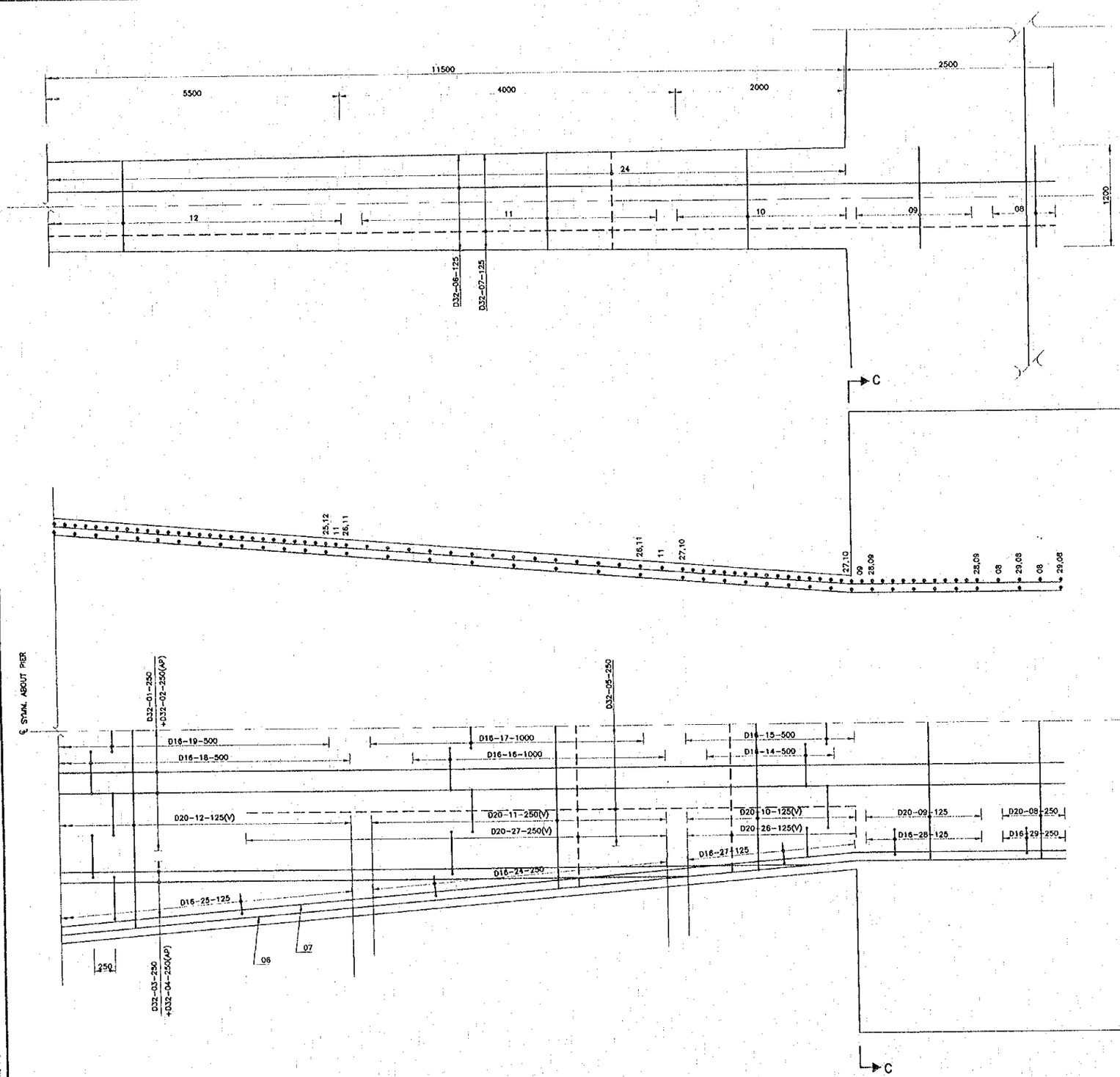
DWG. TITLE:

MAIN BRIDGE SUPERSTRUCTURE
TOWER AND PC. SAIL GENERAL ARRANGEMENT

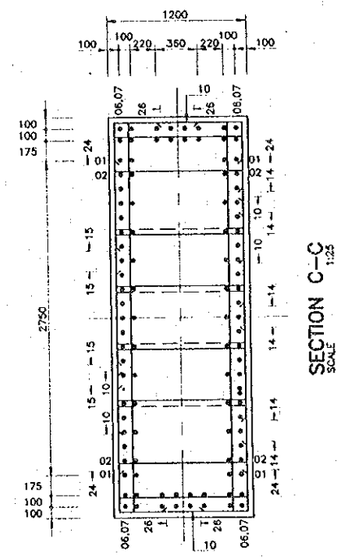
Plot date: Fri, 4 Feb 2000 - 4.37.05

C:\SMB\MAIN-BRIDGE\SUPERM-39.DWG

DATE OF ISSUE: 05/03/2000	
DWG. NO. B-M-40	SHEET NO. 151
DWG. STATUS	

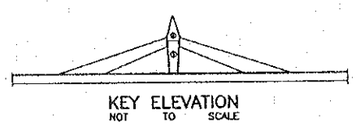


P.C. SAIL REINFORCEMENT DETAIL
SCALE 1:25



NOTES :

1. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH DWG. NO. B-M-41



KEY ELEVATION
NOT TO SCALE

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	E. Ohno		15/01/00
DESIGN CHECK	H. Watanabe		17/01/00
SUBMITTED	A. Hirotani		21/1/00
APPROVED	P. Viraphanth		25/01/00
	S. Tamiyabutra		23/01/00

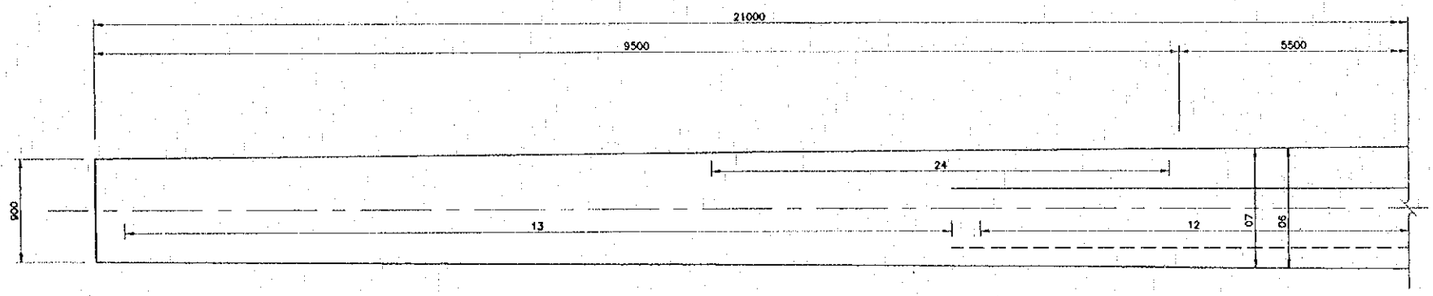
DWG. TITLE:

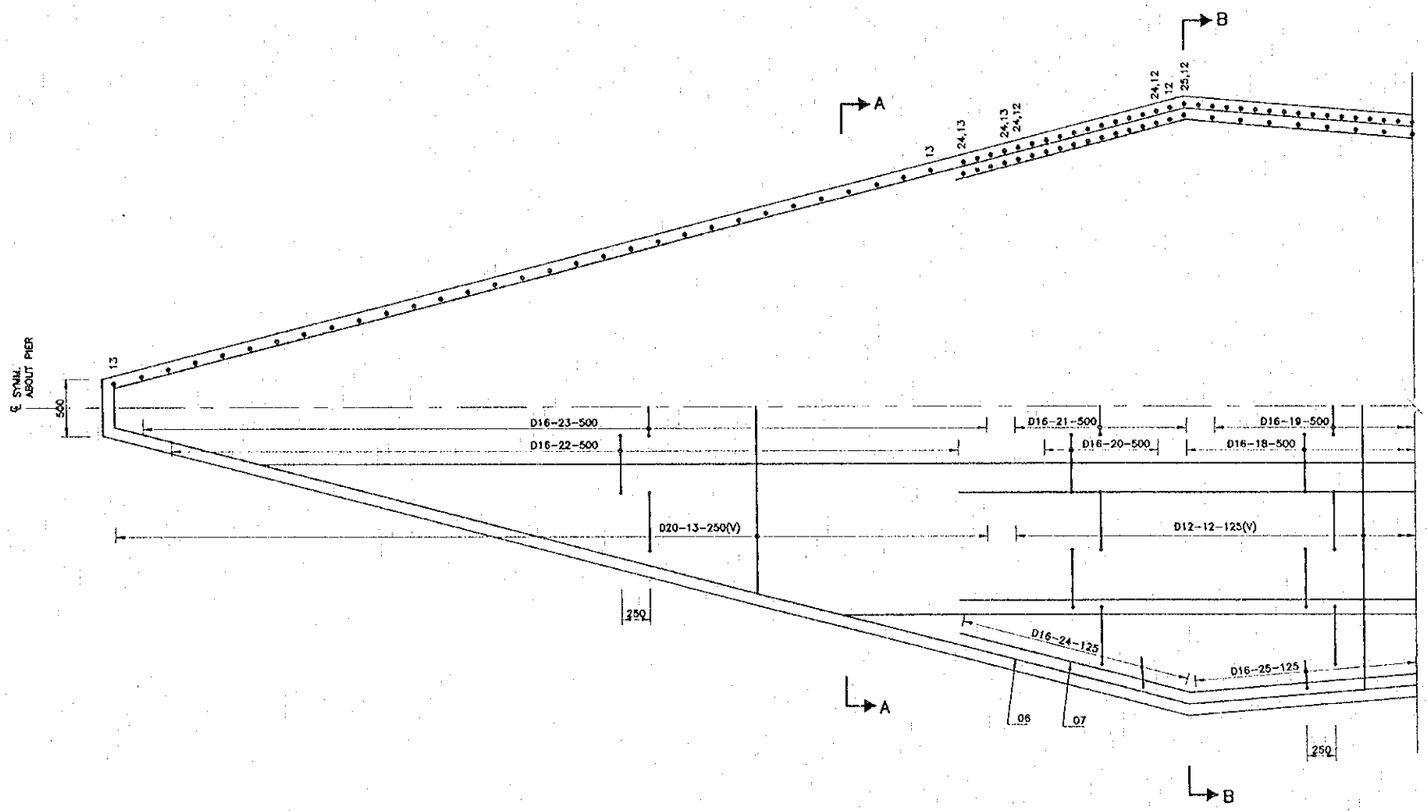
MAIN BRIDGE SUPERSTRUCTURE
PC. SAIL R.C. DETAILS

Plot date: Thu, 17 Feb 2000 - 1:34:45

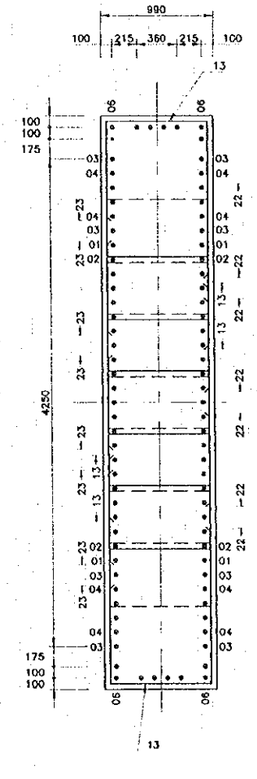
C:\SMB\MAIN-BRIDGE\M-40.DAC

DATE OF ISSUE: 05/03/2000	
DWG. NO. B-M-41	SHEET NO. 152
DWG. STATUS	

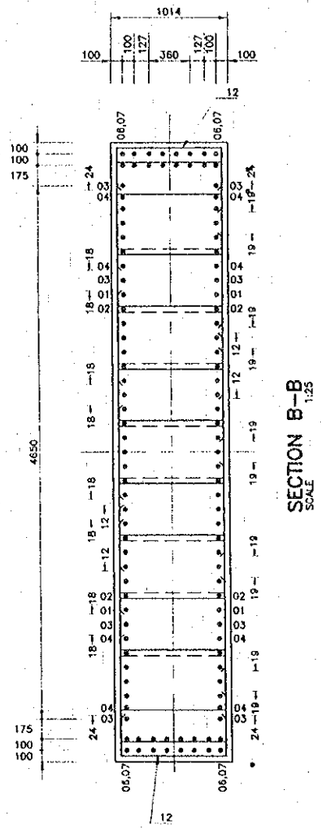




P.C. SAIL REINFORCEMENT DETAIL
1:25



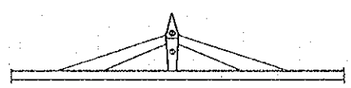
SECTION A-A
SCALE



SECTION B-B
SCALE

NOTES :

1. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH DWG. NO. B-M-40



KEY ELEVATION
NOT TO SCALE

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	T. Onno		11/01/00
DESIGN CHECK	H. Watanabe		11/01/00
SUBMITTED	A. Hiratani		11/01/00
APPROVED	P. Viraphanth		11/01/00
	S. Temiyabutra		11/01/00

DWG. TITLE:

MAIN BRIDGE SUPERSTRUCTURE
PC. SAIL R.C. DETAILS

Plot date: Thu, 17 Feb 2000 - 1:33:21

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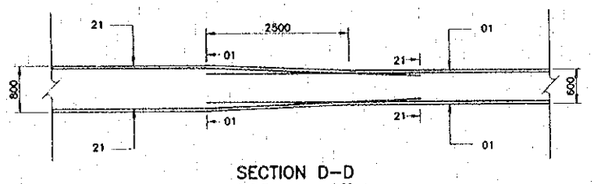
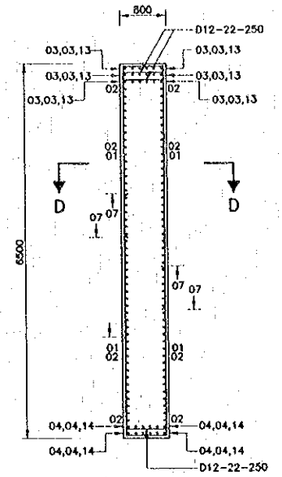
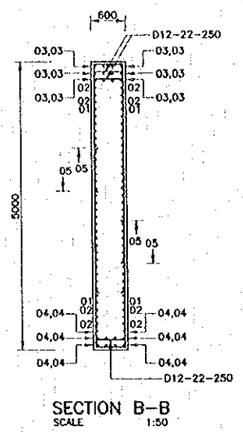
DATE OF ISSUE: 05/03/2000	
DWG. NO. B-M-42	SHEET NO. 153
DWG. STATUS	



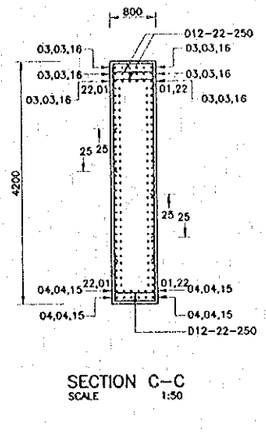
SECTION D-D
SCALE 1:50



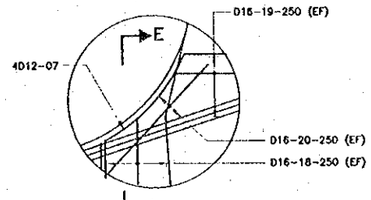
SECTION A-A
SCALE 1:50



SECTION B-B
SCALE 1:50

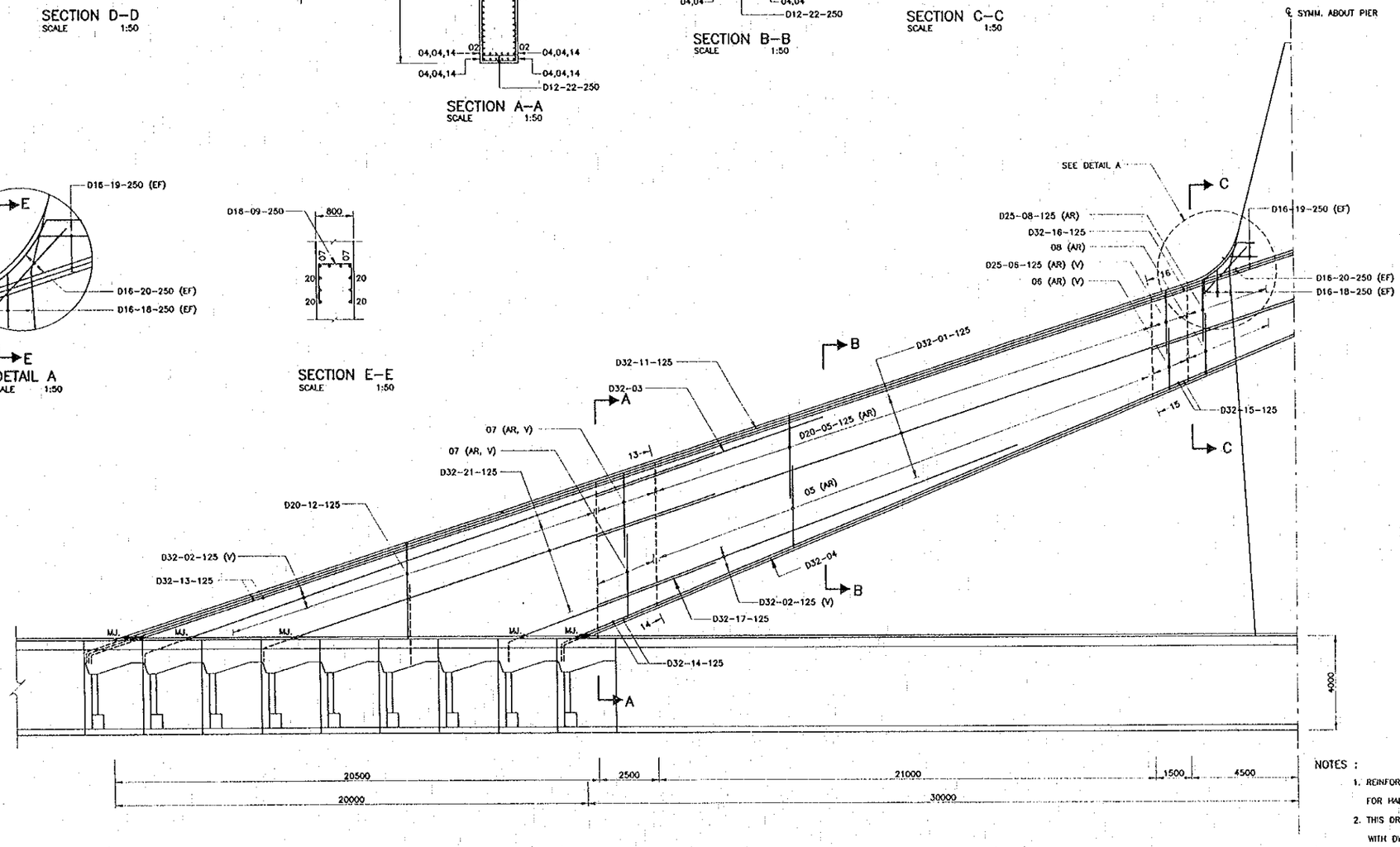


SECTION C-C
SCALE 1:50



DETAIL A
SCALE 1:50

SECTION E-E
SCALE 1:50



REINFORCEMENT DETAIL FOR PC. SAILS
SCALE 1:100

NOTES :

1. REINFORCEMENT SHOWN AND CALL UP FOR HALF SECTION ONLY.
2. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH DWG. NO. B-M-36 AND B-M-41
3. THE DISTANCE OF HORIZONTAL TIE REINFORCEMENT (NO. 22) IN PC. SAIL SHALL NOT EXCEED 0.5 METER.

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	T. Ohno		5/3/00
DESIGN CHECK	H. Watanabe		18/2/00
SUBMITTED	A. Hirotani		21/02/00
APPROVED	P. Viraphanh		22/02/00
	S. Tanniyabutra		23/02/00

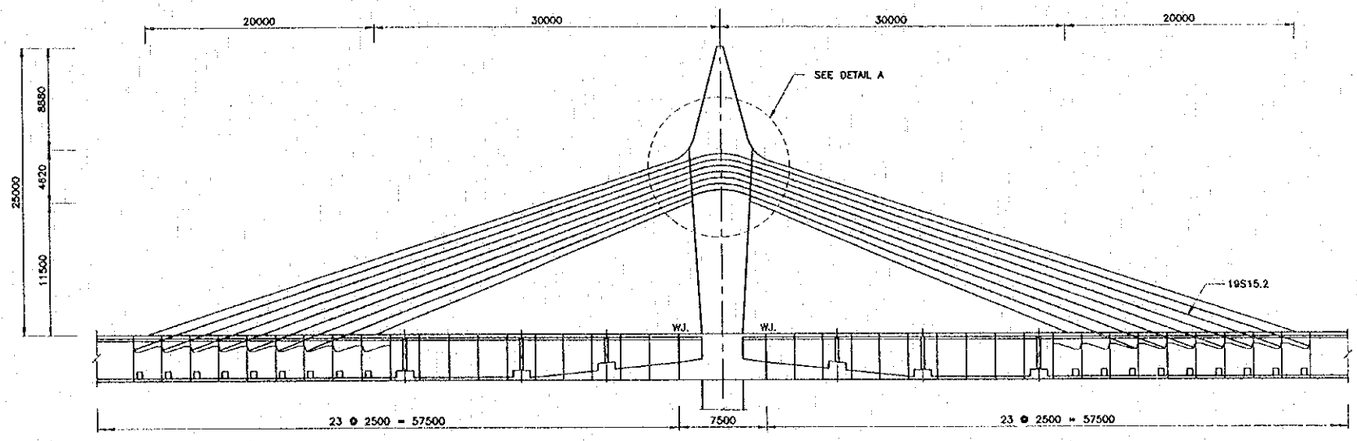
DWG. TITLE:

MAIN BRIDGE SUPERSTRUCTURE
PC. SAIL R.C. DETAILS

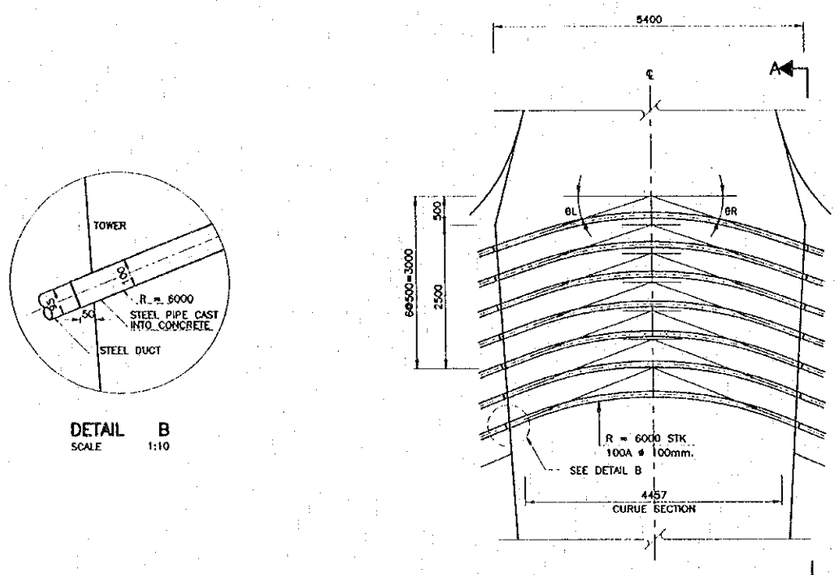
Plot date: Tue, 8 Feb 2000 - 20:06:02

C:\SMB\MAIN-BRIDGE\M-42.DWG

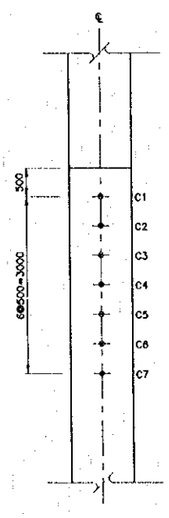
DATE OF ISSUE: 05/03/2000	
DWG. NO. B-M-43	SHEET NO. 154
DWG. STATUS	



SAIL PIER ELEVATION
SCALE 1:250

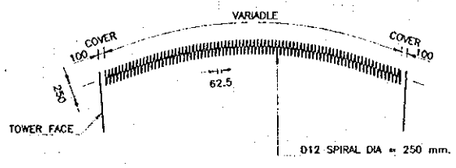


DETAIL A
SCALE 1:50



SECTION A-A
SCALE 1:50

DETAIL B
SCALE 1:10

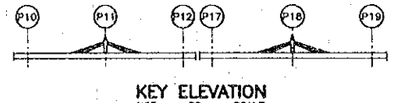


SADDEL STEEL PIPE R.C. DETAIL
SCALE 1:50

NOTES :

1. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH DWG. NO. B-M-41 AND B-M-42
2. STRESSING OF ALL TENDONS FROM BOTH ENDS.
3. JACKING FORCE BEFORE LOCK OFF ARE

	BEFORE PC. SAIL CONCRETING	AFTER PC. SAIL CONCRETING
C1, C2, C3	350 KN	3490 KN
C4	1050 KN	3490 KN
C5, C6, C7	1750 KN	3490 KN



KEY ELEVATION
NOT TO SCALE

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

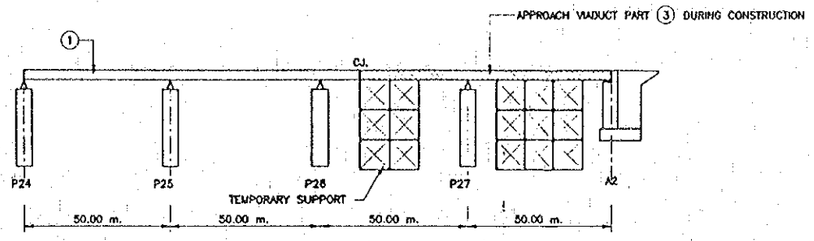
JICA JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	T. Ohno		15/2/00
DESIGN CHECK	H. Watanabe		18/2/00
SUBMITTED	A. Hirotani		21/2/00
APPROVED	P. Viraphanth		22/02/00
	S. Temiyabutra		22/02/00

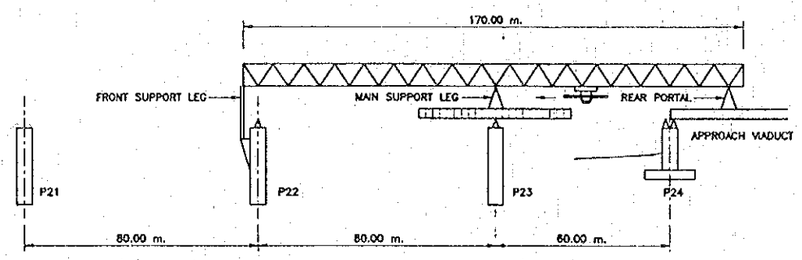
DWG. TITLE:
MAIN BRIDGE SUPERSTRUCTURE
CABLE LAYOUT AND DETAILS

Plot date: Thu, 13 Jan 2000 - 11:05:21
C:\SUB\MAIN-BRIDGE\M-43.dwg



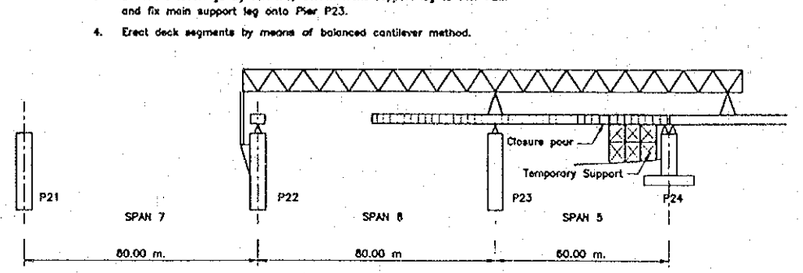
STAGE 1

1. In Loo PDR. side , approach viaduct construct by means of cast in-situ method separate from. P24 to A2. respectively.



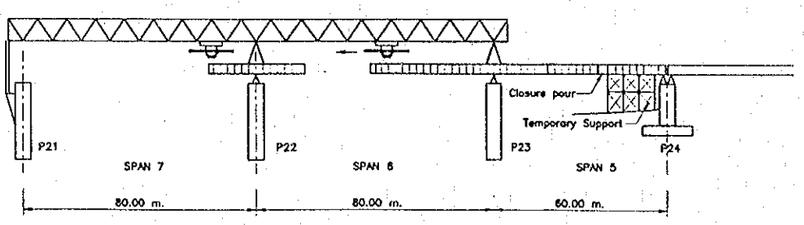
STAGE 2

1. Assemble erection gantry behind P24 and launch forward onto temporary support at Pier P23.
2. Erect pierhead segment on Pier P23.
3. Launch erection gantry forward, attach front support leg to Pier P22. and fix main support leg onto Pier P23.
4. Erect deck segments by means of balanced cantilever method.



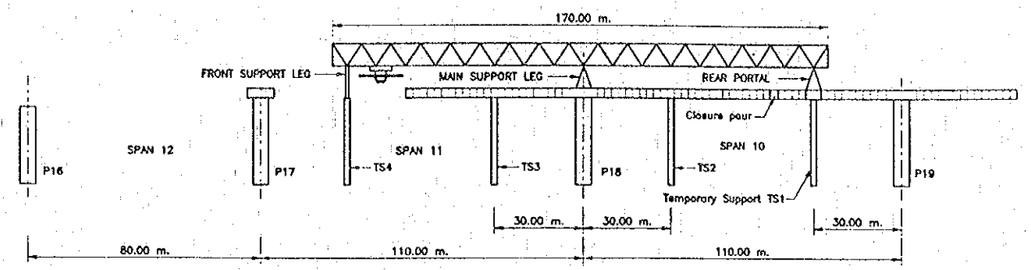
STAGE 3

1. Place Span 5 segments on tempory support.
2. Erect clamping steelwork and formwork and cast closure pour.
3. Erect pierhead segment onto Pier P22 and tempory fixed



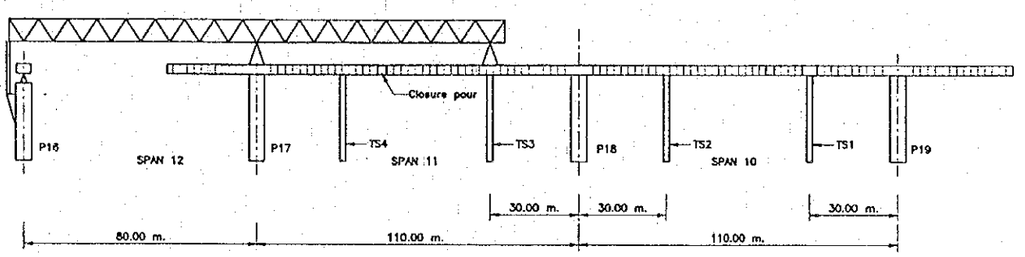
STAGE 4

1. Launch erection gantry forward, attach front support leg to Pier P21 and fix main support leg onto Pier P22.
2. Erect deck segments by means of balanced cantilever method.
3. Erect clamping steelwork and formwork and cast closure pour in span 6.
4. Erect pierhead segment Pier P21.
5. Repeat 1–4 for subsequence spans.



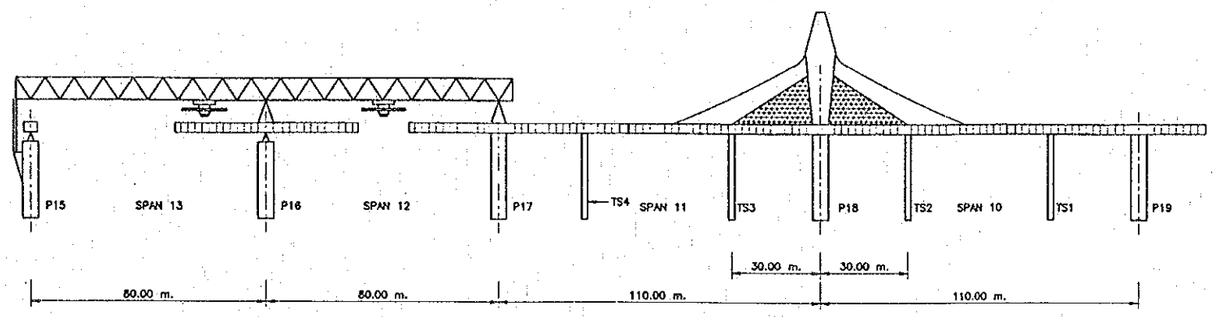
STAGE 5

1. Launch erection gantry forward, attach front support leg to temporary support TS4 and fix main support leg onto Pier P18.
2. Erect deck segments by means of balanced cantilever method, up to 30 m. from P18.
3. Support deck segments at TS2 and TS3 and erect deck segments accordingly.
4. Erect clamping steelwork and formwork and cast closure pour in span 10.



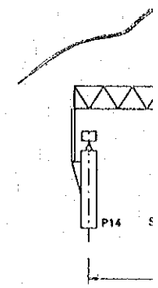
STAGE 6

1. Launch erection gantry forward, attach front support leg to Pier P16. and fix main support leg onto Pier P17.
2. Erect deck segments by means of balanced cantilever method.
3. Erect clamping steelwork and formwork and cast closure pour in span 11.
4. Erect pierhead segment on Pier P16.
5. Support deck segments at TS4.



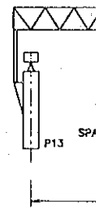
STAGE 7

1. Launch erection gantry forward, attach front support leg to Pier P15. and fix main support leg onto Pier P16.
2. Erect deck segments by means of balanced cantilever method.
3. Erect clamping steelwork and formwork and cast closure pour in span 12.
4. Erect pierhead segment on Pier P15.
5. Repeat 1–4 for subsequence spans.
6. Simutaneously construct tower at P18 and PC. soil on span 10–11.



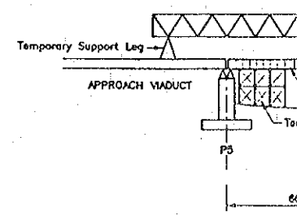
STAGE 8

1. Launch
and fix
2. Erect
3. Support
4. Erect



STAGE 9

1. Launch
and fix
2. Erect de
3. Support
4. Erect D
(Dappo



STAGE 10

1. Erect
2. Launch
P5 an
3. Erect
4. Place
and c
5. Erect
6. Remov

REV.	DATE	DISCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
In association with
NIPPON KOEI CO., LTD.

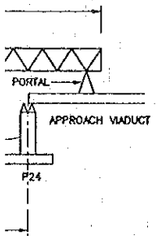
JICA JAPAN INTERNATIONAL COOPERATION AGENCY
MINISTRY OF COMMUNICATIONS, TRANSPORT, POST AND CONSTRUCTION, LAO PRD
MINISTRY OF TRANSPORT AND COMMUNICATIONS DEPARTMENT OF HIGHWAYS THAILAND

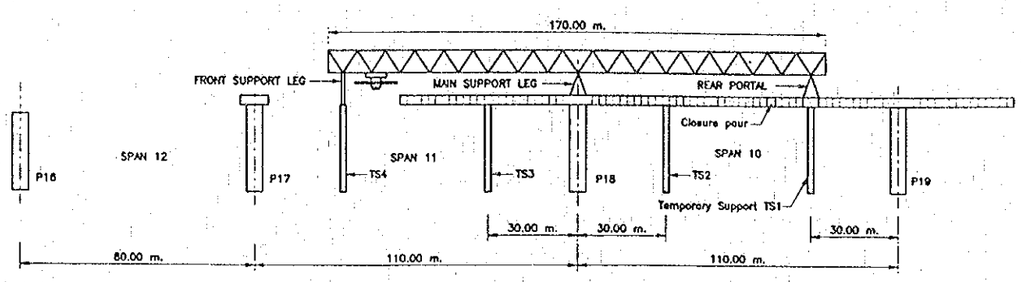
THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME
DESIGN	T. Ohno
DESIGN CHECK	H. Watanabe
SUBMITTED	A. Hirotani
APPROVED	P. Virophanth
	S. Terniyobutra

02/5/99
C:\SUB\CATAL\MAIN-BRI\M-44.dwg

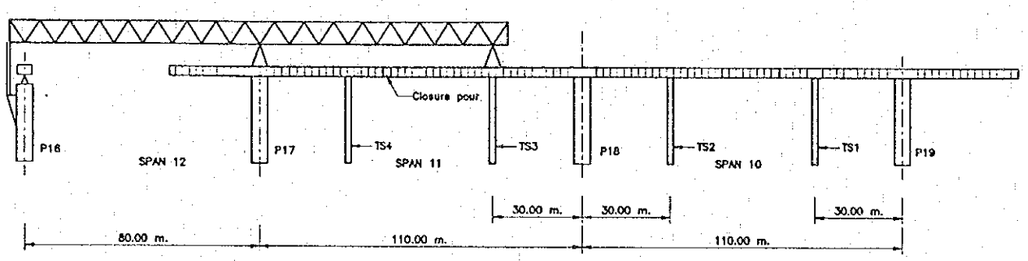
DATE OF ISSUE: 05/03/2000	
DWG. NO. B-M-44	SHEET NO. 155
DWG. STATUS	





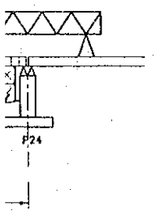
STAGE 5

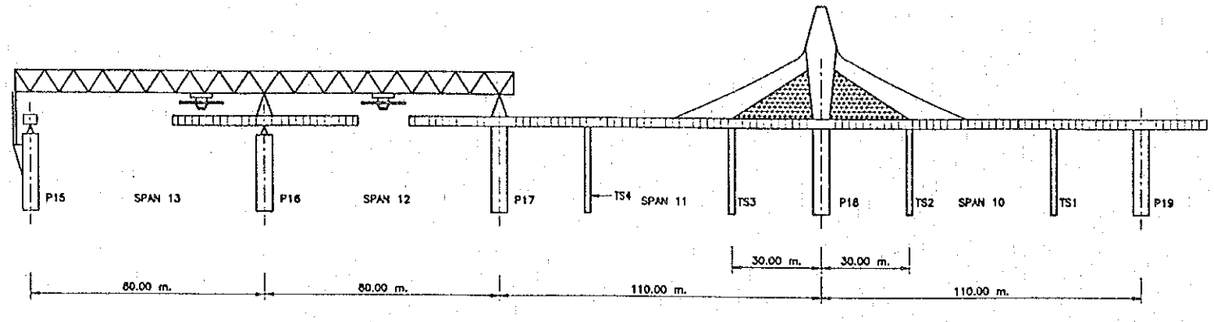
1. Launch erection gantry forward, attach front support leg to temporary support TS4 and fix main support leg onto Pier P18.
2. Erect deck segments by means of balanced cantilever method, up to 30 m. from P18.
3. Support deck segments at TS2 and TS3 and erect deck segments accordingly.
4. Erect clamping steelwork and formwork and cast closure pour in span 10.

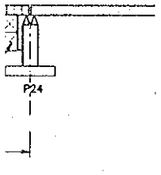


STAGE 6

1. Launch erection gantry forward, attach front support leg to Pier P16, and fix main support leg onto Pier P17.
2. Erect deck segments by means of balanced cantilever method.
3. Erect clamping steelwork and formwork and cast closure pour in span 11.
4. Erect pierhead segment on Pier P16.
5. Support deck segments at TS4.

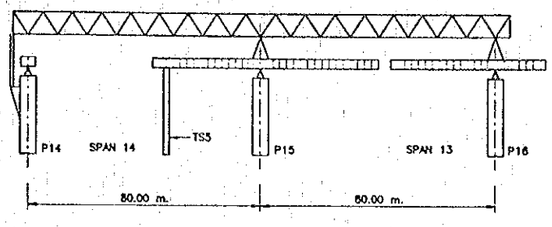






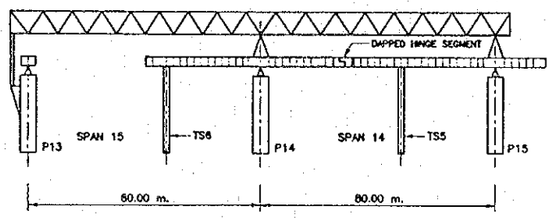
STAGE 7

1. Launch erection gantry forward, attach front support leg to Pier P15, and fix main support leg onto Pier P16.
2. Erect deck segments by means of balanced cantilever method.
3. Erect clamping steelwork and formwork and cast closure pour in span 12.
4. Erect pierhead segment on Pier P15.
5. Repeat 1-4 for subsequence spans.
6. Simutanously construct tower at P18 and PC. sail on span 10-11.



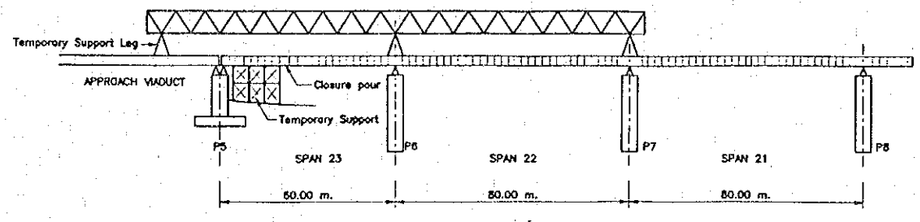
STAGE 8

1. Launch erection gantry forward, attach front support leg to Pier P14 and fix main support leg onto Pier P15.
2. Erect deck segments by means of balanced cantilever method.
3. Support deck segments at TS5 and erect deck segments in span 14.
4. Erect clamping steelwork and formwork and cast closure pour in span 13.



STAGE 9

1. Launch erection gantry forward, attach front support leg to Pier P13, and fix main support leg onto Pier P14.
2. Erect deck segments by means of balanced cantilever method.
3. Support deck segments at TS6 and erect deck segments in span 15.
4. Erect Dapped hinge segments and cast insitu concrete behind Dapped hinge. (Dapped hinge temporary fixed is released after span 15 completed.)



STAGE 10

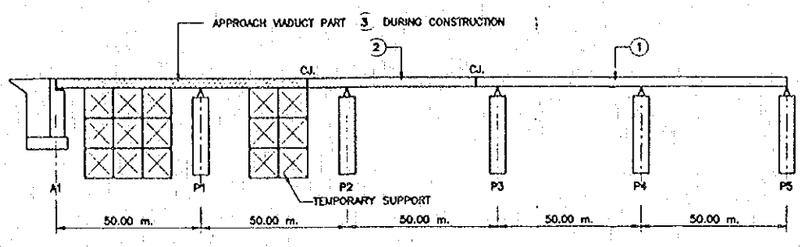
1. Erect segments up to P7 accordingly.
2. Launch erection gantry forward onto temporary support behind P5 and fix center leg onto Pier P8.
3. Erect deck segments by means of balanced cantilever method.
4. Place span 23 segments on tempory support ,erect clamping steelwork,formwork and cast closure pour in span 22.
5. Erect clamping steelwork and formwork and cast closure pour in span 23.
6. Remove and dismantle erection gantry.

APPROVED	PROJECT STUDY TEAM	JAPAN INTERNATIONAL COOPERATION AGENCY	THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT
	ORIENTAL CONSULTANTS CO., LTD. in association with NIPPON KOEI CO., LTD.	MINISTRY OF COMMUNICATIONS, TRANSPORT, POST AND CONSTRUCTION, LAO PRD MINISTRY OF TRANSPORT AND COMMUNICATIONS DEPARTMENT OF HIGHWAYS THAILAND	

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	T. Ohno	T. Ohno	15/12/02
DESIGN CHECK	H. Watanabe	H. Watanabe	16/12/02
SUBMITTED	A. Hiratani	A. Hiratani	21/02/03
APPROVED	P. Virophanth	P. Virophanth	20/02/03
	S. Termiyabutra	S. Termiyabutra	22/02/03

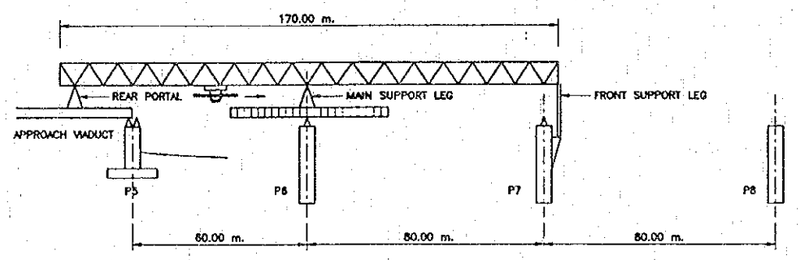
DWG. TITLE:

MAIN BRIDGE SUPERSTRUCTURE CONSTRUCTION SEQUENCE CASE OF STARTING FROM LAO PDR SIDE)



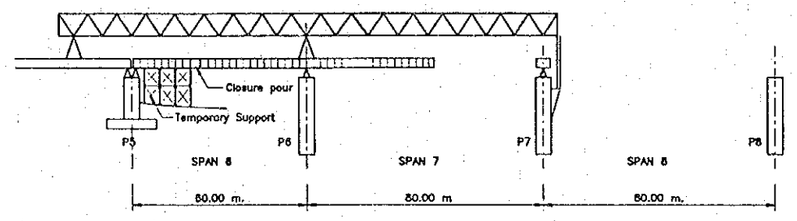
STAGE 1

1. In Thailand side , approach viaduct construct by means of cast in-situ method separate from. P5 to A1. respectively.



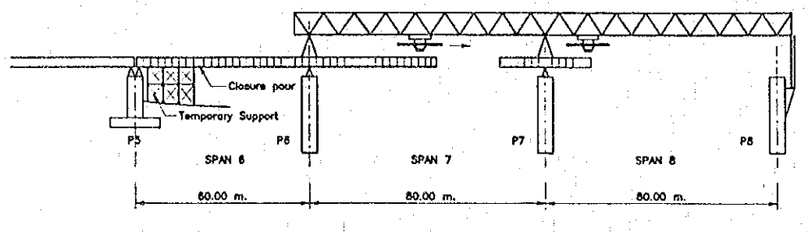
STAGE 2

1. Assemble erection gantry behind P5 and launch forward onto temporary support at Pier P6.
2. Erect pierhead segment on Pier P6.
3. Launch erection gantry forward, attach front support leg to Pier P7. and fix main support leg onto Pier P6.
4. Erect deck segments by means of balanced cantilever method.



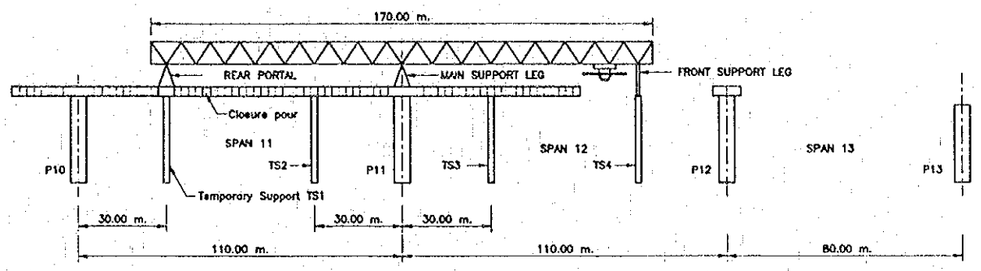
STAGE 3

1. Place Span 6 segments on tempory support.
2. Erect clamping steelwork and formwork and cast closure pour.
3. Erect pierhead segment onto Pier P7 and tempory fixed



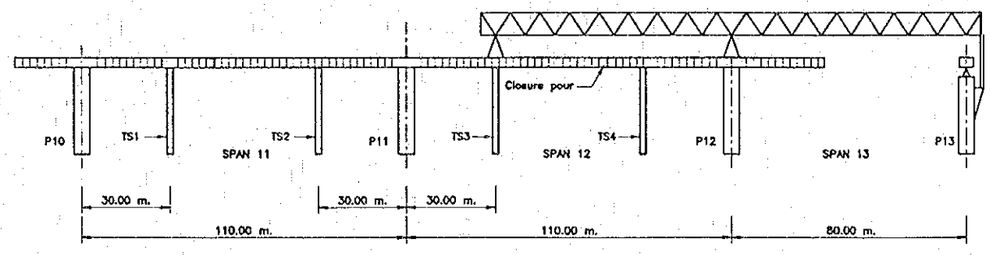
STAGE 4

1. Launch erection gantry forward, attach front support leg to Pier P8 and fix main support leg onto Pier P7.
2. Erect deck segments by means of balanced cantilever method.
3. Erect clamping steelwork and formwork and cast closure pour in span 6.
4. Erect pierhead segment Pier P8.
5. Repeat 1–4 for subsequence spans.



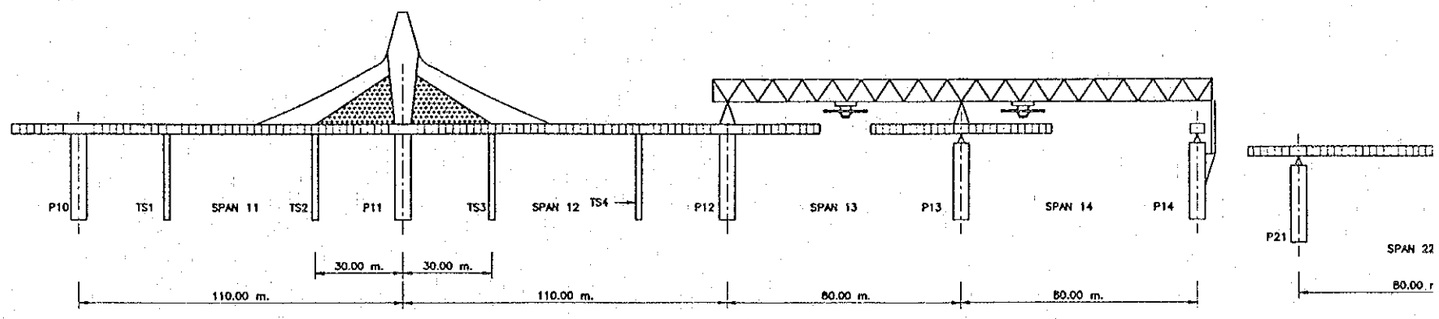
STAGE 5

1. Launch erection gantry forward, attach front support leg to temporary support TS4 and fix main support leg onto Pier P11.
2. Erect deck segments by means of balanced cantilever method. up to 30 m. from P11.
3. Support deck segments at TS2 and TS3 and erect deck segments accordingly.
4. Erect clamping steelwork and formwork and cast closure pour in span 11.



STAGE 6

1. Launch erection gantry forward, attach front support leg to Pier P13. and fix main support leg onto Pier P12.
2. Erect deck segments by means of balanced cantilever method.
3. Erect clamping steelwork and formwork and cast closure pour in span 12.
4. Erect pierhead segment on Pier P13.
5. Support deck segments at TS4.



STAGE 7

1. Launch erection gantry forward, attach front support leg to Pier P14. and fix main support leg onto Pier P13.
2. Erect deck segments by means of balanced cantilever method.
3. Erect clamping steelwork and formwork and cast closure pour in span 13.
4. Erect pierhead segment on Pier P14.
5. Repeat 1–4 for subsequence spans.
6. Simutanously construct tower at P11 and PC. soil on span 11–12.

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
In association with
NIPPON KOEI CO., LTD.

JAPAN INTERNATIONAL COOPERATION AGENCY
MINISTRY OF COMMUNICATIONS, TRANSPORT, POST AND CONSTRUCTION, LAO PRD
MINISTRY OF TRANSPORT AND COMMUNICATIONS DEPARTMENT OF HIGHWAYS THAILAND

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD
DESIGN
DESIGN CHECK
SUBMITTED
APPROVED

02/9/99
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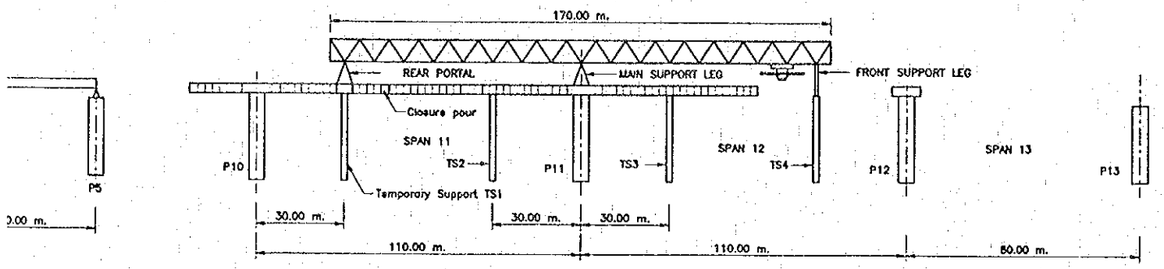
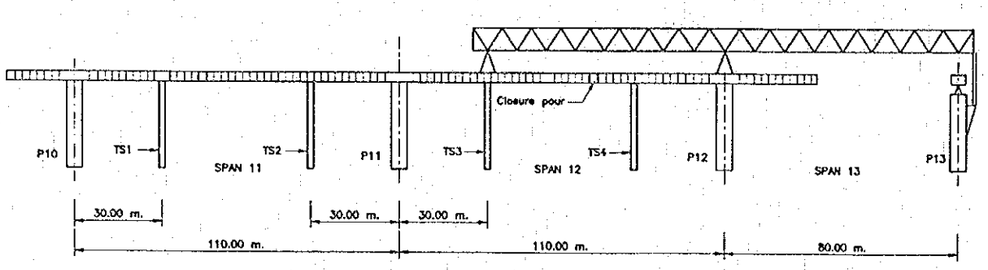
DATE OF ISSUE: 05/03/2000	
DWG. NO. B-M-45	SHEET NO. 156
DWG. STATUS	



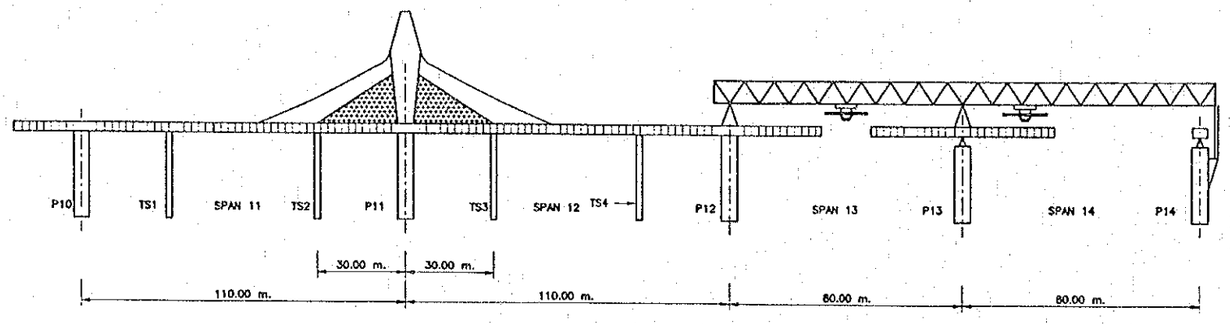
STAGE 5

1. Launch erection gantry forward, attach front support leg to temporary support TS4 and fix main support leg onto Pier P11.
2. Erect deck segments by means of balanced cantilever method. up to 30 m. from P11.
3. Support deck segments at TS2 and TS3 and erect deck segments accordingly.
4. Erect clamping steelwork and formwork and cast closure pour in span 11.



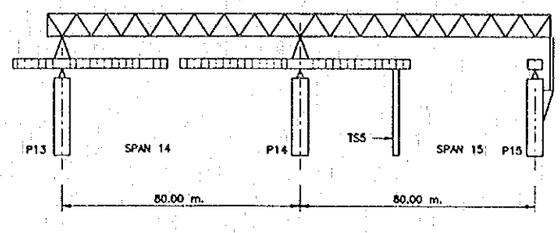
STAGE 6

1. Launch erection gantry forward, attach front support leg to Pier P13. and fix main support leg onto Pier P12.
2. Erect deck segments by means of balanced cantilever method.
3. Erect clamping steelwork and formwork and cast closure pour in span 12.
4. Erect pierhead segment on Pier P13.
5. Support deck segments at TS4.



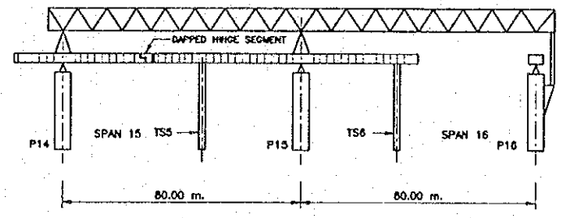
STAGE 7

1. Launch erection gantry forward, attach front support leg to Pier P14. and fix main support leg onto Pier P13.
2. Erect deck segments by means of balanced cantilever method.
3. Erect clamping steelwork and formwork and cast closure pour in span 13.
4. Erect pierhead segment on Pier P14.
5. Repeat 1-4 for subsequence spans.
6. Simutanously construct tower at P11 and PC. sail on span 11-12.



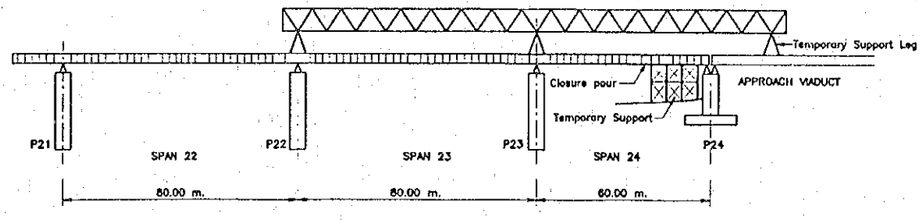
STAGE 8

1. Launch erection gantry forward, attach front support leg to Pier P15 and fix main support leg onto Pier P14.
2. Erect deck segments by means of balanced cantilever method.
3. Support deck segments at TS5 and erect deck segments in span 15.
4. Erect clamping steelwork and formwork and cast closure pour in span 14.



STAGE 9

1. Launch erection gantry forward, attach front support leg to Pier P16. and fix main support leg onto Pier P15.
2. Erect deck segments by means of balanced cantilever method.
3. Support deck segments at TS6 and erect deck segments in span 16.
4. Erect Dapped hinge segments and cast insitu concrete behind Dapped hinge. (Dapped hinge temporary fixed is released after span 16 completed.)



STAGE 10

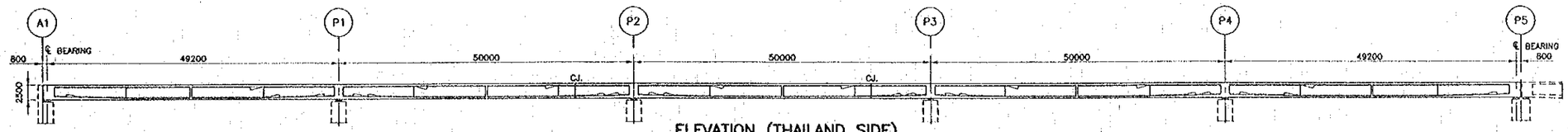
1. Erect segments up to P22 accordingly.
2. Launch erection gantry forward onto temporary support behind P24 and fix center leg onto Pier P23.
3. Erect deck segments by means of balanced cantilever method.
4. Place span 24 segments on tempory support ,erect clamping steelwork,formwork and cast closure pour in span 23.
5. Erect clamping steelwork and formwork and cast closure pour in span 24.
6. Remove and diamantle erection gantry.

	APPROVED	PROJECT STUDY TEAM		QUALITY RECORD	NAME	SIGNATURE	DATE
		ORIENTAL CONSULTANTS CO., LTD. in association with NIPPON KOEI CO., LTD.	JAPAN INTERNATIONAL COOPERATION AGENCY MINISTRY OF COMMUNICATIONS, TRANSPORT, POST AND CONSTRUCTION, LAO PRD MINISTRY OF TRANSPORT AND COMMUNICATIONS DEPARTMENT OF HIGHWAYS THAILAND	THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT	DESIGN	T. Ohno		15/12/99
					DESIGN CHECK	H. Watanabe		15/12/99
					SUBMITTED	A. Hirotani		21/12/99
					APPROVED	P. Viraphanh		22/12/99
						S. Terniyabutre		22/12/99

DWG. TITLE:

MAIN BRIDGE SUPERSTRUCTURE
CONSTRUCTION SEQUENCE
(CASE OF STARTING FROM THAILAND SIDE)

DATE OF ISSUE: 05/03/2000	
DWG. NO. B-A-1	SHEET NO. 157
DWG. STATUS	



ELEVATION (THAILAND SIDE)

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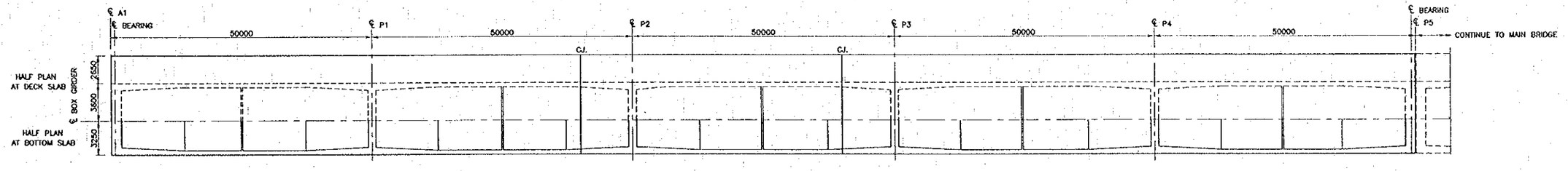
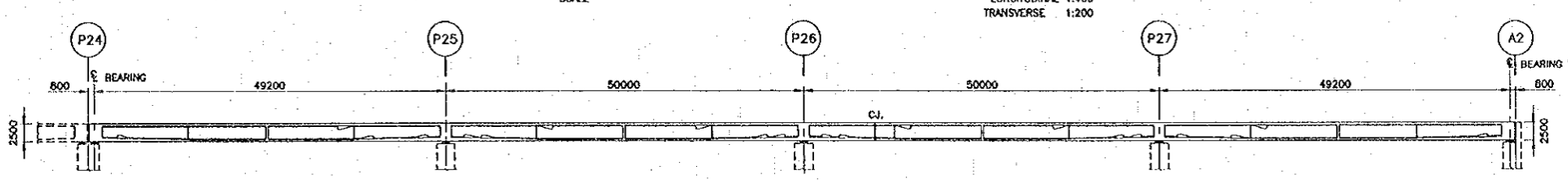


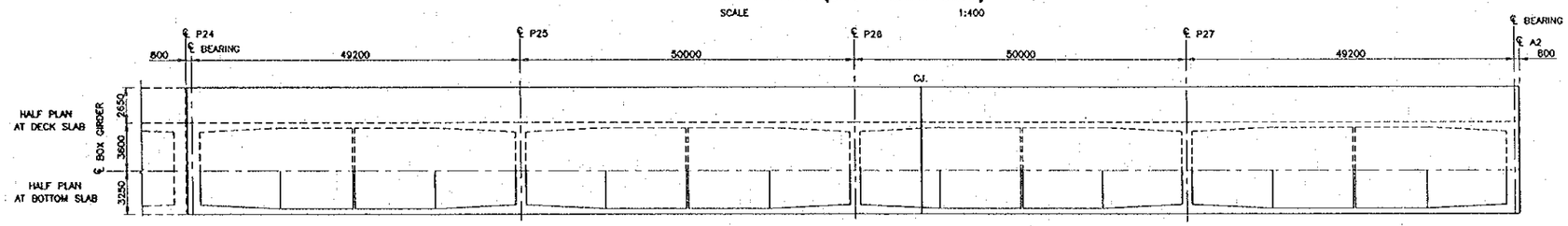
DECK AND BOTTOM SLAB PLAN (THAILAND SIDE)

SCALE LONGITUDINAL 1:400
TRANSVERSE 1:200



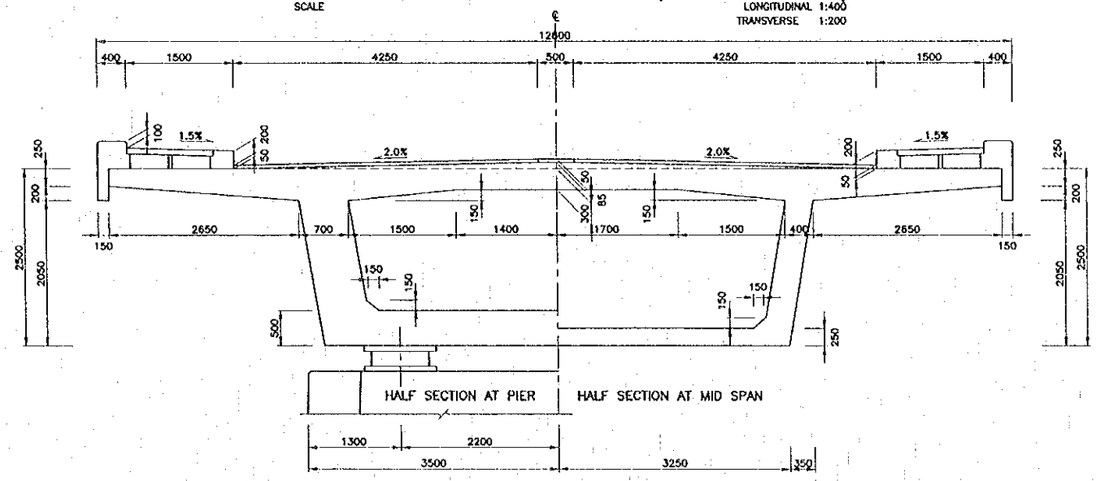
ELEVATION (LAO P.D.R. SIDE)

SCALE 1:400



DECK AND BOTTOM SLAB PLAN (LAO P.D.R. SIDE)

SCALE LONGITUDINAL 1:400
TRANSVERSE 1:200



TYPICAL CROSS SECTION

SCALE 1:40

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM

ORIENTAL CONSULTANTS CO., LTD.

in association with

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JAPAN INTERNATIONAL COOPERATION AGENCY

LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION

KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	H. Kobayashi		16/12/00
DESIGN CHECK	H. Watanabe		18/12/00
SUBMITTED	A. Hiratani		21/12/00
APPROVED	P. Viraphanh		22/12/00
	S. Temiyabutra		22/12/00

DWG. TITLE:

APPROACH VIADUCT SUPERSTRUCTURE

BOX GIRDER GENERAL LAYOUT

Plot date: Tue, 6 Feb 2001 - 21:06:45

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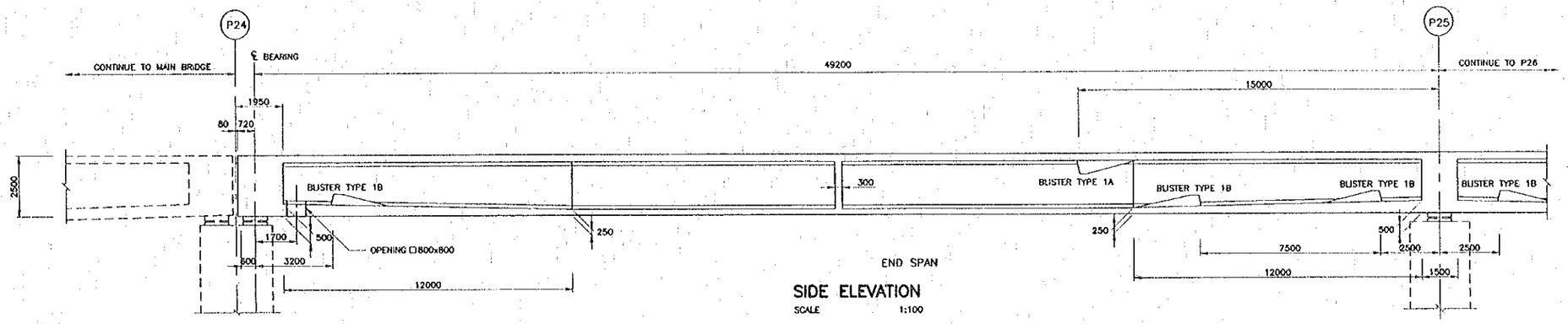
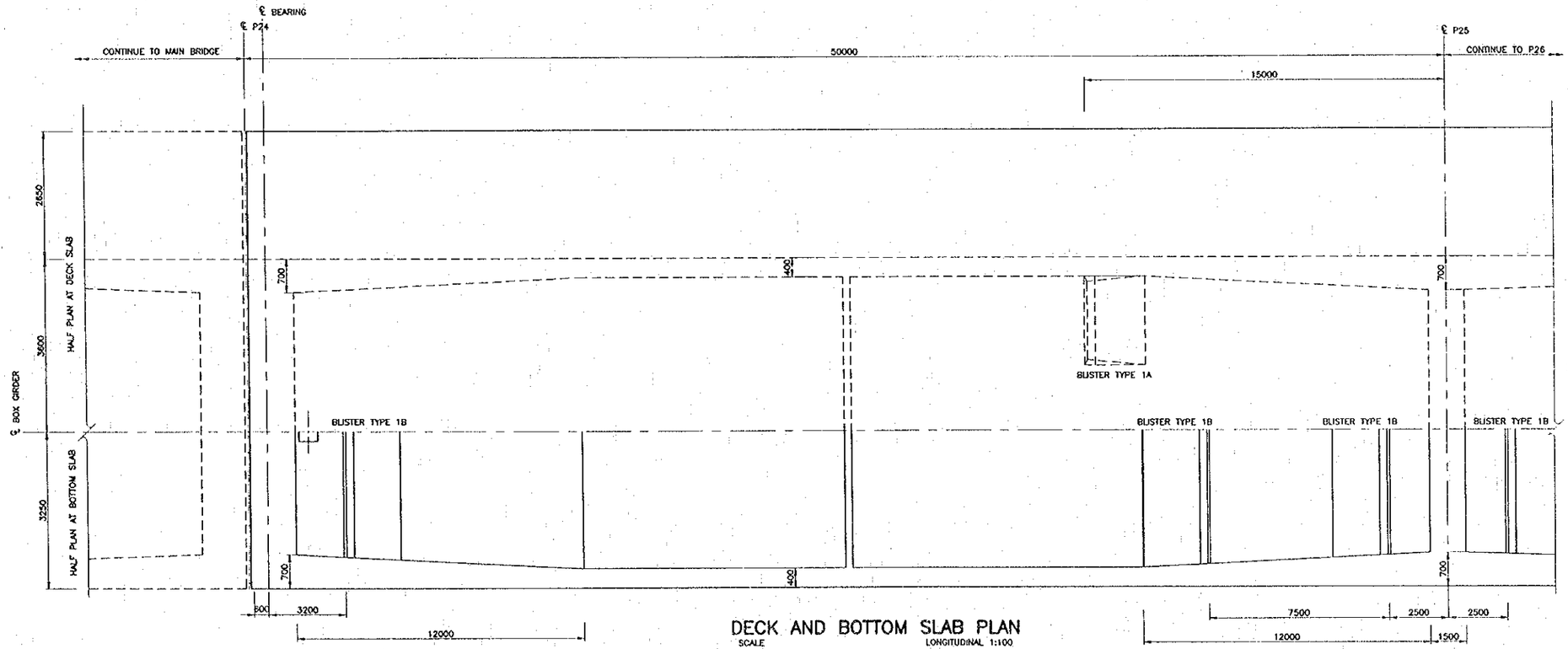
DATE OF ISSUE: 05/03/2000	
DWG. NO. B-A-2	SHEET NO. 158
DWG. STATUS	



END SPAN

SIDE ELEVATION

SCALE 1:100

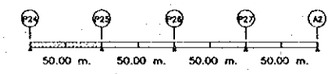


DECK AND BOTTOM SLAB PLAN

SCALE LONGITUDINAL 1:100
TRANSVERSE 1:50

NOTES :

1. FOR DETAILS OF BEARING DOWNSTAND SEE DWG. NO. B-AC-1



KEY ELEVATION

SCALE 1:2000

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
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JICA JAPAN INTERNATIONAL COOPERATION AGENCY
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MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

	NAME	SIGNATURE	DATE
QUALITY RECORD			
DESIGN	H. Kobayashi		16.01.00
DESIGN CHECK	H. Watanabe		18/01/00
SUBMITTED	A. Hirotani		21/01/00
APPROVED	P. Virophanth		22/01/00
	S. Tamiyabutra		22/6/00

DWG. TITLE:
APPROACH VIADUCT SUPERSTRUCTURE
BOX GIRDER GENERAL ARRANGEMENT (LAO PDR SIDE)
SHEET 1 OF 4

Plot date: Tue, 8 Feb 2000 - 21:09:01

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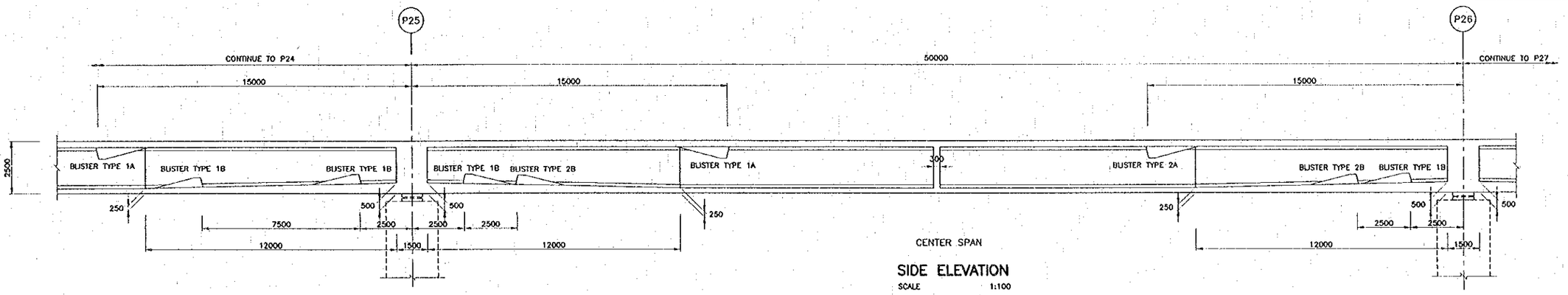
DATE OF ISSUE: 05/03/2000	
DWG. NO. B-A-3	SHEET NO. 159
DWG. STATUS	



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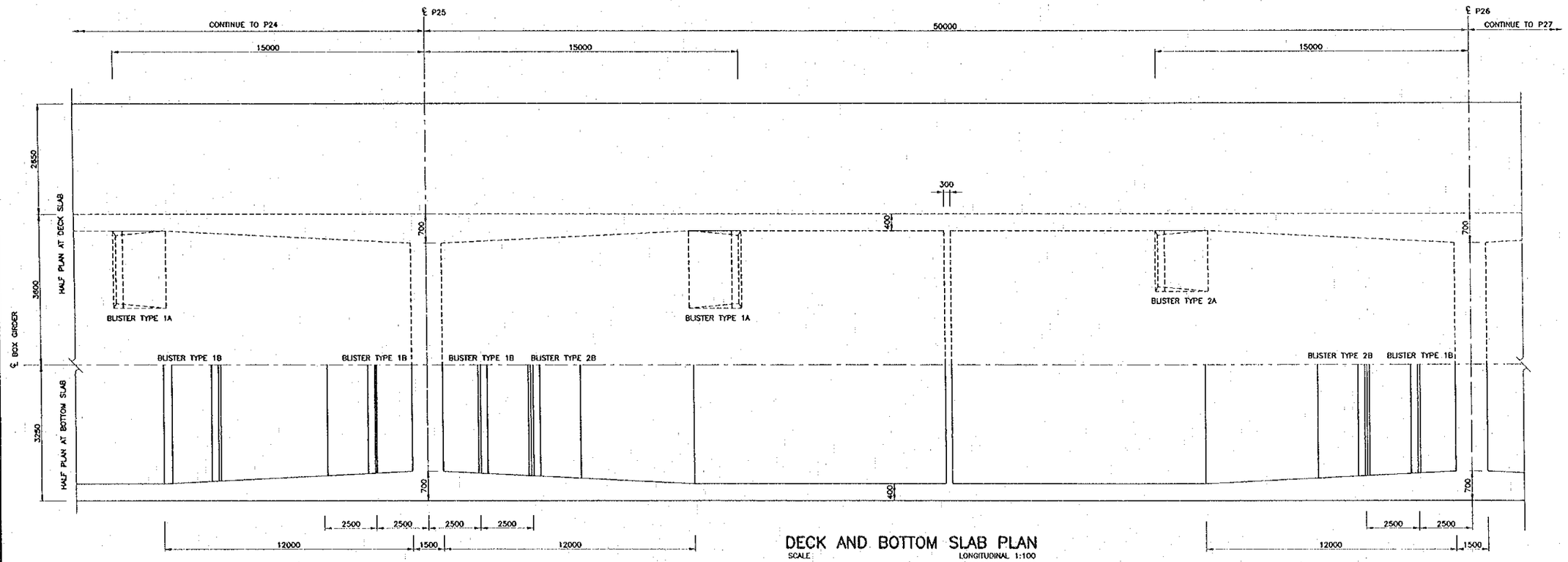
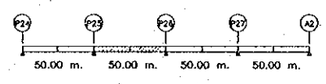
SCALE 1:100



DECK AND BOTTOM SLAB PLAN

SCALE LONGITUDINAL 1:100
TRANSVERSE 1:50



KEY ELEVATION

SCALE 1:2000

NOTES :

1. FOR DETAILS OF BEARING DOWNSTAND SEE DWG. NO. B-AC-1

REV.	DATE	DESCRIPTION	APPROVED

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DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	H. Kobayashi		16.12.00
DESIGN CHECK	H. Watanabe		18/12/00
SUBMITTED	A. Niratani		21/12/00
APPROVED	P. Viraphanth		22/12/00
	S. Tamiyabutra		22/12/00

DWG. TITLE:
APPROACH VIADUCT SUPERSTRUCTURE
BOX GIRDER GENERAL ARRANGEMENT
(LAO PDR SIDE)
SHEET 2 OF 4

Plot date: Tue, 8 Feb 2000 - 21:24:53
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DATE OF ISSUE: 05/03/2000	
DWG. NO. B-A-4	SHEET NO. 160
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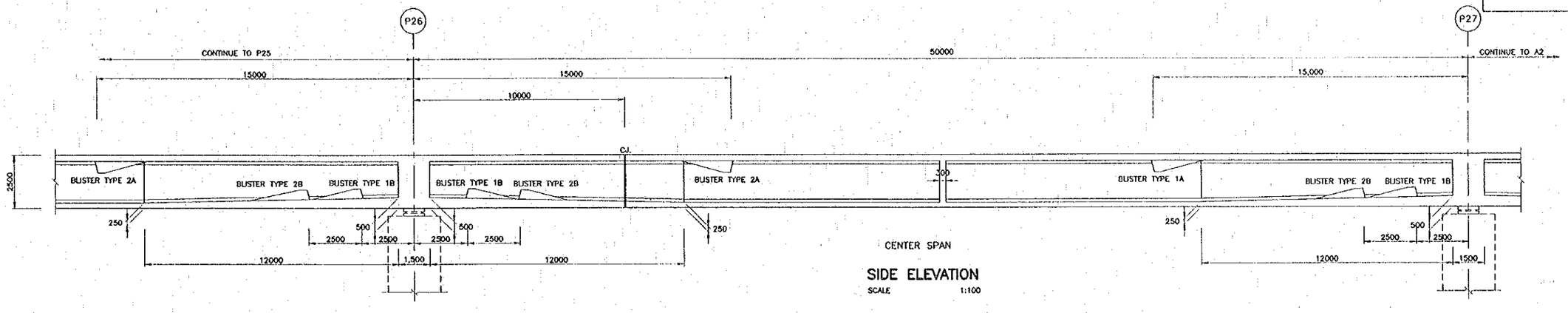

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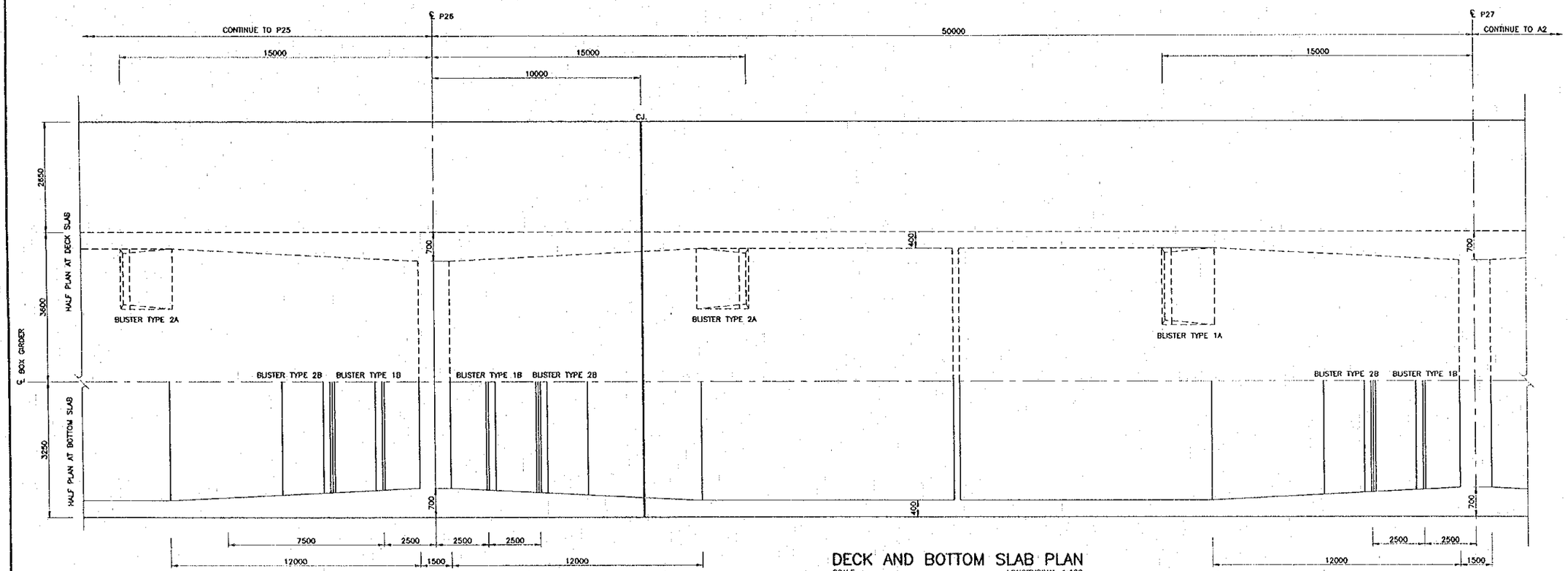
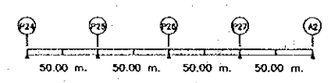


DECK AND BOTTOM SLAB PLAN

SCALE LONGITUDINAL 1:100
TRANSVERSE 1:50



KEY ELEVATION

SCALE 1:2000

NOTES :

1. FOR DETAILS OF BEARING DOWNSTAND SEE DWG. NO. B-AC-1

REV.	DATE	DESCRIPTION	APPROVED

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KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	H. Kobayashi		11/01/00
DESIGN CHECK	H. Watanabe		13/01/00
SUBMITTED	A. Hirotani		21/01/00
APPROVED	P. Virophanth		20/01/00
	S. Temiyabutra		22/01/00

DWG. TITLE:
APPROACH VIADUCT SUPERSTRUCTURE
BOX GIRDER GENERAL ARRANGEMENT (LAO PDR SIDE)
SHEET 3 OF 4

Plot date: Tue, 8 Feb 2000 - 21:28:29
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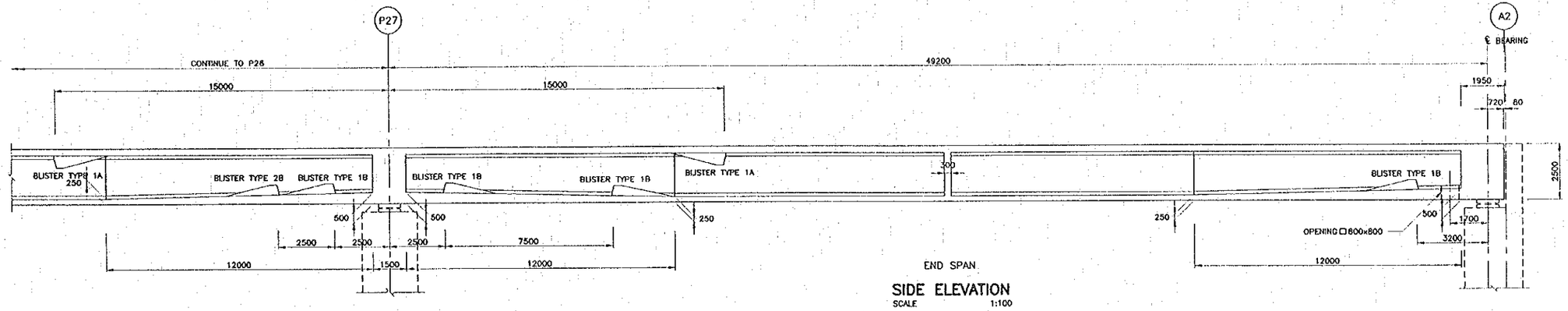

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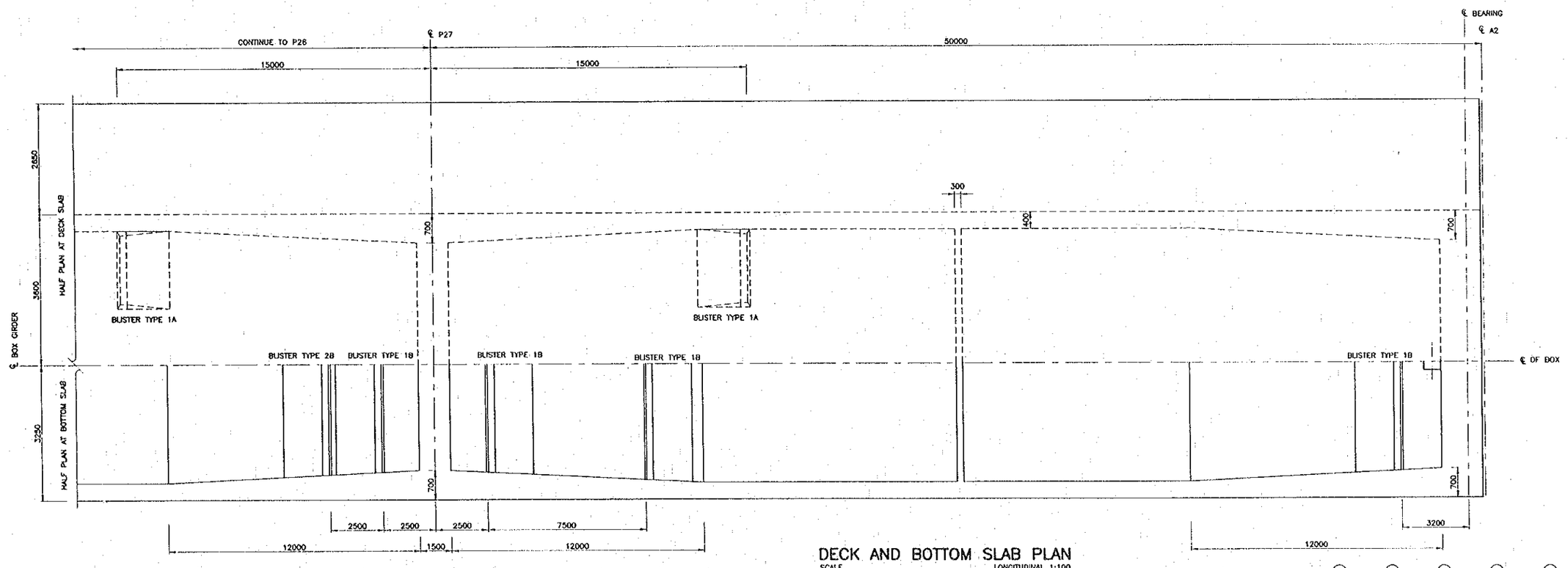
SIDE ELEVATION

SCALE 1:100

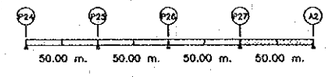


DECK AND BOTTOM SLAB PLAN

SCALE LONGITUDINAL 1:100
TRANSVERSE 1:50

NOTES :

1. FOR DETAILS OF BEARING DOWNSTAND SEE DWG. NO. B-AC-1



KEY ELEVATION
SCALE 1:2000

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
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JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
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DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

	NAME	SIGNATURE	DATE
QUALITY RECORD			
DESIGN	H. Kobayashi		16/02/00
DESIGN CHECK	H. Watanabe		17/02/00
SUBMITTED	A. Hiroton		21/02/00
APPROVED	P. Viraphanth		23/02/00
	S. Tamiyabuto	S. Tamiya	23/02/00

DWG. TITLE:
APPROACH VIADUCT SUPERSTRUCTURE
BOX GIRDER GENERAL ARRANGEMENT (LAO PDR SIDE)
SHEET 4 OF 4

Plot date: Tue, 8 Feb 2000 - 21:32:51
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DATE OF ISSUE: 05/03/2000	
DWG. NO. B-A-6	SHEET NO. 162
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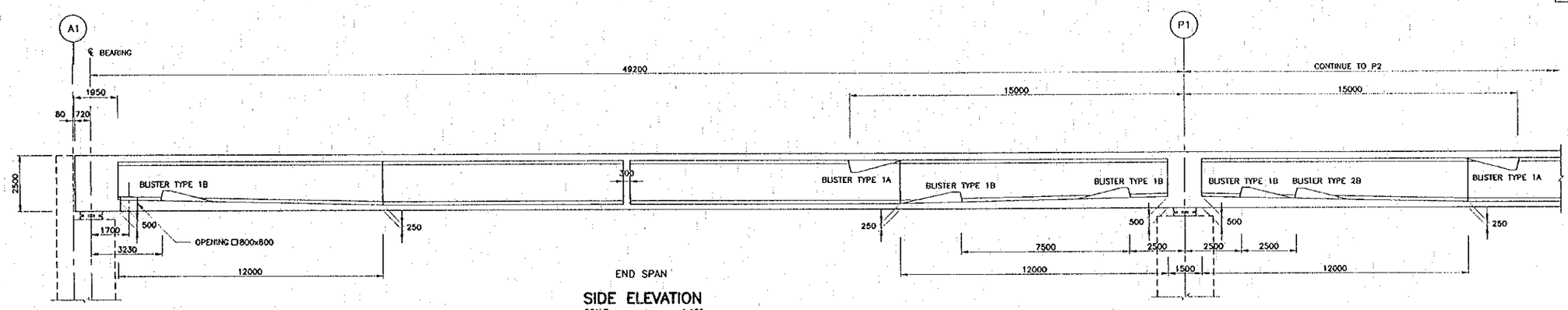

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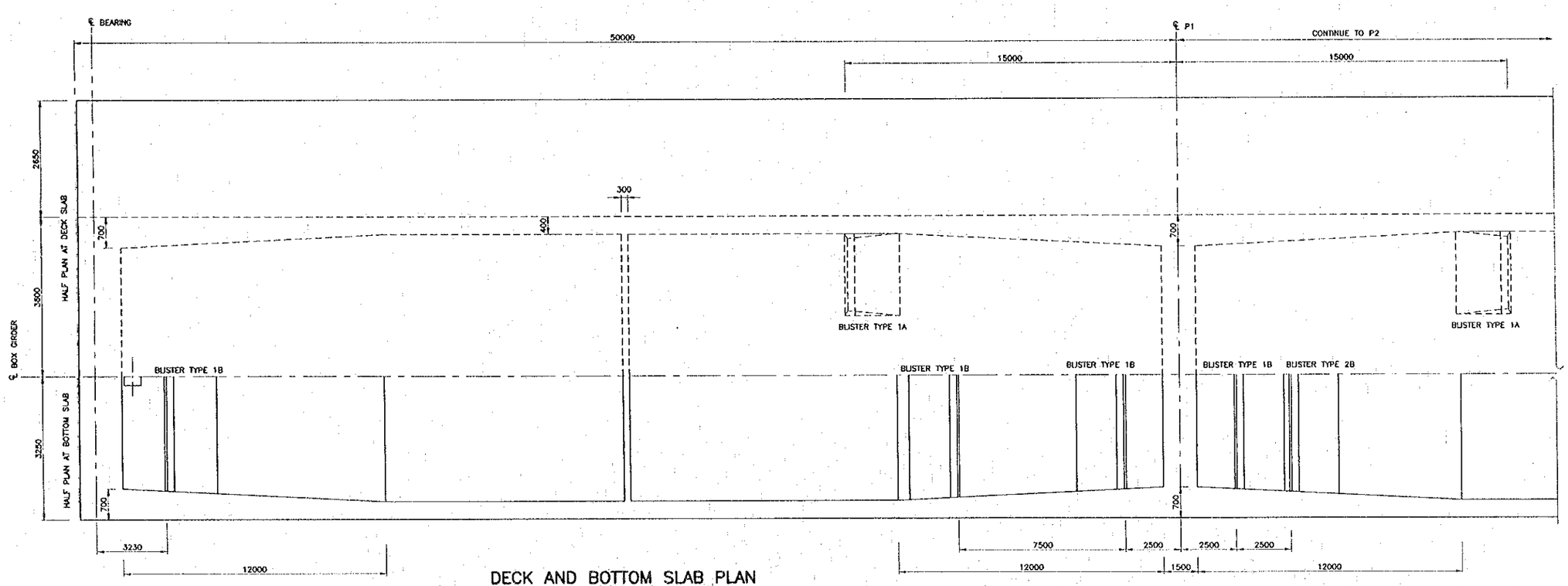
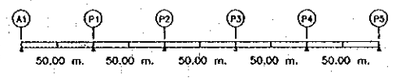
SIDE ELEVATION

SCALE 1:100



DECK AND BOTTOM SLAB PLAN

SCALE LONGITUDINAL 1:100
TRANSVERSE 1:50



KEY ELEVATION

SCALE 1:2000

NOTES :

1. FOR DETAILS OF BEARING DOWNSTAND SEE DWG. NO. B-AC-1

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JICA JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	H. Kobayashi		10.02.00
DESIGN CHECK	H. Watanabe		13/02/00
SUBMITTED	A. Hirotani		17/02/00
APPROVED	P. Viraphanth		23/02/00
	S. Temiyabutra		22/02/00

DWG. TITLE:
APPROACH VIADUCT SUPERSTRUCTURE
BOX GIRDER GENERAL ARRANGEMENT (THAILAND SIDE)
SHEET 1 OF 5

Plot date: Tue, 8 Feb 2000 - 21:34:55

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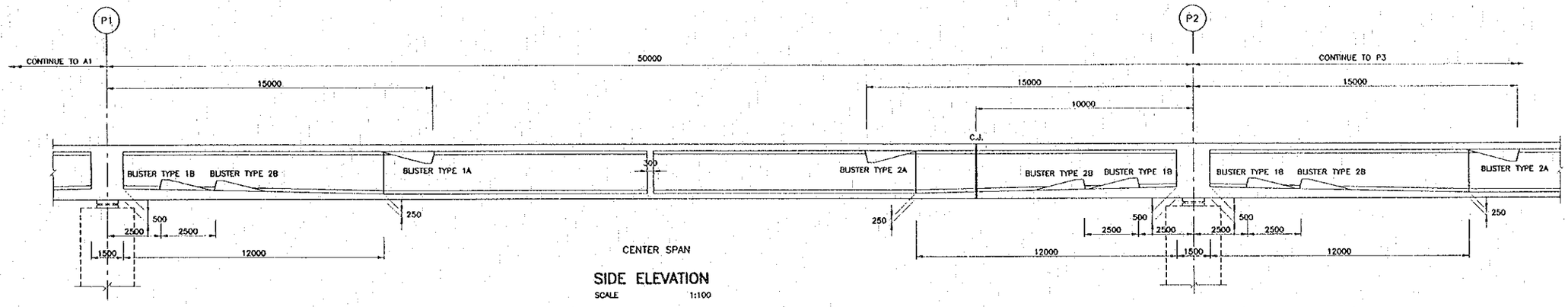
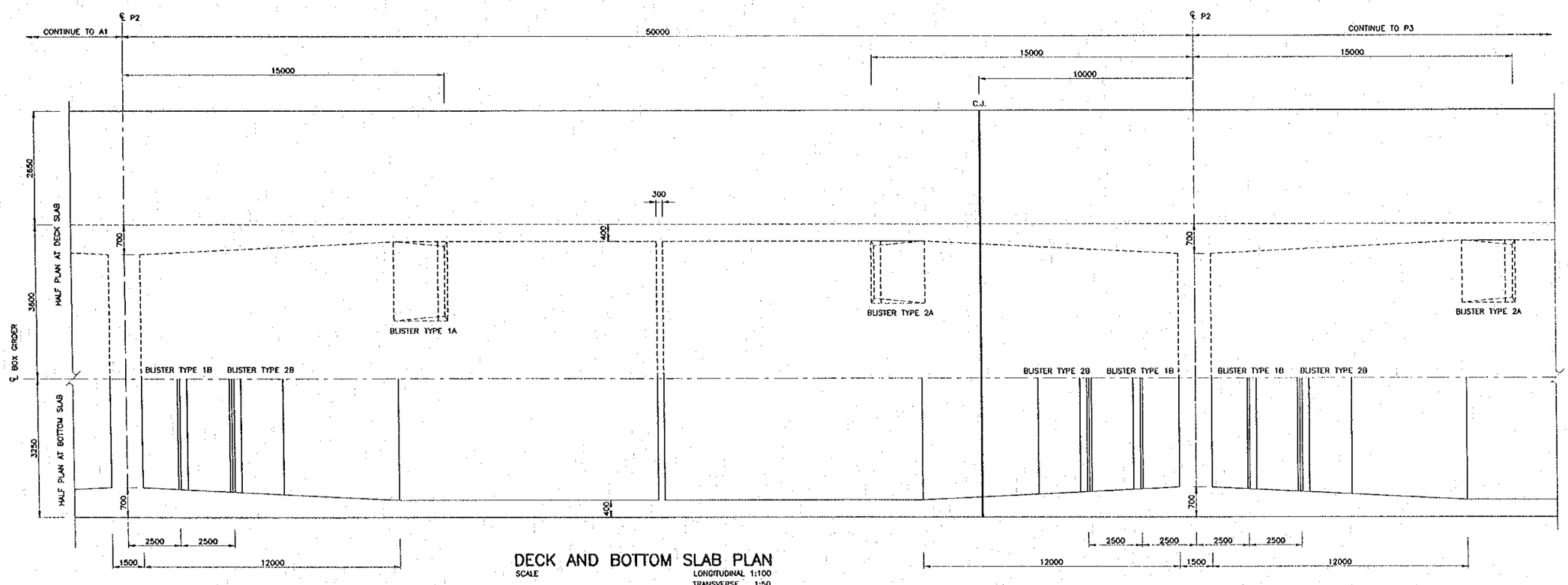
DATE OF ISSUE: 05/03/2000	
DWG. NO. B-A-7	SHEET NO. 163
DWG. STATUS	



CENTER SPAN

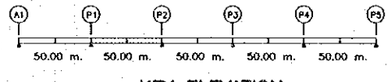
SIDE ELEVATION

SCALE 1:100



DECK AND BOTTOM SLAB PLAN

SCALE LONGITUDINAL 1:100
TRANSVERSE 1:50



KEY ELEVATION

SCALE 1:2000

NOTES :

1. FOR DETAILS OF BEARING DOWNSTAND SEE DWG. NO. B-AC-1

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	H. Kobayashi		11.9.00
DESIGN CHECK	H. Watanabe		11/9/00
SUBMITTED	A. Hirotani		21/9/00
APPROVED	P. Viraphanth		21/9/00
	S. Tamiyabutra		22/9/00

DWG. TITLE:
APPROACH VIADUCT SUPERSTRUCTURE
BOX GIRDER GENERAL ARRANGEMENT
(THAILAND SIDE)
SHEET 2 OF 5

Plot date: Tue, 8 Feb 2000 - 21:37:30
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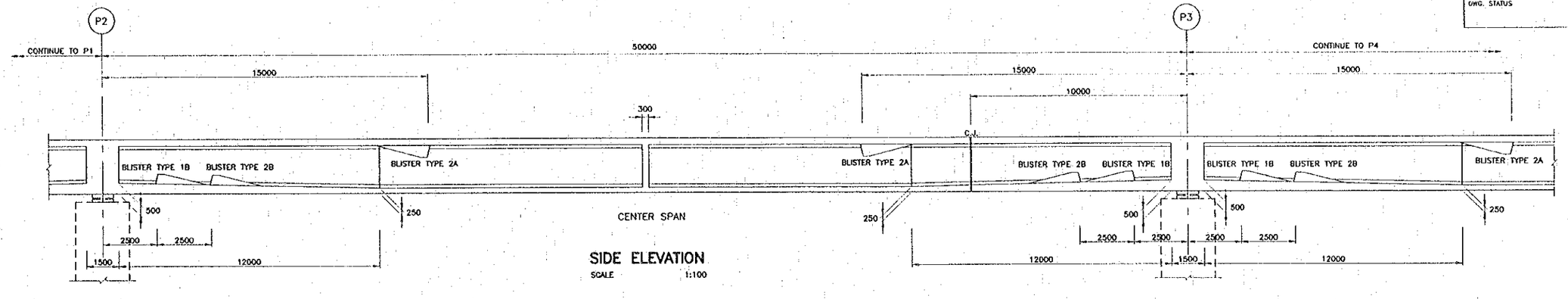
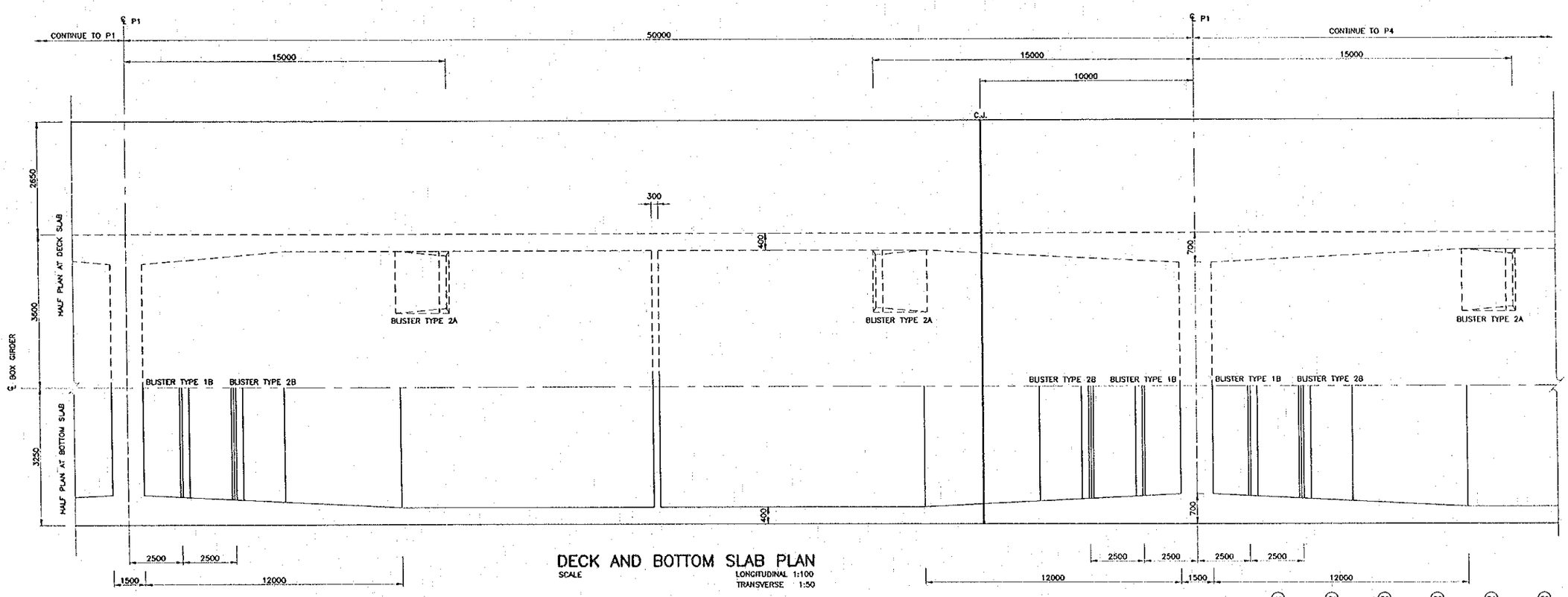
DATE OF ISSUE: 05/03/2000	
DWG. NO. B-A-8	SHEET NO. 164
DWG. STATUS	



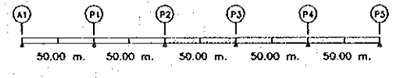
SIDE ELEVATION

SCALE 1:100



DECK AND BOTTOM SLAB PLAN

SCALE LONGITUDINAL 1:100
TRANSVERSE 1:50



KEY ELEVATION

SCALE 1:2000

NOTES :

1. FOR DETAILS OF BEARING DOWNSTAND SEE DWG. NO. B-AC-1

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
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JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	H. Kobayashi		16-03-00
DESIGN CHECK	H. Watanabe		16/03/00
SUBMITTED	A. Hirotani		21/03/00
APPROVED	P. Viraphanth		22/03/00
	S. Temiyabutra		22/3/00

DWG. TITLE:
APPROACH VIADUCT SUPERSTRUCTURE
BOX GIRDER GENERAL ARRANGEMENT (THAILAND SIDE)
SHEET 3 OF 5

Plot date: Thu, 27 Jan 2000 - 9:26:49
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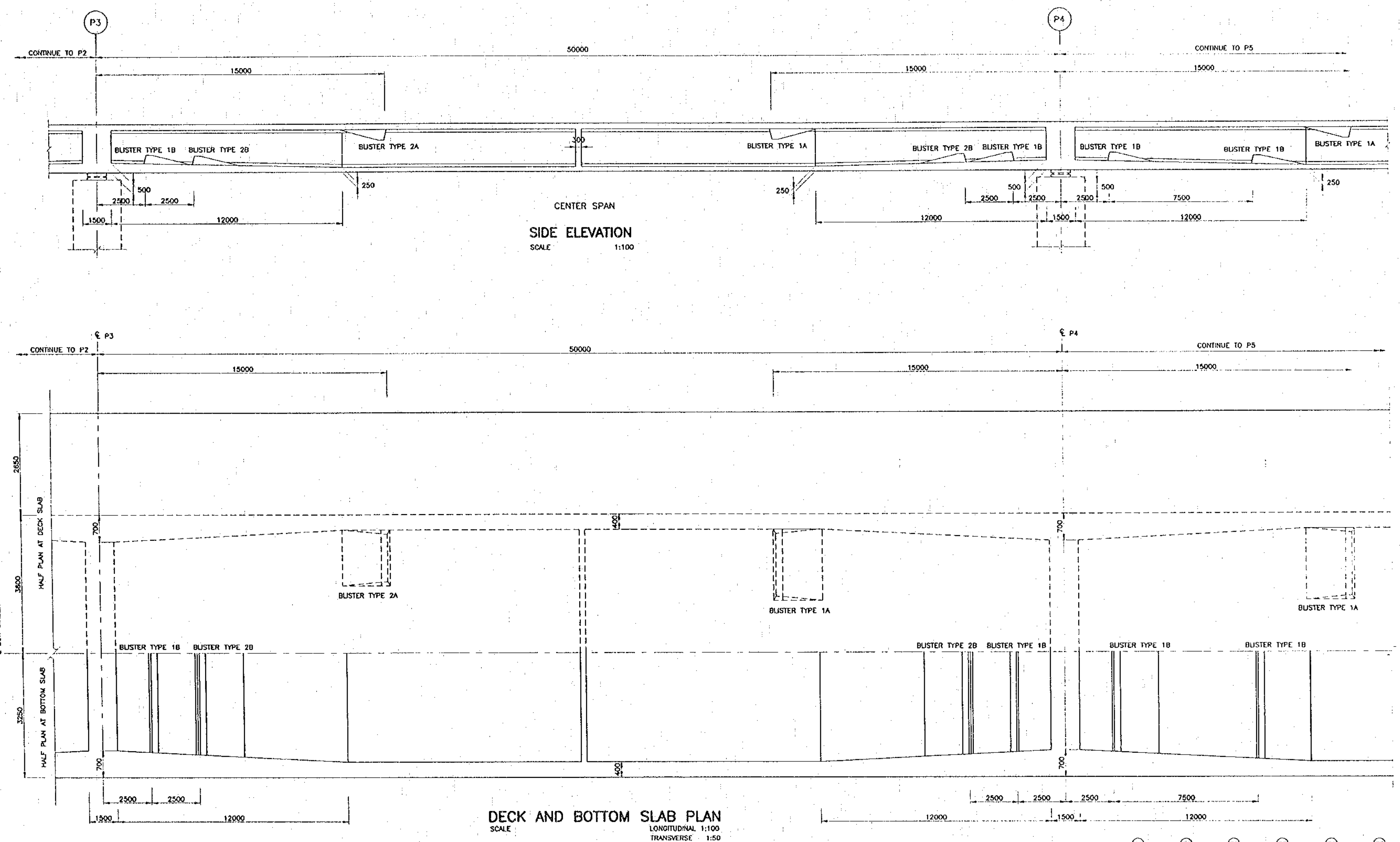
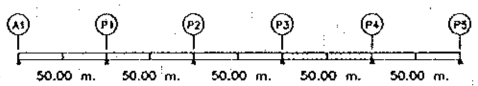
DATE OF ISSUE:	
05/03/2000	
DWG. NO. B-A-9	SHEET NO. 165
DWG. STATUS	



NOTES :

1. FOR DETAILS OF BEARING DOWNSTAND SEE DWG. NO. B-AC-1



KEY ELEVATION
SCALE 1:2000

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JICA JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	H. Kobayashi		
DESIGN CHECK	H. Watanabe		
SUBMITTED	A. Hiratani		
APPROVED	P. Vraphanth		
	S. Tamlyabutra		

DWG. TITLE:
APPROACH VIADUCT SUPERSTRUCTURE
BOX GIRDER GENERAL ARRANGEMENT
(THAILAND SIDE)
SHEET 4 OF 5

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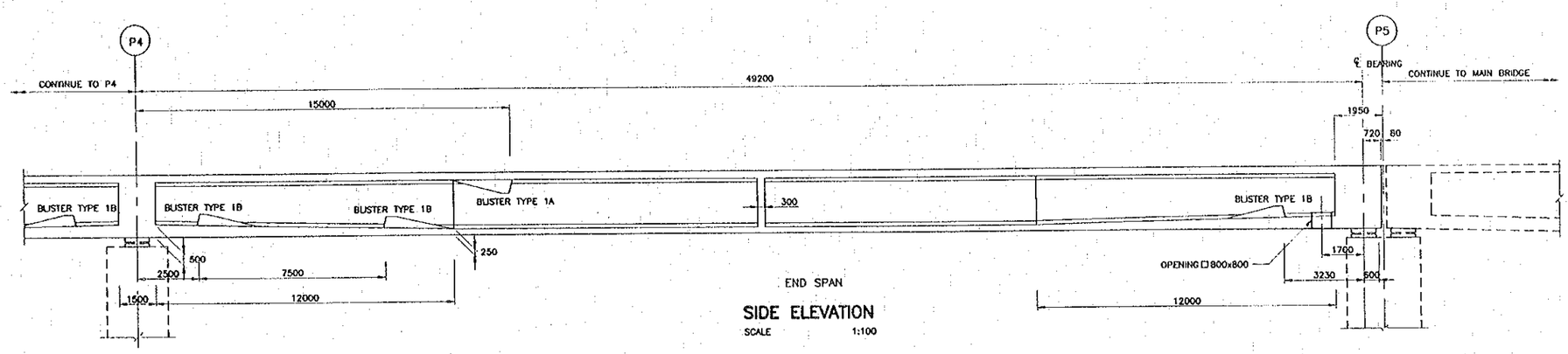
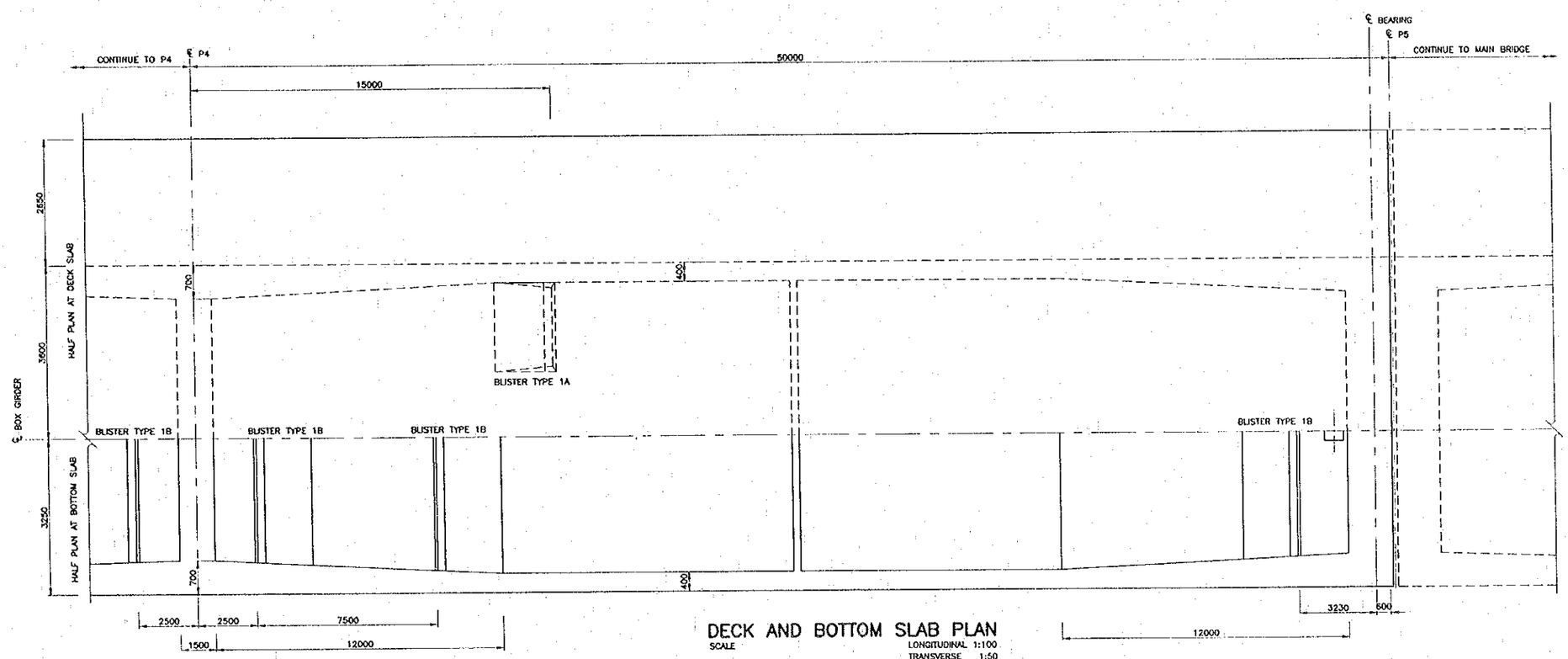
DATE OF ISSUE: 05/03/2000	
DWG. NO. B-A-10	SHEET NO. 166
DWG. STATUS	



END SPAN

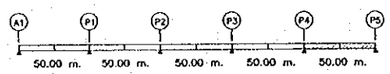
SIDE ELEVATION

SCALE 1:100



DECK AND BOTTOM SLAB PLAN

SCALE LONGITUDINAL 1:100
TRANSVERSE 1:50



KEY ELEVATION

SCALE 1:2000

NOTES :

1. FOR DETAILS OF BEARING DOWNSTAND SEE DWG. NO. B-AC-1

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
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JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	H. Kobayashi		16.11.00
DESIGN CHECK	H. Watanabe		17/11/00
SUBMITTED	A. Hirotani		21/12/00
APPROVED	P. Viraphanth		22/12/00
	S. Temiyabutra		22/12/00

DWG. TITLE:
APPROACH VIADUCT SUPERSTRUCTURE
BOX GIRDER GENERAL ARRANGEMENT (THAILAND SIDE)
SHEET 5 OF 5

Plot date: Tue, 8 Feb 2000 - 21:47:28

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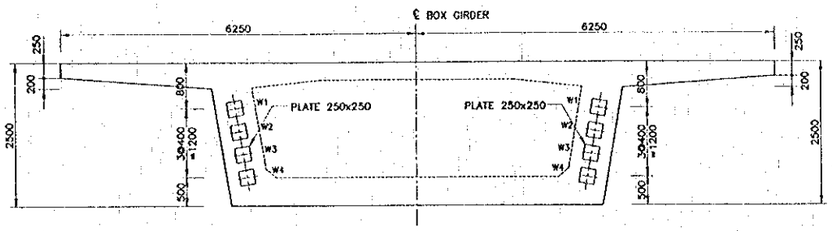
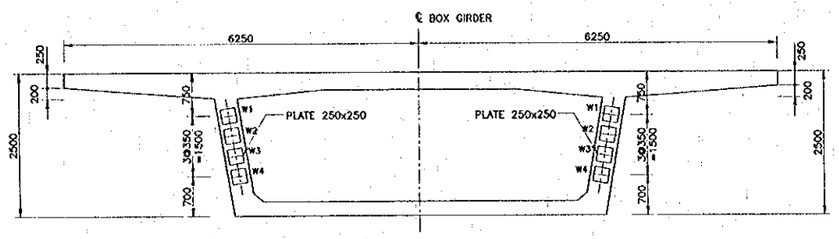
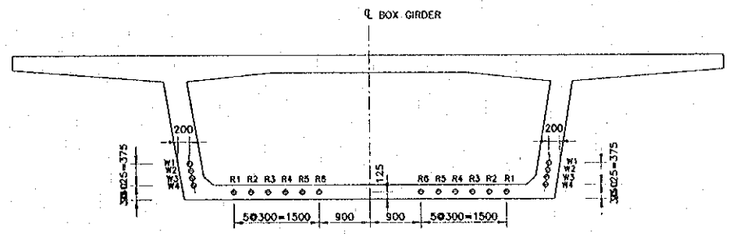
DATE OF ISSUE: 05/03/2000	
DWG. NO. B-A-11	SHEET NO. 167
DWG. STATUS	



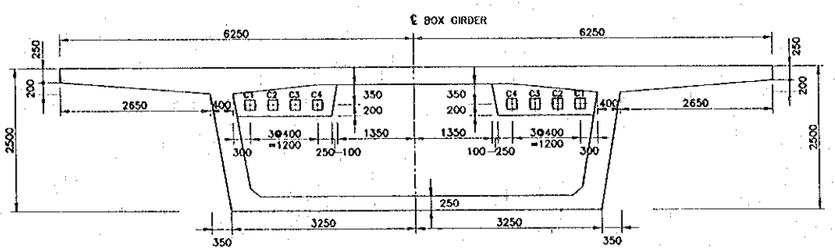
END FACE ANCHORAGE
SCALE 1:50



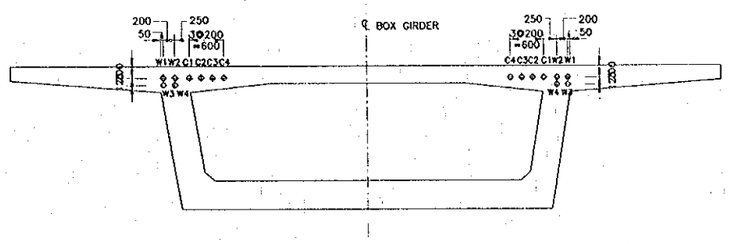
ANCHORAGE AT CONSTRUCTION JOINT
SCALE 1:50



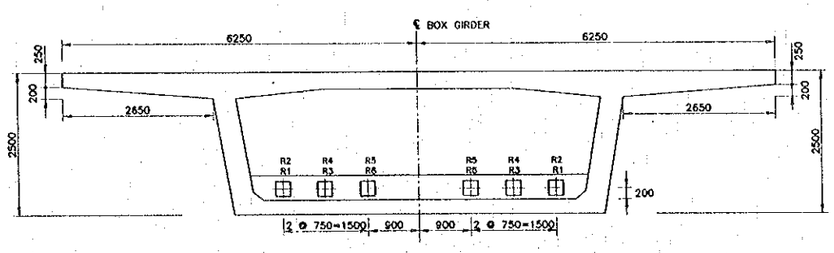
TYPICAL DUCT LOCATION AT MIDSPAN
SCALE 1:50



ANCHORAGE AT TOP BLISTER
SCALE 1:50



TYPICAL DUCT LOCATION AT PIER
SCALE 1:50



ANCHORAGE AT BOTTOM BLISTER
SCALE 1:50

NOTES :
1. DUCT SIZE IS 80 ID 12S15.2 TENDONS.

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
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JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	H. Kobayashi		05/03/00
DESIGN CHECK	H. Watanabe		05/03/00
SUBMITTED	A. Hiratani		05/03/00
APPROVED	P. Virophanth		22/02/00
	S. Temiyabutra		22/02/00

DWG. TITLE:
APPROACH VIADUCT SUPERSTRUCTURE
ANCHORAGE GENERAL ARRANGEMENT AND PC. CABLE DUCT LOCATIONS

Plot date: Mon, 14 Feb 2000 - 9:07:42
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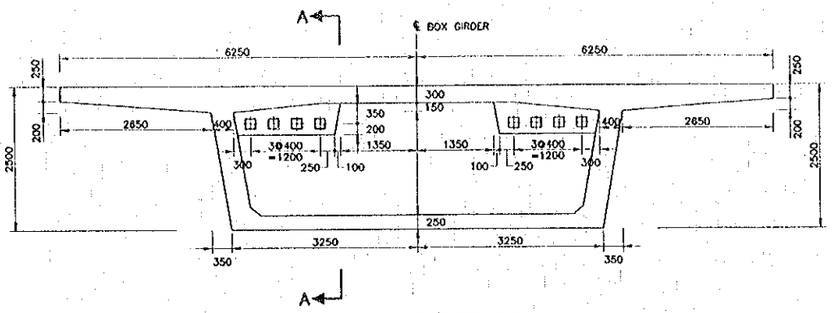
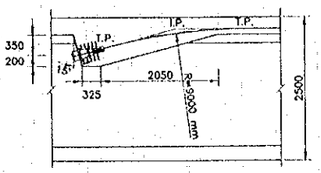
DATE OF ISSUE: 05/03/2000

DWG. NO. B-A-12 | SHEET NO. 168

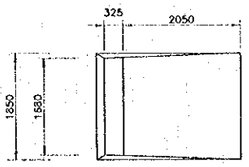
DWG. STATUS



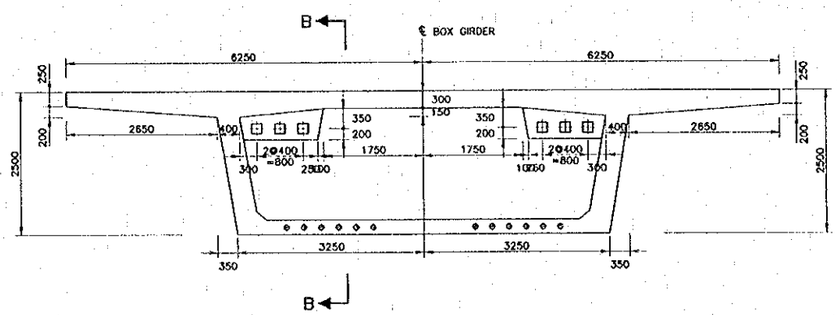
BLISTER TYPE 1A
SCALE 1:50



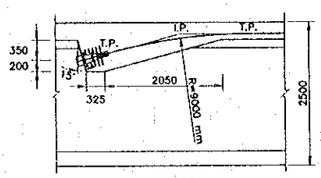
SECTION A-A
SCALE 1:50



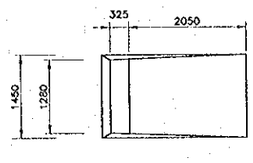
PLAN
SCALE 1:50



BLISTER TYPE 2A
SCALE 1:50



SECTION B-B
SCALE 1:50



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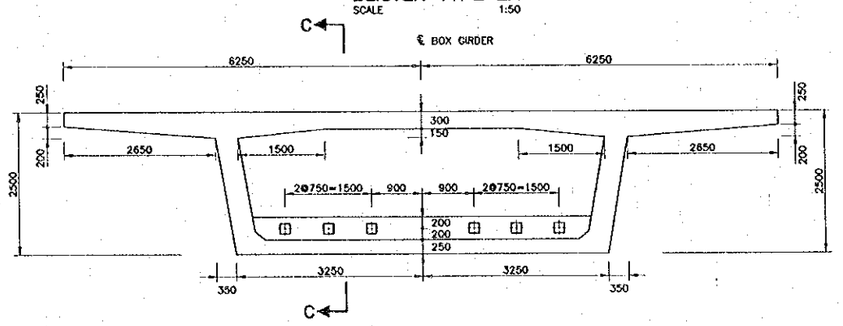

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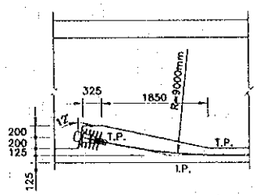
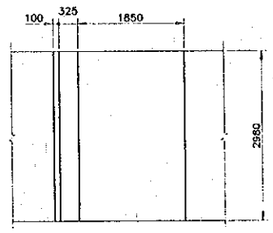


SECTION C-C
SCALE 1:50



PLAN
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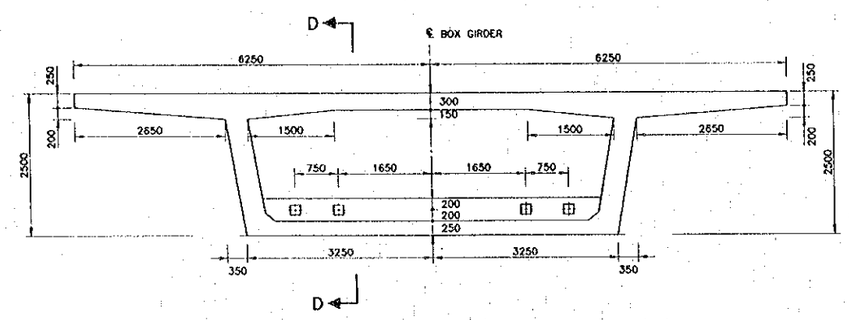

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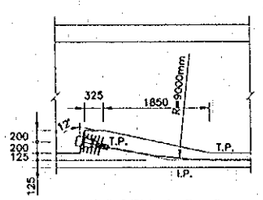
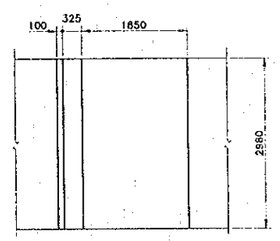


SECTION D-D
SCALE 1:50



PLAN
SCALE 1:50

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	H. Kobayashi		16/02/00
DESIGN CHECK	H. Watanabe		16/02/00
SUBMITTED	A. Hirotani		22/02/00
APPROVED	P. Viraphanth		22/02/00
	S. Tomiyabutra		22/02/00

DWG. TITLE:
APPROACH VIADUCT SUPERSTRUCTURE
BLISTER DETAILS

Plot date: Tue, 8 Feb 2000 - 21:58:19

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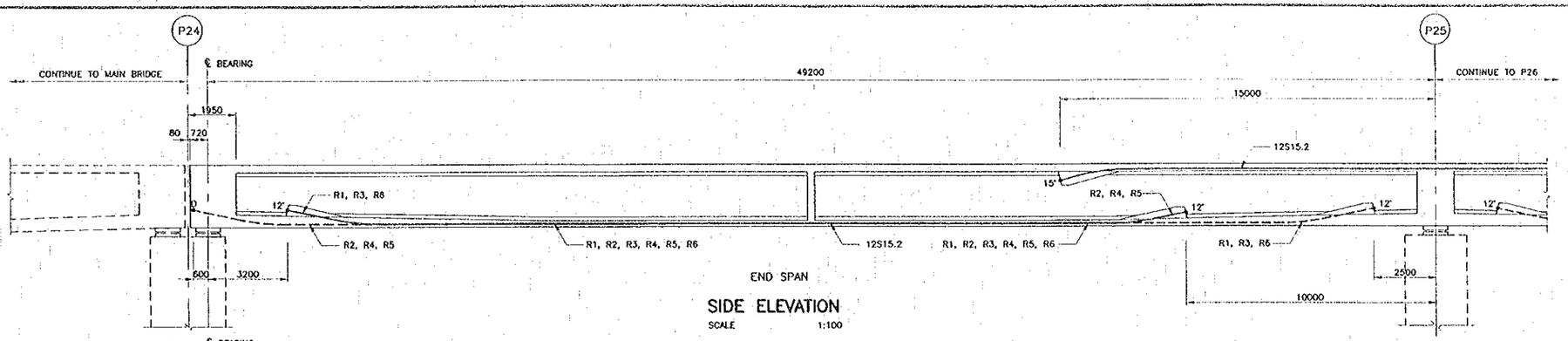
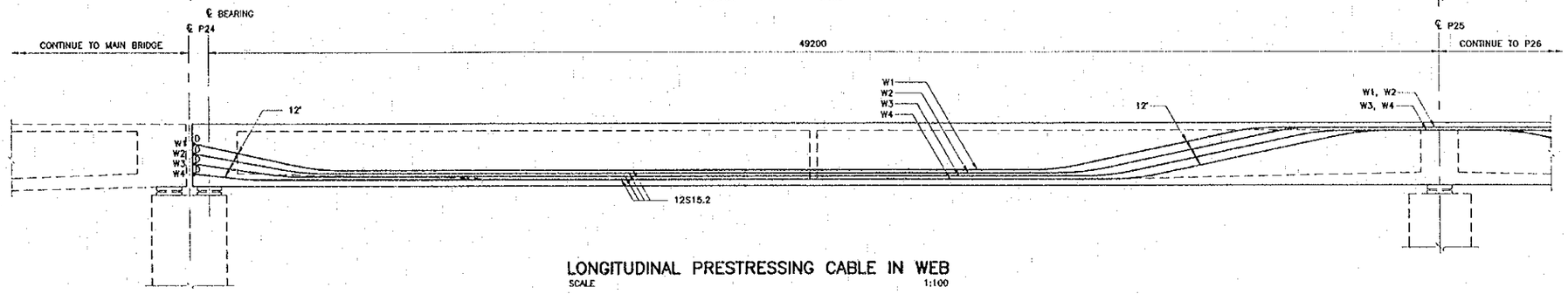
DATE OF ISSUE: 05/03/2000	
DWG. NO. B-A-13	SHEET NO. 169
DWG. STATUS	



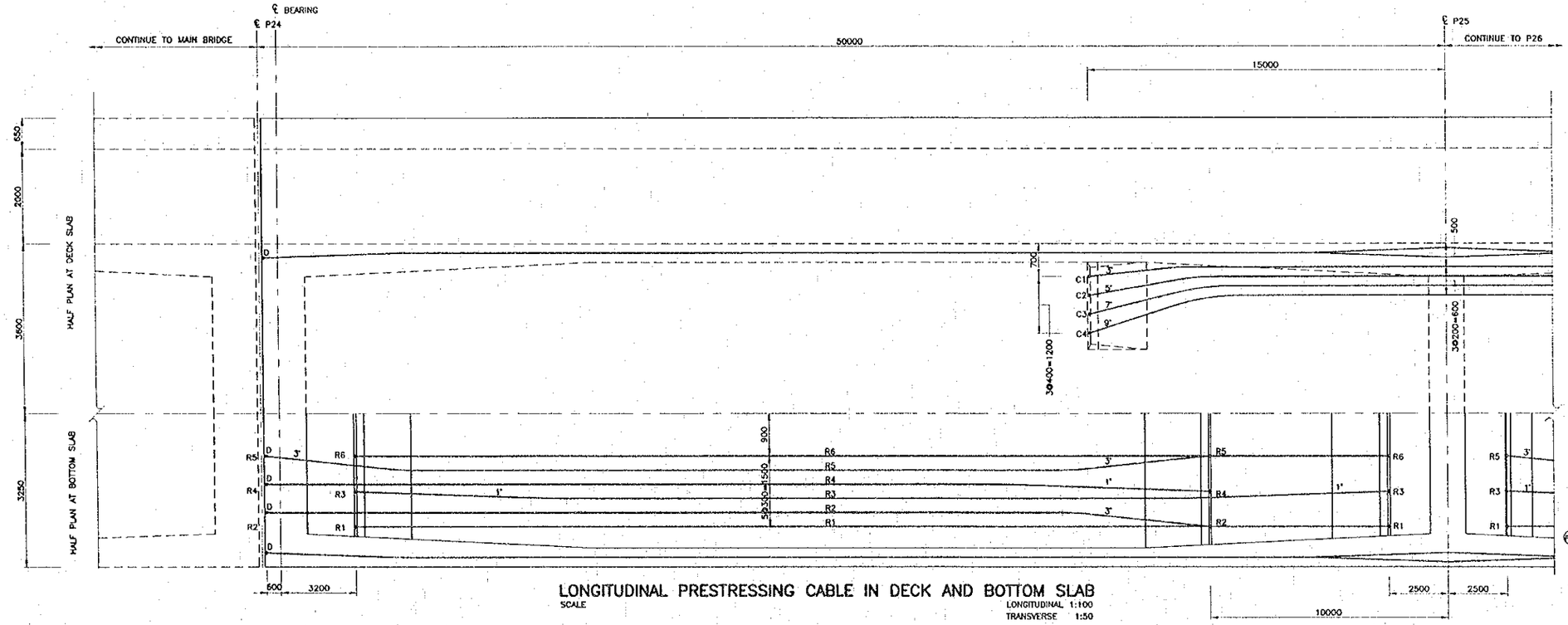
SIDE ELEVATION

SCALE 1:100



LONGITUDINAL PRESTRESSING CABLE IN WEB

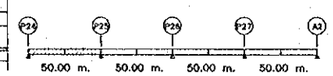
SCALE 1:100



LONGITUDINAL PRESTRESSING CABLE IN DECK AND BOTTOM SLAB

SCALE LONGITUDINAL 1:100
TRANSVERSE 1:50

NOTES :
1. ALL PC. CABLE CURVATURE RADIAL AS 9000 MILLIMETERS.
2. LEGENDS ANCHORAGE
   - PRESTRESSING END
   - D DEAD END ANCHORAGE



KEY ELEVATION

NOT TO SCALE

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JICA JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	H. Kobayashi		16.11.99
DESIGN CHECK	H. Watanabe		11/11/99
SUBMITTED	A. Hirotani		21/11/99
APPROVED	P. Virophanth		22/11/99
	S. Tamiyabutra	S. Tamiya	23/11/99

DWG. TITLE:
APPROACH VIADUCT SUPERSTRUCTURE
LONGITUDINAL PRESTRESSING LAYOUT (LAO PDR SIDE)
SHEET 1 OF 4

Plot date: Tue, 6 Feb 2000 - 23:29:11
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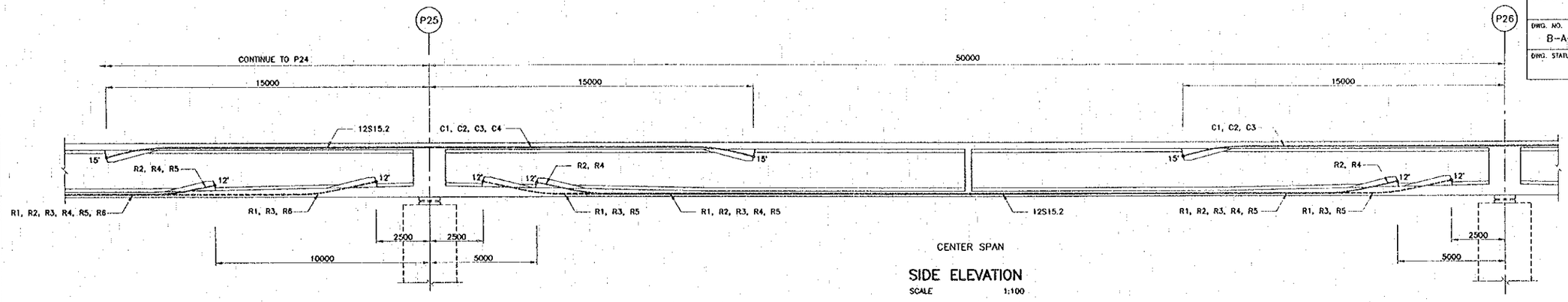
DATE OF ISSUE: 05/03/2000

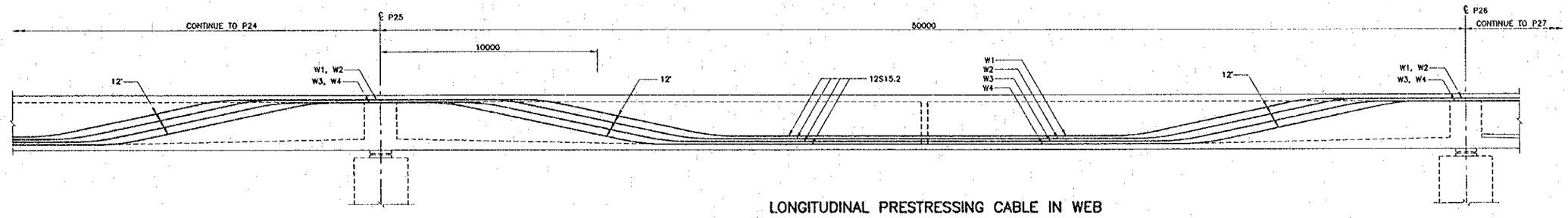
DWG. NO. B-A-14 | SHEET NO. 170

DWG. STATUS



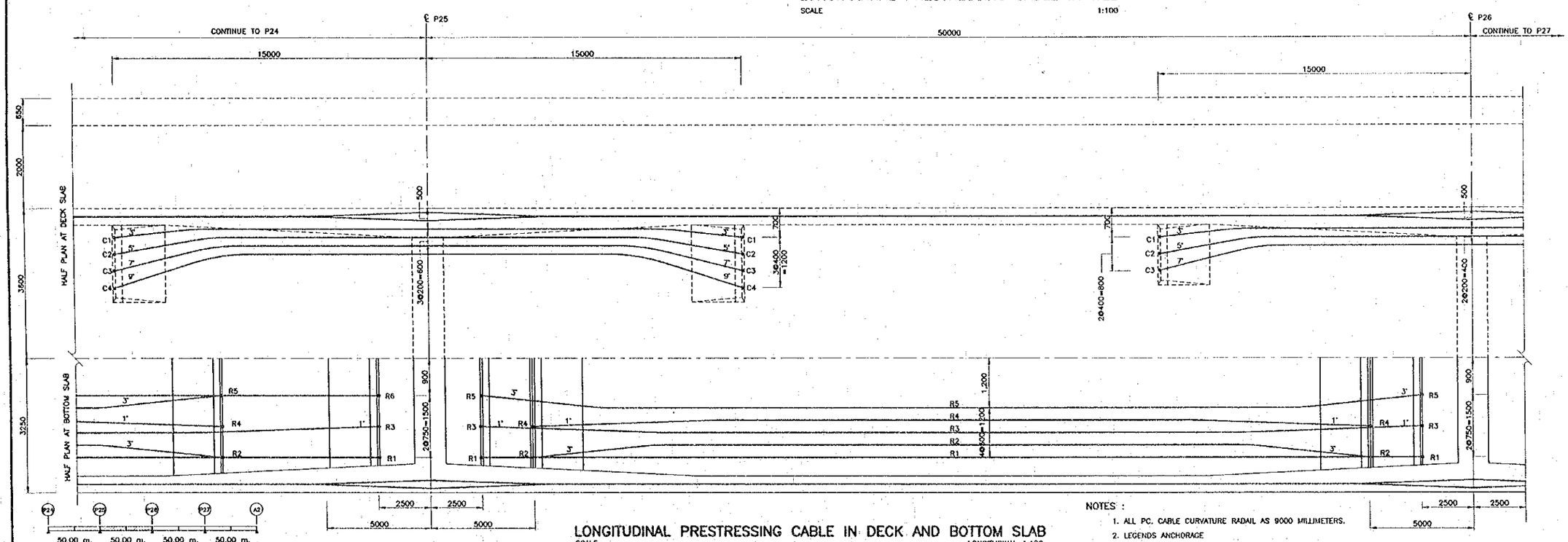
SIDE ELEVATION

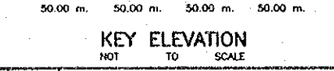
SCALE 1:100



LONGITUDINAL PRESTRESSING CABLE IN WEB

SCALE 1:100





KEY ELEVATION

NOT TO SCALE

LONGITUDINAL PRESTRESSING CABLE IN DECK AND BOTTOM SLAB

SCALE LONGITUDINAL 1:100
TRANSVERSE 1:50

NOTES :

1. ALL PC. CABLE CURVATURE RADAIL AS 9000 MILLIMETERS.
2. LEGENDS ANCHORAGE
   - ⟵ PRESTRESSING END
   - ⊙— DEAD END ANCHORAGE

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JAPAN INTERNATIONAL COOPERATION AGENCY

LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION

KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	H. Kobayashi		8-02-00
DESIGN CHECK	H. Watanabe		8/02/00
SUBMITTED	A. Hiratani		9-02-00
APPROVED	P. Viraphanth		22/02/00
	S. Tamiyabutra		22/2/00

DWG. TITLE:

APPROACH VIADUCT SUPERSTRUCTURE
LONGITUDINAL PRESTRESSING LAYOUT
(LAO P.D.R. SIDE)

SHEET 2 OF 4

Plot date: Tue, 8 Feb 2000 - 23:32:47
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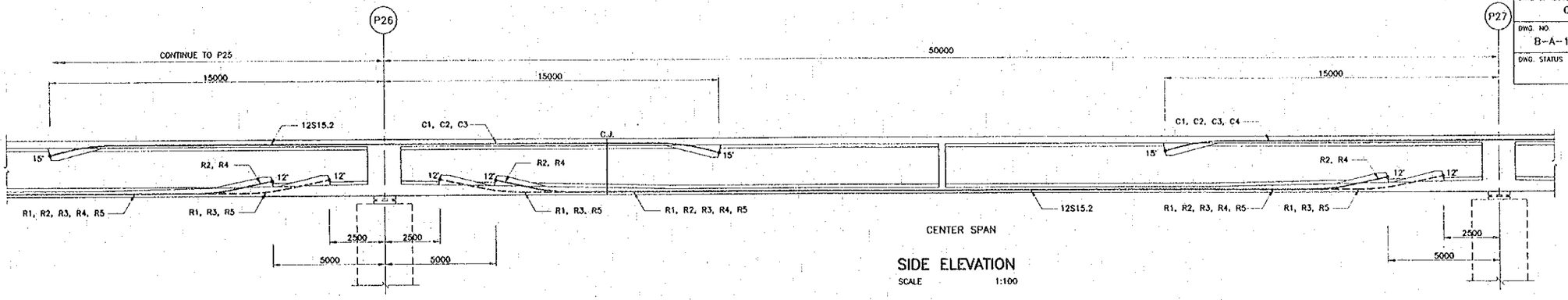
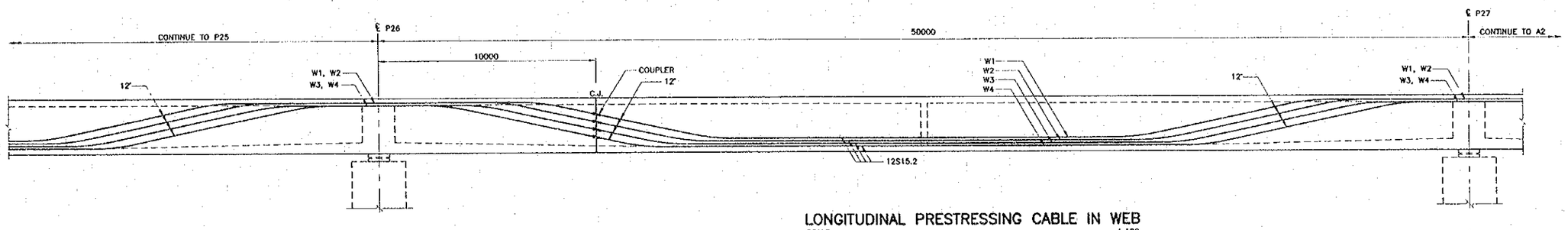
DATE OF ISSUE: 05/03/2000	
DWG. NO. B-A-15	SHEET NO. 171
DWG. STATUS	



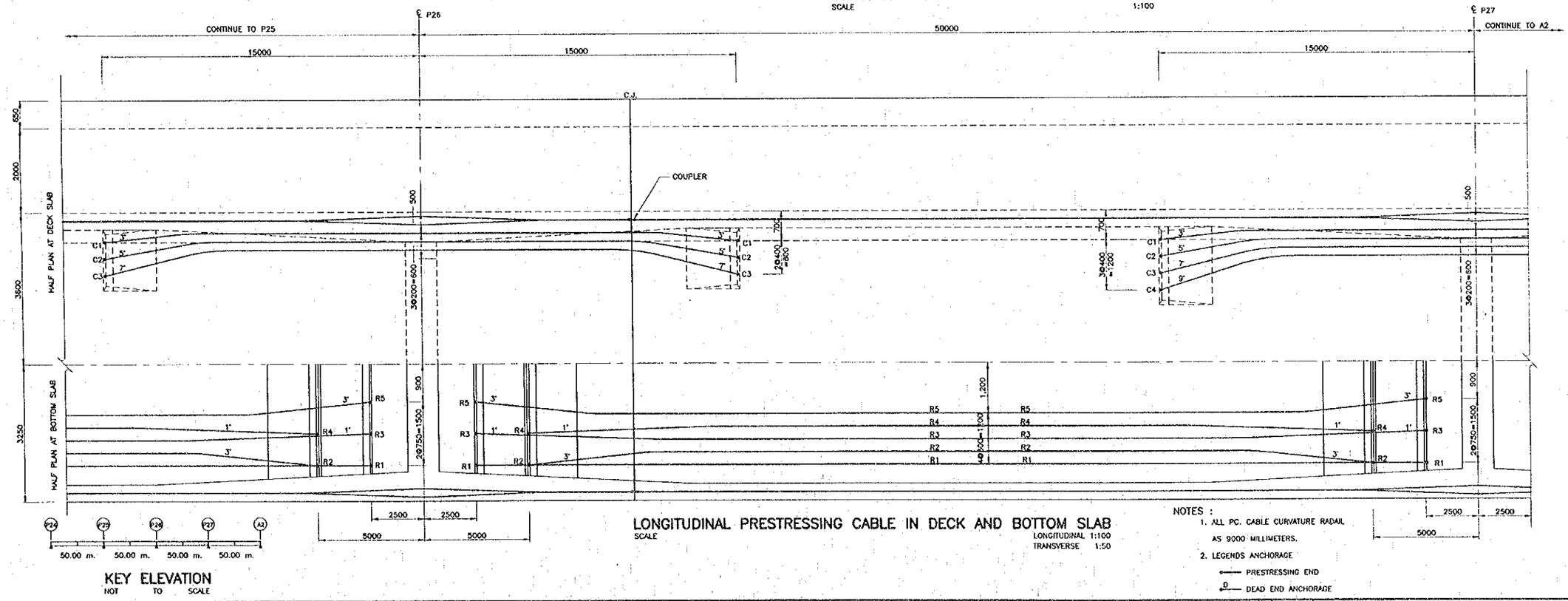
SIDE ELEVATION

SCALE 1:100



LONGITUDINAL PRESTRESSING CABLE IN WEB

SCALE 1:100



KEY ELEVATION

NOT TO SCALE

LONGITUDINAL PRESTRESSING CABLE IN DECK AND BOTTOM SLAB

SCALE LONGITUDINAL 1:100
TRANSVERSE 1:50

NOTES :

1. ALL PC. CABLE CURVATURE RADIAL AS 9000 MILLIMETERS.
2. LEGENDS ANCHORAGE
   - PRESTRESSING END
   - D DEAD END ANCHORAGE

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	H. Kobayashi		12/05/00
DESIGN CHECK	H. Watanabe		13/05/00
SUBMITTED	A. Hirotani		13/05/00
APPROVED	P. Viraphanth		12/06/00
	S. Tamiyobutra		12/06/00

DWG. TITLE:

APPROACH VIADUCT SUPERSTRUCTURE
LONGITUDINAL PRESTRESSING LAYOUT (LAO PDR SIDE)

SHEET 3 OF 4

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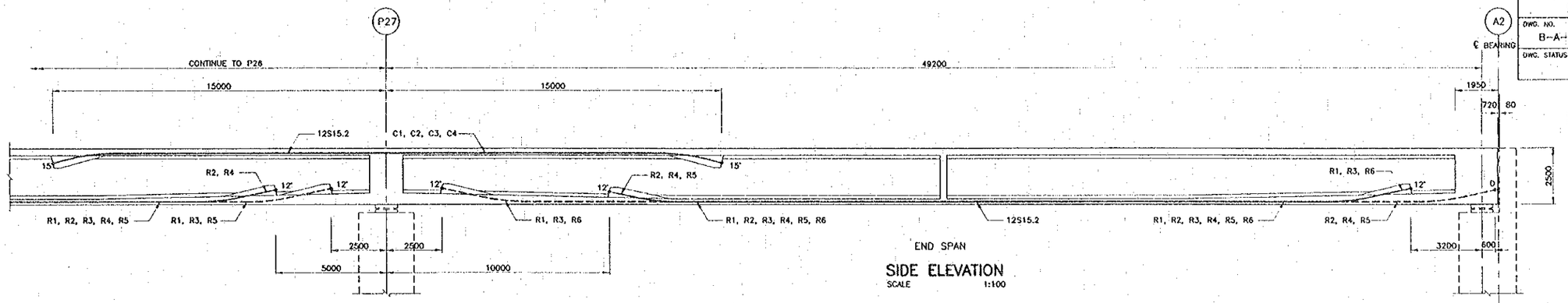
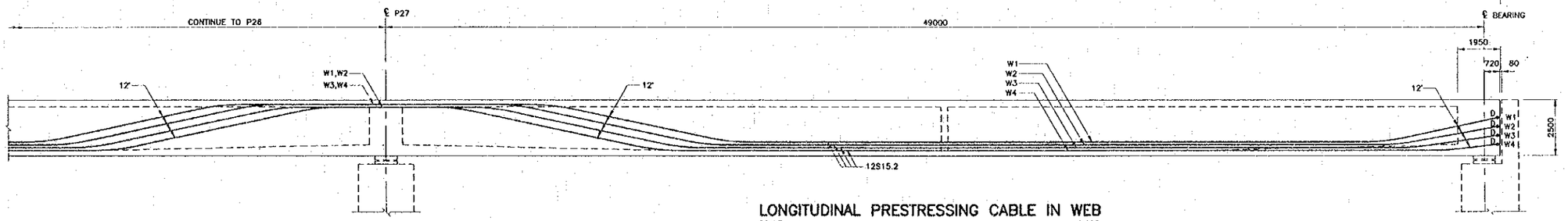
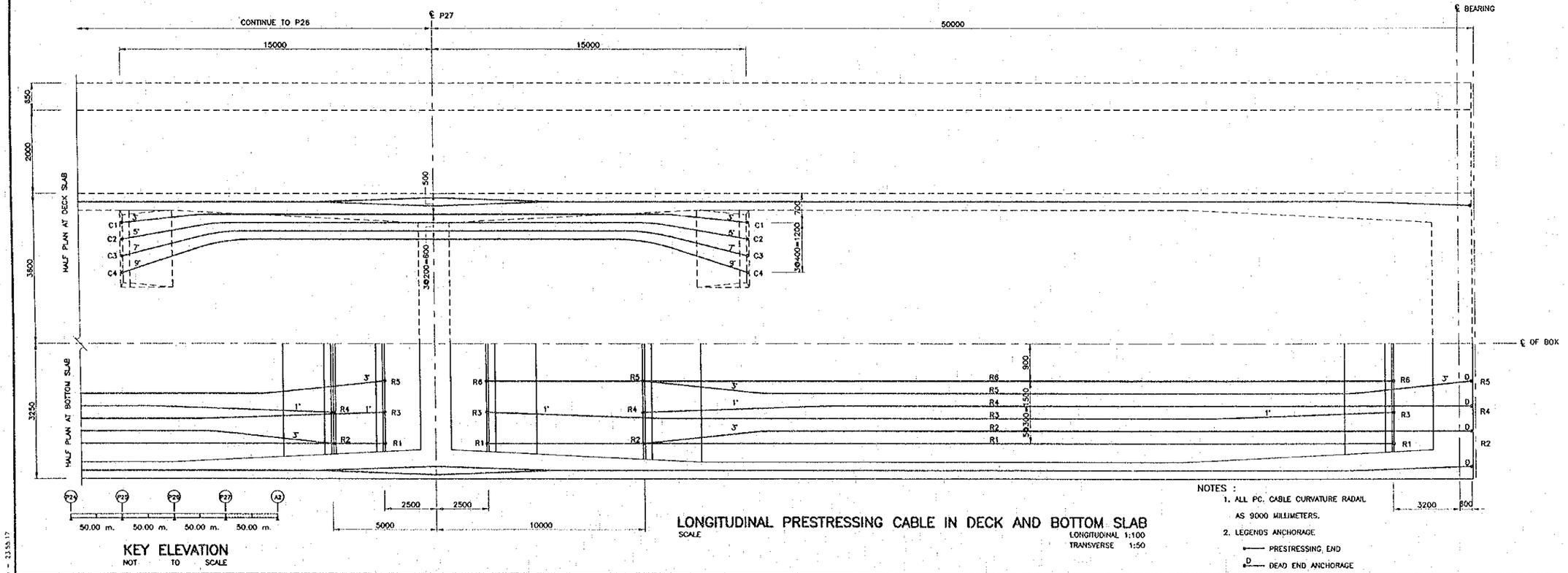
DATE OF ISSUE: 05/03/2000	
DWG. NO. B-A-16	SHEET NO. 172
DWG. STATUS	



SIDE ELEVATION
SCALE 1:100



LONGITUDINAL PRESTRESSING CABLE IN WEB
SCALE 1:100



LONGITUDINAL PRESTRESSING CABLE IN DECK AND BOTTOM SLAB
SCALE
LONGITUDINAL 1:100
TRANSVERSE 1:50

KEY ELEVATION
NOT TO SCALE

NOTES :
1. ALL PC. CABLE CURVATURE RADIUS AS 9000 MILLIMETERS.
2. LEGENDS ANCHORAGE
   - PRESTRESSING, END
   - D DEAD END ANCHORAGE

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JICA JAPAN INTERNATIONAL COOPERATION AGENCY

LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION

KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

	NAME	SIGNATURE	DATE
QUALITY RECORD			
DESIGN	H. Kobayashi		16.02.00
DESIGN CHECK	H. Watanabe		18/02/00
SUBMITTED	A. Hirotani		21/02/00
APPROVED	P. Viraphanth		23/02/00
	S. Tantiyabutra		27/02/00

DWG. TITLE:
APPROACH VIADUCT SUPERSTRUCTURE
LONGITUDINAL PRESTRESSING LAYOUT (LAO PDR SIDE)
SHEET 4 OF 4

Plot date: Tue, 8 Feb 2000 - 23:55:17
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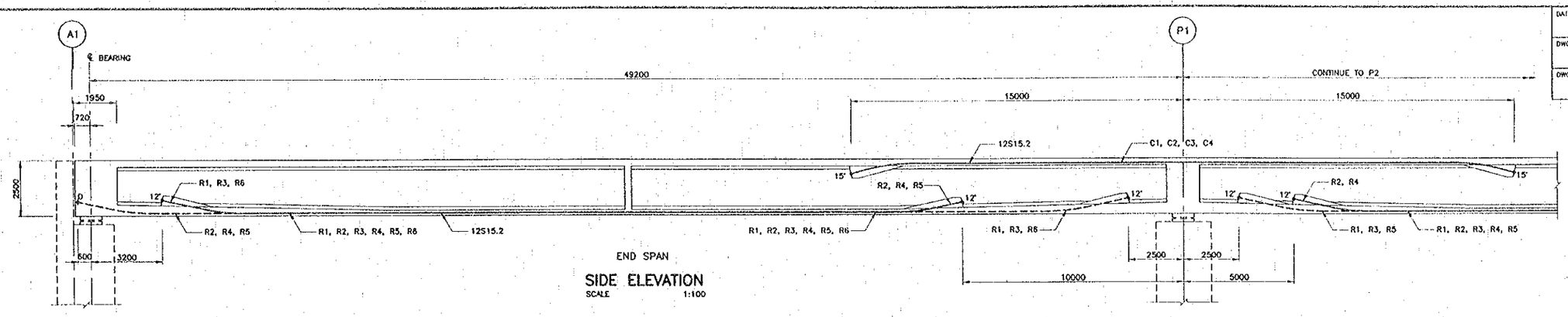
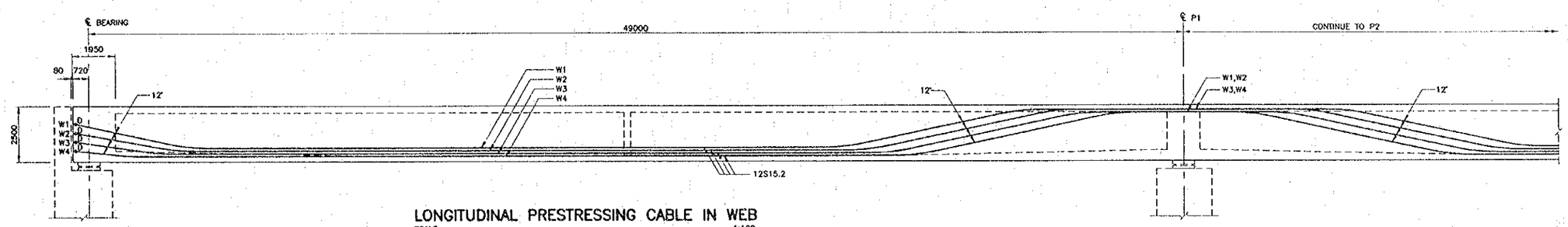
DATE OF ISSUE: 05/03/2000	
DWG. NO. B-A-17	SHEET NO. 173
DWG. STATUS	



END SPAN

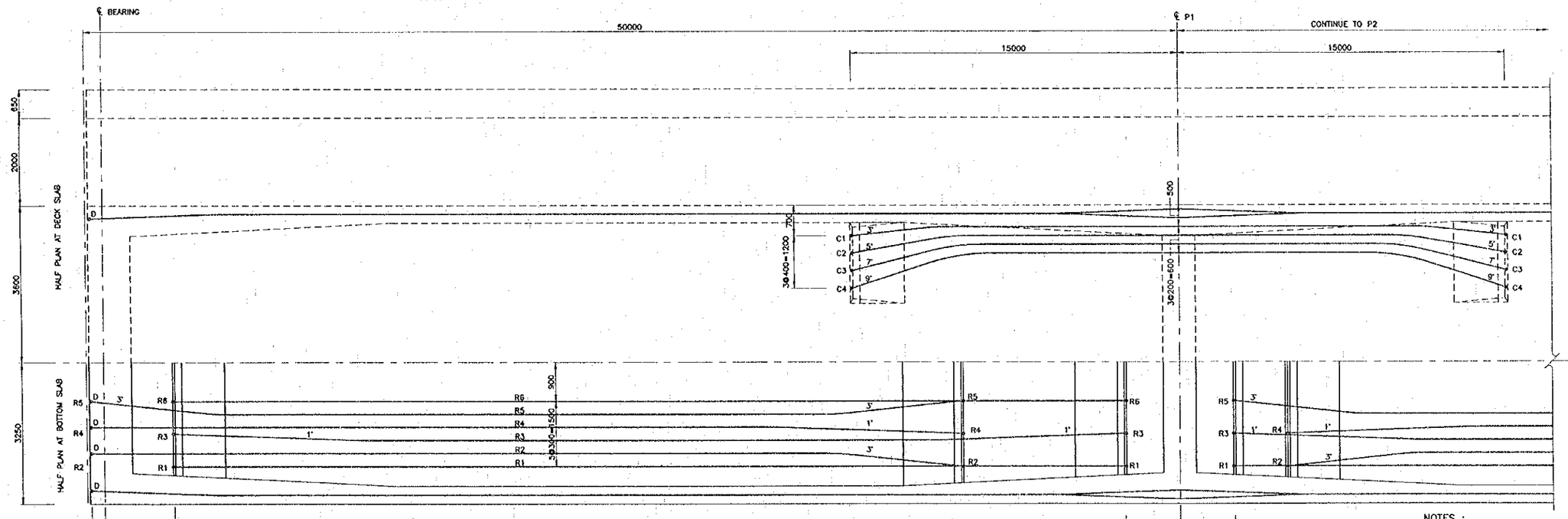
SIDE ELEVATION

SCALE 1:100



LONGITUDINAL PRESTRESSING CABLE IN WEB

SCALE 1:100



LONGITUDINAL PRESTRESSING CABLE IN DECK AND BOTTOM SLAB

SCALE LONGITUDINAL 1:100
TRANSVERSE 1:50

KEY ELEVATION

NOT TO SCALE

NOTES :

1. ALL PC. CABLE CURVATURE RADAIL AS 9000 MILLIMETERS.
2. LEGENDS ANCHORAGE
   - PRESTRESSING END
   - D DEAD END ANCHORAGE

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
In association with
NIPPON KOEI CO., LTD.

JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	H. Kobayashi		11.22.99
DESIGN CHECK	H. Watanabe		12/01/00
SUBMITTED	A. Hiratani		01/01/00
APPROVED	P. Viraphanth		03/01/05
	S. Temiyabutra	S. Temiyabutra	29/01/05

DWG. TITLE:

APPROACH VIADUCT SUPERSTRUCTURE

LONGITUDINAL PRESTRESSING LAYOUT (THAILAND SIDE)

SHEET 1 OF 5

Plot date: Wed, 9 Feb 2000 - 08:23:31

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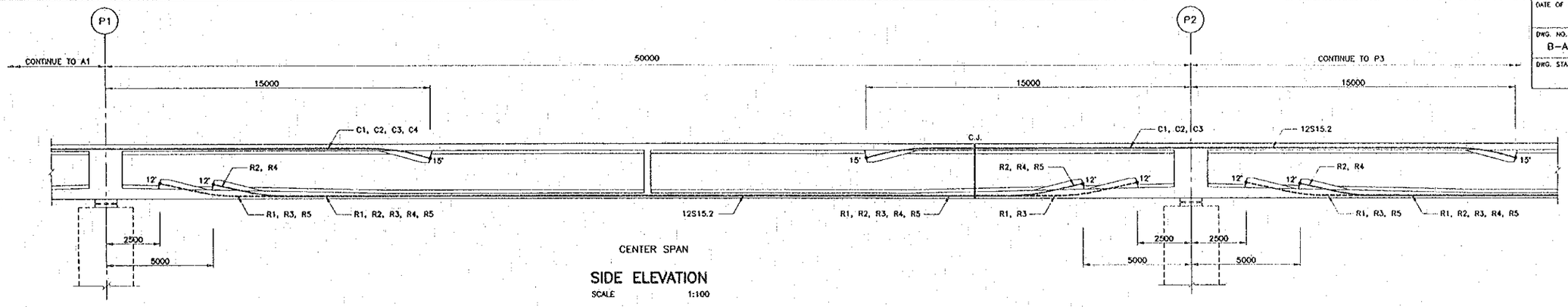
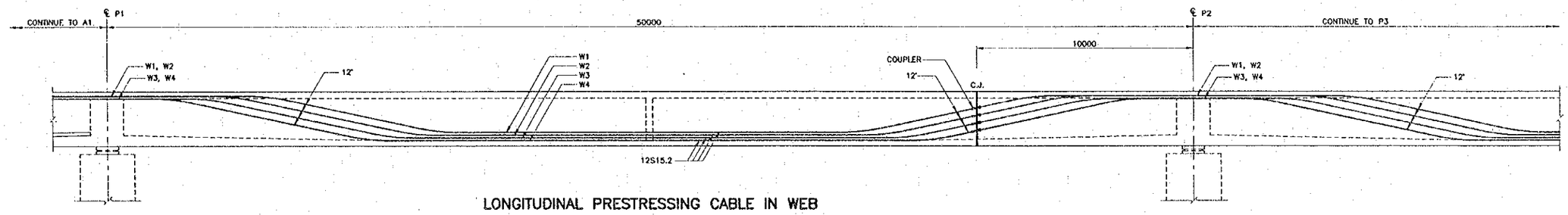
DATE OF ISSUE: 05/03/2000	
DWG. NO. B-A-18	SHEET NO. 174
DWG. STATUS	



CENTER SPAN

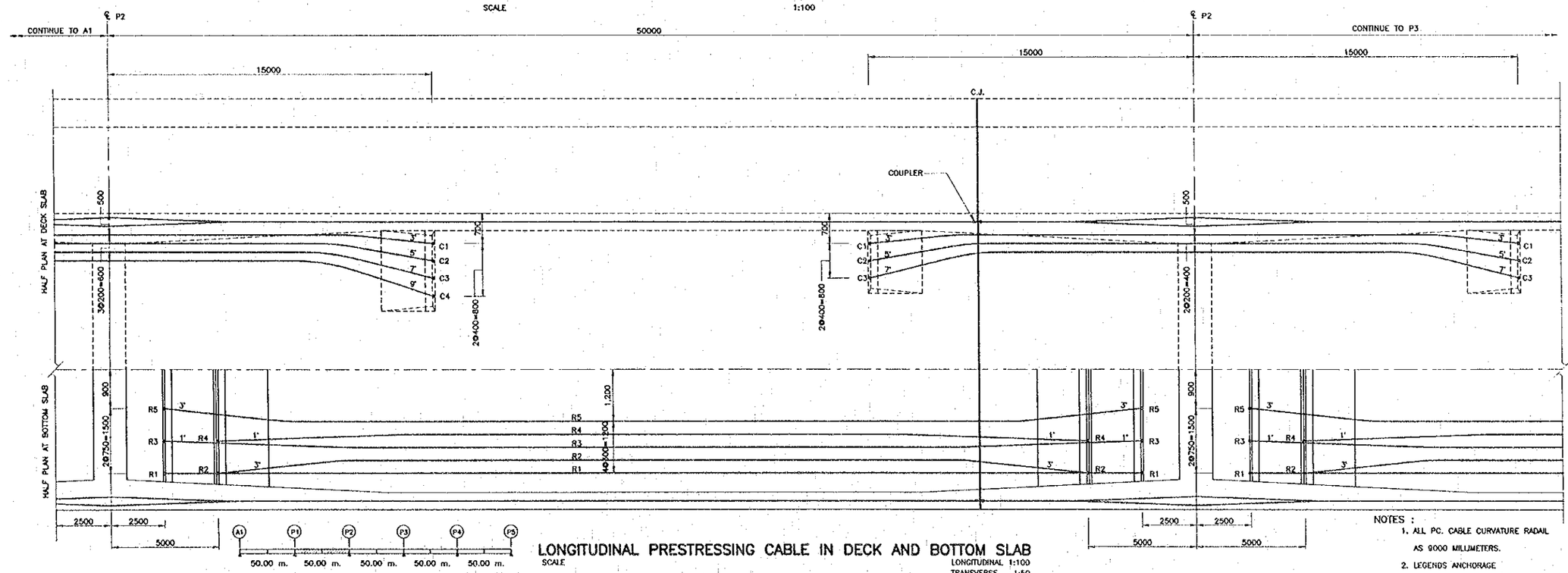
SIDE ELEVATION

SCALE 1:100



LONGITUDINAL PRESTRESSING CABLE IN WEB

SCALE 1:100



KEY ELEVATION

NOT TO SCALE

LONGITUDINAL PRESTRESSING CABLE IN DECK AND BOTTOM SLAB

SCALE LONGITUDINAL 1:100
TRANSVERSE 1:50

NOTES :
1. ALL PC. CABLE CURVATURE RADAIL AS 9000 MILLIMETERS.
2. LEGENDS ANCHORAGE
⟵ PRESTRESSING END
0⟵ DEAD END ANCHORAGE

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NK NIPPON KOEI CO., LTD.

JICA JAPAN INTERNATIONAL COOPERATION AGENCY

LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION

KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	H. Kobayashi		16.02.00
DESIGN CHECK	H. Watanabe		18/02/00
SUBMITTED	A. Hiratani		21/2/00
APPROVED	P. Viraphanth		22/02/00
	S. Temiyabutra		22/2/00

DWG. TITLE:

APPROACH VIADUCT SUPERSTRUCTURE
LONGITUDINAL PRESTRESSING LAYOUT
(THAILAND SIDE)

SHEET 2 OF 5

Plot date: Wed, 9 Feb 2000 - 0:18:08

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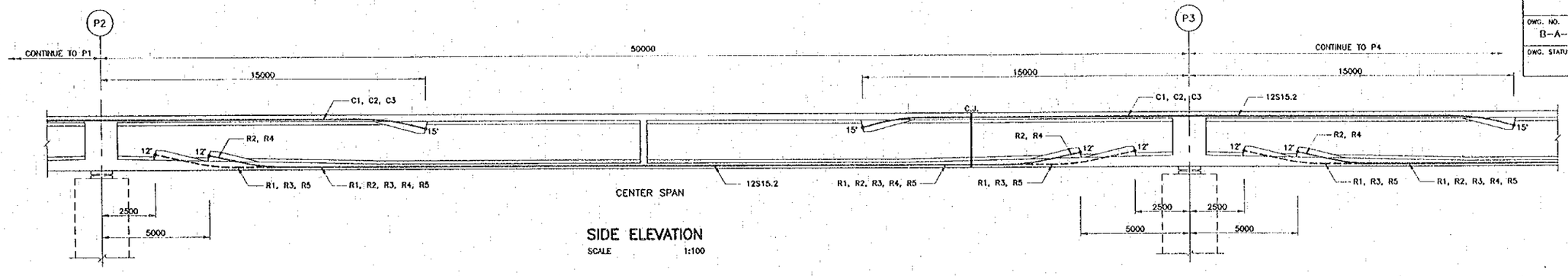
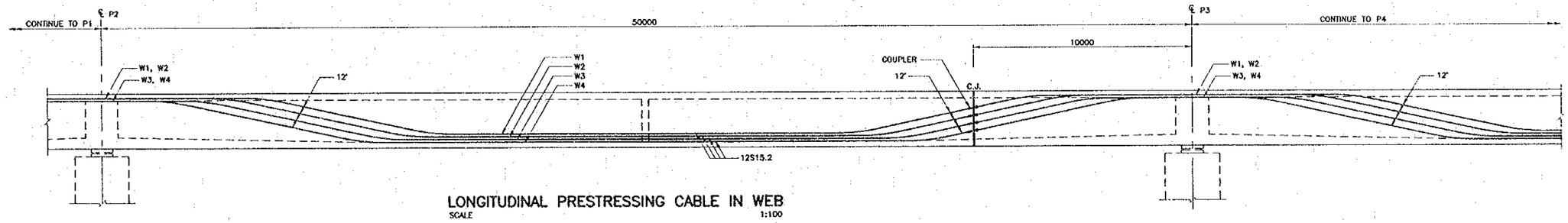
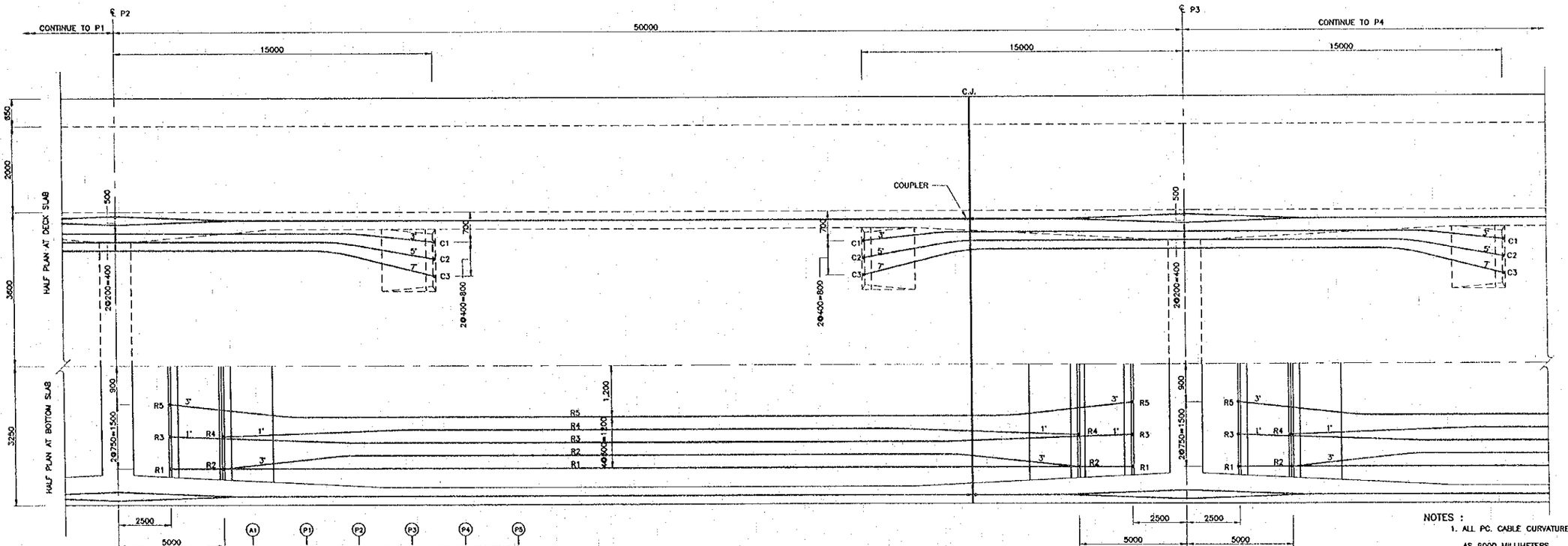
DATE OF ISSUE: 05/03/2000	
DWG. NO. B-A-19	SHEET NO. 175
DWG. STATUS	

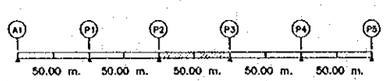


SIDE ELEVATION
SCALE 1:100



LONGITUDINAL PRESTRESSING CABLE IN WEB
SCALE 1:100





KEY ELEVATION
NOT TO SCALE

LONGITUDINAL PRESTRESSING CABLE IN DECK AND BOTTOM SLAB
SCALE LONGITUDINAL 1:100
TRANSVERSE 1:50

NOTES :
1. ALL PC. CABLE CURVATURE RADAIL AS 9000 MILLIMETERS.
2. LEGENDS ANCHORAGE
PRESTRESSING END
D DEAD END ANCHORAGE

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JICA JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	H. Kobayashi		16/02/00
DESIGN CHECK	H. Watanabe		16/02/00
SUBMITTED	A. Hirotani		21/02/00
APPROVED	P. Virophasth		22/02/00
	S. Temiyabutra	S. Temiyabutra	22/02/00

DWG. TITLE:
APPROACH VIADUCT SUPERSTRUCTURE
LONGITUDINAL PRESTRESSING LAYOUT (THAILAND SIDE)
SHEET 3 OF 5

Plot date: Wed, 9 Feb 2000 - 04:03
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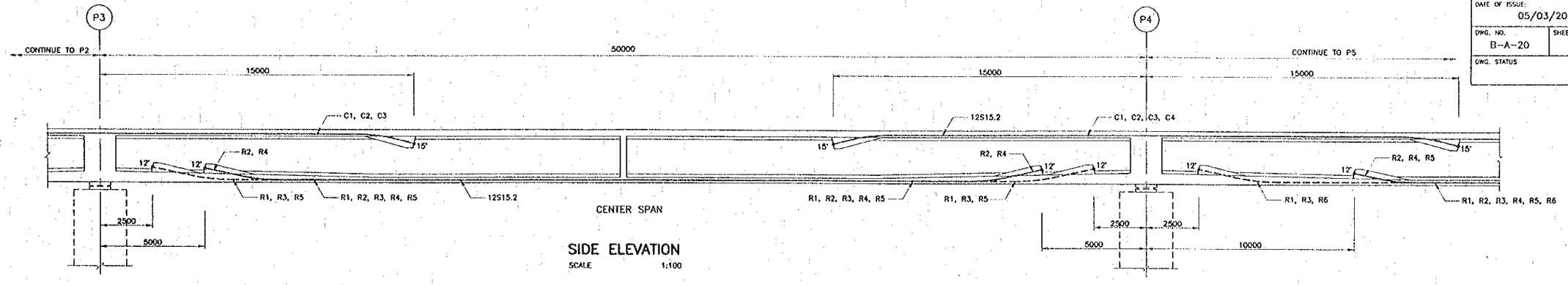
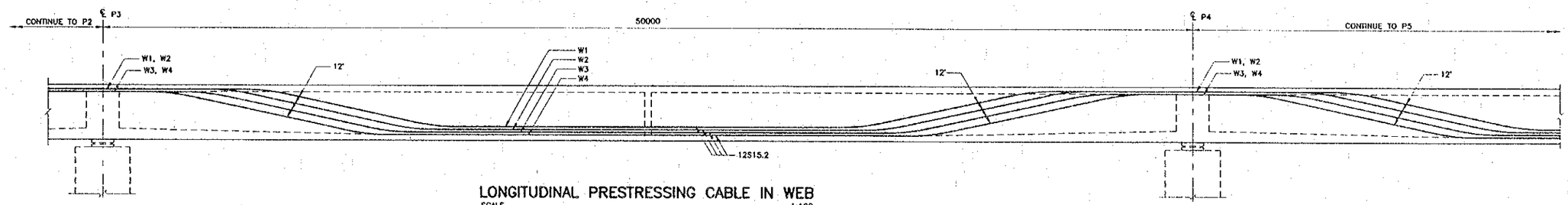
DATE OF ISSUE: 05/03/2000	
DWG. NO. B--A--20	SHEET NO. 176
DWG. STATUS	



CENTER SPAN

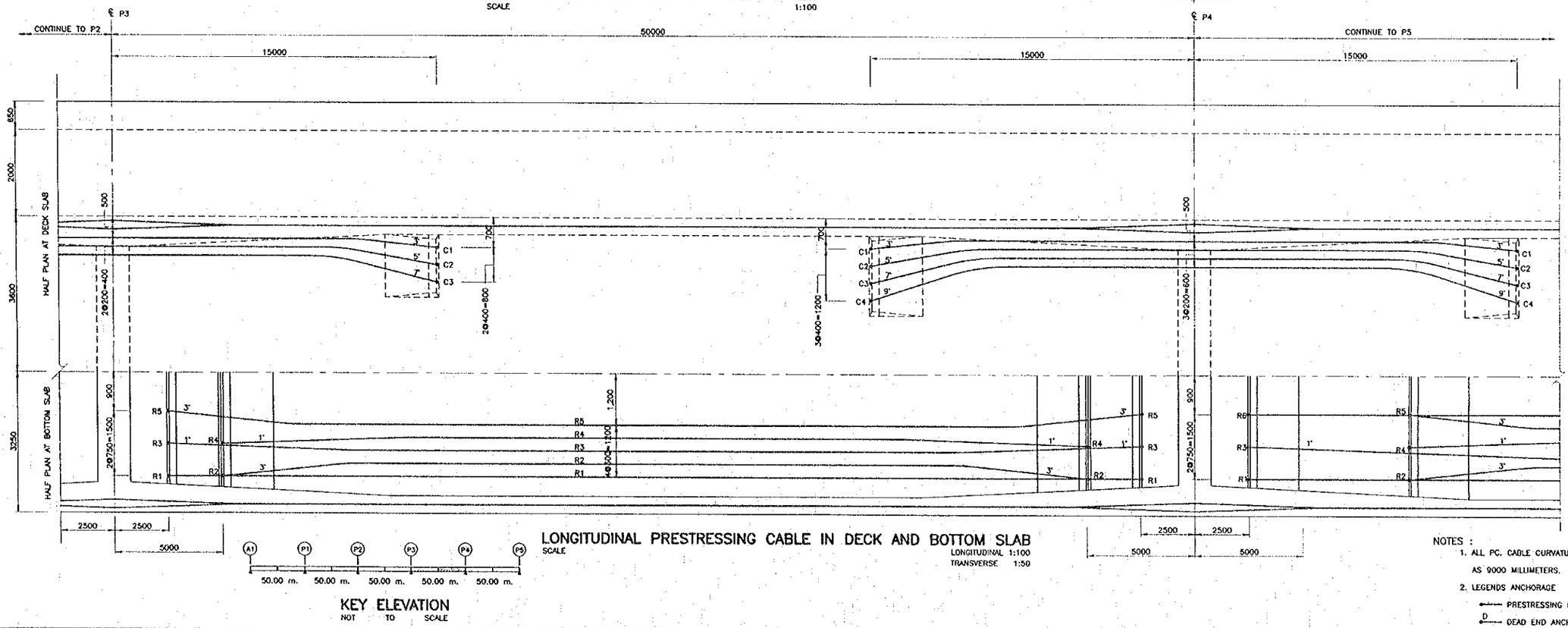
SIDE ELEVATION

SCALE 1:100



LONGITUDINAL PRESTRESSING CABLE IN WEB

SCALE 1:100



LONGITUDINAL PRESTRESSING CABLE IN DECK AND BOTTOM SLAB

SCALE
LONGITUDINAL 1:100
TRANSVERSE 1:50

KEY ELEVATION

NOT TO SCALE

NOTES :
1. ALL PC. CABLE CURVATURE RADAIL AS 9000 MILLIMETERS.
2. LEGENDS ANCHORAGE
   - PRESTRESSING END
   - D DEAD END ANCHORAGE

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	H. Kobayashi		16.02.00
DESIGN CHECK	H. Watanabe		15/2/00
SUBMITTED	A. Hirotani		22/2/00
APPROVED	P. Virophanth		22/02/00
	S. Temiyabutra		22/2/00

DWG. TITLE:
APPROACH VIADUCT SUPERSTRUCTURE
LONGITUDINAL PRESTRESSING LAYOUT (THAILAND SIDE)
SHEET 4 OF 5

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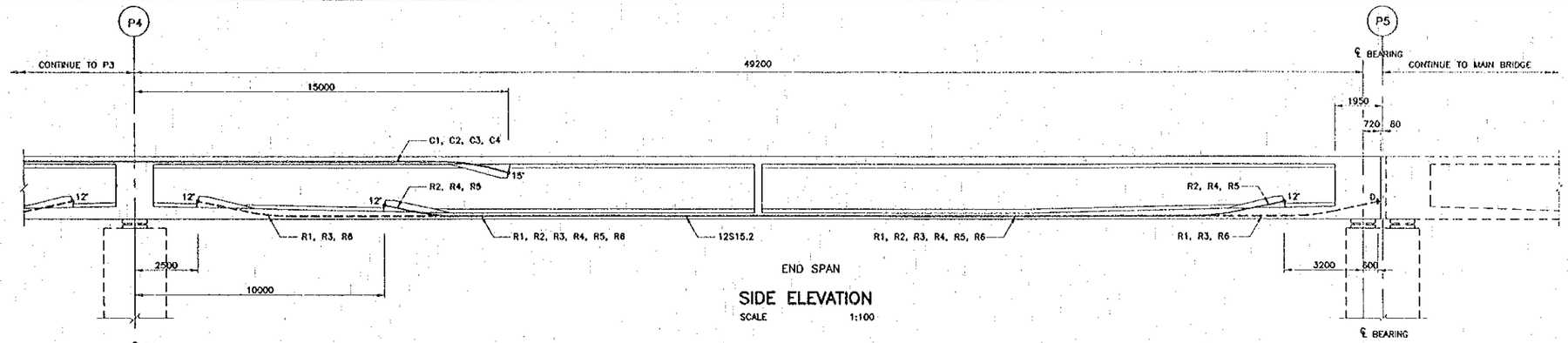
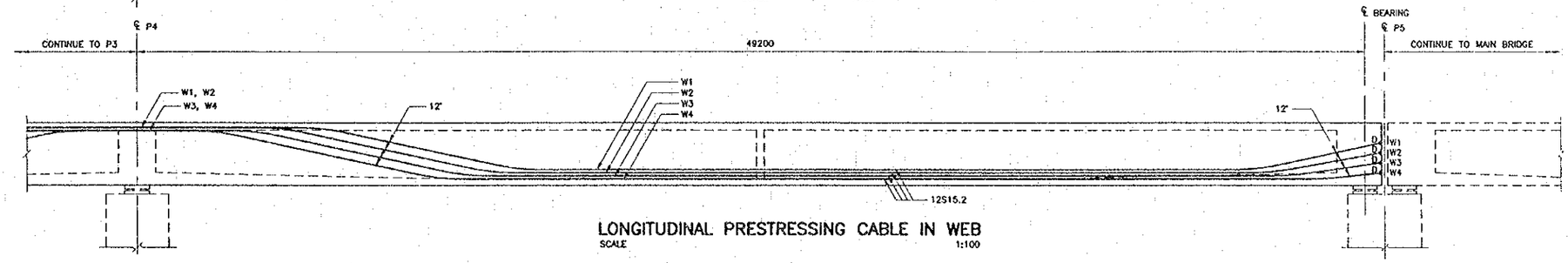
DATE OF ISSUE: 05/03/2000	
DWG. NO. B-A-21	SHEET NO. 177
DWG. STATUS	



END SPAN

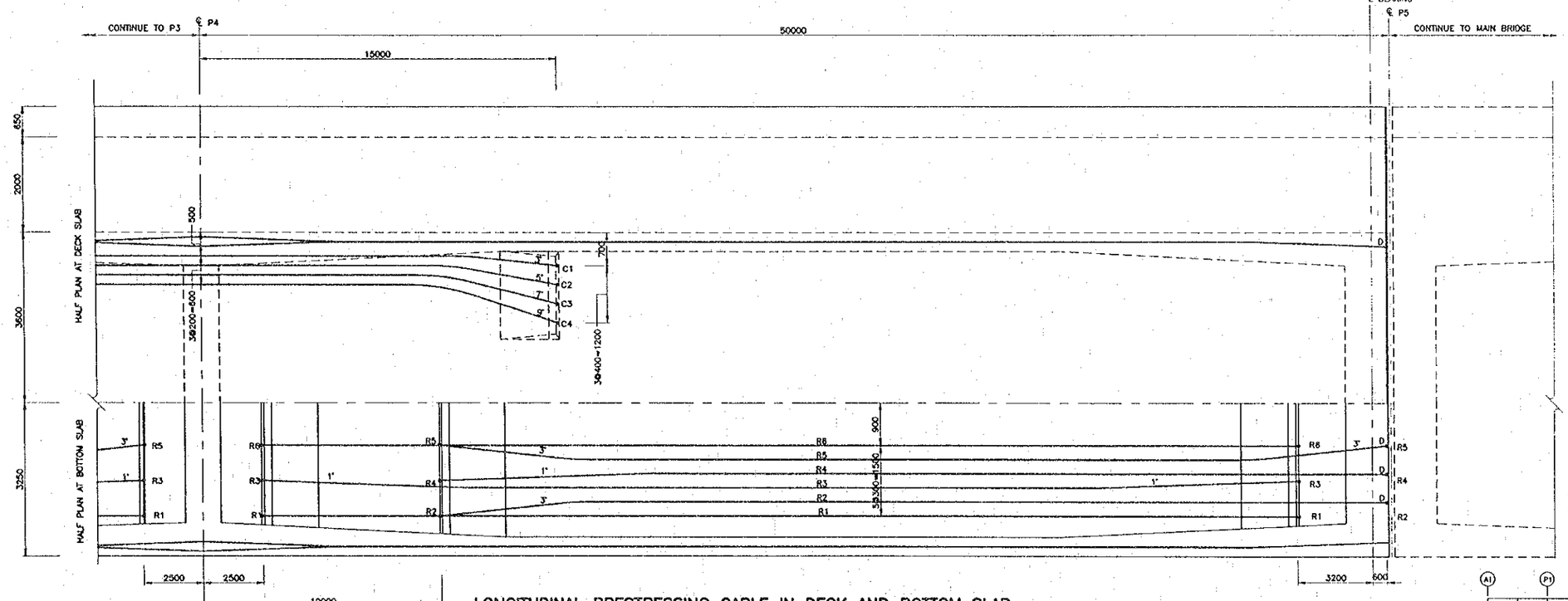
SIDE ELEVATION

SCALE 1:100



LONGITUDINAL PRESTRESSING CABLE IN WEB

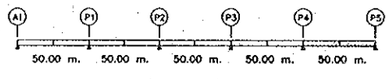
SCALE 1:100



LONGITUDINAL PRESTRESSING CABLE IN DECK AND BOTTOM SLAB

SCALE LONGITUDINAL 1:100
TRANSVERSE 1:50

NOTES :
1. ALL PC. CABLE CURVATURE RADAR AS 9000 MILLIMETERS.
2. LEGENDS ANCHORAGE
   - PRESTRESSING END
   - D DEAD END ANCHORAGE



KEY ELEVATION

NOT TO SCALE

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JICA JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	H. Kobayashi		6.12.99
DESIGN CHECK	H. Watanabe		15/01/00
SUBMITTED	A. Hiratani		21/1/00
APPROVED	P. Viraphanth		27/03/00
	S. Temiyabutra		22/3/00

DWG. TITLE:
APPROACH VIADUCT SUPERSTRUCTURE
LONGITUDINAL PRESTRESSING LAYOUT (THAILAND SIDE)
SHEET 5 OF 5

Plot date: Wed, 9 Feb 2000 -- 0:50:40
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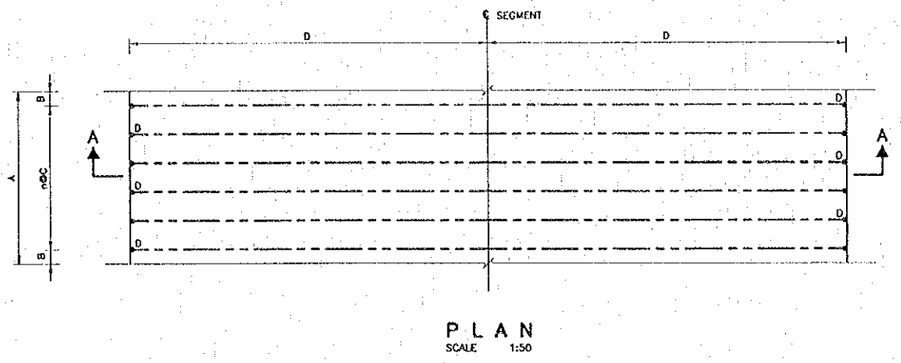
DATE OF ISSUE: 05/03/2000	
DWG. NO. B--A-22	SHEET NO. 178
DWG. STATUS	



PLAN
SCALE 1:50

TYPE OF APPROACH VIADUCT SUPERSTRUCTURE	A	B	nΦC (max.)
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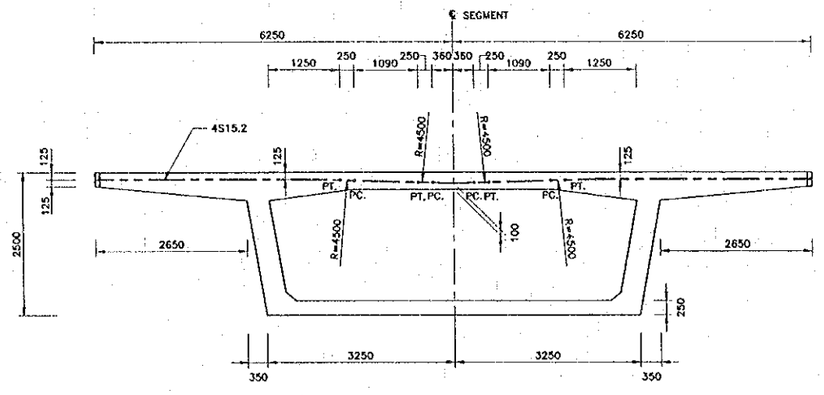
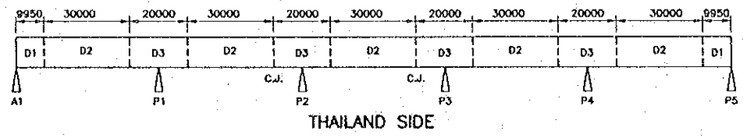
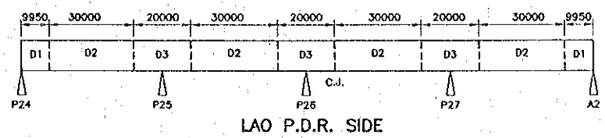
D2	30000	312.5	47 Φ 625
D3	20000	312.5	31 Φ 625



SECTION A–A
SCALE 1:50



THAILAND SIDE



LAO P.D.R. SIDE

KEY ELEVATION
NOT TO SCALE

NOTES :
1. LEGENDS
   - ⟷ PRESTRESSING END ANCHORAGE
   - ⟷D DEAD END ANCHORAGE
2. 4S15.2 INDICATES A 4 STRANDS FLAT SLAB ANCHORAGE SYSTEM.
3. ALL STRANDS TO BE S15.2 WITH A UTS OF 261 KN.
4. ALL STRAND IN THE TENDONS SHALL BE STRESSED FROM ONE END ONLY WITH JACKING FORCE OF 710 KN. BEFORE LOCK OFF.

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JICA JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

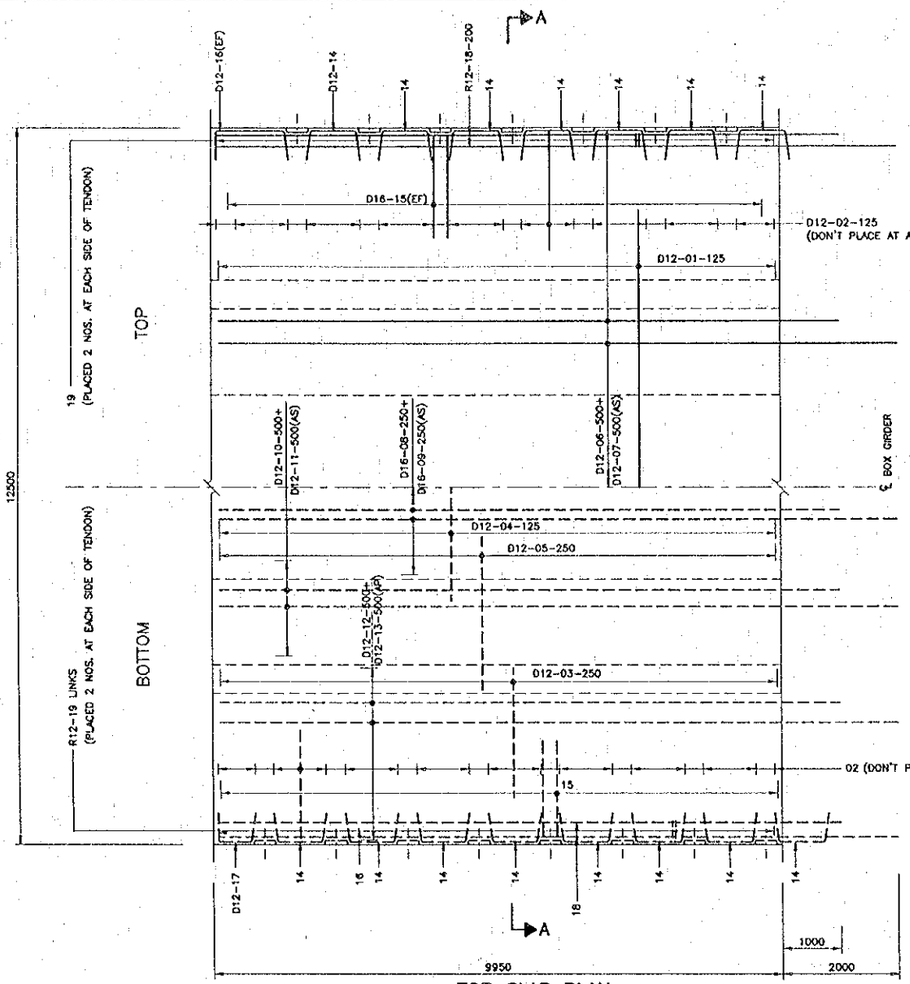
THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	H. Kobayashi		16-02-00
DESIGN CHECK	H. Watanabe		17/02/00
SUBMITTED	A. Hiratani		21/02/00
APPROVED	P. Viraphanth		29/02/00
	S. Tamiyabutra	S. Tamiya	22/02/00

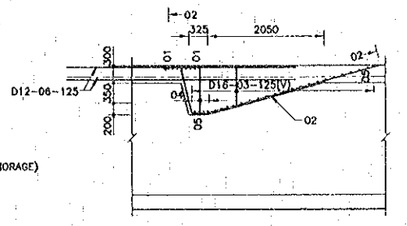
DWG. TITLE:
APPROACH VIADUCT SUPERSTRUCTURE
TRANSVERSE PRESTRESSING LAYOUT AND DETAILS

Plot date: Wed, 9 Feb 2000 - 2:04:55
C:\SMB\APPROACH\SUPER\A-22.dwg

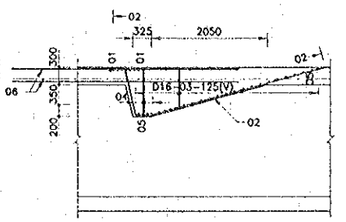
DATE OF ISSUE: 05/03/2000	
DWG. NO. B-A-23	SHEET NO. 179
DWG. STATUS	



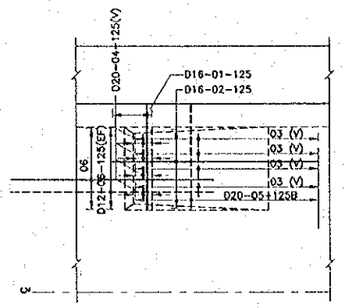
TOP SLAB PLAN
SCALE 1:50



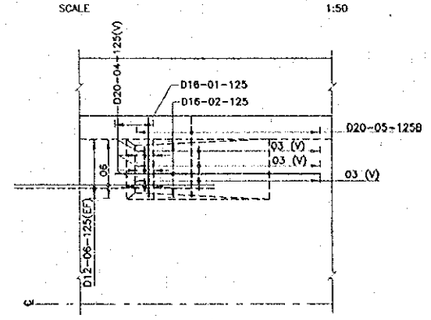
TOP SLAB BLISTER ELEVATION
SCALE 1:50



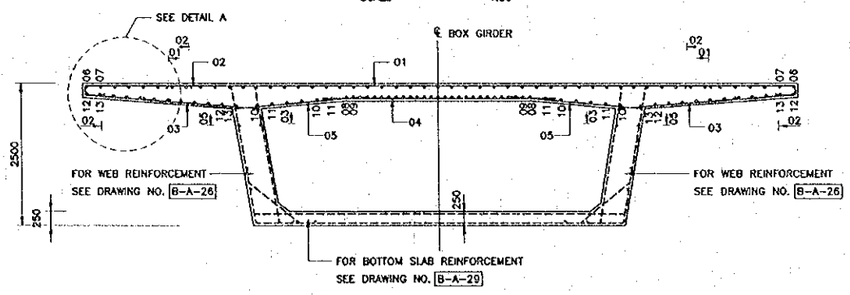
TOP SLAB BLISTER ELEVATION
SCALE 1:50



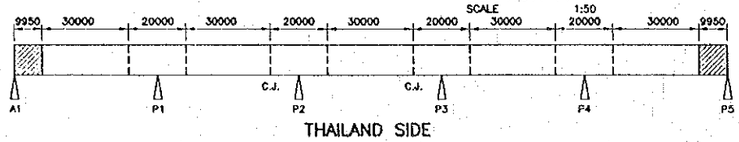
TOP SLAB BLISTER PLAN
SCALE 1:50



TOP SLAB BLISTER PLAN
SCALE 1:50

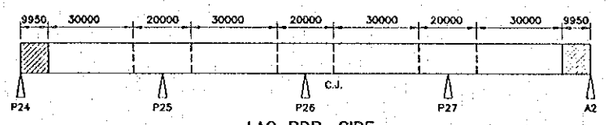


SECTION A-A
SCALE 1:50

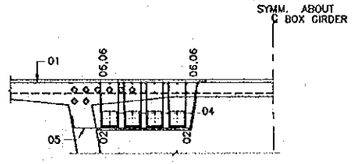


THAILAND SIDE

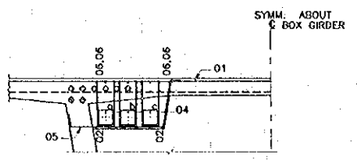
KEY ELEVATION
NOT TO SCALE



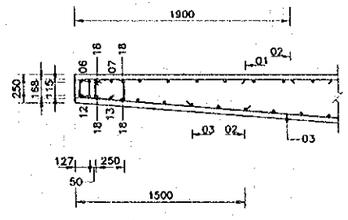
LAO PDR. SIDE



BLISTER TYPE 1A FOR LOCATION
PRESTRESSING CABLE IN TOP SLAB
SCALE 1:50



BLISTER TYPE 2A FOR LOCATION
PRESTRESSING CABLE IN TOP SLAB
SCALE 1:50



DETAIL A
SCALE 1:25

NOTE :
1. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH DWG. NO. B-A-26 AND B-A-29

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JICA JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

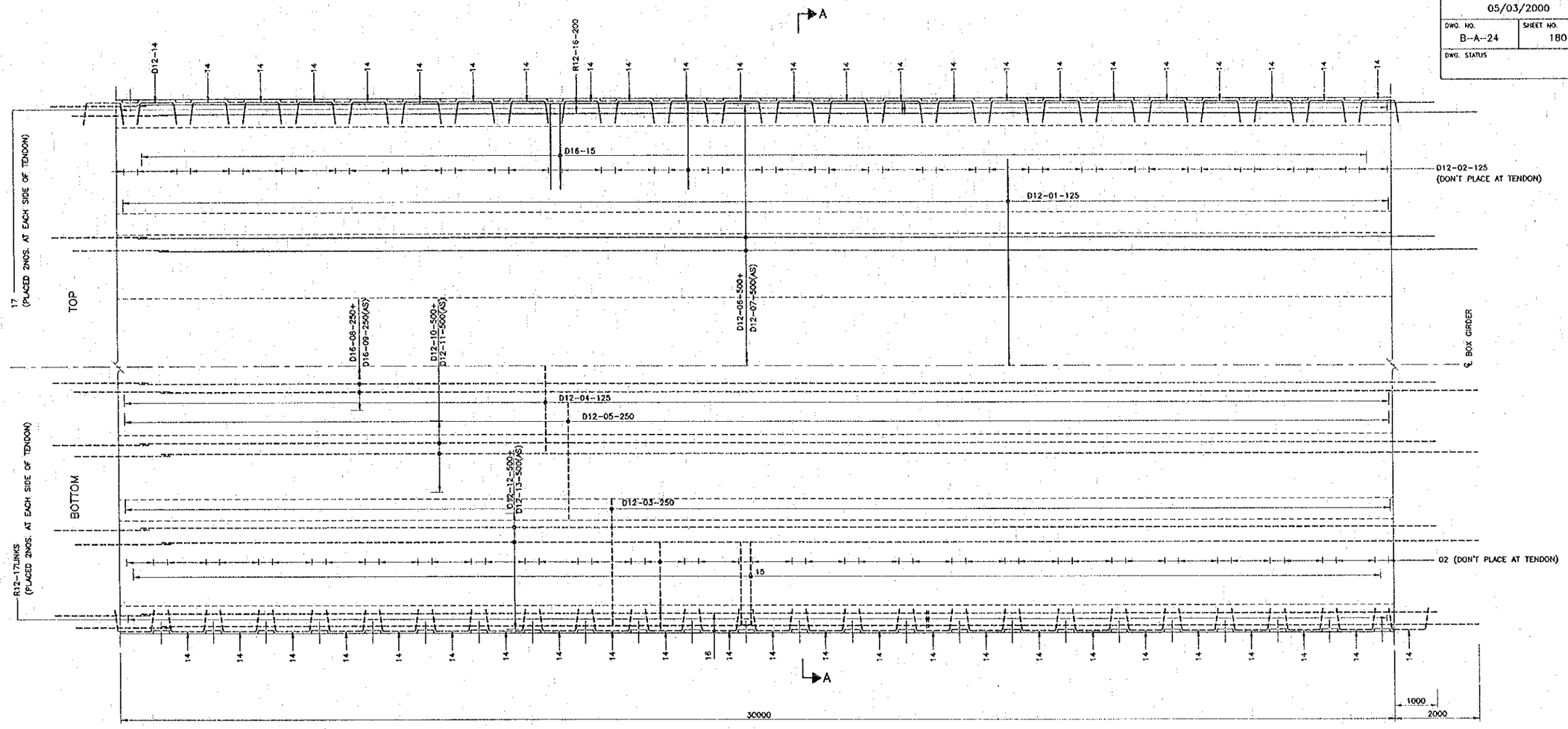
THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	H. Kobayashi		16/02/00
DESIGN CHECK	H. Watanabe		16/02/00
SUBMITTED	A. Hirotani		21/02/00
APPROVED	P. Viraphanth		22/02/00
	S. Tamiyabutra		22/02/00

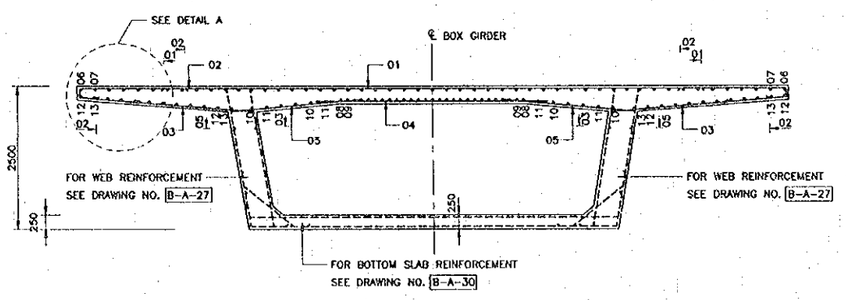
DWG. TITLE:
APPROACH VIADUCT SUPERSTRUCTURE
DECK SLAB R.C. DETAILS
SHEET 1 OF 3

Plot date: Wed, 9 Feb 2000 - 2:08:51
C:\SMB\APPROACH\SUPER\A-23.DWG

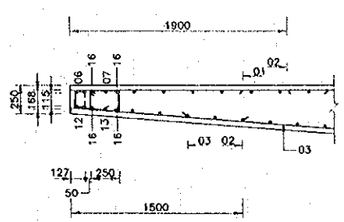
DATE OF ISSUE: 05/03/2000	
DWG. NO. B-A-24	SHEET NO. 180
DWG. STATUS	



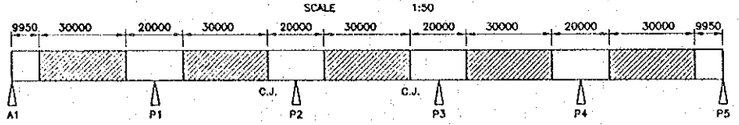
PLAN
SCALE 1:50



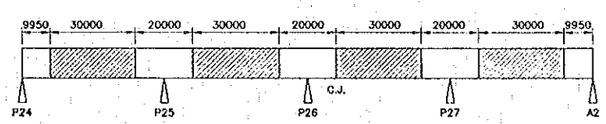
SECTION A-A
SCALE 1:50



DETAIL A
SCALE 1:25



THAILAND SIDE



LAO PDR. SIDE

KEY ELEVATION
NOT TO SCALE

NOTE :

1. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH DWG. NO. B-A-27 AND B-A-30

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JICA JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	H. Kobayashi		16/2/00
DESIGN CHECK	H. Watanabe		18/02/00
SUBMITTED	A. Hirotani		21/02/00
APPROVED	P. Virophanth		22/02/00
	S. Tamiyabutra		22/02/00

DWG. TITLE:
APPROACH VIADUCT SUPERSTRUCTURE
DECK SLAB R.C. DETAILS
SHEET 2 OF 3

Plot date: Wed, 9 Feb 2000 - 2:14:04
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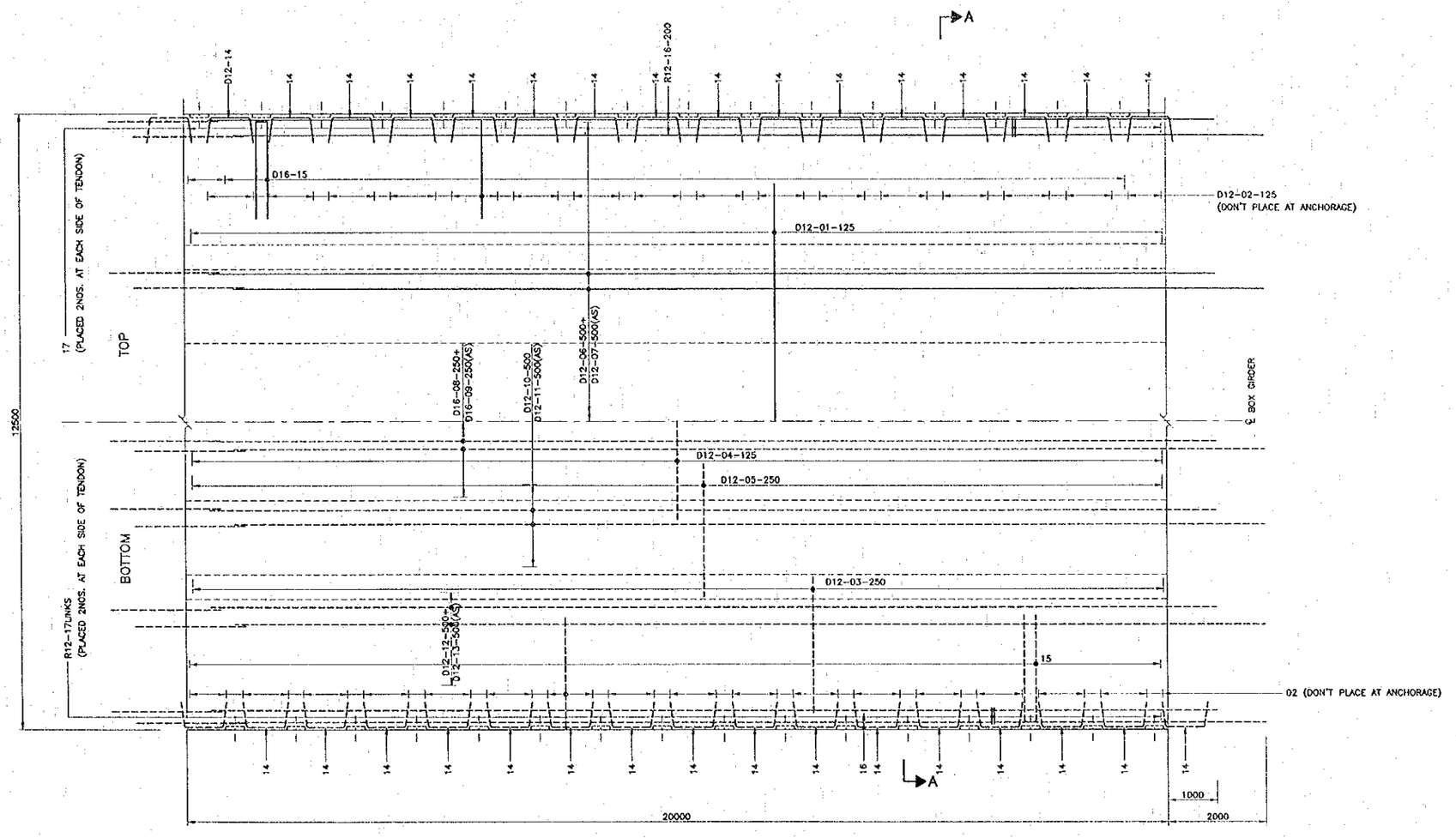
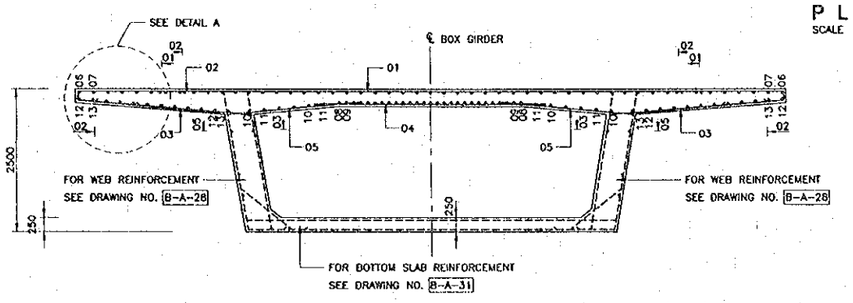
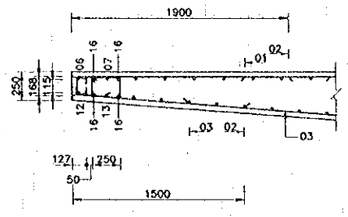
DATE OF ISSUE: 05/03/2000	
DWG. NO. B-A-25	SHEET NO. 181
DWG. STATUS	



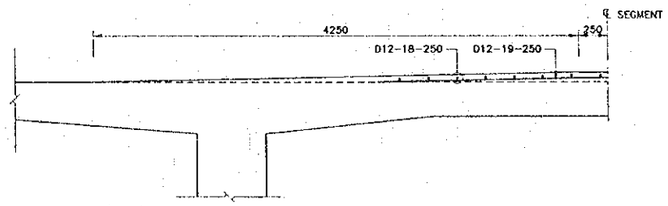
PLAN
SCALE 1:50



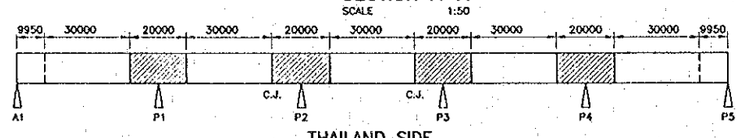
SECTION A-A
SCALE 1:50



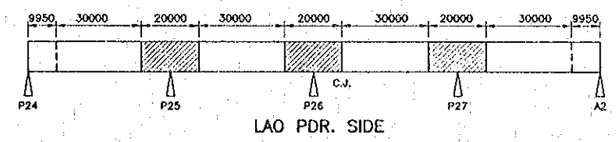
DETAIL A
SCALE 1:25



DECK SLOPE REINFORCEMENT DETAIL
SCALE 1:25



THAILAND SIDE



LAO PDR. SIDE

KEY ELEVATION
NOT TO SCALE

NOTE :

1. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH DWG.NO. B-A-28 AND B-A-31
2. DECK SLOPE REINFORCEMENT SHALL ARRANGE ON THE WHOLE BRIDGE SUBJECT TO NECESSITY.

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	H. Koboyashi		14-02-00
DESIGN CHECK	H. Watanabe		18/02/00
SUBMITTED	A. Hirotani		21/02/00
APPROVED	P. Viraphanh		22/02/00
	S. Temiyabutra		22/02/00

DWG. TITLE:

APPROACH VIADUCT SUPERSTRUCTURE
DECK SLAB R.C. DETAILS
SHEET 3 OF 3

Plot date: Wed, 9 Feb 2000 - 2:55:00
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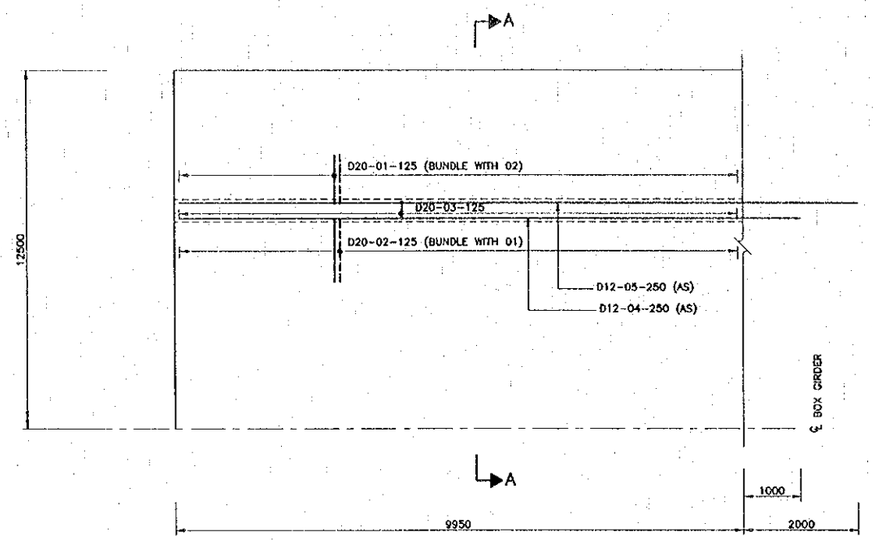
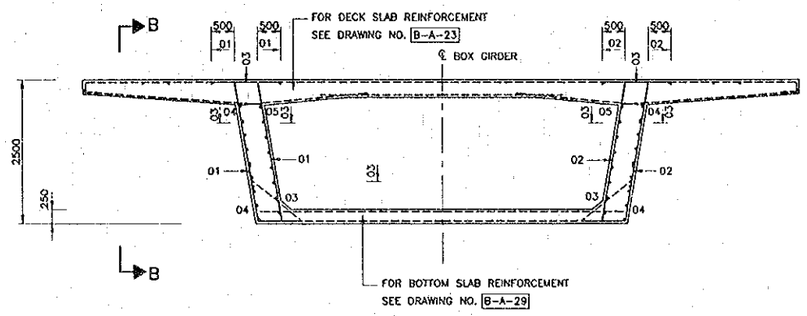
DATE OF ISSUE. 05/03/2000	
DWG. NO. B-A-26	SHEET NO. 182
DWG. STATUS	

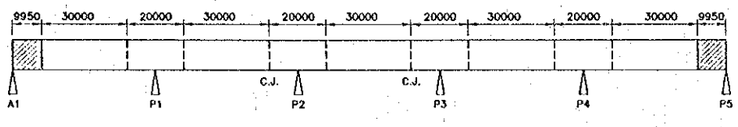


PLAN
SCALE 1:50

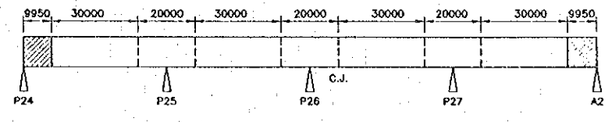


SECTION A-A
SCALE 1:50

SECTION B-B
SCALE 1:50



THAILAND SIDE



LAO PDR. SIDE

KEY ELEVATION
NOT TO SCALE

NOTE :
1. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH DWG.NO. B-A-23 AND B-A-29

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JICA JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	H. Kobayashi		16-02-00
DESIGN CHECK	H. Watanabe		18/02/00
SUBMITTED	A. Hirotani		21/02/00
APPROVED	P. Viraphanh		22/02/00
	S. Temiyabutra	S. Temiyabutra	22/02/00

DWG. TITLE:
APPROACH VIADUCT SUPERSTRUCTURE
WEB R.C. DETAILS
SHEET 1 OF 3

Plot date: Mon, 24 Jan 2000 - 3:49:07
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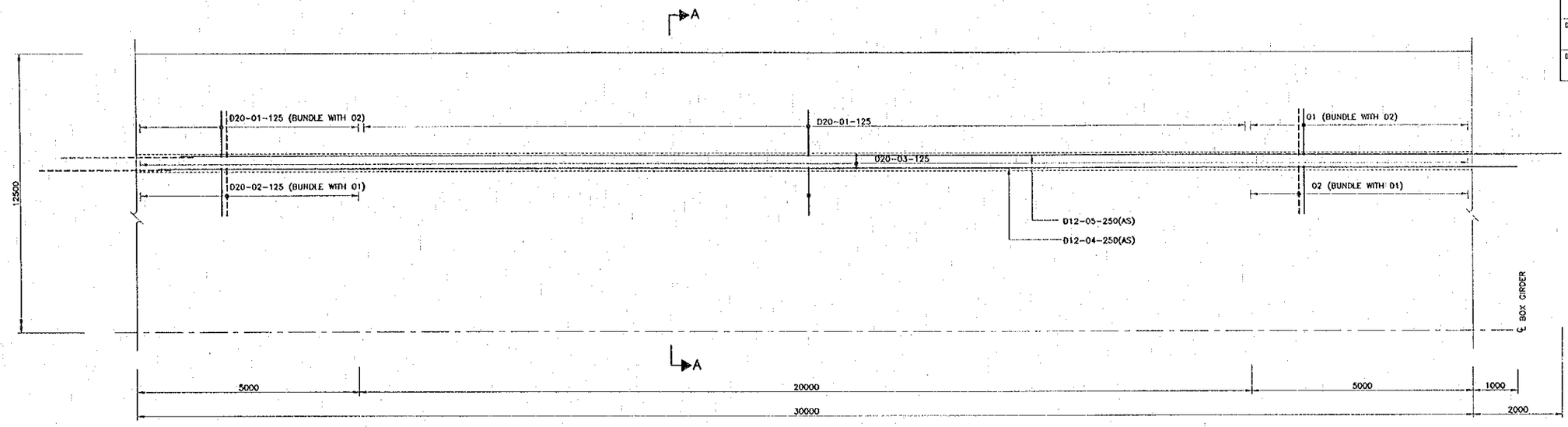
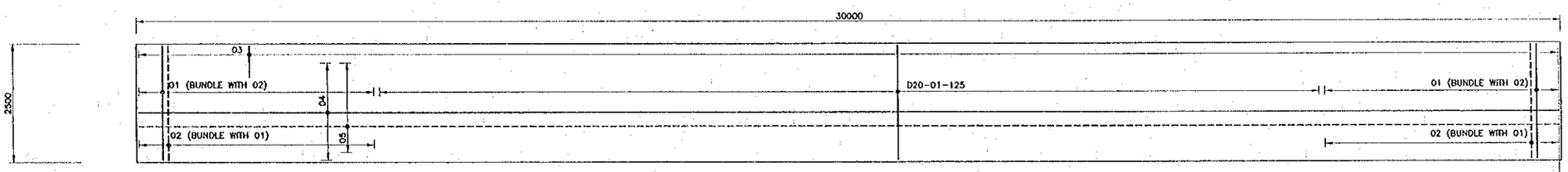
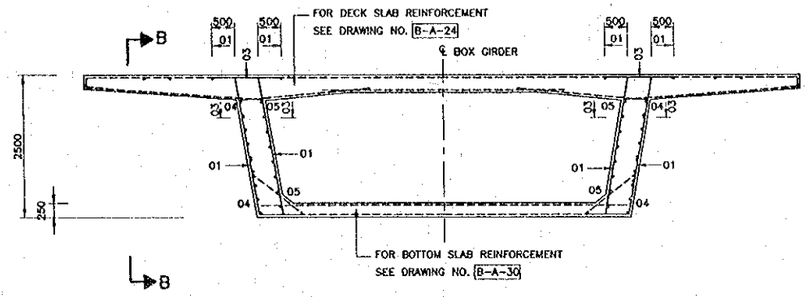
DATE OF ISSUE: 05/03/2000	
DWG. NO. B-A-27	SHEET NO. 183
DWG. STATUS	



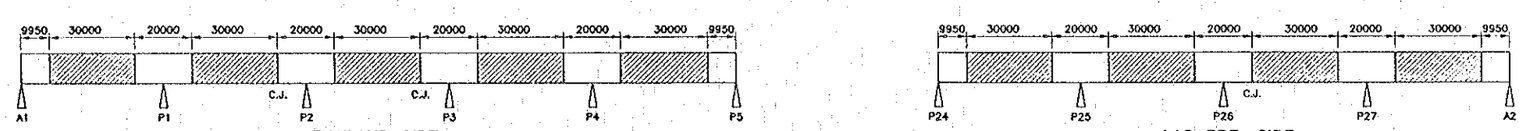
PLAN
SCALE 1:50



SECTION B–B
SCALE 1:50



SECTION A–A
SCALE 1:50



KEY ELEVATION
NOT TO SCALE

NOTE :

1. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH DWG. NO. B-A-24 AND B-A-30

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JICA JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	H. Kobayashi		16.12.00
DESIGN CHECK	H. Watanabe		15/02/00
SUBMITTED	A. Hiratani		21/02/00
APPROVED	P. Viraphanh		22/02/00
	S. Terniyabutra		22/02/00

DWG. TITLE:
APPROACH VIADUCT SUPERSTRUCTURE
WEB R.C. DETAILS
SHEET 2 OF 3

Plot date: Wed, 9 Feb 2000 – 3:33:58
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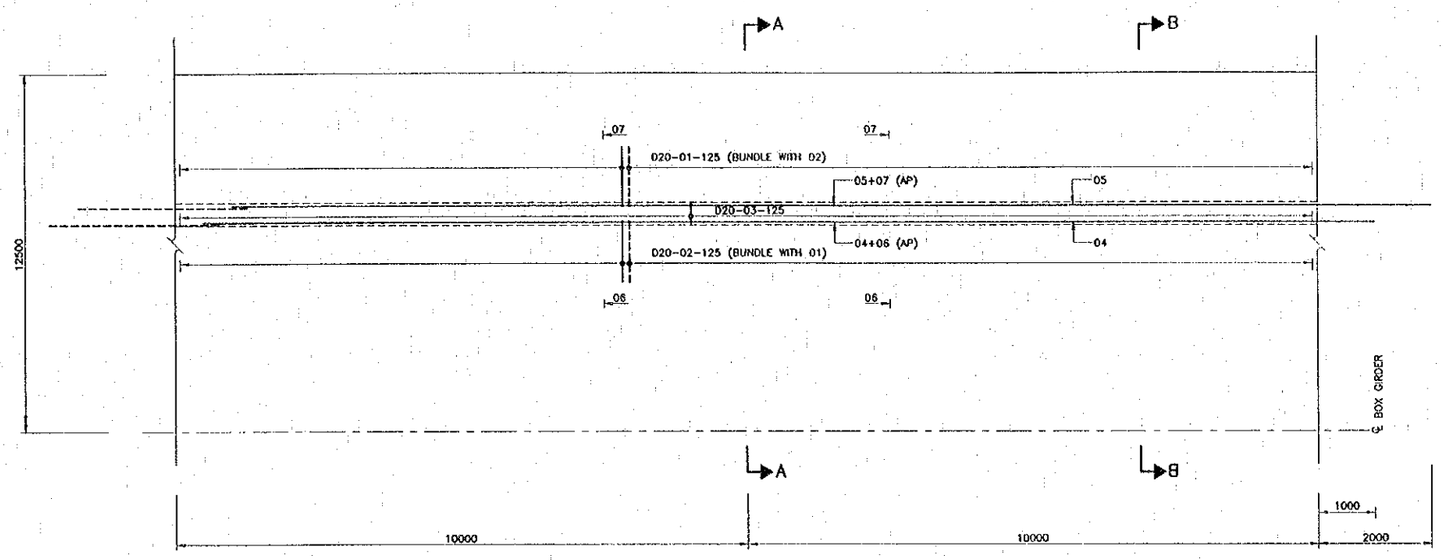
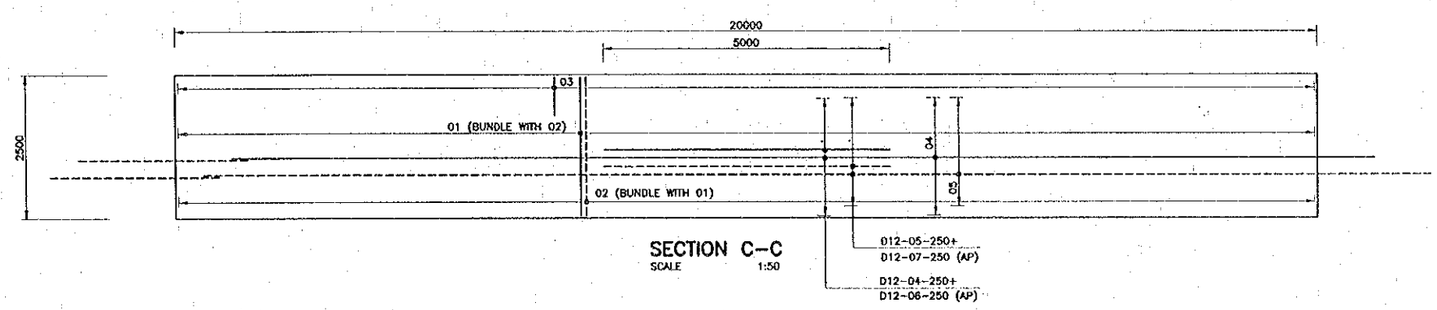
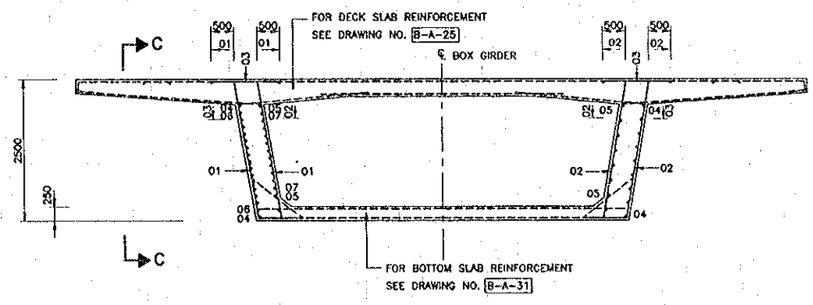
DATE OF ISSUE: 05/03/2000	
DWG. NO. B-A-28	SHEET NO. 184
DWG. STATUS	



PLAN
SCALE 1:50

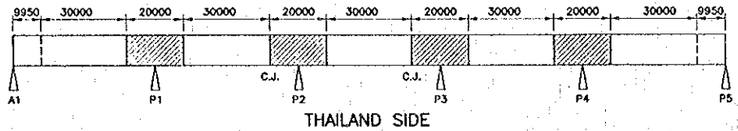


SECTION C-C
SCALE 1:50



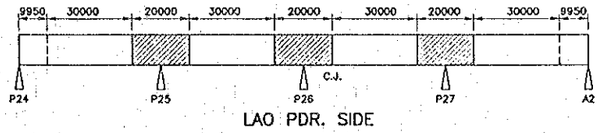
SECTION A-A
SCALE 1:50

SECTION B-B
SCALE 1:50



THAILAND SIDE

KEY ELEVATION
NOT TO SCALE



LAO PDR. SIDE

NOTE :
1. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH DWG. NO. B-A-25 AND B-A-31
2. REBAR NO. 06 & 07 PROVIDE TO C.J.

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	H. Kobayashi		16.12.00
DESIGN CHECK	H. Watanabe		16/12/00
SUBMITTED	A. Hirotani		21/12/00
APPROVED	P. Viraphanth		22/12/00
	S. Temiyabutra	S. Temiya	22/02/01

DWG. TITLE:
APPROACH VIADUCT SUPERSTRUCTURE
WEB R.C. DETAILS
SHEET 3 OF 3

Plot date: Wed, 9 Feb 2000 - 3:44:50
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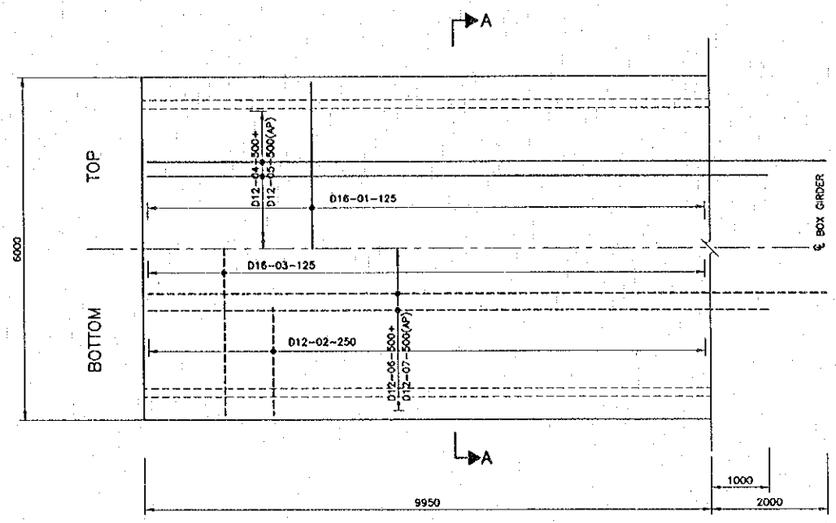
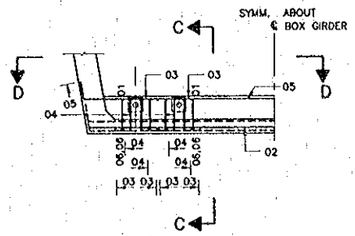
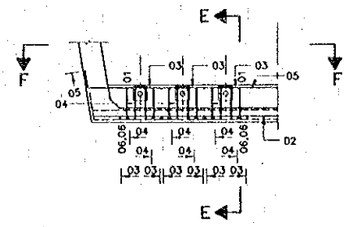
DATE OF ISSUE: 05/03/2000	
DWG. NO. B-A-29	SHEET NO. 185
DWG. STATUS	



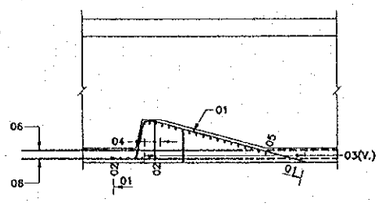
BOTTOM SLAB PLAN
SCALE 1:50



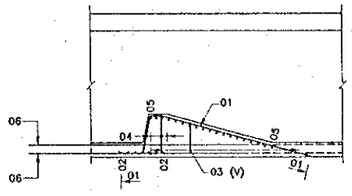
BLISTER TYPE 2B R.C. DETAILS
SCALE 1:50



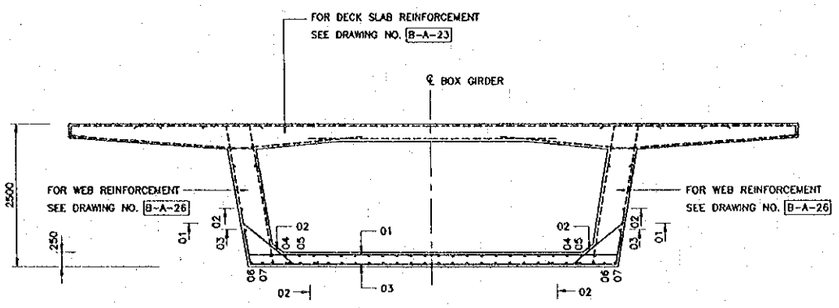
BLISTER TYPE 1B R.C. DETAILS
SCALE 1:50



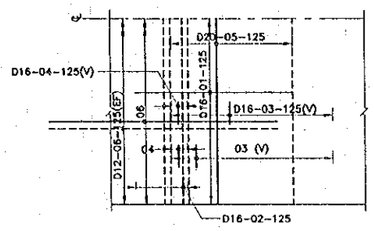
SECTION C-C
SCALE 1:50



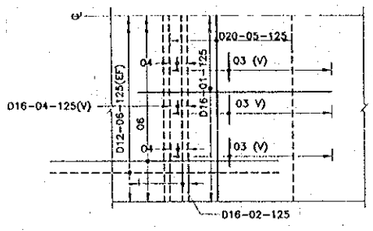
SECTION E-E
SCALE 1:50



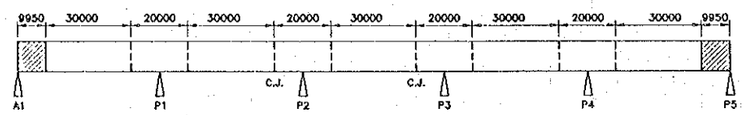
SECTION A-A
SCALE 1:50



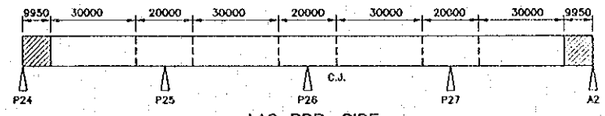
SECTION D-D
SCALE 1:50



SECTION F-F
SCALE 1:50



THAILAND SIDE



LAO PDR. SIDE

KEY ELEVATION
NOT TO SCALE

NOTE :
1. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH DWG. NO. B-A-23 AND B-A-26

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	H. Kobayashi		11.04.00
DESIGN CHECK	H. Watanabe		19/12/00
SUBMITTED	A. Hirotani		21/12/00
APPROVED	P. Virophanth		22/03/00
	S. Temiyabutra		22/03/00

DWG. TITLE:
APPROACH VIADUCT SUPERSTRUCTURE
BOTTOM SLAB R.C. DETAILS
SHEET 1 OF 3

Plot date: Wed, 9 Feb 2000 - 13:56:53
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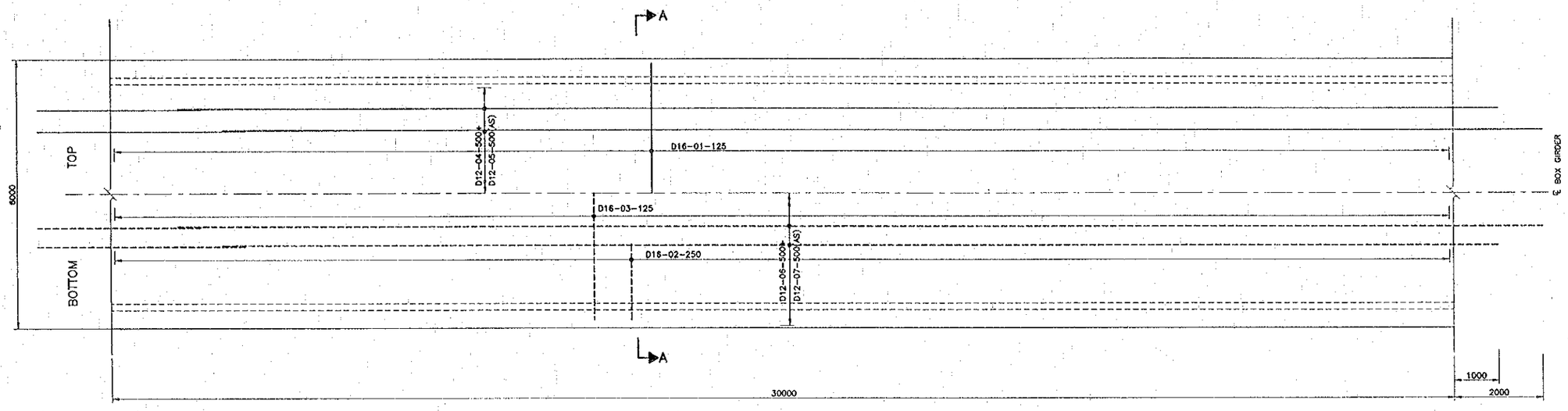
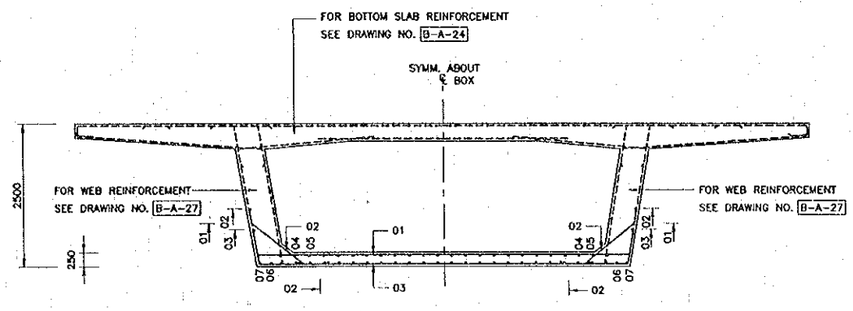
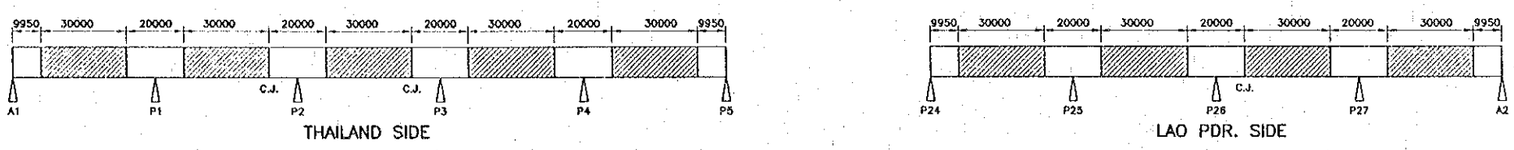
DATE OF ISSUE: 05/03/2000	
DWG. NO. B-A-30	SHEET NO. 186
DWG. STATUS	



PLAN
SCALE 1:50



SECTION A-A
SCALE 1:50



KEY ELEVATION
NOT TO SCALE

NOTE :

1. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH DWG.NO. B-A-24 AND B-A-27

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JICA JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	H. Kobayashi		16-02-00
DESIGN CHECK	H. Watanabe		18/2/00
SUBMITTED	A. Hiratani		21-2-00
APPROVED	P. Viraphanth		22/02/00
	S. Temiyabutra		22/2/00

DWG. TITLE:
APPROACH VIADUCT SUPERSTRUCTURE
BOTTOM SLAB R.C. DETAILS
SHEET 2 OF 3

Plot date: Wed, 9 Feb 2000 - 4.07.43

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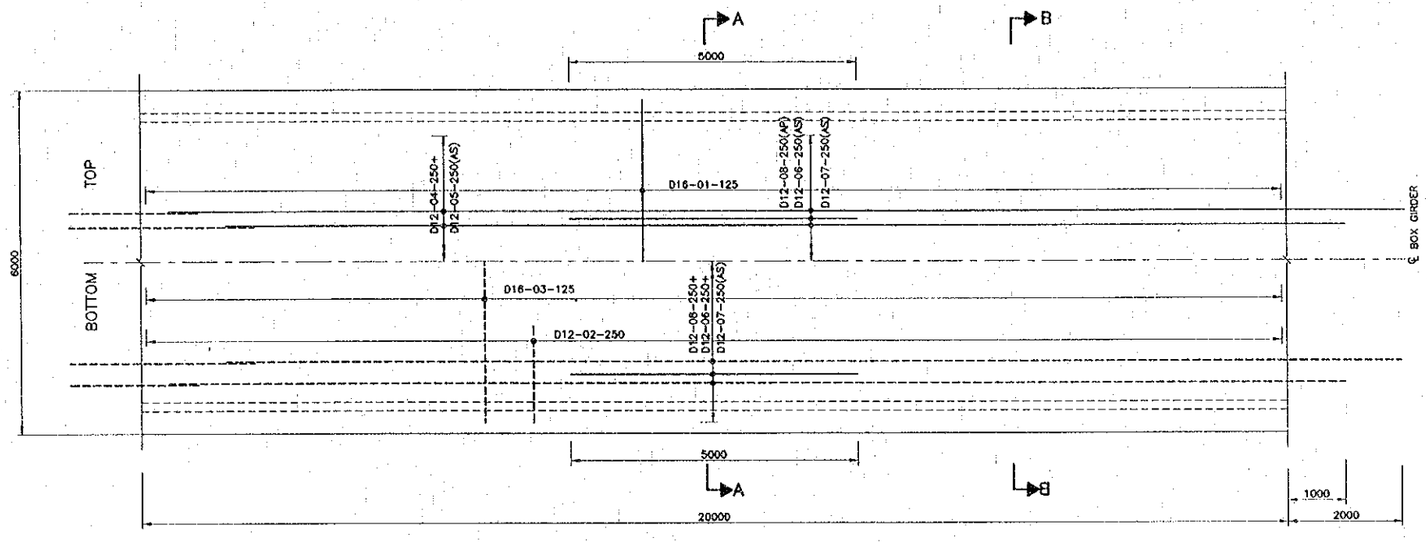
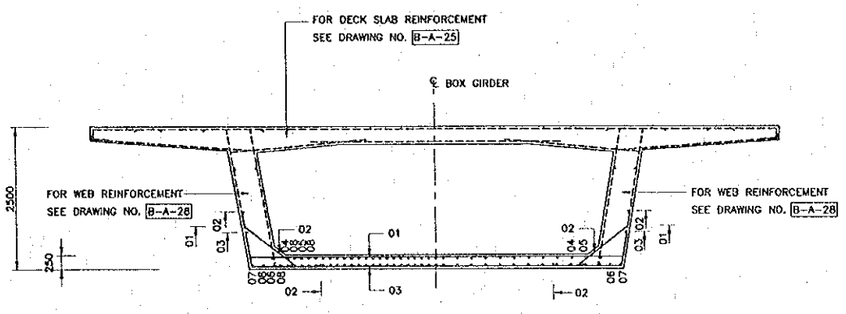
DATE OF ISSUE.	
	05/03/2000
DWG. NO.	SHEET NO.
B-A-31	187
DWG. STATUS	

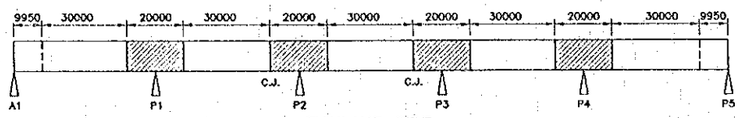


PLAN
SCALE 1:50

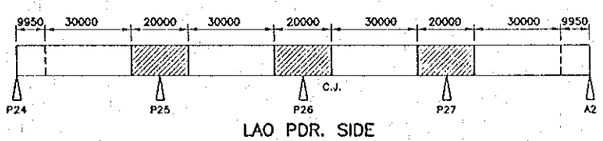


SECTION A-A
SCALE 1:50

SECTION B-B
SCALE 1:50



THAILAND SIDE



LAO PDR. SIDE

KEY ELEVATION
NOT TO SCALE

NOTE :

1. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH DWG.NO. B-A-25 AND B-A-28
2. REBAR NO. 06 & 07 PROVIDE TO C.J.

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JAPAN INTERNATIONAL COOPERATION AGENCY

LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION

KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	H. Kobayashi		16-03-00
DESIGN CHECK	H. Watanabe		28/4/00
SUBMITTED	A. Hirotani		31/4/00
APPROVED	P. Viraphanth		22/05/00
	S. Temiyabutra		23/5/00

DWG. TITLE:

APPROACH VIADUCT SUPERSTRUCTURE
BOTTOM SLAB R.C. DETAILS
SHEET 3 OF 3

Plot date: Wed, 9 Feb 2000 - 4:12:23
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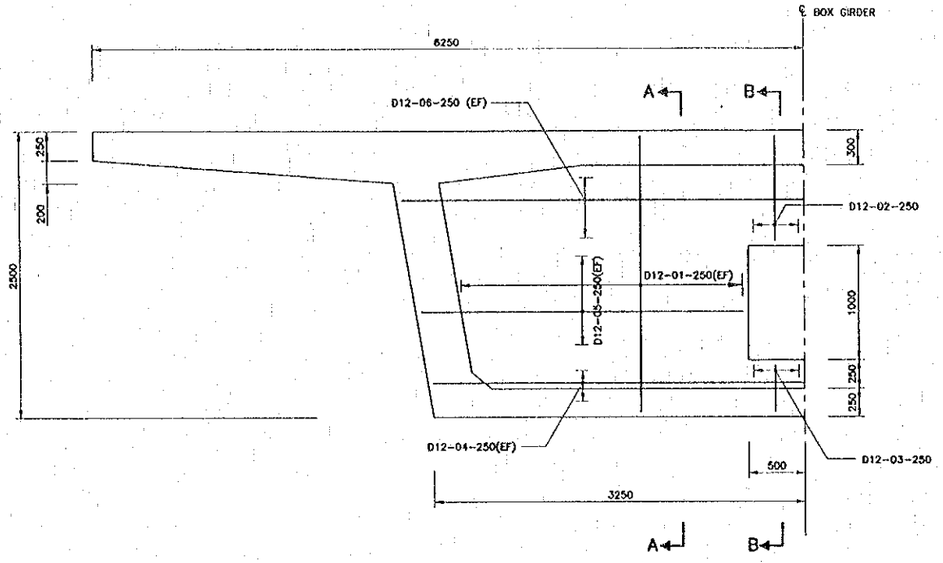
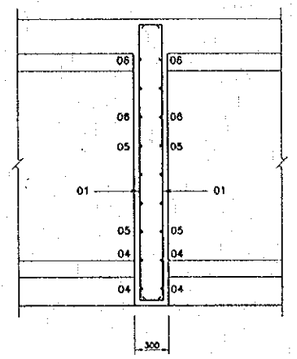
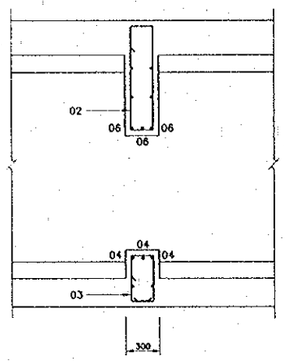
DATE OF ISSUE: 05/03/2000	
DWG. NO. B-A-32	SHEET NO. 188
DWG. STATUS	



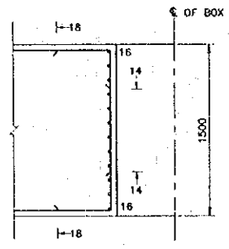
INTERMEDIATE DIAPHRAGM R.C. DETAIL
SCALE 1:25



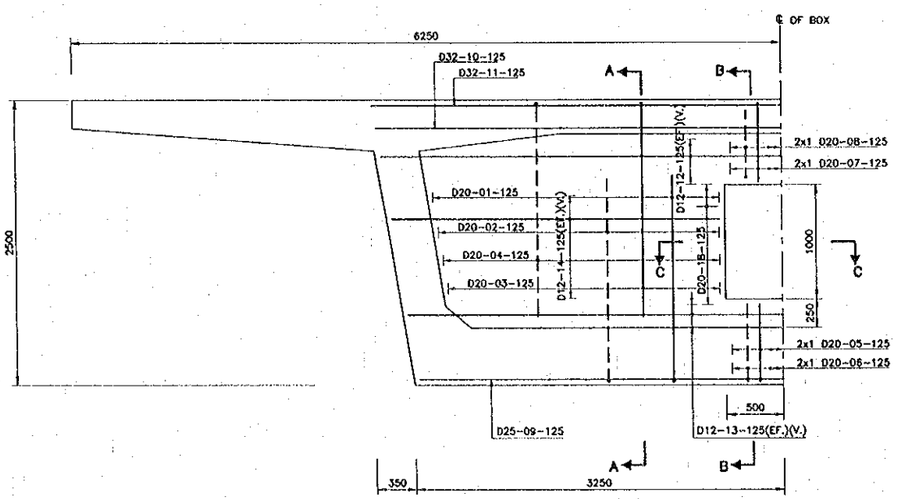
SECTION A-A
SCALE 1:25



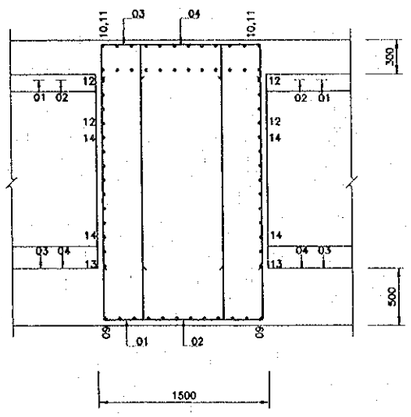
SECTION B-B
SCALE 1:25



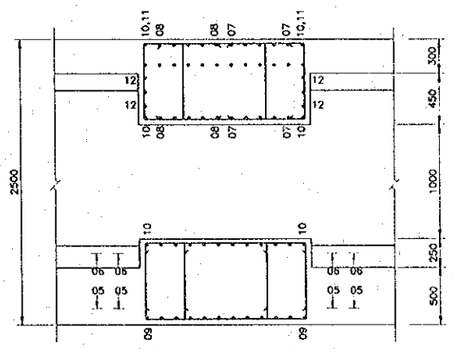
SECTION C-C
SCALE 1:25



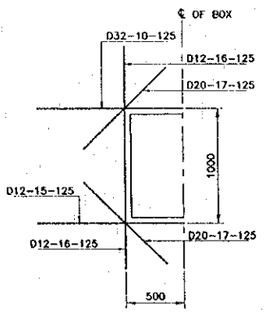
PIER HEAD DIAPHRAGM R.C. DETAIL
SCALE 1:25



SECTION A-A
SCALE 1:25



SECTION B-B
SCALE 1:25



OPENING REINFORCEMENT DETAIL
SCALE 1:25

NOTES :

1. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH DWG.NO. B-A-24 , B-A-27 AND B-A-30

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JICA JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

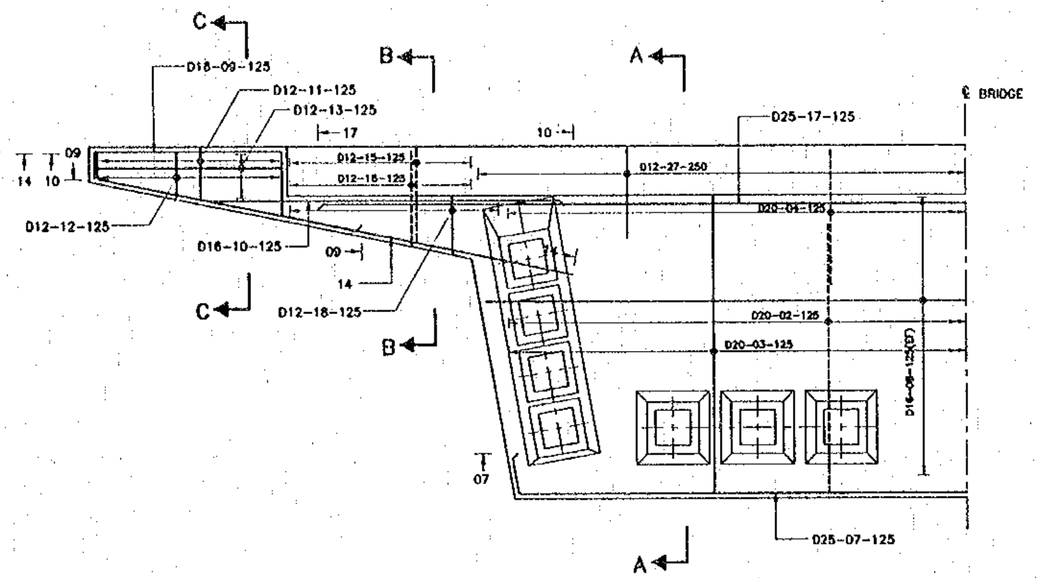
THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	H. Kobayashi		16-02-00
DESIGN CHECK	H. Watanabe		18/02/00
SUBMITTED	A. Hirotani		21/2/00
APPROVED	P. Viraphanh		22/02/00
	S. Temiyabutra		22/2/00

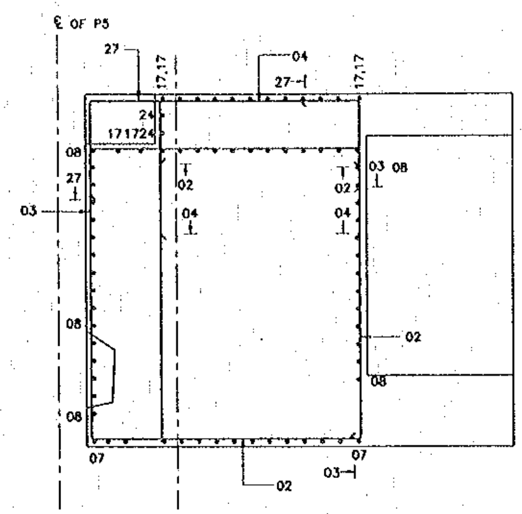
DWG. TITLE:
APPROACH VIADUCT SUPERSTRUCTURE
DIAPHRAGM R.C. DETAILS
SHEET 1 OF 2

Plot date: Mon, 7 Feb 2000 - 11:39:41
C:\SMB\APPROACH\SUPER\A-32.dwg

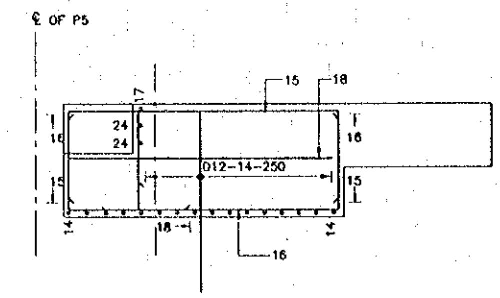
DATE OF ISSUE:	05/03/2000
DWG. NO.	B-A-33
SHEET NO.	189
DWG. STATUS	



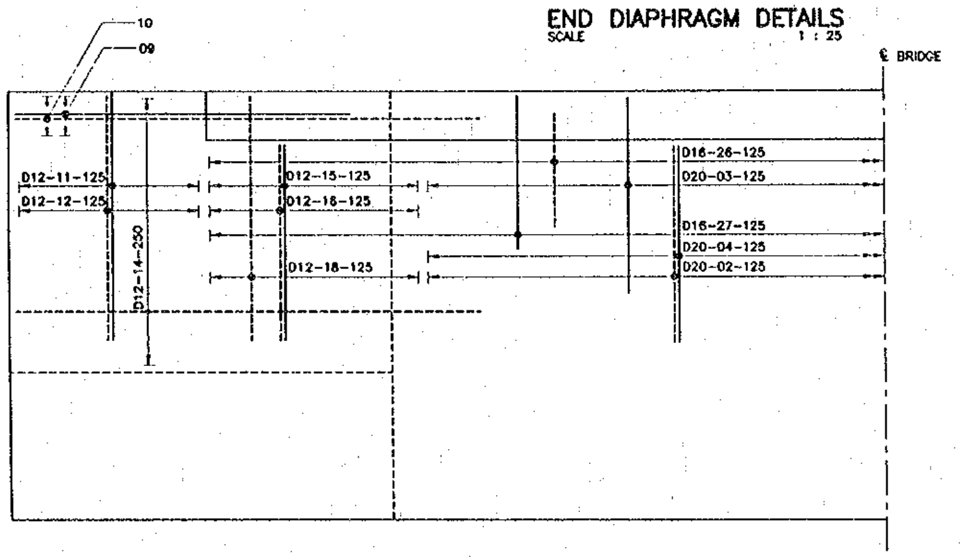
END DIAPHRAGM DETAILS
SCALE 1 : 25



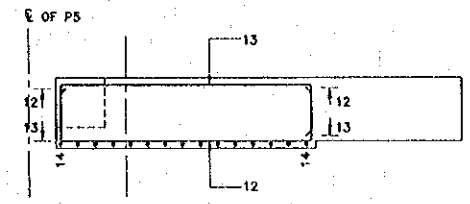
SECTION A–A
SCALE 1 : 25



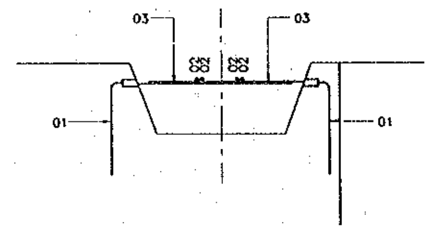
SECTION B–B
SCALE 1 : 25



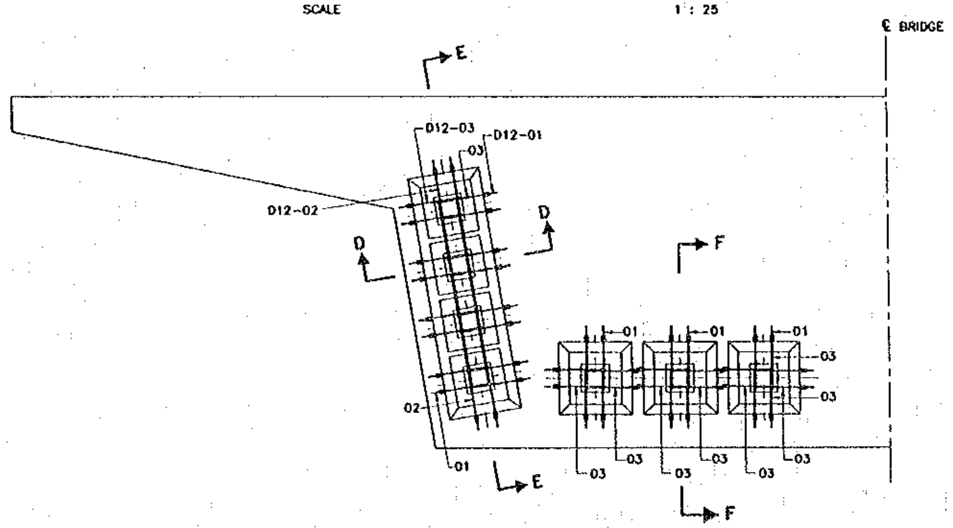
END DIAPHRAGM DECK SLAB PLAN
SCALE 1 : 25



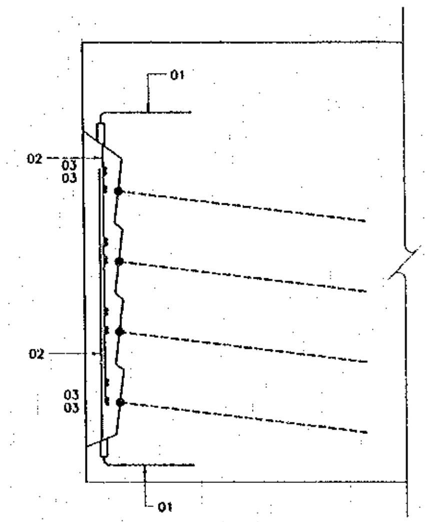
SECTION C–C
SCALE 1 : 25



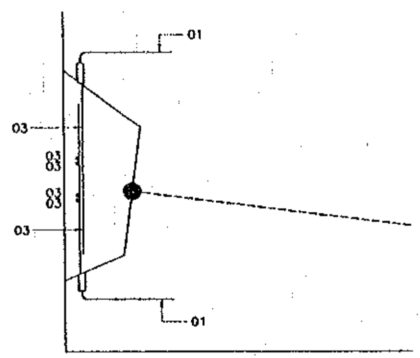
SECTION D–D
SCALE 1:10



ANCHOR RECESS R.C. DETAILS
SCALE 1 : 25



SECTION E–E
SCALE 1:10



SECTION F–F
SCALE 1:10

NOTES:

1. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH DWG. NO. B-A-23, B-A-26, B-A-29 AND B-AC-2

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM: ORIENTAL CONSULTANTS CO., LTD. in association with NIPPON KOEI CO., LTD.

JAPAN INTERNATIONAL COOPERATION AGENCY

LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION

KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	H. Kobayashi		
DESIGN CHECK	H. Watanabe		
SUBMITTED	A. Hiratani		
APPROVED	P. Viraphonth		
	S. Temiyabutra		

DWG. TITLE:

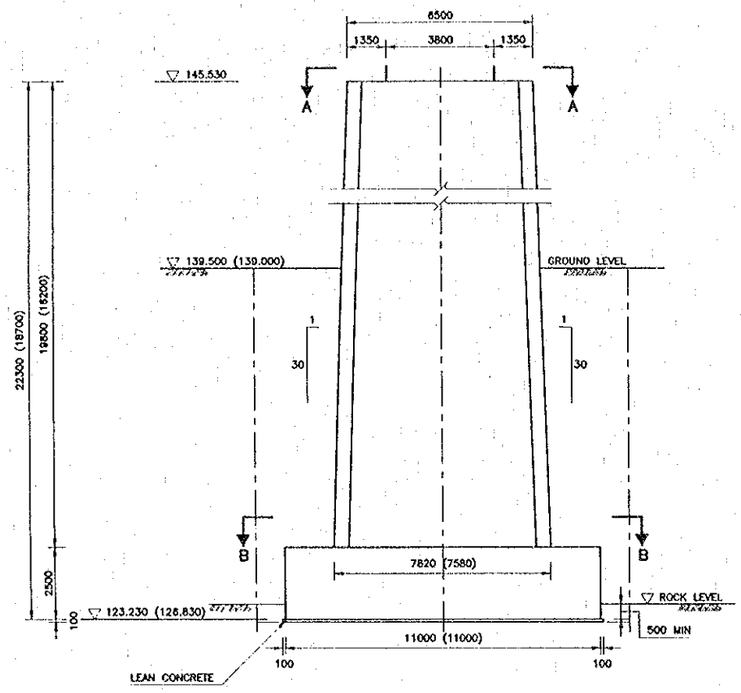
APPROACH VIADUCT SUPERSTRUCTURE

DIAPHRAGM R.C. DETAILS

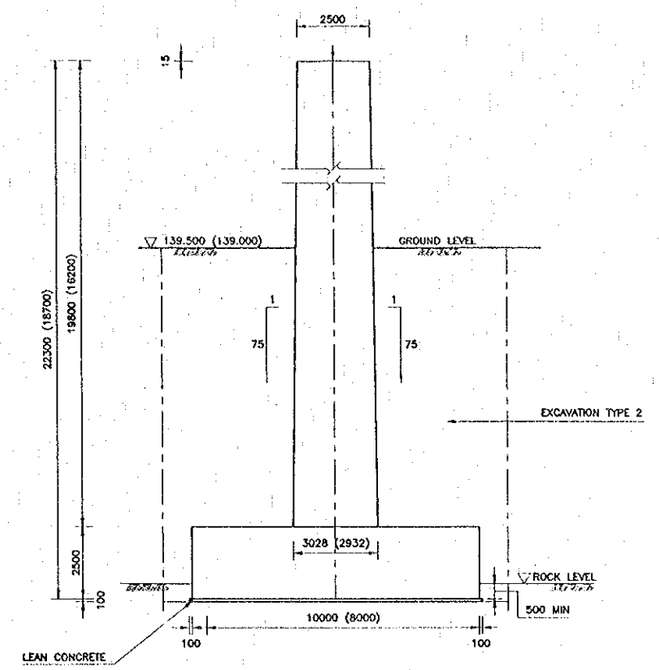
SHEET 2 OF 2

C:\SMB\APPROACH\SUPER\A-33.dwg

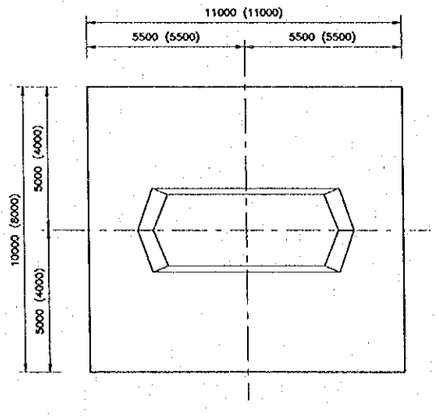
DATE OF ISSUE: 05/03/2000	
DWG. NO. B-MS-1	SHEET NO. 190
DWG. STATUS	



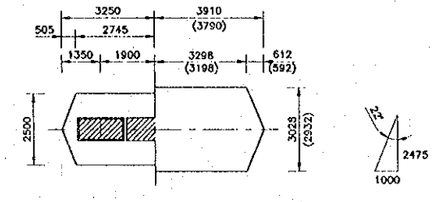
ELEVATION
SCALE 1:100



SIDE ELEVATION
SCALE 1:100



PLAN
SCALE 1:100



SECTION A-A
SCALE 1:100

SECTION B-B
SCALE 1:100

NOTES :

1. FOR GENERAL NOTES REFER TO DWGS. [B-G-1] AND [B-G-2]
2. NUMBER IN BRACKETS FOR P23
3. FOR DETAILS OF FOOTING AND PIER REINFORCING REFER TO DWG. [B-MS-3]
4. PIER AND FOOTING CONCRETE CLASS D 24 N/mm^2
5. SURFACE FINISH
   - PIER F4
   - FOOTING F1
6. FOR BEARING DETAILS REFER TO DWGS. [B-AC-1], [B-AC-2] AND [B-AC-4]
7. FOR ACCESSORY DETAILS REFER DWGS. [B-AC-14] AND [B-AC-21]
8. CONTRACTOR TO SUBMIT SHOP DRAWINGS FOR THE ENGINEERS APPROVAL BEFORE CONSTRUCTION COMMENCES
9. FOOTING BASE TO BE EMBEDDED AT LEAST 500mm. INTO ROCK OR STRATUM WITH SPT (N) > 50

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

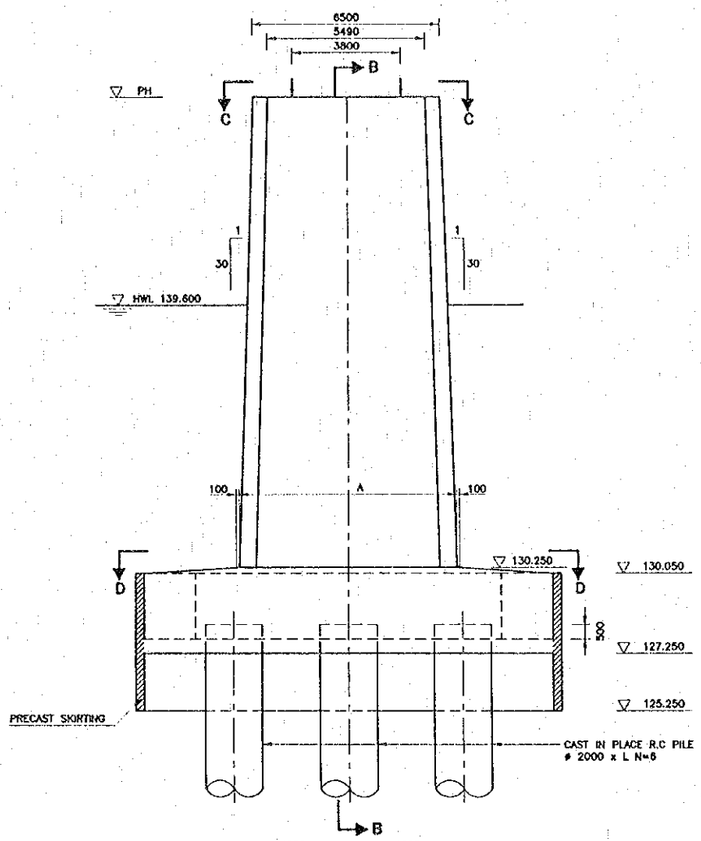
QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	S. Watanabe		6.02.00
DESIGN CHECK	D. Wesley		11.02.00
SUBMITTED	A. Hirotani		21.02.00
APPROVED	P. Viraphanth		29/02/00
	S. Temiyabutra		29/2/00

DWG. TITLE:

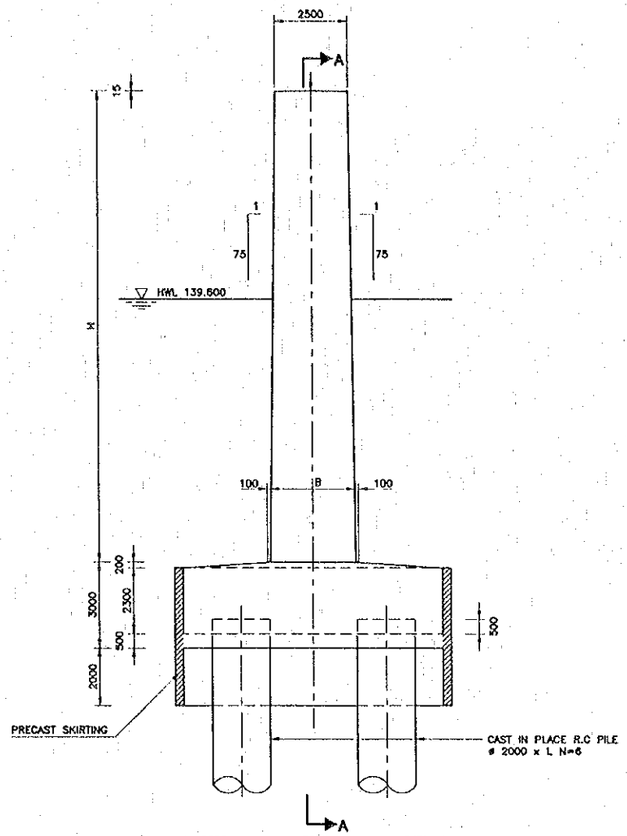
MAIN BRIDGE SUBSTRUCTURE
FOOTING AND PIER GENERAL ARRANGEMENT OF P6 AND P23

Plot date: Thu, 3 Feb 2000 - 13:14:44
C:\CHANTANA\SMB\MAIN-BRIDGE-SUB\MS-1.dwg

DATE OF ISSUE:	05/03/2000
DWG. NO.	B-MS-2
SHEET NO.	191
DWG. STATUS	



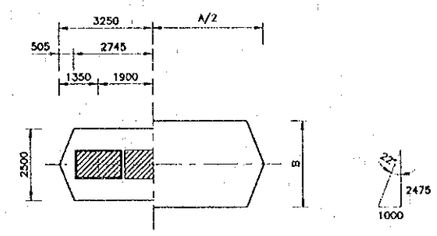
SECTION A–A
SCALE 1:100



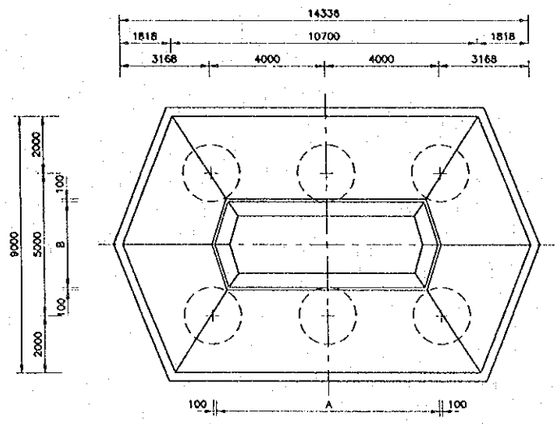
SECTION B–B
SCALE 1:100

	P7	P8	P9	P13	P14	REMARK
PH	146.770	147.870	148.830	151.450	151.570	
H	16520	17620	18580	21200	21320	
A	7602	7675	7739	7914	7922	
B	2941	2970	2996	3066	3069	
PILE LENGTH	11000	11500	13000	13500	13500	

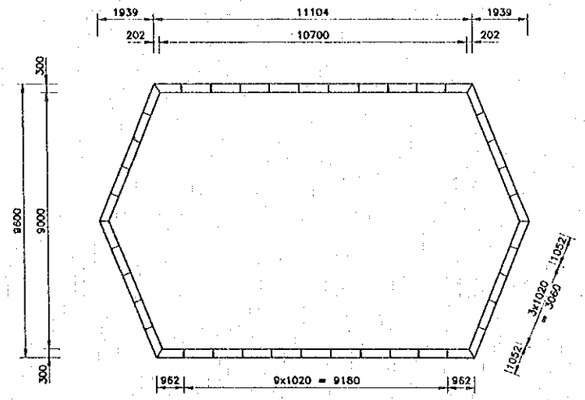
	P15	P16	P20	P21	P22	REMARK
PH	151.570	151.450	148.830	147.870	146.770	
H	21320	21200	18580	17620	16520	
A	7922	7914	7739	7675	7602	
B	3069	3066	2996	2970	2941	
PILE LENGTH	14000	14000	14000	13000	10500	



SECTION C–C SECTION D–D
SCALE 1:100 SCALE 1:100



PLAN
SCALE 1:100



PRECAST SKIRTING LAYOUT
SCALE 1:100

NOTES :

1. FOR GENERAL NOTES REFER TO DWGS. [B-G-1] AND [B-G-2]
2. FOR DETAILS OF PILES REFER TO DWG. [B-MS-9]
3. FOR DETAILS OF REINFORCEMENT REFER TO DWG. [B-MS-6]
4. PIER AND PILE CAP CONCRETE CLASS D 24 N/mm^2
5. SURFACE FINISH
   - PIER SKIRT F4
   - PILE CAPS F2
   - TOP OF PILE CAPS U2
6. FOR BEARING DETAILS REFER TO DWGS. [B-AC-1], [B-AC-2], [B-AC-4] AND [B-AC-5]
7. CONTRACTOR TO SUBMIT SHOP DRAWINGS FOR THE ENGINEERS APPROVAL BEFORE CONSTRUCTION COMMENCES
8. CONTRACTOR TO PROPOSE AND DESIGN FALSEWORK SYSTEM FOR PILE CAP CONSTRUCTION AND SUBMIT TO ENGINEER FOR APPROVAL
9. CONTRACTOR TO VERIFY ALL DIMENSIONS BEFORE CONSTRUCTION COMMENCES

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JICA JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	S. Watanabe		16-02-00
DESIGN CHECK	D. Wesley		18-02-00
SUBMITTED	A. Hirotani		17/03/00
APPROVED	P. Viraphanth		17/03/00
	S. Tamiyabutra		20/03/00

DWG. TITLE:

MAIN BRIDGE SUBSTRUCTURE
PILE CAP AND PIER GENERAL ARRANGEMENT OF P7~P9, P13~P16 AND P20~P22

Plot date : Sat, 5 Feb 2000 - 10:40:18
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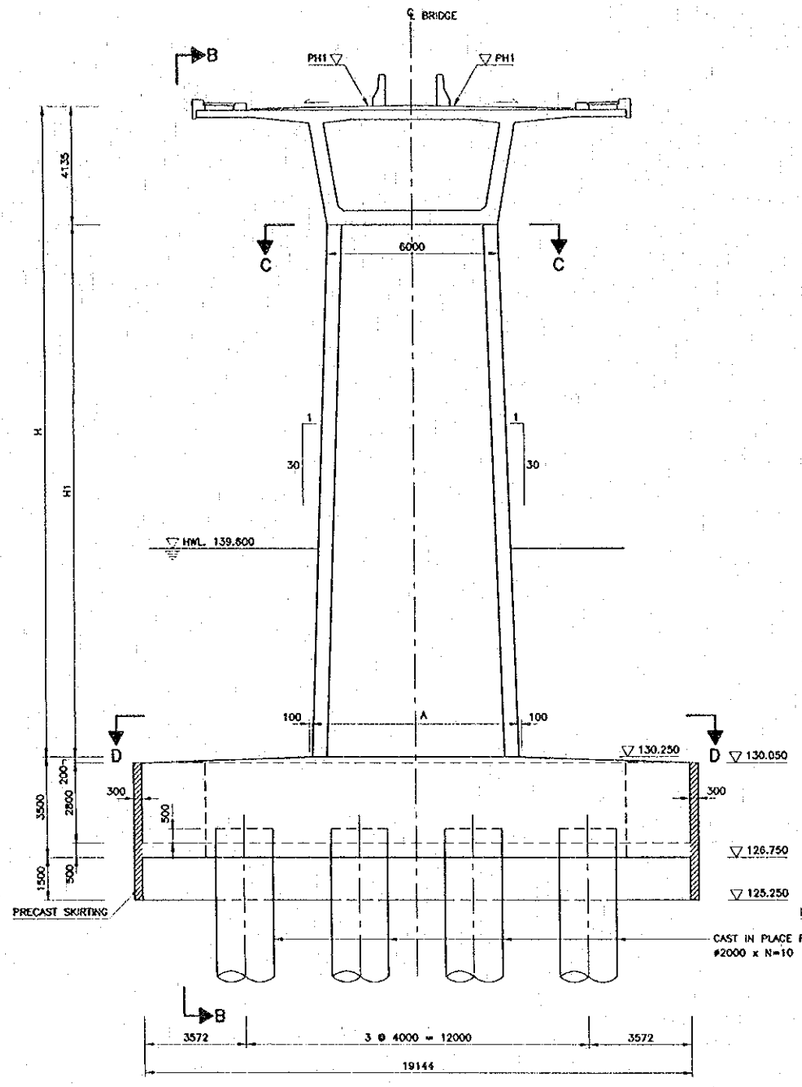
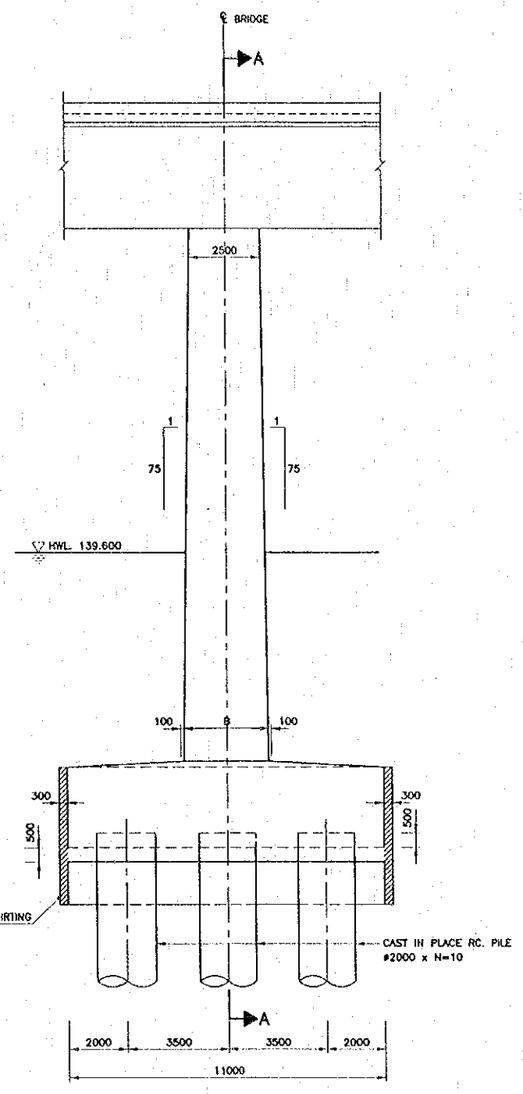
DATE OF ISSUE: 05/03/2000	
DWG. NO. B-MS-3	SHEET NO. 192
DWG. STATUS	

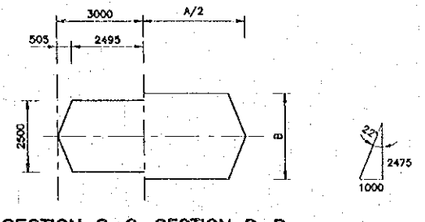


SECTION A–A
SCALE 1:100

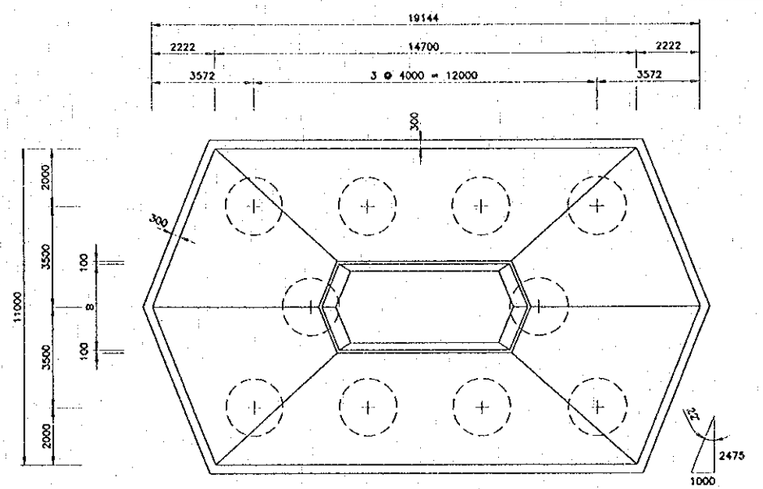


SECTION B–B
SCALE 1:100

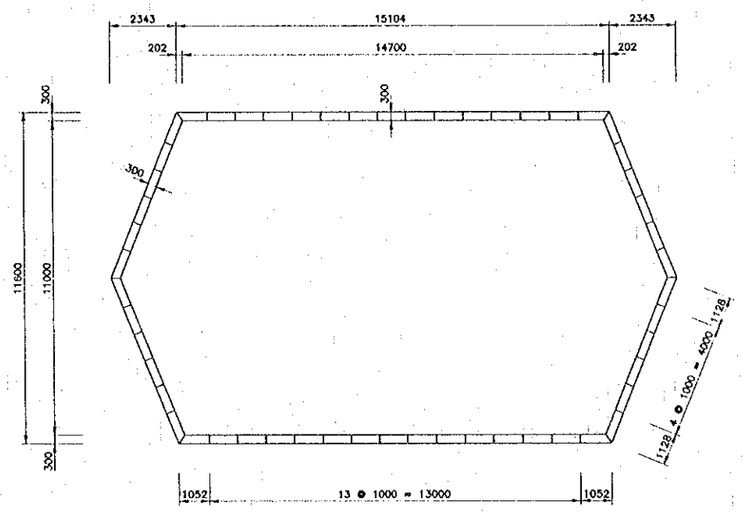
	P10	P12	P17	P19
PH1	154.120	155.636	155.636	154.120
H	23870	25386	25386	23870
H1	19735	21251	21251	19735
A	7316	7417	7417	7316
B	3027	3067	3067	3027
PILE LENGTH	13500	13000	14000	14000



SECTION C–C SECTION D–D
SCALE 1:100 SCALE 1:100



PLAN
SCALE 1:100



PRECAST SKIRTING
SCALE 1:100

NOTES :

1. FOR GENERAL NOTES REFER TO DWGS. B-G-1 AND B-G-2
2. FOR DETAILS OF REINFORCEMENT REFER TO DWG. B-MS-7 FOR PIER AND PILE CAP
3. FOR ALL OTHER NOTES REFER TO DWG. B-MS-2
4. PIER CONCRETE CLASS C 27 MPa
5. PILE CAP AND SKIRT CONCRETE CLASS D 24 MPa

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
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JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	S. Watanabe		6-2-00
DESIGN CHECK	D. Wesley		17-02-00
SUBMITTED	A. Hirotani		21-2-00
APPROVED	P. Viraphanth		14/2/00
	S. Tamiyabutra		22/2/00

DWG. TITLE:
MAIN BRIDGE SUBSTRUCTURE
PILE CAP AND PIER GENERAL ARRANGEMENT OF P10, P12, P17 AND P19

Plot date : Sat, 3 Feb 2000 - 10:45:20
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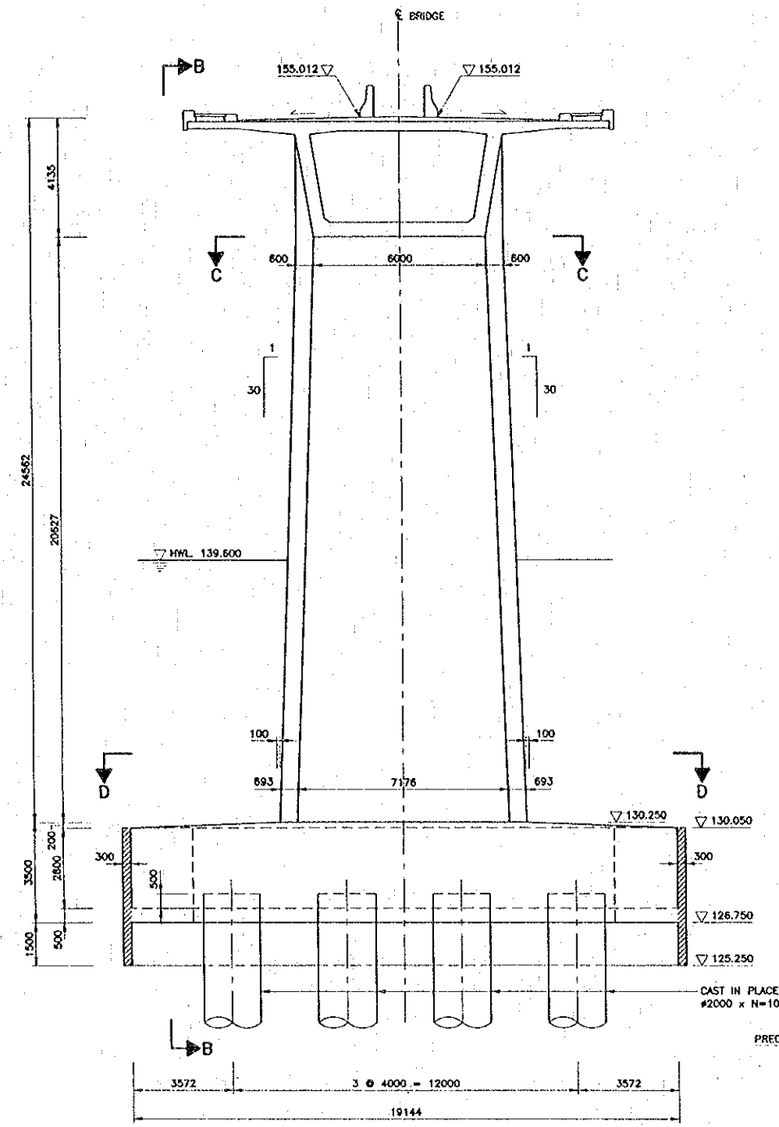
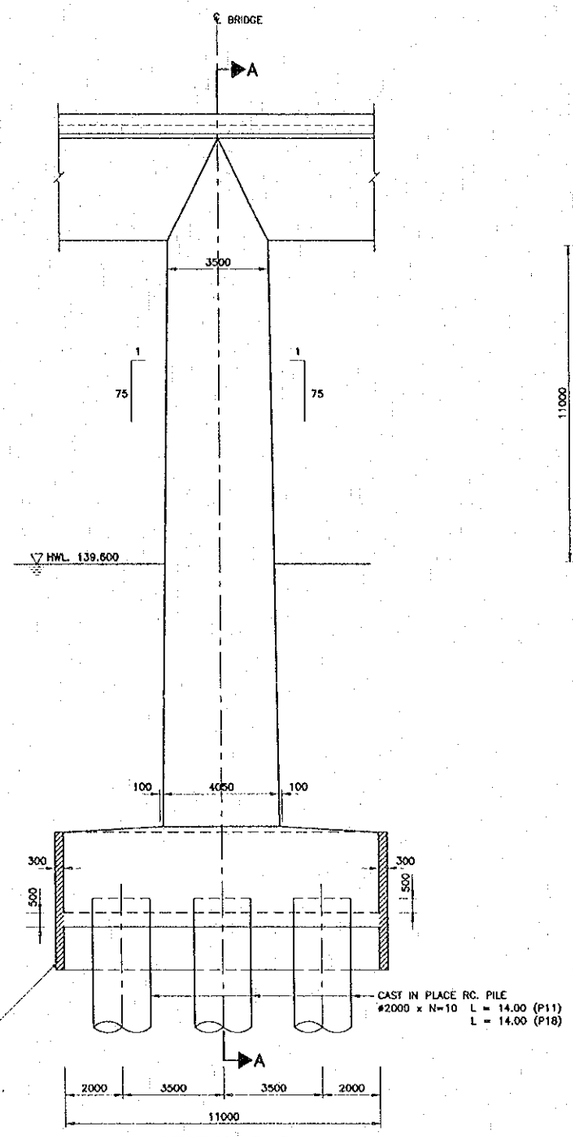
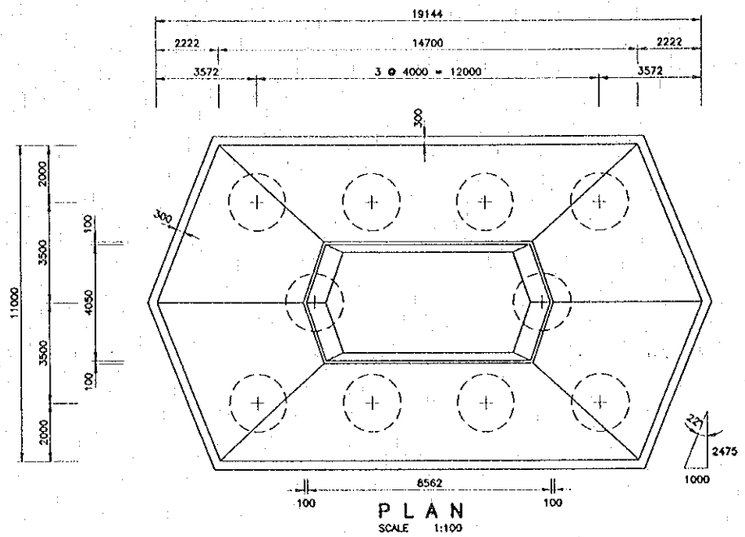
DATE OF ISSUE: 05/03/2000	
DWG. NO. B-MS-4	SHEET NO. 193
DWG. STATUS	



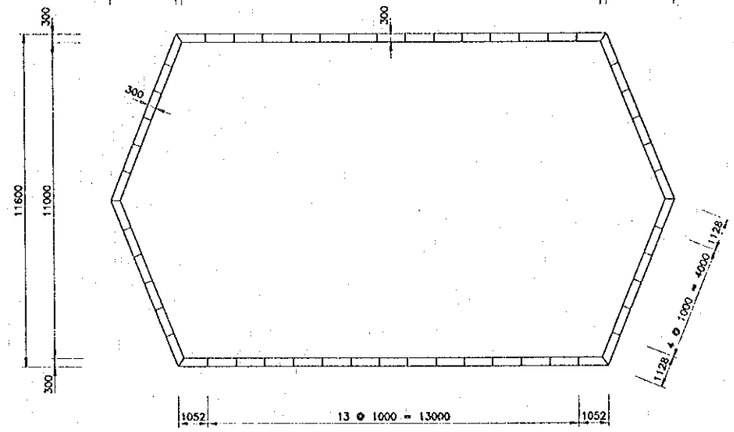
SECTION A--A
SCALE 1:100



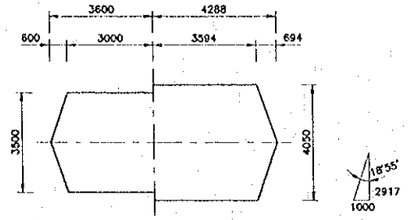
SECTION B--B
SCALE 1:100



PLAN
SCALE 1:100



PRECAST SKIRTING
SCALE 1:100



SECTION C--C SECTION D--D
SCALE 1:100 SCALE 1:100

NOTES :

1. FOR GENERAL NOTES REFER TO DWGS. B-G-1 AND B-G-2
2. FOR DETAILS OF REINFORCEMENT REFER TO DWG. B-MS-8 FOR PIER AND PILE CAP
3. FOR ALL OTHER NOTES REFER TO DWG. B-MS-2
4. PIER CONCRETE CLASS C 27 MPa
5. PILE CAP AND SKIRT CONCRETE CLASS B 24 MPa

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	S. Watanabe		16-02-00
DESIGN CHECK	D. Wesley		18-11-04
SUBMITTED	A. Hirotani		1-1-00
APPROVED	P. Viraphanth		22/02/00
	S. Tamiyabutra		22/2/00

DWG. TITLE:
MAIN BRIDGE SUBSTRUCTURE
PILE CAP AND PIER GENERAL ARRANGEMENT OF P11 AND P18

Plot date: Sat, 5 Feb 2000 - 10:59:15
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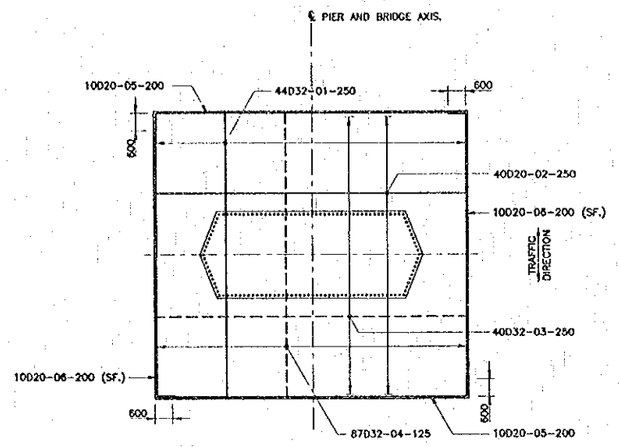
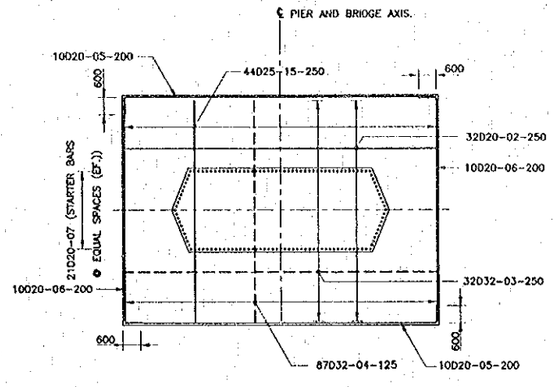
DATE OF ISSUE: 05/03/2000	
DWG. NO. B-MS-5	SHEET NO. 194
DWG. STATUS	



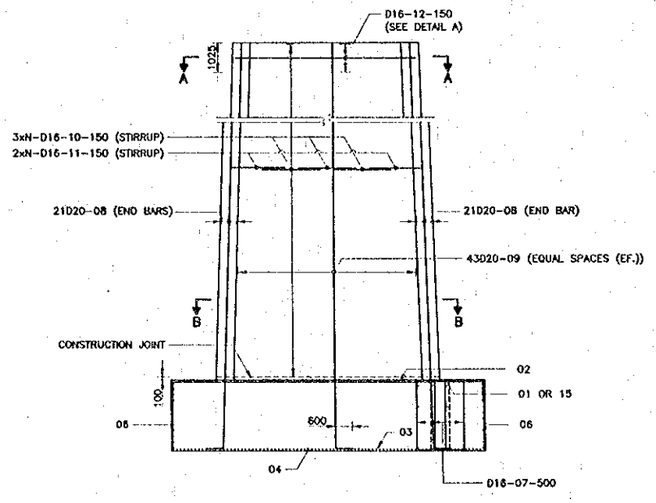
FOOTING R.C. DETAILS PLAN
OF P6

SCALE 1:100



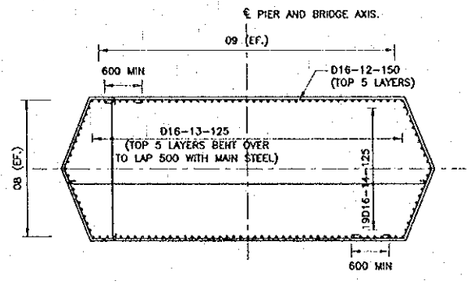
FOOTING R.C. DETAILS PLAN
OF P23

SCALE 1:100

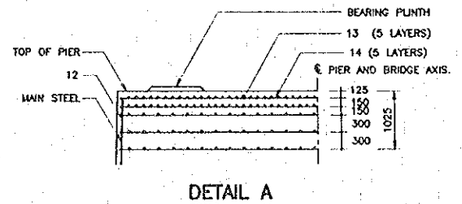


FOOTING AND PIER R.C. DETAILS ELEVATION
OF P6 AND P23

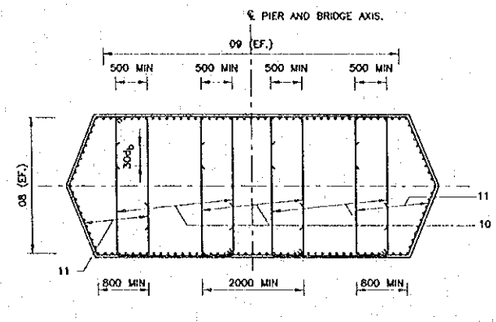
SCALE 1:100



SECTION A-A
SCALE 1:50



DETAIL A
SCALE 1:50



SECTION B-B
SCALE 1:50

NOTES :

1. FOR GENERAL NOTES REFER TO DWGS. B-G-1 AND B-G-2
2. FOR DETAILS OF DIMENSIONS REFER TO DWG. B-MS-1
3. ALL REINFORCING SPLICES TO BE IN ACCORDANCE WITH TABLE IN DWG. B-G-1
4. ALL STEEL TO GRADE 390 TIS 24-2527
5. FOR BEARING DETAILS SEE DWGS. B-AC-1, B-AC-2 AND B-AC-4
6. SURFACE FINISH
   - PIER F4
   - FOOTING F2
7. CONTRACTOR TO PROPOSE AND DESIGN TEMPORARY WORKS FOR PIER AND FOOTING AND SUBMIT FULL DETAILS TO THE ENGINEER FOR APPROVAL
8. CONTRACTOR TO VERIFY ALL DIMENSIONS AND SUBMIT SHOP DRAWINGS BEFORE CONSTRUCTION COMMENCES

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JICA JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	S. Watanabe		16-02-00
DESIGN CHECK	D. Wesley		19-01-00
SUBMITTED	A. Hirotani		21/1/00
APPROVED	P. Viraphanth		11/2/00
	S. Tamiyabutra		22/02/00

DWG. TITLE:

MAIN BRIDGE SUBSTRUCTURE
FOOTING AND PIER R.C. DETAILS OF P6 AND P23

Plot date : Sat, 5 Feb 2000 - 11:02:46

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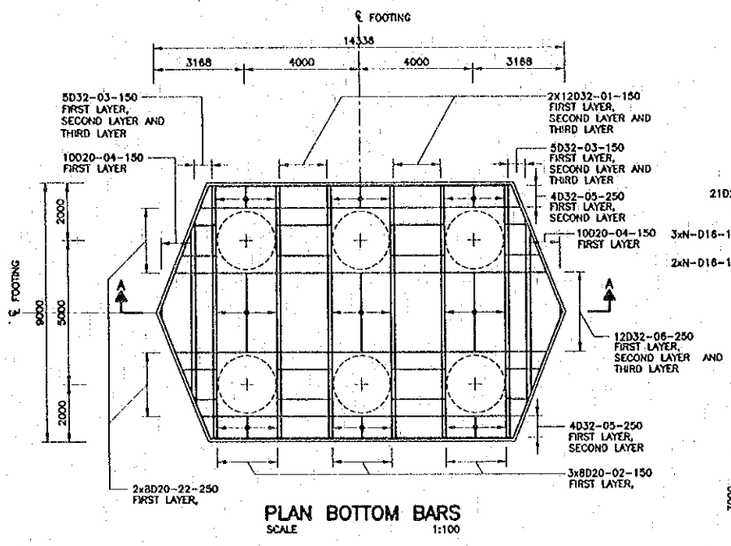
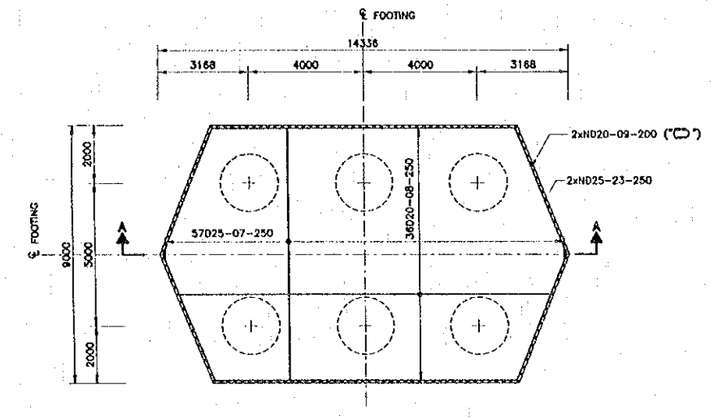
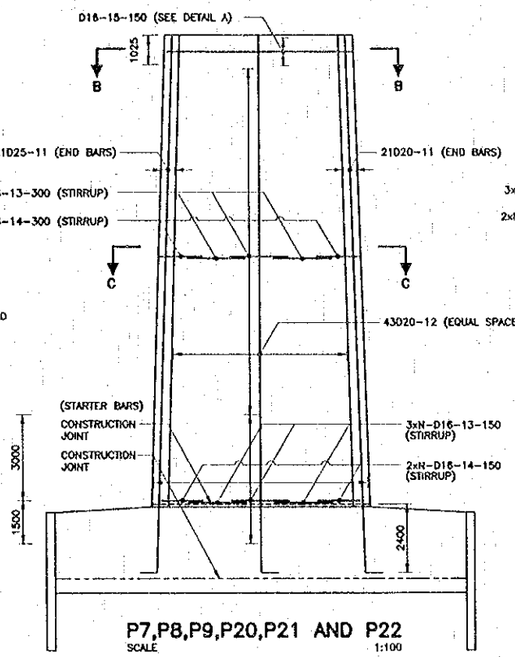
DATE OF ISSUE: 05/03/2000	
DWG. NO. B-MS-6	SHEET NO. 195
DWG. STATUS	



PLAN BOTTOM BARS
SCALE 1:100



PLAN TOP BARS
SCALE 1:100



P7,P8,P9,P20,P21 AND P22
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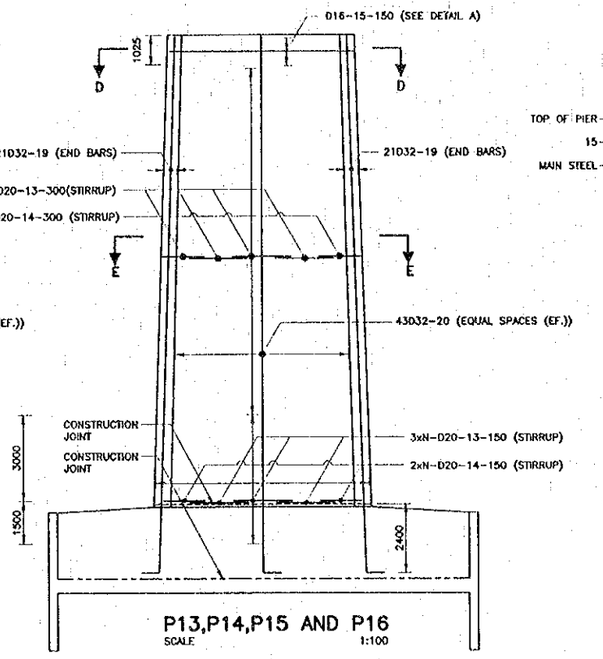
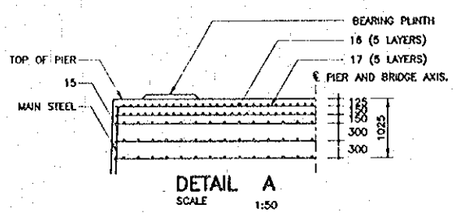


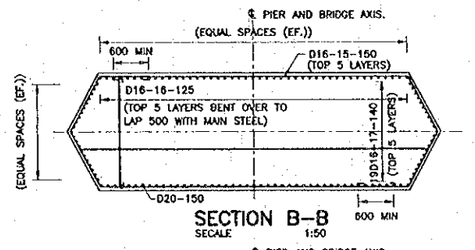
P13,P14,P15 AND P16
SCALE 1:100



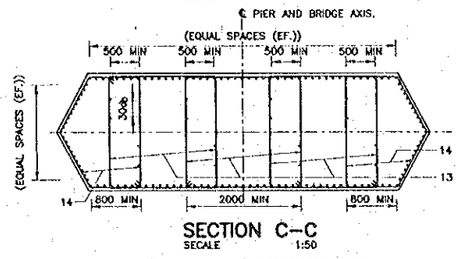
DETAIL A
SCALE 1:50

LIST OF PRECAST SKIRTING

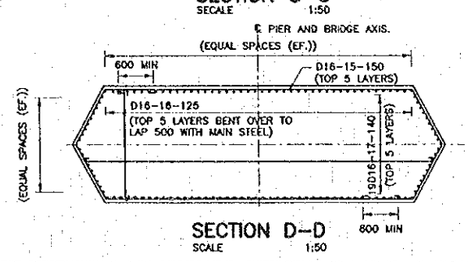
ITEM		MOVEABLE	
		LENGTH	QUANTITY
PRECAST SKIRTING	CONCRETE 0.30x4.80	1020	1.47 m^3
	WEIGHT	-	4.0 ton
FORM WORK	t=0.30 m	-	3.49 m^2
REINFORCEMENT	SD395	-	211 kg
EPOXY	0.30x4.80	-	1.44 m^2



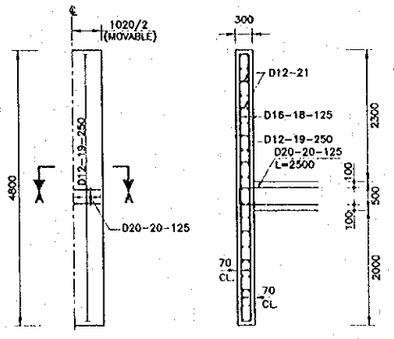
SECTION B-B
SECALE 1:50



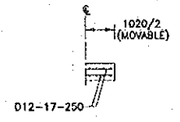
SECTION C-C
SECALE 1:50



SECTION D-D
SCALE 1:50

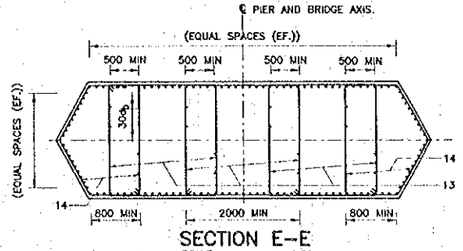


SIDE ELEVATION MOVABLE PIER

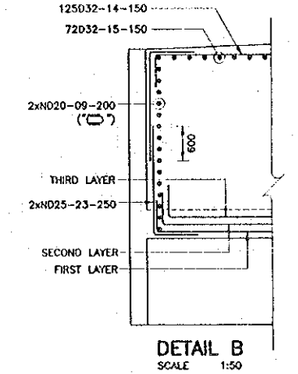


SECTION A-A
SCALE 1:50

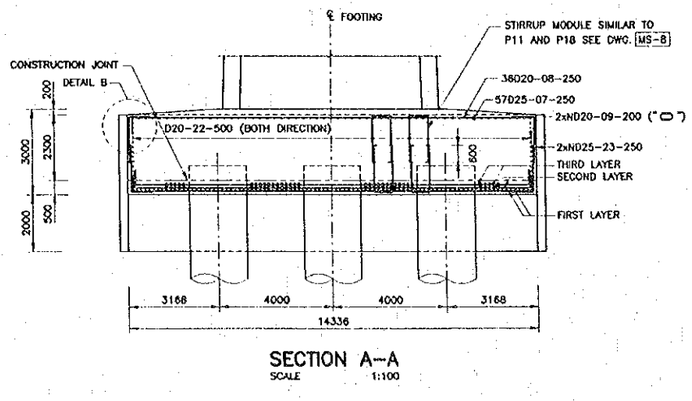
PRECAST SKIRTING R.C. DETAILS
SCALE 1:50



SECTION E-E
SCALE 1:50



DETAIL B
SCALE 1:50



SECTION A-A
SCALE 1:100

NOTES :

1. FOR GENERAL NOTES REFER TO DWGS. B-G-1 AND B-G-2
2. FOR DETAILS OF DIMENSIONS REFER TO DWG. B-MS-2
3. FOR DETAILS OF PILES REFER DWG. B-MS-9
4. SURFACE FINISH
   - PIER SKIRT F4
   - PILE CAPS F2
   - TOP OF CAPS U2
5. REINFORCING STEEL TO GRADE 390 TIS 24-2527
6. FOR BEARING DETAILS SEE DWGS. B-AC-1, B-AC-2, B-AC-4 AND B-AC-5
7. CONTRACTOR TO PROPOSE AND DESIGN FALSEWORK SYSTEM FOR PILE CAP CONSTRUCTION AND SUBMIT TO ENGINEER FOR APPROVAL
8. CONTRACTOR TO VERIFY ALL DIMENSIONS AND SUBMIT SHOP DRAWINGS BEFORE CONSTRUCTION COMMENCES

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JICA JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	S. Watanabe		15.02.00
DESIGN CHECK	D. Wesley		15.02.00
SUBMITTED	A. Hirotani		21/2/00
APPROVED	P. Viraphonh		22/2/00
	S. Temiyabutra		22.02.00

DWG. TITLE:

MAIN BRIDGE SUBSTRUCTURE
PILE CAP AND PIER R.C. DETAILS OF P7~P9, P13~P16 AND P20~P22

Plot date: Sat, 5 Feb 2000 - 11:06:25
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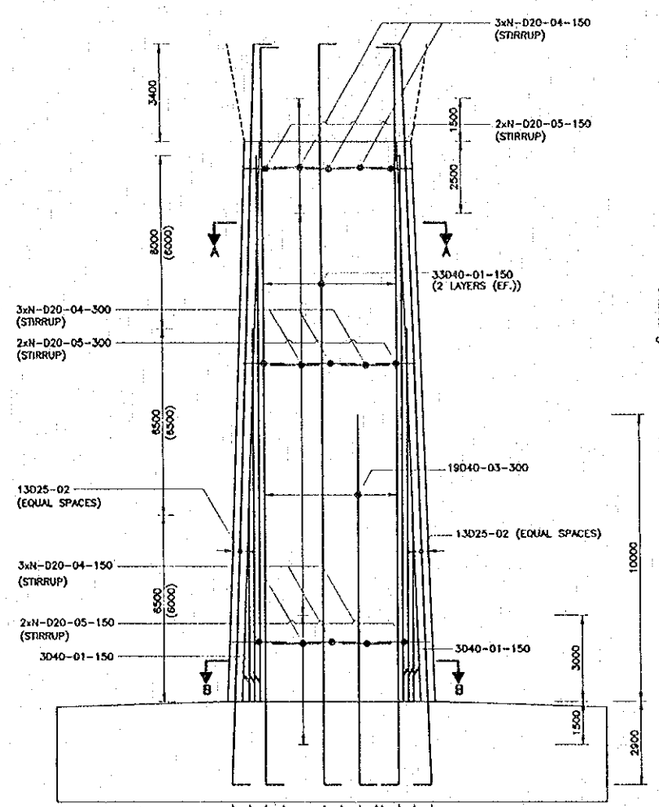
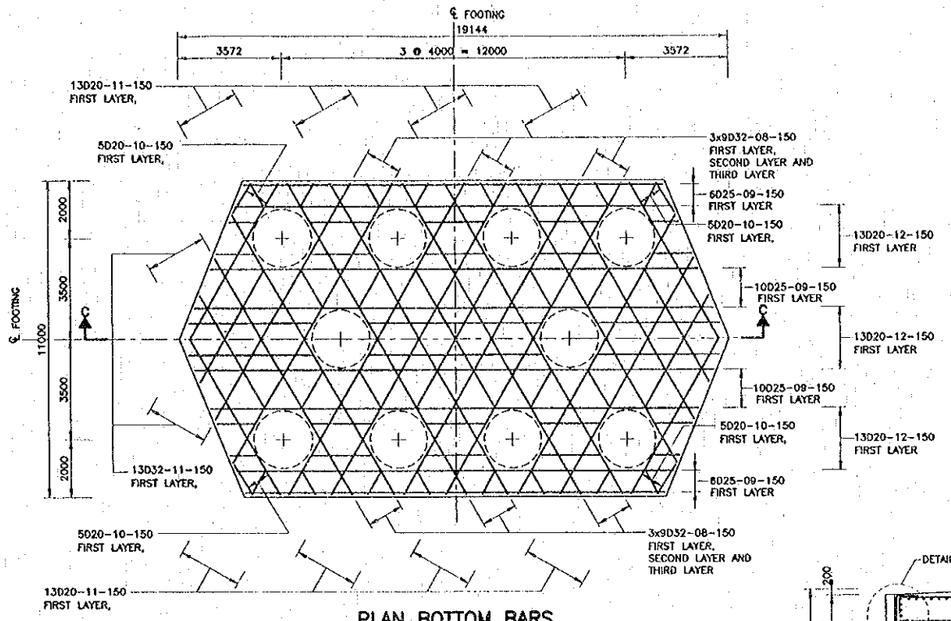
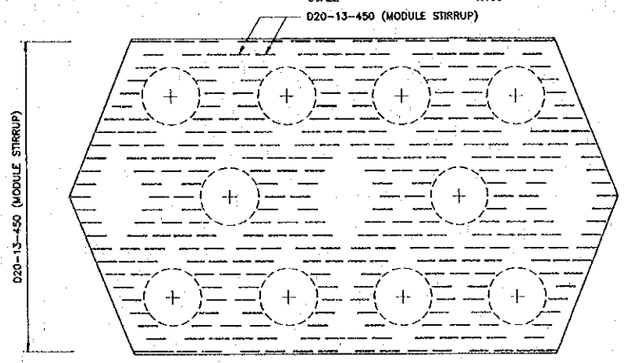


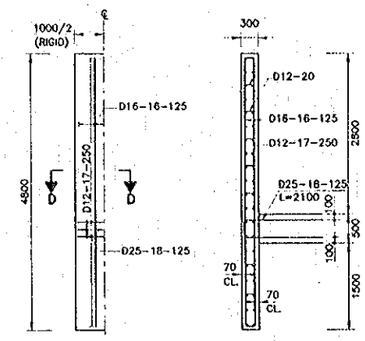
ELEVATION OF P10, P12, P17 AND P19
SCALE 1:100



PLAN BOTTOM BARS
SCALE 1:100

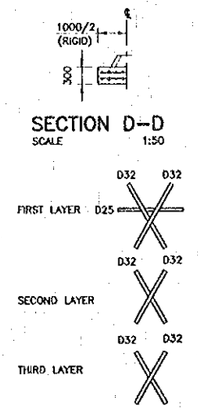


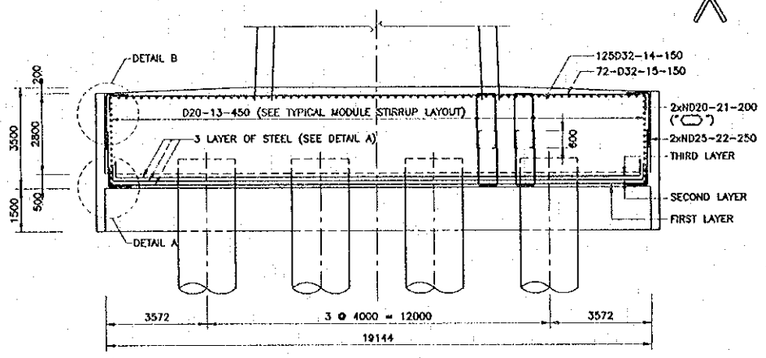
MODULE STIRRUP LAYOUT
SCALE 1:100



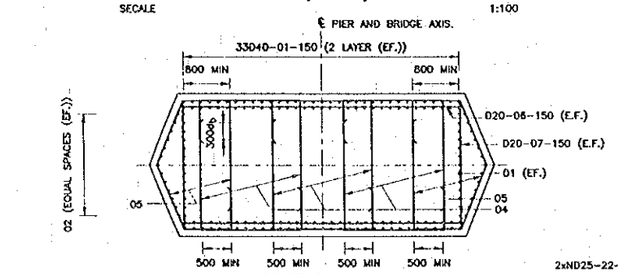
SIDE ELEVATION RIGID FRAME PIER

PRECAST SKIRTING R.C. DETAILS
SCALE 1:50

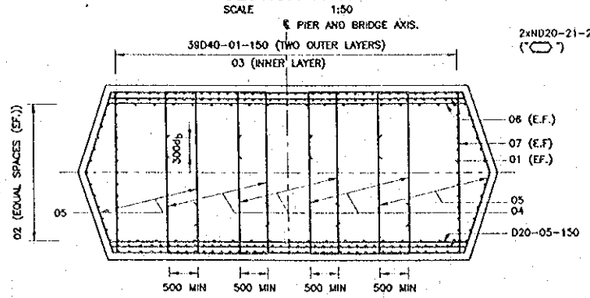




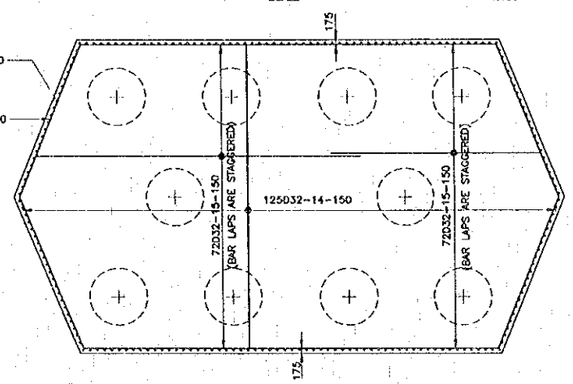
SECTION C-C
SCALE 1:100



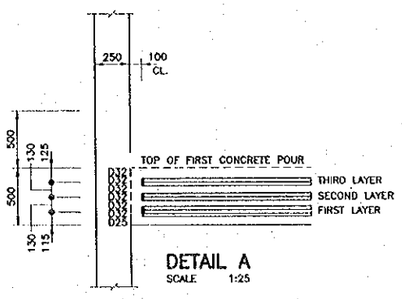
SECTION A-A
SCALE 1:50



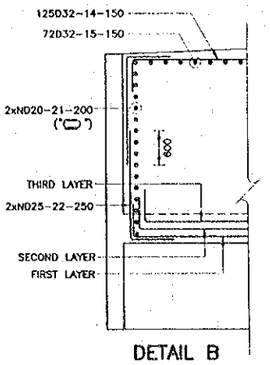
SECTION B-B
SCALE 1:50



PLAN TOP BARS
SCALE 1:100



DETAIL A
SCALE 1:25



DETAIL B
SCALE 1:50

LIST OF PRECAST SKIRTING

ITEM		RIGID	
		LENGTH	QUANTITY
PRECAST SKIRTING	CONCRETE 0.30x4.80	1.000	1.44 m^3
	WEIGHT	–	3.6 ton
FORM WORK	t=0.30 m	–	3.48 m^2
REINFORCEMENT	SD395	–	245 kg
EPOXY	0.30x4.80	–	1.44 m^2

NOTES :

1. FOR GENERAL NOTES REFER DWGS. B-G-1 AND B-G-2
2. FOR DIMENSIONS REFER DWG. B-MS-3
3. FOR ALL OTHER NOTES REFER DWG. B-MS-5
4. NUMBER IN BRACKETS FOR P10 AND P19

DATE OF ISSUE:	
05/03/2000	
DWG. NO. B-MS-7	SHEET NO. 196
DWG. STATUS	

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JICA JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

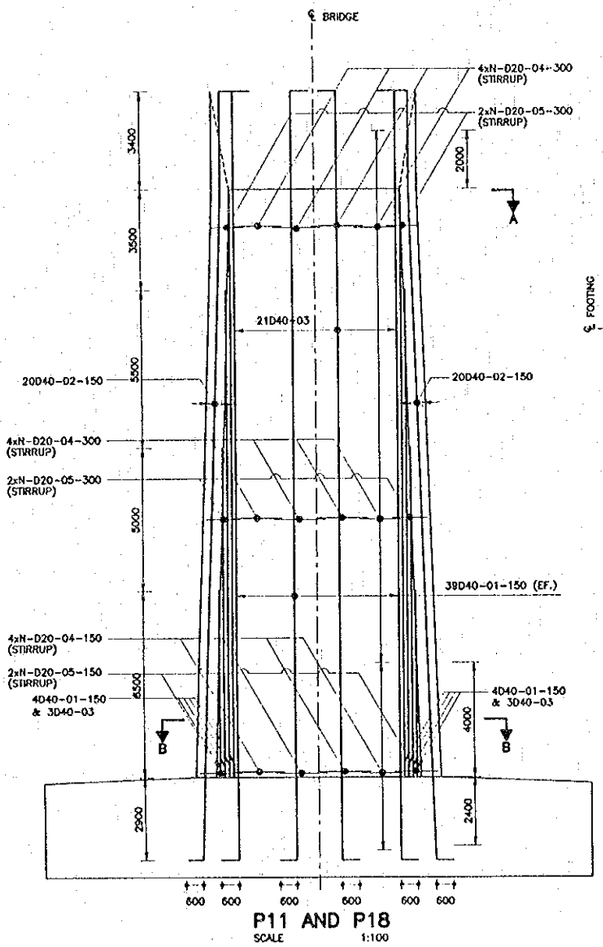
THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	S. Watanabe		16-03-00
DESIGN CHECK	D. Wesley		17-01-00
SUBMITTED	A. Hirotani		21/02/00
APPROVED	P. Viraphanth		22/02/00
	S. Temiyabutra		22/02/00

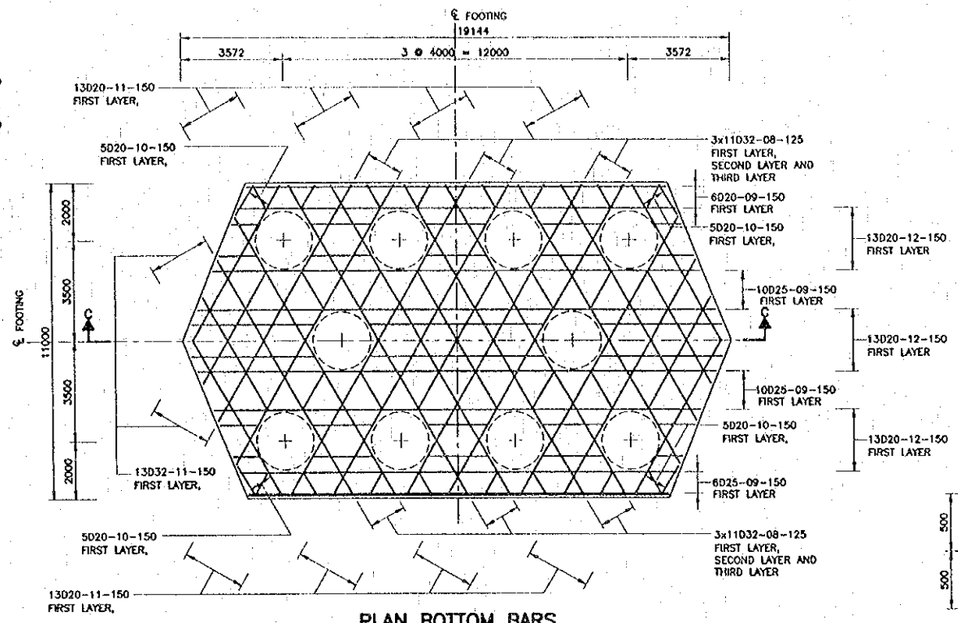
DWG. TITLE:
MAIN BRIDGE SUBSTRUCTURE
PILE CAP AND PIER R.C DETAILS OF P10, P12, P17 AND P19

Plot date : Sat, 5 Feb 2000 - 11:37:19
C:\CHANTANA\SMB\MAIN-BRIDGE-SUB\MS-7.dwg

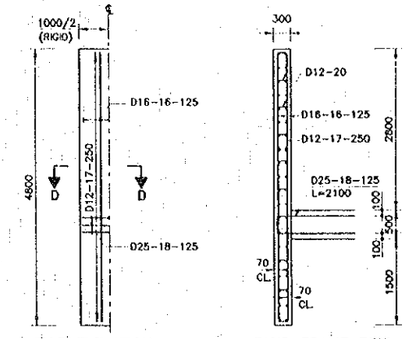
DATE OF ISSUE: 05/03/2000
DWG. NO. B-MS-8 | SHEET NO. 197
DWG. STATUS



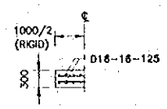
P11 AND P18
SCALE 1:100



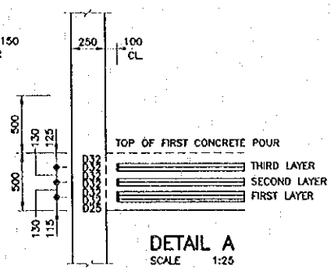
PLAN BOTTOM BARS
SCALE 1:100



SIDE ELEVATION RIGID FRAME PIER
PRECAST SKIRTING R.C. DETAILS
SCALE 1:50



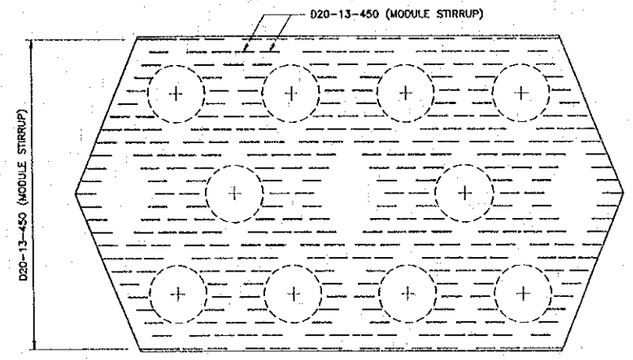
SECTION D-D
SCALE 1:50



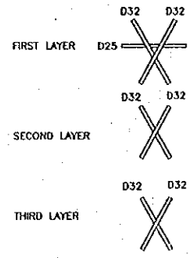
DETAIL A
SCALE 1:25

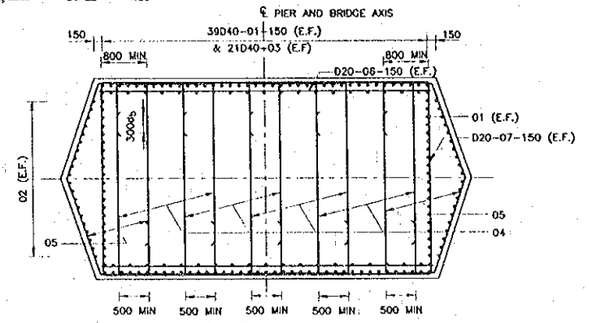
LIST OF PRECAST SKIRTING

ITEM		RIGID	
		LENGTH	QUANTITY
PRECAST SKIRTING	CONCRETE 0.30x4.80	1.000	1.44 m^3
	WEIGHT	-	3.6 ton
FORM WORK	t=0.30 m	-	3.48 m^2
REINFORCEMENT	SD395	-	245 kg
EPOXY	0.30x4.80	-	1.44 m^2

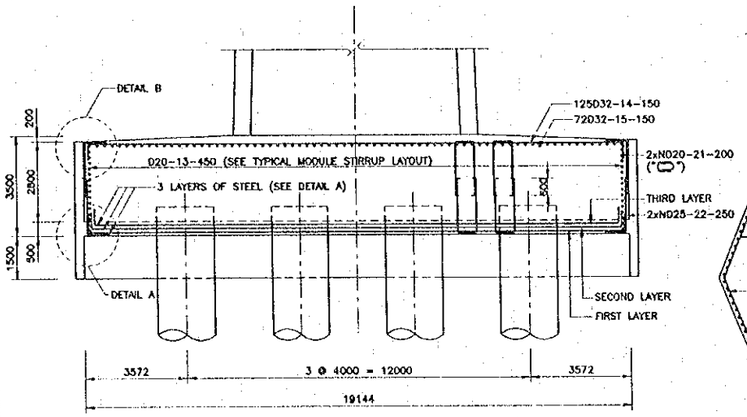


MODULE STIRRUP LAYOUT
SCALE 1:100

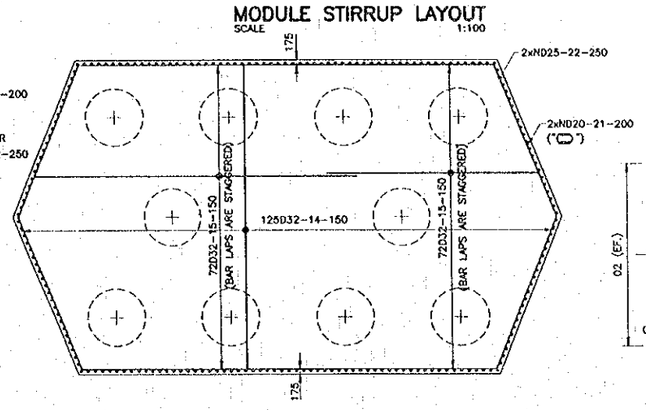




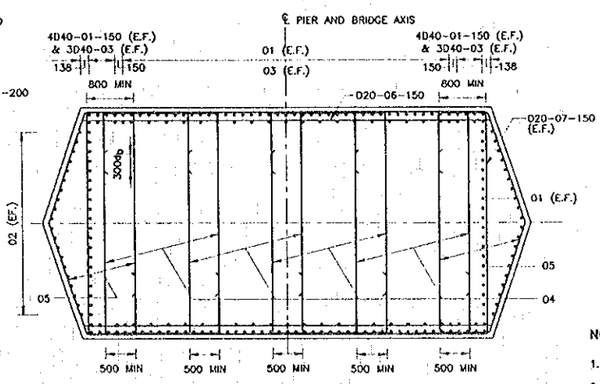
SECTION A-A
SCALE 1:50



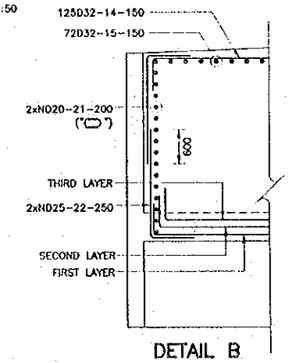
SECTION C-C
SCALE 1:100



PLAN TOP BARS
SCALE 1:100



SECTION B-B
SCALE 1:50



DETAIL B
SCALE 1:50

NOTES :
1. FOR GENERAL NOTES REFER DWGS. B-G-1 AND B-G-2
2. FOR DIMENSIONS REFER DWG. B-MS-4
3. FOR ALL OTHER NOTES REFER DWG. B-MS-6

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	S. Watanabe		16-02-00
DESIGN CHECK	D. Wesley		18-02-00
SUBMITTED	A. Hirotani		21/02/00
APPROVED	P. Viraphanth		22/02/00
	S. Tamiyabutra		24/02/00

DWG. TITLE:
MAIN BRIDGE SUBSTRUCTURE
PILE CAP AND PIER R.C. DETAILS OF P11 AND P18

Plot date : Sat, 5 Feb 2000 - 15:08:33
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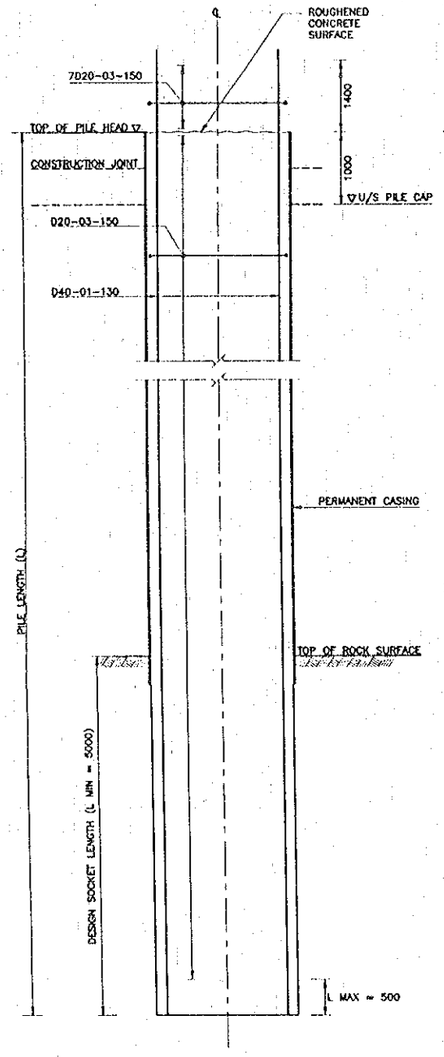
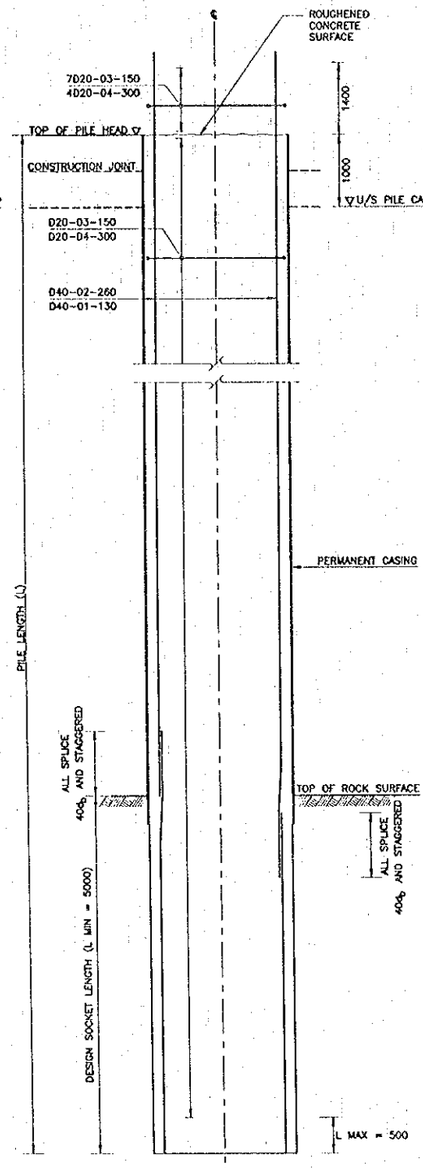
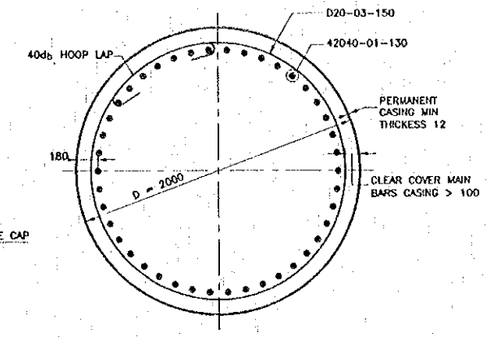
DATE OF ISSUE: 05/03/2000	
DWG. NO. B-MS-9	SHEET NO. 198
DWG. STATUS	



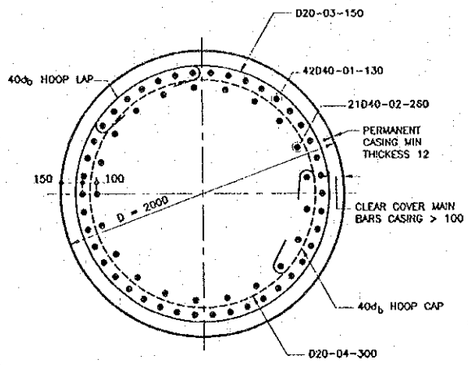
ELEVATION OF TYPICAL PILE
TYPE 1
SCALE 1:40



ELEVATION OF TYPICAL PILE
TYPE 2, 3
SCALE 1:40

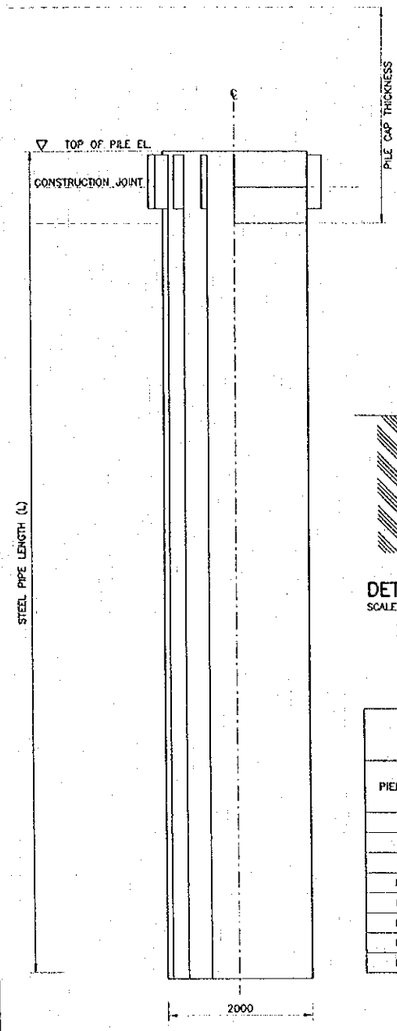


TYPICAL SECTION FOR PILE
PIER P7~P9, P13~P16 AND P20~P22
(TYPE 1,2)
SCALE 1:20

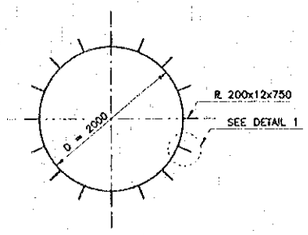


TYPICAL SECTION FOR PILE
PIER P10~12 AND P17~P19
(TYPE 3)
SCALE 1:20

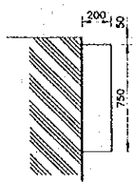
LONGITUDINAL PILE STEEL MAIN BRIDGE SUBSTRUCTURE					
PIER No.	PILE		TYPE	NO. OF REINFORCEMENT BAR	
	LENGTH	NUMBER		01	02
P7	11000	6	2	42	–
P8	11500	6	2	42	–
P9	13000	6	2	42	–
P10	13500	10	3	42	21
P11	14000	10	3	42	21
P12	13000	10	3	42	21
P13	13500	6	3	42	–
P14	13500	6	3	42	–
P15	14000	6	3	42	–
P16	14000	6	3	42	–
P17	14000	10	3	42	21
P18	14000	10	3	42	21
P19	14000	10	3	42	21
P20	14000	6	2	42	–
P21	13000	6	2	42	–
P22	10500	6	1	42	–



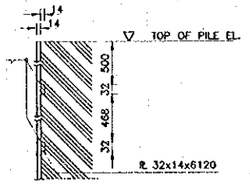
STEEL PIPE DETAIL
SCALE 1:40



DETAIL OF PIPE HEAD
SCALE 1:40



DETAIL 1
SCALE 1:20



DETAIL OF SHEAR CONNECTOR
SCALE 1:10

THAILAND SIDE			LAO P.D.R. SIDE		
PIER No.	STEEL PIPE LENGTH	NUMBER	PIER No.	STEEL PIPE LENGTH	NUMBER
P7	6050	6	P15	8950	6
P8	6750	6	P16	9150	6
P9	7950	6	P17	8950	10
P10	8650	10	P18	9250	10
P11	8950	10	P19	9050	10
P12	8050	10	P20	8950	6
P13	8550	6	P21	7950	6
P14	8750	6	P22	5450	6

NOTES :

1. FOR GENERAL NOTES REFER DWGS. B-G-1 AND B-G-2
2. THE DESIGN SOCKET LENGTH IS 5.00 METERS MINIMUM INTO ROCK WITH SPT (N) > 50
3. PILE CONCRETE CLASS B 30 N/mm.^{2}
4. CONCRETE COVER TO CASING 100mm.
5. REINFORCEMENT SHALL BE GRADE 390 TO TIS 24-2527
6. CONTRACTOR TO SUBMIT METHODOLOGY FOR PILING TO ENGINEER FOR APPROVAL.
7. STEEL PIPE FOR CASING TO AASHTO M270 GRADE 50

REV.	DATE	DESCRIPTION	APPROVED

Plot date: Sat, 5 Feb 2000 - 15:14:08
C:\CHAINAN\SMB\MAIN-BRIDGE-SUB\MS-9.dgn

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

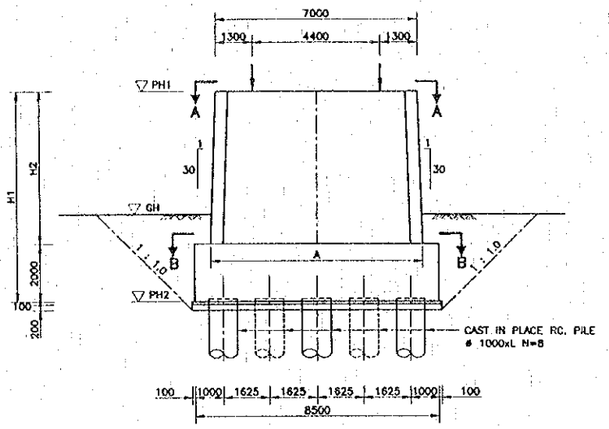
THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	S. Watanabe		6-02-00
DESIGN CHECK	O. Wesley		18-02-00
SUBMITTED	A. Hirotani		[illegible]
APPROVED	P. Viraphanth		22/2/00
	S. Temiyabutra		22/02/00

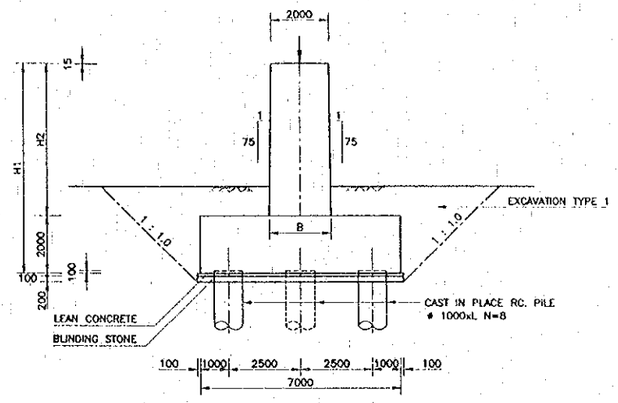
DWG. TITLE:

MAIN BRIDGE SUBSTRUCTURE
PILE DETAILS

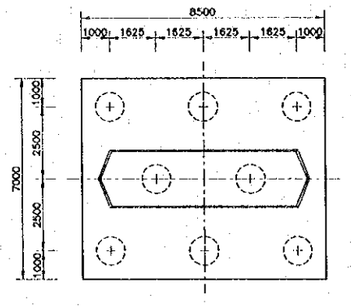
DATE OF ISSUE: 05/03/2000	
DWG. NO. B-AS-1	SHEET NO. 199
DWG. STATUS	



ELEVATION
SCALE 1:100

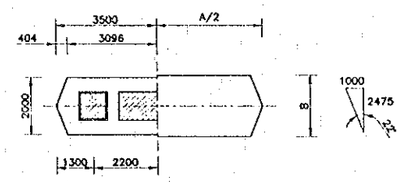


SIDE ELEVATION
SCALE 1:100



PLAN
SCALE 1:100

THAILAND SIDE				
	P1	P2	P4	REMARK
PH1	142.149	143.149	145.119	
PH2	134.849	134.649	134.619	
GH	137.850	137.700	137.650	
H1	7300	8500	10500	
H2	5300	6500	8500	
A	7354	7434	7567	
B	2142	2174	2227	
PILE LENGTH	11000	11000	11500	



SECTION A–A
SCALE 1:100

SECTION B–B
SCALE 1:100

LAO P.R.D. SIDE			
	P25	P27	REMARK
PH1	145.119	143.149	
PH2	135.119	136.049	
GH	138.000	139.000	
H1	10000	7100	
H2	8000	5100	
A	7534	7340	
B	2214	2136	
PILE LENGTH	9000	9500	

NOTES :

1. FOR GENERAL NOTES REFER DWGS. B-G-1 AND B-G-2
2. FOR DETAILS OF PILE CAP REINFORCMENT REFER DWG. B-AS-6
3. FOR DETAILS OF PIER REINFORCMENT REFER DWG. B-AS-6
4. FOR DETAILS OF PILES REINFORCMENT DWG. B-AS-11
5. PILE CAP CONCRETE CLASS D 24 N/mm.^{2}
6. PIER CONCRETE CLASS D 24 N/mm.^{2}
7. SURFACE FINISH
   - PIER F4
   - PILE CAP F1
8. CONTRACTOR TO CHECK ACCURACY OF ALL DIMENSIONS AND SUBMIT SHOP DRAWINGS FOR APPROVAL BEFORE CONSTRUCTION
9. FOR BEARING DETAILS SEE DWGS. B-AC-1, B-AC-2, AND B-AC-3

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JICA JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

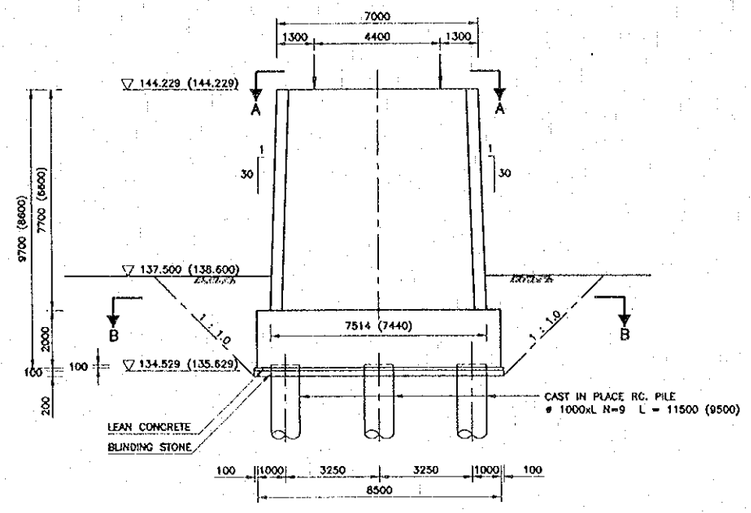
THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	S. Watanabe		4-2000
DESIGN CHECK	D. Wesley		19.01.00
SUBMITTED	A. Hiratani		
APPROVED	P. Viraphanth		03/03/00
	S. Tamiyabutra		24/03/00

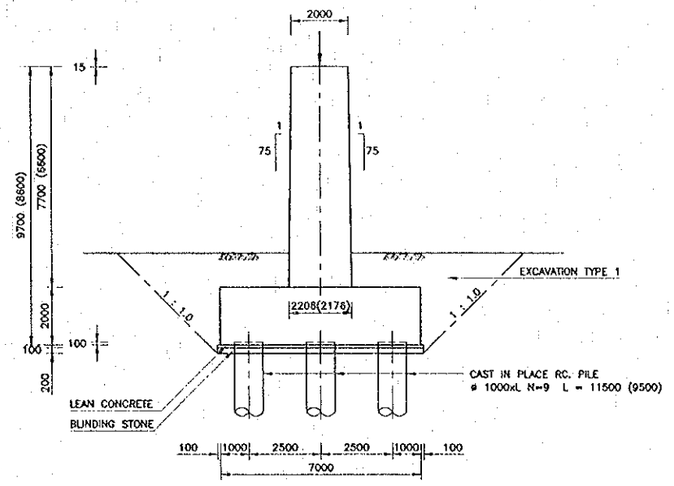
DWG. TITLE:
APPROACH VIADUCT SUBSTRUCTURE
PILE CAP AND PIER GENERAL ARRANGEMENT OF P1, P2, P4, P25 AND P27

Plot date: Sat, 5 Feb 2000 - 12:08:03
C:\CHANTANA\SMB\SUBSTRUCTURE\AS-1.dwg

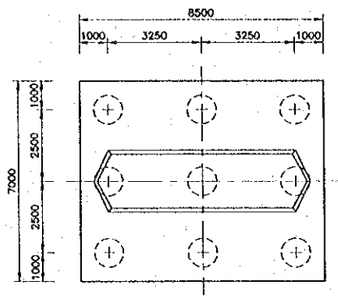
DATE OF ISSUE: 05/03/2000	
DWG. NO. B-AS-2	SHEET NO. 200
DWG. STATUS	



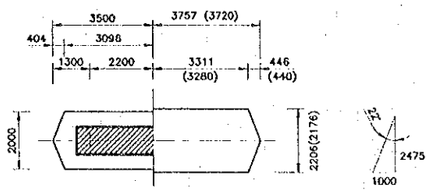
ELEVATION
SCALE 1:100



SIDE ELEVATION
SCALE 1:100



PLAN
SCALE 1:100



SECTION A–A SECTION B–B
SCALE 1:100 SCALE 1:100

NOTES :

1. NUMBER IN BRACKETS FOR P26
2. FOR GENERAL NOTES REFER TO DWGS. B-G-1 AND B-G-2
3. FOR DETAILS OF PILE CAP AND PIER REINFORCEMENT REFER TO DWG. B-AS-7
4. FOR DETAILS OF PILES REFER DWG. B-AS-11
5. PILE CAP CONCRETE CLASS D 24 N/mm.^{2}
6. PIER CONCRETE CLASS D 24 N/mm.^{2}
7. SURFACE FINISH
   - PIER F4
   - PILE CAP F1
8. FOR BEARING DETAILS REFER TO DWGS. B-AC-1, B-AC-2 AND B-AC-3
9. CONTRACTOR TO CHECK ACCURACY OF ALL DIMENSIONS AND SUBMIT SHOP DRAWINGS FOR APPROVAL BEFORE CONSTRUCTION

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	S. Watanabe		16-02-00
DESIGN CHECK	D. Wesley		18-07-00
SUBMITTED	A. Hiratani		22/01/01
APPROVED	P. Virophonth		29/01/01
	S. Temiyabutra		22/02/01

DWG. TITLE:
APPROACH VIADUCT SUBSTRUCTURE
PILE CAP AND PIER GENERAL ARRANGEMENT OF P3 AND P26

Plot date: Wed, 12 Jan 2000 - 9:50:11
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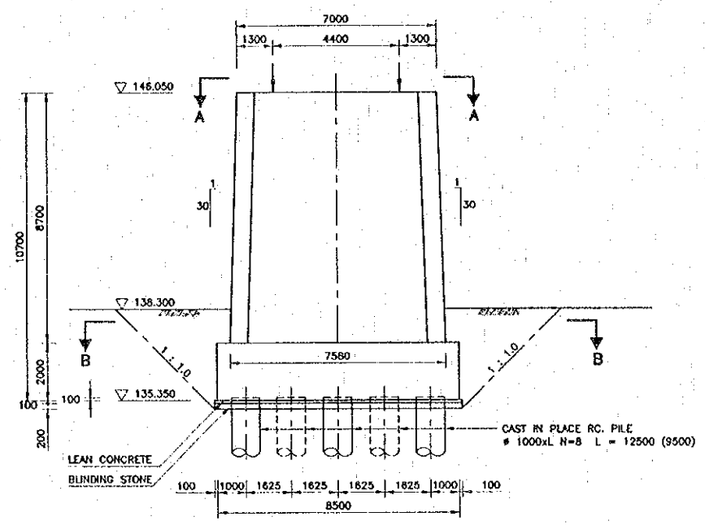
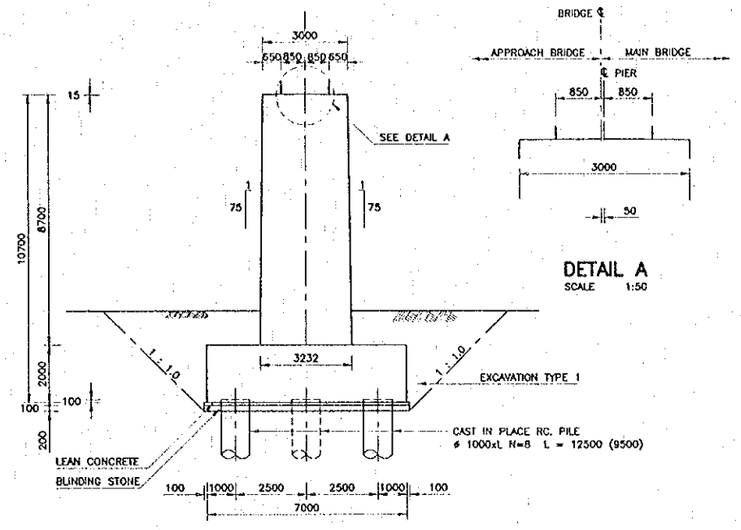
DATE OF ISSUE: 05/03/2000	
DWG. NO. B-AS-3	SHEET NO. 201
DWG. STATUS	

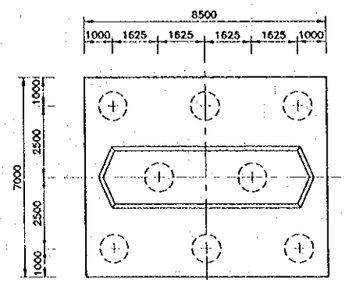


ELEVATION
SCALE 1:100



SIDE ELEVATION
SCALE 1:100

DETAIL A
SCALE 1:50



PLAN
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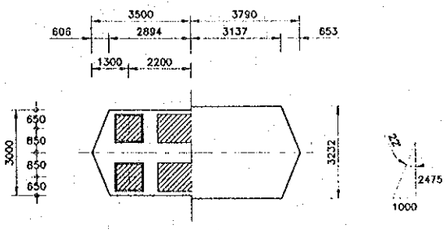

SECTION A–A
SCALE 1:100

SECTION B–B
SCALE 1:100

NOTES :

1. NUMBER IN BRACKETS FOR P24
2. FOR GENERAL NOTES REFER TO DWGS. [B-G-1] AND [B-G-2]
3. FOR DETAILS OF PILE CAP AND PIER REINFORCEMENT REFER TO DWG. [B-AS-8]
4. FOR DETAILS OF PILES REFER DWG. [B-AS-11]
5. PILE CAP CONCRETE CLASS D 24 N/mm^2
6. PIER CONCRETE CLASS D 24 N/mm^2
7. SURFACE FINISH
   - PIER F4
   - PILE CAP F1
8. FOR BEARING DETAILS REFER TO DWGS. [B-AC-1], [B-AC-2], AND [B-AC-3]
9. CONTRACTOR TO CHECK ACCURACY OF ALL DIMENSIONS AND SUBMIT SHOP DRAWINGS FOR APPROVAL BEFORE CONSTRUCTION

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JICA JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	S. Watanabe		6.02.00
DESIGN CHECK	D. Wesley		8.01.00
SUBMITTED	A. Hirotani		21/11/00
APPROVED	P. Virophanh		22/11/00
	S. Temiyabutra		22/12/00

DWG. TITLE:
APPROACH VIADUCT SUBSTRUCTURE
PILE CAP AND PIER GENERAL ARRANGEMENT OF P5 AND P24

Plot date: Sat, 4 Feb 2006 - 12:18:25
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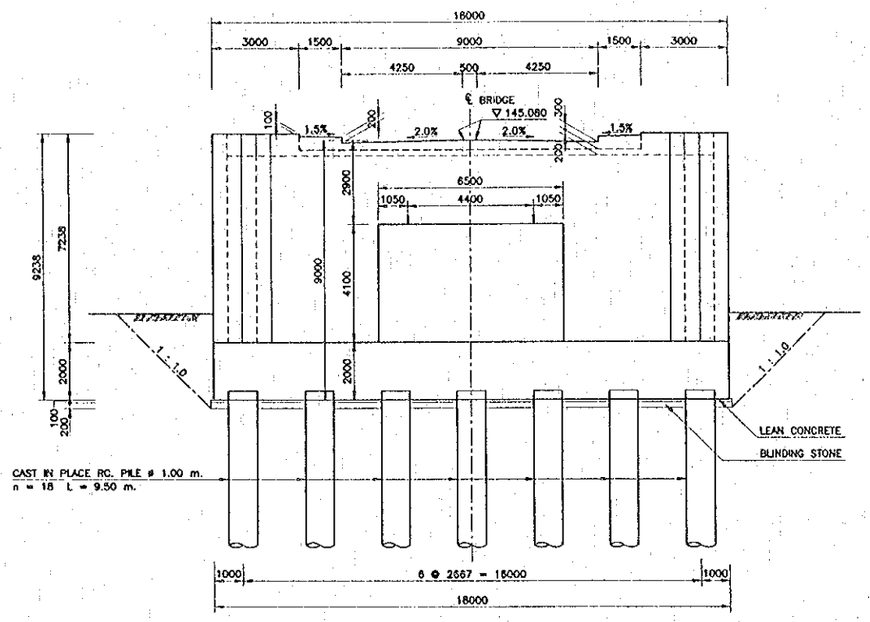
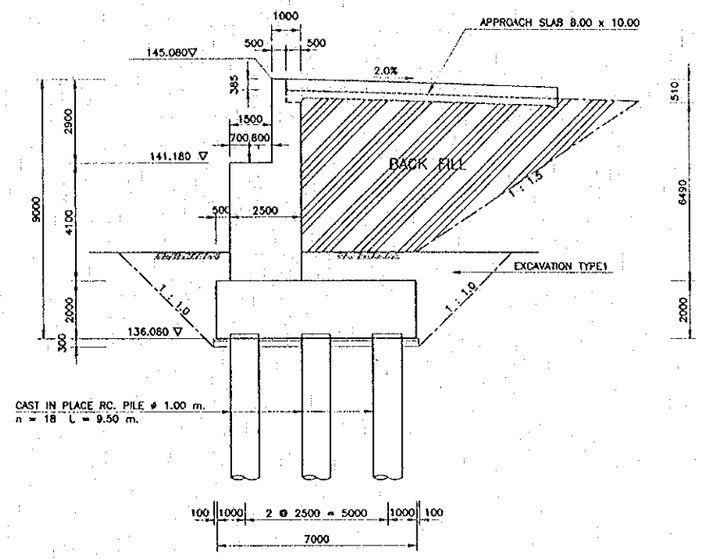
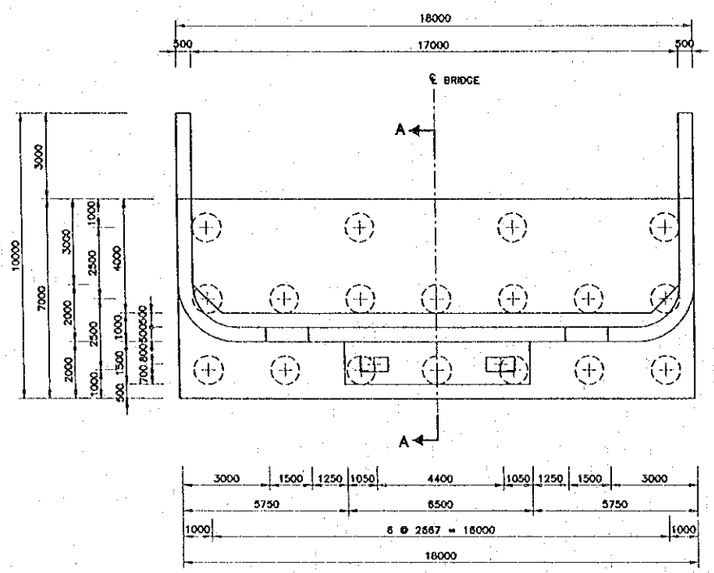
DATE OF ISSUE: 05/03/2000	
DWG. NO. B-AS-4	SHEET NO. 202
DWG. STATUS	



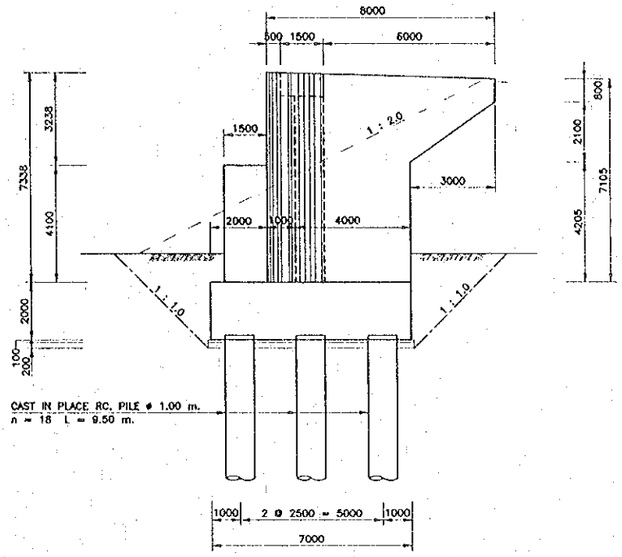
ELEVATION
SCALE 1:100



SECTION A-A
SCALE 1:100



P L A N
SCALE 1:100



SIDE ELEVATION
SCALE 1:100

NOTES :

1. FOR GENERAL NOTES REFER TO DWGS. [B-G-1] AND [B-G-2]
2. FOR DETAILS OF ABUTMENT REINFORCEMENT REFER TO DWG. [B-AS-9]
3. FOR DETAILS OF PILES REFER DWG. [B-AS-11]
4. ABUTMENT CONCRETE CLASS D 24 N/mm^2.
5. SURFACE FINISH
   - ABUTMENT F4
   - PARAPET F3
   - PILE CAP F1
6. FOR BEARING DETAILS REFER TO DWGS. [B-AC-1], [B-AC-2], AND [B-AC-3]
7. FOR ACCESSORY DETAILS REFER DWGS. [B-AC-14] AND [B-AC-22]
8. CONTRACTOR TO VERIFY ACCURACY OF ALL DIMENSIONS AND SUBMIT SHOP DRAWINGS FOR APPROVAL BEFORE CONSTRUCTION

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JICA JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	S. Watanabe		16-02-00
DESIGN CHECK	D. Wesley		18-02-00
SUBMITTED	A. Hirotani		21/2/00
APPROVED	P. Viraphonh		22/2/00
	S. Temjobutra		22/02/00

DWG. TITLE:
APPROACH VIADUCT SUBSTRUCTURE
ABUTMENT GENERAL ARRANGEMENT (LAO P.D.R. SIDE)

Plot date : Sat, 5 Feb 2000 - 13:44:50
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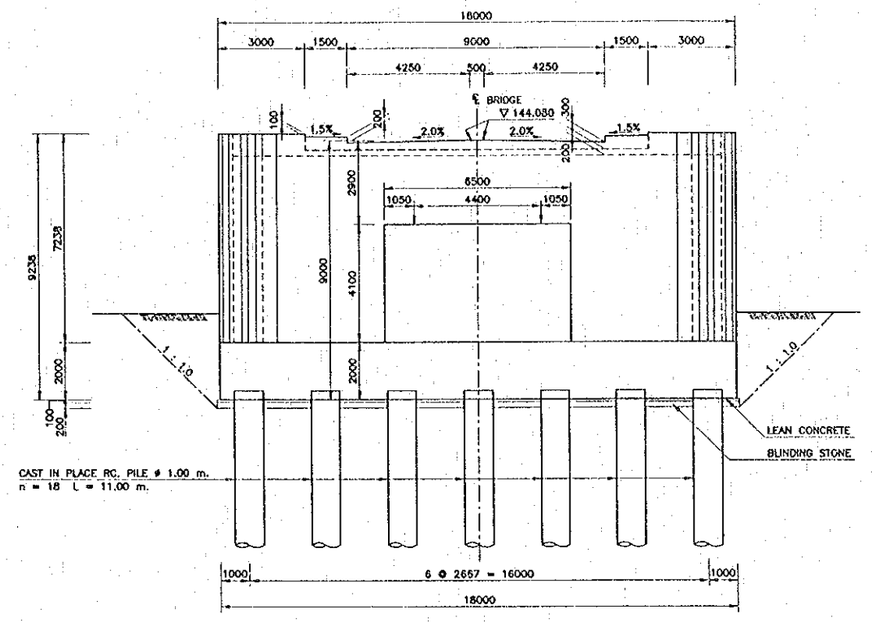
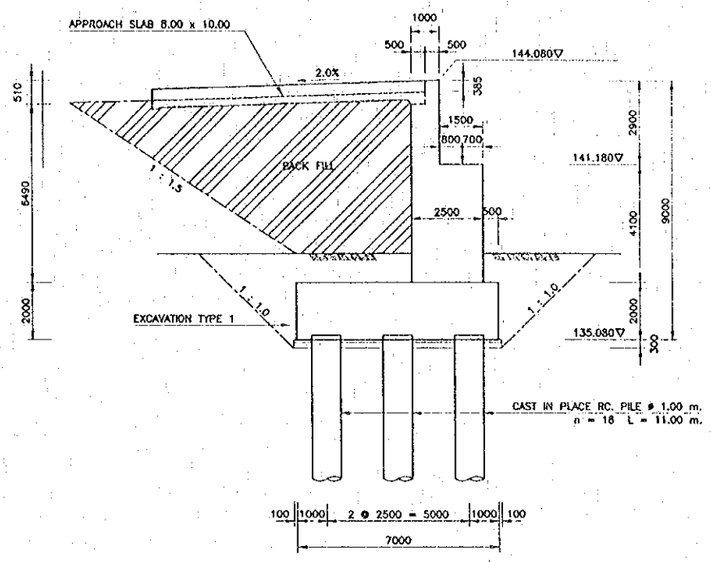
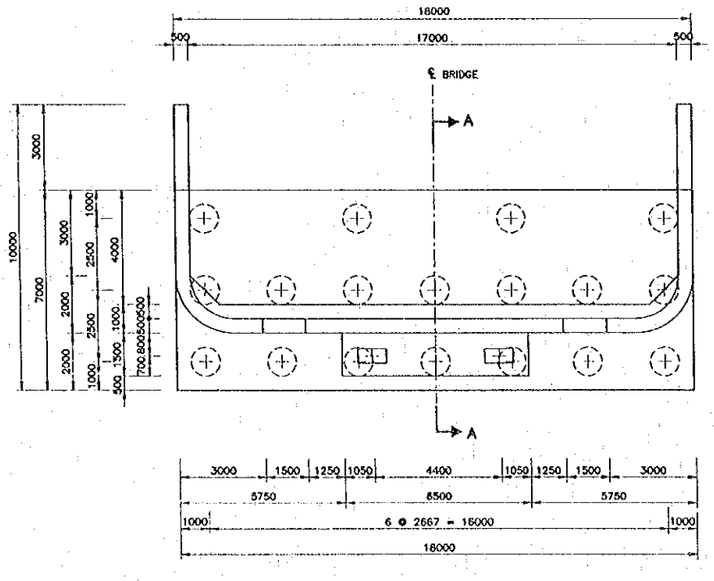
DATE OF ISSUE: 05/03/2000	
DWG. NO. B-AS-5	SHEET NO. 203
DWG. STATUS	



ELEVATION
SCALE 1:100



SECTION A-A
SCALE 1:100



PLAN
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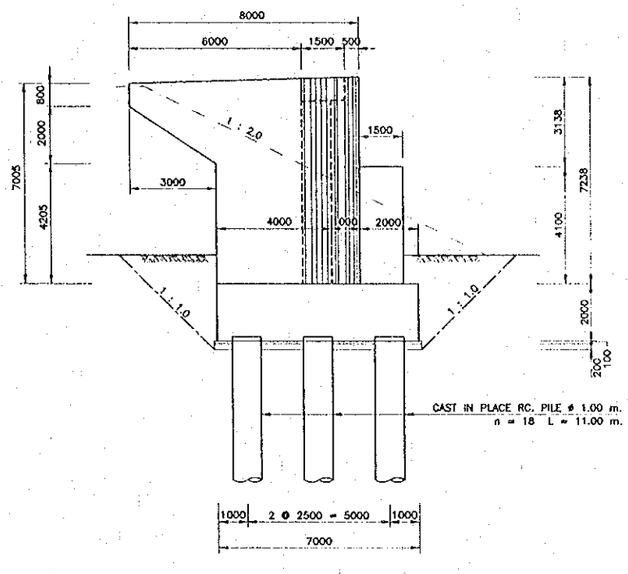

SIDE ELEVATION
SCALE 1:100

NOTES :

1. FOR GENERAL NOTES REFER TO DWGS. [B-G-1] AND [B-G-2]
2. FOR DETAILS OF ABUTMENT REINFORCEMENT REFER TO DWG. [B-AS-10]
3. FOR DETAILS OF PILES REFER DWG. [B-AS-11]
4. ABUTMENT CONCRETE CLASS D 24 N/mm^2
5. SURFACE FINISH
   - ABUTMENT F4
   - PARAPET F3
   - PILE CAP F1
6. FOR BEARING DETAILS REFER TO DWGS. [B-AC-1], [B-AC-2], AND [B-AC-3]
7. FOR ACCESSORY DETAILS REFER DWGS. [B-AC-14] AND [B-AC-22]
8. CONTRACTOR TO VERIFY ACCURACY OF ALL DIMENSIONS AND SUBMIT SHOP DRAWINGS FOR APPROVAL BEFORE CONSTRUCTION

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JICA JAPAN INTERNATIONAL COOPERATION AGENCY

LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION

KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	S. Watanabe		16-02-00
DESIGN CHECK	D. Wesley		18-02-00
SUBMITTED	A. Hirotani		21/2/00
APPROVED	P. Virophanth		22/02/00
	S. Temiyabutra		22/02/00

DWG. TITLE:

APPROACH VIADUCT SUBSTRUCTURE
ABUTMENT GENERAL ARRANGEMENT (THAILAND SIDE)

Plot date : Tue, 6 Feb 2000 - 13:59:10
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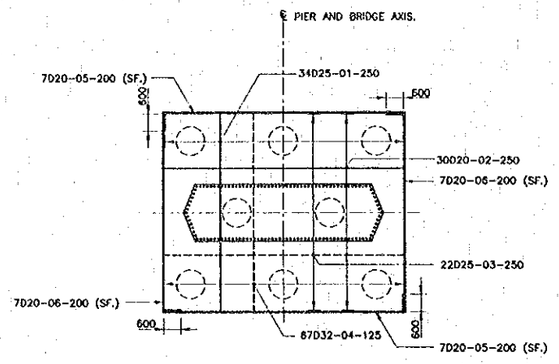
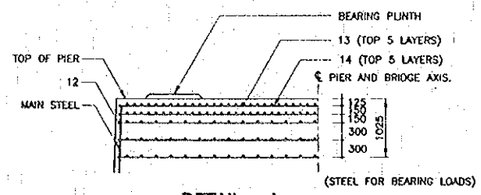
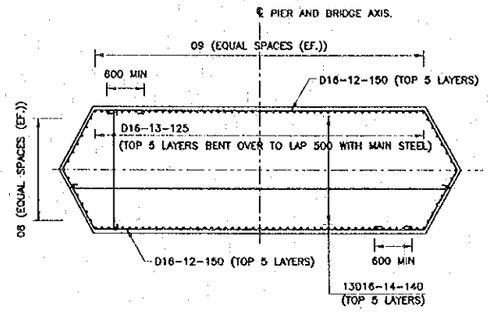
DATE OF ISSUE: 05/03/2000	
DWG. NO. B-AS-6	SHEET NO. 204
DWG. STATUS	



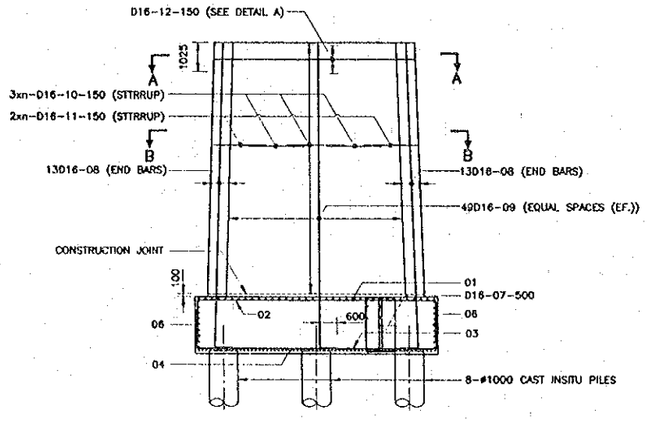
PILE CAP R.C. DETAILS PLAN
SCALE 1:100



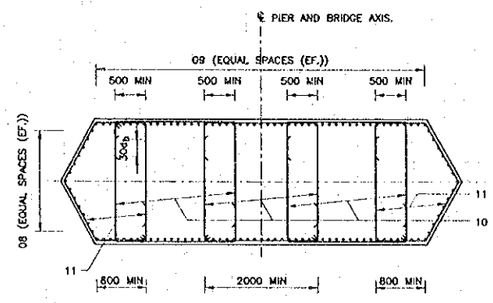
DETAIL A
SCALE 1:50



SECTION A-A
SCALE 1:50



PILE CAP AND PIER R.C. DETAILS ELEVATION
SCALE 1:100



SECTION B-B
SCALE 1:50

NOTES :

1. FOR GENERAL NOTES REFER TO DWGS. B-G-1 AND B-G-2
2. FOR DETAILS OF DIMENSIONS REFER TO DWG. B-AS-1
3. FOR DETAILS OF PILES REFER DWG. B-AS-11
4. ALL REINFORCING SPLICES TO BE IN ACCORDANCE WITH THE TABLE IN DWG. B-G-1
5. ALL STEEL GRADE 390 TO TIS 24-2527
6. FOR BEARING DETAILS REFER TO DWGS. B-AC-1, B-AC-2 AND B-AC-3
7. CONTRACTOR TO SUBMIT SHOP DRAWING FOR THE ENGINEERS APPROVAL BEFORE CONSTRUCTION COMMENCES
8. SURFACE FINISH
   - PIER F4
   - PILE CAP F1

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	S. Watanabe		16-02-00
DESIGN CHECK	D. Wesley		16.02.00
SUBMITTED	A. Hirotani		16/2/00
APPROVED	P. Viraphanth		17/02/00
	S. Temiyabutra		21/02/00

DWG. TITLE:

APPROACH VIADUCT SUBSTRUCTURE

PILE CAP AND PIER R.C. DETAILS OF P1, P2, P4, P25 AND P27

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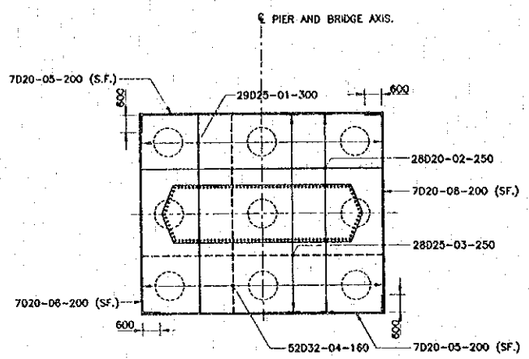
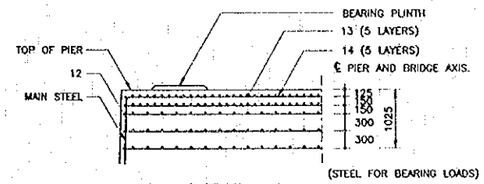
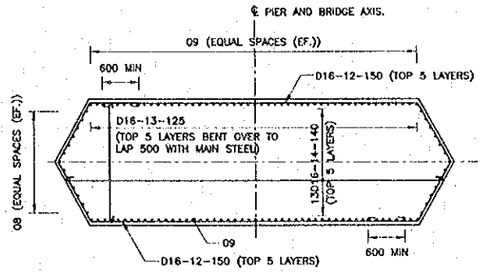
DATE OF ISSUE: 05/03/2000	
DWG. NO. B-AS-7	SHEET NO. 205
DWG. STATUS	



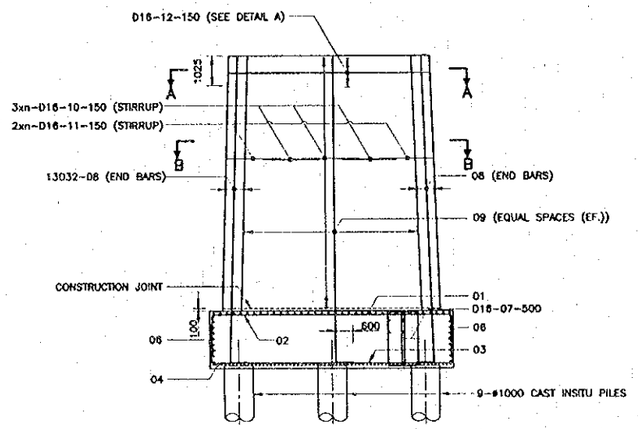
PILE CAP R.C. DETAILS PLAN
SCALE 1:100



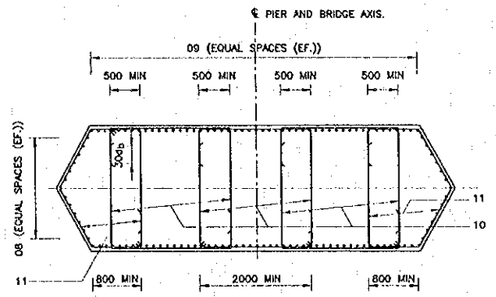
DETAIL A
SCALE 1:50



SECTION A-A
SCALE 1:50



PILE CAP AND PIER R.C. DETAILS ELEVATION
SCALE 1:100



SECTION B-B
SCALE 1:50

NOTES :

1. FOR GENERAL NOTES REFER DWGS. B-G-1 AND B-G-2
2. THIS DRAWING TO BE READ IN CONJUNCTION WITH DWG. B-AS-6 ALL NOTES ALSO APPLY TO THIS DRAWING

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	S. Watanabe		16-07-00
DESIGN CHECK	D. Wesley		1-03-00
SUBMITTED	A. Hirotani		21/7/00
APPROVED	P. Viraphanth		22/07/00
	S. Temiyabutra		22/07/00

DWG. TITLE:
APPROACH VIADUCT SUBSTRUCTURE
PILE CAP AND PIER R.C. DETAILS OF P3 AND P26

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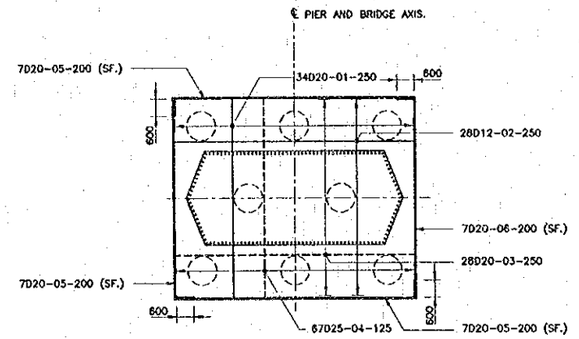
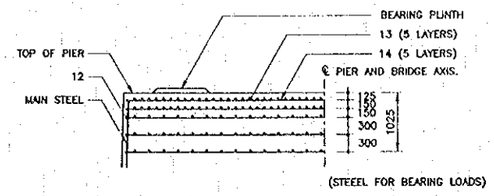
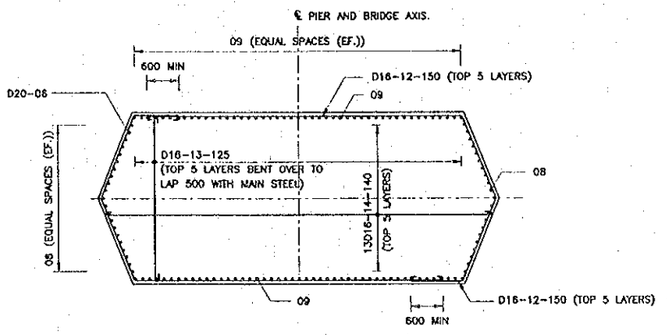
DATE OF ISSUE: 05/03/2000	
DWG. NO. B-AS-8	SHEET NO. 206
DWG. STATUS	



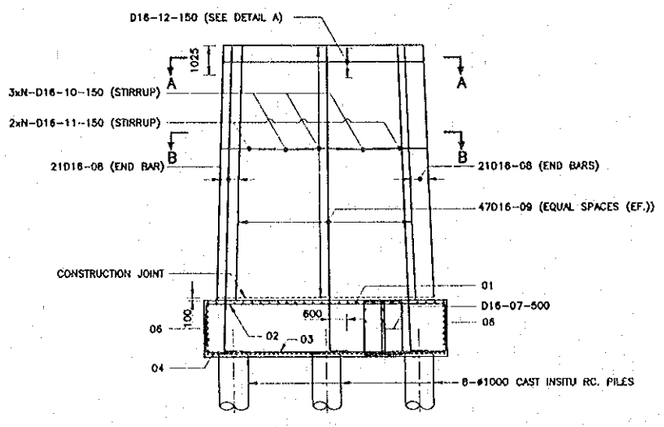
PILE CAP R.C. DETAILS PLAN
SCALE 1:100



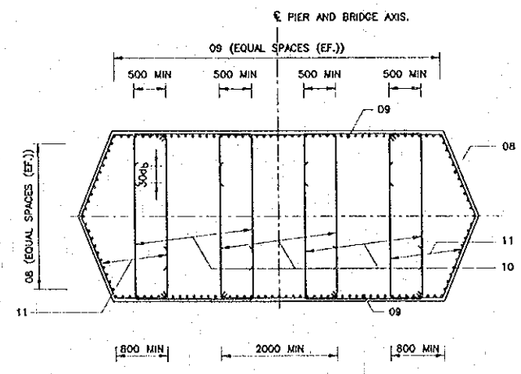
DETAIL A
SCALE 1:50



SECTION A-A
SCALE 1:50



PILE CAP AND PIER R.C. DETAILS ELEVATION
SCALE 1:100



SECTION B-B
SCALE 1:50

NOTES :

1. FOR GENERAL NOTES REFER TO DWGS. B-G-1 AND B-G-2
2. NOTES ON DWG. B-AS-6 ALSO APPLY TO THIS DRAWING

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	S. Watanabe		16-02-00
DESIGN CHECK	D. Wesley		18-02-00
SUBMITTED	A. Hirotani		21/2/00
APPROVED	P. Virophanth		22/2/00
	S. Temiyabutra		24/2/00

DWG. TITLE:
APPROACH VIADUCT SUBSTRUCTURE
PILE CAP AND PIER R.C. DETAILS
OF P5 AND P24

Plot date: Sat, 5 Feb 2000 - 14:07:05
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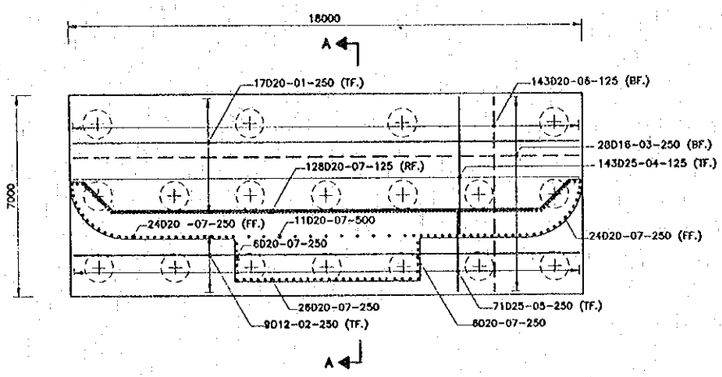
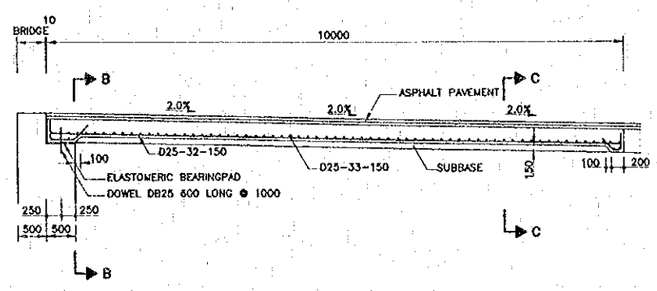
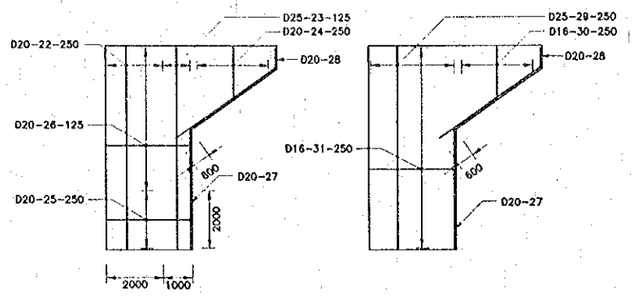
DATE OF ISSUE: 05/03/2000	
DWG. NO. B-AS-9	SHEET NO. 207
DWG. STATUS	



ABUTMENT FOOTING R.C. DETAIL
SCALE 1:100

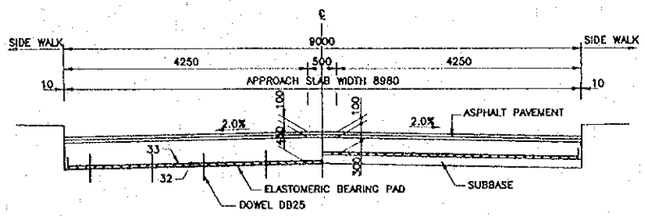


APPROACH SLAB REINFORCEMENT
SCALE 1:100



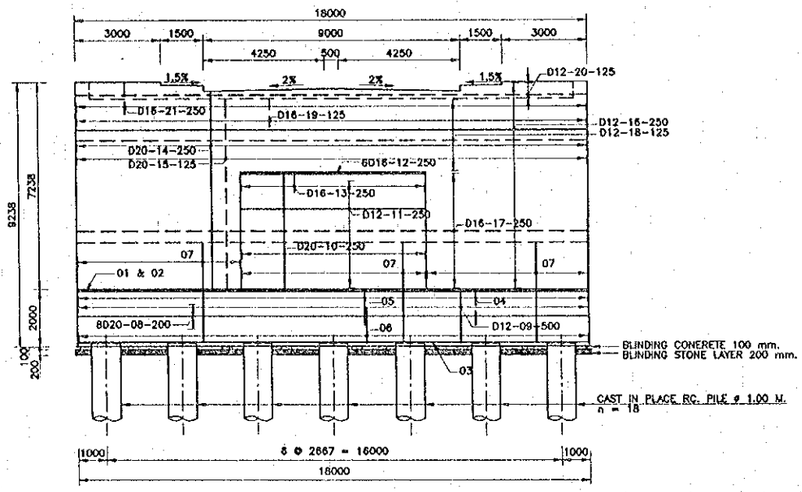
INNER FACE OUTER FACE

WING WALL R.C. DETAILS
SCALE 1:100

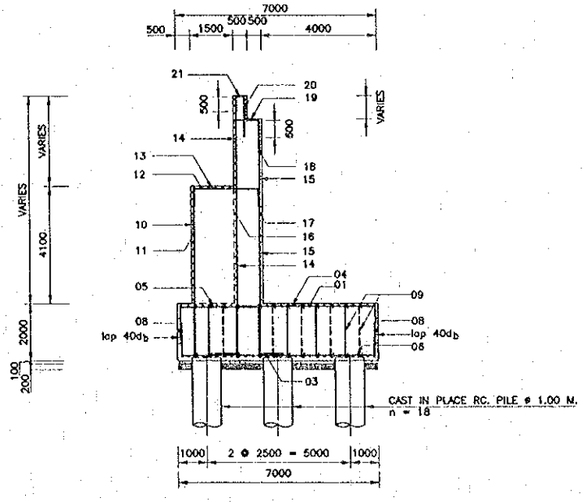


SECTION B–B
SCALE 1:100

SECTION C–C
SCALE 1:100



ELEVATION R.C. DETAILS
SCALE 1:100



SECTION A–A
SCALE 1:100

NOTES :

1. FOR GENERAL NOTES REFER DWGS. B-G-1 AND B-G-2
2. FOR ALL OTHER NOTES REFER TO DWG. B-AS-4
3. FOR DETAILS OF PILES REFER DWG. B-AS-11
4. SURFACE FINISH
   - ABUTMENT F4
   - PARAPET F3
   - FOUNDATION F1
5. ALL REINFORCING STEEL GRADE 390 TO TIS 24-2527
6. FOR BEARING DETAILS REFER TO DWGS. B-AC-1 , B-AC-2 AND B-AC-3
7. FOR ACCESSORY DETAILS REFER DWGS. B-AC-14 AND B-AC-22
8. CONTRACTOR TO SUBMIT SHOP DRAWINGS FOR THE ENGINEERS APPROVAL BEFORE CONSTRUCTION COMMENCES

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

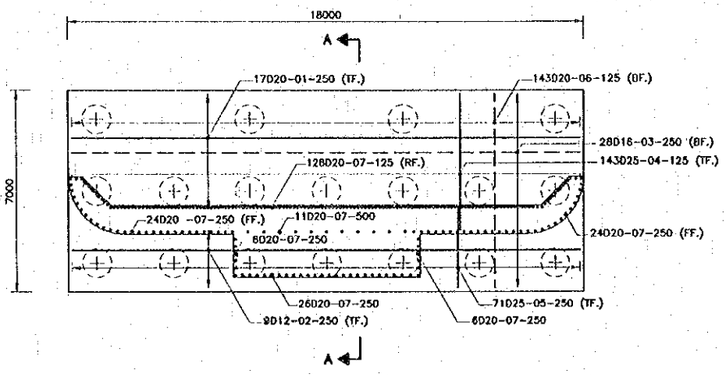
THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	S. Watanabe		4-02-00
DESIGN CHECK	D. Wesley		14-02-00
SUBMITTED	A. Hirotani		21/2/00
APPROVED	P. Viraphanth		22/02/00
	S. Yamiyabutra		22/02/00

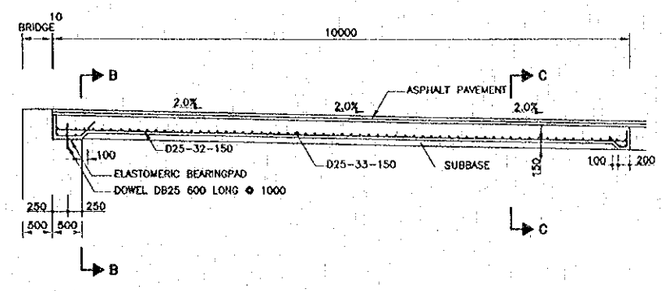
DWG. TITLE:
APPROACH VIADUCT SUBSTRUCTURE
ABUTMENT R.C. DETAILS (LAO P.D.R. SIDE)

Plot date: Sat, 5 Feb 2000 – 14:13:48
C:\CHANTANA\SWB\SUBSTRUCTURE\AS-9.dgn

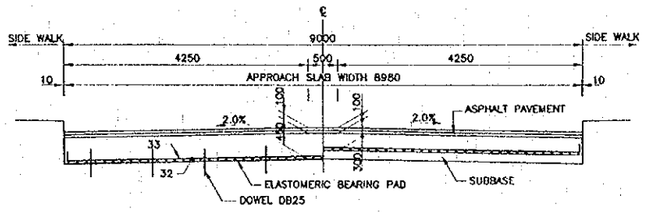
DATE OF ISSUE: 05/03/2000	
DWG. NO. B-AS-10	SHEET NO. 208
DWG. STATUS	



ABUTMENT FOOTING R.C. DETAIL
SCALE 1:100

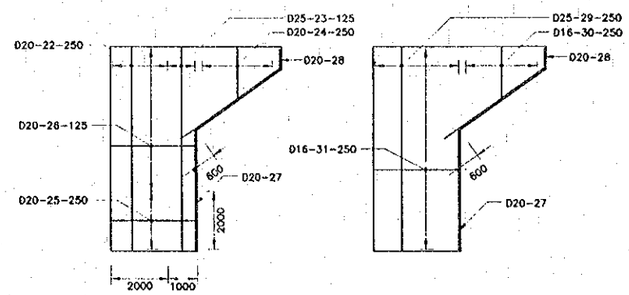


APPROACH SLAB REINFORCEMENT
SCALE 1:100



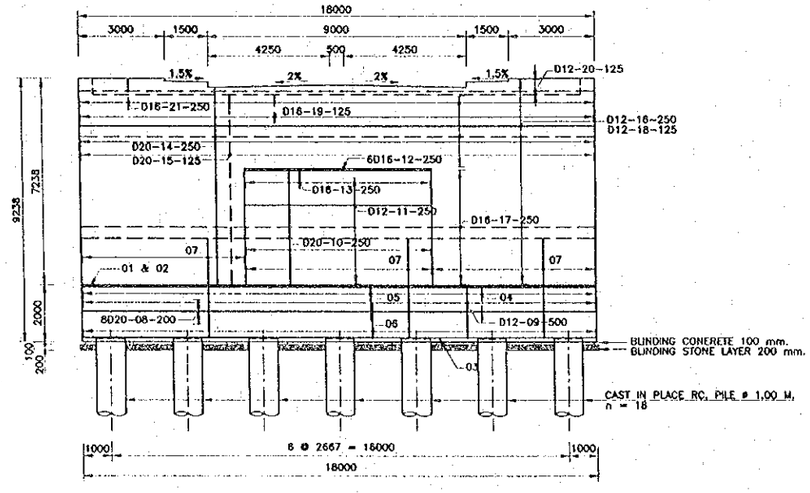
SECTION B-B
SCALE 1:100

SECTION C-C
SCALE 1:100

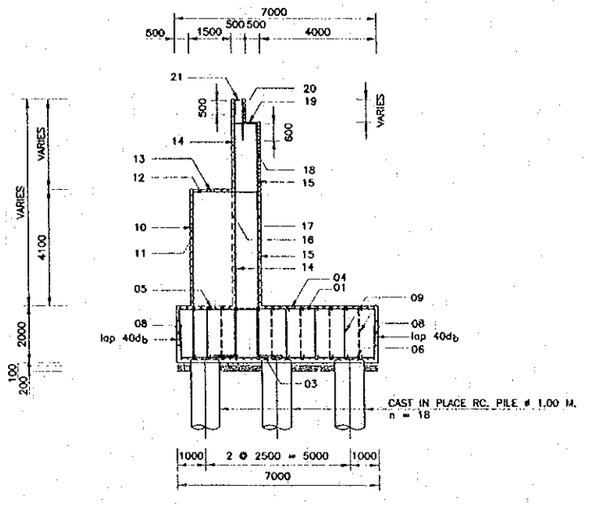


INNER FACE OUTER FACE

WING WALL R.C. DETAILS
SCALE 1:100



ELEVATION R.C. DETAILS
SCALE 1:100



SECTION A-A
SCALE 1:100

NOTES :

1. FOR GENERAL NOTES REFER DWGS. [B-G-1] AND [B-G-2]
2. FOR ALL OTHER NOTES REFER TO DWG. [B-AS-9]

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

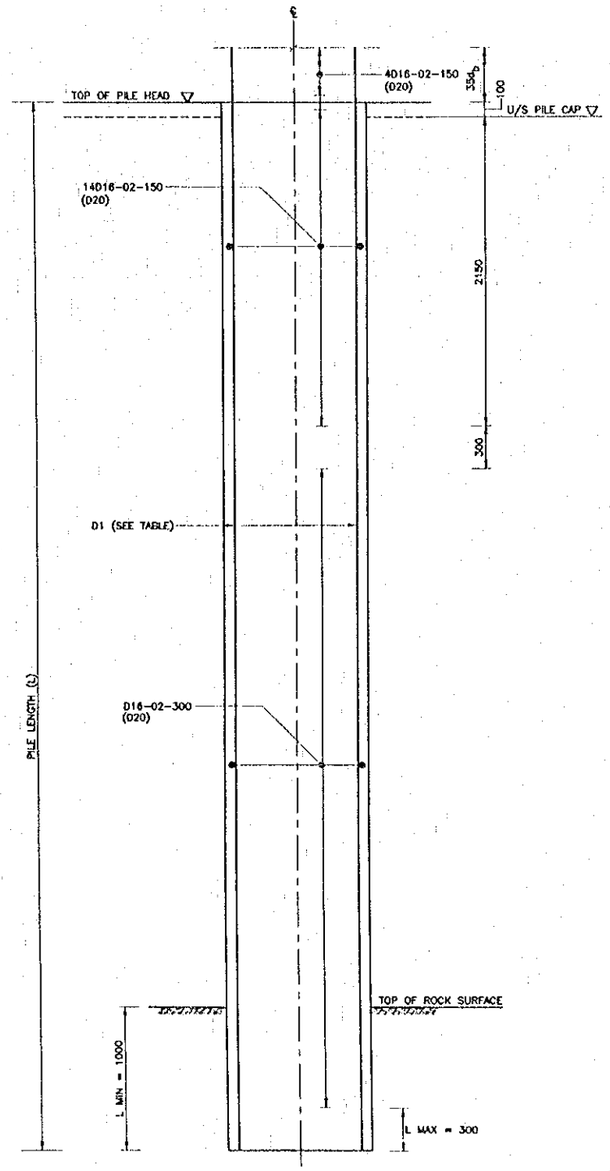
THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	S. Watanabe		4-02-00
DESIGN CHECK	D. Wesley		8-02-00
SUBMITTED	A. Hiratani		
APPROVED	P. Viraphanth		17/02/00
	S. Temiyabutra		22/02/00

DWG. TITLE:
APPROACH VIADUCT SUBSTRUCTURE
ABUTMENT R.C. DETAILS (THAILAND SIDE)

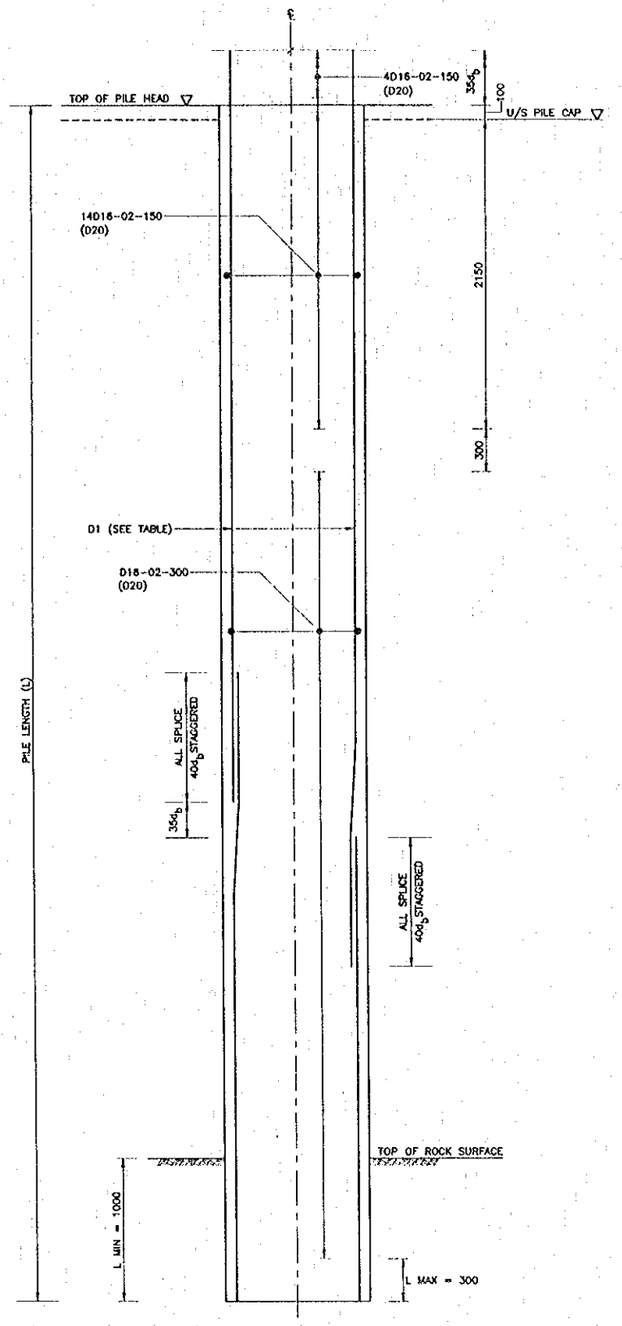
Plot date: Sat, 5 Feb 2000 - 14:10:54
C:\CHANTANA\SMIB\SUBSTRUCTURE\AS-10.dwg

DATE OF ISSUE: 05/03/2000	
DWG. NO. B-AS-11	SHEET NO. 209
DWG. STATUS	



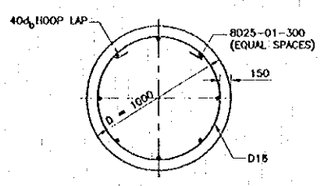
ELEVATION OF TYPICAL PILE
TYPE 1, 2, 3

SCALE 1:20

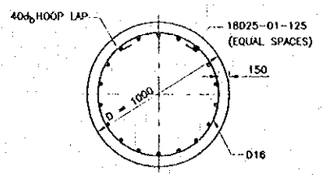


ELEVATION OF TYPICAL PILE
TYPE 4, 5, 6

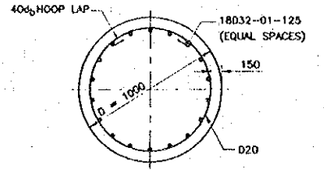
SCALE 1:20



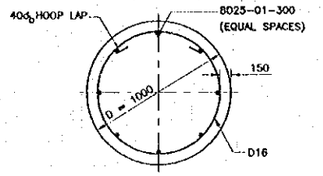
P24, P25 AND P27 PILES
SCALE 1:20
(TYPE 1)



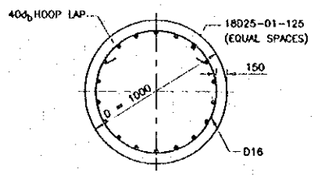
ABUTMENT (A2) PILE
SCALE 1:20
(TYPE 2)



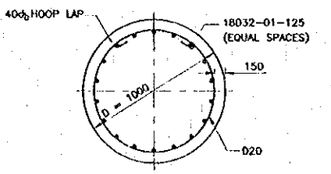
P26 PILE
SCALE 1:20
(TYPE 3)



P1, P2, P4, AND P5 PILES
SCALE 1:20
(TYPE 4)



ABUTMENT (A1) PILE
SCALE 1:20
(TYPE 5)



P3 PILE
SCALE 1:20
(TYPE 6)

PIER No.	PILE LENGTH	No. OF PILES	TYPE	REINFORCEMENT		REMARK
				D1 (DIA)	NUMBER	
A1	11000	18	5	D25	18	
P1	11000	8	4	D25	8	
P2	11500	8	4	D25	8	
P3	11500	9	6	D32	18	
P4	11500	8	4	D25	8	
P5	12500	8	4	D25	8	
P24	9500	8	1	D25	8	
P25	9000	8	1	D25	8	
P26	9500	9	3	D32	18	
P27	9500	8	1	D25	8	
A2	9500	18	2	D25	18	

NOTES :

1. FOR GENERAL NOTES REFER TO DWGS. B-G-1 AND B-G-2
2. THE DESIGN SOCKET LENGTH IS 1.00 METER MINIMUM INTO ROCK OR STRATUM WITH SPT (N) > 50
3. PILE CONCRETE CLASS B 30 N/mm^2
4. CONCRETE COVER TO MAIN STEEL MINIMUM 150mm.
5. CAST INSITU PILES ARE SHOWN ON BASIS OF SOIL CONDITIONS. THE CONTRACTOR MAY SUBMIT ALTERNATIVE DESIGN BASED ON PRECAST PRESTRESSED PILES TO THE ENGINEER INCLUDING FULL CALCULATIONS FOR THIS APPROVAL
6. PRECAST PRESTRESSED PILES SHALL CONFORM FULLY TO THE SPECIFICATION
7. REINFORCEMENT SHALL BE GRAD 390 TO TIS 24-2527
8. DETAILS OF TEMPORARY CASING AND/OR SUPPORT FLUIDS TO BE SUBMITTED TO THE ENGINEER FOR APPROVAL

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KORI CO., LTD.

JICA JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

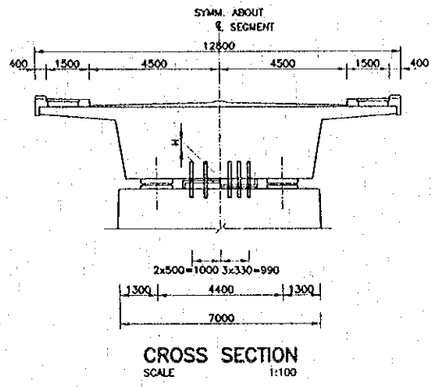
THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	S. Watanabe		16-02-00
DESIGN CHECK	D. Wesley		18-01-0
SUBMITTED	A. Hirotani		21/02/00
APPROVED	P. Viraphanth		22/02/00
	S. Temiyabutra		22/02/00

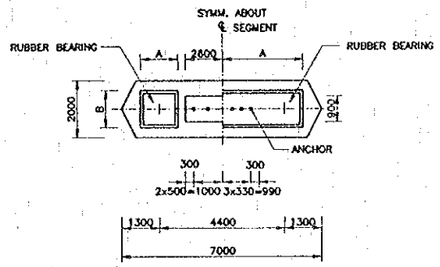
DWG. TITLE:

APPROACH VIADUCT SUBSTRUCTURE
PILE DETAILS

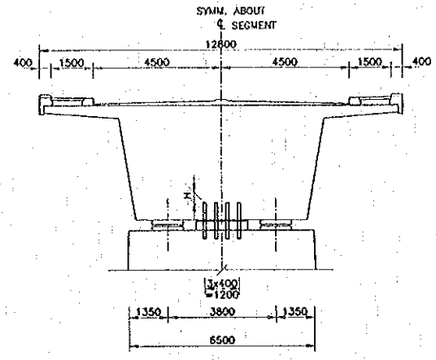
Plot date: Sat, 5 Feb 2000 - 14:19:48
C:\CHANTANA\SUB\SUBSTRUCTURE\AS-11.dwg



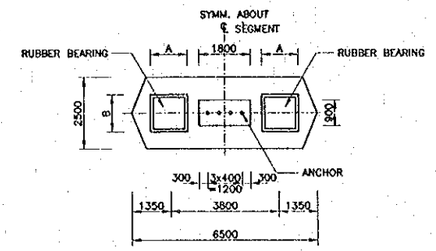
CROSS SECTION
SCALE 1:100



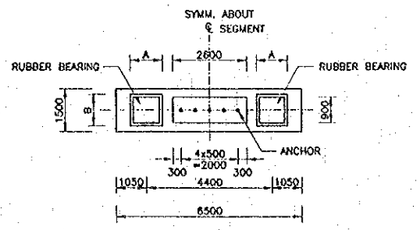
P1,P2,P4,P25,P27 P3,P26
MIDDLE PIER
SCALE 1:50



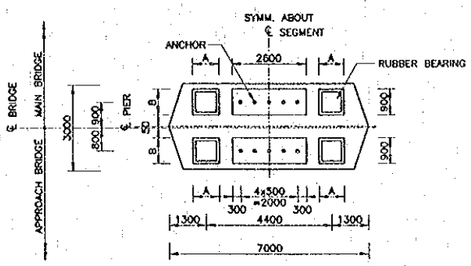
CROSS SECTION
SCALE 1:100



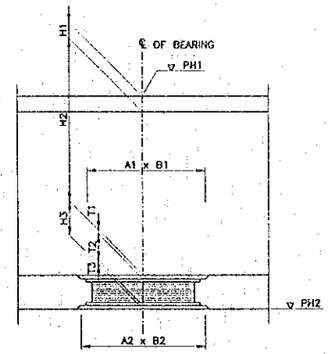
MIDDLE PIER (P6~P9, P13~P16, P20~P23)
SCALE 1:50



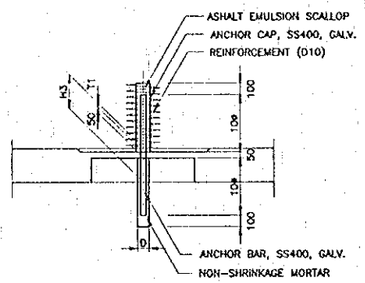
ABUTMENT (A1, A2)
SCALE 1:100



END PIER (P5 & P24)
SCALE 1:100

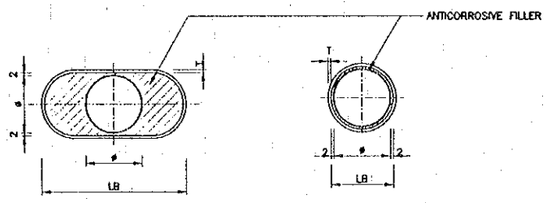


BEARING



STOPPER BAR

SIDE ELEVATION
SCALE 1:25



MOVABLE FIXED

DETAIL OF STOPPER
NOT TO SCALE

		A1	P1	P2,P27	P3	P4,P25	P5,P24 APPROACH	P5,P24 MAIN BRIDGE	P6,P23	P7,P22	P8,P21	P9,P20	P13,P16	P14	P15	P26	A2	D.H.
PH 1		144.098	145.080	146.080	147.080	146.050	148.955	148.938	149.996	151.240	152.342	153.302	155.920	156.062	156.062	147.080	145.096	156.078
H 1		135	←	←	←	←	135	135	←	←	←	←	←	135	135	135	135	135
H 2		2500	←	←	←	←	2500	2500	4000	←	←	←	←	4000	4000	2500	2500	2120
H3	T1	35	←	←	←	←	35	35	←	←	←	←	←	35	35	35	35	35
	T2	205	231	231	151	231	205	205	265	265	265	265	265	283	265	151	205	210
	T3	41	30	30	30	30	30	58	31	35	37	37	35	39	57	30	41	35
	TOTAL	281	298	296	216	286	270	298	331	335	337	337	335	357	357	216	281	280
H=(H1+H2+H3)		2916	2931	2931	2851	2931	2905	2933	4466	4470	4472	4472	4470	4492	4492	2851	2916	2535
PH2		141.180	142.149	143.149	144.229	145.119	146.050	146.050	145.530	146.770	147.870	148.830	151.450	151.590	151.570	144.229	142.180	153.543
SUPERSTRUCTURE	A1	950	1400	1400	1350	1400	950	950	1850	1850	1850	1850	1850	1950	1850	1350	950	900
	B1	1000	1250	1250	1050	1250	1000	1250	1650	1600	1550	1500	1500	1600	1550	1050	1000	1200
SUBSTRUCTURE	A2	900	1400	1400	2875	1400	900	900	1850	1850	1850	1850	1850	1950	1850	2875	900	1200
	B2	900	1150	1150	1050	1150	900	900	1350	1350	1350	1350	1350	1400	1350	1050	900	800
BEARING	BEARING TYPE	MOVABLE	MOVABLE	MOVABLE	FIXED	MOVABLE	MOVABLE	MOVABLE	MOVABLE	MOVABLE	MOVABLE	MOVABLE	MOVABLE	MOVABLE	MOVABLE	FIXED	MOVABLE	MOVABLE
	TYPE	2	3	3	1	3	2	4	5	6	6	6	5	7	6	1	2	6
	NUMBER	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
STOPPER (ANCHOR)	ϕ	32	50	50	90	50	32	32	72	72	72	72	72	80	80	80	32	–
	LB	145	125	95	94	95	115	480	460	380	315	245	255	330	330	84	115	–
	T	2.8	2.8	2.3	3.2	2.3	3.2	6.4	6.4	6.0	6.0	4.5	4.5	6.0	6.0	2.3	32	–
	H1	196	211	211	(101)	211	185	213	246	250	252	252	250	272	292	(101)	196	–
	D	ϕ100	ϕ100	ϕ100	ϕ150	ϕ100	ϕ100	ϕ100	ϕ150	ϕ150	ϕ150	ϕ150	ϕ150	ϕ150	ϕ100	ϕ150	ϕ100	–

DATE OF ISSUE: 05/03/2000
DWG. NO. B-AC-1
SHEET NO. 210
DWG. STATUS

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JICA JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

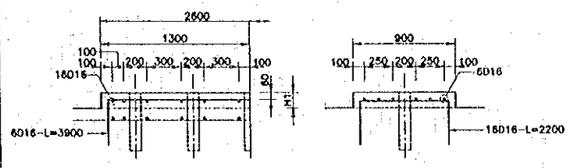
THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	T. Ohno		
DESIGN CHECK	H. Watanabe		19/01/00
SUBMITTED	A. Hiratani		21/02/00
APPROVED	P. Wrophanth		21/02/00
	S. Tamiyabutra		22/02/00

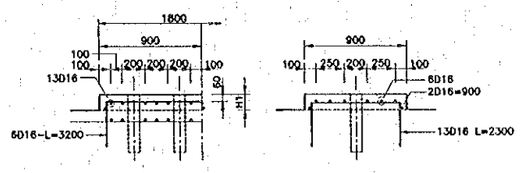
DWG. TITLE:
ACCESSORY
BEARING INSTALLATION DETAILS AND SCHEDULE
SHEET 1 OF 2

Plot date: Sat, 8 Jan 2000 - 15:41:05
C:\CHANTANA\SMB\ACCESSORY\AC-1.dwg

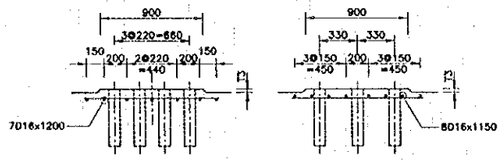
DATE OF ISSUE: 05/03/2000	
DWG. NO. B-AC-2	SHEET NO. 211
DWG. STATUS	



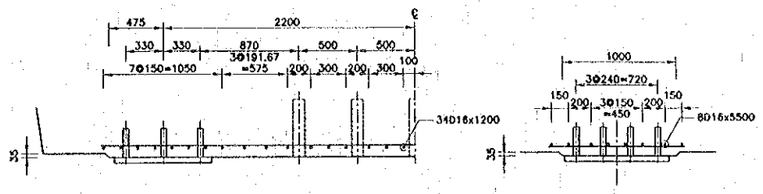
STOPPER FOR APPROACH VIADUCT
(A1,P1,P2,P4,P25,P27,A2)
AND MAIN BRIDGE (P5,P24)
SCALE 1:25



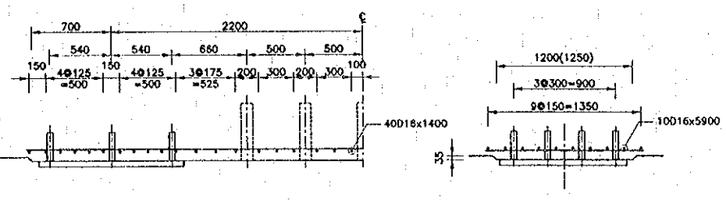
STOPPER FOR MAIN BRIDGE
(P6~P9,P13~P16 AND P20~P23)
SCALE 1:25



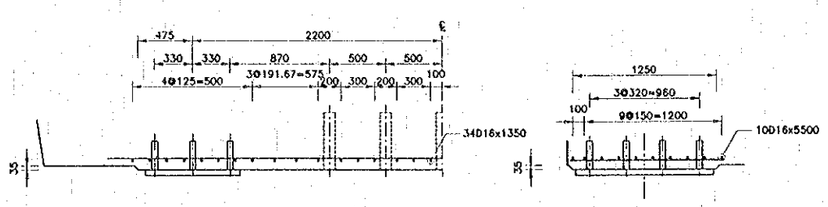
BEARING FOR APPROACH VIADUCT A1, P5, P24 AND A2
MAIN BRIDGE P5 AND P24
SCALE 1:25



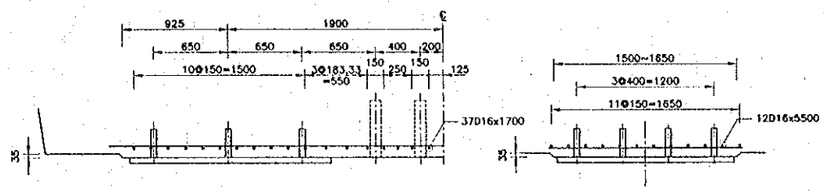
BEARING AND STOPPER FOR APPROACH VIADUCT
A1, P5, P24 AND A2
SCALE 1:25



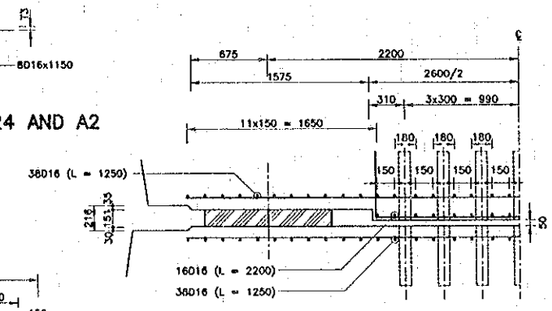
BEARING AND STOPPER FOR APPROACH VIADUCT
P1, P2, P4, P25 AND P27
SCALE 1:25

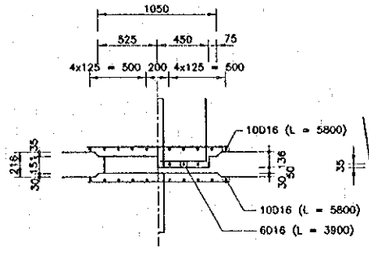


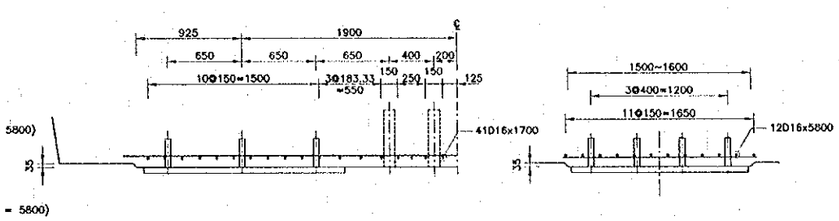
BEARING AND STOPPER FOR MAIN BRIDGE P5 AND P24
SCALE 1:25



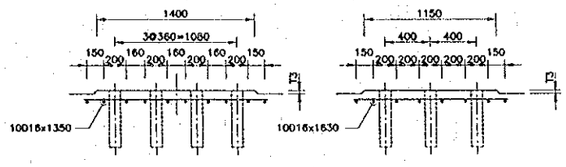
BEARING AND STOPPER FOR MAIN BRIDGE P6, P13, P16 AND P23
SCALE 1:25



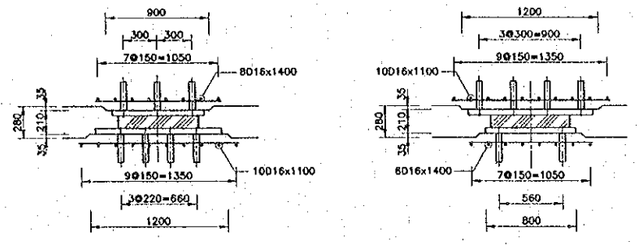




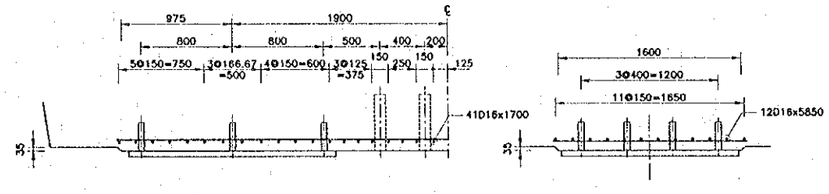
BEARING AND STOPPER FOR MAIN BRIDGE P7~P9, P15 AND P20~P22
SCALE 1:25



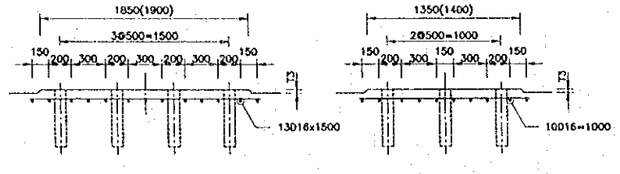
BEARING FOR APPROACH VIADUCT P1,P2,P4,P25 AND P27
SCALE 1:25



BEARING FOR MAIN BRIDGE DAPPED HINGE
SCALE 1:25



BEARING AND STOPPER FOR MAIN BRIDGE P14
SCALE 1:25



BEARING FOR MAIN BRIDGE P6~P9, P13~P16 AND P20~P23
SCALE 1:25

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULYANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JICA JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG
INTERNATIONAL BRIDGE
CONSTRUCTION PROJECT

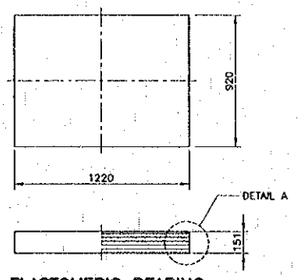
QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	T. Ohno		31/01/00
DESIGN CHECK	H. Watanabe		31/01/00
SUBMITTED	A. Hirotani		31/01/00
APPROVED	P. Viraphanth		31/02/00
	S. Temiyabutra		12/04/00

DWG. TITLE:
ACCESSORY
BEARING INSTALLATION DETAILS
AND SCHEDULE
SHEET 2 OF 2

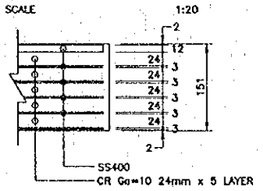
Plot date: Mon, 31 Jan 2000 - 11:23:04
E:\CHANTANA\SMB\ACCESSORY\AC-2.dwg

NOTES :

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE SPECIFICATION AND THE GENERAL NOTES.
2. THE CONTRACTOR SHALL PREPARE AND SUBMIT SHOP DRAWINGS AND DESIGN CALCULATIONS FOR BEARINGS AND RESTRAINTS FOR THE APPROVAL OF THE ENGINEER IN ACCORDANCE WITH SECTION 6.2 OF THE JRA SPECIFICATION. ALL DETAILS SHOWN ARE INDICATIVE ONLY.
3. SHEAR KEY, UPPER AND UNDER PLATE TO BE BASED ON JIS G 3106 "SM490" UNLESS OTHERWISE NOTED.
4. ANCHOR BAR TO BE BASED ON JIS G 4051 "S35CN" UNLESS OTHERWISE NOTED.
5. ALL STEELWORK, INCLUDING NUTS AND BOLTS SHALL BE HOT DIP GALVANIZED ZINC COATING SHALL NOT BE LESS THAN 550 GRAMS PER SQUARE METER FOLLOWING JIS H8641 HDZ55 (550g/m^2).
6. C1 = 1 mm. TAPER.

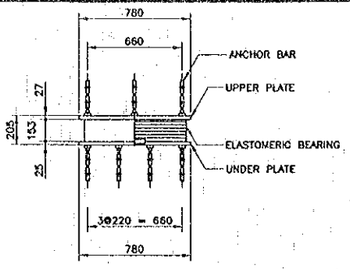


ELASTOMERIC BEARING
SCALE 1:20

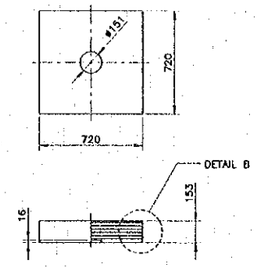


DETAIL A
SCALE 1:5

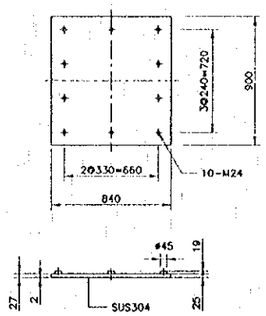
TYPE 1 FOR P3 AND P26 APPROACH VIADUCT



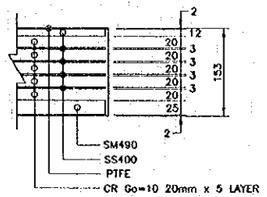
ASSEMBLY DRAWING
SCALE 1:20



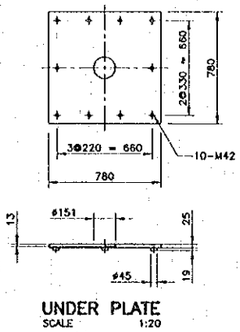
ELASTOMERIC BEARING
SCALE 1:20



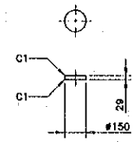
UPPER PLATE
SCALE 1:20



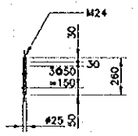
DETAIL B
SCALE 1:5



UNDER PLATE
SCALE 1:20

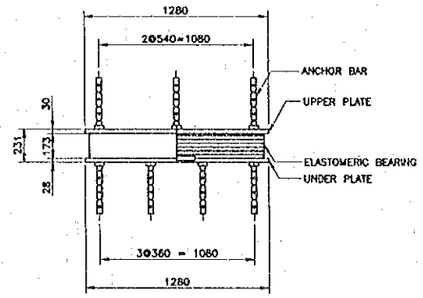


SHEAR KEY
SCALE 1:20

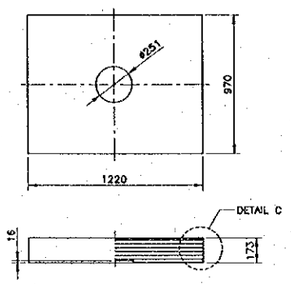


ANCHOR BAR
SCALE 1:20

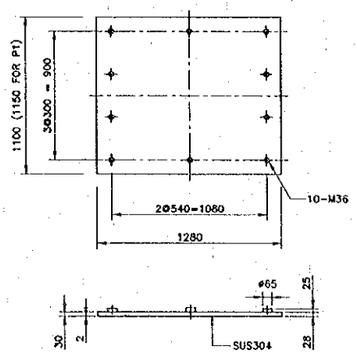
TYPE 2 FOR A1, P5, P24 AND A2 APPROACH VIADUCT



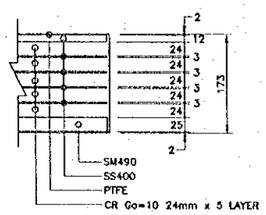
ASSEMBLY DRAWING
SCALE 1:20



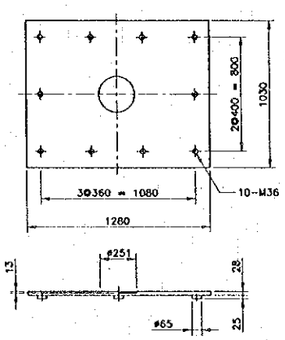
ELASTOMERIC BEARING
SCALE 1:20



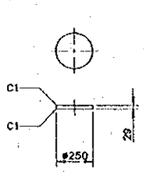
UPPER PLATE
SCALE 1:20



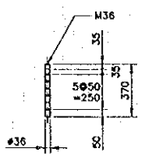
DETAIL C
SCALE 1:5



UNDER PLATE
SCALE 1:20

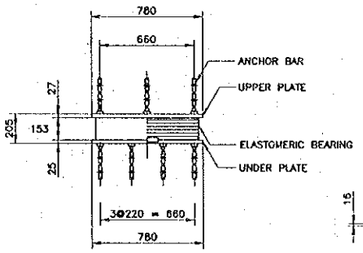


SHEAR KEY
SCALE 1:20

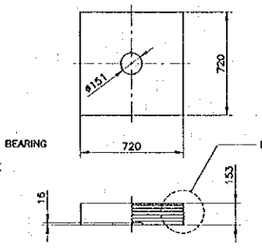


ANCHOR BAR
SCALE 1:20

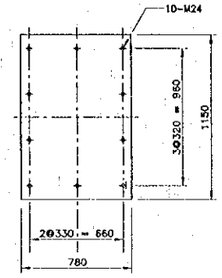
TYPE 3 FOR P1, P2, P4, P25 AND P27 APPROACH VIADUCT

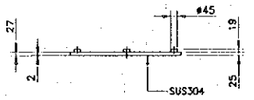


ASSEMBLY DRAWING
SCALE 1:20

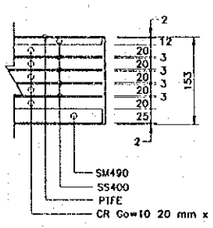


ELASTOMERIC BEARING
SCALE 1:20

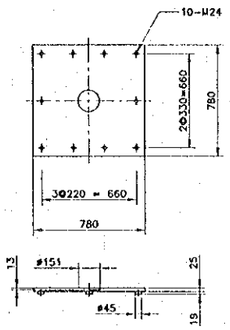




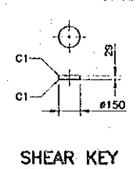
UPPER PLATE
SCALE 1:20



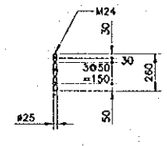
DETAIL D
SCALE 1:5



UNDER PLATE
SCALE 1:20



SHEAR KEY
SCALE 1:20



ANCHOR BAR
SCALE 1:20

TYPE 4 FOR P5 AND P24 MAIN BRIDGE

DATE OF ISSUE: 05/03/2000	
DWG. NO. B-AC-3	SHEET NO. 212
DWG. STATUS	

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

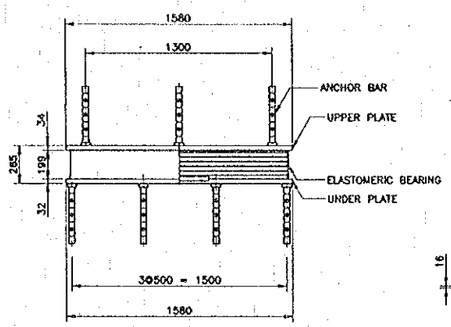
THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	T. Ohno	T.Ohno	14/3/00
DESIGN CHECK	H. Watanabe	H.Watanabe	15/3/00
SUBMITTED	A. Hirotani		
APPROVED	P. Viraphanth		22/4/00
	S. Temiyabutra	S.Temiyabutra	22/4/00

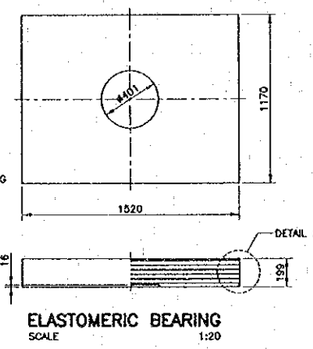
DWG. TITLE:
ACCESSORY
BEARING DETAILS
SHEET 1 OF 3

Plot date: Mon, 31 Jan 2000 - 11:53:43
C:\CHANTANA\SKB\ACCESSORY\AC-3.dwg

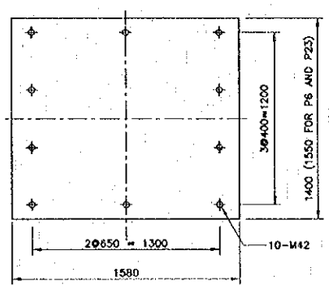
DATE OF ISSUE: 05/03/2000	
DWG. NO. B-AC-4	SHEET NO. 213
DWG. STATUS	

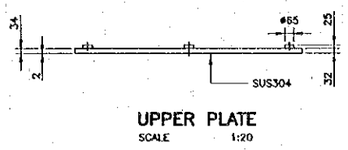


ASSEMBLY DRAWING
SCALE 1:20

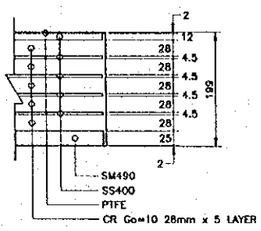


ELASTOMERIC BEARING
SCALE 1:20

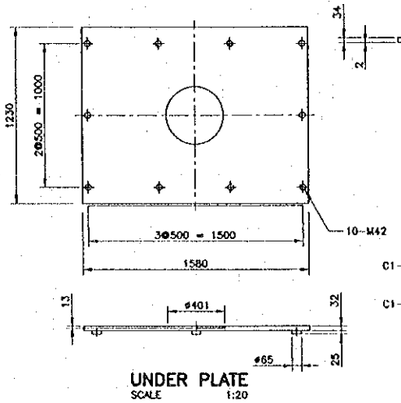




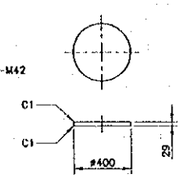
UPPER PLATE
SCALE 1:20



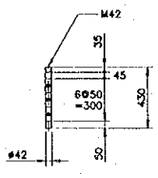
DETAIL A
SCALE 1:5



UNDER PLATE
SCALE 1:20

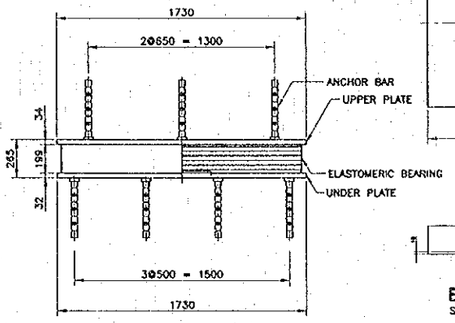


SHEAR KEY
SCALE 1:20

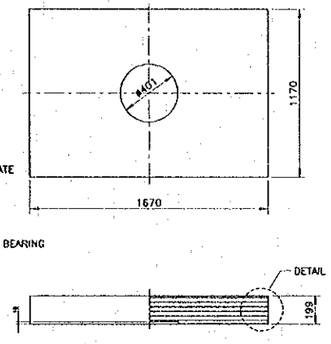


ANCHOR BAR
SCALE 1:20

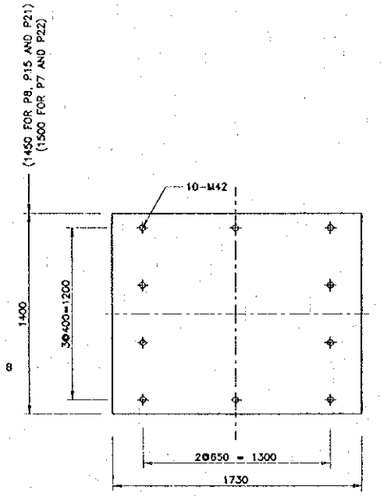
TYPE 5 FOR P6, P13, P16 AND P23 MAIN BRIDGE

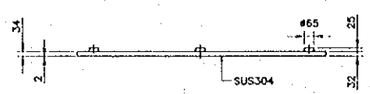


ASSEMBLY DRAWING
SCALE 1:20

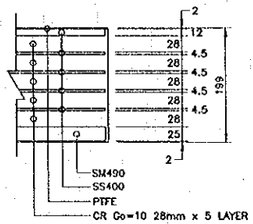


ELASTOMERIC BEARING
SCALE 1:20

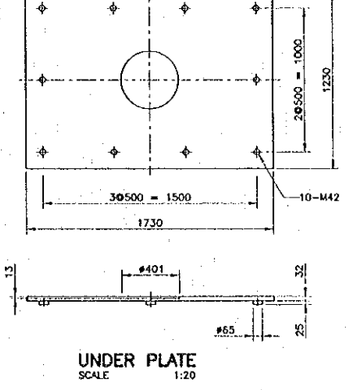




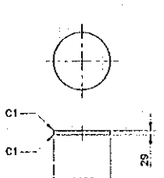
UPPER PLATE
SCALE 1:20



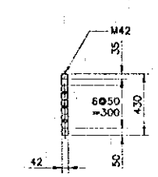
DETAIL B
SCALE 1:5



UNDER PLATE
SCALE 1:20



SHEAR KEY
SCALE 1:20



ANCHOR BAR
SCALE 1:20

TYPE 6 FOR P7~ P9, P15 AND P20~P22 MAIN BRIDGE

NOTES :

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE SPECIFICATION AND THE GENERAL NOTES.
2. THE CONTRACTOR SHALL PREPARE AND SUBMIT SHOP DRAWINGS AND DESIGN CALCULATIONS FOR BEARINGS AND RESTRAINTS FOR THE APPROVAL OF THE ENGINEER IN ACCORDANCE WITH SECTION 6.2 OF THE JRA SPECIFICATION. ALL DETAILS SHOWN ARE INDICATIVE ONLY.
3. SHEAR KEY, UPPER AND UNDER PLATE TO BE BASED ON JIS G 3106 "SM490" UNLESS OTHERWISE NOTED.
4. ANCHOR BAR TO BE BASED ON JIS G 4051 "S35CN" UNLESS OTHERWISE NOTED.
5. ALL STEELWORK, INCLUDING NUTS AND BOLTS SHALL BE HOT DIP GALVANIZED ZINC COATING SHALL NOT BE LESS THAN 550 GRAMS PER SQUARE METER FOLLOWING JIS H8641 HDZ55 ($550g/m^2$).
6. C1 = 1 mm. TAPER.

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	T. Ohno		12/05
DESIGN CHECK	H. Watanabe		12/12/00
SUBMITTED	A. Hiratani		12/12
APPROVED	P. Viraphanth		12/12/00
	S Temiyabutra		12/12/00

DWG. TITLE:
ACCESSORY
BEARING DETAILS
SHEET 2 OF 3

Plot date: Mon, 31 Jan 2000 - 13:27:41
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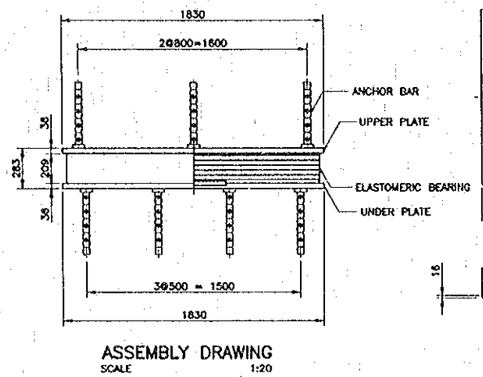
DATE OF ISSUE: 05/03/2000	
DWG. NO. B-AC-5	SHEET NO. 214
DWG. STATUS	



ASSEMBLY DRAWING
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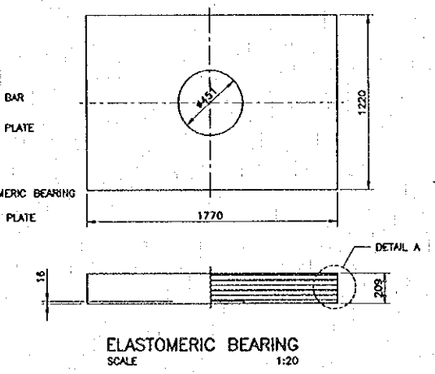
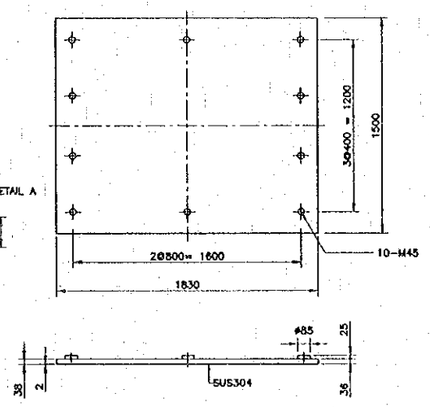
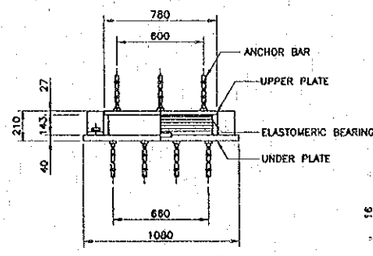


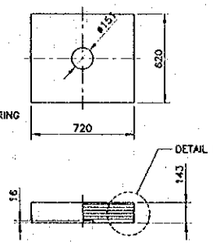
ELASTOMERIC BEARING
SCALE 1:20



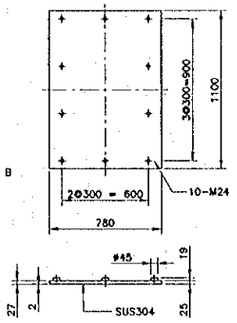
UPPER PLATE
SCALE 1:20



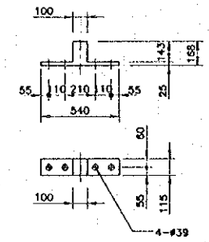
ASSEMBLY DRAWING
SCALE 1:20



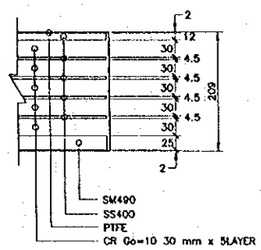
ELASTOMERIC BEARING
SCALE 1:20



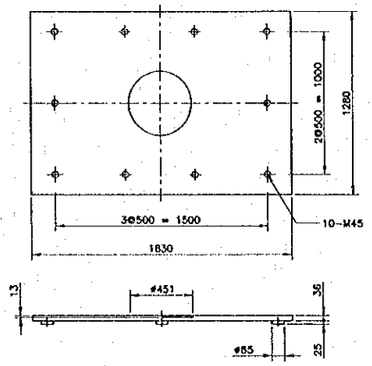
UPPER PLATE
SCALE 1:20



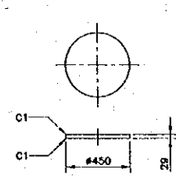
SIDE BLOCK
SCALE 1:20



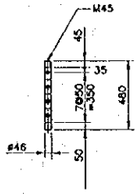
DETAIL A
SCALE 1:5



UNDER PLATE
SCALE 1:20

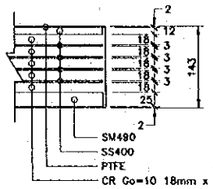


SHEAR KEY
SCALE 1:20

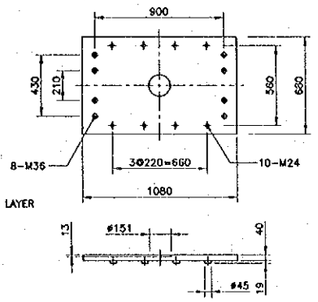


ANCHOR BAR
SCALE 1:20

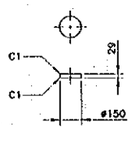
TYPE 7 FOR P14



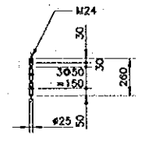
DETAIL B
SCALE 1:5



UNDER PLATE
SCALE 1:20



SHEAR KEY
SCALE 1:20



ANCHOR BAR
SCALE 1:20

TYPE 8 FOR DAPPED HINGE

BRIDGE		APPROACH VIADUCT				MAIN BRIDGE							
TYPE		1	2	3		4	5		6			7	8
BEARING LOCATIONS		P3,P26	A1,P5, P24,A2	P2,P4, P25,P27	P1	P5,P24	P13,P16	P6,P23	P9,P20	P8,P15,P21	P7,P22	P14	D.H.
		FIX	MOVE	MOVE	MOVE	MOVE	MOVE	MOVE	MOVE	MOVE	MOVE	MOVE	MOVE
DESIGN VERTICAL LOAD PER BEARING (KN)	DEAD LOAD	6100	2800	6600		2700	11000		11900			13700	2300
	MAXIMUM	7300	3400	7800		3400	12500		13400			15500	2800
	MINIMUM	5900	2700	6500		2600	10800		11700			13500	1900
DESIGN LONGITUDINAL MOVEMENT (mm.)	SHRINKAGE AND CREEP	–	50	20	35	235	95	205	90	135	165	120	285
	THERMAL EXPANSION AND CONTRACTION	–	25	10	15	70	30	65	30	40	55	40	95
	MAXIMUM MOVEMENT	–	75	30	50	305	125	270	120	175	220	160	380

NOTES :

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE SPECIFICATION AND THE GENERAL NOTES.
2. THE CONTRACTOR SHALL PREPARE AND SUBMIT SHOP DRAWINGS AND DESIGN CALCULATIONS FOR BEARINGS AND RESTRAINTS FOR THE APPROVAL OF THE ENGINEER IN ACCORDANCE WITH SECTION 6.2 OF THE JRA SPECIFICATION. ALL DETAILS SHOWN ARE INDICATIVE ONLY.
3. SHEAR KEY, UPPER AND UNDER PLATE TO BE BASED ON JIS G 3106 "SM490" UNLESS OTHERWISE NOTED.
4. ANCHOR BAR TO BE BASED ON JIS G 4051 "S35CN" UNLESS OTHERWISE NOTED.
5. ALL STEELWORK, INCLUDING NUTS AND BOLTS SHALL BE HOT DIP GALVANIZED ZINC COATING SHALL NOT BE LESS THAN 550 GRAMS PER SQUARE METER FOLLOWING JIS H8641 HDZ55 (550g/m^2).
6. C1 = 1 mm. TAPER.

REV.	DATE	DESCRIPTION	APPROVED

Plot date: Mon, 31 Jan 2000 - 13:47:25

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PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

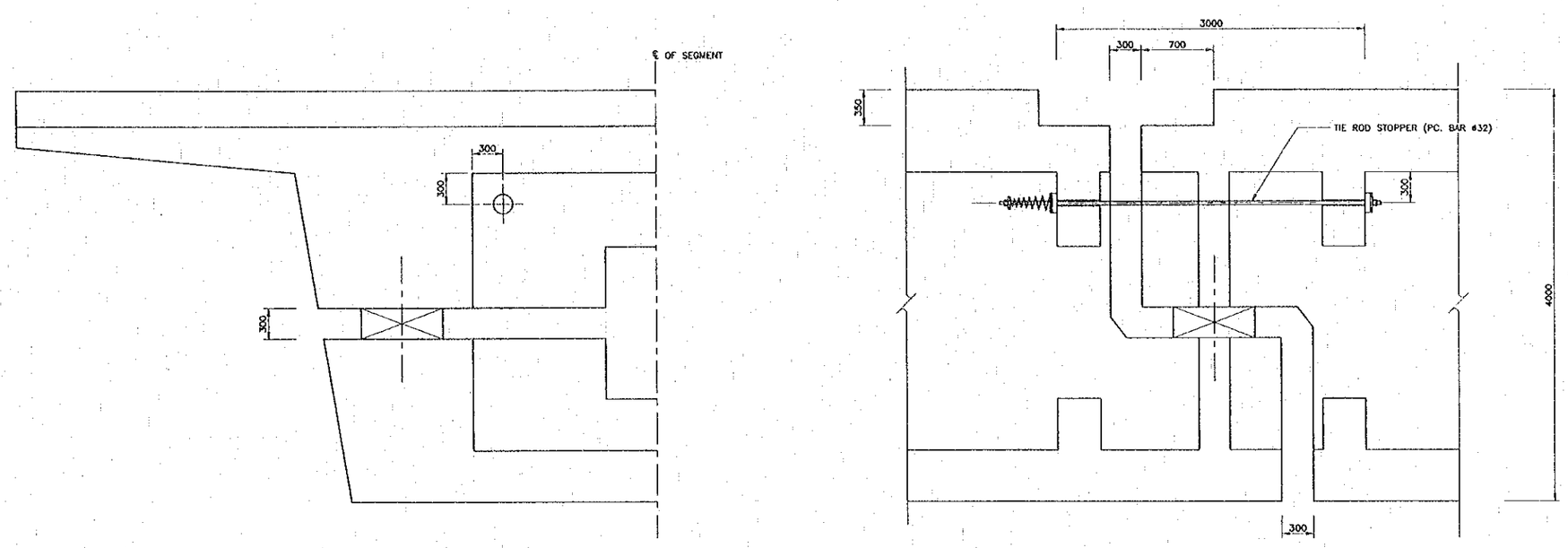
THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	T. Ohno		11.1.00
DESIGN CHECK	H. Watanabe		18/1/00
SUBMITTED	A. Hirotani		21.1.00
APPROVED	P. Virophanth		22/02/00
	S. Temiyabutra		24/02/00

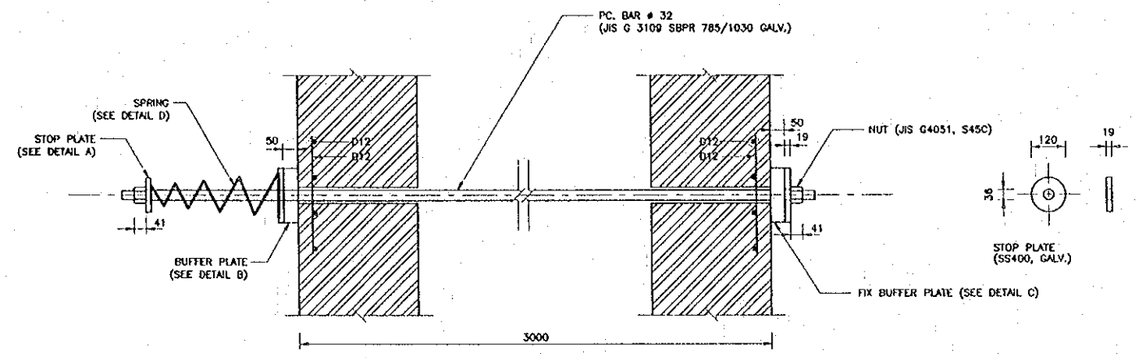
DWG. TITLE:

ACCESSORY
BEARING DETAILS
SHEET 3 OF 3

DATE OF ISSUE:	05/03/2000
DWG. NO.	SHEET NO.
B-AC-6	215
DWG. STATUS	

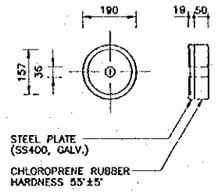


TIE ROD STOPPER GENERAL ARRANGEMENT AT DAPPED HINGE
SCALE 1:25



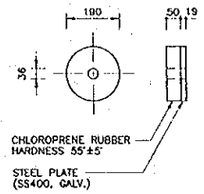
TIE ROD STOPPER DETAILS
SCALE 1:10

DETAIL A
SCALE 1:10



BUFFER PLATE

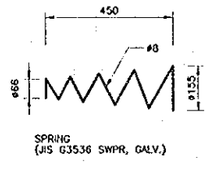
DETAIL B
SCALE 1:10



FIX BUFFER PLATE

DETAIL C
SCALE 1:10

(COMPRESSED IN THE ESTABLISHMENT)



DETAIL D
SCALE 1:10

NOTES :

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE SPECIFICATION.
2. ALLOWABLE TENSILE AND MOVEMENT AMOUNTS TO BE AS FOLLOWS.
   TENSILE AMOUNT : 250 KN/BAR
   MOVEMENT AMOUNT : 380 mm.
3. ALL STEELWORK, INCLUDING NUTS BOLTS SHALL BE HOT DIP GALVANIZED, ZINC COATING SHALL NOT BE LESS THAN 550 GRAMS PER SQUARE METER BY JIS H8641 HDZ55 (550 g/m^2)
4. PC BAR : SBPR 785/1030 JIS G3109 STEEL BAR FOR PRESTRESSED CONCRETE.
   NUT : S45C JIS G4051 CARBON STEELS FOR MACHINE STRUCTURAL USE.
   SPRING : SWPR JIS G3536 UNCOATED STRESS-RELIEVED STEEL WIRES AND STRANDS FOR PRESTRESSED CONCRETE.

REV.	DATE	DESCRIPTION	APPROVED

Plot date: Mon, 31 Jan 2000 - 15:17:27
C:\CHANTANA\SMB\ACCESSORY\AC-6.dwg

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JICA JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

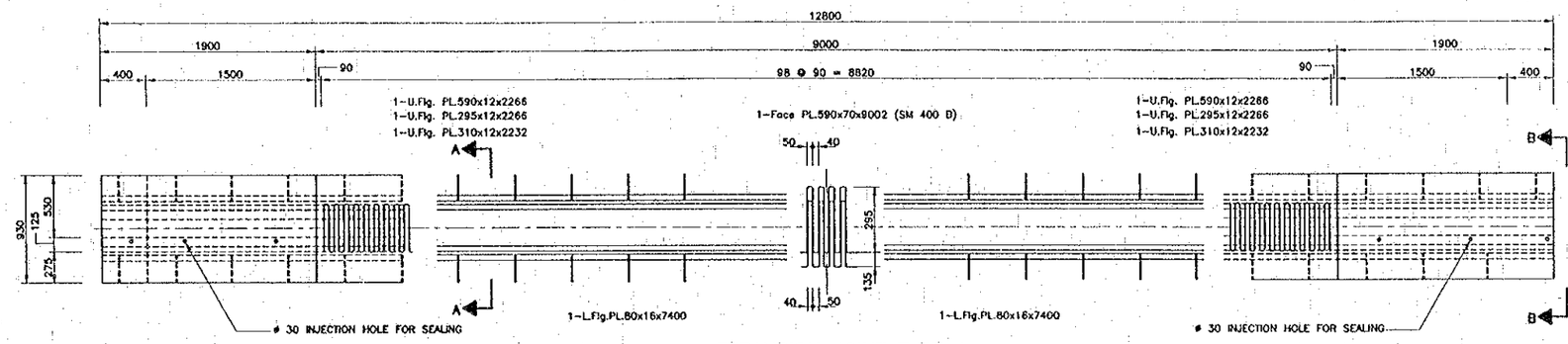
THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	T. Ohno		99/11/01
DESIGN CHECK	H. Watanabe		99/11/01
SUBMITTED	A. Hirotani		99/12/01
APPROVED	P. Viraphanth		99/01/00
	S. Temiyabutra		99/02/14

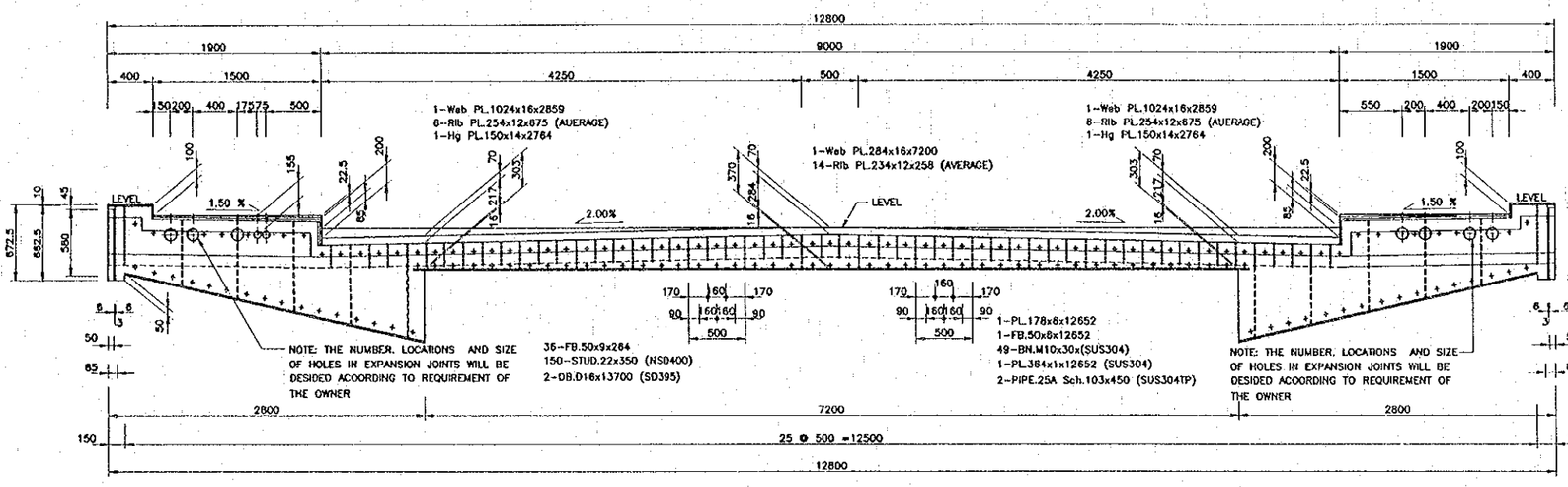
DWG. TITLE:

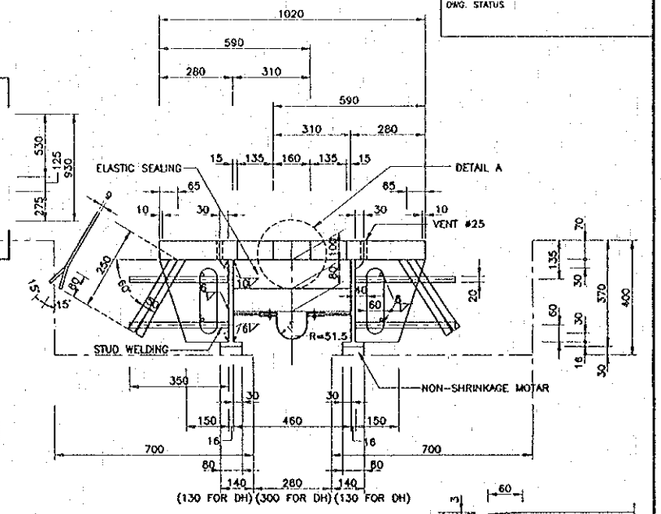
ACCESSORY
TIE ROD STOPPER
GENERAL ARRANGEMENT AND DETAILS

DATE OF ISSUE: 05/03/2000	
DWG. NO. B-AC-7	SHEET NO. 216
DWG. STATUS	

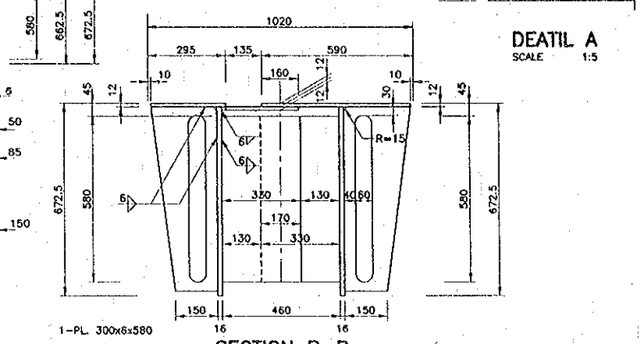


EXPANSION JOINT TYPE 1
SCALE 1:25



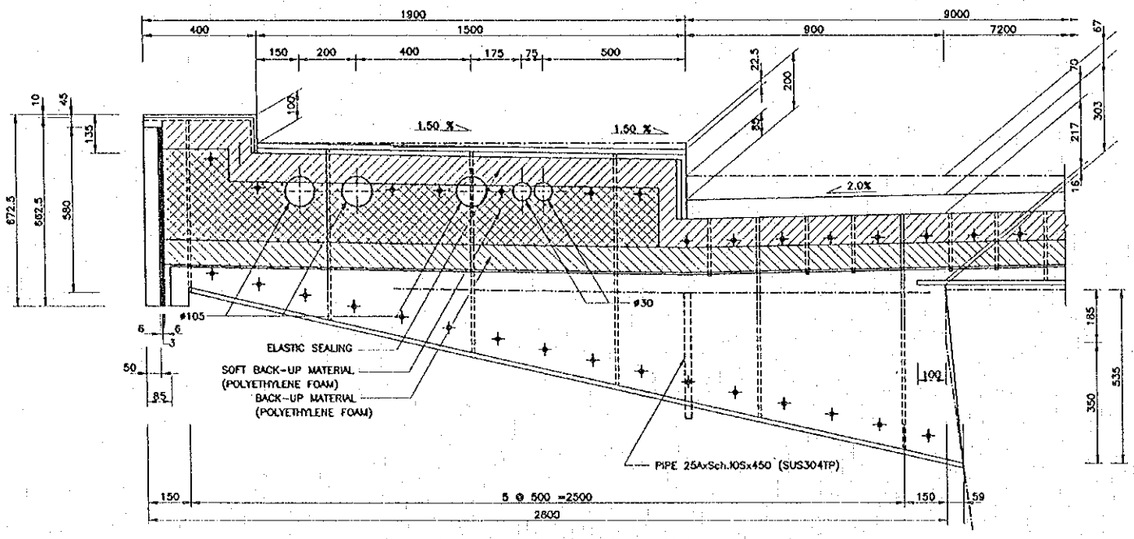


SECTION A-A
SCALE 1:10

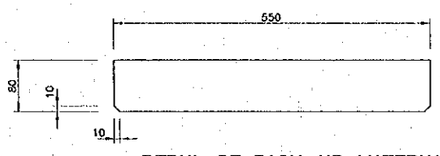


SECTION B-B
SCALE 1:10

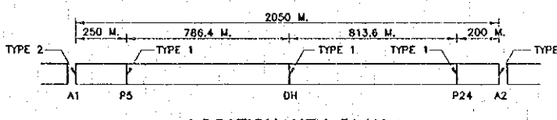
DEATIL A
SCALE 1:5



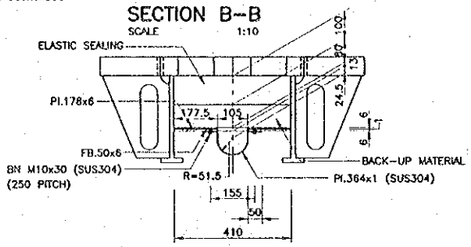
DETAILS OF WHEEL GUARD
SCALE 1:10



DETAIL OF BACK-UP MATERIAL
SCALE 1:5



LOCATION KEY PLAN
NOT TO SCALE



DETAILS OF STAINLESS DRAIN
SCALE 1:10

NOTES :

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE SPECIFICATION.
2. THE CONTRACTOR SHALL PREPARE AND SUBMIT SHOP DRAWINGS AND DESIGN CALCULATIONS FOR EXPANSION JOINT FOR THE APPROVAL OF THE ENGINEER IN ACCORDANCE WITH THE SPECIFICATION ALL DETAILS SHOWN ARE INDICATIVE ONLY.
3. ALL STEALS SHOWN ARE INDICATIVE ONLY. THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN AND DETAILING OF ALL ELEMENTS ROADWAY AND SIDEWALK EXPANSION JOINTS. DESIGN SHALL BE IN ACCORDANCE WITH JRA OR AASHTO SPECIFICATION.
4. SIDEWALK TOP COVER PLATE TR HAVE PROFILED SKID RESISTANT SURFACE TO THE APPROVAL OF ENGINEER.
5. STEEL PLATE TO BE JIS G3101 "SS400" UNLESS OTHERWISE NOTED.

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JICA JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	T. Ohno	T.Ohno	4/3/00
DESIGN CHECK	H. Watanabe		4/3/00
SUBMITTED	A. Hirotani		4/3/00
APPROVED	P. Veophanith		24/02/00
	S. Temiyabutra	S. Temiyabutra	22/02/00

DWG. TITLE:

ACCESSORY
EXPANSION JOINT DETAILS TYPE 1

Plot date: Fri, 4 Feb 2000 - 0:13:32
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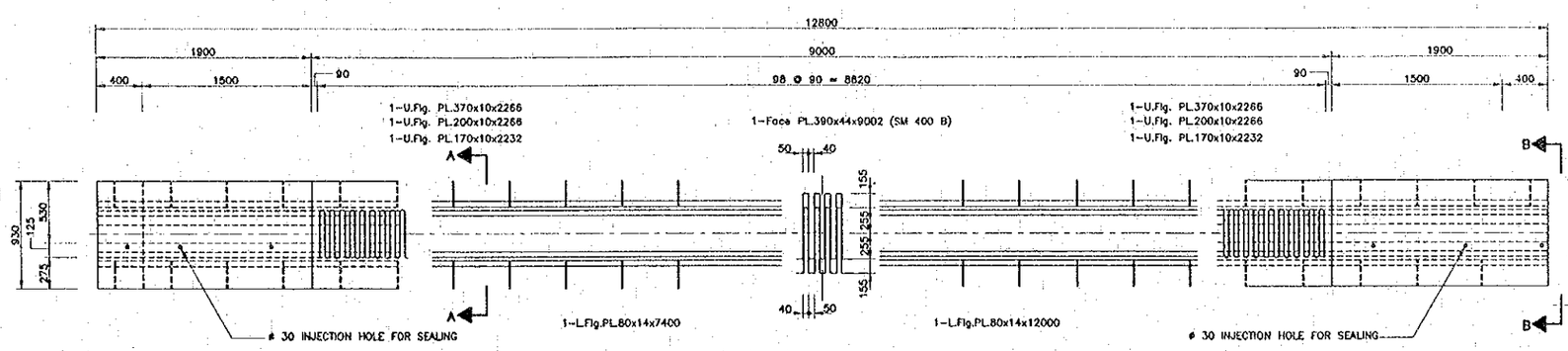
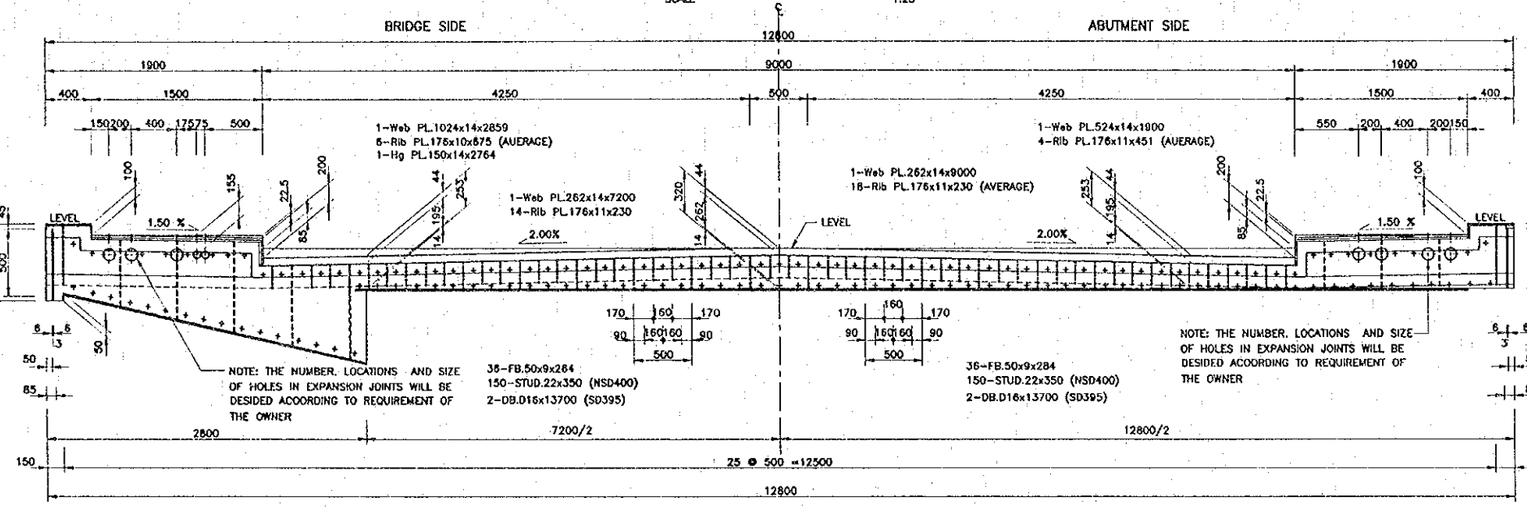
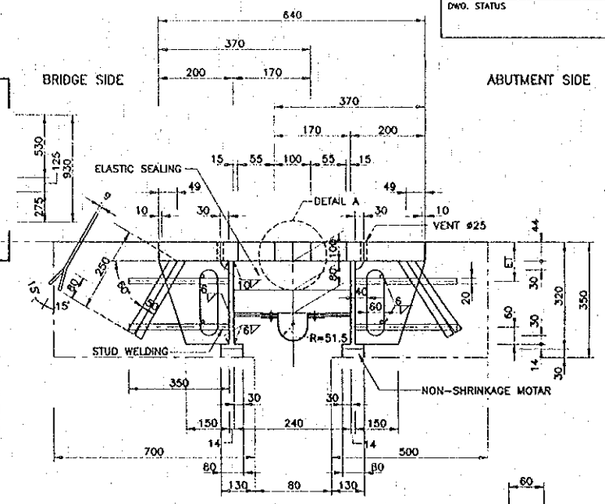
DATE OF ISSUE: 05/03/2000	
DWG. NO. B-AC-8	SHEET NO. 217
DWG. STATUS	



EXPANSION JOINT TYPE 2

SCALE 1:25



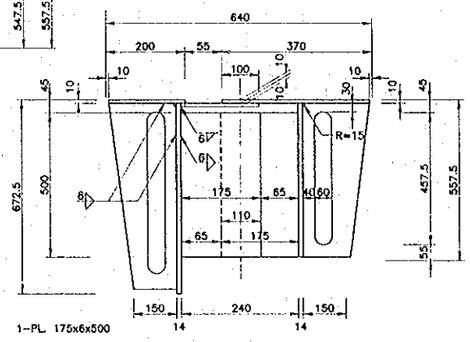


SECTION A-A

SCALE 1:10

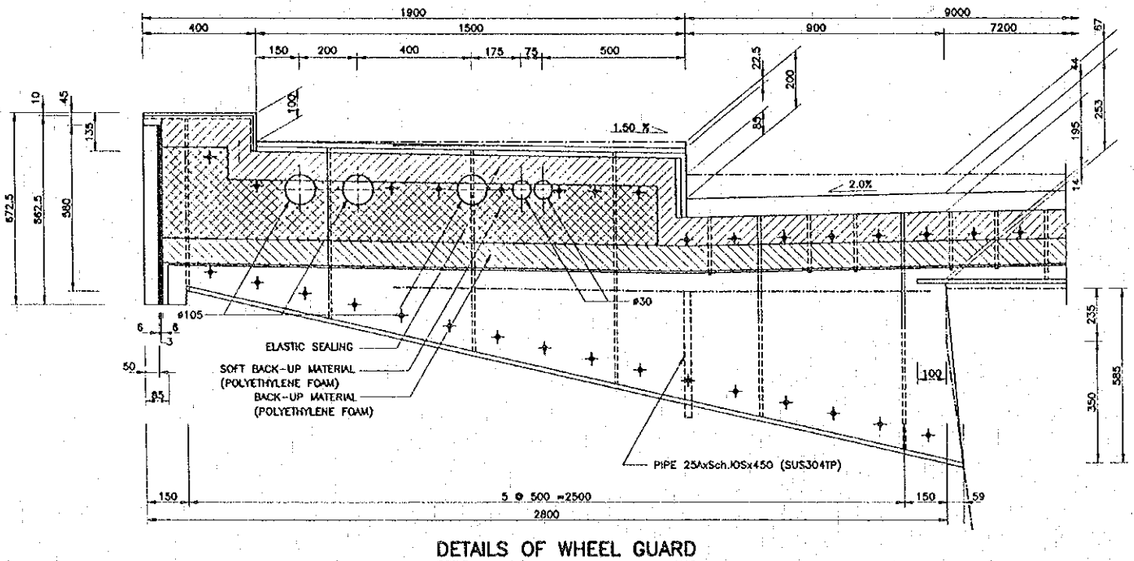
DEATIL A

SCALE 1:5



SECTION B-B

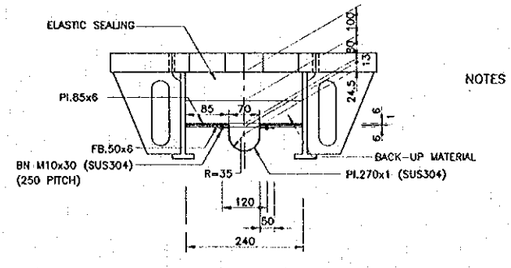
SCALE 1:10



DETAILS OF WHEEL GUARD

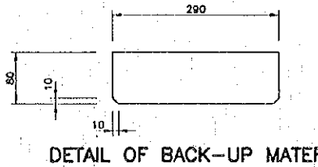
SCALE 1:10

1-PL.55x6x12852
1-FB.50x6x12652
49-BN.M10x30x(SUS304)
1-PL.270x1x12652 (SUS304)
2-PIPE.25A Sch.103x450 (SUS304TP)



DETAILS OF STAINLESS DRAIN

SCALE 1:10

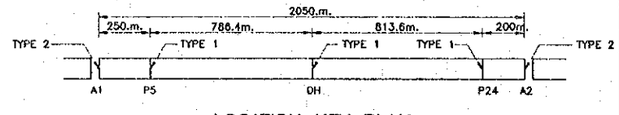


DETAIL OF BACK-UP MATERIAL

SCALE 1:5

NOTES :

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE SPECIFICATION.
2. THE CONTRACTOR SHALL PREPARE AND SUBMIT SHOP DRAWINGS AND DESIGN CALCULATIONS FOR EXPANSION JIONT FOR THE APPROVAL OF THE ENGINEER IN ACCORDANCE WITH THE SPECIFICATION ALL DETAILS SHOWN ARE INDICATIVE ONLY.
3. ALL STEALS SHOWN ARE INDICATIVE ONLY. THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN AND DETAILING OF ALL ELEMENTS ROADWAY AND SIDEWALK EXPANSION JOINTS. DESIGN SHALL BE IN ACCORDANCE WITH JRA OR AASHTO SPECIFICATION.
4. SIDEWALK TOP COVER PLATE TR HAVE PROFILED SKID RESISTANT SURFACE TO THE APPROVAL OF ENGINEER.
5. STEEL PLATE TO BE JIS G3101 "SS400" UNLESS OTHERWISE NOTED.



LOCATION KEY PLAN

NOT TO SCALE

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM

ORIENTAL CONSULTANTS CO., LTD.

in association with

NIPPON KOEI CO., LTD.

JICA JAPAN INTERNATIONAL COOPERATION AGENCY

LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION

KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	T. Ohno		11/2/00
DESIGN CHECK	H. Watanabe		2/21/00
SUBMITTED	A. Hirotani		21/02/00
APPROVED	P. Viraphanth		22/02/00
	S. Tamiyabutra		22/02/00

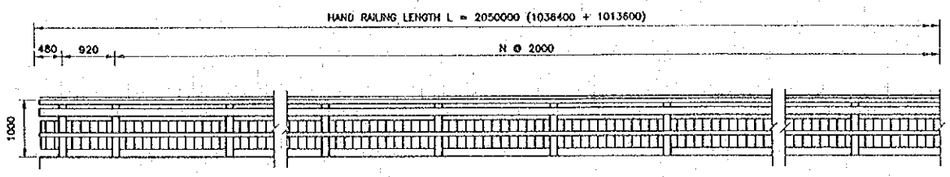
DWG. TITLE:

ACCESSORY
EXPANSION JOINT DETAILS TYPE 2

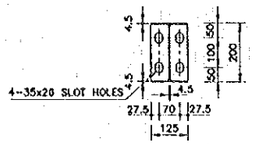
Plot date: Tue, 1 Feb 2000 - 10:25:21

C:\CHANTANA\SMB\ACCESSORY\AC-8.dwg

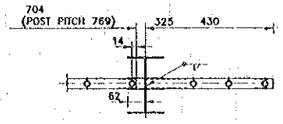
DATE OF ISSUE: 05/03/2000	
DWG. NO. B-AC-09	SHEET NO. 218
DWG. STATUS	



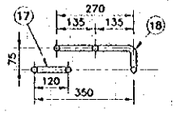
SIDE VIEW
SCALE 1:50



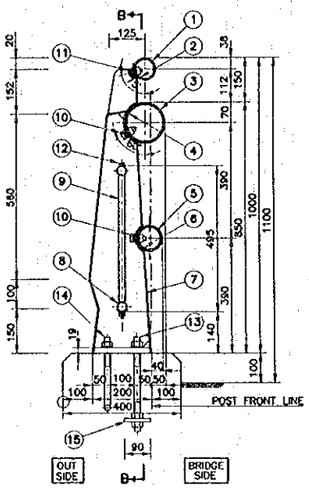
BASE PLATE
SCALE 1:100



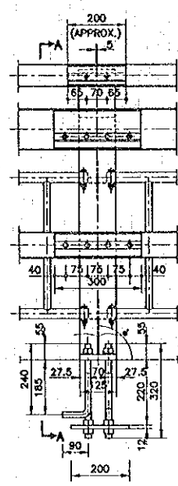
SECTION C-C
SCALE 1:100



SECTION D-D
SCALE 1:100

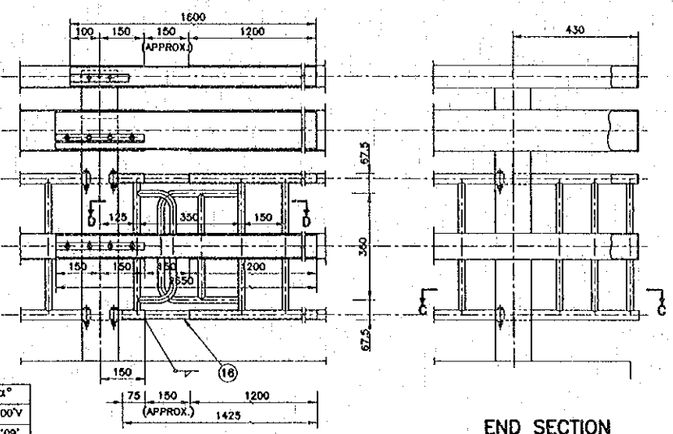


SECTION A-A
SCALE 1:100



SECTION B-B
SCALE 1:100

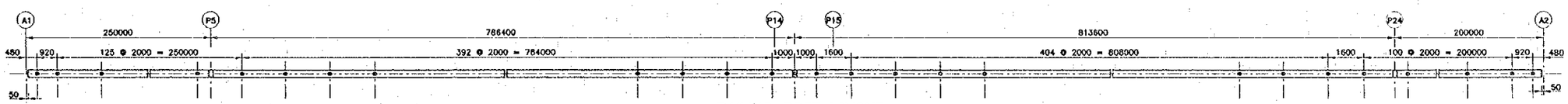
SLOPE	α°
LEVEL	90°00'V
2%L	91°09'
2%R	88°51'V



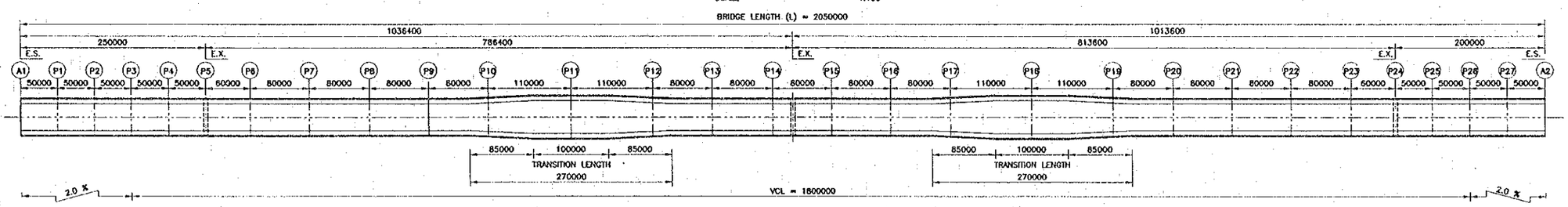
EXPANSION JOINT
SCALE 1:100

END SECTION
SCALE 1:100

NO	NAME	SIZE	MATERIAL	L = 2000		EXPANSION JOINT	
				LENGTH (CM)	WEIGHT (K.G)	LENGTH (CM)	WEIGHT (K.G.)
1	HAND RAILING	ø76.3 x 2.8	STK400	1995	10.1	1845	9.4
2	HAND RAILING SLEEVE	ø65.0 x 4.0	-	200	1.5	1600	12.0
3	MAIN RAILING	ø139.0 x 3.5	-	1995	23.5	1845	21.7
4	MAIN RAILING SLEEVE	ø130.0 x 5.0	-	300	5.3	1650	29.1
5	LOWER RAILING	ø89.1 x 3.2	-	1995	13.5	1845	12.5
6	LOWER RAILING SLEEVE	ø80.0 x 5.0	-	300	3.5	1650	19.3
7	POST	125 x 200 x 1000	SS400	1	16.5	1	16.5
8	BOTTOM RAILING	ø34.0 x 2.3	STK400	1935	3.5	1785	3.2
9	BALUSTER	ø21.7 x 1.9	-	461	0.4	461	0.4
10	HEXAGON HEAD BOLT	M16	SS400	45	-	45	-
11	HEXAGON HEAD BOLT	M12	-	40	-	40	-
12	HEXAGON HEAD BOLT	M10	-	60	-	60	-
13	ANCHOR BOLT NUT	M22	SCM435	320	-	320	-
14	ANCHOR BOLT NUT	M20	SS400	330	-	330	-
15	ANCHOR PLATE	90 x 1.2	-	200	1.9	200	1.9
16	BALUSTER	ø27.2 x 2.3	STK400	-	-	1 SET	0.9
17	BALUSTER	ø21.7 x 1.9	-	-	-	1 SET	0.6
18	BALUSTER	ø21.7 x 1.9	-	-	-	1 SET	1.0



RAILING POST LAYOUT
SCALE 1:100



BRIDGE LAYOUT
SCALE 1:3000

NOTES :

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE SPECIFICATION AND THE GENERAL NOTES.
2. ALL DETAILS SHOWN ARE INDICATIVE ONLY, THE CONTRACTOR SHALL BE PREPARE SHOP DRAWING FOR BRIDGE RAILING FOR THE APPROVAL OF THE ENGINEER, DESIGN SHALL BE IN ACCORDANCE WITH JRA SPECIFICTION HIGHWAY BRIDGE OR APPROVED SPECIFICATION.
3. STK400 : JIS G3444 CARBON STEEL TUBES FOR GENERAL STRUCTURAL PURPOSES.
   SS400 : JIS G3101 ROLLED STEELS FOR GENERAL STRUCTURE.
   SCM435 : JIS G4105 CHROMIUM MOLYBDENUM STEELS.
4. ALL STEELWORK, INCLUDING NUTS AND BOLTS SHALL BE HOT DIP GALVANIZED, ZINC COATING SHALL NOT BE LESS THAN 550 GRAMS PER SQUARE METER BY JIS H8641 HDZ55 (550 g/m^2)

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JICA JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

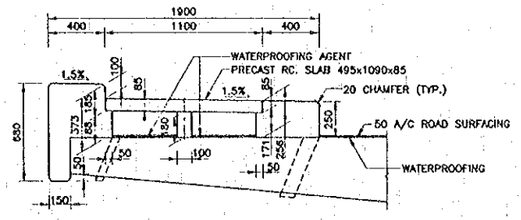
QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	T. Ohno		11/05/11
DESIGN CHECK	H. Watanabe		11/05/00
SUBMITTED	A. Hiratani		11/05/00
APPROVED	P. Viraphanth		22/02/00
	S. Tanmiyabutra		22/02/00

DWG. TITLE:

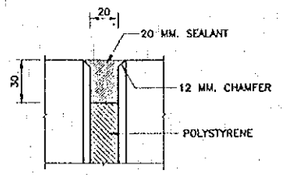
ACCESSORY
BRIDGE RAILING

Plot date: Tue, 8 Feb 2000 - 15:00:12
C:\CHANTARA\SUB\ACCESSORY\AC-9.dwg

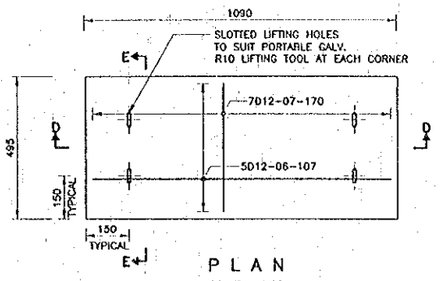
DATE OF ISSUE: 05/03/2000	
DWG. NO. B-AC-10	SHEET NO. 219
DWG. STATUS	



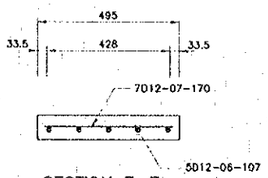
CROSS SECTION OF SIDEWALK (CONCRETE CURB)
SCALE 1:20
(DIMENSIONS)



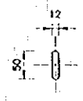
EXPANSION JOINT DETAIL
SCALE 1:20



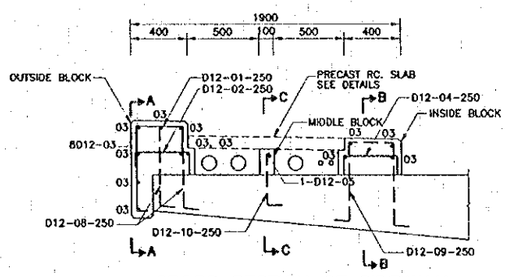
PLAN
SCALE 1:10



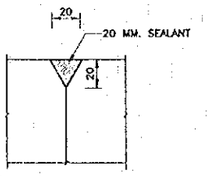
SECTION E-E
SCALE 1:10



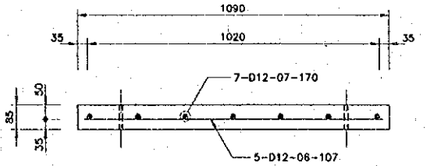
SLOTTED LIFTING HOLES DETAILS
SCALE 1:5



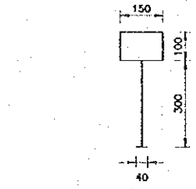
CROSS SECTION OF SIDEWALK
SCALE 1:20
(REINFORCEMENT)



CONSTRUCTION JOINT DETAIL
SCALE 1:20

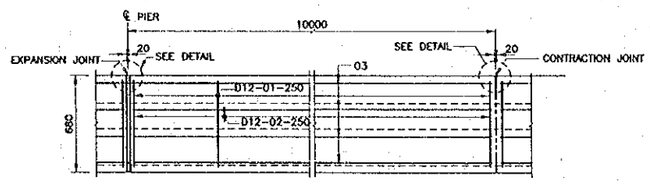


SECTION D-D
SCALE 1:10

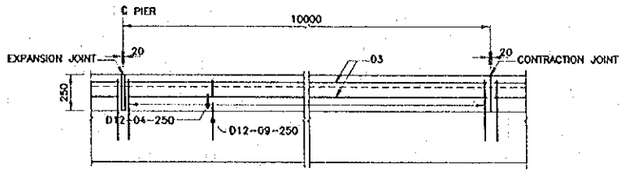


R10 LIFTING TOOL DETAILS
SCALE 1:10

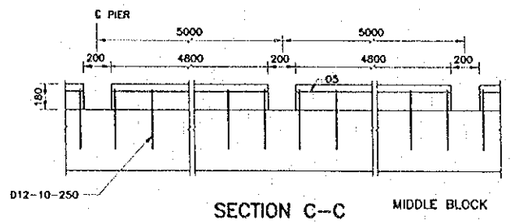
TYPICAL PRECAST RC. SLAB DETAILS



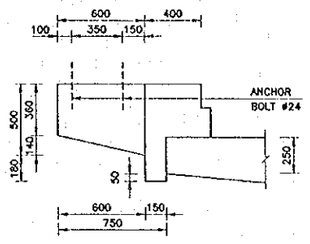
SECTION A-A OUTSIDE BLOCK
SCALE 1:20



SECTION B-B INSIDE BLOCK
SCALE 1:20



SECTION C-C MIDDLE BLOCK
SCALE 1:10



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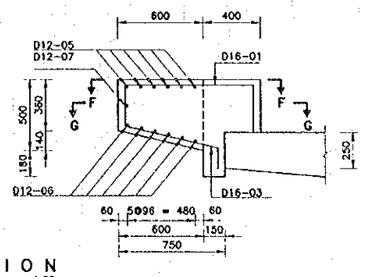
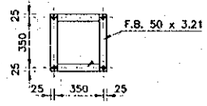
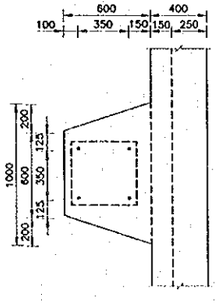
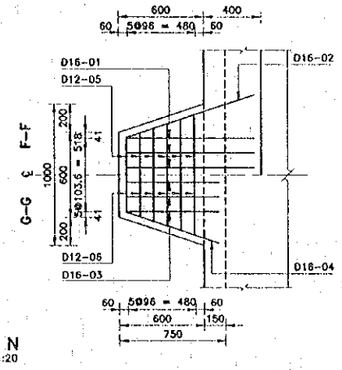


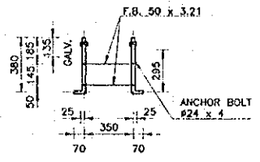






PLAN
SCALE 1:20

LIGHT POLE SUPPORTING



ANCHOR BOLT DETAILS
SCALE 1:20

QUANTITY OF MATERIALS				
DESCCRIPTION	SIZE	ONE PORTION	NUMBER	TOTAL
ANCHOR BOLT	ø24	4	65	260
F.B.	50 x 3.2	8	65	520

NOTES :

1. CONSTRUCTION JOINT FOR CONCRETE CURB AT SIDEWALK SHALL BE PROVIDED AT 10 M. INTERVAL.
2. EXPANSION JOINT FOR CONCRETE CURB AT SIDE WALK SHALL BE PROVIDED ON THE CENTER OF PIERS.
3. CONCRETE CLASS SHALL BE CLASS D (24 N/mm^2).
4. LAYOUT OF MIDDLE BLOCK OF SIDEWALK IS SUBJECT TO LIGHTING & TELEPHONE CABLE ARRANGEMENT.

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JICA JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

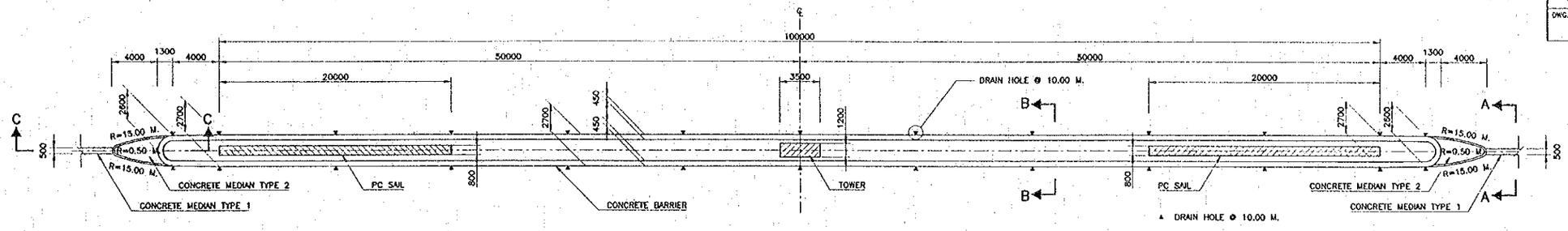
QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	T. Ohno	T.Ohno	11/02/00
DESIGN CHECK	H. Watanabe	H.Watanabe	11/02/00
SUBMITTED	A. Hiratani	A.Hiratani	11/02/00
APPROVED	P. Virophanth		11/02/00
	S. Temiyabutra	S.Temiyabutra	11/02/00

DWG. TITLE:
ACCESSORY
SIDEWALK R.C. DETAILS
LIGHT POLE SUPPORTING

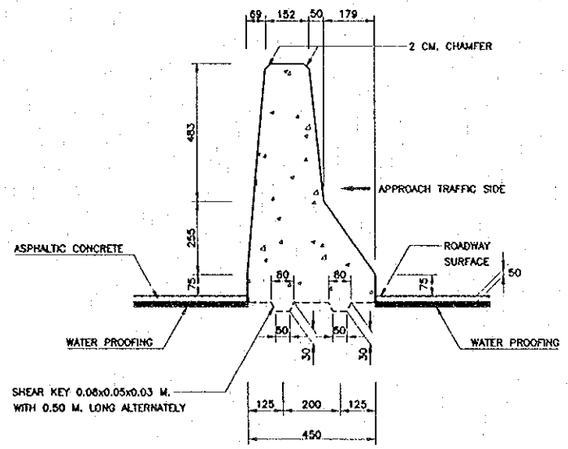
Plot date: Wed, 2 Feb 2000 - 9:40:46
C:\CHANTANA\SUB\ACCESSORY\AC-10.dwg

DATE OF ISSUE: 05/03/2000	
DWG. NO. B-AC-11	SHEET NO. 220
DWG. STATUS	

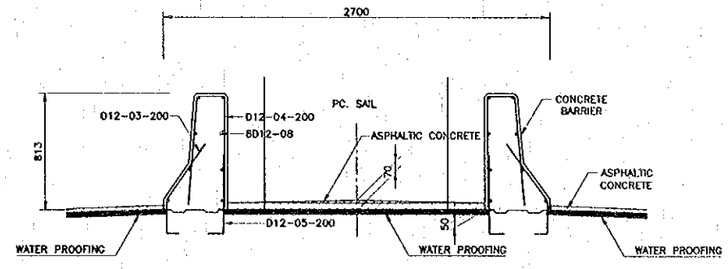
P11,P18



CONCRETE BARRIER AT PC SAIL PLAN
SCALE 1 : 200

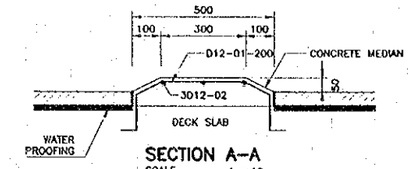


FRONT ELEVATION OF CONCRETE BARRIER
SCALE 1 : 10



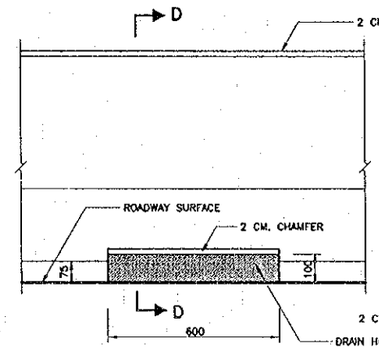
SECTION B-B
SCALE 1 : 20

CONCRETE BARRIER

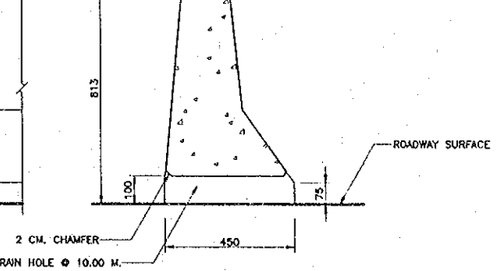


SECTION A-A
SCALE 1 : 10

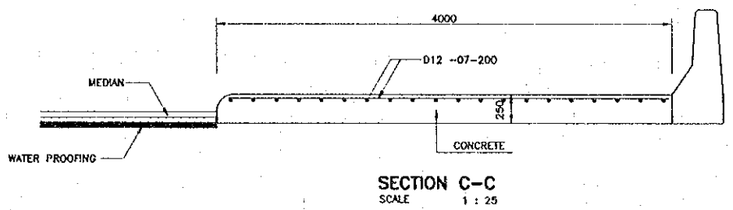
CONCRETE MEDIAN TYPE 1



SIDE ELEVATION OF CONCRETE BARRIER
SCALE 1 : 10

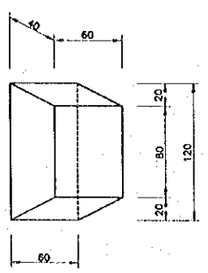


SECTION D - D
SCALE 1 : 10

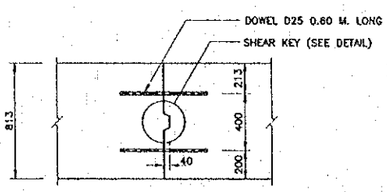


SECTION C-C
SCALE 1 : 25

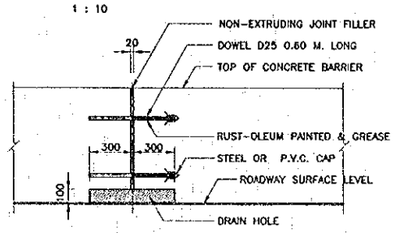
CONCRETE MEDIAN TYPE 2



SHEAR KEY DETAIL
SCALE 1 : 2.5



CONSTRUCTION JOINT DETAIL
SCALE 1 : 20



EXPANSION JOINT DETAIL
SCALE 1 : 20

NOTES :

1. CONCRETE CLASS SHALL BE CLASS D (24 N/mm.^{2})
2. CLEAR CONCRETE COVER SHALL BE 5 cm.
3. CONSTRUCTION JOINT FOR CONCRETE BARRIER SHALL BE PROVIDED AT 10 m. INTERVAL.
4. EXPANSION JOINT WITH NON-EXTRUDING JOINT FILLER FOR CONCRETE BARRIER SHALL BE PROVIDED AT 60 m. INTERVAL.
5. WATER PROOFING SHALL BE INSTALLED ALL BRIDGE DECK SURFACES.

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KORI CO., LTD.

JICA JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	T. Ohno		11/12/00
DESIGN CHECK	H. Watanabe		18/12/00
SUBMITTED	A. Hiratani		21/12/00
APPROVED	P. Viraphanth		22/12/00
	S. Temiyabutra		22/12/00

DWG. TITLE:
ACCESSORY
CONCRETE BARRIER AND MEDIAN RC. DETAILS

Plot date: Wed, 2 Feb 2000 - 18:56:03
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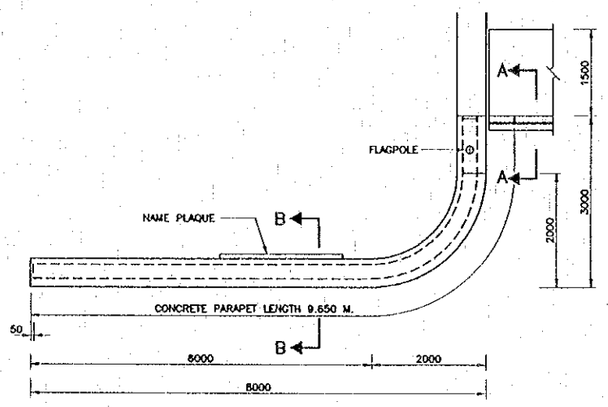
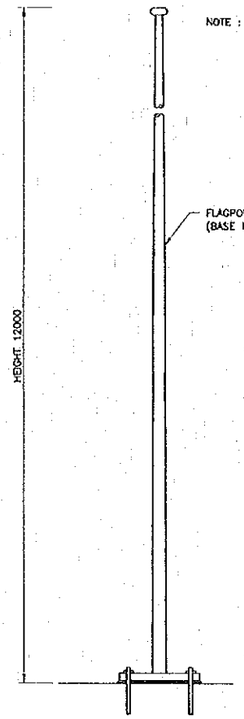
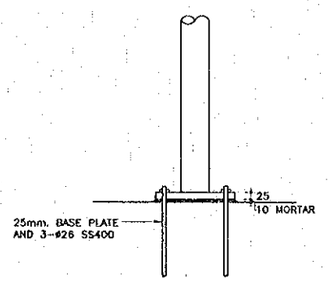
DATE OF ISSUE: 05/03/2000	
DWG. NO. B-AC-12	SHEET NO. 221
DWG. STATUS	



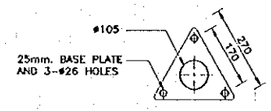
DETAIL A
1:50 SCALE

NOTE : DIAMETER OF FLAGPOLE AND SPIGOT TO SUIT MANUFACTURES DESIGN REQUIREMENTS FOR LOCAL CONDITIONS AND PROPOSED FLAG SIZE.

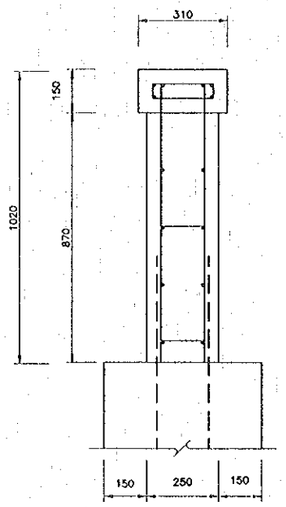




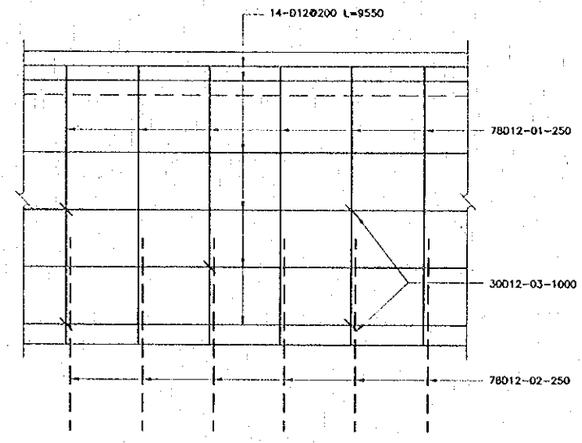
SPIGOT DETAIL
SCALE 1:10



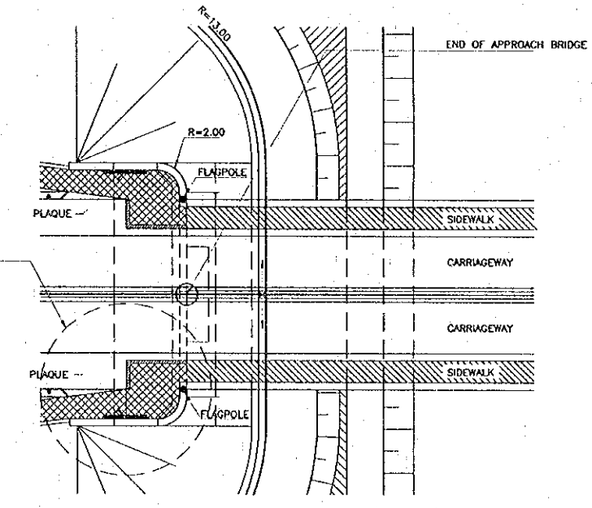
FLAGPOLE BASE PLATE
SCALE 1:10



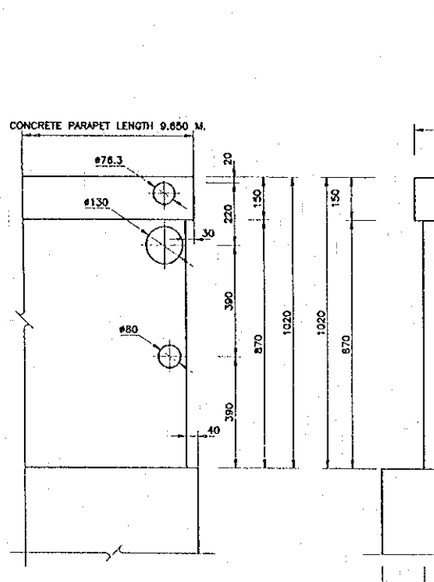
SECTION B-B
SCALE 1:10



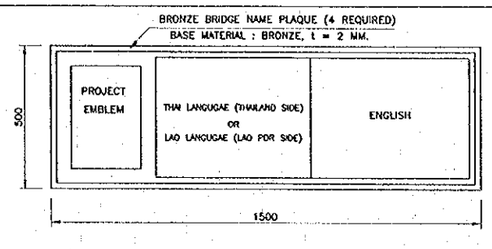
REINFORCEMENT FOR BRIDGE PARAPET
SCALE 1:10



PLAN AT ABUTMENT
NOT TO SCALE



SECTION A-A
1:10 SCALE



BRIDGE PARAPET & BRONZE BRIDGE NAME PLAQUE
SCALE 1:10

NOTES :

1. THE FLAGPOLES TO BE PROVIDED UNDER THE CONTRACT SHALL BE SUBJECT TO APPROVAL OF THE ENGINEER.
2. THE OVERALL LENGTH OF THE FLAGPOLES SHALL BE 12000 mm. MINIMUM WITH FIXTURES TO THE MANUFACTURERS RECOMMENDATIONS.
3. DETAILS OF FIXING OF FLAGPOLES DIFFERENT FROM THOSE SHOWN ON THE DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.
4. THE FLAGPOLES SHALL BE OF THE SECURITY TYPE WITH THE HALYARD SECURED WITHIN THE FLAGPOLES BEHIND A LOCKABLE DOOR.
5. CONCRETE CLASS FOR BRIDGE PARAPET SHALL BE CLASS D (24 N/mm^2).

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JICA JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN			
DESIGN CHECK	H. Watanabe		
SUBMITTED	A. Hiratani		
APPROVED	P. Viraphanth		22/02/00
	S. Tamiyabutra		

DWG. TITLE:

ACCESSORY
BRIDGE PARAPET AT ABUTMENT
FLAGPOLE, BRONZE BRIDGE NAME PLAQUE

Plot date: Thu, 3 Feb 2000 - 9:45:05
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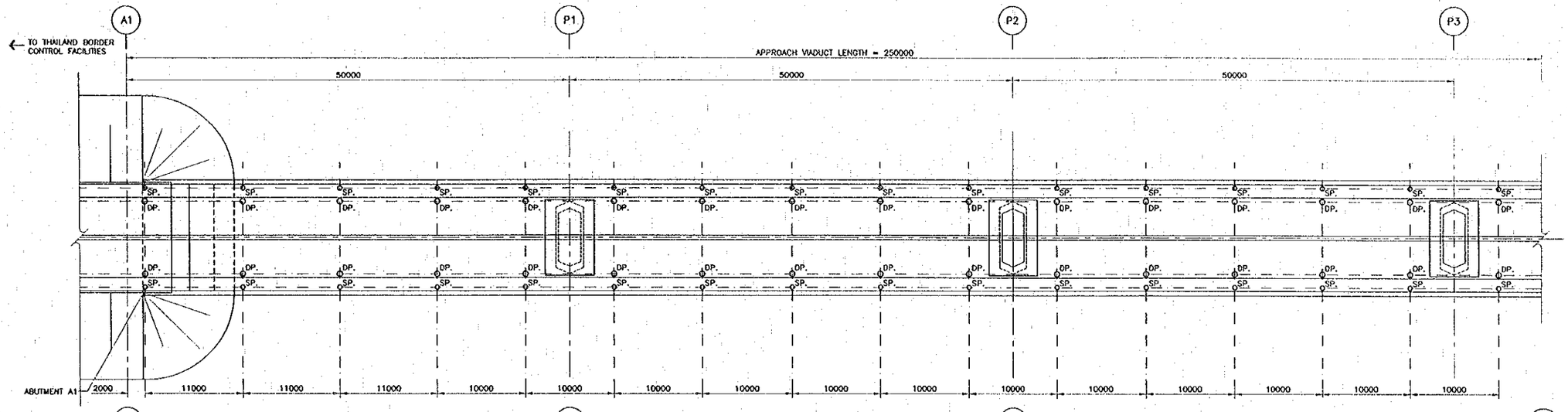
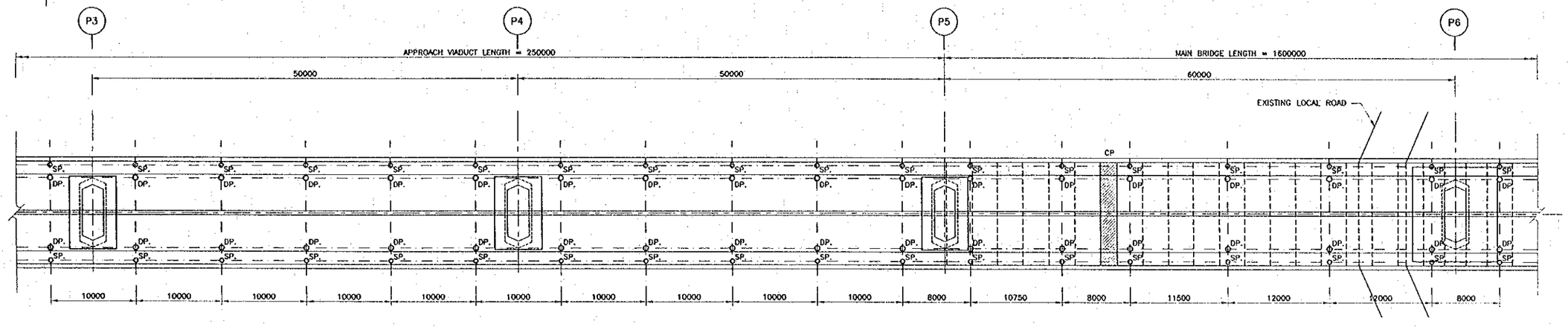
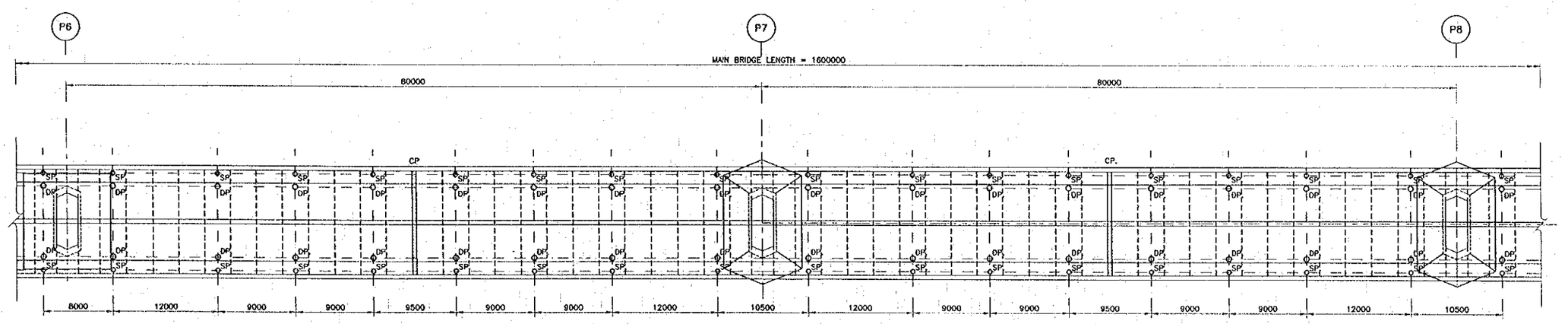
DATE OF ISSUE: 05/03/2000	
DWG. NO. B-AC-13	SHEET NO. 222
DWG. STATUS	







DECK DRAINAGE LAYOUT PLAN

SCALE 1:250

LEGEND :
O DP. ϕ150 DRAINAGE SCUPPER THROUGH TOP FLANGE
O SP. ϕ50 DRAINAGE SCUPPER THROUGH TOP FLANGE

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JICA JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	I. Ohno		11/1/00
DESIGN CHECK	H. Watanabe		11/1/00
SUBMITTED	A. Hiratani		11/1/00
APPROVED	P. Viraphanth		12/01/00
	S. Temiyabutra		12/01/00

DWG. TITLE:
ACCESSORY
DECK DRAINAGE LAYOUT PLAN
SHEET 1 OF 6

Plot date: Thu, 3 Feb 2000 - 11:50:14

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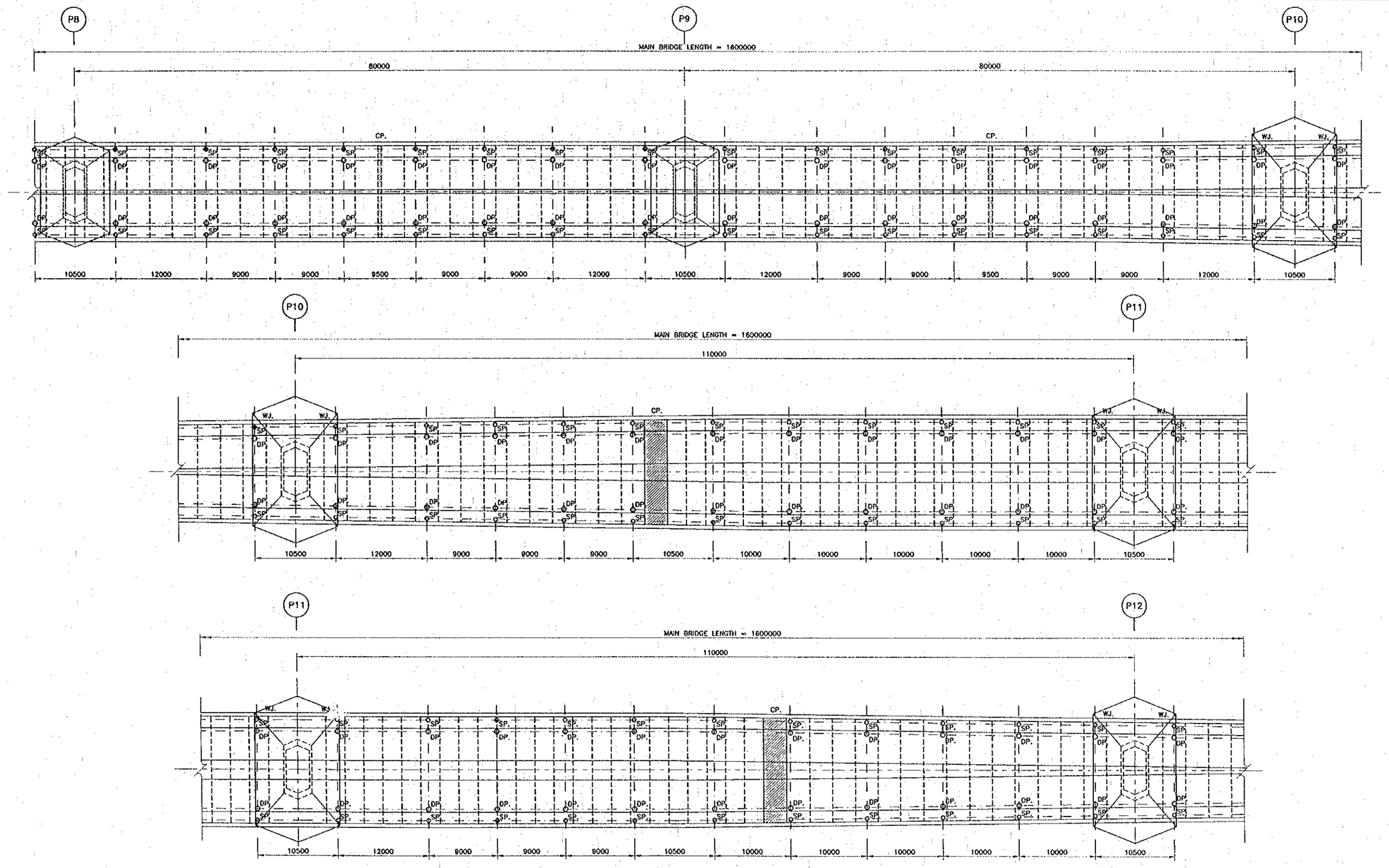
DATE OF ISSUE: 05/03/2000	
DWG. NO. B-AC-14	SHEET NO. 223
DWG. STATUS	



DECK DRAINAGE LAYOUT PLAN

SCALE 1:250

LEGEND :
- O DP. ϕ150 DRAINAGE SCUPPER THROUGH TOP FLANGE
- O SP. ϕ50 DRAINAGE SCUPPER THROUGH TOP FLANGE

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JICA JAPAN INTERNATIONAL COOPERATION AGENCY

LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION

KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	T. Ohno	T. Ohno	4/3/00
DESIGN CHECK	H. Watanabe		15/3/00
SUBMITTED	A. Hiratani		21/3/00
APPROVED	P. Viraphanth		22/03/00
	S. Temiyabutra	S. Temiyabutra	22/03/00

DWG. TITLE:

ACCESSORY
DECK DRAINAGE LAYOUT PLAN
SHEET 2 OF 6

Plot date : Thu, 3 Feb 2000 - 11:49:02

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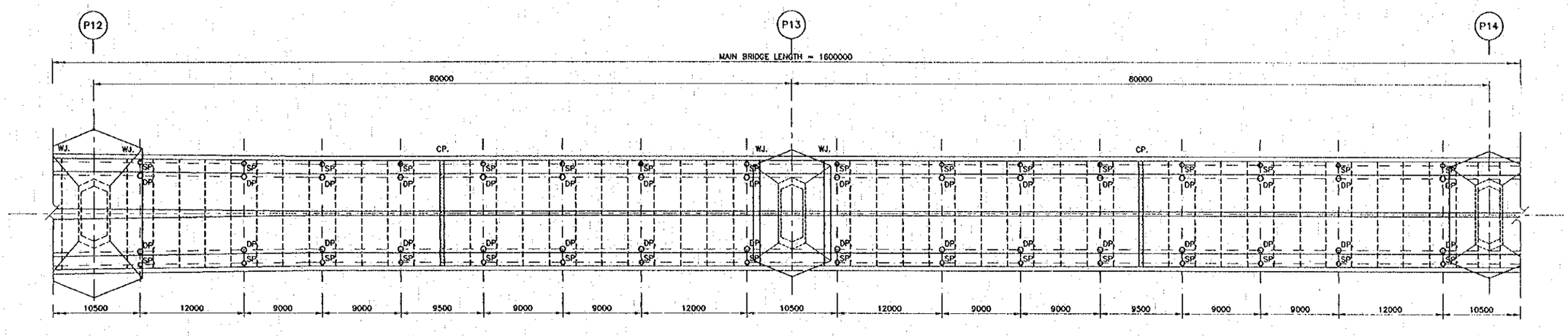
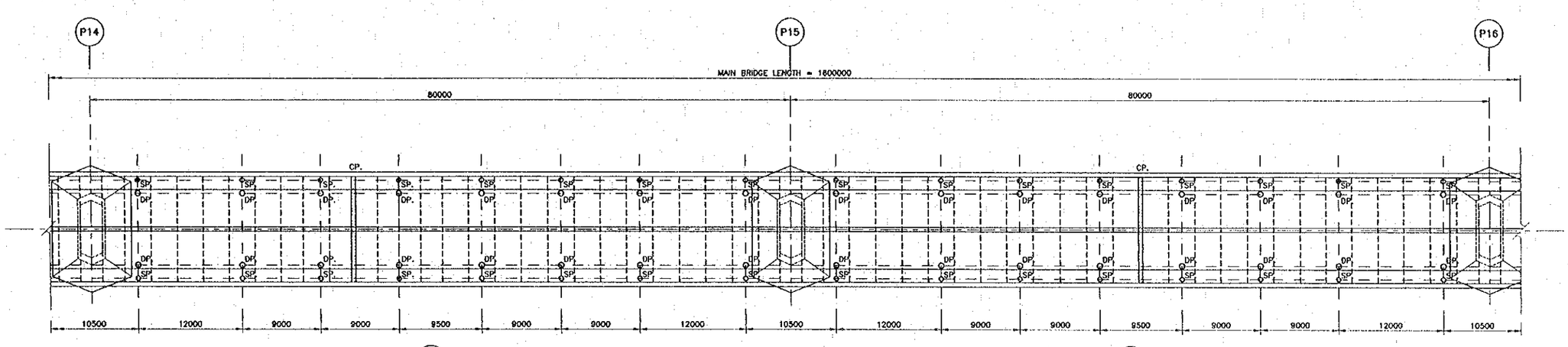
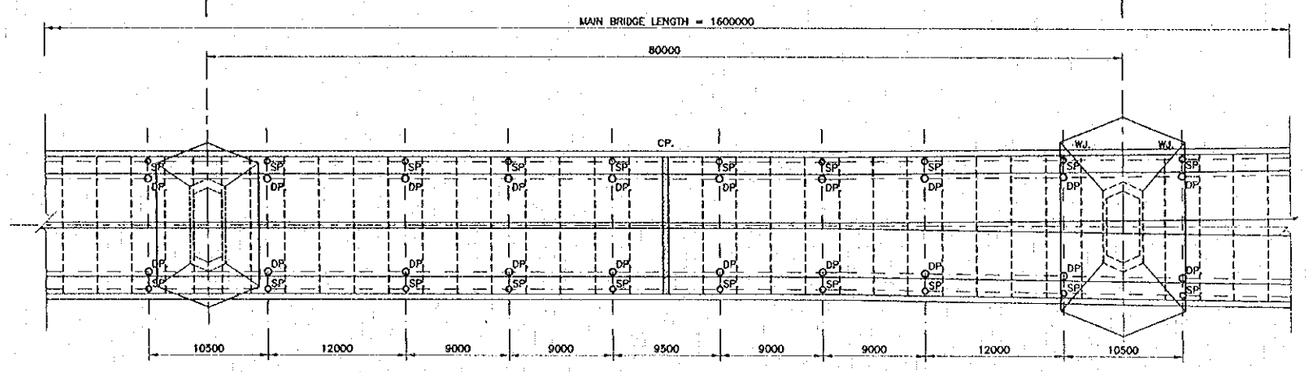
DATE OF ISSUE: 05/03/2000	
DWG. NO. B-AC-15	SHEET NO. 224
DWG. STATUS	







DECK DRAINAGE LAYOUT PLAN

SCALE 1:250

LEGEND :
- O DP. ø150 DRAINAGE SCUPPER THROUGH TOP FLANGE
- O SP. ø50 DRAINAGE SCUPPER THROUGH TOP FLANGE

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JICA JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	T. Ohno	T. Ohno	4/02/00
DESIGN CHECK	H. Watanabe		15/02/00
SUBMITTED	A. Hirotani		21/02/00
APPROVED	P. Virophanith		14/02/00
	S. Tamiyabutra	S. Tamiya	22/02/00

DWG. TITLE:
ACCESSORY
DECK DRAINAGE LAYOUT PLAN
SHEET 3 OF 6

Plot date: Thu, 3 Feb 2000 - 15:37:16
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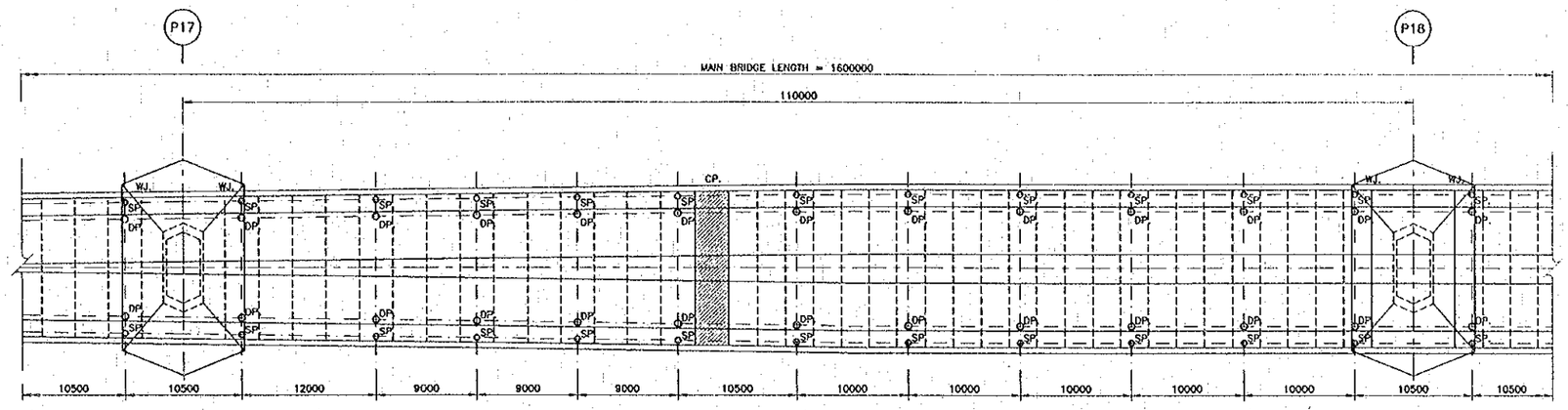
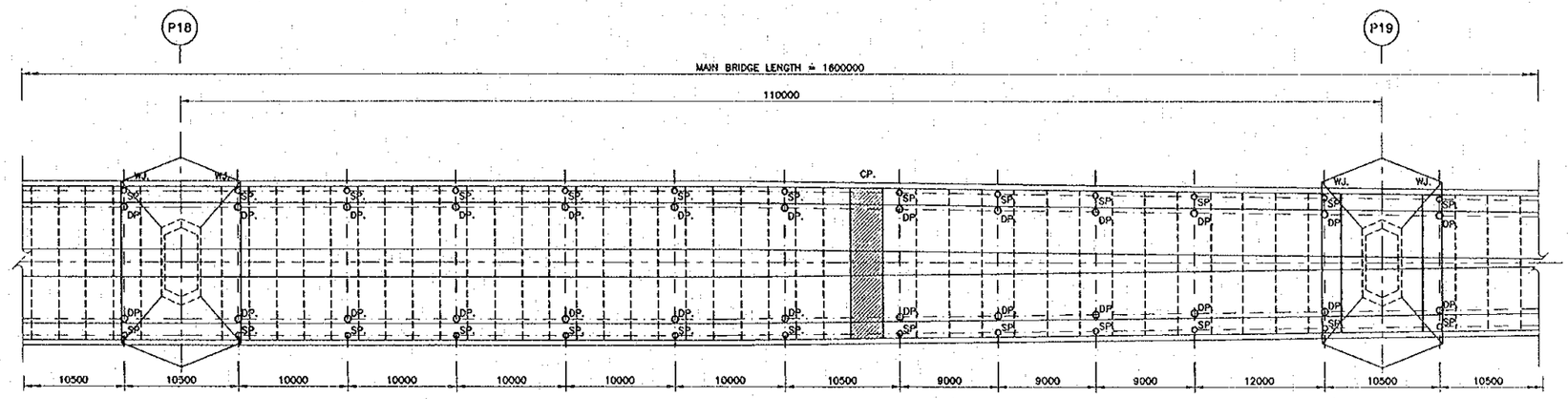
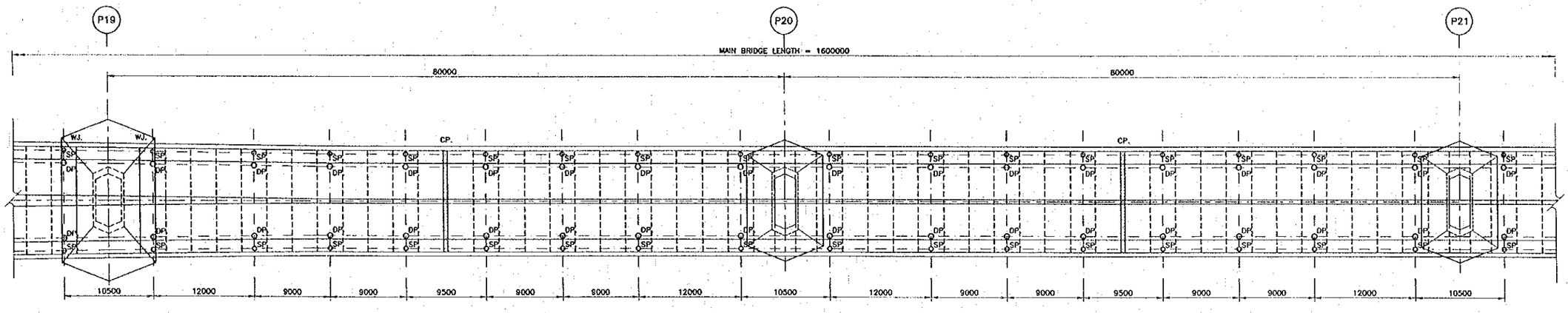
DATE OF ISSUE: 05/03/2000	
DWG. NO. B-AC-16	SHEET NO. 225
DWG. STATUS	







DECK DRAINAGE LAYOUT PLAN

SCALE 1:250

LEGEND :
- O DP. ϕ150 DRAINAGE SCUPPER THROUGH TOP FLANGE
- O SP. ϕ50 DRAINAGE SCUPPER THROUGH TOP FLANGE

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	T. Ohno		
DESIGN CHECK	N. Watanabe		
SUBMITTED	A. Hirotani		
APPROVED	P. Virophanth		22/02/00
	S. Temiyabutra		22/2/00

DWG. TITLE:

ACCESSORY
DECK DRAINAGE LAYOUT PLAN
SHEET 4 OF 6

Plot date: Fri, 4 Feb 2000 - 24:00

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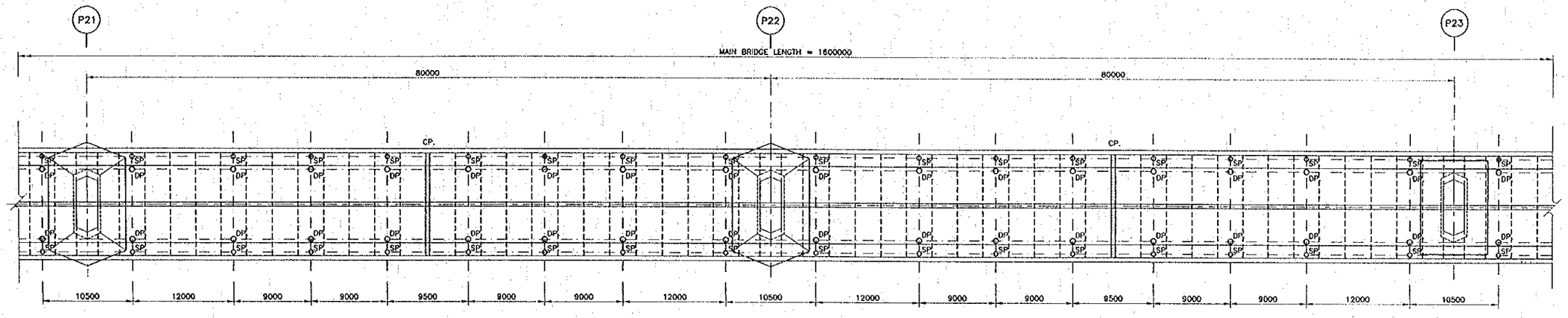
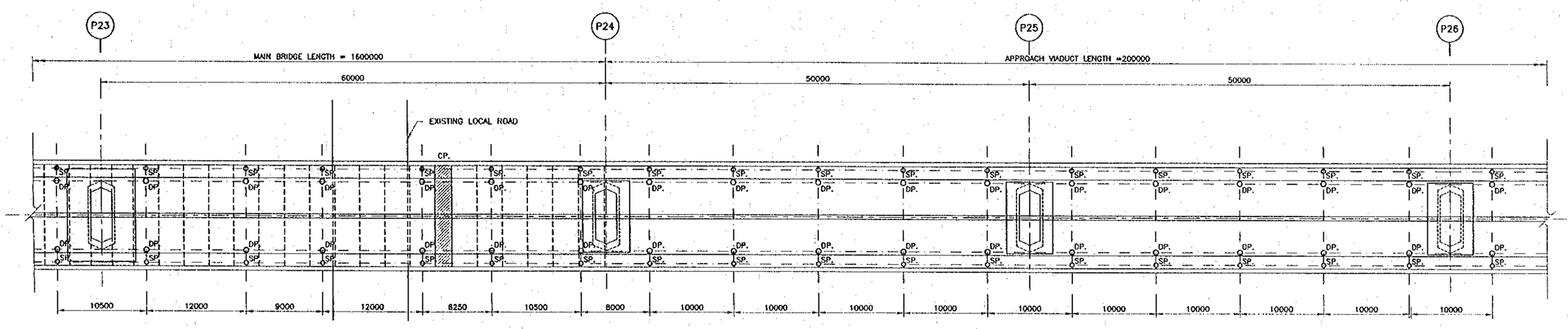
DATE OF ISSUE: 05/03/2000	
DWG. NO. 8-AC-17	SHEET NO. 226
DWG. STATUS	





DECK DRAINAGE LAYOUT PLAN

SCALE 1:250

LEGEND :

O DP. ϕ150 DRAINAGE SCUPPER THROUGH TOP FLANGE

O SP. ϕ50 DRAINAGE SCUPPER THROUGH TOP FLANGE

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM

ORIENTAL CONSULTANTS CO., LTD.

in association with

NIPPON KOEI CO., LTD.

JAPAN INTERNATIONAL COOPERATION AGENCY

LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION

KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG
INTERNATIONAL BRIDGE
CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	T. Ohno		
DESIGN CHECK	H. Watanabe		
SUBMITTED	A. Hirotani		
APPROVED	P. Viraphanh		22/2/00
	S. Tamlyabutra		22/02/00

DWG. TITLE:

ACCESSORY
DECK DRAINAGE LAYOUT PLAN
SHEET 5 OF 6

Plot date: Fri, 4 Feb 2000 - 2:13:41

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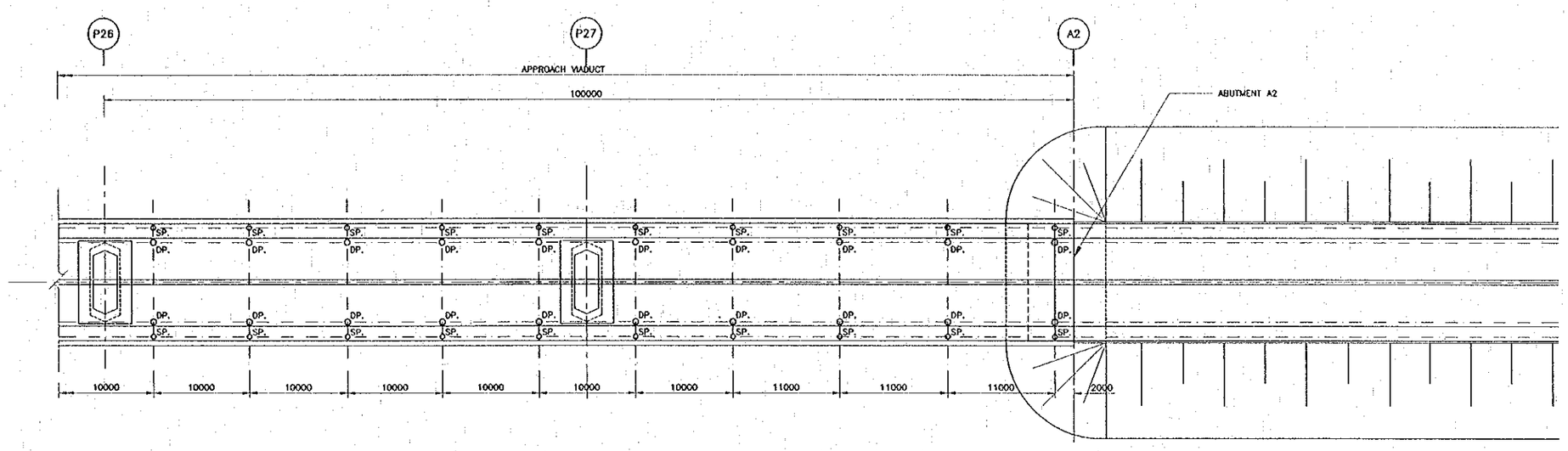
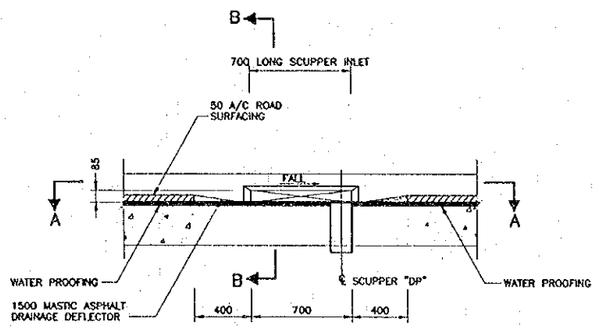
DATE OF ISSUE: 05/03/2000	
DWG. NO. B-AC-18	SHEET NO. 227
DWG. STATUS	

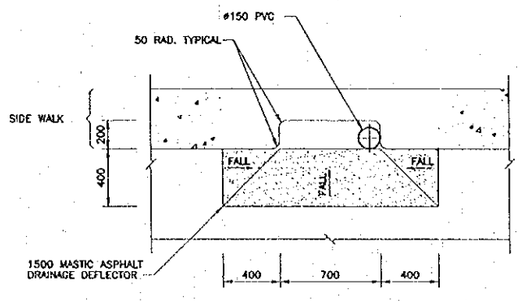


DECK DRAINAGE LAYOUT PLAN
SCALE 1:250

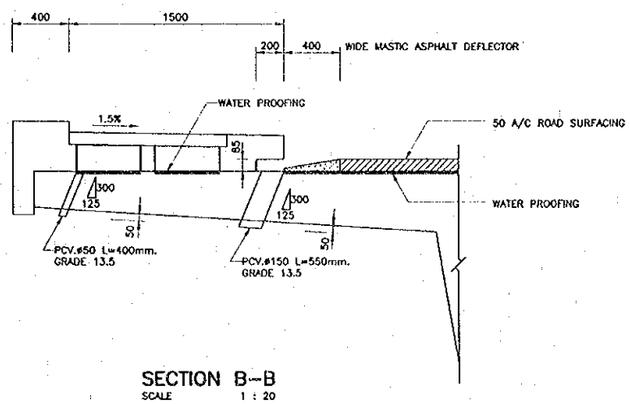
TO LAO PDR BORDER→
CONTROL FACILITIES



ELELVATION
TYPICAL DRAINAGE SCUPPER AT SIDEWALK
SCALE 1 : 20



SECTION A–A
SCALE 1 : 20



SECTION B–B
SCALE 1 : 20

NOTES :

1. DRAIN PIPES FOR DECK DRAINAGE SHALL BE UNDER TIS 17-2523.
2. WATER PROOFING SHALL BE INSTALLED ALL BRIDGE DECK SURFACES.
3. WATER PROOFING MEMBRANE SHALL FOLLOW THE SPECIFICATION.
4. LAYOUT OF DRAINAGE IS SUBJECT TO PC TENDONS ARRANGEMENT.

LEGEND :

O DP. ø150 DRAINAGE SCUPPER THROUGH TOP FLANGE
O SP. ø50 DRAINAGE SCUPPER THROUGH TOP FLANGE

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	F. Ohno		11/2/00
DESIGN CHECK	H. Watanabe		21/2/00
SUBMITTED	A. Hirotani		21/2/00
APPROVED	P. Viraphanth		22/02/00
	S. Tamiyabutra		22/02/00

DWG. TITLE:

ACCESSORY
DECK DRAINAGE LAYOUT PLAN
SHEET 6 OF 6

Plot date: Thu, 3 Feb 2000 - 15:59:15

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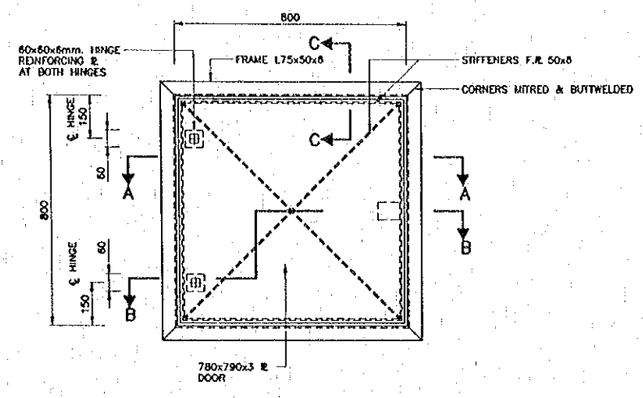
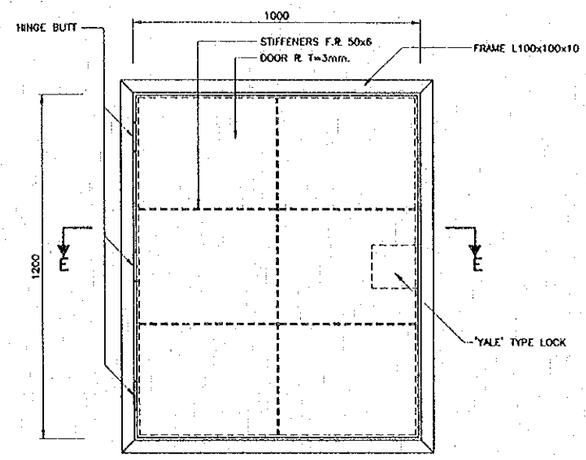
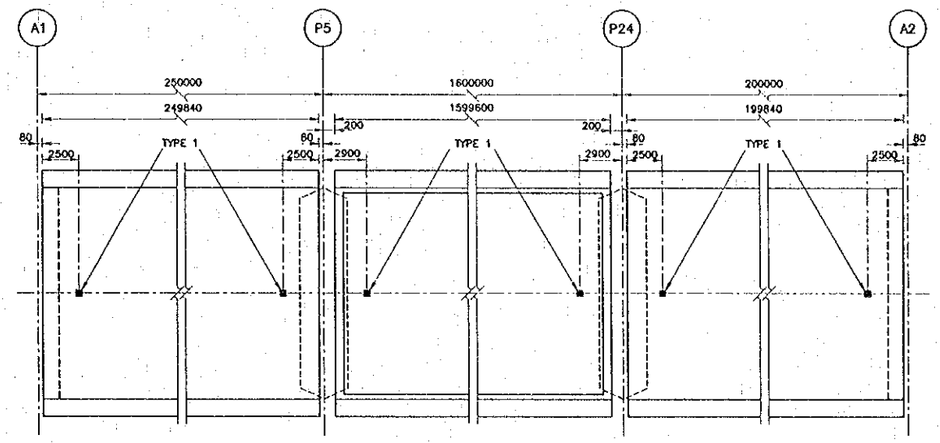
DATE OF ISSUE: 05/03/2000	
DWG. NO. B-AC-19	SHEET NO. 228
DWG. STATUS	



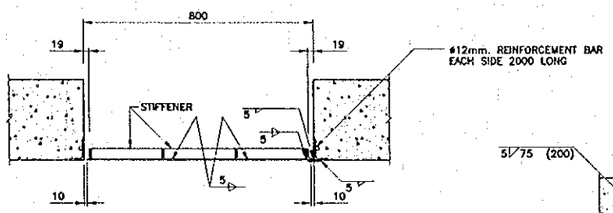
STEEL DOOR DETAIL-TYPE 1 (6 REQUIRED)
VIEWED FROM BENEATH BRIDGE
SCALE 1:100



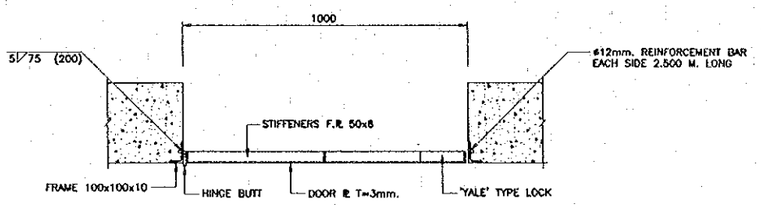
STEEL DOOR AT HINGE - TYPE 2
(2 REQURED TOTAL)
SCALE 1:100



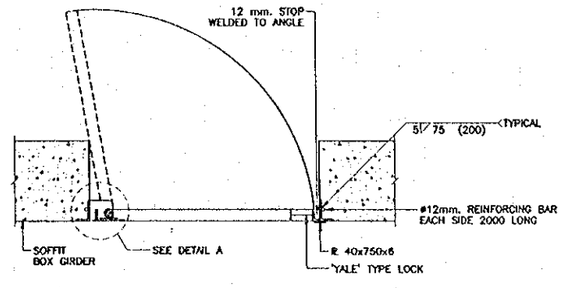
KEY PLAN
NOT TO SCALE



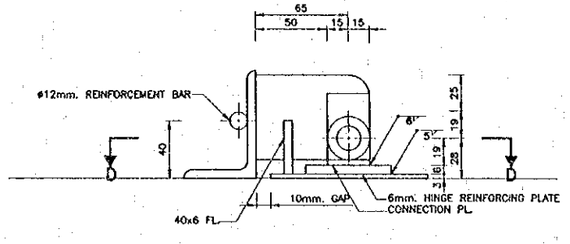
SECTION A-A
SCALE 1:100



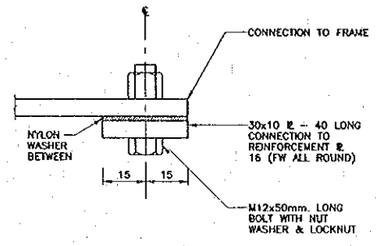
SECTION E-E
SCALE 1:100



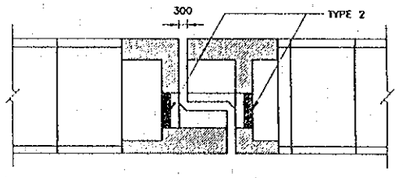
SECTION B-B
SCALE 1:100



DETAIL A
SCALE 1:20



SECTION D-D
SCALE 1:10



KEY ELEVATION
NOT TO SCALE

NOTES :

1. ALL COMPONENTS TO BE HOT DIP GALVANIZED AFTER FABRICATION.
2. ALL DOORS ARE LOCATED ARE INTERIOR FACES OF DIAPHRAGM.
3. STEEL PLATE TO BE JIS G3101 "SS400" UNLESS OTHERWISE NOTED.

REV.	DATE	DESCRIPTION	APPROVED

PROJECT STUDY TEAM
ORIENTAL CONSULTANTS CO., LTD.
in association with
NIPPON KOEI CO., LTD.

JAPAN INTERNATIONAL COOPERATION AGENCY
LAO PEOPLE'S DEMOCRATIC REPUBLIC
MINISTRY OF COMMUNICATION, TRANSPORT, POST AND CONSTRUCTION
KINGDOM OF THAILAND
MINISTRY OF TRANSPORT AND COMMUNICATIONS
DEPARTMENT OF HIGHWAYS

THE SECOND MEKONG INTERNATIONAL BRIDGE CONSTRUCTION PROJECT

QUALITY RECORD	NAME	SIGNATURE	DATE
DESIGN	T. Ohno	T. Ohno	16/1/00
DESIGN CHECK	H. Watanabe	H. Watanabe	18/2/00
SUBMITTED	A. Hiratani	A. Hiratani	21/2/00
APPROVED	P. Viraphanth	P. Viraphanth	22/2/00
	S. Tomiyabutro	S. Tomiyabutro	24/2/00

DWG. TITLE:
ACCESSORY
STEEL DOOR DETAILS

Plot date: Wed, 2 Feb 2000 - 13:54:29
C:\CHANTANA\SMB\ACCESSORY\AC-19.dwg